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READERS in search of a particular subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such, for instance, as Brain and Cerebral; Heart and Cardiac; Liver and Hepatic; Renal and Kidney; Cancer and Epithelioma, Malignant Disease, New Growth, Sarcoma, etc.; Child and Infant; Bronchocele, Goitre, and Thyroid; Diabetes, Glycosuria and Sugar; Light, Roentgen, Radium, *X* Rays; Status Lymphaticus and Thymus; Eye, Ophthalmia and Vision; Bicycle and Cycle; Motor and Automobile; Association, Institution, and Society; Paris, France; Berlin, Prussia, Germany; Vienna, Austria, etc. Subjects dealt with under the various main headings in the JOURNAL have been set out in alphabetical order under their respective headings—for example, "Act, Workmen's Compensation," "Correspondence," "Leading Articles," "Literary Notes," etc.; while under "Original Articles," will be found a list of those who have contributed papers on scientific and clinical subjects, with the titles of their contributions.

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An Address
ON
RADIUM AND CANCER.

DELIVERED AT THE ANNUAL MEETING OF THE WEST SOMERSET BRANCH OF THE BRITISH MEDICAL ASSOCIATION, AT TAUNTON, ON DECEMBER 9TH.

(*With Special Plate.*)

BY SIR ALFRED PEARCE GOULD, K.C.V.O.,

SENIOR SURGEON TO THE MIDDLESEX HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—In speaking to you this afternoon upon the subject of radium and cancer, a subject chosen for me by your President, I desire to keep steadily before my mind two or three facts which make it imperative that I should speak with great reserve.

The first of these facts is that, familiar as we all are with the clinical manifestations and the gross and the minute morbid anatomy of malignant growths, we are still in ignorance of their exact pathology. Whether cancer is the result of an infection of the tissues by a bacterial or protozoal parasite, or whether it is the result of a disordered, irregular, uncontrolled cell growth, is not known. Much can be said in favour of each view, but we are still waiting for the actual demonstration that shall remove all doubts and clearly establish the nature of malignant growths. Although this is so, we can say with confidence that a malignant growth begins as a local disease, usually single, and that while tending to spread locally, it also has a special power of causing secondary growths in various parts of the body more or less remote from its primary seat. The cells of which it is composed are derived from, and are very closely analogous to, the cells of healthy tissues. These cells have an enormous power of multiplication but lack a corresponding power of organized and regular development and of functional value. As a general rule, the course of the disease is marked by a steady increase of the cancerous growth, often accompanied by ulceration—particularly of the primary seat of the disease—with increasing interference with the function of various organs, and to this may be added haemorrhages, the wearing effects of pain, later on toxaemia, and in some cases such disastrous consequences as starvation, obstruction, or paralysis. But one of the first facts brought home to any student of this disease is the extraordinary variation in its course, activity, and duration. It is the most protean of all diseases, so much so that it is almost impossible to make any statement about it to which exception may not be taken. Usually beginning in a single tiny focus, it may be multiple from the start; usually steadily enlarging, it may actually diminish in size while it develops; usually showing little power of organization or development, the malignant cells may organize into higher tissues so completely as to make it impossible for the skilled pathologist to recognize the signs of a malignant growth. I was recently consulted about a lady from whom a tumour of the upper end of the fibula had been excised; at the operation it fell on the floor with a resounding noise, and on microscopical examination only apparently normal bone could be detected, so that it was confidently pronounced to be an osteoma; and yet the operation was immediately followed by local recurrence, and the really malignant nature of the growth was beyond all doubt. Of what form of cancer would one speak of pain as a more constant symptom than of epithelioma of the tongue? And yet a medical friend of mine died from a very extensive epithelioma of the tongue, the floor of the mouth and the cervical glands, and to the last was persistent that he had not suffered any pain. He never asked for, nor had given him, an anodyne, and he slept well without a narcotic. If we speak of the duration of the disease, we have to say that while some cases run their whole course in a few weeks, others extend over a greater number of years. And lastly, while we are all too familiar with the steady downward progress of this disease, there are undoubtedly a few cases which get well spontaneously.

If cancer is thus unknown in its exact nature, and extremely variable in its clinical course and manifestations, what can we say of radium? It is potent; it is wonderful; chemists place it among metals; the physicist can for a short while store its active emanations in liquid air, but it remains still one of Nature's mysteries, and its influence upon living tissues is unexplained and variable, and at present not within our control. Evidently, therefore, when we have to consider the action of unknown and variable radium upon unknown and very variable cancer, it is incumbent upon us to speak with great reserve, and to be constantly checking our observations with what is known of the natural history of the disease. I desire to emphasize this point most carefully, and I beg you to criticize all my statements most rigidly, and to remember that exact therapeutic knowledge can only be obtained when we have exact knowledge of the nature of a disease, and of the physiological action of the medicament.

With this by way of preface, let me now tell you what little I know of radium in its action on cancer, and something of what I have myself seen of its therapeutic uses.

There is no doubt that radium has power over the life-history of animal cells; it can increase or inhibit their rate of multiplication, and it can affect their vitality even to the point of destroying them. But this action is by no means uniform on all animal cells; it can influence certain cells more readily than others, and, speaking generally, it affects cancer cells more powerfully than normal tissue cells, and the cells of certain malignant growths more than those of others. It is upon this great fact that the therapeutic use of radium in cancer is based. Were all living cells influenced alike by radium we should find it impossible to use it in any other way than we use the knife or caustic, as a means of removing a given area of tissue, in the hope that by so doing we should destroy all the living cancer cells present in the body.

The *selective power of radium*, as I may call it, enables us to use it to remove the cells of a malignant growth, and to leave behind the healthy tissues. It is true that in practice we sometimes come short of this ideal, both in the way of failure to remove all cancer cells, and also in the injury or destruction of other than cancer cells.

But the true therapeutic use of radium rests upon its selective affinity for cancer cells, and not upon a general caustic or destructive power.

It is akin to salvarsan with its wonderful selective affinity for the *Treponema pallidum*, and we can even think of it in the terms with which Professor Ehrlich has made us familiar. It follows that radium is not to be used in the treatment of cancer, like many drugs, as a palliative agent for the relief of pain or for the lessening of haemorrhage or discharge—all of which it does—but as

a curative agent for the arrest of the life and activity of the cancer cell. This will all become clear if I mention to you certain cases, and I will take first the histories of two patients who have been good enough to come to Taunton to-day that you may see the results of radium treatment many months after its completion.

CASE I.—*Adeno-carcinoma.*

Mrs. M. A. H., aged 44, came to me on December 12th, 1911. Her history was that in 1906 a cystic adenoma of one ovary was removed, and that in 1908 a solid tumour of the remaining ovary was removed: this specimen was unfortunately lost before it had been examined. There was prolonged suppuration after the second operation, and healing was accompanied by the development of a solid lump in the abdominal wall. In November, 1911, the surgeon made an attempt to remove this, but found it quite impossible. A portion of the tumour was taken for microscopical examination, and was found to be adeno-carcinoma. When I saw her she looked ill, and there was a considerable tumour of the abdominal wall fixed to the pelvis, and over its centre was an irregular ulcer the size of the palm of one's hand. In each groin were firm enlarged glands. On two occasions she had full pastille doses of *x* rays, and after that (between the end of February, 1912, and January, 1913) she had five courses of radium-plate treatment, kindly carried out at the Radium Institute. As you see, Mrs. H. is now in robust health: she weighs nearly 3 st. more than when I first saw her. She is living a strenuous life, and shows no sign of her old malady, except the scars.

CASE II.—*Spindle-cell Periosteal Sarcoma.*

Mr. R. G., aged 18, was brought to me on May 4th, 1912, by Dr. Gower Bergin of Bristol. The history was that nine weeks before he had tripped over a peg, fell, and hurt his right knee, but went on running. Three weeks later he tripped on the stairs, and this time he had great pain in the same place. A week later he consulted Dr. Bergin because he still had pain, and walked with a slight limp. Dr. Bergin found a small lump, which he thought might be a haematoma in the rectus femoris muscle: he kept him in bed for a week, and applied iodine to the swelling. Since then very trifling jars to the limb had brought on pain in the same place, and the tumour had got decidedly larger. The patient was a healthy-looking youth. I found an elongated swelling on the front of the right femur just below its centre, with an abrupt upper edge, a less salient lower end: it was absolutely fixed to the bone, and apparently attached to about one-quarter of its circumference. The swelling was firm, without pulsation, slightly uneven on the surface, not tender. I could not detect any enlarged glands in the groin, nor any signs of enlargement of the liver or affection of the lungs. The knee could be fully extended, but could not be flexed beyond an angle of 120 degrees. Dr. Bergin brought with him a skiagram, which showed a shadow on the front of the femur, well defined and uniform in density (Fig. 1).

I diagnosed periosteal sarcoma of the femur, and it was decided to use radium rather than resort to amputation through the hip-joint. On May 10th, 1912, I cut down on the tumour, which I found to be infiltrating the quadriceps muscle, excised a portion for microscopical examination, and then embedded in the tumour a tube containing 100 mg. of radium, very kindly lent by the Radium Institute. This was removed after twenty-three hours. On June 28th (six weeks later) I saw him again: the tumour was, I thought, a little smaller, with a less abrupt edge to it: it was certainly not larger. I repeated the operation, but this time found the tumour tissue to form only a thin layer under the muscle, with new bone beneath it. I introduced a tube of radium emanations, equivalent to 100 mg. of radium, into the tumour, and left it in for twenty-eight hours. There has been no further treatment. Since October, 1912, he has resumed his studies at Bristol University, and I have heard of him from time to time that he was "quite well."

Dr. Bergin has taken several skiagrams, which indicate diminution of the tumour, with progressive ossification (see Fig. 2). Mr. Gordon Taylor kindly prepared sections of the portion of the tumour removed on May 10th. It shows the structure of a typical spindle-cell sarcoma. Sections of the tumour removed on June 28th show the cells to be degenerated and quite altered.

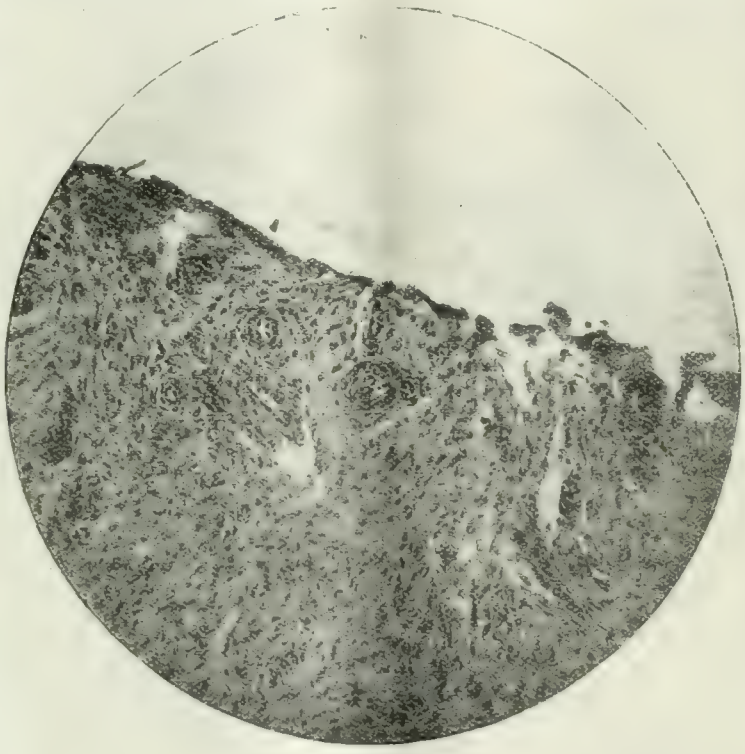


Fig. 4. Photomicrograph of a section of the growth of the femur removed on May 10th, 1912. Case II, Mr. R. G.

Mr. G. tells me to-day that beyond his right thigh being a little smaller than the left, he knows of no difference between the two limbs; he walks for long distances, cycles, plays all games except football and hockey, is quite free from pain, and has full use of the knee: he looks in robust health, and all that can be felt in the thigh is a slight thickening on the front of the femur at the site of the tumour. A skiagram taken this week shows a small bony thickening on the front of the femur (Fig. 3).

It is now nineteen months since the radium was first used, and when we remember the extreme malignancy of these cases—the great rapidity of growth and of the development of metastases—the fact that the patient shows no signs of local activity or of metastasis warrants, I think, the hope that he is cured.

I will relate three other cases in which radium has proved strikingly beneficial.

CASE III.—*Large Tumour of Tonsil and Pharynx.*

M. L., aged 58, was admitted to the Cancer Charity of Middlesex Hospital on March 31st, 1913. Eight months before she had noticed a swelling on the right side of her neck. Four months later she discovered a swelling in her throat. In January, 1913, she attended the out-patient department of the hospital, and was told that she had a growth in the tonsil, and was advised to enter the Cancer Charity as it was inoperable.

On examining the pharynx, I found a globular growth attached to the right tonsil, the right pillar of the fauces, and the right side of the base of the tongue; it seemed to fill the pharynx, and reached across to the left tonsil. It was soft in consistence, and the mucous membrane covering it was congested, and in places superficially ulcerated. She was only able to swallow liquids, and that with difficulty; her breathing was frequent and difficult, and she had a distressed appearance. The

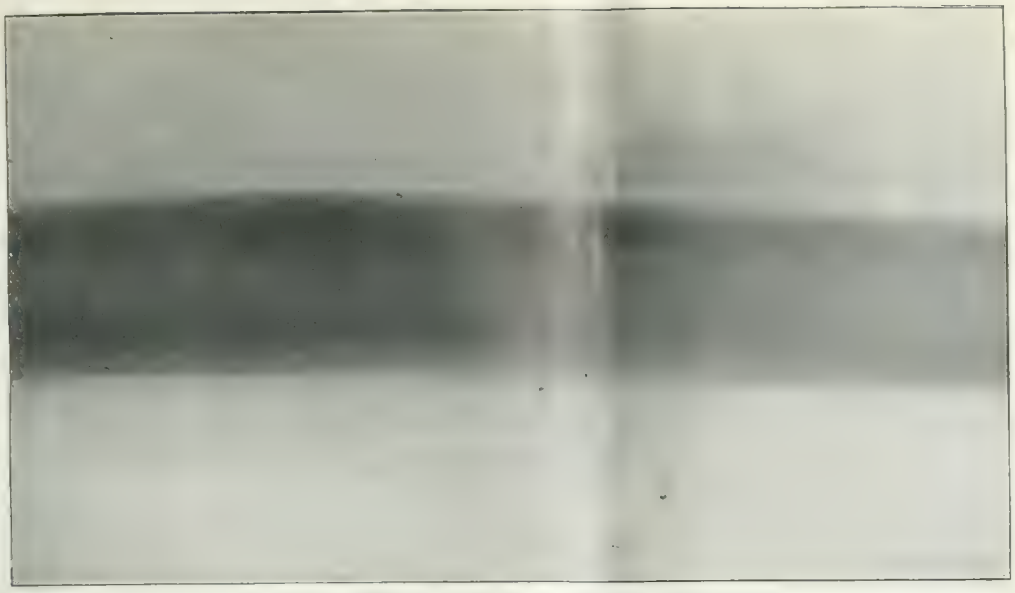


FIG. 1.—Skiagram of Case II, Mr. R. G., taken in 1912 before treatment, showing the faint shadow of the sarcoma on the anterior surface of the femur.



FIG. 2.—Skiagram of Case II, Mr. R. G., taken in December, 1912, showing the shadow of the ossified sarcoma.



FIG. 3.—Skiagram of Case II, Mr. R. G., taken December, 1913, showing only a slight bony thickening of the femur at the site of the former sarcoma.

movements of the tongue were limited; its tip could be pushed up to, but not beyond, the incisor teeth. There was a firm, enlarged gland behind the angle of the jaw on the right side; none could be felt lower down the neck, nor was there other evidence of secondary growth.

On April 29th a tube containing 82 mg. of radium was inserted into the centre of the growth through the mouth. This remained in place for twelve and a half hours, and then came out. It was reintroduced next day for a further twelve hours.

On May 14th it was noticed that the growth was smaller, and that there was no difficulty in deglutition; the movements of the tongue were still limited. Three days later it was noted that the tongue could be protruded nearly an inch beyond the teeth. The tumour continued to shrink rapidly, and on June 22nd, eight weeks from the introduction of the radium, I made the following note:

> There is now no sign of the growth in the tonsil or pharynx, and the glands behind the mandible can no longer be felt. The patient swallows solid food easily, and has no functional defect. Her general health is good. I am, therefore, discharging her from the Cancer Charity.

This patient has attended the cancer out-patient department from time to time, and I saw her there less than a week ago. The pharynx remains quite sound, and the woman feels well and is back at her work; but there is now an enlarged gland beneath the middle of the right sterno-mastoid muscle; this I intend to excise within the next few days.

CASE IV. *Encephaloid Carcinoma of Testicle.*

Mr. P., a man 30 years of age, was brought to me by Dr. Crawford Aitken, of Carlisle, on July 23rd, 1912, with a tumour of the left testicle. I agreed with Dr. Aitken that it was a malignant growth, and advised its immediate removal. This was done the same month by the late Mr. Jordan Lloyd, who excised the testicle and cord, and carried the dissection up along the retroperitoneal tissues as far as the renal vessels. The tumour was found to be encephaloid carcinoma; the patient made a good recovery.

In September, 1913, Dr. Aitken wrote to say that Mr. P. was very ill, that he had a considerable swelling in the upper left abdomen, and was losing flesh and strength. On October 3rd he brought him to see me. Mr. P. was then very pale, thin, with sunken eyes; he complained of nausea, and of entire loss of appetite; his tongue was thickly furred, and he suffered a good deal of pain, which prevented sleep; he was entirely unable to work, and walked with difficulty. He had a tumour which occupied the left hypochondriac region, projected the abdominal wall below the false ribs, and reached from just to the right of the middle line into the left loin. The tumour was immovably fixed to the spine, was solid, and, of course, dull on percussion. The pulse was 104; I could not discover any signs of other metastases.

I regarded the case as an exceedingly unfavourable one, but consented to try the effects of radium; so on October 9th an incision was made into the abdomen, the colon was separated from the stomach sufficiently to expose the tumour, which was found to be dark in colour, and of the size already stated. Two tubes of radium emanations of 50 mg. each were inserted into it for twenty-four hours. There was speedy improvement in the patient's pain, then he lost his nausea; in ten days we noticed that the tumour was smaller. On October 31st he left the nursing home and went to Bournemouth, and at that time we could not feel any trace of the tumour. His weight was then 8 st. 10 lb. On Friday last, December 5th, he returned home from Bournemouth, and I saw him as he passed through London. He had all the appearance of a healthy man, he had gained flesh, and weighed 9 st. 8 lb., had a very fair colour, could walk five miles at a time, had a good appetite and normal digestion, and on careful examination of his abdomen I could not detect the least sign of the tumour, nor could I find any enlarged glands or signs of metastasis anywhere.

CASE V.—*Malignant Disease of Naso-pharynx.*

On November 11th I was asked to see, with Mr. Marriage and Dr. Rose, a young man, J. T., 18 years of age, who had a growth on the left side of his naso-pharynx, and glands about the size of a hen's egg beneath the upper end of the left sterno-mastoid muscle. He was deaf in the left ear, and had obstruction in the left nasal fossa. We decided to remove the glands in the neck, and at the same time to explore the naso-pharynx while he was under the anaesthetic. On November 13th this was done. We felt a firm growth occupying the left side of the naso-pharynx, and involving the Eustachian tube, and Mr. Marriage removed a portion of it for microscopical examination; at the same time I excised the glands in the neck. The parts removed were submitted to three pathologists, all of whom reported them as undoubtedly malignant, though there was difference of opinion as to the exact classification of the malignant growth.

On November 19th 100 mg. of radium screened in a metal tube and inserted into a rubber catheter was passed along the nasal fossa into the naso-pharynx, and left in place for eight hours. We saw this patient yesterday (Monday, December 8th)—less than three weeks after the use of the radium, and he told us that on the tenth day he felt a sudden opening of the Eustachian tube, and that from that date began to recover his hearing, which is now practically perfect. There is an entire absence of all obstruction in the nasal fossa.

We examined the naso-pharynx with the finger while the patient was under chloroform, and were unable to feel any sign of the growth which we had felt three weeks before. The only difference between the two sides was that the trumpet end of the left Eustachian tube was just a trifle fuller on the left side than on the right. There was no sign of enlargement of glands in the neck.

These cases are sufficient to illustrate the two results of the treatment of cancer by radium that in my opinion are to be desired—the gradual removal of the growth without sloughing, and the removal of the tumour without injury to the healthy tissues. They show the "selective action" of the radium on malignant cells, its power to inhibit their growth more quickly than that of healthy cells. The cases also show the much more rapid and satisfactory effects of radium when introduced into a tumour than when it is applied as a plate on the surface of the body. A good deal of radium has been and is being wasted—in the sense of not being used to its greatest advantage—by being made into radium plates instead of placed in thin metal tubes. Further, these cases illustrate what was known long before its recent dramatic announcement in the lay press—that radium emanations are as efficient as the pure salt of radium itself. I could relate many other cases in which I have seen evidence of the power of radium to arrest and to remove malignant growths. These cases include cancer of the tongue, lip, maxilla, mandible, breast, chest wall, glands, rectum, muscles, and fascia; some of these I have already published.

DANGERS OF THE RADIUM TREATMENT OF CANCER.

I will, however, devote the time remaining to me to a consideration of some of the dangers and limitations of the radium treatment of cancer. Let me first of all deal with its dangers.

Danger to the Operator.

You will not misunderstand me if in the first place I refer to the danger to the worker with radium. I know one who has definite changes in the skin of his finger-tips, and in view of the many disasters that have occurred to x-ray experts, I make no apology for uttering a warning against the careless handling of tubes of radium.

Sloughing.

The first danger to the patient is sloughing. This I have seen in two or three forms. Thus, I saw last week a woman who came to me with a very large inoperable recurrence of a fibro-sarcoma of the leg, which had been twice removed by operation. I have introduced tubes of radium into this tumour on several occasions, and the circumference of the leg has been reduced by 3½ in., and the patient has lost her pain. But at the site of one of the punctures there is now an ulcer as large as a shilling, with a sloughy base. Again, I have under my care a woman who had a large infiltrating mass filling the right iliac fossa and bulging forwards the abdominal wall, into which it extended—a tumour as large as a good-sized melon. I have treated this with radium, and all that is left is a very slight thickening of the abdominal wall, close to the fold of the groin; for six months she had a very painful sloughing indolent ulcer at the seat of the introduction of one of the radium tubes. I am glad to say that

now the ulcer is no longer painful and is healing. These are examples of *superficial radium burns.*

Another form of sloughing occurred in a woman in one of my cancer beds, who had an inoperable and growing cancer of the ovary, forming a considerable abdominal tumour. I put in a tube of radium on three occasions, each time with apparent benefit in the form of lessened pain and diminution in the size of the tumour. But an ulcer formed at the site of the second tube, and through this liquid faecal matter escaped, and the faecal fistula hurried on the fatal end. The radium had "burnt" into an adjacent—probably adherent—coil of small intestine. The same accident happened in another case in the hospital under one of my colleagues. In that case he put a tube of radium into a tumour in the right iliac fossa, which also involved the abdominal wall. A faecal fistula formed and persists, though the tumour is very much reduced in size, and the patient, a member of our profession, is able to get about.

A third form of this sloughing effect is illustrated in a case now in the Middlesex Hospital Cancer Charity. This woman had a large secondary scirrhous carcinoma adherent to the sternum and the ribs on the left side. I treated her first by a single tube of radium, and she was later on admitted to the hospital for further radium treatment, and, owing to a misunderstanding, three tubes of radium, amounting in all to 144 mg., were introduced into the centre of the mass, with the result that this central part quickly sloughed. The slough has now separated leaving a large ulcer, but no beneficial effect has been produced on the surrounding growth. It seems to be an example of a too intense action over a limited area, which is not compensated for by a less intense and beneficent action of the radium outside this area. I regard this as a regrettable accident, and not as an illustration of one of the proper ways of using radium.

Thrombosis.

Another danger is the production of thrombosis. In a case in Middlesex Hospital a tube of radium was passed into a tumour in the right iliac region. Unhappily the patient became very ill, jaundice set in, and death occurred in about forty-eight hours. At the necropsy it was found that thrombosis had occurred in the external iliac vein, and had extended along the vena cava into the right auricle of the heart and into the hepatic veins. I have on more than one occasion put radium into a cancerous gland above the clavicle, fortunately without accident, but I am afraid that it has not been without risk of thrombosis in the jugular, subclavian, or innominate veins.

Haemorrhage.

Another danger is that of haemorrhage. The introduction of a tube of radium into a very vascular growth may be attended with free haemorrhage at the time. This has occurred to me twice—once when I passed a tube into a malignant growth of the thyroid gland, and once in passing a tube into a large fibro-sarcoma of the calf. On each occasion firm pressure over the puncture quickly arrested it. I know of a case where, three days after the introduction of a tube of radium into a growth in the abdomen, there was very free, and even alarming, haemorrhage. The action of radium upon vessels should make us cautious about introducing it into growths close to large arteries or veins. In a case to which I shall presently refer, where I was asked about the use of radium in a case of malignant disease of the pancreas and liver, one of the reasons I gave against the suggestion was that the radium would of necessity be in close proximity to many large and important vessels.

Constitutional Reaction.

The introduction of radium into a tumour is often quickly followed by a slight constitutional reaction—moderate rise of temperature for a day or two; I have known this to develop to quite a dangerous extent—to high fever, very rapid pulse, and jaundice—a condition which obviously threatened life.

The Limitations of the Treatment of Cancer by Radium.

Inaccessibility.

The first limitation arises from the inaccessibility of many malignant growths, such as cancer of the liver, secondary growths in the spine, etc. I mention these with some reserve, because, if with more experience we gain greater confidence in the value of radium in the treatment of cancer, we may discover safe means of carrying so beneficent an agent into the most inaccessible regions of the body.

Nature of the Part Affected.

The second limitation arises from the nature of the part affected—for example, the intestine, the stomach, or the bladder. I was recently asked if I thought radium should be introduced into a large mass caused by an inoperable cancer of the caecum, and I replied, "No, because I do not see how it is possible to remove the disease and to leave an intact bowel." The only possibilities of good that occurred to me were: "If radium could so perfectly remove the disease, at the expense of the formation of a fistula, that the surgeon could then excise the affected portion and unite the severed ends of the bowel: or (2) that after a short-circuiting operation the area of disease could be isolated, then treated by radium, and a final less severe operation done to close the remaining wound. At present our experience with radium and its less satisfactory effect on mucous membrane does not, I fear, warrant its use in this way, but more knowledge may give us the power to do something of the kind. The same conditions apply to cancer in the stomach and bladder.

Metastases.

A third limitation in the use of radium arises from the spread of malignant disease in the body and to the presence of metastases. I was recently asked whether I could advise the use of radium for a case of inoperable cancer of the pancreas, with secondary deposits in the liver—I had to say "No." So far as our present knowledge goes I can see no hope of using radium successfully in such a case, nor for such cases as melanotic sarcoma with numerous secondary growths, nor for the late stages of cancer of the breast with metastases in bones, liver, pleura, and many glands.

I believe that what is known as radium water is sometimes prescribed as a beverage with the idea that it may affect beneficially internal and widely diffused malignant growths. It is not for me to criticize the prescriptions of others, but I should certainly consider myself guilty of charlatanism if, with my present knowledge, I ordered radium water for any such purpose. I know of no evidence to justify it.

The Extent of the Influence of Radium on Cancer.

The question of the area over which radium produces a curative influence on malignant growths is a very important one and cannot be summarily dismissed. In the first place, we must remember that it is not unknown for the removal of a primary malignant growth to be followed by the disappearance, or the very long quiescence, of secondary growths. The most striking instances are afforded by operations upon *deciduoma malignum* and upon papilliferous ovarian cysts. I have known it to happen in cancer of the breast, and I have in the hospital just now an interesting example in a case of carcinoma of the maxilla. The patient came in with a tumour in the left maxilla and a definitely enlarged gland beneath the mandible. I excised the maxilla, and intended to dissect out the glands in the neck a few days later. When I examined the neck before this second operation I was unable to feel the gland which before had been quite obvious. I nevertheless carried out the operation upon the neck, and sent the parts removed to the pathologist for examination, and his report was that more than one of the glands removed showed carcinomatous growth.

So far as I have had the opportunity of studying the effects of radium on cancer up to the present, the extent of its influence has appeared to be very variable and often quite limited. I have already mentioned a case of growth in the right tonsil, where radium removed the primary growth, and, apparently, the growth in the adjacent gland, but there is now quite certainly growth in another gland lower down in the neck. I have seen other cases where the diseased glands have been quite unaffected by the successful use of radium for growths close by. In a case of squamous epithelioma of the left maxilla which was removed quite quickly by radium, a secondary growth in the neck was wholly unaffected and had to be excised.

I recently had a case of secondary carcinoma of the chest wall, consisting of an ulcerated growth adherent to the sternum, with a small nodule in the skin about half an inch away. A tube of radium emanations inserted into the larger growth was followed by a healing of the ulcer, and the entire disappearance of the malignant induration beneath and around it, but the little separate nodule of growth was quite unaffected, and continued slowly to enlarge. In this case the influence of radium would appear to have been very limited in range.

Then, again, I have seen the introduction of radium into a carcinoma of the chest wall, for instance, followed by healing of an ulcerated surface and the removal of the more superficial part of the growth, while a deep layer of firm growth has been left behind and required the further use of radium. This limitation of its influence is also seen sometimes in the disappearance of an area of tumour tissue immediately around the tube of radium, without any apparent benefit to the growth further away. And yet, in another case, even a large tumour may disappear after the insertion of radium into it at one spot, as in the instance of Mr. P. (Case IV).

There is, moreover, variation in the time during which beneficial effects are seen. In most cases the good effect is seen soon, and is not observed to increase after a few weeks. In others it seems to continue for many weeks; that is to say, in some cases the diminution of the tumour is quickly at an end, in others it goes on for a very long time. But in this matter we must be careful to distinguish between two separate processes—(1) the arrest of the growth of the cancer cells, (2) the removal of the inhibited or dead cancer tissue. The first is largely, possibly wholly, due to the radium, the second may be independent of the radium—we do not know this—and will certainly vary in rapidity with the proportion of fibrous tissue and other more highly organized tissue to the cellular elements. Arrest of growth is the surest measure of the beneficial influence of radium; the removal of the morbid tissue is a matter of secondary importance.

Variations in the Reaction to the Same Dose of Radium.

Very directly connected, therefore, with this is another of the limitations in the use of radium—the great variation in the reaction to the same dose of radium. This is the most trying circumstance connected with its use. One of my early experiences with radium was the case of an elderly gentleman who had a very extensive papillary squamous epithelioma of the hard and soft palate on the right side, and extending down along the wall of the pharynx below the opening of the larynx. It was treated by a tube of radium introduced into the mouth. The first application was followed by the complete destruction of the lower half of the growth, but the part in the mouth, which was actually closer to the tube of radium, was entirely unaffected by it, and although the application of the radium was repeated, it was never affected at all, and the patient died of his disease.

I have seen cases of scirrhus of the breast remain quite unaltered after the introduction of a tube of radium into them, while others that I could not distinguish clinically from the first, have rapidly melted away under the influence of the same tube of radium. Then, again, cancer affecting mucous membrane appears to be less amenable to radium treatment than cancer of adjacent skin. This is frequently exemplified in the treatment of cases of rodent ulcer by radium. As a class, sarcomata have been more amenable than carcinomata, and the softer growths than the firmer ones, but exceptions to this rule are seen. Thus, several cases of firm scirrhous lumps of the chest wall, secondary to cancer of the breast, have disappeared quite rapidly when a tube of radium was passed into them, and I recently had a patient whose rectum I had excised, and who came back with a firm flat recurrence on one side of the anus that could have been just covered with a florin. A fortnight after the introduction of a tube of radium beneath this disc-like growth I failed to find any trace of it whatever.

On the other hand, I have a patient with a very soft tumour of the maxilla, into which I have twice introduced radium with little, if any, observable benefit.

I must also mention that *some cases seem to be made actually worse by the use of radium.* This was strikingly exemplified for me in a man who was under my care for epithelioma of the pinna and parotid region. The introduction of radium into this growth was immediately followed by the much more rapid extension of the growth, and a speedy downward course.

Painful and Persistent Local Reaction.

I must specially mention the painful and often persistent local reaction that sometimes follows the use of radium. This is particularly the case when the radium is used in the rectum; sometimes it happens when introduced into the vagina. The pain caused by the radium may last for many weeks, and add considerably to the patient's distress.

I have made no reference to-day to the effects of radium in uterine cancer, where relief of pain, cessation of haemorrhage, and lessening of discharge frequently result from the introduction of the radium into the malignant mass, even if the disease be not cured. I cannot now deal with the very important practical point of the amount of filtration or screening that it is best to use. This is a matter on which we need a good deal more light.

Ought Radium to be Used as an Alternative to Operation?

Two important questions remain for consideration. The first is: Ought we to use radium for the treatment of cases of malignant disease which we believe can be satisfactorily dealt with by operation—for example, cases of early scirrhus of the breast? I would answer that question with considerable reserve, remembering that we are only on the threshold of our experience and knowledge of this subject; but, so far, I have not felt it right to do so, and for these reasons: Experience tells us that even in a very early carcinoma of the breast there may be secondary growths commencing in the axillary glands or in lymphatics a little remote from the primary growth, though nothing of the kind can be detected by the most careful clinical examination. We do not yet know that even if radium deals satisfactorily with the primary growth it would prevent the usual developments of these metastases, while we do know that a careful and wide operation affords a very good prospect of setting our patient free from the disease. The case, however, is very different when the operative treatment of the disease has proved very far from satisfactory, and of such I would mention particularly periosteal sarcoma of the femur, melanotic sarcoma, and some pharyngeal and laryngeal growths. The success which attended the use of radium in the case of sarcoma of the femur which I treated nineteen months ago (Case II), the subject of which is here this afternoon, has emboldened me to advise radium rather than amputation at the hip-joint in three other cases of a like nature, which I will just mention quite briefly.

CASE VI.—*Periosteal Sarcoma.*

A girl, S. M., aged 16, was admitted to Middlesex Hospital under my colleague, Dr. Pasteur, in June, 1913, supposed to be suffering from rheumatic fever. She was transferred to my ward on July 3rd, as it was evident that she had a periosteal sarcoma of the left femur. There was a tender swelling of the bone on the front and inner side of the knee, immediately above the epiphysis, and this was the seat of constant and severe pain. There was no pulsation or sense of yielding. A skiagram showed the bone intact and the shadow of a tumour attached to it.

On July 5th I cut down on the tumour, cut out a piece, and then buried in the tumour three tubes, containing in all 144 mg. of radium, which were left in place for twenty-four hours. The pain immediately lessened, and in two or three days was gone. The tumour not only ceased to grow, but became smaller, and its *x*-ray shadow at the same time became denser.

On July 26th I repeated the operation, cut out a piece of the growth, and put in 60 mg. of radium for another twenty-four hours. I have seen her from time to time since. The swelling on the inner side of the bone has flattened down to a condition of only slight thickening of the bone. Last month she complained of pain on the outer side of the bone, and I found a swelling there, so on November 9th I had 144 mg. of radium introduced there. At this operation a thin layer of sarcomatous tissue was found over the bone. I saw her on November 25th, and she was then free from pain, and I could

not identify any swelling on the outer side. The tumour when first removed was seen to be a mixed-cell sarcoma with many mitotic figures. On the second occasion, only three weeks later, the tumour was harder, and on section was found to be largely ossified and much less vascular than before. Islands of cartilages were seen embedded in small masses of fibrous tissue; there was no evidence of malignant disease. This girl has now been under observation for five months, and the original tumour, instead of being larger, has almost, if not wholly, disappeared.

CASE VII.—*Periosteal Sarcoma.*

G. P., aged 16, was brought to me by his father on November 15th. On October 12th he was knocked down at football and then accidentally kicked on the inner side of his right knee. I saw him just five weeks after his accident. He walked into my room very lame, leaning hard upon his father, with his right knee bent at an angle of 140 degrees. I found a prominent swelling on the inner side of the knee, about the size of an apple, fixed to the femur, with an abrupt, well-defined upper edge. It was solid, without pulsation, a little tender. The skin over it was neither reddened, hot, nor oedematous. The muscles of the thigh were much wasted; the femoral glands were not enlarged. In this case excellent skiagrams were taken; they showed no shadow, the outline of the femur was perfect, but there was one tiny defect in the bone about ¼ in. below the surface. I diagnosed a periosteal sarcoma, and advised treatment by radium rather than immediate amputation at the hip-joint.

On November 20th, 1913, I operated, and found the tumour unattached to the muscle over it, and covered by a thin capsule. I cut out a piece of it, and then buried in the tumour for twenty-four hours 100 mg. of radium. I last saw this patient on December 9th, nearly three weeks later. There was some little fluid in the joint, but the swelling was very definitely smaller, and has lost all definite outline; the boy declares that since the operation he has had none of the old pain, and he wants to get up and walk. There is, at any rate, good reason to hope for success in this case, but it is too early to speak with assurance. The tumour in this case is a spindle cell sarcoma with considerable chondrification.

CASE VIII.—*Periosteal Sarcoma.*

My fourth case of femoral sarcoma was brought to me only last week, on December 4th, by Dr. Millar, of Streatham. The patient was a single woman, 30 years of age, who noticed a swelling on the inner side of the left knee five weeks before; beyond that we could not get any history. She walked without a limp, and had practically no pain or disability. There was a prominent tumour on the inner side of the left femur, immediately above the epiphysis. It was firm in consistence, immovably fixed to the bone, measuring nearly 5 in. by 3¾ in. The skiagram showed a faint shadow, and the femur intact. I diagnosed a periosteal sarcoma, and advised the use of radium.

On December 6th I cut down on the tumour, found it attached to the bone and infiltrating the muscle, and after removing a bit for microscopic examination, buried a tube of 100 mg. of radium in it for twenty-four hours. Examination of the piece of tumour removed showed it to be a spindle-cell sarcoma.

These cases are incomplete, and I have not put them, therefore, alongside of the cases which I mentioned in the earlier part of this paper. I am mentioning them now merely as examples of a class of case in which the choice lay between an extensive and notoriously unsatisfactory operation and the use of radium, and in which I decided to try radium rather than at once resort to the operation.

I have under my care just now a case of melanotic sarcoma of the heel where I have introduced radium into the primary growth, and excised the glands in the groin. As we all know, the operative treatment for melanotic sarcoma has been extremely unsatisfactory. I have also spoken of a case of naso-pharyngeal cancer treated by radium.

Our practice in this matter can only be based upon much longer and wider experience of the use of radium than we have at present. We must "wait and see."

Prophylactic Use of Radium.

The other question is whether, after operating for cancer, we ought to use radium as a prophylactic measure to prevent recurrence. I do not see my way to do this. In the first place, we do not know where the supposed cancer cells are lurking, and, as I have already said, we have at present no clear evidence that the selective effect of radium on cancer cells is exercised over a wide area. But we do know that radium can produce such active cell growth as will end in cancer. Further, when operating for cancer, I like to approach the case with the conviction that if the operation is well planned and carefully carried out it will succeed in freeing the patient from the whole of his disease. I fear it will have a paralysing effect upon the surgeon in his operation if he is feeling that, after all, he is leaving cancer cells behind, and will use radium in the wound to prevent their further activity. If we operate, let us have faith in the efficiency of our operation. Still, in this as in other matters, I wish to preserve an open mind, and to accept any new light that comes.

In bringing these remarks to a close I think I am justified in stating that the cases I have been able to relate to you to-day from my own experience warrant me in saying that in radium we have an agent that in many cases can be used in the treatment of cancer with great hope of success, and that the selective action upon cancer cells marks it out from all other known remedies for this disease; but this same experience also shows that it would be a gross exaggeration to speak glibly of radium as the "cure for cancer" in the sense that it will deal with any and every case of this disease. Such is not the case, as we use it at present; but remembering what I started with as a preface to this paper—that on the one hand the nature of cancer is unknown and most variable in its manifestations, and on the other hand that radium is almost the youngest of the known chemical elements, and has been studied but for a few years, and by relatively few investigators—there is good ground for hope that in the time, which will surely come, when we shall unravel the secret of the nature of cancer and know more of the properties of radium, and how to use them better and to control them, we shall have a great extension of the therapeutic value of radium in cancer.

A Clinical Lecture
ON
THE TRIPLE SYNDROME
IN ABDOMINAL EMERGENCIES.

DELIVERED AT
THE ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE,
NOVEMBER 13TH, 1913.

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IT is important, probably of greater practical importance than anything else in medicine and surgery, to know the meaning of an abdominal pain. Such pains are of so common occurrence, especially in children, that most old women seem to think "a dose of castor oil and a hot bottle" are sufficient treatment, and that a diagnosis as to the cause is unnecessary. This is almost as bad teaching as that of those surgeons who say a "diagnosis is impossible, open the abdomen and see"—for both may result in more harm than good.

Those of you who have accompanied me round the wards know that in abdominal emergency cases I expect from my house-surgeon a carefully-taken history, followed by a description of the physical signs, his diagnosis in detail before operation, and a description of the pathological findings after operation to compare with this. By a diagnosis in detail, taking appendicitis as an example, I mean that he shall foretell the position of the appendix, the pathological condition of it and of the peritoneum, and offer an estimate of the vital resistance of the patient. Nothing has interested me more than to note the quickly-acquired and improved diagnostic capacity of a zealous and enthusiastic house-surgeon subject to these apparently exacting demands, for at the termination of his six

*This lecture was delivered also at a scientific meeting of the British Medical Association held on November 20th, 1913.

months' period of office such an one seldom indeed makes a serious mistake.

The most serious mistake in these cases is to postpone operation when it should have been done earlier, because 90 per cent. of the mortality still results from general septic peritonitis, and every surgeon now knows that this is preventable by early enough removal of its cause.

The following figures, taken from a paper of mine on general septic peritonitis,[1] emphasize this more strongly than anything I can say. They are from the statistics of the Royal Victoria Infirmary, Newcastle-on-Tyne, for the year 1910, and were supplied by Mr. R. J. Willan, F.R.C.S., Surgical Registrar.

STATISTICS.

Appendicitis (427 Cases with 18 Deaths).

Six of the 18 who died were not operated upon, and all were suffering from advanced general peritonitis on admission.

Twelve were operated upon; 1 of these died of portal sepsis ten days and 1 of pulmonary embolism seven days after operation. In all of the remaining 10 general septic peritonitis was present at the time of the operation and at the *post-mortem* examination.

There were 290 acute cases, and all of the deaths (18) occurred in this series. (There were no deaths in the interval cases.)

Sixty-two of the 290 acute cases had not perforated, and had no associated peritonitis. There was one death from portal sepsis in this series.

Thirty-eight had perforated, but had not yet developed any gross peritonitis. In this series there was one death from pulmonary embolism.

One hundred and fifty-seven were associated with localized peritonitis and abscess. All recovered.

Thirty-three were associated with general septic peritonitis, 25 were operated upon, and of these 13 recovered and 12 died. Eight were not operated upon; 2 of these recovered, 6 died.

Perforating Gastric Ulcers (16 Cases).

Twelve recovered, 4 died from septic peritonitis (verified by *post-mortem* examination).

Eleven were operated upon under twenty-four hours after the perforation. Ten of these recovered and 1 died.

Two cases were operated upon over twenty-four hours and under forty-eight. Both patients died.

Two cases were operated upon after forty-eight hours and recovered. In these it was noted that the gastric perforation was closed by adhesions.

One case which died had been perforated one week, was admitted moribund, and died of septic peritonitis just after admission, without operation.

Perforating Duodenal Ulcers (36 Cases).

Three were admitted very ill with septic peritonitis, and died soon after admission, without operation.

Seventeen cases were operated upon under twelve hours after perforation. All of these patients recovered.

Eight cases were operated upon over twelve and under twenty-four hours after perforation. Six of these patients recovered and 2 died.

Five cases were operated upon over twenty-four and under forty-eight hours after perforation. Two of these patients recovered, and 3 died.

Six cases were operated upon over forty-eight hours after perforation. Two cases (in which the perforation had been excluded from the general peritoneal cavity) recovered, and 4 died.

You will be ready now to believe it when I tell you that *the fate of a patient, the victim of an abdominal emergency, depends almost entirely upon the skill and promptitude of his doctor*, and that any special surgical skill has very little to do with his recovery. It is rare for these emergency operations to require other than ordinary surgical care and skill, as proved by the fact that the results of the most junior members of our staff in early cases of acute appendicitis, perforating gastric and duodenal ulcers, and ruptured ectopic gestations, are as good as those of their seniors. It is, therefore, an obvious conclusion that diagnostic skill is the most important factor in recovery.

The belief has been forced upon me, after careful study for many years of the history of cases before and after operation, that the majority of mistakes in diagnosis are due to ignorance of a certain law which it will be the chief object of my lecture to-day to impress upon you. In order to do this the more effectually I asked for suggestions and endeavoured to find a name which would stick and serve as a constant reminder. The best seems to me to be "The triple syndrome in abdominal emergencies," but perhaps the explanation may to some be even more easily remembered than this name.

The principle of the law has been to some extent recognized for cases of appendicitis, for which a "lethal interval," "the dangerous remission," "the deceptive calm," etc., have been described and emphasized in many papers, but what is true of appendicitis is, I want to prove to you, true for the other abdominal emergencies.

In all there should be three phases or stages, which are as follows:

1. *The stage of shock.*
2. *The stage of reaction.*
3. *The stage peculiar to each lesion;* for example, peritonitis for perforation, acute anaemia for haemorrhage, an enlarged gall bladder or jaundice for gall stone, etc.

In all of the dangerous lesions pain is severe enough in the first stage to produce symptoms of shock, varying from a feeling that something serious has happened, accompanied by pallor, sweating and feebleness, to such a bad sensation and symptoms as to threaten and, rarely, to cause death.

This is the period to which I am anxious to draw your special attention to-day because it is of the greatest importance. If looked at fair and square it is difficult to miss the meaning of the symptoms, but there may be only a single chance, *the first look, the first visit.* Half an hour, even a few minutes later, and, chiefly independent of the sort of lesion, the second phase—that of reaction—has set in, and in a short time the patient *may* be apparently so well that it is now almost impossible to believe that any dangerous condition is present.

This is the time when mistakes are made. The early alarm is too readily forgotten both by patient and doctor and deceptive signs of recovery may mislead both for hours or days. In this, the second, phase the most important evidences are tenderness and rigidity of the abdominal muscles on palpation, and shifting dullness on percussion.

TREATMENT.

The time has come to make a rule that all cases of abdominal injury and of acute abdominal pain should be sent to a hospital without delay for observation.

The public must be taught that the requirements of present day surgery cannot be met by extemporized arrangements even in the most perfect houses and that the mortality of serious operations, done at home, is at least four times as great as it is in the suitable environment of a hospital.

The following recent cases are typical examples of the truths which I have been telling:

CASE I.

A gentleman, aged 58, seen with Dr. Ruxton. On a Monday afternoon he had some grumbling ache in his belly, but went on with his work. In the evening he went to meet his wife at the railway station, and whilst standing on the platform had so much pain that, though very averse to such a course, he had to go to the refreshment-room for some brandy. When his wife saw him she asked him what was the matter, said he looked "perfectly ghastly," and took him for some more brandy. On the way home in a cab he vomited and the *pain and vomiting continued all Monday night up to Tuesday morning.* On Tuesday morning he was so much better that he wanted to go to work, but yielded to his doctor's request that he should stay at home, as his temperature was 101° F. On Wednesday morning I found him in bed against his wish. He was smoking a cigarette and reading a newspaper; he said, "to put off the time till I told his doctor and his wife that they were making a fuss about nothing and allowed him to get up." His temperature was 100° F., pulse 80. He was tender on pressure over his right iliac fossa and the overlying muscles were slightly rigid. *His swollen appendix was palpable.*

I operated in a private hospital two hours later. This showed the appendix to be completely gangrenous—"the rotten sausage" appendix—it was hanging over the pelvic brim. He recovered.

CASE II.

A fragile old woman, aged 67, residing close to the infirmary gates, was seized with a pain so sudden and severe at 10.30 on the morning of her admission that she thought "she was going to die," and so did her doctor when he saw her at 11.30.

An hour later, when I saw her with him, she explained that she was "all right now," and looked as if nothing

could be seriously wrong. She gave a history of long-standing indigestion. Her pulse was good, temperature normal. Her abdomen was tender on light pressure in the epigastrium; there was some rigidity of the upper half of both recti muscles, and shifting dullness in both flanks.

I operated two hours later in the infirmary. There was a perforated pyloric ulcer with gas and free fluid in the belly. Pyloroplasty; lavage of peritoneum; recovery.

Case III.

A gentleman, aged 36, seen Saturday evening, November 15th, 1913. At 7 o'clock he was *suddenly* seized with a very severe pain; immediately after Dr. Beatley found him tossing about the bed in "agony," pallid, in a cold sweat, and with a feeble pulse. He sent at once for a surgeon, and Mr. Richardson arrived at 8.15. By this time the patient had apparently entirely recovered, and took so optimistic a view of the situation that he thought Dr. Beatley and Mr. Richardson's advice to have operation done at once required further consideration.

When I saw him about 8.30 it was difficult to believe at first glance that there was anything at all wrong. At my request he crossed over his broad bed unaided and with alacrity. His abdomen was *tender* to the right of the middle line above and in the right iliac fossa below. His right rectus was more *rigid* than the left, and there was *dullness* in his right flank.

Operation in a private hospital by Mr. Richardson shortly after revealed a perforated duodenal ulcer. Recovery.

Case IV.

A lady, aged 52. On a Tuesday evening in July, at 6 o'clock, she was playing croquet in her garden, when she was suddenly seized with so severe a pain in the abdomen that she had to rush to a seat, and a few minutes later had to be carried into the house and put to bed. Almost immediately after the pain commenced she vomited, and the vomiting continued till early on Wednesday morning. The pain gradually abated and she had a little sleep.

When I saw her with the doctor on Wednesday morning he described the change in her condition from the previous night as "marvellous." She was reading in bed and looked as if there was nothing the matter with her. She had, however, still an occasional "grumbling" pain and had passed no flatus. Her pulse and temperature were normal. There was a scar in the middle line of the abdomen below the umbilicus, the result of a gynaecological operation performed two years previously. Physical signs were negative.

She lived in the country, between twenty and thirty miles away from Newcastle, and I advised that she should come back with me in the motor car and go into a hospital for observation. All the way back in the car she talked the sort of entertaining "slush" in which society ladies indulge, and said she enjoyed the trip immensely. In the evening I saw her again. She was quite cheerful, but still had a little "grumbling pain and wind," but no sickness. In order to clear up the difficulty in diagnosis and to decide—as I thought in time—as to whether the case was one of intestinal obstruction or not, I ordered, as is my usual custom, that early in the morning an enema should be administered. If this gave no result, the stomach was to be washed out. If there were faeculent contents, an immediate operation should be done. If not, after the lavage 1 oz. of castor oil should be left in the stomach. The enema had no effect; the stomach had no faeculent contents, but shortly after the administration of castor oil spasmodic pain and vomiting set in, so I operated. The operation discovered a loop of gut strangulated by a band, and the gut was gangrenous. Intravenous infusion during operation; resection and anastomosis; recovery.

Case V.

On Saturday evening, November 1st, 1913, Dr. Longbotham, of Middlesbrough, telephoned to say that he had just seen a lady who was better now, but she had had a bad abdominal pain and looked very ill during the attack, and that he felt anxious about her still. It was arranged that she should be sent through by motor, and at 11 o'clock the same night she arrived at the private hospital in a motor car. She rejected the offer to carry her, walked upstairs, and shortly after we held a consultation.

The history was that she was 37 years of age, had been married for thirteen years, and had no children. A week before she had been seized with very bad pain when she got out of bed. The pain made her shout out and go to bed again. The pain was situated in the right iliac fossa and shot down into the rectum. After lasting for an hour it passed off; she got up and went about as usual. Two days later she had an exactly similar attack, and recovered as before. At mid-day three days later she was again seized with pain, mostly in the middle line below the umbilicus, but extending into the right iliac fossa. This time she turned cold and clammy, felt very ill, and thought she was going to die. The menstrual period was a fortnight overdue, but such an irregularity was not of infrequent occurrence with her.

She was a handsome, well-nourished looking lady, somewhat anaemic (though not more than usual it was thought), who looked cheerful and as if nothing serious could possibly be wrong with her. Tongue clean, pulse 82, temperature 97.8° F. Her abdomen was somewhat rigid and tender in the right iliac fossa, but beyond these signs nothing was discoverable. It seemed doubtful whether anything was seriously amiss with her, and it certainly appeared to all of us then that there was nothing to cause any alarm.

We met next morning for a further consultation. She still looked very well, but perhaps not quite so well as the night before, and had not slept much. *Tenderness and rigidity* in the right iliac fossa were now well marked, and there was *shifting dullness in both flanks.*

Operation, immediately following the consultation, showed the abdomen to be filled with blood (there could not have been less than 1 quart) due to an early ectopic gestation which had ruptured near to the fimbriated extremity of the right Fallopian tube. Ligature and excision of the tube; intravenous saline infusion on table. Recovery.

Case VI.

A woman, aged 48, was admitted to the Royal Victoria Infirmary with the following history: In February, 1911, she had an attack of pain in the left side of the abdomen, which she says was not very severe, though she vomited several times with it, was confined to the house, and was most of the time in bed for three weeks. She remained quite well after this for more than two years. On July 3rd, 1913, when alighting from a train in Durham Station, the pain suddenly returned, and was so severe that she had to be helped into a cab and home to bed. She vomited many times, but after a few hours, with the help of some little pills sent by the doctor and hot applications made by a friend, she got relief, and thought she would soon be all right again. She had been a fortnight in bed.

On admission her abdomen was swollen and tender. Spasmodic pains, and visible, palpable, and audible evidence of increased peristalsis, and inability to pass flatus (the trinity required for the diagnosis of intestinal obstruction according to my view) were present, and there was a large, very tender cystic tumour occupying the abdomen.

Operation showed much distended adherent intestines, and a plum-coloured, adherent, gangrenous ovarian cyst, with a pedicle twisted one and a half times. Ovariotomy; recovery.

Case VII.

A male, aged 42, admitted to the Royal Victoria Infirmary. For several years past he had indefinite, cramp-like pains in his stomach, relieved by alcohol. Two days before admission he felt pains in the stomach and cold two hours after breakfast. By 12 o'clock the pain became of a stabbing character and was so severe that it doubled him up, made him shout, roll about, and shiver and sweat. It was chiefly in the right side below the ribs and in the pit of the stomach, and it caught his breath. He got no relief till next day, when his doctor gave him opium.

On admission to the infirmary (two days after the attack commenced) he looked well. Tongue dry and furred (opium ?). Pulse 107, temperature 101°. There was marked tenderness below the right ribs, no marked rigidity, and a very tender gall bladder tumour was palpable.

Operation.—The gall bladder was enlarged, of a livid red colour, tensely distended, contained thick, dark bile, pus, blood, and gall stones. The mucous membrane lining it showed patches of gangrene. Removal of gall stones. Cholecystostomy; recovery.

Case VIII.

A miner, aged 17, was admitted to the Royal Victoria Infirmary on the evening of March 27th, 1913. Five hours before his admission he had been crushed, and held between a brake behind and fifty-six tubs in front

of him. He felt very faint, and, on being released, fell down in great pain and very ill. The abdominal pain, so severe at first, gradually passed off, and he had none when he arrived. His complaint then was of pain over the lower part of the ribs on the right side, and he was tender there.

The only sign discoverable was some *rigidity* over the right side of the abdomen. He looked well, his pulse was 80, and his temperature was normal. He was examined by several different authorities, and all agreed that there was nothing to indicate a serious lesion or the need for an operation. Directions were given that a half-hourly record of his pulse be kept.

Next morning, when I saw him for the first time, he had not slept and was in great pain. His colour was good, he was sweating freely, his tongue was moist, and his pulse of good quality and only 80 to the minute. His abdomen moved very little with respiration, it was markedly *rigid and tender* all over and there was *shifting dullness in both flanks and the hypogastrium*.

It was now evident that some serious intra-abdominal lesion was present, and the problem, whether this condition was due to ruptured intestine with general peritonitis or to intraperitoneal haemorrhage, was fully discussed. My view was in favour of peritonitis, as, though I knew a large intra-abdominal haemorrhage might exist with very little disturbance, I could not believe that a haemorrhage large enough to cause dullness so marked could fail to produce evident anaemia

Operation (seventeen hours after the accident).—On opening the abdomen blood poured out. This was



Fig. 1.—Diagram of ruptured liver.

traced to the liver. Remembering Hogarth Pringle's valuable hint, I passed my left forefinger into the foramen of Winslow, and with my thumb in front compressed the hepatic artery, portal vein, and bile duct, arresting all haemorrhage at once. The wound was found to be in the right lobe of the liver extending from the coronary ligament through the free margin and involving so much of the whole thickness of the organ that the portion on the right seemed to be attached to the left part by only a narrow band.

The tear was sutured in four tiers with thick catgut (Fig. 1). The first line of mattress sutures commenced about 1½ in. from each side of the tear, and caught the bottom of it, the next were introduced about 1 in. from the edge, the third ½ in., and a final continuous suture brought the fibrous capsule together (Fig. 2). Before the sutures were tied any relaxation of the hold upon the gastro-hepatic omentum was followed by active haemorrhage, but as soon as the sutures were tied the wound was quite dry. The peritoneum was washed clean. Intravenous infusion on table.

A drainage tube was left in the hepatic pouch for the first ten days, but nothing escaped from it, and the wound healed by first intention. Except for a curious rise in temperature every evening (up to 102° F.) the patient made a good recovery, and went home well fourteen days after the operation.

COMMENTARY.

Nothing impresses so forcibly the remarkable progress that has been made during the last twenty-five years as consideration of cases such as these. They have been selected as typical examples of a class of patients whose lives are saved now by early operation, but would formerly have been lost. Surgeons, however, are not yet satisfied. Lives are still lost that should be saved, and a delay, not so dangerous, too often means prolonged convalescence, and a dangerous illness, which might have been averted by more accurate diagnosis and more prompt action. Improvement has been most marked in the more tragic conditions, such as some perforating gastric and duodenal ulcers, because symptoms are so serious and so pronounced that every one concerned is convinced that something should be done without unnecessary delay. There are still too many appendix cases left to form abscess or to develop peritonitis before operation, and still more gall stones left till serious complications, such as abscess, common duct infection, and cancer, render operations serious and unsatisfactory.

The removal of the appendix before perforation or of gall stones when still confined to the gall bladder is, in the hands of competent surgeons, now so safe that a diagnosis of appendicitis or of gall stones, unless a sufficient excuse to the contrary can be offered, should mean undelayed operation, because this, with few exceptions, is the only reasonable course to follow. The public has not yet appreciated, as surgeons have, the serious effects of gall stones and the dangers of delay, otherwise there would be few visits to Vichy to undergo the "cure," and less medical treatment of them. The fact is that, in this part of the world at any rate, the advances of surgery have been almost entirely to the advantage of the miner, and have affected the millionaire scarcely at all. Every surgeon can recall the urgent call to a country mansion,

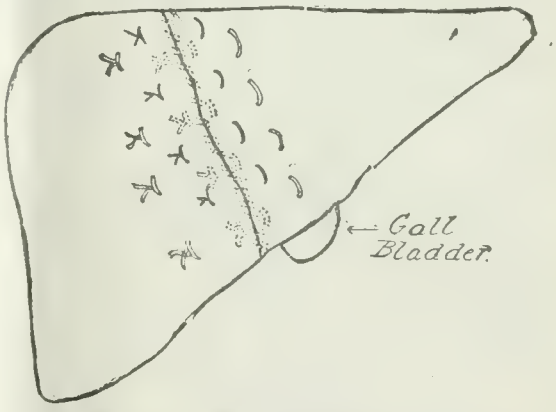


Fig. 2.—Diagram of the same after suturing.

the twenty to fifty mile journey, the consultations first with the patient, then with his wife, next with his family, then with one or more interested relatives or friends, then with a professional celebrity, who often has to be waited for, and finally, "as a last chance," the operation, in magnificent but wholly unsuitable surroundings, and the deplorable loss of a life which he knows could have been saved.

In conclusion, I would like to draw your attention to the report of a case in one of the papers last week—that of a young man struck in the abdomen by the knee of another football player. He was carried into a cottage close to the playing field, and after a few hours was taken home, where he died on Thursday. The evidence at the coroner's inquest was to the effect that he died of peritonitis, the result of a tear of the small bowel. In every case where a sharp localized blow has been received on the abdomen the patient is "severely winded" and much shocked, but often recovers so completely for a time that a fatal result scarcely seems possible. I have seen several of them, and have taught for a long time that, however perfect the recovery may appear to be, the probabilities are so strongly in favour of a serious lesion that such a patient should be sent to a hospital for observation without delay.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, October 28th, 1911.

BRISTOL ROYAL INFIRMARY, the Hospital for Sick Women and Children in the same city, and the Monmouth Female Hospital and Dispensary each receive a bequest of £500 under the will of the late Rev. Robert Hall Jackson, formerly rector of Ganarew.

An Address
ON
THE MEDICAL CLINIC:
A RETROSPECT AND A FORECAST.

Delivered before the Abernethian Society, St. Bartholomew's Hospital, London, December 4th, 1913,

BY
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Unrest and change are the order of the day, and it may be taken as a good sign that the medical profession is bestirring itself about many problems, one of the most important of which relates to the future of our medical schools. Those who have followed the discussions of the past few years will have noticed that two diametrically opposite opinions have been expressed. On the one hand, there is a group thoroughly satisfied with existing conditions—and with themselves—the teaching was never better, the students never more contented, and any change could not but be for the worse. On the other hand, there are those who say that the existing conditions in our large hospitals are inadequate to meet the modern needs of student and of staff, that the teaching is defective, that the rejections at the examinations are shockingly high, that there is inadequate provision for research, and that an entire change is needed in the organization of the clinical departments of our medical schools.

Upon one point all are agreed—that in these islands during the past century an admirable system of teaching medicine and surgery has been evolved. I wish there were time to trace its historical growth; but the practical outcome is that the medical student, in his last years, lives and moves and has his being in the hospital. But with this there has been no internal development of the hospital at all commensurate with the growth of the science of medicine. The century-old custom prevails of a group of physicians and surgeons whose individual "services" are organized neither for teaching nor for research. On the Continent there has grown up a different system. In the medical schools there has gradually been organized separate clinics, each with a head, a graded staff, laboratories, and an organization resembling in every respect that of any other scientific department of the university. The burning question to-day is whether these systems cannot be combined, whether the Continental cannot be safely grafted on the English system. Practically in the large clinics of Paris the two have been combined for more than a century. The medical student is as much at home in the Paris hospital as he is in the English, but there is not everywhere the complete organization of the German clinics. My address this evening is a small contribution to this problem, as perhaps I am the only English speaking teacher who has combined successfully both systems, and I am going to give you my personal experience. I would not bother any audience with it did I not feel that, at the present moment, it may have a certain value. Montaigne somewhere remarks that to talk about oneself cannot possibly be done without detriment to the person talked about, but you will overlook, I am sure, the necessary personal element in the story.

When I began clinical work in 1870, the Montreal General Hospital was an old coccus- and rat-ridden building, but with two valuable assets for the student—much acute disease and a group of keen teachers. Pneumonia, phthisis, sepsis and dysentery were rife. The "services" were not separated, and a man for three months looked after medical and surgical patients, jumbled together in the same wards. The physic of the men who were really surgeons was better than the surgery of the men who were really physicians, which is the best that can be said of a very bad arrangement. The talk of the teachers was of the Royal Infirmary of Edinburgh, or of Glasgow, of the Meath Hospital, of the Rotunda, and of Bart's, of Guy's, of St. Thomas's; and in a town four-fifths French the lights of Paris medicine burned brightly. Scottish and English methods prevailed, and we had to serve our time as dressers and clerks, and, indeed, in serious cases we very often at night took our share in the nursing. There were four first-rate teachers of medicine on the staff—Howard, Wright, MacCallum and Drake—three of whom had learned at first hand the great language of Graves and of Stokes. The bedside instruction was excellent and the clerking a serious business. I spent the greater part of the summer of 1871 at the hospital, and we had admirable out-patient clinics from Dr. Howard, and a small group worked in the wards under Dr. MacCallum. An excellent plan, copied from an old custom of the *Lancet*, was for the clinical clerk to report the cases of special interest under *Hospital Practice* in the local medical monthly. My first appearance in print is in the *Canadian Medical and Surgical Journal*, reporting cases from Dr. MacCallum's wards. Our teachers were men in whose busy lives in large general practice the hospital work was a pleasant and a profitable incident. A man like Palmer Howard got all that was possible out of the position, working hard at the hospital, studying the literature, writing excellent papers, and teaching with extraordinary care and accuracy; naturally such a man exercised a wide influence, lay and medical. I left the old General Hospital with a good deal of practical experience to my credit and with warm friends among the members of the staff.

In the summer of 1872 after a short *Rundreise*, Dublin Glasgow, and Edinburgh, I settled at the Physiology Laboratory, University College, with Professor Burdon-Sanderson, where I spent about fifteen months working at histology and physiology. At the hospital across the way I saw in full swing the admirable English system, with the ward work done by the student himself the essential feature. I was not a regular student of the hospital, but through the kind introduction of Dr. Burdon-Sanderson and of Dr. Charlton Bastian, an old family friend, I had many opportunities of seeing Jenner and Wilson Fox, and my notebooks contain many precepts of these model clinicians. From Ringer, Bastian, and Tilbury Fox, I learned, too, how attractive out-patient teaching could be made. Ringer I always felt missed his generation, and suffered from living in advance of it.

The autumn semester of the next year was spent in Berlin, where I had my first introduction to the medical clinic on a large scale. Professor Burdon-Sanderson had given me a letter to Frerichs, who very kindly assigned places in the arena of his clinic to Dr. (afterwards Sir) Stephen Mackenzie, and to Dr. (afterwards Sir) Charles Hutchinson, and myself. To Hoffmann, Riess and Ewald, his assistants, we were under obligation for many attentions. The other clinic of the Charité was in charge of Traube. The experience of the semester was invaluable. Systematically, day by day, the more important cases of the wards were shown, the symptoms, pathology, and treatment discussed at length. To each case a student was called, who was supposed to take charge of the examination and to answer questions. Sometimes this was serious for the student, though very often quite formal. He was supposed to keep himself informed of the progress of his patient day by day. I remember one morning Professor Frerichs called down a student who had had a case the day before, and he asked, "How is your patient this morning, Mr. Schmidt?" To which the reply, "Very well indeed, very well; he is much better than yesterday." To which the professor replied in his slow, quiet way, "Very well indeed; he died this morning; you will see what was the matter shortly."

The wealth of material in each department, the systematic arrangement of the clinic, the graded assistants, all men of experience working at the problems of disease, was a striking contrast to the small hospital service of the London clinician, with his single house-physician and absence of all laboratory accommodation. Traube made a great impression upon me as an ideal physiological clinician, and to the three volumes of his *Gesammelte Beiträge* I still turn for clinical information.

The first five months of 1874 I spent in Vienna attending the clinics of Hebra, Bamberger and Widerhoffer. In Bamberger I found another ideal clinician—accurate, painstaking, devoting the whole morning to his teaching and "rounds."

When I returned to Montreal in September, 1874, the Professor of the Institutes of Medicine had had to retire on account of heart disease, and instead of getting, as I

had hoped, a position as his demonstrator, the faculty appointed me lecturer with the ghastly task of delivering four systematic lectures a week for the winter session, from which period dates my ingrained hostility to this type of teaching. Four years in the *post-mortem* room of the general hospital, with clinical work during the small-pox epidemic, seemed to warrant the governors of the general hospital in appointing me, in 1878, full physician, over the heads—it seems scandalous to me now—of the assistant physicians. The day of the election I left (with my friend George Ross) for London to take my Membership of the College of Physicians and to work at clinical medicine. For three months we had a delightful experience. Murchison, whom I had seen before in 1873, was most kind, and I do not think we missed one of his hospital visits. He was a model bedside teacher—so clear in his expositions, so thorough and painstaking with the student. My old friend Luther Holden introduced us to Gee, in whom were combined the spirit of Hippocrates and the method of Sydenham. Fred. Roberts, at University College Hospital, showed us how physical diagnosis could be taught. We rarely missed a visit with Bastian and Ringer, and at Queen Square I began a long friendship with that brilliant ornament of British medicine, Gowers. With my old comrade Stephen Mackenzie we went to Sutton's Sunday morning class at the London—his "Sunday School" as it was called—and we learned to have deep respect for his clinical and pathological skill. I mention these trivial details to indicate that before beginning work as clinic teacher I had at least seen some of the best men of the day.

In the summer session of 1879 I had my first clinical class. We worked together through Gee's *Auscultation and Percussion*, and in the ward visit, physical diagnosis exercises, and in a clinical microscopy class the greater part of the morning was spent. I came across the other day the clinical notebook I had prepared for the students with a motto from Froude, "The knowledge which a man can use is the only real knowledge, the only knowledge which has life and growth in it, and converts itself into practical power. The rest hangs like dust about the brain, or dries like raindrops off the stones." The next five years passed in teaching physiology and pathology in the winter session and clinical medicine in the summer. In 1884 I spent four months in Germany, chiefly at Leipzig, working at pathology with Weigert, and clinical medicine with Wagner, a model teacher who devoted the whole morning to hospital work, and whose clinic was splendidly arranged for post-graduate study. After a preliminary visit to the ward he would enter the amphitheatre with clock-like regularity, and day by day demonstrate the more important cases, always finishing the morning's work with a visit to the *post-mortem* room.

This year I accepted the chair of clinical medicine in the University of Pennsylvania, Philadelphia, the premier medical school of the United States, founded in 1789 by Morgan, Shippen, and Wistar, a group of men who had come strongly under the influence of John Hunter. The teaching of medicine was by lectures and the theatre clinic, which, with the large classes and short period of study, had become an important educational feature. In the hands of a man like William Pepper it resembled rather the larger French clinic, but all through it was an affair of the professor, who demonstrated three or four cases, and dwelt specially upon the diagnosis and treatment. Ward classes for physical diagnosis were in vogue, but clinical clerks were unknown and theoretical lectures occupied a large share of the student's time. The University Hospital and Blockley, the large city hospital, contained an abundance of clinical material which could be utilized for physical diagnosis and for general clinical instruction. I started a small clinical laboratory, which was in charge of Dr. George Dock, now Professor of Medicine in St. Louis. At the Infirmary for Nervous Diseases I became associated with that remarkable man, Dr. S. Weir Mitchell whose career illustrates how a great clinician may develop apart from academic influences or work. The pleasantest memories of five years' sojourn in the "Quaker city" are associated with my friendship with this modern Francesco Redi.

The opening of the Johns Hopkins Hospital in 1889 marked a new departure in medical education in the United States. It was not the hospital itself, as there were many larger and just as good; it was not the men appointed, as there were others quite as well qualified; it was the organization. For the first time in an English-speaking country a hospital was organized in units, each one in charge of a head or chief. The day after my appointment I had a telegram from Dr. Gilman, president of the university, who had been asked to open the hospital, to meet him at the Fifth Avenue Hotel, New York. He said to Dr. Welch and me: "I have asked you to come here as the manager is an old friend of mine, and we will spend a couple of days; there is no difference really between a hospital and a hotel." We saw everything arranged in departments, with responsible heads, and over all a director. "This," he said, "is really the hospital, and we shall model ours upon it. The clinical unit of a hospital is the exact counterpart of one of the subdivisions of any great hotel or department store."

Fortunately the university had not enough money at first to open the medical school, so that we had several years to wait, during which there was only post-graduate teaching, and we were able to complete our organization.

I am going to show you, illustrated by lantern slides, the method of work gradually adopted in the medical unit. But first let me say that we had the good sense to make a high standard for entrance to the school, either the B.A. or the B.Sc. Through the influence of Professor Newell Martin, to whom American biological science owes a deep debt, and Drs. Remsen and Welch, an admirable three years' preliminary course to medicine was offered by the university.

By the time the first class of medical students had reached the final stage the hospital was in very good working order. The medical unit consisted of about seventy beds (the number gradually increased to above one hundred), a large out-patient department, and a clinical laboratory close to the chief wards. In charge was the head, *ex officio* professor of medicine in the university, a resident staff of first, second, and third assistants (nominated by the professor), a fourth assistant in charge of the laboratory; and in addition four house physicians, appointed annually. The first assistant, a man of experience, remained for some years, and in the absence of the chief was in complete control of the department. He had rooms in the hospital and was paid £200 a year, half by the hospital, half by the university. All of the assistants were engaged in teaching and were paid. The appointments were for no fixed period, and during the sixteen years of my control there were only five first assistants, Dr. Lafleur, now Professor of Medicine at McGill, Dr. Thayer, Professor of Clinical Medicine at the Johns Hopkins Hospital, Dr. Futcher, Associate Professor of Medicine at the Johns Hopkins Hospital, Dr. McCrae, Professor of Medicine at Jefferson College, Philadelphia, and Dr. Cole, at present Director of the hospital connected with the Rockefeller Institute. In each instance these men had lived as junior and senior assistants in the hospital for seven, eight, or more years. I had the good fortune to have in charge of the clinical laboratory for some years Dr. Emerson, now Professor of Medicine in the University of Indiana.

I have always felt that the success which followed this experiment—for such it was in hospital work in the United States, at any rate—was due to the type of men we had as senior assistants in the various departments. We chose the best that were to be had; the nomination was in the hands of the chief of the department; they were given responsibility, encouraged to teach, and to write, and their professional development was promoted in every way. An excellent plan, greatly favoured by the director of the hospital, Dr. Hurd, was to allow the senior assistants every couple of years a vacation of from four to six months to go abroad for study. The out-patient section of the medical unit was in charge of a separate staff, usually men who had been senior assistants and had gone into practice in the city. There were three; each took two days a week, and had his own staff of three or four assistants, and all were directly engaged in teaching. You may gather from this some idea of the size of a medical unit and of the number of men at work in it, at least twenty-three or twenty-four when I left the hospital. This may be said to be an impossible task for one man to control. Not at all; it is all a question of organization, of subdivision of labour, and of co-operation among workers,

and the introduction into a department of modern business methods.

To come now to the actual work. The first duty in the unit is the care of the patient. For the sake of hospital managers I would like to make a statement. If one wishes patients well taken care of, their diseases thoroughly studied, and their treatment in every detail up to date, have medical students in the wards and out-patient departments. They represent the suprarenal extract of the body medical, maintaining the tonus and furnishing the working stimulus. A man's attitude towards his fellow-creatures is largely temperamental. If naturally devoid of the milk of human kindness, to assume a kindly interest in the sick is impossible. This was the meaning of that striking remark of Hippocrates that to a proper love of the profession must be joined a love for humanity—or words to that effect. In any ward visit one can see immediately the spirit in a hospital—whether patients are regarded as just so much material, or as our brethren deserving under all circumstances of every possible consideration and kindness. I have always felt that in this respect we can all take a lesson from our French colleagues, whose gentle courtesy towards their patients has always made a deep impression upon me. In the wards of the Bicêtre, or of the Salpêtrière, where congregate the very dregs of humanity, the greetings of the old men and women show how they feel that in their physician one friend at any rate is left.

The second great function of the clinic is concerned with teaching—assistants, students, nurses. One of the special advantages of an organization of this kind is the progressive training of a group of young men who take part in the work and are taught progressively, often unconsciously, how to teach.

The first assistant is the understudy of the chief, the second of the first, the third of the second, and any one at a moment's notice is able to take the duties of the other. If Professor Halstead was absent at any time or during his summer vacation, the first assistant did the operative work and had charge of the clinic. If I was away, my first assistant took my place, and did my day's work in the hospital. In this way a group of men are educated who are fit to take teaching positions, and a source of the most legitimate pride in a teacher is to have his old associates scattered over the country in responsible positions. The organization of the university clinic exists primarily for the training of the student, who has a right to demand systematic, thorough, and punctual instruction, enough to give a working knowledge of his profession. With students in a hospital as part of its machinery, and if you do not try to teach them too much or lecture them too much, in two years, given a thorough preliminary training, they should get a very fair knowledge of medicine and surgery.

Junior Clinical Class.

We divided the classes into junior and senior, representing the third and fourth years. As our numbers were limited we rarely had more than sixty to seventy in each. They were arranged in three groups in each year—medical, surgical, obstetrical and gynaecological—each of which spent about three months and a half in medicine and surgery and the rest of the time in obstetrics and gynaecology. Let us take first the junior class. A strong believer in the out-patient department for teaching purposes we utilized this almost exclusively for the junior students. The arrangement was as follows:

(*a*) *Physical Diagnosis.*

The three men in charge of the out-patients were demonstrators or associates in medicine, and responsible for the routine instruction in physical diagnosis. To each one a small group of students was assigned who day by day helped in the work and were taught practically physical diagnosis. As the school grew this teaching fell into the hands of experienced men such as Dr. Thayer, Dr. Futcher, and Dr. McCrae, and it was with special satisfaction that I saw the full development of this work. The out-patient department was arranged with suitable teaching rooms and a small laboratory. When the Phipps Tuberculosis Dispensary was opened as an annex, each member of the junior class passed through it in the routine of training. The out-patient room offers much the best opportunities for the beginner. He sees the sick man or the sick child as he is, and he can be taught much more satisfactorily how to take the histories provided that he has plenty of time, numerous instructors, plenty of patients, and ample accommodation. In medicine the work of a junior student was to get a knowledge of disease and of its methods of recognition in the out-patient department. To supplement this, three times a week, at the close of the out-patient hours, was held—

(*b*) *A Systematic Out-patient Clinic.*

I used to call this an observation class, as its primary function was to train men in the use of their senses. My instruction to the assistants was "send in anything the men can see or handle." The picture (Fig. 1) shows the



Fig. 1.—Out-patient clinic.

out-patient clinic at work in a room large enough to hold thirty men comfortably seated. Students were taken in routine, and by this next picture (Table I) it is seen how

Table I.—*Cases for the Month of January, 1901.*

Date.	Clerk.	Case.
Jan. 3	Riggins	Periostitis, luetic.
,, 3	Oschner	Chlorosis.
,, 10	Wright	Haemachromatosis.
,, 10	Scholl	Enlarged liver, syphilitic.
,, 12	Simpson	Cancer of stomach.
,, 12	Steele	Lues, secondary.
,, 12	Talant (Miss)	Tachycardia.
,, 15	Silverberg	Aneurysm, carotid.
,, 15	Wight	Angiomata, nasal haemorrhage.
,, 15	Williams (Miss)	Dementia praecox.
,, 15	Williams	Lues, secondary.
,, 17	Arsdall	Phthisis.
,, 17	Browne	Aneurysm, thoracic.
,, 19	Auer	Haemoglobinuria.
,, 19	Briggs	Thickened pleura.
,, 22	Bruns	Epithelioma of lip.
,, 22	Bryan	Acute pleural effusion.
,, 24	Bush	Tuberculosis, pulmonary, pleural, and peritoneal.
,, 24	Churchman	Malignant disease of oesophagus.
,, 24	Clarke	Gout.
,, 29	Cook	Pleurisy, tuberculous.
,, 29	Coons	Tabes, mitral disease.
,, 29	Dolley	Polypnoea, neurasthenia.
,, 29	Duffy	Pulmonary tuberculosis.

the scheme worked. The clerk's name was put down, the name of the patient, and then the ward if he was admitted.

The clerk was expected "to keep track" of his case, and to report on it in a way that you will hear in a few minutes. Upon one strong conviction I have always tried to act—to make as far as possible the student participate in the teaching. The next picture (Table II) illustrates

TABLE II.—*1900-1901.*

Date.	Name.	Subject.	Read.
Oct. 6	Bryan	Pediculi and peliomata	x. 14
,, 9	Dohme	Method of healing of aneurysm	x. 16
,, 9	Bush	Fowler and Fowler's solution	v. 8
,, 9	Coons	Virchow's original description of leukaemia	x. 30
,, 11	Duffy	Huntingdon's paper on chronic chorea	x. 20
,, 16	Ferry	Lung stones	x. 15
,, 16	Frankenthal	Gastric ulcer at early age	x. 25
,, 18	Haynes (Miss)	Diagnosis of varieties of tapeworm	x. 25
,, 20	Hirshberg	Hippocrates's description of phthisical chest	xi. 12
,, 25	Lehr	Bronchiectasis, pathology of	xi. 11
,, 30	Reede	Round-up for October	xi. 8
Nov. 13	Briggs	Argyria, smallest amount of nitrate of silver to cause,	xi. 22
,, 13	Williams (Miss)	First description of mitral stenosis	xi. 22
,, 15	Wright	History of Peruvian bark	ii. 21
,, 17	Bruns	Nerve changes in herpes zoster	xi. 22
,, 17	Clarke	Visible peristalsis in pregnant uterus and in distended bladder	xii. 4
,, 22	Cook	Analysis of lithia waters	xii. 13
,, 24	Dolley	*Re* discovery of thyroid feeding	xii. 11
,, 24	Duffy	St. Vitus	xii. 24
,, 27	Ferry	Round-up for November	xii. 5
Dec. 4	Frankenthal	Subcutaneous fibroid nodules	xii. 6
,, 6	Erving	Glycosuria in tuberculosis	xii. 11
,, 6	Glenny	Who first described the *bruit de diable*	xii. 13
,, 6	Hardy	Weir Mitchell's paper on post-hemiplegic movements	xii. 20
,, 11	Lootz (Miss)	*Re* prognosis of diabetes in the young	i. 3
,, 13	Haviland	Acquired lues in congenital syphilis	i. 8
,, 17	Karsted	Necrosis in chrome workers	iii. 7
,, 20	Meisenhelder, J. E.	Round-up for December	i. 5

how this was carried out. At the top of the list you see the words "pediculi" and "peliomata." A case had come in with this association. It is an interesting point, and Mr. Bryan, the student who happened to be called up, was asked to report on the subject the next week. If you go down the list you will see what a motley group of subjects came under discussion. Take, for example, No. 3 on the list, Fowler. I would ask: "Who is Dr. Fowler who introduced Fowler's solution? Where was the article published?" Of course, Mr. Bush had not the faintest notion; but he was at once reassured when I told him that I also did not know. Nor could he give an affirmative to the next question: "Where will you look for it?" In such cases they were always referred to the *Index Catalogue* of the Surgeon-General's Library; sometimes to Neale's *Medical Digest*, and if the books were not in our own library they could be procured from the Surgeon-General's. Two things were required from the student who presented his report—brevity and lucidity—and, as far as possible, men were encouraged to speak, not to read from a MS. You see from the list how varied were the subjects presented during one semester. I got a great deal of instruction myself, we saw a great deal of valuable medical literature, it did not take very much time, and it was a great help in the education of the individual student.

On the table you will see at the end of each month the word "round-up," which we took from a practice of the Western cattle ranches. The last man called at the end of each month had to report the next week on the cases that had been before us during the month. In this way we kept in touch with them, and at the end of the session a complete report was presented by the eight or nine men who had had the monthly round-ups. Table III shows the

TABLE III.

(Cases, 230; deaths, 15; mortality, 6.5 per cent.)

	Cases.	Deaths.
1. Specific infectious diseases	61	6
2. Diseases of digestive system ...	35	7
3. Diseases of respiratory system ...	21	0
4. Diseases of circulatory system ...	32	1
5. Constitutional diseases	17	0
6. Diseases of blood and ductless glands	20	0
7. Diseases of kidney	5	1
8. Diseases of nervous system	22	0
9. Diseases due to animal and vegetable parasites	4	0
10. Diseases due to intoxications ...	6	0
11. Pregnancy	1	0
12. Anatomical and pathological curiosities	6	0

analysis of the session's work. You see that 230 cases were presented in 1899-1900, and I pass round a typewritten copy of the report which each student could procure. It illustrates the wealth of material available for teaching in the out-patient department of any large general hospital. You will be impressed with that first item on the

TABLE IV.—*Specific Infectious Diseases.*

	Cases.	Deaths.
A. *Malarial Infection* (12 cases; 1 death).		
(*a*) Aestivo-autumnal	3	1
(*b*) Single and double tertian	9	0
October	5	
November	3	
December	2	
February	1	
(11 cases; history of chills and fever during summer.)		
April (tertian infection)	1	
(No history of chills and fever during previous summer.)		
Fatal case (aestivo-autumnal infection): Malarial nephritis.		
B. *Typhoid Fever and its Sequelae* (5 cases).		
(*a*) Abortive typhoid (October and November)	2	0
(*b*) Obliteration of femoral vein (ten years' duration	1	
(*c*) Hemiplegia with athetosis (two years' duration, developed three weeks after attack)	1	
(*d*) Peripheral neuritis (seen October, 1899, developed ataxia, at present greatly improved)	1	
C. *Sequelae of Diphtheria* (4 cases).		
(*a*) Peripheral neuritis (all in children developing during or from two to four weeks after attack	4	0
Pathological lesion—		
(1) Paralysis of palate in	4	
(2) Ptosis in	3	
(3) Paralysis of iris in	1	
(4) Paralysis of legs developing two weeks after paralysis of palate ...	1	
(All made complete but slow recoveries.)		
D. *Pneumonia* (1 case with extensive pleurisy) ...	2	0
E. *Varicella*	1	0
F. *Parotitis*	1	0
(The last two patients were both negro children.)		
G. *Febricula*	1	
H. *Amoebic dysentery*	1	
I. *Gonorrhoeal Arthritis* (five years' duration, girl 15)	1	
J. *Syphilis* (other than of the liver)	15	0
(*a*) Secondary (rash appearing five weeks to eight months after primary sore) ...	9	
(*b*) Tertiary	4	
(1) Perforation of palate	1	
(2) Periostitis	1	
(3) Arthritis...	1	
(All in women 25 to 40 years.)		
(4) Gumma of scalp	1	
(*c*) Congenital	2	0
(1) Girl, 18		
(2) Negro child, 3 months.		
K. *Tuberculosis*	18	5
(*a*) Pulmonary	15	4
(12 men, 3 women, about equally divided between negroes and whites. 10 under 3 years, 5 over 30 years, greatest number between 20 and 30 years.)		
(*b*) Peritonitis	1	1
(*c*) Ulcer of lip	1	0
(*d*) Lupus (5 years' duration)	1	0

list—61 cases of specific infections. It is a great advantage to see these in the unwashed, unprepared condition in which they present themselves at the hospital; and an analysis such as you see in the next figures could only be arranged by a great deal of co-operative work among the students. Table IV (p. 13), a page of the report, shows the analysis of the cases of specific infectious diseases. Of course such a rich group of interesting cases could only be obtained through the keen co-operation of assistants always on the look-out after suitable cases to show at this third-year clinic. For the teacher himself this type of



Fig. 2.—Clinical laboratory.

class is ideal, only it must be thoroughly practical, theoretical discussions must be tabooed, and the student must do as much work as possible. It is an ideal way in which to begin the study, as the young men are encouraged to look up the literature, and to visit their own cases whether in the homes or in the wards, and it gives good men an opportunity to show what they could do in the way of presenting the reports.

(c) *The Clinical Laboratory.*

The young medical student needs above all things method and technique, and to be trained early in the use of instruments of precision. In the physiological and pathological classes he becomes adept in the use of the microscope, etc., and when he comes to the hospital side



Fig. 4.—Ward visit.

he should have opportunities to apply this knowledge in the study of disease. He may get this haphazard, doing work in the out-patient rooms and in the wards, but it is very much better to have well-organized instruction extending throughout the entire session. In the scheme which we followed each student had his place in the laboratory with a microscope, always a good one, rented to him by the school for £1 a year. Here three afternoons a week throughout the entire session the junior class had routine instruction in clinical laboratory methods. The next two pictures (Figs. 2 and 3) represent the class at work. How much really good work may be done in classes of this sort may be gathered from Emerson's *Manual for the Clinical Laboratory*, which is largely based on material collected by the students. I was fortunate to have in charge of the laboratory such men as Lazier (who sacrificed his life in the yellow fever investigations), Camac, Emerson, and Cole.

In a laboratory of this type the student feels at home, with his own apparatus and reagents; here he can do his private work, always in reach of skilled assistance, and in a scientific atmosphere, as researches were always in progress.

The junior clinical student had plenty to do, with physical diagnosis classes, the routine work of the out-patient department, the tri-weekly out-patient clinics, and



Fig. 3.—Clinical laboratory.

three afternoons weekly in the clinical laboratory. He had one other class—

(d) *The General Clinic.*

The general clinic, which both the juniors and the seniors attended, and of the organization of which I will speak in a few minutes. You notice that the work of the junior student was almost exclusively in the out-patient department. There are those, I know, who feel that instruction may be better given to him in the wards, and that, as a senior, he appreciates more the out-patient department, but if the out-patient work is suitably arranged, and if teaching is made a predominant feature, there are many advantages in confining the work of the juniors to this section of the hospital. Of course, there is



Fig. 5.—Ward visit.

no objection whatever to the teaching of physical diagnosis in the wards, but one has to consider the patients.

Senior Clinical Class.

In the three chief subjects the men were assigned for work in the wards as clinical clerks or surgical dressers in groups of 20 to 25.

(a) *Ward Work.*

Each morning until 12 o'clock was free for it; the ward visit was made at 9 o'clock sharp. The number of beds assigned to each clerk varied—five, six, or eight, or even more. Under the direction of the house-physician, the clerk took the history and worked up the case, doing himself the various analyses. For this purpose each

clinical clerk had to have his own microscope, rented from the school, and his own place with the reagents, etc., in the clinical laboratory. The ward visit was on the plan with which you are so familiar. I show you a couple of pictures (Figs. 4 and 5) which illustrate its disadvantage—namely, the crowding round the bed—and in the next figures (Figs. 6 and 7) you may see the professor dictating a note or listening to a student making a report. Of a new case the clerk was encouraged to give orally a summary, not to read a full elaborate history. In this way he was again made to help with the teaching, and, in fact, he was encouraged to do as much of the talking as possible. The Socratic dialogue is the ideal bedside method, in which long harangues are out of place, and, after all, the priceless value of the system is not in the tongue of the teacher, but in the daily routine of personal contact with the patient, who is really the teacher. The assistants shared the ward work with me, and on alternate days, when I had the out-patient clinic, they made the visit with the clinical clerks.

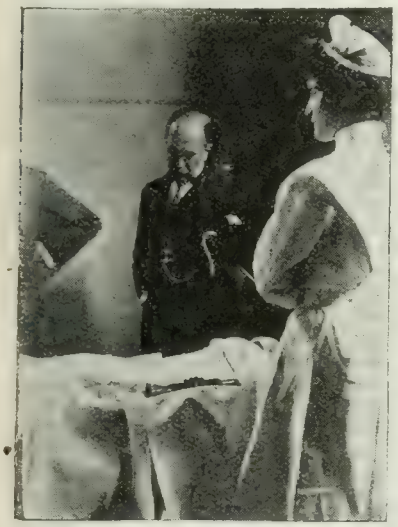


Fig. 6.—Ward visit.

(b) The General Clinic.

There are several methods of conducting what may be called the theatre clinic of a hospital. In the German method a series of cases is usually presented, on which the professor gives a more or less elaborate lecture. In France, from the days of Corvisart, the ward visit has been the feature, after which the teacher lectures, usually without the cases before him, on special affections. Sometimes these lectures are extraordinarily complicated.

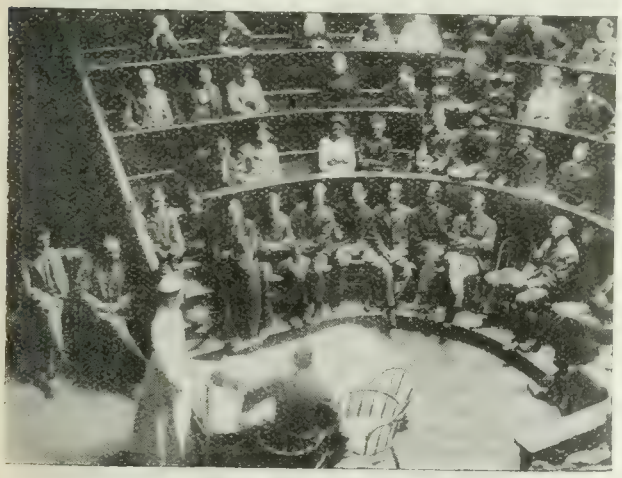


Fig. 8.—Theatre teaching.

I heard Dieulafoy lecture three successive Saturdays on the same case.

I utilized the theatre clinic largely to present to both the junior and senior students the general work of the wards. These next two pictures (Figs. 8 and 9) illustrate the theatre and the method of teaching. As far as possible we followed the seasons and their acute diseases; typhoid fever and malaria in the early autumn, then pneumonia as the winter progressed. Special emphasis was always laid on the more common affections. The clinical clerk described the main features of the case, if possible without his notes, talking, as I always insisted, to the back benches. This, again, was for a definite purpose—to teach the young fellows to control their vasomotors and to stand and think and talk simultaneously. In response to a question a keen student would give an answer that contributed not a little to the lecture itself. You notice on the second figure of the clinic (Fig. 9) the large blackboards. The lists of cases that you see represent an important feature of the clinic. As I mentioned, its special object was to present, week by week, to the third and fourth year students—all of whom were required to attend—the work of the wards. On the important diseases committees of the students were appointed to report. The tabulated lists on the blackboard represent the cases of typhoid fever and pneumonia entered week by week. Only the typhoid cases with complications were put up, but the entire experience of the clinic with pneumonia was presented. One of the first questions asked was for the chairman of the typhoid and pneumonia committees to report. In the longer list on the blackboard you see for the session 1900–1901 some 60 cases of pneumonia, very many of which were shown at the clinic, and all of which we reported upon. At the end of the session typewritten copies of these lists were circulated among the students. By the end of his fourth year a man could have a knowledge of at least 70 or 80 cases of pneumonia and of the complications of several hundred cases of typhoid fever.

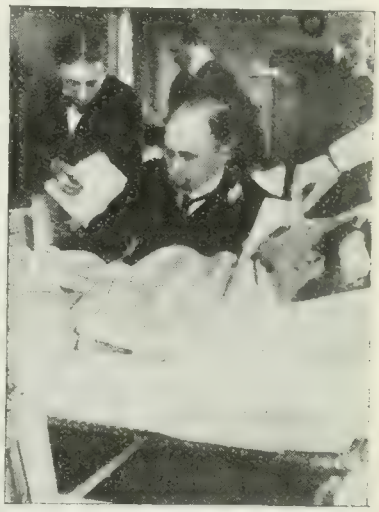


Fig. 7.—Ward visit.

Very special stress was laid upon this side of the work, and here again you see the important feature of making the student an active participant in the teaching. As far as possible groups of cases illustrating special features



Fig. 9.—Theatre teaching.

of disease were presented; very often an assistant participated in and was asked to present a case which he worked up specially. Sometimes we had a symposium conducted by the students. I remember on one occasion, when we had in the wards a number of cases of diabetes, the students held the clinic, and six of them presented the various features of the disease. Of course, they could not let the occasion pass without a joke, and on my table and in their buttonholes were sweet-peas! One last feature remains to be noticed. The concluding remark always was: What deaths? what *post-mortems?* If a *post-mortem* examination had been held, the clerk whose patient had

died was responsible for the demonstration of the lesions. In making it as far as possible a student's affair the clinic may lack the dramatic unity of the French or the thoroughness of the German, but I claim for the method an educational feature of a high order; well arranged by the assistants and students, there is one thing it will not miss—the power to draw large and appreciative audiences.

(c) Seminar Classes.

In a very busy clinic there is neither the time nor is there the necessity for systematic lectures, but even in a rich hospital service it is impossible to show the student even types of all diseases, so that it is necessary to supplement in some way the teaching of the wards, the dispensary, and the theatre. We managed this in two ways. One of the assistants held each week what is called a "recitation" class, in which the students were examined upon set subjects given out previously. Sometimes text-book chapters were put down for study, sometimes journal articles, and, as far as possible, the important literature of the subject discussed was placed on the table. In this way one feels sure that the student gets at least some knowledge of the more obscure and less common maladies.

Then, a couple of years before I left, the assistants and the clinical clerks started a weekly *seminar*, in which, seated about a long table, the important recent contributions in the literature usually to the diseases under observation were reported upon and discussed.

(d) Research.

The third function of the clinic is organization for research, a side of the work which presents many difficulties. If a laboratory man, the professor may neglect patients and students, and if an old time bread-and-butter clinician he may neglect the laboratory side. He sets the pace, but one thing is certain, that in a university clinic the interest of the student should be paramount.

Every patient presents problems for research, and the clinical clerk should be able to carry out the necessary investigations. For this purpose there must be skilled assistants, directly attached to the clinic, who are able to advise and control his bacteriological, chemical and physiological studies. For example, in pneumonia and in typhoid fever the bacteriological work should be done under skilled supervision, and the clerk should be able to make his own blood cultures or to plate out a stool. In gout and diabetes he should carry out his own chemical studies with the help of a trained clinical chemist in a laboratory attached to the clinic; and in a case of heart-block he should have at hand all the graphic and electrical apparatus necessary for this study. The student should himself carry out researches, particularly if he comes into the ward with a good chemical training. With reference to the arrangement of the laboratories one of two plans may be followed. In very large hospitals they may be concentrated in one building and even combined with pathology, but in the university medical clinic there are great advantages in having small laboratories of bacteriology, chemistry and pathological physiology associated directly with the wards.

In every university department the chief research must be done by the young assistants and special students under the direction of the chief, who fertilizes them with ideas. Here again it is a matter largely of organization, only I feel strongly that however important research may be every man associated with the clinic should take his share in teaching, and should be made to feel that the student is the pivot round which the machine works. Research becomes very absorbing, and in some men fosters a seclusive selfishness that is most deplorable. I can testify in an interesting way to the large amount of good work that may be done by the students and young assistants. When I left the Johns Hopkins Hospital, the graduates of the first eight years of the medical school presented me with twelve handsomely bound volumes containing just five hundred contributions they had made.

As briefly as possible this is a summary of my life as a clinical teacher. At a farewell dinner given to me by the profession of the United States and Canada, I expressed the pious wish that my epitaph should be, "He introduced routine bedside teaching into the United States"; and I think I may claim for my colleagues that in all the departments of the Johns Hopkins Hospital the English and Continental systems of teaching were combined with great advantage.

A Forecast.

Now, in a few concluding words, let me give you a forecast. I designedly took this subject for my address because the future is with you young men, who are certain to see within the next few years radical changes in the medical schools of this country. There are two important problems. Is it possible to organize in the English hospitals university clinics such as exist on the Continent, and such as those which we had at the Johns Hopkins Hospital? There are difficulties, of course, but they are not insuperable, and, once started, clinics of this type will be instituted in every school in the kingdom. Only let them be complete; the chief in full control, responsible for the teaching, responsible for the work of his assistants, and let them be well equipped with all modern accessories for research. The other problem is more difficult. Shall the director of such a clinic devote his whole time to the work, or shall he be allowed to take consulting work? For the former many advantages may be claimed, though the plan has nowhere yet had a practical trial. The amount of work in a modern clinic is enormous—quite enough to take up the time and energies of any one man in conducting the teaching, treating the patients, and superintending the researches. Then it is attractive to think of a group of super-clinicians, not bothered with the cares of consulting practice, and whose whole interests are in scientific work. It is claimed that as much good will follow the adoption of the plan of whole-time clinicians as has followed the whole-time physiologists and anatomists. Against it may be urged the danger of handing over students who are to be general practitioners to a group of teachers completely out of touch with the conditions under which these young men will have to live. The clinician should always be in the fighting line, and in close touch with the rank and file, with the men behind the guns, who are doing the real work of the profession. The question, too, is whether the best men could be secured; whether academic and scientific distinctions would satisfy these men. Then for the hospital itself, would it be best to keep our best in clinical seclusion? Would there not be the danger of the evolution throughout the country of a set of clinical prigs, the boundary of whose horizon would be the laboratory, and whose only human interest would be research? I say frankly that I am not in favour of the whole-time clinical teacher. This is not surprising, as my life has been largely spent in association with my professional brethren, participating in the many interests we have had in common. At the same time let me freely confess that I mistrust my own judgement, as this is a problem for young men and for the future. I know how hard it is "to serve God and mammon," to try to do one's duty as a teacher and to live up to the responsibility of a large department, and at the same time to meet the outside demands of your brethren and of the public. And if added to this you have an active interest in medical societies, and in the multifarious local and general problems, the breaking point may be reached. I had had thirty-one years of uninterrupted hard work. William Pepper, my predecessor in Philadelphia, died of angina at 55; John Musser, my successor, of the same disease at 53! After listening to my story you may wonder how it was possible to leave a place so gratifying to the ambitions of any clinical teacher: I had had a good innings and was glad to get away without a serious breakdown.

The German Central Medical Excursions Committee has arranged a tour for the study of winter health resorts and winter sports in Upper Bavaria and Tyrol. The tour will begin on January 22nd, starting from Munich and ending at Meran on January 31st. The places to be visited include Munich, Ebenhausen, Partenkirchen (Ettal, Oberammergau, Linderhof, Partnachklamm, Risser, Baader, Eibsee, etc.), Innsbrück, Gossensass, Bozen, Gries, Meran. The cost of this ten-day trip, including railway, sleigh and carriage travel, board and lodging, but not liquors or "tips," will be 175 marks (about £8 15s.). Communications on the subject should be addressed to the Deutsche Zentralkomitee für aerztliche Studienreisen 9, Potsdamerstrasse, 134B, Berlin, W.

ON THE TEACHING OF CLINICAL MEDICINE.

BY J. MACKENZIE, M.D., F.R.C.P., LL.D.

THE problems of medical education and of medical research at present engage the attention of the profession not only in this country but in many others as well. Two interesting reports by Abraham Flexner—one on medical education in America and Canada, and the other on medical education in Europe—have been published by the Carnegie Foundation for the advancement of teaching. The Royal Commission on University Education in London has included medical education within the scope of its work, and has examined witnesses and drawn up recommendations, and has appointed a Departmental Committee to give effect to the recommendations.

In the two reports by Flexner and in the evidence of the medical witnesses examined by the London University Commission there is a very large amount of information and many suggestions from teachers of medicine drawn from different parts of the globe, of experts in various sciences, and of education authorities, practical and doctrinaire. It might be anticipated that the information obtained in this way would provide material from which the best plan of medical education could be evolved. Nevertheless, a critical examination of the evidence given and of the conclusions drawn from such evidence, in so far as the evidence relates to clinical medicine, reveals defects of such a serious nature that any scheme elaborated on such evidence and suggestions alone will do little to advance the cause of clinical medicine, and may even retard its progress for an indefinite number of years. The reason for this prediction is, that points which are essential to a medical education and to the progress of clinical medicine have been realized neither by the witnesses nor by the Commission.

CLINICAL MEDICINE AS A SCIENCE.

In order to understand why it is that clinical medicine fails to advance, or advances so slowly, it is necessary, in the first place, to consider the features peculiar to clinical medicine as a science.

All sciences have evolved gradually from the stage when the term "science" could not be applied to them. In the term "science" is included the accurate observation and the verification of all statements, and the elimination of all statements based only upon tradition and not verified by actual observation. While most sciences, as chemistry, mathematics, and astronomy, have to a great extent passed out of the traditional stage, medicine has not yet begun to emerge from this stage, and it is still so encumbered by tradition that it hardly deserves the name of a science.

While the principles of investigation in all sciences are identical, the methods by which the sciences are pursued are naturally extremely varied, according to the phenomena that have to be investigated. Thus the science of geology requires different methods for its pursuit from that of chemistry. If, however, the chemist imposed his methods upon the geologist and pursuaded him to devote his time to laboratory work alone, then no doubt the geologist would acquire some new facts as to the chemical composition of rocks, but if he neglected the means of ascertaining by actual observation the distribution of the strata he would acquire an extremely limited knowledge of the science of geology. If, moreover, a professor of geology was to be selected for teaching purposes because he had spent his whole time in the laboratory and never studied the subject by investigation in the country, the pupils of such a teacher would never be adequately instructed in the subject, and the science would cease to be progressive or make tardy advance only in less important lines.

This illustration applies to clinical methods. The pursuit of this subject as a science has been diverted from its natural course, and it has endeavoured to advance by imitating the methods of other sciences, and not by developing its own methods. The clinical laboratory and the wards of the hospital represent the chemical laboratories in the above illustration, and the concentration of effort on these limited fields has so restricted the progress of medicine, and the opportunities for its study, that the cry has gone up in all quarters of the inadequate advance of clinical medicine. Before any real advance can be made the methods peculiar to clinical medicine must be adopted, and the field of observation must extend far beyond the hospitals and laboratories. The truth of this proposition will be appreciated as I develop the subject.

HOW DISEASE IS PRESENTED TO THE MEDICAL PROFESSION.

To understand how medicine should be advanced it is necessary that we should appreciate how its problems present themselves to the medical profession.

The diagnosis of any disease depends upon the perception of the signs and symptoms which it creates.

The signs are of two kinds, those of which the patient is conscious, which may be summed up as an absence of well-being—*subjective symptoms*—and those symptoms where there is some physical sign of disease—*objective symptoms*.

In the early stages of disease the symptoms are nearly always limited to the first of these kinds—the patient's consciousness of there being something amiss. If it is due to some affection of an organ, then the function of that organ is disturbed, and as health may be considered as the harmonious action of the various organs, so ill-health is the disturbance of that harmony, and of this disharmony the patient becomes conscious. If the individual is invaded by some toxic influence, microbic or chemical, then this invasion is again first shown by the patient's consciousness.

It follows, then, that before any physical sign is perceptible the individual's sensations give warning of the presence of a disease process, and a physical sign may be taken as an evidence that the disease process has advanced so far as to cause a change in the structure of an organ, or has disturbed the function of that organ very markedly, as in altered action of the heart.

Recognizing, then, that the early stages of the disease are chiefly made manifest by subjective symptoms, and the advanced stages have in addition physical signs more or less marked, it will be well to see what opportunities the profession have of detecting disease at its different stages.

It will be convenient for the purpose in hand to contrast this subject from the standpoint of disease as it presents itself in the hospitals and in general practice.

First, then, in regard to the hospital patients. It may be said that, generally, patients do not go to hospitals until the disease has advanced so far as to cause incapacity for work, or when it has become fairly well established. So frequent is a feeling of ill-health temporary and transient, that many people in the earlier stages of disease look upon the symptoms as being due to a transient complaint, and continue their work. It is only when the illness persists that they seek hospital advice. Many may come when the disease is so slightly advanced that there are no physical signs, and these patients, unless manifestly ill or in distress, are treated by the junior physicians in the hospital.*

If physical signs are present, then they are given more attention, and if the physical sign is a rare one, or the patients be very ill, they are then admitted into the wards of the hospital, where they are under the care of the senior and more experienced physicians. Here they may remain for a few weeks or months, and careful examinations are repeatedly made by means of the resources of a well-equipped hospital. If they drift and die there follows a careful *post-mortem* examination.

The general practitioner has the opportunity of seeing patients under very different circumstances. It must be remembered that the vast proportion of the sick passes into his hands, and that the vast majority of people never go near a hospital even when they are dangerously ill. The family doctor is often consulted for the most trivial ailments,

* I may here remark that I was recently for three years a physician of the out-patient department of a consumption hospital, and during the whole of that time I never saw one patient in the early and curable stage. In fact, the last place for discerning the early and curable stage of consumption is in the wards or out-patient department of a consumption hospital, for the simple reason that patients never go to those places until there are signs of some chest affection long after the invasion has taken place.

and as these trivial ailments are frequently the first sign of a long protracted disease he has the opportunity of seeing many illnesses at a stage earlier than the hospital physician. As these patients are always under his observation he has the further opportunity of seeing the signs of disease progress until they show definite physical signs, and after this he can watch impaired individuals for years until they die.

From this brief statement it will be seen that as far as opportunity goes the general practitioner sees disease earlier and can watch its progress better than the hospital physician.

Hitherto, unfortunately, these advantages which the general practioner has have never been properly made use of. The investigation into disease has been left almost entirely in the hands or under the direction of the hospital physician, whose opportunities do not permit him to see the earlier stages, except as they appear in the out-patient department. He has no real opportunity of watching the progress of a disease over an extended period, for in hospital the duration of study of a patient is comparatively limited, and it is not possible for the physician to follow and watch the changes that gradually ensue as the disease progresses.

Reasons for the Tardy Advance made by Clinical Medicine.

It is worth while to consider more fully how clinical medicine has failed to use the opportunities for the treatment and detection of disease in hospitals — the field invariably assumed to be the best for research.

It is an axiom that the earlier a disease is recognized the more susceptible it is to treatment, and next to preventing disease, the most imperative duty of the physician is to recognize it at its very earliest stage. If we review our knowledge of the various diseases, we must recognize that we are profoundly ignorant of the earliest stages of almost all chronic diseases. The early history of consumption, of cancer, of rheumatoid arthritis, of gastric ulcer, of appendicitis, of arterio-sclerosis, is a complete blank. It is true that here and there some will declare that they know these stages as early as it is humanly possible to do so, but a critical examination of their evidences will show how little basis there is for the assertion, and if the manner in which disease is investigated be considered, it will be found that, in the nature of things, it has been physically impossible for these early stages to have been discovered. Consider how disease is investigated in the hospitals. In the wards we have the senior and more experienced physicians, helped in some cases by a number of assistants trained in particular departments, so that all available means of diagnosis and treatment are brought to the consideration of the cases. The majority of the cases have got some well-marked physical sign, and these signs are studied from every point of view. As these signs indicate some damaged tissues, the disease has passed beyond the stage of simple functional disturbance, and has caused some alteration or destruction of normal tissue. This stage in chronic disease is for the most part incurable in the sense that the normal structure cannot be restored, and all that can be hoped for is to stay the progress of the disease. In many cases this is not possible, and the patient dies, and then the opportunity for the further study of the disease is obtained by the *post-mortem* examination.

It is in the wards that the greatest amount of teaching is carried on, and there also that the ardent student seeks to pursue the investigation of disease. Under such conditions disease is detected by physical signs. The teacher demonstrates the disease by the physical signs. Most of the methods are constructed so as to discover physical signs, and, consequently, physical signs occupy a dominant position in the minds of teachers, assistants, and students.

The other field for observation in hospitals is the out-patient department. Here disease presents itself in a more varied aspect. Patients come here complaining of sensations which tell them there is something wrong. The patients are seen by junior physicians who are beginning their study of disease, who have been trained in the wards, and who are adepts in the detection of physical signs. They have to select cases that are suitable for the wards, and in the main are guided in this selection by the presence of physical signs. Where there is teaching done in the out-patient department these cases with physical signs are selected, for the junior but imitates the senior in the wards. Those patients with no physical signs, and who show no signs of grave illness, are either dismissed with a perfunctory examination, or handed over to a house-physician.

The existence of such conditions shows the topsy-turvy state of clinical medicine. The early and curable stage of disease is practically neglected, and all the energy of the more experienced physician with his numerous assistants directed to the study of disease after it has passed from the curable stage. It is notorious that the early stages of disease are the most difficult to recognize, the signs being so slight and elusive, while it is comparatively easy to recognize disease after it has advanced so far as to produce physical signs. Yet the easiest and least useful part of investigation is reserved for the experienced physician and all his assistants, while the more difficult and most necessary part of the work is handed over to the least experienced, or even the inexperienced physician.

Or put the matter in another way. The patient with a disease in the early and curable stage receives the least attention, and is actually not considered a fit subject for thorough examination and treatment till his disease has become firmly established and for the most part incurable.

What has been said of the neglect of the early and curable stage of disease can also be said of the prognosis of disease. It is no doubt true that in many cases of a rapidly progressive nature, or in the later stage of some chronic disease, the prognoses have been accurately enough worked out. But it is no exaggeration to say that the methods by which a prognosis can be arrived at have never yet been appreciated, because teachers have recognized neither their limitations nor their lack of opportunity.

Hospital patients are under observation only for brief intervals, and though hospital physicians may make attempts to watch patients, yet the circumstances of the case prevent them doing this in a competent manner. Take a case of rheumatic fever and the results that follow —a damaged heart. The hospital physician sees the acute attack and may detect an endocarditis. The patient leaves the hospital with a more or less damaged heart. For a number of years the heart maintains an efficient circulation. By-and-by heart failure begins to appear, and the hospital physician may have him under observation during a few attacks of heart failure until he dies, when he may get a *post-mortem* examination. During the patient's life, dating from the period of his rheumatic attack, changes of a slowly progressive nature have been going on, modifying the heart's action in a variety of ways. These changes are subtle and difficult to detect, but they have an influence on the heart's efficiency. The hospital physician has never the chance of detecting these subtle changes, so that when the heart fails to such an extent that the patient seeks his advice, he is unable to appreciate the factors that have brought this failure about. The result is that the knowledge of heart failure is based on the conclusions drawn from very imperfect data, and as a consequence the prognosis of heart failure is often a mere matter of guesswork, while the mechanism by which heart failure is brought about has never been detected. What is true of heart affections—for the truth of the above statements can be demonstrated—is no doubt true of every chronic affection.

The line of teaching and of investigation which has been pursued of late years accounts for the diversion of clinical medicine into the wrong channels. The use of methods from other branches of science has drawn attention away from the methods that are peculiar to clinical medicine. So long as these methods are neglected very little progress can be made. I do not deny that special methods have brought to light valuable aids to diagnosis, but much of this energy is misdirected, as shown by the relative amount of work in the hospital wards compared with that in the out-patient department, while the obsession for those methods to which the term "scientific" is commonly limited has diverted attention from the true scientific methods of clinical medicine.

The Training of the Teacher.

In order to appreciate the reason why medicine has been so badly taught, and has advanced so slowly, it is necessary to consider the qualifications of those who are

responsible for teaching and research. For this purpose the manner in which the teacher is trained will throw light upon the matter.

The student, when he enters upon the study of clinical medicine, devotes most of his time to the wards. Here he is taught the physical signs of disease, and here he has the opportunity of seeing disease in its advanced stages, and here he can study disease by the aid of accessory sciences, as chemistry, bacteriology, histology, radiology, and so forth. He may watch the disease advance until the patient dies, and then he has the further opportunity of studying *post mortem* all the changes which have come about by the gradual extension of the disease, and so gets a knowledge of the last stage of disease. In this manner he becomes very familiar with well-established illnesses, and particularly when they are beyond the hope of cure.

The student who hopes to become a teacher after he is qualified goes through a series of minor appointments, and in waiting for a post may employ himself in diverse ways. He may work in some laboratory either at home or abroad, and spend much misdirected energy in what is called "research," which almost invariably means working out some problem of little importance. He may seek minor appointments at some other hospital; but one thing he must not do if he wants to get a post as teacher of clinical medicine—he must not carry out the work which would be essential to qualify him to be an efficient teacher. Tradition dictates that if he wants to get on to the staff of a hospital, and therefore to teach students who become general practitioners, he must be careful to avoid acquiring a knowledge of disease as it presents itself to a general practitioner. The budding teacher must limit himself to a knowledge of how to treat disease with all the accessories of a hospital. He must not see disease in its early stages, and he must not learn to treat patients at their own homes where the opportunities are limited, and he must not acquaint himself otherwise with the duties of a general practitioner, because he knows that to become a general practitioner would handicap him in obtaining a post at a teaching school.

To such an extent does this absurd practice prevail that some young aspirants to hospital appointments make a point of declining to undertake the treatment of a private patient in order that they may claim to belong to the class of practitioners known as consultants, utterly oblivious of the fact that they are thus depriving themselves of the only opportunity they will ever have of acquiring a full knowledge of the progress of disease.

When a man is appointed to the staff of a teaching hospital, among his duties is the giving of instruction in physical diagnosis. His conception of what constitutes physical diagnosis is limited to the few signs he was accustomed to see demonstrated in the wards when he was a student. From actual experience he has no knowledge of the significance or the meaning of the signs which he teaches, and what little information he has to give is second-hand, which has come to him by the same process as that which he gives to the students under his care. At the outset, then, he becomes the vehicle for passing on a tradition, and if there is anything that injures a man's intellectual activity it is to become the mouthpiece of tradition—teaching by faith and not by reason. The students at this time are at the most receptive period of their career, and on the clean slate of their minds the half-trained junior stamps his beliefs.

This junior teacher gets most of his practice in the out-patient department, and as his previous training has been in the hospital wards or in a laboratory, he does not know how to set about detecting the subtle and more elusive signs of disease, but concentrates his attention in the search of physical signs, in the finding of which practically every young physician prides himself. He knows that the patients that are wanted for his chief in the wards must have physical signs, and those who show none are speedily disposed of.

In course of time the out-patient or assistant physician gets what is considered promotion, and he passes up to the serener atmosphere of the wards, where he may have assistants and laboratories, and where he firmly believes he is about to enter on a career of scientific investigation.

Consider what his opportunities have been. In his lectures he deals with every disease in a systematic form—etiology, symptomatology, prognosis, and treatment. What opportunity has he had in the whole course of his career in studying the etiology of disease? As already shown, he has shunned the possibility of seeing cases in the very early stage in general practice. When he had an opportunity in the out-patient department, the early cases without physical signs received little or no attention. In the wards, where he may have spent the greater part of his life, he may see advanced incurable cases. As a consultant patients are never brought to him until their disease is well established.

What opportunities has he ever had of watching the progress of disease? In the hospital he may have a patient under his care for a few weeks, or, if he is dying, for a few months. As a consultant he sees a patient once or occasionally a few times. Unless it is in the later stages of disease when the patient is steadily progressing to death he has never had the opportunity of watching the course of a chronic disease.

The Attitude of Teachers towards Research.

It may be said that the object of a scientific education is to instruct students in accurate methods of investigation, and laboratory methods train the mind to accurate observation. But it is here that the exponents of what is called scientific medicine go wrong. Instead of recognizing that clinical medicine is a science apart, with methods of its own, they simply imitate other sciences. Apart from the recognized methods of physical examination which have been in use for several generations, the whole tendency of recent teaching has been to seek assistance from methods which are useful in other sciences, such as by the microscope, *x* rays, and other mechanical means. No doubt all these have their places, and are of service, but they are not of the essence of clinical medicine. Disease gives rise to many symptoms of a nature that cannot be brought to light by mechanical means, and they are often extremely difficult to detect, and require a great deal of further observation to explain. Except for the more easily recognized symptomatology, the tendency has been to ignore those that did not come within a certain limited category. I could illustrate this in many ways, and some illustrations will be given when I deal with my personal experiences. Here I would direct attention to the field of the greatest importance, which amply justifies my criticism of the attitude of the teaching profession towards scientific medicine.

The backward state of medical education is well illustrated by the attitude of the profession to methods of treatment. The total absence of anything like science in this department is shown by the great variety of methods of treating any one disease, and the extraordinary recommendations that are published by different teachers. This but demonstrates that clinical medicine has not yet emerged from a condition of servitude to tradition, and even to superstition. It is not so many years ago that a schism arose because some members of the profession were led by a fantastic theory to adopt an unusual attitude to the supposed action of remedies. The orthodox views of the profession with regard to remedies were based on little better than tradition. In science there can be nothing of the nature of a schism, and it is only in matters of belief and faith that a schism can arise. If the authorities in the past had had but the faintest perception of the nature of their beliefs and how far many of these were from having a basis of truth, no schism could have been possible. But the same curious unreasoning belief in the efficacy of remedies is as rampant to-day as ever, and this is entirely the outcome of the clinical teaching, for the faith in ineffective remedies, though given by such scientific methods as the hypodermic syringe, is as simple and as trusting as the belief in charms and incantations of a bygone age.

Let anyone seriously investigate the manner in which therapeutics are taught and exemplified even in those model scientific wards where the chief physician is assisted by some ten or dozen skilled scientific assistants. The observing student will find drugs administered, and not the slightest attempt made to see if they have the action that the physician supposed them to have. If he cares to investigate the matter more closely and tries to find the grounds on which the physician prescribes the drug, it will be found that it is prescribed because some authority has observed that it has a certain effect. If he inquires

further he will find out that in the majority of cases the evidence for its action is based on such flimsy grounds that there is no justification for its use. Even if it has some demonstrable action its effects in other ways have never been sought for.

Now, in the action of remedies there is always a variety of symptoms provoked. Some more obtrusive action may be detected, and that is the effect that is taught and demonstrated. The other less obtrusive signs are ignored. Take, for instance, the action of an aperient. It is prescribed and the nurse enters on the chart the number of times the bowels have been moved, and that is all, except that the bacteriological and chemical assistant may make an analysis of the stool. But the whole series of subjective phenomena are never investigated—such as the feeling of nausea, when it occurs or when its ceases; the sensation of pain, the time and place of its starting, the regions into which it spreads, the occasion of its cessation. Other changes may occur, as tonic contraction of the muscles of the abdominal wall, and altered sensibility in the skin and muscles in certain well-defined regions, but these pass unrecognized.

It may be said that these are unnecessary facts, which it would be a waste of time to analyse. There is a certain amount of truth in this statement, for it requires much discrimination to differentiate between the essential and non-essential. But in the case I have taken for illustration, if the student had been taught to find out all about the sensations of nausea, and of pain, and how to appreciate the associated phenomena, he would have derived a knowledge of the very first importance in a neglected field of clinical medicine. In addition, he would have the opportunity of seeing symptoms arise and disappear. The action of the digestive tube gives rise to those symptoms, and the portion of the intestine that passes into strong peristalsis gives rise to pain in a definite area. In practice the physician is constantly coming across cases of affection of the intestine, in which the pain and associated phenomena are so instructive that it is possible to locate the site of the trouble with great precision. Yet at the present day all these instructive phenomena are ignored or misunderstood by the great bulk of teachers of clinical medicine, and such simple means of observing them are never taken advantage of.

While I have mentioned an aperient as an illustration, I might have chosen almost any drug in the pharmacopœia, and I could say without fear of contradiction that not one single drug has been carefully studied so as to understand its full effects on the human system, effects that could be easily recognized had a systematic examination been carried out when it was administered in the hospital wards. Even if we take drugs with a deservedly high reputation for their beneficial effects, as those of the digitalis group of remedies, we find the teaching profession has never accurately observed them, so that to-day the principle on which the drugs are administered is not scientific, but rule of thumb, and based on imperfect observations. The reason for this is partly due to the fact that the profession has never understood the meaning of the phenomena which the drug produced.

In referring thus to treatment, I use the illustration not only to show how the opportunities for studying clinical phenomena and the action of remedies are neglected, but for another purpose, namely, to show how the attitude of the physician to this subject has a most baneful effect upon the students' minds. In the wards and in the laboratories he is taught to examine a limited number of phenomena, and he is taught laboratory methods with pedantic precision. It may be the student acquires a considerable amount of dexterity in these methods, and there is in the teacher that sense of satisfaction that the students are receiving a scientific education. When, however, the teacher after all the elaborate examinations comes to treat his patient, the student sees some drug given to the patient, because of some supposed effect, and then little attention is paid to what the result may be. He is never taught how to investigate the action of the simplest remedies. When the student passes into general practice he finds the call for these elaborate scientific methods so infrequent that he gradually ceases to use them. On the other hand, to every patient he has to apply methods of treatment. His teaching in this repect has been slipshod in the extreme, and he has no knowledge how to investigate the action of the remedies he prescribes. He gives remedies because of faith and not of reason, and as he was never shown how to watch the effects of remedies, he readily becomes the prey of the advertising chemist or other purveyors of specific treatments, who describe their wares with a gloss of scientific jargon which misleads the untutored practitioner. So notwithstanding all the scientific methods, the deplorable state that treatment is in at the present day is due to the slovenly methods employed by those who have failed to grasp the true nature of the science of clinical medicine.

Personal Experiences.

Lest it might be considered that the position of strong hostility to the present day methods that I have adopted is merely the expression of opinion not based on sufficient grounds, I am constrained to refer to my own personal experiences in order to illustrate the experiences that befall the practitioner. However much my views may be scouted by the teachers, I know they will appeal to the vast majority of practitioners who have suffered from inefficient teaching. I could have illustrated my remarks from other sources, but for the purpose in hand my own experience represents that of the great bulk of general practitioners, and though my attempts to remedy my deficient education may not have been very successful, yet they may serve to convey a knowledge of where the teaching of clinical medicine fails. These experiences refer back to medical education as given thirty years ago, and it will no doubt be contended that enormous advances in education have been made since then. I fully recognize that certain departments, as bacteriology and physiology, have made enormous advances, yet the really scientific teaching of clinical medicine has made little or no advance—in some respects it has retrograded in the sense that the general practitioner is less fitted by his training for the duties of his profession now than he was then. The reason for this is that the teacher of thirty or forty years ago had been a general practitioner, and knew by experience the kind of life the students who would enter general practice would lead, and the aspect that disease would present. Nowadays the teacher is usually innocent of this experience.

On entering general practice I was under the impression that the knowledge of disease was so nearly complete that there was absolutely nothing to be done but to apply that knowledge to my patients. I speedily found that I, at all events, was extremely deficient in my knowledge, for I was continually puzzled by the fact that the majority of my patients presented features widely different from what I had seen in my hospital training. I put it down to my own fault in not having acquired the knowledge, and turned to textbooks and visited hospitals in order to improve myself, and took my patients to consultants. Still I made little progress, and after several years it gradually dawned on me that the field of clinical medicine had not, perhaps, been so fully explored as I had thought, and I resolved I would begin to observe for myself, and take note of every sign or symptom that might appear. I soon found that I was very ignorant of a great many signs and symptoms, some of them very obtrusive, and when I turned to my textbooks I found a complete silence on the subject, or a description so little in accord with the facts that it was evident that the authorities did not understand the subject any more than I did. I therefore took courage and laid down a rule that I would not slur over any sign or symptom, but carefully note its presence, try to understand its mechanism and its relation to other phenomena, and to see what bearing it had on the patient's future. Carrying out this idea, I soon came across such a bewildering variety of strange phenomena that it was in vain to attempt to follow them all, so I selected some of the more conspicuous and studied them. But I had scarcely set out on this inquiry when I found that I had to re-educate myself in methods and instruct myself in some of the more simple facts in physiology. I found I had never properly understood the very first thing met with in examining a patient, that is, the significance of the statements made by the patient in describing his complaint. I found that in failing to appreciate the significance of the patient's statements, it was not so much a question of the patient's incoherence as of my own ignorance in understanding the condition that gave rise to

the sensations. The majority of patients complain because of something that tells them they are not in perfect health. The patient himself cannot very well explain, his recollections are often vague and even misleading. If, however, the patients are carefully interrogated by getting them to tell of the most trifling circumstances and by entering fully into their feelings, a great deal of light can be thrown upon their complaints. Thus, for instance, the patient would describe attacks of exhaustion and attacks of weakness and of giddiness, and he might vaguely call them heart attacks. A physical examination might reveal no abnormality, and I would be at a loss to account for the sensations. But as I acquired a better knowledge of the heart's abnormal action, I endeavoured to recognize at the same time the sensations that accompanied it. In course of time I acquired a knowledge that enabled me to recognize from the patient's statements the nature of some of the complaints that hitherto I had put aside as of little importance.

Now what is true of the heart is true of the sensations produced by other organs, and while I am still ignorant of many sensations produced by the disarrangement of other organs, nevertheless I have found the recapitulation of the patient's sensations the most helpful part in the examination, and have recognized how difficult it is to interpret these sensations and to correlate them with the altered function.

I must confess there are a large number of phenomena the significance of which I have failed fully to comprehend. This applies particularly to those which appear in the very early stage of chronic complaints, but I have gained sufficient insight into the matter to permit me to state most emphatically that diseases do give evidence capable of recognition long before the present day methods can detect them. Thus, if we take consumption or tuberculous diseases generally, in the course of my observations I found patients complaining vaguely of symptoms—varying from time to time. The most careful examination revealed no physical sign, save at times an increased rate of the pulse beat. Such cases would go on for years until a cough or expectoration would indicate some definite disease of the lung, or the pointing of an abscess would indicate the seat of some tuberculous infection. The discrimination of these cases is still beyond me, because I had not realized what was to happen, and had not taken sufficient care to note all the concurrent phenomena. But of this I am certain, that definite symptoms do exist, and if consumption is ever to be recognized and cured, the general practitioner is the only individual who has the opportunity of detecting it in the curable stage.

Besides these obscure sensations, difficult to describe, I found that even the most clamant of symptoms—pain—had never really received the attention from clinicians which it deserved. It so happened in my practice that I saw a large number of people suffering from affections of the digestive organs, and my first study was centred on the pain produced by the abdominal organs. By paying careful attention to the pain, the site of its origin, the manner of its radiation, and the circumstances that provoked it, I gradually saw that in this symptom far more information was to be obtained than I had ever expected. But it required great care to get out the facts, and repeatedly the patient's memory was so much at fault that I was baffled. When the pain tended to recur I got him carefully to note all the circumstances. Moreover, as a general practitioner I was frequently summoned to see a patient in great pain, and had the opportunity of questioning the patient while actually suffering. From facts derived in this manner I was gradually able to see that there was a principle underlying the production of pain which, if ascertained, would be of enormous advantage. Although I gradually acquired a better knowledge, and was able to adopt a hypothesis to explain the symptoms, it took me a long time to get proofs. Thus the first patient on whom I was able to demonstrate the relation of a gastric ulcer to the pain area I had watched and studied for ten years. But by pursuing this line of observation in cases of gastric ulcer, and with cases of obstruction in the bowels, and noting the pain as it shifted with diarrhœa, I was able to show that there was an intimate connexion between the different parts of the bowel and definite regions in the abdominal wall, so that in certain cases of obstruction, for instance, I would be able to indicate within certain limits the part of the bowel that was obstructed. This line of observation also enabled me to differentiate the pain due to the digestive tract from the pain due to the other abdominal viscera with more precision than had hitherto been done.

In pursuing this line of observation other phenomena were detected associated with pain. Thus, early in these investigations my attention was arrested by severe cutaneous hyperalgesia in a patient with gall-stone colic. This led me to search for altered sensations, and I found out that hyperalgesia was not an infrequent symptom. But the question arose, In what tissues was this altered sensation present? It is a remarkable fact that at the time I was studying the question there was no knowledge of the sensibility of the different tissues of the human body. It was necessary, then, to inquire into this matter, and I undertook a long series of observations whenever occasion permitted, to test the sensibility of cut wounds, the lining of cavities, and their contents. By this means I was able to test the reaction to simple stimuli of such organs and tissues as the lungs and pleura, the peritoneum, bowel, liver, kidneys, etc., and I found them actually insensitive to pressure, pinching, and cutting.

Other phenomena which I had to investigate presented themselves, such as the reflexes associated with disturbance of other organs. These reflexes not only affected the muscles of the abdominal wall in a peculiar manner, but also affected the activity of other organs sometimes remote from the original seat of trouble. Of these reflexes, that affecting the contraction of the muscle wall of the abdomen presented most instructive features, especially the curious manner in which limited portions of the muscle would remain contracted. It was almost impossible to differentiate these small hard contractions from tumours in the abdominal cavity, and I have repeatedly seen them mistaken for tumours by experienced physicians and surgeons and the abdomen operated to remove them, when no tumour or swelling was found.

My purpose in mentioning these observations here is not to state my observations are completed or even accurate, but to call attention to striking clinical phenomena that are to a great extent ignored or misunderstood, and to state that I have repeatedly found these phenomena present in cases which after a long period showed more definite signs of disease, and that therefore this is one of a class of phenomena where we get evidence of a stage in disease earlier than has hitherto been recognized or realized.

I do not doubt that many physicians and surgeons will ask, But what bearing has this upon clinical medicine or surgery? With such questions I am quite familiar, and it is just an additional evidence showing how teachers in these subjects fail to recognize what is essential in clinical diagnosis. How often do we see surgeons and physicians diagnosing a tender liver, a tender gall bladder, a tender spleen, a tender colon! How do they demonstrate their diagnosis? By pushing their finger into the abdomen in the regions they imagine these organs to occupy. What are they doing? They are pressing on layers of very sensitive structures, and on other structures which are completely insensitive to such stimulation, and describing the pain, not as caused by the sensitive structures, but as caused by the insensitive. Even in such a common complaint as appendicitis the nature and the meaning of the most striking phenomena present have never been understood, and, so far, I have come across no description of what structures are tender in the most common sign of all—McBurney's point.

While pursuing my researches into the nature of the phenomena, I always kept before me the bearing they might have upon the patient's future. As far as I could I kept the patient under observation, and noted what changes took place as years went past. To do this I kept in touch with the patients, not only taking the opportunity that illness afforded, but by visiting them, and getting them to call on me at frequent intervals. By this means I was able to see the prognostic significance of some symptoms.

As an illustration, take the irregular action of the heart. At the time I began these investigations the preliminary step of differentiating one form of irregularity from another had not been taken, so that I had to spend a great deal of time taking this step. As these irregularities were recorded graphically, the records remained recognizable,

so that I could always turn to them in after-years, though at the time I might not understand their nature By comparing these with the results of animal experiments I and others engaged in the work were able to recognize the mechanism of their production. In this way I obtained not only a knowledge of certain forms of irregularity, but also, as years went on, the prognostic significance of some of them. There is one form of the heart's irregularity that is of great frequence, occurring in people of all ages, which is usually recognized by the term "intermittent pulse," but which is really due to a premature contraction of the ventricle, the beat usually being so small that it is not perceived by the finger on the radial artery. This was one of the forms that I recognized at the very outset of my observations, and, finding it of great frequency, I collected observations from a great number of people. In the course of a few years I had obtained records of its presence in several thousands of people, so that I was able to get the age incidence of its occurrence. As I could not follow all the cases, I kept in contact with a great number of them, and kept records of how the heart responded to such incidents as pregnancy and labour, and such illnesses as pneumonia. People employed in severe bodily work frequently showed it, and I kept in contact with a number of these. Some of them I observed developed other signs of heart trouble, and drifted and died, others pursued healthy lives none the worse for the condition causing the irregular action. I endeavoured to obtain the facts that would lead me to predict these different results, so that at the end of twenty five years I was able to give with some degree of confidence the grounds on which a prognosis should be based. It will be gathered that to attain this end a vast amount of work had to be done, for to elucidate this one point I must have taken over 20,000 graphic records.

The importance and necessity for this work will be appreciated when it is realized that this irregularity is of great frequency and may occur at all ages. The doctor is frequently consulted because the patient is conscious of its presence, and a great number of individuals are subjected to most elaborate and expensive treatment for it. Moreover, examiners for life insurance and for entrance into the services frequently detect it, and hitherto there has been no guide as to its significance. Some reject candidates because of it, others pass them. In no place, neither in the teaching at the schools nor in the books dealing with this subject, is there any description of the principle that should guide the medical man in recognizing the significance of this simple sign.

I have been struck by the attitude of the physicians to work of this kind that I have undertaken. I have often met with cordial recognition of the work I have done, but I do not remember seeing a single reference to this part of my work—the work that has caused the greatest amount of trouble, and which has been beset with the greatest difficulties, and which nevertheless has been of the greatest value. Rather have my views been the subject for depreciation, in the sense that my prognosis has been treated as of no account, for it was known to the profession long before I undertook the work.

Time and again I have been told by teachers of experience and by authors of textbooks, that all the statements I had made in regard to prognosis were well known long before my day. When I asked why they had not published this information—for in no book is there the slightest hint how to differentiate these irregularities the one from the other, let alone giving their prognostic significance—I have been informed that it was a matter of common knowledge, and it was not necessary to mention it!

So little do the scientific trained physicians of the present day realize the only method by which a prognosis should be arrived at, that I am continually meeting with instances when a confident prognosis is given in cases which the writer has only observed after a few months or a few years, when I have been following similar cases for many years, and have yet failed to appreciate fully the prognostic significance of the symptoms.

Illustrations of the Help towards Research that can be given by the General Practitioner.

If a survey be made of the progress of medicine during the last twenty years, there is one field that stands out prominently in which advance has been greater probably than in any other corresponding field—namely, in the diseases of the heart. The advance that has been made in that time constitutes a revolution. Signs and symptoms that a few years ago were looked upon as being inexplicable have been clearly differentiated, the mechanism of their production unravelled, their bearing on the heart's efficiency understood, their indications for treatment analysed, and their prognostic significance clearly defined. Symptoms that were not even suspected to exist have been discovered, and their recognition has thrown a flood of light on many obscure actions of the heart. In addition, for the first time the treatment of heart affections has been based on scientific principles, and the action of remedies has been studied with a degree of accuracy never attained in any other field of medicine. Moreover, these clinical researches have given a guide and an impetus to the study of the physiology of the heart by animal experiment which has revealed many new facts of the highest importance.

The inception of all this work, the carrying out of the principal investigations, and the great bulk of the discoveries were due to general practitioners, unhelped by any of the hospital and laboratory contrivances which are considered essential to research. With a few exceptions teachers of medicine were oblivious of the fact that this great advance was taking place, and have failed to appreciate its significance.

Conclusions.

From these considerations it will be seen that if clinical medicine is to advance, if it is ever to attain the dignity of a science, a new spirit must be infused into the teaching. Symptoms that have hitherto been ignored, and however insignificant they seem, must be systematically investigated to find out the mechanism of their production and their bearing on the patient's future.

The early stages of disease must be searched for more thoroughly, and in this respect the little explored field of subjective sensations must be systematically investigated in order to correlate them with disordered functions.

Prognosis must be worked out on definite scientific lines by the continuous observation of individual cases over many years.

Treatment must be rationalized and put on an exact basis by the acquisition of precise methods of observation and by instructing the students to study for themselves the effects of remedies on the human body.

The general practitioner must be recognized as an essential adjunct in research. To him especially we should look to find out the early stage of disease and its progress. Hitherto the lack of this assistance has been the cause of the tardy advance of medicine. How complete this failure to recognize his opportunities is seen in the attitude of the leaders of the profession. Not a single general practitioner, nor any one cognizant of his opportunities, was asked to give evidence before the Royal Commission on University Education in London. Though money in abundance is forthcoming for research no one ever dreams of giving financial help to the individual of all individuals that could undertake this work.

The following brief description indicates lines on which clinical medicine should be taught so as to instruct students and to promote the investigation of disease:

Take a hospital which has 100 beds for teaching clinical medicine. For teaching purposes at least four teachers would be necessary. The larger proportion of these beds—say seventy—should be placed under the care of the two junior physicians. These beds would be occupied by the type of patient that at present fills the hospital. In these wards the student would spend half his time allotted to clinical medicine, and would be taught the physical signs of disease, the mechanism of their production, their bearing on the future life of the patient, and the indications they give for treatment. The action of each remedy administered would be watched with particular care, so that the student, by personal observation, might perceive the effects of remedies and acquire the knowledge how to determine the value of remedies. The *post-mortem* appearances of such patients as died should be studied, with particular reference to such physical signs as were present during life, so that the student, by direct

observation, might appreciate the relation of the physical sign to the morbid condition causing it.

After learning to recognize the more obvious signs of disease and the mechanism of their production the student would pass to the senior physician, who would have charge of the out-patient department. Here the student would study the early stages of disease—stages before the appearance of definite physical signs directly due to the disease. The symptoms here are more elusive—subjective mainly, or shown only by other organs secondarily affected.

The senior physicians only by their knowledge, acquired after long experience, are capable of duly appreciating and detecting these more subtle signs. To these physicians thirty beds would be allotted. A proportion of these beds would be used for the purpose of the more careful study of those cases the examination of which could not be completed in the out-patient department, and in which the assistance of accessory methods of diagnosis are required, as test meals, x-ray, blood, and bacteriological examinations, and cardiographic observations.

In the out-patient department careful records of all patients, even with trivial signs, should be kept, and arrangements made by which these patients should be systematically watched for long periods of time. When they do not come to the hospital, trained assistants, with students, should be told off to visit them at their homes, and reports should be made of the course of their complaint.

It is manifest that it is only by such methods that the progress of disease can be detected in hospital patients, while assistant and student will get an insight into the manner in which disease presents itself for diagnosis and treatment in general practice.

Teachers of clinical medicine should not be appointed until some ten years after qualification. During that time they will have had an opportunity of showing that they are capable of investigating disease. One-half of the teachers should have been engaged in general practice, while the others may have been engaged in laboratory work, with particular application to clinical investigation.

Each physician appointed should be expected to engage in some field of research, having particular reference to the more common forms of disease. As far as possible the subjects for investigation should not overlap, so that the student in passing through his curriculum should be brought into contact with the progress of medicine in as many different fields as possible. In this way the teaching will be more effective, for the teacher will be speaking from actual experience, and not be merely the mouthpiece of tradition or hearsay, while the student, participating in his teacher's research, will have his interest quickened and will learn how to investigate.

A certain number of beds allotted to the physician can be reserved for the particular line of investigation in which he is engaged.

There should be a constant intercourse between the physician and the heads of other departments in the school, as the surgeon, bacteriologist, physiologist, experimental pharmacologist, in the investigation and treatment of the patients.

THE Maharajah of Nepal has informed the Committee of Management of the Brompton Hospital that an anonymous donor is prepared to give £1,300 towards the endowment of the research work of the hospital. The hospital is appealing for a further sum of £5,000 for the purpose of maintaining and extending the research work, and the Maharajah, through whose munificence the hospital was enabled two years ago to extend the existing accommodation for such work, has expressed the hope that this new donation may serve as an incentive to others to come forward with a helping hand. The work is under the direction of Dr. A. C. Inman, who informed a representative of the *Times* that one of the problems proposed to be attacked was the evolution of a test similar to the Wassermann reaction in syphilis, which would be of use in recognizing the presence of the infection in early and latent stages.

A FAMILY WITH CEREBELLAR ATAXIA.

BY

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A EURASIAN male (E. S. P.), aged 35, came to the out-patient department of King George's Hospital, Lucknow, complaining of tremors on standing and of giddiness. He resembled at first sight a case of disseminated sclerosis, but examination showed points of difference; he was admitted to hospital. There is nothing of importance in the previous history. The history of his present illness was that three and a half years ago he noticed that his head was often shaking. He continued in this condition for about a year, and then had an attack of intermittent fever, nature unknown, lasting a month. After this his gait became more staggering and he noticed general tremors of the body and limbs; he suffered from giddiness and felt often that he was about to fall. He managed to continue at his work as a proof reader for another two years, and then found his disease had advanced so far as to prevent him doing his work, and six months later he came to the hospital. Inquiry elicited that others of his family, including his father, had been and were similarly affected, and further investigation and examination of other members of the family has succeeded in producing the genealogy shown in the table.



H = Healthy person. **C** = With cerebellar ataxy. **D** = Not afflicted with cerebellar ataxy, but died at or before puberty of some other disease. **A** = Alive and apparently healthy, but has not yet reached puberty. * Indicates female.

1. G. P. Apparently the first in the family to show this disease. Said to have begun to show it at about 50 years and to have died at 68. When he died his condition was not so far advanced as that of his eldest son (Case No. 2) now is.

2. C. B. P. The second case seen and here described. His children were also seen and are apparently normal, but the eldest is only 8.

3. G. P. The only female in the family so far who is said to have had the disease. Is reported to have begun to show effects at about 40, and to have died after one year.

4. P. P. Died, aged 31, of some other disease. Never showed signs of cerebellar ataxy.

5. S. P. Died, aged 32, of some other disease. Never showed signs of cerebellar ataxy.

6. E. S. P. The first case seen and described here.

7. T. W. P. Also seen. Aged 30 and appears well. Is a railway guard.

8. C. B. P. Not seen. Is aged 28, and is reported to have begun showing the characteristic tremors within the last two years, but is still at work on the railway.

9. The grandfather. Said to have been healthy, but to have been killed in the Mutiny at a comparatively early age.

10 and 11. Not seen. Said to be healthy, but aged only 18 and 15 years respectively.

It will be noticed that of the present generation only three have reached adult life without being affected; of these three two died at 31 and 32 respectively of other diseases. It remains to be seen what will happen to the third, No. 7.

In E. S. P. the nervous system alone shows any abnormality. Except when at rest the whole body is shaken with coarse, irregular tremors, especially marked on voluntary movements of the upper or lower limbs. The gait is unsteady and resembles that of disseminated sclerosis, with the addition that he spreads his legs apart. There is no loss of power; the muscles are well developed, and the hand-grasps are strong. Inco-ordination is very marked, and is not increased by making the patient shut his eyes. He has difficulty in touching his nose, and in drinking a glass of water he raises the glass with one hand to his face and steadies the rim against the bridge of his nose. In removing the glass there is much shaking, and some of the water is invariably spilt. He can, however, button his shirt and perform fine movements without

much difficulty. He sways much on standing and feels giddy, but does not fall even with his eyes shut. There is no rigidity of any muscle.

There is no nystagmus; the pupil reactions and ophthalmoscopic appearances are normal. The fields of vision are nearly normal, but there is a certain amount of limitation, equal in all directions, on the left side. There is slight ptosis on each side. Speech is somewhat explosive and at the same time scanning. It was this defect in speech more than anything else that made him give up his work. There is no affection of sensation in any part.

The knee-jerks are exaggerated. There is no ankle clonus. The plantar reflex is flexor. There is no affection of the sphincters, but some frequency of micturition—about twelve times in the twenty-four hours, including once or twice at night, when he is compelled to get up for that purpose. The quantity of urine in the twenty-four hours is only about 60 oz., and it appears to be normal.

C. B. P., the eldest brother of the family, was also examined. He showed a more advanced stage of the same disease. He first noticed signs of it nine years ago at the age of 43. He is now almost bedridden. In his previous history there is nothing of note. His first symptom was pain in the legs on walking, soon followed by coarse tremors of his hands, which at the end of a year prevented him from following his occupation as a clerk. He also suffered from a prolonged fever of unknown nature and was left much worse at the end of it. Since then his disease has steadily progressed, and now he cannot move about without support on each side. He complained much of vertigo; when at rest he felt all right, but on sitting up or after any movement everything appeared to be going round.

On examination the nervous and urinary systems alone appeared affected. The signs were like those of his younger brother described above, but much more marked. The hand-grasps were strong and the limbs muscular. Inco-ordination was extreme; he took two hands to a glass of water and then spilt half of it. He could, however, button up his shirt. There was no spasticity. There was no nystagmus, nor anything abnormal about the eye, except that the pupillary reaction to light was slow. Speech was very explosive and indistinct, and it was difficult to understand him. When he attempted to stand his general ataxia combined with his explosive speech gave him very much the appearance of a drunken man. There was no affection of sensation. The knee-jerks were present, somewhat exaggerated on the left side. There was no ankle clonus and plantar reflex was extensor on both sides. The mental condition was normal. There was much polyuria; he micturated every twenty minutes during the day and every hour or so at night. He appeared to have a little difficulty in starting the act. Each time he voided about 8 oz., and the total was nearly 300 oz. in the twenty-four hours. The urine (sp. gr. 1002) was clear and of very pale colour, neutral in reaction, and contained neither albumin nor sugar. Thirst was correspondingly great, and he always had a glass of water by him.

The children of C. B. P., of E. S. P., and of T. W. P. were seen and are apparently healthy, but as they are all under the age of puberty it is impossible to say yet whether they may not be affected later. So far the disease has shown the phenomenon of "anticipation"—that is to say, whereas the father, G. P., did not show signs of it until the age of 50, his eldest son, C. B. P., began to show signs at 43, and the daughter at 40; the next son, E. S. P., at 32; and the next son affected at 28. It remains to be seen whether the next generation will develop the defect earlier, if at all. If so the stock will thus naturally be eliminated.

Similar families have been previously reported, notably by Sanger Brown; that family showed no fewer than 21 cases in four generations. In those and other cases where *post-mortem* examinations have been obtained the cerebellar structure appeared normal, but there was degeneration of the dorsal and spino-cerebellar tracts of the spinal cord. Cases described by other authors, however, have shown either the existence of a small cerebellum or of degeneration of that organ.

Marie described a series of cases under the name "hereditary cerebellar ataxia"; but critical examination of his cases since has shown a lack of unity in their symptoms and pathology. Without a *post-mortem* examination on one of the affected of the family now reported, it is impossible to state the limitation of the lesion.

The symptoms produced so strongly resemble those we associate with experimental cerebellar lesions that we are justified in thinking that the cerebellum or the spino-cerebellar tracts, or both, must be at fault.

I am indebted to my clinical clerk, Mr. V. D. Saksena, for notes on the history and genealogy of these cases.

A CASE OF WOODY PHLEGMON OF THE NECK (PHLEGMON LIGNEUX).

By GEORGE PARKER, M.D.CANTAB.,
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THIS condition is worth noting because of its remarkable resemblance to a malignant or tuberculous growth and its exceedingly slow progress, ending generally in a complete recovery. Such a case might easily be mistaken for a cancerous one, and if treated with "Mr. Polypody's pills" or some elixir or other, the results would be considered most convincing.

Reclus first described it in 1893, and a number of instances have been observed on the Continent and in America, though I have not found any recorded in this country. It generally occurs in males over 50 who are in low health, but usually no kidney or constitutional troubles are present. A slowly growing swelling due to infiltration of the subcutaneous cellular tissues appears over the lower jaw, in the neck, or in the lower part of the scalp. Occasionally such a mass has occurred in the abdominal wall after an attack of appendicitis. The tissues become as hard as a board. The skin darkens, and may be cyanosed or violet coloured in places. The surface may be nodular or smooth, and after some weeks slight fluctuation is found at several points and a little pus is evacuated, more or less blood-stained and granular. In many cases there is no pain, tenderness, or fever, and the indurated mass may remain unaltered by the discharge of pus. Fresh sinuses form, and the process goes on for months, but when final absorption does take place, it is remarkably perfect and very few scars remain. Lang and Smincke tried to show that the tumour was cancerous, but this view has found no support, and usually it disappears entirely. The inflammatory infiltration may be leucocytic or lymphocytic. Perhaps the most common organism found is a staphylococcus, but a streptococcus, a pneumococcus, a diphtheroid bacillus, and others have been noticed in different cases. Reclus thinks it may be caused by any organism of weak virulence acting in highly resistant tissues. There may be patches of oedema along the margin, due to obstruction of the lymph channels. One patient died from oedema of the glottis, but the majority get perfectly well. Operative treatment has had little effect. The incisions discharge for a time, then heal up and fresh sinuses form. Vaccines have not been much more successful, but in any case the hard infiltrated areas slowly diminish and pass away. The history of my case is as follows:

A gentleman, aged 74, of strong physique and leading a regular and abstemious life, with hardly any records of previous illness, suffered in March, 1912, from toothache, for which he consulted Mr. Perry, a dental surgeon. A swelling in the cheek appeared about April 14th, and a necrosed lower molar tooth was extracted on April 18th. Considerable swelling of the face and gum took place and went on increasing. The mouth became closed from infiltration of the masseter, and could not be opened for eight months. During this time the front teeth were so closed together that often a knife blade could hardly be inserted, but occasionally there would be a gap of a quarter of an inch. On May 2nd an incision was made in the gum down to the bone and a drainage tube inserted. The tissues over the jaw were thickened and hard. Hot fomentations were employed for months. A sinus in the neck began to discharge about May 22nd, and others followed from various nodules on the surface, but very little change took place in the dense mass which covered the greater part of the right side of the neck from about 2 in. above the clavicle to a little below the level of the

mouth, curving upwards in front of the ear and behind it to the mastoid process. There was some oedema of the cheek above the hard area.

An examination of the pus showed a growth of *Staphylococcus aureus* only. It also contained blood and granular matter. An autogenous vaccine was prepared and a course of injections was given, beginning on June 20th, rising gradually to a dose of 1,200 millions, but with practically no effect. There was considerable difficulty in feeding the patient for the eight months during which the jaws were closed, since there were hardly any gaps in the teeth; he had to be content with thick soups, grated kidney, farinaceous food, and milk. During November and December slight pain from a dental nerve or the ear was complained of; it was relieved by gelsemium and phenacetin.

Towards the beginning of 1913 the indurated and thickened area began to grow smaller, the secondary oedema diminished, and the sinuses were less active. The general health improved, and after the middle of February the mouth at times opened for half an inch, but fresh nodes appeared from time to time and discharged, causing the jaws to close for a while. It may be noticed that there was no pyrexia throughout and little or no odour from the pus.

By August nearly all the thickening deformity and scars had passed away and the skin was of nearly normal appearance, except for a very small patch of induration about the ramus of the lower jaw, and occasionally a trifling discharge from one or two minute sinuses. The mouth could generally be opened for an inch or more, and the patient gained weight and appeared in vigorous health. By November there were few traces of the phlegmon left. It had lasted about nineteen months, had caused practically no pain or constitutional disturbance, and, except for the absence of definite glandular enlargement, closely resembled some forms of malignant growth.

LITERATURE.

Reclus, Des phlegmons ligneux, *Gaz. d. Hôp.*, No. 88, 1893, p. 833. Leonard Freeman, *Keen's System of Surgery*, vol. i, p. 262. C. A. Powers (*Journ. Amer. Med. Assoc.*, lvii, July 29th, 1911) gives a bibliography of the earlier cases.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANAPHYLAXIS.

IN the JOURNAL of November 22nd, 1913, Dr. E. W. Goodall says that he is not sure that any article of diet except mussels, crabs, strawberries, or raspberries is capable of producing anaphylaxis. Recently I had a case remarkably like anaphylaxis produced by dried milk in the form of powder. The patient, a widow aged 76, had never been able to take cow's milk in any form without feeling ill, and in her early days had been brought up on goat's milk, which suited her quite well. I suggested she might try milk in the form of a dry powder. About 9 p.m. she took two tablespoonfuls in a glass of water. In a few seconds she had intense flushing of the face and a most severe headache, and also strong colicky pains in the stomach; at the same time breathing became difficult, and she felt very ill. The gastric pains lasted three hours, the headache one hour severely, but less intense all night. At 11 a.m. next day patches of congestion were still visible on the face. Surely this was a case of anaphylaxis; the symptoms came on too rapidly for the powder to have acted as an irritant poison, besides which there was no vomiting and no diarrhœa.

London, N. R. BROADBENT, M.D.

AN UNUSUAL CONDITION OF THE APPENDICES EPIPLOICAE OF THE PELVIC COLON.

A WOMAN aged 68 was admitted to the Royal Infirmary, Derby, with symptoms of intestinal obstruction. She had been treated for an attack of gall-stone colic and obstructive jaundice by Dr. Moon, who suggested that the intestinal obstruction was due to a gall stone impacted in the ileo-cæcal valve.

An exploratory laparotomy proved this diagnosis to be entirely correct, a large single unfaceted gall stone being found in the ileum just above the ileo-cæcal valve. It was evident that the stone had travelled down to the valve, but was unable to pass through on account of its size. It was interesting to note that the stone evidently moved backwards and forwards in the ileum for a distance of about 4 in. from the valve. The stone was removed by a linear incision, and the intestine closed.

Whilst exploring the rest of the abdomen for any more possible gall stones, I found two hard nodules in the pelvic colon. This was brought to the surface for examination, when it was seen that the two nodules were attached to the side of the pelvic colon away from its mesentery in line with the appendices epiploicæ, which were particularly well marked. The nodules were very hard, were beneath the serous coat, and blackish in colour. The exposed portion of the bowel was carefully packed off from the rest of the abdomen by means of sterile gauze, and the peritoneum over the nodule incised. A hard faecal concretion of the size of a large pea was obtained, but no communication with the bowel could be made out. The incision was, however, carefully sutured. The other nodule proved to be exactly similar.

I have not come across the same condition before, nor have I seen any description of such a formation. My explanation of the presence of these nodules is as follows: Appendices epiploicæ are practically small subserous lipomata, and it is conceivable that in an atonic intestine a small hernial protrusion of the mucous membrane lining the intestine might project between the fibres of the muscular coat. Faecal matter could find its way into such a hernial protrusion, and becoming desiccated would form a concretion. Owing to the peristaltic movements of the intestine and the presence of the concretion, the narrow neck of the hernial protrusion might tend to become a pedicle, and ultimately get completely shut off from the lumen of the intestine.

The patient made an uninterrupted recovery. She volunteers the statement that before operation she had been unable to lie on her left side for some years, owing to pain in the left iliac fossa, but that now she could do so without discomfort. It is possible that the traction of the nodules may have had something to do with this symptom.

FRANCIS L. A. GREAVES, F.R.C.S.,
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SURGICAL EMPHYSEMA FOLLOWING OPERATION IN THE TRENDELENBURG POSITION.

MRS. X. was admitted to the Florence Nightingale Hospital suffering from chronic inflammation of the right ovary and tube. She was operated upon, and the ovary, tube, and appendix were removed, as well as two small subserous myomata of the uterus.

The operation was performed in the usual Trendelenburg position, the wound being sutured before the table was lowered. After the operation she suffered from rather severe post-anaesthetic vomiting, but made a good recovery. On the sixth day after the operation the patient called attention to a movable swelling in the right thigh, which was found to be due to surgical emphysema, following the course of the femoral vessels and reaching down to the middle of the thigh. On removing the dressings on the eighth day in order to take out the stitches it was evident that there was emphysema all over the abdomen. The condition cleared up in about a week.

What had apparently happened was that air had been left inside the peritoneal cavity, and, the peritoneum not being sufficiently closely sutured, had escaped during the vomiting efforts into the cellular spaces deep to the transversalis fascia, and thence had forced its way down into the thigh through the femoral sheath. The condition is not unimportant, as it might have led to strangulated hernia or other mischief.

The lesson to be learnt is that in operations in the Trendelenburg position the table should be lowered before the peritoneum is sewn up, so that air may be displaced out of the peritoneal cavity and the omentum may be rearranged in its proper position, precautions which I think are usually neglected. Correspondingly, at the commencement of the operation, it is of advantage to have the patient in the Trendelenburg position before the abdomen is opened, as otherwise air gets access to the subdiaphragmatic region and the intestines do not retract properly into the upper abdomen. This precaution is, however, more generally adopted.

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British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.

THE City Division, conjointly with the Finsbury Medical Guild, held a clinical evening on December 12th, 1913. Dr. T. HOBBS CRAMPTON, Chairman of the Division, took the chair.

Treatment of Chronic Urethritis.—Dr. JAMES MACMUNN gave a most interesting address on this subject. He said surface and deep lesions required different treatment. Chronic gleet sprang, as a rule, from parts posterior to the bulbo-membranous junction, although the anterior urethra was usually involved. The best test as to site, if the urethroscope failed, was to massage, after micturition, the anterior urethra over a flat instrument with a cup at the end, the contents of such cup being then microscopically examined, and after flushing the anterior urethra, to massage the prostate, and also to examine the products thus pressed out. A study of flakes was suggestive—"stars, stripes, and banners" (surface lesions) worms—"fairy guts" (follicles), or "the long line flake" (residual prostatic catarrh). In deciding on treatment the patient should be studied even more than his disease—constitutional states, as gout and rheumatism, debility and irritability should be thought of, bacteria searched for and a rectal examination made; the more harmlessly the urethral examinations were conducted the better. It was not right to use an endoscope before using sounds if cocaine were not employed. Internal remedies—"specifics" and such drugs as hydrarg. biniodide, potass. permanganate, urotropin, ergot, etc.—aided. Before severe remedies were employed locally urethral reflexes could be blocked by local anaesthetics, or by injecting antipyrin and morphine into the rectum deaden the sensibility of the posterior urethra and prevent sequelae. Otis's dictum, "gleet means stricture," was often true; a narrow meatus or infiltrations constituted potential strictures. Behind such infiltrations the urethra for some distance lost its tone, as was evidenced by the automatic urethrometer, and was the seat of discharge. Implication of follicles, however, caused the greatest difficulties. If the meatus were normal, sounds were better than Kollman's dilators. They smoothed down surface asperity, pressed blood out of vesicles, relieved the spasm of the urethral muscle which caused congestion, forced muco-pus out of follicles, and were anaesthetic. Metal bulbs, though more useful for diagnosis, fulfilled some of these uses. Dilators as used were defective, because the urethra was not a cylinder; they could not expand the urethral bulb (about 43 mm. normally) without splitting mucous membrane before or behind. The bulb could have no useful urinary function, but it did act as a reservoir for semen before its final discharge (ampulla urethrales seminis). Sounds used to full capacity often radically cured stricture, as they did gleet, especially if at night a hot-water bottle were pressed to the perineum for some hours. Lubricants should be injected. After the sound instillations should be used, or flushing out with weak saline salts, and in the intervals irrigations or injections should be employed. Colloidal iodine silver or astringent salts should be used; copper penetrated most deeply. Means should be tried to empty the follicles so that injections had more fair play. Amongst these means exhausting tubes might be used, which also acted as in Bier's treatment. The absorptive power of the posterior urethra was great, that of the anterior small. A clip, "mechanical fingers," to close the meatus and retain the injection for an hour or more could be adopted with benefit. By means of the urethroscope much stronger applications could be made and were often demanded. Strictures that were not cured by dilatation would be almost always radically cured by cutting, if this were rationally done and followed by rational after-treatment. Vaccines were unreliable and could not remove anatomical lesions. Prostatic troubles, with involvement of mucous membrane, usually disappeared with the cure of the latter. Abiding congestion or inflammation was best met by hot, or hot and cold, rectal douches and pressure, massage, etc. The same applied to the vesicles, but efficient massage of them was carried out by large rectal bulbs. Graduated exercise, change, and hydropathy were always beneficial.

DR. MACMUNN replied to many inquiries which were put on various points. On the motion of Dr. DAVID ROSS, Chairman of the Æsculapian Society, seconded by Dr. EBOR CHAMBERS, President of the Finsbury Medical Guild, a vote of thanks was accorded to Dr. James MacMunn. Dr. MACMUNN suitably responded.

METROPOLITAN COUNTIES BRANCH: SOUTH MIDDLESEX DIVISION.

A MEETING of the South Middlesex Division was held at the Hounslow Hospital on December 17th, 1913, Dr. M. F. COCK in the chair.

Tuberculin in Diagnosis and Treatment.—Dr. E. E. NORTON, Tuberculosis Medical Officer to the Middlesex County Council, read a paper on tuberculin in diagnosis and treatment. He sketched the exact present position of tuberculin—the way in which it acted; the varieties of tuberculin; the tuberculin tests, in which he had little faith for practical use, as they were either inconclusive or dangerous; the methods of measuring doses; points of technique in administration; the varieties of cases likely to benefit. He then dealt with various difficult points likely to arise, and thought that the weakness of tuberculin treatment was its inconclusiveness, as it only produced a relative immunity, not a true immunity. His own feeling was that it was a distinct and definite advance in the treatment of tubercle. Dr. COOPER followed with a short paper detailing his experiences with tuberculin in the treatment of 19 cases in the last few years. Judging from the effects he had observed, he thought that without doubt tuberculin was most beneficial if the patient had been taught how to live by a short sojourn in a sanatorium, and if the injections were maintained for a long period of time. He mentioned the technique he adopted, and also congratulated the Middlesex County Council on the steps it had taken by appointing tuberculosis medical officers, but felt that even yet the arrangements and methods for dealing with cases were totally inadequate. The debate was continued by Drs. CAMPS, DENDLE, and SCOTT; and Dr. NORTON replied.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.

THE third winter scientific demonstration of the Newcastle-on-Tyne Division of the British Medical Association was held at the Royal Victoria Infirmary, Newcastle-on-Tyne, on December 19th, 1913, when ninety medical practitioners were present.

Scarlet Fever and Diphtheria.—A paper entitled "Some Infectious Fevers" was read by Dr. S. J. CLEGG, who dealt with some types and variations of scarlet fever and diphtheria commonly met with in hospital, but not so frequently seen outside. He described the general appearance, course, prognosis, and treatment of scarlet fever, and dealt with the various methods of serum and vaccine treatment, which he regarded as being often of no avail. A combination of fresh air and salines seemed to give the best results in such cases, and in his opinion the incidence of a mixed infection with diphtheria, usually stated as being as much as 10 per cent., was probably too high. He then described nephritis, endocarditis, and rhinitis in their relation to scarlet fever, and gave a general description of certain of the severer toxic forms of diphtheria. He pointed out the importance of early recognition of serious involvement of heart muscle and the great importance of early administration of antitoxin, either subcutaneously or, if possible, intravenously. He endorsed the modern procedure of injecting antitoxin in all suspected cases before waiting to clinch the diagnosis by means of a bacteriological examination, and drew attention to efforts on the part of the public health department by means of free distribution of antitoxin to facilitate the early treatment of such cases.

Artificial Pneumothorax.—A paper was then read by Dr. W. C. RIVERS on the treatment of phthisis by artificial pneumothorax. Dr. Rivers's paper consisted of an address, illustrated by radiographs and charts, lasting ten minutes, followed by a practical illustration of the method on a

female patient. Dr. Rivers said that Forlanini was the leading clinical exponent of the method, and that his establishment of a special journal for lung collapse therapy was an instance of the rapid breaking up of internal medicine into specialities. Dr. Rivers laid stress on the fact that abundance of time was necessary for such treatment, which for the first six months at all events should be supplemented by strict hygienic and dietetic measures. Provided the time difficulty could be overcome, he advised that in every fairly homolateral case a trial of artificial pneumothorax should be made after preliminary open-air treatment for six weeks to improve the general health. One great cause of failure, he continued, was totally or partially adherent pleura, and almost as important was the fact that the sound lung might be unable to withstand the increased strain. He then described the technique of the operation, and cited reasons for and against needling and incision. The dangers of operation might, he said, be classified under three headings: Sepsis, pleural reflex, and a wrong destination for the gas; the great safeguard was a good technique with proper observation of the two general rules—keep out of the lung; and, never exceed the water pressure of 20 c.cm. Dr. Rivers then refilled a case admitted to the Barrasford Sanatorium in July, 1912, with almost the whole of the right lung affected, and also the left upper lobe slightly. No improvement had been effected in this case by means of ordinary treatment or tuberculin. Artificial pneumothorax was produced in February, 1913. The temperature returned to the normal in three weeks, and the sputum dropped from 1½ oz. to 1 drachm daily. Opportunity was taken to illustrate on this patient the highly important differences between pleural and pulmonary manometric oscillations, and Petersen's method of taking the mean intrapleural pressure as described by Saugmann was also shown.

Ruptured Gastric and Duodenal Ulcers.—After the tea interval Mr. J. W. LEECH read a paper illustrated by lantern slides, on the diagnosis and treatment of ruptured ulcers of the stomach and duodenum. Statistics were given comparing the results obtained in various hospitals in England and in the Royal Victoria Infirmary, Newcastle-on-Tyne, and attention was drawn to the necessity for prompt recognition on the part of the general practitioner of such cases.

Diseases of the Ear.—Mr. S. S. WHILLIS then spoke on some common conditions of the ear, and drew attention to the importance of a proper acquaintance with the anatomy of the parts involved.

Intestinal Obstruction.—Mr. C. GREY TURNER gave a lantern demonstration on the diagnosis of intestinal obstruction. He pointed out that obstruction was not really very common, its frequency lying somewhere between appendicitis and perforation of the stomach and duodenum. Up to the end of 1912 he had been responsible for nearly 2,000 abdominal operations, and of these 681 were for appendicitis, 61 for perforation of the stomach and duodenum, and 93 for the various types of intestinal obstruction. Nevertheless obstruction was always a serious disease, and all surgeons agreed that improvement was only to be looked for as a result of earlier diagnosis. He emphasized the importance of the absorptive function of the intestine, pointing out that it was this great power of absorption that made the toxaemia associated with the obstruction so very deadly a condition. He emphasized the important symptoms of abdominal pain, intermittent colic, vomiting, and inability to secure the passing of flatus in all cases of intestinal obstruction, and urged his audience to remember that the pulse and temperature might be entirely unaffected, that there might be no collapse, and but little general disturbance. Therefore he agreed entirely with Mr. Sampson Handley, who had said that "faecal vomiting was not to be regarded as a symptom of intestinal obstruction, but as a herald of approaching death." In every case of suspected intestinal obstruction the practitioner must make a careful examination of both hernial sites and the rectum, and examine the abdomen and its contents both thoroughly and systematically. Examination of the hernial sites and of the rectum should never be omitted on any consideration whatsoever. During the last fifteen years he had seen no great improvement in the operative treatment of this class of case, and all the modern methods could really do very little for the toxaemia associated with long-standing obstruction. The only hope for these cases was operation at the earliest possible stage, and in his opinion the onus of making an early diagnosis rested entirely with the practitioner, and the credit belonged to him if such cases were carried to a successful conclusion, for the responsibility of the operation was comparatively slight when surgical aid was summoned sufficiently early. As bearing out this contention he said that among his own 93 cases there were 31 deaths, a mortality of 33 per cent.; but of the total number of cases 14 developed in hospital, that is to say, when there was no excuse for not making an early diagnosis, and of these 2 died, a mortality of less than half as much as in the others.

Next Meeting.—This closed the proceedings for the afternoon. The fourth meeting will take place at the Royal Victoria Infirmary, Newcastle-on-Tyne, on Friday, January 23rd.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

AT a meeting on December 5th, 1913, DR. J. F. O'CARROLL, President, in the chair, two cases illustrating possible *Sequelae of typhoid fever* were shown by Dr. A. R. PARSONS and DR. R. ATKINSON STONEY respectively. The first patient was a man who had typhoid in 1893. The onset of very acute pain in the right iliac fossa had caused so much suspicion of perforation that laparotomy was performed. No perforation was found, and the patient made a comparatively uneventful recovery. Two years later the patient showed signs of obstruction in the two iliac veins, or perhaps in the inferior vena cava. At present the veins on the abdominal wall were enormously dilated, but no inconvenience was experienced by the patient. The other case was a man, aged 41, who, when serving in South Africa, had enteric fever. He was in bed for three months and had two relapses. No bleeding from the bowels occurred at any time. He was sent home, and on the voyage noticed swelling of both legs for the first time, most marked in the right leg, which was said to have been 5½ in. larger than normal. No enlargement of veins of the legs was noticed at this time, but veins on the front of the abdomen were noticed to be enlarging. After two months in a convalescent home in England he was discharged from the army, and had since been in the Canadian Police. Veins in the legs became enlarged while in that force in 1904, and enlarged veins in the thigh gave trouble when riding. Varicose ulcers first formed on legs in 1910 and had healed and broken down twice since then. At present there was a very large tortuous vein forming up on each side of the abdomen from below the middle of Poupart's ligaments to the corresponding axillae, the blood flow was free in both directions; one valve not completely competent was situated just below the level of the nipple. There was another large tortuous vein on either side of the middle line from the same origin to the front of the sternum. The femoral vein could be felt as a hard cord in each leg up to Poupart's ligament; the abdominal veins had become larger during the last nine months. The condition was probably due to occlusion of iliac veins and inferior vena cava. SIR JOHN MOORE related a case which resembled these cases, but the dilatation of the superficial abdominal veins was unilateral. The PRESIDENT and DRS. MOORHEAD and LAW discussed the condition. There was a general feeling that thrombosis of the femoral veins was a commoner sequel of typhoid than statistics led one to believe.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on December 10th, 1913, Sir HALLIDAY CROOM in the chair, DR. BARBOUR, in a paper on the *Place of gynaecology in the medical curriculum and in general practice*, said that the recent rearrangements in the clinical teaching in the Edinburgh Royal Infirmary included the recognition of clinical gynaecology as a department by itself. It was the last of the recent

developments. The first was the recognition of gynaecology as a distinct subject in the systematic course of lectures, which occurred in 1906. The next step was the introduction in 1907 of an examination in clinical gynaecology into the final examination. An analysis of 2,000 cases in the university gynaecological ward of the Royal Infirmary showed that in 50 per cent. the condition was referred directly or indirectly to conception or childbirth; in 9 per cent. to the onset of the menstrual function at puberty; in 7 per cent. to the patient entering married life; whilst 20 per cent. began to suffer towards the menopause. In practice patients of the poor and middle classes, who formed the bulk of the *clientèle* of the general practitioner, expected to be treated in the first instance by the physician who attended at their confinement. The first examination was made by him, the diagnosis depended upon him, and the routine treatment of chronic cases should be relegated to him. About one-sixth of the female patients of the general practitioner were gynaecological. The difficulties which beset the clinical teaching of gynaecology had in the past sent the graduate into practice inadequately prepared for gynaecological practice. To this was largely due the tendency to quackery in the treatment of women's diseases. Such lent themselves specially to quackery owing to the difficulties attendant on a thorough examination and on forming a clear idea of the pelvic lesion, not to mention the necessity of telling the patient with some assurance that there was nothing the matter with her pelvic organs when this was the case. Unless the graduate had learnt gynaecological methods of examination under skilled guidance as a student his knowledge was likely to become less and less as time passed, unlike what was natural in regard to the lungs or heart. To avert this ampler scope was being introduced for the teaching of clinical gynaecology in Edinburgh, and a clinical examination formed an integral part of the final. Dr. JAMES YOUNG showed an *Adenomyoma of the uterus* in which there had formed spaces filled with chocolate-coloured blood. These were shown to be due to menstrual blood being pent up in the included portions of endometrium. Dr. JOHNSTONE showed a *Fetus compressus* in the membranes of its twin, which at first looked like a succenturiate portion of placenta.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANAESTHETICS.

AT a meeting on December 15th, 1913, Dr. J. BLUMFELD, President, in the chair, Mr. A. L. FLEMMING, in a paper on *Fatalities during anaesthesia* as reported in the lay press from 1910–13, regretted that his figures could not be of great scientific value, as so many of the reports were very meagre in detail. The present system of inquiry into these matters by coroner and jury was useless both from a medical and legal point of view. So far as he could discover, most of the fatalities had occurred when the anaesthetic was being given by men who had no special experience. Teachers should remember that very often the student learnt from observation, and that when he saw experts giving chloroform with ease and without accidents occurring he was apt to think the administration easier and safer than it really was. Hence teachers should impress on the student that ether was the anaesthetic for the inexperienced, and that chloroform should be left to the skilled and expert man. A large proportion of the fatalities appeared to have been due to the selection of the wrong anaesthetic for the particular case: for instance, nitrous oxide for a case of angina ludovici. A considerable number of deaths had occurred before the operation had started, and in almost all of these the anaesthetic used was chloroform, the patients dying in the struggling stage. This showed clearly that it was better and safer to induce anaesthesia either with gas and ether or ether rather than with chloroform. Sir FREDERIC HEWITT said Mr. Flemming's statistics lent great weight to the contention lately put forward by Dr. Brend that the coroner's court, as at present constituted, was not only useless but harmful when it essayed to inquire into deaths connected with anaesthetics. It was little short of a farce for coroners' juries to express views as to how and why patients died during surgical anaesthesia. It was the duty of the medical profession to combine and to urge the introduction of some kind of private inquiry as a substitute for the present coroner's inquest. Such an inquiry should be conducted by a trained medical man with or without an expert assessor. The present system was useless because the information asked for and obtained was not suitable for scientific and statistical purposes; it was harmful because it inflicted unnecessary pain and discredit upon the relatives of the deceased and the medical practitioners. One of the recommendations of the Home Office Departmental Committee, appointed a few years ago to consider *inter alia* the administration of anaesthetics, was to the effect that "a small standing scientific committee on anaesthetics should be instituted under the authority of the Home Office"; but this recommendation, like others, had become a dead letter. Such a committee would be most valuable as an intermediary between the private Home Office inquiries on the one hand and the various professional and educational bodies on the other. Dr. LLEWELLYN POWELL said it was very difficult to make a student realize the importance of keeping the airway clear. Probably men preferred chloroform as it was easier to give than ether. Dr. GOODMAN LEVY suggested that the society should take up the collecting of reports of anaesthetic fatalities, so that a proper record could be made. Mr. BOYLE commented on the relatively large number of deaths reported under N_2O. With ordinary care death ought never to occur under N_2O. He had long held that it was dangerous to induce anaesthesia with $CHCl_3$, and if gas and ether were used for this purpose, and the anaesthesia continued either with ether or chloroform, the death-rate would sensibly diminish.

LIVERPOOL MEDICAL INSTITUTION.

AT the second pathological meeting on December 11th, 1913, Dr. LLOYD ROBERTS in the chair, the following were among the exhibits:—Dr. LEITH MURRAY: Three cases (two of which had been under the care of the late Dr. A. Wallace) of *Adenomyoma of the posterior vaginal wall* immediately below, but distinct from, the cervix. In two the growth was histologically simple and identical with a uterine adenomyoma, but burrowed through the recto-vaginal septum and infiltrated the wall of the rectum. Among a good many specimens of *Human and animal hair balls* shown by different members, Mr. G. P. NEWBOLT and Dr. MURRAY CAIRNS showed one weighing 4½ lb. which had been successfully removed by Mr. Newbolt from the stomach of a girl, aged 16, and Mr. G. P. NEWBOLT one weighing 9 oz., which he had removed in the year 1908. In this case a bismuth *x*-ray photograph clearly showed the outline of the hair ball. Dr. W. B. WARRINGTON: *A tumour of the cerebellum* the size of a small walnut, growing between the fifth and the seventh nerves. During life the only focal symptom was right corneal areflexia. The posterior fossa was explored on the right side, but owing to the interior and anterior site of the tumour its presence was not detected at the operation. It consisted of innocent fibrous tissue. Professor J. W. W. STEPHENS and Mr. F. JEANS: *The foot* of a Chinese lady. Surgically it was in a condition of pes cavus, whilst pathologically the deformity was mainly produced by a change in the os calcis; this was L-shaped, the patient walking on the insertion of the tendo Achillis. Professor J. W. W. STEPHENS having read a paper on *The relation of blackwater fever to malaria*, Dr. PROUT said that he supported Professor Stephens's view. The more he had seen of this disease in the tropics the more he was impressed from a clinical point of view with its relationship to malaria. Some of the figures cited by Dr. Stephens were very convincing; and additional confirmatory evidence might be cited in the results of the prophylactic use of quinine. When this had been systematically administered it had been found that blackwater fever had diminished as well as malaria.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on December 12th, 1913, Mr. W. R. BATES, Vice-President, in the chair, Mr. J. E. MIDDLEMISS showed a case of *Bronchial asthma associated with pregnancy*, which he had treated by hypnotic suggestion. The patient was a married woman, aged 25, who had suffered from bronchitis since childhood, and for the last two years from

recurrent attacks of typical bronchial asthma, increasing in frequency and severity, until latterly they occurred once a week or oftener. There was almost constant dyspnœa between attacks; and she was unable to walk out alone and unable to assume a recumbent position at night. Twice she had been operated on for some nasal or post-nasal obstruction before the asthma began, about five years ago. She was first seen in July last during a typical attack of bronchial asthma. She was then six months pregnant, and looked very ill and suffering from chronic laryngitis. The usual medicinal remedies were given, and the attack subsided. Suggestive treatment was begun immediately after. Sittings were given three times a week at first, later once a week. The patient proved readily susceptible to hypnotism at the first sitting. At the second sitting occurred complete muscular relaxation and amnesia during sleep. On subsequent occasions the first hypnotic suggestions were readily carried out, and the patient conversed without subsequent recollection. Suggestions were given that the attacks would be less violent and less frequent, and eventually would cease. Complete cessation of attacks was insisted upon as treatment advanced. The result was that the patient had been free from asthma up to the present time. Household duties had been resumed, and she was able to lie down flat at nighttime. The huskiness of voice did not disappear until after some nine weeks of treatment. Labour occurred at term without complication. Dr. C. W. VINING and Dr. W. H. MAXWELL TELLING showed a boy, aged 9, with a clinical condition strongly indicating general paralysis. The symptoms had begun three months after a blow on the head twenty months ago. The child's general mental condition had changed. It was now destructive, restless, silly, and dirty in his habits. The pupils, reflexes, and tongue were typical of the condition, and both the blood serum and cerebro-spinal fluid were markedly positive to the Wassermann test.

MIDLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting held in Derby on December 2nd, 1913, Dr. WALTER SWAYNE, President, in the chair, the following were among the exhibits:—Mr. H. T. HICKS: (1) Two specimens of *Chorion-epithelioma occurring after pregnancy* at full term. The first specimen was obtained at the autopsy on a patient who had given birth to a full-term living child about three months before death. A small nodular growth was present in the uterine muscle close to the left cornu, and metastases were found in the lungs, kidneys, liver, and other viscera. An important point in connexion with the case was the absence of uterine haemorrhage. Apart from a slight loss of blood about sixteen days after delivery, uterine symptoms were absent. The patient was admitted as an acute liver condition. The hepatic area was explored, and small secondary growths in the liver were found at the time of operation. Microscopical sections revealed the nature of the neoplasm. The second specimen consisted of a uterus enlarged to about the size of a two months gestation, and containing a diffuse dark-coloured necrotic growth, which had the typical characteristics of chorion-epithelioma. The organ was removed from a patient who had suffered from attacks of bleeding for a month after delivery at full term. A small embolic growth was present in the anterior wall of the vagina. This was also removed. The patient was operated upon six weeks after delivery, and nine months later was apparently in good health. (2) A complete *Cast passed per urethram* from the female bladder. The patient had suffered from retention of urine, the result of pressure from a retroverted and incarcerated gravid uterus. The latter had to be emptied, and about a week later a small portion of the cast appeared at the urethral orifice. The whole cast was delivered by traction from below. The patient ultimately made a complete recovery. (3) A small *Dermoid of the left ovary containing three teeth*. The interest in the specimen lay in the fact that the patient was *x*-rayed for diagnostic purposes, and the photograph showed three distinct shadows lying near the left sacro-iliac synchondrosis. The abdomen was explored for supposed ureteral calculi, when the small tumour containing the teeth was discovered, the latter accounting for the shadows. Mr. CHRISTOPHER MARTIN: A uterus and appendages removed on account of *Bilateral tubal gestation* and small multiple uterine fibroids. Dr. C. E. PURSLOW: A specimen of *Unruptured interstitial ectopic gestation* removed from a patient, aged 32, who had been married five years and had not previously been pregnant. Menstruation had been regular up to ten weeks before operation. She then had six weeks' amenorrhœa, and subsequently on three occasions noticed a brown discharge. It was thought that there had been an abortion, and she was sent by her medical attendant to Dr. Purslow with a view to having curetting performed. On examination the uterus was slightly enlarged and a small swelling was noted attached to its right cornu. Tubal gestation was diagnosed. On opening the abdomen the swelling was found to occupy the right uterine cornu, the corresponding round ligament being attached rather to the inner side of the centre of the swelling. The tube was perfectly normal. The tumour was removed by excising a wedge-shaped portion from the wall of the uterus, the patient making a good recovery. No blood was present in the peritoneal cavity. Mr. BECKWITH WHITEHOUSE discussed a case of *Extra-uterine gestation occurring twice in the same patient*. It raised an important point as to whether one was justified in removing the uterine appendage in cases of tubal mole or incomplete tubal abortion. Personally, he did not believe that it was good surgery to sacrifice the ovary and tube in these instances, since dissection of a number of specimens under normal saline had shown that the mole is only attached by a narrow base, and that no great difficulty need be anticipated in controlling the bleeding point. He suggested that access to the mole be attained by a longitudinal incision through the wall of the tube. After enucleation and control of the bleeding point the wall might be closed by a continuous suture of fine silk. As regards the objection of total or partial occlusion of the tube, he did not think that the risk of such occlusion was as great in cases of tubal mole as in inflammatory conditions which were from time to time subjected to operation by salpingostomy and partial salpingectomy.

MANCHESTER PATHOLOGICAL SOCIETY.

AT a meeting on December 10th, 1913, Dr. A. BROWN, President, in the chair, Dr. JOHN ELLIOTT (Chester) gave an account of some human remains found in a Roman cemetery recently discovered in Chester in some meadow land adjoining the infirmary and known as the "Infirmary Field." On this field two new wings in connexion with the infirmary extension are now being erected, and the excavations for their foundation had disclosed the site of a Roman cemetery. Some thirty graves had already been disclosed within a small area, in addition to a number of indiscriminate Roman interments at the back of the existing infirmary, on the site of the new out-patient department, and in close proximity to the main site. Although within the area of the existing walls of Chester, it was certainly extramural in Roman times. Almost without exception the floor of the graves was sprinkled with a layer of finely-divided, broken-up Roman tiles or bricks, mixed in many cases with charcoal. Among the peculiarities in the bones found were several instances of metopism in the skulls and of platycnemia of tibiae. There was also an example of hydrocephalus, and one of exostoses in both external auditory canals was shown, as also a depression in the temporal bone indicating a healed mastoid abscess in another specimen; one, an adult skull, was typically achondroplasic. Instances of caries in the well-worn teeth were few and far between, and instances of rheumatoid arthritis in the bones most exceptional. There had also been found in Chester an altar erected by "Hermogenes, a physician," who was conjectured to have been physician to the Emperor Hadrian. This was probably unique, the facilities for obtaining medical assistance at that early period in Britain being in all probability very remote. All the available evidence suggested that the burials belonged to the second century. The paper was illustrated by lantern slides and autochromes.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

At a meeting on December 12th, 1913, Dr. A. K. CHALMERS, President, in the chair, Dr. JOSEPH CATES, in a paper on the *Sale of milk*, said that although the Board of Agriculture had laid down regulations to the effect that a sample of milk containing less than 3 per cent. of fat should be presumed, until the contrary was proved, not to be genuine by reason of the abstraction of milk fat or the addition of water, and that where a sample contained less than 8.5 per cent. of milk solids, other than milk fat, there was presumption that water had been added or non-fatty solids abstracted, yet various defences might be set up successfully. At Lancaster a milk seller was recently prosecuted for selling milk 23 per cent. deficient in fat. The defendant stated that he had not tampered with the milk, and the cowkeeper from whom he purchased it swore that when sold to the defendant it was in the same condition in which it came from the cows. Witnesses were called by the defendant to show that normal healthy cows could give milk containing as little as 1.7 per cent. of fat, and that in this particular instance the deficiency in fat was probably due to the season of the year. The case was dismissed. Among the factors said to cause variations were seasonal variation, the period of lactation, the interval between the times of milking, the method of milking, the effect of food, and the breed of the cow. The main cause of the low quality of milk Dr. Cates thought was "toning." This consisted in the addition to a naturally rich milk of water, or more commonly of skimmed milk, in sufficient quantity to bring the resultant mixture into line with the minimum requirement of the Board of Agriculture. Any attempt to deal with the supply of genuine milk must include some provision directed to check the practice of toning. It should be made an offence to sell milk which did not attain a certain fixed minimum limit, irrespective of the cause of the deficiency of fats or solids. The present standard was not unreasonable, and cows which habitually gave milk of a quality below it should not be used for the supply of milk for human consumption. Mr. WILFRED BUCKLEY spoke of the advantages of the American system of supplying certified milk, but he urged that the certifying should be done by the State, and not by a body of private individuals. Sir SHIRLEY MURPHY doubted whether it might not be prudent to have no fixed standard, for there were extreme difficulties in deciding what was good milk. He quite agreed that the milk from a cow which produced milk of a low fat content should not be sold. Dr. BURNETT HAM said that in Victoria, New South Wales, there was a milk standard of 3.5 per cent. of fat. After several years' experience, it had been found that no hardship had been inflicted on the producers, and the practice of toning was not prevalent in Australia. Dr. MCMASTER advocated the adoption of the American plan of grading milk, a practice which Dr. HERBERT JONES hoped would never be adopted in England, as it would largely increase the difficulties attending the production of milk under cleanly conditions. Dr. S. B. WALSH said that, judged bacteriologically, the milk in America was one hundred times cleaner than that in England. The production of clean milk need not necessarily increase its price.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

At a meeting held on December 2nd, 1913, Dr. JANE WALKER, President, in the chair, Dr. MARY SCHARLIEB, in opening a discussion on the scheme for an *Indian medical service for women*, as described by Sir Charles Lukis in an address published in these columns on October 4th, invited criticism of the following points: (1) The proportion of medical women to be recruited from England and from India. (2) The retiring age of 48 which, although not made absolute, seemed arbitrary and unfair, that of men under like conditions being 55, and in some cases 62. (3) The suggested emoluments, the highest pay obtainable by women being £440 a year, while the salary of men was increased at a higher rate to a maximum of £1,400. She took into consideration that the expenses of women were, as a rule, less than those of men, and that women could not take charge of regiments. (4) The subordination of the medical women in the Provinces to a local committee, with power of suspension though not of dismissal. (5) The scheme for the erection of a medical college and hospital for women at New Delhi. In conclusion, the speaker contended that medical women should avail themselves of the scheme as it stood, and do their best to improve it. Dr. ALICE PENNELL disagreed entirely with the views of the opener of the discussion. The suggested conditions were neither fair nor desirable. Men received Rs. 70 a month more than women from the first, and after six years their salary had reached a higher figure than the maximum suggested for women after twenty years' service. Restrictions were also imposed upon women in regard to private practice. The provincial committees were chosen promiscuously, the members frequently having no knowledge of the subject: medical women should not be subordinate to such bodies. The expenses of women were not less, but often greater, than those of men. Dr. MAY THORNE objected to the omission of pensions for women, such as were given to men after seventeen years' service. Dr. MARY O'BRIEN did not advise boycotting the scheme. A strong protest should, however, be made. Dr. ISABELLA MACDONALD said that first-rate British medical women would never go out under the scheme. Dr. FLORENCE WILLEY said that if the association accepted the scheme this would be the first time that medical women had agreed to take pay inferior to that offered to men for equal work. It would be quite intolerable to be placed under the subordination of local committees. Dr. CORTHORN said she had found women's expenses in India to be heavier than those of men. Dr. VAN INGEN WINTER, who had worked for twenty-three years in India, said she considered the proposed scheme to be a forward movement, and not a retrograde step. Women should not receive pay equal to that given to men. It was not necessary for the best women to go to India. Dr. FRANCES IVENS said that medical women had always fought for remuneration equal to that given to men, and that it would be criminal for women to accept less under this scheme. After further discussion, in the course of which New Delhi was condemned as a site for the suggested hospital, the following resolution was proposed by Dr. FLORENCE WILLEY, seconded by Dr. CONSTANCE LONG, and carried unanimously:

> That the Association of Registered Medical Women, while recognizing that the proposed scheme for a women's medical service in India in many respects offers improved conditions for the work of women under the Dufferin fund, desires strongly to protest against the scale of remuneration offered, which is entirely inadequate for the work which the medical women are asked to undertake; and also against the subjection of medical women to a lay committee, for the constitution of which no guarantee is offered, yet which has the power of punishment for acts of which the committee may disapprove. The association feels that these defects will be fatal to the success of the scheme, since no first-rate medical women will consent to work under such conditions.

Dr. LOUISA MARTINDALE, in a paper on *A modern German Frauenklinik*, described the work of Krönig and Aschoff in Freiburg under three headings—obstetrical, surgical, and *x* ray and mesothorium. The Freiburg school was unique in its use of Dämmerschlaf in labour. Internal examinations were always made per rectum, and the membranes could even be ruptured by this route. The mother was allowed to sit up twelve hours after her confinement, walked on the second day, and remained up all day on the sixth. In all operations local anaesthesia was used, the favourite form for laparotomies being sacral anaesthesia combined with deep veronal-scopolamin-morphine Dämmerschlaf. But surgery was now comparatively rare. The complete breast amputation and Wertheim's operation for carcinoma had been completely given up. *X*-ray work was carried out under Dr. Gauss in an intensive manner, the hard rays being allowed to penetrate deep into the tissues and the patient being exposed for four to five hours at a stretch. Fibroma and metritis were cured in this way in about eight weeks. In cases of inoperable carcinoma no trace of cancer cells could be discovered after the treatment. Sometimes radium and mesothorium were used in conjunction with *x* rays. Out of 82 cases of inoperable carcinoma treated purely by radiotherapy, Gauss had obtained cure in 28 cases; large ulcers disappeared rapidly, bleeding, discharge, and pain ceased. In cases of sarcoma the rays

were applied to the sarcoma itself through a number of small fields, and the whole surface of the body was exposed in large areas for the chemical effect on the blood. The speaker had seen no case of burns, though *Röntgen-jammer* occurred fairly frequently.

Reviews.

THE STUDY OF DISEASES OF THE HEART.

THE introduction of instrumental means of graphic illustration of the action of the heart has wrought a great change in our views of the clinical aspects of heart disease. A few years only have elapsed since we had occasion to comment (BRITISH MEDICAL JOURNAL, May 7th, 1910) upon a new edition of Dr. JAMES MACKENZIE'S important treatise on *Diseases of the Heart*,[1] and we have now to record the appearance of a third edition. The author has found it necessary to rewrite the greater portion. Not only has the electro-cardiograph led to a better understanding of the sequence of contractions of the cardiac muscle, but a beginning has been made toward the explanation of the action of various drugs which have hitherto been used in the haphazard way necessitated by imperfect information. The new work has brought a new nomenclature, and the definitions of unfamiliar terms, given in a preface, will be found of great interest to those readers who have not been in a position to follow the course of recent research. The distinction, for instance, between "auricular fibrillation" and "auricular flutter" would not be obvious to any but expert readers.

The whole work, however, is not addressed to beginners. It is essentially intended for the enlightenment and guidance of practitioners of every degree, and deals without reserve with many time-honoured traditions which have hitherto formed the basis of the student's mental equipment. The valvular murmur, the pericardial friction, and the irregular rhythm have in times past been thought sufficient to indicate special forms of disease, but under modern conditions they are only held to be indicative of a part, and sometimes a very small part, of the whole. The analysis of the action of the morbid heart, rendered possible by instrumental demonstration, has thrown considerable light upon the significance of the classical physical signs, but even with the aid of the most elaborate apparatus there is still a limit fixed beyond which actual knowledge ceases and conjecture must for the present take its place.

The term "heart failure" has become all too familiar as a cause of death, and doubtless in many cases it does not imply more than the natural stoppage of action, due to some extracardiac cause; but heart failure in its proper sense has a most important meaning for the physician. It is indeed the most important indication he has, to enable him to determine the gravity, or otherwise, of an existing lesion. Throughout his very comprehensive book Dr. Mackenzie constantly reminds his reader of the importance of gauging the heart's condition by its power of withstanding strain, by exertion, etc.

The theory of back pressure which has so long held the field as explanatory of failure from valvular disease is liable to mislead if it be considered without reference to other evidence of impairment of function. The amount of force inherent in the heart muscle differs considerably in different individuals, and hence it is of the greatest importance that evidence should be obtained as to the normal degree of power possessed by the individual heart in health before assessing the gravity of any abnormal action that may be present on exertion.

Tradition has always been a source of delay in the progress of medicine. Positive statements, not founded on a trustworthy basis, have too long been accepted without question, and knowledge has been assumed by sheer force of repetition of conjecture. How much has been asserted and how little is really known on the subject of intravascular tension!

In dealing with this, as with many other difficult parts of his subject, Dr. Mackenzie draws a sharp line between knowledge and inference, and insists upon the need for the application of unfettered common-sense. This is particularly evident in the chapters relating to treatment, wherein will be found a wealth of useful hints interspersed with some scathing criticism of certain routine methods. Never a great believer in special lines of treatment, the author sets forth his personal experiences of the system, or systems, pursued at Nauheim with merciless fidelity.

Of the new edition as a whole it may be said that it is worthy of those which have preceded it. The trend of modern research toward the study of the action of the heart under morbid conditions will doubtless throw still more light on much that yet remains hid, but as an epitome of modern knowledge, and of inference to be derived from research, Dr. Mackenzie's work maintains its position as the leading treatise, at any rate in our language, and we doubt if it has its equal in any other.

[1] *Diseases of the Heart.* By James Mackenzie, M.D., F.R.C.P. Third edition. London: H. Frowde; Hodder and Stoughton. 1913. (Cr. 4to, pp. 525. 25s. net.)

CHEYNE AND BURGHARD'S SURGERY.

THE fourth volume of the *Manual of Surgical Treatment*, by CHEYNE and BURGHARD,[2] continues the consideration of the surgery of regions, and commences with that of the jaws and tongue. Under the subject of tumours of the jaws opportunity is taken to discuss the newer methods of anaesthesia—the intravenous administration of ether and hedonal, and intratracheal insufflation. The operation of lateral rhinotomy, a useful method of gaining access to tumours chiefly nasal, is well described and illustrated. The chapter on malignant disease of the tongue is one of the best in the volume; especially valuable is the discussion of the different operative methods suitable for diseases of different sites and extent.

The second division treats of affections of the pharynx and oesophagus. For the removal of small carcinomata of the tonsillar region the thermocautery is recommended. When wide access is necessary division of the jaw above the angle, with removal of the ascending ramus, is advised, and is said not to cause much functional disability. The various routes are well set out. There is little of note in the chapter on the oesophagus except that the subject of oesophageal spasm is not as adequately dealt with as might have been desired. This condition has been studied in many clinics of late years, and its importance established as a cause of so-called idiopathic dilatation of the oesophagus.

The third and largest division is devoted to the surgical affections of the stomach and intestines. There is here an attention to detail in description of procedures which is highly to be commended, and it is obvious throughout that discussion is based on wide personal experience. Gastro-enterostomy receives a good deal of attention; the so-called vicious circle is no doubt rightly stated to be most commonly due to obstruction at the site of anastomosis. In the usual posterior operation, is it not better to fix the stomach wall to the slit in the mesocolon after the anastomosis has been completed rather than before, as described in the text? The authors have more faith in the pillow-maker's stitch as a haemostatic than is felt by many. It has long been shown that some eversion of the edge of the mucous membrane by the anterior half of the through-and-through suture is of no consequence and that it is not worth while risking defective haemostasis to obtain perfect inversion. In excision of ulcer it is useful to stitch as the excision proceeds, rather than to leave stitching until the excision is completed.

After operation for perforation many surgeons hold it wise to drain the pelvis invariably as well as to insert a tube down to the immediate vicinity of the ulcer. Loreta's operation, that is to say, forcible divulsion of the pylorus, is the operation recommended for congenital stenosis of the pylorus; there are records to show that Nicholl's pyloroplasty and gastro-enterostomy compete successfully with this method. Emphasis is laid on the necessity for emptying the intestine in acute intestinal obstruction at the time of operation, certainly a most important point, but the text suggests that "an hour or more" may have to be spent on this evacuation. What would be the result of keeping the patient under anaesthesia for an extra hour and throughout this time exposing and handling the

[2] *A Manual of Surgical Treatment.* By Sir W. Watson Cheyne, Bart., C.B., D.Sc., LL.D., F.R.C.S., F.R.S., and F. F. Burghard, M.S., F.R.C.S. New edition, entirely revised and largely rewritten, with the assistance of T. P. Legg, M.S., F.R.C.S., and Arthur Edmunds, M.S., F.R.C.S. In five volumes. Vol. IV. London: Longmans, Green, and Co. 1913. (Medium 8vo, pp. 649; 208 figs. 21s. net.)

intestine? The chapter on appendicitis is necessarily long. For quiet cases the "gridiron" and the "vertical" incisions are described. The latter is recommended to be 3 in. in length with its centre over the umbilicus; this is presumably a modification of "Battle's incision" which commences an inch above the umbilicus and passes obliquely downwards for four inches internal to the semilunar line. In what respect is the authors' incision superior to Battle's, except possibly when the diagnosis is in doubt? It would seem that the access given to the right iliac fossa must be indifferent.

The chapter on hernia is in every way admirable and excellently illustrated. What is described as "Kocher's method of treating the sac in radical cure of inguinal hernia" is not that which Kocher has preferred since 1907. The "*Invaginationsverlagerung*," described in the fifth edition of his textbook is almost always applicable and is probably better than any other method.

The volume is completed by chapters on the rectum and anus which follow recognized lines. The difficult question of rectal cancer is dealt with in a very satisfying manner which unquestionably represents the present position of this subject.

THE MONTESSORI "SYSTEM."

Madame Montessori's name is best known in connexion with a system of teaching adapted for the development of mentally defective children. The scheme which she has brought into existence in Italy has been a notable advance on the methods previously existing there, and as such has attracted a great deal of attention amongst educationalists: further, it was averred that the same scheme with modifications presented the ideal of education for all children. The claim of the system on the notice of English educationalists has been and is still the subject of inquiry, but, so far as can be judged by the reports of those who have examined the schools in their native habitat, the methods do not present any advance on, if indeed they are so good as, existing methods for the training of defectives that have been working in this country for several years; whilst the claim that it is the foundation of a better scheme of general education for normal children appears to be quite unfounded. Montessori methods suggest improvements on Italian methods, but not on English methods. English educational methods provide a freedom for individual expression that is unknown in regular Italian methods.

The weighty volume, *Pedagogical Anthropology*,[3] is in a sense the basis of the author's teaching scheme. She is a disciple of Cesare Lombroso. What he claimed to have done for criminal anthropology the author seeks to do for pedagogy. She writes: "The credit rests with Italy for having rescued anthropology from a sort of Olympus, and led it by new paths to the performance of an eminent and practical service." Until these new paths were discovered "Anthropology failed to raise itself from the status of a pure and aristocratic, in other words, a superfluous science, a status that prevented it from ranking among the sciences of primary importance." Unfortunately for this claim, Lombroso's way of opening these new paths has been subject to the most destructive criticism, and the new world has been found to be a shifting morass. So recent a piece of work as that entitled, *The English Convict: a Statistical Study*, by Dr. Charles Goring (London: Wyman and Sons), proves conclusively from the life-histories of 3,000 convicts that there is no such thing as a predestined type of humanity "born to do evil," and "there is no definite line of demarcation, no absolute difference in nature, as opposed to degree, between the human beings who are, and those who are not, criminal." Taking the words of our author literally, they mean that the man in the street has had an introduction to anthropology by a sensational road which to some extent tallies with preconceived notions, or at any rate fits in with the sense of things as outlined by melodrama. We should like to hear the views of anthropologists, the "pure scientists," on the assertion that their work is "superfluous," and not "ranking as of primary importance"!

The work deals with the general principle of biology, then proceeds to consider human morphology in detail. Stature, weight, craniology, the trunk, limbs, skin and pigmentation, and the significance of stigmata, are dealt with. Then follow the methods of anthropological investigations, and tables for the calculation of indices.

There are points of detail open to criticism; for example, it is written: "The English recommend soups made of cereals and gluten, in which it is never necessary to use soup stock, just as it is never necessary to use meat in children's diet." Apart from a general recommendation nowadays of porridge, and the pet hobbies of certain dietetic cranks, this statement is quite untrue of English practice.

Some of the author's conclusions are not untinged with her views on feminism. Dealing with stature and bodily conformation, the two types—the robust of trunk and the long of limb—are considered. The former is that of the worker type, the latter that of the aristocrat. Applying the suggestion implied by the respective utilities of these classes, the author argues that woman, being of the robust trunk type, is likely to be superior to the long-legged man! Truly each is the superior of the other for that state of life to which it has pleased God to call us! Again, in craniology there is a revival of the bigger brain criterion of the sexes, and the author quotes with the highest encomium the work of Manouvrier, who, by a strange "sexual index," proved that woman had the biggest brain mass. The method is a lively example of how figures may be made to prove anything. In this thing only the author laments the depravity of her master Lombroso, who "defended the principle of the innate inferiority of woman, and regarded her, in comparison with man, as a case of infantile arrest of development."

Some of the stigmata and the indications of character given by physical conformations are difficult of application. In the one part of the book the glory of the face as the prime index of character is dilated upon; in another the hand is cited as the one index—"we can judge from the hand whether a man is fitted for work or not." It would be a hard thing to decide the fate of a child upon his face or the shape of his hands, if even we dare venture a guess on that of a man with his more defined features. Indeed, the author suggests the problem in another part of the work: "The women of Latium, who are dark and dolichocephalic, have most beautiful faces, but their hands and feet are imperfect; the brachycephalic blondes, on the contrary, are coarse-featured, while their hands and feet are extremely beautiful." Which, then, is the indication of the finer character? The dilemma shows the uncertainty that must attend upon any such scheme of pedagogical anthropology.

Nevertheless, this is a book that every school doctor should read and study; and if he will undertake investigations of the sort indicated in this work the more or less routine work of examining school children will abound in interest. If he cannot take a tripos course in human anatomy at Cambridge he can do the next best thing—read this work, follow up the authors quoted, or, better, launch out into an investigation of his own.

It remains to be added that the translator has done his work admirably; the text reads like good, original English.

INDIAN SOCIOLOGY.

A true and detailed account of domestic life constitutes a very important contribution to the science of sociology. The family is the nucleus and type of social organizations, and the habits and usages of the home are the outcome of those instincts and motives which govern the relations of individuals to each other and the adaptations of human beings to their environment, and to their hopes and fears for the future. From this point of view Mr. Denys Bray's *Life-History of a Brāhūī*[4] possesses great value and interest, and this has been recognized by the Royal Asiatic Society of Great Britain and Ireland, which has issued the work as a prize publication. Mr. Bray is an Indian civilian stationed at Quetta, and the material utilized in the composition of his book was obtained orally from one Mirza Shēr Muhammad, himself a Brāhūī and intimately acquainted with the customs of this race of Mohammedan

[3] *Pedagogical Anthropology*. By Maria Montessori. Translated by Frederic Taber Cooper. London: William Heinemann. 1913. (Roy. 8vo, pp. 518; 165 illustrations. 14s. net.)

[4] *The Life-History of a Brāhūī*. By Denys Bray, I.C.S. London: Royal Asiatic Society. 1913. (Med. 8vo, pp. 182. 5s.)

Baluchis which inhabits the South-Eastern corner of Baluchistan and owns allegiance of the Khan of Kalāt. The information derived from this gentleman, who was once in the service of the Khān, and is now in the employ of the Indian Government, was communicated "piecemeal at odd moments, sometimes spontaneously, sometimes in answer to questions," and the author has systematized his gleanings—"preserving their refreshing *naïveté*, their intimacy and boldness of detail." The Brāhūī are a pastoral and partly nomadic people of various races, inheriting the traditions and ceremonies of their ancestors, which are scrupulously guarded, as in all the East, by women. These are, however, in consequence of the advance of civilization and of education and of increased communication with the outer world, gradually falling into desuetude, and this fact, deplored by the narrator, adds value to the record. The narrative concerns mainly those cardinal events of organized life, birth, marriage, and death—integration, reproduction, and disintegration—and the observances and incidents connected with these are described very plainly and minutely. The most striking impression produced by a perusal of the book is that of the multiplicity of ceremonies which attend the occurrences of life from beginning to end. Of the origin and reason of these customs it is impossible to give any plausible explanation. Most of them are dictated by fear of evil influences, if the jinns and other malign spirits are not propitiated by prayers and sacrifices. There is a chapter on possession by evil spirits, in which the pranks and powers of these demons are stated and the methods of exorcising them detailed. Every natural incident, such as the cutting of the teeth, the attainment of puberty, and so forth, has its ghostly significance, perils, and ceremonial observances. Even the souls of the dead are believed to haunt the homes and graves of their defunct hosts, and to plot mischief which has to be warded off by propitiatory oblations. These simple nomads, indeed, appear to be obsessed throughout their lives by superstitions, and a belief in the efficacy of charms and prayers and sacrifices, and in the ministration of the mulla or priest. The intercession of saints and martyrs is also invoked on occasion. There is an interesting chapter in which crude descriptions are given of various diseases, infectious and otherwise: and different methods of treatment, many of them barbarous, many magical, and all without rational justification, are related with evident conviction of their benefit. The Brāhūī are Mohammedans, and believe in a good God and holy prophets, and glimpses of religious faith and worship appear occasionally; but their supernatural world is peopled by supernatural existences who appear to work independently of and antagonistically to a beneficent deity.

The work exhibits a curious picture of social life among the nomad tribes of Baluchistan. The author has "attempted neither to analyse nor to explain, preferring to leave the story in its simplicity, undefaced by the jargon of science." Nevertheless, the facts set forth lend themselves to very interesting comparisons, and deductions.

RURAL HOUSING.

It is nearly five-and-twenty years since Parliament made it the duty of every sanitary authority to cause an inspection to be made of its district with a view to ascertaining what houses were unfit for human habitation. In the large towns this duty has been carried out with some regularity, but in rural districts it has been almost entirely neglected. Indeed, it is probable that many rural authorities were altogether ignorant of this obligation. With the passing of the Housing, Town Planning, etc., Act, 1909, and the making under that Act of the Housing (Inspection of District) Regulations, 1910, these local bodies have at last been stirred into activity, with the result that there is now accumulating a mass of information in official records concerning the conditions under which a large number of the inhabitants of rural districts are housed. There is very little difference of opinion as to the necessity for improving those conditions. All are agreed that reforms are needed, but as to the precise mode of reform no agreement has yet been reached. An important contribution to the controversy is made by Mr. Hugh Aronson in his little book on *Our Village Homes*,[7] which gives a passing account of the growth and decline of the villages, and then enters into the practical question of restoring them to their former condition of prosperity. The author says unhesitatingly that this can only be achieved by improving the houses of the rural labourer. That the Act of 1909, though it may have done a great deal in the way of bringing into prominence the amount of the existing evils, will secure any effective remedy for them he greatly doubts; he is apparently more in favour of central action on the lines suggested in the bill introduced into Parliament by Sir Griffith Boscawen. The basis of that measure was the creation of a separate Housing Commission which, in default of the erection of houses where required by the local authorities, should be empowered to undertake the duties of the authorities. It will be recalled that Mr. Burns opposed this bill on the ground that it was calculated to do permanent harm to housing, by tending to depress rather than to encourage local authorities, and by acting as a deterrent to private enterprise. Mr. Aronson points out that for years neither local authorities nor private enterprise has done anything effectually to solve the problem of rural housing, and that the time has arrived for definite steps to be taken to ensure success where failure hitherto has been prominent. Whatever views may be held on the rural housing question, and as to the best means to be adopted concerning it, a perusal of Mr. Aronson's book cannot fail to be of assistance, for it is written with an evident desire to obtain reforms from whatever quarter they may be proposed.

NOTES ON BOOKS.

Dr. J. Johnston Abraham's book on his experience as a ship's doctor, published a little over two years ago, went through four editions in five months; two more were published last year, and it has now attained the crowning honour of a popular edition.[8] The secret of the success of *The Surgeon's Log* lies partly in the author's skill as a teller of a story, for the book consists largely of a series of episodes grave and gay, but mostly gay. Mainly it lies in his temperament. He is an optimist who can see a good side or a humorous side to most people and incidents. He tells us in the preface to this edition that he has received many inquiries from doctors anxious to repeat his experiences, and has answered that, given the proper subjective attitude of mind, their pleasure in similar circumstances would be as great. That such inquiries should be made affords best proof of the merits of this delightful book.

Meat and Food Inspection.

Dr. Francis Vacher has taken the opportunity afforded by the issue of the sixth edition of the *Food Inspector's Handbook*[9] to add to its usefulness in several ways. A new chapter, with several illustrations, has been inserted, giving the mode of cutting up meat. The chapter on fish has been enlarged, and more extended reference has been made to salmon. It might be made still more useful if information were given as to the approximate time after it is caught a fish should be cooked. A young housewife, for example, might have a salmon sent to her and wish to know how long she might keep it before cooking. There are now over one hundred illustrations in the book from the pencil of Mr. R. E. Holding. One is an excellent coloured reproduction showing the internal surface of healthy ribs of beef, and the internal surface of similar portions of tuberculous ribs.

The very unappetizing appearance of the majority of butchers' shops in England has often been the subject of adverse comment by visitors from foreign countries. Those who desire to assist in removing this reproach should read the *Purveyor's Path to Success*,[8] by Mr. W. H.

[7] *Our Village Homes: Present Conditions and Suggested Remedies.* By Hugh Aronson, M.A., Barrister-at-Law, with a Preface by Lord Henry Bentinck, M.P. London: Thomas Murby and Co. 1913. (Cr. 8vo, pp. 160. 2s. 6d. net.)

[8] *The Surgeon's Log: Impressions of the Far East.* By J. Johnston Abraham. Seventh and Cheaper Edition. London: Chapman and Hall. 1913. (Cr. 8vo, pp. 316; 8 illustrations. 2s. 6d. net.)

[9] *The Food Inspector's Handbook.* A Practical Guide for Medical Officers of Health, Meat Inspectors, Army Officers, Students, and Others. By Francis Vacher. Sixth edition. London: The Sanitary Publishing Co. 1913. (Demy 8vo, pp. 338; 98 figures. 7s. 6d. net.)

[8] *The Purveyor's Path to Success and Stock Breeder's Manual.* By William Henry Major. London: Towers and Co., Ltd. (Cr. 4to, pp. 269. Illustrated. 6s. net.)

MAJOR, who carries on the business of a butcher in Folkestone. Competition, he says, grows keener and keener each year, and if the tradesman of to-day is to keep pace with his competitors he must adopt up-to-date methods and cleanliness, and must make his window displays both attractive and tempting. He takes many pages to show in detail how this advice can best be carried out, and lays great stress on the importance of slaughtering under proper sanitary regulations. He refers with indignation to the lack of efficient inspection of livestock offered for sale at country markets, and relates instances of the purchase for a few shillings of wastrels and piners, which when dressed and exposed for sale would be difficult to detect as unfit for human food. He maintains that the time to prevent their use as food was when being put up for sale at the auction mart.

SOME BOOKS FOR THE PUBLIC.

Among many other volumes published more or less recently for the information of the general public in regard to subjects of a medical order are *The Vital Balance*,[9] in which Drs. ALBERT and GEORGE GRESSWELL review the factors contributory to physical well-being, and have a good deal to say likewise about the preservation of mental and spiritual health. The paper bound volume entitled *Disease in Milk: The Remedy Pasteurization*[10] must be regarded as for the most part a labour of love on the part of its authoress, Mrs. LINA GUTHERZ STRAUS, her main object, seemingly, having been to record the valuable work done by her husband, Mr. Nathan Straus of New York. It reproduces, however, many of the posters and pamphlets issued by him in the course of his almost lifelong campaign against impure milk, and thus supplies much information on the subject of milk pasteurization. A third edition has been published of *The Care of Children*,[11] the special point about it being that its author, Major R. J. BLACKHAM, R.A.M.C., has kept in mind throughout the needs of mothers and nurses in tropical and subtropical countries. A great deal of useful information is very succinctly conveyed in *Home Health and Domestic Hygiene*,[12] whose authors, Sir JOHN COLLIE and C. F. WIGHTMAN, are practised writers of booklets for popular consumption on scientific subjects. In the present volume they adopt their customary plan of concluding each chapter with a number of appropriate questions to facilitate self or class examination. Of the twelve chapters of the volume entitled *Hygiene for Teachers*[13] four deal with the sanitation of the school, the disabilities and diseases of children, and the medical inspection of schools. In the other eight the author of the book, Mr. R. A. ROWLANDS, of the London Hospital Medical School, deals somewhat deeply at times with the structure and functions of the body. The subject of butter making is discussed in detail, and on very practical lines, in *Farm and Creamery Butter Making*,[14] whose joint authors, Messrs. C. W. WALKER-TISDALE and THEODORE R. ROBINSON, brought out some time ago a corresponding volume on soft cheese making. The penny pamphlet entitled *How to Rear a Baby*[15] conveys much sound teaching in a series of succinct paragraphs. It has already gone through two editions, and its authoress, Mrs. FRANK STEPHENS, submitted it in proof for criticism to the medical officers of large provincial cities.

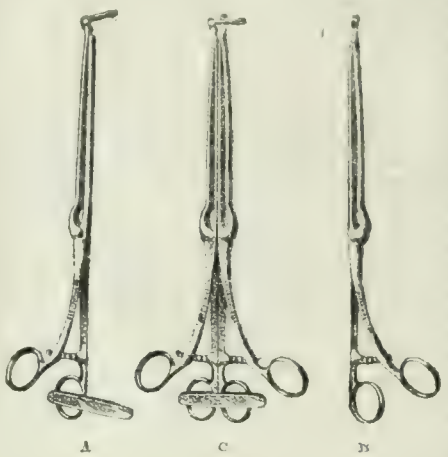
The edition for 1914 of the *Englishwoman's Year Book and Directory*[16] is edited by Miss G. E. MITTON, and like its predecessors forms a volume of much interest and utility to women of all classes. Practically no occupation or amusement in which women engage, or public work designed for their benefit or in which they take a part, fails to receive attention, and the information supplied is both succinct and accurate. Health centres and school clinics are among the subjects to which new articles are devoted this year. In the preface is mentioned as of special interest a table of "Records for Women," showing how "all along the line women are breaking new ground in those professions and honours previously supposed to be exclusively men's privileges," but we were unable to find it in the text.

[9] London: William Rider and Sons. 1913. Price 2s. net.
[10] New York: Published privately. 1913.
[11] London: The Scientific Press, Ltd. 1913. Price 1s. 6d. net.
[12] London: George Gill and Sons. 1913. 9d. net.
[13] London: Edward Arnold. 1912. Price 3s. 6d. net.
[14] London: The office of the *Dairy World and British Dairy Farmer*. 1913. Price 3s. 6d. net.
[15] London: Horace Marshall and Son. Price 1d.
[16] *The Englishwoman's Year Book and Directory*. By G. E. Mitton. Thirty-third year of issue. London: Adam and Charles Black. 1914. (Crown 8vo, pp. 441. 2s. 6d. net.)

MEDICAL AND SURGICAL APPLIANCES.

Gastro-enterostomy Clamp.

MR. BILTON POLLARD (London) writes: The gastro-enterostomy clamp here illustrated can be applied separately, and then easily combined (Fig. C), so as to hold the stomach and jejunum in suitable apposition without the help of an assistant. The clamps can be disconnected without sliding one on the other, and consequently without exerting any strain on the stitches uniting the jejunum to the stomach. As shown in the figures, the rachet of each clamp is visible in the position in which it is applied, and so the degree of compression exerted is easily recognizable. As a rule, sufficient compression is obtained by clamping to the second notch, sometimes to the third. The clamp for the stomach (A) is of a slightly stronger build than that for the jejunum (B). The length of the clamping surface of the blades is 5 in. The clamps were made for me five years ago by Messrs. Mayer and Meltzer, and, after repeatedly using them during that period, I find they possess all the requirements I need in gastro-enterostomy clamps.



A New Intensifying Screen.

A new type of intensifying screen for shortening the exposures in x-ray photography has been introduced by Messrs. Siemens Brothers and Company, Limited, of Caxton House, Westminster, S.W. A distinctive value of the "Heyden" screen lies in the fact that the emulsified surface is washable, and that the cleaning involves no loss of intensity. Indeed, the screen represents an effort to solve the problem of getting increased intensity together with greater durability of material. Add to this the claims that exposures may be reduced by nine-tenths or more, and that granular effect is negligible, and it is evident that the screen should add to radiographic efficiency. Accessory to this apparatus is a very neat cassette, or light-proof holder for both plate and screen, which also we had the opportunity of inspecting. It is arranged with an automatic spring-back contrivance to ensure that the emulsion side of the screen is in firm contact with the plate, and practically it appears to give to the screen all the advantages of a metallic support.

The "Daron" Micro-telescope.

Microscopic and telescopic functions are combined in an interesting instrument brought out by Messrs. Davidson and Company (29, Great Portland Street, W.). It is really a microscope which can be made available for telescopic vision. Putting abstruse optical description on one side, the pith of the matter is that in this instrument, with its small bulk and simple adjustments, the eyepiece and objective of a microscope are made to form in combination the eyepiece of a telescope. With a telescopic objective of 7-in. focal length and a micro-objective of 1-in. focal length, it gives a magnification of from 45 to 50 diameters at any distance over 4 ft. A special reflector makes it possible to do quite an interesting amount of astronomical observation, and as a terrestrial telescope, as was demonstrated to us, its powers are considerable. With the aid of a short-focus attachment it becomes available for quite close work. The uses of such an instrument, particularly for the naturalist, are not to be underrated, and so far as the doctor is concerned, the special application which is urged for it is in the examination of the cornea or of the skin, the patient being seated at 4 ft. distance and an illuminating attachment introduced. The instrument can also be adapted for telephotography on the one hand and for photomicrography on the other, while on viewing a transparency or even an ordinary photographic print on paper through its combination a pronounced stereoscopic effect is for some rather obscure reason given to the image.



ABERDEEN FROM THE SOUTH.
[From a photograph by John Avery and Co., Limited.]

EIGHTY-SECOND ANNUAL MEETING

of the

British Medical Association,

ABERDEEN, JULY, 1914.

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

THE CITY OF ABERDEEN.

Aberdeen is an ancient city of great historic interest and is famous as one of the centres of the higher education in Scotland. It is also the chief seaport in the North of Scotland and a place of considerable commercial importance. It is a royal burgh and the seat of an old bishopric with a cathedral, once of great size and magnificence, till it fell on evil days in the sixteenth century; though shorn of its ancient majesty it is still an imposing structure. It is the county town and the dépôt of the Gordon Highlanders. The population in 1911 was 163,891; how rapidly it has grown during the last hundred years is shown by the fact that the total number of inhabitants in 1801 was 26,992; in 1841, 63,262; in 1851, 71,973; in 1881, 105,076; in 1891, 121,623; and in 1901, 153,503. In the closing years of the fourteenth century the population was about 3,000. The city covers more than ten miles in area. It has a picturesque position on the North Sea, lying between the estuaries of two rivers, the Dee and the Don. Formerly divided into two towns, the old and the new, the former on the dark and treacherous-looking Don, the latter on the bright and sparkling Dee, it is now one city.

From the material of which it is mostly built Aberdeen is known as the Granite City. As is said in the *Baronial and Ecclesiastical Antiquities of Scotland*, illustrated by Robert William Billings and William Burn:[1]

> It has often been remarked that if the tide of prosperity were to desert London, and the population to leave it, in a very few years it would present nothing but a large heap of brickdust, with here and there a stone ruin rising through the mass. If the same fate should overtake all our cities together, the very last to lose its original shape and structure would be Aberdeen, where all the domestic as well as the public edifices are built of that indestructible material, granite, which has left us the edifices of the ancient Egyptians fresh and clean after three thousand years have passed over them.

A stranger is struck by the beauty and regularity of the architecture of the principal streets, but also by the austerity of the style. This is due to the hardness of the granite and the cost of carving it into mouldings, but it well expresses the simple, solid character of the people. As an unnamed writer has said:

> The impression which forces itself upon the visitor is the sense of solidity and permanence and of constant progression, and a little knowledge of its prominent men conveys this sense as part of their personality; men of quiet strength, fine business perception, and almost stubborn pertinacity of purpose, qualities which have doubtless come from their surroundings and which have imbued them with a large share of characteristics, which are perhaps national. All around are fine buildings, and in the growth of the city do we see the prosperity which comes out of industry and good business foresight and habit.

A more poetical name for Aberdeen is the "Silver City by the Sea." To appreciate the appropriateness of this designation, Aberdeen should be seen after a heavy rain, when the light grey granite of the houses and stately public buildings gleams in the sun with a silvery sheen which gives it a fascinating though somewhat cold beauty. The coldness of aspect, however, does not express the character of its people, who are eminently sociable. As William Watson has well said:

> But on thy heart hath fall'n no touch of frost,
> O city of the pallid brow austere,
> Grey, wintry-featured, sea-throned Aberdeen!

A stranger can scarcely fail to be struck by the large number of substantial-looking, well-built houses, many of

[1] William Blackwood and Sons, Edinburgh and London. MDCCCL.

them ornamented with the light, graceful turret adopted from the old French château architecture, and curious crow's step indentations of the gables. These houses are the outward symbol of the life within, which is marked by comfort, sociability, and good fellowship. Contrary to the proverbial notion of Scottish canniness in money matters, there are no more liberal people to be found than in Aberdeen. This characteristic in no way conflicts with the shrewdness that has given rise to the legend of the Jew who went to Aberdeen thinking he would find the simple Hyperboreans an easy prey. He was soon driven to seek more likely hunting grounds, remarking as he left that he had found the lost tribes of Israel. Gladstone once said there were no longer-headed people in the kingdom than the Aberdonians. The late Sir Francis Galton described the inhabitants as the ugliest folk in Great Britain, but we are sure that this verdict will not be endorsed by any one who has good opportunities for observation. From a eugenic point of view, the appearance of vigorous health in the young women, even in the poorer quarters of the city, should have appealed to him.

The electric tramway service is so conveniently arranged that a good general idea of the city can be got in a couple of hours by going on the outside of a car round the system known as "the circular route." One who wishes to see it in a less American way can visit nearly every part worth a visit on two or three afternoon excursions on foot. There are, of course, many spots where one should linger. The view down Union Street to the Market Cross, with the County and Municipal Buildings at the bottom on the left, shows the very heart of the modern city. King's College in the old town, and Marischal College with its magnificent Mitchell Tower in the new, will attract historians and lovers of architectural beauty. Round about the stately buildings of Marischal College are many streets which are now slums, but which are interesting as relics of the past and as object lessons of the manner in which people lived up to the eighteenth century. Among these are the Gallowgate, along which those doomed to death were carried to the place of execution on Heading Hill below Castle Hill where to-day stand the barracks. The Guest Row (Holy Ghost Row), a narrow thoroughfare, now a squalid haunt of social outcasts, was once the dwelling-place of rank and fashion. In it there stands a house which still bears upon it evidences of vanished greatness. It is marked by an entry with a lamp over it inscribed with the name of a lodging-house; within is a fine carved doorway. The oldest part dates from 1580. It was once the residence of Provost Sir George Skene, whose coat of arms may be seen above the doorway. In 1745 it was occupied by the Duke of Cumberland on his way to and from the field of Culloden—the army commanded by the "Butcher" levied heavy spoil from the city in which they were quartered. Another narrow winding thoroughfare leading down towards the harbour, and ending near the lower end of Market Street, is Ship Row, the houses of which, now the hiding-places of poverty, were once tenanted by well-to-do burgesses.



Municipal Buildings.

Churches.

The most conspicuous landmark in the old town looking up the valley of the Don is the Cathedral of St. Machar. Its distinctive features are two towers with spiked spires, which can be seen from long distances around. The cathedral is so bound up with the history of Aberdeen that a fuller account of it must be reserved till we come to deal with that subject. Of the numerous other places of worship in Aberdeen special mention may be made of the East and West Churches, which stand on the site occupied by the old parish church of St. Nicholas, the patron saint of the city. That church dated at least from the twelfth century, and tradition says that its nave was begun in 1060. It was completed in the early years of the sixteenth century. At the Reformation it was divided into two places of worship, the nave and choir being separated from each other by "Drum's Aisle" and "Collison's Aisle," which represent the transepts of the old church. In accordance with the geographical system of nomenclature which makes it somewhat difficult for the visitor from the south to identify the Presbyterian churches of Aberdeen, they are known respectively as the East and West Churches. In Drum's Aisle are some early heraldic tombstones, tapestries, and brasses. Below the East Church is a small crypt known as St. Mary's Chapel, which was built probably about 1430. There is contained in it a large collection of sixteenth and seventeenth century carved work, the remnants of the stalls and pews of the old church of St. Nicholas. In the churchyard lie buried many men of note, among whom may be mentioned Johnson's friend, James Beattie, philosopher and poet. Separating the churchyard from Union Street is a stone screen, which is one of the most striking features of the main thoroughfare of the city. Conspicuous among the churches of Aberdeen, most of which show a stern contempt of decorative art, is the Roman Catholic Cathedral, built in the Gothic style, with a graceful spire towering to a height of 200 feet, and a musical peal of bells. Inside the eye is delighted by the beauty of the wood carving and the tastefulness of the ornamentation.

Schools.

Apart from the University, Aberdeen has many places where the poorest man can get a good education. Among them the principal are the Grammar School and Gordon's College. At the former Byron, when he was—in the words of his grand-uncle, the "wicked Lord Byron," whom he succeeded—"the little boy at Aberdeen," was a scholar; his mother was a Miss Gordon, heiress of the beautiful estate of Gight, whose lands and fortune had been dissipated by her profligate husband. Byron was there for four years, 1795–8, and his association with Aberdeen is to be commemorated by a statue. The Grammar School, which dates from the middle of the thirteenth century, has been the training ground of a large number of men who have won distinction in every walk of life. But it has been transformed from the humble building in the School Hill, where it stood for centuries, into a fine structure in Skene Street. Near the School Hill stands Gordon's College, named after its founder Robert Gordon, a Dantzig merchant who died in 1730. He left £10,300 for the building of an institution in which thirty sons and grandsons of burgesses should be maintained and educated. A further large endowment was received in 1816, under the will of Alexander Simpson of Colly Hill. Gordon, like the founder of Guy's Hospital, lived a miser for the purpose of collecting funds to carry his design into effect. The tradition is that when he wished to read at night, rather than buy candles, he would use the light that came through a hole in the floor from a shoemaker's shop below. Like the

old public schools of England, the institution has far outgrown the original scheme, and now provides education for more than a thousand scholars. The College occupies the site of the old Blackfriars monastery, and stands pleasantly amid tastefully laid out grounds. In front of the gateway is a bronze statue of General Gordon, erected in 1888 by subscriptions of the Clan Gordon. The Art Gallery, which is close to Gordon's College, contains many fine works of art and is well worth a visit. Gray's School of Art, which stands near, should also be seen. There are a good number of statues in the town—Queen Victoria, Prince Albert, and Robert Burns being thus commemorated. By far the most striking of all is a colossal bronze statue of William Wallace at the north end of Union Terrace.



Brig o' Balgownie.

Parks.

Aberdeen has several public parks, the largest being the Duthie Park by the side of the Dee; it extends over forty-four acres, with cricket pitches and lawn tennis courts and a museum. This park was presented to the city by the late Miss Duthie of Ruthrieston. In it are a monument of Hygeia, erected in 1898, and an obelisk made of Peterhead granite, and 70 ft. high, in memory of Sir James McGrigor, who was the chief of the medical staff in the Peninsular War, a man highly esteemed by the Iron Duke. This originally stood in the quadrangle of Marischal College, from which some years ago it was transferred to the Park.

Hospitals.

Of the hospitals the principal is the Royal Infirmary in Woolmanhill, founded in 1740, rebuilt in 1833-40, and greatly enlarged in 1887 as a memorial of the jubilee of Queen Victoria. The infirmary has 240 beds. There is a Hospital for Sick Children, founded in 1877, with 85 beds; a Maternity Hospital, founded in 1823, with 18 beds; the City Hospital for Infectious Diseases, established in 1874, with 230 beds; the Royal Asylum for the Insane, which was opened in 1880, has 1,000 beds. In connexion with this must be mentioned the interesting offshoot of the asylum at Kingseat, Newmachar, established in 1904, one of the earliest examples of the village asylum in this country. There harmless patients of the kind called in Scotland "fatuous" are placed among comfortable surroundings and occupied in useful work. An illustrated description of the Kingseat District Asylum appeared in the BRITISH MEDICAL JOURNAL of November 24th, 1906, p. 1498. It is well worth a visit.



Bridge of Dee (1822).

The Bridges.

Of the sights of Aberdeen none is more picturesque than the Brig o' Balgownie over the Don; it consists of a high single-pointed arch 62 ft. wide. This old bridge, which was probably built by Bishop Cheyne of Aberdeen in 1320, has been made famous by Byron. He alludes to it in a note to a passage in the tenth canto of *Don Juan*:

> The Brig of Don near the auld town of Aberdeen, with its one arch and its deep black salmon stream below, is in my memory as yesterday. I still remember, though perhaps I may misquote, the awful proverb which made me pause to cross it, and yet lean over it with a childish delight, being an only son, at least by the mother's side. The saying as recollected by me was this, but I have never heard or seen it since I was nine years of age:
>
> Brig o' Balgownie,
> black's your wa,
> Wi' a wife's ae son,
> and a mare's ae foal,
> Doon ye shall fa."

Aberdeen stands alone among the cities of Scotland in having among its ancient monuments two historic bridges, each spanning one of the rivers between which it stands. The Brig o' Dee, the history of which has recently been written by Mr. G. M. Fraser, Librarian of the Aberdeen Public Library,[1] was begun by Bishop Elphinstone in the early part of the sixteenth century and completed by one of his successors, Bishop Gavin Dunbar, in 1527. There are twenty-eight coats of arms and inscriptions carved on the bridge; a full description of these is given by Mr. Fraser in the work just mentioned. The bridge, which was long the only way of access to the city from the south, consists of seven circular ribbed arches. As these were becoming unsafe in the early days of the eighteenth century they were rebuilt by the town council between 1719 and 1723, as is set forth in a Latin inscription on the west side. It was originally 16½ ft. wide, but in 1842, to meet the needs of modern traffic, it was widened to 28 ft. The Brig o' Dee was one of the few bridges that withstood the mighty rush of waters in the great Morayshire floods of 1829. Formerly there was a gate and watch tower to guard against sudden attack by enemies and also to keep out persons suspected of carrying pestilence. These structures were swept away in 1773. In 1589 the Bridge was held by the Earl of Huntly against the Royal army, and in 1639 it was the scene of one of the earliest struggles between the Crown and Parliament. Viscount Aboyne with a Royalist force endeavoured to hold it against the Marquis of Montrose, but after a struggle of two days he was obliged to yield possession.

Both these bridges stand in the midst of characteristic scenery, the memory of which never fails to touch the hearts of the many Aberdonians whom fate has made

[1] *Bridge of Dee: Its History, its Structural Features, and its Sculptures.* Aberdeen: William Smith and Sons, The Bon-Accord Press.

exiles in strange lands. This feeling has been expressed by Byron in the famous lines:

> As "Auld lang syne" brings Scotland one and all,
> Scotch plaids, Scotch snoods, the blue hills and clear streams,
> The Dee, the Don, Balgownie's Brig's black wall,
> All my boy's feelings, all my gentler dreams
> Of what I then dreamt, clothed in their own pall,
> Like Banquo's offspring; -floating past me seems
> My childhood in this childishness of mind:
> I care not—'tis a glimpse of "Auld Lang Syne."

Deeside.

Deeside has been made fashionable by the patronage of royalty. Both rivers have associations in which legend and history are intertwined. As our immediate concern is with the city of Aberdeen, nothing need be said now as to the country round, except that it gives abundant opportunity for excursions, of which members will doubtless be glad to avail themselves.

The History of the City of Aberdeen.

Only the briefest sketch can be given here of the history of Aberdeen. What is called Old Aberdeen, or the "Aulton," is not the original town. There was a more ancient city, of which the central part was burnt in 1336 by Edward III: the part towards Donside, which was left standing, came to be known as Old by way of distinction from the new town, which was erected on the site of the part that had been destroyed by fire. Aberdeen is said to have been founded by Malcolm II in 1010. David I granted the city corporate rights, which were confirmed by a charter granted by his grandson William the Lion. Aberdeen claims to have records older and more complete than any other Scottish burgh. Besides the charters from William the Lion between 1171 and 1185, it has another from the same King, one from Alexander II, two from Alexander III, several from Robert Bruce, and others from later sovereigns. These charters, extending, confirming, and renewing privileges of trade and rights of self-government, gave importance to Aberdeen as a commercial centre. Cosmo Innes says: "Long before Edinburgh had acquired the precedency of a capital, or even the first place among the Four Burghs of Southern Scotland—while Glasgow was yet an insignificant dependent on its Bishop—Aberdeen had taken its place as a great and independent Royal Burgh and a port of extensive foreign trade."

Aberdeen had its share in the fierce and prolonged struggles which marked the birth of Scotland as an independent kingdom. In the wars against England both Wallace and Bruce had to thank the burghers for timely help. A memorable feat of arms is the recapture of the Castle of Aberdeen. The watchword for the night attack is said to have been "Bon Accord," which was afterwards taken by the city for its motto. Near Inverurie on the Don, about nineteen miles from Aberdeen, in July, 1411, was fought the battle of Harlaw, which is memorable in Scottish history as a struggle between the forces of civilization represented by the Lowlanders on one side and on the other by the Highlanders, who at that time were little better than savages. Donald, Lord of the Isles, who claimed the Earldom of Buchan in right of his wife, put the question to the issue of the sword, but his real object was probably to establish himself as an independent sovereign. He gathered a large force of Macleans, Macleods, Camerons, and other clansmen at Ardtornish on the Sound of Mull, and marched against Aberdeen. To oppose this avalanche of wild Highlanders the Earl of Mar got together an army of Lowlanders, among whom were many burgesses. The battle, which was fought on July 24th, 1411, lasted all day, and when night came the victory was still doubtful. The Highlanders, however, withdrew, and the cause of civilization triumphed.

Again in the sixteenth century an attempt was made by a great noble, the Earl of Huntly, to vindicate his title to be the "Cock of the North," and to fulfil the old rhyme:

> By Bogie, Deveron, Dee and Don
> The Gordons haud the guidin' o't.

Not long after her arrival in Scotland, Queen Mary went to Aberdeen to break his power. Huntly was slain at the battle of Corrichie in 1562, and his son John was put to death under the eyes of the Queen, who looked on at the execution from the house of the Earl Marischal, the hereditary enemy of the Gordons. In the following century Aberdeen suffered much in the struggles between the Royalists and the Covenanters, both of whom plundered the citizens impartially. It was three times attacked by the great Marquis of Montrose, twice in the cause of the Covenant, the third time in that of the King.

Here may be interposed mention of a royal visit before that of the unfortunate Queen Mary. In the spring of 1511 Aberdeen welcomed Queen Margaret, sister of Henry VIII, and wife of James IV of Scotland, with royal honours. The occasion was celebrated by William Dunbar, the Queen's favourite poet, in the following verses, which we venture to quote, as they are probably unfamiliar to many readers. Allowing for the exuberance of the poetic temperament, the verses serve to give an idea of what Aberdeen was at the beginning of the sixteenth century.

> Blythe Aberdeen, thou beryl of all Townis,
> The lamp of beauty, bounty, and blytheness,
> Unto the heaven ascended thy renown is
> Of virtue, wisdom, and of worthiness.
> High noted is thy name of nobleness,
> Into the coming of our lusty queen.
> The well of wealth, good cheer and merriness:
> Be blythe and blissful, burgh of Aberdeen.
>
> And first her met the burgess of the town,
> Richly arrayed as became them to be,
> Of whom they choosed four men of renown,
> In gowns of velvet, young, able and lusty,
> To bear the pall of velvet cramoisy
> Above her head, as the custom has been;
> Great was the sound of the artillery:
> Be blythe and blissful, burgh of Aberdeen.
>
> A fair procession met her at the port
> In a cap of gold and silk, full and pleasantly,
> Then at her entry, with many fair disport,
> Received her on streetis lustily,
> Where first the salutation honourably,
> Of the sweet Virgin goodly might be seen,
> The sound of minstrels blowing to the sky:
> Be blythe and blissful, burgh of Aberdeen.
>
> And then thou gart the orient Kingis three,
> Offer to Christ with benign reverence
> Gold, sense[1] and myrrh, with all humility,
> Showing him King with most magnificence;
> Then how the angel, with sword of violence,
> Forth of the joy of Paradise put clean
> Adam and Eve, for unobedience—
> Be blythe and blissful, burgh of Aberdeen.
>
> And then the Bruce that ever was bold in stour,[2]
> Thou gart as King come riding, under crown,
> Right awful strong, and large of portraiture,
> As noble, dreadful, mighty champion,
> The noble Steuarts then, of great renown,
> Thou gart upspring, with branches new and green,
> So gloriously, while gladded all the town:
> Be blythe and blissful, burgh of Aberdeen.
>
> Then came there four-and-twenty maidens young,
> All clad in green of marvellous beauty,
> With hair detressed as threads of gold did hang,
> With white hats all broidered right bravely,
> Playing on timbrels and singing right sweetly;
> That seemly sort, in order well beseen,
> Did meet the queen, her saluting reverently:
> Be blythe and blissful, burgh of Aberdeen.
>
> The streets were all hung with tapestry,
> Great was the press of people dwelt about,
> And pleasant pageants played prettily:
> The lieges all did to their lady lout,[3]
> Who was conveyed with a royal rout,
> Of great barons and lusty ladies schene[4]
> "Welcome our queen!" the commons gave a shout:
> Be blythe and blissful, burgh of Aberdeen.
>
> At her coming great was the mirth and joy,
> For at their cross abundantly ran wine:
> Unto her lodging the town did her convey:
> Her for to treat they set their whole ingine,[5]
> A rich present they did to her propine;
> A costly cup that large thing did contain,
> Covered and full of coined gold right fine;
> Be blythe and blissful, burgh of Aberdeen.
>
> O potent princess, pleasant and preclair,
> Great cause thou hast to thank this noble town,
> That for to do thee honour, did not spare,
> Their gear, riches, substance and person,
> Thee to receive on most fair fashion,
> Thee for to please they sought all way and mean;
> Therefore as long as queen thou bearest crown,
> Be thankful to this burgh of Aberdeen.

[1] Frankincense. [2] Battle. [3] Bow. [4] Beautiful. [5] Ingenuity.

We are sure that all members who attend the annual meeting will echo Dunbar's refrain:

Be blythe and blissful, burgh of Aberdeen.

Speaking of the same period, Principal Marshall Lang[1] says that Aberdeen was then scarcely inferior in importance to any other town in Scotland. At the beginning of the sixteenth century it had a population of nearly 4,000 souls, with a provost and magistrates, with a strong gildry, and with incorporations of trade. It had its markets and a market cross, six posts or gates and four quarters, which when danger was apprehended were guarded by citizen captains. It had its processions and festivals. It was an ecclesiastical and an educational centre. There were four houses of priors. There was the great church of St. Nicholas. It was the seat of a bishop with a castle—"Ane fair Courte, with four high towers"—and a cathedral which when Hector Boece, the historian and first Principal of the University, first saw it in 1500, was fairly complete. Canons, prebendaries, and chaplains, some of them men of culture and of worth, resided in the neighbourhood of the cathedral and castle. A grammar school of high repute provided instruction in grammar and logic. A Master Thomas, of Bennum, was Rector Scholarum de Abirden in 1262, and there is nothing to lead one to infer that the office was then of recent institution. The borough records refer repeatedly in the fifteenth century to the Magister Scholarum, and in one place describe him as a graduate in arts, *magnae literaturae et scientiae*. A song school gave instruction in music. It may be mentioned here that the Aberdeen "Sang Schule," one of the earliest in Scotland, was founded in 1370. It was originally intended for the training of the cathedral choir, but its scope was afterwards extended. It was long celebrated and it continued to exist till 1778.

The religious storm that swept over Scotland during the sixteenth century left the surface of life in Aberdeen comparatively unruffled, but it did not wholly escape the iconoclastic fury of the Reformers. In the following century the city suffered severely at the hands of Cromwell's soldiers; the Covenanters completed the work of destruction begun in the previous century. In particular, the stately old cathedral was almost wrecked. A brief account of this fine monument of ancient faith may be of interest.



Oldmachar Cathedral from the south-west.

The Cathedral.

The cathedral, which is the most conspicuous landmark in the city, was dedicated to Machar, a companion of St. Columba; it stands on the site of a rude church built by him about 570. The legend is that St. Machar was sent by St. Columba towards the northern part of the land of the Picts; he was to go on till he came to a spot where the river was bent into the form of a bishop's crook, and there he was to build a church. Standing at the north-east side of the cathedral, a visitor who looks up the Don in its course through Seaton Vale will see how faithfully St. Machar carried out his master's behest. It needs no stretch of fancy to discern the likeness to a bishop's crook, but it may perhaps without rashness be conjectured that the legend was framed to fit with the accidental resemblance. The cathedral was founded in the twelfth century in the reign of David the First, son of St. Margaret. It was destroyed during the English invasion, and on the site of two, if not three, pre-existing churches, Bishop Alexander Kinimmund began to build the present cathedral in the fourteenth century. The building went on under successive bishops, and was completed in 1522. The most striking of the external features that remain are the twin battlemented towers surmounted by short spires built by Bishop Gavin Dunbar (1518–30), and the round-headed portal and the seven-lighted window in the west end, the latter of which forms part of the granite work built by Bishop Lichton or Leighton about 1450. The cathedral as it was in the sixteenth century was vastly larger than it is now. "In 1560," says Father Hay (quoted in *Baronial and Ecclesiastical Antiquities of Scotland*), "the Barons of Mernes, accompanied with some of the townsmen of Aberdeen, having demolished the monasteries of the Black and Grey Friars, fell to rob the cathedrale, which they spoiled of all its costly ornaments and jewels, and demolished the chancell. They stripped the lead, bells and other utensils, intending to expose them to sale in Holland: but all this ill-gotten wealth sunk, by the just judgement of God, not far from the Girdleness" [where the lighthouse now stands].

[1] *Studies in the History and Development of the University of Aberdeen.* Edited by P. J. Anderson. Aberdeen. 1906. (P. 24.)

"The body of the cathedrale," he continues, "was preserved from utter ruin by the Earl of Huntly, and in 1607 repaired and covered with slate at the charge of the parish." The little of the interior that had been spared was destroyed by the Covenanters in the Civil War.

The following description of the manner in which the work of destruction was carried out is given by Douglas in his *Account of the East Coast of Scotland*:

The high altar, a piece of the finest workmanship of anything of the kind in Europe, had to that time remained inviolate, but in the year 1649 was hewed to pieces, by order and with the aid of the parish minister. The carpenter employed for this infamous purpose, awed by the sanctity of the place, and struck with the noble workmanship, refused to lay a tool on it, till the more than Gothic priest took the hatchet from his hand and struck the first blow. The wainscotting was richly carved and ornamented with different kinds of crowns on top, admirably cut; one of these—large, and of superior workmanship—even staggered the zeal of the furious priest; he wished to save it, perhaps, as a trophy over a fallen enemy. Whatever his motives may have been, his hopes were disappointed; while the carpenter rudely hewed down the supporting timbers, the crown fell from a great height, ploughed up the pavement of the church, and flew in a thousand pieces.

The roof is the only woodwork now left of the original fittings of the cathedral. This heraldic ceiling, which is still well preserved, was put up by Gavin Dunbar about 1520; on it may be seen three rows of shields with the blazons of "Kings, Priests, Prelates, Potentates and Peers." Some attempt to patch up the ruined building was made in 1607, but Cromwell's soldiers found the eastern part a convenient quarry for materials with which they built a citadel on Castle Hill. Owing to the dilapidation thus caused, the great steeple, which rose at the junction of the choir and nave, fell down in 1688, crushing the choir and transepts, and doing much damage to the nave.

Since the suppression of the last Jacobite rising in 1745 the history of the city of Aberdeen has been one of steadily increasing prosperity.

In another article the history of the University of Aberdeen will be sketched.

(To be continued.)

ROYAL COMMISSION ON VENEREAL DISEASES.

The following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the eighth meeting of the Royal Commission on Venereal Diseases evidence was given by Sir William Thompson, Registrar-General for Ireland.

He said that as a cause of death venereal diseases played relatively a small part in Ireland. The death-rate from syphilis and allied diseases was 0.78 per 10,000 of the population, whereas the figures for tuberculosis at the head of the list were 21.52 per 10,000.

Compared with previous years the deaths from syphilis and general paralysis of the insane appear to show a tendency to increase, but Sir William Thompson thought that much of the increase was more apparent than real, and was due to the more careful recording of deaths.

The greater part of the deaths from venereal diseases occurred in the two cities Dublin and Belfast. In Dublin the figures were abnormally high, the death-rates from syphilis and general paralysis of the insane being about twice those for London.

On the whole the incidence of venereal diseases in Ireland was very much lower than in the rest of the United Kingdom; the syphilis death-rate was only that of England and Wales, while with regard to infant mortality the number of deaths due to syphilis per 1,000 births in the three kingdoms were—England and Wales 1.29, Scotland 1.4, Ireland 0.59.

The late Dr. William Carnegie Brown left estate of the gross value of £49,886.

An international society for the destruction of rats has been formed, with its head quarters at Copenhagen (K. Cort, Adelersgabe 8). It already includes a number of other organizations formed for the same purpose, and has obtained the patronage of numerous sanitary authorities throughout the world.

FUEL FOR MEDICAL MEN'S MOTOR CARS.

POSITION OF PETROL SUBSTITUTES.

By H. Massac Buist.

The fact that wholesale contracts with the big corporations for the supply of petrol during 1914 are in many cases being entered into on a basis of as much as threepence a gallon more than a year ago raises a serious problem for the medical man, who has already found that his fuel bills threaten to become a greater burden than his tyre costs. True there exist a few enterprises created for the avowed purpose of supplying car owners, nominally on the co-operative plan, with petrol at fixed prices below the current market cost of that fuel. But the financial soundness of these concerns has yet to be proved, while the scale even of the best schemes among them is such as to have no appreciable effect in alleviating the situation. The cost of the generally used motor fuel has risen to at least twice as much as the lowest that has ruled during the last ten years; and this has happened despite the facts that, on the one hand, petrol of a character heavier than that formerly tried is being marketed as a second grade spirit; and, on the other, that fresh processes are being employed whereby, for example, the Rockefeller Corporation is able to produce a usable motor spirit from about 60 per cent. of the total amount of material formerly wasted in treatment.

The situation is so serious that the Royal Automobile Club formed a "Petrol Committee," but its sittings, after several months, revealed only a more and more hopeless case instead of showing any likely solution. The inquiry was therefore suspended indefinitely until a newly created body—the Petrol Substitutes Investigation Committee, composed of members of the club, of the Automobile Association, and of the Society of Motor Manufacturers and Traders—should have completed exhaustive investigations of substitutes, and arrived at some definite conclusion. The more directly to encourage the object in view, the Society of Motor Manufacturers and Traders offered a prize of two thousand guineas for the discovery of a motor fuel of any sort that could be produced in this country in commercial quantities at a price to compete with petrol. Sir Boverton Redwood was appointed adjudicator. Though nearly a year has passed since the work was begun, he reported the other day that not only had no fuel been discovered that would justify the awarding of the prize, but he could not even recommend that a consolation prize of a small sum should be given for anything submitted.

Practical Aspects of the Retailing of Fuels.

Alternative fuels may be broadly grouped under three classes: (1) Mixtures of various chemicals with petrol or with crude petroleum; (2) benzol; and (3) alcohol. The first class may be dismissed at the moment, because it cannot be introduced successfully without at least the willing co-operation of those who control the large supplies of petroleum and petrol. Therefore, whatever comes in this direction is likely presently to be introduced directly by the big oil groups, which, apart from having their own extensive laboratories, from time to time purchase patented methods of producing mixed fuels, though they have not yet put any such on the market. In regard to benzol and alcohol, which are fuels produced in their entirety quite independent of the sources of oil supply, the governing factors of the situation are not entirely limited to the cost at which the fuel can be actually manufactured. We have, for example, had benzol offered us duty free in minimum quantities of fifty gallons at certain gas works and at certain refineries, provided the purchaser will go to those places and himself carry the fuel away. To be of any use as a general proposition to the medical profession, however, motor fuel must continue to be procurable in small retail quantities locally in any part of the country. It is this necessity which accounts for a very heavy proportion of the retail cost price of any motor fuel. The popular idea is that the American Oil Trust owns practically all the wells that supply the fuel it handles, whereas the fact is that that Trust is a gigantic organization for the marketing of oils and all the products associated with them. It does not own the wells producing more than 5 per cent. of the material it sells.

Even the rival British oil group, under the Samuels's management, only owns a small proportion of the wells producing the oil it sells. For the most part it contracts to handle the output of proved wells independently owned. The huge capitals are employed in building up endless ramifications for the effective retail distribution of motor fuel all over the country. This point is of the utmost importance when considering alternative motor fuels. In the case of every one of these it will be necessary to have equally efficient distributing organizations, and it would therefore seem that gigantic capital and methods of amalgamation on the part of producers and vendors can alone solve the problem, even if a substitute fuel could be produced at the right price.

The only Widely Available Alternative To-day.

To-day benzol is procurable in retail fashion at prices between 1s. 2d. and 1s. 4d. a gallon in approximately a couple of hundred centres about the country. From that point of view it may be described as beginning to be practicable for quite a number of users, though not entirely so, because to get efficient results with benzol carburettors have to be used in a condition of adjustment different to that employed when petrol is used. It will be appreciated that at the present prices benzol does not start as a really cheap motor fuel per gallon, though considerably less in cost than petrol. It has a further disadvantage in that it is not plain to see how the price of it could be reduced should there be a sudden and great "cut" in the price of petrols of usable grades. The gas companies, as at Manchester, are not eager to readjust their plant for the production of benzol because such as they do produce they can at present sell at a very high price for chemical work in connexion with aniline dyes, and so forth. Moreover, before the gas companies of the country in general could produce great quantities of benzol, such as would make a really appreciable difference to the market, there would have to be an alteration of the Board of Trade unit for the quality of gas supplied to the householder. At present there is a proportion of heating power as distinct from illuminating power in the gas, which is entirely wasted by the vast majority of users, but which, on the other hand, is needed by those who use the old-fashioned open burners and who cook by gas. Experience in the districts where coal-gas is so used to the greatest extent has proved that it is practically impossible to educate the British working man to use incandescent burners. If we were to assume this accomplished, however, and that the standard required by the Board of Trade unit were so altered that companies were able to produce the maximum amount of benzol for motor fuel, they would have to sink vast capital sums in entirely remodelling their plant to that end, and would further have to supply gas to the consumers at a lower price, for those who used it for heating would require to burn a greater amount to get an equivalent result.

Points about Benzol in Use.

Nevertheless, we are to-day producing in this country benzol equal to quite a tenth of our demand for petrol. It is estimated that at the end of 1913 we shall have imported 100 million gallons of motor fuel, against an actual import of 80 million gallons in 1912, which contrasted with only 12 million gallons used in 1904. These figures sufficiently indicate that the demand for motor fuel is abnormal and is likely to continue to be so for several years. We are in a transitional stage. No matter what fresh sources of supply shall be opened up, the fuel problem is likely to be difficult of solution for a generation or otherwise until the motor movement shall have attained to something approximating its full growth.

In the meantime the medical man is not free to use any of the many forms of fuel down to crude petroleum. His choice is restricted by certain practical conditions. Of the alternative fuels at present on the market, benzol must be regarded at the moment as the only one generally within his reach. It has various advantages over petrol apart from the cheaper price, as notably that, once the carburettor has been properly adjusted, appreciably greater mileage can be got, as well as more power, and, as far as unofficial tests have gone, comparative freedom from carbonization. Against it is the fact that practically every user of benzol is expected to be an experimenter on his own initiative, inasmuch as neither the Royal Automobile Club as the recognized trials organization, nor the National Physical Laboratory, has as yet conducted any tests to furnish the world with official data as to the precise effects of the use of benzol on the mechanism of a motor-car engine; or to determine by comparative trial, for the guidance of automobile engineers and the public, precisely in what manner the use of benzol is advantageous and exactly where it is disadvantageous. Such unofficial tests as have been conducted have been of too haphazard a character. None has been of anything approximating to sufficient duration. We want to know positively what are the effects of using benzol on various types of cars on the market over a period representing three or five years' use.

With benzol a combustion which is comparatively very hot is obtained. An attempt by one of the foremost British constructors to use benzol, as being the means of getting increased power out of an engine built to a volume limit, in the last 3-litre car race in France for the *Coupe de l'Auto*, was found to be impossible owing to the electrodes of the sparking plugs melting under the extreme heat. That, however, does not occur with motors of slower speed and lower compression, such as the medical man uses for his daily service. A practical point that will concern him, however, is that benzol continues to smell badly, its malodour being extremely penetrating. This is a drawback that affects the medical man whose practice is in the towns much more directly than the one whose work is in the country. In Germany benzol is being produced in something like 30 per cent. greater quantities than in this country. But of the twenty-eight million gallons manufactured there last year only one and a half million gallons were made by gasworks. It is estimated that it would be necessary to treat more than a million and a half tons of coal to produce sufficient benzol for the yearly requirements of the London General Omnibus Company alone.

Nature of the Main Motor Fuels.

The other principal school studying the production of a spirit entirely independent of oil which will be suitable for motor fuel advocates alcohol. Perhaps the best-known adherents to this view are Sir Boverton Redwood and Dr. W. R. Ormandy. The term "alcohol" is applied popularly in this connexion to the particular alcohol known chemically as ethyl alcohol (C_2H_6O), of specific gravity 0.806 at 0° C. Its calorific value is about 12,600 B.Th.U., and it boils at 78° C. It burns with a blue flame, and mixes with water in all proportions, having, indeed, always a small proportion of water present. From 4 to 13 per cent. alcohol vapour in air will explode, as against from 2 to 5 per cent. of petrol vapour in air. The coal-tar spirit called benzol consists of a mixture of benzine, toluene, and xylene. It commences to distil at about 80° C., but does not completely distil until nearly 120° C. Its calorific value is about 20,000 B.Th.U., and its specific gravity is about 0.885. It contains about 92 per cent. carbon and 8 per cent. hydrogen. The motor spirit known in this country as petrol is of the approximate composition of C_8H_{18}. It consists of a mixture of hydrocarbons of the paraffin series, and its boiling point varies from about 50 to 150° C. Its specific gravity is from 0.680 to 0.720, while its calorific value is about 19,500 B.T.U. It contains about 84 per cent. of carbon and 16 per cent. of hydrogen; is extremely volatile, and burns with a luminous, sooty flame. For this last reason petrol is comparatively an ideal fuel for engines of the sliding sleeve valve sort, which work at their best only when in the natural condition of a gas engine—namely, in a partially carbonized state. It is for this reason not an ideal fuel for the latter-day highly efficient poppet valve engine, an inherent defect of which at present is that it does not work at its best under the normal conditions of an ordinary gas engine precisely because these poppet valve, liquid fuel, internal combustion engines must be in a clean, non-carbonized condition to give the best results.

Prospects and Aspects of Alcohol as Fuel.

As far as this country is concerned, alcohol is not yet available on a commercial scale as a motor fuel. It is, nevertheless, an established fact that it merely requires capital to put it among the practical motor fuels. Not only do experiments conducted at home point to this, the

fact is besides confirmed by Continental experience. There alcohol fuel is being used for commercial purposes. Abroad some liquid fuel engines that have been running on alcohol for from twelve to sixteen hours a day for periods up to eight years do not show the slightest sign of corrosion that could be attributed to acid production. Any alternative fuel applied to the motor-car engine necessarily suffers from the disadvantage that it is being used in a machine that has been designed for something like a quarter of a century to employ one class of spirit only, petrol. Experience to date points to the fact that the problem of satisfactory carburation will have, to a very large extent, to be studied afresh in the case of each new class of motor fuel. That, however, is not an insurmountable difficulty, because the results of such investigations can always be standardized.

A large school is advocating the use of half-and-half fuel, otherwise half benzol and half alcohol, which has been proved, with merely slight modifications to existing types of carburettors, to give as much power, flexibility, ease of starting, quiet working and economical consumption in a motor engine as ordinary petrol. Dr. Ormandy's view is that progress towards the final goal of using alcohol virtually as the sole motor fuel is to be sought by experimental work on mixtures containing gradually diminishing amounts of benzol, the influence of which, according to experiments carried out in France and Germany, is out of all proportion greater than the small quantity employed.

The Medical Motorist in 1914.

Meantime, the situation of the medical motorist is that, for 1914, he has the choice of paying a possibly increased price for petrol, though it must be had in mind that the cruder grades now on the market can give better mileages, and also that remarkable economy can be achieved by employing the latest styles of carburettor. To take a single example of perhaps the most widely used type—the Claudel-Hobson. With the new patterns the same power, a better "pick up" and fully 20 per cent. better mileage can be got than with the former patterns.

Again, many a novice to motoring is not aware of the big savings that can be effected in driving if the average speed is reduced perhaps by only three or four miles an hour. According to my own experience a 30-cwt. car handled at speeds not exceeding twenty-four miles an hour and averaging, say, sixteen miles an hour, will do as much as twenty-four and twenty-five miles to the gallon on second-grade petrol with the carburettor adjusted precisely, as when driving up to forty miles an hour fastest, and averaging about twenty-seven miles an hour, when the consumption works out at only eighteen miles to the gallon. The average medical man does not use a high-powered engine. If he will give attention to having his carburettor so adjusted that the motor will start readily, another very appreciable source of saving is that he can stop the engine even if only for half a minute at a time. In a year or two everybody will stop his engine if he only pauses to inquire the way, because all cars will be fitted with engine starters as satisfactory as the magneto-ignition machines themselves. At present, however, as a general proposition, one would hesitate to say that the average mechanical engine starter has been sufficiently proved in the hands of the British motoring public to justify its being relied on absolutely by the medical profession. In any case these aids to economy apply equally to any form of motor fuel used.

The obvious possibility of a further rise in the price of petrol in 1914 means that many doctors living in districts where benzol can be got in retail quantities will put up with the malodours at present associated with its use. They should be warned, however, that the carburettor will need specially adjusting. The best way to do that is to be guided by the actual individual experience. Twenty miles should be done with the carburettor in the ordinary condition as used for petrol. The driver will then begin to have some idea of what sort of a mixture he has got according to the way the car is behaving as he drives it over roads that will be chosen because they are familiar to him when motoring. He will in all probability discover that he can weaken the mixture. But the jet should be adjusted very gradually, say half a turn at a time. Then let the car be run another twenty or thirty miles, and then, perhaps, another half-turn tried. So, feeling the way until the proper proportion of fuel feed to air supply has been achieved, the user will get the best results.

ONE HUNDRED YEARS AGO.

The Annus Medicus, 1813.

The annus medicus 1813 was not by any means an annus mirabilis. It could not take rank with 1798, when Jenner announced the success of vaccination; with 1846, when ether was introduced into surgical practice; with 1847, when Simpson used it in obstetrics, and later in the same year discovered the anaesthetic properties of chloroform; with 1867, when Lister began to make antisepsis known; with 1881, when Koch discovered the tubercle bacillus; and with 1885, when Pasteur treated human subjects successfully for hydrophobia. Nevertheless, there was much that was interesting in the progress of medicine in 1813, and during the past few months we have had occasion in these articles to refer to some of the burning questions of that time. There was the state of the medical profession itself, and its attempts at reform, "abortive bills," and what not; there was vaccination making its way steadily, meeting with a warm welcome wherever the ravages of small-pox were recent and terrible; there was some growing acquaintance with tropical diseases, made possible by the researches of the British naval surgeon sailing in southern seas; there was Richard Bright taking his M.D. at Edinburgh, and causing no small stir in his own circle by his trip to Iceland and his somewhat unsettling versatility; there was the local business of the Royal College of Physicians of London, of great interest to the Fellows and to their phœnix-like president; there was the tragic story of typhus fever and the part it had played and was even then playing on the battlefields of Europe; there was the French encyclopaedia of medicine steadily making its periodical appearances undeterred by war's alarms; there was the curiously backward position of surgery to be deplored; there were accidents happening in those days too, even although there were no railway trains, motor cars, or aeroplanes; there was Thomas Thomson and his very own *Annals of Philosophy*; there were the quarrels amongst the physiologists; and was there not also that small storm in a teapot about the fasting woman of Tutbury? Assuredly there were medical matters of weight and importance in 1813.

Medicine, too, had business with the monarch who sat upon the throne—with disastrous George III; had had business with him more or less all his life, from his birth as a seven months child, when it was doubted whether it would be physically possible to rear him; in his youth when he was very backward; soon after his accession to the throne, when symptoms of mental derangement appeared, to disappear again; in 1788 when he suffered much from bilious attacks and mental derangement once more (intense cerebral irritation, "mind dwelling much on the loss of the American colonies"), and when Dr. Willis was called in, not a little to the disgust of the regular physicians, right on to the year 1813, when visual as well as mental darkness hung heavy over the old man and the regency had been an accomplished fact for two years. Here is the monthly report of his health (or alas, the lack of it) for September, 1813:

> The report circulated, that his majesty is so much recovered as to have had communication made to him of political events, is totally void of foundation. The king has never, at any period of his protracted disorder, been more under its influence than he is at this time; and not a single individual has spoken to his majesty but his physicians and the attendants. The queen occasionally sees the king in the presence of the doctors. [Dr. Willis himself had gone in 1807 "where beyond these voices there is peace."] Either Sir Henry Halford or Dr. Baillie are in constant attendance on the king. Dr. Heberden has taken a house at Datchet, in consequence of his constant attendance on his majesty, where his family reside, particularly when he is in waiting. He retires there every evening after dining with the other medical gentlemen.[1]

The Emperor Napoleon had not, unlike George III, had much to do with doctors, not, that is to say, before 1813; but in that year, on August 27th, the battle of Dresden having been won, something happened to Buonaparte which, as his followers believed, so altered his physical

[1] *Edinburgh Annual Register*, vol. vi, Chronicle for 1813, p. cix.

frame that he was never again the conqueror of old. Here is what Sir Walter Scott[2] said about it:

> No frame, even of iron, could have supported the fatigues of both mind and body to which Napoleon had subjected himself within the last three or four days. He was perpetually exposed to the storm, and had rarely taken rest or refreshment. He is also stated to have suffered from having eaten hastily some food of a coarse and indigestible quality. To be precise—a shoulder of mutton, stuffed with garlic, was the only dinner which his attendants could procure for him on the 27th. Through one or the other or the whole of these causes combined, Napoleon became very much indisposed, and was prevailed upon to return in his carriage to Dresden, instead of remaining at Pirna, more close in the rear of his pursuing battalions, to direct their motions. The French officers, at least some of them, ascribe to this circumstance, as the primary cause, a great, critical, and most unexpected misfortune which befell his arms at this time.

The misfortune was the disastrous defeat of Vandamme at Kulm, and it was but the first of a number of blows which falling upon Napoleon led to the first abdication (April 11, 1814), and the temporary stay in the island of Elba. There are some historians who see in this serious indisposition at Dresden the first symptoms of the malignant disease of the stomach which was the cause of Napoleon's death in 1821 in St. Helena, and, although the time is rather long, the supposition is not improbable: perhaps it may rather be said that the Dresden illness betokened the beginning of the gastric ulcer upon which the cancer ultimately developed. At any rate, from August, 1813, onwards, the great Napoleon—how dreaded by our ancestors we can hardly imagine—had another enemy in the field against him, with tactics more subtle than his own, more resolute in attack, more relentless in pressing home an advantage gained; pathology was ranged against him, as the foe in his own household, and there was no successful outmanœuvring of that stern warrior. Let us think of him on that ominous day in August a hundred years ago, as Browning has pictured him for us:

> With neck out-thrust, you fancy how,
> Legs wide, arms locked behind,
> As if to balance the prone brow
> Oppressive with its mind.

"He might," said Thomas Carlyle, trying to pay him the highest compliment in his possession, "have been among the first writers of his age if he had not chosen to be the very first conqueror of any age." True, but disease and death were dogging his footsteps even now, and about him, as about all mortal men, Luther's laconic "und starb" fell to be written; the grim King of Terrors is, in the meantime, "the very first conqueror of any age."

The same king was busy among the ranks of the medical profession in Britain in this year a century ago. There was Thomas Ramsden, "a most excellent surgeon and amiable man," who died in February; "in the prime of life" is added in an obituary notice of the time. He was surgeon to Christ's and the Foundling Hospitals, and assistant-surgeon to St. Bartholomew's; but, in the opinion of his contemporaries, "he will be better known to posterity as the author of a valuable practical work on the sclerocele and other morbid enlargements of the testicle." One wonders if this has been so. Then, in April, there passed away in his 71st year Dr. Andrew Marshall, the anatomist. Living alone, a bachelor, he died after much suffering at Bartlett's Buildings, Holborn, leaving behind him a valuable anatomical museum, and "numerous papers and memorandum books" to be edited by his assistant, Sawrey, but found to be in hardly any part ready for publication. He was a Fifeshire lad, was intended to be a farmer, but he himself wished to be a minister, only, that not being practicable, he tried his hand on many things—trigonometry, metaphysics, translating a work on Conic Sections, travelling with the son of the Earl of Leven and Melville; and, finally, went to London at the age of 35 to study medicine under the two Hunters and Cruikshank. He was soon acting as surgeon to the 83rd Regiment, and went with it to Jersey—in fact, remained with it till it was disbanded. In 1782 he graduated M.D. in Edinburgh, writing a dissertation on a subject about which he presumably knew not a little—namely, *De militum salute tuenda*. Then he settled in London under the wing of Dr. David Pitcairn, entered both colleges, taught anatomy successfully for seventeen years in Thavies Inn, Holborn, and then for the rest of his life gave himself to medical practice. "Besides being a most minute anatomist, he was a profound scholar and an able and successful practitioner." His lectures on anatomy were to have formed part of a scheme for establishing a kind of school of physic and surgery for the pupils of St. Bartholomew's Hospital. But "his figure and voice were both against him," says his biographer, Dr. Greenhill,[3] although his lectures were so full of the infinite wisdom exhibited in the contrivance of the structure of the body "as to form the finest system of natural theology."

Another medical man who died in April was Samuel Foart Simmons, a Sandwich man, educated in France; he studied medicine in Edinburgh for three years, and then proceeded to Leyden, where he became doctor of medicine (1776). He then had a *Wanderjahr* on the Continent, making the acquaintance of Camper and Haller and paying a flying visit to Ferney to see Voltaire, "that man, that child in love with celebrity," as Sainte Beuve called him. In 1777 Simmons was admitted an Extra-Licentiate of the College of Physicians in London, and in the next year a Licentiate. In 1780 he was appointed physician to the Westminster Dispensary, and later to St. Luke's Hospital. He made a special study of insanity, and this spelt fortune for him, for in 1803 he was called into attendance upon the king, George III, and was appointed one of His Majesty's physicians-extraordinary in 1804. He wrote many books, including *An Account of the Life and Writings of Dr. William Hunter*, and he was for many years the sole editor of the *London Medical Journal*. To some of us he may be memorable as the originator and compiler of the *Medical Register*, from which have come in order of descent the portly medical directories of the present day. George Shaw, who died in July, was M.B. and M.D. of Oxford, having studied there and at Edinburgh; but he was at heart a naturalist, and is remembered as joint founder and Vice-President of the Linnean Society, and as keeper of the natural history section of the British Museum. He was a bit of a humanist too; "wrote Latin with facility, elegance, and purity, and sometimes lapsed into poetry." His pen also was busy with popular works on natural history.

A day or two before the battle of Dresden there died James Vaughan, the great Leicester physician, son of Henry Vaughan, the surgeon of Leominster. He was famed, it is said, for the large size of the doses of medicine which he gave, but then they were "administered with confidence and success." He was more famous for his notable sons: there was Sir Henry Halford, president of the College of Physicians, "in constant attendance upon the king" just about this time, as we have seen (the Halford title came to him through his mother); there was Sir John Vaughan, a privy councillor, and much else; there was the Dean of Chester (the very reverend Peter Vaughan, D.D.); and there was the Right Honourable Sir Charles Richard Vaughan, envoy extraordinary to the United States of America. James Vaughan must have felt he was leaving the family name in good hands when he died on August 19th, in the 75th year of his age. August was fatal also to Dr. Rudolph Rhode, "fifty years physician in the British army," and in December the Prince Regent lost his surgeon dentist, Chevalier Ruspini. These were some of the leaders in the profession; but of the rank and file of the little army of doctors fighting manfully against disease and death, and yielding themselves in the end to their lifelong enemies, who shall tell the names? Brave men were they all, doing the humble duties of the country doctor's daily round, facing infection with hardihood (and there was infection to be met in these days everywhere), and earning the gratitude—and often little more—of their none-too-rich patients in these hard times of warfare and taxes. There was a great harvest, however, this year ("best September month within remembrance"), and we will hope some of the outstanding bills were paid.

We have spoken of deaths in the profession; but there were some births of future doctors too. There was one in particular, on March 19th, away up north on the banks of the Clyde, that of David Livingstone, "Columbus of Africa," learning by-and-by to be a doctor that he might be a missionary. A strange purpose it may well have seemed to the people of these long past days, and

[2] *Life of Napoleon Buonaparte*, vol. vii, p. 350.

[3] *Dictionary of National Biography*, vol. xxxvi, p. 320.

not altogether without a tinge of strangeness in it to some of us even now. Of his life, however, and of his lonely death out in Chitambo's village, near the very heart of the Dark Continent (dark no longer, thanks to Livingstone mainly), we have spoken already (JOURNAL, March 15th, p. 564), and we merely name him now as one of the recruits, likely to prove fine fighters, who came into the army of medicine in 1813.

Of the books on medicine born in 1813 there was not perhaps any one that was very great, but still some of a certain degree of distinction. Of course there were not many books altogether as compared with the output of the present day. Why, for 1912 the English catalogue named 440 works on medicine and public health, including 308 books, 5 translations, 30 pamphlets, and 97 new editions, and it may safely be predicted that 1913 will have as long a list: the books of 1813 were a mere handful in comparison. Let us fix for ourselves the year by a reference to general literature: Jane Austen's *Pride and Prejudice* appeared in that year; so did Lord Byron's *Bride of Abydos*, *The Giaour*, and *The Waltz*; Sir Walter Scott's *Rokeby* was also published, in one volume, price £2 2s., and the *Queen's Wake*, by James Hogg, the Ettrick Shepherd, in one volume, price 12s. Curiously enough the poet laureateship was vacant in 1813, as it has been in 1913, H. J. Pye, Esq., "the poetical Pye," as Sir Walter Scott called him, "eminently respectable in everything except his poetry," having died in August. Byron hit off both George III with his "What! what!" and Pye's mediocrity in the lines (in *The Vision of Judgement*):

> The monarch, mute till then, exclaimed "What! what!
> Pye come again? No more—no more of that!"

Pye was followed in the laureateship by one (Robert Southey) who had been a medical student, and might have been a doctor but for the dissecting-room, and now a hundred years later Alfred Austin has been succeeded by one (Robert Bridges) who is a physician, or at least was till the Muses captured him some thirty years ago.

Perhaps the outstanding medical book of the year was Samuel Tuke's *Description of the Retreat*, as the York institution for the treatment of the insane, founded by his father and grandfather, was called. Samuel Tuke was not a medical man, although he had wished to become one, and both the Retreat and his *Description* of it were years before their time. It is true that Sydney Smith in the *Edinburgh Review* had words of approbation; but there was widespread criticism amounting to detraction in the medical profession. For Tuke in his work not only described the novel plans employed at the retreat (startling they must have been to the professional mind of the time), but both directly and indirectly drew attention to the abuses prevailing in the existing madhouses all over the country. We know now that Tuke was right, and the startling novelties of the Retreat are commonplaces to-day; but it was not so in 1813. In 1814, however, some inkling of the true state of affairs was beginning to be obtained by the committee employed to visit houses and hospitals for the confinement of insane persons, as the following extract[4] from that committee's report shows:

> If the committee have been pained by the remarkable contrast in management between one of our great public hospitals for the insane and the larger private houses generally, they have been as forcibly impressed by contrasting the practice of even such houses with the general economy of the "Friends' Retreat," near York, where neither chains nor corporeal punishment are tolerated on any pretext; where the conveniences provided, both within doors and without, are suitable to patients in any station of life, and every appearance is avoided that can afflict the mind by painful recollection; and where regulation and control are governed by the experienced efficacy of this important principle, that whatever tends to promote the happiness of the patient, increases his desire to restrain himself.

The committee went on to state that "they had the strongest grounds for recommending a new asylum (in London), to be conducted after the simple and mild, but successful, plan of the 'Friends' Retreat' at York." Surely Tuke's book, in the light of such a report, and notwithstanding the lukewarm review in the *Edinburgh Medical and Surgical Journal*,[5] and the strongly worded but anonymous letter from the physician of the York County Asylum to a local newspaper, must be accorded a high place among the medical works of 1813.

[4] *Medical and Physical Journal*, xxxii, p. 127, 1814.
[5] *Edinburgh Medical and Surgical Journal*, vol. x, p. 65, 1814.

As to the other medical books published in 1813 we can do little more than name some of them. There was Bateman's *Practical Synopsis of Cutaneous Diseases*, which was really Willan's work finished, and very well finished, by Bateman: it introduced a nomenclature which was a distinct advance upon what had gone before. There was another synopsis, that by Dr. Merriman, *Of the Various Kinds of Difficult Parturition*, in which dystocia was arranged in seventeen orders: it contained many good pieces of advice, such as that whatever we are going to do "we should give our heads time to direct our hands." There was Alexander Ramsay's *Anatomy of the Heart, Cranium, and Brain, adapted to the Purposes of the Medical and Surgical Practitioner*, with a series of plates to accompany it; if the twentieth century reader will turn to it for a moment he will find in it something very different from dry, anatomical details, Ramsay being a decided anti-materialist, and discoursing somewhat surprisingly upon life, "a living decomposition," as he not very cheerfully calls it, and religion, and pain, and pleasure. There was Dr. Robert Watt's *Treatise on the History, Nature, and Treatment of Chincough*, a work which was welcomed by a reviewer with this pregnant sentence about the disease: "Every family expects its visitation, and it has become a prevalent fashion to permit this malady to pursue its course with little interruption or assistance, unless such as is afforded by gossips, amulets, or domestic remedies." There was also a part of Dr. Farre's admirable *Morbid Anatomy of the Liver*, the fourth volume of Dr. Ferriar's interesting *Medical Histories and Reflections*, and Thomas Sutton's *Tracts upon Delirium Tremens and Peritonitis*. These were by no means all the medical books of the year, but they are fair specimens of the literature our medical ancestors had lying on their tables or on their shelves a century ago.

We think somewhat poorly, perhaps, of the achievements of the medical profession in 1813; and truly without asepsis, anaesthesia, and the whole of bacteriology the practitioners a hundred years ago were without some of the most potent weapons for waging war on disease and death which are now in our hands; but let us not be boastful; let us ask ourselves whether we make as good use of the means within our reach as they did; let us pause a moment and consider. What are we prepared to say to the doctors of 2013 about—to name only two diseases—the irritating, omnipresent, drug-defying, and sometimes dangerous influenza, and about the deadly cancer? Alas! nothing. But who knows how near we may be to great discoveries? Let us work; there is "endless hope in work," and, says Carlyle, "a human doubt is the most complex and inarticulate of Nature's facts."

THE MEDICAL PROFESSION AND TRADE UNIONISM.

A MEETING of medical practitioners, called by the National Medical Guild, was held at Hammersmith Town Hall on December 19th, 1913, when a discussion took place on the question of trade unionism in relation to the medical profession. Invitations had been sent out over a somewhat wide area in Western London, and about fifty practitioners attended.

Dr. CHARLES BUTTAR, President of the Guild, who was in the chair, said that the organization was registered under the Trade Union Acts, and called attention to the difficulties looming before the medical profession when the whole question of medical benefit under the Insurance Act came up for review in 1915 and the inclusion of dependants became almost a probability. Notwithstanding the urgency of these matters, there was very little cohesion in the profession and hardly a sign of preparation for the fight, as witness the collapse of the schemes suggested by the British Medical Association for the provision of a fighting fund. Nothing was to be done in this matter for at least seven months.

Mr. E. B. TURNER addressed the meeting in favour of trade unionism as applied to the medical profession. He admitted that for a long time the idea of becoming a trade unionist "stuck in his gizzard," but he had now come to the conclusion that in the altered circumstances of the present day it was practically a necessity for a medical practitioner to become a trade unionist. The whole ques-

tion of State insurance would be thrown into the melting pot again in a short time, and the medical profession must be better prepared than it was on the last occasion. Many of the approved societies, oblivious of the fact that they had accepted so many bad lives, considered the present sickness rates abnormal; if they thought their actuarial position unsafe in 1915 the cry was sure to arise that the doctors were being paid too much or were not doing enough for their remuneration. All those who had accepted service under the Act would be affected by such an agitation, but the likelihood of the inclusion of dependants affected all those whose practice in any way touched the industrial classes. The profession must try and unite again and fight for its rights and honour. Funds for this purpose were absolutely essential; one of the principal factors of the situation a year ago was that the money available was not nearly sufficient. Furthermore, it was very doubtful whether those funds were entirely safe or could be used in the way intended; the only way in which such funds could be rendered safe was by entrusting them to a trade union. His ideal was that the British Medical Association should become a trade union on one side of its work and a scientific body on the other, but the legal difficulties in the way of such a reconstitution of the Association were practically insurmountable. A trade union formed outside the Association should not be hostile to that body; it should work on parallel lines, but at the same time be able to protect its funds. One of the reasons why the proposal for the formation of a special fund was not carried at the recent Special Representative Meeting was that some Divisions did not consider the money was safe. Mr. Turner said that one advantage possessed by a trade union was that it was able, by delegation of full powers to leaders, to take prompt action. If the profession wanted anything done in Parliament it should have a representative independent of party. Members of the profession in Parliament at present subordinated their profession to party; he could not blame them: they were elected as party men. He believed a representative of the profession could be forced through for the Marylebone Division. The urgency of the situation must appeal to those working under the Act, because they would be in the forefront of the battle; to those outside the Act whose practice was amongst the industrial classes, because they would be brought under State service; and it appealed to the whole profession, because there was a strong feeling abroad amongst politicians, approved societies, and the public generally that the best method of looking after the health of the United Kingdom was by means of a State medical service. He would look on that as most injurious both to the profession and to the public health. Such a movement could be effectually countered by a properly organized profession.

Dr. F. M. BOCLET agreed with Mr. Turner's remarks, but deplored the apathy of the profession, which he described as appalling.

Dr. H. H. TOMKINS thought it was due to the lamentable want of interest on the part of the units of the profession and the apathy displayed at the time of crisis that no better results were accomplished. If the units left all the work to the executive there must be failure. Trade unions amongst the working classes had gained ascendancy because every man was keenly interested and the officials were strongly backed. It was the profession's own fault that the Association had not stood the members in better stead in the past; it was still the body to which all should turn. He hoped when the guild was powerful enough it would be able to take over by a friendly arrangement the trade union work of the Association.

Dr. P. C. RAIMENT, the general secretary of the guild, stated that the organization arose out of the old London Medical Committee, and its certificate of registration as a trade union gave it the privileges of Section 4 of the Trade Unions Act. As to the membership of the guild, Dr. Raiment said the numbers appeared to be limited by the amount of work the executive could give. In three months 1,200 members had joined, including some of the most important members of the British Medical Association. After quoting Mr. Colquhoun Dill's opinion in the SUPPLEMENT of November 1st, that "if you want a fund and want it protected you must have a trade union," Dr. Raiment mentioned that the guild had taken powers to levy up to £20 in any one year, but if there were three peaceful years before matters became urgent, a membership of 10,000 would produce a fund of £60,000 on a call of £2 a year, and then by levying £20 for a year £200,000 would be at call. Would the profession wait for the Association to evolve a scheme which might not be protected, or give support now to a trade union, outside the Association but certainly in harmony with it?

Dr. BURNHILL having urged that the leaders of a trade union must show greater capability for leading than the executive of the Association, the following resolution, proposed by Dr. TOWNSEND, was adopted with only three dissentients:

> That this meeting of practitioners, having heard Mr. E. B. Turner and being convinced of the necessity of a trade union for the profession, pledges itself to support the National Medical Guild, and to use every legitimate means to compel the British Medical Association to recognize the guild as an auxiliary body.

SCIENCE NOTES.

IT has been claimed by various observers that radium emanations possess the property of accelerating or increasing the action of certain ferments—for example, pepsin and tyrosinase—although in some cases by longer exposure the ferment may be rendered inactive, trypsin and invertin being cases in point. The increased rate of growth in plants and germinating seeds brought about by the exposure to radium rays has been attributed to the action of the latter in stimulating certain enzymes. It has been supposed that the therapeutic effects claimed in such diseases as gout might be attributable to similar agencies, and in this connexion Marshall and Rowntree (*Journ. of Biol. Chem.*, December, 1913) have investigated the effect of radium emanations on lipase. This fat-splitting ferment was obtained from pig's liver, and the substrates on which it was tested were, in most cases, solutions of ethyl butyrate. The amount of digestion was estimated by titration with barium hydroxide. Radio-active solutions in various quantities were added to the mixtures of lipase and substrate and after the lapse of a certain time similar titrations were made. It was conclusively shown that no accelerating effect was produced on the lipolytic ferment by radium emanation; on the contrary, the ferment activity was, if anything, inhibited.

Besredka and Jufille have devised a new culture medium for bacteria. It is cheap, though at first somewhat difficult to prepare properly. Practically all the micro-organisms investigated grew remarkably well. The cultures remained alive and retained their virulence for a much longer time than in any other medium, thus obviating the necessity of preparing special media for particular organisms and of frequent subcultivations to keep certain strains alive. For example, the cultures of the pneumococcus in this medium conserve their vitality for several months; the meningococcus—usually a very delicate organism—retains its vitality for at least two months; and a still more delicate organism, the gonococcus, not only gives good growths within twenty-four hours but subcultivates on other media after a stay of twenty days in Besredka's medium. The bacillus of whooping-cough gives abundant cultures, and the organisms survive for at least four months in the incubator. It is rather striking that several organisms which can only be grown in other media under strictly anaërobic conditions grow and flourish in this medium in the presence of oxygen. It is claimed that the tubercle bacillus grows remarkably well with certain modifications of the composition, which consist in the exclusion of glycerine (hitherto considered an almost indispensable constituent) and peptone. The growth is rapid and abundant, and the fluid freed from bacteria gives complement fixation tests with the serum of infected animals even before the microscopic appearances of lesions. The medium is composed of incoagulable egg albumin, incoagulable egg yolk, and beef broth in the proportion of 4 : 1 : 5. The albumin may be omitted when the tubercle bacillus has to be cultivated. It is claimed that by this medium the human and bovine types of the bacillus can be differentiated, and a very active tuberculin can be elaborated.

Hata has succeeded in simplifying the original technique of Noguchi for the cultivation of the spirochaete of relapsing fever on artificial media. Noguchi's medium entails a supply of fresh ascitic fluid, which is not at all easy to obtain at the time it is wanted, and the medium prepared from it retains its nutritive properties for a very short time. Further, very strict anaërobic precautions have to be maintained, and each tube requires the addition of a portion of fresh animal tissue. By the method of Hata the inconveniences are very sensibly diminished. He employs horse serum, which is diluted with twice its volume of physiological saline solution, and heated gradually up to 70° C. An opaque semi-coagulated medium is thus obtained, to which is added a piece of the "buffy coat" from blood clot. By these means a more stable medium is produced than by the method of Noguchi, and the spirochaetes will live vigorously at room temperature for as long as sixty days. It will be interesting to find if by similar means other classes of spirochaetes can be made to grow outside of the body.

The President of the Royal Photographic Society, Mr. Chapman Jones, F.I.C., devoted his annual address to a consideration of the media of high refractive power for the mounting of microscopical subjects such as the smaller diatoms. Diatoms, he said, were fairly visible in air, but in water they were far less visible, and in Canada balsam some of the more delicate kinds were altogether lost to view. This was due to the fact that the refractive indices of the two last media approximated closely to the refractive index of the silicious coating of the diatom itself: Air, 1; water, 1.33; diatom (silica), 1.43; Canada balsam, 1.52. He then discussed the question of extending the range of media of high refractive power so as to secure greater visibility. All the following had possibilities: Styrax, 1.58; piperine, 1.68; sulphur, 2; realgar, 2.45. Styrax had first to be hardened by being kept warm for a considerable time in order to rid it of its volatile constituents. A slide prepared with crystalline piperine began to go opaque in about a month owing to crystallization, and in nine months the opacity was entire. If, however, that piperine were heated to between 125° and 130° C. for five hours, although the beginning of crystallization was expedited by the procedure, its further progress was retarded, and after fourteen months the crystallization was not complete. Further heating up to 180° C. for one hour tended slightly to reduce the refractive powers of piperine, but it was a useful substance, because, in addition to its high refractive power, it had a remarkably high dispersion spectrum, and could be used with Canada balsam and other mixtures. Coming to media containing arsenic and sulphur, Mr. Chapman Jones pointed out that any preparation made of sulphur which was ground for the purpose would be dirty, because, whatever the purity of the product, the mere manipulation attracted what he called the aërial motes. He found it necessary to purify sulphur by distilling it twice in a retort; the arsenic element also had to be distilled twice, and the mineral realgar (arsenic disulphid) had to be distilled at red heat. Realgar could be used as the medium if, after distillation, only the vitreous transparent parts were selected. Such mounts were probably permanent so far as the medium was concerned, but they cracked. To avoid this difficulty, sulphur was added. Sulphur itself would be an excellent medium, save for its tendency to crystallize, and the problem was to find the maximum proportion of sulphur which, mixed with arsenic, would give a stable medium. Thirty or 22½ parts of sulphur appeared at present the most suitable amount, but time only would prove the permanence or otherwise of the preparation.

PROFESSOR G. H. F. NUTTALL, F.R.S., has been elected foreign member (*honoris causa*) of the Royal Hungarian Society of Medicine.

AT a meeting of the Association of Registered Medical Women, held on December 2nd, 1913, the following resolution was passed: "That this meeting of registered medical practitioners condemns the practice of artificial feeding as performed in His Majesty's prisons, being convinced that the performance of such an operation, under such conditions on a sane and resisting person by the direction of a lay authority, is a contravention of the rules of medical practice."

SANITATION IN GERMAN AFRICAN COLONIES.

THE medical and sanitary reports for the German Colonies for the year 1910–11[1] contain a record of continuous progress in the prevention and treatment of tropical diseases. It is gratifying to note that the natives are beginning to appreciate European methods and to understand that it is to their own advantage to carry out the instructions issued by the German Colonial authorities for the prevention of epidemic disease.

Ankylostomiasis.

In the section on sanitation, in the report for German East Africa, the water supply is stated to be generally unsatisfactory; most of it is derived from shallow wells which in many places are liable to contamination. Europeans, as a rule, boil all water for household consumption: natives will not trouble to do so, and in consequence many of them contract enteric fever or dysentery. On account of the prevalence of ankylostomiasis, the provision of proper latrine accommodation for natives is an urgent matter. The native, if left to himself, defaecates anywhere, but preferably near water; the ova of the ankylostoma are thus deposited in a suitable medium, and infect other natives who may select this spot for defaecation. Men belonging to different tribes, employed on the same plantation, object to using a common latrine. An attempt is being made to make them dig a hole to receive their excrement and to cover it up with earth, also to instil into them the danger to the rest of the community incurred by infecting wet soil. When a family occupies a hut, a separate latrine, consisting of a covered pit, rendered private by constructing a grass hut over it, has been accepted by the natives and has been found to be an efficient preventive against the spread of ankylostomiasis. The adoption of this and other measures, such as the distribution of leaflets describing the disease, its mode of infection, etc., and free treatment for those infected, has succeeded in reducing the percentage of ankylostoma carriers in the Bungu district from 64 to 10.

Small-pox and Vaccination.

Small-pox was prevalent, and caused many deaths in several of the districts, especially where vaccination had been generally refused. After each epidemic numbers of natives asked to be vaccinated; this was carried out during the year on 886,750 persons with lymph prepared in the colony. Some interesting experiments are noted in which attempts were made to inoculate calves, sheep, goats, and rabbits with human small-pox, human cow-pox, and vaccinia. Goats and sheep in some cases produced a small crop of pustules when inoculated with vaccinia; rabbits similarly treated produced a good crop of pustules. The virulence of vaccine which appeared to have become attenuated was exalted by passing it through donkeys and swine. The object of these experiments was to find some animal, other than the calf, suitable for maintaining a stock of active vaccine in districts infested with tsetse fly.

Plague.

Only a few cases of plague, all imported, occurred during the year. The destruction of rats in seaport towns is being steadily continued; during the year the number destroyed was 154,600.

Malaria.

The year 1910 was dry, and the incidence of malaria was lower than in preceding years; still it accounted for one-third of all sickness and one-sixth of the total mortality. In Dar-es-salam the antimalaria measures were chiefly directed to detecting and treating carriers of the malaria parasite and to the destruction of mosquito-breeding places. Altogether 21,476 persons were examined during the year; of these 4,891 were found to be carriers; tropical ring forms were found in 77 per cent. of the carriers.

Leprosy.

The leprosy segregation villages are gradually becoming a success, and natives no longer hesitate to notify cases of the disease.

[1] *Medizinal-Berichte ueber die Deutschen Schutzgebiete fur das Jahr 1910–11.* Herausgegeben vom Reichs-Kolonialamt. Berlin: Mittler und Sohn. 1913. (Roy. 8vo, pp. 820; 29 plates, 20 figures. Mk. 10, cloth Mk. 11.)

Sleeping Sickness.

A special staff consisting of one director, eight medical officers, sixteen medical subordinates, and one sister, was engaged in combating sleeping sickness. The south side of Lake Victoria Nyanza was reported to be free from the disease, and all landing places had been cleared of bush. Cases which occurred were believed to have been infected in British and Congo territory.

Maternity.

The Red Cross maternity sisters were doing excellent work in teaching native women the management of confinements and the elementary precautions against sepsis which formerly caused many deaths among lying-in women.

Cameroons and Togo.

The report from the Cameroons notes that in designing houses for Europeans an attempt is being made to construct brighter and more airy buildings in place of the former low ones with dark rooms surrounded by a deep verandah.

In Togo the incidence of illness among Europeans was at the rate of 3,520 cases per 1,000 of population.

In a short review it has only been possible to touch on one or two points, but those interested in the prevention and treatment of disease in the tropics or in veterinary matters will find much interesting information in these reports.

CHINA.

In an introduction to the third series (for 1912) of the medical reports from His Majesty's Consulates in China, Dr. Douglas Gray, British Legation, Peking, states that the reports compare satisfactorily with those of other years. The most stricken part of China continues to be the Yang-tsze Valley, where famine, flood, and relapsing or famine fever again took a heavy toll of the lives of the inhabitants. The flood problem remains unsolved, and many students of the question think that the most workable solution lies in the migration of the homeless and ruined farmers from the banks of the Yang-tsze to Northern Shansi and South Mongolia, where vast areas of land await cultivation. It is calculated that at least 200,000 deaths annually occur in the Yang-tsze Valley among people who are under 30 years of age, from causes the direct result of economic stress. Cholera was present in an epidemic form in this area and accounted for many deaths. Plague appeared as usual in the southern ports, but not to any marked extent. In North China influenza reappears annually during the colder months. Reports of the presence of ankylostomiasis have come from all parts of China and are more frequent. Kala-azar is also being more frequently noted. Schistosomiasis japonica continues to scourge the fishermen and farmers of mid-China, but there is no evidence of its spread to any extent among Europeans.

Lieutenant Dive, R.A.M.C., has contributed an interesting account of the hospital and surgical work done at Hankow during the revolution (October, 1911, to January, 1912). According to Red Cross figures, the recorded casualties were 2,000 buried in the field and 4,000 treated in hospitals; but Lieutenant Dive considers that, as the imperial troops had an ambulance corps of their own, and that very many cases never came under observation, the total figures must have been very much higher. To deal with these casualties a local Red Cross Society was formed and recognized by both belligerents. It secured sufficient accommodation for every case, and a large international staff was enrolled. A total of 2,200 beds were available in the different hospitals for the reception of casualties.

From Amoy Dr. Ainslie reports that the health of the foreign community was very good. The prevalent diseases of this port are plague, small-pox, dengue fever, typhoid, and tuberculosis. Dr. Davenport, in his report on Canton, with its population of 2,500,000, the most important Chinese city in the empire, states that bubonic plague appeared in the spring and early summer months, but only in scattered areas. No European has been affected with plague during the past eight years. The health of the foreign community in Foochow Dr. Moorhead reports to be very good; many of the diseases prevalent among the Chinese are largely preventable, and are due to faulty sanitary conditions. Hankow, which has one of the largest foreign communities in China, Dr. Thomson reports was fairly healthy. He states that no further cases of schistosomiasis among Europeans have to be reported this year; all the 5 cases reported on last year have made complete recoveries, no ova can be found in their faeces, and the blood counts have returned to normal. It is interesting to note that the incidence of disease among foreigners in Peking is steadily diminishing, especially as regards preventable diseases. This, Dr. Gray states, is largely due to improved sanitary conditions. Regarding the Chinese community, tuberculosis and venereal disease remain the commonest diseases, the incidence of the former being very high. It occurs in the majority of homes, and continues to be the chief death factor. The number of cases of small-pox would appear to be annually decreasing, as vaccination is now popular among all classes. Reference is made to a curious and, as yet, obscure incident of foreign military life in North China—namely, the presence each summer and autumn of sporadic cases of coma and pyrexia among soldiers in the British and other troops in Peking and Tientsin. The symptoms, course, termination, and *post-mortem* findings in all the cases are very similar, and a diagnosis of poliomyelitis anterior acuta seemed applicable to most of them. The disease attacked healthy muscular men, who, when they reported sick, complained of headache and fever. The leading symptom was rapid motor paralysis of one or more limbs. The head was not retracted. There was progressive weakness without any signs of organic disturbance of the viscera, except a diminished resonance over the bases of both lungs as cardiac failure became more pronounced. Repeated examination of the blood and cerebro-spinal fluid never revealed any parasites. Though the French army doctors thought cerebro-spinal meningitis was an extremely probable diagnosis, in no case was there any sign of the *Diplococcus intracellularis meningitidis*. In 1910 there were 5 cases, all fatal; in 1911, 8 cases, of which 7 died; and in 1912, 7 cases occurred, with 6 deaths. Except in one suspicious case, the details of which could not be gathered, the disease has not attacked civilians. Arrangements are being made for co-operation in more extended inquiries should the disease reappear. Dr. Brown states that the health of the foreign community in Tientsin was on the whole fairly good. There was an unusual increase in the number of cases of malaria during the summer and early autumn. In former years an occasional case occurred, for the most part in those who had previously suffered from the disease while resident in southern climates. In 1912, however, a large number of cases were reported among the British soldiers stationed in Tientsin and also among the French troops. Regarding the remaining treaty ports there is nothing of medical interest to report.

As this is the first year any report has been received from South Formosa, Dr. Maxwell compares the state of the island now, after some fifteen years of effective Japanese occupation, with the conditions of earlier days. Whatever may be said of the relations between rulers and ruled, there is no question that in material respects and in sanitary conditions Formosa has made enormous strides in the last few years, and the effect on the health of the inhabitants has been favourable. Railways and good roads now intersect the island in all directions; the Chinese sedan chair has almost disappeared. A good water supply has been brought to several of the more important cities; broad streets, well drained, have to a considerable extent replaced the narrow Chinese alleys, and periodical cleaning of the Chinese houses is enforced by the police.

The whole of these reports are full of interesting material and reflects great credit on the reporters, isolated, many of them, far from Western civilization and without the means of consulting with a colleague in cases of difficulty.

ADDENBROOKE'S HOSPITAL, Cambridge, and the Colchester Asylum for Idiots each receives a bequest of £500 under the will of the late Mr. William Basham Gurteen, a clothing manufacturer, of Haverhill, Suffolk.

SIXTH INTERNATIONAL DENTAL CONGRESS, 1914.

Much progress has been made with the arrangements for the sixth International Dental Congress, which will be held in London in August, 1914 (3rd to 8th), under the patronage of His Majesty King George V and at the invitation of the British Dental Association. The British Government has issued invitations to foreign Governments and also to the self-governing dominions of the British Empire to send official representatives to the Congress, and several delegates have already been appointed. Invitations have been issued to dental societies and organizations throughout the world, and steps have been taken to secure as reporters or introducers of discussions in the ten sections of the Congress the co-operation of leading specialists and representative authorities in all branches of dental surgery. The officers of the Congress are:

President: J. Howard Mummery, M.R.C.S., L.D.S.Eng.
Vice-Presidents: W. B. Paterson, L. Matheson, W. Guy, Dr. A. W. W. Baker, and the President of the British Dental Association.
President of Committee of Organization: W. B. Paterson, F.R.C.S., L.D.S.Eng.
Honorary Treasurer: H. Baldwin, M.R.C.S., L.D.S.Eng.
Honorary General Secretaries: Norman G. Bennett, M.A., M.B., B.C.Cantab., L.D.S.Eng.; H. R. F. Brooks, J.P., L.D.S.Edin., Glas. and L.

The work of the Congress will be distributed among ten sections as follows:

1. Dental Anatomy, Histology, and Physiology.
2. Dental Pathology and Bacteriology.
3. Dental Surgery and Therapeutics.
4. Dental Physics, Chemistry, Radiography, and Metallurgy.
5. Dental Prosthesis.
6. Orthodontics.
7. Oral Surgery and Surgical Prosthesis.
8. Anæsthesia (General and Local).
9. Oral Hygiene, Public Instruction, and Public Dental Services.
10. Dental Education.

The International Congress Museum is intended to be representative of every section of the Congress. Mr. A. Hopewell-Smith is Chairman of the Committee, and Mr. F. N. Doubleday is the Honorary General Secretary. Application forms and all information will be sent to all intending exhibitors on application at the office of the Congress, 19, Hanover Square, W.

LITERARY NOTES.

A society, entitled *Epidaure artistique et littéraire*, has recently been formed in France. It will have as its organ a review bearing that title. The society will consist not only of doctors who are authors of artistic and literary works, but of other members of the profession interested in such things. The review will be conducted by members, but will deal only with questions of art and literature. The Committee of Patronage includes Professors Ch. Richet, Renaut and Beaunis; Drs. Maurice de Fleury, André Courreur, Vice-President of the Société des Gens de Letires, Cabanès, editor of the *Chronique Médicale*, and others. All communications relative to the society should be addressed to Dr. Giuliani, 61, Cours de la Liberté, Lyons.

Dr. Arnold Chaplin has reprinted for private circulation the paper read by him before the Historical Section of the International Congress of Medicine on the fatal illness of Napoleon. His book entitled *The Illness and Death of Napoleon Bonaparte* (*A Medical Criticism*) was reviewed in the Journal of December 28th, 1912, p. 1761. Dr. Chaplin there analysed the available evidence, and came to the conclusion that the cancer which killed Napoleon was secondary to a chronic gastric ulcer from which he must have suffered for a considerable time. In the paper he again discusses in detail the testimony of all the witnesses and the views of other writers. As he has heard it stated that Professor Keith does not believe that Napoleon had cancer of the stomach, he mentions that the distinguished Conservator of the Museum of the College of Surgeons has told him that no one who read Antommarchi's careful description of the *post-mortem* appearances of the stomach could come to any other conclusion than that the disease, of which that organ was the seat, was cancer. Professor Keith had clearly expressed this opinion in his paper entitled "The history and nature of certain specimens alleged to have been obtained at the *post-mortem* examination of Napoleon the Great," published in the Journal of January 11th, 1913, p. 53. Professor Keith there propounded a theory that Napoleon had also suffered from Malta or undulant fever. Dr. Chaplin thinks there is much to be said for this "endemic theory," and he brings forward evidence which goes to prove that Napoleon had suffered from ague when a young man. He also gives statistics which show that there was a large amount of sickness—dysentery and bowel complaints, liver complaints, effects of the sun and chest complaints—among the troops stationed at St. Helena.

> There is therefore a clear history of infection of an endemic kind prevalent in the islands of the Mediterranean; and it is by no means impossible that the seeds thus sown may have flourished again when Napoleon went to reside in the subtropics of St. Helena.

Dr. Chaplin's paper is from the medical point of view a *document pour servir* which cannot be neglected by the historian. All the relevant facts of the case are impartially laid before the reader, who is left to draw his own inferences.

Dr. Herbert Warren, President of Magdalen College and Professor of Poetry in the University of Oxford, has issued a reprint of a public lecture delivered in the Examination Schools on November 13th, 1913, entitled *Robert Bridges, Poet Laureate: Readings from his Poems*. It is published by the Clarendon Press. He gives a sketch of the history of the laureateship, telling incidentally a good story about one of the most famous holders of the post:

> When the Exhibition of 1862 was opened and Tennyson's Ode was sung, one of the newspapers reported that the Poet Laureate was present clothed "in his green *baize*."

The selection of Mr. Bridges, whom we still claim as a member of our profession, for the laureateship has been the subject of a good deal of ignorant comment. His poetry is caviare to the general. The Oxford professor of poetry hails the appointment with enthusiasm. He exclaims:

> *Habemus poetam laureatum!* We have a laureate in the true English line of poetry, of Chaucer and Spenser, of Milton and Gray, of Wordsworth and Tennyson.

Dr. Warren goes on:

> It is a commonplace to say that Mr. Bridges is not a "popular" poet. In a sense that is true. He has never sought to be popular. He does not live in the street. His poetry is not known to the "man in the street," whether on the pavement or the top of the tram. . . . He left the street long ago, for the very reason that he did not wish for this sort of worship.

Of special interest to medical readers is a poem mentioned by Dr. Warren which, we imagine, is known only to a very select circle. It is entitled *Carmen Elegiacum Roberti Bridges de Nosocomio Sti. Bartholomaei Londinensis*, and is an account of "Bart's" and its staff. It is addressed to Dr. Patrick Black. It was published in 1877, and was exhibited at the London College of Physicians on St. Luke's day last when Mr. Bridges, who is a Fellow of the College, was entertained as the guest of the evening. Dr. Warren points out that as regards his poetry the important effect of the period of his career when he was on the staff of St. Bartholomew's is the influence of his medical and scientific study upon his thought. "He possesses and exhibits a grasp of natural science, so potent a factor in our time, such as will be found in no English poet before Tennyson and in no other poet since Tennyson." Dr. Warren goes through the work of Mr. Bridges, quoting passages that illustrate the exquisiteness and variety of his poetic gifts. The lecture makes delightful reading to all lovers of delicate artistry in verse. It may not be amiss to refer the reader who wishes to make acquaintance with the poet to *The Poetical Works of Robert Bridges*, excluding the eight dramas, published by Humphrey Milford, Oxford University Press, 1913.

British Medical Journal.

SATURDAY, JANUARY 3RD, 1914.

THE SCIENTIFIC STUDY OF CLINICAL MEDICINE.

THE scheme for the organization of medical education embodied in Mr. Abraham Flexner's now famous report has an appearance of logical precision which so deeply impressed the Royal Commission on University Education in London that its recommendations in respect to the teaching of medicine were founded almost wholly upon his evidence. The fact that one result of the acceptance of these opinions was to induce the Commissioners to omit a Faculty of Medicine from their plan for the reorganized university at once raised a suspicion that there was a fallacy somewhere, since for generations and certainly until the consolidation and expansion of the Imperial College of Science and Technology the medical schools formed by far the most important teaching institutions of university rank in London.

A closer examination shows that Mr. Flexner's scheme is not a model of logical precision, for it is founded partly on the assumption that the results of the German professorial-institute system are better than those of what may be called the British system, and partly on analogy. It is affirmed that the German system works better for the advancement of medical science and for the education of the student to be a good practitioner of medicine. The first assertion is made with more confidence than the second. To establish the latter, an inquiry much more extensive and of quite different character from that undertaken by Mr. Flexner would be necessary.

Analogy is a useful stimulus to thought and inquiry, but, unaided, it is a dangerous guide to action. It is particularly dangerous in this case because the study and its application to the affairs of life are concerned with mankind, and there is a great deal of humanity in man.

The Royal Commission seems to have been mistaken in assuming, *a priori*, that the methods most appropriate for the advancement of, for instance, chemistry or physics as sciences and arts would be those most appropriate for the advancement of the science and art of medicine. The doctrine may be well founded, but the proposition must be proved, and cannot be assumed as axiomatic.

It is no disparagement of Mr. Flexner's eminence as an educational expert to say that his opinion is probably more authoritative in some other departments of education than in that concerned with medicine. The study of every science is conditioned by the medium in which the phenomena it sets out to investigate occur. In sciences purely experimental, such as physics and chemistry, the inquirer can himself determine every circumstance of his experiment. In other departments of science—in geology, for instance—advance can take place almost solely by way of reasoning from the observation of the phenomena displayed in Nature. Physiology and pathology have the more difficult task of using and harmonizing both methods. Medicine also has to make use of both methods, but to a very large extent it must, like geology, rely on the observations of the phenomena as they are presented to it by the living, sentient, variable patient. The difficulty of the subject is increased because medicine has always to reckon with the incommensurable factor of mind which influences every bodily state, and is often the element determining the result of an illness.

We have the advantage of being able to publish in this issue the opinions of two physicians who have attained eminence by different routes, but both qualified to express an opinion which must be received with respectful attention. Both deal with the methods of studying and teaching clinical medicine in the scientific spirit, and though they approach the subject from different starting points, the general conclusions to be drawn from what they have to say are by no means at variance, but are rather complementary the one to the other. Sir William Osler describes the way in which, with a clear field at Johns Hopkins, he sought to combine the advantages of the German and of the British systems. Of the striking success of the combined system in his hands there can be no doubt, and it is certain that a man who had been through his mill must have been made of very poor material if he did not come out with a very good understanding of the aims and the methods of modern medicine. The guiding principle all through seems to have been to bring the man into intimate contact with the patient and to make him think about and talk about his cases, and in particular, by the device of the rounding up and in other ways, to provide him with material for the exercise of any critical faculty he may have possessed. Dr. James Mackenzie approaches the subject along the road of the general practitioner, in which capacity he was engaged in a provincial town for many years. He criticizes the methods by which, whether in Germany or Great Britain, clinical medicine is taught and studied, but the most valuable part of his paper seems to us to be the suggestions it contains for inciting the general practitioner to recognize that his branch of the practice of medicine affords him great opportunities for the systematic study of clinical phenomena in a scientific way.

The whole process of an acute infection may be comprised within a few days or weeks. The onset is often sudden, and the phenomena develop so quickly that the hospital ward affords an opportunity for studying the course of the disease and establishing the prognosis. But it is otherwise with chronic disorders; their first beginnings are insidious and must be searched for. They are to be found very commonly in the subjective sensations of the patient, who may be inaccurate in his statements, either exaggerating or making light of symptoms which are often variable and indefinite.

As Dr. Mackenzie says, in hospitals and in the consulting room of the specialist, there are seen in such cases only the results of processes which have probably been in existence for weeks, months, or years. His thesis is that a doctor engaged in general practice may by continuous, careful observation overlong periods, during which he preserves accurate records of the course of events, learn to recognize the earliest premonitions of disease, afforded most often by the subjective symptoms the patient is able to relate. If clinical medicine is to be studied in the scientific spirit, the value of these subjective symptoms must be ascertained; they must be linked up with objective symptoms, such as localized tenderness or derange-

ments of metabolism, and they must be traced forward through months and years of the patient's life, so that their true cause and etiological importance or unimportance shall be ascertained. Such work would be of the highest scientific value, and Dr. Mackenzie has himself shown, by his investigation of disorders of the heart, that it can be done in general practice if a man have grit and perseverance and patience to wait.

RADIUM AND CANCER.

THE cancer problem is still unsolved. All the known forces and elements in Nature are being pressed into the service, and the search for cause and cure goes on. Radium, the most recent discovery in physics, is one of the rarest and most mysterious of substances, and it is in a sense fitting that it should be capable of effecting cures in cancer, one of the strangest though commonest of diseases.

Cancer has always possessed a dread fascination for the public, and our profession is in a measure under reproach that the cure is still uncertain. Radium, too, appeals to the non-scientific imagination in the romance of its discovery, in its peculiar and wonderful attributes, and in its ultra-commercial value.

The fact that radium has in certain cases apparently cured cancer brings into conjunction two extraordinary forces, the full extent and power and variability of which are unknown. In the remarkably candid and temperate address, published in this issue, which Sir Alfred Pearce Gould delivered last month before the West Somerset Branch of the British Medical Association, he shows himself anxious that the profession should realize on the one hand how inconstant the disease cancer is, how erratic its behaviour, how though generally painful it may be painless, how though commonly tending to rapidly increase in size it may actually shrink as it grows, how it may even very rarely undergo spontaneous cure; and, on the other hand, how little we really know of the new therapeutic agent—radium. Proof of the earlier of these propositions is unnecessary; the mutability and variability of cancer manifest themselves in the practice of every man. As to the last, it has to be confessed that we are not in utter ignorance. It is acknowledged that radium can both stimulate and check cell growth apparently of all kinds. Its power of checking cell multiplication and growth appears to be greater when exercised upon cells of malignant tumours than upon normal tissue cells, and Sir Alfred Pearce Gould seems ready to admit that radium can inhibit or check the growth of cancer cells—that it has, in fact, a selective affinity for cancer cells, and can destroy them. It is upon this fact that its use as a curative agent depends; but, if pushed too far, it destroys normal tissue, so that its power of resistance to the growth and propagation of cancer is lessened. In other words, the immunity reaction of the tissue is lost. Upon this latter may depend the explanation of those cases which appear to be worsened by radium treatment.

But radium has a still further power. Dr. Abbe, of the New York Cancer Hospital, speaking in the discussion on this subject at the Brighton Meeting of the Association, pointed out that radium has also a stimulating effect on cell growth. He had experimented by exposing seeds of oats in layers to radium emanations at varied distances. The oats were afterwards planted in rows corresponding to the distances at which each of the layers had been exposed to radium. He found that the two rows which had been nearest to the radium were killed, the third row was devitalized, the fourth to the seventh rows were most perfect in growth, being actually larger, thicker, and richer in colour than the control rows which had not been irradiated at all—that is to say, growth had been stimulated. The rows beyond these again were poor in quality—in point of fact, devitalized. Time exposures had similar results. After ten to fourteen hours' irradiation the effect was overgrowth; beyond that period there was depression. Whether the action of radium on animal tissues is identical with that on vegetable structures is not yet known; a close similarity may be presumed.

The technique of radium-therapy has not yet been fixed. Sir Alfred Pearce Gould is convinced that the embedding of radium within the tumour mass is more efficacious than external application of radium plates. In this he is in agreement with Dr. Dominici and Dr. A. A. Warden of Paris, who recently published the reports of the later condition of patients shown at the London Meeting of the British Medical Association; he is in agreement also with Bumm and Doederlein in Germany. Of course, where embedding is impracticable, the plate method should be adopted, though embedding may be done in unlikely situations. For example, to reach an epithelioma at the base of the tongue the small glass, platinum, or silver tube covered with rubber may be inserted by the submental route and removed by the attached threads after twenty-four hours. By the embedding method more rapid results seem to be obtained, since one or two applications have proved in certain cases sufficient to cause the disappearance of malignant tumours with rapidity little short of miraculous. The next technical point is that dosage should not be too great. Sir Alfred Pearce Gould has employed tubes of radium emanations of from 50 mg. to 100 mg., and finds on the whole that these doses suffice to kill the cancer cells without damaging the healthy tissues. Professor Bumm, to whose demonstrations on radiotherapy of cancer of the womb we have already referred,[1] says that it is a serious mistake to imagine that the greater the dosage the better the result. He found himself constantly diminishing the weight of the radium employed, and he was now in the habit of using not more than 50 to 60 mg. at a time, and said that he had no doubt that it was best from every point of view to use weak doses and increase the time of application—as a rule twenty-four hours at a time. The Munich operators were of the same opinion. Another fairly definite view held by radium workers is that sarcomatous tumours are more readily influenced by radium than cancers. It is true that only one of Sir Alfred Pearce Gould's striking first series of five is an example of sarcoma, but all of the last three cases are sarcomata, though they have not yet been long enough under observation to be classed amongst the cures.

The address does not discuss the relative values of radium and Roentgen rays; these were fully dealt with in the Section of Electro-therapeutics at Brighton. But the conclusion come to by Professor Bumm as to the treatment of malignant disease of the womb is worth keeping clearly in mind. He thought that radium, mesothorium, and Roentgen-therapy were all equally valuable agents, and x-ray treatment properly applied gave results as good as those obtained by radium. Radium and x rays have been used in conjunction in many clinics, and it is a remarkable tribute to the wonderful power of these agents that in Doederlein's clinic not a single case of uterine or

[1] BRITISH MEDICAL JOURNAL, December 13th, 1913, p. 1546.

cervical cancer had been operated on during the past eleven months.

An important feature of the address is the statement of the possible dangers of the radium treatment of cancer. The lessons of the early recklessness in the use of *x* rays will surely not be forgotten, and we hope that the tragic results to workers with *x* rays will not be repeated with radium. The dangers to which the patients are exposed are sloughing, which may be simply burning of the skin or may manifest itself by necrosis of intestinal wall with formation of faecal fistula; thrombosis in veins close to the site of treatment, haemorrhage, constitutional disturbance, hyperpyrexia (106° F.) after employment of a very large dose; and, lastly (this point is made by Bumm), very late, six months or a year after exposure, manifestation of destructive action on normal tissues with the occurrence of fibrotic and hyaline degeneration.

In considering the suitability of cases for radium treatment it is easier to approach the subject from the negative point of view. Secondary malignant disease in the liver, pancreas, or vertebrae is beyond its reach; so also is primary disease of the stomach, intestine, or bladder. In these latter radium can be applied, but its beneficent action may be obtained only at the expense of formation of fistula. If extensive metastasis has occurred, radium is of no use; but if, for example, in epithelioma of the mouth glandular involvement has occurred, the local disease can be treated with radium, the glands dissected out as cleanly as possible, and the operation area irradiated before closing the wound. Again, in inoperable cancer of the intestine radium may be applied so as to reduce the size of the malignant mass, and some palliative operation—short-circuiting, or occlusion—may be performed. Sir Alfred Pearce Gould thinks that there is a wide field for radium in sarcoma of the long bones, especially the femur, where surgery can suggest only a serious mutilating operation. But where surgery has gained marked success, as in early cancer of the breast, the treatment should still be surgical, though radium workers ask that they should get cases in the early stages, as radium is most likely then to be of benefit.

The successful cases published both in this address and in other literature dealing with the subject cannot fail to raise high hopes, but there have been many failures and disappointments about which less is said. Sir Alfred Pearce Gould asks us to look on both sides of the shield. But it is plain that in radium a new power is placed in our hands for the treatment of cancer. Knowledge of the laws which govern and control that power will only come with time and a multitude of witnesses.

THE PROSPECTS OF YOUNG DOCTORS.

THE *Times* on Tuesday gave prominence to an article on "The Revolt of the Junior Medical Officer," which was described in the title as "an effect of the Insurance Act." It opened with a reference to the meeting of the assistant medical officers of public asylums in Birmingham, and, it might have been added, in other centres, and went on to assert that this meeting, inasmuch as it was "grappling with the ubiquitous problem of the junior medical officer . . . indicates the beginning of a movement." So far as the article seeks to draw public attention to the movement among a class of public servants who have suffered many things at the hands of the asylum authorities we gladly welcome it, but in the development of the subject we miss the comprehensiveness of view and accuracy of detail upon which our eminent contemporary justly prides itself.

In justification of our contention that the article contains inaccuracies in detail we need only instance the reference to a supposititious Unqualified Assistants Act, which, it seems to be suggested, combined with the Insurance Act to cause the remuneration ordinarily paid to locumtenents to rise from two guineas a week or even less to seven, nine, or even twelve guineas a week, rates which it is stated ruled throughout the holiday season last year. That there has been a material increase in the remuneration received by locumtenents and assistants within the last ten or twelve years is beyond doubt, though not, we think, to the extent suggested; but our contemporary has telescoped a gradual process and has brought the end results into more intimate relation with the operation of the Insurance Act than the facts justify.

It is quite true, as the *Times* states, that the influence of Darwin and Huxley in inducing men to devote themselves to science had at first a considerable effect in increasing the number of aspirants to medical honours, but, as our contemporary also recognizes, though this impetus first sent many men in the direction of medicine, its effect in this respect was spent not, as suggested, at the time of the passing of the Insurance Act, but very much earlier. For many years past those young men whose attention was directed to science have been finding their way more and more into various departments of engineering, and also, though to a less extent than in Germany, into the chemical industries.

The advance in the remuneration of assistants and locumtenents began many years before the Insurance Act was heard of, and, though the dislocation of arrangements caused by that Act undoubtedly caused great stringency during the last holiday season it would be a mistake to anticipate that the rates paid in emergencies last summer will repeat themselves when matters have settled down, as may, to a large extent at any rate, prove to be the case before the holiday season of this year comes round. The article refers also to the movement amongst ship surgeons to obtain a higher remuneration, but this again was on foot and had been met by a few of the principal lines before the Insurance Act came into force. The writer also drags in the statement that there was a serious deficiency last year in the number of candidates for commissions in the Royal Navy. Here again we would point out that this deficiency has been in evidence for a good many years, and is due not to the operations of the Insurance Act, but to the defective conditions of service pointed out by Admiral Durnford's Committee, and only very recently partially rectified by the Admiralty minutes quoted in the JOURNAL of December 6th, 1913, p. 1519. Again, our contemporary seeks to reinforce its argument by stating that in the outlying districts of the Highlands doctors, tempted by the new opportunities, have resigned their appointments, and successors cannot be found. This must have been written in forgetfulness of the report of the recent Special Committee on the conditions of medical service in the Highlands and Islands, which made it very plain that remedies were long overdue. The Poor Law Medical Officers' Association of Scotland could supply numberless instances within the last twenty years in which precisely similar conditions have existed in the Highlands and Islands of Scotland owing to the faulty administration of the parish councils and the overbearing attitude assumed in some districts by the representatives of the landowners.

To go on to assert, as our contemporary does,

that, "so far, at any rate, as doctors in cities and industrial centres are concerned," the Insurance Act "has produced something very like an embarrassment of riches" is to indulge in hyperbole. If the statement had been guarded so as to apply to certain doctors in certain industrial districts, it might have been defended as a picturesque phrase, but in fact though some doctors have benefited pecuniarily, none of them is as yet embarrassed by his receipts from the insurance funds, though some may have been disturbed by the increased work thrown on them. According to the statistics given by Mr. Churchill in his speech at the Alexandra Palace on November 15th, 1913, there were (presumably on October 14th, 1913) 13,700,000 insured persons and 20,000 doctors. This would mean an average of 685 patients on each panel doctor's list, and an average income to each doctor from the insurance fund of somewhere about £320 a year—not exactly an embarrassing amount. In Manchester, where the system of payment by attendance prevails, the doctors received during the first three quarters of last year somewhere about 60 per cent. of their claims on a very moderate tariff scale. It is, of course, true that for a certain class of person from whom under previous conditions they received little or nothing the doctors are now receiving remuneration, but this must be discounted by the lowering of the rates in other grades of insured persons, either more thrifty or better paid, who have been swept into the insurance net, such as the highly-skilled artisans, clerks, shop assistants, and others.

On the other hand, it is quite true, as our contemporary says, that the university and hospital assistants and juniors, public health, education, and asylum officers, who have been in the past notoriously underpaid, have not been in any way benefited, and we gladly admit that the *Times* has put its finger upon a real evil when it insists that no profession can really afford to tempt its best men to forswear the fundamental work of research and specialization. It is, indeed, the first interest of the State that opportunities should be afforded for advanced work, whether in the direction of discovery or technique, and that the ablest men should be procured for it. As it is, in spite of public and private generosity in establishing research scholarships, and in spite of the multiplication of junior appointments in the universities and medical schools necessitated by the increased and increasing width of medical education, the prospects of a young man who takes to original research or teaching are very uncertain, and while he remains in a junior position his remuneration is wholly inadequate. Very many men who begin their career in this way have shortly to abandon it should they undertake the ordinary responsibilities of manhood.

We would invite our contemporary to return to this subject, and, by presenting the case more fully and with greater precision to its readers, use its immense influence to direct public opinion along the right road.

EVIDENCE FOR THE ROYAL COMMISSION ON VENEREAL DISEASES.

The President of the Association has received a letter from the Chairman of the Royal Commission on Venereal Diseases stating that the Commission is desirous of obtaining the co-operation of the British Medical Association in securing the best evidence available on the questions referred to the Commission. The Commission is instructed to inquire into the prevalence of venereal diseases in the United Kingdom, their effects upon the health of the community, and the means by which those effects can be alleviated or prevented, it being understood that no return to the policy or provisions of the Contagious Diseases Acts is to be regarded as falling within the scope of the inquiry. Lord Sydenham states that with reference to the question of prevalence evidence has been already forthcoming from the usual official sources, but the Commission is open to receive suggestions for obtaining additional information, and would in particular welcome suggestions from the Association as to suitable witnesses to give evidence respecting especially the more direct effect of syphilis in producing organic disease and with regard to remedial measures. The President has replied to the effect that he believed that the Association would be willing to co-operate, and he has already suggested the names of some witnesses. He will, however, be glad to receive the names of others willing to give evidence. Any names which it is desired to submit to the President of the Association should be sent to the Medical Secretary, 429, Strand, London, W.C. The evidence so far taken by the Commission has had reference to the statistics of the Registrars-General in England, Scotland, and Ireland, and to the experience of the Royal Navy and the Army. Evidence has also been taken from Dr. Burnett Ham on the experience of the health department of the State of Victoria as to the results of measures recently taken in connexion with venereal disease in that State, and from Dr. Mott, Pathologist to the London County Council, as to general paralysis and infantile syphilis. At the end of his evidence Dr. Mott drew attention to the importance of ensuring that satisfactory education should be provided for medical students, so that they should thoroughly understand how to diagnose syphilis in its early stages, in order that delay in dealing with the disease might be avoided.

THE ITALIAN PREMIER ON SECRET REMEDIES.

There is at present before the Italian Chamber of Deputies a bill regulating the sale of drugs. The Prime Minister, who took part in a recent debate on the subject, said that he was fully alive to the danger of secret remedies, which he described as snares to the public. Speaking of advertisements of such things, he confessed frankly that, while recognizing that they were deplorable, he did not know how to remedy the evil, as the matter, besides coming within the scope of the law as to drugs, affected the law as to the press. "In fact," said Signor Giolitti, "if we prohibit the fourth page [of the daily paper], the advertisements will be moved to the third or second page, and, instead of appearing in their present form, will be published in the guise of laudatory articles. The pity of it is that those who find their patrons in the world of fools will always have a large *clientèle*." He expresed the belief that the only true remedy was the proposal made in the bill before the Chamber—that the State should have the right to examine these specialities; to forbid the sale of those found not to be genuine—that was to say, which did not contain the remedial ingredients which they were said to contain, and which must be disclosed before they could be offered for sale—and, further, that the State should have the power of absolutely preventing the sale of specialities known to be injurious. The Prime Minister quoted the following clause in the law: "Whoever shall sell or distribute, or cause to be sold or distributed, remedies and compounded medicines or medical specialities, attributing to them on the labels or in advertisements to the public a composition different from that which they have, or special therapeutic indications not corresponding to their real composition, is liable to a fine of not less than £20 in addition to confiscation of the product; in case of repetition of the offence the punishment is imprisonment for three months. The Ministry of the Interior may further, with the consent of the Superior Council of Health, independently

of the penal procedure, and even while the case is still undecided, prohibit the sale of the product to the public and temporarily confiscate it." "At present," Signor Giolitti concluded, "that is the only means I have found effectual." The real difficulty, however, is not in making laws for the suppression of the trade in quack medicines, but in getting them enforced. The wiles of the nostrum vendor in eluding the traps set for him are manifold; the analyst follows him, like justice, *pede claudo*. It is quite true that, as the Italian Premier says, those who find their patrons among fools will always do a large trade. Short of the growth of an educated public opinion, the only way to protect the masses is to strike at the root of the evil—that is, at the lying advertisement. Advertisement within proper limits is a legitimate form of commercial enterprise, but the publication of lies "with intent to deceive" is a different matter. There is comparatively little difficulty in the detection of falsehood in advertisements, for the lies of the advertiser of quack medicines are, like those of Falstaff, gross as a mountain, open, palpable. The most serious obstacle in the way of the reform of advertising is of course the attitude of certain sections of the press itself. In regard to advertisements of secret remedies many newspaper proprietors seem to take Vespasian's cynical phrase *non olet* as their motto. Yet "clean advertising" need not spell ruin to a newspaper. The campaign so successfully conducted in America by Mr. John Adams Thayer is a proof of this statement. He tells the story in his book *Getting On: The Confessions of a Publisher*, issued in this country by T. Werner Laurie. He took as the basis of his operations the principle that all patent medicine, objectionable and doubtful matter, should be declined. So far from losing by this policy, what he calls "high grade advertising" came in good quantity, and at the end of the second year after the beginning of his campaign, the total income from advertisements of the periodical which under his inspiration was the pioneer of this reform was £20,000 more than it had been the year before. His example was followed by *Collier's Weekly* and other widely-read periodicals.

A HOSPITAL FOR THE MIDDLE CLASS.

THE opening of the Empire Hospital for paying patients in Westminster is of considerable interest both from a medical and lay point of view. It is not a hospital in the sense of having a medical or surgical staff attached, but is simply a large up-to-date nursing home, constructed and equipped *ad hoc*, with every arrangement for the comfort of patients and the convenience of doctors. There is a resident nursing staff under the supervision of the matron, Miss Mackintosh, who until recently was matron of the Gordon Hospital. Patients are attended by their own medical men. The building is carefully designed and is very conveniently arranged. Built on three sides of a courtyard, it faces Vincent Square on one side, Rochester Row on the other. There is a central elevator and staircase, four floors and basement. The top floor is occupied mainly by the two operating theatres, anaesthetic room, surgeon's dressing room, and an additional room for patients. Other floors are mainly occupied by patients' rooms, all very pleasant, but varying in size and outlook. Each floor has bathrooms, etc. In addition there is an *x*-ray room, and an electric room with various modern appliances for different kinds of treatment. The nurses have a dining and sitting room of their own. The kitchen premises are exceedingly good, all the heat being supplied by electricity and gas, with special ventilation; there is a service lift to all floors, and telephones are fitted throughout. The construction is fireproof, and there is a fire-escape for each corridor, and the building is warmed by central apparatus as well as fireplaces. All floors are finished in terrazzo laid on concrete, with rounded corners. Altogether it would be hard to devise a more commodious or up-to-date home. There are forty rooms. It is run on business lines, but "it is not intended to make larger profits than will provide a reasonable return on the capital invested." The rates charged vary from £3 3s. to £10 10s. a week; the majority of rooms are six to eight guineas. These terms, we understand, include board and nursing. It is difficult to think that such a home could fail of success if properly managed; and it may fairly claim to represent an advance on anything hitherto seen in London. If similar homes were built in other parts of London, the competition would be keenly felt by existing single-house nursing homes; as it is, the upgrowth of such competition will be gradual; no one can doubt that it will be healthy, and to the advantage of both public and doctors. It is high time that persons of moderate means—and even the wealthy—had at their disposal the comforts, appliances, and conveniences which are provided gratuitously at hospitals for the poor. This home is a few hundred yards from Victoria Station, in a quiet and pleasant situation. It has its business committee, and an Honorary Advisory Committee containing well-known names. We wish this notable adventure the success it deserves.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

THE quarterly instalment (for January) of the *New English Dictionary*[1] begins with a word (*sorrow*) which was formerly used on occasion in a medical sense, and almost the last term in it (*speculum*) has very frequently a medical significance. With regard to *sorrow* in its obsolete medical sense, Dr. Craigie, under whose editorship this part has passed through the press, gives a number of illustrative quotations in which it is evident that it meant physical pain or suffering; two of these are from Wyclif's Bible, and the first one, which is from Genesis xxxiv, 25, refers to the state of a circumcision wound. The men of Shalem had all been circumcised, and on the third day when they were *sore* (as the Authorized Version has it) the sons of Jacob fell upon them and slew them in revenge for what had been done to their sister Dinah. Wyclif's version reads, "The thridde day, whanne the sorwe of the woundes is moost grevows." The Hebrew word here translated sorrow or sore is *kaab*, meaning to be pained. Turning now to *speculum*, we find that Dr. Craigie puts the medical meaning first, and that of any mirror or reflector second. Two plurals are given, *specula* and *speculums*, so those writers who employ speculums on the analogy of asylums and museums can now claim the highest sanction. The word comes from the verb *specere*, to look at; it is defined as "a surgical instrument of various forms, used for dilating orifices of the body so as to facilitate examination or operations," and we draw attention to the completeness, exactness, and brevity of this definition; let even the medical reader see if he can improve upon it. The illustrative quotations, too, ranging from 1597 to 1897, are admirably chosen, and each one adds something to our knowledge of what a speculum is or does. Take, for instance, that one (of 1693) from Blancard's *Dictionary*: "Dilatorium, a Chyrurgeon's Instrument, wherewith the Womb or the Mouth is dilated or opened; it is called likewise Speculum, because by it one may see into the Mouth or the Womb." Other medical terms in this part demand attention. There is *specific* (with *specifical* and *specifically*), which is very often employed in the medical sense of "specially or exclusively efficacious for, or acting upon, a particular ailment or part of the body." We wonder if Dr. Craigie realized how humiliating to the faculty his list of illustrative quotations might prove; certainly to read them over is like spelling out the names on old tombstones beneath which lie blighted hopes.

[1] *A New English Dictionary on Historical Principles.* Edited by Sir James A. H. Murray. Sorrow—Speech (Volume IX). By W. A. Craigie, M.A., LL.D. Oxford: At the Clarendon Press. January 1st, 1914. (Price 5s.—1.25 dols.)

Here are some. "It (we need not be more precise) is esteemed to be specifick for malignant Diseases"; "Garlick . . . I believe is a Specifick Remedy of the Gout"; "I doe assent that both Lime and Sulphur are in some affections Specifics for the lungs"; "Elder tree is a specific for the cure of the Dropsie"; "If there be a specific in Aliment it is certainly *whey*," and so on. No wonder the last but one of the quotations is from Graves's *System of Clinical Medicine*, and reads: "All specifics lead to a false system of therapeutics"; whilst the last quotation is Herbert Spencer's dictum: "Always you find among people, in proportion as they are ignorant, a belief in specifics." It seems that one finds also sermons in dictionaries as well as in stones sometimes. Amongst other medical terms which, if there were space, might well be considered, are *spatula*, with its Anglicized forms, *spatule*, *spatul*, *spature*, *spat*, *spattle*, etc., and its derivatives, *spatuliform*, *spatulous*, *spatulate*, *spatulation*, etc.; *spasmus*, with its Anglicized form, *spasm*, and such words as *spasma*, *spasmadrap* (a medical plaster), *spasmic*, *spasmodic*, and *spasmy*; *spastic* and *spasticity*; and *sparteine*, with which all physicians are acquainted, and *sparganosis*, which it is safe to say very few have heard of. *Sparganosis*, it may be explained, is derived from σπαργάν, to swell, and has two meanings—distension of the breasts from too much milk, and puerperal swelling of the legs. Of course *speciality*, *specialist*, and *specialism* are not exclusively medical terms, but they have very definite meanings as used in connexion with professional matters; all these are scrupulously cared for in the pages of the *Dictionary*, and Dr. Craigie has rather happily lighted upon an illustrative quotation in Allbutt's *System of Medicine* which is well worth copying here and even bearing in mind for the future. It is the advice to seek "some well-known (and not too special) specialist."

GLASSES IN CATARACT.

THERE is a superstition firmly rooted in the mind of the public that cataract is a disease which can be cured by treatment other than operative, and it is easy to understand why this is so when we remember the way in which the idea has been fostered and traded upon by quacks of all sorts. Only recently we have heard of another claim having been put forward—that spectacles and general treatment can cure this disease. Is such a thing possible? This question can be easily answered by an appeal to the physiology and pathology of the lens. In health it is clear and transparent, and it may be said that the criterion of health for the crystalline lens is its transparency. Should anything interfere with its nutrition it becomes more or less opaque, and thus we get cataract. This condition is well known to follow certain diseases, such as diabetes. The lens always becomes opaque when it is wounded, and it frequently becomes so in old age and in cases of severe irido-cyclitis, but in all these instances the real cause is the same—namely, interference with its nutrition. It is probable that the extreme overaction of the ciliary muscle in cases of uncorrected hypermetropia is a predisposing cause, for the lens is perpetually being squeezed and altered in shape by the action of the muscle in the endeavour to get a clear retinal image. The exact opposite of all this should tend to keep the lens healthy, and consequently clear. It is within the experience of all ophthalmic surgeons that lenticular opacities may remain without getting worse for many years. Undoubtedly this desirable state of affairs may be rendered all the more likely to take place if the patient can be successfully treated for some general disease from which he happens to be suffering, and the same amount of good may arise by a full correction of an error of refraction with suitable glasses. It is such cases as these that appear to give colour to the claims of many a quack, and it often happens that a practitioner who is not very experienced in eye diseases may state that a certain patient has cataract and will be blind in a certain given period of time, when an operation will have to be performed. Such a patient may in his fright go to an optician or a quack curer of cataract who says that all the patient requires is glasses, and then at the time when it was foretold the eye would be blind that patient is perhaps seeing as well or may be better (with the glasses) than he was at the time he was threatened with blindness. It is not to be wondered that the quack gets great credit from such a case. There is nothing so unwise as to give an opinion as to how long a cataract will take to become mature. Many a lens will become more opaque in a few weeks than others in as many years, and it is impossible to say that a lens with opacities in it will be ready for operation in six months or a year or within any definite time. There are few things so misleading as the appearance of a lens. The well-known trick of "dissolving the cataract with drops" at so much a bottle is practically always carried out by using atropine or some other mydriatic; with the pupil dilated the sight is very often improved for the time being in those cases in which the nucleus of the lens is foggy and the periphery clear. Disaster, however, frequently follows the use of a mydriatic; for the quack often imagines that all eyes which have failing sight are developing cataract; if the case is one of chronic glaucoma, an acute attack is produced which is usually followed by blindness unless an operation is quickly done for its relief. Although it is sometimes claimed that lenticular opacities may disappear after they are once present, little faith need be placed in such statements, and it is wise never to expect this to take place in any case which comes under observation. It cannot be said that such a thing is impossible, but it is no exaggeration to say that it is so rare that many and many an ophthalmic surgeon of vast experience has never seen a case in which it has occurred.

THE VACCINATION TREATMENT OF CANCER.

P. BLUMENTHAL has recently reported the results of experiments made by him and von Leyden, which have led to what he terms "the vaccination treatment" of cancer.[1] The earliest experiment was one in which the suspension of a finely-minced rectal carcinoma from a dog was injected into a second dog, which was also suffering from rectal carcinoma. One injection was given each week, and after five months the tumour had almost disappeared. The remains were removed surgically and the animal lived for several years, when it was lost sight of. Complete recovery resulted in a second similar case. Blumenthal worked afterwards with Jensen on the theory of absolute specificity of action; Fichera and others made experiments on the basis of Ehrlich's theory of panimmunity, and attempted to induce a resistance with heterogeneous tumours and even other tissues (autolysed embryonic skin); but Bashford and Lewin at a later date questioned the application of the panimmunity theory as far as certain rat tumours were concerned. Blumenthal next used the serum obtained from a pancreatic carcinoma for the treatment of a case of the same condition found at an exploratory operation to be insusceptible of removal. The patient was kept under observation for a year; during that time she put on weight and improved greatly in general health, and the tumour could no longer be distinguished by palpation. Two somewhat similar cases were reported by Paul Lazarus. Seligmann treated uterine carcinomata with finely powdered uterine cancer, and observed improvement in some cases, although no very definite result was noticeable in the majority. Glycerine was added to the finely divided tumours, in the hope of preventing the tumour cells from becoming inoculated. Various results were reported with this kind of treatment. The next stage of the inquiry involved the

[1] *Berl. klin. Woch.*, December 15th, 1913.

autolysis of the tumour to be utilized for treatment purposes. The point which Blumenthal insists upon is that in his vaccination treatment the patient's own tumour is the essential thing, and autolysis is merely a means for obviating the risk of inoculation. The tumour substance has been autolysed in a number of ways. Blumenthal's original method was first to extract it with chloroform and then to allow it to autolyse in the incubator for three days. Pinkuss and Kloninger[1] have reported their experience in 7 mammary and uterine tumours, of which 3 were treated by operation and the vaccination undertaken to prevent recurrence, with apparent success (about seven months) in 2, while the vaccination was unsuccessful in the other 4 cases, which were very advanced inoperable cases. Klemperer, Lewin, Stammler, Odier, Daels, and Bertrand have also used this method, with success in some cases. Stammler in one case obtained complete cure, and in another marked diminution in size of the tumour. In several cases a local reaction was observed and benefit followed the treatment. Lewin also has a good account to give of his experiments. He points out that the cases hitherto treated have been desperate, and that though the number of successes is small, there is reason to regard the fundamental idea as justifying further research in this direction. He is inclined to believe that the suggestion of Pinkuss and Kloninger, that the autolysis may be expedited by the action of peptic and tryptic ferments, is worthy of consideration. The chief use of the treatment, when improved by further investigation, would be to prevent recurrence after surgical removal of the primary tumour.

NEW ITALIAN OPERATION FOR VARICOSE VEINS.

DR. SCHIASSI has recently published a method of operation for varicose veins of the leg,[2] which he claims, after a considerable experience, to be simpler and more efficient than the various methods of excision hitherto practised. The object of the operation is to obliterate the lumen of the veins by inducing adhesion of their internal surfaces. This is brought about by the injection into the vein of a watery solution of iodine, the formula for which is—iodine 1 gram, potassium iodide 1.10 grams, distilled water 100 grams. Of this solution 50 to 60 c.cm. are injected. He insists on the great importance of using an aqueous solution of iodine, and maintains that the tincture, or any other alcoholic preparation acting directly on the blood so as to produce coagulation, should not be used. The technique is comparatively simple: a small incision is made over the internal saphena vein, immediately below the saphenous opening, the vein is isolated and divided, the upper end being ligatured and the lower clamped with forceps. Another small incision is made immediately below the knee over the vein, which again is cut across and the ends held by clamps. Next a syringe with the aqueous solution of iodine is introduced into the lower end of the vein at the knee, and is injected with some force until some of the iodine fluid shows at the upper end of that section of vein; this being done, both ends of that section of vein are ligatured. The same process is repeated over the section of vein extending from a little below the knee to the internal malleolus. The wounds are then stitched, and a firm bandage applied; the patient is allowed out of bed in ten days. Dr. Schiassi holds that it is impossible for thrombosis to take place because, for one reason amongst others, the solution which he has formulated creates conditions which do not lead to coagulation. He has made microscopic sections at varying intervals after the operation, and these apparently have satisfied him and his colleagues that complete organization of the blood clot still left in the vein and proliferation of the middle and inner coats take place satisfactorily. The operation is performed under local anaesthesia, and is apparently a comparatively simple procedure. Dr. Schiassi says that there is no risk whatever of the iodine solution reaching the deep veins.

[1] *Berl. klin. Woch.*, October 20th, 1913.

[2] *La "Nouvelle Méthode Italienne" comme trattement des varices du membre inférieur.* Par B. Schiassi. Bologne: Imprimerie Gamberini-parmeggiani. 1913. (D.sup. roy. 8vo, pp. 24; 18 figures.)

MENDELISM AND EUGENICS.

THE seventh of the series of pamphlets issued from the Galton Laboratory, under the heading "Questions of the Day and of the Fray," is a criticism by Dr. David Heron[3] of recent American work dealing with the inheritance of mental defect. Dr. Heron energetically protests against advice apparently tendered by Dr. C. B. Davenport, that "weakness in any trait should marry strength in that trait and strength may marry weakness." Dr. Heron argues that, if the mental defects considered by Dr. Davenport behave like simple Mendelian characters, then, on the assumption that a normal person is either DD or DR, the marriage of "strength" with "weakness" would, on the average, lead to all the children having the defect latent, or to 50 per cent. having the defect latent and 50 per cent. being actually diseased. Several memoirs purporting to show the Mendelian character of inheritance in the case of mental defect are then criticized in detail, and a large number of apparent errors and contradictions are brought to light; some of these may be the result of careless proof reading, some others are matters of opinion. For instance, the superiority of Dr. Heron's redraft of a pedigree over the original form does not seem to us unquestionable. A not unimportant residuum, however, remains which cannot be explained in these ways. We concur with Dr. Heron in his view that the material collected by the American authors is not in itself satisfactory, and that the analytical treatment falls considerably short of the standard desirable in work of this kind. Holding this view, we can but express our regret that the style in which Dr. Heron's paper is written will make it very difficult for the authors criticized to examine his remarks in an impartial spirit. We may also suggest that some of Dr. Heron's utterances seem likely to do harm to the cause of eugenics. It is an elementary canon of scientific work that even in controversial writings words or phrases the obvious effect of which must be to give pain should be omitted. This canon has often been violated both by members of the Galton Laboratory staff and by their adversaries, but we do not recall many grosser violations than are to be found in Dr. Heron's pamphlet. A single specimen will suffice. A pedigree, apparently compiled by Dr. Rosanoff, was cited in a memoir by Dr. Davenport. In a subsequent paper by Dr. Rosanoff this pedigree is not used. Dr. Heron notices the omission, and adds, "But we are not prepared to dissent from the view that the citation of a pedigree by Dr. Davenport is a disqualification for its further use." A sufficient comment on this remark is provided by a quotation from Macaulay: "A wise man might talk folly like this by his own fireside; but that any human being, after having made such a joke, should write it down, and copy it out, and transmit it to the printer, and correct the proof sheets, and send it forth into the world, is enough to make us ashamed of our species." This question of manners may seem trifling; it is really of some importance. The discouragements which face any one working upon novel lines are already sufficiently great; if to these are added intemperate condemnation by fellow students, the number of investigators is likely to remain small.

[3] *Mendelism and the Problem of Mental Defect. I. A Criticism of Recent American Work.* By David Heron, D.Sc. London: Dulau and Co. 1913. (Sup. roy. 8vo, pp. 62; 4 diagrams. 2s. net.)

THE PATHOLOGY OF DEATH FROM BURNS.

THE conditions responsible for the immediate and late effects of burns on the living organism have been studied for many years by Professor Hermann Pfeiffer, who has

now published[1] a very full, up-to-date analysis of his own and others' work on this subject. The great amount of work which has already been devoted to the subject falls into two divisions. The first is mainly clinical, and represents the scientific, but very limited, observations made up to ten years ago. The hypotheses constructed on these observations have changed from time to time, doubtless because their limitations afforded a free field for the imagination. The second division includes the recent researches into the pathology of a group of phenomena which come under the heading anaphylaxis. Professor Pfeiffer takes care to define the subjects discussed and to describe the technique adopted. He gives a careful account of the local and general reactions following burns, and devotes separate sections to the composition of the blood, blood pressure, the temperature of the body, the nervous and the metabolic changes, the toxicity of the serum and urine, and the *post-mortem* appearances. He holds that severe burns provoke two phases practically independent of each other. The first occurs within a few seconds or minutes of a burn, and consists of stimulation of sensory nerve endings, a rise of blood pressure, dyspnoea or apnoea, a "vagus" pulse, and haemoglobinaemia due to thermic injury to the red cells. These changes are proportional to the severity of the burn and rapidly pass away, to be succeeded by the second phase, in which there is progressive vaso-dilatation and a fall of blood pressure and of temperature. A marked increase of the leucocytes and of the coagulability of the blood is followed by leucopoenia and diminution of coagulability. The blood is less alkaline than in the normal state and contains large quantities of the products of albuminous decomposition, formed apparently at the site of the burn. They are largely the product of burnt blood, for, *ceteris paribus*, when tissues are rendered bloodless before heat is applied, the reaction is less severe than when blood-filled tissues are burnt. The late effects of severe burns are, according to the author, identical with those associated with anaphylactic shock, and are due to the same cause—the flushing of the body with toxic albuminous decomposition products. Rational treatment would accordingly consist of removing the burnt area from which these products come, irrigation of the circulatory system, and the administration of diuretics.

THE WELFARE OF THE DEAF.

THE National Bureau for Promoting the General Welfare of the Deaf, which published a short time ago a very useful handbook[2] containing a variety of information chiefly on the subject of philanthropic enterprises for the benefit of the deaf, has now issued its second annual report. From this it may be gathered that it has organized its work on comprehensive lines, and that its finances are, for so youthful a society, in a satisfactory condition, thanks largely to the fact that its initiator and existing president, Mr. Leo Bonn, provided it with a useful nest-egg in the shape of £5,000. Little by little it may be expected to acquire quite a large capital through donations and annual subscriptions, for there was indubitably an opening for the foundation of an association of this order, and if its affairs are conducted with due energy it is likely to do much good. Its direct objects are described as follows: To get into touch with and to promote co-operation between all existing agencies and charities for the deaf; to collect all information from annual reports, periodicals, daily papers, Government publications (home and foreign), and to classify and disseminate such information; to make special studies of problems affecting the deaf, and to submit the results of such investigation to the council for the purposes of private and public propaganda, and to make suggestions for reforms. These are all useful aims, and since the membership of its council at once entitles the Bureau to respect, all that would seem to be necessary to ensure that it shall be of real practical utility is that it shall make its existence thoroughly well known among all classes of society. There is no way in which it could better do this than by instituting and steadfastly maintaining a campaign against the numerous advertising quacks who prey upon the rarely filled purses of the deaf, as also against such vendors of telephonic aids to hearing as endeavour to secure a sale for their goods by the advertisement of claims much higher than are really justifiable. Such a campaign, besides effecting the purpose indicated, would be of direct benefit to the deaf. Work in the same connexion has long been done by our contemporary *Truth*, to whom all deaf persons have much reason to be grateful, but it could be done even more effectively by a body such as the Bureau. The latter, for instance, could note down the papers in which advertisements of the kind in question usually appear, and place with their managers a standing order for the contemporaneous publication of an advertisement drawing attention to the desirability of deaf people seeking advice from the Bureau before putting themselves in the hands of those who advertise their ability to cure deafness or to relieve it by instrumental or other means.

NEW YEAR HONOURS.

THE long list of New Year honours contains thirteen names of members of the medical profession. Surgeon-General A. T. Sloggett, C.B., C.M.G., Director-General of the Army Medical Services in India, and shortly to become Director-General in England, receives the honour of knighthood, as does Dr. H. B. Allen, Professor of Pathology and Dean of the Faculty of Medicine in the University of Melbourne. The honour of knighthood is also conferred upon Dr. Temulji Bhikaji Nariman, L.M. and S., and a Fellow of the Bombay University. Sir Rickman J. Godlee, Bart., President of the Royal College of Surgeons of England, and Sir William Job Collins, F.R.C.S., M.D., are made K.C.V.O., and a baronetcy is conferred upon Mr. T. J. Stafford, C.B., F.R.C.S., medical member of the Local Government Board in Ireland. Sir Christopher Nixon, Bart., a past President of the Royal College of Physicians in Ireland, and first President of the Royal Veterinary College of Ireland, is to be sworn a member of the Privy Council in Ireland. The distinction of C.B. is conferred upon Surgeon-General H. G. Hathaway, Deputy Director of Army Medical Services in India, and Major J. C. Robertson, M.B., I.M.S., Sanitary Commissioner with the Government of India, receives the distinction of C.I.E. The Kaisar-i-Hind Medal of the first class for public service in India is conferred on Mr. William Stokes, M.B., Chief of the Basel German Medical Mission, Madras; Dr. M. B. Carleton, in charge of the Leper Asylum, Subathu, Punjab; and the Rev. James Shepherd, M.D., D.D., Missionary of the United Free Church of Scotland Mission, Udaipur, Rajputana. Surgeon-General Arthur William May, C.B., Director-General of the Medical Department of the Royal Navy, has been appointed Honorary Physician to His Majesty. Sir Archibald Geikie, K.C.B., who recently vacated the office of President of the Royal Society, has been appointed to the Order of Merit, and a knighthood has been conferred upon Professor Ernest Rutherford, F.R.S., Langworthy Professor and Director of the Physical Laboratory in the University of Manchester, one of the three or four scientists who have contributed most to the elucidation of the nature and mode of action of radio-active substances. The same honour is conferred

[1] *Das Problem des Verbrühungstodes.* Von Dr. H. Pfeiffer. Wien: Ed. Hölzels Verlag. 1913. (Roy. 8vo, 4 figures, 39 plates. Mk. 8; Geb. Mk. 9.60.)

[2] *The Deaf: Handbook containing information relating to Statistics, and Schools, Missions, Hospitals, Charities, and other Institutions for the Deaf.* Published for the Bureau by P. S. King and Son. Price 6d. net.

upon Mr. W. J. Thomas, a generous benefactor of the Medical Faculty of University College of South Wales and Monmouthshire at Cardiff.

ANTITYPHOID VACCINATION IN FRANCE.

ON a report presented recently by Dr. Léon Labbé, the French Senate, in accordance with the recommendations therein contained, has passed a bill making antityphoid vaccination compulsory in the French army. In special circumstances the Minister of War may order the extension of the law to men serving in the reserve at a time when they are undergoing a period of training. The Paris Municipal Council has referred to the administration and to a committee the following proposal made by M. Ambroise Rendu: The administration is invited to ascertain the number of cases of typhoid fever in each quarter of the city, and to publish a table showing the results as compared with the statistics for the corresponding school population. It shall then study the means of supplying the vaccine to the medical officers of the schools most affected.

LORD RAYLEIGH will unveil a tablet to the memory o Lord Lister at King's College, London, on Wednesday January 14th, at 4.30.

ON December 2nd, 1913. on the petition of the American College of Surgeons, a gold medal of honorary membership and the presentation medal of the National Institute of Social Sciences for notable service rendered to humanity were presented to Sir Rickman Godlee, President of the Royal College of Surgeons of England.

THE Section of Medicine of the Royal Society of Medicine has arranged to hold a discussion on vaccines from the standpoint of the physician, in the hope that it may serve to focus the opinions of practitioners who have had experience of their worth in clinical medicine. A good deal more has been said and written about the bacteriology of the subject and the use of vaccines in skin diseases than about their value in general medicine, and the discussion ought to prove valuable. It will be opened on Tuesday, January 27th, by Dr. T. J. Horder, and among those who have already expressed their intention to take part in it are Sir John McFadyean and Dr. Charlton Briscoe. Other members who desire to speak in the discussion should send their names to the honorary secretary of the section at the society's house, 1, Wimpole Street, London, W. The discussion will, if found necessary, be continued on Tuesday, February 3rd.

THE INSURANCE STRUGGLE IN GERMANY.

IT would appear that through the intervention of representatives of the German universities a settlement in the dispute between the doctors and the insurance societies has been effected on the eve of the coming into force of the new Imperial Insurance Order.

On December 18th the German Secretary of State for Home Affairs, Herr v. Delbrück, accompanied by the Prussian Ministers of Trade, Agriculture, and of the Interior, received a deputation from the German universities, consisting of Professors Passow, Orth, and Kraus, who had been empowered to speak in the name of the medical faculties of all the German universities. They pointed out that it was greatly to be desired that the Imperial Government should consider the claims of the doctors in this struggle against the insurance societies in a sympathetic manner, and by impartial and just action make an effort to prevent the new insurance law from proving disastrous to the mass of insured persons. The difficulties of the situation were discussed, and Herr von Delbrück promised to attempt to bring about a settlement satisfactory to both parties. The professors on their part promised to use their influence with the profession to accept reasonable terms should the negotiations prove effective.

On Christmas Day it was announced that the parties had been prevailed upon to accept new terms. The terms provide that a District Committee (Bezirkskomitee) shall be formed in each insurance area, consisting of an equal number of representatives of the doctors and of the insurance societies, with a neutral (official) chairman, preferably the head of the local State insurance office. These committees will (1) draw up contracts, which must contain certain specified conditions of medical service; (2) will prepare a list of doctors who have intimated their willingness to serve as "panel doctors" for the area concerned; and (3) will act as an arbitration committee. The contracts shall provide a rate of remuneration which, if the capitation system is adopted, shall not be less than five marks for each insured person per annum; this amount may be increased by local agreements. The insured persons shall have free choice of doctor among those on the list for the insurance area, or, in the case of works' clubs, among those medical practitioners who have signed the contracts of such clubs. All existing contracts are to hold good, but the contracts signed by "strike-breaking" practitioners shall be terminated, and they are to receive compensation; for this purpose a fund is to be formed to which the insurance societies shall subscribe the sum of 5 pf. per head, and the Leipzig League of Doctors shall subscribe a similar sum.

It appears that all the new contracts are to be signed by the individual practitioners without submission to any organization, but it is anticipated that the terms of these contracts will be influenced to a great extent by the demand of these bodies. They are to remain effective for a period of ten years.

A court or committee of appeal or arbitration is to be set up in Berlin, consisting of an equal number of representatives of the insurance societies and the doctors, with as its president the head of the chief insurance office (an officer holding a position analogous to that of the Chairman of the Insurance Commissioners).

The terms were at once referred to the doctors and to the insurance societies. The former at a meeting held on December 28th criticized the terms somewhat severely, but on the advice of Dr. Mugdan agreed to accept them, particularly on the ground that material causes of complaint had been removed by the setting up of arbitration courts and the removal of strike-breakers. Exception is taken to the long duration of the proposed contracts (ten years). We understand that the insurance societies also have accepted the terms, and that there remained therefore only to adjust individual contracts by January 1st, 1914, to enable the new Insurance Order to take effect.

Up to the last moment the doctors have been working strenuously to enter on the fight with a united front. We learn from the current number of the *Berliner Aerzte-Correspondent* that the organization of the profession in Berlin has made great strides, and that in spite of conflicting interests, the profession in the capital city has learnt a lesson which will bind it firmly together to guard its common interests zealously in the future. The lack of concord in Dresden has been gradually and steadily removed during the last few weeks, and a solid organization of the profession in that city has at last been achieved. The importance of this will be recognized when it is remembered that the only weak spots in the German Empire were Berlin, Dresden, and Hamburg, and the peculiar geographical and political position of the last-named city almost necessitates a special arrangement being made for it. The agreement which has now been come to will not be the last word in this matter, for with a united medical profession there is power to demand and obtain redress for any real hardships imposed on the doctors by the district committees.

A SCHOOL of Nursing has been established by Ministerial decree in connexion with the General Hospital of Vienna. Candidates, who must be not less than 18 years of age and have passed an examination in elementary general knowledge, will receive gratuitous training in their professional work, besides board and lodging in the hospital. Afterwards they will be required to give their services for a further period of three years in hospitals. At the end of this course a diploma will be granted by the State.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LEEDS.

Dr. Myer Coplans's Researches.

Dr. Myer Coplans, who, as stated in the Journal of December 27th, 1913, has been elected to a Beit Fellowship, has been Demonstrator in Bacteriology and Public Health in the University since 1906. At the Lister Institute he will continue his investigations upon immunity, with special reference to the action of the silicates (including the "asbestos" minerals and the zeolites) upon bacteria and bacterial substances. [A summary of the work already carried out appeared in the issue of the British Medical Journal of November 22nd last.] Dr. Coplans during his tenure of office at Leeds has been engaged in investigating for the War Office the important problems of water purification in the field, and a report upon the results is being drafted. These investigations have served to show the futility of the application of rigid bacterioscopic methods to waters of changing salinity, more especially those of marked temporary hardness, inasmuch as the apparently great reduction in the numbers of organisms present, which occurs naturally with this class of water on standing or on storage, is due not so much to the death of the organisms, as to the process of their spontaneous agglutination and sedimentation, a phenomenon which is concurrent with a diminution of the degree of temporary hardness. As an outcome of these experiments, not only must Koch's criteria of the bacterial purity of drinking waters be accepted with great reserve, but there arises, in addition, a fresh argument against the abandonment of those standards of chemical purity towards which some microbiologists have latterly shown a tendency to rebel. In September of last year Dr. Coplans obtained for the first time, by electrical measurements, a continuous and complete record of the salinity of the North Atlantic, including the waterway between Avonmouth and Niagara. He has also conducted investigations upon the vital properties of milk in its relationship to bacterial contamination.

The General Infirmary.

The work of clearing the site for the large extension of the Infirmary is making good progress. Not until the site is wholly cleared and the new street constructed will it be possible to close the existing thoroughfares which now lie within the area of the future circumference of the Infirmary. The improvement to the city will be enormous, for, as has been pointed out before, the property which is being demolished is among the worst in Leeds. It may be mentioned that the Special Memorial Fund has not as yet amounted to more than £110,000. The sum which was mentioned as necessary for the immediate purposes of the Infirmary when the fund was started was £150,000. Every one knew that the first £100,000 would be easier to get than the £50,000 which is required to complete the sum. There can be no doubt, however, that this fact was emphasized by the announcement of the conditions of the Insurance Bill, which for a time brought the subscriptions to a somewhat abrupt ending. The result of the working of the Act for twelve months appears to have been this—that the number of out-patients has been materially reduced, but that the pressure on all the indoor departments has continued to show that steady increase which has for years called for an increase in the accommodation. When, therefore, a fresh appeal is made to the public it is hoped that the response will be prompt and generous, and that the board may be enabled to carry out all the extensions in a manner worthy of the best traditions of the institution. For many months the board and the staff have been in close consultation with their architect, Mr. Sydney Kitson, and the plans for the reconstruction of the out-patient department, the provision of a new suite of operating theatres, and a new block of wards are well advanced.

Public Dispensary.

At a special meeting of the Election Committee of the Dispensary certain vacancies on the staff were filled. Mr. Harry Lee, B.A., M.B., B.C.Cantab., was elected to the post of ophthalmic surgeon, which has been vacated by Mr. Michael Teale. Mr. Teale, who was elected as ophthalmic and aural surgeon some ten years ago, generously consented to the splitting off from his department all the cases of diseases of the ear when the aural department was started some few years ago. He has served the institution well, and the board have wisely exercised their powers in conferring upon him the honour of a position on the consulting staff. For many years Mr. Teale has had the desire and the distinct intention of retiring from practice and devoting himself to art as a profession. His talents are well known to his professional brethren, and his expertness in colour and in black and white will be known to many. It will be an additional source of regret to his many friends that Mr. Teale intends to leave Leeds and settle in the south.

The position of pathologist has been happily filled by the appointment of Mr. J. Godwin Greenfield, M.B., Ch.B., B.Sc.Edin., who for some time was assistant curator of the Pathological Laboratory at the Infirmary.

The vacancies on the medical and surgical sides caused by the resignation of Dr. Watson and by the death of Mr. Lee Wells were filled by the appointment as honorary physician of Mr. J. le Fleming Burrow, M.B., Ch.B.Edin., M.R.C.P.Lond., and by the appointment as honorary surgeon of Mr. A. Richardson, M.B., B.S.Lond., F.R.C.S.Eng. For the last two years Mr. Burrow has held the position of medical registrar and medical tutor at the General Infirmary, and he will retain this position. Mr. Burrow has proved himself an ardent and successful teacher, and one is glad to see him with an independent clinical post. Mr. Richardson, who is a Leeds student, has filled many of the resident posts at the Infirmary, and has recently been appointed surgical registrar and surgical tutor at the Infirmary. It is one of the conditions of the tenure of these posts at the Infirmary that permission to hold any other position at the same time must be obtained from the faculty of the Infirmary, and the cordial granting of permission in the case of these two gentlemen testifies to the confidence which is felt by the staff that their new work will not be allowed by them to interfere with the continued efficiency of their work at the Infirmary.

BRADFORD.

Complimentary Dinner to Dr. Manknell.

On December 19th the members of the Bradford Division gave a complimentary dinner at the Victoria Hotel to Dr. Manknell, to mark their appreciation of his services during the past three years. Dr. Hebblethwaite (Keighley), Chairman of the Division, presided, and about fifty members of the local profession attended. In proposing the health of the guest of the evening the Chairman claimed a longer acquaintance with Dr. Manknell than any one present, having known him as a student when he was the envy of his fellow students owing to the successful manner in which he mastered difficulties. It was, however, for his work during recent times as Chairman of the Division and Representative that they were honouring him that night. They felt that Dr. Manknell's services had been of inestimable value, not only to the Division, but also to the British Medical Association generally. He had shown a great amount of self-denial, and had devoted both time and money to their cause. They trusted that Dr. Manknell would long be spared to them, and that he would be willing to give them the help of his sound judgement in the struggles they still had to encounter. The toast was received with much enthusiasm and rousing musical honours. In returning thanks, Dr. Manknell said that any success during the past two or three years which had attended their efforts were due in great measure to the untiring efforts of the executive and the enthusiasm of their two honorary secretaries. As a Division they stood in Bradford for a united profession. They were striving for the health of the nation, and did not intend to be dominated by politicians of any party. He referred to Germany, where medical men of all grades were uniting and striving for their interests against the friendly societies. Dr. Manknell then made a stirring appeal for support for the British Medical Association. They should combine so as to make the Association an effective fighting machine worthy of the profession.

Especially did he appeal to any members who contemplated resignation to reconsider any such decision. If the profession allowed itself to be split their cause was lost and their interests must suffer. After dinner songs grave and gay were rendered by Drs. Clow, Hanson, Hayes Smith, Mosley, Mackenzie, Oliver, and Scott, and Dr. Hebblethwaite contributed a highly diverting recitation.

LONDON.

ST. GEORGE'S HOSPITAL.

AT a meeting of the Governors of St. George's Hospital, held on December 19th, 1913, under the chairmanship of Sir William Bennett, a report from the House Committee was received recommending that the Secretary should be retired upon a pension, and that the Treasurer, Mr. West, should be appointed secretary and superintendent at a salary of £600 a year with lodgings, and an allowance of £150 a year for board and servants. The proposal to appoint the Treasurer as secretary and superintendent was strongly opposed and eventually defeated. The proposal for the retirement of the Secretary was thereupon withdrawn.

Subsequently Mr. West succeeded Sir William Bennett in the chair, and said that Mr. Mallaby-Deeley had withdrawn his offer to purchase the site, but that there were several other offers in view. It was decided to abandon the joint bill prepared with respect to the amalgamation of the hospital with Westminster Hospital and to proceed with a bill on behalf of St. George's Hospital only. A resolution was adopted expressing the opinion that it was desirable to secure a site which would be suitable either for a new joint hospital or a new St. George's Hospital, and the House Committee was directed to negotiate for the purchase of the Wandsworth Bridge site by St. George's Hospital at a price not exceeding £27,000, exclusive of any sums paid for options.

In consequence of the charges brought by certain governors at this meeting against the administration of the hospital by the treasurers, Lord Plymouth and Mr. A. William West, these gentlemen tendered their resignation, but have consented that their resignations shall be held in abeyance pending the result of an independent inquiry which has been directed to be made by Princess Christian, President of the hospital.

BOROUGH COUNCILS AND THE TREATMENT OF TUBERCULOSIS.

In a circular issued just before Christmas the Local Government Board set forth in much detail its views as to the part which the metropolitan borough councils should individually play in the treatment of tuberculosis, and, without making the statement in so many words, contrived to make it evident that Government grants will be forthcoming only if the principles described are faithfully followed.

The general duty of borough councils will be to provide tuberculosis dispensaries and the connected machinery, the provision of accommodation for residential treatment being left to the London County Council, which has already expressed its readiness to undertake the duty. Each borough council must either provide itself with a dispensary of its own, or combine with some other borough or boroughs to maintain a dispensary for their joint use, and to such dispensary every person who resides within the area served by it and who is suffering from, or suspected to be suffering from, tuberculosis must have access for diagnosis and treatment. If there is a general or consumption hospital situated in the borough or within easy reach of its inhabitants, the borough council should endeavour to make an arrangement by which such hospital shall carry on the dispensary work of the area. Similarly if there is already a voluntary institution in existence which is found to be efficient, and suitable arrangements can be made with it, such dispensary should be included in the borough's scheme. If neither hospital nor voluntary dispensary is available, then the borough council must provide a dispensary for itself, either alone or in combination with some other borough. Any dispensary other than one established at a hospital must be affiliated to a hospital in order that any specially difficult case may be sent to the latter for diagnosis and treatment. Every dispensary, too, should have at its disposition a certain number of observation beds, but these beds should not be at the dispensary itself, but provided by the London County Council.

Any agreement which it is proposed to make for the conduct of a dispensary with the authorities of a hospital or of an already existing voluntary dispensary must be submitted to the Local Government Board for approval, a copy being also sent to the London County Council. Whether the dispensary be maintained by the borough council itself or by some other body on its behalf, the arrangements made must provide for the complete co-ordination of its work with the preventive work of the borough under the Tuberculosis Regulations, 1912. In the case of a dispensary maintained by the borough council itself the staff, though independent of control in clinical matters, should do its work under the administrative supervision of the medical officer of health. In the case of a hospital or voluntary dispensary, it must be in charge of a medical man possessed of suitable qualifications and who is prepared to allow both the borough and the county medical officer of health free access to the building and its records. The dispensary medical officer must also be prepared to examine "contacts" and "suspects," and to do so if necessary at the patient's own house. The arrangements should also provide for complete exchange of information between these officers, as also, if a health visitor is employed by the dispensary, for the co-ordination of her work with that of the medical officer of health's department, she forwarding reports of her visits to the medical officer of health as well as to the medical officer of the dispensary, and obtaining for the medical officer of health any information he may require. It will usually, it is thought, be found possible to arrange that the officers of the dispensary shall be available to undertake under the direction of the medical officer of health the domiciliary visits and inquiries required by the Tuberculosis Regulations. It must also be arranged for the dispensary medical officer to furnish such information in his possession as may reasonably be required by any medical practitioner in attendance on patients who are also attending the dispensary and by the medical officers of residential institutions. He will be a "consulting officer" within the meaning of the order issued by the Board in connexion with the National Insurance Act. Hence he should be prepared to report to the Insurance Committee concerning persons applying for sanatorium benefit, and to attend committee meetings if required. For a dispensary to be approved in connexion with the National Insurance Act the Board will usually require (1) that it shall be open to inspection at any time by any of the Board's officers; (2) that such records shall be kept as the Board after consultation with the Insurance Commissioners may from time to time require; (3) that the Board shall be informed of any change in its ownership or management, and of any proposed alteration in or addition to its medical staff; and (4) that there shall be compliance with any rules that the Board may find it necessary to make in regard to dispensaries in London.

It is also pointed out that borough councils should prove themselves willing to furnish the London County Council with any information it may require for administrative and statistical purposes, and arrange to do their work in close co-operation with the County Council in order that all the various agencies may be properly co-ordinated through the latter body, so as to form parts of a complete scheme of institutional treatment. Each borough should also arrange with the London Insurance Committee as to the terms on which the dispensaries are to be available by insured persons, and these arrangements must be approved by the Insurance Commissioners as well as by the Board. The arrangement should be for the payment of a lump sum, the amount of which would be subject to revision in the light of experience, rather than the payment of a fee for each case, and any monetary arrangements made by the borough council with a hospital or voluntary dispensary should be on the same system, but provide for the treatment, if necessary, of all tuberculous persons, whether insured or uninsured. Any payment made by an Insurance Committee for the dispensary treatment of insured persons should be made to the borough council, which should be regarded as the providing authority, even though it does

its work through a hospital or voluntary organization. No grant can be made by Government direct to a hospital or voluntary dispensary, and this fact should be borne in mind by borough councils when making arrangements with them.

Subject to the expenditure on dispensary schemes being kept within reasonable limits the Board's contribution will be 50 per cent. of the net cost; a further 25 per cent. of the net cost will be provided by the London County Council; the remaining 25 per cent. must be met out of the rates of the borough. This net cost will be calculated after deducting the payments made by the Insurance Committee in respect of the treatment of insured persons and any other contributions.

London County Council.

School Medical Service.

It was reported to the Education Committee of the London County Council, at the last meeting before the Christmas recess, that the new regulations by which the Board of Education will contribute to the extent of 50 per cent. towards the cost of the medical inspection and treatment of school children would make necessary the appointment of eight additional full-time medical assistants or their equivalent. In view of the suggestions of the Board (British Medical Journal, August 2nd, 1913, p. 278) that an injurious effect would be produced on the school medical work unless more variety were introduced into the work of the assistant medical officers, the committee proposed to make a partial return to the part-time system in respect of these appointments. The county would be divided into five districts instead of four, and the staff under the control of the divisional officer would consist of a nucleus of permanent medical assistants, the remainder of the staff consisting partly of full-time temporary medical assistants to be appointed for a period of three years only, and partly, where practicable, of temporary part-time medical inspectors. The three-year appointments would be held on probation for the first year; holders would not be debarred from seeking reappointment. Having regard to the importance of the work to be performed by the heads of divisions, these officers would be designated "divisional medical officers." The staff would consist of 15 permanent officers, 20 whole-time assistants, and 18 part-time school medical inspectors giving three half-day attendances a week at a fee of £1 for each attendance. It was hoped that these arrangements would obviate the dangers indicated by the Board of Education.

WALES.

The Red Cross Work at Senghenydd.

Our correspondent in South Wales writes as follows with reference to the letters published in the Journal of December 20th, 1913, p. 1607:

The communication which appeared in your issue of November 1st last had reference only to the work at Senghenydd of voluntary aid detachments. In it appeared the following statement:

> At the time of the colliery disaster . . . there were eleven Glamorgan county voluntary aid detachments organized in the Senghenydd district, ten from the British Red Cross Society, and one from the St. John Ambulance Association.

This statement is correct. No reference was made or intended to be made to the civil members of the St. John Ambulance Association, that is, those who do not belong to voluntary aid detachments, or who, if they do belong, did not work at Senghenydd in their capacity as members of voluntary aid detachments. These, of course, as has been pointed out in your issue of December 20th, also rendered good service.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Glasgow.

Research Defence Society.

A meeting of the Glasgow branch of the Research Defence Society was held on Friday, December 19th, 1913, Lord Lamington in the chair. There was a large attendance, among those present being Sir George Beatson, Sir Hector Cameron, Dean of Guild Roxburgh, Professor G. Sims Woodhead, and the Rev. Hubert Simpson, grand-nephew of Sir James Young Simpson. The Chairman said that the meeting was called to rebut certain statements which had for some time past been appearing in the Glasgow newspapers, particularly statements to the effect that there was a great amount of cruelty involved in experiments conducted on animals. After insisting on the legislative and other precautions taken in this country to ensure the prevention of cruelty in animal experimentation, Lord Lamington went on to say that he thought there were only two other countries — Denmark and Switzerland—which had any regulations at all by which those experiments were in any way restricted. He entirely respected the feelings of those who wished to eliminate all possible suffering. With regard to the value of vivisection to medical science, he stated that the late Professor Goldmann had informed him that he believed that research in that direction would lead to the art of surgery becoming unnecessary except for accident cases; that it would almost eliminate the knife of the surgeon.

Dr. Charles Walker (Honorary Secretary) read a number of apologies for absence. These included a letter from Mr. A. J. Balfour in the following terms:

> I am much concerned to hear that, on alleged humanitarian grounds, an effort is being made to hamper research in the Glasgow hospitals by cutting off public subscriptions on which they depend.
>
> I do not in the least impugn the motives of those who are responsible for this policy; I do not doubt either their sincerity or their kindness of heart. But I am most firmly convinced that nothing will so minister to the diminution of physical suffering, both among men and animals, as that profounder knowledge of pathology which can only be obtained by patient, long continued, and, alas! costly investigations such as those which are now being carried on at the Cancer Hospital and elsewhere.

Professor Latta, President of the Royal Society for the Prevention of Cruelty to Animals, wrote expressing the opinion that the Research Defence Society deserved the support of all who valued human life and health. Multitudes of people owed their lives to the painless vivisection of animals. Letters of regret and sympathy with the objects of the meeting were also received from Sir J. H. Biles, the Earl of Glasgow, Sir John Stirling-Maxwell, Lord Graham, Lord Dunedin, Dr. Paul Rottenburg, and others.

Professor Woodhead, who addressed the meeting, said it was wise that now and again a very definite public statement should be made by those who were most closely interested—at any rate, in the first instance—in maintaining liberty to perform experiments on animals. They must remember that however misguided their critics might be, they were terribly in earnest. "We believe, on the other hand," said Professor Woodhead, "that they made those statements because they have inadequate knowledge, or it may be that they are not able to see things in their proper light or, at all events, in their proper perspective; that they lose the importance of the issues which were constantly brought before those who were engaged in fighting disease." There should be regulation and careful inspection. But inspection should be carried out by those who had some knowledge of what was to be gained from vivisection, and that a number of ignorant people who did not understand the difference between muscular movement and nervous sensation should not be selected to look after experiments which were being carried on by men who had a thorough knowledge of those points. After speaking of the efficacy of antitoxin treatment and relating diphtheria cases which had come within his own experience, he said they would be traitors to their profession and their science if, with these facts before them, they were satisfied to let go an instrument which had enabled men to do such work as had been done.

The Rev. Hubert Simpson said it was quite well known that the modern craze for toy dogs was leading to the breeding of a delicate, miserable little type of animal with flat nose and difficulty in breathing, which really caused far more suffering in order to meet the whims of society ladies than anything he had ever seen done. Dogs were never meant to be fed on coffee and oysters, and he was sorry that the animals were dumb animals, because he was quite sure that if they could speak for themselves they would be on that platform that night. One would like to ask the antivivisectionists if they never wore

aigrettes; if they never ate mutton. One would also like to ask them whether they would dare to censure the heroic miner who, going down to the rescue of an entombed comrade, took with him a canary in a cage in order that it first might be overcome by the noxious fumes. If they would not do any of these things, it was illogical, to say the least of it, to begin at quite the wrong end and attack the medical men and scientists. They wanted the armchair philosophers, the boudoir sentimentalists to agitate in the right direction. He would like to ask the antivivisectionists to work off some of their sickly lapdog sentiment on the care of the children of the slums.

The Chairman said the antivivisectionists invested the animals with their own feelings and disregarded all examination of what was really the scientific construction of animal life. He moved a vote of thanks to Professor Sims Woodhead and the Rev. Hubert Simpson, which was passed with applause. Several questions afterwards were answered.

Edinburgh Royal Infirmary.

At a meeting of the managers of the Edinburgh Royal Infirmary on December 22nd, 1913, the appointment of the following representatives to the Board of Management for the year 1914 was intimated: By the Royal College of Physicians, Dr. T. R. Ronaldson and Professor James Ritchie, M.D.; by the Royal College of Surgeons, Dr. Charles W. MacGillivray, F.R.C.S.Edin., and Mr. J. M. Cotterill, F.R.C.S.Edin.; by the Senators of the College of Justice, Hon. Lord Skerrington; by the Faculty of Advocates, Mr. G. L. Crole, K.C.; and by the Writers to the Signet Society, Mr. A. R. C. Pitman, W.S. It was reported that out of 1,023 persons admitted to the wards for treatment during the preceding month 453 (or 44.28 per cent.) were insured persons; whilst among the new out-patients (2,675 in number) for the same period 889 (or 33.23 per cent.) were insured. At the meeting of the managers on December 29th it was intimated that the following ladies and gentlemen had been nominated for election as the representatives of the Court of Contributors to the Board of Management for 1914: Sir James Affleck, M.D., Sir Robert Cranston, K.C.V.O., Dr. R. M'Kenzie Johnston, Mrs. George Kerr, Mr. Alexander Smith, and Mrs. Alexander Patten. These six nominations will just fill the six seats on the board, and consequently no poll will be required at the annual meeting of the contributors on January 5th.

Lady Lister's Next of Kin.

An interesting decision was given in the First Division of the Court of Session at Edinburgh, on December 17th, 1913, in connexion with the question of who were Lady Lister's next of kin. A special case was brought for Arthur Hugh Lister, of Aberdeen, judicial factor on the trust estate under the antenuptial contract of marriage between Lord and Lady Lister and others. It had become necessary to have it ascertained authoritatively whether the contract of marriage was to be construed according to the law of Scotland or of England. If it fell to be construed according to the law of the latter country, Lady Lister's next of kin were her sister, Miss Lucy Syme, her half-brother, Mr. James Syme, and her half-sister, Mrs. Burn. If, however, the contract must be construed according to the law of Scotland, Miss Syme was entitled to the whole trust funds, which amounted to £2,000. It was recalled that Lord Lister was an Englishman, and came to Scotland in 1852. At the date of his marriage in 1856 he resided in Edinburgh. He returned to England in 1877, and died in London, a domiciled Englishman, in 1912. Lady Lister was a daughter of Professor Syme, of Edinburgh, but acquired an English domicile on her husband taking up residence in England. She died in Italy in 1893, domiciled in England. There was no issue of the marriage, and the trust funds fell to her "next of kin." The marriage contract was in Scottish form, and was prepared by a Scottish solicitor, and at the time Lady Lister was a domiciled Scotswoman. The Division held that "the next of kin" fell to be construed in the sense attached to that expression by the law of Scotland, to the exclusion of the half-blood. The Lord President said that in the absence of any indication to the contrary they were not entitled to assume that Lady Lister intended as the objects of her bounty persons to be chosen and selected according to the law of a foreign State, with which presumably she was not familiar. Equally clearly they were not entitled to assume that when she changed her domicile she intended to change the objects of her bequest unless she expressed a clear intention to that effect. Lord Johnston dissented.

The late Sir John Batty Tuke.

Sir John Batty Tuke, who died on October 15th, 1913 (JOURNAL, October 18th, 1913, p. 1045), and whose real and personal estate in the United Kingdom has been valued at £30,750, has left to the Royal College of Physicians, Edinburgh, his bust by John Hutchison, R.S.A., on condition that it be placed in the great hall of the college, and an etching of Darwin by Rajor for the portrait gallery of the same college. To the Aesculapian Club he has left his antique silver-bound and mounted Norwegian tankard and the silver cigar box presented to him by Mrs. Charles Underhill. The Dutch tiles in his study fireplace at Balgreen go to the Royal College of Surgeons.

Teratology at the Waverley Market Carnival, Edinburgh.

Every Christmas season those who are interested in teratological phenomena and in freaks, physical and physiological, can add to their knowledge by a visit to the "Carnival of Venice" in the Waverley Market, Edinburgh. This year the chief interest centres in the Brothers Hugo, the "Giants of the Alps," who are said to be the tallest men in Europe. Each stands 8 ft. high, and, whilst one weighs 29 st., the other turns the scale at 23 st. The elder brother (Baptist) is 32 years of age, and the younger is 24. They were born at Nice. It is stated that when they arrived in Edinburgh the taxicab driver who was engaged for their safe conveyance would not allow both of them to enter the same vehicle, but made them take two. Mdlle. Vallée, a young Parisienne, is another interesting person in the Carnival; she was born without arms, and she does many things with her toes as well as, and perhaps better than, other people with their fingers; certainly her playing of the piano is a remarkable sight. Upmann, who has the extraordinary power of increasing his height, comes from Melbourne, is called "the man who grows," and presents spectators with a puzzling physiological problem. He is able by a series of gradual hoists to increase his length by four or five inches, and he can also lengthen one arm or one leg at will. All are familiar with the fact that after a night's rest one is a fraction of an inch taller than after a day spent standing or walking, but Upmann puts this fractional increase in stature quite in the shade by his performance.

Treatment of Tuberculosis in Edinburgh.

At the last meeting of the Edinburgh Town Council for the year 1913, held on December 16th, the recommendation of the Public Health Committee (vide JOURNAL, p. 1643, December 27th, 1913), that approval should be given to the agreement with the parish council with regard to the treatment of tuberculous pauper patients, was accepted. Mr. Young, the convener of the committee, said that the agreement was really to the benefit of the citizens, although it was nominally a transfer to the town council of the parish council patients; for half the cost of the treatment would now be recoverable from the Government.

Edinburgh Society for the Relief of the Destitute Sick.

The one hundred and twenty-eighth annual meeting of this old-established society was held in Edinburgh on December 19th, 1913, Lord Provost Inches presiding. The number of new applicants for relief during the past year had been 1,621, as compared with 2,582 the year before; and the number of visits made had been 8,641, as against 11,815; whilst the money distributed had been £2,061, as against £2,484. The causes of the decrease in all these figures had been, no doubt, the better weather, the plentiful opportunities for getting work, and, particularly, the beginning of the benefits of the Insurance Act.

Hospital for Women, Edinburgh.

On December 18th, 1913, an entertainment was given in the Queen's Hall, Edinburgh, in aid of the extension fund of the Hospital for Women, Archibald Place. This hospital, which is for the treatment of gynaecological diseases, was opened three and a half years ago, and has already proved too small for the number of patients applying. It is intended for women able to pay £1 a week to cover the cost of operation, nursing, and board while in the hospital.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Tuberculosis.

The Londonderry Council has adopted a scheme under the Tuberculosis Prevention (Ireland) Act, 1908, providing for the erection in the neighbourhood of Coleraine of a sanatorium and dispensary, with two branch dispensaries at Limavady and Magherafelt; a full-time tuberculosis officer is to be appointed at a salary of £300 per annum, rising by annual increments to £400, and £100 a year for the upkeep of a motor car; a head nurse and three or four full-time nurses are to be appointed, and £500 is to be allocated for domiciliary treatment. The Treasury is to be asked for £250 for the provision of shelter huts, and £2,000 for the erection of the sanatorium and dispensary.

A Hard Case.

At the last meeting of the Athlone Guardians a letter was received from the Local Government Board in relation to a fee for the committal of a dangerous lunatic claimed by Dr. Collins, of Ballinasloe. The Board stated that, having regard to the fact that one of the magistrates who signed the certificate for the payment had ceased to hold the Commission of the Peace, and to the circumstances set out by the guardians, the payment could not be validly made. The Chairman said it was clear that Dr. Collins would have to do without his fee, though it was rather hard lines on him.

Irish Branch of the British Dental Association.

On December 13th, 1913, the members of the Irish branch of the British Dental Association entertained at dinner at the Shelbourne Hotel, Dublin, the Lord Lieutenant and a number of guests. Mr. Kevin E. O'Duffy (President of the branch) occupied the chair. The Presidents of the Royal Colleges of Physicians and Surgeons in Ireland were both present. The Lord Lieutenant, in responding to the toast of his health, said that in a recent report of the Dublin Advisory Board for Juvenile Employment it was stated that many boys and girls who applied to the Labour Exchange failed to obtain employment owing to defects in eyesight or in their teeth. The Commissioners of National Education had issued a memorandum to managers and teachers of National Schools, calling their attention to the facilities now afforded by the regulations for the dental treatment of school children. The teachers were reminded that the minimum time constituting an attendance might include any time occupied by visits to dental clinics during school hours. The Central Branch of the Women's National Health Association had already organized eight dental clinics—five in Dublin, one in Antrim, and two elsewhere.

At the annual general meeting of the branch held in the Royal College of Surgeons on the previous day there was a large attendance of members; the annual report, which was of a very satisfactory character, was adopted, and several interesting communications were read and discussed.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

Infant Mortality in Madras.

The causes of infant mortality in India are somewhat different from those in England, but the percentage of deaths is very much higher in India, especially in the Presidency cities, where insanitary conditions are at their worst. The deaths are partly due to premature birth and congenital debility, but the majority are the consequence of preventable causes due to ignorance. Children are allowed to be born on the bare cow-dunged floors in dark and noisome rooms where ventilation is impossible. The local midwife or *dhai* is ignorant, and one of the first things to be done is to instruct them. The custom of the *dhai* is to sever the umbilical cord with a splinter of bamboo, to ligature it with a piece of thread, to smear the end with a mixture of ashes and oil, and to dress it with a rag which in most case is the reverse of clean. The result is that 35 per cent. of the deaths are due to tetanus neonatorum. The corporation does not employ midwives, but there are numbers of trained diplomaed midwives who find employment; it has been suggested that the Government should make the experiment of employing, say, half a dozen midwives, and fix a nominal fee for their services

Extension of Medical Aid in Madras.

At a recent session of the Madras Council the Hon. Mr. A. S. Krishna Rao proposed that the Council should recommend the Governor to direct that better provision for medical aid in villages be made (*a*) by establishing additional hospitals or dispensaries, (*b*) by making grants to local bodies for the establishment of such hospitals or dispensaries on a larger scale than at present, (*c*) by appointing travelling medical practitioners for groups of villages, (*d*) by affording additional facilities for the study and practice of indigenous systems of medicine like Ayurvedic or Unani, and (*e*) by such other means as are calculated to improve medical aid in villages.

Burma Civil Surgeon's Generosity.

Lieutenant-Colonel K. Prasad, I.M.S., who retired in June last, after twenty years' service as a civil surgeon in Burma, recently offered the local government, as a mark of his affection for the country and its people, a donation of Rs.10,000, to be devoted to any charitable object which the local government might consider likely to promote the welfare of the Murmans. Colonel Prasad's generous offer has been accepted by the Lieutenant-Governor, and it has been decided to spend the money on the renovation and renewal of the main ward of the Civil Hospital at Shwebo, at which station Colonel Prasad spent many years of his service. The ward is to be called the "Kanta Prasad Ward," after the donor.

The Milk Supply of Bombay.

The Government of Bombay has had under consideration the question of the prevention of the contamination of the milk supply in large mofussil towns. Hitherto, except in cantonment areas, no systematic action has been taken in this direction. Much, however, can be effected by the provision of properly constructed and hygienic cow-sheds and dairy buildings, which could be let to dairymen at low rentals, and by the supply to them at a moderate charge of milk vessels and dairy appliances of approved patterns. These are measures which municipalities can usually undertake in the interests of the public health, and the Government, with a view to encouraging their adoption, has decided that approved schemes on the lines indicated will in future be entitled, *pari passu* with other sanitary projects, to support from the provision annually made for grants-in-aid to local bodies for the improvement of urban sanitation. For the present no general limit will be imposed on the proportion of the cost which will thus be borne by Government. The proportion will be determined in each case on a consideration of the merits of the scheme and the extent of the ability of the municipality concerned to finance it from its own resources.

South Australia.

[FROM OUR SPECIAL CORRESPONDENT.]

Annual Meeting of the Branch.

The annual meeting of the South Australian Branch, held on June 26th, 1913, was well attended, as was the annual dinner in the evening, held at the Café Rubéo. Dr. Poulton presided at both functions, he having been re-elected President for the coming year, in view of important business which has been begun but not completed by the council, such as the model lodge agreement, the federal code of ethics, and the possibility of fresh legislation, both State and Federal, affecting the medical profession. Australia and New Zealand generally prefer to be in the lead as regards socialistic legislative experiments and enactments, and are not a little hurt at Mr. Lloyd George having discovered a panacea for social ills of which they had not dreamt.

Dr. Poulton's address was concerned with the history of the medical school of the Adelaide University, which was founded in 1885, and with respect to which he might justly say "*quorum pars magna fui.*" To the majority of his

audience it was naturally of deep personal interest, for in the South Australian Branch about one-half of the members are either local graduates or have been connected with the teaching staff in some capacity or other.

ASSOCIATION PREMISES.

For some time the council has been ambitious to possess its own premises as head quarters for the Branch, with a hall in which to hold the meetings, together with a library, and possibly the rudiments of a club. The Melbourne Medical Society has for many years possessed such premises. More recently Sydney has erected a many storied building, and we hear that Brisbane has now its head quarters established upon a sound financial basis. A most generous offer was recently made by an ex-president of the Branch, Dr. W. A. Verco, to accommodate the Branch rent free for twenty-five years, but it would appear as though the council, whilst fully appreciating this wonderful generosity, was anxious to start with premises entirely the property of the Branch from the outset. For this purpose a limited liability company is being formed with a capital of £7,000 in £10 shares. The sum of £1,250 has already been promised as a gift, whilst preference shares to the extent of £2,550 have been applied for, and the building of the Young Women's Christian Association has actually been purchased.

Special Correspondence.

PARIS.

Reconstruction of some Paris Hospitals.—Roussel's Law.—The Use of X Rays in the Diagnosis of Heart Conditions.—The Treatment of Rheumatism.

A PLAN for the reconstruction or improvement of many of the hospitals in Paris which belong to the State has recently been put forward by l'Assistance Publique, the department which controls them. M. Mesureur, the Director-General of this department, proposes to spend on this object as much as £300,000, among the principal items being an outlay of some £60,000 on the Hôpital Cochin, of £40,000 on the Hôpital Tenon—the work to include the construction of new operating theatres—and of some £28,000 on the Hôpital St. Louis, for the construction of maternity wards. Apart from this expenditure by his own department, M. Mesureur is endeavouring to persuade the authorities of the city of Paris to increase the hospital accommodation which they themselves provide. They ought, he claims, to build an entirely new hospital containing a thousand beds. To build a hospital of this size and to equip it adequately would probably cost not less than a million sterling, and it remains to be seen whether the city authorities will consent to so large an expenditure. Meantime it is clear that la Ville Lumière is by no means blind to the requirements of hospitals, for it proposes to spend some £6,000 on the purchase of radium for their use. There is, of course, a considerable quantity of radium already in use in Paris, but it is all in the hands of institutions which are not State hospitals, the latter at present having none at their disposition.

At several recent meetings of the Academy of Medicine discussions have taken place regarding the maintenance of Roussel's law concerning the breast-feeding of infants and the period at which a foster-nurse may properly take charge of a second child. There are two distinct parties in regard to this question. One side maintains that a mother ought to feed her own child for seven months before weaning it with the object of devoting herself to another infant; the other side is prepared to reduce the period to be devoted to the mother's own child to four months. In all official notices the seven-months period is the one described as that for which every child has the right to its mother's milk. Dr. Fernet goes further by maintaining that a mother ought to suckle her child for from one year to fourteen months whenever she can. Women who refuse to suckle their children for other than reasons of health should, he thinks, be sternly reprimanded. In the case of children whose mothers really are unable to feed them there should be no difficulty in finding foster-mothers, since comparatively few women now die during childbirth. M. Pinard maintains that a wet nurse should never abandon her own child to suckle another infant, and that it can rarely be necessary for her to do so, since a healthy woman can easily feed children without harm to herself.

At a recent meeting of the Medical Society of the Hospitals, Dr. Barié described a case of heart disease in the diagnosis of which he had utilized *x* rays. The patient, aged 30, had been subject since childhood to cyanosis, and all the classical signs of congenital heart disease were present. The mucous membrane of the mouth, nose, and eyes were congested, the fingers were clubbed, and the patient suffered from slight haemorrhage of the gums, and from a feeling of sleepiness and fatigue. There was also a slight systolic murmur at the fourth left costal cartilage, which was conducted downwards towards the epigastrium. An *x*-ray examination showed that the left ventricle was atrophied, while the whole of the right side of the heart was hypertrophied; the transverse diameter of the heart was 15 cm. On these facts the author correctly diagnosed a congenital stenosis of the pulmonary artery above the pulmonary valves, combined with a deficiency in the interventricular septum.

In a paper before the Academy of Medicine Dr. Robin has dealt with the treatment of chronic rheumatism by a solution of colloidal sulphur. Sulphur, he pointed out, was found not only in the skin and mucous membranes but in the synovial fluid and the lining membranes of joints, and the favourable results he had obtained in cases of articular rheumatism he believed to be due to increase in the amount of sulphur normally present in the synovial fluid. This he stated to be 1.4 per cent. The only drawback of the treatment was, he said, that it sometimes set up diarrhoea, but might be avoided by intermitting the dosage.

Correspondence.

A PROFESSORSHIP OF MILITARY MEDICAL HISTORY AT THE ROYAL ARMY MEDICAL CORPS COLLEGE, LONDON.

SIR,—I propose that, with the view of collecting information on the medical history of our many wars, and conveying the experiences of past campaigns to the advanced class of medical officers working at the Royal Army Medical Corps College, London, a Professorship of Military Medical History should be established at that college.

It is astonishing how the history of campaigns dies out in the eras of peace, and as a result, in campaign after campaign the same breakdowns recur with almost identical regularity.

One reason is that it is nobody's special duty to compile the medical history of campaigns, or if any attempts are made so to compile, the records are put away and the experiences forgotten. The true remedy is to appoint a special officer to lecture on bygone campaigns and explain to the young officers the lessons of the past.

Is there one officer in the R.A.M.C. to-day who could offhand tell the story of the Walcheren expedition?—yet it was the campaign that gave a Medical Director-General to the army, after terrible loss of life had occurred.

Book after book appears dealing with the breakdown of the Crimean army, yet no one appears able to state the case for the Army Medical Service, or to carry the attack into the enemy's camp and show that the old army system logically led up to failure. A crushed-out and powerless apology for a medical service was unable to meet the actual strain of the war, and even to-day writer after writer treats the catastrophe as if it was the personal failure of the military medical service.

When we remember the anguish of the public conscience which occurs in campaign after campaign when complaints arrive home as to so-called medical shortcomings, is it not our bounden duty to tell the public now that unless we learn by our bitter experiences, and teach our younger officers how to avoid the causes of breakdown, the tendency will ever be to have a recurrence of intense strain and potential inefficiency?

The public is completely willing to meet the cost of such an instructor. No nation pays up so loyally and so fully as do the British people. No barrier on that account exists, but we are ourselves to blame in not freely stating our

case before war comes on us. We may reel out our excuses after war is over; the true spirit is now in peace to instruct our officers and the nation on all our past sufferings and present demands.—I am, etc.,

GEORGE J. H. EVATT, M.D.,
London, Dec. 18th, 1913. Surgeon-General, R.P.

THE CRAZE FOR APPENDICECTOMY.

SIR,—The two letters appearing under the above heading in last week's JOURNAL, by Mr. Gilbert Barling and Dr. A. W. Macmichael respectively, present a great contrast.

On the one hand, Mr. Barling's letter shows the favourable results of immediate operation in every case of acute appendicitis; on the other, Dr. Macmichael gives his experience of treating all his cases of appendicitis medically, with only one death, in twenty years of general practice.

The first thing that occurs to one in considering these two letters is that Dr. Macmichael's experience has been an exceptional one, for there is no doubt that there are many cases of appendicitis for which operation is the only treatment that can result in cure.

On the other hand, it is certain that surgeons who subject every case of acute appendicitis to operation will do so in very many cases unnecessarily, and put a seam in many an abdominal wall which, even if strengthened by numerous layers of buried sutures, or perhaps fortified by a filigree, can be of no advantage to the possessor.

The whole question depends on the difficulty of recognizing the cases that will not get well without operation. This difficulty is shelved by the extremists on the one side by saying, "We will operate on all the cases, and then we will not miss the ones that require operation"; their opponents say, "We will cure most of our cases of appendicitis with 'Mist. mag. sulph. cum ferro,' and if the disease kills a few, less harm will be done than by your indiscriminate operations." Between these holders of extreme views there are numerous members of the profession who think that they are able to separate their cases of appendicitis into three classes:

1. The ones that do not require operation.
2. The ones that do require operation.
3. The doubtful ones. The majority of general practitioners—I should presume, occupy this last position, the reason probably being that the general practitioner sees far more cases of the milder forms of appendicitis than come under the notice of the consulting surgeon.

The general practitioner has cured so many cases of appendicitis without operation that he becomes, perhaps, unduly biassed against it. The surgical operator has cured so many by operation (or in spite of it) that he becomes unduly biassed in its favour. Statistics such as Mr. Barling produces do not help us much; he himself attributes the lowering of the mortality of the operation to the fact that general practitioners have sent their cases of appendicitis in an earlier stage to the Birmingham Hospital. This raises the doubt as to whether these practitioners are now sending into hospital for operation cases of mild appendicitis, which in former years they would have cured themselves with Dr. Macmichael's "Mist. mag. sulph. cum ferro." Of course, if the operation of appendicectomy is performed in all cases of belly-ache not otherwise explained, the operation mortality will go down without the number of deaths from appendicitis proper diminishing in the same degree. The surgeons who advocate immediate operation in all cases of acute appendicitis will, I am sure, acknowledge that their present position, though they regard it as the best possible under existing circumstances, is of a temporary nature, and will be abandoned as soon as the diagnosis of these cases becomes more accurate. Their present position resembles that of the schoolmaster who punishes the whole class because he cannot diagnose which boy hit him in the eye with the peashooter. In connexion with this subject it may be interesting to mention that in 1888 or 1889 the Queen's College Medical Society of Birmingham discussed the question of appendicitis after hearing a paper on the subject read by Mr. W. F. Haslam. I remember on that occasion one of the members advocated that "all babies should have their appendices removed a little while after they had been vaccinated." Another member advocated the treatment of all appendicitis cases by "Mist. mag. sulph. cum ferro," on which another member sprang to his feet and said, "That is what killed my brother"; so you will see, Sir, that this controversy is not an absolutely modern one.—I am, etc.,

Colchester, Dec. 19th, 1913. J. R. HICKINBOTHAM, M.B.

SIR,—In the practice of the profession crazes often assume the form of abuses. Notably can we say this of blood-letting and blistering in a former era of medicine. Yet each of these methods of relieving disease finds its proper position when judiciously and correctly practised. And we can argue in a like manner with regard to appendicectomy. To add to the dangers of the situation the physician sides with the reactionary surgeon. The British surgeon is not only equal to surgical emergencies, but he carries through his policy without the faintest shadow of disorder; and at the same time teaches the physician and his friends a sharp lesson particularly in the folly of attempting to thwart the surgeon's good work in the vicious behaviour of the appendix. Most of us can assert dogmatically that lives are frequently saved by the operation.

The history of therapeutics undoubtedly savours of empiricism even at the present day, inasmuch as experimental research can but feebly balance affairs of health. This brings us to a point of logic in the management of disease, since the correct appreciation of alimentary therapeutics does away with the need of appendicectomy. I mean treatment by careful regulation of the diet, food, etc.—"alimentotherapy." But such abdominal hygiene seems almost an impossible standard of attainment, for is it not too ideal for most people to carry out? Nevertheless, alimentotherapy is possible of success by those outside the profession who are able, willing, and desirous of grasping the secrets of healthy living. In our great private and public hospitals for the insane we see the study of preventive medicine carried out to perfection. Statistics come to our aid very opportunely when we consider the craze for appendicectomy, for they point out that appendicitis is very rare in private and public mental hospitals in England, Wales, Scotland, and Ireland. And in a recent conference of the Medico-Psychological Association on appendicitis in private and public hospitals for the insane I was supported by my brethren in declaring that abdominal hygiene is a preventive of appendicitis.—I am, etc.,

Alton, Hants, Dec. 27th, 1913. JOHN FREDK. BRISCOE.

"NORMAL SALINE SOLUTION."

SIR,—I shall be glad if you can afford me space to draw attention to the somewhat loose way in which the term "normal saline solution" is used in several surgical textbooks and in everyday life.

The surgical "normal saline" is variously stated to be of the strength of 30 grains of sodium chloride to one pint of water and of one teaspoonful of "salt" to a pint of water.

Of course, neither of these has any relation to the chemical normal solution of sodium chloride, but they are much nearer to a decinormal solution. Would it not be better to drop the misleading term "normal saline" and substitute the term "physiological saline" or some more appropriate name?

The solution of strength 60 grains to the pint approximates fairly closely to the salinity of the blood if I am not mistaken (61¼ grains to the pint = 0.7 per cent.) and probably that is why it has come to be termed "normal saline."—I am, etc.,

Plymouth, Dec. 15th, 1913. CHARLES J. COOKE.

NOMENCLATURE OF TUBERCULIN DOSES.

SIR,—If Dr. Keith Robertson (December 20th, 1913) were to use the cubic centimetre as his unit he would find that the estimation of dose and choice of appropriate dilution would become absolutely mechanical and involve no calculation at all. By marking the dilutions I, II, III, IV, etc., in the order in which they are made—each being one-tenth the strength of the preceding one—and using the ordinary syringe graduated in tenths of a cubic centi-

metre, then the number of 0's in the dose represents the number on the bottle to be used, and the succeeding numeral or numerals the quantity to be taken from it. For example:

.0004 c.cm. T.R. = .4 c.cm. (4 divisions of syringe) of T.R. III.
.015 c.cm. T.R. = .15 c.cm. (1½ divisions of syringe) of T.R. I.

—I am, etc.,

Pontefract, Dec. 21st, 1913. DUDLEY MACKENZIE.

Public Health.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

City of Sheffield.—The estimated population of the city of Sheffield at the middle of 1912 was 466,408. The birth-rate for 1912 was 27.7 per 1,000 and the death-rate from all causes 14.3 per 1,000. The infant mortality-rate was 106 per 1,000 births. The medical officer of health, Dr. Harold Scurfield, states that the scheme for dealing with tuberculosis in Sheffield is developing satisfactorily. There are available at the two corporation hospitals 150 beds for cases of tuberculosis of the lungs, and a residential school for 40 tuberculous children will soon be in use. At the corporation dispensary tuberculin is being extensively used. For a hopeful case the ordinary procedure is for the patient to have about six weeks' indoor treatment at one of the hospitals, during which time tuberculin is probably begun. After discharge from the hospital attendance is continued at the dispensary for nine or twelve months while the course of tuberculin is completed. Dr. Scurfield states that so far as can at present be judged the results obtained by a short period of sanatorium treatment, followed by a prolonged out-patient course of tuberculin, are better than those formerly obtained by a prolonged course of sanatorium treatment alone. The veterinary surgeons employed by the corporation found during the year eighteen cows with tuberculous udders in the Sheffield cowsheds. An unusual case of adulteration was dealt with satisfactorily. A man was found to be selling to small shopkeepers pepper which he had previously mixed with ground rice. He was prosecuted for obtaining money by false pretences, and sentenced to four months' imprisonment with hard labour.

Universities and Colleges.

UNIVERSITY OF OXFORD.

Degrees.

THE following degrees have been conferred:

D.M.—H. G. Butterfield, A. F. S. Sladden, L. J. Burra, E. P. Poulton, M. B. Baines, A. J. Jex-Blake.
B.M., B.CH.—G. T. Hebert, J. A. G. Sparrow, A. H. Southam, R. O. Ward, J. F. Venables.

Examinations.

The following candidates have been approved at the examinations indicated:

FIRST M.B.—*Organic Chemistry:* I. H. Beattie, A. J. I. Donald, R. H. Freeman, C. K. J. Hamilton, J. T. S. Hoey, A. H. Macfarlane, R. L. H. Nunn, T. Patterson, G. H. F. Power, G. H. Rossdale, A. L. B. Stevens. *Human Anatomy and Human Physiology:* C. J. A. Buckell, J. C. Dixey, J. W. Horan, H. S. Jeffries, J. C. Paterson, C. H. Terry.

SECOND M.B.—*Materia Medica and Pharmacology:* H. E. Bamber, B. A. Bull, J. J. Conybeare, K. M. Dyott, A. G. East, V. T. Ellwood, F. C. Gladstone, O. H. Gotch, T. E. Micklem, T. S. Nelson, H. M. Oddy, O. G. Parry-Jones, O. B. Pratt, A. B. Thompson, S. W. F. Underhill, H. St. H. Vertue. *Pathology:* W. T. Collier, C. Dean, J. A. G. Sparrow, C. W. Wheeler-Bennett. *Forensic Medicine and Public Health:* A. C. Ballance, J. D. Batt, E. W. Carrington, C. Dean, A. W. Dennis, R. S. A. Heathcote, G. T. Hebert, A. B. Thompson, J. F. Venables, W. W. Waller, R. O. Ward. *Medicine, Surgery, and Midwifery:* A. C. Ballance, E. W. Carrington, R. S. A. Heathcote, G. T. Hebert, E. W. N. Hobhouse, A. H. Southam, J. A. G. Sparrow, W. W. Waller, C. W. Wheeler-Bennett.

D.P.H.—*Part I:* E. G. Brander, C. H. Browning, N. A. Coward, W. Gilmour, C. B. Gratte, F. R. M. Heggs, H. L. Hopkins, E. T. H. Lea, T. J. Mackie, A. B. Mitchell, J. Powell, E. L. N. Rhodes, H. W. White, J. H. Wood. *Part II:* C. H. Browning, R. H. Deans, E. T. H. Lea, T. J. Mackie, H. K. Ward.

UNIVERSITY OF EDINBURGH.

The Winter Graduation Ceremony.

As Sir William Turner pointed out in his address to the graduates in medicine on December 17th, 1913, the winter graduation ceremony has for some years been assuming larger proportions, and is now a regular part of the academic work of the University of Edinburgh. On the present occasion the graduates numbered 109, there being 18 Doctors of Medicine, 87 Bachelors of Medicine and Surgery, 1 Doctor of Science, and 3 Bachelors of Science. The list included graduates of both sexes, and there were representatives not only from the British Isles and from other parts of the empire (notably India, Africa, Australia, and the West Indies), but also from the Continent of Europe.

The medical degrees granted were as follows:

M.D.—†N. H. Bolton, *C. J. G. Bourhill, †G. L. Brunton, †G. C. Burgess, A. C. Court, †G. F. Fismer, J. Hewat, †J. P. Litt, †W. Macdonald, N. D. Mackay, J. S. Manson, E. A. Milner, A. E. Moore, †T. P. Noble, †A. Z. Philips, J. Robinson, W. S. Thomson, †H. B. Watson.

* Highly commended for thesis. † Commended for thesis.

M.B., CH.B.—E. Allan, G. A. M. Anderson, S. Arnott, Vera N. Bolotine, G. A. Borthwick, H. Boyle, W. T. Brown, J. W. K. Bruce, J. V. Buchanan, J. R. Bulman, W. S. H. Campbell, J. W. Cannon, P. A. B. Clark, J. B. Cook, G. Cromie, J. B. Cunningham, May F. W. Davidson, W. Duguid, W. B. H. Dundee, B. V. Dunn, J. M. Elliot, A. Eprile, D. Gilmour, C. Gordon, G. R. Grant, D. A. R. Haddon, Julia V. Henslow, H. C. Hinwood, J. H. G. Hunter, R. C. Irvine, Jamal-ud-din (India), F. N. Johns, R. W. R. Jones, Margretta J. Keers, D. Kerr, J. L. C. Lagois, W. A. Lethem, E. Llewellyn, J. M'Craig, J. N. M'Intosh, Bessie R. Mackenzie, H. A. Macmillan, Rosanna E. Macmillan, G. M'Neill, D. M'Vicker, J. T. H. Madill, A. C. Mann, J. R. Menzies, Samarendra Lal Mitra, Sarat C. Mitra, J. B. Mitton, H. M. Moir, S. R. Moll, A. J. M'C. C. Morrison, A. H. Murch, B. P. B. Naidu, R. H. H. Newton, K. P. Panikkar, A. E. S. P. Pattison, Margrethe Plum, E. G. C. Price, J. K. Reid, M. J. Da Rocha, J. A. N. Scott, E. A. Seagar, J. Sircar, J. H. Smith, V. R. Smith, R. A. Stark, R. J. Tait, J. S. Tomb, J. Z. Truter, Mary B. Walker, J. H. Ward, J. H. D. Watson, W. N. Watson, W. G. Wyllie.

B.SC. IN PUBLIC HEALTH.—W. Campbell, A. M. V. Hesterlow.

DIP. TROP. MED. AND HYG.—A. M. V. Hesterlow.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held on Monday, December 22nd, 1913, Sir Thomas Barlow, Bart., K.C.V.O., President, being in the chair.

Communications.

The following communications were received: (1) From the Secretary of the Royal College of Surgeons of England dated respectively November 13th and December 15th, reporting proceedings of the Council of that College on those days. (2) From the Secretary of the Royal Sanitary Institute, dated November 25th, inviting the College to appoint delegates to their congress, which is to be held in Blackpool in July next. It was resolved that it should be left to the President to appoint delegates at a later date. (3) From the Chairman of the Royal Commission on Venereal Diseases, dated December, 1913, asking suggestions as to suitable witnesses to be called, especially respecting the more indirect effects of syphilis in producing organic disease, and upon the subject of remedial measures. The President was requested to nominate Fellows as witnesses. (4) From Mr. A. M. Burke, dated December 6th, asking permission to photograph the portrait of Sir Thomas Mollington. The request was granted.

Reports.

A report was received from the representative of the College upon the General Medical Council (Dr. Norman Moore).

A report was received and adopted from the Committee of Management, dated December 16th, 1913, stating that it had considered a recommendation of the Examiners for the Diploma in the Diseases and Hygiene of the Tropics, that the examination be divided into two parts, and as the committee was of the opinion that it was desirable to adopt this proposal, it recommended that the following new clauses be substituted for Clauses I to III of the existing regulations, namely:

I. The examinations will be held in the months of April and July.

II. The examination will consist of two parts.

Part I will comprise—(*a*) written questions, (*b*) oral questions, and (*c*) practical laboratory work in the following subjects: Pathology and haematology, bacteriology, general parasitology, and protozoology.

Part II will comprise—(*a*) written questions, (*b*) oral questions, and (*c*) clinical and laboratory work in tropical diseases and hygiene. This will include helminthology, protozoology, zoology and entomology in their relations to clinical medicine.

III. The fee for admission to Part I is £5 5s., and the fee for admission to Part II is £4 4s.

IV. Candidates may enter for Parts I and II separately or together, but they will not be allowed to proceed to Part II until they have passed Part I.

The committee also recommend that the following institutions should be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics, namely: St. Chad's College, Denstone; Bournemouth Municipal College; Bournemouth School.

Both recommendations were adopted.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following candidates have been admitted to the Fellowship:

J. B. Banister, F. E. Brown, N. H. Bye, H. P. Costobadie, F. J. Coutts, A. Dickson, C. C. Elliott, J. C. B. Grant, N. W. Mackworth, C. T. Moller, S. Mort, F. C. Pridham, A. H. Seelenmeyer, R. E. Smith, J. Tennant, H. W. Webb.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—J. Cusack, L. Finnegan, P. J. Flood, W. F. Moorhead, W. H. Pierce, W. H. Sexton.

SECOND COLLEGE.—D. Boland, D. L. Crean, E. M. T. Crymble, T. Curran, R. D'Alton, Miss E. M. Lloyd-Dodd, E. C. H. Ewart, D. C. Kelleher, D. L. Kelly, J. R. Little, E. T. McElligott, M. F. Murphy, P. O'Connell, I. I. Sharpe, G. C. L. Woodroffe, J. Young.

THIRD COLLEGE.—R. M. Alcorn, S. Brown, S. J. M. Cairns, W. J. Dunlop, J. C. Fergusson, C. E. H. Gater, J. J. Gray, D. Kelly, J. Magner, W. G. D. McCall, F. R. H. Moilan, P. J. Murphy, J. A. Musgrave, J. O'Brien, P. J. D. O'Malley, Miss M. F. R. Welply, H. J. Villiers.

FINAL.—R. J. Aherne, W. K. Carew, J. Crowley, J. P. Fitzpatrick, J. J. Kevins, P. Loy, B. Malaher, S. D. G. McEntire, D. Murphy, J. V. Ryan, P. Rowan, J. Sandys, C. R. Wallace, R. A. Wright.

D.P.H.—H. H. Scott, G. E. Beggs, Jennette C. Hargrave, C. C. Hes.

* Passed with Honours.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following candidates were approved at the examination held at the end of the forty-third session:

*†W. H. Kauntze, *†A. R. Paterson, †M. F. Reaney, D. T. Mitchell, †R. F. Steel, †A. S. Burgess, †D. L. Graham, J. R. Ridlon, †R. Drummond, †T. P. Fraser, E. H. Griffin, R. G. Perkins, †C. R. Bakhle, H. W. Furnival, J. K. A. Hofmeyr, †P. A. Clearkin, †E. J. H. Garstin, A. L. Jackson, K. Ghosh, †L. R. Sharples, Miss J. Crozier, C. R. Avari, L. G. Fink, W. E. Masters, †R. G. Ball, Miss M. I. Balfour, J. R. Dodd, †G. V. Fiddian, C. S. Harwood, S. Shepheard, B. Sefton, D. S. Bryan-Brown, L. M. Bisvas, C. B. Mack, †J. Atkinson, E. B. Pearson.

* Passed with distinction. † Colonial Service.
‡ Indian Medical Service.

Medico-Legal.

INTERPRETATION OF AN AGREEMENT.

Eastes v. Russ.

AT page 1252 of the JOURNAL of June 7th, 1913, an account was published of an action in which Dr. G. L. Eastes charged Dr. Charles Russ with a breach of an agreement under which he had formerly assisted Dr. Eastes in the conduct of his clinical research laboratory. No formal contract of service had been signed by the parties, but a statement of the conditions of his employment had been handed to the defendant by the plaintiff, and it was agreed by both parties that the rights of either should be judged by its contents. One of the conditions was that the defendant should not take part in the conduct of any other clinical research laboratory within ten miles of the plaintiff's laboratory. The clause formulating this stipulation did not state whether it related merely to the term of the defendant's employment by the plaintiff or to his whole life, and mainly on the ground that all the other conditions obviously related solely to the former period, Mr. Justice Sargant, who tried the case, ruled that this particular condition could not be held to debar the defendant permanently from practising his speciality within the prescribed area. Hence he gave judgement for the defendant with costs. On December 19th the same case was considered by the Court of Appeal, the judgement of the lower court being upheld by a majority. Two of the judges took the view that though the intention of the agreement was that the restriction should be for life, the appeal should be dismissed because the interests of the public had to be considered in such cases, and it was neither necessary nor reasonable to exclude all competition on the part of the respondent. The third judge held that the life-long duration of the restraint was not unnecessarily great in the circumstances, nor the area of restriction unreasonably wide.

Obituary.

JOHN HENRY BROWN, M.D.,

SHEFFIELD.

WE regret to announce the death of Dr. John Henry Brown of Sheffield, which took place on December 12th, after a long illness at the comparatively early age of 54 years. A native of Whitby, he received his medical education at the University of Edinburgh, of which he was a graduate. After holding resident hospital appointments in the Manchester Royal Infirmary and elsewhere, he commenced practice in Sheffield. From the first he made his mark, and for many years he conducted one of the largest practices in the city. While a good all-round man, he took special interest in gynaecology, and was a frequent visitor at the meetings of the Gynaecological Society. When the British Medical Association met in Sheffield in 1908 he was elected a vice-president of the Section of Gynaecology.

He was much beloved by his patients, who recognized under an exterior which at times could be stern enough, a generous and sympathetic nature, a clever doctor, and a loyal friend.

Possessed of extraordinary energy he did everything that he undertook with all his might. This strenuousness he maintained even in his games and holidays, and it is too probable that the high pressure at which he constantly worked brought on arterial sclerosis, which was the cause of his death. For many years he hunted regularly with the Fitzwilliam hounds, commencing his professional rounds at a very early hour in the morning in order that he might snatch half a day for his favourite sport.

He married Miss Alloit of Barnsley, who, with two sons and a daughter, survive him. We join with a large circle of his friends, among whom are many fellow practitioners, in offering our sympathy to his bereaved family.

J. G. DURRAN, M.B., C.M.ABERD.,

LEIGHTON BUZZARD.

THE sudden death of Dr. John George Durran, of Leighton Buzzard, at the early age of 55, came as a shock to his friends, and removes from the medical profession of the locality one whom it could ill afford to lose. He was taken ill on December 4th, 1913, with influenza, and died of heart failure on December 8th.

He was born at Bower, Caithness, and was the son of the Free Church minister of the parish. He was educated at the Glasgow High School and at Aberdeen University, where he took the degrees of M.B., C.M. He practised for some years at Kirriemuir, Forfarshire, and married in 1898 the daughter of the Town Clerk. He leaves a widow and a family of six children, the eldest being only 14 years old. He went to Leighton Buzzard eleven years ago, and was in partnership with the late Dr. Stedman, and recently with his son, Dr. Percy Stedman.

He was a man of deep religious convictions, and was appointed a lay reader by the Bishop of Oxford some time ago. He was also a member of the Church of England Missionary Society.

His connexion with the British Medical Association began about six years ago, when he took an active part in the formation of the Bucks Division. He represented the Division on the Branch Council of the South Midland Branch for some time. On the introduction of the Insurance Act he at once came to the front as a strong opponent, and he was proposed by the Division as a member of the Central Council of the Association, and elected in 1912. He attended all the numerous meetings of the Division during that eventful year and impressed the members by his eloquence and earnestness. He acted as Representative for the Division at the meeting in December, 1912, and in support of Dr. Todd's amendment made a powerful speech, which was listened to by the meeting without interruption. He had the foresight to see that resistance was impossible all over the country, and that it was best to allow each locality to act as it wished. He foresaw what would occur, and that there would be large numbers who would join the panels in spite of the majority voting against it.

FOR some years past Dr. ORPHOOT has not been the familiar figure on the streets of the New Town of Edinburgh that he was in the 'seventies and 'eighties of the last century, for he had retired from practice as a dentist and had gone to reside at Greenhythe, North Berwick. It was there that he died on December 17th, 1913, and his funeral, to the North Berwick cemetery, took place on Saturday, the 20th. He was in his eighty-seventh year, and is survived by a widow and a family. He and his brother (Sheriff Orphoot) were the sons of Mr. John Orphoot, a printer in Edinburgh. He received his education partly at Carentan in France and partly at Edinburgh, and he graduated M.D. in the University of Edinburgh in 1852. He had a large and good class practice as a surgeon-dentist, his house being not far from the west end of George Street, in the days when that street was a favourite residential centre for both doctors and dentists. His memories went back to the time of the death of William IV, an event which he used to tell he heard shouted across the water from a passing ship as he was travelling by sea to London.

DR. KENNETH MCADAM, of Oamaru, New Zealand, died on October 29th at the early age of 43. He was born in Glasgow, and as a child left his native land with his parents, who settled in Dunedin. There he spent his youth.

Having completed his education at the Otago High School, he passed the matriculation examination of the University of New Zealand, and entered Otago University as a student of medicine in 1838. He passed through the five years' curriculum with distinction, and graduated M.B., C.M. in 1893. After graduation he was appointed junior house-surgeon to Dunedin Hospital. He held that post for one year, when he became senior house-surgeon; that appointment he also held for a year. Leaving Dunedin Hospital Dr. McAdam paid a visit to London, where he worked for more than a year at St. Bartholomew's Hospital. During that period he obtained the diplomas of M.R.C.S. and L.R.C.P. On his return to New Zealand he settled in private practice in Oamaru. Among other appointments he was surgeon to Oamaru Hospital. He was known not only as a medical man, but as an earnest public worker. He was a Borough Councillor for eight years, and was Mayor of Oamaru for two years in succession. Besides municipal affairs, he interested himself in ambulance work, volunteering, and other public services. Nearly three years ago it became clear that his health was failing, and although he manfully continued his work to the last, he was well aware that his time was short. He was buried in the Oamaru Cemetery on October 31st; his funeral was attended by a large number of people. Dr. McAdam leaves a widow and three daughters.

COLONEL J. H. NEWMAN, who recently died at his residence, Coolatta, Killinardrish, County Cork, was a distinguished officer of the Indian Medical Service. He studied medicine in the Queen's College, Cork, and took the degrees in medicine and surgery of the Queen's University in 1865. In 1867 he entered the Indian Medical Service, and took part in the Abyssinian campaign of 1868; in 1878 he went through the Afghan war. He received the medals for both these campaigns. The greater part of his service was passed in Rajputana. He was civil surgeon of Ajmere from 1879 to 1892, and occasionally filled temporary posts in higher offices elsewhere. In 1895 he became principal medical officer, and in this year was appointed inspector-general of hospitals in Bengal, and also administrative medical officer and sanitary commissioner for the Central Provinces. Before his retirement in 1900 he held the same position in the Punjab. Colonel Newman had a wide reputation in his profession and was beloved by his patients, who had absolute confidence in him. With many accomplishments, a keen all-round sportsman, a reliable friend in difficulty or emergency, "Jack" Newman was popular and beloved wherever he went.

BRIGADE SURGEON EDWARD FOOTNER, Army Medical Department (retired), died by drowning at Southchurch on December 12th, his body being found on the beach there the following day. He was educated at St. Thomas's Hospital, took the diplomas of M.R.C.S. and L.S.A. in 1858, and entered the A.M.D. as assistant surgeon on April 1st, 1861. He became surgeon, when the rank of assistant surgeon was abolished, on March 1st, 1873, and Surgeon-Major a month later, on completion of twelve years' service, retiring with a step of honorary rank on October 27th, 1882. He took the degree of M.B. at Aberdeen in 1872, and those of M.D. and C.M. in 1884, after retiring from the service. He served in the Afghan war of 1878–80, took part in the march from Kandahar to Kabul under Sir Donald Stewart, and was present in the actions at Ahmad Khel and Arzu, receiving the Afghan medal with a clasp.

Medical News.

A LEAGUE for the suppression of venereal diseases has been formed at Moscow.

THE late Dr. John Thomas Hartill, for many years medical officer of health for Lillenhall, left estate of the gross value of £14,052, of which £6,651 is net personalty.

THE second portion of the course of lectures at the London Hospital Medical College, on neuroses and psychoses of children, by Dr. Francis Warner, will commence on Monday, January 12th, at 4.15 p.m., and will be continued on following Mondays at the same hour.

DR. J. JOHNSTON of Bolton has been made an Honorary Associate of the Order of St. John of Jerusalem in England in recognition of twenty-five years' service in the ambulance and other voluntary causes for the alleviation of pain and suffering. The appointment has been approved by the King.

THE Council of the County Borough of St. Helens has recently established a completely equipped school clinic for the treatment of ear, throat, and eye defects, and minor ailments. An *x*-ray apparatus has also been provided for the treatment of ringworm and the diagnosis of pulmonary tuberculosis. In the same building, but completely separated from the school clinic, is a tuberculosis dispensary, provided with consulting, waiting, and dressing rooms, and a small laboratory for the examination of specimens. A sanatorium to provide accommodation for about sixty cases of phthisis will be opened in the course of a few weeks.

M. CAZENEUVE, representative of the Rhône Department in the French Senate, has brought in a bill providing for the adoption of measures directed to the prevention of abortion and the suppression of the anticonceptional propaganda. Private lying-in homes are to be organized and the conditions of their authorization and supervision are laid down. Instigation to the production of abortion and the publication of books or other writings the purpose of which is to incite to preventive practices are severely penalized. The bill, says M. Cazeneuve, is intended to remedy a grave evil from which France, attacked in its very sources of life by failure of natality, is suffering. Foreign nations have passed severe measures against a propaganda which, under the mask of science, strikes at the constitution of the family, and France, he holds, cannot maintain an attitude of indifference in regard to the criminal practices which tend to become general, especially in large towns.

CAESAREAN section is becoming generalized with remarkable rapidity, and since the copious tables of cases in the United Kingdom alone were issued by Dr. Amand Routh only two years ago, many more instances of repeated operations on the same subject have been reported. It is natural that sterilization should be thought advisable by both operator and patient. Ligature of the Fallopian tubes has been tried but in some instances has failed, and in consequence more radical measures have been adopted. Resection of the middle of the Fallopian tubes is insufficient, and several instances of pregnancy after this have been known. The permeability of the canal of the proximal stump is recovered, and its free end becomes a true ostium. Hence Braux buries the ostia of the tubes under the peritoneum. Buhl pulls them into the vagina and fixes the infundibula there, Menge cuts off the ostia and turns the ends of the tubes into the inguinal canals, and Frankel amputates the tubes entire, with a wedge-shaped piece of the cornua of the uterus. Dr. Planchu of Lyons (*Bulletin de la Soc. d'Obstét. et de Gynéc. de Paris*, 1913, p. 479), after enumerating these methods, concludes that only the more complex and extensive operations can ensure the object in view. He records a most instructive instance of failure in his own practice. In January, 1911, he performed a third Caesarean section on a woman the subject of extreme pelvic contraction. He tied each Fallopian tube with a stout silk ligature but did not resect any portion of them. In August, 1912, Professor Delore operated on the patient for incisional hernia, removing at the same time one ovary with its tube. Dr. Delore searched for the two ligatures but could find no trace of them. The tube was completely divided at the seat of ligature, and the stumps formed hernial projections under the peritoneum—that is, under the mesosalpinx reflected over the upper border of the tube. A fine probe passed through the ostium reached the seat of section but could not be passed through it, and in the cicatricial tissue developed on the peritoneum and the stump of the proximal end of the tube no trace of any aperture could be detected. Thus simple ligature of the Fallopian tube may cause complete division, and the tube may fail to recover its permeability. Such was the case with one of the tubes in this instance, and Dr. Delore declared that the tube he did not remove presented the same appearances, having parted into two pieces at the point of section. Then followed a remarkable after-history. Two months after Dr. Delore's operation for the incisional hernia the patient became pregnant once more! The proximal end of the stump must have become patent.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

ANSWERS.

RADIUM EMANATIONS.

H. A. P. writes, in reply to the inquiry published in the JOURNAL of December 20th, p. 1616, to state that emanation treatment can be obtained from £1 10s. per month from Radium Limited, 93, Mortimer Street, W., and also from the Army and Navy Stores, which supply radium water at £1 per week.

* It appears to be desirable to add that as it is necessary for a purchaser of radium to obtain a guarantee of the amount of the active metal present in the salt so a purchaser should obtain from the vendor a guarantee of the amount of emanation which the solution sold will provide.

ANTIMERISTIN.

ANXIOUS.—A substance, called "cancroin," manufactured and sold by W. Schmidt, of Cologne, was stated to be a killed culture of the fungus *Mucor racemosus*. Dr. Otto Schmidt has disclaimed any responsibility for the terms of the advertisements which W. Schmidt issues. At first (1902) Schmidt appears to have attempted to keep the nature of the supposititious parasite of cancer a close secret, and when Dr. J. Johnston, after investigating the clinical results obtained in Cologne, gave an address at St. Bartholomew's Hospital (November, 1903), little evidence was offered in favour of the theories which were supposed to justify the treatment. At a later date Dr. Otto Schmidt declared that a newer preparation, cancroidin (later called "antimeristin"), was the killed cultures of a protozoon obtained from human carcinoma. He stated that this protozoon, when injected into mice, produced malignant tumours. The evidence for this did not at the time appear to be strong, and although a certain amount of literature appeared in the German medical journals, one of the first scientific attempts to control Schmidt's results seems to have been the work of Professor v. Wasielewski and Dr. Wülker (*Muench. med. Woch.*, February 20th, 1912). These observers not only failed to recognize a true mucor in the cultures, but also failed in their attempt to produce tumours in mice with Schmidt's own cultures. They therefore agreed with those clinicians who protested against the repetitions of the claims that antimeristin was a specific for cancer. In 1912 Dr. Karl Kolb (*Berl. klin. Woch.*, April 22nd, 1912) published a critical account of the evidence offered in favour of antimeristin. It was stated that at that time the only favourable accounts of cases treated in this way seemed to be those of Schmidt, Maetzke, and Nosek, while the number of clinicians who had tried the remedy without success was considerable. From Dr. Kolb's statements it would appear that antimeristin is capable of producing inflammatory changes in the tissue to which it is applied. He accounted for the apparent benefit derived from it in certain superficial malignant tumours in this way. He concluded from the clinical and experimental evidence that antimeristin is not a specific remedy for cancer.

LETTERS, NOTES, ETC.

REX V. HAMILTON.

DR. W. H. GIMBLETT (86, Sutherland Avenue, London, W.) has received the following subscription in addition to £65 16s. already acknowledged: The Misses Ritchie, Beverley Road, Barnes, £1 1s.

TUBERCULOSIS.

DR. J. REID (London, W.C.) writes: About 1885 I opened a psoas abscess in a lad under 12, and dressed it daily with ordinary tow, merely cleaning the part with tow (no water or disinfectants), and applying fresh daily. In addition to this a Sayre's jacket was applied. Possibly (I forget) he had syrup of the iodide of iron. In three months the jacket was removed, the discharge ceased, the tenderness over the dorsal vertebræ, whence the abscess arose, ceased, and the lad was permanently cured. About 1884 a powerful man consulted me for pulmonary haemorrhage. Both apices were pretty well destroyed. Mr. Wood of Rochdale had attended him fourteen years before, and ordered him to give up mining and do open air work. He became a carter, and was treated by Mr. Bland off and on for haemorrhages. He had not been treated between 1882 and 1884 until I saw him. A year or two ago I saw a miner moping in his house on a couch, with a wife and young children struggling along, but did not examine him, as I was attending a child. He had been six months in a sanatorium, and returned about two months before! What is progress? He was much less affected than the Rochdale man.

SIR JONATHAN HUTCHINSON ON NATURAL HISTORY.

DR. CLEMENT ROGERSON (Huddersfield) writes: May I point out an error which has crept into J. W. B.'s account of the late Sir Jonathan Hutchinson's versatility?

The insect which secretes the "cuckoo spit" is not the aphis but the "frog-hopper," *Aphrophora spumaria*. The foam is produced from the large amount of sap which the insect sucks from the plant on which it feeds.

The secretion from the aphis is totally different, being of a sticky, syrupy nature, and is known as "honey-dew." It has nothing whatever to do with honey, except when the nectar of the flowers is very deficient in quantity; then bees may sometimes collect it instead of nectar, much to the detriment of their stock of honey, especially when the "honey-dew" has been collected from oak trees. "Honey-dew" is liable to be attacked by "soot fungus," which causes it to change to a dark brown, slimy deposit, which absolutely ruins any honey with which bees may incorporate it.

The frog-hopper may easily be found by washing away the froth from a stem dipped into a glass of water.

S. D. C. writes: The article by "J. W. B." upon Sir Jonathan Hutchinson in last week's JOURNAL is so interesting and the writer of it evidently so true a lover of natural history that I dare say he will be glad to be put right in one small matter. He spells "yellow hammer" in the way in which it is popularly but incorrectly written. There is no "h" in the bird's name, nor is there any resemblance in its beak to a hammer. The bird belongs to the Bunting family, the German name for which is *Ammer*. Some years ago an English translator of a German work on ornithology, either from carelessness or in deference to Cockney instinct, inserted the "h," and the mistake was copied from one book to another. It has only recently been erased from the labels in the South Kensington Museum.

PSYCHO-ANALYSIS.

Dr. STUART MOORE (Assistant Physician, Dunedin Hospital, New Zealand) writes: In the discussion on crime and punishment reported in the JOURNAL of August 2nd, it was contended by one speaker that the case of every accused person should be gone into carefully by competent persons. Dr. Mercier pointed out that this contention implied that "all the persons who investigated such cases—police magistrates, judges, juries, barristers—were all incompetent." Dr. Mercier asks, "Where was the competent and sympathetic person to be found?"

Homosexuals who escape detection and punishment are to-day being cured by psycho-analysis. Society is, I think it will be admitted, more benefited by the cure of these people than by their detection and punishment. Surely criminals of this class should be given the chance of such treatment, if not before, then after they are sentenced.

In the light of Freud's work, is it too much to say that any one who is not familiar with the practice of psycho-analysis is incompetent to investigate such cases? I cannot conceive of any one using Freud's methods who is not sympathetic. Cannot, then, the sympathetic and competent person for investigating such cases be found, and found only, in the psycho-analyst?

It is not only the homosexual who could be treated in this way. Reports of cases published suggest that criminals of other kinds might be cured in the same way. The Sanatorium de Psychothérapie treats people for "*paresse et troubles du caractère.*" I have had little to do with gaols or criminals, but my study and practice of various methods of psychotherapy suggest very strongly to me, in my ignorance, that psychotherapy (that is, psycho-analysis, suggestion, and re-education of attentive control) is the means by which society should at present attempt to cure its criminals while it punishes them. Not only does modern psychology give us hope that we may cure a number of our criminals, but also, it seems to me, it gives us an indication at least of how we may set about preventing the formation of the criminal.

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An Address
ON
PNEUMONIA: ITS NATURE AND TREATMENT.

DELIVERED BEFORE THE GLASGOW SOUTHERN MEDICAL SOCIETY.

BY SIR JAMES BARR, M.D., LL.D., F.R.C.P., F.R.S.E.,
HONORARY PRESIDENT OF THE SOCIETY.

THE subject of pneumonia, which I have chosen for this address, may appear to most of you threadbare, and it is one on which I have frequently lectured and written, but it is always possible to present an old subject in a new light. Moreover, a disease which kills more of His Majesty's lieges in this country than any other, with the single exception of tuberculosis, must always command the attention of thoughtful men. To night I shall not weary you with any historical sketch, diagnostic problems, or symptomatology, with which I shall assume that you are all familiar; but I shall limit our attention to some points which I think worthy of the consideration of an intellectual audience. I have long held that pneumonia is, to a great extent, a preventable disease, and, in dealing with this ubiquitous affection, prevention must more largely rest with the general practitioner than with the medical officer of health. For the prevention and cure of this or ony other disease we must have a good knowledge of its incidence, etiology, and proper treatment. It is to these topics that I shall devote your attention to-night.

INCIDENCE.

In 1909 the deaths from pneumonia in England and Wales considerably exceeded those from phthisis, the numbers being per 1,000 deaths, pneumonia 89, phthisis 74.6, and the rate per million living, pneumonia 1,290, phthisis 1.080. In 1911 the death-rate from pneumonia had fallen to 1.041 per million living, while the deaths from phthisis (including 22 per million of population from acute miliary tuberculosis) reached 1,084. This death-rate from phthisis of 1,084 per million persons amounted to 7.4 per cent. of the total death-rate, and was composed of the rate of 1,256 for males and 923 for females. It would seem as if the great fall in the death-rate from tuberculosis, which was very marked during the past fifty years, had been somewhat checked since the great outcry about the conquest of consumption began. In 1911 the deaths from all forms of tuberculosis in England and Wales were 53,120, against 51,317 in 1910. There is evidently still plenty of scope for those gentlemen who have done so much shouting and made so little progress.

The total deaths in England and Wales in 1911 from pneumonia were 21,582 males and 16.060 females; total, 37.642, which gives a death-rate per million persons of 1.041. There were also 14,391 deaths from pneumonia as a complication of other diseases, such as measles, whooping-cough, influenza, enteric fever, etc.

In the Registrar-General's report for 1911, Dr. Stevenson remarks on the mortality from pneumonia that, "apart from London, where it is high, there is a steady decrease from north to south in all classes of area and in both sexes, the position of Wales being intermediate between the North and the Midlands. The range of mortality is extreme, being four times as great for males in the county boroughs of the North as for females in the rural districts of the South, and not far from three times as great when persons of the same sex are compared. Even when comparison is restricted to the same class of area, in each case the mortality of the North is in no instance very much less than twice that of the South. No doubt this depends to some extent upon industrial conditions, but these can scarcely explain the great difference between the North and the Midlands. Evidently pneumonia is to a large extent a preventable disease, and the North of England has still much to learn with regard to its prevention. Statistics show pneumonia to be largely a disease of town life, as in all parts of the country mortality increases with urbanization, though the county boroughs of the South suffer less than the rural districts of the North."

The death-rates from pneumonia and phthisis in London are very heavy, being respectively 1,253 and 1,382 deaths per million persons living; these rates are high for the South, but there are many cities in the North of England and in Scotland where the death-rates from these diseases are much higher.

In dealing further with the incidence of this terrible disease I shall take Glasgow and Liverpool, with which cities I am fairly well acquainted. I am indebted to the reports of the Medical Officers of Health of Glasgow and Liverpool for much statistical information. In their reports for 1912, before we got greater Glasgow and greater Liverpool, the two cities were very similar in population, birth-rate, and death-rate, the only striking difference being in density of population, which was in Glasgow 60 persons to the acre and in Liverpool 45.2; the deaths from pneumonia were in Glasgow 1,378 and in Liverpool 1,469, which gave a respective death-rate per million persons living of 1,756 and 1,953.

Dr. Chalmers points out that while the death-rate from all causes in Glasgow in 1912 was 177 per million population less than in 1911, the death-rate from pneumonia was 138 per million more. There was a great difference in the death-rate from this disease in different city wards per million persons living: In Blackfriars the rate was 2,989, in Calton 2,600, in Hutchenstown 2,511, in Mile End 2,237, in Kingston 2,214, in Cowcaddens 2,203, and in Broomielaw, 2,122. In the following wards a very low death-rate was recorded: In Dennistown 935, in Langside 716, in Pollokshields 624, in Park 583, and in Kelvinside 519. In the wards with a high death-rate there was also a high birth-rate, but even of more importance to our present subject is the admirable paper by Dr. Chalmers on "The house as a contributory factor in the death-rate." The general death-rate, 1909–12, per 1,000 persons was in houses of one apartment 25.9, in two apartments 16.5, in three apartments 11.5, in four apartments and upwards 10.8. The reduction in the death-rate during the previous decennium was 20.8 per cent. in one apartment residences, 22.5 per cent. in two apartments, 16 per cent. in three apartments, and only 3.6 per cent. in four apartments and upwards. The proportion of children is greatest in the smallest houses, thus supporting his contention that the chief fall in the general death-rate during the decennium has been among children. In relation to pneumonia he shows that "at each age-period, almost without exception, the higher rates fell on the houses of one and two apartments. It would therefore seem to be a disease entirely of environment and climatic conditions, resembling in its behaviour, indeed, those of a more definitely infectious type. In infancy the rate for the larger houses is equal to two-thirds that of one apartment, but a greater interval separates the rates from bronchitis, and is probably related to the increasing air impurity in houses of smaller size." In this relation the following table is very instructive:

Table of the Death-rate of Male Children under 1 Year from Diseases of the Respiratory Organs.

	Pneumonia.	Bronchitis.	Other Diseases of Respiratory Organs.	All Diseases of Respiratory Organs.
1 apartment ...	21.46	13.35	4.95	39.76
2 apartments ...	21.05	11.54	2.92	35.51
3 apartments ...	15.56	6.67	4.44	26.67
4 apartments and upwards	14.42	5.61	—	20.03

Dr. Chalmers also shows from the experience of Glasgow "how rapidly fog and low temperature, when combined even for a short period, are disastrous alike to persons at both extremes of life."

The increase in the death-rate from pneumonia during recent years is, no doubt, partly due to a more correct certification of deaths, many of those formerly labelled "bronchitis," especially among children, being now more correctly designated pneumonia. But whatever the cause of the apparent increase, there can be no doubt that the death-rate from this disease is somewhat fearful. During 1912 there were in Glasgow 723 deaths from pneumonia

under 5 years of age, and 576 over 25 years. In Liverpool at these respective ages there were 738 and 629 deaths. In Glasgow during the same year and at the same ages there were 256 and 648 deaths from bronchitis, while in Liverpool the respective number of deaths were 375 and 1,022. From these statistics it would appear to me that correct death certification is rather more strictly carried out in Glasgow than in Liverpool. Both these diseases are very fatal at the extremes of life, and bronchitis especially so in old age, while pneumonia is the much more fatal of the two in middle life. In these two cities between the ages of 25 and 45 there were 377 deaths from pneumonia and only 115 from bronchitis.

Pneumonia occurs in all climes and is fairly common in many tropical countries. In this respect its incidence differs from that of bronchitis, which increases in frequency as we recede from the tropics. Hirsch says:

> Although the *geographical position* cannot be shown to have much to do with differences in the diffusion of pneumonia over the globe, yet the amount of sickness depends very decidedly upon certain influences of *season* and *weather*.

In this insular climate the disease reaches its maximum about December and January, and is about twice as frequent in the winter and spring months as it is in the summer and autumn. On the other hand, according to Hirsch and Jürgensen, it reaches its maximum from February to May on the Continent of Europe and in America. Hirsch says:

> We may with all confidence conclude from the very pronounced association of pneumonia, whether sporadic or epidemic, with winter and spring, that the origin of the malady is dependent on weather influences proper to those seasons, and more particularly upon sudden changes of temperature and considerable fluctuations in the proportion of moisture in the air. That conclusion finds support in the opinion expressed by many observers in all parts of the world, that the number of sporadic cases of pneumonia, as well as the extent and severity of its epidemics, is in direct proportion to the degree in which these influences, the changes in temperature in particular, make themselves felt, and that any exceptionally large number of cases of inflammation of the lungs at other seasons, more especially in summer, has coincided with the prevalence of the same meteorological conditions phenomenally at that season.
>
> That conclusion is still further borne out by the fact that in those northern regions (Russia, Sweden, Denmark, Germany, England, North of France, and the Northern States of the American Union) where the most sudden and severe changes of temperature fall in the spring, the largest number of cases is met with in the spring also; while in the warmer and subtropical countries (Italy, islands of the Mediterranean, Spain and Portugal, Greece, Algiers, Southern States of the Union, Chili and Peru), which are subject to these meteorological influences for the most part in winter, it is winter that represents the proper season of pneumonia. One other fact deserves to be noticed here—namely, that those tracts of country, especially in the tropics, which are highly favoured in their climate, or in the steadiness of the temperature from day to day (Egypt, many parts of India, including Bengal and the plain of Burma, California, etc.), are subject to pneumonia to a comparatively slight extent.

It is much less prevalent in the country than in town, and less among those who lead an outdoor life than among those whose occupations confine them to close, ill-ventilated and insanitary buildings. It is rarely nowadays contracted at sea, though I have seen it develop there. In former ages there were many epidemics of pneumonia in the navy, barracks, gaols, workhouses, asylums, etc. None of the Polar expeditions seem to have suffered from it. Exposure to cold, especially damp cold, seems to lead to catarrhal affections rather than to true pneumonia; sudden variations of temperature may so depress the resisting powers as to become a markedly predisposing cause of the disease. It has been correctly asserted that exposure during sleep increases the predisposition to this disease, and this is no doubt due to the lessened control of the nervous system. This applies more especially to the aged and young, whose resisting powers are easily enfeebled; consumptives and others who can keep the furnace burning within, readily withstand the cold air in their bedrooms, though draughts of cold damp air may easily induce catarrhal conditions. Frequent draughts of alcohol are, in my opinion, a much more important predisposing cause than any draught of cold air, and this may to some extent account for its greater prevalence among men than among women. A high barometric pressure is inimical to the origin of pneumonia, and is of advantage in the treatment of the disease. A cold foggy atmosphere saturated with moisture is very deleterious.

Race.

Hirsch says:

> While the immigrants from northern latitudes to sub-tropical or equatorial regions enjoy a comparative immunity from inflammation of the lungs, the natives of the tropics and most of the negroes are subject to the malady in quite a peculiar degree, not merely when they go to live in colder regions, but also within the countries of their birth. I am unable to say how far this fact is to be explained on the ground of a predisposition (congenital or acquired) in the coloured races, particularly in the negroes; or whether in their case also the wretched state in which they live, and their notorious carelessness in exposing themselves to the weather, may not be to some extent the decisive thing.

There has been a good deal of agitation about the excessive death-rates from phthisis and pneumonia among the negroes engaged in mining work on the Rand. On the other hand, the Chinese when thus engaged were very healthy, the death-rate from all causes being only 12 per 1,000 living, while the general death-rate of the negro population was often as high as 40 or 50.

There is no race exempt from this disease, though some seem much more liable to it than others, and in the same race the difference in individual immunity is often very marked.

Sex.

While the incidence is less among women, the percentage mortality among those affected is quite as great as, if not greater than, among men, and this is perhaps due to the lesser vital capacity of females. This disparity in the mortality between the sexes occurs at all ages, and is a markedly contributing cause of the excess in the female over that of the male population.

Age.

There is no age exempt from pneumonia; statistics show that it is most common and most fatal during the first two years of life, and even at this early period of life the incidence and mortality is greatest among males. The disease is very prevalent and fatal up to the age of 5; after this the incidence and mortality are low till 25 or 30. There is then a gradual increase both in the incidence and mortality up to the age of 65 years, but in old age the occurrence and mortality are not so great as from bronchitis. It frequently attacks those of strong constitution, but rarely when they are in good health, while the weak and debilitated are very prone to the disease.

Etiology.

Pneumonia—both croupous pneumonia and broncho-pneumonia—is an infective process for the most part due to the pneumococcus of Fraenkel, though many other micro-organisms play an important part in its causation, such as the influenza bacillus, staphylococci, streptococci, the *Bacillus typhosus*, the plague bacillus, and practically all the pathogenic bacteria. Since 1890 the prevalence of influenza has led to a varying increase in the number of cases of pneumonia. Here the inflammatory mischief is of a low congestive type and often rapidly fatal; but the bacillus of Pfeiffer does not seem to lead to the marked consolidation of the lung which takes place in cases associated with the pneumococcus of Fraenkel. However, in these cases there is not infrequently a mixed infection. The pneumococcus usually exists as a harmless organism in the mouth and upper air passages. What, then, are the predisposing causes which give rise to its cultured malignancy in the air cells, causing a serious disease, which, as we have seen, occurs in all climes and at all ages?

There can be no doubt that the pneumococcus, either alone or in association with other pathogenic organisms, is the chief cause of pneumonia or pneumonic fever in the vast majority of cases, but in the present day no one will contend that it is the only cause of the very large and varied class of diseases which, according to our present classification, we group under the generic head of "pneumonia." Many of the cases differ very widely in their general characters, even apart from the predisposition or special constitution of the individual affected, and have very little in common except that they all involve an inflammation, more or less, of the lung. Who can view a true croupous or fibrinous pneumonia,

involving perhaps the whole of one lung, without much more nervous disturbance than that of sleeplessness, and a case of pleuro-pneumonia limited to the apex of one lung, and associated with wild and noisy delirium, without coming to the conclusion that there is at least a difference in the virulence of the toxin in the two cases?

The pneumococcus is often sparsely disseminated in the expectoration, while staphylococci and streptococci may be found in much greater profusion. I have recorded a severe case of pneumonia associated with phlegmonous erysipelas and abscesses in the leg; streptococci were found in the purulent discharge, and both the patient's lungs and leg were cured by antistreptococcus serum. In another very severe case of pneumonia with mixed infection, in a young lady, which I published in 1900, an abscess was apparently forming in the lung, and streptococci were found in the serum obtained from the focus by an exploring needle; she was cured by a few injections of antistreptococcus serum.

In surgical practice cases of pneumonia are not at all uncommon, and are generally ascribed to draughts from the window, whereas, the true cause may be some infective pyaemic organism. In operations in the mouth and throat pneumonia is especially frequent. In my opinion, when possible, no operation should be undertaken in this region until a careful examination of the flora of the mouth and throat has been made for pathogenic organisms and a suitable vaccine administered. Very many years ago my friend, Mr. Paul, in his cases of operation for cancer of the tongue and floor of the mouth, adopted my suggestion of placing the patient for some days before the operation on a mixture containing calcium chloride and administering three doses of antistreptococcus serum; since then he has had no pneumonia in such cases. More recently I wanted him to try a vaccine as a preventive measure, but he avowed that he was quite satisfied with his present procedure, as he has not had a single failure.

The pneumococcus is often present in the mouth and upper air passages even in health as a harmless saprophyte, but in these low septic pneumonias of which I am speaking I do not think that it is often the principal offending organism. Pneumonia is often associated with influenza, typhus, typhoid, diphtheria, measles, anthrax, glanders, pneumonic plague, and other infectious diseases, and in such cases the pneumonitis most probably owes its origin to the micro-organism of the primary disease, though in certain cases the pneumococcus may be also in action. An inflammatory process in the lungs or elsewhere may be started by a great variety of micro-organisms, but a true croupous pneumonia starting and ending abruptly is due to the pneumococcus. I have seen pneumonia occur as a sequel to carbolic acid taken with suicidal intent. Again, we have the so-called ether pneumonia—probably a true pneumonia—and the hypostatic pneumonias associated with many debilitating diseases. We have also seen that in 1911 there were 14,391 terminal pneumonias in England and Wales. I have no doubt that in the future all these varied types, which we now classify under the generic head of "pneumonia," will be arranged in proper classes; in fact, we have now got lobar pneumonia, broncho-pneumonia, and pleuro-pneumonia, and in our treatment of individual cases we are largely influenced by our knowledge of their nature and causes. Perhaps our classification does not matter very much so long as we recognize the true nature of each individual case, and recollect that it is the patient rather than his disease which we have got to treat.

I have reckoned that the incidence of pneumonia affects at least 1 per cent. of the population of Glasgow and Liverpool each year. It may, of course, be looked upon as a good racial disease, as it kills the weaklings, and, as a rule, causes no permanent injury to the survivors. But, unfortunately, it does much more, and cuts off a large number of both sexes, more especially the male sex, in the prime of life. It is often very appalling to see the breadwinner of a large family cut off in the vigour of manhood after a few days' illness.

Notwithstanding the prevalence and widespread nature of this disease, there are very many individuals fairly immune, but even these become susceptible when their resisting power is lowered from any cause. The domestic fowl is fairly immune to anthrax, but when its normal temperature is lowered it becomes readily susceptible; a similar readiness to develop this disease occurs in the adult white rat when it is over-fatigued. I look upon the immunity to pneumonia which numerous human beings possess as a very relative term, and therefore those who possess such immunity should not ruthlessly destroy it.

Alcohol is a strong predisposing factor, a factor which not only increases the incidence of the disease, but also immeasurably lowers the resisting power of the individual, and so increases the mortality-rate. On the other hand, it must be said that gouty individuals who eat well and drink moderately, or perhaps rather freely, are not particularly prone to the disease, and the mortality in their cases is low. An excessive amount of lime salts in the blood and tissues greatly increases the resisting power of the individual, and so both lessens the incidence and the mortality. A lay friend of mine maintains that the general death-rate is lower in districts supplied with hard water than in those where the water is soft. This is not a point which I have myself studied, but it might be worthy of the attention of Glasgow and Liverpool, where the water is exceptionally soft. Personally I am not inclined to recommend this method of preventing disease strongly except within well-defined lines, as in escaping Scylla you might fall into Charybdis.

PREVENTION.

The way to prevent pneumonia is to increase the resisting power of the individual: hence you should encourage temperance or even total abstinence, and the avoidance of all debilitating agencies, such as undue exposure, overfatigue, work in an insanitary, stagnant, moist atmosphere. There should be an abundant supply of fresh, moving air night and day; the body temperature should be maintained by a proper supply of food, and there should be suitable external clothing to assist the regulative mechanism of the body in maintaining and distributing the heat which it has generated. A fever patient may be packed in ice so long as the temperature is high, but if this treatment be continued after the temperature has fallen to normal you quickly get congestion and oedema of the lungs.

A corpulent individual is not particularly prone to the disease, but a fat, flabby man, perhaps with a heart infiltrated with fat, and who gets out of breath on the slightest exertion, has a very poor chance when he develops an attack of pneumonia. People should be encouraged to develop muscle rather than fat by plenty of outdoor exercise.

Any septic condition of the mouth increases the virulence of the pathogenic organisms, and so a foul-mouthed individual is usually a greater danger to himself than to others. The mouth should always be kept perfectly clean and as aseptic as possible, and the teeth in good order. The nasal passages and throat should be kept clean with some simple oily preparation, such as pure liquid paraffin, as they are frequently the paths of infection for pneumonia, rheumatic fever, influenza, diphtheria, and cerebro-spinal fever. As many of the micro-organisms which induce pneumonia may be introduced by other paths than the respiratory passages, all sources of pulmonary infection should be obviated. A cool bath each morning and physical exercises improve the vitality and general resisting powers of the individual. Leonard Hill has recently shown that the depressing effects of crowded rooms are more due to the stillness and moisture of the atmosphere than to the carbonic acid; hence the air should be kept moving, and the drier it is the better. I have seen a case of bronchitis almost drowned in his own secretions rapidly cured by raising the temperature of his bedroom and drying the atmosphere.

Pneumococcal and influenzal vaccines, introduced by Sir Almroth Wright, act not merely as curative but also as preventive agents by establishing an artificial immunity. In apoplexy and hemiplegia the patient frequently succumbs to an attack of pneumonia, and this can be obviated by a proper vaccine and by keeping the mouth clean. Many of the terminal pneumonias might be thus prevented. After a severe chill, or prolonged exposure and fatigue, the individual should have a warm bath, be put to bed in a warm room, and have warm liquid nourishment; whisky and hot water is a favourite remedy, but a bowl of hot gruel or a cup of hot coffee would have a more beneficial effect.

Treatment.

A common cause of the high mortality from pneumonia is the lack of proper early treatment, often owing to the fact that some medical men take two or three days to diagnose the disease and then call it congestion of the lungs, and treat it cavalierly as a matter of no great importance for fear of frightening the patient, until the unfortunate individual is too ill to be frightened by anything. In my opinion, if pneumonia were early recognized and properly treated, the mortality would be greatly lessened.

A few years ago a young friend was dangerously ill in the South of England with one of the worst attacks of typhoid fever I have ever seen, and his condition was not improved by the fact that he had been treated as a case of influenza for the first ten or twelve days of his illness. I was with him many days and nights, and one night he almost succumbed to an attack of acute pulmonary œdema; there was just a flicker of consciousness left, his breathing had almost ceased, except for a few short, shallow gasps, and a nurse was kept busy wiping away the frothy fluid which welled out of his mouth. By continually shouting at him to breathe, mechanical stimulation of his respiration, and the free administration of atropine he pulled round. Three days afterwards, on a Sunday, he showed signs of a commencing pneumonia which I thought was pneumococcal from its somewhat abrupt onset in the middle of the fever. I wired for some pneumococcal vaccine, took a swab from his throat, with which I returned home that night, and told the medical attendant that he would have my report by wire in the morning, before the vaccine could arrive. I found pneumococci, and the patient had several doses of vaccine, which contributed to his recovery.

The treatment of pneumonia was the battlefield of contending schools of thought for the greater part of the last century, and yet the death-rate has not materially decreased. In some respects our forefathers had the advantage over us in that they agreed to bleed, starve, or stimulate their patients; but now we have arrived at the "do as you please" period, so that there is no uniformity. The excessive blood-letting in the early part of last century led to a revulsion in favour of the expectant and supporting treatment of Hughes Bennett and the non-interference of Skoda and Dietl. Yet it is highly probable that the mortality during the active period of adult life was not greater under the antiphlogistic treatment than it is in the present day. In the presence of a disease with a high mortality neither the public nor the profession were content to do nothing, and then followed the very permicious system of Todd, who dosed his patients with huge quantities of alcohol, a practice which, in a somewhat modified form, has been perpetuated, I regret to say, to the present day. Then came the antipyretic treatment, which, as carried out by Jürgensen, von Ziemssen, Liebermeister, and others, had definite objects in view, and was attended by a fair measure of success, but it involved too much trouble ever to become popular in this country.

There are many men who have no hesitation in prescribing such noxious drugs as phenacetin, antifebrin, antipyrin, and other coal-tar products made in Germany, who would never dream of undertaking the trouble of administering the German cold bath.

We have recently had the antiseptic treatment of pneumonia, which is as irrational as any which preceded it. The idea of attacking the pneumococcus is very self-satisfying to young physicians, but I would strongly dissuade you against any such frontal attack, because the chances are 1,000 to 1 that you will not succeed; but, on the other hand, you may succeed in killing your patient. The great curse of all these systems is that the treatment is directed to the disease rather than to the patient. It is far more rational to try to increase the resisting powers of the individual, or to protect him against the ravages of the pneumococci or other pathogenic organisms and their toxins. The pneumococcal vaccine of Sir Almroth Wright is extremely valuable if used in the early stage of the disease. I rarely use more than 20 millions, and I have the dose repeated the following or second day, as deemed advisable.

A good leucocytosis in the early stage of the disease is a favourable omen, but it is not necessarily so in a late stage, when there is purulent infiltration. When there is a defective leucocytosis, the formation of a fixation abscess has been highly extolled; but I prefer a very old remedy—the application of a large fly-blister. My friend the late Sir Mitchell Banks used to tell about an enormously big, fat, plethoric man, over 20 st. in weight, he thought was dying from pneumonia; the late James Long was called in, and he literally covered the man's back with a great quantity of liquor epispasticus which he laid on with a large paint brush; the following morning Banks found the man sitting up in bed reading the newspaper, and he made a good and rapid recovery. Sir Mitchell Banks was not an authority on pneumonia, so I give this case with all reservations as to the diagnosis, but there is no doubt in my mind that this old remedy is too much neglected in the present day, especially where there is a poor leucocytosis.

The Causes of Death in Pneumonia.

In treatment our chief object is to cure our patients—to restore them to the *statu quo ante*. In dealing with an acute and self-limited disease like pneumonia we must always recognize the fact that a large proportion of cases get well without treatment, under any treatment, and in spite of treatment, so that in, say, 75 per cent. of our cases we must not take too much credit for any line of treatment which we adopt. Yet the almost universal death-rate is, in my opinion, far too high, and it seems to me that if we are to improve our treatment we must look at the question from a fresh standpoint, and ask ourselves why do so many persons die from an acute but short specific disease? When a patient dies it is a simple enough matter to find out sufficient reasons to account for his death, but it is much better to see the danger signals ahead and try to steer the patient clear of them.

You will not infrequently meet with men who tell you that they never or only very seldom have a death from pneumonia, and they will detail some line of treatment which has long since been discarded by men of experience. You can swallow as many of their statements as you like, but in my opinion the man who never sees a death from pneumonia never sees much, and his patients belong to that large class who get well in spite of treatment. Moreover, when dealing with the incidence of this disease, I pointed out the enormous disparity in the death-rate in different parts of the country, at different ages and between the sexes. The severity of the disease varies much and also the natural powers of recovery of the patients. I would like to see some of those gentlemen located for twelve months in Blackfriars, where the death-rate from this disease is nearly six times that of Kelvinside.

In Children.

We will now consider the classes of patients who die from pneumonia. I have referred to the very heavy mortality which occurs during the first five years of life, and more especially during the first two years. No doubt the vast majority of these cases included in the Registrar-General's returns are cases of bronchopneumonia or capillary bronchitis, but yet after the second year true croupous pneumonia is not at all uncommon. The case mortality is variously stated as from 30 to 50 per cent., and I have a shrewd opinion that the bronchitis kettle is to a considerable extent responsible for this excessive mortality. This is not only one of the most useless, but one of the most diabolical inventions ever foisted on the public; it may cause bronchitis and drown the patients, but it will not cure them. These little patients should be kept in a warm, dry atmosphere.

But independent of treatment, many of these little patients after a long struggle gradually succumb from failure of the right side of the heart. Why should this be? Their young hearts are healthy and particularly sensitive, so that they will not stop on a slight provocation. I have often demonstrated the effect of respiration in carrying on the circulation of the blood, and have shown what assistance can be afforded the right side of the heart by simply shutting the glottis and expanding the chest. Now if a young child suffering from laryngeal diphtheria is observed, it will be seen that the resilient chest walls cannot expand against the atmospheric pressure: the diaphragm is pulled down, but the lower part of the sternum and the costal cartilages are pushed in, so that the heart gets comparatively little assistance from the

respiratory pump. In capillary bronchitis and pneumonia where there is little variation in the dimensions of the lungs between expiration and inspiration, the same conditions apply, though to a less extent.

The situation of the heart, where the soft cartilages are easily pushed in by the atmospheric pressure, prevents the blood-vascular cavity from obtaining much relief. Moreover, the stomach and bowels are frequently so much distended with gas, owing to too much food of an improper quality, that the diaphragm has got very little play, and thus the respiratory pump is still further thrown out of gear. However, there is one point in favour of these young children, and even of those of less tender years, suffering from pneumonia: their inspirations may appear short, shallow, and catchy, but there is frequently a considerable pause between the end of inspiration and the commencement of expiration which enormously assists the pulmonic circulation.

In Adults.

In children after the age of 5 years with strong chest walls, and in young adults, the surplus vital capacity, even when a whole lung is involved, is usually sufficient to tide the heart over its difficulties until resolution takes place. In women—and especially in pregnant women—the vital capacity is less and the case mortality, *ceteris paribus*, is greater than in men. With advancing years and rigid chest walls there is a gradual failure in the respiratory pump, and a corresponding increase in the death-rate. However, there is a great difference in individuals, and some spare men keep a good pump even up to old age. In very old people, as was pointed out by Sir William Gull, pneumonia is frequently a mode of dying, and they die as comfortably from it as from any other disease. However, I am convinced that a good many terminal pneumonias might be obviated or cured by the timely use of a vaccine. Many patients cannot expand their chest owing to a pleuritic stitch, but if they partly empty it, by groaning or otherwise, they get the advantage of the respiratory pump during the succeeding inspiration. They should be induced to hold the chest expanded at the end of inspiration for a short period, and for this purpose it is advantageous to lay hold of a rail above the head with both hands. I know a big, heavy man who dislocated his humerus by this manœuvre, but, notwithstanding the accident, he avers that he owes his life to this assistance to his respiration and to semi-starvation.

The big, plethoric, pot-bellied man often succumbs rapidly to an attack of pneumonia. How is this? Such men are not particularly prone to the disease; the pneumococcus has no special predilection for fat; the disease is not more intense than in lean persons, except that the non-conducting layer of fat is apt to maintain a higher internal temperature, and if the temperature be high, it is more difficult to reduce, but in these cases the temperature is usually not very high, because the primary failure is in the fatty infiltrated heart.

Their vital capacity is poor and the respiratory pump is easily thrown out of gear. The best treatment for these individuals is prophylactic: you should start months or years before the attack to reduce their "corporations" and strengthen their fat, flabby right hearts. However, when you are dealing with the emergency the vascular tone must be maintained, and in most cases pituitary extract does much good; there must be no overloading of the vascular system; the lime salts must be given freely; the respiratory pump must be kept in action; the stomach and bowels must be kept unloaded and no distension permitted; the diet must be very simple and light, such as syrup of glucose or sugar of milk. There must be an abundant supply of cool, *dry* air, and there should be some counter-irritation with a mustard poultice or fly-blister; of course, a vaccine should be administered at the earliest moment.

There is many a spare individual with a fatty, degenerated right ventricle, but with a good respiratory pump, who goes about his ordinary business for years with an extremely irregular pulse, and a barely perceptible first sound over the right ventricle. Of course such patients are apt to succumb to any acute illness, but it is sometimes marvellous how their good respiration carries them safely through a mild attack of pneumonia. Early recognition and prompt treatment is required in such cases.

Patients suffering from emphysema are not good subjects for pneumonia, but the right side of the heart is usually hypertrophied, and does not stand in much need of respiratory assistance, so if there be no accompanying bronchitis it may suffice for a pneumonia of one lobe.

In diabetes there is frequently much emaciation of the muscles, a feeble respiratory pump and weak heart, conditions which favour a fatal termination.

In advanced kidney disease there is uræmic poisoning, a tendency to pulmonary œdema, indicative of right cardiac failure. Both acute and chronic alcoholism lead to cardiac asthenia, and the frequently associated abdominal distension interferes with the respiratory pump, so such cases are liable to rapidly succumb from cardiac failure, accompanied by a large *ante-mortem* clot in the right side of the heart. The case is quite different with the gouty individual; his heart is usually hypertrophied and healthy, and, if there be no kidney mischief, he stands an attack of pneumonia well.

Cardiac Failure.

There are certain cases who have got no innate power of recovery, and who seem to fall victims to the intensity of the poison, but the vast majority of the deaths are due to cardiac failure arising from want of proper assistance owing to a defective respiratory pump. Mere carbonic acid poisoning is scarcely ever a cause. In bad cases of emphysema with bronchitis the patient is often more livid for weeks, but so long as the right heart does not fail there is no danger from the mere lividity.

It is true that in carbonic acid poisoning there is a general rise in arterial pressure and secondary overloading of the right side of the heart, but in pneumonia this sequence is prevented by the vasomotor paresis. The overloading of the right side which takes place is due to failure of the heart and of the respiratory pump. At the very commencement of an acute pneumonia, with a severe stabbing pain in the side, the patient's face is often extremely purple and congested; this is not due to any obstruction in the lungs, as is shown by the large, full, bounding, relatively high-tension pulse, but arises from the fact that the patient cannot use his respiratory pump owing to the sharp pleuritic pain. These are the cases where the removal of 10 to 20 oz. of blood from the arm affords immediate relief, but, *cui bono?* A good dose of opium or opium and antimony has a similar salutary effect by relieving the pleuritic pain, and enabling the patient to put his pump in action.

Cardiac failure is the proximate cause of all cases of somatic death: anyhow we would scarcely say the patient was dead until the heart ceased to beat.

What are the causes of cardiac failure in cases of pneumonia? A certain number of hearts have such degenerate coronary vessels and muscle walls that they fail under the slightest stress, or cease to beat under any marked inhibition. We are never likely to be able to prevent such deaths unless by prophylactic measures. The large majority of hearts, however, make a desperate struggle for continued existence. The failure takes place from:

(*a*) Granular degeneration of the muscle fibre induced by continued high temperature and by toxæmia.

(*b*) Low arterial pressure, which prevents proper nutrition of the heart, and this organ gets exhausted pumping blood into unfilled vessels.

(*c*) Any interference with the proper action of the respiratory pump leads to overloading and ultimate failure of the right side of the heart.

(*d*) The toxæmia leads to loss of muscular tone and dilatation of all the cavities of the heart.

(*e*) Extensive lung consolidation.

Our indications for treatment, therefore, are (1) to lower the temperature and control the inflammatory process at the earliest possible period, before stagnation of the blood and hepatization have taken place, and thus preserve as far as possible the integrity of the respiratory apparatus; this also lessens the risk of involvement of the nutritive vessels of the lungs; (2) to maintain fair systemic blood pressure; (3) to keep the respiratory pump acting by lessening the frequency and increasing the depth of the respirations; (4) remedies to lessen the toxæmia and maintain the tone of the cardiac muscle; (5) methods to lessen the spread of the mischief.

The Reduction of High Temperature.

Whatever means be adopted for dealing with the temperature of the patient it should be kept within moderate bounds, as high temperature leads to granular degeneration of the heart muscle, sleeplessness, delirium, and nervous exhaustion. It is often sufficient to keep the patient very lightly clothed—a single sheet over the body with a blanket over the lower extremities—and thus allow free evaporation of the sweat, which carries off a large amount of latent heat. All eiderdowns, cotton-wool, waterproof, and every impervious covering should be avoided; cold or tepid sponging is very comforting to the patient. I am a firm believer in the danger of continued high temperature, and I have used many methods to control it, such as cold sponging, the application of ice to the affected side, ice-cradling, the abstraction of heat by radiation with black semicircular ice tins over the patient, by evaporation with large moist, cool poultices and compresses, and by convection with currents of warm dry air.

The Abdominal Ice-bag.

In the beginning of 1900 I introduced the abdominal ice-bag in the treatment of this disease, and I have continued its use ever since in all cases of high temperature with the best results. The abdomen affords a large cooling surface, and it occurred to me that one or more ice-bags sufficient to cover the whole abdomen would lower the temperature, and, from the action of the cold on the splanchnic area, would raise the general arterial pressure, would lessen the distension of the abdomen, and finally increase the depth and lessen the frequency of the respirations. This was no simple theoretical speculation, because I had long previously used this method for reducing the temperature in typhoid fever, and I had observed the above effects times without number. Moreover, the abdomen is not very sensitive to cold, except the groins, which can be easily protected by a little cotton-wool, and so this method of treatment is not particularly uncomfortable to the patient.

I had thought this plan well out and was quite ready to give effect to it, when, on January 3rd, 1900, my house-physician, Dr. Alderson, telephoned to me that he had admitted two severe cases of pneumonia, both of whom were so violently delirious that they could not be restrained in bed. The results in these two cases were remarkably successful and were a happy inauguration of this line of treatment.

Maintenance of the Systolic Blood Pressure and Ventilation.

It is most important to maintain the tone and tension of the vascular system, otherwise the nutrition of the heart fails, its cavities dilate; the large vessels hold an inordinate amount of blood and the heart gets exhausted in its attempt to carry on the circulation. The lime salts are the best agents in maintaining cardiac and vascular tone; digitalis has not much effect when the temperature is high, and strychnine has no marked effect on the blood pressure and is apt to exhaust the nervous system, so should be reserved for a late stage of the illness. Adrenalin, pituitary extract, and strophanthin are often very serviceable.

You should avoid everything which would depress the nervous and vascular systems, such as a dull, dismal, badly-ventilated bedroom, a moist, overheated atmosphere, and alcohol. The room should be the best in the house, and if possible should contain at least 1,000 cubic feet for each occupant, and the whole air of the room should be changed three times every hour. There is no difficulty whatever in freely ventilating a room. Feverish patients do not catch cold, so that bugbear may be set on one side. Night and day a stream of pure air should be admitted without creating draughts. I usually throw a window widely open. The play of fresh air about the patient stimulates respiration and exhilarates the patient. Dr. W. P. Northrup, of New York, has treated patients with pneumonia on the open roof of the hospital for six hours a day "in all weather, when harsh high winds, rain, and snow did not prevent." This may do for New York, but I am certain it would not suit Glasgow or Liverpool. A cold, foggy, moist atmosphere would materially lessen the patient's chances of recovery. The atmosphere of the room should be maintained about 60° to 65° F., by a large fire. The ordinary atmosphere at this temperature is not saturated with moisture, and is therefore capable of holding the patient's exhalations, and there is not much danger of him drowning in his own excretions. I have never found the atmosphere in this climate so dry as to require any additional moisture.

As long as a strong light or radiant heat from the fire is not playing on the patient's face, the more bright and cheerful the room the better. I do not believe in converting the bedroom into a dark chamber, which makes it difficult for the patient to distinguish day from night, and is apt to give him the impression that he is cast into outer darkness. If the patient has a comfortable night he will not require much sleep during the day.

No one can survive long without oxygen, but there is more in the air than the blood can take up; in fact, the atmosphere only loses 4 of its 20 per cent. in the process of respiration. Of what necessity or value, then, are the cylinders of oxygen largely used in this disease? Of what value are 20 to 60 cubic feet of oxygen compared with 72,000 cubic feet of fresh air with which each patient should be supplied every twenty-four hours? The public craze for oxygen has not yet died out, and medical men are often too apt to pander to the popular demands. Many men readily acknowledge that they have never seen any life saved thereby, but the public want oxygen, and oxygen they get, on the supposition that it cannot do any harm; just in the same way many prescribe a teaspoonful of brandy every four hours because they say it can do no harm and may please the patient's friends. Our prescriptions should not be placebos, but we should diligently inquire respecting all our remedies, Will they do any good? Let us see on what scientific basis, if any, this expensive luxury of oxygen rests, and more especially so as it can be had in as pure a state in the atmosphere for nothing. The nurses, perhaps the patient, and the patient's relatives will tell you that the free supply of pure oxygen affords great relief and makes the patient breathe more easily. This may seem to some an unanswerable reason; but it is not merely the patient's comfort, it is his recovery we are after.

I have again and again pointed out the great value of the respiratory pump in carrying on the circulation, and if the patient's breathing becomes easy and shallow, the pump is thrown out of action. You want to make the patient breathe as deeply as possible, and this is encouraged by a stream of air playing on the patient's face. I have often used for this purpose a foot-bellows, and an electric fan is very serviceable. Every one knows how rushing through the air in an open motor car makes you breathe. Carbonic acid is the natural stimulus for the respiratory centre, and in cases of pneumonia the stimulus should be in constant action, but when you freely supply oxygen to the air cells the red corpuscles do not necessarily take up more oxygen, but the carbonic acid tension in the blood falls, the respiratory centre does not receive its necessary stimulus, and the heart is handicapped; thus the comfort of the patient is at the expense of his vitality.

Dr. Yandell Henderson has shown how hyperpnoea may so reduce the carbonic acid in the blood—a state which is called acapnia—as to induce fatal apnoea. Fortunately it is not very easy to produce this condition in pneumonia, but it is just as well to keep the patient breathing as long and as deeply as possible, as he can die "from want of breath" just as readily as from "failure of the heart's action."

I suppose you are all familiar, and if not you should be, with the excellent work of Dr. Ernest Thomson of Glasgow on the "True position of oxygen as a restorative in carbonic acid poisoning." This investigation on the subject of choke-damp asphyxia was undertaken at the instigation of the Council of the Mining Institute of Scotland, and was published in the *Glasgow Medical Journal* for 1893 and 1894. He conclusively showed that in these cases of asphyxia pure oxygen had no advantage over atmospheric air. Also, "an animal may be placed in a chamber the general cavity of which contains about 50 per cent. of carbonic acid, and retained there for a long time without supervention of muscular collapse, provided a gentle stream of a respirable gas—air or oxygen indifferently—be allowed to play upon the nostrils and agitate the surrounding atmosphere."

GENERAL PRINCIPLES OF TREATMENT.

Successful treatment largely depends on early recognition of the disease, and in this respect the general practitioner has many advantages over the consultant, while in hospital cases the fate of the patient is often sealed before he arrives. If the patient can be properly treated and nursed at home *keep* him there, but if not send him to a hospital at the earliest possible moment; you have no moral right to bundle him off at a later stage, when the mere movement may turn the scale against him.

We shall suppose that we are dealing with a case from the commencement. When you meet with a case of high fever of sudden onset without any definite localizing symptoms, do not imagine that you have got a legitimate point of attack and begin to knock down the temperature with such drugs as phenacetin, or antipyrin, or by saturating the patient with sodium salicylate. You may in this way, for the time being, lower the temperature and make the patient quiet, but you thus mask the symptoms, put yourself in a fool's paradise, prevent the early recognition of the disease, and in no way modify its course, but perhaps do irreparable mischief to the patient. You must not keep hovering between conflicting opinions as to whether the patient has got pneumonia or typhoid fever, influenza, or some other disease, waiting to see what will turn up. You must be prepared to treat the individual rather than the disease. You must find out the condition of every organ of his body, and if you do this the nature of the affection will not long escape your detection. Pneumonia is a disease which varies very much in intensity, and its prominent symptoms are more or less pronounced according as the individual is robust and plethoric, or weak and debilitated. A typical case with a flushed face, rapid breathing, high temperature, and a stabbing pain in the side is early recognized, but the majority of cases are not typical in their onset. In the young and aged errors most frequently occur, but with careful examination every case should be diagnosed within the first twelve or twenty-four hours. The febrile process and quickened respirations should arrest your attention. Very careful physical examination should detect a very moderate degree of lung engorgement and thus enable you to localize the mischief. If there be a rigor the patient should be warmly clothed and have a hot drink. In the very early stage I am in favour of a warm bath with plenty of soap, but if this be impracticable, either from the condition of the patient or the environment, he should be well washed and the action of the skin encouraged. If the temperature rapidly reach a high level, such as 104° F., the sooner a large ice-bag is applied to the abdomen the better. I am much in favour of reflex stimulation, I therefore order a large mustard poultice to the affected side. The nerve supply to the lungs is derived from the first six dorsal segments: if, therefore, you apply a mustard poultice to the cutaneous nerves of the upper part of the thorax on the affected side as low down as about the level of the ninth dorsal spine, you produce a reflex action in the nerves supplying the lung, and thus increase vasomotor tone. To be of any value this must be done at an early stage; there is no use stimulating the lung when the lung is solid and the mischief done. At a later stage, however, good is often done if applied to other portions of the same lung or the opposite lung, by lessening the collateral oedema which not infrequently occurs. It is this collateral oedema or spreading area, and not the solid portion of the lung, which gives rise to the expectoration. A few leeches applied to a painful spot on the side acts in a similar way: there is a depletion of the vessels in the vasomotor tract supplied by that segment of the spinal cord. If there be a defective leucocytosis I apply a large fly-blister at any stage of the illness.

Blood-letting has not been in vogue for many years, but I have no doubt in some few plethoric cases it does good. If it be deemed advisable in any particular case, the sooner it is performed the better. It should never be adopted after the first forty-eight hours, and never at any time if the pulse be small, feeble, and compressible. Pneumonia in the female is often relieved by a commencing menstruation, and an epistaxis is occasionally beneficial. If at the beginning of the disease there be a full bounding pulse and laboured respiration in a plethoric individual you may abstract 10 or 12 oz. from the arm. Venesection should not be performed in the very young, the old, or debilitated, though I once took over a pint from a lady aged 89 who was in the status epilepticus from a cortical haemorrhage. She lived till she was 95. After bleeding, the patient should abstain from fluids for some hours. The cases, however, in which venesection is beneficial are few and far between.

The expectoration should be examined and a suitable vaccine administered at the earliest possible moment. I have seen excellent results from the pneumococcus vaccine prepared by Sir Almroth Wright.

Sleep.

It is important that the patient should have a fair amount of sleep from the onset; the exhaustion of the nervous system from want of sleep lessens the patient's chance of recovery. There is no objection to opium in the early stage, and two or three 10-grain doses of Dover's powder during the night often answer admirably. In alcoholic subjects a combination of opium and antimony answers well. When the lung is engorged and the right side of the heart handicapped you should avoid all preparations of opium, as they blunt the respiratory centre, or only use morphine in combination with hyoscine and atropine, or strychnine. If sleep has been obtained in the early stages it is not difficult to induce it in the later. A quiet restful sleep tends to lower the temperature, and on the other hand, a high temperature is very inimical to sleep. The low muttering delirium which frequently accompanies the disease is usually controlled by free ventilation and the reduction of the patient's temperature, which is best effected by large ice-bags to the abdomen. The body should be lightly clothed, but the lower extremities kept warm. Pneumonia complicated with delirium tremens is a very fatal malady. It is often difficult to draw a distinction between the delirium of pneumonia and alcoholic delirium complicating pneumonia. The latter generally starts in the later stages of the illness, or as a rule not earlier than the third day, the delirium is active, often violent, delusions of sight and hearing, great tremor, irritability of the nervous system, and the knee-jerks are usually absent.

In such cases it is essential to keep the nervous system quiet and obtain sleep, but this is often a most difficult problem to solve, especially when the delirium tremens arises late in the pneumonia attack. There must be no mechanical restraint, nor any struggling with the patient, as thus fatal syncope is readily induced. I have often seen these patients become quiet when they were allowed to stand or walk about in a well-ventilated room. Under these circumstances the fall in the blood pressure and the lessened blood supply to the brain has a calming effect. When the patient has been induced to go back to bed, if it be in the early stage of the disease, and the pulse full and bounding, or small and firm, he should have repeated doses of antimony and opium. If it be in a later stage, with the pulse small, short, and feeble, and with the lungs engorged and skin very moist, a hypodermic injection of hyoscine, morphine, and atropine answers better. A few whiffs of chloroform or the A.C.E. mixture often gives the sedative an opportunity of acting. To these patients I frequently allow two pints of beer or stout in the twenty-four hours as a sedative. It is not wise to entirely cut off alcohol from a patient bordering on delirium tremens. Under no other circumstances do I prescribe alcohol in pneumonia. Alcohol does not increase the power of the cardiac muscle, but merely lessens the peripheral resistance by producing vasomotor paresis, an effect which cannot often be required, as the systemic blood pressure is usually too low without any assistance from alcohol. It also increases the diastolic tension within the ventricles and leads to cardiac dilatation. Alcohol dries the tongue, increases the delirium, and makes the sleep more perturbed. The good effects of abstention are well seen in those cases who have been overdosed, when you abruptly cut off all alcohol; the delirium, restlessness, and parched mouth are replaced by quiet sleep and moist tongue. During convalescence the patient may, if thought necessary, revert to his accustomed use of alcohol, but in great moderation.

Drugs.

If the illness begins with nausea or vomiting, it is well to wash out the stomach with a few tumblerfuls of hot

water to which an equal number of teaspoonfuls of mustard have been added. The bowels should be cleared with a large dose of calomel. In sthenic cases—but such cases are the exception rather than the rule—antimony is useful. If there be much restlessness or delirium, antimony and opium is a good combination. All the coal-tar products are injurious; the same may be said for sodium salicylate, as it is a decalcifying agent. In no case should an acid mixture be given at the commencement. I have long since discarded quinine as an antipyretic agent in this disease.

For limiting the spread of the disease the lime salts are the best remedy. In the acute stages of pneumonia the more scanty and more sticky the expectoration, the more viscous the blood, the more lime salts and leucocytes it contains, the more favourable the prognosis; on the other hand, the more fluid and haemorrhagic the expectoration, the more liquid the blood, the less the lime salts and leucocytes, the worse the prognosis. The expectoration comes from the spreading area, and not from the consolidated lung, hence I prefer the lime salts to increase the coagulability of the secretion and limit the spread of the mischief. Acting on these views, I have long ceased to prescribe ammonium carbonate and other expectorants during the acute stage of the disease. Those cases of creeping and influenzal pneumonia where there is no proper consolidation are very fatal. Cardiac thrombosis is more frequently a sequel than a cause of cardiac failure; occurs chiefly in the right auricle and ventricle; is due to cardiac weakness, blood stagnation, leucocytic destruction, and fibrin ferment, rather than to any excess of lime salts. Thrombosis in the heart is usually a terminal phenomenon, the *ante-mortem* clots rarely preceding death by more than twenty-four hours; this occurrence is best prevented by maintaining the tone and contractile power of the cardiac muscles. A hypertonic serum consisting of calcium chloride, normal saline, and syrup of glucose would lessen blood destruction, and hence the tendency to clot formation. I have seen clots in the heart dissipated and the patients cured by the administration of equal parts of liquor ammoniae fort. and spiritus chloroformi, 5 to 10 minims every half-hour.

The necessity for calcium salts in the maintenance of cardiac contraction and muscular tone is, perhaps, fairly well known, but the knowledge is too often neglected in the treatment of this disease. In all febrile conditions the blood rapidly parts with its calcium, and unfortunately it is often most difficult to get the intestinal tract to take up a sufficient supply. You must not rest satisfied with the mere administration of lime salts by the mouth; you must satisfy yourself as to whether a sufficient amount is being absorbed. A direct examination of the blood by Blair Bell's method will solve this problem: but this is troublesome, and more especially so as it should be repeated many times during the illness. I find the urine a very good indicator and very easily examined. It has long been known that the chlorides are deficient in pneumonia, but in my observations they are not nearly so scanty as the lime salts. If you find the lime salts deficient and albumin present in the urine, you may safely conclude that both the free and fixed calcium salts in the blood are deficient, and the sooner they are replenished the better. You should prescribe the soluble salts of calcium—such as the glycero-phosphate, the lactate, and the chloride. The carbonate is not very soluble, but it is often useful as an antacid for the intestinal tract, especially when combined with the bicarbonate and chloride of sodium. I have had good results from calcium iodide with tincture of iodine in cases of pneumonia complicating bronchitic asthma.

Somewhat similar views to my own have been expressed by Dr. Auld, who also is a Glasgow graduate. He says "that pneumonic consolidation is Nature's method of localizing the morbid process, and curing the disease. . . . Moreover, in cases of pneumococcus infection showing little or no tendency to pulmonary hepatization—when the pneumococci run riot in the organism, so to speak—the result is always grave, and indeed generally fatal." Dr. Auld informs me that "the results of his experiments on animals correspond to those observed on man. It was only in those cases where a culture of moderate virulence was employed that hepatization of lung was obtained in animals; a very virulent culture failed to give hepatization, thus showing that when the organism of pneumonia freely enters the circulating blood it prevents the pulmonary coagulation, whereas when it is capable of being localized coagulation follows. These injections were also made into the pleural cavities with the same results. The time element was also considered, as when the animal was killed after a moderately virulent culture hepatization was observed to have begun, but after a very virulent culture this feature was absent, being replaced by a sanguineous serum."

When the blood pressure is very low and the heart dilated I have had good effects from the intravenous injections of small doses of adrenalin, but these have to be very frequently repeated, and I now prefer a hypodermic injection of 1 c.cm. of pituitary extract every eight hours. This also lessens the abdominal distension. In these cases it is also well to make use of the cardiac reflex of that versatile genius, Albert Abrams; the nurse should be taught to frequently apply mediate percussion over the seventh cervical and first dorsal vertebrae, and she should also use friction with her hand over the heart. Strychnine, caffeine, and digitalis are often useful; when the pulse is extremely frequent an intravenous injection of $\frac{1}{250}$ to $\frac{1}{120}$ grain of strophanthin will be found serviceable. When the febrile process is over it is well then to use some medicine to lessen the viscosity of the blood and liquefy the effusion in the alveoli, such as ammonia, sodium citrate, ammonium citrate, citric acid, lemon squash, etc.

If the lung pass into the stage of grey hepatization with purulent infiltration, or there be an abscess or gangrene of the lung, you should freely administer terebene or some of the turpentine series. In these cases the infection is usually very mixed, and the inflammatory mischief has been so intense as to involve the nutritive vessels of the lungs as well as the finer branches of the pulmonary artery supplying the affected area. I have seen good effects from tincture of iodine and calcium iodide in these cases. An autogenous vaccine may also help resolution. During convalescence some tonic is required and a liberal diet.

The teeth, tongue, mouth, and even the nose, should be kept clean with some antiseptic during the illness. The importance of keeping the mouth clean as a preventive measure is well exemplified in the so-called ether pneumonias, which are due to the aspiration into the trachea and bronchi of foul secretions from the mouth. Before the administration of an anaesthetic the mouth should be well cleansed with some strong antiseptic. Pure brandy or whisky answers very well, but this mouth-wash should not be swallowed. An excellent mouth-wash can be made with formalin, glycerine of carbolic acid, and eau de Cologne.

Diet.

One of the greatest difficulties in private practice is to control the diet: the public have been educated in the belief that great quantities of nourishment and stimulants are necessary, and too frequently the regulation of the diet is left to the nurses and relatives, consequently you frequently find the abdomen enormously distended with flatus which prevents the free play of the diaphragm. The medical attendant should not move along the lines of least resistance, but carefully consider every point in the interests of his patient. There is usually a paretic condition of the intestinal tract, and any food decomposition is apt to give rise to acute dilatation of the stomach and bowels; when this occurs pituitary extract is the remedy *par excellence*. There is scarcely any anabolic change going on during the febrile stage, so there is no use in troubling the patient with large quantities of nitrogenous food, which are not required and are only apt to form poisonous ptomaines. It is a great mistake to worry the patient with much food during the first three or four days of illness, and it should be very gradually increased as the patient seems capable of digesting it. It is not what you put in the patient's stomach, but what he assimilates, that proves of any value. A good combination consists of an infusion of half a pound of raisins in a quart of hot water with three or four ounces of syrup of glucose, two drachms of sodium chloride, and half a drachm of the glycerophosphate or lactate of calcium. The patient can drink this *ad libitum*.

Milk is an excellent item in the diet, but it is not always easily digested, and consequently it should be well diluted; it should be boiled to get rid of the *Bacillus coli* and other organisms. The following will serve an adult in the acute stage for twenty-four hours: About 2 pints of milk, 2 or 3 pints of barley water, whey, or plain water, 6 or 8 oz. of syrup of glucose, 4 or 5 drachms of table salt, and 1 drachm of the glycerophosphate of calcium.

If the syrup of glucose be too sweet or mawkish, a quarter of a pound of sugar of milk can be used. Later on the patient can have peptonized bread and milk or some infants' food, broths, raw eggs, jellies, cocoa or coffee, and a few biscuits. He can have cold water when he likes: you can wait on the desire of the patient for solid food. Be always careful that the bowels are not loaded or distended.

In conclusion, I wish strongly to impress on you that pneumonia should always be looked upon as a serious disease; remember that no matter how mild the case may at first appear, you cannot always forecast how it may develop, and every medical man, in dealing with this affection, should feel the responsibility of a human life in his hands. It has been said that young men kill their patients and old men allow them to die. I wish you to take a different course and direct them into a harbour of safety. Early recognition and prompt treatment will save many a valuable life.

INVESTIGATIONS ON SYPHILIS AS AFFECTING THE HEALTH OF THE COMMUNITY.

A SUMMARY OF THE COLLECTIVE EXAMINATION OF OVER 3,000 CASES BY CLINICAL AND SEROLOGICAL METHODS.

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ANY attempt to estimate the actual prevalence of a disease such as syphilis in the community is a task attended with great difficulty. In the first place, the recognition of the disease when in an active state depends on the presence of signs which may be fugitive or atypical in character. Secondly, when the evidence of disease which has ceased to be active is being sought for one has to rely, perhaps wholly, on the history, which may be fallacious, through intent or through ignorance. With regard to the signs of active disease, it must be borne in mind that practically no infective condition invariably presents characteristic clinical appearances. The reason for this is obvious when one remembers that the manifestations of disease in any particular case depend on the virulence of the infective agent, the amount of virus gaining access to the tissues, and the particular degree of resistance of the infected subject. Hence it happens that even such comparatively well-defined infections as diphtheria and typhoid fever escape detection in at least as many instances as are recognized. It is more or less true, of course, that these cases in which symptoms are so transient and mild as to escape detection are in slight need of treatment; but a second consideration, beyond that of the infected individual, is the question of the welfare of those who come into association with him. The great tendency of modern medicine is towards prevention, and in the case of infectious diseases prevention must largely take the form of measures to diminish the infectivity of those affected. The essential precursor of such measures, however, is the accurate and comprehensive recognition of the disease. Now, when conditions with such comparatively characteristic symptomatology as diphtheria and typhoid fever are readily missed, how much more frequently must syphilis escape detection, for here we are dealing with a disease whose manifestations are of the most multifarious description.

A further consideration of the highest importance is that the subjects of syphilitic infection, unless treated by the most energetic methods at our disposal, pass almost invariably through the carrier stage. The part played by carriers in disseminating other infectious diseases has been amply proved; but the number of individuals who after apparently complete recovery from typhoid fever or diphtheria continue to harbour virulent organisms for long periods is relatively small in proportion to the sum total of those attacked by these diseases. In syphilis, on the other hand, it is well known that while, even without treatment, apparently complete restoration to health may follow the primary and secondary stages, the presence of the active virus is shown by the fact that the latent syphilitic is capable of infecting others, and the same holds good when the latent state is induced by mercurial treatment. In the course of time infectivity diminishes, and it is commonly accepted that the subject of acquired syphilis when persistently treated with mercury ceases to be a source of danger after about two years. But the loss of infectivity may not occur for many years. Thus I have observed the case of a man who was treated with mercury for about six months after the appearance of the primary sore; during the subsequent twenty-five years he has remained apparently perfectly healthy, but he infected his wife, whom he married thirteen years after contracting the disease. The latent syphilitic in the early stage, although apparently healthy, is a source of great danger to others, and it must be clearly borne in mind that cases in this category are, in the absence of a history, practically unrecognizable by clinical methods.

Apart from the difficulties attached to the correct diagnosis of the nature of existing lesions and to the recognition of infections in the latent stage, there is a further complication introduced by the fact that the characteristic primary and secondary stages may be missed or suppressed altogether, so that the affected individual is actually not aware of his state. This seems to be specially true in the case of women, particularly when syphilitic infection is associated with pregnancy; but a similar absence of early phenomena is met with in men also, and I have seen a case of tabes with rapidly progressing optic atrophy occur in a highly intelligent and well-informed man who had never, to his knowledge, presented any of the early signs of syphilis, although he volunteered the history of exposure to possible infection.

To arrive, therefore, at accurate conclusions regarding the prevalence of a disease with such varied features as syphilis, it is necessary to seek corroborative evidence from all possible sources. In the course of the past three years extensive clinical and serological observations on the part played by syphilis in the production of disease have been carried out in connexion with the Pathological Department of Glasgow University and Western Infirmary, where various workers have taken up special branches of investigation and have examined over 3,000 cases. At the present time, when interest is being aroused regarding the importance of venereal diseases as affecting the health of the community, a useful object may be served by giving a brief summary of the principal results obtained, with a view to emphasizing their significance for the general health, and in order to point out very briefly their bearing on future measures which may aim at the amelioration of existing conditions.

METHODS OF INVESTIGATION.

The information yielded by an investigation with the object here described obviously depends for its accuracy and completeness on the correlation of different methods of observation. This was clearly recognized, and it was apparent that, to obtain the most fruitful results, the clinical and the laboratory aspects of the conditions studied should either be examined by the same observers, or else by several workers, each of whom was conversant with all the problems concerned in the cases. The complete investigation aimed at was to obtain in every instance:

(*a*) The clinical examination of the patient; (*b*) the examination of the members of the patient's family; (*c*) the history of the health of the patient and his family; (*d*) the result of the Wassermann test with the blood of the patient and of the members of his family.

It is obvious that the carrying out of such a scheme in all its details is extremely tedious and frequently impossible. Dr. H. F. Watson has, however, investigated a large series of cases as far as possible on these lines, and has thereby done much to verify the specificity of the

laboratory test—the Wassermann reaction—as indicating syphilis and nothing but syphilis. The consequence is that the validity of positive conclusions drawn from the Wassermann test cannot well be controverted, provided, of course, that the test is carried out under thoroughly reliable conditions. With regard to the significance of the Wassermann reaction,* it was necessary to establish by personal experience the proof of its specificity for syphilis. It is, of course, well known that a positive reaction is obtained with the blood serum in

95 per cent. of cases of syphilis in the secondary stage.
75 per cent. of cases of syphilis in the tertiary stage.
50 per cent. of cases of syphilis in the latent stage.
95 per cent. of cases of congenital syphilis with lesions.

In order to be able to place reliance on the Wassermann reaction for purposes of diagnosis it was necessary to demonstrate that a positive result did not occur in conditions other than syphilis. The specificity of a positive reaction as a sign of syphilis has never been seriously doubted, so far as diseases common to this country are concerned. But the proof that a positive reaction really indicates syphilitic infection and does not occur under other circumstances is a matter of the highest importance, and I shall therefore adduce the evidence on this point which has been obtained here. In the first place, a number of workers in the laboratory have at different times given their serums for the purpose of controlling the tests, and in no instance has a positive result been obtained with such control serums. Secondly, Watson (unpublished observations) examined a large series of cases, almost exclusively children, in which there was nothing suspicious either in the physical state or in the history of the individual and his family.† The results were as follows (excluding 20 cases in which the Wassermann reaction was merely doubtful, with no other suspicious circumstance):

Result of Wassermann Reaction in 364 Selected Cases attending the Dispensary of the Royal Hospital for Sick Children and the Central Dispensary, Glasgow.

Number of negative cases	351
Number of positive cases	13
Number of families to which the cases belonged	337
Families yielding only negative reactions ...	330
Families yielding positive reactions	7
Percentage of positive cases	3.5
Percentage of families with positively reacting members	2.0

In a third of the above-mentioned cases the history was taken before the Wassermann test was applied. It is also interesting to note that *of the positive cases 6 came from one family* whose parents were also positive. The examination, in addition, of 69 country children belonging to 39 families did not yield a single positive reaction. On the other hand, the examination of 97 children belonging to 83 families, who either presented clinical evidence of syphilis, or in whose family or personal history there was evidence of the disease, gave the following results (excluding 14 other cases in which the Wassermann reaction was doubtful):

Result of Wassermann Reaction in 97 Children (belonging to 83 Families) presenting either Clinical Evidence or a Family History of Syphilis.

Number of positive cases	70
Number of negative cases	27
Number of families yielding positive reactions..	66
Number of families yielding negative reactions	17

Accordingly 72 per cent. of the cases and 80 per cent. of the families react positively. This shows clearly how essential it is to apply the Wassermann test to as many members of a family as possible, in order to make sure of detecting syphilitic infection.

It is evident from these results that the occurrence of a positive Wassermann reaction is not an isolated phenomenon, but stands in the closest relationship to other conditions which have been accepted by the majority of clinicians as presumptive evidence of syphilis.‡ As a consequence the important conclusion follows that a positive Wassermann reaction, even in the absence of other evidence, may be accepted as a valid proof of the presence of syphilis. This converse proposition having been established, the Wassermann reaction now provides an invaluable method for detecting syphilitic infection. By this means positively reacting individuals, although they present no typical lesions, can be placed in the category of latent syphilitics. As has been already seen, 50 per cent. of cases, not otherwise recognizable, can be detected thus. The Wassermann reaction accordingly affords an extremely useful weapon for the attack of clinical problems; its value is enhanced further by the fact that it is objective, as contrasted with personal examination. Thus the elucidation of a syphilitic history depends not merely on the skill and knowledge of the examiner, but also on his personal qualities, and if he meets with a consciously untruthful subject the results of his examination are, of course, entirely vitiated. It is an old teaching, which I in my generation received from Sir Hector Cameron, that it is useless to ask a man if he has had syphilis, for his denial will serve merely to shake confidence in one's own judgement, but will not alter the fact. In this connexion I may quote the unpublished results of Drs. Hislop Manson and Edgar Smith in a series of upwards of half a dozen men suffering from iritis. These patients all were unable to give the clinicians any clue as to the cause of their eye condition, but when the Wassermann reaction had been found positive in each case and they were informed that they must have been infected with syphilis, every man furnished corroborative details.

Another point which has been raised is whether a positive Wassermann reaction indicates that syphilitic infection is actually present at the time of examination, or whether the reaction may not indicate a change due to syphilis in the past. Doubt was thrown on the view that a positive reaction signifies existing infection by the almost universal positive results in cases of general paralysis; thus Gilmour[1] in his series of cases obtained positive reactions with the blood serum in 96 per cent. Those authorities who held that general paralysis was a sequel—a "parasyphilitic condition" not due to the presence of the virus of syphilis, concluded therefore that a positive Wassermann reaction might persist or develop anew after the infection had died out. The failure to influence general paralysis by antisyphilitic treatment was also adduced as evidence against the syphilitic nature of the disease. With regard to the latter point, the argument from resistance to treatment cannot be taken as valid; thus practically no one doubts that interstitial keratitis is a syphilitic manifestation, yet general experience has proved that many cases of interstitial keratitis do not respond to antisyphilitic remedies, even when most energetically applied. In some unpublished cases of this kind treated with neosalvarsan by Dr. Hislop Manson, not merely did the disease fail to respond to treatment, but the second eye became similarly affected in the course of a series of intravenous injections of the drug.

Writing upon general paralysis and locomotor ataxia in 1909, Browning and Mackenzie[2] stated that the evidence "strongly suggests the possibility that the syphilitic virus is an active agent in the production of parasyphilitic disease," and that "further search for the *contagium vivum* of syphilis in the body during the stage of general paralysis is necessary." The best confirmation of the syphilitic nature of these conditions is the finding of spirochaetes in the central nervous system by Noguchi, Levaditi, and others.

The Effects of Syphilis on the Health of the Community.

We may now proceed to consider those diseases in the causation of which syphilis has been proved to play an important part, and the social conditions with which syphilis is closely associated.

* This test was throughout performed by the method of Browning, Cruickshank, and Mackenzie (Browning and Mackenzie, *Recent Advances in the Diagnosis and Treatment of Syphilis*, London, 1911).

† All cases were excluded from this group in which there was evidence present or history in the past of lesions of a recognized syphilitic character in the patient, his parents, or other members of the family, in which the mother had had abortions or miscarriages, and in which other children of the family had been born prematurely or had died from suspicious conditions in infancy.

‡ It is noteworthy that among 364 clinically unsuspicious cases 20 reacted doubtfully—5 per cent.; whereas of 111 cases to which suspicion attached 14 gave doubtful reactions—12.5 per cent. Thus doubtful reactions occurred two and a half times as often among those cases which had clinically a syphilitic association as among those which presented no evidence of syphilis.

The Prevalence of Congenital Syphilis.

Watson (unpublished observations) investigated 331 unselected cases attending the Dispensary of the Royal Hospital for Sick Children and the Central Dispensary, Glasgow, for the treatment of conditions which were not frankly syphilitic. The results were as follows:

No. of Cases.	No. of Cases with Evidence of Syphilis.	
	Clinical.	Positive Wassermann Reaction.
236	0	0
35*	35	35
35	14	(doubtful 35)
25	25	0
Total (331) ...	74	Positive 35 Doubtful 35

*9 of these suffered from periostitis or joint swellings.

Thus, among 331 cases representative of the general conditions which lead to the appearance of children at the outdoor department of a hospital, 10 per cent. are syphilitic, both on clinical evidence and as the result of the Wassermann test; 22 per cent. have a syphilitic association on clinical grounds, with confirmatory evidence from a doubtful result of the Wassermann test in 4 per cent. This gives practically conclusive evidence of syphilis in 14 per cent.

Mental Deficiency and Epilepsy.

Dr. Kate Fraser and Dr. Watson[3] have examined 204 cases of mental deficiency and epilepsy in young subjects. The series of 99 cases examined by Dr. Fraser mainly belonged to the class fit to attend special schools; while the cases—105 in number—examined by Dr. Watson were either under school age (13 being less than 5 years old) or else were not fit to attend a school by reason of their mental defect. The results of the two independent observations were practically identical and may therefore be grouped together.

	No. of Cases.	No. of Cases with Positive Wassermann Reaction.	
			Per Cent.
Cases with mental defect only ...	94	48	51
Cases with mental defect and epilepsy	33	15	45
Cases with mental and physical defect	67	28	41
Cases with epilepsy only	10	4	40
Total	204	95	46

The examination of other members of families of cases gave confirmatory evidence through the occurrence of positive reactions in 21 instances. In addition, the presence of syphilis in the families of 21 cases which themselves gave a negative or doubtful reaction was proved by the occurrence of positive reactions in other members, while 5 of the 6 negatively reacting cases of epilepsy had positively reacting relatives. Syphilitic infection was thus shown to be associated with 59 per cent. of the cases in all.

These results in epilepsy form a striking confirmation of Dean's[4] observation that the syphilitic character of such cases is best determined by examining the patients at an early age, since the percentage of positive results rapidly diminishes after the sixteenth year. Thus, Gilmour (unpublished observations), who examined 61 cases of epilepsy in adults at Gartloch District Asylum, obtained only 13 per cent. of positive reactions.

It is noteworthy that only 22 of the cases examined by Fraser and Watson showed stigmata of congenital syphilis—10 per cent.—a result which is in agreement with the generally recognized fact that those individuals who develop general paralysis as a result of acquired syphilis usually do not suffer from any of the severe visceral or cutaneous lesions of the disease. Hence it would appear that there is an inverse ratio between syphilitic nerve damage and the ordinary somatic manifestations of syphilis, whether congenital or acquired. The general results are that syphilis is responsible for more than half of the cases of mental deficiency, with or without epilepsy, of whatever grade of severity, and that the type of epilepsy which manifests itself at early ages is mainly of syphilitic origin.

Heart Disease in Children.

Watson (unpublished) examined 25 cases of this kind; 7 reacted negatively, 1 doubtfully, and 17 positively in the Wassermann test. The positive cases ranged in age from 1 month to 3 years. The mothers of 14 of these positive children and of the 1 doubtful case all gave a positive reaction: in every instance a positive reaction was obtained with some member of the families of the positive cases. Of the 7 negatives, aged 3 to 8 years, the mothers were examined in 5 instances, all with negative result; in every one of these cases the mother suffered from acute rheumatism during pregnancy. Thus, it appears that "congenital" cardiac disease has two main causes—syphilis and rheumatism. A striking feature of the syphilitic type is the mortality; of the 18 syphilitic cases, 9 died when less than 6 months old.

Deafness in Children.

In conjunction with Dr. Kerr Love, Browning and Cruickshank[5] have examined the blood of 82 deaf children, with the following results:

Condition.	No. of Cases.	No. of Families to which the Cases belong.	No. of Cases yielding a Positive Wassermann Reaction.	No. of Families containing Positively Reacting Members.
Congenital deafness (not hereditary)	46	41	6	6
Acquired deafness ...	36	33	7	8
(Acquired deafness combined with interstitial keratitis	4	4	4	4)

It is to be noted in this connexion that the investigation of other members of the families of these cases was by no means exhaustive. As Dr. Kerr Love has stated, congenital deafness appears to be due to an expiring syphilis; thus in a family of five children, four of whom were born deaf, the blood was tested in every instance, and also in the case of the parents, but only one—a deaf child—reacted positively. It is probable, therefore, that syphilis plays a much greater part in the production of this condition than can be detected by the Wassermann test applied at a date long after the disease has ceased to be active. An interesting result illustrating the association of syphilis with acquired and congenital deafness was obtained in two families both of which contained positively reacting members, and in each of which cases of acquired and of congenital deafness occurred side by side; there was no case of interstitial keratitis in these families.

Ozaena.

J. F. Smith examined 52 cases (unpublished), which showed no definite clinical signs of syphilis, such as necrosis of the nasal bones, and in which no syphilitic history was obtained. Of the series 16 gave a positive Wassermann reaction (30 per cent.).

Aortic Disease and Intrathoracic Tumour suspected of being Aneurysm.

During the past two years 46 cases from the wards of the Western Infirmary were examined, with a positive Wassermann reaction in 64 per cent.

Nervous Diseases.

The cases here recorded are in a sense selected, being the last 122 specimens of this nature submitted from the

wards of the Western Infirmary. The results are as follows:

Condition.	No. of Cases.	Result of the Wassermann Reaction.	
		Positive	Negative.
Locomotor ataxia	30	15	15
Disseminated sclerosis	7	1	6
Ataxic and spastic paraplegia (lateral sclerosis)	12	1	11
Suspected commencing general paralysis	8	7	1
Indefinite symptoms suggestive of spinal cord lesions	22	5	17
Hemiplegia and cerebral haemorrhage	8	4	4
Epilepsy	9	1	8
Epilepsy, Jacksonian	7	3	4
Progressive muscular atrophy	3	2	1
Myelitis	6	3	3
Miscellaneous	17	6	11

The information afforded by these results would have been much more complete had the cerebro-spinal fluids also been available for examination; as it is, the results of the Wassermann test confirm strikingly the generally accepted view as to the etiology of these conditions. Thus the large number of positives among the cases of locomotor ataxia and suspected general paralysis contrast with the preponderance of negative results in cases of disseminated sclerosis and affections of the lateral columns. The sum total of the results, however—41 per cent. of positives—indicates how frequent syphilis is among the cases of nervous disease in a general hospital.

Eye Diseases.

The following figures, taken from Drs. Hislop Manson and Edgar Smith's unpublished observations, demonstrate the close relationship between syphilis and certain classes of eye disease:

Condition.	No. of Cases.	Result of the Wassermann Reaction.	
		Positive	Negative.
Interstitial keratitis	37	35	2
Iritis	22	12	10
Choroiditis	20	5	15
Primary optic atrophy	5	5	0

The striking result is the practically universal syphilitic nature of interstitial keratitis (95 per cent. of positive reactions), and probably of primary optic atrophy, also the frequency of syphilis in cases of iritis (54 per cent. of positive reactions). Positive results were obtained in a number of cases of interstitial keratitis in which the disease had ceased to be active many years before the blood was tested.

Paroxysmal Haemoglobinuria.

Browning and Watson,[6] as the result of an examination of 6 patients, and of other members of their families, in addition to an investigation of the cases recorded in the literature, have concluded that "the occurrence of a positive Wassermann reaction with the serum of the majority of cases of paroxysmal haemoglobinuria, along with the collateral evidence afforded by the presence of a positive Wassermann reaction with the serums of other members of the families, even where the patient reacts negatively, the history pointing to syphilis in the parents of haemoglobinuric children, and the stigmata of congenital syphilis in brothers and sisters, although absent in the patients themselves, constitute a very strong basis for the opinion that syphilitic infection is practically invariably present in cases of paroxysmal haemoglobinuria e frigore.

Metritis and Uterine Haemorrhage, apart from Tumour.

Out of 37 cases of this type investigated by Drs. A. L. and J. H. McIlroy along with H. F. Watson,[7] 20 reacted positively, and 2 others had positively reacting children—that is, syphilis was present in 59 per cent. Among 39 other gynaecological cases of indefinite origin studied by these observers, 18 reacted positively—46 per cent. The cases were in attendance at the out-patient department of Glasgow Royal Infirmary, and were all of considerable severity. These results suggest that syphilis is very markedly associated with the more severe degrees of indefinite gynaecological ailments in women of this class.

Social Conditions Associated with Syphilis.

Prostitutes.

Watson (unpublished observation) examined the blood serum of 104 girls, aged 14 to 18, half of whom resided in the poorest quarters, while the other half lived in the best residential districts. In every instance the Wassermann reaction was positive. The importance of such a source of infection can hardly be overestimated, since it is obvious that, apart possibly from a certain proportion of congenital cases, infection must have taken place recently, and therefore all must have been in a highly infective state.

Tuberculosis.

Eighteen families, comprising 85 children, 14 mothers, and 10 fathers, were examined by Watson (unpublished). In every instance a marked positive Wassermann reaction was obtained, and in the great majority of the families confirmatory evidence of syphilitic infection was elicited, so that the conclusion is justifiable that the Wassermann test was of direct value in detecting the presence of syphilis in the remainder (see also Watson[8]). It is noteworthy that with these people large families are the rule.

Chronic Disease.

I should hesitate to make the assertion, based on the Wassermann reaction in great part, that this long catalogue of conditions is closely associated with syphilis were it not that the wealth of control observations quoted at the commencement of this paper show in the most convincing fashion that the results of the Wassermann reaction run parallel with the indications afforded by clinical observations wherever such are available, and that a positive reaction is practically conclusive proof of existing syphilitic infection. In fact, the frequent occurrence of a negative Wassermann reaction in latent syphilis and in locomotor ataxia shows that if the test errs in anything it is in the failure to detect a proportion of cases of syphilis. There is no evidence that a positive result is got in non-syphilities even in 1 per cent. of cases.

It is to be observed that no attempt has been made to gauge the prevalence of syphilis in the general population, but it is impossible to avoid the conclusion that syphilis is very largely associated with the "hospitalized" portion of the community, and also with certain social classes which are peculiarly liable to spread the disease. Some hold that syphilis is diminishing in prevalence, and it is probable that the manifestations of the disease are now less obvious than in previous times, but no one is likely to view with equanimity the widespread incidence revealed by investigations such as those described here. The great prevalence of syphilis among the invalid population, not to mention the wastage from abortions and infant deaths[9] due to congenital syphilis, shows clearly the grave influence of this infection in deteriorating the worth of human material. In treatment we have a most potent remedy ready to hand: syphilis is highly amenable to treatment, but hitherto the disease has neither been adequately recognized nor sufficiently treated. Confining attention to the medical aspect, and neglecting such important social questions as the need for the adequate remuneration of many forms of female labour so as to make them truly self-supporting, there are two much needed reforms. In the first place, the widest possible routine application

[9] The statistics of Dr. A. K. Chalmers (Glasgow), communicated to the Eighteenth Section of the International Congress of Medicine, 1913, are most significant in this connexion. Thus, his inquiry into the maternity history of 1,357 women who had given birth to dead children showed that 32 per cent. of their live-born children were dead prior to the occurrence of the stillbirth which gave rise to the inquiry.

should be made of methods of diagnosis wherever they can be carried out from official sources on individuals not gathered together for this specific purpose alone: for this purpose use could be made of the existing medical organizations for the examination of children attending school, persons offering themselves for life insurance, patients under treatment at the out-patient department as well as in the wards of the hospitals, and also cases seen under the Insurance Act and so on. Under all circumstances the examination should be made irrespective of the fact that there are at the time no obvious signs of the disease. As a means of diagnosis the Wassermann reaction, or some test fulfilling similar conditions, should occupy a prominent place on account of its reliability as well as its capacity to detect the infection at latent periods, and also from the fact that it is not likely to cause such offence as a determined effort to obtain a history may give rise to.* For statistical purposes the Wassermann reaction will yield a truer conception of the actual prevalence of syphilis than can be arrived at from clinical records alone. Clinical statistics in general, but especially those compiled from experience in general private practice, must yield too low an estimate of the incidence of syphilis, since adequate clinical instruction in this disease is seldom given to students, so that medical men are not in a position to recognize unusual lesions or those slight manifestations which may constitute a very large proportion of all the cases.†

The second reform has regard to methods of treatment. All cases of syphilis should be *thoroughly* treated. The necessity for thorough treatment must be emphasized. The comparative inadequacy of the common form of mercurial therapy by pills is well seen from the results of McIntosh and Fildes,[9] who found that after two years of such treatment 30 per cent. of cases still reacted positively in the Wassermann test; while on clinical grounds, Jonathan Hutchinson, junr.,[10] admitted that 20 per cent. of cases failed to be cured by this method. Ernest Lane,[11] convinced of the insufficiency of two years of mercurial treatment, has recommended that it should be continued for five or seven years! The therapeutic results can be greatly improved by the employment of salvarsan in addition to mercury. In the light of further experience, we adhere to our original statement that a single dose of salvarsan is at least as efficient as a prolonged course of mercury, and produces its effect with greater rapidity.[12] At present, however, very little use is made of the means at disposal for treating cases of syphilis.

Whereas the function of hospitals should be not merely to house cases of sickness but also to treat them, there is nowadays the tendency for such institutions to do neither the one or the other with syphilitic patients. Cases of acquired syphilis are, at most, treated in the outdoor department with pills, powders, or mercurial solutions—a form of therapy which only very slowly extinguishes infectivity, and, as usually carried out, probably fails to effect cure in more than a small proportion of cases. Now there can be no doubt that for the safety of the general community the infectivity of cases of recently acquired syphilis should be abolished as rapidly as possible. This can be effected with great certainty and rapidity by admitting the patient into hospital for periods of two days on five or six occasions and giving him intravenous injections of salvarsan; in addition he should receive systematic courses of mercurial injections or inunctions at the out-patient department. Precisely how long a time will be necessary to abolish infectivity by such treatment has not been definitely ascertained. It is well known that the syphilitic patient with tertiary lesions is usually non-infective, and this is probably due in great part to the small number of spirochaetes which he harbours. Applying the same point of view to cases treated energetically with salvarsan, it is most likely that they also are non-infective within a few weeks afterwards; but if complete sterilization has not been effected a recrudescence may occur with, no doubt, renewed infectivity. The prolonged subsequent treatment by mercurial injections or inunctions aims at preventing this latter possibility.

The great difficulty centres in the question as to how treatment is to be enforced. Probably the first and most important step in this direction is to disseminate to the widest possible extent an accurate knowledge of the nature of syphilis and its consequences, especially when not adequately treated. By this means chiefly will popular sympathy towards effective legislation be aroused, and then no doubt the disease will be made notifiable. Before this result is attained the educative propaganda will have the effect of leading to early diagnosis and efficient treatment; such has been the consequence of educative measures in the army. In the meantime no good object would be served by the existence of special hospitals or even of special wards for such cases, since any measures tending to stigmatize the individual will, by leading to concealment, interfere with thorough treatment, and thus conduce to the further spread of the disease. Treatment by salvarsan is, of course, not so private as mercurial therapy, since the former requires a period of rest in bed, but the administration presents no great difficulties, and, with the aid of an assistant, could be carried out at the patient's home by any medical man who had received a short course of special training. Enlightenment as to the consequences of inadequate treatment must be counted upon to overcome prejudice regarding this degree of publicity. It is worth considering whether, from the point of view of the health of the community, as well as of the individual, a most valuable object would not be served if public health authorities were prepared to supply salvarsan free of charge to practitioners for the treatment of patients who could not themselves afford to pay for the drug, just as has been done with diphtheria antitoxin.

If notification is capable of being applied at all in the meantime, some form might be devised for coercing those who, aware that they are suffering from the disease, do not submit to thorough treatment, by bringing them under the infectious diseases sections of the Public Health Acts; those individuals would then become liable to penalties for acting as sources of infection and for infecting articles such as drinking vessels, etc. This procedure, however, is likely to be practicable only in the case of patients in public practice.

It cannot be too greatly emphasized that thorough treatment constitutes, if not the only method, at least the most practicable means of exterminating the disease. The wide application of efficient diagnostic methods, including some test such as the Wassermann reaction, will prove invaluable as an indication where treatment is necessary. The information so acquired will be best utilized if every hospital and institution applies itself to treat thoroughly and unostentatiously the cases which come within its reach. Thus valuable work in the direction of prevention as well as of cure can be effected by the special infirmaries for maternity, gynaecological and eye cases, etc., in addition to the general hospitals. In this way syphilitic women may be detected and abortions and congenital syphilis be obviated, or, again, the presence of latent congenital syphilis being detected, treatment may be applied to prevent the occurrence later on of such disabling and intractable conditions as interstitial keratitis.

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THE fifty-seventh course of lectures and demonstrations for sanitary officers arranged by the Royal Sanitary Institute will begin on Monday, February 2nd. The course for school teachers and others entering for the examinations in school hygiene will begin on February 16th. Further particulars can be obtained on application to the Secretary at the Institute, 90, Buckingham Palace Road, S.W.

* The Public Health Authority of Glasgow has already acted on this principle by providing practitioners with the appliances for taking samples of blood and by carrying out free of charge the Wassermann test on all specimens submitted.

† A striking example of the syphilitic nature of a minor lesion with fairly well defined clinical characters has been established by Findlay and Watson (*Lancet*, March 29th, 1913) in the case of chronic eczema oris in children.

THE TREATMENT OF HYDATID OF THE LIVER.

By C. MacLAURIN, M.B., C.M., F.R.C.S.E.,

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THIS question has been again raised by an interesting paper from the pen of Mr. Philip Buckley[1] of Salford, who narrates a case in which a brilliantly successful result followed the total extirpation of two small cysts from the liver of a young girl. He asks for a general reconsideration of the attitude of the profession towards this disease, and considers that in a fair proportion of cases, especially in young people, it may be found possible to remove hydatid, adventitious cyst and all, at one sitting, thus leaving a clean wound in the liver, which it may frequently be found possible to suture after the manner in which the uterus is sutured in a myomectomy. The advantages would undoubtedly be more rapid healing and less liability to the formation of adhesions. I may be pardoned for giving an account of our experience at the Royal Prince Alfred Hospital during the last couple of years, during which 70 cases have been submitted to operation.

I should, however, like to criticize the pathology as stated in Buckley's paper. He uses the term "ectocyst" as equivalent to "adventitious cyst"—a use of terms which is common, but none the less incorrect. Before proceeding further it would be as well to give an account of the pathology as generally accepted. The hydatid proper consists of a mother cyst, composed of two thin cyst walls fused one with another—the ectocyst, a laminated layer; and the endocyst, a granular layer. This mother cyst lies within an adventitious cyst, composed of fibrous elements due to the reaction of the tissues of the host against a mildly irritating foreign body. I am not aware that this adventitious cyst contains any elements drawn from the parasite. Although a great many cases have been carefully examined in our laboratories in Sydney no such elements have ever been found, and I should be grateful to Mr. Buckley if he can give a reference to any authority who shows otherwise. Normally the mother cyst is slightly adherent to the surrounding wall of the adventitious cyst, but as a rule it is quite easy to draw it out once the adventitia has been freely opened and the fluid allowed to escape from the hydatid.

The criticism which I should be disposed to make on Buckley's suggestion is, that he proposes to turn a safe operation into a very serious one. The ordinary operation of marsupialization, in small cysts, performed by a competent surgeon, is probably the most trifling in abdominal surgery, if any abdominal operation can be called trifling; and the results in such cases are equal to those of any other operation whatever. Why, therefore, deliberately go out of one's way to perform a dangerous operation, which may involve risk of great haemorrhage, and may result in leaving a large raw cavity in the liver? Any operating surgeon will testify to the great difficulty always found in accurately closing wounds of the liver; the numerous methods which have been devised with this end in view bear full witness to the nature of the problem. Frequently it is found impossible, and the surgeon ends by packing the cavity with gauze; and it is difficult to see where the advantage lies in this over the simple method of leaving a tube in an adventitious cyst. I freely admit that in the cases mentioned by Mr. Buckley it is quite possible, and not necessarily difficult, to extirpate the adventitia; but these are the very cases which can be easily cured by an operation of marsupialization taking ten minutes, without appreciable risk, and with an easy and rapid convalescence. I fancy the prejudice against marsupialization is founded on the results of difficult and complicated cases, which could not be cured by any other method.

Of our last 70 cases in the Prince Alfred Hospital, 34 were males and 36 females. Only three were less than 10 years of age; but this does not represent the true incidence, as a considerable number of children with hydatids are treated at the Royal Alexandra Hospital for Children. There were 7 deaths, all in complicated cases. No case of simple hydatid, treated by marsupialization, died. A remarkable feature was that no fewer than 12 cases had already been operated upon for the same condition; none of these had been infected at the previous operation, but all of them were obviously cases of latent cysts which had grown since the first operation, or else of reinfection from dogs in the house. One case came back again no less than twelve years later.

Another surprising thing is that in 19 cases the hydatid was suppurating, and in two of these rupture had taken place. Two died.

Four cases had ruptured, and of these 3 died.

Of the 7 deaths, 2, as already stated, were in suppurating cases; they died from exhaustion. The average mortality from ordinary abscess of the liver, or from subphrenic abscess, is probably considerably higher than 10 per cent. Three other deaths were in ruptured cases, general peritonitis ending the scene. It must be remembered that the liver is a great destroyer of germs from the portal system, and it is possible that some of these escape into the abdomen when a hydatid ruptures, and thus set up peritonitis. There is no doubt that rupture of a hydatid of the liver into the abdomen is a very fatal accident. Two of the cases were already suppurating.

The other two deaths were in complicated cases. One was an old man with three large cysts, two in the liver, and one in the spleen. He had a fatty heart and was in a most feeble and debilitated condition. He might have died from a trifling operation of any kind, or from a broken leg. The other was a woman with general waxy disease and old tuberculous peritonitis.

Most of the simple cases left the hospital in from three to six weeks, the period depending apparently more on the practice of the surgeon than on any other cause. That the sooner the tube could be removed the sooner the cyst closed up seemed to be the general rule. Since I have been removing the tube in four or five days convalescence has been much quicker in my own cases. The longest time in hospital was sixteen weeks, in a suppurating case. One feeble old man developed pneumonia, and was fourteen weeks in hospital. One had hectic; lime deposits formed in the sinus, which had to be scraped out; he was fourteen weeks in hospital. One was entirely healed at the end of three weeks. The others were all discharged with a trifling sinus about 1 in. long, which in every case seems to have closed entirely at the end of a few days.

It must be remembered that in many cases the cysts were gigantic, holding quarts of fluid; almost it became a question whether the hydatid was parasitic on the man or the man on the hydatid. Some of these country patients seem to go on for years in comparative ill health without troubling to seek advice; perhaps their lonely lives develop along a groove, and they do not care to face the long journey and the hurrying crowds of the city. I have notes of cases extending over eight, nine, and even ten years, who even then were only driven to the hospital by the advent of some urgent, perhaps desperate, complication.

It is pretty clear, therefore, that the technique of marsupialization, as practised in Sydney, gives extremely satisfactory results, and I am convinced that in view of these results we should not be wise to make any great change in our methods.

In these 70 cases three hydatids were totally excised. These were all small cysts on the lower surface of the liver, all superficial, all the subjects of calcification. In one of these it was found possible to close the cavity in the liver with stitches. The other two were packed with gauze. One of the cases had a stormy convalescence, and nearly died. All these cases were the subjects of ordinary fluid hydatids, which were drained. The excisions were merely by-operations on small cysts accidentally discovered; whether these would have done any great harm if they had been left alone is another matter. As I showed in a former paper, the presence of an old calcified cyst appears frequently to cause neurotic phenomena in women, which may justify the running of a certain amount of risk by their removal. Possibly these phenomena may depend upon hepatoptosis, due to the weight of the nearly solid mass of fibrous tissue and lime salts which sooner or later takes the place of the hydatid.

Since reading Buckley's paper I discovered a small hydatid in the liver of a woman upon whom I was operating for gall stones; at the end of the operation I made an attempt to extirpate the hydatid, but it was so

densely adherent that I thought it wiser to desist. Either it will perish, as the result of the cholecystectomy, or, should it survive, it will require operation at a later date, when the patient is in a fit condition to stand further interference.

In one case the hydatid was so deep in the liver that it was deemed better to leave it alone, in the hope that the cyst might degenerate, or that it might reach a more accessible situation in the future.

The general technique at this hospital has become standardized by thirty years of experience, and does not differ materially with the surgeon. Access was obtained in 56 cases by the anterior route; in 19 by excision of a rib. Thus there were more operations than patients; in several cases there were multiple cysts, and in a few the cyst extended entirely through the liver, and a tube was passed from back to front of the patient.

The customary method is to expose the liver; usually the cyst is obvious on the surface. Should it not be seen the liver is palpated, and an aspirating needle is thrust into any dense mass observed. When fluid is withdrawn some surgeons inject a little pure formalin, with the idea of killing any live scolices; some merely leave the needle *in situ*, and quickly plunge a knife deep into the cyst. The finger rapidly follows the knife, and hooks the surface of the liver outside the abdomen, allowing the fluid to escape into a bucket. It usually rushes out with great force, so care is always taken that onlookers and assistants stand well clear of the torrent. The opening in the liver is then enlarged and the mother-cyst drawn out with ovum forceps. The inner surface of the adventitious cyst is next swabbed out with weak formalin or iodine solution, and the edges of the wound in the liver stitched with a continuous suture to the abdominal wall; a large tube is now inserted into the cavity, and the patient sent back to bed. In most cases recovery is rapid and complete.

Should it be necessary to resect a rib, access is obtained through the pleura and diaphragm; no collapse of the lung is ever observed. It is customary to stitch the edges of the orifice in the cyst and the diaphragm together to the abdomino-thoracic wall. Recovery is equally satisfactory.

There is no case in our records, so far as I have seen, where autoinfection during the operation has occurred.

The after-treatment simply consists of removing the tube in a few days, keeping the skin wound open with gauze or a small tube till complete healing takes place. Some surgeons wash out the cyst daily with weak iodine solution.

Should there be more than one cyst present, it may be necessary to make a second or even a third incision, but frequently it is possible to drain the second through the first by penetrating the thin wall of intervening liver tissue.

The operation, as can readily be imagined, is accompanied by little shock or haemorrhage, and the results on the whole are extremely good.

I would venture to remark, as a final criticism on Mr. Buckley's operation, that one of the cysts ruptured while it was being removed. The serious results of such an accident may easily be imagined, should scolices lodge in the large raw surface of the liver wound.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, September 20th, 1913, p. 725.

THE South Devon and East Cornwall Hospital and the Royal Albert Hospital, Devonport, each receives a bequest of £500 under the will of the late Mr. Robert Bayly of Annery, near Bideford, Devonshire.

THE following officers of the recently formed Association of Assistant Medical Officers of Asylums in England and Wales have been elected: *Chairman*, E. L. Dunn, Berkshire Asylum, Wallingford; *Honorary Treasurer*, W. Maule Smith, 2, Victoria Road, Bromsgrove; *Honorary Secretary*, F. J. Stuart, Berry Wood, Northampton.

IT is announced that owing to the diminution in his emoluments due to the smaller number of births, marriages, and deaths to be registered, the registrar of Matlock has resigned, believing that he will make a better living at his old trade of carpentering. He states that the fees have fallen from over £300 a year to less than £40.

TWO CASES OF TUBERCULOUS PERITONITIS AND SALPINGITIS WITH MENSTRUAL COMPLICATIONS.

BY WALTER G. SPENCER, M.S.,
SURGEON TO THE WESTMINSTER HOSPITAL.

MR. ALBAN DORAN has kindly given me advice on the following cases and furnished me with references:

1. *Intermittent Haematosalpinx attending Menstruation following Tuberculous Peritonitis and Salpingitis.*

A girl, at the age of 5, began to suffer from attacks of abdominal pain, accompanied by vomiting and diarrhoea. The attacks were attributed to tuberculous peritonitis; her health was frail, but with unremitting care some improvement gradually ensued. Menstruation, which began at 13, was at first approximately normal, except for some clot. Later on it was accompanied by much general disturbance and also by severe abdominal pain, which was at its worst before the onset of the flow; with the pain there was a general swelling of the lower abdomen. Later, along with the general swelling, a special swelling came to be noted in the iliac region of each side; it was more marked on the left side, where the pain was usually more severe. The pain and swelling of the abdomen subsided as the menstrual flow set in. This flow came to resemble thick ink, except that towards the end it sometimes got thinner and redder.

I saw the patient first in July, 1910, at the age of 15. The menstrual period previous to my examination had been much the worst. She was a thin, slight girl, with normal breasts and pubic hair. The abdomen below the umbilicus was tumid; behind the left rectus there was a tense swelling 2 in. in diameter. During the following fortnight this swelling increased in size, and became more painful until a flow of thick, inky fluid began to escape. On the day before the operation there were ink-like stains on the diaper, and the nurse syringed blackish stuff from the vagina.

Operation.

An incision was made through the left rectus muscle, which exposed dense adhesions between coils of small intestines and the fundus of the uterus, and when these had been separated the tubes and ovaries were found matted together behind it; the appendix vermiformis was not involved.

Right Side.—The right ovary presented a cyst the size of a pullet's egg, which ruptured; the right tube was thickened, dilated, and twisted S-shape. There was a sharp kink in it about an inch from the uterus, but between the kink and the uterus the tube seemed normal. The portion removed was the cystic part of the ovary and the outer part of the tube, leaving 1 in. connected with the uterus, together with the remainder of the ovary.

Left Side.—The left ovary was covered by adhesions, but was separable from the left tube. This was more thickened and dilated than the right; it also had a sharp kink about 1 in. from the uterus. There remained on the left side after the removal the ovary covered by adhesions and 1 in. of the tube next to the uterus.

After-History.

The patient recovered slowly; a sinus formed at the lower angle of the wound which did not heal for a year; from it some blood-stained fluid escaped during menstruation. A year after the operation the patient was seen with the sinus definitely closed, and a marked improvement in her general health had taken place. She was still somewhat anaemic and had had nose-bleeding from the usual point on the septum, but menstruation was regular and normal; she emphasized the great benefit experienced from the absence of all abdominal pain during menstruation.

I have seen her recently—three years after the operation. She is now 18, has grown, is in good health, and has a fresh colour. Menstruation occurs regularly, and the flow is bright red without clots. The periods usually begin with slight pain in the right leg, but there is no abdominal pain, and she is not hindered in any way during her periods.

I took the portions of tubes removed to the College of Surgeons, where they are now in the museum (series Injuries and Diseases of the Female Organs of Generation, No. 201). Mr. Shattock at first thought the specimens an instance of primary carcinoma associated with tuberculosis, but, after further examination and consideration, concluded that the tubes showed a peculiar diffuse tuberculous infiltration.

2. *Tuberculous Peritonitis and Salpingitis: Caseation: Menstrual Fistula.*

This patient, seen in 1901 at the age of 18, had during girlhood been in weak health and subject to attacks of abdominal pain; lately she had become thinner, paler, and of an earthy aspect. Three weeks before I saw her, after a bicycle ride, a more severe attack of abdominal pain set in, with a temperature of 101° and a pulse of 100. This was followed by the formation of a resistant swelling behind the right rectus abdominis muscle. The patient at the time was so weak that I limited myself to an incision through the rectus, which exposed a cold abscess containing thin, curdy pus. She improved slowly, and ten weeks later menstruation occurred, with a discharge of blood-stained fluid through the opening. As a sinus persisted

with the discharge of menstrual fluid I again operated, and exposed a cavity lined by pulpy granulations. After separating numerous dense intestinal adhesions I was able to remove the right ovary, tube, and appendix, which had been matted together. The tube and, to a less extent, the ovary proved to have been infiltrated by tubercle, which had caseated. The appendix, although involved in the adhesions, had remained unaffected by the tubercle. The left tube and ovary were buried under adhesions. After this operation a sinus persisted for some months, and discharged blood-stained fluid at the monthly periods; finally it healed. I have seen this patient several times in the interval, as well as quite recently—twelve years after the operation. She has remained in good health, free from abdominal pain, and menstruating regularly.

I have not been able to find a case similar to the first on record. The tubes play some part in menstration, and changes similar to those occurring in the mucous lining of the uterus have been described. Haematosalpinx, apart from atresia of the cervix uteri or of the vagina, and ectopic gestation, is rare, and is generally ascribed to some infection,[1] but Bazy[2] did not include a mention of tuberculosis. Macnaughton Jones[3] described a case of haematosalpinx from primary tuberculosis limited to the mucous membrane of one tube. In both my cases the invasion of tubercle seems to have been from the peritoneal aspect. An intermittent discharge of bloody fluid from a dilated tube occurred in a case described by Knaggs,[4] but this happened in a woman about the climacteric who had been exposed possibly to both gonorrhoeal and puerperal infection. Doléris[5] noted the intermittent escape of large quantities of a thin fluid from a tube affected by papilliferous degeneration of the mucous membrane.

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THE ADMINISTRATION OF GUAIACOL IN PULMONARY TUBERCULOSIS.

By GEORGE M. MAYBERRY, B.A., L.R.C.P.I., L.M. Rotunda,

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I believe that guaiacol is not used nearly so much in pulmonary tuberculosis as it might be. It has, no doubt, been used by a considerable number of practitioners, but abandoned as of little use. (1) It was not given in large enough doses; (2) it was not continued for a sufficiently long period; (3) it may not have been possible for the drug to be administered regularly. Even intervals of a few days in the administration have a prejudicial effect.

For eighteen months I gave systematically guaiacol in a fairly large number of cases, mostly of the bronchial type, and though I got no satisfactory results with 5-minim doses three times a day for a couple of months, I found that by gradually increasing the dose up to 12 minims three times a day, and prolonging the period to four months or over, highly satisfactory results were obtained. Many cases of pulmonary tuberculosis no doubt recover when removed from unsuitable to suitable surroundings; and those who claim to have cured cases by tuberculin under such conditions are always open to this criticism, which applies also to guaiacol, but in most of the cases in which good results were obtained the patients had been in the institution for some time, and showed no signs of deriving any benefit from their stay; on being put on guaiacol improvement gradually set in, and became more apparent as time went on. It has been said that guaiacol upsets the digestion; I always gave it before food, and in no case did it cause harm in any way.

The following short details of five cases on which I have taken special notes leaves no doubt in my mind as to the efficacy of the drug:

1. S. C., aged 22. On admission both lungs were affected, and the amount of purulent sputum in the twenty-four hours was 6 oz. The sputum was so fetid that other patients objected to sleeping in the same cubicle, and he had to be removed to a single cubicle. After 175 days he gained 9 lb., the disease was arrested, and the sputum had entirely disappeared. The patient returned to work, and when last heard of was doing well.

2. W. F. H., aged 26. On admission both lungs were extensively affected, and the disease was spreading rapidly. The amount of sputum in twenty-four hours was 2½ oz. After 204 days' treatment he gained 27½ lb., the disease was arrested and the sputum had entirely disappeared.

3. A. R. H., aged 18. On admission both lungs were affected. He was very weak and had had severe haemoptysis, which had not ceased on his admission. He had a second haemoptysis seven weeks later. The amount of sputum in the twenty-four hours was 4½ oz. On discharge he had gained 22¾ lb., the disease was arrested, and the sputum had entirely disappeared.

4. H. J. W., aged 37. On admission both lungs were affected. He had a severe hacking cough which kept him awake all night and was not relieved by the ordinary sedative mixtures. The sputum in the twenty-four hours measured 5 oz. On discharge, after 175 days' treatment, he had gained 15 lb. in weight, the disease was arrested, cough was very slight, and the sputum had almost entirely disappeared.

5. J. J. B., aged 42, was readmitted after two and a half years with both lungs affected, and in the right was a large cavity. The sputum in the twenty-four hours measured 3 oz. On discharge, after 198 days in the sanatorium, he had gained 13⅛ lb. in weight, the disease was arrested and the sputum had practically disappeared.

I administer the drug in the following mixture, and as a rule find it practicable to increase the dose of guaiacol by 2 minims each week until a maximum of 12 to 15 minims is given three times a day: Guaiacol ʒj, spirit. vini rect. ʒj, syrupi limonis ʒj, spirit. chloroformi ʒij, aqua ad ʒvj. The dose of this is ʒss thrice a day.

I have records of a considerable number of further cases in which marked improvement has ensued on the administration of guaiacol according to the above formula, and feel confident that other practitioners, if they take up this treatment on the lines indicated, will have similar success.

EPIDEMIC CERVICAL ADENITIS.

By

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The cases so clearly described by Dr. J. Gordon Sharp in the Journal of November 15th, 1913, in which the patients are suddenly seized with fever and soon show great enlargement of the lymphatic glands of the neck, without sufficient cause in the throat or elsewhere to account for the condition, seem to belong to the group first described by Dr. E. Pfeiffer in 1889 under the name of glandular fever—*Drüsenfieber*. A very complete and succinct description of the disease occurs in Allbutt and Rolleston's *System of Medicine* from the pen of Dr. Dawson Williams. Dr. Sharp refers to an article in the Journal of June 14th last, where a correspondent describes an epidemic of the fever which had occurred in an institution, and which he considered "to be a new disease." His cases, too, all fit in with the classical accounts of glandular fever, except that he says that the heart was frequently involved—the title of his communication, indeed, was "An Epidemic characterized by Adenitis, Tonsillitis, and Cardiac Complications." This involvement of the heart does not appear to have been previously noted, and it is just possible that the systolic murmurs—and they were all systolic—that so often occurred were merely "functional" in origin and would disappear when the patients fully convalesced.

Until last spring I do not remember having come across any cases of glandular fever, but then my attention was painfully drawn to the condition by two cases which appeared in my own family. They were, shortly, as follows:

Case I.

Girl, aged 14 years, previously in perfect health, except for the occurrence of measles several weeks before, came home from school one day feeling out of sorts, and with a temperature of 104° F. Very soon the glands in the left side of the neck became enlarged and very painful, and a few days later the swelling and tenderness shifted to the right side. The throat was slightly congested, but showed nothing to account sufficiently for the adenitis. She remained quite ill for some days, and had several attacks of epistaxis and vomiting, with a good deal of abdominal pain, and then the temperature fell by lysis, and she gradually made a perfect recovery. We learnt that a number of other girls (about eleven) at the school were taken ill at the same time in the same way.

Case II.

Boy, aged 11 years. Exactly a week after his sister had come home ill he was seized in the same way with high fever and, soon, pain in the neck, with greatly enlarged lymphatic glands. The throat was scarcely at all reddened. He had no epistaxis, but persistent vomiting and a good deal of abdominal pain. The swelling at first was on the right side of the neck, but soon the

left became involved, and there was some swelling and tenderness of the axillary and inguinal glands. There was no eruption present in either his case or that of his sister. After about a week of high fever the temperature gradually settled, and he was soon up and about, but the first glands to enlarge (those in the right neck) did not go down, and he remained pale and weak. Nearly a month from the onset these right cervical glands began to further enlarge, but there was no fever, and frequent blood counts showed no leucocytosis—one report was as follows: "Red cells 4,500,000, white cells 7,000, haemoglobin 88 per cent.: differential count shows no abnormal cells, polymorphonuclears 60 per cent." Tuberculosis was feared, although there was no other indication or likelihood of this. The local condition suggested suppuration, but as this is said never to occur in glandular fever we waited for a few days, but at last pointing left no doubt about the presence of pus, and my colleague, Dr. Primrose, opened the abscess under a general anaesthetic, and put in a deep drain. The white cells numbered only 7,200 just before the operation, but mounted to double that number for a few days after it. The wound healed completely in two weeks, and after that convalescence was uninterrupted. The pus showed a pure culture of streptococci.

In neither of these cases did nephritis occur, nor did it seem to be present in any of your two correspondents' cases, although all writers refer to its frequency.

The bacteriology of this very infectious disease is as yet unknown. In our second case, as mentioned, streptococci were found in the pus. They may have been there as a secondary infection, but in one of the cases described by your correspondent in the June letter streptococci were obtained from the blood.

The disease appears to be a rare one, but a number of epidemics have been described. Such a one, I am informed, occurred in a hospital in London, Ontario, some years ago, and necessitated the closure of the building for a short time.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANOTHER SIMPLE METHOD FOR DIMINISHING CHLOROFORM AND ETHER SICKNESS.

I HAVE read Dr. J. Crawford Renton's method with considerable interest.

Several years ago I came to the conclusion that post-operative vomiting was mainly due to the nauseating smell of the anaesthetic (particularly ether), which often hangs about the nasal cavities for days. To obviate this I apply eau de Cologne on a mask immediately on ceasing the anaesthetic, and instruct the nurse to continue to do so for half an hour after the patient is back in bed.

I do not for a moment suppose that eau de Cologne possesses any specific virtue for the purpose, but simply replaces an unpleasant smell with a pleasing one. The results are so satisfactory that I now practise it as a routine.

E. M. BARKER,
Physician to the East Sussex Hospital,
St. Leonards-on-Sea. Hastings.

IODINE APPLICATIONS IN DIPHTHERIA AND SCARLET FEVER.

SOME months ago it occurred to me that iodine, because of its great bactericidal powers, might be of service in diphtheria if applied locally. I therefore tried it in the form of ung. iodi, known as iodex, which contains 5 per cent. of free iodine and seemed to me to be well adapted for the purpose.

I have now used it in 30 cases of diphtheria and 19 of scarlet fever, and in 10 other cases suspected of diphtheria or of scarlet fever but proved to be septic throats of various origin and degree. The result has been very satisfactory, the iodine ointment being more effective than anything I had previously used. One of its great advantages is that it is not unpleasant to the patient—an important point in treating young children.

I use three cotton-wool mops, two to remove secretions and false membrane and to dry the surface as far as possible; the third, well smeared with the ointment, is thoroughly rubbed on the affected surface and its surrounding area. This is done every three hours, or in very severe cases every two hours, until improvement occurs. When using other applications I had generally found it necessary for the cases to be dressed every hour in the daytime and every two hours at night.

Under the iodine treatment many cases of diphtheria clear up within a few hours, becoming quite free from false membrane on the second or third day. The septic cases and those due to specific disease also promptly recovered, and the scarlet fever cases were remarkably free from local complications.

A. HARRISON THOMAS, M.B., B.Sc.Edin.,
Medical Superintendent, Taunton and District Fever Hospital.

IDENTIFICATION OF RAT-FLEAS IN COLOMBO.

IN February, 1912, I commenced a systematic examination of the rats, principally *Mus rattus*, caught by the municipal rat-catchers within the boundaries of the city of Colombo. I paid particular attention to the presence or absence of lesions said to be characteristic of chronic rat plague and rat leprosy. Simultaneously collections were made from live rats, of the *Siphonaptera*, and certain small acarine parasites harboured in the rat fur.

The fleas have been identified by the Hon. N. C. Rothschild as *Xenopsylla astia* (Roths). This species was first described by Rothschild from specimens caught in Rangoon.[1] The acarina have been identified by my brother, Mr. Stanley Hirst, of the Arachnida Department of the British Museum (Natural History). A description of a new species found among them appears in the latest number of the *Bulletin of Entomological Research*. Thanks to the kindness of Captain Patton, I.M.S., Dr. W. R. MacDonald, Health Officer Corporation of Madras, and Dr. K. Rama Menon, of the Plague Hospital, Madras, I have been able to obtain collections of fleas occurring on *Mus rattus* in Madras for comparison with the Colombo species. I now learn (November, 1913) that the Hon. N. C. Rothschild identifies these also as *X. astia*.

In the seventh report on plague investigations in India, December, 1912, I find it stated that practically the only species found on the rats in Madras City is *X. cheopis*.

I have been successful in breeding numerous fleas from the eggs laid by fleas caught on live Colombo rats.

I have carried out experiments on the readiness with which these fleas bite man on the same lines as Miss H. Chick and C. J. Martin[2]; unfortunately, however, I am not in a position to utilize *X. cheopis* as a control, as is eminently desirable.

The results hitherto obtained (July to October, 1913) seem to indicate that *X. astia* seldom bites man at temperatures over 80° F. At temperatures between 70° F. and 80° F. the flea exhibits greater activity, bites man more frequently and the control rats with less delay.

Plague is endemic in Rangoon, but not in Southern India or Ceylon. No epidemic of plague has yet occurred in Colombo. In spite of the susceptibility to plague infection of the Madras rats, no epidemic of any importance has been recorded in the city within recent times.

I venture to suggest that an investigation into the relative geographical distribution of *X. cheopis* and *X. astia* in Southern India and Burma and into the relative infectivity of these fleas as porters of plague, carried out at different temperatures and under various climatic conditions, might throw additional light on the epidemiology of plague.

L. FABIAN HIRST, M.D.Lond., D.P.H.,
Bacteriologist, City of Colombo.

[1] *Novitates Zoologicae*, June, 1911.
[2] *Journal of Hygiene*, 1911.

AN interesting abstract in the *Tropical Diseases Bulletin* (vol. ii, No. 10) deals with a paper by Surcouf on the transmission of the *Ver. macaque* by a mosquito. The author brings forward strong evidence to show that the eggs of the fly, *Dermatobia cyaniventris*, get attached to the thorax and abdomen of a mosquito named the *Lanthinosoma lutzi*, and that the larvae which emerge penetrate the skin by way of the puncture wounds made by the mosquito when sucking blood. The exact method of entrance of these larvae has hitherto been unknown, though a suspicion that they were in some way or other connected with mosquitos has been general amongst the laity from time immemorial.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

PUBLIC HOSPITAL, BELIZE, BRITISH HONDURAS.

INTRASPINAL INJECTION OF MAGNESIUM SULPHATE IN TETANUS.

(By Charles Mackey, M.B., B.Ch.Vict.)

A native boy, aged 12 years, presented marked symptoms of tetanus (trismus, risus sardonicus, and rigidity of muscles of neck, back, abdomen, and limbs). Handling him brought on tetanoid contractions. The method of treatment was that given by Dr. Tidy in the British Medical Journal of May 24th, 1913: 10 c.cm. of cerebro-spinal fluid were withdrawn and 3 c.cm. of a 25 per cent. solution of magnesium sulphate injected. The temperature was 98.4° and the pulse-rate 72. Four and a half hours later the temperature rose to 101.8° and the pulse-rate to 90. The patient's condition did not seem changed on the following day, but forty-eight hours after the introduction of the magnesium sulphate he seemed much better. He could separate his jaws to the extent of 1½ in., and muscular rigidity was less marked. On the third day the symptoms of tetanus returned; in fact, the patient appeared worse than on the day of admission. The temperature oscillated between 97.4° and 98.6° and the pulse-rate from 62 to 72. As on the fourth day the boy showed no change, 10 c.cm. of cerebro-spinal fluid were withdrawn and 3.75 c.cm. of the magnesium sulphate solution injected. On the fifth day there was no improvement. On the sixth day the muscles were less rigid. On the seventh day the patient was much better, and from this time onwards his recovery was progressive.

Owing to the restricted facilities in isolated places such as are met with in the tropics and also to the greater frequency of tetanus in warm climates, the magnesium sulphate treatment might be very useful. I have found the serum treatment of tetanus in the tropics to be very disappointing.

I am aware that too much significance ought not to be attached to the treatment of a single case, but perhaps this report may usefully compare with Dr. Tidy's account of a case in which magnesium sulphate and serum were used.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

LANCASHIRE AND CHESHIRE BRANCH.

At a meeting held in conjunction with the Manchester Medical Society at the Royal Infirmary, Manchester, on December 17th, 1913, the exhibits included a series of some fourteen or fifteen medical cases, an equally full series of surgical cases, and a considerable number of patients suffering from disorders belonging to special departments of medicine and surgery. Among the medical exhibits were the following: Dr. Brockbank, an example of spleno-medullary leucocythaemia in a child aged 5; Dr. Core, a case of Hodgkin's disease in which the mesenteric glands were markedly enlarged; Dr. C. E. Lea, a patient suffering from hystero-epilepsy associated with catalepsy; Dr. Tylecote, a patient whose superficial abdominal veins were in a state of thrombosis; Dr. Reynolds, a case of Hodgkin's disease which had benefited by arsenical treatment; Dr. Vipont Brown, a case of mitral stenosis in which the heart sounds were very loud. Among the surgical cases were the following: Mr. A. H. Burgess, a case in which both patellae had been simultaneously fractured and repaired by operation; Mr. Hey, an example of Madelung's deformity; Mr. John Morley, a case of aneurysm of the ilio-femoral artery which he had treated by ligature of the external iliac artery—also a case in which myositis ossificans had set in subsequently to an injury; Mr. R. Ollerenshaw, two cases in illustration of application of a new splint for the treatment of birth palsy, and a case of prolapse of the urethra in a child; Mr. H. H. Rayner, an example of congenital bilateral dislocation of the hip. Also shown by Dr. Sturrock and Mr. Ollerenshaw was a patient after decapsulation of the kidneys for chronic nephritis. Dr. Milligan's series of ear cases included a patient whose larynx had been completely excised two years previously owing to the existence of carcinoma, and one of epithelioma of the auricle with involvement of the adjacent tissues; it had been treated by removing the squamous and mastoid portions of the temporal bone. Other exhibitors of cases were:—Skin cases: Drs. Lancashire, Savatard, and Dyson. Eye cases: Dr. J. Gray Clegg. Medical cases: Drs. Ashby, Lapage, Marsden, and Murray; and Mr. Sewell a specimen of exostosis of the ear. The evening also included a demonstration of methods of screen examination with and without the use of bismuth by Drs. Barclay and Bythell.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

At a meeting on December 12th, 1913, Dr. M. J. Gibson, President, in the chair, Dr. Gibbon FitzGibbon showed the left tube, right ovary, and uterus of a woman aged 40, whose second and last child had been born five years previously. When admitted to hospital in October a tumour was found in the middle line reaching to within 1 in. of the umbilicus. The uterus could not be definitely separated from this tumour, and there was a large mass behind the uterus filling Douglas's pouch and rather fixed, but separate from the tumour in front. The condition suggested multiple fibroids, except that the front tumour was distinctly cystic. At the operation the right ovary was found cystic, about the size of a fetal head, and adherent to the fundus of the uterus and intestines. This was removed and then the left tube, which was enlarged to about the size of an elongated cricket ball, was found adherent to Douglas's pouch; when this was removed a hard nodule was found in the bottom of the pouch and connected with the cervix, and as it seemed rather suspicious it was decided to do a hysterectomy; this was done as low down as necessary on the vagina to get below the nodule, and when the posterior wall of the vagina was divided it was found that the nodule was adherent to the rectum, requiring the removal of a piece of bowel about the size of a shilling. The nodule was growing from the cervix and was extra-peritoneal. The ovary showed histologically a carcinoma of a squamous type and rather suggestive of sarcoma. The tube was solid, and proved to be a columnar carcinoma quite unlike the ovary. The nodule on the uterus rather resembled the ovarian cancer. The combination of two distinct types of cancer in the tube and ovary at the same time was curious, and since the third centre of disease in the uterus resembled the ovarian cancer, which was completely removed from the region of the uterine disease, it raised the question of whether the uterine or ovarian growths were independent and if not which of the two was primary. A further point of interest was the rapidity of the growth, for there was no suggestion of any growth twelve months previously—the only suggestion being an early carcinoma of the body of the uterus. The patient left hospital in five weeks in better health, but there was very little hope that the whole disease could have been eradicated. Dr. E. H. Tweedy considered that Dr. FitzGibbon took too gloomy a view of the result in this case. From the appearance of the specimen it seemed that the tumour was got out very well, and as there had been a great deal of inflammation all round it was unlikely that the disease would rapidly spread. He expressed the opinion that the patient would not have a recurrence for a long period. Sir William Smyly agreed with Dr. Tweedy's opinion, but suggested that the patient should look out for recurrence in the rectum. Dr. FitzGibbon, in reply, said that his reason for taking such a gloomy view of the result in this case was the apparently very rapid growth of the cancer: from

its microscopic appearance it evidently was a very rapidly growing one. He also mentioned that he had found small nodules on the back of the bladder and the peritoneum.

ROYAL SOCIETY OF MEDICINE.

SECTION OF PSYCHIATRY.

AT a meeting at the Royal Bethlem Hospital on December 15th, 1913, Sir GEORGE SAVAGE in the chair, the series of cases shown by the staff included the following:—Dr. W. H. B. STODDART: (1) A case of *Polyneuritic psychosis* in a middle-aged woman, with very severe peripheral nerve disturbance. She was wearing splints, suggested years ago by Gowers, to prevent contractures. She heard quite well ordinarily, but mention of a particular etiological factor found her quite unresponsive. A demonstration caused her to be very suspicious. She had both rectal and vesical difficulty, but probably it was really mental. She slept but little, and was constantly hearing voices. There had been some psychical blindness, and a test with a bottle of whisky showed the defect to be purely psychical. (2) A case of *Hypopituitarism* in a married woman, aged 69, formerly an actress. She had been admitted ten months previously with mental confusion and occasional lapses of memory, restlessness, hallucinations of vision, and cutaneous sensations, which latter had now passed off. She was still feeble, and had recently developed thickening of lips and tongue. She had an increased capacity for sugar, being able to take 350 grams of dextrose without any being excreted. She improved while taking large doses of pituitary extract, but not upon thyroid extract. She was mildly depressed, but sometimes was witty. Dr. RALPH BROWN: (1) A case of *Congenital neurasthenia* in an artist's assistant, aged 19. There was no nervous heredity, but when aged 9 the patient received a blow on the head. Definite depression dated from early in 1912. He became morbidly introspective, and unable to do work; he said he had committed the "unpardonable sin" (blasphemy). His habits were seclusive, and he recently threatened suicide. (2) An unusual case of *General paralysis* in a man aged 45, a tea inspector. His father died of phthisis, and he had a brother an epileptic. There were visual and auditory hallucinations, and both recent and remote memory was poor. The knee-jerks were increased, but there were no other physical signs of general paralysis. Lumbar puncture, performed in May last, showed the cerebro-spinal fluid to be normal. The Wassermann reaction (both blood and cerebro-spinal fluid) was negative. Speech was slow and rather hesitating, and there was some fibrillary tremor of the tongue. He had delusions of a megalo-melancholic nature, and auditory hallucinations of a persecutory type. There had been no antisyphilitic treatment. It was not uncommon, the exhibitor said, for cases of general paralysis to reach an advanced stage with but little abnormality of pupils; but it was less common to find the Wassermann test negative. A positive Wassermann reaction in the serum and cerebro-spinal fluid was of great diagnostic value, but a negative one was not conclusive.

SECTION OF DERMATOLOGY.

AT a meeting on December 18th, 1913, Dr. J. J. PRINGLE, President, in the chair, the following were among the exhibits:—The PRESIDENT: A man, aged 30, with typical *Fordyce's disease* of the lips of about fifteen years' duration. As was often the case, the subjective symptoms were greatly disproportionate to the visible changes. In asking for suggestions as to treatment, the exhibitor said his personal experience of *x* rays had been disappointing. He had heard of the successful use of radium in one such case, it being probably employed "naked" in small and frequently repeated doses; he proposed to apply this method in the case shown. Dr. SIBLEY recommended sodium salicylate cataphoresis, Dr. PERNET electrolysis, and Mr. BEDDOES arsenical paste. Dr. WHITFIELD advocated the surgical removal of skin and subsequent grafting if no good results were obtained from full pastille doses of *x* rays. Dr. DUDLEY CORBETT: A man, who had contracted syphilis in 1885 and who now presented marked *Macrocheilia* of the upper lip dating from 1902. The Wassermann reaction was positive; the patient was a heavy smoker and had a very septic mouth. Dr. SEQUEIRA said he had seen a similar case greatly improved by salvarsan. Dr. GRAHAM LITTLE suggested extracting the teeth. Dr. WHITFIELD recommended the use of salvarsan combined with mercury and the removal of the teeth. Dr. A. M. H. GRAY and the PRESIDENT added their testimony to the efficacy of salvarsan in such cases. Mr. BEDDOES: Recent malignant growth on the finger of a medical man who had suffered from *x*-ray dermatitis for at least nine years. Dr. SEQUEIRA recalled a similar case observed by Darier which developed eleven years and seven months after exposures to *x* rays. Dr. WHITFIELD said he had observed the appearance of an *x*-ray ulcer twelve years after *x* rays were employed to locate a needle in the foot. Dr. ADAMSON pointed out that this case illustrated the fact that epithelioma might be consecutive to large as well as to repeated small doses of *x* rays. All three speakers strongly advised free excision of the growth. Dr. GRAHAM LITTLE referred to a case observed by Darier arising in circumstances identical with that reported by Dr. Whitfield, and Dr. MEACHEN mentioned two cases of severe dermatitis occurring five and seven years respectively after the *x*-raying of scrofulous glands and ringworm. Dr. KENNETH WILLS (Bristol) said that he had found carbon dioxide snow useful in the removal of warty growths resulting from *x* rays. Dr. DORE: (1) A boy aged 4½ years with *Congenital hyperkeratosis* of the palms and soles, which was noticed at birth. Similar keratoses were present over the elbows and knuckles and dorsal aspects of the ankles. The exhibitor discussed the relationship to ichthyosis, and thought that in view of the difficulty of classifying these cases it was better to retain the name of congenital hyperkeratosis. Dr. MACLEOD thought the condition had best be classified as a form of naevus, and said that in true ichthyosis the palms and soles were rarely affected. Dr. PARKES WEBER considered that keratoses of the extremities constituted a class by themselves. Dr. WHITFIELD and the PRESIDENT, while agreeing that such cases as that exhibited were not examples of true ichthyosis, were of opinion that in true ichthyosis the palms and soles were almost invariably involved to some extent, although not in the manner exhibited in the patient. (2) A case of *Congenital alopecia* in a boy aged 2, which had been complete at birth, but tufts of hair had since grown on the vertex and in the occipital region and elsewhere. The Wassermann reaction was negative. Dr. SEQUEIRA's experience was that the Wassermann reaction was negative in all such cases. Dr. MACLEOD exhibited a boy who presented the lesions of lichen spinulosus as well as those of lichen planus. The lichen spinulosus had been present for about four years, but the lichen planus had developed on the flexor aspects of the arms and legs only within the last few weeks. He considered that the case was not an example of the lichen-plano-pilaris which had been described by the President. The PRESIDENT concurred in this view, and added that the disease with which his name had been associated occurred in adults, and that the spiny and plane lesions which developed successively were probably clinical expressions of one pathological condition. Dr. ADAMSON said that lichen spinulosus in the adult was in his experience always the precursor of lichen planus. Dr. WHITFIELD was of opinion that spinulosus papules might occur any time before the onset of a lichen planus, and did not follow the same course. Dr. SIBLEY: (1) A case of extensive *Erythematous lupus of the scalp and face* treated with carbon dioxide snow dissolved in acetone. Various members discussed and criticized the treatment, all agreeing that the essential condition for success was the production of a superficial atrophy after an appropriate amount of cutaneous reaction. In reply, Dr. SIBLEY stated that the pain produced was not unduly severe, and that the method was applicable both to the "fixed" and more diffuse vascular types of the disease. (2) A case of *Stomatitis neurotica chronica* of ten months' duration in a nervous woman, aged 33, the lesions being situated on the buccal mucosa and on the dorsum of the tongue, and always aggravated by worry. The condition had been differentiated by several Continental observers, and he had published three cases in 1899, one of them being of twenty-five years' duration. Dr. ADAMSON regarded the case as annular lichen planus. Dr. PARKES WEBER had seen one similar case successfully treated with a weak solution of chromic acid. Dr. GALLOWAY had observed several identical cases, which he regarded

as the result of oral sepsis. The PRESIDENT was quite familiar with the condition, which he had long considered to be one of recurrent herpes. They were certainly frequently associated with neurotic dyspepsia. In reply, Dr. SIBLEY said none of his cases had ever developed lichen planus, and in one patient all the teeth had been removed without improvement. Dr. A. M. H. GRAY: An example of *Parapsoriasis-en-plaques* of three years' duration in a middle-aged man, the patches being situated on the thighs, legs, arms, and back. Great improvement, especially as regards diminution of the itching, had resulted from the use of the Kromayer lamp. Dr. SEQUEIRA: A case of *Multiple neuromata* in a woman aged 56, the whole of whose body presented innumerable pigmentary patches and small tumours, which had been present since childhood. The diagnosis was in doubt until microscopical examination revealed the true neuromatous nature of these growths; this brought the case into very close affinity with Recklinghausen's disease.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

AT a meeting on December 4th, 1913, Dr. W. S. A. GRIFFITH, President, in the chair, Dr. HERBERT SPENCER read notes of a case of *Primary carcinoma of Bartholin's gland* which he had removed, with the superficial inguinal (carcinomatous) glands, on March 3rd, 1912, the patient being well and free from recurrence on October 21st, 1913. A section through the growth and duct (which was unaffected) showed it to be an adeno-carcinoma with degeneration of the cells, causing it to resemble squamous carcinoma. He also gave an abstract of 14 other like cases, of which only one had remained free from recurrence. The disease, which was very rare, occurred at ages between 28 and 91, half the cases being over 50. The two sides were affected with equal frequency. The disease appeared first as a small, hard, tender lump, accompanied by pain of a severe lancinating character, sometimes passing to the coccyx and groin, and greatly increased by walking, menstruation, and coitus. The skin over it might be bluish, and the remains of the hymen oedematous. The lump was much harder than an inflamed gland, and its surface was slightly nodular. After a time the growth became apparent to the sight and burst through the skin at one or more orifices. The tumour might then become papillary or irregular, or ulcerated on the surface, and might be fixed to the pubic bone. The inguinal glands were early affected. Mr. BECKWITH WHITEHOUSE (Birmingham), in a paper on *The relation of syphilis to the uterus*, pointed out that the occurrence in the uterus of lesions the result of syphilitic infection had long been regarded as extremely rare. Apart from the occasional record of a primary chancre upon the portio vaginalis of the cervix uteri, or the suggestion that some ulcerations in this area might be of syphilitic origin, very little had been written upon the subject. If it were true that the corpus uteri possessed a definite immunity to the ravages of the *Spirochaeta pallida* it was a matter of considerable interest, especially as the relationship was so intimate in connexion with placental and fetal syphilis. He did not think that this was the case, but considered rather that syphilitic lesions of the uterus had been overlooked in the past. In 1912 he had suggested that the underlying pathological factor in some cases of chronic metritis and fibrosis uteri might be syphilis. He had since had an opportunity of investigating by means of the Wassermann reaction 16 patients with a clinical diagnosis of this nature. Several of these cases showed a well-marked positive reaction, although only one gave a history or presented other evidence of direct syphilitic infection. In 3 patients it was necessary to remove the uterus on account of severe haemorrhage unrelieved by repeated curetting and various intrauterine applications. The uteri obtained from these cases all showed well-marked fibrosis and periarteritis or endarteritis of the vessels. The pathological picture coincided with the appearances seen in interstitial myocarditis, orchitis, hepatic cirrhosis, and other indurative conditions which were generally accepted as being due to syphilis. In view of these facts why, in the case of the uterus, should it be deemed necessary to call for other factors, such as inflammation due to septic causes, repeated pregnancy, etc., to account for an exactly similar lesion, especially when the Wassermann test showed that a certain proportion of such patients were undoubtedly infected? The exact proportion that syphilitic fibrosis of the uterus bore to fibrosis due to other causes must, however, remain undetermined until a longer series of cases could be brought forward. It was possible that errors might arise even in a long series owing to the phenomena associated with "latent syphilis." Knöpelmacher and Lehndorffe had shown that 50 per cent. of the mothers of syphilitic children gave a positive reaction some years after the birth of the last child, although a few months after parturition 90 per cent. of such women reacted positively. The author was of opinion that it was largely from this class that the ranks of the chronic metritis patients were filled. Some cases of pyometra unassociated with malignant disease appeared to bear a distinct relation to syphilis. He had seen two well-marked examples in patients who exhibited indubitable evidence of syphilitic infection, and he had received records of two others. Observations had recently been made upon menstrual blood collected through an intrauterine catheter during the secondary stage of syphilis. Specimens from 5 cases had been investigated, and in 2 the intracellular bodies described by McDonagh and Ross had been found. The presence of such bodies in the menstrual discharge was important as proving a possible source of infection to the uterine tissues through which they passed. At present the *Spirochaeta pallida* had not been demonstrated in the menstrual blood.

HISTORY SECTION.

AT a meeting on December 3rd, 1913, Sir WILLIAM OSLER, F.R.S., President, in the chair, Dr. J. D. ROLLESTON, in the second part of his paper on the *Medical aspects of Greek anthology*, dealt with the allusions to medicine and religion, puerperal mortality, deaths at different ages, modes of death, acute and chronic infection, especially possible references to malaria, tuberculosis, and syphilis, alcoholism and other intoxications, gout, digestive disorders, latrines, baths, cosmetics, deformities, dwarfs and giants, diseases of the nervous system, and veterinary medicine. In conclusion, he stated that though many of the medical epigrams were anonymous or by writers whose date was uncertain, the Greek anthology deserved more attention than it had hitherto received, for the following reasons: (1) It offered numerous illustrations of the relations between Greek medicine and religion, particularly as regards Asklepius. (2) It contained definite references to certain diseases, such as gout, alcoholism, and malaria, as well as numerous allusions to epidemic diseases the nature of which could not be determined. (3) It supplied valuable negative evidence of the existence of syphilis in antiquity in spite of the numerous facilities for the spread of the disease. (4) It illustrated many subjects in the private life of the ancients more or less closely concerned with medicine, such as baths, latrines, cosmetics, prostitution, the homosexual—or rather bisexual—life of the ancients, popular remedies, and superstitions. (5) As a source of medical satire and caricature it deserved to rank with the works of the Latin poets. Dr. CRAWFURD read a paper entitled *Martial and medicine*, in which he cited the chief allusions of Martial to medicine, and gave renderings of these epigrams in English verse. Mr. C. J. S. THOMPSON exhibited various objects of medical and surgical interest, including a chastity belt, an early bullet extractor, and an ivory model showing the internal ear.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on December 18th, 1913, Mr. ROBERT JONES, President, in the chair, Mr. R. E. HARCOURT related the case of a man, 19 years of age, in whom was present *Hypermetropic astigmatism associated with hystero-epileptic fits* and headaches over a period of six weeks. Rest in bed caused the fits to cease, and correction of the refractive error resulted in complete cessation of fits and headaches. Dr. H. ARMSTRONG mentioned the case of a child of 4 in whom homicidal mania was present along with hypermetropia and squint. In this case correction of vision had also resulted in complete disappearance of all mental symptoms. Mr. A. NIMMO WALKER, in a note on further experiences of *Sclero-corneal*

trephining for glaucoma, described three important modifications of the operation originally performed by Lieutenant-Colonel Elliot. The flap was altered in shape, being made a small segment of a large circle parallel to the limbus; the trephine hole was made further forward, and the iris was allowed to prolapse into the trephine hole; a small portion being snipped out with scissors, and the prolapsed portion allowed to fall back into its place. Mr. Walker was of opinion that this operation was by far the best treatment yet discovered for glaucoma. He did not claim that it was an infallible cure for all cases, but it enabled the surgeon to advise an operation which had a good chance of arresting the disease without causing mutilation of the eye or damage to the sight. A patient was shown on both of whose eyes the trephining had been performed. Mr. R. J. HAMILTON said he had seen two cases in which the drainage had not continued after the trephining, and iridectomy had then been done. He had had good results in other cases. Mr. HUGH E. JONES found iridectomy satisfactory, but considered that in some cases tension was kept down better by trephining. Mr. EDGAR STEVENSON considered that the introduction of the trephining operation was the most important step forward in ophthalmology since von Graefe introduced iridectomy. The operation was all-British. Dr. BLAIR BELL described a new operation for the *Treatment of severe salpingitis* in young women. As the internal secretions of the ovary and the menstrual function were important to the general condition of young subjects, he did not in them approve of complete removal of the tubes, ovaries, and uterus. By taking a wedge-shaped portion of the fundus along with one ovary and both tubes he removed the diseased structures and left enough to be of use to the patient. Dr. C. O. STALLYBRASS, in a paper on *Some factors in the spread of typhoid*, showed by large charts that the great fall from 1,300 cases in 1895 to 124 in 1912 was coincident with the fall in the number of courts and alleys in the city. The greater facilities for the isolation of the sick, the supervision of the milk supply and that of other foodstuffs, and the removal of fly-breeding refuse had also contributed. Many cases were imported, mainly sea-borne, and these might be the source of small local outbreaks, especially where one of the patients was a chronic carrier. Shellfish cases were mostly due to mussels from Ireland. Oysters had not for some time given rise to typhoid so far as was known. Typhoid was chiefly spread by direct contact, fingers of a patient or his attendants being soiled by excreta, and in many cases preparation of food by the soiled hands led to spread of the disease. He thought it possible that flies might carry germs to food and so cause infection. It might yet be proved that biting insects also spread the disease. Dr. E. W. HOPE said Dr. Stallybrass's careful work proved and confirmed the views expressed as to the causation of typhoid fever. It had been suggested that the disease was decreasing because the population was acquiring immunity, but the facts presented proved this was not the case; in 65 per cent. of notified cases the origin had been determined accurately.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

A MEETING on December 10th, 1913, Dr. WATSON-WILLIAMS in the chair, was devoted to an exhibition of cases and specimens of *Syphilis*. Mr. ELWIN HARRIS showed a child with chronic tertiary ulceration of the scalp. Dr. J. O. SYMES showed a patient with multiple swellings in and on the tibia and other bones, with a protein body in the urine. The patient was improving with antispecific treatment; the Wassermann reaction was positive. Dr. E. C. WILLIAMS stated that an infant, aged 5 months, with a gumma of the femur, which he was to have shown, had died forty-one days after an injection (intramuscular) of 0.05 gram of neo-salvarsan. Dr. CAREY COOMBS, in showing a case of associated tabes dorsalis and aortic regurgitation, remarked that this was the not uncommon Babinski syndrome, and that syphilis was probably the cause of aortic disease in 75 per cent. of cases. Dr. BERTRAM ROGERS showed an infant, 2½ months old, in whom all symptoms had cleared up and the child put on weight after an intramuscular injection of 0.05 gram of neo-salvarsan. Dr. WATSON-WILLIAMS showed patients illustrating typical tertiary syphilitic lesions of the nose, pharynx, and larynx. Dr. MICHELL CLARKE showed a case of associated congenital syphilis and Graves's disease, and said that he regarded the simultaneous occurrence as accidental. Dr. J. R. CHARLES showed a case in which there were symptoms of tabes in association with plumbism; a positive Wassermann reaction was present, but might, it was thought, possibly be due to the lead. Dr. J. R. KAY-MOCAT, among other specimens, showed one of the site of injection of salvarsan nineteen days after injection. The tissues showed the presence of arsenic in the centre with a surrounding area of hyperaemia and leucocytic infiltration.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on December 4th, 1913, Mr. R. G. HOGARTH, President, in the chair, Mr. P. JOHNSTON FREYER, in an address on *Cancer of the prostate*, said this condition was more common than was generally imagined. He had found 13.4 per cent. of his cases of enlargement of the prostate to be malignant. If the ordinary symptoms of enlargement of the prostate occurred very rapidly and were accompanied by loss of flesh and energy with a good deal of sacral pain, suspicion of malignant disease should be evoked. In these cases passage of the catheter was difficult, but on rectal examination the gland would be found to be hard and fixed to the surrounding tissues. As a rule the only thing to do was to continue to pass catheters as long as possible, and then to make a permanent suprapubic cystotomy and fit the patient with a suitable urinal. Morphine should be given to make the end as peaceful as possible. When cancer attacked a prostate which was already the seat of an adenomatous enlargement, the whole gland could be enucleated with good prospect of success. He had operated on eight such cases during the last ten years with complete success, all but one being alive at the present time. The exception was a man who died of heart disease six years after the operation.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.

AT a meeting on December 17th, 1913, Mr. CHARLES HEATH, who was in the chair, described a case of *Aural suppuration*, with rapid metaplasia of the covering epithelium of the antral lining. The attack of otitis media followed a cold in the head. The infection was a diphtheroid bacillus (Hoffmann's). There were no squames in the discharge at the first examination. Autogenous vaccines were given. Two days later there were a few squames in the discharge. The patient was confined to bed and warmth applied to the ear. At the end of a fortnight squames were found in great abundance in the discharge. The hearing had meanwhile considerably deteriorated, owing to swelling of the attic and tympanic mucous membrane. After a consultation with Dr. Jakins it was decided to operate by the conservative method in order to arrest disease and prevent deafness. At the operation the pericranium and bone were found to be vascular, and there was pus in the antrum. The lining of the cavity was greatly thickened, and the attic was obstructed by swollen mucous membrane. Dr. Wingrave reported that the structure of the antral lining was as follows: "The tissue is granulomatous of a simple type, covered with a distinctly thickened layer of stratified epithelium, whose upper layers are distinctly squamous. Plasma cells are numerous, mixed with lymphocytes and rudimentary blood vessels. There are no 'giant' and no 'syncytial' cells. The epithelium well illustrates metaplastic changes from the simple flattened or cubical type which normally lines the cavity." Such clear evidence of rapid metaplasia was rarely forthcoming, but the history of perfect hearing in both ears up to the onset of otitis media could not in this instance be questioned. The case afforded definite proof of the metaplastic change which Dr. Wingrave was the first to describe, and of the rapidity with which it might occur. The exhibitor wished to emphasize the need of early surgical assistance in such cases with the object of preventing deafness, and for this purpose had brought the matter before the society. Only four weeks had elapsed since the operation, yet the perforation had healed, and the hearing was now equal on the two sides. Mr. Heath also showed several preparations of temporal bones which illustrated some of the

causes of perpetuation of discharge after an attack of otitis media: (1) The inner tympanic wall, showing an unusual sinus beneath the promontory; (2) the inner wall of the tympanum, showing three unusual sinuses, one of which was sub-Eustachian; (3) a bone showing the external semicircular canal projecting into the aditus; (4) a safe antrum with smooth walls and a lining of mucous membrane; (5) a bone showing the route of antral drainage through Shrapnell's membrane; (6) large bone cells in the mastoid process which were separated from the mastoid antrum by muco-periosteum only; (7) a temporal bone showing corpuscular bodies in the antrum, also that drainage escaping through Shrapnell's membrane did not pass through the tympanum at all; (8) the inner wall of the tympanum showing fibrous fixation of the stapes resulting from long past disease; (9) bone showing the sclerosing effect of chronic aural suppuration. Dr. WALKER WOOD read notes of a case illustrating the value of the naso-pharyngoscope (Holmes's) in the diagnosis of naso-pharyngeal and aural conditions. The patient, a woman aged 50, complained of tinnitus and deafness in the left ear and a feeling of a foreign body in the throat. Both ears showed signs of chronic middle-ear catarrh. Ordinary post-rhinoscopic examination was impossible. Naso-pharyngoscopic examination with Holmes's instrument showed the right side to be normal, and on the left side a cyst was found occupying Rosenmüller's fossa. The cyst was removed through Yankhauer's speculum. This was followed by complete relief of abnormal pharyngeal sensation and tinnitus; the hearing also improved. The case had been under treatment for tinnitus in France and Switzerland without the cause being discovered. The exhibitor considered that the cyst was due to degeneration of an adenoid mass in the lateral recess of the pharynx (Rosenmüller's fossa). Microscopic appearances endorsed this view. Cysts in this region were very rare, and he had been unable to find any recorded cases. He had examined the naso-pharynx in 1,850 cases.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting held in Manchester on December 19th, 1913, Dr. W. E. FOTHERGILL, President, in the chair, the following were among the exhibits:—Dr. DONALD (Manchester): A specimen from a case of *Endothelioma of the cervix*, occurring in a woman aged 25; it had been treated by abdominal panhysterectomy. Dr. BLAIR BELL (Liverpool): (1) An example of unusual *Malformation of the uterus*. The uterus was apparently normal except for a small left horn, to which were attached the round and ovarian ligaments; (2) a specimen from a case of *Ampullary pregnancy*, which was on the point of rupture. Dr. CLIFFORD (Manchester) reported a case of *Concealed accidental haemorrhage*, accompanied by haemorrhage into the peritoneal cavity; the bleeding was apparently due to rupture of vessels in the right broad ligament following the great and acute distension of the uterus. The patient was admitted to hospital in a very serious condition, and after a short rest it was decided to open the abdomen and remove the uterus. This was rapidly done, and for a short time the patient rallied, but eventually died six hours after the operation. The urine was loaded with albumin. Dr. LEITH MURRAY (Liverpool) and Dr. LITTLER (Southport) recorded a case of *Adeno-chondro-sarcoma of the endometrium*. The patient was an unmarried woman, aged 46. Microscopical examination of a polypus suddenly extruded from the cervix rendered the diagnosis easy, and a wide hysterectomy was done. Regular glands, sarcoma spindles, islands of hyaline cartilage, and possibly fat cells were present. There was no invasion of the cervix, the muscularis of the body, or the appendages. Dr. DOUGAL recorded a fatal case of puerperal infection with the *Bacillus aerogenes capsulatus*. Dr. BLAIR BELL read a paper upon the cause of the non-coagulability of menstrual fluid and of pathological clotting.

THE late Dr. Frederick Dale, one of the honorary consulting surgeons at the Scarborough Hospital and Dispensary, left estate valued at £29,521 gross, with net personalty £22,849.

Reviews.

PSYCHO-ANALYSIS.

DR. BRILL, who is indefatigable in explaining the doctrines of Professor Sigmund Freud to the English-speaking world, has published another book, entitled *Psychanalysis: Its Theories and Practical Application*.[1] It is a very clear exposition of the views on psychology held by Dr. Freud, whose philosophy, with sex as the basis of a very large part of human activity, is greatly in vogue at present in many schools of thought. For medical men the chief importance of Freud's hypotheses and observations lies in the treatment of certain psycho-pathological conditions. At the same time, Dr. Brill's chapter on the psycho-pathology of everyday life, while concerned with matters which do not generally come under the observation of the physician, is useful in explaining the conception of consciousness upon which the method of treatment by psychanalysis is founded.

In examining any new hypothesis, it is well to remember that however brilliant the apparent discovery may be, however great the credit to be given to the originality of the inventor, still it remains a fact that the enthusiasm of the specialist is apt to carry him further than the facts warrant, and to blind him to the dangers and errors which may lurk in the wholesale application of his discovery to the observed facts of Nature. It is quite possible that, notwithstanding the floods of fiction dealing with so-called sex problems, we do not at present recognize fully the importance of the sexual functions, that we sometimes forget that the only object in life of which the necessity can hardly be questioned is the propagation of the species, and that perhaps all other functions are really subsidiary to this alone. But with the development of civilization it is equally necessary to consider the influences brought to bear on this primary function by the extension of the interests and activities of life; and it may not be wise, even in the cause of truth, to try to reduce all human ideals to the condition of mere manifestations of misdirected carnal desires. At any rate it is clear that Dr. Brill must be a most embarrassing acquaintance if he really walks about the world analysing simple words and actions of his friends in the manner indicated in one or two instances in this book.

We may recur to some of the hypotheses of Freud, to which reference has been made in previous issues, and particularly to that which considers that the newborn child brings with it the germs of sexual feelings, and possesses auto-erotic sexual activities. Inasmuch as no action takes place without a motive, it is explained that thumb-sucking in an infant is a manifestation of auto-erotic sexual activity! Later on this activity displays itself in masturbation; whence it passes to a homo-sexual phase, which finally in normal conditions of the individual gives place to healthy hetero-sexual life!

Existence in a civilized society necessitates the repression of many desires, which sink consequently into the unconscious, though, according to Freud, always remaining active and waiting for expression whenever they have an opportunity to unite with an emotion from conscious life. Everything that is unpleasant or painful is forced down into the unconscious; this repressed material may reappear in dreams, but in an altered form, owing to a kind of psychic censorship. The later repressions consist mainly of erotic material (almost everything is erotic according to Freud). Thus aversion to a mother-in-law is a manifest expression of a latent incestuous love which has been repressed! All sorts of objects become attractive because of their resemblance to the penis. A taste for collecting curious forms of mushroom may lay a woman open to the charge of eroticism; for is not one kind of fungus known by the name "phallus"?

The memory of things we do not like is repressed. If an umbrella is forgotten and left in a railway carriage it is because we do not like or value the umbrella! If the name of some familiar person is forgotten it is because it has unpleasant associations, and so on and so on!

[1] *Psychanalysis: Its Theories and Practical Application*. By A. A. Brill, Ph.B., M.D. Philadelphia and London: W. B. Saunders Co. 1915. (Demy 8vo, pp. 136. 5s. net.)

Psychanalysis (to adopt Dr. Brill's spelling) can be pursued by the methods of "continuous" or of "free" association; and great stress is laid upon the interpretation of dreams, which are stated to represent the realization of a wish. These methods are employed in the diagnosis and treatment of neuroses, obsessions, and psychoses of various kinds. The investigator of Freudian persuasion, being convinced that the majority of these troubles are connected with some form of sexual repression, must needs be a person with the resisting power of Joseph or of St. Anthony if he is to conduct his operations invariably with safety to himself and his female patients. Even if an army of medical men—and the prolonged investigations would need an army to deal with the multitude of obsessions in this world—could be trained to approach the subject of psycho-sexuality with young unmarried females "without prudishness or lewdness," very considerable safeguards will be required to protect the good name of the army from occasional attacks by unscrupulous women.

It is to be gathered from Dr. Brill's book that if by means of psychanalysis the origin of any particular obsession can be traced and demonstrated to the patient, the mere demonstration is sufficient to cure the obsession. Such a statement, as we ventured to observe when last dealing with the subject, requires very clear and decisive evidence before it can be accepted; and the evidence of enthusiastic advocates of one particular treatment is not always absolutely trustworthy. Unconsciously the desire for success colours the result reported. Moreover, it would almost be a miracle if the nature of the patient should be completely changed by the mere demonstration of the cause of a single obsession. A consideration of human nature might suggest that the patient when one devil is cast out will take to himself seven other devils worse than the first. Be that as it may, the cases reported by Dr. Brill are sadly lacking so far as the after-history of the patient is concerned. Take the case of a lady who had a rooted and unreasonable objection to a fellow member of her club who suffered from Titian-coloured hair. Analysis showed this objection to be based upon an unpleasant experience with a red-haired schoolmate forty-eight years previously. But we are not informed whether the objector developed an affection for red-haired ladies as the result of the analysis, nor do we know whether her original prejudice included every red-haired person she met.

To sum up the objections to Freud's psychology as applied to medicine: firstly, it may be said that its narrow basis (for practically it is concerned with sexual activities to the exclusion of almost all others) lays it open to suspicion; secondly, it contains inherent possibilities of danger for patient and doctor; thirdly, the process of psychanalysis is too lengthy for practical purposes (Dr. Brill himself spent five hours and filled twelve pages in attempting to recall a name he had forgotten); fourthly, the results have not yet been thrown open sufficiently to unprejudiced observation.

At the same time, it may be admitted freely that the scheme of philosophy elaborated by Freud is extremely ingenious, well worthy of further investigation, and contains probably many germs of truth. But it is certainly undesirable that this philosophy should be widely taught or discussed outside medical circles; still more undesirable that the methods of investigation should be practised by any casually interested person. As an adjunct to other forms of treatment in a small number of obstinate cases, psychanalysis under proper safeguards may be of considerable value. In most people the attention can be better occupied than in diving into muddy pools of dubious sexuality.

DIPHTHERIA.

THE volume on the *The Bacteriology of Diphtheria*,[2] edited by Dr. G. H. F. NUTTALL and Dr. G. S. GRAHAM-SMITH, is a reissue of a work which appeared in 1908. As the papers published since then have mainly confirmed the opinions put forward in the first issue, the editors have thought it sufficient to give a supplementary bibliography of the more important articles published since 1908. The second issue also differs from the first in a considerable reduction of the price.

The work is divided into six sections, three of which are subdivided into chapters. The first section, which is by Professor Loeffler, is devoted to the history of diphtheria. No mention of it is to be found in Hippocrates, Celsus, Soranus, Galen, or Caelius Aurelianus. The first accurate account of pharyngeal diphtheria was given by Aretaeus of Cappadocia, who lived in Rome at the end of the first century A.D. The disease was believed to have been imported from Egypt and Syria, and was therefore known as the Egyptian or Syriac ulcer, but it only occurred sporadically in those countries, and never attained epidemic dimensions. A full account is given of the epidemic in Spain in the sixteenth century and of the subsequent spread of the disease. Of special interest are the pages describing the discovery of the diphtheria bacillus by Loeffler, followed some years later by the production of antitoxin and its application in the treatment of diphtheria by Roux, Behring, and others.

In the second section Dr. Arthur Newsholme, writing on the epidemiology, seeks to prove that diphtheria is a disease which varies inversely with the rainfall. He also discusses the relation of the administration of antitoxin to epidemicity, the relation between the prevalence and the fatality of diphtheria, the natural variations in the fatality, and the seasonal incidence of diphtheria.

In the third section, in which the pathology of diphtheria is dealt with, Dr. F. B. Mallory describes in detail the local systemic and secondary lesions and experimental diphtheria. His account is based on 251 necropsies on cases of diphtheria in the Boston City Hospital. In view of the findings of other observers, it is noteworthy that in none of his cases did the adrenals or hypophysis show any naked-eye or microscopical changes.

The fourth section, which forms the most important part of the work, is by Dr. G. S. Graham-Smith, and is divided into ten chapters, in which every aspect of the bacteriology of diphtheria is exhaustively discussed. Three chapters are devoted to a consideration of the diphtheria bacillus, Hofmann's bacillus, and the relation of the diphtheria bacillus to Hofmann's bacillus respectively; and the rest deal with experimental and natural diphtheria in animals, modes of infection in man, bacteriological diagnosis, preventive measures, post-scarlatinal diphtheria, and diphtheroid organisms in the insane. To five of the chapters excellent summaries are appended.

The fifth section, by Dr. G. Dean, is divided into four chapters, in which an admirably lucid description is given of the types of immunity, the toxin of the diphtheria bacillus, the formation of antitoxin in the body, and the effect of antitoxin on toxin.

The sixth section, by Drs. W. H. Park and C. F. Bolduan, of New York, consists of two chapters. In the first, which is concerned with the mortality from diphtheria, the writers gives instructive tables showing the mortality from diphtheria before and after the introduction of antitoxin, and discuss the influence of various factors on the mortality and prevalence of the disease. They reject Dr. Newsholme's theory of the influence of rainfall, and point out that in some places, such as Manhattan Island, the amount of rainfall would exert little influence on the ground water. They also pertinently remark that in cold weather dampness predisposes to respiratory troubles and so to diphtheria, especially of the laryngeal type. The second chapter is mainly clinical, and contains an account of the serum disease. It is stated that though over 50,000 persons in New York City in the course of eleven years received antitoxin, only two cases of sudden death were reported: one of these occurred in a girl aged 6, who died after a prophylactic injection of 1,000 units, and the autopsy revealed well-marked status lymphaticus. The other case was that of a lad aged 16, suffering from well-developed but not malignant pharyngeal diphtheria. Death took place a few minutes after injection, and no necropsy was performed.

The bibliography, including the additions in the new issue, occupies 74 pages, and is followed by an excellent index.

Enough has been said to show how wide a field is

[2] *The Bacteriology of Diphtheria; including Sections on the History, Epidemiology, and Pathology of the Disease.* Edited by G. H. F. Nuttall, M.D., Ph.D., Sc.D., F.R.S., and G. S. Graham-Smith, M.A., M.D. Reissue, with Supplementary Bibliography. Cambridge: The University Press. 1913. (Sup. roy. 8vo, pp. 718. 15s. net.)

covered by this work, which will appeal not only to the bacteriologist and pathologist, but also to the epidemiologist and, in spite of a disclaimer, to the clinician. All the articles, as was to be expected from their writers, are remarkably complete. Not only do they contain a considerable quantity of original work, but they include also sufficient acknowledgement of the labours of others to render reference to the original papers unnecessary, except for special purposes. The book is well printed and illustrated; the photomicrographs have been reproduced with remarkable clearness. Mention should also be made of the interesting portraits of Bretonneau, Loeffler, Behring, and Roux, which are accompanied by short biographical notices.

DISEASES OF THE THROAT, NOSE, AND EAR.

IT is not surprising that a book so well adapted to the requirements of senior students and junior practitioners as Dr. LAMB'S *Practical Guide to Diseases of the Throat, Nose, and Ear*,[3] should have reached within a few years its third edition. In preparing this new edition the author has spared no pains to make the book worthy of its title and a really helpful guide to the beginner. Several short sections on various practical points have been added. Amongst them is one on oral sepsis, which is still very often left out of account as a possible cause of disease. The occasional risks attending operation on the tonsils and adenoids also receive attention. The so-called recurrence of adenoids is, in the author's opinion, probably always due to an imperfect operation; but this, of course, in a few exceptional cases is by no means easy to avoid. The author's remarks anent this matter may be fully endorsed:

> Probaby no minor operation in surgery is more frequently performed imperfectly than the removal of adenoids and enlarged tonsils. This is partly because it is, in some quarters, the fashion to speak of it as being almost too trivial a proceeding for serious consideration, and so it is not taken seriously; and partly because of inherent difficulties due to the fact that part of the field of operation is out of sight, and belongs to the respiratory tract.

We also endorse the author's remark upon the relative merits of tonsillotomy and tonsillectomy, a subject to which a good deal of prominence has been given in discussions at recent medical conferences:

> When tonsillotomy (writes Dr. Lamb) is well done, it is rare for the small pad of tonsil that is left to give trouble. . . . The proportion of cases in which it is necessary to dissect out a diseased tonsil is not a large one, but when this operation is clearly indicated, no other will serve the purpose.

The danger signs in ear disease form the subject of another of the short sections which have been introduced into the present edition, and are an important addition, for the author can hardly be held to go too far when he says that there is still amongst many members of the profession a very inadequate appreciation of the danger signs in ear disease. The author has kept in mind the needs of those for whom he has written—namely, senior students and junior practitioners—and has confined himself mainly to practical points, especially noting difficulties the beginner is sure to encounter, though they sometimes receive scanty notice in systematic works. He does not give a dozen and one ways in which a disease may be treated or an operation performed. The book, so far as it goes, reflects the author's practice; he has recommended no method which he is not in the habit of using. He has avoided overloading his pages with information upon more highly technical points in a speciality which now covers a very wide field. Such information is best obtained from special monographs. For example, the examination of the larynx, the bronchi, the oesophagus, and the stomach by the direct method is omitted, and the recent work in connexion with diseases of the labyrinth of the ear is briefly summarized. These omissions in no way detract from the value of the book; on the contrary, they maintain its original character, which has made it so useful to those for whom it has been written.

[3] *Practical Guide to Diseases of the Throat, Nose, and Ear.* By William Lamb, M.D. Third Edition. London: Baillière, Tindall and Cox. 1913. (Cr. 8vo, pp. 368; 2 plates, 57 figures. 7s. 6d. net.)

The contents of Dr. GERBER'S book[4] on the examination of the air passages are well described in its second title—an introduction to modern rhino laryngology for students and practitioners. Very little space is given to the commonplaces and old current teaching on the subject; almost the whole is devoted to those points which are essentially modern and are not dealt with in the older classical textbooks concerning it. Furthermore, many points to which very scanty notice has habitually been given are dwelt upon in spite of the fact that they may not be exactly modern. As an illustration we may mention the examination of the vestibule of the nose, the diseases of which are sometimes the cause of considerable discomfort, and are apt to be overlooked during the examination of the deeper parts of the organ. Among the various forms of investigation are included the newer methods of examining the naso-pharynx, such as Yankauer's, Valentin's, and Gyergyai's. Special emphasis is laid on the value of counter-pressnre during direct laryngoscopy; hanging laryngoscopy also is described, and the use of the Roentgen rays comes in for notice. In a very small bulk the newer methods are shortly described and very freely illustrated. No doubt the value of the work is at its greatest when it is accompanied by actual demonstrations on the living subject, which, no doubt, was the purpose for which the writer originally intended it. In any circumstances it will be found an accurate and concise summary of the subject.

Professor SKILLERN, in an excellent book on *The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose*,[5] presents to the reader a valuable description of this branch of surgery. It will take a foremost place, and is perhaps the best book of its kind that we have seen on this subject. It is profusely illustrated, and many of the plates and figures are excellent and original. The text gives sufficient information as to the anatomy of the parts under discussion, without unnecessary detail. The volume is divided into five parts, the first bearing on general considerations and dealing with the general anatomy of the sinuses, their development, their physiology and theories concerning them. It also discusses the bacteriology and the various methods of infection; the technique of differential diagnosis is fully explained, many useful hints, born evidently of practical experience, being given. We miss, however, any reference to the use of the nasendoscope and its value in the diagnosis of suppuration, especially of the sphenoid sinus; by its use the absence and presence of this condition can often be recognized without operative interference with the middle turbinate. The author's remarks on the slight value of transillumination and his objections to operation based upon its findings are justifiable. The different types and varieties of diseased processes are discussed, and the symptoms presented by abnormal conditions are well brought out. The symptoms produced by nasal polypi are only briefly touched upon, though their etiology is discussed at some length. The connexion between accessory sinus disease and neighbouring organs—the eye, optic nerve, and brain—is described and the roots of infection explained, Onodi's classical work in this connexion being recognized. Parts 2, 3, 4, 5 deal with the maxillary, frontal and sphenoidal sinuses, and the ethmoidal labyrinth; their peculiarities are described and their diseases fully discussed. There are one or two clerical errors in the description of diagrams, but this is almost inevitable in a book so profusely illustrated. It is worthy of high praise and should find a place on the shelves of every nasal specialist.

THE GOAL OF EVOLUTION.

ALL students of Darwin know that his theory was derived largely from the influence of Malthus, who believed that there was a general tendency for the rate of reproduction to outgrow the means of subsistence. The work of Malthus was confined, however, to the human species;

[4] *Die Untersuching der Luftwege.* Von Dr. P. J. Gerber. Würzburg: C. Kabitzsch. 1913. (Roy. 8vo, pp. 45; 49 figures, 4 plates. Mk. 2.)

[5] *The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose.* By Professor Ross Hall Skillern, M.D. Philadelphia and London: J. B. Lippincott Co. 1913. (Roy. 8vo, pp. 409; 242 illustrations, 5 plates. 18s. net.)

Darwin extended the scope of the so-called "law of population" to embrace all animate beings. He, in fact, applied to biology the principle of unrestricted competition which was then dominant in political economy, and gave it a bionomic sanction. The means of subsistence available at a given time being strictly limited, it seemed to follow inevitably that only those strong or cunning enough to help themselves freely could survive and perpetuate their kind. The weak must somehow be eliminated, presumably by starvation; but as to the precise method of elimination Darwin confessed himself in the dark. As a matter of fact, evidence of actual starvation as a prominent feature of organic life is not easily found; in a work entitled *No Struggle for Existence: No Natural Selection*, published in 1908, George Paulin expressed his conviction that Darwin was mistaken in his fundamental belief, and claimed to have discovered a law whereby the undue increase of animal life is restricted. In the case of all prolific species, the young are, he asserts, devoured by the male parent, if he can obtain access to them within a certain period after birth. Hence, when parturition is due, the female secretes herself until the danger period is over, after which the male will no longer molest her young. But in periods of abundance, when the male has not to go far afield for food or prey, the majority of broods will be devoured by the male parents, and an undue multiplication of individuals checked. The first five chapters of Dr. HALL CALVERT'S *Further Evolution of Man*[6] are almost entirely taken up by an exposition of Paulin's views, and by statistics drawn from his book in support of the contention that population rises and falls with the rise and fall of industry and commerce. Having thus, to his own satisfaction at least, demolished the basis of the Darwinian view as to the method of evolution, Dr. Calvert proceeds to expound his own opinions as to the future of the race. In this he claims to be a strict adherent of scientific method, but in our opinion the claim cannot be made good. With no inconsiderable eloquence he sets forth a humanitarian programme, sound enough in the main but in no way new or original. He draws a hard and fast line between "egoism" and "altruism," and predicts the gradual triumph of the latter and the culmination of the process in a golden age of harmony and "sweet reasonableness." In the procuring of this consummation exceptional individuals are to count for nothing; all men are born "good"—it is merely a question of improving the environment. From the point of view of a didactic evangelical radicalism the book deserves commendation; as a serious contribution to evolutionary theory it is of less account.

NOTES ON BOOKS.

FOR the general conception of *Who's Who in Science (International), 1914*,[7] we have nothing but praise. It contains nearly 700 pages, and of these 500 are occupied by brief biographical notices of, as the preface tells us, some 9,000 men of science in all parts of the world. These notices give in most instances the place and date of birth, the educational course, the offices now or formerly held, the principal publications, and the address of the person mentioned. Prefixed to the biographical section are two tables: the one shows the professors in the various universities, and the other is a classified list of the principal learned societies, giving the title and address, names of president and secretary, date of foundation, number of members, annual subscription, and publications, if any. Finally, there is an index of name classified according to subject and country. It would be harsh to criticize mistakes of detail in an early issue of a book such as this. The chances of error are almost innumerable, and the task of the editor, Mr. H. H. STEPHENSON, must have been exacting and tedious. The biographical notices, as far as we have been able to test them, seem to be accurate, although we observe the inclusion of the name of one person who died over a year ago. The tables of universities and societies are distinctly useful; one correction we feel bound to make—the British Medical Association was founded, not in 1872, but in 1832, when William IV was King. The index seems to be the weakest part of the book.

Professor HALLIBURTON is to be congratulated on issuing the eleventh edition of his *Handbook of Physiology*[8] (the 24th edition of Kirke's *Physiology*). The sections dealing with salivary secretion, the formation of urine, and much of the chapter on respiration, have been almost entirely rewritten with the help of Mr. Barcroft; new matter has been added on the process of conduction in the heart, on the application of physical chemistry to physiology, and on "vitamines," the active principles, so named by Funk, found in the outer layers of wheat, rice, etc., the absence of which occasions beri-beri and scorbutic affections. Dr. Myers has revised the part which deals with the special senses. Dr. Hertz has helped to bring up to date the chapter on movements of the stomach and intestines. Dr. F. H. A. Marshall has aided in the production of a new and excellent concluding chapter on reproduction and development. From this chapter we cite the deduction drawn from the study of parthenogenesis. "One must suppose that the female cell has within it a male component which can be transmitted to future generations. The (parthogenetic) ovum of these animals only extrudes one polar globule. It may therefore be that the second polar body contains the hereditary male element which is retained in parthogenesis, but in animals which multiply sexually this is got rid of prior to the inception of the new male element." Professor Halliburton says, "the theory at present most in vogue to explain involution of the uterus" is that the process is one of autolysis due to the action of intracellular digestive ferments. Creatin appears in the urine, but as this occurs after the uterus has been amputated it must have to do with the mammary gland and secretion of milk. The symptoms which accompany the menopause may, it is thought, be due to the absorption of the products of autolysis of the uterine tissue.

An excellent idea of current views on the subject of infant mortality, including its extent, causation and prevention, may be obtained from the published report[9] of the conference on this subject which took place last August under the auspices of the National Association for the Prevention of Infant Mortality and for the Welfare of Infancy. It was attended by representatives—many of them being official—of practically of every English-speaking country, and the work was done in two sections—administrative and medical. In the latter there were special discussions and many papers on the necessity of special education in hygiene, on medical milk problems, and on antenatal hygiene. The president of the medical section was the Right Hon. Joseph Pease, M.P., and of the administrative, Dr. Arthur Newsholme. The general president was Mr. John Burns.

A verbatim account has been published of the discussion on *Alimentary Toxaemia*,[10] including its sources, consequences, and treatment, which took place at the Royal Society of Medicine last March. In addition to the readers of the six opening papers, there were some fifty speakers, medicine and surgery being fairly equally represented. A report of the discussion and the full text of some of the papers appeared in the JOURNAL at the time.

A Manual of Infectious Diseases Occurring in Schools,[11] which has been issued by the Association of Preparatory Schools under the editorship of Dr. H. G. ARMSTRONG and Dr. J. M. FORTESCUE-BRICKDALE, is primarily intended for teachers, but the editors hope that it may be of some assistance to doctors in their school practices. The book is divided into seventeen chapters, eight of which are by Dr. Fortescue-Brickdale and seven by Dr. Armstrong, while the remaining two, on infectious eye diseases and ringworm, are by Mr. R. W. Doyne and Dr. Aldersmith respectively. A glossary of the few technical words employed in the text is appended. A clear and accurate account of each disease is given which may be of value to

[6] *The Further Evolution of Man: A Study from Observed Phenomena.* By W. Hall Calvert, M.D. London: A. C. Fifield. 1913. (Cr. 8vo, pp. 324. 5s. net.)

[7] *Who's Who in Science (International), 1914.* Edited by H. H. Stephenson. London: J. and A. Churchill. (Roy. 8vo, pp. 682.)

[8] *Handbook of Physiology.* By Professor W. D. Halliburton, M.D. F.R.S. Eleventh edition. London: J. Murray. 1913. (Fcp. 4to, pp. 940; 577 figures, 3 plates. 15s. net.)

[9] *Proceedings of the English-speaking Conference on Infant Mortality.* London: National Association for the Prevention of Infant Mortality. 1913. (Demy 8vo, pp. 456. 3s. net.)

[10] *Alimentary Toxaemia: Its Sources, Consequences, and Treatment.* London: Longmans, Green and Co. 1913. (Sup. roy. 8vo, pp. 425. 4s. 6d. net.)

[11] *A Manual of Infectious Diseases Occurring in Schools.* By H. G. Armstrong, M.R.C.S., L.S.A., and J. M. Fortescue-Brickdale, M.A., M.D. With chapters on Infectious Eye Diseases by R. W. Doyne, M.A., F.R.C.S., and Ringworm by H. Aldersmith, M.B., F.R.C.P. Bristol: John Wright and Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent and Co. 1912. (Cr. 8vo, pp. 156; 7 plates. 3s. net.)

schoolmasters and schoolmistresses, but as pathology is practically omitted, and treatment dealt with only in a general way, the medical reader will be well advised to supplement the information in this manual by recourse to a larger textbook.

It is essential that the student of hygiene should have a working knowledge of anatomy, of physiology, and of physics, and it is the neglect of this proposition by some authors that has lessened the value of their works. It is admittedly extremely difficult to judge of the amount of knowledge of these subjects which is necessary, though it is obviously better to know too much of them than too little. In Mr. W. D. STURROCK'S *First Principles of Hygiene*,[12] although both anatomy and physiology are dealt with at rather more length than in many elementary works on hygiene, he has succeeded in placing them before his readers in a very interesting manner, so much so, indeed, that many students would be tempted to extend their knowledge beyond that to be obtained from the opening chapters of this work. In the chapter on air and oxygen there is given just enough information about physics to make intelligible such subjects as combustion and respiration. The chapters upon climate, water, food, digestion, and personal hygiene are all accurate and informing, and the diction never becomes wearisome. Only a few pages are devoted to sanitation as opposed to hygiene, but the information, though restricted, is quite in accordance with modern views. Mr. Sturrock lays great emphasis on the fact that a good constitution increases immunity to disease, and he insists that a good constitution depends on good air, good food, good work, good rest, and good habits. The fifty illustrations are well selected and executed. They add materially to the value of a very useful work.

It is difficult to know exactly what place is taken in the literature of public health by the latest addition to the Student's Aid Series which has been written by Dr. DAVID SOMERVILLE, and is entitled *Aids to Public Health*.[13] A small book of about 140 pages, even though they may be closely printed, can hardly be classed as a textbook. On the other hand, the half-dozen chapters deal with as many subjects far too fully to designate it a cram book. Perhaps it had best be placed midway between the two and considered as the result of a judicious boiling down of larger works. Even this, however, is not a just description, for in the course of the culinary process the author has added much original matter from his own stockpot, so that there is a great deal of information in it which cannot be obtained from other though larger works. The various chapters treat of water, sewage, soil, air, foodstuffs, and antiseptics and disinfectants. In the last chapter bacteriology is discussed at some length, for, as the author truly says, it is impossible to grasp the significance of disinfection without full knowledge of the meaning of infection.

With the title *Maternity Nursing*[14] S. MACDONALD, the matron of the Salford Maternity Training School, has put together the lectures she gives to her pupils in a small volume, which is intended to appeal to women who are anxious to be initiated into the special work of maternity nursing. In attempting in a few short lectures to convey an adequate knowledge to a mind that is at the outset ignorant even of fundamental facts, the author has set herself a task of great difficulty, and the opening lectures will not, we fear, convey very much to the readers for whom they are intended. On the other hand, the later chapters are written by one who is obviously not only an enthusiast for her work, but is very anxious to instil a similar spirit into the minds of her pupils, and can be read with considerable interest and advantage by those who are contemplating undertaking work of this kind.

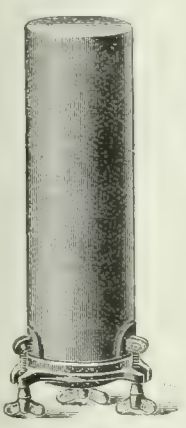
It was a happy thought on the part of Dr. J. B. HURRY to embody in the handsomely produced volume before us the fruit of his experience in various capacities in connexion with the Reading Pathological Society. The author's hints on *The Ideals and Organization of a Medical Society*[15] may be very helpful, for the volume contains short chapters, describing the general aims to be kept in view, the duties of members, and the functions of the various officers and committees. There is also a set of model rules, in which, however, we find no provision for enforcing the obligations of individual members. Yet such provision is, to say the least, often conducive to success.

Mr. WEBER'S volume *German Self-Taught and Grammar*[16] consists of two parts. The first consists of a vocabulary, followed by conversational sentences. There is also an alphabetical vocabulary—in other words, a dictionary—at the end of the second part, with exercises in German handwriting. We cannot put much faith in phonetic education, which, as in many similar works, is bravely tackled by Mr. Weber, yet we must allow that the German language is one of the least difficult to represent phonetically to the Anglo-Saxon reader. It is more important to say that the volume is essentially suited to the adult student of German. Instead of the Ollendorfian questions and inconsequential replies so prominent in many grammars, we have dialogues with railway porters, 'bus conductors, cyclists, and other people with whom we have to do in real life. To read German is, relatively at least, easy, and this work will be of real value to medical students and doctors who read *Zeitschrifts* and *Zentralblatts*.

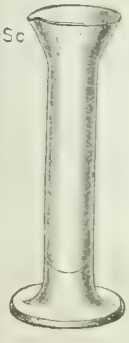
MEDICAL AND SURGICAL APPLIANCES.

Sterilizer Tank for Instruments.

MR. THOMAS NORTH, F.R.C.S.Irel. (London), writes: Messrs. Allen and Hanburys, Ltd., Wigmore Street, W., have made for me a sterilizer tank for instruments which I have found very useful when operating in private, as it obviates the delay and fuss which occur when having to get things ready in the patient's home. This sterilizer tank is a cylindrical vessel 11 in. high and 3½ in. inside diameter, fitted with a lid which is clamped on by three thumbscrews fixed to lugs which are riveted to the cylinder, similar to the lid of a high-pressure sterilizer. In the centre of the lid is a hole which is closed by a screw-in plug. The tank is boiled over a Bunsen or T. D. Fletcher burner, the instruments placed inside, and the lid, with the plug removed, clamped on. When sufficiently boiled a portion or all of the water is poured off, all that is necessary to do this being to stand the sterilizer upside down over a basin; it will rest quite securely on the screws, which act as a stand. When empty some lysol, spirit, or other solution can be poured through the hole in the lid, the plug screwed in, and the container placed in the bag with the instruments ready to be turned out at the time of the operation sterilized in readiness for use. When properly screwed up the sterilizer tank is quite water-tight. The apparatus is of such a size that it will take any ordinary-sized instruments required for almost any major operation.



A Urine Glass.



Drs. RIDEAL and BEDDARD have introduced a specimen glass which they think will be found useful in hospitals and by insurance examiners and others who frequently examine urine. The advantages are: That glass is of small calibre, so that about 1 oz. of fluid will freely float an ordinary urinometer; that the blunt conical bottom enables sediment to be collected, and renders cleaning easy, and that the use of a funnel is obviated by funnel-shaped top to hold filter paper and that this top allows the glass to be safely inverted for drainage. The glasses are made by Messrs. Down Bros., who have registered the design.

Instrument for Maxillary Antrum Operation.

Mr. B. SEYMOUR JONES, F.R.C.S. (Assistant Honorary Surgeon to the Ear and Throat Hospital, Birmingham), writes: An essential feature of the endo-nasal operation

[12] *First Principles of Hygiene.* By W. D. Sturrock. Oxford: The Clarendon Press. 1913. (Post 8vo, pp. 256; 47 figures. 2s. 6d.)

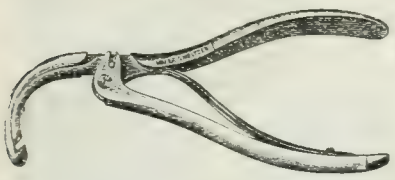
[13] *Aids to Public Health.* By David Somerville, M.D., D.P.H. London: Baillière, Tindall, and Cox. 1913. (Fcap. 8vo, pp. 152. 2s. 6d. net.)

[14] *Maternity Nursing.* By S. Macdonald. London: Methuen and Co., Ltd. 1913. (Demy 8vo, pp. 214; 11 diagrams. 3s. 6d. net.)

[15] *The Ideals and Organization of a Medical Society.* By Jamieson B. Hurry, M.A., M.D. London: J. and A. Churchill. 1913. (Med. 8vo, pp. 51. 2s. net.)

[16] *German Self-Taught and Grammar, with Key.* By W. E. Weber, M.A. Revised and enlarged edition. London: E. Marlborough and Co. 1913. (Cr. 8vo, pp. 184. 3s. 6d. net.)

for opening and draining the maxillary antrum is the removal of the anterior infraturbinal part of the nasal wall; most instruments devised for this purpose are weak, complicated and easily put out of use. Messrs. Mayer and Meltzer have made to my instruction the instrument figured. This is very strong and able to cut through any thickness of bone met with in this situation, and may be used for both sides without resetting the parts. In practice it is best to pass the beak through the perforation made and then slide it back until the notch engages with the edge of bone. The instrument is also useful for the radical operation.



An Intestinal Crushing Clamp.

Mr. W. ERNEST MILES, F.R.C.S.Eng. (London) writes: The crushing clamp here illustrated has been especially made for me by the Holborn Surgical Instrument Company for use during the radical abdomino-perineal operation for cancer of the rectum. The proximal half of the blade is nearly an inch in breadth in order that the crushed part of the pelvic colon shall be sufficiently wide to permit an easy division between the ligatures. The distal portion of the blade is much narrower, as it is only necessary to crush the mesocolon, for haemostatic purposes, along the line of division. The advantage of using this clamp is that it greatly minimizes the risk of infection when the pelvic colon is divided.



ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the ninth meeting of the Royal Commission on Venereal Diseases, which was held on December 15th, 1913, evidence was given by Mr. J. Ernest Lane, Senior Surgeon of St. Mary's Hospital and of the London Lock Hospital, and a member of the Royal Commission.

Organization of Treatment.

Mr. Lane said that in his opinion venereal diseases were attended by just as great a mortality as tuberculosis or cancer, and although it was not possible to obtain figures to support this view, it was one which had been more or less frequently expressed by well-qualified persons. He thought that the diseases were somewhat less prevalent than twenty or thirty years ago, but on this point it was very difficult to speak with certainty; the statistics of deaths certified as due to syphilis did not give any idea of the prevalence of the diseases.

Mr. Lane said that although large subscriptions were given to the cause of combating other diseases nothing had been done with regard to venereal diseases, and public money had never been expended except in carrying out the Contagious Diseases Acts. He laid stress on the necessity for improved and free hospital treatment, and said that every patient suffering from any form of venereal disease ought to be entitled to gratuitous treatment and medicine and to bacteriological and other tests. If it were desired to cure syphilis and get rid of the disease anything that would aid early diagnosis ought to be at a patient's disposal without expense to him.

In any scheme for the efficient treatment of the diseases, the establishment of night clinics was essential.

On the subject of notification, Mr. Lane said that though he had formerly been in favour of notifying all cases of venereal disease to the sanitary authority, he had now modified his view, because he was convinced that notification would deter sufferers from seeking proper advice and would lead to increased recourse to quack treatment.

Dealing with the question of the education of public opinion with regard to venereal diseases, he said that in the first place the infected person must be instructed. It should be made compulsory for medical practitioners to supply to every patient suffering from venereal disease printed instructions as to the nature of his disease and as to the measures he should adopt to avoid spreading the trouble; copies of these instructions should be supplied gratuitously to the doctors. Secondly, he would suggest that all institutions where there are a large number of employees or institutions such as colleges and universities ought to have some course of lectures explaining the dangers of venereal disease.

It was also of the greatest importance that the standard of knowledge of these diseases in the medical profession should be raised; in the past the teaching given in the medical schools was very inadequate, but steps were now being taken in some of the more important hospitals which should lead to an improvement in this respect.

Mr. Lane gave some statistics of the work done at the London Lock Hospital. He showed that during the last thirty years there had been a remarkable diminution in the numbers of prostitutes treated at the female hospital; at the present time the majority of the female patients were very young girls and 13 per cent. of the patients were married women. All the cases in the children's wards and the greater part of the married women were examples of innocent syphilis. In the male hospital the new out-patient department opened in 1911 had proved most satisfactory and the number of attendances was increasing; a new in-patient department was opened in November last with three wards perfectly fitted with all modern accommodation for forty patients.

Further Evidence of the Superintendent of Statistics, General Register Office.

At the tenth meeting, held on December 19th, Dr. Stevenson, Superintendent of Statistics to the Registrar-General of England and Wales, attended and gave evidence supplementing that which he gave at the first meeting. Dr. Stevenson said that though the statistics tabulated from death registers by the Registrar-General could not be claimed to afford any measure of the absolute amount of mortality from venereal disease, they did throw light in varying degree upon its relative amount, whether the comparison made were historical, geographical, or social.

Looking at the matter from the historical point of view, the curve of mortality from syphilis in England and Wales showed a very large and rapid rise between 1850 and 1868, followed by a period of fairly sustained elevation till about 1886; this was succeeded by ten years of rapid fall, and the fall had continued, though it had become less rapid, since 1896.

Dr. Stevenson was of opinion that the fall recorded in the last thirty years represented a genuine decrease in the mortality from the disease; he gave several reasons in support of this view, and referred also to the large contemporaneous fall in the curves showing prevalence of syphilis in the army and navy.

To illustrate the incidence of syphilis and diseases resulting from it on various occupational and social classes, tables had been prepared in which the male population was graded according to occupation into five main groups, and three additional groups (textile workers, miners, and agricultural labourers) representing the three largest single industries. Of the five main groups, the first consisted of the upper and middle classes, and was sufficiently comprehensive to include clerks and insurance agents; the fifth group represented unskilled labour. The most striking feature of the tables was the uniformly low mortality of textile operatives, miners, and agricultural labourers, the last group especially yielding very low rates. Of the five main groups, the highest mortality was found in Group 5; the mortality from syphilis was lowest in Group 1, but the mortality recorded against it from the parasyphilitic diseases was high, and for locomotor ataxy the rate was higher than that of any of the other groups.

Taking all the circumstances into consideration, Dr. Stevenson conjectured that syphilis was most prevalent amongst the highest and lowest of the five social classes

he dealt with, and that the three great industries of textile manufacture, mining, and agriculture are almost certainly exceptionally free from the disease.

With regard to the geographical distribution of the diseases, the tables furnished by Dr. Stevenson indicated that the prevalence in the large towns was much greater than in the rural and small urban districts.

THE AGREEMENT IN THE GERMAN INSURANCE DISPUTE.

THE terms of the agreement between the Federation of German Medical Associations and the Leipzig League of Doctors on the one hand, and the League of the German Works' Clubs, the Federation of German Insurance Societies, and the Chief League of German Local Insurance Societies on the other, drawn up at a meeting held under the presidency of the Imperial Secretary of the Interior, on December 23rd, 1913, and accepted by both contracting parties on December 28th (see BRITISH MEDICAL JOURNAL, January 3rd, 1914, p. 57), are, to a certain extent, ambiguous, and at least one paragraph may be variously interpreted. The following is a literal translation. Appended to the agreement is a note which gives a four days' grace in regard to contracts concluded after the settlement, provided that the contracting parties were not aware of the terms of the agreement.

THE AGREEMENT.

I.

A register (or list) of doctors shall be exhibited at the Insurance Office, or some other official place, and on this list the name of every doctor who desires to undertake contract practice, whether he belongs to an organization or not, shall appear. Further regulations in regard to registration shall be decided by local arrangement.

Only those doctors whose names appear in the lists shall be admitted to contract practice. The selection of the applicants will be determined in each case by agreement between the representatives of the insurance societies and the representatives of the medical practitioners on the lists, on the basis of regulations which shall be drawn up beforehand with the approval of the chief insurance office. Doctors who have hitherto carried on contract practice, shall *ipso facto* be regarded as registered and their names shall be officially entered on the lists. A committee consisting of an equal number of members of each party, with a majority of contract practice doctors among the medical members, sitting under the chairmanship of an official (for example, the chairman of the insurance office) shall decide in all cases of dispute regarding the admission of an applicant.

A medical practitioner, whose name appears on a list, who refuses a position on any given insurance society three times without a satisfactory reason, may have his name removed from the list of doctors.

II.

Save in the case of an insurance society or a federation of insurance societies in which all medical practitioners on the lists are admitted to contract practice (Sections 408 to 413 of the Imperial Insurance Order), the number of doctors to be secured shall be such that there shall be at least one doctor to every 1,350 insured persons, or in the case that the families of the insured are to receive treatment, one doctor to each 1,000 insured persons. Provided that no other arrangement exists, the insured persons shall have free choice of doctors from among the doctors on the list.

III.

The method of remuneration for medical services, including the payment for mileage, shall be determined by the individual contracts. In determining the rate, the local conditions, both in regard to the benefits which the insurance societies are in a position to grant, and in regard to the demands of the doctors for remuneration which shall be adequate both in kind and amount, shall be taken into consideration.

IV.

The insurance societies situated within an insurance area and the doctors admitted to contract practice within the same area shall each form a union, for the purpose of electing a Contracts Committee. Only those doctors who undertake contract practice work are eligible to serve on the committee. The contracts shall be entered upon between the insurance societies or federation of insurance societies and the individual doctor. The validity of such contracts may not be rendered dependent on the approval of any other organization than that named in Section III.*

V.

Should no agreement be come to in regard to the terms of new contracts, the doctors and the insurance societies shall submit the issue to the Arbitration Committee, consisting of an equal number of members of each party and an official chairman, which shall determine the conditions that shall govern the contracts.

In regard to the system of medical service, that which has obtained up to the present shall be maintained, notwithstanding anything contained in Section VII. A change of system of medical service shall be made when both parties, the insurance societies and the doctors admitted to the societies, are in agreement on this point, or if an agreement be not reached, when an important reason can be adduced in its favour. Should the doctors who have hitherto served an insurance society object to a proposed change of system brought forward by the insurance society, the question shall be determined by a majority vote of the medical members of the Contracts Committee (Section IV, first sentence). In the event of a dispute as to whether an important reason exists or not, the matter is to be decided by the Arbitration Committee (first paragraph). The decision of the Arbitration Committee shall be binding on both parties.

VI.

A court of arbitration, consisting of an equal number of members of each party, shall finally decide disputes arising out of accepted contracts, and its decision shall be binding on both parties. In regard to financial claims, however, the interested parties may have recourse to courts of law.

VII.

Existing contracts between the insurance societies and doctors shall, save in so far as the provisions of Section XI are applicable, continue in force. The provisions of this agreement are not applicable in those cases in which an agreement had provisionally been arrived at between the doctors and the insurance societies before December 24th, 1913, pending the ratification by the Executive Council of the Leipzig League.

VIII.

The regulations governing the relations between the doctors and the works' clubs of the railways and the regulations governing the relations between the doctors and the miners' work clubs are not determined by the provisions of this agreement.

IX.

In carrying out this agreement, subject to the approval of the interested parties, an inquiry may be made as to whether the conditions of the rural insurance societies and the local insurance societies which may replace the former, require special provisions.

X.

The contracting parties undertake to report to the Ministry of the Interior before midday on December 29th, 1913, the decisions of their organizations in regard to this agreement. If both parties agree, the central body contracting in the name of the doctors (Leipzig League) shall—

(*a*) Ratify immediately those contracts the terms of which have been agreed to by the doctors and the insurance societies;

(*b*) In the case of newly formed insurance societies, further the temporary arrangements for medical services;

(*c*) Attempt to promote contract negotiations in those cases in which the doctors and the insurance societies have not come to terms, and shall permit the old terms of service to hold good pending the termination of these negotiations.

XI.

Both contracting parties shall endeavour—

(*a*) To take into consideration the immediate release from contract practice in the area concerned of those doctors who during the recent dispute regarding the contracts have been imported from elsewhere, and with whom the insurance societies have entered into legally binding contracts;

(*b*) To find other posts for these doctors;

(*c*) To bring about a determination of the contracts at as early a date as possible;

(*d*) To agree on the conditions required for the same.

These negotiations shall be carried out by both contracting parties acting together, it being understood that the various Governments shall support their efforts.

The liabilities arising out of these negotiations shall be borne by the Leipzig League, provided that the federations of insurance societies use their influence to obtain from the insurance societies in all districts an increase of the medical fees of 5 pfennigs per insured person per annum for this purpose. This increase should cover one-half of the costs to be incurred.

XII.

For the purpose of carrying this agreement into effect and of deciding disputes which may arise in connexion with the same, a central committee, having an equal number of members of each party, under the chairmanship of the nominee of the Secretary for the Interior, shall be set up in Berlin. In the selection of the members of this committee regard shall be had to the adequate representation of the various Federal States concerned.

XIII.

This agreement shall have effect from January 1st, 1914, until December 31st, 1923, and from that date onwards indefinitely, with the proviso that it may be determined on one year's notice being given on the 1st day of January of any year. Should the agreement be determined, the central committee shall at once take steps to prepare a new agreement.

* This reference is obviously incorrect; probably it should be to the first sentence of Section IV.



VIEW OF OLD ABERDEEN: KING'S COLLEGE AND THE CATHEDRAL.
[Painting by A. Nasmyth from a drawing by R. Seaton.]

EIGHTY-SECOND ANNUAL MEETING

of the

British Medical Association,

ABERDEEN, JULY, 1914.*

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

THE UNIVERSITY.

The University of Aberdeen as it now exists is a compound of two distinct foundations—King's College and Marischal College. It must be clearly understood that these were never in any sense colleges of one university. Except for a short time in the seventeenth century when they were forced into a union which was quickly dissolved, they stood apart, independent, and in fact always more or less antagonistic. Each was a university with provision for teaching, and the power of granting degrees. As some parliamentary wit said, "Aberdeen is a great place, as, like England, it has two universities." The anomaly of the existence of two universities in one town only a mile from each other arose from the circumstances of their foundation. King's, the older college, was created by the Pope; Marischal was an offspring of the Reformation. For nearly a couple of centuries after the religious reason for their separation had ceased, the disunion continued, and was a cause of weakness to both colleges. Many attempts to bring them together were made by enlightened men, but it was not till 1860 that they were joined together in one university.

KING'S COLLEGE.

The original University of Aberdeen was King's College, which was founded by Bishop William Elphinstone in 1494–5 and formally opened as a teaching institution in September, 1505. Elphinstone was a man of great fame and influence in his day, who had studied and taught in the universities of Paris, Orleans, and Glasgow. He was skilled in all the learning of his time, and was particularly distinguished as a scholar and a lawyer. He was also a statesman and a diplomatist. He was in great favour with King James III, and was sent by him as ambassador to France, England, Burgundy, and Austria. For a short time he was Chancellor of Scotland; this office he lost at the death of James III, but he was soon recalled by James IV to the royal counsels, and he seems to have been Keeper of the Privy Seal from 1500 till his death in 1514.

On his consecration as Bishop of Aberdeen in 1487 he first set about the reform of the ecclesiastical affairs

* A previous article, on the City of Aberdeen, was published in the JOURNAL of January 3rd p. 35.



KING'S COLLEGE.

[From a picture preserved in the College, supposed to have been painted by Jamieson.]

of his diocese, and then proceeded to carry out a design which he had conceived of founding in his cathedral city a university which should rival those of St. Andrews and Glasgow. At his request James IV wrote to Pope Alexander VI, asking him to grant the necessary ecclesiastical authority for the foundation of the proposed university. The royal letter is lost or buried in the papal archives, but the Bull sent in reply on February 10th, 1494–95 indicates its tenor. The new university was intended especially for the benefit of a "remote portion of Scotland cut off from the rest of the kingdom by arms of the sea and very lofty mountains, and inhabited by unlettered, ignorant, and almost barbarous people (*homines rudes et litterarum ignari et fere indomiti*), who have scarcely among them men capable of preaching the Word and administering the sacraments." Through a university situated "in the renowned ancient city of Aberdeen the ignorant would acquire knowledge and the rude erudition." The universities of Paris and Bologna had evidently been mentioned in the application to the Pope as models of what was desired for the new institution in Aberdeen, and the Bull sanctions the institution of the faculties of theology, canon and civil law, medicine, arts, and "any other faculty." Elphinstone and his successors were made councillors. Provision was made for the appointment of a rector, regents, masters, and doctors, who were empowered to promote deserving students after examination to degrees of bachelor, licentiate, doctor, master, and all the other honourable distinctions in the various faculties. This Bull is preserved in the treasury of King's College. Alexander VI was remarkable even in an age of gross immorality for his depravity, but he was a capable administrator, and, luckily, the value of an institution does not depend on the character of its official founder. Elphinstone, the actual founder, was a man of the highest character,* and King's College was built largely out of savings from his episcopal income. The building was begun in the spring of 1500. More than five years later a charter, dated September 17th, 1505, and confirmed by the reigning Pope, Julius II, records the completion of the original buildings, including chapel, tower, and crown, residents' and class rooms, and living accommodation for the members of the college. The chapel and the tower remain substantially as they were at the time of their erection. The royal crown on the top of the tower is, as the scholastics say, *formaliter* the same, though *materialiter* it is not, having been blown down by a violent storm in 1633, and "re-edefeit and biggit up little inferior to the first," the architect being Dr. William Gordon, the Mediciner. Originally it had thirteen bells, so "tunable" that it was poetically said they might by the sweetness of their melody call the very stones to prayer. The whole of the original building was of freestone. In a translation of Hector Boece's *Life of Elphinstone* in rhyme, "be Alexander Garden, Aberdone, 1619," the college buildings are spoken of as "a manour for the muses meit." The poet-historian proceeds:

> He builds
> A statlie structure thair
> A fabrick firm and fair
> Which hes a temple tabulat
> Of polished stones and squair
> With tables, celrings, seats
> Lights of discolor'd glass
> * * * *
> A strait, strong, steeple too
> A pleasant princelie frame
> Beaut'fi'd with bells within; without
> Deck'd with a diadem.

The college was dedicated to the Trinity and to the Blessed Virgin, and it was at first called the University and College of St. Mary; the name was afterwards altered to King's. In the inside of the chapel the exquisitely carved stalls still bear witness to the artistry that went to its making. By August 20th, 1500, Hector Boece, or Boyce, the first Principal, arrived from Paris. Teaching probably began soon afterwards in some buildings at the Bishop's disposal. But the earliest regular teaching within the walls may probably be assigned to the session 1505–6. Among the teaching staff we find James Cumyne, Mediciner. This is the first record of a chair of medicine in any British university, the professorship at Cambridge dating from 1540 and that of Oxford from 1546. Dublin comes next *longo intervallo* with a chair of medicine founded in 1618; Glasgow, Edinburgh, and St. Andrews following in 1637, 1685, and 1721 respectively. The *medicus* was one of four doctors who formed part of the original academic staff. It should be

* For a sympathetic appreciation of him and his work see Professor Henry Cowan in *Studies in the History and Development of the University of Aberdeen*, 1906.

explained that the Mediciner, when he taught at all, did not lecture for the instruction of men who meant to practise the healing art, but for the benefit of students of arts. Some knowledge of medicine was in those days included in a liberal education. The King conferred by charter on the new university all the rights, privileges, and immunities granted by kings of France to the University of Paris and by his own royal ancestors to the two earlier Scottish universities—namely, by James I to St. Andrews in 1411, and by James II to Glasgow in 1451. The college was originally founded for thirty-six persons, consisting of the Principal, the Canonist, the Civilist, the Mediciner, the Sub-Principal, and the Grammarian. There were besides five graduates also priests, who as student teachers were to act as regents in arts, thirteen scholars (bursars or poor clerks), eight prebendaries, and four choir boys. The number of members was afterwards increased to forty-two. All with the exception of four doctors, who had manses outside where they taught, had to reside in college. Residence in college continued to be the rule till late in the eighteenth century, and was not finally discontinued until 1825. There is still standing in the north-east corner of the quadrangle a building erected chiefly for residential quarters in 1658. It has come in recent years to be called "Cromwell's tower," in recognition of the help given towards its erection by the officers of Cromwell's forces then in the North. Cromwell's own name does not appear in the list of contributors. Up to the last, indeed until the buildings were taken down in 1860, one elderly bachelor professor continued to occupy rooms in the upper floor of the buildings that stood over the cloisters on the south side of the present quadrangle. All the officials, with the exception of the Mediciner, were priests, and as such were required to celebrate Masses for the founders of their respective foundations. In the Middle Ages many physicians were priests, and in Paris they were canons. Even those who were neither priests nor clerics were still bound to celibacy, and this obligation survived long years after the decrees of the councils proclaiming the incompatibility of the practice of medicine with the ecclesiastical state. Cardinal D'Estouteville, who in 1452 was charged by Pope Nicholas V with the reorganization of the University of Paris, abolished the rule of celibacy for lay physicians. Yet even as late as the beginning of the seventeenth century, when all the members of the faculty had to attend a high mass on St. Luke's day, the celebrant was a doctor of the faculty.* It is curious to find that the rule of celibacy was applied to the Regents and "founded masters" at Aberdeen for a century after the Reformation. In 1643, it is noted that Alexander Middleton, the Sub-Principal, was married "contrary to the formation of the college, for he was the first Regent that entered into a marriage condition in this College." But notwithstanding attempts to enforce the rule against the marriage of Regents, the obligation of celibacy was allowed to lapse about the middle of the seventeenth century.

Elphinstone was succeeded as Bishop and Chancellor of the University by Alexander Gordon, who seems to have left no record of himself. He died in 1518, and then came Gavin Dunbar, a man of energy and sagacity, like Elphinstone himself. He erected a pile of buildings as residential quarters that for two centuries were known as Dunbar's Buildings. They stood on the south side of the present quadrangle opposite the chapel. Dunbar died in 1532, and Hector Boece, the first Principal, in 1536. The university was evidently then in a flourishing condition. In 1534 Ferrerius of Paris speaks of as *celeberrimam apud Scotos hoc potissimum tempore (absit verbo invidia) Academiam.* It is interesting to note that among the early teachers Ferrerius makes a complimentary reference to Robert Gray, Doctor of Medicine.

In 1541 the first royal visit was paid to the university, when James V and his Queen, Mary of Guise, were entertained by the Bishop for fifteen days, being lodged apparently in the college buildings. Bishop Leslie, who must have been present, says that they were received there

> with diverse triumphes and playes maid be the town, and be the university and scuilis theirof, and remainit thair the space of fiftein dayes weill entertenit be the bishop: quhair ther was exercise and disputationes in all kind of sciences in the college and schulis, with diverse orationis maid in Greke, Latine, and uther languages.. quhilk wes mickell commendit be the King and Quene and all thair company.

Only eight years later a deplorable change had come over the spirit of the university. In 1549 an official visitation was made by Alexander Galloway, parson of Kynkell, then Rector for the fourth time. The record shows that already there were signs of laxity in the administration. There were very few students in the college who were not on the foundation, and apparently none but such as were being trained for the Church. The ideals of Elphinstone had been lost sight of, and the university had become a conventual school. In 1561 the authorities were summoned before John Knox and the General Assembly in Edinburgh. There was a hot debate, but nothing came of it. In 1569 the first "purging" of King's College was carried out. The chief officials were removed, but the wave of the Reformation which swept over the university left nothing but wreckage behind. In 1562 Queen Mary visited Aberdeen. Randolph, the English Ambassador, who accompanied her, wrote:



King's College.

> The Quene in her progresse is now come as far as olde Aberdine the Bishop's seat and where also the Universitie is, or at the least one College with fiftene or sixteen scollers.

Seven years after there were not even fifteen. The average number entering during the first years of the seventeenth century was nineteen. Before the Restoration it had grown to thirty, and for the ten years following the Restoration it was seventy. In the middle of the eighteenth century the average number for the ten years following 1756 had fallen to 29; after that time it gradually recovered, and Cosmo Innes, writing in 1854, says the average number who entered during the preceding years was ninety. Small as the number of students was in the seventeenth century, Aberdeen had a great reputation for learning. Clarendon commemorates the "many excellent scholars and very learned men under whom the Scotch Universities and especially Aberdeen flourished." Intelligent foreigners and the gentry of the North were attracted to Aberdeen, and a higher class of students than had previously sought instruction there resorted to its colleges.

Cosmo Innes, in his preface to the *Fasti Aberdonenses*, says the earliest diploma of M.D. he has seen is one granted to Patrick Foord in 1697, but an Englishman named Parkins is recorded to have obtained that degree at Aberdeen in 1630. It had already gained celebrity as a medical school. Andrew Strachan, in his *Panegyricus*

* Maurice Raynaud, *Les Médecins au temps de Molière*, second edition Paris, 1863, p. 23.

spoken on July 16th, 1630, exclaims: *Quantus medicorum grex! quanta claritas!* He mentions the two Johnstons—Arthur, the "divine poet" and physician to the King, and William, professor of botany—Dun, a man in great practice, and William Gordon, "medicus et alchymista eximius." But about that time the university had fallen on evil days. It was "purged" again by the Assembly in 1640. What the effect of the purgation was we learn from Gordon of Rothiemay, who concludes his account as follows:

Thus the Assembly's errand was thoroughly done: thes eminent divynes of Aberdeen, either deade, deposed, or banished; in whom fell mor learning then wes left behynde in all Scotlande besyde at that tyme. Nor has that cittye, nor any cittye in Scotland, ever since seene so many learned divynes and scollars at one tyme together as wer immediatly befor this in Aberdeene. From that tyme fordwards, learning beganne to be discountanced; and such as wer knowing in antiqwitie and in the wryttings of the fathers, wer had in suspitione as men who smelled of poperye; and he was most esteemed of who affected novellisme and singularitye most; and the very forme of preaching, as wealle as the materialls, was chainged for the most pairt. Learning was nicknamed human learning: and some ministers so farr cryed it downe in ther pulpitts, as they wer heard to saye, "Downe doctrine and upp Chryste!"

The Universitas Carolina.

In 1641 Charles I made an attempt to unite the two colleges of old and new Aberdeen into one university to be called by his name. This, says Cosmo Innes (preface to *Fasti Aberdonenses*, p. xlix), for a short time flourished, or, at any rate, lived under the title of Universitas Carolina. The style of the united university was still used by Professor Douglas and Principal Row when celebrating the restoration of Charles II, and even nine years later by graduates of Marischal College in a philosophical thesis for the degree of M.A., *Lycaei Marischallani Universitatis Carolinae.*

Beginnings of the Medical School.

William Gordon, who was Mediciner from 1632 to 1649, was a pioneer of medical education in Great Britain. He taught anatomy, and not only "exercesed the students sufficientlie in the dissection of beasts," but in 1636 made an application to the Privy Council for the delivery of dead bodies to the "Colledge of Aberdeen." He asked that the municipal authorities should hand over to him bodies to be "publictlie anatomized." The Privy Council directed the Sheriff and the Town Councils of Aberdeen and Banff to deliver every year to the Mediciner

twa bodies of men, being notable malefactors, executte in thair bounds, especiallie being rebells and outlawis; and failzeing of them, the bodies of the poorer sort, deeing in hospittals; or abortive bairns, foundlings; or of those of no qualitie, who hes died of thare diseases, and has few friends or acquaintance that can take exception.

After Gordon came Andrew Moore, who occupied the chair till 1672. Next came Patrick Urquhart, who held it for fifty-three years. Then came the long era of the Gregories, a family which is said to have produced no fewer than sixteen professors, mostly of mathematics and medicine. Three of them, a father and two sons, were successively Mediciners in the eighteenth century. They lectured in English instead of Latin, as had previously been the rule. John Gregory, who became Mediciner in 1755, in succession to his elder brother James, made a strenuous effort to make the medical school a living thing. He gave lectures, but mostly to empty benches. He also promoted the establishment of a museum of natural history, and the erection of a chemical laboratory and a dissecting-room. In 1766, however, he migrated to Edinburgh, and with him went the progressive spirit which he had tried to infuse into Aberdeen. Another attempt to institute a medical school was made in 1783 by the professor of Latin in King's College, who advocated the union of the two universities for the purpose. This also came to nought.

(To be continued.)

KINGSEAT MENTAL HOSPITAL.

Dr. H. DE M. ALEXANDER (Medical Superintendent) writes: In your description of the hospitals of Aberdeen, in the JOURNAL of January 3rd, the reference to this institution is slightly inaccurate. This institution is the asylum for the city of Aberdeen, and has no connexion with the Royal Asylum, the latter institution accommodating private patients and also the insane of the country parishes of Aberdeenshire.

ROYAL MEDICAL BENEVOLENT FUND.

AT the December meeting of the Committee 32 cases were considered, and grants amounting to £284 made to 25 of the applicants. Appended is an abstract of the cases relieved.

1. Widow, aged 58, of L.R.C.P.Edin. Husband died eighteen years ago after a long illness, during which he was supported by the applicant. Is at present acting as nurse to a helpless invalid, but is obliged to give up because not strong enough for the duties. Voted £10.

2. Widow, aged 35, of M.D. No income; incapacitated by phthisis, and requires help in order to go to a sanatorium; three children, aged 12 to 5. Relieved twice, £10. Voted £10.

3. Widow, aged 46, of M.D. No income, and suffers from a spinal complaint by which she is quite incapacitated; two children, aged 6 and 5. Is endeavouring to obtain admission to a hospital for incurables. Relieved once, £5. Voted £18.

4. Daughter, aged 62, of late M.B.Lond. Only income £14 10s. a year, and has been disposing of her furniture to meet unavoidable expenses. Voted £12.

5. Daughter, aged 49, of late L.R.C.P., M.R.C.S. Is much run down after nursing her mother (recently deceased) through a long illness and is ordered a short rest before trying to find a post as companion. Voted £5.

6. Daughter, aged 63, of late M.R.C.S. Used to have a small school in a good London suburb, but was obliged to give it up owing to ill health, and is now totally incapacitated. No income. Voted £12.

7. Daughter, aged 62, of late M.R.C.S. Has a small annuity, but finds when she has paid for a room and some attendance which is necessary, because she is nearly blind, there is not sufficient left for other unavoidable expenses. Voted £5.

8. Widow, aged 62, of L.F.P.S.Glasg. No income and no relations or friends able to assist. Voted £12.

9. Daughter, aged 46, of late M.R.C.S. Has been an invalid for several years owing to pyaemia contracted in discharge of her duties as a nurse, and is now permanently incapacitated. Has a pension from the British Hospital for Incurables, and hopes to be elected to one from another institution, but requires help for maintenance and necessary attention meanwhile. Voted £12.

10. Daughter, aged 56, of late L.R.C.P. Has a pension from a charitable society, but finds it insufficient for the bare necessities of life and is unable to supplement it by suitable work. Relieved six times, £29. Voted £12.

11. Daughter, aged 58, of late M.D.Edin. Used to support herself as a governess, but for some years past has been unable to obtain a permanent post in that capacity and at present is dependent on precarious earnings from needlework. Relieved four times, £27. Voted £12.

12. Widow, aged 59, of L.R.C.P., L.R.C.S.Edin. After husband's death endeavoured to establish a small boarding-house, but was compelled to give up owing to failing health and is now practically incapacitated. No income, and dependent on a daughter who is a lady help. Relieved once, £10. Voted £10.

13. Widow, aged 85, of M.R.C.S. Only income an annuity of £10 and the old age pension. Children unable to help. Relieved three times, £18. Voted £10.

14. Daughter, aged 66, of late M.D.Edin. Used to be a governess, but is now unable to earn for herself because obliged to attend to two invalid sisters. Only income £40 a year given by an old friend. Relieved eight times, £95. Voted £12.

15. Widow, aged 67, of L.R.C.P.Edin. Supplements an annuity of £20 from a charitable society by addressing envelopes, etc. Relieved sixteen times, £151. Voted £10.

16. Daughter, aged 51, of late M.D.Edin. No income, and has been a chronic invalid for some years. Voted £10.

17. Widow, aged 54, of L.S.A. Quite unprovided for at husband's death several years ago, and supports herself by letting rooms and by needlework. Two daughters, both teachers, but barely self-supporting. Relieved eight times, £88. Voted £12.

18. Daughter, aged 59, of late M.D.Lond. Used to give music lessons, but is no longer able to obtain pupils, and is dependent on a sister whose income is very small; eyesight failing, and suffers from chronic rheumatism. Relieved thirty times, £239. Voted £12.

19. Widow, aged 52, of M.R.C.S. Since husband's death has been endeavouring to establish a boarding house in the town where he practised, and now finds that with the help from this fund she can just meet her expenses. Voted £12.

20. Daughter, aged 62, of late M.R.C.S. Endeavours to support herself by letting lodgings and keeping fowls; health very feeble. Relieved once, £12. Voted £12.

21. Widow, aged 68, of L.R.C.P.Edin. Had a small house which is let at a rent of £24, but the lease expires in a few years' time and repairs have to be frequently done. Relieved fourteen times, £162. Voted £12.

22. Widow, aged 57, of L.R.C.P.I. No income; health indifferent; is at present a caretaker but receives no salary. Relieved six times, £72. Voted £12.

23. Daughter, aged 55, of late M.R.C.S. No income and unfitted to earn her living. Relieved six times. £67. Voted £18.

24. Widow, aged 40, of M.R.C.S. Quite unprovided for at husband's death, and endeavours to support herself and two delicate children by selling old clothes on commission and by doing needlework. Relieved once, £10. Voted £10.

25. Daughter, aged 30, of late M.R.C.S. Was obliged to give up a post as typist some months ago owing to a complete breakdown in health, but hopes shortly to be well enough to start again. Relieved six times, £34. Voted £12.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

SCIENCE NOTES.

SINCE the time when Wassermann, Neisser, and Brück, adopting the complement deviation method of Bordet and Gengou, succeeded by a magnificent fluke in obtaining a serological method for the diagnosis of syphilis, much investigation has been made and many theories have been propounded as to the nature of the reaction. Wassermann himself, quite wrongly as we know, considered it to be a reaction between specific antibodies present in the serum of syphilitics and specific protein-lipoid constituents of the syphilitic liver extract. Brück considered the latter as probably not specific, but that the reaction was between this and an antibody against some unknown syphilitic constituent. Weil and Braun, again, regarded the antibody to be produced to the protein of the broken-down cells. Others have considered it to be a precipitin reaction between certain colloids and proteins, whilst others again have elaborated explanations as to the ferment nature of various components. All the theories fail in so far as they make no attempt to account for the reaction taking place with serums other than syphilitic, and yet it is beyond reasonable doubt that positive reactions occur in other circumstances. In leprosy, recurrent fever, malaria, and in scarlet fever, the serum often exhibits the property of deviating complement in the presence of the antigen extract. It is held, too, that in eclamptic attacks or in healthy patients during narcosis, the serum exhibits this property transitorily. Marcus Rabinowitch has published (*Centralbl. f. Bakt.*, November 26th, 1913) some striking observations on the effects produced by serum kept in the ice-chest for various lengths of time—two weeks to several months. All serums were tested at the beginning, and it was found that after the lapse of a certain time they invariably gave a positive reaction, no matter whether they were normal or syphilitic. He has examined some 3,000 cases, and the reactions were tried with five different antigens. Not only did this phenomenon occur with unheated serum, but also with heated serum. The presence of bacteria did not affect the results, though there was a strange exception in that serums polluted by moulds all reacted negatively quite independently of the results of the first reaction. Rabinowitch draws a parallel between these findings and the antitryptic power of normal serum. The antitryptic power disappears in certain diseased conditions and on storage of the serum. He concludes that the Wassermann reaction is a fermentative reaction, depending on the fact that in syphilitic serum there is an inactivation of some fermentative constituent, comparable to the antitrypsin of normal blood, which prevents the binding of the added complement by the haemolytic system. The inactivation of this antiferment renders possible the fermentative reciprocal effect between complement, organ extract, and patient's serum, whereby the complement is destroyed or absorbed. But Rabinowitch agrees that though a similar process may take place in diseased conditions other than syphilis, yet these are so comparatively rare that in practice the Wassermann reaction may be relied on as a diagnostic of syphilis.

Last February Professor Norman Collie, of University College, London, and Mr. Patterson, of the University of Leeds, reported to the Chemical Society independent experiments which had led them to the conclusion that on subjecting hydrogen to bombardment by the cathode rays both neon and helium made their appearance. They stated that if into a vacuum tube sufficient hydrogen were admitted to conduct an electric discharge, helium made its appearance after sparking had been in progress for some time. If this vacuum tube were surrounded by another containing a little oxygen, both neon and helium were found in the space between the two tubes, the appearance of neon being apparently conditional on the presence of oxygen. The authors suggested three possible explanations; one was that one or more of the elements in the glass or the electrodes had been transmuted into helium or neon; the second was that hydrogen had been transmuted into helium and neon as a result of the electric discharge to which the hydrogen had been subjected; the third suggestion was that the energy of the electric discharge had been converted directly into helium and neon. In making these suggestions they drew attention to the relations expressed by such an equation as helium (4) + oxygen (16) = (20). These explanations were subjected to much criticism, and it was suggested that the gases might have been liberated from the glass or the electrodes in which they had been occluded, and Sir J. J. Thomson afterwards brought forward evidence in support of this alternative explanation. Professor the Hon. R. J. Strutt, F.R.S., has now reported to the Royal Society the result of some experiments undertaken in the hope of confirming the work of Collie and Patterson. His results were negative, but whether this was due to a failure to appreciate the proper conditions for the production of neon by electrical discharge or for some other reason he was unable to say. He states, however, that he found it difficult or impossible to be sure of excluding air when the hydrogen was pumped out from one apparatus and transferred to another, and he therefore avoided this kind of manipulation. The hydrogen, after each experiment, was converted into water by admitting a little oxygen into the discharge vessel and continuing the discharge for a short time at intervals. The resulting water vapour was frozen out in a side tube cooled by liquid air. Diffusion was free enough soon to remove the whole of it, and a pure oxygen discharge remained. The oxygen could easily be removed by cooled charcoal. Thus the entire series of operations was carried out in one closed apparatus. The discharge with electrodes in a cylindrical tube was tried, both at the cathode-ray stage and at higher pressures; also the electrodeless discharge. The duration of each experiment varied from eight to twenty hours. In no case was any trace of neon observed.

Photographs, both in monochrome and in colours, of an *x*-ray tube in full activity have been successfully obtained in France, and some very beautiful colour results have been brought before the Société de Radiologie Médicale de Paris (*Bull. et mém.*, November, 1913). There is no danger of *x*-ray action on the photographic plate in the camera by a fluorescing tube, for the lens effectively protects the central part of the plate, while the outer portions can be screened from penetrating rays by a partition of lead in front of the camera. The autochrome plate and screen were used in the colour experiments, and with a tube working in the dark, and having a hardness represented by about 6 degrees Benoist, the exposure necessary was half an hour. Only the luminous parts of the tube appeared on the plate, and therefore a further exposure was necessary, with the current off and the room lighted, in order to get a silhouette of the glass and metal parts of the apparatus. In a room weakly illuminated by daylight this additional exposure was two hours, with a lens working at F 4. The too rapid reddening of the anticathode in some tubes involved central over-exposure, but other tubes caused no difficulty in this respect. The photography of *x*-ray tubes has certain practical applications. It is possible to see in the monochrome photograph—not, apparently, in the colour one—the central cathode bundle of rays, which is invisible to the naked eye. Photography, therefore, permits analysis to some extent of the cathode radiation.

Mr. A. Mallock, F.R.S., communicated to a recent meeting of the Royal Society a paper on intermittent vision, in which he suggested an explanation of the convention by which rapid rotation is indicated in drawings by introducing a large number of radial lines in place of the actual spokes of the wheel. He said that when a wheel turns so rapidly that the separate spokes cannot be seen or easily followed by the eye, and if at the same time the observer receives a small mechanical shock of almost any kind, the spokes appear almost stationary for a fraction of a second. The appearances, he found, depended on the speed of rotation, on the brightness of the illumination, and, to a lesser degree, on the nature of the shock. Suitable shocks could be given by the contact of the feet with the ground as in walking, by tapping the head or body, and in many other ways. He described experiments bearing on the relation between the appearances and the

speed of rotation, and suggested an explanation depending on an assumed variation of sensibility produced by a slight shock. This variation, which appeared to be rapidly extinguished, had a periodic time of about $\frac{1}{15}$ second, but differed slightly for different individuals.

LITERARY NOTES.

As everything relating to Aberdeen is of special interest at the present time to members of the Association in view of the forthcoming annual meeting, we make no excuse for giving extracts from some interesting remarks by Dr. James Galloway, physician to Charing Cross Hospital, on the Rev. James Smith's *Genealogies of an Aberdeen Family—1540 to 1913*, which appear in the *Aberdeen Daily Journal* of December 24th. He says the book is of interest not only as giving an account of individuals of whom we have some knowledge, but chiefly as a study in the recent ethnology of Aberdeen and its neighbourhood:

> It is interesting to see how different families in the north-east of Scotland entered the melting pot of the city and how intimate the fusion became. In spite of this, the types must have been very much the same, for the product has nearly always the same characteristic marks—an industrious, efficient race of people, with their emotional and artistic capacities either undeveloped or kept continuously under strict control. This is in spite of the fact that there are obviously importations from what are usually considered the Celtic elements of our population.

Dr. Galloway thinks that all over the north-east the Gaelic-speaking inhabitants (the so-called northern Picts) must have been for many centuries in occupation of the land, and have formed a very homogeneous race. He does not believe that the Teutonic or Scandinavian importations ever had any appreciable effect on this part of the country. He thinks the so-called "Highlander" of these districts must have been of the same Pictish race. The centres of population in very early historical times seem not to have been on the east coast, but in the upper valleys of the rivers. There was probably, therefore, no distinction between Highlander and Lowlander. The more purely imaginative traits that are now usually ascribed to the Celtic race were probably of southern origin. A large part of the Arthurian myth is concerned with the south of Scotland and Cornwall, taking almost no note of modern Wales. Very few south Celtic influences had penetrated over the Mounth, though the Aber in Aberdeen sounds more Cymric than Gaelic. The so-called Highland families, therefore, who settled in Aberdeen and mixed their blood with the more truly Aberdeenshire families produced very little change in the physical and mental characteristics of their progeny.

The chief points of a paper on puericulture and eugenics in ancient Greece by Dr. M. Moïssidès, of Constantinople, editor of the Greek medical review *Hippocrates*, were discussed in a leading article which appeared in the BRITISH MEDICAL JOURNAL of December 6th, 1913, p. 1502. Nothing was there said, however, of the author's views of the etymology of the word "eugenics." Accepting Sir Francis Galton's definition of the objects of the science created by him, Dr. Moïssidès says that there are three names in current use to designate it—*eugenia*, from *εὖ γενος*, meaning the condition of being in the German sense "well-born" (there is a Greek word *εὐγένεια* which means nobility of birth); *eugenics*, from *εὖ γεννινος*, not much used by the ancient writers, but found in Byzantine authors in the sense of "come of good stock"; and *eugenetics*, from *εὖ* and *γεννηθινός*. The last word, says Dr. Moïssidès, does not exist in Greek; the second part is used by Aristotle to denote one fit to procreate. Of the three words, Dr. Moïssidès prefers "eugenics," which, we take it, is derived from *εὐγενης*, which was used by the Greeks to designate one high bred or born of good stock. Sophocles applied it in this sense to the horse, Aeschylus to the lion, Polybius to birds; it was used in regard to plants by Galen and to soil by Plutarch. "Eugenics" was used by Galton as far back as in 1883. The word is formed on the analogy of economics, politics, and so forth. Dr. Moïssidès goes on to state that in a Greek pamphlet published by him not long ago (Constantinople, 1912) he used the word "callipaedia" (*καλλιπαιδία*), which he says he invented to designate "the science of begetting fine children." We do not doubt the originality of his invention, but in this, as is so often the case with regard to new discoveries, he has been anticipated by two centuries and a half. Claude Quillet published in 1655 a Latin poem in four books entitled, *Callipaedia seu de Pulchrae Prolis habendae Ratione*, which he dedicated to Cardinal Mazarin. A second edition was issued in 1656. It is said that the author was rewarded with an abbacy. The book was translated into French prose about the middle of the eighteenth century, and into French verse in 1779. A translation "done into English verse" with the title, *Callipaedeae, or an Art how to have Handsome Children*, was published anonymously, with a dedication to Garth. A second edition appeared in 1718.

At the Eleventh International Conference on Tuberculosis held in Berlin on October 25th, the following system of abbreviation of words indicating conditions of the lung was finally adopted: *d.*, dexter; *s.*, sinister; *a.*, anterior; *p.*, posterior; *sup.*, superior; *inf.*, inferior; *C.*, costa; C_2, *etc.*, costa II and so on; *interc.*, spatium intercostale; *Cl.*, clavicula; *Pap.*, papillula mammae; *Sp.*, spina scapulae; *Ang.*, angulus scapulae; $\frac{1}{2}$ *Sc.*, medio scapulae; —, usque ad; *Th.*, thorax; *applan.*, applanatus; *dilat.*, dilatatus; *retard.*, retardatus; *Margo.*, margo pulmonis; *mobil.*, mobilis; *immobil.*, immobilis; *M.*, mutitio, mutus —dullness, dull; *Tymp.*, tympanismus; *Met.*, metallica; *Resp.*, respiratio; *Insp.*, inspiratio; *Exsp.*, exspiratio; *ves.*, vesicularis; *bronch.*, bronchialis; *amph.*, amphoricus; *sacc.*, saccatus; *prolong.*, prolongatus; *fort.*, fortis; *dim.*, diminutus; *RL.*, large bubbling râles; *RI.*, moderate moist râles; *rl.*, dry râles; Rl_1., small râles only heard after coughing; *sicc.*, siccus; *cons.*, consonans; *crep.*, crepitans; *subcrep.*, subcrepitans, crackling; *rh.*, rhonchi; *frict.*, frictio; *Frem.*, fremitus vocalis; *Brph.*, bronchophonia.

In Mr. L. F. Salzmann's *Mediaeval Byways* (London: Constable and Company, Limited) there are accounts of several curious legal trials in which doctors were concerned. A curious case came into court in 1292. Mauger le Vavassour, a member of a leading Yorkshire family, fell ill. His wife and other friends sent for Master Otto of Germany, a man of note as a doctor, promising him one mark if he would visit the patient, and six marks more if he would undertake the treatment. The doctor went, saw, and conquered. Various medicines and healing drinks compounded by him in the shop of an apothecary of York were administered with good effect. Then came a hitch. When the patient was convalescent, Otto put him on so strict a diet that he grew restive, and his wife gave him various forbidden foods. Otto, finding his orders disobeyed, threw up the case. The sequel shows that mediaeval patients who wished to cheat their doctors showed as much ingenuity in their pleas as is sometimes displayed in modern times. The question submitted to the court was whether the physician, having left his patient before he was fully cured, had shown neglect, and was disentitled to his fees. With a judgement more subtle than might have been expected from a thirteenth century jury, the verdict given was that Otto had ordered the diet for the patient's good, and not, as was pleaded, with the object of keeping him weak and so increasing his bill for attendance; they also found that the food given in disobedience of his orders, as a matter of fact, did the patient good. The judges were puzzled and reserved their decision. It would have been interesting to know how the case was decided. In another case, which occurred about the middle of the fifteenth century, Eryk de Vedica, one of the brethren of the Grey Friars of London, and a physician of reputation, was sent for by Alice, wife of William Stede, a vintner. When Eryk understood her "grete age and Jubertous Sickness," he was with difficulty persuaded to undertake the treatment. After five weeks' attendance he "had soo doon hys parte vnto her that she thought herself wele amended in her body, she cowde hym grete thancke, and gave hym 20s. for his labour." Then the husband sued Eryk for taking the money, and the friar had no defence, as "the common law supposeth every receiving of the husband's goods or money by the hands of his wife without his licence or command to be a wrongful taking away of the same from him." The case was taken to the Court of Chancery. Here again one would like to know how it was decided. But the case as it stands suffices to show the eternal meanness of unregenerate man in regard to the payment of medical fees.

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THE SYPHILITIC FACTOR IN SOME OBSCURE DISEASES.

THE amount of interest attaching at the present time to the study of venereal diseases and their effects on the health of the community is reflected not only in the restrained though earnest discussion of the matter in the lay press, but also by the appointment of a Royal Commission to collect information and make practical suggestions thereon. It would, perhaps, be idle to assert that the composition of the Commission has given universal satisfaction; but it has to be remembered that the problem is not concerned only with the medical aspect of the case, but necessitates the consideration of economic and other factors. Under the uncontrolled rule of a ruthless medical dictator, unconcerned with or inconsiderate of the other important factors, and bent only on the extermination of venereal diseases, the problem could be solved, just as rabies was stamped out in this country. No such campaign, however, is possible in the present state of our civilization, and it is probable that the pessimism of medical men in general on the question is due to the absence of agreement as to the most effective policy.

The public mind grasps the fact that syphilis is fraught oftentimes with dire consequences to the individual; that owing to its great infectivity and to the weaknesses of mankind it is easily spread, and that, as "when the fathers have eaten the sour grape the children's teeth are set on edge," so the disease may be transmitted to the offspring, manifesting itself in certain definite signs; but what they do not yet fully comprehend is that syphilis is so protean in its manifestations, so productive of later and obscurer and often incurable diseases, and plays such a part in the causation in the individual himself or in his offspring of other diseased conditions that bear no apparent relationship to the original infection. It is true also that the signs of syphilitic infection are not always evident even to the medical eye, and when, perhaps years afterwards, a lesion arousing a suspicion of syphilis makes its appearance, it may be difficult, if not impossible, to obtain from the patient an admission of syphilis, either because he is unaware of its occurrence or is indisposed to admit it. If, however, it could be impressed on the popular mind that syphilis is the *vera causa* of many worse diseases, that it is eminently curable provided energetic methods be adopted, and dangerous when these are half-heartedly pursued, and that it is a disease which is economically and racially disastrous, then people might willingly submit to measures directed against its eradication in themselves or designed for its prevention.

But just as educative measures should be promulgated amongst the laymen, so must medical men seek to perfect their knowledge of the disease. Here the laboratory worker can join hands with the practical clinician, for the triumphs of the former within the last few years in the elucidation of some of the problems of syphilis have been striking, and the welcome extended to them by the latter hearty. The practical value of two laboratory endeavours—the method of serum diagnosis and the production of a curative drug, both the outcome of many long and patient researches that at first sight seemed devoid of clinical application—have now been established beyond serious cavil. We are, therefore, glad to publish a communication from a brilliant laboratory investigator who has been associated with much of the important work that led to these two advances, and who has himself in no small way contributed to their progress. Dr. Carl Browning's conclusions on the value of the Wassermann reaction in elucidating the occurrence of syphilis as a factor in diseases of doubtful etiology are extremely striking, and, built as they are on the dispassionate study of a large number of cases by himself and his assistants, are sufficiently convincing to merit the attention of all interested in the subject.

Before accepting the conclusion that the Wassermann reaction is absolutely specific for syphilis, one must be satisfied not only with the precision of the technique adopted, but also, in the absence of a sure explanation of the mechanism of the reaction, with the establishment of its practical value in a large number of known cases. It must be admitted that the original technique of the Wassermann reaction is not precise enough to exclude fallacies patent enough to those workers who have been concerned with other investigations in serology. Too many of the modifications of that technique have been devised as short cuts by others more anxious to save trouble in its performance than actuated by any desire to minimize those sources of fallacy which they have not appreciated. Thus some of the modifications in far too common use are wholly fallacious, and conclusions drawn from them are not to be relied upon. On the other hand, the possible fallacies of the original have been controlled by certain modifications which certainly entail more skilled and precise labour on the part of those who adopt them.

On the score of precision of technique no adverse criticism can be directed against the observations of Dr. Browning, for the technique adopted—that of Browning, Cruickshank, and Mackenzie—is sufficiently rigorous to satisfy the most meticulous critic, for it controls, probably more than any other modification, all the variable constituents entering into the reaction, and accurately estimates their variability. On the second point—namely, the worth of the reaction in ascertained cases—Dr. Browning supplies evidence in his paper. His conclusion is that the reaction fails only in understating the percentages of syphilis. In evident syphilis positive indications are given in 95 per cent. of cases in the secondary stage, 75 per cent. in the tertiary, and in 95 per cent. of congenital cases with definite lesions. The proof that a positive reaction does not occur in other conditions than syphilis is of the utmost importance, and is naturally not so easy of demonstration. The points brought forward to support this are that in the serum of colleagues repeatedly examined no positive reaction was obtained; that in a large number of cases of children in whom suspicious signs of syphilis in the physical state, individual history, or family history were rigorously excluded, the results of the reaction were positive in only a very small percentage; even that percentage showed that the selection on clinical grounds was not sufficiently exclusive, because the reaction in the parents or other members of the family, when performed, was positive also.

Further, among selected country children, in no instance was a positive reaction obtained, which is in marked contrast to the results of examination of the serum of children selected on the grounds that they themselves showed clinical evidence of syphilis, or because in their personal or family history there were suggestive signs. In this latter class, 72 per cent. of the cases and 80 per cent. of the families reacted positively. On these grounds, which are confirmatory of the observations of others, Dr. Browning concluded that even in the absence of other evidence, a positive Wassermann reaction may be accepted as a valid proof of the presence of syphilis. It may be that every one will not subscribe to this conclusion. The inductive method of logic has its limitations. But all will agree that in the present state of our knowledge, and taking a comprehensive view of the accumulated experience, the finding of a positive Wassermann reaction in ordinary circumstances is one of the strongest points in favour of a diagnosis of syphilis. Dr. Browning and his collaborators have not trusted to the reaction alone in determining the incidence of syphilis in various diseases of obscure origin, but have been assiduous in collecting the clinical evidence and particulars of the family history. We must pay a tribute to the trouble that has been taken—and it must have been considerable—in obtaining the results of the Wassermann reaction of the parents and other members of the family in such a large number of cases before concluding that syphilis played a part in the particular diseases of children investigated. New light has been thrown on mental deficiency, epilepsy, heart disease, and deafness in children, and also on aortic disease, aneurysm, nervous diseases, eye diseases, and other conditions that show how widespread are the effects of syphilis. We particularly commend the thoughtful conclusions on the methods of cure and prevention of this great social evil.

THE MEDICAL VOLUNTEER RESERVE, R.N.

THE regulations for the appointment and training and the conditions of service of medical officers joining the Royal Naval Volunteer Reserve are printed in the Service notes of this issue. The Naval Medical Reserve is designed to provide medical officers for the navy in time of war or emergency. The number of medical officers to be enrolled in this reserve—exclusive of supernumerary officers—has been fixed at 150: 8 fleet surgeons, 22 staff surgeons, and 120 surgeons. They join under the obligation to serve either ashore or afloat in time of war and in any part of the world, with the understanding that their services shall as far as possible be confined to home waters and the Mediterranean. Less than half the numbers required have, we understand, been obtained up to the present. Civilian practitioners willing to give an undertaking to serve their country in time of war are eligible for this Reserve.

The great advantage of the Reserve to the navy will, it is hoped, be that men in the prime of life, fully in touch with the latest knowledge and habitually engaged in the practice of operative surgery, will be available in time of national danger. The volunteer medical officer joins with an immediate competence for his special duties which no volunteer officer in any other capacity can hope to reach unless, perhaps, after lengthy and arduous training. Civil medical practitioners who bear the King's commission will gain the benefits of intercommunication and exchange of experience during their training in one of the great battleships or naval hospitals.

A certain number of the medical officers of the Reserve are attached to divisions and perform certain duties: they examine recruits, sign hurt certificates if necessary, and are present at the Admiral's inspection. Unattached surgeons have no duties of this kind, but they may apply to be attached when vacancies occur in the divisions, but they will only find it convenient to undertake these duties if they live near the divisional centre. Both classes of surgeons, however, have to undergo the same training, and have equal advantages in respect of pay, promotion, and otherwise. Candidates must not be over 32 years of age, and in order to fit them for their special duties provision is made for training. Surgeons go afloat in one of His Majesty's ships once in their first four years of service and once in the second four years of service, with an interval between them of not less than two years. The period of training is fourteen to twenty-eight days (at the officer's option). In addition, surgeons are required to go through two courses at a naval hospital, once in the first four years' service and once in the second four years' service, with an interval between them of not less than two years.

Every effort is made to meet an officer's convenience as to the time when he shall undergo a course, and if he indicates that he can join a ship or hospital at a certain date, his wish is respected. Provision is also made to enable staff surgeons to have the benefit of hospital or man-of-war courses.

Surgeons who have completed eight years' service and have embarked for training twice during that period, and have been through two courses of at least fourteen days each at a naval hospital will be eligible for advancement to the rank of staff surgeon, and staff surgeons who have served eight years in that rank will be eligible for promotion to the rank of fleet surgeon.

While undergoing peace training surgeons are paid, if afloat and under two years' seniority, 14s. a day; if of two years' seniority, 15s.; if of four years', 17s.; and if of six years, 18s. During a hospital course the pay is at the same rate, with, in addition, the hospital allowance at the usual naval rate. An officer travels between his place of residence and His Majesty's ship or hospital at the public expense, under the regulations laid down for naval medical officers of equivalent rank.

When called out the pay and special allowances of medical officers will together amount, for surgeons under four years' seniority, to 22s. a day; if of 6 years' seniority to 23s. a day. Staff surgeons under two years' seniority will receive 20s. a day, and 5s. a day as special allowance; if of two years' seniority, 21s. and 5s. a day; if of four years' seniority, 24s. and 5s. a day; if of six years' seniority, 25s. and 5s. a day. Fleet surgeons will begin at 27s. and 5s. special allowance, reaching 35s. and 5s. at ten years' seniority. These rates of pay are in addition to hospital, lodging, and other allowances under the same conditions and at the same rates as those payable to naval medical officers. Before joining for training an officer must provide himself with certain articles of uniform prescribed by the regulations, and an allowance of £20 in aid of outfit will be granted to him on completing his first course of training, whether afloat or ashore.

On being called out for service surgeons will be entitled to a further grant of £10 in aid of outfit: the extra grant to a staff surgeon will be £20 and to a

fleet surgeon £30. If a surgeon at the time of being called out for service should not have qualified for the first grant of £20 by reason of not having undergone a course of training, he will nevertheless receive it together with the further grant of £10.

If an officer should receive hurts or wounds while on active service or whilst undergoing training, he will receive the same pension and allowances as those to which officers in the Royal Navy of corresponding rank would be entitled under similar circumstances. Moreover, widows and children of officers who may be killed in action, or die from accident resulting from the performance of their duty, will receive the same pensions and compassionate allowances as the widows and children of naval officers of corresponding rank would be entitled to receive in similar circumstances.

HOW IT STRIKES A CONTEMPORARY.

SCIENTIFIC research is a pursuit so fascinating and absorbing that men engaged in it are a little disposed to neglect, if not to despise, lay opinion—at any rate, when they are young. They may be advised to read the case which Mr. Howard McFadden—who is an American citizen, but has spent thirty years in commercial pursuits in England—makes out in the current number of the *Nineteenth Century and After* for the somewhat unconventional method of aiding medical research which he has been carrying on for four years past.

The article is entitled, "A Layman's Views on Medical Research," and is interesting from more than one point of view. Its particular interest and novelty lies in this—that it gives the point of view of the man who, having an income larger than he requires for his personal expenditure, and, seeking some direction in which the superfluity may usefully be expended, is attracted to medical research. It is an appeal by one successful man of business to others of like good fortune. The writer regards medical research from a rather fresh point of view, and gives reasons why his brethren in business should spend money on it. Some of the reasons are of the serious sort to which we are well accustomed, but others are half humorous, as when he says that "even one (researcher) provided will help considerably and ensure more gratification" to the lay promoter "than a third motor car." In fact, part of Mr. McFadden's argument is that rich men should make the encouragement of medical research a hobby, taking a personal interest in its general course and administration, and that this gives not only plenty of occupation, but, as he has found, much pleasure also. "I have," he says, "not hitherto found its equal" in these respects, "and there is also the satisfaction of knowing and feeling that every step has its value for the benefit of humanity." By medical research he understands "a specially organized attempt to investigate disease from the more scientific point of view, that is to say, to employ well-adapted men to investigate firstly all the well-known facts concerning the disease, then to try to discover the cause of it, and to prove the matter experimentally." It is interesting to find Mr. McFadden recognizing that "every doctor while doing his daily work is in a way a scholar of medical research, investigating all the time, although he may not realize the fact." Thus this lay promoter of laboratory research has grasped one of the main doctrines of Dr. Mackenzie's article of last week, although he has not pursued this line of thought to its logical conclusion.

Mr. McFadden would have the lay promoter of a research take an interest in its general course, so that his scheme embodies the idea of personal service, but he is wise enough to see that it would be a mistake for the lay promoter to interfere in the actual details of research. He understands, too, that though a worker must keep the goal in view, he must not be pinned down too closely to a foresettled programme, and that, whereas a frontal attack may encounter great difficulties, a flanking movement may discover the way into the citadel. He recognizes that such work "requires determination, unlimited patience, and, above all, freedom of thought and plenty of opportunity for it." He condemns the salaries paid to the men who do this work; it is not, he says, right that men should devote perhaps their lives, and certainly their best years, to science for such small remuneration. Mr. McFadden's words must here be given and ought to be underlined: "We must not trade on enthusiasm for progress; better work is done if the workers have no financial worries and have not the fear that age or incapacitation may land them in difficulties; it may be said that great credit comes from successful research, but credit in science does not provide food, shelter, and happiness, and many years of drudgery may be experienced before any credit is received, if it is received at all." He thinks also that temporary research appointments are a mistake. This, the business side of research, he says, requires much foresight, and we may agree with him that it is really the business man's province. We come, then, to Mr. McFadden's views as to this business side. He is strongly in favour of the business man subsidizing research out of income, and not by way of endowment. "This method of conducting research," he says, "is cheaper than the endowment plan; one is not forced to invest large sums of money at 4 or 5 per cent. A business man will appreciate what this means. From experience I find that it costs less than a similar number of workers under some of the endowed funds. Yet I have no complaints from the researchers. I know that they live comfortably and work their hardest. I have made provision for the future. We are an enthusiastic group, unfettered by conventions and regulations, and by this means I believe we stand a good chance of solving the difficult problems we have undertaken." Mr. McFadden does not say how he has made provision for the future, and we must for the present rest content to accept the fact that he has, and that he has doubtless done it on sound business principles.

Mr. McFadden is a little perplexed by the attitude of the medical profession. He finds it to be conservative, demanding much evidence for any new discovery, and that it shall be convinced of bona-fide endeavour. When the initial stages of the work in which he is interested were published the profession took, he thinks, no notice of them, while later on there was some adverse criticism. If the medical profession displays a cautious attitude it is because experience has taught the need for it. Perhaps if the case were transposed, and had to do, not with the presentation of the alleged discovery of a new scientific fact to the medical profession, but with the submission of the alleged discovery of a new diamond mine to a man of business, his business training would compel him to demand much evidence, and convincing proof of something more than bona-fide endeavour before accepting the estimates of the sanguine discoverer.

THE ORGANIZATION OF MEDICAL RESEARCH.

THE organization and direction of the work which is committed to the Medical Research Committee appointed last year by the Chancellor of the Exchequer in connexion with the fund available under the National Insurance Act for medical research, not only possesses great interest and importance for those immediately concerned, but also for the teaching and progress of medicine in this country. As was mentioned in the JOURNAL of December 6th, 1913, a meeting of the Advisory Council for Research was held on December 4th, to which Lord Moulton (the chairman of both bodies) presented the scheme proposed by the Medical Research Committee. We understand that various members of the Committee have paid visits to different university centres, and that other visits are in contemplation. Members are thus enabled to ascertain what researches are being carried on and to come into direct contact with those engaged upon them. Useful work may be done by promoting co-operation amongst different workers, and in co-ordination in various directions, and we hope the Committee will not lose sight of these considerations. It would appear also from these visits that the Committee believes that it may be able to afford assistance to some of those engaged in research who are working either independently or in connexion with the laboratories established in various universities and medical schools. We sincerely hope that this will prove to be the case, for the encouragement and training of men able and disposed to do research work is of the first importance, and nothing will be more potent in that direction than for research workers of the right type to have the possibility of a career in which they may be assured of a reasonable livelihood opened out to them. Whatever may be done in more specialized directions, the ultimate success of any research scheme must depend upon an adequate supply of capable men. In addition, such encouragement of research at the various teaching centres would provide a very wholesome stimulus to good progressive work. We understand also that various statistical and sociological inquiries on scientific lines are contemplated by the Committee. Some time ago it was reported in the lay press that the Medical Research Committee had acquired the Mount Vernon Hospital for the purposes of central laboratories, but no information was forthcoming as to whether it was proposed to continue the provision of beds for tuberculosis or other diseases at this institution. We find on inquiry that the report as to the acquirement of Mount Vernon Hospital by the Medical Research Committee is correct. It would appear, therefore, that the scheme of the Committee contemplates the carrying on concurrently of research in established laboratories and in other places as well as in a central institute, together with the conduct of sociological investigations.

CLINICAL TEACHING AND INVESTIGATION.

THE *Glasgow Herald* published on Tuesday last a thoughtful and, on the whole, a sympathetic leading article on the papers by Sir William Osler and Dr. James Mackenzie published in our last issue. Our contemporary, after outlining Sir William Osler's account of his methods and experience as a teacher at Johns Hopkins Hospital, and Dr. Mackenzie's indictment of the defects he observes in the clinical teaching of medical students, bids the medical profession and the public not to be unduly depressed. Bold criticism is not evidence of pessimism nor any cause for depression; on the contrary, it is proof of healthy vigour and hopeful optimism. Defects are pointed out because the critics believe that they are susceptible of remedy. The difficulty is to find the remedy in this instance without sacrificing the special excellences of British medical education in clinical subjects which have made the standard of efficiency among general medical practitioners in this country so high. There can be no hesitation in asserting that in no other land is it higher, and we doubt whether in any other it is so high. But, as was well said by a great Scottish teacher of a past generation, the facts a student ought to know are many and great, but the greatest fact of all is that there are only twenty-four hours in a day. The problem is how to use the years of the medical curriculum to the best advantage, and so to adjust the time allotted to each one of a very large number of subjects that each shall occupy its proper relative place. Our contemporary has perhaps not quite fully grasped Dr. Mackenzie's doctrine. It is, as we understand it, that a student when he begins his clinical work should go into the wards, where he will see disease in its most developed stages, and learn how to study and investigate symptoms which may be perceived with comparative readiness by the inexperienced eye and hand, and how to combine his perceptions so as to make a diagnosis. Later Dr. Mackenzie would have the student go to the out-patient department, there to learn to observe and study, under the most experienced teachers, the slighter degrees of illness which may be the first indications of some pathological process that will in time limit activity and shorten life. The principle underlying this proposal has been much debated for a generation. Many teachers of experience have held that a student cannot be brought too early into actual contact with the patient as he lives and moves and has his being, and that under modern conditions this is best done in the out-patient room and casualty department. The old apprenticeship system, which had many virtues, achieved this, but had to be given up mainly owing to the changes which have come about in the standard of secondary education, and in the requirements as to education in the preliminary sciences. The third suggestion that emerges in Dr. Mackenzie's paper arises out of his own experience. While still actively engaged in general practice he built up for himself a scientific reputation which has placed him in a position second to none in the subject to which he has devoted special attention. He gave a very stimulating account of how he worked. The secret seems to be that early in his career he was impressed by the importance of getting to understand the true significance of minor ailments and of symptoms often regarded both by patient and doctor as trivial, and in particular by continuous observation of the same patient for years to learn how these matters of apparently small consequence were related to serious pathological changes slowly developing during a man's active life. In commenting on this we ventured to say that any man who would follow in Dr. Mackenzie's footsteps must have "grit and perseverance, and patience to wait." This, to those who know anything of the harassing conditions of general practice, in which no man can ever count on being free to take and record observations regularly and systematically, must have seemed a truism; but our contemporary finds it grimly humorous, and wonders "What happens to the patients while the medical man is waiting with 'grit and perseverance'?" What happens to the patient is that his symptoms are carefully observed and studied, because he has a doctor whose mind is bent on finding out their true significance as warnings, and on tracing out more accurately the big results of small causes. This is all to the advantage of the patient and to the progress of the art as well as of the science of medicine. Underlying the criticisms contained in the article we are discussing there seems to be the assumption that there is a certain body of ascertained facts, and that the whole problem before the medical profession is to get these facts into the student's mind. Thus baldly stated the assumption would, we are sure, not be accepted, for every one recognizes that medicine is progressive. But it is perhaps not so generally realized as it ought to be that general practice affords special opportunities for the study of

clinical phenomena in their relation especially to the causes of diseases. It is only by ascertaining causes that we can hope to establish prophylaxis. Every practitioner ought to be a student. He must not rest satisfied merely with adding to his stock of knowledge an acquaintance with the contributions of others, but must seek himself to add to the stock by observations and deductions of his own. We are quite well aware of the difficulties in the way of a man busily engaged in general practice who seeks to bring scientific methods to bear on the clinical study of cases, and that he can count on little encouragement. We hope that a result of Dr. Mackenzie's appeal may be to stimulate full consideration of the thesis he has maintained, and that means may be devised for giving isolated clinical workers the support and encouragement of which they stand in need.

THE HISTOLOGICAL CHANGES PRODUCED BY X RAYS.

AT a meeting of the Roentgen Society held at Middlesex Hospital on January 5th, Dr. Jean Clunet of Paris gave a demonstration on the effects produced in animal tissues by the action of *x* rays. He first of all dealt with the normal tissues, showing how a rapid maturing of cells took place with their consequent death. Thus, in the case of the testicle the spermatoblasts were first stimulated to maturity and then destroyed, while in the case of squamous epithelium the deeper cells soon cornified, the cornified epithelium was shed, and later there was desquamation of the cells. In applying the investigations to malignant tissues two methods were employed, which the lecturer named radiation in time and radiation in space. In the first method small doses were given over a period of time. Sections were taken from the tumour before treatment and at various times during its course. In an atypical epithelioma of the skin of an old man in which no cell nests were present no change was observed for a few days. After ten days the cells were larger both as regards nuclei and protoplasm, and the nuclei showed more karyokinetic figures. In about three weeks after the beginning of the treatment it was difficult to detect entire cells in a superficial portion, the epithelium was acidophile and looked like keratin, and the nuclei were degenerate (pycnotic). Later still, the horny portions were attacked by young connective tissue cells and many leucocytes. At the end of healing there were apparently no more epithelial cells to be detected, the young connective tissue was giving place to mature fibrous tissue; on looking carefully, however, amongst the fibres some giant cells could be detected here and there, and also single cells in all gradations to normal epithelial cells. The latter were considered to be dormant cancer cells and capable of producing recurrence. In the second method (the method of space) a large rodent ulcer of the axilla which had existed for many years in an old man was strongly radiated without filtration. Only one application was given; the patient died eleven days afterwards. In this instance the periphery had a small dose, and the centre a larger one. When sections were examined the normal skin was found unchanged at the edge, but on passing inwards unchanged trabeculae of cancer cells were encountered; in the growth itself there was extreme keratinization, with massive horny formation and congregations of dead epithelium separated by young connective tissue cells. Similar appearances were found from the depths of the section upwards. Dealing with the hypertrophic effect of *x* rays on the skin, Dr. Clunet showed that in the dermatitis produced in radiologists' hands the granular layer of epithelium was thickened. When an epithelium resulted there was at the edges of such a lesion enormous hypertrophy of the papillae, with an exaggerated horny layer, and in the lesion itself the cells showed monstrous nuclei, and there was no distinct margin between dermis and epidermis. The keratin instead of being formed from below upwards was produced in concentric masses. Several illustrations were given of *x*-ray cancer on the hands of radiologists and nurses. The differences between an *x*-ray-produced cancer no longer subjected to the action of *x* rays, and one in which the worker had gone on using his hands, were strikingly brought out by the observation that in the former the tumour showed no abnormal changes, whilst in the latter the presence of giant cells and giant nuclei was a marked feature. In another case an *x*-ray cancer was treated by filtered *x* rays, and, though the tumour receded at first, an exacerbation of the deeper changes was produced, resulting in increasingly painful neuritis, and surgical treatment had to be adopted. The lecturer claimed to have produced experimentally in rats sarcomata capable of transplantation. These tumours were obtained by producing ulceration by *x* rays, allowing the part to heal, and repeating the procedure several times. After the lapse of about two years fibro-sarcoma resulted. An interesting section was shown in which the cicatrix left after *x*-ray treatment of lupus was removed for aesthetic reasons, and it was found that a very early epithelioma had been produced. The lecture was illustrated by excellent autochrome photomicrographs and drawings, and the large audience presided over by Professor A. W. Potter, F.R.S., was very appreciative of the striking demonstration of the effects of the *x* rays, not only in producing, but in healing neoplasms.

PELLAGRA INVESTIGATIONS.

DR. L. W. SAMBON, who left England in August last to investigate pellagra in the West Indies, returned to London this week. By invitation he first proceeded to the United States of America, and in Spartanburg, Columbia, and Charleston he met several of the men who have recently devoted themselves to the study of pellagra, and delivered addresses before medical societies in these cities. Dr. Sambon found that in the United States the interest in the disease was very keen, owing no doubt to the evidences of the existence of pellagra to a serious extent in many parts of the country. As is well known, Dr. Sambon's opinion is that pellagra is not due to the consumption of maize, whether diseased or sound, but that it is caused by an infection brought about most probably by a fly. His investigations in Southern and Eastern Europe suggested that the intermediary was a simulium, an insect closely allied to the group represented by the sandfly. In the United States Dr. Sambon found many men ready to accept this hypothesis, and was greatly impressed with the work which was being carried out by the Thompson-MacFadden Pellagra Commission in South Carolina. After leaving the North American continent he proceeded to the West Indies, where he visited Jamaica, Antigua, Barbados, Trinidad, Grenada, St. Vincent, and other islands. In the hospitals, asylums, and rural districts he met with many cases of pellagra, and proved the existence of the disease in several areas in which its presence had previously been unknown. Dr. Sambon also visited British Guiana, and found pellagra along the coast from the Demerara to the Berbice rivers. In part of his trip Dr. Sambon was accompanied by Captain Siler, U.S. Army, chief of the America Pellagra Commission, and by Mr. Jennings, of the Entomological Bureau, Washington, U.S. The observations made will certainly add much to the knowledge of the distribution of the disease. Besides studying pellagra in its etiological and epidemiological aspects, a great deal of useful and interesting information has been gathered on the causation and topographical distribution of other tropical ailments, more especially blackwater fever, filariasis and elephantiasis, as well as on the subject of leprosy. Dr. Sambon has brought back with him a number of pathological and entomological specimens, and over a thousand photographs and drawings of medical and sanitary interest, in the preparation of which he was assisted by Mr. E. Schwartz.

When Dr. Sambon's report is published there can be no doubt that the sum of money which has been expended by the West Indian Governments and by Mr. H. S. Wellcome in furthering this expedition will be amply repaid. Dr. Sambon met with ready assistance in the prosecution of his work from the authorities, the medical men, and the personnel of the agricultural and veterinary departments at all of the many places he visited.

SOME GREAT IRISH CLINICIANS.

A PAPER on the great Irish clinicians of the nineteenth century contributed to the *Johns Hopkins Hospital Bulletin* for August last by Professor David Riesman, of the University of Pennsylvania, has recently been reprinted. In the mid-Victorian period, when Graves, Stokes, and Corrigan flourished, Dublin attracted students from America and other countries. Professor Riesman's statement that Stokes and Graves introduced clinical teaching in this country is not quite accurate, for in 1748 clinical lectures given in the Edinburgh Royal Infirmary by John Rutherford were so successful that the managers set aside a ward for teaching purposes. But there is no doubt that the famous Dublin physicians were pioneers in this province of medical education. Graves gave his students opportunities of making observations on patients as to whose condition throughout the course of the disease they had to make regular reports. To him belongs the glory of having earned the enthusiastic praise of Trousseau as a "perfect clinical teacher." He was kind to his patients at a time when consideration for the feelings of the inmates of hospitals was by no means so general as it is now. He particularly objected to the discussion of cases within the hearing of patients. He revolutionized the treatment of fevers, in which starvation—a system known in France as *diète*, on the *lucus a non lucendo* principle—was formerly the most prominent feature. He was naturally proud of the success of this innovation, and said on one occasion, when calling attention to the good effect of nourishment in some cases of typhus: "Lest when I am gone you may be at a loss for an epitaph for me, let me give you one in three words, 'He fed fevers.'" These words are not, however, on his tombstone. Graves's ideas on tuberculosis were in advance of his time. He fed consumptive patients generously, and recommended them, if the weather permitted, to remain in the open air four or five hours, taking exercise on a jaunting car or on the top of a coach. He insisted that the doctor should never abandon cases of consumption. William Stokes, while still a student at Edinburgh, wrote a booklet on the stethoscope, which did much to popularize Laënnec's invention. Diseases of the heart and lungs specially interested him, and in the words of Professor Riesman "he understood better than his contemporaries, better even than the school of Laënnec, and than many of his successors, that the murmur is not everything, either in the diagnosis or in the prognosis of diseases of the heart, and that a functional diagnosis is better than an anatomic one." He was one of the first to urge a definite course of gymnastics or pedestrian exercise in the treatment of heart disease. He believed in the curability of phthisis even after the formation of cavities. In essentials his treatment differed but little from that in vogue at the present day. His name is associated with that of his colleague, Cheyne, in the peculiar type of breathing which, though discovered by Robert Adams of London, was first thoroughly worked out by Stokes. Corrigan's name is kept alive by his article on permanent patency of the aortic valves, published in the *Edinburgh Medical and Surgical Journal* in 1832. It is pointed out by Professor Riesman that he studied the condition clinically and pathologically in an institution in which he had only six beds. This is a proof how much can be done even in medicine by close observation of a few cases, exemplifying the value in another sphere of the old precept as to reading, *non multa, sed multum*. Corrigan was a successful practitioner rather than a great teacher. John Cheyne, who was a native of Scotland, started in Edinburgh, but for some reason did not find that famous medical centre a congenial field for practice. He migrated to Dublin, where he became physician to the Meath Hospital and lecturer at the College of Physicians, and acquired a very large practice. He was an eminently shrewd man, and in particular was punctual in his engagements—a quality which he says he found very useful in Dublin. He was struck down in the prime of life, and had, therefore, probably no experience of the bitter truth of his own words: "It must, however, be admitted that professional success, like every other good thing in this life, has in its nature many seeds of decay. The same circumstances which tended to bring the present favourite into general repute are probably already operating in behalf of his destined successor. Thus the physician to whom his fellow citizens award the possession of the most skill is generally called upon to assist when all assistance is too late, and sarcastic remarks tending to promote his downfall are made when the patient dies and becomes the subject of ephemeral talk."

THE FRIEDMANN TREATMENT OF TUBERCULOSIS.

DR. HARRY LEE BARNES, Superintendent of the State Sanatorium, Rhode Island, has been good enough to send us a reprint from the *Providence Medical Journal* of a preliminary report made by him to the Rhode Island Medical Society last September on 120 cases treated with the Friedmann vaccine, from which it appears that he has not formed a favourable opinion of the remedy. He states that 69 patients and employees, who had willingly consented to undergo the treatment, were injected by Dr. Friedmann on April 9th, that on May 28th 43 of these patients were given a second injection by him, and that on June 8th Dr. W. G. Dwinell, who has charge of the Friedmann Institute in Providence, gave first injections to 40 additional patients. The total of 120 is made up by 11 other patients who had received injections shortly before admission; 53 per cent. of the patients received two injections, 14 per cent. three injections, 5.8 per cent. four injections. Of the patients mentioned in the report, 60 per cent. had received the vaccine five months before the report was made. Dr. Friedmann stated his intention to make a selection from all classes of cases, but owing to limited time he, in fact, only treated two of those who were confined to bed; he, however, treated several cases after he had been informed that signs of cavity were present. A rise of temperature followed the injections in 30 cases (25 per cent.). If the fever was mild (99.5° to 101.5° F.), it was usually accompanied by headache, backache, and general muscular pain; some of those patients in whom the temperature rose to 103° or 104° had chills, sweating, and nausea. Taking them as a whole, Dr. Barnes considers that the fever reactions were very similar to those after tuberculin. Indurations occurred at the site of inoculation in 70 per cent. of the cases, and in 23 per cent. abscesses formed. Speaking of the cases generally, Dr. Barnes says that the cough and expectoration were not strikingly improved, the bacilli persisted in the sputum in 85 per cent. of positive cases, the vaccinated patients lost more weight than others, they had more fever and night sweats after the vaccine than before, and blood spitting was at least as frequent. On the other hand, 20 per cent. experienced improvement in chest pain, though there was no unusual tendency towards disappearance of physical signs, which were on the contrary increased in many cases improving previously; 40 per cent. of the eighty-five persons whose condition at the time the report was prepared was known at an average period of four months after the first injection, were worse. The most striking improvement

was seen in one case of joint tuberculosis: the patient was a young man, aged 19, with a stiff elbow and in relation with the joint a sinus discharging pus; an abscess occurred at the site of inoculation, and the patient subsequently had an attack of epididymitis ending in suppuration. Four months after the preliminary injection, however, the movement of the elbow joint, previously quite stiff, had increased, and the hand could be moved through an arc of 45 degrees. Four other patients with active tuberculosis outside the lungs did not show unusual improvement. In conclusion, Dr. Barnes states that 17 per cent. of the patients suffering from pulmonary tuberculosis showed after the inoculation an increased activity of the disease which would not have been expected under ordinary sanatorium treatment. The final words of the report are: "The permanent good or harm done these patients can only be measured with reasonable accuracy from one to three years after the administration of the vaccine."

THE MILK PROBLEM IN AMERICA.

To the superficial observer it would not appear to be any more difficult to secure a pure milk supply than to obtain a pure water supply or to ensure the purity of any other commodity. But when a closer acquaintance with the subject is obtained difficulties are at once apparent, and it is not an easy matter to overcome them. What some of those difficulties are were described very accurately and intelligibly by Professor M. J. Rosenau in the Norman Wait Harris lectures,[1] delivered before the North-Western University of America in 1912. The fact that the question was dealt with almost solely from an American point of view does not in the least detract from their value to those who in this country are engaged in the attempt to secure a better milk supply. In one respect only perhaps do the American difficulties differ from the British. The distance between the dairy farm and the consumer is often very much greater in America than it is in England, with the result that more elaborate means have to be adopted in the former for the preservation of milk in transit. In both countries there are the dirty cowsheds, the unhealthy surroundings, the improper water supply, and the small farmer who has no capital wherewith to improve the unsatisfactory conditions to which his attention may be drawn. In the earlier part of Professor Rosenau's lectures he almost inferred that he was about to suggest some entirely new method of solving what has come to be called the milk problem. A careful perusal of the later lectures makes it evident that he believes sufficient progress will be made by proceeding on lines already laid down, and that no startling innovation is necessary. In this connexion, however, he must be credited with a strong advocacy of the policy of co-operation on the part of the dairy farmers, and especially of those who have small farms. He urges that by co-operation the work of sterilizing cans and other utensils and of cooling can be carried out much more economically and thoroughly than by a small farmer who, as a rule, neglects them altogether. No account of the dairying industry in America would be complete without an account of the Milk Commissions first formed on the suggestion of Dr. H. L. Coit, of Newark, N.J., in 1893, which have led to the sale of "certified milk." The advantages and the drawbacks of these organizations are very impartially related by Professor Rosenau, and he also describes Dr. North's Dairy Demonstration Company of New York, which was formed three years ago to demonstrate the fact that a clean and satisfactory milk could be produced with little extra expense. Those who are engaged, officially or otherwise, in improving the milk supply will derive a great deal of helpful information from Professor Rosenau's lectures.

[1] *The Milk Question.* By M. J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard Medical School. London: Constable and Co. (Demy 8vo, pp. 321; illustrated. 7s. 6d. net.)

SANATORIUM RESULTS.

THE evidence collected annually by the Charity Organization Society as to the actual results of the sanatorium treatment of their patients has been increased by the results of the past year's work. The experience of ten years is now available for analysis,[2] and details of the present condition of 688 patients visited during 1913 have been ascertained and tabulated. Reports of similar visitations and inquiries instituted during the last three years are furnished for comparison. About 11 per cent. of the cases were untraced, but of the remainder no fewer than 50 per cent. were found to be either at work or to be capable of work. In other words, 345 consumptives have been enabled by means of sanatorium treatment to recover their working powers and to maintain them for considerable periods, while a far larger number among the families of those sent away have been relieved from the risk of infection. Sanatorium treatment is therefore regarded by the officials of the society as by far the most effective method of combating the disease. This view is very widely shared by other authorities, and the efforts that are now being made to bring the county councils and the Local Government Board into a line of common action will doubtless result eventually in far more effective provision of accommodation than has yet been possible. The hard and fast lines of officialdom are unfortunately out of place where tuberculosis is concerned. Unlike the acute febrile infectious diseases, tuberculosis calls for elastic interpretation of rules. Power must be given to the local authority to decide as to length of stay, subsequent inspection, and final discharge. The tuberculosis officer would seem to be the fitting referee for such decisions, acting in concert with the medical officer of health.

REGENERATION OF THE TESTIS.

MR. C. J. BOND has recently published the results of some interesting experiments on the effects of orchectomy in birds.[3] In a paper which appeared in the JOURNAL some years ago (July 21st, 1906) Mr. Bond showed, among other results, that the removal of one ovary in the rabbit is followed by compensatory overgrowth of the remaining ovary. While investigating the question whether a similar compensatory hypertrophy occurred in the case of removal of one testis, the author was led to the interesting discovery that after apparently complete intracapsular removal of a testis, regeneration of the secreting tissue and tubuli seminiferi occurred *in situ*. It is of interest to note that this result only applies to birds, no evidence of any similar intracapsular regeneration having been obtained in mammals. Mr. Bond points out that "the domestic fowl has undergone a process of artificial selection in regard to the egg-laying capacity of the female sex gland, and probably also in regard to the sperm-forming capacity of the male sex gland, hence it is of interest to find that the testis of the domestic fowl has great powers of structural and functional regeneration after partial removal, greater apparently than exists in mammals." It is naturally a point of great interest to determine whether, from the gametic standpoint, the regenerated sex gland differed from the previously existing structure. To test this Mr. Bond crossed the same female with a male before and after orchectomy. The experiment performed on fowls revealed no difference between the offspring before and after operation on the male parent. In the case of two experiments on pigeons, however, some differences of a fairly definite character were noted. As Mr. Bond remarks, further experiments, if possible under simplified conditions so far as the gametic constitution of the parents is concerned, require to be done. Mr. Bond's paper should attract the notice of all students of the physiology of reproduction.

[2] Charity Organization Society. The Sanatorium Treatment of Consumption. A Report of the Society's Work in the years 1902-12.
[3] *Journ. Genetics*, 1913, iii, 151.

THE PHILANTHROPY OF ADVERTISING.

It has been said that the world knows nothing of its greatest men. That is often less the fault of the world than of the great men, who hide themselves from the vulgar eye like the gems of purest ray serene which, we are assured by the poet, the dark unfathomed caves of ocean bear. If a great man will not reveal himself, how is the world to know of his existence, to say nothing of his greatness? Therefore, when a man has the power of benefiting his fellow-creatures, it is the truest philanthropy on his part to make the fact known as widely as possible. As an example, we may quote the following "notice," signed for the enlightenment of the people of Penang by a local hakim, which has been sent to us by a correspondent. The healer proclaims his powers without false modesty or reticence. He informs the public: "That my paternal occupation is Doctory and I use to perform it by means of Roots certified to & invaluable Drugs. I have been mertified everywhere I went with this art. Nowadays I have come to this city. For the benifit of the public it is notified that those who want to call me to their homes will have to bear the fee. In both the cases they are informed that they have to pay me for my support after getting recovery. The price of the medicines only will be charged at first. A few diseases are noted below. Asthma, Syphilis, Polyuria, Warms, Renal Colic, Piles, Diarrhoea, Nausea, Jaundice, Fits Spleen, Palpitation of Heart, Caugh, Itches, Abortion, Hysteria, Importence-wet dream, Leprosy, Acni, Gonorrhoea, Giddiness, Rhumatism, Diabites, Head-ache, Pneumonia, Indigestion, Bach-ache, Result of Erroes, Result of excess, Wasted muscles, Loss of Memory." The list is as long and as various as that of the diseases declared by Molière's quack to be curable by "orviétan." We do not quite gather what the hakim means when he says he has been "mertified" by his "doctory": we hazard the conjecture that he intends to say he has gained merit. There is a fine directness about his intimation on the subject of fees, but if his patients are willing to pay him for his support "after getting recovery," we can only say that Penang must offer a highly desirable field of practice.

ESPERANTO.

A good deal has been heard of Esperanto of late years and no one can fail to be aware that the movement in favour of the universal adoption of this peculiar language numbers many enthusiastic adherents. Nevertheless there is still a decidedly twentieth century flavour about the whole conception, a fact which becomes almost surprising when one learns from *Esperanto for All*[1] that it dates its origin back at least twenty-five years, and that in the last twelve of these years over 2,000 societies devoted to the propagation of the language have come into existence. As evidence of the need of a common language the book refers to the immense growth during the last fifty years of the practice of holding international congresses. In the ten years ending 1860 only 19 international congresses were held; in the ten years ending 1900 the number had increased to 645, while in the first ten years of the present century as many as 884 took place. These figures, however, seem to represent a somewhat double-edged argument. It might, for instance, be suggested that the popularity of international congresses would hardly have increased so rapidly if the use of one common tongue were really essential to their success. Still it is hardly fair to judge the case for Esperanto by the possible fallacy of a single argument, and those interested may be referred to the book itself. Costing one penny, it supplies a complete grammar of the language, all the information that is necessary for acquiring it, and all the arguments that can be adduced in favour of adopting this course. One of them is that besides being phonetic, easy to pronounce, and pleasant to hear, the vocabulary is international, and it is alleged that English-speaking people can recognize at least two words out of three. By way of enabling our readers to gauge the accuracy of this statement for themselves, we reproduce here a paragraph by which our contemporary the *British Esperantist* gave notice of the intention of the British Esperanto Association to entertain any attendants at the International Congress who were prepared to accept its hospitality:

La 8an de Aŭgusto, je la 7.30 gis la 11a. okazos, sub la aŭspicioj de la London Esperanto Club, festa kunveno ce St. Bride's Institute, Bride Lane, Ludgate-circus, E.C. La festo estas arangata laŭ la fame konato kutimo de la klubo, t.e. kiel *conversazione*—kun muziko, du teatrajetoj, interludo babilado, ne forgesante jam la refresajojn kaj dancadon! Spite la sezono de la jaro, ni esperas, ke la Londonaj samideanoj estos "ce hejmo" por gastigi la vizitantajn kuracistojn. La bileto kostas 1 3: aŭ 1 , se acetita antaŭ la 4a de Aŭgusto. *Ciu Esperantista membro de la Internacia Medicina Kongreso povos laŭ peto ricevi senpage invitan bileton. Skribu al S-ro H. A. Epstein, ce B.E.A., 133-6, High Holborn, W.C.*

It will be remembered that a meeting of the Universal Esperanto Medical Association, of which Mr. Jameson Johnston, F.R.C.S.I., is president, was one of those officially authorized to be held during the course of the congress. The list of readers of papers in Esperanto included Professor Sims Woodhead and Dr. F. W. Alexander, who dealt with "Sanigado per marakvo kaj elektro."

[1] *Esperanto for All: How to Read, Write, and Speak it.* London: The British Esperanto Association, 133-6, High Holborn. (32mo, pp. 46. Price 1d.)

THE INSURANCE STRUGGLE IN GERMANY.

We publish in another column a translation of the agreement which, under the auspices of the Imperial Minister for the Interior, has been reached in Germany between the representatives of the medical profession and the insurance societies. It will be seen that the Leipzig League is recognized as a contracting party, not only to the agreement as such but also in regard to the contracts of the individual doctors (par. X, first sentence). The provision that the doctors may be guided in regard to the terms of the contracts by their local organizations further indicates the recognition of the medical organizations. This point is perhaps the first for which the medical profession in Germany has been fighting. The second point to be emphasized is the application, though limited, of free choice of doctor. The *Muenchener medizinische Wochenschrift* (December 30th, 1913) does not consider this a material gain, but inasmuch as the principle is admitted in the agreement it compares favourably with the demands of the insurance societies to adhere to the principle of employing a staff of medical officers. Lastly, provision is now made to prevent the clubs or societies from underselling and from exerting pressure on the doctors to accept unfavourable terms. A distinct loss, for the present at least, appears to be that certain works' clubs, including those of the miners, do not seem to be included in the agreement. A further recognition of the doctors' organization, though perhaps one which they might have been willing to forego, is contained in the provision by which the Leipzig League accepts liability in regard to claims for compensation for those imported doctors who will be removed from their new positions and placed elsewhere. The terms of the last sentence of paragraph X1 are involved, and until the meaning is decided in a court of law, it appears doubtful whether the full extent of this liability can be measured. The *Muenchener medizinische Wochenschrift* protests against the treasury of the League being plundered to protect these "unexceptionable gentlemen" from pecuniary loss.

The Address in Surgery at the annual meeting of the British Medical Association at Aberdeen will be delivered by Sir John Bland-Sutton. The subject of the popular lecture which Professor J. Arthur Thomson will give on the evening of July 31st is *Vis medicatrix naturae*.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEDICAL TREATMENT OF SCHOOL CHILDREN.

THE Scottish Education Department has issued regulations under which grants in respect of the medical treatment of necessitous school children will be made by the Department during the year. A covering letter restates the principles emphasized by the Department in October last—that the treatment should not extend to the provision of medical attention in cases of accident, or of casual or serious illness, nor to provision on behalf of blind, deaf, mute, defective, and epileptic children, for which provision is made in other Acts. On the other hand, it would cover cases of defective vision, defective teeth, diseases of the ear, nose, and throat, and similar ailments that impair the efficiency and affect the general health of the children. Only expenditure upon the treatment of actual defects will be admitted, and not for such purposes as cleansing of teeth or the provision of general bathing facilities. Except in very special circumstances, all treatment shall be given by fully qualified dentists and medical practitioners, or by nurses working under the direct supervision of the latter. Payments to hospitals can only be permitted when made "on a definable basis in respect of the actual treatment of suitable cases of necessitous school children of which a record has been kept." The Treasury requires an equivalent contribution, whether from rates or from other local sources, as a condition of the payment of any grant for the medical treatment of school children after the current year. While the Department's allocation of the grant will be based on the cost of the treatment of necessitous children only, "school boards are not therefore precluded from arranging for the treatment at a school clinic of other children, provided such charges are made as may reasonably be expected to result cumulatively in the school fund being relieved of any cost attributable to the treatment of non-necessitous children."

The most important part of the scheme is that the Department has now expressed the intention of applying to Scotland the same regulations as apply to England—namely, that a grant for medical treatment will be paid only at the rate of one-half of the expenditure, leaving the remaining half to be raised from local sources. Where the half is not so raised, the Department may pay at a lower rate, or may even withhold the grant altogether.

A FAMOUS GLASGOW MEDICAL FAMILY.

At a meeting of the Old Glasgow Club Professor J. Glaister, M.D., gave a lecture on an old Glasgow medical family and the contemporary history of its times. Lord Inverclyde, who presided, said that he considered it a great privilege to come to hear something of his ancestors, as he had some pride in heredity. Professor Glaister, in the course of his lecture on the Burns family, of which Lord Inverclyde is the present representative, said that some time between 1750 and 1760 there came to Glasgow from Stirling John Burn, or Burns. He was a teacher, and of his seven sons four reached manhood; two studied medicine, and the youngest founded the shipping firm of G. and J. Burns. One of these sons, John Burns, became eventually the first professor of surgery at Glasgow University. Appointed surgeon's clerk at the Royal Infirmary in 1792, he was admitted to the Faculty of Physicians and Surgeons four years later. In 1797, when only 22 years of age, he rented rooms at the north-west corner of Virginia Street for the purpose of teaching surgery and anatomy, and proved himself a capable teacher. In those days the majority of subjects were obtained by robbing graveyards, and John Burns became implicated in a charge of "resurrecting." The magistrates quashed the proceedings on condition that he did not continue his lectures on anatomy. It was about this time that his brother Allan returned from Russia and took up the work. In 1779 John Burns was appointed to the Chair of Surgery and Anatomy at Anderson's University, to which he was nominated in the will of the founder. But he continued his outside lectures, which were then given in College Street. If John Burns was not the actual originator of clinical lectures at the infirmary, he presented a request, which was granted, to give such lectures in 1798. In 1799 his first essay as an author appeared. A year later two volumes came from his pen. Then followed an obstetrical treatise, and in 1809 his popular work on midwifery. In 1815 he became more closely associated with surgery, and was nominated by the then Duke of Montrose to the new Chair of Surgery at the Glasgow University. It was said that it was due to his instigation that the Senate gave degrees in surgery—an act which led to prolonged litigation between the Faculty and the Senate. After occupying the chair for twenty-three years he published in two volumes his greatest work, *The Principles of Surgery*. In 1832 his son Allan became a member of the Faculty, but what promised to be a great career was cut short by intermittent fever in 1843. Professor Burns published his last work, *Christian Fragments*, in 1844. His end was a tragic one. He perished during a return voyage from Liverpool on June 18th, 1850, when on board the *Orion*, which struck a rock and foundered opposite Portpatrick. He was then in his 76th year. His brother Allan, who became a member of the Royal College of Surgeons about 1804, was for six months a physician at the Imperial Court of Russia. In 1805–6 he started classes in Glasgow, and continued at the work until his death, in 1813.

GLASGOW CORPORATION AND PUBLIC HEALTH CONGRESSES.

At a meeting of the Health Committee of Glasgow Corporation letters were submitted by the Town Clerk from the Royal Institute of Public Health and the Royal Sanitary Institute asking that delegates from the Town Council be appointed to take part in their annual congresses, that of the former in Edinburgh from July 8th to 13th, and of the latter in Blackpool from July 6th to 11th. The committee, having regard to previous resolutions that no representatives be appointed by the corporation to attend either of these congresses until the two institutes in question have come to an understanding either to combine their congresses or to hold their respective congresses in alternate years, decided not to accept the invitations to send delegates. This decision was ratified by the Town Council at its next meeting, as was also a recommendation that the Society of Medical Officers of Health, of which Dr. A. K. Chalmers, the city medical officer of health, is president for the current year, be invited to hold its annual congress in Glasgow in June, and that civic recognition be accorded the society on that occasion. It was remitted to the convener and subconvener of the committee to make the necessary arrangements.

ROYAL INFIRMARY OF EDINBURGH.

In the report by the managers of the Royal Infirmary of Edinburgh, submitted to the annual meeting of contributors on January 5th, reference was made to several matters, such as the rearrangement of the teaching of clinical medicine and the additions and changes in the medical and surgical staff, which have already been recorded or commented on in these pages, but some other matters now call for notice.

Statistics.

During the infirmary year (which begins on October 1st) the number of patients admitted to the wards was 11,691, and, as there were 823 patients already in the hospital at the beginning of the year, the total number of persons treated was 12,514. Of these, 7,546 were discharged cured, 3,062 were discharged relieved, 206 were discharged on other grounds, 870 died, and 830 remained in hospital at the end of the year. The deaths which took place within forty-eight hours after the patient's admission numbered 163. Whilst, therefore, the percentage of deaths to cases treated was 6.9, it was reduced to 4.8 if those occurring within forty-eight hours of admission were deducted. The medical cases numbered 4,096 and the surgical 7,588; the average period of residence in the medical wards was 22.4 days, as against 20.7 days in 1912, and in the surgical wards (excluding the Lock wards) it was 21.1 days, as against 20.9 days in the preceding year. Of the cases admitted 4,720 were from Edinburgh, 412 from Leith, and 6,559 from the country. There was a decrease of 177 in the total number of patients treated, as compared with the previous year (1912), but the average daily number of patients in the hospital was much the same—858, against 856—and the average daily number of children was 85, against 93. The largest number of patients on any one date was 887 (the same as in 1912), whilst the smallest number was 796, compared with 803. The out-patients numbered 38,278, and most of these attended several times. The total number of patients admitted to the Convalescent House, Murrayfield, was 1,317 (753 males and 564 females), against 1,323 in the preceding year. The daily average number

of patients in residence there was almost the same as in 1912 (namely, 70.33 as against 70.8 : 21, or 1.59 of the whole number, returned to the Royal Infirmary for further treatment, whilst among the 984 who were kept for three weeks or longer the average gain in weight per patient was 5.08 lb. It appears, therefore, that this great charity (Infirmary and Convalescent House) gave treatment to, on an average, 928 persons a day, in addition to the 36,000 patients in the year who attended in the out-patient departments.

Finance.

The ordinary income for the year was £36,033 8s. 10d., showing an increase of £641 6s. 1d. over the preceding twelve months; of this sum the voluntary contributions amounted to £20,354 3s. 1d., and but for the greater return from incidental contributions (small legacies and donations), there would again (as in 1912) have been a decrease. The legacies and donations of £100 and upwards to the general funds amounted to £43,984 2s. 9d., of which sum £1,935 was specially earmarked as "permanent capital," and £1,000 was generously given by the Lord High Commissioner (Lord Glenconner), for the purchase of radium. The ordinary expenditure amounted to £56,609 5s., an increase over the preceding year of £727 5s. 1d. The entire ordinary expenditure during the year (including the out-patient departments) was, per occupied bed, £65 19s. 7d., an increase of 13s. 11d. on that of the previous year. Finally, the extraordinary expenditure was £1,143 14s. 8d. It will be seen, therefore, that the deficit arising from the ordinary expenditure has been met out of the extraordinary revenue; this, of course, is satisfactory from one point of view, but obviously sounder finance would make the ordinary income cover the ordinary expenditure.

Effect of Insurance Act.

With regard to the effect of the National Insurance Act, it is reported that for the eleven months to December 14th, 1913, insured persons constituted 43.67 per cent. of the in-patients and 32.46 per cent. of the out-patients; in other words, it could be taken that of the total of the whole ordinary expenditure of the institution 44 per cent. was incurred in dealing with insured persons. Looking to the work thus done, the managers considered that they had a very strong claim for a substantial measure of support from the Burgh Insurance Committee and the approved societies. These bodies were accordingly invited to send representatives to a meeting in December, when the facts were laid before them, and an appeal made that they should exercise the powers granted to them by Section 21 of the Act in giving subscriptions or donations in aid of the hospital: the managers were awaiting with interest the result of that conference. In order to preserve the principles of the "open door" and free treatment the managers decided more than a year ago that no claims should be made for any share of the sickness benefit of insured persons having no dependants who might be treated in the hospital, and consequently no agreements had been entered into with any of the approved societies. In 17 cases payments amounting to £21 6s. 6d. in all had been made through societies, but these sums were tendered and accepted as freewill offerings.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Lunacy Fees.

At the last meeting of the Westmeath County Council the chairman called attention to a deficit of £40,000 in the local taxation account, and said that the council was not getting the full proportion of the grant, as charges payable out of the account were not fully allowed for. He instanced the committal of dangerous lunatics, for which the amount allowed in the Act was £2 a head, whereas many magistrates gave certificates for the payment of the amount to doctors for certifying the lunatics examined before committal. The cost of conveyance, etc., had then to be paid out of the county rates. The amount of the grant should be raised, and the full cost of committal charged to the Irish Taxation Account. Alternatively, the proposal was mentioned that local magistrates should only allow a guinea for the committal certificate.

Registrar-General's Returns.

In the Dublin registration area the births registered for the last week of last year amounted to 140 (81 boys and 59 girls), and the deaths to 137 (72 males and 65 females). The deaths registered, omitting the deaths (numbering 5 of persons admitted into public institutions from localities outside the area, represent an annual rate of mortality of 17.1 per 1,000 of the population. During the fifty-two weeks ending with December 27th, 1913, the death-rate averaged 20.1, and was 1.6 below the mean rate for the corresponding portions of the ten years 1903–1912. The total deaths registered, numbering 137, represent an annual rate of 17.7 per 1,000: the annual rate for the past fifty-two weeks was 21.5 per 1,000, and the average annual rate for the corresponding period of the past ten years was 22.8 per 1,000 of the mean population.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WEST YORKSHIRE.

The West Riding Medical Charitable Society.

The Medical Charitable Society for the West Riding of the County of York continues to carry on the excellent work which has from time to time been mentioned in this column. Since the initiation of the society some eighty-five years ago the amount distributed in grants has been £54,806, and there has also been invested a sum of about £30,000. The financial year, which ended on June 30th, 1913, showed that the subscriptions of the members for that year amounted to £813, and that the investments and bank interest brought in £1,159; a donation of £10 had been received, so that with the balance carried to credit at the end of the last year there was a sum of about £3,000 available; of this amount £1,682 was absorbed in the payment of grants made at the previous annual meeting, £1,203 was carried forward, and the balance was absorbed by printing expenses, auditor's fee, and the legal costs involved in connexion with the drawing up of a trust deed. At the annual meeting, which was held at Doncaster under the chairmanship of Dr. H. J. Clarke, grants were made to 47 applicants. The amounts of the grants varied from £30 to £10, and the total sum voted was £1,730. The total amount which has been voted in grants since the society was started has reached the handsome sum of £53,076. The sums voted are paid to specially selected stewards in each district, and they convey them to the recipients in the manner they think best. The greatest care has always been taken in the allocation of the grants. Before any one can be eligible for a grant he must have been a member for five consecutive years. No application for a grant in respect of the membership of any one can be entertained unless the same condition has been observed. There are about 800 members in the association, and the annual subscription is 1 guinea. There are a few non-medical subscribers, and legacies and donations, some of considerable amounts, have been received from time to time. It will be many years before the annual recurrence of these meetings fails to bring to the mind of every one who attends them the genial face and presence of the late Mr. Wheelhouse. For many years he was the life and soul of the association, and some twelve years ago he wrote a very interesting pamphlet recording its birth and development. This, which was commented upon in this column at the time it was published, forms a record of cautious enterprise which has brought the society to its present state of utility and financial stability. It is a matter of great surprise that the membership is not larger than it is. Financially, it is certain that no better investment could be made than the payment of this small annual subscription: it is equally certain that in no way can the sum of 1 guinea be guaranteed to do a greater amount of good than when it is utilized as a subscription to the Medical Charitable Society for the West Riding of Yorkshire.

Notification of Births Act.

The adoption in September, 1913, of the Notification of Births Act by the City Council, acting as the local authority for the City of Leeds, was followed by the order of the Local Government Board, which directed that the Act should come into operation in Leeds on January 1st, 1914. All medical men in the borough of Leeds have therefore been advised from the office of the town clerk that the Act is now in force. The medical officer of

health, Dr. Spottiswoode Cameron, has also sent a letter to all medical men, stating that in any case in which the medical man deems it advisable, he will direct that one of the women inspectors shall at once visit the house and give such assistance in the carrying out of his directions as may be necessary. The co-operation of the medical profession is confidently expected, and it is hoped that the adoption of the Act will conduce to the lowering of the infant mortality and to the development of a higher standard in the children of this large manufacturing district.

India.

[FROM OUR SPECIAL CORRESPONDENT.]

TROPICAL SCHOOL OF MEDICINE, CALCUTTA.

It is announced that the Governor of Bengal, Lord Carmichael, will lay the foundation stone of the building for the Tropical School of Medicine, Calcutta, on February 24th. Liberal endowments will be required to provide workers in the extensive research laboratories proposed to be erected if full advantage is to be taken of the immense amount of material for the study of tropical diseases furnished by the large Medical College Hospital and other hospitals in Calcutta. An endowment fund, to which Professor Leonard Rogers will act as honorary secretary, will be opened at once with the Bank of Bengal in Calcutta.

A TOWN PLANNING BILL.

The text of the Town Planning Bill, which is to be presented for the consideration of the Bombay Legislative Council shortly, has been published. It is one of the first measures of its kind to be introduced in India. It is based on a careful study of the requirements of surburban areas and of town planning legislation in England, Germany, and other countries, and follows generally the Housing and Town Planning Act which was passed by Parliament in 1909. The bill is intended to apply primarily to Salsette, the object being to encourage development of that part of the island of Bombay as a residential surburban area, and provides for the construction of roads, supervision of the alignments, and for bridges and sanitary and other necessary works, and the regulation of building sites. The new measure will render it possible to draw up a comprehensive and well-considered scheme for the development of the island of Bombay, which, it is hoped, will be the outcome of the investigations of the Committee which is now sitting to record evidence on the question.

Correspondence.

RADIUM AND CANCER.

SIR,—In his most interesting paper on Radium and Cancer, published in your issue of January 3rd, Sir Alfred Pearce Gould gives three radiograms and a photomicrograph (Fig. 4) in illustration of a case which he considered to be a periosteal sarcoma of the femur, apparently cured by radium treatment. In any case of alleged disappearance of a malignant growth it is important to exercise the most searching scepticism as to the diagnosis. It is with the greatest diffidence that one challenges the opinion of so eminent an authority, but I feel bound to say that the illustrations in question seem to me to show not periosteal sarcoma but a fairly typical traumatic "myositis ossificans."

In this latter condition, the pathology and treatment of which I dealt with in a recent paper,[1] the intramuscular bony mass as seen in radiograms shows a characteristic arrangement in laminae parallel to the shaft of the parent bone, the outline of which is in the early stages unbroken. It appears to me that a similar laminated appearance is well shown in Sir Alfred Pearce Gould's skiagram (Fig. 2). It is also shown in a photograph of a museum specimen (Fig. 5) in my article, and in many skiagrams in the literature. I believe it to be due to the mechanical direction of the growth of the migrating osteoblasts by the intramuscular fibrous tissue, and consider that it constitutes the chief diagnostic feature by which "myositis ossificans" can be distinguished from periosteal sarcoma. Also Sir Alfred's photomicrograph (Fig. 4) does not appear to me to show spindle-celled sarcoma, but rather young connective tissue, or the undifferentiated "pre-osseous tissue" stage shown in the photomicrographs of my paper. It would be interesting to know whether any of the new bone shown in the skiagrams was removed and decalcified for microscopical examination.

If my contention as to the nature of this case be justified, slow spontaneous disappearance of the mass in the quadriceps is precisely what one would expect, and the therapeutic efficacy of radium is to this extent falsely accredited. The clinical history of the case under discussion is quite typical of a slight case of traumatic "myositis ossificans," and I have at present a similar case under my care at Ancoats Hospital that was not severe and is slowly disappearing without any special treatment, though his convalescence would probably have been shortened by operation.

With regard to Sir Alfred's Cases VI, VII, and VIII, which he considered also to be periosteal sarcomata, the data do not permit more than the most tentative criticism. I would suggest, however, that it is possible, and even probable, that Cases VI and VII may also have been examples of traumatic "myositis ossificans." It would be interesting to know whether there was any history of injury in Case VI. The presence of islands of cartilage in both these cases in no way negatives my suggestion, as cartilage was present in abundance in the case described in my paper. The history given of Case VIII is so short as to be inconclusive.

Sir Alfred asks that all his statements should be "criticized most rigidly," and he will, I am sure, exonerate me from any desire to be polemical. His case, if allowed to pass unchallenged, might on the one hand encourage some to treat true cases of sarcoma with radium until the operable stage had passed by, or on the other hand might lead to the needless sacrifice of limbs for a condition that, however disabling, is in no way malignant.—I am, etc.,

Manchester, Jan. 4th. JOHN MORLEY.

[1] BRITISH MEDICAL JOURNAL, December 6th, 1913.

THE ETIOLOGY OF BERI-BERI.

SIR,—From correspondence in the BRITISH MEDICAL JOURNAL it would seem that there are many who do not accept as yet the cause of beri-beri as shown by Dr. Braddon and amplified by Drs. Fraser and Stanton. One of the latest of these letters, that from Dr. Stanley[1] contains the sentence, "the nice theory . . . founded on what appears to be wrongly interpreted experiments on the feeding of fowls"; and he gives some reasons which make him still cling to an infection theory. Now, as Fraser and Stanton point out,[2] the experiments on fowls have not given proof of the theory; they were undertaken, as I understand, in order to endeavour to ascertain the exact nature of the substance the absence or presence of which caused the disease in those whose principal article of diet was polished rice.

The answer to Dr. Stanley's question, "If beri-beri were due to the loss of something in the outer covering of the rice grain, why should the disease show such a marked proclivity towards persons closely aggregated in large numbers?" is that it does so only when the amount of polished rice bears more than a certain proportion to the total food supply; and that if a grain still possessing the aleurone layer be substituted for the polished rice, or if some of the polished rice be replaced by certain other articles of diet, no amount of overcrowding will cause the disease to appear.

The theory of infection by external animal parasites has nothing to support it. Disinfection of a place fails to prevent the disease, and habitation in a beri-beri place does not produce it. Those who have tried experiments on insects, bugs or lice, have invariably failed; no protozoa, though looked for, have ever been found. Braddon, years ago—prior to 1896—had observed Tamils living in houses which had been occupied previously by Chinese who had had beri-beri, and no cases occurred among the Tamils.

The analogy of ergotism and lathyrism does not quite hold. These diseases are due to a poison produced in the

[1] BRITISH MEDICAL JOURNAL, November 1st, 1913.
[2] BRITISH MEDICAL JOURNAL, October 25th, 1913.

grain. The theory of beri-beri maintains that something is missing from the diet. A disease more comparable is scurvy, which is due to the absence of something, not to the presence of a poison.

In 1895 Braddon told me that he considered that some difference between the Tamil who did not get beri-beri and the Chinaman who frequently had it would reveal the cause of the disease; that difference he later stated to lie in the rice they ate. The Tamil eats parboiled rice—that is, rice from which the aleurone layer has not been removed, and, while eating this rice, has never been known to get beri-beri in the Malay Peninsula. The Chinaman, on the other hand, eats polished rice—that is, rice from which the aleurone layer has been removed, and he (Braddon) showed that it was the Chinaman who got beri-beri when this polished rice bore too high a proportion to the total diet.

Braddon brought forward an array of facts all bearing on the same point, such as that the Malay in his Kampong house, where his wife daily prepares the rice dish direct from the padi, never gets beri-beri, but is liable to it when, as lighthouse keeper or policeman, or in some other occupation, he is able to get only the polished rice of the shops; or as that the Indian bullock-cart drivers, who live on chappaties and milk, never get the disease unless they should become poverty stricken, and so find polished rice the only diet they can afford.

Fletcher's experience with rice in the lunatic asylum at Kuala Lumpur was very conclusive, and the experiment on Javanese coolies on the Pahang-Negri Sembilan road, originated by Braddon and organized by Fraser and Stanton—an experiment conducted under apparently perfect conditions of observation and control—left no doubt in the minds of those who read the account of it that the disease was solely due to the rice and that any theory of infection was completely disproved.

The death-rate in the hospitals and prisons of the Malay Peninsula dropped as soon as polished rice ceased to be supplied and the parboiled rice substituted; and beri-beri never now, as it did formerly, starts in hospital patients who have been admitted for other diseases, or in a prisoner who has been in gaol for more than a few days. The cleanliness of these places has been altered in no respect.

The following figures, though few, may have a bearing. They show the effect of the use of parboiled rice for beri-beri patients in the Kuala Lumpur Hospital, the first in Perak to use this rice. It was first used on January 6th, 1908. I give some death-rates for the year 1907 to compare with those of 1908:

	Total admissions for Beri-beri.	Deaths from Beri-beri	Percentage of Deaths.
1907	293	135	46.06
1908	463	66	14.2

Deducting the cases which died within forty-eight hours of admission, the rate for

1907 becomes	37.5 per cent.
1908 ,,	9.4 ,,

Deducting the cases which died on or before the seventh day after admission, the rate for

1907 becomes	32.1 per cent.
1908 ,,	6.7 ,,

These figures show how the death-rate from beri-beri during the first year of the use of parboiled rice dropped to one-third of what it had been in the previous year, notwithstanding a very great increase in the amount of beri-beri in the district, an occurrence which is just contrary to what happens in epidemics due to micro-organisms when the death-rate rises with the number of cases. Secondly, they show how the death-rate of those who had been on the parboiled rice for two days fell still more from that of the corresponding cases of 1907—a fall to one-quarter; and how in those who had been on the parboiled rice for seven days the rate was only one-fifth of that of the preceding year for the corresponding cases.

In the Batu Gajah gaol in 1907 there were 8 deaths from beri-beri, of which 6 occurred before March 30th; after that date all with symptoms even suspicious of beri-beri were taken off rice and put on to bread; during the rest of the year only two deaths occurred. In 1908 only one death occurred from beri-beri, and this was in February; the whole gaol was put on to parboiled rice on March 25th, and no deaths occurred during the remainder of the year. Coincidently there was a disappearance from the prisoners of the epigastric pain and rapid pulse—characteristic symptoms of the early days of beri-beri. This gaol had always been a bad place for beri-beri.

Both in the hospitals and gaols during this period there was much overcrowding, and the amount of beri beri in the country was exceptionally great.

It seems to me that every fact brought forward since Braddon published his book has only served to establish the accuracy of his observations and bear out the truth of a most wonderful piece of reasoning.—I am, etc.,

J. TERTIUS CLARKE.
Health Officer, Perak South.

London, Dec., 1913.

AN UNUSUAL CONDITION OF THE APPENDICES EPIPLOICAE OF THE PELVIC COLON.

SIR,—In the JOURNAL of January 3rd, p. 25, Mr. Francis L. A. Greaves reports a case of a woman, aged 68, operated upon for intestinal obstruction due to impacted gall stones, in whom he discovered two hard nodules in the appendices epiploicae, which, on being cut out, proved to be faecal concretions. He states that he has seen no description of such a condition. May I point out that the explanation of the condition which he offers is the correct one, and that the case was undoubtedly one of sigmoid diverticulitis, a condition which has recently received a good deal of attention from surgeons interested in diseases of the large bowel. This condition of the formation of diverticulae of the large intestine in elderly subjects is by no means so uncommon as is generally supposed. There is always a minute canal connecting with the lumen of the bowel through which faecal material has found its way. A full description of this condition will be found in my book *Diseases of the Colon*, chapter xiii, and also in the following papers: Telling, *Lancet*, March 21st, 1908; Brewer, *American Journal of Medical Science*, October, 1907. There is curiously enough no specimen of this condition in the Museum of the Royal College of Surgeons, nor has the subject yet found a place in the textbooks on general surgery.—I am, etc.,

J. P. LOCKHART MUMMERY, F.R.C.S.

London, W., Jan. 3rd.

THE RESPONSIBILITY OF THE MEDICAL PROFESSION AS REGARDS ANTI-TYPHOID INOCULATION.

SIR,—As a worker in the tropics in the ubiquitous position of a civil surgeon, and one, therefore, who has to deal with almost every variety of patient and disease, I would like to make a most urgent appeal and protest to all medical men in Great Britain.

It has been my fortune to deal with many new arrivals in the tropics, including officials, missionaries, business men, etc. Many of these have come or been sent by their superiors to be inoculated against typhoid. Others, when I have asked them if they have been inoculated, have said: "My doctor at home does not believe in antityphoid inoculation, and thinks it useless." This latter statement by a professional brother ignorant of tropical work and conditions, thrown at the head of one who has seen so many terrible tragedies from the want of inoculation, makes it imperative that I should protest as publicly as possible against what I can only consider is loose talk, and the want of realization on the part of the medical man as to how some patients take in, dwell on, and misconstrue any general statement made by a doctor. Unfortunately, when these tragedies occur, the terrible responsibility of the above, to me, wicked advice cannot be brought directly on to the head of him who gave it.

Talking this matter over with my friends in the Royal Army Medical Corps stationed here, they have assured me that my experience is not unique, and that they also have come across many such cases.

In conclusion, I would ask any medical man who is a sceptic as regards the value of antityphoid inoculation to study the statistics issued by the Royal Army Medical Corps and those of the Director-General of the United States Army Medical Department. I am also sure the Director of the Royal Army Medical College, Millbank, would supply information to any one interested in knowing the real truth.—I am, etc.,

C. MADDOCK, M.D., etc.,
Major, Indian Medical Service.

Ahmednagar, India,
Dec. 19th, 1913.

THE CRAZE FOR APPENDICECTOMY.

SIR,—One of the more interesting letters in this discussion is that of Dr. McMichael, who describes the results of a considerable number of cases of appendicitis treated in the country without operation. The subject is one of almost painful interest to those of us who work in places where the path to operative help is open but nearly always beset with difficulties. The following remarks are based partly on the experiences of my partner in this practice, which has only recently, by means of telephone and motor, been brought within easy reach of a hospital.

I think there is no doubt whatever that the majority of patients with appendicitis will recover under medical treatment, or at any rate will not die. There have been several here where recovery has followed even though they have gone on quite definitely to the formation of an abscess, which no doubt has discharged into the bowel. We are even of opinion that we have seen a few succumb after operation (perhaps too long delayed) who, had they been left alone, would quite possibly have survived. I cannot help thinking, however, that to have treated "dozens of cases" with a mortality practically *nil* must be an experience as unusual as it is happy. We have had several fatal cases here—one died about four years ago, twelve years after the first acute attack, which subsided under medical treatment. He had been quite free from trouble during the interval. On the other hand, we could point to many old patients who have had one, or even two, severe illnesses many years ago and have been perfectly well ever since. On the whole, however, our experience of that particular aspect of the subject of appendicitis, on which the country practitioner has special opportunities of forming a judgement, leads us to agree entirely with surgeons and others who advocate early operation in all cases. But until the removal of certain practical difficulties has rendered this less a counsel of perfection than it is now, the best results will be obtained by insisting at all costs on the immediate removal to hospital of every acute case with rapid onset, and treating the milder ones with less rapid onset medically at home, subsequently advising strongly the performance of that ideal procedure, the "interval" operation. To hospital surgeons, and to practitioners living next door either to the hospital or the surgeon, this may sound like an attitude of timidity and compromise. Country doctors, however, will realize that, at any rate at present, circumstances are often too adverse to permit the carrying out of what is recognized as theoretically the best form of treatment. But it rests with us to endeavour to educate public opinion along such lines as will ultimately lead to a more perfect organization for dealing with these cases. In the meantime we must derive what comfort we can from the fact that the results in practice are not, after all, so bad as theoretically they ought to be.—I am, etc.,

JAMES F. BLACKETT, M.D.Lond.

Audley, Staffs., Dec. 27th, 1913.

SIR,—There have been few things more interesting during the past year in your pages than the correspondence upon the surgical and medical problems connected with appendicitis.

The surgical side seems to be summed up in the advice that if a patient has any important abdominal pain of doubtful diagnosis, the abdomen should be opened in order that an accurate diagnosis should be made, and that the appendix should always be examined and, if not absolutely normal, should be removed.

The medical advice seems to be summed up in the recommendation that the abdomen should not be opened speculatively, that diagnosis should be more accurately studied, and that a high percentage of cases of appendicitis are curable without operation, and that in these cases no operation should be performed.

My own experience is very small, but I venture to think it is worth recording that out of about 100 cases that have come under my care I have not had one operated on—and I have not lost one, and I have not had one that has had a recurrent attack when my dietary has been followed.

Although several of my cases were considered by skilled surgeons as being in urgent need of operation and yet recovered without, I would, of course, at once admit that a considerable percentage of cases are purely surgical and ought to be treated surgically, but that by more accurate diagnosis and careful dietetic treatment a large percentage of those now treated surgically should in future be treated dietetically.

Appendicitis, like all other inflammations, gives warning, and therefore I would plead for a more careful consideration of preappendicitis treatment. Most forms of inflammation are reduced by fasting, and reduction in the number and virulence of pathogenic micro-organisms at the point of attack will transform what might have been a fatal to what may only be a trivial inflammation.

The treatment, therefore, of non-surgical cases of appendicitis may be on the lines of (1) castor oil ½ oz., (2) a complete fast of from two to seven days, (3) the administration during this period of olive oil in dessertspoon doses twice a day, and freshly expressed orange or lime or lemon juice or grape juice and sips of water *ad lib.*, (4) the entire elimination of meat and meat extracts and meat broths and milk from the dietary, (5) a spare diet commencing after the fast) of crisped cereals and cream and butter, the juices of ripe fruits, baked bananas, maigre soups of carrot, macaroni, spaghetti, etc., with cream or oil freely added, and croutons or toast or rusks, and then gradually add cheese, yolk of egg, greens, salads, and sweet dried fruits, (6) complete rest until all symptoms have disappeared.—I am, etc.,

Bromley, Kent, Jan. 6th. JOSIAH OLDFIELD.

"NORMAL SALINE SOLUTION."

SIR,—The term "normal saline solution" conveys a perfectly definite meaning to pharmacists, though "physiological saline solution" may be a better description. The *British Pharmaceutical Codex* describes this solution as containing 80 grains of sodium chloride in 20 fl. oz. of water, which is equivalent to 0.91 per cent.; such a solution is isotonic with human blood serum, freezing at − 0.56° C.

The accepted strength of normal (or physiological) saline solution has varied from 0.6 to 0.91 per cent. The former figure gained acceptance from the use of frog's blood as the indicator of osmotic pressure, and though correct for frog's blood, it lakes human blood.

It should be noted that the percentage of saline constituents of blood serum may not be the measure of its osmotic pressure; the freezing point gives a correct indication.[1]—I am, etc.,

Allen and Hanburys, Ltd., 7, Vere Street, Cavendish Square, London, W., Jan. 6th. F. W. GAMBLE.

THE CENTENARY OF THE BIRTH OF SIR JAMES PAGET.

SIR,—I think it will interest your readers to learn that as Sunday next, January 11th, is the centenary of the birth of Sir James Paget, the occasion is being specially commemorated in the parish church of Great Yarmouth, with which Sir James Paget and his family were intimately connected. His son, the Bishop of Stepney, is preaching throughout the day, and the morning service will be attended by the Mayor in state, and the aldermen and councillors of the borough, the naval and military forces stationed in the town, and by a body of doctors and nurses. There will also be present the Master of Downing, professor of surgery in the University of Cambridge, and delegates from the Norwich Medical Association, and from several scientific societies.—I am, etc.,

C. LISLE CARR,
Great Yarmouth, Jan. 6th. Vicar of Great Yarmouth.

[1] For a full description of this subject see "Osmotic Pressure and its Physiological Bearing" (Bennett and Gamble), *Pharmacological Journal*, March 16th, 1912.

THE demand for cottages at a low price in rural districts and the suggestion of the Departmental Committee on Small Holdings that concrete might be used for this purpose have induced the proprietors of *Concrete and Constructional Engineering* to institute a competition for a suitable design for a cheap cottage to be erected largely or mainly of concrete. A first prize of 100 guineas and a second prize of 50 guineas are offered. The conditions of the competition can be obtained on application to the Editorial Secretary (North British and Mercantile Building, Waterloo Place, London, S.W.).

The Services.

ROYAL NAVAL VOLUNTEER RESERVE (MEDICAL).

THE following regulations for the appointment, training, etc., of the medical officers of the Royal Naval Volunteer Reserve were issued by the Admiralty a couple of years ago, and are now published for information, as it is desired to bring the Reserve up to its full strength.

REGULATIONS FOR THE APPOINTMENT, TRAINING, ETC., OF MEDICAL OFFICERS, R.N.V.R.

1. *Total Number of Officers.*—The total number of Medical Officers in the Royal Naval Volunteer Reserve (exclusive of "Supernumerary" Officers, see para. 2) to be 150, composed of 8 Fleet Surgeons, 22 Staff Surgeons, 120 Surgeons.

2. *Supernumerary Officers.*—In addition to the above numbers, certain officers may be retained in the lists as "Supernumerary" under the following conditions; their names will be shown in the Navy List in italics.

3. *Conditions of Entry.*—Candidates for entry must—

(*a*) not be over 32 years of age:
(*b*) be registered under the Medical Act in force as qualified to practise Medicine and Surgery in Great Britain and Ireland;
(*c*) be of pure European descent, and the son either of natural-born British subjects, or of parents naturalized in the United Kingdom.

Applications for entry, stating full particulars of Medical qualifications, should be submitted through the Admiralty Volunteer Committee for the consideration of the Admiralty. If a candidate's application is accepted, he will be enrolled in the Reserve with the rank of Surgeon.

4. *Qualifications for Promotion.*—Surgeons who have completed eight years' service as Surgeon, have embarked for training twice during the eight years, and have been through two 14-day courses at a Naval Hospital, will be eligible for advancement to the rank of Staff Surgeon; Staff Surgeons who have completed eight years' service in that rank will be eligible for promotion to rank of Fleet Surgeon.

5. *Selection for Promotion.*—Promotion to the ranks of Staff Surgeon and Fleet Surgeon will be made by the Admiralty, as requisite to fill vacancies in the higher ranks, the promotion being by seniority tempered with selection.

6. *"Supernumerary" Surgeons and Staff Surgeons.*—Surgeons who complete eight years' service, and who, though eligible for promotion to Staff Surgeon, have not been advanced, may, at the discretion of the Admiralty, be retained on the Surgeons' List as "Supernumerary" (see paragraph 2). After completing eight years as "Supernumerary"—that is, 16 years in all—they will be eligible to retire with the rank of Staff Surgeon; but may, at the discretion of the Admiralty, remain for another four years as "Supernumerary" on the Surgeons' List, in order to complete the 20 years' service required for the Volunteer Decoration. Retirement after completion of 20 years' service will be compulsory.

Staff Surgeons who complete eight years' service in that rank, and who have not been advanced, may, at the discretion of the Admiralty, be retained on the Staff Surgeons' List as "Supernumerary," and may remain on that List until they complete 20 years' service in the Royal Naval Volunteer Reserve. "Supernumerary" Staff Surgeons who complete 20 years in the Royal Naval Volunteer Reserve will be placed on the retired list, and will be eligible for the rank of Fleet Surgeon at the discretion of the Admiralty.

"Supernumerary" Surgeons and "Supernumerary" Staff Surgeons will be eligible for promotion to fill vacancies on the Staff Surgeons' and Fleet Surgeons' Lists.

7. *Retirement.*—(*a*) Surgeons who attain eight years' seniority without qualifying for promotion will be placed on the retired list.

(*b*) "Supernumerary" Surgeons (paragraph 6) (except those promoted to Staff Surgeon) will be retired compulsorily after 20 years' service in the Royal Naval Volunteer Reserve, but may retire at any time at their option (16 years' service being necessary to qualify for retired rank of Staff Surgeon).

(*c*) Staff Surgeons (including "Supernumerary" Staff Surgeons) may retire at any time at their option; but will be compulsorily retired on attaining 20 years' service in the Royal Naval Volunteer Reserve (except those promoted to Fleet Surgeon). Staff Surgeons who complete 20 years' total service before retirement will be eligible for the retired rank of Fleet Surgeon.

(*d*) Fleet Surgeons may retire at any time at their option, but will be compulsorily retired on attaining the age of 52.

8. *Resignation.*—Officers who are not eligible for retirement under paragraph 7 will (when not called out) be permitted to resign their commissions.

9. *Association with R.N.V.R. Divisions.*—Officers (except "Supernumerary" Surgeons and "Supernumerary" Staff Surgeons) will, as far as practicable, be attached to the Royal Naval Volunteer Reserve Divisions or Outlying Companies, and in such cases will be eligible to earn the Capitation and Special Capitation Allowance for such Division or Company under the conditions laid down in the Royal Naval Volunteer Reserve Regulations (one of which conditions is attendance at Annual Inspection).

In cases where it is not practicable for an officer to be attached to a Division or Company he will be shown as "unattached," and no Capitation or special Capitation Allowance will be payable for him. All "Supernumerary" Surgeons and Staff Surgeons will be "unattached."

10. *Training in Peace.*—(*a*) Surgeons, R.N.V.R., will be required to undergo the following courses of training, and to obtain certificates from the Medical Director-General of the Navy, that they have been instructed in these duties, and have taken full advantage of the instruction.

(*b*) Staff Surgeons, R.N.V.R. will be permitted to undergo the following courses of training, if they so wish and their services are required, under conditions similar to those laid down in the case of Surgeons, R.N.V.R.

While so serving these officers will receive the pay of their rank and the usual travelling allowances.

Certificates of training will be issued as for Surgeons, R.N.V.R.

Training Afloat in one of H.M. Ships.

Once in first four years' service and once in second four years' service as Surgeon, at an interval of not less than two years. The period of training will be from 14 to 28 days (at officer's option), and the course of instruction will be in (1) the arrangements for the treatment of wounded in action, (2) the keeping and rendering of accounts and returns, (3) the victualling of the sick, (4) the method of sending patients to hospital.

Hospital Course at a Naval Hospital.

Once in the first four years' service and once in second four years' service at an interval of not less than two years. The period of course will be 14 days, and will embrace instruction in (1) the routine of ward work, (2) the admission and discharge of patients, (3) the dieting of hospital patients, (4) the examination of recruits, (5) the method of keeping and rendering returns.

"Supernumerary" Surgeons, "Supernumerary" Staff Surgeons and Fleet Surgeons will not be eligible to undergo further training.

11. *Pay, etc., during Peace Training.*—While under training as above Surgeons R.N.V.R. will be paid as follows:

Training Afloat.

Surgeons under two years' seniority	...	14*s.* per diem.
.. of	...	15*s.* ..
.. .. four	...	17*s.* ..
.. .. six	...	18*s.* ..

Hospital Course.—Pay as above and also hospital allowance at the usual naval rate.

Officers will travel between their place of residence and H.M. ship or hospital at the public expense under the regulations as laid down for naval medical officers of equivalent rank.

12. *Uniform.*—Officers before going through a course of training will be required to provide themselves with the following uniform:

No. 4 Frock Coat and No. 5 "Undress": Frock coat; undress coat (monkey jacket); morning waistcoat; trousers, plain, blue; white trousers during summer months; cap (and cap covers from May 1st to September 30th); sword and undress belt.

No. 7 "Mess Undress": Jacket; evening waistcoat (blue); trousers, plain, blue.

An allowance of £20 in aid of outfit will be granted to Surgeons on their completing their first course of training afloat or their first Hospital course. In the event of an officer resigning within three years he is liable to refund the allowance paid to him.

13. *Capitation Allowances.*—A capitation allowance at the rate of 50s. annually will be granted for each Medical Officer who is attached to a Division or Outlying Company (see paragraph 9) under the conditions laid down in the Royal Naval Volunteer Reserve Regulations, and is payable to the Division concerned.

An additional or special allowance at the rate of 30s. annually will be similarly granted for each "attached" Surgeon, Staff or Fleet Surgeon, who has completed both a course of training afloat and a Hospital course.

14. *Service when "Called Out."*—Whenever the Admiralty call out the Naval Volunteers, or any of them, for actual service, they will be liable to serve either ashore or afloat, as may be directed by the Admiralty, and anywhere the Admiralty may have need of their services, with the understanding that those services shall, as far as practicable, be confined to Home waters and the Mediterranean.

(2) As far as possible Fleet and Staff Surgeons, and "Supernumerary" Surgeons, if required, would be utilised for shore appointments only.

15. *Pay when "Called Out."*—When called out, Medical Officers to be paid as follows:

- Surgeons under two years' seniority, 14s. + 8s. per diem (special allowance).
- Surgeons of two years' seniority, 15s. + 7s. per diem (special allowance).
- Surgeons of four years' seniority, 17s. + 5s. per diem (special allowance).
- Surgeons of six years' seniority, 18s. + 5s. per diem (special allowance).
- Staff Surgeons under two years' seniority, 20s. + 5s. per diem (special allowance).
- Staff Surgeons of two years' seniority, 21s. + 5s. per diem (special allowance).
- Staff Surgeons of four years' seniority, 24s. + 5s. per diem (special allowance).
- Staff Surgeons of six years' seniority, 25s. + 5s. per diem (special allowance).
- Fleet Surgeons under two years' seniority, 27s. + 5s. per diem (special allowance).
- Fleet Surgeons of two years' seniority, 28s. + 5s. per diem (special allowance).
- Fleet Surgeons of four years' seniority, 30s. + 5s. per diem (special allowance).
- Fleet Surgeons of six years' seniority, 31s. + 5s. per diem (special allowance).
- Fleet Surgeons of eight years' seniority, 33s. + 5s. per diem (special allowance).
- Fleet Surgeons of ten years' seniority, 35s. + 5s. per diem (special allowance).

together with hospital, lodging, and other allowances, under the same conditions and at the same rates as those payable to naval medical officers.

16. *Pensions for Wounds.*—Officers who may receive hurts or wounds whilst on active service in the Royal Navy, or whilst undergoing training, will receive the same pensions and allowances as those to which officers in the Royal Navy of corresponding rank would be entitled in similar circumstances.

17. *Pensions for Widows and Children.*—Widows and children (if any) of officers who may be killed in action, or die from accident resulting from the performance of their duty, will receive the same pensions and compassionate allowances as the widows and children of naval officers of corresponding rank would be entitled to in similar circumstances.

18. When selecting medical practitioners for appointment as Surgeons and Agents or similar posts, the Admiralty will give preference to candidates who hold commissions in the Royal Naval Volunteer Reserve.

INDIAN MEDICAL SERVICE.

THE PUBLIC SERVICES COMMISSION.

Evidence of the Director-General, I.M.S.

WHEN the Public Services Commission resumed its sittings on November 21st, 1913, the inquiry into the medical services was commenced.

The Director-General (Sir C. Pardey Lukis) was the first witness, and was examined by the Chairman. The sanctioned strength of the Indian Medical Service was 748 officers, but the actual number was 722, and of these 54 were Indians. Out of these 54 only 28 applied for civil employ. Before long there would be a station hospital system for Indian troops on the same lines as for British troops. In his opinion it did a man no harm to be put on regimental duties for six years. He thought all Indian Medical Service officers should be placed on the general list as regards selection for the grades of Lieutenant-Colonel. The best men were not coming into the service owing to the impression which had got abroad that the Indian Medical Service was going to be broken up. That impression existed at home, and was not easy to remove. The number of Indians in the Indian Medical Service had of late years increased considerably. Out of 72 new appointments 15 were Indians. He hoped that training of candidates would be augmented by a course of study at the new School of Tropical Medicine in Calcutta.

The figures showed that the number of applications from candidates to enter the civil service were 52 per cent. of Indians and 87 per cent. of Europeans. This result had surprised him, as he would have anticipated the opposite. He did not think that the regimental service of officers who were to enter the civil service should be too long. All appointments for ordinary civil work were made by seniority without regard to questions of military rank, and in his opinion any system of selection would be injurious.

In reply to questions as to the supply of surgeons for war purposes, Sir Pardey Lukis said that at present 331 out of 475 of the civil surgeons were under orders for reversion to military duties in the event of a general mobilization. There had not been a mobilization which affected the service throughout since the Afghan campaign. To rely upon England and the Colonies in the event of mobilization would be to depend on a broken reed. So far as could be ascertained, there were 1,771 independent practitioners in India holding qualifications. The European and Eurasian practitioners were under contract with big firms, and their services would not be available even if they were willing. Many of the Indian practitioners had large practices in big cities, and he did not think they would give these up. Many of the remaining men belonged to the non-martial races and so would not be the kind of men desired. Some time ago, when inquiries were made as to the number of practitioners who would volunteer, twenty-four responded, all Europeans. These facts justified the opinion that the question of a war establishment was one of considerable importance.

As regards the standard of training in Indian medical institutions at Calcutta, Madras, Bombay, Lahore, and Lucknow, Sir Pardey Lukis considered that it was good and in some cases better than that given at some of the colleges at home. The only defects he could point out were non-insistence on practical training for students before granting them diplomas, the understaffing of colleges, and the want of development in special branches of study, such as throat and ear diseases. Existing conditions in India prevented students from attending confinement cases before qualifying. It was important that students should undergo practical instruction in women's and children's diseases, and he suggested that the marks should be raised from 600 to 700 for women's and children's diseases as for medicine and surgery.

In answer to further questions by the Chairman, Sir C. P. Lukis said that civil assistant surgeons had a better training than military. Candidates for the military assistant surgeon's grade should have the same training as students seeking civil employ. In a letter submitted to the Government of India in January, 1911, he had suggested improvements. Military assistants had one advantage, that after passing the examination they went with British troops and obtained excellent training, not only with soldiers, but with women and children. Military assistant surgeons received training in *x* rays and bacteriology, but he would like to see them from the very beginning receiving the same training as civil assistant surgeons.

In answer to questions regarding a Women's Medical Service in India, Sir Pardey Lukis said that there was no medical college entirely devoted to women in India, and this had, generally, an effect in keeping away the better class of Indian women from taking to medicine. He hoped that when Lady Hardinge's Medical College for Indian women at Delhi was opened a better class of women would join it. The scheme in connexion with that college was complete. Asked as to medical missionaries, he said that there were 355 in India; they were serious rivals, not only to civil surgeons, but to independent practitioners also. The missionaries treated practically for nothing.

With a view to stopping medical practice by persons who had no qualifications and styled themselves as doctors, a bill was passed by the Bombay Legislative Council in March, 1912. A somewhat similar bill was under the consideration of the Madras Council, and a bill would be brought before the Bengal Council during the ensuing session. An Imperial Act was also under consideration. Such legislation was not intended to interfere with the practice of the Eastern systems of medicine but only to control the practice of the Western system.

There were only two places in India—Calcutta and Bombay—where independent medical colleges had been established. Efforts made lately in Calcutta to form one medical college out of the several private medical institutions there had failed. An institution at Belgachia, run in connexion with the Albert Victor Hospital, had a very good surgical and medical staff, but was badly handicapped for want of funds. He had heard unofficially that the Bengal Government had decided to give 5 lakhs (not recurring) and Rs. 50,000 a year (recurring) for the upkeep of this institution on condition that the college was affiliated to the Calcutta University and the necessary buildings and equipment for a hospital were provided. As to Bombay he saw no reason why a big independent medical college should not be built there. In reply to Mr. Gokhale, Sir Pardey said that in the event of civil surgeons reverting to military duty in times of war, the positions thus made temporarily vacant were filled by the assistant surgeons. They would not all be recalled at once, but in six different sections. If the whole of the Indian army were mobilized a large number of civil institutions would have to be closed.

In answer to further questions by Mr. Gokhale, Sir Pardey Lukis said that he was not aware of the existence of an impression among Indian members of the Indian Medical Service that only inferior posts were given to them and if such an impression existed it was not justified. He stated also that 75 per cent. of the European members of the service possessed higher qualifications and 153 officers of the service had specialized themselves. He did not approve the appointment of

independent medical practitioners as professors in Government colleges, but suggested the establishment of private institutions where the abilities of such men could be utilized.

In reply to Mr. Sly, Sir C. P. Lukis said he would have no objection to Indians being given scholarships to proceed to England for additional medical training after they obtained their diplomas. He would accept the scheme of study leave applicable to military assistant surgeons, civil surgeons, and Indian Medical Service officers.

In reply to Mr. Ramsay Macdonald, M.P., he said that he held that the Indian Medical Service was essential from a military point of view and that all personal and private considerations and claims of race must be subordinated. In replying to questions concerning the unpopularity of the Indian Medical Service with young men at home, he said that he believed the Indian Medical Service was now as safe as it ever was and that it presented as many opportunities for good careers as ever. He had been preaching that gospel for some little time and was horrified to find how little impression he could make. The trouble had arisen since Lord Morley's circular, and there was also a belief that the military service in India was going to be wholly Royal Army Medical Corps.

In answer to Sir Valentine Chirol, he said that in order to bring India up to the numerical standard of practitioners in Great Britain there would be required a total of 250,000 practitioners.

On November 22nd, 1913, Colonel C. J. Bamber, M.V.O., Inspector-General of Civil Surgeons, Punjab, and Rai Sahib Pandit Balkishen Kaul were co-opted to be members on behalf of the Indian Medical Service and the Provisional Medical Service respectively.

The first witness was Dr. Bhawat Ram Sawhney, representing the Punjab Medical Union. He said that the attendance at British institutions made students of medicine reliant and efficient, and he agreed with those who held that no Indian should enter the Indian Medical Service without possessing British qualifications. He was not in favour of Indian Medical Service officers taking professorial work, and urged that the professors of medical colleges in India should be recruited in England. Indian Medical Service officers with the necessary training, qualification, and ability made good professors, but they did not, after reaching India, obtain the experience essential for teaching. He urged the reduction of the present medical service by one-half and the substitution of private practitioners; he would have all surgeons trained in England, but would exempt assistant surgeons from such training until they were ready to take a full surgeoncy. In reply to Sir Valentine Chirol, the witness, while admitting that private practitioners could be encouraged without so sweeping a change as he had suggested, held that the change would be without serious effect on the Indian Medical Service. In reply to Lord Ronaldshay, he said that if the training were sufficiently good it would be possible for Indians to study in India. It was mainly the professorial class he desired to send to England.

Lieutenant-Colonel H. Smith, I.M.S., Civil Surgeon, Amritsar, representative of the Indian Medical Service in the Punjab, said that Lord Morley's circular had left a feeling of uncertainty about the future. He thought all Indian candidates should go to England; though the standard of Indian colleges was up to the times, they lacked the social life of an English college. He would restrict the number of Indians who entered the I.M.S. to 20 per cent. In reply to Mr. Ramsay Macdonald, who invited the witness not to answer any question he thought improper, Lieutenant-Colonel Smith said that the scope for corruption and bribery for a civil surgeon engaged in legal work was enormous. There was a danger of judging India by English standards, but there was no such thing as professional etiquette, as it was understood in England, among certain classes of medical practitioners in India; they engaged, for instance, in a kind of advertising.

Lieutenant Fleming, Deputy Superintendent of the Lunatic Asylum, Lahore, and a member of the Subordinate Medical Department, said that though the members of the department were entitled to a month's privilege leave in a year, they did not obtain it, and often Sundays and public holidays were working days for them. In reply to Mr. Abdur Rahim, he said that while he did not make any suggestion as to the limitation of Indians in the medical department, he was of opinion that Europeans wielded greater influence and commanded more respect. In reply to Mr. Gokhale, he said that it was possible for an Indian and Mohammedan civil surgeon to show favouritism in attending patients, but withdrew the statement that this actually occurred. In his opinion Indian patients preferred European surgeons in India.

At its meeting on November 24th, the Commission co-opted Colonel C. J. Bamber, M.V.O., Indian Medical Service. Assistant-Surgeon Malir, representative of the railway section of the Indian Subordinate Medical Department, said that the assistant surgeons in that department demanded the same privileges as were granted to the Indian Medical Service; they performed the same duties as civil surgeons and acted independently. In reply to Colonel Bamber, he said that he knew many cases in which military assistant surgeons were serving under civil assistant surgeons, and he saw no objection to it. The alleged superiority of the civil surgeons over military assistant surgeons existed in theory only; in practice the military had more outdoor work to do and gained more experience.

Lieutenant-Colonel S. Browning Smith, I.M.S., Sanitary Commissioner of the Punjab, said in reply to the Chairman that for the sanitary department officers drawn from the military were better than those in civil employ, since a medical officer of a regiment had heavy work to do in respect to the sanitation of troops. He was of opinion that there were many Indians well fitted for sanitary work in view of their knowledge of public health and their acquaintance with the language and customs of the people. The attractions of the department were limited, and he suggested that promotion in it should be from one list for all India. In reply to Mr. Ramsay Macdonald, he said that he saw the advantage of women doctors in sanitary work, but did not think that the stage for their employment had yet been reached. In reply to other questions, the witness said that the reorganization of the department was going on, and the awakening of public interest in sanitation in India had progressed so far as to justify a considerable increase in the staff.

Major J. C. Robertson, I.M.S., Sanitary Commissioner with the Government of India, advised the formation of an all-India sanitary and bacteriological department. It was essential that Indians should be recruited to the department. At present he would prefer European superior officers because of their extra knowledge. In reply to Mr. Chaubal, he said that he would be disposed to give superior posts to the best Indians from the Indian medical colleges, provided they went to Europe for two or three years to study sanitation.

Major R. M. Dalziel, I.M.S., Superintendent, Central Gaol, Punjab, said that the Gaols Branch was not popular. In reply to the Chairman, who asked whether it was necessary to put Indian medical officers in this branch of the service, the witness said that Indian Medical Service officers had conducted the gaols so well that he saw no need for a change. He was not in favour of transferring superintendents from one province to another, but advocated promotion in the same province to the inspector-generalship. The central gaols in big cities gave good scope for the training of superintendents. In reply to Sir Murray Hammick, he said that he did not think assistant surgeons should be placed in charge of gaols, nor that the governorship and the surgeoncy of a gaol should be held by different men. Visitors were appointed officially to visit gaols.

Dr. A. Lankester, Honorary Secretary of the Medical Missionary Association of India, said that he had had twenty-two years' experience in the country. He expressed the opinion that there should be a considerable increase in the staff of the medical service in India, and that the Government should call in voluntary agencies more and more to help. He considered that the civil surgeons were overworked, and did not believe that the staff was sufficient for the work the Government had now entered upon. In reply to the Chairman, he said that he considered that the Government hospitals were understaffed, and that there would be advantage in having private practitioners as honorary surgeons. It was most important that a Medical Act should be introduced in India. He advised that the civil side of the Indian Medical Service should be the premier branch, and that the military side should be recruited from it. To ease the work of the civil surgeons, he would place the non-official charge of gaols in the hands of non-medical officers. He advocated the abolition of private practice for civil surgeons, and suggested that they should be compensated for the loss.

Public Health
AND
POOR LAW MEDICAL SERVICES.

NEW POOR LAW ORDERS.

POOR LAW INSTITUTIONS ORDER, 1913.

THE Departmental Committee of the Local Government Board is doing good work, and Mr. John Burns is pushing forwards, if somewhat tardily, important Poor Law reforms. Two new Poor Law Orders have just been promulgated dealing with Poor Law institutions, and although exception might be taken to some of the details, most Poor Law reformers will agree that a step has been taken in the right direction.

The Royal Commission was unanimously of opinion that children should be excluded from the common workhouse, and after March 31st next, "a child shall not be retained in the institution for a period exceeding six weeks," unless under certain conditions that forbid its immediate removal (Part I. Article 4).

Article 3 deals with the classification of the inmates of Poor Law institutions, and strikes a blow at the too frequent confusion at present existing in this respect. The irregular and disorderly mixing together of all sorts and conditions of pauper life has long been a blot on our Poor Law administration. As we are chiefly concerned with the medical aspect of Poor Law reform, it will be useful to note the changes that have been brought about in the medical administration of Poor Law institutions by the recent Orders. On the whole it must be admitted that they tend to a more efficient service, but, as is too often the case, the welfare and convenience of the medical officer is sacrificed to the public good. A large amount of additional work is thrown upon him, and there is no indication that

it is proposed to give an increased remuneration. The following may be taken as an epitome of his increased duties:

He is to keep a record of the medical history of the physical and mental condition and fitness for employment of all persons admitted to the workhouse.

He is to supply the guardians with written recommendations before they deal with the classification of certain inmates.

He is to keep records of the medical history, diet, and treatment of each inmate of a sick ward or a mental ward, and of each infant under the age of 18 months.

He is to examine every infant under 18 months not less often than once in two weeks, and every infant above 18 months and every child at least once a month, and to record the result of such examination.

He is to furnish the medical officer of health with such information as the Local Government Board may direct with respect to cases of sickness or death within the institution.

He is to supply to the clerk of the guardians, so far as matters affecting his office are concerned, any information necessary for the purpose of any report, answer, or return required by the Local Government Board, or their officers, or by the guardians, or otherwise required for the business of the union.

The only offset against this additional work is that the Medical Relief Register is to be abolished. To do this additional work in large unions it will be necessary to provide some means to carry out all the clerical work, and an additional assistant medical officer will have to be appointed. In smaller unions the medical officer ought to be compensated for the additional time he will have to devote to his duties. But upon these obvious corollaries the Order is silent.

The proposed repeated examinations of healthy children seem to be unnecessary. What is required is that the children's wards should be under the control of the medical officer, that the children should be under the direct supervision of trained nurses directly responsible to the medical officer, that they should be periodically weighed and measured, and that they should be examined by the medical officer as often as he thinks necessary.

With regard to another important matter a serious protest must be made. As a matter of fact the Order places the medical officer, as regards subordination to the workhouse master, in a worse position than at present. The Order lays down definitely that the master is to govern and control, subject to the directions of the guardians, the institution and the officers. This would seem to include the medical officer, and, as it to give point to this subordination, the duties of the medical officer are placed after those of the master, instead of preceding them, as they do in the General Consolidated Order.

POOR LAW INSTITUTIONS (NURSING) ORDER, 1913.

The Poor Law Institutions (Nursing) Order will tend to improve the nursing arrangements in the Poor Law service.

Article 2 makes it compulsory on the guardians to appoint a superintendent nurse wherever in an institution there are more than 100 beds for sick inmates; Article 4 insists on the presence in a Poor Law institution of at least one officer who holds a certificate of having undergone for three years a course of instruction in the medical and surgical wards of a hospital or infirmary, being a training school for nurses; and Article 5 lays down important safeguards to ensure the proper training of superintendent nurses and midwives to Poor Law institutions.

The superintendent nurse is required to report direct to the House Committee on any matters affecting her duties which may require consideration. There is no doubt that this is an improvement upon the present condition, but it does not go far enough. A system which places the supreme control of the sick wards in the hands of a lay officer and subordinates the medical and nursing staff to him is radically wrong and cannot be allowed to continue. The interests of the sick in the workhouse demand that the sick wards shall be entirely separated administratively from the rest of the workhouse, and placed under the control of the medical officer, to whom the superintendent nurse must be directly responsible. The workhouse master must be entirely excluded from the control of the sick wards, for which, however, he might still act as steward under the medical officer.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

Panel Patients.—The Honorary Secretary of the Poor Law Medical Officers' Association of England and Wales asks us to correct a statement in the report of their last Council meeting that the demands of the Bethnal Green Guardians had been acceded to by the infirmary medical officers with regard to the payment by them to the guardians of fees received for attendance on employees of the guardians as panel patients. It would appear that the Honorary Secretary's information in this matter was incorrect.

Obituary.

SILAS WEIR MITCHELL, M.D., LL.D.,

EX-PRESIDENT OF THE COLLEGE OF PHYSICIANS, PHILADELPHIA.

THE medical profession throughout the world will mourn the death of Dr. Weir Mitchell, which took place on January 4th, in his 85th year. Though the measure of his years was more than full, the activity of his intellectual life continued to the end. Our American contemporary, *Science*, of December 12th, contained an admirable memoir of the late Dr. John Shaw Billings read by him in November before the National Academy of Sciences at Baltimore. He was one of the few intimate friends of that remarkable man, whom he calls a "rather taciturn and reserved gentleman."

Dr. Weir Mitchell had earned the highest distinction in two widely different fields. One of the foremost neurologists of his time, he also held a leading place among American writers of fiction in the latter half of the nineteenth century. The son of John Kearsley Mitchell, a Philadelphia physician, Silas Weir Mitchell was born at Philadelphia on February 15th, 1829, and received his literary education at the grammar school and University of Pennsylvania. Turning to the study of medicine he graduated M.D. at Jefferson Medical College in 1850. He then settled in practice in his native city. In 1863 Dr. William Hammond, then Surgeon-General of the United States Army, placed him and Dr. George R. Morehouse in charge of a hospital in Philadelphia for soldiers suffering from nervous diseases. The scope of this hospital was soon enlarged to include men suffering from injuries of the nerves. Before long it was found necessary to build a new hospital with accommodation for 400 patients; there a vast number of cases representing almost every conceivable type of obscure nervous diseases were received. Few persons have ever at any time had such a field for the study of these maladies, and Dr. Weir Mitchell and his colleagues made full use of their opportunities. The first-fruits were two important papers by Mitchell, Morehouse, and Keen—one on reflex paralysis, treating of cases of sudden palsy following wounds in remote regions of the body, the other on the antagonism of morphine and atropine. In conjunction with his colleagues Weir Mitchell also produced a remarkable paper on malingering, and a book entitled *Gunshot Wounds and Other Injuries of Nerves* (1864). After serving in the United States Army for four years, Weir Mitchell returned to civil practice. He continued to give his attention to nervous diseases, and became the leading authority on the subject in America. He made a number of important researches on the poison of the rattlesnake, and on the effects of morphine, chloral, chloroform, and ether. In the BRITISH MEDICAL JOURNAL of December 5th, 1896, p. 1625, we had the privilege of publishing a paper by him on the effects of *Anhelonium lewinii* (the mescal button) a vision-producing drug used by the Indians of New Mexico. He made experiments on himself to test its power. He gave a vivid description of the vision-stars, zigzag lines of colour of extraordinary brilliancy. On the whole, the effect of the mescal button on him was more or less what is experienced in some ophthalmic megrims. The JOURNAL also published an address delivered by Dr. Weir Mitchell at Netley on the occasion of the distribution of prizes in July, 1894 (BRITISH MEDICAL JOURNAL, August 11th, 1894).

He embodied the results of his experience in the observation of nervous diseases in a number of books which made his name a household word among his professional brethren. Among these may be mentioned *Wear and Tear: or Hints for the Overworked* (1871); *Injuries of the Nervous System and their Consequences* (1872); *Diseases of the Nervous System* (1881); *Lectures on Diseases of the Nervous System, especially in Women*, dedicated to Hughlings Jackson (1881); and *Clinical Lectures on Nervous Diseases* (1897). His famous treatise, *Fat and Blood: an Essay on the Treatment of Neurasthenia*

and Hysteria (1877), contains the description of the treatment of these disorders which is associated with his name. It was translated into five European languages. Among his medical works is a valuable treatise entitled *Doctor and Patient* (1888), in which the relations between them and the place of the nurse are discussed. In a presidential address delivered before the Second Congress of American Physicians and Surgeons in September, 1891, he gave the results of laborious researches into the early history of instrumental precision in medicine. In an address to the American Medico-Psychological Association in 1895 he spoke his mind with great freedom as to the unsatisfactory manner in which hospitals for the insane were conducted. In 1907 he published some memoranda in regard to William Harvey. In all he produced about 140 papers and books on medical subjects.

Dr. Weir Mitchell was for many years physician to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, where for more than thirty years his weekly clinic was largely attended. His influence on younger men was very great; he suggested to them lines of research, and stimulated them by the force of his personality and his example. He was a man of commanding presence and personality. He was a pioneer in neurology, and the influence of his work is writ large in the history of the development of that branch of medical science.

Even the purely medical writings of Weir Mitchell are marked by a charm of style very rare in medical authors. This literary gift found a field for its exercise in fiction and in poetry. His first effort in the writing of fiction was entitled "The Case of George Dedlow," a short story dealing with physiological and psychological problems, which appeared in the *Atlantic Monthly* in 1863. His account of its publication is amusing. He says it was not written with any intention that it should appear in print. He lent the manuscript to a friend and forgot all about it. This friend sent it to the Rev. Edward Everett Hale. He goes on: "He, presuming, I fancy, that every one desired to appear in the *Atlantic*, offered it to that journal. To my surprise, soon afterwards I received a proof and a check. The story was inserted as a leading article without my name. It was at once accepted by many as the description of a real case. Money was collected in several places to assist the unfortunate man, and benevolent persons went to the 'Stump Hospital' in Philadelphia, to see the sufferer and to offer him aid." His best novel is *Hugh Wynne, Free Quaker* (1897), a tale of Philadelphian life in the time of the Revolution, which gives a description of the war as seen by a Quaker who upheld his right to bear arms in defence of his country. It is a book written evidently out of an abundant knowledge of the history of the period in which the plot is laid, and the sketches of character show great insight. Of his other novels, *The Adventures of Francois* (1898) and *The Red City* (1909) take a high place in contemporary fiction. His last novel was *Westways*, which is just about to be published in this country. It is a story of Middle Pennsylvania extending over a period of years embracing the American Civil War. He also wrote books for children, *Prince Littleboy* and others, which had considerable vogue. *The Adventures of a Quack*, published in 1900, contains an analysis of the mentality of a charlatan, which is of the highest interest to medical readers. The quality of [illegible]e may be judged by his *Collected Poems* (1896). [illegible]n not marked by any special inspiration, they show that he had a gift of neat and often graceful expression. A drama by Weir Mitchell, entitled *The Masque*, was produced by Wilson Barrett.

Although he achieved remarkable success in fiction, Weir Mitchell never allowed his literary labours to in[illegible] with his duties as a physician. His literary works fill some eighteen volumes. He brackets novel writing with salmon fishing among his "recreations."

He was a Fellow of the Philadelphia College of Physicians, of which he was at one time president. Many honours were conferred upon him by his own profession. He was an honorary member of the British Medical Association, a Fellow of the Royal Society, an Honorary Fellow of the Royal Medical and Chirurgical Society, and Honorary Foreign Associate of the French Academy of Medicine. He was also a member of the American National Academy of Sciences; an honorary member of the London Medical Society; a Foreign Associate of the Royal Medical Society of Norway; Honorary Associate, Royal Academy of Medicine of Rome; a Corresponding Associate of the Verein für innere Medicin, Berlin; and an honorary member, Royal Academy of Bologna. Altogether he was a member of nearly twenty medical societies in America and Europe. The Universities of Edinburgh and Harvard, Princeton and Toronto conferred on him the honorary degree of LL.D. He was also an honorary M.D. of Bologna.

Sir WILLIAM OSLER writes:

For nearly thirty years I have enjoyed the friendship of Weir Mitchell, so that it is difficult to write in measured terms about his character and work. I met him first in 1884. He had been commissioned by the trustees of the University of Pennsylvania to look me over as a possible successor of William Pepper in the Chair of Clinical Medicine at the University of Pennsylvania. At Leipzig at the time, I had a cable to meet him at Limmer's Hotel, Conduit Street, at dinner, giving the date. He told me subsequently that the next morning he had cabled "All right! Elect Osler." In a measure he regarded himself as responsible for me, and during five years' residence in Philadelphia, had I been his son, he could not have done more, in every possible way, to promote my welfare. We have been constant correspondents, and his Christmas letter, dated December 20th, 1913, was full of cheery greetings. The 15th of next February would have been his 85th birthday. When I saw him last May he had begun to show his age, but mentally he was as keen and alert as ever. Of no man I have known are Walter Savage Landor's words more true—"I have warmed both hands at the fire of life." We have to go to other centuries to find a parallel to his career, not, it is true, in professional work—for others have done more—but in the combination of a life devoted to the best interests of science with literary and social distinction. He reminds one of Mead, who filled so large a place in public and professional life in the early part of the eighteenth century. And of Mitchell, Dr. Johnson's remark of Mead is equally true—"No man ever lived more in the sunshine of life." But a much closer parallel is with the great seventeenth century Tuscan, Francesco Redi, in the triple combination already referred to, of devotion to scientific study and to *belles lettres* and in the position which he enjoyed in public esteem.

Mitchell's early scientific work was largely experimental. The first of importance was a monograph on the venom of the rattlesnake, to which subject he retured in a more elaborate study in 1883. The Civil War brought opportunities which were utilized in the study of gunshot wounds and injuries of the nerves, and in 1864, in conjunction with his friends, Drs. Keen and Morehouse, appeared the now classical monograph on that subject. In 1872 he issued a separate work, in which the after-histories of many of the more important cases were given. These experiences turned his attention to the diseases of the nervous system, in which his most notable studies have been on hysteria, chorea, and affections of the peripheral nervous system. Among these, two of the most striking contributions were post-hemiplegic choreiform movement, and on a painful affection of the feet, erythromelalgia. What brought his greatest reputation in the profession was the introduction of the so-called rest treatment. The story of this method has been told several times, but it may be of interest to give it just as I wrote it down:

> December 9th, 1887. I have just walked home with Weir Mitchell from the Biological Club at William Sellers, and he told me on the way of his discovery, if one may so call it, of the rest treatment:
>
> "About twelve to fourteen years ago a Mrs. S., from Bangor, Maine, came to consult me at the advice of a mutual friend. She was a bright intelligent woman who had, as a girl, attended in Boston a school in which Agassiz and his wife were interested, and had passed through the four years' curriculum in three years. She then had married, and within as short a time as was possible, had had four children, with the result of total breakdown, body and mind. Boston and New York physicians were tried for a year; then she went abroad, and in London and Paris saw the

most eminent consultants and spent months at various spas. But in vain: she returned a complete invalid. When seen she was a woman of 5 ft. 8 in., emaciated, nervous, unable to digest any food unless she lay upon her back with the eyes shut; and full of whims and fancies.

"Standing at the foot of her bed, M. said that he felt every suggestion that he had to make as to treatment had been forestalled. Every physician had urged her to take exercise, to keep on her feet, and get about, and she felt herself that this was the best. M., on the inspiration of the moment, told her to remain in bed. She took food better, but found that on attempting to get up she was so weak that she could scarcely stand from lack of exercise. M. says he felt that he had run up against a stone wall. About this time he had seen on several occasions a quack named Lyons, who professed to cure by passes and rubbings, relieve a confirmed ataxic in such a way that he could get about for an hour or more at a time. The idea occurred to him to substitute for exercise the movements of the muscles caused by rubbing and friction, and, after giving to a Miss H. several lessons, he instructed her to rub Mrs. S. for so long each day. Improvement began to be noticed, and to the rubbing was added the electrical stimulation of the muscles—also as a substitute for the active movement. The food was taken more freely, she gained in flesh, and gradually recovered, and was sent home to Bangor perfectly well. The improvement has persisted, and she has since borne several children and has been the soul of many enterprises in her native town. An incident—*post partum*, so to speak—was a letter received from Mrs. S.'s mother, a wealthy New England woman full of 'isms,' and a speaker at temperance meetings, etc. She wrote to Dr. M. to say that bodily comfort and ease, health and enjoyment, might be dearly bought at the price of eternal peace. That he had recommended her daughter to take champagne and to have a maid to assist in her toilette. The former she considered not only unnecessary but hurtful, the latter quite superfluous, as any well instructed New England husband was quite capable of helping his wife in her toilette!"

I was associated with Dr. Mitchell at the Orthopedic Hospital and Infirmary for Nervous Diseases for five years, and had ample opportunity to see his method of work. Until his son, Dr. J. K. Mitchell, returned from Europe I saw much of his private practice. Three factors contributed to his extraordinary success: a strong personality, his nurses, and the method itself. He was fortunate always to have good assistants, who helped to bear the heavy burden of the routine of practice.

He had untiring interest in physiological problems, and among writers and workers Harvey was his ideal. I have rarely met with a man with so much mental leaven. He was always suggesting problems for investigation and discussion, and he retained to the end the keenest interest in the progress of science. Twice he missed important chairs of physiology for which he was a candidate, but perhaps it was an advantage that he never was hampered with academic harness. The history and traditions of the College of Physicians of Philadelphia, one of the oldest of English-speaking medical societies, always appealed to him, and its present magnificent building and strong financial position are largely owing to his devotion to its service.

Versatility was the striking feature of Weir Mitchell's mind, and it is shown by the remarkable success obtained in other than professional fields. In large part he was able to do this by living a double life and by the development of an extraordinary capacity for continuous work. Giving up practice early in June, he had a month in Canada salmon fishing, and then until the middle of October at Bar Harbour, Maine, he spent the morning in literary work, the afternoon in exercise, chiefly walking, and the evening in social intercourse with his friends. We have not another instance of so distinguished literary success in a man who at the same time was all his life actively engaged in professional work. Oliver Wendell Holmes, though he taught anatomy for forty years, was first and foremost a literary man. As a writer of fiction Mitchell had an unusual success. His first story dates from 1880. His last novel, *Westways*, which appeared last year, was written when he was about 80 years of age. His first long novel, *In War Time*, appeared when he was 53. His most successful story, *Hugh Wynne*, is a brilliant study of the revolutionary war. His novels were good sellers, and I heard him say that his income from his pen was at times as large as from his practice.

As a poet he is not so well known, though he wrote largely and on many topics. While he had not the gift of Holmes for the occasional verse, some of his post-prandial verses have the flavour of Prior. One at least of his poems will live, the "Ode on a Lycian Tomb," written out of the depth of a heart stricken with severe personal loss. This famous monument, known as "Les Pleureuses," now in the museum at Constantinople, represents one and the same mourning woman carved in eighteen attitudes of grief between Doric columns. The poem has been ranked by good judges among the great elegies in the English language. I will quote one verse of it:

> Cold mourner set in stone so long ago,
> Too much my thoughts have dwelt with thee apart,
> Again my grief is young: full well I know
> The pang reborn, that mocked my feeble art
> With that too human wail in pain expressed,
> The parent cry above the empty nest.

Weir Mitchell had one other characteristic in which he resembled Mead and Askew and many of the great physicians of the past—the gift of sociability and conviviality. He was a great believer in a good dinner and in good company. One of his special benefactions to the College of Physicians was a fund to promote fellowship by an annual festival. This is a trait he probably derived from Ayrshire ancestors. His great-grandfather was Collector Mitchell, the companion and friend of Robert Burns. One of the last of his publications, a privately printed history of the Mitchells of Ayrshire and the Symons of Cornwall, shows an extraordinary amount of careful genealogical research.

In presenting a portrait of Dr. Mitchell to the College of Physicians, Philadelphia, on behalf of his friends, I said that Matthew Arnold's well-known words fitly described him as one

> Whose even-balanced soul
> Business could not make dull, nor passion wild;
> Who saw life steadily and saw it whole.

SIR TREVOR LAWRENCE, BART., K.C.V.O., M.R.C.S.

SIR JOHN JAMES TREVOR LAWRENCE, second baronet, died at Burford House, Dorking, on December 22nd, 1913. He was born on December 30th, 1831, the son of Sir William Lawrence, Serjeant-Surgeon to the Queen, and of Louisa Senior, of Broughton House, Buckinghamshire. He was educated at Winchester, and at his father's hospital, St. Bartholomew's, took the diploma of M.R.C.S. in 1853, and entered the Bengal Medical Service as assistant surgeon on January 20th, 1854. He became surgeon on January 1st, 1866, and resigned a few weeks later. The *Army List* credits him with no war service, though he was in India at the time of the Mutiny.

His service in the Indian Medical Service, however, was merely an episode in his early life. His real career began after he left India. When his father died, on July 5th, 1867, he succeeded to the baronetcy, which had been conferred only a few weeks earlier (April 30th, 1867). In 1874 he unsuccessfully contested Gloucester as a Conservative, but in 1875 was elected for Mid-Surrey. He sat for that constituency for ten years, till it was abolished in the redistribution of seats in 1885, when he was elected for the Reigate Division of Surrey, holding the seat for seven years. At the general election of 1892 he did not seek re-election. In 1892 he succeeded Sir Sidney Waterlow as treasurer of St. Bartholomew's, and held that office for twelve years, till 1904. During that time he gave £100 annually for a research studentship at the hospital. He also assisted in founding the Lawrence Scholarship in memory of his father. He was a member of the Council of King Edward's Hospital Fund from its inauguration until a few weeks before his death. On November 9th, 1902, he was created K.C.V.O. He was also a Knight of Grace of the Order of St. John of Jerusalem.

His chief interest, however, was horticulture, his speciality being orchid-growing. From 1885 to 1913 he was president of the Horticultural Society, which increased greatly in numbers and in means during his tenure of

office. The society presented him with the Victoria Medal in 1900, with his portrait, painted by Sir Hubert Herkomer in 1906, and with the Veitch Memorial Gold Medal in 1913; it also founded the Lawrence Gold Medal in his honour. He was vice-president of the Japan Society, and had a very fine collection of Japanese lacquer, especially of the eighteenth and early nineteenth centuries; his collections of Chinese and European porcelain were also well known.

In 1869 he married Elizabeth, only child of the late John Burford, of Dorking, by whom he had three sons and one daughter. His successor as third baronet is his son, William Matthew Trevor, born September 17th, 1870.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.C.—K. T. A. Davis, R. M. Vick.
M.B., B.C.—H. Y. Mansfield.
B.C.—J. H. Newmarch, T. H. Oliver.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on December 17th, 1913, under the presidency of the Vice-Chancellor, Dr. Herringham.

Recognition of Teachers.

The following were recognized as teachers of the University in the subjects and at the institutions indicated:

University College.—Dr. C. A. Lovatt Evans (Physiology).
King's College.—Mr. Edward Mellanby (Physiology).
St. Bartholomew's Hospital Medical School.—Dr. P. H. Smith Hartley, C.V.O. (Medicine); Mr. John D. Barris (Midwifery and Diseases of Women), Mr. W. Girling Ball (Surgery).
St. George's Hospital Medical School.—Mr. Charles H. S. Frankau (Surgery); Mr. R. Salusbury Trevor (Forensic Medicine); Mr. James A. Torrens (Medicine); Mr Robert R. James (Ophthalmology).
London Hospital Medical School.—Dr. Charles H. Miller (Clinical Medicine).
London School of Medicine for Women.—Dr. William P. S. Bransom (Clinical Medicine), Mr. John G. French (Laryngology and Aural Surgery).

Internal Students in Medicine and the Cambridge Natural History Tripos.

It was resolved:

That internal students who have taken honours at the natural sciences tripos examination in the University of Cambridge with chemistry, or physics, or botany and zoology, be exempted at the first examination for medical degrees from examination in the subjects in which they have passed, provided that they have completed the required courses of study either in this university or in the University of Cambridge, and provided that no exemption from the examination in general biology be granted to students who have not taken honours at the tripos examination in both botany and zoology.

Regulations for the M.D. Examination.

It was resolved:

That the regulations for the M.D. examination (Branch V) (Red Book, 1913-14, p. 188, and Blue Book, September, 1913, p. 241) be amended as follows:

(1) By the substitution for the words "Two papers in State medicine, including hygiene, school hygiene, and forensic medicine" of the following:

One paper in State medicine, including hygiene and school hygiene.
One paper in State medicine, including forensic medicine.

(2) By the insertion after the words "A practical examination, extending over two days, one of which will be devoted to practical work in a laboratory" of the following:

In (*a*) bacteriology and (*b*) chemistry.

That if the thesis or published work submitted by a candidate be judged of sufficient excellence by the examiners he may be exempted from part or the whole of the written and of the practical portions of the examination; and that the regulations for the M.D. examination (Red Book, 1913-14, p. 189, and Blue Book, September, 1913, p. 243) be amended accordingly.

Proposed University of London Club.

The Senate has sanctioned a proposal to found a University of London Club. The persons eligible for membership would include all graduates, teachers, and officers of the university and other persons connected with the university and its colleges, schools, institutions, and organizations, including officers of the University of London Contingent of the Officers' Training Corps, but not including undergraduates. The annual subscription will in the first instance be £2 2s. for town members and £1 1s. for country members; for original members, of whom not more than one thousand will be admitted, there will be no entrance fee. Two houses at the south end of Gower Street, Nos. 19 and 21, have been selected for the first home of the club; they are directly opposite the site of the proposed Shakespeare Memorial Theatre, and the Bedford Estate has undertaken to erect a hall in the garden at the back of the houses, and to make certain structural alterations. The hall would have a separate entrance, and would, it is hoped, provide satisfactory accommodation for the meetings and business of undergraduates' societies and for other university purposes. If sufficient support is obtained it is intended to open the club to members immediately after the Easter vacation this year. Particulars can be obtained from Mr. T. Ll. Humberstone, Secretary of the University of London Club Organization Committee, at the University.

Award of University Medal.

The University medal at the M.B., B.S. examination for internal and external students, October, 1913, has been awarded to Mr. Hugh J. O. Ewing, of the University of Bristol.

Gilchrist Studentship for Women.

The Senate will shortly proceed to an appointment to the Gilchrist studentship for women of the value of £100, tenable for one year by a graduate of the University who is prepared to take a course of study in an approved institution in preparation for some profession. Applications must reach the Principal not later than February 28th.

Advanced Lectures in Medicine.

The following advanced lectures have been arranged for the second term:

University College Hospital Medical School.—One lecture on Apraxia, its Clinical and Localizing Value, by Dr. S. A. Kinnier Wilson, M.D., on Thursday, January 29th, at 4.30 p.m.
Middlesex Hospital.—One lecture on the Action of Radium upon Animal Cells, by Dr. H. Beckton, on Wednesday, March 4th, at 5 p.m.
London Hospital.—Two lectures on the Pathological Excretion of Nitrogen by the Skin and the Resulting Changes in the Urine, by Dr. H. L. Tidy, on Wednesdays, March 4th and 11th, at 4.30 p.m.

The following lectures will be given during the third term:

University College.—One lecture on Recent Observations of Ulcers of the Stomach, by Dr. Charles Bolton.
St. Thomas's Hospital.—Three lectures on Carbohydrate Metabolism in Health and in Diabetes, by Dr. H. MacLean.
King's College (Department of Bacteriology, 62, Chandos Street, W.C.).—A course of eight or nine lectures on Anaphylaxis will be given by Dr. L. Rajchman, M.D.(Cracow), at 5 p.m. on Thursdays, beginning on January 15th. The lectures are free.

The lectures, which are free without ticket, are addressed to advanced students of the university, and to others interested in the subjects dealt with.

Advanced Lectures in Physiology.

The following lectures will be given during the second term:

King's College.—Four lectures by Arthur Harden, D.Sc., F.R.S., on Carbohydrate Fermentation, on January 26th, February 2nd, 9th, and 16th.
Guy's Hospital.—Eight lectures on Physiological Effects of Anæsthetics and Narcotics, by Dr. M. S. Pembrey and Mr. J. H. Ryffel, M.A., B.C., on Thursdays, January 22nd, 29th, February 5th, 12th, 19th, 26th, and March 5th and 12th. (This course is recognized as advanced lectures which a candidate at the B.Sc. (honours) examination may name for part of his examination.)

The lectures, which will be illustrated by experiments, are free without ticket, and are addressed to advanced students of the university and to others interested in the subjects dealt with.

The course of lectures by Dr. C. Lovatt Evans on Oxidation in the Tissues announced to be given in University College during the second term has been transferred to the third term.

Lectures by the Professor of Protozoology.

A course of twelve lectures on the Protozoa Parasitic in man will be given in the Lister Institute of Preventive Medicine, Chelsea, by Professor E. A. Minchin, on Tuesdays and Fridays during the second term at 5 p.m., beginning on Tuesday, January 27th. Each lecture will, when possible, be followed by exhibits of microscopic preparations illustrative of the lecture. The course is intended to provide instruction (*a*) to students past the intermediate stage—that is, to those preparing for the B.Sc. examination, pass or honours, or taking "Protozoa" as a special subject for the B.Sc. examination, or to those preparing a thesis upon the group for the D.Sc. degree; (*b*) for medical men and others interested in the practical aspects of protozoology. The course is open free (1) to all members of the university; (2) to all medical men or registered medical students; (3) to other persons, who may obtain tickets on application to the Academic Registrar.

Advanced Lectures in Zoology.

The following course of lectures addressed to advanced students and others interested in the subjects dealt with will be given and are free without ticket:

Three lectures on the Place of Instinct in Evolution by Dr. C. Lloyd Morgan, F.R.S., during the second term.
Three lectures on the Morphology of the Cranial Muscles in Vertebrates by Dr. F. H. Edgeworth during third session.

The lectures will be addressed to advanced students of the university and others interested in the subjects dealt with.

Historical Record of the University.

The first issue of the historical record of the University has been published and is now on sale, price 5s. net, postage 4d. The volume contains the history of the University, the texts of the various charters and of the University of London Act; the texts of University College and King's College Acts, lists of former Fellows and officers; full particulars of the trusts and beneficiaries; a list of graduates arranged according to their degrees; a list of honours graduates and undergraduates from

the foundation of the University; lists of persons to whom exhibitions, scholarships, studentships, and prizes have been awarded, and other information of interest.

UNIVERSITY COLLEGE.

Physical Anthropology.

A course of lectures and practical instruction on physical anthropology will be given in the department of anatomy by Mr. D. E. Derry, M.B., Ch.B., lecturer on the subject. The course will comprise one lecture and two meetings for practical work each week. The first lecture will be given on Thursday next, at 2 p.m., and the course will be continued on Mondays, Thursdays, and Fridays at the same hour. The subjects dealt with are: (1) Craniоscopy; (2) craniometry; (3) osteometry; (4) anthropometry (on the living subject); (5) estimation of stature, age, and sex from bones; (6) comparison with higher mammals, especially the anthropoid apes; (7) race distribution and characteristics. The fee for the course to graduates and regular students of the University is one guinea, and to others two guineas. Particulars can be obtained on application to the Secretary, University College, London.

UNIVERSITY OF GLASGOW.

Statistical Report.

THE Secretary of the Glasgow University Court has issued the statistical report of the university for the year ending September 30th, 1913. The teaching staff consisted of 35 professors, 69 lecturers, and 83 assistants and demonstrators. The salaries paid to the principal and professors amounted in all to £27,186 11s. 2d., to lecturers £15,914, and to assistants and demonstrators £7,349. Pensions to retired professors amounted to £5,493. The total number of matriculated students was 2,835, and included 648 women; in the previous year the total was 2,794, including 681 women. Of these 2,835 students, 717 were enrolled in the Faculty of Medicine, 87 being women. Eleven were enrolled in both Arts and Medicine, and 21, including 1 woman, in both Science and Medicine. In the Faculty of Medicine the following degrees were conferred during the year: 6 M.D. with honours, 1 M.D. with high commendation, 7 M.D. with commendation, 11 ordinary degrees, 4 M.B., Ch.B., with honours, 9 with commendation, and 77 ordinary degrees, 2 ordinary M.B., C.M.—a total of 117. The total number of degrees granted in all the faculties was 535, as compared with 481 in the preceding year. At September 30th the General Council of the University consisted of 8,548 members, as compared with 8,245 during the previous year. During the year 2,355 volumes, 734 parts of volumes, and 22 pamphlets were added to the university library by purchase, 847 of these volumes being periodicals. There were also presented to the library 646 volumes, 801 parts of volumes, and 444 pamphlets, 270 volumes and 147 parts of volumes being reports and periodicals.

UNIVERSITY OF LEEDS.

THE following candidates have been approved at the examinations indicated:

SECOND M.B., CH.B.—*Part I:* Jane Bamford, C. W. Dudley, Z. P. Fernandez, W. L. M. Gebriel, F. H. Goss, C. R. Knowles, I. Liberman, W. O. Lodge, M. Rosenewige, A. L. Telling, F. Walton. *Part II:* S. Adler, H. E. Charles, C. W. Dudley, Emily E. V. Glover, G. F. Hurst, W. O. Lodge, L. Mosses, J. H. Parker, N. Pick, M. Rosenewige, W. H. Rowden, P. Shillito, I. Silverstein, C. H. Smith.

FINAL M.B., CH.B.—*Part I:* H. S. Bhalla, C. M. Gozney, H. S. Lockwood, C. H. Seville, Jessie Smith. *Part II:* W. H. Lonen. *Part III:* H. L. Taylor, L. H. Butler, W. D. A. King, K. Menon.

DIP. PSYCH. MED.—W. Robinson.

[*] Second class honours.

Medical News.

THE spring term of clinical lectures and demonstrations at the National Hospital for the Paralysed and Epileptic, Queen Square, W.C., will commence on Tuesday, January 20th, at 3.30 p.m.

THE late Dr. Frank Buszard, for over fifty years honorary physician to the Northampton Hospital, left estate of the gross value of £13,374, of which £10,161 is net personalty.

DR. GUSTAVE MONOD, M.R.C.P.Lond., of Vichy, has been commissioned by the French Ministre de l'Instruction Publique to study the organization of post-graduate study in Great Britain and in the United States.

A COURSE of clinical lectures and demonstrations given at the Queen's Hospital for Children, Hackney Road, Bethnal Green, E., commenced on January 2nd, and will conclude on March 30th. The lectures, which are free to all medical practitioners and students of medicine, are held at 4 p.m.

THE new buildings of the National Hospital for the Diseases of the Heart which have been erected in Westmoreland Street, Marylebone, W., will be opened by Prince Arthur of Connaught on the afternoon of Monday next. The new buildings have, we understand, been wired so that an electro-cardiogram can be obtained without moving a patient from his bed in the ward.

THE next meeting of the Hunterian Society will be held at St. Bartholomew's Hospital on Wednesday, January 14th, at 9 p.m., when Mr. James Cantlie will give a lecture on recent advances in tropical medicine, illustrated by a lantern-slide demonstration. All members of the profession are invited to attend.

THE Gresham Professor of Physic, Dr. F. M. Sandwith, will give three lectures on January 20th, 21st, and 22nd at the College, Basinghall Street, E.C., at 6 p.m. on each day. The first will deal with medicine in Sir Thomas Gresham's day, and the second and third with the International Congress of Medicine in London last year. On January 23rd Dr. Sandwith will give a demonstration of cinematograph pictures relating to biological science.

THE next meeting of the Society for the Study of Inebriety will be held in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday, January 13th, at 4 p.m. The Rev. S. Scobell Lessey, M.D., Chaplain-Superintendent of Abbotswood House, Temple Memorial Home for Male Inebriates, will open a discussion on "The Male Inebriate."

THE first lecture of a course of instruction for tuberculosis officers, school medical officers, and medical practitioners, arranged by the Royal Institute of Public Health, will be delivered by Dr. Christopher Addison, M.P., on January 16th, when he will deal with the relation of the problem to insurance and public health. All interested are invited to attend this first lecture, which will be given at 5 p.m. The fee for the course is 3 guineas; further information can be obtained on application to the Secretary, 37, Russell Square, W.C.

THE North Staffordshire medical men entertained Dr. John Russell, the Chairman and Representative of the Division, at a complimentary dinner in the North Stafford Hotel on December 10th, 1913, at which he was presented with a silver salver in recognition of his services to the profession during the past few years. Mr. Spanton was in the chair, and the toast to the guest was proposed by Dr. Prendergast and supported by Dr. Dawes. The presentation was made on behalf of the medical men of the Division by Mr. Wheelton Hind.

THE complimentary dinner to Dr. Addison, M.P. (at which the Chancellor of the Exchequer will preside) will be held at the Trocadero Restaurant on Tuesday, February 3rd. The following gentlemen have already joined the committee: Lord Sandhurst, Sir Clifford Allbutt, Sir Arbuthnot Lane, Sir Almroth Wright, Sir Victor Horsley, Sir Robert Philip, Sir Shirley Murphy, Colonel Sir William Leishman, the Right Hon. R. Farquharson, M.D., Professor Sims Woodhead, Professor Keith, Professor Arthur Thomson, Professor William Wright, Professor A. M. Patterson, Professor William Bulloch, Dr. Mott, Dr. Arthur Latham, Mr. Lenthal Cheatle, Mr. C. J. Bond (Leicester), Dr. Ewen Maclean (Cardiff), Dr. Adam Fulton (Nottingham), Dr. Todd (Sunderland), Dr. Buist (Dundee), Dr. C. A. Flemming (Bradford-on-Avon, Dr. Norman Walker (Edinburgh), and a considerable number of Dr. Addison's parliamentary colleagues. Tickets for the dinner (price 7s. 6d., excluding wine) can be obtained from Sir John Collie, 25, Porchester Terrace, W., and Dr. H. H. Mills, 21, St. Mary Abbots Terrace, Kensington.

DR. JAMES PEARSE, of Trowbridge, M.O.H. for the urban district, who has received an appointment under the National Insurance Commission, was recently entertained at a complimentary dinner at the George Hotel, Trowbridge, by the medical profession in Wiltshire and East Somerset. Dr. Haydon, of Marlborough, presided, and referred to the valuable work done in Trowbridge and the county by Dr. Pearse, not only as a medical practitioner, but on behalf of the profession generally. He tendered to Dr. Pearse the hearty good wishes of the medical profession in Wiltshire and East Somerset, and Dr. Rattray (Frome) expressed similar wishes on the part of the profession in East Somerset. Dr. Pearse was presented with a travelling case and an autograph album containing the signatures of sixty-three subscribers, with the following inscription: "This book, containing the names of subscribers, together with a suit-case, was presented to Dr. James Pearse by his professional colleagues in Wiltshire and East Somerset as a token of their esteem and in grateful recognition of much arduous and valuable work cheerfully undertaken by him on behalf of the medical profession. Trowbridge, December 30th, 1913." Dr. Pearse, in reply, expressed his warmest thanks for the honour done to him.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. M. asks what are the indications, if any, for performing circumcision in an infant a few days old and able to pass urine without difficulty. He has observed that the normal aperture in the prepuce is generally very small in an infant.

J. S. R. is concerned in the management of a boy aged 13 who has been paralysed in the lower limbs for two and a half years. He asks for advice on the following points: (*a*) As to any mechanical device or apparatus; (*b*) as to any good class school that would take in such a case for education and also give the necessary medical treatment.

LETTERS, NOTES, ETC.

SIR JONATHAN HUTCHINSON ON NATURAL HISTORY.

MR. JAMES TURLE (Bexhill-on-Sea), in commenting on the note by "S.D.C.," on the name "yellow hammer," asks for a reference to book and date; he suggests that the name may have something to do with "hammer cloth."

WARNING TO SHIP SURGEONS.

DR. ARTHUR W. CONDER (Surgeon, P. and O.) writes: I have just read in the JOURNAL of the formation of a subcommittee to look after the interests of surgeons employed in the mercantile marine. It is about time concerted action was taken to prevent men shipping as surgeons "for the fun of the thing." There are many retired practitioners and pensioned men of the Indian Medical Service who accept inadequate wages and thereby keep down the rate of pay; and I cordially approve of a wage limit of not less than £15 per mensem with authority to charge passengers (other than emigrants) fees ranging from 7s. 6d. a visit first class to 5s. or 2s. 6d. second class. This would induce more men of good professional standing to take up the service as a permanent means of livelihood. The duties laid upon the ship surgeon of efficient inspection of emigrants and thorough knowledge of the peculiarities of the foreign quarantine regulations, unless efficiently performed, may involve a steamship company in considerable delay and expense, and, unless the surgeons are adequately paid for their work, it cannot be expected that these duties, which are often onerous and unpleasant, will be done with the zeal expected of them. As an instance of this slackness and consequent expense I may cite the case of a British shipmaster at Quebec being fined 2,000 dollars for twenty cases of trachoma rejected by the Immigration Department. On inquiry, the company admitted that their surgeon had signed on for the voyage at 1s. a month!

May I point out that the committee appear to have overlooked the fact that under the Merchant Shipping Act, 1894, paragraph 240,

> the Master shall enter in the official log book . . . (5) every case of illness or injury happening to a member of the crew, with the nature thereof, and the medical treatment (if any).

Unless the decision, "That it is unprofessional of the surgeon to furnish this information to the master" is rescinded, I fail to see how the requisite data demanded by the Act can be entered in the log.

In an experience of five of the leading companies, extending over seven years, I have always found that an appeal to the "burra sahibs" at the office is listened to with courtesy, and any reasonable comforts—for example, fans, an outside cabin (if vacant)—granted. Much depends at sea upon a surgeon falling in with the amenities of ship life and his conforming to the unwritten laws and mutual courtesies of his shipmates. Let all surgeons before signing articles—the only binding agreement at law as between master and surgeon—read, mark, and learn the *Ship Surgeon's Handbook*, by A. Vavasour Elder, M.R.C.S., L.R.C.P., second edition (London: Baillière, Tindall, and Cox, 1911, 5s.), and they will find that life at sea can be both pleasant and profitable if they conform to the hints given therein.

DR. A. VAVASOUR ELDER (London, W.) writes: As far as I can ascertain, the Seamen's Insurance Society takes no official cognizance of ship surgeons, either as panel or non-panel practitioners. In these circumstances, data as to sickness of insured persons while at sea will only be obtainable by the Commissioners from the official log of a ship. Ship surgeons would be well advised, therefore, to see that all cases which might reasonably be expected to give rise to subsequent inquiry on the part of the Insurance Commissioners, are fully entered in the official log in conformity with the requirements of the Merchant Shipping Acts.

*** Under the National Insurance Act, 1911, Section 48 (i), the duration of sickness benefit of any insured seaman is calculated from the commencement of the disease or disablement, and although no payment is made to a seaman afloat in respect of such period as the owner of the ship is, under the Merchant Shipping Act, 1894, liable to defray the expense of the necessary surgical and medical advice and attendance and medicine, and of the man's maintenance, the occurrence of such disease or disablement must be ascertained for the purpose of calculating the duration of the sickness benefit. The Seamen's National Insurance Society ascertains such particulars, we are informed, by a certificate from the master, or *by inspection of the ship's log*, hence the necessity that the log should be properly kept.

CIRCULATORY DISORDERS AND SKIN DISEASES.

IN the review of Dr. David Walsh's *Diseases of the Skin* (BRITISH MEDICAL JOURNAL, December 20th, 1913, p. 1591), attention was called to the emphasis the author laid upon the close connexion between circulatory disturbances and various dermatoses, notably eczema and acne rosacea, and it was stated that probably every physician with much experience of skin disease has had the connexion more or less borne in upon him, but that though the specialists had recognized it, they had not perhaps given to it as much consideration as its importance merits. Dr. Walsh asks for references in corroboration of this statement. He adds: My contention is that the importance of the circulation in relation to skin affections has not hitherto been duly appreciated by dermatologists. My own investigations show that many skin troubles of a diverse nature are commonly associated with valvular, myocardial, and functional disease of the heart, with arterio-sclerosis, and so on. In such cases I regard the dermatitis as resulting from the failure of the skin to establish that healthy reaction against (moderate) traumatism which is a character of normal skin. A disturbed balance of surface circulation, moreover, permits the invasion of pathogenic micro-organisms from outside to the deeper tissues. The circulatory defect, in my opinion, predisposes to a great variety of skin affection, and some of them, at any rate, may end in a generalized infection. The associated skin eruption I regard as symptomatic of the cardio-vascular defect; in early cases it may draw attention to the unsuspected heart disease, or it may register a failure of compensation, or the advent of functional trouble (for example, smoker's heart). Finally, I have evidence which suggests that abnormal or unhealthy reaction to traumatism may similarly occur in internal organs in association with cardio-vascular troubles. In short, the principle of abnormal traumatic reaction due to predisposing circulatory defect is capable of general application.

*** We have referred Dr. Walsh's letter to our reviewer, who writes: Without any difficulty I have found the following reference to circulatory disturbances in dermatological works: (1) On page 290 of the fifth edition of Sir Malcolm Morris's well-known book, "Galloway and Eyre include among the predisposing causes of eczema (1) certain organic lesions, especially such as produce circulatory stasis in the skin. . . ." On page 133 of the same work rosacea is mentioned as "in its simplest form . . . nothing more than temporary congestion of the face caused by reflex, circulatory disturbance." (2) Dr. Whitfield, on page 141 of his book, *Skin Diseases and their Treatment*, says, "The important point to realize is that there is a common basis of circulatory disturbance underlying the superficial lesions (of rosacea)." (3) Dr. Sequeira mentions in his book, p. 318, cardiac and chronic pulmonary disease as a cause of rosacea. I think I was quite justified in saying in my review of Dr. Walsh's book that we are indebted to him for emphasizing the connexion between skin disease and disorders of the circulation, although I cannot admit that he was the first to point it out. To me the connexion, in certain types of disease, has always seemed obvious, and perhaps for this very reason dermatologists have neglected to emphasize it. On the other hand, I feel bound to say that Dr. Walsh has driven his theory too far in attempting to make circulatory disturbance account for such divers conditions as epidermolysis bullosa and alopecia areata.

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THE SCIENCE COMMITTEE
OF THE
British Medical Association.

REPORT ON
THE INFECTION OF CHILDREN WITH THE BOVINE TUBERCLE BACILLUS.*

(With Special Plate.)

BY A. PHILP MITCHELL, CH.M., M.D., F.R.C.S.,
ERNEST HART MEMORIAL SCHOLAR; FORMERLY MCCUNN SCHOLAR IN SURGERY, BRITISH MEDICAL RESEARCH SCHOLAR, AND RESIDENT SURGICAL OFFICER, ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.
(From the Royal College of Physicians' Laboratory, Edinburgh.)

In recent years the results of investigations on tuberculosis conducted by the British Royal Commission, the German Imperial Commission, and by many individual workers have proved beyond a doubt the communicability of the bovine virus from animal to man.

While for the proof of this contention these investigators employed material obtained from human tuberculosis in its various forms, they were unable, owing to the small number of cases investigated, to define the extent and importance of the bovine infection in the commoner varieties of surgical tuberculosis affecting children. The subject of tuberculous cervical glands in children—a very frequent disease in Edinburgh—had received little attention, and this seemed to me a favourable one for investigation. The only way to obtain definite statistical evidence as to the relative frequency of the bovine and human types of infection was to undertake the examination of a large series of non-selected cases. Accordingly I commenced such an inquiry at the beginning of 1911, and the special points of these investigations I wish to discuss here are:

(*a*) Technique.
(*b*) Results of investigations—important relationship of clinical data and milk supply.
(*c*) Pathological considerations—relation between channels of infection and groups of glands involved.
(*d*) Channels of infection.

A. TECHNIQUE.

I have investigated 72 consecutive cases of tuberculous cervical glands in children; of these 38 resided in Edinburgh and 34 came from neighbouring country districts (within a radius of thirty miles). The material for this study has come to my hand without selection through the kindness of Mr. Harold J. Stiles and Mr. C. Balfour Paul. Almost without exception the material was removed at operations at the Royal Hospital for Sick Children, Edinburgh. In a few instances it was obtained from operations in private practice. I received it in sterile gauze from the operating theatre, and have been, in all cases, able to guarantee freedom from contamination with other tuberculous material. Clinical histories were personally recorded in each case in the hope that I might be able to detect some feature or features of distinction between the cases in which bovine and human types of tubercle bacilli were found.

I also endeavoured, in every suitable case, to establish the relationship between the incidence of tuberculous cervical glands and the drinking of tuberculous cow's milk. I only expected to be able to trace the disease to the milk when, after the onset of symptoms pointing to infection by way of the mouth, the cow or cows from which the milk had been obtained were still available for examination.

I selected as a basis for my technique the methods employed by Park, Krumwiede, the British Royal Commission, and by German workers.

Direct cultures from the operation material were attempted in a few instances, but this method proved too uncertain. For the sake of comparison I preferred to treat all the material in one way, so that experimental animals have been used in every case. Guinea-pigs were inoculated with tuberculous material as soon as possible after receiving it, and the lesions subsequently developing were the immediate source of the cultures. It was found that the spleen and softened caseous lumbar glands were the structures that yielded the best growing cultures.

As advised by Dorset,[1] Park and Krumwiede,[2] I have employed in all cases egg media (plain egg and glycerine egg) for raising primary cultures. To these media I have found it extremely advantageous to add a few drops of alcoholic basic fuchsine to give a distinct pink colour, a method advocated by Cruickshank.[3] The use of coloured media is of great help in aiding the detection of early colonies or the recognition of a scanty primary growth. The uniformity of the results with these media made other media quite unnecessary. These media, along with glycerine agar and glycerine serum, were used in classifying the cultures. For the reliable differentiation of cultures it is essential to use media containing glycerine.

It soon became evident that I had to deal with two distinct groups of tubercle bacilli, one of which far exceeded the other in virulence for the rabbit. The groups I have designated eugonic (luxuriant) and dysgonic (sparse), as suggested in the Second Interim Report of the British Royal Commission on Tuberculosis.

1. The dysgonic (sparse) group is a very large one and contains sixty-five viruses. All the cultures of this group grow very sparsely or not at all on glycerine egg and are assuredly of the bovine type.

2. The eugonic (luxuriant) group grows luxuriantly on glycerine egg in primary cultures and succeeding generations and includes all the cultures of the human type. It is a very small group and contains only seven out of the seventy-two viruses investigated.

This division into eugonic and dysgonic viruses has corresponded in all cases with the differences in virulence in rabbits.

Bovine Tubercle Bacillus.

Although the type of growth on the test media has varied considerably, the quantitative differences, and especially the effect of glycerine, have been so constant and uniform that almost without exception the type of bacillus could be determined from the cultures alone. The difference between the growth on plain egg and glycerine egg is well brought out in primary cultures. In the large majority of instances the bovine type failed to give any growth on glycerine egg, and produced quite a scanty growth on plain egg.

The bovine viruses have exhibited three types of growth in primary cultures:

1. In early cultures, when the colonies are scanty, they may not be noticed until the end of the third week. They appear on plain egg media as small, discrete, raised, white colonies. In some cases they remain small and discrete; in others they continue to grow and form flat, white colonies.

2. The colonies are more numerous, and appear at the end of the second week as small, moist, glistening, transparent points, and remain so.

3. The colonies appear at the end of a week or ten days, producing a thin grey film, consisting of multiple closely packed punctate colonies. This type of growth tends to be patchy, and is only seen on plain egg media.

In early subcultures the bovine tubercle bacillus appears on plain egg as a thin, flat, slightly granular, non-pigmented film, which is dull or moist and varies greatly in thickness according to the vigour of the primary culture. In older subcultures the film becomes thicker and white. A striking feature of subcultures on glycerine egg is the tendency for the growth to be greater than that on plain egg as soon as it has become accustomed to glycerine. It follows from this that for accurate differentiation of type the observations must be confined to the first few generations.

The poorest subcultures may show only a few isolated punctate colonies, while the better growing ones form a complete layer, which is moist and slightly granular. The degree of moisture varies considerably, being so marked in some that a slimy appearance is produced.

Human Tubercle Bacillus.

All the cultures fall into the eugonic (luxuriant) group, and the influence of glycerine on increased growth, evident in all primary cultures, is of great diagnostic value in the

* Being an abstract of a thesis presented to the University of Edinburgh for the degree of Ch.M., and awarded a gold medal, July, 1913. The expenses of the research were defrayed from grants from the British Medical Association, the McCunn Trust, and the Carnegie Trust, for which I desire to express my thanks.

separation of the two types. This important differential test was carefully elaborated by Cobbet,[4] Moeller,[5] and Beck.[6]

The appearance of the growth varies as to whether the colonies are discrete, or whether there is a confluent layer of growth. In the former the colonies are large, raised, white and rounded. In the latter the growth is closely verrucose, with a very dense, dull film. There is no pigmentation unless incubation is prolonged. The growth is generally dry, clings very tenaciously to the medium, so that its surface is frequently torn in removing some with a platinum loop, and it is also difficult to emulsify. In subcultures the growth is also ready and luxuriant, and about equal on plain egg and glycerine egg after the lapse of equal times. It appears on plain egg as a dense, dull, dry film, which seems to grow into the medium and does not scrape off easily. On glycerine egg it appears as a profusely dry, punctate growth, with a tendency to heaping of the colonies, and the production of reddish-brown pigment. A noteworthy feature of the human type, in some cases, is a tendency to quickly lose its vitality when cultivated on plain egg.

In the foregoing I have attempted to give briefly the broad general cultural differences between the bovine and human types of the tubercle bacillus on egg media, based on the appearances shown by the great majority of the cultures. No difficulty was experienced in classifying the cultures into bovine and human types—that is, no intermediate types were present in my series.

Method of Distinguishing Types of Bacilli.

The cultural characters along with the virulence test in rabbits supplied in each case the necessary data for the differentiation of type. Experience has shown that the rabbit can be relied upon to differentiate between the virulence of tubercle bacilli from bovine and human sources. Consequently I have systematically employed the rabbit as a standard test animal for the differentiation of the virulence of all cultures. Rabbits of various weights have been used. No differences in the lesions produced were observed as a result of this variation in weight. The initial weight of each rabbit was recorded, and also its weight at death. The intravenous method of inoculation was the one chiefly used. The material for inoculation was from egg cultures, both plain and glycerine. The age of the subcultures varied from three to four weeks. It is unnecessary to give a complete report of the findings in each rabbit employed. The following descriptions denote the evidence on which differentiation was made, and these lesions I considered absolutely characteristic.

For testing the virulence of each virus two rabbits were injected in order to preclude any possibility of doubt as to the accuracy of the primary results. The dosage employed was 0.01 and 0.1 mg. of dried culture injected intravenously, or infection with 5 to 10 mg. by the subcutaneous method was substituted for the larger of the intravenous doses. This made it possible to compare the relative value of the doses and methods.

The *bovine* tubercle bacillus produced in rabbits within five weeks an acute generalized tuberculosis, ending in death, from the *intravenous* injection of 0.01 or 0.1 mg. of culture. With the *human* tubercle bacillus intravenously injected in the same doses the lesions were limited, usually confined to the lungs and kidneys, progressed slowly, were almost never generalized, and death seldom resulted.

Again, the *subcutaneous* injection (in the scapular region) of rabbits with 5 to 10 mg. of the *bovine* tubercle bacillus resulted in their death from acute generalized tuberculosis in forty to one hundred and twenty days. There was always a loss in weight, sometimes as much as 600 or 700 grams. In rabbits which die in from six to eight weeks the lungs are bulky, extensively diseased, and are packed with small and large caseating tubercles. The liver shows a few scattered grey tubercles or caseous areas. The spleen usually contains a few small caseous tubercles. The kidneys show numerous caseous tubercles of various sizes, the large ones projecting from the surface. At the site of inoculation there is a caseous mass with enlargement and casecation of the axillary and scapular glands. In rabbits living longer than eight weeks the lesions are more limited to the lungs and kidneys. The lungs are large and very heavy, and contain large and small uniformly caseous tubercles. The liver seldom contains more than one or two small tubercles. The spleen is small and may contain a tubercle or two. The kidneys usually show in the cortices many firm, globular, caseous nodes. They vary in size. The large ones project from the surface and are adherent to the capsule.

But with the *human* tubercle bacillus injected subcutaneously in the same dose, the rabbit never dies from tuberculosis. The majority increase greatly in weight. The local lesion usually consists of a small or large cyst, which is thin-walled, and contains creamy pus. The axillary and scapular glands are enlarged, but show no naked-eye evidence of tubercle. The abdominal viscera are usually normal. The kidneys may show one or two tubercles.

Although probably the most distinctive picture is obtained with the intravenous injection of 0.01 mg. of culture, as has been pointed out by Oehlecker, Park, Krumwiede, and others, I consider the subcutaneous method equally reliable, since the pathological contrast is quite as good, and have frequently employed it as the supplementary rabbit test.

The following lesions were produced with 0.01 mg. of the *bovine* tubercle bacillus intravenously injected. The rabbit dies in from twenty-five to thirty-five days, and is greatly emaciated, having lost from 400 to 500 grams in weight. The inguinal and axillary glands frequently show caseous deposits. The lungs are very large, and completely fill the thoracic cavity. They are composed almost entirely of caseating nodules, and it is often wonderful that the animal has lived as long as it did. The tubercles may be small and closely packed, or large, confluent, with much caseation, giving the appearance of a caseous bronchopneumonia. The spleen is enlarged, occasionally enormously, and closely packed with small tubercles. The liver, as a rule, is speckled with greyish-white tubercles. The kidneys show numerous caseous tubercles in their cortices. Tubercles are sometimes observed in the myocardium and the diaphragmatic pleura. The omentum may be thickly set with greyish-white tubercles. In short, the whole picture is that of a completely generalized progressive tuberculosis.

With the inoculation of 0.01 mg. of the *human* tubercle bacillus, the limited lesions produced (usually confined to

DESCRIPTION OF SPECIAL PLATE.

FIG. 1.—PRIMARY CULTURES OF BOVINE TUBERCLE BACILLI ON DORSET'S EGG MEDIUM (PLAIN). All from tuberculous cervical glands except E.

- A. Scanty, flat, white colonies. Sixteen months old.
- B. Scattered, raised, white punctate colonies. Seven months old.
- C. Scanty, white, punctate colonies—flat colonies beginning to form. Four months old.
- D. Large, flat, white confluent colonies. Six months old.
- E. Flat, white, discoid colonies. Fourteen months old. From faucial tonsil.
- F. Finely granular, patchy, moist film. Subculture I. Four months old.

FIG. 2.—PRIMARY CULTURES OF HUMAN TUBERCLE BACILLI ON DORSET'S MEDIUM (PLAIN AND GLYCERINE). All from tuberculous cervical glands, except B.

- A. Numerous large, raised, white, rounded colonies. Six months old.
- B. Numerous large, raised, white, rounded colonies. Seven months old. From faucial tonsil.
- C. Profuse, closely packed, white punctate colonies. Six months old.
- D. Large, raised, white, rounded colonies. Glycerine egg. Six months old.
- E. Dense, dull, dry film. Subculture I. Plain egg. Four months old.
- F. Closely packed, raised, white, punctate colonies, with commencing heaping. Subculture I. Glycerine egg. Four months old.

FIG. 3.—VIRULENCE TEST IN RABBIT:

- A. Typical appearances produced in lung of rabbit by intravenous injection of 0.01 mg. of the *human* type of tubercle bacillus. Note scattered chronic healed nodes.
- B. Typical appearances produced in lung of rabbit by intravenous injection of 0.01 mg. of the *bovine* type of tubercle bacillus.

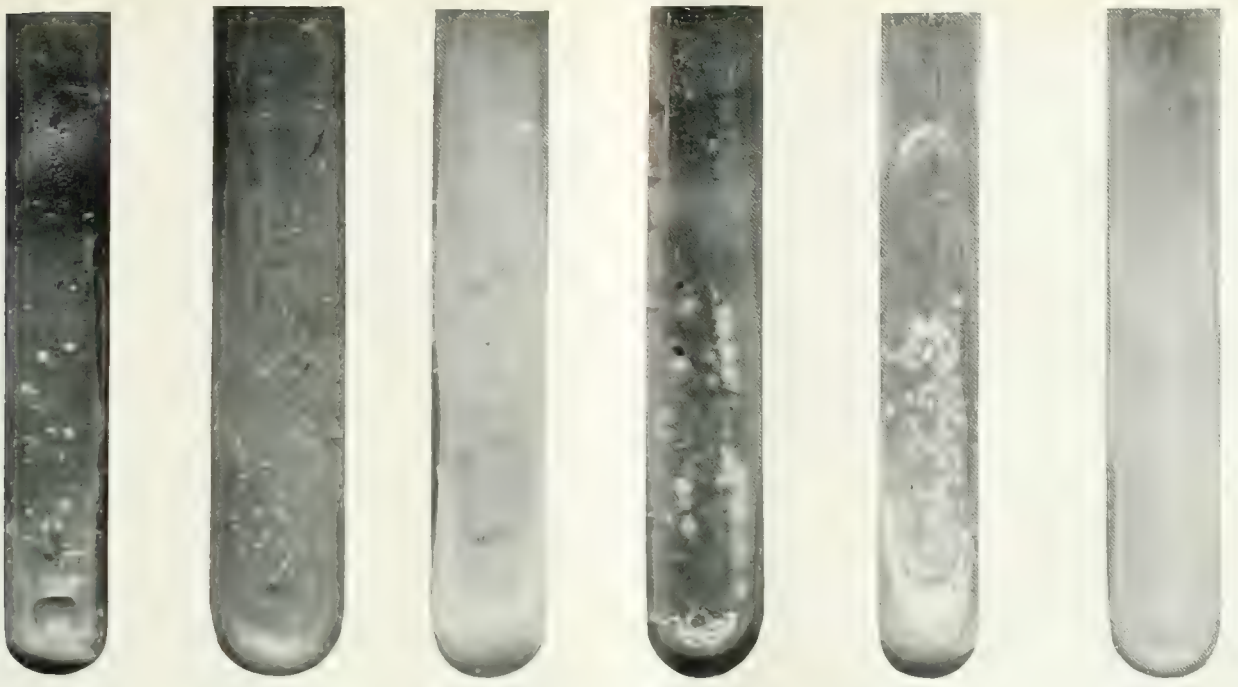


FIG. 1.—CULTURES OF BOVINE TUBERCLE BACILLI.

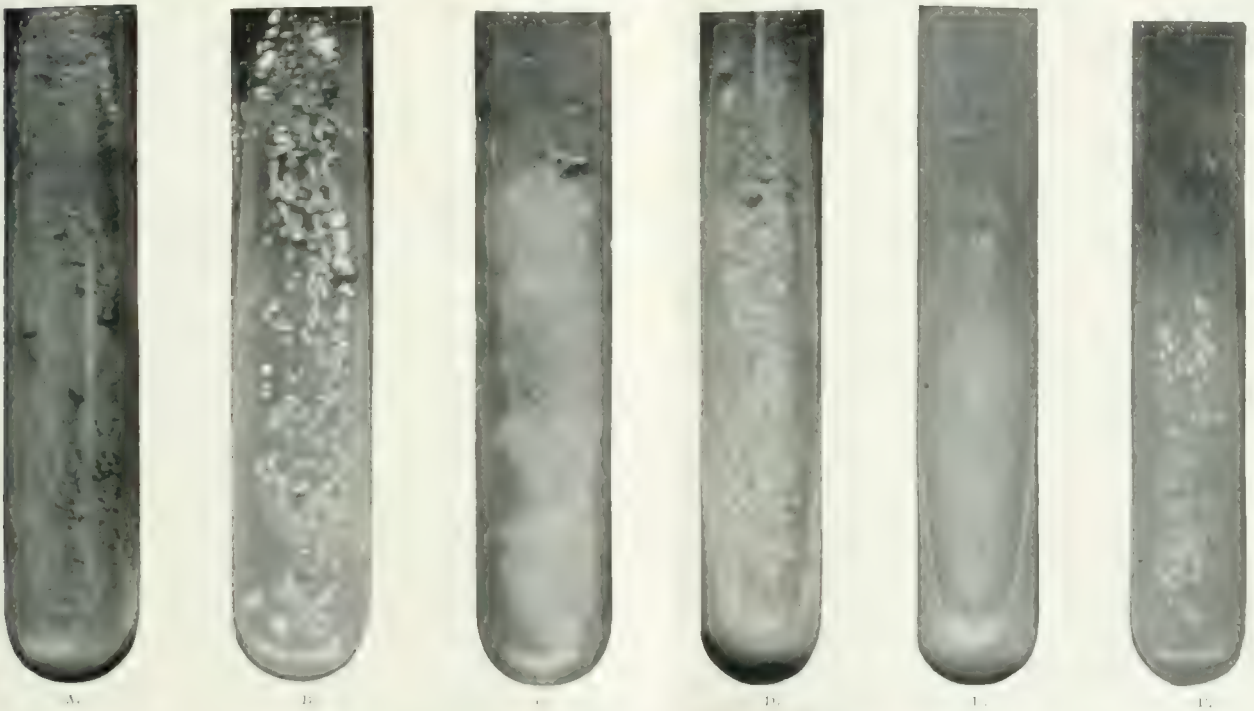


FIG. 2.—CULTURES OF HUMAN TUBERCLE BACILLI.

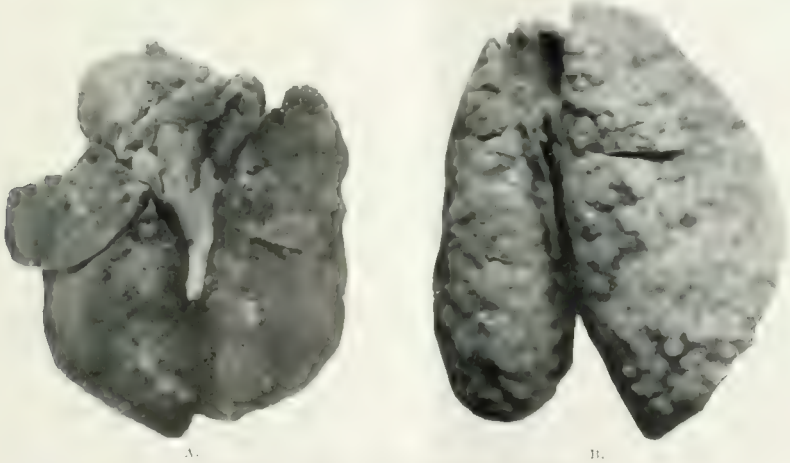


FIG. 3.—VIRULENCE TEST IN RABBIT.

the lungs and kidneys) are again in marked contrast with the acute, widespread, generalized and progressive disease following the same dose of the bovine type. The life of the rabbit is apparently not endangered. It seldom dies from tuberculosis within three months. At the end of three months it has usually increased somewhat in weight. This period of time was fixed for the killing of all rabbits that had survived the intravenous injection of 0.01 and 0.1 mg. of culture. If the animal is allowed to live on, it ultimately becomes very emaciated. The animal is listless and its coat is rough. A purulent discharge from the eyes is not uncommon. The kidney is commonly involved, a few grey tubercles being found in the cortices. The liver and spleen are rarely affected. The liver occasionally shows one or two greyish-white tubercles. The lesions in the lungs vary. There may be a few grey tubercles at the bases, or scattered throughout the lungs, and especially near the borders. Sometimes the tubercles are larger, and show a considerable degree of central caseation. The majority of the rabbits have shown only involvement of the lungs and kidneys. These inoculations into rabbits produced such typical lesions that along with the cultural characters they furnish a reliable means of identifying the bovine and human types of tubercle bacilli.

The morphological differences which can be observed between the human and bovine types of bacilli are too inconstant and indistinct to be of practical value in the determination of type.

B.—Results of Investigations—Important Relationship of Clinical Data and Milk Supply.

Experimental investigations of the relative frequency of bovine and human tubercle bacilli in tuberculous cervical adenitis have been reported by Paul H. Lewis,[7] 15 cases; British Royal Commission on Tuberculosis,[8] 9 cases; H. Burckhardt,[9] 9 cases; W. Litterer,[10] 11 cases; H. Weber,[11] 5 cases; Park and Krumwiede,[12] 54 cases; Oehlecker,[13] 14 cases; German Imperial Health Board,[14] 3 cases.

Of the cases investigated by Lewis, 9 were due to the bovine bacillus and 6 to the human type. The average age of the patients giving the bovine type of bacillus was 8½ years. The youngest was 18 months, and the oldest 19 years. The average age of the 6 patients suffering from infection with the human type of bacillus was 17⅓ years, the oldest 32 years, and the youngest 8 years.

The British Royal Commission examined 9 cases. It is a noteworthy feature that all the cases except one were over 6 years of age. Three cases contained the bovine bacillus; ages, 1⅔, 7, and 7½ years. Six cases contained the human bacillus; ages, 11½, 6, 12, 4, and 7 years.

Litterer's series consisted of 11 cases, and resulted in the isolation of five cultures of the human type and six cultures of the bovine type. Ages not stated.

Burckhardt found one bovine case out of 9 cases of tuberculous glandular processes in the neck. The ages were 28, 21, 18, 18, 17, 15, 15, 12, and 6. The youngest yielded the bovine culture.

Weber studied 5 cases, and isolated the bovine type of tubercle bacillus from all. The ages were 1½, 2, 4, 6½, and 8 years.

Park and Krumwiede examined a series of 54 cases; 9 cases were obtained from adults (16 years and over), and were without exception due to the human bacillus; 27 cases from children (5 to 16 years) resulted in the isolation of the human type from 19 and the bovine type from 8; 18 cases from children under 5 years—12 were due to the bovine type and 6 to the human type.

Oehlecker investigated 14 consecutive cases. Two were in adults, both infections being of the human type; 12 cases in children yielded four cultures of the bovine type.

German Imperial Health Board, in a general series of cases, reported 3 of primary cervical adenitis in children under 10 years, 2 of which were due to bacilli of the bovine type and 1 to the human type.

On reading these statistics it is obvious that a comparison of the results of the individual investigators is impossible, since the number of cases investigated at each age period has varied so much. The results are too fragmentary for any conclusions to be drawn. All the cases have not been consecutive, and the importance of investigating a large number of primary tuberculous cervical adenitis affecting young children has not been sufficiently recognized. This is one of the special factors to be considered in explaining the outstanding differences presented by the results of my investigations as compared with those of other investigators.

I found that out of a total of 72 cases in children, in 65 instances (90 per cent.) the bovine bacillus was present, and in 7 cases (10 per cent.) the human bacillus.

I believe that these results can be verified by a careful consideration of certain clinical data, which have been personally gathered, such as age, family history, geographical relations, and the milk supply. A correct interpretation of the bacteriological findings is impossible without specially considering the nature of the clinical data of the cases reported. The correlation between these factors has, I regret, frequently been overlooked by Continental workers.

The clinical data collected may be conveniently tabulated (see Table I, p. 128).

Clinical Data.

1. *Age of Patients.*

Age is a most important factor in such experimental inquiries. I reiterate that some investigators have apparently not recognized the importance of studying the disease in young children and the influence of age on the type of bacillus isolated.

I have tabulated the cases according to the age and type of infection to show the relative frequency of types at the various age periods:

Table II.—*Ages with Types of Tubercle Bacilli from Tuberculous Cervical Glands.*

Age.	Human.	Bovine.	Total.
To 1 year ...	2	1	3
1 to 2 years ...	—	16	16
2 to 3 ,, ...	—	8	8
3 to 4 ,, ...	1	10	11
4 to 5 ,, ...	—	4	4
5 to 6 ,, ...	1	4	5
6 to 7 ,, ...	—	5	5
7 to 8 ,, ...	—	5	5
8 to 9 ,, ...	—	5	5
9 to 10 ,, ...	1	4	5
10 to 12 ,, ...	2	3	5
	7	65	72

Table III.

Children 5 to 12 years of age:	
Human bacilli	4
Bovine bacilli	30
Children under 5 years of age:	
Human bacilli	3
Bovine bacilli	35
Grand total	72 cases

A most striking fact brought out is the high incidence of the disease in children under 3 years of age. This is not surprising when it is recalled that the large majority of children of this age are nourished in whole or in part on cow's milk. I find that, in my series of cases, 84 per cent. of the children two years of age and under have been fed with unsterilized cow's milk since birth. The correlation between this observation and that of the high incidence of bovine cervical glandular tuberculosis during the same age period points wholly to the drinking of tuberculous cow's milk as the most probable source of infection. I contend that if in Edinburgh and district the number of cases of tuberculous cervical glands in children under 3 years of age is much above the normal, and if, in that same neighbourhood, a large proportion of the cows are affected with tuberculosis, and further, if it is usual to feed the children on unsterilized milk, then the increased incidence of tuberculous cervical glands in young children is probable evidence that the disease is due to the drinking of milk from tuberculous cows.

2. *Duration of Illness and Previous Health.*

Most of the cases were brought to hospital on account of a lump in the neck, which had been present for a varying period. The average duration of the illness before operative measures were carried out was seven and a

TABLE I.—*Clinical Data regarding 72 Consecutive Cases of Tuberculous Cervical Glands in Children.*

No. and Initial.	Age: Years.	Duration of Illness.	Milk Supply.	Previous Health.	Type.
1. A. G.	1½	15 mths.	Unsterilized cow's milk	Healthy	Bovine.
2. I. B.	9½	2 yrs.	Breast-fed (8 months)	Glands followed measles	Human.
3. D. R.	4	5 mths.	Breast-fed (11 months)	—	Human.
4. J. M.	2	14 ,,	Unsterilized cow's milk	—	Bovine.
5. W. G.	1	6 ,,	Unsterilized cow's milk	Otitis media	Bovine.
6. D. W.	2½	2 ,,	Breast-fed (12 months)	—	Bovine.
7. D. F.	1½	6 ,,	Unsterilized cow's milk	—	Bovine.
8. J. D.	1½	4 ,,	Unsterilized cow's milk	—	Bovine.
9. B. P.	9½	1 yr.	Unsterilized cow's milk	Otitis media	Bovine.
10. G. L.	9	18 mths.	Breast-fed (6 months)	Glands followed scarlet fever	Bovine.
11. J. I.	3½	8 wks.	Unsterilized cow's milk	—	Bovine.
12. H. D.	5	3 mths.	Breast-fed (9 months)	Glands followed measles and scarlet fever	Bovine.
13. B. P.	1½	4 mths.	Unsterilized cow's milk	—	Bovine.
14. M. M.	8	10 mths.	Breast-fed (10 months)	Glands followed measles	Bovine.
15. J. M.	2	3 ,,	Breast-fed (8 months)	—	Bovine.
16. R. F.	2½	8 ,,	Breast-fed (6 months)	—	Bovine.
17. J. McB.	10	3 wks.	Unsterilized cow's milk	—	Bovine.
18. A. W.	4	6 ,,	Breast-fed (12 months)	—	Bovine.
19. W. B.	9	6 mths.	Unsterilized cow's milk	—	Bovine.
20. J. M.	5	6 wks.	Unsterilized cow's milk	Glands followed whooping-cough	Bovine.
21. M. S.	9	2 mths.	Unsterilized cow's milk	—	Bovine.
22. R. G.	11	16 ,,	Unsterilized cow's milk	—	Bovine.
23. M. F.	6	4 wks.	Breast-fed (8 months)	—	Bovine.
24. R. A.	1½	7 ,,	Unsterilized cow's milk	—	Bovine.
25. W. H.	2	5 mths.	Breast-fed (6 months)	—	Bovine.
26. B. S.	2	2 ,,	Unsterilized cow's milk	—	Bovine.
27. M. J.	3½	2 ,,	Unsterilized cow's milk	—	Bovine.
28. M. B.	6	3 ,,	Unsterilized cow's milk	—	Bovine.
29. J. D.	4	7 ,,	Breast-fed (9 months)	—	Bovine.
30. J. S.	8	5 ,,	Unsterilized cow's milk	—	Bovine.
31. H. L.	4	4 ,,	Breast-fed (8 months)	—	Bovine.
32. T. C.	4	3 yrs.	Unsterilized cow's milk	—	Bovine.
33. J. B.	4	8 mths.	Unsterilized cow's milk	—	Bovine.
34. J. G.	2½	4 ,,	Breast-fed (6 months)	Glands followed measles	Bovine.
35. C. H.	1½	2 wks.	Unsterilized cow's milk	—	Bovine.
36. E. A.	3½	7 mths.	Breast-fed (9 months)	—	Bovine.
37. J. McA.	4	12 ,,	Breast-fed (12 months)	Glands followed measles	Bovine.
38. P. McD.	1½	15 ,,	Unsterilized cow's milk	—	Bovine.
39. J. B.	7	3 mths.	Unsterilized cow's milk (father's byre)	—	Bovine.
40. J. L.	11	3 ,,	Breast-fed (8 months)	—	Human.
41. R. G.	5	3 ,,	Breast-fed (6 months)	—	Bovine.
42. E. L.	6	12 ,,	Breast-fed (9 months)	Had pleurisy when 1 year old	Human.
43. A. E.	8	4 ,,	Breast-fed (12 months)	Glands followed measles	Bovine.
44. M. F.	2½	18 ,,	Unsterilized cow's milk	Glands followed measles	Bovine.
45. C. S.	2	2 ,,	Unsterilized cow's milk	—	Bovine.
46. J. F.	3	2 years	Unsterilized cow's milk	Otitis media since 18 mths. old	Bovine.
47. E. C.	11	3 ,,	Breast-fed (12 months)	Measles	Human.
48. W. S.	9	4 mths.	Unsterilized cow's milk	—	Bovine.
49. W. S.	9	6 weeks	Breast-fed (9 months)	—	Bovine.
50. M. B.	3	6 mths	Unsterilized cow's milk	—	Bovine.
51. J. H.	7	5 ,,	Breast-fed (15 months)	Glands followed measles and mumps	Bovine.
52. C. T.	5	6 ,,	Unsterilized cow's milk	—	Bovine.
53. B. F.	1½	1 wk.	Unsterilized cow's milk	—	Bovine.
54. J. M.	3	6 mths.	Unsterilized cow's milk	Glands followed measles	Bovine.
55. T. H.	5 mths.	2 ,,	Breast-fed (5 months)	Tuberculous disease of mastoid since 3 months old	Human.
56. R. D.	8	3 ,,	Unsterilized cow's milk	Glands followed typhoid fever	Bovine.
57. W. L.	3½	6 ,,	Unsterilized cow's milk	—	Bovine.
58. P. C.	10 mths.	2 ,,	Breast-fed (3 months)	—	Human.
59. A. M.	5½	3 ,,	Unsterilized cow's milk	—	Bovine.
60. C. W.	2	2 ,,	Unsterilized cow's milk	—	Bovine.
61. J. P.	6½	2 yrs.	Unsterilized cow's milk	—	Bovine.
62. M. M.	10	18 mths.	Unsterilized cow's milk	Glands followed tonsillitis	Bovine.
63. C. H.	3	1 yr.	Unsterilized cow's milk (father's byre)	—	Bovine.
64. M. McL.	1½	1 mth.	Unsterilized cow's milk	Glands followed tonsillitis	Bovine.
65. M. W.	7	6 wks.	Breast-fed (9 months)	—	Bovine.
66. M. W.	7	3 mths.	Unsterilized cow's milk	—	Bovine.
67. B. C.	10	8 ,,	Breast-fed (15 months)	—	Bovine.
68. W. L.	9 mths.	6 ,,	Unsterilized cow's milk	—	Bovine.
69. J. W.	12	2 yrs.	Unsterilized cow's milk (father's byre)	Measles and whooping-cough	Bovine.
70. L. T.	12	2 mths.	Unsterilized cow's milk	—	Bovine.
71. M. C.	8	3 ,,	Unsterilized cow's milk	—	Bovine.
72. A. McD.	8	2 yrs.	Breast-fed (9 months)	Glands followed measles	Bovine.

Notes on the Family History of Tubercle in Cases contained in Table I.

Case 9.—Brother, 6 years old, died from generalized tuberculosis. Brother, 5 years old, has tuberculous cervical abscesses. These developed three months after the first appearance of the patient's.

Case 19.—Sister, 6 years old, died from tuberculous meningitis one month after the patient's glands were excised.

Case 22.—Sister, 8 years old, has tuberculous cervical glands.

Case 23.—Brother, 2 years old, had tuberculous abscess in neck eighteen months previous to onset of the patient's glands.

Case 25.—Brother, 3 years old, had tuberculous cervical abscess in December, 1910, when the patient's glands were first noticed.

Case 26.—Brother, 18 months old, died from tuberculous meningitis in 1909.

Case 32.—Sister, 2 years old, had hypertrophied faucial tonsils removed one month after the patient's glands were excised. The tonsils I found to be tuberculous and harbouring the bovine type of bacillus.

Case 41.—Brother has tuberculous disease of humerus.

Case 43.—Brother, 6½ years old, died from tuberculous disease of the spine.

Case 45.—Brother, 9 years old, died from tuberculous meningitis. Sister, 5 years old, had a leg amputated for tuberculous disease. Sister, 17 years old, died from generalized tuberculosis, being primarily in the cervical glands.

Case 47.—Father died from pulmonary tuberculosis. Mother has enlarged cervical glands. Sister, 4 years old, died from abdominal tuberculosis.

Case 51.—Sister, 12 years old, has tuberculous glands in the neck. Brother, 8 months old, died from tuberculous meningitis.

Case 55.—Mother has tuberculous disease of mastoid.

Case 57.—Sister, 10 years old, had hypertrophied faucial tonsils removed three months before excision of her brother's glands. The tonsils were found to be tuberculous, and to harbour the bovine type of bacillus.

Case 58.—Father treated for pulmonary tuberculosis during the last ten years.

Case 60.—Brother, aged 8, died from tuberculous meningitis three years ago.

Case 65.—Infant brother died from abdominal tuberculosis.

Case 68.—Brother had tuberculous cervical glands excised a year ago.

Case 71.—Sister, 2 years old, had tuberculous cervical glands excised. They appeared at the same time as the patient's.

half months. There is seldom any interference with the general health. It cannot be said that there is one type of child especially liable to this disease. A noteworthy fact is that in the large majority of cases the patients, apart from the glandular enlargement, are in robust health, and show no evidence of tuberculosis elsewhere in the body. In only 9 cases was it observed that the child looked delicate and presented the characteristic tuberculous facies. Children who live in rural districts are affected just as frequently as those living in the crowded streets of large cities. Further, it is not at all rare for a single member of an otherwise apparently healthy family to exhibit the disease. In 16 instances "an only child" had developed the disease. The influence of infectious diseases, notably measles, whooping-cough, and scarlet fever, in apparently favouring the dissemination of the disease in the glands, is so well known that I merely mention it. This relationship was noted in 15 cases.

3. *Family History of Tuberculosis.*

This has been carefully investigated in every case with special reference to the existence of pulmonary tuberculosis in the parents and other members of the household. When such a focus exists in any family it must constitute a probable and most dangerous source of infection. In only 3 instances was a history of pulmonary tuberculosis occurring in the patient's family found; in 1 case the mother and in the other 2 the father. Each patient had been living for years in contact with a "consumptive" when the glands appeared.

In each of the 3 cases the human type of tubercle bacillus was isolated from the cervical glands. There was no history of pulmonary tuberculosis in the remaining 4 human cases.

As regards the bovine cases, it seems more than a coincidence that in not a single case was there a history of pulmonary tuberculosis in the various families. In 16 cases (Nos. 9, 19, 22, 23, 25, 26, 32, 41, 43, 45, 51, 57, 60, 65, 68, and 71), however, one or more of the other children in the respective families were affected with various forms of surgical tuberculosis. Although these cases are fully recorded in Table I, I should like to draw attention to the milk supply in a few.

In Case 25, a brother, aged 3 years, had a tuberculous cervical abscess in December, 1910, when the patient's glands were first noticed. I investigated the milk supply and found that a cow with advanced tuberculosis of the udder had been removed for destruction in September, 1910. This cow had been in the byre for several months, and I have not the slightest doubt that its milk was responsible for these two cases of tuberculous cervical adenitis.

In Case 26, a brother, 18 months old, died from tuberculous meningitis in 1909. The patient's glands appeared in December, 1910. The onset was acute. I found the milk was obtained from a byre situated just beyond the city boundary. I visited the byre, and the dairyman readily confessed that he had disposed in October, 1910, of a very tuberculous cow with the udder involved. The cow had been in the byre many months. The circumstantial evidence was likewise strong in this case.

In Case 32, a sister, aged 2 years, had tonsillotomy performed (one month after the patient's glands were excised for hypertrophied faucial tonsils with no clinical evidence of cervical lymphatic tuberculosis, and from them I isolated the bovine type of tubercle bacillus. The family consisted of two children, who had been given plenty of unsterilized cow's milk to drink.

In Case 57, a sister, aged 10 years, had tonsillotomy performed (three months before the patient's glands were excised for hypertrophied faucial tonsils with no clinical evidence of cervical lymphatic tuberculosis, and from them I isolated the bovine type of tubercle bacillus.

It seems to me a justifiable conclusion that at any rate in each of these sixteen families the children acquired the tuberculous disease from an infected milk supply.

4. *Geographical Relations.*

The greater opportunities for infection of human beings by milk from small byres in the country (which in Scotland are seldom visited by sanitary or veterinary inspectors) have not been sufficiently recognized by the public health authorities. The Public Health Act (Scotland) does not include under the term "dairyman" a person who only sells milk of his own cows in small quantities to his workmen or neighbours for their accommodation. If even with the absolutely inadequate veterinary inspection at present existing in our large towns we know that tuberculosis amongst cows is an extremely prevalent disease, how much more prevalent must it be in those small country byres that cannot, with the present legislation, be supervised at all for the protection of the public against an undoubted source of infection! These are the byres in which cows are kept for years, and should a farmer unwittingly buy a cow with early tuberculous disease of the udder, it will remain for a long time in an apparently healthy state, giving plenty of rich milk, but yet teeming with tubercle bacilli. The advance of the disease is so insidious that few such dairymen ever detect its presence until the characters of the milk become changed or the cow emaciated. Still I have examined tuberculous milk the colour of rusty water, and the dairyman has declared in the witness box that he believed the cow and its milk to be perfectly healthy. Further, it is in those country byres that I have found or obtained particulars of the "guilty cow" in several instances. I think that it is a fair and honest deduction that greater facilities for infection with the bovine virus are thus afforded in the country compared with the town.

I find that, of the children in my series harbouring the bovine tubercle bacillus, almost 50 per cent. had been born and brought up in the rural districts round Edinburgh. This I claim as a very important factor in explaining the high incidence of the bovine tubercle bacillus in my series of cases.

5. *Milk Supply.*

A consideration of the milk supply becomes of prime importance in a series of cases of glandular tuberculosis in children yielding such a high percentage of bovine infection. Whatever may be the case in other countries, the mode of feeding children in Britain, especially in Scotland, is such as to favour bovine infection. I have already stated that in my series 84 per cent. of the children 2 years of age and under were nourished from birth with unsterilized milk. That a large proportion of Scottish babies are bottle-fed and that it is the exception rather than the rule to sterilize the milk are factors the significance and importance of which have not been fully recognized by many investigators in other countries.

As evidence in favour of the view that the ingestion of tuberculous cow's milk is an important cause of surgical tuberculosis in children, I might record several cases in which the relationship of cause and effect appear to be obvious. The milk supply was investigated in every suitable case, and from many town and country expeditions I have gained much valuable information regarding the existing conditions under which milk is produced and sold. The opportunities for tracing bovine infection are much greater in small communities and rural districts than in large cities. It is the country practitioner who could gather together much valuable information. As examples of what not infrequently happens, let me instance the following:

(*a*) A country child, aged 9 months, whom Mr. Stiles operated on a few months ago for multiple osseous tuberculosis, proved to be a very instructive case. The father and mother and the other children were all healthy. The milk was obtained from a small dairy farm in the village. Investigating the milk supply of this patient, I discovered that of the six cows in the byre two had tuberculous udders, with the milk from both teeming with tubercle bacilli.

(*b*) There was brought, a short time ago, to the surgical out-patient department of the Royal Hospital for Sick Children, Edinburgh, a child, aged 1 year and 5 months, suffering from multiple osseous tuberculosis. I elicited from the mother the following appalling history: The baby had been bottle-fed with milk obtained from a small dairy farm. The mother had been informed by the child's grandfather, who worked on the farm, that soon after the birth of the child one of the cows had "gone wrong." He told how the animal had rapidly wasted, become so weak that it was unable to stand; it was actually milked lying on the ground, and this milk was used for human consumption! By this time it was thought expedient to call in a veterinary surgeon, who, finding the animal suffering from generalized tuberculosis with marked involvement of the udder, at once ordered its destruction and burial.

In both cases the bovine type of bacillus was isolated.

(*c*) C. A., aged 6 years. Swelling appeared suddenly on right side of the neck (upper carotid region) about the end of November, 1912. Abscess rapidly formed. Pus swarming with tubercle bacilli. Sterno-mastoid muscle extensively involved by the tuberculous process. Right faucial tonsil slightly enlarged and showed a dirty surface. The patient usually had unsterilized cow's milk at every meal. Daily supply of milk to the house about two gallons, and obtained from dairy farm where twenty cows were kept. Byre visited in December, 1912, and it was ascertained that a cow affected with generalized tuberculosis (lungs and udder involved) had

been removed for destruction from the byre in October, 1912. This cow had been in the byre and used for milking purposes for about four years. I isolated the bovine type of tubercle bacillus from both the cervical glands and the right faucial tonsil.

(*d*) C. H., aged 3 years. Swelling in neck appeared in February, 1910, when the patient was 2 years old. Abscess rapidly formed. Nourished from birth with unsterilized cow's milk, which was usually obtained from three cows in the father's byre, which contained thirty-eight cows. I interviewed the father, and found that one of his cows had died in May, 1910, from advanced generalized tuberculosis.

(*e*) Sometimes it has happened that two or three cases of tuberculous cervical glands have come from the same district in the town, within a few days of one another, to the Sick Children's Hospital. They had been supplied with milk from the same dairy for years, and I ascertained from the city veterinary inspector that a cow with a tuberculous udder had recently been removed from the byre in question.

(*f*) Some time ago Mr. Stiles was asked to see a baby the mother thought was suffering merely from the effects of teething. The child was found to be suffering not only from multiple tuberculous dactylitis of the hands and feet but also from tuberculous disease of the upper jaw, of both frontal bones, and of the cervical and mesenteric glands. No operation was recommended. Death occurred six weeks later from tuberculous meningitis. The parents were both free from tubercle, as also were the other children. On inquiry into the milk supply Mr. Stiles was informed that two cows were kept on the Home Farm for the special use of the household, that they had both been tested, and that neither of them reacted to the tuberculin test, which had been applied six months previously. He suggested that they were probably too tuberculous to react, and that the best plan would be to kill them. This was done, with the result that both cows were found to be suffering from general tuberculosis, and that one of them had a tuberculous udder. In this case it is evident that the cows were so extensively tuberculous that they failed to respond to the tuberculin test.

I merely instance these cases to show what is happening here and there throughout the country. They also prove that not only the resistance of the patient but the dosage exercises a great influence on the extent and spread of the disease.

While the faucial tonsils and the cervical glands must often succeed in killing the small numbers of tubercle bacilli which are frequently present in unsterilized milk, they fail to cope with such large amounts as are ingested by children who are unfortunately being nourished with milk from a single cow with tuberculosis of the udder or from a small herd harbouring a cow with udder tuberculosis or with advanced clinical tuberculosis. It has been shown by Delépine that one part of the milk from a cow with udder tuberculosis is capable of infecting 100,000 parts of sound milk and producing tuberculosis in guinea-pigs. He therefore concluded that one cow with udder tuberculosis was capable of infecting the mixed milk from a large herd. Further, it may be confidently stated that the reason why so many children do not present any clinical evidence of tuberculosis, in spite of the fact that they are frequently drinking infected milk, is to be found in a consideration of the results of certain animal experiments.

Feeding experiments in animals have shown that while inhalation of tubercle bacilli is a certain method of infecting the animal even when small doses of bacilli are employed, very much larger doses are required to produce the disease by way of the alimentary canal. It is perfectly plain, therefore, that when the milk is obtained from a single cow with udder tuberculosis, or with advanced generalized tuberculosis, or from the mixed milk from a small herd, containing one or more tuberculous cows, a child may receive the infection in concentrated form. If, then, man derives a certain percentage of infection from bovines, it is reasonable to expect that where tuberculosis in human subjects is of frequent occurrence, the bovine disease will also be rife, and that raw milk formed an important article of diet. It is not remarkable that a causal relationship between the two does exist, when it is recalled how frequently raw milk is used as a food, and is one of the few animal products used by civilized man in the uncooked state. And, moreover, it constitutes the chief nourishment of the large majority of children. I believe that the chief reasons why bovine tuberculosis is so extremely common amongst children in Edinburgh and district are the great prevalence of tuberculosis in dairy cows, the present very inadequate veterinary inspection, and the gross ignorance of the dairy farmers in matters relating to bovine tuberculosis.

Although extensive and accurate statistics are wanting in this country regarding the number of tuberculous cows, we have a sufficiency of data to form a fairly accurate estimate. The extent to which tuberculosis is prevalent in cows can only be determined by the tuberculin test, which has not been used very extensively in this country.

Inspection of the byres and cows in Edinburgh under the Public Health Department was first instituted in 1900. The following table, compiled by me from the medical officer's reports, 1900–1912, shows the number of tuberculous cows removed annually from the city byres:

TABLE IV.—*Tuberculosis amongst Edinburgh Dairy Cows, 1900 to 1912.*

Year.	Byres in City.	Byres Closed.	No. of Cows.	Veterinary Inspections of City Byres.	Veterinary Inspections of Country Byres.	No. of Cows Removed for Tuberculosis.	Site of Tuberculous Lesions.
1900	124	—	3,000	—	—	25	Tuberculosis of udder, 11.
1901	140	5	3,366	1,863	. .	23	Tuberculosis of udder, 14.
1902	127	13	3,097	1,601	. .	16	Udder, 5; lungs, 4.
1903	115	4	3,072	2,021	—	35	Lungs, 24; udder, 5; clinical, 6.
1904	115	3	2,974	1,866	. .	39	Lungs, 27; udder, 5; clinical, 7.
1905	111	7	2,942	2,113	. .	37	Lungs, 23; udder, 9; clinical, 5.
1906	108	4	2,944	2,211	—	31	Lungs, 20; udder, 5; clinical, 5; uterus, 1.
1907	99	9	2,765	2,070	10	29	Lungs, 19; udder, 9; clinical, 1
1908	97	2	2,793	1,	10	28	Lungs, 14; udder, 3; clinical, 11.
1909	96	1	2,831	1,531	22	36	Lungs, 23; udder, 13.
1910	90	6	2,708	1,439	30	36	Lungs, 9; udder, 20; clinical 7.
1911	81	9	2,446	1,158	20	27	Lungs, 16; udder, 6; clinical, 5.
1912	76	5	2,318	1,126	20	23	Lungs, 9; udder, 10; clinical, 3.

It will be observed that much attention has been given to the establishment of better ventilated and more sanitary byres in Edinburgh. In spite of the closing of so many byres during the last twelve years, the number of tuberculous cows removed annually from the city byres remains practically the same, which would point to very little benefit having followed from improved animal sanitation. These observations are also identical with those made by Professor Delépine in the Manchester district. Further, it is to be noted that the Edinburgh City veterinary inspector has ordered, on an average, the removal of thirty tuberculous cows annually from the city byres, and of the thirty about ten had tuberculosis of the udder.

The important practical point to consider is the extent to which tuberculous cows yield tubercle bacilli in the milk. Until a few years ago it was a commonly accepted view that tubercle bacilli were only found in milk when the udder was affected. As a result of the experimental work of Schroeder[18] in America, and more recently that of the last Royal Commission on Tuberculosis[19] in this country, we now know this not to be the case. Their results prove indisputably that tubercle bacilli may and do gain access to milk from cows which clinically show no signs of udder tuberculosis, or, indeed, any form of tuberculosis. Of course, it must be emphasized that extensive infection of milk with tubercle bacilli is mainly from cows either marked "piners" or those suffering from tuberculous infection of the udder. On this account chief significance must still be attached to the cows with udder tuberculosis, and information as to the prevalence of this condition in Scotland is most important and still wanting.

The very absence of any definite sign in the earlier stage is one of the greatest dangers of this condition. According to Delépine it is practically impossible for the veterinary surgeon unaided to discover by ordinary inspection early tuberculous lesions of the udder. Further, it is also impossible for the most experienced veterinary surgeon to distinguish by inspection and palpation tuberculous mastitis from all the other forms of mastitis. There appears to be no escape from the conclusion that clinical examination alone cannot be relied on for the

detection of udder tuberculosis, and one naturally asks how it can be reliably detected. Inoculation of the milk into experimental animals (guinea-pigs and rabbits) is the most certain method. This method, as far as I can gather from the medical officer's annual reports (1900 to 1912), is very seldom employed in Edinburgh.

The milk from a tuberculous udder retains for a long time often a month—its natural appearance. The possibility of infection is thereby highly increased, for the milker lets the milk run into the pail as long as it looks natural, and sometimes even after it has commenced to look somewhat thin and fluffy. Tuberculosis of the udder is, therefore, a very dangerous disseminator of infection, and it is by no means a rare disease.

What system is employed at present in Scotland to protect the public against an undoubted source of infection? In the smaller towns and villages scattered throughout Scotland there is practically no veterinary inspection whatever. In the larger towns there is a certain amount, but its complete inadequacy is only too apparent: for example, in Edinburgh, one veterinary surgeon (who is also a food and drug inspector) is expected to examine all the cows—fully 2,000—in the city byres at intervals of not less than three weeks, and in addition he endeavours to supervise the supply of milk from the byres outside the city boundary (numbering about 250 compared with 76 inside the city). Referring to the city report for 1910, 1,439 inspections of the city byres are recorded against 30 of the byres beyond the city. The inadequacy of this supervision is quite apparent, and the fact that the city milk supply from the country is steadily increasing every year strongly emphasizes the immediate necessity for some radical change. Under the provisions of the Public Health (Scotland) Act, 1897, and the Edinburgh Municipal and Police (Amendment) Act, 1891, the owner of a tuberculous cow is ordered to have it removed within a specified time—namely, twenty-four hours—after the official notice is served; but it is left entirely to his own discretion to dispose of the diseased cow as he may think fit. The seller is under no compulsion to say in what manner he has disposed of the animal, and the buyer is not compelled to notify the authorities that he is in possession of a tuberculous cow.

This is indeed a travesty and burlesque of efficient administration that there is absolutely no safeguard against a considerable proportion of these animals, for a time at least, continuing to propagate the disease. As no method of branding such animals is employed there is no reason why the tuberculous cow may not be transferred to another herd and continue contributing to the city's daily milk supply, or find its way to the North of England, as a great many do.

Although it is an undisputed fact that tuberculous milk is very much more dangerous than is tuberculous meat, yet the anomaly of the situation is evident when it is noted that the local authorities have powers to seize and destroy tuberculous cows exposed for sale for food purposes, but are powerless to seize tuberculous cows supplying milk for human consumption. Surely, in the face of all the foregoing evidence it cannot be denied that the provision of a pure, wholesome, and tubercle-free milk supply is a problem of great national importance, and rightly claims its immediate consideration by the Government. It seems almost criminal negligence to permit the present state of affairs to continue.

Tuberculosis amongst dairy cows could be practically eliminated in time by providing, throughout the United Kingdom, for a regular and adequate system of veterinary inspection: the frequent examination of samples of milk by inoculation of experimental animals; the destruction of all cows which show evidence of tuberculosis of the udder, tuberculosis of the lungs, or give tuberculous milk, and those which are clinically tuberculous; the segregation and permanent ear-marking of all animals reacting to the tuberculin test; and the absolute prohibition of the use of their milk for human food; and, finally, the gradual establishment of tubercle-free herds.

It is gratifying to note that the Board of Agriculture and Fisheries and the Local Government Boards for England and Scotland have at last realized their responsibility in the matter, the former by issuing a Tuberculosis Order, and the latter by introducing to Parliament the Milk and Dairies Bills. Such measures to be effective must be so framed that their application by the various local authorities throughout the United Kingdom will be uniformly compulsory. With regard to the Tuberculosis Order, which came into force on May 1st, 1913, it is disappointing to read of it as not being uniformly adopted throughout the country. It is also regrettable that the Order has not made tuberculin-testing of all cows compulsory; nor has it included cows suffering from lung tuberculosis—a dangerous form of open tuberculosis.

I do not propose to discuss the details of the Milk Bills and provisions of the Tuberculosis Order, but what I must emphasize is that, in this country, the necessity for both measures is most urgent, and I am sure their application would result in a considerable diminution of abdominal and cervical gland tuberculosis in children.

Finally, it is obvious that some time must elapse before the necessary legislation is obtained. In the meantime the public ought to protect infants and young children from the chance of infection with the bovine virus. Such an immediate safeguard is to be had in the sterilization of milk for the artificial feeding of infants and the nourishment of all children. Here it should be stated that the lowest temperature which destroys the tubercle bacillus is 140° F., and at this temperature the shortest allowable time is twenty minutes. A great deal too much has been made in this country of the effects of sterilized milk upon infants and young children—namely, infantile scurvy and rickets. In France and Germany, where this method is most popular, hundreds of thousands of children have been raised without the production of rickets or scurvy.

C.—Pathological Considerations: Relation between Channels of Infection and Groups of Glands Involved.

If we are to understand clearly the pathway of infection it is essential to refer shortly to the arrangement of the lymphatic glands in the neck.

The cervical glands are divided into two main groups—the superficial, forming a kind of circle at the junction of the head and neck, and the deep, consisting of a right and left vertical chain under the sterno-mastoid.

In the superficial group an important set of glands is the retropharyngeal. The lymphatic area drained by these glands is very extensive—namely, the mucous membrane of the nasal fossae lymphatics of the naso-pharynx and the Eustachian tube—and explains the frequency with which they are diseased. In number they vary—usually one or two—and they are situated laterally in the cellular space between the posterior pharyngeal wall and the vertebral column just below the body of the sphenoid bone and bounded externally by the fibrous sheath surrounding the large vessels of the neck. Their efferents, according to George B. Wood,[16] empty into the external glands of the upper deep cervical group. Tuberculous disease of these glands, in most instances, points to an infection through the adenoids. In none of my cases was this group the only one to show manifestations of tuberculous disease in the neck. It was always involved along with the upper posterior group (which I have named the pharyngeal, owing to the intimate relationship of its efferents with the naso-pharynx) of the deep cervical chain. The cases numbered five.

The deep cervical chain constitutes one of the most important of the glandular regions of the body. It is a broad chain of lymph nodes which forms a complete chain on each side, stretching beneath the sterno-mastoid muscle from the transverse process of the atlas to the root of the neck.

For anatomical and pathological reasons it is convenient to divide the chain into several subsidiary groups, which drain fairly well-defined areas. These groups are united by many anastomoses. Theoretically and practically "the chain may be first divided into an upper and lower portion, the former situated above the level of the anterior belly of the omohyoid muscle, and the latter below it. Each of these divisions is again subdivided into an anterior and posterior chain."[17]

It is the upper group of glands that concerns us most, as in the vast majority of cases of tuberculous cervical adenitis in children these are the first involved by the tuberculous process. This is explained by the fact that this group receives its lymphatic drainage from the pharynx and naso-pharynx, including the faucial and

pharyngeal tonsils, which organs I hope to show later are not only the most frequent portals of entry for the tubercle bacillus in children, but in a great many instances exhibit microscopic evidence of having been the primary focus of the tuberculous process.

1. *The Upper Anterior Group.*

This group is the most important from the fact that in the great majority of cases tuberculous infection first manifests itself here. The glands of this group are larger than those of the posterior and some of them are fairly constant in their position. One large gland is constantly found in the angle formed by the junction of the common facial and internal jugular veins, and beneath the posterior belly of the digastric. George B. Wood[15] has named this gland the tonsillar lymph gland, since he has succeeded in tracing the efferents of the tonsils into this gland, and from the fact that the most important infections of the cervical lymphatics originate through the faucial tonsil.

In 51 of the 72 cases under consideration the tonsillar lymphatic gland has given at operation evidence of the most advanced tuberculous change, and has been the first gland to be involved, according to the history of onset.

2. *The Upper Posterior Group.*

This group is smaller than the anterior, is situated postero-external to the internal jugular vein, and directly under the sterno-mastoid muscle, just below the mastoid bone. These glands are numerous, lie upon the origins of the splenius and levator anguli scapulae muscles, and are intimately related to the spinal accessory nerve. When tuberculous they may form a large swelling extending across the posterior triangle to the trapezius.

According to the researches of George B. Wood,[16] the lymphatics of the pharyngeal tonsil drain primarily into the upper posterior group, and from this relationship I have named it the pharyngeal. Wood found that the lymphatics, after piercing the posterior pharyngeal wall, passed downwards and outwards under the sheath of the great vessels of the neck, to end in the glands situated deeply just below the tip of the mastoid along the posterior border of the sterno-mastoid. The clinical importance of this anatomical fact lies in the frequency with which this group of glands is involved with the tonsillar in tuberculosis and the rôle played by the adenoids (pharyngeal tonsil) as a portal of entry for the tubercle bacillus. This group is seldom involved alone—only amounting to 8 cases in the series. It is more frequently involved along with the tonsillar group.

In extensive cases of tuberculous cervical glands the infection spreads to the lower groups of glands, anterior and posterior. The lower anterior group is continuous above with the upper anterior jugular group and below with the superior mediastinal glands. In only one of the cases was this group involved. The lower posterior group is a continuation of the upper posterior group. The lowest glands of the group—namely, supraclavicular—are the most important set. Tuberculous disease of this group alone is of the greatest rarity in children. In only one case was this group involved.

It will thus be seen that the commonest site for tuberculous cervical glands is in the upper part of the anterior triangle, involving the tonsillar and pharyngeal groups.

3. *Morbid Anatomy and Histology of Tuberculous Adenitis.*

A careful consideration of the characters of a series of tuberculous cervical glands makes it possible to differentiate two main morbid types. The occurrence of retrograde or caseo-necrotic changes in some enlarged glands is such a characteristic feature that it served to distinguish them from glands showing little tendency to this change.

(a) Tuberculous Cervical Glands showing little tendency to Caseo-necrotic Change.

The glands conforming to this type have usually belonged to the posterior jugular or pharyngeal group. Occasionally the tonsillar gland has given examples. Typical examples of this type of gland occurred in nine cases.

The comparatively short duration commonly associated with this type points to an acute form of lymphatic tuberculosis.

Macroscopic.—The glands vary in size; they may be large or small, are rounded or oval. They seldom form dense, firmly adherent masses as in the caseo-necrotic type. The capsule is usually smooth. The glands are of a yellowish-pink colour, and, on section, the surface is moist and glistening and rather closely beset with characteristic granular semitranslucent tubercles.

Microscopic.—The capsule is not thickened, and shows no tuberculous lesions. The tubercle follicles are scattered throughout the gland and do not show any tendency to spread through the capsule to the periglandular tissue.

(b) Tuberculous Cervical Glands in which Caseo-necrotic Change is the Characteristic Feature.

To this type by far the greatest number of glands of the series belong. The average duration of the case before coming under clinical observation is much longer.

Macroscopic.—The glands vary considerably in size, sometimes being as large as a hen's egg. They also vary much in consistence. They may be firm, elastic, or soft and fluctuant. The glands usually form adherent masses, so that their external surface is irregular. In colour they may be yellowish-white or greyish-pink. The capsule is frequently thickened. On section the central area of gland may be occupied by an irregular cheesy mass, parts of which may be softening or the seat of calcareous degeneration. Between the capsule and the caseous mass there is a variable zone of greyish-white tissue which is not yet invaded. In a few cases the whole of the gland is affected, and is surrounded by a thick fibrous capsule.

In my series the prevalence of the varieties of caseo-necrotic change are noted as follows:

1. Firm, cheesy caseation, diffuse central or nodular, in 33 cases.
2. Soft caseation, in 28 cases.
3. Semidiffluent caseation, in 6 cases.
4. Calcareous degeneration, in 3 cases.
5. Hard, india-rubber, elastic caseation, resembling a gumma, in 1 case.

Microscopic.—The infiltration of the capsule and pericapsular tissues is a noteworthy feature. The characteristic tendency of the tuberculous process to spread through the capsule into the surrounding tissues may explain the matting together of the glands, the frequent occurrence of superficial abscesses, with the involvement of the skin and formation of sinuses, and the gradual spread of the disease from gland to gland. The gland parenchyma shows varying degrees of coagulation necrosis and scattered tubercle follicles and giant cells.

In addition to these morbid processes in the glands, the mischief may spread to the surrounding tissues in varying degree.

1. The formation of a superficial abscess with involvement of the skin (on its deep aspect), due to the disintegration of the gland or glands, is of frequent occurrence. Thus it is common to find in the anterior triangle of the neck an abscess pointing over the anterior border of the sterno-mastoid muscle. Here it is worth remarking that it is of the greatest rarity to find pyogenic organisms in such abscesses. Superficial abscesses occurred in 21 cases.
2. Periadenitis, which generally results from the suppuration, was present in a marked degree in 5 cases.
3. Sinuses complicated the disease in 9 cases.
4. Retropharyngeal abscess was associated in 5 cases.
5. In aggravated cases it is not uncommon to find the sterno-mastoid muscle extensively infiltrated by the tuberculous process. This happened in 9 cases.

Such, briefly, are the chief morbid characters of all the glands of the series, and I have failed to find any reliable features which distinguish a lymphatic gland infected with the bovine type of bacillus from one infected with the human type.

D.—Channels of Infection.

From what has already been said regarding the order in which the cervical lymphatic glands are infected my conclusion is that the mouth and naso-pharynx have been the avenues of infection.

The more frequent involvement of the glands in front of the sterno-mastoid muscle in the upper carotid region is

strongly suggestive of the faucial tonsils being more often a source of infection than the adenoids. In tuberculous disease of the upper deep cervical glands the faucial tonsils have an importance not hitherto well enough recognized or understood. The position of the tonsils at the entrance to the digestive tract favours infection more with food than with inspired air, a fact of great consequence in considering the frequency with which cervical glands in children harbour the bovine type of tubercle bacillus. Furthermore, the very direct and short pathway between the tonsils and the tonsillar lymphatic glands explains the frequency with which well marked tuberculosis of these glands may be secondary to a small focus in a tonsil.

Lesions in the Tonsil.—I have investigated the faucial tonsils from 64 consecutive cases of children suffering from tuberculous disease of the upper deep cervical glands; 24 (37.5 per cent.) of these cases showed histological evidence of tuberculosis in the tonsils. There are no clinical signs by which the condition can be recognized. In the majority of cases the tonsil retains its normal appearance, is small, and frequently receding. Occasionally the tonsil is flat and its surface fissured, or it may be hypertrophied, the external surface showing *no* ulceration. The chief sites for tuberculous lesions in the tonsil are:

1. Surrounding the deeper parts of crypts, especially the supratonsillar group.
2. Immediately under the mucous membrane near the mouths of crypts.
3. Deep in tonsil, close to posterior capsule.

The lesions may be localized or generalized.

Experimental inoculation of guinea-pigs and rabbits with pieces of tonsillar tissue yielded positive results in 19 cases (30 per cent.), and of these the bovine bacillus was present in 12 cases and the human in 3 cases.

I have also investigated the hypertrophied faucial tonsils removed from 90 children, in whom the cervical glands showed no clinical evidence of tuberculous disease; 6 (6.5 per cent.) of these hypertrophied tonsils gave histological evidence of tuberculous disease, while 9 (10 per cent.) yielded positive results when inoculated into guinea-pigs. The bovine bacillus was present in 3 cases, and the human in 1 case.

General Conclusions.

Cow's milk containing bovine tubercle bacilli is clearly the cause of 90 per cent. of the cases of tuberculous cervical glands in infants and children residing in Edinburgh and district, and is responsible for by far the larger proportion of tuberculous cervical glands in children during the milk drinking period of life (0 to 5 years).

The concentration of attention on the existence of human sources of infection has in the past quite overshadowed the evidence that the drinking of milk is an important factor in the infection of children with tuberculosis. Having demonstrated that a larger percentage of cases of tuberculous cervical glands in children is due to the bovine tubercle bacillus than previously believed, the need for immediate action is evident and becomes an absolute necessity.

Bovine tuberculosis can, therefore, no longer be considered a negligible factor in respect to the spread of tuberculosis amongst children, more especially since unsterilized cow's milk in this country is a vehicle by which tubercle bacilli must most frequently be introduced into the bodies of children.

The powers at present vested in our local authorities are grossly inadequate, and it seems to me to be our special duty to endeavour to prevent this enormous and entirely preventable amount of tuberculosis amongst children. It is a national problem, and the earlier it is faced the more easily will it be solved.

That measures for the protection of children against infection with the bovine virus are indispensable is an indisputable fact. Whatever powers may be given to the local authorities, they must, to be effective, be so framed that their application throughout the United Kingdom will be uniformly compulsory. I am convinced that the Tuberculosis Order (1913) would in conjunction with the Milk and Dairies Bill (if passed) result in a marked diminution of abdominal and cervical gland tuberculosis in children.

Until the proper legislative measures are obtained it is imperatively necessary for the public to sterilize cow's milk for the feeding of children. I think there has been an unfortunate prejudice in this country against the sterilization of milk.

Regarding the channels of infection, the faucial tonsils have in tuberculosis of the upper deep cervical glands an importance not hitherto well enough recognized or understood—that is, they act not only as most frequent portals of entry for the tubercle bacillus, but in a large proportion of cases a well-marked tuberculosis of the upper deep cervical glands is secondary to a small tuberculous focus in the tonsil. The high percentage of faucial tonsils in which the bovine virus was present is further striking proof of the frequency of tuberculous cow's milk as a source of infection.

The results of my investigations are widely different from those of investigators in other countries, but I believe they can be verified by the recognition of several correlative factors: (1) The age of the patients; the importance of investigating a large number of consecutive cases of the disease in young children has not been sufficiently recognized. (2) The family history of tuberculosis. (3) The almost universal practice in Scotland of feeding children with unsterilized cow's milk. (4) The great prevalence in Scotland of tuberculosis in dairy cows, and, in conjunction with this, the present very inadequate veterinary inspection and the gross ignorance of the dairy farmers in matters relating to bovine tuberculosis. (5) The fact that about two-thirds of the Edinburgh daily milk supply comes from small byres situated in rural districts round the city, where there is practically no supervision. Greater facilities of infection with the bovine virus are thus afforded in the country compared with the town. Of the children in my series harbouring the bovine tubercle bacillus, almost 50 per cent. had been born and brought up in the rural districts round Edinburgh.

Further, I claim that there is the greater likelihood of a more accurate interpretation of the bacteriological findings if the investigator possesses a combined pathological and clinical experience, and entirely controls the various branches of the investigations.

In conclusion, I have to thank Professor James Ritchie and Mr. Harold J. Stiles for much valuable advice in these investigations.

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TORN SEMILUNAR CARTILAGES.

BY

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For some years past I have been trying to discover exactly how the internal semilunar cartilage is torn in the so-called internal derangement of the knee-joint, because the explanation usually given seems to me inadequate, and leaves out of account one of the two most important factors—namely, the strong action of the extensor muscles of the thigh in its production. Experience has shown me that no dislocation of the cartilage can take place without the meniscus (Gk., "a crescent") being torn. Therefore the name "torn menisci" (BNA), or "torn semilunar cartilages of the knee-joint," should replace "dislocation of the semilunar cartilages," just as the latter, as our knowledge of the subject became more definite, displaced Hey's original term "internal derangement of the knee-joint" (1782). There can be a tear without displacement, but no displacement without a tear. Statistics show that the internal (or medial) cartilage is torn twelve times as often as the external, for reasons

anatomic, which must, for the purpose of this paper, be enumerated and shortly described.

The Anatomy.

The outer convex border of the internal semilunar cartilage (median meniscus) is attached to the capsule of the joint by the coronary ligament, the fibres of which are longer in its anterior half than those in the posterior half; the result of this arrangement is that the slender anterior half of the cartilage is more loosely attached to the capsule and therefore has more play than the posterior half, which is comparatively firmly and closely adherent to the capsule, especially where the latter is blended with the fibres of the internal lateral (or tibial collateral) ligament of the joint. The external cartilage is not attached to the capsule.

The tendon of the quadriceps extensor femoris is inserted into the patella, and the muscle sends two strong fibrous expansions, one on either side of the knee-cap, to blend with the fibrous capsule of the joint and to be inserted finally into the upper end of the tibia. This fibrous expansion on the inner side fills in the interval between the patella and the internal lateral ligament, and is now called the retinacula from the vastus medialis (BNA). By means of these bands, when the patella is pulled upwards by the contraction of the extensor, the capsule of the joint is also pulled upon directly and rendered taut, as may readily be seen and felt by the surgeon placing his fingers on both sides of the patella of a patient and getting him voluntarily to contract the quadriceps. Thus it happens that with the leg in a straight line with the thigh when the extensor muscle contracts the joint capsule is pulled tight, and through the attachment of the latter to the internal meniscus the internal cartilage is drawn away from the centre to the periphery of the articulation and kept immovably fixed there out of harm's way. Once during an operation on the knee I witnessed this action of the vastus internus when it was stimulated to contract by a faradic current. Should the action of the muscle be very violent during this extension, *with the leg straight*, the patella may be fractured across but the meniscus is never torn. In full extension the capsule is taut, the cartilage is at the periphery of the joint, and the bones are "screwed home" and locked, and then no rotation of the tibia on the femur is possible, though a slight rotation inwards of the thigh on the leg takes place as the last stage of extension is being effected.

The Mode of Production and the Nature of the Injury.

When the joint is partly flexed or bent to a right angle, a different condition of the parts obtains. Then the capsule is relaxed, and rotation can take place; and when rotation of the femur inwards or of the leg outwards occurs, the medial meniscus in its anterior half (which has more play than the posterior half) is drawn obliquely across the articular surface of the tibia from the periphery towards the centre of the joint—it may be as much as ¾ in., as I have frequently demonstrated to onlookers at operations on the joint. This occurs (1) owing to the insertion of the anterior horn of the cartilage into the front of the tibia, and (2) because the posterior half is closely attached to the internal lateral ligament, and moreover (3) cannot be drawn into the interior of the joint on account of the posterior parts of the articular surfaces of the femur and tibia being in close apposition. Therefore, when the knee is bent and the leg rotated outwards (or the thigh inwards), the capsule being loose, the anterior half of the cartilage is obliquely stretched across the articular surfaces immediately in front of those parts of the internal condyle and head of the tibia which are in close contact. Should now a sudden extension occur the cartilage is nipped between the two opposing articular surfaces* and becomes a fixed point, and as extension of the limb rapidly proceeds, the capsule is forcibly pulled outwards by the contraction of the quadriceps, and as the cartilage cannot follow, a rent in its substance occurs, generally either near its attachment to the capsule and antero-posteriorly, or through its substance in the same direction or transversely, or one or more of its three anterior attachments are wrenched off or torn through. These are the commonest injuries, though others occur. And this is exactly what occurs in nearly every injury of the joint in which the medial meniscus is torn, as the brief notes of some of my cases which are given below show. These cases have been selected from my list because the notes show in sufficient detail the nature of the accident and the lesion found at operation. In nearly all there has been a violent twist of the thigh inwards (or leg outwards), with the foot more or less fixed and the knee more or less bent, and the patient falls. When he feels himself falling an unconscious and spontaneous effort occurs to save himself, therefore a sudden contraction of the extensor muscles of the thigh takes place and the cartilage is torn; without the capsule and cartilage being pulled outwards the meniscus would be bruised only, not torn; and without rotation in the joint—that is, with the leg straight—the patella alone would be broken across. It is quite true that the patient never says he tries to save himself from falling by contracting his thigh muscles when a torn cartilage occurs; neither does he make a similar statement when fracture of the patella occurs. But that this attempt to prevent falling must occur is, I think, sufficiently obvious.

Hitherto there have been two theories of causation of this injury advanced:

1. The old statement that it occurs with a violent twist with the knee flexed.
2. It occurs with the leg straight or being forcibly straightened.

My view tends to harmonize these divergent statements.

The sickening pain felt at the time of the accident is, of course, caused by the overstretching of the unyielding ligaments of the joint by the bones being forced apart by the gripped cartilage when the extensors contract. The accident is commonest in active muscular men, and in some occupations—for example, coal-mining and football playing. I have seen only one case in a woman.

The Diagnosis.

A certain diagnosis can often be made solely from the *history*. I prefer the word *history*, which means literally "a learning by inquiry," to its Greek fellow, *anamnesis*, which means "a recollection" (especially of a previous state), and which requires a mental effort to pronounce and to understand. In nearly every case we learn by inquiry that there has been:

1. A severe twist of the flexed knee or a severe blow on the side of the flexed knee, with or without the patient falling.
2. A sickening pain, and often a sensation of something having given way in the joint.
3. "Locking" of the joint, that is, inability to extend the limb (if the anterior part of the cartilage be torn) or, much less often, to flex it (if the rent is in the posterior half). The joint sooner or later goes straight of itself or by a special effort on the part of the patient, or is pulled straight by someone—generally with a feeling as if something had slipped into its place.
4. A temporary effusion into the joint (traumatic synovitis).
5. One or several recurrences of the above symptoms, especially of "locking" of the joint on slighter but similar accidents, such as slipping off a kerbstone, twisting the leg in walking, or even turning over in bed.

When the patient applies to the surgeon often nothing can be made out on examination of the joint except some tenderness over the injured meniscus—inner or outer, as the case may be. If the femur has been rotated inwards (or the leg outwards) almost always the inner meniscus will be found torn. If the rotation of the femur is outwards (or of the leg inwards) one cannot be so certain that it will be the outer meniscus that will be found ruptured (see notes of cases).

Treatment.

In working men there is only one treatment—operation.

My method is as follows: The patient is lying straight with the knee held acutely flexed, or he is in the Trendelenburg position. A tourniquet is applied. The skin is swabbed over with petrol containing ½ per cent. of iodine to remove grease, and then painted with tincture of iodine, after which the joint is wrapped round tightly with four

* Recently I saw a cartilage which had been torn from the capsule and which was bruised and slightly torn across at the spot where it had been thus nipped.

layers of gauze wrung out of a solution containing spirit (70 per cent.) and mercury biniodide (1 in 1.000). A transverse incision is made to extend backwards from the inner border of the patellar tendon for 3 in. Sometimes it is necessary to have a good look round, to use a hook and to rotate the leg, before the lesion is discovered. The wound is closed in three layers, the two deeper always with iodized catgut. The interrupted sutures in the capsule are placed widely apart to allow of transudation of the synovia, which is poured out after the operation, to escape into the tissues outside of the joint and thus prevent the pain which arises from distension of the joint. No drain is inserted. I use either iodized catgut for the skin incision, or silkworm gut (sometimes intracutaneously), or Michel's clips. The skin is painted again with iodine, and gauze, wool, and a bandage is applied. No splint is applied; no sepsis occurs and the results are excellent. Only exceptionally is the patient slow in returning to work, and he is always a workman receiving payment under the Workmen's Compensation Act.

BRIEF NOTES OF CASES.

I. TORN INTERNAL CARTILAGES.

Case 1.

Operation No. 524. Horsekeeper (31). Fell and twisted right knee.

Right internal cartilage torn from capsule and anterior attachments.

Case 2.

No. 528. Student (18). Twisted knee while playing football.

Right internal cartilage torn from capsule and anterior attachments.

Case 3.

No. 660. Coal-miner (19). Fell whilst crossing a fence and twisted the right knee whilst the foot was fixed. Recurrent attacks of "locking."

Right internal cartilage was torn from capsule and its anterior attachments, and the anterior half was twisted on itself.

Case 4.

No. 752. Sea-going fireman (30). Twisted right knee whilst at work; still unable to extend joint fully.

Right internal cartilage torn from its attachments in anterior two-thirds and displaced inwards between condyle of femur and head of tibia. Note that displacement inwards of anterior part of cartilage prevents full *extension*. Compare Cases 5 and 6.

Case 5.

No. 765. Coal-miner (27). Twisted left knee. Could not flex knee beyond a right angle.

Left internal cartilage was torn from its posterior attachments and capsule; the cartilage was folded on itself so that its two ends were in contact with each other. Note that displacement of the posterior half of the cartilage prevents flexion. Compare Case 4.

Case 6.

No. 773. Coal-miner (39). Struck by a piece of coal on inner side of right knee and twisted joint. Could not flex knee completely.

Right meniscus torn in its posterior half and bent forwards exactly as in Case 5 (q.v.).

Case 7.

No. 823. Coal-miner (23). Whilst sitting hewing coal on his "hunkers" (that is, squatting) he screwed his body round to the left and suddenly felt a sharp pain on inner side of right knee, which was flexed at the time and became locked (that is, he could not extend it).

Right meniscus torn from its anterior attachments and from the capsule in its anterior half.

Case 8.

No. 858. Coal-miner (30). Whilst kneeling at work a fall of stone caused him to throw himself backwards, and (he thinks) to twist himself somewhat to the right. Pain in the left knee, which could not be straightened. Locking occurred several times subsequently. Tenderness over inner meniscus and on full extension.

Left meniscus detached from capsule, but still attached at each end and lying straight across joint antero-posteriorly and nipped between condyle and tibia (= bucket-handle displacement).

Case 9.

No. 868. Coal-miner (27). Was throwing "band" behind him to the left whilst in a stooping posture, with right knee slightly flexed and inverted; felt something snap in right knee.

Right meniscus torn across, causing a triangular gap near its anterior end.

Case 10.

No. 870. Coal-miner (20). Whilst running at football, right foot was caught in a hole in the ground; he flew suddenly on to his face. On rising he could not straighten his knee, which was painful and swelled. Later his foot turned over to the outer side, and the knee became locked.

Right meniscus was torn through three-quarters of an inch from its anterior attachment, and the torn part was turned up against the anterior crucial ligament. (One of the three slips of attachment of the anterior horn blends with the anterior X ligament.)

Case 11.

No. 913. Dock labourer (48). Got right foot fast, and twisted the right knee "in over."

Right meniscus torn from its anterior attachments and projecting into the joint.

Case 12.

No. 924. Youth (21). Severe blow on outer side of extended right knee, twisting the joint in. Joint locked and swelled up for some days.

Right meniscus—a loose tag torn off anterior attachment.

Case 13.

No. 944. Driver (24). When going down three steps fell, but alighted on ball of right foot, twisting right knee inwards. Difficulty in straightening joint, which sometimes locked with pain, if when in bed the knee was bent and the foot twisted inwards.

Right meniscus was torn across three-quarters of an inch from its anterior attachment, and projected as a tag into joint from its anterior attachments.

Case 14.

No. 961. Coal-miner (33). Whilst holding up a beam with both hands above his head and standing on a step, he slipped off the latter and twisted his right knee inwards whilst slightly flexed. Movements limited.

Right meniscus torn across one and a half inches from the anterior end. The torn part, whose edges were rounded, projected into the joint.

Case 15.

No. 979. Coal-miner (23). Caught his left foot between a "roller bed and rail," twisted round to the left with the left leg bending under him, and he fell, and felt something "go" right through the joint. Cannot straighten the knee—frequent locking.

Left meniscus torn from its capsule in its posterior half (the whole cartilage was removed); the anterior crucial ligament looked only about one-third of its natural thickness, and the anterior tubercle and the intercondylar eminence in front of it was bare and rough, showing that part of the ligament had been torn off, though no tag could be seen. On opening the joint both cartilages appeared normal, but on twisting the joint the anterior edge of the posterior half of the inner cartilage was seen to project into the middle of the joint like the thin end of a wedge.

Case 16.

No. 1001. Rivetter (40). Slipped down 2 ft., with knees flexed and twisted around to right. Intense pain in left knee, and could not straighten it for forty-five minutes.

Left meniscus torn from its insertion in front of the tibial spine, and from the capsule in its whole length. On dividing the two remaining anterior attachments and pulling on the cartilage it "snapped" across the joint to the outer (lateral) side of the condyle, and was removed.

Case 17.

No. 1016. Coal-miner (21). Whilst lifting a heavy tub he twisted inwards the left knee, which was a little bent. Inability to straighten the leg and swelling followed. A month later, when kicking a football, the left leg gave way suddenly, and he fell. The joint swelled up again. A month later he trod on a stone, which rolled from under his foot; he slipped and fell with the left foot rotated outwards. The knee swelled up again.

Left meniscus was split in its middle third near its attachment to the capsule. The rent could not be seen until the anterior end was cut through and dragged upon, when the whole cartilage was readily pulled right across into the middle of the joint with an audible snap. The anterior crucial ligament was also torn through.

Case 18.

No. 1026. Coal-miner (31). Was buried under a fall of stone with the left knee bent in. Frequent locking.

Left cartilage torn near the capsule in its middle third.

Case 19.

No. 1034. Coal-miner (33). Knocked down by a pit prop striking him on the inner side of the right knee. Could not say if knee was twisted.

Right cartilage split lengthwise in its anterior half.

Case 20.

No. 1058. Coal-miner (31). Slipped off kerb and fell with left knee behind the right and bent. Felt "a crack" in joint and severe pain. Knee swelled. Was off work six weeks. Later left heel slipped off a sleeper and he fell on his left side and twisted the left knee, which was bent.

Left meniscus was torn from and near to the capsule in its anterior half.

Case 21.

No. 1117. Coal-miner (27). Whilst lifting a "tub" with hands behind his back, he twisted his body round to the left whilst his knee was bent. Severe pain and swelling. Could not straighten the limb. Several "lockings."

Left cartilage found split, with inner half displaced to the outer side of internal condyle.

Case 22.

No. 1165. Coal-miner (26). Whilst standing astride, a pony backed and struck the inner side of his left knee, and he fell, twisting round to the right with the left knee inwards. Felt severe pain and a "click," as if something slipped into its place on rising. A week later, whilst hewing coal, with the knees slightly bent and rotating the left femur inwards as he used the pick, he suddenly felt "something go out" in his left knee. As he straightened the leg with difficulty something slipped in again. The cartilage has been out five times altogether. The slightest twist now displaces it.

Left meniscus torn near its convex border from near the capsule = bucket-handle tear.

II. TORN EXTERNAL CARTILAGES.

Case 1.

No. 831. Coal-miner (22). Whilst lifting a tub (small wagon) with his hands behind his back and the knees flexed, he slipped and twisted round to the left on his left leg, which was fixed. He felt acute pain in the left knee, and something "gave" in it, and then he doubled up. The knee swelled, and he could not straighten the limb. Later he got the same knee jammed between a tub and a prop, when the knee was bent in, and it swelled up again. Knee can be fully extended, but not completely flexed.

Left outer cartilage was split across transversely at its middle and the posterior half projected into the joint. Note that rotation of the thigh *outwards* caused tearing of the *outer* cartilage, whilst rotation *inwards* causes tearing of the internal meniscus, and that displacement of the posterior half interfered with flexion.

Case 2.

No. 934. Ship's stoker (39). Whilst right foot was fixed and knee bent he was forcibly twisted around to the left. Pain over outer cartilage on full extension.

Right meniscus torn across about its middle. Anterior half removed. (This case is against the rule, but my cases of torn external cartilages are too few to reason from as to the exact causation.)

SUMMARY OF CASES.

Torn inner cartilages	22	
Torn outer cartilages	2	24
Right knee	14	
Left knee...	10	

Ages.—18 to 48 years.

Sex.—Males, 24; females, 0.

Occupations.—Coal-miners, 15; football accidents, 2. The chief industries in this district are coal-mining and ship-building.

NATURE OF TEAR.

A. *In Inner Cartilages (Total 22).*

1. In posterior half only	3	
2. Torn anterior attachments only	2	
3. Torn anterior attachments and from anterior part of capsule	5	
4. Bucket-handle tears—that is, from the capsule only:		
(*a*) In whole length	3	
(*b*) In middle half	2	
(*c*) In anterior third	1	6
5. Longitudinal splits in substance of cartilage	2	
6. Transverse tears in anterior half	4	

B. *In Outer Cartilages (Total 2).*

Both had transverse splits	2

THE *Bulletin administratif du Ministère de l'Instruction publique* gives statistics as to the students in different faculties in France on January 15th, 1913. At that time the total number of students in the faculties of medicine was 8,247, consisting of 7,400 men, of whom 803 were foreigners, and 847 women, of whom 489 were foreigners. The total number of students in the schools of medicine was 1,497; of that number 1,287 were men, of whom 29 were foreigners, and 210 women, of whom 9 were foreign. These numbers are almost exactly the same as those for the previous year. For the several faculties the numbers were as follows: Paris, 4,211; Lyons, 1,055; Bordeaux, 751; Montpellier, 699; Toulouse, 346; Nancy, 306; Lille, 285; Algiers, 156. Of the various nationalities represented, the list was headed by the Russians, who numbered 831, of whom Paris had 585 and Montpellier 132. Next came the Turks with a total of 85, of whom 68 were studying in Paris and 11 at Montpellier. There were 67 Bulgarians—20 at Lyons, 28 at Montpellier, and 12 at Nancy. The Roumanians numbered 59, of whom 54 were studying in Paris and 5 at Montpellier. Of other nationalities there were 13 English and 24 Greeks in Paris, while the South American Republics were represented by 22, all in Paris.

A POSSIBLE FALLACY IN THE DIAGNOSIS OF INTERNAL DERANGEMENTS OF THE KNEE-JOINT.

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THE interesting abstract in the EPITOME of the BRITISH MEDICAL JOURNAL (November 15th, 1913, par. 255) of a recent article by Bahr[1] on spurs of the patella in relation to inflammation of the knee-joint, recalls some examples of a similar deformity which I have recently studied.

In few cases of displaced, loose, or fractured semilunar cartilages are all the prominent signs found. Allingham[2] recounted the classical signs as follows: Tenderness over the upper part of the tibia, fixation of knee in semiflexed position, inability to extend the knee though flexion is free and painless, cracking of the joint on movement, weakness on walking or supporting the body on the limb, rotation of the foot, and synovitis. In a summary of his cases he describes three varieties:

1. The internal or external semilunar cartilages may be torn away from their—
   (*a*) Anterior attachment.
   (*b*) Posterior attachment.
   (*c*) Coronary ligaments.
   (*d*) Coronary ligaments and anterior attachment.
   (*e*) Coronary ligaments and posterior attachment (rare).

   The cartilage at its injured part is completely movable.
2. All or some of the attachments of the semilunar cartilages may have been stretched or *partially* ruptured.
3. Split cartilages.

Recent operative measures have shown the frequency of actual fracture of the cartilages, or in many cases of the existence of rheumatoid arthritis causing irregular projecting synovial fringes with fibrosis and irregular destruction of the cartilages, which easily become displaced over the typical lipping or moulding of bone of a "mushroom"-like form accompanying these changes.

In many cases pain in the knee is the chief symptom, drawing attention to deformity elicited on palpation from projection of a cartilage, or to rheumatoid change in the bones and joint with recurrent synovial effusion. In elderly patients it is always wise to look for rheumatoid conditions before diagnosing traumatic displacement, even when an injury first leads to the examination of the painful joint affection.

In three such cases seen recently operation showed little or no change in the interior of the joint, but there were periarticular rheumatoid affections of a spur-like character simulating it. The symptoms were pain, swelling, and clicking sensations on movement, and the condition was one resembling that got in *hanche* or *genou à ressort*, thickened bands of tendon or fascia gliding suddenly and precipitately over bony prominences.

The site was internal in all three cases, the tendon of the sartorius muscle riding upon a distinctly lipped portion of the inner border of the femoral condyle. Examination of the borders of the patella, tibia, and outer surface of the femur should in every case be made, and inquiry made into the condition of other joints. In the three cases—two males and one female—injury was adduced as the supposed cause; incipient rheumatoid arthritis was the real cause, and operation was beneficial in allowing the deformed spur of bone to be burred off, though signs of typical rheumatoid change were developed afterwards.

I believe such cases with *external* joint trouble, and others with typical *internal* mischief, often referred to internal traumatic damage, to be much more commonly the resultant of rheumatoid disease than is usually diagnosed. Sometimes they are due to exostoses, in other cases tuberculosis may be a factor. The importance of their clear recognition, especially in cases of compensation proceedings for injury, is obvious.

REFERENCES.

[1] *Deut. med. Woch.*, July, 1913. [2] Allingham: *Internal Derangements of the Knee-joint.*

THE TREATMENT OF FRACTURES ABOUT THE ELBOW-JOINT AND KNEE-JOINT.

BY

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THERE are perhaps no fractures in the body that call for greater care and patience in their treatment than do fractures in the immediate vicinity of the elbow-joint and knee-joint. In medical practice it must have been the lot of many men to have witnessed most unsatisfactory end-results, where stiffness, deformity, and marked restriction of movement have played the chief part. This end-result in most cases has not been in any way from want of perseverance or patience on the part of the medical attendant, for in a number of old cases that I have seen which had been treated by others, and in which there had been exhibited the most conscientious efforts, the end-results were unsatisfactory.

These two joints are indispensable to people in the richer walks of life, and specially to the bread-winner, and it is for this reason that I venture a few hints which I have found to give, in the majority of cases, the most satisfactory end-results.

These cases, over 100 in all, have come from the casualty departments of the Royal Free Hospital, London, King's College Hospital, London, and the Bradford Royal Infirmary. At the latter institution fractures in the region of the elbow-joint have been very numerous, and an excellent opportunity has been afforded of watching them over a period of more than a year, and gaining new points in the treatment, all of which have served to gain a more perfect end-result.

Elbow-joint.

The commonest types of fracture in the region of the elbow-joint have been the following:

(*a*) Separation of the lower epiphysis of the humerus, and with it a small piece of bone from the diaphysis.

(*b*) Separation of the lower epiphysis of the humerus, complicated by a fracture of the epiphysis itself, running into the joint.

(*c*) Fracture of the lower end of the humerus, either transversely or running obliquely into the joint.

(*d*) Fracture of the olecranon process of the ulna.

(*e*) A fracture of the head of the radius has been rare in this series.

(*a*) and (*b*) have usually occurred in young children up to the age of 12, but mostly about the age of 5. (*c*) and (*d*) have been the class of cases most common in adults. These fractures were far more common in girls than in boys. They are easily diagnosed, though their extent is often deceptive. They are at once, as a routine procedure, *x*-rayed. In young children (and it is to these cases that I particularly wish to refer) it is of the greatest importance to gain the small patient's confidence, and throughout the treatment infliction of pain should absolutely be avoided. For this reason an anaesthetic is always administered before the fracture is dealt with.

The method of fixation of the fracture is that advocated by Mr. Robert Jones, of Liverpool, namely, by full flexion of the elbow-joint. If there be much swelling about the elbow when first seen—and such is frequently the case—this is no contraindication to full flexion. Some of these cases, specially in adults, have presented considerable swelling, and after putting up the fracture it has been very difficult to make out a radial pulse. The swelling rapidly subsides, and I have never seen any harm whatever follow full flexion in these cases. In putting up the arm the carrying-angle must not be forgotten; I have found that the safest way is to flex the sound arm, and to make the injured arm, when flexed, as near a match to the sound arm as possible—that is, when full flexion is obtained the hand and forearm lie internal to the upper arm. This is not usually advocated, but I have found it give the truest results.

Having obtained full flexion the desired position is maintained by a piece of ordinary adhesive strapping passed around the forearm and upper arm nearer the wrist than the elbow and nearer the shoulder than the elbow. Beneath the strapping, which should be between 1½ in. and 2 in. wide, is placed a strip of boracic lint. By this means most of the upper arm and forearm are left bare, and over the elbow is placed a piece of lint soaked in some evaporating lotion. The arm so treated is put in an ordinary sling, and is not bandaged to the side; the patient uses the wrist and shoulder joints. He is usually retained for three hours after the anaesthetic and care taken to examine the hand and fingers before he leaves the hospital. The hand is often blue and swollen, but the radial artery can usually be felt and the circulation in the hand is satisfactory. The patient is seen every day for the next two or three days, when the elbow and hand are inspected, and the patient sees others with a similar affection doing exercises, and frequently expresses a desire to do the same.

After the third day the elbow is very gently rubbed with a lubricant, usually olive oil, quite painlessly, and the parent is instructed how to do this at home. The patient is not seen again until the tenth day, when the strapping is removed, but no passive movement whatever is practised. The right of way for extension in my experience is never lost; it is the right of way for flexion that must be maintained.

When the strapping is removed the forearm will fall of itself past the right angle, and this for the time being is quite sufficient. The strapping is replaced by an elastic garter about 2½ in. wide, made from silk-covered elastic. A large length is kept in the casualty room and a garter to fit the case is rapidly made by the nurse. The patient now attends daily, and the garter is removed for about half an hour. During this time small playthings, such as a seaside bucket with a small weight in it or a dumb-bell, are held in the hand of the injured arm. Extension is by this means easily and painlessly increased up to an angle of about 160 degrees. After this half-hour the elbow and arm are very gently massaged and the elastic garter replaced. At the end of a fortnight the garter is omitted during the daytime and the patient is encouraged to use the arm, and at meals the sound arm is strapped to the body. When the child goes to bed the garter is carefully replaced, and on waking in the morning the arm is again in full flexion, and the right of way is thus maintained. At the end of the third week regular exercises, performed with light dumb-bells and designed to flex and extend the forearm, are started. The little ones enjoy the exercises, look forward to their visits, and there is a keen competition as to who can do best. At the end of the fourth week the patient is allowed to swing on the trapeze, and and at the end of this week the trapeze, assisted with gentle massage, usually suffices to produce full extension. At the end of the fifth week the arm is usually strong again, movements are free, and treatment can be discontinued. The aim is to make the whole treatment as much a pleasure to these small patients as is possible, and above all to avoid causing pain at any part of it.

The treatment as detailed above gave such satisfactory results—in most cases full flexion and full extension with no deformity—that it was adopted as a routine procedure in the casualty department.

It is all-important not to cause the patient pain if it can possibly be avoided. Forced movements should not be practised; they hurt the patient and break down adhesions around the joint which are often valuable at this stage; cause also further haemorrhage with consequent fibrosis and thickening around the joint—one of the surest forerunners of failure. It is not advisable to seek to obtain full extension too soon; it will come in good time without any forcible or painful movements. Should the error of too early and too persevering movements have been made, and consequent thickening, with stiffness, resulted, on no account should the attempt be made to obtain further movement by breaking down adhesions. It is better to start all over again by putting the arm in full flexion, leaving it for ten days or a fortnight, and giving the thickening a chance to disappear. The aim is to obtain flexion, as extension has, in my experience, usually looked after itself.

There are yet cases which despite care and patience do not do well; these failures I have especially noticed to occur in patients with a rheumatic tendency. Here fibrosis and thickening occur and increase while the arm is rigidly kept at rest. Massage in these cases is useless, and indeed often aggravates the condition. One or two

such cases have improved on arsenic and iodide, cataphoresis, and strapping the elbow with Scott's dressing. The latter treatment combined with the drugs has given the most satisfactory solution in this series. Another complication to be feared, and, I think, an unavoidable one, is the formation of new bone in the substance of the brachialis anticus muscle near its attachment, the so-called myositis ossificans traumatica. It has occurred in three of this series, and I know of no treatment that will cure it. If the new bone is removed it has been my experience to see it recur, and to recur in greater quantity than was present originally. In these cases flexion is limited to a right angle or less.

The last complication not to be forgotten, and one which again indicates painless treatment and early rest, is that these joints, after such an injury, are prone to infection. I have seen one case of tubercle follow such an injury in a child and one of gonorrhoea in an adult.

Treatment by full flexion applies to all fractures in the neighbourhood of the elbow-joint, except fractures of the olecranon process, and most cases of fracture of the head of the radius. In these two latter open operation is preferable—namely, wiring the olecranon and often excision of the head of the radius.

In adults movements may be practised by the surgeon, though such movements should not cause pain. Extension and flexion return more quickly in an adult than in a child, and suspension from a trapeze may be started between the third and fourth weeks.

Open operation for fractures about the elbow-joint, except for the two varieties mentioned above, has, I think, nothing to recommend it, and usually ends in bad results, especially in young children. If operation for deformity from faulty position some time after the injury is necessary, it is, I think, wiser to wait. A condition which seems hopeless at first can often be greatly improved by careful manipulation under an anaesthetic and after-treatment. Should these measures fail, it would seem wise to wait until the bones have stopped growing, and then plan some form of osteotomy. Open operation, however, should be the very last resort.

Knee-joint.

Of injuries in the neighbourhood of the knee-joint, only those involving separation of the lower epiphysis of the femur and fracture of the shaft in the neighbourhood of the condyles not involving the joint will be considered. The displacement here is reduced under an anaesthetic, and the knee is put in a condition of full flexion. It is strapped in this position just as in the treatment of the elbow-joint. Evaporating lotion is applied and a straight splint fixed on either side of the limb at the level of the strapping with buckle and straps. The knee is kept fully flexed for ten days or a fortnight and then is brought down to full extension and put up on a Liston's long splint with extension below the knee. If there is any bending of the limb laterally at the site of the fracture, it can at this stage be easily straightened under an anaesthetic. An *x*-ray picture should be taken after the limb is put up to see that the position of the lower fragment is satisfactory. At the end of five weeks, or often between the fourth and fifth weeks, passive movements should be started, and massage earlier, while the limb is still on the splint. The splint should be replaced after the passive movements and discontinued at the end of the sixth week.

These fractures are very troublesome to treat by other means, as the lower fragment shows a constant tendency to slip, and it is extremely difficult to fix it otherwise. Mr. Robert Jones advises full extension in these cases from the beginning. He says that surgeons, after performing femoral osteotomy for conditions such as genu-valgum, do not put up the limb in full flexion. I think there are one or two points he may have omitted to take into consideration. In an osteotomy the same kind of force has not been exercised to produce the fracture. Here the bone only is cleanly divided, and frequently only partially divided, without the laceration of muscles and forcible displacement that usually occurs in one of these fractures. I have tried the full extension method for this type of fracture and can only say that it has proved a failure, whereas full flexion has given the most satisfactory results.

Open operation for these fractures has, as a rule, nothing to recommend it.

THE USE OF IONIC MEDICATION IN THE TREATMENT OF CERTAIN VENEREAL DISEASES.

By R. CONNELL, M.B., B.Ch., Surgeon R.N.

I HAVE lately had an opportunity of trying the effect of ionic medication in cases of primary syphilis, secondary syphilitic ulcerations, gummata, soft sores, septic buboes after operation, and gonorrhoeal rheumatism. Instances of successful treatment of the last mentioned have already been reported, but, so far as I am aware, no cases of primary syphilis treated by mercury ionization have been published.

Treatment by ionic medication gave very satisfactory results in most of the above-mentioned diseases, but the results obtained by using the mercuric ion in syphilitic lesions are specially worthy of mention. The best results were obtained in those cases of syphilis in which there was no evidence of a mixed infection. In these the *Spirochaeta pallida* alone was the cause of the lesion, and the results were equally good whether the sore were an early primary chancre or an old chancre which had resisted treatment for some time.

If a mixed infection existed the healing was not so rapid; there was great improvement at first, probably due to destruction of the spirochaetes, but later on delay occurred; the ulcer remained clean but had a chronic appearance. As the secondary infecting organism may be of many varieties, it is impossible to lay down a rule as to the ion to use when the mercury has done its work. Probably the best results are obtained from the iodide or zinc ion. The worst results of all were in soft sores.

It is a common error to think that all sores occurring in a syphilitic patient, either in the early stages when primary and secondary signs are present, or later, when the early secondary manifestations have disappeared, are due to the syphilitic virus. Quite frequently a patient has both hard and soft sores at once, and in many cases a fresh infection of soft sores occurs while the patient is still under treatment for syphilis. Should this occur, it is very liable to be ascribed to renewed activity of the syphilitic virus and lead to renewed use of anti-syphilitic remedies. Such a sore as this heals very slowly and is disappointing to the surgeon, largely because of unsuitable treatment due to the mistake in diagnosis. Such a sore also causes disappointment in ionization if treatment with the mercury ion be persisted in. If the response to the mercury ion be not early and striking, the case should be regarded as probably non-syphilitic and treated by ordinary antiseptics, the ions of zinc, chlorine, or iodine being given a trial.

There is another class of case in which a healed primary syphilitic sore breaks down again. This may occur in spite of treatment by salvarsan and continuous mercury. These sores are very resistant to ordinary treatment, but readily respond to ionic medication with the mercury ion.

In the Royal Naval Hospital, Plymouth, it has been the practice to give internal antisyphilitic treatment as soon as the diagnosis is confirmed. This consists of grey powder gr.ij thrice daily, and to the majority of cases three injections of neo-salvarsan are given in addition. The first injection is given as a rule within a week after admission.

It may therefore be objected that the results shown below were really due to the neo-salvarsan or the mercury rather than the ionization, but several of the cases to be mentioned were almost completely healed before the first dose of neo-salvarsan was given, and the two most striking cases had no salvarsan at all. The improvement, too, follows so hard upon the first application of ionization, and is at once so marked, that to the observer there cannot be any doubt as to its cause. Also, certain stubborn cases which failed to respond to mercury and salvarsan cleared up rapidly on the application of ionic medication; and before this treatment was tried it was unusual for the primary sores to be healed until some time after the three injections of salvarsan had been given.

In the earlier cases treated the zinc ion was used with

good results, but when, as an experiment, the mercury ion was tried the result was astonishing.

The two most strikingly successful cases (Nos. I and VI) were the two most severe.

CASE I.

In the first of these the sore was a very severe primary chancre, extending half way around the corona from frenum to dorsum. Swelling, inflammation, and pain were very great. The sore had already been present for eleven days. The patient had been treated for six days in hospital by baths and lotio nigra, with mercury internally, but there was little or no improvement. He had refused salvarsan. As an experiment mercury ionization was tried; a 2 per cent. solution of mercury perchloride was applied on layers of wool, a bent zinc wire being fitted so as to embrace the affected side of the penis. A current of 2½ milliampères was passed for five minutes. This was the maximum current that could be borne without excessive discomfort. The treatment was painful, partly owing to the stinging caused by the perchloride solution. Cocaine, applied after treatment, gave relief. The improvement was immediate; the patient had a comfortable night, free from pain. Next day the inflammation was nearly gone, and the penis had regained its normal size. The ionization was repeated on the fourth, eighth, and thirteenth days, and on the fifteenth a short application of the zinc ion was given as a finishing touch. By the fourth day the sore was rapidly healing; by the eighth it had come down to half size, and by the seventeenth day healing was complete. Between the applications it was dressed at first with perchloride solution 1 in 10,000, and later with ung. zinci c. ichthyol 5 per cent. This sore was thus completely healed in sixteen days. I doubt if healing *could* be more rapid.

In the majority of the following cases healing was similarly rapid in proportion to the size of the lesion.

CASE II.

Primary chancre of four days' duration. Was given two applications of mercury ionization. Result: Almost healed on fourth day; completely healed on eighth day. One injection of salvarsan was given in this period.

CASE III.

Primary sore at frenum of eleven days' duration. Completely healed four days after a single application of mercury ions. Had one injection of salvarsan on second day. An indurated area around the healed sore disappeared after a second ionic treatment.

CASE IV.

Small early primary sore on side of penis present for four days. Healed on third day following a single treatment with mercury ions. An injection of salvarsan was given on second day.

CASE V.

This patient had had salvarsan two and a half years previously; also three further injections about six weeks before admission. On admission in July, 1913, there was apparently an early primary sore near the frenum. It had been present for twelve days and had followed coitus. Three applications of mercury ions were given. On the day following the first treatment the sore was larger and more moist, with one or two slight blisters at the periphery. These cleared up rapidly and healing was complete in thirteen days. No salvarsan was given on this occasion.

CASE VI.

This case is of special interest. The patient had a very large sore, involving the whole under surface of the glans penis, the frenum being eaten away. It had resisted antisyphilitic treatment by mercury for two months. He also had an ulcer on the right thigh. This had the appearance of a soft sore, but was thought to be syphilitic. It had been present for two weeks. Both sores were treated by mercuric ionization; the improvement in each was good at first, but while that on the penis made a rapid recovery and healed in thirteen days with two applications of ionization, that on the thigh, which was less than half the size of the other and not indurated, soon ceased to improve. On the sixteenth day it was still about the size of a shilling; on the nineteenth day iodide ions were applied. Immediate improvement set in, and two further applications completed the healing by the thirtieth day.

I am at a loss to account for the unequal behaviour of these two sores, unless on the grounds that the ulcer on the thigh was a soft sore, in which case the mercuric ion would be unsuitable. (See below.)

CASE VII.

This was one of the earliest treated. An indurated sore appeared on the penis of a man who had had three injections of salvarsan a couple of months previously. He had again been exposed to infection three weeks before its appearance. He refused salvarsan on this occasion. The sore was treated at first by zinc ionization. After the second application of zinc the mercuric ion was tried, as its good effect on Case I had been noticed. Three applications were given; but though the sore had decreased to half-size in ten days, there then seemed to be no further response to the mercuric ion, the sides of the ulcer remaining still indurated and the centre excavated. When, however, the iodide ion was tried, immediate healing set in. This case took twenty-nine days to heal.

CASE VIII.

The patient had an old indurated punched-out sore on penis. This had first appeared in July, 1912. He was then given three injections of salvarsan. It broke down again, and healed reluctantly in May, 1913. It again broke down in July, 1913, on which occasion he came under my notice. It had already been present for thirty-eight days when ionization was commenced. On the second day following the first ionic treatment improvement was already well marked, but unfortunately for the results of the experiment a first injection of salvarsan was given on the third day, and a second on the eighth day. Healing was complete on the eleventh day. Three applications of ionic medication were given in the period.

CASE IX.

A mental chancre of five days' duration. Healed in eighteen days. Had four applications of mercury ionization. All pain and induration disappeared on the day following the first treatment. It was difficult to treat this case effectively owing to the situation of the sore; hence the delay in healing. He had one injection of neo-salvarsan on the fifth day.

CASE X.

Early sore near frenum of six days' duration. Three applications of mercuric ionization were given. The sore was healed on the eighth day.

TECHNIQUE.

The ulcer is cleaned as thoroughly as possible. If pain is anticipated, it is first treated with 5 per cent. cocaine on lint. Any cocaine solution remaining on the sore is driven in with the mercuric ion when the current is passed. A 2 per cent. solution of mercury perchloride is then applied on several pieces of lint cut to the proper shape. The first layer should fit the ulcer as exactly as possible. The outer layers should extend a little beyond its edge. The electrodes consist of narrow strips of zinc sheeting cut to convenient sizes, and bent to suit the shape of individual cases. They are attached to the positive pole. If the ulcer is flat any circular piece of copper or zinc would do. I do not see the necessity for elaborate precautions to ensure that the ion of the metallic electrode should be the same as that in the solution. If sufficient lint is used the ions from the metal electrode will not have time to reach the ulcer. Personally I use as an electrode the head of a large bronze screw for small circular sores. If the copper (or zinc) ions from the screw reach the ulcer their effect is curative, and the corrosive action of the perchloride solution on the more expensive electrodes is obviated.

The effect of the application of the mercuric ion for a short time is to produce a slight whitening of the tissues not unlike that caused by the zinc ion. It is, perhaps, advisable not to push the treatment so far as this. If the application is too long, or if the current is unevenly distributed, blistering may occur. These blisters usually heal rapidly. The current usually borne is about 2 to 4 milliampères. It is best to make a first application of not more than five minutes' duration. This may be repeated in three or four days.

The first effect noticed is a striking diminution of pain and discomfort on the night following the treatment. By the next day the sore is more moist, and may appear a little larger, but the inflammation surrounding it is gone, and though it does not look improved the patient is convinced that it is very much better; he generally describes it as being "easier." After this progress is rapid, and by the fourth day it usually has the clean and flat appearance of a rapidly healing ulcer. The effect of each application is to produce a slight moisture for the first twenty-four hours, and therefore I think small doses are the more efficacious; and also probably a longer period than three days between applications would give better results. If induration persists in the surrounding parts after the sore is healed, it disappears quickly when given a further application. If a set-back occur in the healing process, probably a change to the iodide ion will produce a good effect.

There is unfortunately no probability of aborting syphilis by ionic medication alone. In two cases of very early sores treated by me, and healed in four and six days respectively, the Wassermann reaction became positive, though no secondary symptoms have developed so far. They had the usual internal treatment.

But in spite of the fact that we must regard this treatment as purely local, I venture to suggest that when

greater experience of it is gained by a more extended trial, it will prove to be one of the most rapid methods of healing a superficial syphilitic lesion, whether primary or secondary.

GUMMATA.

As a means of introducing the iodide ion locally ionization is very efficacious. A case of gumma of the abdominal wall which was making very slow progress under treatment with mercury and salvarsan began to resolve rapidly as soon as ionic medication was tried. It was especially serviceable in this case, as the patient could not take potassium iodide by the mouth. If the skin be unbroken, a current of 30 to 50 milliampères can be borne for twenty to thirty minutes without injury. The lint must be folded in sixteen thicknesses and attached to the negative pole. Tincture of iodine painted on the skin (negative pole) seems to be good also, but is much more likely to cause small burns.

For broken-down gummata the iodide ion at once clears up all induration, removes sloughs, and cleans up the ulcer. Two cases of broken-down superficial gummata were treated with success.

NON-SYPHILITIC LESIONS.

In the case of non-syphilitic lesions the results obtained by zinc ionization have been very good, but by no means so striking as those mentioned above. This is due to the absence of any ion which is a specific for the disease.

SOFT SORES.

In soft sores the result of zinc ionization has been at times most satisfactory and at others very discouraging. No very recent soft sore was treated.

CASE I.

This man had an extensive irregular sore on penis, also an abscess in groin and another on the penis, each of which, after incision, had taken on the characters of a soft sore. The condition had persisted for forty-six days prior to ionic treatment. It was healed in twenty-nine days. The zinc ion was used. The number of applications were: To the bubo, two of 15 milliampères for ten minutes; to each of the other sores, five applications of 3 to 4 milliamperes for five minutes.

CASE II.

This man had contracted severe syphilis at Colombo four months before. Since then he had been continuously on the sick list. The present lesions were a severe gummatous ulceration of the throat, two syphilitic ulcers on elbows, and a large soft ulcer on buttock. It responded at first to the Hg ion, but, though pain was absent, the sore did not look much cleaner after two weeks. Two applications of the chlorine ion were then given for the cleaning effect, with very good results. Iodide ions were then applied. At the time of writing there have been two applications of 10 milliampères for fifteen minutes, and the ulcer is now less than half its original size, with flat healing edges. Treatment has lasted three weeks. Possibly larger and earlier doses of iodide ions would have produced a quicker effect. (Compare this with Case VI above.)

CASE III.

This man suffered recently from syphilis for which he had had three doses of salvarsan. Three small abscesses occurred in his groins, which after incision took on the appearance of soft sores, the edges being ragged and undermined. He was given six applications of zinc ions in small doses. Improvement was good at first, but relapses occurred, and no permanent benefit was obtained. He had in all nine applications of ionization (including two of iodide) when the treatment had to be suspended for other reasons.

This last case may possibly have been some infection distinct from soft chancre, but it is quoted because it was distinctly unsatisfactory.

It would appear from the above that the results with soft sores are not uniform, but though success is not certain the method is worth a trial as an adjunct to ordinary antiseptic treatment.

SEPTIC BUBOES.

The ionic treatment of large suppurating buboes after operation is on the whole very encouraging. The sloughs separate, fetor if present quickly ceases, healthy granulations soon appear, the sides remain clean, and the large cavity closes with considerable speed.

CASE I.

This case underwent extensive removal of inguinal glands twenty-one days previous to ionic treatment. When ionization was commenced there was a very large sloughing cavity, with ragged edges, stitch sinuses and profuse discharge. He had thirteen applications of zinc ions and made an uninterrupted recovery, being completely healed in nine weeks. This period seems long, but the cavity was extremely large, and the last ten days were spent in the healing over of the superficial scar.

CASE II.

The bubo was incised on April 5th. Ionization was commenced on May 4th (that is, twenty-nine days afterwards). At this time there was a large sloughing cavity with unhealthy granulations and considerable discharge. Five applications of zinc ions were made, the current being gradually reduced from 20 milliampères for half an hour to 10 milliampères for five minutes. Complete healing took place in thirty-six days.

CASE III.

A large mass of inguinal glands was removed on May 19th. On May 23rd there was a large quantity of foul-smelling pus with sloughs and gas, and great inflammation. Ionization commenced on that date. May 25th, all fetor gone. May 28th, clean and healing. July 8th, completely healed in forty-six days. Had nine applications averaging 20 milliampères for ten minutes.

The three foregoing were the worst cases treated. Healing was very rapid in view of the condition prevailing at the commencement, and the very large cavities to be filled in.

There is one other case of bubo worthy of mention. This man had syphilis.

CASE IV.

An abscess was opened in groin on May 29th. Zinc ionization commenced on June 8th. Progress was very good. Six applications were given, and on July 8th further ionization was considered unnecessary, as only a small sinus remained. This, however, persisted, and on July 20th and 27th two further doses of zinc ions were given, but no improvement followed. There was still a small, deep, punched-out sinus, with hard, yellow sides. On August 2nd a single application of the Hg ions was given. On August 3rd there was a watery discharge. By August 5th sloughs had almost disappeared from the sides, and on August 8th it was quite healed. This man had no other active signs of syphilis, and having already been treated with salvarsan was awaiting the healing of the bubo before being sent to duty.

TECHNIQUE FOR BUBOES.

The cavity is cleaned as thoroughly as the patient can bear. The sides and all diverticula are then carefully packed with wool soaked in a 2 per cent. solution of zinc sulphate. A flat strip of zinc about half an inch wide is then placed on edge in the cavity between the layers of wool, so as to be, as far as possible, equidistant from the sides. The spaces remaining are then packed with the moistened wool, care being taken that the bare metal does not touch the patient. Usually in a large cavity a current of 20 to 30 milliampères can be borne for fifteen or twenty minutes; this gives about the right degree of whiteness of the tissues. The patient's comfort is the chief guide to current strength. As a rule, he can bear 1 or 2 milliampères per square centimetre. It is better to give a weak current for a long time than a large dose for a shorter period, as the ions probably penetrate further in the long application.

It is advisable to reduce the dose when the healing process has been well established, as there is usually a serous discharge for the first twenty-four hours after the larger applications.

If there is much pus, I find that one or two applications of the chlorine ion (sodium chloride solution at the negative pole) is a very effective method of cleaning the wound before zinc ionization is commenced.

GONORRHOEAL RHEUMATISM.

I have not tried ionization in the acute stages of this affection, but when it has become chronic, with increased fibrous tissue around the joints, considerable benefit is obtained from the chlorine ion. The improvement is quickly appreciated by the patient. Usually a current of 15 to 20 milliampères is passed for thirty minutes three or four times a week. On the whole, in gonorrhoeal rheumatism, as in soft chancres, or buboes which have been infected with the chancroid virus, the results, while usually good, may sometimes disappoint. But in syphilitic lesions of any stage, provided they be superficial and accessible, the treatment by ionic medication gives unusually good results, and when wider experience has been gained, bids fair to be one of the most efficient at our disposal.

RAPID DELIVERY IN ECLAMPSIA.

BY

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In your issue of December 27th, 1913 (p. 1625), Dr. R. Carmichael Worsley states that during upwards of twenty years of general practice he has treated several cases of eclampsia, and that he has now discarded such temporary measures as chloral and bromide, venesection and transfusion, etc., in favour of prompt emptying of the uterus. He advises the administration of a full dose of morphine, and if more than one fit has occurred, immediate dilatation of the cervix by means of a screw dilator, and delivery, even when the external os will only admit the finger.

In contradistinction to Dr. Worsley's experience, allow me to give mine. During upwards of twenty years of practice I have treated not several but several hundreds of cases of eclampsia, and I now never advise or practise immediate delivery in ordinary cases, unless the labour is well advanced. I have treated scores of cases by immediate delivery, but I have given up this method in favour of a waiting policy, and the results have been much better.

At the present moment we have eight cases under treatment in the maternity hospital, four under my care and four under the care of my colleague. In all, the waiting policy has been adopted, and the patients are doing well. The following are short notes of my cases:

Case 1.—Multipara; seven months pregnant; four fits before admission and three during the time she was being cleansed; not in labour. Given 1 c.cm. veratrone and ½ grain morphine; purged and sweated; no more fits; the albumin in the urine rapidly disappeared. Two weeks later delivery of a premature live child occurred naturally. The child weighed 3½ lb. and lived for a week. The mother is now quite well.

Case 2.—A multipara, six months pregnant, had two fits before admission. Treated with veratrone, purging, and sweating. No more fits; the albumin has not quite disappeared from the urine, but the patient is quite well and the pregnancy is going on.

Case 3.—A primipara at full time, in labour, had had four fits before admission. As the head was on the perineum delivery was effected by forceps, and bleeding was encouraged. Two pints of my saline solution were given into the abdominal wall. As the pulse had become soft I did not use veratrone. After some hours the fits recurred, and as the pulse had become rapid and tense 1 c.cm. of veratrone was given. The fits now ceased. She had ten in all after delivery, and at the time the veratrone was given they were recurring every few minutes. The veratrone caused so much depression that $\frac{1}{60}$ grain of strychnine was given. For two days the patient was insane. At the end of that time her mental condition become normal, and she is now quite well; her child is also quite well.

Case 4.—A primipara, full time, admitted after having had five fits. She was not in labour. She was given 1 c.cm. veratrone and a purge, and she was sweated. The labour commenced shortly after admission but the fits continued. By the time the head was on the perineum she had had eight more fits. She was then delivered of a live child by forceps and allowed to bleed freely. Two pints of the ordinary saline solution were given under the breasts. No more fits occurred, and the mother and child are now quite well.

I might instance many other similar cases, but these should be sufficient, on the standard which Dr. Worsley has adopted. I am not going to lay down any lines as to the proper treatment of eclampsia on the strength of my experience of several hundred cases, but I would like to draw attention to the use of veratrone in these cases. Many years ago I tried veratrum viride, but gave it up, as I found the effect was very uncertain, but, on the issue of its active principle, veratrone, I again began to use it, with very good results. When the pulse-rate and tension are high, it has a most remarkable effect. In the cases which I have quoted the pulse-rates were reduced from 130 or 140 to from 60 to 70 within half an hour. In Case 3 the reduction of something like 60 beats was followed by such alarming depression that $\frac{1}{30}$ grain of strychnine was given hypodermically, and the patient quickly rallied. Morphine is said to be an antidote to veratrone, but in Case 1 the two drugs were given together, and the reduction of the pulse-rate and tension occurred, just as if veratrone alone had been given. The drug has a very powerful effect, and when it is used after delivery the depression may be alarming. In one case the patient looked as if she were dying, but a hypodermic of $\frac{1}{30}$ grain of strychnine quickly rallied her. In Case 3 we had a somewhat similar experience.

The treatment of eclampsia is very unsatisfactory, and it will remain so until we find out the real cause of the condition.

The veratrone used was that supplied by Parke, Davis, and Co. The full hypodermic dose (1 c.cm.) equals 20 m of tincture of veratrum viride (*B.P.* 1885) which was of the strength of 1 in 5.

Since the above was written I have had another striking instance of the value of the drug. A primipara was admitted in a very restless and violent condition. It took three nurses to keep her in bed. Within half an hour of the administration of veratrone she had become quite quiet, and her pulse had fallen from 132 to 72. She had had six fits before admission and two more occurred shortly afterwards. Next day she was delivered of a live child by low forceps. No fits occurred after the veratrone was given. The mother and child are doing well.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE INDUCTION OF ARTIFICIAL PNEUMOTHORAX.

THE article in the JOURNAL for December 13th, 1913, by Drs. Carleton and Evans, commenting on the paper published by Dr. Woodcock on October 25th, 1913, contains certain statements which it seems to me would be dangerous to allow to pass unchallenged.

In their fifth comment Drs. Carleton and Evans say: "We consider that the local anaesthetic is unnecessary." During the production of an artificial pneumothorax several fatalities have been recorded, and in the majority of these cases death has been due to the production either of a pulmonary embolism or of a pleural reflex. Both these dangers can be avoided by taking suitable precautions, and as one of the exciting causes of pleural reflex is the stimulation of the parietal pleura during the passage of the needle, it is surely necessary that this membrane should be anaesthetized before it is traversed by the needle. Drs. Carleton and Evans have been fortunate in not witnessing a pleural reflex from this cause, and though the danger is rare it seems to me essential that it should be guarded against on every occasion.

The anaesthetization of the track of the needle, including the parietal pleura (so far as we know the visceral pleura contains no sensory nerves), occupies at the most one minute. From their concluding sentence in comment 5, it would appear that Drs. Carleton and Evans regard this as a waste of time; but though when doing a nitrogen displacement (artificial pneumothorax) or an oxygen replacement I have punctured the pleura nearly a hundred times, and have always anaesthetized the track of the needle, I have never regarded the time occupied in injecting the novocain as wasted.

When Drs. Carleton and Evans entered the needle "with a sudden stab" they must run the additional risk, especially if the ribs are close together, of striking the bone with the point of the needle, thereby causing further pain to the patient and turning the point of the needle. The needle must then either be driven on with its battered point or withdrawn, and a fresh "sudden stab" made.

Dr. Woodcock advocates the administration of morphine before the injection of nitrogen. This, I am sure, is a wise precaution, which I always take before the first injection and before the subsequent injections in nervous and excitable people.

I agree that the site chosen for the puncture should be, as far as possible, over healthy lung, but would point out that in the space between the anterior border of the latissimus dorsi and the inferior border of the pectoralis major the intercostal spaces are most easily determined, and, other conditions being equal, offer the most suitable site for puncture.

Iodine painted over the skin is sufficient preparation. If the skin is scrubbed and washed with a watery solution immediately before the application of the iodine, the efficacy of the latter is very greatly impaired.

London. H. MORRISTON DAVIES.

EARLY INFECTION WITH MEASLES (POST-NATAL).

I DELIVERED Mrs. W. of a full-time child on May 22nd, 1913. On May 24th the mother had a well-marked characteristic measles rash, fully out, all over the body and extremities. On June 4th, the thirteenth day of life, the baby had also fully out a typical measles rash. This would indicate that immediately after birth the baby became infected, escaping infection *in utero*. There was obviously no immunity conferred on the child *in utero*, as is supposed to be common in infective fevers attacking the mother. Neither does the case, so far as it goes, support the view that fetal fevers are simultaneous in mother and child (supposed characteristic of fetal measles). The mother contracted measles evidently fifteen or sixteen days before the birth of her child, and the child contracted it during the first day of life. In both cases the usual signs and symptoms of measles were present. Both recovered.

It is a prevalent idea that babies under 6 months have an immunity from measles. In an article on measles in the BRITISH MEDICAL JOURNAL, June 29th, 1912, I combated this view. I contended that the apparent immunity was a cradle one, properly speaking a protection due to cradle isolation. Literally speaking, children crawl into infection. There is, therefore, nothing to justify exposure to infection of young children any more than older children. It would also seem to be one's duty to isolate a newborn child from its mother who is infectious at the time of birth.

Cheltenham. ARTHUR EDWIN TAIT, M.B., Ch.B.Edin.

ANTISEPTIC USE OF SOUTHEY'S TUBES.

THE following case may be of interest, as I know that men are sometimes deterred from using Southey's tubes by the fear of causing troublesome ulceration in tissues of lowered vitality, which can, I think, be avoided if strict antiseptic precautions are taken.

Mr. X., aged 60, came under my care four years ago. He was apparently dying; the heart was very much dilated, the liver much enlarged, and the urine contained one-eighth albumin. The pulse was very weak, rapid, and irregular, there was much fluid in the abdomen, and the legs and thighs were enormously distended—in fact, absolutely waterlogged. On August 23rd, when he was then as ill as he could be, passing very little urine, I introduced, under strict antiseptic precautions, two Southey's tubes into each leg (one at each ankle). The entrance of the tube was guarded with collodion and gauze. The flow of fluid was as follows:

		oz.
August 23rd,	1 p.m. to 9 p.m. ... ... over	60
	9 p.m. to 10 a.m.	60
August 24th,	10 a.m. to 10 p.m.	60
	10 p.m. to 12 noon	91
August 25th,	Noon to 10 p.m. (3 tubes only) ...	20
	10 p.m. to 10 a.m.	60
August 26th,	10 a.m. to 10 p.m.	45
	10 p.m. to 10 a.m. (1 tube only) ...	20
August 27th,	10 a.m. to 10 p.m. (1 tube only) ...	20
August 28th	(1 tube only)	20
		456 oz.

That is, 23 pints, or over 28 lb. weight of fluid in four and a half days. He had been sleeping (when he could) in an armchair with the legs hanging down.

On August 27th he was much better; the breathing was much easier; he was passing 50 to 60 oz. of urine a day; the pulse was 100 and regular. He was sleeping well, and appetite was good.

On August 28th the fluid intake was limited. A salt-free diet was ordered, and digitalin Nativelle $\frac{1}{100}$ grain prescribed to be taken three times a day.

On August 29th the legs were almost normal; the heart's apex was in nipple line, and there was only a little fluid in the abdomen. The pulse was 92, and the amount of albumin very much less.

I saw him twelve months later, walking, going out to dinner and to the theatres. Twelve months later, when I saw him again, he was contemplating matrimony, but wisely abstained. I heard that he died twelve months later.

REGINALD POLLARD, M.B., M.R.C.S., D.P.H.

London, S.W.

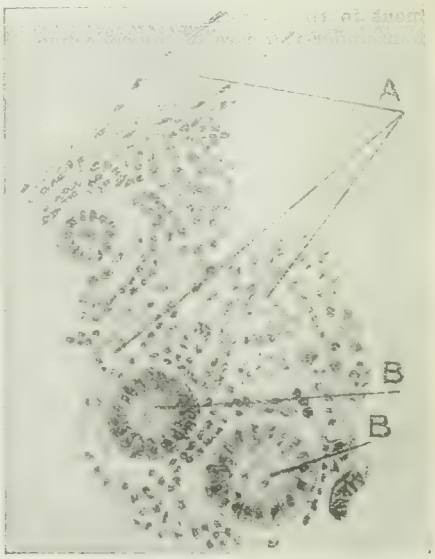
Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

BRADFORD ROYAL INFIRMARY.

ENDOTHELIOMA OF JEJUNUM: SYMPTOMS SUGGESTING PYLORIC STENOSIS: DEATH DUE TO ACUTE PERFORATION.

(By JAMES PHILLIPS, F.R.C.S.Edin., Honorary Surgeon.)

J. W., aged 53, was brought to see me by Dr. Laing on April 30th, 1913. He had had "indigestion" for over a year, and had lost some weight. He had nausea an hour or more after taking a meal, and sometimes vomited. On Christmas Day, 1912, some hours after a heavy dinner, he had very severe pain in the lower half of the abdomen. Similar attacks had come on at intervals since, and they were becoming more severe and more frequent. Vomiting relieved the pain. Sometimes he had no pain for a week, and he then felt almost quite well. The bowels acted daily, and the stools were normal. His doctor had noticed visible peristalsis, and had suggested to the patient that surgical treatment might be required. My notes on this occasion are: Thin man; abdomen rather full; veins show markedly. Definite splash below umbilicus. Resonance seems to indicate large dropped stomach. Per rectum, *nil ultra*. The patient declined operation, and even to have an *x* ray examination, which was repeatedly urged by Dr. Laing between April and September.



A, New blood vessels containing blood. B, Intestinal glands, with columns of endotheliomatous new growth growing around and between them.

On September 2nd, while straining at stool, the patient was seized with sudden agonizing abdominal pain. Dr. Laing sent him into the infirmary, where I found him with all the symptoms of perforation. I opened the abdomen, which contained much turbid fluid. Finding the stomach dilated and tense, and no obvious perforation, I explored the abdomen lower down and found a growth of the small bowel with a perforation about $\frac{1}{16}$ in. in diameter. The patient's condition was so bad that I simply brought the growth outside the abdomen and fixed it with a Wells forceps through the mesentery; mopped up as much intraperitoneal fluid as possible, put in a tube, and closed the abdomen. The man died twelve hours later.

Necropsy.—The growth was in the jejunum, some eighteen inches below the duodeno-jejunal junction. Externally it resembled a ring cancer of the colon. The little finger could become engaged in the lumen of the growth, but could not be passed through it. The bowel wall was much thicker above the growth than below it, and the duodenum and stomach also showed the effects of back pressure, the stomach being, perhaps, twice the normal size. Microscopically, Mr. Hughes reports that the growth is an endothelioma.

Remarks.

Growths of the small bowel are sufficiently rare to make this case worth recording. Pathologists seem to be agreed that such growths are usually endotheliomata.

From the clinical point of view the case is very interesting. When I saw the man in April I came to the conclusion that he probably had a pyloric stenosis, and not an intestinal obstruction; I daresay I did not give enough weight to Dr. Laing's observation of visible peristalsis. When I saw the man at the Infirmary the signs of perforation were so definite that I felt confident that I had been right, and was correspondingly surprised when the perforation was found not at the pylorus but in the jejunum. The necropsy revealed a greatly dilated stomach; indeed, the stenosis was so near to the duodenum that the main effect of the obstruction was similar to that of a pyloric stenosis. The case was one which could easily have been treated by resection had the man submitted to operation in April.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

STAFFORDSHIRE BRANCH.

THE first general meeting of the session was held at Stoke-on-Trent on November 20th, 1913, when the President (Mr. W. F. CHOLMELEY, F.R.C.S.) took the chair, and forty-two members were present.

Blood Changes in Lead Poisoning.

Dr. JOHN RUSSELL read a paper on blood changes in lead poisoning. After pointing out the necessity of obtaining a pathognomonic sign of lead poisoning, he gave a detailed account of the procedure followed at the Hygienic Institute, Leipzig, by Professors Hofmann and Schmidt. There it was shown that in coming to a diagnosis of lead poisoning the greatest dependence was to be placed in the presence of more than a certain proportion of erythrocytes containing basophile granules. Several pathological conditions besides lead poisoning showed this change in the blood, but rarely to the same extent, and if they did were easily distinguished by other symptoms. If the blood of a worker in a lead process showed 100 per million basophile granule cells attention should be given to the worker's health and the case watched; 100 to 300 per million was looked upon as the frontier zone requiring caution. Above 300 the worker was considered to be suffering from plumbism, suspended from working in a lead process, and put under treatment till his blood became normal again. In Leipzig this test was accepted both by the worker and the State, and it was claimed that by careful and repeated observation of the blood of lead workers and their immediate treatment whenever blood changes occurred, severe cases of lead poisoning had almost entirely disappeared. The significance of punctate basophilia was discussed, and the view favoured that it indicated a degenerative and not a regenerative process. Diagrams were shown giving the results of examination in Leipzig and in Stoke-on-Trent. At Leipzig from 1907 to 1912, 1,031 blood examinations were made of various operatives sent to the Institute for that purpose; 187 showed blood changes (18.1 per cent.). The results of 100 consecutive examinations of cases receiving compensation for lead poisoning in the Stoke-on-Trent area were shown in the second diagram; 27 of these showed no blood changes, 26 showed basophile granule cells under 300 per million, 47 showed basophile granule cells ranging from 300 per million up to 27,000 per million. An analysis was given of the 27 cases showing no blood changes; 21 had only subjective symptoms, 6 had albuminuria, and not one showed any nerve change. In each but one of the 6 showing albuminuria a satisfactory explanation was given for the absence of the blood reaction. Other points discussed in the paper were the relation of the number of basophile granule cells to the severity of the poisoning, the relation of the basophilia to disability, and the rate of the disappearance and the period of persistence of basophile granule cells after the worker had ceased to work in lead process. Drs. PRENDERGAST, KING ALCOCK, and CODD, and Mr. HIND discussed the paper, and Dr. RUSSELL replied.

Clinical Importance of Cerebro-spinal Fluid.

A paper on the clinical importance of the cerebro-spinal fluid was read by Dr. WILLIAM BOYD, who said that the fluid should be clear and colourless, and contain a trace of globulin, and only an occasional lymphocyte. The two chief naked-eye changes were the presence of blood and pus. Blood due to the accidental injury of a vessel at the time of puncture might be distinguished from blood due to a previous intracranial haemorrhage by the use of the centrifuge. Turbidity indicated the presence of polymorphs, and was always due to acute meningitis. In such conditions as tuberculous meningitis, general paralysis of the insane, and tabes dorsalis, enormous numbers of lymphocytes might be present in a perfectly clear fluid. Various methods of estimating the cellular content of the cerebro-spinal fluid were described, and illustrative cases given showing the importance of such an estimation. In the differential diagnosis between neurasthenia and early general paralysis no single point was so useful as the presence or absence of lymphocytosis in the spinal fluid. This sign was of equal value in tabes dorsalis. The bacteriology of the fluid was touched on, and the use of vaccines in the treatment of certain cerebro-spinal affections discussed. The therapeutic uses of lumbar puncture were then described, and the value of injections of urotropine directly into the spinal theca in septic meningeal conditions insisted on. Drs. CODD, MITCHELL SMITH, and MYOTT discussed the paper, and Dr. BOYD replied.

Tonsillectomy.

Mr. G. A. CARTER read a paper on tonsillectomy, in which he reviewed in detail the anatomy and physiology of the tonsil, including the work of Seccombe Hett and Butterfield on the microscopic examination of healthy and diseased tonsils. The relative values and advantages of tonsillotomy and tonsillectomy were discussed at length, and the general principles involved in the selection of cases. Mr. Carter stated that he was of opinion that every tonsil could be completely removed with its capsule intact by means of the guillotine, with no ill effect and no other permanent local change than approximation and partial fusion of the faucial pillars in some cases. He condemned all incomplete operations, such as tonsillotomy, as scientifically unsound and surgically incorrect, and expressed the opinion that whenever an operation upon the tonsil was justified at all, nothing short of a complete enucleation should be undertaken, as by this operation only could future immunity against infection through the sinus tonsillaris be guaranteed. The technique of tonsillectomy, by means of the guillotine, was described, and a number of instruments shown. Mr. Carter said that he preferred a reinforced Heath guillotine. The importance of attention to dental caries previous to operation was remarked upon, and also such details as cerumen in the ears; in the after-treatment he advised three days in bed, no milk for forty-eight hours, and no local interference. If local trauma were excessive subsequent local sepsis was dealt with by painting the sinus tonsillaris with tincture of iodine. Mr. Carter considered that the frequency of post-operative haemorrhage had been over-estimated, and expressed the opinion that with the introduction of the recent method of clipping the pillars of the fauces ample protection against haemorrhage was provided. Dr. MYOTT and Messrs. ALLARDICE and R. ALCOCK discussed the paper, and Mr. CARTER replied.

Demonstration.

Mr. R. H. DICKSON showed a patient who had long suffered from chronic dacryocystitis; complete cure followed excision of the lacrymal sac.

Pathological Specimens.

(1) Mr. WHEELTON HIND showed an enlarged and much thickened gall bladder removed by cholecystectomy. (2) Dr. WILLIAM BOYD showed hydatid cysts from the liver. (3) Mr. HAROLD HARTLEY showed: (*a*) Cancer of transverse colon; the patient, aged 58, had herself felt a small, very hard, very mobile, painless lump in her abdomen "for three or four years." This lump was usually to be felt in the left iliac fossa, but could be pushed to any part of the abdomen. It was found to be a cancer of the transverse colon, closely adherent to the stomach. The growth, glands, and omentum were excised, the bowel ends near the hepatic and splenic flexures closed, and an ileo-

sigmoidostomy performed. The patient made a good recovery and returned home, but at the end of September, 1913, was attacked during an epidemic of diarrhoea—"nothing would stop it," and she died. (*b*) Uterus and appendages removed for cancer of the cervix by Wertheim's method of abdominal panhysterectomy. The patient made an excellent recovery from the operation.

Dinner.—The meeting was followed by a dinner, at which twenty members were present. A collection in aid of Epsom College realized £1 3s. 6d.

Reports of Societies.

PATHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

COLONEL SIR WILLIAM LEISHMAN, F.R.S., presided at the meeting of the Pathological Society of Great Britain and Ireland, held at the Royal Army Medical College, London, on Friday and Saturday, January 9th and 10th, 1914. A large number of communications were read, and a few demonstrations were given.

Malakoplakia.

Professor STUART MCDONALD (Newcastle) read a paper on the pathology of malakoplakia, a condition first described by von Hansemann in 1892; since then 21 cases have been recorded. Professor McDonald described the first case observed in this country; in it the lesions were limited to the urinary bladder, the ureters, and the pelvis of the kidneys. Macroscopically, the characteristic changes were pale yellow nodules, which at a later stage became tumour-like, while on the surface large raised plaques were observed. No clinical symptoms occur in this condition, but it is usually associated with some severe disease affecting persons of advanced age. In the case now recorded, however, the patient was a woman only 24 years of age. After describing the lesions in the bladder and kidneys, Professor McDonald dealt in some detail with the microscopical appearances of the large cells seen in the tumours. He raised the question whether the cell inclusions, known as Michaelis-Gutmann bodies, were parasitic in nature or not. He was inclined to regard them as degeneration products. He expressed the opinion that the condition was not infective, and that its special features were due to the fact that the cells found were of a peculiar nature. In the discussion, Sir WILLIAM LEISHMAN agreed with the speaker that the cell inclusions were probably not parasites.

Delayed Chloroform Poisoning.

Professor R. F. C. LEITH (Birmingham) described an interesting case of delayed chloroform poisoning. The patient, a boy of 8 years, suffered a rupture of the left lobe of the liver in a street accident. An operation was undertaken with ether-chloroform anaesthesia at first, and later pure ether by the open method. Only 2 drachms of chloroform were used. The lad died thirty-seven or thirty-eight hours after the operation, and at the *post-mortem* examination no satisfactory cause of death could be discovered. The microscopical examination of the liver revealed an enormous number of granules and small fat globules, the changes being more intense in the area of rupture, but well marked all over the organ. The fat was neutral. There was a very fine fibro-cellular cirrhosis as well. Professor Leith mentioned the view held by some American pathologists that ether was capable of producing the fatty degeneration of the liver usually ascribed to chloroform. He regarded this case as one of delayed chloroform poisoning, in spite of the small amount of chloroform employed. Professor BOYCOTT pointed out that fatty changes were at times seen to arise with extraordinary rapidity during very severe illness, and cited a case of poisoning by strong hydrochloric acid in which it occurred. The absence of necrosis led him to doubt whether the case described was one of chloroform poisoning. Professor LEITH, in reply, said that he had never seen such extensive fatty changes save in phosphorus and chloroform poisoning, although he admitted that necrosis was usually associated with the fatty changes in the latter.

Disease of the Adrenal Glands.

Dr. S. G. SCOTT (London) discussed the pathology of Addison's disease and of the condition characterized by haemorrhage in the suprarenal capsules, and showed both from his own and from other published cases that destruction of the suprarenal cortex was an essential change. After recalling that Karakascheff had stated that the suprarenal medulla was not essential to life, Dr. Scott adduced evidence to prove that in Addison's disease there was a gradual, and in suprarenal haemorrhage a very rapid, destruction of the cortical cells.

Status Lymphaticus.

The next paper led to the reference to the Committee of the question whether the society should attempt to collect and collate evidence of the association between the persistence of the thymus, the enlargement of the lymphatic apparatus, and the occurrence of sudden death. Dr. E. EMRYS ROBERTS (Llanbedrgoch, Anglesey) gave details of 9 cases of what he regarded as typical instances of status lymphaticus. In analysing his tables he showed that with the exception of one case of myasthenia gravis, of one case of severe injury to the head, and of one of pneumonia, no cause of death other than that found in the lymphatic apparatus could be discovered. Sir WILLIAM OSLER expressed the opinion that this condition could at times be recognized during life by the flabby, over-fed condition, the enlargement of the glands, especially in the posterior triangle, and the hypertrophy of the tonsils. Professor SIMS WOODHEAD raised the question of some cardiac lesion in the cases spoken of, and asked for information about the blood pressure during life. Professor BOYCOTT asked whether the series represented selected cases or not, and expressed a doubt as to the causal relationship between enlarged thymus and sudden death. He asked the author how many cases of unexpected sudden death had been observed in which there was enlargement of the thymus. In three of the nine cases mentioned there was a sufficient cause of death found. Professor RITCHIE suggested that statistics bearing on this question should be collected, and Professor WALKER HALL thought that in an inquiry the behaviour of the patient's serum toward thymus protein during life should be investigated. In his reply Dr. ROBERTS adhered to his contention that his cases were actually instances of status lymphaticus, and explained that they were not selected cases.

Radium and Cancer Immunity.

Dr. C. RUSS (London) spoke of the investigations he had conducted with Drs. Wedd and Morson on the immunity conferred upon mice by irradiated mouse carcinoma. He stated that the greatest degree of immunity was obtained by the exposure of the tumour to the action of radium for a comparatively short time, and that when the irradiation was more prolonged less immunity was conferred, until at last none was produced. After describing the effect of variations in the dosage of radium and in the time of action on the histological characters of the tumour cells, he recorded the results of a series of experiments in which portions of the tumours were removed, irradiated, and reinjected. He laid some stress on the reduction of the frequency of recurrence after this procedure, as compared with his control animals. Dr. BASHFORD spoke of Haaland's experiments, which went to show that prolonged irradiation prevented the conference of immunity. Destroyed cells could not grow, and could not confer immunity. Partly killed cells might grow for a time, but would not immunize. He doubted the therapeutic value of the experiments, and stated that he had never obtained a single positive result from these forms of experiments. Dr. MURRAY asked whether the tumour strain with which the authors had been working produced immunity independently of irradiation. The strain originally did not do so. Professor GRÜNBAUM asked whether the tumours were removed before irradiation. In reply, Dr. RUSS expressed the opinion that the reduction of frequency of recurrence was promising. He did not think that the tumour without irradiation conferred immunity. It was removed for irradiation.

Haemolytic Anaemia.

Professor MUIR (Glasgow) communicated a very interesting paper on the condition of iron freed from the blood by the action of haemolytic serums in animals. After discussing the

quantity of haemoglobin (expressed as iron) lost and the quantity which the body was able to re-utilize during recovery, he passed on to show that in the kidneys a true haemolysis took place, with the deposition of intact haemoglobin, which was excreted by the convoluted tubules. In the liver at first haemoglobin was diffusely spread in the parenchyma, but later the deposit of haemosiderin indicated the breaking up of the blood pigment. Phagocytosis of red blood cells actually took place both in the liver and in the spleen.

Radium and Cancer, Histology.

Dr. A. C. MORSON (London) demonstrated the changes observed in human carcinoma when exposed to the action of the gamma rays of radium. After fifteen hours the cancer cells began to degenerate, the nuclei became indistinct, and at the end of twenty-four hours all that was left was a structureless mass of cells in various stages of degeneration. These changes were limited to the immediate neighbourhood of the tube. Vacuolization took place, and eventually there was free connective tissue proliferation. In some cases the tumour cells appeared to be resistant to the action of the rays. He concluded that these changes were not due to the metal tube enclosing the radium, but to the radium itself, because, when a long tube of silver was used, the degenerative changes were limited to the site corresponding to the end of the tube containing the radium. He was of opinion that the changes were of a chemical nature. The nature of the changes was illustrated by a series of excellent lantern slides. Dr. MURRAY thought that the changes were probably chemical. Dr. BASHFORD said that his experience of the effect of radium on tumours was that those tumours which degenerated under its effect usually tended to cure themselves without its agency. Dr. LEITCH expressed himself as somewhat sceptical as to the nature of these changes. Similar changes were frequently observed as a spontaneous phenomenon. In the reply, Dr. MORSON insisted on the fact that many of the patients were still free from recurrences.

Trypanosoma Lewisi.

Professor MINCHIN (London) gave a highly instructive account of researches made with Dr. J. D. Thomson on the so-called stomach phase of the *Trypanosoma lewisi*. The epithelial cell of the stomach of the flea caught up the flagellum of the trypanosome and drew the whole parasite into itself. Within the cell the nucleus of the trypanosome and the tropho-nucleus divided into a large number of daughter nuclei, and daughter flagella developed. The free end of the original flagellum disappeared, and the original parasite, limited by that portion of the flagellum which was wrapped around itself, became spherical, enlarged, and eventually contained a number of free daughter parasites which escaped on the bursting of the cyst. The contents entered the intestine of the flea and were excreted in the faeces. If swallowed in a moist condition by the rat the latter became infected. He adduced evidence to show that this was the only method of infection of the rat by *Trypanosoma lewisi*, save when the rat swallowed the flea altogether.

Measurement of Electro-conductivity.

Dr. MYER COPLANS (Leeds) described an apparatus for the determination of electro-conductivity. A point of interest in this apparatus was the method of slinging the coils, and Dr. Coplans referred to the advances which had been made within recent times in this direction. While the apparatus was described by the makers as an ohmmeter, it could be equally well spoken of as a resistance meter or a conductivity meter.

Asbestos.

Dr. COPLANS also gave some interesting details of experiments carried out with asbestos and other silicates. He said that, though asbestos was usually described as being insoluble, there occurred under certain conditions something approaching solution, though he preferred to designate it deterioration. When absorption into the asbestos proceeded, the deterioration became more active. He had found that a suspension of diphtheria bacilli lost their virulence when brought into contact with, and partially absorbed by, asbestos.

Permeability of Vessel Walls in Nephritis.

Dr. CHISHOLM showed with striking clearness that the volume of blood was regulated by the behaviour of the endothelium of the vessels in nephritis produced by potassium chromate, and stated that inhibition of permeability was to be observed more clearly in chromate than in uranium nephritis. Professor BOYCOTT spoke of the alteration in the permeability of the vessel wall in uranium nephritis.

Effect of Bleeding on Antibodies.

Dr. O'BRIEN (London) gave a demonstration showing that the haemolytic amboceptor in the serum of horses previously treated with foreign blood cells persisted at a high level after large bleedings, but that in the case of horses immunized to diphtheria toxin there was a marked fall in the antitoxin in the serum after such bleedings. He discussed the theoretical significance of these phenomena.

Effect of Nuclein on Antibodies.

Dr. S. P. BEDSON (Newcastle) said that a number of observers had found that resistance to infection was raised by nuclein or nucleic acid. Working with four different samples of nucleic acid, he had found that the opsonic index was only raised by two samples, which proved to be impure; the purer samples failed to cause this increase of opsonin. Having come to the conclusion that the special action on the opsonic index was due to some impurity in the nucleic acid preparation, he proceeded to indicate the lines along which his further research would be conducted to solve the general question of the effect of the nuclein substances on normal antibody.

Augmentation of Toxicity of Bacterial Products.

Dr. PENFOLD (London) read a paper describing some experiments made in conjunction with Dr. Violle to ascertain the effect of injecting large quantities of pure water on the toxicity of bacterial products. Dr. Penfold said that he had demonstrated previously that the toxicity of typhoid toxins was greatly augmented when the filtrates were injected along with large quantities of water. Working with the cholera vibrio he and Dr. Violle had found that the filtrate obtained from a four days old culture killed a rabbit only when injected in quantities of over 2 c.cm. If diluted in a large quantity of distilled water, a dose of 0.01 was followed by death often within two minutes. The same applied to broth cultures of eighteen hours. The water was also injected independently, either before or after the filtrate, and in this case death occurred with the small dose. If the filtrate was injected into the peritoneum and the water into a vein two hours later, death followed within two minutes. The speaker described the death as being as rapid as that observed in anaphylactic shock. In reply to Dr. COPLANS, Dr. PENFOLD stated that he had obtained a lethal effect with as little as 11 to 20 c.cm. of water, but that the optimum quantity was between one-thirtieth and one-fortieth of the body-weight. In reply to a question as to the maximum quantity of distilled water which could be given without producing death from haemolysis, he stated that he had given rabbits as much as 97 c.cm. without any appreciable harm. He also stated that the serum of rabbits treated in this manner apparently did not efficiently protect the individual against the effect of a subsequent injection of cholera toxin. The mechanism of the toxic effect had as yet not been sufficiently studied to justify any conclusions regarding the nature of the phenomenon.

Micro-chemical Differentiation of Lipoids.

Dr. W. CRAMER gave an account of work done with Drs. W. E. Bulloch and H. O. Feiss on the micro-chemical differentiation of lipoids. The centre around which this paper turned was the mechanism of the micro-chemical reaction of the Marchi reaction of true fats—that is, the glycerine esters of the fatty acids. He showed that olein was the only lipoid which gave a black staining reaction with osmic acid after preliminary treatment with potassium bichromate, but that this property was also evident with a mixture of oleic acid and cholesterin. By means of a table the histo-chemical characters of the best known fatty acids, etc., were explained, and the practical significance of blackening by Marchi's method illustrated. In the discussion, which was lively, Dr. Cramer found it necessary to emphasize the fact that the reactions of

which he was speaking were histological and not pure chemical ones, and that a quantitative extraction of all the lecithin by ether or other solvents was practically impossible.

Splenectomy for Splenic Anaemia.

Dr. S. McDonald detailed the history of four cases in which splenectomy had been carried out for conditions which were diagnosed as splenic anaemia. In the first case, however, the diagnosis proved to be erroneous, the condition being a secondary anaemia with great enlargement of the spleen. Death, unfortunately, followed in this case, and the *post-mortem* examination showed that it was due to haemorrhage resulting from the operative interference. The spleen exhibited well-marked sago-waxy degeneration, but during life no indications of this change were detected. The second case was a typical one, and the result was complete cure, known to have lasted for some ten months. In the third case the patient was a child with typical symptoms. The result so far was satisfactory. The changes in the spleen were described and their significance discussed. Lastly, an unusual case with all the signs of splenic anaemia was described, in which splenectomy was performed, but death followed. This case was complicated by cirrhosis of the liver, thrombosis of the splenic vein, operative damage to the pancreas, which the author regarded as serious, and the usual changes in the spleen associated with splenic anaemia. Dr. Murray pointed out that accidental injury to the pancreas in experiment animals was not of material consequence, but Dr. McDonald said that surgeons regarded it as highly dangerous in the human subject.

Lethal Dosage.

A very good discussion followed a paper by Dr. G. Dreyer and Dr. E. W. Ainley Walker. The latter showed that the minimal lethal dose of a large variety of substances, if worked out on the basis of the animal's body weight, led to irregular results. Leaving aside the question of the time factor, he contended that constant results could be obtained by taking into account the volume of blood. Since it had been shown that the volume of the blood and the surface area of the body were in definite relation, he had set up a formula which gave uniform results for lethal doses in a constant time. On this basis he found that the dosage of pharmacological drugs suggested for children needed revision. On the revised basis, the full dose was given at 21 years, three-quarters at 15, one half at 9 or 10 years, one third at 3 to 4 years, one quarter at one year, and one-tenth in the early months of life. For the determination of the lethal dose without fixing a constant time arbitrarily, Dr. Dreyer had introduced another formula, which stated that for every equal increment in time there corresponded a definite increase in the active dose. The formulae gave remarkably constant results in the experimental series. Dr. O'Brien referred to the wide variations obtained in attempting to fix a lethal dose for tetanus toxin. The variation of the time when death took place was often extremely wide. In reply to other questions Dr. Walker said that the figures given represented averages of groups of animals, and that satisfactory results could be obtained with any series of animals, no matter of what weight or when they died. Dr. Hort raised the question whether the formulae could really reflect the true dose, in view of the work done by Penfold and himself with bacterial products diluted with large quantities of water. The formulae did not take into account the question of diluent. It was suggested that the formulae might be employed to measure the range of individual susceptibility.

Infective Abortion.

Dr. J. H. Teacher gave an account of some observations and experiments on infective abortion in guinea-pigs due to a diphtheroid bacillus. The bacilli were chiefly found on the surface of the placenta.

Enumeration of Vaccines.

Dr. G. H. K. Macalister described his method of counting bacteria by dark-ground illumination. The chief points of the method were the use of a grating in the eye-piece instead of the ruled squares in the cell of the haemocytometer. As a suspending fluid he used deci-normal hydrochloric acid, which stopped Brownian movements rapidly and prevented agglutination. Bacteria adhered to both the lower surface of the cover-glass and the glass floor of the cell, so that the counting could be carried in two planes without difficulty or eyestrain. He exhibited a table showing the results obtained by Wright's method and his own, the average being compared with the extremes. It was found that the difference between the average and the extremes was considerably less with his method than with Wright's method. The time occupied in his method was materially shorter than that occupied in carrying out the Wright counts. Dr. Henderson Smith congratulated the author on the surprisingly small differences between the averages and the extremes in the counts by Wright's method. He recognized the advantages of the eye-piece grating, and agreed that the new method would remove Brownian movement. Dr. C. J. Martin described the condenser which Drs. Rowland and Chick were using for counting bacteria. It had a small angle instead of the usual wide one, and was so adjusted that with an 8 mm. objective and a high eyepiece (Zeiss) counting became incomparably easier.

Cultivation of Spirochaetes.

Dr. J. W. McLeod gave a very interesting account of a simplification of Noguchi's method of cultivating spirochaetes on fluid media. Instead of using a lower tube to contain the piece of organ and the ascitic fluid, and the upper tube with a seal of agar-agar, he employed a single tube fitted with a perforated rubber cork, through which was passed a glass tube drawn out to a capillary point. The ascitic fluid in the tube was first exhausted of its oxygen content *in vacuo;* by adjusting the rubber cork the fluid was driven up into the capillary portion of the tube. The tube was then sealed off. For the purpose of examining the fluid for growth, the point of the capillary tube was broken off, a fine capillary tube passed through the glass tube into the ascitic fluid, and withdrawn with a sufficient quantity of fluid, and the tube again sealed off. Dr. McLeod had failed to start a culture of *Spirochaeta pallida*, but working with some cultures which Noguchi had placed at his disposal, he had been able to keep these going and to start subcultures. Growth was obtained in from four days to one week. Turbidity, due not to spirochaetes but to some other unascertained cause, was noted in the fluid. Cultivation only succeeded when associated bacteria were got rid of.

The Tuberculin Reaction.

Dr. R. A. O'Brien discussed the suggestion that the tuberculin reaction was an anaphylactic phenomenon. He limited his remarks to the phenomenon observed when a tuberculous guinea-pig was killed rapidly by an injection of tuberculin, which did not produce any marked toxic effects in a normal guinea-pig. Anaphylaxis to protein had the following characters: (1) The sensitizor was the same substance as the toxic substance; if an animal were sensitized by one form of protein, death would follow specifically only in response to an injection of the same form of protein. In the case of tuberculin the sensitizor was an infecting tubercle bacillus and the intoxicant tuberculin. (2) The injection of sublethal doses of the protein in a sensitized animal desensitized it, and it remained resistant to the action of the same protein. A sublethal dose of tuberculin in a tuberculous guinea-pig did not alter the susceptibility of the animal toward a subsequent injection of tuberculin. (3) Intravenous injections of the protein killed the sensitized animal immediately, but with tuberculin this did not occur. (4) In this anaphylactic death the lungs were found to be distended, but in a guinea-pig killed by a test dose of tuberculin the lungs collapsed as after ordinary death. (5) The serum of a sensitized animal, when injected into a normal animal, sensitized the latter toward the same antigen. The serum of tuberculous guinea-pigs did not render fresh guinea-pigs susceptible to tuberculin. (6) The isolated uterus of a sensitized animal contracted on the application of the antigen, and then became desensitized. Dr. O'Brien showed a number of curves which demonstrated that the uterus of a tuberculous guinea-pig contracted on the application of tuberculin, but did so repeatedly, whenever tuberculin was applied, and also when a glycerinated veal broth was applied. There was, therefore, no desensitizing and no characteristic specificity. The spleen of guinea-pigs killed by tuberculin was much

enlarged, as compared with the spleen of the ordinary tuberculous guinea-pig. In the discussion Dr. C. J. MARTIN referred to some experiments of Marmorek, which showed that while subdural injection of tuberculin did not kill tuberculous guinea-pigs, death was immediate when material from a tuberculous focus was injected. He raised the question as to how far the requirements of specificity should be carried in these forms of tests. He agreed that the tuberculin reaction was not an anaphylactic phenomenon.

Structure of Complement.

Professor MUIR read a paper by Drs. Browning and Mackie on the structure of complement. The protein of serum could be split up so that what was called the middle piece of complement appeared in the one fraction and the end piece in the other. Further manipulations revealed that the chief part of complement was attached to the pseudo-globulin, and that if the middle piece were split into euglobulin and pseudo-globulin, the greatest part of the complement was to be found in this pseudo-globulin part of the middle piece, while there was little in the pseudo-globulin fraction of the end piece. Practically all the complement was obtained by combining the pseudo-globulin of the middle piece and the albumin fraction of the end piece. If the serum was kept in a frozen state, complement could be preserved for a considerable time, even as long as six weeks.

Action of Electrolytes in Agglutination.

Dr. W. J. TULLOCH (Newcastle) gave an account of investigations from which it appeared that the electrolytes with monovalent and divalent cations precipitated sensitized bacteria, while trivalent and polyvalent cations acted strongly on unsensitized bacteria. The communication brought to light many points of technical importance, and it therefore caused not a little amusement when, in reply to the practical question as to which was the best electrolyte for ordinary agglutination, the speaker stated in one word—"saline."

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

AT a meeting on January 8th, Mr. J. CHARTERS SYMONDS, President, in the chair, the following were among the exhibits:—Dr. H. D. ROLLESTON and Mr. E. G. BOYD: A case of *Addison's disease* in a boy aged 12¾, with calcification of the adrenals. The interesting point was the presence of polycythaemia. Mr. SYDNEY BOYD: A case of *Splenectomy* for chronic acquired acholuric jaundice with splenomegaly. Apparently complete recovery had followed. There was neither congenital nor family history of the disease. Of special interest were the practically normal fragility of the red cells; the remarkable changes in the blood which followed operation; the futility of drainage of the gall bladder in these cases (this had been unsuccessfully tried); the immediate and beneficial effect of splenectomy. Mr. HENRY CURTIS: A case of successful *Excision of the shoulder* performed by Sir John Erichsen fifty years ago. Dr. BERNARD MYERS: *Osteitis deformans* in a man aged 57. The cranium was unaffected, but the lower jaw suggested possibility of coincident acromegaly. Mr. GORDON TAYLOR: Another example of the same disease. An operation for fractured femur had been performed. In this case also the cranium had not enlarged. Mr. T. H. KELLOCK: *Lipoma nasi* in a man aged 77. The tumour was the size of a fist. Sixty-two years before an amputation had been performed at "the seat of election" for a fracture of the left femur, tibia, and fibula, without an anaesthetic. Dr. W. ESSEX WYNTER: (1) *Congenital heart disease*, probably pulmonary stenosis, with incomplete ventricular septum, in a man aged 26. The patient's only complaints were shortness of breath on exertion, and inability to perform arduous work. He had never been able to play games. (2) *Patent ductus arteriosus* in a woman aged 35. It was revealed by *x*-ray examination, which showed a bulging pulmonary artery above the heart shadow. There were no symptoms. (3) *Chronic lymphatic obstruction* in a man aged 44. Dr. C. R. BOX: *Hypertrophy of the bladder*, with polyuria and polydipsia in a boy aged 7.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on December 19th, 1913, Mr. ERNEST MAYLARD, President, in the chair, Dr. JARDINE, in a paper on *The retraction ring of Bandl* as an obstruction in labour, said that clinical experience of a number of cases had confirmed his belief that it was not at the internal os that the ring formed, but several inches higher up, the height depending on the amount of stretching which the lower uterine segment had undergone. From a clinical point of view the exact situation of the ring was not of so much importance as the fact that it did form, and might cause an exceedingly dangerous obstruction in labour. In some cases it was not the primary cause but the result of the obstruction; in others it was itself the cause of the obstruction. While it was a rare complication of labour, it was commoner than was generally supposed. Cases fell into three groups, according as the retraction ring formed (1) in front of the presenting head, (2) above the presenting head, or (3) in breech presentations. When the ring formed in front of the head there was no apparent obstruction to its advance; yet labour was delayed despite strong and frequent uterine contractions. On external palpation the head was found well above the brim of the pelvis and could not be pushed down. If the abdominal wall were thin the ring could be felt. The os was dilated and the lower uterine segment opened up, but some three inches or so above the os a distinct ridge could be felt running round a portion or the whole of the uterine cavity in front of the head. During a pain this ledge did not relax but became more prominent and prevented the advance of the head. The membranes might or might not be ruptured; if intact they protruded into the vagina, and might even appear at the vulva. In any case the ring undoubtedly formed before the membranes ruptured. The cause of the formation of the ring was possibly a spasmodic contraction of certain of the uterine fibres, comparable to the spasmodic contraction of the os which was occasionally met with, and was generally attributed to an irritant which acted reflexly. If the condition were recognized in time both mother and child should be saved. The proper treatment, if the child were alive, was Caesarean section. Full doses of morphine or opium failed to cause relaxation. Manual dilatation was impracticable. Incision of the ring would be followed by extension of the incisions and would end in rupture of the uterus. Hydrostatic bags could not be introduced high enough to bear on the ring. If the child were dead it could be delivered by craniotomy. In a case of retraction ring above the presenting head the ring in a thin patient could be felt as a distinct ledge in front of the shoulders. It was due to the membranes rupturing before there was any dilatation of the os, and the uterus soon becoming moulded round the child. During the slow dilatation of the os retraction took place, and the ring formed round the neck of the child. If the condition were recognized early the chances for both mother and child should be good, but if it were recognized only after attempts to deliver had failed the prognosis was unfavourable, especially for the child. In this group of cases also the treatment was Caesarean section if the child were alive, or craniotomy if it were dead. In a breech presentation, when the legs were extended, impaction generally occurred, because of the retraction ring gripping the child below the knees, so that its legs and feet were hitched above the ring. In these cases the membranes ruptured early, the whole of the liquor amnii drained away, and the uterus became moulded round the child. The risks to the mother were very small if proper precautions were taken, and to the child they were not much greater than in an ordinary breech presentation which required artificial delivery. With the patient deeply anaesthetized the flattened hand should be passed in carefully in front of the child until a foot was reached, which must then be swept inwards over the front of the child and brought down carefully, on account of the thinness of the lower uterine segment. When the leg was brought down traction should be made upon it, while an assistant kept up firm pressure upon the fundus of the uterus to prevent the arms going up and to keep the head well flexed. If the arms were caught they must be relieved by sweeping them over the front of the child, and the after-coming head must be dealt with in the usual way.

Reviews.

SANATORIUMS FOR THE TUBERCULOUS.

SANATORIUM treatment, which has been alternately extolled and decried of late years, maintains its position as the best known method of dealing with internal tubercle, although it must be regarded as a very imperfect best.

Information is frequently sought as to the best climatic situations, the best forms of building, and the cheapest in cost, for the erection of sanatoriums, and all such questions may be found fully dealt with in the latest edition, the fourth, of Dr. RUFENACHT WALTERS'S well-known work[1] on the subject. The practical experience of years has wrought certain changes of opinion as to the relative value of the various elements of sanatorium treatment, and very definite distinctions are now made between the management of the febrile case requiring rest and the non-febrile case for whom graduated exercise is beneficial.

So many are the minor alterations required that Dr. Walters has rewritten the whole book, which follows much the same lines of arrangement as its predecessors, but has increased in size owing to the greater amount of attention devoted to more important points and to the larger number of institutions which call for description. These are all dealt with in proportionate detail in the second half of the work; many illustrations are given of the more important or more recent establishments, and all available information as to design and cost has been collated. As a textbook for medical and lay authorities who may be engaged at the present time in devising sanatorium accommodation to fulfil the promises held out by the authors of the Insurance Act, we can cordially recommend Dr. Walters's latest edition. To the practitioner seeking information to aid him in advising his tuberculous patients in the choice of a suitable institution such a work is invaluable.

Many questions arise in practice which cannot be answered without a good deal of thought. One of these is the decision between home or foreign sanatorium treatment. In former times the climatic considerations held the foremost place in any such discussion, and for certain classes of case the southern shores of France and Italy may still be best, while others will find the rarefied air of the Swiss altitudes more beneficial, but under either of these climatic extremes there are many drawbacks which are not met with under home conditions. The regulated hygienic life of a well-managed British sanatorium is in most cases advisable for the average British patient, in spite of the exasperating variations of weather to which all parts of the kingdom are subject.

In the opinion of many of those well qualified to judge, the sheltered inland situations have yielded better results than the seaside localities, swept as they often are by moisture-laden breezes or gales. Popular tradition has always assigned "bracing" virtues to seaside climates, but it has been abundantly demonstrated that sea-air has proved anything but beneficial to certain forms of tuberculous disease of the lungs, although almost uniformly useful in other forms of the disease, particularly in children.

The success or failure of sanatorium treatment, however, whether by the sea or inland, must depend largely upon attention to detail. The management of each case must be superintended by an experienced clinician and carried out by competent nurses. Every one concerned in the treatment of consumptives should have special training in his or her work, and it is to be hoped that a great army of such trained workers will be enlisted as the proposed system of tuberculosis dispensaries becomes developed throughout the country. At the present time there is great need for some system of registration by which the cases which have been under treatment, and perhaps classed as "cured," can be followed up. The Charity Organization Society has carried out such a system with success, and an extension of the method to all public institutions for dealing with consumptives is greatly to be desired.

[1] *Sanatoria for the Tuberculous.* Including a Description of many Existing Institutions and of Sanatorium Treatment of Pulmonary Tuberculosis. By F. R. Walters, M.D., M.R.C.P. Fourth edition, entirely rewritten. London: G. Allen and Co., Ltd. 1913. (Demy 8vo, pp. 458; 38 figures. 12s. 6d. net.)

SURGERY.

THE popularity of THOMSON AND MILES'S *Manual of Surgery*[2] may be estimated by the rapidity with which it has been necessary to issue a second edition of the third volume, which deals exclusively with operative surgery. It is only about a year ago that we were glad to notice this work very favourably. It does not pretend to be an exhaustive treatise on operative surgery, but deals with the essential features of modern operative work, and the selection and grouping of the operations are the result of the great experience of the authors. The volume is compact, the type is clear, the illustrations are sufficiently numerous to make the work really interesting, and the style in which it is written is pleasant, thereby continuing one of the most notable features of the first and second volumes. No very serious differences are to be noted when the new edition is compared with the first; there are, however, some omissions: for example, there is no notice of the needling method of treatment of aneurysm suggested by Macewen; the chapter dealing with the treatment of that disease being strictly modern, containing a correct account of the recent work of Matas. The chapter on the operations on arteries is thoroughly up to date, and bears evidence of study of the recent work of Guthrie and Carrel. The illustrations in this portion of the work are perhaps too diagrammatic, but they are sufficiently accurate to stir up interest in the subject, and to encourage further investigation. We are glad to see that not too much space has been given to the ligature of arteries and to amputations. We have long thought that too much importance was paid to the many amputations associated with the names of surgeons of past days. While it is right that these names should be preserved, there is sometimes a tendency to make a fetish of an ancient name. It is quite proper that the work and opinions of the Edinburgh school of surgery should bulk largely in this volume. The authors are brilliant exponents of Edinburgh teaching of the present day, and in this volume we find that they have not been unmindful of the great names associated with Edinburgh, and are keen to show that even with the changes of modern surgical technique, the essentials of operative surgery taught by Syme and Miller and Lister are in no way altered. We venture to think that this volume will rank equally high in the opinion of the profession with the others on general surgery.

It is hardly a year since we reviewed BINNIE'S *Operative Surgery*,[3] and now we have before us a new edition. While the general plan of the book is not altered some new material finds a place. The chapters on the operative surgery of the stomach have been to a great extent rewritten so as to introduce the changes necessary in consequence of the recent work on the lymphatics of the gastro-intestinal area. The comprehension of the lymphatic arrangements of the stomach is greatly aided by some lucid diagrams. This part of the book is very full, and gives prominence to quite the newest work. Another feature is the recognition of the work of the British Medical Association's Committee on Fractures. The author has incorporated *in extenso* all the propositions and findings of that Committee, and has shown himself to be not only favourably impressed by them but also disposed to recommend their general acceptance. This work fills a distinct place in surgical literature. The author's task is to "devote attention to the advanced operative surgery of the day and to avoid discussion of those topics which are sufficiently described" in ordinary textbooks of surgery. This means that much of the book is compilation, as it is impossible for one surgeon to speak with personal knowledge of all that is newest. Rare and difficult operations are described with exactness. No place is given to operations which ought to be within the everyday work and knowledge of the average surgeon. Keeping this in view, we venture to think that no one consulting the work will come away empty,

[2] *Manual of Surgery.* By Alexis Thomson and Alexander Miles. Vol. iii. Second edition. London: H. Frowde; Hodder and Stoughton. 1913. (Cr. 8vo, pp. 636; 255 figures. 10s. 6d. net.)

[3] *Manual of Operative Surgery.* By John Fairbairn Binnie, A.M., C.M.Aberd., Surgeon to the General Hospital, Kansas City, Mo. Sixth edition. London: H. K. Lewis. 1913. (Med. 8vo, pp. 1265; 1,438 figures. 30s. net.)

and most will be amazed at the vast amount of information it contains.

The first words of the preface of Mr. D. C. L. FITZWILLIAMS's *Manual of Operative Surgery*[4] are that the book is not written to be read by surgeons, and we are relieved that the author limits his appeal to the "apprentice" and the "journeyman craftsman," as the "master of the art needs no handbook." For, to be frank, we think it an unsatisfactory book, as it seems to be fitted to prepare students to meet examiners whose surgery is a quarter of a century behind the times. And that view seems to have been the author's. In the description of ligature of the external iliac artery we find the following: "Ligature by the extraperitoneal route; this method is the one usually adopted in examinations, but as the modern transperitoneal route is now sometimes asked, the student should make himself familiar with both." Now we think that it is bad teaching which preserves an obsolete method simply because some examiners may themselves be becoming obsolete. The sooner old-fashioned methods and operations agreed by everyone to be quite superseded by newer and better ones cease to occupy the pages of textbooks the better. There are other examples which may be quoted from Mr. Fitzwilliams's book. Lumbar colotomy, the author says, is now seldom performed in the living, and is practically impossible in a formalin-preserved subject; yet he occupies two pages in describing it. Ventrifixation is described according to a method discarded, we believe, by every gynaecologist of experience, and we have found no mention of Gilliam's operation of fixation of a loop of each round ligament in the tissues of the abdominal wall, nor of the Adams-Alexander operation, which has the commendation of such an authority as Kocher. We cannot agree with the author that the Macewen method of controlling the aorta causes undue pressure on viscera or embarrasses respiration. It seems as though it must have these effects, but experience proves that it has not. We wonder what the average house-surgeon thinks when he remembers the awful grind he had to get up all about amputations and how hopelessly mixed he was amongst Chopart, Lisfranc, Faraboeuf, Hey, Pirogoff, and all the rest, as he watches his chief cutting the flaps according to the material left him by the disease or the railway smash. We wonder, even, if he ever sees an amputation at all. We know that even in big hospitals in industrial centres months may pass without one. Yet authors of textbooks of operative surgery go on filling their pages with the old names and the old pictures, and apparently teachers of operative surgery still seem to be oblivious of the fact that amputations and excisions and ligature of vessels play only a very small part in the surgery of to-day. Ought not this department of operative surgery to be taught by inculcating general principles and not by elaborating unnecessary details, and if some examiners are so unreasonable as to expect candidates to be acquainted with obsolete methods, as Mr. Fitzwilliams seems to suggest, should not teachers call the attention of the universities and licensing bodies to the matter by some sort of joint representation?

Professor STEWART of Philadelphia is to be congratulated on the third edition of *A Manual of Surgery*.[5] The work is in one volume, and has been considerably improved since the first edition was reviewed by us in 1907. Much has been rewritten and fresh illustrations added; important additions have been made to the chapters on anaesthesia, surgical technique, syphilis, the vascular system, the lymphatics, the thyroid, the stomach, the intestine, fractures, amputations, the brain, and spinal cord. Both students and practitioners will find it useful; for the student it contains what is required for the qualifying examinations given clearly and concisely, for the practitioner it will serve as a useful book of reference.

[4] *A Manual of Operative Surgery, with Surgical Anatomy and Surface Markings.* By Duncan C. L. Fitzwilliams, M.D., Ch.M., F.R.C.S.Eng., Surgeon in Charge of Out-patients, St. Mary's Hospital, etc. London: Baillière, Tindall, and Cox. 1913. (Demy 8vo, pp. 458; 284 figures. 10s. 6d. net.)

[5] *A Manual of Surgery for Students and Practitioners.* By Francis T. Stewart, M.D., Professor of Clinical Surgery, Jefferson College, Philadelphia. Third edition. London: J. and A. Churchill. 1913. (Med. 8vo, pp. 753; 571 illustrations. 16s. net.)

THE DISEASES OF CHILDREN.

The Diseases of Children,[6] by Sir JAMES GOODHART and Dr. STILL, has now reached its tenth edition. An old favourite, it has served for the instruction of more than a generation of students in the London schools of medicine. "An early edition of the same book," says Dr. Still in the preface to the present edition of the work, "was my first guide in diseases of children, and if this tenth edition proves as helpful and stimulating to others as its precursor did to me in my student days, our purpose will have been well fulfilled." We do not doubt that its many merits will procure for this edition as wide a field of usefulness as any of its predecessors possessed. The strength and vigour of the pictures of common diseases in childhood remain unimpaired, and the task of providing those modifications and additions, which the advance of knowledge has made necessary, has been accomplished without destroying the charm of the older work. In one respect the newer material contrasts with the old. In the older work the references to the teaching of the leaders of Continental schools were not infrequent, and the work of Trousseau, Parrot, Henoch, and many others was mentioned with respect. The legitimate successors of these men in the Continental schools of to-day are not usually mentioned, even when their belief and practice is completely opposed to the opinions expressed in the text. Have we in our study of the diseases of children become more insular? The present edition contains several new chapters; perhaps the most important of these is that in which the subject of anterior poliomyelitis is dealt with. We notice that the chief place in treatment is still assigned to massage and the stimulation of the muscles by electrical means. The success which has been achieved in recent epidemics by the fixation of the affected muscles in that position which affords the most complete relaxation has been so great that we should have liked to have found some description of the methods to be adopted. The danger of stretching the muscles by the unskilful use of the exercises described in the appendix is not insisted upon. We notice that the authors advise caution in the addition of sodium citrate to cow's milk for infants, on the ground that constipation may result. We are not aware of any direct evidence that can be adduced in support of this view, which would seem opposed to all the teaching of pharmacology. Moreover, curiously enough, the authors, in speaking of the uses of potassium citrate in the treatment of pyelitis, mention the danger of producing diarrhoea by large doses of the drug. It is difficult to reconcile statements apparently so contradictory. The illustrations as a whole are well chosen and admirably reproduced. Perhaps the part played in the diagnosis of disease in children by an examination with *x* rays is not sufficiently illustrated. The single skiagram reproduced on page 443 can hardly be regarded as representing the results obtained by modern methods. The book remains among the most useful of the smaller textbooks of children's diseases in this country.

In the preface to his *Diseases of Children*,[7] a second edition of which has been received, Professor HENRY ENOS TULEY, M.D., writes: "Believing that the question of infant feeding is one of the most important which confronts us, much more space has been devoted to that subject than is given other important ones. We wish to interest the general practitioner in milk, its care and handling, the necessity for the formation of Certified Milk Commissions, and the establishment of milk dépôts where certified milk may be placed within the reach of the poor." This explanation must be borne in mind if the value of his book is to be properly appreciated. However great the need for interesting the general practitioner in the United States in the care of milk and in the necessity for a certification of milk by some independent authority other than the vendor, it is great and pressing also in this country. We welcome, therefore, a concise statement of the accepted American teaching

[6] *The Diseases of Children.* By Sir J. F. Goodhart, Bart., M.D., LL.D.Aberd., F.R.C.P. Tenth edition, edited and revised by G. F. Still, M.A., M.D., F.R.C.P. London: J. and A. Churchill. 1913. (Med. 8vo, pp. 975; 42 figures. 16s. net.)

[7] *The Diseases of Children.* By Professor H. E. Tuley, M.D. Second edition, revised. London: H. Kimpton; Glasgow: A. Stenhouse. 1913. (Roy. 8vo, pp. 684; 106 figures, 3 plates. 24s. net.)

upon these matters, and have nothing but praise for that part of the book which is concerned with them. The part dealing with the disorders of infantile digestion and nutrition is of unequal merit. The author says that the old classification of the diseases of the gastro-intestinal tract has been retained for want of a better, but with the full knowledge that it is unsatisfactory. We should have thought that it was just in this particular that striking advances had been made in the interval between the two editions. The language employed is sometimes picturesque, sometimes a little loose. For example, it is recommended that "after the child has ceased coughing it should be given a tonic which will make up the leucocytosis and low haemoglobin which is nearly always present." On the whole the book is sufficiently individual and sufficiently different from the usual small textbook on diseases of children to make it well worth perusal. It is well printed and profusely illustrated.

NOTES ON BOOKS.

THE third issue of *The Medical Who's Who*[8] exhibits the tendency of all such works of reference to increase in size. Of its 812 pages, 763 are filled by condensed biographies chiefly of members of the medical profession though we have noted some entries of dentists whose names do not appear in the *Medical Register*—a fact for which the title and the preface of the volume had not prepared us. The remaining pages are occupied by an alphabetical list of towns with the names of those resident practitioners whose names appear in the earlier part of the book. The publishers state that forms asking for particulars were sent to every practitioner on the *Medical Register* in Great Britain and Ireland and that the names of all those who returned these forms in time have been included. The book, therefore, does not claim to be either a directory of the profession or a selection of the most eminent names in the profession. It is an alphabetical list of all those doctors who wish to have their names included in the work, together with certain particulars of a more or less detailed character regarding their prosonal and professional history. So long as the book is accepted simply for what the publishers claim it to be, no great harm can be done, but, as has previously been pointed out, there is a risk of the public taking it for a list of doctors who have special claim to professional fame —a risk which is perhaps enhanced by the fact that the practitioner has been asked to state his speciality. A list which includes the President of the College of Surgeons, but not the President of the College of Physicians, the President of the General Medical Council, but not several of the members of that body; in which the Medical Director of the Navy, and the Chief Medical Officers of the Local Government Board, and the Board of Education do not appear, while the Chief Inspector of Factories does; from which the names of the President of the British Medical Association, its President-elect, Chairman of Representative Meetings, and Chairman of Council are absent, and which does not include the three Medical Commissioners under the Insurance Act—such a list, while no doubt of considerable interest for what it contains, is still far from being representative of the profession. There is a tendency to the setting up of a standard of length of biography whereby the entry shall be in inverse proportion to the fame of the subject, but this is common to all works of this class, and must be set down not to any fault of the publishers, but to an inherent weakness of human nature.

One of the latest additions to annuals of the reference book order is the *Tuberculosis Year Book*.[9] In addition to a useful general review by its editor, Dr. T. N. KELYNACK, it includes a miscellaneous collection of articles on some of the many aspects of tuberculosis by more or less well-known authors, outline sketches of the tuberculosis schemes that have so far been adopted in various parts of the country, and much information concerning various institutions which have made arrangements for the reception and treatment of cases of tuberculosis.

The issue for the present year of HERBERT FRY'S *Royal Guide to the London Charities*[10] is the fiftieth of the series, and like its predecessors is a very useful production. It supplies at a very small cost a comprehensive list of all charities working in and from London, showing when they were founded, their official address, their specific objects, the names of the principal officers, how application should be made by or on behalf of candidates, and the number of persons annually benefited. The arrangement is alphabetic and there is also an index. An habitual feature is a preface in which the editor reviews briefly the chief charitable events of the previous year from the point of view of philanthropic enterprise. From this it would appear that the sums bestowed in 1912 for the purposes of charity amounted to £3,724,571; this included about a million pounds left by Lord Wandsworth for the foundation and endowment of an orphanage; medical charities received over a million. Of the total £1,714,000 was subjected to trusts, thus bringing up the amount held in trust for charitable purposes to £31,666,409. Since the first issue of this reference book by Mr. Herbert Fry in 1863 its editorship has only twice changed; Mr. Fry was succeeded by the late Mr. John Lane, and he by the present editor, who is a second John Lane.

The records of the work done at the ninth Australasian Medical Congress fill two large volumes,[11] containing between them some fourteen hundred pages. There were twelve sections, and the whole congress, which was held at Sydney in September, 1911, under the presidency of Dr. F. Pockley, closely resembled in its duration and order of procedure an annual meeting of the British Medical Association. A very large number of papers on scientific subjects were read, and these, as well as the discussions which preceded the adoption of reports of committees, contain much interesting information. Instances in point are the discussions on contract practice, on hospital abuse, and on the preventive treatment of venereal disease. From the standpoint both of medical politics and of science the profession in Australia is very much alive.

In the report[12] prepared by Dr. PANNWITZ of the tenth International Congress on Tuberculosis, which took place in Rome in 1912, the forty or fifty papers read by the representative authorities of many different countries are printed *in extenso*. In most cases summaries are given also; these are in French and in German if the original was in English, in English and German if the original was in French, and in English and French if the original was in German. An opportunity is thus afforded of comparing these three languages as a medium for scientific thought, and of gauging the extent to which practical identity of form has been reached in regard to the expressions commonly used in discussing bacteriological and allied questions.

A CORRECTION.—The price of Dr. A. A. Brill's book, *Psychanalysis: Its Theories and Practical Application*, reviewed last week, p. 90, is 15s., and not as there printed.

MEDICAL AND SURGICAL APPLIANCES.

A Pocket Stylographic Pen.

At one time it seemed as though the stylograph pen, the first of the reservoir pens, would be altogether displaced in popular favour by the nib fountain pens, but the stylographic principle has certain advantages, especially for rapid note-taking and for carrying in the pocket. Improvements in workmanship have made it a more effective instrument, and there has been at the same time a material reduction in price. Both these advantages are possessed by a stylographic pen to which our attention has recently been directed. It is called the Compacto pen, and deserves the name inasmuch as, though when extended for use it measures 5 in., when closed for the pocket it measures only 3 in. The reservoir part of the pen, which is of vulcanite, is retracted into a silver-plated or silver case. The pen is free in use, but the stream of ink is so thin that it dries almost at once. The pen is therefore very convenient for making notes in a pocket visiting list. It is made by Burge, Warren, and Ridgley, Ltd., 91 and 92, Great Saffron Hill, London, E.C., and is sold by stationers at 3s. 6d. (silver-plated) or 7s. in silver. The makers will send a pen direct on receipt of a postal order.

[8] *The Medical Who's Who, 1914.* London: The London and Counties Press Association. (Cr. 8vo, pp. 812. 10s. 6d. net).

[9] *The Tuberculosis Year Book.* Edited by T. N. Kelynack, M.D. Vol. i, 1913–14. London: John Bale, Sons and Danielsson, Ltd. 1913. (Sup. roy. 8vo, pp. 476. 7s. 6d. net).

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MARISCHAL COLLEGE: NEW FRONT. FROM THE SPIRE OF ST. NICHOLAS CHURCH.

EIGHTY-SECOND ANNUAL MEETING

of the

British Medical Association,

ABERDEEN, JULY, 1914.*

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

THE UNIVERSITY.

MARISCHAL COLLEGE.

King's College was a Catholic foundation, and after the Reformation it continued for some years to be an object of hostility and suspicion to the Kirk. As a counterblast, George Keith, fifth Earl Marischal, an ardent Protestant, founded Marischal College. In the preamble to the Charter, he sets forth the objects of his foundation as follows:

"Whereas, being mindful of our birth, position, and duty, we had determined according to our ability to be of service to the Church, the country, and the commonwealth, and to further the general well being by whatever means we could. . . .

We desire to found at Aberdeen (called New to distinguish it from Old Aberdeen)—a city which has deserved well at our hands, and which, being specially bound to us by this benefaction, will, we trust, deserve still better of us and of our successors and of our whole family—a public "gymnasium" in the buildings formerly belonging to the Franciscans, where young men may be thoroughly trained and instructed both in the other humane arts and also in philosophy and a purer piety.†

There is a royal, almost a papal, style about this declaration which is almost comic when it is remembered that the "benefaction" by which Aberdeen was to be bound to the founder of the new college was in fact made up of spoils got from the robbery of Church property. "Never," says Professor Robert S. Rait,‡ "was there a founder who combined stricter economy with his piety than the Keith to whom Carlyle was grateful for allowing Scotsmen to cultivate the Muses on a little oatmeal." There is no evidence that he contributed a groat of his own money towards the foundation of the college which was to train the ingenuous youth of Aberdeen to deserve well of him and his family. The famous motto—

Thay haif said.
Quhat say they?
Lat thame say.—

is believed to express the pious founder's contempt of criticism of his disposal of the lands of the Abbey of Deer and other Church property. Marischal College, says Mr. Bulloch, "remains to this day the only university in this country founded by a nobleman." But then it falls to the lot of few noblemen to give their name to a college created out of nothing belonging to themselves. The example of this pious founder stimulated the Town Council to a like

* Previous articles on Aberdeen were published in the JOURNAL on January 3rd, p. 35, and on January 10th, p. 97.

† J. M. Bulloch, *Studies in the History and Development of the University of Aberdeen*, 1906, p. 62.

‡ Ibid., p. 389.

display of vicarious liberality. It gave the Grey Friars' Monastery to serve as a house to the new university.

Marischal College was founded in 1593. The buildings were altered and added to as funds were available. Until 1901, though altered and deformed, there remained in use as the Parish Church of Grey Friars, or the College Kirk, the ancient freestone church of pre-Reformation days. That interesting historic link with the past was sacrificed to make room for the pile of granite now forming the front block of Marischal College. Naturally there was great rivalry between the two colleges. To give any detailed account of the struggles between them would lead us far beyond the limits of a hasty sketch such as this. One hundred and fifty years after the date of Earl Marischal's Charter a decision of the House of Lords (April 11th, 1745) was needed to vindicate against the authorities of King's the right of Marischal as an independent university to grant degrees in all the faculties. During the numerous troubles, political and religious, of the seventeenth century the two little universities struggled on with varying fortunes. It is one of the ironies of history that although Marischal College owed its foundation to a reformer, when the Jacobite rising took place in 1715, it espoused the Stuart cause under the influence of the tenth and last Earl Marischal—the "Mylord Maréchal" so well known on the Continent; the only man, it is said, whom Frederick the Great really loved—and his brother, Field Marshal James Keith. King's College also, as might be expected from its history, took the same side. Both colleges were punished for their disloyalty by a fifth purgation in 1717, the result of which was that no fewer than ten professors—four of King's and six at Marischal—were deposed by the Royal Commissioners. In the peaceful times which followed Culloden the two colleges set about reforming themselves from the educational point of view. Springing out of this movement came further attempts at union between the two colleges. There were no fewer than four of these between 1747 and 1787, all ending in failure. In 1742 the infirmary had been founded, and the dispensary came into existence forty years later. Hence proposals for a joint school of medicine were prominent in the scheme of union of 1787. On the suggestion, however, that the aid of a Royal Commission should be invoked, the opposition of King's College was aroused, and the scheme came to nothing. An attempt by each college to found a medical school for itself had the same fate. Out of this movement, however, came the foundation by a group of twelve Marischal College students of a debating club known as the Aberdeen Medical Society, which achieved such remarkable success as to goad the university into action. One of the founders of the society was a student, who was afterwards as Sir James M'Grigor to be head of the medical staff of the British Army.



Marischal College in the Seventeenth Century.
[From an old print.]



Marischal College in the Eighteenth Century.

A Joint Medical School.

At the suggestion of Marischal College a joint medical school came into existence in 1818. Its life was from the first very precarious, and in 1839 the Senatus of King's College came to the resolution that it was "inexpedient, and even dangerous, to maintain further intercourse with Marischal College." One reason of the failure of this scheme was that its aims were too ambitious. In 1825 the joint committee decreed that every candidate for the degree of M.D. should be not less than 25 years of age, and should have the degree in arts. So difficult was the attainment of the degree made that between 1825 and 1839 only three students from King's and twenty-five from Marischal College gained the distinction. The provision for teaching was very inadequate, and students in general showed little disposition to learn. Of the teaching of that time a notion may be got from, Andrew Moir's account of his own student days. Moir, who was lecturer on anatomy at King's College, was a man who in a larger sphere might have won a European reputation. He says:

> There was in my time no teacher who concerned himself in the least about the progress of his students, or who took any pains to instruct them. We mostly studied anatomy and practical surgery, and these we learned at the dissecting room, all groping our way as well as we could, and the older students assisting the less experienced. We never saw our teachers except at the lecture hours, and many of us were vain enough to think ourselves as wise as they were, or even vastly wiser. . . . In those days, if we had plenty of subjects, we thought all was right. Our knowledge of practical medicine, such as it was, we got at the hospital, and to the hospital shop we trusted for materia medica and pharmacy. About midwifery we never thought seriously, and chemistry we conceived we had learned long ago.*

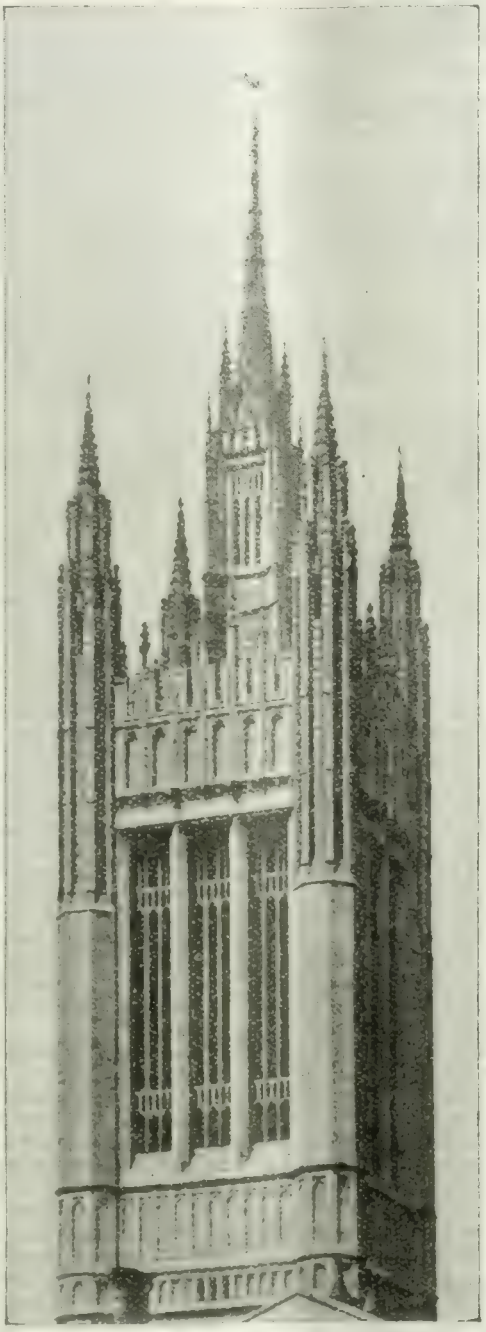
In 1839 the short-lived union between the colleges was dissolved. After the breakdown of the joint school, both King's and Marischal, especially the latter, showed an increased activity in furthering their own development. In 1839 William Gregory was appointed Medicine at

* Quoted in *Aberdeen Doctors at Home and Abroad*. By Ella Hill Burton Rodger. Edinburgh and London. 1893.

King's College, being the fourth member of the family to hold that post. He was a son of the inventor of the famous powder, so long a word of fear in nurseries, and had a considerable reputation as a chemist. His appointment was followed by the establishment of lectureships in anatomy, physiology, botany, practice of medicine, midwifery, and medical jurisprudence. At the same time chairs of anatomy and surgery were created by the Crown in Marischal College, and in 1857 a chair of medical jurisprudence was founded. The jealousy of the rival institutions was inflamed to the highest pitch. In 1850 an attempt was made on behalf of King's to show that Marischal had no right to grant degrees, with the amiable implication that the medical degrees already conferred were false coin. Marischal triumphantly vindicated its title to all the rights and privileges of the university—a question which had been finally decided by the House of Lords in 1745. In the meantime steps had been taken to bring pressure from without to bear on the two bodies which continued to show such incompatibility of temper. In 1826 Sir Robert Peel had appointed a Commission to investigate the state of things in the Scottish universities. The Commissioners, whose report was presented in 1830, suggested, among other things affecting all the universities, the fusion of the two colleges in Aberdeen. The chief benefit looked for from this union was the creation of an efficient medical school. But this did not end the matter. In 1836 Sir Robert Peel brought in a bill for the union under the title of "United University of Aberdeen," but it was soon withdrawn. In 1837 another Commission was appointed to draw up another scheme of union, but again this report led to nothing. Several other measures were attempted, but proved abortive.

The Union between the Colleges.

At last, on September 15th, 1860, the union was accomplished. That date marks the real beginning of the history of the University of Aberdeen. Medicine was then for the first time placed on a satisfactory footing. The classes in the Faculties of Medicine and Law and also the class of Natural History were housed in Marischal College. Since then the development of the medical faculty has gone on steadily.



Marischal College: Spire of Mitchell Tower.

In 1906 magnificent new buildings of Marischal College were opened by King Edward VII. A description of them was given with illustrations in the BRITISH MEDICAL JOURNAL of September 22nd, 1906. We need only say that the extensions then made cost over £200,000, all of which, with the exception of £46,000 contributed by the State, was raised by subscriptions. Among the donors, the principal were the late Dr. Charles Mitchell and his son, Mr. G. W. Mitchell, of the firm of William Armstrong, Mitchell and Company, a former student of the university, who gave about £40,000, and Lord Strathcona, who contributed £25,000. The buildings are said to be the largest granite pile in existence, with the possible exception of the Escorial. The material is throughout light grey granite, and the style is the perpendicular Gothic of the period of Henry VII. Over the main archway is an exquisitely wrought series of escutcheons bearing the arms of the Earl Marischal, Bishop Elphinstone, the Mitchell family, Lord Strathcona, Old Aberdeen, the City of Aberdeen, and the University. The Mitchell Hall, which is used for graduation and other university functions, measures 116 by 40 ft. It is lighted by ten side windows, each of five lights, and a great window at the east end of twenty lights. In this window the story of Marischal College is heraldically told in stained glass by Mr. P. J. Anderson, the university librarian. The Mitchell Tower, which dominates the whole building, is a square structure measuring 39 ft. on each face; it rises to a height of 250 ft. from the lower and 230 ft. from the upper quadrangle. It contains a look-out chamber from which a magnificent view of the city, the country for many miles round, and the sea is obtained. The whole structure is of light grey granite. The beautiful effect of the tower has been described as "200 ft. of four-square precipice, from which there leaps and crystallizes a spiry frothy crown of glittering pinnacles."

GROWTH OF THE UNIVERSITY.

How much the university has grown in the last twenty years may be gathered from the following passage in the foreword contributed by Principal G. Adam Smith to the first number of the *Aberdeen University Review* (November 1st, 1913):

> Twenty years ago, in 1892-3, there were on the regular teaching staff twenty-two professors, five lecturers, and sixteen assistants to professors—in all forty-three. Now there are twenty-five professors and thirty-three lecturers, of whom twelve, along with thirty-one others, are assistants to professors. Then there were nine external examiners, now there are thirty-one. Between 1890 and 1900 the average number of students was 830, while last session there were 1,042 (724 men and 318 women); the highest annual roll in the history of the university, though whether such a number can be maintained in the face of the volume of emigration from the north and north-east of Scotland is very doubtful. Within the last few years there have been new Ordinances in Arts, Law, and Medicine, the degree of LL.B. has been founded, and for the former system of class fees inclusive fees have been substituted for courses leading to degrees in Arts, Pure Science, Law, and Medicine. A new block of buildings, with eleven rooms for English, history, French, and German, has been erected at King's College; and the Carnegie Trust has allocated enough of its next quinquennial grant to the university for a large extension of the library at King's and the erection of an Examination Hall.

In the same *Review* it is stated that at the recent graduation, of 86 students who received the degree of M.A. no fewer than 48 were women. In science and medicine the position was very different—only 1 woman in each of these faculties obtained a degree, while 9 men graduated B.Sc., and 12 M.B., C.M.

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THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

AT a meeting of the Medico-Legal Society, which was held on November 25th, 1913, Dr. ROBERT ARMSTRONG-JONES, Resident Physician at the London County Asylum, Claybury, read a paper on The Rational Treatment of Incipient Insanity and the urgent need for legislation. Earl RUSSELL was in the chair, and Dr. Henry Maudsley was among those present.

The following is an abstract of Dr. Armstrong-Jones's paper, the adjourned discussion on which will take place at the meeting of the society on Tuesday next, January 20th.

In the course of his paper Dr. Armstrong-Jones pointed out that, inasmuch as it represents the professions of law and medicine, the society was well qualified to discuss the question of treatment of incipient insanity. The mental and physical condition of the insane required the services of a medical man, while to protect property and safeguard liberty the services of a lawyer were necessary. Insanity probably had two meanings for members of the society. The medical section would regard it as a disease, while the legal members looked upon an insane person as one who had become such through the filling up and signing of certain forms and schedules. To the lawyer the transition from sanity to insanity took no notice of the condition necessitating the change. He only took cognizance of the delimiting frontier, namely, certification. The subject of his paper demanded earnest support, because an unjustifiable obloquy attached in the public mind to insanity and to the insane, and even to places where they were treated. When recovering from his terrible disability no convalescent home would at present receive a lunatic, while he was even shunned by his friends and relations. Indeed, he was even shunned when, as was now frequently the case, he was restored to his former health, owing to unfair bias and unsympathetic feeling. It was the duty of those acquainted with the lunacy laws to try and alter the public feeling against those who suffer from disease of the mind. Experience had shown that treatment in early stages was most successful.

There were about 140,000 lunatics in England and Wales, in addition to many other persons who might be regarded as borderland cases. While parents sacrificed themselves in order to give good education to their children, both parents and teachers sometimes forgot the importance of a healthy nervous system. The neurasthenic class was never more numerous than it was to-day. "Homes" had been established for all sorts of nervous breakdowns; but if it were only more widely known that incipient insanity could be controlled and quickly relieved by proper treatment and early advice, a national movement might be promoted to provide for it. His subject had been brought into prominence by the recent munificent gift of Dr. Henry Maudsley to the London County Council, as a result of which a mental hospital was to be established in South London; but it could not be of full use until the law was changed. Under the present system there was one lunacy law for the rich and another for the poor. Even a rich lunatic, however, could not be cared for by his friends or relations, except at the risk of their being fined. Further, no person suffering from insanity could be kept or maintained for payment unless he was certified and registered. A person who was restless or delirious with excitement could not be looked after in any home or private hospital without risk unless he was certified. The certificate carried with it a stigma. He had known persons to lose their situations owing to that stigma. While alcoholic excess was often said to be the most frequent cause of insanity, mental disorder was a condition with many antecedents, which might be brought about by numerous causes—for example, unhealthy surroundings, the want of fresh air and sunshine, long years of strain and worry, noise, sleeplessness, and bad food. It was a gradual rather than a rapid change. He cited the case of a woman whose confinement was associated with a slight fissure of the cervix uteri. The continued infection from this source caused her to become a complete mental wreck. Early treatment would have stopped the mischief. A poor mother in a needy home with a large family might also through worry and overwork eventually fail in general health and be threatened with a mental breakdown. She would not be taken into a general hospital, having no definite organic disease, nor would she be admitted to an asylum, not having been certified. It was cases of this character that required special treatment, and he could cite many others. He had seen many instances of teachers, governesses, clerks and working men who would never have been certified insane could they have had intermediate treatment. Many a young woman might also by such treatment be saved from the pauper lunatic asylum after her first confinement. Again, for persons of a nervous or high-strung temperament, who had been subjected to accident or shock, there was often no place but the nearest lunatic asylum.

It was satisfactory to know that many patients suffering mentally from the effects of alcohol had been successfully treated in the Poor Law infirmary wards. It was cruel that other rescuable cases should not be also saved. While a rich man could be placed as a voluntary boarder in a licensed house, or a mental hospital if a mental breakdown was impending, there was no such accommodation for the poor, who had to pass through the workhouse or Poor Law infirmary; yet, even in the rich man's "retreat," what were generally termed "nervous cases" were frequently looked after by persons having no knowledge of incipient insanity.

Owing to the stigma of insanity, there was a great tendency on the part of relatives and friends to avoid asylums and to use these nursing homes. Even doctors sometimes failed to recognize the early symptoms and sent patients to these homes. The line between sanity and insanity was so fine that a large number of cases were undetected, and a number of uncertified lunatics did exist.

In his view it ought to be possible to establish a system whereby cases could be kept under observation from the start in a house or home recognized or registered for official supervision either by the Lunacy Commissioners or by such authorities as the London County Council in London. The feeling that he was not going into an asylum would encourage the patient who desired mental relief.

Successful experiments had already been made. In Glasgow the Poor Law authorities, advised by Dr. John Carswell, had provided separate wards in their sick infirmary for the treatment of early mental cases. In 1904 1,027 such cases were sent to the infirmary, of whom 56 per cent. were sent to the asylum, but 42 per cent. recovered within six weeks. Treatment of early cases was easier in Scotland than in England because the Scottish lunacy law allowed treatment of incipient insanity for six months before certification. Dr. Helen Boyle had established a successful mental hospital at Brighton, while in London (under Dr. Toogood, of Lewisham) and in Liverpool early causes of lunacy had been treated under the Poor Law with satisfactory results. In 1905 it appears that of 23,734 mental cases in London 11,428 were sent to the asylums, while 10,158 were sent out recovered within thirty-one days. Having drawn attention to the fact that in the State of Ontario a law had been passed providing for the early treatment of mental cases, he mentioned that steps had been taken in the same direction at the Albany Hospital, New York; in the colonies of Victoria and New South Wales; in Berlin, Göttingen, Dresden, Vienna, and Paris.

He pointed out that in 1903 a Lunacy Acts Amendment Bill for London had contained a provision authorizing the London County Council to establish receiving homes for mental cases. A similar bill was introduced in 1905 by Sir John Batty Tuke, but it had never become law.

In view of the munificence of Dr. Maudsley it was urgent that there should be changes in the law of lunacy if that new hospital were to become the leading mental clinic of the world. Under existing law it would become an ordinary lunatic asylum, receiving patients after their disease was fully developed. Was it surprising that the friends of the poor insane should resent this treatment for the most dreaded and disabling of all the afflictions to which the poor were susceptible?

The symptoms of insanity began long before the patient was insane. What would be thought of a doctor who did not place a patient suffering from tuberculosis under treatment until cough and emanation had fully confirmed the presence of the disease? Indeed, our sanatoriums recognized the need for early treatment, and there would be a public scandal if admission was refused until the disease was permitted to get its full hold. That, however, was what occurred in the present treatment of insanity.

He recognized that the proposed innovation must be carefully safeguarded from abuse, and that there were many dangers connected with it. He would like to move a resolution to the effect that any person whose insanity was doubtful, or the symptoms of whose case had not fully developed, or in whom the disease had not yet become confirmed, should be permitted to be placed under treatment for a specific time in a home or hospital suitably registered (so far as London was concerned) by the London County Council and recognized for the purpose by the Lunacy Commissioners, upon the application and upon the responsibility of the relations or other responsible persons. The necessary application should be accompanied, as was now the case in Scotland, by a written medical opinion of the case, and certified, if necessary, before a magistrate. He would also like to move that a committee be appointed to consider his proposal.

Dr. SIDNEY COUPLAND, Mr. A. H. TREVOR, Dr. HELEN BOYLE, and Dr. NATHAN RAW took part in the discussion of the paper, further debate being adjourned to the date already stated.

THE CENTENARY OF SIR JAMES PAGET AT GREAT YARMOUTH.

No more fitting commemoration of the centenary of Sir James Paget's birth could have been conceived and carried out than that which took place at Yarmouth on Sunday, January 11th. On this day one hundred years ago James, the twelfth child of Samuel and Sarah Elizabeth Paget, was born at 59, South Quay, which had just been rebuilt by his father to meet the increase in the size of his family. This house, which still remains, bears a tablet with the following inscription:

SIR JAMES PAGET, BART.,
F.R.S., F.R.C.S.,
SERJEANT-SURGEON TO
H.M. QUEEN VICTORIA,
WAS BORN IN THIS HOUSE, JAN. 11, 1814,
DIED IN LONDON, DEC. 30, 1899,
HONOURED RESPECTED BELOVED
FOR HIS SCIENTIFIC SKILL
HIS VAST KNOWLEDGE
HIS HIGH RELIGIOUS PRINCIPLE
HIS UPRIGHT FIRM
AND PEACEABLE CHARACTER.

Paget spent the first twenty years of his life in his native town, and it was during the four years for which he was a pupil of Mr. Charles Costerton, a well-known general practitioner in Yarmouth, that he published, in collaboration with his elder brother Charles, that now very rare little octavo, *Sketch of the Natural History of Yarmouth and its Neighbourhood, containing Catalogues of the Species of Animals, Birds, Reptiles, Fish, Insects, and Plants at Present Known.* Of the educational value of thus early taking up a hobby outside his strictly professional work during his apprenticeship days he says (*Memoirs and Letters*, p. 27): "I think it impossible to estimate too highly the influence of the study of botany on the course of my life. It introduced me into the society of studious and observant men; it gave me an ambition for success, or at the worst some opportunities for display in subjects that were socially harmless; it encouraged the habit of observing, of really looking at things and learning the value of exact descriptions; it educated me in habits of orderly arrangement. I can think of none among the reasons of my success—so far as I can judge of them—which may not be thought of as due in some degree to this part of my apprentice life. My early associations with scientific men; my readiness to work patiently in museums, and arrange them, and make catalogues; the unfelt power of observing and of recording facts—these and many more helps towards happiness and success may justly be ascribed to the pursuit of botany."

The commemoration on Sunday last took the form of three services at the parish church, at each of which the Bishop of Stepney (one of Sir James Paget's sons) preached. After forty-eight hours of continuous rain the day broke under truly Arctic conditions, with the ground hard frozen and snow clad, and a piercing east wind, such as can be experienced only near the Norfolk coast. The Mayor and Corporation, together with representatives of the various naval and military dépôts in the town, attended the morning service; and it was most inspiriting to be one of the huge congregation that assembled to do honour to Yarmouth's most distinguished son. The parish church of Yarmouth is the largest in England, and when it is remembered that it has seating accommodation for nearly 4,000 persons, and that hardly a seat was vacant, the effect produced by this large concourse of people singing "O God, our help in ages past," can be well imagined. Of the Paget family there were present, in addition to the Bishop of Stepney, Mrs. H. L. Paget, and their two sons; Mr. and Mrs. Stephen Paget; Mrs. Thompson (daughter), with her son; and Miss Paget, another daughter of Sir James. Amongst others in the congregation were the Master of Downing (Professor Howard Marsh), Dr. S. J. Barton, Dr. Sydney Long (representing the Norwich Medico-Chirurgical Society), Mr. Donald Day, Mr. H. A. Ballance, Mr. H. C. Nance, and Mr. Burfield, from Norwich; and Dr. Mayo, Dr. Shaw, Mr. W. Wyllys, Mr. H. Wyllys, Dr. Herbert Mayo, and many other Yarmouth practitioners.

In the course of an eloquent sermon the BISHOP OF STEPNEY briefly outlined his father's career, and mentioned the three great difficulties against which he had to contend. In his early life he had to face extreme poverty, which, of itself, would have crushed the aspiration of a less indomitable spirit; he also had to contend against an embittered opposition, and, finally, he was frequently disabled by illnesses, having had no less than six attacks of pneumonia between 1851 and 1870.

At the conclusion of the morning service the Mayor and Corporation and other representatives, together with the members of the Paget family present, proceeded to the Priory Hall, near the church, when the Bishop of Stepney presented a claret jug (given to his father by a grateful patient) to the town of Yarmouth. Mr. and Mrs. Stephen Paget also gave a silver-gilt fruit dish that had been presented to Sir James and Lady Paget on the occasion of their golden wedding, and Miss Paget presented the gold key with which Sir James Paget opened the new hospital at Yarmouth in 1888.

LITERARY NOTES.

DR. BERNARD TAFT of Paris, a distinguished pupil of the physiologist Mathias-Duval, has won considerable fame as a novelist. In his last book, *Dans la Lutte*, which has just been published by Albin Michel, 22, rue Huygens, Paris, he gives a vivid description of the world of professors and students of medicine.

In a report on an essay of Dr. Dinguizli of Tunis, on diabetes as described by the ancient Arab physicians, presented to the Académie de Médecine on December 30th, 1913, Professor Albert Robin points out that the discovery of diabetes mellitus is usually attributed to Thomas Willis in 1674. Polyuria of various kinds had been named without any attempt to discriminate them by Aretaeus of Cappadocia, Celsus, and many other ancient authors. Dr. Dinguizli, a distinguished Arabic scholar, in studying the *Canon* of Avicenna, who lived in the tenth century,

found in it not only a description but a treatment of the disease, which he called "diabetissa." He says:

This affection expresses itself by the expulsion of the water as it has been swallowed after a short lapse of time. This water is expelled by the organs which excrete the urine in the form of fluid that is very clear and colourless owing to its short contact with the constituent elements of the sanguineous humour. In this affection food and liquid nutritious substances are to the excretory organs, and in particular to the renal apparatus, what solid food is to the digestive apparatus, particularly the stomach when that organ is dilated.

The Greek authors apply the names "diascos," "karamis," and others to diabetes. In true Arabic speech diabetes should be called "Donarah," or "Zalc El Goliah," which signifies increase in size of the kidney. Avicenna describes the symptoms as follows:

Persons suffering from diabetes have an irresistible desire to drink without succeeding in satisfying a thirst which is always painful and imperious, The desire to pass water is incessant. They pass urine as abundantly as they absorb liquid. Nutrition in them is irregular and capricious. Thus one sees diabetics eat abundantly without the food doing them any good, as is shown by the loss of flesh from which they most often suffer.

The cause of diabetes, according to him, is generally a chill, or it may be the consequence of inopportune drinking of very cold water. The liver is attacked and its function as a source of heat supply is disorganized owing to exaggeration in organic combustions. The relations between the kidney and the liver become irregular to such a degree that the kidney withdraws from the liver humours in greater quantity than it can store. It is interesting, says Professor Robin, to note that Avicenna speaks of animal heat and organic combustion, and that he assigns to the liver a preponderant part in the production of these two phenomena. He also speaks of the part played by the nervous system, by the liver, by the digestive apparatus, and particularly the stomach, in diabetes. He seems to have noted the sweetness of the urine in diabetes, for he says that when exposed to the air it quickly dries, leaving a residue, which has a sweet taste like honey and resembling particles of bran. By way of treatment, Avicenna recommends the patient not to make a constant and exclusive use of fruits and sweet food, giving as a reason that the sugar increases the combustion in the body, and as a consequence also increases the animal heat. He recommends opium and oily fruits. He also advises the administration of various vegetable products—among others, the seeds of semen-contra (semen-cine, a strong aromatic drug imported from Aleppo and Barbary), fenugreek, and lupine. All these plants were reckoned as aphrodisiacs by the Arabs, and it may be conjectured that Avicenna prescribed them as remedies for the sexual frigidity which is common in diabetics.

In Dr. Weir Mitchell's *Autobiography of a Quack*, the hero, if such he may be called, in his variegated career, tries homœopathy. He found that his new practice had decided advantages. All pills looked and tasted alike, and the same might be said of the powders, so that he was never troubled by those absurd investigations into the nature of remedies which some patients are prone to make. He goes on:

Of course I desired to get business, and it was therefore obviously unwise to give little pills of Lac., or Puls., or Sep., when a man needed a dose of oil or a white-faced girl iron, or the like. I soon made the useful discovery that it was only necessary to prescribe cod-liver oil, for instance, as a diet, in order to make use of it where required. When a man got impatient over an ancient ague, I usually found, too, that I could persuade him to let me try a good dose of quinine, while, on the other hand, there was a distinct pecuniary advantage in those cases of the shakes which could be made to believe that it was best not to interfere with Nature. I ought to add that this kind of faith is uncommon among folks who carry hods or build walls.

He describes a consultation he had with a famous homœopath, where they busily discussed the case of a poor consumptive fellow who previously had lost a leg. In consequence of this defect Dr. Zwanzig considered that the ten-thousandth of a grain of aurum would be an overdose, and that it must be fractioned so as to allow for the departed leg. Otherwise the rest of the man would be getting a leg dose too much! The narrator afterwards tried his fortune as a German physician who had spent two years on the plains acquiring a knowledge of Indian medicine, and was prepared to treat all diseases by vegetable remedies alone. Next he thought of trying travelling as a physiological lecturer, combining with that the business of a practitioner, scaring the audience at night with an enumeration of symptoms which belong to ten out of every dozen healthy people, and then doctoring such of them as were gulls enough to consult him the next morning. He adds:

The patent medicine business also looked well enough, but it is somewhat overdone at all times, and requires a heavy outlay, with the probable result of ill success. Indeed, I believe one hundred quack remedies fail for one that succeeds, and millions must have been wasted on placards, bills, and advertisements, which never return half their value to the speculator. I think I shall some day beguile my time with writing an account of the principal quack remedies which have met with success. They are few in number after all, as any one must know who recalls the countless pills and tonics which are puffed awhile on the fences, and disappear to be heard of no more.

We think that if such an account is ever written it will show that the quack remedies which have proved successful are composed of familiar drugs with a well-marked action, such as aloes, which can be felt by the patient, with a little flavouring or colouring matter that can be changed without interfering with the effect of the active ingredient.

A writer in the *Journal d'Accouchements* says that nutrient enemas had their origin in the time of Louis XIV, when *clysterium donare* was the chief part of medical treatment. With their introduction a question began to vex devout souls, who were puzzled to know whether it was right to receive them in Lent or before Communion. In other words, does the enema break the fast? People were in great perplexity on the subject. A doctor named Montanus came to the rescue with a syllogism. Only one thing, he argued, can break fast—that is food. Now the character of food is that it is something taken into the body by the mouth. *Ergo*, as an enema is not taken by the mouth and does not pass into the stomach, it cannot be looked upon as food. The inference was quickly drawn. Since an enema *non frangit jejunium*, would it not be lawful to take some nice sustaining *bouillon* by *lavement* in Lent? This would be comforting to the body and would do no harm to the soul. Thus it came about that nutrient enemas came into use, the doctors having learnt the method of treatment from their patients. We do not guarantee the strict accuracy of this piece of medical history.

As we have just used the word *lavement* we may recall the curious fact that in the reign of Louis XIV the word was condemned as indecent. What was to be substituted for it? The difficulty was solved in characteristic fashion by the Jesuits. They proposed *remède*, which was sufficiently appropriate, as the enema was the great remedy in use at the time. Father Letellier begged Louis XIV to use it, and the Grand Monarch granted the favour. Then the Académie Française was ordered to replace *lavement* by *remède* in its dictionary. As showing the silliness of these scruples about words, we may say that in our younger days we have heard nice practitioners (and it may be remembered that Swift defined a *nice* man as a man of nasty ideas) use *lavement* as being less shocking to ears polite than enema! The word *lavement* has now recovered the place among respectable vocables which it lost when it was sacrificed to the prudery of a profoundly immoral age. Did not Voltaire well say that virtue had left the heart of man and taken refuge on his lips?

Professor Debove, Perpetual Secretary of the Académie de Médecine, presented to the Academy, at its meeting of December 30th, a pamphlet by Professor Lacassagne dealing with the last years and the death of Jean Jacques Rousseau. The author gives a number of interesting details as to the mental pathology of the writer of *Emile*. There is an account of his last moments, the official record of his death, the autopsy, and a cast of his face. As is well known, many hypotheses have been put forward as to the cause of Rousseau's death. Among other things, it has been attributed to a crime, to suicide, or to a fall in a fit. M. Berthelot, who examined the skull on December 18th, 1897, said it showed no trace of fracture such as would have been caused by a pistol shot. On the other hand, the absence of any lesion of the skull does not exclude the possibility of death by poison or by stabbing. M. Lacassagne attributes the death of Jean Jacques to a uraemic convulsion ending in a fall which caused a superficial wound of the forehead.

British Medical Journal.

SATURDAY, JANUARY 17TH, 1914.

THE BOVINE BACILLUS AND TUBERCULOUS GLANDS IN CHILDREN.

A HIGHLY important piece of original work on the infection of children with the bovine tubercle bacillus, by the Ernest Hart Memorial Scholar of the British Medical Association, appears on the first page of this issue. It deals with the connexion between tuberculosis and the consumption of raw milk, and offers conclusive proof that in and about Edinburgh, at any rate, that connexion is close indeed.

The tubercle bacillus, as we all know, was identified and described by Koch in 1882, and was recognized in the tuberculous lesions of both man and animals. For the next fifteen years or so only one variety of tubercle bacillus was supposed to exist, but in 1896 and 1898 Theobald Smith showed that morphological, cultural, and staining differences between two types, the human occurring in man, the bovine found in domestic animals, could be clearly made out. Koch in 1901 said that the infection of human beings with bovine tubercle bacilli was so rare as to be practically negligible, still maintaining this view in 1908. But the opposite belief was very strongly urged in 1903 by von Behring, who stated the dogma that the tuberculous milk imbibed by infants and children was the cause of any tuberculosis developing in them as adults, the infection remaining latent in them for years. For the last decade the question has been much disputed. It is clearly of the greatest importance that it should be settled, for on the answer depends the form that must be given to measures directed towards the suppression of tuberculosis. For if the bovine bacillus, and not the human, is the common infecting agent in man, preventive measures will have to be directed mainly against the use of tuberculous milk. The upshot of an immense amount of work has been to show that both Koch and von Behring were in error. Koch was mistaken in saying that bovine tuberculosis was so rare in human beings as to be negligible; witness the 65 cases of tuberculous cervical glands due to infection with bovine tubercle bacilli as described in Dr. A. P. Mitchell's report. And von Behring was wrong in ascribing the bulk of adult tuberculosis to infection with bovine tubercle bacilli, for numerous investigators throughout the world have found that the infection of adults with this bacillus is, actually and relatively, very uncommon. Both the latency postulated by von Behring and the transformation of the bovine into the human type of bacillus by the alleged long latent residence in the body as required by his hypothesis are as yet unproven. But it has been found that infection with the bovine bacillus is at least tolerably common in the tuberculosis of infants and children in every country.

In Edinburgh and its neighbourhood Dr. Mitchell found tubercle bacilli of the bovine type in no fewer than 65 out of 72 cases of cervical adenitis in infants and children, and his statistical table shows how closely the infection was connected with the consumption of raw milk; bacilli of the human type were found in the remaining 7 cases. Somewhat similar figures for the same district were reported by Fraser in 1912. Examining tuberculous material from lesions in the bones and joints of 67 tuberculous children, he found bacilli of the bovine type in 41, of the human type in 23, of both types together in 3. It is legitimate, therefore, to conclude that tuberculous milk is the common cause of tuberculosis in the bones, joints, and glands of the infants and children brought up in and around Edinburgh. As Dr. Mitchell says, this source of infection could be dried up at once if the local authorities possessed and used proper powers for the control of the milk supply. Until adequate precautions are enforced, it is imperatively necessary for the public to sterilize the cow's milk they give their children.

Dr. Mitchell's figures and deductions are based on investigations made in Edinburgh, and it cannot be doubted that they are valid for that city, but it must be remembered that other towns exist in which they certainly are not valid. Thus Gaffky investigated the tuberculous glands of 78 children in the city of Berlin, and found tubercle bacilli of the human type in 75 of them, bacilli of the bovine type in no more than 3. In Berlin, therefore, the fullest sanitary control of the milk supply could do little towards the suppression of tuberculous adenitis in children. Again, figures have been quoted to show that the actual danger run by drinking tuberculous milk, the milk of cows with tuberculosis of the udders, may be readily overestimated. An official of the German Imperial Sanitary Board has reported on 628 persons who had drunk tuberculous milk in large quantities for long periods of time. One group, containing 360 persons, 151 of them children, had taken the milk raw, and contained 2 cases of tuberculous adenitis, and 14 cases of suspected tuberculosis. The remaining group, 268 persons, had boiled the milk before consuming it; and among them were 13 cases of suspected tuberculosis. It must be remembered that a few tubercle bacilli inhaled into the lungs of young experimental animals suffice to set up fatal tuberculosis; whereas the fatal dose administered by swallowing runs into millions, and smaller doses are apparently innocuous. Again, bovine tubercle bacilli are unknown in Japan, according to Kitasato, and cow's milk is not used in Greenland; yet in both these countries the incidence of primary intestinal tuberculosis, the form chiefly affected by bovine tubercle bacilli in human beings, would seem to be much the same as it is with us. A statistical inquiry into the incidence of tuberculosis in man and cattle in Italy was made by Gosio in 1912. It has been argued that if human beings are often infected with bovine tubercle bacilli, the frequencies with which human and bovine tuberculosis occurred should vary together. Gosio found, however, that in Italy the two are not connected to any appreciable extent, and concluded that human tuberculosis was "a scourge due to the industries that favour human contagion." He examined the type of tubercle bacillus in 122 cases of human tuberculosis, and found the bovine type only once. It may therefore be concluded that in Italy, as in Berlin, the infection of human beings with tubercle bacilli of the bovine type is uncommon.

It is clear, therefore, that the extent to which the milk of tuberculous cows is actually responsible for the infection of mankind with tuberculosis is very

variable in different places. More experimental investigation of the question is urgently called for, because it cannot be settled on *a priori* grounds. In Berlin only 4 per cent. of the children with tuberculous glands gave evidence of infection by milk; in Edinburgh this percentage is as high as 90. At what figure does it stand in Manchester, in London, in Portsmouth, in our large towns and in our country villages generally? These are questions that demand an answer if an attempt is made to limit the incidence of tuberculosis in children by the elaborate legislative control of the milk supply.

A STATE MEDICAL SERVICE.

THE profession has recently gone through a period of so much turmoil that most of us would be glad if for a time we could rest and take stock of the situation, but there are many signs that this luxury must not be indulged in, and that the whole organization and status of the medical profession will shortly again be thrown into the melting-pot.

A measure which brought the medical attendance of some fourteen millions of the population under the control of the Government and local authorities, and which seems likely at no remote date to be so extended as to absorb the vast majority of the population, was bound to give origin to speculations on the question whether the present method of administration of medical benefit is the best that can be devised. In the discussion of this question the views of those who advocate a State Medical Service are beginning to loom large and must be carefully examined. These views have certain intrinsic attractions; they are in accord, or apparent accord, with certain social tendencies, and they are advanced or supported by not a few earnest and able members of the profession itself. Such a scheme, having an appearance of logical completeness and administrative symmetry, would naturally attract support from a certain type of lay enthusiasts for State control who, however imperfect their understanding of common human nature, are full of zeal and capacity for creating an appearance of a public demand—in other words, are very good "wire-pullers." It is necessary, therefore, before any fictitious "public demand" is manufactured that this question should be fully discussed by the medical profession. To its members the public will naturally turn for guidance, but the matter is one on which the public must be the final judge, for the question resolves itself into a debate as to whether the public—the ordinary man in the street—would or would not best serve its own interests by demanding a salaried medical service, a course which would practically extinguish the present race of general practitioners.

The proposals as put forward by the official organ of the State Medical Service Association and enunciated with certain variations by Sir John Collie in his lecture this week to the Faculty of Insurance, to which we do not propose now further to refer (a report will be found in the SUPPLEMENT, p. 28), may be summarized as follows: The various medical services of the community—public health, hospitals, Poor Law, general practitioners—are to be linked up in one national service of whole-time officers under a Minister of Public Health. The officers would be paid by fixed salary, rising by regular increments to a fixed maximum, except in the case of such members of the service as by reason of special merit would be advanced to more highly paid and responsible posts. In all cases there would be fixed hours of service, stated holidays, and pensions. At the first blush this is a not unattractive picture, but the profession, with a fairly extensive knowledge of actual as opposed to utopian State and municipal services, will need a good deal more than confident assertion to convince it that such a picture when materialized would not be for it a very disappointing reality. State salaries have a habit of affording remuneration and conditions of life inferior to those which can be obtained by men of energy and capability in independent positions, and the attractions of pensions and holidays may quite possibly be more than counterbalanced by the disadvantages of belonging to a kind of hierarchy in which merit and hard work would by no means necessarily lead to the best posts, and in which red tape would tend to the repression of individuality and the maintenance of a respectable dead level. For the moment we are looking at the matter from the insured person's point of view, and leave aside the probable effect of such a system on the progress of medicine, scientific and practical.

The advocates of the service declare it to be a logical and necessary sequel of the panel system. This is no more than an assertion of their particular opinion, and from this opinion we take leave wholly to dissent. The foundation of the panel system is the right of the insured person to choose that doctor who in his opinion is the best for him. The idea of a salaried whole-time service is based on a negation of that right. At present, in many areas, the insured person (and still more his dependants) has a free choice among practically all the doctors engaged in industrial practice. In other areas the choice of the insured person is more restricted, though we anticipate that before long the good sense of the Insurance Committees will lead them to a proper conception of what is meant by the free choice clause of the Insurance Act. It would not be possible to incorporate free choice in any system of salaried whole-time medical officers serving the whole community. Under any such system it would as a matter of administration be necessary to allot an approximately definite number of prospective patients to each doctor; this would entail a geographical distribution of the doctors. Let it be assumed that it would be decided that in towns no doctor should have more than 3,000 persons in his charge. Then in a town of 30,000 ten doctors would be required, and the town would be divided into areas, each containing approximately 3,000 persons. Under such a scheme the doctor appointed to one area could not be allowed to follow his patients if they moved, nor could people outside his district who preferred him to their own district doctor be allowed to consult him, for to allow such a discretion would immediately set up the very discrepancies in the work of doctors which the State service, in fulfilment of its aspirations towards symmetry, professes to eliminate.

To do the advocates of the State service justice it must be admitted that they do not seek to ignore or avoid this difficulty. They simply sweep it on one side by declaring that they stand for utility and not for sentiment, and that, as "free choice" is a matter of sentiment, it must give way before the superior utility of a salaried whole-time service. As to superior utility, the advocates of free choice will gladly join issue, for it is on this point that any system must stand or fall, but it will be very interesting to see what the working man, and more particularly his wife, will say to the advocates of a State service if the latter will frankly state all that such a service implies, and not content

themselves with talking vaguely about "administrative efficiency," "co-ordination," and other such blessed words. *Naturam expellas furca, tamen usque recurret*, or, to adopt La Fontaine's paraphrase, if you slam the door in Nature's face she will come in by the window. Nothing has been more striking to practical men than the way in which the elementary facts of human nature are ignored or flouted by the advocates of a whole-time service. It is significant to note that the chief supporters of the plan in the profession are professors, consultants, and others who, if they ever knew anything about general practice among the industrial classes, have evidently forgotten it. As has been said, it must frankly be recognized on all hands that the decision finally rests with the public, but we believe that when the matter is fairly placed before them the people themselves will reject a plan which is essentially undemocratic, as it would deprive the poorer members of the community of that free choice which would still be left to the well-to-do, who would be able to employ, if they chose, the few independent practitioners remaining outside the State service.

We believe that the sentiment of the people in preferring to choose their own doctor rather than have him chosen for them by more or less superior elected or official persons, is sound, and the House of Commons recognized this when it conceded the right by a very large majority. The British Medical Association, in fighting the battle for free choice, had a true conception not only of the sentiment of the public, but of its real needs. The demand for "free choice" has a real utilitarian basis. We would not for one moment argue that the average layman always makes the best choice from a professional point of view—have we not known people deliberately pass our own door and choose someone else! But granting that the State or the local authority would have the same kind of material to choose from as the individual now has, we believe that the average person is more likely to get real satisfaction and benefit if he chooses a man in whom he has confidence, as the result of personal experience, or on the recommendation of friends who have had personal experience, than if he were placed, willy-nilly, in the hands of his State-appointed officer, whose personality might be absolutely unsympathetic to him. We are content to leave the decision as to this in the hands of any person who has been a patient himself.

This article has dealt more particularly with the patient's point of view, first because in our opinion the advocates of the State service are apt to overlook the individual in their zeal for the State. The State is only an abstraction. The primary function of the general practitioner is, and always must be, to meet the demand of the individual to have his individual ailment cured or alleviated. Highflown generalities about the duty of the profession to the State cannot be allowed to obscure this fact Secondly, unless the profession is prepared to abandon the principle of free choice on which it concentrated with such remarkable unanimity in 1911, it seems unnecessary at the present time minutely to analyse the advantages or disadvantages of the proposal from a purely professional point of view. We must not be taken as arguing that the present system is incapable of improvement. We should be very sorry to think so. But we do contend that the onus is on those who advocate a State service to show either how such a service can be reconciled with the principle of free choice, or alternatively that the profession in fighting for this principle was profoundly mistaken.

THE DISTRIBUTION OF UNALLOCATED FUNDS.

On previous occasions we have had the opportunity to state various views held with regard to the distribution of unallocated funds; we are now in a position to add the opinions held by the Non-Panel Committee of the British Medical Association. The question may be one chiefly of academic interest, but it undoubtedly gives rise to acute differences of opinion in the profession. The Non-Panel Committee appears to consider that the scheme it suggests ought to unite moderate men of both parties. It is probably safe to assume that the hope of the authors of the Insurance Act was that all insured persons would be panel patients, and the vast majority of doctors panel men, and in that case no medical practitioner would have received more than 7s. a year in respect of medical benefit for each insured person on his list. The hope, however, has not been realized in certain districts, notably in London. In this connexion insured persons at the present time may conveniently be divided into three classes: (1) Those who have taken their cards to panel doctors; (2) those who have been ill and have been medically attended, but have not taken their cards to be signed, and have been treated at their own expense; (3) those who have not been ill and have not had their cards signed. The second of these classes may be divided into (*a*) those who will always remain non-panel patients; (*b*) those who may possibly become panel patients as the result of the vicissitudes of life. Class 3 may be subdivided into (*a*) those who will go to a panel doctor when they fall sick—that is, will join Class 1; (*b*) those who will join Class 2 (*a*). The Non-Panel Committee holds that all moneys provided for the medical benefit of insured persons who have not chosen a doctor should be used only in payment of the cost of medical service to such insured persons. It is considered that on these lines it is easy to devise a plan on which an equitable distribution of the funds may be based. For Class 1 the question is already settled. For Class 2 (*a*) the policy of the Association now stands "that such portion of the unallocated funds in the hands of the Insurance Committees as are attributable to insured persons who have been attended individually as private patients should be distributed as a set-off to the medical bills of these patients." As regards Class 3 the Non-Panel Committee holds that the money for their medical benefit should be retained until it is known whether these patients fall into section (*a*) or section (*b*). When the time arrives for one of these insured persons to need a doctor, and the patient decides to employ a panel practitioner, then the doctor who first signed the patient's card would become entitled to the deferred pay standing to the credit of the insured person. If a man had neither selected a doctor nor been ill during three consecutive years there would be standing to his credit the sum of one guinea for medical benefit. When he became ill the first doctor to whom this insured person went should be the presumptive doctor of that person for the preceding three years, and, if on the panel, would receive the guinea as deferred pay. If, however, the patient belonged to section (*b*) of Class 3 and had not been ill for three years, in that case when he went to a doctor he would become a member of Class 2 (*a*), and as soon as he presented a receipted bill he would become entitled to draw up to one guinea to pay that bill. If his account happened to be only 7s., then 14s. would be carried forward to his next bill for medical attendance. It is urged that under such a scheme the only class of insured person who would present any difficulty is 2 (*b*), and this class is admitted to be open to discussion. It has, however, been suggested that this difficulty might be met in the following way: A certain number of better-class patients will always be too indifferent to go to the trouble of presenting their receipted bills for discount. Hence there will always be a certain amount of money in the unallocated fund. From this, which is only applicable to medical benefit, it might be

possible to compensate a panel doctor who had to take up the treatment of an insured person whose means no longer enabled him to pay for his treatment. It is urged that these proposals contain possibilities for the retention of the freedom of the insured persons in the community and of the medical profession, and are therefore worthy of serious consideration. If they will help to heal the sores of the profession, it is even more advisable that calm discussion should be given to them.

THE STATUS AND DUTIES OF MEDICAL OFFICERS OF HEALTH.

A copy of a letter addressed by the Local Government Board to the Ilford Urban District Council, printed in the Supplement for this week, enunciates a principle and deals with certain local incidents in a way which it may be hoped will bring a prolonged controversy to an end. For some time, as our readers are aware, there has been friction between the medical officer of health on the one hand, and the Ilford Urban District Council and its Public Health Committee on the other. The Urban District Council passed a resolution asking the Local Government Board to assent to the dismissal of the medical officer of health, Dr. Stovin, but at the request of a number of ratepayers the Board, last July, held a local inquiry through two of its inspectors. The inquiry was prolonged, but eventually it was announced that the medical officer of health withdrew all the charges he had made against the council and the staff, and that the council had thereupon decided to rescind the resolution calling upon him to resign. Dr. Stovin had throughout had the unanimous support of the profession in the district, and it was hoped that the matter was at end, and that the growing and populous township of Ilford would retain the services of its energetic medical officer, whose abilities and capacity had never been in question. This hope, however, was frustrated; for in November the District Council suspended the medical officer of health from duty, and gave him three months' notice to terminate his appointment. This action would appear to have arisen out of the promulgation by the District Council of regulations putting the control and the supervision of the whole of the work of the sanitary inspectors under the chief inspector of nuisances. The matter was taken up vigorously by the Public Health Committee of the British Medical Association, which addressed a letter to the Local Government Board asking whether the policy of the Board, which it was understood was that the medical officer of health of a district must be the responsible head of the sanitary department, had undergone any change, and if not, whether the Board would take steps to remove the misapprehension which apparently existed among members of the Ilford Urban District Council. The Local Government Board has acted with gratifying promptitude and firmness. In the letter which it has addressed to the Ilford Urban District Council it has stated specifically that the medical officer of health is the head of the public health department, and that the inspector of nuisances is not independent, and that with regard to the assistant inspectors, though they should as a rule take instructions from the chief inspector of nuisances, the medical officer of health has power to direct the assistant inspectors as he thinks fit, informing the chief inspector of the instructions he has given, and conferring with him if time permits. The Board goes on to point out that in a circular issued in December, 1910, transmitting a general order of December 13th in that year, the Board drew attention to the fact that an article of the order had been altered so as to emphasize this fact. There is a not unnatural tendency among inspectors to magnify their office, but it is an elementary condition of efficient administration that there should be one responsible head for every department, and it is satisfactory to find that the Local Government Board clearly recognizes that the medical officer of health must be the responsible head of a public health department. With regard to special local incidents, the Local Government Board, while not acquitting Dr. Stovin of some want of discretion, emphatically states that, in view of the efficient manner in which he has discharged the duties of medical officer of health for a number of years, certain departures which he made from local regulations did not afford sufficient ground for the extreme step of dismissing him from office. The Board, therefore, invites the District Council to reconsider the matter, and to modify its new regulations so as to bring them into complete accord with the principles laid down at the conference last July. We trust, therefore, that the local council will see the propriety and expediency of taking this course, and of retaining in the services of the town an officer who has always discharged his important public duties with zeal and efficiency.

RADIUM AND CANCER.

Some of the inconveniences of discussing in the general press medical questions still in an unsettled state are illustrated by a recent incident in connexion with the use of radium in the treatment of cancer. On January 8th the *Times* published, on the authority of Dr. Lazarus-Barlow, director of the Cancer Research Laboratories at the Middlesex Hospital, a statement in which the statistics for 1912 and 1913 were compared. Dr. Lazarus-Barlow was there reported to have said that from June to September, 1912, 24 inoperable cases, such as the cancer department of the hospital only admits, were received, and that all died, a mortality-rate of 100 per cent.; it was stated that from June to September, 1913, on the other hand, 68 cases were admitted, and that of these 36 died while 32 were in so favourable a condition that they were discharged from the hospital—an unprecedented event. It was added that in one or two cases only had recurrence taken place, and that it was hoped that with a fuller knowledge of the action of radium recurrences would be prevented. Dr. Lazarus-Barlow was further reported to have said that it was possible that in some cases a sufficiently powerful dose of the remedy had not been used, and that in consequence a few cells were left unkilled which afterwards caused the recurrence. While admitting that time was required to substantiate the remarkable results achieved, and that no one should talk of an absolute cure until his results had been so substantiated, Dr. Lazarus-Barlow is reported to have added that there would no longer be any doubt as to the immediate effect of radium upon cancers and tumours. Thereupon followed various notes upon the matter of the high price of radium to which we refer below. A couple of days later a letter was published in the *Times* by the members of the surgical staff of the Middlesex Hospital stating that the communication published on January 8th had been made without any communication with those responsible for the treatment of the patients, and that it did not correspond with their experience. They went on to give the following statement, founded on the Registrar's returns: "During the year 1912, 319 patients were under treatment in the 90 beds of the special cancer wards of the Middlesex Hospital. Of these, 167 patients died, 67 patients were discharged at their own request, and 85 patients remained in the hospital at the end of the year. During the year 1913, 361 patients were under treatment; 198 patients died, 75 patients were discharged at their own request, and 88 remained in the hospital at the end of the year." It is added: "The results hitherto attained by the use of radium in the treatment of patients suffering from cancer, although in some cases most striking, and in many cases hopeful, are not such as to justify the statement that in radium we have a 'cure for cancer.'" Those who have read the highly interesting address given by Sir Alfred Pearce Gould before the West

Somerset Branch of the British Medical Association at Taunton, published in the JOURNAL of January 3rd, p. 1, will have noticed the judicial attitude which he took and the cautious terms in which he expressed himself. In the meanwhile we think that the profession would be well advised to accept his conclusions as those to which the experience gained in the special department of the Middlesex Hospital in the treatment of cancer by radium properly lead.

THE COST OF RADIUM.

THE present market price of pure radium bromide is given in some quotations as £20 per milligram, and the minimum figure is probably not less than £16, which is at the rate of £750,000 per ounce for the radium element. The price showed a downward tendency a year ago, when the therapeutic possibilities of thorium products began to be discussed, but since that time radium, in Stock Exchange parlance, has made a sharp recovery. One circumstance which adds to the peculiarity of the present position is that in the early days of radium manufacture almost pure samples of the bromide, prepared by a German chemist, were obtainable at a price only about one-tenth of that demanded at present. This former cheapness does not necessarily imply any strictures upon those who now control the radium industry, for workable deposits of radium ore are known to be rare, and by this time some 30 or 40 grams of radium bromide have been put into service. The pitchblende available is probably insufficient to meet the world's demand, which is estimated at 10 or 15 grams a year. At the same time, it is scarcely denied that the present price is inflated, and that it bears a more or less speculative relation to the scarcity of uranium minerals rather than a real relation to the cost of extraction, though this, owing to the necessity for skilled operators and expensive machinery, is considerable. Hitherto the greater part of the radium in use has come from Bohemia, but the crude ore from which radium is extracted is found also in Saxony, in Russia where tentative efforts are now being made to develop it, in North America, and in Australia. Up to the present the search for workable uranium ores in Asia, Africa, and South America, seems to have proved fruitless. It may yet be established that England is the home of the richest radium supply in the world. Pitchblende occurs in Cornwall, generally in small veins crossing the tin-bearing lodes, and it is stated of the Trenwith mine, near St. Ives, which is worked by the British Radium Corporation, Limited, that the deposit is a guarantee of an assured supply of radium in large quantity. The heap of pitchblende there, the unconsidered residue of former tin workings, is being sorted over, and a considerable quantity of radio-active material has been recovered. The sister Cornish mine of South Terras, near Grampound Road, is owned by the Société Industrielle de Radium, and has the distinction of being the only mine in the world to have been worked in the past solely for uranium ore. According to a report signed by Mme. Curie, the content of radium in the 300 tons of concentrated uranium ore already obtained from the dumps at this Cornish mine has varied from 5 to 190 mg. per ton, and it is asserted by those working the mine that the amount of radium bromide actually present in the dumps is close upon 10,000 mg. The ore from this mine is treated in France, that from Trenwith at Limehouse. The high price of radium has had the one advantageous result of stimulating the investigation of possible sources other than pitchblende. Although radium follows exclusively the occurrence of uranium, and maintains a ratio of about three or four parts in 10 millions of the uranium element, there are uranium carrying rocks other than pitchblende proper, and low grade uranium ores occur in many parts of the world. There is little doubt that radium itself has a wide distribution. In this country the suggestion has been made that the heavy spar of Derbyshire, the celestine of Gloucestershire, and the witherite of the North of England, might be made to yield radio-active treasure. Even certain kinds of clay have proved remarkably radio-active, and Vesuvian lavas are said to be increasingly rich in traces of radium with each successive eruption. Radium preparations, inseparable, however, from mesothorium, have also been made from monazite sand. One of the most practicable materials discovered up to the present is carnotite, an ochreous pigment, found chiefly, and in abundance, in the sandstone of Colorado and Utah, and also—but of low grade—in Central Turkestan and South Australia. For the Colorado carnotite it is claimed that its value is only slightly below that of the Joachimsthal mine in Bohemia. Another substance to which attention is being called is autunite, a hydrous phosphate of uranium and calcium, found in workable quantities in Eastern Portugal. This ore, like others which are being exploited, is comparatively of low grade, and the lower the grade—in some cases it is as low as 2 or 3 per cent. of uranium content—the more expensive will be the working. The processes of extraction are at present tedious, although they may in future be accelerated. To obtain radium from pitchblende is a matter of months, perhaps of a year. Even when, after the removal of inactive impurities, and a succession of crushing, fusing, washing, and dissolving processes, a ton of ore is reduced to a few pounds of radio-active substance, this has to undergo many repetitions of fractional crystallization before the radium chloride is isolated, and the bromide afterwards prepared. Only 1 gram of pure radium chloride has been obtained from 8 tons of uranium ore. It is difficult to say what should be the true market price of radium, but in view of this process, apart from speculative considerations, the very low figure in shillings per milligram at which it has been suggested that radium could be sold at a profit seems scarcely feasible. Whether or not the State should regulate the radium supply, it is important that all radium bought and sold should be measured at the National Physical Laboratory against the national duplicate of Mme. Curie's international standard. The usual method, a French one, of expressing the activity of radium in terms of that of metallic uranium is unsatisfactory, because the activity of the two elements is not comparable. The scientific alternative, urged by Sir Ernest Rutherford, and now accepted in many cases, is to express activity in terms of the metallic radium actually present. The prohibitive price of radium has drawn attention to possible substitutes. In a lecture delivered before the Berlin Medical Society, and reported in the JOURNAL of December 13th, 1913, Professor Bumm ranked mesothorium and x rays as equal with radium in therapeutic value. We believe that in Germany, to ensure a more prolonged activity for mesothorium, 25 per cent. radium is added to the commercial product. Between x rays and radium the physical and therapeutic parallel is very close. It has been proved physically that there is no fundamental difference in character between the two radiations, except that gamma rays of radium penetrate more deeply; their effect has been noted at a depth ten times as great as that of x rays. The ionizing action of the radiations differs somewhat, but even in this respect the "harder" or more penetrating the x ray (that is, the more highly exhausted the vacuum of the tube) the nearer the values approximate. The difference would entirely disappear if x rays having the same penetrating power as gamma rays could be produced, but no tube yet constructed can give rays even approximating those of radium in "hardness." X-ray technique, however, has as yet by no means reached perfection. Therapeutic results with x rays are becoming less erratic and the procedure less

empirical. The tube itself is being continually reshaped, and new metals tried as anticathodes. Within the last few days the *Times* has published an account of a new tube devised in America by Mr. Coolidge. It is difficult to gather a proper idea of it from the few details at present available, but the claim is made for it that the quality or "hardness" of ray, hitherto the most variable factor in ray production, is under complete control, and that by the use of tungsten for both cathode and anticathode, and by bringing into play within the tube ionic particles of a metallic nature, the radiation efficiency is greatly increased. It is more certain than ever that, even if radium were easily and cheaply obtainable, *x*-ray therapeutics would not by any means be abandoned.

ASSISTED UNIVERSITY EDUCATION.

AT a meeting of the Glasgow University Court on January 8th, Preceptor James Macfarlane, whose term as assessor had expired, made some remarks on the effect of the operation of the Carnegie Trust and on the general question of bursaries and scholarships which have a bearing on affairs outside Glasgow, and indeed outside the northern kingdom. He began by stating that during the four years he had held office the revenues of the university had risen from £77,032 to £103,460, and the benefactions during the same period amounted to over £125,000, including the sums for the chair of Scottish History, the number of matriculations had steadily risen, and there had been special development on the medical side, so that the degrees of the university now ranked among the highest in the medical world. He then went on to observe that, according to the report of the Carnegie Trustees, nearly 50 per cent. of the men and nearly 60 per cent. of the women at the University of Glasgow had their fees paid, more or less, by the trustees. To very many of these a university training must be a comparative disappointment, and, in his judgement, the university would be stronger if it had only 2,000 students instead of fully 2,800. The trustees themselves recognized the avidity of students to have their fees paid, and pointed out in their report that many, through these fees being paid, went forward to the university, with the object of saving a year, when they should have remained at a secondary or continuation school. A higher pass examination might, he thought, rectify this and leave the university to be not an ordinary teaching school but one for the nurture of thought. The bursary question was now ripe, he considered, for consideration, in view of increased grants, etc., and bursaries should be grouped so as to be of higher value and be utilized for research work or travelling scholarships. In discussing the vexed question of inclusive fees, as to which he recognized there might well be a difference of opinion, he said that it must not be forgotten that the Treasury grant was now nearly £14 a student. The intention of that grant apparently was to extend scholarship and to send students out into the world better equipped. While the universities would deprecate in the very strongest manner possible any interference with its financial independence, yet if the Treasury contributed very largely to the revenues it was entitled to say what should be the minimum of the students' attainments.

THE PRETENSIONS OF SIGHT-TESTING OPTICIANS.

THE question of the rights and ability of opticians to test sight has been raised again—this time in Melbourne. The Victoria Optical Association is promoting a bill to give a legal status to the opticians who think themselves capable not only of working out the refraction of the eye, but also of deciding whether or not a patient is suffering from disease which for its treatment requires the assistance of a medical practitioner, either a general practitioner or a specialist. Several bills of this sort have been introduced from time to time into the British Parliament, and it was in large measure due to the prompt measures taken by the British Medical Association, acting in co-operation with the Ophthalmological Society of the United Kingdom, that the bill to provide for the registration of "sight-testing opticians" was not proceeded with. The question was brought prominently forward in consequence of certain advertisements issued by persons holding the diploma of the Spectacle Makers' Company. Some went as far as to state that they were "qualified to treat the most difficult cases when glasses would be of use"; others guaranteed "the greatest possible satisfaction in cases of failing eyesight or errors of refraction." In 1906 a bill was actually introduced into the House of Lords to provide State registration of opticians. The Joint Committee of the British Medical Association and the Ophthalmological Society at once and with great energy opposed it, with the result that the bill was dropped. In Melbourne a spirited correspondence has been taking place between Dr. Leonard J. C. Mitchell, the Honorary Secretary of the Eye and Ear Section of the Victorian Branch of the British Medical Association, on the one hand, and Mr. H. H. Baker, the President, and Mr. William Nott, the Secretary of the Victoria Optical Association, on the other. After many letters had passed, a conference was arranged to see if some ground for agreement could be found between the medical profession and the opticians. The meeting was held on July 21st, 1913, with Dr. E. L. Gault, the President of the Eye and Ear Section of the Victorian Branch, British Medical Association, in the chair. A very frank discussion took place, but it soon became apparent that the disagreement was fundamental, and involved the entire purport of the bill. Clause 8 of the bill stated that "any sight-testing optician shall be entitled to practise sight-testing in any part of the State." The medical members of the conference denied the competence of opticians to test sight in a large number of cases: they pointed out that absolute accuracy could only be obtained in many cases after the use of mydriatics, and that the use of such drugs in unsuitable cases involved the risk of severe inflammation of the eyes and loss of sight. The opticians admitted this, and stated that it was their intention to forbid the use of drugs. Mr. Baker also admitted that accuracy could not in many cases be attained without the use of drugs. The medical members contended that these limitations of the competence of the opticians as sight-testers were so sweeping that they completely cut away the justification for Clause 8, and that any parliamentary sanction of the practice of opticians as sight-testers would be contrary to these facts and dangerous to the public. It was pointed out also that persons often went to an optician and asked for spectacles when they in reality required general or local treatment. The opticians admitted this, but considered that by acquiring some elementary knowledge of diseases of the eye they would be able to discriminate the cases they could treat and could send the others to a medical man. The obvious rejoinder to this by the medical members was that no one but a trained medical man could possibly discriminate between the two classes of cases, and that the public would imagine that they might with safety consult the optician for defects of sight. The eye was so intimately connected with the body that diseases of the latter often first made themselves recognizable through the eye to the trained observer, and it was all-important to discover such cases at the earliest possible moment. For these reasons it was maintained that opticians could not claim to be generally competent to test eyesight for the purposes of determining the causes of defects of sight. Their training and methods could enable them only to measure refractive errors, and these only in certain groups of cases, while others were left completely outside their sphere. The sphere of treatment even by glasses essentially belonged to medical men, and was outside the competence of opticians. This brought the conference to

a deadlock, as the President of the Victoria Optical Association admitted, and it thereupon closed. The real aim of the bill would seem to have been to create a close corporation of opticians to keep a profitable trade, under the plea that it was a highly skilled profession. Admission to this was to be in the hands of opticians. Such a state of affairs could not for a moment be recognized by the medical profession. Any one who has had experience of ophthalmic practice has had brought under his notice scores of times most deplorable cases in which opticians have treated glaucoma with glasses until the sight was almost gone, and cases of diabetic and albuminuric retinitis, optic neuritis, commencing atrophy, etc., when the only thing which could save the patient's life would be skilled medical treatment. In addition numerous cases are known in which concave glasses have been given for hypermetropic astigmatism, etc. We heartily congratulate the Victorian Branch of the British Medical Association on the way in which it has taken up the matter, and great credit is due to Dr. Gault, the President, and Dr. Mitchell, the Honorary Secretary, for the able way in which they have conducted the negotiations.

NEW INSURANCE CONTRACTS IN BAVARIA.

THE *Muenchener medizinische Wochenschrift* published on January 6th the terms of the various contracts which have been signed by the doctors and the insurance societies in Munich. The terms compare favourably with the contracts to be adopted in some other areas of the German Empire. A notable instance of disappointment in this respect is afforded by the case of the Bavarian medical men outside the capital. During last summer an agreement was reached as to terms, but this was not ratified, and the terms offered in the contracts were withdrawn by the societies when the position became strained at a later date. The new contracts for Bavaria outside Munich will therefore contain the provisions arranged by the signatories of the agreement, published in the BRITISH MEDICAL JOURNAL on January 10th, p. 96. In Munich itself there are eight classes of contracts. The system of payment by capitation fee has been adopted by three societies, and payment for services rendered by the remaining five. The capitation fee eventually to be reached, if the funds of the societies permit, is in the case of the societies 6 mk., but in one the sums at starting will be 5 mk., and in the second 5 mk. 50 pf. In the third society the capitation fee will be 6 mk. Extra fees according to a fixed scale are allowed in each case. In regard to the five societies granting payment for services, either the recognized scale is to govern the amount or the fee for a consultation at the doctor's house will be either 1 mk. or 1 mk. 25 pf., while the fees for visits will be from 1 mk. 50 pf. to 1 mk. 75 pf. In one instance a fee of 5 mk. is to be charged for night visits, and 2 mk. 50 pf. for night attendance at the doctor's house. In another case 4 mk. is allowed for night visits. Mileage is fixed by the imperial scale. The next point is the recognition of right of "free choice of hospital." These eight classes of contracts in Munich are for five years only, and in certain cases the rate of remuneration may be revised, after two years, by reference to the Arbitration Committee. The contract of the local town insurance society of Munich (Ortskrankenkasse Münchenstadt) provides that regulations shall be drawn up in regard to the obligations of the insured patients, and also in regard to Sunday rest for the doctor.

THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

THE third biennial Congress of the Far Eastern Association of Tropical Medicine was held at Saigon from November 8th to November 15th, 1913, and was attended by more than one hundred medical men from Ceylon, China, the Federated Malay States, Formosa, French Indo-China (Annam, Cambodia, Cochin-China and Tonkin), Hong Kong, India, Japan, Macau, Netherlands-India (Java and Sumatra), the Philippine Islands, Shanghai, Siam, Siberia, the Straits Settlements, Tsingtau, and Vladivostock. Official delegates to the number of thirty from the respective Governments of most of these countries were present and took part in the proceedings. One day was entirely devoted to the consideration and discussion of dysentery, and many of the members spoke highly of the value of emetine in the treatment of the amœbic type; others had found simaroubine of great assistance in this variety of the disease. Cholera, enteric fever, leprosy, and plague were debated from various standpoints, and further researches in regard to the life-history, prophylaxis, and treatment of certain intestinal parasites were detailed and discussed. A whole day did not suffice for the discussion of the subject of beri-beri, concerning which there was a clearly-marked division of opinion between the French school, which still holds the view that the disease is produced by the microbial contamination of decorticated rice, and the English, American, and Dutch school, which pins its faith entirely to the nutritional theory—namely, that decortication, when carried to excess, deprives the rice of certain nutritive elements which are necessary to the upkeep of the tissues of the body, and that unless these substances (the exact chemical composition of which is still unknown) are consumed in other articles of food, beri-beri will ensue. The disease is not confined to rice-eaters, but will attack any community which subsists almost wholly upon a diet from which the essential elements have been removed by over-preparation (for example, over-milling), or in which they have been destroyed by steam cooking under pressure. These academic differences of opinion on a subject which involves, at the present time, the deaths of many thousands of victims yearly in Far Eastern countries, will stimulate further researches into this most important question. It was held that they did not in any way detract from the great value of the main heads of agreement of both schools, which were so clearly enunciated at the Hong Kong Congress in 1912, and afford ample scope for the initiation of remedial measures along such lines as may seem best to the respective Governments of those countries in which this disease prevails. Another question which received the attention of the Congress was that of quarantine, and it was generally thought that the findings of the Paris Convention of last year were not quite applicable to Far Eastern countries. It was suggested that a special conference should be convened by the Governments concerned in order to arrive at some rules of procedure which would be acceptable to all of them, and it was left to the official delegates from Netherlands-India to take the first steps in this matter. The delegates met with a most cordial reception from their French *confrères*, and expressed their most grateful thanks to His Excellency the Governor-General of French Indo-China, to the officials of the Congress, to the various Consuls, and in fact to all concerned in the reception, for the many kindnesses shown them during their too brief stay in the beautiful city of Saigon.

DR. BARNES OF EYE.

DR. EDGAR BARNES, whose name is so well known to the profession as one of its foremost representatives in East Anglia, is about to retire from practice in Eye, where he has resided for forty-four years. Last week he and Mrs. Barnes received striking testimony of the esteem in which they are held in Eye at a meeting presided over by the Hon. Rosamund Hanbury. Mr. Harold Warnes, who had acted as treasurer of a fund to make a presentation to Dr. Barnes, said that the total number of subscribers was 767, and that the list included every rank of society. He sketched the important public work Dr. Barnes had done

for the town and district, including his duties as medical officer of health for Eye and for Hartismere. He had been chairman of the Grammar School governors at a critical time when the school passed over to the county council; he had been a town councillor, and had filled the office of mayor with distinction: he had been chairman of the charity trustees, and the people's warden at the parish church. In all his public work he had been ably assisted by Mrs. Barnes, and both of them would always be held in affectionate remembrance. Mr. F. W. French, who followed, spoke of the work Dr. Barnes had done for his profession with respect to the Insurance Act, and of his services for the last two years as one of its representatives on the County Insurance Committee. The Hon. Rosamund Hanbury then handed to Mrs. Barnes a gold bracelet, and mentioned the objects presented to Dr. Barnes himself, which consisted of the *Encyclopaedia Britannica*, an old oak cabinet with fifteen pieces of old china, a set of antique chairs, and an illuminated album with a suitable inscription. Dr. Barnes warmly expressed his thanks, and said that with the exception of his time as a student and hospital resident in London he had spent the whole of his life in or near Eye, within seven miles of which he was born. The Rev. J. F. S. Pritchitt, who moved a vote of thanks to the Hon. Rosamund Hanbury for presiding, said that Dr. Barnes had always tried to do the largest possible amount of good to the greatest possible number, and Dr. Beverley, who seconded, recalled the fact that as the Representative of Norfolk he had served with Dr. Barnes, who represented Suffolk on the Council of the British Medical Association for several years. Dr. Barnes had been co-secretary with him of the East Anglian Branch of the British Medical Association, of which Dr. Barnes had recently been president. He had also served with him on the Council of the Medical Defence Union, of which Dr. Barnes was at the present time president for the third year. He was therefore well able to speak of the excellence of Dr. Barnes's work for his profession. There was no man with a more judicial mind or whose opinion was more valued. The vote was carried unanimously, as was a motion thanking the committee which had organized the testimonial, and its secretary. It is with very great pleasure that we record and that members of the British Medical Association will read of this striking testimony to the esteem in which Dr. Barnes is held by the people among whom he has worked so long. They will be glad to know that a man for whose ability and character and disinterested work, only too modestly done, for the Association they have long felt so much regard and gratitude, is held in equally high esteem by those who have watched his comings in and his goings out through a working lifetime longer than it is given most men to spend in the service of humanity.

THE DISCOVERY OF CHLOROFORM.

Perhaps the last remaining link with the history of the discovery of chloroform anaesthesia has been broken by the death of Mrs. Agnes Thomson, who passed away at Streatham the other day, at the age of 82. She was a niece of Sir James Simpson, and was present at his house on the evening when the first experiment was made. An account of the scene is given by Miss Eve Blantyre Simpson in her life of her father in the Famous Scots Series. Simpson and his assistants, Matthews Duncan and George Keith, tried it on themselves. Keith was the first to inhale it, and the others, on seeing the effects on him, and hearing his approval before he went quite "under," both took a dose. Soon they were all more or less under the table together, much to the alarm of the ladies of Simpson's family. When he was recovering, Simpson said to himself, "This is far stronger and better than ether." Duncan was snoring heavily, while Keith was kicking violently at the table above him. Among those present were Mrs. (afterwards Lady) Simpson, her sister Miss Grindlay, her niece Miss Petrie, and her brother-in-law Captain Petrie. Several further trials were made. Miss Petrie, the lady who has recently died, offered herself for experiment, and when falling asleep under the influence of the drug she remarked, "I am an angel, a beautiful angel; how are you all down there?" On the other hand, Keith's expression was so ghastly that he frightened the ladies. Of Matthews Duncan it is related that, after he had with difficulty been got to bed, he came out on the landing and shouted "Give a roar, Duncan!" and proceeded to do so with such effect that he scared everybody in the house. Simpson, as is known, tried many things as anaesthetics, and chloroform was suggested to him as a likely agent by Mr. David Waldie, then connected with the Apothecaries' Company at Liverpool. Waldie promised to procure the drug for Simpson, but, as he says, other engagements and various impediments prevented his doing so as soon as he would have wished, and in the meantime Simpson got some from Duncan and Flockhart of Edinburgh. With this he forthwith proceeded to experiment, and the results were communicated to the Medico-Chirurgical Society of Edinburgh on November 10th. Mr. Alexander Spence, a dispensing chemist of Leslie in Fife, has sent us an extract from the *Statesman and Friend* of India of November 10th, 1913, in which it is stated that a brass tablet commemorating Mr. Waldie and his association with the discovery of the anaesthetic properties of chloroform was put up in the rooms of the Asiatic Society of Bengal on the previous evening. Mr. Waldie went to Calcutta in 1853, and became the pioneer of chemical manufactures in India. Mr. Spence states that a bronze portrait medallion is to be placed on the house in Linlithgow where Mr. Waldie lived for some time.

LONDON SCHOOL OF TROPICAL MEDICINE.

Reference has more than once been made in the British Medical Journal to the appeal by Mr. Austen Chamberlain for £100,000 to place the London School of Tropical Medicine on a sound financial footing. He asked for a sum sufficient "to provide a modest but adequate endowment fund; to make necessary additions to the laboratories and buildings; to provide for the active prosecution of research; and to provide a certain number of beds for civilians who cannot afford to procure for themselves the special medical and surgical treatment required by patients suffering from tropical diseases." In a letter announcing the closure of the fund Mr. Chamberlain gives some particulars of the amount collected and the purposes to which it will be devoted. The total amount actually contributed is £71,000, to which may be added £1,000 interest while the fund has been accumulating. The sum obtained, though not so large as it had been hoped to get, is sufficient to provide for the immediate necessities of the school. The committee and the teaching staff of the school carefully considered the best manner of using the funds available on the lines laid down in the original appeal. Their recommendations have been approved by the board of management. Mr. Chamberlain expresses his cordial agreement. He goes on to say: "The new buildings have cost £15,000. It is hoped that this will not be considered an undue amount to expend on bricks and mortar. It has provided very efficient laboratories and good sleeping accommodation for students — accommodation which has been much needed. It is hoped that these additions will meet the requirements of the school for some time to come. £10,000 has been devoted to research, this being the amount devised by the late Lord Wandsworth to Sir William Bennett, who has placed it at the disposal of the school. £6,000 has been invested, and the income thereof will provide beds for tropical cases. The beds will supply much needed accommodation for that class of official and

employee who, though able to meet the expenses of an ordinary ailment, is powerless to provide without assistance the special nursing and treatment required in cases of tropical disease. The remainder, a little more than £40,000, has been invested in trustee securities, and the income thereof has been made available for the general purposes of the school. This will enable improvements to be made in the position of the teaching staff, will provide more modern and suitable appliances, and will maintain in greater efficiency the laboratories and general equipment. The additional income will also be available to strengthen the resources of the special departments which are partly engaged in research." While regretting that the whole amount asked for has not been forthcoming we think the school is to be congratulated on the virtual success of the appeal. It is now in a position to continue its good work free from constant financial anxiety. As its work expands, as must be the case as knowledge grows and the hygienic needs of the empire increase, we have the fullest confidence that the necessary means will be provided. A work that makes so direct an appeal to administrators on the one hand and to business men on the other, is sure to command whatever public support may from time to time be required for its efficient performance.

FATAL CHOREA OF PREGNANCY.

SINCE the publication of Dr. F. W. McCann's well-known monograph on chorea gravidarum,[1] numerous instances of this grave complication of pregnancy have been published, and recently Dr. M. G. Lepage[2] has related the clinical history of a patient under his own care. She was a Jewess, aged 25, belonging to a neurotic family, but had passed through one pregnancy without complications excepting that she grew a little more "nervous" than before. Four years later she became pregnant again, and choreic symptoms developed early. She grew maniacal, labour was induced in the third month, but the patient died suddenly on the second day. Unfortunately no necropsy was allowed. Dr. Lepage adds abstracts of 20 fatal cases of chorea gravidarum where labour was not induced. In most instances no special lesions were detected after death, but endometritis was discovered in 3. Retention of urine, with or without incontinence, was marked in several, and was probably existent, but unreported, in others. Abstracts of 13 cases in which death ensued after artificial emptying of the uterus show that the fatal result may be delayed for ten or twelve days, the chorea continuing in all its severity. Eleven of the 20 women in the first, and 7 out of those in the second group were primiparae; including Dr. Lepage's patient, who was a secundipara, the proportion is 7 to 14. Endocarditis was detected in three of the subjects who died after intervention. On the other hand, Vinay, Ahlfeld, Pollock, Spiegelberg, and Lawson Tait have reported cases in which intervention was followed by cure, and five more were recently published in a monograph; it is to be remembered, too, that in this series the complication had generally advanced to delirium, and to the characteristic exhausting insomnia before labour was induced. The pathogenesis of chorea gravidarum remains obscure, and treatment is highly unsatisfactory. Interruption of pregnancy is not by any means a certain cure, though it is possible that many mild cases in which labour has been successfully induced, and still more instances of spontaneous abortions followed by recovery, have not been reported. Altogether Dr. Lepage's records seem to indicate that it is safer to treat chorea gravidarum by early induction of labour. When delayed the results are very bad; anaesthesia, as in Dr. Lepage's personal experience, is badly tolerated, and above all sudden death not rarely supervenes when the patient seems to be progressing favourably.

[1] Chorea Gravidarum, *Trans. Obstet. Soc. Lond.*, vol. xxxiii. pp. 413, 465.

[2] De la mort chez les choréique pendant la grossesse, *Bulletins de la Soc. d'Obstét. et de Gynéc. de Paris*, April, 1913, p. 326.

LORD LISTER AND KING'S COLLEGE.

THE tablet unveiled at King's College by Lord Rayleigh on January 14th to the memory of Lord Lister bears the following inscription:

"In affectionate and respectful memory of Joseph Baron Lister, F.R.S., O.M., Professor of Clinical Surgery in King's College from 1877–1892, and for many years Consulting Surgeon to the King's College Hospital, member of the Council, and Life Governor of the College, this tablet is erected. His name will be handed down to posterity as the founder of antiseptic surgery, one of the greatest discoveries in history, and a source of inestimable benefit to mankind."

Before the tablet was unveiled a brief ceremony was held in the college chapel, when Lord Rayleigh delivered a short address, and Dr. Herringham, Vice-Chancellor of the University of London, paid a tribute to the memory of Lord Lister, who, he said, worked finely and whose methods were fine. He believed that no discovery ever made in the history of chemistry or physics had in so short a time produced one-half the effect upon the arts they served as Lister's work had had upon the arts of surgery and medicine. The tablet has been placed in the corridor outside the chapel.

THE PATHOLOGICAL MUSEUM.

A STATEMENT by the committee formed in Aberdeen to organize the Pathological Museum during the annual meeting of the British Medical Association in that city next July was published in the SUPPLEMENT of last week (p. 18). These exhibitions, which grew out of a suggestion made a good many years ago by the late Sir Jonathan Hutchinson, have become one of the most interesting and instructive features of succeeding annual meetings, and if the committee in Aberdeen is able to carry out even a part of the programme it has sketched, the next museum will be no exception. It asks for exhibits bearing on discussions and papers in the various Sections, for specimens and illustrations relating to any recent research work, for individual specimens or series of special interest, and for instruments relating to clinical diagnosis and pathological investigation. In expansion of this classification, the committee indicates its desire to gather together specimens relating to the pathology of the circulatory system and the ductless glands, of the value of pyelo-radiography and *x*-ray photographs of the brain, skull, and gall stones, and of the effect of radium on malignant growths. It is also intended to bring together a collection of ancient and historical surgical instruments. Offers of assistance may be addressed to the honorary secretaries, Drs. A. W. Falconer, and Wm. Anderson, Pathological Department, Marischal College, Aberdeen.

THE Council of the Perthshire Branch, at its last meeting, after considering the letter issued by the Council of the Association suggesting the holding of clinical meetings more regularly—a practice which there has been some tendency to intermit during the last two years owing to the frequent meetings to discuss the various phases of the Insurance Act—resolved itself into a science committee with power to co-opt other members. It was at once decided to hold a clinical meeting at the Perth Infirmary in the second week of March, and the honorary secretary, Dr. John H. Lyell, 15, Marshall Place, Perth, will be glad to receive suggestions from members willing to contribute to the meeting. The desire is for short papers on subjects of practical interest, and demonstration of cases, pathological specimens, or photographs.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

HOSPITAL FOR DISEASES OF THE HEART.

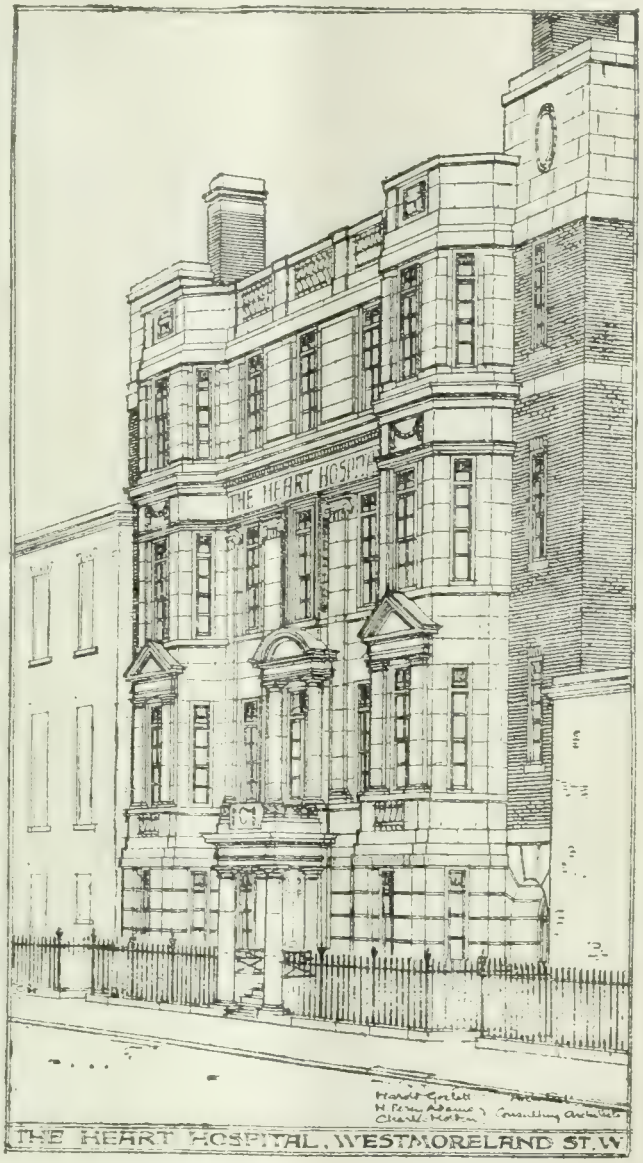
THE new building in Westmoreland Street, W., for the National Hospital for Diseases of the Heart, formerly in Soho Square, was opened on January 12th, by H.R.H. Prince Arthur of Connaught.

The ceremony was conducted in the out-patient waiting hall of the hospital. After a short prayer, offered by the Master of the Temple, His Royal Highness, who was accompanied by the Princess, referred to the long connexion of his family, in the persons of the Duke of Albany, the Duke of Cambridge, and his father, with the hospital, and alluded in felicitous terms to the work done in the past by the institution, which, since its foundation in 1857, has a record of nearly three-quarters of a million out-patient attendances besides the cases treated in its wards. Lord Verulam, the President of the Hospital, suitably replied, and mentioned the interesting fact that the new building stands on the site formerly occupied by St. James's Chapel, of which the Rev. H. R. Haweis, at one time a chaplain of the hospital, was incumbent.

He was followed by the consulting physicians to the hospital, Dr. Frederick Taylor and Professor A. D. Waller. Dr. Taylor drew attention to the great frequency of cardiac affections in all ranks of society, and pointed out the importance to the community of a proper understanding of these disorders. He claimed that while all general hospitals received heart cases into their wards, there was ample scope for a place where they were made a special subject of study, and referred to the very complete scientific equipment of the new hospital. Professor Waller said that it might seem curious to some that he, as a pure physiologist, should appear before them as a consulting physician, but the governors had determined to endeavour to combine the experience and methods of the laboratory with the skill and knowledge of the clinician in dealing with the diagnosis and treatment of patients suffering from heart affections. When his audience saw the cardiographic laboratory he felt they would agree that the governors were justified in hoping that the combination of the clinical physician and the laboratory worker would prove of benefit to the patients. The work done in recent years showed that a closer connexion between medicine and physiology made for the mutual benefit of both subjects.

The Mayor of Marylebone then welcomed the institution as an addition to the charities in the borough, and afterwards the Prince and Princess inspected the hospital and laboratories and had an electro-cardiogram taken, which was presented to them as they left the building.

For the last forty years the hospital occupied a house in Soho Square, which has historic interest owing to the fact that it was tenanted during the later eighteenth and early nineteenth centuries by that celebrated President of the Royal Society, Sir Joseph Banks. While this house, with its Adams ceilings and handsome fireplaces, is a beautiful and interesting specimen of Georgian architecture, it was not a suitable building for a modern hospital; the waiting hall was small and constantly overcrowded, the administrative offices, consulting-room, and nurses' quarters were totally inadequate, and the ward accommodation such as might be expected in a converted dwelling-house; the pathological laboratory and *x*-ray installation were housed in a small temporary erection. It is therefore easy to understand why the governors, as soon as they felt themselves financially strong enough, should have built a new home for the institution.



THE HEART HOSPITAL, WESTMORELAND ST. W.

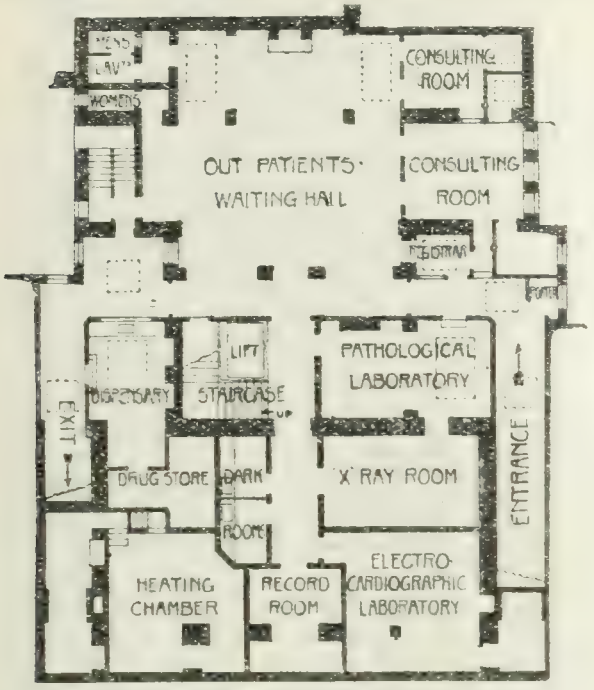
The new building in Westmoreland Street, covering an area of 5,000 square feet, has a red brick and Portland stone front, in the centre is the main entrance, and on either side the out-patients' entrance and exit.

The basement is entirely devoted to the out-patient department and laboratories. The out-patients, entering on the right pass down an incline to the porter's box, where they receive their tickets, and then to the registrar's office, where the necessary inquiries are made, and so to a lofty waiting hall, out of which open the consulting-rooms, furnished with small dressing-rooms for the patients. Having seen the physician, they leave the consulting-room by another door and go to a lobby furnished with seats, opposite the dispensary, to get their medicines, and then out of the hospital by another incline on the left side of the building. By this means any confusion between patients coming and going is avoided.

The laboratories are situated along a corridor, separated from the waiting hall by swing doors; they consist of a well-lighted pathological laboratory, an *x*-ray room with a dark room opposite it, a cardiographic laboratory with two dark rooms, and a store room for records.

In the cardiographic laboratory there are installed a Cambridge string galvanometer, a Bock-Thoma oscillograph, and a Siemens cardiographic galvanometer, as well as a Boulitte kymograph and appropriate instruments for taking venous and arterial tracings and blood pressures. It will be seen that those concerned, instead of confining themselves to a string galvanometer alone for electrographic work, have provided one of each of the three types of instruments used for this purpose, so that the installa-

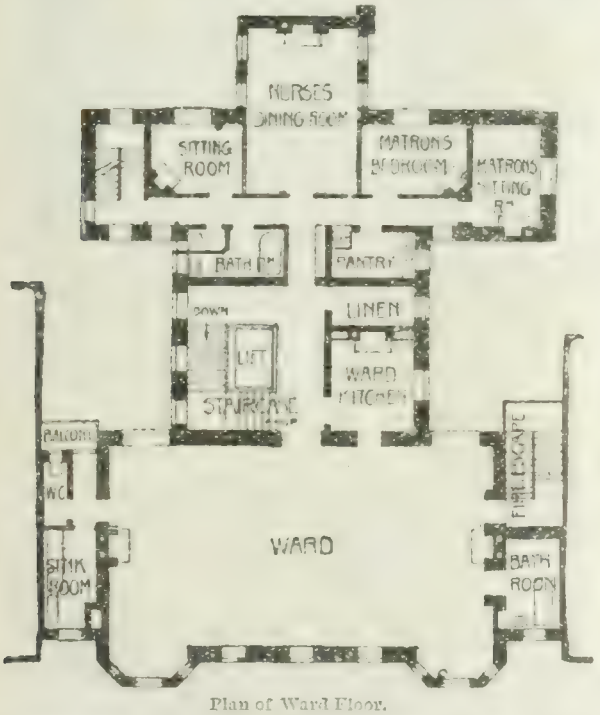
tion is probably the most complete in this country. There is fixed on the wall by every bed in the wards a neat case containing seven terminals connected by wires with corresponding terminals in the cardiographic laboratory, so



Plan of Out-patient Department.

that electro-cardiograms can be taken of every patient in bed.

The ground floor is entirely reserved for administration. The accommodation consists of a board-room, secretary's office, matron's office, a small library for the medical staff, porter's bedroom and offices, telephone and porters' boxes, and a self-contained suite for the resident



Plan of Ward Floor.

medical officer, comprising a sitting-room, bedroom, bathroom, etc.

From the first floor upwards the building is divided by doors into two blocks—a front portion, containing the wards, ward kitchens, main staircase and main lift, and a back block, which contains the quarters for the nursing staff and servants. The back part comprises a mezzanine floor, consequently there are five stories behind to four in front.

On the first, second, and third floors of the front block the accommodation is similar, except that on the first floor there is a linen room instead of a children's ward, and consists in each case of a large general ward and a small children's ward and ward kitchen communicating with the main kitchen by a small service lift.

The wards are well lighted by large windows, and illuminated at night by specially shielded ceiling electric lights, which give a diffused light without any direct glare. At opposite ends of each large ward are a bath and linen room, and a sink room and lavatory. Opening out of these wards is a door which gives exit directly on to the fire-escape staircase. On the fourth floor is a separation ward, and over the large wards a roof garden furnished with a covered, warmed shelter at one end and lavatory, etc., at the other.

The central part of the building is continued a story higher, and contains the *post-mortem* room and mortuary. The back block contains the nurses' quarters, comprising a dining-room, sisters' sitting-room, matron's suite, and a separate bedroom for each nurse, with bathrooms and other offices. Over the nurses' apartments, and distinct from them, is the accommodation for the domestics, and at the top of this block the main kitchen, scullery and pantries.

Though not large, the hospital has been very carefully planned by the architects, Mr. Harold Goslett and Mr. Percy Adams. With its equipment, it should be able to fulfil all modern requirements for the study and treatment of cardiac disorders.

MANCHESTER AND SALFORD.

The Notification of Births in Salford.

Several years ago, when proposals were made in Manchester and Salford to adopt the Notification of Births Act, deputations from the Divisions of Manchester and Salford waited on the respective Health Committees to object to the proposals. In Manchester, although the adoption was postponed in deference to the practically unanimous wish of the profession, the Act was eventually adopted. It met with a considerable amount of passive resistance from the profession, and in many districts medical men refused to sign any notifications, in some cases telling the parents that it was their duty to notify, but in not a few cases completely ignoring the Act. In Salford the Health Committee showed itself more amenable to the reasons put forward by the profession against the Act, as it was made quite clear that there was a determination not to sign any notifications even at the risk of incurring legal penalties. During the last year, however, the Insurance Act has so entirely absorbed the attention of the Salford Division on the few occasions when it has met that apparently no notice was taken of the intention announced by the corporation to adopt the Notification of Births Act, and at a meeting of the Salford Town Council, held on January 7th, the following resolution was passed:

> That the provisions of the Notification of Births Act, 1907, be, and the same are hereby adopted in the area of the county borough of Salford, and that application be made to the Local Government Board for consent to the adoption of the said Act, and that the town clerk be instructed to take such steps as may be necessary to carry out the purport of this resolution.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Highlands and Islands Medical Service.

County of Caithness.

A conference of representatives of local authorities, medical practitioners, and nursing associations was held at Wick on January 10th, to consider the preparation of a general statement showing the requirements of the county of Caithness in regard to improved medical and nursing service. After prolonged discussion, during which the claims of individual parishes to be treated as special areas

were pressed, it was unanimously agreed to appoint a committee, consisting of sixteen members representing all bodies interested, to act in an advisory and consultative capacity for the whole area of the county. The draft scheme makes provision for improved medical and nursing service, better means of communication, additional hospital accommodation, and specialized medical service, including school clinics, consultations, etc. It was urged that every effort should be made to correlate as far as possible the services administered by the different local authorities, and the representatives agreed that the schemes prepared by individual parish councils, school boards, etc., should be submitted to the advisory committee in order to secure as far as possible a uniform system of nursing and of specialized service, and also special consideration for sparsely populated areas requiring assistance in providing improved medical attendance for persons of limited means.

Inverness.

Over 100 delegates from the mainland and islands of Inverness-shire met in Inverness on Thursday, January 8th, to consider the same question. The conference reviewed the special needs of each district in Inverness-shire, and discussed the question whether districts should be worked by themselves or whether there should be a county medical service association. Dr. Miller (Fort William), who was on the Dewar Commission, said the Commissioners frankly recognized the need for the representation of local areas and had determined to retain the parish element at all costs. A general discussion ensued, representatives telling of their districts' needs, and it was generally agreed that the districts should recognize that provision should be made for a sufficient number of medical men with adequate remuneration, with suitable accommodation, means of travelling, provision for consultation of medical men in serious cases, and for specialized service, provision for medical hospitals at suitable centres, adequate nursing services, communication between medical men and hospitals in scattered places by telegraph and telephone, suitable ambulance for conveyance to local hospitals or to where steamers and trains were available.

Skye.

A meeting convened by the recently formed District Medical and Nursing Association was held at Portree on January 8th, and was attended by representatives of parish councils, school boards, district committees, hospital and nursing associations. The claims of each parish were considered, and it was agreed that in the first instance representation should be made for grants towards the erection of houses for parish doctors, with subsidies towards their travelling expenses, so as to enable them to attend to every patient, however distant, for the same fee as charged at the doctor's residence. It was agreed to make an appeal for subsidies towards the three nurses already employed in the island, and for a grant sufficient to provide thirteen more nurses for service throughout the island and the erection of suitable residences for them, with a room for emergency cases. It was also agreed to make a representation to the Board for a grant towards maintenance of the MacKinnon Memorial Hospital at Broadford, and a sum to enable the Martin Hospital trustees to erect a house for the medical officer. It was also proposed that all doctors' and nurses' residences should be connected by telephone. It was unanimously agreed that it should be made a condition of the subsidy to the doctors that they should treat all cases within their respective districts, including school children, old-age pensioners, public health patients, and also grant the necessary certificate of exemption to pupils unable to attend school on account of illness. It was also agreed to appeal for the services of specialists for occasional visits, including dentists. Finally, the meeting decided to put in a claim for a well-equipped hospital, with bacteriological laboratory, at Portree, for the use of the island generally. It was also suggested that there should be a motor ambulance for service throughout the whole island, and a motor sea ambulance for the use of adjacent islands.

Glasgow Street Ambulance Service.

At the present time, when so much is being heard of the lack of adequate ambulance provision for street accident cases in the metropolitan area, it may be of interest to note that in Glasgow a highly efficient service has been maintained for many years by voluntary effort. It is provided by the Glasgow branch of the St. Andrew's Ambulance Association, an organization supported mainly by voluntary contributions from employers and employed, which also provides services on similar lines in other towns in Scotland. The thirtieth annual report of this organization, just issued, states that during the year ending May 31st the number of turns-out in Glasgow was 7,248, involving 7,333 cases, an increase of 1,156 cases as compared with the previous year. Of this increase 613 cases were from the recently amalgamated districts of Partick and Govan. The turns-out represented an average of 19.85 daily, or, leaving Sundays out of the calculation, 23.15. Out of the total of 7,248 turns-out, 3,585 were to accidents, and 3,663 to cases of illness. In 186 cases the wagons were not required on arrival. Of the 3,585 calls to accidents, 1,018 were from police offices, houses and stairs, 1,420 were street accidents, 677 from public works, 347 from docks and wharves, 123 from railways and stations; 2,058 cases of accident and 1,058 cases of illness were taken to the Royal Infirmary; 1,220 cases of accident and 823 cases of illness to the Western Infirmary; 259 cases of accident and 432 cases of illness to the Victoria Infirmary; and 362 cases were taken to the Maternity Hospital; the remainder being taken to other institutions or to their homes. Of the cases, all the accidents (3,625) and 1,372 of the sickness removals were removed free of all charge to the beneficiaries. The wagons covered 38,919 miles during the year.

The service is maintained by five motor ambulance wagons, by which the horse-drawn vehicles have within recent years been replaced, though some of the horse-drawn wagons are retained in reserve in case of emergency. The wagons are kept in readiness at the head quarters in the centre of the city, and calls for cases of accident are immediately responded to, no matter from what source the call may come. The report states that, on receipt of an alarm, by day or night, sent by messenger, telegraph, or telephone, a wagon is dispatched at once to the scene of the accident; the wagon is under the charge of a trained attendant, who, in the absence of a doctor, will temporarily dress the injuries and accompany the injured person in the wagon to his own home or the nearest infirmary. The corporation of the city pays an annual subscription towards this service, and this was recently increased from £150 to £500 owing to the extension of the city boundaries and the inclusion of the burghs of Partick and Govan, both of which have a number of large industrial works, docks, etc. From a table giving particulars of a typical day's work it appears that the interval between the receipt of the message and the arrival of the ambulance at the scene of the accident varied from five minutes to (in one case) twenty-three minutes; the usual interval seems to have been about ten minutes.

From the income and expenditure account it is difficult to calculate the exact cost of the service, as the items for salaries, office rent, etc., include the headquarters staff, the members of which are not exclusively employed in connexion with this department of the association's work. The item for the running of wagons includes drivers' wages. The expenditure account in the report is:

Salaries	£1,428	2	9
Pension premium	59	5	11
Office rent, etc.	327	3	5
Storing, insuring, and running wagons ...	984	14	7
Repairing and improving motor wagons ...	384	8	4
Depreciation on motor wagons	462	12	6
Wagon and equipment purchase account ...	277	1	10

Edinburgh Royal Infirmary and the Trades Council.

At a recent meeting between Managers of the Royal Infirmary and delegates from the council and other bodies it was agreed to recommend that the approved societies should contribute to the Infirmary from their surplus funds. The report of the delegates was submitted to the fortnightly meeting of the Edinburgh and District Trades Council on January 6th, when Mr. Allan moved an amendment to the effect that the proposal be not viewed with favour. He said that before the Act the Infirmary was an institution open to the public. After the Act was passed the managers threatened to debar the public from treatment at the institution, but so strong was public opinion that

they had to whittle down this policy, and he thought that if the approved societies had any surplus they should retain it, or at least give it back to their members. Mr. Small seconded the amendment. Mr. Eunson (vice-president), however, pointed out that there was no difference between a working man contributing to the Infirmary as an individual, as many did, and giving from the surplus fund of an approved society. The Chairman pointed out that over 10,000 insured persons had been treated at the out-patient department of the Infirmary. The amendment was defeated by 27 votes to 15. Mr. Bell then moved that the Council ask the managers of the Infirmary to rescind their resolution of July 6th, 1912, which was that insured persons be referred to their panel doctor for treatment except in urgent cases; the resolution had been suspended, and he thought it ought now to be rescinded. Mr. Smith (Secretary) pointed out that the Council a year ago had approved of this and other resolutions if properly carried out; he moved the previous question. On a vote being taken Mr. Bell's motion was carried by 23 to 19.

Medical Treatment of School Children in Edinburgh.

At the meeting of the Edinburgh School Board on January 12th Mrs. Leslie Mackenzie (Convener of the Health Committee) presented the report on the medical inspection of the children. Last year 8,000 children who needed treatment had been dealt with. The necessity for much earlier treatment than the board could give had become evident, and some public authority should see to the condition of these children before they came to school at all. The greater part of the School Board's work with these children was due to insufficient recovery from such diseases as measles, whooping-cough, and scarlet fever, when they were two or three years of age. She further reported that the Royal Infirmary managers had not agreed to the board's terms for the proposed treatment of children by *x* rays. The alternative was an installation of the board's own, which could be got for the £120 or £150 which the board had suggested as a fixed annual sum to be paid to the Infirmary.

At a meeting of the managers of the Royal Infirmary, held on the same day, Lord Provost Inches presiding, Dr. MacGillivray reported that the managers had met members of the Health Committee of the School Board in conference, and that, after discussion, the chairman of the committee had promised to send a report of the numbers of school children requiring special treatment. This had not yet been received. It had been stated in the newspapers that the managers were willing to accept an annual payment, but this was misleading. They were willing to accept a donation, not annual payment, for they could not undertake contract work. Owing to pressure upon the *x* ray department, they could not enter into an agreement to give regular treatment to the children from the special school. The matter was still *sub judice* so far as the Infirmary managers were concerned.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

"Belfast Health Journal."

Dr. Henry O'Neill has just brought out Part 1 of Volume V of his *Belfast Health Journal*. Some years ago this journal was started to bring before the public in a popular and pleasing shape various points of interest and importance in sanitary science. Besides a large number of photographs the new number contains articles on the influence of women in sanitary reform, on primary education in Belfast, speeches by Dr. O'Neill himself and by others at the opening of the new public abattoir and on other occasions; reports of deputations; of the Women's National Health Association and its travelling exhibition; on the Tuberculosis Act in Ireland; and other important questions; there are also valuable illustrations of many of the latest scientific sanitary improvements. Dr. O'Neill has not been in very good health lately, and it is very characteristic of his nature that a time of enforced idleness has been filled with one more illustration of his devotion to public duty. It is gratifying to hear that he is recovering, and it may be hoped that he will soon be on the double path of peace to his clients and of war in matters of public health.

Irish Tuberculosis Medical Officers' Association.

At a largely attended meeting of Irish tuberculosis medical officers, held recently in Dublin, it was unanimously decided to form an association for the purpose of studying the various problems arising in connexion with tuberculosis, and of protecting the interests of the members. Dr. Lanigan O'Keefe (Tyrone) having been elected to the chair, explained the objects of the meeting, and complimented Dr. Burke (Sligo) on his energy and initiative in bringing together such a large and representative number of tuberculosis officers. After a full discussion the meeting appointed a committee, consisting of the chairman and two representatives from each province, to meet every three months to discuss matters of interest. A committee was appointed also to wait on the Local Government Board and discuss with it points raised at the general meeting. A vote of thanks having been passed to the chairman, the meeting adjourned to a date within three months, to be later decided on. Subsequently the members of the association were entertained to luncheon in the Dolphin Hotel by the Countess of Aberdeen, who complimented the association on being the first of its kind. Afterwards, as Her Excellency's guests, the members of the newly formed association motored to Peamount to inspect the sanatorium.

Motor Ambulance for Dublin.

Early last year, when the annual estimates were being considered by the Dublin Corporation, a proposal to provide a motor ambulance for the fire brigade was rejected by the Council on financial grounds. The promoters, however, persevered, and the Council has now consented. The car was designed by the head of the Dublin Fire Brigade, and made by the Leyland Motors, Limited. The chassis is of a strong type specially designed for heavy service, and has a four-cylinder 20-h.p. engine. The front wheels are artillery pattern, with heavy solid rubber tyres; but in the rear steel wheels solid rubber twin tyres are employed. The body is roomy, the springs long and well-proportioned, rubber packings absorb shocks, and, finally, the stretchers are supported by special brass mountings enclosing spiral springs under each corner. Accommodation is provided for four injured persons, two attendants, and the driver, and the normal speed is 20 miles an hour. That such a vehicle was much needed is shown by the fact that the calls on the Fire Department for first aid have gradually increased since the service was first established fifteen years ago, until they now reach about 2,500 a year.

Salaries of Medical Officers of the North Dublin Union.

A special committee was recently appointed by the North Dublin Union to go into the question of the salaries of those employed by the board. Its report, which is to be considered at the next meeting of the board of guardians, recommends an increase in the salary of nearly every official in the employment of the board. Among them the following increases are recommended to the medical officers. To one visiting medical officer, who has now £205, a minimum of £220, with annual increments of £5 until a maximum of £235 is reached; to two visiting medical officers, who have £200, to get £220, with annual increments of £1 until £225 is reached; to a visiting medical officer, whose salary is £85, a maximum of £125, to be reached by annual increments of £2 10s.; to the resident medical officer, who has £250, a maximum of £275 a year, to be reached by annual increments of £5; to a medical officer, who was appointed two years ago at £150, a maximum salary of £196, together with residence and £37 in lieu of rations. It is recommended that the maximum salary of each of the dispensary medical officers be increased from £195 to £220.

At the meeting of the Paris Académie de Médecine, on December 23rd, 1913, Dr. Charles Perier succeeded to the presidential chair, and Dr. Duguet was elected Vice-President.

Correspondence.

ANTENATAL PATHOLOGY.

SIR,—In your issue for September 20th, 1913, one of your leading articles drew attention to the important questions circling round "Pregnancy and Antenatal Hygiene," and you strongly supported the views of myself and other obstetricians that progress along certain lines was necessary. Amongst these you mentioned "medical supervision over pregnant women, provision of prematernity wards, registration of stillbirths, and the financial endowment of motherhood."

On January 13th last, by desire of the National Society for the Prevention of Infant Mortality, whose Executive Chairman is Sir Thomas Barlow, I gave a lecture on Antenatal Hygiene, and urged that all these suggestions require prompt adoption. In addition to these points I repeated the suggestion, made in my valedictory Presidential Address in the Obstetric Section of the Royal Society of Medicine, published in the BRITISH MEDICAL JOURNAL on July 5th, 1913 (p. 17), that in order to check the terrible loss of life *in utero* and during the first year of life, steps must be taken to perfect our knowledge of antenatal pathology, a subject till now almost entirely ignored as a recognized subject for study and research.

In 1911, 114,600 infants died in their first year of life in England and Wales, and I have given reasons in my paper, shortly to be published in your JOURNAL, to show that there are annually about the same number of intrauterine deaths during the nine months of gestation, together forming a loss of about 200,000 lives every year. When it is considered that the number of infants in England and Wales in 1911 who survived this double loss is known to have been only 782,362, it will be realized how great is the loss to the community.

As compared with other pathological advances very little has been done as regards antenatal pathology since Dr. Priestley read his Lumleian Lectures on "The Pathology of Intrauterine Death" at the Royal College of Physicians in 1887, though Dr. J. W. Ballantyne of Edinburgh has for the last fifteen years consistently endeavoured to stimulate our interest in the subject. In 1891 Dr. Herbert Spencer, at University College Hospital, showed what could be done by a routine examination of 180 consecutive cases of stillbirth; but we now have scientific facilities for working on the subject of antenatal pathology by microscopical, bacteriological, and chemical methods not then available.

I write to urge that every general and lying-in hospital, especially those attached to medical schools, should systematize the routine examination of every "product of conception" which comes to hand. Every abortion, every stillborn child, every placenta should be scientifically examined and reported upon, and the cause of death ascertained. If this could be done our profound ignorance of antenatal pathology would lessen, and prophylaxis and scientific treatment would become possible. Some of the surest and quickest results would be that we could ascertain the proportion of intrauterine deaths due to syphilis, and settle the question as to how far tubercle is the cause of fetal death. The question, too, of the transmission of various other maternal diseases through the placenta needs much elucidation.

The appointment at our teaching hospitals of an obstetric pathologist—in addition, perhaps, to the existing obstetric registrar—whose special sphere would be antenatal pathology seems to be the first step indicated.

There is no lack of keen and able workers, neither is there any lack of material, for, beyond that which would daily come to hand, old students could be relied upon to send up specimens with short clinical histories. The only real difficulty will be the usual financial one—to pay for increased laboratory accommodation and upkeep, and to provide the necessary honoraria of the skilled workers. Let us hope that this initial difficulty will be surmounted.—I am, etc.,

AMAND ROUTH, M.D., F.R.C.P.,
Consulting Physician to Charing Cross Hospital, etc.

January 12th.

THE TEACHING OF CLINICAL MEDICINE.

SIR,—I fancy that Dr. Mackenzie's thoughtful paper upon the teaching of clinical medicine, published in your issue of January 3rd, puts into words the vague convictions of a good many people. A convention has arisen which delimits with unhappy rigour the types of cases which are to be considered suitable for admission to the medical wards of hospitals, at least in London: and the criterion of suitability in vogue succeeds in peopling such wards with a large proportion of cases which are in the nature of things incurable—pointing aneurysms of the aorta, cirrhosis of the liver with ascites, pneumothorax with advanced tuberculosis of the lung, chronic valvular disease of the heart in its latest chapters, chronic bronchitis and emphysema, especially when the heart is failing, chronic nephritis (but only when oedema is extensive), advanced sclerosis of the spinal cord, mediastinal tumours, Charcot's disease of joints, visceral malignant disease with extensive metastases. How large do such cases bulk in the population of most medical wards! It is no wonder that medicine, as compared with surgery, stands in the eyes of students for lost causes and battles already decided against the physician, when a "good" medical case has come to be a case exhibiting the most admirable evidences of structural alteration, but practically beyond the reach of human help.

Mutatis mutandis the same convention holds in the out-patient departments of teaching hospitals, whither are sent by the selectors of cases such patients as are likely to provide "instructive material" for students in those departments: that is to say, the patients must provide tangible physical evidences of diseases, evidences which can be demonstrated without difficulty, diseases which can be labelled. But for the lesser, vaguer, remediable disturbances of health, one might imagine that they fell beneath the dignity of the visiting physicians of hospitals.

Why is this? My professional life has been passed very largely in the atmosphere of teaching hospitals, so I venture my opinion for what it is worth. I believe the convention is set in the first instance by the examiners for degrees and diplomas in medicine. They expect the student to be versed in these irremediable phases of disease, so, naturally, the teacher and his house-physician have grown to feel the propriety of supplying the need; and since the teacher in course of time becomes the examiner, the tradition remains unbroken.

If any one doubts this, let him note the ways of the "devil" deputed by some examiner to provide suitable cases for an examination. Does he go to the casualty department and carry off the first half-dozen medical cases that apply for treatment (provided that they are not too closely allied in their complaints)? Not he. But he scours heaven and earth for something gross, or something fanciful and rare, according to the majesty of the examination. Yet I conceive that an examiner of insight could make a shrewd judgement of a man's capacity to be a practitioner of medicine by bidding him ask, let us say, an anaemic girl who complains of indigestion and weakness the questions requisite to establish, or at least to indicate, a correct diagnosis.

I have spent too much time in resident and other subordinate positions to assert that what I have indicated is the sole reason for the existing state of affairs, but I do feel strongly that it is perhaps the most important of them all: and that if the senior physicians of teaching hospitals would let it be known that disorders of function (apart from overt structural change) would be welcome in their wards, a great gain would accrue not only to the teaching of clinical medicine, but to a host of chronic sufferers from minor maladies whom a brief stay in hospital would set upon their legs again. I submit that in our hospitals the art of medicine is in partial eclipse and the science of it exalted out of reasonable proportion, and that this state of things is bad for all concerned; for it gives the sphere of medicine a sombre air of deadness and academicity which is no part of its inherent endowment, or so it seems to me. It is true, of course, that the student must learn something of the extremities to which disease can bring us in order that he may identify them when he sees them. But there is no fear that the orthodox hopeless medical case will disappear entirely from the wards and out-patient rooms, for the urgency of circumstance will continue to enforce its admission in ample numbers. No doubt the palliation of

irremediable mischiefs—a not ignoble task—will remain within the province of the physician; I do not grumble at that, but I do think that if medicine were to appear less constantly dressed in crape than is her practice to-day in hospitals it would give a much-needed fillip to her worshippers. She has plenty of cheery gear in her wardrobe, and I fail to see why she should not wear it more in public.—I am, etc.,

London, W., Jan. 6th. WILLIAM P. S. BRANSON.

PNEUMONIA: ITS NATURE AND TREATMENT.

SIR,—There is one matter (at least) in the lecture on pneumonia by Sir James Barr to which attention may profitably be directed. It refers to the action and use of oxygen in this disease. As regards its action Sir James says: "When you freely supply oxygen to the air cells, the red corpuscles do not necessarily take up more oxygen, but the carbonic acid tension in the blood falls." Now it would be indeed difficult to prove that after a free supply of oxygen the blood cells in any particular instance failed to take up any more, but in any case the extra oxygen (less or more) would nearly all be taken up into solution in the plasma, and very little would be received into the corpuscles. It is quite true that the epithelium of the air cells is normally capable of secreting all the oxygen required by the body from the air even under conditions of stress, but it must not be forgotten that in pneumonia we are dealing with a damaged epithelium, and the administration of pure oxygen in moderate doses acts (as Lorrain Smith's experiments proved) as a restorative, enabling the oxygen secretion to proceed.

As regards the fall in tension of the carbon dioxide of the blood in the air cells, it would appear from Sir James's statement that the mere supply of oxygen to the air cells could of itself cause such a fall, as he says the red corpuscles "do not necessarily" take up more oxygen. Needless to say, such is not the case. The increase in the oxygen tension of the blood has, since Bohr's observations in 1890, been regarded as without influence on the dissociation of carbon dioxide. Lately, however, observations made on blood *in vitro* by Christiansen and others, go to show that saturation of the haemoglobin with oxygen increases the dissociation of carbon dioxide, as compared with blood deprived of oxygen. But in pneumonia, any relief to the hyperpnoea by giving oxygen would of course result in a rise instead of a fall in the carbon dioxide tension, as the hyperpnoea maintains a low respiratory quotient. Sir James wishes to keep the patient breathing "as long and as deeply as possible." The *rationale* of this is not so easy to see. The hyperpnoea in pneumonia is naturally adjusted to supply the necessary oxygen, and is due to acidosis. If, then, the necessary oxygen be supplied, why force the breathing in the acute stage by artificial means, and thus augment an already existing acapnia? This might prove dangerous.

As regards the use of oxygen in pneumonia, Sir James Barr makes a sweeping condemnatory statement. But all depends on the nature of the case. Each case of pneumonia must be separately investigated. Examination of the blood gases in a large number of cases during the febrile stage proves indeed that in the great majority the oxygen content of the blood is well within the normal limits, and therefore, as Sir James rightly observes, in such cases there is no call for the administration of oxygen. But a minority of cases is found in which the oxygen content of the blood is low. This defective absorption may be due to such causes as fatigue of the pulmonary epithelium; to the massive block in the lungs; or to a lowered affinity of haemoglobin for oxygen, caused by the pneumococcus, thus setting up a meionexy. These are the cases in which oxygen by inhalation has proved of very great service. On the other hand, the indiscriminate administration of oxygen in all cases of this disease is usually due to the prevailing ignorance of the physiological conditions.—I am, etc.,

London, W., Jan. 12th. A. G. AULD.

HAUSA CUSTOMS AND FOLKLORE.

SIR,—In your issue of the December 6th, 1913, you published a review of my book, *Hausa Superstitions and Customs*. I intended to reply to some remarks in the notice at the time, but first owing to pressure of work, and later owing to neuralgia, I had to postpone my letter.

With regard to the saddle and tribal marks, I must disagree with your reviewer, but he is correct in what he says about the Bori. The view set forth was the official one, evolved out of a number of separate reports, and published in the *Gazette*. I felt dissatisfied with it, and last year I visited Tunis and Tripoli (where the Bori cult is highly developed), and Messrs. Heath, Cranston, and Ouseley will publish the results shortly in *The Ban of the Bori*. Some of these spirits are old Magazawa deities, some are imported—for example, Tanit—some are Semitic jinns, but now all are classed together as disease demons. I explained this in two papers read at the last meeting of the British Association, but although reports appeared in several papers, I am not going to be so discourteous as to suggest that your reviewer has not read any of them. On the contrary, it is evident that he is well acquainted with the subject, and I should be very glad if he would communicate with me privately, as I hope to return to North Africa next month to continue the work, and I should value his suggestions highly. I am to read a paper before the Folk-Lore Society next Wednesday night (January 21st), and if he and any other person interested in the subject would care to be present I should be very much pleased, and I know that the society also would welcome them.—I am, etc.,

105, Blackheath Park, S.E., Jan. 14th. A. J. N. TREMEARNE.

THE CRAZE FOR APPENDICECTOMY.

SIR,—The letters by Drs. Hickinbotham and Briscoe in your issue of January 3rd are very interesting. They, however, move me to write in order to suggest that the discussion is rather like the hypothetical one, "Should all whitlows and other inflammations of the fingers be treated by amputation of the digit, or should palliative means be tried first?"

The answer by most practitioners and surgeons would be certainly by palliative means first; yet some medical men could point to irreparable injury to the usefulness of the limb by whitlows which have been poulticed, fomented, and opened, and in every known way treated by palliative means; and also such medical men could point to many cases of *post-mortem* wound poisoning where death has occurred owing to only a little delay in the removal of the finger or hand, where palliative methods were tried first.

The truth is that appendicitis is the generic name of—speaking roughly—some twenty different ailments, the severity and danger ranging according to the germ, to the position of the appendix, and to the resistance of the patient) from (as a simile) an attack on man by a kitten to one by a tiger.

Many of us have seen fulminating cases which (even when operated upon at a very early stage) have died, overwhelmed by the poison, the abdominal wound sometimes turning black and necrotic during the few hours left to the patient.

On the other hand, the general practitioner knows that if he rushed off for operation all the cases in which he suspected inflammation of the appendix he would often subject the patient and the friends to great, unnecessary, and intolerable worry, sorrow, and expense. I may add he would soon get a bad name in the neighbourhood, and he would before long have no more chance of carrying on his hobby (or monomania). The moral is that each case must be examined and carefully watched, and must be treated on its merits. Action should be prompt and sharp if the patient is losing ground, but otherwise palliative means should be tried for a time. This last does not preclude a guarded prognosis, and sufficient warning to the friends and even some general arrangements being made, so that if the patient show disquieting signs, or if after a consultation with a brother practitioner or (when practical politics) after an examination by a consulting surgeon, it is decided to operate, no future delay need occur.

Dr. Briscoe's plea for the hygienic treatment of the intestines as a prophylactic measure I thoroughly endorse.—I am, etc.,

Herne Bay, Jan. 12th. R. C. T. EVANS.

SIR,—Dr. Hutchison in his letter in the JOURNAL of November 15th, 1913, says:

One can distinguish, I think, three sorts of cases in which removal of the appendix is constantly being advised or performed with doubtful justification. These are cases of so-called "appendix dyspepsia"; secondly, cases of chronic pain or discomfort in the right iliac fossa; and, thirdly, cases of vague ill health, in which the patient "looks toxic."

The following case might reasonably be included in the second class:

The patient, a strong, healthy-looking girl, 22 years of age, came to me about the beginning of September complaining of occasional pain in the right side of the abdomen lasting for a few hours and then abating. She stated that she sometimes felt it down the right leg. There was no history of any acute illness; indeed, the patient had seldom been a day in bed. Menstruation was irregular. On September 14th I examined the patient in bed, and on inspecting the abdomen was struck by the marked growth of hair extending up to the umbilicus. Palpation elicited tenderness on the right side, most marked over McBurney's point, and the right rectus was contracted. No swelling could be made out. The temperature was normal and the pulse 76. She appeared to be of a somewhat neurotic temperament, and taking this with the above symptoms into account I decided to keep her under observation in hospital.

Two weeks after admission I examined her under an anaesthetic. No swelling could be felt in the right iliac fossa, and I could not make out any abnormality of the genito-urinary system or malformation which might be associated with the presence of hair extending up the abdomen. During the next two weeks she was allowed to get up, but her condition was practically unchanged. The pulse and temperature were never above normal. One of my colleagues, who saw her at this time, suggested that the case seemed to be on a parallel with the cases in which Mr. T. K. Dalziel recommended division of the right twelfth dorsal nerve.[1] Somewhat reluctantly I made up my mind to "look and see"; on November 7th I opened the abdomen, and I admit at once that I saw what appeared to be a perfectly healthy appendix with no adhesions. Several small nodules were, however, felt in its lumen, and the appendix was therefore removed. The patient made an uneventful recovery and left the hospital within three weeks.



The lumen of the appendix was patent throughout, and the contents were easily expressed in the following order: Two small faecal calculi, a grape seed, two faecal calculi larger than the first. The photograph shows the appendix (with its mesentery removed) and of the grape seed.

Now I wish to ask Dr. Hutchison whether he would consider an appendix in this condition "as harmless as an extinct volcano or as potentially dangerous as a powder magazine," and the line of treatment adopted in this case as "at best a mere gambler's throw."

That pain in the iliac region may be *frequently* due to neuralgia of the twelfth dorsal nerve, and that it can be cured by division of that nerve seems to me to be open to much doubt, and more especially that such neuralgia should be due to mechanical injury, as Mr. Dalziel[1] suggested. The area in question is supplied by the eleventh and twelfth dorsal, the ilio-hypogastric, and ilio-inguinal nerves, and it is difficult to believe that any mechanical injury should definitely select the fibres of the twelfth nerve only. I take it that the most frequent form of mechanical irritation to which the branches of the twelfth nerve are subjected in this area is that resulting from operation scars. We know that severe neuralgia may result from inclusion of nerve fibres in amputation scars, etc., but it does not appear to be common after laparotomy, and certainly I have never heard of a case in which it was severe enough to justify division of the nerves. It is indeed difficult to believe that neuralgia of the twelfth dorsal nerve can be a distinct entity. It would be interesting to know how many of Mr. Dalziel's patients were females, and in what proportion of the total number the "neuralgia" occurred on the right side. One might also be tempted to ask regarding the first case mentioned by Mr. Dalziel how many abdominal organs the lady has parted with since the twelfth nerve was divided.—I am, etc.,

Wick, N.B., Dec. 15th, 1913. THOS. WRIGHT, M.D.

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1913, p. 1087.

SIR,—I have read with much interest the discussion that has taken place in the JOURNAL, but I have hesitated to join in the discussion, for, being a practitioner in a purely country district, my experience is not very extensive. All the same, during the past twelve months there was a very large amount of appendicitis in this neighbourhood. My total amounted to 23 cases, with 23 appendicectomies. I am fortunate in having at a distance of four miles a very up-to-date cottage hospital with a private ward, where most of the cases were sent, 3 only being operated on at their homes. Of these 23 cases only 6 can be described as acute; that is, they were operated on as speedily as possible, the times varying from ten minutes to twelve hours after the first interview. Of these 6 cases 3 proved to be fulminating, though only one was recognized as such; all three had free pus in the peritoneum, gangrenous appendices, and one had a concretion the size of a damson lying free in the peritoneal cavity. The remainder were cold cases, but all had had recurrent attacks and periods of ill health, and on removal all showed some gross pathological change. A considerable proportion had concretions, and when this condition was not present there were liquid faeces, kinks, adhesions, etc. The only healthy one I removed was found in a hernial sac during an operation for radical cure in a child. I am pleased to say that all the cases (including the fulminating ones) recovered without any alarming symptoms, thanks to free drainage of the peritoneal cavity in the peritonitis cases, though the one with the free concretion developed an abscess over his gall bladder, which I had subsequently to operate on.

Thus, of the 6 acute cases, just one half were so acute that had they not been operated on they were past praying for. The other 3 I have no doubt would have become quiescent with the treatment that some of your correspondents advise—namely, rest, starvation, and a subsequent course of cereal, fruit-juice diet, etc.; but what an awful risk to take! To quote 2 instances only of the "cold" cases. One small boy of 10, whose abdominal attacks were put down to green apples or other errors of diet, was found to have a dangerous appendix with a concretion and numerous adhesions. One lady, who nine months before had nearly died from haematemesis from a duodenal ulcer, developed evidence of appendicitis, and was found to have a dilated appendix with a considerable quantity of semi-liquid faeces in the dilated area—undoubtedly the cause of the duodenal ulceration.

I am told by pathologists that many *post-mortem* examinations show pathological lesions in the appendix which have given rise to no symptoms. How do they know? Take a similar pathological condition, namely, gall stones—one of the commonest discoveries in the *post-mortem* room. I am certain that no one can carry a gall stone or a concretion in the appendix without suffering from ill health, if it can only amount to a feeling of want of "well being." I am speaking from personal experience, for after suffering for many months appendicectomy made a new man of me, though I understand my individual appendix was not very malignant in character. My modest experience will have shown that I am thoroughly in agreement with Mr. Edmund Owen and the attitude that the Royal Society of Medicine took up on this question; and though freely sympathizing with my country brethren who have not the same access to hospitals as other men, I feel that the increase of cottage hospitals throughout the country ought to render the mortality from appendicitis a rapidly decreasing factor.—I am, etc.,

WILFRED BALGARNIE, M.B.Lond., F.R.C.S.Eng.

Winchfield, Hants, Jan. 11th.

PSYCHO-ANALYSIS.

SIR,—It is much to be regretted that the reviewer of Dr. Brill's book on this subject did not speak out plainly what was in his mind, and treat the subject as it deserves, instead of praising it with faint damns. It is high time some one made a protest against the new pornography, and though you have refused to publish previous protests of mine, I trust you will allow me to state publicly that there are still psychologists who have some regard to decency, and refuse to practise or to countenance this new doctrine. Phallic worship, under one disguise or another, perpetually revives from time to time, and is perhaps most sickening when it masquerades as science. The late

Krafft-Ebing was the high priest of one particularly revolting form of phallic worship, and his books had an enormous sale, but he did comparatively little harm. No one was likely to be contaminated by his teaching who had not already a strong leaning towards the worship of the phallus. But the new pornography is far more subtle and more dangerous. It teaches that medical practitioners should question and cross-question for hours together, day after day, for weeks and months, clean-minded men and pure-minded women upon the very subjects that clean-minded men and pure-minded women put behind them and refuse to think about. Sex, sex, sex, in its grossest aspect, is dinned into their ears for hours every day, and every failure to elicit a confession is met by the suggestion of some new form of beastliness. The Freudian finds tongues (talking dirt) in trees, books (on beastliness) in the running brooks, sermons (on sexuality) in stones, and filth in everything.

Sir, I have always refused to join in the general wail about the decadence of the English nation. The English have always led the civilized world in most things, and in most things they lead it still; but when I see the younger generation of English psychologists and alienists gulp down every silly fad that reaches us from the Continent I begin to have my doubts. The cult of the superficial and pretentious, as exemplified by the followers of Kraepelin and Bergson, is a regrettable waste of time and energy, but otherwise does no harm; but the cult of the foul is another and a much graver matter, and I think the BRITISH MEDICAL JOURNAL should have given us a much stronger condemnation of this gospel.—I am, etc.,

Parkstone, Dorset, Jan. 10th. CHAS. MERCIER.

*** We have referred this letter to our reviewer, who writes: The Editor has permitted me to reply to Dr. Mercier's charge of damning with faint praise the "new pornography." I admit that I did not use the strenuous phraseology for which Dr. Mercier is so well known; at the same time, I disclaim any intention of speaking in praise of Freudism. While proud of the Englishman's respect for decency, I may feel perhaps that sometimes he is inclined to be too contemptuous of the scavengers of mud in the brooks, or of foul-smelling fungi in the trees, though their researches may result occasionally in a discovery of value. And, while some foreigners may be too intent on sex, the Englishman's *pudor* may lead him to bury facts in order not to see them. I hope Dr. Mercier will allow me to assure him that the only phallic worship I practise is that of the enjoyment, in a culinary sense, of the edible mushroom.

THE NEW POOR LAW INSTITUTIONS ORDER.

SIR,—In view of the revolutionary character of the Poor Law Institutions Order, 1913, which comes into force on April 1st, the large amount of work which it throws on the already badly paid workhouse medical officer, and the attempt, to which you direct attention in the current number of the JOURNAL, to place the medical officer in a subordinate position, it is essential that we should at once take steps for concerted action to protect ourselves.

We must make a firm demand for (1) proper remuneration on some definite scale; and (2) a perfectly clear understanding that we as professional men are not going to be placed in a subordinate position.

It may be true that this Order is a step in the right direction, but if the Local Government Board keeps on adding to the work and encroaching more and more on the time of medical officers whose salaries are simply ridiculous for the amount of work and worry entailed, it certainly ought to see that those salaries are increased all round. Now is the time to make a firm stand: the profession is not overcrowded at present; it would not be very easy for guardians to fill vacancies caused by resignations, especially if the British Medical Association takes strong action in the matter, as I trust it will.

I for one am prepared to take any step which appears desirable in a united movement for our protection.—I am, etc.,

A WORKHOUSE MEDICAL OFFICER OF TWENTY YEARS' STANDING.

January 11th.

RAPID DELIVERY IN ECLAMPSIA.

SIR,—I read with interest Dr. R. Carmichael Worsley's communication on this subject in your issue of December 27th, 1913, p. 1625, and my experience entirely coincides with his. In puerperal convulsions I have always hastened the delivery of the uterine contents, if possible under chloroform, and have never seen a fatal issue from this alarming complication; the attacks cease immediately the womb is emptied. In one case—primipara—the woman was *in extremis*, the fits having lasted without intermission twelve hours; the patient, a weak frail girl, had been in labour three days when I was called in. I found a tense tough bag of membranes presenting and protruding from the vulva, as large as a fetal head; rupture of this, with the outlet of the waters and the immediate expulsion of the (living) child, brought instant relief to all untoward symptoms, the convulsions ceasing on the spot: the mother made a speedy recovery. Leaving aside of course all cases of uraemic origin, it has always been my experience that puerperal convulsions, pure and simple, yield at once to the removal of the exciting cause.—I am, etc.,

JOHN F. ELLIOTT, L.R.C.S. and P.I.

Rostrevor, co. Down, Jan. 8th.

Universities and Colleges.

UNIVERSITY OF LONDON.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE council have appointed Mrs. Flemming, M.D., B.S., to the Half-Lectureship in Medicine, and Mr. Malcolm Hepburn, M.D., F.R.C.S., to the Half-Lectureship in Ophthalmology.

Two St. Dunstan exhibitions of the value of £60 a year each for six years, the Isabel Thorne Scholarship of the value of £30, and the Mabel-Sharman-Crawford Scholarship of the value of £20 a year for four years, will be awarded on the results of an examination to be held in July next. A bursary for dental students of the value of £60 will also be awarded for the course beginning October, 1914. Further particulars can be obtained on application to the secretary.

PRELIMINARY EXAMINATION AT SCOTTISH UNIVERSITIES.

THE Joint Board of Examiners of the Scottish universities have issued tables of statistics relative to the preliminary examinations held in September last. Of the candidates who entered for the medical preliminary, 100 per cent. passed in all the subjects at St. Andrew's, 22.22 per cent. at Glasgow, 25 per cent. at Aberdeen, and 43.13 per cent. at Edinburgh. The table showing the number of passes and failures in each subject of the arts and science preliminary is most illuminating. At Glasgow 200 entered for the English paper, of whom no fewer than 121 failed; 127 out of 155 candidates failed in French. At Edinburgh only 12 out of 97 candidates passed in this subject.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY council was held on January 8th, when Sir Rickman J. Godlee, Bart., President, was in the chair.

Court of Examiners.

Mr. Walter George Spencer was readmitted a member of the Court of Examiners.

Hunterian Oration.

The President reported that Sir W. Watson Cheyne would deliver the next Hunterian Oration in 1915.

Queen Victoria's Jubilee Institute for Nurses.

Mr. C. J. Symonds was appointed to represent the college on the council of the above.

Donation.

The thanks of the council were voted to Mrs. King, Milton, Mass., for the presentation of a clock in memory of her father, Mr. W. C. B. Fifield of Boston, a former member of the college.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—*Part I (Chemistry), Part II (Physics):* †R. Ambler, H. Amin, E. G. Anderson, H. D. Apergis, H. C. Apperly, F. Cameron, ‡H. C. Clifford-Smith, V. D. Corbett, *C. J. C. de Silva, *B. O. Dewes, ‡H. S. Drabble, ‡A. el H. El Rakshi, E. S. Gawne, R. B. Gibson, *E. F. Gillett, ‡J. Hollings, *J. R. Houghton, G. R. Hubbard, ‡R. E. Jenkins, ‡H. A. C. Kite, †Lillian Lowenstein, A. Magill, ‡A. Y. Massouda, ‡G. Millar, ‡A. R. Moxsy, *W. P. Nelson, A. E. Parkes, K. S. Procter, *C. F. Rainer, O. A. Ll. Roberts, P. E. Robinson, H. M. Savery, K. E. Shellshear, *D. R. Thomas, ‡B. M. Tonkin, H. B. Troup.

†C. Vincent-Brown, H. P. Warren, H. E. Williams. *Part III (Elementary Biology)*: E. G. Anderson, G. A. A. Bradnack, H. C. Clifford-Smith, V. D. Cornett, M. A. El Dardiri, E. S. Gawne, R. V. Hudson, R. E. Jenkins, F. Lawrence, J. S. Lewis, P. Lloyd-Williams, H. O. Long, W. H. Maudling, A. B. Olumuyiwa, W. G. Owen, A. L. Packham, A. E. Parkes, K. S. Procter, J. S. L. Roberts, J. C. Robertson, R. J. Saunders, W. M. Savery, U. Hester Schreiner, R. V. Stanford, F. E. G. Watson, G. Winter, B. C. Woodroffe.

* Passed in Part I only. † Passed in Part II only.

Medico-Legal.

FEES FOR MEDICAL WITNESSES AT INQUESTS.

IN the JOURNAL of November 29th, 1913, p. 1467, a case was discussed in which a medical witness at an inquest had been refused his travelling expenses by the coroner. The doctor issued a writ, and the expenses were then paid. In commenting on this case the statement was made that statutory regulations provide for the payment of travelling expenses. The expression was erroneous, inasmuch as the true position is that the local authority has statutory power to make a schedule of fees, allowances, and disbursements which on the holding of an inquest may be paid by a coroner. We are advised that if the schedule of fees and allowances authorized by the local authority include mileage allowance to witnesses a coroner of the same county or borough is justified in paying the travelling expenses of a medical witness. As a rule the medical witness called by a coroner lives in the immediate neighbourhood, and it would appear that in London it is not the custom to pay travelling expenses unless the medical witness has to travel over ten miles. Halsbury's *Laws of England*, vol. viii, p. 293, note (*k*), makes the following statement: "If in the opinion of the coroner any special expenses ought to be incurred which are not provided for in the schedule he should apply to the local authority for leave to incur them; if he incurs them without such authority he will be liable to pay them out of his own pocket."

Obituary.

THE sudden death of Dr. JAMES C. FERGUSON, Medical Officer of No. 6 Dispensary District, Belfast, is much regretted both by the profession and by a large number of the public. Dr. Ferguson arrived at the dispensary of his district about 11 o'clock on January 6th, and while speaking to his colleague, Dr. William Burns, suddenly gave a gasp and fell to the ground before Dr. Burns could spring to his assistance; although remedies were promptly applied he never recovered consciousness. He had been complaining of a slight cold for the previous few weeks, but otherwise seemed well and alert as usual. Dr. Ferguson was 58 years of age; he was born in Doagh, co. Antrim, and was the son of Dr. Ferguson of that town. In 1884 he graduated M.D. in the old Royal University of Ireland, and was soon afterwards appointed resident medical officer in the Poor Law infirmary, and in 1888 dispensary medical officer for Dock Ward. He was also for a time physician to the Ulster Hospital for Children and Women. A few months ago he was transferred to No. 6 District. Dr. Ferguson was most popular with his colleagues and patients, and trusted as a most valued and experienced officer by the board of guardians. As medical officer of health for his district he gave invaluable aid to the superintendent medical officer of health, and was instrumental in getting several sanitary reforms carried out. Much sympathy is felt with his widow and two children, and numerous resolutions of condolences have been passed by various public boards and by the meeting of medical men under the chairmanship of Sir John Byers.

THE sudden death of Dr. JOHN GORMAN of Bangor came as a great shock to his many friends and patients. He had been in apparent good health, and was always considered strong and vigorous; he carried on a large practice, and worked both night and day. During the week before his death he complained once or twice of a slight oppression about the heart, but continued to discharge his duties although he had promised to take a holiday. On the morning of December 27th, after getting up he felt sick and said he would rest for another hour, and arranged for his motor. When a relative went to awake him, he was found to be dead; and the attacks were in all probability anginal. Dr. Gorman, who was a student of Queen's College, Belfast, was under 50 years of age; he took the diplomas of L.R.C.P.and S.Ed., L.R.F.P.S.G. in 1894, and settled in Bangor, co. Down, where by steady and indefatigable work he established a large practice; he was trusted by his patients, and did everything in his power for their benefit. He was honorary physician to the Homes of Rest, Bangor, and gave unstinted attention to his duties in connexion with this charity. Much sympathy is felt with his widow and only son.

MAJOR ERNEST CHESTER ANDERSON, R.A.M.C.(ret.), who died recently at Totland Bay, Isle of Wight, was born on November 26th, 1863. He was educated at St. Mary's Hospital, took the diploma of M.R.C.S. in 1887, of L.S.A. in 1888, and of L.R.C.P.Lond. in 1889. He entered the Royal Army Medical Corps as surgeon-lieutenant on January 30th, 1892, became surgeon-captain on January 30th, 1895, major on January 30th, 1904, and retired immediately on completing twenty years' service on January 30th, 1912. He then joined the Reserve of Officers, and was employed till 1913 at Golden Hill Fort. He served in the South African war from 1899 to 1902; in the Orange Free State from February to May, 1900, being present in the actions at Paardeberg from February 17th to 26th, at Poplar Grove and at Driefontein; in the Transvaal in May and June, 1900, including actions round Johannesburg and Pretoria; from July, 1900, to November, 1901, in Cape Colony and the Orange Free State: and in the Transvaal from November, 1901, to May, 1902. For these services he had received the Queen's medal with four clasps and the King's medal with two clasps, and also the D.S.O.

A VERY sad occurrence is reported from Castlebar. It appears that Dr. JAMES J. MCGRAEL, J.P., medical officer of the Louisburgh dispensary district, committed suicide at his residence by taking a dose of morphine. Dr. McGrael was a native of Westport: he had a successful medical career in Dublin, and passed his final examinations with honours. Four years ago he was appointed dispensary doctor for the Louisburgh district, and over a year ago he was married. From the evidence given at the inquest it would seem that the deceased had been depressed in mind since the death of his child, which occurred some weeks ago, and the jury found that death was due to poisoning by morphine self-administered during temporary insanity.

SURGEON-MAJOR WALTER FRY, Madras Medical Service (ret.), of Kenmore, Maidstone, died at Nice, after an operation, on December 30th, 1913. He was born on March 3rd, 1836, the son of John Fry, auctioneer, of Greenwich; educated at King's College, London, and took the diploma of M.R.C.S. in 1858. In that year Major J. Moore placed at the disposal of the Council of King's College, London, a nomination for a commission as assistant surgeon in the Indian Medical Service. The Council selected Fry as the best student among the applicants, and he was nominated by Sir Richard Jenkins, G.C.B., from June 29th, 1858. He became surgeon on June 29th, 1870, surgeon-major on July 1st, 1873, and retired on November 20th, 1882. The *Army List* assigns him no war service. He spent his first twelve years in military employment; in 1870 he was posted as Residency surgeon of Travancore, and held that appointment for the rest of his service.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. John Green, professor of ophthalmology at the St. Louis Medical College of Washington University since 1886, and one of the organizers of the American Ophthalmological Society, aged 78; Dr. Josef Heim, of Vienna, formerly President of the Austrian Medical Council of the Doctors' College of Vienna, aged 71; Dr. Louis Jullien, surgeon to the Maison de Santé, Paris; Dr. Frederick Ogden Marsh, professor of chemistry and toxicology in Miami Medical College, Cincinnati, aged 54; Dr. Warren Oscar Plympton, formerly professor of surgery in the New York Post-graduate Medical School, aged 55; and Dr. G. Vignier, *agrégé* professor of parasitology in the Medical Faculty of Algiers.

Medical News.

A RADIUM institute is to be opened at Geneva in September.

DR. ALBERT ROSENAU has been appointed Sanitäts-Rat by the King of Bavaria.

THE centenary of Claude Bernard was solemnly celebrated at the Collège de France on December 30th, 1913. He was born on July 12th, 1813, and died on February 10th, 1878.

THE annual meeting of the After-Care Association for Poor Persons Discharged from Asylums will be held on February 23rd at the Royal College of Physicians of London, under the chairmanship of the President of the College, Sir Thomas Barlow.

MEMBERS of the West African Medical Staff now at home on leave, as also ex-officers of this service, will dine together on Wednesday, January 21st, at the Grand Hotel, Charing Cross. In accordance with established custom, decorations will be worn. Tickets can be obtained on application to Dr. J. P. Fagan, 27, Scarsdale Villas, Kensington, W.

THE accounts of the Metropolitan Hospital Saturday Fund for the year 1913 show a shrinkage in receipts not dissimilar to that exhibited by the corresponding accounts of the Metropolitan Hospital Sunday Fund, to which we made allusion some weeks ago. The total receipts for the year were £40,272, against £45,118 in the previous twelve months.

AT the annual dinner of the West London Medico-Chirurgical Society on Thursday, February 19th, at the Hotel Great Central, the society's triennial gold medal will be presented to Professor Arthur Keith, F.R.S., Conservator of the Museum of the Royal College of Surgeons of England.

DR. G. A. BERRY, of Edinburgh, will preside at the eighth annual dinner of the past and present students of the Royal Ophthalmic Hospital, to be held at the Imperial Restaurant, Regent Street, London, W., on Tuesday, February 3rd. Further particulars can be obtained from the honorary secretaries, Mr. Arnold Lawson, 12, Harley Street, W., and Mr. J. H. Parsons, 54, Queen Anne Street, W.

THE third International Congress of Occupational Diseases will be held at Vienna in September next. The following subjects are proposed for discussion: (*a*) Physiological and pathological fatigue, with special relation to professional work; the action of professional work on the nervous system; night work. (*b*) Work in hot and moist air. (*c*) Anthrax in workpeople.

THE Congress of French Practitioners will be held next April in Paris. The main object of the congress is to discuss the slow but steady tendency towards a public medical service which is being made by states and the great mutualist societies. The congress will make a protest against this in the name of all practitioners in France, and insist on the need of the organization of public hygiene in connexion with the profession.

THE fourteenth French Congress of Medicine, organized by the Association of French-speaking doctors, will be held at Brussels from September 30th to October 3rd, under the presidency of Professor Henrijean. The following subjects are proposed for discussion: Syphilis of the cardio-vascular apparatus, lipoids in pathology, the therapeutic value of artificial pneumothorax, vaccine-therapy in general, and special vaccinotherapy of cancer and typhoid fever. Communications relative to the congress should be addressed to the General Secretary, Professor René Verhoogen, 22, rue Joseph II, Brussels.

A RECENT circular of the British Fire Prevention Committee states that it has records of seven fatalities in England due to the bursting of chemical fire extinguishers, and that it has grounds for believing that there is a tendency to put on the market "cheap-jack" appliances of this order, and to promote their sale in country areas by misleading demonstration tests. Portable fire extinguishers at the best are, it is pointed out, merely first-aid appliances, which in a majority of cases are not superior to buckets of water and hand-pumps, and always require care in maintenance and handling. The committee has devoted considerable pains to testing fire extinguishers on scientific lines, and has prepared a standard specification for the construction of these appliances as a guide to prospective purchasers. Copies of this are obtainable on application at 8, Waterloo Place, Pall Mall, S.W., and would no doubt be found useful by many hospital authorities. The knowledge possessed by the public, however, on the whole subject is so limited that the committee would do well to supplement this technical specification by a general statement as to the method and action of chemical fire extinguishers as a class. To some which have been long on the market the present specification would appear to have no application.

THE recent Conference of Educational Associations included a meeting of the Child Study Society, which was held in the Jehangier Hall of the University of London on January 9th, with Sir Edward Brabrook in the chair. A discussion on the child and the curriculum was opened by Dr. W. G. Sleight, who said that the primary object of the school was to provide the child with all the important ideals of life. No one subject could provide the concepts which were intended to be of universal application; and it was the duty of the maker of curricula to collect facts of genuine value and leave to the teacher and his pupil the task of extracting the lessons from them. They must distinguish, however, between the content of curriculum and the concepts of method and conduct, for, although curricula should be made with high ideals, it should be left to the teacher to carry them out. In constructing a curriculum, therefore, the question of discipline could be altogether banished; but it was far otherwise when it came to teaching the curriculum. In spite of much that had been said to the contrary, no one could state definitely that the teaching of certain subjects would inculcate into the child the virtues of obedience and truthfulness; it rested with the teacher to make his lessons on each and every subject in the curriculum a means of inspiring his pupils with a love and reverence for these and other qualities necessary for their development into good and useful citizens. Dr. Sleight's address was followed by a discussion, in which the Chairman took part, remarking that it should always be remembered that the curriculum in its relation to the child was like the Sabbath and man, inasmuch as the curriculum was made for the child and not the child for the curriculum. Other speakers were Mr. B. Dumville, Miss Kelley, Mr. T. G. Tibbey, and Mrs. Jeffe White.

The need for some more effective means of dealing with tuberculosis as a national disease becomes more and more obvious as time goes on. Effort at the present time is chiefly concentrated upon sanatorium treatment and improvement of the resistent powers of the affected individual rather than upon any combined attack upon the cause of the disease as it is known to exist. Doubtless there is much yet to be learnt as to the behaviour of the tubercle bacillus outside the body in which it has been developed, but enough is known to make it certain that the individuals may be a constant source of danger to the community. If this unpleasant fact were only more widely recognized it would not be difficult to devise methods of segregation by which the spread of the bacillus broadcast might be checked. Public common sense has fully accepted the compulsory segregation of the acute infectious diseases, but the application of the system to the chronic infective maladies involves greater sacrifices of individual and family liberty in proportion to the probable duration of the illness. If done at all it would seem necessary to do it on a very large scale, but it is now obvious to the ordinary observer that small measures are not producing any very tangible results, and that something more radical is called for. In a letter published in the JOURNAL of September 21st, 1912, and again in more extended form in a pamphlet reprinted from a contemporary journal (*Hospital*, and the Scientific Press Limited) Dr. Esslemont, the Superintendent of the Home Sanatorium at Bournemouth, has put forward a suggestion for the establishment of garden cities for consumptives. Experience has already proved that a high standard of general and personal hygiene is attainable in communities where segregation is carried out with due regard to the requirements of all classes included in the scheme. Consumptives are of all ranks and innumerable occupations, and nothing short of a garden city, including means of occupation, interest, and amusement for a vast variety of patients, could be reasonably expected to meet with public approval. Dr. Esslemont has not tried to minimize the great difficulties and the huge initial cost attending the establishment of such communities, but he maintains that it is only by such means that the disease can be finally eradicated, and that it is useless, from the preventive point of view, to rest satisfied with the treatment of early disease so long as the advanced case is permitted to be at large and uncontrolled.

Letters, Notes, and Answers.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Value of Practice.

Enquirens asks what is the market value of a London suburban practice established over twenty years returning about £450 per annum; present panel membership, 430.

Before the Insurance Act the market price would have been about a year's purchase; but that Act has introduced new factors which have to be considered and their importance would vary in different localities. In some suburban districts the market price would be diminished; in others it might be increased.

Income Tax.

No. 603.—From September, 1911, to September, 1913, P. and A. were in partnership, the former taking five-ninths of the profits and the latter four-ninths. From September, 1913, P. became the sole proprietor of the practice. What proportion of the income tax payable in January, 1914, should A. bear?

*** Section 62 of the Taxes Management Act, 1880, provides for the division of the tax charged by way of assessment between a former proprietor and a successor, and as that is essentially the position in this case our correspondent should request the surveyor of taxes to divide the charge for 1913–14 between (*a*) the firm of P. and A. for the period to September, and (*b*) the present proprietor, P., for the remainder of the year. He will, no doubt, also furnish, on request, figures showing how the first portion of the charge should be divided between the partners. It appears from our correspondent's letter that the tax for 1912–13 was never shared, but that he bore the whole of that amount himself. It is now too late to invoke the aid of Section 62, but on general principles of equity P. seems to be in a position to call upon A. to refund him a fair proportion of that sum, as being money necessarily paid by him (P.) to the use of A. It is assumed throughout this reply that the partnership deed did not provide for any specific apportionment of outstanding taxes at the end of the partnership; if it did, then the answer to our correspondent's question depends entirely on the construction of the deed.

LETTERS, NOTES, ETC.

Rex v. Hamilton.

Dr. W. H. Gimblett (86, Sutherland Avenue, Maida Vale, W.) has received the following further subscription, in addition to the sum of £66 17s. already acknowledged: Mrs. Grace Tolcher, £2 2s.

Warning.

A warning was published at page 1416 of our issue for November 22nd, 1913, regarding a man, who, calling himself sometimes Williams, sometimes Longford, represented himself as traveller in books for Messrs. Churchill, and against whom a warrant was stated to have been issued. We are informed that a man using the same names has recently visited several medical men asking without authority for payments on account of sums due by them to Mr. Stanley Phillips, agent for the F. A. Davis Company, Philadelphia, and others publishers of medical works.

Warning to Ship Surgeons.

Dr. A. Vavasour Elder (London, W.) writes: As the allusion to professional secrecy and the Merchant Shipping Acts in Dr. Arthur W. Condor's warning letter to ship surgeons may cause confusion, I would like to point out that the decision of the Ship Surgeons Subcommittee anent professional secrecy applies entirely to the varying forms of medical logs, reports, etc., called for by different companies from their surgeons in respect of passengers and crew. Effect is given to the requirements of the Merchant Shipping Acts by the concluding phrase (in italics) of the Subcommittee's decision: "That professional secrecy should be maintained by ship surgeons in respect to all cases of illness attended by them on board ship, *except in those cases which come within the quarantine regulation of any part visited, or other legal obligations.*" That an official log entry would be treated as anything but privileged can hardly be doubted, and with the present tangled state of the Insurance Act, it becomes most important that medical men should not lay themselves open to a charge of neglecting statutory obligations. To what extent the ship's official logbook is to be converted into a medical logbook is not very easy to decide in view of the limited amount of space contained therein and the unlimited ceremonial of countersigning entries connected therewith. In this respect surgeons must use discretion, and, in common with the generality of Board of Trade requirements, leave a good deal to chance. My own practice is to make an official log entry—apart from the medical log—of all cases among members of the crew laid off duty for twenty-four hours or more, and any case of head or other injury likely to be followed by sequelae. How long the purser, who has to make these entries, and the co-signatories will permit me to pursue the even tenor of this way without grumbling at the apparent uselessness of these formalities remains to be seen.

Treatment of Pneumonia.

Dr. S. K. Chaudhuri (Laksa, Benares), writing in regard to the treatment of pneumonia, says that, so far as drugs are concerned, it will be long before a better combination is found than that recommended by Dr. A. J. Mathison in an article published at page 1611 of the British Medical Journal of November 19th, 1910. He can fully corroborate Dr. Mathison's claim that on use of the combination the disease not infrequently aborts, the crisis occurring sometimes as early as the third day, and convalescence being as a rule uneventful. He has slightly modified the mixture in some cases, but has taken care not to modify the amount of potassium iodide and creosote. He regards a preliminary dose of calomel as an advantage, considering that in all cases of pyrexia due to infection, except possibly infection by the *B. typhosus*, a dose of calomel at the beginning of the illness enables the patient to fight with the infection more successfully. The mixture in question is as follows: Potassium iodide, 1 drachm; creosote, ½ drachm; rectified spirits, 2 drachms; liquid extract of liquorice, 3 drachms (or 4 drachms of the older *Pharmacopœia* preparation); water, 6 oz. A tablespoonful to be taken every four hours.

Syphilis.

Dr. J. Reid (London, W.C.) writes: In 1885 I attended a farmer's wife in her confinement. Both feet of the baby were affected by talipes. Her husband was syphilitic, but his symptoms had been quiet for some years. I treated the baby with grey powder, and applied cardboard splints, with the result that both feet were normal at the end of ten months. Syphilis has been observed in connexion with talipes before. When I was a student in 1881 I diagnosed syphilis in a child who had general gland enlargement. The indignant mother told me she and her husband had known each other since childhood and that both had been always in perfect health. She made complaint to the doctor of the clinic—dispensary—that a student had made the diagnosis. The students concurred and so did he. She refused treatment, but I vaccinated the child later, only I hurt her feelings by not vaccinating from its vesicles. I suppose its own autoinoculation will eventually cure, unless vital parts are affected. It is somewhat surprising that Larrey's method of treating acute infectious diseases—although not called autoinoculation—should be on like principles! Growth and injection are more quick, but the principle remains. No doubt notified syphilis would cause much friction.

The Scottish Vernacular.

D. W. (Glasgow) writes: What a loss of time when refined sort of people try to tell us that they have sore bellies. Here is a delightful contrast. I was called to a poor man. "Well, what's the complaint?" His answer consisted of four words: "Something tormentin my puddins."

Sir Jonathan Hutchinson on Natural History.

In reply to Mr. James Turle, "S. D. C." writes: I am unable to give the name of the English translator who incorrectly added the "h" to *yellow ammer*. I obtained the information from one of the curators of the Natural History Museum, South Kensington. This etymology is accepted by the editors of the *New English Dictionary*. The suggestion that the bird's name has some connexion with "hammer cloth" appears to be untenable. Most dictionaries define "hammer cloth" simply as the cloth covering the coachman's seat, and in the pockets of which a hammer and other repairing instruments were carried in case of breakdown. The late Professor Skeat, however, derived the word from the Dutch *hamel*, a covering.

Dr. J. H. Gibson (Aldershot) writes: Skeat (*Concise Etymological Dictionary*) says of this name: The "h" is an ignorant insertion; ammer answers to A.S. amore, a small bird, etc.

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An Address
ON
CHRONIC INTESTINAL STASIS:
"AUTOINTOXICATION" AND SUB-INFECTION.

DELIVERED BEFORE THE MEDICAL SOCIETY OF THE CITY AND COUNTY OF DENVER, DENVER, COLORADO.

BY
J. GEORGE ADAMI, M.D., Sc.D., LL.D., F.R.S.,
STRATHCONA PROFESSOR OF PATHOLOGY, MCGILL UNIVERSITY, MONTREAL.

STEADILY and progressively during the last score or so of years there has developed a tendency to ascribe to derangement of the intestinal tract the origin of not a few grave disorders, until to-day we have Sir Arbuthnot Lane[1] recording no fewer than seventeen more or less outstanding symptoms as directly due to stasis and delayed passage of faecal matter through the lower end of the ileum and the larger bowel, together with nine maladies indirectly due to the same cause, while we are informed that these are merely the more important possible outcomes of stasis; several others may also be imputed to this cause. It is a portentous roll—a roll so long that we may well call a halt and examine into its details.

SIR ARBUTHNOT LANE'S THESIS.

Let me, as this is to form the text for my sermon, rapidly recapitulate Lane's conclusions:

By chronic intestinal stasis, says Sir Arbuthnot, he means that the passage of the contents of the intestinal canal is delayed sufficiently long to result in the production, in the small intestine especially, of an excess of toxic material, and in the absorption into the circulation of a greater quantity of poisonous products than the organs which convert and excrete them are able to deal with. In consequence there exist in the circulation materials which produce degenerative changes in every single tissue of the body, and lower its resisting power to invasion by deleterious organisms.

He ascribes these disturbances primarily to delay of faecal material in the large bowel. This loading of the large bowel tends towards downward displacement and dragging upon the other organs in the abdominal cavity. Along the lines of stress there develop definite membranes; these very membranes, by pulling upon the other organs, induce kinks and partial obstructions, and where this obstruction tells upon the small bowel dilatation occurs above the point of obstruction, with a relative stasis. Thus we find brought about a delayed passage of the contents of the small intestine, as also of the duodenum and the stomach, with resultant infection of these organs and accumulation of deleterious bodies from the stagnating material. He enumerates the following as the symptoms which result directly from the "autointoxication" of chronic intestinal stasis:

1. Loss of fat.
2. Wasting of both voluntary and involuntary muscles.
3. Alteration in the texture and colour of the skin, with pigmentation and offensive perspiration.
4. Subnormal temperature, especially affecting the extremities. There is no abrupt line of separation between this condition and Raynaud's disease, of which it would appear to be a stage.
5. Mental conditions of apathy, stupidity, or misery, which may become exaggerated to a state of melancholia, or even apparent imbecility, with suicidal tendencies. There may be neuralgic symptoms, neuritis, frequent headache, loss of control over the temper. These nervous states due to stasis are a much more frequent cause of serious crime than is generally imagined.
6. Rheumatic aches and pains in muscles, joints, and skin.
7. Atrophy of the thyroid gland.
8. Either increased or lowered blood pressure.
9. Degenerative changes in the breasts, especially in the upper and outer zone of the left breast, predisposing to cancer.
10. Prolapse of abdominal organs, partly because of loss of fat, partly because of wasted muscle fibres. Increased mobility of the kidneys, and prolapse and bends of the uterus.
11. Breathlessness on exertion, at times of asthmatic type, due in some cases to a distension of the stomach and intestines.
12. Degeneration of the heart muscle with dilatation of left heart and aorta and arterio-sclerotic changes (atheromatous) in the systemic arteries.
13. Renal changes which are roughly grouped under the term "Bright's disease."
14. Early loss of hair colour with falling out, more common in those with dark than with red hair.
15. Affections of the pancreas with chronic induration, inflammation, and finally cancer. Pancreatic diabetes.
16. Infection of the biliary system, cholecystitis, cholelithiasis, cancer, together with many acute and chronic diseases of the liver.
17. Degenerative diseases of the eye.

The indirect changes resulting from the lowered resisting power of the tissues can, says Sir Arbuthnot, hardly be separated abruptly from these more direct changes. Of these the most obvious are:

1. Infection of the gums and pyorrhoea alveolaris.
2. Tuberculous infection other than that due to direct inoculation, as through the skin.
3. Rheumatoid arthritis. This, like tuberculosis, is declared not to develop, except in the presence of defective drainage of the gastro-intestinal tract.
4. Infection of the genito-urinary tract, producing nephritis, cystitis, pyelitis, endometritis, salpingitis, etc.
5. Thyroid disorders, such as diffuse enlargement, exophthalmic goitre, adenomatous tumours.
6. Still's disease.
7. Pustular infections of the skin.
8. Infections of the large intestine; several varieties of mucous and ulcerative colitis.
9. Ulcerative endocarditis.

These, says Sir Arbuthnot, are merely a few obvious, typical, indirect results of the "autointoxications" of chronic intestinal stasis.

On the occasion when he announced these conclusions Sir Arbuthnot brought forward seventeen patients and their case reports as evidence that these various conditions can be cured or definitely ameliorated by short-circuiting the large intestine, by the operation of ileo-sigmoidostomy with or without removal of the colon, by removal of obstructing bands, or, again, by performance of gastro-jejunostomy to overcome duodenal obstruction.

To-day I want to consider, not as a clinician, but as a pathologist, how far we may reasonably accompany Sir Arbuthnot, to what extent his doctrine is to be accepted; for, honestly, at first sight these seventeen symptoms, and nine diseases indirectly induced, seem to be a horrible jumble. Instinctively we are thrown into an attitude of doubt; instinctively we feel that the great surgeon of Guy's Hospital, to whom surgery owes so much, may have fallen a victim to that most dangerous, if it be not the last, infirmity of noble minds—obsession. For it seems to me that the noble mind as distinct from the great mind possesses a certain quality of generous enthusiasm which, while it is an added virtue, is also a danger; so that its possessor, once he has discovered a truth, in that enthusiasm inevitably sees applications of that truth in all directions. If it so happens that he has lighted upon a fundamental truth, this is a perfectly safe procedure; we marvel at his perspicacity, and the charge of obsession, if advanced, passes off like water from a duck's back. If his discovery is not a fundamental truth, but only a half-truth, then the same obsession leads him with fatal sureness to some *reductio ad absurdum;* leads him to enumerate as related—and what is more, to be convinced that they are related—matters which the every-day man not thus wrought up recognizes as capable of a totally different and more natural explanation. And the pitiful part of it all is that small minds and untrained—as we see every day in matters of religion—may be possessed of a like enthusiasm over what are not even half-truths, but merely phantasms of a disordered imagination; and a callous world, heedless of distinctions, judges both orders of men by the same judgement, and cheerfully consigns both to the common pit.

I speak here with all sympathy, for I have been there. I have known what it is in the course of my work to have reveal itself to me what appeared to be a great principle, to find that principle applying itself to and elucidating every phase of my subject, until all my thoughts throughout the day, and in the watches of the night, hovered around and constantly returned to this one principle and its application, to the virtual exclusion of everything else; until, frankly, I became frightened at myself, and with a determined effort gave up that line of investigation—turning to routine university work. I had known others—

workers of higher calibre than myself—who had become similarly so filled with their work and its possibilities that temporarily, it seemed to me, their reason had become somewhat unbalanced. And here is the point: it was about this very matter of intestinal derangements that I thought I saw light. To me also it appeared that they were the cause of many grave conditions—in fact of so many and so diverse that, as I say, I feared to continue further, lest if I were not obsessed the world nevertheless would so regard me. That was fourteen years ago, and in the meantime I have largely permitted this particular field to lie fallow. Taking these facts into consideration, I think it will be admitted that I can deal with this subject both sympathetically and—shall I say?—with a certain maturity of judgement.

Is Sir Arbuthnot Lane justified in his teaching, or is he the victim of obsession?

"Autointoxication."

For practical purposes the present movement began with Professor Bouchard,[2] and with a blunder which has shown its fell influence all through these years up to the present moment. The blunder is all the more remarkable as having been perpetrated by a Frenchman, for to the leaders of French thought, be it in literature, in the sciences, or in medicine—and Bouchard was such a leader—we look for clear, logical exposition of their subjects, and particularly for a choice and precise use of words. It was in 1887 that Bouchard published his lectures upon "autointoxication" in disease; to him we owe the popularization, if not the actual introduction, of this miserable word—a word, let me say, that is not miserable in itself, but deserving of condign damnation when wrongly applied, as Bouchard employed it, as a means to cloak our ignorance in a garment of pretended knowledge. For in a most muddleheaded manner, among the self-poisonings proper—the poisonings, that is, due to excess or defect of the products of metabolism, to disordered working of the body cells themselves, or due, again, to the actual disintegration of cells and the products of dissociation of dead tissue—Bouchard not merely included, but laid particular emphasis upon, a group of intoxications which by no stretch of the imagination can justifiably be termed self-poisonings. The poisons produced by invading bacteria are of extrinsic origin; of course they are not autointoxicants of the body. It is absurd to retort that what Bouchard meant is that when they are produced in our "insides" they become part of ourselves, and so autointoxicants. As I pointed out many years ago,[3] Bouchard had no right to employ any such slipshod convention. For, accurately, the contents of the intestines are not inside—they are outside the body; only that is inside the body which has penetrated through the cellular lining or surface membrane. Poisons, therefore, originating within the alimentary canal, originate outside the body every whit as much as if they had their origin in the vaginal chamber, or on the skin. Even if they were derived from the products of cellular excretion into the alimentary canal—from substances not in themselves poisonous, but rendered poisonous by the dissociative activities of bacterial or other external agents—they still would not be autointoxicants. Still less are the products of foodstuffs, taken from without, autointoxicants, no matter whether these products gain their poisonous properties through the action of the digestive juices or through the putrefactive functions of the intestinal bacteria. Bouchard, however, with sublime heedlessness, included all these as inducing autointoxication; meat poisoning, whether infective or ectotoxic, internal strangulation, and frank infections like typhoid fever and cholera, were by him all comprehended as autointoxications of intestinal origin.

This blessed word "autointoxication," *sensu Bouchard*, has become a shibboleth; and after the inevitable tendency of frail humanity it is scarcely ever employed for the self-poisonings proper; we see it used every day, both by those who ought to know better—like Sir Arbuthnot Lane and Dr. Saundby—and yet more often by those who obviously do not know better, as a blanket or omnibus term to cover all the processes which are not autointoxications, processes whether of toxic or intectious nature originating in the alimentary canal. As a consequence, the users are blinded to the fact that they are confusing together many processes which for the purposes of clear thinking and progress ought to be carefully kept apart.

The word, in short, should and must be banished from the vocabulary of all self-respecting medical men. It is absurd to jumble all these conditions into one common heap; our duty is to recognize and classify each different form—to analyse before we attempt to synthetize.

The Etiology of Intestinal Stasis.

Herein, speaking as a pathologist, is my main criticism of Sir Arbuthnot Lane's paper. Let us admit that all these symptoms which he enumerates are found to follow intestinal stasis; let us admit all his list of diseases said to be indirectly due to the same condition. He himself will be the first to admit that in any given case only a relatively small proportion of the symptoms are present; in any given case only one or two of the diseases he enumerates indirectly follow the development of the condition. The variation is too great to be put down to individual idiosyncrasy. There must be different agents at work in different cases. Even if we grant that one and all are relieved by short-circuiting—this does not mean that stasis is the essential predisposing factor—those agents, by analogy, are likely to gain entrance by various tracts. To say, as Lane at least implies, that without intestinal stasis there would be no generalization of tuberculosis, is, it may be urged, to ride one's horse to death.

If words have any weight, then the logical result of his teaching is that, for instance, so soon as we diagnose a case of tuberculosis we are to whip out that patient's colon, because, forsooth, without intestinal stasis we should have no tuberculosis, save that induced by direct inoculation. Here, surely, is the *reductio ad absurdum* of the half-truth. Does the cow with its dozen and more evacuations per diem suffer from intestinal stasis? Does it suffer from displacement of the abdominal viscera due to the assumption of the "all fours" position, and, notwithstanding, is it not quite as susceptible to tuberculosis as is man?

It would have been within the bounds of moderation to call attention to the fact that where stasis exists in certain cases of chronic progressive tuberculosis, the general condition of the patient is so much improved by short circuiting that a definite arrest of the disease occurs. In like manner it is necessary to point out that conditions such as cholelithiasis, cirrhosis of the liver, pancreatic diabetes, are, like tuberculosis, indirectly caused by conditions other than intestinal stasis.

From another point of view the objection may be raised that Sir Arbuthnot Lane, as has been pointed out to me by my colleague, Professor Geddes, has not gone far enough; he has not recognized the *fons et origo mali*. In a long survey of the anatomical relationships of the viscera, Dr. Geddes assures me that constantly where he has encountered Jackson's membrane or Lane's and other bands of like nature, he has found a lax abdominal wall with more or less atrophy of the recti and other muscles. The prime cause of visceral displacement is lack of due support. To remedy this, rather than to give paraffin, should be the first object of preventive medicine and surgery.

As a pathologist two questions present themselves to me. The first: Granting that by bismuth meals or other means we discover that there is serious delay in the passage of the contents of the alimentary canal, and that accompanying this delay a certain number of the symptoms described by Lane have made their appearance, is this sufficient ground for operation? The second: What is the relative value of these various symptoms as an indication for operation? or, put otherwise, do we know anything definite regarding these symptoms and the way in which they are brought about, and can we utilize that knowledge as a guide in determining our mode of treatment?

On "Lane's Bands" as an Indication for Operation.

In answer to the first, I am inclined to say that, provided the fluoroscope demonstrates the existence of kinks and relative obstruction by narrowing of the lumen in any region, operation is to be recommended—operation, that is, to remove the bands causing the kinks or obstructions.

No medical treatment can permanently restore the *status quo ante*; at most, dieting on soft foods and carefully adjusted support of the anterior abdominal wall may palliate the conditions. It is true that, as Sir Arbuthnot admits, without such support after operation these bands are liable to form again, but operation gives a greater chance of removing the obstruction than any other means known to us.

I do not like to seem to be blowing my own trumpet, but where another worker affords illustrations which either support or oppose one's own favourite doctrines, it is difficult to be silent. Thus for long years I have dwelt upon the existence of non-inflammatory fibroses[1] and what I term stress hypertrophy of the connective tissues, pointing out that the effects of strain as distinct from overstrain are increased development of the tissue subjected to the stress. Judged by the little reference to this teaching by other pathologists, I have sometimes thought of myself as one crying in the wilderness. Some may know that it is in this way that I explain the overgrowth of the intima and adventitia of arteries in arterio-sclerotic conditions. Lane likewise feels that he is a *vox clamans in deserto*. I have to confess ignorance of the fact that he as an anatomist and surgeon has been proclaiming this doctrine since 1887.[2] There could be no prettier demonstration of the action of this principle than is afforded by these bands upon which he lays so much emphasis, these evolutionary bands as he terms them, produced by the pull of the badly-supported bowel upon its mesenteric attachments.[3]

When we remember that the whole process of digestion is one of conversion of the foodstuffs into a soluble fluid state, we may assure ourselves that the absorption of fluid that occurs in the colon is at the same time an absorption of foodstuffs, while the very concentration of this faecal matter arrests bacterial activity in an extraordinary manner. It is a preventive of the putrefactive changes which originate in the small bowel. If from one-quarter to one-third the total solids of the healthy faeces is composed of bacteria, what is equally striking is that these are nearly all dead. It is an utter fallacy to picture the contents of the colon, as I fancy most of us are apt to do, as undergoing acute putrefaction. Such putrefaction, when it occurs, takes place mainly in the ileum. It is in the small intestine that there is the greatest bacterial proliferation and activity, and there, and not in the colon, we should locate the main absorption of bacterial poisons. Added to this, we have clear evidence that the mucosa of the colon is a region of active excretion; we know, for example, that antimony and mercury are discharged from the blood by this path, while the recent studies of Hertz[4] demonstrate that the ileo-caecal valve does not so much function as a means of preventing regurgitation from the caecum into the ileum as, on the contrary, of retaining the fluid chyme in the ileum until, with the taking of food into the stomach, there is a reflex opening of the gate and filling of the caecum, accompanied by peristaltic propulsion of the contents of the upper colon into the sigmoid. As Hertz had previously pointed out, this filling of the sigmoid has a siphon-like action; when the lower limb of the loop becomes full the whole column descends into the rectum, which normally, until this event, has been empty, and it is the pressure of this column of faecal matter upon the pre-anal portion of the rectum that initiates the desire for evacuation or call to evacuate.

As McCrae and I have pointed out elsewhere,[5] the very arrangement and relationships of the appendix, caecum, and colon indicate function. Now, it is quite true that, as with all other organs of the body, there is in the alimentary canal a huge reserve force and margin of safety; but because it has been demonstrated that very little absorption takes place from the stomach, and that a man can manage to exist without a stomach, that is no reason to recommend gastrectomy as a popular proceeding, as the proper course to pursue in chronic dyspepsia, for example, however excellent a measure this might be in cancerous states or obstinate ulceration. We shall soon at this rate have it recommended that, as after the climacteric the breasts and uterus are of no possible use, and as more than any other organs they are liable to be the seat of cancer, therefore as a matter of routine these organs be removed between the ages of 40 and 50.

Saying this I do not wish it to be understood that (leaving out of consideration malignant growths) I recognize no conditions in which ileo-sigmoidostomy is to be recommended. I freely admit that the mechanical effect of retained faeces may induce congestion and inflammation of the mucosa of the colon with altered secretions favouring the growth of bacteria, which in their turn induce a general degeneration of the mucosa with erosion and ulceration of the viscus, and that this colitis, if long continued, may so alter the mucous membrane that normal function cannot be restored. In such cases the one hope of giving back relative health to the patient lies in colectomy. But, with Hale White,[10] I would say that it casts a grave reflection upon the medical attendant if a patient be permitted to reach this state. There are more means than one of promoting the action of the large bowel—more means than saline purgatives and vegetable cathartics; more means than Sir Arbuthnot Lane's soft paraffin and mechanical support of the lower abdomen—in fact, I am inclined to think that such passive support is distinctly an erroneous treatment. If my colleague, Professor Geddes, be right, and laxity of the abdominal wall be the prime cause of displacement of the bowels with consequent stasis, then active increase in the muscular tonus, and not passive bolstering up from without, is what is indicated—in short, a course of abdominal massage. Not being in practice, I speak with some diffidence about these matters of treatment. I recall, however, as from the distant past, that this laxity of the abdominal wall was what I was taught as a main cause of chronic constipation in my student days, and that my old chief, Dr. Morgan of Manchester, in the Eighties used to recommend for those who could not afford the services of a professional masseur, that they should beg, borrow, or steal a small cannon ball and roll it morning and evening for so many minutes over their abdomen. He explained that its very coldness had a tonic effect, and that rolling up the right side and down the left might also duly stimulate the colon to contraction.

In short, while granting freely that Sir Arbuthnot Lane in certain cases has by the removal of a permanently damaged colon given a new lease of life to his patients, converting chronic and progressive invalidism into health and activity, I must at the same time accuse him of false doctrine in his teaching that the colon is merely a "common sink." The danger of this false doctrine is that, encouraged by Sir Arbuthnot Lane's brilliant advocacy, encouraged to regard the colon as of no account, the immature surgeons of two continents will inaugurate an era of short-circuiting, performing this or the yet graver colectomy for all sorts and conditions of disease in all sorts and conditions of men, women, and children, on the smallest possible pretext. It is, I hold, too grave a responsibility to assume, this of starting an epidemic of operative surgery purely upon an empirical basis, on a foundation that is not established upon uncontrovertible fact. For, to repeat, those who employ this term "autointoxication" do not know what they are talking about: they do not know whether the morbid state originates in the small or the large bowel; they see at most that delayed passage in any part of the alimentary tract leads to serious symptoms, but whereas if the hand had offended them they would not cut it off until they had employed the latest and last efforts of conservative surgery, with the colon they would have no such scruples.

[1] NOTE.—While saying this I have to confess that I am not wholly convinced that a low form of infection may not play a part in the initiation of these bands. The studies of my colleague, Dr. Archibald—studies extended over a long period, and not yet published, which he permits me to refer to—upon the production and arrest of adhesions in the abdomen of the dog, appear to teach that however careful the laparotomy, bacteria are constantly to be found in early adhesions; that bacteria pass from the intestine into the peritoneal cavity with comparative ease, and that where present locally in any number, and of low virulence, they tend to be destroyed by the inflammation which they set up, so that the fully formed adhesions are sterile. Probably, therefore, such bacteria incite the first formation of plastic adhesions locally, but later, just as in the repair of bone we find the early cellular and inflammatory callus becoming the matrix in which laminae of true bone are laid down along the lines of stress, so here, the plastic exudate affords the matrix in which, once laid down, the connective tissue growth may progressively increase along the lines of stress in harmony with the extent of that stress.

The Positive Data concerning Intestinal Intoxication.

This brings me to the second question referred to some time ago, namely, the nature of the processes set up by intestinal stasis. The truth is that we know painfully little that is precise. Take first the matter of intestinal intoxication—of absorption, that is, of deleterious materials developed in the course of intestinal activity. There are, it would seem, three orders of possible toxic substances to be taken into consideration: (1) The products of disintegration of foodstuffs by the digestive juices, (2) the products of disintegration of foodstuffs by bacterial activity, and (3) the ectotoxins discharged by the intestinal bacteria.

As to the first we know this, that the gastric juice splits the proteins into the simpler diffusible peptones and proteoses, the pancreatic juice can act on both proteins and peptones, the succus entericus cannot act on proteins, but can act on peptones and proteoses splitting them into bodies of the order of polypeptids and amino-acids. Now peptones, and more especially primary proteoses introduced directly into the tissues, are directly toxic.[11] The studies upon enteral and parenteral digestion respectively have, however, demonstrated that normally in the passage through the intestinal wall these proteoses are either broken down or built up into harmless substances; it is when they gain entrance directly into the tissues that they are dangerous. Nor can it be urged that where the intestine is inflamed or ulcerated, bodies of this order gain entrance into the blood and lymph, and so set up the symptoms encountered in chronic constipation, because the symptoms of peptone and proteose intoxication are of a totally different type, resembling in fact those seen in anaphylactic shock. While laying this down I would point out that there is still lacking any thorough study upon the effects of entry into the system of recurrent minimal doses of bodies of this order. But for the present they cannot be implicated.

It is not a little interesting that as the protein molecule undergoes further disintegration into bodies of the nature of polypeptids and amino-acids, the products, in general, instead of becoming more toxic, become less toxic. There are some exceptions which I shall note shortly, but so far as I can gather, digestion by the gastric and intestinal juices pure and simple, conducted *in vitro*, affords no substance to which we can ascribe any important group of Sir Arbuthnot Lane's series of symptoms.

In like manner the products of carbohydrate and fatty disintegration have so far not been found to yield disturbances resembling any considerable group of Lane's symptoms, or, to my knowledge, even one of the seventeen, unless we here include the wasting that occurs from lack of digestion and absorption of fatty and other foodstuffs.

We must conclude, therefore, that in the light of our present knowledge, it is not the digestive fluids that by their action on the foodstuffs induce Lane's symptoms.

The Products of Bacterial Activity upon the Foodstuffs.

With the products of the fermentative and disintegrative activities of the intestinal bacteria the case is somewhat different, but still vague and unsatisfactory. It is well determined that the different bacteria acting upon soluble foodstuffs give rise to different dissociation products, but it cannot be said that the testing of these products, steadily pursued as it has been for the last quarter of a century, has led us very far. Some here may remember the excitement that was raised by Brieger and his ptomaines in the years that immediately followed Bouchard's lectures. To-day we rarely hear the word, the conclusion having been reached that these diamins, results of bacterial activity—for example, putrescin and cadaverin—are produced in such relatively small amounts that they may be neglected. At most there is still some talk regarding one of these possible final products of protein degeneration (but more frequently of lecithin dissociation), namely, cholin and its conversion into its more poisonous ally, neurin. It cannot, however, be said that this has progressed beyond the stage of hypothesis; or that, from what we know of the action of neurin, it could be made responsible for more than certain of the nervous and possibly of the muscular disturbances.

Our only positive data are in connexion with another series of disintegration products, the results of the disintegration of the aromatic group in the protein molecule—tryptophane and its derivatives, indol, skatol, phenol, and cresol. We owe to that devoted physician and pathological chemist of New York, the late Dr. Herter,[12] the determination that indol introduced into the circulation induces some of the striking symptoms which we associate with retention of faeces—headache, mental irritability, muscular fatigue. Although this has not been proved, Vaughan Harley[13] and others ascribe the melancholia and neurasthenia of chronic constipation to excessive continued absorption of indol, skatol, and phenol from the bowel.

But, granting that in indol and its allies we have discovered the cause of the predominant set of symptoms in simple constipation, we are met with the following contradictory facts—namely, that indol and skatol are not easily absorbed from the large intestine. Time and again it is possible to obtain abundant indol from the stools when the urine affords scarce a trace of indican: dry scybala, for instance, are often rich in unabsorbed indol. It is now well established that, judged by the amount of indican in the urine, it is when obstruction occurs high up in the small intestine with retention and putrefaction of the fluid faeces in that region, that the most indol is absorbed and excreted through the kidneys. It is quite possible that when the fluid contents of the ileum pass into the caecum, and there by resorption of the fluid undergo desiccation, some indol is taken into the system, but this is not the main source.

Evidently, therefore, if these symptoms are due to the indol group, the colon only plays, in general, a secondary part in their development. We must suppose that a full colon causes retention of fluid faeces in the ileum, and so favours absorption of the indol group, or suggest that while little absorption occurs in the healthy colon, the inflamed mucosa takes up the indol and its allies. Once again we are led to the conclusion that symptoms are directly ascribed to the poor colon which belong elsewhere. I cannot but feel that there is considerable truth in a remark made to me within the last week by Dr. Harvey Cushing: "In seeking to gain a knowledge of the disorders of the alimentary tract we are utilizing the methods of the tunnel borer, and have started at both ends; we have passed now through the stomach to the duodenum at one end, through the rectum to the ileo-caecal valve at the other; we ascribe every digestive disturbance to these parts about which we know something, but in the meantime the whole length of the small intestine is absolutely unexplored; to it we ascribe nothing."

Evidently we can proceed very little further; my old friend, Professor Woolley of Cincinnati, has been studying the effects of long-continued injections of indol and tyrosin. He and Newburgh[14] have by this means been unable to discover any changes in the glandular organs; no blood vessel changes were observed in any case either in the indol or the tyrosin series. There was a slight effect upon the adrenals—namely, an increase in the pigmentation of the chromaffin cells of the medulla together with a relative increase in the size of the cortex. But this was all.

Interesting as it is, the work of Ackermann,[15] Mellanby and Twort,[16] and others, upon the production from histidin of toxic β imidazolylethylamin by putrefactive and intestinal bacteria, cannot as yet be surely correlated with the symptoms due to intestinal stasis; indeed, as bearing upon the difference between enteral and parenteral digestion, we have the observations of Barger and Dale[17] that "β i." is easily obtainable from the fresh mucosa of the small intestine removed during life, and this simply by treatment with alcohol, so that highly toxic as it is there is evidently a mechanism whereby this substance does not gain entrance as such into the general circulation: at most it may be responsible for the acute death which is apt to follow upon complete duodenal obstruction. As a matter of fact, this work of Herter, and its continuation by Woolley and Newburgh represents the one solid acquirement we have gained in this matter of alimentary intoxication, and you see how doubtfully it can be applied to the colon and to the development of the more serious states which may accompany grave coprostasis.

BACTERIAL ECTOTOXINS.

We come now to the third form of intoxication—that, namely, by bacterial ectotoxins. It is striking that the intestinal bacilli *par excellence*—namely, the members of the *B. coli* group—produce no recognizable ectotoxins; the same is true of the other important group of the streptococci. If either of these directly caused the symptoms of alimentary intoxication, it could only be through bacteriolysis, through breaking down and liberation of their split products. Now, in the first place, accepting Vaughan's most thorough work,[11] these bacterial split proteins cause symptoms similar to those set up by the peptones and proteoses, not those of faecal retention; and in the second, the vast number of bacterial corpses seen in the faeces is contrary to any theory of bacteriolysis; the bacteria have been killed, but have not suffered dissociation and dissolution.*

There are only two recognized invaders of the alimentary tract that produce ectotoxins known to produce intoxicative symptoms when absorbed. These are the rare *B. botulinus*, which by its toxins acts particularly in the nervous system, setting up one form of meat poisoning, and the *B. pyocyaneus*, a not uncommon inhabitant of the ileum and lower bowel, whose toxins act also in the nervous system. So far I think I am right in saying that whenever the characteristic tonic contraction of the muscles have been observed, which are brought about by *pyocyaneus* toxins, we have had to deal, not with a mere intoxication, but with a definite infection by this organism. That, at least, has been our experience in Montreal. There still is needed a careful study of the anaërobes of the digestive tract, which, as Herter pointed out, are apt to be greatly increased in irritative conditions of the lower bowel. By analogy some of these should produce powerful ectotoxins. It does not, however, follow that such ectotoxins, if discharged, undergo absorption by the bowel wall.

Here once again it is evident that there is singularly little evidence of the development of intoxication proper.

SUBINFECTION VERSUS INTOXICATION.

When, indeed, we sum up all these known data, we find that they are so mean in amount that irresistibly I find myself inclined to ask, "Are we nosing along the right scent? May not we be working along the wrong one?" Are there not observations of another order that throw much more light upon Lane's syndrome with its associated diseases, and at the same time harmonize other observations regarding the onset of the same group of diseases—an onset by no means necessarily related to intestinal stasis?

If I may criticize Sir Arbuthnot Lane's reports upon his cases, I would say that these are not up to date—they are too largely clinical. An important development nowadays, such as he recommends, demands the fullest co-ordination with the laboratory; there ought to be routine blood cultures in every case recorded, routine examination and reports upon the stools and their predominant bacterial types, blood counts, haemoglobin examinations—in fact, the full clinical study of each case, so that nothing is neglected. That, I say, is demanded to-day; that Sir Arbuthnot does not give us. The surgeon to-day, no less than the physician, must so arrange his service as to give his patients all these aids to correct diagnosis. What interests us, however, is to note that occasionally in his series of cases Sir Arbuthnot notes that either *B. coli* or streptococci, or both, were found upon blood culture. The point I want to make is this—that had Sir Arbuthnot instituted fuller preliminary studies he would have recorded this finding in so many of his cases that he would not have spoken of autointoxication, but of low infection, as the cause of most of the disturbances he tabulates.

Fourteen years ago I called attention to this matter, bringing forward a considerable body of evidence.* I showed, both from the studies of others and the investigations of workers in my laboratory, of Ford, Nicholls, and others, that not only do the lymph nodes of the respiratory tract and of the alimentary tract of normal animals constantly afford cultures of bacteria, but also that properly prepared organs, such as the liver and kidneys of healthy animals, yield cultures of pathogenic and non-pathogenic bacteria; that, through the agency of leucocytes, bacteria are constantly being carried into the system and as constantly being destroyed in the healthy animal; that with inflammatory conditions in the alimentary canal and greater accumulation of leucocytes in its walls there must be greater passage of these from the surface and more extensive carriage of bacteria into the system. According to the virulence and number of these bacteria so may there be set up other foci of active infection or a condition which I termed "subinfection"—that is to say, the bacteria thus carried in do not multiply and set up foci of suppuration; they are destroyed, but with their destruction the liberation of their toxins causes a poisoning of the cells immediately around them, and the accumulative action of these toxins, whether locally or at a distance, upon the liver cells, for example, brings about the death of certain cells and replacement by fibrous tissue.

In the fourteen years that have elapsed since I brought forward these ideas upon subinfection steadily and surely facts have accumulated in support of these views and the allied view regarding the frequency of latent infection. There has been abundant confirmatory evidence demonstrating that tubercle and other bacilli fed by the mouth to young animals are to be found in the lymph of the thoracic duct in the course of an hour or two. We now know that whether the point of entrance be through the upper respiratory tracts or through the digestive tract, by the eighteenth year 95 per cent. of those examined respond to the tuberculo-cutaneous tests, although only 10 per cent. die from the disease; in 85 per cent. of the population the disease becomes arrested and latent. Dr. Opie[19] has demonstrated that portal cirrhosis is a subinfection by showing that whereas chloroform alone will not cause cirrhosis in the animals of the laboratory, although it causes necrosis of the liver cells, which subsequently regenerate, and whereas inoculation of sublethal doses of colon bacilli alone will not cause cirrhosis, chloroform, followed by sublethal doses of *B. coli*, surely will. I will not go into these matters here; a year ago I referred to them in Iowa City.[20] What I want to point out is that properly made blood cultures afford a high proportion of positive results in cases of continued intestinal stasis, and that most, if not all, of Lane's symptoms which have not so far been demonstrated to be due to intoxication are such as follow subinfection, not necessarily originating through the lower bowel, but due to the carriage in of bacteria through the mucous membrane at any point from the mouth to the anus.

I will not say—that would be absurd—that intoxication by the indol group, for example, plays no part. I would only say that our present knowledge of the phenomena of enteral and parenteral digestion suggests that the toxic products of protein (including bacterial) disintegration are most effective upon the tissues when they are produced within them, and not upon the outer side of the mucous membrane. Thus, to conclude by recapitulating Lane's symptoms:

Loss of fat (1) and wasting of the muscles (2) can be induced by inoculating animals with recurrent sublethal doses of *B. coli*. Such recurrent inoculation of sublethal doses of *B. coli* or of streptococci induces haemolysis and liberation of blood pigment in the circulation(3). As shown some years ago by Charlton[21] in my laboratory, a grave condition of anaemia may be induced by this means in laboratory animals. The pigmentation reaches an extreme degree in "microbic cyanosis," the condition first described by Stokvis, in which the late Dr. Gibson of Edinburgh,[22] and Blackader and Duval of Montreal[23] have found as obvious cause an acute *B. coli* bacteriaemia. The papules and pimples of the skin gain their simplest explanation as being of the same nature as the rose spots in typhoid fever, that is, as brought about by lodgement of bacteria in the cutaneous capillaries.

The offensive perspiration I must leave an open matter. I am quite willing to accept it as due to the diffusion of volatile bodies of the skatol type from the intestinal tract.

Subnormal temperature (4) is one of the marked features of *B. coli* infection. As regards the symptoms of mental irritation or torpor, and the melancholia (5), as already

* Here is another piece of work that deserves doing—namely, to observe whether in prolonged retention of faeces the faecal bacteria exhibit any evidences of lysis.

stated, I freely accept these as set up by members of the indol group, leaving it an open question whether these be of enteral or parenteral production. It deserves note, however, that *B. coli* inoculations also affect the nervous system, the most striking result being the production of paretic changes of an ascending type.

Chronic Interstitial Fibroses.

Regarding the rheumatic aches and pains (6) and their origin it is necessary to speak a little more at length, and that because only within the last few weeks rheumatic myositis has been for the first time experimentally induced and given an adequate explanation. These experiments throw a flood of light upon a most important group of so-called chronic rheumatic or rheumatoid lesions. It was my good fortune upon my journey here to spend some hours in Chicago with Dr. Rosenow, and there to study his exquisite material bearing upon the development of various strains of the streptococcus and the lesions produced by these different strains.[24] Among these were the lesions of myositis in the rabbit. These lesions he is able to produce with certainty, and in the very regions in the rabbit in which in man the rheumatic aches and pains show themselves. They are not of toxic origin, but of the nature of a typical subinfection. Studying the lesions at various periods of their development it is seen that streptococci of a particular grade of attenuation become arrested in the muscle capillaries, more especially in those situated near the tendinous attachments. For a few hours it appears that these multiply; following upon this a small area of muscle fibres in the immediate neighbourhood of the affected capillary undergo necrosis and become pale. And here is the striking feature—the cocci do not proliferate further, but, on the contrary, disappear, undergoing lysis. There is no formation of a productive microbic lesion, no formation of an abscess for example. It appears that so soon as the bacteria set up a reaction, whether by their mere mechanical presence, or by endothelial phagocytosis of some of their number and liberation of their endotoxins, that reaction is adequate to destroy the rest of the bacteria, and this with relatively very slight accumulation of wandering cells. But the liberated and diffused endotoxins are sufficiently powerful to destroy the more highly differentiated cells in the immediate neighbourhood, and following this destruction there is either, in favourable cases, regeneration and *restitutio ad integrum*, or, in unfavourable cases, a replacement and even a productive fibrosis.

I describe these lesions in some detail because it so happens that only in April last, delivering the Harveian Lecture before the Harveian Society of London, Dr. Luff[25] very serviceably brought together all the examples of these chronic "rheumatic" affections, pointing out that the lesion is of the nature of a hyperplasia of the ordinary connective tissue in various points of the body, that the condition may undergo absorption, or may pass on to organization with the formation of nodules or patches of thickening. The parts implicated are the fibrous tissues of the joints, muscles and bones, aponeuroses and insertions of muscles, "the sheaths in which the muscle spindles lie," the bursae, fasciae, ligaments, and capsules of joints, and the periosteum. The indurations may be widespread, but generally are well defined, and vary in size from $\frac{1}{8}$ in. to 1 in. in diameter.

Luff would group all these lesions under the comprehensive term "fibrositis." I will not here discuss whether this term is to be accepted. What I would point out is that he describes lesions identical with those produced experimentally by Rosenow. It is quite true, as he points out, that these most often occur without any previous attack of acute rheumatism. That, however, does not mean that they have not a similar etiology. As Rosenow has, I think, conclusively demonstrated, the reason why acute rheumatic endocarditis, for example, originates only in youth is purely anatomical. The typical verrucose endocarditis of acute rheumatism is of embolic origin, and can be induced by inoculating half-grown rabbits with streptococci of a grade of virulence closely allied to that which in older rabbits will induce the above-mentioned myositis. Why the older animals do not suffer from endocarditis is because in them the heart valves have become non-vascular, the fine arterioles present in early life in the proximal two-thirds of the cusps undergoing obliteration. In all probability similar vascular changes explain the incidence and location of rheumatoid changes at different life-periods.

Following the older tradition, Luff regards this fibrositis as of toxic origin, although he gives no experimental evidence in support of this view, and interestingly enough quotes Ware as having demonstrated the presence of gonococci in the myositis secondary to gonorrhoeal arthritis. Here I would point out what Luff neglects to notice, that at times "muscular rheumatism" accompanies acute rheumatic arthritis of the ordinary non-gonorrhoeal type. By analogy I would suggest that the muscular aches and pains of influenza are due to similar embolic lodgement and lysis of the influenza bacilli in the muscle capillaries.

More and more, in fact, are we coming to realize that various orders of chronic interstitial fibrosis originate from this condition of subinfection. I have already referred to Opie's experimental production of hepatic cirrhosis by action of the *B. coli* in the damaged liver. Recently Gaskell,[26] working under Aschoff, and Libman and Baehr[27] in New York have drawn attention to a form of chronic Bright's disease set up by streptococcal embolism in the fine capillary loops of the glomeruli accompanying subacute endocarditis of streptococcal origin. In all these cases, let me emphasize, we have at most a temporary proliferation of bacteria in the capillaries to which they have been carried, until such time as mechanically or otherwise they set up irritation and reaction; so soon as the tissues react the bacteria undergo lysis. It is not their proliferation but their death that liberates the toxic substances, which, diffusing out, destroy the higher tissue cells in the neighbourhood, and simultaneously stimulate the lower connective tissue cells to proliferate and develop an area of fibrosis. We deal, that is, with something beyond local capillary infarct formation; the area of necrosis extends beyond the limit of the territory of the blocked capillary; its extent can only be ascribed to the action of liberated toxins. What is characteristic of all these cases is recurrence, or, more accurately, they represent not simultaneous infection, but the summation of a succession of minute insults to the tissues, sometimes occurring within a few days or weeks, but often extending over years, so that on examination lesions may be discoverable in various stages. What is more, it is evident that the incriminated bacteria gain this recurrent entry into the blood stream from various points—from the genital passages in gonorrhoea, from the tonsils in rheumatic tonsillitis, from the gums in pyorrhoea alveolaris, and it may well be from the intestines in cirrhosis and many other conditions. With this light upon the nature of the process, it is now our duty to study the bacteriology of each case, and from that determine the treatment.

Having said this much, I can be very brief regarding the remainder of Sir Arbuthnot Lane's symptoms and diseases. The arterial, renal, and eye changes (Nos. 12, 13, and 17) belong to the "fibrositis" group; the pancreatic and hepatic changes (Nos. 15 and 16) have all the ear-marks of the like subinfection. The very admission that the blood pressure is at times increased, at times lowered (No. 8), is indication that we deal with no one common basic intoxication; it is what might be expected in subinfection by different orders of bacteria. But this and the atrophy of the breasts (No. 9) must properly be left as open matters. Lastly, as regards the atrophy of the thyroid (No. 7), it deserves note that the work of the last year points to this as a result of infection. Farrant[28] has shown that diphtheria and other pathogenic bacteria inoculated into experimental animals induce excessive activity of the thyroid, and indicate that an important function of the gland is by its internal secretion to neutralize circulating toxins. Continued stimulation of the gland must result either in exhaustion and atrophy or, as Lane points out, in adenomatous overgrowth.

To those who have not been following the drift of recent bacteriological research, this latter part of my address may appear to be of the nature of special pleading. Be it so. I shall be perfectly satisfied if it leads my clinical brethren to examine more carefully into these cases of chronic intestinal and rheumatoid cases, of cirrhosis and Bright's disease, in fact, of all the conditions commented upon by Lane, to determine whether evidences of infection

or subinfection are to be detected. I would, however, in all meekness, object that the intoxication theory has been tried, and, save as regards a singularly limited series of symptoms, has so far been found wanting when subjected to the test of experiment; while, on the contrary, it is possible to adduce experimental evidence in favour of each of my pleas in favour of the infective nature of the conditions discussed.

Conclusions.

To epitomize:

1. It is more rational to regard the evil effects of intestinal stasis as, in the main, a result of conditions favouring subinfection and low forms of infection than as a result of chronic intoxication.
2. The term "gastro-intestinal autointoxication" is pernicious and not to be employed by any self-respecting member of our profession, save for so limited a set of conditions that for ordinary purposes it may safely be wholly expunged from the medical vocabulary.
3. While the symptoms and diseases enumerated by Sir Arbuthnot Lane may follow intestinal stasis, at least a large proportion of them may originate independently of such stasis.
4. Before recommending the operation of short-circuiting it is necessary, therefore, to make the fullest studies, so as to discover, if possible, the nature of the organism responsible for the disturbance and its probable seat of entry.
5. A discovery of the cause of the symptoms is calculated to suggest the appropriate means of treatment by means other than short-circuiting. Only when these have been tried and found wanting is removal or short-circuiting of the colon justifiable.

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Under the will of the late Mrs. Sarah Berry of Wimbledon the Royal Hospital for Incurables at Putney receives a bequest of £1,000.

In a pamphlet entitled, *What Town Planning Means*, published by the Garden Cities and Town Planning Association (post free, 3d.), the author, Mr. George Pepler, F.S.I., in addition to discussing what local councils and private owners of property may do under the Act, and the possibilities that the Act opens up, gives a list of corporations and urban district councils which have already prepared, or are considering the preparation of, schemes of improvement. They number not far short of a hundred. In a good many localities schemes for dealing with several different areas are in view.

An Address
on
CHRONIC INTESTINAL STASIS.

Delivered before the Dublin University Biological Association on November 22nd, 1913.

By SETON S. PRINGLE, F.R.C.S.I.,

President of that Association, and Surgeon to Mercer's and Cork Street Hospitals, Dublin.

All of us have had the experience of treating and some of us of operating on cases with more or less indefinite abdominal symptoms—symptoms which may have suggested gastric or duodenal ulcer, gall stones, chronic appendicitis, ovaritis, etc. But at the operation none of these lesions have been found, or if found, their appropriate treatment has failed to permanently relieve our patients. Looking back over such cases we recognize that in many the abdominal trouble has been accompanied by general debility, chronic constipation, a sallowness or duskiness of the skin, headaches, bad appetite. In fact, the patients were toxaemic, and in treating the lesion we have merely dealt with the result and left the cause untouched. The root of the trouble in these cases is chronic intestinal stasis, or, in other words, delay in the passage of the contents through the alimentary tract, and consequent excessive absorption of toxic products. We are indebted chiefly to Sir Arbuthnot Lane for enlightenment on this subject, and no communication such as this would be complete without heartily acknowledging the excellent pioneer work he has accomplished in the face of much prejudice and keen opposition. Many other workers have thrown light on one or other aspect of the problem, and I wish to mention in this connexion the names of Coffey, Wilms, Flint, Mayo, Jackson, Connell, Rovsing, Goldthwait, Bainbridge, Eastman—and last, but not least, Mr. Gray. Personally, I have been feeling my way in the treatment of these most interesting cases for the last five years. As my own ideas have become crystallized, I have absorbed and adopted many of the ideas put forward in the first place by some of the above writers, so here and now I wish to express my obligation.

There are, to my mind, two distinct factors in the production of stasis: (1) Ptosis of some part of the gastro-intestinal tract, and (2) kinking and stenosis of the bowel by bands and membranes; in other words, we may speak of "stasis of gravity" and "stasis of obstruction." These two conditions are as a rule associated; but in such cases one condition generally preponderates and overshadows the other.

Anatomical Considerations.

In the study of ptosis the first matter to consider is the manner in which the various parts of the gastro-intestinal tract are maintained in position against the force of gravity which is constantly tending to produce downward displacement in the erect position assumed by man. If we glance at the longitudinal section of the abdomen we are at once struck by the fact that the shape of the abdominal cavity proper, as distinct from the pelvis, is that of an inverted cone. It will also be seen that the posterior abdominal wall forms a shelf inclined at an angle of about 50 degrees, on which all the heavy organs rest. The majority of the organs are supported on this shelf by peritoneal folds and mesenteries, by pads of fat, and by the abdominal pressure maintained by the anterior abdominal wall. In the case of the duodenum and the ascending and descending colon we also have direct attachments to the fascia of the posterior abdominal wall—a state of things brought about by the fusion and disappearance of the peritoneal coverings of the gut and parietes where these come in contact. If one of these means of support is lessened, equilibrium is disturbed and ptosis results. Thus ptosis is in the early stages localized, the commonest condition being either mid-line ptosis where the stomach and transverse colon are affected, or right-sided ptosis where the caecum is the organ at fault. In many cases the condition does not progress further; but on the other hand, if stasis is caused by the ptosis, we get distension behind the affected part, with general ill-health and resultant absorption of fat and loss of muscle power.

This combination of factors brings about general ptosis of the intestinal tract and finally of the solid viscera: in other words we get the condition known as Glenard's [illegible].

Mid-line Ptosis.

For practical purposes we may look on the stomach as being suspended at either end—on the left by the œsophagus and gastro-phrenic ligament, on the right by the strong free edge of the gastro-hepatic omentum containing within its layers the bile duct, the hepatic artery and the portal vein. The remainder of the gastro-hepatic omentum attached to the lesser curvature is a weak peritoneal fold and cannot provide material support. In the same way the transverse colon is slung from the firmly fixed splenic and less fixed hepatic flexure and is suspended from the posterior abdominal wall by its mesocolon and from the greater curvature of the stomach by the gastro-colic omentum. If in the course of development the two anterior layers of the great omentum fail to fuse with the two posterior layers (thus obliterating the omental bursa) and with the anterior surface of the colon, this part of the intestine loses a material support. It is also to be noticed that neither the body of the stomach nor the transverse colon rest on the shelf which I have described. From these facts it is evident that the stomach and transverse colon depend largely on abdominal pressure for their support. If for any reason the musculature of the anterior abdominal wall should be weak, and especially if this is associated with constipation and loading of the colon, ptosis must inevitably occur, and if the omental bursa has not been obliterated as mentioned, the colon will prolapse to even a greater degree than the stomach. As soon as any sagging takes place the fixed points, namely, the first stage of the duodenum and the hepatic and splenic flexures, will be dragged on and a certain amount of kinking result; thus stomach and bowel will have greater difficulty in emptying, there will be retention of their contents, more weight will be thrown on their supports, causing an increase in the sagging, and so a vicious circle is set up and symptoms produced.

Right-sided Ptosis and Mobile Cæcum.

Right-sided ptosis and mobile cæcum are one and the same condition. Normally the ascending colon is firmly fixed on the shelf of the loin by peritoneal fusion, but in as many as 20 per cent. of subjects this fusion is incomplete or does not occur at all. As a result the cæcum tends to sag, frequently bringing with it the right kidney. When this occurs the cæcum is suspended between the fixed hepatic flexure and the last stage of the ileum. If the fixation at the former site does not stretch, the flexure is dragged on and a sharp angle is formed, while, if there is not a long mesentery to the terminal ileum, here also a kink and consequent stasis are produced. The attachments of the hepatic flexure, however, frequently do stretch, and thus we get prolapse of the cæcum, ascending colon, and right half of the transverse colon.

These conditions of local ptosis are frequently the first steps in the production of general sagging of the intestinal tract. I have seen cases with the stomach well below the umbilicus, the dependent part of the third stage of the duodenum resting on the promontory of the sacrum, the small intestines in the pelvis, and the whole of the colon provided with such a long mesentery that it was possible to bring it, including even the splenic flexure, which is the last part to give way, completely out of the abdomen through a laparotomy incision. In such cases the bowel is dilated, its wall is markedly atonic, and serious stasis results.

Bands and Membranes.

We have now to consider the presence of the various bands and membranes which have been described in connexion with the alimentary tract. No one who carefully explores a number of abdomens can doubt the frequent presence of one or other of these bands or so-called "adhesions"; and when we find that their presence is in many cases associated with a certain set of symptoms which are always alleviated and frequently completely abolished by the division of these adhesions, I think we are justified in looking on them as the cause of much abdominal discomfort.

A great deal of controversy has raged, and will still rage, around the etiology of these conditions. From amongst the many conflicting and often contradictory opinions I have, as regards each condition, adopted and frequently modified that explanation which fits in best with my personal observation and experience. I do this in the hope that it will stimulate other surgeons to a closer study of the intra-abdominal conditions found during operation, and likewise the physicians to re-[illegible] many of their patients with indefinite abdominal troubles, in the light which recent research has thrown on the subject. I believe that we shall arrive at the true cause and correct treatment of these conditions by means of the work not of one, but of many. It will assist us in our consideration of the etiology of these bands, etc., if at the outset I state that I am not dealing with the very varied adhesions which may result from inflammation, although undoubtedly these also frequently produce stasis. I am only referring to those bands, membranes, or peritoneal folds which are not adhesions in the ordinary sense of the term. They are too regular and constant in their position and extent and the arrangement of their blood vessels, and lack the opaque scarred appearance of inflammatory adhesions.

I propose to deal with these bands, etc., seriatim, describing them briefly. In every case I hope to be able to prove that these bands are embryonic in origin, though undoubtedly they may become thickened and otherwise altered by the strain thrown on them in pathological conditions of the bowel. I also believe that in many cases they produce no symptoms, and that it is only in those cases in which they are well developed or associated with more or less marked ptosis that they cause trouble.

1. *Gall Bladder-Duodenum Band.*

The first band to be considered is the fold of peritoneum which frequently extends from the under surface of the gall bladder to the first stage of the duodenum (Fig. 1), and sometimes down unto the anterior aspect of the transverse colon. In common with other observers I have found this band in the fetus, and it is undoubtedly due to a persistence of the fold of peritoneum which the gall bladder as it buds out of the common duct draws out of the ventral mesogastrium. If a band such as this is associated with ptosis of the stomach, it is obvious that the kinking of the first stage of the duodenum will be more marked



Fig. 1.—Diagram showing cholecysto-duodenal band.

2. *The Mesocolic Band.*

The mesocolic band, first described by Mayo, which suspends the antimesenteric border of the first few inches of the jejunum from the under surface of the transverse mesocolon (Fig. 2). This band also I have found in the fetus. It is, I believe, due to fusion between the peritoneum of the mesocolon and that covering the jejunum. In cases of ptosis of the small intestine secondary to obstruction further on in the tract, I have often seen a sharp angle produced at the duodeno-jejunal flexure causing stasis in the duodenum, as evidenced by its dilated condition. Where, however, this mesocolic band is present, it tends to keep the angle open and thus obviate the formation of such kink. Personally, I have never seen a case in which I considered this band as assisting in producing duodenal stasis, and I believe its action to be

mainly conservative. Lane describes other bands which "run upwards and outwards from the commencement of the outer aspect of the jejunum to the peritoneum lining the adjacent abdominal wall," and considers that they are adhesions acquired in an effort of Nature to support a sagging small intestine.

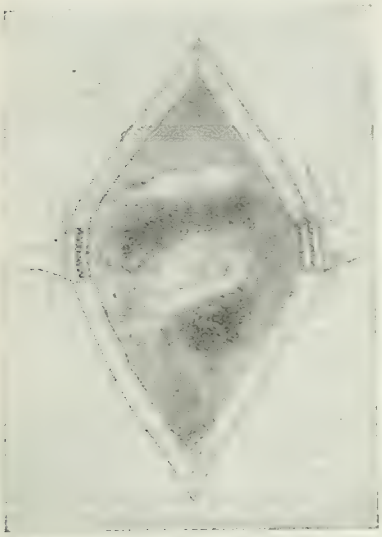


Fig. 2.—Diagram showing mesenteric band.

3. *Lane's Ileal Kink.*

The general appearance of this condition is best understood by reference to the drawing (Fig. 3) originally published by Mayo, and accepted as correct by Lane. This band, found in connexion with the last few inches of the ileum, is generally triangular in shape, and extends from the free surface of the ileum to the peritoneum at the brim of the pelvis; not only does it in this way tie down the terminal ileum, but it causes a rotation of the bowel at the point of its attachment, and when it is divided the ileum, as it were, rolls out of it. I have examined this region in a number of infants and embryos. In 20 per cent. I have found some abnormal peritoneal attachments. In some cases the appearances were identical with that described as Lane's kink in the adult, and such a condition in the fœtus is illustrated in Fig. 4. In others there was a more or less extensive fold which corresponds to that described by Reid, and called by him the genito-mesenteric (Fig. 5). This fold is attached above to the mesentery of the terminal ileum, and frequently extends on to the lower aspect of the circumference of the bowel. Below it passes downwards to be attached to the posterior abdominal wall along the line of the right spermatic or ovarian vessels, often being continuous below with the suspensory ligament of the ovary. Again, I found in an embryo 20 cm. long in which the cæcum had not yet descended, the under-leaf of the ileal mesentery firmly adherent to the posterior parietal peritoneum well up in the iliac fossa (Fig. 6), and it was easy to see that as the intestine descended this bend might be pulled out into the fold resembling Lane's kink. From these observations I consider that the condition is always congenital in origin and due either to persistence of Reid's fold or to an excessive peritoneal fusion. The adhesion, fusion, and sometimes subsequent absorption of two layers of peritoneum lying in contact, normally occurs in many situations in the evolution of the adult condition from that of the embryo, so that it is but a small step to the supposition that a similar process may occur at the lower end of the ileum. Lane believes that this band is due to "the crystallization of lines of force" developed by



Fig. 3.—Shows Lane's ileal kink, with the band of peritoneum which produces it. (Mayo, *Surg. Gynaec. and Obstet.*, March, 1911.)

Nature in the endeavour to hold the cæcum out of the pelvis. I have, however, found this band unassociated with mobile cæcum, and vice versa have demonstrated its absence in many cases of marked prolapse of that organ. If it were developed as an accessory suspensory ligament of the cæcum we would expect it in connexion with the upper leaf of the mesentery, as has been pointed out by Gray and others.

In whatever way this fold is formed, there is, at any rate, no question that kinking is frequently produced, especially if ptosis of the cæcum be present and that the lumen of the bowel is reduced by this kinking as well as by the rolling in of itself on its mesentery, as I have already described.

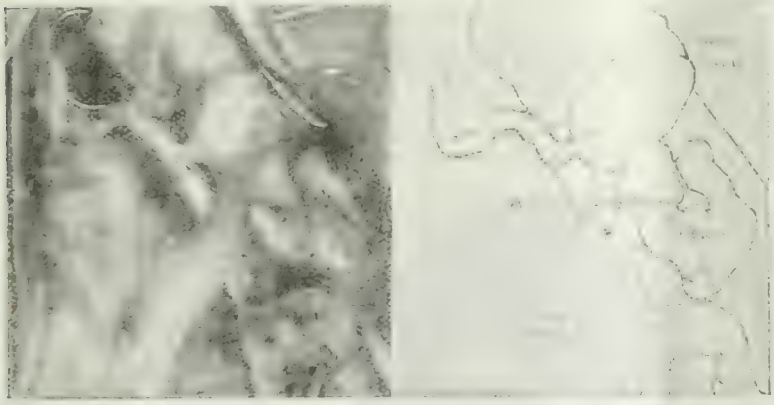


Fig. 4.—Photograph (and tracing) of cæcal region in a fœtus, 28 cm. long, showing terminal ileal kink (A), and the fold (×) producing it.

4. "*Jackson's Membrane.*"

We have now to consider the bands and membranes which are found in connexion with the cæcum and ascending colon, and to which the generic term "Jackson's membrane" is given. Lane has for years described adhesions tying the prolapsed cæcum to the right lateral abdominal wall, but Jackson in 1909, under the title of "membranous pericolitis," described a thin vascular veil extending over the ascending colon. Since then many surgeons have described various forms of membranes or veils in this region, till at present, I think, that we may apply the term "Jackson's membrane" to any membrane filmy or in parts fibrous which extends over whole or part of the ascending colon and cæcum, attached externally to the parietal peritoneum, and blending internally with the peritoneum covering the anterior aspect of the colon, and sometimes even continued on into the great omentum. This condition

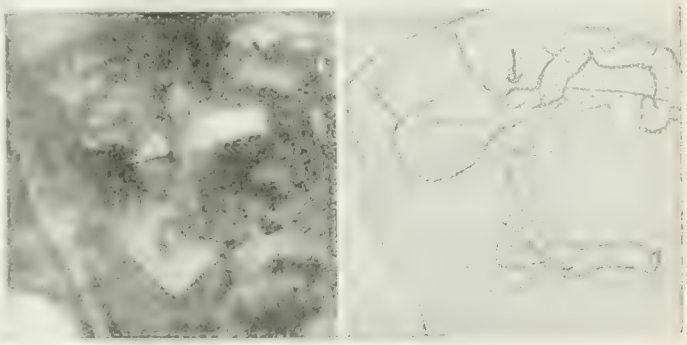


Fig. 5.—Photograph (and tracing) of cæcal region in a fœtus 26 cm. long, showing Reid's genito-mesenteric fold (×), extending into suspensory ligament of ovary (*ov.*). *a*, Slips of paper underneath fold and ovary; *ut.*, uterus. Note puckering of ileum at *b*.

also I consider congenital. In common with many others I have found fine veil-like adhesions extending to the lateral abdominal wall from the surface of the colon in the fetus, and it is easily understood if such peritoneal fusion occurs while the caecum is incompletely descended and rotated,

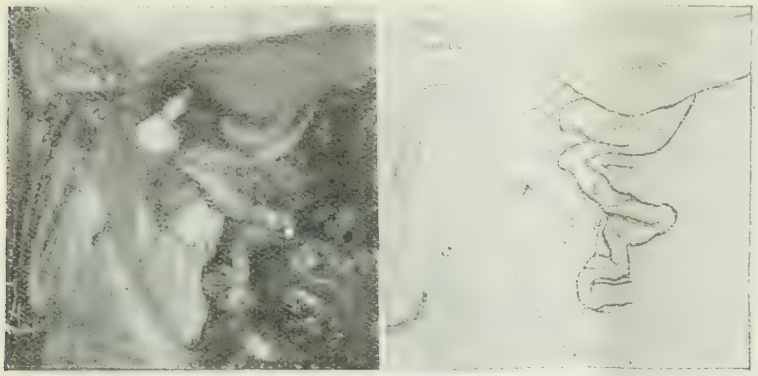


Fig. 6.—Photograph (and tracing) of caecal region in a fetus 20 cm. long, showing undescended caecum and fold of peritoneum (×) fixing terminal ileum in right loin and producing angulation. *a*, Appendix; *b*, ileum; *c*, inner surface of reflected flap of abdominal wall; *d*, slip of paper underneath peritoneal fold.

that as the bowel descends and rolls inwards they will be pulled out into just such a membrane. In fact, such a condition was described years ago by Jonnesco and Juvara, who called it the "parieto-colic fold," and it has been found by different observers in from 10 to 20 per cent. of fetuses after the sixth month. It has been suggested by Gray and Anderson and by Cottee that this membrane is due to a prolongation of the right edge of the great omentum out over the colon, with fusion to the anterior aspect of the bowel and to the parietes, and I have found in one fetus an arrangement strongly confirmatory of this view.

In many cases where stasis is present these membranes are in places distinctly fibrous. This thickening, in my experience, is found most frequently opposite the crest of the ilium and just below the hepatic flexure. This condensation is, I believe, due to secondary inflammatory change, and this inflammation may extend so as to bind the ascending colon to the right half of the transverse colon in cases in which the latter is ptosed, bringing about the condition known as double-barrelled colon. When the ordinary veil-like type of membrane is divided, peritoneum is found underneath; but if the secondary inflammatory changes, with thickening, have taken place, such a division leaves a raw surface, which requires to be covered in. There can be no question that in many cases these membranes cause a narrowing of the bowel. I have often been astonished at the way in which the ascending colon will unroll and expand as they are divided. The densest bands are found associated with mobile caecum, but, just as in the case of the ileal kink, I have seen a well-marked Jackson's membrane on a colon in perfect position.

5. *The Splenic Kink.*

This is due to the fact that the phrenico-colic ligament is very dense, and is the last normal attachment of the bowel to stretch in cases of ptosis; in fact, here the increased drag in such cases brings about a strengthening of this ligament, as pointed out by Lane. The result is that there is a very sharp angle produced, and the more the transverse colon is ptosed the greater the obstruction to its emptying itself. The acuteness of the angle is also increased if the descending colon should happen to have a mesentery. In advanced cases also the two limbs of the angle are bound together by more or less dense adhesions, due to secondary inflammation.

6. *Pelvic Colon Kink.*

Lastly, we come to the kink in the pelvic colon called by Lane the "last kink." This part of the colon should normally have a free mesentery, but frequently the mesocolon just opposite the brim of the true pelvis is shorter than that above or below. On examining this we find that it is due to a shortening of the under-leaf of the mesentery, and on this shortened part we find one of those "white lines" which have been pointed out by Toldt as signifying the limit of fusion between two peritoneal surfaces. This fusion is embryonic in origin, and has taken place between the outer fold of the meso-sigmoid and the parietal peritoneum at this point. I have found a very beautiful example in a fetus 20 cm. long (Fig. 7). The attachment of this shortened mesentery to the pelvic wall is very close to the ovary, and any drag is easily communicated to that organ, especially in those cases in which secondary inflammation has caused condensation and contraction with implication of the ovary in the fold. This binding down of the colon causes a very distinct kink, and if the bowel above is very loose it, when loaded with faeces, will fall over into the pelvis, thus tending to aggravate the kink.

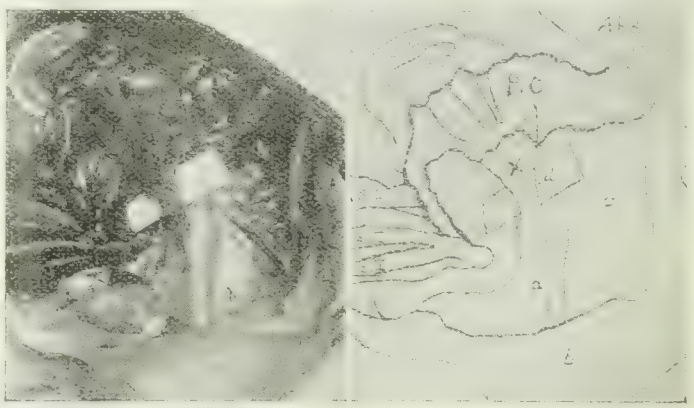


Fig. 7.—Photograph (and tracing) of left lower abdomen in fetus 20 cm. long, showing fusion (×) of under-leaf of mesentery of pelvic colon (P.C.) to peritoneum pelvic brim (*a*), producing the sigmoid kink. *b*, Inner surface reflected flap of abdominal wall; *c*, left iliac fossa; *d*, slip of paper underneath fold.

Symptoms.

As regards the symptoms produced by these ptoses and kinks a whole book might be written, for with lesions in such different parts of the intestinal tract it is obvious that the predominating symptoms will vary with the site of the chief trouble. Clinically, however, I would divide the symptoms into (*a*) toxic, and (*b*) obstructive.

(*a*) *Toxic.*

This group of symptoms is best marked in cases with extensive general ptosis when a very characteristic picture is produced. The patient, generally a woman, has a muddy complexion and dark rings under the eyes. The skin is harsh, dry, and pigmented, especially in the axillae and groins; the thorax is long and the lower ribs depressed; the breasts are small and nodular; the upper abdomen is narrow and contracted, the lower protuberant, and the abdominal muscles are atrophied. She complains of headaches, bad appetite, a feeling of depression and wretchedness and general lack of energy. Constipation is marked as a rule, and there may be mucus in the stools. She complains of abdominal discomfort, a sense of fullness and distension, with perhaps nausea and at times vomiting. Such is the picture of an extreme case, but we find all gradations in proportion to the amount of stasis present, until, in cases of localized ptosis, the toxaemia is overshadowed by the obstructive symptoms.

(*b*) *Obstructive Type.*

Here the symptoms vary with the site of the local trouble. In kinking of the duodenum from mid-line ptosis or of the duodeno-jejunal flexure we get a train of symptoms which are suggestive of gastric or duodenal ulcer—for example, pain after food, distension and vomiting, with tenderness to the right of the middle line, and sometimes haematemesis. This class also includes many cases which are sent to the surgeon to have gall stones removed,

or are treated by the physician as suffering from nervous dyspepsia, chronic gastritis, etc. Rest in bed immediately relieves such cases, and if accompanied by a course of massage and fattening treatment, relief may be experienced for a considerable time.

If a Lane's kink is present the symptoms are very similar to those of chronic appendicitis. I have operated on several such cases in which the appendix had already been removed. These patients complain of fullness and pain some time after food, associated with constipation and tenderness in the right iliac fossa. I have found in several cases marked distension of the left abdomen some hours after a meal, due to its retention in the small intestines. At times attacks of afebrile colic are complained of.

In mobile caecum and in constriction by bands of the ascending colon or hepatic flexure there is tenderness in the right iliac fossa, a distended caecum can be made out and a succussion splash can frequently be elicited. Many of my patients of this type have complained of burning pain in the right lower abdomen, especially in the evenings or middle of the night. The pain may culminate in a sharp attack of colic, and in my experience patients with trouble in this region suffer more pain than those with any other form of localized ptosis.

Splenic kink is generally associated with mid-line ptosis and causes much the same symptoms. It is frequently accompanied by a dragging, aching pain with a sense of distension in the left hypochondrium, and the patient often states that such pain is relieved as flatus is felt to pass on.

The last, or sigmoid kink, may be associated with a chronic pain in the left iliac fossa which is often relieved by the passage of a motion. In females this dragging pain is often worse at the menstrual period, a fact which is easily explained by the close connexion to the ovary.

All these bowel symptoms are associated with chronic constipation, or in some cases with diarrhoea due to the irritation of the retained faeces. In all the toxic symptoms above described are more or less marked. Frequently, of course, we have several kinks in the same subject, so that we get the symptoms grouped in very different ways, but with experience it is generally an easy matter to differentiate. Of late, since the number of these cases which I have seen has reached a respectable total, I have experienced little difficulty in arriving at a correct diagnosis from a study of the clinical symptoms combined with a careful physical examination. The greatest help can be gained from a study of a series of x-ray photographs, taken at different periods after a bismuth meal, and I strongly advocate the routine adoption of this method of confirming the diagnosis. In many cases, as I have stated above, these kinks, etc., may be present without producing stasis, and in a case with several of these conditions present – some producing stasis and some not—the bismuth meal shows us clearly which part of the intestine is at fault.

A consideration of the symptoms of chronic intestinal stasis would not be complete without some reference to what Lane terms "end results." He believes that gall stones, gastric and duodenal ulcers, cancer of the stomach and intestines, chronic mastitis, goitre, atheroma of the arteries, chronic arthritis, and tuberculosis, all arise from stasis. Perhaps we may not agree with him entirely, but at any rate it is obvious that stasis must lead to the presence of micro-organisms higher up in the intestine than normal, and in this way cause gastric or duodenal ulcer and infection of the bile ducts. There is also an obvious connexion between chronic irritation at the flexures and kinks and the production of cancer at these sites.

TREATMENT.

The treatment of these cases of chronic stasis is a subject of lively controversy. For example, I may mention the two extremes: On the one hand, Sir Arbuthnot Lane advises ileo-colostomy or complete colectomy in all severe cases, while, on the other hand, orthopaedists such as Goldthwait claim to be able to cure even most advanced cases by belts, exercises, etc. Personally, after treating many of these cases, I consider we may divide the treatment into (1) prophylactic, (2) medical, (3) local operative, (4) radical operative.

1. *Prophylaxis.*

I would like to impress on the profession my belief that the abdominal muscles are the most important voluntary muscles in the body. The abdominal organs largely depend for the maintenance of their positions on the support of these muscles, and if they are properly developed by suitable exercises the possibility of ptosis occurring is reduced to a minimum. The other prophylactic measures I would urge are the acquiring in early life of a regular habit of emptying the bowels and the avoidance of the routine use of aperients. If there is any costiveness it should be combated early by the regulation of the diet and the use of liquid paraffin.

2. *Medical Treatment.*

A great many cases of stasis, if seen in the early stages, can be rendered comfortable by the use of an abdominal belt, the practice of exercises which develop the abdominal muscles, and the internal administration of paraffin. The latter can be taken in doses of 1 to 4 drachms three times a day in the form of liquid paraffin (*British Pharmacopoeia*), flavoured with one of the essential oils, such as cinnamon or peppermint. A few patients find it impossible to take it in this form, and then one or other of the proprietary preparations may be ordered.

3. *Local Operations.*

The local operative procedures are legion in number, and I cannot do more here than specify those I have employed and found satisfactory.

In mid-line ptosis I, as a rule, perform Rovsing's gastropexy, together with shortening of the gastro-hepatic and gastro-colic omenta, but in some cases I have employed Coffey's omentoplexy. If the liver has also prolapsed and would endanger the success of the gastropexy, I first fix it up by shortening the falciform ligament and suturing the free edge of the liver to the anterior parietal peritoneum. If the upper abdomen is very contracted I have enlarged it after the manner advocated by Coffey and Rovsing.

Should the splenic flexure be slung very high, I divide the costo-colic ligament and open up the angle by suturing the descending colon to the left lateral abdominal wall after dividing any adhesions which might bind the two limbs of the angle together.

In kinking at the duodeno-jejunal junction I fix the jejunum to the under-surface of the transverse mesocolon in such a way as to open out the angle; in other words I reproduce the mesocolic band.

For Lane's ileal kink I divide the band parallel to the line of the bowel and suture the resultant rent vertically, employing if necessary an omental graft to assist in covering in the raw area.

In mobile dilated caecum unassociated with Jackson's membrane I have employed many methods of fixation, and have also enfolded it in cases of marked dilatation. Recently, however, I have used the method of Coffey, which is a combined fixation and plication. If a mobile caecum is associated with Jackson's membrane, I divide this prior to fixation. When Jackson's membrane is found without ptosis of the caecum, but constricting the colon, I merely divide the membrane, and if any raw surface is left, which occurs in cases of secondary inflammatory thickening, I use an omental graft to prevent adhesion formation.

If a double-barrelled colon be present, or if the bands in the neighbourhood of the hepatic flexure are very dense, and I consider them likely to recur, I do a lateral anastomosis between the caecum and the transverse colon, or—and I think this the better procedure—excise the caecum, ascending colon and right half of the transverse colon, and restore the continuity of the intestine by implanting the end of the ileum into the remaining part of the transverse colon. In all cases of trouble in the caecal region I also remove the appendix. Where the last or sigmoid kink is causing trouble I divide the shortened leaf of the mesentery transversely and suture it vertically. Many times I have found it necessary to do two or more of these conservative operations at the same time; for example, I have divided an ileal kink and Jackson's membrane, fixed the caecum in the loin, freed the splenic and sigmoid kink, and finally performed a Rovsing's gastropexy with expansion of the upper abdomen.

4. *Radical Operations.*

The radical procedures are those so strongly advocated by Lane, and are two in number. The first consists in short-circuiting the intestinal flow by ileo-colostomy. This procedure he employs in all cases of stasis which require operation, and in which the colon is not loose nor the abdominal wall lax. The ileum is divided about six inches above the ileo-caecal valve, and its proximal end implanted into the lateral aspect of the pelvic colon as low down as possible, and in all cases below the site of the last kink. Lane claims that "the last kink," if well developed, obviates in these cases the reverse flow of the intestinal contents up along the colon, which was the troublesome sequela of many of his earlier operations. If the last kink is not well developed, he produces one by suturing the mesentery of the colon above the anastomosis to the peritoneum over the pelvic brim.

The second and most radical procedure of all is complete colectomy. This operation Lane performs in all cases in which the whole colon is loose. In such cases the entire colon, including the hepatic and splenic flexures, is provided with a mesentery, and can be lifted out of the abdomen, making the performance of the operation safe and astonishingly easy. Personally I reserve these radical procedures for the cases in which I consider that multiple conservative operations (of course carried out at the one sitting) would not be effective, or in which the length of time necessary for their performance would endanger the life of the patient. My own opinion is that ileo-colostomy is not a good surgical procedure, and I believe that where conservative operations are contraindicated the best operation is complete colectomy.

In the performance of colectomy I use an extra broad crushing clamp (Fig. 8) specially made for me by Messrs.

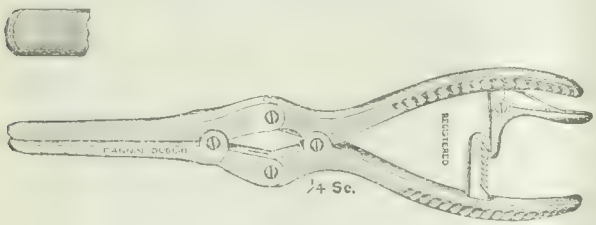


Fig. 8.

Fannin. This instrument has blades 1 in. wide, and presses out laterally the muscular and mucous coats of the bowel, leaving the serous intact. A ligature is placed round either end of the crushed part and the bowel divided between. In this way the possibility of infection is reduced to a minimum and the invagination of the ends of the severed gut by purse-string sutures is rendered easy.

The patients after complete colectomy make good recoveries, put on flesh and gain better health than they have experienced for years; in fact, they derive the greatest benefit from the removal of their great bowel, which had lost its original function and degenerated into a cesspool, as tersely expressed by Lane.

From the foregoing it will be seen that in my treatment of these cases I have gradually felt my way up from the performance of small conservative operations to the adoption of radical procedures in suitable cases. The majority of my cases are too recent to allow me to judge of the final outcome, but the immediate results have been most satisfactory and encouraging. In those cases which have been operated on one, two, or three years ago, the improvement, which in some was very startling, has been maintained. The result of my experience has been to convince me of the importance of intestinal stasis, and I believe that here a great opportunity is presented to the surgeon for the relief and cure of much unnecessary suffering.

In conclusion, I would like to express my deep sense of indebtedness to Mr. Gray for coming over to address us to-night, and also to Professor Dixon for the facilities he most kindly gave me for the study of the intra-abdominal conditions in infants and fetuses.

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Remarks
ON
CHRONIC INTESTINAL STASIS.

MADE AT THE MEETING OF THE DUBLIN UNIVERSITY BIOLOGICAL ASSOCIATION, NOVEMBER 22ND, 1913.

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IN the consideration of the various aspects of intestinal stasis it will be of great advantage if we continually keep in mind their bearing on the question of treatment, which is after all the most important question—how are we to turn our knowledge, our discoveries, to the best advantage? We should always be asking ourselves, "Why, why?" or "How, how?" However hackneyed a subject is, however highly developed the technique of an operation is, we should always have the attitude that something more may be learned, some improvement can be made, which will redound to the better comfort or safety of our patients. I am glad that during recent years the feeling has been gaining ground that surgeons have, in the past, been doing too little for many of their abdominal cases, that the primary cause has been neglected in the presence of an assertive effect.

If the symptoms are not perfectly clear, it is due to the patient, when once he has submitted to operation, that a thorough intra-abdominal investigation should be made, and, if it is thought advisable, a sort of "spring cleaning" carried out, multiple operations should be done, so as thoroughly to break up the vicious circles which, as all of us know, abound in the abdomen. At the same time, the surgeon must be discriminating; there must be clear indications for interference; our desire to help must not allow our itching fingers to maltreat perfectly harmless conditions. What I say can be applied with great force to our subject to-night, and I think that there are still many points to be settled in connexion with intestinal stasis. For example, the treatment of this condition is by no means so straightforward or systematized as we are led to believe by Lane and his followers.

We must, in following up what has been mapped out so admirably by Mr. Pringle, discard from discussion all cases of stasis due to new growth, to the immediate or remote direct effects of inflammatory processes such as tubercle, dysentery, diverticulitis, and so forth, and to those other pathological conditions which cause constipation by a reflex influence, such as appendicitis, gall-bladder disease, or pyloric stenosis, and which are most satisfactorily dealt with by suitable and thorough surgical procedures.

There is also a small number of cases in which, either before or after death, no satisfactory explanation of the stasis is forthcoming. There is no stenosis, or angulation of, or other interference with, the bowel, so far as apparent to us, and yet the bowel has that dilated and possibly also hypertrophied appearance characteristic of cases in which real organic obstruction exists. Till better diagnosis and treatment are available, apparently nothing other than surgical remedies are of any lasting use in these cases, and even they sometimes fail to be permanent in their effects.

The discussion, therefore, is confined to the consideration of that large residue of cases of stasis caused by the presence of certain bands or membranes which interfere with the full action of the bowel. It is curious how many surgeons are still sceptical about the presence of these membranes. All one can say is, although their presence

may not be "well recognized," they are very easily recognizable. As Mr. Pringle has hinted, it is owing to a desire on the part of certain surgeons to procure uniformly good results—that is, if possible, a relief of *all* abdominal symptoms—and to a recognition of the far-reaching effects of intra-abdominal vicious circles, that the presence and importance of these membranes have been brought to light. It is curious how little notice of them has been taken in the past by anatomists and pathologists, who, one would have thought, with their greater opportunities, would have given prominence to them in their writings and teaching. I believe that 75 to 80 per cent. of all cases of intestinal stasis are due, directly or indirectly, to the presence of these bands.

As to the etiology of these membranes there is as yet no unanimity. There is a tendency for two schools to be set up. One, with Sir Arbuthnot Lane at its head, believes that these membranes are the result of the stasis. The other school believes that they are developmental in origin. Now, while I agree most heartily in all that Mr. Pringle has said about Sir Arbuthnot Lane's work—and I am glad that it is at last receiving something like adequate recognition—yet I could never accept his theories as to the origin of these membranes, and, after much consideration of the matter and study of the conditions found at operations, I came to the conclusion that the membranes were congenital, and gave voice to my opinions nearly two years ago. As frequently happens, workers in another country, Connell and Flint in America, were on the same track about the same time. I do not wish to fight about priority with such good men as these. I am sure we are on the right track. The more experience of intra-abdominal conditions I have, the more convinced am I about this, for reasons, some of which have been recapitulated by Mr. Pringle, and also because, like him, I have seen these membranes and bands repeatedly in fetuses. I have found them, well-developed, over and over again in young children. I have also very frequently observed them in adult patients, who have never in their lives suffered apparently in any way from them. How, then, can I make myself believe that they are the result of chronic constipation?

Still less can I credit the theory that they are due to long-continued inflammation. I thought this theory had got its quietus, but it has been revived again recently by Mr. Howell, of Cheltenham, in a paper,[1] "A clinical study of the chief function of the peritoneum," without, however, the backing of any conclusive evidence.

The study of the membranes found on the right side of the abdomen in a case of arrested descent and rotation of the caecum, which recently came under my care suffering from duodenal ulcer, will serve to illustrate the fallacy of any other theory than the developmental one. Ordinarily the caput caecum and ascending colon descend from under the liver to the iliac fossa and loin, and are fused, so to speak, to the posterior abdominal wall in these situations. The lower end of the ileum then enters the left or inner aspect of the caecum, and is otherwise free within the abdomen, except along its mesenteric attachment. The appendix lies usually to the lower and inner side of the caecum. One sees all sorts of gradations between this arrangement, which may be regarded as normal, and the abnormality which I found. From the study of abnormalities one may learn much. In my case the caecum was fixed under the liver in front of the upper part of the kidney. It had not rotated, so that the lower end of the ileum entered its posterior aspect. The base of the appendix had, with regard to the ileum and caecum, its normal attachment, but it was situated behind the caecum and its tip peeped over the colon in the region of the second portion of the duodenum. The caecum was bound chiefly to the posterior abdominal wall and partly to the under surface of the liver by a membrane which was continuous with and in structure was identical with the omentum, and of which it really formed the extreme right portion. The lower part of the ileum and its mesentery were loosely adherent to the posterior abdominal wall of the loin and iliac fossa. When the ileum was lifted up the most beautiful and extensive terminal ileal membrane which I have ever seen was made evident.

Suppose that this prematurely fixed caecum descended into its normal position in the iliac fossa, what would happen to these abnormal structures which held it in position? The ileum would be partly pulled, partly pushed, inwards as the caecum came to occupy its position, and during this process the typical Lane's membrane would be formed; the ileum at the same time would be prevented from rotating into its usual position—it would be kept rolled downwards on its own axis, as Lane described it when first he drew attention to the condition. The caecum in its descent would draw out the part of the omentum which fixed it, and in its thinned-out condition this would form the filmy, more or less irregular, Jackson's membrane. The caecum also would rotate outwards as it descended (like the movement of everting the right hand), else the ileum would continue to enter its posterior aspect. In this, it will be observed, I disagree with Mr. Pringle's opinion of what takes place.

It will be noted also that the filmy Jackson's membrane differs much in appearance from the more fibrous terminal ileal membrane. They are derived from different kinds of tissue. I venture to point out that the rotation of the caecum sometimes does not occur although its descent is otherwise normal, and the ileum in that case enters its posterior aspect. I have seen this repeatedly.

The appendix may not descend, or do so only partially. It tends, seeing that it is most posterior in its primary high position, to become adherent first and to be more fixed than the other structures. It is frequently ultimately retro-caecal or retro-colic, its tip reaching even as high as the under surface of the liver. In an appendix which has succeeded in escaping from behind the caecum evidence is very frequently seen of the bonds which at one time entangled it, in the shape of a flat band of "adhesion," attached usually about its middle or proximal part, in which run the typical fine linear vessels seen in many of the other developmental membranes. This band is, I believe, a great predisposing cause of appendicitis.

I do not think I need say more about the etiology of these membranes. If they are studied the fact will be appreciated that they are all due to an excess of developmental fusion or to a deficiency of developmental absorption. Great variation in their arrangement will be found; and in their effect on the motility and mobility of the bowel.

In dealing with the subject of intestinal stasis from a purely surgical standpoint, we must, at present at all events, look at it from the point of view of a man to whom sufferers from this complaint, with its numerous sequelae, come after having been treated in all sorts of ways, with only temporary relief or with none at all. They have had drugs administered to them by the mouth, by the rectum, or through the skin; they have undergone courses of ordinary enemata or of more vigorous douching processes; they have had abdominal massage and electrical treatment; they have drunk and bathed in the waters of various spas, and they may even have had vaccines or antitoxins of various kinds injected into them. The multiplicity of the remedies and the fact that the patient has so frequently perforce to discard one for another in order to provide a fresh stimulant for his jaded intestine show that there must be some factor at work which these remedies do not remove. They alleviate the stasis temporarily by stimulating a better tone of the bowel, or, by liquefying its contents, enable the bowel to act more easily. The cause of this so-called chronic constipation is mechanical, and, therefore, can only be adequately and permanently relieved by mechanical means.

The membranes or bands which are the cause of the stasis have been adequately described as to their position by Mr. Pringle. They may be present in well-marked form without producing constipation. The stasis is caused by the *manner* in which these bands are attached to the bowel or its mesocolon. If the membrane is short and causes angulation of the bowel, sooner or later it will be the cause of stasis proximal to the angulation. It is really a matter of failure of compensation. So long as the tone of the bowel is good, so long may the patient be free from constipation. A healthy, active life, attention to diet and to the regular action of the bowels, will help to keep the bowel in good tone. Acute or chronic illness, change from an active to a sedentary occupation, nervous upset, and so on, may influence the tone of the bowel and break down the compensation to such an extent that they are never properly recovered, and intestinal stasis with its attendant

evils becomes the bane of the patient's life, and, as already detailed, one intestinal stimulant after another is tried. The resemblance to chronic cardiac disorder is marked—there is similar dilatation and hypertrophy, a similar tendency to breaking down of compensation in untoward circumstances, and a similar temporary response to suitable remedies. One great advantage in the case of the colon is that the horizontal position tends to undo these angulations and allow the passage of its contents, and this intermittent relief helps the preservation or restoration of the tone of the bowel more than in the case of the heart.

I would lay stress on the fact that these membranes vary enormously in their arrangement and effects. They may be long or short, they may be broad or narrow, they may bind the bowel down over a large extent, and interfere but slightly with its action, or they may have but a narrow attachment to its surface or to its mesocolon, and by causing angulation interfere very greatly with the efficiency of its action. As a rule these narrow limiting bands, found especially at the hepatic and splenic flexures, are far more injurious in their effects than the broader membranes. As I have elsewhere pointed out,[2] I believe they have much to do with the presence of enteroptosis—that they are the primary cause. From its weight the dilated, overfilled bowel tends to sag downwards when the erect posture is assumed, and thus a vicious circle is initiated and tends to become more marked. In support of the developmental theory we find that a certain type of individual is subject to constipation, is subject to enteroptosis, is found to be possessed of these bands, usually of a deleterious variety. Such a type is recognizable in quite early life, and when the abdomen is opened for any reason these bands are found. They are not acquired as the result of long-continued constipation. I do not for a moment imply that the bands or membranes are not found in other individuals, but individuals of long, narrow build are the usual sufferers. It is curious how such individuals are found most frequently in occupations which do not allow of much exercise—for example, barmaids, dressmakers, clerks—of course, the worse kind of occupation for them, but their own inclinations and the demand for their type of build by employers seem to be the factors determining them to take up that kind of work.

The human race suffers many things owing to having adopted the upright posture. The upright posture enters into the formation of another wider vicious circle. Lessened tone affects pretty well all the tissues and functions of the body, but the effect on the flat abdominal muscles is very important. They become relaxed and flabby in action, and their relaxation encourages ptosis of the viscera—the one reacts upon the other. I labour this point somewhat because I believe it is so important, and that a chance of breaking up or preventing the vicious circle occurs with greater frequency as more and more abdomens are opened in children. As I have indicated, it is most frequently only when the active habits of childhood are given up that the strain on the bowel begins to tell. We can recognize the type, we can recognize the early symptoms, and we can advise prophylaxis in the way of choice of occupation, exercise, habits, etc., and when these fail or when opportunity offers we can try to remove the cause.

Diagnosis.

If adhesions of the gall bladder are the cause of stasis in that organ, owing, put shortly, to kinking of the cystic duct, I find that the symptoms referable to the gall bladder are much more capricious than when due actually to gall stones or infective cholecystitis. The tenderness, the pain, both local and referred, and the dragging sensation are very variable. I have only once seen a trace of jaundice. The tension produced in the gall bladder may become so severe that actual gangrene may result. I have seen three cases of this very serious nature. I have found in these cases of gall-bladder adhesions that hyperaesthesia in the region of the angles of the ninth, tenth, and eleventh ribs on the right side is much more constant than in either gall-stone trouble or infective cholecystitis. I believe that these gall-bladder adhesions predispose to the formation of gall stones.

In a similar way the membrane which may cause kinking at the duodeno-jejunal junction, while producing dilatation and hypertrophy of both the duodenum and stomach, causes symptoms which, while superficially resembling those of either duodenal or gastric ulcer or pyloric stenosis, do not conform, on more accurate investigation, to the usually definite symptom-complex of these conditions. Again they are more capricious. I have found frequently that the symptoms subside with greater rapidity when the patient assumes the supine posture, so much so that relief and capacity to take ordinary diet very quickly ensue. Usually the tenderness and rigidity of the abdominal muscles, found almost universally in cases of ulcer, are absent or little marked, but I have found that such patients complain of tenderness immediately above and slightly to the left of the umbilicus, lower down than that complained of in gastric ulcer.

A symptom which has led me to diagnose or at least strongly suspect a terminal ileal membrane is the presence of tenderness about 1 in. below and to the left of the umbilicus, as well as tenderness slightly below and internal to McBurney's point. There may be a line of tenderness between these two situations. Occasionally when pressure is maintained over the appendix area the subumbilical tenderness disappears. The only other condition which gives symptoms like these is an inflamed appendix adherent along the under surface of the mesentery.

On comparatively rare occasions only have I found dilatation and hypertrophy of the ileum above this membrane. I am not inclined to believe that this membrane causes intestinal stasis nearly so frequently as Lane and others suggest, and the absence of any evidence of stasis is explained, to my mind, by the fact that the free portion of the ileum usually rises out of the pelvis in an axis which corresponds to that of its terminal portion, which is more or less fixed in the iliac fossa by the membrane. This is merely another example of Nature's power of accommodation to abnormal conditions. Many cases of well-marked lower ileal membrane have never shown any symptoms of intestinal stasis, and in my experience in almost all cases in which symptoms of stasis have been present there has been ample cause found for it in the presence of well-marked angulation of the colon, usually at the hepatic flexure in the vast majority of cases. This ileal membrane only produces symptoms simulating chronic appendicitis. In a few of my cases patients have complained of colicky pains when they have assumed the supine posture, or when the bladder was distended. In such cases angulation has no doubt occurred, and only in these have I found hypertrophy and dilatation of the ileum above the kink.

The effect of pregnancy in cases of lower ileal membrane varies; in some the discomfort complained of in the right iliac fossa is no doubt due to formation of a kink, or to a drag upon the membrane as the ileum is displaced upwards. Relief occurs after parturition.

The Effect of the Meso-sigmoid Adhesion on the Ovarian and Spermatic Veins.

These veins run directly under this adhesion, and are often more or less caught up in it. If the sigmoid is loaded, if the patient is erect, there ensues a direct drag or pressure on these veins, causing congestion of them below the point of application of the force. This, in my opinion, explains the aggravation of so-called ovarian neuralgia or the pain of a varicocele when the patient is constipated, and the amelioration of symptoms when the patient lies down. Owing to the anatomical arrangement of the female pelvis, as compared with the male, deleterious effects are more marked in the former. Neuralgia, resulting from fibrosis or cystic disease of the ovary, mainly due to intermittent congestion, is very frequent in the cases under discussion. Remember our type in this connexion! It is extraordinary sometimes the extent to which the meso-sigmoid adhesion will implicate the ovary, tube, or broad ligament. One has again to think of the developmental descent of the ovary in order to explain this. I should like here to point out the beneficial effects of double ligature and division of the ovarian veins under these conditions. The comfort derived from this procedure exceeds that of any operation for varicocele.

Finally, I should like to remark that when I employ skiagraphy as an aid to diagnosis in gastro-intestinal cases, I think it necessary, in order to arrive at anything like a

true interpretation of what occurs under ordinary conditions of living, that the patient should be given the bismuth meal quite early in the morning, and that the upright position, either sitting or standing, should be maintained all day, and a skiagram taken quite late at night. If indicated in any case, skiagrams may be taken at intervals during the day. It is sometimes of value to know what effect the horizontal position assumed at night has on the contents of the bowel by noting what is revealed in a skiagram taken next morning.

Treatment.

In consideration of all that I have said, it will be necessary for me to discuss only the purely operative treatment.

In the first place, I should say that if gastro-intestinal stasis is diagnosed a free vertical mesial incision is necessary for the adequate recognition and treatment of the conditions causing it. I always make, if possible, a paracentral one. I repeat that the incision should be very free. (I was delighted to see some of Mr. Pringle's incisions when I visited his wards.) One should be able actually to *see* the conditions present. It is heartbreaking to watch a man attempting to diagnose or treat these by an incision through which he has to *bore* his hand.

The great indication for any surgical interference is *the presence of dilatation and hypertrophy*, be this in stomach, gall bladder, small intestine, or colon. The only difficulty which presents itself, to my mind, is what to do when one discovers these membranes in a child in whom it is possible that the changes in the alimentary tract have not yet asserted themselves, but from the character of the membranes angulation of the bowel may be expected as the child grows. Is it justifiable on this assumption to interfere, or should one wait till one is certain that stasis has begun? The large number of cases in which these membranes are present in adults without the cardinal evidences of stasis, dilatation and hypertrophy, appear to me to justify non-interference and reliance on measures at which I have merely hinted in order to keep up the tone of the bowel, except when the bands are very narrow.

As has been pointed out, stasis due to these bands can be treated surgically by fixation of the affected stomach or bowel, by division of the bands, by short-circuiting operations, and by colectomy. I have but little faith in artificial fixation of normally mobile organs, and never perform such an operation except in some cases of movable kidney.

If division is chosen as the operative procedure, I wish to emphasize very strongly that this must be done very thoroughly, and that an attempt should be made to cover over the raw surface thus produced either by sliding and suturing adjacent peritoneum or transplanting omentum. Incomplete division of one membrane may make angulation, caused by the remaining part, worse than before. Further, division of a distorting membrane at, say, the hepatic flexure and loosening of the bowel there, may throw an undue strain on what has been a previously comparatively mild angulation of the splenic flexure, and in this way merely shift the site of obstruction, and possibly even aggravate the symptoms. Therefore, if one limiting membrane is interfered with all others distal to it should be dealt with also as thoroughly as possible. Acute angulations should be transformed into gradual curves. All bleeding points should be carefully secured. If there is only a very thin, filmy covering left on the colon, or if there is a tendency for the bowel to drop back into its old position, a piece of omentum should be either pushed or transplanted over the denuded area. I prefer omentum without fat for this purpose. I think that fatty omentum is apt to be transformed into fibrous tissue, especially if transplanted, and this by its contraction may give rise to trouble again.

I wish to speak about the operation of ileo-sigmoidostomy for intestinal stasis only to condemn it strongly, except when done as a preliminary to colectomy. Whether the anastomosis is made above or below the sigmoid angulation, whether at the same time this angulation is removed by plastic operation on the meso-sigmoid adhesion, it is, I believe, only in the minority of cases that faecal material does not find its way, in a retrograde fashion, and stagnate in the colon, which has been converted by the operation into a backwater, a real cesspool! The colon may, in such cases, be packed from end to end with faecal masses, and *x* rays, after a bismuth meal, show how long these masses may remain *in situ*. It is remarkable in these cases to find how the bismuth reaches the caecum and ascending colon within a day or two, and, whether from its weight or from a property of inhibiting peristaltic action, how long it remains there.

When admissible, I prefer division of the membranes to the operation of colectomy, because it is a less formidable and in suitable cases an equally efficacious procedure. It is, however, certain that some cases will not be relieved by this method. These cases, although they may be completely relieved for a period after the operation, yet sooner or later relapse into the old condition. The difficulty is to say exactly, when the abdomen is opened, which cases will require colectomy.

I feel that colectomy should be given the preference when there is marked ptosis of the ascending or transverse colon, or when, accompanying an acute angulation, the membranes are wide in extent and their thorough separation entails leaving large raw areas of the bowel. I think it is a slur on our Creator to look upon every colon as a cesspool, as some would have us! It is far too elaborate an organ to put such a base value upon. I think that one should save as much as possible; only the dilated and hypertrophied part should be removed. I prefer, if possible, to do short-circuit and colectomy at one sitting. Although an extensive operation, it is not a dangerous one when done by an efficient surgeon.

In many of these cases there is a long sigmoid loop. In order to leave as long a portion of the colon in the natural position of the colon, I have several times, after having excised ascending, transverse, and part of the descending colon, divided the peritoneum along the outer side of the remaining part of the descending colon and of the meso-sigmoid, and so mobilized and transposed these parts of the colon that at the end of the operation the patient was provided with a new transverse and descending colon, which was continued without any convolution into the rectum. In these cases the upper end of the descending colon became the commencement of the new transverse colon into which the ileum was implanted.

I think it is of great importance to preserve as much of the omentum as possible. It can usually be sheared off close to the colon without difficulty. It can be made to cover over raw areas or to moor the new transverse colon as may be indicated.

The results of successful operative procedures are very striking. The patients often veritably seem to renew their youth. They sleep better, eat better, look better, and feel better. They are desirous of and capable of leading more active lives, that is, they lose their mental and physical lassitude. What seems to give most delight and satisfaction is the natural, regular, and free movement of the bowels. I saw only this week a nurse on whom I had performed colectomy with transplantation of the remaining colon as I have just described. Appendectomy had been done previously without relief of her symptoms. She told me that she would readily have undergone the discomforts and pain of the operation two or three times over if she had been assured that she would be in the perfect health which she now experiences compared with the misery that she had previous to the operation.

These effects of the operation, the change produced on the patient's outlook on life, show the importance of the subject. The general public are being stirred in the matter. It is for us to guide them aright.

Proper treatment will have an effect on the peace and happiness of the nations, for is not Sir Arbuthnot Lane reported to have said recently that he "can understand a man preferring to live with a drunken woman rather than a toxic one. A drunken person is occasionally merry, but a toxic one never!"

[illegible]

[1] *Lancet*, October 25th, 1913. [2] Gray and Anderson, *Developmental Adhesions affecting the Lower End of the Ileum and Colon*, Aberdeen University Press, 1912; Gray and Anderson, Abnormal Extra-abdominal Developmental Adhesions, *Lancet*, May 10th and 17th, 1913.

A SOCIAL democratic medical association has recently been founded in Berlin. It already has a membership of about one hundred. Dr. Zadek has been elected provisional secretary.

SOME EFFECTS OF CHRONIC INTESTINAL STASIS ON THE FEMALE GENERATIVE ORGANS.*

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When I was honoured by an invitation to deliver a lecture to you I chose as my subject the one that is at present uppermost in the minds of so many thinking medical men the world over. I refer to chronic intestinal stasis, and let me here state most definitely, so that I may convey no wrong impression, that by this term we do not imply simply an unsatisfactory evacuation of the contents of the lower portion of the bowel, which must of necessity be treated by colectomy or ileo-colostomy, but such a delay in the passage of the intestinal contents as results in the absorption of a larger quantity of poisonous products than can be satisfactorily dealt with by the excretory mechanisms of the body. It is impossible to consider so large a subject in all its aspects in the time at my disposal, so what I propose to-day to discuss is chiefly its gynaecological aspect.

For many years it has been an accepted creed that whatever changes might be taking place in the intestinal contents during their passage along the alimentary tract, the epithelial lining was quite equal to all demands that might be made upon it and acted as a definite barrier to the absorption of any of the harmful products that might be formed.

Yet, when we examine the accuracy of this in the light of the recent work of Sir Arbuthnot Lane, to whom we are indebted for all our knowledge of this subject, we find that such an idea is completely erroneous. As the result of a careful investigation of the facts that he has placed at our disposal we find that not only does absorption of noxious material take place from the intestinal tract, but that it is difficult to over-estimate the importance of this long-continued flooding of the various tissues of the body by such products absorbed from the several parts of the alimentary tract. This view is now supported by such a mass of operative and clinical evidence, which is open to all the world to see and examine, and has indeed been seen by practically all the greatest surgeons of to-day, as to be undeniable, and the basis of this master conception of disease stands established on fact. I wish to particularly emphasize this as it has been stated frequently and positively by those who have clearly not taken the opportunity of noting carefully the conditions that are found in the living abdomen, that the foundations on which this conception of disease is erected are not sure.

I shall endeavour, then, to show that it is no longer possible for us to consider many gynaecological conditions as separate diseases to be labelled by distinct titles and regarded as of entirely independent pathology, but that having masqueraded for so long in various disguises, they must now fall in line with the many other abdominal conditions whose primary cause is intestinal stasis. When it has been shown that in cases of stasis a marked absorption of undesirable material is going on from the alimentary tract, it is obvious that every single tissue and organ in the body must be affected thereby; the female generative organs are no exceptions, but are most definitely affected, not only by this long-continued absorption, but also by the mechanical factors that bring about the stasis.

In man the large intestine tends constantly to be displaced downwards. This is especially true in the female, owing to the wider pelvis and to the much longer abdomen, a fact of great importance that has apparently escaped the attention of anatomists. To oppose this displacement supporting bands develop, and they crystallize out along the lines of force. Apparently some observers have great difficulty in accepting this as a possibility. All are now agreed that this may take place elsewhere in the body, but it is still considered a heresy to introduce the principle into the abdomen. I have seen these bands in all stages of their development, from a slight thickening on the surface of the mesentery to a stout band that not only fixes the intestine, but by gradually embracing the circumference of the bowel rotates it on its long axis and very definitely obstructs the passage of the intestinal contents.

The end of the ileum is frequently definitely affected in this way, and to this the name of "Lane's kink" has been given. It is urged that these bands are of congenital origin, and, with the object of inquiring into this point, I have opened and examined carefully at Guy's Hospital thirty-one fetuses. Their ages varied from 4 to 9 months, but in no case was I able to find anything that might be considered a true Lane kink. The congenital folds of peritoneum that are met with in the right iliac fossa of the fetus are entirely different from the typical Lane kink that develops during the lifetime of the individual. Again, in the left iliac fossa in the region of the ileo-pelvic colon, in no instance was I able to discover any thickening of the mesentery or adventitious bands. Here the development is much simpler, and there is less likelihood of confusing congenital and acquired conditions, and yet in the adult this is the point at which these evolutionary bands are most frequently found; and a careful consideration of the facts will, I think, definitely show that they are not congenital, but develop to oppose the downward displacement of the ileo-pelvic colon into the pelvis.

Confirmatory evidence of the accuracy of these descriptions is daily forthcoming, and I have recently had the privilege of looking through a most beautiful series of pictures representing these conditions, which came from the clinic of Dr. Bainbridge of New York. The drawings were of that high standard of excellence that one would expect from this surgeon, and some of them were reproduced in a recent number of the British Medical Journal (November 1st, 1913, p. 1129).

Whatever view be taken of the origin of these bands the effect they produce upon the bowel is most definite. Take, for instance, the band that develops at the end of the ileum. I have frequently observed it during laparotomy fixing the bowel at the pelvic brim, a greatly dilated flabby caecum occupying the pelvis together with a portion of the transverse colon and the lower coils of the ileum. The affected portion of the bowel is often not only fixed but rotated along its axis, so that a most definite obstruction is produced. Dr. Jordan has shown a delay in the transmission of the contents of a bismuth meal at this spot up to forty-eight hours. I have myself operated on a woman eight months pregnant with almost complete obstruction at this point, producing repeated vomiting and distension above the obstruction, which was relieved by merely undoing this kink. In the left iliac fossa the development of these bands is largely responsible for the many types of ileo-pelvic colon met with in the abdomen.

I have referred particularly to these two parts of the intestine because they interest us chiefly from a gynaecological point of view and supply a mechanical basis for several of the conditions that affect the purely female organs.

As a result of the mechanical obstruction thus produced a definite delay in the flow of the intestinal contents is brought about, and very definite sequelae result. The sequela that stands out as of paramount importance is that the small intestine becomes infected by organisms with which it cannot cope. Infection of the large intestine is of course the primary factor, its contents undergoing putrefactive changes due to the delay in their passage; but the large intestine is much more capable of dealing with its own infections than is the small, and the result is infinitely more serious when the latter becomes infected. Again, since it is from the small intestine that all the food products are absorbed, except water, its infection must be of the greatest possible importance.

Delay in the passage through the small intestine is produced in one of three ways:

1. By an ileal kink.

2. By an appendix, fixed tensely behind the ileum, which drops over it into the pelvis.

3. By what is known as a simple stasis, in which the patient has not reacted to form any acquired adhesion and there is no controlling appendix. The difficulty with which the ileum empties itself will be greatly increased by a caecum distended with stagnating contents and fully occupying the true pelvis, and the result of this must be an accumulation of its contents in which bacterial and

* A lecture delivered before the Medical Graduates' Polyclinic on November 18th, 1913.

chemical changes take place. It is clear, then, that although the stagnation of contents is primarily in the large intestine, it is the delay in the small intestine and the resultant infection of its contents that is of far greater import. It is on this point that we differ radically from the views expressed by Metchnikoff.

A detailed examination of patients suffering from marked intestinal stasis reveals a set of conditions that may be divided into three great groups: (*a*) The obstructive; (*b*) the degenerative; and (*c*) the infective group.

The Obstructive Group of Cases.

The obstructive group embraces those conditions that result mechanically from the obstruction of the intestine. An ileal kink or an appendix controlling the end of the ileum may produce a very definite obstruction, and behind it material stagnates. This will result in an obstruction at the end of the duodenum, so that it becomes very markedly distended. I have seen this distension on very many occasions, and on some of them the distension was sufficiently great to cause the duodenum to present through the wound when the abdomen was opened. It is clearly the antecedent condition of a possible ulceration and even perforation of that organ. This ileal kink is productive of a great deal of pain in the right side in women, and it is not rare to see such cases in which the appendix, or right ovary or tube, or even both ovaries, which admittedly showed no naked-eye lesion, have been removed, to the very serious detriment of the patient, by the surgeon in his attempt to deal with the pain. Some gynaecologists appear to regard the removal of the ovaries as a matter of no importance to the patient. I would most strongly oppose this, as the results are often disastrous to the future happiness of the patient both in her married life and in her mental condition. During pregnancy this kink plays at times a most important part; it is a fixed portion of bowel, and as the pregnant uterus rises from the pelvis into the abdomen and pushes up the abdominal contents, the kinking is as a general rule undone, and the beneficial results are obvious enough. On the other hand, right-sided pain is thus frequently produced, and a number of patients with this condition who have gone through a pregnancy have suffered very considerably from a pain which was doubtless due to this upward thrust of the uterus. Different degrees of obstruction will thus be produced, and the results vary in severity from an occasional attack of pain and vomiting to persistent vomiting in the later months. In cases of persistent vomiting of pregnancy which show no evidence of a specific toxaemia the cause of the vomiting and right-sided pain is often to be found in the kink of the ileum.

Again patients who present the type of simple stasis are often markedly benefited, and are never so well as when pregnant. The explanation of this is again mechanical: the uterus raises the intestines out of the pelvis and their drainage is very markedly improved.

In the left iliac fossa these adventitious bands are often the cause of much left sided abdominal pain. This is such a frequent symptom in women as to be worthy of very careful consideration. I have seen several cases in which the left ovary had been removed with no relief to the pain, but to the greatest disadvantage to the comfort and well-being of the patient. The pelvic colon can be rolled quite readily under the hand, and tension on these bands produces the pain. It is produced whenever scybala pass along this portion of the bowel, or the part is distended with gas. This condition is frequently but wrongly attributed to ovaritis or salpingitis, but neither organ is in reality at fault. The pain may be considerably increased by the inclusion of the left ovary in the adhesions.

The Degenerative Group.

The degenerative changes are of equal interest and of much greater importance. They result from the action of material that is absorbed from the intestinal tract, and this action is but part of a general scheme whereby every tissue in the body is affected. Conclusive experimental proof of the truth of this has lately been afforded by the genius of Carrel, who has succeeded in growing living tissues, and finds that if their waste products are not removed the life of these tissues is short. If, on the other hand, the growing tissues are frequently washed and their waste products removed, their life is very materially lengthened.

The breasts show these changes very definitely. As a result of the absorption from the bowel a condition is brought about that is clinically and microscopically indistinguishable from what is commonly known as chronic mastitis. Later this goes on to cystic degeneration of the breast, on which a cancerous change may supervene. If the evidence of this is asked, I reply that time and again I have seen it disappear after the short-circuiting or colectomy and the breast regain its normal consistence. I well remember a case which was sent into Martha Ward in Guy's Hospital, under Sir Arbuthnot Lane, for removal of both breasts. The hard irregular nodular lumps had raised the question of malignancy in the mind of an exceedingly able surgeon. The patient showed marked signs of intestinal stasis. The breasts were not removed, but an ileo-colostomy was performed. Within four weeks the change in the breasts was obvious to everybody who saw her.

A similar degenerative change takes place in the thyroid, an organ whose function is closely associated with the female generative organs. It shows very clearly the effects of chronic stasis, and rapidly degenerates and wastes. This wasting is easily determined by the finger. A more unexpected association has been found between the adenomatous degeneration undergone by the thyroid and chronic stasis.

A woman was taken into Martha Ward of Guy's Hospital with old, well-marked chronic stasis. She also had a large cystic mass in a lobe of the thyroid sufficiently large to raise in the anaesthetist's mind the wisdom of employing a general anaesthetic. It was suggested to the patient, therefore, that the thyroid mass should first be removed in order that the abdominal condition might a little later be attended to. This she refused to allow, saying that she had had it for many years and that she had come up for abdominal trouble. Consequently, ileo-colostomy was performed. She went out of the hospital some five weeks after the operation, wearing the same blouse as she had worn on admission. The thyroid mass had been reduced to a quarter its size and the neck of her blouse was now many sizes too big for her, and gave good indication of the degree to which the tumour had diminished in that short time. It has since completely disappeared.

Another sequel of the intestinal absorption is the loss of the body fat. This is an important factor in the condition we know as prolapse. The supporting tissues of the uterus share in the general degeneration of the tissues of the body, and the uterus falls back retroverted into the pelvis and on to the rectum, and so increases the difficulty of evacuating the solid material in this part of the bowel. Retroversion is the position of the uterus most favourable for the occurrence of prolapse, and should there be a lack of support from below due to an old laceration of the perineum in association with this degeneration of the uterine supports, prolapse will inevitably follow. It is this degeneration and laxity of the uterine supports and the surrounding tissues that so often provide the main difficulty in arriving at a completely satisfactory method for the relief of the prolapse.

This condition has frequently associated with it prolapse of the ovaries into the bottom of the pouch of Douglas, and the resultant discomfort is augmented by a chronic backache and dyspareunia.

The loss of elasticity of the skin, often so noticeable in patients with marked symptoms of stasis, may show itself in a very unpleasant manner during normal labour, in which there is no excessive size of the fetus, nor any contraction at the pelvic outlet. As the head escapes from the vulva during the process of extension, the skin, instead of yielding and gradually stretching, in spite of all care tears through like wash-leather, and a bad laceration results.

At the large number of operations for intestinal stasis at which I have assisted I have made a practice of systematically examining the uterus, ovaries, and tubes, and except when a secondary infection has taken place, I have found practically always a bulky, flabby, and retroverted uterus. In a certain number of the cases the retroverted uterus had been previously either suspended or fixed, with a relief to the patient that at best was very temporary.

This is an interesting fact, and shows clearly that to support the uterus by a suspending or fixation operation is merely to deal with a result of the stasis, and can only in these cases afford partial relief.

This position of retroversion is frequently associated with a chronic backache, the uterus falling backwards, the venous return along the vessels in the base of the broad ligaments is partially obstructed, and this leads to a continual congestion of that organ, with the result that a bulky uterus is produced and a condition of endometritis is brought about.

Retroflexion of the uterus is closely connected with this problem, and the constant straining during defaecation in a constipated individual whose involuntary muscle shares in the general degeneration of the entire voluntary and involuntary muscular systems must result in a bending back of the uterus. This is accompanied by an obstructive type of dysmenorrhoea. The condition is usually regarded as of congenital origin, but I am convinced that a large number of cases are not congenital, but are produced in the manner described. I was asked once to see a young woman who showed very marked symptoms of intestinal stasis. She was extremely constipated, and an unaided action of the bowels was always associated with marked straining and frequently with distressing pain. On this occasion she had collapsed with sudden pain during defaecation. On examination an almost complete obstruction was offered, on the introduction of a finger into the rectum, by a very tender lump that was quite fixed in the pelvis. Under anaesthesia the lump was found to be a bulky and sharply retroflexed and retroverted uterus which when replaced showed no other abnormality. The history of this patient exhibited dysmenorrhoea of the obstructive type, which was becoming increasingly severe and incapacitating.

The degenerative changes that affect the body tissues do not spare the uterus. I have already mentioned several instances in which the various tissues are replaced by fibrous tissue as a result of absorption from the intestine secondary to stasis. A ready example is the degeneration of the heart muscle that Mackenzie has shown to be primarily due to intestinal stasis. In the uterus this replacement of the tissues by fibrous tissue gives rise to a definite variety of fibrotic uterus. This is one of the most distressing uterine conditions, as it occurs only too frequently in youngish women in whom all less active means fail completely to control the haemorrhage, and in the end hysterectomy has to be performed. In the cases of this kind in which I have recently been compelled to perform a hysterectomy I have observed that there has been no ileal kink, but a marked stasis of the simple type, a distended flabby caecum occupying the true pelvis with coils of the ileum and a large part of the transverse colon in a similarly unsatisfactory state. I do not, of course, wish to include in this particular group those cases which are clearly the result of an infection of the uterine cavity that has spread to and involved the deeper planes of that organ. On the other hand, we know that the general resistance to organisms is very definitely lowered in cases of stasis, and we see how intimately associated is the condition of intestinal stasis with the production of a fibrotic uterus.

It has only been possible for me to outline briefly some of the effects of intestinal stasis. If the interpretation of the fundamental facts on which this superstructure is raised be true, and I submit to you that the evidence is overwhelmingly in its favour, then we have indeed been pointed to the greatest truth of modern times. The opinion on this subject of those members of our profession whose attention has been attracted to it has undergone a very rapid change. Nothing can better illustrate this than the Address in Surgery delivered before the Annual Meeting of the British Medical Association at Brighton by Sir Berkeley Moynihan. This surgeon, whose experience and world-wide reputation compel us to admit the weight and importance of any of his observations, now refers to Lane's disease as a clinical entity. It is a subject whose importance is vast, and as we ponder over it, its limits extend and carry us a long step backwards as we probe into the ultimate cause of things. It seems to me that many of those who are engaged in the branch of surgery that particularly interests me localize their view-point as they localize their surgical procedures, and are all too ready to exclude from their observations primary causes of pelvic conditions that are to be found in the intestines, which they exclude from the field of operation.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF BRONCHIAL ASTHMA ASSOCIATED WITH PREGNANCY TREATED BY HYPNOTISM.

A young married woman, aged 25, had suffered from recurrent attacks of typical bronchial asthma for two years, latterly as often as once a week. The usual remedies had been employed, but without permanent improvement. The attacks were excited by the most trivial circumstances, especially by windy or foggy weather, and household occupations such as "washing" and "dusting" were impossible. Even between the attacks there was constant dyspnoea, and the patient was never able to lie down flat at night. In addition she suffered from various nervous phobias, such as fear of being left alone, fear of going out alone or going upstairs in the dark. She was first seen by me some six months ago during an attack of bronchial asthma associated with the usual distressing symptoms. She was at that time six months pregnant, was very ill and anaemic, and suffering from chronic laryngitis. The attack was relieved by the usual remedies, and passed off after a few days. I then decided to try suggestive treatment. She proved readily susceptible to hypnosis at the first sitting. At the second sitting, two days later, there was complete muscular relaxation and amnesia during the "sleep." Positive suggestions that the attacks would be less violent and less frequent, and would finally cease altogether were given from the first. Some explanation was given of the processes involved, and the complete cessation of the attacks was emphasized more and more as the treatment progressed. At first sittings were given every two days, and later once a week. She has been entirely free from asthma since the first interview, and has remained so up to the present time. She can perform her household duties and go out in all weathers. She is able, moreover, to lie flat at night, and the dyspnoea has entirely disappeared. The confinement occurred at term, and passed off without incident.

Whatever views may be held as to the precise etiology of bronchial asthma there appears to be a consensus of opinion as to its neurotic basis, and it would seem, therefore, to be an affection in which suggestive therapy would be helpful. The *rationale* of the hypnotic method can be stated only in the most general terms. Whereas the medicinal and prophylactic treatment usually resolves itself into diminishing the sensitiveness of the bronchial mucosa and avoidance or removal of all known exciting causes, the treatment by hypnosis simply presupposes a psycho-motor mechanism and utilizes it in securing a specific effect. Admittedly empirical in its application it would appear to be justified of its results. A remarkable feature in the present case was the complete cessation of the asthma after the first sitting and the continued immunity even during pregnancy and the stress of parturition. It may be mentioned that she dreaded the advent of her confinement, and in view of her history and debilitated condition I hardly expected her to get through the ordeal without a relapse. With a view to diminishing the risk of this as far as possible suggestions were repeatedly given during the course of treatment that she would have no fear whatever of the approaching event, but would feel a perfect confidence when the time came.

Another point I should like to emphasize was the extraordinary susceptibility of the patient to hypnotic influence. . . . The mere suggestion that after all her case might prove amenable to treatment had an astonishingly tonic effect. She had no hesitation about the treatment, but simply placed herself in my hands to do as I wished, and I am convinced that this complete passivity was the main factor in her recovery.

J. E. MIDDLEMISS,
(Late) Assistant Medical Officer, Gartloch Mental Hospital, N.B.
Leeds.

GLANDULAR FEVER.

GLANDULAR fever, as described in the JOURNAL of January 10th, p. 84, is by no means a rare disease. It is probable that most of the cases which occur pass unrecognized or are diagnosed as tonsillitis or tuberculosis.

I have had recently in a small area an epidemic of 30 cases in which the clinical features were unmistakable. The patients were all under 12 years old, and exhibited, with varying degrees of intensity, the same symptoms. These were: Enlarged glands in the neck, always at the angle of the jaw, and often in addition along the anterior and posterior borders of the sterno-mastoid. They were firm, slightly tender, and in some cases as large as an average-sized Tangerine orange; pyrexia ranging from 101 to 104, usually lasting two or three days; and practically normal fauces. In a few cases the throat was slightly congested, but in none were there any signs of tonsillitis. The disease is apparently highly contagious, and in my series no child escaped who was brought into contact with an active case.

I had no opportunity of ascertaining the duration of the period of incubation or infectivity. Although the fever subsides in two or three days, the glands remain more or less enlarged for as many weeks. I have not met with a case in which the liver or spleen was enlarged, but one patient of the series developed haemorrhagic nephritis. It is possible that many of the cases of acute nephritis which occur in children, apart from those due to exposure or scarlet fever, are sequels to unrecognized attacks of glandular fever. Some of the cases had a systolic murmur, but I am convinced that this was only the murmur so often heard in children who are feverish.

A bacteriological examination of the throat in all cases might throw some light on the nature of the infection. In the only two I was able to examine I found merely the *Staphylococcus pyogenes aureus* and *albus* and a few streptococci.

My cases were treated with a calomel purge and small doses of sodium salicylate, followed by iron when the fever had subsided. They all made a good recovery.

Wanstead Park, Essex. A. CAMPBELL STARK.

THE TECHNIQUE OF ARTIFICIAL PNEUMOTHORAX.

IN Dr. Egbert Morland's note, published in the JOURNAL of December 13th, 1913, he refers to the frequency with which pleural effusion occurs as a sequela of induced pneumothorax. Of 6 cases treated by this method at the Fazakerley Sanatorium, Liverpool, early in the past year, 5 now present evidence of considerable exudation. A larger number of patients similarly treated in the latter half of last year are as yet without marked effusion.

These facts support the view attributed by Dr. Morland to Professor Saugman, that effusion not uncommonly sets in more than six months after the commencement of treatment. The presence of fluid is probably a conservative and not undesirable factor, but its late onset in treatment by induced pneumothorax is somewhat odd. It would be interesting to know whether the phenomenon is of sufficient frequency in the experience of others to justify our regarding it as a probable late sequela in all cases.

Fazakerley Sanatorium, Liverpool. C. RUNDLE.

A CASE OF CLEIDO-CRANIAL DYSOSTOSIS.

THIS condition, in which there is defective ossification of certain of the membranous bones, is rare, and another instance is worth adding to the small number on record.

The patient, a female infant, is now a fortnight old. It weighed at birth 7½ lb., and has since been losing weight steadily, being now just over 6 lb. The child seems of normal intelligence, and is the first of healthy parents; they know of no other case in either of their families.

The child's head seems large, the parietal eminences being particularly prominent. In front there is a wide gap between the frontal bones, as there is also in the position of the coronal suture: the posterior fontanelle extends almost over the back of the head, the ossification of the occipital bone being especially incomplete. The clavicles in this case seem normal, instead of being rudimentary or absent, as is usual. There is no other abnormality.

Swansea. ALBAN EVANS, M.R.C.S., L.R.C.P.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

AT a meeting on January 12th, Sir DAVID FERRIER, President, in the chair, Dr. W. D'ESTE EMERY, in a paper on the *Pathology of syphilis*, said that he regarded the remarkable clinical history of the disease as being due to the reactions of the tissues of varying degrees of sensitiveness to the spirochaetes or their toxins. At first the patient was relatively immune, and it was only when the tissues in the neighbourhood had become sensitive that they reacted and a chancre was formed. The highest degree of sensitiveness appeared at the commencement of the secondary period, when the lesions were mainly of an acute inflammatory nature, and fell off gradually during the whole course of the disease, the gumma marking the reaction of but slightly sensitive tissues. With regard to the Wassermann reaction, it was not a reaction of immunity but of cell degeneration, and its strength in any given patient afforded a rough guide as to the extent of the disease; in all cases it indicated the necessity for continuing treatment. In regard to treatment he attributed to the iodides an action like that of an antitoxin, but no spirillicide powers. As for parasyphilis, this seemed to him essentially similar to gumma formation, except that the spirochaetes were situated in the nerve substance proper. Unlike McIntosh and Fildes, he thought that the lesions were due to the access of the organisms to tissues which were already sensitive, and not to the subsequent sensitization of tissue containing them. It was, however, quite possible that there were strains of spirochaetes having a special affinity for the central nervous system. In regard to curability, he protested against the pessimistic views on tertiary syphilis held by some at the present time. Long-standing cases certainly did not react readily to treatment because spirochaetes had become resistant to mercury, arsenic, and probably also to syphilitic antibodies. In parasyphilis he had obtained some good results from the method of spinal injection of the blood after an injection of neo-salvarsan introduced by Swift and Ellis. In certain closely-defined circumstances the continued absence of a Wassermann reaction, especially after a provocative injection of neo-salvarsan, might be taken as indicating an almost certain cure. Mr. J. E. R. MCDONAGH held that the syphilitic lesions were due to the activity of the spore in completing its life-cycle. Early nerve lesions were vascular, and gave rise to hemiplegia in the brain and myelitis in the cord. The late lesions were due to direct extension of the organisms to the nerve substance, and thus caused general paralysis in the case of the brain, and tabes in that of the cord. Salvarsan attacked the spirochaete directly, owing to the free OH groups which the organism presented, but the other phases were destroyed indirectly. Salvarsan acted as an accelerator of the enzyme action by which the serum and plasma cells attacked the leucocytozoon, and this zymotic action was probably that of an oxydase. Mr. PAUL FILDES spoke of the curability of early syphilis and the incurability of late syphilis. This was due to the fact that early syphilis was a septicaemic condition, whilst in late syphilis no spirochaetes were found in the blood stream. Since the action of salvarsan was very transient, and it soon disappeared from the blood, it had little opportunity of destroying spirochaetes distant from the blood vessels. The incurability of late syphilis was due to anatomical, not pathological, causes. Mesaortitis syphilitica was by far the commonest late lesion of syphilis in the *post-mortem* room, and as the greater part of the aortic wall was non-vascular, this condition remained unaffected by salvarsan. The brain constituted another area into which salvarsan could not penetrate, and hence spirochaetes situated here would survive in spite of treatment, as in dementia syphilitica. Dr. J. MCINTOSH said that even after a maximum dose of neo-salvarsan little or no arsenic was present in the blood after an interval of twelve hours, and in therapeutic amount it persisted in the blood for three or four hours only. This fact and the peculiar anatomical construction of the brain and its membranes, particularly of their capillaries, explained, in his opinion, the failure of arsenic to reach the brain.

ROYAL SOCIETY OF MEDICINE.

SECTION OF THERAPEUTICS AND PHARMACOLOGY.

The Therapeutic Value of Hormones.

AT a meeting on January 20th, Dr. W. HALE WHITE, President, being in the chair, Professor G. R. MURRAY opened a discussion on the therapeutical value of hormones. He said that our knowledge of the ductless glands had increased rapidly in the last few years, but it was difficult to distinguish between advance and mere theorizing. There was a tendency to claim too great a therapeutic value for some of the hormones. The internal secretions of certain glands contained one or more hormones. Many glands consisted of two parts endowed with different functions. Hormones regulated metabolism in two directions, for whilst some stimulated it, others exercised a controlling or inhibitory effect. It was probable that an internal secretion might contain different hormones, and it was also probable that one hormone might supplement or supplant another. In some cases, as in that of the internal secretion of the pancreas, one could not administer the hormone in a form in which it was therapeutically active. These agents might be put to four chief therapeutical uses: (1) Treatment of a disease which was caused by a destructive lesion of the gland by which the hormone was secreted; (2) when there was a physiological demand for its increased secretion; (3) when its known physiological action was of service although it was known that the gland which secreted it was normal; and (4) empirically. He illustrated these points by reference to thyroidal hormones. As an example of their use under (1) he cited their administration in myxoedema and cretinism. It was essential to make sure that the preparation was physiologically active. The dose should be regulated by the effect produced, and not by any hard and fast rule. It was important that treatment should be continuous. Simple goitre provided an example of their use under group (2), but he thought that special care should be taken to exclude cases of Graves's disease. Under (3) thyroidal hormones might be used to stimulate metabolism, as in obesity. And lastly, as examples of its use under (4) he instanced its unexplained action in such conditions as nocturnal enuresis, rickets, and rheumatoid arthritis. He then spoke of suprarenal hormones, regarding Addison's disease as due to their deficiency. In his experience, suprarenal extracts did not replace the normal secretion, though some observers had noted recoveries after their use. They were nevertheless useful because of their physiological effect, and were thus employed in haemorrhage. They were valuable also in asthma, and were used for Graves's disease, but in the last condition he had not found them to be of much value. Concerning the pituitary gland, he said that its atrophy was known to be associated with adiposogenital dystrophy. Good results had been claimed for pituitary extract, but it was apparently of no value in acromegaly. It was used, however, for *post-partum* haemorrhage, and stimulated mammary and renal activity. Ovarian extract had been said to be of value in the symptoms of the premature climacteric following removal of the ovaries, and for those of the normal climacteric. Concerning the value of ovarian and testicular extracts, he thought that judgement must be reserved. Preparations from the islets of Langerhans had not yet led to any beneficial effect in diabetes. The whole question was a very difficult one, and he would not further confuse it by referring to the combined use of hormones of more than one gland.

Professor STARLING defined a hormone as a chemical messenger or instrument by means of which correlation was obtained between different organs. These chemical correlations could be put in two groups: (1) *Acute*, where the change in organ A was followed in a few minutes by change in organ B or in organs B, C, D, etc. The change in the second organ ceased with the change in the first. (2) *Chronic*, where a slow change in one organ produced a change, also chronic, in one or more other organs, which also came to an end with the cessation of change in the first. As an example of an acute correlation he cited that produced by secretin. The balance of effect and cause was brought about by virtue of the instability of the hormone. Among the hormones acting acutely he included CO_2, which conveyed messages to the respiratory and vasomotor centres. A third example of a hormone which acted acutely was adrenalin, which was secreted in excess in an animal as the result of fright, and by its action placed the animal in the best condition for resistance or flight. Great difficulties were met with in the administration of hormones, because they were so rapidly destroyed. Thus secretin was useless if given by the alimentary tract, and it was necessary to give it intravenously to produce an effect; much the same might be said of adrenalin. Again, in both instances, harm might be done if secretion was induced when the body was unprepared for it. He had by recent experiment on the isolated mammalian heart assured himself of the extreme value of adrenalin as a cardiac tonic, but it also acted upon the vasomotor centre, which tended to counterbalance this effect. However, he thought its possible value in this direction was worth considering. Among chronically acting hormones he mentioned those of the thyroid, pituitary, sexual organs, and pancreas. In all cases the evidence of their value was based on arguments, and not on direct proof. Except in the case of the thyroid it was very slight, and laboratory experiences made him very sceptical of the value of these extracts, since with all the conditions in his favour which exact experimentation allowed, he had often made mistakes. Only in the case of the thyroid was there any evidence of therapeutic results following the administration of a hormone of this class, and probably this was because that gland was originally connected with the alimentary tract.

Dr. LEONARD WILLIAMS said that his chief experience had been with thyroid extract, but he had had some with that of the pituitary gland. He had formerly been afraid of administering pituitary extract because of its pressor effect, but had found that this was not produced when it was given by the mouth. He had obtained good results from its use in at least two cases of amenorrhoea. He pleaded for the disuse of the term "thyroid excess" for Graves's disease. Symptoms of Graves's disease were not those of simple excessive secretion, and often the signs of hypothyroidism could be detected in that disease. One of the functions of the thyroid gland was to fix the calcium salts, and in Graves's disease he had found calcium chloride or calcium lactate of great value. He also employed small doses of thyroid extract.

Dr. H. H. DALE said that treatment by means of hormones could be arranged under two heads: (1) Substitution therapy; (2) treatment of symptoms through the knowledge of the physiological action of the hormone employed. Apart from the thyroid extracts, the extracts of the ductless glands were useful chiefly as drugs. He spoke especially of pituitary extract. The posterior lobe yielded an extract which was first employed—fifteen years after its action had been discovered—for its tonic effect on involuntary muscle and arteries. It acted rather by increasing the sensitiveness of plain muscle to normal stimuli than by actually stimulating it. The same was true of its action on the uterus. It did not induce labour in pregnancy, but when the uterus began to contract, then pituitary extract increased its contraction. In this country it was used chiefly for *post-partum* haemorrhage, but on the Continent largely also for inertia in the second stage of labour.

The CHAIRMAN said that many people took an excess of thyroid extract for myxoedema. Another point upon which there was no information was what to do in the case of pregnancy in a myxoedematous woman. In that condition the thyroid normally enlarged. Was it proper treatment to give more thyroid then than before? In obesity, thyroid often started a loss of fat when diet alone had failed. When once the obesity had begun to diminish, diet alone might in such cases be sufficient. Pituitary extract was the best means of inducing a quick rise in blood pressure, but it was disappointing as a diuretic. He considered that the effect of adrenalin in asthmatic attacks was remarkably successful.

SURGICAL SECTION.

AT a meeting on January 13th, Mr. MAKINS, President, in the chair, Mr. G. PERCIVAL MILLS described the results obtained in 90 *Nephropexies* performed in Birmingham by eight different surgeons between 1909 and 1912. Among other points he mentioned that in 53 per cent. of all the cases

the kidneys were fixed high and 23 per cent. of all the cases had relapsed so that the fingers could be placed above the kidneys. Of the cases in which sling sutures were used 23 per cent. had relapsed after two years and 28 per cent. after from three to four years. From all his statistics he deduced that the relapses occurred early and that the mechanical results were independent of the previous degree of mobility. As regards symptoms, of all cases 33 per cent. were cured, 10 per cent. were relieved, and 57 per cent. were unrelieved by operation. Of 20 cases of fixed lumbar pain relieved by rest, 75 per cent. were cured; of 10 cases of lumbar pain unrelieved by rest, none were cured; of 21 accompanied by dyspepsia or neurosis, 9 per cent. were cured. He thought that the indications for operation were chronic renal pain, intermittent hydronephrosis, and some cases of Glenard's disease. Bad results occurred in the cases where the pain was unrelieved by rest or which were associated with chronic appendicitis, dyspepsia, pelvic disease, or some neurosis. Mr. W. BILLINGTON said that he had operated on 800 cases (25 per cent. of whom were hospital patients), with 4 deaths and 1 recurrence. The worst results were obtained in hospital patients, as they returned to work and had no after-treatment. He had not modified the operation described by him in the BRITISH MEDICAL JOURNAL in 1907. He performed nephropexy after medical treatment had failed; it rendered an incurable case curable. Careful after-treatment was necessary for more than a year. Of his cases Nos. 151–251 a full year after operation 60 per cent. led ordinary lives, 20 per cent. were much better, 10 per cent. were improved, and 10 per cent. were no better. Of 30 nephropexies performed on lunatics 50 per cent. were cured. He thought that badly fixed kidneys gave rise to worse symptoms than movable ones. Mr. THOMPSON WALKER divided cases of movable kidney into three groups: those without symptoms, those with local symptoms, and those with either a neurosis or gastro-intestinal symptoms. The first of these he thought should not be operated on, and the third gave bad results. Rest in bed was an important test, as the gastro-intestinal cases became worse. He fixed the kidney by sling sutures over the last rib, and made a bed for it in the posterior abdominal wall. Mr. S. G. BARLING said that he had obtained his best results in cases with definite local signs, such as albuminuria, haematuria, or pyelitis. Mr. BLAKEWAY gave an account of cases operated on in St. Bartholomew's Hospital between 1909 and 1912; 2 were on both sides, making 64 nephropexies; 1 had died of pneumonia four months after operation, and *post mortem* it was found that the kidney had been fixed too mesially, and had caused an obstruction and dilatation of the ureter. Of 35 cases which had been traced 22 were satisfactory and the rest unsatisfactory. Mr. GARDNER said that at Guy's Hospital 26 nephropexies had been performed between 1909 and 1912; of these 21 were relieved immediately and 5 unrelieved. The condition in 4 cases was associated with appendicitis and in 4 with renal calculus. At St. Thomas's inquiries had been made as to 53 cases of nephropexy, and 32 had replied; of these, 16 stated they were cured, 4 were relieved, 2 were slightly improved, 1 had temporarily improved, and 9 were no better. At St. George's 8 replies had been received from 24 cases; 2 were worse, 1 was the same, 3 were slightly improved, and 1 was cured. Mr. A. E. JOHNSON demonstrated by a series of pyelo-radiographs the faulty positions in which movable kidneys were fixed; such faultiness often led to dilatation of the pelvis and kinking of the ureter. All kidneys could not be fixed to the last rib; he advised a high fixation and a bed in the posterior abdominal wall. Mr. MAKINS thought that the number of nephropexies performed in London was on the decrease.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

AT a meeting on January 8th, Dr. W. S. A. GRIFFITH, President, in the chair, Dr. EDEN reported a case of *Chorion-epithelioma with bilateral lutein cysts* in a married woman, aged 27, admitted to the Chelsea Hospital for Women. The uterus was considerably enlarged, and after some days the cervix was dilated on account of haemorrhage, and the uterus evacuated of a well-marked hydatidiform mole by vaginal hysterotomy. At the time there was an area of suspicious thickening felt near the fundus, but it was felt advisable to do nothing further, as the patient had lost blood considerably. Convalescence was normal. She was then sent to a convalescent home and requested to report herself later. Six weeks afterwards she returned to the hospital and was examined. The uterus was normal, but there was now a soft swelling in the region of the left ovary. There was no discharge from the uterus. A fortnight later the swelling in the left ovarian region had increased considerably, and a smaller cystic mass could be felt on the right side, which was not detected at the first examination. Abdominal section was performed and two simple ovarian cysts found, together with a somewhat irregular uterus. Supravaginal hysterectomy was performed, and on opening the uterus masses of soft red growth were found. Sections showed typical chorion-epithelium deeply invading the uterine wall. Lutein cysts were present in the ovaries. The operation was performed two and a half years ago, and the patient had had no return of the disease up to the present time. Points of special interest were the total absence of haemorrhage or discharge after removal of the vesicular mole, although a malignant growth was present in the uterus; also the rapidity with which the ovarian cysts grew, and the complete cure by operation which had resulted.

Dr. GRIFFITH reported a case of primary epithelioma of the vagina which he had had treated by radium. The patient, a woman aged 67, had had one child when aged 30, and no miscarriages. The menopause occurred at the age of 50. Since then, except for the onset of double cataract, she had been in good health. In October, 1912, she noticed mucous leucorrhoea. It was sometimes tinged with blood, but there was no haemorrhage or pain. In June, 1913, she was examined by Dr. Griffith, who found a warty papillary growth of the posterior fornix about 1½ in. in length by 1 in. in breadth, apparently involving the whole thickness of the thin senile vagina, but the rectal wall was quite free. The cervix was senile and healthy. A portion was removed and found to be squamous-celled epithelioma. Treatment by radium was commenced at the Radium Institute on June 16th, when five screened six-hour exposures were made on consecutive days, and were repeated for four days about a month later. In October Dr. Griffith examined the patient again, and found no trace of disease. The vagina was smooth and soft, but a little more contracted than in June. He reported the case because primary epithelioma of the vagina was a comparatively rare disease, the operative treatment of which was not satisfactory, and because he thought all gynaecological cases treated by radium of which accurate details were forthcoming ought to be reported.

Dr. RUSSELL ANDREWS described a case of haematometra with absence of the upper part of the vagina. The patient, aged 22, who had never menstruated, complained of abdominal pain recurring every month for the last eight years. For the last few months this pain had been sufficiently severe to keep her in bed. For a long time she had had a tender swelling in the lower part of the abdomen, reaching about three inches above the pubes. The external genitals were normal, but the vagina was not more than an inch long. On rectal examination a tumour, the size of a large pear, could be felt in the position of the uterus. No distinction between body and cervix could be made out. The abdomen was opened, and the uterus, which was 5 in. long, distended with blood, was removed, together with a left-sided haematosalpinx and small ovarian tumour; the right ovary, which was normal, being preserved. The patient made an uninterrupted recovery. No trace of the external os could be found, and the vagina seemed to be completely absent except for about an inch at the lower end. Dr. Andrews considered that the removal of the haematometra and haematosalpinx by the abdomen was better treatment than drainage from below, with an attempt at making a new vagina. The operation of grafting would be a very difficult one in a case where the upper part of the vagina was wanting.

DERMATOLOGICAL SECTION.

AT a meeting on January 8th, Dr. J. J. PRINGLE, President, in the chair, the following were among the exhibits: Dr. SEQUEIRA: A case of *Pityriasis rubra pilaris* in a girl aged 9. The patient had been admitted to a fever hospital in September, 1913, for scarlet fever, diagnosed by most

competent authorities. This ran its usual course, and was followed by characteristic desquamation, after which the present eruption made its appearance. The lesions were atypical in distribution, the posterior aspects of the proximal phalanges of the fingers being hardly if at all affected. The eruption on the front of the chest closely resembled lichen planus, but was of characteristic salmon-pink colour. Acuminate papules were present over the abdomen and back, and the desquamative condition of the face and scalp confirmed the diagnosis. The child had had an eruption of pityriasis rubra pilaris in the previous year. The PRESIDENT agreed with the exhibitor's diagnosis, but said that the cause might easily elude the most experienced observer. Dr. HALDIN DAVIS said he had seen two cases of this disease preceded by high fever, erythrodermia, and desquamation, closely resembling scarlatina. He understood that this course of events had been recorded by others. Dr. DORE said he had observed a typical case of pityriasis rubra pilaris in a young woman in which the preliminary erythematous stage was well marked and of long duration, and which gradually emerged into a generalized sclerodermia. Dr. KNOWSLEY SIBLEY: A girl, aged 13, who had apparently suffered from lupus of the nose at the age of 4 years, with resulting extensive ulceration of the face. Two years afterwards the lesions began to spread slowly over the entire face and neck, both in front and behind. They consisted of brown nodules, very closely aggregated into patches, which terminated in an abrupt margin a little below the level of the clavicles in front, and extended like a collar round the neck. There was old ectropion and much disfigurement of the face, but the more recent lesions had not ulcerated. The exhibitor applied the term "tuberculide" to the condition. Dr. WHITFIELD objected to this nomenclature, and considered the case to be one of typical lupus vulgaris. The name "tuberculide" was originally designed for and applied to tuberculous cutaneous manifestations distributed through the blood stream. Dr. SEQUEIRA agreed with this view, and said that the case seemed to him a striking exemplification of the local extension of lupus vulgaris by satellites. Dr. MACLEOD remarked that many cases previously regarded as toxi-tuberculides were now proved to be bacillary. He thought the term "tuberculide" might soon be dispensed with altogether. Dr. A. M. H. GRAY said that tubercle bacilli were now being found in lesions formerly regarded as tuberculides. Dr. DORE agreed generally with Dr. Whitfield's observations as regards nomenclature, but pointed out that the condition usually termed "multiple lupus," for example, after measles, was the result of blood infection. The PRESIDENT hoped the Section would set the seal of its approbation upon the interpretation of the term "tuberculide" as being the result of a systemic infection, and not of a mere local tuberculous extension. In reply, Dr. SIBLEY said that he considered the nodules as examples of pigmentary tuberculides, and not as lupus. Dr. PERNET: A typical case of extensive *Acne varioliformis* in a woman; he drew attention to the rarity of the disease in the female sex. Dr. A. M. H. GRAY: (1) A case of *Generalized lupus erythematosus* occurring after an attack of pneumonia; haemorrhagic bullae had been a prominent feature of the eruption. Contrary to expectation, almost complete recovery had taken place, although the only treatment adopted had been rest in bed and small doses of quinine. Dr. SEQUEIRA recalled the fact that in three of his fatal cases non-tuberculous pleurisy had been present. The PRESIDENT said that nearly all such patients under his own care had died, most from disseminated tuberculosis. A typical case of the condition, now moribund in hospital, had presented for the past four months all the blood changes said to be characteristic of pernicious anaemia as well as some evidences of tuberculosis. (2) *A papulo-necrotic tuberculide* on the hands of a girl, aged 21, of four years' duration, who had had several operations for tuberculous glands of the neck. Dr. WHITFIELD: A case of *Cutaneous atrophy with comedo*, in a boy aged 7. Comedones were observed soon after birth, and the patches of abnormal skin were situated upon the left side of the neck, left temple, and in the scalp. No microbacilli had been found in the extracted comedones. The exhibitor thought the atrophy was primary, and probably congenital, and that the comedo-like bodies were merely irregular cornifications.

SECTION OF OTOLOGY.

AT a meeting on January 16th, Mr. RICHARD LAKE in the chair, the following were among the exhibits. Dr. DAN MCKENZIE: A child, aged 6, in whom mastoiditis without perforation of the tympanic membrane had occurred. The symptoms set in a month after the removal of tonsils and adenoids, and on operation the mastoid cells were found occupied by pus and granulations. At no time was there any discharge from the meatus. Recovery was uneventful. The PRESIDENT: A patient, aged 61, after operation for *Aural vertigo*. The first attack came on seven years ago, suddenly, while he was asleep. The attacks had since increased in frequency, but had not been so severe as the first one. Objects around him appeared to rotate in a vertical plane. Unless he kept his eyes shut he vomited. He had continuous tinnitus in the left (the deaf) ear and had been totally deaf for three years. His blood pressure was 110. There was no rhomboidism, his gait was steady, with no deviation and no ataxia; no nystagmus. The operation was easily tolerated. Mr. G. J. JENKINS: A case of *Haematoma auris* successfully treated by operation. The patient, a woman aged 32, received a blow at night, and next day the swelling involved the whole external surface of the cartilaginous part of the pinna, and was the size of a hen's egg. That afternoon an incision was made along the margin of the helix. The contents were mostly fluid blood, but there were some clots in the lower part. The blood extended somewhat into the meatus. The patient's present appearance seemed fully to justify the course which had been followed.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT a meeting on January 9th, Dr. A. K. CHALMERS, President, in the chair, Dr. A. A. MCWHAN, in a paper on *Problems of rural housing*, said that the increasing cost of erecting cottages was a serious consideration. The membership of rural local authorities was chiefly confined to the farming and land-owning classes, most of whom had no special interest in housing, and had a natural desire to avoid any measures which would burden the rates. A Scottish difficulty connected with reconstruction was the presence of a large number of solidly built stone houses without damp courses, and it was impossible to insert these owing to the excessive cost of the proceeding. Although local authorities were entrusted with the duty of carrying out housing schemes, it was most unlikely they would do so of their own accord; and, although county councils had been suggested as the housing authorities, it was improbable that they would in any way forward matters. There was evidence that the Local Government Board intended using its powers of compulsion with reluctant local authorities, who might thus be stimulated to greater activity, not only as regards building schemes, but in dealing with insanitary property. If the Housing Acts were to be administered honestly and conscientiously by local authorities, and it was found that agricultural industries could not bear the cost entailed, the solution of the housing problem would lie not with sanitary officials but with politicians and economists. Dr. W. G. SAVAGE considered that it was the duty of a medical officer of health to ascertain and to represent all unfit houses to the local authority, and to represent them on their merits, quite independently of any effect on local conditions. It was for the local authority to decide whether the houses should not be closed owing to a scarcity of houses in the district. Referring to the house inspections now going on, he considered that the existing rate of progress was not likely to increase, for the following up of initial inspections was a most time-consuming process. One of the greatest difficulties was that of proving the existence of a scarcity of houses in a particular district. The migration of the unhoused made it unlikely that at any given time many persons would come forward and say they were without houses to live in. Mr. F. E. FREMANTLE advocated a national sanitary service, and deplored the piling up of work on existing officials who could not cope with it. Dr. A. H. BYGOTT said that gas and water had been successfully municipalized, and there ought to be more done in the way of municipal housing. He considered

that county councils should be empowered to make building by-laws. Dr. JOHN TAYLOR and Mr. HERBERT JONES considered that if the local authority did not carry out a housing scheme where one was required the duty should be thrown upon a central body and not upon the county councils.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting on January 8th, Dr. FLORENCE STONEY in the chair, Dr. ETHEL STACY, giving an account of some interesting cases seen in general practice, said that the number of semi-mental and nerve cases met with was large. One troublesome case of *Nocturnal incontinence* had been cured in three weeks by massage of the urethra twice weekly. An interesting confinement was that of an *African pygmy*, whose height was 4 ft. 2¾ in., forceps were applied after the second stage had lasted four hours, and much force was required to deliver the patient, the child dying almost immediately. The child weighed 5 lb. 12 oz. The mother's measurements were: Interspinous, 6½ in.; intercristal, 7¾ in.; intertrochanteric, 9 in.; external conjugate, 6 in.; diagonal conjugate, 3¾ in. Miss ALDRICH BLAKE, M.S., speaking of cases of *Renal surgery* which had been under her care at the New Hospital for Women during the last ten years, said these consisted of 14 cases of stone in the kidney, 4 of undue kidney mobility, 3 of hydronephrosis of an intermittent character, 4 of chronic hydronephrosis, 5 of tuberculous kidney, 4 of haematuria of unknown cause, 1 of bilateral cystic disease. In the cases of stone the most striking feature was that all except 3 of the patients complained principally of attacks of pain, which gradually grew more frequent or more severe. Haematuria was generally regarded as a characteristic symptom of stone, but was absent in 9 out of the 14 cases. Haematuria seemed much commoner in tuberculous cases than in cases of stone. Nor had frequency of micturition seemed as marked a symptom of stone as it was of tuberculous disease. In all the cases a careful investigation of the urine was made, in many cases being collected separately from the two kidneys; an *x*-ray examination of both kidneys was also made. Eight patients had been subjected to nephrolithotomy and 4 to primary and 2 to secondary nephrectomy. One patient, very ill on admission, died from shock shortly after a secondary nephrectomy; all the others made a complete recovery. Operation was carried out through an incision in the lumbar region, the kidney being lifted out and examined; in this way the stone could be removed with the least possible damage to the kidney. The kidney should be divided midway between the sulci on the posterior border, as this gave rise to least haemorrhage. The pelvis of the kidney was drained by means of a tube in order to prevent colic being caused by clots of blood passing down the ureter, the tube being removed after two to three days. With regard to mobility of the kidneys, the speaker was not convinced that the symptoms were improved after operation. In the tuberculous cases frequency was the most important symptom, and sudden severe attacks of pain occurred, typical of renal colic. In one case of haematuria a very small angioma had been found in the pelvis of the kidney after its removal.

THE Society of Tropical Medicine and Hygiene has now taken a room from the Medical Society of London at 11, Chandos Street, Cavendish Square, London, W., for its permanent quarters. Fellows will be able to use this room, from 10 a.m. to 5 p.m. daily, both for reading and for the examination of microscopical specimens. A certain number of exchange publications lie upon the table, and the late Dr. Carnegie Brown's bequest of books forms the nucleus of a small library. These works can also be consulted. It is hoped that Fellows upon arriving home from abroad will make use of the room and also record their home addresses there. By so doing, men from different colonies will be able to come into touch with each other and so exchange ideas. Up to the present time the lack of such accommodation has been felt by many, and the Society hopes, by the permanent quarters, this want will be suitably met.

Reviews.

ARISTOTLE AS A BIOLOGIST.

THE Herbert Spencer lecture of 1913 was delivered before the University of Oxford by Professor D'ARCY W. THOMPSON. The subject chosen was *Aristotle as a Biologist*,[1] a subject which Professor Thompson has made peculiarly his own, possessing, as he does, the happy combination of considerable classical and zoological knowledge. As is customary in these annual addresses, the lecturer began by paying the usual, but none the less merited, tribute to the genius of Herbert Spencer, and the widespread influence which his philosophy exercised over the whole thinking world—an influence the more remarkable since it was expressed without "literary art or any charm of magic words."

After reviewing the salient points in Spencer's materialistic philosophy, the lecturer passed on to speak of Aristotle as "the greatest biologist of antiquity," and so reverting by the analogy of contrast from "a great teacher of mechanical causation to him who taught us our first clear lessons of the phenomena of life." In an attempt to trace the relation of Aristotle's biological studies to his philosophical work, Professor D'Arcy Thompson commenced with an examination of the evidence as to the period of life at which the attention of the philosopher was diverted to the study of natural history. Setting aside various legends, internal evidence is forthcoming to show that the most important part of his zoological studies were carried out upon the Asiatic coast, in or near Mitylene; and, further, that Aristotle's biological work preceded the more strictly philosophical.

As a writer Aristotle had a comprehension of the beautiful; but it was rather the comprehension of the philosopher than of the artist or of the poet. His literary style seldom rises "above its level didactic plane." Reference was made by quotations to the great breadth of Aristotle's knowledge of anatomical facts, and also to his great interest in the broader theoretical aspects of biology. He concerned himself with problems still unsolved, and still arousing interest to-day. Setting aside the speculative side of his writings, Professor D'Arcy Thompson devoted a considerable portion of his lecture to some "few fragments out of the storehouse of zoological and embryological facts" with which works of Aristotle abound. The morphology and physiology of the cephalopods was known to this naturalist of old in remarkable and accurate detail. Many of the facts, ignored and forgotten, awaited rediscovery by Cuvier; and, indeed, Cuvier "lacked knowledge that Aristotle possessed." The same may be said with equal truth of many other animal groups, crustacea, insects, fish. His account of the anatomy and reproduction of the selachii excited the admiration of Johannes Müller, that "prince of anatomists."

In the last pages of the address the lecturer depicted the influence which the scientific method, learnt from the study of biology, exerted in moulding the more purely philosophical ideas of Aristotle. Thus, growing up "upon a broad basis of natural history, the whole psychology of Aristotle, and in particular that great doctrine of the tripartite soul," is unfolded. Whatever else he may have been, Aristotle is the great vitalist; the Aristotelian *entelechy* is but the forerunner of the doctrines of Leibnitz and of Driesch.

The lecture forms most interesting reading, and more than that, the subject matter is a wholesome corrective. The present generation is apt to be puffed up with its knowledge and its advances. It is well that we should be reminded of how much was known by the sages of antiquity, and of the great debt which we owe to work carried out by them as pioneers in unexplored regions without any of the apparatus or other aids with which modern investigators are equipped. To Professor D'Arcy Thompson our thanks are due for bringing out these facts in such a fascinating manner.

[1] *On Aristotle as a Biologist, with a Preamion on Herbert Spencer.* By D'Arcy W. Thompson, M.D., D.Litt., Professor of Zoology, University College, Dundee. Oxford: Clarendon Press. 1913. (Med. 8vo. pp. 31. 1s. net.)

THE ANATOMY AND HISTOLOGY OF THE EYE.

THE Oxford University Press has issued[2] a set of enlarged stereoscopic photographs which fully illustrate the macroscopic anatomy of the human eye. The series consists of 67 plates contained in a cardboard box, which measures 11½ in. by 7½ in. by 2½ in. The box is divided into three compartments, which contain the plates. These are of the size which fits an ordinary stereoscope. It also holds a book devoted in part to a most valuable account of the naked-eye anatomy of the eye and in part to a key to the plates. This key is admirably planned. One page is devoted to each photograph, and shows a key sketch of the preparation suitably lettered and described. The photographs are taken in some cases by transmitted light, in others by reflected light, and in a few by the combined methods of lighting. We have nothing but praise for the care which Professor THOMSON has devoted to the production of these pictures. The eyes have been skilfully dissected, the photography is well done, and the originals have been faithfully reproduced. In most cases the eyes were removed within four hours of death, hardened in 4 per cent. solution of formol, and cut in the frozen state. Great care has been taken to select normal eyes, and to avoid any appreciable distortion during the process of preparation. The studies of the eye are divided into five groups—antero-posterior sections; dissections from the front; the anterior half of the eye seen from behind; the lens; the posterior half of the eye. There are several preparations of the feta eye which show in a striking manner how the fetal eye differs from the fully developed organ. These photographs should prove very useful to the student preparing for examination, for he is far more likely to get a comprehensive grasp of the subject if he supplements his reading with the visual picture Professor Thomson has given him. The ophthalmologist will be able to see exactly where he should place his incisions and trephine holes, and cannot fail to benefit from a study of the whole series of photographs, more especially from those which illustrate the regional anatomy in the neighbourhood of the lens. The general anatomy of the body has already been presented in a stereoscopic form, there is a stereoscopic atlas of gynaecology, and now Professor Thomson has added one of the anatomy of the eye.

A third edition of Professor GREEFF'S *Guide to the Microscopic Examination of the Eye*[3] was published in 1910, and a translation by Mr. HUGH WALKER appeared in serial form in the *Ophthalmoscope*. This translation has now been issued in book form. The first edition was translated by the same author into English, and it was rendered also into Japanese. In order to utilize the experience of other clinics than his own, Professor Greeff has secured the co-operation of Professor Stock of Freiberg and Professor Wintersteiner of Vienna, a fact which renders the third edition even more valuable than those which preceded it. Mr. Walker has translated the book very well; no trace of the German idiom can be detected. The difficulty of avoiding Teutonic phraseology will be fully appreciated by those who have attempted to render German into English. The work is a very valuable one. In eighty-six pages the technique of the practical histology of the eye is clearly and concisely explained; nothing essential is wanting, and there is no redundancy. Professor Greeff notes that the equipment of a small laboratory suitable for the microscopic examination of the eye does not involve great trouble or expense. A satisfactory examination can be made without elaborate instruments or numerous reagents. It is much better to adhere to a few reliable methods and become proficient in their use than to try every new formula which is published. A good microscope is essential, and it is well to buy a good stand to which all that is eventually necessary can be fitted. The author recommends a simple microtome made by Schanze of Leipzig, which only costs £5. Leitz's drawing eyepiece is useful, as is Edinger's projecting eyepiece. The book can be recommended as the most suitable for the ophthalmic surgeon who desires to cut his own sections. The professional pathologist will find it useful but he may perhaps in some cases require a larger book.

[2] *The Anatomy of the Human Eye as Illustrated by Enlarged Stereoscopic Photographs.* By Professor Arthur Thomson, M.A., M.B., F.R.C.S. Oxford: The Clarendon Press. London: Henry Frowde. 1912. (Med. 8vo, pp. 60: 67 plates. £2 2s. net.)

[3] *Guide to the Microscopic Examination of the Eye.* By Professor R. Greeff, with the co-operation of Professors Stock and Wintersteiner. Translated from the third German edition by Hugh Walker, M.A., M.B., C.M. London: The Ophthalmoscope Press. 1913. (Sup. roy. 8vo, pp. 102. 7s. 6d. net.)

THE OPERATING ROOM AND THE PATIENT.

THE changes that have taken place in the arrangements and material of an operating theatre and the alterations in technique have been very considerable since the publication of the last edition of Dr. RUSSELL FOWLER'S book, *The Operating Room and the Patient*[4] in 1907, so that we are not surprised to find that the third edition has been entirely rewritten and is greatly enlarged. The volume is a manual of pre-operative and post-operative treatment, and it is obvious from the title that a very large area of surgical work is covered. Indeed, in reading the book one feels that the author tells too much, that he leaves absolutely no room for initiation or enterprise on the part of a surgeon. The descriptions of the preparation for operations, the disposition of the personnel of the operating theatre, are detailed to the uttermost. The result is that a considerable amount of overlapping occurs in the book, but we do not suggest that the overlapping and the detail are faults; they are, indeed, to be regarded rather as recommendations. The detail is so minute that the book could be given into the hands of a body of hospital managers, for example, and from it they could furnish the whole of the contents of a modern operating theatre. It is given to very few surgeons to start an operating theatre *de novo*. Most men come into succession and find a complete scheme in working operation, and all that they require to do is to alter little details to suit their own convenience or ideas.

In this volume Dr. Russell Fowler gives descriptions of the operating room, the preparation of instruments, preoperative preparation, and dressing; general consideration of the after-treatment; care of the wound. The latter half of the book is taken up with details regarding operations upon special tissues and regions. There is also a chapter on bandaging, which is fully illustrated, the illustrations being taken from the author's work on *General Surgery*. We cannot find that the author recommends so fully as we think he ought the use of gauze for bandaging, especially for head bandages. It seems to us that it is time that all other materials than gauze for head bandages were abolished.

In the chapter on anaesthesia he advocates the preliminary use of sedatives, such as morphine, and holds that this kind of medication is distinctly indicated. The preliminary administration of morphine is of great value, but it has its disadvantages: in some cases apparently the patient is more sick and longer sick after anaesthesia, and it is also to be noted that the induction of anaesthesia requires a longer time, though the total quantity of anaesthetic is greatly less. The author figures the patient ready to receive the anaesthetic lying on the table, and he suggests that the arms should be placed by the side with the hands under the hips, or that the arms be laid across the chest (as in the figure), a broad soft roller gauze bandage being placed around the forearms from wrist to elbow. This last provision we regard as dangerous, as it is never known how soon or how quickly artificial respiration may be required, and the time lost in loosening even a loose roller bandage might be regretted.

With regard to the preliminary preparation of the patient, we are glad to observe that the author disparages free purgation before operation, and thinks that a moderate laxative, such as castor oil, which we in this country are inclined to regard as old-fashioned, is best. The author states that after administration of calomel occult blood is always found in the stools, and also that magnesium sulphate is a cardiac depressant, extracts too much water from the system, and if administered in a solution of more than 6 per cent. may act as a poison, and that to its use are traceable certain obscure deaths.

The section of the book dealing with regional surgery is full of suggestive hints and practical points which even the most experienced surgeon will be glad to note, and will be of immense value to the junior man.

[4] *The Operating Room and the Patient: a Manual of Pre- and Post-operative Treatment.* By Russell S. Fowler, M.D., Chief Surgeon, First Division, German Hospital, New York. Third edition, rewritten and enlarged. Philadelphia and London: W. B. Saunders Company. 1913. (Med. 8vo; 212 illustrations. 15s. net.)

The final chapter of the book contains lists of instruments and dressings commonly employed for various operations. The only fault we have to find with this list is that very commonly an instrument is described simply by the name of the inventor, and there are many instruments known apparently in America by names which are not known in this country. This tendency to perpetuate the name of an inventor or modifier of an instrument seems to be on the increase, and is, on the whole, to be deprecated.

The literary style of the book might be improved; its main fault is a tendency to redundance. The illustrations are good, well chosen, and not too numerous.

It may be said, then, that this book is one which we have confidence in heartily recommending, and it will prove a thoroughly useful adjunct in any surgical service.

DIETETICS.

DR. HERBERT S. CARTER has given, in a volume entitled *Diet Lists of the Presbyterian Hospital, New York City*,[6] tables of food values and analyses for the use of practitioners similar to several which have been published in Germany, and to at least two which have recently appeared in America. He tells us that the table of standard portions was originally prepared by Professor Irving Fisher of Yale University, whose work in connexion with low protein diet is well known, and that the table of food values was published by Atwater and Bryant in the *Bulletins* of the Department of Agriculture. The book prints in detail the diets in use at the Presbyterian Hospital in New York; and states the results of analyses and the caloric value of each; in addition there are diets for diabetes, gout, obesity, and so forth, with comments and rough estimates of the values of "servings" of various articles of food. We notice that the "milk diet" in use at the Presbyterian Hospital consists of 3 quarts, which must be more than is required by most patients whose illness necessitates their being restricted to such a diet; moreover 3 quarts are said to be equivalent to 3,000 c.cm., but this amount is 3 litres, not 3 quarts. The differences between English and American ways of living are shown in the use of ice cream as a regular portion of a hospital diet, and in allowing "stew" for breakfast; but oatmeal gruel, pea-soup, and bean-soup seem out of place in the diets of typhoid patients. Under the heading "Anticonstipation Diet," we should expect to see reference to the use of sour milk, but this figures only on page 95 under the name of "Artificial Buttermilk." Dr. Carter criticizes the low calcium diet which he attributes to C. G. L. Wolf, of Cornell Medical School, as monotonous, but he might have added the better dietary devised by Klemperer and have pointed out the articles which it is desirable to avoid, so that the practitioner could vary the diet for himself. The only obesity diet given is too low, as it contains only 1,300 heat units; von Noorden gives three dietaries, the highest 2,000 heat units, the second 1,500, and the lowest 1,000, as it is desirable that there should be a gradual reduction in the amount of food. The table of carbohydrate equivalents would need modification for use in this country; soya bean meal is said to contain no starch, but 9.34 per cent. of cane sugar; it should have been made clear that this refers to a special brand, as in Kinch's standard analysis the carbohydrate is given as 24 per cent.; Friedenwald and Ruhrah state, in the volume next to be noticed, that the "nitrogen free extract" in soya bean is 30.50, while in Rose's *Laboratory Handbook for Dietetics* the carbohydrate in "soy bean meal" is given as 25.09, the authority quoted for the statement being the Connecticut Experimental Station Report, 1906. Certain hospitals in this country have constructed dietaries on scientific principles, printing the value of protein, fat, and carbohydrates in calories, but this information is only accessible to the staff and the students attending the hospital. There is an undoubted need for an inexpensive book like that before us, which should consist chiefly of tables with a few explanatory comments, and we congratulate our American cousins on the energy they have shown in the matter.

[6] *Diet Lists of the Presbyterian Hospital, New York City.* By Herbert S. Carter, A.M., M.D. Philadelphia and London: W. B. Saunders Company. 1913. (Demy 8vo, pp. 136. 5s. net.)

The handbook on *Diet in Health and Disease*,[6] by DRS. JULIUS FRIEDENWALD and JOHN RUHRÄH, has now reached a fourth edition, and maintains the standard of excellence which has always characterized it. This edition has been largely rewritten in order to include many fresh facts and new ideas that have emerged during the four years that have elapsed since the third edition was published. A section has been added on the mechanism of digestion, and the chapter on metabolism is largely new. The various dietaries in special diseases have been reconsidered, the chapter on infant feeding thoroughly revised, a table on purin bodies has been reprinted from Walker Hall, and many other tables of the composition and calorific value of foods have been included; the authors claim that they have tried to sift the constantly increasing literature on the subject so as to separate the good from the bad, and afford practitioners a concise, clear, and common-sense guide amid the growing intricacies of the subject. Their views on the protein optimum and allied questions are difficult to discover; it is stated to be an open question, and that the range is between 60 and 120 grams, varying with the individual and his mode of life, so that a standard of universal application cannot be fixed; they do not express any opinion as to whether a high protein diet is generally an advantage or disadvantage to the individual, they recommend it in tuberculosis, during the growing period, and in pregnancy and lactation, but deprecate its use by persons leading a sedentary life. These platitudes are not very refreshing to read, and we should appreciate the book better if the authors, while retaining their impartiality in the statement of facts and arguments, had ventured to draw conclusions for the assistance of their readers.

The first edition of a little book on the dietetic treatment of diabetes, by Major D. B. BASU,[7] late of the Indian Medical Service, was published in 1909 and reviewed by us in October of that year. Second and third editions were issued in the course of that and the following year, and the fourth edition reached us a short time ago. The author's main point is that diabetes should be treated by vegetarianism, at least in India, as this diet is better suited to the constitutions of the natives of that wide country. He advocates the withdrawal or restriction of meat, alcohol, tea, coffee, and cocoa, and the use of vegetables, of which so many are already more or less extensively used in India by the various races. For example, he recommends the use of cocoanut, soy bean, peanuts, various pulses and dals, besan, a meal used in Northern India, meal from *Sesamum indicum* called in the vernacular *til*, linseed meal, meal of the seeds of *Buchania latifolia*, poppy seeds, and cotton seeds. In the preface the author adopts the view that diabetes is caused by alimentary toxaemia, which is to be attributed to oral sepsis, to the adulteration of foodstuffs, over-polishing of rice, the exportation of wheat, the prevalence of malaria, the introduction of the potato, and, lastly, to the peculiar political situation of educated Indians, which subjects them to worry and anxiety of many sorts! He supports these propositions by passages extracted from many writers, but he neglects to give any evidence in the form of cases to show that his vegetarian treatment is followed by good results.

NOTES ON BOOKS.

DR. CHARLES BOLTON, Director of the Research Department at University College Hospital Medical School[8] has bound up together a number of papers issued from the department into a volume which gives a striking impression of the extent and value of the researches, some of them with a direct clinical bearing, there carried on.

We are glad to have an opportunity of drawing attention to a second edition of *Physical Chemistry*[9] by Mr. J. C.

[6] *Diet in Health and Disease.* By Julius Friedenwald, M.D., and John Ruhräh, M.D. Fourth edition, thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders Company. 1913. (Med. 8vo, pp. 857. 18s. net.)

[7] *The Dietetic Treatment of Diabetes.* By Major D. B. Basu, I.M.S. (retired). Fourth edition. Allahabad: The Panini Office. 1913. (Cr. 8vo, pp. 70. Rs. 1.8.)

[8] *University College Hospital Medical School: Collected Papers.* Vol. iii.

[9] *Physical Chemistry.* By J. C. Philip, M.A., Ph.D., D.Sc. Second edition. London: Edward Arnold. 1913. (Cr. 8vo, pp. 335; 24 figures. 7s. 6d. net.)

PHILIP, Ph.D., D.Sc., Assistant Professor of Chemistry at the Imperial College of Science. The subject with which it deals has for some years past been of increasing interest to medical men owing to the direction taken by modern therapeutics. As a rule the author illustrates his exposition of the principles of physical chemistry by examples derived from the fields of biology, physiology and medicine, and he assumes on the part of his readers only a very ordinary acquaintance with chemistry and physics. The new edition includes a chapter on electro-motive force.

A considerable number of papers of value to students of tuberculosis in its preventive and other aspects is contained in the report[10] of the proceedings of the first West Indian Intercolonial Tuberculosis Conference, published under the editorship of the honorary secretary of the conference, Dr. G. H. MASSON. Of some of the papers read thereat, as also of the general proceedings, an account was supplied in our issue for June 14th last year. In addition to the remarkably complete account of the disease in Trinidad and Tobago supplied by the honorary secretary himself, papers were read relating to its prevalence in the Windward Islands by Dr. E. F. Hatton; in the Leeward Islands by Dr. M. P. Duke; in Bermuda by Dr. W. E. Tucker; in Jamaica by Dr. G. H. K. Ross; in Martinique by Médecin-Major F. Noc; in British Guiana by Dr. J. E. Godfrey; in Dutch Guiana by Dr. H. O. Hovenkamp; and in Porto Rico by Dr. E. Font y Guillot. Other contributors, in addition to the president of the congress (Dr. H. L. Clare), were Drs. J. F. Hudson, R. Scheult, and Angus Macdonald.

Of the nineteen papers contained in the thirty-eighth volume of the *Transactions of the Edinburgh Obstetrical Society*,[11] fourteen relate to obstetrics proper, one to pediatrics—being an account of fatal jaundice in newborn children, by Dr. John McGibbon—and four to gynaecology, including a discussion on the physiology and pathology of the corpus luteum, by Dr. James Young. Among the obstetrical papers are a careful study of the duration of the interval between insemination and parturition in mammals, by Dr. Berry Hart, and an able review by the president, Dr. J. Haig Ferguson, of various latter-day problems regarding marriage and childbirth; in its course he adduced reasons for holding that, whatever might be said for the theory of Malthus at the time of its production in 1798, it was unsound in an industrial age; in reference to the neglect of breast-feeding, he quoted a saying of Marcus Aurelius to the effect that a woman who has merely borne a child is only half a mother.

The enactment of a new Lunacy Act in 1912, applicable to all India, has necessitated a new edition of BRYSON'S *Indian Lunacy Manual*,[12] the third within four years. The book is divided into five parts: Private patients, public patients, forms, Lunacy Acts, and military lunatics, and is most useful to all medical officers and magistrates in India, in short, to all who have to deal with the insane. The author gives references to official authority for every statement. While nothing essential is omitted, the actual reading matter fills only 24 out of the 93 pages, the rest being occupied by the Act of 1912, which is given in full, and by the numerous and varied forms which have to be filled up by magistrates and surgeons before a lunatic can be sent to an asylum. The list of asylums on the first page contains two geographical errors: Patna is in Bihar, not in Orissa; and Dakka in Bengal, not in Assam. It would have been useful to show which asylums accommodate European patients. Bhawanipur, we believe, admits Europeans only.

Dr. G. H. EDINGTON has described, in a volume entitled *Congenital Occlusions of the Oesophagus and Lesser Bowel*,[13] nine cases illustrating these defects which have come under his personal observation. He adds a brief summary of similar cases recorded in the literature of the subject, and discusses generally the theories which have been advanced to explain their occurrence. He is strongly impressed by Bland-Sutton's conclusion that they usually occur at the seat of embryological events, and are the result of derangement in the normal developmental processes. Tandler's discovery that the lumen of the duodenum is normally obliterated during development will readily explain certain occlusions in this part of the alimentary tract, while if, with Forssner, we accept the view that a similar obliteration may occur abnormally in other parts, such occlusions over a wider area would be explained. The "snaring" by the umbilical ring of those portions of the small intestine which lie for a time normally outside the general peritoneal cavity affords a plausible explanation of certain cases in which a portion of gut is entirely absent, the gut above and below the interruption ending blindly. Fetal peritonitis is held to explain other cases, particularly those in which fibrous bands and adhesions are present. The book is a thesis which Dr. Edington submitted for the Doctorate of Science in the University of Glasgow, and we are pleased to hear that it was successful in its purpose, for we have seldom read a contribution to medical literature which, while limited in interest, is so admirable alike in matter and form.

[10] Proceedings of the First West Indian Intercolonial Tuberculosis Conference, held in Trinidad, March, 1913. Trinidad: Government Printing Office. (D. fcap. 8vo, pp. 155.)

[11] *The Transactions of the Edinburgh Obstetrical Society*. Vol. xxxviii. Session 1912-13. Edinburgh: Oliver and Boyd. (Medium 8vo, pp. 352.)

[12] *The Indian Lunacy Manual for Medical Officers and the General Public*. Compiled by Major R. Bryson, F.R.C.S.E., I.M.S. Third edition, revised by Captain P. Heffernan, I.M.S. Calcutta: Thacker, Spink and Co. 1913. (Roy. 8vo, pp. 93.)

[13] *Congenital Occlusions of the Oesophagus and Lesser Bowel*. By G. H. Edington, M.D., D.Sc. Glasgow: A. Macdougall. 1913. (Demy 8vo, pp. 72; 19 figures.)

MEDICAL AND SURGICAL APPLIANCES.

Perineal Spray or Douche.

MR. HY. GRAEME ANDERSON, F.R.C.S. (London) sends the following description of a perineal spray or douche: It consists of a flexible metal tube made of pewter which can be easily bent into any fixed position. To one end of this tube is attached a small piece of rubber tube carrying a glass nozzle, whilst the other end, which has a stopcock on it, is attached by rubber tubing to the ordinary douche can. The whole apparatus, which can be readily sterilized by boiling, is attached by means of a sliding bracket to one of the lithotomy uprights; saline or antiseptic fluid is run through the apparatus from the douche can, and the flow easily regulated by the stopcock. If the operation is in the region of the anus, the pewter tube is so bent that the glass nozzle points downwards and impinges on the central point of the perineum. If the operation is on the vulva, the nozzle is fixed just below the symphysis pubis. From these points the regulated stream of fluid washes away all blood, gives the surgeon a clear view of the field of operation, and saves an assistant from constantly swabbing the wound, and, to a certain extent, injuring the tissues. The apparatus, which has been found especially useful in operating on haemorrhoids by Whitehead's method, was designed by Mr. Anderson five years ago at the request of the late Sir Frederick Wallis. It has been in use at St. Mark's Hospital since that time, and has given the utmost satisfaction. Care must be taken in bending the pewter tube to do so always at the nozzle end and not near the joint at the bracket. The apparatus is made by Allen and Hanburys, Limited, 48, Wigmore Street, London, W.

Acetylene Lamps for Country Lighting.

To the large number of medical men who live in districts remote from public gas and electricity undertakings, domestic lighting is still an extremely difficult problem. Many country doctors must have compared the oil lamp, to its disadvantage, with the brilliant flame of acetylene, but acetylene lighting has generally involved certain practical difficulties, if not increased danger. These objections seem to be on the way to elimination in a self-contained and portable lamp, generating its own gas, which has been placed on the market by the Dargue Acetylene Gas Company, Limited (57–59, Grey Street, Newcastle-on-Tyne). Every one who knows anything about acetylene is aware that the crucial point is the regulation of the supply of water to the calcium carbide, which generates the gas. In a pamphlet entitled *Country Lighting*, issued by this firm, it is claimed for the Dargue acetylene table lamp that the water drip is automatically regulated "drop by drop" by the gas that is being used. A large number of lamps of decorative design are described, as is also a generator devised to make simple and "fool-proof" the working of the acetylene lights in a motor car. Here, again, the supply of water to the carbide is controlled automatically by the amount of gas consumed in the lamps.

THE German Balneological Society will hold its thirty-fifth congress in Hamburg in March (11th to 16th) under the presidency of Professor Brieger. All communications relative to the congress should be addressed to the General Secretary of the Society, Herr Geheimrat Dr. Brock, Berlin, N.W. 52, Thomasius strasse 24.

BOARD OF EDUCATION.

FIFTH ANNUAL REPORT OF THE MEDICAL OFFICER.

THE fifth annual report[1] of the chief medical officer to the Board of Education relates nominally only to the year 1912, but references are made in it to events of importance occurring up to the autumn of 1913. It is divided into eighteen sections and nine appendices, and contains a certain number of illustrations in addition to many tables and diagrams. Most of the space in the earlier volumes Sir George Newman devoted to discussion of questions of organization and of the aims of medical inspection; in the present report he touches comparatively lightly on these subjects, but has a good deal to say as to some of the results that have already been obtained and as to the lines on which the work should be developed, especially in regard to physically and mentally abnormal children.

It is a considerably larger volume than its predecessors, owing partly to Sir George Newman's practice of emphasizing his meaning by repeating what he has to say in different words, but mainly to the fact that the volume is in effect less a report on the work of 1912 than a series of able monographs on various subjects connected with the medical control of education. It is a method of writing an official report that has its merits, but these are accompanied by the defect that the resulting size of the volume may deter many people who take a certain amount of interest in questions of education from studying its pages with the care they deserve.

General Arrangements.

The school year now ends on March 31st, but the reports of school medical officers relate to the calendar year. In practically all education areas the actual requirements of the Education (Administrative Provisions) Act have been more or less adequately met, and most authorities now are also undertaking work of various kinds ancillary to medical inspection—such as the provision of medical treatment, of schemes of following up, of physical training, or of feeding underfed children. The number of children estimated to have been submitted to routine examination in England and Wales during the code year 1912–13 was 1,323,000, while not fewer than 250,000 other children were specially examined at the request of teachers, or for other reasons. In addition to the examination of "entrants" and "leavers," which is everywhere undertaken, 120 authorities examine also an intermediate group of children between the ages of 8 and 9. In the school year beginning in 1915 this intermediate examination will be compulsory. The term "leavers" now includes all children aged 12 who have not been examined after reaching that age.

The total number of medical officers in the whole school service is now 1,111, as compared with 943 in the previous year, the count including school medical officers and their assistants, whether whole or part time officers. Of the school medical officers, all but 55 are also medical officers for their areas, but even when this is not the case a desirable degree of co-ordination between the two services has generally been secured. Of the assistant medical officers, about one-third are whole-time officers. The service includes 83 women doctors, 61 being whole time; as also 742 school nurses, of whom 397 devote all, and 345 part, of their time to the work. In an increasing number of areas special inquiries are being conducted by various school medical officers. Medical inspection is also being carried out in 122 secondary schools, or about one-eighth of the total number of secondary schools to which Government grants are made. A circular issued last August with reference to Exchequer grants stated that one of the points which would be considered in determining the amount of a grant to the authorities of any individual area would be the adequacy of the salaries paid to their school medical officers and of the clerical assistance with which the medical staff was supplied; the second ground being that it was very important to attract and retain the services of experienced men.

Physical Condition of School Children.

As last year, Sir George Newman lays stress on the principles which should guide school medical officers in the performance of their work. What is required of them is a careful study of each child. They must ever be on the outlook for beginnings of disease, and must think of disease not only as a cause of present suffering and disability, but also as a stunting agency. In childhood the body as a whole, and in all its functions, suffers in sympathy with local conditions, such as in adults would be without effect. On the other hand it responds promptly to treatment, and curative processes set in more rapidly than in the bodies of adults. Only if a school medical officer proves himself a clinician as well as an administrator will his work be educational, timely, and valuable.

Medical inspection, it is pointed out, has now been in progress for some five years on a more or less comparable basis, and school medical officers having acquired a certain amount of experience are in a position to record, tabulate, and interpret their findings with increasing accuracy and definition. The results of their examinations are already comparable on broad lines, but the time has arrived when further steps should be taken in the direction of securing from year to year a record of the results of medical inspection with a view to the comparison of the findings in different areas and as a guide and check on the future policy of each authority. But to gain and obtain permanent value such records should be kept on fairly uniform lines. Hence school medical officers are asked in their official reports in future to adopt three particular forms for tabulating the results of their examinations. The figures in these tables will not be strictly comparable, since personal factors will introduce a certain variability into the statistical units; nevertheless, the tables will be of distinct utility if properly interpreted, and will provide preliminary data for research work and other objects.

Malnutrition.

Statistics are quoted in relation to the general nutrition of the school population of various areas, but little or no comparison between them is possible, because at present there is no absolute standard, nor any single criterion by which a medical officer can guide himself in making a diagnosis of the condition of a child's nutrition. In some areas the percentage of children whose nutrition is stated to be subnormal or bad is less than 2, in others over 30. An ultimate opinion as to the nutrition of a child cannot always be formed by a single examination. In connexion with this point the report states:

> Thus in endeavouring to estimate a child's nutrition or malnutrition we must think not only of bulk and of weight, but of ratio of stature to weight, of the general appearance and "substance" of the body, and of its carriage and bearing; of the firmness of the tissues; of the presence of subcutaneous fat; of the condition and process of development of the muscular system; of the condition of the skin and the redness of the mucous membranes; of the nervous and muscular systems as expressed in listlessness or alertness, apathy or keenness; of the condition of the various systems of the body; and speaking generally of the relative balance and co-ordination of the functions and powers of digestion, absorption, assimilation of food, and of the excretion of waste products.

Pending the establishment of some sort of standard nutrition as the result of long and wide experience, an index of special value—since it is capable of precise mathematical expression—is the relation of weight to height.

Uncleanliness.

Uncleanliness still occupies a large share of the time, thought, and energy of school medical officers in practically every area, but the grosser forms of uncleanliness are now rare as compared with the conditions prevailing five years ago. Experience proves that extirpation of vermin cannot be secured except by a comprehensive policy of inspection, following up, and cleansing, accompanied when necessary by preventive measures, such as the improvement both of personal habits and of environment. The conscience of the parent has still to be aroused; possibly the children now emerging from the schools will carry with them into life a new code of ideas on the subject of personal hygiene. Education cannot be said to have achieved any result worthy of the name as long as children commonly leave school with the lesson of cleanliness unlearnt. The cleansing scheme devised by the London County Council—which, when necessary, brings the police court to bear on the parents of a verminous child—is fully described as a model for other areas. The value

[1] Annual Report for 1912 of the Medical Officer to the Board of Education. 1913. London: His Majesty's Stationery Office. (Med. 8vo, pp. 414. 2s. 6d.) (Cd. 7184.)

of shower, douche, and spray baths is being increasingly recognized, not only as a means of cleansing a dirty child, but as a form of education. Since the provision of twenty shower baths, together with dressing boxes, does not cost more than between £350 and £450, even if an independent bath house be built, and large numbers of children can be bathed in batches each week, the resulting outlay is relatively small.

Adenoids and Enlarged Tonsils.

Reasons are adduced for holding that the treatment, including breathing exercises, employed during the past years, is beginning to produce an effect on the prevalence of adenoids and enlarged tonsils thoughout the whole country; apparently rural children are more liable to this condition than town children. The throats and noses of children should be examined with especial care, not only because adenoids and enlarged tonsils are detrimental to the child itself, but because children thus affected are always potential, and frequently actual, carriers of infectious diseases. During a campaign against diphtheria in Tunbridge Wells, the medical officer found that over 90 per cent. of the carrier cases had enlarged tonsils. In the best hospitals and school clinics children on whose throats operations have been performed are now being detained for twenty-four hours, or at all events provision for their detention, if deemed desirable, is made.

Defective Hearing.

The report indicates that in all probability a great deal of defective hearing is overlooked, for a hearing test is not, as it should be, universally adopted at inspections; and the figures supplied as to the extent of the existence of slight and well-marked defective hearing vary greatly. It is advised that children who cannot hear a forced whisper at 10 ft., should be placed in the front row of a class, and that in the case of those who cannot hear it at more than 5 ft. the question of educating them under special conditions should be considered. The practice is condemned of allowing children with running ears to be treated by nurses without medical supervision or any serious attempt to remove the cause. One medical officer furnishes reasons for believing that in most cases of running ears it is the throat rather than the ear that should receive attention—at all events, in the first instance.

Ringworm.

In most areas increased attention is being given to the control of ringworm—a disease which, though trifling in itself, is of great importance from an educational point of view. No policy of eradication can be successful if it does not aim at the treatment of children of all ages; in some areas treatment is offered to all members of a family aged over 2 years, in order to prevent home reinfection. Only in a few areas would there appear to be any evidence of a decline in the prevalence of this disease. In country areas it is for many reasons—including contact with animals—especially difficult to control.

Defective Vision.

There are curious differences in the returns relating to the vision of school children as tested by Snellen's types at a distance of 20 ft. The percentage of children whose vision was put down as $\frac{6}{9}$ varies between 44 and 88, but use of this method is still hampered in many schools by bad lighting. When a well-lighted distance of 20 ft. cannot be obtained, reading the types at a distance of 10 ft. from a mirror on to which the types have been reflected from a corresponding distance, gives satisfactory results. Judging solely by gross numbers, visual defects appear to be commoner in girls than in boys, but girls outnumber the boys. In both sexes visual defects seem commoner in town than in country children.

Tuberculosis.

Numerous figures regarding the prevalence of tuberculosis are supplied, but the only definite conclusion that can be derived from them is that the number of cases detected at routine examinations has fallen steadily since the commencement of medical inspection. Last year the percentage was 0.56 and in the previous school year 0.59. There are wide variations in the methods used in the diagnosis of this condition. By no local education authority have comprehensive arrangements for the treatment of tuberculous children yet been made, but in a good many areas there are special arrangements for their education. A comprehensive scheme, if introduced, ought to provide for (*a*) early detection of the disease by means of medical inspection, the examination of contacts, etc.; (*b*) treatment of doubtful cases of lung or gland tuberculosis by means of the open-air schools, playground classes, and free meals; (*c*) treatment of pulmonary cases at a sanatorium or day open-air school; (*d*) treatment of surgical cases at a sanatorium school, and (*e*) suitable instruction in hygiene for children and teachers.

Heart Disease and Rheumatism.

The figures supplied as to the existence of heart disorders relate to 136,074 male children and 130,419 female children. Excluding in both instances the cases in which the disorder was merely functional the percentage in the case of boys works out at 0.82, and in the case of girls at 1.09. The underlying cause appears to be undoubtedly rheumatism, though a certain proportion of cases can be traced to the infection of scarlet fever or diphtheria. In this connexion the fact is emphasized that rheumatism in the child usually manifests itself in an altogether different way to that of rheumatism in the adult, many of the symptoms and danger signals being so apparently trivial in character that they are apt to be overlooked. The action of local authorities in this connexion should be mainly preventive, steps being taken to warn parents and to remove all recognized predisposing causes. In established cases following up should be carefully practised, but it is thought that probably the best course is to send affected children to a residential school for a period of prolonged treatment.

Epilepsy.

Although local authorities have been empowered ever since 1899 to make special arrangements for their education, the vast majority of epileptic children do not receive the treatment specially adapted to their condition. It is not known precisely how many epileptic children there are of school age, but a table based upon a special inquiry in twenty-four large areas gives figures in which the proportion of epileptic children on the school registers varies from 1 in 372 to 1 in 2,024.

Owing to various reasons, including intermittency of education, most epileptic children are more or less decidedly backward as judged by school standards, and the tendency is towards progressive mental deterioration. Most school medical officers exclude children whose fits are frequent or occur at school. The best treatment for an epileptic child is commonly a residential school, but at present there are only six such schools with a total accommodation for 488 children, and with one exception they are all under voluntary management. The special features which call for the adoption of particular methods in the training and education of a given epileptic child are, in addition to the occurrence of fits, (*a*) the child's condition immediately subsequent to the actual seizure, (*b*) the effect on the course of the disease and the number of fits exercised by its environment, including the school curriculum, and (*c*) the tendency exhibited towards mental deterioration. It is most desirable that reliable statistics should be available in respect of this disease, in order that more accurate statements may be made as to prognosis and that treatment may be placed on a more scientific basis. It is pointed out that school medical officers have unique facilities for obtaining the necessary information, and they are urged to endeavour to obtain and keep up to date a complete record of the epileptic children within their areas, including an investigation of family histories, the frequency of fits in individual children and their mental progress.

(*To be continued.*)

A BRONZE relief bust of the late Professor Braumann, of Halle, has been placed in the vestibule of the Surgical Clinic of the University. It was unveiled on December 20th, 1913. The bust was designed by the distinguished sculptor, Professor Max Lange, of Leipzig, and the cost was defrayed by funds contributed by the assistants in the clinic.

Nova et Vetera.

EARLY PRINTED MEDICAL BOOKS.

SIR WILLIAM OSLER gave his presidential address at the annual meeting of the Bibliographical Society at 20, Hanover Square, on January 19th. It dealt with "The Earliest Printed Medical Books," and was illustrated by examples of a large number of volumes, some from his own library and others from that of the Royal College of Surgeons of England. All of them presented a curious interest, and some were magnificent specimens of the printer's art.

Sir William Osler began by observing that the earliest books or incunabula possessed a special interest of their own as illustrating the origin and evolution of the art which more than any other had set free the mind of man. There was a growing personal interest in individual books, their family history, genealogy, and wanderings, until safe in the great national or university collections. He had seen in Rome a few years ago a famous book that had just started from its home, where it had lain peacefully for nearly four hundred and fifty years in the very house in which it was printed, the *De Civitate Dei* of St. Augustine, from the press of Sweinheim and Panartz. The leaves of the printed book told man's story as clearly as did the palaeontological record of the earth's strata. An expert in a geological museum would pick out the Lower Silurian fossils from the Devonian, and so, without knowing their authors, the practical historian could assign any dozen books on any subjects to their centuries. To-day in special departments, with rapid progress, the expert could put the knowledge from any printed page into decades. It would not be rash to offer to assign to its decade any important work on pathology published in the last century. Revolutions were more rapidly effected in the arts than in the mind. A new process or a new discovery in practical science made more progress in one decade than a new thought in ten. Harvey's announcement of the circulation of the blood was scarcely accepted by his own generation, but in a few years following Jenner's discovery the whole civilized world was vaccinated. It was not surprising that the invention of printing spread so rapidly that within twenty-five years (to 1480) it had been introduced into 111 places and some 350 printers had been at work. The art of the copyist, however, long survived, and even as late as 1490 the busy hand of Erasmus was used in transcribing copies of works, and in the early years of the sixteenth century his practice was to present his shorter works to his patrons in manuscript.

The fifteenth century possessed in medicine and science no outstanding name, and was marked by no observation or discovery of the first rank. There were then three great centres of medical study—Montpellier, Paris, and the northern Italian universities. Montpellier had reached its zenith, Paris was rapidly rising, and the schools of North Italy were well organized. Medicine was taught at Oxford and Cambridge, but they had not medical faculties as had the old Continental universities. Arabic medicine was supreme. In a work of the period written by Ferrari the name of Avicenna appeared 3,100 times, that of Rhazes 1,280 times, that of Galen 1,160 times, and that of Hippocrates 140 times. The printed medical works before 1480 to which he referred numbered 182, and represented 67 authors. Of these, 6 were classical, 8 Arabic, 23 mediaeval, and 30 belonged to the fifteenth century. The first piece of medical printing was a short Maintz calendar published in 1457; it was based on the belief that certain phases of the moon and conjunctions of the planets were favourable for bleeding. It was very dangerous to bleed a young man during a young moon, or an old man during an old moon. The monks were bled five times in the year for three days running. Astrology died hard, and as late as 1707 a treatise on astrology was submitted to the Paris University, but after consideration refused. Among the early classical books was the *Historia* of Pliny, who was far more outspoken than Molière or Mr. Bernard Shaw in his criticism of the medical profession. Seven editions of it in all were printed up to 1780. There were no editions of Galen or Hippocrates, but two commentaries on their works. Aristotle was more fortunate, and the *De animalibus* of 1476 was a superbly produced book. In 1478 an edition of the works of the botanist Dioscorides was printed. A famous sixth-century codex of this was in existence, and his book was still read and used by collectors in Asia Minor. There was Celsus, too, the only classical medical writer to survive in the modern examination room. He deserved to survive for his shrewd observation and common sense.

The domination of Arabic thought was seen in the fact that there were seven Arabic authors with twenty-one editions on the list. Among them were Avicenna, more venerated probably on account of his composition, his lucid diction, and his logical sequence than for the value of his material; Rhazes, still quoted for his description of small-pox, whose great work, printed in 1486, was the most ponderous of the incunabula, and perhaps the weightiest book known; and Averroes, represented only by a commentator. Despite the Arabic-Greek controversy that raged between Paris and Montpellier, the canon of Avicenna held its own until the seventeenth century. The Arabs contributed nothing to medicine or anatomy, but their heavy hand was still seen in the *British Pharmacopoeia*.

Passing on to mediaeval writers and the school of Salerno, Sir William Osler spoke of the *Regimen Sanitatis* and its author, known as the *Flos Medicinae*, whose book went into two hundred and fifty known editions. Out of this volume came the couplet:

> Joy and Temperance and Repose
> Slam the door on the doctor's nose.

The first printed book on surgery belonged to this period, and it and one other were the only surgical books in the collection. There were the works, too, of the commentators, conciliators, and aggregators. One of the aggregators' compilations was the original and the best of all those dictionaries of treatment called for by doctors who liked to work on penny-in-the-slot lines. There was a larger number of remedies for every symptom in it than in any other book of the sort, and its author was one of the best clock-makers of the day. For some diseases there were five printed columns of the names of medicines. There was the book of Albertus Magnus, whose long life was a triumph of accomplishment. Except for Dioscorides, he was the one great botanist after Theophrastus down to modern times. Michael Scot was another of the mediaeval authors represented, and in the section of his book referring to generation he had many outspoken words as to the choice of a wife. With his views on dreams and their interpretations based on a consideration of the dreamers' complexions, the school of Freud would probably be in sympathy. It was a practice of the time for patients to write out their symptoms and for the professors to write consultations on them which were really essays, and this custom was long kept up by the Italian professors. In the great Lancisi library in Rome there was a long shelf entirely filled with a collection of the "consultations" of the famous anatomist Malpighi, and the library possessed almost as many examples of Lancisi.

Anatomy was not taught and, indeed, had not been taught by the Greeks other than those of the Alexandrian school, and Aristotle and Hippocrates had never seen the human heart, though the former was a good comparative anatomist. The first anatomical treatise was printed in 1478; it had been written in 1326. It was dominated by Arabic influence and inexact, differing strikingly from the descriptions of Galen, which could be used to-day, with few alterations, in a high school.

Sir William Osler went on to refer to twelve small books on plague, one of them a six-leaf pamphlet in which the author lamented that the disease was so easy to write about, but so difficult to treat, only God Almighty knowing whence it came. The first monograph on diseases of children appeared in 1472; a monograph on the diseases of the eye was published in 1474, a book on diseases in 1477, and in 1472 a volume with a eugenic title and full of excellent common sense. It was reprinted five times before 1480.

Sir William Osler concluded by expressing the opinion that at first printing did little to revive medicine, and it was only after two generations that Greek influence began to oust Arabian conceptions.

THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

NEED FOR LEGISLATION.

AT the meeting of the Medico-Legal Society held on January 20th, the discussion was resumed upon the paper read by Dr. ROBERT ARMSTRONG-JONES on November 25th, 1913, entitled "The Rational Treatment of Incipient Insanity, and the Urgent Need for Legislation" (JOURNAL, January 17th, p. 154).

Dr. ARMSTRONG-JONES had given notice of a resolution which the President, Earl RUSSELL, stated, as modified at a meeting of the Council, read as follows:

> That this meeting of the Medico-Legal Society is of opinion that the early treatment of incipient insanity without certification will be advantageous, and that the Council be authorized to take such steps as they may think necessary to support legislation to effect this object.

Dr. HUBERT BOND (Lunacy Commissioner) said he was in entire sympathy with efforts to secure the application of treatment in the best sense of the word, namely, treatment over and above detention and care, at the earliest possible moment in all cases of incipient insanity. Its urgent desirability ought indeed to be axiomatic. It was not, however, fair, he thought, to lay all the chief blame on the law as it at present stands for the fact that there is so often delay in the inception of such treatment. It was scarcely correct, for instance, to say that the law required the poor to pass through the workhouse or the Poor Law infirmary on their way to obtain treatment in the asylum. That, unfortunately, was the procedure adopted owing to the exigencies of circumstances in London and certain other big centres, but it was the exception rather than the custom as respected the greater number of asylums in the kingdom, and he ventured to think that those who framed the law never contemplated that Section 20 of the Act of 1890 either would or should ever be applied in the wholesale manner in which it was in certain centres. It was, however, a regrettable fact that, while persons might voluntarily submit themselves for mental treatment—"voluntary boarders," as they were termed, in "hospitals" registered and in "houses" licensed under the Lunacy Acts—there was no such salutary provision as respected county and borough asylums, and as the number of "registered hospitals" for the insane was unfortunately so few, it was obvious that they could only cope with an exceedingly small proportion of those whose pecuniary means were insufficient to materially contribute to their own maintenance. That similar facilities to receive voluntary boarders should be granted to county and borough asylums was a need he constantly experienced when he was an asylum superintendent. He saw no insuperable difficulty in extending them to "single care." The lack of such facilities, he predicted, would be acutely felt at the Maudsley Hospital, for although the establishment had been christened a hospital, it would, as the law now stands, be in the position of a county asylum. If the legislation he suggested should be obtained, a considerable number of the difficulties with which the Maudsley Hospital would be faced—if it was to fulfil the mission intended by its founder—would vanish. If it could be found practicable to associate similar opportunities with "single care," many of the existing instances of illegal charge would disappear. For many years (Section 15 of the amending Act of 1866) asylums in Scotland, corresponding to county and borough asylums in England and Wales, had possessed such opportunities, and these had been extended under Section 59 of the Mental Deficiency and Lunacy (Scotland) Act, 1913, and no serious difficulties ought to be anticipated in securing the same for England and Wales. But in the promotion of such legislation it should be remembered that the first of these sections contained the restricting words "whose mental condition is not such as to render it legal to grant certificates of insanity in his case," and to carefully avoid any such hampering proviso, or where there was an entire absence in the sections under which voluntary boarders were admitted into registered hospitals and licensed houses in this country. The proposed change in the law could not yield its full measure of benefit until by further legislation or a Local Government Board order guardians were empowered to pay the whole or a part of the maintenance charges of these voluntary borders, and to obtain the 4s. grant for such of them whose mental condition was found to be such that they could have been certified as of unsound mind. The blame for other hindrances to the prompt treatment of incipient insanity was due rather to the not unnatural dislike of publicity than to defects in the law and to the unwillingness on the part of the patients' relatives to acknowledge as a fact that which existed. That, in his opinion, constituted the chief obstacle, and it became their duty, as practical men and women, to endeavour to remove those legal formalities which, rightly or wrongly, in the eyes of the relatives spelt publicity and stigma, without endangering the interests of the patients or public safety. Whatever were the outcome of their deliberations they ought to keep steadily before them on the one hand the best course to pursue, considered rigidly in relation to the promotion of mental recovery, and, on the other hand, the course which would secure the maximum amount of privacy. In the comparatively short time he had been a Commissioner he had seen a sufficient number of cases placed in circumstances which could only be explained by the view that privacy rather than treatment had been the primary consideration, to compel him to feel strongly that great caution should mark their course. He was equally strongly of opinion that, if they were ever to secure promptness in treatment and an abolition of methods all deplored, legislation was both desirable and necessary, as well with a view to the removal of some of the obnoxious formalities as in deference to the sentiments of relatives and those of the patients themselves. Prior to the passage of the Lunacy Act of 1890 a person of unsound mind could be sent for treatment upon the order of a responsible relative or friend, backed by the certificates of two medical practitioners, with but little publicity or formality, and he believed he was correct in saying that in all the years during which the previous Acts were in force not a single instance of either *mala fides* or improper collusion was ever proved, even in the course of the relentless probing at the hands of the Dillwyn Committee of Inquiry. The demand for the change in procedure did not come from either the legal or the medical profession, or from the Commissioners or any other corporate body. Its source was public sentiment, deeply stirred by the publicity given to certain misapprehended cases into which a semblance of wrongful interference with personal liberty had been introduced, and the fact must be faced that the sentiments which were bound up in the expression "liberty of the subject" were cherished with undiminished tenacity. It had been suggested that there should be established "houses" or "homes" intermediate between the patient's home and the asylum, including in the latter term, he presumed, registered hospitals and licensed houses. He had very little faith in the efficacy of such solution, for he believed that, no matter by what euphemism they were called, it could only be a question of time before their purpose was known, and those who were now unwilling to send a relative in the early stages of his illness to one of the admirably conducted hospitals or licensed houses which already existed would be equally unwilling to send him to one of the houses proposed to be created, owing to the fact that the desire for privacy was allowed to dominate that for treatment. It had also been suggested that an official register should be kept of persons willing and accustomed to take patients into "single care" under their charge, and whose houses had been inspected, and that it should be lawful to send for a limited period (six months) patients in the early stages of their illness to these persons, without the formalities of a reception order, provided that the patient's doctor supplied a modified form of certificate. Such an informal list might be said to exist already in the office of the Commissioners. The latter were always ready to supply the names and addresses of such persons. This, omitting the institution of a list of registered "holders," expressed, if he rightly interpreted Section 13 of the 1866 Act, the position as it at present existed in Scotland. In applying it to this country, some appeared to wish precisely to imitate it; others favoured the addition of notification to the Commissioners, as was provided for in the bill of 1905 to amend the English Lunacy Acts. He thought they ought to keep in mind the fact that those six months were of vital importance to the patient; also that in such an illness as

mental disorder, in which the patient might have no effective voice, it was open to serious question whether treatment in the house of a private individual ought to be free from all supervision. Another difficulty was the understanding as to what constituted incipient or unconfirmed insanity. It might be taken as certain that the relatives of patients would exert strong efforts to bring every case under the operation of any such statute, and he could not but fear that by limiting the statute's operation to "single care" it would be a direct invitation to relatives to send the patient invariably, in the first instance, to private houses for treatment. He could not give "single care" whole-hearted support in cases requiring much active treatment, save in exceptionally favourable circumstances. Careful consideration should be given, in framing any such statute, to the question whether its application could not be extended to other than "single care." If some extension of its operation was not included, how could it assist the Maudsley Hospital? Such a suggestion was made in the sixty-third report of the Commissioners in Lunacy (1909) in order to meet certain of the difficulties which, the Commissioners foresaw, the hospital would have to face. He was very sanguine that if legislation could be secured whereby this suggestion, as well as the proposal with regard to voluntary boarders, could be carried into effect, the Maudsley Hospital would be freed from its legal disabilities and the way paved for it to fulfil the great place the profession were confident awaited it. Lastly, he would advocate the establishment of (at least) out-patient departments in connexion with public asylums, not at those institutions, but at the nearest general hospital. He felt sure of its practicability in relation to the majority of asylums, and that any such scheme could not fail to exert a powerful influence in the promotion of prompt treatment in the early stages of insanity.

Dr. JAMES CARSWELL gave a description of the system in operation in Scotland. In Glasgow, in the hospital under the parish council, the observation wards contained 50 beds—25 for men and 25 for females, through which were passed last year over 700 patients; 736 patients were admitted, 313 were discharged "recovered," 122 discharged improved, 254 were discharged to the asylum, and 51 died. It was a great advantage that the area treated was the Poor Law area and one body constituted both the Poor Law authority and the lunacy authority. It was one of the disadvantages that existed in the London district that there were not only two separate statutory spheres, but two separate administrative spheres, having in some respects conflicting interests. In addition, Glasgow had the advantage that one medical man was appointed whose duty it was to select the patients who were to enter the observation wards and those who were to go to the asylum, and also who was responsible for the treatment in the observation wards. The system worked perfectly, and it had been carried into effect without any alteration of the law. Everybody who had relatives afflicted with mental disorder was anxious that they should be treated in the observation wards. There had been over 6,000 patients since the wards were opened in 1904, and there had never been a single question involving legal responsibility. On the contrary, it had been necessary to urge people to send their relatives to the asylum. He did not see the trouble as to "single care" anticipated by Dr. Bond. He had never been in favour of the reception-house idea. It required that all persons should be brought there, and that there should be a process of selection, and some would be sent to an asylum. It would be a waste of public money to provide these beds, which would often be empty. Selection of the patient could be made in his own home under the supervision of a visiting mental staff, provided it was efficient.

Dr. DEVON said the difficulty arose very largely from the fact that there was not in England the closeness of association between the physicians and the public that there was in Scotland. The asylum was not the proper place in which to treat cases of early insanity; the patients never recovered from the stigma it cast upon them.

Dr. F. S. TOOGOOD said he had been superintendent of one or more infirmaries in the metropolis for something like twenty-five years, and he quite appreciated that there must be the closest connexion between the officials who administered the law and the friends of patients. In Lewisham the infirmary for the last twenty years had acted practically as a receiving house for the Poor Law district. Any lunatic or person of unsound mind who could not provide sufficient means either to go into single care or a private asylum went into the infirmary; about 99 per cent. were taken in under Section 20. The relieving officer visited the patient, and in a rough and ready way decided whether he was a lunatic or not. He gave a detention order under Section 20, and the person was admitted. No stigma rested upon the patients—they were simply infirmary patients. Their friends asked that they should be admitted, and there was very little objection on the part of the patients. The results of the system were exceedingly good. The Maudsley Hospital would inevitably be associated in the minds of the public with lunacy. He would prefer that in every general hospital there should be mental wards, and he believed this to be quite possible. There would then be no stigma, because the patient would simply be an ordinary hospital patient. If he wanted to keep a patient longer than the regulations laid down he kept him. He told the friends he had not recovered, and he found there was no objection on their part. He then approached the patient, who sometimes objected, but he generally got him to stop, and after a short time he was satisfied to remain.

Mr. P. T. BLACKWELL, barrister, urged the desirability of not going too fast in altering the lunacy laws. He gave instances which had come within his knowledge where people were improperly put under restraint.

Sir WILLIAM COLLINS said that the resolution was somewhat colourless in its character, and was therefore more likely to command unanimity. He did not see any objection to it. He was in favour of getting rid of certification as far as possible. Once the official paraphernalia were brought to these new organizations they would be considered as asylums. Anything that could get rid of the notion held by the public with regard to lunacy and asylums would be a good thing. Insanity should be looked upon as "unhealth of the mind," and he saw no reason why it should not be dealt with by precisely the same methods as disease of the body. Early treatment was what was needed.

Dr. M. FINUCANE thought it was desirable that there should be ample safeguards in the interest of the patients.

Dr. EWART said he strongly objected to certification in the case of patients going to the Maudsley Hospital. If simple notification were sufficient it would be a hospital of hope, otherwise it would come to be considered as an asylum.

Dr. HENRY RAYNER said that the objection of private patients to certification was so great that they would resort to almost any means of avoiding it, and their friends would often run the risk of doing harm rather than have their happiness damaged thereby. If the resolution were adopted he would like to add that there should be provision that the persons treating the cases should be properly qualified, and that the places set apart for treatment should be of a satisfactory character.

Mr. H. F. KEENE (Clerk to the Asylums Committee) said that Dr. Maudsley's proposition to the county council was that it should establish a hospital for the early treatment of insanity, and that the cases to be treated were to be recent and acute cases of lunacy. He had no doubt that if the power was given to the council to receive incipient cases and voluntary boarders, it would be very useful in such a place as the Maudsley Hospital. The council proposed to have an out-patients' department, and although it was said that it would not be able to pay for it out of the rates, it was thought the difficulty might be got over. No doubt doctors would give their services; medicines might, perhaps, be paid for out of grants made by Dr. Maudsley, or, perhaps, by the patients themselves. The county council had no power to take in patients without certification. He was very pleased that the society was proposing to get the Lunacy Act altered, because it certainly was a defect that voluntary boarders could not be admitted into county asylums. If that power were obtained, the Maudsley Hospital would have sufficient equipment to do the work which its donor desired.

Dr. ARMSTRONG-JONES having replied, the motion was unanimously agreed to.

LITERARY NOTES.

SIR CHARLES TUPPER, formerly Prime Minister of Canada, will shortly issue a record of his public work under the title *Recollections of Sixty Years*. The book will be published by Messrs. Cassell. Sir Charles Tupper was born in 1821, and is therefore now in his 93rd year. He is a Doctor of Medicine of the University of Edinburgh, and is one of the many men who have left the profession which they originally intended to follow for a political career. He has held nearly all the highest offices in the Government of the Dominion.

Messrs. Harrison and Sons (45, Pall Mall, S.W.) write in regard to a book published by them for Mr. Whiteford under the title *An Operating Theatre in Private Practice*, and reviewed in the BRITISH MEDICAL JOURNAL of July 13th, 1912, p. 89, to state that in response to requests a supplement, containing a plan and two photographs, has now been prepared. This is supplied gratis to purchasers of the book, to whom, so far as their names and addresses can be ascertained, copies have been sent. If those purchasers, who have not received the supplement, will kindly communicate with Messrs. Harrison and Sons, they will be pleased to remedy the omission.

We regret to announce the death, on December 12th, 1913, at the age of 71, of Dr. Carl von Klein, of Chicago, a distinguished Egyptian scholar, who had a work on the Ebers papyrus nearly ready for publication.

Messrs. Williams and Norgate announce a new issue, the tenth, of the *Horne University Library of Modern Knowledge*. Among the new volumes will be *Prehistoric Britain*, in which Dr. Robert Munro summarizes the evidence of remains unearthed up to the recent finding of the Piltdown skull.

Among the most interesting contents of the January number of *Bedrock* are articles on the significance of the discovery at Piltdown by Professor Arthur Keith and on the palæolithic flint implements of Suffolk by Mr. J. Reid Moir. Dr. Archdall Reid discusses biological terms with much acuteness. Sir Oliver Lodge is made the object of a good deal of heavy jocularity on the part of writers who cannot forgive him for having said to the British Association that science has not completely solved the riddle of the universe. To them there seems to be no riddle; unlike Bishop Berkeley they say that all is matter, to which Sir Oliver Lodge might with equal cogency and perhaps more philosophy retort that 'tis no matter what they say.

L'Hygiène for December contains several interesting articles and a number of well-executed illustrations. There is an account of Professor Fernand Widal, whose name is well known in connexion with his researches on agglutination in typhoid fever and on uræmia in its various forms. An excellent portrait accompanies the letterpress. Dr. Horace Bianchon writes on alcoholism. He holds that, although it would be impossible to prevent the use of wine or cider, which in moderate quantities he thinks useful, spirituous liquors and particularly absinthe—called by Lucien Jacquet a poisoned poison—should be suppressed. Dr. J. Laumonier contributes an interesting article on toxicomaniacs. The use of narcotic drugs is so widespread in France and is causing so much mischief that a prompt remedy is required. He says it is not without reason that M. André Ibels compares the narcomaniac to a person suffering from a contagious disease, since at least two-thirds of the victims of the drug habit have become so by persuasion and imitation. Mental contagion is all the more formidable here since it is often exerted by means of an article or book. A deplorable example of this "contagion" was reported in the *Daily Mail* of January 7th, where it was stated that a medical man was found dying of opium poisoning with a copy of De Quincey's *Confessions of an English Opium Eater* open by his side. That book, with its glowing descriptions of the visions inspired by what the author calls "just, subtle and all conquering opium," must have had a bad effect on many gifted men besides Francis Thompson. Professor Cadiot, of Alfort, writes on tuberculosis in domesticated carnivora. Dogs and cats catch tuberculosis from man, and when the animals have open lesions may in turn infect human beings. Dr. Lucien Nass writes of double personality. Dr. Henry Meurisse gives an account of the researches of Professor Bosc, of Montpellier, who thinks that cancer is caused by protozoa. These organisms live, generally speaking, in water, particularly stagnant waters, and are carried about by insects and animals, cold-blooded and warm-blooded alike. The eating of vegetables, raw fruit, insufficiently cooked fish, shellfish, and such things explains the frequency of cancer in the digestive passages. Obviously, therefore, the way to avert the disease is to take care to prevent the introduction of the protozoa into our tissues. Scrupulous attention must be paid to the cleanliness of the skin; every lesion of a natural orifice which may be in contact with dust or water charged with unwholesome spores should at once be treated; precautions should be taken against stings, and the contact of animals infected with protozoa should be avoided. Only perfectly cooked food should be eaten, and the hygiene of the dwelling should be beyond reproach. Living in damp basements is a great source of danger.

Smollett has given in *Roderick Random* an amusing account of his examination at the College of Surgeons for the position of surgeon's mate, an ordeal which was too much for poor Goldsmith. He sailed in the expedition to Carthagena under Sir Charles Ogle in 1740. Carlyle, in his *Life of Frederick the Great*, describing the scene, says:

> Most obscure among the other items in that Armada of Sir Chaloner just taking leave of England; most obscure of the items then, but now most noticeable or almost alone noticeable is a young surgeon's mate—one Tobias Smollett; looking over the waters there and the fading coast, not without thoughts. A proud, soft-hearted, though somewhat stern visage, caustic and indignant young gentleman. Apt to be caustic in speech having sorrows of his own under lock and key on this and subsequent occasions. Excellent Tobias; he has, little as he hopes it, something considerable by way of mission in this Expedition and in this Universe generally. Mission to take Portraiture of English Seamanhood with the due grimness due fidelity: and convey the same to remote generations before it vanish. Courage my young brave Tobias. Through endless sorrows, contradictions, toils and confusion, you will do your errand in some measure; and that will be something.

On his return Smollett tried to practise as a doctor, but without success. As his biographer, David Hannay, says:

> Without a degree and with no London connexion a legitimate medical practice was not to be obtained; and even if there had been no honesty in the way Smollett was a great deal too proud, quarrelsome, and scornful for the trade of quack, which many eighteenth century notabilities found so lucrative.

The degree was got from Marischal College, Aberdeen, in 1750, and by way of establishing a reputation as a medical man Smollett published a scientific treatise on the external use of water. The water he wrote about was that of Bath, and his object in the treatise was apparently to prove that any other water would do as well. This was hardly the way to make himself popular. So he had to turn to literature for a living. He savagely caricatured Mark Akenside in *Peregrine Pickle*, and lost no opportunity of girding at the medical profession. Yet he was proud of being a member of it, for on the wall of the bedroom in which he died at Leghorn hung his medical diploma framed as if he wished to show that he was a real doctor. He revised Smellie's *Treatise on Midwifery* and did other drudgery of the same kind. He was acquainted with John Hunter, Pitcairne, and other leaders of the profession in his day. In the spring of 1771 he wrote to John Hunter:

> With respect to myself I have nothing to say, but that if I can prevail upon my wife to execute my last will, you shall receive my poor carcas in a box after I am dead to be placed among your rarities. I am already so dry and emaciated that I may pass for an Egyptian mummy without any other preparation than some pitch and painted linen.

He died on September 17th, 1771, aged 51, worn out by overwork, debt, and anxiety. Smollett saw the possibilities of Cannes as a health resort, and may be regarded as a medical pioneer of the Riviera.

The *British Review* for January has something for every taste—a discussion on our army system, by Major Redway; a disquisition on the writing of Irish history, by Padraic Colum; a reading of the signs of the times in Portugal, by V. de Bragança Cunha; a budget of paradoxes on the silence of journalists, by Mr. G. K. Chesterton; a sensible article contending that in Canada care should be taken to preserve "perfect harmony between two great races which, if alien in speech and in creed, were and are closely allied by ties of a common loyalty, a common destiny, and the anticipations of a common and glorious future." Poetry, criticisms, and fiction also help to make up an interesting number.

British Medical Journal.

SATURDAY, JANUARY 24TH, 1914.

IMMUNITY AGAINST CARBOHYDRATES.

HITHERTO it has been accepted that no substances beyond a certain class of complicated proteins are capable of acting as antigens—that is to say, endowed with the property of producing antibodies when they are injected into an animal—though it has been admitted that certain carbohydrates may have the property in a modified degree. To Weinland must be given the credit of having first demonstrated, in 1906, that the subcutaneous injection of cane-sugar solutions is capable of eliciting in the serum of young dogs a ferment (invertin) with the property of splitting up cane sugar. The observation did not attract much attention at the time, and the discovery is generally attributed to Abderhalden, who claimed that he could obtain evidences of invertin very quickly after the intraperitoneal introduction of small doses of cane sugar into adult as well as young dogs. Others have failed to corroborate this claim.

Kumagai[1] has recently taken up the subject, but has not confirmed Abderhalden's statements, though he has succeeded in producing invertin in the serum by repeated injections at longer intervals. In dogs so treated the serum has the power of breaking up cane sugar; but this observation alone is only a small part of his research, and the experimental conclusions he has drawn are not only of the highest importance in themselves, but are striking contributions to the elucidation of the chemical mechanism of immunity in general. It may be said at once that he has produced a true immunity, not to substances of an exceedingly complicated chemical structure but to substances of a much more simple nature.

He found that when mixtures of the blood serum of treated dogs and solutions of cane sugar were examined in a polarimeter, after being for varying times in the incubator, a surprising degree of levo-rotation was produced. The mere splitting up of the cane sugar was insufficient to account for such a marked rotation. A certain amount of rotation was undoubtedly due to the levulose fraction, but the dextrose fraction must also have been transformed into levulose and into a more powerful levo-rotatory substance still, for when the serum was added to dextrose alone it was acted upon so that it rotated to the left more powerfully than levulose alone. But the action did not stop there. If the mixtures of serum and sugar were left for a few days a new phenomenon appeared, for the levo-rotation was converted into a dextro-rotation. Dextrose is thus first converted into a left rotatory substance, and then into a right rotatory substance, and the same dextro-rotatory substance arises from levulose. Thus we have the production of a new and hitherto unrecognized disaccharide.

[1] Kumagai, Antigenwirkung der Kohlenhydrate, *Biochem. Zeitschr.*, November 28th, 1913.

Now this "immune" serum produced by the injection of cane sugar has other properties as well. Not only does it split up cane sugar, but it has an effect on lactose, which it converts into a left rotatory substance, and it also acts on galactose, increasing its dextro-rotatory effect. It has no appreciable action on maltose, but on starch the effects are very interesting. The diastatic action of normal serum is immeasurably increased by sugar immunization. The immune serum, when fresh, has only the same degree of diastatic action as the normal serum, but after being left at room temperature for a few hours the action is enormously accentuated. Probably this is due to a pro-amylase, which has to be "activated" before mixture with the starch. Soluble starch is converted into dextrin and dextrose. Both normal and immune serum, when added to saline solutions of starch, bring about the formation of a precipitate, but this precipitate is obtained with much greater dilutions of the latter than of the former serum. This precipitate is a combination of starch and albumin. The clear supernatant fluid no longer gives the iodine reaction, but if the mixture be heated the precipitate becomes dissolved, and the mixture then gives the blue colour. It would thus seem that the starch is to a certain extent, owing to its combination with the albumin, protected against the action of the ferment. If the mixture with the precipitate is allowed to stand for a longer time, the iodine reaction is no longer obtained on heating.

In order to prove that there is here a true immunity reaction certain other points have to be noticed. The first is that the "immune" serum, when it has remained for some time at room temperature, loses its power of acting on sugar and the degradation products of sugar, but regains that power if there be now added a small quantity of fresh guinea-pig's serum. If the serum be heated to 55° to 57° C. for half an hour the action on sugar is very considerably weakened, whilst the action on dextrose and levulose is quite lost, but again the original power is restored if fresh normal serum be added. The amylase action of normal serum is not impaired though the serum be left standing at room temperature for three or four days, or be heated to 57° for half an hour, but in the case of the "immune" serum the starch-fermenting property disappears or is extremely weakened in those circumstances. Here again the power of the immune serum can be restored—that is, it can be "reactivated" by the addition of normal serum. Thus, as regards the properties of being "inactivated" and "reactivated," this immune serum falls into line with the more common immune serums.

Secondly, in addition to this production of active immunity, it is possible to produce passive immunity to cane sugar. If the serum of animals treated by injections of cane sugar be inoculated into fresh animals, not necessarily even of the same species, the serum of the latter acquires this same property of splitting up sugar and its products. And the serum of these latter passively immunized animals, when injected into a further set, calls forth in them in turn a sugar ferment action. It is not merely a question of a certain amount of invertin being transferred from the one to the other, because it would be exceedingly dilute, whereas the ferment action of the serum of the passively immunized is as strong as that of the actively immunized animals. Thus, the immune serum of the actively immunized animal, when injected into a fresh animal, must in some way act as a producer or activator of ferments in the passively immunized animal. Passive immunity is also produced by the injection of heated

inactivated immune serum or of such serum desiccated and pulverized.

The injection into animals of starch, maltose, or dextrose, beyond increasing to a variable degree the normal diastatic action of serum, was found to have no other antigenic effect. No antibodies were observed. On the other hand, the injection of levulose, lactose, or galactose, in addition to increasing the amylase, brought about the production of invertin, changing dextrose into levulose, and carrying this on to the formation of the new disaccharide.

Thus the first phase in the production of immunity to cane sugar and lactose consists in the splitting up of these substances, an occurrence which may take place in the mucous membrane of the small intestine. Levulose and galactose are probably both converted into the same new product which brings about the immunity reaction. There are, therefore, enzymes for cane sugar and lactose, then an enzyme which transforms dextrose and galactose into levulose, and a final enzyme that converts this into a disaccharide. The mechanism is not such a simple affair as the so-called protective or guardian ferments of Abderhalden, for the reaction following the introduction of the sugars is directed not merely against them alone but also against certain associated substances: thus the injection of cane sugar gives a serum capable of splitting up lactose, and the injection of levulose is followed by the power of splitting up cane sugar and lactose. The ferments also act on the fraction products of the sugars introduced. Still further, they call forth increased amylase, which acts neither on the introduced disaccharides nor on their fraction products, but on another product built up secondarily from the latter.

The sugar immunity is in a certain sense a general reaction, but it is specific in so far as the reactions are confined to a certain group of substances, just as the action of immune serums in general may be said to be confined to a group of substances chemically allied to the antigen.

A PLACE IN THE SUN.

GREAT BRITAIN hardly sees enough of the sun to be able to indulge as a matter of routine in heliotherapy, the treatment of disease by sun baths; indeed, has not a modern German historian named our country *Nebelland*, the land of fogs? But Treitschke was an Anglophobe, and wrote with bias; a mere Britisher may be pardoned, perhaps, if he claims that sunlight cures are not impossible of performance even in England. The literature of the subject is not small; the use of sun baths in the treatment of tuberculous peritonitis has recently been advocated by Cantilena.[1] He describes various details of the ways in which a number of authors have prescribed the daily doses of insolation, or exposure to the direct rays of the sun, and concludes that for Bologna, where he works, hard and fast rules are not necessary, apparatus and special institutions are undesirable. In fact, only two things are needful—the patient in bed and a place for him in the sun; common sense will supply the rest. Only a part of the body needs to be exposed to the sun's rays; the head should be adequately protected; the bath may last for hours, and be given once a day or more often. Cantilena details two cases in which the method proved successful. The first patient was a child of 3, coming under observation in October with tuberculous peritonitis and an amount of ascites that seriously impeded respiration. The first line of treatment adopted was laparotomy; much clear fluid escaped from the peritoneal cavity, and numerous tubercles were seen on the peritoneum. A month later the abdomen was distended with fluid once more, and paracentesis was necessary; a quantity of greenish-yellow fluid was withdrawn. A month later, and again a month after that, paracentesis of the abdomen was urgently called for and was performed, and on this last occasion the Talma-Morison operation was done, though only a small piece of the omentum was found free enough for employment. After this there seemed to be some improvement, and the ascitic fluid reaccumulated less rapidly during the next six weeks. It was now the end of February; heliotherapy was begun, with rapid improvement, and after seventeen sun baths there was no evidence of ascites at all. The child left hospital cured in May; a year later she was still in good health.

The second patient, a girl of 11, had had abdominal pains and headaches for eight months, and more recently abdominal swelling and diarrhoea. This was in August: there was free fluid in the peritoneal cavity. Heliotherapy was applied without delay, and in five weeks the ascitic fluid was completely absorbed after twenty-three exposures to the sun's rays. For the first fortnight the girl was feverish, the temperature reaching 99.3° F.; the diarrhoea disappeared after a fortnight's treatment. Cantilena draws particular attention to the rapidity with which heliotherapy brought about the absorption of the ascitic fluid in his two cases, adding that neither patient was made to perspire by the treatment, so that there can be no question of excessive loss of fluid by the skin. In what way the insolation brings about a cure he does not attempt to explain, and he emphasizes the fact that an arrest of the tuberculous process resulted in each case, without, so far as he could judge, the production of any intraperitoneal fibrosis.

Cantilena, as has just been said, finds no difficulty in deciding the dose in which sun baths should be administered, and has nothing to say about their dangers. Not so, however, the Swiss Delachaux, who writes[2] of heliotherapy and its use at high altitudes. He would have the patient first spend a few days in getting acclimatized to the altitude, and then begin the sun baths by exposing a part of the legs to the sun's rays, for from a few seconds to a few minutes only, two or three times in the first day. The exposures are increased, in both extent and duration, gradually from day to day. The difficulty in heliotherapy lies in the beginning of the cure; the care of a medical expert is required, for grave inconveniences may result from over-exposure to the curative powers of the sun—fever, palpitations, insomnia, and very painful erythema of the skin. The air bath, according to Delachaux, is a valuable auxiliary to heliotherapy, and is taken by going naked about the room for a few minutes at a time with the windows wide open; in cloudy weather such an air-bath should take the place of the sun-bath. The treatment, of course, is suitable only for chronic cases of disease, and should last for months, speaking in a general way. An unexpected result to which it always leads is a considerable increase in the volume of the muscles, even when the patient is kept at rest. Delachaux is enthusiastic in his estimate and enumeration of the benefits derived from sun-bath treatment. The weight at first may go down, but soon steadily increases; the nervous system is soothed, irritable and neurotic

[1] *La Pediatria*, Naples, 1913, xxi, 340.

[2] *Revue Suisse de Médecine*, Berne, 1913, xiii, 1025.

patients become quieted: digestion improves, constipation is cured; the victims of chronic or recurrent coryza, tonsillitis, or bronchitis rapidly become hardened and free from these complaints in as short a time as four or six weeks. Patients with heart disease, varicose veins, lymphatism, scrofula, chronic rheumatism, gout—all these, and more besides—may look to gain great benefit from well designed courses of heliotherapy, assisted, if need be, by the simultaneous application of other special methods of treatment. It is particularly in scrofula, tuberculosis, and pre-tuberculosis that the full therapeutic value of sun baths and high altitudes makes itself realized.

THE UNIONIST PARTY AND NATIONAL INSURANCE.

IT will be remembered that on November 13th last at Norwich, at the conference of the Unionist party (SUPPLEMENT, November 22nd, 1913, p. 452), Mr. Bonar Law, speaking of the National Insurance Act, declared that if the opportunity were given to his party it would appoint a committee, as far as possible non political, impartial, and competent, to go into the whole subject, not only into the working but into the whole principles of the Act, and to advise whether it would not be possible and in the interest of the nation to turn it into a voluntary system. At the same conference Mr. Worthington Evans, M.P., moved the following resolution, which was agreed to: "That this conference is of opinion that while there are undoubted benefits to be derived from a truly national scheme of insurance, the hardships and loss of individual liberty arising from the present Acts are such that an inquiry should at once be instituted with a view of adopting a voluntary scheme administered by the approved societies and aided by at least equal subsidies from the State." There is no doubt that these proceedings caused forebodings to many members of the medical profession, who feared that they were again to become the plaything of political parties, for, whatever may be said in favour of a remodelling of the insurance system on voluntary lines, it is certain that such a course of action would mean a complete upset of the present arrangements with a renewal of the anxieties of the past two years. It is satisfactory, therefore, to have the assurance given in the letter from Mr. Godfrey Locker-Lampson, M.P., which is published in this week's SUPPLEMENT, p. 37. Speaking for himself, but with all the weight which naturally attaches to one who is understood to be deep in the counsels of his party on this matter, he states his definite opinion that the Unionist party is not committed to a reversal of the compulsory principle, and that such a plan will not form part of the policy of the Unionist party unless, and until, an impartial examination has resulted in a recommendation that such a change ought to take place. It is further to be noted, first, that even the consideration of the subject as a matter of practical politics depends on the accession of the Unionist party to power; secondly, that, as practically the whole House of Commons was in favour of compulsion, the strongest evidence against that system would undoubtedly be required to induce any party to propose its abandonment; and, finally, that every day which passes under the present system helps to consolidate the many vested interests which are now connected with it. There seems no cause, therefore, for any undue anxiety that those who have just begun to adapt themselves to the present system are likely to be disturbed, and, with Mr. Locker-Lampson's assurance, we may even hope that when the proposed investigation takes place party advantage will be only a minor factor in the considerations leading to any proposed change.

THE NEW INSURANCE CONTRACTS IN GERMANY.

THE *Muenchener medizinische Wochenschrift* for January 14th, 1914, reports that a number of new contracts have been signed by the doctors and the insurance societies in many localities, and that, for the present at all events, the differences between the contracting parties have been brought to an end. In Düsseldorf the medical men who had agreed to come to the town to take service in opposition to the local medical profession have withdrawn, and the basis of the contracts with the local doctors is that of the draft contract to which the profession had agreed pending ratification by the Leipzig League. This draft contract had been provisionally accepted by the insurance societies, but they afterwards took exception to the decision of the Leipzig League that no contracts should be signed until satisfactory terms were obtained for the whole empire; as a result the societies invited outside practitioners to undertake the work. The new contracts affecting the works' and local insurance societies and the friendly societies of the city of Stettin all include the principle of free choice of doctor. The newly formed local societies have agreed to employ the local profession only, and the doctors who had been tempted to go to Stettin to take up insurance work in opposition to the wishes of the local profession have been given three days' notice to quit. It must be remembered, however, that these gentlemen are to receive compensation for the loss of their new posts according to the agreement made in Berlin (Section XI). In Brandenburg the contracts are to run for a term of three years, instead of the ten years suggested or fixed by the agreement, and the capitation fee, which is to include extras, is fixed at 6 marks. Free choice of doctor will be allowed. The doctors of Niederbarnim have agreed to continue to treat the insured persons on the old terms pending the acceptance of new contracts, but it is provided that the new contracts shall be retrospective as from January 1st. This, of course, only affects the rate of remuneration but may be of importance to the doctors. This expedient has been adopted because paragraph 370 of the Imperial Insurance Order, by which the societies could be relieved from the obligation to supply medical attendance on condition that they paid over a sum of money in lieu thereof, had already been carried into effect, so that what might be described as a state of war obtained in the town. Temporary peace now reigns, and it remains to be seen whether the terms of the new contracts will be acceptable to the local profession. A five-year contract has been accepted in Liegnitz, including the free choice of doctor, while, as has already been reported in the BRITISH MEDICAL JOURNAL (January 17th, 1914, p. 163), terms deemed satisfactory are included in the contracts for Munich. It will be noticed that several of the new contracts are for shorter periods than ten years, while free choice of doctor figures largely in them. Difficulty appears to have been experienced already in some districts, and a definite settlement may be delayed for some time. In Breslau agreement has been arrived at in regard to the scale of fees and to the method of dealing with the "imported doctors," but not in regard to the system of service. The chairman, a representative of the Government, suggested as a sort of compromise that free choice of doctor should be tried for one year, but the insurance societies would not listen to this. The negotiations have therefore been broken off, and further attempts to secure mutual agreement will be made at a later date when someone has worked out another scheme of compromise. A deadlock appears to have been brought about at Elbing. The position created in these places is unfavourably affected by the attitude which the journal of the German insurance societies has adopted towards the doctors. It does not hesitate to jeer at what it considers to be the failure of the bluffing policy of the Leipzig League.

THE PHYSIOLOGICAL ANTAGONISM OF ADRENALIN AND SALVARSAN.

In the interesting experimental and clinical data which Dr. Milian has collected under the above title[1] a new chapter in salvarsan therapy has been opened up. He quotes the experiments of Marschalko and Vezprémi, Girauld and Duret, Ehrlich himself, and Professor Ullmann, in support of his contention that salvarsan is non-toxic, in the sense that it is not neurotropic, that is, specifically injurious to brain or nervous tissue. The first named of these investigators claim that there is no histological evidence of cell damage, in animal experiments or in *post-mortem* investigations on the brain of man, either in the nature of inflammatory change, or of softening due to degeneration. Ehrlich, who with atoxyl had produced clinical proof of auditory nerve damage in the mouse, was unable to do so with salvarsan, and Ullmann's experiments definitely proved from the chemical side that the liver was the most arsenophilic organ in the body, and that the brain hardly bound any arsenic at all. Meyer and Gottlieb proved that toxic doses of arsenic produced a profound fall of blood pressure by paralysis of the contractility of the mesenteric vessels, and drew the conclusion that salvarsan might produce similar effects, varying in severity with the resistance of the individual and the nature of the arsenical salt. The most profound effects were exhibited after injection of the acid salt. Camus found reduction of 20 mm. pressure in the mercurial manometer in a dog, which also showed *post-mortem* evidence of vaso-dilatation in renal congestion and pulmonary oedema. The depressor effect of the sodium salt is less, so that if the effect of the first be estimated at 80 to 100, that of the second is only 10 to 100. For neo-salvarsan the figure 5 to 100 is suggested. The individual resistance to the depressor action varies with two arbitrary factors. According to Milian, the one is a chemical blood change, in the nature of a deficient alkalinity, which favours development of the acid salvarsan, and the other a physiological hypotonicity of the mesenteric vessels. His arguments for the first hypothesis are based on the fact that the intravenous injection of weak soda solutions in cases of salvarsan poisoning has proved very efficacious in certain cases, and his proof of the latter assumption rests on the fact that certain symptoms—such as headache, rigors, anorexia, and cyanosis—were definitely prevented by prophylactic injections of adrenalin given by him both subcutaneously and intramuscularly a few minutes before the salvarsan was introduced. The cases which he reports are sufficiently conclusive, and all question of coincidence can be confidently eliminated. The individuals with this hypersusceptible response, whether chemical or physiological, are termed by him ectasophilic. As to the method of administering adrenalin he found the Clin preparation the best, as it is the most stable product. Its strength is 1 in 1.000, and 1 to 2 c.cm. were injected, according as the patient was known to be highly or only slightly susceptible. Injections should be made intramuscularly, although they are painful. The "adrenalin tremble," which frequently follows, is usually counteracted by the salvarsan injection, as is also the extreme pallor, which may lead the operator to think that his patient is about to faint. The subjective sensations of the patients are, however, always satisfactory, and in one notable case the patient refused to continue the salvarsan injections unless adrenalin were first administered.

[1] *Bulletin de derm. et de syph.*, No. 8, November, 1913.

THE EARLY RECOGNITION OF CANCER.

In estimating the success that attends any particular surgical or other measure for the cure of cancer it is rare to find a reference to the fact that a selection of cases has in fact been made. Statistics of results are incomplete and misleading unless the percentage of cases in which a cure is claimed is referred to the number actually seen and selected from. The ratio of operable to inoperable cases varies not only with the thoroughness of the technique of the operator, but also with the extent of progress of the disease. But, though modern operative treatment is extending its scope, and the percentage of inoperable cases should thereby be diminishing, yet it is the general experience that very many patients seek advice only when the disease has progressed far beyond the reach of any operative measure. Two ideas common in the popular mind are responsible for such a condition of affairs: It is believed that cancer is from the first an extremely painful malady, and the disease is almost universally regarded as being incurable at any stage. Attempts have been made from time to time to instruct certain sections of the population in the warning signs of cancer, but to meet with any great measure of success greater publicity is necessary. We are glad to see that the Health Committee of the borough of Portsmouth is tackling the matter in a commendable fashion. They have issued a public notice on the subject drawn up by Dr. A. Mearns Fraser, the medical officer of health of Portsmouth. Though the notice may be capable of improvement in certain respects, as a first attempt of the kind it deserves high commendation. It is sufficiently instructive to be of great assistance in bringing home the need for prompt treatment, and in dissipating the fatalistic ideas so commonly held; similar notices issued by medical officers of health throughout the country might do a great deal of good. Even members of the medical profession sometimes hesitate to recognize and tell the patients the dire significance of the early signs of malignant growth; there is sometimes a tendency to yield to the patient's dread of operation, and to await developments, with a consequent risk of allowing the disease to pass beyond the operative stage; or the doctor himself may not be fully familiar with the advances that surgical treatment has made within comparatively recent years, for, despite the frequency of cancer, few medical men in practice see many cases during the course of a year. General and special hospitals might use to greater advantage the resources at their disposal. Last year a course of clinical lectures to practitioners was delivered at the Cancer Hospital, Brompton; these lectures were well attended, and most of them were published in our columns. Another course will commence early next month, and from the wealth of material at the disposal of the hospital it ought to be possible to learn much in a comparatively short time.

COMMEMORATION OF ROGER BACON.

To most of us Roger Bacon is probably more a legendary figure than a man whose blood, in Gratiano's phrase, was warm within, in the thirteenth century. The seven hundredth anniversary of his birth falls this year, and the occasion is to be commemorated in Oxford in June or July next. A statue by Mr. Hope Pinker will be set up in the Museum of Natural History. Addresses by a number of distinguished persons will be delivered and a memorial volume containing contributions by various eminent specialists will be published. An invitation to take part in the celebration and a copy of the memorial volume will be sent to all contributors of one guinea and upwards; subscriptions should be sent to Colonel Hime, 20, West Park Road, Kew. Besides this, an editorial committee, consisting of Messrs. J. P. Gilson of the British Museum, F. Madan of the Bodleian Library, Oxford, Professor A. G. Little, with M. François Picavet as a foreign corresponding member, has been appointed to take the necessary steps for the issue of an edition of Roger Bacon's works, subjected to thorough critical revision and arranged as far as possible in proper chronological order, as soon as the necessary funds have been collected. M. Picavet states in the *Revue Philosophique* for January that the first volume, containing Bacon's unpublished

treatise and his commentary on the *Secret and Secrets* of the pseudo-Aristotle is in the press. The second will probably contain medical treatises, and will be edited by Dr. Withington and Professor Little. Among the contents will be the famous treatise *De Retardandis senectutis accidentibus et de sensibus conservandis*, which it will be interesting to compare with Descartes's observations on the means of prolonging human life in his *Discours de la Méthode*. Other volumes will contain the whole of the *Opus Tertium*, fragments of which were published in 1859, 1909, and 1912, the *Questiones* on the physics and metaphysics of Aristotle and the *De Plantis*; the *Communia Mathematicae*, and perhaps the *Computus Naturalium*. Following these will come critical editions of the *Opus Majus* and the *Opus Minus*, of which only fragments exist; the *De Naturis Metallorum*, and the *Tractatus Trium Verborum*. The manuscripts scattered about in different countries will be carefully collated by competent scholars. To carry this scheme to fulfilment it will be necessary, says M. Picavet, to found a society bearing the name of Roger Bacon; he hopes that the establishment of such a society may be one of the outcomes of the Oxford celebration. The committee already numbers the names of the Chancellors of Oxford, Cambridge, Glasgow, and Edinburgh; the Vice-Chancellors of the Universities of Oxford, Birmingham, and Leeds; the Principal of the University of London, and the Archbishop of York, among its members; it has representatives in France, Germany, Italy, and the United States. There appears, therefore, to be a good prospect of the appearance of a complete edition of the works of Roger Bacon, if only funds for the purpose are forthcoming.

DAY ILLUMINATION IN SCHOOLS.

A FEW years ago an eminent architect is reported to have stated that on the matter of day illumination in schools nothing remained to be said. If that be the case, the Illuminating Engineering Society has lately been wasting much time in vain discussion, for the subject occupied both the December and January meetings. As a fact, there await solution some rather formidable problems relating to day illumination generally, and that of schools in particular. It is rather disconcerting to be told that practically no rules exist for determining what width, height, and arrangement of glass area will afford adequate illumination for any given size of room, and that there is no recognized criterion in existence for adequacy of natural illumination in a given case, whether for school or library, office or dwelling-house, factory or shop. Mr. Percy J. Waldram, F.S.I., who opened the recent discussion, pointed out that the required day illumination must differ with the purpose for which the building is used. For the majority of handicrafts a low-angle light—the angle being the one made by the window with the horizontal of the table surface—is of minor importance, although in a schoolroom, for the illumination of wall diagrams and blackboards, it may be invaluable. Even within the same walls different kinds of day illumination may be necessary. The operating theatre of a hospital, for instance, may be perfectly illuminated by a large lantern light, which would be all but intolerable for the wards. Mr. Waldram contended that in a schoolroom the high angle light which was essential for reading and writing had a most depressing effect when it was the sole source of illumination. Supplementary lighting by window glass at a lower angle, inefficient and uneconomical though it might appear to be, had a beneficial effect on the mind, which was of no small educational value. Schoolroom windows which excluded the high angle midsummer sun while admitting what there was of the low angle winter sun, must not necessarily be despised by school architects on account of their poor return in desk illumination. Similarly in the hospital ward, a comparatively low window sill, admitting the early morning and late afternoon sun, might be better for the patient than an arrangement which gave an excellent vertical illumination for doctor and nurse. Mr. Waldram did not even insist upon the rule that a minimum of sky must be visible from every point of a classroom, and his figures for desk illumination appeared to be rather low. The standing regulations of the Board of Education, in his opinion, were most excellent in many respects, but he thought the sweeping denunciation of the skylight uncalled for. The skylight had an enormous lighting value, and often was the means of rectifying defects in the remainder of the lighting which would otherwise be so atrocious as to involve the closing of the school. He complained also that the regulations did not differentiate between skylights and lanterns or high dormers, and considered that the condemnation of front lights was open to question, especially in cases where the sill was fairly high and the aspect not sunny. The subsequent discussion was mainly occupied with technical matters, but one or two architects showed a disposition to question the authoritative value of photometry on that side of architecture which has to do with the provision of daylight for interiors.

FRANCIS WILLIS AND GEORGE III.

DURING the mental illness of George III in 1801 there appeared the well-known epigram:

> The King receives three doctors daily—
> Willis, Heberden, and Baillie:
> Three distinguished clever men—
> Baillie, Willis, Heberden;
> Doubtful which more sure to kill is
> Baillie, Heberden, or Willis.

Matthew Baillie, one of the pioneers of scientific pathology and a nephew of the Hunters, needs no sacred bard. Heberden was the son of the famous physician of that name—the trusted friend and doctor of Samuel Johnson. Willis (Robert Darling) was the fifth and youngest son of Francis Willis, who had successfully treated the King in his first attack in 1788. Robert Darling Willis was the grandfather of John Willis Clark, known to his friends as "J," for many years Registrary of the University of Cambridge, a delightful memoir of whom, by Mr. A. E. Shipley, Master of Christ's College, appeared a few months ago.[1] In that book there is an interesting account of Francis Willis. Born in 1718, he was educated at Oxford, and eventually became Fellow and Vice-Principal of Brasenose College. He took Holy Orders, but he was always more of a doctor than a divine, and studied medicine with enthusiasm. After his marriage he established himself at Dunston, in Lincolnshire, his wife's county. There he is said to have practised medicine, without being duly "qualified," taking lunatics belonging to the upper classes under his care. In 1759 his own university tried to regularize the situation by conferring on him the degrees of M.B. and M.D. This act of grace did not, however, absolve him in the eyes of the medical fraternity, who probably felt that he had found his way into the profession by a side door. Hence, when, at the end of 1788, he was called in to treat George III during his second attack of insanity, he met with great opposition from the other physicians. But he soon gained the confidence of the royal patient by insisting on gentle methods of treatment and especially giving him greater liberty than he had before been allowed. When called in to the King, Willis was about 70 years of age, but seemed to be exempt from the infirmities of old age. Hannah More describes him as "the very image of simplicity, quite a good, plain, old-fashioned country parson," and Fanny Burney says he was "a man of ten thousand; open, honest, dauntless, light-hearted, innocent,

[1] *"J.": A Memoir of John Willis Clark.* Registrary of the University of Cambridge and sometime Fellow of Trinity College. By A. E. Shipley. London: Smith, Elder and Co. 1913. (Med. 8vo, 372 pp.; 5 illustrations. 10s. 6d. net.)

and high-minded." Willis's position was very responsible, as the political importance of the King's illness was great. While the Whigs wished the Regent—the Prince of Wales—to exercise the prerogatives of a reigning monarch, the existing Ministry sought to limit and restrict his powers. Both Houses appointed Committees to examine the doctors from time to time as to the progress of the malady. Willis, who always professed to be sure of the King's recovery, and was high in the estimation of the Tory party, inspired the administration with confidence in the policy they had adopted. Complaints were made that Willis allowed the King to read *King Lear*—a play the doctor confessed he was unacquainted with! and to shave himself with an ordinary razor. There is, says Mr. Shipley, a traditional anecdote connected with this razor scene, strongly illustrative, if true, of Willis's character. Burke asked him, it is said, what he would have done if the King had become suddenly violent while the razor was in his hands. Having placed the candles between them, Willis replied, "There, sir, by the eye! I should have looked at him thus, sir—thus!" Whereupon Burke instantaneously averted his head and made no reply. Among the gossip of the day was a similar story respecting the effect of Willis's tone on Sheridan when about to examine him in Committee. "Pray, sir, before you begin," said Willis, "be so good as to snuff the candles, that we may see clear, for I always like to see the face of the man I am speaking to." Sheridan was so confounded at this speech of the doctor that he could not get on in his examination, and for once in his life he was posed. In the practical knowledge of insanity, and the management of the insane, Willis was unquestionably in advance of his associates; but he was dictatorial in speech, and often overstepped the limits of professional etiquette. He was rewarded by Parliament with a pension of £1,500 for twenty-one years. He was shortly after employed to treat the Queen of Portugal, but she proved to be incurable. For this service he received £20,000.

NÉLATON'S PROBE.

COLUMBUS'S demonstration of the way in which an egg can be made to stand on one end is fascinating by its very simplicity. Nélaton's invention of his probe was almost equally simple, though a good deal of the fame which it brought to its author was due to its association with the successful treatment of Garibaldi's wound. Other surgeons had failed to find the bullet embedded in the hero's heel. Nélaton came with a probe specially made, saw, and conquered. Was the probe really his own invention? In the matter of surgical instruments it is often not altogether easy to determine the true begetter. In an interesting note contributed to the *Chronique Médicale* of September 1st, 1913, Dr. A. Cordès, of Geneva, says that in 1864, when he was serving as dresser under Nélaton, he passed some of his time in the neighbouring clinic, that of Depaul, studying midwifery—a combination of practice appalling to those trained in the ritual of asepsis. Mathieu, the elder, who was then chief assistant to the well-known surgical instrument maker Charrière, was often in Depaul's wards, and he told the young men there that Nélaton, when called to Garibaldi, had gone to Charrière to ask him to supply a small instrument suitable for the detection of a bullet at the bottom of a wound. At that time bullets were made of lead. Charrière passed the order on to Mathieu, who, from the fact that lead leaves a blue stain on porcelain not covered with enamel, conceived the idea of making a small globe of that material. This he fixed on a rod, and the simple apparatus was complete. The invention of the probe was therefore due to Mathieu. We give this story for what it is worth, but it is not intrinsically improbable. It is at least equally probable that Nélaton knew exactly what was wanted, and asked the instrument maker to give concrete shape to his idea.

NAPOLEON'S WOUNDS.

IT is generally said that Napoleon was wounded only once, when a bullet struck him on the ankle at Ratisbon. This supposed fact has even been made the pretext for hints that he took care not to expose himself to the risks of the battlefield. He gave many proofs, however, of personal courage, and is said to have had nineteen horses killed under him in battle, although like Ney he seemed to bear a charmed life, and used to say that the bullet had not been cast that would kill him. According to Dr. Gabriel Ravarit, author of an interesting article which appeared in *Aesculape* for October, 1913, Napoleon was wounded three times. At Toulon, in 1793, he was struck on the head by a spent ball, and a few minutes later he was wounded by an English gunner above the left knee. In Egypt, at Damanhour, he was kicked on the leg by a horse during a skirmish with the enemy, and Larrey, fearing complications, begged him to be carried on a litter like other wounded men. Napoleon, however, insisted on sharing the fatigues of the march. What made Larrey anxious, no doubt, was the fact that Napoleon in his youth had a very unhealthy appearance; indeed, there is reason to believe that he had in him the germs of tuberculosis. At Ratisbon, on May 2nd, Napoleon was struck on the right side of the ankle by a bullet; he was on foot, studying the position of the enemy at the time, and the shock threw him to the ground. Had he been hit a trifle higher amputation would probably have been necessary. He mounted his horse, however, although the contusion was very painful, in order that his soldiers might not know that anything had happened. It was not Larrey, as is generally stated, who dressed him, but Yvan, surgeon to the imperial household. In a week he was able to dispense with further surgical aid. Naturally he had many narrow escapes.

HOUSING AND TOWN PLANNING.

FOR the third year in succession the Local Government Board in England has issued a Memorandum[1] showing the results that have been achieved through the operations of the various Housing Acts. A principal duty of local authorities under the Housing, Town Planning, etc., Act, 1909, is the inspection of houses, the inspection being carried out in conformity with regulations made by the Local Government Board. The Board appears to be satisfied that considerable progress has been made in most districts in this work of inspection, and in some districts it is stated that an inspection of all houses has been completed. Where a house is let at a rental not exceeding £40 in London, of £26 in urban districts with a population of 50,000, and elsewhere of £16, there is an implied contract, if the tenancy has begun since December 3rd, 1909, the date of the passing of the Act, that the house shall be in every respect reasonably fit for human habitation. Up to the end of March, 1913, notices had been sent to the owners that 113,623 houses did not fulfil this implied contract, and as regards 85,021 of these houses they were put into a fit state. The procedure with respect to the closing of uninhabitable houses was altered by the Act of 1909. These orders are now made by the local authority and not as formerly by the local justices. An owner who is aggrieved at the making of a Closing Order may appeal to the Local Government Board. During the three complete years ending March 31st, 1913, in the whole of England and Wales 127,565 houses were represented to the local authorities as uninhabitable, and it says a good deal for the reasonable manner in which the Housing Acts are being administered that appeals were left to the Board to be decided as regards only 418 houses. The appeals were upheld on technical grounds

[1] Memorandum (No. 3) of the Local Government Board relative to the operation of the Housing, Town Planning, etc., Act, 1909 and the earlier Housing Acts as amended by that Act. Price 1½d. (Cd. 7205.)

with respect to 17 houses, and after inquiry with respect to 62, and with regard to 106 houses they were still under consideration when the Memorandum was issued. When we come to inquire what has happened to these 127,565 uninhabitable houses we find that nearly 60,000 were either demolished, or closed, or made fit for habitation, so that there must still be over 40,000 houses in occupation which have been represented as uninhabitable. Of this large number about 25,000 are in rural districts. The reason of the continued occupation is no doubt the absence of available houses in the districts concerned. The activity of local authorities in providing new houses is increasing, but it is far below what is necessary to supply the deficiency revealed by the figures given in the Memorandum. Since the passing of the Act loans have been sanctioned and are under the consideration of the Board with respect to 7,713 houses, of which number only 1,427 are situated in rural districts. In addition to these houses a great many—the number is not stated—are being or will be provided by town-planning schemes, though these are mostly in urban areas, only seven rural district councils having concerned themselves with such schemes.

THE HONORARY SECRETARY OF THE BRIGHTON MEETING.

At a meeting of the Brighton Division of the British Medical Association on January 16th, at the New Road Lecture Hall, there was an interesting sequel to the Annual Meeting of the Association held in Brighton last July in the form of a pleasing ceremony, when Dr. L. A. Parry, the Local Honorary Secretary of the meeting, was presented by the members of the Division with a handsome case of cutlery in recognition of his valuable services. The presentation was made by Dr. W. Ainslie Hollis, the President of the Association, who paid a high tribute to the work done by Dr. Parry in organizing the arrangements for the meeting. Dr. Parry, he said, acted as his navigating lieutenant, and to him the scientific and social success of the meeting was in a great measure due. His unfailing courtesy and tact during all the many months spent in making the various arrangements was a source of great gratification to his colleagues. He trusted that Dr. Parry would use the gift of the members of the Division at many happy dinner parties. Dr. Parry, who was very warmly received, said he scarcely knew how to find words to thank the members for their handsome gift and for the kindly feeling which it expressed towards him. When he undertook the post of local honorary secretary he did not know the amount of work it would entail, but, in spite of the labour involved, he enjoyed every bit of it. He felt, however, that the success of such a meeting could not have been due to any one man. He had had the loyal aid and co-operation of all his colleagues, without which it would have been impossible for him to have carried out the work. He should always look back on the week of the annual meeting as one of the happiest of his life, and would value the beautiful gift made to him that afternoon as one of his most treasured possessions.

A LISTER INSTITUTE FOR EDINBURGH.

We understand that arrangements have nearly been completed for the establishment, as a memorial to Lord Lister in Edinburgh, of a Lister Institute. It is proposed that the institute, which will be devoted mainly to research in bacteriology and pathology, shall work in connexion with the University, but that it shall be managed by an independent board consisting of representatives of the Royal Colleges of Physicians and Surgeons, and of the University, and probably of the Carnegie trustees who have recently become interested in the laboratories of the Royal College of Physicians. The Institute will, as has been said, be devoted chiefly to research work under the direction of the professors of bacteriology and pathology, but it is intended that certain facilities for teaching shall also be provided. It would appear to be the intention that eventually all pathological work, both in research and teaching, in Edinburgh shall be under the general supervision of the professor of pathology, who, in addition to holding that chair, and taking an appropriate share in the conduct of the new Institute, will act as honorary pathologist to the Royal Infirmary. Working in conjunction with him will be a large staff both of teachers and research workers, but the details have not yet, we believe, been completed, and as the Lister Institute has to be built there will, of course, be ample time to perfect all arrangements.

LORD STRATHCONA AND MOUNT ROYAL.

Lord Strathcona and Mount Royal—the second part of the title commemorates his long connexion with Montreal—took a deep interest in higher education and fully recognized the position which medical education should hold in any university system. His benefactions to McGill University, Montreal, which exceeded a quarter of a million, included £30,000 for the Medical Faculty. In 1887, on the occasion of Queen Victoria's first jubilee, he was associated with Lord Mountstephen in building and endowing the Royal Victoria Hospital, Montreal, which is the university hospital, and when it was seriously damaged by fire he spent some £50,000 in reinstating it. He gave £25,000 to Marischal College, Aberdeen, and endowed a chair of agriculture in Aberdeen University. He established and endowed the Royal Victoria College for Women at Montreal, and made many other benefactions to hospitals and for the promotion of higher education. His attitude towards these departments of knowledge was recognized not only by the honours he received from the Crown, but also by many universities, for he was an honorary graduate of Oxford, Cambridge, Manchester, Aberdeen, Glasgow, Dublin, Laval (Quebec), Yale, Ottawa, and Toronto. He was Chancellor of McGill University, Montreal, and of the University of Aberdeen. He was also a Fellow of the Royal Society and an honorary member of the British Medical Association; this last distinction was conferred upon him in recognition of the lively interest he showed in the annual meeting of the British Medical Association in Montreal in 1897, the first held outside the United Kingdom. Though he had even then reached an advanced age, he made a special journey to Montreal in order personally to extend hospitality to members of the Association visiting the city on that occasion. He was born at Forres, at the foot of the Cluny Hills of Elginshire, in, as he believed, 1820, though many of his friends thought that this understated his age by two years.

The usual monthly meeting of the Executive Committee of the Medical Sickness and Accident Society was held at 429, Strand, W.C., on January 16th, Dr. F. J. Allan in the chair. The accounts presented showed a decrease in the number and amount of sickness claims during the month of December. The new proposals received were above those for the same month in the preceding year; on the whole year the numbers are about the same. The annual statement of accounts was presented and discussed, and showed a satisfactory improvement in the sickness branch of the society. At this meeting special attention was paid to those claimants who are certified as being permanently incapacitated. This list is a long one, and the amount paid away in 1913 to these cases was over £5,000. Prospectus and all information from the Secretary, Mr. Bertram Sutton, 33, Chancery Lane, W.C.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Scottish Poor Law Medical Officers' Association.

The annual meeting of the Scottish Poor Law Medical Officers' Association took place at St. Enoch Hotel on January 16th, Dr. William Cullen, Vice-Chairman, presiding.

Annual Report.

The report of the Committee stated that the number of appointments vacant during the year had been much above the average, and had led to a considerable amount of correspondence. In all but a few cases the association's secretary had been supplied with particulars by the outgoing medical officer, and no one of the latter had, so far as he was aware, been dismissed unjustly. Many of the appointments had been vacant for several months owing to the scarcity of young medical men and the large salaries now obtainable by assistants. Until the Government came to the assistance of the smaller parish councils this difficulty was likely to continue, and the inhabitants of outlying small parishes would suffer accordingly. There was gratifying evidence that parish councils now realized that the association had some influence with the profession, for two of them had appealed to its secretary for assistance in procuring medical officers. This he had granted them, but at the same time had informed them that it would not be of much value unless an income of not less than £250 to £300 a year could be guaranteed. In one case a parish council had threatened him with an action in the law courts because, owing to the information given by him, a candidate for an appointment offered by it had withdrawn his application. This information was to the effect that there was no reason why the candidate should not accept the appointment except that, owing to the sparsity of the population and the fact that most of it was banded together in a medical aid association, private practice would be very small, and the income derivable from all sources not satisfactory. The threat, however, never materialized. There had been a good deal of correspondence with the Glasgow corporation in respect of its refusal to pay 2s. 6d. to Poor Law medical officers for notification of cases of tuberculosis, on the ground that in issuing a circular placing the amount at 2s. 6d. instead of 1s., as under the Infectious Diseases Act, the Local Government Board had exceeded its powers. The corporation, however, had at length agreed to pay the fee of 2s. 6d. so long as the circular remained in force. This was satisfactory, since at one time it looked as if the association would have to appeal to the law courts. The parish council mentioned in the report for 1912 as having refused to pay for attendance on paupers had ultimately given way without the medical officer concerned having to take legal action, thanks in large measure to the advice of the association and the steps adopted by it. The report also mentioned that considerable correspondence had taken place with a number of members in regard to the National Insurance Act. Some of them thought that its effects would be beneficial, others the reverse. It was as yet too soon to be sure how districts in which the population was small and scattered would be affected. Dr. F. Stewart Campbell had been appointed treasurer in place of the late Dr. Martin, whose lamented death had occurred with startling suddenness. He would be greatly missed, as he had been the faithful treasurer of the association ever since its formation. In the association's name the secretary had conveyed to his family an expression of sympathy. Dr. McKee and Dr. Muir had been appointed to act as delegates, with power to take any action required in furthering the progress of the Poor Law Officers' Superannuation Bill, at present before Parliament as a private bill. In regard to the financial position of the association, its total income for the year 1913, including the sum brought over from the previous year, was £213 2s. 7d., and its total expenditure £31 3s. 8d., thus leaving a balance in hand of £181 18s. 11d. The report concluded with an appeal to members of the Poor Law service to join the association. It had lost a good many members by death, and others having resigned their appointments owing to age had ceased to be eligible for continuation of their membership. If the association was to continue to exercise an influence for good its numbers must be kept up.

Election of Officers.

The report having been adopted, it was unanimously resolved that the existing office-bearers — Dr. Gilbert Campbell (Chairman), Dr. F. Stewart Campbell (Treasurer), and Dr. W. L. Muir (Secretary) — should be re-elected for a further term of office. The meeting terminated with the usual vote of thanks to the office-bearers.

The annual subscription to the association (5s.) is now due, and should be sent to Dr. Muir at 1, Seton Terrace, Glasgow, or to Dr. Campbell, 19, Westercraigs, Glasgow.

Records of Cases of Tuberculosis.

In a circular letter addressed to the clerks of local authorities, sanatoriums, and hospital committees the Local Government Board in Scotland has set out forms of record for cases of tuberculosis treated in institutions approved by the Board in terms of Section 16 of the Insurance Act, 1911. Before granting its approval to sanatoriums, hospitals, infirmaries, and other institutions for the treatment of tuberculosis, the Board has stipulated that at least the following records shall be kept as regards each case under treatment:

(*a*) *Admission records*, showing local and general condition of patient on admission, with diagram of the chest in cases of pulmonary tuberculosis; history of the illness of the patient and of his family; description of his environment at home; character of his employment.

(*b*) *Temperature charts*, upon which, in addition to temperature and pulse and respiration rates, there are recorded the weights of patients at weekly intervals, and details as to any special forms of treatment—for example, graduated labour, injection of tuberculin, etc.

(*c*) *A history* of the case while in the institution, written at weekly or monthly intervals, and kept with such accuracy and completeness as are usual in the hospitals to which medical schools are attached.

In granting approval to dispensaries the minimum requirements include (*a*) above, and case records showing the general and local condition of the patient at each visit to the dispensary, and embodying notes of the weight and details of any special treatment, such as the injection of tuberculin.

The Board has put out the schedules now, in response to suggestions received by it from a number of hospital medical officers and others concerned, to the effect that convenience, simplicity, and uniformity would be promoted by the issue of model schedules. The schedules issued refer to pulmonary and non-pulmonary tuberculosis respectively. One form is for the entry of particulars on the admission of the patient, another for the record of temperature, and a third for a continued record in hospital. As it has been represented to the Board that benefit would accrue were the medical officer in charge of an institution to issue a discharge note to the medical officer of health or tuberculosis officer upon the discharge of each patient from an institution, a schedule has been prepared for this purpose.

Fertility of Marriages in Scotland.

With the appearance of the third and final volume of the Report on the Census of Scotland taken in 1911,[1] it is possible to arrive at some conclusions regarding the fertility of marriage in that country: indeed, the greater part of the volume is given up to this important subject. It is the first time in the history of census-taking in Scotland that questions regarding the fertility of marriage have been asked, and the information received occupies in the form of abstracts 187 pages of the volume. The original tables, however, if printed in full, would have extended to some thousands of printed pages; and, of course, exigencies of space forbade. It is satisfactory to know that these tables will be preserved in the Registrar-General's department, and that they will be available for consultation.

Proportion of Unfruitful Marriages.

One of the most important matters dealt with in the report is the proportion of unfruitful marriages in Scotland (p. xxvii). In this connexion 239,943 marriages in

[1] Census of Scotland, 1911. Report on the Twelfth Decennial Census of Scotland, vol. iii. London, 1913.

which the wife was of child-bearing age at the time of marriage and continued in the married state till the end of her child-bearing period of life were available for consideration. Of these marriages, 27,478 were childless, giving a proportion of 11.5 per cent. But in this matter a variable entered in, and had to be dealt with—namely, the age of the wife at marriage. Of the women who married at the age of 17, only 2.6 were childless, and of those who married at 18, only 2.3 were unfruitful; but from that age onward to 44 the percentage of childless marriages steadily increased. Thus, when the woman was 25 at marriage, the percentage of childless unions was 6.7; when she was 30, it was 12.8; when she was 35, it was 24.7; when she was 37, it was 34.0; when she was 39, it was 45.5; when she was 40, it was 57.1; and when she was 44, it was 86.0 per cent.

Average Number of Children.

The average number of children per marriage resulting from marriages of completed fertility, as they are termed in the report, is dealt with. The number was 5.49, but it also varied within wide limits with the age of the wife at marriage. The families of the women who married at 17 years of age contained almost exactly 9 children, whilst the average number of children per marriage when the wives entered the state of matrimony at the age of 20 was 7.86; it was 5.66 when they married at 25, 3.89 when they married at 30, 2.29 when they married at 35, 0.86 when they married at 40, and 0.22 when they postponed their nuptials till the age of 44.

Decline of Relative Fertility.

But by far the most important matter dealt with is the relative fertility of marriages which took place at various periods covering nearly half a century. Every one interested in the falling birth-rate (and who is not?) will turn to the figures supplied here with immediate attention. The report says that the figures "afford ample evidence of a continuous drop in the fertility of marriage"; and the table (p. xxxiv), which shows the number of children per 100 marriages for a few selected ages of the wife at marriage, is so much to the point that it may usefully be reproduced.

Period when Marriage took Place.	Age of Wife at Marriage.									
	21	23	25	27	29	31	33	35	37	39
1864 and before...	818	740	673	580	574	483	400	382	388	175
1865-69	800	738	651	565	500	439	322	310	200	217
1870-74	782	704	624	582	498	433	338	287	193	216
1875-79	738	659	594	539	464	429	368	287	211	144
1880-84	710	639	568	505	437	371	326	277	202	162
1885-89	700	597	523	460	419	359	315	252	192	148
1890-94	—	—	503	437	375	330	277	230	159	127
1895-99	—	—	—	—	353	304	251	198	142	112
1900-04	—	—	—	—	—	—	—	174	146	97

This is an exceedingly interesting table, for from it we learn that, whereas between the years 1865 and 1869 100 young women of 21 years of age entering into the married state gave birth in the years which followed to some 8 children each (on an average), twenty years later the same number of women of the same age had families only averaging 7 children each. Further, the decrease in the average size of the families has been continuous; it has also been greatest for the more advanced ages. Thus, 100 women, marrying at the age of 39 between the years 1865–9, could be counted on to give birth to 217 children, whilst 100 women of the same age marrying between 1895–9 had only 112 children between them. It is taken for granted that 45 marks the close of the reproductive life. To put it in another way, "the total fertility of marriage for age of wife 21 has fallen from 818 children per hundred marriages to 700; for age 25, from 673 to 503 . . ."; for ages 30 to 34 the decline averages 156 children per 100 marriages; and for ages 35 to 39 it averages 164 children per 100 marriages.

Occupational Fertilities.

The relative prolificity among different classes or social grades of the community ("occupational fertilities") is likewise very instructive. The twelve occupations with the least fertility (p. 35) are those of civil engineers, chemists, clerks, ministers, those professing art, music, and the drama, schoolmasters and teachers, literary and scientific persons, veterinary surgeons, advocates and solicitors, physicians and surgeons, dentists, and army officers (effective and retired). It will be noticed that the wives of the members of the medical profession occupy a very low position in this table of relative fertility, the average number of children per marriage in their case being only 3.91; in fact, all the twelve occupations with small families may be called more or less professional in character. On the other hand, the occupations with greatest fertility include crofters (who head the list with the average number of 7.04 children per marriage), plasterers' labourers, coal, shale, and ironstone miners, and mine owners, fishermen-crofters, coalheavers, glaziers, agricultural labourers, agents and managers, fishermen, ship platers, and stone, slate miners, dressers, and quarriers. In all these occupations the average number of children per marriage is above 6.3.

Survival of Children.

Another question of considerable practical importance relates to the number of surviving children of each marriage (p. xxxvii), and some light is shed upon the relative child mortality in families in which the mothers are required to act as wage-earners in comparison with the others in which no such burden is laid upon them. Here is the result as stated in the report: Of the 13,970 children born to the marriages in which the mothers were unoccupied, 11,908, or 85.2 per cent., were living at the time of the census (the marriages selected were those of not more than fifteen years' duration), and 2,062, or 14.8 per cent., were then deceased; of the 12,881 children born to the marriages in which the wives were returned as having remunerative occupation, 9,790, or 76 per cent. were alive at census date, and 3,091, or 24 per cent., were then deceased." "This comparison," continues the report (p. xxxviii), "shows a distinct difference, and seems to support the inference that the fact of the mother having remunerative occupation decreases the chances of survival of the children; the chance of survival through the younger age period—that is, to 15 years of age—when the mother is unoccupied is 0.85, or fully 5½ to 1, but when the mother is occupied this chance falls to 0.76, or 3 to 1." The rate of mortality varied somewhat according to the nature of the mother's occupation, but the general result remains that there is a higher mortality among the children of working mothers than among those of non-working mothers.

There are many other matters which emerge from the mass of statistics upon which the report is based, but the reader who is interested must go to the work itself for them; it should, however, be added that the Registrar-General (Mr. J. Patten Macdonald) and the Superintendent of Statistics (Dr. J. C. Dunlop) are to be congratulated on the satisfactory and prompt conclusion of their work.

EDINBURGH ROYAL INFIRMARY.

The report by the Committee of Contributors to the Edinburgh Royal Infirmary regarding the managers' annual statement at the recent meeting of the General Court (*vide* JOURNAL, p. 111, January 10th, 1914) deals with several matters of interest. Commenting upon the increased cost for each occupied bed (which is 13s. 11d. over that of the previous year) the Committee states that the increase in the cost of maintenance is 5d. for each occupied bed, and in medical expenditure 5s. 0½d. a bed, the balance being accounted for principally by national insurance payments on account of the nursing and serving staffs. In connexion with the item of £408 in the accounts for equipment of the medical electrical department the Committee states that the managers have in contemplation a scheme for the rehousing and complete reorganization of that department, upon which during recent years constantly increasing demands have been made; this will involve considerable capital outlay, but the step is considered to be necessary. The Committee expressed satisfaction that the Infirmary continues to confer its benefits

upon all in need of medical or surgical treatment, including insured persons, and concurred with the view expressed by the managers that a strong claim existed for a substantial measure of support from the insurance authorities and the approved societies towards the expenses of the institution; and thought that a further representation on the subject should be made in the future, in view of the decrease in contributions and collections and of the fact that the Infirmary itself pays £345 per annum of insurance contributions for its own staff. This report will be submitted to the adjourned general meeting.

HIGHLANDS AND ISLANDS MEDICAL SERVICE.

Argyllshire.

A meeting representative of the various authorities in the county of Argyll was held at Oban on January 12th, to consider the information to be supplied to the Highlands and Islands Medical Board. After prolonged discussion it was recommended that each parochial medical officer should have a house provided, and that a fund should be instituted for the purpose of superannuating parochial doctors on account of age or infirmity. Additional doctors were recommended, one in the immediate vicinity of Kilchrenan and one at Benderloch. The telephonic communication was considered most inadequate, and it was suggested that doctors and nurses should be put in direct telephonic communication, and that all hospitals should be in direct telephonic communication with the superintendents thereof. A motor ambulance carriage for the removal of patients from a distance to hospitals and sanatoriums would, it was pointed out, be of great service, such an ambulance serving the greater part of the county situated on the mainland.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

SALARIES, FEES, AND SUPERANNUATION.

AT the last monthly meeting of the Committee of Management of the Derry City and County Infirmary it was reported that no application had been received for the position of assistant medical officer of the Infirmary, at a salary of £80 a year, with apartments. Some of the members said the salary was not too enticing. Dr. Cooke, the house-surgeon, suggested that the salary should be £100. It was ultimately decided to offer a minimum salary of £90, rising to £100.

At the last monthly meeting of the Tyrone and Fermanagh Asylum Committee it was unanimously decided to increase the salary of Dr. Patrick O'Doherty, assistant medical officer, from £200 to £300 a year.

The guardians of Castlebar Union have decided to elect a medical officer for the Balla dispensary district, to fill the vacancy caused by the resignation of Dr. O'Callaghan, and to offer a salary of £110 per annum, with £15 as medical officer of health. One of the guardians proposed the following as one of the conditions of the appointment:

> The candidates for election will be called upon by the board before the appointment is made to agree to the graded scale of fees to be laid down by the guardians for their services, and any candidate not agreeing to the terms of such a scale shall not be entitled to have his application considered by the board.

This resolution was seconded and adopted, but it is *ultra vires*, as neither the guardians nor the Local Government Board have any right or authority to interfere with the medical officer's private practice, nor to dictate what fees he shall charge.

At the last meeting of the Castlederg Board of Guardians a resolution was unanimously adopted granting £114 superannuation allowance to Dr. Thomas Leary, J.P., formerly medical officer of the workhouse. Dr. Leary has been in the service of the board for over fifty-one years.

EPIDEMIC DISEASES.

Four cases of typhoid fever have recently been notified in Belturbet. The place has no modern water supply or sewerage system, and numbers of people earn their living by carting and selling water, rain water especially, in the summer.

At the meeting of the Cookstown Rural Council on January 17th Dr. Harris of Stewartstown reported the death of a child in his district from poliomyelitis after a few hours' illness.

PUBLIC HEALTH IN DERRY.

Owing to the death of Dr. Fergusson, the office of medical superintendent for the borough of Derry is vacant. An arrangement has been come to between the Public Health Committee and the Local Insurance Committee to appoint a medical practitioner to be health superintendent and borough officer for the treatment of tuberculosis, at a commencing salary of £550 per annum. The corporation also contemplates the erection of a sanatorium for the treatment of consumptive patients in the city and the provision of a laboratory for the purpose of food and drug analysis.

England and Wales.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

WALES.

A COMPLETE MEDICAL SCHOOL FOR WALES.

THE article in the first number of *The Welsh Outlook* on the medical outlook in Wales shows that the report of the Royal Commission on University Education in London has been carefully studied in South Wales, and that it is recognized that in settling a scheme for a complete Welsh medical school Cardiff is afforded the opportunity of doing pioneer work in medical education. The following summary is given of the essentials of what is required to complete an efficient medical school at Cardiff: (1) The provision of suitable laboratories for the advanced medical studies and for research; (2) the liberal endowment of professorships in medicine, surgery, and midwifery; (3) the selection of the best available men for these posts; (4) the combination of all medical talent and of all local hospitals (including not only the King Edward VII Hospital, but the Seamen's Hospital, City Fever Hospital, and the Tuberculosis Hospital) as constituent parts of a medical school organized on the lines already indicated. It is fully recognized that the realization of this scheme would involve a large capital expenditure, and demand a large annual income. To obtain the money requisite the promoters cast their eyes in two directions—to the wealthy men of Wales and to the State. It is argued that both the medical profession and the State have a common interest in demanding a remedy for any deficiencies shown to exist in medical education, and it is stated that the Government is understood to be considering the claims both of London and of Wales. "In one respect," it is said, "Chancellors of the Exchequer resemble Providence because they always help those who help themselves; and if the money for the new buildings were raised in Wales, the case for suitable grants towards annual expenditure would be materially strengthened and doubtless prove irresistible, if it were shown that the proposed school aimed at educating medical men on lines that would make them really efficient servants of the community. In such an effort Wales should lead the way, not only because there is an unrivalled opportunity of reorganizing medical education without interference from vested interests, but because the subsequent success of those students who have received their preliminary medical education at Cardiff proves that a supply of the right kind of student is ready to hand."

The *Welsh Outlook* is a new venture which it is hoped will fill a place in the intellectual life of Wales not hitherto occupied. It is to be published monthly, and the first number appeared with the new year.[1] Its promoters intend it "to witness the unity of [Welsh] national life and to deepen and enrich it . . . not by refusing what other nations offer, but by taking of their best, making it our own and returning it with interest." This worthy ambition is perhaps best illustrated in this first number of the new periodical by the article on the medical outlook in Wales in respect especially of medical education. There are articles also on the religious outlook in Wales,

[1] Cardiff: The Welsh Outlook Press. Price 3d. Annual subscription (United Kingdom), 4s., post free.

on modern Welsh literature, on art in national life, on university settlements (evolution or revolution?) by Principal Burrows, and on English nursery rhymes, though the writer of the last, we venture to think, strikes a wrong note. This first number contains also notes of the month, supplemented by a series of paragraphs on "Wales at Work" (educational and social work) and reviews of books. There are also some artistic illustrations and a double page showing colliers' huts at Senghenydd and colliers' cottages in Yorkshire, which make so eloquent an appeal that the series of articles promised on the housing conditions in Welsh mining villages might seem almost superfluous.

Special Correspondence.

PARIS.

Nursing in the Paris Hospitals.—A Case of Diaphragmatic Hernia.—The After-results of Gastro-enterostomy.—The Results of Fracture of the Neck of the Femur.—A Diagnostic Sign in Tabes.

THERE are still many medical men who for various reasons would like to see the religious orders placed once more in charge of the nursing of the patients in the Paris hospitals, and an attempt has recently been made to arouse fresh interest in this question. It has been by no means unsuccessful, for in various quarters there has been a good deal of discussion on the subject. In regard to the anti-clerical movement in general, there has recently been some evidence in the general press of a certain readiness to admit that it went much too far; but in respect of the nursing question, the probability of a return to previous conditions is lessened by the fact that for several years past the standard of lay nursing in the hospitals had been gradually improving. The school for nurses carried on in connexion with the Hôpital Salpêtrière has played a considerable part in this result.

At a recent meeting of the Surgical Society, M. Kirmisson described an interesting case of diaphragmatic hernia under the care of Dr. Duval. The patient, a boy aged 12, complained of pain in the left side of the chest, accompanied by palpitation, vomiting, and febrile attacks, and the first diagnosis made was one either of interlobular pleurisy or of subphrenic abscess. Subsequently, however, the patient was exposed to x rays, and with somewhat startling results, for the skiagram showed that the greater part of the left side of his chest contained intestines, these closely approaching the clavicle. In consequence an operation was undertaken, the abdomen being opened above the umbilicus and the left eighth rib resected. The bowel, though adherent in several places, was safely replaced in the abdomen and the diaphragmatic opening closed. The left lung was in a state of complete atelectasis, and the appendix was found to be very inflamed. It was to the latter condition that the symptoms were probably due.

On the same occasion Dr. Hartmann reported some observations of M. Marquis regarding the occurrence of secondary peptic ulcer after gastro-enterostomy. They pointed to the possibility of a recurrence taking place as much as eleven years later. Dr. Hartmann said that in his own series of 350 cases of gastro-enterostomy no instance of secondary ulcer had occurred, but the literature on the subject revealed recurrences in six cases out of 913. Posterior gastro-enterostomy seemed more liable to be followed by recurrence of symptoms than the anterior operation.

At a later meeting a report by M. Auvry of a case of fracture of the neck of the femur evoked evidence of much difference of view as to the exact diagnosis of this condition. The patient was a woman who was able to take up work again a few days after a fall, though a radiograph showed that fracture of the neck of the femur existed. M. Delbet said that he had had occasion to examine the same patient shortly afterwards, and after taking several x-ray plates in different positions, he was convinced that it was a case not of fracture but of slight congenital subluxation of the hip-joint, complicated by a dry arthritis, which possibly had been caused by the fall. One femur was of lesser diameter than the other and there was some asymmetry of the pelvis. Dry arthritis might closely simulate the signs of fracture of the neck of the femur—a point always to be borne in mind when considering claimants under the workmen's compensation law. Another speaker maintained that it was common for children in whom fracture of the neck of the femur had occurred to be able to walk with a little difficulty a few days later.

A new sign of tabes has been described by M. Lasper in a communication to the Medical Society of the Hospitals. In a normal person when the eyeball is pressed backwards the heart becomes slower for a few beats, but in the tabetic this reflex is, according to the observer quoted, constantly absent and the heart beats normally in spite of the pressure on the eyeball. He attributed this loss of reflex to a lesion in the trigeminal nerve at the point where it is crossed by the vagus in the sensory bulbar nucleus.

Correspondence.

RADIUM AND CANCER.

SIR,—I am grateful to Mr. John Morley for his courteous criticism (p. 113) of my paper on Radium and Cancer. He suggests that the Case No. II, which was recorded by me as a periosteal sarcoma of the femur which disappeared under the influence of radium, was really a case of traumatic myositis ossificans. Mr. Morley has kindly sent me a copy of his paper on this disease, which was published in your columns on December 6th, 1913, and also skiagrams of two of his cases, and microscopic slides. My delay in answering Mr. Morley is due to my desire to study all his evidence before doing so. I gather from Mr. Morley's article that traumatic myositis ossificans is a disease which arises soon after a "single severe contusion" of a long bone, and consists of an infiltration of muscle with an inflammatory exudate that quickly ossifies. In its clinical features, it may so closely imitate sarcoma as to be only distinguished from it on examination after an exploratory incision.

As regards my Case II there was not a "single severe contusion," but two slighter strains; this may not be of much moment. What I lay stress upon in the diagnosis is that having made two exploratory incisions down to this tumour, I found it to be a tumour of the femur, and not an inflammatory infiltration of muscle, and that even so long as four months after the first sign of the swelling there was no ossification in muscle, nor any ossification of the part of the tumour removed for examination. The pieces removed consisted each time of a slice of the whole thickness of the tumour.

I have compared the microscopic appearances in my case with the sections kindly lent me by Mr. John Morley, and the difference is most striking. His specimens show an infiltration of muscle, mine shows no sign of muscle; his specimens show widely extending irregular ossification, mine shows neither bone nor preosseous tissue. Mr. Gordon Taylor, who originally made the pathological report to me, has examined these specimens, and he allows me to state that he, too, can see no evidence of myositis ossificans in the section, and is convinced of the accuracy of his original diagnosis of sarcoma.

The ossification in my case was a late occurrence—a secondary change after the arrest of the growth, after the marked degeneration which was observed at the second operation. A comparison of my final skiagrams (Fig. 3) with any of the skiagrams published and sent to me by Mr. John Morley, shows a totally different condition—the bone, in place of passing in irregular jagged processes into muscles, is a smooth rounded thickening of the bone—a scar.

Mr. John Morley asks if there was a history of injury in one of my other cases (VIII); there was none. I am now able to add that there has been a very satisfactory reduction in the size of this tumour since I put radium into it. Then (December 6th) it measured 5 in. by 3¾ in. On January 10th it measured only 2¼ in. by 1¾ in., and the appearance of the knee was wholly changed. I placed a tube of radium, 100 mg., into the remaining tumour for twenty-four hours, and am now awaiting the result.

I should like to take this opportunity of giving late

particulars of two of the cases I mentioned at Taunton, particularly as the hopes I then entertained have been disappointed.

Case 7 (G. P.).—The portion of the growth into which I introduced the radium on November 20th disappeared; but extension occurred towards the popliteal surface of the bone, and I introduced radium into this part of the mass, but in spite of this, further growth around the lower end of the bone took place, and a skiagram taken towards the end of December showed extension into the bone as well. I therefore amputated the thigh. The specimen shows a typical sarcoma. The "hope of success," of which I spoke in my address, has not been realized, but has been most grievously disappointed. I may perhaps be allowed to repeat what I hope I made plain in my address, that Cases VI, VII, and VIII were only introduced as bearing upon the consideration of the question whether radium ought to be used as an alternative to operation. They were not recorded as instances of the successful use of radium.

The improvement described in Case V is not maintained. Mr. J. T.'s doctor in the country has written to me to say that he is very ill, and from his description I fear there is a recurrence of the growth in the temporal bone. These cases remind us once again that "disappearance of a growth" and "cure of cancer" are far from being synonymous terms.—I am, etc.,

London, W., Jan. 20th. ALFRED PEARCE GOULD.

THE TEACHING OF CLINICAL MEDICINE.

SIR,—Many must have had in their minds in a more or less nebulous state the ideas now so delightfully and forcefully expressed by Dr. James Mackenzie. From no one could they come with such authority as they do from this distinguished clinician, who is now preaching what he has long practised with results known to the world; a man whose example must always be an encouragement to the practitioner despairing of his opportunities for scientific research. From him once more we learn the fact that the genius of research may still be found outside the laboratory, though for want of help to see and to seize the opportunity many must be lost in the rush. For while it may be true that necessity and competition are incubators of genius, it is equally true that overwork, anxiety, and chilling indifference will stop its growth. It is only the strongest character and phenomenal resolution that will withstand and make progress against these obstacles. But we are not all geniuses, and it is to the average medical man that Dr. Mackenzie points a way, to all who care to take it, off the dreary high road of ordinary practice into the alluring land of research, its trackless wonderlands, its mines of priceless jewels, the land of adventure, of hope and difficulty and disappointment, of sunshine and success. Every one who wanders there with his eyes open is sure to find something either valuable, rare, or beautiful. Though we are not all geniuses, we all have some intelligence, some training in the art of observation and the science of deduction. The accuracy of our observation and the value of our deductions depend very largely upon the persistence with which we train ourselves in the use of these methods. Now we have been shown that in the land of research there is an immense tract for the exploration of which the general practitioner is peculiarly fitted. He need not be disheartened because in practice he cannot continue to use the elaborate means of diagnosis he used in the hospital. By accurate observation and record of symptoms, followed up by their analysis, he may carry on a truly scientific work; the study of the life history of illness from its uncharted beginning, through its little-known wanderings, to its end; the influence on it of heredity, of all sorts of surroundings, such as family, house, climate, occupation, food, and many other things, of all of which the consultant can have little knowledge; the influence of the illness on the patient at the time and afterwards, and on his surroundings.

But there is one period in the life-history of illness to the study of which by the general practitioner Dr. Mackenzie very pointedly and very rightly draws attention—that is, the very beginning. There is in the making of an illness a group of factors which combine; the removal of one of these factors before the combination is effective constitutes preventive treatment. But there is a period, after the combination of these factors, but before disease is well established, when it may still be arrested. This period is naturally undefined; the treatment to be adopted at this stage may be called abortive. It is the study of this period, the recognition of its signs and symptoms, that is so essentially the work of the general practitioner. It is a phase of disease that has been too much neglected, and with it perforce that treatment which comes between prophylactic and curative. Its neglect is due largely to the system of teaching so severely censured in the article referred to, and to the unfortunate habit of attaching too much value to things "well recognized," and too little value to things "not recognized." The need for exhaustive and careful research during this period of disease is obvious; equally so are the difficulties, the very definition is vague. The signs and symptoms must be there, but their proper recognition will require the infinite capacity for taking pains.

I assume that Dr. Mackenzie intends his scheme of clinical teaching to be complementary to that which already exists, so as to form a complete system. But he will, I am sure, agree he probably intends that the work—call it teaching or learning or research—is not to end at the school or hospital, but to go on throughout practice. And the object of this letter is to refer to this particular part of work. Dr. Mackenzie's example and writing may excite some to emulate him, but still such work will almost certainly be sporadic. Are there any means by which this work can be fostered and advanced? Can there be found some further incentive to clinical research, some scheme to produce a regular stimulus to action? Practitioners may make and keep many records for long periods, they must always be acquiring the knowledge of an immense number of facts, much of this information must of itself be valuable, much of it unique; 25,000 medical men in daily general practice! Think what the sum of their knowledge and experience must be! But at present except for themselves and their patients it is practically wasted. If each of these 25,000 men would make accurate observation of his patients and keep careful records, however concise, what an enormous mass of clinical facts there would be! But still it would be almost useless. Is there any remedy? I think so.

The British Medical Association has in its admirable organization a wonderful opportunity. The Insurance Act has already shown the ease with which a card index can be kept, and already has the value of even such a meagre record begun to be appreciated, and the importance to all concerned of the earliest possible diagnosis and treatment is becoming daily more evident. The part to be played by the general practitioner is coming to be nearer that of the medical officer of health, the preventer of disease. A little encouragement and a little organized help should make it easier to convert every man's practice into a clinic, the work done in which shall be, not only of an increasing value, but more useful to the medical and so to the whole community. The central organization might well devise a system in which the whole profession should be divided into convenient small groups; each group would set to work to investigate some disease, some phase of disease or some symptom. This should afterwards be discussed at Divisional and then at Branch meetings, where the specialists and consultants might with great advantage help. The discussion might finish for the time being at the appropriate section of an annual meeting of the Association, and the JOURNAL, perhaps, would devote a special number to the question. Or the reverse process might take place, but there would be rather a tendency in this case to work from theory instead of building up a theory on observed facts. The subject should not be considered settled after such a series of discussions, as this might tend to dogmatism, and it would probably be well to have three or four subjects under consideration concurrently. By the choosing of subjects of general interest and of fairly evident utility it should not be difficult to enlist the services of all practitioners.

We are apt at times to waver—at any rate, to be too indifferent—in the everlasting fight between rationalism and empiricism. We give too much tacit encouragement to the public in their support of quackery and too little encouragement to our own members in fighting against it.

We have now a great opportunity to help them in their search for truth, the one invincible weapon in the fight.—I am, etc.,

Bradford-on-Avon, Jan. 16th. CHAS. E. S. FLEMMING.

SIR,—Dr. James Mackenzie's paper was a criticism of the training of the clinical teacher, which appeared to me, after much consideration, to have been written with a complete misapprehension of the real conditions governing the work of selection of patients for ward treatment in the London hospitals. After a large experience of such work I could not admit, without a considerable discount, the justice of his strictures. I waited to see what comments his criticism would elicit, and am confronted this week by my friend Dr. Branson's letter. He, I know, will pardon me, when I say frankly that in my judgement he shows a lamentable lack of appreciation of what is done both for the patient and the student at a large London hospital.

The gist of his letter is that the medical wards are too much devoted to the consideration of patients who are already beyond the reach of human help, and he pleads for admission to the wards, and for the use for teaching purposes, of minor ailments.

Let me take his strictures seriatim. Of some 3,000 patients admitted to the medical wards of St. Bartholomew's Hospital in the year 1911, 9 were suffering from aneurysm of the aorta (0.3 per cent.), 18 had cirrhosis of the liver (0.6 per cent.), 2 only had pneumothorax, 5 had mediastinal new growths. Chronic valvular disease of the heart "in its latest chapters" is a condition, as Dr. Branson very well knows, admitted reluctantly to the wards by the casualty and house physicians, chiefly on the ground of humanity to the sufferers. Of these patients there were 121, many of them not "in the latest chapter," who afforded valuable lessons in treatment to the student and derived great benefit, which was in some cases permanent, themselves. The same observations apply to the 33 cases of chronic bronchitis and emphysema and to the 59 cases of chronic nephritis. As to advanced scleroses of the spinal cord, putting on these words their widest interpretation, there were 40 cases out of 254 classed as diseases of the nervous system, or out of 295 if 41 cases of chorea are included in this category—a proportion, seeing that it includes such important complaints as tabes dorsalis, disseminated sclerosis, and general paralysis of the insane, not at all unreasonable, either from the point of view of the patient or of the future general practitioner. A perusal of the statistics will convince Dr. Branson of his error with regard to the admission of minor ailments.

No, Sir, Dr. Branson's thesis is untenable in view of the facts, and if he and Dr. Mackenzie will only examine the symptoms a little more accurately, they will soon be convinced that their diagnosis in this respect at least is very wide of the mark; for the recognition of the true character of the disease we want scientific reasoning, not blind hypothesis based on a careless or prejudiced examination of the phenomena. For Dr. Mackenzie is not only inaccurate; he is unjust. He says:

> His (the junior teacher's) conception of what constitutes physical diagnosis is limited to the few signs he was accustomed to see demonstrated in the wards when he was a student. From actual experience he has no knowledge of the significance or the meaning of the signs he teaches, etc.

I submit, Sir, that this and much more of Dr. Mackenzie's account of the training of the teacher is, to any one acquainted with the facts, a ludicrous misstatement. I assert without fear of contradiction from any impartial observer that there is no body of men who spend more time, energy, and enthusiasm in equipping themselves for their teaching duties than the junior teachers of the London schools. Their opportunities may be limited, their intelligence not so high as that of their critics, but they are not the slaves to convention and the passive channels of outworn tradition that Dr. Mackenzie paints.

I could say much more upon this theme, but this is already a long letter, and I shall be content if I have succeeded in demonstrating the ignorance and injustice of these essays in criticism. The faults of the London schools are many, but they are better recognized by the teachers than by Dr. Mackenzie and Dr. Branson.—I am, etc.,

Wimpole Street, W., Jan. 17th. HUGH THURSFIELD.

THE LATE DR. W. COURTENAY MILWARD.

SIR,—We are anxious to make an appeal through the columns of the BRITISH MEDICAL JOURNAL to all members of the recently divided South-Eastern Branch who happen to be subscribers to Epsom College. Our appeal is on behalf of Wilmot Milward, who is a candidate for election to the College in June of this year. It will, we hope, be remembered that his father, Courtenay Milward, was the late Honorary Secretary of the Cardiff Division of the British Medical Association, who may rightly be said to have died fighting for his profession.

The profession generally is under a deep obligation to those who gave so much time and labour to the common cause during the great Insurance Act campaign, and the present chance of discharging a portion of that debt is one which we hope will not be allowed to go by. We fully recognize the great difficulty of carrying our candidate at the first time of asking, but it has been done before, and, with the help of your readers, we intend to do it again. If our efforts are to be crowned with success it is necessary that no stone should be left unturned, and we therefore invite the cordial co-operation of all. While not wishing in any way to detach votes from more deserving cases, if any such can be found, we hope by issuing this appeal early in the year, to obtain promises of support from those who are not as yet pledged to support other candidates.

Trusting that our efforts may not be in vain, we remain, yours etc.,

ARTHUR M. MITCHELL,
President, late S.E. Branch.
JOHN SCOTT,
Past-President, late S.E. Branch.
E. A. STARLING,
Honorary Secretary, late S.E. Branch.
C. COURTENAY LORD,
Member of Council, late S.E. Branch.

*** Communications may be addressed to Dr. Courtenay Lord, 155, High Street, Gillingham, Kent.

THE INFECTION OF CHILDREN WITH THE BOVINE TUBERCLE BACILLUS.

SIR,—The interesting and valuable communication by Dr. Philp Mitchell in the JOURNAL of January 17th, wherein he shows by careful experiment how large a proportion of tuberculous neck glands in quite young children are due to the bovine bacillus, once again directs attention to the relation of cow's milk to the problem of the prevention of tuberculosis. There are few of us who would not support him whole-heartedly in his demand for a clean milk supply (especially needed, it seems, in the neighbourhood of Edinburgh) or agree with him as to the risk of massive tuberculous infection through the use of milk from a single cow or a small herd. Such milk, failing sure knowledge of the health of the cows, is doubtless safer sterilized.

But the wholesale sterilization of milk which he advocates opens up much more doubtful and debatable issues. It has long been matter of surprise to me to observe, in the attitude towards the control of tuberculosis in this country, how utterly has been ignored the important part almost certainly played by the bovine bacillus in protecting the community against the (to man) more virulent human strain; and I would put forward the proposition that, until the human tubercle bacillus can be nearly eliminated from our midst, or artificial immunization becomes an accomplished fact, infection with the bovine bacillus through the use of a well-mixed milk remains our best ally in the campaign against tuberculosis.

My further remarks must be prefaced by a short reminder of the incidence of tuberculosis at the present time among civilized communities. The Vienna school, continuing and extending the work of the morbid anatomists initiated by Naegeli, has shown clearly that nearly every human being becomes infected with tubercle before the age of 15. This observation has been extended to and confirmed for many of the big towns of civilized Europe, and it seems clear that, as things are at present, all living in crowded communities must come to grips with the bacillus. It is, however, a matter of the utmost moment whether a child's first acquaintance is with the bovine or human strain of this organism, since the first generally leads to a mild and recoverable lesion with protection against further infection, while the latter tends to

produce more severe and often rapidly fatal forms of tuberculosis.

The issues of the problem may be conveniently discussed under two headings:

1. *The immunity against tuberculosis conferred by an early slight lesion.*

Those who discuss the problem of tuberculosis control generally ignore that very vital point—the protection afforded by slight infection against further more dangerous assaults. The immunization of cattle with human strains of the bacillus to protect them against the (to them) more dangerous bovine bacillus is a practical example of this. Cattle already tuberculous are immune against doses of tubercle bacillus which quickly lead to fatal disease in healthy animals. The same is applicable to other animal species, and has been shown by Kraus to be true for apes, and hence may be presumed for man also. As a matter of fact, clinical evidence points clearly to the existence of such immunity amongst humans. The protection afforded by a childhood infection is revealed in many ways. Mayo points out that in Minnesota, where surgical tubercle is rife, phthisis is uncommon. Turban, Weicker, H. M. King, record the more favourable course of phthisis when a family history of tuberculosis is present, and the same is the case when the individual has been scrofulous. The ready curability of phthisis in children of 7 to 10 years, remarked on by Hamburger and well recognized by those of experience in this country, suggests a retention of early immunity to a greater degree than in adults. The same probably accounts, to a notable extent, for the remarkably low death-rate from tuberculosis of all forms in the later years of childhood so clearly brought out in the Registrar-General's reports.

That the bovine bacillus may play an important part in the protection acquired in early life is strongly suggested by certain facts derived from the population among which Dr. Philp Mitchell's cases lived. The ubiquity of the bovine bacillus in the Edinburgh district has been common knowledge since the publications of Charles McNeil on the prevalence there of abdominal tuberculosis, a disease which we know to be especially often associated with the bovine type of organism. McNeil in comparing his figures with similar ones from Vienna, brought out the interesting fact that, against a high incidence of mesenteric disease in Edinburgh, must be placed a strikingly low phthisis mortality rate, that of Vienna being nearly three times that of Edinburgh. This seems to suggest protection against the human bacillus by the bovine infection in the latter town.

On the other side of the picture, as negative proof of the protection afforded by a slight lesion, may be placed the susceptibility to tuberculosis shown by adults previously unexposed to infection. It is well known that people coming from tubercle-free districts into towns are very prone to acute and fatal forms of tuberculosis rarely seen among adults in crowded communities. This has been verified for many districts—for Turkey by Deycke, Palestine by Much, the Argentine by Römer.

2. *The greater safety of bovine over human tubercle bacillus in the production of such immunity.*

The lesser danger from bovine than from human infection is a matter not difficult of proof. The famous pronouncement of Koch at the Tuberculosis Congress in London in 1901, that the bovine bacillus was innocuous to man, has, indeed, not been upheld by subsequent investigation. That it is comparatively innocuous must, however, be fully conceded. The lesions to which the bovine bacillus give rise are mainly confined to glands in the abdominal and cervical regions of children, and the disease (rare instances of miliary tuberculosis apart) remains as a rule localized and recoverable. Nearly all Dr. Mitchell's cases, he remarks, were in excellent general condition. Practically all the dangerous and fatal forms of tuberculosis, the lung diseases of childhood, phthisis of adults, even disease of bones, joints, and thoracic glands to a great extent, are due to the bacillus of human strain. Thus the virulence of the bovine bacillus may be said to be slight for children, while attempts to inoculate it into adults (Baumgarten in cancer cases) have persistently failed. In accordance with these facts is the certainty that the elimination of the bovine bacillus from a community leads to no appreciable reduction in tuberculosis incidence or mortality. In Perak and Penang the cattle are said to be tuberculosis-free and the phthisis mortality high; in places where raw cow's milk is never used for food, Japan (Kitasato), Turkey (Rieder), Asiatic Turkey (Christ), Egypt (v. Becker), Rumania (Babes), the Gold Coast (Fischl), Greenland (Nansen), apical tuberculosis is, as one would expect, frequent.

The comparative harmlessness of the bovine bacillus is well brought out in some investigations conducted by Weber, of the Kaiserlicher Gesundheitsamt, in 1910, on children fed from cows with tuberculous udders. Among 360 persons drinking the unboiled milk, of whom 151 were children, two infants suffered with tuberculous neck glands, but did well; 6 other children and 1 adult had also tuberculous neck glands, 4 children and 1 adult had symptoms of abdominal tuberculosis, but recovered, and 1 child became "scrofulous." Hess publishes similar experiences. These may be conveniently contrasted with those of Floyd and Bowditch for children living in phthisical households, among whom a large proportion developed serious lung tuberculosis. Though the different virulence to man of the human and bovine bacillus is, doubtless, at the bottom of these results, the different path of infection, respiratory to a large extent on the one hand, and alimentary on the other, must play an important part. It is well known that many hundred thousand times the dose is required for alimentary as suffices for respiratory infection (Koch, Kossel, Fluegge, etc.).

It has sometimes been put forward as an interesting problem that young children become infected and immunized with little or no disturbance of health, while adults from tubercle-free neighbourhoods so readily succumb to acute forms of the disease. This is to ignore the enormous mortality from acute forms of tubercle in infancy, the death-rate per million being considerably higher for the age period under 5 years than for any other 20-year period of later life. That nearly all these deaths are due to infection with the human strain of tubercle bacillus is rendered probable by *post-mortem* experience, for disease of bronchial glands or lung is present in nearly all such cases, while marked abdominal infection, for which the bovine bacillus is especially responsible, is present in a much smaller proportion, which varies somewhat with locality and observer. It seems reasonable to suppose that the children who escape to give a von Pirquet reaction at later ages, and at the same time show a notable resistance to tuberculosis, are, in the main, those who have had the good fortune to meet the bovine bacillus first. It is a pity that Détre's differential cutaneous test fails so signally in giving us any information on this point.

The material here put forward, though incomplete, serves to support the contention I have already made, and make again—namely, that as long as tuberculosis due to the human bacillus is rife we should look upon the bovine bacillus as a valuable means of protection against infection from human sources. It may happen that before long we shall be in possession of a safer and surer means of immunizing against tuberculosis. The discovery by Hans Much of the remarkable property possessed by certain acid preparations of the tubercle bacillus in producing tuberculin sensitiveness, and at the same time immunity, in non-tuberculous animals (results hitherto only achieved by inoculation with living bacilli) makes it possible that a safe method of artificial immunization for human beings will soon be an accomplished fact. In the meantime we have to choose whether our children shall be immunized by living bacilli of the human or the bovine type, for that they will be infected by one or other is certain. The safest and most practical method open to us at the present time seems to me to lie in the use of a well-mixed milk, such as the large London dairy companies supply. In such a milk the bacilli must be well diluted and the danger of massive dosage reduced to a negligible figure. It must not be forgotten, however, that dosage is relative, and the resistance to tubercle is at a minimum during the first few months of life. It would seem best, therefore, to sterilize the milk at first and gradually add to it increasing quantities of raw milk till this alone is given. Where, as in country districts, exposure to danger from human sources can be avoided, the administration of raw milk might be postponed to a later age with advantage. The question of sterilization of milk has been approached in this letter solely from the point of view of tuberculosis; it

involves, of course, many other important issues, which space does not permit me to touch on here.—I am, etc.,

London, W., Jan. 19th. CLIVE RIVIERE.

PNEUMONIA: ITS NATURE AND TREATMENT.

SIR,—It is most profitable to discuss the propositions closely bearing upon the patient's recovery upon which there is least agreement. On many pathological and clinical points opinions do not differ. It is agreed, for instance, that the duration of the acute attack is timed to the hour by that of the consolidation, and recovery by its rapid disappearance. The suddenness of the latter resembles that of the invasion, in which we all recognize a uniform central vaso-motor event, together with a mysteriously variable pulmonary localization of the vaso-paralysis. But it takes at least two days for the stasis to become absolute and for the tissue to solidify completely, whilst a few hours sometimes suffice for the resolution. That interval of "fluid pneumonia" is the chief field of divergence in theory, in experimental observations, and also unfortunately in our practice the two opposites of which cannot be both equally for the good of the patient. In diphtheria Nature's cure is likewise by exudation, but we have never regarded this as a good cure. Is consolidation a sufficiently good cure in pneumonia? No answer, no discussion, and no clinical investigation are hitherto forthcoming. Yet, so long as patients die of their consolidation, that first of questions, upon which our treatment should pivot, cannot be ignored as unimportant. If it is shirked for want of evidence, should we not be trying to get at the facts instead of prejudging them?

The following propositions are worth debating, and perhaps worth adopting, if they can be substantiated: (1) Normally, the deaths which occur from pneumonia occur during consolidation, and largely owing to its effects; that risk should be obviated, if possible, by every means in our power. (2) The abortion of a pneumonia at the fluid stage, or at the early solid stage, is not an added danger but a boon. If this should be doubted, let us obtain more conclusive clinical evidence. (3) The day of the toxic invasion is the time, not for useless examinations, but for the active treatment (*a*) of the shock to the nervous system, (*b*) of the vasomotor paralysis threatening the lung, and (*c*) of the blood and of the vascular endothelium, as a safeguard against the onset of consolidation. (4) The time is short, but the opportunity is the best the patient will ever have. Not an hour of it should be wasted for the cure. That day almost everything is still in working order; the vasomotor system is responsive in the average cases, and the lung still pervious to blood and to air. Even later, in the early stage of consolidation, the same measures, free from all risk or exertion for the patient, as described in 1905 in a paper on the "Principles of treatment of pneumonia,"[1] may still be used with striking effect. (5) There was no drug to cut short malaria prior to quinine; salvarsan is a recent discovery; fibrolysin also a novelty; why might not a drug yet be discovered to cut short pneumonia? Meanwhile we should not neglect to use the lymphatic remedy *par excellence*, the most potent of our agents for the absorption of massive deposits such as gumma; not in heroic, but in small innocuous hourly doses during the first day; not on theoretical grounds, but because, in its harmless combination with ammonium citrate, with hot lemonade, and with whey instead of milk, it has been found of the greatest value to the patients.

These good results I have ascribed partly to the vaso-motor measures of the first day, but also largely to these frequently repeated doses of potassium iodide. That conclusion is supported by Dr. Mathison's published experience.[2] He may have a special first day technique, but he attributes his good results to his prescription; and the only drug it contains in common with my own is potassium iodide. The creosote which he couples with it I have not used in pneumonia, but I have never wished for better results than those I obtained without it. Further confirmation is contributed from India in the issue of the JOURNAL of January 17th, p. 176. Dr. S. K. Chaudhuri writes from Laksa, Benares, that "he can fully corroborate Dr. Mathison's claim that on use of the combination the disease not infrequently aborts, the crisis occurring sometimes as early as the third day, and convalescence being as a rule uneventful."—I am, etc.,

London, W., Jan. 18th. WM. EWART.

SIR,—If I remember aright Dr. Mathison published his creosote and iodide treatment of pneumonia long prior to 1910. I have been using it since 1904, and with most gratifying results. I include, however, 5-minim doses of tincture of digitalis, and leave out the fluid creosote from the mixture, preferring to give it in 2-minim capsules every three hours. The treatment advocated by Dr. Mathison is almost a specific in this disease, and in many cases it has aborted an attack.—I am, etc.,

JOHN F. ELLIOTT, L.R.C.S, L.R.C.P.I.

Rostrevor, co. Down, Jan. 19th.

FATAL CHOREA OF PREGNANCY.

SIR,—The short article on fatal chorea of pregnancy on page 165 of the BRITISH MEDICAL JOURNAL for January 17th is calculated to give a wrong impression of the gravity of chorea of pregnancy and of the treatment which should be adopted in the majority of cases. The article states that "treatment is highly unsatisfactory," and goes on " . . . it is possible that many mild cases in which labour has been successfully induced have not been reported . . . altogether Dr. Lepage's records seem to indicate that it is safer to treat chorea gravidarum by early induction of labour . . . when delayed the results are very bad." These views may be entirely due to a consideration of Dr. Lepage's paper, and not the views of the writer of the article, but the impression that these sentences convey is that chorea of pregnancy is a very dangerous condition, that it is difficult to treat, and that artificial termination of the pregnancy is the best treatment. In our opinion this teaching is absolutely wrong.

In a paper read by us before the Medical Society of London in May, 1903, based on 40 cases of chorea of pregnancy which had not been previously reported, we said:

> In the majority of cases pregnancy continues undisturbed and results in natural labour. . . . Since 1895 abortion has not been induced for chorea in the London Hospital. . . . In the majority of cases rest, full feeding, freedom from worry and anxiety, and sleep, if necessary assisted by chloral, produce such diminution if not cessation of movements that induction of abortion need not even be considered.

In the discussion on our paper Dr. McCann said that the number of cases of chorea in which induction of premature labour was indicated was very small. Our experience of cases of chorea of pregnancy during the last eleven years has not led us to alter our opinion on any of these points except that we have learnt the value of aspirin in some cases. Since our paper was written there have been 28 cases of chorea of pregnancy treated in the wards of the London Hospital up to the end of 1912. Among these there were 2 fatal cases. Abortion has not been induced once, that is, during the last eighteen years it has not been found necessary to induce abortion for chorea of pregnancy in the London Hospital. If cases of chorea of pregnancy are treated with large doses of bromides, chloral, or opium, we can believe that the "treatment is highly unsatisfactory," but treatment by rest, seclusion, careful feeding, and gentle discipline is, as a rule, satisfactory. We do not wish to suggest that induction of abortion or premature labour is never called for, but we consider that it is a method of treatment which is seldom to be considered.—We are, etc.,

CECIL WALL.

London, W., Jan. 18th. HENRY RUSSELL ANDREWS.

SIR,—In an annotation upon the above subject in your last issue, of January 17th, p. 165, you state: "The pathogenesis of chorea gravidarum remains obscure, and the treatment is highly unsatisfactory." The first part of this statement can, I am sure, be proved to be erroneous, and the latter unduly pessimistic. The condition has been proved, as far as anything can be proved from clinical evidence alone, to be due to a toxaemia, and if treatment

[1] *Lancet*, vol. i, 1905.
[2] BRITISH MEDICAL JOURNAL, 1910, vol. ii, p. 1611.

is adopted to eliminate the toxin, excellent results are obtained in these cases.

In the *Journal of Obstetrics and Gynaecology of the British Empire* (April, 1907) I published the notes of eleven consecutive cases of chorea gravidarum. The first two were treated by the old method with arsenic, etc., and finally labour induced—both patients died. Acting on a suggestion of Dr. Fothergill's, who for some time had been teaching that this condition was one of the toxaemias of pregnancy, the remaining nine cases were treated with a view of eliminating a toxin. The patients were kept in bed free from excitement, the bowels well moved with calomel and magnesium sulphate, diuresis and diaphoresis induced with a saline mixture, and the food restricted to milk. All these patients made excellent recoveries, though several were quite as serious as the two fatal cases. In June, 1908, in the same journal, I published 3 further cases which were cured by the same treatment.

Since that date all cases of chorea gravidarum admitted to St. Mary's Hospital, Manchester, have been treated in this way. Every patient has made a complete recovery; *in no instance has labour been induced*, and the great majority have continued to full term and been delivered of living children. Altogether 32 consecutive cases have been treated without a single death.

In 1910 Dr. E. O. Croft, of Leeds, published the notes of 3 cases which he had treated on the lines indicated in my paper with excellent results (BRITISH MEDICAL JOURNAL, April 19th, 1910, p. 872).

The reasons for considering these cases to be due to a toxaemia are too long for a letter, but the results of the treatment seem to be worth repeating.

I am glad to see several textbooks now classify chorea gravidarum with the toxaemias of pregnancy, and I am quite convinced, if this classification and treatment were generally adopted, there would be few, if any, deaths to record and no truth in the gloomy sentence I quoted from your annotation.—I am, etc.,

Manchester, Jan. 19th. WM. FLETCHER SHAW.

SIR,—I have been much pained by the jeremiad on this subject which appeared in your last number (January 17th, p. 165). "The pathogenesis of chorea gravidarum remains obscure, and treatment is highly unsatisfactory." "Interruption of pregnancy is not by any means a certain cure," and "when (it is) delayed the results are very bad." I hoped every one had given up interrupting pregnancy for chorea long ago; for, if it is omitted, the results of eliminative treatment are brilliant.

In the *St. Thomas's Hospital Reports*, 1908, Turney pointed out that chorea gravidarum is one of the many manifestations of the "toxaemia of pregnancy." Some of us took the hint at once, and have taught accordingly ever since. When Dr. W. Fletcher Shaw was resident surgical officer at St. Mary's Hospital, Manchester, he gave up the interruption of pregnancy for chorea after having two fatal cases. He then used eliminative treatment as for threatened eclampsia, excessive vomiting, and other toxaemic states. The result was a series of twelve successful cases which he reported in the *Journal of Obstetrics and Gynaecology of the British Empire* in April, 1907, and June, 1908. Dr. Shaw's last published case occurred in December, 1907. I now turn to the published maternity reports of St. Mary's Hospital for the years 1908–12, and I find that during these five years there were twenty cases of chorea gravidarum. In these twenty cases pregnancy was never artificially interrupted, eliminative treatment was always used, and every case had a favourable result. There has thus been at St. Mary's a run of thirty-two consecutive successful cases. Nor do I remember the occurrence of a death from this cause during 1913. But I will not add further details, for I think Dr. Shaw should now write a third paper on the subject, and should publish, this time, in the BRITISH MEDICAL JOURNAL.—I am, etc.,

Manchester, Jan. 19th. W. E. FOTHERGILL.

PSYCHO-ANALYSIS.

SIR,—It is to be hoped that Dr. Mercier's letter will induce some of the practitioners of psycho-analysis to make their position a little clearer. At present there is an extraordinary discrepancy between their theory and their practice. Their teaching about the sexual origin of psychoses, about the Oedipus complex, and the incestuous impulses of infants, merits all that Dr. Mercier says about it. But their practice seems to be mainly concerned (judging by the published cases) with the tracing of those psychic accidents which have had a harmful influence on mental development. But these accidents when determined turn out in the majority of cases to have no sexual basis at all.

If their unpleasant theories were dropped there seems no reason why psycho-analysis should not go on investigating the mental causes of ailments just as efficiently as before. In fact, it would be more in accordance with scientific method not to start an investigation with a preconceived conviction as to the result.

A great deal more work will need to be done before psycho-analysis can afford to take up the pontifical tone which some of its exponents adopt. Its ultimate theories must depend on its ascertained results, and these are not yet sufficiently numerous or definite to establish any theory,—I am, etc.,

Darlington, Jan. 19th. R. H. BOTHAM.

SIR,—What a marvellous self-revelation of ignorance of the nature of psycho-analysis is Dr. Mercier's letter! If Dr. Mercier has ever attempted psycho-analysis of his patients in such a manner as he describes the obscenity of his conversations must have surpassed all belief.—I am, etc.,

W. H. B. STODDART.

Bethlem Royal Hospital, London, S.E., Jan. 20th.

THE HISTORY OF THE PARASITE OF SYPHILIS.

SIR,—A few days ago I chanced to read in your issue of December 14th, 1912, the article by Mr. E. H. Ross on some intracellular forms of the parasite of syphilis. In the course of the article, under the subheading, "The History of the Parasite of Syphilis," Mr. Ross states that Stassano (1901) was the first to find cell inclusions in the manifestations of this disease.

This is an error which I must ask you to allow me to correct. The first demonstration of some of the intracellular phases of the protozoon of syphilis was given by myself in 1894 at a meeting of the Pathological Society, and the description was published, with an illustration, under the heading, "A Note on Variola and Vaccinia," in the *Transactions* of the Society of 1895, ten years before Schaudinn described the spiral phase of the parasite.—I am, etc.,

London W., Jan. 16th. J. JACKSON CLARKE.

THE NEW POOR LAW INSTITUTIONS ORDER.

SIR,—May I suggest to "A Workhouse Medical Officer of Twenty Years' Standing," whose letter on the subject of the new Poor Law Institutions Order and the position of the workhouse medical officer you published last week, that he should at once join the Poor Law Medical Officers' Association if he is not already a member? The first move in pressing for adequate remuneration and proper conditions of service should be made by this association. The Secretary is Dr. Major Greenwood, 243, Hackney Road, N.E.—I am, etc.,

January 19th. WORKHOUSE MED. OFFICER.

AN OBJECTIONABLE SOLICITATION.

SIR,—A London firm of opticians has a branch in this city. Some two years ago a patient of mine obtained glasses from this branch on my prescription. A few days ago he received the following letter, written in the name of the firm by the manager of the branch, and thinking it curious kindly forwarded it to me:

> Jan. 13, 1914. Dear Sir,—Upon looking through our books, we find that it is now over two years since you last consulted Dr. ——. As with sight like yours it is always desirable to have the eyes periodically examined, we take the liberty of calling your attention to the matter, in case the lapse of time may have been unnoticed by you.
>
> We are, Sir, yours respectfully, ——.

Disapproving such action, I called on the manager and learnt that he had written about thirty letters of the kind since the beginning of the year, referring to different ophthalmic surgeons, and that the head of the establishment in London has been in the habit of doing this for some years past. He regretted my disapproval, promised to make no further use of my name, and undertook to

write to each patient of mine to whom such a letter had been sent, saying that it had been sent without my knowledge. Other ophthalmic surgeons may be interested to know of this custom. I enclose my card.—I am, etc.,

January 19th. OPHTHALMIC SURGEON.

THE PATHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

SIR,—In your report of the proceedings of the Pathological Society of Great Britain and Ireland in the current issue of the JOURNAL, may I point out one or two material emendations?

(1) *Re Electro-Conductivity Measurements.*—The last two lines should read, ". . . that is, resistance or conductivity meter, might equally be employed as an ampère meter, or as a volt meter, with suitable alteration in the scale reading, inasmuch as there was but one principle involved, namely, current measurement."

2. *Re Asbestos.*—The expression "lost their virulence" should read "apparently lost their toxin-producing power."—I am, etc.,

Leeds, Jan. 19th. MYER COPLANS.

*** We regret that in the same report the remarks on radium and cancer immunity, which we are informed were made by Mr. Sydney Russ, D.Sc., of the Middlesex Hospital Cancer Investigation Department, were by inadvertence attributed to Dr. C. Russ.

THE FRIEDMANN TREATMENT OF TUBERCULOSIS.

WE have received from Dr. Hans Thalheim, of Berlin, writing, as we understand, on behalf of Professor Schleich and himself, a communication criticizing the paper of Dr. Harry Lee Barnes, Superintendent of the State Sanatorium, Rhode Island, an abstract of which was published in the JOURNAL of January 10th, p. 103. The communication contains allegations of want of impartiality against Dr. Barnes, which we consider it unnecessary and undesirable to reproduce, but with regard to one matter raised in this part of Dr. Thalheim's letter, it seems proper to mention one point not specifically stated in the abstract. Dr. Barnes, in his full paper, states that, when informed by Dr. W. L. Harris, of the State Board of Health, that Governor Pothier, of Rhode Island, had invited Dr. Friedmann to demonstrate his treatment in the State institutions, Dr. Barnes had replied that too little was known about the vaccine for him to endorse it, or even to ensure its safety, and that therefore patients would be so notified, after which they would be allowed to take it on their own responsibility. A statement to this effect was, Dr. Barnes adds, posted on the bulletin boards, and minors were required to obtain the consent of their parents or guardians.

Dr. Thalheim states that in consequence of Dr. Barnes's attitude Dr. Friedmann and his assistants, on their second visit to the State sanatorium, made all examinations in the presence of a notary, and that a great number of affidavits exist. The following are the concluding passages of Dr. Thalheim's communication:

> At the examination on that day more than 90 per cent. of the cases treated showed a remarkable improvement. Cough and expectoration were diminished a good deal, night sweats had disappeared, weight had increased, also the general condition had improved very much. Distinct objective physical signs of improvement in the condition of the lungs could be observed in a part of those patients already then, that is, some weeks after the beginning of the treatment: the rales were much diminished. Dr. Dwinell, one of the best experts of lung tuberculosis among the Rhode Island physicians, who knows profoundly the principles of the Friedmann treatment, and who constantly and severely, critically and scientifically observes all cases of State sanatorium, reports in a telegram sent to Professor Schleich in Berlin three months after the beginning of the treatment, that also the Rhode Island State Sanatorium patients showed splendid results. Dr. Dwinell will, as I hear, publish a comprehensive report about all those patients in some weeks.
>
> If Dr. Barnes pretends in his article that in 23 per cent. of the cases treated abscesses had formed, it signifies that he does not know the character of the Friedmann method of treatment. As it is stated in the indications published by Dr. Friedmann,[1] and as is confirmed by prominent physicians through thousands of experiences, the forming of an abscess can be avoided with full security, that means in 100 per cent. of cases by an interfering intravenous injection made in time. If Dr. Barnes further pretends that cough and expectoration did not diminish strikingly, it would be interesting to hear what he understands by "strikingly." At any rate, his observation would be in remarkable contrast with the observations and publications of impartial, objective German authorities who know the results of the Friedmann treatment for a long time, part of them already for years—for instance, Professor Erich Müller, Professor Kraus, Professor Schleich, Dr. Immelmann, Dr. Frankenstein, specialist for lung tuberculosis; Health Councillor Isaac, the director of the well-known clinic of Professor Dr. Lassar; Dr. Helwig, specialist for children's diseases; Dr. Pust (Stettin), surgeon; Dr. Leuwer (Bonn), specialist for larynx and lungs; Privy Councillor Turban (Davos); Dr. Barczo (Budapest), specialist for lung diseases; and many others.
>
> (Signed) DR. HANS THALHEIM.

Berlin, Bambergerstrasse 78.

Medico-Legal.

LIBEL ON THE DIRECTOR-GENERAL OF THE INSANE, WEST AUSTRALIA.

A CASE well illustrating the readiness with which some people jump to totally false conclusions, and the irresponsible character of the charges sometimes launched against medical men by the writers of anonymous letters in the newspapers, occupied the time of the Supreme Court of West Australia during two days in December. It was an action for libel brought against a newspaper company by Dr. S. H. R. Montgomery, who occupies the Government appointment of Director-General of the Insane, and is also superintendent medical officer of the Claremont Hospital for the Insane. The ground of action was the publication in the *West Australian* of an anonymous letter stating that the writer during a recent visit to the asylum had seen women chained to long seats against a wall in a room in which a number of children were playing, and to which visitors were admitted. On the attention of the newspaper company being drawn to the fact that apart from its general inaccuracy the letter contained a statement which was grossly untrue, the newspaper, after mentioning that objection to the letter had been lodged by Dr. Montgomery, contented itself by saying that the letter had been inserted on the authority of a respectable citizen of Claremont; still, if the letter did any injustice to Dr. Montgomery or could be read as a reflection on the institution over which he presided, its publication was much regretted and apologies tendered. For some little time after this Dr. Montgomery was too unwell to attend to the matter, but eventually took steps which led to its coming into court.

The defence then set up by the newspaper was that the statements in the letter were in fact true, and that even if they were not true the making of them did not constitute a libel, because they contained no reflection on Dr. Montgomery. The evidence for the prosecution was given by Dr. Montgomery himself, by the Government Minister to whom he is officially responsible; by several medical men, including the resident medical officers of the asylum; by the chaplain, the matron, and several subordinate employees; and by a number of laymen who had frequently had occasion to visit the asylum to see relatives and friends among its patients. Summed up, this evidence was singularly unanimous in its tone, its general effect being that, if it were believed that in an asylum under Dr. Montgomery's control patients were allowed to be chained up, this could not fail to do Dr. Montgomery much harm, for hitherto he had been regarded as a man of advanced views in regard to treating insane persons by non-restraint methods. Claremont Asylum had been built under his superintendence, and was designed largely with a view to its inmates being allowed the greatest amount of liberty possible. There were no chains of any sort in the asylum except the waist-belt chains on which the nurses kept their keys, and these were much too short to be used for chaining a person to anything. The only means of restraint ever employed was segregating any patient who was dangerous to his companions, or, if dangerous to himself, putting him in a strait-jacket, or keeping him in bed and having him constantly watched by two attendants. The ward which the writer of the letter had visited was occupied by harmless old women lunatics, and the children seen by the writer playing in it were not sane children but imbeciles. They were allowed at times to associate with these old women because such association was found good both for the children and for the old people.

The evidence for the defence was given by the writer of the letter; it was to the effect that she had never visited an asylum

[1] *Berliner Klinische Wochenschrift*, 1913, No. 44.

before, and was unaware that it was not customary to chain patients up. From the attitude of two of the patients and something she saw on their wrists she concluded they were chained to the form on which they were sitting. There were about a dozen patients in the ward as well as a number of nurses and children; she was only in the ward a minute or two, and, when one of the patients whom she believed she had previously seen chained tried to enter the dormitory to which the witness was taken, she supposed that the old woman had been unchained.

In the course of his charge to the jury the judge said that, as the writer of the letter was admittedly wrong in her conclusions about the children, the only points that the jury need consider were whether it was true that the patients were chained up, and if this reflected on Dr. Montgomery. It was not claimed that the latter had been materially injured by the publication of the letter, so if the jury concluded that the letter was libellous it need not award a larger amount by way of damages than would suffice to evince its opinion that the charges were quite unfounded. After a brief consideration the jury returned a verdict to the effect that it was untrue that the chains were ever used at the asylum, that the statements made did reflect upon Dr. Montgomery, and that the newspaper company should pay him a sum of £250 by way of damages.

CONVICTION OF A MIDWIFE.

AT the Central Criminal Court on January 15th, Elizabeth Kennedy, aged 55, a nurse, and Minnie Short, aged 34, a cook, were charged with conspiring to use means unknown to procure the miscarriage of two young women. The prisoners pleaded not guilty, and the judge advised the jury to confine their attention to the count in one case. The jury found the prisoners guilty in that case; it was stated that Kennedy carried on a legitimate business as a midwife and was kind to poor people, and that Short also bore a good character. Kennedy was sentenced to fifteen months' imprisonment, and Short to six months' imprisonment. Kennedy had been indicted on the previous day for the murder of a married woman alleged to have died from the effects of an illegal operation; but the judge stopped the case at the close of the prosecuting counsel's opening statement, and the jury found the prisoner not guilty.

OPERATIONS IN HOSPITALS.

AT the Stroud County Court, on January 20th, a local medical practitioner sued a dentist assistant for £17 for an operation performed on his wife in a local general hospital. Payment, according to the report in the *Daily Telegraph*, was resisted on the ground that hospitals maintained by voluntary subscriptions gave free treatment. The defendant said that he earned two guineas weekly. The county court judge decided that the defendant must pay the amount claimed, and observed that public hospitals were founded to give free treatment to the extremely poor, but not to those earning two guineas weekly.

Public Health AND POOR LAW MEDICAL SERVICES.

VITAL STATISTICS IN ENGLAND AND WALES (1913).

WE are indebted to the Registrar-General for the following statement showing the birth-rates and death-rates and the rate of infantile mortality in England and Wales, and in certain parts of the country during the year 1913.

ENGLAND AND WALES.

Birth-rate, Death-rate, and Infantile Mortality during the Year 1913 (Provisional Figures).

	Annual Rate per 1,000 Living.			
	Births.	Deaths.		Deaths under One Year to 1,000 Births.
		Crude.	Standardized.	
England and Wales...	23.9	13.7	13.4	103
96 great towns, including London	25.1	14.3	14.7	116
145 smaller towns ...	23.9	12.8	13.0	112
England and Wales, less the 241 towns	22.2	13.1	12.1	96
London	24.8	14.2	14.2	104

* The standardized death-rates (formerly called corrected death-rates) are the rates which would have been recorded had the sex and age constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901. A description of the method of standardizing these death-rates is to be found in the Registrar-General's Annual Report for 1911, p. xxix.

BAKEHOUSES AND THE FACTORY AND WORKSHOPS ACT.

F. SOUTH WALES.—The Editors of *Lumley's Public Health*, in a note to Section 102 of the Factory and Workshops Act, 1901, say that it is very questionable whether a medical officer of health can be authorized to conduct proceedings under Section 120 of that Act.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have been approved at the examination indicated:

DIP. TROP. MED. AND HYGIENE.—C. R. Bahhlé, Major I.M.S.; H. Crossle, Captain I.M.S.; R. Drummond, D. L. Graham, Captain I.M.S.; E. H. Griffin.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

FIRST PROFESSIONAL.—A. L. Abel, C. H. Atkinson, A. R. H. S. Azzam, †G. A. E. Barnes, P. S. Bayley, K. C. Beatty, C. C. Bennett, E. J. Bilcliffe, A. O. Bolton, J. W. Brash, I. Braun, Margaret H. Bridge, H. Carpenter, J. E. Carpenter, H. S. Carter, B. R. Chandhri, C. S. Clarke, H. C. Cox, H. Das, O. G. Davies, A. H. Douthwaite, D. A. Dyer, H. E. K. Eccles, G. E. Edwards, R. W. L. Edginton, W. Edinow, S. Farquharson, V. F. Farr, W. A. Flynn, Beatrice Ford, J. S. Franklin, T. C. W. Geijer, J. C. Gie, L. C. Goument Dorothy W. Gowers, A. S. Green, R. B. Green, L. Handy, W. A. Hawes, C. G. Haynes, C. E. E. Herington, C. P. Hines, N. R. H. Holmes, O. H. Hyman, C. V. Isard, D. C. James, T. Johnston, M. E. Jones, G. F. Juckes, N. Kamchorn, N. E. F. Kemm, Margaret H. Kingsford, D. M. Lalá, D. A. C. Layman, G. E. MacAlevey, J. G. McCann, Kathleen McC. McKeown, G. G. Michell, ‡F. C. Miller, Annie S. Mules, Edith M. Newman, H. W. L. Nichols, D. R. Owen, S. L. S. Pearson, B. W. Philipps, Ruth W. Plimsoll, M. C. Polhill, Jean S. Pope, A. Rathouse, G. H. Roberts, J. S. L. Roberts, †‡J. F. Ryan, *S. Sacks, E. J. Samuel, T. A. S. Samuel, C. K. Scales, H. Schaal, Charlotte A. Shields, K. L. Singer, W. H. Steavenson, *V. R. Stewart, N. Synn, †R. Theron, J. A. Van Heerden, Kathleen S. Vine, E. B. Woolf.

* Awarded a mark of distinction in Inorganic Chemistry.
† Awarded a mark of distinction in Physics.
‡ Awarded a mark of distinction in Biology.

Obituary.

JOSEPH GEORGE HARSANT, M.D.LOND., M.R.C.P.,

PHYSICIAN TO THE ROYAL VICTORIA AND WEST HANTS HOSPITAL; AND TO THE ROYAL NATIONAL SANATORIUM FOR CONSUMPTION, BOURNEMOUTH.

WE regret to record the death, which took place at Bournemouth on January 9th, of Dr. Harsant, at the age of 52. He was thus struck down in the prime of life, and in the middle of an active and successful career.

Educated at Epsom College, his thoughts were no doubt early turned towards medicine. He became a student at Guy's, and graduated M.B., B.S.Lond. in 1885, and M.D. in 1887. He took the diploma of M.R.C.P. in 1905.

After holding the posts of house-surgeon at Guy's and resident medical officer at the City of London Hospital for Diseases of the Chest, he acted for some time as medical officer in the service of the P. and O. Company, finally settling in practice in Bournemouth in 1892. It was not long before he began to build up a practice, which ultimately became extensive, and his success was all the more marked that he did not pass through the stage of general practice on which, as a rule, a position in the provinces is founded. His patients were very devoted to him, and many of them used to speak of him as their "friend and medical adviser."

During his college life and for a short time after settling in Bournemouth Dr. Harsant was a well-known athlete. He played cricket, football, tennis, golf, croquet, and excelled in all, but the claims of an absorbing practice caused an abandonment of all these except golf and croquet, to which he remained devoted, so far as brief leisure time gave him opportunity. He was also musical, and possessed a fine baritone voice, which during his younger days was readily at the service of any charitable or other deserving object.

Not long after settling in Bournemouth, Dr. Harsant was appointed on the staff of what was then the Royal Victoria Hospital, passing to full physician in 1906. He was also appointed one of the physicians to the Royal National Sanatorium for Consumption in 1908. His previous experience as resident medical officer of the City of London Hospital for Diseases of the Chest had

admirably fitted him for this post. Both positions he filled with much acceptance, and he proved himself to be a colleague with whom it was a pleasure to work. Though of a gentle, retiring, and reticent disposition, he had much force of will, and a quiet power of determination. His amiability was most marked; he was never heard to say an unkind word of any one, and he had not an enemy in the world.

Some three years ago Dr. Harsant underwent a severe operation—removal of the right kidney—and although he seemed for a time to have recovered well, symptoms of mischief in the left organ showed themselves, as well as trouble elsewhere. He, however, bravely struggled on till October of last year, when advancing weakness prevented further work. He knew what was coming; but his courage never failed him, and there was never one word of repining or rebellion during all his last illness. A clerical friend who saw him often during those last months wrote: "He bade farewell to life as a brave man and a Christian ought. I always felt the better for seeing him."

He was laid to rest at Bournemouth, amidst marked expressions of regret and of esteem from his professional colleages and from friends and old patients. The number and the beauty of the floral wreaths which were sent were a striking testimony to the regard in which he had been held and the sorrow felt at his death.

HENRY ALBERT REEVES, M.R.C.S., F.R.C.S.Ed.,

FORMERLY SURGEON TO THE ROYAL ORTHOPAEDIC HOSPITAL.

THE death of Mr. Reeves, at the age of more than 70 years, removes from the scene one of the older generation of orthopaedic surgeons who took a considerable part in emancipating the speciality from the purely subcutaneous traditions of the pre-Listerian era.

He was born in Calcutta, the son of a mechanical naval architect, and went to school at St. Albans. He received his medical education at the Middlesex Hospital, and became M.R.C.S.Eng. in 1865, and a Fellow of the Edinburgh College of Surgeons in 1871. At the Middlesex he held the post of Demonstrator of Anatomy, but was subsequently appointed to a similar post at the London Hospital, where he became assistant surgeon in 1869, and afterwards surgeon to out-patients. For some reason—certainly not lack of ability—Mr. Reeves did not take the Fellowship of the English College, and consequently was passed over in elections to the full staff with charge of beds. He became a member of the surgical staff of the East London Hospital for Children, Shadwell, in 1870, and continued to work there until 1885. In 1877 he was appointed surgeon to the Royal Orthopaedic Hospital, and his work there, despite his various other surgical activities, constitutes his best title to remembrance. Although never an aseptic or even strictly antiseptic surgeon, his operations on deformities of the skeleton were largely successful, and he was in some sense a pioneer in osteotomy, especially for knock-knee. In 1885 he published a record of 493 osteotomies without a death, and he stated that he only used Listerian precautions in six or seven cases.

Besides the appointments already mentioned, Mr. Reeves at one time or another held the post of surgeon to the Hospital for Women, to which at the time of his death he was consulting surgeon; to the Central London Ophthalmic Hospital, and to the Westminster General Dispensary, and he had been Lecturer on Anatomy at the School of Medicine for Women.

In 1870 he served with the ambulance of the British National Society for Aid to the Sick and Wounded during the Franco-German war.

Of tall stature and genial manner, he was at one time very well known at the medical societies in London and in surgical circles generally, and he was probably the last practising hospital surgeon who habitually took snuff.

Besides papers in the medical journals and *Transactions* of societies, his works were *Bodily Deformities*, published in 1885 in Lewis's Practical Series; and *Human Morphology: A Treatise on Practical and Applied Anatomy*.

Mr. Reeves married the lady well known to readers of fiction as Helen Mathers.

He resigned his appointment at the London Hospital in 1892, and after his retirement from the staff of the Royal Orthopaedic Hospital, shortly before its amalgamation with the National Orthopaedic, he gradually retired from practice, and was seldom seen in professional circles.

MANY of those members of our profession who entered on their medical studies at Edinburgh University in 1894 will doubtless remember their Armenian fellow student, YERVANT ALEXANDER DJEDJIZIAN. His death from pneumonia, after only three days' illness, took place on December 14th in his native town of Adabazar, in Asia Minor. Somewhat older than the majority of the men in his year, he soon showed that previous years spent as a schoolmaster and as the editor of a weekly Armenian newspaper had been an excellent training to him, and enabled his mind to receive, sift, and remember the multitudinous facts and theories presented to him during the course of his medical studies. Of a quiet and retiring disposition, he never took a place in the social side of student life: and although he was not one of the brilliant men in his year, yet he was always among the first few in the various "class examinations." He graduated in 1899, and acted as an assistant for a few months in a general practice in Gateshead. Here he developed signs of phthisis, and, after a short holiday in Edinburgh to recuperate, he returned to his native town. His health remained indifferent for a time, but he gradually threw his old weakness off and entered more and more into the busy life of general practice. His quiet and unassuming demeanour, together with his straightforwardness, his earnest endeavour ever to give of his best, soon gathered round him a very large circle of friends. He was a man who practised not for his own gain, but solely for the sake of doing good to others. His strong Christian character and his unceasing efforts to help the poor and afflicted were recognized by everybody, and made him a great force for good in the town. The burial service in the Armenian church on December 16th was attended by 700 people, who came, in spite of the pouring rain, to show their grief at the loss of a counsellor, friend, and trusted physician.

Medical News.

MR. A. H. TUBBY has been elected a Corresponding Member of the Société Française de Chirurgie.

THE RIGHT HON. THE LORD MAYOR OF LONDON has consented to act as Chairman of the General Committee promoting the Health Week which will be held from November 15th to 21st.

THE staff of the Cancer Hospital, Fulham Road, has in view the delivery of a course of post-graduate lectures on the subject of the diagnosis and treatment of cancer. Numbering eight, the lectures will be given in the museum of the hospital at 5 p.m. on Wednesday of each week from February 4th to April 1st.

THE Pharmaceutical Society of Great Britain has arranged for a course of four lectures on applications of electricity in medical practice in so far as pharmacists may reasonably be expected to be familiar with them, to be given at the house of the society, Bloomsbury Square, by Mr. R. S. Wright, A.M.I.E.E. The first lecture will be delivered on Tuesday, January 27th, at 8 p.m., and subsequent lectures at intervals of a fortnight. The lectures will deal with the medical application of low-tension and high-tension electrical currents, and with *x*-ray work.

DR. H. H. MILLS, one of the honorary secretaries for the complimentary dinner to be given to Dr. Addison, M.P., asks us to state that the names of Mr. Walter Jessop, Dr. Leonard Hill, F.R.S., and Dr. Lauriston Shaw were inadvertently omitted from the first list of the committee. Dr. Mills asks those who desire to attend the dinner, which will take place at the Trocadero Restaurant on Tuesday, February 3rd, to make early application to him at 21, St. Mary Abbot's Terrace, W., for tickets, price 7s. 6d. without wine.

THE council of the Eugenics Education Society has decided that the work of Sir Francis Galton shall be commemorated on the anniversary of his birth (February 16th) in each year by a Galton lecture and dinner. The first celebration will take place on Monday, February 16th next, when a dinner will be held at 7 p.m. at the Hotel Cecil, and Sir Francis Darwin, F.R.S., will deliver the lecture at 8.30 p.m. Particulars can be obtained from the Honorary Secretary of the Galton Celebration Committee, Eugenics Education Society, Kingsway House, Kingsway, W.C.

AT a private meeting of a number of governors of St. George's Hospital on January 20th, under the chairmanship

of Mr. Stuart de la Rue, a deputation was appointed to confer with the house committee with a view to securing an amicable settlement of the present difficulty before the meeting of the court on February 12th, and especially as to the immediate appointment of a medical superintendent and the reinstatement of three members of the house committee not re-elected at the last midsummer court, and the addition of new members to the committee. It was also resolved to give notice of a motion for the election at the court on February 12th of a committee of five or seven governors to consider the laws of St George's Hospital, and to report to a special court as early as possible whether any alterations should be made therein.

THE annual lectures at the Royal College of Surgeons of England will commence on Monday, February 2nd, when Mr. Hastings Gilford (Reading) will give the first of two lectures on infantilism. Mr. E. Hey Groves (Bristol) will lecture on the experimental production and treatment of fractures in lower animals, on February 6th; Mr. A. Rendle Short (Bristol) on changes in the blood in the causation of surgical shock, on February 9th, and Mr. H. Beckwith Whitehouse (Birmingham) on the pathology and causation of idiopathic uterine haemorrhage, on February 13th. On February 16th, Professor Arthur Keith, conservator of the museum, will give the first of six lectures on the evolution, anatomy, and diseases of the anthropoid apes. On March 2nd, Dr. David Waterston (London) will give a lecture on some recent researches in human development; on March 4th and 6th, Dr. F. Wood Jones (London) will lecture on the morphology of the external genitalia; and on March 9th Mr. C. Mansell Moullin (London) will describe further observations upon the biology and classification of tumours.

AT a meeting of the School Medical Service Group of the Society of Medical Officers of Health, in London, on January 3rd, a discussion took place on security of tenure in relation to increase in salary. Strong disapproval was expressed of the action of those local authorities who refused to reappoint medical officers after a limited number of years, and it was resolved to ask the Council of the Society of Medical Officers of Health and the British Medical Association to take steps to include whole-time school and assistant school medical officers and medical officers whose duties include school work in the provisions of the bill to secure superannuation and security of tenure. A meeting of the officers in the school medical service in the northern counties was held at Newcastle-on-Tyne on January 3rd, when it was determined to approach the Board of Education to point out that in order to attract and keep efficient officers in the school medical service it was essential that the question of salaries should be reconsidered. A meeting, to which all medical officers in the north-western district of England, whose duties include medical inspection of schools, are invited, is being held this day, Saturday, at Milton Hall, Deansgate, Manchester, and a meeting of the midland medical officers will be held on January 31st at 3 p.m., at the Medical Institute, Edmund Street, Birmingham.

A PATHOLOGICAL laboratory has been added to the Wolverhampton and Staffordshire General Hospital at a cost with equipment of £1,400, and will be in charge of Dr. William Boyd, pathologist to the hospital. It is intended that the laboratory shall be available not only for the hospital, but also for the assistance of medical practitioners and surgeons in the neighbourhood, and that it shall also give assistance to veterinary practitioners. The laboratory was opened on January 12th by Sir Clifford Allbutt, who said that clinical laboratories, such as that erected in Wolverhampton, would do a great deal not only for practice in hospitals, but for all medical practice in the districts in which they were established. Pathology, he said, might be described as a part of physiology—the seamy side of physiology. Physiology was studied in laboratories apart from hospitals and for its own sake; pathology, in what might be called its abstract side, was also studied in university laboratories, for, being as it were an outbud of physiology, it ought to have laboratories of its own. But much valuable work would not be done if those who were engaged in research never came into direct contact with a particular disease. In the academic laboratory large abstract investigations were undertaken, but the clinical laboratory was placed in immediate contact with the wards. It was a recognition of the necessity for this close contact which had led to the establishment of clinical laboratories in connexion with hospitals. There must be close co-operation between the staff of the hospital and of the laboratory, for from such co-operation great things were already coming, and much greater things would come in the future.

Letters, Notes, and Answers.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

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☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.B. asks for advice in the treatment of a patient whose leg was amputated above the knee some years ago. He suffers from severe, constant, and increasing pain and cramp in the non-existent phantom leg. There is no tenderness of the stump. He walks well with an artificial limb, and is very active both in mind and body.

ANSWERS.

MR. PAUL BERNARD ROTH, F.R.C.S. (London), writes in reply to "J. S. R.": (*a*) In so far as it is possible to give advice without a full examination, the best mechanical apparatus for such a case consists of a calliper knee walking splint (Thomas) for each leg. (*b*) There is, he thinks, no "good class school that would take in such a case for education and also give the necessary medical treatment." Plenty of good class schools will take the boy for educational purposes, but the medical treatment will have to be obtained elsewhere.

NEW ARSENICAL COMPOUNDS IN SYPHILIS.

ANTISYPHILITIC (South Africa) writes for further information concerning "galyl" and "ludyl," two new arsenical preparations made by Mouneyrat, the French chemist, a short account of which was given in the EPITOME of this JOURNAL, November 22nd, 1913. He asks (1) whether these preparations when given by intramuscular injection are free from the danger of local abscess and sloughing, and (2) whether they are suitable for use in a large and poor practice. In answer it may be said that, according to the published accounts, "galyl" and "ludyl" are free from the danger of abscess and sloughing. As regards their suitability for general use in a poor general practice this is quite another matter. It must be remembered that all these new arsenical preparations are on trial, and that it has not yet been proved that any of them will cure syphilis, not even salvarsan. In fact, it will take many years to prove this. Again, they are all expensive, most of them of unstable composition, and they all require expert administration. "Antisyphilitic" might be well advised to keep to mercury and iodides.

LETTERS, NOTES, ETC.

SIR J. HUTCHINSON ON NATURAL HISTORY.

N. E. D. writes: The reference which Mr. James Turle desires is as follows: 1843, Yarrell, *British Birds* (1856), I. 518 (Yellow Hammer). "I have ventured to restore to this bird what I believe to have been its first English name, Yellow Ammer. The word Ammer is a well-known German term for Bunting."

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	£	s.	d.
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A Clinical Lecture
ON
LINITIS PLASTICA,
OR
LEATHER-BOTTLE STOMACH.

DELIVERED AT THE MIDDLESEX HOSPITAL ON NOVEMBER 11TH, 1913.

BY SIR JOHN BLAND-SUTTON, F.R.C.S.,
SURGEON TO THE HOSPITAL.

PHYSICIANS and surgeons of great experience, after examining patients with tumours connected with the abdominal viscera, are often unable to decide whether the tumours are innocent or malignant. In a doubtful case they sometimes advise the patient to have the tumour exposed by an operation in order that its nature may be determined; indeed, it is not uncommon when the tumour has been thus exposed for the doubt to persist. In suitable cases the offending lump is excised and submitted to microscopic examination. This method, as a rule, settles the question, but not always, for pathologists of equal eminence and experience occasionally differ not only in regard to the species or even the genus of the tumour, but, what is more important from the patient's point of view, whether the morbid growth is an inflammatory mass or a malignant tumour. To-day I propose to illustrate this matter by reference to an extremely interesting morbid condition known as the leather-bottle stomach.

In 1854 Dr. William Brinton, Physician to St. Thomas's Hospital, described under the term "linitis plastica" a remarkable disease of the stomach. The precise nature of the change puzzled him as it had other pathologists who studied this disease before him. There is evidence that the condition had been recognized at least two centuries before Brinton invented the fantastic name, "linitis plastica," but credit is due to him for attempting to separate it as a distinct disease.

The introduction of operative methods in the treatment of gastric diseases has led to a thorough study of the histology of morbid growths of the stomach, but even with the aid of all the refinements of histological methods this disease defies exact classification in precisely those features on which the practical surgeon most requires information. Are the extraordinary changes which produce a leather-bottle stomach infective (inflammatory) or cancerous? I propose to emphasize the importance of this question by giving the particulars of a case.

A woman, aged 42, was admitted into the hospital under the care of Dr. Lakin. Her belly was enormously distended with fluid and everywhere dull on percussion. We could not satisfy ourselves whether the distension was due to fluid from a burst ovarian cyst or hydroperitoneum associated with a papillomatous cyst of the ovary. We were also suspicious that a cancerous focus existed somewhere in the abdomen, but we could not define its position, the extensive hydrosphere masked everything. It was decided to evacuate the fluid through an incision in the abdomen, and then examine the viscera. As soon as this was done we were confronted with a typical leather-bottle stomach so intimately adherent to the adjacent organs that any hopeful surgical treatment was out of question. The free fluid was removed and the incision in the abdominal wall closed. The patient survived the interference three weeks.



Fig. 1.—A cancerous leather-bottle stomach. Natural size.

The condition of the stomach is remarkable, but before we consider it let me briefly recall the leading features of the normal organ. The dimensions of the stomach vary with the age of the patient and the degree of distension at the time it is examined. The stomach of an adult is 12 in. long, 5 in. wide, and its walls are about one-fifth of an inch thick. In the living body the stomach is pink, glistening, soft, very vascular, and has a capacity of 40 fluid ounces. The stomach the subject of our observation (Fig. 1) measures 4 in. in length, 2 in. in width, and in places its walls are an inch in thickness. Instead of being flexible its walls are rigid, thick, and hard like a leather pouch. When pressed upon the wall does not collapse, and, as Brinton pointed out, it resists even considerable pressure, and returns to its original shape like a large artery or a caoutchouc bottle. So shrunk is this stomach that it has a capacity of 4 instead of 40 oz. The thickening involves the gastric walls from the cardiac opening to the pylorus. At the pyloric end it is sharply defined, and the thin walls of the duodenum are in striking contrast to the thickness of the walls of the stomach (Fig. 2). At the cardiac end the thickening involves the terminal inch of the oesophagus.

In normal conditions the omenta hang like veils about the stomach, but in our specimen the great omentum is a mere ridge of hard, shrunk tissue which, in contracting, has drawn up the transverse colon. Some parts of the transverse colon in relation with the stomach are also infiltrated and thickened. When the wall of the stomach is divided the tissues seem to be bloodless, and the boundaries between its various coats are easily discernible. The cut surface, traversed by glistening filamentous

bands, recalls the appearance of woven linen: this suggested to Brinton the term, "linitis" (λιγον, *rete ex lino factum*). He regarded the change in the walls of the stomach as an "inflammation of the filamentous network of areolar tissue ensheathing the vessels."

The minute anatomy of the leather-bottle stomach has been studied with great care, and as much uncertainty exists in regard to this remarkable condition as in Brinton's day. Some writers believe it to be inflammatory in origin, others regard it as a diffuse form of cancer, a few consider it to be syphilitic, and it has been described as tuberculous, like the hyperplastic tuberculous thickening occasionally seen in the small intestine, and especially in the caecum.

Our specimen has been subjected to a thorough microscopic examination, and I am satisfied that the changes it presents are due to the infiltration of its coats with spheroidal-celled cancer, but as the whole of the stomach is so uniformly permeated and the mucous membrane shows no evidence of ulceration, it is impossible to determine the particular part of the mucous membrane in which the morbid change began.

The implication of the transverse colon is a fact of some interest. It is a well-known feature of cancer that it does not respect the individuality of organs but its cells invade adjacent organs freely. I have on several occasions known a cancerous focus on the anterior wall of the stomach to invade the peritoneum of the anterior abdominal wall lying in contact with it. The cells will permeate the subperitoneal tissue and form a muffin-shaped mass of cancer around the umbilicus. When this is well marked the umbilicus is retracted, and the appearance produced recalls in a striking way an atrophic breast with a mass of cancer surrounding a retracted nipple. This appearance resembles the crown of a codlin apple.

I have on several occasions diagnosed an otherwise obscure cancer of the stomach by this appearance alone. The codlin apple appearance of the umbilicus is also seen in the late stages of cancer of the breast when epigastric permeation has occurred.

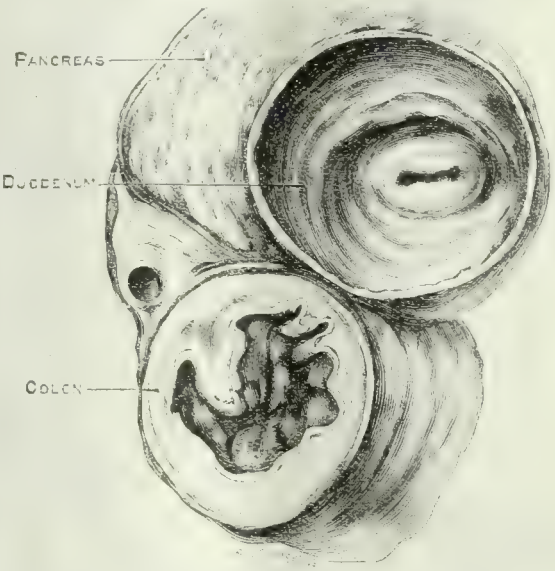


Fig. 2.—The duodenum, pancreas, and transverse colon of the specimen represented in Fig. 1 shown in section. The cancerous infiltration stops at the pylorus; the duodenum is normal, but the walls of the colon are permeated. Natural size.

Linitis plastica may be limited to the pyloric portion of the stomach and convert it into a rigid funnel-shaped tube. In well-marked examples the portion of the gastric wall implicated in the change may measure an inch or more in thickness. The change is sharply limited at the pyloric ring, but towards the cardiac regions of the stomach it shades away indefinitely. The pyloric orifice, though thickened, is not obstructed, although often greatly narrowed. The thickened portion of the stomach is usually buried in adhesions.

Professor Alexis Thomson has recently studied nine examples of localized fibrosis of the stomach, and states that seven of the specimens showed a visible punched-out ulcer; in the remaining two specimens there was superficial ulceration over the greater part of the affected area. Even in cases of cancerous leather-bottle stomachs it is impossible to deny that the infiltration began as a simple chronic ulcer which ultimately became cancerous. The study of these thickened stomachs makes it fairly clear that the condition predisposing to linitis plastica is an ulcer in the mucous membrane, which permits the connective tissue planes of the stomach to be permeated by infective agents associated with the ulcer, and the new connective tissue grows in response to the irritation they cause. The sharp limitation of the thickening at the pyloric ring accords with the anatomy of the stomach. The leather-bottle stomach produced by malignant disease has a similar history. A cancerous focus in the gastric mucous membrane—probably a chronic gastric ulcer which has become malignant—allows epithelial elements to permeate the connective tissue planes of the stomach.

The main features underlying the production of these hard, unyielding stomachs may be studied in the gall bladder. It is not uncommon to find a shrunken gall bladder containing gall stones and its walls so thick as to raise a suspicion that they may be the seat of malignant change. On slitting the gall bladder open, after removal, an ulcer will often be detected at the fundus or in its neck, and some of these shrunken gall bladders are cancerous. An ulcer is not always detected in a stomach the seat of linitis plastica, but it is easily conceivable in infective cases that the primary ulcer has healed. The importance of deciding the nature of the change seen in leather-bottle stomachs is great because of its relation to treatment. Let me set before you the clinical history of another patient in order to illustrate the difficulties.

A woman was placed under my care, by a physician of experience and repute, on account of a movable lump in the left hypochondrium. The lump was reniform, and easily glided into the left lumbar region, but it rested most easily in the epigastrium; the extreme mobility and shape of this body led my colleague to regard it as a mobile kidney, and he wished me to fix it. I satisfied myself that it was connected with the stomach. When the parts were inspected through a median supra-umbilical incision I found a saddle-shaped tumour involving the lesser curvature of the stomach and the adjacent gastric walls equally. The whole stomach was so small and movable that it hung like a wallet between the oesophagus and the duodenum. Although there were no enlarged lymph nodes to be seen or felt, the hardness of the tumour raised the fear in my mind that it was cancerous, so I removed the stomach and joined the oesophagus to the duodenum. The patient recovered quickly, and improved rapidly in health. Three months after the total gastrectomy she reported herself in good health, and complained only of her inability to eat as big a meal as her husband, but she made up this deficiency by taking two extra meals. I saw her three years after the operation in good health, but a year later, as she did not report herself, I made inquiries, and was informed that she had been dead six months. I could not get any particulars concerning the cause of her death.

The examination of the tumour in this stomach led to much difference of opinion in regard to its nature. Immediately after removal the stomach was hardened and sectioned. The walls in relation with the lesser curvature were very thick, measuring in some parts 2 inches. In no part of the mucous membrane could we discern any trace of ulceration, and in no part could I find microscopically any evidence of cancer. With great surprise I received from the Cancer Laboratory a report that the mass in the stomach wall was cancerous. I expressed my doubts very frankly, and sections were prepared from various parts of it. The pathologists persisted in the belief that the scanty islets of epithelium were cancerous, but I still believe that the mass was a localized linitis plastica, and that the epithelial nests were peptic glands, separated and isolated by connective tissue, producing an appearance like that seen in sections of mammary gland affected with chronic mastitis. I think the long survival (three and a half years) after gastrectomy supports my opinion that the lump was not cancerous.

Surgeons during the last twenty years have often opened the abdomen expecting to find a condition of stomach suitable for gastro-jejunostomy, and on exposing

the mass have found a hard pylorus embedded in adhesions. Dismayed by such experiences, they have considered the condition to be cancerous, and closed the incision. A man, aged 38, was admitted into the Cancer Charity with the diagnosis of gastric cancer, and he had, in the epigastric region, a scar left by an exploratory incision; the surgeon who made this incision believed that this patient had an inoperable pyloric cancer. I watched the patient for many weeks, and doubting the accuracy of the diagnosis, advised him to submit to gastro-jejunostomy. In the course of the operation I found the pyloric half of the stomach completely fibrosed; its walls resembled scar tissue in colour and consistence. The gastro-jejunostomy was successful: the man left the Cancer Charity, and returned to his occupation. This operation was performed in January, 1912. In November, 1913, the man reported himself in good health, and was earning his living by hard work such as hop-picking, pulling turnips, and digging. We examined the condition of the stomach by means of the *x* rays and a bismuth meal; the new stoma could be seen discharging its functions very efficiently. It is of the utmost service to us that the improvements which follow the establishment of a new stoma in the stomach are capable of visual demonstration.

Reports on the results of gastro-jejunostomy often contain accounts of patients who have been submitted to operation in the belief that a localized lump in the wall of the stomach was cancerous: the surgeon has been surprised, on examining the patient two years afterwards, to find that the suspected cancerous lump has disappeared. So many of these cases have been observed and reported that surgeons willingly admit the difficulty of deciding between a stomach converted into the semblance of a leather bottle by cancer, or by inflammation. Such changes are not confined to examples in which the stomach is uniformly affected, for the change may be limited to a relatively small area of the stomach, but it shows clearly the advantage, in doubtful cases, of giving the patient the benefit of the doubt as well as the benefit which gastro-jejunostomy will bring him if the lump in his stomach is of inflammatory origin. All surgeons who have had much experience of gastro-jejunostomy for tumours of the stomach will admit that patients often make excellent and permanent recoveries after an operation, in spite of a dismal prognosis.

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TWO YEARS' OPERATING TO THE CLOCK.

BY

JOHN O'CONOR, M.A., M.D.T.C.DUB.,

SENIOR MEDICAL OFFICER, BRITISH HOSPITAL, BUENOS AIRES.

IN a very interesting leading article in the BRITISH MEDICAL JOURNAL last year, my attention was attracted by an appeal to surgeons, not to forget that quick operating meant less exposure of parts, with consequent less liability to shock and supervention of sepsis. For years past I happen to have acted according to the idea that the success of a serious surgical operation on the unknown quantity, the human body, is in direct ratio to its rapidity.

Speaking recently to Mr. Maclaren, the famous cricketer, I was much interested by hearing him state "there are more matches lost by not playing to the clock than many people imagine." Might I venture to apply this remark to our "game," and say there are many more lives saved by a smart operation than probably many of us realize?

At the same time I emphasize the fact that I should not be credited with the opinion that quick operating is of value *per se* unless combined with conscientious and thorough workmanship, and unless compatible with the removal of the *fons et origo mali*, whether this be an infected appendix, Fallopian tube, or gall bladder, or other cause. Also in many septic cases deliberate care must be taken to isolate the operating area by sponge packing, so as to avoid further visceral or parietal infection, and a most determined attempt must be always made to clear the "field of battle" of all dead material and to leave it as dry as possible. If these latter conditions cannot be, for one reason or another, complied with, then I unhesitatingly recommend free drainage every time. Furthermore, the size of the incision must be of such dimension as to afford every facility to the operator to carry out intelligently such measures as the exigency of the condition demands, and it should constantly be borne in mind that the peritoneal cavity in particular is not the place for the game of "blind man's buff."

Before recording the results obtained by me in working to the clock it will be well to describe briefly the general system on which the patients have been treated.

After a detailed organic examination has been made the patient has two days' preparation in hospital, consisting of light diet, calomel, magnesia, mistura calcii lactatis, and if debilitated, hypodermic injections of liquor strychninae. On the morning of operation a soap and water enema is administered, and the patient's skin is painted with tincture of iodine (1 in 50). If the condition is serious, a nutrient enema (strong coffee ℥iij, brandy ℥j, glucose ℥j, peptonized milk ℥v) is given half an hour before operation, also a hypodermic injection of morphine, gr. ¼ with atropine $\frac{1}{150}$, and fifteen minutes later a brandy and soda. Ether by the open method is the routine, unless there are contraindicating lesions.

My operating staff consists of an anaesthetist, my resident medical officer, my specially trained assistant nurse, the charge nurse of the operation theatres, her assistant, and the operation room porter. No headgear is indulged in, and gloves are worn only in very septic cases, for self protection. Our hands and arms are treated liberally to hot water, soap, and nailbrush, hot formalin solution (1 in 200), alcoholic mercuric solution (1 in 1,000), and aqueous acid mercuric solution (1 in 1,000) respectively.

During operation the sterilized instruments are kept in a basin of carbolic lotion (1 in 40); our sponges are all dry sterilized, except the Turkey sponges, which are kept in acid mercurial solution and thoroughly wrung out in warm carbolic lotion before being used. No lotions are used in wounds, and only in cases of abdominal pus collections are Turkey sponges employed, and then merely to form a more effective walling-off of the danger zone.

Sterilized silk is used for all intraperitoneal work except when pus is present; then Lister's catgut is exclusively employed. Wounds above the umbilicus are closed by interrupted through-and-through strong silk sutures; below the umbilicus we always employ tier sutures, except in septic cases with drainage. I never bury silk in any parietal wound, hernial or otherwise. All bleeding points are ligated, and if "dead" spaces cannot be avoided they are left open to drain themselves. No flushing of the abdominal cavity or of wounds is practised, except in curetting a womb and arthrotomy of infected joints. Dry sterilized gauze dressing is applied to all clean wounds. Collapse and shock are treated by saline infusion, hot saline and brandy enemata, temporary elevation of foot of bed, and hypodermic injections of aseptic ergot, camphorated oil, and strychnine.

The following summary includes, without any attempt at selection, all important operations performed by me in the British Hospital, Buenos Aires, during the two years May, 1910, to May, 1912. This period is chosen principally because Dr. K. McFarlane Walker and Dr. K. D. Pringle, who have been my assistants and who are responsible for all entries in the operation register, are still resident, a fact which considerably facilitates reference.

SUMMARY.

Hernia, Inguinal: Radical Cure (Halsted).—Number of operations, 50; total time occupied, 733 minutes; average to each, 14.6 minutes; maximum time 27 minutes, minimum 8. Result: Local sepsis in 1 case, the rest healing normally.

Some twelve years ago I abandoned Halsted's method on account of the frequency of testicular complications; a few years ago I was tempted to try it again, now it is my operation of choice; with improved technique, I find orchitis with subsequent atrophy is eliminated. In this operation I thoroughly expose lower shelf of Poupart, and pass the two lower sutures through Gimbernat's ligament and conjoined tendon; this, in my opinion, is the principal part in the piece.

Hernia, Inguinal: Radical Cure (Bassini).—Number of operations, 21; total time occupied, 332 minutes; average to each,

15.8 minutes; maximum 25, minimum 9. Result: Local sepsis in 1 case, rest normal union.

My only objection to this operation is, that the placing of cord between oblique muscles creates an intermuscular space, which must obviously detract from the solidity of the barrier, as compared with Halsted's method.

Hernia, Inguinal: Radical Cure (Buchannon).—Number of operations, 66; total time occupied, 99 minutes; average to each, 16.5; maximum 21, minimum 10 minutes. Result: Normal union in all cases.

I find this is a useful operation in young children, whose cord structures are thin, and consequently do not occupy much space.

Hernia, Inguinal, Strangulated.—One case: 5 minutes; no attempt at radical cure, gangrenous bowel returned, and gauze drain inserted. Result: Aseptic cure.

Hernia, Femoral: Radical Cure (Bassini).—Number of operations, 2; 22 and 12 minutes respectively. Normal union.

Hernia, Inguinal, and Hydrocele.—One case treated by Halsted's method and excision of the hydrocele sac; time occupied, 19 minutes. Result: Normal union.

Hernia Umbilical, Radical Cure.—One case; 15 minutes. Normal union.

Hernia, Ventral: Radical Cure.—Number of cases, 6; time occupied, 98 minutes; average to each, 16.3; maximum 25 minutes, minimum 6 minutes. Result: Normal union in all cases.

In these operations the sac and all cicatricial tissues were excised, anatomical structures thoroughly differentiated and revivified before suture.

Hydrocele: Radical Cure.—Number of cases, 11; time occupied, 88 minutes; average to each, 8; maximum 13 minutes, minimum 5 minutes. Result: Normal union in all cases.

Treated by excision of free portion of the sac, with doubling back of remainder by suture.

Varicocele (Bennett's Operation).—Four cases; 9, 5, 9, and 7 minutes respectively. Result: Normal union in all cases.

Appendicectomy, Non-suppurative.—Number of cases, 39; time occupied, 458 minutes; average to each, 11.7; maximum 18 minutes, minimum 7 minutes. Result: One gangrenous case died from streptococcus poisoning; in the rest normal union occurred.

In each instance the abdomen was opened by vertical incision in semilunar line, and stump of appendix interred in caecal wall by suture.

Appendicectomy, Suppurative, with and without Peritonitis.—Number of cases, 23; time occupied, 410 minutes; average to each, 17.8; maximum 26, minimum 9 minutes. Result: One death, the rest being cured.

Whenever possible, stump was buried in caecal wall; in others, the appendix was cut off flush, and caecal wound closed in ordinary way. Drainage was employed in each case; a few minutes spent in thorough drying of pus cavities is well rewarded by results. In all except one (moribund) the appendix was removed. I operate in every case of appendicitis as soon as I can make the necessary technical arrangements.

Cholecystectomy.—Number of cases, 11; time occupied, 173 minutes. Average to each, 15.7; maximum 28½, minimum 3½ minutes. Result: In the 4 gangrenous and suppurative cases drainage was provided for forty-eight hours; seven healed aseptically, and all were discharged cured by the thirtieth day.

The method which I usually adopt is to thoroughly isolate "field" with sponges and bibules; then the gall bladder is aspirated, incised, mopped dry, edges seized with forceps; these are grasped in palm of left hand, while left index finger is inserted into gall bladder right down to opening of cystic duct. With this guide and grip the cysto-hepatic adhesion is most easily separated, and the tip of index finger at duct opening points the site for application of ligature by my assistant; occasionally an omental graft is utilized for stump. The above use of my left hand considerably facilitates examination of cystic and common ducts for calculi, which is always done before ligature is applied. My only regret in twenty years' operating on the gall bladder is that I have not removed it much more often instead of trusting to cholecystotomy with drainage—a method which, as far as permanent cure is concerned, has proved very ineffective in my hands.

Cholecystotomy (after Enteric Fever).—Number of cases, 1; time occupied, 16 minutes. Result: Convalescing.

Hydatid Tumours (Liver).—Number of operations, 13; time occupied, 171 minutes; average to each, 13; maximum 26, minimum 6 minutes. Result: All cured.

On opening the abdomen the whole operative field is packed round and isolated with sponges, the assistant places his left hand flat below inferior angle of wound, and makes constant firm pressure on the abdominal wall. The cyst is then incised, edges rapidly seized with forceps, cyst pulled outwards, and contents evacuated. When the part is clean and dry the assistant removes his hand, the packing is then removed, and the edges of incised cyst wall sutured to upper angle of parietal wound, a large drainage tube inserted into cyst, and remainder of wound closed by interrupted through-and-through sutures.

When the cyst is situated deeply in substance of liver, the following tactics are adopted. An exploratory needle is introduced *in situ;* when fluid is struck the syringe is detached from needle, the latter remaining as a guide; packing having been performed as before mentioned, the blade of a long scalpel is introduced along needle into cyst, needle then withdrawn. An index finger is at once inserted along knifeblade, and knife withdrawn. The cyst with intervening portion of liver is then drawn forwards by finger. Two sharp hooks are now introduced alongside of finger, and made to firmly grasp each side of incised cyst wall. With a full curved needle interrupted through-and-through sutures are introduced on each side. These embrace parietal wall, intervening liver substance, and cyst wall. A large drainage tube is inserted, and lower segment of wound closed. Haemorrhage is generally momentarily brisk in these cases, but if a resolute attitude is taken on plan indicated above, it is of no consequence, and always ceases the moment index finger gets control inside cyst. Paradoxical though it may seem, experience has taught me that no instrument causes less haemorrhage in liver or lung than a good sharp knife. All these cases recovered after protracted convalescence; suppuration seems to be an essential natural factor in removal of fibrous capsules. I make it a rule to get these cases out of bed by the tenth day, and insist on their spending their time in the garden.

Hydatid Liver: Rupture into Lung: Transthoracic Hepatotomy.—Number of cases, 1; time occupied, 7 minutes. Result: Cured.

Before the admission of the patient, a young man, the cyst had been discharging itself via the bronchus, large quantities of purulent offensive bilious material being coughed up. Owing to the occurrence of marked septicaemia, with rapid loss of strength, I had to intervene. I endeavoured to locate cyst with long exploring needle (eight punctures), but failed; concluding that the cyst had collapsed, and was obviously situated near superior border of liver, I adopted a plan of campaign which I had devised on a former occasion and found efficacious. Some 3 in. of seventh and eighth ribs were excised in axillary line; edges of pleural incision were rapidly sewn to diaphragm. The latter having been incised, I worked my right index finger along superior border of liver until I came to a dense adhesion between latter and diaphragm. An exploring needle was then inserted into liver substance at this point, and pus withdrawn. Thanks to the harmonious action of needle, knife, and index finger, daylight was promptly admitted into a small suppurating fetid cavity, containing a gangrenous cyst. This was extracted; a large drainage tube was introduced. Within ten days cough and bronchial discharge had ceased; two months later he left hospital cured. Owing to the patient's very exhausted toxic condition rapidity was essential; luckily I seemed to have the wind at my back from start to finish.

Hepatic Abscess: Transthoracic Hepatotomy.—Number of operations, 3; time occupied, 36, 15, and 8 minutes respectively. Two were cured; *the other died of septic pneumonia.*

Hydatid Lung.—One case; 9 minutes. Cured.

I cannot lay too much stress on the absolute necessity of accurately locating cyst by exploratory punctures before excising rib; the latter must be effected at site where the cyst seems to be most superficial. By attention to this all-important detail life, pleuritis, and operating time can be saved. On excising rib the presenting portion of lung is instantly seized with vulsellum forceps and dragged into wound, which it is made to cork, so that no blood or fluid may subsequently enter pleural cavity. The exploring needle is again inserted into exposed portion of lung, when fluid is withdrawn, syringe is detached, knife passed along needle, needle withdrawn, index finger passed along blade of knife, knife withdrawn, two sharp hooks passed alongside of finger, placed in position, and finger withdrawn. Through-and-through interrupted sutures are then inserted; exposed portion of lung is now allowed to recede to inner level of parietal wound and sutures tied. A short, thick drainage tube is then introduced *just* into cavity of cyst. In interstitial pulmonary and hepatic hydatids rapidity and resolution are the cardinal factors, to which might be added, so as to avoid drowning (pulmonary cases), never move the patient from the dorsal position during operation; if necessary, sit down and work from below upwards.

Hydatid Omentum (size of Orange): Enucleation.—One case, lasting 8 minutes. Result: Normal union.

Hydatid, Mesentery (two "Hen Egg" Cysts).—One case; enucleation in 12 minutes. Result: Normal union.

Hydatid, Pleura: Excision Rib, Marsupialization.—One case, lasting 9 minutes. Result: Cure.

Hydatid, Gluteus Maximus (Drainage).—One case, lasting 10 minutes. Result: Cure.

Hydatid, Pelvic (Drainage).—One case, lasting 46 minutes. Result: Cure.

The patient had had previous operations elsewhere during the past eight years. On exposing the cyst I found it densely adherent to adjacent coils of bowel. The left broad ligament was also adherent and spread out on its anterior surface. The mass seemed to be welded into and to occupy whole pelvic basin. Considering the antecedent history of recurrence, I went for enucleation, but I had not gone far until I found that I had denuded some 4 in. of ileum of its peritoneum, and as I had gained little or no ground, I abandoned the enucleation theory and excised the denuded portion of ileum, uniting gut by end-to-end anastomosis, opened cyst, cleaned out myriads of daughter cysts; some anatomy seemed now to be coming into sight! Seeing what we took to be an independent small-sized cyst near middle line I incised it; it turned out to be a uterus containing a normal ovum (about one month). I completed this unasked-for Caesarean section, fixed the edges of cyst to lower angle of parietal wound, inserted a large drainage tube. The lady was out of bed on the twenty-first day, the wound being healed and *all* functions normal.

Partial Obstruction, Ascending Colon, Band, Mesenteric Adenitis: Appendicectomy.—One case, lasting 26 minutes. Result: Normal union.

At site of a large calcareous gland the bowel was found partially occluded by a narrow band of what looked like an old detached strip of omentum. This along with adjacent dense adhesions was removed, the gland enucleated, and appendix extirpated for insurance reasons.

Salpingo-oöphorectomy, Hysteropexy, Appendicectomy.—Number of cases, 10; time occupied, 177 minutes; average to each, 17.7; maximum 34, minimum 11 minutes. Result: Normal union in all cases.

In this series only one tube and ovary were removed in each case; all were non-suppurative. Hysteropexy is employed in these cases to elevate the parts so as to prevent the formation of adhesions with stump in depth of pelvis, and which I have known to cause subsequent fixed retroversion of uterus. *Re* appendicectomy: Some years ago, after a simple salpingo-oöphorectomy on right side, the patient developed symptoms of complete intestinal obstruction on the eleventh day after operation. On opening the abdomen I found the tip of appendix glued to stump, forming a tight band constricting an underlying coil of ileum. Since that lesson the appendix has ceased from troubling.

Bilateral Salpingo-oöphorectomy, Pyosalpinx, Hysteropexy, and Appendicectomy.—Number of cases, 7; time occupied, 185 minutes; average to each 27; maximum 41, minimum 16 minutes. Result: All healed within a month.

Drainage was employed in each instance for at least seven days, and Lister's catgut was exclusively used for ligatures and sutures. Since adopting catgut in these cases of pyosalpinx I find that healing is considerably accelerated. I have had my share of bitter experience awaiting the discharge of what must be infected masses of silk. All the above were healed within a month. In the primary walling off of the peritoneal cavity before these collections are attacked I find nothing so useful as three or four large-sized Turkey sponges, supplemented with bibules to edges of parietal incision. By this means the chances of serious infection are reduced to a minimum; needless to say, the hands must be frequently rinsed in mercurial lotion during the performance.

Combined Operations.—Mrs. D., aged 35, a thin but wiry Irish lady, entered hospital with the following conditions: Endometritis, laceration of cervix, retroversion of womb, with slight prolapse, cystic ovary (right), and a very movable right kidney. I commenced by dilatation (Hegar) and curetting endometrium, excised the hypertrophied lacerated cervix, and performed posterior colporrhaphy. Time occupied, 13 minutes. Then I opened the abdomen, removed the right cystic ovary and appendix, ventrifixed the uterus, and closed wound. Time occupied, 12 minutes. Next a lumbar incision was made, and the kidney fixed by Lane's method. Time occupied, 8 minutes. Total time absorbed in the three operations, 33 minutes. Total time, including removal and application of bandages and dressings, 42 minutes. No shock followed. Temperature and pulse remained at normal, and the patient left hospital aseptically cured on the thirty-second day.

Ovariotomy and Appendicectomy.—Number of cases, 9, including one of primary ovarian gestation. Time occupied, 138 minutes: average 15.3; maximum 17, minimum 8 minutes. Result: Normal union in all cases.

In over 3,000 abdominal operations I have only met with this one case of undoubted primary ovarian gestation. In this instance the sac (about the size of a walnut), grew from free border of left ovary; the ovary with sac was absolutely non-adherent. The tube appeared perfectly free and normal. On opening sac, a perfect ovum, about one month, with some four teaspoonfuls of clear liquid, was found. Normal union took place, and she left hospital on the twentieth day. Ten months previously I had had to operate urgently on this lady for a ruptured extrauterine gestation of right tube.

Bilateral Ovariotomy and Appendicectomy.—One case, lasting 12 minutes. Result: Normal union.

I follow tradition in employing the term "ovariotomy," as meaning removal of developed cysts, as apart from cystic disease of the ovary.

Hysteropexy.—Number of cases, 9. Time occupied, 134 minutes; maximum 25, minimum 7 minutes. Result: Normal union in all cases.

The method I usually employ is as follows (for cases of prolapse after menopause): A transverse incision is made along line of attachment of vesical peritoneum to uterus (as in hysterectomy); the cervical tissue is exposed by blunt dissector, edges of peritoneum held out of the way by forceps, three catgut (medium size) sutures are passed through resistant cervix, about one-third inch apart, the ends of which are drawn out on each side respectively by Childe's forceps through recti muscles, and then tied; thus the exposed cervical tissue is brought into direct apposition with muscular fibres. The first loop of continuous peritoneal closure suture catches up a fold of uterine peritoneum, in order that no raw surface may be left for intestinal adhesion. The suture is then continued in the ordinary way, and wound closed in layers. The results are excellent.

Myomectomy and Hysteropexy.—Two cases, occupying 24 and 49 minutes respectively, and followed by normal union.

Dilatation and Curetting Uterus, Abdominal Hysteropexy, and Lumbar Nephropexy.—One case, occupying 42 minutes, resulting in normal union.

Hysterectomy, Abdominal (Subtotal Fibroids).—Number of cases, 12; time occupied, 373 minutes; average to each 31 minutes; maximum 60, minimum 15 minutes. Result: All discharged cured by twenty-eighth day.

In each instance the broad ligaments were ligated in two or three sections (*plus* a final occlusive ligature) by means of that most handy of instruments, Childe's ligature forceps. In order to keep the game well in hand I suture (continuous) the divided cervical tissue *pari passu* with transverse sectional strokes of the knife; thus by the time the division of fundus from cervix is completed the cervical flaps are practically sutured together. This I find a great help, as it eliminates the tail-wagging dog business of subsequent groping for cervical flaps in the depths of a bloody pelvis. One provided an excellent specimen of "red degeneration." In nine of these cases the appendix was also removed.

Rupture of Ectopic Gestation.—Four cases, which occupied 8, 11, 11, and 13 minutes respectively. Result: All recovered, 3 aseptically.

The condition of the first was so desperate that I had not a moment to make a final inspection to see if all clots were removed. She reacted from the shock, and fourteen days later I had to reopen abdomen and clean out a purulent sanguineous collection from pelvis drainage. She recovered, but died of confluent small-pox nine months later.

In this desperate affection time is everything. I make it a practice, the instant the abdomen is open, irrespective of a "lake of blood," to dash my left hand into pelvis and firmly grip the ruptured tube, which is at once drawn to the surface and removed. Then, if time admits of it, I evacuate blood and clots. In the hurry I confess I forgot drainage in the above case in the first instance. The moral is obvious. Don't forget; when in doubt, drain.

Curetting the Uterus with (Hegar's) Dilatation.—Number of cases, 21; time occupied, 232 minutes; average to each, 11 minutes. One died, a case of hyperemesis, from excessive blood loss at operation. The rest were relieved. I rarely apply chemicals to the endometrium. I always dilate thoroughly and flush out interior with warm oxygen solution.

Faecal Fistula, following Gangrenous Appendicitis and Diffuse Peritonitis.—One case, treated by enterectomy and end-to-end anastomosis; time occupied, 53 minutes. Result: Normal union.

Cocliotomy, Exploratory.—Number of cases, 11; time occupied, 80 minutes; average, 7.3 minutes; maximum 15, minimum 2 minutes. Result: One died (duodenal ulcer, perforation, with advanced diffuse peritonitis); 7 proved inoperable cases of cancer, and 1 afforded an exquisite example of a perfectly symmetrical bicornuate uterus, which was left alone.

Gastro-jejunostomy, Posterior.—Number of cases, 12; time occupied, 379 minutes; average, 31.5; maximum 43, minimum 23. Result: Ten aseptic recoveries, 2 deaths, 1 from previous starvation, the other from cancer.

I rely altogether on the needle and thread for approximation purposes, making liberal use of silk stay sutures as guides and tractors before inserting the outer and inner circular sutures (silk and catgut respectively). I always make a 3 to 4 inch incision in stomach and jejunum, and then purposely halt in order to ligature all spurting vessels. Although I once succeeded (1900) in completing this operation in 18 minutes, a few cases of post-operative haematemesis have slackened the pace, and now I cannot reckon on getting all my sewing in and concluding the job to my satisfaction under 30 minutes.

Nephropexy.—Number of cases, 12; time occupied, 156 minutes; average to each 13; maximum 18, minimum 8 minutes. Result: Eleven healed aseptically; in the remaining case there was some local but unimportant sepsis.

Since 1902, when Mr. Arbuthnot Lane kindly showed me his method, I have used none other.

Nephro-lithotomy.—Two cases, occupying 26 and 9 minutes respectively. Both resulted in cures.

Nephrectomy.—Two cases, occupying 20 and 14 minutes respectively, and both resulting in cures.

Nephrotomy, Exploratory.—Two cases, occupying 11 and 6 minutes respectively. Normal union followed in both cases.

Vesical Calculus.—One case, treated by dilatation; time occupied, 5 minutes. Result: Cure. The patient was a woman.

Urethrotomy, External, and Vesical Drainage.—Number of cases, 5; time occupied, 32 minutes; maximum 12, minimum 3 minutes. Result: Two died from ante-operative uraemia; the other 3 were relieved.

Perineorrhaphy (Lawson Tait).—Two cases, occupying 12 and 11 minutes respectively, and ending in normal union.

Prostatic Abscess: Prostatotomy.—Number of cases, 5; average time occupied, 7 minutes. Result: All cured. Vesical drainage was employed.

Prostatectomy, Suprapubic.—Number of cases, 6; time occupied, 40 minutes: average to each, 6 minutes; maximum 12 (2 cases), minimum 2 (2 cases). Result: All cured.

One of the cases which took two minutes occurred in June, 1912, that is, a few weeks after the date mentioned at the beginning of this paper, but is included as of special interest. The patient was aged 67, and the growth the size of an orange. There was very little haemorrhage and no shock.

Prostatectomy, Perineal.—One case; 17 minutes. The patient had two previous operations in England for subacute abscess. I removed the affected lobe by crescentic incision. He was cured.

Haemorrhoids (Whitehead Modified).—Number of cases, 47; time occupied, 358 minutes; average to each, 7.6; maximum (1 case) 15 minutes, minimum (6 cases) 5 minutes. Result: All were discharged cured by twelfth day.

Pruritus Ani (Ball).—Two cases, occupying 8 and 9 minutes respectively, and resulting in distinct relief.

Empyema (Excision of Rib and Drainage).—Number of cases, 6; time occupied, 44 minutes; maximum 9, minimum 5. Result: One died; the rest recovered.

Breast Cancer (Halsted).—Number of operations, 6; time occupied, 200 minutes; average 33 minutes; maximum 43, minimum 24. Result: Normal union in all cases.

Breast Amputation (Chronic Interstitial Mastitis).—Three cases, occupying 12, 13, and 14 minutes respectively, and all resulting in normal union.

Adenitis, Tuberculous Cervical.—Two cases, occupying 24 and 26 minutes respectively, and each resulting in normal union.

In each the incision extended from mastoid to clavicle, with extensive dissection from and exposure of carotid artery and internal jugular vein.

Thyroid Cyst: Excision.—Three cases, occupying 15, 24, and 7 minutes respectively, and all resulting in normal union.

Otitis Media (Stacke).—One case, lasting 14 minutes. Relieved.

Laminectomy (for Fractured Spine).—One case, lasting 41 minutes. Normal union followed, but the patient was unrelieved, and died three weeks later.

Epiplopexy, Talma-Morison (Cirrhosis Liver).—One case, occupying 16 minutes. The patient was not relieved.

Peritonitis, Tuberculous (Incision).—One case, occupying 10 minutes, and ending in cure.

Varicose Veins.—Number of cases, 9; total time occupied, 212 minutes; average 23. Result: Seven healed normally; in 2 some infection occurred in the eczematous zones.

I commence with a Trendelenburg, and when feasible remove affected vein or veins by one long incision.

Elephantiasis, Scalp.—One case of excision lasting 52 minutes. This was the most hideous deformity I have ever seen on the human skull—a huge, overhanging, brawny, scaly mass, which had at its base an area extending from occiput along superior longitudinal line to and involving right eyelid (complete closure of lids), passing down to zygoma along upper margin of ear back to occiput. The patient (26 years of age) stated that he had had "a lump on his head ever since he could remember," and that it had gradually increased in size. Before coming to the Argentine he consulted surgeons in Manchester, who declined to operate. As the repugnant aspect of this weird kind of "dewlap" prevented his getting work, he begged me to operate. Having explained to him the danger of the procedure, at his request, I went for it; my lines of incision more or less corresponded to above area; the whole intervening scalp with mass was excised. At times the haemorrhage was terrific, but, ably backed by my assistant Dr. Walker, we stemmed the torrent, got him off the table alive, and treated him liberally to saline infusion, etc. A month later I had to do a plastic operation to restore normal position of right eyelid, and afterwards Dr. Walker grafted the granulating scalp with success. He is now, with the help of a wig, a very contented and presentable person. Not a trace of recurrence in twelve months. At page 799 in *Anomalies and Curiosities of Medicine*, by Gould and Pyle, is a figure similar to above case. The latter, however, was more extensive in that it involved right forehead and closed eye.

Branchial Sinus (Atheromatous Cyst), Third Cleft.—One case, occupied 20 minutes, in a girl 14 years of age. A hard, thickened, cord-like mass 2 to 3 in. in length, passing upwards and inwards from anterior border of sterno-mastoid to level of hyoid bone, where it formed a kind of bulb about the size of a grape. The parents' attention was drawn to the trouble by a line of inflammation of skin, which had recently gradually increased in intensity. A corresponding incision was made; a hard calcareous-like tube was exposed. At first its dissection appeared comparatively easy, but on reaching the terminal "cystic" portion I experienced a very bad ten minutes. The mass appeared firmly wedded to the internal jugular vein, carotid artery, and structures about greater corner of hyoid. However I succeeded in extirpating it in mass, escaping with one slight puncture of jugular vein, which, by the way, was anything but easy to repair. Normal union followed. She was discharged on the sixteenth day. Fig. 165 in Keen's *System of Surgery*, vol. iii, page 285, is a facsimile of the tube removed in this case, except in my case there was a cystic kind of bulb at its inner termination.

Fracture, Patella.—Suture, strong catgut; open method; 2 cases, occupying 30 and 12 minutes respectively, and each ending in aseptic cure.

Fracture, Ununited, Femur (Sutured by Wire).—Two cases, occupying 34 and 57 minutes respectively. One united aseptically, the other became septic, and failed to unite.

It should be mentioned that this case had three months' previous treatment with splint and extension; at operation there was not a trace of callus to be seen. Later on, when parts became aseptic, two more attempts were made, free drainage was provided, and, in spite of there being no further infection, callus was conspicuous by its absence; eventually (three months later) amputation was performed at the patient's request; normal union.

Fracture, Humerus, Compound.—Suture, strong catgut. One case, occupying 8 minutes, and resulting in normal union.

Fracture, Inferior Maxilla (Suture around Teeth).—One case, occupying 16 minutes, and ending in cure.

Fracture, Tibia (Ununited).—Number of cases, 5; time occupied, 120 minutes; average, 24 minutes. Result: Normal union.

In all strong catgut sutures were employed.

Fracture, Clavicle, Ununited (Suture Strong Catgut).—One case, occupying 16 minutes, and resulting in normal union.

Dislocation, Anterior Head of Radius (Three Weeks' Duration).—Impossible to reduce, even when parts were exposed by incision. The head was excised. Time occupied, 30 minutes. Normal union followed, and the result is hopeful. The case underwent operation only recently.

Dislocation, Elbow, Backwards (Six Weeks' Duration).—One case; open reduction, occupying 57 minutes. An extremely difficult procedure, ending in normal union. The movements three months later were almost normal.

Ankylosis, Hip (Gonorrhoeal Arthritis: Faulty Position of Limb).—Osteotomy through neck of femur: one case, occupying 32 minutes. Aseptic healing in good position.

Amputation at Hip-joint.—Two cases, occupying 15 and 18 minutes respectively, and resulting in normal union.

Excision, Hip.—Tuberculous disease. One case, occupying 23 minutes. Probable cure.

Excision, Wrist.—Tuberculous disease. One case, occupying 22 minutes. Result: Very hopeful.

Excision, Superior Maxilla.—Necrosis, profound septicaemia before operation. One case, occupying 10 minutes. Died.

Excision, Ankle-joint.—Two cases, one tuberculous and one necrosis (traumatic), both recent. Each occupied 16 minutes. Result: One looks most hopeful, the other doubtful.

Bullet in Head of Humerus.—One case, 22 minutes, helped by an excellent *x*-ray photograph by my colleague Dr. Pennington. I made a long vertical incision through deltoid muscle, opened joint, dislocated head forwards and outwards, extracted bullet from its apparently comfortable bed in cancellous tissue of head, reduced dislocation; interrupted sutures, leaving room for free drainage. Aseptic healing ensued. He left hospital with fair movement. A few months later my friend Dr. Taylor of Dublin broke down some adhesions under $CHCl_3$; movement is now normal.

Acute Epiphysitis, Left Tibia (Lower); Pyaemia.—One case, in a boy aged 13, and ending in cure.

This was indeed a desperate affair. I chiselled open the greater portion of tibia and cleared out a medulla full of purulent material. As the left shoulder was distended, I performed arthrotomy, removing some 6 oz. of pus. Four days later the left ankle-joint became suddenly swollen; immediate arthrotomy and drainage. A fortnight later, shoulder again became distended; arthrotomy, removal of pus and some necrosed bone. A month later the left hip-joint became similarly involved; immediate incision and evacuation of some 12 oz. of pus. Recovery ensued. Immediately after first operation he was placed permanently in an open, sunny corridor. A pint of "Pol Roger" was daily administered for weeks with the greatest benefit. When the tibial wound had cicatrized he was sent to the seaside for a month. Cured.

Semilunar Cartilage, Right Knee: Excision.—One case, occupying 23 minutes, and giving a normal result.

Arthrotomy, Knee-joint: Haemarthrosis (Gonorrhoeal and Infective Arthritis).—Number of cases, 20; time occupied 102 minutes; average to each, 5 minutes. Result: All healed aseptically and were discharged cured by thirtieth day.

In each instance drainage was provided for at least forty eight hours. I always make an incision through each side of distended capsule, insert a large through-and-through drainage tube, and flush out joint twice daily with warm oxygen lotion. Arthrotomy without drainage in infective cases is, to my mind, senseless.

Multiple Arthrotomy.—Total time occupied, 14 minutes. The patient, a man aged 38, was admitted to hospital suffering from what was apparently rheumatic fever. Temperature varying from 100° to 102°: tongue coated, both knees and ankles swollen and painful, and metacarpo-phalangeal (middle finger) also swollen and tender. He was treated as usual with 30-grain doses of sodium salicylate, guarded with drachm doses of sodium bicarbonate every three hours. As no improvement took place with seven days' treatment, on April 9th I opened both knees and ankles by bilateral incisions, evacuated a large quantity of turbid flaky serum from the knees, and a small quantity of same from each ankle. I inserted through-and-through tubes in the four joints, and washed out twice daily for three days with oxygen lotion. I should have stated I also incised metacarpo-phalangeal joint at same time as others. The drainage tubes were removed on the fourth morning. Normal healing ensued. Temperature gradually became normal; no more pains followed. He was allowed out of bed on April 20th (eleventh day), and he walked out of hospital cured on April 29th. I have operated on many such cases, but I have never before met with such a rapid convalescence.

The system employed in timing operations is as follows: The charge theatre nurse writes down the time by the clock the moment knife enters skin, and when final skin suture is tied calls out the time occupied. This is immediately written down by her on the operation slate, under the supervision of the resident medical officer, who later on in the day fills in all details in the operation register.

In conclusion, we have found that the employment of ether by the open method has so materially diminished the percentage of cases of shock that it is no exaggeration to state that I do not have one such case a month.

In serious cases of ante-operative toxaemia we have found the placing of the patients permanently out of doors, immediately after operation, to be of immense service, and during the early convalescent stage in such cases we have experimented purposely, and have proved over and over again that there is no drug, or anything else, equal to the

daily administration of a pint of the best dry champagne for a week. In connexion with this matter, it is only just to state that the committee of the hospital have never once questioned such expenditure.

I should be sorry to conclude this paper without recognizing the services of my staff. We all formed a machine, each part of which was indispensable to the whole. I often wish I could have the chance of similarly burying my individuality when operating in houses and homes. And in order to show the confidence I have had in my assistants, Drs. Walker and Pringle, I need only state that accident and emergency operations are their perquisite.

THE PRODUCTION OF GENERAL SYMPTOMS IN HAEMOGLOBINAEMIA.

BY

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AND

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In the course of a previous investigation upon the effect of intravenous injection of laked red cells,[1] the conclusion was reached that the effective agent in causing an alteration of the general condition of the animal injected was represented by the red cell stromata, and not by the haemoglobin given up by the red cells when laked. As these observations appeared likely to throw some light upon the origin and nature of the general symptoms attending haemoglobinaemia due to the destruction of red blood cells, such as occurs naturally in paroxysmal haemoglobinuria and in blackwater fever, it was determined to repeat on a more extended scale some of the observations already made.

To this end the series of experiments recorded in Table I was made. These experiments fall into three groups. In the experiments of the first group the red cells of rabbit's blood, after twice washing with 0.85 per cent. sodium chloride solution, were laked by the addition of an equal volume of distilled water, solid sodium chloride being added at the end of five to ten minutes in amount equal to 0.85 per cent. of the distilled water employed. A portion of the liquid so obtained was injected intravenously into rabbits. The rest of the liquid was centrifugalized, and thereby separated into a clear supernatant fluid, ruby red in colour, containing haemoglobin, and a viscid jelly-like sediment of stromata. The supernatant fluid was pipetted off and used for intravenous injection of a second group of rabbits; the sediment was mixed with an equal volume of 0.85 per cent. solution of sodium chloride, and the stromata were then distributed uniformly in the liquid by stirring with a glass rod, the liquid so obtained being employed for intravenous injection of a third group of rabbits. In all experiments the injection was made slowly, 3 c.cm. of fluid a minute being delivered into the vein of the ear.

It will thus be seen that three liquids were used for injection. The first contained dissolved haemoglobin together with suspended red cell stromata; the second contained dissolved haemoglobin in approximately the same concentration as the first but was free from stromata; the third contained both stromata and dissolved haemoglobin, the amount of the former being the same as in an equal volume of the first liquid, while the concentration of dissolved haemoglobin was approximately half that present in the first liquid. In the tables the haemoglobin and stromata respectively are expressed in terms of the volume of red cells required to furnish the amounts injected, and, for convenience of comparison of the experiments one with another, these quantities are given per kilogram of body weight of the animal used for injection.

Comparing the three groups in Table I, it is seen that in those experiments in which red cell stromata were injected (the first and the third groups) death or severe symptoms usually followed injection, the amount of stromata employed per kilogram of body weight of the rabbits being represented by amounts of red cells ranging from 4 c.cm. to 20 c.cm. In experiments 4 and 21, in which the amounts of stromata per kilogram of body weight were represented by 12 c.cm. and 5 c.cm. respectively, no ill effect followed injection. The amount injected in the latter experiment is in the neighbourhood of the lethal dose, but in the former experiment there is encountered an individual variation in susceptibility to injection which is from time to time met with in rabbits, and is further illustrated in the second group in the same table (Experiments 6 to 13), and also in Table II.

TABLE I.—*Intravenous Injection of Laked Red Blood Cells, Dissolved Haemoglobin, and Red Cell Stromata. First Series.*

No. of Experiment.	Weight of Rabbit in Grams.	Haemoglobin injected per Kilo of Body Weight (in Terms of Red Cells).	Stromata injected per Kilo of Body Weight (in Terms of Red Cells).	Result.
1	370	20 c.cm.	20 c.cm.	Died six minutes after injection.
2	746	15 ,,	15 ,,	Died three and a half hours after injection.
3	373	15 ,,	15 ,,	Convulsive attack one and a half hours after injection, followed by recovery.
4	485	13 ,,	13 ,,	No marked ill effect followed injection.
5	340	4 ,,	4 ,,	Died at end of injection.
6	240	30 c.cm.	Removed by centrifugalization	Not markedly affected by injection.
7	400	30 ,,	,,	Slight lassitude after injection.
8	342	24 ,,	,,	No marked ill effect followed injection.
9	455	20 ,,	,,	Collapse after injection followed by recovery and subsequent relapse. Killed four hours after injection.
10	260	20 ,,	,,	Died at end of injection.
11	400	12.5 ,,	,,	No marked ill effect after injection.
12	300	12.5 ,,	,,	No marked ill effect after injection.
13	260	9.0 ,,	,,	Collapse after injection followed by recovery.
14	370	7 c.cm.	14 c.cm.	Died one minute after injection.
15	556	5 ,,	10 ,,	Died one and three-quarter hours after injection.
16	612	5 ,,	10 ,,	Died five and a half hours after injection.
17	712	5 ,,	10 ,,	Died two and a half hours after injection.
18	330	3.5 ,,	7 ,,	Died three hours after injection.
19	520	2.5 ,,	5 ,,	Paresis of hind legs after injection followed by recovery.
20	550	2.5 ,,	5 ,,	Died one and three-quarter hours after injection.
21	580	2.5 ,,	5 ,,	No marked ill effect followed injection.

NOTE.—In experiments 1 to 5 the material injected was laked blood cells; in experiments 6 to 13 haemoglobin solution; and in experiments 14 to 21 red cell stromata (sediment after centrifugalization).

When the solution of haemoglobin free from stromata, prepared as described above, was injected in amount represented by 30 c.cm. to 9 c.cm. of red cells per kilogram of body weight, it was observed that in most experiments no obvious ill effect followed injection. Two animals, however, became collapsed after injection (20 c.cm. and 9 c.cm. respectively per kilogram of body weight), and one died at the end of injection (20 c.cm. per kilogram of body weight). These experiments, which indicate the different degrees of susceptibility exhibited by individual rabbits, illustrate, when taken in conjunction with the preceding and succeeding series, the relatively slight ill effect ordinarily following injection of even large quantities of haemoglobin compared with the lethal character of small amounts of stromata. The experiments further suggest that when symptoms make their appearance after injection of large quantities of solution of haemoglobin, freed as far as possible from stromata by long continued centrifugalization, the ultimate source of the symptoms is perhaps to be found not in the haemoglobin, but in some stromata still remaining in the fluid injected.

A second series of experiments of the same type are recorded in Table II. It will be seen that although some variations are met with in individual experiments (for example, Experiments 3 and 11), nevertheless, on the

TABLE II.—*Intravenous Injection of Laked Red Blood Cells, Dissolved Haemoglobin, and Red Cell Stromata. Second Series.*

No. of Experiment.	Weight of Rabbit in Grams.	Haemoglobin injected per Kilo of Body Weight (in Terms of Red Cells).	Stromata injected per Kilo of Body Weight (in Terms of Red Cells).	Result.
1	228	12 c.cm.	12 c.cm.	Died at end of injection.
2	228	12 „	12 „	Died at end of injection.
3	228	8 „	8 „	No marked ill effect followed injection.
4	256	8 „	8 „	Died three and a half hours after injection.
5	570	8 „	8 „	Died at end of injection.
6	496	7 „	7 „	Died one minute after injection.
7	171	5 „	5 „	No marked ill effect followed injection.
8	300	5 „	5 „	Died eight hours after injection.
9	214	2.5 „	2.5 „	No marked ill effect followed injection.
10	385	27.5 c.cm.	Removed by centrifugalization	No marked ill effect followed injection.
11	385	20 „	„	Collapse at end of injection, followed by complete recovery.
12	313	15 „	„	No marked ill effect followed injection.
13	342	15 „	„	No marked ill effect followed injection.
14	342	10 „	„	No marked ill effect followed injection.
15	385	8 „	„	No marked ill effect followed injection.
16	484	7.5 c.cm.	15 c.cm.	Died thirty-eight minutes after injection.
17	256	7.5 „	15 „	Died one hour and fifty minutes after injection.
18	400	6.5 „	13 „	Died at end of injection.
19	400	5.0 „	10 „	Died twenty minutes after injection.
20	356	5.0 „	10 „	Died eleven hours after injection.
21	313	2.5 „	5 „	No marked ill effect followed injection.
22	400	2.5 „	5 „	No marked ill effect followed injection
23	228	1.25 „	2.5 „	No marked ill effect followed injection.

NOTE.—In experiments 1 to 9 the material injected was laked red blood cells; in experiments 10 to 15 haemoglobin solution; and in experiments 16 to 23 red cell stromata (sediment after centrifugalization).

whole, fairly concordant results are obtained. The very slight effect produced by the injection of large amounts of haemoglobin and the extremely lethal character of injection of stromata in relatively small amounts are much more effectively exhibited in this table than in Table I.

The character of the symptoms was the same whatever the material injected. The most acute symptoms, appearing towards the end of or shortly after injection, were convulsions of an opisthotonic type, rapidly terminating in death; sometimes collapse preceded or replaced convulsions, and usually the heart continued to beat for about a minute after respiration had ceased. In less severe cases difficulty of respiration was observed, attended with feebleness; if recovery did not occur death was preceded by convulsions. In other cases increased respiratory movements and refusal of food were the only definite indications of illness. After death the lungs generally collapsed normally on opening the chest, though occasionally collapse took place somewhat slowly.

As in the experiments already published, delayed coagulation of the blood was observed after injection. A number of additional observations, which have been collected from a large series of experiments, are grouped together in Table III. They were made with the aid of Dale and Laidlaw's coagulometer.[2] It will be seen that considerable variation is observable in respect of the time of onset of coagulation at 37° C. In general the onset is delayed, and occurs at the end of one to nine minutes, but in exceptional cases the coagulability of the blood is increased, clotting taking place at the end of twenty to thirty seconds (the normal time of coagulation of rabbit's blood *in vitro* at 37° C. is generally about sixty seconds, rarely exceeding seventy-five seconds, and being occasionally only about thirty seconds in very young animals). In one experiment the blood remained liquid, and in another clot was found in the heart immediately after death. No clear relation is, however, observed between (1) the alteration of coagulability and (2) the amount of material injected or the length of time elapsing between injection and examination at time of death.

The alteration of coagulability of the blood after injection, taken in conjunction with the circumstance that red cell stromata in presence of calcium chloride act as a coagulant *in vitro* of blood plasma or of a solution of fibrinogen, suggests that the symptoms attending injection may be due to intravascular separation of fibrin.[3] To test this point microscopical examination of the viscera was made in all cases of death following injection. Masses of fibrin were found in the blood vessels of the lungs in some experiments, while in others the result of very careful search was negative; thus out of nineteen experiments, in which laked red cells or red cell stromata were injected with fatal result, fibrin masses were found in the blood vessels of the lungs in nine cases. The appearance presented is illustrated in Fig. 1, in which a scanty collection of fibrin fibrils is shown within the lumen of a venule of the lung. In Fig. 2 fibrin has separated out in the form of beaded threads; this form is unusual and is generally associated with the former. Not infrequently collections of leucocytes, usually polymorphonuclear, were seen in the

TABLE III.—*Effect of Injection upon Coagulation of the Blood.*

Material Injected.	Haemoglobin injected per Kilo of Body Weight (in Terms of Red Cells).	Stromata injected per Kilo of Body Weight (in Terms of Red Cells).	Time of Death.	Coagulation Time (37° C.).
Laked red cells	25 c.cm.	25 c.cm.	At end of injection	20 sec.
„	15 „	15 „	8 min. after injection	6 min.
„	8 „	8 „	1½ hrs. after injection	2 min.
„	8 „	8 „	3½ hrs. after injection	Clot in heart at time of death.
„	8 „	8 „	At end of injection	5 min.
„	7 „	7 „	1 min. after injection	5 min.
„	5 „	5 „	4 hrs. after injection	1½ min.
„	5 „	5 „	3½ hrs. after injection	20 sec.
„	5 „	5 „	8 hrs. after injection	Remained liquid.
Haemoglobin solution	20 c.cm.	—	4 hrs. after injection	1½ min.
„	15 „	—	At end of injection	4 min.
Red cell stromata	7.5 c.cm.	15 c.cm.	38 min. after injection	Blood in heart clotted 8 min. after death.
„	7.5 „	15 „	2 hrs. after injection	30 sec.
„	7.0 „	14 „	1 min. after injection	1 min.
„	6.5 „	13 „	At end of injection	9 min.
„	5.0 „	10 „	20 min. after injection	1 min. 10 sec.
„	5.0 „	10 „	1¼ hrs. after injection	4 min.
„	5.0 „	10 „	5½ hrs. after injection	3½ min.
„	3.5 „	7 „	3 hrs. after injection	1 min. 10 sec.
„	2.0 „	6 „	1½ min. after injection	Blood collected from heart formed a firm clot at room temperature.
„	1.4 „	4 „	2½ hrs. after injection	Blood collected from heart formed a soft clot at room temperature.
„	1.2 „	3.5 „	3 min. after injection	1½ min.
„	1.0 „	3.0 „	3 min. after injection	1 min.

blood vessels of the lungs (Fig. 3); these possibly represented the sites of intravascular collections of fibrin which have disappeared as the result of phagocytosis. The masses of fibrin when present were, however, in such

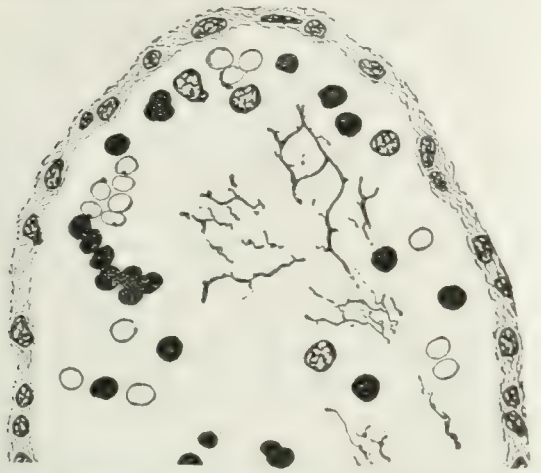


Fig. 1.—Section of small vein of lung of Rabbit 20, Table II. The lumen of the vessel contains red cells and red cell stromata (the latter more numerous than represented in the sketch), together with a few leucocytes and fibrils of fibrin, the latter forming a very irregular network. Stained with iron-alum haematoxylin. × 500.

exceedingly sparse numbers that it seemed very improbable that they can be the cause of the symptoms observed after injection. This conclusion is borne out by a circumstance which has not yet been referred to, namely, that when blood obtained from the heart immediately after death clots, the clot, which, as already mentioned, is generally formed slowly, is nevertheless not, as a rule,



Fig. 2.—Section of small vein from lung of Rabbit 15, Table I. The lumen of the vessel is occupied by granular material (not shown in the sketch), representing precipitated protein, retracted from the vessel wall, in which are seen several moniliform fibrin threads of varying length and also a few isolated granules. A small number of leucocytes are visible below, together with three red blood cells, two of which are seen in optical section, the third being decolourized. Stained with iron-alum haematoxylin. × 530.

lacking in firmness, so that no obvious defect of fibrinogen in the blood can be recognized. This is not, however, invariably the case, for, as already noted, the blood occasionally formed a very soft clot or failed to coagulate, remaining liquid (Table III). Even in the latter cases, however, fibrin masses were very sparse or could not be found in the pulmonary blood vessels, and appeared to be absent in the blood vessels of the other viscera. Further



Fig. 3.—Section of small vein from lung of Rabbit 15, Table I. The lumen of the vessel is occupied by granular material (not shown in the sketch), representing precipitated protein, in places retracted from the vessel wall, together with numerous polynuclear leucocytes, situated towards the right. The leucocytes are more numerous than would appear from the sketch. No red cells or red cell stromata are present in the vessel. Stained with iron-alum haematoxylin. × 450.

light may be expected to be afforded by a determination of the amount of fibrinogen in the blood plasma in those rare cases in which blood collected from the heart immediately after death remains liquid. This occurred in Experiment 9, Table III, but unfortunately an opportunity of estimating the content of fibrinogen was not afforded in this experiment. As already mentioned, this result of injection is an occasional and quite exceptional occurrence, and cannot as yet be produced intentionally.

It thus does not appear possible to attribute the general symptoms attending injection of red cell stromata to a purely mechanical effect of injection brought about by intravascular production of fibrin, for the amounts so produced are very small, and fibrin cannot be detected in every case of death following injection. Nevertheless it must be admitted that the irregular character of the result of injection of laked red cells or red cell stromata strongly suggests a mechanical lesion, for it is to be observed that neither the time of onset nor the severity of symptoms corresponds closely to the amount of stromata injected, and this would appear to be most simply explained on the assumption that a blocking of blood vessels occurs, the incidence of which would be expected to vary in animals of different ages and unequal powers of accommodation to obstruction of the circulation of the blood.

Two facts, not hitherto referred to, suggest the possibility of occurrence of mechanical obstruction of the circulation after injection of liquids containing stromata; one is the circumstance that when such liquids are examined microscopically it is found that the stromata are aggregated into masses of varying size, the exact limits of which are difficult to define; the other is that when a drop of the suspension of red cell stromata employed for injection is allowed to fall into 0.85 per cent. sodium chloride solution or into rabbit's serum, the drop breaks up into flocculent masses of varying size, forming a coarse precipitate. The latter appearance suggests that it would be impossible to inject such a liquid into a vein without the occurrence of blocking of the blood vessels of the lungs, and at first sight appears to furnish a complete explanation of the symptoms following injection. On searching for evidence of such obstruction in sections of the lungs we have not, however, been able to obtain, by any of the staining methods adopted, satisfactory evidence of blocking of pulmonary vessels,* though careful

* The presence of collections of leucocytes in the pulmonary vessels already alluded to is consistent with the hypothesis of an antecedent plug of stromata in these vessels.

observation has been made in all experiments in which injection has been followed by death.

The alternative hypothesis is that the symptoms are toxic in character, due either to substances dissolved out of the stromata before injection or dissolving in part, at any rate, in the blood plasma of the animal after injection. This hypothesis does not appear to us to account so satisfactorily for the variability observed in the time of onset and severity of the symptoms following injection of stromata holding liquids, as does the mechanical explanation above suggested.

Neither of the two hypotheses appears to furnish a satisfactory explanation of the occasional appearance of acute symptoms following upon the injection of solution of haemoglobin free from stromata.

Before concluding this article reference may be made to a series of seven experiments, in which from 7 c.cm. to 2.5 c.cm. per kilogram of body weight of laked rabbit's red cells were injected intravenously into rabbits in which both vagi had been divided before injection. The object of the latter procedure was to avoid the production of reflex arrest of respiration should the stromata injected be capable of exerting any marked local action upon the pulmonary tissue. These experiments, however, afforded no evidence of such action; at the time of death the heart was observed to continue beating after the cessation of respiration, exactly as occurred in those experiments in which division of the vagi had not been practised.

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A CASE OF EOSINOPHILE ASCITES: WITH REMARKS.

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Eosinophile ascites has, so far as I can find out, hardly ever been recorded. This rather contrasts with the attention which has been devoted to the occurrence of eosinophile cells in the exudate of experimental acute peritonitis in its earliest stages, especially by Durham, Opie, Dudgeon and Ross. But the exudate of acute peritonitis in human beings rarely contains as much as 1 per cent. of eosinophile cells. In this case of eosinophile ascites acute peritonitis brought the eosinophile count down from 22 to 0.5 per cent. The explanation of a haemic eosinophilia of 12 per cent. is not obvious in the absence of animal parasites. Possibly it may be connected with the presence of carcinoma, for Weinberg and C. Mello[3] found 5.33 per cent. of eosinophiles in carcinoma of the colon, and 6.6 in carcinoma of the liver.

History and Course.

A male, aged 52, at the end of September, 1913, had colic and vomiting two days after eating some fish, followed gradually by jaundice and putty-like stools, and about the middle of October by transient pruritus. He was admitted to St. George's Hospital on November 4th with considerable jaundice, some rather vague resistance in the right loin, an enlarged and tender liver, and tenderness near the umbilicus. The gall bladder and the spleen could not be felt. For a time there was some apparent improvement, but on November 21st ascites was obvious, and on December 3rd 7 pints of fluid were removed; Dr. E. L. Hunt found that this contained red blood corpuscles, lymphocytes 46 per cent., endothelial cells 29, eosinophiles 22, polymorphonuclears 2, mast cells 1. The Wassermann reaction in the ascitic fluid and in the blood was negative (Mr. H. W. Bayly). A differential count of the haemic leucocytes (total count 17,040) showed: Polymorphonuclears, 71 per cent.; lymphocytes, 16.5; mononuclears, 0.5; cosinophiles, 12; mast cells, 0. Examination of the stools did not reveal the presence of any ova of worms. The urine constantly contained bile pigment, but not bile salts, and there was no sugar; in the last week of life there was a trace of albumin on two occasions. Early in December the base of the right lung was found to be dull on percussion, breath sounds to be absent, and skiagraphy showed opacity. On December 12th the patient had severe abdominal pain, and the pulse rose to over 100. The pain gradually increased and necessitated the use of morphine. On December 14th the patient became comatose and died on December 15th at 2 a.m. His temperature, which had always been about normal, rose to 99.6° F. on December 14th.

Necropsy.

The necropsy was performed by Dr. R. S. Trevor. The skin was universally jaundiced. There was acute peritonitis with a copious effusion which, Dr. E. L. Hunt reported, contained polymorphonuclear cells 79 per cent., lymphocytes and endothelial cells 21 per cent.; a count of 400 white cells showing two eosinophiles. There were numerous minute secondary growths on the peritoneum, especially on the diaphragm, which was much thickened. There was a primary "colloid" carcinoma in the ascending colon just above the ileo-caecal valve, which was not narrowed. The caecum was high up in the abdomen on the right side. The liver, 5½ lb., contained numerous secondary growths, some of which were "colloid." There was much matting in the portal fissure, but the portal vein was free from thrombosis. The walls of the gall bladder were white, thickened, and microscopically infiltrated with carcinoma. There were no biliary calculi. The kidneys, 8 oz. each, were bile-stained, but otherwise normal. The spleen, 8 oz., was soft. There was a bilateral bile-stained pleural effusion; there was recent pleurisy on the right side; the fluid was not examined. There was extensive collapse of the lower lobes of both lungs. The apex of the right lung was free from tuberculosis, but near the apex of the lower lobe there was a small calcareous mass. There was no evidence of tuberculosis in the left lung, or of metastases in the lungs or pleurae. The heart, 11 oz., was soft, and the endocardium bile-stained. On the anterior cusp of the mitral valve there was a small serous cyst, the size of a sixpence; as this burst on examining the heart its contents could not be investigated.

Microscopically the cyst was shown to be due to oedematous separation between the superficial and the deep layers of the valve segment, and not to present any evidence of a hydatid cyst. There was no trace of hydatid disease elsewhere in the body. Microscopically the growth in the colon was a columnar celled carcinoma showing extensive myxomatous degeneration. Sections of the primary growth and of the peritoneal metastases did not show eosinophilia.

In this case the discovery of ascitic eosinophilia suggested hydatid infection of the peritoneum, on the ground that haemic eosinophilia may accompany hydatid disease. But I was somewhat surprised at the apparent absence of any published evidence that rupture of a hydatid cyst into the peritoneum caused a local eosinophilia in that serous sac. I therefore wrote for information to Professor F. Dévé, of Rouen, the authority on hydatid disease, who very kindly replied:

> Peritoneal eosinophilia does, indeed, sometimes occur as the result of intraperitoneal rupture of a hydatid cyst—with or without choleperitoneum—but, so far as I know, one case only has been recorded—namely, in Brouqueyre's thesis, "De l'éosinophilia générale et locale dans les kystes hydatiques" (*Thèse de Bordeaux*, 1905, p. 70). This observation was also given *in extenso* (without any fresh cytological details) in Tremblin's thesis, "De l'ouverture spontanée des kystes hydatiques du foie dans le péritoine" (*Thèse de Paris*, 1906, No. 283, p. 45, Obs. I). This is the extract from Brouqueyre's thesis: "M. Lereboullet has told me of an extremely interesting case which he watched when under the care of Professor Gilbert. A hydatid cyst of the liver ruptured, but none of its contents passed into the peritoneum. The usual phenomena due to a secondary ascites of no great size led to paracentesis. The fluid withdrawn was deeply bile-stained, and, on centrifuging, gave a deposit containing a considerable quantity of eosinophile cells, at least 50 per cent.
>
> I have seen a case of the same kind, which, though I intend to publish it eventually, you are at liberty to quote. In February, 1913, I diagnosed a hydatid of the liver in a man of 23 years of age, and advised operation without delay. Four days later it ruptured spontaneously when he was sitting quietly at his desk doing accounts. Laparotomy twenty-seven hours after the rupture revealed rupture of a hydatid cyst on the anterior surface of the left lobe of the liver and 3 or 4 litres of turbid fibrinous fluid the colour of orangeade and containing scolices. Bacteriological cultures proved that the fluid was sterile, and chemical analysis that it contained urea (0.45 per cent.), fibrin, cholesterin, bile pigments, and traces of glucose, but no bile salts. Cytologically I found polymorphonuclear neutrophiles 85 per cent., eosinophiles 8 per cent., small and medium-sized mononuclears 0.5, large mononuclears (macrophages) 0.5, and red blood cells 5.3 per cent. At the time of the operation the blood contained 2.7 per cent. of eosinophiles (before the rupture it was only 0.9 per cent.).

Dr. d'Este Emery has told me that on one occasion he found 10 per cent. of eosinophiles in the ascitic fluid of a man who afterwards died of abdominal malignant disease. I have not obtained any other information from published

or personal sources about eosinophile ascites, but a few words may be added about eosinophile pleural and cerebrospinal effusions.

Eosinophile pleural effusions have been reported by Widal and Revaut[9] (4 cases), Barjon and Cade[1] (5 cases), Perkins and Dudgeon.[7] According to Emerson,[3] there is a slight eosinophilia (2 to 5 per cent.) in tuberculous pleurisy, and Mosny, Dumont, and Saint-Girons[4] state that eosinophile pleural effusions are common in Paris. In a traumatic haemothorax the latter observers found 92 per cent. eosinophiles, while the haemic eosinophile count was 4 per cent.; and in 2 cases of pleural effusion due to bullet wounds H. S. Carter[2] reported eosinophilia of 70.2 and 87.8 per cent. respectively. Eosinophile pleural effusions have been regarded as usually transient, benign, and as indicating a process on the way to cure (Widal and Revaut). Perkins and Dudgeon's case, however, proved fatal. Eosinophilia may occur in pleural effusions due to such widely different causes (post-pneumonic, post-typhoid, haemorrhage, granular kidney, rheumatism, tuberculosis) that its presence cannot be correlated with any special etiological factor. In many of the cases the effusions have been sterile on culture. With eosinophile pleural effusions there is usually, though not invariably, haemic eosinophilia, which, however, never approaches the count seen in the serous effusions. Mosny, Dumont, and Saint-Girons contend that in these cases the eosinophilia is a local process, and that under some unknown influence the granulations of the polymorphonuclear neutrophile leucocytes become eosinophile, the curves of the number of neutrophile and eosinophile leucocytes in these effusions varying inversely. This hypothesis as to the origin of eosinophile cells is opposed to the usually accepted view, originally put forward by Ehrlich and subsequently supported by Opie,[6] that the eosinophile cells are always derived from the bone marrow.

Mosny and Harvier[5] report a case of chronic syphilitic *meningitis* in which four lumbar punctures were performed. In the first puncture fluid eosinophiles were absent, in the second they formed 0.3 of the cells present, in the third 5 per cent., and in the fourth 9 per cent. All transitions from lymphocytes to eosinophile cells were seen. The eosinophile cells in the blood were never more than 1 per cent. This was regarded as an example of local eosinophilia due to the transformation of lymphocytes into eosinophile cells, as stated by Dominici.

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SYPHILITIC PARALYSIS OF THE OESOPHAGUS.

BY

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I AM induced to put on record the following case, as, so far as I have been able to look up the literature of the subject, it is an example of a very rare condition.

A gentleman, aged 35, consulted me on March 30th, 1895, complaining of his sight going dark at times, with giddiness, but no pain; he was occasionally faint; he had been ill for a month, and was gradually getting worse; he did not think he ever lost consciousness, and he had certainly never fallen down. His previous health had been good, and he had never had gout or rheumatism; twelve years before he had had a primary syphilitic sore. His father was alive and well; his mother was alive but insane. Two brothers were alive, one well; the other suffered from chronic heart disease, and a sister, aged 42, also suffered from chronic heart disease and kidney mischief. There was no other case of insanity in the family known to him, and no case of fits. During the attacks, which began in the fingers of the right hand and ran up to the shoulder, the arm seemed powerless; his head was drawn to the right, and his speech became thick "like a man who is drunk"; he saw double. Ophthalmoscopic examination showed some haziness of the margin of both discs, especially the left. Physical signs were normal; the urine was thick with urates, but free from albumin and sugar.

He was given a mixture containing iodide and bromide of potassium, and on May 8th he reported that there had been no return of his symptoms since the previous visit, and on December 10th that there had been only two slight attacks of giddiness.

In January, 1898, he saw me again, complaining of giddiness and difficulty of articulation lasting a few minutes. The urine was still normal and the ophthalmoscopic examination still showed some haziness at the margin of the discs. The knee-jerks were present. His pupils reacted well to light, and Romberg's sign was absent. He was advised to resume the iodide and bromide of potassium twice a day. In June he reported that he had been quite well except for occasional giddiness with no loss of consciousness; memory and attention were good. In August he was still keeping to the medicine and was still occasionally giddy, but so slightly that people who were with him did not notice it.

He was not seen again until November, 1902, when I met his family doctor in consultation. He had had difficulty in swallowing, but there was no obstruction to the passage of a sound into the stomach; fluids regurgitated when he attempted to swallow them, and for eight days it was necessary to feed him with a tube. Under antisyphilitic treatment he made a rapid recovery and swallowed naturally, although he could not drink a draught of liquid. There was no giddiness, but he had a sensation of warmth down the left side and the left hand was unable to distinguish between hot and cold. There was no analgesia or anaesthesia. The knee-jerks were present; the pupils reacted to light, and there was no Romberg's sign.

The next note is on March 11th, 1904, when he was again seen in consultation; he thought that his swallowing was not quite what it had been, but there was no apparent difficulty either with solids or liquids. There was still imperfect sensation of heat in the left hand; his eyesight was good; he weighed 13 st. 12 lb.

On June 15th in the same year he came to see me, saying that he had kept well until recently, when he had had a good deal of neuralgia, and his eyesight had gone dim for about twenty minutes. He did not feel giddy, but he was writing at the time and only saw half the page distinctly. The haziness of the optic discs was still present. He was recommended to take his old medicine for a fortnight, and he then reported that he had had one similar attack.

I did not see this patient again until November 19th, 1913, when he consulted me complaining of sleeplessness, which had troubled him for the previous eighteen months. He said he had had no return of his old troubles, but he had had gout several times in the ankle, although not for three or four years. His pulse was 72, regular, and soft; blood pressure 130. The right hand shook, especially when he was writing; it had, he said, done so for many years, and he thought ever since the time when he had difficulty in speaking (March 30th, 1895). He was a stoutly built, healthy looking man, now aged 53; he weighed 13 st. 7 lb. He used to smoke an ounce of tobacco in a day, but had lately reduced this to two ounces a week, and had always taken little alcohol—for years none at all—but lately a glass of whisky the last thing at night; no coffee, and only one cup of tea about 5 o'clock in the afternoon. The knee-jerks were lively; the pupils reacted well to light; there was no Romberg's sign, and on ophthalmoscopic examination the discs seemed quite clear. I ordered him a draught containing 7 grains of veronal sodium and 10 grains of potassium bromide, to be taken at bedtime; on this he has slept quite well, and when last seen had apparently recovered his normal state of health.

Paralysis of the oesophagus is generally dealt with in a summary fashion by systematic writers. The causes given are diphtheria, haemorrhage, softening, tumour or sclerosis in the brain, and pressure from enlarged lymphatic glands on the vagus nerve or disease of the vertebrae, chronic alcoholism, or lead poisoning setting up neuritis. Nowhere have I been able to find any reference to syphilitic paralysis of the oesophagus, but Dr. F. W. Mott[1] has recorded the following case:

A commercial traveller, aged 38, who six months after infection, while seated at the piano singing a comic song to his own accompaniment, suddenly became faint and speechless. His

friends were at first amused, and did not realize that it was not part of the entertainment. They then came to his help and gave him a glass of water, which he was unable to swallow, the fluid regurgitating through the nose. This was followed the next day by paralysis of the left leg, left arm, and left side of the face, including the upper part, and for a month he had to be fed with a tube. This happened in Japan; the doctor treated him by inunction, and after a month he was able to swallow and speak. He was sent to me on his return from Japan suffering with the remains of a left-sided paralysis, including the upper facial muscles, and there was also paresis of the left vocal cord and soft palate. He attended my practice for some years without further symptoms, and gradually improved.

I do not believe there is any reasonable ground for questioning the syphilitic origin of my case, as it occurred as one of a series of syphilitic phenomena which yielded rapidly to specific treatment, and the patient's condition at the present time is not in favour of its being a manifestation of that curiously irregular disease—disseminated sclerosis.

REFERENCE.

[1] *A System of Syphilis*, Power and Murphy, vol. iv. Syphilis of the Nervous System, p. 92.

THE IMPORTANCE OF A LEUCOCYTE COUNT IN DOUBTFUL CASES OF APPENDICITIS.

BY

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THE cases here recorded illustrate in a marked degree the importance of taking a leucocyte count in doubtful cases of appendicitis. This weapon of diagnosis is without doubt daily used, and is, in my opinion, of paramount importance in elucidating vague symptoms referable to the appendix region; it tells whether we may temporize, or whether, on the other hand, we have no time to spare. It is on these cases with a high leucocytosis, and with the constitutional symptoms masked, often both pulse and temperature below 100, that I wish particularly to lay stress; it is these cases which, if watched, so often end in the tragedy of acute suppurative peritonitis: it is, moreover, more common in a first attack, where adhesions do not exist to shut off an appendix distended with infected contents, with usually a stercolith, gradually burrowing its way through the muco-muscular wall of some portion of the appendicular canal; if, in these cases a count shows a leucocytosis of anything between 15,000 and 30,000, the appendix should be at once explored, and the picture usually presented is a semi-gangrenous appendix, the serous coat of which is intact, the lumen distended with foul pus, with one or more stercoliths, but no adhesions, which renders the operation of removal easy and safe.

CASE I.

R. C., aged 14 years, had had no serious illness, but had suffered occasionally from attacks of indigestion.

He was quite well at school on November 13th. He was seen by Dr. Leslie Watt at 9 a.m. on November 14th, when he complained of pain in the right iliac fossa, increased on pressure; he had vomited several times during the night. The pulse was 84, the temperature 98.4° F.; there was no rigidity of the right lower rectus abdominis. He was seen again on the same day at 8 p.m., when he looked flushed, the pulse was 104, and the temperature 100.8° F. There had been no vomiting since the early morning. Hot belladonna fomentations were applied. He was seen again at 8.30 a.m. next day, November 15th. He had had a comfortable night, and looked much better; the pulse was 84, the temperature normal, and pain slight. I was asked to see him at noon; his general appearance was good, and did not in any way suggest the necessity for an operation; pulse and temperature were normal. I took a specimen of blood, and Dr. Pethybridge reported a leucocytosis of 25,000. Immediate operation was urged.

The appendix was found lying free, without adhesions; it was of large size, 1 in. in diameter at about the centre; towards the base it appeared normal, and this was clamped, the stump buried in the caecal wall, the meso-appendix tied off, and the parietes closed in layers without drainage. On opening the appendix it was found tightly distended with foul pus, and there was a large stercolith; the anterior two-thirds of the mucous and submucous coats were gangrenous. Recovery was uneventful.

I have not the slightest doubt that, but for the blood count, this case would in twenty-four hours have become an example of a fulminating appendicitis.

CASE II.

T. L., aged 46, seen in consultation with Dr. George Hillyar. On November 19th he played golf; at night he had pain in the right iliac fossa. I was asked to see him next day (November 20th). There was some tenderness in the right iliac fossa, but no rigidity of the rectus; the patient did not appear very ill. I was doubtful whether the appendix was at fault, as he had previously suffered from attacks of pain referred to the region of the gall bladder; a specimen of blood was taken: Dr. Pethybridge reported a leucocytosis of 14,800.

He was at once removed to a nursing home, and, assisted by Dr. Hillyar, I made an incision over the right rectus; the appendix was found much swollen, coiling round, and plastered to the fundus of the caecum; the parietes were sutured without drainage. The appendix contained a stercolith and 2 drachms of foul pus. This body had a marked resemblance to a gall stone, but it proved to be a stercolith. The patient made a good recovery and left the nursing home in seventeen days.

CASE III.

D. T., aged 8, seen in consultation with Dr. W. L. Hodge. On August 30th he was watching a cricket match; when he returned home at 7 p.m. he complained of abdominal pain; he vomited during the night and had several loose motions; the pain, which was paroxysmal and extended over the abdomen, subsided. At 8 a.m. next day (August 31st) the temperature was 100.6°, the pulse 120; acute abdominal pain returned at noon and continued till 4 p.m. and was more localized in the right iliac fossa; his condition then improved. The temperature was 100° and the pulse 98; the tongue was moist. A leucocyte count was made by Dr. Pethybridge, who reported 22,000.

Immediate operation was performed and I found the appendix of large size and gangrenous, and the gangrene had invaded the serous coat, although rupture had not taken place; infection of the fossa was evident, necessitating drainage. The base of the appendix was divided and buried in the caecal wall. The patient left the nursing home in four weeks and rapidly regained health.

In this case the symptoms were apparently improving and the patient's father, a medical man, was in favour of delay before the blood count was made. I am of opinion that with delay of twenty-four hours the result would probably have been different.

OBSERVATIONS ON THE FUNCTIONS OF THE COLON, WITH SPECIAL REFERENCE TO THE MOVEMENTS OF ENEMATA.

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A STATEMENT by Professor Rutherford Morison to the effect that enemata will travel along the whole of the large intestine and that succussion of the fluid injected can be obtained in the caecum, directed my attention specially to the subject and led to the following observations. He made this remark before *x*-ray apparatus was in use, and therefore before the method of examination by bismuth enemata was carried out as an aid to diagnosis of disease, and at the time, I believe, its truth was generally doubted.

It has now been definitely proved that in animals as well as human beings an enema will travel through the whole course of the large bowel, and the object of my paper is to illustrate this and to record some interesting observations, the result of personal experience with the fluorescent screen, in investigating a large number of cases when bismuth and barium enemata were employed for diagnostic purposes.

Cannon[1] has shown experimentally that in cats enemata will not only find their way into the caecum, but when injected in large quantities will travel through the ileo-caecal sphincter into the small intestine; and on one occasion he observed that the enema injected entered the stomach, for the animal actually vomited a portion of it. He found, however, that the ileo-caecal sphincter remained competent when small enemata were employed, and that to pass the caecum an enema had to be injected under considerable pressure.

Grutyner's[2] observations, published in 1894, seemed to prove that a salt solution containing powdered charcoal when injected into the rectum was carried up the whole

length of the alimentary tract into the stomach, but his results were not confirmed by later observers. Hertz[6] affirms that an injection of bismuth when run into the rectum at low pressure may pass into the ileum, and the same statement has been made by other observers.

My own observations made on patients go to show that enemata invariably travel to the caecum, but rarely any further in normal cases, and that when they do pass the ileo-caecal valve there is, as a rule, some pathological condition present, a point illustrated by the following cases of appendicitis in which intestinal obstruction developed some days after operation for removal of the appendix. The first case was that of a boy aged 14: an appendix abscess was opened and drained, and the appendix removed, and the following day enterostomy was performed for acute intestinal obstruction. After this it was noticed that when an enema was given the salt solution flowed freely out of the enterostomy wound. He succumbed on the fifth day after the second operation, and *post-mortem* examination showed that the enterostomy opening was situated 7 in. above the ileo-caecal valve, and that there was no fistulous communication between the large and small gut. This, of course, proved that the water had not travelled by a short-circuit route.

The second case was a boy, aged 10, who was operated upon for acute perforative appendicitis. The appendix was removed and drainage of the peritoneal cavity was established. Acute obstruction of the small intestine occurred on the eleventh day after the operation, and this necessitated an extensive enterectomy, followed by a small bowel anastomosis: this leaked, and was followed three days later by faecal fistula. Rectal injections of water escaped through the fistulous opening in the abdominal wall. In this case half a pint of water had to be administered per rectum before it appeared on the belly wall.

The third case was that of a labourer, aged 24, who was admitted to hospital with general peritonitis of a week's standing. A fortnight after his admission the appendix was removed. The patient developed a faecal fistula which, at a subsequent operation performed with the object of closing the same, was shown to originate from a loop of small intestine. After this, whenever saline was introduced by the rectum, it came out of the faecal fistula in the belly wall; this took place after 10 oz. of fluid had been injected into the rectum.

It was inferred that in these cases there was paralytic distension of the caecum and adjacent small gut, rendering the ileo-caecal valve and sphincter incompetent.

When employing bismuth or barium enemata for diagnostic purposes it was my practice to place the patient on his back and to inject the fluid slowly and rhythmically by means of Higginson's syringe. Where there was no organic obstruction of the large bowel it was found, as a rule, that bismuth reached the caecum in ten minutes or under (a result rarely obtained before a pint was introduced). The more rapidly fluid was pumped in the sooner the caecum was reached, provided the pressure was not sufficiently great to cause discomfort to the patient and the return of the fluid. The rule was that 1½ or 2 pints were necessary to reach the caecum, and this agrees with the observations of Haenischof, who found that the colon was traversed after 1 litre was introduced—namely, 1.76 pints. Hertz noticed that after more than 1½ pints were used with a pressure of 1½ ft. of water, or even less, the colon contracted and rejected its contents.

At times, no doubt, fluid travels along the bowel at a more rapid rate—for example, in two instances the caecum was reached in eight minutes and the splenic flexure in three and two minutes respectively, in the former case when 6 oz. had been introduced.

I also found that whilst a pint of barium-charged fluid arrived at the caecum in eight minutes, a similar quantity of a fluid of thinner consistency (sterilized milk or water) reached the proximal end of the colon just as quickly—for example, a man aged 40, upon whom caecostomy had been performed for acute colitis, was given an enema of 18 oz. of sterilized milk, and in six minutes this fluid appeared from the caecal fistula. On another occasion the same patient was given an enema of similar nature—12 oz. in amount—but it did not reach the caecum before twenty-five minutes.

Hey Groves[4] made a similar observation in a lad aged 19, with a faecal fistula, the result of acute appendicitis. He found that on injecting from time to time a coloured fluid into the rectum it made its appearance in the caecum after 15 oz. had been given, the amount varying only within limits of an ounce or two. He also observed that the fluid appeared at the caecal fistula not in a continuous stream, but in jets, occurring from four to five times a minute, and from this he concluded that antiperistalsis was responsible for the backward movement of the injection.

With regard to the question, To what extent, if at all, does antiperistalsis take place? it may be mentioned that in none of the cases above referred to could I see any indication of reversed peristalsis. Cannon,[5] in 1902, published observations made on cats after bismuth meals. He found that antiperistalsis definitely occurred and that such movements were limited to the proximal half of the intestine. In 1904 this observation was confirmed by Elliott and Barclay Smith,[6] who demonstrated it in the rat, guinea-pig, dog, hedgehog, and ferret, and concluded from their observations that "antiperistalsis is a characteristic feature of the muscular activity of the colon."

Hertz[7] investigated antiperistalsis in the human colon, but discovered no movement which suggested antiperistalsis, and he came to the conclusion that the passage of fluid from the rectum to the caecum was brought about solely by hydrostatic pressure. This opinion is supported by *post-mortem* investigation. For example, at an autopsy on the body of a man a measured quantity of water was introduced through the anus with a Higginson syringe, and it was found that between 2 and 2½ pints had to be injected before the fluid reached the caecum. This result I have demonstrated on at least two occasions.

It was frequently noticed that when the bismuth or barium were clearly shown in the caecum—that is, when the large bowel had been traversed and its outline revealed—there was little or nothing to be seen to mark the iliac colon, due possibly to tonic contraction of this segment of the bowel. At two points at least the passage of fluid along the colon is apt to be retarded—namely, at the junction of the rectum and pelvic colon, and at the splenic flexure, as Hertz has pointed out—at least with regard to the former site. Experience in the use of the sigmoidoscope throws light upon this, as the anatomical kink may be so acute that at times, even under general anaesthesia, the instrument cannot be passed beyond the rectum. In one case in which there was no obstruction, as shown *post mortem* (for the patient died after an abdominal operation a fortnight later), the barium, even when 2 pints were injected, could not be coaxed beyond the splenic flexure.

Whatever may be the force at work in passing fluids injected in quantity along the colon, whether hydrostatic pressure or antiperistalsis, there must still be some doubt as to the means by which small enemata travel along the bowel, as I think they certainly do.

A nervous hypochondriacal man complained of constipation. His bowels were cleared with a dose of castor oil and by enemata, and at 9 a.m. an enema of potato-starch solution (5 oz.) mixed with bismuth was injected into his rectum, where it was seen by the fluorescent screen. Three hours later it was seen to be still confined to the pelvis. Six hours after the injection it was found to have left the pelvis, and the outline of the descending colon, up to the splenic flexure, was plainly seen, whilst there was still a mass in the rectum. The patient was not examined again for eighteen hours—that is, twenty-four hours after the enema had been administered, and it was then found that the solution occupied the whole of the large intestine up to the hepatic flexure. On examination thirty hours after the injection the bismuth had gone back, so that the ascending colon was occupied down to the level of the iliac crest. Forty-eight hours after the injection it could no longer be made out in the transverse colon; what remained of the mass lay chiefly in the rectum, and only a thin coating could be seen in the descending colon. Although the solution was never seen in the caecum, it seems to be a fair assumption that it reached there some time between the thirtieth and the forty-eighth hour.

Bearing upon this question, the observations of Bond[8] are of interest. He found that indigo granules were present in the mucus from a caecal fistula from twenty-four to forty-eight hours after the dye had been introduced

into the rectum. He states that this back flow occurs independently of muscular contraction, and is brought about by a reversed mucous current along the bowel.

Advantage was taken of the opportunity to investigate the relation between the small bowel and the colon in some 5 or 6 cases of ileo-colostomy (division of the lower end of the ileum and implantation of the proximal end into the pelvic colon low down). An enema of barium sulphate was given in the way already described, and its course watched as it travelled along the bowel. In cases in which the operation had been performed recently—within a month or so—the barium was seen to travel up the large intestine, and in one case to the caecum, but there was no indication that it entered the small bowel.

On the other hand, in cases in which the operation had been performed one or two years previously, the solution ran up into the small bowel, and was seen in distended loops of small intestine lying on the right side of the abdomen; it was not until a considerable amount of the fluid was so disposed that the large intestine proximal to the anastomosis began to show a shadow.

This observation suggests that in cases of ileo-colostomy in which the operation has been performed some considerable time—a year or more—the dilated coils of small intestine adjacent to the colon assume somewhat the functions of the large gut.

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THE PRE-PERITONITIC STAGE OF ACUTE APPENDICITIS.

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IF the mortality from appendicitis is to be reduced almost to vanishing point, it is essential that the earliest signs and symptoms of the condition should be appreciated clearly; the view is accepted in America and is gaining ground in England that every case of acute appendicitis should be operated on within the first twenty-four hours from the onset, or as soon after as is possible. There are two reasons why cases are operated on later than this—either the patient may think that the symptoms are not serious enough to seek medical advice, or his adviser may think the symptoms not typical of appendicitis or not serious enough to demand operation. It is clear that we have no remedy against the first cause save the education of the public, but in regard to the second something can be done by way of explaining that the so-called typical symptoms of appendicitis as given in the textbooks often indicate a somewhat advanced stage of the condition, and that it is impossible to say at the beginning of an attack whether it is likely to be mild or severe in type.

It is desirable and in most cases possible to diagnose appendicitis before peritonitis has set in, or at least before there is any more than that slight amount of congestion of the peritoneum which is commonly associated with any inflammatory process within the gut.

It must be understood that the pre-peritonitic stage does not always coincide with a simple catarrhal state of the mucous membrane; quite commonly there is deep ulceration of the interior of the appendix, and sometimes even gangrene of part of the wall extending through to the peritoneal coat.

In diagnosing the pre-peritonitic stage of acute appendicitis the following points must be noted:

(a) *The History just Prior to the Onset of Pain.*

There is often a history of some unusual irregularity of the bowels. Constipation is of less significance than diarrhoea, which is especially common in children. The occurrence of diarrhoea is likely to mislead; it is probably due to activity in the caecum and colon of the virulent microbes which cause such damage in the appendix. This early diarrhoea has to be distinguished from the later variety due to irritation of the rectum by pelvic peritonitis or a pelvic abscess. Frequently also there is an account given of flatulence or indigestion for a few days prior to the onset of the attack; in a patient who has never previously been subject to pain after food this history should be sufficient to put one on guard.

(b) *The Symptoms of the Attack.*

The early symptoms are pain, nausea or vomiting, local deep tenderness as felt from the abdomen or by the rectum, sometimes rigidity or local distension, and generally fever. The pain in the majority of cases is first referred to the epigastrium and is later localized in the right iliac fossa. But this localization is not by any means constant in the pre-peritonitic stage. Sometimes the patient asserts that the initial pain is felt all over the abdomen, or it may be hypogastric in distribution. When the appendix is in the retro-caecal position the pain may be from first to last felt only in the right iliac fossa. The causes of the early pain are probably two. First, and most important, is the exaggerated peristalsis of the appendix excited by the relative or absolute obstruction to its lumen by a concretion, a kink, or swollen mucous membrane; bacterial infection causes the accumulation of irritating products, which lead to a distension of the appendical lumen. Secondly, there may be bouts of pain caused by painful peristalsis of the caecum. Vomiting generally, but by no means always, occurs in the pre-peritonitic stage, and usually the patient only vomits once or twice. Nausea is nearly always present, even though there be no vomiting. The degree of nausea and the amount of vomiting in this stage appear to depend on two factors—first, the amount of distension of the inflamed appendix; and, secondly, the reflex nervous susceptibility of the patient. Vomiting is thus more prone to occur in children, or in patients whose digestive tract is easily deranged. It may be taken as an important general rule that the severity and frequency of the vomiting at the onset indicate the degree of distension of the appendix, and consequently the immediate risk to the patient that perforation may occur.

Local deep tenderness is probably to be elicited from the onset of the attack, but at first it is frequently masked by the more generalized referred pains. When the latter have subsided the local deep tenderness is easily elicited. Quite frequently there is no superficial tenderness in the early stage.

Rigidity of the abdominal muscles over the appendix is not a constant symptom. In most cases well-marked muscular rigidity coincides with commencing peritonitis, though I have certainly seen it when no peritonitis has been present; but it is quite a common experience (I believe it is the general rule) not to get rigidity in the pre-peritonitic stage. I am certain that the failure to realize this fact is responsible for many delayed operations and lost lives. An appendix may be on the point of bursting into the general peritoneal cavity without a single adhesion to limit infection, though at the same time the abdominal wall may be flaccid and allow of free manipulation without any rigidity appearing. This fact must be known to every surgeon of experience, but in general it is certainly not fully appreciated, nor do the textbooks make the point clear. Rigidity is taught to be one of the earliest signs of acute inflammation of the appendix, whereas in quite a large proportion of cases it is almost completely absent in the earliest stage and in some cases is absent even though pelvic peritonitis exists.

Fever may not be present at the beginning of the attack, but nearly always develops before twenty-four hours have passed. As a rule, the temperature does not go much above normal, two or three degrees being the average elevation. Mistakes are liable to happen owing to the fact that the temperature is not elevated at the time of the onset of the pain, and thus the more serious disease may be mistaken for an attack of simple intestinal colic. In any suspected case the temperature should be taken every two or four hours, and if it rise in a gradual manner it is a point in favour of appendicitis. If at the very beginning of any attack of acute abdominal pain the temperature is raised, the presumption is against appendicitis.

The pulse is only slightly, if at all, accelerated in the early stage; it may be normal in every way, even though the temperature be raised. Any continued or decided acceleration of the pulse generally corresponds with the occurrence of local peritonitis; to wait for such alteration is, therefore, to sacrifice the best time for operation.

When the appendix is acutely inflamed gaseous distension of the caecum is frequently present; this local distension is due partly to the excessive formation of gases by the active bacterial decomposition of the contents of the caecum and appendix, and probably in some cases partly to an accompanying inflammation of the interior of the caecum (typhlitis) with atony of the gut. It is more likely to be present when the appendix is retrocaecal in position and closely embedded in the wall of the caecum. It gives rise to a local swelling with a tympanitic note on percussion, to borborygmi, and occasionally to painful peristaltic waves. This may cause the observer to think that he is merely dealing with a case of caecal dyspepsia, and the swelling of the caecum may mask the inflamed appendix placed behind it; or the painful contractions of the distended gut attempting to empty itself may even suggest intestinal obstruction.

(c) The Order of Occurrence of the Symptoms.

It is largely due to Murphy that the importance of noting the order of the symptoms has been realized. Pain is always the first symptom; a few hours later nausea or vomiting occur; after a few more hours local tenderness manifests itself, and the temperature rises. Murphy states that leucocytosis is a still later symptom. He adds: "The symptoms occur almost without exception in the above order, and when that order varies I always question the diagnosis." Every surgeon who has carefully investigated this point must be able to confirm this dictum, though it must be allowed that important exceptions occur. If fever precedes the onset of pain, if vomiting accompanies or precedes the first bout of pain, it is generally not appendicitis that we are dealing with.

(d) The Local Conditions found on Examination.

On examination of a case of acute appendicitis in the pre-peritonitic stage there will accordingly be found slight elevation of temperature with slight quickening of the pulse-rate. Local tenderness will be determined over the position of the appendix either in the right iliac fossa or on the right wall of the pelvis as felt from the rectum. There may, but more likely will not, be local rigidity. These points, taken with a suggestive history of onset, are in most cases sufficient to enable one to make a diagnosis of acute appendicitis before any local peritonitis has developed. At the same time the great probability of the condition being acute appendicitis does not absolve one from the obligation to make the most thorough examination in order to exclude any lesion elsewhere. Examination of the chest and urinalysis are especially important.

ALTERNATIVE METHODS OF TREATING THE APPENDIX STUMP.

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In the ordinary operation undertaken for quiescent or catarrhal appendicitis, ligature or crushing of the appendix stump followed by its invagination into the caecum presents no difficulty and is entirely satisfactory in its results. In another class of case with local or general suppurative peritonitis and profound toxaemia, any search for the appendix may be mistaken enthusiasm, and likely to extinguish the last hope of the patient's recovery.

Between these two extremes other conditions may be found which may tax considerably the ingenuity of the operator, and cannot be dealt with by the ordinary methods. Such conditions may be encountered in the following type of case. The patient may have been ill for some four, five, or more days, or may in addition have had previous attacks. On opening the abdomen a mass is found, consisting of omentum, ileum, caecum, and appendix, partially or wholly matted together, in the centre of which there may or may not be some thick pus or thin sero-purulent fluid. I have recently operated upon three such cases, in which the condition of the patient contraindicated prolonged manipulation; though it seemed very desirable to remove a highly infective appendix, yet it appeared inadvisable, if not impracticable, to do so in its entirety by the usual method.

In these circumstances I was forced to adopt unorthodox methods of dealing with the stump—methods for which I do not claim originality, though I have not myself seen or heard of their use; as they were very happily successful they may be useful to others.

Cases I and II presented a very similar condition of affairs—a matted mass of bowel and omentum of the consistence of soft cheese, enclosing a little thin offensive fluid, and a gangrenous, perforated appendix. In each case the terminal half of the organ was gangrenous, whilst the proximal half was deeply infiltrated, stiff, and densely adherent to neighbouring bowel. In each case no difficulty was experienced in separating the distal gangrenous portion; it was the proximal half which proved intractable in view of the patient's inability to stand prolonged manipulation.

In Case I separation of the proximal half of the appendix was accompanied by profuse venous haemorrhage, flooding the wound and flowing over the abdominal incision. Attempts at securing bleeding points with forceps only made matters worse, the softened tissues crumbling and tearing with the utmost readiness; the bleeding could only be arrested by firm gauze packing.

It seemed unwise to make further attempts at separating this portion, and accordingly all the freed part of the appendix was tied off, the base was "squeezed" by forceps to obliterate communication with the caecum, and the still adherent proximal portion crushed longitudinally to destroy its vitality. The caecum was now brought up to the abdominal wound and secured by a few points of suture; the "dead" appendix stump was now extraperitoneal, and it was further isolated by ribbon gauze. The usual drainage was employed, with closure of the rest of the incision.

In Case II, with gangrene and local peritonitis, the proximal end of the appendix was adherent to the ileum, and its separation was attended by tearing of the latter. The tear was sutured, and a further attempt made, with a similar result. As time was valuable, the stump was treated as in Case I, the ileum and caecum being secured in the wound and the appendix stump isolated in the abdominal incision.

In Case III an inflammatory mass as large as a child's fist, without abscess formation, was found. The appendix was at first retrocaecal, and then passed upwards and outwards, embedded as it were in the outer wall of the caecum. The caecum itself was glued to the posterior parietes, and was absolutely immobile. The distal half of the appendix lying on the outer caecal wall was easily separated, but the proximal end lying behind the fixed caput caeci seemed a difficult problem. The distal end of the appendix was cut off without ligature, a small stab hole made into the lumen of the caecum through its outer wall, and the open end of the appendix stump thrust into the caecum and secured by two or three points of catgut. The appendix stump now opened into the caecum at both ends, and the wound was closed without drainage.

All three cases made good recoveries. I feel confident that in Cases I and II the crushed appendix stump sloughed into the dressings, and that in Case III it discharged at both ends into the caecal cesspool.

THE thirteenth Congress of the German Orthopaedic Society will be held this year in Berlin on Monday and Tuesday, April 13th and 14th, under the presidency of Professor Th. Kölliker of Leipzig. The principal subject proposed for discussion is the operative treatment of spondylitis, to be opened by Dr. Albee, of New York, with an address on his method of osteoplasty in spondylitis. The next day Professor Biesalski will open the proceedings with an address on the physiological advantages of transplantation of tendons. Among other communications are the following: Dr. Gocht, on the technique of arthrodesis; Dr. Schulthess, on the theory and practice of Abbott's procedure; Dr. Wilms, on the operative treatment of flat-foot.

APPENDICITIS WITH SYMPTOMS RESEMBLING THOSE OF RENAL COLIC.

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BRADFORD.

THE following case is, I think, sufficiently interesting to be worth recording:

W. D., a girl aged 8 years, was suddenly one evening seized with acute abdominal pain, doubling her up and making her scream. This pain did not radiate in any particular direction, but was confined to the region of the umbilicus, and the point of maximum tenderness was just to the right of this spot. The patient vomited, the tongue was slightly furred, and the pulse-rate was 150. The temperature was just above normal, and at the onset there was marked rigidity of the right rectus muscle. The face was pale and drawn, and the child looked very ill. She had previously in the last two years had one or two less severe attacks.

I saw the case about an hour and a half after the onset in consultation with Dr. Wrangham and Dr. Rawson. The pulse-rate had then fallen to 110, most of the pain had subsided, but there was a tender point on deep pressure just to the right of the umbilicus. No tenderness or swelling could be found in the right iliac fossa, and most of the rigidity of the right rectus muscle had passed away. The result of a rectal examination was negative.

There was a history of the urine having occasionally been high-coloured and thick on previous occasions. Thinking that the case might be one of right renal colic, a catheter specimen of the urine was examined. It contained microscopically pus cells and a few blood cells, but no casts or crystals. On agar a pure culture of *B. coli communis* was obtained. It was decided to have an *x*-ray photograph taken in order to help the diagnosis, but before this could be done the patient had similar attacks, some more severe than others.

Urinary antiseptics were given, and the bowels, which had been previously constipated, were encouraged to act with rectal enemata. Under this treatment the child got better, and a further examination of the urine showed it to be free from blood, pus, and organisms. The skiagram was negative.

About a month after the onset the patient got up, as the attacks had ceased, and was taken for a walk by her mother. She felt ill on returning home, and had another severe seizure much like the first. She was put to bed, and, despite rest, the attacks recurred. I saw her again with Dr. Wrangham and Dr. Rawson five weeks after the first consultation, and there was now to be felt an irregular, slightly tender and freely movable mass just to the right of the umbilicus. We diagnosed the tumour as a mass of glands. There was no abdominal distension and no sign of any free fluid in the peritoneal cavity. Rectal examination was again negative.

Laparotomy.

A subumbilical incision was made through the right rectus muscle, and the diagnosis of a mass of glands, evidently inflammatory in nature, was verified. Both kidneys were normal to palpation; nothing was seen on the surfaces of either the large or small bowel, and there was nothing to be felt. The enlarged mass of glands started around the termination of the ileum (the ileal group), and extended some distance upwards. The caecum was high-lying and movable, and attached to it was a long appendix, whose serous coat was injected, and which was acutely kinked in its middle by what appeared to be a contracted portion of the meso-appendix. The distal half of the appendix was fluctuant.

The appendix was removed, and was found in its distal half to contain a fluid faecal material. The mucous membrane was ulcerated, allowing quite a considerable surface for absorption.

After-History.

The convalescence was uneventful, except that the patient had one or two very much less severe attacks. The glands, which were not touched at the operation, have now subsided, and the child is now well and running about, having had no further trouble.

This case is of interest (*a*) that it shows that a *B. coli* infection of the urinary tract may give rise to symptoms almost indistinguishable from those of stone in the ureter, in that in this case the pain was unilateral, came in spasms, and that the urine contained blood and pus.

(*b*) That there was little or no pain on deep pressure over the appendix that was half full of a fluid faecal material, and whose mucosa was ulcerated; and that such an appendix must have existed for some time without giving rise to more serious symptoms, such as acute inflammation and abscess formation.

(*c*) That such an appendix could have been the cause of so large a mass of enlarged inflammatory glands.

(*d*) That such an appendix with its ulcerated mucosa was, I think, the source of inlet to the *B. coli communis*, which were being excreted by the kidneys, and which, in the case of the right kidney, had been sufficient to give rise to symptoms resembling those of renal colic.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

GANGRENOUS APPENDICITIS, WITH GENERAL PERITONITIS, COMPLICATING LABOUR AT FULL TERM: OPERATION: RECOVERY.

MRS. T., aged 39, was due to be confined early in November, 1913, with her fifth child. I was summoned late in the evening of October 15th, with the message that she was sick and had abdominal pain. As I was unable to go, my partner, Dr. H. W. Doll, saw her that night. He did not think that labour had begun, and, as he could find nothing abnormal in an abdomen which was completely filled by the pregnant uterus, he treated it on simple lines. I saw her on October 16th. She was still in pain, worse on the right side; she was still vomiting, and the bowels had not been opened. The os was partially dilated and very high up. I concluded that labour had begun, although the pains were not typically intermittent; her general condition seemed quite good and the pulse was not abnormally quick. I told the maternity nurse to watch her and send for me again if she got worse. A dose of aperient medicine was vomited. Abdominal palpation did not help at all as there was general tenderness all over.

She had a bad night, and continued to vomit everything, and the pains became practically constant with no intermissions. I was able to rupture the membranes at 11 a.m. on October 17th, and the infant was speedily delivered. She seemed much relieved at first, but the pain in the right side continued. On the morning of October 18th I was surprised to find that she was still very sick; the abdomen, of course, was full; there was definite tenderness on the right side; the bowels had not acted in spite of enemata; the temperature was 100°.

On the morning of October 19th I found the abdomen was markedly distended; the pulse had quickened; she was still sick, and the bowels had not been relieved. There was some dullness in the flanks; her expression was cheerful and not at all anxious. I felt certain that there was some serious mischief in the abdomen. Mr. T. C. English saw her with me at 1 p.m., and after turpentine enemata had completely failed to relieve her, operation was agreed upon. The abdomen was opened in the middle line. A large quantity of turbid fluid escaped; the intestines were covered with lymph, as also the uterus and right ovary. The appendix was found gangrenous to the root, and came off in the surgeon's fingers. The stump was buried as well as was possible, and the pelvis and both flanks drained with largest-sized tubes. The anaesthetic was well taken, and there was practically no after-sickness. She was placed in a sitting position. Her condition that night was grave; the pulse was 180, and the temperature 101°. Frequent saline injections were given with brandy, and strychnine hypodermically.

She was better the next morning, having rallied from the shock, but the abdomen was much distended and there was great tension on the stitches. The vigorous use of aperients, which were fortunately retained, was at once commenced, combined with turpentine enemata. The bowels acted freely that night and continuously all the next day. She steadily improved from that time, and except for a faecal discharge for a week through the right tube, convalescence was uninterrupted. She was able to get up, with the incisions healed, on November 25th.

The complication of acute appendicitis with labour has not often been recorded with recovery of mother and survival of infant; the somewhat easy delivery of the child was in the mother's favour. The active use of aperients the day after the operation, although the result was a faecal fistula, undoubtedly saved the mother's life.

Hampton, Middlesex. H. M. COOPER, M.B.Lond.

LOCAL ANAESTHESIA IN ARTIFICIAL PNEUMOTHORAX.

IN reference to the question as to whether a local anaesthetic is necessary when giving an injection of gas into the chest, I beg to state my experience for the benefit of your readers interested in this subject. I have now given

nearly 300 injections of nitrogen into the chest, and, except for a first injection, I do not use a local anaesthetic. I seldom use a needle more than twice before having it resharpened. I never boil the needles, but always sterilize them by placing them in absolute alcohol for a minute or two just before use. When a sharp needle not too thick in calibre is used the amount of pain at a refill is trifling and the risk of shock negligible. If a local anaesthetic is used there is no doubt, in my opinion, that blockage of the needle is more likely to occur, either from a drop of blood or from the fluid dissolving the anaesthetic. I cannot see, therefore, that it is necessary to use a local anaesthetic when giving a refill of gas. When last I induced an artificial pneumothorax I used morphine, but (for the first time at an inaugural injection) no local anaesthetic; and I am now debating whether I shall repeat this practice when next the occasion arises.

Mundesley. S. VERE PEARSON, M.B., M.R.C.P.

A REMARKABLE DIURESIS.

A. B., a single woman, aged 54, first came under my care on June 1st, 1913. She was then complaining of shortness of breath and pain in the chest, which radiated to the shoulders and occasionally down the arms. She had always been very active and had worked hard. She was a tall, large-boned woman, with well-developed arm muscles, and had been accustomed to helping her brother, who was a farmer. Six days a week for years she made a 40-lb. cheese, and she would lift these about; she told me also that she would work with her brother trenching a piece of ground, and keep pace with him easily. When I examined her I found a dilated heart with a very irregular beat. The apex pulsation was in the sixth space, 1 in. outside the nipple line, and the dullness extended ½ in. over the right side of the sternum. The systolic blood pressure was 155 mm. Hg. and in view of this I did not give her digitalis at first, but put her on tincture of nux vomica, ♏ x, three times a day. An occasional tablet of trinitrin gr. $\frac{1}{100}$ relieved the radiating pains. She was, of course, put to bed.

She went on fairly well until the middle of July, when the urine began to get scanty. She was then given tincture of digitalis ♏ viij thrice daily for a few days, followed by theocin sodium acetate gr. viij for six doses, but with no result. On July 23rd I went away for three weeks, and on returning on August 13th found she was still passing very little urine, was rather more dyspnoeic, that there was a considerable amount of oedema of the legs and hips. She was once more put on tincture of digitalis ♏ viij thrice a day. On August 19th there were signs of free fluid in the abdomen, which was tapped and ʒ xvi drawn off; about the same quantity or a little less was left in. On August 23rd the digitalis was discontinued and theocin sodium acetate gr. viij t.i.d. for six doses substituted. By 8 a.m., August 24th, she had passed ʒ xlv of urine. From 8 a.m., August 24th, until 8 a.m., August 25th, she passed 300 oz. of urine. When I saw her at 10 a.m. the change in her appearance was startling; she seemed to have shrunk to a skeleton. The hips and sacrum previously were padded with fluid, and doughy, but after the diuresis were drawn and quite flat. The dyspnoea had gone and she was quite comfortable. From then up to the present time she has continued to pass 50 or more ounces of urine in the twenty-four hours, and has taken tincture of digitalis ♏ viij thrice a day. She is much improved and the heart more regular; there have been no more radiating pains, and the blood pressure is 140 mm. Hg. The points I would like opinions on are:

1. Was it an advantage to leave some of the fluid in the abdomen?

2. Why did the same treatment succeed in such a startling manner after the paracentesis abdominis, which had failed so signally before ever there was any free fluid in the abdomen? She had no free fluid before August 19th, because I was watching carefully for the first signs of it.

J. CHARSLEY MACKWOOD, M.R.C.S.Eng., L.R.C.P.Lond.,
Medical Officer, Lewes Union Infirmary.

IN October, 1913, the Dermatological Society of Vienna appointed a committee to inquire into the prevalence, causes, and prophylaxis of industrial skin diseases. The inquiry is being carried out in the first instance by written questions, the replies to which will afterwards be used as material for verbal inquiry.

Reports of Societies.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, January 21st, 1914.

J. W. B. HODSDON, F.R.C.S., in the Chair.

Cancer of Appendix.

MR. J. M. GRAHAM presented a communication on cancer of the appendix, with lantern demonstration. His series included eleven cases, all primary, of which ten were obtained on operation. Two main types of cancer occurred: the spheroidal-celled, characterized by early age incidence (in his series the average was 24 years) and by benign nature; the adeno-carcinoma, a much rarer type (in his series there was only one case, aged 55 years), and of more malignant nature, metastases being present. These features of his own series corresponded with those of over 100 cases he had collected from the literature. There was evidence in all cases that the cancerous process started at a stenosed or obliterated portion of the appendix, the site of old ulceration or inflammation. The tumour mass gave the reaction of lipoid tissue, and had the same yellowish appearance as malignant hypernephromata and suprarenal tumours.

Intestinal Toxaemia.

DR. CHALMERS WATSON read a paper on this subject, with special reference to the indications for operative treatment. He said that among the clinical conditions induced by chronic intestinal stasis were a neurasthenic group, erroneously regarded as "neurotics"; rheumatoid arthritis which was invariably toxaemic, the infection originating in most cases from the digestive tract; dyspepsia of various types, and simulating chronic appendicitis, duodenal ulcer, gall stones, etc. He gave a brief summary of a number of cases, each accompanied by *x*-ray photographs showing varying degrees of stasis and visceroptosis. He emphasized the following points: The great importance of intestinal toxaemia as a cause of some chronic diseases; the probability of the caecum being a primary source of the trouble, and this explaining the failure of many appendix operations; the importance of a thorough examination of the stools and urine; the value of *x*-ray photographs in enhancing the accuracy of diagnosis. While many cases were amenable to medical treatment, a few were incurable, and for these he was in the meantime in favour of short-circuit operations. Evidence was growing that the various bands, kinks, and membranes found at operation were the result and not the cause of the condition.

Professor CAIRD had in his experience of abdominal operations found kinks and bands but rarely, while in the *post-mortem* room he had seen cases of very extensive and serious peritoneal adhesion associated with good digestion and normal evacuation.

Professor RUSSELL said the passage of a bismuth meal was very different from food. There was no proof that the symptoms in these cases were due to absorption of toxins from the dried faeces. It was very difficult to say what factor was at fault in these cases, but in many it was useless to attack the caecum, and in some the objective should be the stomach and duodenum, and the procedure a gastro-enterostomy.

Sir JAMES AFFLECK alluded to cases of marked stasis without toxaemia. He pleaded for more patient and prolonged medical treatment of those cases before handing them over to the surgeon.

Dr. C. W. MACGILLIVRAY said that scarcely anything was yet known either of the pathology or of the best treatment for intestinal toxaemia.

Dr. TORRANCE THOMSON said that in addition to the local condition in the bowel there was also a constitutional fault, and that nervous debility and some psychic factor were present.

Mr. G. CHIENE said that anchoring of the caecum to the abdominal wall was bad surgical practice. As a remedy for constipation he advised pinhead oatmeal.

Mr. DOWDEN said the majority of the cases occurred in women, and especially young women, and were frequently associated with tight corsets and floating kidney. He did not favour surgical interference.

Mr. J. W. STRUTHERS said that reliable *x*-ray standards for the healthy abdomen were still wanting. The various peritoneal membranes and bands were probably anatomical structures, and, while they might cause acute obstruction, seldom delayed peristalsis. A short-circuit operation was of doubtful value, without excision of the caecum and colon.

Mr. E. SCOTT CARMICHAEL agreed that kinks, etc., were not of pathological importance. The *x*-ray screen was more helpful than the photograph in those cases. Anchoring and plication of the caecum was useless and unsurgical.

Mr. HENRY WADE defended fixation and plication of the caecum. The modern view of the caecum was that it was a second stomach, and that in these cases of stasis it was distended and unable to empty itself; if that were true, the operation of plication was a rational one.

Mr. D. P. D. WILKIE believed that duodenal ulcer was generally secondary to trouble in the ileo-caecal region; *post-mortem* evidence which he had collected strongly favoured this view. He supported the operation of plication of the caecum where it was enlarged and mobile.

Dr. CHALMERS WATSON replied.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on January 14th, Dr. BARBOUR SIMPSON, Vice-President, in the chair, Dr. R. W. JOHNSTONE gave an epidiascopic demonstration of an *Early human ovum*. It was obtained *in situ* from a woman, who died suddenly from fatty heart, and corresponded, in size and development of the villi, to the specimen described some years ago by Jung. The blastocyst had unfortunately been torn before being hardened, and this had distorted the contents and rendered their interpretation difficult. The blastocyst contained two large vesicles, each consisting of two layers of cells and each attached to the mesoderm of the chorion. If these represented the two vesicles of a single embryo, the double attachment was unusual. There was, however, reason to believe that each vesicle represented a separate embryo, and that the specimen was one of uniovular twins. Owing to its damaged state, however, it was impossible to be sure of this. The nature and relations of the trophoblast were shown, and the mode of formation of the intervillous spaces was discussed. In regard to the maternal reaction, the mucosa changes were similar to those described in all early ova. There were large blood lakes, apparently formed by greatly expanded capillaries, surrounding the blastocyst. The decidua was oedematous. Dr. BERRY HART thought it was impossible to say anything definite about the embryo, because of its damaged condition. Dr. JAMES YOUNG referred to the similarity in the maternal changes in this case and in the early ovum he described four years ago, which was, as regards the decidual changes, the youngest ovum ever described. As regards the blastocyst it formed the link between the Teacher-Bryce and the Jung specimens. Dr. BERRY HART, in a paper on a *Biometric analysis of insemination-labour and menstrual-labour curves in some mammalia*, recalled that in a previous paper he had shown that certain labour-date statistics in cattle, ewes, and the human female, when plotted out and grouped in 48 or 96-hourly periods, gave a frequency polygon, somewhat skew or humped. It was necessary, however, to plot these out in 24-hourly periods and then see how they could be treated by Gauss's method of least squares. In Spencer's cattle statistics there were 764 animals, and the sum of their days between insemination and labour was 216,451; this divided by 764 gave a mean of 283.3 days. The sum of the squared differences between this mean and the actual dates gave 60,649, and the probable error of one observation was found, after a special calculation, to be 6.012 days. The probable error of the mean was 0.2 8. Thus one calculated from the date of insemination in cattle a period of 283 days with a probable error of + or − 6 days. In Reid's 500 human cases, treated in the same way, the mean was 278 and the probable error of one observation was 7.748; the probable error of the mean was 0.3466, and thus the date of labour reckoned from the last day of menstruation should be 278 days + or − 7 days, but the most probable duration was between 277.93 and 278.63 days.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

AT a meeting on January 9th, Mr. R. D. PUREFOY, P.R.C.S.I., President, in the chair, Mr. SETON PRINGLE, in a communication on *Operations for chronic osteomyelitis*, called attention to the unsatisfactory results obtained by the old "gutter" procedure. The cause of persistent sinuses after this operation was the leaving of a cavity with hard bony walls which could not fall in and assist in obliteration of the gap. The operation he advocated consisted in the removal of the greater part of the shaft of the bone in such a way that the soft tissues were able to fall in and obliterate any cavity left. In some cases he advocated the complete subperiosteal resection of the shaft of the bone. A number of cases were described. Mr. BLAYNEY considered the procedure suggested a definite step forward in the treatment of cases which were very troublesome. Since he had first heard of it he had been carrying out the operation with very satisfactory results. He agreed that granulation tissue had a very limited growth, and it therefore took a very long time for a cavity in the bone to fill up, and that this operation did away with the necessity for the production of much granulation tissue. Mr. W. I. DE C. WHEELER said he had an opportunity of seeing a good many of the operations performed, and had recently adopted the method in the case of a man suffering from chronic disease of the tibia, and, although there was a fracture in the strip of the bone left, it gave rise to no trouble afterwards. He had demonstrated that periosteum formed bone in children; the process could be seen in *x*-ray photographs. Mr. CRAWFORD said he was particularly interested by the case in which the disease spread to the epiphysis, as in four cases he had found that the dead bone extended to the end and that in every case there was a large cavity. Mr. STOKES asked if there were any cases recorded in which the periosteum failed to reproduce bone. Mr. BLAYNEY remarked that in the cases referred to it would be almost impossible to test the periosteum, as it was difficult to peel it off without bringing away some scales of bone with it. Mr. PEARSON said he thought the periosteum was to be regarded as bone surface. He recalled a case in which there was no necessity for peeling off the periosteum at all, and the entire wound was healed in four weeks. There were no scales in that periosteum, and the *x*-ray photographs, taken five years afterwards, showed complete re-formation of bone. Mr. PRINGLE, in reply, said he thought that in childhood there was a certain number of osteoblasts lying in the periosteum. There was no doubt that in some cases the periosteum failed to regenerate bone. This was possible in very chronic tuberculous cases, as the osteoblasts might be destroyed, but in the majority of cases the periosteum seemed to regenerate bone. He had no hesitation in removing the whole length of the bone in young persons if he could not find a normal strip. In one case he had a fracture, but it reunited, and there was some shortening. Mr. C. ARTHUR BALL described a case of *Combined renal calculus and tumour*. The patient, a man aged 45, had complained for two years of a more or less continuous pain in the region of the right kidney. On two occasions he had passed blood, the first about two years ago; the second a few days before he came to town for treatment. On examination the only point of note was a slight but decided tenderness when the right kidney was palpated. The urine contained no blood, pus, albumin, or tubercle bacilli, and beyond a few uric acid crystals nothing abnormal was made out microscopically. An *x*-ray examination showed a small calculus in the pelvis of the kidney. The kidney was, therefore, exposed by an extraperitoneal incision with a view to removal of the stone, and a tumour was found on the convex border of the kidney, which was therefore removed with the stone *in situ*. The tumour was microscopically a cystadenoma.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 7th, Mr. R. G. HOGARTH, President, in the chair, Dr. W. T. ROWE, speaking on the subject of *Bismuth meal*, said that examination of the alimentary canal by means of bismuth and *x* rays had

thrown new light on the anatomy of the stomach and large bowel. The stomach was not a flaccid bag lying in the upper part of the abdominal cavity, as was frequently supposed, but was a J-shaped organ lying almost wholly to the left of the median line. Evidence could be obtained as to the presence of duodenal or gastric ulcer, and differences observable in the bismuth shadow, especially as to the rate of the emptying of the stomach, were of importance in the differential diagnosis of these conditions. Organic hour-glass stomach was not definitely diagnosable by any other means. The writer stated that obstruction of the oesophagus was more safely and more thoroughly investigated by this means than by any other. As regards carcinoma of the stomach, *x* rays and bismuth were not of as much service as a diagnostic method as one could hope: but the writer stated that he considered retention of the meal in the stomach for eight hours, especially if there was little or no dilatation, as strong evidence of malignant disease of the stomach.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, January 27th, 1914.

SAMUEL WEST, M.D., President, in the Chair.

Vaccines from the Standpoint of the Physician.

THE PRESIDENT, in introducing a discussion on this subject, said the term "physician" was meant to include all who had the opportunity of watching the effects of vaccines from the clinical side. He suggested as special points on which emphasis might be laid—(1) the contraindications; (2) cases in which vaccines had been used and had failed, and were abandoned, and the reasons for this; and (3) cases in which definite ill effects had been produced by them.

DR. T. J. HORDER, in an opening paper, said that now the subject had been freed from the incubus of the opsonic index much advance had been made in the use of vaccines during the last few years. There were three types of vaccine: (1) The autogenous, (2) the stock vaccine, and (3) the phylacogens. This order, he thought, represented the grades of their efficiency, and though stock vaccines were necessary in certain cases where autogenous vaccines could not be prepared, the merits of vaccine-therapy rested almost entirely with the first class. In no case had he seen, in chronic infection of the urinary or bronchial tracts, freedom from micro-organisms obtained. In spite of limitations, however, a systematic use of vaccines led to improvement in the general condition, and, to a less extent, in the local condition also. Effective drainage was an important adjunct to such course of treatment. There was a tendency for practitioners either to proceed with unreasonable precaution or to use a rigid system of dosage which had been laid down as a tentative scheme rather than as an inviolable law. The failures of vaccine-therapy were probably much more numerous than its successes. Yet in it they had a weapon of enormous value. He had no doubt of the efficacy at times of vaccine-therapy, and he was quite as disappointed in its effects in the mass as most others. Its value was in direct proportion to the care bestowed on the diagnostic problem. Speaking of the factors which made for success, he placed choice of case first. The nature of the organism mattered little compared with the nature of the diseased process. It was a matter of importance that the diseased process which was treated was really due to an infection. In the attempt to isolate the causal microbe the collection of the material should not be entrusted either to the patient or to the nurse, and it should be dealt with as promptly as possible. He was convinced of the superiority of sensitized vaccines. A graduated system of dosage seemed to have proved the favourite, and he had found it most generally useful in chronic infections. In acute infections, whether local or general, he favoured a steppage system of dosage. It was important that there should be relative rest of the patient for twenty-four hours, and that vaccine should be omitted or decreased considerably if there was any general disturbance or disturbing incident, such as a journey, menstruation, etc. He emphasized the truth that attention must be paid to all the non-specific points in the treatment, just as though no vaccine were being given. It must be confessed that the limitations of this treatment were considerable, and had already got far beyond those outlined by the sponsors of the method at its birth. Sometimes there was a response to a vaccine when it was first tried, but it failed in later attempts. It was a matter for question as to whether this was comparable to the same failure to respond, which occurred when drugs were given, or whether the first attempt at vaccine-therapy used up all the patient's power of response. Cases of general infection did not yield to this treatment in most cases. In typhoid fever he thought it was of some help, but that it did not shorten or modify the course of the disease.

DR. CHARLTON BRISCOE began by giving reasons for the disappointment which had been experienced by some, in results produced by vaccine-therapy. He then mentioned three cases—a staphylococcic infection, an asthmatic case with a lesion in the nose, and a case of rheumatoid arthritis, illustrating the points: (1) That a vaccine injection tended to produce local necrosis; (2) the toxic symptoms alone might be relieved; and (3) that an infected area ought to be completely removed in order to avoid the risk of a recurrence, even when a vaccine relieved the symptoms. Illustrating the first point, he quoted cases where empyema had followed vaccine injections, and gave a warning against the employment of this treatment in large lesions where drainage had not been effected. He claimed that vaccines diminished the amount and duration of the suppuration which followed the evacuation of pus, and materially assisted the closing of recent sinuses. Illustrating the second point, he remarked upon the striking success which followed the treatment of asthma by the eradication of some septic focus, or by treatment by vaccines grown from the sputum. He instanced three cases in which this treatment was a complete failure, to show that success did not always follow. Following this line of argument, he pointed out that bacilluria, when causing symptoms, and rheumatoid arthritis were conditions which were readily relieved by vaccines. He recommended that where possible the infecting focus should be completely removed, on account of the liability to relapse when the injections were discontinued. He related some cases in which recognized treatment had completely failed, where vaccines had produced good results. The cases instanced were: (1) A staphylococcal cellulitis of the scalp; (2) a *Bacillus coli* infection of the genito-urinary tract; (3) a non-tuberculous caseation of large size in the pelvis; (4) an acute pyrexial polyarthritis (not acute rheumatism); and (5) a bronchorrhoea of thirty years' standing. Finally, he drew the general conclusions that vaccines were distinctly useful therapeutically, but should be employed in conjunction with recognized treatment; that all infecting focuses should be removed; that where such was not possible vaccines might relieve symptoms; and he concluded that he had never seen a case where permanent injury had been produced by this form of treatment.

DR. H. T. GILLETT said the results in treatment by vaccines would depend, not only on the use of an efficient vaccine, but also on the method of administering the doses. The intensive method of Fornet and Müller had not been successful in two cases in which he tried it, but gradually increasing doses, allowing a sufficient interval for recovery from any negative phase, he had found very satisfactory. About 75 per cent. of his chronic bronchitis cases had responded favourably to an autogenous vaccine; some cases complicated with dyspnoea were very greatly benefited, but some chronic cases were obstinate. He had found that benefit had followed this line of treatment in the following diseases: leucorrhoea, rheumatoid arthritis, septicaemia, pneumonia, and bronchopneumonia; and had almost invariably used autogenous vaccines. On a few occasions he had used sensitized vaccines with good results, but where the patient's powers of response were adequate the ordinary vaccine probably stimulated the tissues to the formation of a larger quantity of antibodies than would be the case when immune body was injected at the same time.

DR. PHINEAS ABRAHAM objected to the term "vaccines." It was not only inaccurate but misleading. He had tried vaccine-therapy in several generalized diseases of the skin, bullous affections, desquamative dermatitis, and eczema with little or no benefit. In one case, indeed, the patient's death was accelerated by it. He had also

seen the results of these injections at the hands of others in quite a large number of cases of localized staphylococcic infections and of common acne. These patients had come to him after a course of the new treatment, which had proved futile and even disastrous in its results. Many of the bad results had occurred in patients who had been under the care of thoroughly competent medical men. He did not deny that some cases of cutaneous diseases had been cured by its means, but he did maintain that in the vast majority of acne and furunculosis cases a more rapid and certain cure could be effected by well-known commonsense measures without any risk of generalizing the pustules and producing such results as he had seen. They were quite justified in employing this method in severe cases when ordinary measures failed, but not in cases amenable to well-tried and safer treatment.

The discussion will be continued on Tuesday, February 3rd, at 5 p.m., when it will be reopened by Dr. H. D. Rolleston.

Section of Laryngology.

At a meeting on January 9th, Dr. D. R. Paterson, President, in the chair, the following were among the exhibits:—Dr. Lambert Lack: Three children with *Diffuse infiltration of the soft palate* and upper part of the larynx due to congenital syphilis. The Wassermann reaction was positive, but the condition did not yield to iodine, mercury, or salvarsan. Probably the infiltrations described by Dr. Brown Kelly were of the same nature. Dr. Kelson exhibited a patient aged 70, from whom he had removed a large pharyngeal pouch under local anaesthesia for progressive dysphagia and wasting. The omohyoid was divided and the pouch dissected out from behind the oesophagus; it extended to the aortic arch. Dr. Jordan demonstrated the straight upper edge of bismuth skiagrams of pharyngeal pouches. The only oesophageal pouch he recognized was a small pocket to be seen below the crossing of the bronchus. Dr. Dan McKenzie showed three patients to illustrate sinus lesions. In the first case the trouble had followed a fall; it was cured by drainage of the left frontal sinus combined with a left nasal antrostomy. The second case—one of double antrum disease in a patient aged 12—was cured by a radical antral operation on one side and simple nasal antrostomy on the other. The third patient, aged 15, suffered with left frontal suppuration and ethmoiditis. She was unrelieved by curetting and drainage. A Killian's operation, though the bridge necrosed, was followed by relief. The President remarked that injuries were frequently followed by frontal sinus suppuration; this was his experience in compensation cases. Dr. Watson-Williams was of opinion that the accident was superimposed on an inflammatory condition, such as was found with influenza. Mr. H. Tilley showed that the frontal sinus was frequently affected, but usually recovered of itself, or if treated with irrigation. Dr. D. Davis's case of *Myasthenia gravis with adductor parcsis* of the cords and paresis of the palate in a woman aged 25, was discussed by Dr. Gordon Holmes, who alluded to the great effect of fatigue on such cases, for they did not lose weight if fed in the morning when they were fresh. The muscles did not waste, and palsies were rare. The orbiculares of the eye and mouth were occasionally paralysed, the palate and larynx more rarely still. The intensity of the symptoms depended on fatigue, and were variable. Sir Felix Semon remarked on the uncertain pathology of the disease, in which the periphery was possibly affected, and so did not oppose "Semon's law." Mr. E. D. Davis showed an open safety pin removed by suspension laryngoscopy, and a farthing which was impacted at the orifice of the oesophagus in a boy aged 4, but was invisible by suspension laryngoscopy. An oesophagoscope was readily passed in the suspension position and the coin removed.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

At a meeting in Manchester, on January 16th, Dr. W. E. Fothergill (Manchester) described a case of fatal *Toxaemia of pregnancy*, complicated by vesicular degeneration of the chorion, in a patient aged 26. She was admitted to hospital as a case of urgency during the seventh month of her third pregnancy, and was then delirious. The abdomen was distended by free fluid, and the legs and labia much swelled. The urine contained a large quantity of albumin. The os was closed and there had been no bleeding. It was dilated under ether, and the hydatid mole was then diagnosed. The fluid having been removed by an abdominal incision, supravaginal hysterectomy was rapidly performed. The uterus was the size of one eight months pregnant. Its wall was everywhere very thin, but it was not perforated by villi. The whole cavity was filled with vesicles of degenerated chorion. The ovaries were normal. The patient improved for a time, she became rational, took food well, and was free from oedema and hydroperitoneum. Later the toxaemia from which she was suffering on admission regained the upper hand. The legs and labia again swelled, and the abdomen once more became filled with fluid. The delirium returned, albumin reappeared in the urine, and the patient died twenty-seven days after the operation. Unfortunately, no *post-mortem* examination was permitted. Dr. Howie Smith (Stockport) showed a *Uterus didelphys*, both horns of which had been pregnant at separate times. After delivery of a macerated premature fetus the placenta proved adherent and the patient died of shock. The uterus was in two completely separate halves, which were only joined between the cervices. One half had been pregnant some years previously and the cervix was much hypertrophied; the other was the one from which the recent child had been delivered. Dr. Leith Murray (Liverpool) described three cases of *Pyelitis developing after delivery*. They were atypical (1) in presenting no localizing signs or symptoms, (2) in showing a "continuous" fever, (3) in the small amount of pus present in the urine of patients rather seriously ill, and (4) in the onset on the day following delivery. This type possibly contributes to puerperal morbidity more largely than was thought. The condition easily eluded diagnosis if the urine were not centrifugalized. Vaccines were of marked service when intelligently administered. The action of urotropin, aided by acid sodium phosphate, should always be controlled by an investigation of the formalin actually formed in the urine; the larger doses of Thomson Walker were strongly recommended.

LONDON DERMATOLOGICAL SOCIETY.

At a meeting at the Western Skin Hospital on January 8th, Dr. David Walsh in the chair, the following were among the exhibits:—Dr. Phineas Abraham: A case of *Lupus vulgaris*, which had been treated by him several years ago by scraping and cauterization. The patient, passing into other hands, at a later date had a patch treated by many applications of Finsen light. It was obvious, the exhibitor maintained, that the result of his surgical treatment had been far more satisfactory than that of the more modern method, both as regards eradication of the disease and appearance of the healed tissues. Dr. Samuel: A typical case of *Erythema iris*. Dr. Meachen, after showing a case of *Lupus erythematosus* practically confined to the scalp, opened a discussion on this subject in a short communication dealing chiefly with the clinical aspect of the disease. Those who took part in the discussion confined their remarks mainly to the question of how far the disease was associated with and due to tuberculosis. Discussion on the question of treatment was adjourned to a further meeting.

The first Spanish congress of paediatrics will be held at Palma in Majorca in April (12th to 18th). The work will be distributed among four sections: (1) Puericulture; (2) medicine of children; (3) surgery of children; (4) social hygiene. The chairman of the organizing committee is Dr. Andrés Martinez Vargas, professor of children's diseases in the University of Barcelona.

The number of medical women in Germany is steadily increasing. In 1908 it was 55; two years later it had risen to 102 and in 1913 it was 195. Most of them practise in the larger towns, Berlin heading the list last year with 56; Munich was second with 13; next came in order Breslau with 10, Hamburg with 9, Frankfort-on-the-Main and Dresden each with 7, Mannheim with 6, Hanover, Cologne, and Stuttgart each with 4, Leipzig and Düsseldorf each with 3.

Reviews.

IONIC MEDICATION.

So much has been heard lately of the method of treating certain conditions by the liberation of ions, that Dr. H. LEWIS JONES has done good service by writing a short account of the principles of the method and the clinical results it gives in a volume entitled *Ionic Medication*.[1] The book so distinctly fills a vacant place that we are not surprised to hear that it has already reached a second edition. Dr. Lewis Jones believes that ionic medication is a real addition to our means of treating disease, whether there is any effective penetration of ions into the tissues treated or not, and gives results of real value in superficial affections. He enters a protest against its indiscriminate use by incompetent persons; the unfortunate victims of chronic polyarthritis in its advanced stages have, he says, been especially exploited in this direction, and he adds that such exploitation should not be countenanced by members of the medical profession.

The first two chapters of the book describe the way in which the human body may serve as a conductor of electrical currents, and give a brief account of the apparatus employed in ionic medication. The rest of the volume is devoted to the ions of various sorts—metallic, non-metallic, and compound—that are commonly employed, together with the indications for their use and the maladies in which each is likely to be of service. After the perusal of Dr. Jones's work the impression left upon the mind is that ionic medication can do no harm in skilled hands—*primum non nocere*—and is often surprisingly successful in the treatment of chronic ailments of the most various kinds. Many quotations from the recent literature of the subject are given. It may be noted that the word usually spelt "cation" appears as "kathion" throughout the book; we know of no authority for this form.

SURGICAL CLINICS.

THE October number of Dr. MURPHY'S *Surgical Clinics*[2] preserves the same general aspect of its predecessors. We still think that considerable improvement in the style of these "clinics" is possible. It would appear as if Dr. Murphy talked all the time he was doing an operation and his remarks were taken down verbatim. The result of this is that it is sometimes difficult to follow the steps of an operation; for example, in the description of the operation for faecal fistula a considerable amount of confusion arises from the author's frequent references to coils of bowel which the spectators saw at the time, but the reader has to imagine. A very typical case of Hirschsprung's disease is described, though there is nothing new, except the success of the treatment. The enormous distension of the colon was demonstrated by means of bismuth enemata, and a skiagram reproduced shows what was the extent of megacolon. In this case the cause was found to be a constriction in the rectum 3 in. above the anus. Cure appears to have been effected by dilatation. Dr. Murphy makes no suggestion as to how this constriction arose, and our knowledge of the etiology of the disease is not advanced. The last paper is an interesting talk on cancer, by Dr. W. L. Rodman, who was present as a guest in the clinic. The main burden of this talk is the cry for earlier recognition. What Dr. Murphy means by "early" in cancer is "the time in the development of cancer between the primary penetration of the basement membrane by the malignant cells and its first transmission into the neighbouring lymph channels or glands, or less frequently its primary admission into the blood stream." On page 902 we find that the Lembert stitch is described as one which goes through all the coats of the bowel; that, of course, is not a Lembert stitch at all. Severe subediting would make these volumes more valuable for future reference and present guidance.

[1] *Ionic Medication.* By H. Lewis Jones, M.D. Second edition. London: H. K. Lewis. 1914. (Crown 8vo, pp. 177. 5s. net.)

[2] *The Surgical Clinics of John B. Murphy, M.D.*, at Mercy Hospital, Chicago. Vol. ii, No. 5. October, 1913. Published bi-monthly. Philadelphia and London: W. B. Saunders and Co. 1913. (Med. 8vo. 35s. net a year; cloth, 50s. net.)

SURGICAL DIAGNOSIS.

WE do not know of any better book of its kind in the English language than the translation Dr. SNOWMAN has made of DR. DE QUERVAIN'S *Clinical Surgical Diagnosis*.[3] In the author's preface to the English edition he informs us that the volume is the outcome of years of association with students, as a teacher, and with medical practitioners at consultations. He has employed the methods of investigation which are available for the general practitioner, or, at all events, those which can be easily carried out for him. The general plan of the book is that the author sets out to investigate a case from the patient's point of view—that is to say, he deals with the symptoms which cause the patient to seek advice, and proceeds by methods of exclusion until a final diagnosis is reached. He prefers this method to the other of starting off with a diagnosis already made and building up a long clinical story from that basis. It is obvious that from the teaching point of view the former is the better method. The author is careful to indicate, however, that the prime duty of the practitioner is to cure the patient, so that he strongly deprecates spending too much time on the diagnosis, and says that if it is impossible to have accuracy in diagnosis he endeavours to obtain such accuracy as not to entail injury to the patient, nor involve the loss of the most favourable moment for a successful operation.

The volume is divided into six parts, dealing with the surgical disease of regions, beginning with the head, neck, thorax, and so to the extremities. A notable feature of the book is that it is derived entirely from the author's personal experience. He makes a somewhat apologetic remark that as a result of this method omissions are inevitable; but no apology is needed at all, for we have searched diligently and find that there is nothing essential to the inquiry into the diagnosis of any surgical condition which is omitted.

The book is lavishly illustrated, and we may say that we have never yet seen such a uniformly beautiful collection of pictures of surgical conditions. There are also many series of diagrams illustrating the course of disease. For example, the course of acute osteomyelitis of the tibia is diagrammatically represented by four figures which show more clearly than anything we have yet seen what happens in this disease. Similarly, infections of the knee-joint are diagrammatically represented with admirable clearness. The style is clear and graceful, with here and there reference to ordinary literature, and events in every-day life enforce the meaning or adorn an illustration.

This is a book which we think might well be in the hands not only of practitioners of medicine in general, but also in those of teachers of surgery. Unlike most surgical works, the subject of diagnosis is most strictly adhered to; the author is never tempted to introduce pathology or treatment, and the value of the book is thereby enormously enhanced. The teaching is not entirely dogmatic, though the author has quite clear ideas on all points, but the view of the subject is liberal and comprehensive, such as we expect from a keenly observant and widely experienced man. The present volume is a translation of the fourth edition by Dr. J. Snowman, and that part of the work is so well done that no one could tell that it was a translation at all.

DISEASES OF THE NERVOUS SYSTEM.

IN 1896 Goldscheider started a neurological clinic in the Moabit Hospital at Berlin. One result of his activity lies before us in the shape of a large and well illustrated monograph[4] by his colleague, Dr. LEO JACOBSOHN, in which the attempt is made to discuss the diseases of the nervous system from the point of view of the practising physician. Comparatively little attention is given to the pathological histology and purely abstract consideration of the disorder concerned, although they are quite adequately treated. Great care and much space are, however, devoted to the symptomatology and the treatment of the diseases, so that

[3] *Clinical Surgical Diagnosis, for Students and Practitioners.* By F. de Quervain, Professor of Surgery and Director of the Surgical Clinic at the University of Basle. Translated from the fourth edition by J. Snowman, M.D. London: John Bale, Sons, and Danielsson. 1913. (Roy. 8vo, pp. 795; 510 illustrations, 4 plates. 25s net.)

[4] *Klinik der Nervenkrankheiten; ein Lehrbuch für Aerzte und Studierende.* By Dr. L. Jacobsohn. Berlin: A. Hirschwald. 1913. (Imp. 8vo, pp. 500; 367 figures, 4 plates. Mk. 19.)

the book acquires a practical character that one has not learnt to look for in the large German textbooks dealing with the various branches of medical science. Of great practical utility, too, as well as of considerable technical merit in the great majority of the cases, are the numerous illustrations with which the text is amplified. Both the book and the illustrations are founded on the last ten years' work at the Moabit Hospital. The first 90 pages give a general introduction to neurology; after that successive chapters are given to neuritis, neuralgia, diseases of the spinal cord, diseases of the brain and its membranes, and in the last 100 pages an excellent account of the neuroses (with Graves's disease, myxoedema, and acromegaly thrown in) is rendered. There is a good index. The book is printed on highly polished paper, whereby the illustrations gain, though the reader's eye may suffer from extra fatigue. The author has set out to produce a textbook of nervous disorders that shall appeal to the wider circle of medical practitioners and not to the professed neurologist alone. He has succeeded in his attempt. The book is clearly written, complete, and really practical in character; it may be recommended to medical men who read German and are in search of a good textbook of neurology that is not too scientific.

The massive treatise on *The Modern Treatment of Nervous and Mental Diseases* by American and British authors[5] gives an admirable summary of the present position of treatment as advanced by the progressive sciences of neurology and psychiatry. It is the work of thirty-six authors, of whom six are British. The first volume deals for the most part with the treatment of insanity and feeble-mindedness, and contains special chapters on a number of allied problems that are of particular interest to the alienist. A chapter on "Immigration and the Mixture of Races in Relation to the Mental Health of the Nation," by Dr. T. W. Salmon, is of special interest to Americans. From 1907 to 1911 America received nearly a million immigrants annually, and it is natural that the health of these immigrants should be a matter of the greatest interest to the health authorities of that country. Dr. Salmon emphasizes his opinion that the steamship companies do not do their best, either for their steerage passengers or for America, and obstruct both the exclusion of undesirable immigrants and the return to their own country of aliens unfit to land. There is an excellent article by Havelock Ellis on the nervous and mental relations of sexual problems, and an interesting account of "Nervous and Mental Disorders in their Military Relations" by Dr. R. L. Richards. Conditions of war always produce a great increase in mental diseases, and the victims of the different forms of insanity that appear during campaigns are for the most part the degenerates and weak-minded members of the army. The second volume of the treatise is devoted to the treatment of the various nervous disorders—neuritis, headache, epilepsy, meningitis, cerebral syphilis, hemiplegia, aphasia, apraxia, and so forth—and contains a great deal of sound advice that should be of service to all who have to deal with mental and nervous disease. Many of the illustrations are excellent; the different articles composing the two volumes are, naturally enough, of various standards and merit, as is inevitable when so many different authors have been called upon to contribute. But the average level of merit attained is high; these two volumes should be in the hands of all alienists and neurologists, and might often be consulted with advantage by the general practitioner.

SCIATICA.

DR. WILLIAM BRUCE has published, under the title, *Sciatica: a Fresh Study*,[6] what appears to be an expansion of an address delivered ten years ago to the Medical Graduates' College and Polyclinic. The author holds that the majority of cases of sciatica, if not all, are secondary to "rheumatoid arthritis of the hip," affirming, indeed, that they are the same disease masquerading under different names. The term seems misleading, as his remarks would appear to apply to osteo-arthritis or morbus coxae senilis. Elsewhere he states that the majority of his cases are "examples of gout," this diathesis being cited as further proof of his claim. This leaves us doubtful whether gouty arthritis or osteo-arthritis is held most commonly responsible for sciatica. That gout is a frequent cause of sciatica may be admitted, but not through an intermediary arthritis, its dramatic alternation with gouty manifestations elsewhere contraverting this assumption. Again, if osteo-arthritis be present, why should gout be invoked, since the former is capable, alone, of originating sciatica. Moreover, sciatic pain is not diagnostic of hip mischief, for it is often replaced by anterior crural neuralgia. Gluteal wasting in sciatica is, the author holds, distinctive of arthritis. Now, gluteal atrophy, it is true, is present in hip disease and absent in trunk sciatica, but this same wasting of the buttock is a striking feature of radicular sciatica, of which there are many recorded examples. Failure to exclude this type vitiates the author's conclusions. Again, granted pain on flexion and internal and external rotation in hip disorders, why is no reference made to restricted abduction, probably the most typical restriction in osteo-arthritis as distinguished from sciatica? The lumbago commonly associated with sciatica is held to be secondary to hip trouble of static origin, due to lumbar scoliosis. But in many cases at least the true sequence is: first lumbago, then sciatica, finally static scoliosis: the frequent occurrence of the phrase, "had lumbago," in the author's notes of appended cases witnesses to this. His dismissal of fibrositis as a cause of sciatica is, we think, unjustified, the excision of nodules having placed it beyond cavil. Also his doubts as to the existence of sciatic neuritis are untenable, if muscular wasting, anaesthesia and absent Achillis jerk count for anything. The treatment he recommends conforms to the usual practice, but more stress might have been laid on constitutional treatment; thus no mention is made of potassium iodide or colchicum, despite the stress laid on gout; a mixture containing morphine, salicylates, potassium bromide, and chloral is recommended as "a useful prescription." If the view that osteo-arthritis is present is to be accepted, such treatment must be inadequate. No allusion is made to orthopaedic measures, nor to the operative procedures for removal of osteophytes or excision of the head of the femur. The *x*-ray investigations are too few to justify the author's theory; but he has done good service in accentuating the need for greater caution in diagnosing sciatica, though the absence of any mention of so-called "pressure sciaticas" is a defect in a monograph devoted to the consideration of one of the many forms of secondary sciatica.

NOTES ON BOOKS.

MATHIESON'S *Handbook for Investors*[7] for 1914 is the fifteenth annual issue. It is a concise record of Stock Exchange prices and of the dividends of the principal securities quoted in England, Scotland, and Ireland. The highest and lowest prices in each year are given, mainly, it is stated, from the official daily price lists; with the dividends in each year particulars of the nature and amount of each security are given. The volume, small though it be, contains an immense amount of information indispensable to investors. The same firm has published the forty-second issue of *Highest and Lowest Prices* in 1913. It publishes also a number of special handbooks and lists, including one relating to mining and kindred companies.

We need do no more than mention the fact that a new edition, the thirteenth, of Dr. HALE WHITE'S *Materia Medica, Pharmacy, Pharmacology, and Therapeutics*[8] has been published. The book has attained and passed its majority, for it was first published in 1892. The new edition has been revised throughout and certain new remedies have been introduced.

[5] *The Modern Treatment of Nervous and Mental Diseases.* Edited by W. A. White of Washington, and S. E. Jelliffe, of New York. London: H. Kimpton; Glasgow: A. Stenhouse. 1913. (Roy. 8vo, pp. 884 and 822; 137 figures; 50 plates. 60s. net.)

[6] *Sciatica: A Fresh Study.* By William Bruce, M.A., LL.D., M.D.Aberd. London: Bailliere, Tindall, and Cox. 1913. (Cr. 8vo. pp. 186; 18 plates. 5s. net.)

[7] London: F. C. Mathieson and Sons, supplied to the Trade by Effingham Wilson. *Handbook*, small 8vo, pp. 360; 2s. 6d. net. *Highest and Lowest Prices*, fcap. 8vo; 2s. 6d. *Mining Highest and Lowest Prices*, etc., pp. 116; 1s.

[8] *Materia Medica, Pharmacy, Pharmacology, and Therapeutics.* By W. Hale White, M.D.Lond., M.D.Dub.(Hon.) Thirteenth edition. London: J. and A. Churchill. 1913. (Fcap. 8vo, pp. 705. 6s. 6d. net.)

MEDICINAL AND DIETETIC PREPARATIONS.

Glandular Extracts.

WE have received from Messrs. Burroughs, Wellcome, and Co. samples of certain glandular extracts put up in tabloid form. One of these is stated to contain 6 grains of thyroid, $\frac{2}{3}$ grain suprarenal gland, and $\frac{1}{15}$ grain pituitary body, and is called "tabloid three glands." Another is stated to contain 5 grains of fresh substance of lymphatic gland. Extract of lymphatic gland has been recommended in the treatment of enlarged tonsils and adenoids in children. The preparations are convenient methods of administering gland extract in suitable cases.

THE "COMPACTO" STYLO PEN: A CORRECTION.

IN our notice of this pen, in the JOURNAL of January 17th, p. 150, the price, in solid silver case, was incorrectly given as 7s. The prices of the pen are: Silver plated, 3s. 6d.; silver, 7s. 6d.

ROYAL COMMISSION ON VENEREAL DISEASES.

Evidence of Lieutenant-Colonel Gibbard, R.A.M.C.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the eleventh meeting of the Royal Commission, held on January 19th, evidence was given by Lieutenant-Colonel Gibbard, R.A.M.C., head of the Rochester Row Military Hospital. The witness said that the most important causes of the decrease of venereal diseases in the army were the improved treatment and the instruction of the men by lectures and individual talks; other causes contributing to the reduction were greater temperance, the increased attractions of barracks, and the greater encouragement given to sports and outdoor games.

The problem of the prevention of the spread of venereal diseases in the civil population could best be attacked by providing early diagnosis and treatment, by enlightening the public regarding the diseases by lectures and otherwise, and by promoting temperance.

As syphilis was chiefly spread during the early stages of the disease, early diagnosis and treatment were of the greatest importance, especially now that the methods of diagnosis were so good, and that by the use of salvarsan a patient was rendered non-infective in from twenty-four to forty-eight hours.

For the provision of early diagnosis it was necessary that arrangements should be made whereby microscopic examinations and blood tests could be carried out free of charge to private practitioners or patients.

With regard to treatment, Colonel Gibbard was of opinion that special hospitals for venereal diseases were not to be recommended; every general hospital should provide a certain number of beds for the treatment of the diseases, and these beds should be in general wards. An out-patient department should also be organized so as to give patients every facility for early diagnosis and treatment; and the department (which should not be called venereal) should be kept open at hours suitable to the working classes. Colonel Gibbard thought that compulsory notification was most undesirable, as it would lead to concealment of the diseases.

On the subject of education respecting venereal diseases he thought that there would be advantage in lectures being given at all large factories by selected medical men (or women where the employees were women), and that these lectures might perhaps be illustrated by kinemacolor photographs. At the lectures great stress should be laid on the importance of seeking medical advice on the first suspicion of the disease, and of not consulting chemists or quacks. The experience at Rochester Row had shown that much good might be done in this direction. The number of secondary cases among the men reporting sick at that hospital had been reduced until it was now only equal to the number of primary cases, whereas for the army generally it had been found that for every soldier commencing treatment in the primary stage five began in the secondary stage.

The importance of this reduction was illustrated in the results of the treatment of 62 consecutive cases of primary syphilis during the last eighteen months, which have been under observation for periods varying from six to nine months from the completion of treatment. None of these cases had developed secondary symptoms; only one case relapsed, and that was probably a reinfection. Colonel Gibbard gave an account of the methods of treatment employed at Rochester Row and of the results obtained. The use of a combined treatment of mercury and salvarsan had effected a reduction in the average number of days in hospital on first admission from 42 to 23.2, while the percentage of relapses had fallen from 33 with mercury alone to 3.9 per cent. with the combined treatment.

Questioned respecting some remarks which had been recently published regarding the dangers attending the use of salvarsan, Colonel Gibbard said that all his experience had gone to show that, provided the medical men using it had acquired and knew thoroughly the technique and contraindications, salvarsan could be safely used, and in conjunction with mercury was the most effective cure known. There had been no deaths or ill effects following its use at Rochester Row, and more than 3,000 intravenous salvarsan injections had been given.

REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD FOR THE YEAR ENDING MARCH 31, 1913.

1.

THE forty-second annual report of the Medical Officer to the Local Government Board forms an interesting and valuable document, which presents several new features. Perhaps the most important section of the report is that dealing with tuberculosis and the co-ordination of the different factors in the antituberculosis crusade which now forms one of the functions of the Board. Dr. Newsholme has compressed into thirty pages a valuable monograph on the present-day aspects of the problem. A second new feature of the report is the strong plea put forward on behalf of an extension of facilities for pathological diagnosis, which practically amounts to the contention that the general practitioner should be supplied with laboratory facilities such as are at present confined to the large hospitals.

Measles presents a problem bristling with difficulties. Attempts to diminish its prevalence appear to be doomed to failure, therefore more attention is to be directed to the treatment of the patient, and removal to hospital is strongly advocated. The special investigation conducted by Dr. Thursfield into the causes of death in measles furnishes additional evidence in support of the opinion—now, we believe, very generally held by practical clinicians—that better results may be obtained by greater attention to the mouth and pharynx during the height of the disease.

Enteric fever, it is believed, is slowly but surely succumbing to the measures which have been directed against it. The part played by shellfish in spreading the infection is becoming more and more obvious, and new regulations for controlling the gathering and sale of mussels and other shellfish are being framed. The carrier problem is more difficult of solution, as a carrier is only discoverable after a fairly large number of cases have occurred, and the further difficulty of dealing with a known carrier is almost beyond the powers of the law. The situation is this: A person—usually in this country a woman who earns her living by preparing food for other people—is a continual source of danger to the community, and this danger can only be removed by supplying the individual with other employment which will offer no opportunity for the contamination of food. The history of the manner in which the ravages wrought by the Shopley carrier were gradually brought to light reads like a detective romance.

Pathological diagnosis is now recognized as being of the greatest value from the national standpoint, and the following sentence, reprinted from the medical officer's report to the Departmental Committee of Tuberculosis, is worthy of reproduction here. He writes (p. x): "In order that a satisfactory medical service may be secured throughout the country facilities for work similar to that now being done in hospitals will need to be offered to medical practitioners generally."

The special investigations undertaken with the aid of financial grants from the Board relate to the bacteriological control of convalescents from typhoid fever, to the causes of death in measles, to the bacteriology of summer

diarrhoea, and the biology of the rat-flea. To these we hope to refer in a subsequent issue.

Vital Statistics.

The death-rate was the lowest on record, being 13.3 against 14.6 for 1911, and 27 per cent. below the average for the ten years 1891–1900.

The vital statistics are now being presented under a new method, which presents the following advantages: the deaths are now being allocated to the district in which the dead man resided; the international list of causes of death is being used, and all medical officers of health are to use the same classification; in the case of some diseases "standardized" rates are to be used through which by means of "standardizing factors" supplied by the Registrar-General, corrections can be applied by medical officers of health for the errors arising out of differences in the age and sex distributions of the population in different districts.

Acute Infectious Diseases.

Scarlet fever increased slightly in England, there being 1,968 deaths, which represents a mortality-rate of 1.83 per cent. on all notified cases.

Diphtheria showed a fall in England and London with a slight rise in Wales, there being 4,176 deaths, with a mortality of 9.34 per cent. of notified cases. The "carrier" question is referred to as a source of great difficulty.

Enteric fever fell; there were 1,577 deaths, which represent a mortality of 19.1 per cent. of all notified cases. The eating of contaminated shellfish has been referred to as the potent cause of several epidemics, and new regulations are at present being framed. There have been two presumably waterborne epidemics. An epidemic at Colne was traced to milk infection; a case of enteric fever which occurred in a dairyman's household escaped recognition, and one individual carried out the dual functions of sick nurse and dairymaid. Epidemics in Harwich and the West Riding were definitely traced to milk infection by carriers. Dr. Ledingham's work has shown that among cases discharged from the Metropolitan Asylums Board hospitals, and ascertained not to be passing bacilli at the time of discharge, there were no carrier cases, whilst among those who were passing bacilli at the time of discharge 5.4 per cent. proved to be "carriers."

Measles.—The position with regard to measles is very unsatisfactory. Little can be done to diminish the attack-rate, therefore it is urged that more help should be given to the poorer patients in order to diminish the mortality. In the schools of Manchester inquiries have shown that of children entering the school at the age of 5 no fewer than 75 per cent. have already been infected, so that susceptibility is even higher than in the case of whooping-cough, where the figure was 38 per cent. Notification has hitherto proved of very little value, and some authorities which had added measles to the list of notifiable diseases have petitioned to have it removed. The medical officer points out that notification must be valueless unless during epidemic periods the local authorities take the advice tendered by the Board and provide additional assistance, medical or otherwise. He defends the practice—often adversely criticized—of allowing children from infected households to attend school, provided they are not in the infant standards. The Metropolitan Asylums Board have admitted during the year 4,314 patients with measles to their hospitals, the mortality-rate being 9.6 per cent. owing to the serious nature of the cases admitted.

Whooping-cough.—Deaths from this disease are steadily declining, owing, it is suggested, to more satisfactory domestic nursing and domestic hygiene generally.

Small-pox.—Only 121 cases of small-pox were notified. Two small epidemics at Bristol and Newhaven were controlled without much loss of life. In the latter epidemic there were 26 cases, with but five deaths, and "of these five three were in children under 9 years of age in one household, whose parents had refused vaccination for them."

Cerebro-spinal fever and poliomyelitis are now subject to compulsory notification, and a few interesting facts have been elicited. Some of the cases notified as cerebro-spinal fever turned out to be poliomyelitis. Poliomyelitis shows a well-marked seasonal incidence, there being a great increase during the hot months. It is also relatively more common in the urban districts, although this may be due to the cases being frequently treated in hospitals. The mortality-rate in the case of poliomyelitis was 13 per cent. of the notifications, and the permanently damaged formed 50 per cent. of the total.

Tuberculosis.—The year 1912-13 marked a great change in the administrative control of tuberculosis, as not only has the disease been made notifiable in all districts, but the passing of the National Insurance Act and the grant of one and a half millions for the provision of institutional treatment have also placed a tremendous responsibility and power in the hands of the Board. In an interesting discussion of the question how much reliance can be placed on notification statistics, the medical officer states that the relationship between the notifications and the death-rate vary very much in different localities; in some they are about equal to the death-rate, whilst in others they are four times as great. This is due to local differences in the degree of confidence displayed by the profession and patients in the administration, and to the facilities for diagnosis, such as sputum examination. Publication of the local statistics for tuberculosis notifications has, therefore, been withheld, and for the present attention must be directed to removing from mortality statistics the various factors which may invalidate the conclusion drawn from them. Some of these difficulties have been removed by the adoption of "standardized" rates, and by the improved methods mentioned at the commencement of this article. One great source of fallacy remains. This is due to the fact that patients with tuberculosis permanently change their residence, so that even when deaths are allocated to the place of residence instead of the place of death there must still be a large number of deaths which are credited to a locality in which the disease was not contracted. Thus Bournemouth and the county of Devon have a bad place in the statistics, due probably to the migration of tuberculous invalids. Then, again, in some of the large cities invalid tramps and labourers tend to collect, and the great amount of work done in these cities is apt to be discredited. Special returns of age and sex distribution are being made by the Registrar-General, and it is hoped that with time these will enable the health authorities to pick out the weak spots of their administration. In dealing with the measures for the treatment, institutional and otherwise, of tuberculosis, the medical officer has little to add to the different orders and circulars which have been issued during the period under review.

He emphasizes the need for co-operation with the voluntary hospitals, and makes a few pertinent remarks on the value of tuberculin:

> The moot point as to the value of tuberculin in treatment evidently needs investigation. This particular investigation is complicated by the diversity of methods employed and the necessity of dealing with each of these separately. No definite opinion can yet be expressed upon the value of tuberculin in the treatment of tuberculosis. It must, however, be pointed out that although tuberculin may, in the hands of those skilled in its use, prove servicable, it has lost none of its potentiality to do harm.

(*To be continued.*)

ONE HUNDRED YEARS AGO.

The Doctor in Fiction in 1814.

Dr. Erasmus Percy is the medical man in fiction whom the year 1814 brought before the notice of the British reading public. He is one of the most engaging of the characters who cross and recross the stage in Miss Maria Edgeworth's novel *Patronage*, and this book was published in all probability (for there is some mystery about it) in January, 1814. The preface, written by Miss Edgeworth's father, is dated October 6th, 1813, and the title-page bears the year 1814; but, further, the *Edinburgh Review* for January, 1814, contains a long and appreciative article on the work. It may be hazarded that it was published in January, and that the Edinburgh reviewer received an advance copy.

There had, of course, been medical men in fiction before the days of Miss Edgeworth and Dr. Erasmus Percy, the offspring of her brain and possibly the reflection of some one in her entourage. The novelists of the eighteenth century introduced doctors into their stories, but they did not paint their portraits with a sympathetic touch. Even Tobias Smollett, himself a medical man, dealt very unkindly with many of his professional brethren as he depicted them in his works; and he did not hesitate to hold up to scorn as Mr. Potion (in *Roderick Random*) his old master to whom he was apprenticed, Mr. John Gordon, an eminent Glasgow surgeon. It must, however, be added that in later years he did him tardy justice, calling him "a patriot of a truly noble spirit." As for Laurence Sterne's Dr. Slop (in *Tristram Shandy*), he was a frightful caricature of Dr. John Burton of York, who was, as

Mr. Alban Doran has recently fully established,[1] both a famous obstetrician and a highly distinguished antiquary.

It was not until the beginning of the nineteenth century that medical men were accorded the place in works of fiction to which their self-sacrificing lives in many instances entitled them. It has been affirmed[2] that "the better surgeon found a better status in fiction when Scott wrote *The Surgeon's Daughter*," and gave to posterity the character of good Dr. Gideon Gray; but it would seem that in this, as in some other things, Sir Walter was following in the footsteps of Miss Maria Edgeworth. It was her descriptions of Irish character in her novels which (on Scott's own showing) encouraged him to try to do work of the same sort in Scotland and on the Scottish character. *Waverley* appeared in 1814, several years after Miss Edgeworth had published *Castle Rackrent*, *Leonora*, and *Tales of Fashionable Life;* and she was Sir Walter Scott's guest at Abbotsford in 1823, four years before the appearance of *The Surgeon's Daughter*. It is not at all unlikely that Sir Walter followed her example in the greater appreciation he showed for the country doctor. From Scott's time onward to the present day medical men, and lately medical women, have taken their rightful place in fiction; there are good doctors and bad ones, and there have been admirable and despicable representatives of the profession in the novels of Dickens, of Thackeray, of Trollope, and of many other eminent writers both on this side and on the other side of the Atlantic.

Let us now return to *Patronage* and the year 1814 in the month of January. It is a capital story, and hardly deserves the disregard in which it seems now to be held, for the writer had a long search before he secured a perusal of the work. The four duodecimo volumes in which it made its appearance are packed full of incident and of sprightly conversations; the tale, notwithstanding the occasional overcrowding of the stage with characters, holds the reader's attention to the very end; and the climax of interest is reached in the trial scene when the true ownership of the Percy estates is still undecided and when the discovery of a sixpence under the seal of a forged deed enables justice to right the wronged and to restore Percy Hall to the branch of the Percy family whose members have all along refused to seek for the protection of the great. For the novel has a didactic purpose, and Miss Edgeworth points the moral as well as adorns the tale. "I detest and despise the whole system of patronage," said Mr. Percy to Commissioner Falconer, who was busily engaged advancing his own and his children's fortunes by a constant employment of all the devices by which obsequiousness, sycophancy, flattery, subserviency, and even abasement, strive to win the favour of the men in power. Mr. Percy, however, and his wife and children find that it is no easy matter to get on in the world or even to maintain the position gained already without appealing to patronage, and they are all sorely tempted many a time to abandon their independence of spirit, which seems always to be interfering with their advancement. Misfortunes fall thickly upon them, but they endure quietly and with dignity, for "this family had never been proud in prosperity, nor were they abject in adversity"; and in the end the authoress sees to it that virtue is suitably rewarded and that the parasites and tuft-hunters creep away into well-deserved obscurity.

Dr. Erasmus Percy is one of the sons of this admirable family, and Miss Edgeworth makes use of his experiences as a young medical man starting practice in London to exemplify the peculiar forms which patronage takes in professional life. She was not unacquainted with physicians, for her full sister, Anna, had married Dr. Thomas Beddoes of Clifton, and later of London. Beddoes had studied at London and Edinburgh, and had taken his M.D. degree at Oxford; he had also been appointed reader in chemistry at the last named university and had attracted a very large class.[3] He was not long in this position, however, for he resigned his readership, partly on account of his sympathy with the French Revolution; perhaps we may see in this incident in Beddoes's career an indication of the same spirit of independence which his sister-in-law was busily depicting in her novel. The novel itself had a sort of medical, or, rather, obstetrical, origin, for it was first written under the name of the *Freeman Family*, for the amusement of Miss Edgeworth's step-mother, Elizabeth, when she was recovering from a confinement in 1787;[4] it was afterwards developed into *Patronage*, and possibly Dr. Erasmus Percy was then added to the list of characters, for he does not play an indispensable part in the working out of the plot. At the same time, it is through Dr. Erasmus that one of Miss Edgeworth's inimitable Irishmen comes into the tale, and the scenes in which O'Brien appears are by far the most vivacious and entertaining in the whole story; the book without the young doctor and his grateful Irish patient would be shorn of much of its power and of all its medical interest.

Erasmus appears in the story first in a letter to his father, wherein he tells the tale of his unlucky candidature for the post of physician in a London hospital. He asks his father not to feel disappointed that he is not getting on quite so fast as he had expected; he had not neglected any honourable means of bringing himself into notice, but it was very difficult for an honest young man to rise without puffing or stooping to low means. Then he tells of his candidature:

> I made all the necessary applications to those who had votes and interest. Sir Amyas Courtney and Dr. Frumpton, I was told, were the leading men, one a court, the other a city, physician; one always consulted in nervous complaints, the other in desperate cases; both hating and despising each other; each seizing this election as an opportunity of plaguing and mortifying his opponent, and of making the election for the hospital a mere struggle for power, and trial of popularity. I waited first upon Sir Amyas Courtney, and was at his house ten times before I could find him at home. At last by appointment I went to breakfast with him. He received me in the most promising manner—recollected to have danced with my mother many years ago at a ball at Lord Somebody's—professed the greatest respect for the name of Percy—asked me various questions about my great-grandfather, which I could not answer—and paid you more compliments than I can remember.

All seemed to be going well, but Sir Amyas took the young candidate to see his museum of rarities—"sad was the hour and luckless was the day"—and exhibited to him with pride a shell which he regarded as "an unique." Dr. Erasmus saw it was a *made* shell, but was prudently silent until forced by Sir Amyas to give his opinion, which he did with the independence of spirit and love of truth which were characteristic of the Percy family. His rival, Dr. Bland, happened then to call, pushing his fortunes; his opinion was asked regarding the shell, and at the first glance he was confident that it was unique. This, of course, ended Erasmus's chances with Sir Amyas. But, as the future was to show, the interview had not been without its use, for Mr. Gresham, a rich merchant and lover of pictures, had been present, had witnessed the behaviour of the two candidates, and had been favourably impressed by young Percy's straightforwardness.

Erasmus then paid his visit to Dr. Frumpton, and Miss Edgeworth's description of him must not be omitted:

> He was a farrier in a remote county. He began by persuading the country people in his neighbourhood that he had a specific for the bite of a mad dog. It happened that he cured an old dowager's favourite waiting maid, who had been bitten by a cross lap dog, which her servants pronounced to be mad that they might have an excuse for hanging it. The fame of this cure was spread by the dowager among her numerous acquaintance in town and country. Then he took agues—and afterwards scrofula under his protection; patronized by his old dowager, and lucky in some of his desperate quackery, Dr. Frumpton's reputation rapidly increased, and from different counties fools came to consult him. His manners were bearish even to persons of quality who resorted to his den, but these brutal manners *imposed* upon many, heightened the idea of his confidence in himself, and commanded the submission of the timid. His tone grew higher and higher, and he more and more easily bullied the credulity of man and womankind. It seems that either extreme of soft and polished, or of rough and brutal manner, can succeed with a physician. *Dr.* Frumpton's name, and Dr. Frumpton's wonderful cures, were in every newspaper and in every shop window. No man ever puffed himself better even in this puffing age. His success was viewed with scornful, yet with jealous eyes by the regular bred physicians, and they did all they could to keep him down, Sir Amyas Courtney, in particular, who would never call him anything but *that farrier*, making what noise he could about Frumpton's practising without a diploma. In pure spite Frumpton took to learning; late as it was he put himself to school, with virulent zeal he read and *crammed* till—Heaven

[1] *Journ. Obstet. and Gynaec. of the Brit. Empire*, xxiii, p. 86, 1913.
[2] BRITISH MEDICAL JOURNAL, vol. i for 1903, p. 40.
[3] *Dict. Nat. Biography*, iv, p. 94, 1885.
[4] *Dict. Nat. Biography*, xvi, p. 280, 1888.

knows how!—he accomplished getting a diploma, stood all prescribed examinations, forced himself into the College of Physicians, and has grinned defiance ever since at Sir Amyas.

Erasmus was on the whole well received by Dr. Frumpton; but there was one terrible moment in the interview when the latter learnt that the candidate had visited Sir Amyas first; but the shell which had wrecked Erasmus's chances with Sir Amyas seemed like to make his fortune with his rival, who told the story with embellishments all over the town. Dr. Frumpton was now Erasmus's declared friend. But again misfortune stepped in on the day just before the election when the late farrier was taking Erasmus round the hospital, and showing him his *summary clinics*. "Summary, indeed," wrote young Percy to his father; "when I saw the way in which this famous physician dealt with the lives of his poor patients I really grew sick, and could scarcely follow him." O'Brien the Irishman was brought in with a bruised leg; the surgeon was called. Dr. Frumpton said the leg must come off. Dr. Erasmus, partly out of sympathy and partly from medical observation, thought an attempt should be made to save the leg. A fierce quarrel ensued, which was ended by Erasmus taking the man away with him to lodgings and getting a young surgeon to look after him; and so ended Dr. Frumpton's patronage. Dr. Bland was elected, and O'Brien's leg was saved.

Dr. Erasmus reappears in Miss Edgeworth's second volume,[5] and the passage which tells of O'Brien's practical gratitude is so much in her best style that it may be transcribed:

> One morning, when Erasmus was just getting up, he heard a loud knock at his door, and in one and the same instant, pushing past his servant into his bedchamber, and to the foot of his bed, rushed O'Brien, breathless, and with a face perspiring joy—
>
> "I axe your Honor's pardon, master, but it's what you're wanting down street in all haste. Here's an elegant case for ye, Doctor dear! That painter-jantleman down in the square there beyond that is not expected ——"
>
> "Not expected!" said Erasmus.
>
> "Ay, not expected, so put on ye with the speed of light—— Where's his waistcoat?" continued he, turning to Dr. Percy's astonished servant—"and coat?—the top coat—and the wig—has he one?—Well! boots or shoes give him any way——"
>
> "But I don't clearly understand. . . . Pray did this gentleman send for me?" said Dr. Percy.
>
> "Send for your Honor! Troth, he never thought of it—No, nor couldn't—how could he? and he in the way he was and is—— But God bless ye! and never mind shaving, or another might get it afore we'd be back. Though there was none *in it* but myself when I left it—but still keep on buttoning for the life."

And so Dr. Erasmus is hurried off to attend O'Brien's master, the painter, who has had a fit—fortunately a slight one—from which he recovers. "Nature and Dr. Percy brought him through." Erasmus would not take any fee because he went unsent for by the patient; but at the painter's he meets again Mr. Gresham, the rich merchant, and through him he is introduced to high-class and remunerative practice. The conversation between Mr. Gresham and Erasmus, with O'Brien's dramatic interruption, is well told:

> Mr. Gresham turned to Dr. Percy and said: "I am afraid, sir, that you lost your election at the hospital by your sincerity about a shell." Before Erasmus could answer—in less time than he could have thought it possible to take off a stocking, a great bare leg—O'Brien's leg, came between Mr. Gresham and Dr. Percy. "There's what lost him the election! saving that leg lost him the election—so it did, God for ever bless him! and reward him for it!"

But, after all, it may be asked, was Erasmus not getting on by patronage? Miss Edgeworth faces this somewhat fictitious difficulty quite fairly. The doctor is "struck by a delicacy which begins in the midst of his prosperity to make his pride uneasy;" he wonders if O'Brien's and Mr. Gresham's help is not patronage; and so he writes to his father to quiet his troubled spirit and to tell him if the assistance of friends is to be called patronage. Mr. Percy deals with what one can only regard as a hyperensitive conscience at considerable length in an answering letter; but in the end he states his meaning clearly by means of two illustrations: "If you had saved a Minister of State from breaking his neck, and he in return made you surgeon-general to our armies, without knowing whether you were qualified for that situation, I should call that partial and pernicious patronage. But if you had cured a great man of a dangerous disease, and he afterwards exerted himself to recommend you as a physician to his friends and acquaintance, this I should consider as part of your fit reward." It is a fine question, however; and even in Mr. Percy's solution of this problem of conduct there is just a suspicion of dialectics.

This novel, a hundred years old though it be, deals with difficulties in professional behaviour which are quite modern, and whilst one hopes that physicians of the precise type of Sir Amyas Courtney and Dr. Frumpton are extinct, and that young men with a horror of sycophancy, with candour and independence of spirit, and with a fine and delicate sense of duty to patient and to brother practitioner, are pressing into the ranks of the great army of healers, one fears that there is still some evidence that patronage of the "partial and pernicious kind" is not yet dead, and that the puff, direct and indirect, is even now instrumental in advancing the incompetent whilst it retards the progress of the deserving and modest. It seems a safe thing to say that the grateful patient is the only proper patron for a skilful practitioner; but the situation becomes one of extreme complexity when, as in a recent novel by a popular authoress, the young medical man desires to marry the elderly and wealthy lady with frequently recurring attacks of angina, whose sufferings he has been able to relieve by modern medicaments of the vaso-dilator kind. It is a hard task, too, to discriminate between fair and unfair self-advertisement by articles, books, and speeches at medical meetings, and it is not much easier to decide what is honest criticism of another's theories and methods of treatment and what is unjust depreciation bordering upon detraction. No one wishes to have said about him what Goldsmith wrote:

> Of praise a mere glutton, he swallowed what came,
> And the puff of a dunce, he mistook it for fame.

But every one has a right to the just recognition which his talents, be they theoretical or practical, merit. If he will test them first by his conscience (which, it is to be hoped, is in good repair), then by the opinion his rival has of them, and if he will finally strike a mean between the two extremes (for extremes they are sure to be) he may hope to arrive at a pretty correct estimate.

[5] *Patronage*, vol. ii, p. 20, 1814.

A HOSPITAL UNIT IN THE UNIVERSITY OF BUDAPEST.

By E. GRAHAM LITTLE, M.D., F.R.C.P.Lond.,

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So much attention is at present concentrated on the question of making changes in the system of medical education in England, changes advocated by the recent Royal Commission, that a study at first hand of the conditions governing medical tuition in a great Continental university may be acceptable to the readers of a British journal devoted to medical interests. I have had a very recent opportunity of observing the practice in a hospital clinic in the University of Budapest more closely perhaps than is possible to the average visitor, for by the kind hospitality of the professor and director of the dermatological clinic in that university I lived in the clinic, and was allowed every opportunity of becoming acquainted with the working of its manifold activities.

Probably some of your readers will be as ignorant as I was before my visit as regards the position and importance of the University of Budapest. This university, the largest of the three universities at present established in Hungary, has over 8,000 students, of whom nearly 3,000 are medical students. In Hungary there are no other qualifying bodies than the university, so that all students of medicine must pass through a university to obtain a licence to practise. Before coming to the consideration of the Medical Faculty, which was my more immediate interest, I may premise that the university is under the control of the Minister of Education and a Senate of ten members, but is to a large extent actually governed by a Faculty Committee, consisting of all the professors, and a rector chosen in turn from each faculty. The income of the university is derived from private property in its possession, from fees of students, and from a

Government grant. The revenue from the first two items averages three and a half million crowns a year, and the Government grant affords another three million crowns, so that the annual income of the university as a whole is approximately £230,000. The academic year comprises two semesters—the first from the middle of January to the middle of June, the second from the middle of September to the middle of December. The fee payable by the student for each semester is only 75 crowns—that is, about £3 2s. 6d., and for this fee all the teaching in all the faculties is open to him.

The professors are salaried, but not full-time officers, and their remuneration begins at 6,000 crowns (£250) which is increased every five years by 1.000 crowns until the professor has served twenty years, when these quinquennial increments cease. The commencing salary is increased by allowances for lodging, and for children while they are minors, and by certain examination fees, so that the average salary of a professor in the middle period of his service is about 10.000 crowns (£420). The professor is obliged to retire at the age of 70. His pension depends upon the duration of his service; after thirty-five years of professorial work the pension equals the salary at the date of retirement.

The professor is allowed as much private practice as may be compatible with his duties of lecturing. I could not learn that any attempt to limit the amount of private work had ever been made.

The Medical Faculty consists of the twenty-seven professors in possession of chairs. The buildings provided for the faculty are nearly all modern, and surprisingly fine and splendid. There are fifteen clinics, those having beds ranging in size from a content of 80 to 200 patients, and all with the proportionate accommodation for out-patients, laboratories, and other services. Food is supplied from kitchens outside the clinics and sent in daily according to requisition; there are means of heating food when necessary in each ward. Medicines, instruments, heating, lighting, laundry, and experimental animals are all supplied from the central administration.

The dermatological clinic, in which I was especially interested, may serve as a type of the other clinics, and I am able to give a very detailed description of this by the kindness of the director, Professor Louis Nekam, whose friendship I have enjoyed since we met as post-graduate students in the University of Paris eighteen years ago. Professor Nekam is director of the clinic as well as professor, a combination which is usual in the case of professors having beds. The present dermatological clinic has been newly converted from its previous use as a surgical clinic, and the conversion is not quite completed. Originally consisting of three floors devoted to the in-patients, the middle floor under its present occupancy is given up entirely to housing the laboratory and magnificent library; to these is allotted no less a space than an area of 340 square metres. The ground and second floors are respectively devoted to male and female patients, 78 beds being available in all. Upon the ground floor there is a large out-patient department; and on the first floor there is a lecture theatre which can seat 300 students, all of whom can see the demonstration-screen on which projections of photographs and slides are made.

The clinical lecture is the keynote of teaching, as in most Continental clinics, and this duty is, in fact, the sole legal obligation of the professor, the performance of this service, in the absence of any other, justifying the retention of his post by the professor, as is actually the case with a very distinguished occupant of a chair in the University of Vienna. Five clinical lectures are given during the week by the professor, the material for these being most elaborately prepared by himself and his assistants. When the professor is also a director of a clinic with beds, there is, of course, much more responsibility upon his shoulders. Professor Nekam's personal hours are as follows:

8 a.m. to 9 a.m., visit in the wards.
9 a.m. to 11 a.m., out-patients.
11 a.m. to 12 noon, administrative duties.
12 to 1, clinical demonstration in the theatre.
2.30 to 4.30, private practice at his own house.
5.30 to 9 p.m., hours usually spent in the clinic in research and preparation of the morrow's clinical lecture.

Attendance during one semester at the dermatological lectures is a compulsory part of the medical curriculum, and the average class for the lecture in the last semester numbered 570. Examinations are conducted by the professor, nominally with the dean and a Ministerial representative as assessors, but this is purely a matter of form; the assessors are seldom actually present at any part of the examination.

At the present time Professor Nekam has fourteen qualified doctors assisting him. I give the initials and special experience of each of these, and the duration of their service in the clinic:

1. Dr. B. K.; radiology and electrical treatment: 13 years.
2. Dr. T. H.; chief assistant in the out-patient department; 12 years.
3. Dr. E. N.; chief assistant in laboratory, photographer and histologist; 18 years.
4. Dr. E. H.; in charge of the out-patient dental department, open every day for cases restricted to the skin clinic. This department has been in use for one year.
5. Dr. E. S.; chief assistant in the administrative department and resident physician in charge of the female ward; 6 years.
6. Dr. B. K.; urologist; 6 years.
7. Dr. L. H.; resident physician in charge of men's ward; 6 years.
8. Dr. S. S.; second assistant in the out-patient department; 4 years.
9. Dr. A. M.; assistant in the out-patient department; 2 years.
10. Dr. F. G.; parasitologist and laboratory assistant; 1 year.
11. Dr. E. L.; chief assistant in the preparation of the clinical lecture; 1 year.
12. Dr. J. K.; assistant in the out-patient department; 1 year.
13. Dr. A. B.; assistant in the laboratory and artist; 1 year.
14. Dr. A. S.; army surgeon-major deputed by the Government to make a special study of syphilis; 3 to 4 years.

In addition to this fully qualified staff there are: An artist in charge of the wax model department; three women assistants in the laboratory; a machinist and electrician operating the projection apparatus in the theatre; and the usual staff of male and female nurses, ward maids, and other servants.

The qualified assistants are all appointed on the selection of the professor. Those receiving salaries are paid by the university. Their actual stipends are small, but they are afforded some opportunities of supplementing the official income by tutorial classes and by private practice; and the coveted award of the distinction of *Privat-docent*, which is also in the gift of the professor, is an additional inducement to prolonged service. There are 126 privat-docents in the Faculty of Medicine; 24 of these are dignified with the title of "professor extraordinary," but they have no chairs, and are not members of the Faculty of Medicine.

The lecture theatre is beautifully lighted. Lining its walls are glass cases containing a remarkably complete collection of parasites and specimens of plants and finished pharmaceutical products. At the personal expense of the professor, who is a connoisseur of the fine arts, a series of paintings portraying past occupants of the chair and teachers of the subject, adorns the spaces between the severer exhibition of wax models of rare diseases of the skin. The adjacent library is certainly the finest collection of dermatological works that I have ever seen. The most valuable part of it—the incunabula and early printed books—are the gift to the clinic of the professor, who takes a pardonable pride in the frequent assertion which the fortunate man is in a position to make, that "Such and such a book is not in your British Museum Library."

The clinical lecture, which is the flower of all this intensive culture, is as complete and perfect an instrument for demonstration to large classes as can be devised. Cases of disease illustrating the lecture are brought down from the ward and out-patient department, where possible, and a large and exceptionally excellent collection of colour photographs, wax models, and histological sections is available for study; projections of these are thrown upon the screen by an instrument, the invention of the professor, which is a great improvement upon the epidiascope, for projections are given without darkening the room at all, and broad daylight in no way diminishes the sharpness of the picture.

It is true that the University of Budapest requires that the graduate, after obtaining his degree but before he is admitted to practice, shall attend for two semesters the practice of some optional clinics, of which there are six. It is also true that some facilities are offered for a small percentage of the students to attend before qualification the practice of the five privat-docents who are licensed

to teach dermatology in the Faculty of Medicine, the teaching being given outside the university clinic. But it is obvious that so large a body of students as attend the lecture can hardly come into direct relations with disease in the living patient, and this system of teaching, excellent though it is where large classes must be dealt with, does not seem to me entirely to compensate for the lack of the direct contact with the patient which is the keynote of our English training. On the other hand, there is no doubt that the system of ensuring a large and permanent body of skilled assistants offers opportunities for advancing knowledge which are absent from our starved schools of medicine. It must, however, be noted that the expense of the provision of these clinics is very large. The salaries of professors and assistants are about one-quarter to one-half as much as would be considered a minimum wage in London, and the expenses of living in Budapest are similarly less than in London. Yet the income which the university enjoys is much more than twice as large as the income which the Royal Commission regarded as adequate for the University of London, and which, small as it is, remains entirely unprovided, and indeed is little more than a pious aspiration.

MEDICAL EXPERIENCES IN THE ANTARCTIC.

On January 26th Surgeon Murray Levick, R.N., delivered a lecture on the experiences of Captain Scott's northern party, from a medical point of view, illustrated by a large number of beautiful slides, in the large hall of the Royal Society of Medicine, which was quite filled, Sir F. H. Champneys, President, in the chair.

Surgeon Levick said that the northern party consisted of six persons: Commander Campbell (in command), Surgeon Levick, Mr. Priestley, and three petty officers, R.N. They left New Zealand at the end of November, rather earlier in the season than former expeditions had set out. In the summer the sea ice broke up and went northward and accumulated, so that masses of block ice extended round the Antarctic Circle. Later it became somewhat thinned, and ships were able to get through. In December the party were in pack ice for five weeks. The *Fram* was met in the Bay of Whales. Captain Scott eventually made his winter quarters at the foot of Mount Erebus. Both ponies and dogs of the Siberian domestic breed were taken with the expedition; the dogs did most of the hauling, and formed the better means of transport, and it was possible that dogs only would be taken in future. It was found impossible to land stores owing to the precipitous front of the barrier.

At Cape Adair the only way of getting to the beach in the summer was by the sea; afterwards the party was frozen up and unable to get away. Here a hut was built out of the sections prepared and numbered. Owing to the great force of the prevailing winds—often 100 miles an hour—the hut had to be anchored by means of wire ropes attached to supports driven deeply into the ice. During the four months of darkness it was impossible to get away from the beach.

The clothing used for the spring—the time of very low temperatures and wind—consisted of thick woollen trousers and vest, a woollen jersey, and over these cotton wind-proof clothing. On the feet two or three pairs of socks were worn, and fur boots made of reindeer hide. A wind-proof helmet completed the attire. Often the wind compelled the wearing of a woollen nose-piece. The only way in which much of the snow-covered surface could be negotiated was on skis. The weather in this region was very treacherous, for though on setting out the day might be bright and promising, in twenty minutes the party would be in the midst of a blizzard. Once they were kept prisoners for four days in this way. The party were now some 220 miles from Cape Evans, and with only three weeks' full provisions began to be anxious about the coming of the ship according to arrangement.

The chief interest of the lecture centred in the difficulties encountered by the party and their manœuvres to eke out their scanty provisions. Nothing could be erected to withstand the force of the wind, and the only resource was to burrow into hard-blown snow. After great labour a habitation measuring about 12 ft. by 4 ft. by 5 ft. 6 in. was chiselled out of blue ice, and a small corner was set apart for cooking. The feet frequently became frost-bitten, chiefly the great toe and between the toes. The victim had either to take off his footgear or walk off rapidly in the hope of re-establishing the circulation. At one period the members of the party were eating nothing but seal meat and one biscuit a day: it was very difficult to get accustomed to the blubber owing to its strong flavour. The party found they could not satisfy their hunger on lean meat, however much of it they consumed. They were constantly hungry, and gradually became weaker. Seal's blubber was used as oil for light—a yellow smoky flame—and a teased-out piece of rope for a wick, which had to be snuffed every five minutes. Heat for cooking was derived from dropping blubber on to bones and keeping it alight. The fare was later varied by killing and eating some seventy attenuated old penguins. When the temperature fell below −10° or −15° the meat had to be chopped off by means of a geological chisel hammer. The result of eating so much seal meat was that the members of the party had some very unpleasant symptoms. Then they had 60 per cent. blubber and 40 per cent. meat. Carbohydrates were very seriously missed. They had the misfortune to run out of salt, and felt a strong craving for it, which was partly satisfied by using salt-water ice from the sea. Directly after this was started an epidemic of diarrhoea broke out. They stopped the ice salt and used up the small remaining stock of salt and the epidemic subsided, but it was renewed when the ice was again used. The conditions in which the members of the party found themselves were eminently conducive to scurvy except in the matter of food—uncomfortable and depressing surroundings, very little exercise, and very bad air—but the party did not suffer from that disease, showing that people did not have scurvy so long as they lived on fresh meat. When first consuming large quantities of seal meat the urine contained large quantities of uric acid, and hence pain ensued on micturition, due to the crystals. Some members also suffered from enuresis in their sleeping bags at night, so that in the morning those bags were soaked and frozen hard. The desire to micturate was very acute, even when there was but small need for the act, so that there was not time to adjust the wind-proof clothes, and the evacuation took place in the sleeping bag. These symptoms were improved by low diet. Later still there was serious constipation, with the result that several had anal fissures, and sometimes haemorrhages occurred. A member might be absent for defaecation forty minutes, and come back suffering much pain, which lasted some hours. Several seals having been killed, large quantities of meat were eaten, and the symptoms returned. They then boiled the meat for at least half an hour, and the symptoms again disappeared. If for any reason the meat was underdone, there was a reappearance of uric acid and the other discomforts. It seemed likely that the symptoms were due to large quantities of protein passing through the intestines without being assimilated. In the cramped igloo there were three doors to shut out all winds, and these were made as nearly as possible air-tight. For a time the roof was composed simply of snow, through which air passed fairly quickly, and it was by this channel the oxygen consumed by the party reached them. But later the warmth from the interior partly thawed and subsequently glazed this roof, and then the atmosphere became so vitiated that the blubber lamp would not burn, and even a match soon went out. Six men had been lying perfectly still in a very confined space, yet had been comfortable, without even a headache. This he attributed to the stimulant effect of the intense cold; they could scarcely have lived in such an atmosphere if the temperature had been definitely higher. One member of the party had to leave several times a night, yet he continued going cheerfully during the whole time. Later on every member of the party suffered from ptomaine poisoning. The meat at this time was soft enough to cut with a knife, and there was only one tin available, with no facilities for cleaning it. Diarrhoea was common, and some had several attacks of it.

The party lived for seven months under those conditions; for five months they were in good health, but afterwards the troubles described arose, and it was decided to leave the igloo. For three weeks before the start on September 30th all the members of the party did Swedish exercises in view of the long journey before them, and by the time they had to leave they were fitter than they expected to be.

That fact the lecturer attributed to the carnivorous diet. The party started with two sledges, three men to each: one was on wooden runners, and the other on iron. For the first three days they did very good marching, but after that they became very stale, though they were still consuming a large amount of seal meat. Presently a bamboo pole was espied on a ridge: it proved to be a dépôt of food which had been left a year before by Mr. Griffith Taylor's geological party. It was 100 miles from Cape Evans. There was a pleasant variety of food—biscuits, chocolate, tea, lard, butter, and every luxury. Each member of the party ate an enormous meal. Yet they awoke in the middle of the night hungry again, and made another big meal. The result was that a member of the party who had been ailing for weeks became well in twenty-four hours. Farinaceous food did for him what all the remedies at the lecturer's command had failed to effect. Several days they marched sixteen hours, and at the end of the day, though tired, felt quite fit. They arrived at their base on November 2nd, having been five weeks on the journey.

SCIENCE NOTES.

Australian Tribal Customs.

PROFESSOR BALDWIN SPENCER, F.R.S., of Melbourne, gave a most striking address on the life of the Australian tribesmen before the Royal Anthropological Institute on January 27th. Both the Secretary of State for the Colonies, who moved, and Sir Ray Lankester, who seconded, a vote of thanks, which was enthusiastically accorded, commented on the extraordinary vividness of the mental impression produced by the simultaneous appeal to the eye and ear of the cinematograph and of the phonograph. What Professor Spencer has done is to get on such good terms with the natives that one tribe has sent messengers ahead of him as he travelled to let the next tribe know that he was to be trusted, and might be allowed to see anything he wished. In this way he was able to witness most of the ceremonies which occupy so large a part of the black fellow's time, to photograph the dances which make up so much of them, and to record the strange singing by which they are accompanied. It is to be hoped that both sets of records have been duplicated, for already the customs are decaying, and it is little likely that any one again, even though he possessed Professor Spencer's tact in dealing with the natives, will have such an opportunity of observing and recording the ceremonies of tribes who seem still to be living in the stone age. After photographs of the great plains of the Northern Territory, the Central Ranges, and the Northern Rivers had been shown, ordinary camp life—and the native tribes are all nomads—was illustrated by cinematographs of cooking, of boat races with many upsets, and of ordinary corroboree dances, the photographs being accompanied by phonographic records of the songs. Then followed similar records of sacred ceremonies, all connected with the totemic ancestors of the tribe, which only initiated men may see. They included the ceremony, connected with the admission of the youth to manhood, of swinging the bull-roarer, a wooden instrument which, when whirled round at the end of a cord, produces a noise to which it owes its name. Not only may no woman witness the ceremony, but she must not even see the instrument on penalty of losing her sight. Other ceremonies demonstrated were the kangaroo and eagle hawk ceremonies of the Arunta tribe, the turtle ceremony of the Geimbio tribe, and the snake and kangaroo ceremonies of the Kakadu tribe. The symbolism of some of the ceremonies was, as Professor Spencer admitted, difficult to understand, but in other cases, as in the snake and kangaroo ceremonies of the Kakadus, it was easy to see a mimicry of the animal, as also in the buffalo dance of the natives of Bathurst Island, which, as the animal was only introduced comparatively recently, cannot be very old. Finally, the ceremonies of death, burial, and mourning observed on the same island were demonstrated. The native, Professor Spencer said, did not believe in death from old age or disease, but always attributed it to magic, and would undertake long expeditions to kill the member of some other tribe who had been selected, without any discoverable reason, as the evil-doer. Incidentally he mentioned, in the course of his lecture, that the tribal medicine men subscribe to this doctrine, and sometimes give astounding explanations of the way in which the magic works. In one instance which he seems to have witnessed a consultation, attended by several medicine men, was held. The senior diagnosed the disorder as due to the introduction of a human bone into the patient's inside; the next in order agreed that something had been introduced, but considered that it was a knotty piece of the branch of a gum tree, and the junior consultants agreed with both. After much rubbing, the senior consultant, with the assistance of his colleagues, produced several pieces of bone, and attention was then turned to the expulsion of the gum tree branch. After working till they were exhausted, they tied a hair rope tightly round the patient's belly to prevent loss of the advantage gained. Before their energies were restored the patient unfortunately died. Clearly the magic had been too strong. From the way in which Professor Spencer spoke of the singing, it would seem to be noisy, but as rendered by the phonograph much of it had a certain resemblance to primitive Gregorian chanting.

Spontaneous Generation.

Dr. Bastian has published in *Nature* (January 22nd) a statement of experimental data in evidence of the occurrence of spontaneous generation at the present day, containing accounts of some experiments made since his paper on the subject was published in the BRITISH MEDICAL JOURNAL (November 12th, 1912, p. 1542). Stated in general terms, the result of the experiments in which he has been engaged for a good many years is that various living organisms—torulae, minute moulds, and bacteria—appear in saline solution of a certain special composition enclosed in glass tubes, then sterilized by heat, and subsequently exposed to the action of diffused light and a varying amount of actual sunshine for periods of from four to ten months. These saline solutions were used "because they could be submitted, within limits, to higher temperatures than organic infusions without destroying any possible productivity, and because in using them there would be a closer approximation to the conditions that must have existed when the surface of our earth first cooled down below the temperature of boiling water, so that a natural origin of living matter might thereafter become possible." In the experiments now related sterilized tubes containing the solution (about ½ oz.) were sealed and subsequently heated for five to twenty minutes at 125° to 145° C., or to 100° C. for twenty minutes on three successive days. Prefixed to Dr. Bastian's paper is a note by Professor R. T. Hewlett, who, in the first place, points out that, "although such solutions apparently contain no carbon and other constituent elements of protoplasm, an ample sufficiency of such elements to supply all requirements is present as 'impurities' in the solutions." Professor Hewlett then makes the following statements: (1) That he has repeated Dr. Bastian's experiments in his own laboratory, but has not yet been able to confirm Dr. Bastian's observations; (2) that subcultures from the solutions before sterilization have yielded abundant growths of micro-organisms, but that subcultures have never been obtained from the fluid in the tubes prepared according to Dr. Bastian's directions and submitted to only one boiling; (3) that he has never obtained from the sterilized tubes the common forms of sporing bacilli, though they would certainly have been expected had sterilization been incomplete; (4) that the structures resembling organisms he has, on many occasions, seen in Dr. Bastian's tubes are really organisms and not artefacts or pseudo-organisms, but whether they were living or not could not be determined by microscopic examination except in the case of certain motile bacteria seen on two or three occasions. Dr. Bastian in his paper states that Albert and Alexandre Mary have repeated his experiments in Paris, and after the tubes had been exposed to light for some months found typical torulae and micrococci, which they have succeeded in subcultivating in a solution of glucose (2 per cent.) containing a small quantity of iron lactate. He states also that Drs. Jonathan Wright and MacNeal, of the post-graduate laboratories, New York, have, following his method, obtained bacteria in "enormous numbers," although bacteriological examination of the original materials yielded negative results. He records also certain observations of his own in which, in cover-glass preparations, torulae obtained from the experimental tubes threw out hyphae.

Hydrogen in the Lung Gases.

The first of the Friday discourses of the session was given at the Royal Institution on Friday, January 23rd, by Sir James Dewar, on "The Coming of Age of the Vacuum Flask." Towards the end of his lecture he announced that as a result of recent researches he had been able to demonstrate the presence of hydrogen in the air breathed out from the lungs of men and animals.

The early portion of the lecture was devoted to a history of the work done in connexion with the liquefaction of gases at the Royal Institution laboratories and to an account of the application of the vacuum principle to flasks; he emphasized, in passing, the need of these vessels being standardized, as the varying degrees of vacuum at present used made them of very varying degrees of efficiency. The power of a vacuum chamber in preventing the influx of heat had, he pointed out, been known for a long time, and he had applied the principle at the Royal Institution, when, for the purpose of his researches on gases, he wished to prevent the absorption of heat by the gases with which he was experimenting. As was shown by a number of lantern slides, the apparatus had been very greatly simplified in the course of the experiments. The chief difficulty met with had been to secure a really satisfactory vacuum. The first method had been to boil mercury in the space that it was desired to evacuate and then to condense the mercury vapour that remained by means of liquid air. In this way a mirror of mercury was formed that served to reflect away any heat due to radiation, just as the vacuum prevented any heat being brought by convection. The use of charcoal, cooled to a low temperature, had proved, however, a more satisfactory method for absorbing the gases. Since that had been adopted the only improvement in the manufacture of the flasks had been due to the skill of the glass-blowers. Sir James Dewar demonstrated the use of the molecular air-pump, which was capable of producing a vacuum to five figures. The essential principle of its working is a specially constructed spindle, capable of being turned at eight thousand revolutions a minute, which sweeps on the gas molecules mechanically. At this speed he had no difficulty in exhausting a two litre vessel, in passing it in a few seconds through all the well known phases, and in showing the production of the different degrees of exhaustion by means of their behaviour to the electric discharge. Another illustration of the efficiency of the pump was given by exhausting with it a quantity of liquid oxygen, with the result that in a few minutes the oxygen was frozen solid. The application of vacuum tube methods had resulted in bringing the law of Dulong and Petit into relation with the other laws governing the behaviour of the atoms. Working at ordinary laboratory temperatures Dulong and Petit had shown that the atomic heats for the various elements (got by multiplying the specific heat and atomic weight) was a constant of an approximate value six. Sir James Dewar said that he had extended the research by working at an atmosphere of 50° absolute (− 223° C.), and had constructed a liquid hydrogen calorimeter in which the specific heat of the various elements could be easily determined in terms of the volume of gas produced in cooling the substances. Under such conditions he had got very different results from those previously obtained, and he had found that the atomic heats exhibited the same rough periodicity of function with atomic weights as was shown by other properties of the elements. A double curve for the different elements was shown, demonstrating the complete parallelism between the atomic volumes and the atomic heats. In connexion with their speculations as to the constitution of the atoms, physicists had all been, he would not say fighting, but putting different interpretations on their results, discussing vortices of electrons, central positive charges, and so forth. It was remarkable, in view of these results, that some of them had predicted that the atomic heats must be chiefly determined by the atomic volumes and the electric constants.

Passing on to consider the question of hydrogen, Sir James Dewar said that it required special precautions to make the liquid last very long, since its boiling point was 20° absolute. When once it had been prepared, it was desirable to go on working with it until it was exhausted. The investigation of the uncondensable gases of the atmosphere was not yet concluded; at the temperature of 20° absolute uncondensable gases still remained. These would naturally consist of helium, neon, and hydrogen, and Sir James Dewar at the close of his lecture maintained there was evidence that on treating air with various reducing agents to remove the oxygen measurable quantities of hydrogen made their appearance; from a study of the behaviour of the various reagents it seemed probable that the hydrogen might be derived from the decomposition of water. It will be noticed that the total volume of uncondensable gases as shown in Sir James Dewar's table amounted to about one in forty thousand of the volume originally taken, while the hydrogen considered alone was of the order of one in two million. The table of results was as follows:

Uncondensable Gas at 20° Absolute. Air-Nitrogen obtained in Different Ways.

Reagent for Removing Oxygen.	Pressure per Atmosphere in 10^{-4} mm.	Parts per Million Volumes.
(Theoretical value)	226	29.7
Hot copper and copper oxide	228	30.0
Yellow phosphorus (combustion	220	28.9
Red phosphorus (combustion)	392	51.6
Red phosphorus (combustion), H removed ...	212	27.9
Ferrous oxide and water	1,260	166.0
Ferrous oxide and water, H removed	203	26.7
Phosphorus (yellow) and water	524–1,410	68.9–186
Phosphorus (yellow) and water, H removed ...	212	27.9
Copper and ammonia solution	707	93.0
Copper and ammonia solution, H removed ...	210	27.6
Sodium hydrosulphite	219	28.8
Cuprous chloride, acid solution	226	29.7
Pyrogallate (alkaline)	284	37.4
Pyrogallate (alkaline), H removed	211	27.9
Chromous chloride, acid solution	520–200,000	68.4–26,300
Chromous chloride, acid solution, H removed..	236	31.1

This table was succeeded by another which gave the totals of uncondensable gases at 20° absolute, a portion of them consisting of hydrogen. It was as follows:

Uncondensable Gases at 20° Absolute in Air from Various Sources.

Material.	Pressure per Atmosphere in 10^{-4} mm.	Parts per Million Volumes.
Chemical nitrogen	0.33	0.043
Chemical oxygen	0.23	0.030
Air (pure)	179	23.6
Air (H removed)	173	22.8
Soil gas (6 in. deep)	167	22.0
Gas from fresh liquid air	66.4	8.74
Gas from old liquid air	5.1	0.67
Gas from liquid air machine	252	33.2
Gas from rain water	119	15.7
Gas from deep well water	127	16.7
Gas from surface well water (chalk) ...	224	29.5
Gas from earth brine	270	35.5
Gas from King's Well, Bath	11520	1516.0
Gas from King's Well (H removed)	10830	1425.0

Sir James Dewar said that the hydrogen was probably due to the action of reducing agents, and stated that by pursuing these same methods he had been able to find that hydrogen was steadily being given off in the lung gases. His own contribution was about 100 c.cm. a day, but that of one of his assistants was about a quarter of a

litre. He had made experiments also on animals, and it appeared that hydrogen was being given off in respiration by the whole animal world. It was clear, therefore, either that it was escaping from the earth or being oxidized in the upper air and coming back as water. Probably both processes were in progress. The table summarizing the results obtained by the analysis of the lung gases, so far as their hydrogen content was concerned, was as follows:

Uncondensable Gases at 20° Absolute in Respired Air.

Samples: Different Persons taken at Royal Institution.	Pressure per Atmosphere in 10^{-3} mm.	Parts per Million Volumes.	
		Total Uncondensable.	H Only.
A	217-234	28.6-30.8	5.0-7.2
B	196-220	25.8-29.0	2.2-5.4
C	235	30.9	7.4
D	351	46.2	22.6
E	321	42.2	18.8
F	295	38.8	15.3
G	247-444	32.5-58.4	9.0-34.9
G hydrogen out	182	23.9	—
G at home ...	228-393	29.9-51.6	6.3-28.0
Animal	223-278	29.3-36.5	5.7-12.9
Ordinary air ...	179	23.6	0.8

As regards these tables, it may be noted that all three give the records of similar processes of analysis. In the first air is taken; oxygen is removed in the various ways indicated; nitrogen is frozen out, and the presence of minute quantities of rare gases and hydrogen uncondensed at 20° absolute is established. In the second the sources of the air are varied as much as possible, and the large variation in the quantity of uncondensable gases is emphasized. In the third several samples of lung gases are considered, and the hydrogen and other gases are differentiated, their volume being found to be considerably greater than that in ordinary air, the variation from the flat quantity of about twenty-three volumes per million being due to the presence of the hydrogen produced in the body.

LITERARY NOTES.

SIR CHARLES TUPPER'S reminiscences will be published by Messrs. Constable, not by Messrs. Cassell, as stated in the BRITISH MEDICAL JOURNAL of January 24th. Among Messrs. Constable's other announcements is a volume entitled *Thirty Years in Moukden*, by Dr. Dugald Christie, a record of medical missionary work which includes the author's experiences during the Chino-Japanese war, the Boxer rebellion, and the Russo-Japanese war.

The *Medical Record* of New York states that it is reported that the late Dr. Weir Mitchell a very short time before his death finished an epic poem of five thousand lines entitled *Barabbas*, which is believed to be one of the most remarkable of his literary productions.

Among the publications of Messrs. Stanley Paul and Co. and Messrs. Grevning and Co. during the spring of 1914 we find *The Life of James Hinton*, aural surgeon and philosopher, by Mrs. Havelock Ellis, who had had access to private papers, and has had the help of intimate friends of Hinton; and *Dr. Thomas Shortt, Principal Medical Officer in St. Helena, 1815-1821*, by Dr. Arnold Chaplin, author of the *Illness of Napoleon Bonaparte*, which was reviewed in the BRITISH MEDICAL JOURNAL of December 28th, 1912, p. 1761. The volume is compiled from papers in the possession of Dr. Shortt's family, and contains brief notes on some of the other medical men associated with the case of Napoleon at St. Helena between 1815 and 1821.

Of all the curious customs that "can plead a course of long observance for its use," perhaps the most mischievous is one which appears to have been peculiar to Caithness, where at one time it was by no means unusual for a wedding to be followed almost immediately by the funeral of the bridegroom, owing to the zeal with which the friends of the latter vied with one another in making him dead drunk on his wedding night. A correspondent writing on this subject in the October number of the *Old-Lore Miscellany of Orkney, Shetland, Caithness, and Sutherland*, Part IV, vol. vi, remarks:

It would appear from the following extract that this was a common practice in Thurso parish about the middle of the 18th century:

"Thurso, January 15th, 1740.—The session being informed that at the time of Don^d. Swanson, weaver in town, his marriage, he was filled drunk to that degree that his life was endangered, and that it is a common practice of filling bridegrooms drunk to that degree that it has proved fatal to severalls, and being resolved to give a publick testimony agt. it. They do recommend to Theo. Dunnet and James Ogilvie to inform themselves who the persons were that forced the said Don^d. Swanson to drink to that pitch and to make report next session."

In this instance retribution followed quickly in the footsteps of Donald Swanson's too convivial friends, for we learn from the same writer that little more than a month later, on February 19th, 1740:

Alex^r. Reid, John Johnstown, Alex^r. Forbes, Andrew Sinclair, and Henry Williamson, charged with having filled Don. Swanson drunk at the time of his marriage, compeared and denyed that they forced him to drink, but owned that they were present with him when he became drunk, and confessed they were faulty in witnessing his drinking to a pitch, and promised not to be guilty of the like for the future, they were dismissed with an admonition not to be guilty of the like in time coming.

No more is heard of "Alex^r. Reid" and his companions, but one wonders whether the admonition had the desired effect, and when and how this barbarous custom died out at Thurso weddings. The same number of the *Old-Lore Miscellany* contains, besides these and a number of other antiquarian notes, the conclusion of an interesting article by the Rev. D. Beaton on the early Christian monuments of Caithness, and some further extracts from the diary kept by the late Dr. Edward Charlton during his tour through the Shetlands in 1832.

In Boswell's *Journal of a Tour to the Hebrides with Samuel Johnson, LL.D.*, there is an account of a short stay which they made at Aberdeen on their way along the East Coast of Scotland. They reached the town on August 21st, 1773. On Sunday, 22nd, after attending service at the "English Chapel" they walked down to the shore. Johnson is reported to have laughed when he was told that Cromwell's soldiers taught the Aberdeen people to make shoes and stockings and to plant cabbages. Professor Thomas Gordon gave him an account of the plan of education in the college, which Johnson said was similar to that at Oxford. Waller, the poet's great-grandson, was then studying at Aberdeen. Among other visitors was Sir Alexander Gordon, who had known Johnson twenty years before in London. Boswell describes him as a gentleman "of good family, Lismore, but who had not the estate." King's College made him professor of medicine, which afforded him a decent subsistence. He told the travellers that the value of the stockings exported from Aberdeen was in peace £100,000, and in war £170,000. Johnson asked what made the difference. Sir Alexander said, "Because there is more occasion for them in war." Professor Thomas Gordon, however, said, "Because the Germans, who are our great rivals in the manufacture of stockings, are otherwise employed in time of war." This Johnson thought a good solution. At dinner he ate several platefuls of Scotch broth with barley and peas in it, and seemed very fond of the dish. Boswell said to him, "You never ate it before," and he replied, "No, sir; but I don't care how soon I eat it again." On August 23rd they went to Marischal College, and on the same day waited on the magistrates in the town hall, when Johnson was presented with the freedom of the town—a mark of attention with which he was much pleased. Johnson went with Sir Alexander Gordon to the old college (King's). They visited two booksellers' shops, but could not find the works of Arthur Johnson, Aberdeen's most celebrated Latin poet. The poet is like the prophet, without fame in his own country. On the whole, Johnson does not seem to have been impressed by the men he met in the city of the two universities. Boswell says that at his inn he was very merry, and observed how little they had either heard or said at Aberdeen—that the Aberdonians had not started a single *mawkin* (the Scottish word for hare) for them to pursue.

British Medical Journal.

SATURDAY, JANUARY 31st, 1914.

INSURANCE FINANCE.

It is distasteful to the majority of medical men that the aims and future of their profession should be made a factor in political conflicts, but it was probably inevitable that the results of the institution by one party of a gigantic system of national insurance should be subjected to criticism by the other, and that the cost of medical benefit and the methods of its administration should not be exempt. The recent almost simultaneous publication by such influential exponents of Unionist opinion as the *Times*, the *Scotsman*, and the *Glasgow Herald* of articles taking a very gloomy view of the financial position of the approved societies and the financial aspects of the national insurance scheme generally is evidence that the Opposition may not be indisposed to exercise its right of criticism, and it can hardly be doubted that the subject will be raised in Parliament, in some form, soon after the new session begins.

The grounds for the solicitude displayed in this particular quarter are not made very plain, and so far as we are aware no official information has been published as to the financial position of the approved societies, although many dark hints have been dropped by officials of some of the old friendly societies. The speech of the chairman of the Welsh Insurance Commissioners, delivered the other day to the conference of Welsh Insurance Committees, tended to produce a rather optimistic impression as to the general financial position, at any rate in Wales, although it is not possible to form any reliable opinion in the absence of dates and other essential details.

It is to be noted that rather less than three months ago the National Insurance Joint Committee issued new regulations as to the administration expenses of approved societies and revoked those previously in force. The new regulations provided that if a deficiency were shown in the administration account of any society or branch for the period from July 15th, 1912 (when sanatorium benefit came into force), to January 12th, 1913, or for any subsequent year, the governing body of the society or branch must, unless the deficiency be made good in some other way, forthwith make a special levy, payable within two months. The head office of a society may in the same way make good a deficiency in its administrative account by a levy on the branches. Last month a circular was issued under the authority of the four national Commissions calling attention to these regulations, and stating that the societies must now take action to make good any deficiency shown in their administration accounts for the period from July 15th, 1912, to January 12th, 1913. The circular points out that a deficiency may be made good by voluntary subscriptions, by obtaining the permission of the Commissioners to carry forward the deficiency to the administrative account for the next year—that which ended on January 11th, 1914—or by a levy.

The general effect of the "retrospect" of a year of national insurance by an actuarial correspondent, published by the *Times*, was summed up in the statement "that the actuarial calculations on which the scheme is based have been falsified by experience to a degree that brings most of the societies face to face with approaching insolvency." The reasons assigned for the alleged deficiencies are, first, that the basis on which the actuarial estimates of the Act were founded—namely, the experience of the Manchester Unity in the years 1893-97—were insufficient, not only in extent, but also because they showed only the average benefits which a given fund could provide. The second reason given was that in the scramble to enrol members some societies did not require any examination of applicants; the "retrospect" assumed that the number refused on the ground of ill health must have been a small fraction only of the number the actuaries took account of in their estimates, and that consequently the allowance of 10 per cent. by which the experience tables were weighted will prove insufficient. The third ground mentioned was that the estimates of sickness were based upon the results of voluntary insurance, whereas it has been found by experience in Germany and elsewhere that the rates of claim under a compulsory system are far higher. The same considerations, it was said, applied to disablement benefit. The fifth source of error mentioned was the assumption that the same rates of sickness and disablement claims would rule in women's societies as in men's; this, it was asserted, had already been admitted to be a great and dangerous fallacy, at any rate for societies of women engaged in industrial employment. The last cause assigned was that the societies rejected the offer implied in the Act to take over £12,000,000 of their liabilities, and had thus failed to prevent double insurance. It was added that the disastrous effect of double insurance on sickness rates was well known to actuaries, and that this influence would deeply affect the finances of the private as well as of the statutory funds of the societies.

Many critics of the insurance scheme and its administration seem now to take it for granted that the financial results of the first three years' working will be so unfavourable that "something will have to be done." This is one of those indefinite phrases which those who hold very different opinions as to the remedy may agree to use; but in this instance more than one party is turning its eyes to medical benefit. The managers of the approved societies and works clubs declare that if the administration were turned over to them they would be able to effect great economies, while those who have become obsessed by the idea of a whole-time medical service are equally confident that their pet scheme would have the same effect. Two circumstances have to be borne in mind in this connexion. In the first place the Act directs (sec. 36 (1)) that a valuation of the assets and liabilities of every approved society and its branches shall be made, by a valuer appointed by or with the approval of the Treasury, at the expiration of every three years dating from the commencement of the Act. Another point is that the period for which the Chancellor of the Exchequer undertook to make the special grant in aid to provide for what was commonly called the extra 2s. 6d. for medical benefit was three years. The undertaking he gave to the British Medical Association, the Advisory Committee, and the House of Commons in October, 1912, was expressed in the following sentence of his speech to the Advisory Committee, afterwards issued as a parliamentary paper. He said, "We think it is better that we should try these arrangements as an experiment, and see how they work. I propose, therefore,

that the arrangements which are made on this basis shall be made for a term of years—not too long; and also not too short—otherwise we do not get the requisite experience. It is no use trying a year's experiment—I think you must have at least three—and I suggest, therefore, that the financial arrangements should, for three years, be made on this basis, and that at the end of that period there should be a reconsideration of the whole position." In the Supplementary Estimate for the financial year ending March 31st, 1913, the sum of £1,825,000 was voted to cover "payments at a rate not exceeding 2s. 6d. for each insured person" in England, Wales, and Scotland, "for the cost of medical attendance and treatment, and not exceeding 1½d. for each insured person for the cost of administration of medical benefit," for the vote of £50,000 to Ireland, for £30,000 for the special drug fund (epidemics) in Great Britain, and for the mileage fund for Great Britain, excluding the Highlands and Islands of Scotland. The Civil Service Estimates for the financial year ending March 31st, 1914, presented to the House of Commons on March 10th, 1913, made provision for the same purposes; the total amounted to £1,887,000. The Civil Service Estimates for the coming year will, no doubt, contain a similar vote. Mr. Masterman, Financial Secretary to the Treasury and Chairman of the National Insurance Joint Committee, stated in the House of Commons on February 5th last, in reply to a question by Mr. Cassel, that the Insurance Act contemplated that Insurance Committees should be credited on January 1st in each year with the whole of the money required for medical benefit during the year.[1] The House of Commons has already voted the special grant for the calendar years 1913 and 1914, and the estimates which must be brought in early in the next session of Parliament will no doubt make provision for the calendar year 1915. When this vote has been passed the Chancellor of the Exchequer will have fulfilled his promise. It will be the duty of the Commissioners a year, or less, hence to make representations to the Treasury showing the requirements of the Insurance fund for the financial year then next ensuing. It need not be assumed that they will be anxious to disturb existing arrangements, in order to realize that the Government may be compelled by political exigencies to enter upon that "reconsideration of the whole position" of which the Chancellor spoke in 1912.

In this connexion it would be imprudent for the profession to ignore the very positive statements made by newspapers devoted to the interests of the Government, to the effect that the institution of a whole-time State medical service is being seriously considered. However this may be, it is clear that before this time next year an opportunity will arise permitting the review, if then thought expedient, of the whole financial position under the Insurance Act. If alterations in existing conditions requiring the sanction of Parliament were deemed necessary any changes in expenditure thereby involved would have to be dealt with in the Budget to be introduced early next year—1915—or by way of a supplementary estimate during the session of that year. This is tantamount to saying that the profession may have to face during next autumn or winter proposals for modifications in the financial arrangements for medical benefit. Before that the report of the Departmental Committee now sitting to inquire into the working of the insurance scheme ought to have been presented, but we have, of course, no assurance that it will not make its appearance at the last moment. In these circumstances we venture to think that the position requires earnest consideration at an early date, and that the Representative Meeting would be well advised to discuss the matter at Aberdeen next July.

[1] SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 15th, 1913, p. 155.

THE PHYSICIAN IN ENGLISH HISTORY.

DOCTORS have played a large part in history, but mostly behind the scenes. The peculiarly confidential relation in which they stand towards rulers and statesmen who happen to be their patients has naturally given them great influence. Unfortunately this has not always been used with discretion. Struensee, through the infatuation of Caroline Matilda, that unhappy sister of George III, who has been fitly named the "Queen of Tears," ruled Denmark for some time, but died a traitor's death. This is the most conspicuous example of overweening ambition on the part of a physician. In our own country Sir Theodore Mayerne played a considerable part in the reign of James I and Charles I. Two days before the death of James I Sir William Paddy, a celebrated physician of the day, was sent for and told the King there was nothing he could do for His Majesty but pray for his soul. He has left a record of the prayers said at the royal deathbed. Sir Alexander Fraizer attained a degree of influence over Charles II which is perhaps unequalled in the history of the profession. It is true that at least a part of his influence was obtained in discreditable ways, as may be read in Pepys's *Diary*. Charles was, it is recorded, so impressed by the power of the physician to influence political intrigue that he said Lower, whose name lives in his "tubercle" and who was doctor to Nell Gwynne, did more mischief than a troop of horse. Another physician who played a part in the troubles of the time was Sir John Hinton, who submitted to Charles II, one of whose physicians he was, "a short and plaine Narrative of some memorable passages, wherein the divine providence hath bin extended to a miraculous degree upon your Person and Affaires, in which itt hath pleased God to make mee personally instrumentall."[1] John Arbuthnot, Queen Anne's favourite physician, and the friend of the wits of her day, took an active part in the literary war against the Whigs. The physicians who ministered to George III in his various attacks of mental disease were used as political counters by those who wished the Prince of Wales to be appointed Regent, and by those who opposed that policy. Sir William Knighton, who was secretary to George IV, was the depositary of many State secrets. Fashionable physicians have been used by Ministers of State as collectors of public opinion, and as intermediaries in political negotiations. Robert Ferguson, in whom Palmerston said he had not only an able physician but a friend, and who was also held in high esteem by the leader of the opposite party, Lord Derby, was useful in a political way to both these statesmen. The mistake of a Court physician at the beginning of Queen Victoria's reign caused a cloud of unpopularity which was not dissipated for a long time. It should not be forgotten that Stockmar, the Mentor of Prince Albert, was a physician. Sir William Jenner, though

[1] *Memoires by Sir John Hinton, Physitian in Ordinary to His Majesties Person.* 1679. The copy before us bears the imprint T. Bensley, Bolt Court, Fleet Street, London, and a manuscript note states that only 100 copies were printed.

he did not actively meddle with politics, exerted great influence over Queen Victoria. Dr. Foster Quin was a conspicuous figure in London society, especially in political circles, which he frequented irrespective of party. In Lord Edmond Fitzmaurice's *Life of the Second Earl Granville* there is a letter which shows that in 1868 Disraeli tried through Quin to induce Lord Granville to enter his administration. In our own day the house of a well-known doctor, who died some years ago, was looked upon as a neutral ground where leading men on each side might meet informally and discuss matters without compromising themselves or their party.

Of the great part played by doctors in building our colonial empire, from Gabriel Boughton in India to Leander Starr Jameson in South Africa, there is no need to speak. It is outside our scope to refer to the part played by Rudolf Virchow, who for many years led the Liberal party in Germany; to the prominent share taken by Guido Baccelli in Italian politics, or the work done in France by Emile Combes and Georges Clemenceau. Enough has been said to show that a record of the part played by the physician in history, if it could be fully written, would be curious and enlightening reading.

In his Linacre Lecture delivered at Cambridge in 1913,[2] Dr. Norman Moore confines himself more to the purely professional aspect of his subject. He tells us that the first physician whose name occurs in English history is Cynifrid, who is mentioned by Bede as being present at the death of Etheldreda, Abbess of Ely. She had a great swelling under the jaw into which he cut to give issue to the "hurtful humour" contained therein. For two days she seemed somewhat better, but on the third she died. When the body was disinterred, sixteen years afterwards, the wound seemed to be cured, and there were very slight traces of a scar. It may be inferred that it was a tuberculous swelling, and that it had existed for some time before her death. Dr. Moore points out that although Cynifrid's attainments seem small to us, the present Regius Professor of Physic at Cambridge is certainly the first holder of his office who has known the true way in which a tuberculous abscess such as that of Etheldreda is produced. The fact that the swellings once called scrofulous are caused by the tubercle bacillus has only been established within living memory. We are next taken to the deathbed of William the Conqueror. He had long been a man of immense corpulence, but in the summer of 1087 it was recognized that the hand of death was upon him. He was about 60 years of age, and Dr. Moore thinks that the account of his illness suggests obstruction of the large intestine, possibly in the pelvic colon, with secondary growths in the liver.

Dr. Moore dwells with natural complacency on the place held by physicians in the early years of the reign of Henry VIII. Linacre formed physicians into an organized body by the foundation of the London College of Physicians. The leading physicians of that day were the intimate friends of powerful churchmen like Archbishop Warham and Cardinal Wolsey, of statesmen like Sir Thomas More, of scholars like Erasmus. The bond of intimacy was that they were all humanists, filled with enthusiasm for the treasures of knowledge and art buried for so many centuries, till the Renaissance, with the revival of Greek, gave them once more to the world.

In the sixteenth century, though the physician was still a scholar, he turned more and more to the direct observation of nature. Harvey's discovery of the circulation of the blood, and Glisson, in his anatomical studies and his treatise on rickets, set the example. About the middle of the century came the foundation of the Royal Society, which had its origin in the informal meetings of a few friends, a third of whom were physicians, in the rooms of Wilkins, warden of Wadham College. Sir William Petty, one of the founders of political economy, was physician-in-general to the forces in Ireland. Later he obtained a patent constituting him Surveyor-General of Ireland. He made a large fortune and became the founder of the Lansdowne family.

Next we come to the literary physician. Dr. Moore says that Thomas Lodge is the earliest doctor of physic "whose writings deserve to be regarded as important contributions to English literature." We would enter a plea for Philemon Holland, called by Fuller "the translator generall in his age." He rendered Livy, Pliny, Suetonius, and other classical writers into an English prose which, for majesty and noble rhythm, had hardly an equal in his day. Something is said of Garth, author of *The Dispensary*, and of Arbuthnot, but why do we hear nothing of Sloane, whose library and collections formed the nucleus of the British Museum; or of Richard Mead, the friend of Pope, Bentley, and Newton? A good deal is said about Brocklesby, an excellent man who ministered to Samuel Johnson in the last years of his life with extraordinary liberality; his claim to a place in the history of English literature rests on an essay on music and its application to the treatment of disease. But the name of Mark Akenside does not appear, nor is William Heberden, whom Johnson called "Ultimus Romanorum, the last of our learned physicians," mentioned.

Dr. Norman Moore's lecture is interesting as far as it goes, but we are tempted to say in regard to it what Charles Lamb said when some one gave him a small volume entitled *Beauties of Shakespeare*: "This is all very well, but where are the other ten volumes?" If the doctor's place in literature is to be counted as a part of his place in history, where is Sir Thomas Browne, incomparably the greatest literary figure of them all? In the Johnson period why are not Goldsmith and Smollett mentioned? Dr. Moore says he has tried no more than to indicate the position of physicians in the conversation and thought of their time and their influence on the genius of each generation. Within the limits which he has imposed upon himself he has carried out his design. But the subject deserves a larger canvas, and Dr. Norman Moore, with his great knowledge and deft literary touch, could fill it admirably. We hope he will some day give us the complete picture, for which, we take it, this is but a preliminary study.

[2] Linacre Lecture, 1913. St. John's College, Cambridge. *The Physician in English History.* By Norman Moore, M.D., Fellow of the Royal College of Physicians; Honorary Fellow of St. Catherine's College; Consulting Physician to St Bartholomew's Hospital. Cambridge: At the University Press. 1913. (Pp. 33. 2s. 6d. net.)

CANCER OF THE RECTUM.

THE address which Mr. Harrison Cripps delivered, in opening a discussion on cancer of the rectum at the annual meeting of the Association in 1912, is published in the new editions of his textbooks on *Diseases of the Rectum and Anus*,[1] and *Cancer of the Rectum*,[2] and the occasion may be taken for a notice

[1] *Diseases of the Rectum and Anus.* By Harrison Cripps, F.R.C.S. Fourth edition. London: J. and A. Churchill. 1913. (Roy. 8vo, pp. 588; 34 figures, 14 plates. 10s. 6d. net.)

[2] *Cancer of the Rectum, its Surgical Treatment.* By Harrison Cripps, F.R.C.S. Sixth edition. London: J. and A. Churchill. 1913. (Cr. 4to, pp. 255; 11 figures, 14 plates. 5s. net.)

of the present state of surgical opinion on the treatment of the disease.

Mr. Harrison Cripps stands for the view that in removing the disease an inch or so is a fair margin, and states that he can scarcely recall a case of recurrence in the cut edge of the bowel when he has been able to secure this margin. He therefore considers that the great majority of cases can be adequately dealt with by a perineal or sacral operation, the abdominal route being reserved for high cases more than 6 in. above the anus. He does not favour the combined abdomino-perineal operation. On the other hand, there is a considerable body of surgical opinion which views restricted operations with disfavour and considers a margin of an inch or so beyond the disease as quite inadequate.

In a problem of this kind clinical and pathological evidence must both be given due weight. The tables which Mr. Cripps publishes do not enable a comparison to be made between the various routes and methods, but they show a total of 42 cases (39.2 per cent.) alive and free from recurrence over three years after operations carried out on the principles referred to. The results published by some other well-known surgeons are not nearly so favourable as these, as far as perineal and sacral operations are concerned, and Mr. Cripps's figures must be looked upon as a piece of clinical evidence to which due weight must be attached. They at any rate show that on clinical grounds these lesser procedures are defensible. Are they defensible from the point of view of pathological anatomy? The most valuable work bearing on this aspect of the problem is that of Cole, and this has been further reinforced by a recent publication by Monsarrat and Williams. Cole's investigations show that the disease in its common type remains comparatively local for a considerable period, and they refute the deductions of Handley, based on the examination of a single specimen, that the disease in an early stage disseminates widely in lymphatic plexuses in the bowel wall.

A very extensive amputation is, therefore, not imposed by pathological anatomy as an operative *sine quâ non*. Mr. Harrison Cripps and those who agree with his view are at present entitled to say to those who favour the major procedure that neither pathological anatomy nor clinical experience clearly calls for the abandonment of the methods they practise, and further that abdomino-perineal amputation must show a much diminished mortality before it can be properly held to be an operation of routine.

Admitting that complete amputation is not imposed on surgeons as the single justifiable procedure, it may properly be said that it is capable of giving an assurance against recurrence which cannot be conferred by any of the lesser operations. Its disadvantages are that it has so far been attended by a high mortality, especially in males, and that by it sphincteric control is sacrificed.

On general grounds it may be expected that experience will decrease the mortality of this operation, and there is evidence that one addition to the technique—spinal anaesthesia—may be trusted to lessen materially the risk of shock, which is the chief risk. Those who have operated with and without spinal anaesthesia (combined with a general anaesthetic) know the striking absence of shock when it is employed compared with that which always attends this formidable operation without it. With regard to the anus, when an operator imposes on himself the careful retention of the anal sphincteric apparatus, there is a tendency to risk a somewhat inadequate resection. Many a surgeon has had cause to regret such an attempt. On the other hand, if an uncontrolled anus is left, it is more manageable and more easily kept clean when in the inguinal region than when in the perineal or sacral positions. In a very large number of cases as met with by the surgeon the disease is so situated that it is difficult or impossible to keep well wide of the disease without encroaching on the anal canal. Sacrifice of the sphincter being therefore unavoidable, there is much to be said for placing the uncontrolled anus in the inguinal position. This is achieved by abdomino-perineal amputation, which also leaves no length of bowel below to interfere with the patient's comfort.

If the major operation were less formidable, there is no doubt that the increased security against recurrence which a pelvic dissection gives, and the state of comparative comfort in which it leaves the patient, would weigh heavily in its favour. Its severity, as shown in statistics, compels a careful selection of cases, but in cases so selected it is gaining ground as the operation of choice.

At the same time, when this extensive procedure is contraindicated by the general condition of the patient and by considerations based on sex or age, adiposity, and so forth, we are not compelled to regard operative treatment as hopeless. On the contrary, we have reasons for considering that less extensive amputations give a fair, though not the best, prospect of a radical cure. It is fortunate that choice of operation within a certain range is possible, because the condition presented by patients varies very greatly. Many are poor surgical risks. Opening of the abdomen is very desirable in all cases; even though nothing is done from this side except colostomy, the opportunity of inspecting the pelvis is of very great value, and the immediate and later risks of a perineal or sacral resection are materially lessened by the colostomy. In most surgical clinics it is becoming the practice to open the abdomen as a routine, to do little or much from the inside according as the condition of the patient admits, at one end of the scale the surgeon proceeding to a complete abdomino-perineal amputation in one stage, at the other end being content with the establishment of a colostomy, the removal of the growth being carried out later from below.

CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

THE Council, at its quarterly meeting on January 28th, decided to arrange for holding a Conference of representatives of Local Medical and Panel Committees in the United Kingdom. Representations had been received by the Insurance Act Committee suggesting that the British Medical Association should bring together representatives of these Committees to consider questions of vital interest to the profession. In view of the fact that it is the duty of the Association to interest itself in all questions affecting the welfare of the medical profession; that it has the necessary machinery for acting in the way desired; and in view also of the fact that the Conference of Representatives of Local Medical Committees held at Brighton in July last requested the Council to call another Conference, either at or before the next Annual Representative Meeting, the Council agreed not only to call a Conference, but that it should be held at as early a date as possible. It was known that schemes had been put forward by other bodies for the organization of Panel Committees, but it was felt that no action taken by any such bodies could absolve the Association from its duty in this respect to the profession as a whole, and particularly to those of its members

who are concerned in the working of these committees. The Association was entirely responsible for the creation of the Local Medical Committees as a part of the machinery of the National Insurance Act, and, as these Committees and the Panel Committees are in most insurance areas practically composed of the same persons, wasteful overlapping must occur if some means be not found for co-operation between representatives of both Committees through a conference of this kind. The Council has decided that the Association shall incur the expenditure necessary to provide the place of meeting, printing and postage, and clerical assistance, but Local Medical and Panel Committees sending representatives to the Conference will be expected to make their own arrangements with regard to the other expenses of their representatives. The duty of making arrangements for the Conference was placed in the hands of the Insurance Act Committee, which will, we understand, very shortly communicate with the Local Medical and Panel Committees throughout the country.

THE ORGANIZATION OF PHARMACISTS.

A CONFERENCE of delegates of local pharmaceutical associations was held in London under the auspices of the Pharmaceutical Society on January 21st. The chair was taken by the President of the Pharmaceutical Society (Mr. Edmund White, B.Sc., F.I.C.), who was supported by the majority of the members of the council, the chairman of the executive of the North British Branch (Mr. J. P. Gilmour), and the parliamentary secretary of the society (Mr. W. S. Glyn-Jones, M.P.). A draft scheme of organization sent out by the council to the local associations was before the meeting, which comprised 150 delegates, directly representing all but twenty-nine of the counties and boroughs in England and Wales. We learn from the *Pharmaceutical Journal* that at the beginning of the meeting it was decided that the Pharmaceutical Society, through its council, should be the controlling body in pharmaceutical organization, and the president intimated that the council was prepared to accept the decisions of the conference. The scheme before it suggested that there should be a half-yearly conference of delegates elected by the statutory pharmaceutical committees, but those present decided by an overwhelming majority that the delegates should be elected by the local pharmaceutical associations. Such an association was defined to be a body that covers an area coterminous with that of a Local Insurance Committee, associations serving the needs of lesser areas being distinguished as district associations and affiliated to form the executive of the local (county or county borough) pharmaceutical association. It was recommended that secretaries of both local and district associations should be formally appointed as the Pharmaceutical Society's official representatives in their respective areas, and it was foreshadowed that this may result in an entire change in the system by which the society is now represented locally by divisional secretaries. It was arranged also that each local pharmaceutical association shall appoint a Pharmaceutical Insurance Committee, consisting of the pharmacist members of the statutory pharmaceutical committees. The conference then decided to establish an executive committee of the Local Associations Conference. The method of constituting this committee led to prolonged discussion, and it was finally decided that it should consist of seventeen persons. Of these, six are to be members of the council of the Pharmaceutical Society, selected by the council, with the president and the secretary of the society as *ex-officio* members; of the remaining nine members of the committee seven (including at least one from Wales) are to be elected by the delegates, and two by firms and corporate bodies on the panel.

SICKNESS INSURANCE IN GERMANY.

A MEETING of the "Advisory doctors" subcommittee of the Leipzig League (Vertrauensmänner-Versammlung des Leipziger Verbandes) was held on January 11th to consider the position created by the Berlin agreement and the obligations of the Leipzig League in regard to the strike breakers. The league during recent years has been very active in the work of organization, and it is doubtful whether in any other profession or trade the ranks have been better held together. Less than ½ per cent. of the whole profession in the German Empire was tempted by the offers of the insurance societies to disregard the mandates of the league at a time when the dispute was most threatening. In these circumstances the league is now prepared to be magnanimous, not only in compensating these delinquents but also in offering to forgive the past and to welcome them into the league. Dr. Hartmann explained the policy of the league to the meeting. He stated that a number of insurance societies had refused to subscribe their 5 pf. per insured person to the indemnity fund, as specified in the agreement. The exact amount required to pay off the "strike-breakers" was not yet definitely ascertained, chiefly because a number of them had signed contracts with societies in two, three, and even four different districts. In some cases the compensation, he said, would take the form of a single payment, while in others a sum of money would be paid yearly during the peri[illegible] for which the relinquished contracts would have ru[illegible] The league hoped to be able to find posts for several of these gentlemen and to assist them to take an honourable position in the profession. In order to carry out its part of the agreement satisfactorily and also to do all that was possible to gather those willing to serve the profession well in the future, the league proposed to make a levy per insured person of 10 pf. annually on every practitioner undertaking contract practice. It was hoped that the insurance societies would be willing to deduct the proportionate sum from the moneys payable to the doctors, and, after adding a further 5 pf. per insured person, to fund the whole amount in a manner to be determined by the Minister of the Interior. The proposal was approved by the meeting, and the opinion was expressed that it would be deeply to be regretted if the insurance societies, by refusing to carry out their obligations as fixed by the Berlin agreement, were to force the doctors again to take up a fighting attitude. This action of the league may be expected to have a good effect. In the first place, a liberal interpretation of its obligations by the league may stimulate the insurance societies to think less seriously of the smaller contribution they are called upon to make. In the second place, the trust reposed in the societies shown in asking them to collect and bank the moneys earmarked for compensation purposes is evidence of a real disposition on the part of the doctors to bury past differences, and to live in peace with their old enemies. Thirdly, the manner of collection will save the doctors money in the long run, since the tiresome and costly process of individual notification and collection by the league will be obviated, and the doctors will not notice the effect of a subscription of about £8 or £10 for a year or two so much if this sum be deducted from moneys due as if the amount had to be paid out of pocket. Lastly, if the penitents are induced to come into the Leipzig League the possibility of a repetition of this kind of behaviour in future will be diminished or removed, since a condition of membership of the league is that a member shall give a year's notice of resignation, and this can only be tendered in December of any year. A member of the league would be liable to be dealt with in accordance with the regulations of the league if he disobeyed any mandates during a struggle with the societies, while no resignation could be effective for at least twelve months. One of the prime objects of the new Imperial Insurance Order was to clear out of the way the "local insurance societies" (Ortskrankenkassen), which were created as a temporary expedient in the original insurance scheme to

serve a function more or less similar to that of the system of deposit contributors in the British scheme. In 1912 there were in Bavaria 75 such societies, with 275,274 members[1]; 22 of these societies have been reorganized and will in future be known as "general local insurance societies" (allgemeine Ortskrankenkassen), while 8 will continue to exist as "special local societies." There has been wholesale abolition of what used to be termed "urban or rural district societies," and the same fate has befallen the smaller works clubs. A rearrangement has been effected, and instead of 4,630 societies, with a membership of 1,234,325, there will be only 801 societies, but they will contain 1,613,600 members. The majority of the societies will be classified as general local insurance societies—that is, societies with a properly organized administration and having at least 250 members, residence in the locality being a condition for membership. There are now 236 such societies. The 8 special local societies comprise some 11,300 members; 470 works clubs or societies with a membership of at least 100 members have been recognized, and include 275,000 members. Special conditions have been held to justify the recognition of 60 rural insurance societies with 138,000 members, and 27 societies of "guilds," or what may be regarded as friendly societies, having 17,300 members, have also been recognized. The contracts between these societies and the doctors will vary considerably in different places and in the various societies. In some cases the terms have already been agreed upon, and the contracts signed, while in others agreement has not yet been reached. In order to expedite matters, the Bavarian Minister of the Interior has issued a notice containing suggestions as to procedure. Inasmuch as this Ministry was instrumental in bringing about a provisional agreement last summer, which was only rendered nugatory by the failure of the negotiations in Prussia and other federal States of the German Empire, the first place is given to the terms of this provisional agreement, and the advice is given that if it be found impossible to ratify these contracts the conditions of the Berlin agreement should be enforced, and an agreement made as rapidly as possible with the aid of the machinery created for this purpose.

[1] *Muench. med. Woch.*, January 20th, 1914.

A WAY OF LIFE.

WE are accustomed to look for good things from the hand of Sir William Osler, and again we are not disappointed. His address given one Sunday evening in April last to Yale students has been printed in a small volume,[2] and brighter stimulus to the development of the uses of life could hardly be found. He speaks as a plain man to plain men; we all love the plain man who steps down from his professor's chair and shows us, without simulation, that he is just like ourselves, only more so; his plain philosophy we can appreciate, and follow to the best of our power the road that led him to success. For we all have a philosophy of life, whether we know it or not; but, sooner or later, we must come to know it; and it matters much how the knowledge comes. And here is the working rule of this plain philosopher—"Life in day-tight compartments!" It is an old truth with a new face—perhaps the greatest need of this time; for the old faces have lost their freshness, and we are too apt to consign them to the rubbish heap. It is a bit of the Sermon on the Mount in a new guise. "Sufficient unto the day"—good or evil; but let this day be good. Not a maxim to excuse lack of provision, but to ensure that the present day's work shall be well done. The year will be good if each day in it is good—the old story of the pennies and the pounds. The daily habit of life—a clean mind in clean body. "The clean tongue, the clear head, and the bright eye are birthrights of each day." The morning hour foretells the day; and "the woolly sensation, the cold, fish-like eye, and last week's taste in the mouth" that follows the nightly dalliance with Lady Nicotine—not to speak of Bacchus and Venus—these condemn the day to vanity. The habit of "peaceful concentration," that puts aside the failure of yesterday and the fear of to-morrow—this it is that brings promise of success. It is worry, not work, that kills: "acquanimitas" is the habit for the day's ride. But read Sir William Osler's own words, and it will be a half-hour well spent. After all, this is the sort of philosophy that tells; it brings us to book with that which is good within us. Criticism would be perhaps out of place, but why is St. James—accurately quoted—dubbed Ecclesiastes? No doubt he is a preacher, but he is no pessimist; and, after all, the epistle is but a contemporary comment on the Sermon on the Mount. And St. James is a philosophic friend of Osler. But Osler is to be congratulated on quoting the whole passage right, as he did not look it up. The profession may be proud of a leader who can, without affectation, preach lay sermons which an archbishop might not be ashamed to have written.

[2] *A Way of Life.* London: Constable and Co., Ltd. 1913. (Fcap. 8vo, pp. 64. 1s. net.)

THE COMEDY OF THE CERTIFICATE.

EVERY ONE who has been called on to write a testimonial or certificate knows how difficult it often is to reconcile a proper regard for truth with the interest of the person on behalf of whom the document is written. An illegible handwriting may be useful. It is said that a letter of Horace Greeley, the famous American journalist, dismissing a member of his staff, was successfully used by the person to whom it was addressed as a recommendation to any able editor in need of a competent assistant. Odder certificates than this have, however, been used by enterprising persons. Candidates for French degrees can often get exemption from some of the necessary examinations on the production of certificates obtained in their own country, which are accepted as equivalent. The documents required are issued at the office of the Enseignement Supérieur in the Rue de Grenelle, Paris. Some time ago, according to the *Cri de Paris*, a young Egyptian presented himself there with a recommendation from an important political personage and handed in an imposing-looking document in Turkish, ornamented with a number of crescents and arabesques and other Oriental decorations. The ingenuous youth explained that this was a diploma from the University of Cairo, granted only to its best pupils. He was told it would be translated. He objected that he had not time to wait, and that he required the equivalent document to enable him to get an appointment for which a French diploma was required. The political personage's name was accordingly accepted as a sufficient guarantee, and the necessary papers were issued to the applicant. A few days later the Turkish document was translated and was found to be a shooting licence, and, to make the thing complete, one that had expired. A still more daring exploit in the misuse of certificates is recorded in the *Gazette Hebdomadaire des Sciences Médicales*. A student of the Val-de-Grâce, the French army school of medicine, after a number of breaches of discipline, was sentenced to expulsion. The decision was conveyed to the culprit in an official letter stating that he had been dismissed (*licencié*). But the young man was clever enough to turn the instrument of his disgrace to favour and to prettiness by describing himself on his cards as "*Licencié* (Licentiate) *du Val-de-Grâce*"!

RESCUE APPARATUS FOR IRRESPIRABLE ATMOSPHERES.

A THOROUGH investigation of various forms of self-contained rescue apparatus for use in irrespirable atmospheres has lately been undertaken by Dr. J. S. Haldane, F.R.S.,

for the Doncaster Coal Owners' Committee (Gob Fire Research), and his conclusions have been presented to the committee in the form of a semi-private report. We are informed that every apparatus examined appears to have been found to suffer from weaknesses or defects to a greater or smaller extent, but as the same investigator is to be asked by the committee to renew his tests in three months' time in order to discover what improvements have taken place in a line with his recommendations, it is not considered proper to give a general publicity at present to his detailed criticisms of any particular apparatus. It is considered that in some instances the defects to which he draws attention are of a radical nature, but that in others they are capable of being remedied by slight adjustments. The final efficiency of all such apparatus must depend also to some extent upon the knowledge and caution of the wearer. Dr. Haldane has expressed the opinion that a non-leaking oxygen supply of 2 litres a minute ought to be regarded as the minimum for portable apparatus. This amount suffices for ordinary exertions, such as walking at the rate of four miles an hour. The store of oxygen ought to be sufficient to maintain this steady supply to the breathing bag for a definite known period, conveniently two hours, and the purifying arrangement for absorbing or otherwise removing the carbon dioxide should also outlast this period. In four out of the five forms of apparatus examined, the oxygen was stored in cylinders; in the fifth it was replenished from a reservoir in which liquid air was evaporating. Dr. Haldane sees little objection to the use of liquid air as the source, but the individual apparatus embodying this principle was in an experimental stage when the tests were carried out, and few comparative results could be obtained. A liquid air apparatus has the advantage of furnishing a cool air supply to the wearer, and this is particularly appreciated in a hot place; on the other hand, oxygen cylinders have certain advantages of convenience. A matter of great and often vital importance in all apparatus is the tightness of the attachment, and Dr. Haldane found that two forms of helmet and one form of half-mask were leaky and unsafe in poisonous air, while another form of half-mask required great care in order to prevent leakage; the mouthpiece was found to be less comfortable than the half-mask, but the danger of leakage was less. Dr. Haldane, we are informed, expressed an opinion unfavourable to the helmet on more than one ground. It has the disadvantage of limiting the vision, and it seemed also to interfere with the removal of the carbon dioxide. In two forms of apparatus, each of which is capable of being used either with a helmet or a mouthpiece, he found that, upon ordinary exertion, the helmets became so charged with carbon dioxide as to cause great distress in breathing, whereas with the mouthpieces there was no such distress, at least when the injector was working well. The injector is a device inserted into some forms of apparatus in order to maintain a circulation of air to the purifying arrangement, but it is liable to get out of order, and, other things being equal, an apparatus so designed as to be independent of such a device would be preferable. Dr. Haldane's work will go far to promote the efficiency and safety of these breathing appliances, the provision of which, under recent legislation, has been made obligatory at coal mines.

THE STORY OF A POOR LAW INFIRMARY.

A long struggle between the medical officer on the one hand, and the master and the guardians on the other, with the final triumph of the doctor, is recalled by the resignation on January 28th of Mr. Samuel Craddock, Medical Officer of the Bath Union Workhouse. During his thirty-one years of service in this capacity a great advance in the care and attention bestowed on the pauper sick has been effected by his personal efforts and determined advocacy. In 1882, on his appointment, Mr. Craddock found that the nursing was being done by one old woman and an untrained girl. The old woman suffered from heart disease, and used to shout her orders through one of the windows, because she could not get to all the wards. Practically all the nursing was done by paupers. In 1894 Mr. Craddock's efforts to secure an improvement in the nursing culminated in a Local Government Board inquiry. At that time there were 207 patients in the infirmary and only three nurses and one girl of 17 years to attend to them, in addition to the pauper help, which was quite inefficient, and, being irresponsible, proportionately unreliable. Matters were bad enough in the day, though the nurses were on duty from 6 a.m. to 10 p.m.; but the night nursing was left to paupers. Mr. Craddock instanced the case of two children suffering from pneumonia being placed under the control of two paupers (aged 69 and 75), one of the two children being found by him sitting near an open window with the rash of measles on him. The nursing question attracted much attention, and a lengthy report appeared in the British Medical Journal from our medical commissioner, who made scathing criticisms on the state of things. The Local Government Board came to the conclusion that the staff should consist of a superintendent nurse and a minimum of eighteen nurses, one certified in midwifery and two to act as night nurses. This was acted upon, and to-day there are twenty paid nurses on the staff; and, in fact, under Mr. Craddock the whole system has been revolutionized and improved. Mr. Craddock was one of the pioneers in the West in the fight against consumption, and after pegging away for a long time induced the guardians to provide special wards for these patients, and there is now accommodation for twenty. Since 1867 Mr. Craddock has been coroner for North Somerset, a position he retains. At the same meeting of the guardians at which Mr. Craddock's resignation was notified, a recommendation was received from a special committee to the effect that a new infirmary of about 100 beds should be built at an estimated cost of £10,000. In it accommodation would be provided for the acutely sick and those requiring special nursing and care, and the old infirmary would be available for the infirm inmates, while room would be left for male venereal and special cases, as well as for advanced cases of phthisis. The new building could be worked with a staff of twelve nurses, and it was reported that the saving would be £240 per annum for classification only. The recommendation is to be considered at a special meeting of the guardians.

CANCER IN RELATION TO FUEL.

In a recent number of the *Edinburgh Medical Journal* Mr. C. E. Green published a statistical study of the distribution of cancer deaths in the registration districts of Orkney during the years 1902–1911. The author is convinced, as a result of the present and of a previous investigation into the local incidence of cancer in Nairnshire, to which reference was made in the British Medical Journal of September 11th, 1909, p. 704, that the etiology of the disease is connected in some way with the fuel question. He found that cancer deaths were relatively less frequent where peat was burned. With the exception of certain localities, it was found on chemical analysis that the peat burnt in these districts yielded an abnormally high percentage of sulphur. The point is interesting, but as the total number of cancer deaths under review in the twenty-three registration districts of Orkney only amounted to 286, the statistical foundation was too slight to warrant any definite conclusions, even had corrected death-rates been employed. It is worthy of

remark that Bebla, on the basis of a somewhat extensive study,[1] also attributed importance in regard to the distribution of cancer to the nature of the fuel employed.

MEDICAL OFFICERS OF HEALTH AND THE BRITISH MEDICAL ASSOCIATION.

THE *Medical Officer* in an article in a recent issue expresses its regret at having heard that a small number of medical officers of health have taken the occasion of the increase in the subscription of the British Medical Association of withdrawing from it, on the plea that "it has never done anything for the public health service." In commenting on this our contemporary makes observations upon the work done by the Association for the public health service which will be best appreciated by those who best know the strenuous and unremitting efforts made for many years past. "Fortunately," it says, "the vast majority of medical officers of health know full well how erroneous such a statement is. Quite apart from the advocacy of the BRITISH MEDICAL JOURNAL of the aspirations of medical officers of health, such as superannuation, or security of tenure, the machinery of the Association has been working continuously for many years in the production of parliamentary bills, having for their object the betterment of the conditions of the Public Health Service. Any one who knows anything about such matters is aware that such machinery is extremely costly. The drafting of a bill means consultation with solicitors, the briefing of counsel, heavy printing expenditure, the securing of members of Parliament to introduce the bill, and an infinite amount of lobbying so long as the bill remains before the House. All this has been carried out by the British Medical Association at very considerable expense on behalf of medical officers of health, and it does seem to us to be the grossest ingratitude for a single member of the Public Health Service to withdraw from the Association at this juncture, and still worse to assert that the Association has never done anything for the service. It may be said that the Association, in spite of its efforts and in spite of its expenditure, has not been successful all along the line. That may be true, but it has been successful to a considerable distance. The medical officers of health of county councils have obtained security of tenure, and all medical officers of health have got rid of lapsed appointments. Both of these achievements are largely due to the persistent efforts of the British Medical Association backed up, we are pleased to believe, by the advocacy of the medical journals."

MR. TARGETT'S BEQUEST TO THE MEDICAL SCHOOL, GUY'S HOSPITAL.

By the will of the late Mr. Targett, Obstetric Surgeon to Guy's Hospital and Joint Lecturer on Obstetrics, a sum sufficient to bring in approximately £300 a year has been left to the medical school for the benefit of the new pathological department. The school undertook the erection and upkeep of so large a department not without considerable misgiving. It would seem, however, that its action is about to be completely justified. Thanks to the generosity of an anonymous donor, the building and equipment was presented as a free gift to the school, while of the sum expended annually on the remuneration of lecturers and demonstrators, more than two-thirds is now covered by endowment provided by friends of the school. Had it not been for Mr. Targett's bequest, however, the annual expenditure upon the upkeep of the department would still have been a considerable tax upon the resources of the school. The department is of a type rare in London. It performs none of the ordinary routine work of the hospital, but is devoted entirely to teaching and to the investigation of disease. It is hoped that the time will soon come when the whole department may be staffed, equipped, and maintained by endowment provided for the purpose. Freed from the necessity of its maintenance the other resources of the school would then be available for the more elaborate equipment of other researches which are even more closely in association with the work in the wards.

[1] *Krebs und Tuberkulose in beruflicher Beziehung, etc.* Von Dr. R. Bebla, Berlin. 1910.

PROPOSED CONFERENCE ON THE DRUG TARIFF.

AT its meeting on Wednesday last the Council of the British Medical Association decided that it was desirable that a conference should be held some time during the summer of each year between representatives of the British Medical Association and of the Pharmaceutical Society, for the purpose of arriving at some agreement with regard to the drug tariff for the succeeding insurance year. Any agreement thus reached could then be recommended by each parent body to the various Local Medical, Panel, and Pharmaceutical Committees. Inconvenience has been caused this year by proposals with regard to the drug tariff being issued so late that there was no time for adequate consideration.

THE Medical Society of London announces three discussions to be held during the present session. A discussion on the value of the operation of decompression of the brain in cases of intracranial haemorrhage the outcome either of accident or disease will be introduced by Mr. L. B. Rawling and Dr. Hamill on Monday, February 9th, and it is expected that Mr. C. A. Ballance, Mr. Percy Sargent, and Dr. Judson Bury will take part in the discussion. On March 9th a discussion on radium therapy will be introduced by Mr. Hayward Pinch, F.R.C.S., Medical Superintendent of the Radium Institute, London, and he will be followed by, among others, Sir Frederick Treves and Sir Alfred Pearce Gould. The third discussion will be held on May 11th, when the subject of ascites and its treatment will be introduced by Dr. de Havilland Hall, and discussed by, among others, Sir Richard Douglas Powell, Sir William Osler, and Dr. Hale White. The annual conversazione will take place on May 18th, when Mr. Robert Jones, of Liverpool, will deliver the annual oration. The delivery of the Lettsomian lectures has been postponed until June.

THE next congress of the International Association of Thalassotherapy will be held at Cannes on April 15th and following days, under the presidency of Professor d'Arsonval. Prince Albert I of Monaco, a member of the Institute of France, will be honorary president. The question which will be specially studied is heliotherapy, and the reports to be presented will deal with the nature of solar radiations at the sea level and the means of measuring them; marine heliotherapy in its relation to actinomometry and climatology; the biological effects and dosage of marine heliotherapy; its effects in surgical tuberculosis, in abdominal tuberculosis, in pleuro-pulmonary and adeno-mediastinal tuberculosis, in the treatment of cutaneous tuberculosis, and in tuberculous affections generally. Those who wish to read papers should communicate with the general secretary, Dr. Georges Baudouin, 21, rue du Mont-Thabor, Paris. Excursions and receptions will be organized at Nice, Monte Carlo, Mentone, and Hyères, and visits to establishments for thalassotherapy and the sun cure will be arranged. Information can be obtained from the secretaries, M. le Dr. Cavasse, villa des Bluets, Cannes (Alpes-Maritimes), and M. le Dr. Mantoux, villa Sardou, au Cannet, près de Cannes (Alpes-Maritimes). Applications for membership should be addressed to Dr. Gimbert, villa de Myrtes, Cannes.

Scotland.

(FROM OUR SPECIAL CORRESPONDENTS.)

SCOTTISH INTER-UNIVERSITIES' CONFERENCE.

SEVERAL medical matters are set down for discussion at the annual conference of the Scottish universities at Glasgow on January 30th and 31st. Aberdeen is to bring up resolutions that university lecturers in clinical medicine and clinical surgery be appointed, and that the Senatus of Scottish Universities be petitioned to hold medical professional examinations at the end of the first winter term. Edinburgh is to ask that a lectureship be instituted in every Scottish university for the purpose of instruction in the history of medicine, and that provision be made for the teaching of dietetics. Glasgow is to propose that the authorities be petitioned to make the preliminary examination in medicine uniform with the preliminary examination for degrees in arts and science, and that the conference approve of the general wearing of academic dress by the students of universities of Scotland, and of the compulsory wearing of such dress on all official occasions.

ROYAL INFIRMARY, EDINBURGH: REPRESENTATION OF THE WORKING CLASSES.

At the adjourned meeting of contributors to the Royal Infirmary on January 19th the report of the committee of contributors appointed at the General Court[1] was submitted. A paragraph in the report had reference to the suggestion that the number of managers elected by the contributors should be increased, and went on to say that, "in view of the importance of this matter, the committee recommend that the rules be recommitted to the board for further consideration in connexion with that question." Mr. Alexander Maitland, advocate, said that another question which should be considered by the managers was whether any representation on the management should be given to contributors among the working classes. Contributors of under £1 were entirely excluded from the management. A motion to recommit this part of the report was agreed to, and the remainder of the report was adopted.

At a meeting of the Edinburgh and District Trades Council held on January 20th, the Chairman, Mr. James Campbell, stated, in connexion with the representation of the council on the board of managers of the Royal Infirmary, that three different deputations had been sent to the managers, who had ultimately conceded a single representative. He believed that the best way to get better representation on the board was to ask the managers to change the charter. The matter was remitted to the Executive Committee.

CONFERENCE OF REPRENTATIVES OF THE SCOTTISH MATERNITY HOSPITALS.

A conference between the four Scottish maternity hospitals (of Aberdeen, Dundee, Edinburgh, and Glasgow) has, we understand, been arranged for Wednesday, February 4th, in Edinburgh. It has been felt for some time that if any satisfactory working of maternity benefit under the National Insurance Act in Scotland were to be achieved, conjoint action was necessary on the part of the four maternity hospitals which have so much to do with the training both of medical students and nurses. The matters which will probably be discussed at the conference are the effect which the Act has had upon the numbers of patients attending the maternity hospitals and consequently upon the capability of these institutions to continue teaching students and nurses efficiently; the degree of success which has attended efforts to conclude working agreements with the approved societies; the fixing of the sum considered to be fair to be given to the hospital for attendance upon persons under the Act, either in the indoor or in the outdoor practice of the institution; the position of dispensaries and smaller obstetric institutions in all these respects; and the necessity, in the light of the new conditions under the National Insurance Act, for a Midwives Bill for Scotland in order to check the employment of untrained women by persons getting the maternity benefit under the Act. It will be remembered that some years ago, when there was the possibility of a Midwives Bill for Scotland being introduced, the Scottish maternity hospitals formed a sort of Central Midwives Examining Board for Scotland, before which nurses trained in these hospitals appeared and were tested by written, oral, and practical questions; a certificate was given to such as satisfied the examiners. Since, however, the examination was in no sense a Government one, the practice fell into desuetude, each hospital carrying out the examining of its own nurses and giving its own certificate.

[1] BRITISH MEDICAL JOURNAL, January 24th, p. 217.

GLASGOW LISTER MEMORIAL SCHEME.

Considerable progress has been made in the collection of subscriptions for the Glasgow memorial to the late Lord Lister. Glasgow was the first centre to move in the matter of a memorial, and this was only appropriate, as it was in Glasgow that he first put into practice his antiseptic system. In the appeal issued by the Glasgow Committee subscriptions were asked (1) towards the erection in Glasgow of a suitable monument to Lord Lister and the provision of an endowment for the equipment and maintenance of a Lister museum at the Royal Infirmary in one of the wards where Lord Lister worked; and (2) towards the fund promoted by the London Committee, which includes the placing of a memorial tablet in Westminster Abbey, the erection of a monument in a public place in London, and the establishment of an International Lister Memorial Fund for the Advancement of Surgery, from which either grants in aid of researches bearing on surgery or awards in recognition of distinguished contributions to surgical science should be made, irrespective of nationality. Glasgow contributors were asked to earmark their subscriptions for whichever of these objects they preferred. The sum available for the local memorial is now between £2,000 and £3,000. The honorary treasurer is Mr. J. S. Samuel, City Chambers, Glasgow.

EDINBURGH MEDICAL MISSIONARY SOCIETY.

Emeritus Professor Crum Brown presided over the annual meeting of the Edinburgh Medical Missionary Society on January 22nd. Dr. R. A. Fleming, the Treasurer of the Society, who dealt with the subject of finance, spoke of the success of the bazaar which had recently been held to raise a fund to erect the new hospital at Nazareth; and he also pointed out the importance of inaugurating a pension fund for the medical missionaries. Dr. Sargood Fry then presented the annual report, and Dr. Scrimgeour (of Nazareth) moved, and Dr. Lechmere Taylor (of Jalalpur) seconded, the adoption of the report. Dr. Scrimgeour sketched the medical and surgical work carried on during the past four years in Nazareth, and described what would be done during the next fifteen months while the new hospital was being constructed. Dr. Lechmere Taylor, of the Church of Scotland Mission Hospital at Jalalpur in the Punjab, spoke on medical missionaries in India. Referring to the evidence given at the Public Services Commission by the Director-General of the Indian Medical Service (Sir C. Pardey Lukis), as reported in the BRITISH MEDICAL JOURNAL (January 10th, 1914, p. 117), he criticized the following sentences in Sir Pardey Lukis's answers: "Asked as to medical missionaries, he said that there were 355 in India; they were serious rivals, not only to civil surgeons, but to independent practitioners also. The missionaries treated practically for nothing." Dr. Lechmere Taylor pointed out that Sir Pardey Lukis, in another part of his evidence (p. 118) had stated that "in order to bring India up to the numerical standard of practitioners in Great Britain there would be required a total of 250,000 practitioners." Now, if there were some 722 doctors in the Indian Medical Service, 1,721 other medical practitioners not in the Indian Medical Service, 355 medical missionaries, and perhaps four or five hundred other doctors who did not come into any of these groups, or a little over 3,000 medical practitioners in all; and if 250,000 doctors were needed to bring India up to the same standard as regarded medical practitioners as was found in Great Britain, it hardly appeared that the 355 medical missionaries could be serious rivals. With regard to the other statement made by Sir Pardey Lukis, that "the missionaries treated practically for nothing," Dr. Lechmere Taylor gave as an instance the hospital of which he was in charge at Jalalpur: for the year 1912 the sum of £460 had been received in fees in connexion with the hospital; from the Church at home £258 had been received, and

£248 had been paid back to the home authorities, so that the hospital and its work (which was large) had only cost the Church at home £10 that year; in other words, the hospital was practically self-supporting. This did not bear out the statement that "the missionaries treated practically for nothing." Sir James Affleck moved and Dr. James Ritchie seconded the motion for the re-election of the office-bearers and directors of the society, and this was agreed to.

The John Reid Prize.

The John Reid prize for the best original research conducted in one of the hospitals or scientific laboratories in Glasgow and bearing on any department of medical science, has been awarded to Mr. Herbert J. Paul, M.A., B.Sc., a student of Glasgow University. The prize is of the annual value of £25, and the competition is open to registered students of medicine in Glasgow of not less than two years' standing and to qualified medical men of not more than two years' standing who are still attached to one of the medical schools as bona fide students. Mr. Paul's thesis is entitled "Autonomy and Optic Regeneration in Eupagurus." The research was conducted in the physiological laboratory at the University. The prize, which may be awarded for one, two, or three years, has been awarded to Mr. Paul for two years.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Cases of Tetanus in Dublin.

In connexion with the Dublin strike two cases of tetanus, both of which proved fatal, occurred recently. In one case a girl was shot in the hand by a revolver; she was treated at one of the Dublin hospitals, and the bullet was located by means of the *x* rays and removed. From its deformed appearance it was concluded that it must have ricochetted off the ground or a wall, and it was probably in this way that the bullet became infected with the tetanus germs. In the other case the patient, a young man, was shot through the foot. In this case, as well as the first, the bullet was fired from a revolver or pistol, and it penetrated the patient's boot. Both cases were of the acute variety, and death ensued a couple of days after the onset of symptoms, in spite of all that could be done for them in the hospitals to which they were admitted.

Allan A. Ryan Hospital for Consumption.

Last week the formal transference of the management of the Allan A. Ryan Home Hospital for Consumption from the Women's National Health Association of Ireland to the Tuberculosis Committee of the Dublin Corporation took place at the Mansion House. The Countess of Aberdeen was present. The Lord Mayor, who presided, stated that the Dublin Corporation had placed the Allan Ryan Home at the disposal of the Women's National Health Association, and that this society had done its work well; now the Corporation was taking back the home to place it under the control of the newly-formed Dublin Tuberculosis Committee, so that the committee might discharge its duties under the Insurance Act. It was absolutely necessary, he said, that some means should be found of removing from their families patients who were in an advanced stage of consumption, and the committee was about to grapple with that particular part of the problem. A medical report upon the home drawn up by Dr. F. J. Dunne and Dr. A. E. Boyd was then read. It stated that on January 1st, 1913, there were 52 patients in the home, and 673 were admitted during the year, so that 725 patients were dealt with during the period. The great majority of these were in the late second or in the third stage of consumption. Of these 11 were sent to other hospitals, 15 to the hospice for the dying, 15 died in the home, 132 returned to their own homes, 504 were transferred to Peamount Sanatorium, and 48 remained in the home on December 31st, 1913. Of the patients who returned to their own homes 45 showed marked improvement. The report contained the following passage:

> A great number of the patients who came under our care during the year were in such an advanced stage of consumption as to be practically hopeless. These cases were sent by Insurance Committees from almost every part of Ireland. Our experience emphasizes the need for provision locally of "isolation homes" for the accommodation of such patients, who are of most danger to the community. Such local provision would facilitate the segregation of these advanced cases and obviate the hardship to the patients and their friends involved in sending those in a dying state so far from their homes.

Dr. Boyd stated that during the past three years nearly 1,000 cases had been dealt with in the home. The Countess of Aberdeen, in formally handing over the home, said that the association had had to depend on the charitable contributions of friends to continue the necessary improvements and alterations; these had cost the association £1,700, but would now enable the Tuberculosis Committee of the Corporation to take possession of the place in running order. There was an idea, she said, that the Allan Ryan Home was a place only for the dying, but she was glad to think that many of the patients who had come to them in a very serious condition were now happy in their own homes earning their living. The Lord Mayor conveyed to the medical and nursing staffs of the home the thanks of the citizens for the manner in which they had done their work. He hoped that within the next twenty years, owing to the diminution in disease among the poor on account of the operation of this part of State insurance, the money at present paid in such benefits would be available for granting old age pensions at an earlier age than at present.

New Midland Sanatorium.

The county councils of Queen's County, King's County, and Kildare, with the North Riding of Tipperary, have decided to take over the disused Donoughamore Workhouse and equip it as a sanatorium for the Midland counties.

Health of Dublin.

Though the number of cases of infectious diseases at present in Dublin is still high, it has fallen somewhat in the last three weeks. Five cases of enteric fever were admitted to hospital last week, 4 were discharged, there was 1 death, and 41 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the three preceding weeks being 52, 51, and 41. Three cases of typhus fever remained under treatment in hospital; the numbers at the end of the three preceding weeks were 4, 3, and 3 respectively. Four cases of measles were admitted, 3 were discharged, and 1 died, and 18 cases remained under treatment, the numbers for the preceding three weeks being 10, 11, and 18 respectively. Seventeen cases of scarlatina were admitted to hospital, 34 were discharged, and there were 2 deaths, and 98 cases remained under treatment, the figures for the previous three weeks were 124, 132, and 117. Twelve cases of diphtheria were admitted, 9 were discharged, and 1 died, and 53 remained in hospital; there were 65, 57, and 51 in the three previous weeks. Six cases of pneumonia were admitted and 6 were discharged; there were 2 deaths; 23 cases remained under treatment.

A New House for an Old.

At the petty sessions at Kiltimagh, co. Mayo, a woman was charged by the sanitary officer with failing to comply with an order of the court directing her to abate a nuisance. Although she had had a new house built for her by the Congested Districts Board she refused to leave the old one, and had sublet the new. In the house she occupied the roof was falling, the walls separating, and the floor and her bed were filthy, the fowls actually roosting among the bedclothes.

Omagh Nursing Association.

The report presented to the annual meeting of the Omagh Nursing Association last week stated that during the year 156 patients had been nursed and 2,466 visits paid, and that the expenditure for the year amounted to £105 17s. 8d.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WALES.

SCHOOLS FOR MOTHERS.

SCHOOLS for mothers are springing up in many cities, and the fifth annual report of the Infantile Health Central Committee, Newport, Monmouthshire, gives an account of the working of three of them. The amount of the work, the manner of its doing, and the finances are dealt with exhaustively. If any warrant were needed for such work it is to be found in the introduction by Dr. J. Howard Jones, the honorary medical officer. He quotes the Registrar-General's Annual Returns for 1911, which show that the mortality among the infant children of agricultural labourers was 97 per 1,000, compared with 148 among those of textile operatives, and with 160 in the families of miners! He claims that this return is conclusive evidence of the importance of the personal factor in the prevention of infant mortality. On page 8 there is an interesting paragraph throwing a curious light on the ways of officialdom:

> It was brought to the notice of the Committee that the Board of Education gave grants in aid of Schools for Mothers, provided certain requirements were complied with. Accordingly application was made for recognition of our schools; after making preliminary arrangements, a lady medical inspector was sent down to visit the schools. The result was that the Board considered that the instruction provided for the mothers was not of a type eligible for recognition under the conditions laid down in the regulations, because:
>
> 1. Other activities, such as baby weighing, take place at the same time.
> 2. That the instruction is not definite enough.
> 3. That the instruction in needlework is not organized on a sufficiently educational basis.
> 4. That the efficiency of the instruction is impaired by the disturbance caused by the large number of children who are present with their mothers.

After this we may look out for the establishment by the Board of Education of Schools for Mothers of which the first article will be "None with encumbrances need apply." We wonder who that lady medical inspector was, and could safely hazard the guess that she was never a mother. We congratulate the Committee on their determination to go on with their work with the babies and all, even though the Board refuses to travail with them.

THE MEDICAL OFFICER OF HEALTH FOR CARDIFF.

On the occasion of the celebration of his twenty-five years' service as medical officer of health for the City and Port of Cardiff, Dr. Edward Walford was presented by his colleagues with a handsome silver table centrepiece. The Town Clerk, the City Engineer, the Waterworks Engineer, the City Treasurer, the Assistant Medical Officer of Health (Dr. A. F. Bernard Shaw), the Tramway Manager, the Director of Education, and the Medical Superintendent of the Mental Hospital (Dr. Goodall), all bore testimony to the esteem in which Dr. Walford was held by his colleagues. The Lord Mayor, in making the presentation, paid a high tribute to Dr. Walford's work, remarking that the administration of his department was second to none in the kingdom. The staff of the public health department when Dr. Walford was appointed numbered three, now it numbered fifty-three. In the interval the death-rate had fallen from 20 to 14. Dr. Walford, in expressing his thanks, said that it was exceedingly gratifying to find that he possessed the regard of his colleagues and the officials of the corporation. He paid a tribute to all those who had co-operated with him in carrying out the work of his department, and expressed his thanks for the helpful advice and assistance he had received from the heads of other departments. He thanked the Lord Mayor and the members of the Public Health Committee for the consideration he had always received at their hands.

MANCHESTER AND DISTRICT.

A SUPPLY OF RADIUM FOR MANCHESTER.

THE success that has attended the use of radium in certain cases of cancer has stimulated a proposal which has been made in Manchester by Dr. Milligan that a joint effort should be made to secure a supply of radium for the treatment of cancerous disease in Manchester. The Christie Cancer Hospital and the Hospital for Skin Diseases have each very small amounts, by no means sufficient for their own use, and it is proposed that at least two separate quantities of 100 mg. each should be obtained, costing at the present market price about £4,000, and it is suggested that the various hospitals should combine to raise that sum, and should appoint a small board to control the use of the radium. Mr. W. H. Colt of Manchester writes to the press lamenting that he had failed to interest the medical profession in the subject several years ago when, if he had had the least encouragement, he says he could have secured for this country the only radium yielding mine in Austria, which is now in the possession of the Austrian Government. He adds that though it appears to be difficult to obtain radium to-day at a reasonable price, if a purchaser is willing to deposit half the purchase price with his order, any quantity up to 500 mg. could be delivered within about six months in quantities of about 100 mg. a month. The question is to be considered by the Board of Management of the Royal Infirmary, which deals with a large number of cancer cases every year, and if the board does not take the matter up, it is probable that an independent committee will be formed and an appeal made to the public, including the municipal authorities, for the necessary funds.

SHEFFIELD.

MEDICAL INSPECTION.

THE fifth annual report of the chief school medical officer to the Education Committee of the city of Sheffield deals with the year ending December, 1912. It describes the routine medical inspection of the school children, the variety and number of the defects found, and the manner of treatment followed out. There is a system of following up cases referred for treatment, but no note is made as to how recalcitrant parents are ultimately dealt with. Perhaps Sheffield has the good fortune to possess visitors of particularly persuasive powers, so that even the most stubborn parents see the error of their ways. Improvements in school sanitary provisions have been made. Shower baths have been provided in several schools; and it is noted on the evidence of outside observers that these have been productive of noteworthy improvements in the cleanliness and general well-being of the children. For the teachers lectures in hygiene have been provided. A special investigation has been undertaken into the character of the clothing and boots of the children in relation to the position and status of the parents, and the results are of great interest. There is evidence that the work of the department is being translated into distinct advantage to the children. The table showing the state of the heads of the children during each successive year of the work is, in itself, evidence of the gain. The work of such a department is slow at the outset, for it has to overcome the prejudice of ignorance and a not natural resentment at an alleged interference with private affairs: but the effect is cumulative, and gratifying to even the rebellious when it is apparent.

LONDON.

LONDON COUNTY COUNCIL.

Treatment of Advanced Cases of Tuberculosis.

ON January 27th the London County Council considered the resolution of the London Insurance Committee that advanced cases of tuberculosis should be treated at the cost of the county fund and not the insurance fund, on the ground that these cases were a danger to public health (SUPPLEMENT, December 6th, 1913, p. 521). The Public Health Committee advised the Council that such a distinction could not be made in practice, and that the policy of treating only uninsured persons at the expense of the rates should be adhered to. In the course of debate, Miss Lawrence, a member of the Insurance Committee, said that the Committee only had at its disposal £92,000 for sanatorium benefit, and its estimates for the current year amounted to £125,000. By the summer it would be necessary to reduce the number of cases received in sanatoriums from 800 to 500. Mr. Warburg, another member of the Insurance Committee, attributed the deficiency to the allocation of 6d. per

insured person to domiciliary treatment, and said that most members of the Insurance Committee felt that this sum was greater than was warranted by the amount of service rendered. Several members urged the Council not to take too narrow a view of its responsibilities, in view of the fact that, apart from the Insurance Act, the treatment of tuberculosis would be a charge upon the ratepayers. The Council, however, decided by 66 votes to 41 to treat only uninsured persons at the expense of the rates.

METROPOLITAN ASYLUMS BOARD.

Treatment of Tuberculosis.

The Metropolitan Asylums Board on January 24th devoted further consideration to the question of provision in London for treatment of tuberculosis. Pending the receipt of a complete statement from the London County Council of the accommodation required, the Local Government Board had intimated that it was very desirable some further immediate provision, if only of a temporary nature, should be made for hospital cases. To meet this request the General Purposes Committee proposed to take a lease of a receiving home for children in Milman Street, Chelsea, from the Westminster Board of Guardians. There would be accommodation for fifty patients, and the cost per head was estimated at 35s. a week. The present arrangements at the Downs Sanatorium were quite insufficient to allow of adequate classification of patients and hospital cases were being received as well as cases for which the institution was opened. Except for the beds which the Insurance Committee had been able to engage in private sanatoriums, London had no suitable open-air sanatorium available for early cases, and in this respect was far behind some of the home counties. The Asylums Board was not a free agent in this matter, and could make no progress in it, even by agreement with the Insurance Committee, without the concurrence of the County Council. The present temporary and unsatisfactory arrangements came to an end in March, and would have to be extended unless a permanent and comprehensive scheme were entered into by that time. Having regard to the need for a modern and up-to-date open-air sanatorium for early cases, the General Purposes Committee considered that the Asylums Board should take the preliminary steps towards such provision without waiting for the final settlement of all the principles involved. Until the County Council had settled questions connected with the treatment of other classes, such an institution as proposed would be limited to insured persons. A communication should be sent to the County Council asking it to approve, as a temporary measure, of an agreement being made with the Insurance Committee for this purpose.

The Board approved of a communication in these terms being sent to the County Council, and of a lease being taken of the receiving home at Chelsea.

Salaries of Medical Superintendents.

The Hospitals Committee reported that it had received applications for readjustment of salary from Dr. Byles and Dr. Griffiths, medical superintendents of the Brook and Southern Hospitals respectively. In support of the applications it was urged that the admission of a greater number of infectious cases and the extension of fever hospital work made the position of medical superintendent more onerous, that more work was required in the direction of teaching and supervision of nurses, that "the market value" of the medical practitioner had risen in recent years, and that the cost of living had risen. It was urged that the commencing salary of £400 was inadequate as compared with £300 for a senior assistant medical officer, who was provided with furnished apartments and full emoluments. Further, the annual increase of salary was only £25, and it took twelve years to reach the maximum. junior medical superintendents were usually located at hospitals where there was little or no opportunity of increasing their incomes by students' fees. The Board agreed to increase the present salaries of Dr. Byles and Dr. Griffiths (subject to the approval of the Local Government Board) by three annual increments forthwith to £575 and £550 per annum respectively, thus accelerating the attainment of the present maximum.

Appointment of a Whole-time Dentist.

The Board decided, instead of employing a number of part-time dentists to visit six of its institutions, to make one whole-time appointment at a salary of £350 a year, with travelling expenses and luncheon.

Ambulance Service for the Metropolis.

In reference to the decision of the London County Council that it could not legally accept the ambulance service scheme prepared by the Metropolitan Asylums Board at the request of the Council, it was mentioned by the Ambulance Committee of the Board that when in 1903 the Board began the conveyance of non-infectious cases (mental, medical, and surgical), the service could easily have been extended to street accidents. These, however, were purposely excluded, because the County Council in 1902 had undertaken an inquiry into the ambulance question. Eleven years had passed, and it was to be regretted that London must now wait for a further indefinite period for a street accident service which the Asylums Board was prepared to provide by midsummer next. In this connexion it may be mentioned that although the County Council has now held two meetings since Christmas, the details of an ambulance scheme—promised to be reported "immediately" after the recess—are not yet forthcoming.

A LIST OF VOLUNTARY HEALTH SOCIETIES.

The Local Government Board has sent to the mayor of each metropolitan borough and the chairman of each board of guardians a list of voluntary health societies in London, prepared by the Central Health Committee (Voluntary) for London. This organization was established in July, 1912, with the object of promoting joint action between health authorities and voluntary health agencies in the metropolis. In its circular the Local Government Board expresses approval of these aims, and suggests that a conference of all concerned should be convened in each borough, so that a definite scheme of co-operative action may be formulated.

HOSPITAL SATURDAY FUND.

At a special meeting of the Board of Delegates of the Metropolitan Hospital Saturday Fund Association, presided over by Sir Savile B. Crossley, on January 24th, the recommendation of the distribution committee to allot the sum of £28,400 among 224 institutions was unanimously adopted. The total receipts from all sources amounted to £40,309, as compared with £45,118 in 1912, the grants were diminished by £4,081, and the number of participating institutions by 3. The grants were classified as follows: 36 general hospitals, £8,027; 22 cottage hospitals, £520; 77 special hospitals, £10,387; 36 dispensaries, £668; 19 convalescent homes, £1,854; 23 nursing institutions, £401. The sum allotted for ambulance, distribution, surgical appliances, and other miscellaneous purposes was £6,543.

ST. GEORGE'S HOSPITAL.

The crisis in the affairs of St. George's Hospital seems to be becoming more acute. It was announced some weeks ago that the Princess Christian, President of the hospital, had given directions for an independent inquiry into the matters raised at the Court of Governors at a meeting on December 19th, 1913. It was at the same time announced that the two treasurers (Lord Plymouth and Mr. A. William West) had tendered their resignations, but had consented to remain in office pending the result of the inquiry. The difficulty had its origin in recommendations of the House Committee involving the retirement of Mr. Wingrove, the secretary, on a pension, and the appointment of a secretary and superintendent at a salary of £600 a year, with £150 for board and servants. For this office Mr. West was designated. The proposal was rejected at the Court of Governors by 30 votes to 18. As was mentioned last week, at a private meeting on January 20th of some of the governors, under the chairmanship of Mr. Stuart de la Rue, it was resolved to appoint a deputation to confer with the House Committee with a view to securing an amicable settlement of the difficulty before the meeting of the court on February 12th, and it was also decided to give notice of a motion for the election at that court of a committee of five or seven governors to consider the laws of St. George's Hospital, and to report to a special court as early as possible whether any alterations should be made therein. On January 21st Princess Christian wrote to the House Committee resigning the office of President, on the ground that certain governors did not recognize her authority to hold an inquiry, and would not consent to be bound by the result. The House Committee, at its meeting on January 28th, unanimously resolved to ask Her Royal Highness to receive a deputation.

Correspondence.

THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

SIR,—It is remarkable that nowhere, either in the full debate at the Medico-Legal Society or in Dr. Armstrong-Jones's paper which initiated that debate, is there any mention of the fact that a very full measure of freedom in the treatment of incipient insanity was drafted and actually accepted some years ago by the then Lord Chancellor, Lord Halsbury. The Medico-Psychological Association for years worked at this idea, and later, on its joining the British Medical Association for this and other similar purposes, active steps were taken by a joint committee of the two bodies. A strong deputation was received graciously, and, as said, a draft clause was accepted, to the surprise of many, who feared that the jealousy for the liberty of the subject would be too much for it. I can at the moment only speak from memory; but I feel sure that all that was required was notification to the Commissioners, *plus* some mild statement. There was to be no official "order," and the length of time for the treatment was to be six months, with, I think, some provision for renewal under certain circumstances. Whatever the actual provisions may have been, there can be no doubt as to the acceptance of the principle by the head of the Legislature. In fact, unless my memory fails me, the clause appeared in a short official Lunacy Bill which was crowded out by other legislation. I know that ever since then the principle has been noted by the Medico-Psychological Association for pressing in any lunacy legislation that may occur, and I may say the same of the point made by Dr. Hubert Bond as to the admission of voluntary patients into county or borough asylums. Hardly a year passes without some asylum report containing a note as to an unfortunate person, wishing to place himself where he and others will be safe from his own acts, being refused admission for want of formal papers.—I am, etc.,

Ticehurst, Jan. 24th. H. H. NEWINGTON.

AUTOINTOXICATION AND SUBINFECTION.

SIR,—As a great admirer of the work, and believer in the teaching, of Professor Adami on the important part played by a chronic low infection by the intestinal bacteria in inducing chronic disease, I would like to refer briefly to his instructive address published in your issue of January 24th.

On his own showing, the position of affairs would appear to be as follows: Fourteen years ago Professor Adami came to the conclusion that a chronic low infection of the system as a result of abnormal activity of intestinal bacteria was "the cause of many grave conditions—in fact, of so many and so diverse that, as I say, I feared to continue further, lest, if I were not obsessed, the world, nevertheless, would so regard me." In the meantime, as he tells us, although increasing knowledge has confirmed him in the probable accuracy of his teaching, he has directed little further attention to it. It may interest Professor Adami to know that the important paper which he then published on subinfection made at least one disciple. For many years, when opportunity offered, I have drawn the attention of my students to the probable importance of this subinfection, associating this view with Professor Adami's work.

I would like, however, to point out that, in my opinion, Professor Adami's teaching, far from being in any important degree antagonistic to that of Sir Arbuthnot Lane, really supports it.

Professor Adami's position with regard to Lane's teaching appears to savour of hair-splitting. Lane believes that many pathological conditions are induced as a result of intestinal stasis; Adami holds that many of the conditions referred to by Lane are a result of a low form of infection by the intestinal bacteria. Surely both views may be correct. I take it that intestinal stasis necessarily implies a pathological activity of intestinal bacteria. If any practitioner has doubt on this point, let him make a systematic study of the stools in these cases.

Professor Adami quotes with approval Hale White in the statement "that it casts a grave reflection on the medical attendant if a patient be permitted to reach this stage." I quite agree with this opinion; it is a fact, however, that we physicians see many of these cases at a stage at which we can confer little or no benefit upon them. In the course of the past year I have had several cases of severe intestinal stasis sent to me who previously had been under prolonged medical treatment, without benefit, and a further course of treatment in my own hands, including all the measures referred to by Professor Adami, failed to give the patient any marked relief. The history of these cases, with a complete series of *x*-ray photographs of bismuth meals, was given only a few days ago at the Edinburgh Medico-Chirurgical Society. Our apparent helplessness in these cases led me some time ago to study at first hand Sir Arbuthnot Lane's work, and through his courtesy I had full opportunity of observing for myself his hospital cases, and of studying his ward records. I was much impressed with what I saw and learned, and the results of my investigation satisfied me that we are justified in a particular group of cases, selected only after the fullest investigation, in advising the operative treatment recommended by him. To the physician the special value of Lane's teaching lies in the fact that the attention he has directed to the subject holds out the prospect of the condition being recognized in its early stages, at a time when amenable to simple medical treatment.

The very instructive address which Professor Adami gave fourteen years ago on subinfection to my mind marked an important advance in our conception of pathological processes; similarly I believe that Lane's teaching will prove an important landmark in our knowledge of the diagnosis and treatment of medical affections.—I am, etc.,

Edinburgh, Jan. 26th. CHALMERS WATSON, M.D.

SIR,—Professor Adami's criticism of Sir Arbuthnot Lane's views on coprostasis are well timed; he allows, as every observer will, that certain minor derangements are brought about by absorption from the bowel (as of indol, skatol, and other aromatic substances), but refuses to attach the same extraordinary importance to this factor that some do.

As a destructive critic Professor Adami is excellent; the bias of the laboratory worker, however, shows itself in his constructive suggestions. He tells us that most of "Lane's symptoms" are due, not to "intoxication," but to "subinfection" by the products of bacterial lysis, the bacteria having got into the system at various parts of the alimentary tract, and having been carried by the leucocytes into all the tissues of the body, there to be broken up. Doubtless various so-called rheumatic pains may be produced by such toxins; one would be wrong, however, in attaching more importance to them than to the aromatic substances which are absorbed directly from the bowel. The really important and practical point is that both sorts of poisoning are secondary conditions—the product of vicious circles. Chronic constipation is nothing more or less than a bad habit—much the same, for example, as chronic alcoholism. The people who become chronically constipated are people who have allowed themselves to become slack in other ways; many of them are lazy, self-indulgent, unsystematic; some are disheartened; they are people who do not take themselves properly in hand; they drift into all sorts of bad habits. Not a few belong to the "idle rich" class, who have no aim in life but to have a "good time"; they over-eat, over-drink, over-sleep, and otherwise over-indulge themselves; consequently they become more and more flabby, physically as well as morally; their involuntary muscles and supporting tissues sag, they get ptosis of various viscera, their peristalsis becomes irregular, their bowels strike work. If "psycho-analysis" cannot discern this elementary fact, then it is time it retired from the field and gave an innings to common sense. Lacking self-reliance, such people crave for sympathy—for some one who will look after them. Hence largely the excellent temporary results of the impressive bedside manner, of the latest and most imposing operation. That these people can survive, and even flourish under some of the eviscerating procedures to which they are subjected is a stupendous testimony to the compensatory powers of the human organism. The proper treatment for such folk is an education in right living; they need to be wakened up and given some work into which they can

throw themselves *con amore*.—What they want is a job; or, if this be not "scientific" enough, let us say that the indication here is for a prolonged and intensive course of ergotherapeutic activities.

Are not the ileal bands to be looked on as exaggerations of normal structures, rendered necessary as a compensatory support for the non-self-reliant or atonic bowel—another illustration, in fact, of the organism making the best of a bad job?—I am, etc.,

Edinburgh, Jan. 21th. ARTHUR J. BROCK.

THE INFECTION OF CHILDREN WITH THE BOVINE TUBERCLE BACILLUS.

SIR,—I was much interested in the article published in the JOURNAL of January 27th entitled "The Infection of Children with the Bovine Tubercle Bacillus." The rather startling fact is there demonstrated that 90 per cent. of the cases of tuberculous cervical glands in infants and children residing in Edinburgh and district are caused by the bovine tubercle bacillus, the infection being transmitted by cow's milk. The writer of the article recommends that effective powers should be vested in local authorities for the purpose of eliminating bovine tuberculosis from amongst dairy cows, in order that the milk used for human consumption may be obtained from tubercle-free herds.

It is undoubtedly the case that milk from tuberculous cattle as a source of certain forms of tuberculosis in man has been much neglected in the past, and certainly the Tuberculosis Order (1913) is not in any sense premature. On the other hand, it does not necessarily follow that the establishment of absolutely tubercle-free herds is at present imperative or even desirable.

A person infected in childhood with a small dose of bovine tubercle bacilli—a dose which his tissues are able to overcome—or with repeated small doses, is quite possibly very favourably placed with regard to future infection with human tubercle bacilli. Conversely, it may be that a child fed continuously on sterilized cow's milk or on milk from a tubercle-free herd is specially liable to be successfully attacked by human tubercle bacilli, the development of phthisis pulmonalis being a likely result. In other words, the introduction in early life of small doses of tubercle bacilli of the bovine type may produce a degree of immunity to subsequent infection with tubercle bacilli of the human type. Nathan Raw writes:

"I have also been particularly impressed with the fact that children who suffer from the surgical forms of tuberculosis—such as tuberculous glands, joint disease, and lupus—very rarely indeed are attacked, even in the later stages of their malady, by phthisis pulmonalis." He adds that "a mild attack of bovine tuberculosis protects against phthisis pulmonalis."—*The Tuberculosis Year Book and Sanatoria Annual* (1913–14).

Doubtless this is a subject on which there is considerable difference of opinion, but it is at least desirable that those who insist on the continuous sterilization of cow's milk for infant feeding and on the production of tubercle-free herds should pause for a moment to consider that a minimal dose of bovine tubercle bacilli in childhood may after all be a protective measure. If this be so, then the elimination of the more gross tuberculous lesions from amongst dairy cows would produce sufficiently satisfactory results for the present, whilst the establishment of tubercle-free herds could be reserved for the future, when, it is to be hoped, the incidence of pulmonary phthisis will have fallen considerably below its present high level.—I am, etc.,

Ayrshire Sanatorium, Glenalton, Jan. 22nd. WILLIAM A. MUIR, M.D.

PNEUMONIA: ITS NATURE AND TREATMENT.

SIR,—In his recent interesting and comprehensive address on pneumonia, reported in the JOURNAL, Sir James Barr referred to its antiseptic treatment as irrational, describing the method as a frontal attack, and quite discouraging its use.

In the two issues immediately following that containing Sir James's address, the treatment I have introduced, and which is certainly to some extent antiseptic, has received warm approval from Dr. Chaudhuri and Dr. J. F. Elliott, and at least qualified approval from Dr. Ewart.

This encourages me to point out that though this combination of creosote and potassium iodide may be said to give a frontal attack by its antiseptic action, and also thus may appear to treat the disease alone; yet, by its stimulation of leucocytosis it calls out the patient's reserves on the flanks of the enemy, and so treats the patient also. We get the disease between at least two fires, as it were.

But theorizing apart, let us bring all treatments to the touchstone of experience. What treatment exists in which about one-third of the cases of pneumonia abort in two days, as in my later series of cases? I simply ask my *confrères* to try this simple method. People who might otherwise have been admitted to hospital may now have pneumonia aborted at home, or made to run down by a tame lysis. Hospital physicians in wards and in private houses, seeing the disease well advanced, may find this remedy still indicated, and have the satisfaction of seeing valuable lives saved. The secret of securing the abortion of the disease is to diagnose early by the general symptoms—comprising severe nervous disturbance very often in young children—and by slight dullness and increased resistance on percussion, by crepitations and (even more characteristic) by the ominously silent lung on auscultation; and by then applying the specific.

I have no special technique on the first day, though it is well, I think, to give calomel if it appears indicated. I gave up the use of potassium iodide alone because I lost a patient, and cast about in consequence for some improvement in the treatment. This I found in the addition of creosote, which, quite apart from any action against the disease in question, opposes any tuberculous alliance which may exist. This point I raise in answer to Dr. Ewart; though I admit his plan of giving the iodide may possibly have some special virtue.

However, let the matter be decided by statistics.—I am, etc.,

London, N., Jan. 26th. ARTHUR J. MATHISON.

SIR,—Creosote and potassium iodide were used in the treatment of pneumonia long before 1904. When I joined my father in 1871, his almost routine treatment in pneumonia was calomel and opium, in a pill, with antimonial wine, potassium iodide, potassium nitrate, and creosote. Its *rationale* was relief of pain, restoration to a normal vasomotor condition, the minimizing of consolidation, and the expedition of resolution.

Educated at the feet of Sidney Ringer—my teacher for over forty years—I was naturally enthusiastic in favour of aconite in frequent and minute doses, associated with potassium iodide. Many years' experience of this line of treatment satisfied us (we sometimes differed as to aconite *versus* antimony) that our mortality did not exceed that of our neighbours. Eventually we dropped the creosote and used carbolic acid. Now, after forty-three years, I believe, provided that the practitioner realizes in the early hours that he has a case of genuine pneumonia to deal with, the best drug treatment is aconite and potassium iodide; using calomel and opium in cases of excessive pain; carbolic acid in those fulminating cases which rapidly become asthenic, and frequently involve those in personal attendance.—I am, etc.,

Bletchley, Jan. 25th. P. B. GILES.

SIR,—In the JOURNAL of January 24th Dr. Ewart commends the use of potassium iodide, and Dr. Elliott that of potassium iodide and creosote, in cases of pneumonia. In the JOURNAL for 1908 (vol. i, p. 258), attention was drawn to the beneficial effects of giving potassium iodide and paraldehyde to children or infants with bronchitis and bronchopneumonia.

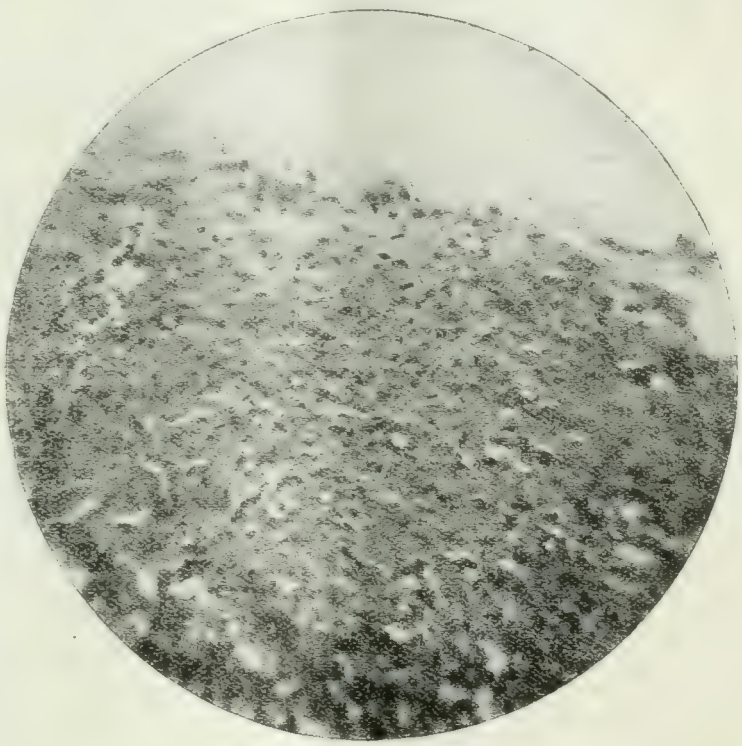
Strictly speaking, this prescription affords an example of chemical incompatibility; nevertheless, the results are excellent. They are, however, better still if the three drugs—paraldehyde, potassium iodide, and creosote—are given together, with liquid extract of liquorice, spirits of nitrous ether, and water. Formulas are given on pp. 107 and 328 of the last edition of Martindale and Westcott's *Extra Pharmacopœia*.—I am, etc.,

London W., Jan. 24th. F. G. CROOKSHANK.

RADIUM AND CANCER.

SIR,—The great courtesy that Sir Alfred Pearce Gould has shown me in regard to my criticism of his paper[1] makes any further comment from me in danger of seeming ungracious, but the issue is so far-reaching at a time when the lay press is ready to attribute any miraculous powers to radium that I cannot let the matter rest with his reply.

In my former letter I ventured to suggest that Sir Alfred Pearce Gould's Case No. II was not a sarcoma but a traumatic myositis ossificans, on the threefold evidence of the skiagrams, the photomicrograph, and the clinical history. As regards the skiagrams, Sir Alfred Pearce Gould does not deny my contention that his Fig. 2 shows the faint laminated shadow so characteristic of traumatic myositis ossificans when combined with the unbroken outline of the underlying femur. Sir Alfred Pearce Gould now appears to discount the importance of this shadow, since he found no evidence of bone when cutting through the whole thickness of the tumour on to the femur, though in his original paper he refers to this same Fig. 2 as showing "progressive ossification." But the shadow is, I contend, so definite and characteristic that it can mean nothing but a deposit of calcium salts in association with simple osteoblastic tissue. The mere fact that this tissue was so soft as to be cut readily with a sharp knife does not prove that it was sarcomatous. Much of the tissue in my case of traumatic myositis ossificans[2] was soft cartilage and preosseous tissue, and in my paper I dwelt on the transmutability of all these tissues—namely, undifferentiated preosseous tissue, cartilage, and bone.



Mr. Morley's photomicrograph.

In Sir Alfred Pearce Gould's final skiagram (Fig. 3), unless my eyes deceive me, a distinct trace of the same characteristic laminated structure is seen in a faint pointed shadow which leaves the right hand slope of the smooth rounded thickening left on the femur, and runs parallel with the shaft of that bone. A similar condition in the final stage of traumatic myositis ossificans is shown in one of the prints that I sent to Sir A. Pearce Gould, but it appears to have escaped his notice.

Turning now to the histological evidence I am able to write more definitely than in my former letter, since Sir Alfred Pearce Gould has most kindly let me see a section prepared by Mr. Gordon Taylor from his case. I agree that the slide shows no trace of true bone, though I found definite muscle fibres in one part, infiltrated by connective tissue cells. The important point, however, is this: that after the fullest examination I cannot see any definite sign of malignancy in the section. On the other hand, it does correspond precisely to the more or less undifferentiated osteoblastic connective tissue seen in traumatic myositis ossificans, which is variously known as preosseous tissue or bone granulation tissue. This tissue is shown for the sake of comparison in the accompanying photomicrograph from my case.

I criticize the histological diagnosis of sarcoma in Sir Alfred Pearce Gould's case on the grounds: (1) That the nuclei are everywhere too sparse in proportion to matrix; (2) that the nuclei show no signs of active division, but are on the whole approximating to the long, pointed, and very slender nuclei characteristic of adult fibrous tissue; and (3) that the blood vessels, which are numerous, show definite, well-formed muscular coats, such as are not usually found in sarcoma. In making these criticisms I have no wish to shelter behind the authority of others, but I showed the slide to two or three expert pathologists, and none of them could agree with Mr. Gordon Taylor in diagnosing sarcoma from it.

Regarding the clinical history, Sir Alfred Pearce Gould mentions that the original injury was in the nature of a muscular strain rather than a severe contusion, and he particularly emphasizes the point that the mass on the femur was not infiltrating the muscle. I should attribute the absence of extensive infiltration of the quadriceps to the probable fact that the patient's fall produced a breach of periosteum and caused a haematoma under the quadriceps without extensive damage to muscle; for healthy muscle tissue, as my experiments proved, can resist invasion by osteoblasts. But this very absence of infiltration tells seriously against the diagnosis of sarcoma, for surely no tissue infiltrates muscle more rapidly and extensively than a periosteal sarcoma?

I feel bound, therefore, still to contend, on radiographic, histological, and clinical grounds, that this case was not malignant, but was a clear example of traumatic myositis ossificans, and I am sorry that Sir Alfred Pearce Gould is not convinced. At the same time I am deeply sensible of his magnanimity in welcoming, and even, by the loan of his slide, chivalrously arming my criticism.—I am, etc.,

JOHN MORLEY.

Manchester,
Jan. 26th.

*** In view of the importance of the question at issue, it has been thought well to reproduce on the opposite page the photomicrograph printed in Sir Alfred Pearce Gould's paper, that the comparison with that now sent by Mr. Morley may be the more easy.

SIR,—The questions raised by Sir Alfred Pearce Gould's paper in your issue of January 3rd are of such vital importance that I venture to join in the discussion. I do so as a radiologist, because I am firmly convinced that the radiogram reproduced in the plate of Case II unquestionably proves the diagnosis to be one of myositis ossificans. In fact, I consider it typical in every way of that lesion and lacking in all the essential features of periosteal sarcoma.

In the first place, it shows very clearly the most distinctive characteristic of myositis ossificans—namely, what Coley has described as the "well-defined sharp line of demarcation between the bone and the tumour, differing strikingly from the irregular indentation almost always present in the case of sarcoma" (*Annals of Surgery*, March, 1913). Coley says that he has seen but one case of periosteal sarcoma in which this was not true, and that the exception was one of "extremely rapid growth."

Another equally distinctive feature of the radiograms

[1] BRITISH MEDICAL JOURNAL, January 3rd, 1914.
[2] BRITISH MEDICAL JOURNAL, December 6th, 1913.

of myositis ossificans is the laminated arrangement of the shadows, more or less parallel to the outline of the bone. This is also obvious in Sir Alfred's radiogram. In periosteal sarcoma, on the contrary, the surface of the bone is not only indented, but the adventitious shadows appear to *rise from the bone* and to radiate outwards. The appearance resembles that of smoke arising from a smouldering heap of leaves. Coley, in the paper quoted, does not actually describe this lamination, but in all his radiograms of myositis ossificans it is very clearly visible, whereas in those which he has diagnosed as periosteal sarcoma what I have termed the "smoky" appearance is just as distinctly seen and the line of demarcation absent.

I may add that during the past year I have had an unusual number of opportunities for studying the radiographic appearances of both myositis ossificans and periosteal sarcoma, partly in conjunction with my colleague Mr. John Morley, and I have been impressed with the points of distinction I have enumerated.—I am, etc.,

Manchester, Jan. 26th. W. J. S. BYTHELL.

SIR,—When I read the article by Sir A. Pearce Gould on radium and cancer I was struck by the resemblance of Case II to the cases recently described as "traumatic myositis ossificans" by Mr. John Morley, whose specimens I had seen. I have recently had the opportunity of seeing the microscope section from this case (Case II).



Sir Alfred Pearce Gould's photomicrograph. Reprinted from the JOURNAL of January 3rd (p. 2).

While the section shows no evidence of ossification, it does show the presence of interstitial myositis. There are several muscle fibres in the section, some of which are separated from one another by new fibrous tissue, and are undergoing atrophy. In my opinion the main part of the section is composed of granulation tissue, and I cannot see sufficient evidence of the presence of sarcoma.—I am, etc.,

Manchester, Jan. 27th. CHARLES POWELL WHITE.

THE EARLY RECOGNITION OF CANCER.

SIR,—Referring to the article in last week's issue (p. 242), in which you commend the action taken by the Portsmouth Health Committee to secure the earlier recognition of cancer, I should like to state that whatever credit there may be due is not to me, but to Mr. C. P. Childe, Senior Surgeon to the Royal Portsmouth Hospital, who is also Vice-Chairman of the Health Committee. Mr. Childe both took the initiative in this matter in committee and drafted the public regulations issued.—I am, etc.,

A. MEARNS FRASER,
Portsmouth, Jan. 24th. Medical Officer of Health.

PSYCHO-ANALYSIS.

SIR,—Dr. Mercier's criticism of your review of Dr. Brill's book is interesting. He apparently regards a certain department of medical study as merely "phallic worship," and he bundles Freud and Krafft-Ebing together as high priests of this religion. One gathers from his letter two main propositions with regard to sex psychology: First, that it is dirty and beastly, and therefore ought not to be studied; secondly, that it has no application to England, whose men are all "clean-minded," and whose women are all "pure-minded."

If we are to accept his first proposition it is difficult to see what department of medical study will be able to stand. State medicine and gynaecology must go, for they undoubtedly deal with many filthy things, if one must regard filth from a layman's point of view, as Dr. Mercier seems to do.

If he be right in his second proposition, then a certain barrister in large practice, who is in a position to know, and who told me some time ago that a certain section of the English police found Krafft-Ebing's books an absolute necessity to them in their work, must have been "drawing the long bow"; and certain solicitor friends, who have related hair-raising stories of blackmail (which they have encountered in the course of their duties, founded on sexual crime), and have made astonishing estimates of the extent of this blackmail in London, must have also been "drawing the long bow."

But even if we grant that lawyers are romancists, what are we to make of the cases which crop up in the daily papers at frequent intervals to shock the public mind? Surely these stories must be true; journalists would not be allowed to invent and publish them with impunity. If Dr. Mercier reads the papers he must have seen these cases, and must know that the persons implicated were his "clean-minded Englishmen." But perhaps when he sees such cases he closes his shocked maidenly eyes with a snap that may be heard in the house of his next-door neighbour and, like the Pharisee of old, thanks God that we are not as the rest of men—and perhaps he thinks that the rest of the medical profession in England ought equally to fail in the duty which is entrusted to them.

To an observer who is not a "psychologist and alienist" it seems that England, which is the home and birthplace of the suffragette, is the last country on earth in which the study of sex psychology should be banned.—I am, etc.,

London, N.E., Jan. 27th. T. F. KEENAN.

SIR,—I agree with Dr. Mercier in protesting against the excessive sexual probing which is so conspicuous in the methods of the present day. Why should everything have a sexual basis? As a matter of fact it has not; and though Freudism does not assert that there may not be other causes at work, yet the overwhelming prominence given by it to the sexual basis is, in this country at least, not warranted clinically, and it is not only cruel but dangerous to go about probing for cesspools until one is actually created by the irritative instruments of investigation. We seem to be living in a sexual age where everything is being done to promote the growth of the feeling. The short and tight dresses of many of the women, the figure displays of the ultra-cult of athleticism, the semi-nude exhibits of female dancers, the scant clothing of the coryphées in the pantomimes, the early education in some of the schools of children in sexual physiology — all these processes

emphasize the early growth and development of sexual curiosity, which is best left in abeyance, to its own natural evolution in its own time. If early precocity in this direction is known to exist it should be checked; if it is latent and not in any degree exigent it should be left severely alone; certainly it ought not to have hothouse training and forcing, because it is bad psychology and physiology to heat up a strong emotion into premature ripeness whilst the development of the controlling power (will) is not as yet capable of checking it.

The desperate craze for money, notoriety, and amusement makes the caterers for these longings careless in their methods, and it seems hopeless to expect any change in the nature of these meretricious fomentations of sexual display as long as parents give their support to supplies so lavishly provided. It is indeed probable that the cult of early sex precocity is already bearing its inevitable fruit—a premature sex-pervasion—one consequence of which might be too early marriages, which physiologically are not desirable and economically are unnecessary, because there is no call for speeding-up the population-rate. The mental examination of patients—otherwise called "psycho-analysis"—can be made without setting up either fatigue or mono-ideism, and it is not expedient to press it unduly in either of these directions, because then a new element may be superinduced—namely, that of suggestion, under the influence of which any particular phenomenon that is desired may be made to appear.—I am, etc.,

London, W., Jan. 24th. T. CLAYE SHAW.

SIR,—Dr. Stoddart says that my letter on this subject is a marvellous self-revelation of ignorance of the nature of psycho-analysis. He does not say on what point my knowledge is defective, and therefore I am unable to rebut the charge. This is not the first time that Dr. Stoddart has attempted to discredit me in your columns. On the last occasion I showed that he put statements into my mouth that I had never uttered. He did not attempt to substantiate his accusation, nor did he withdraw it. He took refuge in silence. He would have been well advised not to break that silence. If I could stoop to his methods, I should call his letter a marvellous self-revelation of ignorance of the manner in which a controversy should be conducted.

Dr. Stoddart admits that if a person attempts to conduct, in the way I have described, what is called psycho-analysis, his conversation must be obscene beyond belief. Sir, it is. I will give an example. A certain Dr. Maeder, who is described by Mr. Havelock Ellis—and he ought to know—as "a distinguished adherent of the Freudian school," visited this country a year or two ago for the purpose of studying "the English soul" by the method of psycho-analysis, and these are some of the results over which he licks his lips. The Englishman's devotion to sport is a symptom of suppressed lust. The Englishwoman's love of dancing (this was before the day of the tango) is a symptom of suppressed lust. The *décolleté* evening dress of the Englishwoman is a symptom of suppressed lust. The pronounced self-complacency of the Englishman is a symptom of suppressed lust. The "immense luxury of the English water-closet" is one of many symptoms presented by the English of "anal eroticism"—in plain terms, of their fondness for sodomy. The well-groomed Englishman shows by the extreme care of his person suppressed lust. The English love of animals is a symptom of lust. "Domestic pets are in England the lightning conductors of lust"—in other words, they are kept for the purpose of bestiality.

The Israelites incurred the wrath of God by worshipping a golden calf. The cult was reprehensible, no doubt, but at any rate it was clean. Would the fate of the Cities of the Plain be too severe for those who worship a goat, lovingly fashioned out of ordure?

Dr. Stoddart puts the supposition, "If Dr. Mercier has ever attempted psycho-analysis of his patients in such a manner as he describes." The suggestion is offensive and insulting, and ought not to have been made. I have not attempted psycho-analysis.—I am, etc.,

Parkstone, Jan. 24th. CHAS. MERCIER.

P.S.—Your reviewer misses the point of my criticism. He says I charged him with damning Dr. Brill with faint praise. I said he praised Dr. Brill with faint damns. The phrase is not mine, but Sir Bryan Donkin's, and admirably characterizes your reviewer's attitude. I regret to find that you emasculate my letters so that they express very inadequately the disapproval that I feel of psycho-analysis.

THE TEACHING OF CLINICAL MEDICINE.

SIR,—I am at a loss to account for the warmth of Dr. Thursfield's letter on the above subject in your issue of January 24th (unless it be an explosion of long-repressed conservatism), for I am loth to believe that the tone of my communication of the week before conveyed any assumption of intellectual superiority over my fellows.

It may be remembered that I expressed adhesion to Dr. James Mackenzie's view that enough attention was not given to the beginnings of diseases, and ventured the opinion that the medical side of teaching hospitals devoted itself unduly to maladies relatively irremediable; citing, by the way, some half-dozen examples of inveterate affections commonly to be found in medical wards. I trouble you with this second letter because Dr. Thursfield thinks he has demolished my case by some statistics from the wards of St. Bartholomew's with regard to the specific maladies I mentioned. The latter were, of course only cited as types; but even if the list were complete no apposite conclusion could be drawn from a mere recital of numbers, since a patient who occupies a bed for three months is equivalent (as far as the quality of practice provided in his ward is concerned) to three patients of the same type occupying the bed for a month apiece. I have not my critic's facile confidence in statistics, or I might be tempted to support my contention by the fact that in 1911, the year of his choice, the death-rate among the completed medical cases in the wards of St. Bartholomew's (excluding gynaecological cases) was no less than 16 per cent.; and might offer him the choice of accepting this high death-rate as reflecting the gravity of the cases admitted, or of finding some other solution acceptable to a loyal son of that foundation. But such figures are as little to the point as Dr. Thursfield's, since many of the most hopeless cases do not die during their residence in hospitals, while on the other hand many do die there for whom one can fight with hopes of success to the very end.

I fall back, therefore, upon the impressions left me by such experience as I have had, and reaffirm my belief that the teaching of clinical medicine would be improved if senior teachers showed a more lively interest in "minor maladies"—a heading which includes some maladies which soon cease to be minor unless adequately dealt with, and others in abundance which, though minor to the end, yet are a continual embarrassment to happiness. Among the advantages which would accrue from such a shifting of attitude, the following occur to me as important.

Students would gradually cease to look with a cavalier eye upon symptoms which have no backing of obvious physical change, would cease to regard them comprehensively as negligible products of valetudinarianism, and would develop an interest in their analysis and explanation. In the doing of this they could not fail to be introduced to the great subject of individuality and its bearing upon the manifestations of disease, since it is in minor illness that individuality has its fullest play, while grave organic disease goes far towards swamping it. By such paths they would get some clues to the understanding of a host of vague ailments which are dismissed lightly enough in the casualty departments of hospitals, but assume a greater dignity in practice; and would learn something of the inner meaning of the advice that our wisest have never ceased to ingeminate—namely, that we must treat the patient, not the disease. As a result they would, I believe, enter the active practice of their profession with larger views and better equipped for what they will have to do than is the case to-day; and, what is more, with their interests quickened in directions which they need not abandon when they no longer have laboratories at their elbow.—I am, etc.,

London, W., Jan. 26th. WILLIAM P. S. BRANSON.

GRAVES AND FEEDING FEVERS.

SIR,—In your interesting article in the JOURNAL of January 10th you quote the great Irish clinician as saying that he desired for an epitaph "He fed fevers." As a good deal of misconception exists as to what Graves

meant by feeding. I have looked up his own statements in *A System of Clinical Medicine* (by Robert James Graves, Dublin, 1843), and find that his own words are that he was led

> to adopt the advice of a country physician of great shrewdness, who advised me never to let my patients die of starvation. If I have more success than others in the treatment of fever, I think it is owing in a great degree to the adoption of this advice. . . . Food must be given with great care and judgement, particularly in the beginning of the fever. For the first three or four days, particularly if the patient is young and robust, water, weak barley water, and whey will be sufficient. After this, it may be well to begin with some mild nutriment. What I generally give is some well-boiled gruel made of groats and flavoured, if there be no tendency to diarrhœa, with sugar and a small quantity of lemon juice. . . . I am also much in the habit of ordering a little thin panada morning and evening during the latter part of the first and the beginning of the middle stage of fever. . . . As the fever advances you may add some mild animal jelly or broth, and one of the best kinds of nutriment in the middle and later stages of fever is chicken broth.

The same words occur in the *Clinical Lectures* by Graves, published by the New Sydenham Society (1884). Judged by present-day standards, Graves's methods of feeding were mild enough. Happily, the fevers spoken of by Graves—typhus, enteric, and unclassified continued fevers—are not now so often met with in private practice.—I am, etc.,

Leeds, Jan. 12th. J. GORDON SHARP.

THE CRAZE FOR APPENDICECTOMY.

SIR,—I have been addressed by members of the laity since my letter on this subject appeared in the JOURNAL of January 3rd, but I have avoided the temptation of adding to the correspondence on a subject which is purely professional by not expressing my opinions to them, and avoiding the columns of the lay papers. Nevertheless, I am safe when I state that abdominal hygiene is not sufficiently appreciated or practised. Two-thirds of diseases might be expunged from the *Nomenclature* of the Royal College of Physicians if the family doctor were to see his way to prevent disease on the lines of abdominal hygiene.

Formerly the family doctor washed away "the some twenty different ailments" (quoted by Dr. R. C. T. Evans in your issue of January 17th) into the watercloset by the blue pill and the black draught. And this is the line of routine action we employ in mental hospitals. Is this part of the explanation why we rarely see appendicitis among the institutional insane? In the past people may have been wrongly and horribly fed just as to-day, and also have had disgusting closets to discharge their evacuations into, still we have no statistics to prove that appendicitis was as common then as it is nowadays. If it be consistent to say that physical ailments can be removed from the fermenting vat of the intestines, I have proofs, and only too recent a one, that equally by the same means delusions can be driven into the pan of the faecal utensil, and thus enable some people to avoid the stigma of certification. As a word of warning, is it always wise to trust the majority of mankind when they say their bowels are open and to omit personal observations, as is the practice in mental hospitals, under lock and key?

I may be excused further for alluding to the powers of Epsom salts and its allies, and in pointing out, too, that the art of proper dietary in health and in diseased states should be a part of every one's education, especially when we claim uncleanliness as the cause of mental and physical crippledom. It might help to lessen the craze for appendicectomy.—I am, etc.,

Alton, Hants, Jan. 18th. JOHN FREDERICK BRISCOE.

FATAL CHOREA OF PREGNANCY.

SIR,—Several years ago Dr. Leonard G. Parsons obtained a specimen of cerebro-spinal fluid by lumbar puncture from a case of chorea gravidarum, from which I was able to grow in pure culture a streptococcus identical with the streptococcus which I had found in several cases of puerperal fever.

I have since found the identical streptococcus in 57 cases of puerperal fever, either in the uterus or the blood.

Moreover, I have never met with a streptococcus possessing the same characters in any other condition, though I have identified every streptococcus which has found its way to my laboratory during the past five years.

The suggestion that chorea gravidarum may be a meningeal or cerebro-spinal infection due to the streptococcus of puerperal fever, may not be warranted, but surely the clue is worth following by those interested in the pathogenesis of this disease.—I am, etc.,

Birmingham, Jan. 24th. LEONARD MACKEY.

OPERATIVE SURGERY.

SIR,—The reviewer to whom you entrusted my book on *Operative Surgery, with Surgical Anatomy and Surface Markings*, has made such singular work of the criticism that I feel I must ask you to give me space to reply.

He is evidently new to such work, and in place of a criticism of the book in question, he prefers to give his own views as to how operative surgery should be taught—views so extraordinary that I cannot allow them to pass unchallenged.

He takes me to task for including the description of the extraperitoneal as well as the transperitoneal method of ligaturing the external iliac artery, and says:

> "Now we think that it is bad teaching which preserves an obsolete method simply because some examiners may themselves be becoming obsolete. The sooner old-fashioned methods and operations agreed by every one to be quite superseded by newer and better ones cease to occupy the pages of textbooks the better."

As your critic has failed entirely to comprehend the objects for which *post-mortem* surgery is taught, he does well to express his "we think's" anonymously. But those who know what the student has to face in examinations, and whose duty it is to prepare them for that ordeal, as well as for work in after-life, can hardly be expected to agree with him. These operations are not the useless procedures your critic imagines. Books and classes of operative surgery must teach the principles of operating, as well as the technique of special operations. For the beginner the teaching of care, observation, precision, and the proper use of instruments, and, above all, how to deal with unexpected difficulties, is of prime importance, and the ligature of arteries, whether by old or new methods, provides excellent opportunities to put these principles in practice. An examiner will probably gain a more accurate insight to the capabilities of a candidate by watching him perform the more difficult extraperitoneal operation, than by watching him at the simple transperitoneal one. These are the reasons, and not the obsoleteness of the examiner, which influence writers on operative surgery to include both methods.

To the critic ventrifixation of the uterus is described,

> "according to a method discarded, we believe, by every gynaecologist of experience."

I am sorry to shake his belief in this matter. The operation is the only one given by Sir John Bland-Sutton, vol. iv of Burchardt's *Operative Surgery*, probably the best book we have on the subject in our language. Of the two operations which the critic thinks more suitable, no mention is found in the manuals of Thomson and Miles, Wheeler or Treves, while Waring gives the condemned method.

Among the amputations the methods of

> "Chopart, Lisfranc, Faraboeuf, Hey, Pirogoff, and all the rest"

are apparently valueless to the house-surgeon who

> "watches his chief cutting the flaps according to the material left him by the disease or the railway smash."

It never seems to have struck the reviewer that the modern amputation is the direct outcome of the work associated with the names he affects to despise. This is not surprising, however, for he goes on to

> "wonder even if he the (House Surgeon) ever sees an amputation at all."

From this I conclude that the critic is not a surgeon; I doubt whether he has even served as house-surgeon in a general hospital, or he would know what a house-surgeon sees. He has certainly never been associated with the teaching of operative surgery, and until he has gained some experience in the matter, the wisdom of expressing

such decided opinions may well be questioned. The operative surgery which, he suggests, should omit "amputations, and incisions, and ligature of vessels," still awaits his authorship. I hope the criticism will be entrusted to one who knows the subject.

But I am afraid that, until he can prevail upon those who frame the regulations of medical education to adopt his short cuts to knowledge and dexterity, textbooks, teachers and even "obsolete" examiners must continue to incur his displeasure.—I am, etc.,

London, W., Jan. 21st. DUNCAN C. L. FITZWILLIAMS.

*** Mr. Fitzwilliams's diagnosis of the experience of the reviewer and his qualifications to deal with this subject is singularly wide of the mark. Mr. Fitzwilliams's views with regard to the value of operative surgery as now taught and made a subject of examination differ from those which, after full consideration and examination of the circumstances, have frequently been expressed in the BRITISH MEDICAL JOURNAL. We have no doubt that when the *Curiosities of Medical Education in the XXth Century* comes to be written—it will be a big book—there will be a chapter on operative surgery classes.

THE ROYAL COMMISSION ON VENEREAL DISEASES.

SIR,—The time has surely arrived for checking the spreading of venereal diseases by up-to-date means similar to the methods employed for limiting the spreading of other infectious diseases.

Public sentiment has, rightly or wrongly, condemned the compulsory examination, with power to detain for treatment, of a certain class of women.

It now only remains to make the wilful spreading of these diseases as criminal as the wilful spreading of measles and small-pox; and just as there is legal power to isolate and detain until cured a person with measles or small-pox, so should there be the same power to isolate and cure a person who in the course of her occupation is daily spreading a loathsome disease to all and sundry.

It is not so much the disease itself which is so appalling, but it is the awful consequences. When one considers that practically all cases of life-long blindness and all cases of locomotor ataxia and general paralysis are so caused, and that this class of disease is the most prolific cause of abortion and miscarriage, and the birth of defective and diseased children, and that in a great number of women it causes sterility and diseases necessitating operative interference (although they are often unaware of the cause of their disease)—it is certainly time that effective measures were taken to minimize the evil effects in the way I have suggested.

It is very anomalous and absurd that a poor woman who exposes a child suffering from measles in a public place should be punished, whilst another less estimable person, who spreads more virulent disease right and left for pecuniary gain, should be allowed to do so with impunity.

The immediate effects of legislation on the lines suggested would be twofold: (1) A number of persons engaging in the daily propagation of disease would be isolated and cured; and (2) a number of others would seek treatment and would, from a wholesome fear, use means to prevent their associates from contracting disease.

The whole matter is very loathsome, but it is to be hoped that remedial legislative measures will not be shirked on that account.—I am, etc.,

Sunderland, Jan. 25th. THOMAS A. WATSON.

RESEARCH DEFENCE SOCIETY.

SIR,—By the death of its revered president, Sir David Gill, the Research Defence Society has suffered a very heavy loss. His death has come at the time when our society is just beginning the sixth year of its work, and we ask you kindly to publish this short note on the result of the past five years of work.

We are of opinion that our society has helped to bring about a much better understanding of experiments on animals in this country. There is less of ignorance, prejudice, and ill will; less readiness to accept without inquiry the charges made against this method of research; less doubt of its great value in physiology and pathology. The public is beginning to see that experiments on animals are useful in the maintenance of national health and efficiency, in the protection of men on foreign service, in the safeguarding of workers at dangerous trades, and in the immunizing of live-stock against infectious diseases. It has come home to thoughtful people that diphtheria antitoxin, thyroid extract, salvarsan, amyl nitrite, and many other drugs, and many important facts in physiology, and the protective treatments against rabies, cholera, plague, Malta fever, typhoid fever, tetanus, anthrax, and pleuropneumonia—to name these instances and no more—were discovered by the help of experiments on animals.

Of course our society must not take more than its share of the credit for this advance of public opinion. Much of it is due to the labours of the Royal Commission, to the influence of the resolution passed last year by the International Medical Congress, and to the reverses sustained by our opponents. Moreover, the discoveries made of late years by medical research speak for themselves. Still, there is always need of interpreters of science, to explain in simple words the advantages given to us, by men of science, for the saving or safeguarding not only of human lives but of animal lives. This work of popular interpretation is the especial duty of the Research Defence Society, and we look forward to many years of continued usefulness.—We are, etc.,

CROMER,
Vice-President,
F. M. SANDWITH,
Honorary Treasurer.
S. PAGET,
Honorary Secretary.

London, W., Jan. 27th.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The Diploma in Psychological Medicine, 1914.

PART I of the Examination for the Diploma in Psychological Medicine will begin on Tuesday, June 2nd, and Part II on Tuesday, March 31st. The examination for Part I will be held in Cambridge; that for Part II will be held in London.

Degrees.

The following degrees have been conferred:

M.D.—A. J. Clark, A. C. D. Firth.
M.R.—F. S. Tinker, D. S. Bryon-Brown.
B.C.—J. Brewer, D. S. Bryon-Brown, J. Deighton, W. B. Stoner, A. G. G. Thompson, F. S. Tinker.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examination indicated:

D.P.H. (*Both Parts*).—H. el Arculli, G. A. Crowley, R. Gamlin, H. J. Glover, J. R. Gwynne, H. H. MacWilliams, E. S. Miller, Phoebe M. Powell, J. F. Roberts, H. Seddon, T. W. Wadsworth.

CONJOINT BOARD FOR SCOTLAND.

THE following candidates were successful at the quarterly examinations of this Board held in Edinburgh on January 24th:

FIRST EXAMINATION.—R. G. Battersby, R. Smith, Jean McMurray Crawford, L. L. Steele, T. F. Kelly, Karumuri Virabhadra Swami, Arukatti Patabendige Frederick Abeysuriya, P. A. O'Brien, G. M. S. Lindsay, Janie Isabel McBirnie, and N. J. Patterson. One passed in Physics, 4 in Biology, and 2 in Chemistry.

SECOND EXAMINATION.—E. D. Kinsey, C. Z. A. Green (with distinction), W. H. A. D. Sutton, J. A. Tolmie, E. A. Hamilton, R. MacKinnon, I. Davies, A. Holmes, and J. H. Cooper. Three passed in Anatomy and 3 in Physiology.

THIRD EXAMINATION.—C. B. Charnock, J. N. Walker, T. C. MacCowan, J. W. Gordon, J. J. de Waal, C. C. Irvine, Elfrida Hester Brooke Coghill, and W. Walker. Five passed in Materia Medica.

FINAL EXAMINATION.—The following candidates were admitted L.R.C.P.E., L.R.C.S.E., L.R.F.P.and S.G.: Lilian Sarah Wilkes, I. J. McDonough, W. F. H. Pereira, C. C. Popham, W. S. Rorich, W. W. K. Duncan, M. McCloskey, W. C. Davis, E. I. Parry, J. Gordon-Bell, and Asutosh Sinha. Seven passed in Medicine, 2 in Surgery, 8 in Midwifery, and 14 in Medical Jurisprudence.

D.P.H.—G. D. Cairns, M.B., Ch.B.Edin., obtained the Diploma in Public Health granted by the Board.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE (*Part IV, Practical Pharmacy*).—A. Abdel-Al, D. R. Alexander, P. W. L. Andrew, A. L. Anthony, H. A. Ash, G. Aspinall-Stevala, J. D. Bangay, S. L. Bhatia, C. H. Carroll, B. S. Collings, E. Coomaraswamy, C. D. Day, J. A. Durante,

N. E. Farr, P. E. F. Frossard, M. Z. Hanafy, E. G. Harris, C. O. Hudson, D. R. Jones, N. H. Linzee, F. O. MacGibbon, W. H. Marshall, H. Morrison, R. H. C. Pryn, R. E. Rampling, P. F. J. L. Rathier-Du-Verge, C. H. Savory, F. G. L. Scott, L. W. Shelley, G. E. L. Simons, H. L. Slaughter, R. P. Starkie, G. S. Stathus, C. P. G. Wakeley, R. Williams, M. U. Wilson.

SECOND COLLEGE (*Anatomy and Physiology*).—W. Agar, E. B. Alabaster, F. M. Allchin, C. H. D. Banks, H. S. Bryan, A. Bulleid, A. A. Cockayne, W. T. Cooper, M. de Costa, A. J. D'Souza, W. F. Eberli, C. A. L. Evans, W. Farquharson, P. C. C. Fenwick, F. L. Fonseka, M. R. V. Ford, G. T. Garraway, G. R. Gokharkar, C. F. Good, T. S. Greenaway, M. St. C. Hamilton, J. F. Haynes, C. G. Hitchcock, E. L. Hopkins, C. E. Hopwood, J. M. Hughes, V. Kameneff, P. R. E. Kirby, C. H. Laver, D. Laughlin, J. M. M. Marshall, W. J. May, G. Noott, T. M. Payne, A. E. A. Poulier, R. R. Powell, J. S. Rawson, M. M. Shaffi, M. T. Talaat, S. B. Venugopal, J. de S. Wijeyeratne, T. Wilson.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—*†E. M. D. N. Baker, *†J. C. Gillies, *†T. H. W. Idris, †S. de Moor, †D. Schonken, †J. D. Schonken.

MEDICINE.—*C. Bluett, †E. S. Dufty, *†J. C. Gillies, *†G. B. Holroyde, *†S. de Moor, †J. A. Prendergast, †E. Renouf, *†J. D. Schonken, †J. A. Watson.

FORENSIC MEDICINE.—†E. M. D. N. Baker, E. S. Dufty, J. C. Gillies, S. de Moor, J. A. Prendergast, E. Renouf.

MIDWIFERY.—E. S. Dufty.

*Section I. †Section II.

The diploma of the Society has been granted to Messrs. E. M. D. N. Baker, T. H. W. Idris, S. de Moor, J. A. Prendergast, and D. Schonken.

Medico-Legal.

DR. DRURY v. OFFICERS OF THE NATIONAL ANTIVACCINATION LEAGUE.

An Apology and Payment.

AN action for damages entered in the High Court of Justice, King's Bench Division, against certain officers of the National Antivaccination League has recently been settled by agreement. The plaintiff (Dr. Drury of Halifax) sued the editor of the *Vaccination Inquirer* and other officers of the League in consequence of an article published by the defendants in the *Vaccination Inquirer* last July. This journal is the official organ of the National Antivaccination League. Last March Dr. Drury gave evidence in favour of vaccination before a special inquiry conducted by the Legislative Council in the Isle of Man.[1] The article of which the plaintiff complained contained a number of references to Dr. Drury's evidence, including the following:

Dr. Drury's evidence, which formed the principal feature of the provaccinist testimony given to the Council, has been proved by Dr. Hadwen to be full of gross inaccuracies and misleading statements. In addition to the usual array of stock Jennerian fallacies, we regret to have to state that he also deliberately misled the Council in several important particulars.

Dr. Drury Misrepresents the "Vaccination Inquirer."

As it specially concerns ourselves, we may perhaps be pardoned drawing attention to the dishonest way in which Dr. Drury led the Council to believe that the *Inquirer* had prophesied that small-pox was about to come again. In animadverting upon Dr. Hadwen's statements "that small-pox had gone the way of the black death, sweating sickness, and the plague, which, by the sanitary improvements of the time, had simply departed from the country; that there was practically no small pox at the present time, and that he did not believe that small-pox ever again would be able to get a hold in any country such as the United Kingdom or Germany or other well-regulated countries," Dr. Drury said:

"Dr. Hadwen is incorrect in saying that small-pox has gone. Most sanitarians—even antivaccinators themselves—believe that small-pox is coming. They express that opinion themselves."

By the Attorney-General:

361. Do I understand you to say that small-pox is coming?—I am not a scaremonger really. I am not giving it as my opinion, but I have given you an opinion taken from the *Vaccination Inquirer*, in which they express the view that small-pox was about to come again.

362. Do you think that view reasonable?—I am not going to say. That is the view of hundreds of sanitarians, and I see the antivaccinators say that.

The Attorney-General: We may not have the same confidence in their opinion as you have.

We have no hesitation in saying that when Dr. Drury made these references to the views of the *Inquirer* he deliberately misled the Council, because he knows very well that we have merely quoted the statements of provaccinists as to the cyclical character of small-pox epidemics and as to the terrible retribution that awaited England when small-pox came again, as, in their opinion, it was sure to do.

[1] BRITISH MEDICAL JOURNAL, 1913, vol. i, pp. 1069, 1079, 1140.

The article then quotes from speeches of the President and ex-President of the Association of Public Vaccinators of England and Wales, and continues:

With these speeches ringing in his ears Dr. Drury goes to the Isle of Man and calmly tells the Council that, in saying that small-pox is coming, he is not giving his own opinion, but is giving an opinion taken from the *Vaccination Inquirer!* Such conduct is as dishonest as it is cunning. We are surprised that Dr. Drury is not ashamed to descend to such dishonourable dodges.

Dr. Drury's evidence in this matter was based on a leading article published in the *Vaccination Inquirer* (August 2nd, 1909), entitled "Coming Events," in which it is stated, "We agree that it is no doubt likely that this country will be visited by an epidemic of small-pox ere long."

On behalf of Dr. Drury, the Medical Defence Union, represented by Messrs. Hempson, solicitors, London, have conducted the case, and Mr. Collins, solicitor, acted on behalf of the defendants.

In October the following paragraph appeared in the *Vaccination Inquirer*:

Dr. Drury and the "Vaccination Inquirer."

Having regard to the freedom of the language frequently used by both pro- and anti-vaccinist controversialists, we are surprised to learn that Dr. Drury considers the remarks which we made in the July *Inquirer* on certain portions of his Manx evidence, transgress the limits of "fair comment." We therefore wish to state that in using the words "dishonest" and "dishonourable," we had no desire or intention to make any personal imputations against Dr. Drury as a professional man. The context of those words clearly shows that they had reference only to the criticism of certain statements which Dr. Drury had made in regard to the *Vaccination Inquirer*, and that they were used in a controversial and not in a personal sense. As, however, Dr. Drury thinks that they are capable of an offensive interpretation, and that they reflect upon his character as a professional man, we readily insert this explanation, and express our regret if the use of these words has given Dr. Drury cause to complain.

Later, in December, the defendants caused to be printed and published the following article in the *Vaccination Inquirer*:

We are sorry to learn that Dr. Drury is not satisfied with the explanation and expression of regret which we published in our issue of the 1st of October, 1913, and we therefore desire to amplify our apology. We definitely and distinctly withdraw all the words in our article of the 1st of July which can be considered in any way to reflect on Dr. Drury either in his professional or personal capacity. We desire to express our regret that we allowed any words to be published which could cause Dr. Drury any pain or be considered in any way to reflect upon his integrity, and we make an unreserved and unconditional apology for having done this. Owing to the correspondence that has taken place with Dr. Drury's solicitors, we were not able to insert the above apology in our November issue.

Subsequently a settlement of the action was arrived at on the terms set out below:

1. The payment to Dr. Drury of the sum of 100 guineas.
2. An undertaking that the publication shall not be republished. (The defendants state that the publication has already been withdrawn).
3. The payment of costs in full.
4. The publication in the *Vaccination Inquirer* of the following article:

> "Dr. Drury having taken exception to a certain article in the *Vaccination Inquirer* an action was commenced in the High Court at his suit against the editor of the *Vaccination Inquirer* and certain officers of the National Antivaccination League. This action has now been settled by the apology and withdrawal which appeared in the *Vaccination Inquirer* of 1st December, 1913, defendants having paid to Dr. Drury 100 guineas as agreed damages and his costs of the action and the issue containing the statements complained of has been withdrawn from publication."

5. An agreement that the terms of settlement may be published in the *Jennerian*, the BRITISH MEDICAL JOURNAL, and the *Lancet*.

ACTION BY A MEDICAL SUPERINTENDENT FOR LIBEL.

Verdict for the Plaintiff.

AN action by Dr. W. J. C. Keats, medical superintendent of the Camberwell Infirmary, of the Gordon House Home, and of the children's scattered homes of the Camberwell Guardians, against the proprietors and printers of the *London Budget* for libel, was heard in the King's Bench Division before Mr. Justice Darling and a special jury last week. The plaintiff alleged that the *London Budget* had suggested that he had been guilty of cruelty in flogging convalescent boys in the infirmary. The defendant said that the matter published was a fair and accurate report of a meeting of the Camberwell Guardians, and was

otherwise fair comment on a matter of public interest. The judge ruled that the matter was one of public interest. The short particulars of the case appear sufficiently from the summing up of the judge, which we quote from the *Times* of January 23rd:

On one occasion a mother waiting in an anteroom was horrified at hearing a lad screaming agonizedly. When the mother asked to see her boy she was refused permission to enter the ward. They would probably find that that was a libel. It was not for them to decide as to the propriety of corporal punishment in the infirmary. That was a matter for the authorities and the Local Government Board. It was not disputed that the plaintiff had inflicted the punishment with an instrument consisting of five strands of moderately thick string. The newspaper called that "flogging with a five-tailed lash." With regard to the passage referred to, it appeared now that the boy punished was an orphan, and the boy whom the mother was not allowed to see was another boy. But would not anybody reading that suppose that it was her boy who was being punished? It was obvious that, in the interests of the patients themselves, the parents of all the patients could not be admitted to hospital wards at any time; and it was also obvious, for the same reason, that the practices of these mischievous boys in putting the wards in darkness, assaulting the nurses, etc., must be stopped. He was not in the least surprised at the Countess de Lormet taking up the question: it was quite legitimate to do so. But they must not think, nor must other people think, that they were deciding one way or the other whether this mode of discipline in the Camberwell Infirmary was legitimate or not.

The jury returned a verdict for the plaintiff with £100 damages.

The case on behalf of Dr. Keats was conducted on the instructions of the London and Counties Medical Protection Society.

ALLEGED NEGLIGENCE IN A NURSING HOME.

Action of a Sedative.

In an action heard in the King's Bench Division last week, before Mr. Justice Darling and a special jury, Mr. Victor Chilley, a student at the Royal College of Music, claimed damages for personal injuries caused by the alleged negligence of the servants of the defendant, Dr. Bradford, at the nursing home of which he was the proprietor. The defendant denied negligence.

The summing-up of the judge and the questions he left to the jury were reported as follows in the *Times* of January 24th.

The action was brought for a breach of contract by the defendant to nurse the plaintiff; the defendant said that the contract was not to nurse the plaintiff, but to provide competent nurses to be under the direction of the plaintiff's medical adviser. Probably they would think that the conduct of Dr. Bradford in the matter had been very handsome, for he had treated the plaintiff as his guest for some ten weeks. It was not disputed that the defendant's nurses were bound to obey the orders of Dr. Horsford, the plaintiff's doctor, as to his treatment, and that Dr. Bradford would have no right whatever to alter these orders, and he personally knew nothing as to what was done in this case. Apparently the negligence suggested was the leaving the hot-water bottle in the bed after the hypodermic injection, when, owing to the drowsiness thereby induced, the plaintiff would be unable to feel the pain if his feet came into contact with the bottle. He would leave the following questions to them:

1. Did Dr. Bradford undertake to nurse the plaintiff?
2. Was Nurse Stuart a qualified and competent nurse?
3. Was she guilty of negligence by which the plaintiff was hurt?
4. Was Dr. Bradford himself guilty of negligence; and, if so, in what respect?
5. In ministering to the plaintiff was Nurse Stuart acting as the servant of Dr. Bradford? and
6. Damage.

The jury retired, and after considering for thirty-five minutes they answered all the questions except the fourth in the affirmative, and awarded £100 damages.

The case on behalf of Dr. Bradford was conducted on the instructions of the London and Counties Medical Protection Society, Ltd.

Dr. Bradford in a letter addressed to us makes the following observations:

The sedative in question I understand to have consisted of ⅓ grain of morphine and ⅛₀ grain of atropin given hypodermically, but of course the finding of the jury includes all sedatives and affects the ordinary practice and routine of hospitals private or otherwise, and raises a question of some importance to the medical profession, as in the above case, though I was not held to have been personally negligent, I was held responsible for the alleged negligence of my nurse.

THE *North China Herald* states that dissection of human bodies has been legalized by order of General Tuan Chi-jui, Acting Tutuh of Hupeh, in response to requests by missionaries in the interest of medical education and research. Vice-President Li Yuan-hung had already expressed approval of the matter, but had only sanctioned it informally. It is believed that this is the first time that dissection has been formally legalized in China.

The Services.

THE HEALTH OF THE ARMY IN 1912.

THE fifty-fourth annual report—that for the year 1912—has been issued. In reviews of previous reports for recent years it was suggested that the marvellous progress in army hygiene, as shown in the continued decline in sick ratios, would ultimately sink to, and remain at, a minimum. Such a minimum, under laws of averages, has apparently been reached, yet the result is one for which the nation should be profoundly thankful.

We would also again remind the public that the extraordinary improvement in the health of our world-spread army has been followed upon with the granting of an autonomy, initiative, and authority to the medical service; by this wise step the advances in medical science have been fully extended to the troops, so that—almost within a decade—in a total strength of 200,000, over 6,000 fighting men, a number equal to two brigades of infantry, have been saved to the effective strength who, under the old system, would have been in hospital. The extra cost of the reorganized medical service has thus been repaid a hundredfold.

On a broad survey of the report, the ratio returns, per 1,000, show little difference between 1911 and 1912, but are none the less satisfactory.

TROOPS AT HOME AND ABROAD.

The Director-General remarks: "The general sick-rates are now so small in comparison with former years that it is open to question whether any further decrease can be effected by the efforts of medical officers. . . ." But this might be attained by "increasing attention to the details of hygiene and preventive medicine on the part of regimental officers, non-commissioned officers, and, indeed, of the rank and file themselves."

The following combined table shows broad ratios at Home, India, and the Colonies:

Ratios per 1,000 of Strength.

Years.	Admissions.	Deaths.	Invalids sent Home.	Invalids Finally Discharged.	Constantly Sick.
Home:					
1859-1898	712.5	4.32	—	16.98	41.14
1899-1908	560.1	4.39	—	27.35	31.80
1912	346.4	2.34	—	9.37	19.50
India:					
1859-1898	1464.7	16.43	27.95	14.78	89.61
1899-1908	964.1	11.96	29.47	11.71	59.00
1912	547.9	4.82	6.68	5.94	28.86
Colonies:					
1859-1898	869.6	8.44	23.44	11.24	54.37
1899-1908	621.8	6.74	28.64	10.94	39.82
1912	394.9	3.42	11.94	8.95	26.27
Combined: 1912.					
At home	346.4	2.34	—	9.37	19.50
Abroad	505.2	4.30	*8.42	6.93	28.01

* Calculated on strength excluding troops on board ship.

1. RECRUITING.

Recruiting statistics were formerly prepared for the calendar year, but in 1912 they are given for the recruiting year—whatever that may mean—October 1st, 1911, to September 30th, 1912; consequently, the figures from October to the end of December are again included in the statistical year under review, and this, of course, complicates comparisons.

The broad and regrettable fact is that, under our voluntary system of enlistment, there is a serious shortage of recruits both for the Regulars and the Territorials; this, we hope and believe, is not due to unpopularity of army life, but rather to the demands of labour in civil life, and the drain of emigration from rural England, and above all Scotland: indeed, it is stated in the report "the recruiter has an increasingly formidable competitor in the highly-paid emigration agent."

The reduced ratio per 1,000 of rejections on primary inspection is not attributed to any improvement in physique, but rather to improved recruiting machinery, owing to the

better training of the individual recruiter, and prevention of the old bad system whereby he could rush into the medical inspection room men under standards and exhibiting obvious disabilities. It is to be hoped that the recent advertising of the advantage of soldiering—a calling undoubtedly presenting conditions greatly superior to those under which the majority of the class from which recruits are drawn exists—may stimulate recruiting.

The better primary selection, with a better physical training, on the Swedish system, has much raised in every way the average of our young soldiers.

As of old the chief disabilities in primary selection are: Deficient chest measurement; heart affections; decay of teeth, and defective vision. Rejections on account of teeth disability, which was carried to great lengths, has "under broader and more common sense views among medical examiners" declined from 56.30 to 22.44.

The London district has still the unenviable distinction in the highest ratio of rejections; the Southern, Eastern, and Scotland have the lowest.

2. SANITATION.

Instruction, by lecture and demonstration, in this all-important branch is carried out in all commands, and at the Royal Military Colleges at Sandhurst and Woolwich.

At the School of Army Sanitation at Aldershot over 900 officers and men passed a course in conservancy, disinfection, water, rations, etc.

Attention is directed to an improved method of heating hospital wards by pipes placed near the ceiling, which does away with obstructive floor radiators.

3. INVALIDING.

General invaliding was fractionally higher than in 1911, which was the lowest on record. The chief causes were nervous, circulatory, and tuberculous diseases; but there has been a marked decline in syphilitic cases.

5. TROOPS IN THE UNITED KINGDOM.

The admissions, practically the same as in 1911, were much under the average for the quinquennium. Influenza showed a decided increase, but this was counterbalanced by a large decrease in tonsillitis and sore throat. The London district shows the heaviest rates.

6. INDIA.

Among the 70,000 European troops in India the various ratios were practically the same as in 1911, and pronounced "exceptionally good."

Typhoid and Paratyphoid Fever: Inoculation.

The number of cases of enteric fever was the lowest on record; the mortality was 19 per cent. As the bacillus of paratyphoid fever has now been isolated, accuracy of diagnosis can be assured. About 90 per cent. of the European troops have now been inoculated with the most marked advantage in enteric fever, but with a negative result in paratyphoid fever. The admissions for enteric fever were 1.20, and the deaths 0.15 in the inoculated, as against 6.60 and 2.69 among the non-inoculated, or per cent. 12.8 against 40. All ranks give steady support to inoculation.

Malaria.

Malaria is still the chief cause of inefficiency, notwithstanding steady war against the mosquito. The extended use of bed nets is advocated, but it appears that those in use are not supplied by the Government but regimentally.

Plague and Cholera.

For plague, 10 admissions and 5 deaths, chiefly at Secunderabad, are recorded. For cholera there were 19 admissions and 10 deaths. As usual the infection was from native sources, but some cases were difficult to trace.

Small-pox.

The number of cases of small-pox (17 cases, 3 deaths) was in excess of that for some years, and as usual had a "bazaar" origin. Vaccination was carried out most thoroughly.

Venereal Disease.

Venereal diseases showed a slightly increased ratios, it was much below that of previous years; the rate was highest in Burma.

Invaliding.

Invaliding to England decreased from 2,062 in 1903 to 474 in 1912. This again illustrates the wise policy inaugurated by the present Director-General of sending as many men as possible to the hills during the trying months of the hot season.

7. TROOPS AT OTHER STATIONS ABROAD.

We can only glance at this section of the report.

1. *Egypt.*—Enteric fever was more prevalent, and much more severe in the non-inoculated; an outbreak in a Cairo barrack was traced to a "carrier," in a person employed as a cook, who had recently had the disease; no less than five men were found to be also "carriers." *Mediterranean fever:* Five cases were traced to consumption of goat's milk in the market.
2. *Gibraltar.*—Very healthy.
3. *Malta.*—Health very satisfactory.
4. *South Africa.*—Health continues excellent.
5. *West Africa.*—Health improved; the months of June, July, and August, with the heaviest rainfall, are the most unhealthy.
6. *Bermuda.*—An excellent record.
7. *Ceylon.*—Satisfactory.
8. *North China.*—The retention of an additional regiment of British infantry in the command did not relatively affect the health statistics during the year. A form of sandfly fever, with facial herpes, was somewhat prevalent among the British and French troops in the protectorates.
9. *South Africa.*—A great diminution in the incident of sickness; every ratio, except deaths, lower than in 1911 and the quinquennium.
10. *Jamaica.*—A decline in the ratios for European troops, which is now lower than those for non-Europeans serving in their own country.
11. *Mauritius.*—Hitherto with a bad reputation; is now very satisfactory.
12. *Straits Settlements.*—Satisfactory decrease; for the fourth year enteric absent.

The above brief summary shows results which are not merely good but eminently satisfactory. If made well known, it should draw recruits, for the soldier, both at home and abroad, leads a healthy and clean life much above the companions he leaves in civil life.

The report contains elaborate tables on the diseases of soldiers, which afford a mine to vital statisticians of all classes.

TERRITORIAL FORCE: GLASGOW MEDICAL UNITS.

THE annual gathering and presentation of prizes in connexion with the Glasgow units of the Royal Army Medical Corps Territorial Force was held on January 22nd. Lieutenant-Colonel A. Dryden Moffat, M.D., T.D., presided, and among those present were Major-General Spens, C.B., commanding the Lowland Division; Colonel Thompson, D.S.O.; Colonel D. J. Mackintosh, M.V.O., Assistant Director of Medical Services, Lowland Division; Colonel Napier, M.D.; Lieutenant-Colonel H. Wright Thomson, M.D.; Lieutenant-Colonel G. H. Edington, M.D.; Lieutenant Colonel Arch. Hay, M.D.; Lieutenant-Colonel P. F. Shaw; Lieutenant-Colonel Morgan, R.A.M.C., and a large number of officers of the units and of the division. Lieutenant-Colonel Moffat, during an interval in the programme, addressed the gathering, and said that the past year had been one of steady progress. There had been added to their numbers the nucleus of a clearing hospital unit. With the institution of that unit the chain of medical assistance from the firing line in the front to the base hospital in the rear was completed. The new unit would be of great value in field ambulance work. Under the able command of Colonel Shaw, whom he congratulated upon his well-deserved promotion, it would be of great service to them. The training last year had taken place at Gailes. The recruiting had been a matter of satisfaction to everyone connected with the corps. The ranks were full of enthusiastic young men who were proud of the uniform and of the corps to which they belonged. The authorized establishment was 756 and at the present the strength was 747, and the vacancies could be filled at any moment, for there were a large number of good recruits waiting. General Spens, commanding the Lowland Division, presented the prizes, and was accorded a vote of thanks on the motion of Colonel Mackintosh. General Spens, replying, congratulated the corps on a very successful training season. He had seen the R.A.M.C. in all phases of the training in Ayrshire. Their work was done admirably and on the most practical lines.

THE twelfth international congress of ophthalmology will be held at St. Petersburgh from July 28th to August 2nd, 1914.

THE international prize bearing the name of Emil Chr. Hansen, by whom it was founded, will be awarded for the first time on May 8th, 1914. It is to be given to the author of the best work of medical microbiology published in Denmark or in any other country. The prize consists of a sum of at least £112, with a gold medal stamped with the likeness of the founder. The committee of adjudication includes, besides two administrators of the Carlsberg Laboratory, Professors Calmette of Lille, Gaffky of Berlin, and Theobald Smith of Boston. The prize is to be awarded under the same conditions every two or three years. Works offered for competition should be addressed to the Administrators of the Carlsberg Laboratory, Copenhagen.

Obituary.

ALEX. S. L. NEWINGTON, M.B.CANTAB.,

TICEHURST.

DR. ALEXANDER NEWINGTON, physician and joint proprietor of Ticehurst Asylum for the Insane, was killed on January 17th while driving his car near Ticehurst. Taking a cross road too rapidly he jammed his brakes to avoid a motor dray, his car skidded, and he was thrown out on his head.

Dr. Newington was born in 1846, and was the son of Dr. Samuel Newington and a grandson of the founder of the well-known private asylum at Ticehurst. We are indebted to Sir Bryan Donkin for the following account of his life and tribute to his memory:

Having been an intimate friend of the late Alexander Newington in his early medical days, I venture to ask you to insert this short tribute to his memory. With the exception of his relatives and all others with whom he worked so long and so ably at the asylum at Ticehurst, of which he was joint proprietor with his cousin, Dr. H. H. Newington, from 1881 until his death, there are, perhaps, too few who know what an exceptionably able and attractive man he was. After returning in the early Seventies from India, where he was interested for some few years in tea-planting, he went to Cambridge, and in a surprisingly short time took the degree of M.B. It was at St. Thomas's Hospital, where he worked during the latter part of his student time, that I first met and came to know him well. His interest and zeal in clinical work were unbounded, and he was soon recognized by both teachers and students as one of the best observers and most acute reasoners amongst his fellows. He was, I think, the ablest medical student I have known. After qualifying as M.R.C.S. and taking his Cambridge medical degree, he held consecutively the appointments of house-physician of St. Thomas's, and physician's assistant at Bethlem Hospital, and soon after settled in practice at Wheatley, near Oxford. His medical knowledge at this time was singularly great and sound, especially for one who had passed so short a time in acquiring it; and those who knew him at this period of his career could not fail to recognize that he had all the stuff in him to make a first-rate physician and clinical teacher. He was much liked and highly appreciated at Wheatley, and during the few years of his stay there greatly increased the practice. He had at this time married the daughter of Dr. Robert Barnes, the obstetric physician to St. Thomas's Hospital. I have pleasant memories of occasional visits I made to Dr. and Mrs. Newington at Wheatley, and of much interesting talk.

Dr. Newington's all-round medical and surgical knowledge were highly appreciated by all at Ticehurst when he joined that establishment in 1881. His delight in the science and practice of his profession was never relaxed. Until the end he was, as his cousin tells me, a sound and true physician and surgeon, an excellent observer, and shrewd diagnostician. Besides these medical qualities, he preserved, also from youth to age, his well-deserved popularity, and his interest in all kinds of outdoor pursuits. He will be greatly missed and deeply mourned, not only by all near and dear to him at Ticehurst, but also by all those who have ever known him well.

THE death occurred on January 11th of Dr. ARTHUR HOPE TAYLOR, of Bolton, at the age of 50. He was the son of Mr. James Taylor, headmaster of the Fletcher Street Grammar School, where he received his early education. He then proceeded to Edinburgh, where he took the degrees of M.B., C.M. in 1886, and that of M.D. in 1896, when his thesis was commended. He was for a time clinical assistant to the Great Northern Central Hospital, London, and was called to the Bar. He settled in practice in Bolton, and was for a time a member of the town council, until the calls of increasing practice induced him to retire. He was a member of the British Medical Association, and took an active interest in the work of the local Division. He leaves a widow and one daughter, and with them much sympathy is felt. The funeral was attended by many members of the medical profession, including Dr. O'Neill, representing the Division.

THE death occurred on January 12th of Dr. JAMES JEKEN, of Eltham, at the age of 87. After receiving his medical education at University College, London, he took the diplomas of M.R.C.S. and L.S.A. in 1850, and commenced practice in Eltham in 1858. He was consulting medical officer to the Eltham and Mottingham Cottage Hospital. Five years after starting practice he married Miss H. M. Lewin, of Eltham, and on the occasion of their golden wedding last August the high esteem felt for Dr. and Mrs. Jeken was shown by a large number of gifts and remembrances from all classes in the neighbourhood. Dr. Jeken took great interest in local affairs; he was a member of the old Eltham Vestry, and, when it was first constituted, of the Woolwich Borough Council.

DR. N. V. WISE, who died on January 8th, at the age of 69, was one of the oldest medical practitioners in Trowbridge. He received his early education at Queen's College, Cork, and the Carmichael School, Dublin, and obtained the diplomas of L.R.C.P. and S.I. in 1869. Early in his career he was associated with the late Dr. King in practice at Melksham; afterwards he took over the practice relinquished by the late Dr. Miller, of Trowbridge. Among the appointments which Dr. Wise had held were medical officer of health for Trowbridge and district, medical officer and public vaccinator of the Westbury Union. He was fond of horses and dogs, and was generally interested in all kinds of legitimate sport, and when health and professional duties permitted he was seldom absent from a town cricket or football match. There was a large attendance at his funeral. Dr. Wise is survived by his widow, three sons, and a daughter.

DR. EDWARD CHARLES SPITZKA, the distinguished neurologist of New York, died at his home in that city on January 13th, aged 61. The immediate cause of death was apoplexy, but he had been in failing health for some time, having undergone several operations for necrosis of the jaw. Born in New York in 1852, he was educated at the College of the City of New York, and took his degree at the Medical School of the University of New York in 1873. After studying at Vienna and Leipzig for three years, he returned to America and established himself in practice in New York. From 1881 to 1884 he was editor of the *American Journal of Neurology*, and from 1885 to 1887 Professor of Neurology and Medical Jurisprudence at the Post-Graduate Medical School of New York. In 1890 he was elected President of the New York Neurological Society: he was also President of the American Neurological Association and of the Association of American Anatomists. He was one of the founders of the American Anthropometric Society, which came into existence in 1891. The members of this society pledge themselves to leave their brains to the society for measurement and examination. Dr. Spitzka was the author of a *Treatise on Insanity*, which was published in 1883. He was recognized as an authority on medico-legal questions, and gave evidence in many important cases. He had the courage of his convictions, and at the trial of Guiteau for the assassination of President Garfield he testified, in the face of weighty medical opinion on the other side, that the accused man was insane. He also made the *post-mortem* examination on the body of Czolgosz, the murderer of President McKinley.

BRIGADE-SURGEON CONSTANTINE CARIDI READ, Army Medical Department (ret.), died at Richmond on December 8th, 1913. He took the M.R.C.S. in 1852, and entered the Army Medical Department as assistant surgeon in 1853, retiring as surgeon-major, with a step of honorary rank, on December 9th, 1885. He entered the Grenadier Guards on May 5th, 1854, and spent the whole of his service in that regiment. He was, therefore, practically debarred from rising higher than surgeon-major, as medical officers of the Guards were not eligible for promotion to the administrative grades, and only one brigade-surgeon was allowed for the Brigade of Guards. He served with his regiment in the Crimea in 1854, and was present at the siege and fall of Sevastopol, receiving the medal with a clasp and the Turkish medal. He served also in the Soudan expedition of 1885, at Suakin, receiving the Egyptian medal with a clasp and the Khedive's bronze star.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. E. Boudrimont, a well-known surgeon of Bordeaux; Dr. Antonio D'Antona, professor of clinical surgery in the medical faculty of Naples, one of the founders of the Società Italiana de Chirurgia, author of writings on inflammation, renal surgery, the treatment of surgical tuberculosis, and others, aged 70; Dr. E. Guillet, professor of clinical surgery in the medical faculty of Caen, aged 52; Aly Bey Heydar, ex-professor of anatomy at the School of Kasr-el-Aini, aged 60; Dr. Jeanne, editor of the *Concours Médical*; and Dr. Leonhard Kessler, formerly professor of gynaecology in the University of Dorpat, aged 79.

Medical News.

THE fourteenth Congress of Criminal Anthropology will be held at Budapest next summer.

DR. RICHARD N. JONES has been appointed a justice of the peace for the borough of Swansea.

IN the Carola Hospital at Dresden an institute for the treatment of disease with radium, mesothorium and thorium X, has recently been opened. The director is Dr. Nahmmacher.

PRINCE LUDWIG FERDINAND OF BAVARIA, M.D., who has long been a member of the Leipzig League, has recently joined the Munich Medical Association in order to show his sympathy with the movement for free choice of doctor.

SIR STCLAIR THOMSON and Mr. Arthur Cheatle have been elected honorary members of the Italian Society of Laryngology and Otology. Sir StClair Thomson has also been elected an honorary member of the Laryngological Society of Berlin.

SIR RICHARD DOUGLAS POWELL, Bart., K.C.V.O., M.D., will deliver two Emeritus lectures on Fridays, February 20th and 27th, at 3 p.m., in the Middlesex Hospital Medical School. The lectures will deal with the therapeutic use of digitalis and strychnine.

A COURSE of eight lectures on dietetics will be given at the Royal Institute of Public Health, Russell Square, W.C., by Dr. Josiah Oldfield on Wednesdays, at 4.30 p.m., commencing on February 4th. Further particulars will be found in our advertisement columns.

AT the meeting of the Royal Society on Thursday afternoon next a paper on the conduction of the pulse wave and the measurement of arterial pressure, by Professor Leonard Hill, F.R.S., and Drs. J. McQueen and M. Flack, will be read. A report of the Monte Rosa expedition of 1911 will be presented to the same meeting by Mr. J. Barcroft, F.R.S., of Cambridge, and his colleagues.

DR. LAQUER, of Wiesbaden, is the initiator of a scheme for the foundation of an institute for scientific research on all questions relating to alcohol and alcoholism in Germany. There are institutes of this kind in St. Petersburg and Moscow, and in Boston, U.S.A., in connexion with the Carnegie Nutrition Laboratory.

AT this time, when so much is heard about the education of school children in what is called euphemistically "sex hygiene," it is interesting to learn that on January 7th the Chicago Local Board of Education decided to discontinue courses of lectures on the subject in the public schools after a trial of one year.

A COURSE of six lectures on milk, for those engaged in the milk trade and in institutions where milk is largely consumed, will be delivered by Professor A. Harden, D.Sc., F.R.S., head of the Biochemical Department of the Lister Institute, at the South-Western Polytechnic, Chelsea, commencing on Thursday evening, February 5th. A practical class will be held immediately after the lecture.

DURING the academic year 1912–13 the number of degrees of Doctor of Medicine granted by the nine French universities was 948. Of these 70 were honorary diplomas not conferring the right to practise in French territory. The total number of degrees granted by the several universities was as follows: Paris, 433; Montpellier, 138; Lyons, 116; Bordeaux, 102; Toulouse, 75; Lille, 40; Nancy, 34; Algiers, 12; Beyrouth, 37.

THE complimentary dinner to Dr. Addison, M.P., has been unavoidably postponed until Friday, February 6th. It will be held at the Hotel Métropole at 7.30; reception from 7 to 7.30. Professor Sir Ronald Ross, Professor Hall, Mr. C. F. Lockwood, Mr. Walter Jessop, Dr. W. Langdon-Brown, Dr. Hugh Thursfield, and Dr. H. Morley Fletcher have joined the committee. Those proposing to be present should make early application for tickets to Dr. H. H. Mills, 21, St. Mary Abbott's Terrace, Kensington, W.

A PLEASANTLY written and well informed account of Mentone, as it was and as it is, is to be found in a booklet recently published by Dr. D. W. Samways under the title of *Mentone as a Health and Pleasure Resort*. Nominally it is a second edition of a book by the same author which appeared some twelve years ago, but so much of the matter has been rewritten that the present volume may be regarded as a new publication relating to all subjects covered by a wide interpretation of its title. The book is issued by W. J. Southwood and Co., Exeter.

A NORTHERN nursing and midwifery conference will be held in the Exhibition Buildings, New City Road, Glasgow, from February 7th to February 11th. Among the subjects set down for discussion are nursing in the Royal Navy, the Army and the Territorial Forces, colonial and missionary nursing, the sphere of nurses in the tuberculosis dispensary, the importance of ophthalmic training for nurses, and the nursing of venereal diseases. Trained nurses, midwives, and certificated health workers will be admitted free to the conference and to the exhibition of hospital and nursing appliances to be held during the conference.

IN the annual report of the (American) National Association for the Prevention and Study of Tuberculosis it is stated that the sum of £5,800,000 was spent last year in the various scientific and medical activities dealing with the prevention and treatment of tuberculosis. From the schedules of expenses drawn up for public information it appears, says the *New York Medical Journal*, that sanatoriums and hospitals cost £2,600,000 and the care of patients in dispensaries and open-air schools about £165,000; State and local boards of health spent over £50,000. Public funds furnished £2,760,000 of the total amount. New York spent the largest amount of any State.

THE Irish Medical Schools' and Graduates' Association had a successful meeting and dinner at the Midland Hotel, Manchester, on January 24th. Dr. Douglas, who presided, was supported by Dr. Jocelyn Swan of Wellington, and Dr. Shepherd Boyd of Harrogate, provincial secretary. Dr. Swan proposed the health of the guests, which was responded to by Colonel Coates, C.B., and Dr. Hill Griffiths. Dr. O'Hagan proposed the toast of the association, which was replied to by Dr. Douglas, the president. The pleasure of the evening was greatly augmented by songs and recitations from the following: Mrs. Walls, Dr. Hill Griffiths, Colonel O'Hagan, Mr. Murray, Dr. Starkey, and others.

AT a meeting of the Library Company of Philadelphia, founded by Benjamin Franklin in 1731, appreciative resolutions were passed with regard to the death of Dr. Weir Mitchell, who was for many years presiding director of the library. At a meeting of the Committee of One Hundred of Philadelphia a sealed communication which was opened after the death of Dr. Weir Mitchell was read. In it he, the first custodian, in accordance with the conditions imposed by Dr. Robert Abbe, of New York, designated Dr. Simon Flexner, of New York, to succeed him as custodian of the watch formerly belonging to Dr. Benjamin Rush, of Chicago, and now deposited with the College of Physicians of Philadelphia.

THE winter dinner of the West African Medical Staff was held on Wednesday, January 21st, at the Grand Hotel, London. Dr. Pront was in the chair, and the company numbered about thirty, and enjoyed a most pleasant evening. After the loyal toast, the Chairman proposed the toast of "Prosperity and Success to the West African Medical Service." He referred to the increase in work and responsibility of the staff, and expressed the hope that all grievances would be settled to their satisfaction. Mr. Darker proposed the health of "The Visitors," who included representatives of the Colonial Office and others, and Dr. Milligan and Dr. Pontifax (of the Customs Department of Southern Nigeria) replied. A vote of thanks to Dr. Fagan, who organized the dinner, proposed by Dr. Foy and carried with acclamation, was wittily acknowledged by Dr. Fagan.

THE next meeting of the International Conference on the Blind will be held at the Church House, Westminster, London, S.W., from June 18th to 24th, both dates inclusive. A special feature of the conference will be an exhibition of the arts and industries of the blind, which will include, besides specimens of all kinds of work done by them in Great Britain and foreign countries,

demonstrations by living workers, musical and gymnastic displays, stalls of books and apparatus, medical appliances connected with the preservation and restoration of sight, and many other features of interest. English will be the official language, but interpreters will be in attendance when speeches are given in other languages. H.R.H. the Duke of Connaught is patron of the conference, and among the vice-presidents are the Archbishops of Canterbury and York, Cardinal Bourne, and a number of other persons prominent in various spheres of social activity. The chairman of the General Conference Committee is Mr. Henry J. Wilson of London; the honorary secretary is Mr. Henry Stainsby, the British and Foreign Blind Association, 206, Great Portland Street, London, W.

UNDER the patronage of their Majesties the King and Queen, an International Congress on Social Work and Service (state, Municipal, and Voluntary) will be held in June, 1915, at the London University. Similar international congresses have been held at Paris in 1889, Geneva in 1896, Paris in 1900, Milan in 1906, and Copenhagen in 1910. The subjects already selected for discussion at the London conference have reference to: (1) Thrift in its relation to relief; (2) international provisions for the assistance of deserted children; (3) the assistance of families of prisoners and extradited persons; (4) the care and control of the mentally defective; (5) State insurance and hospitals; (6) the relation of the municipality to public and private assistance; (7) the housing of the working classes; (8) the work of school care committees. H.R.H. Prince Arthur of Connaught has consented to become president of the congress, and an executive committee has been formed of which Sir William Collins is chairman. Among the members of this committee are Sir William Chance, Major Leonard Darwin, Mr. C. S. Loch, and Sir Shirley Murphy. All communications relative to the congress should be sent to the honorary secretaries at Denison House, Vauxhall Bridge Road, London, S.W., and all subscriptions to the honorary treasurer, Sir Felix Schuster, Bart., at the same address.

A QUARTERLY court of the directors of the Society for the Relief of Widows and Orphans of Medical Men was held on Wednesday, January 14th, Dr. Rigden, Senior Vice-President, in the chair. Fifteen members of the court were present. It was reported that since the last court two of the vice-presidents of the society had died—Dr. Clement Godson and Mr. H. W. Kiallmark. One of the widows in receipt of grants had also died. She came on the funds in 1875, and received in grants the sum of £2,300. Her husband paid in subscriptions £37 16s. The sum of £1,260 was voted for the payment of the usual half-yearly grants to the widows and orphans, and £392 10s. was voted for special grants to be paid out of the Brickwell Fund. The invested funds of the society now amount to £139,500. Membership of the society is open to any registered medical practitioner who at the time of his election is resident within a twenty-mile radius of Charing Cross. The annual subscription is two guineas. Special terms for life membership. Further particulars and application forms for membership may be obtained by applying to the Secretary at the office of the society, 11, Chandos Street, Cavendish Square, W.

CALCIUM salts have been employed in bronchial asthma with success, and in the hands of Professors Emmerich and Oskar Loew have yielded surprisingly good results in certain cases of hay fever also (*Muench. med. Woch.*, December 2nd, 1913). They advise a solution of 100 grams of pure crystalline calcium chloride in 500 grams of distilled water, of which 5 c.cm. (about 1 drachm contains 1 gram of the salt) is taken morning, noon, and evening either in water or in some drink, such as tea, soup, or coffee, for an indefinite period. They state that patients who had suffered from extremely severe and obstinate hay fever regularly every year for periods up to thirty-five years, who started the treatment during 1912, remained free during the summer of 1913, and were able to live in the country during the spring and summer. No other treatment was used. The condition in its severer forms is so little amenable to ordinary treatment and so intolerable to the sufferer that there is little wonder that the majority of patients are willing to try any treatment stated to do good, and are apt to fall into the hands of the quack. It is, therefore, of some importance that two capable clinicians like Professors Emmerich and Loew have found so simple a form of treatment effective. Added to the direct effect, they claim for the treatment an increase of energy, an improvement of sleep, a raising of resistance towards infections, a diminution of the tendency to catch cold, and, lastly, in the case of corpulent persons a reduction of fat.

Letters, Notes, and Answers.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

IONIST asks for information as to the significance of a slight flow of milk from the breasts of—(1) a healthy virgin aged 24; suppressed menses six months; uterus normal; excellent health, and no anaemia, etc. (2) A healthy married woman aged 28; miscarriage, at three months, six years ago; no conception since. Milky fluid ever since discharging from breasts, which appear quite normal and virginal.

J. F. F. asks for an explanation for the following phenomenon. I have (he writes) a male patient at present in the hospital on whom I operated for empyema a few weeks ago following on acute pneumonia (tuberculous). Since operation the matron tells me that every plant she has put in the room occupied by the patient immediately begins to droop and fail. The patient has been moved three times into different rooms and the same thing has occurred. Cut flowers placed in water do the same. The discharge from the empyema wound became very offensive a few days after operation, but is now quite sweet.

THE INFECTION OF CHILDREN WITH THE BOVINE TUBERCLE BACILLUS.

MR. G. A. WYON, M.B., Ch.B. (Bow, E.), writes: May I be allowed through your columns to put one or two questions to Dr. Clive Riviere on the above interesting subject? First of all, would Dr. Riviere carry out his suggestion of giving milk which he believed to contain *some* bovine tubercle bacilli *to his own children?* If so, would he make any previous examination of the milk for the number of bacilli per unit volume? If he would advocate such an examination, at what maximum point would he withhold or sterilize the milk? Next, is it an established fact that no acute miliary tuberculosis and that no pulmonary tuberculosis (acute or chronic) is known to be due to the bovine bacillus? Finally, if immunization by bovine bacilli is to be attempted, why not do it by inoculating sterilized milk with a measured quantity of bovine bacilli, or even by hypodermic injection of a culture, living or dead?

INCOME TAX.

I. T. has been asked by the surveyor of taxes for a certified copy of his accounts for 1910, 1911, and 1912, in support of his return of last year. As he has already been assessed for 1913-14, and has paid the tax charged, he wishes to know whether the surveyor can legally claim to examine his accounts, seeing that he has not appealed against the assessment.

*** Our correspondent is not bound to furnish the accounts at the request of the surveyor, but it will probably save him some trouble in the long run to do so, inasmuch as non-compliance with the request may result in an estimated additional assessment being made by the Income Tax Commissioners, in which case production of the accounts would be necessary in connexion with the consequent appeal.

LETTERS, NOTES, ETC.

HAUSA CUSTOMS AND FOLKLORE.

IN Major Tremearne's letter on this subject in the JOURNAL of January 17th, p. 171, a superfluous "not" crept in. Major Tremearne is anxious that it should be understood that he did not wish to imply that our reviewer had read the papers contributed to the last meeting of the British Association.

THE SMALL FAMILY.

DR. BINNIE DUNLOP, Alexandra Court, London, S.W. (member of the Malthusian League), writes that he will give a copy of "The Small Family System" to any member sending him name and address.

FATAL CHOREA OF PREGNANCY.

DR. W. E. FOTHERGILL (Manchester) writes: May I correct a date in my letter on the above subject which appeared on January 24th? The valuable paper by Turney was in the *St. Thomas's Hospital Reports* in 1898—not 1908—and I quoted from it in a work of my own which was published in 1900.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

THE UNIFORM SUCCESS OF SEGREGATION MEASURES IN ERADICATING KALA-AZAR FROM ASSAM TEA GARDENS:

ITS BEARING ON THE PROBABLE MODE OF INFECTION.

BY

J. DODDS PRICE, M.R.C.S., L.R.C.P.,

AND

LEONARD ROGERS, M.D., I.M.S.

In 1906-7 we investigated together the problem of the epidemiology of kala-azar on tea gardens in the Nowgong district of Assam under very favourable conditions for obtaining accurate data. Previous to that time Dodds Price had for several years watched the insidious invasion of the coolie lines of the tea estates from the neighbouring villages by the terrible epidemic of kala-azar which was then sweeping through the Nowgong district in a wave of such relentless severity that it caused an actual decrease of no less than 31.5 per cent. in the population during the decade 1891–1901, against an increase of 16.3 per cent. in the unaffected Lakhimpur district. As a result of a sad experience he had come to the conclusion that the disease was certainly communicable, and had consequently arranged early in 1895 for new lines to be built for a number of freshly imported coolies arriving on the Rangamati tea estate. Rogers commenced his investigations in the Nowgong district in April, 1896, and as the result of detailed inquiries he independently arrived at the conclusion that the infection was a house one, as fully recorded in his original report of 1897 and in *Fevers in the Tropics*.

On investigating together, in 1897, the effects of bringing into use the new lines at Rangamati, we found that no case of kala-azar had occurred among 150 coolies who had then resided there for two years. Yet out of 50 coolies of the same batch who had been living in the old infected lines, for want of room in the new ones, no fewer than 16 per cent. were already dead of kala-azar, while others were suffering from the disease, and that in spite of the fact that the new lines were situated only 300 yards from the old ones.

It was therefore decided to carry out a further experiment, suggested by Rogers, to ascertain if the disease could be stamped out of already infected coolie lines by moving out all the healthy persons into newly built lines, and segregating the remaining infected families. As it was then impossible to diagnose the disease in its early stages from ordinary malarial fever (kala-azar being at that time regarded by us as a peculiar severe epidemic form of malaria), it was decided to move into the new lines no person in whose household any cases of kala-azar had occurred, lest some of them might already be suffering from an early stage of the disease, and thus carry the infection with them. This experiment was carried out at the Old Solona out-garden lines of the Rangamati estate. The infection was so severe in this community that no fewer than 144 out of 240 souls had cases of the disease in their households, so that only the remaining 96 people could be moved, while 5 of these had to be sent back very soon after on account of developing fever. The new line was filled up with freshly imported coolies, who now number 800 workers, and to this day—that is, for sixteen years—they have remained absolutely free from kala-azar. Of the 96 people who had to be left in the old infected lines nearly all contracted the disease and died of it during the next few years. Moreover the kala-azar spread to a contiguous line with 60 healthy coolies, who had worked for years on the estate, and who refused to move into new lines. One-third of them died of the disease within the next fifteen months, and the rest nearly all succumbed or left the estate during the few succeeding years. Their huts have now ceased to exist, and with them the dread disease has disappeared from that neighbourhood. Nevertheless, the new lines—which have now remained free from kala-azar for sixteen years—are only 400 yards from the old ones, which continued to suffer so severely for several years after the new lines were inhabited.

The remarkably successful result obtained in this first experiment, the earlier phases of which have already been recorded by Rogers, has encouraged other tea-garden managers and directors to allow Dodds Price to repeat the procedure in connexion with coolie lines infected by kala-azar. We have recently studied the results obtained during the last sixteen years, and think they are worthy of record, as they have been uniformly successful, and absolutely prove the soundness of the measure based on our epidemiological studies of kala-azar, thus rendering this measure one of the first importance in dealing with the most terrible disease of India, and also throwing considerable light on the probable mode of infection.

In order to bring out the facts in as condensed and convenient a form as possible, the most essential data, as far as they are available, regarding the infected Nowgong tea gardens are shown in Table I. Column 1 shows the working population of each line at the present time, to which must be added from 20 to 25 per cent. to allow for young children. Then follow the dates on which the lines became infected with kala-azar; the approximate number of deaths before the lines were moved, the figures being on the conservative side, and to some extent underestimating the real loss; succeeding columns give the years in which the new lines were built, which was almost always in the non-manufacturing cold season; the approximate number of persons with infection in their households, who were left on the old site or in a segregation camp, and the number of deaths from kala-azar which subsequently occurred among them. The distance of the new lines from the old infected ones and the number of years which the new lines have now remained free from the disease complete the table. As there have been no material extensions of the area under tea in the

TABLE I.

Tea Estate.	Working Population.	Year of Infection.	Deaths before the Lines were Moved.	Year of Removal.	No. of Infected Left Behind.	No. of Infected who Died Later.	Distance the Lines were Moved.	No. of Years the New Lines have remained Free
New Rangamati	622	—	—	1895	—	—	300 yds.	18 yrs.
Old Salona (Rangamati)	800	1893	over 200	1897	8	110	fully 112	400 yds.	16 yrs.
Haspani ...	625	1897	about 75	1899	over 100	at least 60	800 yds.	14 yrs.
Kondoli ...	600	1892	over 150	1901	?	a few	—	12 yrs.
Kellydene ...	900	1895	320	1902-3	about 160	about 75	750 yds.	9 yrs.
Amlucki ...	1,800	1896	350	1900-1	about 100	47	½ mile	13 yrs.
Lung Soong ...	540	1902	about 35	1904-5	about 35	15	800 yds.	8 yrs.
Nonoi	312	1893	about 85	1905-6	about 40	about 12	¾ mile	8 yrs.
Meesa	550	1896	over 50	1905-6	25	17	600 yds.	8 yrs.
Seconee... ...	678	1908	128	1911	98	23	600 yds.	2½ yrs.
Totals ...	6,727	—	1,393	—	698	361		
Deaths per mille	—	—	207	—	—	517		

Nowgong district during the period of time dealt with, owing to the difficulty in increasing the labour force, the present working population of the coolie lines is much the same as formerly. It thus appears that in the ten lines shown in Table I kala-azar has been stamped out of a labour force of nearly 7,000 workers, after it had caused a mortality within a few years of 207 per mille, and although, subsequently to moving the coolie lines, over half of the infected households which had to be left behind on the infected sites died of the disease. As it costs from £7 to £14 to recruit a coolie, and the average duration of the illness is at least seven months, during which food and treatment costs £4, it is clear that, in addition to the great saving of life and suffering, the financial aspect of the case to the tea industry is of great importance.

In order to make matters quite clear, it will be well to give further details regarding certain of the instances recorded in Table I. For this purpose one that happened a number of years ago and one of quite recent date have been selected, solely because more detailed records are

available concerning them, while each contained but a single coolie line, which simplifies the descriptions.

The Amluckie Tea Garden Outbreak of 1896–1904.

Kala-azar commenced on this garden in 1895 and got a strong footing in the following year. It raged during 1898 to 1900, when strong action was taken, the immediately beneficial results of which will be evident from the figures given in Table II.

Table II.—*Yearly Total Deaths and Deaths from Kala-azar at Amluckie.*

Year.	Working Population.	Total Deaths.	Kala-azar Deaths.	Remarks.
1899	1,074	167	138	Years preceding change of lines.
1900	1,056	146	112	
	New Lines Commenced and Kala-azar Camp Opened.			
1901	1,026	32	9	All in kala-azar camp; none in new lines.
1902	975	35	10	
1903	918	33	15	
1904	896	28	13	
1905	856	12	0	
1906	812	25	0	
1907	809	9	0	
1908	985	29	0	212 new coolies imported from famine districts.
1909	1,006	22	0	
1910	1,001	16	0	
1911	961	19	0	
1912	1,008	21	0	
Total			297	

In the cold weather of 1899–1900 a site was chosen and new lines commenced, and 347 healthy coolies, with no kala-azar cases in their households, were carefully selected and drafted into the new lines in April, 1900. In the following cold season of 1900–1 fresh houses were added, and 150 more coolies drafted in, and the lines were finally finished in the winter of 1902–3, when the remaining old healthy coolies, together with freshly recruited ones, were allowed into the new lines. All this time the contacts and kala-azar cases remained in the old lines, and continued to do so until the epidemic ceased simply by killing off the majority of the coolies left on the infected site. It is estimated that about 30 recovered during the period from 1899 to 1905, or 10 per cent.

It will be seen from the figures in Table II that the mortality from kala-azar in 1899 and 1900 amounted to no less than 128 and 106 per mille, while in the previous two years it had also been very high, although unfortunately the exact figures are not now available. The sudden drop in 1901, after the new lines had been occupied, to under 9 per mille deaths from kala-azar, and the complete and lasting eradication of the disease within a year after the completion of the new lines, are conclusive in regard to the effectiveness of the measure. It is not too much to say that this fine estate was saved from very great loss, if not ruin, by the measure under consideration. The high case-mortality of about 90 per cent. shows the virulence of the outbreak.

The Seconee Tea Garden Outbreak of 1908–13.

This garden is situated off the routes of district traffic, and completely escaped infection by kala-azar until some years after the epidemic had died down to a great extent in the Nowgong district, leaving sporadic cases and limited centres of infection. Nevertheless, when the disease did break out on the Seconee estate, it ran an acute epidemic course with a high death-rate, thus showing that tea-garden coolies, who are mainly recruited from parts of India where kala-azar is comparatively rare or totally unknown, are liable to severe outbreaks of the disease, should the infection once gain a footing among them. The number of deaths to October, 1913, has been 151, the complete recoveries amount to 21, while two cases are still under treatment. Omitting the last two, whose condition is still doubtful, the case-mortality has been 87.8 and the recovery-rate 12.2 per cent., or a little over that of the Amluckie outbreak of ten years earlier, thus showing no appreciable diminution in the virulence of the disease.

In May, 1911, the directors gave Dodds Price a free hand in dealing with the serious situation, and new lines were at once constructed, into which 300 healthy people were moved, leaving behind in the old lines 98 persons with the infection in their households; all the uninhabited huts in the old lines were destroyed. Of the 98 people left in the infected lines 23 have died within the ensuing two and a half years up to date of writing. These deaths are included in the total loss of 151 persons, being nearly one-fourth of the whole labour force of the estate. The new lines are situated some 600 yards from the old site, but on higher ground. It is also worthy of note that, owing to no water being obtainable in the new lines except by digging a deep well, the old well was exclusively used during the first year after the new lines were opened, and it is still used during the dry cold and early hot weather months, when the supply in the new well runs short. Nevertheless the kala-azar rapidly died out after the lines were moved, only two cases now remaining. Only one of these had lived in the new lines, and he was a bungalow servant, who used also to visit the neighbouring villages and markets. At Seconee, then, there was no change in the drinking water, which can therefore be excluded as being in any way associated with the incidence of the disease. Segregation was adopted here earlier than in the former cases, although not until very serious loss of life had occurred from kala-azar. It was very noticeable at Seconee, as has been the experience of Dodds Price in all former outbreaks on tea gardens, that it was the acclimatized coolies, who had worked for years on the estate, who succumbed to kala-azar. Their loss is particularly serious from the labour point of view, as it is now impossible to replace them by an equally good class of workers, and as they are very rarely sick they form the backbone of the labour force.

The rapid success of the measures adopted to separate the healthy from infected families was most gratifying in this instance from the sanitary point of view as well as from the financial standpoint.

The Results of Removal.

The above two detailed examples, together with the eight other instances summarized in Table I. will suffice to demonstrate how simply and certainly a serious outbreak of kala-azar can be controlled and, within a comparatively short time, completely eradicated from very badly infected coolie lines of tea estates by the measures advocated. In fact, it would be difficult to find a more successful method of dealing with such a deadly and ruinous human disease in the whole range of preventive medicine. It is particularly worthy of note that this efficacious measure was worked out as a result of epidemiological studies, at a time (1896–7) when we were ignorant of the true nature of kala-azar and its mode of infection; while it was not then even known how the infection of malaria itself was conveyed from one person to another. The facts collected having established that the infection clung to the houses or their sites, this sufficed to enable us to evolve a simple plan of dealing effectually with the epidemic which was ravaging the Nowgong district and ruining its chief industry.

The Indefinite Occurrence of Kala-azar in Coolie Lines Once Infected if Segregation Measures are not Carried Out.

It will be seen from a study of Table I that the segregation measures were invariably successful at whatever period they were carried out—namely, from 1895 up to 1908. The results obtained cannot, therefore, be due to the decline of the epidemic in the Nowgong district during the first decade of the present century. Further and absolutely conclusive evidence to the same effect is furnished by the two control coolie lines, which have not been moved, and which still suffer from the disease to the present moment. The following is a brief account of the course of the disease in these control lines.

Kala-azar at Solona.

On this estate (which is quite distinct from the old Solona lines of the Rangamati garden) two large coolie lines, called Solona and Borghot respectively, became infected with kala-azar as early as 1896. Late in the following year this estate came under the medical care of Dodds Price, when the disease was causing considerable loss of life. Table III shows the number of deaths year by year in each line, and also the mortality during the four years 1897–1900 in the segregation camp, to which all cases of the disease and suspects were for a time removed.

TABLE III.—*Kala-azar Deaths on the Solona Estate from 1897 to 1913.*

Year.	Solona Lines.	Borghot Lines.	Total.	Kala-azar Camp.	Remarks.
1897	45	29	74	80	Also 80 deaths before 1897.
1898	38	37	75		Reduction due to segregation of cases in kala-azar camp.
1899	7	5	12	150	
1900	1	1	2		
1901	3	2	5	—	
1902	10	4	14	—	
1903	15	3	18	—	
1904	14	10	24	—	
1905	5	1	6	—	New lines built at Amguri for newly imported coolies.
1906	3	3	6	—	
1907	3	2	5	—	
1908	1	1	2	—	
1909	2	1	3	—	
1910	3	1	4	—	
1911	6	7	13	—	Recrudescence due to newly imported coolies being again placed in the old lines.
1912	8	7	15	—	
1913 (Dec. 12)	10	14	24	—	
Total deaths	174	128	302	230	
Population	650	850	1,500		

It appears from the data given in Table III that the partial measure of removing the evident and suspected cases of kala-azar from the infected lines to a segregation camp during the four years from late in 1897 to 1900 had a very beneficial effect in greatly reducing the number of deaths from the disease subsequently. The kala-azar camp was broken up at the end of 1900, and two years later the deaths in the old infected lines began to mount once more from 5 in 1901 to 14 in 1902, while the figure reached 24 in 1904. In 1905 a marked decrease again occurred, which lasted for six years. This decline in the disease coincided with the carrying out of the following measures. Disinfection directed towards the destruction of bed-bugs was carried out in all the infected houses in the Borghot lines in the hot season of 1905, and it is worthy of note in this connexion that the Borghot lines had only about half the number of deaths that occurred in the Solona lines during the following six years, although the population of the former (850) is considerably greater than that of the latter (650). An even more important factor was doubtless the construction of new lines at Amguri, only a few hundred yards from the old Borghot lines, in the cold season of 1905–6, into which all the newly imported coolies were placed. This new line has remained almost entirely free from kala-azar during the last eight years, the few cases which did occur being due to carelessness on the part of the manager in allowing admissions of coolies from the infected lines. In 1901 a distinct recrudescence of the disease took place in the two old infected lines, 52 deaths having occurred within just under three years, undoubtedly due to newly imported coolies being again placed in the old lines, owing to the new ones having become filled up. It is thus abundantly clear that the partial measures adopted in the case of this estate have failed to eradicate the disease, which has caused more deaths during the first eleven months of 1913 than in any year since 1899, when the kala-azar camp was in full use.

We have here the clearest evidence that as long as fresh material, in the form of newly imported coolies, is introduced into infected lines, so long will the disease continue to exact a heavy toll in lives, with consequent serious financial loss. The construction of new lines has at length been commenced, into which all healthy families will be moved out of the infected lines, as many as possible of the old houses in which will then be destroyed and the remaining infected families segregated in one of the old lines. There is every reason to believe that this measure will be as successful in eradicating the disease from the Solona estate as it has been in the ten other tea gardens shown in Table I.

The Rangamati Old Lines.

Here the disease broke out as early as 1894, and has continued ever since—that is, for almost twenty years—in the old lines, which have not been moved, although the new lines, only 300 yards distance, have remained free since they were built in 1895. Owing to the old records having been lost in a fire which destroyed the hospital in March, 1908, the exact number of deaths from kala-azar in the old lines are only available since that date, and are as follows:

1908 (from March)	14
1909	11
1910	11
1911	10
1912	8
1913 (to November)	9
Total	63
Remaining under treatment ...	10

Here, again, we have a clear illustration of the continued occurrence for an indefinite period of kala-azar in infected lines, which have not been dealt with by removal of the healthy families and prevention of the admission of newly imported coolies. This instance is all the more striking from the fact that only 300 yards away is situated the first of the newly constructed lines, from which all kala-azar cases have been carefully excluded, and which has remained quite free from the disease for no less than eighteen years, during the whole of which period cases have continued to arise yearly in the old infected lines. Again, we have here further proof of the fact that the old acclimatized coolies, who have lived for years on the estate, many of them having been born and bred there, are sooner or later attacked by the deadly disease, if they continue to reside in infected lines, although they seldom suffer from other serious disease, and form the most valuable and reliable portion of the working population.

The continued occurrence for from eighteen to twenty years of cases of kala-azar in the only two infected coolie lines in the Nowgong district, which have not been dealt with by means of the segregation measures, which we have shown to have been uniformly successful in the case of the ten consecutive lines in which they have been carried out, furnishes the most convincing evidence possible that the complete eradication of the terrible kala-azar from every garden where this plan has been fully put into execution has really been due to the methods advocated.

THE BEARING OF THE SUCCESS OF SEGREGATION MEASURES ON THE PROBABLE MODE OF INFECTION OF KALA-AZAR.

The uniform success of the prophylactic measures, based on the observation that the infection of kala-azar clings to the houses and their sites, is a fact of great importance in considering the probable mode of infection of the disease. As it has been proved that a distance of a few hundred yards—not more than 300 to 400 in certain instances—suffices for the permanent protection of coolie lines, provided no infected person is allowed to reside in them, we may exclude any mode of infection through such flying insects as mosquitos. Moreover, we have found that malarial fever soon becomes as rife in the new lines as in the old ones, for Rogers obtained a malarial infection rate among children of about 80 per cent. in both old kala-azar infected lines and in a new one which had been free from the latter disease for several years, so there could have been no lack of mosquitos in the new

lines. This high endemic index accounts for the number of kala-azar patients Rogers found to be infected with malarial parasites during his first investigation in 1896, that is, several years before the frequent malarial infection of apparently healthy people was known.

Water.

Water can be safely excluded as the vehicle of infection, for several reasons. In the first place, the parasite of kala-azar is very rapidly destroyed by water, even if the temperature and other conditions are favourable. Even a little moisture on a slide will break up the organisms. Secondly, it has been shown that at Seconee segregation measures were rapidly effectual in eradicating the disease, although there was no change of the water supply during the first year after moving the lines, and only a partial change subsequently. In several of the other instances the old water supply was used for many months after the lines were moved, yet the disease rapidly declined. Thirdly, a water origin cannot explain the manner in which the disease clings to particular houses and families for years, while other houses in the same row of huts may be entirely exempt, the water supply for all being the same. That the disease was particularly bad along the banks of the Kulung river of the Nowgong district is easily understood when it is remembered that the grand trunk road of the district follows the course of the river, the banks of which are both the most densely populated area, and the one along which most of the trade occurs, affording constant opportunities for the spread of the infection.

Diet.

Diet can also be excluded, as a result of the study of kala-azar under the favourable conditions for obtaining accurate data presented by tea estates with European doctors, especially when the same medical man has been in charge of all the gardens for sixteen years, and of most of them for twenty years, as in the case of Dodds Price. The diet of the coolies consists mainly of district grown rice, together with a certain amount imported from Calcutta. In addition dhal (a kind of pea) and vegetables are regularly consumed. Meat is indulged in very sparingly. Fish can only be obtained for a few weeks in the year, so is not an important article of diet. Some of the gardens obtain it from the Samaguri bheel (lake) and others from the Kulung river. Moreover, several gardens, one of which was not more than three miles from an infected one, have entirely escaped kala-azar, although their coolies had the same diet, including fish, as the infected ones. Again, the eradication of the disease following the segregation measures took place without any change of diet, while the disease continued in lines which were not moved, although their coolies had the same diet as those in the healthy new lines.

Indications for a Non-flying Insect Carrier, most probably the Bed-bug.

Christophers, Donovan, Patton, and others have demonstrated that the kala-azar parasite can sometimes be found in small numbers in the peripheral blood. Rogers obtained the development of the flagellate stage in sterile citrated normal saline solution kept at a temperature below 75° F. Such a sterile saline medium is not likely to commonly occur in nature except in the stomach of some biting insect. Rogers obtained the most copious development by neutralizing or slightly acidifying the salt solution, and also found that the contents of the stomachs of bed-bugs, after sucking human blood, often showed such a reaction combined with sterility, and consequently suggested the bed-bug as the most likely carrier of the infection. Although he failed to obtain experimental proof of this theory during short leave to Assam for the purpose, yet soon after Patton, after many months' whole-time study of the problem, did succeed in occasionally demonstrating the development of the flagellate stage of the parasite in bed-bugs fed on kala-azar patients who presented the parasites in their peripheral blood. More recently Patton has found that the development proceeds best if no second feed of blood is given to the insects.

It has been objected that Patton has only succeeded in obtaining a very few positive results in a long series of experiments. If we consider for a moment the epidemiological facts, this does not appear to us to be such a serious obstacle to the acceptance of the theory as it might at first sight appear. It will be evident from the data in the earlier portion of this paper that a considerable number of people may live for several years in the same lines, or even, as often happened, in the same house as other persons infected with kala-azar, and yet entirely escape the disease. The further fact that if people go on living long enough in such infected houses or lines the great majority of them do eventually contract the disease, so that after a number of years almost the entire population of a set of contiguous huts may die of kala-azar, appears to show that the slowness of infection is not due to any lack of susceptibility to the disease. We know that in the very same lines every soul is likely to contract malaria over and over again within the same period of time. We can also testify from personal experience that bed-bugs can be collected by the score from every coolie hut. It would appear from these facts that, if even one bed-bug in a hundred was capable of carrying the infection of kala-azar, every person in an infected house would rapidly develop the disease. Moreover, the comparative rarity of the parasites in the peripheral blood, as compared with malaria, alone accounts for much of the difficulty in experimental and natural infection of the insects. It would be quite sufficient for bed-bugs only very rarely to become capable of conveying the infection (as in Patton's experiments), under conditions an exact knowledge of which is not yet available, to enable them to be efficient carriers of the disease.

In this connexion we may refer to the experiment carried out by Dodds Price, at the suggestion of Rogers, with a view to ascertaining if measures directed against the bed-bug would prove effective in freeing houses from infection. Fumigating the houses with sulphur, disinfecting the beds with solution of corrosive sublimate in boiling water, and burning old clothes were followed by the disappearance of the disease from a row of badly infected coolie huts for several years, but this measure was found to be troublesome and expensive. Moreover, cases reappeared in other parts of the lines, and the disease was not completely stamped out. Burning the thatched roofs in the houses also failed to prevent subsequent cases occurring in them. The mud walls of these houses were over 2 ft. in thickness, and the flames died down long before the whole thickness of the walls could have been sufficiently heated to destroy all the bed-bugs within their crevices, so that the failure of this measure can easily be understood. It is also known that bed-bugs can live for many months without food, so that the clinging of the infection to houses harbouring them is not surprising. Were it not for the facts now known regarding the life-history of the parasite, the evidence would go far towards incriminating the actual soil as well as the houses; but on the whole the bed-bug theory best accounts for all the known facts, including a few instances of infection of Europeans through cohabiting with native women suffering from kala-azar. The development of the parasite into the flagellate stage in bed-bugs obtained by Patton goes very far towards establishing this theory.

In any case the invariable success in ten consecutive tea gardens where the segregation methods dealt with in this paper have been carried out, is sufficiently convincing evidence of the infectiousness of the houses, and possibly of their sites, to enable this theory to be safely acted on until such time as the problem is completely and finally solved. Unfortunately the measures, which can be adopted in tea garden coolie lines, cannot be so easily carried out in the case of infected villages or isolated sporadic cases, although the principles remain the same in either case, and further efforts in this direction are much to be desired.

The Permanency of Recoveries from Kala-azar.

Scepticism is not rarely expressed as to whether undoubted kala-azar is ever recovered from. It will be observed that we have referred to a number of such recoveries in this paper, and we wish in conclusion to emphasize the fact. In hospital practice it is only exceptionally possible to follow up patients for a sufficiently long time to prove the occurrence of complete and lasting recovery. Rogers has recorded some instances in his *Fevers in the Tropics*, and has notes of several European children who not only recovered but have remained quite

well for a number of years. Dodds Price, during his twenty years' experience in Assam, has followed upwards of 2,000 cases from first to last on tea estates, and can personally vouch for over 150 complete and permanent recoveries, in which the patients continued to do full work for years. Recently we examined together 14 out of the 15 recoveries on the Seconee estate, the remaining case not being at hand, although in good health. It is interesting to note that in five of these the spleen had entirely receded beneath the ribs, in five more the organ did not extend more than 1 in. below the costal margin, while the largest spleen extended but 2 in. down. These coolies were all doing regular work. On other estates there are coolies working who recovered from kala-azar up to as long as fifteen years ago. The experience of us both is that if a kala-azar patient, who had reached the typical advanced stage of the disease with great emaciation, once loses the fever, puts on flesh steadily for several months, and becomes well nourished, he or she never relapses. Of course, in a comparatively early stage a patient may improve and put on weight for a time, and yet the fever may recur; but we are not referring to such. In the tea-garden cases the recoveries have not followed any special line of treatment, but not infrequently occurred most unexpectedly. It sometimes followed on a septic infection, as in one of the Seconee cases, in which gangrene of the scrotum was the turning point in the course of the disease. Now that we have demonstrated the great value of segregation in the prevention of the spread of kala-azar, what is most wanted is a curative treatment.

WILD GAME AS A RESERVOIR FOR HUMAN TRYPANOSOMES.

An Analysis of the Available Evidence from the Northern Shores of Lake Victoria Nyanza.

BY

H. LYNDHURST DUKE, M.D., D.T.M. and H. Came.

The question whether the wild game of the sleeping sickness areas of Africa are acting as reservoirs for the human trypanosomes, *T. rhodesiense* and *T. gambiense*, has recently attained great importance. Among the investigators engaged in the biological problems connected with sleeping sickness there are two distinct opinions prevalent. On the one hand some observers—foremost among them the Germans of Lake Tanganyika—are strongly of the opinion that these game trypanosomes, however similar they may seem to the human parasite, are nevertheless non-pathogenic to man; others, including the Royal Society's Commissioners in Nyasaland and Kinghorn and Yorke, consider that certain of the trypanosomes recovered from the local game are identical with *T. rhodesiense* of man.

The special aspect of this question which will receive attention here is the part played by the game in the fly area of the northern shores of the Victoria Lake. As is well known, a terrible epidemic of sleeping sickness devastated this part of Uganda Protectorate in the years 1899–1909. The disease was presumably introduced by caravan porters from the Congo, where trypanosomiasis has long been known to the natives. In 1908–9 the native population of the lake shore of the mainland and of the neighbouring islands was removed inland, away from the fly. Since this measure the disease has practically died out in this part of the Protectorate. In spite, however, of the removal of the natives from contact with the wild lake shore *G. palpalis*, a certain proportion of these flies are still (1912) capable of infecting monkeys with a trypanosome. The morphology and general behaviour of this organism are indistinguishable from those of *T. gambiense*.

Again, in September, 1911, an exactly similar trypanosome was obtained from the blood of two situtunga antelope shot on Damba Island, about nine miles from the mainland.[1] The point to be decided is: Are these "wild fly" and "situtunga" trypanosomes descendants of the *T. gambiense* which caused the recent epidemic, or are they merely parasites of the antelope, and not capable of surviving in a human host? Unfortunately, the decisive experiment of inoculating the organisms in question into man is not feasible in Uganda. There are no local volunteers, and the ethical objections to experiments, however painless, on condemned criminals are insurmountable. All that can be done is to review the whole available evidence in the light of common sense, and to try and arrive at a logical conclusion.

For convenience, the trypanosome obtained from Damba situtunga will be referred to as the "Damba trypanosome." The organism pathogenic to monkeys and derived from wild flies will be called the "wild fly trypanosome." I hope in the course of this brief review to establish the fact that these two trypanosomes are identical; and that both are the descendants, doubtless somewhat modified, of the parasite which caused the recent epidemic. The points demanding attention will be considered in the form of a series of questions and answers.

A. *Is there any reason to doubt the identity of the "Damba" trypanosome and the "wild fly" trypanosome?*

I have shown that the morphology and general reactions of these two strains of trypanosomes make it impossible to doubt their identity.[1] The answer to this important question is accordingly in the negative.

B. *Is there any evidence that the trypanosome of the fly on the mainland and island coasts of Northern Lake Victoria Nyanza is derived from antelope, rather than from hippos, reptiles, or birds?*

1. The "Damba trypanosome" was obtained in monkeys by direct injection of situtunga blood.

2. Blood of a considerable number of hippos, birds, and reptiles has been injected into susceptible animals without any trypanosome being discovered.

3. On islands where there are no buck but plenty of hippos, reptiles, and birds, the tsetse are incapable of infecting clean monkeys or goats.

4. The closer the relations between antelope and tsetse, the greater the percentage of infective flies.

As far as there is any evidence, therefore, it answers this question in the affirmative.

C. *Is there any evidence that the trypanosome of the fly is derived from truant natives?*

In spite of the regulations to the contrary there has been evidence from time to time that a few individuals have visited parts of the prohibited area. Some of these have been arrested; others are, perhaps, still at large. Could these natives account for the persistence of infected fly?

The following considerations make this explanation inadequate:

1. There are *very* few such natives.

2. They do not visit the strips of shore on which the experimental flies are caught, for fear of being seen and arrested by the laboratory employees, who are known to visit these localities regularly in search of fly.

3. It is improbable that these truants are sick, as they have of necessity to lead a rough existence and to be constantly on the look out against capture.

4. The signs of recent native occupation are usually on the far side of islands, not on the mainland.

5. On certain islands where definite signs of recent native occupation have been found—for example, huts, ashes, cooking utensils, etc.—and where there are no buck, the tsetse are non infective. On these islands there could be practically no restriction to the movements of the truants—as regards fishing, etc.—owing to the distance from the mainland. Such islands are Nsadzi and Lwagi. The flies on the neighbouring island of Kome are infective, but here situtunga are common.

6. Truant natives are notoriously addicted to night fishing, in order to escape detection. *G. palpalis* is not active at night.

As regards the canoe men and fly boys employed at the laboratory to obtain flies and pupae, they are kept under constant observation and have never shown any signs of sleeping sickness. Both blood inoculation into monkeys and the examination of fresh slides were employed at frequent intervals.

It is plain from the facts here given that antelope are probably the chief reservoir for the "wild fly" trypanosome.

D. *Is there anything in the morphology and general behaviour of either of these lake shore trypanosomes which proves that they cannot be identified with T. gambiense?*

The morphology and animal reaction of these trypanosomes correspond closely with what is known of *T. gambiense*. They cause a more or less chronic disease in monkeys and rats, and are unaffected by human serum.

The data relating to the animal reactions of the human strain of trypanosome obtained from Uganda natives by the Royal Society's Commission at Entebbe show that the disease at the first inoculation was slightly more chronic. Thus white rats lived for three or four months, paralysis of the hind quarters being observed before death in some, but not all, experiments. In four uncomplicated monkey experiments, in which the animals were inoculated directly from human beings, the average duration of the disease was 184 days—the maximum being 250 days, the minimum 107 days. In four monkey experiments with the Damba trypanosome the corresponding figures were 172, 207, and 144 days.

Four monkeys experimentally infected with the "wild fly" strain (1910–11) lived for an average of 114 days (maximum 147 days, minimum 85 days; this last monkey was an old emaciated animal at the commencement of the experiment, and cannot therefore be looked upon as a fair test of the pathogenicity of the trypanosome). A single monkey experimentally infected with wild-fly trypanosomes at Entebbe, in 1904, lived 214 days.

A white rat subinoculated from a rat infected with human blood by the Entebbe Commission died in two months and a half without any paretic symptoms. The average duration of the disease in six white rats inoculated with the "Damba trypanosome" was 61 days (maximum 74 days, minimum 44—a very young animal). Similar figures were obtained with rats inoculated with the "wild fly" strain. It should be noted that the trypanosomes in these Mpumu rats had in each case undergone previous passage through monkeys. Some of the rats showed paralysis of the hind quarters before death, others did not.

It will thus be seen that the general behaviour of the Damba and "wild fly" trypanosomes in monkeys and rats resembles that of the *T. gambiense* obtained in 1903 directly from infected natives. Guinea-pigs were more refractory to the human than to the two recent lake shore strains. It must be remembered, however, in this connexion that when originally tested by Bruce and his collaborators *T. pecorum* was non-inoculable into these animals, though it subsequently proved pathogenic. If such a modification can occur in a trypanosome in the course of a few months at the laboratory, much stress cannot be laid on this difference. For if the human trypanosome were excluded from the blood of man for several years, it might be expected to show a change in its behaviour towards other hosts.

The answer to this question appears to be, therefore, that not merely is there no good evidence to show that the Damba and fly trypanosome is not identical with *T. gambiense*, but that there is a certain amount of evidence to show that it is identical.

E. *Are wild antelope of the species frequenting the lake shore inoculable with the human trypanosome? And if so, does the parasite persist for any length of time in their blood, or is it rapidly fatal?*

The experiments initiated by the 1908 Commission of the Royal Society at Mpumu show conclusively that clean bushbuck, reedbuck, and waterbuck are inoculable with a strain of trypanosome derived from a native patient. Subsequently, at the same laboratory, a duiker and a situtunga were similarly infected.

I have shown[2] that the trypanosome was recoverable from one of the antelope twenty-two months after the original inoculation. Some of the antelope experimented upon ceased to give any evidence of infectivity long before this period had elapsed. Two others were proved to be still carrying the trypanosome fifteen months after inoculation. During the whole period of observation the animals showed excellent health, and on several occasions conceived and gave birth to healthy young at the laboratory.

There is some evidence to show that those animals which have ceased to give evidence of infectivity have acquired a resistance to reinoculation. On the other hand, this is no reason to suppose that the animal which gave a positive result after twenty-two months is not still infective.

The laboratory antelope, therefore, show that the wild lake shore game may act as a reservoir for the human parasite for at least twenty-two months, and during this time experiments have proved that they are relatively well adapted to infect fly with *T. gambiense*.

Given, therefore, a number of fly and antelope in a district, there is nothing to prevent the infection with *T. gambiense* being kept up indefinitely.

The answer to this question furnishes, therefore, indirect confirmation of the conclusions arrived at in the case of the preceding question.

F. *Is the evidence available on the subject of the infectivity of the wild fly to the "wild fly" trypanosome such as would lead to the conclusion that this trypanosome is an antelope parasite, or that it is a descendant of the T. gambiense which caused the recent epidemic?*

The following table shows the available data on the subject of the fly infectivity.

These more or less random figures, taken at long intervals, have but little real statistical value. A number of uncontrollable factors affect their precision. Migration

Period.	Locality.	Number Employed.		Number of Infected Flies.	Percentage of Infected Flies.		Remarks.
		Fed.	Put on.				
May to July, 1903	Entebbe mainland	989–1,360*	—	3	0.30–0.22*		Natives present infected 1 in 3 or 4. No antelope.
September to November, 1903 ...	" "	1,421	—	1	0.07		Natives removed. No antelope.
June to September, 1904	" "	2,299	—	0	0.00		No natives; no buck.
November, 1908, to April, 1909 ...	Mainland, Buka Bay	6,106	10,022	4	0.065	0.039	Antelope available.
May to September, 1909	" "	3,151	5,920	7	0.22	0.11	Antelope available.
November, 1909, to February, 1910 ...	" "	9,878	—	4	0.04	—	Antelope available.
March to June, 1910	" "	8,813	—	3	0.03	—	Antelope available.
August to November, 1910	" "	—	22,784	4	—	0.017	Antelope available.
December, 1910, to March, 1911 ...	—	—	28,294	1	—	0.003	Antelope available.
April to August, 1911	—	—	18,939	3	—	0.015	Antelope available.
October to December, 1911	—	—	9,340	1	—	0.010	Antelope available.
January to June, 1910	Damba Island	6,356		2	0.031	—	Antelope available.
May, 1911	" "	885*	—	1	0.11	—	Antelope available.

* In these early experiments the monkeys were examined only at intervals of seven days. As batches of flies were being fed daily it is therefore impossible to estimate accurately the number responsible for each infection.

of the fly, the relatively small number examined, and the impossibility of recognizing more than one infected fly in any given experiment, all demand due consideration. In spite, however, of the theoretical sources of fallacy, these infectivity experiments do undoubtedly supply an index to the state of affairs on the deserted lake shore. As the figures may be quoted, it is as well to determine what conclusions can be drawn from them as they stand—assuming them to be valid.

The first three experiments of this table deal with wild flies caught at Entebbe by the first Commission of the Royal Society. Hut-tax labourers were encamped on the lake shore close to the place where flies were caught. Other flies were obtained from the shore line or the Botanic Gardens. No antelope would be available to these fly, as the constant presence of natives had long driven them away. Hippos and crocodiles, however, were common. Two tax labourers were removed during the second of these three experiments.

It will be noticed that the infectivity of the flies diminished with the withdrawal of the infected natives. These hut-tax labourers were infected to the extent of 1 in 3 or 4.

Regarding the subsequent experiments, it must be noted in passing that there is a considerable difference between the number of "flies fed" and the number of flies "put on." In Sleeping Sickness Report XIII an experiment was given to show that mere introduction of the proboscis of an infected fly is sufficient to infect a monkey, without any actual blood-sucking. The earlier Commission only counted those flies which had sucked so much blood that it was visible in them to the naked eye, and therefore it is possible that the total numbers of flies given may be too low, and the percentages of infected flies too high. For supposing an infective individual of a given batch of wild flies had merely inserted its proboscis, or had taken only a minute quantity of blood, it would have been rejected in the counting as not having fed. In comparing percentages, it is therefore necessary to bear this point in mind, if both classes of data are not available. In considering the figures for 1908–09 it must be recollected that from November, 1908, to September, 1909, a large number of natives were still present in the fly area, as the island populations were not removed until August and September, 1909. The spot where the flies were caught is almost directly in the line taken by canoes from the heavily infected island of Damba to the mainland landing places. If, therefore, the "wild fly" trypanosome of the recent experiments is, in spite of presumptive evidence to the contrary, a true antelope trypanosome, then these 1908 and 1909 flies would be harbouring *both this antelope organism and T. gambiense*, for both are capable of development in the fly. It would accordingly be reasonable to expect that the flies of this period—an interregnum between the old and new conditions—would show a high percentage of individuals which could infect monkeys. The figures are, however, 0.039 per cent. to 0.11 per cent., which, it will be noticed, are lower than those reached at Entebbe, where only *T. gambiense* was available for the fly.

After the removal of the natives from the islands the percentage drops somewhat, as would be expected, but a considerable number of flies still retain their infectivity to monkeys. It will be seen that the figures from March to June, 1910, do not differ appreciably from those obtained while infected natives were still available to the fly. Subsequently the percentage decreased slightly to the 1911 level of 0.01.

From section J it would appear that if the "wild fly" trypanosome were an antelope parasite like *T. uniforme* or *T. vivax*, there would be a rise in the percentage of infected flies on the removal of the natives, and not a fall. This argument is based on the presumption, supported by facts quoted below (J), that a trypanosome indigenous to antelope will be more readily transmitted by the local tsetse than a newly introduced human organism.

It is remarkable that the percentage of infected flies in Damba Island in May, 1911, is actually higher than it was shortly after the removal of the natives. This might at first sight suggest the presence of a true antelope trypanosome. The conditions of this island are, however, unique. Situtunga are exceedingly numerous, and since the departure of the natives they are frequently seen on the strip of shore where the flies are caught. In former times this particular beach was backed by a large village, so that the antelope would seldom or never reach the water's edge at this point. Unfortunately, no details are available concerning the infectivity of Damba flies to *T. vivax* and *T. uniforme*. From inoculation experiments referred to below (D), it is probable that relatively large numbers carry these trypanosomes. In any case, since the removal of the natives the frequent presence of antelope on the fly shore will ensure a greater proportion of the fly being infected with any suitable trypanosome which the animals may have in their blood. It will be noticed that, in spite of the exceedingly favourable conditions for the spread of the antelope trypanosome among the fly of this Damba beach, the percentage of infected flies is only slightly greater than that reached with *T. uniforme* and *T. vivax* on the mainland. Here far fewer animals reach the fly during their biting hours. In other words, the evidence of this section tells against the deduction that the "wild fly" trypanosome on the Damba Island is an antelope parasite and not *T. gambiense*.

G. *Is there in Uganda any species of trypanosome, other than T. gambiense, with which the "Damba" and "wild fly" trypanosome can be identified?*

The antelope trypanosomes, *T. vivax* and *T. uniforme*, have been recovered from cattle in Uganda. It is reasonable to suppose that if the trypanosomes discussed in this paper were genuine antelope parasites, they would have been recovered from domestic animals by one or other of the Commissions. There is, however, no trypanosome strain known in Uganda the animal reactions of which correspond with those of the lake shore organism, except *T. gambiense*.

The evidence of sections F and G is thus in accordance with that of the previous sections.

H. *Is there any evidence that a mammalian trypanosome could persist in wild flies for years without some mammalian intermediary?*

In this connexion three points demand consideration—that is, (1) longevity of the fly; (2) hereditary transmission of the trypanosome from the parent fly; (3) infection of one fly from another by contaminated feeding.

Longevity of the fly will not alone explain the continued infectivity. So far no one has proved that *G. palpalis* is capable of surviving for one year. Hereditary transmission, though obviously difficult to exclude by experimental proof, has never been known to occur. Experiments conducted on this point by the Commissions of the Royal Society have always proved negative.

Experiments carried out at Mpumu laboratory have always failed completely to support the theory that there is any transmission of trypanosomes among *G. palpalis* by contaminated feeding.

There is therefore no particle of evidence to justify an affirmative answer to question II.

I. *In the prohibited lake shore area what is the proportion of wild antelope which is infected with T. vivax and T. uniforme—that is, genuine antelope trypanosomes non-pathogenic to man, and carried by G. palpalis?*

There is no reason to suspect any one species of antelope of being more or less immune to these trypanosomes.

Considering first the mainland antelope—

In 1909 five bushbuck were shot and the blood examined microscopically. In two cases the blood was subinoculated into goats, animals susceptible to *T. vivax* and *T. uniforme*. One of these antelopes was found to be infected with *T. vivax*, which appeared in the subinoculated goat. Examination of blood slides alone is insufficient to determine the percentage of infected antelope. Three of these five bushbuck were not proved, therefore, to have been negative. At the time of these experiments *T. uniforme* had not been recognized as a species distinct from *T. vivax*, and it is quite possible that had it been present it might have escaped detection. In taking the percentage of infected animals we find, therefore, that at least 20 per cent., and possibly more, carried trypanosomes. The small number of buck examined deprives these figures of much value. In comparing them with others it must be remembered

that the animals were shot near Kibanga, at a place where the fly are fairly common.

From August, 1910, to March, 1911, thirty-two antelope were examined by subinoculation of their blood and by slide examination. *T. uniforme* was detected on three occasions (9.37 per cent.)

From April, 1911, to September, 1911, twenty-three antelope were fully examined, and *T. uniforme* obtained in two animals (8.69 per cent.).

Antelope shot on the islands:

In 1911–12 twenty-one situtunga were examined, and three were found infected (14.2 per cent.). Thirteen of these animals were tested by blood examinations only, and this fact must be borne in mind in considering the percentage. Of the eight animals tested by both blood examination and subinoculation into goats, three were found infected with either *T. vivax* or *T. uniforme* or both. This gives a percentage of 37.5.

Thus at least 10 per cent. of the mainland antelope and 14.2 per cent. of the island situtunga examined were infected with *T. vivax* or *T. uniforme*, or both these trypanosomes.

In reviewing these data it must be remembered that the antelope frequenting the lake shore are limited in their range. Individuals became associated with certain localities. Time and again some easily recognizable animal will be disturbed in its special haunt—a clearing in the forest, a sandy bay fringed with ambatch clumps, or some bare peninsula with forest at its base. For this reason it seems highly probable that certain animals in the prohibited area and on the mainland are much more frequently exposed to fly-bite than others. Unfortunately the neighbourhood of the fly areas on the mainland is very unfavourable to shooting. A number of the antelope shot were obtained in places where fly are scanty. On the islands, on the other hand, where only situtunga occur, the probability of any given animal being subject to fly-bite is greatly increased. This would account for the higher percentage of infected buck on the islands than on the mainland.

J. What is the percentage of wild lake shore flies infected with T. vivax or T. uniforme?

From August, 1909, to October, 1909, 6,750 mainland flies were fed upon healthy goats, and *T. vivax* was obtained on four occasions—that is, 0.05 per cent.

In March, 1911, 1,320 mainland flies produced *T. uniforme* once and *T. vivax* once. This gives a percentage of 0.15 of wild flies infected with antelope trypanosomes. The actual percentages for *T. vivax* and *T. uniforme* respectively were 0.08 and 0.09. From May to September, 1911, 3,880 flies produced four infections, *T. vivax* appearing once and *T. uniforme* three times. This gives a total percentage of 0.103 infected with antelope trypanosomes, and a specific percentage of 0.02 and 0.07 for the respective organisms.

It must be borne in mind that in dealing with a goat which has been infected with *T. uniforme* by wild flies it is sometimes very difficult to decide whether *T. vivax* is or is not also present in its blood. This latter trypanosome may, of course, be found in stained blood slides, or it may be obvious in the fresh blood if present in sufficient numbers. *T. uniforme* is also, however, often exceedingly active in fresh blood. In cases—and they are common—where trypanosomes are scarce in the goats it is often extremely difficult to exclude a double infection of both *T. vivax* and *T. uniforme*. For this reason the percentages given above for *T. vivax* probably err on the small side. From the above figures it will be observed that there is apparently no appreciable reduction in the percentage of wild mainland flies infected with these undoubted antelope trypanosomes. On the contrary, there is an increase over the figures obtained in the earlier experiments. This might be expected from the altered conditions on the lake shore. Since the removal of the canoeman population game of all sorts can wander undisturbed throughout the fly zone. Formerly the numerous villages and the constant passage of canoes would have compelled the animals to drink during the dark hours. For this reason the antelope will now be more frequently exposed to fly-bite. It is remarkable how frequently a fly-infested strip of coast-line is near the site of a deserted village. In such situations it is highly probable that the fly had small occasion to search for wild quadrupeds as long as the villages remained occupied.

Now, however, these old shambas offer many attractions to buck of various kinds, and the fly are still apparently as numerous as ever. If, therefore, the "wild fly" trypanosome under discussion is an antelope trypanosome pure and simple, it is difficult to see why it should not follow the example of *T. vivax* or *T. uniforme*. On the other hand, if, as I maintain, it is descended from the *T. gambiense* of the recent epidemic, then the difficulty vanishes. The human trypanosome would not presumably be so well adapted to circulation among buck as a parasite proper to antelope. Certain of the laboratory antelopes have proved relatively resistant to *T. gambiense*. Bushbuck 2328 and waterbuck 2378 have given no evidence of infection since the fourth month after their original inoculation with a human strain.[1] The same idiosyncrasies doubtless obtain in Nature. Then, again, there is evidence to show that *T. gambiense* is less suited to development in *G. palpalis* than are *T. vivax* and *T. uniforme*. In experimenting on the transmission of *T. uniforme* with laboratory-hatched *G. palpalis* a relatively enormous proportion of the flies used developed flagellates.[3] In four experiments in which 293 flies were used 56 became infected, or 19.1 per cent. Similar experiments by the 1908–10 Commission with *T. vivax* gave a percentage of 20.1 of the flies used becoming infected with the trypanosome. The Commission gave 5 per cent. as the approximate corresponding figure with *T. gambiense*.

Under the circumstance antelope infected with *T. gambiense* would only be found where the conditions are especially favourable to the exposure of a large number of animals to fly-bite. Such a locality is Damba Island, and it is remarkable that two out of four young situtunga shot on this island should be found infected with a trypanosome answering to all available tests for *T. gambiense*.

It will be seen that the trend of the evidence of these two last sections in conjunction with sections A and B is strongly in favour of the assumption that the "wild fly" trypanosome is indeed *T. gambiense*, not a purely antelope trypanosome.

Finally, it is contended that the available evidence justifies the conclusion that the trypanosome recovered from the Damba situtunga and from the wild *G. palpalis* on the islands and the mainland coasts is a descendant of the *T. gambiense* of the epidemic.

The figures quoted are regrettably small, and doubtless arguments can be advanced on the other side which are unanswerable by direct experiment. The presumption, in the earlier days of the Uganda Commission, that these trypanosomes were identical with the organism of sleeping sickness, seemed so justifiable that no systematic attempt was made definitely to establish the point beyond reach of criticism. It is probable that the behaviour of these trypanosomes has been altered in the meantime by their sojourn in ruminant blood. Nevertheless the crucial point now is—are they still pathogenic to man? And to this query only a series of experimental inoculations into man can supply the answer.

REFERENCES.

[1] *Proc. Roy. Soc.*, B. 85. [2] Ibid. [3] Fraser and Duke, *Proc. Roy. Soc.*

A COMMITTEE for the promotion of cancer research and for the study of practical measures of combating the disease has been appointed by the Cultusministerium of the kingdom of Saxony. It held its first meeting on January 12th, when Professor Renk was elected president; Professor Marchand, of Leipzig, vice-president; and Professor Schmorl, of Dresden, secretary. It was decided to establish an institute of cancer research in connexion with the University of Leipzig.

THE British Fire Prevention Committee has added another to the set of Red Books it issues for public information. This is a pamphlet on *Celluloid Dangers and Some Suggestions* (London: The British Fire Prevention Committee, 8, Waterloo Place, S.W.: price 2s. 6d.), the objects and contents of which are indicated in the title. The pamphlet, which is written by Mr. D. W. Wood, the Honorary Secretary of the International Fire Library, embodies the results of the committee's tests and researches. It is understood that the Home Secretary is considering the advisability of introducing legislation to give local authorities control, especially in relation to film-renters' stores in crowded neighbourhoods.

SLEEPING SICKNESS, TSETSE, AND BIG GAME.

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I have read with much interest the articles and correspondence in the issues of the British Medical Journal for June 21st and July 19th, 1913, regarding tsetse, big game, and sleeping sickness in Nyasaland and Rhodesia.

With the exception of three furloughs spent in Britain I have been at work in the territories referred to since 1894. For many years after my arrival on Lake Nyasa my practice extended over a very wide area, and it so happened that many of my journeys were made through districts which are now infested with tsetse fly. It has been my custom to use riding animals whenever it was possible to do so. Frequently I had opportunities of shooting game as we travelled. In the early days I frequently had dogs with me. The presence of riding animals and good dogs made me very careful about the possibility of encountering tsetse fly when on tour, and a close observation was made when game was shot as to whether or not tsetse happened to be about. Time and again I travelled through districts where in pre-rinderpest days Arab caravans used to travel by night in order to avoid their animals being bitten by tsetse. Yet in those early years—1894, 1895, 1896—both Nyasaland and Rhodesia were remarkably free from that fly. The explanation given me by many headmen and others was that since rinderpest had killed off most of the big game tsetse fly had disappeared. I can speak from personal experience and observation of many hundreds of miles of territory where in those early days not a single tsetse fly was to be encountered, and where to-day it swarms, and not a single domestic animal can live. I have watched the spread of tsetse fly for many years now, and long ago warned the Government of the risks they were incurring in allowing it to spread. I appealed to the authorities in Nyasaland and Rhodesia to arrest the spread of tsetse, both on the grounds that *Glossina morsitans* was killing off domestic animals and that it might yet prove to be a carrier of a trypanosome pathogenic to man.

Those of us who are working on the spot attribute the enormous increase of tsetse fly during recent years entirely to the great increase of big game. The increase of game we attribute entirely to the protective measures employed by the governments. About these we need not write in detail meantime. The laws were passed with a view to protecting the wild fauna of this part of Africa, and they have succeeded, I should think, beyond the wildest dreams of those who were responsible for bringing them into being. The wild animals have been preserved, but domestic animals have been sacrificed, and now we are paying a heavy penalty in human lives for having interfered with the balance of Nature.

In a district in which the natives owned 200 head of cattle an incursion of tsetse took place following upon the herds of buffalo that came into it. Within two years the natives owned only 80 head. Under normal circumstances there should have been an increase of 50 per cent. per annum—300 head in all, instead of 80.

In another district known to me where the people were rich in sheep, goats, and cattle, a recent investigation revealed the presence of only four dogs, and these recently imported. Besides having lost their stock, the people are now being killed off by *Glossina morsitans*. Yet with all this going on the people are not allowed to act in self defence. Game laws which would turn any Government out of power if imposed at home are forced upon a primitive people here who have no means of redress.

To those of us who take an interest in politics, it is not a little amusing to find the Chancellor of the Exchequer posing in the matter of game as the friend of the down-trodden peasant at home, whereas a member of the same Government, in the person of the Colonial Secretary, carefully protects the huge animals that eat up the native's crops, kill off his cattle, and carry in their blood the disease germs of certain death to human beings, and that notwithstanding a promise we believe he made to a deputation representing all the missionary societies at work here—that on evidence being adduced that game was responsible he would not fail to act. His replies to Dr. Chapple in the House of Commons have already been referred to in the Journal. Not only do elephants destroy the mealie crops, they this year (1913) fought the owners for possession of the gardens. In my hospital at Kasungu I had recently four patients at one time who had been mauled by wild animals. Three of them had been hurt by elephants in the gardens.

There is one aspect of this question to which I have sought to draw attention. The infant mortality in this country is appalling; so, too, is the mortality among adults from diseases of the alimentary tract. The native has no sick-room cookery worthy of the name. We have sought to teach him the value of milk as a diet for infants and during disease. But along comes tsetse, and this potential food supply in sickness is cut off. Thus indirectly by destroying the food supply and directly by carrying the deadly trypanosome does tsetse kill off the population. When we speak of the population being killed off we mean what we say. The disease, both in Rhodesia and Nyasaland, is much more serious than certain reports make it out to be. The first cases I had in my hospital here were from a district where sleeping sickness was not known to exist. Reports reached me of a very fatal disease having broken out among the natives, who spoke of it as a virulent form of measles. A lad in our employment entered the district and got badly bitten by tsetse. He became very ill, and was carried back to my hospital. I thought he had tick fever, and proceeded to examine his blood for spirochaetes; I found trypanosomes. So far as my knowledge goes, that was the first case for which *Glossina morsitans* was held responsible by a medical man. The Government sent a medical officer into the district and other cases were found. The virulent form of "measles" had carried off many victims before the real nature of the disease was diagnosed. It has carried off many more since.

How do those of us who are working on the spot believe that the disease should be eradicated? For we do believe that the disease should never have existed here, and that it can be, and ought to be, eradicated. We believe that for the time being a severe onslaught must be made upon the wild animals until these are driven back from human settlements and from the public highways. Until the present danger is past, all wild animals capable of acting as a reservoir of trypanosomes should be treated as vermin and destroyed or driven out just as rats are destroyed during an outbreak of plague. I, for one, would welcome an outbreak of rinderpest such as swept this country in 1893 and 1894. It would leave us with a clean country, and, having learnt our lesson in a hard school, we should be slow to impose laws protecting game. We cannot cure the disease when once it has taken hold of human beings. Only those who have seen the victims can realize the horror and the hopelessness of it. We can starve out tsetse by depriving it of its supply of warm blood, and at the same time we can remove the natural reservoir of the disease by driving out or destroying the game. It has been asserted that tsetse can and does exist where it cannot possibly depend upon game for its sustenance, game being absent. This does not hold good of *Glossina morsitans* in Nyasaland and Rhodesia. Instances cited by the Colonial Secretary do not stand the test of investigation.

Again, we are told that if game is driven out tsetse may attack man and his domestic animals more vigorously than at present. In that case, when rinderpest killed off the game tsetse ought to have betaken itself to the nearest villages to feed upon the people. But it did not. It disappeared or remained only in small patches among the foothills, where small herds of game escaped the rinderpest. Similarly, in South Africa, when the Boers shot off the wild animals tsetse ought to have remained behind to feed upon man and his domestic stock. But it did not. There is ample proof that wherever game is killed off by disease, or hunted out, *Glossina morsitans* disappears. There is no proof to the contrary. I hold that the time for experimenting has passed, and that we ought at once to adopt such measures as may be necessary to save the people here from further risk and loss. Traders, farmers, planters, transport riders, and missionaries ask for permission to act in self-defence, permission to save their interests from ruin and themselves and their people from danger.

If we make a mistake we suffer for it, and can blame no one but ourselves. But why should we be called upon to suffer for the fads and mistakes of people at home? We hold that further temporizing, in the light of our present knowledge, is nothing short of criminal folly.

With reference to Dr. Neave's suggestion that the game within a certain area should be impounded and destroyed, I may say that this suggestion was made fully two years ago. We asked, when the first epidemic broke out in Nyasaland, to have the game destroyed. This was refused, on the grounds, among other reasons, that the outbreak was distinctly localized, and that any interference with the game might cause the animals to spread out and carry disease into clean districts. On the strength of this statement I suggested to the Acting Governor that he should impound all the animals within the area mentioned, and once and for all stamp out the disease by exterminating the animals. To this proposal I got a reply that while His Excellency appreciated my good intentions he did not regard the proposal as practicable.

In conclusion, I should like to express my appreciation of and gratitude for the work of the Liverpool Commission, which has settled once and for all many hitherto hotly disputed points, and also my gratitude to the BRITISH MEDICAL JOURNAL for the publicity it is giving to the work of Dr. Warrington Yorke.

A STUDY OF EPIDEMIC DYSENTERY IN THE FIJI ISLANDS,

WITH SPECIAL REFERENCE TO ITS EPIDEMIOLOGY AND TREATMENT.

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THE observations recorded in this paper were made in the Fiji Islands during the year 1910. This group of islands, situated between lat. 17–19 degrees S. and long. 177–179 degrees E., was ceded to Great Britain in 1874, and now constitutes a Crown Colony.

According to Dr. B. G. Corney, I.S.O., a great authority on all matters appertaining to the Pacific, there is no evidence that dysentery was originally introduced by the early European settlers,* but it is known that since the early days epidemics of dysentery have been of annual occurrence, and have levied a heavy toll of life, not only among the European settlers and the imported indentured Indian and Solomon Island labourers, but also among the Fijian natives themselves, and have constituted the chief scourge of the colony, so healthy in other respects.

In former days these dysentery epidemics were of great virulence; the newly imported Solomon Island labourers were specially attacked; thus Daniels[1] reported one such epidemic in which the death-rate was 48 per cent.

At the present day, probably owing to better medical service and hygienic conditions, the case mortality from dysentery of all kinds is not nearly so high as formerly, and amongst the Fijians, according to the official records, is about 16 per cent.

During the year 1910 some 170 well-marked dysentery cases were studied in detail at the Colonial Hospital, Suva, the capital of the group; of these only 11 were found to be of amoebic origin—that is to say, vegetative amoebae bearing the characteristics of the *Amoeba histolytica* of Schaudinn were found in the stools. In the dysenteric discharges of the other 159 cases no amoebae were ever found.

The epidemic dysentery affected members of the various nationalities—Indian, Fijian, Solomon Islanders, Europeans, and half-castes—to an equal degree as far as could be ascertained.

In Fiji, as in more temperate zones, epidemic dysentery is an institutional disease; some 53 per cent. of the patients under observation were prisoners undergoing sentences in either of the prisons of Suva.

* The Fiji Islands were discovered in 1643 by Tasman, who, however, did not land there. The first Europeans who had intercourse with the natives were the mutineers of the *Bounty*, who had crossed over from Tahiti in 1791.

The Bacilli.

By plating out the mucus diluted in sterile broth on Conradi-Drigalski medium (litmus-lactose-nutrose-crystal-violet agar), dysentery bacilli were isolated from the stools in 35 cases and twice from the intestinal mucosa *post mortem*. The bacilli were recognized by their morphology, by their reactions with 1 per cent. solution of various sugars in litmus peptone water, by their agglutination reactions with high dilutions (1 in 50) of a polyvalent anti-dysenteric serum (Lister Institute), and further by their toxicity to guinea-pigs on intraperitoneal injection.

The dysentery bacilli isolated mainly conformed to the well-known types, the one most frequently encountered being the Shiga-Kruse bacillus, but a bacillus identical with the Hiss and Russel Y bacillus was also almost as common. In addition to these, other bacilli, morphologically and culturally similar, but giving atypical reactions with solutions of certain sugars such as saccharose and maltose, while agglutinating with the same polyvalent immune serum, were also encountered, and in these reactions agreeing with Strong's[2] original Philippine strain.

In the varieties of bacilli encountered the results, in the main, are in agreement with those of Shiga,[3] who now recognizes five main types of dysentery bacilli as differentiated by their sugar reactions.

On three occasions bacilli giving identical reactions to those cited above, but in addition exhibiting a feeble lactose fermenting power, were encountered. Ohno,[4] during his extensive study of 74 strains of the dysentery bacillus, also appears to have encountered this variety, to which he assigns 3 out of his 15 types.

Table of Reactions of Main Types of Dysentery Bacilli in Litmus Peptone Water containing 1 per Cent. of Sugars after Twenty-four Hours' Incubation at 37° C.

	Shiga-Kruse Type.	Hiss and Russell's Type Y.	Ohno Type M.
Mannite ...	−	+	+
Lactose ...	−	−	+
Saccharose .	−	−	−
Maltose .	−	≈	+
Dulcite	−	−	−
Dextrose ...	+	+	+
Milk	Acid at first, returned to alkaline second day	Acid at first, returned to alkaline second day	Acid at first, returned to alkaline fourth day

The production of indol by these bacilli was very variable. In the true Shiga-Kruse type none was produced as a rule, even after lengthy incubation.

After long subculture over a period of nine months, and after the sugar reactions had been frequently tested, certain minor variations of certain strains were noted, especially with regard to the fermentation of maltose and saccharose: nevertheless, the reactions of the non-acid or Shiga-Kruse and the acid or Flexner type of bacillus to dextrose and mannite respectively remained constant throughout.

Clinical Observations.

Cases from which the dysentery bacilli were isolated varied greatly in their clinical manifestations—from a mild catarrhal condition, in which the stools were solid and coated with a small amount of blood and mucus, to a fulminating one, in which the call to stool was incessant and in which the patient, overwhelmed with pain, physical exhaustion, and toxic absorption, would succumb in from two to three days from the commencement of the attack. The temperature also varied within wide limits; cases were encountered in which it was subnormal throughout, others in which it reached 103° F. and over. No special dysentery bacillus was found to be associated with any clinical type of case.

No hepatic symptoms in life or suppurative lesions of this organ *post mortem* were ever encountered in this infection. Only one case of bacillary dysentery of a relapsing nature was encountered amongst the whole series. The serum of 74 per cent. of the bacillary cases agglutinated—in a dilution as high as 1 in 200 in some

instances—one or other of the dysentery organisms. A positive agglutination did not take place until six days after the commencement of symptoms.

The eleven amoebic cases, on the other hand, gave a previous history of a much more subacute and relapsing character. Symptoms of acute hepatitis were present in four instances, and in another multiple miliary abscesses of amoebic origin were found *post mortem*.

In making a diagnosis of amoebic dysentery from the microscopic examination of the stools alone care must be exercised so as not to mistake certain round refractile cells, probably representing disintegrated intestinal epithelium and leucocytes, and in which red blood cells are often enclosed; these in some instances certainly bear a close resemblance in size and form to the pathogenic amoeba, and are at present in considerable numbers in the stools of bacillary cases as well as in those of the more chronic amoebic disease.

Epidemiology.

In studying the epidemics of dysentery which have occurred in Suva in recent years one is struck by the fact that the maximum incidence of the disease occurs during the months of December, January, February, March, and April, the period of the highest mean temperature and of the largest rainfall.

In searching for an explanation of this fact I was led to inquire into the possible sources of the bacillary infection.

From what we know of the bacteriology of acute dysentery it is right to assume that as the bacillus escapes from the body in the stools these, as in the case of typhoid, act as the primary source of infection, and, further, that the alimentary route is probably the one by which a fresh infection takes place. The water supply of the town of Suva is beyond reproach, therefore any suspicion of its contamination by infected faecal matter can be dismissed.

There is, in addition, no evidence that the direct infection of foodstuffs plays any part in the spread of the disease, since acute dysentery occurs amongst all races in Fiji, though their respective dietaries are entirely dissimilar. The Fijians for the most part live on cooked farinaceous foods, such as the yam and the dalo (*Calocasia esculenta*), whilst the Indian subsists, as elsewhere, on boiled rice and pulse; the Europeans on a mixed diet, in which fresh meat plays an important part.

In considering the indirect methods by which infection could be conveyed to foodstuffs suspicion fell on the house-fly. Any visitor to the islands will bear me out when I say that the house-flies (*Musca domestica*) constitute a plague of considerable importance. They swarm in the bush and on the roadside, covering the traveller from head to foot. In the houses every article of food must be protected from their attentions, and it is a common occurrence during meals to place a fly-paper on the table in order to draw away the flies from the meal. I need hardly add that in the rather insanitary kitchens they are specially abundant.

The abundance of flies in the cultivated districts can probably be explained by the fact that numerous favourable breeding places are afforded by heaps of decomposing sugar cane, and in the uncultivated districts by the faecal accumulations which generally mark the proximity of native villages.

There can be little doubt that in Suva, at any rate, there is a definite seasonal variation in the number of house-flies, and that this season corresponds with the conditions most favourable for their propagation, that is the season of highest rainfall and atmospheric temperature, and as I have previously pointed out, it is just during these months that the maximum number of cases of acute dysentery occur.

Investigations on the bacteriological flora of flies captured in a dysentery ward of the Colonial Hospital, Suva, were undertaken. A number of attempts were made but on two occasions only did I succeed in isolating the typical Shiga-Kruse bacillus from the lower intestinal tract of the fly.[5]

The technique adopted was based on the work of Graham-Smith;[5] the suspected flies were caught in batches of four in the vicinity of a patient from whose stools the Shiga-Kruse bacillus had already been isolated. The wings and legs of the fly were first removed, the body sterilized as much as possible by passing it rapidly through a flame, was then placed on a sterilized slide together with a drop of sterile saline solution. The abdominal segments were next separated by means of sterile needles, thus exposing the stomach and intestinal tract; a portion of the latter was then removed on a platinum rod, emulsified in sterile broth, and plated on Conradi-Drigalski medium. The Shiga-Kruse bacillus was recognized by the tests already given.

In view of the incomplete data existing at present connecting "wild flies" with the spread of disease, this result may be considered of some value when taken in conjunction with the seasonal distribution of the disease in Fiji and the concomitant prevalence of the house-fly.

A number of Gram-negative non-motile bacilli were also isolated from the intestines of these flies. These bacilli do not ferment the sugars with gas production, and, as has been pointed out by Graham-Smith, are probably normal inhabitants of the intestinal tract of the fly. They, however, are important in that they are liable to be mistaken for pathogenic organisms, especially the dysentery bacillus.

In his interesting book, *Flies and Disease*,[6] Graham-Smith has detailed this subject at great length. These bacilli which do not liquefy gelatin are divided into lactose and non-lactose fermenting groups. Of these, the latter group, from my point of view, are the most important. Graham-Smith found non-lactose fermenting bacilli in 32 per cent. of flies from diarrhoea-infected houses.

The Three Main Varieties of Non-lactose Fermenting Bacilli found in the Intestines of Flies caught in Fiji.

	Mannite.	Lactose.	Saccharose.	Maltose.	Dulcite.	Dextrose.	Milk.
1	A.		A.	A.		A.	Acid; alkaline fourth to fifth day.
2			A.	A.	—	A.	Alkaline.
3	A.	—	—	A.	—	A.	Acid; alkaline third to fifth day.

These probably correspond to Group C, Subgroup *b*, Group B, Subgroup *f*, and Group C, Subgroup *a*, respectively, in Graham-Smith's classification.

These bacilli were further differentiated from the true dysentery organism by their failure to agglutinate with a polyvalent antidysenteric serum.

Of the bacilli fermenting lactose without gas production and forming permanent acidity and occasionally clot in milk a great number were found. To these bacilli I need not refer at any length, as they are of little scientific interest in this connexion. All were tested with a polyvalent antidysenteric serum, but with a negative result.

Later experiments on the transmission of the dysentery bacillus through the intestinal tract of the house-fly were undertaken at the London School of Tropical Medicine. They were conducted in a glass house in which the temperature approached that of the tropics, reaching as high as 91 F. in the daytime. Before experiments were commenced the house was thoroughly washed out with lysol, and all stray flies and other insects were rigidly excluded. The flies were bred and hatched in captivity under as sterile conditions as possible. The pupae were washed in dilute mercury perchloride solution (1 in 1,000) and placed in a sterile cage till the flies emerged. They were then transferred in batches of twenty in sterile test tubes to sterile bottles fitted with a gauge sleeve in the manner recommended by Graham-Smith, and fed with an emulsion of sterile bread and water introduced into the bottles by means of a sterile spoon. The flies were infected by means of bread soaked in a broth culture of the dysentery organism. Over forty experiments were conducted in this manner, but for some reason or other not all were successful.

Two strains of bacilli belonging to the non-acid and the acid or Flexner group were used for infecting the flies—that is, the true Shiga-Kruse bacillus and the Y bacillus—

[5] A summary of these observations has already been published in Supplement No. 2 of the *Journal of the London School of Tropical Medicine*. Witherby and Co., London. 1912.

bacilli which after frequent testing and subculture over a period of nine months had given constant fermentation reactions with the sugars. The infected material, after being left in contact with the flies for twenty-four hours, was removed and sterile food was given as before.

At varying periods batches of flies were dissected, and the contents of the lower intestine were plated out in the manner described above, with the result that neither of these organisms could be recovered from the flies' intestines after the fifth day. The bacilli were recognized by the usual tests.

I was unable to obtain any evidence of the multiplication of these organisms in the fly.

Somewhat similar results have been obtained by Graham-Smith in his experiments with typhoid bacillus and *B. enteritidis*.

Naturally in these experiments the possibility of the flies being infected with the dysentery bacillus in the larval state cannot be excluded; but against this probability are the experiments of Bacot[7] and Graham-Smith, who found that the non-sporing saprophytic organisms only rarely survived in the intestines throughout the larval and pupal stage, and that cultivated strains of *B. typhosus* and *B. enteritidis* fed to larvae do not survive. Lately Tebbutt,[8] in a series of experiments in which larvae were fed with cultures of *B. dysenteriae*, found that the organism could only be recovered from the pupae and imagines in a small number of cases, but concluded that the possibility of infection of flies by these organisms in their breeding grounds may be considered a very remote one.

The dysentery bacillus thus recovered in the majority of instances gave, when tested on solutions of the sugars, the same reaction as the original bacillus with which the flies were infected; there were, however, several exceptions. A maltose fermenting strain was obtained from a fly originally fed with the Shiga-Kruse bacillus. On further subculture, over a period of fifteen days, this property was lost.

From flies infected with the Y bacillus a bacillus was recovered with such feeble power of fermenting mannite that acid was only produced in this sugar after four days' incubation. This property it retained for two months after isolation, but subsequently lost. Other bacilli capable of fermenting saccharose in addition to mannite and dextrose were also obtained; these, however, are not of such great interest.

A Flexner bacillus exhibiting but a poor reaction to mannite has been found by Shiga in the stools of acute dysentery; according to the published descriptions, this bacillus gives a similar reaction to that I have just recorded. Shiga considers that this bacillus occupies a place halfway between the acid and non-acid groups.

That a bacillus can acquire these characteristics by a short sojourn in the intestinal tract of the fly certainly suggests that under certain conditions dysentery bacilli of one group can acquire the characteristics of the other. It may be that this is an instance of an adaptation of the bacillus to its surroundings comparable to the mutation of the *B. typhosus* when grown for a long period on lactose-containing media, according to the researches of Penfold[9] and Twort.[10] My results are certainly suggestive of some such process, but it must be noted that the acquired character of this bacillus was not retained for many generations; it is therefore necessary that these experiments should be repeated on a more extensive scale.

Treatment of Acute Dysentery.

In a disease characterized by clinical forms of such varying severity, especially in native patients belonging to races differing widely in physique and disease-resisting powers, it is difficult to compare the results of various forms of treatment. In every series, however selected, there will necessarily be a number of mild cases in which the constitutional disturbances are so slight as to cause the minimum amount of inconvenience, and which, if untreated, would recover in a few days. The only reliable method would seem to be to compare the results of treatment by different methods of a parallel series of consecutive cases all approximately of equal severity.

The first 53 consecutive cases, of which 41 per cent. had marked constitutional symptoms, were treated by the routine treatment adopted in the Colonial Hospital, Suva. This treatment consisted of the administration of sodium sulphate in drachm doses given every hour for the first twenty-four hours, and subsequently every four hours. The case mortality in this series was 13.2 per cent.

The next series consisted of 106 cases, of which 42 per cent. had marked constitutional symptoms. Some 34 of these were treated by salines combined with cyllin in gelatin capsules (palatinoids) in doses of twenty to thirty in the twenty-four hours (m. 60 to 90 pure cyllin); the remaining 72 cases received in addition to this intravenous injections of a polyvalent antidysenteric serum (kindly supplied by the Lister Institute). A dose of 20 c.cm. was given to adults, 10 c.cm. or less to children.

In apparently hopeless cases injection of 50 to 70 c.cm. of this serum in the first twenty-four hours after admission was followed by remarkable improvement. After such injections no deaths occurred in a series of five cases, in whom the disease was of the severest type, as evidenced by the passage of gangrenous stools and the toxic condition of the patient.

In this series of 106 cases there were only two deaths—a mortality rate of 1.8 per cent. Neither of these deaths could be ascribed to the dysenteric lesions—one, a Fijian child, succumbed to an intercurrent attack of bronchopneumonia; the other, an Indian woman heavily infected with ankylostomes, died in uraemic convulsions. Attention has been drawn to the occurrence of death from nephritis after massive doses of a polyvalent antidysenteric serum by Savage in his El Tor series.

In this instance not only was the average stay in hospital of cases of moderate severity considerably shortened, but it was also found that the stools resumed their normal faecal consistency in a much shorter average space of time—that is, after five days, as compared with eight on the sodium sulphate treatment alone. These favourable results have been confirmed by Willmore[11] and Savage working with a much more extended series of cases. The case mortality rate of dysentery in Egypt seems to have been abnormally high (70 per cent.), but under antiserum treatment in 1912 to 1913 it was reduced to 12 per cent.

The oral administration of salines and intestinal antiseptics, together with the intravenous injections of antiserum, appears to me to rest on a rational basis when the following facts are considered.

The lesions of acute dysentery are confined to the large intestine, and from it the dysenteric toxins are absorbed; it is probably the absorption of these toxins which is responsible for the collapse so often encountered in this affection, especially in children. To counteract the deleterious effects of this toxin, antiserum is injected. The administration of sodium sulphate is a necessary measure to cleanse the lower bowel of faecal matter and thereby to accelerate the repair of the ulcerated mucous membrane. The administration of cyllin, on the other hand, in such large doses must certainly tend to inhibit the multiplication of the dysentery bacilli and other organisms in the intestinal contents.

It must be borne in mind that a very acute dysentery of primary amoebic origin, associated with the passage of gangrenous stools, in which amoebae, though present in the intestinal lesions *post mortem*, cannot be found in the stools in any numbers during life, is also sometimes met with. In Fiji I encountered one such case. Therefore, in any given case of an apparently desperate nature and in which there is no time to make a diagnosis by cultural methods, it is advisable to combine the specific treatment of both the amoebic and bacillary forms. If the case be not of primary amoebic origin, the hypodermic injections of emetine, if inefficacious, is completely harmless.

The combined emetine and antiserum treatment in any case of doubtful origin is therefore the most rational to adopt in the circumstances.

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INTESTINAL SCHISTOSOMIASIS IN THE SUDAN.

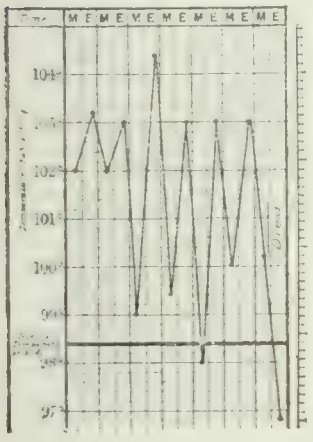
WITH NOTES ON THE TREATMENT OF TWO CASES BY MEANS OF AUTOGENOUS VACCINES OF COLI-LIKE ORGANISMS.

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SCHISTOSOMIASIS exists as a common parasitic infection among the inhabitants of Egypt, and it is mainly due to the excellent researches that have been carried out by different observers in that country that our knowledge of the disease has been obtained. There are, however, particular aspects of it as met with in the Sudan that merit a certain amount of attention, inasmuch as the disease is responsible for a clinical picture that often presents some difficulties to the diagnostician.

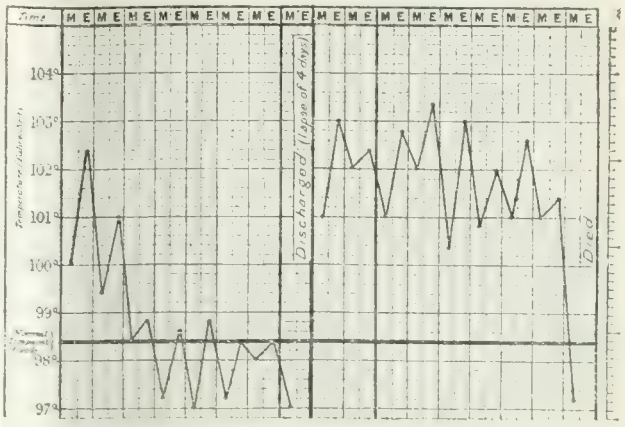
The cases described in this paper represent the intestinal type of schistosomiasis. It has been considered worth while recording them, as they are undoubtedly examples of some of the so-called pyrexias of uncertain origin met with in the Sudan. The patients affected have usually been well-nourished adults admitted to hospital with fever, headache, furred tongue, and frequently enlarged spleen. As will be seen from the clinical histories of a few of the cases, neither diarrhoea nor tenesmus form constant symptoms; indeed they are frequently absent. On admission to hospital the usual routine blood examinations are carried out so as to eliminate the possibilities of either a malarial or other parasitic condition. The blood, as a rule, shows a varying degree of leucocytosis in which the polymorphonuclear leucocytes and large lymphocytes participate, and this may be accompanied by cytological changes in the erythrocytes suggesting an existing anaemia. The absence of an eosinophilia further masks the diagnosis, particularly when intestinal symptoms are in abeyance. Blood serum tests, apart from giving in some cases a slight group reaction, afford negative evidence as regards a systemic infection with organisms of the *B. typhosus* group. Blood cultures give further negative proofs, while spleen and liver punctures eliminate a leishmanial or chronic malarial condition. The examination of urine does not always assist the diagnosis, and as a *dernier ressort* the faeces are investigated; even then one may be at a loss in finding the etiological factor, for in the light of recent experience it is not always a simple matter to locate the lateral-spined ova of *Schistosomum mansonii* in the excreta. The clinical histories of some of these cases might conveniently be considered here.



Case I.

CASE I.

An Egyptian soldier, admitted to hospital in a weak condition with fever and an enlarged liver and spleen. Diarrhoea was not present. Six months previously, while in an out-station, the patient had suffered from an attack of diarrhoea, with blood and mucus in his stools, but since then had been free from similar symptoms. The peripheral blood was examined, and, apart from a leucocytosis, nothing abnormal was noted. The spleen was enlarged to a point about 3 in. below the ribs, and on palpation was of a doughy consistence. The liver increased in size, and in view of the leucocytosis present an exploratory operation was carried out, but no sign of an abscess could be found. Quinine injections failed to influence the temperature. No examination of the faeces was carried out owing to the absence



Case II.

of intestinal symptoms. The patient became weaker, and died on the seventh day after admission.

Post-mortem examination showed that there was extensive ulceration of the large intestine. Smear preparations from the base of the ulcers revealed the lateral-spined ova of *Schistosomum mansonii*. Adult worms were present in the iliac and portal veins. The liver was fatty and cirrhotic and the spleen congested and enlarged.

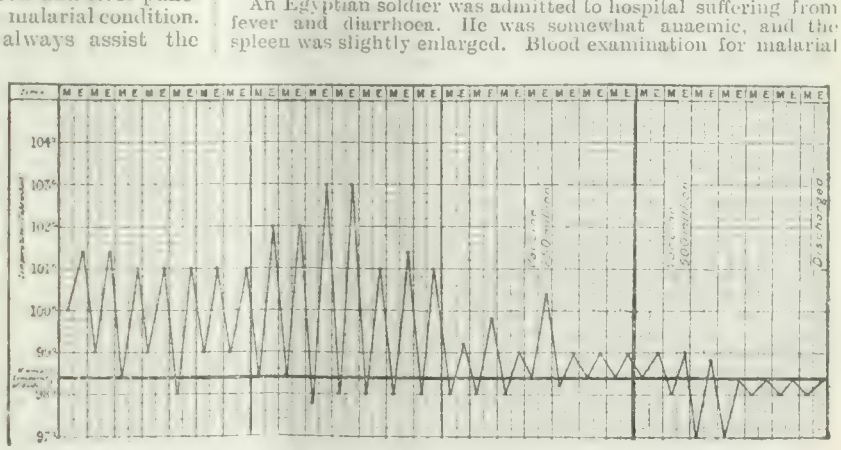
CASE II.

A powerful-looking Egyptian soldier was admitted to hospital suffering from pyrexia. His blood was examined for malarial parasites, but with negative results. The temperature fell to normal on the third day after admission, and he was discharged from hospital at the end of a week. Five days later he was readmitted with high fever, and looked very ill. He complained of headache and rigors. The tongue was thickly furred and the spleen slightly enlarged. The abdomen was distended but not rigid. No diarrhoeic symptoms were present. Blood examination proved negative for malarial or other parasites. The patient became steadily worse, his condition closely simulating a case of enteric fever; the faeces were rather fluid in character and of a pea-soup colour. Two days later he was passing almost pure blood per rectum. A rapid enlargement of the liver was observed, but no jaundice was noted. Examination of the faeces was carried out. Neither the ova of intestinal parasites nor amoebae were found. A daily increased enlargement of the spleen was then observed, and the organ eventually reached a point level with the umbilicus. The patient appeared to be in a state of acute toxaemia, and died on the seventh day after admission to hospital.

Post mortem examination showed very extensive ulceration throughout the large intestine as high up as the ileo-caecal valve. In this area there was a small intussusception, with ulcers present in that portion of the gut forming the intussusceptum. Smear preparations taken from the base of the ulcers showed the existence of lateral-spined ova of *Schistosomum mansonii*.

CASE III.

An Egyptian soldier was admitted to hospital suffering from fever and diarrhoea. He was somewhat anaemic, and the spleen was slightly enlarged. Blood examination for malarial



Case III.

parasites proved negative. After admission the patient's condition quickly became worse. He lost flesh rapidly, and his whole appearance was one of extreme lassitude, suggesting a toxaemic condition likely to be attended with fatal results.

The diarrhoea was a feature of the case from the onset. The faeces were examined, and the lateral-spined ova of *Schistosomum mansoni* were found.

The observations made *post mortem* on the previous cases suggested the possibility of good results accruing if vaccine therapy was employed. A sample of the patient's stools was obtained and plated out on suitable media. The plates were carefully examined, and contained for the most part two different types of *B. coli* colonies. Their cultural characters were worked out, and a bivalent autogenous vaccine prepared. The patient received a first dose of 0.5 c.cm., representing 250 million organisms, followed five days later by a dose representing 500 million. The result obtained was striking. After the first injection the patient stated he felt much better. A marked and rapid improvement in his condition set in. The diarrhoea ceased, the temperature fell, and a week after the second dose he was discharged fit from the hospital.

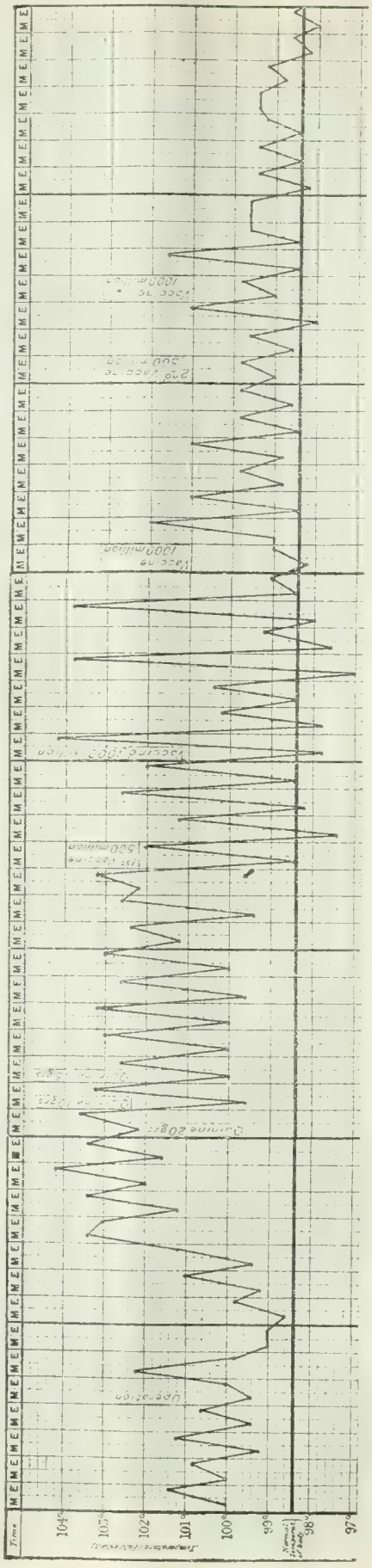
Case IV.

It will only be necessary to refer to the salient points in this very interesting case. A full account of it is being published elsewhere.

The patient was a woman of about 24 years of age, who had never been out of Khartoum. She was admitted to hospital with fever, anaemia, and debility, and a very enlarged spleen extending to the umbilicus. Examination of the peripheral blood was negative for malarial parasites, and a careful search for evidence of malarial pigment was attended with negative results. The red blood corpuscles showed a certain degree of poikilocytosis and microcytes, and a few normoblasts were present. In addition, there were found oval and circular cells about 3.5 μ in diameter, whose cytoplasm stained a delicate blue with Leishman stain. Some of these cells contained a few granules showing a chromatin tint. Myelocytes were not in evidence, nor did the blood films suggest lymphatic leukaemia. The red blood cells numbered 2,250,000 per c.cm., and the white blood cells 8,000 per c.cm. Blood culture was carried out, but yielded no results as regards the presence of a septicaemia. Puncture of the spleen was then resorted to. This organ was very firm, and resisted considerably the entrance of a fine hypodermic needle. Several smears were carefully examined, but neither Leishman-Donovan bodies nor malarial parasites were ever found.

As the spleen continued to enlarge and the patient's condition showed no improvement, the operation of splenectomy was decided upon, and successfully carried out by Dr. Atkey, of the Sudan Medical Department. The operation wound healed satisfactorily, but the patient's temperature continued to rise steadily and was in no way influenced by quinine administered hypodermically. An examination of the faeces was then carried out after a purge had been given; it may be mentioned that since her admission the patient had not shown any signs of intestinal irritation. After a prolonged search the ova of *Schistosomum mansonii* were found.

The patient's physical condition did not improve, and it was noticed that the liver was now commencing to enlarge rapidly. As a possible line of treatment vaccine-therapy was suggested. A sample of the faeces was obtained and suitably plated out, and a bivalent vaccine prepared from two different types of *coli* organisms isolated. An injection of 250 million was given as an initial dose, followed four days later by an injection of twice the number of micro-organisms, and a similar number a week following the last dose.



Case IV.

The patient's temperature after the third injection became consistently lower. Another sample of faeces was obtained, and almost a pure culture of a *proteus*-like organism obtained. A fresh vaccine from this was prepared, two injections were given, and at the end of a week the patient had improved considerably, and a week later was discharged from hospital with practically a normal temperature. Her liver, which had previously extended to a position almost level with the umbilicus, had now retracted to a point 1 in. below the costal margin.

One has only to study the clinical histories of these cases to understand that the diagnosis of intestinal schistosomiasis is not always easy. The clinical signs and symptoms may be very misleading, particularly in those cases in which positive evidence is not furnished by a single examination of the faeces.

The failure to find the ova in some of the cases was due neither to faulty technique nor to a cursory inspection of the specimens sent for examination. In Cases I and II several samples of the faeces taken from the vicinity of the ulcers in the lower gut failed to show evidence of the ova of *Schistosomum mansonii*; even portions of the faecal matter and mucus taken from the surface of the ulcer were devoid of ova, and it was only possible to find the latter by scraping the walls and base of the ulcer. In Case IV no fewer than thirty-five specimens were examined from two different samples of faeces before the ova were detected.

As regards the pathology of the disease little need be said, for the lesions produced resemble those so well described by pathologists in Egypt. It may be mentioned, however, that the papillary type of growth mentioned as occurring in viscera lined by mucous membrane and in the vicinity of the anus is exceedingly rare in the Sudan.

Enlargements of the liver and spleen appear to be fairly constant features. In the former a cirrhotic condition is usually seen; in the latter a chronic hyperaemia, associated with a certain degree of fibrosis, is observed. Ova have, so far, not been found in these organs. In Case II the enlargement of the spleen was extremely rapid, and at the *post-mortem* examination its gross macroscopical appearance closely simulated the spleen met with in typhoid and allied conditions, so much so that it was deemed advisable to make cultures from its substance. A bacillus was isolated which in cultural and other characters resembled an organism previously isolated by me from the faeces of a case of intestinal schistosomiasis. Its presence in the spleen might be explained by the fact that it had gained access to the circulation by way of the ulcers in the intestine.

If this was so, it was not beyond the pale of supposition to suggest that the enlargement of the liver and spleen in intestinal schistosomiasis might be dependent not only on the absorption of the toxins of the causal helminth, but also on the absorption of intestinal micro-organisms and their toxic products from the abraded surfaces of the intestine. If these micro-organisms play a prominent part then vaccine therapy would appear to be a feasible line of treatment, particularly in the acute toxic types of the disease. The beneficial results obtained in the two cases treated appear to justify a further trial, and it has occurred to me that the employment of autogenous vaccines of intestinal organisms might also be extended to cases of splenomegaly in which no apparent cause can be found. Richards and Day[1] have recently described such cases of splenomegaly in Egypt, and it is of interest to note that a certain percentage of them showed a helminth infection.

Maxwell[2] records similar cases of splenomegaly of obscure origin occurring in China, and Wooley,[3] from his observations of splenomegaly in the Philippines, is inclined to consider that some cases are dependent on a chronic infection originating in the intestinal tract, and that various organisms are associated with the clinical picture.

How far vaccine therapy may be serviceable in ankylostome fever remains to be determined. Definite proof is still lacking as to whether this fever is dependent on the toxins of the helminth or upon intestinal bacteria. Castellani[4] noted that ankylostome fever was represented by three different types of pyrexia—a clinical fact which appears to support the view that different intestinal organisms and their toxins play a certain part in its production. It may be added that I have recently had very favourable results from the use of a *coli* vaccine in a serious case of ankylostomiasis.

Among other interesting points in intestinal schistosomiasis may be mentioned the frequent absence of eosinophilia. In the cases seen in the Sudan not one of them showed this blood change—a negative sign somewhat misleading, for it is generally understood that a helminth infection raises the number of eosinophiles in the blood. Low,[5] however, in a recent paper states that chronic helminthiasis need not be productive of an eosinophilia. His experience was based on the examination of a number of natives in Uganda. Absence of eosinophilia must, therefore, not be taken as a contraindication to the examination of the urine or faeces. In urinary schistosomiasis one has found that an eosinophilia is invariably present, even up to 40 per cent.—a fact which may favour the theory of duality of the species of schistosomum.

Another point observed in the blood of these cases of intestinal schistosomiasis is the constant increase of large lymphocytes and a certain degree of leucocytosis affecting the polymorphonuclear leucocytes; indeed, the total number of leucocytes appears to be made up almost entirely of these two types of cells. The red blood cells show a certain amount of poikilocytosis, and one may obtain all the changes observed in secondary anaemias.

The difficulties associated with diagnosis have already been referred to. It is dependent on the finding of the spined ova in the faeces. The similarity to enteric and other fevers must be remembered. If complicated with malaria or tuberculosis it is easily understood what a clinical puzzle might be produced. The method of complement fixation may be useful on the lines adopted for the diagnosis of echinococcosis.

Conclusions.

The main points referred to in this paper may be briefly summarized.

1. There exists a specific fever in the Sudan, acute or chronic in type, dependent on an infection with *Schistosomum mansonii*.

2. This fever is usually accompanied by an enlargement of the spleen, a varying degree of anaemia, a polymorphonuclear leucocytosis, a large lymphocytosis, and an absence of eosinophilia. In the more chronic cases the liver becomes enlarged.

3. Intestinal symptoms may or may not be present.

4. The importance of a careful examination of the faeces in all cases of pyrexia of uncertain origin.

5. The possible value of treatment by autogenous vaccines of intestinal organisms, particularly in the acute toxic types of intestinal schistosomiasis, and in cases of splenomegaly due to no apparent cause.

Thanks are due to Captain A. G. Cummins, R.A.M.C., for the clinical notes of Cases I, II, and III, and to Dr. Atkey and Dr. Christopherson, of the Sudan Medical Department, for facilities given in the treatment of Case IV. Mr. Newlove, of the Khartoum Civil Hospital, also rendered kindly assistance.

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THE ETIOLOGY OF BERI-BERI.

BY

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In view of the widespread tendency to accept as proved that beri-beri is due to the eating of decorticated rice, it behoves those whose experience contradicts this theory to express their opinions. The leading exponents of the rice-eating doctrine, Drs. Fraser and Stanton, writing in the JOURNAL of October 25th, 1913, state: "It is now beyond dispute that the etiology of beri-beri in the Federated Malay States and Straits Settlements have been demonstrated." They are careful to speak only for the Malay States and the Straits Settlements. There is no doubt, however, in the minds of many competent observers that beri-beri occurs in many other parts of the world, and on board ships, amongst persons who do not eat rice and whose diet is in no material way deficient. Dr. MacGilchrist, writing from Bengal, has quite recently given an instance of its occurrence on board ship where diet was not at fault, but everything pointed, in his opinion, to an infectious origin.[1] Dr. Stanley, writing of fifteen years' experience of Shanghai and other places, is convinced that beri-beri is infectious, and probably conveyed by parasites.[2]

The epidemic which occurred on this island in 1901 amongst the Boer prisoners of war was certainly not attributable to diet. Rice formed no part of the diet, which was in every particular a liberal one. Prior to the appearance of the disease there had been much overcrowding in the Boer encampment. Groups of the prisoners, linked by ties of kindred or friendship, had built for themselves small huts made from old biscuit tins, the floors and bunks being of wood. Into these they packed themselves like sardines in a box. The Boers were the reverse of cleanly. Here, therefore, were two factors usually associated with outbreaks of beri-beri. The disease is not unknown in South Africa, and was probably imported with the prisoners of war.

I have long been impressed with the probably infectious nature of the disease. In such a case as the following it is difficult to avoid this conclusion.

In July, 1903, an American whaling brig, 411 tons burthen, put into Jamestown for medical aid. The captain reported that seven men had died of some illness during the past three weeks, and that many of the men on board were apparently suffering from the same disease. He did not know what it was, but thought it must be beri-beri from what he had heard of it in other ships. The deaths of the men had taken place suddenly while they were at work on deck.

On examining the ship's company I found eleven men in varying stages of beri-beri. Several were in a serious condition, and one man was in the last phase of heart failure. He died the following day in hospital.

This vessel had a crew of thirty all told. Nineteen men slept in the small forecastle, ventilated only by the companion way, and lighted by a small glass oblong let into the deck. The cubic space available for these nineteen men involved gross overcrowding, and there was a lack of even average cleanliness. I did not find that the diet varied substantially from that found on board most sailing vessels. No doubt salt beef and pork as the staple article of diet is not ideal, but fresh bread was served every day, and preserved vegetables and lime-juice were issued at regular intervals. Rice was not eaten. A monotonous fare

made up largely of preserved provisions may be looked upon as a predisposing cause of ill-health, but there are no grounds for going further in the present instance.

In the fatal case I found at the *post-mortem* examination enormous dilatation of the stomach, and this I have found to be a nearly constant feature, in a greater or less degree, in the cases of acute beri-beri I have examined after death. It would appear, by the way, to contraindicate the use of yeast advocated by some in the treatment of the disease.

After the removal of those seriously ill to hospital, measures were taken thoroughly to disinfect and cleanse the quarters of officers and men, together with all bedding and clothing, etc. Fumigation with SO_2 and the liberal application of 1 in 1,000 mercury perchloride solution was carried out on three or four separate occasions, the men meantime sleeping on deck. After remaining in port for three weeks this vessel, taking those of the crew who had recovered and some fresh hands, put to sea, and did not touch land till she returned to St. Helena at the end of six months. The crew had kept in perfect health, and no fresh cases of beri-beri had appeared.

I am told by those whose memory of shipping in St. Helena goes back over many years that their impression was that the disease commonly reappeared in the same ship. It is difficult to get accurate information on this point. Since systematic disinfection has been carried out, I have not learnt of an instance in which a fresh outbreak occurred on resuming the voyage. A report on the above vessel was made to the United States Government, through the American Consul, with the recommendation that, in the *Medical Handbook* issued for the guidance of captains in the mercantile marine, a more helpful account of the disease should be inserted, embracing a warning as to the danger from heart failure, and the need for absolute rest when a man complained of shortness of breath. A similar suggestion was made to the Board of Trade in England through the Governor of St. Helena, as at that time (1903) the account given in the *Medical Guide* for the British Merchant Service was quite inadequate.

Since 1903 every ship calling at St. Helena with beri-beri cases on board has been subjected to very thorough disinfection and fumigation of the quarters of the sick. In endeavouring to trace the connexion of any case on board ship with previous cases of beri-beri, I have never failed to find one at least of three circumstances: (*a*) The existence of beri-beri on the ship on a previous voyage: (*b*) the presence on board of a member or members of the crew who had previously had beri-beri; or (*c*) some member of the crew who had recently sailed on a ship where beri-beri prevailed though he had not then had the disease himself.

The Norwegian Beri-beri Commission arrived at the remarkable finding that the so-called ship's beri-beri was not beri-beri. If not, what is it? The Commission came to this conclusion because the symptoms are principally weak heart, with weakness and dropsy of the lower limbs, without paralysis, and they were of opinion that degeneration of the nerves was not an essential phenomenon. But to what is the weak heart due if not to nerve degeneration in its most perilous site? The weakness, numbness, and anaesthesia, and loss of patellar reflexes constantly present are clearly due to nerve degeneration, and that complete paralysis does not follow in many cases is due to the fact that the disease tends to rapid recovery when men are removed from the ship. I have known several cases of paralysis notwithstanding. The disease as met with on board ship has been diagnosed and treated as beri beri for many years by Manson and others at the London Tropical Hospital.

The polished rice theory of its causation is obviously not going to result in its eradication from ships. A resolution as to its non-infectious nature, carried at the International Congress, should not deter those who think otherwise from carrying out measures of disinfection till accurate knowledge is obtained.

There is a great deal that points to the conveyance of the disease by parasites. The bug is more likely than lice to harbour the possible germ. The bug clings more to places—the chinks and crevices of floors and bunks, etc., and its eggs are difficult to destroy. The organism may even develop in the latter, as in the case of the *Spirochaudinnia duttoni* in the ova of the tick. Before the etiology of beri-beri can be finally settled, the part, if any, played by parasites must be thoroughly investigated by modern methods.

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ZEISM OR PELLAGRA?

BY

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IN the issue of this JOURNAL of July 5th, 1913, Dr. L. W. Sambon, in giving the history of pellagra, quotes me as having in 1912 described cases of it in Rhodesia under the term "zeism," and, in spite of my then[1] stating that the disease in some respects resembled pellagra but was "certainly not pellagra," emphatically declares that the cases reported and illustrated by me are pellagra. I am not specially wedded to the coined word "zeism," and have no great objection to the revision of my diagnosis, but when Dr. Sambon lays such stress upon the revision I think that at the same time he should at least have mentioned the etiology I gave of the disease, especially as it is directly opposed to his insect-borne theory of pellagra.

My object in this article is to try and prove either that zeism is not the same as pellagra, or, if it is, that pellagra, at least in this part of the world, is directly due to the loss of some essential nutritive constituent during the process of grinding maize into meal, probably of the nature of an organic salt.

The disease which I termed zeism first came under my notice early in March, 1912, and, after observing 11 cases, I described it in the following month, though my article was not published till July. With a fuller knowledge derived from the observation of a further 29 cases (making 40 in all), I have little, if anything, to add to or subtract from my original opinions on the subject. All the cases occurred in the Victoria Gaol, of which I have been in medical charge for a little over five years. No fault can be found with the buildings, general hygiene, official diet scale, etc., while the food itself is well cooked and carefully supervised.

The staple article of diet among the natives in the district is rapoko (*Eleusina coracana*); in the gaol this was issued in the proportion of seven bags of rapoko meal to two bags of mealie meal. The main difference in the two meals is that the rapoko is hand-milled within the precincts of the gaol and contains the whole husk, while the mealie is steam-milled in the town to a fineness which must allow 75 per cent. of it to pass through a 30-inch mesh sieve, which necessarily entails, under the present milling process, the discarding as waste of a large proportion of the husk. That this waste husk, to which probably clings some minute portion of the grain itself, is of high nutritive value is proved by feeding cows on it, when the quantity and quality of the milk they give is greatly increased. This proportion of mixed meals held good up to the middle of November, 1911, when, owing to the partial failure of the rapoko crop, mealie meal alone was issued. Early in March, 1912, the first case of zeism was noted, and since then the gaol has never been quite free from it.

The gaol is built on the highest point of the township, 92 ft. above, and nearly a mile away from, the nearest river. This river is a typical South African middle veldt one—in flood from January to March during the rains, then sluggish for four or five months, finally reduced to pools for the rest of the year. It is, therefore, a more suitable breeding place for the malarial mosquito than the *Simulium* of pellagra (Sambon) except during the three months named; certainly at all times innumerable midges and other blood-sucking insects are to be found in its vicinity. Some eight or ten of the more robust prisoners are employed hauling water daily from this river, except during the rains, when the gaol catchment tanks supply the necessary water. Among those so employed zeism is seldom seen, possibly because they are usually short-sentenced men, and are lost sight of at the end of two or three months. None of the other prisoners go within half a mile of any running water. During the year not more than six or seven prisoners are ever off duty on account of malaria.

Etiology.

A good many years ago, when resident in Siam, I was a strong opponent of the theory that beri-beri was caused by

some flaw in the rice, but have since had cause to see the error of my ways. The administrative experiments of Dr. H. Campbell Highet, principal medical officer of the Siamese Local Government, by which he clearly proved that in Siam, at least, rice over-milled produced, and under-milled prevented and cured, beri-beri,[2] made such a profound impression on me that in 1911[3] I advanced the theory that scurvy, at any rate in Rhodesia, was due to a flaw in the milling process of the mealie—when probably too much of the husk was removed. Therefore, when a year later I was suddenly confronted with an epidemic of what appeared to be an unknown disease, I at once thought it might be due to a fault in the staple article of diet, and finally named it "zeism."

I was, of course, acquainted with pellagra, and aware of Dr. Sambon's protozoan theory of its etiology, and therefore had no hesitation in stating that "the disease was most certainly *not* pellagra—even if an acute form of that disease were known."[1]

Some of the early gastro-intestinal symptoms of zeism closely resembled those of scurvy and beri-beri, and therefore I was all the more ready to deal radically with the meal question. Accordingly I immediately stopped the mealie meal, and, rapoko being unobtainable, issued rice instead, increasing the ration of meat and vegetables at the same time; the unaccustomed diet of rice produced some gastro-intestinal troubles, but while those suffering from zeism (at that time seven in number) did not improve it was noticeable that no fresh cases arose. Shortly afterwards rapoko was procured, hand-milled (whole-husked) within the gaol, and issued with the most beneficial results, all the cases immediately improving, and no fresh ones occurring.

Unfortunately, as time went on rapoko rose to famine prices, and I was forced again to use a mixture (on alternate days) of the two meals; finally, I was only able to issue rapoko to the actual patients, while the rest (a daily average of about eighty) had to have mealie meal until such time as any of them developed the disease and were put on the sick list. I was thus able to watch the effects of two different meals acting on a body of men, all living under exactly the same conditions, until I came to the following definite conclusions:

1. That the continued consumption of finely ground mealie meal, from which a large percentage of the husk had been removed, as a staple diet, produced zeism.
2. That those who ate rapoko did not contract the disease.
3. That prisoners who had not been outside the gaol walls for months contracted the disease if fed on mealie meal.
4. That sufferers from zeism invariably steadily improved under rapoko meal, until in periods varying from three weeks to seven months they showed no further signs or symptoms of it.
5. That its shortest incubation period was forty-two days. (Sambon[4] gives an incubation period of only two weeks for at least one case of pellagra.)
6. That relapses were not seasonal, but occurred only in apparently cured cases that returned too soon to the mealie meal diet.
7. That the disease was in no way infectious or contagious.

I further noticed that the cooks never contracted the disease, and that any case suffering only mildly recovered rapidly when working in the kitchen, doubtless on account of the extra titbits that were to be procured there.

Symptoms.

Dr. C. R. Box[5] has described the symptoms of pellagra under three heads—alimentary, cutaneous, and nervous—and, as his description is the fullest I know, I propose to draw largely on it in comparing them with those of zeism.

It will be noticed that zeism closely resembles pellagra in its alimentary, differs considerably from it in its cutaneous, and bears no relationship at all to its nervous symptoms.

It is also interesting to note that the symptoms of beri-beri and scurvy fall naturally under the same headings.

Gastro-intestinal Symptoms.

Pellagra (Box).	Zeism.
1. Tongue sore, coated, then peels red; sometimes fissured.	1. The same.
2. General stomatitis; gums swollen, spongy, tend to bleed; mucous membrane superficially ulcerated.	2. The same.
3. General pharyngitis.	3. The same.
4. Indigestion, diarrhœa, nausea, anorexia; sometimes vomiting.	4. The same.
5. Stools peculiarly offensive; mucus, sometimes blood.	5. No blood or mucus.
6. Proctitis, haemorrhoids.	6. Not observed.
7. Great loss of weight—10 to 40 lb. in a week.	7. The same.
8. Disturbances of alimentary system may be responsible for fatal termination.	8. Never.

In spite of the close similarity of these symptoms it must be borne in mind that they hold almost equally good for scurvy, and to a large extent for beri-beri also; in other words, they are the first and most noticeable symptoms in the large group of "deficiency" diseases, where some essential necessary for the normal physiological processes is absent or deficient.

Cutaneous Symptoms.

Pellagra (Box).	Zeism.
1. Dermatitis is seasonal and recurrent.	1. Not seasonal; relapses, not recurrent.
2. Symmetrical and sharply defined.	2. The same.
3. Predilection for extensor surfaces and sometimes on elbows, perineum, and adductor regions from pressure.	3. Extensors of forearms only.
4. First appears on back of hands and wrist, forming a "pellagrous glove."	4. First appears on back of forearms; never extends to back of hands, and seldom to wrists; no "pellagrous glove."
5. Later "pellagrous mask" of cheeks and nose; back of neck and front of chest involved.	5. "Zeism collar" of neck begins when arms are first affected; then extends across forehead and under the eyes, sometimes with patches on cheeks; nose not affected.
6. Sometimes dorsal surfaces of feet; scrotum or vulva may be implicated.	6. Dorsum of feet only affected in severest cases from extension downwards of dermatitis; scrotum never affected; vulva not observed.
7. Sometimes axillary and interscapular regions affected.	7. Never.
8. Skin red, then inflammation subsides and brawny desquamation follows.	8. First appears in dark, somewhat rough patches, slightly raised; redness unobservable in the jet black native skins; dry skin peels off in large flakes during convalescence only. Slightly irritable only.
9. Severe cases may have bullæ with serous or bloody fluid on inflamed areas.	9. Never bullæ; the severer the case the blacker, thicker, drier, and rougher the dermatitis.
10. Skin becomes rough and thick from annual recurrences.	10. As attack passes off skin resumes its natural colour and softness; no annual recurrences.
11. Sometimes subcutaneous haemorrhages and fissures.	11. Never.
12. Ultimately cutaneous atrophy, skin becoming parchment-like.	12. Never.
	13. In severe cases the dermatitis spreads completely round the forearms, but does not extend above the elbow or below the wrist; also it may, after beginning on the calves, surround the legs, never above knee; rarely affects dorsum of foot.

In my original paper I used the expression "burnt areas" to describe the dermatitis of zeism, for that term seemed to suit better the jet-black, rough, and superficially hard surface of the affected areas.

Certainly the dermatitis in both pellagra and zeism has some strong points in common, but when their respective positions are considered in full, and those of zeism compared with the beautiful coloured drawing of pellagra which appeared in the JOURNAL of July 5th, 1913, their differences are even more striking than their similarities.

Nervous Symptoms.

Pellagra (Box).	Zeism.
1. Neurasthenic symptoms begin early, and may be earliest of all.	Nervous system not affected in any of the 10 cases observed.
2. Knee-jerks exaggerated; spinal pain on pressure.	
3. Symptoms referable to sclerosis of the posterior and lateral columns of the cord.	
4. Nystagmus and sphincter paralysis may occur.	
5. Speech hesitating.	
6. Ataxia, spasticity, myelitis; meningeal haemorrhage may occur.	
7. Jerky movements of muscles of face and limbs; possibly cerebellar fits.	
8. Neurasthenic symptoms tend to merge into permanent mental disorder, excitement, hallucinations, dementia	
9. In from 4 to 10 per cent. suicide occurs.	

The complete absence of any nervous symptoms, even in the most severe cases, convinced me that zeism was not the same disease as pellagra. It is true that I have had no one particular case under observation and treatment for a longer period than twelve months, but, considering the early onset and severity of the nervous symptoms in pellagra, it seems hardly possible that no case out of forty of zeism should have developed a single symptom if the two diseases were identical. Again, it is possible that if my cases had not been detected and treated from their very onset, such symptoms might have appeared.

The prognosis in pellagra is bad, in zeism good. Only one of my earliest cases of zeism gave any cause for anxiety, and that was a patient whose weight fell from 140 lb. to 91½ lb. in five weeks; after twelve months he made an excellent recovery, and when discharged from gaol weighed 150 lb.; six months later I ascertained that his health was perfectly normal both physically and mentally.

Treatment.

The treatment in pellagra appears to be unsatisfactory, and chiefly symptomatic; it is, however, very interesting to see that Dr. Box says that we cannot on general principles be wrong in forbidding the use of damaged maize, that the importance of proteins and fats (cod-liver oil) is insisted on, and that active antiscorbutic measures are often beneficial, while Castellani and Chalmers[6] tell us that "maize should be avoided."

In zeism there is a specific remedy, and that is that the staple article of diet must consist of some grain retaining a large proportion of its pericarp. The only grains I have had to deal with are mealies (*Zea mays*) and rapoko; the former, deprived of the greater portion of its husk, produced the disease; the latter, retaining its entire husk, both cured the disease and acted as a prophylactic. Meat and vegetables added to the diet were of great assistance; cod-liver oil was invaluable; from arsenic and phosphorus I had no good result. Kafir beer (made from rapoko, and containing from 3 to 5 per cent. of alcohol) in time became my sheet anchor, though it was not always procurable. Given this treatment I felt confident that I could deal with the disease satisfactorily.

That the epidemic I had, and have, to deal with is a formidable one may be gathered from the fact that from March 5th, 1912, to September 1st, 1913, the number of days' work lost by the prisoners who suffered from the disease amounted to 1,210, not counting the mild cases, which were on light duty only. That no actual death occurred from it I attribute solely to the early recognition of its etiology, from which treatment and prophylaxis naturally followed.

Conclusion.

I do not wish it to be thought—for I am naturally not in a position to do so—that I am combating Dr. Sambon's *Simulium* hypothesis of pellagra, but as he insists that zeism is in reality pellagra, I have only attempted to justify both my diagnosis and etiology.

Beri-beri, scurvy, pellagra, and zeism form a group of diseases almost by themselves. Beri-beri, at least in the Malayan Archipelago, has been proved to be due to a deficiency of phosphorus pentoxide in white polished rice;[2] zeism, as I have attempted to show, is caused by the ingestion of mealie meal from which too much husk had been removed; scurvy, in Rhodesia, I have elsewhere suggested may be caused by some flaw in the milling process of the mealie (analogous to that of zeism), while a strong "zeist school" insists that pellagra "is a variety of food poison attributed to the use of maize as a staple article of diet" (Box). Finally, Mr. F. E. Place, Veterinary Lecturer to the Department of Agriculture of South Australia,[7] draws a striking picture of the resemblance between beri-beri and scurvy in man and their analogues in horses and heifers, due, in his opinion, to the absence or deficiency of "vitamines," or protective substances, in the staple diet of all four cases.

If, therefore, I were inclined to support the zeist school in its etiology of pellagra, it would be solely on the lines that the elimination of the husk during the milling process of certain grains deprived the resulting meal of its "protective substances"—a view which I am not aware has been advanced before, and which is probably the keynote to the etiology of the above group of deficiency diseases.

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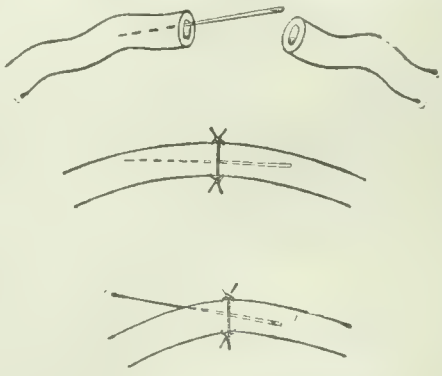
ANASTOMOSIS OF THE VAS DEFERENS.

BY

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TWICE recently I have had occasion to anastomose the vas deferens after division in operations on the spermatic cord. In making a junction I found the method illustrated by the accompanying diagrams simple and effective. The divided ends of the vas are passed over the eye



and point of a fine straight needle until they meet. A few points of suture are then inserted, and the needle is pushed out through the wall of the vas at a distance from the anastomotic junction. The line of sutures is wrapped round with neighbouring fascia to give additional strength. After salpingectomy the anastomosis of the Fallopian tubes could readily be accomplished by the same device.

THE German Surgical Society will hold its forty-third congress at Berlin in April (15th to 18th) under the presidency of Professor W. Müller of Rostock. Among the subjects to be discussed are the causes and treatment of post-operative ventral hernia, the remote results of transplantation of the thyroid gland in man, and tumours of the bladder.



FIG. 1.



FIG. 3.

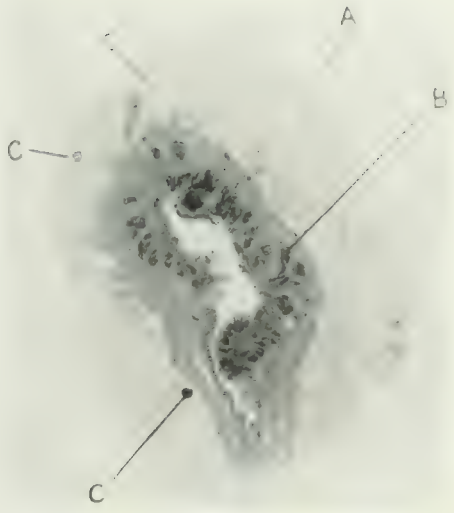


FIG. 4.



FIG. 2.

TO ILLUSTRATE MR. G. L. CHEATLE'S PAPER.

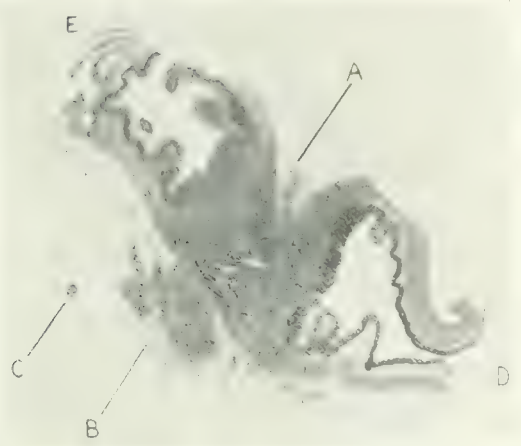


FIG. 5.

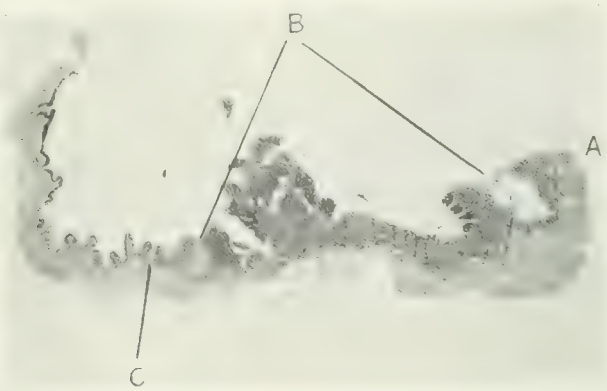


FIG. 7.

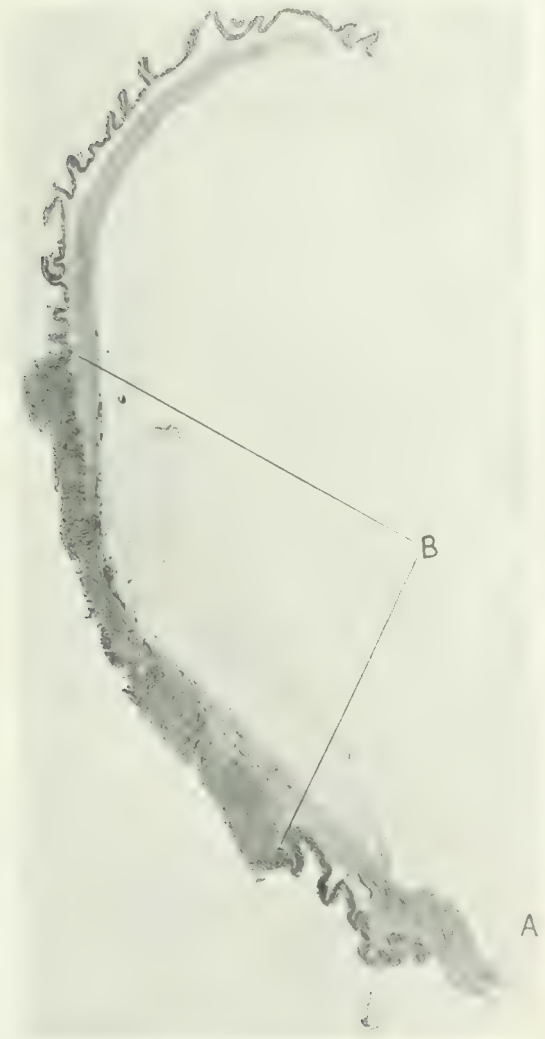


FIG. 6.

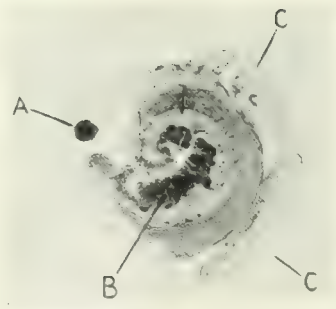


FIG. 8.

TO ILLUSTRATE MR. G. L. CHEATLE'S PAPER.

THE SPREAD OF CANCER IN THE LOWER PART OF THE LARGE INTESTINE.

(WITH SPECIAL PLATE.)

BY G. LENTHAL CHEATLE, C.V.O., C.B., F.R.C.S.,

SURGEON AND JOINT LECTURER ON SURGERY, KING'S COLLEGE HOSPITAL.

IN the BRITISH MEDICAL JOURNAL, 1910, vol. i, pp. 853 and 922, Mr. Sampson Handley published a case of very extensive spread of cancer in the lymphatic vessels of the submucous tissue in the lower intestine. Like many others, I was at once struck with the importance of this observation, and at the same time realized from my own clinical experience that this extensive spread in the lymphatics of the submucous tissue of the large intestine could not be applicable to all cases. Therefore I determined to examine all my subsequent cases with a view to the determination of this point.

I began by attempting to cut transverse sections of all the tissue I removed from these cases, but as I proceeded I found the number of sections would run into several hundreds for each case; therefore I decided to cut longitudinal sections on my big microtome, and the curve which will be seen in the longest sections was made to accommodate the tissues on its stage. The concavity of the curves represents the peritoneal surfaces in Figs. 1, 8, 6, and the mucous membrane in Figs. 2 and 7.

The cases which I publish are all cancers of the lower part of the large intestine, and they show how strictly limited is the growth of the primary focus of disease. Very little spread can be seen in the submucous tissue of any of them. Indeed, there is no spread to be observed in any other part of the bowel wall.

In one of my cases—namely, that represented in Fig. 8—there is a most alarming diffuse spread in all directions, namely, in the submucous tissue, the intramuscular tissue, the intermuscular tissue, and subperitoneal tissue, as well as in the lymphatic glands in the mesocolon. Even the appendices epiploicae are loaded with it; in fact, every available lymphatic space seems to be occupied. This appears to me to be an exceptional case.

Before publishing these cases I made a point of informing Mr. Sampson Handley of their nature, and he informed me that he has had the same experience in cases he has examined since the one which caused such disturbance in the minds of surgeons who read his paper.

In the majority of my cases I have not seen the submucous spread greater than that seen in the extramural lymphatic distribution.

I have no doubt that the publication of Mr. Sampson Handley's case has influenced surgeons to remove a greater length of bowel than is absolutely necessary in most cases. On the other hand, I quite agree that extensive removal is the main indication, for two reasons:

First, the operator can never be sure from clinical observation whether he be dealing with a case of extensive or limited distribution, although the presence of enlarged and discrete lymphatic glands may help him to decide the matter in favour of the presence of extensive spread of cancer.

Secondly, an extensive removal of the intestine enables the operator to deal more effectually with the lymphatic area in direct communication with the diseased parts.

The spread of the disease in the bowel will be seen in Figs. 1, 2, 3, 4, 5, 6, and 7, and it does not support the view that wide removal of the bowel is essential for recovery in most cases. I would advise an extensive removal of the bowel where possible, but the results of the examination of my cases gives definite scientific reason to hope for a successful issue from a more limited removal of the intestine in cases which are obviously unfit for extensive and dangerous operations. As a matter of fact, as a direct result of these observations I have successfully treated cases which were not fit for wide and radical surgical measures.

It may be said that if my sections 1, 2, 5, 6, and 7 had been transverse instead of longitudinal, the submucous spread of the disease might have been demonstrated, especially as I point out in Figs. 3 and 4 the submucous spread has been demonstrated, and the submucous spread in Fig. 8, with many other directions of distribution, is shown to be very great. But I feel sure the observations I have made upon the longitudinal sections are correct, for many sections were cut in each case and carefully examined. Moreover, in Figs. 3 and 4, which are reproductions of transverse sections, the disease was limited to the parts removed.

I have very great satisfaction in knowing that my experience is borne out by the more recent observations which Mr. Sampson Handley has made.

I could add many more cases in which the lymphatic glandular infection was absent, but they would not include observations upon the submucous spread, as they were examined before Mr. Sampson Handley published his case.

The description of the distribution and the subsequent history of the cases will be found in the description of each section.

DESCRIPTION OF SPECIAL PLATE.

Fig. 1.—Longitudinal section (natural size) of lowest part of large intestine. A, Anus; B, cancer; C, a submucous lymphatic vessel full of cancer cells. All sections made of this case gave no evidence of cancer involving any parts above C or below the lower indicating line leading from B. The patient from whom this tumour was removed died from shock of operation.

Fig. 2.—Longitudinal section of lowest part of large intestine (natural size). A, Anus; B, cancer; C, normal lymphatic gland. There was no spread of disease observed in any of the sections made of this case apart from the primary focus. The patient from whom this tumour was removed is well two and a half years after operation.

Fig. 3.—Transverse section of rectum (B) and surrounding fat (A) (natural size). It represents normal conditions, with the exception at C and C, where there are lymphatic vessels in the submucous tissue filled with cancer cells. The section of the rectum was taken 1½ in. above the cancer seen in Fig. 4. The patient was well four and a half years after excision.

Fig. 4.—Transverse section of rectum (B) (natural size) and the surrounding fat (A), which has undergone atrophy. The mucous membrane is replaced by cancer, except for about ⅜ in. at lower and left hand part. The cancer has spread into the muscular coats. C, C, C, point to lymphatic glandular tissue not invaded by cancer.

Fig. 5.—Longitudinal section of part of the sigmoid flexure, removed for the relief of acute intestinal obstruction (natural size). A, is the cancer, which has spread to all parts of the bowel wall, and is involving the mesocolon at B. C is a normal lymphatic gland, D towards rectum, E towards transverse colon. In no section made of this case was observed any other spread of disease. The mesocolon was extensively removed. Patient well; operation five and a half years ago.

Fig. 6.—Longitudinal section of lowest part of large intestine (natural size). A, Anus; B, cancer. In no sections made of this case could any spread be detected apart from the distribution at the primary focus. The patient from whom this tumour was removed is well three years after operation.

Fig. 7.—Longitudinal section of rectum (natural size). A, Towards anus; B, cancer; C, a submucous lymphatic vessel containing cancer cells. C was the limit of spread among all sections cut of this case. Subsequent history unknown.

Fig. 8.—Transverse section (natural size) of sigmoid flexure. A, Lymphatic gland invaded by cancer not undergoing colloid degeneration; B, the intestine, which is invaded throughout all coats by cancer undergoing colloid degeneration; C, C, appendices epiploicae, which are similarly invaded. The patient from whom this tumour was removed died from shock of operation. I was unable to make complete investigations of this case.

THE Prussian Ordre pour le Mérite has been conferred on Dr. Camillo Golgi, Professor of Pathology in the University of Pavia, and Senator of Italy.

THE late Dr. Clement Godson, formerly President of the British Gynaecological Society, left estate of the gross value of £48,492, of which £44,633 is net personalty.

THE American Society for the Control of Cancer issued the following timely note of warning as to the value of radium in the treatment of cancer: "The American Society for the Control of Cancer fears that exaggerated ideas of the power of radium in the treatment of cancer may result from the recent publicity given to this agent in the public press. It appears highly important at the present time that the limitations of radium in the control of cancer should be emphasized, as well as the favourable effects in certain cases. Otherwise the familiar story of new hope destined only to disappointment will again be recorded at the expense of many unfortunate sufferers."

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, February 3rd, 1914.

SAMUEL WEST, M.D., President, in the Chair.

Vaccines from the Standpoint of the Physician.

DR. H. D. ROLLESTON, in resuming the discussion on this subject (see BRITISH MEDICAL JOURNAL, January 31st, p. 247), said that in the opening speeches the two most striking statements were the frank admission that the failures of vaccine-therapy were probably much more numerous than its successes, and that vaccines, when employed, should be in addition to and not a substitute for the ordinary methods of treatment. Opinion on vaccine-therapy might be divided into (1) the optimistic, held by those who, while under the fascination of a new conception of a really rational treatment, had seen several cures in succession. This attitude was usually somewhat modified by time. (2) The pessimistic, more often expressed in private than in print, that vaccines never did any good, and that benefit apparently due to their use was either a coincidence or, perhaps, suggestion. (3) The doubtful or open-minded. This was his own position. Curative vaccine treatment must be admitted to have disappointed the high hopes with which it began, and in this respect its history resembled that of most remedies. The problem of immunity was so complex that it was highly probable that the technique or practice, rather than the principle of vaccine-therapy, was at fault, and that in time this might be so perfected as to establish the position of vaccines as a reliable remedy. The determination of the infecting micro-organism was exposed to well-known fallacies, and even with all due precaution a wrong vaccine might be given and do harm. Possibly the conditions of culture on artificial media might so modify the products of the micro-organisms of which the vaccine was composed as to render artificial inoculation far inferior to autoinoculation. Further, there was no doubt that vaccine-therapy had been used improperly in many ways. Thus it had been employed as a speculation in cases in which the nature of the infection was assumed but not proved. This had damaged vaccine-therapy, and had exerted an evil influence on medicine generally. The introduction of phylacogens recalled the happy-go-lucky polypharmacy of a bygone age. That bad results might follow the injection of vaccines must be admitted. It might be due to the administration of the wrong vaccine, to excessive dose of the appropriate vaccine, or to acquired hypersensitiveness on the part of the patient. The results of vaccines was so uncertain that their use appeared to be justified only when trustworthy therapeutic methods had failed or did not exist. That good effects, sometimes dramatic in their intensity, might follow the use of vaccines was also undoubted, but the old question, *post hoc* or *propter hoc*, arose. It seemed wiser to act as if the sequence of events was not a coincidence merely, and, in cases in which nothing better was available, to give our patients the chance of benefit from vaccine treatment.

DR. D. W. CARMALT JONES said that exponents of vaccine-therapy, of which he was one, claimed that they were guided by a definite principle, that they were using a substance which could produce a definite physiological effect, which assisted in removing a cause of disease, and which they used with considerably greater rational support than was possible for most drugs available for oral administration. No one with experience of vaccines claimed that he could control infection in any given case, but most of them were at least confident that the principles upon which they worked were sound, and that if the control of infections was ever possible, it would arise out of the methods which they employed to-day. These principles indicated not only the scope, but the limitations of the method; for organisms in any site did more or less destruction, leading to scars, deformities, loss of function, etc., and vaccines could do nothing for these conditions. It was essential that all sources of irritation, such as sequestra, pus, or other dead tissue or foreign substance should be removed. This was the first indication for accessory treatment, and its omission was a common cause of failure. Three further conditions must be observed: (1) That the correct organisms should be used for the vaccine; (2) that suitable doses should be injected: and (3) that the patient's tissues should be capable of responding. His own experience was chiefly among out-patients or patients who had come to him for treatment, which had to be considered from the point of view of dose, and he was accustomed by necessity as well as by conviction to use small doses. He noted some results obtained in pyorrhoea alveolaris, bronchial asthma, and arthritis. He was satisfied that local improvement in the mouth in cases of gingivitis and pyorrhoea, and improvement in general health and digestion and the incidence of obscure fascial and muscular pains, were frequently obtained by the use of streptococcal vaccines, with the co-operation of the dentist. In asthma good results often followed vaccine treatment. He now preferred to use the organisms from the patient's own sputum. The asthma which was excited by an inflamed and infected bronchial mucous membrane was that which was amenable to this form of treatment. The irritable respiratory centre should not be forgotten. Gonococcal arthritis had in his experience given fair results. Rheumatoid arthritis was a disease of indeterminate bacteriology, and its treatment by vaccines was purely empirical. By using vaccines of organisms derived from gums, urine and faeces, sometimes good and even striking results were obtained. On the whole he was fairly well pleased with the results of vaccine-therapy in chronic cases of arthritis. Cure was often impossible, but when patients persisted in treatment a good deal of relief was ultimately obtained in a fair proportion of cases.

DR. NATHAN RAW dealt especially with the treatment of lobar and bronchopneumonia. He had treated 207 cases by this means. Of 30 between the ages of 1 and 10, 28 recovered and 2 died. Of 36 between the ages of 10 and 20, 30 recovered and 6 died. Of 35 between the ages of 20 and 30, 31 recovered and 4 died. Of 50 between the ages of 40 and 50, 42 recovered and 8 died. Of 22 between the ages of 50 and 60, 16 recovered and 6 died. Of 4 between the ages of 60 and 70, 1 recovered and 3 died. The total mortality was 16 per cent. He thought that the man with the best chance of recovery from acute pneumonia was he who had a sound circulatory system, a good heart muscle, and good elasticity of blood vessels; but there was need of something antagonistic to the pneumococci. The results he had obtained from the use of antipneumococcic serum were not encouraging. A vaccine to be valuable must be injected at the beginning of the illness, and if used on the second or third day, its effect was sometimes almost miraculous. Hence, he had been compelled to use stock vaccines. In this way the treatment was under considerable disadvantage, but in spite of this it was very valuable. The cases treated did not include all his cases, as he did not use the vaccine in some mild ones, where it was obviously uncalled for, nor in moribund cases. It was difficult to estimate the true value of the treatment, and one had to be guided by general impressions. Each case was treated also on orthodox lines, alcohol was freely given if necessary, and an icebag was never used. The dose was 50 million for adults, but for some 100 million was used. He was convinced of its harmlessness, and had never noticed a bad effect. It was true that in a certain proportion there was no effect at all, but in others it caused a sudden drop of temperature. The effect on the pulse was always good, delirium was often relieved, and temporary natural sleep was frequently obtained. There was a notable absence of complications, and not a single case of empyaema developed. He regarded it as a valuable aid in the treatment of pneumonia, but not as a specific remedy.

MR. DOUGLAS HARMER spoke of the treatment of inflammatory conditions in the upper air passages by vaccines. Dr. M. H. Gordon alone had made more than 200 autogenous vaccines from his patients. Reactions, both local and general, were much more frequent than was generally supposed. The duration of immunity varied very greatly in different individuals. The more acute infections of the upper air passages were usually due to the streptococcus or pneumococcus, and in such cases large doses of vaccines should be given early and repeated. The fulfilment of these requirements was possible since the introduction of

sensitized vaccines, because they were less likely to make the patient worse than non-sensitized ones. In acute streptococcus infection doses of 100, 500, and 1,000 million could be given on three succeeding days, and the result was often remarkable. On the other hand, the pneumococcus cases had been very disappointing. With regard to colds, pharyngitis, and laryngitis, they had been found to be most often due to pneumococcus and *Micrococcus catarrhalis*, or the pneumococcus and *Bacillus influenzae* in combination. There seemed to be evidence that vaccines would often cure them. There was also abundant evidence that vaccines would often cure an ordinary cold. In chronic sinusitis he had found that streptococcus and Friedländer vaccines gave good results, whilst vaccination with pneumococcus, *B. influenzae*, staphylococcus, and coliform organisms had been valueless. In a series of 14 cases of atrophic rhinitis treated with vaccines of Friedländer's bacillus there was nothing to suggest that the treatment had any curative value. His impression was that a point had been reached at which it was safe to say that vaccines had a definite curative value in some of the complaints treated, and that better results could be obtained with some vaccines than with others. He recorded some instances of temporary ill effect, but knew of no case which had been made permanently worse.

Dr. Agnes Savill said there was no doubt as to the good effect of an initial small dose of *Staphylococcus aureus* for boils, and in long-standing recurring cases vaccines had done more than all other treatment. In folliculitis of the scalp in children a staphylococcus vaccine would immediately improve a condition in which local antiseptic and internal tonic treatment had been tried in vain. In sycosis the effect of this vaccine was sometimes marvellous, in others it failed. She had used the acne bacillus most. In comedones the acne bacillus yielded remarkable results in most cases, but when very large red, angry papules and deep-seated pustules covered the face, vaccines would not cure but only ameliorate the condition. She had ceased to employ vaccines in the angry chronic acne and treated the alimentary tract instead. The unique value of large doses of acne vaccine for seborrhoea oleosa and baldness due to or accompanied by its germ was discovered by her in 1908, and she had recorded 20 cases showing the beneficial effects and cures. She examined each case microscopically and never gave a vaccine unless she found the microbacillus teeming. In only 4 out of 27 cases had she failed to check the disease.

Dr. David N. Nabarro said he was convinced of the value of vaccine-therapy in suitable cases. He had frequently had patients whom he had treated for chronic and recurring colds, for chronic naso-pharyngeal and bronchial catarrh, and for infections of the urinary tract, return to him to have a fresh vaccine prepared because the previous one had done them so much good. The vaccines often failed to cure but they could ameliorate the patient's condition. By means of vaccines one could diminish the number of pus cells and organisms in the urine in infections of the urinary tract, reduce the fever, and relieve the pain and other local symptoms. It was important, however, that the urine should be examined from time to time to ascertain if the same organism was the cause of the trouble. This re-examination of the material voided applied also to mucus from the nose or pharynx, and to sputum. He referred to two cases of streptococcal infection which he had treated with sensitized vaccines, and which he regarded as being benefited by them. He had used other sensitized vaccines than streptococcal, and considered them harmless in suitable doses.

Dr. W. Bezly Thorne recorded three cases differing materially as to symptoms and in some respects in regard to treatment but having this in common—that, having been brought within reasonable distance of recovery by measures of which pharmaceutic and dietetic treatment of alimentary toxaemia formed a part, there remained conditions impairing the completeness and permanence of restoration to health, which were not corrected until recourse was had to autogenous vaccines.

Lieutenant-Colonel R. H. Elliot, I.M.S., thought that much of the optic neuritis, optic atrophy, and iritis in the East was due to pyorrhoea, and excellent results were often obtained by vaccines. Staphylococcal vaccines gave good results in the large boils which were found there, and also the rheumatic pains and asthma which accompanied them. He was told, however, that the antiplague serum gave even better results; and he thought that there was something in vaccines besides the specific element.

The President, in summarizing the discussion, said he thought it was concluded that vaccines were not of much use in those cases which had not been referred to particularly. He thought that the exclusion from the discussion of tuberculin and the use of vaccines for prophylaxis had been a wise provision. It appeared that in acute infections the results of vaccine-therapy in the great majority of cases had been eminently disappointing, though strikingly valuable in a few. These few could not be held to establish the good effects of this form of treatment. Cases in which harm had followed had been observed in this group especially. Most of the cases belonged to the subacute or chronic category. The manner in which vaccines were employed generally throughout the country was essentially unscientific, and could do little good. Another point which had been brought out was the importance of using also ordinary methods of treatment. It was difficult to compute the value of any therapeutic measure, and important to take into consideration the natural course of the untreated disease. There was, therefore, the need for the closest possible co-operation between the workers in the laboratory and those in the wards—a co-operation which should be hearty and without rivalry. The enthusiasm and hopes of the earlier workers had been largely tempered by later experience, and the haphazard use of vaccines in disease could only bring them into disrepute and retard progress.

Section for the Study of Disease in Children.

Friday, December 12th, 1913.

Leonard Guthrie, M.D., in the Chair.

Enlargement of the Spleen in Children.

A discussion on this subject was opened by Dr. Robert Hutchison and Sir John Bland-Sutton.

Dr. Hutchison suggested the following grouping of enlargements of the spleen met with in children in this country:

1. Tumours: Neoplasms, endothelioma, cysts, etc.
2. Infective: Typhoid, ulcerative endocarditis, malaria, tuberculosis, lymphadenoma, chronic arthritis.
3. Chronic venous congestion.
4. Metabolic disorders: Rickets, lardaceous disease.
5. Blood diseases: Leukaemias, splenic anaemia of infancy, chloroma, congenital anaemia with splenomegaly and jaundice.
6. Splenic anaemia of the adult type.
7. Syphilitic.
8. Splenomegaly, with acholuric jaundice.
9. Splenomegaly with cirrhosis of liver: (*a*) Portal cirrhosis, alcoholic and other forms; (*b*) biliary cirrhosis; (*c*) syphilitic cirrhosis; (*d*) Banti's disease; (*e*) congenital obliteration of bile ducts.

He pointed out that the classification was mainly clinical, and made a few remarks explanatory of each group. With regard to Group 5, he said that chronic myeloid leukaemia, which caused so great a degree of enlargement of the spleen in adults, was rare in childhood; but acute myeloid and lymphatic leukaemia were not very uncommon, and were attended by a considerable degree of splenomegaly. By far the commonest blood disorder in early childhood characterized by marked enlargement of the spleen was the so-called pseudo-leukaemia of von Jaksch (splenic anaemia of infancy). The pathological problems which arose in connexion with enlargement of the spleen in these cases in children did not differ from the kindred problems in the case of adults. Group 6: Cases were sometimes met with in later childhood indistinguishable from the splenic anaemia of adults. Group 9: Enlargement of the spleen with cirrhosis was not infrequent. Several varieties might be distinguished: (*a*) The cirrhosis might be of the multilobular type: some cases were alcoholic, but probably other poisons produced a similar result. (*b*) The cirrhosis might be of the monolobular variety (Hanot type). (*c*) The cirrhosis might be syphilitic. (*d*) Enlargement of the spleen might exist for years, and be followed by a multilobular cirrhosis (Banti's disease). (*e*) Cirrhosis might depend upon congenital malformation of the bile ducts. As regards pathology, the questions might be asked: (*a*) What is the cause of the enlargement of the spleen?

(*b*) What is its relation to the pathology of the disease as a whole, and especially is the spleen playing an active or passive part? It was reasonably certain that the cause of the enlargement was not the same in all the groups, but it was particularly necessary to inquire what part was played by syphilis in its production. Dr. Hutchison suggested that in Groups 6 and 8 syphilis played no part, nor did it play any part in cases of cirrhosis, except where the cirrhosis was of the well-known syphilitic variety. As to the ultimate cause of the enlargement in acholuric jaundice, in splenic anaemia of the adult type, in portal and biliary cirrhosis, and congenital obliteration of the bile ducts, he had no suggestions to offer. The results of splenectomy were now enabling one to say whether the part played by the spleen was active or passive. In Groups 6 and 8 the spleen was in some way the cause of the other features in the clinical picture. As regards treatment, he suggested that splenectomy was indicated in Groups 1, 6, and 8. It would generally be admitted that it was inadmissible in Group 5.

Sir JOHN BLAND-SUTTON said the rapid increase in size of the spleen after birth and the facility with which it became engorged in fevers and other infantile disorders, especially rickets, suggested that it had important functions at the commencement of life. The enlarged spleen associated with numerical reduction of the red corpuscles in the disease of children known as "splenic anaemia" was due to functional overactivity of the organ. When its destructive activity was excessive, harmful products of this overaction accumulated in the blood, producing, in addition to anaemia, acholuric jaundice. He had removed the spleen of a woman, aged 22, for acholuric jaundice, with a most satisfactory result. In children the spleen could certainly be removed without interfering with their growth and development. Removal of the spleen in children suffering from splenic anaemia was a life-saving measure. In 1895 he excised the spleen from a girl, aged 5 years, for splenic anaemia. Sutherland and Burghard's patients were aged 6 and 12 years respectively. Hutchinson removed the spleen from a boy aged 7 years. Makins removed the spleen from a girl aged 9 years. He (the speaker) removed an enormous spleen from a girl aged 17 years suffering from splenic anaemia and jaundice. In all these cases the result of the operation was a complete success. He recommended opening the abdomen in the left linea semilunaris. The suspensory ligament (phrenocolic) was then snipped with scissors, and the spleen then slipped out quite easily. The vessels were secured with haemostatic forceps and divided with the gastro-splenic omentum close to the spleen. After the organ had been excised the vessels were tied with silk. Stress was laid on the importance of a study of the microscopic features of the blood when there was enlargement of the spleen. To day any abdominal swelling resembling an enlarged spleen suggested a blood count, and it was not wise to remove a spleen before making a microscopic examination of the blood. The removal of a leukaemic spleen always ended in disaster.

Dr. G. A. SUTHERLAND gave an account of two cases of splenic anaemia which had been under his care, in each of which Mr. Burghard had performed splenectomy. In each of the cases the splenic anaemia was a family affection, and in each there was a rapid improvement and eventually a complete cure. He pointed out that in splenic anaemia the splenic vessels were enlarged, and this had usually been ascribed to the call of the spleen for more blood. On the other hand, it was possible that there might be primarily a pathological condition of the splenic vessels, a vasomotor disorder, leading to hyperaemia of the spleen, and its natural functions were thus disturbed.

Dr. POYNTON limited his remarks to cases of family acholuric jaundice. He had four families under observation, including twelve individuals, some of which had been under observation for several years. He believed that he was among the first to point out in this country that the condition of yellowness might alternate with that of anaemia, and that an enlarged spleen with an anaemia so little tinged with a yellow colour as to be easily overlooked might occur in some members of these families. He had not yet had a case operated upon, although in one case he had recently advised it. The diagnosis was full of difficulties, and those were interesting. Gall-stone colic, gastric ulcer, intussusception, and renal colic had been among those made in his cases. Syphilis of the liver, splenic anaemia, chlorosis, and Addison's disease were other diagnoses that had been made in his comparatively small collection.

Dr. THURSFIELD said that the type of disease known as splenic anaemia was really a congeries of cases due to different causes. From that group there had been separated off the group of acholuric jaundice. But even that was not a homogeneous group. The causation remained obscure, though it was certainly not syphilis. With regard to the pathology of the various cirrhoses, he did not think that any advance had been made. At present there was no method by which one could examine the blood of the living patient and demonstrate the haemolysis causing the anaemia or the pigmentation as the case might be. Still he did not despair of some method being found. With regard to the fragility of corpuscles, there was no abnormal fragility in any disease, even in purpura haemorrhagica and scurvy, except in acholuric jaundice, where in twelve cases with one exception the fragility was abnormal. He felt that in these obscure cases, when the patient was not making satisfactory progress, a surgeon should be asked to remove the spleen, especially because he believed that in the vast majority of cases of splenectomy the whole of the splenic tissue was not removed.

Mr. PHILIP TURNER mentioned a case of a boy, aged 5 years, whose spleen he had removed. He was much wasted, the skin had a yellow, waxy appearance, the spleen was much enlarged, filling the left iliac fossa. Anaemia was intense, red corpuscles being 1½ million and haemoglobin 25 per cent. Dr. French, under whose care the child was, had diagnosed von Jaksch's anaemia. In spite of all treatment the child got steadily worse, and removal of the spleen was decided upon. The operation, which was carried out on the lines described by Sir John Bland-Sutton, was attended by very little shock, and but little blood was lost. Within three months the patient was practically well.

Dr. T. S. LUKIS discussed the question of the fragility of the corpuscles. Mention had been made of the vital staining granules which he had been studying for some time. His researches were not complete and his conclusions had not been formed. Still, it seemed clear that, whatever these granules were, they bore a definite relation to blood destruction, and particularly to blood regeneration. One found them in cases which had surgical haemorrhages; they appeared in the blood for a time during regeneration, and disappeared when the blood returned to normal. In 7 cases of acholuric jaundice which he had examined he found a very high percentage of these vital staining cells. Generally speaking, in those cases where there was a high percentage of vital staining cells the prognosis was better.

Dr. PARKES WEBER thought that with the help of further research the following classification might be possible:

1. Enlargements of the spleen in which the enlargement and structural or functional change was serving some useful purpose.
2. Enlargements due to the presence of tumours.
3. Enlargements or alterations due to the local presence of microbes.
4. Enlargements or alterations connected with disorder or excess in the functional activity of the splenic tissue.

Dr. HUTCHISON and Sir JOHN BLAND-SUTTON replied.

SECTION OF PSYCHIATRY.

Tuesday, January 27th, 1914.

Sir GEORGE SAVAGE, President, in the Chair.

Influence of Toxins on the Nervous System.

Dr. DAVID ORR read a paper by himself and Dr. R. G. Rows, entitled, "Further observations on the influence of toxins on the central nervous system." Experiment showed that toxins travelled upwards readily in the perineural lymphatics, and the irritation was continued in the central nervous system if the toxins succeeded in gaining that level. Continuity of extension was an important feature, and was as constant in the central as in the peripheral nervous system. The lymphogenous infiltration was characterized by reaction of cells of the fixed connective tissues; secondly, by proliferation of the cells

of the adventitial sheath of veins and capillaries; thirdly, by the appearance of scavenger cells in the cord when the myelin was disintegrated; and fourthly, nerve cell degeneration. The proliferation of adventitial cells was like the periarteritis in general paralysis of the insane and some other conditions. They had found that the lymph path of the nerves was an important mechanism in brain and cord infection, and probably general paralysis and tabes were lymphogenous infections. Another mode of infection of the central nervous system was by the blood stream, and, over and above the deleterious influence on nerve tissue of organisms and toxins, one had to remember the effects of products of altered metabolism and the influence of hypersecretion and hyposecretion of the ductless glands. In the present series of experiments the authors had commenced a study of the effects of bacterial intoxication on the spinal cord, and had chosen the abdominal cavity as the site of the experiments. The reasons for this were multiple: (1) This site was most suitable for experiment in which one wished to exclude infection of the lymph system of the spinal nerves; (2) in order to reproduce as closely as possible gastro-intestinal intoxication and observe the effects on the spinal cord; (3) to ascertain in how far such toxic infection affected the sympathetic ganglion chain. The method of inducing the toxaemia had been uniform in all the animals: celloidin capsules containing a culture of the *Staphylococcus pyogenes aureus* placed in the abdomen, where it was attached to various organs —the mesentery, kidney, bladder, and lower part of the stomach. Ten rabbits and one dog were used. At the *post-mortem* examination the capsules were found surrounded by an accumulation of inflammatory cells, and the mesentery, stomach, small and large intestines were all congested. The inflammatory reaction extended from the neighbourhood of the capsules a considerable distance along the mesentery, and there was abundance of evidence of reaction in connexion with the sympathetic ganglia. The vessels passing into the ganglion substance showed proliferative changes in the ganglion sheath. Some of the sympathetic ganglia were surrounded by masses of degenerate polymorphonuclear cells, by cells of the lymphocyte type, and fibroblasts. The vessels passing into the ganglion substance showed proliferative changes in the adventitial sheath. Within the ganglia there was chromatolysis of the nerve cells. Much of the chromatophile material had disappeared from the centre of the cell, and the nucleus was displaced to the periphery. The spinal cords were fixed in formalin and potassium bichromate, and pieces from all regions were cut in longitudinal and transverse sections. No evidence of lymphogenous invasion was found in the sheath of the spinal ganglia, the perineurium of the spinal roots, or in either the dura mater or pia arachnoid. But within the cord the picture presented a remarkable difference, and the proliferation of the glial elements was very noticeable. It affected both white and grey matter, but mostly the outer layers of the latter. Many amoebid neuroglia cells were clustered round the veins and capillaries of the white matter. There were also scattered sclerotic foci, consisting of glial elements in the resting stage following proliferation. There was absence of sclerosis in any of the tracts of the cord, but there was considerable fragmentation, the appearance resembling that in the cord oedema of cancer cachexia and pernicious anaemia. The changes in the vessels varied much; where intense toxicity was induced, the changes in the vessels were the most prominent morbid phenomenon in the cord. Many of the vessels contained hyaline thrombi. The authors thought there must be a factor at work besides general intoxication, and invoked a disturbance of the sympathetic influence on the cord vessels.

Dr. F. W. Mott considered that the experiments were of great value, and had been conducted with much care, though he was not inclined to accept all the conclusions in the paper. The effect of a poison was different according to whether it operated through the lymphatic stream or through the blood stream. The lesion shown by photomicrograph in the cord reminded one very much of that of combined sclerosis, and in pernicious anaemia there was oedema of the cord. There was no proof of a sympathetic affection, and one would have expected changes in the pupils. The fact that the changes were much more marked when the toxin travelled up the posterior spinal lymphatics was of great interest to him in connexion with the causation of tabes dorsalis. In this disease one usually found in the aorta evidence of syphilitic lesions, and he thought it possible that toxins might pass up by the lymphatics along the blood vessels, and so get into the posterior columns of the cord and produce the degenerative changes characteristic of the disease. But the Argyll Robertson pupil was difficult to account for by a theory of that kind. The authors' experiments supported the original doctrine that tabes was a syphilosis affecting the posterior lymphatic system of the spinal cord. There was no degeneration of those segments of the cord supplying the pre-axial border of the limb, and there must be an anatomical reason for that. The reason the frontal lobes of the brain were first and most seriously affected in general paralysis seemed also to depend on some anatomical fact; the frontal lobes were supplied by veins in which the blood ran against gravity, and opened into the longitudinal sinus in a direction opposite to the current, so there would be a tendency to congestive stasis. If the spirochaetes were anaërobic organisms, the conditions were such as to favour the development of the disease in that region first.

Dr. F. E. Batten said the changes described were strikingly like those in subacute combined degeneration of the cord. He would like to hear more fully what the authors meant by hyaline thrombosis, for such a staining occurred in subacute combined sclerosis. Did it mean that the vessels were definitely thrombosed?

Dr. Orr replied that what was seen was degenerated myelin in the posterior median septum, immediately surrounding the vessels; the hyaline seemed to be lying free in the lymph spaces. Some vessels contained a plug, but were not thrombosed from end to end.

Disturbance of Personality in Mental Disorders.

Dr. R. G. Rows read a paper on this subject. He said disorders of the mind were now considered from a broader point of view; it was now no longer thought sufficient to enumerate the psychic symptoms and label the case accordingly; to say that a case was an atypical case of disease was equivalent to saying some factor had escaped notice, or could not be explained. The psychogenic as well as the pathogenic etiology must receive attention. The bodily and nervous symptoms might be as much a part of the illness as were the psychic; in fact, these latter were often merely a symbol expressing some change in the function of an organ outside the brain. The paper was based upon two cases in women whose morbid mentality, originating in a grave shock caused by loss of a close friend, was described in detail and carefully analysed. The loss of mental balance was largely shown by strong alternations between religious intensity and erotic sensations, and there were periods of apparent detachment of personality, so that one of the patients declared that part of her own self reposed on the pillow beside her. The mental development of these women was, in the author's opinion, influenced largely by the strongest of the instincts, and Dupré had adduced much evidence in support of the view that perversion of the instincts lay at the bottom of many of the anomalies of mental development, and considered that practically the whole of our mental activity might be affected by these disturbances of the instincts. Juliusberger suggested that psycho-analysis would show that the source of the disturbance of the organ sensations must be sought in a disturbance of the psycho-sexual constitution, and organ sensations were a most important constituent of sexuality. One patient said that her attacks of giddiness, in which she said she felt justified in doing anything to relieve the tension, occurred most frequently after her thoughts had been running on sexual matters. The author showed that anything which disturbed the affective tone of sensations, by toxic action or otherwise, would interfere with the psychic functions, and hence a morbid affectivity might be produced. Head's work on certain mental changes that accompanied visceral disease bore upon this, and Dr. Rows and Dr. Orr had shown that similar morbid effects might occur in the brain, the vessels of which were provided with vasomotor fibres, and were thus under the control of the sympathetic system. It seemed clear that primary lesions of the sympathetic system might disturb the organ sensations, and also the

dynamic processes in the central nervous system, and so play an important rôle in producing those mental disorders in which a change of the personality was a prominent symptom.

Leucocytozoon Syphilidis in Brain in General Paralysis.

Mr. J. E. R. McDONAGH showed some microscopic specimens demonstrating the *Leucocytozoon syphilidis* in the brain of cases of general paralysis of the insane. So far, six brains had been examined, in five of which the phases had been found. The exhibitor considered that these phases were more easily to be demonstrated than *Spirochaeta pallida*. Changes were to be found in the pia mater and in the walls of the blood vessels, which extended from the pia into the cortex. But the *Spirochaeta pallida* had not any regular distribution. Since the other phases were mainly to be found in the walls of the vessels, and in those which had their origin in the meninges, it was reasonable to suppose that general paralysis of the insane was caused not by direct extension along the lymphatic sheath, but by extension from the pia mater.

MEDICAL SOCIETY OF LONDON.

AT a clinical meeting on January 26th, Sir DAVID FERRIER, President, in the chair, the following were among the exhibits: Mr. J. E. H. ROBERTS: (1) Man with an *Old fracture of the pelvis and a transpubic hernia*. As the result of a lift accident the symphysis pubis was separated, and the horizontal ramus was fractured. At the time of the accident the patient had a right femoral and a left inguinal hernia. Two and a half years later no bony union had occurred at the symphysis, and the upper three-quarters of the gap was still present. Through this, part of the intestine protruded on coughing. Mr. Roberts had devised a special truss which controlled the hernia. The original inguinal hernia had disappeared. (2) A man aged 62, with *Cloquet's and other herniae*. On the right side was an ordinary scrotal hernia which had been present from birth; on the left was an inguinal bubonocele which protruded into the thigh below Poupart's ligament. The ligament divided the swelling into two parts; both were reduced together, and pressure over the outer part of the inguinal canal prevented the descent of the hernia. This form of hernia had not been hitherto described. Mr. V. WARREN LOW: (1) *Benign growth in the tibia* of a boy. In 1908 there was a smooth uniform swelling of the subcutaneous surface of the tibia. This was exposed by operation, and the interior of the bone was examined. The cancellous tissue appeared softer than normal, and yielded to the finger; the microscope showed evidence of chronic inflammation, but none of tubercle or syphilis. In June, 1909, the bone was reopened, and the softened area gouged away. The pathological report was the same as before. In June, 1910, a large mass of cancellous tissue of the consistency of putty and containing bony granules was removed. The walls of the cavity containing this appeared to be normal. It was now reported to be an ossifying myxo-fibroma. In October, 1910, the boy fractured his right tibia and fibula at the site of the growth. Complete union followed. Since then the growth had gradually increased in size, whilst the tibia was becoming more curved and increasing in length. The swelling caused the boy no inconvenience. (2) ? *Enchondroma of the lower end of the femur* undergoing calcification, in a boy aged 17. The right popliteal space was occupied by a hard oval lump fixed to the femur, but not to the superficial structures. An *x* ray photograph showed some calcareous deposit in the centre of the tumour, but unconnected with the femur. Mr. CHAD WOODWARD: *Fracture of the femur, treated by direct extension of the fragments*, in a man aged 69. Extension was obtained by means of Steinmann's apparatus. The weight attached to the extension cord was gradually increased to 24 lb., and the injured limb became longer than its fellow by slightly more than half an inch after three days' extension by this weight. The weight was then decreased to 21 lb., and this degree of extension was maintained for a fortnight. The pin was removed on the twenty-second day. The result was satisfactory, and this means of treatment was advantageous since simple rubbing could easily be carried out. Dr. J. L. BUNCH: (1) *Multiple rodent ulcer* following traumatism in a man aged 78. The lesions occurred after frost-bite. Many years ago several tumours had been removed, which were said to have followed stinging by bees. (2) *Extragenital chancre of the upper lip* in a woman aged 23. A typical secondary rash was also present.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 16th, Mr. A. ERNEST MAYLARD, President, in the chair, Sir W. ARBUTHNOT LANE delivered a lecture on *Chronic intestinal stasis*. The condition was primarily a stasis in the large intestine, and was most marked in the caecum, ascending colon, and sigmoid. The sigmoid, with its solid contents, tended to pull into the pelvis, and at an early date resistances to this prolapse were crystallized in the form of bands attached to the outer surface of the meso-sigmoid, fixing the mesentery and later the sigmoid as a straight rigid tube to the floor of the iliac fossa. Among the disastrous consequences which sometimes followed the development of these bands were involvement of the ovary and Fallopian tube in adhesions, wasting of the muscle wall of the bowel, obstruction of the bowel, the formation of hernial diverticula, and inflammatory changes, with possibly cancerous infection later on. The caecum tended to be displaced by hydraulic pressure in the erect posture into the true pelvis and this tendency was specially marked in women, on account of their longer abdomen and bigger pelvis. Here also resistances were developed in the form of bands or membranes, running in two directions, one upwards and outwards to be attached to the adjacent peritoneum, and the other in and along the posterior wall of the mesentery, which held up the termination of the ileum. In either of these bands the appendix might be involved, with resulting "appendicitis." By the latter band the ileum was not only kinked at one point, but was also twisted on itself, so that the passage of its contents into the caecum was obstructed, with the result that material accumulated in the small intestine and exerted a drag upon the vertically placed termination of the duodenum. The duodenum in consequence became dilated and changes took place in its mucous membrane, which were exaggerated by the infection of the intestinal contents resulting from their delay. Engorgement of the mucous membrane was followed by inflammation, abrasion, and ulceration. The hepatic and pancreatic ducts were also infected, and changes of an inflammatory, and later of a cancerous nature developed in the pancreas. Gall stones were formed in the gall bladder, which might produce cancer, and the infection of the hepatic ducts changed the secreting power of the liver. Spasm of the pylorus developed to prevent the passage of the compressed duodenal contents back into the stomach, while the contents of the stomach were dammed back, and changes consequent on gastric distension resulted—degenerative and inflammatory changes in the mucous membrane with, later, ulceration and cancer. Stasis resulted in the absorption into the circulation of an excess of toxic products, which produced degenerative changes in every tissue and organ. If operations on the drainage scheme had done nothing more than demonstrate the damage done by these poisons, the remarkable power of repair which the tissues exhibited on being freed from their malign influence and the extraordinary improvement in the function of every organ after operation, they would have been fully justified. Thus the pigmentation of the skin and the coldness, blueness, and clamminess of the hands which characterized patients with chronic stasis, disappeared rapidly after operation. In so-called Bright's disease, which was merely a product of chronic intestinal stasis, the exclusion of the large bowel was followed by a functional improvement as extraordinary as it was rapid. In female patients suffering from stasis the breast was often indurated and knobby; if the supply of toxins were eliminated the organ became soft and healthy. The influence of these toxins on the nervous system was illustrated by the case of a woman who had been confined to bed for many months, and whose mental condition was such that she was regarded by many as an imbecile. Within a few weeks of the removal of the large bowel she became a happy, active, intelligent woman, and had since lived usefully,

earning her living. A woman who had suffered for nine years from epileptiform neuralgia of the right fifth nerve was sent from South Africa to have the Gasserian ganglion removed. She was definitely static, and her symptoms varied with her toxicity. She was short-circuited, with the result that all symptoms disappeared, and her general health and weight improved rapidly. In another patient, a man, intense headaches, associated with vomiting suggestive of cerebral tumour, disappeared abruptly after an ileo-colostomy. Removal of the large bowel had been followed by very rapid subsidence of a large adenoma of the thyroid, and typical symptoms of exophthalmic goitre of long standing, associated with intestinal stasis, had rapidly and permanently disappeared in other cases. The extraordinary improvement that resulted from short-circuiting and the disconnexion or removal of the large bowel did not mean that the colon was the chief source from which toxins were absorbed in excess. The improvement was largely due to the fact that the evacuation of the small intestine was facilitated by its introduction into the pelvic colon, so that the infection of its contents by organisms which grew in the stagnating material in the large intestine ceased abruptly, and the production and absorption of toxins therefore no longer took place.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on January 20th, Dr. SYKES in the chair, Mr. APPLEYARD read notes on a case of *Nerve deafness following the use of salvarsan*. The patient was a syphilitic man, aged 24, who received an injection of salvarsan about the middle of October, 1913. Six weeks later he became totally deaf in both ears. A week later he was dizzy and had nystagmus on looking both to right and left. The rotatory and caloric tests showed that the vestibular branch of the eighth nerve was also affected though not totally destroyed. Both drums were normal as also was his vision. There was no optic atrophy. Mr. Appleyard thought the deafness was most likely due to the salvarsan and not to the syphilis. The case was discussed by Drs. EURICH and LODGE. Mr. HOOTON read a paper on *X-ray examination of the alimentary canal* (with lantern illustrations). Since bismuth came into use for the *x*-ray examination of the alimentary canal in 1897 enormous strides had been made. Beginning with the oesophagus, he showed by means of lantern slides the difference between cardiospasm, malignant stricture, and fibrous stricture, and also the picture produced by an oesophageal diverticulum. Turning to the stomach, he showed slides of a normal stomach, an atonic dilated stomach, a case of extreme pyloric obstruction, and an hour-glass stomach. In duodenal ulcer the food appeared to be delayed in the first part of the duodenum; this was a distinctive feature of this disease. In addition, slides from various cases of intestinal obstruction were shown. The paper was discussed by Drs. LANKESTER, LODGE, EURICH, and RABAGLIATI. Mr. PHILLIPS read a paper on *Dyspareunia* and its surgical treatment. Dyspareunia was much more frequent than most practitioners imagined. It was not a subject women cared to talk about, and the condition went for years undiscovered. Experience showed that this condition underlay many a case of otherwise unaccountable neurosis, and that it nearly always depended on some pathological lesion, which, if properly diagnosed and treated, could generally be cured. The cause might be (*a*) at the vaginal entrance: for instance, unruptured hymen, fissure of the hymen, kraurosis vulvae; (*b*) in the vagina itself—for example, vaginismus, and a very short vagina; (*c*) above the vagina—for instance, retroflexed uterus, prolapsed ovary, ovarian cyst, ovario-salpingitis, parturition trauma. Mr. Phillips described many cases illustrating these causes, most of them showing particularly the difficulties surrounding them and the comparative ease with which they could be treated once the cause had been discovered.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on January 22nd, Dr. E. W. HOPE, President, in the chair, Dr. ADAM HOPE SIMPSON related a case of *Faulty metabolism following panhysterectomy*. There were marked changes in almost every joint; examination showed a deficiency in calcium in the blood, and the blood pressure was low. The patient was treated with extract of the pituitary gland and calcium lactate with marked success. Dr. BLAIR BELL and Sir JAMES BARR discussed the case. Mr. R. W. MURRAY, in a paper on the *Geographical distribution of appendicitis*, sought for an explanation of the change in type and the increasing virulence and frequency of this disease. He had been in correspondence with medical men all over the world, and the universal opinion was that natives were practically immune so long as they continued to live on their ordinary simple diet. The more complex the diet the greater was the proneness to appendicitis, and any excess in the saturated fats was an important predisposing factor. The increased frequency of appendicitis was the punishment of luxury. As far as that disease was concerned, the area of civilization was coterminous with that of the surgeon. Mr. PAUL referred to the bodies found in diverticula of the intestine composed of calcium soaps. Dr. YOUNG, Mr. NEWBOLT, Dr. LOGAN, Mr. DUN, and Dr. STOOKES also discussed the paper. Dr CLAUDE RUNDLE read a short paper on *Induced pneumothorax in the treatment of pulmonary tuberculosis*. He said that Dr. James Carson of Liverpool was the pioneer and originator of this form of treatment, and had prophesied a great future for it. Dr. Rundle's communication was based on the results of the treatment in 21 cases with 250 injections without serious complications. He strongly advocated this treatment in cases of moderate severity where the involvement of the lung was partial and mainly unilateral. He thought the improvement was greater than that following on the administration of tuberculin. The difficulties met with were—adhesions; subdiaphragmatic emphysema and ballooning of the scrotum; pyopneumothorax due to faulty technique; sudden death might occur, dyspnoea, and distress. In his experience pain on inserting the needle was the greatest difficulty. Dr. ADAMS reminded the meeting that Mr. Bickersteth was the surgeon who assisted Dr. James Carson in his first two cases. Dr. Adams himself had six patients under this treatment. He employed quinine and urea as a local anaesthetic. Sir JAMES BARR saw no reason why air should not be used instead of nitrogen. He questioned the value of induced pneumothorax. Dr. MCLELLAN, Dr. HICK, and Dr. JOHN HAY also spoke.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 16th, Dr. WARDROP GRIFFITH, President, in the chair, Dr. F. W. EURICH read *Remarks on intracranial suppuration*. The paper was discussed by Mr. CONSTABLE HAYES, Mr. W. MAXWELL MUNBY, Mr. A. L. WHITEHEAD, Dr. J. G. GREENFIELD, Dr. T. CHURTON, and Dr. R. A. VEALE. Mr. L. R. BRAITHWAITE showed a man, aged 46, in whom an *Aneurysm of the second and third parts of the right subclavian artery* had been successfully excised, with a perfect functional result. Dr. C. W. VINING showed a case of *Congenital heart disease*. There was a rough systolic bruit with a purring thrill, both having their maximum intensity at the base, but present on each side of the neck. The absence of any cyanosis or evidence of increase of size of the right heart made pulmonary stenosis unlikely. The case was thought to be one of aortic stenosis. Mr. J. STEWART showed specimens from four cases of *Extrauterine gestation*. In one case the diagnosis was made, and the affected tube successfully removed before rupture. Dr. T. CHURTON showed three cases of *Empyema*, in one case bilateral, treated by drainage without excision of rib. Dr. J. LE F. C. BURROW showed *Pachon's oscillometer* for measurement of blood pressure.

IT has been decided that the twenty-fourth Italian Congress of Internal Medicine shall be held at Genoa in October. The following subjects are proposed for discussion: Leukaemia and diseases presenting affinity therewith; non-tuberculous lesions of the apex of the lung; gastric neuroses; the early diagnosis of tabes dorsalis. The following subjects are suggested as themes for special debates: artificial pneumothorax; non-nephritic albuminurias.

Reviews.

THE INDIAN JOURNAL OF MEDICAL RESEARCH.

THE second number of the *Indian Journal of Medical Research*[1] contains a number of interesting papers.

Yellow Fever.

The first two, by Major S. P. James, I.M.S., are on yellow fever. The disease does not occur in India, but the mosquito *Stegomyia fasciata*, which transmits it, is abundant in Indian ports. Over ten years ago Sir Patrick Manson called attention to the risk of the introduction of yellow fever into Asia owing to the extension of trade and diversion of trade routes that might be expected to follow the opening of the Panama Canal, which is within the endemic area. Professor Tucker, I.M.S., of Bombay, raised the question of the introduction of the infection into India some three years ago, and in October, 1911, the Government of India instructed Major S. P. James, I.M.S., to report on the subject after visiting the endemic areas in Central America. It would appear that there has been a good deal of misapprehension as to the effect of the Canal in shortening trade routes to India from European and even from American ports; it does not seem probable that existing routes will be abandoned. Mainly for this reason Major James thinks that the risk of the importation of yellow fever from the endemic area to India direct is small, and that if the disease does reach India it will be a secondary result of the infection of ports in Japan, China (including Hong Hong), the East Indies, or Australia. In Hong Kong, which is, we believe, still the port of the Further East with the largest annual tonnage, *S. fasciata* has not been met with. *S. scutellaris* seems not uncommon, but there is no definite evidence that it can carry the infection of yellow fever, though the question does not appear to have been investigated. The last systematic examination of mosquitos in Hong Kong was made by Dr. Thomson as long ago as 1901, and in January, 1912, it was arranged to make a thorough official inquiry. Whether *S. fasciata* occurs at Shanghai appears to be in doubt, but it is present in Singapore. The protection of the East from yellow fever is, in Major James's opinion, dependent in great measure upon the protection of ports of call in islands in the Pacific, and of these Honolulu is the most important in this connexion. *S. fasciata* occurs there, but the campaign of the Board of Health directed against its breeding place has met with a large measure of success. The recommendations made by Major James fall under three main heads: First, that the Indian Government should arrange to obtain continuously first-hand information regarding the disease in the endemic area, and should move the British Government to take steps for the establishment of a central Intelligence Bureau. Secondly, that a thorough investigation should be made in India to ascertain the distribution of *S. fasciata*, especially at ports, and to settle the question whether *S. scutellaris* can carry the infection. Thirdly, that an adequate water supply by standpipes should be ensured in all Indian ports, so as to do away with the necessity of the domestic storage of water. And, fourthly, that a system for the inspection and control of ships, with special reference to yellow fever, should be established at Hong Kong.

Pathology of the Pneumonia of Cholera.

There are three papers on cholera. In the first Major E. D. W. Greig, I.M.S., on special duty for the Cholera Inquiry, records a second case in which he found the comma bacillus in the lung and succeeded in cultivating it. The second is by the same officer, and deals with the precipitation of bacterial protein by concentrated salt solution and its relation to the bacteriological diagnosis of cholera.

Intraperitoneal Saline Injections in Cholera.

The third paper is by Dr. T. H. Bishop. A little over three years ago Professor Leonard Rogers described in the JOURNAL[2] a method of treating cholera the main features of which were the administration of permanganates and the intravenous injection, guided by the blood pressure, of a hypertonic solution of sodium chloride in the collapse stage. Subsequently, in 1911, while on leave from India, he applied the method during the epidemic of cholera at Palermo,[3] and it was continued with success after he left. Dr. Bishop gives a detailed account of the working of a cholera prevention scheme at the constructional works of the Lower Ganges Bridge, to which he is chief medical officer, and describes a modification of Rogers's method of treatment of the disease which presented certain advantages in the special circumstances, and would appear to have afforded equally good results. For intravenous injection asepsis and sufficient light to make certain of the accurate introduction of the cannula are necessary, but neither of these essentials could be ensured; moreover the patients and their friends objected to the requisite incision. Dr. Bishop therefore took the bold course of injecting the saline solution directly into the peritoneal cavity. The main features of this routine method are as follows: An eschar about half an inch in diameter is made with pure carbolic acid about one inch below and to one side of the umbilicus. An assistant grasping the abdominal wall on each side, lifts it well away from the spinal column, drawing it taut and at the same time a little to one side, so that the eschar is in the middle line. A guarded trocar and cannula of special design[4] is then thrust boldly through the abdominal wall at this spot with a screwing motion and the trocar withdrawn. The temperature of the saline solution injected varied in relation to the rectal temperature; when this was 100° F. the solution was also of that temperature, but for each degree above 100° in the rectal temperature that of the solution was reduced 2°, so that with the rectal temperature at 105° F. that of the fluid was at 90° F. It is stated that after the introduction of 70 to 80 oz., the patient has a desire to micturate, and this may be taken as an indication that enough has been given though there may be no actual micturition for a few hours. In cases so bad that the radial pulse has almost or entirely disappeared the quantity of solution introduced may be sufficient to produce some slight abdominal distension, but, as a rule, a suitable quantity is 80 oz. in adults and half this in children. The injections are designed to meet the indication of collapse. Others are met by giving, when the patient is first seen, 20 mm. of fluid pituitary extract in water by the mouth, repeating it every four hours until micturition is established; in urgent cases the extract is given by hypodermic injection. Concurrently potassium permanganate (2 grains) in stearin-coated pills is given every quarter of an hour, until 32 grains have been taken. Afterwards the dose of 2 grains is repeated every two hours until the stools become coloured; on the second day 2 grains are given every two hours for eight doses. Weak calcium permanganate solution is also given occasionally, but for the first three days the diet is limited to barley water; after this, first soup and then whey and jelly are allowed, but no solid food until a week after all symptoms have subsided. In the two years prior to the introduction of this method of treatment 229 cases were treated, with 113 deaths (49.4 per cent.); in the first year of the new treatment 261 cases were treated, with 55 deaths (21 per cent.), and in the next six months 38 cases were treated, with no death.

Relapses of Malarial Fever.

Major A. C. MacGilchrist, by the study of the incidence of malaria at Jessore, and of the statistics of the gaol there, has attempted to determine the proportion of relapses to fresh infections. Jessore has an evil reputation for malaria, but this he states is due to the heavy incidence of the disease from July to December. From January to June newcomers seldom get an attack of malaria, and mosquitos are comparatively rare, the nights being fairly cold, and most of the breeding places dried up. The statistics are those for the eight years 1895–1902; those for later dates are rendered useless for the purpose indicated above by the fact that the routine employment of quinine as a prophylactic was begun in 1903. During the non-malarious seasons of these eight years the number of admissions averaged 25 a month, during the malarious seasons the average was

[1] Calcutta: Thacker, Spink and Co. Price 2 rupees; annual subscription: India, 6 rupees, other countries, 10s.
[2] BRITISH MEDICAL JOURNAL, 1910, vol. ii, p. 835.
[3] BRITISH MEDICAL JOURNAL, 1911, vol. ii, p. 631.
[4] Made by Smith, Stanistreet, and Co., Calcutta.

40 a month. Major MacGilchrist contends that it is safe to assume that the 25 cases in the non-malarious season were all relapses, and that as there is no reason why the number of relapses during the fever season should not be taken as approximately the same as that during the non-fever season, of the 40 cases each month during the fever season 25 were relapses and 15 fresh infections. From this he concludes that the customary treatment of malarial fever is unsatisfactory, and entails loss of efficiency, which, even if attention is confined to European troops, is a serious consideration for the Government. He recommends that the dose of quinine for an average adult man (weighing 11 st.) should be 20 grains every eight hours, with or soon after food. The object is to keep the quinine in the blood as high as possible during the whole twenty-four hours: when quinine is taken with food its elimination, and presumably the amount in the blood, continues high for six or eight hours. For after-treatment or "disinfection" he recommends 20 grains each night for a week or longer; as a prophylactic the same quantity after the evening meal on two consecutive days in each week. In another paper the same writer recommends precipitated quinine base as the best form for administration by the mouth, and in cases in which haemoglobinuria is to be feared. It can, he states, be given intravenously: it is dissolved in a minute amount of absolute alcohol, and normal saline added to make a dilution of 1 in 2,000 or 1 in 5,000.

Nastin in Leprosy.

Captain L. Bodley Scott contributes a very favourable report on the value of nastin in leprosy, founded on his experience at the Sylhet Asylum in Assam. The number of patients treated with nastin (B 1) was 49. After periods of treatment varying from four months to three years and a half, eight patients were reported cured—that is to say, they recovered good general health, lost all symptoms causing inconvenience or incapacity, and resumed their ordinary occupations. The number of deaths was six; two died of cholera and one of dysentery; the deaths of the other three were due to leprosy; two were very severe cases when admitted, the one of nerve and the other of nodular leprosy; five other cases got worse but did not die; none of the remainder developed any fresh leprous lesion while under nastin treatment.

THE ANNALS OF TROPICAL MEDICINE AND PARASITOLOGY.

THE *Annals of Tropical Medicine and Parasitology* are issued four times a year by the committee of the Incorporated Liverpool School of Tropical Medicine, and in January, 1907, succeeded the series of *Reports* of the school which had been issued since 1899. The present fasciculus of the *Annals* is the fourth of the seventh volume.[5]

Cultivation of Malarial Parasites.

The current number contains a paper by Dr. J. G. Thomson and Dr. David Thomson on the growth and sporulation of the benign and malignant tertian malarial parasites in the culture tube, which brings the investigation of this important subject a step further forward. They have succeeded in cultivating the malignant tertian parasite by the method of Bass and Johns on twelve occasions and the benign tertian parasite on three occasions. They find that it is unnecessary to remove the leucocytes from the blood before incubation, and that though the parasites may grow at a temperature of 36° C. or 37° C., the optimum temperature appears to be about 38° C. The time required for the full development of the parasite *in vitro* varies, and is partly in relation to the age of the parasite at the time of incubation. The benign tertian parasite in culture showed no tendency to clumping either before or during sporulation, whereas the parasite of the malignant tertian tended to clump. This difference, the authors consider, explains in a satisfactory manner why only young forms of malignant tertian are found in the peripheral blood, as the clumping tendency of the larger forms causes them to be arrested in the finer capillaries of the internal organs. It also explains the tendency to pernicious symptoms, such as coma, in malignant tertian malaria. All stages of the benign tertian parasite are found in the peripheral blood, and there are seldom pernicious symptoms, because there is no tendency to clumping. The malignant tertian parasite (*P. falciparum*) is capable of producing, in maximum segmentation, thirty-two spores. On the other hand, benign tertian (*P. vivax*) produces, as a rule, during maximum segmentation, sixteen spores; sometimes more may be produced, but the number is never thirty-two. The pigment in *P. falciparum* collects into a definite, circular, and very compact mass early in the growth of the parasite. On the other hand, during the growth of *P. vivax* the pigment remains scattered in definite granules throughout the body of the parasite, till just before segmentation, when it collects into a loose mass of granules in the centre of the full-grown plasmodium. The morphology of *P. falciparum* and *P. vivax* in the human host is identical with the morphology of these parasites as obtained in the culture tube. This paper, as is the rule with the *Annals*, is admirably illustrated.

Cultivation of Babesia canis.

Dr. J. G. Thomson also has a paper, written in collaboration with Dr. H. B. Fantham, on the culture of *Babesia* (*piroplasma*) *canis*. It is a preliminary communication, and is of particular value because the investigation of cultural forms of protozoa is at the present day of great importance, since it may lead to many practical applications. They were successful in two out of four attempts. They followed the method of Bass, using blood and glucose, and incubating at 37° C. Various types of the organisms were seen in the cultures—pyriform, amoeboid, rounded and oval. Division of rounded forms was observed by gemmation with chromatinic forking. A puppy was inoculated from a forty-one hours' culture, and succumbed to piroplasmosis on the fifth day.

Statistical Study of Blackwater Fever.

In another paper in the same issue Professor J. W. W. Stephens gives the results of a statistical study of blackwater fever. From an examination of 390 collected cases, he finds that parasites were recognized in 73 per cent. of cases examined on the day before the onset, in 47.5 per cent examined on the day of onset, and in 23 per cent. examined on the day after the onset. This confirms previous observations as to the rapid disappearance of parasites during the course of the disease; it is in all probability associated with the acute haemolysis that takes place in blackwater fever, and points to the conclusion that the initial attack is closely associated with a malarial attack. From an examination of the figures for Nigeria and for the Ancon Hospital, Panama, Professor Stephens found further evidence of the dependence of blackwater fever on malaria; he admits that it is possible to argue that the relationship depends upon the fact that we are dealing with two diseases both inoculated by the mosquito, or that those suffering from malaria are debilitated and so open to the attack of the hypothetical other disease, but contends that even if for argument's sake such hypotheses were allowed it would still be necessary to recognize that this disease affects those suffering from malaria. He considers that the obvious explanation is the true one. He points out also that the figures lend no support to the view that there is a quinine haemoglobinuria distinct from blackwater fever.

NON-BITING FLIES.

THE part non-biting flies play in the spread of disease has within recent years come much before the public eye, but although a fair number of papers and reports have appeared upon the subject no authoritative book has hitherto seen the light of day.

Dr. GRAHAM-SMITH of Cambridge now supplies this want in a work entitled *Flies in Relation to Disease—Non-Blood-Sucking Flies*.[6] The book forms the first of a series—the Cambridge Public Health Series—under the editorship of the author and J. E. PURVIS. It is intended that volumes of this series should contain material which will be

[5] *Annals of Tropical Medicine and Parasitology*. Liverpool: The University Press. (7s. 6d. net. Subscription £1 2s. 6d. a volume post

[6] *Flies in Relation to Disease—Non-Blood-Sucking Flies*. By G. S. Graham-Smith, M.D., University Lecturer in Hygiene, Cambridge. Cambridge: The University Press. London: Cambridge University Press. 1913. (Med. 8vo, pp. 306; 24 plates, 32 figures. 10s. 6d. net.)

suggestive and instructive to members of Public Health and School Hygiene Committees, and influence the large body of the educated and intelligent public in the problems of public health. The work is divided into twenty-eight chapters, of which some are devoted to descriptions of the house-fly, its anatomy, structure, and habits, while others deal with the part flies play in the spread of anthrax, cholera, tuberculosis, typhoid, dysentery, and other diseases. There is a chapter on myiasis and others on the diseases and parasites of flies, and the enemies of flies; the last chapter contains a summary and conclusions. From this list it will be seen that the ground covered is extensive. The descriptions of all that pertains to the house-fly are excellent, and will be very useful to any student of the subject. The tables in Chapter IX indicate how much careful and accurate work the author has accomplished in determining the way in which flies carry and distribute bacteria.

A glance at the last chapter shows clearly the danger of flies, even when our attention is turned only to the non-blood-sucking flies. The dangers are greatly increased when biting flies are also taken into consideration. Perhaps the part of the book of most interest to tropical practitioners is that dealing with myiasis, by which term is understood the presence of dipterous larvae in the living body of man or animals, and the disorders thus set up. This is a very important subject; the *Chrysomyia macellaria*, for example, can cause serious lesions, and even death. The author has not noted in the section dealing with *Dermatobia cyaniventris* the recent work on the transmission of these larvae by mosquito bites. It has lately been shown that the eggs of this fly are laid on rotting bananas or other vegetation, and by means of a cement substance become attached to the thorax and abdomen of mosquitos (*Jansinothoma lutzii*) which have been frequenting those sites. The larvae are carried about by the mosquito, and emerging from the eggs drop on the skin and penetrate this by means of the puncture made by the mosquito. This explains the term "mosquito worm" so often used for this infection.

Another point that requires clearing up, and which the author might have verified more fully, is Austen's statement that *Cordylobia anthropophaga* has been wrongly identified as *Bengalia depressa*, and that there is no evidence to show that the latter is a subcutaneous parasite. A short bibliography of the subject is given. The book is a very good one, and meets a very distinct want.

RURAL INDIA.

In *The Silent India*[7] Colonel THOMSON describes the real India, the India of the masses, who speak in no congress, who write in no newspapers. Comparatively few Europeans come much in contact with the rural population. The tourist sees the Presidency towns and a dozen show places, chiefly great cities. The merchant who works in Bombay or Calcutta, even the official stationed in these towns, sees little more. The District officers, magistrate, policeman, and civil surgeon, especially the first, come into closer relations with the villagers. Besides the magistrate, the men who see most of rural India are the planter and the sanitary officer. Colonel Thomson has gained his experience in twenty-five years' service in the Sanitary Department in Hindustan proper, now the United Provinces, the most typical part of India. Probably no medical officer of recent times is better qualified to write about rural India.

India is a big place, a continent rather than a country. The census of 1911 returned a population of over 315 millions, who speak over a dozen different languages and some hundreds of dialects. In spite of the great growth of twelve or fifteen large cities, and considerable industrial development in the mills—manufacturing chiefly cotton in Bombay, jute in Bengal—two-thirds of the population still depend upon agriculture. Of these 315 millions, only 10 per cent. of males and under 1 per cent. of females can read their own vernacular. The proportion who know any English, even a smattering, is about one in 300. Sikh and Madrasi, Pathan and Bengali, Gurkha and Maratha, differ from each other in race, language, and religion, more than Italian and Swede, Spaniard and Russian, Greek and Englishman. In no country in the world does the rural differ from the urban population so much as in India. The highly educated scholar from an Indian university, perhaps finished at Oxford, is about as much in sympathy with the *raiyat* as a French advocate with a Russian peasant. The half-educated student from the Presidency towns is no nearer to the cultivator; indeed, the interests of the two classes are opposed. It is from the peasantry that we recruit our army and police; it is on the prosperity and on the content of the peasantry that English rule is based.

The twelve sketches which the book comprises are all well written and all readable. Some—An Indian Village, A Religious Fair, and the Conclusion—are serious studies of Indian life. Others—An Oriental Stratagem and The Misadventures of Paiga—are amusing. A Village Tragedy and The Little Cricket are sad, the latter describing how the bright and promising son of a village *bania* develops, under evil influences, into an anarchist; thus somewhat resembling that tragic book, *Siri Ram, Revolutionist*. The illustrations, from photographs taken on the spot, are good.

TROPICAL MEDICINE AND HYGIENE.

LIEUTENANT-COLONEL J. A. WYLLIE has translated into English, under the title, *Sleeping Sickness in the Island of Principe*,[8] DA COSTA'S little book describing the measures taken in the island in respect to sanitation, statistics, and hospital services, and the work of the official conservancy brigade. The history of the disease in Principe is a very instructive one; the fly was the first arrival, being brought by cattle imported from the Gaboon in and after 1825. The disease did not appear until 1890, when Angolan labourers from the infected region of Cazengo began to be introduced. Although the disease then spread rapidly the Government did nothing to prevent its extension till 1907. In 1911 steps were again taken; but it was not until 1912, when Da Costa took on the work of the previous missions, that any decrease in the spread of the disease was observed. In this book Da Costa has narrated what was done; prophylactic measures against the spread of sleeping sickness, he states, are being carried out by all planters, but by some more judiciously than by others. The planters have complied not only with the law of April 17th, 1911, but also with all the instructions, having for their object the radical extinction of sleeping sickness, issued by the medical mission. The sacrifices made and the efforts exerted by all the owners and the government have given fruitful results; but, in order that the warfare against the disease should cover a sufficient area, the government, he believes, must facilitate the entry of labourers to the plantations and get more men to make up the strength of the official brigade, in accordance with the decree of April 17th, 1912. He also urges the government to reorganize the mission in accordance with the principles outlined by him in a proposal submitted on February 16th, 1913, and to meet all the requirements therein set out, in the hope of bringing about the total extinction of sleeping sickness within a short period. Even as it is, the general result is satisfactory, and shows that, at any rate in a limited area like an island, an enormous amount may be done in stamping out sleeping sickness and its carrier, the *Glossina*. It is to be hoped that the Government of the Island of Principe will back up Da Costa in every way possible and give him the free hand he wishes in stamping out the disease.

A second edition of Dr. DANIELS'S *Tropical Medicine and Hygiene*[9] is now being published. The original work was in three parts, and the second edition will follow the same plan. Part I—Diseases due to Protozoa—has now been revised, and the other parts will follow in due course.

[7] *The Silent India; being Tales and Sketches of the Masses.* By Lieutenant-Colonel S. J. Thomson, C.I.E., I.M.S.(ret.) Edinburgh and London: W. Blackwood and Sons. 1913. (Med. 8vo, pp. 374; 12 illustrations. 10s. 6d. net.)

[8] *Sleeping Sickness in the Island of Principe: Sanitation, Statistics, Hospital Services, and Work of Official Conservancy Brigade.* By Surgeon-Captain Bernardo F. Bruto Da Costa, Health Officer and Chief of the Sleeping Sickness Commission. Translated by Lieutenant-Colonel J. A. Wyllie, F.R.G.S., Indian Army (retired), Honorary Associate Centro Colonial, Lisbon. London: Baillière, Tindall, and Cox. 1913. (Demy 8vo pp. 93; 3 plates. 2s. 6d. net.)

[9] *Tropical Medicine and Hygiene.* By C. W. Daniels, M.B.Cantab., F.R.C.P.Lond. Part I—Diseases due to Protozoa. Second edition. London: John Bale, Sons and Danielsson. 1913. (Med. 8vo, pp. 292; 2 plates, 75 figures. 7s. 6d. net.)

The author has sought to group the diseases treated according to their known or probable causation—for example, diseases such as malaria, which are known to be of protozoal nature—are dealt with in the first part, while in the second part diseases due to the higher forms of animal life are considered. Part III is devoted to bacterial diseases, to the effects of certain animal and vegetable poisons, and to certain diseases the causation of which is unknown or but imperfectly understood. This plan is very practical and useful, and conduces to a clear comprehension of the subject. This first part of the second edition is a distinct improvement on the corresponding part of the first. The book is excellent, and gives a very good description of the subjects that make up tropical medicine. It can be confidently recommended.

Nothing succeeds like success. A few years ago books on elementary tropical hygiene did not exist. Then Prout brought out his well-known work. So popular did this become that imitators quickly appeared in the field. The latest addition to the ranks of these little primers is one entitled *Lessons in Elementary Tropical Hygiene*,[10] by HENRY STRACHAN, C.M.G., late P.M.O. of Southern Nigeria. It contains a series of lessons which seem suitably simple for children. As regards diagrams for such works it is well, in fact it is essential, that some idea of the magnification of the objects depicted should be given. Facing page 57, for example, is a plate on which, amongst other objects, appear a larval filaria, and then, immediately below it, but of smaller size, an adult whip worm (*Trichuris*). Want of discrimination in this respect must tend to convey erroneous ideas to the youthful mind. The work does not differ materially from other existing books, but it may well be able to find a place for itself amongst them.

It is difficult at the present time to find anything new to write about upon malaria, though that does not, of course, mean that the subject is worked out. Far from it, indeed, for the eradication of the disease calls for more attention than is being given to it, and as Dr. HENSON'S little book[11] deals carefully with this side of the question, there is justification for its publication. Perhaps it would have been as well if he had limited the work to the subject of prophylaxis, as it was hardly necessary to set out again all the well-known facts concerning the etiology of the disease, nor as a matter of fact to go to the expense of a not too good coloured plate of the schizogony and sporogony of the parasite. The book, however, is well written, and the facts are stated clearly and concisely; this being the case it may with confidence be chosen for reading by any one beginning the study of malaria.

A useful *vade mecum* for planters is the little work entitled *Planter's Medical Guide*,[12] by E. N. GRAHAM, F.R.C.S.Edin., Medical Officer of the Malacca Rubber Plantations, Limited. A variety of diseases are described, and other useful information about drugs, sanitation, hospitals, and medico-legal matters is incorporated. The vocabulary, giving the English equivalents in the different languages used in the Malay Peninsula, is specially valuable.

NOTES ON BOOKS.

THE subject of the fourth of the National Health Manuals deals with *Youth*,[13] those of the three earlier volumes having been infancy, childhood, and school life respectively. It consists of a series of articles, preceded by an introductory chapter by the editor, Dr. T. N. KELYNACK, dealing with youth from different standpoints, but always in relation to health. Sir Thomas Clouston, for instance, considers the psychology of youth; Dr. Robert Hutchison, its diet; Dr. John Lambert, its occupations and recreations; and Dr. Fortescue-Brickdale, its disorders; while Sir James Crichton-Browne writes of growth and development; Dr. Alice Burn, of the hygiene of the adolescent girl; and Dr. Athelstane Simey on the same point in regard to boys. The remaining sections concern education, habits, ethics, and citizenship, the writers being Dr. Allan Warner, Sir Alfred Pearce Gould, Professor J. A. Lindsay, and Dr. Robert Murray Leslie respectively. Though all these various essayists have been left a free hand in the treatment of their particular part of the general subject, there is very little overlapping, and most of them manage to combine brevity with clearness. Hence the volume as a whole is certainly one well calculated to be of utility to parents and others.

The edition for 1914 of the companion to *Whitaker*, known as the *International Whitaker*,[14] is published in a cloth cover, with rounded edges, for the benefit of those who wish to carry the volume about with them on their travels. It derives its title from the fact that its contents consist of information concerning the more important features of the political constitution, history, geography, population, and commerce of every country in the world, including details as to the names of the principal officers of each State. The habitual inclusion of a statement as to the general character of the climate of a given country, its health conditions, and the postal distance of its chief town from England would be a useful addition.

There is now available a verbatim report[15] of the discussions held last October at the annual conference of the National Association for the Feeble-minded. Considerable light was thrown by some of them on obscure points in the new Mental Deficiency Act, as also on occupations for the feeble-minded, whether residents in institutions or otherwise. The volume, therefore, may be commended to the perusal of members of boards of guardians, educational authorities, and other persons who will have to take action in the matter when the Act comes into force on April 1st of the current year. A copy of the Act itself is included in the publication.

BOOKS FOR STUDENTS AND NURSES.

Though the small volume by Dr. OLIVER BRUCE, joint tuberculosis officer for the county of Essex, entitled *Lectures on Tuberculosis to Nurses*,[16] is not free from the defects commonly present in books based on courses of lectures, the clearly-worded sketch of the whole subject that it supplies entitles it to a favourable reception. It is quite common for nurses to emerge from their training schools without any particular knowledge of tuberculosis, and a study of this book will enable those employed in connexion with tuberculosis campaigns to do their work with increased interest and intelligence. A sixth edition has been published of the *Lectures on Medicine to Nurses*,[17] by Dr. HERBERT CUFF, of the Metropolitan Asylums Board. The author exhibits considerable skill in describing scientific facts in very simple fashion, yet quite accurately, and the book as a whole may be regarded as one of a very useful kind. Also useful is the small pamphlet dealing with *Invalid and Convalescent Cookery*,[18] in which the authoress, MARY E. BIRT, has brought together the recipes which she found of value in dealing with her mother during an illness of several years' duration. In devising them she had the advantage of the assistance of her father, who was a medical man. The papers set at examinations of the Royal College of Surgeons of Edinburgh between June, 1906, and October, 1913, have been brought together under the title of *Fellowship Examination Papers*.[19] The book affords no indication of the standard which the answers should reach, but nevertheless may be of utility to students as a guide to the kind of questions with which they will be expected to deal in written papers. Corresponding assistance to candidates for the dental diploma of the Conjoint Board of Scotland is afforded by *Dental Examination Papers*.[20]

[10] *Lessons in Elementary Tropical Hygiene*. For the Use of Pupils in Tropical Schools. By H. Strachan, C.M.G., L.R.C.P.Lond., M.R.C.S.Eng., F.L.S., F.Z.S., etc. London: Constable and Co., Ltd. 1913. (Cr. 8vo, pp. 127; 6 plates. 1s. net.)

[11] *Malaria: Etiology, Pathology, Diagnosis, Prophylaxis, and Treatment*. By Graham E. Henson, M.D., United States Army (non-active list). With an introduction by Charles C. Bass, M.D., Professor of Experimental Medicine. London: Henry Kimpton; Glasgow: A. Stenhouse. 1913. (Med. 8vo, pp. 190; 27 figures. 10s. 6d. net.)

[12] *Planter's Medical Guide*. By E. N. Graham, F.R.C.S.Edin. Singapore: Kelly and Walsh, Ltd. 1913. (Post 8vo, pp. 100; 11 illustrations.)

[13] *Youth*. Edited by T. N. Kelynack, M.D. London: Charles H. Kelly. (Cr. 8vo, pp. 152. 1s. net.)

[14] *The International Whitaker*. London and New York. (Cr. 8vo, pp. 559. 2s.)

[15] *National Association for the Feeble-minded: Annual Conference Report*. 1913. Published by the Association at Denison House, Vauxhall Bridge Road, S.W. (Roy. 8vo; pp. 108.)

[16] *A Course of Lectures on Tuberculosis to Nurses*. By Oliver Bruce, M.R.C.S., L.R.C.P. Illustrated. London: H. K. Lewis. 1913. (Crown 8vo, pp. 142; 8 figures. 2s. 6d. net.)

[17] *A Course of Lectures on Medicine to Nurses*. By Herbert E. Cuff, M.D., F.R.C.S. Sixth edition. 1913. London: J. and A. Churchill. (Crown 8vo, pp. 281. 3s. 6 net.)

[18] Bristol: John Wright and Sons. (6d. net.)

[19] Edinburgh: E. and S. Livingstone. (1s. net.)
Edinburgh: E. and S. Livingstone. (2s. net.)

INDIA.

SCIENTIFIC INVESTIGATION OF EPIDEMIC AND ENDEMIC DISEASES.

INDIA now possesses several well-equipped research laboratories for the investigation of endemic and epidemic disease. Besides those of the five medical colleges, there are now the Central Research Institute at Kasauli, the King Institute at Madras, the Parel Laboratory at Bombay, and the two Pasteur Institutes at Kasauli and Coonoor. Two more Pasteur Institutes will be opened at Shillong and at Rangoon, while the new school of tropical medicine in Calcutta will also have well-equipped laboratories. All, except those of the three older medical colleges in the Presidency towns, are a creation of the last twenty years.

The oldest laboratory is that of the Calcutta Medical College. In it was started what may be considered the first research work on modern lines undertaken in India, when the late Surgeon-Major T. R. Lewis, A.M.D., and Colonel D. D. Cunningham, I.M.S., then newly joined assistant surgeons, after special training in Germany, began their investigations in 1870. In this laboratory also, within the last ten years, Lieutenant-Colonel Leonard Rogers, I.M.S., carried on the researches on cholera and dysentery which have had such important results within the last ten years. The actual buildings have been renewed. New laboratories, both pathological and physiological, were begun in 1902 and completed about two years later, during the principalship of Lieutenant-Colonel G. Bomford, afterwards Surgeon-General Sir Gerald Bomford, Director-General of the Indian Medical Service.

The new school of tropical medicine in Calcutta, the foundation stone of which is to be laid this month, will be provided with laboratories on an extended scale, and will probably take over most of the research hitherto carried out in the Medical College, when presumably the latter will deal chiefly with Government work.

The Government of the North-West, now the United Provinces used to maintain a laboratory in connexion with the Civil Engineering College at Rurki, in charge of the late Dr. Murray Thompson, Chemical Examiner. The work done in this institution was chiefly medico-legal. After Dr. Thompson's retirement the laboratory was removed to Agra, where, reorganized and enlarged under his successor, Mr. E. H. Hankin, much research has been done, especially on cholera and enteric fever, though the laboratory still deals largely with medico-legal work and other Government business.

PASTEUR INSTITUTES.

In 1893 a project was mooted to organize a Pasteur Institute for India, to obviate the necessity for persons bitten by rabid or suspected dogs taking the long journey to Paris, with the necessary delay in treatment so prejudicial to the result. Few Europeans, and fewer natives, were in a position to undertake this pilgrimage. At the Indian Medical Congress held in Calcutta in December, 1894, the late Mr. Ernest Hart, Editor of the BRITISH MEDICAL JOURNAL, urged the want of a special research institute in India, unhampered by routine Government work, for the investigation of the many questions as to the origin, mode of spread, and treatment of tropical diseases, which called urgently for answer. The foundation of an Imperial bacteriological laboratory was sanctioned in 1896. Considerable delay took place before either of these projects materialized. They were finally combined into one, and in July, 1900, the Pasteur Institute and Central Research Institute were opened at Kasauli, under Major (now Lieutenant-Colonel Sir David) Semple, R.A.M.C., formerly Assistant Professor of Pathology in the Army Medical School at Netley. Both institutions were for several years in Semple's charge. They are independent of, though largely subsidized by, Government. In June, 1905, the control of the Central Research Institute was separated from that of the Pasteur Institute, Lieutenant-Colonel Semple retaining the first, while his first assistant, the late Major G. Lamb, I.M.S., took over the second. Lamb went home on furlough in 1909, and died on April 11th, 1911. Captain (now Major) W. F. Harvey succeeded him, and, on Semple's retirement in 1911, took over charge of the Research Institute also. In addition to its special work in the treatment of rabies, much research work of every kind has from the beginning been carried on in this institution, as well as the preparation of antivenene and of antityphoid and other injections.

In the first year, 1900–1, the number of cases which received antirabic treatment at Kasauli was 321. In 1911 the number had risen to 2,268, and in 1912 to 3,548. In no country in the world, probably, is rabies so common as in India. It is propagated by the hordes of ownerless pariah dogs, which swarm round every village, not to mention the part played by jackals, which are common throughout the country. The great and regular rise in the number of cases treated at Kasauli is due, not to any increase in the disease, but to the rapidly growing appreciation of the institution, and to the increased facilities for resort thereto given by Government, by local bodies, and by railways, some of which, the East Indian Railway for example, carry cases to Kasauli free. The opening of the Pasteur Institute at Coonoor, in Southern India, has had no effect in diminishing the number of cases treated at Kasauli. Nor is it likely that the two new Pasteur Institutes to be opened at Shillong for Bengal and Assam, and at Rangoon for Burma, will cause any diminution of work at Kasauli. Out of the 3,500 odd cases treated there in 1912, only about 500 came from Bengal and Assam, and about 70 from Burma.

PLAGUE RESEARCH.

The Plague Research Laboratory at Bombay was opened on October 8th, 1896, some three months after plague had first been detected in that city, under Mr. W. Haffkine. So it began work some years before Kasauli, though the latter was the first projected. In this laboratory Haffkine prepared his serum for antiplague inoculation; in it the two Plague Commissions made their head quarters, and in it the second Commission is still working. This laboratory, as its name shows, was opened for plague research, and is still concerned chiefly with plague, though much work has been carried out on other subjects—snakebite, cerebro-spinal meningitis, etc. It was situated at first in the Petit Laboratory in Bombay. In 1900 the Bombay Government handed over for its accommodation the old Government Houses standing in extensive grounds at Parel, in the northern suburbs of Bombay. In June, 1905, it was recognized by Government as the provincial laboratory of the Bombay Presidency. Started under Haffkine, for the greater part of its existence Lieutenant-Colonel W. B. Bannerman—now Surgeon-General Bannerman, C.S.I., of Madras—was its director. On his promotion in 1910 he was succeeded by Major W. Glen Liston, who is also senior member of the Plague Research Commission.

The Pasteur Institute for Southern India was opened at Coonoor, on the Nilgiri hills, on April 25th, 1907, with Major J. W. Cornwall as Director. In its first year it treated 180 cases; in 1912 the numbers had risen to 940.

THE KING INSTITUTE.

The King Institute of Preventive Medicine at Guindy, in the southern suburbs of Madras, was opened on March 11th, 1905, and was named after Colonel W. G. King, for long Sanitary Commissioner of Madras, to whom its inception was due. It has three departments—dealing with bacteriology, and with the preparation of vaccine lymph, and of various antiserums respectively. The bacteriological department constitutes the provincial laboratory for the investigation of disease. Dr. F. M. Gibson is the director, and Captain W. S. Patton the senior assistant.

THE INDIAN RESEARCH FUND.

The Imperial and Provincial laboratories are supported by Government; the Pasteur Institutes are maintained partly by endowment and partly by subscriptions, in which the contributions of various Government departments bulk largely.

In 1911 the Indian Research Fund was started for the purpose of investigation into the cause, mode of spread, and prevention of communicable disease. It is managed by a committee, of which the member of the Indian Council in charge of Education, in whose department medical matters lie, is president. Among the members are the Secretary of the Department, the Director-General, I.M.S., the Sanitary Commissioner with the Government of India, and the Director of the Central

Research Institute; the medical members of the committee form a Central Advisory Board, which determines the direction in which investigations are to be carried out, the subsidies required, etc. The committee governs the independent research institutes. The previously existing Malaria Committee was absorbed into this body as a sub-committee. The Fund makes grants towards the cost of the research undertaken in the laboratories. Some fifteen officers are employed in the Bacteriological Department, a number which will probably be considerably increased within the next few years.



The King Institute: Main Building, Bacteriological Section.

All these institutions publish annual reports. The results of the investigations carried on were at first published chiefly in the annual reports of the Sanitary Commissioner with the Government of India, previous to 1883, when the publication of *Scientific Memoirs* began. The reports of Lewis and Cunningham were also published in a special memorial volume in 1888, after Lewis's death. From 1884 to 1901 twelve volumes of *Scientific Memoirs* were published, more or less annually, though no volume was issued in several of these years. From 1902 to 1913 each volume was separately published, and sixty memoirs were thus issued. In July, 1913, came out the first number of the *Indian Journal of Medical Research*, a quarterly, edited by the Director-General and the Sanitary Commissioner, with numerous collaborators, among whom are Sir Ronald Ross, Sir David Semple, and Surgeon-General Bannerman. This journal, the second number of which is noticed elsewhere in this issue (p. 310), is the official organ of the Indian Research Fund. The previous official publication, *Paludism*, which comprised the *Transactions* of the Malaria Committee, has been absorbed into this journal, which is also intended to supersede the separate issue of *Scientific Memoirs*.



The King Institute: Preserved Vaccine Preparation and Storage Rooms. Extract ventilation, with air filters.

COMMISSIONS.

Many special commissioners have worked in India during the last thirty years to investigate and report on epidemic disease. In 1884 was appointed the Cholera Commission—Drs. Klein, Heneage Gibbes, and Lingard. In 1899 the first Plague Commission, under Professor Sir Thomas Fraser, of Edinburgh, traversed India, and subsequently issued a bulky report in several volumes. In 1901 Dr. Stephens was appointed to carry out inquiries into the causation and prevalence of malaria, assisted by S. R. Christophers. The latter subsequently entered the Indian Medical Service, and has since been employed chiefly on research work. In 1905 a second Plague Commission was appointed in London, of which Sir Michael Foster, Colonel Sir David Bruce, R.A.M.C., Surgeon-General Branfoot (President of the India Office Medical Board), and Dr. C. J. Martin (Director of the Lister Institute) were members. Dr. Martin visited India, where he was assisted in his inquiries by officers of the Bacteriological Department of the Indian Medical Service. This commission is still working, and is intended to be permanent. In 1906 a standing committee on enteric fever was appointed in India, and soon after the Malaria Committee, now absorbed into that of the Research Fund, also came into existence.



The King Institute: Vaccine section, Animal Operation Room.

INDIVIDUAL RESEARCHES.

Many important researches have also been carried out in India by individual officers on special duty, the most important and most successful being the investigations of Major Sir Ronald Ross into the etiology of malaria. The first in point of time were the researches of the late Surgeon-Major Henry Vandyke Carter at Bombay into relapsing fever, mycetoma, etc. Among many others of late years may also be noted the inquiry into cerebro-spinal fever carried out by the late Major C. J. Robertson-Milne, and the work of Major E. D. W. Greig on cholera, of Donovan on kala-azar, and of Major W. C. H. Forster on dysentery.

BRITISH TROOPS IN INDIA.

Any review of the remarkably favourable results of sanitary and hygienic measures, in recent decades, on the health of British troops in India (extending also to the native army), suggests a retrospect of conditions up to and after the Mutiny, when the sickness and mortality were very great.

A PICTURE OF THE PAST.

There can now only be very few medical survivors who can personally recall these times, when, in the first half of the nineteenth century, and even later, the deaths of British soldiers in some years reached 39 per 1,000 of strength, against 4.82 in 1912!

The recent enormous vital gain can only be attributed to the advance of medical knowledge, scientifically applied through experts, by a more enlightened executive administration.

The state of medical knowledge fifty or sixty years ago, especially in regard to tropical diseases, may be illustrated as follows:

Half a century ago there was issued to army medical

officers, for statistical guidance, a *Nomenclature of Diseases*, which showed the crude etiology and pathology of the period.

Fevers.

"Typhus" and "typhoid" were rather vaguely distinguished, and the pathology of continued fever—probably really enteric—and "remittent" remained undefined.

Malaria.

In its various manifestations malaria retained its original signification as a supposed gaseous emanation from the earth, having little ascensional power; hence in India (as long recognized in Italy and elsewhere) sleeping in an upper story was held to afford some protection against the ground miasm, as well as some relief from the miserable mosquito, with its limited power of vertical flight, but there was no inkling that the irritating insect carried the infection. At some stations—Jubbelpore, for instance—towers were built about 40 feet high to which sleepers could carry up their beds at night.

Cholera.

In its origin and incidence cholera was a complete mystery. It was regarded as caused by an imponderable aërial miasm, sometimes local and sporadic, but at intervals of years sweeping in epidemic waves over wide areas. Its course was often most erratic; it might pass in a straight line through a cantonment, sparing the flanks, or jump over one area and attack the next, or ravage one barrack and skip its neighbour. To combat such a subtle and intangible foe large fires were lit to windward of a camp in the hope of smoking it out; but with such devices there was hardly a thought of its specific nature or its spread.

Clothing.

The British soldier of to-day, living in India in comparative healthy conditions, does not realize what his predecessors had to put up with under old conditions of personal and barrack life.

Old prints of the forties—after the Sikh war—depict the European soldier in tight white overalls, a tighter red coatee, heavily braced with belts, throttled by a leather stock, and wearing a forage cap with a calico cover, and a poor sunflap behind, all as uncomfortable, unsuitable and unprotective for the climate as old traditional martinetism could devise. Contrast that with the loose tunic, breeches, and puttees, ventilated topee, no stock, and a minimum of belts, the average dress of to-day.

Barracks.

The old barrack bungalows were generally built flush with the ground, with imperfect surface and no subsoil drainage at all; they were ill calculated to defend against heat, cold, or rain, and altogether uncomfortable. Many such were destroyed at the Mutiny, and were hastily replaced by "kutcha" temporary structures, which, however, did duty for years; they were essentially insanitary; they were generally thatched, and without ceiling protection, so that the occupants had often to put up with showers of bugs and other vermin from the roofs.

Contrast these with the palatial "pucka" barracks of to-day.

Conservancy.

Whilst the barracks and neighbourhood were kept perfectly clean, the appurtenances were often unsatisfactory, and the latrines generally abominable; the latter were usually left to the care of the low-caste native sweeper, who carried off their contents, most likely to the handiest dry nullah, which in the rains became a watercourse spreading its foul contents far and wide.

Rations.

The bread and meat ration was sufficient in quantity, but often most indifferent in quality, and the vegetable element nearly always deficient.

The beef and mutton supplied in the hot weather by native contractors was of the poorest, from lack of grass and fodder for the animals, which had to subsist on garbage, and it was even disgustingly rumoured visited the sweeper's nullahs! Contrast that with cold storage and the carefully supervised rations of to-day.

Water Supply.

The value of a pure water supply was only imperfectly appreciated in former days. It was drawn by the *bheestie*, or native water-carrier, from wells in and about the cantonment, some being reserved for drinking, others for ablutionary purposes; but, unless the *pani-wallah* was watched, he was apt to make little distinction between the two; both were liable to contamination by surface infiltration.

There was little supervision over dirty bazaar concoctions of lemonade and ginger-beer.

Although much remains to be done for the water supply of Indian cities, including the ports, and still more, perhaps, for out-stations, much has been done to give the soldier wholesome water, and its purity is a chief care of the sanitary officer.

Milk Supply.

According to immemorial native custom, milk is boiled on being drawn from the cows—not, indeed, with any notion of freeing it from disease germs, but to prevent it becoming sour. The frequent contamination was therefore due mainly to foul vessels, or foul added water; it was formerly little regarded, but is now carefully supervised.

Amenities.

The soldier of to-day, with his lectures, concerts, reading and recreation rooms, gymnasia, etc., little realizes the terribly monotonous life of his predecessor, who, except in rare instances, could only resort in his idle time to ill supplied and comfortless regimental canteens, or betake him to low native quarters to drink, amid squalid surroundings, bad arrack with contaminated mineral waters, or consort with the denizens of the *lal* bazaar.

The Present.

From such a gloomy retrospect we may now turn to the brighter life and health of our soldiers in India, as displayed in reports and statistical tables.

Let it be noted that the immense improvement in the health of the army at home and abroad, but especially in India, largely corresponds with the great reorganization of the Army Medical Service, by which its sanitary initiative has been much increased, and its power of bringing the advances of bacteriological science to bear on military life greatly enhanced.

This sanitary initiative has been supported by the Government of India, not only in regard to the troops but to the native population, by the appointment of various commissions—one to inquire into the mode of spread of one of the chief scourges, enteric fever.

Clinical and bacteriological laboratories have been established at the larger stations, and special instruction given in hygiene to officers and men by lectures and demonstrations, with the result that all take better care of their health; and temperance has increased among the rank and file.

The following table, compiled and compressed from the last Report on the Health of the Army for 1912, shows the immense progress of sanitary science in ameliorating the lot of the soldier in India.

Ratios per 1,000 of Strength of British Troops in India.

Years.	Admissions.	Deaths.	Invalids sent Home.	Invalids Finally Discharged.	Constantly Sick.
1869-1878 ...	1,461.7	16.45	27.95	14.78	33.61
1899-1903 ...	954.1	11.96	29.47	11.71	59.00
1909-1912 ...	591.5	5.10	7.04	6.18	32.46
[1912 ...	547.9	4.62	6.68	5.94	28.83]

The saving in life, health, and efficiency in the two decades and a half which this table discloses is indeed remarkable; every ratio shows a diminution of about two-thirds, and invaliding home three-fourths.

The column "constantly sick" shows one man in hospital where there were formerly three, which means the saving, or addition, of some fighting battalions in the garrison of 70,000 men.

There is a vast saving in men and money in the invaliding home, by the sensible scheme of sending debilitated men to recuperate in the hills, instead of shipping them home right away; also by keeping as many regiments in the hills as possible.

The country should be thankful for the great progress of sanitation among the British troops in India. While it is not to be expected that the contraction of sick ratios can continue at the rate achieved during the last quarter of a century, the activity now displayed in the investigation of the etiology and pathology of diseases prevalent in India, and in the application of this knowledge to administration will yield results of the greatest practical value, not only to the British troops in India, but to the inhabitants of that immense country.

NATIVE TROOPS IN INDIA.

The native troops of the army in India have benefited by the results of the researches, investigations, and administrative reforms enumerated in the earlier section of this article dealing with the scientific investigations of epidemic and endemic diseases in India. The reports of the Sanitary Commissioner with the Government of India do not lend themselves very easily to a comparison of the statistical results, but we have abstracted from them certain figures, which are arranged in the following table, and are, we believe, fairly comparable with the table given above for the British troops in India:

Ratios per 1,000 of Strength, Native Troops in India.

	Admissions.	Deaths.	Constantly Sick.	Invalids.
1877-81	1422	24.90	48	—
1882-86	1009	12.29	33	—
1887-91 . .	1030.4	13.76	35	—
1892-96	880.4	11.56	31.8	—
1897-1901 .	794.4	11 92	30.5	12.66
1902-06 .. .	649.5	8 93	21.4	10.03
1907-11	595.2	5.73	21.24	5.55

It will be observed that there has been a remarkable reduction in all the rates, and that in respect of constantly sick and invaliding the rates of the native troops show results better than those for British troops. That the result of the efforts directed to check the prevalence of malaria among the native troops have been rewarded is shown by the fact that the rates of admission from malaria per 1,000 of strength declined from 467 in the quinquenniad 1889–1893 to 228 in 1904–1908.

THE INDIAN MEDICAL SERVICE.

CELEBRATION OF THE ONE HUNDRED AND FIFTIETH ANNIVERSARY OF ITS FORMAL CONSTITUTION.

An Indian Medical Service dinner was held in Calcutta on Wednesday, January 14th, at the United Service Club, to celebrate the one hundred and fiftieth anniversary of the formal foundation of the Service, on January 1st, 1764. Surgeon-General Sir Charles Pardey Lukis, the Director-General, presided; sixty-seven other members of the Service were present, and a dozen guests, including His Excellency Lord Carmichael (Governor of Bengal), Sir William Duke (the senior member of Council), and Sir Arthur Sloggett (Director of Medical Services of the Army in India).

There were only three toasts—the King-Emperor, and the Service, proposed by Sir C. P. Lukis; and the Guests, proposed by Lieutenant-Colonel W. J. Buchanan, and replied to by His Excellency the Governor.

The following is a list of those present at the dinner:

Guests.—His Excellency Lord Carmichael, Governor of Bengal; Sir William Duke, I.C.S.; Surgeon-General Sir Arthur Sloggett, R.A.M.C.; Nawab Saiyid Shams ul Huda; Mr. P. C. Lyon, I.C.S.; Mr. C. J. Stevenson-Moore, I.C.S.; Mr. H. L. Stephenson, I.C.S.; Colonel W. T. Grice, Calcutta Volunteer Rifles; Dr. Hossack, Health Officer of Calcutta; Lieutenant-Colonel C. C. Reilly, R.A.M.C.; Dr. Caddy, Dr. Heron, Mr. F. E. Stewart, Mr. Hardy Taylor.

Surgeon-General.—Sir Charles Pardey Lukis, K.C.S.I.

Colonel.—G. W. P. Dennys.

Lieutenant-Colonels (22).—H. E. Banatvala, F. J. Drury, W. D. Sutherland, C. R. M. Green, E. C. Hare, E. H. Brown (ret.), J. G. Jordan, F. P. Maynard, W. J. Buchanan, C.I.E., A. R. Anderson, J. T. Calvert, J. C. S. Vaughan, B. J. Singh, F. O'Kinealy, B. H. Deare, R. Bird, C.I.E., E. R. Parry, C. R. Stevens, L. Rogers, C.I.E., E. A. R. Newman, Jay Gould, J. Mulvaney.

Majors (25).—T. A. Granger, A. F. Stevens, C. H. Bensley, C. M. Mathew, E. E. Waters, W. W. Clemesha, R. P. Wilson, F. A. L. Hammond, J. G. P. Murray, J. W. F. Rait, J. C. H. Leicester, G. King, E. D. W. Greig, W. F. Harvey, J. W. D. Megaw, E. O. Thurston, T. G. N. Stokes, M. H. Thorneley, M. Mackelvie, W. V. Coppinger, W. G. Hamilton, R. McCarrison, H. B. Foster, R. E. Lloyd.

Captains (18).—F. A. F. Barnardo, L. B. Scott, J. H. Burgess, W. Gillitt, A. H. Proctor, A. S. M. Peebles, A. D. White, J. Cunningham, C. A. Godson, N. H. Hume, W. L. Harnett, J. D. Sandes, V. B. Green-Armytage, J. A. Shorten, R. B. Lloyd, A. M. Jukes, T. L. Bomford, R. H. Bharucha.

Lieutenant.—J. C. Dey.

Colonel G. F. A. Harris, Inspector-General of Civil Hospitals, Bengal, was unfortunately prevented from attending by illness.

EARLY HISTORY OF THE SERVICE.

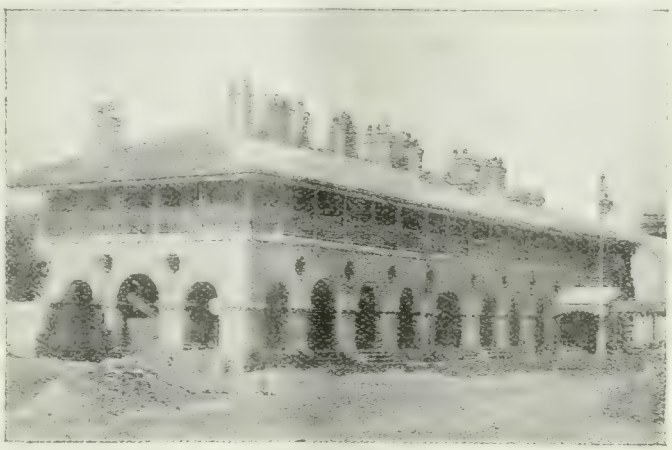
Although January 1st, 1764, was the date from which the Indian Medical Service was formally constituted, that date takes us back only about half way to the real beginnings of the Service. The East India Company's first fleet sailed for the East in December, 1600. It consisted of four ships, each of which carried two surgeons. From this date every Indiaman carried a surgeon; latterly some of the larger ships carried three.

The first factories on shore started by the Company were those at Achin in Sumatra, and Bantam in Java, founded by Captain Lancaster on the first voyage in 1601. For the next quarter of a century the Company's trade was with the Malay Islands more than with continental India. Their first factory in India proper was founded at Masulipatam in 1611. The dates of foundation of the other chief factories were: Surat, January, 1613; Ispahan in Persia, 1616; Fort St. George or Madras, February, 1640; Balasore, 1642; Hugli, January, 1651; Bombay, 1668; Fort William or Calcutta, August 24th, 1690.

From the first the Company kept a medical officer at each of its head factories. Its servants at out-stations had to depend on occasional visits from the surgeon at headquarters. Even so, when a medical officer died, there must often have been long delay before his place could be filled by another surgeon off an Indiaman or from home. During the next century the number of medical officers employed slowly increased. The earliest list of the Service extant is dated 1749; it includes 36 names; in Madras there were 15, of whom 4 were at Fort St. George; in Bengal 9, all in Calcutta; in Bombay 6, 2 in the city and 1 each at Surat, Tellicherri, Anjengo, and Gombroon; in Sumatra 4, and in St. Helena 2. It may not be generally known that, besides the services of the three Indian Presidencies, the Company kept up small separate services in China, St. Helena, Sumatra, and Prince of Wales Island.

Prior to 1764, however, no regular graded medical service existed. Surgeons were engaged to serve in a particular post. They might be, and often were, promoted in turn from the smaller to the larger stations. But they had no right to claim such promotion. Leave and pension were developments of much later date. Any servant of the Company, whether military, civil, or medical, who wished to go home had to resign. The most he could expect was a recommendation to the Court of Directors to reappoint him to the same rank he held before he left, which was often granted. He paid his passage home and out again, and got no pay while absent. Sick leave was first sanctioned in 1783; leave on private affairs in 1796. Pensions were also first granted as a right in 1796, though compassionate pensions had occasionally been granted earlier.

During the Karnatik wars in the middle of the eighteenth century the Company found it necessary to raise a standing army, which of course required surgeons. The medical officers serving in India were combined into a regular graded service from January 1st, 1764, by orders passed on October 20th, 1763, by the Bengal Council, consisting of Henry Vansittart (President and Governor), John Carnac, Warren Hastings, Randolph Marriott, and Hugh Watts. These orders fixed the strength of the Bengal Service at 28 men; namely, 4 head surgeons in Calcutta, 8 surgeons, 4 in the army, and 4 for the chief out-factories—Patna, Dakka, Kasimbazar, and Chittagong; and 28 surgeons' mates, of whom the 8 senior were to be employed in the Calcutta hospitals, the next 8 in European regiments, and the last 12 in sepoy battalions. Just a century later the sanctioned strength of the Indian Medical Service was 861, though it never reached that total. The actual numbers serving in 1861, the highest total attained, were 819, of whom 404 were Bengal men, 219 Madras, and 196 Bombay.



Imperial Bacteriological Laboratory: Main Building.

Several of the most famous members of the Service lived before 1764. Gabriel Boughton, who served as surgeon to Shah Jahan at Agra, and to his son Shah Shuja, Viceroy of Bengal, and got from the latter a charter in favour of the Company's trade, had then been dead more than a century. William Hamilton, the medical officer of Surman's embassy to Delhi, who treated and cured the Emperor Farakh Siyar in 1715, had returned to Calcutta, only to die, in December, 1717. John Zephaniah Holwell, who conducted the defence of Calcutta in 1756, after Drake, the Governor, had fled and abandoned the garrison, and who had been one of the few survivors of the Black Hole, had gone home three years before, after acting as governor for six months. William Fullerton, the sole survivor of the Patna massacre, was still serving.



Imperial Bacteriological Laboratory: Haemorrhagic Septicaemia Sheds.

Later History.

Of the work done by officers of the Indian Medical Service for the advancement of medicine and for the prevention of disease since its formal constitution in 1764, some account is given in the earlier part of this article. It would take us too far to attempt to speak in any adequate manner of its administrative achievements, but we may notice incidentally that education in Western medical methods was introduced into India by officers of the service. A beginning was made in 1812, when young men were appointed in Calcutta and Madras to be trained for the subordinate medical service. A medical college for natives was opened in Calcutta in 1822; the medical colleges in Calcutta and in Bombay were founded in 1835 and 1845 respectively, and since then many other developments in medical education have taken place which would be too long now to set out. Many officers of the Indian Medical Service have made important contributions to botany, geology, forestry, and economic science. Dr. (afterwards Sir) William Brooke O'Shaughnessy, while Professor of Chemistry at Calcutta, made the first experiments which led to the introduction of the electric telegraph into India, and was Director-General of Telegraphs at the time of the Mutiny, when "the telegraph saved India." The postal department also largely owed its development to Indian medical officers; until recently the civil surgeon was often postmaster of the district, and Dr. Elijah Impey was Director-General of the Post Office in India. In education also officers of the Indian Medical Service have done yeoman service. Hugli College was founded by Dr. T. A. Wise, who was its first principal, and when he was transferred to be Principal of Dacca College he was succeeded by Dr. James Esdaile. The assay department of the Mint and the opium assay department were until recently solely in the hands of medical officers. The organization of the veterinary department owed much to medical officers; Dr. W. Gilchrist was one of the earliest writers on diseases of animals in India, and Dr. Kenneth Macleod, formerly professor at Netley, and still with us, was largely instrumental in founding Belgachia Veterinary College. The first principal of the college at Fort William, where young civilians were taught Hindustani, was Dr. J. B. Gilchrist, appointed in 1800; and Dr. Henry Harris was the author of a great Hindustani dictionary published in 1790; Dr. Bellew, though better known as a traveller, was the author of a Pushtu dictionary. In exploration and political work among wild peoples Indian medical officers have done their full share; Sir Alexander Burnes was accompanied by Dr. J. G. Gerrard on his journey through Central Asia in 1832–33, and by Dr. P. B. Lord on his journey to Kabul in 1836. Dr. W. Griffith explored Assam and Bhotan, and Dr. T. Thompson, who was taken prisoner in Afghanistan at the fall of Ghazni in 1842, was one of the Tibetan Boundary Commissioners in 1847, and was the first European to cross the Karakoram Pass; he also accompanied Sir J. Dalton Hooker on many of his journeys.

Dr. Bellew, already mentioned, was chief political officer at Kabul in 1878-79, and Sir George Scott-Robertson, now M.P. for Bradford, was the first European to explore Kaffristan, and was political agent at Chitral at the time of the siege.

It will be possible shortly to fully repair the imperfections in this short narrative, for the origin, growth, and development of the Indian Medical Service will be fully described in a *History of the Indian Medical Service*, in

two volumes, on which Lieutenant-Colonel D. G. Crawford, I.M.S., has been engaged since his retirement three years ago. The book will be published during the next few months by Messrs. Thacker and Co.

THE IMPERIAL BACTERIOLOGICAL LABORATORY, MUKTESAR, INDIA.

The description of the Imperial Bacteriological Laboratory which has been written by the Director, Major J. D. E. Holmes, M.A., D.Sc., M.R.C.V.S., C.I.E., and published by the Government of India, will be read with interest by all concerned with the study of immunity and interested in the developments of bacteriology and serum and vaccine therapy. The laboratory has been established for the investigation of the diseases of stock in India and for the preparation of those prophylactics which have been shown to be of value in the control of epidemics.

In 1890 Dr. Lingard was appointed Imperial Bacteriologist, and worked for some years at Poona. Five years later the laboratory at Muktesar was completed, and since then the development has been very rapid. Three years ago a new wing was added to the main laboratory building, and separate laboratories have been built for the work in connexion with anthrax, black quarter, and glanders. Numerous sheds for the accommodation of cattle and horses are situated near the laboratory, and there are six large out-kraals situated some two miles away. These out-kraals are for the accommodation of a reserve supply of cattle and for animals which have been used for experiments, and are being kept under observation for long periods. There are separate buildings, near the main laboratory, for the preparation of media, sterilization, centrifugalization, storage of serum, and for the accommodation of small animals. The main laboratory is a two-storied stone building, with wide verandahs along the south and west sides. The workrooms are thoroughly equipped with all necessary apparatus, and provided with gas, water, and electric light. The walls are lined with glazed tiles, and the floors laid with marble slabs.

The staff consists of three European officers—the director, an assistant bacteriologist, and a physiological chemist—three European laboratory assistants, an engineer, a farm manager, and a large number of native subordinates. The appointment of a pathologist has recently been sanctioned, and as this officer, when appointed, will visit actual outbreaks of disease, the usefulness of the laboratory will be still further extended by being brought into closer touch with field operations.

The routine work of the laboratory is concerned chiefly with the preparation of anti-rinderpest serum. In 1896 Koch visited Muktesar and demonstrated his bile method for inoculation against rinderpest. During the succeeding three years Lingard made a comprehensive study of rinderpest, and succeeded in preparing a potent anti-rinderpest serum. This was first used in field epidemics in 1899, when about 2,000 doses were issued. The use of this serum has proved of very great value in controlling the spread of infection, and that this fact has been realized by the owners of stock is shown by the popularity of the serum treatment and the rapidly increasing demands for the prophylactic. During the last official year over a million doses of anti-rinderpest serum were prepared in the laboratory and issued for use in the field. In addition to anti-rinderpest serum, a vaccine and serum for haemorrhagic septicaemia, a serum for anthrax, a vaccine for black quarter, tuberculin, and mallein, are also prepared.

The officers of the laboratory have carried out numerous investigations on the diseases of stock, and the results of these researches have been published in various reports to Government and in scientific journals in India and in Europe. Rinderpest is the most prevalent and destructive disease of stock in India, and has been the subject of much research. Lingard succeeded in preparing an efficient antiserum, and made important observations on the different degrees of susceptibility to rinderpest exhibited by different breeds of Indian cattle. The serum prepared by Lingard was satisfactory as regards potency, but was expensive to make. The rapidly increasing demand for the serum rendered its preparation in a more economic manner a matter of urgent necessity. In recent years Holmes has devoted himself to the study of this aspect of the question, and his experiments have met with striking success. Under the old methods of serum preparation the annual maximum production of the laboratory was half a million doses. In 1910 the results of Holmes's experiments were applied to the routine preparation of serum, with the result that the output of serum from the laboratory was doubled, at the same cost as was previously necessary for half this amount. During the past year the results of other investigations have been applied, and a further reduction in the cost of production has been effected. The investigation of surra was begun by Lingard in 1890, and the results of his experiments were published in numerous reports to Government. Holmes took up the study of the subject in 1907 on his appointment as director of the laboratory, and investigated the treatment of the disease. He has discovered a method of treatment which yields 75 per cent. of recoveries.

The success of the laboratory at Muktesar must be gratifying alike to the Government of India, which has provided an up-to-date, well equipped institute for the investigation of the diseases of animals, and to the officers of the laboratory whose energies have contributed so largely to its rapid development. The difficulties which have been encountered have been considerable. Muktesar is situated on a hill in the inner Himalayas, 7,500 feet above sea level, and is so badly served in the matter of roads that transport is a matter of some difficulty. Formerly some opposition was met with from the natives with respect to the treatment of their stock, but this has now disappeared, and the use of serum is accepted to-day without opposition in most districts of India.

TROPICAL MEDICINE—A CRISIS.

BY

Sir RONALD ROSS, K.C.B., M.D., F.R.S.,

Professor of Tropical Sanitation, University of Liverpool.

THE Editor has asked me to write a short note on the Liverpool School of Tropical Medicine; and I am glad to accept, because, as a matter of fact, the moment is rather a critical one for the whole of the great movement of tropical medicine which has done so much for the Empire. This will be best understood after a perusal of the following history of the movement.

The history of its origin has not always been correctly given. The movement really commenced with the work of the old parasitologists rather than with that of the bacteriologists, and from the first was divided into two classes—first, the identification of pathogenic organisms; and, secondly, the determination of their life-history. To the first class belong the discoveries of many animal parasites, especially certain filariae, trypanosomes, spirochaetes, the malaria parasites, the leishmania, and many allied parasites of animals. But while these distinguished discoveries were of great importance in zoology and medicine, they did not directly help the sanitarian until the life-histories were worked out. This branch of the subject really commences with the discovery of *metaxeny*, or change of host, especially by Küchenmeister in 1851–53. A little later Leuckart extended the general law to intermediary hosts among the Arthropoda, and Fedschenko, following his instructions, determined the life-history of *Filaria medinensis*, or the guinea-worm, in *Cyclops* (published in 1869). This work was followed by a succession of discoveries which extended the same law to many parasites, namely, the development of *Filaria bancrofti* in mosquitos by Manson (1877); the discovery of the *Piroplasma* of cattle by Smith and Kilborne, and of its carriage by ticks (1889); the similar discovery of Bruce regarding the tsetse fly disease of cattle (1894); my solution of the malaria problem (1891–99); the determination of the carriage of yellow fever by *Stegomyia* (1900); the carriage of plague by rat fleas and of relapsing fevers by ticks, and similar discoveries regarding many diseases of animals. These advances have evidently opened an entirely new chapter in the sanitation of tropical countries, inasmuch as they showed us how the most important diseases of such countries may be reduced.

I think it was especially the work of Bruce and of myself which led in 1899 to the foundation of the two schools of tropical medicine in Liverpool and London.

Mr. Chamberlain then issued a circular suggesting that this study might be taken up at the principal British ports. It is important to note that in other countries the whole of the movement would have been paid for by Government, as, for example, was the case in regard to the Tropical School of Hamburg; but Mr. Chamberlain's scheme suggested that the English schools should be paid for chiefly from private contributions. The Liverpool School was started in accordance with this idea, chiefly by the late Sir Rubert Boyce, the late Sir Alfred Jones, and the African merchants of Liverpool; and the London School had a similar origin under the influence of Manson and Mr. Chamberlain himself.

I was appointed the chief lecturer of the Liverpool School at its commencement in 1899. It was evident that we had a great campaign before us; and my first effort was to organize an expedition to Freetown, Sierra Leone, for the purpose of attempting to apply my researches on malaria to the actual prevention of the disease by the method of mosquito reduction, which I had already carefully considered in India. The BRITISH MEDICAL JOURNAL gave me from the first the fullest support both in my previous work and in this difficult new departure; and readers who are interested in the subject are referred especially to the series of articles which will be found in it in the numbers for February 1st, 1896; March, 1896; January 30th, 1897; December 18th, 1897; February 26th, 1898; June 18th, 1898; September 24th, 1898; July 1st, 1899. The work at Sierra Leone was fully described by me (anonymously, by previous arrangement) in the BRITISH MEDICAL JOURNAL for September 4th, 16th, 30th, and October 14th, 1899.

The methods which I then laid down have formed the basis of all similar work since then; but, obvious as they were, they received little credence at the time. The discovery of the carriage of yellow fever by *Stegomyia* in 1900, however, started the Americans upon the same lines of sanitation. In the next year Dr. Logan Taylor and myself gave an object lesson on the method in Freetown; and the Liverpool School thereafter sent out a long succession of expeditions to various parts of the world, chiefly to West Africa. These, with the practical sanitary work of Sir William MacGregor and Dr. Strachan in Lagos, the researches of Stephens and Christophers in India and West Africa, the riddance of malaria from Ismailia by my method in 1902, the important investigations of Koch, the discovery of human trypanosomes by Forde and Dutton, and the researches of Bruce, Theobald, Leishman, Donovan, Rogers, Bentley, and many others, threw the light of science into the dark corners of disease in many parts of the tropical world. In all this work I think that we of Liverpool can claim that our expeditions took a leading part, although we were backed merely by the voluntary contributions of a single city.

Another part of the work done was to found permanent centres for teaching the new discoveries, which, of course, meant the endowment or payment of teachers, the provision of buildings, the collection of museums, the publication of special journals, and the maintenance of experts to advise on Government committees. With regard to the teaching of students, it was always apparent that in Liverpool we could never hope for as many students as our friendly rival, the London School, could obtain, and therefore we made expeditions and research our principal line of effort. Nevertheless, Liverpool laid down funds for a permanent institution on the lines indicated above, and this with much less support from Governments than the London School has received. Two endowed chairs have been provided, and a third temporary professorship is arranged for, besides a number of junior posts. A permanent laboratory has long been in existence at Runcorn, near Liverpool. Our *Annals of Tropical Medicine and Parasitology* have been published since 1907, and we have sent out something like thirty expeditions to various parts of the world. Needless to say, as I am writing only of the Liverpool School, I do not refer here to the distinguished labours in the same cause of the officers of the Indian, Naval and Army Medical Services, or the London School, the universities of Cambridge and London, and of numbers of foreign workers. The school has now reached a very high stage of efficiency. Highly qualified teachers and investigators are employed; the recent bequest of Sir Alfred Jones is being used for making very fine new laboratories and a new hospital building, and also, I believe, another research institute in the tropics. At one period we were employing about twenty-five teachers and research workers at once. The Secretary (Mr. A. H. Milne, C.M.G.) informs me that he has collected altogether about £140,000 (of which only about £10,000 have been given by British Governments), but, of course, nearly all this has gone in current expenses and in endowments and buildings. We have also taught a large number of students from various parts of the world; in fact, as many as our present laboratory holds and as our teachers feel justified in undertaking. Our staff now consists of Professor Stephens (tropical medicine), Professor Newstead (entomology), Dr. Fantham (parasitology), Dr. Seidelin (yellow fever), Mr. Carter (entomology), Mr. Stott (statistician), Mr. Drawz (bibliography), besides Drs. Yorke and Blacklock at Runcorn, Dr. Wolferstan Thomas at Manaos, and Drs. Prout, Blood, and Hope (honorary lecturers), and the associated medical staff of the Royal Southern Hospital in Liverpool, and myself (malaria and tropical sanitation). The chairman is Mr. F. C. Danson, J.P.

Summed up, the work of the school has been of great imperial significance. At the time we started, our administrators in the tropics were certainly not keen either upon sanitation or upon medical science. Doctors were generally called "pills," were supposed to know all about the cure of disease by intuition, and were allowed little or no power, even in connexion with sanitation. Frankly, from my experiences of tropical sanitation since 1881, this was in a shockingly bad state. Scarcely any intelligent attempt was made to deal with the great problems regarding the housing of the poor, conservancy, drainage, and water supply. Tropical towns were chiefly collections of slums with an enormous death-rate. Little or no investigation was being done except by a few individuals (at their own expense). When we ventured to express an opinion on sanitary matters we were told to mind our own business, and the same spirit has not entirely died out even yet. But the principal power for good of a school such as ours, practically independent of Government, and consisting of a non-official medical staff, has lain in its capacity for boldly drawing attention to these defects. We have not hesitated to speak out on these matters, and the experience given to us by our expeditions has fully justified us in doing so. The result has certainly been an immense amelioration, as witness the action of the African Committee of the Colonial Office, and the scientific and other committees of the Indian Government. The total amelioration in the public health of many parts of our dominions has been testified to in many reports, by the Secretaries of State for the Colonies, and by the public at large, and the saving to all branches of Government in the cost of death, sickness, and invaliding must be very considerable.

Nevertheless, I am of opinion that the original enthusiasm for the cause is now ceasing, chiefly for the simple economical reason that no attempt is made to give adequate remuneration to the men who have done such exceptional service to the Empire. For years they have accepted for their work payment which is much below what ordinarily successful clinicians can obtain. The highest salary paid in either of the schools during the fifteen years of their existence has been £800 a year, without pension or share of students' fees, and that only for three years. The highest salaries now paid are £600 a year without fees, but with a possible small pension at sixty-five years of age. Many of the expeditions have been carried out for little more than the payment of current expenses. Numbers of the lecturers and other officials receive nothing or next to nothing, and the payment of the junior posts no longer tempts the best men. And this is for a movement which has probably done, and will do, more for our Empire and the tropics than the work of any number of our highly paid and pensioned "proconsuls" put together! But then we are only "pills"!

The fault does not lie with the subscribers to the schools, who, after all, were not obliged to give anything. They have, however, subscribed over a quarter of a million sterling, which, but for their generosity, should have come out of the revenues of the Colonies and the British Exchequer, just as the costs of the Army and Naval Medical Schools do. The committees which

administer these public subscriptions naturally say that the money is given for maintenance at market values, and not for pensions and rewards. Thus the workers, who have actually been doing Government work of high importance for years, find themselves debarred from any adequate remuneration; while, on the other hand, the Colonies and the wealthy British Empire have done a good stroke of business by obtaining their professional services for next to nothing, at the expense partly of private donors, but chiefly of the workers themselves! I venture to maintain, therefore, that the time has now come when the State should begin to see this matter in a true light, and should pay for its "medical benefit": and I hope that the medical profession will interest itself in seeing that the obligation is not lost sight of.

LONDON SCHOOL OF TROPICAL MEDICINE.

The Conception.

In an introductory address delivered at St. George's Hospital in 1897, and reported in the BRITISH MEDICAL JOURNAL of October 9th of that year, p. 985, Dr. (now Sir) Patrick Manson dwelt on the necessity for special education in tropical medicine. It may seem strange that in a country which had been founding colonies in tropical regions for more than three centuries, the problem of the diseases peculiar to hot countries should not have forced itself long before on the attention of those in power. It must be remembered, however, that till the mid-Victorian period medical education of any kind was very fragmentary and inadequate. The requirements of the licensing bodies were so meagre that the description given by Albert Smith in the *Physiology of the London Medical Student* of the process of passing the "College and Hall" is hardly a caricature. Nor were the demands of other bodies in the United Kingdom or of the Universities—with the brilliant exception of that of London—much more exacting. Books had indeed been written on tropical diseases, but they were few and appealed only to a limited number of readers. One cannot help wondering, however, that at least in India, where there had long been a well-organized medical service, nothing in the way of systematic instruction in the diseases peculiar to that country had been attempted. It was still true less than twenty years ago that doctors went to the colonies knowing little or nothing of the special diseases they would have to deal with, and had to gain their experience at a terrible cost of human suffering and a needless sacrifice of life.

In his address Manson preached a new gospel which, at first received with ridicule and indifference, seemed to have fallen among thorns. Some of it, however, fell on good soil, and gradually it bore fruit in the minds of men far-seeing enough to perceive how closely a knowledge of tropical medicine and hygiene was bound up with the welfare of our colonial empire. Manson indicated the reason why till then so little had been done in supplying instruction in tropical pathology. He said:

> Candidates for medical degrees know very well that they will not be asked any questions about tropical disease by their examiners, and so they have not demanded instruction in this subject. And the reason why questions are rarely put on tropical medicine is that the leaders of the profession—those who man our hospitals, who fill the teaching chairs, who examine for degrees, who grant licences to practise, who make the regulations for the education of the youth of the profession—are, in almost every instance, men who have never practised in warm countries and who themselves have never felt the necessity for a wider and more practical knowledge of the diseases peculiar to these climates. Not having themselves felt the want, they have been slow to acknowledge that such a want exists, slower still to apply the remedy.
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> But ask those who are best qualified to express an opinion on this subject. Ask the medical men who have themselves felt the responsibilities of practice in the tropics, and more especially those of them who have endeavoured to follow recent developments in tropical pathology. Ask them if they do not think that the medical man who goes out to battle with tropical disease should have some special instruction and training for the very special and responsible work he has before him, and if they do not think that the medical authorities should take care that the men who do so go out to practise should be properly qualified so far as teaching can qualify. I am sure of their answer. Unfortunately, most of the men of tropical experience live and practise away from the great medical centres. They are hardly represented on the medical teaching, graduating, or legislating bodies, and so it comes that their opinions do not make themselves felt and that a much-needed reform is delayed.

Manson went on to say that the course of instruction in general medicine usually received in this country was utterly inadequate to qualify for tropical practice. He said so emphatically, basing his assertion on his own experience, his own mistakes, and what he had seen and still daily saw of the mistakes of others. He quoted Dr. Andrew Davidson as urging that lectures on the hygiene and diseases of warm climates should be instituted in each medical school. He added that St. George's Hospital had done its share to encourage this necessary reform in medical teaching, and that other medical schools were following its lead.

It soon became clear, however, that something more than lectureships, which were not likely to attract many, would be utterly insufficient for the purpose in view. Fortunately Manson had the ear of Mr. Joseph Chamberlain, then Secretary of State for the Colonies. In Mr. Chamberlain he found a statesman who could appreciate his scheme and who saw the enormous benefits it would confer on the Colonies. The story is so clearly told in a circular addressed by Mr. Chamberlain to the Governors of all Colonies, on May 28th, 1903, that a summary of that document will be sufficient for our purpose.

Action of Mr. Joseph Chamberlain.

In that circular[1] Mr. Chamberlain, after summarizing the steps that had been taken, and the results which had followed suggestions made by him in previous dispatches on medical and sanitary subjects, more especially in connexion with the investigation of malaria and the training of medical officers in the treatment and prevention of tropical diseases, went on to say:

> 2. The great mortality among Europeans in such climates as those of the West African Colonies and Protectorates had not failed to attract my notice from the first as it had that of my predecessors in office, and towards the end of the year 1897, largely through the interest taken in the matter by Dr. Manson, who had succeeded Sir Charles Gage-Brown as medical adviser of the Colonial Office, my attention was more definitely directed to the importance of scientific inquiry into the causes of malaria, and of special education in tropical medicine for the medical officers of the Crown Colonies.
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> 3. In pursuance of the second of these two objects, it was clearly advisable (*a*) that a special training school in tropical medicine should be established, where officers, newly appointed to the medical services of the Colonies and Protectorates, might be given systematic instruction with special facilities for clinical study, before leaving England to take up their appointments, and where doctors already in the service might, when on leave, have opportunities of bringing their professional knowledge up to date; (*b*) that all the leading medical schools in the United Kingdom should be invited to give greater prominence than hitherto in their schemes of study to tropical medicine; (*c*) that the medical reports periodically sent from the tropical Colonies and Protectorates should be recast on one uniform type, designed to throw light on the diseases which are most prevalent in tropical countries, and to indicate the methods likely to be most successful in preventing or curing such diseases.
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> 4. With reference to the first of these three objects—the provision of a special training school—it was considered that the Albert Dock Branch of the Seamen's Hospital, which was about to be enlarged, was likely to offer the facilities required, standing as it does at the dock gates, admitting sufferers from tropical diseases direct from ships from all parts of the world, and being moreover within easy reach of the Colonial Office, and therefore likely to be in close touch with that office. These considerations decided me to approach the managers of this hospital in preference to endeavouring to make whatever arrangements might be possible for attaining the object in view, at the Royal Naval Hospital at Haslar or the Royal Victoria Hospital for soldiers at Netley, at which latter hospital officers of the Indian Medical Service receive instruction in tropical diseases.

Negotiations.

On February 2nd, 1898, Mr. Chamberlain wrote to the Secretary of the Seamen's Hospital Society asking whether, in the enlargement of its Branch Hospital at the Albert Docks, it might not be possible to provide accommodation for the contemplated tropical school. He added that it was not probable that more than six officers would be under instruction at any one time, and that the course would last for three or four months. The

[1] Colonies: Miscellaneous. Papers relating to the Investigation of Malaria and other Tropical Diseases and the Establishment of Schools of Tropical Medicine. Presented to both Houses of Parliament by command of His Majesty, June, 1903.

committee, in reply, put forward a scheme and an estimate for buildings and cost of maintenance. On June 30th Mr. Chamberlain accepted the scheme on the terms that a contribution of £3,550, the sum given in the estimate as the initial cost of school buildings, should be made on behalf of the Colonies and Protectorates concerned. The terms were accepted on July 14th. In the meantime (March 11th, 1898) Mr. Chamberlain had caused a letter to be addressed to the General Medical Council and the leading medical schools of the United Kingdom, pointing out the importance of ensuring that all medical officers selected for appointment in the tropics should enter on their careers with the expert knowledge requisite for dealing with such diseases as prevailed in those regions. Most of the replies received were sympathetic, and the correspondence showed that in upwards of twelve medical schools, some of them situated at large seaports, arrangements either already existed, or were about to be made, for giving special instruction in tropical medicine. The General Medical Council adopted the following resolution:

> That, while the Council is not prepared to recommend that tropical medicine should be made an obligatory subject of the ordinary medical curriculum, it deems it highly desirable, in the public interest, that arrangements should forthwith be made by the Government for the special instruction in tropical medicine, hygiene, and climatology of duly qualified medical practitioners who are selected for the Colonial medical service, or who otherwise propose to practise in tropical countries.

The Foundation.

By September, 1898, arrangements had been made for instituting a School of Tropical Medicine in connexion with the branch of the Seamen's Hospital at the Albert Docks. In anticipation of the opening of the school a circular dispatch was on August 19th, 1898, addressed to the governors of Crown Colonies, asking that pathological specimens of any material likely to be of value for teaching purposes should be collected for use in the school. Later, a copy of that dispatch was sent to the self-governing Colonies. The committee of the Seamen's Hospital Society named October 2nd, 1899, as the date at which the school would be opened. On November 11th following, Mr. Chamberlain sent to the Colonies in a circular dispatch its syllabus and a statement of the rate of tuition fees and the fees for board and residence. It was pointed out in that circular that a School of Tropical Diseases had recently (April 21st, 1899) been established and excellently equipped at University College, Liverpool. Mr. Chamberlain, after giving a sketch of the research work that had been done in various Colonies by representatives of the London and the Liverpool School, concluded by saying:

> It is clear that the work cannot stand still, and as long as those who can speak with the authority of science are confident that by human effort the rate of mortality from malaria and other tropical diseases can be greatly reduced and the strength and efficiency of European residence in unhealthy climates can be sensibly increased, so long in my opinion ought funds to be forthcoming for carrying on what has been so well begun.

When the proposal to establish a school of tropical medicine was first mooted, the Branch Hospital of the Seamen's Hospital Society in the Albert Docks consisted of a small building with accommodation for 25 patients. Owing to its situation in the midst of the dock district, tropical cases were from time to time treated in the hospital. No funds were available for carrying on any educational work there; these, however, were soon forthcoming. The Seamen's Hospital Society advanced a sum of money for the enlargement of the hospital and the erection and equipment of the school, while Mr. Chamberlain, on his part, obtained a Government grant of £3,550, and presided at a banquet at the Hotel Cecil on May 10th, 1899, when a sum of £12,000 was obtained. This provided nearly enough money to repay the advance made by the society for the new buildings. It was resolved to double the size of the hospital and to erect a school to accommodate twenty students. An illustrated description of the school as it was at the end of its first year of existence appeared in the JOURNAL of October 6th, 1900, p. 1041.

First Years.

Between October 2nd, 1899, and April 15th, 1903, that is to say, during a period of about three years and a half, 292 students passed through the London school. Up to that time the committee of management stated that the school had just paid its way on the receipts from tuition and from board and lodging fees. The very success of the school, however, made it necessary that it should be enlarged both in laboratory accommodation and in provision for resident students.

The school made steady progress up to 1905, when the accommodation for students had become insufficient. It was, therefore, decided to double the size of the school, and Mr. Chamberlain again presided at a banquet, when £11,000 was collected.

Growth of the School.

But the steady expansion which the ever-growing scope of the work required, made it necessary that a constantly increasing amount of money should be found to carry it on in an adequate manner. It was felt that if the school were to continue to discharge the work which had been so brilliantly begun, it must be placed on a sound financial basis. For this purpose an endowment fund was needed. A beginning towards the foundation was made by two members of the committee of management. In a report by Mr. Michelli, presented to a general meeting of the supporters of the school in 1911, it was stated that at that time Dr. T. Irvine Rowell had in less than two years collected from friends at home and abroad a sum of £2,000, and Sir William Treacher in a few months had collected £684. At the time of the meeting it was announced that the endowment then exceeded £5,000.

Mr. Austen Chamberlain's Appeal.

In 1912 an appeal was issued by a committee formed at the request of Mr. Lewis Harcourt, Secretary of State for the Colonies, for funds to be applied to the extension of the school. Of that committee Mr. Austen Chamberlain, who has taken the like interest in the fortunes of the school that his distinguished father had shown from the beginning, was chairman, and among the members were the Duke of Marlborough, Lord Lansdowne, Lord Crewe, Lord Curzon of Kedleston, Lord Iveagh, the late Lord Strathcona, Lord Mount Stephen, the late Mr. Alfred Lyttelton, Sir Frederick Lugard and Mr. Astor, M.P. After referring to the share which the school had taken as far as its means allowed in the work of reducing sickness in the tropics, Mr. Austen Chamberlain said that special wards for the treatment of tropical diseases which brought up to 50 the number of beds available in the hospital had been built. The number of students who had attended the school had rapidly increased since its commencement. In 1901 they numbered 75; in 1911 they were 159, or more than double. Altogether 1,438 students had passed through the school: 692 sent by Government, 512 private students, 61 foreign students, and 173 missionaries. Mr. Austen Chamberlain's fund was closed in November, 1913. In this way a sum of £73,000 was placed at the disposal of the school, This has been divided as follows: New buildings, £15,000; research, £10,000; endowment of tropical beds, £6,000; endowment for general purposes, £42,000. It is, therefore, safe to say that the school is now in a sound financial position. Included in the £73,000 above mentioned is the Wandsworth Scholarship of £10,000, being a sum bequeathed by the late Lord Wandsworth to Sir Wm. Bennett for the purpose of research, and placed by Sir William at the disposal of the school. Thus in less than fifteen years £150,000 has been raised for the school. In 1913 the number of students was 178, and the total number who had gone through the course of instruction was 1,674.

Latest Extensions.

In an account of the latest extensions of the school published in the BRITISH MEDICAL JOURNAL of November 1st, 1913, it was stated that a new wing had been added to the school. The new general laboratory provides accommodation for some 70 workers, and, in case of need, room can be found for as many as 120. Separate laboratory accommodation on a liberal scale is provided for tropical hygiene and sanitation and for the breeding of disease-carrying insects. There is also a preparation room. In the middle is the director's office, so placed that he can overlook the different compartments on each side. Each table has a light to itself in such a position as to afford

the best illumination. These laboratories, which are on the ground floor of the new wing, are additions to the existing helminthological, protozoological, and entomological laboratories, and are said to be the most completely equipped of their kind in the kingdom. Within the last few months a distinct course of instruction in tropical sanitation has been established, and one of the new laboratories has been assigned for this purpose. In scientific sanitation lies the hope of a healthier future for dwellers in the tropics; hence the establishment of an independent system of instruction in this subject is an important step in the development of the school. Besides the extension of the working part of the school, eighteen additional rooms for resident students had been provided, making a total of twenty-seven.

Expeditions.

Want of funds has stood in the way of the school sending forth expeditions for research. Still, in proportion to the means hitherto at its disposal it has done considerable work of this kind. The famous experiment carried out by Dr. Sambon, Dr. Low, and Mr. Terzi in the Roman Campagna showed that it was possible to live unharmed in the most malarious part of that unhealthy region if adequate precautions to avoid mosquito bites were taken. The transmission of the disease to man from *Anopheles*-bearing mosquitos was proved by the exposure of two young men (with their full consent) to the bite of infected insects sent from the Campagna. In each case typical malaria developed in due course. During the last ten years the school has sent investigators to the West Indies, East and West Africa, the Sudan, Fiji, Ceylon, Bagdad, and other places. Each has returned bearing his sheaves of scientific results with him.

CENTRAL ORGANIZATION FOR TROPICAL MEDICINE AND HYGIENE IN ENGLAND.

The Tropical Diseases Research Fund.

The Advisory Committee for the Tropical Diseases Research Fund was appointed by the Secretary of State for the Colonies in 1904. It had in 1912 a total income of £3,245; towards this the Imperial Government contributed £1,000 and the Government of India £500, the remainder being provided by contributions from Dominion and Colonial Governments. The Committee advises the Colonial Secretary on questions affecting hygiene and pathology in tropical colonies, and is now in receipt of reports supplied at the request of the Colonial Secretary from certain colonies and protectorates giving statistical and other information with regard to mosquito-borne diseases, and as to the work done in various colonial laboratories. These reports satisfy the Committee that excellent work is being carried on in these laboratories, and it is using its influence to induce the various local Governments in the colonies to increase the opportunities afforded for research work. The income of the Committee is distributed for the purposes of research, and in 1912 the amounts were £1,533 to the London School of Tropical Medicine, £1,200 to the Liverpool School of Tropical Medicine, £750 to the University of London to pay the salary of the professor of protozoology appointed in 1906 and £350 to the University of Cambridge for a research studentship in medical entomology, towards defraying the salaries of an assistant and a consulting entomologist in the Quick Laboratory and towards the general expenses of that laboratory.

The reports published from time to time from colonial laboratories do not deal solely with laboratory research strictly speaking, but all illustrate the application of the scientific methods of the laboratory to hygiene and clinical medicine. The association is so close and the calls made by the local public health administrations and other hospitals for assistance are so numerous that not a few of the directors lament that the fulfilment of their duties in this direction absorbs so much time that research work suffers. The general impression produced by the reports and memoranda is that there is great need for more money and more men to follow up the innumerable new tracks which are constantly being discovered but cannot adequately be explored by the force available. Probably the most extensive of these laboratories is the Institute for Medical Research of the Federated Malay States, which was established some fourteen years ago at Kuala Lumpur. It is now under the direction of Dr. H. Fraser; the scientific staff consists, in addition, of a bacteriologist, a pathologist, a chemist, and an assistant chemist.

The head of the Department of Protozoology of the Lister Institute of Preventive Medicine is the professor of that subject in the University of London, Mr. E. A. Minchin; he has two assistants—H. M. Woodcock, D.Sc., and Muriel Robertson, M.A.—but much work bearing on tropical medicine and hygiene is carried on in other departments of the institute also.

Tropical Diseases Bureau.

As a result of the International Conference on Sleeping Sickness held in London in June, 1907, and March, 1908, to concert measures for the control of that disease, it was proposed to establish a central international bureau to extract and circulate all new literature on sleeping sickness. The delegates, however, were not unanimous as to the seat of the bureau, or even as to the necessity for its establishment. The project therefore fell through, but Lord Elgin, then Secretary of State for the Colonies, took early steps for the establishment of a British Bureau, maintained by imperial funds, with a contribution from the Sudan Government. The Royal Society agreed to house the Bureau, and was thus indirectly a third contributor. An honorary committee was appointed, and held its first meeting in April, 1908. The Sleeping Sickness Bureau performed a very useful function. It issued thirty-six numbers of its *Bulletin*, each containing an account of current work in the field and laboratory on sleeping sickness and other trypanosome diseases, maps of distribution of sleeping sickness and tsetse flies, an exhaustive bibliography, and a popular pamphlet on the means of prevention of sleeping sickness. At a later date *Bulletins* on kala-azar were issued. These publications had a wide circulation; of the monthly *Bulletin* 1,100 copies are issued, of which about half go to Africa. The Bureau acquired a library containing 360 volumes and some 1,500 pamphlets, most of which related to the trypanosome diseases, and initiated the dispatch of several expeditions to investigate sleeping sickness in tropical Africa.

It soon became evident that what the Sleeping Sickness Bureau was doing for sleeping sickness could be done in the same way for tropical diseases generally. Lord Crewe, during his term of office as Secretary of State for the Colonies, and Mr. Lewis Harcourt, interested themselves in the expansion of the Bureau, and on July 1st the Tropical Diseases Bureau was established, with quarters at the Imperial Institute. The expansion of the Sleeping Sickness Bureau into the Tropical Diseases Bureau entailed increased expenditure; the funds are found by the Treasury, the Indian Government, the Sudan Government, the Union of South Africa, Ceylon, the Federated Malay States, Southern Nigeria, the Gold Coast, Sierra Leone, the Gambia, Fiji, Trinidad, and Jamaica; the annual available sum is approximately £3,000.

The Tropical Diseases Bureau deals with diseases prevalent in tropical and subtropical regions, and publishes a *Tropical Diseases Bulletin*,[1] which includes matter of the kind formerly published in the *Sleeping Sickness Bulletin*. The director of the bureau is Dr. A. G. Bagshawe, of the Uganda Medical Staff, and the assistant director is Dr. G. C. Low, lecturer at the London School of Tropical Medicine. They have the assistance of a number of sectional editors; Colonel W. G. King, C.I.E., formerly of Madras, has lately joined the staff as sectional editor for tropical sanitation—a subject which has not yet been dealt with in the *Bulletin*. Thus the results of the most recent researches on every tropical disease in every country, new methods of treatment, improved means of prevention, quickly become available for the remote worker in the tropics.

The tropical diseases of animals are treated in a separate publication, the *Tropical Veterinary Bulletin*,[2] edited by Mr. A. Leslie Sheather, B.Sc., M.R.C.V.S., which is issued quarterly; to represent veterinary science Sir John Macfadyean and Mr. Stewart Stockman have joined the

[1] Baillière, Tindall, and Cox. Annual subscription 21s., post free. The *Bulletin* appears, as a rule, twice a month (20 numbers were issued in 1913). Single copies, 1s. 6d. net.

[2] London: Baillière, Tindall, and Cox. Annual subscription, 10s.; single numbers, 3s., post free.

committee, which includes among its members Sir P. Manson, Sir D. Bruce, Sir W. Leishman, and Sir J. Rose Bradford.

The *Bulletins* are supplied free to medical and veterinary officers of India and of the subscribing colonies; to others they are on sale. The present library, in which current files of all the journals of tropical medicine are to be found, forms the nucleus of a good tropical diseases library. It is growing rapidly, and now receives 140 journals: it is of great value to medical officers home on leave from the tropics.

Schools and Diplomas.

London School of Tropical Medicine.

The facilities afforded to medical practitioners for obtaining instruction in tropical medicine and hygiene in England include the schools in London and Liverpool. The London School of Tropical Medicine connected with the branch hospital of the Seamen's Hospital, Albert Dock, E., has three courses, commencing on January 15th, May 1st, and October 1st respectively, and lasting approximately thirteen weeks. They include theoretical and practical laboratory and clinical work, and are designed to meet the requirements of the various diplomas of tropical medicine. Opportunities are also given for special advanced study. Certificates are given after examination to those who have attended the full course. The courses are attended by qualified medical practitioners, students in their final year, and qualified veterinary surgeons. Women students are admitted to the course. The Secretary is Mr. P. Michelli, C.M.G., Seamen's Hospital, Greenwich.

Liverpool School of Tropical Medicine.

Two full courses are given annually, beginning in January and September. An advanced practical course of one month is also given in June, and it is designed to meet the convenience of practitioners at home on leave; those who attend it are excused the first month of the other course. Three times a year special courses on entomology are given for officers in the West African Medical Service and others. A certificate of satisfactory attendance is given; this is independent of the diploma granted by the University, special research work at the laboratories of the school and at Runcorn research laboratories (16 miles from Liverpool). Full particulars can be obtained from the Secretary, 10B, Exchange Buildings, Liverpool.

Navy, Army, and Indian Medical Services.

Acting surgeons of the Royal Navy—that is to say, candidates successful at the entrance examination for the medical service—spend the first two months of the six months' course of special training at the Naval Medical School, Greenwich, where they receive instruction in tropical medicine, pathology, and hygiene; similarly candidates successful at the entrance examinations for the Royal Army Medical Corps and the Indian Medical Service receive during their subsequent course at the Royal Army Medical College, Millbank, special instruction in tropical medicine and hygiene.

British Diplomas.

One of the six branches that may be taken for the M.D. of the University of London is tropical medicine and hygiene. A diploma in tropical medicine and hygiene is granted by the Universities of Cambridge, Liverpool, and Edinburgh, and by the Conjoint Board in England. These diplomas are not at present registrable as additional qualifications in the *Medical Register*.

The conditions for obtaining the diplomas are very similar. In the case of the universities the candidates should be graduates of the university in medicine, surgery, and midwifery. In all cases evidence is demanded that the candidate has been registered for at least a year. In the case of the Conjoint Board, medical practitioners who have had practical experience in tropical countries deemed likely to furnish the same kind of training are accepted. The subjects for examination are: Bacteriology, parasitology, medical zoology, haematology; hygiene applicable to tropical countries; clinical medicine (tropical). Satisfactory evidence must be given that the candidate has attended courses in these subjects in approved schools and hospitals for the study of tropical diseases: the period requisite varies for the different diplomas, being from three to six months. The Edinburgh University demands a certificate of efficiency in conducting *post-mortem* examinations.

Information as to the exact requirements and fees necessary may be obtained from the Registrar, the University of London, South Kensington, S.W.; the Secretary, the Conjoint Board, Examination Hall, Queen Square, Bloomsbury, W.; Dr. G. S. Graham Smith, Cambridge University; the Dean of the Medical Faculty, Edinburgh University; and the Dean of the Medical Faculty, Liverpool. Particulars may also be found in the Educational Number of the British Medical Journal (September 6th, 1913).

Germany.

The Institut für Schiffs- und Tropenkrankheiten, Hamburg, was founded in 1900, and is the only State school for the purpose in Germany. There is a hospital for the treatment of patients suffering from tropical diseases and for seamen, and the school is intended for the training of medical men for work in the tropics. The State has a certain amount of influence in the institute, appointing the two extern assistants, and having eleven tables in the research laboratory and twenty out of the fifty-four beds in the hospital at its disposal. The medical supervision of the ports of Hamburg is closely connected with the institute. The director is Ober-Medizinalrat Professor Dr. Bernhard Nocht.

Belgium.

Belgium has a State school of tropical medicine at Brussels; it was founded in 1906, and is now under the direction of Dr. A. Broden. There are five professors, among whom are included the chief of the medical department of the Colonial Office and the conservator of the Royal Museum of Natural History.

France.

Courses of lectures on tropical diseases are given in the Paris Faculty of Medicine, and under the Minister of War there is a special school for the sanitary service of colonial troops, where courses of bacteriology, parasitology, military and colonial hygiene, prophylaxis in tropical diseases, and sanitary policing are given.

At the Institut Pasteur in Paris there is a section for "Microbiologie Coloniale" (96, Rue Falquiéra, Paris). There are three subsections: (I) Recherches originales, Professor Laveran; (II) Protozoologie et zoologie tropicale, Professor Mesnil; (III) Bactériologie tropicale, Professor Marchoux. There is also an entomological department.

In Algiers the Pasteur Institute has two sections specially devoted to tropical diseases—the laboratory for research in malaria, under the direction of Dr. Etienne Sergent; and the Laboratoire Saharien, for research into the special diseases of the Sahara District, under the direction of Dr. Foley. At Tunis the Pasteur Institute has a special malaria section, of which Dr. L. Blaizot is director.

Pasteur Institutes are maintained by the French Colonial Office at Saigon, Cochin-China, and at Hanoi, Tonquin. They work in connexion with the Paris Institute.

There are schools of tropical medicine at Bordeaux and Marseilles, and in the first named city there is an École de Service de Santé Marine, connected with the Faculty of Medicine of that university, and intended for the training of medical men and apothecaries for the navy and colonial army. Students are received from the École de Médecine Navale at Brest, Rochefort, and Toulon. The director is M. Henri Chevalier.

Africa.

The most important research school in Africa is the Wellcome Tropical Research Laboratories of the Gordon Memorial College at Khartoum. The School of Medicine at Cairo, connected with the Kasr-el-Ainy Hospital, and directed by Dr. Keatinge, has been brought to a high state of efficiency, and much research work in tropical medicine is done under the direction of Dr. M. A. Ruffer for the Sanitary Maritime and Quarantine Council of Egypt.

At Pretoria there is a division of veterinary research, under the direction of Dr. Arnold Theiler, C.M.G. It has branches at Pietermaritzburg, Grahamstown, and Blomfontein.

Australia.

The Universities of Sydney and Melbourne both give diplomas of Tropical Medicine. Candidates are expected

to furnish evidence of having passed either Part I of the examination for the Diploma of Public Health (Sydney and Melbourne), or of having attended laboratory instruction for at least one month at the university selected. The subjects for examination are: Tropical pathology and parasitology, tropical and applied bacteriology, tropical hygiene and sanitation, tropical medicine. Candidates eligible are qualified medical practitioners registered in one of the States of the Commonwealth. They must produce certificates showing that twelve months have elapsed since qualifying in medicine, surgery, and midwifery, and of having since attended a three months' course of study and practice in tropical pathology, parasitology, bacteriology, hygiene and sanitation, and in tropical medicine. This should include three months' lectures, demonstrations and laboratory work at the Australian Institute for Tropical Diseases, and three months' clinical work at the attached hospital at Townsville. An illustrated description of the Institute was published in our issue for August 30th, 1913, p. 557.

THE WORKING POWER OF THE WHITE MAN IN THE TROPICS AND THE ELECTRIC FAN.

By LEONARD HILL, M.B., F.R.S.,
Professor of Physiology, London Hospital Medical School.

WHILE it has been decreed by the Australian Government that Australia shall be a white man's land, the decree is vain if it run counter to the laws of Nature. In Northern Australia the conditions of the atmosphere are tropical, and a very high wet bulb temperature pertains there through several months of the year.

Evolution has settled the dark-skinned man in the tropics, and the white in the temperate zones of the earth. The difference between the skin of the white and black man may be seen on holding the hands of either before an arc lamp, or putting a glow lamp in the mouth of either in a dark room. Far more light penetrates the hands or cheek of the white than of the black man. If we examine with a pocket spectroscope a piece of skin taken from a white man we find red, green, and blue rays pass through, while a piece of black skin lets through red rays obscurely, and little more than these.

Dr. William Lowe, in an interesting paper read before the Royal Society of Victoria, pointed out that if melanin, obtained from an ox eye, be mixed with water and spread on a sheet of glass, it will prevent the sun's rays, concentrated by a burning glass, from passing through and firing a match held beneath. The light rays are absorbed by the pigment and converted into heat rays which warm the water, and the heat is lost in evaporation. The pigment of the black skin lies in the deepest layer of the epidermis; by absorbing light and converting it into heat it increases the transpiration of water, and at the same time protects the blood in the subjacent vessels. Dr. Lowe suggests that the absorbed heat excites the terminal plexus endings of the cutaneous nerves, and provokes sweating. The black man so protected, though with shaven head and naked body, can do field work in the tropical sun and enjoy life. He wears no clothes, so as to allow the free play of convective currents, and takes full advantage of every wind that blows.

The white man, on the other hand, is unprotected from the actinic rays. These, penetrating his unpigmented epidermis, are absorbed and converted into heat by the pigment of his blood. The blood in the cutaneous vessels is thus warmed, and the heat carried by the blood to the viscera. To protect himself the white man wears clothes, selecting white or khaki, which most reflect and scatter the actinic rays. He thus surrounds himself with a layer of stagnant air confined in his clothes, air with a relatively high wet-bulb temperature, which retards the loss of body heat. The white man's body heat regulating mechanism is therefore less efficient, more energy of the heart, etc., is spent in him in the maintenance of an excessive cutaneous circulation and perspiration. To persuade the black man to wear clothes for the sake of appearance or conformity with the white man's customs is to make him run counter to the laws of Nature.

The white man takes refuge under umbrellas, in verandahs, etc., screens himself from the sunlight. The heat and moisture of the stagnant air brings the blood into his skin. The blood flow through the arm may be ten and even twenty times greater when the atmosphere is hot and still than when it feels cold. His skin temperature rises up to body temperature, and there is established a uniformity of cutaneous conditions. He needs the play of wind and varying temperature to stimulate the great field of cutaneous nerves and keep him vigorous and happy. The white man is disinclined for muscular work under such conditions because he is impelled to keep his heat formation down. He keeps quiet, and in consequence his metabolism is lessened, he ventilates his lungs less, uses less oxygen, his abdominal viscera are not efficiently massaged by deep breathing and body movements, and his blood is less well circulated. He needs less food, has less appetite and digestive power, and so is likely to suffer from the absorption from his bowel of the products of bacterial fermentation. Altogether he runs at a low plane, and feels the need of stimulant. Fortunately he now can gain in house or office the greatest relief from punkahs and electric fans. The electric fan has revolutionized the condition for civilian work in the tropics. The whirling air drives the stagnant atmosphere from his garments and brings him comfort and working power indoors. Fans can be obtained which reverse the direction of the wind and periodically vary the uniformity. Exposed to the sun, however, the conditions of his skin are abnormal, and he cannot be comfortable or happy doing field labour in the tropics. His training and innate energy may drive him through a field task, or a forced march, but he escapes from the climate as soon as he can. If he stops, health and morality tend to diminish, the happiness of congenial work and family life are not his reward. The white man can be the organizer and overlooker, and the handicraftsman working in fan-cooled buildings protected from the sun, but he can only live at the expense of the dark-skinned races whose field labour is exploited by him. Thus the white man is the black man's burden. How far important outdoor labour could be made more possible for white men by the use of powerful fans is a matter for the engineer to determine.

The following is taken from an Australian paper which reached me last year:

"According to Mr. F. Allen (Mayor of East Fremantle), who has just returned from a trip to Darwin, the Commonwealth's white Australia policy, so far as the Northern Territory is concerned, is doomed to failure. This represents not only his own view on the matter, but that of all the whites with whom he came in contact at Darwin. The climatic conditions combined with the high cost of living make it practically impossible for a white community to thrive there. . . . From what he could gather there was a consensus of opinion that to develop the country there should be a system of cheap indentured labour. . . . Only recently a wealthy syndicate obtained concessions inland, and advertised for men in Perth. It was found impossible to get men under £10 a week, while some demanded £20. The consequence was that the syndicate had to abandon its scheme."

MÁKAN SÍRIH.

By W. B. ORME, M.R.C.S., L.R.C.P.,
Sandakan, British North Borneo.

OVER the whole of the Eastern Archipelago the habit of *mákan sirih* is found widespread among the numerous nationalities of these regions.

Sirih is the Malay word for the betel vine, the true designation of the plant being *Piper betle*, belonging to the natural order Piperaceae, to which also belongs *Piper nigrum*, the plant from which is collected ordinary black table pepper.

To those living in Borneo, or in fact anywhere in the Far East, the habit of chewing betel is more or less familiar. It is not confined to the Eastern Archipelago, for it is a common practice in India, especially I believe in the central provinces and Madras, where it goes by the name of *pan-supari*. The word *pan* is the Indian name for the betel vine, and *supari* for the other chief ingredient of the masticatory, namely, areca nut. The betel vine is as a rule grown in special gardens, surrounded by plantains to protect it from the winds; the vine is trained on poles or sticks, much in the same way as scarlet runners are grown at home. It grows best in a shady situation, and if

this is not available it is usual to protect it artificially by attaps or mattings. The leaves of the plant are broadly ovate, with a glossy upper surface, and possess a warm aromatic and somewhat bitter taste; those produced by the second year's crop are most prized by the sirih eater; the vine will, however, last for some twenty or even thirty years.

Natives of India use the heated leaves to apply to the chest in the bronchial affections of children, and I notice that the plant has been included in the addendum to the *British Pharmacopœia* of 1900, probably for this reason.

The areca nut is the fruit of the *pinang*, the palm from which the Prince of Wales Island gained its Malay name. This palm is very common in the Far East and along the Malabar Coast of India, often growing to a height of from 30 to 45 ft., surmounted by a graceful head of leaves. It is generically classified by Tommy Atkins in Kipling's poems as belonging to "them feather-eeded trees."

When in flower the palm throws out a large, many-branched spadix of both male and female flowers of a light yellow colour; at about the fifth year it generally begins to fruit, a bunch of its berries weighing some 20 lb. in a good year. The white endosperm of its berry is of stony consistence, and is ruminated by the dark seed coat growing into it and giving it a mottled and veined appearance.

The method of preparing and using the masticatory varies in different regions, but the usual process is somewhat as follows: The selected leaf is first laid flat in the palm of the left hand, with its glossy surface upwards, and is then smeared with a semi-solid mixture of lime paste; this is called *kapor*, the Malay name for lime, which is often prepared by burning sea-shells.

A young and tender pinang nut is now chosen, and a few small slices removed with a curious double knife, somewhat resembling a pair of ordinary nut-crackers, with sharp blades directed inwards. Most of these knives are made locally, and are of various shapes and models. One or more of these sections is dropped into the centre of the lime-smeared leaf and a little gambir added in the solid form, or as a paste applied by a piece of stick. Gambir is our black catechu, obtained as an extract from the wood of *Acacia catechu*, a delicate-leaved tree belonging to the natural order Leguminosæ. This accomplished, the leaf is folded over its contents in the form of a small triangle, and is ready for chewing.

In certain localities other ingredients are added to the masticatory, such as tobacco, cardamoms, cloves, etc.; the latter are often used not only for their flavour but to act as a kind of button when pierced through the leaf, preventing the package from unfolding.

Now what is the object of chewing this abomination? The saliva soon turns a brilliant crimson resembling blood, and has more than once been mistaken for such by young doctors soon after their arrival in the East. The lips, gums, and teeth became stained, and if the habit is continued for long the teeth gradually attain a jet black, and according to our European ideas do not greatly enhance the personal beauty of the chewers.

The blood-red colour resulting when the mass is chewed has been said to be due to the action of the lime on the tannin in the areca nut; possibly this has something to do with it, as I find that lime and tannic acid give a purplish-blood colour. The full black colour, however, is not produced unless the gambir is used in conjunction with the areca nut, and it may well be that the coloration is simply brought about by the intensification of the natural colouring matters by the alkalinity of the lime.

The poorer classes generally carry the paraphernalia wrapped up in a piece of cloth, or in a sort of cloth purse tied round the waist. In their houses they more generally use some kind of a box with several compartments for the different constituents. The more wealthy use boxes of brass, copper, or silver, many of which are magnificently engraved and among the finest examples of Malay art.

The physiological action of betel is mildly sialagogue, allaying thirst by the increased flow of saliva. The alkaloid arakene which the leaf contains appears to have the effect of assuaging hunger and of warding off bodily fatigue, so that long hours of work can be accomplished though little or no food be taken. In the respect of alleviating bodily fatigue "mákan sirih" appears to fill the same part as coca chewing among the natives of South America, chiefly in Bolivia and Peru. The coca leaves are produced from the *Erythroxylum coca*, which first became known in Europe in the early part of the seventeenth century, and it is from these leaves that cocaine is prepared.

Natives have informed me that "mákan sirih" is an excellent preventive of malarial fever; as to whether this is so to any extent I am not prepared to vouchsafe an opinion, but certainly it is no uncommon occurrence to see sirih eaters suffering from the disease with parasites easily demonstrable in their blood.

It would have been mere arrogance to write on such a subject without personally testing the masticatory. Having obtained, therefore, the necessary ingredients from my orderly, I smeared my sirih leaf lavishly with the lime paste, and, cutting chunks of pinang and gambir with my nail scissors, dropped them in and folded the leaf. The first sensation on chewing this rather cumbersome package was a somewhat bitter taste accompanied by a pleasant warmth. The warmth increased so rapidly, however, that had I not been of a rather determined nature I should probably have ejected the mass over the balcony without delay. However, I hung on for the sake of science. Three minutes passed, during which the warmth developed into heat, and then into actual pain, culminating in intense suffering. Quickly I expectorated the unholy morsel, but, alas! matters were by no means at an end; my tongue swelled so that it felt like a huge potato in the mouth, and the pain became intolerable, causing me to run round the house like a circus horse, halting incidentally at the ice-chest for a cooler.

Apparently the cause of all the distress was the application of too much lime and the use of an amount of the masticatory which only a hardened habitué would have dared to tackle. Let "Festina Lente" be the motto as regards "mákan sirih" of any who wish to make a trial. Personally I am sufficiently altruistic to trust my worst enemy may never undergo the agony that I did.

My first "mákan sirih" has been entered in my diary, and falls into the same category of experiences as my first yachting cruise and my first cigar.

REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD FOR THE YEAR ENDING MARCH 31, 1913.

(Continued from page 252.)

II.

Incidence of Plague, Cholera, and Yellow Fever.

Dr. Bruce Low contributes the usual reports on the diffusion of plague and cholera throughout the world. These reports do not contain very much that is new save that there is some indication that the population of India are now not quite so antagonistic to hygienic reform as previously was the case.

A report on the progress of yellow fever has been added for the first time owing to the renewed importance of this disease in view of the possibility of its carriage to Asia from the Panama Canal. At present Asia is free from the disease, but the *Stegomyia fasciata* abounds in some ports, and there are grave reasons for fearing that once introduced the disease will rapidly become established. On reading this report one is again impressed with the immense debt which humanity owes to the United States Army Medical Service.

Typhoid Fever.

The three reports by inspectors of the Board on epidemics of enteric fever at Strood, Shepley and Ringwood are all carefully worked-out examples of problems in modern epidemiology. The Strood epidemic appears to have been definitely traced to contamination of the public water supply by infective material soaking through fissures in the chalk; the Ringwood epidemic to children drinking from an infected brook, and the Shepley epidemic was traced to a carrier, who was subsequently found to be the cause of a previous epidemic. Although this one case had caused at least 60 cases of enteric in a few years, the county and borough councils concerned have refused to entertain any proposal for granting to her a small allow-

ance to enable her to gain a living without taking any occupation which involved the preparation of food. This course, which has been pursued in Manchester, appears to be the only solution of the difficulty.

Typhoid "Carriers."

Dr. Ledingham has continued his work on this subject. An attempt has been made to follow up a large number of convalescents discharged from the Metropolitan Asylums Board hospitals. Naturally many difficulties have been encountered in the matter of obtaining specimens for examination. Refusals have been many, and of course there has been no guarantee that the specimens have been derived from the person desired. At the same time sufficient evidence has been obtained to justify some important conclusions. Thus 190 cases were discharged from hospital free from infection (two examinations of the faeces and urine), and from no single one of these persons were bacilli isolated by Dr. Ledingham; 99 of these cases were examined "efficiently"—that is, at least 3 specimens were obtained. Of 130 cases discharged in an infectious condition 83 were subsequently examined, and yielded 8 "carriers," and of these 5 proved to be chronic "carriers." Examination of the specimens for bacilli of the Gaertner type gave negative results, but in several cases dysentery bacilli were isolated. It is suggested that strains of *Bacillus dysenteriae* are not so uncommon in England as has been assumed.

The conclusion from these results appears to be that it is not necessary to attempt control of those cases which are free from bacilli on discharge, but that cases which are still infectious on discharge should be followed up. This is advisable not only in the public interest, but in the interest of the patient, for by these means an attempt may be made to cure the patient before the organisms have produced chronic lesions in the biliary tract. One case has been reported to be cured after cholecystectomy.

The Biology of the Rat-Flea.

The common rat-flea of Great Britain, *Ceratophyllus fasciatus*, has assumed importance owing to the importation of plague. Mr. Strickland has therefore made a careful study of its life and habits. It was found that the eggs, which are easily obtained, hatch out after five to fourteen days, and that this incubation period is little influenced by variations in temperature and humidity. The larva, on the other hand, lives best in moist surroundings, as does the unfed adult imago. A comparatively low temperature is also advantageous. They feed on excrement or blood indiscriminately. Light has a very deleterious action at this stage, and is rapidly fatal. The pupal stage persists longer under the influence of cold. Under favourable conditions it persists for seventeen days, but may extend to months. The study of the imago led to the curious discovery that, although the flea will readily feed upon man, even more readily than upon the rat, yet it is not until the flea has fed upon the rat that copulation and oviposition will take place. Rat's blood, therefore, appears to contain a substance which is stimulating to the sexual organs of this flea. When unfed the animal will live for at least seventeen months, provided it is allowed to bury itself in rubbish. In the absence of rubbish it will live at longest for about a month, even when other conditions of temperature and humidity are favourable. From these observations it is clear that the presence of rubbish containing organic matter is essential to the development of the flea.

(To be continued.)

We learn from the *New York Medical Journal* that the United States Bureau of Education has published statistics on the number of medical schools and students, from which it appears that in 1913 there was a decrease in both. The number of graduates also has decreased. Seventy-nine medical schools combined with others or ceased to exist. The enforcement of a rule that every applicant for a medical licence must study one or two years in college before beginning a medical course is noted. Efficiency, it is pointed out, is promoted by having fewer institutions large and well equipped. While the statistics show that the number of women studying medicine has increased, the number of women graduates decreased in 1913.

Nova et Vetera.

THE EARLY HISTORY OF TOBACCO.

Smoking is so general at the present day that, if one thinks of it, one is apt to wonder how those who lived before the end of the sixteenth century, when tobacco was introduced into this country, contrived to do without what Lyly in 1597 called "our holly hearbe Nicotian." There are many who denounce its use as the parent of woes as numberless as the wrath of Achilles brought on the Greeks; and, of course, excess in smoking, as in everything else, is hurtful. Probably most smokers have at one time or another determined to give up the habit and have thrown away their pipes—only to invest in a new set in a week or two. No one has expressed the craving of the smoker for the abandoned "weed" like Charles Lamb, though doubtless many have felt the want of it with equal acuteness. He says:

I should repel my readers, from a mere incapacity of believing me, were I to tell them what tobacco has been to me, the drudging service which I have paid, the slavery which I have vowed to it. How, when I have resolved to quit it, a feeling as of ingratitude has started up; how it has put on personal claims and made the demands of a friend upon me. How the reading of it casually in a book, as where Adams takes his whiff in the chimney-corner of some inn in *Joseph Andrews*, or Piscator in the *Complete Angler* breaks his fast upon a morning pipe in that delicate room *Piscatoribus Sacrum*, has in a moment broken down the resistance of weeks. How a pipe was ever in my midnight path before me, till the vision forced me to realize it,—how then its ascending vapours curled, its fragrance lulled, and the thousand delicious ministerings conversant about it, employing every faculty, extracted the sense of pain. How from illuminating it came to darken, from a quick solace it turned to a negative relief, thence to a restlessness and dissatisfaction, thence to a positive misery. How, even now, when the whole secret stands confessed in all its dreadful truth before me, I feel myself linked to it beyond the power of revocation. Bone of my bone—

This passage occurs in the essay entitled The Confessions of a Drunkard. Lamb, in a later essay, complained that this had been taken for a piece of autobiography. It does not concern us here to inquire how far these confessions in as far as they relate to drink are autobiographical, but the description of the battle with himself before he conquered his love of tobacco throbs with unmistakable personal feeling. It should be pointed out that in his mind it was associated with drink, and it is a stock argument of antitobacco leagues that the two habits are inseparably connected, and that smokers, as Calverley says:

All grow by slow degrees
Brainless as chimpanzees,
Meagre as lizards;
Go mad and beat their wives,
Plunge (after shocking lives)
Razors and carving knives
Into their gizzards.

The general experience of mankind, however, agrees with that of the author of the Ode to Tobacco:

Yet know I five or six
Smokers who freely mix
Still with their neighbours.
* * * * *
Cats may have had their goose
Cooked by tobacco juice,
Still why deny its use
Thoughtfully taken?

It is popularly believed that tobacco was introduced into Europe by Sir Walter Raleigh, and we have seen a print showing that unfortunate adventurer smoking a pipe, to the dismay of some one who comes upon him when he is performing the rite. Tobacco was brought to England in 1586 by Francis Drake in a ship which had Raleigh on board. But the plant had been introduced into France by André Thevet thirty years before. An interesting account of the early history of tobacco, which was credited with medicinal properties by the natives who used it, and by the early writers on the discovery of the New World, is given from first hand authorities by Dr. Charles Singer in the *Quarterly Review* for July, 1913. He says there can be no doubt that the knowledge of tobacco reached the Old World from America, and that the first acquaintance of Europeans with the herb is almost exactly contemporary with the discovery of the Western continent. Columbus

appears to have seen the plant a few hours after he set foot on American soil. He first landed on the island which he called "Guanahani" or San Salvador. Under the date Monday, October 15th, there is the following entry in his Journal:*

> In the middle of the Gulf between the islands of Santa Maria (Rum Cay?) and . . . Fernandina (Long Island?) I found a man in a canoe carrying a little piece of bread about as large as the fist, and a gourd of water, and a bit of reddish earth reduced to dust and then kneaded, and some dry leaves which must be a thing very much appreciated among them, because they had already brought me some as a present at San Salvador.

Dr. Singer says these leaves were doubtless dried tobacco, and the kneaded clay was probably used as a little hearth on which to burn the leaves while the smoke was inhaled. A few days later Columbus landed in Cuba, and on November 2nd he sent inland two emissaries to visit a powerful king who, he was told by the natives, ruled over a neighbouring state. It must be remembered that Columbus had expected to sail to Asia, to reach Cathay and the territories of the Grand Khan. In two or three days the emissaries returned having found nothing but some native tribes in villages. They reported, as Las Casas relates in his *Historia de las Indias*, quoted by Dr. Singer, that they had seen:

> . . . many people, men and women, going to and from their villages, and always the men with a brand in their hands and certain herbs in order to take their smokes, which are some dry herbs put in a certain leaf, also dry, in the manner of a musket formed of paper, like those the boys make at Eastertide. Having lighted one end of it, by the other they suck, absorb or receive that smoke inside with their breath by which they become benumbed and almost drunk, and so it is said they do not feel fatigue. These *muskets* as we will call them (says Las Casas), they call *tabaco*. I knew Spaniards (he adds) on this island of Española (San Domingo) who were accustomed to take it, and being reprimanded by telling them it was a vice, they made reply that they were unable to cease from using it. I know not what relish or benefit they found therein.



Fig. 1.—Earliest pictorial representation of smoking. Enlarged figure from group showing treatment of syphilis. (From Thevet's *Singularitez*, 1558.)

The information that smoking was a vice must have surprised the guileless heathen. It recalls the story of Pio Nono asking a visitor if he smoked, and, getting the answer that it was a vice he did not indulge in, His Holiness, who liked a cigar, at once retorted, "If it were a vice, you would have it!"

The passage quoted from Las Casas is, Dr. Singer says, one of the earliest references to tobacco; it will be observed that the word *tabaco* denotes not the herb but the article prepared for smoking. Las Casas describes tobacco used in the form of cigars, but snuff taking was noticed during Columbus's second voyage in 1494, and the habit of "chewing" was met with on the mainland of South America by the Spaniards in 1592. Indian traditions and the discovery of pipes in ancient graves show that the use of tobacco is of very great antiquity in America.

According to Dr. Singer the first writer who gives a figure of an appliance used in smoking is Gonzalo Fernandez de Oviedo y Valdes, who landed in America in 1514 and remained there till 1523. He made several other voyages to the New World, and wrote its history in the *Natural Hystoria de las Indias*, which appeared in 1526, and the *Cronica de las Indias*, published in 1547. In each of these works he devotes a chapter to smoking, and in the *Cronica* there is a picture of a pipe. He says the Indians of the island of "Española" have among other vices a very bad one, which is that of taking smoke which they call *tabaco* in order to lose consciousness. For this purpose they use a herb of the nature of henbane, but of different shape, "for this herb is a shoot four or five hands high . . . with broad thick soft and downy leaves: and the verdure thereof inclines somewhat to the colour of what herbalists and medical men name the common bugloss." In a footnote Dr. Singer says, "The Bugloss is a member of the natural order Boraginaceae, and is thus closely allied to the Solanaceae, among which the tobacco plant finds a place." As to the manner of taking the smoke, Oviedo says the caciques and chief men have small hollow sticks a few inches long and of the thickness of the little finger. These pipes are Y-shaped, having two channels that merge into one, the whole being in one piece.

> The double end they set in the openings of the nostrils, the other end in the smoke of the burning herb. These pipes be right smooth and well wrought. . . . And they inhale the smoke one, two and three times, and as often more as they can, until they fall senseless and lie for long upon the earth unconscious, drunk and wrapped in profound slumber. The Indians who cannot procure these little sticks take the smoke through common reeds or grasses. The instrument through which they inhale the smoke, or the reeds as aforesaid, the Indians call *tabaco*, but they do not (as some have thought) so name either the herb or the stupor that overcomes them. This herb the Indians regard as a very precious thing, and they grow it in their gardens and plantations for the purpose aforesaid. They consider the use of that herb and the smoke thereof to be not only salutary but very sacred. And so when the cacique or headman falls on the ground, his wives (who are many) take him and place him in his bed, if he have beforehand so commanded them. But if he have not already so ordered, they fear not to leave him where he lies until the intoxication and sleep be past. I cannot think what pleasure is derived from such an act, unless it be the gluttony of drinking till one falls. Yet do I know that some Christians have been addicted to it, especially those who have had the pox, for they declare that during the time when they are thus insensate they feel not the pain of the disease. But to me it seemeth that this is naught else than death in life, a thing which I regard as worse than the pain they thus avoid, since they are not cured thereby.
>
> At present many of the negroes in this city and in the whole island (of San Domingo) have adopted this very habit, and they grow the herb in the gardens and plantations of their masters for the purpose aforesaid. And they indulge in the same smoking, for they say that when they rest from work and have those *tabacos*, their fatigue leaves them. . . . As has been said above, when some headman or cacique falls by *tabaco*, they put him in a bed according to command, and it were well here to say what sort of bed the Indians of this Island have. It is that which they call *Hamaca*. (This is obviously the original of our word "hammock.")

It will be noticed that here, as in nearly all early writings on tobacco, the plant is described as having strongly narcotic qualities. As Dr. Singer says, if these accounts are to be believed, the potency of the herb has much diminished since the sixteenth century.

The custom of smoking is casually mentioned by several other early chroniclers of Spanish travel. Dr. Singer thinks it not unlikely that the plant was first brought to Europe by Hernando Cortes, the conqueror of Mexico, who is said to have presented tobacco grains to Charles V in 1518.

Early in the sixteenth century the Spaniards found rivals in adventurers of other nations. Jacques Cartier, a Breton navigator, made four voyages to America, and it appears that in his second expedition, between 1535 and 1536, tobacco came under his observation among the Canadian Indians. Then came André Thevet, a French traveller, who went to Brazil in 1555. He returned to France in 1556, bringing with him the tobacco plant. In his book, *Singularitez de la France Antarctique*, he devotes two chapters to tobacco, describing in one the use of the herb in Brazil, and in the other giving an account of smoking as practised by the Canadian Indians. Dr. Singer quotes the following passage, with some corrections and additions, from an anonymous translation of Thevet's work

* The original journal of the explorer was in the possession of Bartolomeo de Las Casas, who made an abridgement of it which did not see the light till 1825.

which appeared in 1568 under the title, *The New found worlde or Antarctike:*

> There is another secrete herbe which they name in their langdage *Petun*, the which most commonly they beare about them, for that they esteem it marvellous profitable for many things, this herbe is like our Buglos. They gather this herbe very charely (Fr., *soigneusement*), and dry it (in the shade) within their little cabanes or houses. Their maner to use it, is this, they wrappe a quantitie of this herb being dry in a leafe of a Palme tree which is very great, and so they make rolles of the length of a candle, and than they fire the one end, and receive the smoke thereof by the nose and by their mouthe. They say it is very holesome to clense (Fr., *faire distiller*) and consume the superfluous humors of the brain. Moreover being taken after this sort, it kepeth the parties from hunger and thirst for a time. Therefore they use it ordinarily. . . .
>
> When they have any secret talke or counsel among themselves they draw this smoke and then they speake. The which they do costomably one after another in the (Councils of) Warre (for which purpose it is most useful). The women use it by no means. (It is a fact that) if that they take too much of this perfume, it will make them light in the head as (do the vapours) of strong wine. The Christians that do now inhabite there, are become very desirous of this (herb and) parfume, although that the first use thereof is not without danger, before that one is accustomed thereto, for this smoke causeth sweates and weakenesse, even to fall into a Syncope, the which I have tried in my selfe. And it is not so straunge as it seemeth, for there are many other fruits that offende the braine, though that the tast of them is plesant and good to eat (chap. xxxii, p. 49a).

It is curious that, besides the sweats, weakness, syncope, and so forth here mentioned among the effects of tobacco, another symptom, familiar to the schoolboy who begins to nibble at the forbidden fruit, is not mentioned. The passage is interesting for other reasons. The "tobacco parliament," the only form of council tolerated by Friedrich Wilhelm of Prussia (of which there is an account in Carlyle's history of his famous son, Frederick the Great) was clearly not an invention of that monarch. It was in existence among the Canadian Indians, probably from time immemorial. Then, again, it is interesting to note that the women did not smoke: this fact alone shows how little emancipated they were.

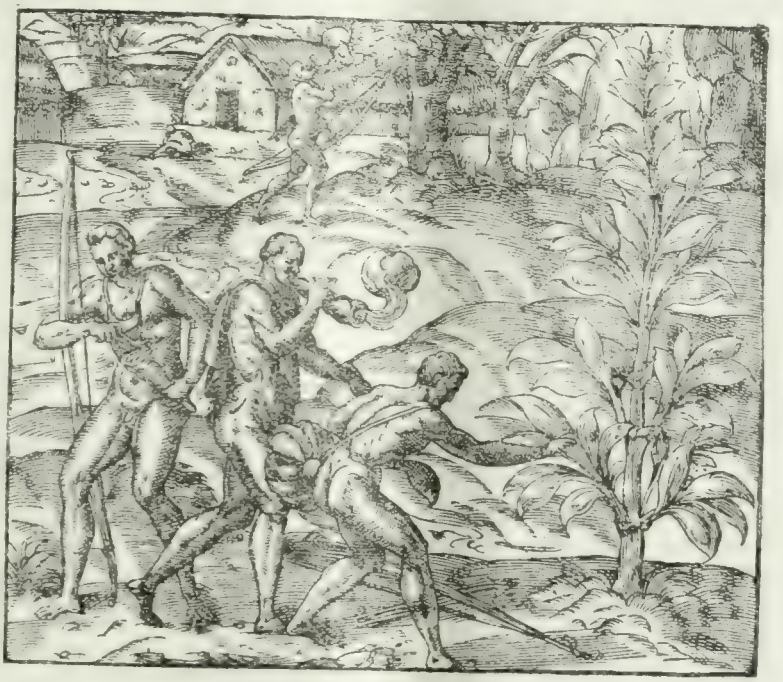


Fig. 2.—Indians smoking (Jan.). (From Thevet's *Cosmographie Universelle*, 1575.)

In 1561, three years after the publication of Thevet's book, Jean Nicot, French Ambassador to the King of Portugal, brought tobacco into France. He did not procure it from its native soil, but got some seeds from a Flemish merchant whom he met at Bordeaux when on his way to Portugal. On his return to France he gave some of the seeds to Catherine de' Medici and to the Grand Prieur. Cardinal de Sainte Croix, papal nuncio to Portugal, and Nicolo Tornaboni, nuncio to France, introduced tobacco into Italy as a remedy for syphilis, for which it was used by the Indians. Tobacco got the name "nicotiana" from Nicot—one of the innumerable instances of a man's name becoming attached to a thing which is not his. After asserting that he was the first who brought the tobacco seed to France and planted it there, Thevet complains that "since then a certain man who has never been in the country (America) has chosen some years after my return to give it his own name." He goes on to deny that the herb is of any use in the cure of wounds, ulcers, or other diseases. Here, however, his anger at the credit having been filched from him by Nicot makes him contradict himself. It is certain that the Indians believed in its healing properties. It appears, says Dr. Singer, to have been used in surgery for wounds, ulcers, and abscesses, and to have had attributed to it mainly an antiseptic and counter-irritant action in addition to its well-known anaesthetic and narcotic influence and emetic effects. Its value for the itch seems to have been undoubted, and it was recommended both internally and externally for cancerous growths, headache, noli-me-tangere, rheumatism, morbus gallicus, indigestion, asthma, yaws, erysipelas, and many other conditions. Monardes especially gives details of its medical application. Leaves and cakes of tobacco, extracts, infusions and distillates, as well as the ashes and smoke of the burning herb, all found usage in these early years. Until recent times, preparations of tobacco were still used among ourselves in medicine as local applications for the relief of pain, especially in cases of hernia and after operations. We have been told by a surgeon who served in the Russo-Turkish war that Turkish soldiers bore the amputation of limbs without any other anaesthetic than such as was supplied by a cigarette.

It has already been said that tobacco was not introduced into England till 1586, but Dr. Singer thinks that smoking was probably common among sailors long before that date. Attempts were made by James I of England and VI of Scotland, by Christian IV of Denmark, and other kings, to "put down" smoking; and Pope Urban VIII, and later Clement XI, fulminated against its use in churches. It would thus seem that smoking in church was at one time customary in Latin countries. It seems to have continued much longer in countries which had shaken off the papal yoke, if we accept the authority of Walter Scott. Readers of *The Heart of Midlothian* will remember the indignation of David Deans at Captain Knockdunder's conduct in Reuben Butler's kirk. "It didna become a wild Indian," he said, "much less a Christian and a gentleman, to sit in the kirk puffing tobacco-reek as if he were in a change-house." But the use of tobacco as a sedative—"the calumet of peace"—survived all papal and royal prohibitions, and it has spread all over the world.

We are indebted to the courtesy of Dr. Singer for the photographs reproduced in this article.

* "Petun" is defined in the *New English Dictionary* (Oxford) as "a native South American name of tobacco, formerly partially in English use."

LITERARY NOTES.

The Turin Royal Academy of Medicine offers for the thirteenth time the Riberi prize of £800 for researches in the province of medical science. Intending competitors are requested to send in the works which they wish to present in competition on or before December 31st, 1916. Forms for the purpose may be obtained on application to the Secretary of the Royal Academy of Medicine, 18, Via Po, Turin.

The *Annales de Médecine* is the name of a new periodical published by Masson et Cie, under the direction of MM. Léon Bernard, Fernand Bezançon, Georges Guillain, Marcel Labbé, Edouard Rist, and Gustave Roussy. The new periodical, which is well printed on good paper, and altogether presents a creditable appearance, contains original

communications and a critical review of some important question under discussion by the profession. A special feature is to be made of illustrations. Those in the first number are admirably executed.

With reference to a note which appeared in this column in the BRITISH MEDICAL JOURNAL of January 31st, to the effect that Sir Charles Tupper's reminiscences would be published by Messrs. Constable, instead of Messrs. Cassell as stated in a previous issue, we learn that two volumes dealing with the career of Sir Charles Tupper will be issued—one by Messrs. Constable, the other by Messrs. Cassell. The latter is a volume of reminiscences.

A Study of Robert Boyle ("Father of Modern Chemistry and brother of the Earl of Cork," as he is described on a monument) has been written by Miss Flora Masson, and will be published during the spring by Messrs. Constable. Boyle was one of the founders of the Royal Society and was elected its President in 1680, but declined the honour owing to a scruple about oaths.

The Oxford University Press will publish immediately *An Account of the Morisonian Herbarium in the Possession of the University of Oxford*, by Professor S. H. Vines and Mr. G. Claridge Davies, Curator of the Fielding Herbarium. A biographical and critical sketch of Morison is given, and there is an account of the early history of the Physic Garden (1619–1720).

At a meeting of the Paris Académie de Médecine held on January 20th, Dr. Paul Regnier presented on behalf of the author a work by Dr. Nass, entitled, *Le Siège de Paris et la Commune*. Dr. Nass's name is well known as a medical historian, and in particular as collaborator with Dr. Cabanès in a volume on revolutionary neuroses. His new work is the result of further studies on the same subject. He describes the morbid phenomena caused in a social organism by events such as the siege of a city with two million inhabitants, and the revolt which follows a painful capitulation. Under the excitement of these events a true neurosis is engendered which attacks the mass of the people as well as individuals; in this lies the explanation of the disorders which, beginning as acts of almost insane heroism, become more acute till they develop into veritable madness with ideas of persecution, and end in acts of furious mania and homicidal delirium. The history of such a period can only be told with scientific impartiality and with true insight into the causes of things by a doctor. A study of this kind shows how little capable man's brain is of resisting certain emotions, and the reader is, like Dr. Nass, inclined to a certain scepticism as to the pretensions of peoples and politicians to direct political movements as they wish.

At the same meeting Professor Rafael Blanchard presented two books to the Academy—one by Dr. A. Blind, entitled *L'Orient par un médecin*, in which the author gives his impressions of the medical institutions and hospitals in Egypt, Palestine, and Syria; the other, by M. Léon Moulé, entitled *Glossaire vétérinaire médiéval*. M. Moulé has already gained a considerable reputation by a dictionary of veterinary biography, and his researches on the parasitology of domestic animals as found in ancient writings.

The number of new books issued in Great Britain in 1912 was 12 067, as against 10.914 in the previous year. The number of medical publications did not show a corresponding increase, 440 having appeared as against 415 in 1911. In Germany the number of new publications showed an increase of 1,803 as compared with 1911: there was no considerable increase in the number of medical publications, which was 2.060 in 1912 and 2.011 in 1911. In Denmark 115 medical books were published in 1912, as against 105 in the previous year. In the United States, of a total number of 10,903 new books in 1912, 495 were medical; in 1911 the total number was 11,225, of which 527 were medical. In France, of a total of 11,560 in 1912, the number of medical publications was 735, a marked decrease as against the figures for 1911, which were 11,652 in all, of which 1,022 were medical. In Italy, in a total number of 11.234 in 1912, medicine was represented by 1,239, as against 1,032 in the previous year. In Holland, of a total number of new publications of 3.739 in 1912, medicine was represented by 125, as compared with 131 in 1911.

The W. B. Saunders Company has just published *The History of Medicine*, by Fielding H. Garrison, M.D., Surgeon-General's Office, Washington. It is a volume of 763 octavo pages, with many illustrations, chiefly portraits. The book traces the history of medicine from the earliest times on through Egyptian, Sumerian, Oriental, and Greek medicine, and each succeeding period down to the present day. There are also appendices covering medical chronology, and data on important diseases, drugs, medical therapeutics, and surgical operations.

Readers of *Orkney and Shetland Records*, published under the auspices of the Viking Society for Northern Research, will be interested to learn that, owing to an offer of hitherto unpublished MSS. made to the society by the Norwegian Government, the original plan of this interesting periodical has been abandoned, and the *Records* will henceforth comprise not only documents taken from "Diplomatarium Norvegicum," as was formerly the case, but all that relate in any way to the history of these islands. "The purpose of the collection," writes Mr. Alfred W. Johnston in his introduction to Part XI of the first volume of this valuable series of documents, "is to bring together material for compiling the history of Orkney and Shetland, a history which has not yet been accomplished. So far it has been all uncertainty, with big gaps, and what has been written has been only partially derived from authentic documents, which are the one safe source." Doubtless many of the forthcoming documents, however, will do more than merely determine such comparatively unimportant details as the precise date of a battle or the accession or death of a certain king. Documents of purely personal interest, such as letters, household accounts and inventories, wills, and other family papers, must always be of inestimable value to the student of history, for they throw a flood of light on the domestic life of the period, and in so doing

> Summon from the shadowy Past
> The forms that once have been.

The list of clothing quoted by Mr. Johnston from a sixteenth century Testament, for instance, shows the wardrobe considered necessary for a Shetlander of good position during the latter part of the reign of James IV, whilst from the enumeration of his losses it is possible to gain some idea as to the domestic arrangements of another Shetland gentleman, whose house was plundered some seventy years later. Mr. Johnston gives the two lists in full as follows:

> The Wardrobe and belongings of a Shetland gentleman of the late fifteenth and early sixteenth centuries. Sir David Sinclair, great foud (lawman or justice) of Shetland, captain of the King's castle in Bergen, etc., are set forth in his will of 1505; *inter alia*: Drinking vessels: two silver and one "mid" stoops, with thirty stopps (flagons and cups?). Ships: "The Carvell:" a little ship; and the Inglis (English) ship. Jewelry: gold chain, which he wore daily; gold chain, called a "collar," given to him by the King of Denmark; great silver belt; signet. Clothing: linen robe brought from the Flemings; blue doublet, with breast set with precious stones; hood, set with precious stones; black doublet of velvet; red hose; short red velvet coat, without sleeves; short black velvet coat, doublet of cloth of gold; grey satin gown; three ostrich feathers; black damask gown with silver buttons; grey scarlet hose; doublet of down cramese; red velvet coat, left to the high altar of St. Magnús' Cathedral; two-thirds of a black velvet coat, left to St. Magnús' church, Tingwell and one-third to the Cross Church of Dunrosnes; green cloth, etc. Harness: three saddles, etc. Books: *The Book of Good Manners*.

Another Shetland gentleman, Magnus Leslie of Ayth, had stolen from him, *circa* 1576, by the foud of Shetland, besides food, drink, cattle, etc., the following articles:

> Sixteen ells of "Keltar": one pair double blankets; a bed covering; a doublet of cramese; a black cowl, which cost a crown of the sun; three crystal stones set in silver, of the Dutch fashion; copper kettle; a keg, with twelve pounds of soap; tin cans and empty stoops; (the latter must have proved a sore disappointment to the thieves, who seem to have taken a fancy to their unfortunate victim's kitchen-ware); honey, cruses; pigs (earthenware jars); "stalis"; cups; beakers; together with all his servants' clothing, such as cassies, breeks, doublets.

Mr. Johnston's admirable introduction forms the whole of the present number of the *Records*; and his masterly little sketch of the early history of the Orkney and Shetland Islands serves but to whet the appetites of his readers for the more solid fare to follow in the forthcoming numbers of this excellent periodical.

British Medical Journal.

SATURDAY, FEBRUARY 7TH, 1914.

THE PROPHYLAXIS OF KALA-AZAR.

THE ravages of kala-azar in Assam are well known to all students of tropical medicine. Apparently it was observed in the Garo Hills in 1869, and was at first supposed to be a very severe form of malignant malaria, though the natives called it kala-azar—which translated means "black fever"—owing to the peculiar dark appearance presented by its victims. Clarke published an account of the disease in 1882, and by 1889 it had been found to exist in many districts of Assam. So serious had the condition of things in the tea gardens become a few years later that several Commissions were appointed to investigate the malady.

The first great step towards an understanding of the pathology and etiology of the class of diseases of which kala-azar is the most serious example was taken by Leishman, who in 1903 described some peculiar bodies in smears from the spleen of a soldier who had died of a fever known in Bengal as Dum-Dum fever. About the same time Donovan found similar parasites in cases of fever in Madras, and later Bentley, following up this work, demonstrated the same bodies in typical cases of kala-azar in Assam. These discoveries, quickly following each other, showed that kala-azar was not a disease peculiar to Assam, but that it occurred in different parts of India. They also showed that the disease need not necessarily occur in epidemics, and it was, indeed, established that the endemic or sporadic form was the more common.

It is astonishing how quickly, when once a discovery is made, its application is extended, and as regards medicine how after the pathology of a disease has been ascertained cases are found to occur in places where the malady was previously undreamt of. In all probability the cases occurred as frequently before, but it is only when attention is specially directed to them that some investigator suddenly begins to suspect that the disease is prevalent in his own country, and by applying the new methods establishes the fact that it is. Kala-azar is no exception to this rule. Since 1903 its known geographical range has been constantly enlarged, until now its existence over very extensive areas of the globe has been established. In 1905 Pianese found leishmanial parasites in Southern Italy, soon afterwards Nicolle found them in Tunis, and at the present moment the whole, or practically the whole, of the Mediterranean littoral is known to be infected. Some observers believe that this form of the disease differs from that seen in India, and the name "infantile kala-azar" has been applied to it. Its chief characteristics are that it attacks infants, though in exceptional instances adults have been known to suffer, and that it also occurs in dogs. In contrast to this are the facts that adults are quite as liable to acquire the Indian form as infants, and that, as far as is known, dogs do not suffer from it under natural conditions. Morphologically, the parasites met with in India and on the Mediterranean littoral are very similar. A similar state of affairs exists with regard to Oriental or tropical sore. Its range is now known to be very considerably wider than used to be supposed, and various ulcerative skin lesions in South America, bearing the local names of uta, espundia, forest yaws, etc., have lately been proved to be due to leishmanial parasites, and are thus brought into the leishmanial group of diseases. The parasite of Oriental sore, *Leishmania tropica*, is usually supposed to be specifically distinct from *L. donovani* (Indian kala-azar), and from *L. infantum* (Mediterranean kala-azar), but whether the newly recognized dermal leishmaniases above mentioned are caused by *L. tropica*, or another species, is a question not yet definitely settled.

Since the discovery of the parasite of kala-azar in 1903 much work has been done on its life-history, and many efforts have been made to discover the way in which it passes from man to man. There is a very general suspicion that the transmitter is an insect, and both bugs and fleas have, with more or less confidence, been incriminated. In India Patton has found flagellate forms of the parasites in the stomach of the bug, but he has not been able to prove how these find their way back to man, and critics of his work have said that the parasite undergoes flagellation in the bug's stomach, because, just as it finds the water of condensation in a haemoglobin agar tube a suitable medium, so does it find the blood in the bug's stomach. Basile maintains that the dog-flea is the intermediate host of *L. infantum*, the parasite that causes the Mediterranean form of the disease. His critics, however, reply to this that he has mistaken common flagellates of the flea's stomach for developmental forms of the kala-azar parasite, and that his conclusions are not warranted. The question, therefore, as to the true intermediate hosts of the leishmanial parasites is still *sub judice*.

On epidemiological grounds, Rogers and Dodds Price, as long ago as 1906-7, came to the conclusion that the disease was a house infection. It appears that in 1897 new coolie lines were constructed at the estate of Rangamati, and thereafter no further cases of kala-azar occurred amongst 150 coolies who were transferred to the new lines. On the other hand, out of 50 coolies who went on living in the old lines for want of room in the new, 16 per cent. died, and others quickly developed the disease. In a paper published in this issue they record a further series of observations, carried out on a somewhat similar plan, which have a high experimental value. Their conclusions are founded on statistics gathered during the last sixteen years, and, as the results of the measures advised have been uniformly successful, the authors rightly think that they prove the soundness of the methods adopted, and also throw considerable light on the probable mode of infection. Their statistics show that where kala-azar prevails in coolie lines segregation of the healthy in newly built lines suffices to stamp out the disease. They state the reasons which lead them to conclude that water can safely be excluded as the vehicle of infection. Similarly diet cannot be inculpated, because the coolies of the uninfected and infected lines had the same. Much more likely is the explanation that the infection is transmitted by a non-flying insect carrier. They believe that this is most probably the bed-bug, and the measures carried out by Dodds Price against this pest—fumigating the houses with sulphur, disinfecting the beds with solution of corrosive sublimate in boiling water, and burning old clothes—were followed by the disappearance of the disease from a row of badly infected coolie huts, though the disease recurred after some years. That the authors are not absolutely certain that the

hypothesis is correct is shown by their statement that "were it not for the facts now known regarding the life-history of the parasite, the evidence would go far towards incriminating the actual soil as well as the houses." It might be well to keep in view the possibility of soil infection and to institute further experiments It would be desirable also to ascertain whether bugs are abundant in the houses of the new coolie lines. If they are, then the question will arise why the disease does not break out there, because, apparently, infected cases have from time to time been accidentally admitted to them, and the bugs would, therefore, have been infected. Whichever of these theories is proved to be true Dodds Price and Rogers have certainly shown employers of labour how they can stamp out the disease, and great credit is due to them for this piece of work. How to deal with the endemic or sporadic cases is not so clear, but until we know that the bug is harmless it will be as well to view it with suspicion and to wage ruthless war against it.

SLEEPING SICKNESS AND BIG GAME.

SINCE the discovery made by Kinghorn and Yorke in 1911 that the antelope is the main reservoir of *Trypanosoma rhodesiense*, the parasite which causes sleeping sickness in Rhodesia and Nyasaland, much discussion has arisen regarding the advisability of relaxing the game laws and attempting to drive back the game from the vicinity of human habitations in fly areas.

It is now generally recognized that there are two types of sleeping sickness in Africa. One form, due to *T. gambiense*, is spread by *Glossina palpalis*, a tsetse fly limited in its distribution to the banks of rivers and the lake shores; the other, caused by *T. rhodesiense*, is disseminated by *G. morsitans*, which, unlike *G. palpalis*, is widely spread over large tracts of country independently of the presence of water. These two types of sleeping sickness can be differentiated clinically only by the more rapid course of the latter, and by the fact that up to the present it has proved to be unaffected by treatment, whereas to a certain extent the former and more chronic type is amenable to treatment.

In the present issue (p. 289) we publish a paper by Dr. H. L. Duke dealing with the problem of the relationship of game to sleeping sickness in so far as it concerns infection by *T. gambiense*. As a result of a prolonged and valuable series of experiments, Dr. Duke finds that the game acts as a reservoir of *T. gambiense*, a conclusion which agrees with that of Kinghorn and Yorke in respect to *T. rhodesiense*. The inferences of these workers have been freely questioned on purely theoretical grounds by certain Government officials, zoologists, big-game hunters, and others who are more interested in the preservation of the African fauna than in the eradication of trypanosomiasis affecting man and his domestic stock; but there is up to the present only a single scientific experiment which militates against these conclusions. Taute, it will be recalled, inoculated himself with trypanosomes obtained from a dog naturally infected with the game trypanosome, and also fed on himself *G. morsitans* rendered infective with the same trypanosome. The result was negative, and Taute therefore concludes that the game trypanosome, although it is identical with *T. rhodesiense* as regards morphology, pathogenicity, and the manner in which it infects the tsetse fly, is nevertheless different from it. This inference has been criticized by Yorke, who points out that it is unsafe to generalize from a single experiment, and suggests as a possible explanation that it is only with difficulty that healthy human beings can be infected with *T. rhodesiense*, but that once they are infected the disease runs a rapidly fatal course. The insurmountable difficulty of obtaining sufficient and satisfactory evidence on the lines of Taute's experiments are clearly pointed out by Duke.

We have now, therefore, to consider what can be done towards the eradication of trypanosomiasis in man and stock. Although the *T. gambiense* infection can be dealt with satisfactorily by removing the population from areas infested by *G. palpalis*, this procedure is impossible in the case of infection by *T. rhodesiense*, as *G. morsitans* is distributed over large tracts of country and not limited to watercourses. A thoroughly satisfactory method of getting rid of *G. morsitans* is efficient clearing of the bush, but it is obvious that at the best this is only practicable in the immediate neighbourhood of villages. Little result can be hoped from natural enemies of the tsetse fly or from trapping. Such suggestions as the introduction of guinea-fowl into fly-infested areas are based on ignorance of the fact that guinea-fowl and *G. morsitans* are frequently found flourishing together.

The arguments in favour of the advisability of relaxing the game laws and driving back the game from the vicinity of human habitations in fly areas were developed by Yorke in a paper published in this JOURNAL (June 21st, 1913), and were the subject of a leading article in the same issue. It was argued that by eradicating the game the tsetse fly would become non-infective, the source from which it derived the virus having been eliminated; it was further suggested that the fly having been deprived of its food supply would either diminish in numbers or even disappear. In support of the latter contention we may draw attention to the article by Dr. Prentice in the present issue (p. 293). Dr. Prentice writes from long personal experience of *G. morsitans* in Rhodesia and Nyasaland. He points out that before the rinderpest swept the greater portion of the game out of Central Africa *G. morsitans* was numerous and was recognized as a source of danger by the Arabs, who were forced to travel by night to avoid its ravages. Shortly after the rinderpest subsided Dr. Prentice travelled widely in Nyasaland and Rhodesia, and states that the country was remarkably free from fly. Now, however, game and fly abound in these very areas. Dealing with the assertion that tsetse can and does exist where it cannot possibly depend upon game for its sustenance, game being absent, Dr. Prentice asserts that this does not hold good of *G. morsitans* in Nyasaland and Rhodesia. Dr. Prentice also furnishes a satisfactory rejoinder to those who maintain that in consequence of the removal of its natural food supply by the destruction of game the fly would devote its attention solely to man and his flocks and herds. He points out that after the rinderpest the fly did not invade the villages, but disappeared, or remained only in small patches near the foothills.

Reviewing the whole situation, we believe the suggestion that the attack must be directed against the reservoir of the infection to be sound, and consider that the game laws should be relaxed in the inhabited portions of fly areas. With the object of filling up some of the gaps which, unfortunately, still exist in our knowledge of the subject it appears desirable that an experiment of game destruction in a localized area, such as was proposed by Yorke, should be undertaken.

THE INDIAN MEDICAL SERVICE.

For some years there has been evidence of increasing dissatisfaction among officers of the Indian Medical Service. The dissatisfaction with existing conditions is aggravated by an apprehension, which seems to be very generally felt, that changes may be in contemplation which would injure still further the prospects of the service and tend to cause deterioration in its efficiency. Many statements to this effect have appeared in the public press both in India and at home, and we have received numerous letters and private communications. In consequence an article was prepared for serial publication in the Journal last autumn; in September, however, the Secretary of State for India invited the British Medical Association to assist him to ascertain the causes of the falling off of candidates for the Indian Medical Service. The matter was considered by the Naval and Military Committee of the Association, and as the causes for this falling off could only be considered to be the same as those at present producing dissatisfaction among officers already serving, it advised the Council to make use of the article already prepared as the basis of a communication to be addressed by it to the Secretary of State for India. This course was adopted, and the statement, which, we are informed, is at present under the consideration of the India Office, is published in the Supplement for this week.

The Indian Medical Service has a long and honourable record. It has for many generations produced men distinguished as administrators, practitioners of medicine and surgery, and men of science. It is primarily a military organization, and one of the oldest still existing in India. The one hundred and fiftieth anniversary of its formal constitution was celebrated in Calcutta last month, and in connexion with that we have been able to give a brief account of some of its achievements, and of the work of some of the distinguished men who have served in it (p. 317).

Though primarily a military service, a large proportion of its officers discharge civil duties; they constitute the military reserve of the army in India, and the maintenance of such a reserve in India is held to be a military necessity. The Government of India has accepted the obligation to provide not only its military forces, but its civilian servants, with adequate medical attendance; it has not interpreted this obligation as involving the exclusive appointment of European-born practitioners to the Indian Medical Service, but it requires that candidates for admission should possess qualifications registrable in the United Kingdom. At the present time the service contains a considerable number of Indian-born officers, and as the result of the last two examinations others have received commissions. The Indian Government has not accepted the responsibility of providing adequate medical service, whether European or Indian, for Europeans engaged in professional or commercial occupations in India, but the European Defence Association has made a vigorous protest against any policy which would tend to check the natural growth of the Indian Medical Service, and would, of course, view with even greater alarm any proposal which would have the effect of diminishing its numbers or checking recruiting.

The Public Services Commission has taken a certain amount of evidence this winter with regard to the medical needs of India and the position of the Indian Medical Service. It appears that the total number of officers in the Indian Medical Service is 722, that of these 475 are civil surgeons, and that of the civil surgeons 331 are under orders for reversion to military duties in the event of a general mobilization. In reply to a question by Sir Valentine Chirol, Sir Pardey Lukis stated that to bring India up to the numerical standard of practitioners in Great Britain there would be required a total of 250,000 practitioners. It is evident, therefore, that there is ample scope for the activities of the medical colleges maintained by the Government of India, as well as for any independent colleges, such as those in Calcutta and Bombay, which can be established. In particular, it is clear that there is in the public health administration of India scope for the employment of a very large number of practitioners of Indian birth adequately trained in modern methods of hygiene. The whole question of the responsibilities of this country with regard to the medical needs of India is of great magnitude and much complexity. It is, however, difficult to see how the best interests of India can be served by any policy which would reduce the numbers or diminish the efficiency of the small band of men educated in Western schools who are now serving in the Indian Medical Service.

SCIENCE AT OXFORD.

By an amending statute which passed its final stage in Convocation on January 27th certain changes are to be made in the Lee's readerships in chemistry, physics, and anatomy. No change in the conditions is to be made during the tenure of the present readers in physics and in anatomy. The readership in chemistry is vacant. The statute is for the establishment of three new professorships, to be called Lee's Professors in the subjects of Anatomy, Chemistry, and Experimental Philosophy. The part or parts of these sciences which are assigned to the chairs are to be determined by the university in agreement with Christ Church. It is hoped that the Lee's Professorship of Anatomy will become the Chair of Human Anatomy in the University. Under Dr. Lee's will a certain sum was left for the foundation of a lectureship in human anatomy, and the lecturer was to be a person studying physics in the university. The change to be effected may restore to medicine what was originally intended for it, though only a small fraction of the emoluments to be paid by Christ Church towards the professorships comes from Dr. Lee's estate. Matthew Lee, who was born in 1694, entered Christ Church in 1713, graduated B.A. in 1717, M.B. in 1722, and M.D. in 1726. After practising in Oxford for some time he settled in London in 1730, and nine years later was appointed physician to Frederick, Prince of Wales. In 1750 he founded the anatomical lectureship at Christ Church, which he endowed with an annual stipend of £140; he also gave money for building an anatomical school. He died in 1755, and his bust is in the library at Christ Church.

JUBILEE OF THE MELBOURNE MEDICAL SCHOOL.

The oldest medical school in Australia, that of the University of Melbourne, will celebrate its jubilee this year. Work actually commenced in 1851, but its original buildings were not opened till two years later. The roll of medical graduates already numbers about 1,100, and over 380 medical students are now attending full courses of instruction. The Melbourne School has from the first insisted on a five years' course, and its degrees have been registrable in the United Kingdom since 1890. The celebrations will commence on Thursday, April 30th, and will last three days. The university is asking the State Government to provide funds for the appointment of assistant professors of anatomy, physiology, and pathology,

the proper staffing of these departments being regarded by the Faculty of Medicine as the most pressing want of the school. Old graduates are being invited to contribute varying sums annually for five years to a permanent fund, the interest of which will be devoted to the promotion of clinical research in the teaching hospitals of Melbourne. A history of the medical school is being prepared. The jubilee celebrations will include an inaugural ceremony in the Wilson Hall of the university; a series of short addresses on the history, needs, and prospects of the school; demonstrations in the laboratories, museums, and hospitals; a jubilee dinner, and a theatre party. A portrait of the Dean of the Faculty, Sir H. B. Allen, is to be painted for presentation to the university. The honorary secretaries of the jubilee are Dr. Douglas Stephens (2, Collins Street, Melbourne), and Dr. Konrad Hiller.

MALARIA IN CYPRUS.

A VERY interesting report on malaria in Cyprus,[1] by Sir Ronald Ross, has just been published by the Colonial Office. Sir Ronald went out in the spring of 1913, and studied the condition on the spot. During his visit he was authorized by the High Commissioner to make any interim recommendations on matters he thought urgently necessary, and he accordingly advised: (1) A general spleen-census of the school children in the island. (2) The issue of 30 grains of free quinine to every scholar suffering from enlarged spleen—that is, enough quinine for fifteen doses of 2 grains each, to be given daily by the schoolmaster. (3) The allotment of £25 to the Public Works Department for dealing experimentally with the marsh at Akhyriton. The spleen-census was most ably planned and directed by Dr. Cleveland, and the marsh at Akhyriton was excellently dealt with by Mr. Nicolls, Director of Public Works, and Mr. Giles of that department. Sir Ronald was also informed that the free quinine would be issued as soon as possible. The area of Cyprus is 3,584 square miles, and the population at the Census of 1911 was: 274,108 (Christians 217,680, Mohammedans 56,428); the density of population is, therefore, 76.48 per square mile. The attendances for malaria at the dispensaries during 1911 numbered 7,198, while 352 cases were admitted into hospital. Dr. Williamson found that the different species of parasites occur as follows: Benign tertian, 48.47 per cent.; quartan, 8.03 per cent.; and aestivo-autumnal or malignant, 43.50 per cent. The distribution of the disease throughout the island varies considerably; the chief transmitter is the *Anopheles maculipennis*, a mosquito which also abounds in Greece and Italy. Though much of the available breeding water dries up in the summer, which is very hot, certain permanent waters remain; these are principally wells, deep pools in river-beds, pools formed by ill-managed irrigation, especially by irrigation from the perennial streams, waste waters from stand pipes and waterworks (as at Limassol), cesspits, cisterns, brick-pits, and possibly certain deeper pools in marshes or ditches which last through the dry weather. Most of these exist only occasionally, but the wells are found almost everywhere, and may be one of the principal sources of the malaria of the island. A series of measures of prevention are advocated, and it is pointed out that the cost and applicability of these will depend upon circumstances, such as (1) the existence of a capable sanitary department, (2) the state of education of the local sanitary and medical officers, and (3) the intelligence and education of the people. Sir Ronald Ross believes that Cyprus is specially suitable for a large antimalarial campaign, and thinks that the only country that he knows that lends itself better to mosquito reduction is Ismailia, in Egypt, and perhaps one or two very arid tracts in India. The absence of rainfall during the warm months of the year is a most valuable asset. As he says, if mosquitos can be reduced in Panama or Sierra Leone, where torrential rains go on during the breeding season, then there is hope for Cyprus.

[1] Cyprus. Report on the Prevention of Malaria in Cyprus. By Sir Ronald Ross, K.C.B., F.R.S., F.R.C.S., M.D., D.Sc., Professor of Tropical Sanitation, Liverpool; Physician for Tropical Diseases, King's College Hospital, London. January, 1914. London: H.M. Stationery Office. [Cd. 7174]. (2½d.)

RELATIVE IMMUNITY TO ENTERIC FEVER.

IT has long been a matter of common observation that natives of India and of some other tropical or semi-tropical countries are apparently much less prone to contract enteric fever than Europeans, but there is no consensus of opinion as to whether this immunity is real or merely apparent, and those who hold the former view are not agreed as to the determining factor. For a study of the primary question the island of Hong Kong offers what is, perhaps, an exceptionally good field. Hospitals and dispensaries in which Western medicine is practised are popular with the Chinese natives; the population outside Victoria and Kowloon is scanty, and for a good many years past all deaths occurring in these towns which have not been certified by qualified practitioners after attendance during life have been investigated either by the medical officer of health or his assistant, and *post-mortem* examinations have, when necessary, been carried out; though the population is subject to sudden accessions from time to time, the annual estimates of its amount are so carefully checked that they can be taken as practically correct when calculations applying to a series of years are in question. These facts lend special interest to the observations made by Dr. Francis Clark, Medical Officer of Health for Hong Kong, in the course of a paper read by him at the last biennial congress of the Far Eastern Association. Dealing—on the basis of twenty years' experience—with the incidence of enteric fever among the European and Chinese sections of the population respectively, he supplied figures covering that period which showed that the chances of a European inhabitant of Hong Kong having enteric fever were thirty times greater than those of a Chinaman, despite the fact that the former lived in far better sanitary conditions. In view of the possibility of this relative immunity being due to a large proportion of the Chinese having gone through an attack of enteric fever in infancy, he had carried on an investigation of the question during a good many years, the work including the making of a special search for intestine ulcers and other *post-mortem* evidences of enteric fever in the bodies of children. The information acquired suggested that Chinese children contracted enteric fever considerably more often than those of similar age in England, but there was no evidence that it was a specially mild disease in Chinese children. Nor can the low relative incidence of enteric fever among the Chinese population be due to their habits in regard to water drinking. If the fact that his favourite beverage is tea, and that he cooks most of his vegetables, protects him from enteric fever, it would, it is argued, protect him also from dysentery, which, so far from being rare, is exceedingly common. Dr. Francis Clark, therefore, inclines to the belief that there really is among Asiatics a condition which may be described as racial immunity to enteric fever. The various explanations put forward for this immunity by those who hold the same belief include statements that in the bodies of Asiatics lymphoid tissue is less developed than in those of Europeans; that infection by the *B. dysenteriae* affords some protection against the *B. typhosus;* and that the development of bacilli of the colon group within the intestines of Asiatics is checked by more frequent evacuations and by the greater acidity of their contents. In Hong Kong the Government pathologist has found no deficiency of lymphoid tissue in Chinese bodies, and Macfarlane found the *B. lactici* to be commonly absent from the faeces of Chinese coolies in Hong Kong; the age incidence of such cases of enteric fever as do occur among the Chinese does not encourage a belief in the theory that

dysentery affords any protection. These theories, therefore, are not satisfactory so far as Hong Kong is concerned. On the other hand, despite the fact that the water supply of Hong Kong is excellent and that for a tropical country it is singularly free from flies, the high incidence of enteric fever among its European inhabitants is easy to understand. The Chinaman—commonly recognized as the most successful gardener in the world—habitually sprays over growing vegetables a highly nitrogenous liquid manure which he obtains from human excreta, both faeces and urine. This being the case Chinese-grown vegetables are exceedingly dangerous food unless thoroughly cooked. It is to lack of the latter precaution that the prevalence of typhoid fever among Europeans in Hong Kong—about eight times greater than in England—is attributed.

HEART DISEASE AND PUBLIC HEALTH.

AT present measures for the improvement of the general health are to a great extent restricted to a few diseases—the zymotic diseases, tuberculosis, and certain diseases of infants, and Dr. Karl Grassmann has recently done good service by calling attention[1] to the fact that there are other fatal and disabling diseases for the prevention of which little or nothing is being done. He instances diseases of the circulatory system, the death-rate from which in all countries is high; no collective attempt has yet been made to deal with the matter from a national point of view. In Germany deaths from diseases of the circulatory apparatus at ages from 15 to 30 years formed 7 per cent., and at the ages between 30 and 60 years 14.5 per cent. of all deaths. In these percentages deaths from apoplexy are not included. Dr. Grassmann states that the Bavarian statistics show that in 1907 nearly 17,000 persons died of diseases of the circulatory organs and of apoplexy, while only 7,000 died of cancer. These two groups of causes of death together account for over one quarter of the total number. He further points out that serious as is the mortality from these affections, the morbidity is still more serious. While it is not possible to form any accurate estimate of the extent of heart disease among the living, some idea may be gleaned from the statistics of persons claiming invalidity benefit under the German Workmen's Insurance laws. Among 151,033 persons who claimed benefit, 13,247 were suffering from some form of heart disease (including apoplexy). Dr. Grassmann says that Dr. James Mackenzie, whom he recognizes as "one of the more experienced heart pathologists and therapeutists," is optimistic in regard to the prognosis of extrasystolic arrhythmia, and that E. von Leyden is even more hopeful. It is, he urges, no longer justifiable to take shelter behind the opinion that nothing can be done for the sufferers from cardiac complaints, though the larger national question is not so much what can be done in an individual case as what can be done to avoid the incidence of these diseases. Congenital defects are beyond remedy, but while admitting that perhaps some of the acute inflammatory heart diseases cannot be made amenable to preventive measures, Grassmann argues that if the causation of these conditions were properly investigated, and suitable means taken to arrest the development of the cardiac defect, prophylactic treatment might even be extended to them, and that an economic advantage would be gained by the systematized care and relative cure of heart patients before their diseases had rendered them a misery to themselves and a burden to the State. One of the primary essentials of any campaign must be earlier diagnosis. New remedies, he thinks, are not wanted, and it may even be possible to do without novel diagnostic means, but the diagnostic and therapeutic weapons which we possess must be employed more fully than they are to-day, and the skill of the few in regard to such intricate measurements as are revealed in electro-cardiograms and the like must be made fully available everywhere. Institutional treatment and nursing should be supplied at the public expense, since the State will profit by the diminution of unemployment due to ill health, and by the prolongation of the working life of the individual. Dr. Grassmann's paper forms a useful comment on the doctrine preached by Dr. Mackenzie in the JOURNAL of January 3rd, for he applies to a particular class of diseases the views expressed by Dr. Mackenzie as to the importance of careful clinical study of common diseases with a view to the elucidation of their etiology, in the expectation that on this safe groundwork effective methods of prophylaxis may be built up.

[1] *Muench. med. Woch.*, November 11th, 1913.

MEDICINE IN THE "ENCYCLOPAEDIA OF RELIGION AND ETHICS."[1]

IN a notice of the preceding volume of this great work[2] attention was drawn to the medical substratum in the article on *Dwarfs and Pygmies*; now, in the present volume (the sixth, completing one half of the whole), the same character is evident in the contributions on *Giants*. There are two of them—one on giants in general, by David MacRitchie, F.S.A., Edinburgh, and the other by Walter Scott, M.A., Oxford, on giants in Greek and Roman story. Mr. MacRitchie is of opinion that there is no human race of giants at the present day, but he thinks that probably the maximum average height of any human family is reached by the men of Balmaclellan in Upper Galloway, Scotland. Their average height was 5 ft. 10.46 in., whilst that of the Tehueleches of Patagonia is now put at 5 ft. 10 in. Individual examples of persons of great height are not, however, difficult to find, and the Russian giant, Machnov, who was exhibited in London in 1905, is named as a well-authenticated case of a man whose stature reached 9 ft. 3 in. Both Machnov and Chang (the Chinese giant) were in all other respects normal, both in mind and body, but this has not by any means been the case generally. A more distinctively medical group of articles is that on *Health and Gods of Healing*, two particularly interesting contributions, written by Dr. E. Thrämer of Strassburg. First, the relations between sacred and profane medicine in antiquity are dealt with, and Dr. Thrämer comes to the conclusion that among the Greeks, as also among the Babylonians and Egyptians of an earlier age, religious medicine did not dispense with rational remedies. About twenty Greek healing gods and goddesses are enumerated and characterized, including, of course, Apollo, Herakles, the Dioscouroi, Dionysos, and Asklepios, and also those less well known in this respect, Athene, Helios, Poseidon, Aristaios, Cheiron, Paieon ("the Homeric physician of the gods"), Artemis, Pan, Hermes, Amphiaraos, and great Zeus himself. Fifteen healing heroes are enumerated, including Achilles, Antikyreus (the discoverer of the ἑλλέβορος μέλας, with which he cured Herakles of madness), Melampous, Amynos, and Molpadia Hemithea (who had an obstetric function). Other articles with a medical element of interest in them are those on *First-born, Good and Evil, Growth* (Biological), *Hallucination, Hand, Head, Heart*, and *Human Sacrifice*. There are two or three which relate specially to midwifery. Thus, under *Girdle*, written by Walter J. Dilling, M.B., Ch.B.Aberd., are to be found some most interesting notes on the use of the cincture in pregnancy and labour. Three distinct uses of the girdle seem to be recognizable: One is to act as a charm in labour, another to support the abdomen in the later months of pregnancy, and another to bring pressure (*vis a tergo*) to bear upon the uterus in the confinement. The meaning of the word *Incincta*, familiar to every one in the French form of *enceinte*, is really a philological problem; generally a belt is worn

[1] *Encyclopaedia of Religion and Ethics*. Edited by James Hastings, with the assistance of John A. Selbie, M.A., D.D., and Louis H. Gray, M.A., Ph.D. Vol. vi. Fiction—Hyksos. Edinburgh: T. and T. Clark. 1913.

[2] BRITISH MEDICAL JOURNAL, January 18th, 1913, p. 134.

in pregnancy and loosed at delivery. Mr. A. E. Crawley (author of the *Mystic Rose*, the *Tree of Life*, etc.) deals with the difficult subject of *Foeticide*. He does not think that at any stage of culture its practice necessarily implies a depraved condition of sexual morality; as often as not the sole reason is poverty. In the progressive evolution of culture, infanticide has given way before feticide, and now feticide is yielding in its turn to the artificial prevention of conception. Modern biology holds that the zygote is a new individual from the moment of penetration of the ovum by the spermatozoon; and Tertullian said, "He also is a man who is about to be one." It is a difficult matter, but Mr. Crawley deals wisely with it. A great many of the other articles contain references to medical questions, and these references cannot easily be foreseen, for they occur often enough under unlikely headings. Thus, in the paper on the *Hopi*, a body of American Indians in Arizona, the curious fact of the prevalence of albinism is touched upon. These albinos are not despised, and they may marry those of normal colour; but their marriages are frequently barren, or the number of children small. In the article on *Herder* it is reported that he had all his life a fistula under one eye, and that he would have been a physician but for his fainting at a dissection. Finally, in this brief summary, attention may be drawn to the two articles on *Heredity* by Professor Punnett and Mr. Philip Napier Waggett. This *Encyclopaedia* is really a wonderful production, and Dr. Hastings is to be congratulated alike upon the volumes, upon the articles, and upon the authors whose services he has enlisted. There is hardly a single page in the 890 which go to make up this instalment which does not contain something of interest even for the medical reader. Each page has from 1,200 to 1,500 words; and this volume contains 266 articles, written by 171 authors, of whom no fewer than 128 have contributed only a single article, so that every effort is evidently being made to find the most qualified exponent for each subject.

VOLTAIRE ON SMALL-POX.

VOLTAIRE, though he sneered at medicine, was, like most scoffers of the sort, an insatiable taker of physic. He remonstrated with Frederick the Great for hiding from him discoveries in therapeutics that might be useful to him, offering the King in exchange marvellous secrets which he said he possessed about cassia and senna. During the greater part of his long life he was much concerned about his health. In his youth he went through the attack of small-pox which was one of the inevitable incidents of life in the eighteenth century. He gives an account of his illness and expounds his views on the pathology of the disease in a letter written to the Baron de Bretcuil in January, 1724, some time after his recovery. He says that small-pox in itself, without extraneous complications, is only a purification of the blood favourable to nature, which, by cleansing the body of everything in it that is impure, lays the foundation of robust health. This notion is still widely held, not only by the ignorant, but by persons who think themselves educated. The practical inference to be drawn from the doctrine is that small-pox should be diffused as widely as possible so as to ensure purity of blood. A logical basis for antivaccinist teaching would be that the "Jennerian rite" by preventing small-pox deprives people of a chance of having their blood purified. In the way of treatment, Voltaire pinned his faith on bleeding. Not even Molière's doctors insisted more on *seignare, ensuita seignare*. Voltaire's reasons for insisting on blood-letting are as "exquisite" as those attributed to Sir Andrew Aguecheek by Sir Toby Belch. We must allow him to set them forth in his own words: "When it (small-pox) is accompanied by a malignant fever, when the volume of blood increased in the vessels is on the point of bursting them, when an abscess is about to form in the brain and the body is full of bile and foreign matters the fermentation of which excites in the machine fatal ravages, then reason alone ought to teach that bleeding is indispensable. It will purify the blood, relax the vessels, make the play of the springs more supple and easy, empty the glands of the skin and favour the eruption." Diafoirus himself could not have reasoned better. He would also have approved Voltaire's defence of purging. "The doctors," says the author of the *Henriade*, "by large evacuations discharge the source of the evil; this draws away with it a part of the leaven of small-pox, and by leaving it free to develop completely prevents it from becoming confluent!" The nonsense that even the cleverest of men will talk when he discusses medical subjects would be incredible had we not such innumerable proofs of this particular infirmity of noble minds. During his attack Voltaire was bled twice, took an emetic eight times, and drank 200 pints of lemonade. He allows, however, that occasions may arise when the use of powerful cordials becomes necessary; this is "when a sluggish blood, made still slower by the leaven which clogs all the fibres, has not the strength to push outside the poison with which it is loaded. Then the Countess of Kent's powder, Vauseger's balsam, the remedy of M. Aignan (Père Tranquille), etc., breaking up the parts of the blood that is almost fixed, cause it to flow more rapidly by separating the foreign matter and open the way of perspiration for the poison which seeks to escape." The cordials of which Voltaire here speaks are with the snows of yesteryear, but his pathology may still be found in the publications of herbalists and in prospectuses of vendors of quack medicines. It is delightful to find Voltaire towards the end of his letter denouncing the charlatans who swarm in Paris and who always give the same remedy for the same disease. "They are poisoners who should be punished." Here, however, he stumbled on a truth which is perhaps even now not sufficiently appreciated—that is to say, that in a given case it is not the disease, or rather the label, that must be treated, but the patient. We once heard Sir Michael Foster declare that there is no "tip" for pneumonia, and we would add that there is no tip for any disease. The most disastrous feature of recent legislation from the scientific point of view is that it encourages treatment by tips.

BALANTIDIASIS.

WALKER has published a very interesting account of balantidiasis,[1] a name now applied to the intestinal infestation of man with the ciliated protozoan parasite, *Balantidium coli*. Such an invasion, he states, is relatively common in the Philippine Islands, and may give rise to chronic diarrhoea or fatal dysentery. The balantidia appear in the stools only at irregular intervals, and consequently infections, unless accompanied by clinical symptoms, may frequently be overlooked. A large proportion of the pigs in and about Manila are infested, and the balantidia are passed in the resistant encysted stage more or less constantly in the stools of such animals. Morphologically *Balantidium coli suis* is identical with *Balantidium coli hominis*. Of a series of monkeys fed or injected rectally with *Balantidium coli hominis*, 40 per cent., and of 17 monkeys fed or injected rectally with *Balantidium coli suis* 73.5 per cent., became infested. In either case the parasites appeared in the stools only at infrequent intervals. In only a small proportion of the infested monkeys was a general infection produced. Of 2 monkeys infected with *Balantidium coli hominis*, 1, and of 12 monkeys parasitized with *Balantidium coli suis*, 1, showed the parasites in the tissues *post mortem*. The early lesions of the intestine of monkeys infected with *Balantidium coli* consist only of a slight hyperaemia with or without punctiform haemorrhages. Histological

[1] *The Philippine Journal of Science* (B, Tropical Medicine), vol. viii. October, 1913, No. 5.

examination of the tissues of monkeys recently infected showed changes, notably vascular dilatation, minute haemorrhages, round-cell infiltration and eosinophilia, which distinguished them from lesions of bacterial origin. In no one of 10 infected monkeys suffering from colitis or ulcerations due to bacteria or other causes was the protozoon found entering the tissues through the lesions. In those monkeys in which infection took place, the balantidia entered the tissues through the sound intestinal epithelium, and the parasite can produce abscesses which are bacteriologically sterile in the submucosa of an infected intestine. *Balantidium coli* is the primary etiologic factor in the symptoms and lesions of balantidial dysentery. The latency frequently observed in balantidiasis of man is due chiefly to the fact that the patient, although infested, is not infected with *Balantidium coli*; it is, however, in part due to the chronicity of the ulcerative process in infected cases. Every person infested with the protozoon is liable sooner or later to develop balantidial dysentery. Walker holds that *Balantidium coli suis* is identical with *Balantidium coli hominis*, and that the domesticated pig is the chief source of infection in the balantidiasis prevalent in the Philippine Islands. He concludes, therefore, that prophylactic measures against this disease in the Philippine Islands, to be efficient, must be directed against these animals, which should be confined and not allowed to run loose in yards and dwellings.

SUPERMAXIMAL INJECTIONS OF MERCURY IN SYPHILIS.

IT is an interesting question whether the rapid effect of salvarsan on syphilitic lesions is due to the particular composition of this drug or to its high percentage of arsenic, and if due to the latter, whether the same results may not be obtained by the injection of supermaximal doses of mercury. Ehlers[1] of Copenhagen claims that results equal to those of salvarsan, as regards rapidity of action, can be obtained by an initial supermaximal dose of mercury benzoate followed by a course of inunction. Commencing with a dose of 2 cg. he gradually increased this, till the large dose of 25 cg. was reached, without any evil effect. Chancres and ulcerative syphilides healed in a week, and the roseola disappeared in two days. The effect on papular syphilides was less rapid, but quicker than with inunction alone. As a rule, except in very obstinate cases, the symptoms disappeared, and the serum reaction became negative. The Herxheimer reaction was more pronounced with doses under 15 cg. than with higher doses; this supports the view that the reaction is due to irritation of the virus by a dose insufficient to destroy it. Ehlers has carried out this treatment in 248 cases, each of which received an initial injection of 10 cg. or more of mercury benzoate, the maximum dose being 25 cg. He fixes the dose at 2½ mg. per kilogram of body weight, an average of 20 cg. for men and 15 cg. for women. There was only one death, due to mercurial colitis, in a patient suffering from malignant syphilis, who temporarily neglected treatment. Mercurial stomatitis in varying degrees occurred in 43 cases, and diarrhoea in a few. By this method, according to Ehlers, an *ictus therapeuticus* can be attained, which is not possible with inunction alone or with the usual doses of mercurial injections.

CONGENITAL PALUDISM.

IN the days when ague was common in England, the idea that a child could be born with it seems to have been admitted, but it is only quite recently that the fact could be proved. Dumollard and Viallet in Algiers detected a few years ago the *Plasmodium falciparum* in a case of congenital malignant tertian, and Dumollard and Laffont discovered *Plasmodium malariae* in the blood of a child whose mother had quartan ague. Brumpt and Tissier[2] have published a report of the case of a European lady who had resided for many years in Algiers, and remained free from ague until January, 1912. Then, just after she had become pregnant, she had a mild attack. In March, 1912, the lady returned to France and went to reside in Neuilly, near Paris. In the fourth month of gestation—June, 1912—fever returned at two days' interval and lasted for six weeks. The temperature occasionally reached 41° C. The fever ceased abruptly, and the patient's health was quite restored. On October 2nd a male child was born spontaneously. It weighed 7 lb. 5 oz., and was slightly sallow. It was fed by the bottle and throve rather badly, yet showed for nearly three weeks no sign of illness. Suddenly, on October 20th, convulsive attacks occurred, and the temperature touched 39.5° C. The attacks recurred on October 22nd and 25th. Congenital paludism was diagnosed, and the *Plasmodium vivax*, the parasite of benign tertian ague, was detected both in the mother and in the child. Quinine was administered, and two months later the infant was doing well; there had been no recurrences, the sallowness had disappeared, the spleen, which had enlarged, became impalpable, and the rate of growth had approached nearer to the normal standard. It is not certain, in the authors' opinion, that the fetus was infected in the uterus during gestation. MM. Brumpt and Tissier believe that infection took place when the placenta was becoming detached. The blood from the sinuses mixed with the blood from the lacerated villi and the organisms then entered into the fetal blood. The infant's first attack occurred on the nineteenth day. Possibly there might have been an earlier attack, as the fever usually develops about the fifteenth day after infection. That ague could be contracted from external causes in Neuilly in October seems, the authors conclude, quite inadmissible.

LORD STRATHCONA'S BEQUESTS.

LORD STRATHCONA, who was born at Forres, was the founder of the Leanchoil Hospital, Forres, to which he made many generous benefactions; he has by his will bequeathed to it a sum of £10,000. At the annual general meeting of the governors of the hospital on January 27th, before the bequest was announced, the chairman, Sir John Macpherson Grant, Bart., of Ballindalloch, referred to the death of Lord Strathcona, and said that the hospital owed everything to him. An expression of sympathy with his relatives was entered on the minutes. It is reported that the number of patients treated during the year was 133. Lord Strathcona has also left a sum of £200,000 to the Royal Victoria College for Women, Montreal, after deduction of payments made during his lifetime, but in addition to the college buildings and site provided by him at a cost of about £30,000. He has left £100,000 to the Royal Victoria Hospital, Montreal, which with Lord Mount Stephen he founded and endowed in 1887, on the occasion of Queen Victoria's first jubilee; to the Extension Fund of Queen's University, Kingston, Canada, £20,000; to the Yale University, Connecticut, U.S.A., £100,000; to the University of Aberdeen for the Chair of Agriculture, £5,000; to St. John's College, Cambridge, £10,000, in addition to the like amount given during his lifetime; to the Queen Alexandra Extension Home and Hospital for Incurables, Streatham, £2,000; and to University College Hospital, to the Middlesex Hospital, and to the National Hospital for the Paralysed and Epileptic, £2,000 each.

[1] Communication to the Section of Dermatology at the Seventeenth International Congress of Medicine, London, 1913.

[2] *Annales de gynéc. et d'obstét.*, October, 1913, p. 610.

THE twenty-ninth congress and exhibition of the Royal Sanitary Institute will be held at Blackpool, by invitation of the Corporation, in July (6th to 11th). The Earl of Derby will preside.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE LISTER MEMORIAL INSTITUTE FOR RESEARCH IN EDINBURGH.

A good beginning has been made in connexion with the raising of the necessary funds (£190,000) for the proposed Lister Memorial Institute for Research in Edinburgh. The University and the Royal College of Physicians have each subscribed £10,000, and the Royal College of Surgeons £5,000.

EDINBURGH WOMEN MEDICAL STUDENTS.

On January 30th two petitions, each dealing with money given for the assistance of the teaching of women medical students in Edinburgh, were before the Court of Session. These petitions revive memories of the whole history of the teaching of medicine to women in Edinburgh. Until the autumn of 1889 there was one school, with Miss Jex-Blake as its dean; it was known as the Edinburgh School of Medicine for Women. At that time, on account of some dissatisfaction among the students, there was a break away, and the Scottish Association for the Medical Education of Women, with the Medical College for Women (in Chambers Street), was formed. For several years, up till 1898, the two schools existed in Edinburgh, and both obtained some recognition from the university enabling them to send their students up for the university degrees in medicine; but in that year (1898) the School of Medicine for Women, under Dr. Jex-Blake's management, ceased to exist. The Scottish Association and the Medical College for Women continued to do all the teaching of women medical students in Edinburgh until 1908, when a strong attempt was made by the women students and the Court of the Association to persuade the university to take over the teaching of women. This was unsuccessful: the lecturers of the college, however, obtaining recognition directly from the University Court, founded the present School of Medicine for Women in Surgeons' Hall School, with Professor William Russell as its dean, and have since carried on the teaching of medicine to women students there.

The two petitions before the Court of Session have reference to two sums of money which were placed in the hands of the late Dr. Sophia Jex-Blake for the purpose of aiding the education of women medical students in the old School of Medicine for Women. Answers were lodged on behalf of the dean and committee of management of the School of Medicine for Women. The First Division of the Court of Session has now ordered the petitioners to reply to the answers lodged.

FACULTY OF INSURANCE NATIONAL CONFERENCE IN EDINBURGH.

On January 29th the first meeting in Scotland described as a National Conference of the Faculty of Insurance was held in Edinburgh. Councillor F. J. Robertson presided, and about 300 persons were present. Dr. M'Vail described the faculty of insurance as a by-product of the National Insurance Act; it had come into existence in the first place for the purpose of testing the knowledge of those who wished to take part in the work of insurance, and in the second place for certifying to their fitness. Very soon it would begin to teach the methods of insurance, and then its examinations would follow its teaching. He thought, considering the worry, anxiety, timidity, and doubts in the mind of the medical profession a year ago, it was remarkable how comparatively calm the atmosphere now was. The change brought about by the Act was so tremendous that perfection could not be reached at once; but he had faith in the doctors of Scotland that they would do their best by the Insurance Act. Mr. W. A. Appleton, a member of the London Insurance Committee, said that the difficulties in England with regard to medical benefit were greater than in Scotland. It had suffered from imperfect diagnosis and ambiguous language, and from the fact that the medical men, in England at least, had not realized that they were not only to certify a particular form of illness, but also to certify incapacity. They paid for a medical certificate for illness and incapacity, and if the doctor was not prepared to take the responsibility he should immediately agree to a reduction of the fee he was receiving. He stated that one London doctor had 3,400 patients on his panel, and was still taking them on, while in Scotland another had so many that he was unable to sign his certificates himself, and his wife had a rubber stamp for the purpose. His own feeling was in favour of a State Medical Service, as much in the interests of the medical profession as in the interests of the persons concerned. In the meantime the numbers on the medical panels might be very rigidly limited. Dr. Michael Dewar said that he agreed with Mr. Appleton that doctors should be punished by fines where negligence was proved.

THE PHARMACEUTICAL SOCIETY IN EDINBURGH.

The second meeting of the Pharmaceutical Society of Great Britain for the winter session took place in Edinburgh on January 28th. Mr. J. P. Gilmour was in the chair. Mr. D. B. Dott, Ph.C., read two papers: one was on apomorphine hydrochloride, and in it, whilst he criticized Paolini's recent research, he expressed the opinion that probably in the production of apomorphine from morphine an intermediate body was first formed. The other dealt with a simple modification of his original process for the estimation of spirit of nitrous ether. Mr. R. Glode Guyer, Ph.C., read a note on tincture of digitalis, giving the result of experiments proving that a tincture made from the lamina of the leaf was practically identical in potency with one from the petiole, midrib, and veins. Mr. Thomas Stephenson, Ph.C., showed a specimen of Kolipinski's digitalic acid, an acid resin which, whilst non-poisonous, had the characteristic action of digitalis on the heart. It was regarded as the mother substance from which the toxic digitalis glucosides were derived.

MEDICAL WORK IN SYRIA AND PALESTINE.

In the annual report presented at the meeting of the Edinburgh Medical Missionary Society, referred to last week (vide JOURNAL for January 31st, p. 268), the following tables are supplied of the surgical work done in the Society's Hospital (Victoria) in Damascus, and in its temporary hospital at Nazareth. The former is under the care of Dr. Frank Mackinnon, and the latter under that of Dr. F. J. Scrimgeour; at each hospital there is an assistant doctor and English nurses. The major operations performed at Damascus numbered 363, and were as follow:

Bones and joints—		Carcinomas	8
Tuberculous disease of bones	22	Ear and throat	16
Tuberculous disease of joints	5	Carcinoma of rectum	1
Osteomyelitis	5	Haemorrhoids and fistulae	15
Excisions (non-tuberculous)	2	Vesical calculus	5
Ununited fractures	4	Castrations, prolapse, etc.	16
Fractures	4	Eye—	
Amputations	8	Cataracts	13
Others	5	Iridectomies	9
Abdominal—		Enucleations	2
Hernia, radical	35	Glaucoma	2
Hernia, strangulated	5	Strabismus	2
Appendicitis	3	Trichiasis	18
Resection of bowel	2	Others	13
Laparotomy	1	Diseases of women—	
Hepatic abscesses	9	Fibroid of uterus, laparotomies	4
Glands of neck	11	Ovarian	1
Gunshot wounds	6	Pelvic abscesses	5
Cysts, etc.	3	Endometritis	45
Tuberculous abscesses and sinuses	35	Vesico-vaginal fistulae	10
		Rectocele	1
		Hysterectomies	2
		Others	2

There were also 360 minor operations and 305 gynaecological cases. In the out-patient department 3,406 patients were seen (the first visit only was counted), and of these 1,839 were Moslems; in the indoor department, also, the Moslem patients constituted nearly 50 per cent. of the total number operated on.

At Nazareth the statistics were from November 11th, 1912, to November 11th, 1913. (Dr. Scrimgeour was in Great Britain during the month of December.) The table is as follows:

Statistics from November 11th, 1912, to November 11th, 1913.

Attendances at the Dispensary	8,357
Visits to patients in their own homes	589
Patients treated in the Hospital wards	537
Number of operations performed (see list below)	648
Teeth extracted	94
Vaccinations	129
Confinements conducted	50

List of Operations.

General Operations.	
Acute abscess	100
Disease of bone	40
Chronic abscess	20
Whitlow	6
Hernia: radical cure ...	25
Hydrocele: radical cure ...	5
Haemorrhoids	11
Fistulae and sinuses ...	10
Tuberculous glands ...	32
Amputations	4
Circumcisions	4
Vesical calculi	8
Laparotomies: exploratory and for tuberculosis ...	12
Tumours and cysts	19
Paracentesis	23
Foreign bodies: bullets, etc.	9
Ascites (Paterson's operation)	6
Colostomy	2
Empyema	6
Various	85
Eye Operations.	
Trichiasis (lids)	66
Iridectomies	26
Evisceration of eye	3
Pterygium	11
Strabismus	9
Various	59
Gynaecological and Obstetrical.	
Curettings	20
Ventral fixations	9
Vesico-vaginal fistulae ...	3
Instrumental labours ...	9
Various	6

All this is being done in a temporary building by no means well adapted for a hospital, and the work is likely to increase and to be still more efficient when the new hospital has been completed. Already its fame has travelled far, as is illustrated by the following incident: A Bedouin arab went to Dr. Scrimgeour some time ago from a place some two or three hundred miles away in the desert. Dr. Scrimgeour asked him why he had come. He said: "To get cured": and then he added: "I said at first, Can any good thing come out of Nazareth? but afterwards I changed my mind and I am come!" It is strange to find the old proverb still travelling about the desert as it did 1900 years ago. The man was not a Christian, and can not have known of the Bible use of the proverb.

Medical Inspection in Sutherland.

Dr. Alexander Bremner, school medical officer, has recently reported that in the year ending July 31st, 1913, the number of children examined was 1,949, and that 363 were re-examined on one or more occasions. Comparing the height and weight of children in the county of Sutherland with the standard of the Anthropometric Committee of the British Association, it appeared that the children in Sutherland were heavier in every age-group, and were taller in every age-group with the exception of that at ten years, and this, he thought, was an accidental variation: it would be necessary to await the result of further inspections before drawing final conclusions. In discussing the influence of food he said that a breakfast of tea and bread and jam was not suited to the requirements of a growing child, but that porridge and milk was an ideal breakfast. He also commented on the deficiency of fat in the diet of the children, and urged that suitable meals should be provided for every child attending school, and that where the parents could not provide it, or lived too far away, the school board should make arrangements.

The General Board of Lunacy (Board of Control).

Dr. John Carswell of Glasgow, certifying physician in lunacy to that parish, medical officer for mentally defective children to the Glasgow School Board, and lecturer on mental diseases in Anderson's College Medical School, has been appointed Medical Commissioner in Lunacy for Scotland. The Secretary of Scotland has also appointed, under the provisions of the Mental Deficiency and Lunacy (Scotland) Act, 1913, Miss Kate Fraser, M.D., Ch.B., D.P.H., at present medical officer to the Govan Parish School Board, and Mr. James P. Sturrock, M.D., C.M., at present medical superintendent of the Criminal Lunatic Department, Perth, to be Deputy Commissioners of the General Board of Lunacy for Scotland, which, after May 15th next, will be designated the General Board of Control for Scotland.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Research Defence Society.

The fifth annual meeting of the Dublin branch of the Research Defence Society was held on January 27th. The President of the Royal College of Physicians (Dr. C. E. Fitzgerald) occupied the chair. There was an attendance numbering over seven hundred. The honorary secretary read the report for the year 1913, which opened with a reference to the death of the chairman of the committee (Sir Henry Swanzy), to whom the branch owed its inception, and to whose wise guidance and untiring energy the continued prosperity of the branch had been in no small degree due. The Dublin branch was the largest branch of the society. The balance of its account was on the right side, but funds were necessary both for publication and for other means of combating the sensational methods of appeal made by the opponents of research. The report also contained the following passage;

> It is a matter of gratification to all friends of research to know that, by the appointment of the Medical Research Committee to deal with the large sum of £57,000 per annum available for research under the National Insurance Act, the investigation of disease in this country will henceforth be co-ordinated and put upon a systematic basis, and will be properly endowed. It is also of the greatest importance that the Government has decided to found an institute for research into the diseases of animals. By this means not only will the health of the animals be improved, and the prevention of disease amongst them be better understood, but the diseases transmissible from animals to man will be checked and reduced.

Mr. Stephen Paget lectured upon the Cinematograph in Science. He said it was the work of the Research Defence Society not only to undo the harm done to people's minds by antivivisection, but also to interpret to the public from time to time the results obtained in experimental physiology and pathology. He showed several films demonstrating first the growth and opening of leaves and flowers and the germination of pollen (these films had been speeded up to a thousand times the real rate of movement), the succeeding films showed the movements of micro-organisms. First, the germs of Asiatic cholera, next spirilla, and finally trypanosomes. All our knowledge of these spirilla and trypanosomes, Mr. Paget said, was founded and built up on experiments on animals. So with all bacteriology, whether it were such remedies as the diphtheria antitoxin, or such protective treatments as were now available against rabies, plague, typhoid fever, anthrax, and Malta fever, or the use of such drugs as salvarsan, the immense value of experiments on animals was shown. The last film showed the development of the mosquito, and how the larvae were destroyed by putting a film of oil over the ponds in which they bred, so that they could not come to the surface of the water to breathe. This method of destroying the larvae of those mosquitos which conveyed the germs of malaria and yellow fever had been the means of saving thousands of human lives; it had been the very making of the Panama Canal.

Discussion on a State Medical Service.

The annual meeting of the Belfast Medical Students' Association was held in the Students' Union, Queen's University, Belfast, on January 26th. The President, Dr. T. S. S. Holmes, occupied the chair, and gave his presidential address, dealing with the origin, growth, and uses of the association. Professor Benjamin Moore, F.R.S., of Liverpool, then gave an address in which, after a brief reference to the university he said if disease were to be tackled as a national problem, the number of doctors should be in proportion to the incidence of disease. Of the half million who died annually in these islands, 50 per cent. died of infectious disease. He calculated that at least two-thirds of that death-rate could be prevented if there were a properly organized State service, which would not cost more than £25,000,000 a year. Health in the nation was made secondary and run by half a dozen compartments; in the Education Department it was secondary to education; the Insurance Commissioners subsidized people who were unhealthy. There ought to be a Minister of Health and one central authority to look after the health of men, women, and children, and to get on to proper scientific lines for tackling the problem. There should be more hospitals but smaller, whose medical officers should go out and teach people public and private hygiene: they must be whole-time and properly paid. The system should be adequately staffed and completely organized.

An interesting discussion followed. Alderman Sir Otto Jaffe said that the medical officers of the Public Health Committee had given the greatest consideration to the matters mentioned by Professor Moore, and had done valuable work. They had the assistance of the highest scientific skill in the university, but practically they had to contend with many difficulties. The Local Government Board had given great help, and much advance had been made.

Sir John Byers pointed out that a State Medical Service as outlined by Professor Moore would destroy the relationship between patient and practitioner. No change that had not been discussed and evolved by those who had practical experience of the attendance on the sick, who knew what night calls, what midwifery work, what the management of sick households all meant, would have any issue except discontent among the working classes, and increased expenditure to both the individual and to the taxpayer.

Dr. John Campbell, Dr. Gardner Robb, and Dr. Rush joined in the discussion, and, after Professor Moore's reply, a hearty vote of thanks was proposed by Sir John Byers, seconded by Mr. Fullerton, F.R.C.S.I., and passed by acclamation.

Remuneration of Dispensary Medical Officers.

The increased scale of salaries adopted by the Rathkeale Board of Guardians for their medical staff has received the approval of the Local Government Board. The increase, which takes effect from October 1st last, applies to the following officers: Medical officer of Askeaton, £180 per annum; of Shanagolden, £180 per annum; Rathkeale No. 2 District, £148 a year and £100 10s. as medical officer of the workhouse; of Pailaskenny district, £125 10s. per annum; and of Rathkeale No. 1 District, £121 a year.

At the last meeting of the Edenderry Board of Guardians a letter was read from the Local Government Board relative to a claim by Dr. Hamilton for payment of £26 14s. for discharging temporarily the duties of the Rhode medical officer, being four days at the rate of 1 guinea a day, and fifteen days at the rate of £1 10s. a day. The Board pointed out that there was no special outbreak of disease in the district at the time. The usual remuneration was £3 3s. for four days' duty, and £9 for fifteen days, making a total of £12 3s. If the guardians were satisfied that more economical terms could not have been arranged, the Board was prepared to sanction payment of Dr. Hamilton's account. It was decided to offer £15 in full discharge of the claim.

Dr. Steevens's Hospital, Dublin.

Last week, in the nursing home of the above hospital, a limelight lecture on old Dublin hospitals was delivered by Dr. T. Percy Kirkpatrick, F.R.C.P.I. The lecture, which is the first of a series, was well attended by the nursing and resident medical staffs, present and past, of the hospital. The lecturer referred to the mediaeval leper houses, the subsequent absence of hospitals, the original attempts to meet the need by the foundation of the hospital now situated in Jervis Street, and of Dr. Steevens's, still in the same building. He also spoke of the first beginnings of the Rotunda Hospital, the disastrous episode of the Foundling Hospital, now abolished, and gave both the false and true stories about Madame Steevens. The lecturer also showed how modern methods of combating infection were foreshadowed two centuries ago, and how recently the illiterate "Sairey Gamps" were replaced by the educated, modern trained nurses.

Proposed Radium Institute for Dublin.

At a meeting of the Council of the Royal Dublin Society last week applications for the loan of the society's radium for use in Dublin hospitals were read, and it was resolved that it be an instruction to the Science Committee to report to the Council upon the desirability of the society increasing its stock of radium or taking steps to promote the establishment of a radium institute in Dublin.

Motor Ambulance in Collision.

While conveying an injured man to hospital last week the motor ambulance of the Dublin Corporation, in trying to avoid colliding with a dray which was coming out of a side street, skidded and collided with the electric lamp-post. The impact was so great that the front axle of the ambulance was broken, the mudguard torn off, and the body injured. The glass screen was broken, and the flying glass cut one of the ambulance men about the head. The driver and the other ambulance man were much shaken. The patient, fortunately, received no further injury in this, his second accident, his original injury being a sprained ankle and cut leg, the result of a collision between the bicycle he was riding and a motor lorry: he was carried the rest of the way to the hospital on a stretcher.

Correspondence.

RADIUM AND CANCER.

SIR,—I have read the letters of Mr. John Morley and his friends in the JOURNAL of Saturday last with the attention they deserve. I have given all the *facts* of this case that I possess, and it is unnecessary to occupy your columns with mere expressions of opinion. Your readers must draw their own conclusions from the evidence before them.—I am, etc.,

London, W., Feb. 2nd. ALFRED PEARCE GOULD.

CANCER OF THE RECTUM.

SIR,—In the JOURNAL of January 31st, under the heading of "Cancer of the Rectum," you discuss "the present state of surgical opinion on the treatment of this disease." You cite a recent paper of mine[1] as showing that, from the standpoint of pathological anatomy, such an extensive operation as the complete abdomino-perineal excision cannot be considered a necessary procedure. Such a deduction is entirely unwarranted. The object in view was to determine the extent and significance of intramural spread, and it was shown that lymphatic dissemination in the wall of the bowel itself was very limited. You might fairly have deduced therefrom that the removal of a considerable length of bowel was of no virtue *per se*, and that those surgeons who resected extensively for fear of recurrence in the bowel wall were not supported in their action by pathological findings. The aim of the abdomino-perineal operation, as devised by Miles, is not, and never has been, to cope with problematical intramural permeation. It has been elaborated, step by step, in accordance with the paths of extramural spread, as clinically demonstrated. Miles has consistently emphasized the overwhelming importance of this factor, and Handley, though formulating the theory of intramural permeation, has always regarded this as of subsidiary importance.

The question of extramural spread was outside the scope of my paper, as it was expressly stated to be, and, as far as I am aware, no authoritative communication has yet appeared dealing with this subject in its pathological aspect.

The paper of Monsarrat and Williams, referred to by you, is of value in that it confirms my observations on the extent of intramural spread, but I cannot find that these authors bring forward evidence that has any important bearing on the question of dissemination outside the bowel wall.

The abdomino-perineal operation must stand or fall by the clinical and pathological facts of extramural spread, and it is in anticipation of my ability to support its claims in the near future that I have endeavoured to exonerate myself completely from the charge of refutation.—I am, etc.,

London, W., Feb. 2nd. PERCIVAL P. COLE.

PSYCHO-ANALYSIS.

SIR,—Now that I know that Dr. Mercier has never attempted psycho-analysis I can sympathize with him in his scepticism as to its utility in the investigation and treatment of nervous and mental disease. I, too, was sceptical when first I began to read Freud's papers some years ago, but I kept an open mind on the subject, and certainly would not have dared publicly to denounce Freud's methods before I had had practical experience of them. Indeed, I still recognize that Freudian psychology and psycho-pathology are open to criticism, but the criticism must be scientific and not a pre-judgement on purely ethical grounds. A truth does not cease to be a truth because it is unpleasant.

Nevertheless, I find myself again in sympathy with Dr. Mercier in that I would undoubtedly never attempt psycho-analysis on my patients, and would repudiate the suggestion that I had done so as "offensive and insulting"

[1] BRITISH MEDICAL JOURNAL, March 1st, 1913.

if I thought, as Dr. Mercier does, that the process would be as follows :

> Sex, sex, sex, in its grossest aspect, is dinned into their ears for hours every day, and every failure to elicit a confession is met by the suggestion of some new form of beastliness.

If these words are not a revelation of ignorance of true psycho-analytic methods they must be worse—an intentional misrepresentation of them. In either case they are apt to give your readers a most erroneous conception of psycho-analysis.

I hope I may therefore be allowed to explain that psycho-analysis is nothing more than a method of disclosing a complete mental history of a patient by means of association experiments and the method of free association, with or without the use of the galvanometer and sphygmograph, by the interpretation of dreams and crystal-ball visions, and, though not by Freud himself, hypnotism. In this way all manner of repressed, hidden and half-forgotten worries are brought into clear consciousness, and the physician endeavours to reveal them in their true light, so that appropriate and adequate emotional reaction may take place on the long recognized principle that "she must weep or she will die." Leading questions and coarse suggestions find no place in true psycho-analysis; repressed complexes must be unearthed by means of the patient's own systems of association. Persons who disobey this principle and thus bring discredit on psycho-analysis have been dubbed by Freud himself *Wildpsychoanalytiker*.

Now, the sole aims of life, from a biological standpoint, are preservation of the individual and perpetuation of the species. It is therefore not surprising to find that the mental history of any living person contains a large sexual component, and the reason why this is such a common etiological factor in nervous and mental disease, and why psycho-analysis is required to discover repressed sexual complexes, is that they are "the very subjects that clean-minded men and pure-minded women put behind them and refuse to think about." Most of our patients are clean-minded men and pure-minded women who repress all sexual desires, thoughts and incidents to such an extent that these become an unrecognized focus of mental irritation in subconsciousness and, in a neuropathic individual, cause mental breakdown. No other complexes undergo such repression, except perhaps crime and alcoholism. Repressed crimes, such as theft, often of a trifling nature, are liable to cause neurosis or psychosis in a neuropath.

Dr. Mercier has burlesqued, parodied, and travestied Dr. Maeder's paper. For example, *libido* in the Freudian sense does not mean lust, which signifies conscious lascivious desire, but rather *latent unconscious sexual energy*. When Dr. Maeder says that the Englishman's devotion to sport is a symptom of suppressed *libido* (not "lust"), he means that the Englishman's sexual energy is sublimated into his sport. Again, Dr. Maeder, when he says that domestic pets in England are the lightning conductors of *libido* (not "lust"), he is making no such coarse suggestion as Dr. Mercier's; he is merely alluding to such facts as the keeping of domestic pets by old maids as an outlet for their affection, which would otherwise have been bestowed upon a husband and children.

But "the proof of the pudding is in the eating of it," and one cannot but be impressed by the fact that no opponent of psycho-analysis has ever given it a serious trial, and that all who have made serious attempts at psycho-analysis recognize it to be helpful to the physician and to the patient. If there are any exceptions, these are the people whose criticisms we want to hear. Of course, psycho-analysis has its failures as well as its successes, like any other form of treatment.

In any case it cannot be right to stigmatize as a "Continental fad" the life-work of a man who is acknowledged by his contemporary colleagues as a great psychologist. Even Dr. Mercier ranks Freud with Kraepelin and Bergson, which is not so bad.—I am, etc.,

London, S.E., Feb. 1st. W. H. B. Stoddart.

Sir,—In the letters of Dr. Mercier and others on this subject there seems to be an important confusion between method and theory. Psycho-analysis as a *method* is above dispute. It is simply a method of "free association," which has been empirically shown to be capable of revealing unconscious trends of thought and feeling. The full interpretation of the result thus obtained is another matter. Many of us would hold that the sexual theory which Freud has himself deduced from them is much too extreme, and that the facts can be better explained in other ways. As a method, psycho-analysis seems likely to have a permanent place in the armoury of the psychologist and the up to-date psychiatrist.—I am, etc.,

William Brown,
Reader in Psychology in the University of
King's College, Feb. 3rd. London.

Sir,—It is open to Dr. Mercier to make a trial of psycho-analysis and, if he finds it worthy of condemnation, to express his opinion, which will be attentively considered alongside the opinions of others. Or, being able to see nothing in psycho-analyis but what is repellant, he can leave it alone. But he is not entitled to refuse to try the method and at the same time to condemn it. Yet this last is his position—the position of Galileo's detractors who refused to look down his telescope for fear of seeing what they did not want to see.—I am, etc.,

London, W., Feb. 2nd. David Forsyth.

Sir,—In this decidedly heated contention for and against the more frank recognition of what for convenience may be termed the sex factor in general and psychological therapy, it is perhaps audacious for a humble member of the audience to wish to catch the eye of the chairman. For good or ill the subject is in the air and has to be dealt with as an incident in our progress towards more accurate knowledge. Public opinion in the nation and in the profession does modify and control our methods of dealing with the difficulties that arise in the progress towards solution of these problems, and the customary ethical standard appears to vary with the degree of the civilization of the particular nation and community that maintains it. What is normal and lawful in one stage of development is unworthy and incompatible with different and better industrial and intellectual states. I think both parties in the present discussion concerning psycho-analysis will admit that our British standards are being somewhat violently assailed by the ultra-adherents of Freud's method, who would appear to discern sex from A to Z in almost any given problem.

On the other hand, it would undoubtedly be short-sighted to deny that our code is in need of certain revision and correction, and it appears to me that for the medical profession the most educative and beneficial means of correction is made to our hand—namely, the reasonable use of that introspective and analytical method of case-taking called by its gifted formulators psycho-analysis. With the quiet precautions which any well-trained mind naturally adopts towards an experimental and powerful remedy, let those who should and are qualified to do so courageously make use of this set of general principles, disregarding the negligible criticism of such foreign critics as the one named in Dr. Mercier's letter of January 24th, who could "see red" in the commendable standard of hygienic cleanliness obtaining in this country as the result of our admirable public health laws. *Honi soit qui mal y pense.*—I am, etc.,

Sidmouth, Feb. 4th. Edith G. Collett.

THE HISTORY OF THE PARASITE OF SYPHILIS.

Sir,—I wish to express my regrets to Mr. Jackson Clarke for having omitted his name from the list of those who have suggested the possible complex protozoal nature of the parasite of syphilis which was set forth in my paper on the subject published in the British Medical Journal of December 14th, 1912. He must have been one of the first to describe "bodies" in the cells of syphilitics, and to suggest that they were parasites.

As I stated in that paper, as well as in a letter published in the Journal about a year ago, the number of writers who have made similar suggestions and observations is considerable, and is still increasing. So far as I can find out, the first to do this was Klebs in 1879, a fact mentioned in my paper. Lately I have been accused of attempting to claim the credit of having first made some of these suggestions and observations—a credit alleged to belong to another recent writer. But as Klebs published when I was an infant, and as his suggestions have been

republished periodically since, such accusations are absurd.

It is very easy to see microscopic "bodies" in the lesions of a disease, and to suggest that they are parasites. Such observations are always interesting, though their value is generally small. Sometimes these suggestions are based upon figments of the imagination only, when they are worthless; sometimes they are based on observed facts, and even then, unless some more evidence is forthcoming, their worth is not great. There are artefacts, degeneration products, contaminations from without, yeasts, bacteria, spores, granules, and a host of bodies which are hard to distinguish from each other and from parasites owing to the crudity of our methods. And until we can bring forward proof that a certain "body," "spore," or "infective granule" is a pathogenic parasite we have no right to so name it. We must remember Koch's postulates, and until we have proved by them that the "bodies" we have seen are true pathogenic parasites it is ridiculous to wrangle about the name of the individual who first noticed them.

Since I published my paper describing intracellular bodies in syphilis, which were demonstrated by the jelly method to develop into spirochaete-like structures, I have endeavoured to obtain direct experimental proof that they are definite pathogenic parasites, and that they are connected with the actual causative agent of syphilis. My paper described, in the first place, bodies within the blood cells of guinea-pigs which develop into spirochaetes, and how these are accompanied by a disease in these animals resembling syphilis. It also described how J. W. Cropper had found similar intracellular bodies in the vesiculae seminales of earthworms, which likewise develop into spirochaetes. A disease in rabbits and hares was also mentioned which resembles syphilis in which similar intracellular bodies had been found in the lesions. Therefore further work on the subject seemed justified, because there was some more evidence than the mere finding of "bodies" in human syphilis.

Inoculation experiments were undertaken. But as it is impracticable to experiment with human beings, and as the guinea-pig disease, having few external lesions, is inconvenient for the purpose, these experiments were undertaken with the rabbit disease. A healthy rabbit was inoculated from the supposed syphilitic sore of a diseased rabbit. In twenty five days a chancre appeared on the prepuce of the inoculated animal. In this artificially produced chancre intracellular bodies similar to those I have described were found again. This chancre was then searched for spirochaetes by Bayon, Noguchi, and myself in my laboratory, and spirochaetes apparently similar to *S. pallida* in morphological appearances were found by the dark-ground illuminator and by Giemsa's stain.[1] But still, although the evidence was getting stronger it was not sufficient to prove that these intracellular bodies are the actual cause of the disease—they might accompany the spirochaetes in the transfer by inoculation or they might be the degeneration products of some transferred cells. Besides, Koch's postulate about the cultivation of the supposed parasite yet remained to be satisfied.

Noguchi's cultures were obtained. It will be borne in mind that the pathogenic spirochaetes can only be cultivated artificially when living tissue cells are present in the culture medium. A search was made in these tissue cells by the jelly method, and there again were the intracellular and extracellular bodies as described by me in human and animal syphilis.[2] That these are not cell-degeneration products is made clear, because there has been no transfer of degenerate cells into the subcultures where the bodies appear as in syphilis, and because they possess a spirochaete-like development.

Therefore Koch's postulates are apparently satisfied in so far as the disease described as rabbit syphilis is concerned. But is rabbit syphilis the same disease as human syphilis, or is it allied to it? Rabbit syphilis resembles human syphilis clinically. It begins as a chancre at the site of inoculation after an incubation period of twenty-five days precisely. Then the inguinal glands become enlarged and may suppurate, sores round the anus follow, then sores in the mouth, lips, nose, and throat. There is loss of fur, necrosis of the nose, abscess of the ears, wasting, and sometimes death. Tumours of the liver have been noticed in some of these animals which have been found by section to resemble gummata. The intracellular bodies are present in the cells of the blood and the various lesions. The disease is amenable to salvarsan and mercury; and, finally, it has been discovered in America[3] that many rabbits give the Wassermann reaction. Noguchi has recently suggested to me that the finding of the spirochaetes in the brain and internal tissues of these naturally infected rabbits should conclude the evidence, and this is now being undertaken according to Marinesco's modification of Levaditi's method of staining—a long and difficult quest.

An attempt has been made to solve the relationship between the rabbit disease and human syphilis, by inoculating the former into monkeys. So far this has failed to "take," but only superficial vaccination was performed, and the experiments are being repeated. But until we succeed in giving rabbit syphilis to some intermediate animal its relationship or its power of producing immunity in human beings cannot be determined. Yet this is the present policy. All this entails great labour and much thought. Consequently it is not just to label suggestions and observations as discoveries until we have proved that they are true; and proof is no easy matter to obtain. The credit to be won for the making of an observation should go, partly to the individual who makes it, but chiefly to the investigator who proves it to be right. Let us first prove the suggestion to be right, and when that is accomplished we can discuss questions of priority and other such matters if we are disposed to do so, or if any good can accrue therefrom.

I have recently been accused of attempting to steal the credit of having discovered the life-cycle of the human parasite; but there is no life-cycle of this parasite yet proved to be correct—there may have been many suggested ones. It is not sufficient to see different shaped bodies in syphilitic sores and to weave them into an imaginary life-cycle—that is suggestion again, it is not proof. I have attempted to prove a life-cycle in the bodies described by making parallel observations of each phase in the four different species affected. These observations are strong evidence in favour of the truth of the cycle; but they do not constitute proof. The authors of other cycles have obtained no evidence at all; they have not gone beyond speculation. Each phase of a parasitic protozoon must be proved experimentally by its exact reproduction in inoculated animals. The theory that these spirochaetes are gametes of a complex protozoon was first suggested to me by my brother, Sir Ronald Ross, when he saw the intracellular development of the guinea-pig parasite in the summer of 1911. I published his suggestion in the *Proceedings of the Royal Society*, B. vol. lxxxv; it is only a suggestion. I am accused now of plagiarizing this idea from some other recent writer: but as a matter of fact Lewis first suggested that tailed blood-protozoa might be gametes in 1832. His suggestion was based on the knowledge gained by Ray Lankester's work on the haemogregarines, and will be found quoted in many textbooks of pathology. Spirochaetes can only be proved gametes when the act of conjugation and fertilization has been seen and proved, though how this is to be done I do not know. Anyhow, it is not sufficient to say that we have seen it, but we must prove that we have seen it.

One writer on this subject has named the complex "bodies" he has seen in human syphilis *Leucocytozoon syphilidis*. Even if he had proved his "bodies" to be parasites (which he has not done), the name is a contravention of the laws of zoology. The generic name "leucocytozoon" is already occupied by something totally different. The Leucocytozoa constitute a well-known genus of large protozoal parasites of which the type *Leucocytozoon canis*, discovered by Bentley and then by James, is perhaps the most familiar. It resembles somewhat the haemogregarines, and each one of its phases is known intimately. It has no resemblance to anything which has been described in syphilis. Then the specific name "syphilidis" is quite inadmissible when applied to anything connected with the parasite of syphilis. It is an accepted law of protozoological nomenclature that the specific name given to that phase of a parasite which was first proved a phase must be

[1] BRITISH MEDICAL JOURNAL, November 1st, 1913.
[2] BRITISH MEDICAL JOURNAL, May 24th, 1913.
[3] *Journal of Med. Research*, vol. xxviii, 1913.

retained even if our knowledge of the parasite's characters is subsequently modified. Schaudinn named the *Spirochaeta pallida*; and this was ostensibly proved to be connected with the parasite causing syphilis by Metchnikoff and Roux in their inoculation experiments with chimpanzees. Therefore, however much we modify our knowledge of the phases of the causative agent of syphilis, its specific name *pallida* must be retained.

I have suggested as a name for the parasites described, "lymphocytozoa." It was the generic name given to the first one of the genus—that of the guinea-pig—proved; it is named *Lymphocytozoon cobayae*. It was given because this parasite inhabits the lymphocytes mainly, and because the name is a new one and is not already occupied. The members of the genus are as follows:

Lymphocytozoon cobayae, the parasite of guinea-pigs, the type;
And, provisionally,
Lymphocytozoon pallidum, the parasite in human beings.
Lymphocytozoon leporis, the parasites in rabbits and hares.
Lymphocytozoon lumbrici (Cropper), the parasite of earthworms.

I have written here at length because I think the appearance of Mr. Jackson Clarke's letter in the BRITISH MEDICAL JOURNAL is a good opportunity of reporting progress, and because I hope it will have the effect of reducing the numbers of speculative articles connected with this work, which are so frequently published in the medical press at home and abroad, and which contain my name with those of my brothers.—I am, etc.,

The John Howard McFadden Researches at the Lister Institute, Jan. 27th. HALFORD ROSS.

THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

SIR,—In the BRITISH MEDICAL JOURNAL for January 31st Dr. Hayes Newington writes:

It is remarkable that nowhere, either in the debate at the Medico-Legal Society or in Dr. Armstrong-Jones's paper which initiated that debate, is there any mention of the fact that a very full measure of freedom in the treatment of incipient insanity was drafted and specially accepted some years ago by the then Lord Chancellor, Lord Halsbury. The Medico-Psychological Association for years worked at this idea, and later, in joining the British Medical Association for this and other similar purposes, active steps were taken by a joint committee of the two bodies.

I am not concerned to defend Dr. Hubert Bond, the Lunacy Commissioner, who is included with me in this aspersion for an apparent want of recognition of the good work of Dr. Hayes Newington and of the two associations named, as he can defend himself; but, in the above remarks, Dr. Newington does an injury to his own reputation for accuracy, as well as an injustice to myself. The BRITISH MEDICAL JOURNAL of January 17th, page 154, owing to pressure upon its columns, only published an extract of my paper before the Medico-Legal Society, as is clear from the statement made by the Editor as well as from the context. If Dr. Newington were to consult the *Lancet*, January 17th, page 195 et seq., which published my paper in full, he will find the following among other statements:

This is no new subject for discussion in London. . . . In 1903 the Lunacy Acts Amendment Bill for London, enabling the London County Council to establish receiving houses for mental patients, was presented to Parliament by Lord Carrington. A subsequent bill was introduced in 1905 by Sir John Batty Tuke, Mr. John Burns, and Sir (then Mr.) John Benn. So far back as 1896 Mr. Henry Rayner advocated the early treatment of insanity. Dr. Outterson Wood in 1903 urged the importance of this matter, and a joint committee of the Medico-Psychological and British Medical Association presented a deputation to the Lord Chancellor Halsbury, who inserted a clause to meet these views. This bill was unfortunately withdrawn, but a similar clause appeared in the then Attorney-General's bill in 1905.

It will be seen from this that my paper did full justice to the two associations named, and had Dr. Newington done me the honour to attend the presentation of my thesis to the Medico-Legal Society in November last, which the President of the Medico-Psychological Association and a large number of other members attended, and to which Sir T. S. Clouston, Dr. A. R. Urquhart, two of the Lunacy Commissioners (Dr. Sidney Coupland and Mr. A. H. Trevor) and others contributed valuable suggestions and support, he would not have fallen into this error.

It is true that I did not in my paper refer to the scheme propounded in 1889 (by Mr. R. Brudenell Carter and others) for the establishing of a mental hospital for London, because this scheme was founded by a committee which set up vague and commonplace precepts, and in its conclusions deliberately cast a slur upon the whole body of medical men practising in the department of lunacy. I stated in my reply on January 20th at the Medico-Legal Society that, neither the great authority of Dr. Hack Tuke, nor of Sir (then Dr.) George H. Savage, nor of the munificent donor of the new mental hospital now being erected for London, Dr. Henry Maudsley, had been invited to give evidence before this 1889 Committee. In fact, no one engaged at that time in the actual management of asylums for the insane was invited to give evidence. It was decided by this Committee that the whole of the treatment of the insane in the proposed mental hospital should be left to the inexperienced hands of a visiting staff, who were to cure insanity with "stuff out of a bottle," and were to take the statical view of the deadhouse rather than actual clinical experience of mental diseases as the guiding star in treatment. Enough has been said about this aborted scheme, which Sir T. Clifford Allbutt then described as "belated, overweening, and magisterial."

It is now not a question of precedence or priority as to whom credit is due for suggestions relating to the early care of the insane, but one for immediate action, and it was considered by all who took part in the recent discussion to be of vital importance that such steps should be taken as shall in the immediate future bring cases of incipient insanity under treatment without the present legal disability and without the shame, the disgrace, and the obloquy which we know now attaches not only to the certificate, but also to the relatives and the friends of the person certified.

If the new mental hospital for London, which owes its inception to the sympathetic and wise benevolence of Dr. Maudsley, is to take its place as the leading mental clinic of the world, it is imperative that there should be an immediate change in the law. The President of the Medico-Legal Society, Lord Russell, formerly a member of the Asylums Committee of the London County Council, is most desirous for this change, and he has summoned a committee to consider this matter forthwith. I know that this has the support of Sir Victor Horsley, also of Sir William J. Collins, the founder of the Pathological Laboratory for the Asylums of London; and of Sir John Tweedy, both past presidents of the Medico-Legal Society. It is for the Medico-Psychological Association and its respected treasurer, Dr. Hayes Newington, to renew their activity in conjunction with the above for the best care and treatment of those who are unable to help themselves. It is of the best augury that the Lunacy Commissioners have so fully and freely expressed themselves in favour of the present movement.—I am, etc.,

Claybury, Feb. 2nd. ROBERT ARMSTRONG-JONES.

THE TRUTH ABOUT THE INDIAN MEDICAL SERVICE.

SIR,—Those of your readers who may read the evidence of the Public Service Committee in India will see it is admitted by the Director-General, Indian Medical Service, that the candidates for the Indian Medical Service are falling off in numbers and quality. Various explanations are put forward, but, from an intimate knowledge of the subject, I can say the reason is plainly this: The financial prospects are not good enough to attract first-class men. If India wants to economize, there can be no more fatal way, in my opinion, of doing it than by letting the standard of the Indian Medical Service officer (be he English or Indian) deteriorate. Every sensible man realizes that more and more posts of all sorts must go to the Indian community as it advances in education. This is the logical outcome of our policy in India. Also that less private practice each year will be enjoyed by Indian Medical Service officers, be they Indian or English, owing to the rapidly increasing number of Indian private practitioners. In many districts it is already practically *nil*.

I am an exceptionally well qualified medical man and have had unique opportunities of studying in Europe and in India, yet I can say that the all-round knowledge

required by an Indian Medical Service officer has been an enormous strain to me to acquire and to keep up, though I love my work and make it my hobby and care for my profession more than anything else.

How can a man of inferior ability do satisfactorily difficult surgery, obstetrics, medicine, eyes, and administer a large district, to say nothing of ordinary medical routine? Yet these men have to do these things single-handed. If they cannot, our countrymen to whom medical assistance is promised, and who surely are valuable lives in the service of India, must suffer and possibly die. I say nothing of the countless thousands of sufferers to whom the civil surgeon is often the only possible consultant. The villager cannot travel hundreds of miles to a big centre, and the Indian or European patient who requires immediate attention must take what he can get, and die if it is inadequate. Does not every surgeon know the difficulties of, for example, an appendix abscess deep in the pelvis? How would the ordinary general practitioner like to undertake this if he had never done one before? Yet in some of these cases, as we all know, the alternative to efficient surgery is, in plain words, death. Yet the junior civil surgeon has to undertake these cases.

What is my remedy? The English Government should realize the position, and also that young medical men of ability are not going to work in a bad and unhealthy climate for a merely living wage. India has lived on the reputation of big fees from rajahs and lucrative private fees, together with sport. The former are things of the past; the latter a keen scientific man often cares little for, and if he does it is a mild set-off to the nightmare of an Indian hot weather.

I am not a disappointed man. I have done well as India goes, but the fact is that there is really no great prize in India when compared with England, and the average man spends what he makes in passages for his family to and from England and in keeping up two houses—one in the hills and one in the plains—a necessity in India, where a lady cannot live in the plains in the hot weather. A man is often even in debt on account of this.

The Indian Medical Service is, as a whole, exceedingly discontented. I for one, had I had an inkling of what the climate was, would never have put foot in India. One can live through it, it is true, but it takes the pleasure out of life for half the year, and saps one's vital energy. Even life insurance companies demand 10 per cent. extra premium for residence in India. This must not be overlooked.

The remedy is to offer really good pay and let both Indians and English medical men compete, and to let the best men obtain the appointments. Even then it will be a beggarly allowance compared with what our brothers in the Indian Civil Service in the higher ranks earn with the same amount or less of brains.

The Indian Medical Service man, be it known, who makes a fair amount in private practice has to do it in his own time after he has done his official work, when the Indian Civil Service man can play games and take leisure. A doctor must work on all holidays and Sundays, and be called up at night. Yet his combined income from official and private practice is poor compared with that of the Indian Civil Service officer. Is this right?

This is an urgent matter. Men are advising their brothers and friends to avoid the Indian Medical Service. I most sincerely advise the same to all first-class men. If a duffer can get into the service, he will do as well as in general practice at home, with certain advantages and disadvantages.

A few good men will do fairly well in the Indian Medical Service; one or two quite well (though no one can get the prizes obtainable by a successful man at home); the rest will earn a living wage, which, in my opinion, taking it all round, they could earn with less personal discomfort and risk to health at home.

No man who knows the conditions can say I am overstating the case. I only hope this letter will catch the eye of someone who has the good of the suffering millions of India at heart. Why should they have second-rate doctors when they can afford good ones?

This is not a question of English *versus* Indians. What is asked for is that there should be really able men, Indian or English.

The Indian Medical Service finds it difficult to attract the best class of Indians, because it has nothing to offer them compared with what they get in the Indian Civil Service. Also, when they join the Indian Medical Service, they are forced to serve in the army, which many quite naturally do not like. They are also liable to the dangers and hardships of active service, and to this certain of the non-martial races quite naturally have a strong aversion. There is no question also that the prestige of the Indian Medical Service is much less than that of the Indian Civil Service. This is a factor which appeals strongly to the Indian.

The result is that the ablest men choose services other than the Indian Medical Service. What else could one expect?

I repeat, I ask for efficient medical men. These know their own value. The English ones, as sensible men, will avoid India, unless paid well for the exile from home, bad climate, and other disadvantages. The Indians will seek a better service than the Indian Medical Service.—I am, etc.,

January 14th. M.B., F.R.C.S.

THE CAUSE OF RHEUMATOID ARTHRITIS.

SIR,—Having for some years been medical officer at Postyen with abundant opportunity for satisfying myself as to the efficiency or otherwise of the mud and water, may I encroach on your space to the extent of stating my experience, in view of the controversy to which you have given publicity?

To the sufferer the cause of the trouble, be the latter rheumatoid arthritis, chilblains, or chronic exudations resulting in spurious ankylosis, is of far less importance than that a condition involving permanent improvement should be brought about. Similarly, the reason why a particular treatment affords relief is of secondary importance to the fact that relief is afforded by it.

In my experience, the application of the Postyen mud not only produces immediate sweating and therefore relief, but in addition effects a change in the patient as a consequence of which recurrence of his trouble, if not ruled out altogether, is rendered remote in point of probability.

I myself agree with Dr. Watson that defective action of the sweat glands is the cause of rheumatoid arthritis; but whereas the treatments applied in this country afford relief through temporary stimulation of the functions of the sweat glands, the Postyen treatment, in my experience, results in a condition as a consequence of which no relapse to insufficient activity makes itself apparent—in other words, that the rheumatic troubles do not recur.

I have had under observation cases innumerable in which permanent relief has been brought about after light baths, hot-air baths, and so forth, have been indulged in *ad nauseam* to no good end. I know nothing, having never seen fit to recommend it, of the effects of the cowdung treatment brought to notice by Dr. Watson, but I venture to suggest, since he brackets cowdung with Postyen mud in point of filthiness, that he either knows nothing of the latter or else is lacking in power of discrimination. From the point of view of the average man there is a vast difference between handling cowdung and the material of which bricks are made. Few people would consider clay a filthy substance to handle in the sense in which they would consider cowdung filthy to handle; and Postyen mud is no filthier than, if as filthy as, ordinary clay. As a fact, it is a soft grey substance, practically free from smell, which, in addition to possessing the qualities already referred to, leaves the skin delightfully soft and white. Of the thousands of patients at Postyen not one has ever complained to me that its application is in any way disagreeable.—I am, etc.,

London, W., Jan. 20th. WALTER HILL, M.R.C.S., L.R.C.P.

MEDICAL OFFICERS OF HEALTH AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—It is with profound regret that I read in the *Medical Officers' Journal* the announcement that quite a number of medical officers of health have resigned their membership of the Association upon the occasion of the increase of subscriptions and putting forward the

suggestion that the Association has done little for them as a body.

It is a suggestion only.

As a fellow medical officer of health I appeal to those gentlemen who have taken this unwise course, in the full interests of the public health service, to reconsider their action, and beg that they may ask themselves the following questions:

1. What body is ever ready to advocate the policy of higher salaries to the medical officer of health?

2. What body really brought about the most recent regulations as to security of tenure of office of the medical officer of health and is now working its hardest in that direction?

3. Through what body was the distasteful method of annual reappointment of the medical officer of health discontinued?

4. What body takes up a strong line to protect the medical officer of health against wrongful dismissal, usually due to his proper performance of duty, such as recently occurred at Ilford?

To these four questions might be added others, and the answer to one and all of them is the same—namely, the British Medical Association.

If there is any branch of the profession in whose interests it is to become and remain members of the Association it is the public health service. I can speak from personal experience, as I once ignored the policy of the Association, and in doing so I candidly admit I was in error.

I trust it will soon be announced in the columns of the JOURNAL that these gentlemen, whoever they may be, will have decided to withdraw their resignations, bearing in mind how public authorities will often make an attack upon an individual officer, but when they find they have to face a strong body, as I claim the Association to be, they will not do so; and it is in these cases and others that the Association is of so much assistance to the medical officer of health.—I am, etc.,

ARTHUR M. BARFORD, M.D., D.P.H.,
Medical Officer of Health, City of Chichester, Sussex.

February 1st.

THE ACCURACY OF THE *MEDICAL REGISTER*.

SIR,—On January 29th a circular of inquiry as to the accuracy of his address on the *Medical Register* was sent to every medical practitioner between the letters A and L, both inclusive. Any practitioner who does not receive one of these circulars in course of post should communicate with me immediately, in order that there may be no risk of his name being taken off the *Register* because he cannot be communicated with.—I am, etc.,

NORMAN C. KING,
Registrar.

299, Oxford Street, London, W.,
Feb. 2nd.

Medico-Legal.

AN ACTION FOR ALLEGED NEGLIGENCE.

SITTING with a special jury, Mr. Justice Scrutton last week heard a case in which Mrs. Violet Carter sought to recover damages from Dr. Hugh Wells Armstead, of 30, Queensborough Terrace, Bayswater.

Mr. J. B. Matthews, K.C., and Mr. Cotes-Preedy (instructed by Messrs. Maddison, Stirling, Humm, and Davies) appeared for the plaintiff: Mr. McCall, K.C., and Mr. P. Maurice Beachcroft (instructed by Messrs. Le Brasseur and Oakley, for the London and Counties Medical Protection Society) appeared for the defendant.

In opening the case, Mr. Matthews said that his client, who was principal of Mr. Gibson's college in Queensborough Terrace, had a fall in May, 1913, as a result of which she broke her knee-cap. She consulted the defendant, who said that he advised the use of *x* rays, but that the plaintiff refused to allow them to be used. The plaintiff, however, would deny that the suggestion was ever made. The way to treat a fracture, or if a fracture was suspected, was to keep the knee in splints. If it was known there was no fracture, but only an injured tendon, the knee should be exercised and bent. In this case the doctor had said there was no fracture and prescribed bending the knee. After some months, as her knee did not improve, Mrs. Carter suggested *x* rays herself, when a fracture was shown. It was only then that the proper treatment was resorted to, and four operations were necessary to break down adhesions. The plaintiff had been put to the expense of £80, had incurred much suffering, and has lost her position at the home, which was worth about £200 a year.

The plaintiff having given evidence, her son, Mr. V. F. Carter, said that he was present when the defendant saw his mother after the accident. He (the defendant) had said nothing about taking an *x*-ray photograph. He never heard the defendant say a second opinion would be necessary if a photograph were not taken.

Mr. J. M. G. Swainson, F.R.C.S., surgeon at the Bolingbroke Hospital and assistant surgeon at the Westminster Hospital, said he attended the plaintiff after the *x*-ray photograph had been taken. He had since treated her from time to time. There had been four operations for breaking down adhesions, and a further operation might be necessary. Had the fracture been diagnosed at the start the operations might have been unnecessary.

The defendant, in giving evidence, said that at first he was unable to say positively what was wrong with the plaintiff's knee. He had advised her to have an *x*-ray photograph taken, but she had demurred owing to the expense. He then said he could do without the photograph, but would have to treat her for the most serious of the three possibilities—a fracture of the knee-cap. He was inclined to think there was a partial rupture of the ligaments, and knew that if there was a fracture it was slight. He had suggested a second opinion, which the plaintiff thought unnecessary. He subsequently saw the *x*-ray photograph; but if he had seen that at first he would not have altered the treatment, which was to apply a bandage and keep the patient in bed with her knee between pillows.

Dr. Ironside Bruce, who took the *x*-ray photograph, and Miss Edwards (nurse) having given evidence for the defendant, Sir Anthony Bowlby said that this was not an ordinary case of fractured knee-cap, as there was no separation of the fragments. Had he been called in he could not have done anything beyond what Dr. Armstead did.

In cross-examination he said three months was too short a period in which to expect a complete recovery; it would take many months.

Sir Alfred Fripp also gave evidence to a similar effect.

Mr. Justice Scrutton, in summing up, said it was obvious that the plaintiff believed in the truth of her story. It was for her to satisfy the jury that there was such a departure from ordinary care and skill that some word imputing blame to the defendant might properly be applied to him. Two of the most eminent surgeons in the profession had said that even if they had had the *x*-ray photograph showing the partial fracture they would have treated the case exactly as the defendant had. In these circumstances it would be going a long way to say that there had been such a divergence from the ordinary practice as to amount to negligence.

The jury returned a verdict for the defendant, saying that there was no negligence, but an error of judgement.

Judgement was entered for the defendant with costs.

ALLEGED NEGLIGENCE WHEN OPERATING ON A SCHOOL CHILD.

Davis v. London County Council.

IN this case, which was heard by Mr. Justice Lush, sitting with a common jury, on January 27th, the plaintiff, an infant scholar at a County Council school, suing by her father and next friend, sought to recover damages for alleged negligence in the administration of an anaesthetic.

Mr. Moyses and Mr. S. Duncan appeared for the plaintiff; Mr. Cecil Walsh, K.C., and Mr. T. Mathew for the defendants.

It was alleged that when the plaintiff was undergoing an operation at the Islington medical treatment centre, under the control of the defendants, the anaesthetist had carelessly allowed some of the A.C.E. mixture to come in contact with her face, with the result that she suffered great pain and would be permanently disfigured.

At the conclusion of the plaintiff's case, Mr. Walsh submitted that the defendant Council were not liable in any event, as the relationship of master and servant did not exist between them and the anaesthetist employed, and that so long as the Council employed competent medical officers it was not responsible. He pointed out that under the Education Acts, 1907 (S. 13 (1) (*b*)) and 1909 (Ss. 1 and 3), the defendants entered into an agreement of October 25th, 1912, with the Islington practitioners. Under that agreement the association was to provide premises, while the London County Council was to have administrative control and supervision of the work. The Council was also to select an anaesthetist and four surgeons from doctors nominated by the association. The Council was also to supply one of the two nurses to be present at operations. The association was to have power to refuse cases, the Council contributing to its funds an amount determined by the number of half-days' work done by the doctors. The authorities made it plain that under such an agreement the doctors performing the operation and supplying the anaesthetic were not the servants of the defendants. He referred to Hall *v.* Lees (1904), 2 K.B., 602; Evans *v.* Liverpool Corporation, 21 T.L.R., 558; Hillyer *v.* St. Bartholomew's Hospital, 25 T.L.R., 762.

Mr. Justice Lush having intimated that he had better hear the defendant's case, witnesses were called on the part of the defendant.

The jury found a verdict for the defendant, and the learned judge, in entering judgement accordingly, intimated that in his opinion the plaintiff could not have succeeded in any event, as the relationship of master and servant had not been established.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.B., B.C.—P. W. Ransom, A. L. Sutcliffe.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Thursday, January 29th, Sir Thomas Barlow, Bart., K.C.V.O., the President, being in the chair.

Admission of Members.

The following gentlemen having passed the required examination were admitted Members of the College:

John Matthew Fortescue-Brickdale, M.D.Oxford (Clifton, Bristol); Arthur Charles Ingram, M.D.Camb., L.R.C.P.; Stanley Gordon Luker, M.D.Camb.; Georg Herman Monrad-Krohn, M.B.Christiania, L.R.C.P.; John Henry Newmarch, L.R.C.P.; Daniel Wells Patterson, M.B.Durh. (Newcastle-on-Tyne); John William Trevan, M.B.Lond., L.R.C.P.; George Edgar Septimus Ward, M.D.Lond.; Rodolph Charles Wingfield, M.B.Oxford.

Licences and Diploma.

Licences to practise physic were granted to ninety-seven gentlemen who had passed the necessary examinations.

Diplomas in Public Health were granted, jointly with the Royal College of Surgeons of England, to the following gentlemen:

C. N. Atlee, L.R.C.P., M.R.C.S., St. Mary's and King's College; W. J. E. Bell (Capt. R.A.M.C.), M.B., Ch.B.Edin., Edinburgh and Royal Army Medical College; *Rose L. H. Davy, M.B., B.S.Lond., L.S.A., Royal Free and University College; C. L. Dunn (Capt. I.M.S.), L.R.C.P. and S.Edin., L.F.P. and S.Glasg., Edinburgh; *Irene D. Eaton, M.B., B.S.Lond., Royal Free and University College; *Maud T. Féré, L.R.C.P. and S.Edin., L.F.P. and S.Glasg., Edinburgh and University College; A. B. Fry (Major I.M.S.), M.D.Lond., L.R.C.P., M.R.C.S., London and Royal Army Medical College; C. J. Galbraith, M.B., B.S.Lond., L.R.C.P., M.R.C.S., King's College; M. K. Kapur, L.M.S.Punjab, Punjab and University College; N. B. Kolsawala, L.M. and S. Bomb., Bombay and University College; N. Low (Capt. R.A.M.C.), L.R.C.P., M.R.C.S., St. Mary's and Royal Army Medical College; D. McIntyre, M.B., Ch.B.Glasg., Glasgow and University College; *Marjorie E. Middleton, M.B., B.S.Lond., Royal Free and University College; A. H. Moore, M.B., B.C.Cantab., Cambridge and St. Bartholomew's; C. C. Morrell, L.R.C.S., L.R.C.P.Edin., L.F.P. and S.Glasg., Edinburgh and King's College; W. W. Pratt, M.B., B.S.Lond., L.R.C.P., M.R.C.S., Bristol and Royal Army Medical College; K. N. Rau, M.B., C.M.Madras, Madras and University College; R. O. Sibley, M.D.Lond., L.R.C.P., M.R.C.S., St. Mary's and King's College; C. L. Sutherland, M.B., Ch.B.Glasg., Glasgow and University College; J. M. Todesco, L.R.C.P., M.R.C.S., University College; F. E. Wilson (Captain, I.M.S.), M.B., Ch.B.Edin., Edinburgh and Royal Army Medical College; J. H. Wood, M.B., B.S.Durh., L.R.C.P., M.R.C.S., Durham and St. Bartholomew's; J. H. Writer, L.M.S.Bombay, Bombay, R.I.P. Health, University College.

* Under the Medical Act, 1876.

Announcements.

The President announced that he had appointed Sir R. Douglas Powell, Bart., K.C.V.O., to deliver the Harveian Oration for this year, and Dr. Nestor Tirard to deliver the Bradshaw Lecture; that the Council had appointed Dr. Edgar Leigh Collis to deliver the Milroy Lectures in 1915; and that the Swiney Prize had been awarded to Mr. J. W. Salmond for his work on jurisprudence.

Communications.

The following communications were received: (1) From the secretary of the Royal College of Surgeons of England, dated January 9th, 1914, reporting proceedings of the Council of that College upon January 8th; (2) from Sir Theodore Hope, K.C.S.I., dated January 4th, 1914, asking whether the College would accept the reversion of a portrait of his father, Dr. James Hope. The offer was accepted with the thanks of the College.

Election of Councillors.

The following Fellows were elected Councillors: Dr. D. Bridge Lees (for one year in the room of Dr. W. Collier, resigned), Dr. R. G. Hebb, Dr. W. D. Halliburton, Dr. W. S. A. Griffith, and Dr. G. R. Murray.

Appointments of Representatives.

Sir Francis Champneys, Bart., was reappointed a representative of the College on the Central Midwives Board, and Sir Dyce Duckworth a representative of the College on the Council of Queen Victoria's Jubilee Institute for Nurses.

After some further business the President dissolved the comitia.

SCOTTISH INTER-UNIVERSITIES' CONFERENCE.

AT the meeting of the above conference on January 31st, the motions regarding the teaching of the history of medicine and of dietetics, the medical preliminary examinations, and the wearing of academic dress (referred to in this JOURNAL, January 31st, p. 268), were all agreed to.

The Services.

INDIAN MEDICAL SERVICE.

THE result of the January examination was announced on January 31st, 1914. There were 33 candidates, the first 20 being admitted as lieutenants on probation with effect from January 31st, 1914.

The names of the successful candidates with the marks obtained by each out of a possible total of 5,100 are given below together with their degrees and medical schools:

Name.	Degrees, etc.	Medical School.	Marks.
G. H. Mahony ...	M.B., B.Ch., B.A.O. (N.U.I.), B.Sc.	University College, Cork	3,656
W. R. Stewart ...	M.B., Ch.B.Edin.	Edinburgh University	3,400
G. Covell	M.B., B.S.Lond.	Guy's Hospital	3,375
J. G. O. Moses ...	M.B., Ch.B.Edin.	Edinburgh University	3,281
K. V. R. Rao ...	M.R.C.S., L.R.C.P.	Madras Medical College, Charing Cross Hospital	3,241
H. Chand	L.M.and S.Punjab, M.R.C.S., L.R.C.P.	Lahore Medical College, Charing Cross Hospital	3,208
J. W. van Reenen	M.B., Ch.B.Edin.	Edinburgh University	3,163
V. Mahadevan ...	L.R.C.P.andS.Edin. L.F.P and S.Glasg.	Madras Medical College, Royal Colleges, Edinburgh	3,156
A. C. L. O. S. Bilderbeck	M.B., B.S.Lond., M.R.C.S., L.R.C.P., B.A.Cantab.	CambridgeUniversity, St. Bartholomew's Hospital	3,142
M. J. Roche ...	M.B., Ch.B., B.A.O.(N.U.I.)	University College, Cork	3,119
B. F. Beatson ...	M.R.C.S., L.R.C.P.	St. Mary's Hospital	3,112
N. D. Puri	M.B., B.S.Punjab	Lahore Medical College, Charing Cross Hospital	3,088
P. C. Roy	M.B.Calcutta	Medical College, Calcutta, St. Bartholomew's Hospital, Charing Cross Hospital	3,044
M. Das	M.B.Calcutta, M.R.C.S., L.R.C.P.	Medical College, Calcutta, London Hospital	3,009
J. B. Vaidya ...	L.M.and S.Bombay, M.R.C.S., L.R.C.P.	Grant Medical College, Bombay, University College Hospital	2,985
J. M. R. Hennessy	L.R.C.P.andS.Edin., L.F.P.and S.Glasg.	Madras Medical College, Royal Colleges, Edinburgh	2,825
W. M. Lupton ...	M.R.C.S., L.R.C.P., B.A.Cantab.	CambridgeUniversity, St. Thomas's Hospital	2,815
A. G. Cowper ...	L.R.C.P.andS.Edin., L.F.P.and S.Glasg.	Grant Medical College, Bombay, Royal Colleges, Edinburgh	2,808
H. H. Brown ...	B.C.Cantab., M.R.C.S., L.R.C.P., B.A.Cantab.	CambridgeUniversity, Leeds University	2,757
C. H. N. Baker ...	L.R.C.P.andS.Edin., L.F.P.and S.Glasg.	Royal Colleges, Edinburgh and St. Bartholomew's Hospital	2,716

Obituary.

PHILIP WHITCOMBE, M.R.C.S., L.S.A.,

GRAVESEND, KENT.

PHILIP WHITCOMBE was, there is good reason to suppose the oldest member of the medical profession in Great Britain when he died at his house in Gravesend on January 24th. He was born on May 27th, 1816, at Cleobury Mortimer, in Shropshire, where members of his family had practised medicine for many generations. His ancestors had been burgesses since 1423, and, according to a writer in the *Pall Mall Gazette*, were descended in the male line from the Counts of Boulogne, who were directly descended from Bertha, daughter of Charlemagne, and her husband, St. Angelbert. King Stephen granted an ancestor a portion of the manor of Martock in Somersetshire, and he took the name of Whitcombe.

Philip Whitcombe took the diploma of M.R.C.S. in 1838, and that of L.S.A. in the following year. He made for himself many other claims to recollection than ancestry or survival; he was the first sanitary medical officer of the Port of London at Gravesend, and in that capacity had to deal with a serious outbreak of cholera which threatened to invade London. On his recommendation, a hospital ship was moored in the lower reaches of the river, where he himself treated the cases. Afterwards he was in charge of the infectious hospital built at Denton, and served altogether as port officer for, we believe, thirty

years. For fifty years he was one of the medical officers of the Strood Union, and for the same period surgeon to the Gravesend police force. In addition to these public appointments, he was engaged in general practice in Gravesend, where he settled in 1843, and worked continuously without a holiday until he had attained the age of 80 years. He was a member of the British Medical Association for over sixty years. After his retirement from practice he continued to live in Gravesend, where he had many friends. He retained his faculties and interest in life to the last. As a boy he had loved to help in breaking-in ponies on the Clee Hills in Shropshire, and was always a good horseman, not hesitating to buy a horse of doubtful gentleness at Tattersall's and ride it through the city to his home at Gravesend. He was able to read without glasses, and did active work up to the age of 90. His memory was wonderful to the last; deafness was his only affliction, but this did not interfere with his playing whist at the houses of his friends even down to within a week of his death.

Dr. Whitcombe, who married in 1858, leaves four sons; two of them—Dr. P. Percival Whitcombe and Dr. W. S. Whitcombe—practise medicine in the West End of London. Another son was formerly an assistant master at Eton, and is now Bishop of Colchester; he said the committal prayer at the graveside when the body of his father was interred on January 29th.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Alois Berten, Member of the Medical Commission of Bruges, Knight of the Order of Leopold, aged 81; Dr. Josef Adolf Mirschl, extraordinary professor of neurology and psychiatry in the University of Vienna, aged 47; Dr. Alexander Pacha Kambouroglou, honorary president of the Imperial Society of Medicine of Constantinople; Dr. Marmottan, formerly one of the deputies for Paris; Professor Gustav Pfalz, lecturer on eye diseases in the Academy of Practical Medicine, and Director of the Municipal Eye Clinic at Düsseldorf, aged 55; Dr. Alfred E. M. Purdy, sometime chief surgeon of the New York Police, and for many years Editor of the *Medical Register*, aged 75; Dr. A. Teeson, former professor of chemistry and toxicology in the medical school of Angers; and Surgeon-General George Henry Torney, of the United States Army, who served in Cuba and the Philippines, and was chairman of the War Relief Committee of the American Red Cross, aged 63.

Public Health AND POOR LAW MEDICAL SERVICES.

DUTIES OF M.O.H. UNDER NOTIFICATION OF BIRTHS ACT.

CYMRO.—No new general Order has been made with respect to the Notification of Births Act, 1907. The Act is an adoptive measure, and may be brought into force in a district with the sanction of the Local Government Board, or the Board may declare the Act to be in force in any district irrespective of any resolution of the local authority adopting it. Where the provisions of the Act are in force, the duties of a medical officer of health with regard to it would be to arrange for a visit to be made by a health visitor to such houses among those from which he had received a notification of a birth as he considered desirable or necessary. On consideration of the reports of the health visitor, the medical officer of health would take such action as he might consider expedient.

THE Assistance Publique has established eleven institutes of puericulture in Paris. These are at the Beaujon Hospital, under Professor Ribemont-Dessaigne; at the Tarnier Clinic, under Professor Bar; at Saint-Antoine, under Dr. Doléris; at the Enfants Assistés, under Dr. Variot; at the Maternité, under Dr. Bonnaire; at Laribosière, under Dr. Boissard; at the Boucicaut Hospital, under Dr. Lepage; at the Charité, under Dr. Tissier; at the Pitié, under Dr. Potocki; at Saint Louis, under Dr. Demelin; and at the Tenon Hospital, under Dr. Bouffe. These institutes are all under the direction of the Assistance Publique, and the physicians and accoucheurs of the hospitals to which they are attached are entrusted with the teaching of the mothers and the treatment of their nurslings.

Medical News.

DR. DUNDAS GRANT has been made an honorary member of the Laryngological Society of Berlin.

THE anniversary dinner of the Medical Society of London will be held at the Hôtel Métropole on Wednesday, March 4th.

SIR FRANCIS DARWIN will deliver the first Galton anniversary lecture at the Hotel Cecil on Monday, February 16th, at 8.30 p.m. The subject of the lecture will be Francis Galton.

THE annual general meeting of subscribers to the Royal Medical Benevolent Fund will be held at 15, Wimpole Street, W., on Tuesday, February 17th. The chair will be taken by the President, Sir John Tweedy, at 4.30 p.m.

A QUARTERLY meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at the Storthes Hall Asylum, near Huddersfield, on Thursday, February 19th, when a paper on the clinical significance of katatonic symptoms will be read by Dr. Henry Devine.

A LOAN exhibition of specimens, instruments, and skiagrams, arranged in connexion with Mr. Hey Groves's lecture on February 6th at the Royal College of Surgeons, Lincoln's Inn Fields, W.C., on experimental production and treatment of fractures in lower animals, will remain on view for a short time.

THE next meeting of the Hunterian Society will be held in the Library of St. Bartholomew's Hospital, on Wednesday, February 11th, at 9 p.m., when the annual Hunterian Oration will be delivered by Dr. Arnold Chaplin, his subject being "John Hunter and his work, and the past and future of the medical profession." All members of the profession are invited to attend.

ON Tuesday next a paper will be read at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., on the King Edward VII Welsh National Memorial Sanatorium, Pont-y-wal, South Wales, by the architect of the building, Mr. Edwin T. Hall, F.R.I.B.A. The paper will be followed by a discussion on the cost and construction of sanatoriums under the Insurance Act. The chair will be taken by Mr. David Davies, M.P., at 7.30 p.m.

NOT only is the office of Mayor of Bath filled this year by a medical man, Dr. Preston King, but another medical practitioner, Mr. Pagan Lowe, who is keenly interested in the baths, has been elected President of the Bath Chamber of Commerce. In addition, Dr. Preston King occupies a position in regard to the Royal United Hospital which is unprecedented in Bath, and probably without parallel in the kingdom. He is President of the institution, a member of the medical staff, and has been an in patient. Speaking at the annual meeting, he deplored the fact that the accounts showed a deficit on the year of £2,528, which was largely due to the Insurance Act. The Act practically only supplied people with a bandage and a bottle of medicine.

PROFESSOR G. BENEKE AND DR. BAUMGART report a remarkable instance of gestation following four years after the application of superheated steam to the uterine cavity (atmocausis) (*Monatsschr. f. Geb. u. Gyn.*, December, 1913, p. 635). During that interval of time the catamenia were totally suppressed, but finally an exceedingly firm uterine tumour developed; it reached the height attained by the uterus at term, but no parts of a fetus could be defined on palpation. Dense tissue was felt obstructing the cervical canal; pains came on, with rise of temperature, and haematometra was, very reasonably, diagnosed, abdominal section was performed, and as the uterus was turned out of the abdominal incision it presented all the appearance of a firm fibromyoma, and it was only after very careful palpation that a fetus could be defined. As infection was suspected the uterus was amputated above the cervix. The patient, aged 32, recovered. The fetus, nearly 20 in. long, was partially macerated and strongly flexed, part of its breech and lower lumbar region was firmly impacted in the dense, unyielding, cicatricial tissue, which blocked the cervical canal. The histological changes in the uterine tissue and certain remarkable modifications in the fetal appendages are described in full by the authors, who express their surprise that gestation could have occurred after the tissues of the uterine wall had undergone such profoundly marked changes as they discovered—changes associated with complete cessation of the periods, yet not incompatible with pregnancy. Finally, it is clear that the effects of atmocausis are so irregular that it would appear to be of doubtful therapeutic value.

THE fourth International Congress of Surgery will be held in New York in April (13th to 16th) under the presidency of Professor Depage of Brussels. The society has a membership of some 600, and includes surgeons in all parts of the world. The head quarters and permanent office of the society are in Brussels, the general secretary being M. J. Lorthoir, 73, boulevard de Waterloo in that city. The secretary of the Congress is M. J. P. Hoguet, 40, East Forty-one Street, New York. Provisional arrangements have been made by which congressists can sail in the *Imperator* from Hamburg, Southampton, and Cherbourg on Thursday, April 2nd, and Friday, April 3rd, arriving at New York on April 9th; or in the *Rotterdam* from Rotterdam and Boulogne, on Saturday, April 4th, reaching New York on April 12th. On Monday, April 13th, the Congress will be formally opened in the Hotel Astor by the President of the United States. There will be discussions on the surgery of gastric and duodenal ulcer; on grafting and transplantation; on amputations of the upper and lower limbs. Demonstrations will be given in the various hospitals. On April 15th there will be a subscription banquet followed by a *conversazione* given by the President of the Congress. Excursions have been arranged to Philadelphia, Baltimore, Washington, Chicago, Rochester, Buffalo, Niagara Falls, and Boston.

DR. ROBERT HARRIS (Secretary of the Southport Division of the British Medical Association) was recently presented with a silver salver bearing the following inscription: "Presented to Dr. Robt. Harris by his medical friends in Southport and district as a mark of esteem, and in recognition of valuable services rendered to the profession. January 22nd, 1914." Mrs. Harris was at the same time presented with a silver teapot suitably inscribed. Dr. W. Alex. Mackay presided at the ceremony. The presentation was made by Dr. Russell, who recalled the great amount of work done for the profession by Dr. Harris since some ten years ago he became secretary of the Division. Dr. Harris, in his reply, said that he had been a member of the British Medical Association for forty-two years, and that he greatly valued the opportunities which his membership of the Lancashire and Cheshire Branch afforded him of becoming acquainted with medical men practising in those two counties. The British Medical Association had been of the greatest advantage to the profession, and would, he hoped, retain its full support. So far from thinking it right that any man could resign because the subscription had been raised to 2 guineas owing to the additional amount of work thrust upon the Association, he trusted that those who were not yet members would now join. It was the only body recognized by the Government as representative of the whole of the profession, for other bodies only represented sections. The profession had passed through an anxious and strenuous time, and it was to be expected that it would have in the future difficulties equally serious to encounter. It must be able to place its case clearly before the public, and could only hope to do so with a united voice through the British Medical Association.

SOME interesting statistics of twelve Caesarean sections performed at Pau have been published by M. Ferré (*Bulletin de la Soc. d'Obstét. et de Gyn. de Paris*, November, 1913, p. 71). In all twelve the obstacle to labour was rachitic pelvis. Eleven mothers recovered and eleven children were saved. The mother who died had undergone the same operation once before, but on the second occasion she delayed asking for admission into hospital, believing that delivery might be spontaneous, and was in a septic condition when the operation was performed. M. Ferré very properly reports in full how a gauze pad, 38 cm. or 14.8 in. square, was left behind in the peritoneal cavity and expelled spontaneously. The patient was highly rachitic, and the trunk so distorted that the operator had to make the abdominal wound extend very high in order to reach the fundus. The stomach and upper intestines immediately prolapsed. M. Ferré made use of several large pads, fixing on to one corner of each a pressure forceps. He experienced much difficulty in reducing the viscera, and one forceps gave way and slipped down outside unobserved, and the pad sank down behind the fundus. During the puerperium the oversight was suspected, as there was a swelling above the fundus, and the patient complained of pains around it. A grooved director was passed through the wound into the swelling, and some yellow serosity and odourless gas escaped. The patient was in excellent general health and suckled her child. She insisted on leaving hospital on the twenty-third day. Four weeks later symptoms of obstruction set in, and the patient, vomiting and straining, passed the compress by the rectum. She continued to suckle her child, who was well nourished: the abdominal cicatrix was perfect and the uterus quite movable.

Letters, Notes, and Answers.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. P. asks for references to publications on the subject of the influence of *x* rays on phagocytosis.

RADIO-ACTIVITY OF SPRING WATER.

SANITAS asks for information as to the method of measuring the radio-activity of spring water, and where practical experience can be gained.

*** The principal apparatus required for measuring the radio-activity of spring water is a special form of electroscope known as the "emanation electroscope." This has to be standardized with a radium solution of known strength, and the complicated method can only usefully be studied in a laboratory. Some description of the work involved in measuring these small amounts of radio-activity is given in *Practical Measurements in Radio-Activity*, by Makower and Geiger (London, Longmans, Green, and Co.), and we believe that a course of such measurements is carried out in the physical laboratories of Manchester University, under the direction of Sir Ernest Rutherford.

ANSWERS.

DR. JOS. S. BOLTON (Nottingham) writes in reply to "M. B.": Pain in a stump can generally be relieved by electricity.

LETTERS, NOTES, ETC.

HEALTH IN WEST AFRICA.

DR. GEORGE D. MACKINTOSH (Forcados) writes: After five years' residence in Forcados, West Africa, and eleven years' knocking about the West Coast, I am often asked if West Africa is healthier than it used to be, or is it still the "white man's grave." Sanitation has made enormous strides, and the efforts made of recent years towards the destruction of mosquitos and the prevention of their breeding has been of incalculable benefit, and my opinion is that a perfectly sound European has nearly as good a chance of surviving here, provided he goes home for at least three or four months at the end of every year, as he would have at home; but here is where the climate catches its victims: let there be one weak spot in the constitution, and West Africa will get hold of that and exaggerate it. I have made a brief note of the different severe diseases for which I have attended white men at Forcados during the past five years; but I cannot pretend that they are of statistical value, because most of my patients are aboard the fleet of steamers of which I am the resident medical officer, and we have only about twelve white men ashore. Malarial fevers—chiefly remittent fevers—563 cases; malignant yellow fever, 2 cases; gastritis, 35; gastro-enteritis and enteritis, 12; phthisis, 1 case (which came from home in an advanced state and died at home after two years on the coast); pneumonia and pleurisy, 3 cases; gout, 10 cases; delirium tremens and alcoholic poisoning, 7 cases; dysentery, 15; insomnia and neurasthenia, 12 cases. Taking the average, the floating population I attend here numbers about 5,000 in the course of the year, but each of them only stops for a few weeks, whilst their ships are in, so that at one time there would not be more than 300 or 400 white men in the river. During the past three years I have not had a single death amongst the white men under my care whilst here, but a few have died on the passage home, and one case of yellow fever died five or six days after the ship left here; the other case died here; the patient was seen twice in consultation with the medical officer in the ship in which the patient was second officer. There is an enormous amount of venereal disease here amongst the natives, principally soft chancre and gonorrhoea, but in other parts of the West Coast syphilis is very prevalent.

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An Address
ON
THE NATURE OF PREGNANCY AND ITS PRACTICAL BEARINGS.

Given to the York Medical Society,

BY

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It is, perhaps, a somewhat remarkable fact that now, in the second decade of the twentieth century, there should still be so many regions in the domain of pregnancy which call for investigation and exploration. Nothing in the whole circuit of medicine is more certain than this or more capable of immediate proof. It is possible that some observers who have not carefully surveyed the entire field may be moved to enter a protest, saying that whilst they fully and readily recognize the limitations of our knowledge in respect of the diseases of gestation they are persuaded that the physiology of pregnancy is not a matter about which there is or can be much mystery. Surely the embryo simply lies in the maternal tissues, obtains from them its nourishment, grows, and in course of time is born and takes on an independent life. Further, are not textbooks of physiology silent regarding any special problems of pregnancy? Is that not sufficient evidence that there are no such special problems?

An answer to these questions is not hard to find; it comes as soon as the attempt is made to study and to explain any of the morbid states of pregnancy. Every one of the diseases of childbearing is made difficult of elucidation by the lack of a satisfactory explanation of the intimate nature of pregnancy and of the phenomena which are associated with the presence of a living embryo or fetus in the uterus. The pathological facts do not fit with any simple theory of gestation, and the silence of the physiological textbooks, it may be suspected, is not one of complete knowledge but rather of partial ignorance, or at least of that curious mental state which is able to look past problems without seeing them. It is only necessary to name one or two of the many problems of pregnancy to establish the correctness of this statement. What relation does the intractable vomiting of pregnancy bear to the so-called normal morning sickness of the expectant mother, and what is the cause and the mechanism of the production of the latter? Or, to instance another constant and apparently commonplace change in the physiology of the woman with child, What is the meaning of the pigmentary changes in her skin, and have they any bearing upon the activity or inactivity of the suprarenal glands at these times in her life? The whole subject of pregnancy, normal as well as pathological, literally abounds in problems as difficult as, or more difficult than, these; and some of them are not only unsolved, they have not even been submitted to the influence of solvents.

It may, therefore, be not unprofitable to take a general survey of the whole field of pregnancy; at least let us essay such a survey, without, of course, hoping to penetrate each nook and cranny with our gaze. There is, unfortunately, no belvedere from which a commanding view can be had, for each observer can only look at the cases which have come within his ken, and it is safe to say that no two instances of pregnancy, normal as well as morbid, are identical. Even if each one of us augments his own experience by that of others as revealed in books, in medical journals, and at professional gatherings, he is still regarding but a small part of what is to be learnt. The heart complications of pregnancy are cases in point. I have seen many such; no two have been quite similar either in symptomatology or in progress, and I feel sure that the next one will differ from all the others and will call for details of management such as none of the others received. So, too, with eclampsia; the differences between individual cases in this disease are more fundamental than can be expressed in terms of relative severity of symptoms; treatment, therefore, should, in all probability, be varied more than is the custom. A much rarer disease is chorea gravidarum; few doctors see as many as half a dozen or a dozen cases; each one is a clinical study by itself. The need, then, for the close study of pregnancy in all its aspects is great.

Pregnancy Regarded as Parasitism.

A very common way of looking at utero-gestation is to think of the unborn infant making certain demands upon the mother, and of the latter supplying these. Thus, the embryo or the fetus requires shelter, protection, warmth, nourishment, and a way of escape for its effete products; and all these the mother is able to give by means of the uterus, which serves as a nest, and is rendered safe from external injury by the pelvic bones, and through the placenta, where the bloods of the two beings come into intimate relations without actually mixing together. It may not be put in so many words, but this is regarding the unborn infant as a parasite; and those who hold this opinion, whilst they do not refuse to the fetus some slight degree of individuality, really class him with the intestinal worms—those free guests which, in popular parlance, suck the blood of their host. He is thought of as living in, and drawing his supplies from, his mother; he always asking, and she always giving, with great advantage to himself, but with constant loss and danger to her until after his birth, when, indeed, she thinks no more of these things, but rejoices in the possession of a baby, and goes on still giving through her milk for his nourishment. This view, whether it be right or wrong in its outlook, has certainly directed the attention of the profession, as of the public, too exclusively to one aspect of pregnancy—to that side of it which reveals the mother sacrificing herself for her unborn child; and it is little wonder if some women in these days should rebel against the convention which requires them patiently to spend the greatest part of their married life in such self-immolation at the shrine of posterity and for the sake of a birth-rate which persists in falling. The influence of this view, too, is seen in the way in which the life of the unborn infant is spoken of both within and outside of the medical profession. An expectant mother is suffering, it may be, from some ailment; if it be a slight illness the comments are limited to remarks upon the unfortunate fact that her recovery will be retarded by the fact that she is carrying a child, whilst if it be a serious malady there is an open call for the termination of her gestation so that she may be relieved from its intolerable burden and set free to fight more strongly for her life. It is my opinion that one hears more of this sort of thing now than formerly; in consulting practice I seem to be familiar with such remarks as "Save my wife, doctor; never mind about the child that she is expecting"; "Cannot we end the pregnancy, and so lighten the heavy handicap she is under?" "She would have a better chance if the baby were brought away, would she not?" If the fetus be nothing but a parasite, and a prejudicial one, too, there would seem to be less moral obliquity in feticide; we might even venture to call it justifiable feticide.

The Pathological Theory of Pregnancy.

Some observers, however, go further, and say that pregnancy is not merely a period of giving without getting on the part of the mother; it is a nine months' disease from which she is suffering. She is not simply weak during these months, she is really ill; she is more than a valetudinarian, she is an actual patient; she has passed from physiology over into pathology. There is something, too, to be said in support of this view, which originated perhaps in the somewhat bitter gibe that a woman only escapes being unwell once a month by being ill for nine months, and therefore the matter must be looked into a little closely. Even a superficial survey shows that there is evidence in support of this startling statement. One has only to remind oneself of the morning sickness of pregnancy, of the various sympathetic phenomena—the neuralgias, dietetic idiosyncrasies, psychical changes—of the varicosities, the blood changes, etc., to see at once that, if this state is really physiological, it wears something very like the livery of pathology. But there is more than this. Modern science has been investigating the blood reactions of the pregnant condition with much care during these past months, and, whilst it is perfectly true that obstetrics may receive from such

researches the gift of a certain blood test for the early detection of gestation, there may also come from them the proof that the carrying of a child in the womb must be classed with the diseases which develop immunity reactions. Work such as that so ably summarized recently by Dr. Leith Murray[1] cannot be easily put on one side, and the evidence must be heard; but in the meantime the investigations are so complicated, the details are so technical, and the true conclusions are so difficult of extraction that final judgement must at least be suspended. Even if it be proved that in some respects pregnancy is an instance of reaction to an antigen, it does not necessarily follow that from all points of view it is to be grouped with diseases.

Pregnancy as Harmonious Symbiosis.

There is another and a very different view of the nature of pregnancy—that specially advanced and elaborated by Professor Bar. Remembering that it is a state in which two living beings are existing together in association the Parisian teacher has examined the alternative to parasitism—to wit, symbiosis or commensalism. More than this, he has found and has furnished a large body of scientific evidence in favour of the view. According to this theory of pregnancy, mother and unborn infant are mutually serviceable or helpful; the child in the womb is not a parasite and the mother a host at whose expense he lives; he is still to be regarded as her guest, a nine months' visitor, let us say, or, better yet, a paying guest, not a free guest, and still less a detrimental. He receives much from his mother—shelter, warmth, food, energy—but he does not receive without also giving: his presence in her womb so reacts upon her organs and tissues that they are stimulated, and, to take but one instance, the food she takes, not necessarily in increased quantity, is better utilized and is made more of than when she is non-pregnant. He demands nourishment from her, but he at the same time gives her the power of yielding that nourishment without weakening her own vitality or lessening her capital fund of albumin, carbohydrates, minerals, and the like. Professor Bar has arrived at this conclusion from careful researches on the metabolism of the maternal organism in pregnancy and from a great number of analyses of the urine and blood, etc., and it must be admitted that he presents a good case, so to say, for his great generalization that if there be a healthy fetus in a healthy mother (*fetus sanus in matre sana*), then pregnancy must be regarded as a perfect, a unique, and a very wonderful instance of homogeneous harmonious symbiosis.[2]

It is homogeneous, because the commensalism is between beings of the same species, for it must be borne in mind that symbiosis, as it is met with in nature—for example, between the lichen and the fungus or between the hermit crab and the anemone—is between creatures of very different kinds. In this case it is an association of two beings of the very same kind: both are human, indeed one may go further and say that they are nearer than two animals of the same species, for the child is bone of the bone and flesh of the flesh of the mother. There is, therefore, every justification for the use of the word "homogeneous." At the same time it must not be claimed that they are identical, for in the act of impregnation there has been introduced a new series of influences which come from the male parent and complicate the process of reproduction. The child *in utero* is an ovum of the mother, advancing through a wonderful procession of events towards a fully-developed human being; but he is more than this, he is truly an ovum of the mother, but with a dash of the father in him, and so he (or she) can never be simply a replica of the mother. Impregnation has, so to say, introduced the unknown quantity into the new being, and has brought qualities which are foreign to the maternal tissues into the embryo and fetus. Of course, there are also traces of earlier ancestors, too, but it is unnecessary to introduce any complications. There is, then, great similarity between the two associated beings, mother and unborn child, but there is not sameness or identity. The word "homogeneous" expresses this relationship very well.

But the symbiosis, says Bar, is also harmonious. That is to say, there is a congruity in the association of mother and unborn infant; they are so adapted and related to each other as to produce an orderly and consistent result—to wit, a healthy child in a healthy mother. Harmonious, from its etymology, means jointed together or agreeing, and in this particular case we are to think of the action and reaction between mother and fetus as in full agreement; there is an interlocking of the two lives which is for the benefit of both. From this thesis one passes to the grand conclusion that for the healthy mother carrying one or even two healthy children, and supplied with sufficient nourishment, the time of pregnancy is not a period of sacrifice but may even be one of gain. At the same time Bar lays stress, and rightly, on the case with which this harmony may be turned into discord, this profitable partnership converted into a prejudicial parasitism. Especially in the first half of pregnancy there is a danger of the harmony breaking into dissonance, but the risk extends into the second half; and truly there is no harmonious symbiosis in, say, a gestation complicated by hyperemesis, by chorea, or by eclampsia. This admission, however, need not weaken the general conclusion that pregnancy under normal circumstances is to be regarded as an advantageous symbiosis rather than as a state of detrimental parasitism; for the equilibrium in commensalism is a very delicate and unstable one, and on small provocation the symbiote may degenerate into a parasite, the paying guest may fall behind in his weekly contributions. If the one partner do more than his fair and fixed share or the other do less, symbiosis has at once broken down and parasitism taken its place.

So there are three theories of the nature of pregnancy for the profession to choose from. There is the view that the unborn infant lives upon his mother as parasite upon host; there is that according to which he constitutes a disease with which she is afflicted, which, after all, is simply the parasitic theory stated in a more subtle fashion, the fetus playing the part of the countless microbes of an infectious malady and setting all the maternal protective organs at work to offer resistance and develop an immunity; and there is the (to me) more welcome hypothesis that mother and unborn infant are not antagonistic in this great matter of reproduction, but are working together for the benefit of both, the mother putting forth energy and giving nourishment, but her child so acting upon her as to enable her to do so without exhaustion or loss. In the first theory there is no thought of anything but what the unborn infant is able to draw from the mother; but, in the second and third, consideration is given to what the fetus is able to effect upon the mother, either in the direction of developing immunity reactions in her or in that of activating her tissues and organs to greater vitality.

The Maternal Response in Pregnancy.

Now a great deal depends upon the view that is taken of the nature of what I have called the maternal response in pregnancy—that is to say, of the reaction of the mother's organs and tissues to the action or stimulus of the new organism in the womb. The maternal response is part of the means by which the obstetrician diagnoses the existence of pregnancy, for it finds expression in some of the signs and symptoms of gestation. But the phenomena of this response may be divided into two kinds—those which are the mechanical or physical effects of the distension of the uterus acting upon that organ itself or upon the structures in its neighbourhood (abdominal wall, intestine, liver, bladder, etc.), and those which are the chemical or bio-chemical changes induced by the presence of the new life inside the womb. There is little difficulty in understanding the former, but the latter present problems of great complexity which are far from solution.

Let us take, for instance, the mammary changes of pregnancy. Some of these are mechanical, and are due to the stretching of the skin caused by the increase in the gland tissue; but others, such as the pigmentation of the areola, the appearance of Montgomery's follicles, and the secretion of milk (colostrum), are bio-chemical. It is common vaguely to call them sympathetic, but it would puzzle most of us to define what is meant by that term. It has been suggested that in the ovary, and precisely in the corpus luteum of that organ, a hormone or messenger substance is produced which is carried to the breasts and sets up certain changes in them resulting in the formation of colostrum. To my mind it is more

likely that some substance from the unborn infant passes over into the maternal blood and stimulates the activities of the milk-producing glands; but the most recent view at the present time is that the mother's pituitary gland supplies the hormone which excites the secretion of milk (Schäfer), although, even if this be so, it may still be something from the fetus, or from the fetal part of the placenta, which, passing over into the maternal tissues, sets up unwonted activity in her pituitary gland.

The maternal response shows itself in many other ways and in many other organs. I have said (in another address) that the expectant mother tingles to her very finger-tips with the new life which is in her, and microscopic examinations of the nails in pregnancy show that the statement is no figure of speech, but sober and demonstrable fact. In the skin also there are deposits of pigment, especially in certain parts of the body, the sebaceous and sudoriparous glands are more active, and the hair, particularly the down, in some cases at least, grows more quickly. Sometimes the maternal response is so excessive as to become pathological, as in the women who suffer in their pregnancies from pruritus and herpes. Morning sickness is, in pregnancy at least, a mysterious phenomenon; but it is probably due to some bio-chemical change set up by the presence of the embryo in the uterus. A like origin is probably to be sought for the vagaries of appetite in gestation, and for pica and longings. The nervous system thrills in its various parts; the sense organs are normally more sensitive in the pregnant woman, and they may become abnormally hypersensitive and lead to disease; mentally, too, the expectant mother is not quite her natural self, for she is either exalted with a sort of *joie de vivre* or depressed with *ennui* or occasionally with forebodings of disaster. Even the cranial bones, far distant as they are from the centre of new life in the womb, feel its influence and react strangely in the formation of little osteophytes or bony outcrops from the inner table of the skull. We know also that the so-called ductless glands and endocrinous organs are profoundly affected by pregnancy; even the ancients were acquainted with the enlargement of the thyroid, but it has recently been discovered that the suprarenals, the pituitary body, the parathyroids, the ovaries, and even the mucous membrane (decidual membranes) of the uterus, are all influenced by gestation, and functionate then in a manner which differs from that seen at other times of life. If they act too much or if they act too little, pathological states may arise, and some observers look to these ductless glands for the explanation, perchance also for the means of cure, of eclampsia and several other maladies of pregnancy which are dreaded greatly for their lethal effects. But it is well to bear in mind that the interrelations of the endocrinous organs in the non-pregnant state have yet to be elucidated, and it is therefore perhaps premature to speculate regarding their behaviour in pregnancy. Of course one wonders if the altered activities of the suprarenal glands have anything to do with the pigmentary changes in the woman carrying a child; but one has as yet no warrant to do more than wonder.

It is upon the chemical changes to be discovered in the urine in pregnancy that Professor Bar has founded his fascinating hypothesis of childbearing as a harmonious symbiosis, and certainly this part of the maternal response is exceedingly interesting. To take only one element in the urine, the nitrogen, it has been found that the output of this constituent of the urine (in the form of urea) is diminished in the second half of gestation when the mother is kept on a constant diet, and that the diminution is proportionate to the development of the unborn infant. Further, it has been discovered that on a mixed diet the faecal nitrogen, as it is called, is lessened in pregnancy, indicating that more of the albuminous food which the woman takes is being utilized for the building up of tissue. Taking these two facts in conjunction, it seems certain that the protein or albuminous constituents of the food, the tissue-builders in the woman's diet, are being more fully assimilated in pregnancy than at other times. Bar thinks that on this account the expectant mother is, in normal circumstances, a little better off, *qua* her stores of nitrogen, at the end of each pregnancy than she was at the beginning; she has suffered no loss, but has actually made a small addition to her nitrogenous capital. Similar conclusions have been reached regarding other materials which go to build up the child's body, which must be derived from the mother's metabolic activities and transmitted by the path of the placenta, and calcium, iron, phosphorus, and sulphur may be named.

It will, however, in all probability be found that upon the blood changes of pregnancy the true theory of the nature of childbearing must rest. By these blood changes I do not mean such simple and obvious alterations as can be seen in increase in white or diminution in red corpuscles, or even in quantitative variations in the iron, albumin, or salts of the circulating fluid. I refer rather to the more subtle states which underlie the development of antibodies in response to chorionic or placental antigens, the variations in surface tension as revealed by the stalagmometer (known as the meiostagmin test), the increased antitryptic power of the serum, and the appearance in the blood of ferments or enzymes capable of breaking up placental albumin into peptone and amino-acids. There is no denying the fact that the existence of these reactions in the blood of the pregnant woman, if it can be proved to the satisfaction of the bacteriologist and the clinician, does support the view that gestation has an effect upon the mother resembling that of an infectious fever and even of malignant disease.

Pregnancy as Physiology at High Pressure.

The opinion I have formed of pregnancy has more affinity with that of Professor Bar than with those which regard the changes of gestation as immunity reactions; but I question whether the theory of harmonious symbiosis does not go too far in maintaining the beneficent effect of the reproductive processes on the female, and does not fall short in its estimate of the ease with which the symbiosis is transformed into a state of prejudicial parasitism. I have looked upon pregnancy as physiology and not as pathology, as health and not as disease; but I have never forgotten that it is health under conditions of strain, that it is physiology working under high pressure, and that it therefore runs the risks which are inseparable from states of strain and high pressure of all sorts. If in the great majority of cases it remains a condition of health, yet in not a few pathology is almost reached, and in a small number the border line of disease is actually crossed. Pregnancy may perhaps be called the Marathon race of the reproductive life of a woman; and on that account it ought to excite our interest, hold our attention, and receive our constant care, for everyone knows that the runner in such a race is undergoing a tremendous strain and test of endurance.

If I am asked to define the nature of pregnancy more accurately I should be inclined to compare it to the process of digestion. When a meal of food is introduced into the stomach there is set in action a complicated bio-chemical machinery, the details of which are far from being completely worked out; but part of this reaction seems to be the development of chemical messengers (hormones) which pass to such organs as the glands of the stomach, the liver, the pancreas, and the intestines, and determine their activity, or, to use the technical term, "activate" them. In abnormal circumstances, however, the food may act as a poison on the individual, or the digestive organs may refuse to work, and indigestion will ensue, which is, of course, a disease. Similarly, it may be supposed that the unborn infant and its membranes and placenta send messenger substances to the mother's organs (as well as to its own), which excite in them activities which are not met with in them apart from pregnancy, activities which constitute the maternal response; but it may send under unusual circumstances poisons or toxins instead of hormones, or the maternal tissues may be incapable of responding, and then a morbid gestation will result.

Childbearing and Life Insurance.

It may, however, be asked, and the question is perfectly justifiable, whether the discussion of the nature of pregnancy is of any practical value, or is likely to lead to any tangible results. I say in reply, Certainly it is, and instances may be given. There is, to begin with, this eminently practical conclusion, that when a woman has stood the strain of three or four pregnancies and gone through them without a breakdown or failure of any sort she may be regarded as possessed of a thoroughly sound body in each and all its parts, for, as has been proved,

pregnancy is a severe and searching test of the structural integrity and functional fitness of every organ and tissue. I for one should have little hesitation in recommending such a woman for acceptance by any insurance office. I am ready to go a little further and to say that until a healthy woman has passed through the strain and stress of a pregnancy she has not developed her frame to its highest or brought out all the latent possibilities of her nature; this is true of the body, and it is equally true of the mind, for Herbert Spencer in his *Study of Sociology*, said "parenthood produces a mental exaltation not otherwise producible." It will be objected that to receive this gain and to advance to this wider and higher level in life the mother must run risks, must take her chance of the maladies of pregnancy and the dangers of the delivery, and must practise self-sacrifice and accept some loss of personal comfort. To this it can be replied that no great thing in life is ever to be achieved without taking risks, that there is no real gain without some suffering, and that grand ends justify high-spirited enterprises. It will be a bad day for this country when the passion of adventure cools down, whether that adventure be in the realm of childbearing, of parenthood, of business, of politics, of medicine, of sport, or of religion. "What we adventure in a cock-boat," said Sir Thomas Browne, "may return in a carrack unto us." Of course, if it can be shown that pregnancy is of the nature of a disease, far more if it can be classed among the deadly diseases, it will be necessary to revise our opinions; in the meantime that necessity is not upon us.

A Biological Blood Test for Pregnancy.

In the second place, this practical benefit flows from, or may flow from, the investigation of the bio-chemical reactions of pregnancy—namely, a biological or blood test of the gravid state. Scientific medicine has been for several years trembling on the brink, so to say, of the discovery of a certain bio-chemical test of pregnancy, which should be available in the early months when no other certain sign is to be had. Time after time hopes have been raised that from a precipitin reaction, or a diffusion reaction, or a complement-fixation reaction, the long-looked-for chemical test for gestation was forthcoming, but further research has generally first weakened and then dissipated the most confident expectations. Lately, however, Abderhalden, by means both of a polarimetric and of a dialytic reaction, seems to have put the biological test of pregnancy on a surer basis than it has ever occupied before. I have elsewhere[3] summarized and criticised the recent literature on the Abderhalden test, and what I state here is the briefest sketch of what is really a very large and a very complicated problem in metabolism.

Greatly abbreviated and shorn of most of its technicalities the Abderhalden test and its *rationale* are as follow: It is known that if species-foreign foodstuffs (materials such as albumin from a different species) are introduced directly into the blood certain intimate changes occur in it, and ultimately the foreign foodstuffs are reduced and converted into materials (*Bau-steine*, or "free-stones," so to say) which can be used in the building up of the tissues. The general belief with regard to this action is that the foreign substances themselves cause ferments to appear in the blood which split them up. The same effect is produced when substances which are native to the body but foreign to the blood are introduced into the latter fluid; they, in technical language, "mobilize" the ferments which in their turn break them up. Abderhalden's test makes use of the action which albumin native to the body of the expectant mother but foreign to her blood stream has, or is believed to have, upon the chemistry of her blood. The foreign substance is thought to be an albumin or protein from the placenta, which makes its way through into the maternal circulation and produces its characteristic effect upon it—that is, causes ferments to appear in it which break up the placental albumin or protein and change it into peptone and amino-acids. On account of their action, the ferments are called proteolytic. If, therefore, these proteolytic ferments are present only in the blood of the pregnant woman, and if they or their products can be easily recognized by any chemical or physical test, then we shall be in possession of a blood test for pregnancy.

Abderhalden claims that these conditions are fulfilled and that we now have such a test. Placental albumin is very carefully prepared (a laborious and prolonged operation) and placed in a dialyser, and the blood serum of a woman believed or supposed to be pregnant is added to it. If now the ferments characteristic of pregnancy are present in the blood, they will change the albumin into peptone and amino-acids, and these will pass through the membrane of the dialyser into the distilled water in the container outside the dialyser. The rest of the test is simple, and consists in the detection of these substances in the water in the container. Formerly the biuret reaction was used, but fortunately a polysyllabic chemical substance, called "triketohydrindenhydrate"—or, shortly, *ninhydrin*—has been discovered, which gives an easily recognizable colour reaction with peptone and alpha-amino-acids. All that remains to be done, therefore, is to add ninhydrin to the dialysate and to note whether or not the colour change takes place; if it does, the reaction is positive and indicates pregnancy; if it does not, the reaction is negative, and the woman whose blood is being tested is not pregnant. But there is one thing about which uncertainty exists—namely, the possibility that the blood of non-pregnant patients sometimes gives a positive reaction. So far as experience has gone, the blood of some patients suffering from diseases of the generative organs and general maladies, including cancer, has given the positive reaction with ninhydrin; further, in some undoubtedly pregnant women the blood test has been negative. There is, however, one very significant fact to be taken notice of: As care in making the test has been increased and as the attention to every detail in the technique has been made more and more rigorous, so there has been a steady diminution in the number of negative results with pregnancy cases and of positive results with non-pregnant ones. This is very evident in such a series of sets of observations as those made by Jellinghaus and Losee,[4] and the fact points to the establishment of the reliability of the test.

The Etiology of the Maladies of Pregnancy.

In the third place, the study of the nature of pregnancy is beginning to throw a flicker of light into that very dark region known as the causation of the diseases of pregnancy; and it may confidently be expected to illuminate it still more as investigations are carried forward with expedition and with increasing enthusiasm. It is unnecessary to do more than name such diseases as eclampsia, intractable vomiting of pregnancy, pernicious jaundice of the gravid, chorea gravidarum, pyelitis in pregnancy, insanity of gestation, tubal pregnancy, and the haemorrhages which may attack the expectant mother, not to name the diseases and deformities to be found in the unborn infant, to convince the least thoughtful amongst us that there is a real need for research here if anywhere in the whole range of medicine. Each one of these names will bring up a spectre out of the past of professional experience to every man or woman who has done much obstetric practice, and to those who have had charge of maternity hospitals the ghosts will come, not in ones or twos, but in battalions. It has, I think, been fully admitted now that the plea I made at the Liverpool meeting of the British Medical Association in 1912 was a necessary one; it was that before we can hope to understand the etiology and pathogenesis of eclampsia we must have a more complete and correct knowledge of the physiology of normal pregnancy and especially of the relation of the ductless glands to that state. I suppose hardly any one believes that the parathyroids by their defective action are the cause of eclampsia, and yet experimental and therapeutic results can be so grouped and so presented as to make a very good case for the theory. Thus, it has been stated that these mysterious little fragments of parenchyma which we call the parathyroids are more active during pregnancy; that their experimental removal in that state is followed by more severe symptoms than in the non-pregnant condition; that, in some cases of eclampsia, *post-mortem* examination has shown a diminution in the number of parathyroids or signs of their defective action; that some women suffering from diseases of the thyroid gland (whose effects could hardly be separated from those due to parathyroid maladies) have developed eclampsia or tetany in pregnancy; and that some of the good results which have occurred after the giving of thyroid extract in eclampsia have been

due to the presence in it of parathyroid tissue. Of course, there are many weak links in this chain of reasoning; but its fundamental defect is that we do not know almost anything with certainty regarding the action of the parathyroids in normal pregnancy. So, too, with regard to the pituitary gland; much investigation is needed before its action in pregnancy can be fully understood, and until this knowledge is our possession the use of pituitrin in obstetrics must remain empiric. At the present time there is a marked tendency for therapeutics to outstrip pharmacology, not always with the best ultimate results to the patient; and this is particularly true in respect of the use of the organic extracts in women, non-pregnant, pregnant, parturient, and puerperal. A closer scrutiny of all the phenomena of normal pregnancy, and more extended experimentation regarding the physiology of this time in a woman's life, are needed if a right understanding of the essential characters of the pathology of gestation is to be arrived at. It is absurd to suppose that we shall discover the nature of hyperemesis if we do not know the cause and mode of production of morning sickness; and the intimate pathogenesis of the convulsions of eclampsia is likely to baffle us till we have more accurate information regarding the state of the reflexes in normal pregnancy.

The Place of Pregnancy and its Diseases in the Medical Curriculum.

Naturally enough, these considerations lead on to the fourth practical bearing which the subject of normal pregnancy has at the present time. If it be granted that normal pregnancy is incompletely understood, and that morbid pregnancy is so deadly in some at least of its manifestations, it follows that radical changes are called for in the manner in which these subjects are presented to the medical student. When I was an undergraduate, some thirty-two years ago, there was no hint given in the lectures on midwifery which I attended that the phenomena of pregnancy were in any sense difficult of explanation, or, indeed, peculiar; further, in connexion with one course of instruction attended by me then, I was told that room for the pathology of pregnancy could not be found in the ordinary lectures, and that it would be dealt with as a sort of appendix course to be held during the succeeding session, with the result that whilst I benefited much from the ordinary lectures I forgot all about, and never attended, the special ones. Even at the present time there is a tendency to teach the subject of pregnancy as if there was nothing hard to understand in its physiology, and to give but small space to the diseases of gestation. A far stronger emphasis should be laid upon the intimate nature of pregnancy, and it ought to be included in courses of instruction, theoretical and practical, upon physiology; the diseases, too, of gestation, whether they be due to the pregnancy, be aggravated by it, or be simply accidental complications of it, should be dealt with much more in detail, and not pushed into a few lectures or demonstrations at the end of the session. This is simply one of many lessons regarding preventive medicine which are being slowly learnt at the present day; it is not wise to wait for the onset of labour pains before trying to remedy a morbid state which has existed during the whole or a part of the pregnancy. It is a sufficiently difficult matter many a time to save the life of a woman in a difficult labour; it is sometimes converted into an impossibility if the confinement be complicated by a disease of gestation which has previously received no treatment, which perchance has not even been recognized. In obstetric teaching, therefore, let abundant time be allowed for the consideration of pregnancy, normal and morbid.

Pregnancy Cases in Hospital and Private Practice.

It is an easy transition to the fifth practical matter, namely, the paying of more attention to normal pregnancies in private and hospital practice. Theoretically, the medical practitioner is responsible for the health and welfare of his pregnant patient from the hour when he is engaged to attend her at her confinement; but in actual practice how seldom is the attention more than nominal, the supervision more than occasional, the control more than haphazard, and the interest more than evanescent. At his first interview with an expectant mother, especially if she be a primipara, the medical man should, in addition to making a careful examination and arriving at a diagnosis, give the woman the probable date of her delivery, ascertain that she has engaged or is about to engage a suitable nurse, tell her the simple rules of health in pregnancy, and give her some hints as to possible danger signals whose appearance ought to bring her back again to him to once. But, further, he should arrange for a second interview, preferably at the patient's own home, and there and then he should inspect the proposed lying in room and supervise the preparations which have been made for the accouchement, or see that they are put in train. Some obstetricians who are thorough in their methods will supply all their pregnant patients with printed or typed cards containing the rules for health in the expectant state, the lists of requisites to be provided before the labour, and an enumeration of the abnormal signs or symptoms which should cause the women to communicate with their doctor. The plan is a good one so long as it does not become stereotyped or perfunctory; but in most cases the spoken word is sufficient, and it has the advantage of being made applicable to the special wants of each case. Then, in addition to making a monthly analysis of the urine, the medical attendant should pay an occasional visit to his patient; in this way he will be able to detect those early, slight, insidious, but not insignificant deviations from the normal of health, which are being slowly recognized as the precursors of some of the most dangerous maladies of gestation. Even if he is not able to do her the service of detecting and averting those terrible catastrophes (eclampsia, hyperemesis, etc.), he may cure her of some of the common troubles of pregnancy (such as constipation, piles, and heartburn), and lessen for her some of the irksomeness and weariness of the long months of gestation. It has been said to me that patients will object to such attentions as unnecessary, and as adding to the ultimate bill; I have not found this to be the case, but quite otherwise. If, however, there seem to be any risk of this, the simplest plan is to make no charge for the visits which are unasked for, or at which you were unable to make any helpful suggestion, and to believe that by making the pregnancy healthy you will in many cases lessen not only your own future anxiety at the labour but also the amount of attendance you will require to give in the puerperium. It may be taken as an axiom that the anxiety caused by, and the increased number of visits needed for, one single case of eclampsia will far more than outweigh the extra attention you would have paid to some dozens of cases of normal pregnancy. If by such special visits and such more than conventional attention you are able to ward off one case of convulsions, you will not grudge the additional time and labour spent. No, indeed. You will also have that great possession—a good conscience.

Pre-maternity Wards and Ante-natal Pathology.

The hospital aspect of this enhanced importance of pregnancy in obstetrics is seen in the desire for the provision of pregnancy or pre-maternity wards. I have written and spoken so much upon this matter already that I need not give much space to it here. The necessity of accommodation for pregnant patients in maternity hospitals is now admitted, and in many places provision of some sort or another is made for it. The advantages are very real, and are enjoyed by all concerned—by the women themselves, who find a hospital for the maladies of pregnancy, and in some cases a home in which to rest during the last weeks of their expectancy; by the managers of the hospital, who are able to appeal still more powerfully to the public for charitable aid because they are in a position to show that a greater amount of relief is being given to suffering womankind; and by members of the medical staff, who are not only furnished with clinical material for teaching purposes, but are also enabled to deal with maladies at a more manageable and less hopeless stage of their development. In some cases, perhaps, the mortality of the hospital has been increased, for grave cases which would not previously have been admitted, because not in labour, have found an asylum in the pregnancy wards; but this increase is not likely to be permanent, for the more familiar expectant mothers become with the idea of hospital treatment for the diseases of gestation, the more readily the less serious cases will apply for admission.

In the long run, too, the treatment which such cases are able to receive before labour supervenes will lessen the dangers associated with the confinement when it happens. Further, the admission of homeless women who are not suffering from any disease may be contemplated, if for no other reason than that they will furnish the medical staff with a means of familiarizing themselves with the phenomena of pregnancy when under scientific observation. It has sometimes been said that these wards have been for unmarried women and their illegitimate pregnancies; but the terms of admission have, in the instance with which I have had to do, made no reference to marriage at all. The pre-maternity is open to all women suffering from the diseases or the strain of gestation, and, as a matter of fact, about 75 per cent. of the patients (about 150) treated in the pre-maternity ward of the Edinburgh Royal Maternity Hospital during the autumn quarters of the past five years have been married.

As a necessary corollary of the pre-maternity ward comes, or ought to come, the pathological department of the hospital. It is a remarkable fact that not a few maternity hospitals have no pathologist on the medical staff, not to speak of the possession of a pathological department. I am happy to say that the Edinburgh Royal Maternity Hospital has now Professor Lorrain Smith as its honorary, and Dr. James Miller as its acting, pathologist; but these appointments have been made comparatively recently. Not only is a pathologist necessary for the performance of *post-mortem* examinations upon the mothers and newborn infants who may die, but he is needed also for the great mass of pathological material, consisting of dead-born children, of infants who have died in the birth, of monstrosities, of abortion sacs (normal and morbid), and of placentas of all sorts. There may not be enough work for a pathologist to do if it be restricted to necropsies upon women dying in labour, for, fortunately, not many maternity hospitals have more than a few of these fatalities in a year; but, if he will undertake the investigation of the morbid states of the products of conception as well, his post will supply him with all the occupation he is likely to ask for. It is a somewhat strange thing that I have been writing now for more than twenty-five years upon the subject of ante-natal pathology, basing my inquiries largely upon the material made available to me through our Maternity Hospital, and yet that material in other hospitals is so often treated as if it had no interest and called for no investigation. It may be that I have laid too strong an emphasis on ante-natal pathology, but I am encouraged to find Dr. Amand Routh[5] making an appeal to the profession to call for the appointment of pathologists in all maternity hospitals to carry out researches upon this very kind of material. But more than a pathologist is needed. There ought also to be a man well trained in physiological and pathological chemistry to study the problems of pregnancy and the puerperium; he should be furnished with the necessary equipment, and he should be familiar with all the modern methods of clinical research. He should, for instance, be able to carry through the Abderhalden biological test for pregnancy, the meiostagmin test, and all the finer investigations on blood, urine, liquor amnii, etc. I am taking it for granted that he is appointed to a hospital which has a pre-maternity ward or wards. It is only by the presence of a pathologist and a bio-chemical researcher on the medical staff of maternity hospitals that an understanding of much that is obscure and well-nigh mysterious in ante-natal pathology and in the physiology and pathology of pregnancy can be arrived at in the near future, and with any degree of accuracy.

Pre-maternity Nurses.

Recently I have carried the pre-maternity principle into the out-patient department of the hospital in Edinburgh, for last autumn a commencement was made of the practice of sending a specially well informed nurse to women who were pregnant, to give them advice regarding their health and the preparations necessary for confinement, to warn them regarding the danger signals of pregnancy (haemorrhage, excessive vomiting, extreme constipation, persistent headache, etc.), and to report upon the actual existence of any of these signals. In certain cases the nurse tested the urine, and was able to report concerning threatened eclampsia. I have noticed also, of late years, an increasing tendency among the women to come to the hospital for advice and treatment during pregnancy; and doubtless, as information spreads among the patients and the medical men of the town, both the indoor and the outdoor pre-maternity work of the hospital will increase in amount. There can be no hesitation in saying that in this way suffering will be diminished and the number of hopeless cases of complicated labour sent to the hospital greatly lessened. There is all the difference in the world between the prognosis in, say, a case of placenta praevia diagnosed early and put under treatment and one which is brought into the maternity hospital for management after great haemorrhage has occurred on several occasions.

Pregnancy and Legislation.

There is a sixth practical bearing which the examination into the nature of normal pregnancy and the etiology of abnormal gestation has or may have upon the future of our profession; I refer to legislation. At the present time the unborn infant is only obliquely recognized by the law, and his mother is but poorly protected from others and possibly from herself during the period of her expectancy; it is not even known how many pregnancies come to an end in their later months in this country, and early miscarriages are quite disregarded. The management of pregnant patients must be fully provided for in any amendments of the Midwives Act for England and in the proposed bill for Scotland; a part of the maternity benefit under the National Insurance Act should be made available for the making of preparations for the arrival of the infant before his birth; stringent regulations should be framed preventing the employment of pregnant women in trades which are dangerous to themselves or their unborn children; such diseases as syphilis, which are so terribly destructive to fetal and embryonic life, should be brought more fully under supervision and control; the notification or registration of stillbirths, with or without the cause of the abortion or premature labour, should be made compulsory by law; and possibly some encouragement (financial or other) should be given to the parents of large and healthy families. The notification of pregnancy is too much to look for, but under the aegis of the National Insurance Act some attempt might be made to lead expectant mothers to give notice of the term of their confinement and of the name of doctor or midwife engaged; the attraction might consist in a payment to account or a more liberal allowance later. The recognition of the value and sacredness of the life before birth ought to be much more evidently shown in the means taken to put down criminal abortions and to punish the abortion-mongers. Even therapeutic feticide or medical induction of abortion must be kept within bounds and scrutinized closely. One must not forget the tremendous fact that in every hundred abortions a hundred lives at least are lost, and that about half the premature babies who come alive into the world pass out of it again in a few hours, days, or months. The law must take more cognizance of these things. The old Latin proverb, *de minimis non curat lex*, does not apply here, for these are not the least things; they are more correctly described as amongst the greatest things.

Pregnancy and Eugenics.

How great they are or may become is rendered dazzlingly clear when we consider them in the light of the woman's movement and of the balancing of the issues of peace or war, not to speak of that fascinating subject of eugenics which is proving so attractive to so many of the well-born scientists, savants, and illuminati of these days. To take the last-named subject first, one cannot but feel some regret that the eugenists with their large stores of enthusiasm and energy should by the restriction of their investigations to heredity have shut themselves out from the study of pregnancy and of the environmental causes which act upon the infant while still in the womb, and should by their acceptance of Weismannism have excluded the germ plasm from the moulding and modifying effects of its surroundings in the human body, making it theoretically as inviolable as the atom once was thought to be.

PREGNANCY AND FEMINISM.

On the surface of the Woman's Movement floats the great vessel known as the *Vote*, and there are lots of little ships around it with sails trimmed to carry them into Franchise Harbour and Equal Representation Bay; but these things are only on the surface. There is underneath them a deep ground swell of discontent—in many cases well founded—of dissatisfaction with the life of womankind under certain circumstances, and of actual rebellion against the imposed self-sacrifice of the mother's lot. The agitation for the vote is a comparatively small matter; but this underlying changed outlook and mental attitude of so many women is no small matter either relatively or absolutely. Childbearing is self sacrifice, and does entail if not suffering at least irksomeness, weariness, strain, inquietude, and a certain separation from other more intellectual, perhaps more agreeable and more attractive, duties, not to name pleasures. In some cases it brings also danger, and it always means, sooner or later, the pains of labour. Of course there are, and ever have been, compensations for those whose hearts are motherly, and the women who bore us doubtless soon remembered no more the anguish for joy that a man was born into the world, but the compensations come after the suffering and are hidden from view at first, and it is not every woman who has the mother's heart. Now, if we obstetricians, who have by anaesthetics taken the sting out of labour and its pain, can by hygiene, supervision, and treatment remove some at least of the irksomeness from the nine months of pregnancy and the whole of the danger, we shall have done much to solve a part, and a not inconsiderable part, of the women's question. If we can assure her that pregnancy is ordinarily simply a period of strain and that the strain is a bracing and not a weakening and unnerving one, we shall put courage into her and alter her mental attitude towards childbearing; but if we have to say to her that gestation is to be regarded as a disease with an immunity reaction but no immunity from danger and attenuation of strength and health, how can it come to us as a surprise that the birth-rate falls still lower? I am not saying that the fall in the birth-rate is due to this or to any single cause, but I hold that the true nature of pregnancy is a factor which must be taken into account in all our thinking upon the subject.

PREGNANCY AND HIGH POLITICS.

Finally, the birth-rate of a country enters into the sphere of high politics, and behind the birth-rate there are, of course, necessarily the pregnancies of the women of that country. Napoleon said that the great need of his exhausted country was more mothers, and the same may be said of France now; but it may be said in another sense and for another object. France now requires more mothers and more pregnancies and a higher birth-rate, not that she may have more soldiers to wage wars of conquest and aggrandisement, but that she may not fall in numerical strength below the level of her rivals. Unless the birth-rate of France rises or that of her neighbour falls more quickly than it is doing, the French people will feel the loss of national strength so acutely that fear will enter in, and where fear enters there too often and too soon follows war. The nation with a high birth- and survival-rate and a limited territory must find room by colonization; where two races are living side by side in a country, the one with the higher birth-rate (the survival-rates being equal and migration inconsiderable) will inevitably rule, although the event may be delayed; the people who will not propagate must die. No wonder a far-seeing statesman said lately, in answer to his own question, What is the greatest thing in the world? "A baby!" In the ultimate issue of things babies are of greater import than battalions, and they are the true dreadnoughts of a nation; if they be well-nourished before they are born, if they are brought into the world with care, and if they are handled afterwards with tenderness and educated with knowledge and foresight, but without fads, they will not only stand to arms if need be for the defence of their land in their manhood, and be apt for the replenishing of her millions in their womanhood, but will also help to maintain her high rank among the nations in science, in literature, in commerce, and in all else that is worthy. Shakespeare was once a baby, and not an extraordinary but a very ordinary one; Isaac Newton was less than an ordinary one, he was a premature one, no better than a fetus; Hobbes the long-lived philosopher, and George III the long-lived king, were both untimely births: and yet the history of the world would be the less interesting for their absence. Babies, indeed, are to be looked for, and even fetuses are not to be despised; and behind each are the nine or seven months of a pregnancy.

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A Lecture
ON
ANTE-NATAL HYGIENE:
*ITS INFLUENCE UPON INFANTILE MORTALITY.**

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IN this lecture I am dealing with ante-natal hygiene in its broadest sense, and my main object is to try to get that vital subject better understood and taken up more scientifically, both by medical practitioners, by municipalities, and by legislation, and last, but not least, by the mothers themselves. I am hoping that soon we shall have many definite signs of progress, and amongst them I would mention:

1. Compulsory registration and notification of still-births, and, if possible, notification of abortions.
2. Arrangements by which every poor woman shall have medical supervision during pregnancy.
3. The provision of pre-maternity wards in every locality, with facilities for conveyance thereto of any pregnant woman found to require hospital treatment.
4. The provision in every general or lying-in hospital in our larger towns and in university clinics of ante-natal research laboratories, and so far as may be practicable of pathological laboratories in every county and county borough under the supervision of the medical officer of health, where abortions and stillborn children and other products of conception can be systematically and scientifically examined by microscopical and bacteriological methods, so that we may gradually arrive at a more certain knowledge of ante-natal pathology.
5. The adoption of some means by which poor pregnant women can be financially assisted during the later months of pregnancy. This might be done by an extension of the maternity benefit for insured persons under the National Insurance Act, by which every pregnant woman may from the sixth or seventh month of pregnancy receive 5s. a week after voluntary notification of her pregnancy to the medical officer of health or her panel doctor.

Though I do not intend here to discuss ante-natal hygiene from the maternal standpoint, it is inevitable that that part of the general subject must be included, as many cases of fetal disease and death are maternal. All those interested in infant welfare are endeavouring still further to reduce the rate of infantile mortality, which in 1912 reached the relatively low figure of an annual mortality in England and Wales of 95 per 1,000 births in infants under 1 year of age. This is a gratifying rate when compared with those of 154, 149, 142, 153, and 127 in the previous five decades.†

Can this infantile death-rate of 95 per 1,000 births in 1912 be still further reduced? I believe it can. The London rate in 1912 was only 90 during the first year of life, and Hornsey, with a rate of 66.8, Bromley 68.1, Guildford 69.6, Hampstead 71.4, and Reigate with 71.9,

* Given on behalf of the National Association for the Prevention of Infant Mortality on January 13th, 1914.

† In 1911 there were 114,600 deaths from all causes under 1 year of age—130 per 1,000 births; but this increase of 35 per 1,000 births was due to deaths from diarrhoea, the result of hot weather and diminished milk supply in the labour strikes of the summer months.

show that still better results can be attained. Even if we cannot reduce this death-rate after birth, there is no doubt that much can be done to increase the fertility of women and to reduce the ante-natal death-rate of unborn children, and my remarks to-day are largely directed towards the latter object. Much is being done to remove ignorance and to increase knowledge amongst mothers and help them to make their lives brighter, their food more rational, their dwellings more hygienic, and their environment more healthy. Progress along these lines, besides lessening infant mortality, must have a further influence for good by improving the health and happiness of expectant and potential mothers, and through them of the children which they are to bring into the world. As medical men and women we are faced with four well-defined conditions which are reducing the number of infants needed to replenish the population.

(*a*) Postponement of marriage.
(*b*) The artificial prevention of fertilization of the ovum by one or both of the potential parents.
(*c*) Ante-natal mortality.
(*d*) Infantile mortality during the first year of life.

I am not now concerned with infantile mortality after birth, and will confine attention to the causes of the reduced birth-rate during recent years.

Reduction of Birth-rate.

We have, then, to consider three main factors which tend to reduce the birth-rate—namely, postponement of marriage, artificial prevention of conception, and ante-natal deaths.

Postponement of Marriage.

In 1871, 1.3 per cent. married women were married before 20 years of age, as compared with 0.5 per cent. in 1911; 13.9 per cent. married women were between 20 and 25, instead of 9.4 per cent. in 1911; 45.5 per cent. between 25 and 35, instead of 46 per cent.; and 39.3 per cent. between 35 and 45 years of age, instead of 44.1 per cent. in 1911.

As fertility diminishes with advancing age, change in the date of marriage must have an appreciable effect in diminishing the birth-rate, and represents, the Registrar-General states, 1.56 per cent. of the total reduction in the birth-rate.

Prevention of Maternity.

The extent to which the artificial prevention of maternity is carried in any nationality can only be roughly estimated by the difference between the past and the present birth-rate.

The birth-rate attained its highest point in England and Wales in 1876. Taking that rate as 100 per cent., the Registrar-General states that in 1911:

1. The birth-rate on the total population of all ages fell to 68—a fall of 32 per cent.;
2. The fertility on the female population aged 15 to 45 years fell to 64—a fall of 36 per cent.;
3. Legitimate fertility on married women aged 15 to 45 years fell to 66—a fall of 34 per cent.;
4. Illegitimate fertility fell to 56—a fall of 44 per cent.

These are startling figures, and become still more so when put into other more concrete form, for the Registrar-General says that "if the fertility of married women in proportion to their numbers had been as high in 1911 as in 1876–1880, the legitimate births would have numbered 1,273,698 instead of the 843,505 actually recorded. This means a potential loss to the nation of 430,193 lives in the one year (1911).

As already stated, part of this potential loss is due to postponement of marriage, or, in other words, to an increase of unmarried and widowed women in 1911 between the ages of 15 and 45, but the Registrar-General considers that the decrease of fertility of married women, revealed by statistics, is "largely due to deliberate restriction of child-bearing." This is borne out by all observers of the tendency of the age and by one's professional experience in all ranks of patients.

This "restriction of child-bearing" usually takes the form of prevention of conception, but in some cases it may mean criminal abortion, and this possibility is, of course, more probable where the women are unmarried.

As every method of artificial prevention of conception is harmful in both its physical and its moral effect, we, as medical practitioners and eugenists, should do our best to counteract the habit by appealing to the child-love which is rarely entirely absent from women, and to the spirit of patriotism which should be present in all.

Ante-natal Mortality.

The third main cause of our low birth-rate is ante-natal mortality. It seems to be true that the large numbers of fetal deaths due to abortions, premature labours, and still-births lessen the number of potential live births nearly or quite as much as the deaths of infants during their first year of life lessen the numbers of the survivors. If we consider that an infant's life begins at fertilization of the ovum, we are confronted with the estimated fact, as yet only imperfectly realized, that about as many infants die during their fetal life of 9 months as during the survivors' first year of separate existence.

With our present statistics it is impossible to compute with scientific accuracy the relative or actual number of children who die *in utero*, but the figures in the following table help us to arrive at a rough estimate.

TABLE I.—*Statistics regarding Stillbirths and Abortions.*

	Percentage to Live Births.	
	Stillbirths.	Abortions.
Philadelphia (Dr. La Fetra)[1] ...	5.0	20.0
England and Wales (1908–12):		
London	2.18	—
74 large towns and boroughs	3.06	—
67 small towns	3.34	—
Boston, U.S.A.	3.9	—
Manhattan, U.S.A.[2]	4.8	—
Dr. Priestley's statistics[3] ...	—	23 % of all pregnancies. 30 % of all live births.
Dr. Whitehead's statistics[3] ...	—	14 % of all pregnancies. 16.6 % of all live births.
Dr. Whitridge Williams's statistics[4]	—	15 to 20 % of all pregnancies.
Dr. Malins of Birmingham[5] ...	—	19.23 % of all pregnancies.
Professor Taussig[6]	—	30 % of all pregnancies.
Dr. Amand Routh[7]	2.8	27.4 % of all pregnancies.

[1] I found that 1,000 consecutive married private patients who had been pregnant between 1880 and 1900 had 2,550 live births (2.55 children for each woman), 74 stillbirths, and 980 abortions. These, like the other figures in Table I, were those of patients, who would be more likely to abort than healthy women.

In 1910, 2,312 stillbirths—that is to say, deaths after the twenty-eighth week of gestation—were notified in London, representing 2.2 per cent. of the total births. If this proportion holds good for 1911 and for the whole of England and Wales, the stillbirths would have been 19,736 for 1910, and 19,385 in 1911.

In taking the percentage of stillbirths to registered births in the London metropolitan boroughs as 2.2, and calculating the total for England and Wales on that basis, there is no doubt that the percentage is understated. I have had the advantage of information supplied to me by Dr. Newsholme, Medical Officer, Local Government Board, as regards the percentage of stillbirths notified under the Notification of Births Acts, 1907, for the 74 county boroughs and towns with populations of over 50,000, and for the 67 towns of 20,000 to 50,000 inhabitants. The following table shows an enormous variation in the

TABLE II.—*Showing the Average Percentage of Stillbirths to Registered (Live) Births in the Towns and County Boroughs and in London where the Notification of Births Act, 1907, is in Force.*

	1910.	1911.	1912.	1908 to 1912, or other Periods.	Range of Percentages for 5 Years 1910–12.
In 74 county boroughs and towns over 50,000 population	3.01	3.18	2.98	3.06	1.08 to 5.52
In 67 towns with populations between 20,000 and 50,000	3.21	3.07	3.34	3.34	1.19 to 7.82
In the 29 metropolitan boroughs	2.14	2.21	2.46	2.18	0.31 to 5.85

percentages of stillbirths, but the totals tend to show that the true average is nearer 3 stillbirths to 100 live births, instead of 2.2 per cent. as in the case of London.

Adopting the moderate estimate of four abortions to each stillbirth we get a total of 98,680 abortions, premature labours and stillbirths in 1910, and 96,925 in 1911, not very different from the number of deaths of children under 1 year of age from all causes in the same years—namely, 94,579 in 1910 and 114,600 in 1911. The total live births in 1910 were 896,962, and in 1911 881,138, so that the ante-natal deaths were in proportion of 1 to every 9 births, about 11 per cent. in both years, and this is probably far less than the real percentage. Table III brings out these figures clearly.

TABLE III.—*Estimated Loss to England and Wales from Postponement of Marriage, Lowered Fertility, Ante-natal Deaths, and Infantile Mortality in 1911.*

	1910.	Loss to Population in 1911.
Potential loss due to postponement of marriage and reduced fertility of married women only	—	430,193
Estimated abortions, premature labours, and stillbirths (in married and unmarried women)	98,680	96,925
Recorded infantile deaths under 1 year of age (legitimate and illegitimate)	94,579	114,600
Total estimated probable loss of population (potential and actual) for 1911 ...		641,718

When it is considered that the number of infants in England and Wales in 1911 who survived this double loss was only 782,362, the loss to the nation is seen to be colossal, nearly cent. per cent.

We, as medical practitioners, appreciate and encourage every effort made by others to improve the condition of gravid women and their unborn babes, but it is time that something more than general effort should be made in this direction. In addition to philanthropic assistance we must have more legislative help, and to enable these two helps to be advantageously operative there must be organized medical oversight, including if possible some regular supervision over every poor gravid woman unable to pay for a registered medical practitioner. To get the maximum of benefit out of these three varieties of assistance there must be points at which philanthropy, legislation and medical assistance touch, so as to make them an organized whole.

Before discussing these three ways by which we can help the unborn babe to survive its nine months of intra-uterine existence, I will set out a list of some of the more important maternal and fetal conditions which may require ante-natal treatment if we are to save the child from disease, abnormality or death.

TABLE IV.—*Causes of Ante-natal Disease and Death.*

I. PATERNAL CAUSES.
- *Syphilis* and *Tuberculosis*, by direct infection of ovum.
- Diabetes, Bright's Disease, Plumbism, etc., inducing Debility of Embryo.

II. MATERNAL CAUSES.

A. *Pathological.*
1. Malnutrition:—Anaemia, etc.
2. Acute Specific and Infectious Diseases:—Smallpox, Scarlatina, Measles, Enteric, Influenza, Erysipelas, Pyelitis, Acute Pneumonia, Bronchitis, etc., Gonorrhoea.
3. Chronic Diseases:—Tuberculosis, Syphilis, Diabetes, Bright's Disease, Heart Disease, Asthma, Plumbism, Chorea.
4. Tropical Diseases:—Malaria, Cholera, Dysentery, etc.
5. Toxaemia:—Pernicious Vomiting, Albuminuria, Eclampsia, Acute Yellow Atrophy of Liver.

B. *Mechanical.*
- Retroversion of Gravid Uterus, Pelvic Contractions, Obstructing Tumours (Fibromyomata, Ovarian Osteomata), Carcinoma Cervicis, Cicatricial Stenosis of Cervix, Vagina, etc., Ventrifixation of the Uterus, Vulvar Abnormalities.

C. *Miscellaneous.*
- Ante-partum Haemorrhages (Accidental, Placenta Praevia), Ectopic Gestation, Criminal Abortions, Operations during Pregnancy.

III. FETAL CAUSES.

A. *Developmental.*

B. *Pathological.*
- Hydramnios.
- Hydatidiform Degeneration of Chorion, Blood Moles.
- Fetal Toxaemias.

C. *Mechanical.*
- Malpositions and Malpresentations, Malformations, Relatively large Children.

NOTE.—Many of the above conditions could be prevented, or diagnosed early and appropriate treatment adopted, if women were under medical supervision during pregnancy.

In discussing ante-natal hygiene we are dealing with the infants' well-being alone, but it is obvious that, as a rule, where something needs remedying from the child's point of view the mother will also derive benefit from any measures sucessfully adopted. If, for instance, the child's illness *in utero* is due to maternal disease or toxaemia, the child can only be treated through the mother by such medical or surgical means as may be indicated to arrest the ultimate results of the toxaemia present, such as albuminuria, eclampsia, acute yellow atrophy of the liver and hyperemesis gravidarum. If from another point of view the child's position *in utero* is abnormal, as in transverse presentation, it is obvious that if the malposition is rectified, not only will the birth of the child be rendered relatively safe and easy, but the risk to the mother of a delayed, or tedious, or possibly obstructed labour is removed.

Now, how can this formidable list of the dangers to which the fetus is directly or indirectly liable be relieved by philanthropic, legislative, and medical means?

1. *Philanthropic Measures.*

I include under this head both private and administrative assistance.

Food.—These efforts to help an expectant mother are mainly directed to relieve her poverty by supplying nourishing food, and at the same time to prepare her by mental equipment for the arrival of the child. Improving the nutrition of the expectant mother must also improve the nutrition of the unborn babe. The mother is found also to be much more able to bear the strain of parturition and to suckle her babe, and the child itself, instead of being often immature and sickly, is robust from birth.

Housing.—Regard must also be paid to the need of sanitary dwelling-rooms as well as good food, for the fetus lives on the blood of the mother, and if her lungs inhale septic or deficiently oxygenated air, both suffer.

Industrial Work.—Dr. Newsholme's report on infantile mortality for 1913 has many forcible remarks about other disadvantageous conditions which require alteration, if ante-natal life is to be rendered secure. Amongst these he emphasizes the fact that, speaking generally, the industrial employment of pregnant women does great harm to the fetus *in utero*. Of course we are sometimes faced with the difficulty that if the mother is poor, and stays at home because of the onerous or prolonged or fatiguing nature of her employment she necessarily loses her wages, and would need pecuniary assistance to help her to support her home. Even if a poor woman is solely engaged in household duties, these become onerous and often harmful during pregnancy. The mortality of the children of textile workers from "developmental defects" is exceptionally high, and this is believed by the Registrar-General to be due to the fact that the wives of such workers frequently work in the mills themselves till late in their pregnancies.

Need for Pre-maternity Benefit.—I wish it had been possible, or were even now possible, to arrange by the National Insurance Act that every wage-earning woman, insured through her husband or herself insured, could receive 5s. a week as soon as she was notified to be pregnant, say at the sixth or seventh month, in addition to the 30s. maternity benefit which she already gets after her child is born. The anxiety of a poor woman as regards the coming birth is very real, especially if she be a primigravida, but this anxiety is largely removed by the prospect of the maternity benefit. It is a pity that some equally certain pecuniary relief cannot be forthcoming during the pregnancy. It would either help pregnant women to stay at home and be free from outside work, or would pay for help in their household work. It would also prevent some very poor women, potential mothers,

from trying to avoid maternity owing to their very real dread of financial stress during a possible pregnancy. In some places clubs have been formed to which women can pay in money for their pregnancies, and get an added bonus from local philanthropy. This is valuable help.

Boarding Out.—If poor pregnant women could be sent to country homes or sanatoriums during part of their nine months' expectancy, very great good could be done. A weekly bonus of 5s. would facilitate this. There are thousands of small farmers or cottagers in rural districts near large towns who would willingly put up such women in summer for 5s. a week. I have had practical experience of this in hospital patients, and know that it is possible.

Health Societies.—In a valuable paper read at the conference in 1913, Mrs. Kitson Clark[7] of Leeds states that there are 200 voluntary health societies in Great Britain, some worked by voluntary helpers who do their own work and receive no pay, some managed by voluntary helpers who pay for expert advice, and some who work under the direction of public authorities. The first two types of health societies work with the sanitary authorities, though they are not controlled by them. These 200 health societies are mainly occupied in dealing with the health of the mother and infant after birth, but many usefully arrange for lectures to expectant mothers on hygiene, home nursing, infant hygiene, etc., and help to remove the ignorance so frequently found to be present. If more visits were paid to expectant mothers by agents of these 200 societies more good might be done, and the formation of clothing and money clubs, restaurants and milk dépôts, for expectant as well as actual mothers, should in suitable areas be encouraged.

2. *Legislation.*

Whilst philanthropic help to expectant mothers can only deal directly with their nutrition, their environment and their mental and moral equipment, legislation could do much more by earlier notification and registration, for by it the condition and medical needs of the mother and the unborn babe could be made known to the medical authorities and timely help could be given to the patient.

Compulsory Registration of Stillbirths.

I believe great good would follow compulsory registration of stillbirths, which does not now exist in this country, for we would also get valuable statistics and more knowledge of the causation of ante-natal deaths and disease.

The Notification of Births Act, 1907, may at present be adopted by any local authority, and its provisions then become compulsory in that urban or rural area. The provisions of the Act include notification to the medical officer of health (not to the registrar of births and deaths) of the birth of any child after the expiration of the twenty-eighth week of pregnancy within thirty-six hours after birth, whether alive or dead, and is to be made by the father or the attendant.

The Local Government Board may place the area of any local authority under the Act "if they think it expedient, having regard to the circumstances of the area," but it is probable that an amending Act would be required if all the local areas in the country were simultaneously put under the provisions of notification enforced by the Act. At present 74 out of 98 large towns, and 67 out of 111 small towns have adopted the Act, and it has also been adopted since 1909 for the administration of the County of London in the 29 metropolitan boroughs by order of the Local Government Board.

Much information is also supplied to the local supervising authority of the various administrative counties and county boroughs under Regulation E 21 of the Central Midwives Board, which requires that the midwives shall, "as soon as possible," send notice, in all cases of stillbirth, where a registered medical practitioner is not in attendance at the time of birth.

A compulsory Registration of Stillbirths Act, on the basis of the provisions now in force under the Notification of Births Act, 1907, and the Midwives Act, would prove exceedingly useful, provided especially that the limit of time of registration be not extended beyond that required in the former Act—thirty-six hours.

One of the main objects of notifying births within thirty-six hours of the confinement is to enable women —especially the poorest women, who are usually attended by midwives—to be visited by officers of the local authority or by the staff of voluntary societies working under the direction of the medical officer of health for the area. To be of any real scientific use in cases of stillbirths, in unattended cases, or in cases attended by midwives, such visits should be made before the stillborn child and the afterbirth have been disposed of; and the visitor should be a medical practitioner, for it is obvious that, if the first visit is only made after the midwife has ceased attendance —about ten days—no scientific information as regards the condition of the fetus or membranes or as to the cause of the stillbirth could be forthcoming. I think, therefore, that if the child is stillborn, and if the mother was not under the care of a qualified medical practitioner, notification should be made within twelve hours, and the child and membranes should be sent to the laboratory for careful examination and report. This is not possible now, but one of these days the medical officers of health in every county or county borough will have a laboratory and a pathological expert to report upon all such specimens. It must be acknowledged that medical practitioners and even obstetric experts have as yet a very imperfect knowledge of the pathology of "products of conception" prematurely born. Systematized scientific examination of abortions and stillbirths is made in very few hospitals. There should be an ante-natal research laboratory in every general and lying-in hospital, and more especially in our teaching hospitals and university clinics. An obstetric pathologist should be appointed, and amongst his other duties he would systematically examine the fetus and placenta and every "product of conception" which came to hand, and report upon it after full examination by bacteriological and histological methods. Such methods would after a little experience enable the cause of the death of the expelled fetus to be scientifically ascertained, and the undecided questions of the transmission of disease from the mother to the child through the placenta would be answered. Later on, when chemical pathology takes its proper place, the nature and origins of placental and fetal toxaemias may also be determined.

From the point of view of statistics, ante-natal pathology and efficient prophylaxis, *notification* of every abortion would add greatly to the value of *registration* of stillbirths, but this seems unlikely to be now adopted.

The organization whereby all pregnant women can be seen and sufficiently examined by a competent medical practitioner is difficult to establish. Compulsory notification of pregnancy, as suggested by Dr. Munro Kerr,[8] might supply the means, but there are, I think, insuperable objections to such compulsory notification. If a "pregnancy benefit" at the sixth or seventh month, as I have suggested, could be forthcoming to every poor insured woman after her pregnancy had been certified, by a method of voluntary notification to the medical officer of health or her panel doctor, arrangements could then be easily made by which the woman should continue under medical supervision and undergo appropriate treatment. This would save many fetal lives. Amongst many arrangements which would need to be organized would be the provision throughout the country of pre-maternity or pregnancy wards, advocated by Dr. J. W. Ballantyne, and conducted by him in Edinburgh for nearly fourteen years.

Arrangements would also have to be made by which poor women, considered by the medical officer of health or his representative to require hospital treatment, should be conveyed to a pre-maternity ward in a general or lying-in hospital in an adjacent town, or to a reserved pre-maternity bed in the local cottage hospital.

The vital difference between the results of the medical and especially the surgical treatment of the complications of pregnancy and labour, when the woman is attended from the first in a pre-maternity hospital as compared with being admitted as an emergency case after outside treatment has failed, is well known. I give one example of this. In 1911 I collected[9] 1,058 cases of contracted pelvis treated by Caesarean section performed by living obstetricians in Great Britain and Ireland, and I found that in "clean" cases, such as those already in hospital, only 2.2 per cent. of the mothers died, and hardly any of the children, whereas in cases in which previous attempts at delivery had been made the percentage of mortality was 34.3 and the fetal mortality at least as high.

Medicine and Surgery in the Ante-natal Stage of Life.

I have already given a list of maternal or fetal conditions which, if untreated, may lead to fetal disease or death. But before such conditions can be treated the opportunity for making a diagnosis must be found.

If all women were under medical observation during pregnancy, not only should we be able to prevent about half the present ante-natal deaths, but also prevent many infants from being born feeble or prematurely.

It cannot be too well realized that many of the deaths of infants dying shortly or immediately after birth are due to ante natal conditions, or to obstructed labour due to causes which could have been discovered or guarded against if the expectant mother had been professionally attended. About one fourth of children who die in their first year of life die in the first week of life. The Registrar-General suggests that a large proportion of deaths due to "prematurity," or which now come under the indefinite heading of atrophy, debility, and marasmus, "are due to congenital debility owing to which the infants' prospects are hopeless from the moment of birth, progress as regards such cases being possible only by improved ante-natal hygiene." Dr. Newsholme, in his fascinating Second Report on Infantile Mortality, alludes (pp. 27–28 and 91) to the remarkable differences in the death-rate of infants in their first week and first month of extrauterine life in various places. He agrees that whilst some of the deaths in the first week of life, ascribed to premature birth and congenital defect, may be due to lack of care after birth, some are also due to lack of care at birth, and many to ante-natal conditions.

The infantile death-rate from premature birth and congenital defects varies enormously in different places, from 40, 50, or 60 per cent. above the average for the 241 urban areas, to 35 and 40, and 50 per cent. below the average in certain towns.

As tending to show that ignorance on the part of both mothers and fathers may increase the infantile death-rate, the Right Hon. John Burns,[10] in his remarkable presidential address at the Conference on Infant Mortality at Caxton Hall last August, stated that doctors' babies died only at the rate of 40 per 1,000 during the first year, whereas in those of miners the rate is 160, and of unskilled labourers 150, and the average was 100. He rightly attributed this to the doctor's skill and intelligent attention to detail by persistent care and prophylaxis. There is very little doubt that a similar difference in ante-natal deaths would be found if statistics were procurable.

Some of the more important conditions discoverable by routine examination of pregnant women, as shown in Table IV, may now be considered and some of the measures, prophylactic and curative, likely to prove useful to the unborn babe indicated.

PATERNAL CAUSES OF FETAL DISEASE OR DEATH.

These are difficult of proof, but, apart from the probability that the ovum may be fertilized and infected simultaneously by the spermatozoa in such diseases as syphilis and tuberculosis, it is also probable that a debilitated father's spermatozoa, in such wasting diseases as diabetes, Bright's disease, plumbism, etc., may be so devitalized that the resulting embryo is either malformed or so weak *ab initio* that it fails to survive long *in utero*. These points are dealt with at greater length under maternal conditions.

MATERNAL CAUSES.

A. Pathological Conditions.

1. *Malnutrition.*

A weak or ill woman will usually have an inactive, unhealthy ovum, and it is clearly less likely to develop normally when fertilized.

2. *Acute, Specific, and Infectious Diseases.*

Where there is danger from infection from any acute infectious fever, the pregnant woman should be removed, for abortions and premature labours frequently follow maternal infection.

Small-pox, for instance, causes abortion or premature labour in the severe types, but not in the discrete forms. The fetus may get the disease *in utero*. The mother should be vaccinated during the pregnancy if exposed to the contagion, for in some cases the fetus is said to be thereby rendered immune to the infection after birth, but this statement requires further confirmation.

Scarlatina appears to me much less common during pregnancy than at other times, and pregnancy may, therefore, confer some sort of immunity. In early pregnancy scarlatina usually causes abortion.

Measles is stated to cause abortion or premature labour in 80 per cent. of cases, and the children are sometimes born with the rash upon them.

Typhoid Fever.—Abortion or premature labour is said to occur in from 40 to 60 per cent. of the cases, and it is believed that the death of the fetus is due to direct transmission of the typhoid bacillus, which has been frequently found in the fetus.

Influenza.—In severe cases 80 per cent. are said to abort, preceded often by profuse haemorrhage, but mild cases do not abort.

Pyelitis, or pyelonephrosis, is one of the most acute of the complications of pregnancy, due usually to acute *Bacillus coli* infection of the pelvis of the right kidney. If the attack is prolonged or severe, abortion may have to be induced.

Acute Pneumonia.—Abortion or premature labour is frequent in severe cases, the fetus often being born unexpectedly with membranes intact. In such cases the woman rarely if ever recovers. Fetal expulsion may be due to deficient oxygenation of the maternal blood, the fetus being born alive, but in a few cases fetal death has been proved to be due to direct transmission of the pneumococci.

Gonorrhoea.—Conception does not occur during the active course of gonorrhoeal infection of the vagina or endocervix, and sterility may be permanent, even after apparent complete recovery, by the effects of double salpingitis. This is a fact which should be fully realized. Acute infection during pregnancy is rare, but I recently saw a woman who was infected a month before term. Labour ensued ten days after infection, and in spite of all precautions the child was infected at birth and had a proved gonococcal conjunctivitis, vulvitis, and vaginitis, all of which soon yielded to treatment. The mother had no serious trouble, liquor iodi being freely applied to the parts affected soon after parturition. In some cases gonorrhoea, contracted in the early months, has led to abortion by the involvement of the endometrium. The treatment of gonorrhoeal infection during pregnancy is clearly to try to cure the mother as soon as possible and prevent fetal infection at birth.

3. *Chronic Maternal Diseases affecting the Fetus in Utero.*

Tuberculosis.

Although the mother apparently improves during pregnancy there is no evidence that there is any real arrest of the disease. All observers agree that there is marked retrogression after the strain of labour, and especially after lactation, if that should have been unwisely permitted. The functional quiescence, and the process of involution of so many important organs and ductless glands previously working at high pressure, and the physiological degeneration and disintegration of tissues closely concerned with the uterus and its mucosa, all tend to make such a progressive disease as tuberculosis advance with rapidity during the lying-in period, constitutional resistance being temporarily at its minimum. It does not, however, appear to be the case that a tuberculous woman is liable to abortion, nor is there evidence that her bacilli are conveyed to the fetus, the placental epithelium being apparently able to act as an efficient filter. There is no reason, therefore, why abortion or premature labour should be induced during the pregnancy from the point of view of the child, and it is at least doubtful whether it is maternally advisable, for the induction of premature labour would probably be almost as severe a strain on the unprepared tissues as a full-term delivery.

Opinions differ on this important question of the transmission of congenital tuberculosis and on the frequency of placental tubercle, but it is obvious that, if it were already infected, induction of premature labour would not improve the child's prospect if it survived.

It is well known that the children of tuberculous women are often remarkably well developed at birth and may remain healthy if not suckled by their mothers. Some

consider the children of tuberculous mothers more prone to the disease than others, especially in the form of spinal caries, or renal tubercle some years after, but as the majority of such children appear to escape the disease, one cannot advocate the wholesale induction of abortion which might be indicated if opposite views were held. The permanence of health in some children of tuberculous mothers may be due to the extra care taken of such children, but some think that such children are born with a greater power of resistance, and have really acquired during the period of their intrauterine existence a relatively greater immunity.

It appears to be possible that tubercle may be conveyed to the ovum by the spermatozoa of the father. This has been shown to occur in experiments upon rabbits and guinea-pigs. It has also been demonstrated that tubercle bacilli are sometimes seen in the interior of ova which are still within the Graafian follicle and probably then of maternal origin. In either case such infected ova would if fertilized soon die *in utero*, and need not be considered by us as bearing on treatment.

Syphilis.

The effect of syphilis upon the fetus *in utero* is far-reaching, either by causing its death and premature delivery or by producing such debility and ill health that it dies at birth or shortly afterwards.

Statistics as to the syphilitic death-rate *in utero* and during the first year of life vary enormously. The infantile death-rate during the first year of life for England and Wales as a result of syphilis is given as 1.29 per 1,000 births, for Scotland 1.4, for Ireland 0.59, but the extreme difficulty of the diagnosis apart from a bacteriological examination of the infant by the Wassermann test during life, or the discovery of spirochaetes after death, almost certainly makes these figures, for past years at all events, unreliable. A further reason for believing these figures unreliable is the desire of the medical practitioner in charge of the case to avoid adding to the grief of the mother and father by putting syphilis as the primary cause of the death in the death certificate, "atrophy," "debility," and "marasmus," or "prematurity," being convenient and partially true substitutes. This opens up the large question of the need of a change in the secrecy of the death certificate so far as the cause of death may be concerned. But this is outside our present subject.

In Uganda, where a terrible wave of syphilis has involved the whole native population during the last few years, Dr. A. R. Cook says that out of 40,000 consecutive cases attending two dispensaries in the country, 22 per cent. were sufferers from venereal disease, and that 70 per cent. of the children born there either die from premature birth or are stillborn, or die in their first week after birth, as a result of syphilis or from the gross ignorance of the natives, who prefer being treated by the native medicines before consulting European doctors. McDonagh[11] says that nearly 50 per cent. of congenital syphilitics die before birth.

If the mother is infected prior to conception the ovum itself is probably infected, and abortion or premature birth ensues. If the mother is infected after the conception the fetus is infected through the placenta, though, if infected late in pregnancy, some children escape. It seems also clear, notwithstanding recent discoveries, that the father by his spermatozoa can transmit the disease direct to the ovum without infecting the mother, as stated in Colles's law, unless he has infectious lesions at the time of coitus. The woman, if not then directly infected, may escape all clinical evidence of the disease, and is probably herself rendered immune by the intimate circulation between herself and the fetus and by the constant casting off into the maternal circulation of fragments of the chorionic villi. In some cases the mother under such conditions presents a positive Wassermann reaction, but Whitridge Williams considers that it is not clear that she is therefore suffering from latent syphilis, and suggests that this positive reaction may be due to the transmission of antibodies through the placenta, and not necessarily to the presence of living spirochaetes in the mother.

The discovery by McDonagh[11] of intracellular parasitic spores developing into spirochaetes, in December, 1912, has an important bearing on the truth of Colles's law, which was believed in by every one till it was pointed out that the *Spirochaeta pallida* is three times as large as the head of the spermatozoon, making the conveyance of the spirochaete in the spermatozoon apparently impossible. The spores result from the multiple subdivision of the fertilized female cell, and if these can convey the disease the difficulty disappears. In any case, I feel sure Colles's law remains often true.

There is much disagreement as regards the proportion of women who present a positive Wassermann reaction and who eventually bear syphilitic children in those cases where the women show no clinical evidence of the disease. There is much uncertainty as to why in some cases both mother and child give a positive reaction, whereas in others the mother is negative and the child positive. In other cases the mother is positive, the child negative at birth, but positive a month later.

Thus Miss McIlroy took 100 gynaecological cases (91 married) from her out-patient department in Glasgow suffering from various chronic gynaecological complaints, all cases of obvious syphilis being excluded. She found that the Wassermann reaction was present in 53 of these cases. In her 91 married cases, 41 had had one or more miscarriages, yet only 13 of these showed a positive reaction. In 5 of the 21 negative cases showing histories of stillbirths and miscarriages the offspring showed positive reactions. This result is difficult to explain, but is recognized to exist by several writers on the subject.

McDonagh's views differ markedly from those which are founded on such results as Dr. Louise McIlroy's cases. He says most mothers who show no clinical evidence of syphilis, but bear syphilitic children, present a positive Wassermann reaction, and he considers that such mothers "are very prone" to develop gummata at or about the menopause. He says all congenital syphilitics, early or late, present a positive Wassermann reaction, and long-continued treatment may fail to change it.

Mr. Beckwith Whitehouse[12] of Birmingham states that out of 16 cases of chronic metritis and fibrosis uteri 7 showed a well-marked positive Wassermann reaction, only one of which had a defined syphilitic history, and he has drawn attention to the researches of Knöpelmacher and Lehndorffe,[13] who have shown that 50 per cent. of the mothers of syphilitic children give a positive reaction some years after the birth of the last child, although a few months after parturition 90 per cent. of such women react positively.

The results of the researches of both Dr. McIlroy and Mr. Whitehouse show that in groups of women with chronic uterine disease, and presenting a large percentage of positive Wassermann reaction (53 and 42 per cent. respectively), the changes in the uterine tissues (fibrosis and periarteritis, etc.), are similar to changes found in hepatic cirrhosis and other recognized syphilitic lesions. If these changes *in utero* are often the result of syphilis, it is one explanation of the frequent early abortions which occur in infected women.

Diagnosis and Treatment of Syphilis.

Ten years ago a positive diagnosis in the absence of a living child with clinical evidences of syphilis was impossible, especially if the physician only had the history of one or two premature births of dead children, and no history of syphilis in either parent, and the mother was apparently healthy. In such case, however—and I have seen several—I have found that by giving the expectant mother $\frac{1}{16}$ grain of mercury perchloride thrice daily a healthy living child would be born and would remain apparently healthy.

Amongst several instances of the truth of Colles's law I will mention the following:

A lady had been married four years and had had two stillbirths shortly before full term, and had also had an abortion, of two months' gestation, six months before seeing me. She was then six weeks pregnant, and had no personal history pointing to syphilis. Her husband, however, acknowledged having had syphilis, its last clinical evidence having been twelve years previous to marriage. I put her on mercury perchloride gr. $\frac{1}{16}$ thrice daily, and delivered her of a healthy child six months later. The year following she again conceived, but refused all treatment, and was delivered prematurely of a feeble, unhealthy child, with vague specific symptoms and permanent mental deficiency. Two years afterwards she again became pregnant, and was again treated by me with mercury perchloride from the sixth week of gestation, and had a healthy child.

The discovery of Wassermann's reaction, and of the treatment by salvarsan and neo-salvarsan has revolutionized diagnosis, prognosis, and treatment. One of the difficulties in the case of poor women is to organize means by which a Wassermann test can be made. Dr. Louis Parkes, medical officer of health for Chelsea, has led the way by arranging with the Lister Institute for the carrying out of the Wassermann blood reaction free of charge for medical practitioners attending the poorer classes in Chelsea. This is a great advance, and if it could be generally adopted would be of enormous advantage. It is evident, however, that free diagnosis which is not followed by free treatment would be useless.

We have already seen that pregnant women, bearing *in utero* a child subsequently proved to be infected (perhaps directly through the paternal spermatozoa), may not in all cases present a positive Wassermann reaction. Such cases are probably very exceptional; in them a positive diagnosis could not be made, and few would in such negative cases adopt radical treatment by salvarsan. Apart, however, from these cases, if a pregnant woman gives a positive Wassermann reaction, immediate treatment is imperative, and should be commenced by an injection of salvarsan, followed by a course of mercurial treatment. Such treatment will not only cure the mother but the fetus *in utero* as well, for both arsenical and mercurial salts and potassium iodide readily pass through the placental circulation to the fetus. Data are not yet available to enable us to know when cure is assured for the unborn babe. Dr. C. F. Marshall[14] quotes Hochsinger, who says that out of 516 births of syphilitic infants 253 were stillborn, and of the 263 others 55 died in spite of antisyphilitic treatment. He thinks about 25 per cent. of syphilitic infants may under treatment become fairly normal.

Salvarsan, when injected intravenously into the mother, does not produce abortion or interfere with the growing fetus, for, as Sir Almroth Wright[15] says, "Salvarsan is an absolutely scientific drug, which attacks a specific organism only. It combines with the protoplasm of that organism to form a new innocuous chemical compound. It does not injure the patient's tissues in any way, nor inhibit the powers of the blood serum." There is, therefore, safety in its use. In 46 cases collected by Lorreyle, in which intravenous injection of salvarsan was used in pregnant women between the second and ninth month, no abortion occurred. In three cases the fetus died *in utero*, in twelve cases the child was known to have recovered from the disease. McDonagh[11] says that if salvarsan be given before secondaries appear in a woman infected during pregnancy the child escapes infection.

Chronic Nephritis.

Women with chronic nephritis may pass through childbearing without the development of fresh symptoms, but sometimes the inefficient kidneys fail to do the extra work thrown upon them, and the fetus may die poisoned by the mother's failure to excrete urea and its primary products. Sometimes an added toxaemia produces symptoms which cannot be distinguished from toxaemic albuminuria, and as a result eclampsia may supervene. Here, again, the fetus may be expelled dead or dying. Some believe that pre-existing chronic nephritis is a very common cause of intrauterine death of the fetus. I have seen recurring cases of fetal death in two mothers, where there was no albuminuria, but where gradual lessening of urea excretion was discovered. In both cases I believe I saved fetal lives in subsequent pregnancies by inducing premature labour when the urea had been steadily reduced to about 200 grains a day.

All such cases require much watchfulness and frequently repeated examination of urine; premature labour should be promptly induced in the presence of such danger symptoms, or if acidosis is present.

Diabetes.

Apart from a harmless lactosuria, which may be present in 5 per cent. of pregnant women shortly before full term, diabetes may be a serious complication of pregnancy. Whitridge Williams[16] collected 66 cases of severe diabetes in pregnant women; 27 of these mothers died soon after labour, and 23 of the remainder died during the next few years. Fully 12 per cent. of the pregnancies ended prematurely, and 33 per cent. of the children born at term were dead. These cases of diabetes are probably due to altered metabolism in the ductless glands and pancreas, and may be toxaemic in origin.

Heart Disease.

Much difference of opinion exists as regards the interaction of pregnancy and heart disease, but where the heart is only able with difficulty to cope with its work, compensation not having been fully maintained, the addition of the extra work involved by pregnancy becomes a serious danger.

Mitral stenosis is said to be the most serious lesion: but everything depends upon the amount of compensation present, and it is safer to watch the clinical evidences carefully, and, if the mother is losing ground, and especially if dyspnoea or oedema supervene, premature labour should be at once induced irrespective of the viability of the child. In inducing labour in these cases every effort should be made to lessen maternal strain and to shorten labour by anaesthesia (oxygen-ether) and by instrumental delivery. If the pregnancy be allowed to go on after marked dyspnoea and anasarca have developed, abortion or premature labour will take place.

Asthma.

Asthma usually becomes seriously aggravated during pregnancy, and if, in spite of treatment, cardiac insufficiency or marked dyspnoea supervene, abortion or premature labour should be induced as in chronic heart disease.

Plumbism.

Lead-poisoning is a well-known cause of abortion when it affects the mother, but also[17] causes sterility and abortion when the father is affected. I recall a case in which a healthy woman had repeated abortions, for which no cause could be discovered till it was found that the husband had suffered for years from chronic plumbism. When he was cured she had a living child. If the mother has plumbism, abortion follows in 65 per cent. or more of the pregnancies, and any children are unhealthy, only 10 per cent. surviving their tenth year. The lead is conveyed to the fetus through the placenta. In unrelieved cases sterility results. Plumbism contracted by women taking diachylon plaster is in certain localities a frequent cause of criminal abortion.

Chorea Gravidarum.

Pregnancy may supervene during idiopathic chorea without serious result, but chorea gravidarum is a disease *sui generis*. In severe cases the fetus *in utero* may die, but may not be at once expelled. If delay occurs ("missed abortion"), or even if abortion at once follows, septicaemia is very apt to develop.

Opinions differ largely as regards the desirability of inducing abortion. I have seen cases recover after it, but in two other cases the patient has become comatose and has died, although the choreic movements have been arrested. It is quite possible that chorea gravidarum is toxaemic in origin.

Tropical Diseases.

European women who become pregnant in tropical climates and who cannot "go to the hills" and escape the great heat, should be sent home so as to avoid the risk of abortion which may follow maternal cholera, dysentery, or malaria and other tropical diseases.

Cholera in pregnant women causes abortion or premature labour in 54 per cent. of cases, and cholera bacilli have been found in the dead fetus.

Malaria, if of severe type, may cause abortion or premature labour in about 40 per cent., but mild cases show no tendency to this termination. Some authorities consider that the fetus *in utero* may be infected, especially in the tertian form, but proof of this by the discovery of the characteristic parasite is awaited. Quinine can be given with impunity in maternal malaria, its slight ecbolic influence upon the uterus being apparently in abeyance.

Toxaemias of Pregnancy.

As causes of fetal death and expulsion of the ovum, the toxaemias of pregnancy form an important group. Some of these toxaemias are maternal in origin, some fetal. Some are no doubt due to the formation and retention of

altered metabolic products derived from the ductless and other glands of the mother; some are due to toxins derived from the placental or perhaps even from fetal metabolism. Chemical pathology cannot yet discover the toxins present by examination of the maternal blood, and we have to make a diagnosis of toxaemia by the general symptoms caused by the toxins, and by the chemical effects of such toxins upon the secretions of the liver and kidneys. The importance, therefore, of every pregnant woman being occasionally seen by a medical practitioner, and of her urine being chemically examined, is obvious.

The effect of maternal toxaemia upon the fetus in marked cases is grave. The early ovum is expelled, and the more advanced fetus dies and is born prematurely.

It is probable that the clinical evidences of toxaemia vary according to the variety of toxin present rather than to the quantity of the poison.

Pernicious Vomiting of Pregnancy.—Whitridge Williams was the first to show that in severe cases of toxaemic hyperemesis an abnormally large proportion of the total nitrogen in the patient's urine was excreted in the form of ammonia instead of urea, the ammonia coefficient rising from 4 to 5 per cent. to 30 or 40 per cent., or even more. Swayne[18] of Bristol and Herbert Williamson[19] of London have shown that acidosis is usually present in these and most other serious toxaemic cases. In severe cases of the pernicious type abortion should be induced if rectal feeding fails. Reflex non-toxaemic cases yield with almost certainty to one application of liquor iodi to the endocervix applied up to the internal os uteri, even in cases where the artificial induction of abortion seemed inevitable.

Toxaemic Albuminuria.—This urinary condition and its general evidences are sometimes the only clinical symptoms, but it often precedes eclampsia, or is associated with acute yellow atrophy of the liver, and may usher in an attack of the insanity of pregnancy. It usually appears in the second half of pregnancy. Headache, giddiness, œdema, visual troubles, and epigastric pain are the usual symptoms, with marked changes in the scanty urine. In severe cases the child is born prematurely and is still-born. In all cases frequent examinations of the urine are essential, and rest in bed with a milk diet and free purgation should be ordered. If the albuminuria increases, or if acidosis develops, or urea excretion lessens, or if sleepiness or epigastric pain supervenes, or slowness of the fetal heart is noted, premature labour should be induced to save both mother and child.

Puerperal Eclampsia.—This toxaemic manifestation is relatively frequent (1 in 250 pregnancies); it occurs mainly in primiparae (70 per cent.), and develops in the later months of pregnancy or during labour in about 80 per cent. of the total cases. The fetus dies in nearly one-half of all the cases, and in most uterine contractions ensue and the child is born rapidly. Eclampsia could possibly often be prevented by discovery of the scanty albuminuric urine and by appropriate treatment. Should eclampsia threaten or supervene, premature labour should be induced by rupture of the membranes, which reduces intra-abdominal tension, and by instrumental delivery of the fetus under anaesthesia when the cervix is dilated. If dilatation of the cervix be absent abdominal Caesarean section is the best and most rapid way of emptying the uterus. In many cases after the birth, and in some cases after the death of the fetus *in utero*, the convulsions cease, and these facts in the absence of certain knowledge as regards the nature and origin of the toxaemia, cause us at present to advocate emptying the uterus. In time we shall adopt a more rational and scientific treatment.

Acute Yellow Atrophy of the Liver.—This serious and generally fatal result of toxaemia usually appears in the later months of pregnancy, and is accompanied by headache, abdominal pain, jaundice, haemorrhagic vomiting, diarrhœa, followed by coma. The area of liver dullness is diminished, and the urinary changes are well marked and distinctive. The fetus is prematurely born and is usually dead. We know nothing certain as to the origin or nature of the toxaemia.

B. Mechanical Maternal Conditions.

Retroversion of Gravid Uterus.—Symptoms, except perhaps backache, bladder irritability, and reflex vomiting, may be absent till the fundus uteri becomes incarcerated; then retention and incontinence of urine with abdominal pain are added. A careful physical examination at once reveals the diagnosis. Prompt emptying of the bladder and replacement of the gravid uterus should be performed, for otherwise abortion about the fourth month of pregnancy or septic cystitis would follow.

Pelvic Contractions.—These can readily be determined during every stage of pregnancy, and in primiparae should always be sought for, and if contraction be detected expert advice should be secured, and the patient should be admitted to a pre-maternity ward at the proper date. If the pelvis is only slightly contracted, and it is believed that a living child can be delivered at or after the thirty-sixth week, labour may be induced then or afterwards. In a markedly contracted pelvis, or at full term, Caesarean section should be performed. If this be done before any other methods of extraction have been attempted, the case is "clean"; the maternal mortality is 2.2 per cent., and the fetal mortality almost *nil*.

Obstructing Tumours.—These, again, can only be detected by physical examination, which is the more necessary because fibromyomata, ovarian tumours, or bony tumours do not almost cause subjective discomfort during the early months. Roughly speaking, these tumours should be removed during the pregnancy if this can be safely and easily done, otherwise they should be dealt with at full term, together with Caesarean section or hysterectomy, according to circumstances. Expert advice and treatment in a pre-maternity ward are essentials to safety in the cases of poor women. I have notes of Caesarean section performed in 74 cases of fibromyomatous tumour, with 16 fetal deaths (21.6 per cent.), in 28 cases of ovarian tumour with 1 fetal death (3.5 per cent.), and in 15 cases of osteomata, etc., with 3 fetal deaths (20 per cent.); many of these were not "clean" cases.

Carcinoma of the Cervix Uteri.—This is said by Sarwey to occur about once in 2,000 cases, and frequently leads to abortion and adds to the chances of puerperal septicaemia. If the carcinoma is detected in an early stage, panhysterectomy (Wertheim), at any date of the gestation, should be performed, but if the cancer be advanced and inoperable, gestation may be allowed to continue and abdominal Caesarean section performed at term. In 33 cases collected by me treated by Caesarean section only 5 children died.

Cicatricial Contraction of Cervix or Vagina.—As a result of injuries, received usually in a previous confinement, scar tissue may form and prevent delivery. Caesarean section at term must be done to save both mother and child. In 8 cases collected by me in which this treatment was adopted all the mothers and children survived.

Ventrifixation of the Uterus.—It is now known that this does not cause dystocia as often as was supposed, but that it sometimes does so is clear from the fact that amongst my 1,285 cases of Caesarean section performed by living British operators there were seven cases of ventrifixation in which that operation was required. Six of the children survived.

C. Miscellaneous Maternal Conditions.

Ante-partum Haemorrhages.—These cases require expert advice, and many of the poorer women would be advantageously treated in pre-maternity wards. The type of treatment will, of course, depend upon whether the haemorrhage is due to complications such as mucous polypus or malignant disease of the cervix, or is the result of partial detachment of a normally situated placenta, or of a placenta praevia. In the latter group the haemorrhage may seriously endanger the life of the fetus, and labour may need to be promptly induced in the interest of both mother and child.

Ectopic gestation need only be mentioned as a cause of ante-natal death, for even secondary abdominal gestations rarely result in a living child.

Criminal Abortion.—What percentage of abortions are criminally induced is unknown. All obstetricians see large numbers of cases in hospital out-patient practice in which the woman has tried to end the pregnancy by advertised drugs, by purgatives, or by diachylon plaster, and cases are admitted into hospital where knitting needles or skewers have been used. Septic troubles not infrequently follow both successful and unsuccessful attempts, and require prompt hospital treatment.

Operations during pregnancy should only be done when necessary, lest abortion ensue, but by steadying the muscular and nervous systems by anaesthesia, even such operations as myomectomy and ovariotomy can be safely performed. Abortion follows 50 per cent. of myomectomies, but rarely follows ovariotomy. Operations for appendicitis complicating early pregnancy do not usually cause abortion, but in the later months premature labour usually results.

FETAL CAUSES.

A. Developmental Causes of Fetal Death.

A very large number of deaths occur during the first few days or weeks after the ovum is fertilized. The human embryo is then merely a mass of cells gradually being placed in defined groups, and undergoing specific changes in character. A faulty grouping or position of these embryonic cells leads to serious subsequent deformity, or if the attachments to the mother be at fault, to failure in nutrition and early death of the fetus. I have already alluded to developmental defects as a result of industrial occupation during gestation. Many early abortions appear to be due to haemorrhages from the early chorio-decidual spaces, leading to diffuse clots, which, together with the early ovum, are expelled at the date of the next period without any attempt at the formation of an organized blood-mole, which would be found in the second or third month. I do not allude to developmental errors in the placenta or cord, the presence of which could not be detected before birth.

B. Pathological Fetal Conditions.

Hydatidiform Disease of the Chorion.—If the uterus is enlarged above its normal dimensions at the supposed date, and fibromyomata are absent, and especially if palpation be unsatisfactory, and there be a "red-currant juice" discharge, this disease may be suspected. Examination may reveal a mass bulging through the dilating cervix. It is possible that a healthy twin may also be present *in utero*, but this is so rare, and the risk of a subsequent chorion-epithelioma is so real, that the uterus should be emptied; the ovum affected practically never has a living fetus in its centre.

Blood moles and fleshy moles produce somewhat similar symptoms, such as metrorrhagia, but the uterus is usually below its normal size at the presumed date of pregnancy. Owing to interference with the blood supply of the embryo it is always dead.

Hydramnios.—This condition is associated with fetal malformations in nearly 50 per cent. of cases, and the fetus, if otherwise normal, is often feebly constituted and dies within the year. If, therefore, there is serious abdominal distension and resulting dyspnoea, the labour should be ended by puncturing the membranes.

Fetal Toxaemias.—It is almost certain that some of the toxaemias arise as a result of altered metabolism in the fetal placenta, especially in the cells of the syncytium or of Langhans's layer, and perhaps even in the fetus itself, but no certain proof of this is yet forthcoming. We can only estimate their gravity by their effect upon the mother, and in some cases by the altered heart-beat or intrauterine death of the fetus.

C. Mechanical Fetal Causes.

Malpositions of the Fetus.—The position of the fetus *in utero* should always be determined by abdominal palpation or by bimanual examination. It is quite easy, if the child's head be at the fundus or is laterally placed, to encourage it to descend gradually towards the pelvis. After it is pushed down to the level of the navel, its own relative weight in the last month of pregnancy will cause it to engage at the brim. To do this the patient should be seen every two or three weeks after the sixth month.

Fetal Malformations.—Fetus hydrocephalus, anencephalus, acephalus, acardiacus, amorphus, and many other types, lead to many fetal deaths, but, with the exception of the first type, they can rarely be diagnosed during gestation, and treatment is, of course, ineffectual.

Relatively Large Children.—These are occasionally encountered, especially when the father is a big bony man with a brachycephalic head and the woman is small and the pelvis barely normal. A history of dystocia or fetal death during a previous parturition may lead to the condition being suspected and discovered. In such cases a timely induction of labour at the thirty-eighth week makes all the difference to both mother and child.

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A METHOD OF PRODUCING RAPID AND FATAL INTOXICATION WITH BACTERIAL PRODUCTS,

WITH SPECIAL REFERENCE TO THE CHOLERA VIBRIO.

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It has been shown by Hort and Penfold (1912) that sublethal doses of *B. typhosus* culture become lethal if injected in a large quantity of distilled water. They further showed that if the water be injected first into one vein, and the sublethal dose of culture subsequently into another vein, death resulted.

We bring forward evidence in this paper to show:

1. That this same augmenting effect of distilled water is obtained with cultures of *V. cholerae* and many other organisms, and that it is not due to the original broth employed as the culture medium.

2. That it is obtained with cholera toxin or filtrate, and does not require the actual presence of organisms.

3. That in the case of *V. cholerae* death is frequently immediate, this immediate death suggesting analogies with the acutest anaphylactic intoxication.

4. That if the toxin be injected first and the distilled water two hours afterwards, death may result immediately.

5. That certain toxic substances do not become more toxic on administration in large quantities of distilled water.

6. That lysis of the blood plays a part in the production of these effects.

The rabbit was the experimental animal used. We employed, when possible, animals between 1.8 and 2.2 kilograms. Animals of other weights were used, however, but any conclusion in the paper depending on animals of weights diverging from this standard will be supported by protocols giving the actual weights. The intravenous method of injection was used unless otherwise stated.

Controls.

The following controls were made, namely: The effect of the intravenous injection of one-thirtieth of the body weight of distilled water, the effect of distilled water with added broth or peptone, and the effect of pure cholera culture.

CONTROL I.—*Effect of the Injection of One-thirtieth of the Body Weight of Water Intravenously.*

	Weight of Rabbit in Kilos.	Quantity of Water Injected Intravenously.	Result.
1	2.13	71 c.cm.	Quite well 14 days later.
2	2.09	70 ,,	Remained quite well.
3	2.14	71 ,,	Quite well next day, and therefore used for a further injection.

The water used throughout was distilled twice. It was used immediately after the second distillation.

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CONTROL II.—*Effect of the Injection of Sterile Broth and Distilled Water Intravenously.*

	Weight in Kilos.	Quantity of Broth.	Quantity of Distilled Water.	Ratio of Water to Body Weight.	Result.
1	2.13	1.2 c.cm.	58.8 c.cm.	1/36	Examined 3 days later and appeared quite well.
2	2.11	0.7 ,,	70.3 ,,	1/30	Examined and found well after 14 days.
3	1.95	1.95 ,,	65.0 ,,	1/30	Still alive.
4	1.97	1.97 ,,	65.6 ,,	1/30	Still alive.
5	1.9	1.9 ,,	63.3 ,,	1/30	Still alive.

Ordinary broth was made faintly alkaline to litmus and then 10 c.cm. of normal soda per litre were added. This was the same broth as we used for our cholera cultures.

EXPERIMENT I.

The augmentation of toxic action by distilled water as obtained in the case of *cholera toxin* is illustrated by the following experiment:

A four day cholera broth was filtered through a Berkefeld filter, and a series of rabbits were injected with the neat toxin, while another series were injected with the same toxin administered in $\frac{1}{30}$ of the body weight of freshly distilled water.

The results are set forth in the following tables:

Series I.

Weight of Animal in Kilos.	Quantity of Toxin Per Kilo.	Result.
1.62	7.5 c.cm.	−
1.62	5.0 ,,	+ after 1 hr. 40 mins.
2.27	4.0 ,,	+ after 2 hrs. 30 mins.
1.84	4.0 ,,	−
2.1	3.0 ,,	+ after one day.
1.57	3.0 ,,	−
1.58	3.0 ,,	−
1.65	3.0 ,,	−
1.60	2.0 ,,	−
1.75	2.0 ,,	−
1.50	2.0 ,,	−

All these were injected with the toxin only.
* The negative sign denotes *survival*.
† The positive sign indicates *death*.

Series II.

Weight in Kilos.	Toxin per Kilo.	Water.	Result.
1.82	0.5 c.cm.	1/30 of body weight	+ immediately.
1.70	0.5 ,,	,, ,,	+ after 40 minutes.
2.22	0.5 ,,	,, ,,	+ after 48 minutes.
2.22	0.5 ,,	,, ,,	+ after 50 minutes.
2.52	0.5 ,,	,, ,,	+ after 54 minutes.
1.71	0.5 ,,	,, ,,	+ after 1 hour 2 minutes.
2.25	0.5 ,,	,, ,,	+ after 1 hour 17 minutes.
1.73	0.5 ,,	,, ,,	+ after 2 hours.
1.84	0.5 ,,	,, ,,	+ next day.
1.76	0.1 ,,	,, ,,	+ immediately.
2.10	0.1 ,,	,, ,,	+ after 1 hour 30 minutes.
1.71	0.1 ,,	,, ,,	− Both very ill at the time, but recovered, and were
2.14	0.1 ,,	,, ,,	− quite well one week later.
1.73	0.01 ,,	,, ,,	+ after 1 hour 5 minutes.
1.95	0.01 ,,	,, ,,	+ after 2 hours 10 minutes.
1.95	0.001 ,,	,, ,,	−
1.95	0.001 ,,	,, ,,	−

Strain P was used thoughout all our experiments on cholera; it was isolated by Pottevin in Constantinople in 1911, and was used by Pottevin and Violle (1913) in their work on the experimental production of cholera in the lower apes.

CONTROL III.—*To Illustrate the Effect of the Intravenous Injection of 24-Hour Cultures of V. cholerae in Broth.*

	Quantity of Culture. Absolute.	Quantity of Culture. Per Kilo.	Result.
A	10 c.cm.	3.7 c.cm.	− Examined three weeks after and found quite well.
B	2.51 ,,	1.0 ,,	+ Died after one hour. Had hydatid cyst of left shoulder.
C	1.94 ,,	1.0 ,,	
	2.2 ,,	1.0 ,,	
D	1.73 ,,	1.0 ,,	
E	1.9 ,,	1.0 ,,	All alive three days after.
	1.76 ,,	1.0 ,,	
	1.62 ,,	1.0 ,,	
	1.48 ,,	1.0 ,,	
F	1.55 ,,	1.0 ,,	
	2.17 ,,	1.0 ,,	
G	0.51 ,,	0.33 ,,	

The above experiments were done with six different cholera cultures of twenty-four hours. In the case in which sudden death resulted the animal had hydatid disease. On the same day two other animals, marked F in the table, were injected with the same amount of the same culture and were not affected by it. The brackets indicate batches injected from the same culture. From the above it is evident that 1.0 c.cm. per kilo of body weight is not fatal in a healthy animal.

The effect of the injection of eighteen to twenty-four hour cholera broth culture of the same strain in a large quantity of distilled water is illustrated in the following experiments:

18 to 24 Hour Cultures.

Weight of Animal in Kilos.	Quantity of Culture per Kilo.	Distilled Water Ratio to Body Weight.	Result.
1.51	0.43 c.cm.	1/39	+ immediate.
1.91	0.17 ,,	1/96	+ ,,
1.50	0.014 ,,	1/37	+ ,,
1.57	0.33 ,,	1/30	−
1.82	0.066 ,,	1/30	+ after 3 hours.
1.37	0.83 ,,	1/30	+ after 1½ hours.
1.72	0.33 ,,	1/30	+ after 4 minutes.
2.47	0.03 ,,	1/30	−

Similar results were obtained with other cholera cultures. It appears from the above that while all the cultures can produce acute death, some are more liable to give immediate death than others. We have not ascertained the cause of this irregularity.

On the Separate Administration of Cholera Toxin and Distilled Water.

In the first experiment cholera toxin of four days was injected into the peritoneum of two animals. Two hours afterwards water was injected intravenously in one of the animals as follows:

Quantity of Toxin per Kilo.	Distilled Water.	Result.
1.0 c.cm.	1/18 of body weight	+ immediate.
1.0 ,,	None	−

In the second experiment water was injected intravenously first. Cholera culture of eighteen hours' growth was injected subsequently after varying intervals.

Distilled Water.	Cholera per Kilo.	Interval of Time.	Result.
1/30 of body weight	0.33 c.cm.	20 minutes	+ after 2½ hours.
,, ,,	0.33 ,,	1 hour	− very ill shortly after injection.
,, ,,	0.33 ,,	1 hr. 10 min.	+ next day.
,, ,,	0.33 ,,	2 hours	+ next day.
,, ,,	0.33 ,,	18 hours	−

Administration of cholera toxin into the peritoneum and distilled water in large quantity into the stomach occasioned no marked intoxication in the case of three animals.

In two pairs of animals an effort was made to prevent the acute intoxication produced by the injection of cholera culture in water by administering a concentrated salt solution intravenously immediately before giving the toxin. The results were as follows:

	5 per Cent. Salt Solution.	Cholera Culture per Kilo.	Distilled Water.	Result.
1. (1)	20 c.cm.	0.38 c.cm.	1/43 of body weight	+ after 2 hours.
(2)	None	0.38 ,,	,, ,,	+ immediate.
2. (1)	20 c.cm.	0.33 ,,	1/30 of body weight	+ after 3½ hours.
(2)	None	0.33 ,,	,, ,,	+ after 3 hours.

From which it appears that hypertonic saline does not have a very marked effect in preventing this intoxication.

In the cases of acute intoxication with diluted cholera toxin which we have been describing the animal shows paresis, which may commence in the fore or hind limbs, coma, convulsions with exophthalmos and opisthotonos.

The *post-mortem* findings are usually as follows: The portal system is congested, especially the small intestine. The peritoneum contains a little blood-stained fluid. The urine is blood-stained. The blood serum is tinted. The heart is usually filled with clot. The lungs are apparently normal on naked-eye examination.

Experiments with Other Organisms.

A. Two experiments with *Proteus vulgaris* broth gave the following result:

1. *Intravenous Simultaneous Injection of Water and 24 Hours' Culture.*

Weight of Rabbits in Kilos.	Culture per Kilo.	Distilled Water.	Result.
1.60	0.33 c.cm.	1/30	+ after ½ hours
2.06	0.033 ,,	1/30	+ after 2 hours
2.13	0.0033 ,,	1/30	+ after 2 hours
	Controls without Water.		
2.14	2.0 c.cm.	None	−
1.35	0.33 ,,	None	−

2. *An Experiment in which the Culture (48 hours) was Injected Subcutaneously into Two Animals and followed in One Animal by Distilled Water Intravenously.*

Weight of Rabbits in Kilos.	Culture per Kilo.	Distilled Water Intravenously after Interval of 3½ Hours.	Result.
3.01	2.5	1/154 of body weight	+ after 4 min.
2.87	2.5	None	−

B. *B. pyocyaneus* culture administered with and without water gave the following result:

Weight of Rabbits in Kilos.	Culture per Kilo.	Distilled Water.	Result.
2.29	0.33 c.cm.	1/30 of body weight	+ after 2 hours
3.0	1.0 ,,	None	−

C. *B. dysenteriae* (Shiga) culture of twenty-four hours administered with and without water.

Weight of Rabbits in Kilos.	Culture per Kilo.	Distilled Water.	Result.
2.31	0.7 c.cm.	1/30 of body weight	+ after 1½ hours
2.47	0.7 ,,	None	−

D. *B. prodigiosus* culture gave similar results.

E. The bacillus of fowl cholera is very fatal to rabbits, and usually kills in about twelve hours after intravenous injection, nevertheless the injection of distilled water in infected animals is liable to cause sudden death.

A rabbit of 2.45 kilos was given 0.33 c.cm. of a 24-hour culture of the bacillus of fowl cholera per kilo into a vein of the ear, after 1¾ hours 20 c.cm. of distilled water were injected intravenously, when the rabbit died immediately.

F. Old tuberculin of Koch was given with and without water to the following animals.

Quantity per Kilo.	Distilled Water.	Result.
2.5 c.cm.	1/30 of the body weight	+ after 5 hours.
1.0 c.cm.	1/30 ,, ,,	−
0.1 c.cm.	1/30 ,, ,,	−
5.0 c.cm.	None	− (a transient convulsion occurred).
2.5 c.cm.	None	− no symptoms.

The toxic effect of tuberculin appears to be slightly increased by this method.

The following experiments were done without acute death resulting, broth cultures of 24 hours being used in the case of each bacterium.

	Weight in Kilos.	Quantity of Culture per Kilo.	Distilled Water Ratio to Body Weight.	Result.
B. anthracis ...	1.9	0.33 c.cm.	1/30	+ on second day after.
	1.74	0.33 ,,	None	+ on third day after.
B. subtilis ,,	2.06	0.33 ,,	None	−
	2.12	0.066 ,,	1/30	−
Pneumococcus	2.23	0.33 ,,	None	−
	2.32	0.066 ,,	1/30	−

Potassium Cyanide: Intravenous Administration.

One cubic centimetre per kilo of a 1 per cent. solution in distilled water of potassium cyanide was given to a rabbit of 1.37 kilos. The animal died at once. 1 c.cm. per kilo of a 0.1 per cent. solution was given to a second rabbit of 1.86 kilos. The animal was convulsed and lay for half an hour on its side unconscious, after which it gradually recovered. A third rabbit of 1.77 kilos was given 1 c.cm. per kilo of the 0.1 per cent. solution of potassium cyanide in one-thirtieth of the body weight of distilled water. The animal showed no convulsions and was not unconscious, though it lay helpless and extended for ten minutes. The dilution appeared to have made the substance less toxic: 0.01 per cent. solution of the cyanide was then injected into two rabbits again, 1 c.cm. per kilo being the amount used, but in the case of one of the rabbits it was added to one-thirtieth of the body weight of distilled water. No marked evidence of acute intoxication was found in either animal.

Strychnine likewise suffered no augmentation of its toxic action when given in distilled water.

We attach little importance to the negative results with the bacteria above described, since exceptions occurred sometimes with the cholera experiments, and we may have been dealing with exceptions in these cases. We have not yet found a fully substantiated negative case in dealing with bacterial products.

Efforts at immunization against diluted cholera toxin have not shown any striking results so far. Normal serum and ordinary anticholera serum when injected in advance are quite unable to prevent the acute intoxication resulting from diluted cholera culture or toxin when either of the latter is administered intravenously.

Cause of Augmentation of Toxicity.

The following experiments were done to investigate the cause of this augmentation of toxicity. Intravenous injections were used throughout.

1. One part of normal rabbit blood was lysed in two parts of distilled water and 10 c.cm. of the resulting mixture per kilo of body weight was given to two normal rabbits, in one case alone, in the second case with 1 c.cm. per kilo of eighteen hours cholera broth. The latter animal died in two minutes, while the other animal is still alive; 1 c.cm. per kilo of eighteen hours cholera broth alone is a sublethal dose.

2. Rabbit blood was lysed in twice its quantity of distilled water and 3 c.cm. per kilo of the mixture given to a further pair of normal rabbits, in the case of one animal alone, in the case of another animal with 1 c.cm. of eighteen hours cholera culture per kilo. The former animal remained quite well, while the latter animal was very ill after one hour and in a state of coma. It recovered, however, and appeared well the next day.

3. A further pair of animals were given lysed blood and lysed blood *plus* cholera culture respectively, the latter being in sublethal dose. The latter animal died, while the control with the lysed blood only, survived and did not appear ill.

These experiments suggested that lysis of the blood was an important factor in the augmentation of toxic action, but the injected fluid being of lower osmotic pressure than the blood, it was thought that the lysis of the blood might be effected with advantage by ether.

4. Lysis of the blood by ether was carried out, and after the ether was removed by means of a water pump the blood was administered as follows to normal rabbits:

Weight of Animal in Kilos.	Ether lysed Blood.	18 Hours Cholera Culture.	Saline.	Result.
2.0	2.0 c.cm.	None	None	– still surviving.
1.7	1.7 ,,	1.7 c.cm.	56.6 c.cm.	+ during the night unconscious in 2 hours.
1.9	1.9 ,,	1.9 ,,	None	+ after 2 hours.

5. A further sample of normal rabbit blood was lysed in ether and the ether removed as before described. It was then administered to normal rabbits as follows:

Weight in Kilos.	Ether lysed Blood.	18 Hours Cholera Culture.	Result.
1.4	1.4 c.cm.	None	– still alive.
1.96	1.96 ,,	None	– still alive.
1.93	1.93 ,,	1.93 c.cm.	+ after 2 hours.
2.26	2.26 ,,	2.26 ,,	+ after 2 hours 55 minutes.

From these experiments we conclude that lysis of the blood is an important factor in the sensitization of the animal body by water to bacterial poisons.

6. 15 c.cm. of rabbit blood were defibrinated and washed twice with saline solution. The volume of red cell emulsion left equalled 4.5 c.cm.; 13 c.cm. of distilled water were added to lyse the red cells. After lysis 0.11 gram of common salt was added to bring the added distilled water up to the strength of normal saline. The mixture was given, with and without cholera culture, to two animals as follows:

Weight of Rabbit in Kilos.	Lysed Blood Mixture per Kilo.	18 Hours Cholera Culture (per Kilo).	Result.
1.70	4.0 c.cm.	1.0 c.cm.	– within 2 hrs.
1.95	4.0 ,,	None	–

This experiment was performed a second time and gave the same result. It appeared, therefore, that the lysis of the cellular elements of the blood as opposed to the effect of distilled water on the plasma was at least one cause of the augmentation of toxic action.

The following experiment supports this conclusion:

A rabbit of 2.9 kilos had the following mixture injected intravenously: 4.35 c.cm. of fresh rabbit serum was diluted with 97 c.cm. of distilled water (one-thirtieth of the body weight); to this 1.45 c.cm. of cholera culture (twenty-seven hours at 37° C.) was added and then sufficient salt to make the distilled water isotonic with the blood. The whole was injected intravenously; the animal survived.

At the same time an experiment was done which was identical with the above, except that the added distilled water was only equal to twice the volume of the serum. The animal which received this injection showed likewise no acute intoxication.

It appeared, therefore, that lysis of the blood was at least one factor in this augmentation of toxic action, and that the cellular elements of blood rather than the plasma or serum were the affected portions. To determine if this was due to lysis of the leucocytes, peritoneal exudate was then obtained from rabbit, and to it distilled water was added, followed by cholera culture (thirty-six hours), and sufficient salt to make the distilled water isotonic with the blood; the mixture was then injected intravenously as follows:

Weight of rabbit	1.90 kilos.
Exudate per kilo	3.0 c.cm.
Cholera culture per kilo	1.0 ,,
Distilled water	$\frac{1}{30}$ of body weight.
Salt	q.s.

The animal survived, and showed no serious symptoms. This experiment was repeated and gave the same results. The experiments on the part played by the lysis of leucocytes in producing this effect are few, but suggest that it is an insignificant factor, while the lysis of red cells is of probably great importance.

Conclusions.

1. Distilled water sensitizes the body to many different bacterial cultures, including cholera culture.

2. The sensitization is equally well demonstrated by using cholera toxin after the actual organisms have been entirely removed.

3. The intoxication with cholera toxin or culture in association with distilled water is acute, and death may be immediate.

4. Acute death occurs if the cholera culture or toxin be given first and the distilled water afterwards; the toxin may be given by channels other than the intravenous.

5. Previous injection of concentrated saline has little effect on the type of intoxication we have been discussing.

6. The augmentation of toxic effect occurs with cultures of *Proteus vulgaris*, *B. pyocyaneus*, *B. dysenteriae* (Shiga), *B. prodigiosus*, and also slightly with tuberculin, while it is not observed apparently with potassium cyanide or strychnine.

7. The injection of lysed blood in small doses with sublethal doses of cholera culture produces acute death.

8. The lysis of red cells is probably an important determining factor in the production of this effect.

References.

[1] Hort and Penfold (1912), Micro-organisms and their Relation to Fever, *Journal of Hygiene*, vol. xii. p. 361. [2] Pottevin and Violle (1913), Choléra expérimental des singes inférieurs, *Compt. de l'Académie des Sciences*, p. 343.

Colonel William C. Gorgas has been appointed by President Wilson to succeed the late General Torney as Surgeon-General of the United States Army with the rank of Brigadier-General. Colonel Gorgas has been an officer of the American Army Medical Corps since 1885 and reached the rank of Colonel in March, 1913. His name is well known for the large part he played in the war against yellow fever in Cuba, and especially for his splendid work in freeing the Isthmus of Panama from the demons of disease which had previously driven away the French. His appointment is said to be intended as a recognition of the work done by him in the sanitation of the Panama Canal zone. He is, we believe, still in South Africa on his mission to advise on the means which may be taken to check pneumonia in the diamond mines, and generally as to the improvement of the sanitary conditions in those districts.

THE RADICAL CURE OF PROCIDENTIA UTERI IN ELDERLY WOMEN.

By MARCUS MAMOURIAN, F.R.C.S.E.,
ASSISTANT SURGEON, THE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL, ASHTON-UNDER-LYNE.

For a considerable time now I have relied mainly upon vaginal plastic methods for the cure of prolapse of the uterus, and so confident am I of its sufficiency that during the last two years I have not deemed it necessary to perform a single intra-abdominal operation. A study of the retentive mechanism of the uterus gives convincing proof that the vaginal route offers easiest and best access to most of the structures that hold the organ *in situ*.

The two main factors upon which depends the maintenance of the uterus in its normal position are (*a*) the integrity of the pelvic floor; (*b*) the anteverted state of the uterus. The levator ani muscle with the pelvic fascia and the round and utero-sacral ligaments are, therefore, of paramount importance. The two last have been most aptly described by Kelly as the two essential intrapelvic supports. The fact that cases of extensive perineal laceration occur without any downward uterine displacement shows that the levator ani is not an indispensable girder, and doubtless the peritoneal attachments, the cellular tissue; the musculature, apposition, length, and direction of the vaginal walls; the perineal body and perineum generally, are important contributory props. In a typical case of procidentia all these structures are damaged, and we find a heavy retroflexed uterus with a hypertrophied cervix in an extroverted vagina, dropping out of a large pudendal orifice accompanied by bladder and bowel.

The history of procidentia also has a bearing upon treatment, and may be briefly outlined as retroflexion, cystocele, prolapse, rectocele, procidentia. This course of events occurs every time the uterus comes down. Furthermore, the act of bearing down, with the concomitant bulging of the anterior wall, reveals in most cases the marked shortening of the posterior wall, and the loss of the support of the anterior wall consequent upon a tear of the perineum is often a primary predisposing cause of the descent of the uterus.

In dealing with the operative treatment, Kelly states that "in those cases in which the vagina has been completely everted, the lax outlet is resected with difficulty," and "there still exists a tendency of the uterus and the upper part of the vagina to bear down upon the repaired outlet." This tendency can be obviated by adopting an operative plan, on normal anatomical lines, comprising:

1. Reduction of the weight of the uterus proper.
2. Removal of excessive cervical substance.
3. Antiflexion of the uterus.
4. Narrowing of the vaginal canal.
5. Lengthening of the posterior vaginal wall.
6. Restoration of the parallelism of the vagina to the conjugate of the pelvis.
7. Restoration of the continuity of the cellular tissue around the new vagina.
8. Repair of the pelvic diaphragm.
9. Repair of the perineal body.
10. Widening of the perineum and lessening the size of the pudendal orifice.

All the above requirements are fulfilled by (1) curettage, (2) amputation of cervix, and (3) anterior colporrhaphy.

Anterior Colporrhaphy.

The ligatures of the cervix (purposely left long in the second step) are pulled upon to put the vaginal walls on the stretch. The ovoid piece of mucous membrane to be removed is outlined with the knife and dissected off with scissors. Its two ends should be about half an inch distant from meatus and os respectively. Its width is determined by the laxity of the vagina, but in any case it need not be much more than an inch, so that the carrying out of the next step may not be interfered with. The cervico-vagino-vesical cellular tissue being thus exposed, the anteflexing sutures, two in number, are put in at the cervical end of the wound, and which transfix the mucous membrane edges and the peritoneum-free anterior cervical wall (supravaginal segment).

Normally the ureters are below this level, and in the extroverted position of the vagina well out of the way. These sutures are not tied till the gap is completely closed. The parametric suture is next introduced, the needle entering and emerging alternately through the submucosa, so that the edges of the mucous membrane are approximated before the final (mucous) row of stitches is inserted and tension thus avoided.

On reinvaginating the genital canal the uterus will be felt to lie in a state of normal anteversion, well over the bladder and sometimes even in a position suggestive of the Watkins-Wertheim operation.

Posterior Colpoplasty.

In the majority of these cases there is a torn perineum; but whatever be the nature and extent of the perineal lesion the technique about to be described answers for almost all cases, with slight modifications.

Three Kocher forceps, used as landmarks and retractors, are placed as follows: One at each lower end of the labia minora and the third at a point in the muco-cutaneous junction nearest the anus. (I generally make the new vagina with a lumen just big enough to admit the thumb.) The labial lips when brought together give a satisfactory opening. The triangular or semicircular flap thus outlined is separated from the underlying scar tissue with scissors till sufficient membrane has been freed to roll over the finger, when dissection becomes simple and easy. Once the level of cicatricial tissue is past, there is scarcely any need to use either knife or scissors, as a ball swab pushed into the wound separates the rectum from the posterior vaginal wall as far up as the peritoneal fold of Douglas, well within the limits of the posterior fornix. Having freed the posterior wall both behind and laterally, the major portion, if not the whole of it (according to the size of canal aimed at) is excised by two incisions more or less parallel which commence at the labial points (indicated by forceps) and converge only in the terminal ½ in. of their course in the lateral fornices. Traction is now made upon the cervix and the closure of the new canal is begun from the cervical end by interrupted catgut sutures, tied intravaginally. In other words, the edges of the mucous membrane are sewn as in a cleft palate. To prevent the tendency of curling in of the mucous membrane edges, submucous sutures are put in, Lembert fashion, so that the suture line stands up as a distinct ridge in the new posterior vaginal wall, an effective substitute for the posterior column. With the insertion of the last stitch at the labial angle, the new vaginal canal is completed. It will be seen, at this juncture, that the new vagina (which has now more of a rectangular direction to the plane of the sacrum and has a posterior wall 3½ in. or even more in length) is separated from the rectum by an extensive space which is bounded laterally by the bases of the broad ligaments, pelvic fascia, levator ani, remains of the triangular ligament and muscular strands representing the small vaginal muscles. At the roof is seen the pouch of Douglas. Both the uterine artery and ureter are palpable and consequently out of harm's way.

Posteriorly are the rectum, the sphincter, and the transversus perinei attached to what remains of the perineal body.

Haemostasis being perfect, this space is now obliterated by what may be called "segmental" stitching. Three superposed interrupted sutures transfix the cellular tissue at the bases of the broad ligaments and over the levator fascia. The second set close the gap in the pelvic fascia and levator ani, and the last lot pass through triangular ligament, vaginal muscles, perineal body (all more or less blended with cicatricial tissue and not identifiable), and emerge through subcutaneous tissue. By suturing in this manner no dead spaces are left and a solid fibro-muscular wedge is interposed between the rectum and vagina which comes to lie on a bed made of the cellular tissue of the bases of the broad ligaments and perivaginal parametrium, pelvic fascia, levatores ani, vaginal muscles, and perineal body. Finally, the perineal raphe is completed by Michel clips.

In most of my earlier cases either an Alexander-Adams operation or ventrifixation was done in addition. At present I simply perform the colpoplasty described. I have now operated over twenty times without any mortality or recurrence. One case suppurated owing to insufficient rectal preparation, but even in this case, of two years' standing, the uterus is still well maintained in position.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

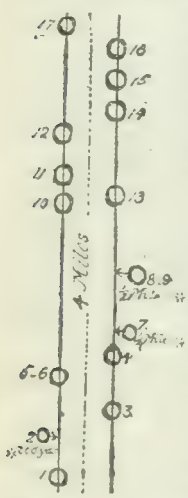
IONIC MEDICATION IN VENEREAL DISEASE.

Surgeon R. Connell's valuable paper on the use of ionic medication in the treatment of certain venereal diseases (p. 138) will interest especially those who have employed electro-therapeutics in gynaecological treatment. Ionic medication can accomplish in a fortnight what antiseptic applications may fail to do in several months. In the January number of the *Practitioner* I described the methods adopted in cases of endocervicitis and endometritis with purulent chronic discharge of many years' standing—cases which were completely cured after a short course of ionic medication. In one case of gonorrhoea of urethra and cervix, with profuse purulent discharge, swabs taken from both infected regions two months from the beginning of ionic applications revealed a healthy mucous membrane. Shortly afterwards pregnancy ensued, and at the third month another examination showed vagina, cervix, and urethra entirely healthy. Every practitioner knows the heart-breaking obstinacy of gonorrhoeal infections of the genital tract in women; ionic medication correctly applied will diminish the duration of the disease to a few weeks. Surgeon Connell's treatment of the syphilitic sore, if promptly and thoroughly performed, should yield as rapid results in syphilis. When relating my cases I desire always to mention my indebtedness to Dr. Samuel Sloan, the pioneer in this country of electro-therapeutics in gynaecology.

London, W. Agnes Savill, M.D.Glasg., M.R.C.P.I.

SEVENTEEN CASES OF "CANCER" INCIDENCE.

The accompanying diagram represents a four-mile stretch of main road in H——shire, and the number and the nature of the cases of malignant disease along this strip which have come under my personal observation during five years' practice in the neighbouring district. The parts affected by "cancer" were as follows: 1, Liver; 2, vulva; 3, testis; 4, small gut; 5, mediastinum; 6, colon (cases 5 and 6 occurred in the same house); 7, abdominal glands; 8, liver; 9, mammary gland (these last two cases were in the same house); 10, intrathoracic; 11, colon; 12, colon; 13, stomach; 14, mammary gland; 15, uterus; 16, mammary gland; 17, pancreas. (* Distance of dwelling from main road.) A superficial study of the diagram, even if not worthy of serious comment, is at the least sufficiently interesting to record, more especially as in the instances 3, 4, 5, 6 and 14, 15, 16, 17 only 100 yards separated the various dwelling places, and in the instances 5, 6, 8, 9 two cases occurred in the same house within a few months of one another. The disease attacked both "high" and "low," the female sex preponderating largely. The nature of the soil in this locality is chiefly clay—some gravel, but clay subsoil.



F. H.

LOCAL ANAESTHESIA IN ARTIFICIAL PNEUMOTHORAX.

May I add my experience to that of Dr. S. Vere Pearson (British Medical Journal, January 31st, p. 244) on the administration of local and general anaesthetics when giving an injection of gas into the chest?

When first I began the treatment, I gave a morphine-scopolamine injection ($\frac{1}{3}$ gr. and $\frac{1}{150}$ gr.) fifteen minutes before commencing, and found that the operation was practically painless; but the patient being in a semi-comatose condition, it was difficult to judge the amount of dyspnoea and other symptoms produced, which are a most useful guide to the amount of compression that may be safely produced. I therefore had to abandon this method.

In my later cases a subarticular injection of quinine-urea hydrochloride (0.025 gram) along the line of the nerve supplying, but internal to, the proposed point of puncture, was used. The full anaesthetic effect of this solution is only obtained in from 20 to 40 minutes, but I found that, using the smaller needles, puncture may be performed at any time after the injection without causing any marked pain or reflex.

It is essential that only small and sharp needles should be used. At first I tried the Saugman needle, as also the Forlanini, but found the smaller size easily blocked and difficult to clean, and had frequently to fall back on a No. 1 sized aspirating trocar.

I am now using the needle recommended by Brauns of Hanover, which is simpler, smaller, and more easily sharpened than any of the previous types, and has the additional advantages that, being made of platinum, it will not corrode nor tarnish, and is easily rendered absolutely sterile.

Using this needle, local anaesthetics may be safely dispensed with, as the pain caused in passing through the skin is not more than that caused by the hypodermic needle, and the risk of pleural reflex, or causing severe pleural pain is so slight that it may be safely ignored. In only one case have I seen even a moderate amount of pleural pain. The patient was a young sensitive female, with advanced disease and some adhesions near where I purposely made the puncture at a low level (eighth intercostal space). I believe the pain was caused by the dragging of the visceral pleura over the point of the needle projecting through the parietal pleura, a puncture at a higher level causing no distress.

My needles are constantly kept in a 10 per cent. solution of lysol in alcohol, and rinsed in normal saline immediately before use. I should very much doubt the efficacy of sterilizing by "placing in absolute alcohol for one or two minutes before use" in the case of some of the more resistant spores, as I feel convinced it would not be sufficient, and, in addition to the irritating effects of the alcohol on the tissues and pleura, it tends to hasten clotting and obstruction in the lumen of the needle.

Messrs. Alexander and Fowler, of Liverpool, have supplied me with an excellent copy of the Brauns needle as described above.

Liverpool Sanatorium, Delamere Forest. Alfred Adams, M.D., D.P.H.

CASE OF EAR COUGH.

The following case may be of some interest to those of us interested in ear work:

A lady brought her child, aged 12 years, to see me on account of pain in the left ear. In the meatus was found a small plug of cotton-wool which had apparently been there for some time. Upon its removal the pain disappeared, and, as far as the ear was concerned, there was no further trouble.

The interesting part of the case, however, is that the child had had a persistent cough, which came on suddenly some six months previously, and I have very little doubt appeared at the same time as the plug of cotton-wool was placed in the ear. It is curious to note that the cough disappeared also when the plug was removed, and has not returned. The child had been seen by a well-known physician for the cough, but with no relief.

It appears possible that the cough was due to irritation conveyed to the trunk of the vagus by Arnold's nerve, and then referred to the respiratory tracts which are supplied by that trunk. Through this little branch the ear is brought into direct connexion with the nerve of the lung.

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Southsea.

The registration returns for November 1st, 1913, for thirty of the leading universities of the United States, show that in medicine Illinois leads with 445, next in order coming New York University with 432, Tulane with 399, Johns Hopkins with 368, Michigan with 353, Columbia with 341, and Harvard with 306; Pennsylvania has 283, Chicago, 191, Cornell 107, Cincinnati 84, and Yale 49.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Section for the Study of Disease in Children.

At a meeting on January 23rd, Dr. Leonard Guthrie, President, in the chair, Dr. T. R. Whipham showed a case of *Kala-azar* in a boy aged 5 years. His father contracted kala azar in Calcutta a year ago, and died recently from that disease. In March, 1913, when in Calcutta, the boy was taken ill with fever and loss of appetite. The abdomen was enlarged when he arrived in England in June, since when he had lost weight and the size of the abdomen had increased. There was wasting, especially in the limbs and chest; the cervical, axillary, and inguinal glands were enlarged. The abdomen measured 24½ in. in circumference; the liver extended 3 in. below the costal margin; the spleen was enormous, extending to the middle line and filling the left iliac fossa. Blood count: Reds, 3,220,000 per c.mm.; whites, 2,200; polymorphonuclears, 46 per cent.; lymphocytes, 38 per cent.; large mononuclears, 12 per cent.; transitionals, 4 per cent.; haemoglobin, 66 per cent. The coagulation time was diminished, being twelve minutes. Leishman-Donovan bodies were present in blood obtained by puncture of the liver. Dr. Whipham also showed a case of *Athetoid movements* in a girl aged 4½ years. The movements, which affected both hands, consisted of alternate pronation and supination, which became more marked when objects were grasped. The condition was probably due to injury at the time of birth. Dr. F. Langmead showed a case of *Malaria in a girl* aged 3½ years. The disease, which commenced in September, 1913, was typical and accompanied by rigors. The mother had malaria while the child was being breast-fed. Examination of the blood showed benign tertiary parasites in fair numbers, large intracorpuscular forms being seen. Dr. Eric Pritchard showed a case of *Cysts on the shoulders* in a baby 6 weeks old. The two cystic swellings were noticed immediately after birth. The presentation was said to have been that of a shoulder (left). The swellings appeared to be of the nature of abnormal and persistent capita succedanea. Dr. J. W. Carr showed a case of (?) *Polioencephalitis*. The patient, a boy aged 7 years, had an attack of diarrhoea with severe headache and pains in the limbs in October, 1913. He became unable to stand or speak, and also appeared to be blind. On admission in December he could not stand alone and could see only imperfectly, and there was a considerable degree of mental deficiency. The optic discs showed evidence of a subsiding neuritis. After five weeks he began to improve as regards mental condition, sight, and movement, though he still had an ataxic gait. Wassermann's reaction was negative. Dr. F. G. Crookshank showed a case of *Deficiency of endocrinic glandular secretion*. The patient, a boy aged 32 months, did not speak and was apathetic and flaccid. Some of the features were suggestive of Mongolism. The external genitals were poorly developed. It was thought that the child had, in addition to some degree of Mongolism, some pituitary deficiency. Dr. H. D. Rolleston and Mr. E. J. Boyd showed a case of *Lymphatic leukaemia under treatment by benzol* in a boy aged 6½ years. The cervical glands became enlarged after measles and pneumonia. Subsequently the axillary, inguinal, and submaxillary glands also became enlarged, and the spleen was palpable. In December the leucocytes were 60,000; large lymphocytes, 54 per cent.; small, 16.5 per cent.; polymorphonuclears, 25 per cent. The boy was treated with benzol, at first mij and later miij, t.d.s. On January 13th the leucocytes were 16,000; large lymphocytes, 41.5 per cent.; small, 46 per cent.; polymorphonuclears, 10 per cent. Mr. Philip Turner showed a case of a *Dental cyst following fracture of an incisor tooth* in a boy aged 12 years. The right central incisor was fractured as the result of a fall two years ago. Swelling of the jaw was noticed three months ago. There was now bulging forward of the facial aspect of the superior maxilla, depression of the palate on the right side, and widening of the alveolar process. A radiogram showed that the pulp cavity of the fractured tooth was exposed, and that the open apex led directly to the cyst. Mr. L. E. C. Norbury showed a girl, aged 5½ years, with *Deformity of the spine* of (?) congenital origin. There was a prominence of the last dorsal and the first lumbar spinous processes. Slight mid-dorsal lateral curvature with convexity to the left; no pain or rigidity. *X*-ray examination showed a wedge-shaped condition of the first and second lumbar vertebrae. The von Pirquet reaction slightly positive. Dr. Eric Pritchard showed a specimen of double *Hydro-ureter* (congenital) in an infant, aged 7 months, who was admitted for diarrhoea and vomiting. The bladder was not distended, but two cystic swellings could be felt internal to the anterior superior iliac spines. The obstruction appeared to have been due to valve-like pressure of the dilated ureters, the primary dilatation being probably due to congenital atresia of the ureteral orifices. The renal pelves were greatly enlarged. Dr. J. Porter Parkinson showed specimens from an *Unusual case of jaundice* which he considered to have been acute yellow atrophy of prolonged duration. The illness commenced with a rigor. Three weeks later jaundice appeared and the liver was enlarged, but subsequently diminished until death. No leucin or tyrosin was detected in the urine. Dr. Leonard Guthrie and Dr. G. A. Sutherland made a communication on two cases of *Transitory diabetes insipidus*. (1) A boy, aged 2½ years, in whom the disease lasted about six weeks. He took 12 pints of water a day, and the urine contained no albumin or sugar; specific gravity 1004. There was some diarrhoea, and the motions were of a peculiar bluish-grey colour. (2) A boy, aged 2 years, in whom the duration was about five weeks. The main symptoms were thirst, drowsiness, and polyuria; there was diarrhoea, and the motions were loose, putty coloured, and offensive. The liver and spleen were enlarged. A possible explanation was that the intestinal derangement set up toxaemia, which, acting on the kidneys, prevented the output of waste products. Another explanation was that the symptoms were due to toxaemic affection of the vasomotor centres and sympathetic system, or perhaps of the pituitary body.

Surgical Section: Subsection of Orthopaedics.

At a meeting held on February 3rd, Mr. Muirhead Little in the chair, Mr. A. H. Tubby showed a girl in whom he had reduced an *Outward dislocation of the right elbow* six weeks after the accident by the open operation; he fixed the aponeurosis to the ulna by sutures which passed through holes drilled in it. He also showed a case of *Congenital dislocation of the hip* which he had reduced by the anterior open operation in 1903; the child now walked perfectly. He gave a short account of his technique. Mr. Paul B. Roth exhibited a girl of 11 with a *Birth injury to the upper epiphysis of the left femur with scoliosis*. The neck of the left femur was short and thick and had produced 1¼ in. shortening. The peculiarity of the case was that the scoliosis had its convexity to the opposite side. He had seen this in some 12 cases. Mr. Tubby thought the scoliosis should be thoroughly investigated by the *x* rays. Mr. Muirhead Little showed a case of *Congenital absence of both tibiae* in a child whose father had a defect of one tibia. The internal condyles of the femora, the patellae, and tibiae were absent, also the astragalus on the left side. The tendo Achillis was contracted and inserted into the fibula; the foot was in marked varus and flexed to a right angle. In 3 previous cases 2 had been associated with varus and 1 with valgus. In unilateral cases he advised amputation, but in bilateral cases he thought some effort should be made to save the feet. In this case a space was made in the femora for the upper end of the fibulae, and he had fixed the feet in the digitigrade position after correcting the equinus and shaping the malleoli. The child was now beginning to walk. He also showed 3 cases of *Paralytic talipes calcaneo-valgus*, on 2 of which Mr. Whitman had performed his operation. In the third he himself had performed Mr. Robert Jones's operation; it gave a stiffer foot. Mr. Laming Evans, who had assisted Mr. Whitman in these operations, said he was struck by the following points: that he used an Esmarch bandage and at the end of the operation put the foot straight into plaster. A very important point was the division of the internal lateral ligament from the inside of the joint after removal of the astragalus; in this way the posterior tibial artery was not divided and the foot could be easily displaced backwards; he did not lay much stress on uniting the peronei to the tendo Achillis.

SECTION OF OPHTHALMOLOGY.

AT a meeting on February 4th, Sir ANDERSON CRITCHETT in the chair, Mr. FRANK MOXON showed cases of *Congenital diffuse opacity of the cornea in two sisters*. The children and the family had been healthy; there was no history of syphilis, tubercle, or miscarriages. One of the children was ill with sickness and diarrhoea at a year old. Both Wassermann and von Pirquet reactions were negative. There was slight photophobia, but the fields of vision appeared to be normal. The cornea was milky, but there was a fairly good fundus reflex. The opaque spots were fairly evenly distributed throughout the thickness of the cornea. Lenses and vitreous were clear. Mr. J. H. FISHER considered that the tension in all four eyes was somewhat raised and that there was a possibility of its being a variant of congenital glaucoma; the changes were mainly in the epithelium. Mr. ANGUS MACNAB showed a case of *Nodular opacity of the cornea*, which he considered bore a relation to Mr. Moxon's case. Mr. J. B. LAWFORD showed a case of *Brawny scleritis*. Mr. W. S. INMAN showed, through Mr. LESLIE PATON, a case of *Irido-cyclitis* in a boy who had been living in Northern Nigeria, and was now suffering from trypanosomiasis gambiensis. The Rhodesian form of the disease seemed to be more severe than the Gambian. Mr. TREACHER COLLINS referred to a case of sleeping sickness which he saw with Sir Patrick Manson, and described the appearance. Eye diseases seemed to be very uncommon in connexion with sleeping sickness. Mr. ORMOND showed a *Case for diagnosis*, which was discussed by Mr. WHITEHEAD (Leeds). Mr. CUNNINGHAM showed a case of *Massive exudate in the retina*. A discussion on *The use of salvarsan in ophthalmic practice* was opened by Mr. W. LANG. He said that during the early stages of syphilis, before the spirochaetes had reached the avascular tissues, salvarsan acted readily and quickly, but later it was less efficacious, though gummata of iris, sclerotic, and ciliary body seemed to be favourably influenced by the treatment. With regard to parasyphilitic diseases, the Argyll Robertson pupil had once been known to react again to light following intravenous injections of salvarsan. Ophthalmoplegia externa and primary optic atrophy had not been definitely improved by the treatment. After injecting a large dose of salvarsan into a rabbit's vein none of it was found in the cornea, though specially searched for. The usual dosage of salvarsan for the adult male was 0.6 gram, and for the adult female 0.5 gram; while if neo-salvarsan were used, the dose must be 50 per cent. more. The destruction of the parasites should be effected as soon as possible, before they had the opportunity of becoming immune to the drug. He instanced cases in which greatly increased doses with that object had been very efficacious. Thanks largely to Mr. Browning, salvarsan was now known to be a successful treatment for sympathetic ophthalmia, and studies on the blood condition enabled one to foresee the onset of the condition. Lieutenant-Colonel GIBBARD, R.A.M.C., said that though salvarsan had not supplanted mercury, its action was more rapid and intense, and he narrated some striking cases in illustration of this. Secondary lesions seemed to be more intractable than primary, and relapses were more frequent. The feature of secondary cases was the tendency to affections of the central nervous system, which was much more often involved than was formerly supposed. He did not believe this was due to salvarsan; cases were heard of more because every one was on the look-out for untoward symptoms following the use of the new drug. He knew of only two cases of cerebral nerve disturbance in 1,200 cases in which the drug was used. And where this did occur, an increased dosage caused a disappearance of the trouble. In syphilitic meningitis there was more proneness to relapses, because of the inaccessibility of the subarachnoid space. Having killed off the main army of the organisms, it seemed necessary to keep in the blood a remedy which would deal with scattered survivors. At his headquarters they had given 4,000 intravenous injections, and the soldiers concerned were followed up wherever they went. Mr. S. H. BROWNING read a paper in which he gave an account of his cytological studies, and the reasoning which led him to suggest giving salvarsan for sympathetic ophthalmitis. He had had excellent results in syphilis from salvarsan given per rectum; that the drug was absorbed when so given was proved by the occurrence of an arsenical rash following the method. Out of 500 to 600 cases, he had not heard of a single instance of ocular palsy, optic neuritis, or other similar trouble. The most successful results from the method were in syphilitic iritis: gummata of the sclera also vanished in a marvellous manner with salvarsan and potassium iodide. He agreed with the general opinion that in interstitial keratitis it did not do much good, though there had been one or two notable exceptions. His usual method was to give the drug intravenously. Neo-salvarsan was more toxic than salvarsan. The debate will be continued at a special meeting of the Section.

SECTION OF BALNEOLOGY AND CLIMATOLOGY.

AT a meeting on January 29th Dr. CLIPPINGDALE read a paper on *London as a health resort*. The paper was in two parts. In the first the author traced the history of efforts to improve the sanitation of the city from the twelfth century, and showed how the autocratic monarchs achieved more by a mere stroke of the pen than the Legislature in these democratic days could achieve in months or years. He instanced Henry VIII's orders as to slaughter-houses being external to the city walls, the exhibition of a white wand outside the house of every person suffering from an infectious disease, and the burning of the clothes worn by the patient in the nearest field. He also instanced Queen Elizabeth's order that no house should contain more than one family, and that no more houses should be built within three miles of the city. In the second part the author claimed that the diversions of London were a very suitable cure for maladies of a neurasthenic or psychasthenic nature; that to send such patients into a home for special treatment was accepting the patient's own theory that he was the subject of actual disease, and treating one imposition by another. What such patients wanted was absorption of their excessive cerebration, and the rational and most honest way of doing this was not by "rest cure," but by such exhilaration as was provided by the great metropolis. Dr. SEPTIMUS SUNDERLAND said he had frequently noticed that a short sojourn in London, with its myriad attractions, was of immense value to country dwellers suffering from various chronic maladies which depressed their vitality and spirits. He referred to the difference, from a climatic point of view, of the various localities in and around London, and mentioned the numerous spas, wells, and bathing establishments which had flourished in the town and its environs in the seventeenth, eighteenth, and early part of the nineteenth centuries. Dr. HENRY LEWIS said the properties of London as a health resort were founded on a fallacy. In the poorer parts it was impossible to find a family which had resided there for three generations. The low death-rate was due to sick persons going into the country, where they swelled the local death-rate and proportionately reduced the apparent death-rate of London. Dr. FORTESCUE FOX said that Luke Howard, the father of modern meteorology, pointed out a hundred years ago in his classical work, *The Climate of London*, that its peculiar variability was due to an alternate participation in the "polar and tropical atmospheres," and that this variability had great advantages to health and some dangers. The three essential elements in a health resort were *climate*, a *mental element* (change of scene and recreation), and some hydrological or other *symptomatic treatment* for chronic affections. It was unscientific and untrue for the climatologist, the hydrologist, or the mental therapist to say to the others, "I have no need of thee." United they stood, divided they fell. Dr. CALTHROP said Dr. Clippingdale had incidentally mentioned the beneficial effect of London air in cases of asthma. A case had come under his own notice which had found most relief from his asthmatic attacks when travelling on the old underground railway between Baker Street and King's Cross, which was noted for its bad ventilation. Dr. Sunderland had enumerated several interesting old wells and springs of London, but had not mentioned the fact that there existed in a little court off the Strand, leading to the Savoy Chapel, an old Roman bath, and recently in the city, near the Tower, in examining the foundations of a building which had been pulled down, evidences of another Roman bath were discovered, as reported in the *Times*, showing that the Romans had probably been the earliest to establish baths in London.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

AT a meeting on January 16th, Dr. T. PERCY C. KIRKPATRICK, President, who was in the chair, delivered an address, which was illustrated by lantern slides, dealing with the *Origin of some of the existing Dublin hospitals*. Dr. PUGIN MELDON read a paper on *Admissions to the Westmorland Lock Hospital*, Dublin, since the year 1860. The decline in the number of admissions he attributed chiefly to three causes—less acute symptoms, closing of irregular houses in the city, and change in the type of prostitute. Dr. MOORE urged that the Section should lay its views before the Royal Commission now sitting to inquire into the subject of venereal disease. It was pointed out that the principal source of venereal disease was the prostitutes, and that unless something was done to stop the disease amongst them and make them come up for treatment energy would only be wasted. In his opinion every medical body ought to express its opinion very definitely on the subject, that unless the source of the disease was tackled it could not be stopped. Another matter of importance was that general hospitals should be called upon to undertake the treatment of syphilis and gonorrhœa, as otherwise students could not be expected to be acquainted with the diagnosis and treatment of such affections. He expressed the opinion that the General Medical Council ought to be called upon to refuse the certificates of any hospital that did not admit venereal cases. Dr. MATSON thought the incidence of the disease was decreasing. He considered that a patient suffering from this condition was just as deserving of relief as one affected with any other illness. His experience was that those patients who had been treated at the Lock Hospital always sought treatment afterwards when there were manifestations of recurrence, but that they went to other hospital dispensaries rather than to the Lock Hospital, knowing that they would receive treatment as outpatients. Dr. ROWLETTE said that accurate statistics on the subject were most necessary, and if notification could give accurate statistics he thought the profession should declare in favour of notification, but it seemed to him that as a preventive of the disease notification would be the worst step that could be taken, as it would put a barrier in the way of early treatment. If a patient suffering from venereal disease had to be notified, he thought the result would be that he would not seek treatment until forced to do so. He suggested that if each medical man was asked to make a return of cases treated by him without giving any names some help might be given, although he was alive to the fact that in this way there might be overlapping by the same patient consulting different doctors. The PRESIDENT said any return to the Contagious Diseases Act was absolutely impossible and outside practical politics at present. He did not think that the notification of infectious diseases had proved the great panacea which the public health authorities would have them believe. He looked forward to early and accurate diagnosis to diminish the disease. He considered that every medical man should have at his disposal the latest scientific methods for making accurate diagnosis, and this he believed would do more to stamp out the disease than anything else. Drs. DAY, NESBITT, CROFTON, and WINTER also spoke, and Dr. MELDON replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on February 4th, Dr. MELVILLE DUNLOP in the chair, a paper, with lantern demonstration, was read by Dr. EDMUND PRICE, on the *Roentgen ray and bismuth meal method as an aid in the diagnosis of alimentary disease*. The subject was confined to conditions of the colon. Radiography was only one of the methods, and its greatest utility lay in confirming the conclusions arrived at by others equally important. In few cases was it useless, and in many it was indispensable. To avoid mistakes, it was necessary to take not one photograph, but a series, in the same patient. One plate being taken immediately after the bismuth meal, the others were exposed at intervals of 3½, 8, 12 and 24 hours; and if necessary, also at 36 and 48 hours. The bismuth meal should be as palatable as possible; and in his recipe he mixed bread, milk and sugar with the bismuth or barium salts. The photographs were all taken in the upright position. Various degrees of stasis and other abnormal conditions of the colon were then shown on lantern slides. In conclusion, he claimed that radiography gave information as to the position of viscera, their movements (stasis) and the condition of the wall (thinning, atrophy). Dr. BURN-MURDOCH cited two cases in which radiography made it possible for an accurate diagnosis to be made and successful treatment to be applied. Mr. SCOT SKIRVING expressed doubt as to how *x* rays could give information regarding the condition of the bowel wall: gas in the bowel might introduce fallacy. Dr. GULLAND described a case in which the skiagram showed a marked local stenosis at the splenic flexure, very suggestive of malignant stricture, but proving to be due to spasm. Mr. STILES expressed his growing appreciation of the value of *x* rays. With their aid surgeons were now able to tell their patients not merely that an operation was necessary, but exactly what operation was required. Professor RUSSELL also made remarks. Dr. BYROM BRAMWELL read a note on *Diffuse sclerodermia*, a rare condition, of which he had met 9 cases out of 16,000 hospital and private patients. There seemed to be a connexion with occupation, for of his cases, 5 were stonemasons and another was a coppersmith who worked much with a cold chisel; in these 6 cases there was no history of syphilis, and in all the condition began in the hand. He suggested that the cause might be holding the cold chisel in the hand in cold weather. He briefly recounted the clinical features of his cases, and showed a case in which, after ten years, there had been considerable improvement in the skin, but there were trophic lesions on the fingers suggestive of Raynaud's disease, and a condition of pigmentation on the face not unlike xeroderma pigmentosum. In treatment he had obtained the best results from subcutaneous injections of fibrolysin. In 2 cases in which daily injections of this substance had been given a rise of temperature had occurred on the seventh or eighth day, which continued for some weeks after if the injections were continued. This pyrexia might be due to a solution of the hardened tissues and a toxic action therefrom. Dr. CRANSTON LOW had seen 3 cases of sclerodermia, all in women. He suggested that the rise of temperature might be an anaphylactic phenomenon from its appearance some time after the first injection. Dr. D. GUTHRIE said the few cases he had seen were in females. In one there were subcutaneous nodules on the hands which occasionally ulcerated through the skin. Dr. R. A. FLEMING asked if massage were combined with the use of fibrolysin. The reference to Raynaud's disease had reminded him of a case of that disease in which thickening of the middle coat of the smaller arteries of the part was found *post mortem*. It would be interesting if the condition of the arteries of the skin in sclerodermia were investigated.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 1st, Dr. R. J. RYLE in the chair, the CHAIRMAN showed a patient with *Advanced renal retinitis*, with marked optic neuritis, white atrophic patches about macula, haemorrhages, etc. The case was of interest because it had been seen at a London hospital, and been sent on definitely for a decompression operation. The man, 43 years old, had albuminuria and high tension pulse, a doubtful history of syphilis, had suffered from sunstroke with subsequent headaches, but never any fits or other localizing brain symptoms; and it seemed certain that kidney disease was the sole cause, and the prognosis grave. Drs. TAYLOR, PARRY, and MORGAN concurred with the diagnosis, and failed to see any reason for the suggested operation. Mr. H. N. FLETCHER read a paper on *Conditions which may simulate acute appendicitis*. In children tuberculous or pneumococcal peritonitis and forms of gastro-enteritis, and in female adults conditions affecting the pelvic organs, were sources of difficulty in diagnosis. Salpingitis, partly because of the inadvisability of operation in the acute stage, was, perhaps, the most important and also one of the most common. The actual site of initial pain was often of great value, because in salpingitis or twisted ovarian cyst, etc., this was always situated below the

umbilicus, while in appendicitis it often commenced above. The history, tracing trouble back to a confinement or miscarriage, careful pelvic examination, and the fact that salpingitis was generally bilateral, were also aids. The fact that a patient was unmarried should not be taken to exclude possibility of salpingitis. The exceedingly sudden and agonizing pain, attended often by vomiting and faintness, with, perhaps, loss of dark blood by the vulva, served to distinguish ruptured ectopic gestation, while careful bimanual examination would generally disclose a twisted pedunculated fibroid or ovarian cyst. Among diseases common to both sexes were perforated gastric or duodenal ulcer with sudden and intense epigastric pain and a history of previous digestive trouble, which also occurred in acute cholecystitis. In typhoid fever with acute onset, a common source of error which had frequently led to operation, there was usually a low leucocytic count, the opposite being the case in appendicitis. Acute pancreatitis, strangulation, and obstruction of the bowel, inflamed Meckel's diverticulum, renal colic, malignant growth of the caecum, were among other conditions dwelt on by Mr. Fletcher. In the discussion which followed, the CHAIRMAN referred to cases with associated inflammation of appendix and ovary. Mr. BUCK spoke of the impossibility of diagnosis in many cases, the exact starting point of inflammation not being traceable even after operation. Mr. WILLOUGHBY FURNER expressed doubt as to the advisability of a general anaesthetic in cases of appendicitis complicated with pneumonia. Mr. C. CHADBORN instanced difficulties in diagnosis from cases of lead colic. Mr. G. MORGAN related cases in which severe abdominal symptoms occurred shortly after labour, where there had been slight appendicitis during pregnancy, and Dr. PARRY cases following operation for adenoids. Mr. FLETCHER replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 21st, Mr. R. G. HOGARTH, President, in the chair, Sir W. ARBUTHNOT LANE delivered an address on *Chronic intestinal stasis*. Owing to our erect position our bowels tended to drop into the pelvis. In this way bands or ligaments were developed in the lines of force; these bands were most marked at the flexures of the large intestine, and tended to produce kinks, and so cause obstruction. There was a special band near the appendix which obstructed that organ, and also caused stasis of the lower end of the ileum. This damming up of the ileum effluent produced back-pressure changes, causing duodenal and gastric ulceration, and finally cancer of the stomach. Delay of intestinal contents in the small intestine also led to infection of the small bowel by organisms which normally were not present there. This caused such diseases as chronic pancreatitis and gall stones. Besides this, more toxins were absorbed into the blood stream, leading to degenerative changes in the liver and kidneys, and this happened in every organ of the body. Among the changes due to intestinal stasis were loss of fat, degeneration of muscles, especially the heart muscles, abdominal respiration, pigmented skin, offensive perspiration, headaches, and irritability. Indirectly, owing to the lowered vitality, tubercle, rheumatoid arthritis, and cancer were more easily acquired. In children short-circuiting was sufficient, and old tuberculous sinuses had healed up after that operation alone. The colon should be removed only where its removal appeared to be easy. The details of the operation were described, and stress was laid on the value of saline injections into the rectum. The chief risks were due to the development of adhesions.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 14th, Dr. WATSON-WILLIAMS in the chair, Dr. CAREY COOMBS read a paper on *Conditions simulating thoracic aneurysm*. He said three groups of cases might be recognized: (*a*) Diffuse aortic dilatation; (*b*) aortitis, syphilitic and otherwise; and (*c*) mitral stenosis, producing enlargement of the left auricle with pressure signs, or hypertrophy of the conus arteriosus dexter with abnormal pulsation. Dr. WATSON-WILLIAMS showed two patients on whom an *Intra-nasal frontal sinus operation* had been performed by opening up the fronto-ethmoidal cells from a point corresponding to the anterior attachment of the middle turbinal. Dr. MUNRO SMITH read notes on two cases—females, aged 61 and 76 years respectively—both of whom presented during life *Signs simulating malignant disease of the liver*, namely, jaundice with enlargement of the liver and a visible and palpable tumour apparently in the liver. The diagnosis was confirmed in each case by several practitioners, but after death the tumours had disappeared, and in the first case a necropsy showed the liver to be normal in size, and no tumour to be present. No autopsy was performed in the second case. Dr. JAMES SWAIN suggested that the condition was one of phantom tumour of the rectus abdominis. Dr. MICHELL CLARKE thought the hepatic enlargement was due to engorgement secondary to cardiac failure. Mr. HARTY showed a case of *Acute mastoiditis* involving the outlying cells alone, a subperiosteal abscess forming over the mastoid without involvement of the middle ear or mastoid antrum.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.

AT a meeting on January 29th, Mr. CHICHELE NOURSE in the chair, Dr. PERCY JAKINS showed: (1) A case of *Cancer of the larynx* in a man, aged 43, with ulceration of both vocal cords. (2) A case of *Tertiary syphilis of the larynx* with paralysis of the right vocal cord, oedema of the arytenoids, and a positive Wassermann reaction. The cases were discussed by Mr. C. NOURSE, Mr. C. HEATH, Dr. JACKSON (Plymouth), and Dr. COUBRO POTTER. Dr. BYRNE replied, in the absence of Dr. JAKINS. Mr. HEATH read notes of *Three cases of aural suppuration*: (1) T. J., a boy 15 years of age, had discharge from both ears for eight years following scarlet fever. (Patient shown.) Years of meatal treatment had proved futile. Eustachian tubes free, and air could be blown through perforations. With the right ear the watch was heard at two inches, with the left only when in contact. Conservative mastoid operation on both sides, enucleation of tonsils and removal of adenoids performed on one afternoon. Disease of the antrum found on both sides. Recovery rapid; the patient left the nursing home under a fortnight. Discharge ceased, perforations healed, and hearing increased to eighteen inches right, two inches left. The boy went to Australia in a sailing ship. Got a chill "down South"; both ears discharged. Right one, being painful, was reopened in Australia, but nothing found. On his return to England both ears had healed, but the pain on the right side persisted, due, in Mr. Heath's opinion, to inadequate drainage through inner attic route. He therefore reopened the ear, removed the outer attic wall and the mucous membrane of the roof, thus diminishing the secreting area and the demand for drainage. The ossicles and drumhead, being uninjured, hearing was preserved. A few months later pain recurred, and was still regarded as due to inadequate inner attic drainage. A radical operation was therefore performed some months later. The mucous membrane of the inner tympanic wall being preserved, the patient could still hear the watch at 9 inches. There is no discharge, but the tympanic mucous membrane being moist, fair hearing will probably remain. The ossicles (which were shown) were intact in their bony structures, but the muco-periosteal covering was oedematous and was partly responsible for obstructing drainage. Mr. Heath pointed out that in early cases such changes of ossicular periosteum did not occur, and that if the operation had been performed early this ear would have been saved. Before the conservative operation upon the other side the watch was only heard on contact; it was now heard at 18 inches. The case was discussed by Dr. J. COUBRO POTTER, Mr. CYRIL HORSFORD, Dr. LITTLE (Bradford), Dr. WALKER WOOD, and Mr. CHICHELE NOURSE. (2) *Acute otitis media* started by tonsillitis, with pain in the ear for several days before rupture of the drumhead. There was a tympanic dam of mucous membrane, causing extreme deafness by pressing against the drumhead and ossicles. Bone conduction was not increased. It was pointed out that the extent of the swelling of mucous membrane was liable to cause obstruction of drainage and acute mastoiditis. Twelve hours later this condition came on, accompanied by severe pain with diminution of discharge. Before operating he held a consultation with Dr. William Hill,

who agreed in the diagnosis of obstruction of antral drainage—that was to say, acute mastoiditis. There was no swelling or tenderness on pressure behind the ear. On operation, the pent-up secretion in the antrum was under great pressure; it was not pus but mucus. The operation had not been delayed long enough for pus to form. Infection streptococcal. The dam of swollen mucous membrane which was the cause of obstructed drainage was removed and shown at the meeting. The antral walls were carious; their lining had been destroyed by the pressure of septic secretion. There was no septic absorption until after this protective membrane had been destroyed. Mr. Heath pointed out that prolonged pain—that was to say, pressure—before rupture of the drumhead often caused disease of the antral walls, and that pain after rupture indicated the existence of acute mastoiditis and the need of a relieving operation before pus had had time to force its way to the surface or to the brain. Prompt operation in this instance resulted in immediate cessation of pain and fever. This case showed what a great difference there was in the amount of protection afforded to the bone by the lining membrane of different parts of the ear, and demonstrated that the vulnerable part was the weakly defended mastoid antrum. Mr. HORSFORD and Mr. NOURSE discussed the cases. (3) (Patient, Mr. S. J. E., shown.) Discharge from right ear for twenty-three years accompanied by deafness, and recently vertigo. Disease started by scarlet fever. Tympanic apparatus destroyed and polypi filling the tympanum. Hearing by air conduction entirely lost, bone conduction diminished. Deafness extreme. Acid-fast squames in the discharge suggested cholesteatoma. Radical operation performed. Cheesy egg shaped cholesteatoma found, about an inch in length, probably originating in the antrum, but had increased in all directions and destroyed the bone. Extensive exposure of lateral sinus and dura mater covering the temporo-sphenoidal and cerebellar lobes, and displacement of contiguous portions of brain. There was a sinus (still visible) leading into the pars petrosa above the external semicircular canal. Recovery slow, but uneventful. Last year the other ear, previously defective, probably from past suppuration, became the seat of otitis media; after a few hours' pain, rupture of the drumhead took place. Next day the patient came to London and was placed in a nursing home. Bed, hot-water bottles applied to ear, sodium salicylate, aperients, and autogenous vaccines. Matters went from bad to worse. Tympanic dam formed, deafness and discharge increased. After waiting twelve days a conservative mastoid operation was performed. Discharge lessened, but did not stop. Inflation, antiseptic irrigation through the attic by way of the now accessible aditus, persevered with for weeks in the hope of saving this, the only useful ear, quite ineffective. Disease was already established in the tympanum. On account of the rarity of such a condition, the case was considered worthy of record. Four months later a radical operation was performed. The mucous membrane of this ear soon dried. Such rapid drying of a mucous membrane undamaged by operation led Mr. Heath to think that it must have undergone serious change before the recent attack of otitis media, and the previously existing deafness lent support to this view. He therefore now considered he was dealing with an ear already considerably altered by disease, and that his chances of saving it by operation were not favourable. Dr. J. COUBRO POTTER discussed the case. Mr. CHICHELE NOURSE exhibited a case of *Double abductor paralysis* of very short duration in which the clinical signs and symptoms pointed to the presence of a mediastinal growth.

HARVEIAN SOCIETY OF LONDON.

AT a meeting on January 29th, Mr. JACKSON CLARKE, President, in the chair, the following clinical cases were shown:—Dr. W. H. WILLCOX: (1) *Raynaud's disease;* (2) *Tracheotomy after poisoning with glacial acetic acid;* (3) *Aneurysm of the arch of the aorta;* (4) *Pituitary tumour.* Sir J. BROADBENT: (1) *Splenomedullary leukaemia;* (2) *Friedreich's ataxy* associated with congenital heart disease. Mr. V. WARREN LOW: (1) *Aneurysm of the external iliac artery* one month after ligation; (2) *Aneurysm of the popliteal artery,* also one month after ligation; (3) *Excision of the clavicle for neoplasm;* (4) *Benign growth of the tibia;* (5) *Degenerating chondroma in the popliteal region* of a boy. Mr. LESLIE PATON: (1) Cases of *Rodent ulcer treated by carbon dioxide snow;* (2) case of *Scleral trephining for glaucoma.* Mr. W. H. CLAYTON-GREENE: (1) *Angioma of the perineum;* (2) *Tumour of the jaw.* Dr. W. J. GOW: *Ovarian tumour.* Dr. GRAHAM LITTLE: (1) *Alopecia universalis with lichen planus;* (2) *Molluscum contagiosum;* (3) *Favus of the glabrous skin;* (4) *Acne varioliformis;* (5) *Double labial chancre* with a rare form of secondary rash—a small follicular syphilide. Mr. CECIL GRAHAM: A case of *Pharyngectomy for malignant neoplasm.* Mr. V. Z. COPE: *Traumatic sensory aphasia* produced by subdural effusion of blood over the angular gyrus and just anterior to it, cured by evacuation of the clot. Dr. L. COLEBROOK: Three cases of *Actinomycosis.* The exhibitor said that he had demonstrated the presence of the fungus in 16 cases in the last few years, 12 of which occurred in the last two years. Dr. W. HILL gave an œsophagoscopic demonstration of *Malignant stricture of the middle third of the gullet* in a woman who had had six applications of radium in the last four years. The treatment had been successful in postponing the fatal termination which seemed inevitable when it was started. Dr. Hill exhibited the apparatus which he used for applying the radium. Dr. PARRY MORGAN gave a demonstration of cases and charts illustrating the effect of the *Pneumothorax treatment of phthisis.* A special apparatus, which he had devised, was shown. Dr. B. H. SPILSBURY exhibited some *Pathological specimens,* including a lithopaedion, probably produced from an extrauterine gestation; a myxosarcoma of the lower end of the tibia, originating from periosteum; and the bladder and urethra of a man who died from acute gonorrhoeal septicaemia, showing active suppurative inflammation.

LONDON DERMATOLOGICAL SOCIETY.

AT a meeting on January 20th, Dr. MORGAN DOCKRELL, President, in the chair, Dr. J. L. BUNCH showed a case of *Lupus erythematosus* in a man aged 40, showing one well-defined patch on the bridge of the nose. Dr. W. GRIFFITH showed (1) a man, aged 26, who had *Large fungating masses on the scalp.* There was no history of previous disease, but on microscopical examination the *Spirochaeta pallida* was found. (2) A case of *Ringworm,* cured in six months by simple shaving and applications of sulphur and salicylic acid. (3) A case of *Pigmentary syphilis* in a woman, aged 36; the lesions were confined to the face and right leg. Dr. S. GOODING showed a case of *Extensive syphilitic ulceration* on the cheeks in a woman aged 54. The PRESIDENT showed (1) a case of *Syphilis plus tuberculosis* in a girl, aged 15; deep ulcerative lesions were present on the arms and legs. (2) A case of *Atrophoderma pigmentosum* in a girl, aged 16. She was taking 9 grains of thyroid extract a day, and the lesions were gradually subsiding. Dr. W. K. SIBLEY: (1) A case of *Lupus erythematosus* successfully treated by slight applications of acetone, CO_2, and calamine lotion. (2) A case for diagnosis. The patient was a boy, aged 16, in whom the soft palate and uvula were destroyed. There was a discharge from the ears and a lesion on the nose. The von Pirquet and Wassermann reactions were negative. A section taken from the lesion on the nose showed a typical epitheliomatous structure. (3) A case of *Extensive lupus with x-ray dermatitis.* Dr. W. K. SIBLEY opened the adjourned discussion on Dr. Hampson's paper on the *Dosage of x rays.* Dr. W. GRIFFITH and Dr. KEMPSTER joined in the discussion, and Dr. HAMPSON replied.

THE dedication ceremony in connexion with the stained glass window erected in Bromsgrove Parish Church in memory of the late Sir Thomas Chavasse was performed by the Lord Bishop of Liverpool, brother of the deceased, on January 8th, in the presence of a large congregation. The window consists of four lights, and is situated in the west end of the south aisle. The centre of the upper lights is occupied by the figure of Christ, with St. Michael and the Angel Gabriel on either side. Across the four main lights runs the text from Proverbs, "Honour a physician with the honour due unto him, for the Lord hath created him."

Reviews.

THE MAYO CLINIC.

It is now proposed by the editor of the *Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic)*[1] to issue an annual volume which shall contain the articles written and presented for publication during the previous year. We have before us the volume for the year 1912. It is a handsome, portly tome of 842 pages, sufficiently illustrated, beautifully printed, and copiously indexed. There are twenty-three contributors and sixty-nine articles in all. Some attempt is made to classify the articles according to regions, and this makes reference easier.

It would appear that absolutely every contribution to medical literature made by members of the clinic is incorporated in the volume. The result is very considerable inequality in the importance of the papers. Several are really substantial additions to surgical knowledge; many are second-rate and trivial. We have grave doubts of the utility of preserving papers contributed to medical societies except when they contain original observations. One of the many uses of local medical societies is to provide a place for addresses and papers which have none but ephemeral interest and have served their passing purpose. We venture to think that the pruning-hook should be vigorously applied to the superabundant tree of knowledge which flourishes in St. Mary's Hospital. From that source the surgical world has already gained much fine fruit, and its palate is now critical and highly cultivated.

In 1912 no fewer than 5,835 operations were performed—a remarkable quantity of work. If we add to this the work of the clinical, pathological, bacteriological, and radiological laboratories, it will easily be comprehended that the Mayo clinic is like a great factory. The complications of operations that have arisen have been very few. If infection, even to a minimum degree, occurred, thorough inquiry was instituted, but its source was practically never found, and the conclusion would seem to be that technique is perfect. Several of the papers will rank as classical, or, at all events, will secure a place in permanent literature. The study of the involvement of regional lymphatic glands in carcinoma of the stomach by Drs. MacCarty and Blackford, the paper on the surgical importance of the thymus by Drs. C. H. Mayo and B. F. McGrath, and the contributions to the surgery of the spleen and of tumours of kidney, suprarenal body, and testis by Dr. Louis B. Wilson are substantial helps on our road.

The workers associated with the brothers Mayo are evidently men of high technical skill, possessing keen insight and well-balanced minds. Nor are they bound much by tradition; they seem to attack every subject as if it were an unexplored country.

The literary style of the volume varies as much as its subjects. We must assume that no attempt is made to cultivate style. The effect on the reader is that he sometimes grasps the meaning with difficulty, so that his memory retains less than it might under more favourable conditions. The use of words is curious, too. We know that some American writers have little reverence for language, but a word like "recognization" should not pass muster, and greater uniformity is desirable than is shown by the use in the same sentence of "appendiceal" and "appendectomy."

[1] *Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic), Rochester, Minnesota, 1912.* Philadelphia and London: W. B. Saunders and Co. 1913. (Roy. 8vo; 219 illustrations. 24s. net.)

TREATMENT OF LEUKAEMIA.

In spite of the undoubted success which has followed the use of *x* rays in the treatment of leukaemia, there is still room for considerable improvement in the therapeutics of this disease. One recent attempt in this direction has taken the form of drug treatment by means of benzol. The idea arose out of certain observations made by Selling on three young women who became ill, after working for some months in a factory where benzol was much used. It was found that a rapid diminution in the number of the white corpuscles and aplasia of the blood-forming organs were very marked in these cases, and it was inferred that like effects might be produced in conditions in which an excess of white corpuscles and enlarged spleen were prominent features, as, for example, in leukaemia. Sanguinetti[2] has collated a fairly large number of cases in which the experiment has been tried, and speaking generally, the verdict is distinctly in favour of benzol as a therapeutic agent. Most of the cases showed definite improvement. That a certain amount of risk attaches to the remedy is also evident, as more than once rather severe toxic symptoms arose in the course of treatment. In any case it is clear that prolonged treatment is inadvisable. As soon as a definite reduction in the number of leucocytes is established it is advisable to leave off the benzol, as the effect on the corpuscles continues after the drug is withheld. It is evident that Sanguinetti, from a personal experience of three cases, and from a study of the literature of the subject, places benzol in the second rank, as compared with the *x* rays, in the treatment of leukaemia, and has also a keen appreciation of the dangers that may lurk in an indiscriminate and casual use of benzol, but as a supplement or an aid to *x* rays, it deserves a good place. Some new points are brought out as the result of the author's personal experience with the drug. These are as follows: Benzol does not aggravate a pre-existing albuminuria, and it increases the elimination of uric acid; the general sense of well-being, caused by the improvement in the patient's condition due to the drug, may last for several months in spite of the fact that a fresh increase in the number of leucocytes may occur. With this renewed increase in the number of leucocytes a simultaneous increase in the red corpuscles may also be noticed. These points are well seen in the graphic charts.

[2] *Intorno all' Azione Terapeutica del Benzolo nella Leucemia.* By A. Sanguinetti. Bologna: Presso Nicola Zanichelli. 1913. (Dbl. post 4to, pp. 42; 5 charts. 5 lire.)

THORPE'S DICTIONARY OF CHEMISTRY.

With the appearance of the fifth volume of Sir Edward Thorpe's *Dictionary of Applied Chemistry*,[3] the reissue of this comprehensive work of reference is completed. The entire work extends to nearly four thousand double-column pages, and the list of contributors of special monographs includes more than a hundred and twenty names of chemists able to speak with authority in regard to their own branches of work. Applied chemistry is an exceedingly wide subject, and it is practically impossible to think of any industrial process in which chemistry plays a part, or any substance utilized by mankind with regard to the chemistry of which more or less knowledge has been obtained, which is not treated of in these pages. The present volume, extending from "sodium" to "zymurgy," includes a good many monographs of medical interest. In one of the most important of these, occupying about twenty-three pages, Professor Virgil Coblenz, of New York, writes about synthetic drugs. The beginning of the present enormous business of manufacturing these articles is traced to the production by O. Fischer in 1882 of kairin, introduced as a substitute for quinine; but it was only with the production of antipyrin in 1885, and acetanilid in 1888, that much attention began to be given to the possibility of making artificially medicaments having certain desired properties. Since then the development of such production has become almost excessive; the number of the products is bewildering. The substances of synthetic origin selected by Professor Coblenz as of sufficient importance for detailed mention number between four and five hundred; it is not quite apparent, however, why a number of animal preparations, such as iodothyrin, rodagen, and gland extracts generally, should be included, as the only body of this class which has been synthesized is the active principle of the suprarenal gland. In a monograph on toxins and antoxins, Professor R. T. Hewlett marshals the principal facts relating to the various bodies of these classes, and epitomizes the three theories as to the nature of the toxin-antitoxin reaction which have been put forward. Professor W. D. Halliburton writes on urine, Professor P. F. Frankland on water; while among the drugs dealt with are squill, strophanthus, sulphur, and waxes. Vegeto-

[3] *A Dictionary of Applied Chemistry.* By Sir E. Thorpe, C.B., LL.D., F.R.S., assisted by eminent contributors. Revised and enlarged edition. In five volumes. Vol. v. London: Longmans, Green, and Co. 1913. (Med. 8vo, pp. 838. 45s. net.)

alkaloids form the subject of a long monograph by Drs. Dunstan and Henry, of the Imperial Institute. Lest any one should be needlessly puzzled by the word "zymurgy," mentioned above as the last entry in the book, let us add that it is defined as "a term used to denote that section of applied chemistry which treats of the scientific principles of those arts in which fermentation is employed—for example, preparation of yeast, vinegar, beer, wine, alcohol."

THE "PSYCHOANALYTIC REVIEW."

Of the multiplication of periodicals, as of the making of books, there is no end, and the *Psychoanalytic Review*, edited by Drs. W. A. White and Smith Ely Jelliffe and published by the *Journal of Nervous and Mental Disease* Publishing Co. (New York) in quarterly numbers at 5 dollars a year, would not seem to be one of those the need for which is urgent. It is doubtful whether one supposed method of diagnosis called psychoanalysis is worthy of a review all to itself, notwithstanding the more pretentious subtitle of "A Journal Devoted to an Understanding of Human Conduct." The value of this particular instrument of investigation appears just now to be overrated. It will find its proper level in time, and results of its use may very well be embodied in the ordinary journals of neurology and psychology. The first number of the new review, however, is interesting because of the article by Dr. C. G. Jung, a pupil of Sigmund Freud. Although the style of this article is by no means pellucid, owing perhaps to difficulties in translation, Dr. Jung sufficiently indicates that he has gone back to some extent on the original Freudism. He does not regard thumb-sucking in infants as a sexual pursuit, and he says that the sexual definition of *libido* must be abandoned: in these matters we may see the beginning of a return to a saner view of life.

The magazine contains a report of a psychoanalytic study of a case of self-mutilation by Dr. Emerson, and a case by Dr. Ames of a man who suffered from hysterical blindness in whom the wish to avoid the sight of his wife was discovered by analysing his dreams. Then follows the beginning of a somewhat discursive treatise on the technique of psychoanalysis by Dr. Jelliffe; a digest of some Freudian contributions to the paranoia problem by Dr. C. R. Payne, and a translation by Dr. W. A. White of an article by Dr. Riklin on wish fulfilment in fairy tales. This translation contains one of the usual monstrous perversions of what is described as an "optic, extraordinary plastic, symbolic dream."

Apparently the editors of the *Psychoanalytic Review* are very ambitious for their enterprise. It will, according to Dr. Jung, necessitate the co-operation of philosophers, historians, archaeologists, mythologists and folklore students, ethnologists, philosophers, theologians, pedagogues, and biologists, in addition to medico-psychologists. To us it seems that the overdone sex obsession is likely to sterilize much of their work if adopted by the exponents of the numerous sciences mentioned.

FIRST AID IN THE NAVY.

Books on first aid fall into four classes—ideal books, those written largely from the point of view of passing examinations, those which nominally cover the whole subject but leave vast gaps to be filled presumably by *viva voce* instructors, and those which deal with the subject from the point of view of one particular order of work. The latest addition to the last class is *First Aid in the Royal Navy*,[4] a small volume which, when allowance is made for the numerous and excellent illustrations, cannot contain more than some 1,500 words. It bears the name of no author, but the fashion in which it is written makes it clear that he is not only thoroughly acquainted with the needs of the navy in this direction, but is a skilled teacher of the subject. The book, in fact, takes the form of reports of four lectures. The first two deal with general principles of first aid; the third and fourth are largely concerned with the special conditions of first aid in the Royal Navy. Nelson insisted on wearing his full uniform with all his orders at Trafalgar; why he did this we can only conjecture, but the motives of the author of this book can be well understood when he tells the men that before a ship goes into action each of them should have a bath if possible and put on freshly washed underclothing, his newest and cleanest blue serge suit, his boots, and his silk handkerchief, the latter being a useful substitute for a bandage if necessary. The new naval first-aid dressing for wounds is described, as well as the special first-aid dressing for burns and scalds. There is a note on electric shock, an accident becoming every day more possible in the navy with the extension of the use of electricity, and there are full directions for carrying the wounded under the very special circumstances of the navy. Some of the drawings illustrate the removal of wounded men in a stokehold, in a turret, in tops, and in conning towers. The last lecture is concerned with first aid to the apparently drowned, with suffocation, with caisson disease, and with heat-stroke, as well as other emergencies. One rather novel feature is that of a summary index of emergencies on the outside of the back cover. If the lettering will stand rough usage, this index ought to be very useful.

[4] *First Aid in the Royal Navy.* Published for official use. London: His Majesty's Stationery Office. (Double post 32mo, pp. 190; illustrated. 9d.)

NOTES ON BOOKS.

A second edition of *Minor Medicine*,[5] a volume in which Dr. W. Essex Wynter deals with the nature and treatment of common ailments, has been published. The text has undergone general revision and some additions have been made. The author, for instance, has now a good deal to say in the introductory chapter as to the relative importance of various phenomena at different periods of life. The ailments chiefly considered are those which, though medical men and the hardier members of the public often tend to write them down as trifling, are nevertheless often of real importance to the sufferers, and sometimes create difficulties in practice. Something concerning most of them may doubtless be found in general treatises on medicine, but in this volume they are considered in detail, so that it may be studied with advantage by all young medical men who have only recently emerged from the schools, and by many of their seniors.

The forty papers included in the twenty-fifth volume of the *Transactions of the Southern Surgical and Gynaecological Association*[6] cover a wide field, their subjects ranging from gas and oxygen anaesthesia and the treatment of flat-foot to the indications for abdominal Caesarean section and the occurrence of extrauterine pregnancy more than once in the same patient. Of most interest, perhaps, at the present time are a number of papers relating more or less directly to the treatment of intestinal toxaemia. They include a consideration by Dr. J. Y. Brown of the value of complete physiological rest of the large bowel; an account of some experimental, anatomical, and physiological observations bearing on the total extirpation of the colon by Dr. A. Schachner; and an attempt by Dr. Robert Crothers to answer the question of when and how cases of intestinal ptosis producing stasis may usefully be treated by non-operative measures and when they should be subjected to operation.

Prayers for Healing[7] is a collection from ancient sources of prayers for the sick, for ministers, for healing, for special occasions; with thanksgivings for recovery, and prayers for dying and dead persons. Some of the prayers are of considerable beauty, dating from the second century onward. Each section is preceded by an explanatory page. Spiritual healing is presupposed to have a wide sphere of operation, no arbitrary distinction being drawn between functional and organic complaints: blessings are invoked upon professional aid. It is creditable to the early Church to find that in its doctrines, as in the teaching of the Founder, suffering is never regarded as a Divine chastisement for sin—a view which unfortunately finds reflection in modern and mediaeval liturgies.

[5] *Minor Medicine.* By Walter Essex Wynter, M.D., B.S.Lond., F.R.C.P., F.R.C.S. Second edition, revised and enlarged. 1914. New York and London: D. Appleton and Co. (Med. 8vo, pp. 308. Price 6s. net.)

[6] *Transactions of the Southern Surgical and Gynaecological Association* Vol. xxv. Published by the Association. 1913. (Med. 8vo, pp. 670.)

[7] *Prayers for Healing.* From the Ancient Liturgies and other Offices of the Church. Compiled by E. B. H. With Foreword by the Rev. the Hon. E. Lyttelton, D.D. London: H. R. Allenson, Limited. (Pott 8vo, pp. 96. 1s. net.)

BOARD OF EDUCATION.

FIFTH ANNUAL REPORT OF THE MEDICAL OFFICER.

(*Continued from page 294.*)

MEDICAL TREATMENT SCHEMES.

IN dealing with the question of action taken in respect of schemes of medical treatment, Sir George Newman states that during the eighteen months under consideration local education authorities as a whole showed increased activity in securing that ailing children shall obtain adequate treatment, as also in regard to "following up," and all that it connotes. Primarily the duty of securing a remedy for any defects found in a child at a medical inspection rests with its parents, but the Board has also held that their task should be facilitated by local authorities organizing schemes for making medical treatment readily available to all school children. The Act of 1907 gave local authorities power to provide such treatment; but the Board considers that, in the first place, any existing voluntary agencies should be utilized as far as possible, and that in any case care should be taken to do nothing which may lessen the responsibility of parents, or deter them from obtaining the advice of their own medical attendants. Subject to these provisos, the Board considers that local authorities may provide treatment, if necessary, for minor ailments, uncleanliness, ringworm, and other common skin diseases of children, defective eyesight or hearing, some external affections of the eyes and ears, and various temporary conditions of the mouth (including the teeth), nose, and throat. For the past eighteen months the Board has been prepared to make grants towards schemes of treatment which include work undertaken by a local authority itself, and in 167 out of the 317 education areas the authorities are now undertaking one or other form of treatment. In this term are included the employment of school nurses, systematic provision of spectacles, organized treatment of ringworm, the payment of contributions to hospitals, or the establishment of a school clinic or a dental clinic.

School Nurses.

These are employed in as many as 241 areas; in 132 their work is primarily to assist in inspection and following up, but in some other areas they are also engaged in treating minor ailments, apart from school clinics. There is almost complete unanimity of opinion that their work is of great value.

Spectacles.

In 60 areas specialists have been appointed to examine the eyesight of the children and to advise as to treatment, and the Board has authorized 101 authorities to spend money on the provision of spectacles; the cost of the latter ranges between 1s. 9d. and 3s. 6d. a pair, the total estimated expenditure being £1,445. The report points out, however, that the provision of spectacles does not meet the whole needs of the situation, and mentions a multiplicity of other points to which attention must be paid.

X-Ray Treatment.

A very large number of local authorities now undertake the treatment of ringworm, but their methods vary greatly. They range from the use of ointment, with or without exclusion from school, and with or without insistence on the wearing of caps, or education of children with ringworm in special classes, to the use of *x*-ray treatment. Medicinal methods have not, on the whole, proved either effective or expeditious, whereas *x*-ray treatment, in areas in which it has been authorized, has given excellent results. Authorities who desire to undertake this treatment should adopt the following principles:

(1) The children treated should be upwards of 3 years of age. (2) The method employed should be that described as the "Kienböck-Adamson five-exposure system"; Sabouraud's pastilles should always be used. (3) A trained and experienced operator should be employed, and there should be continued and careful supervision whilst the child is under treatment. (4) The tubes and apparatus should be efficient. (5) Careful and comprehensive records should be kept.

So far the number of education authorities whose provision of *x*-ray treatment has been sanctioned is forty-one.

SUBSIDIES TO HOSPITALS.

Schemes which include the making of subsidies to hospitals as a means of partly or completely fulfilling the authorities' aims in regard to the provision of treatment have now been authorized in thirty-seven areas. The report states that the treatment scheme of the London County Council — much the most expensive scheme yet undertaken—has developed gradually from a provisional arrangement with several metropolitan hospitals into an immense undertaking which is of a most composite character, utilizing hospitals, medical treatment centres, and voluntary institutions of various kinds. The subsidized institutions include 13 hospitals dealing with 28,000 children, and 21 other forms of institution provide for 56,000 children, exclusive of nursing arrangements and a number of charitable organizations more or less closely connected with the school medical service. The fact is also recalled that in June last the Board drew the attention of the Council to the desirability of introducing some variety into the work of assistant medical officers, the passage concluding with the following general dictum:

> It is important that authorities should so arrange the duties of their medical staff as to secure not only a high quality of officer, but also a high quality of work, and this is not possible if they are under unfavourable conditions of status, salary and duties, or if they are required to spend the whole of their time at routine medical inspection.

SCHOOL CLINICS.

In regard to school clinics Sir George Newman states that it is evident from the increase in the number provided by local authorities that the need for their creation is becoming generally recognized throughout the country. It is part of the ordinary duty of a school medical officer not only to detect and diagnose the nature of physical ailments among the children in his charge, but also to ascertain subsequently whether they are receiving due treatment, and eventually whether they have been cured. Hence it follows that it is an essential part of his work carefully to re-examine every child whom he has found to be defective and has referred for treatment. As a rule such re-examination can best be conducted at a school clinic, and this will serve, too, as a centre at which the school medical officer can carry on all branches of his work not immediately connected with the schools. Some of the clinics at present provided are inspection clinics only, while others are treatment clinics as well; including both varieties, upwards of 150 education areas are now possessed of them. In a large town more than one clinic is generally necessary, since no single house is likely to be sufficiently accessible to all families living within the area. In most large country areas it is naturally difficult to arrange a sufficient number of inspection clinics; in such case the best plan is to make arrangements for the collection in the school on a given day of all children who ought to be re-examined. The accommodation is not adequate at all the inspection clinics so far provided. Their essential equipment is of the simplest kind, but they should at least provide two rooms—one large enough to serve as a waiting-room and the other as a consulting-room, both being clean, airy, and light. The arrangements should also allow of children suffering from contagious disorders to attend at different hours from the rest.

Treatment Clinics.

The report states that 140 treatment clinics have now been approved by the Board. The advantages offered by a treatment clinic should not, it is stated, be limited to necessitous children, though provision should be made for the recovery of the cost of treatment in other cases. If the treatment that the authority desires to undertake is likely to include operations, or the use of expensive or elaborate machinery, it is commonly best for the authority to arrange with a hospital for the maintenance of its clinic. But this is not always the case, and in every instance the question should be decided on its own merits, for the relatively high initial expenditure entailed by an authority establishing its own clinic is often counterbalanced by the advantages accruing, including better supervision of treatment and its greater completeness. Even if the work is undertaken by a hospital, it is the school medical officer who must always remain—nominally, at any rate—in control of the treatment provided, and who must decide

when such treatment is no longer required or cannot be expected to be of further benefit. It is stated that points such as these are not always easy to secure in arrangements with hospitals, and the treatment at the latter cannot generally be complete in the fullest sense of the term, since the general fashion in which their work is done does not allow of effective after-care; and in regard to minor ailments, such as constitute the majority of the defective conditions detected by school medical officers, hospital treatment is somewhat unsatisfactory. Besides this, many of the conditions in question are such as hitherto have been ignored very commonly by the majority of parents—and often by medical practitioners—who in the past have failed to realize the great influence for evil that certain physical defects may produce in children. It is becoming increasingly recognized that the old argument against provision of treatment by an authority—namely, that the sense of parental responsibility is thereby lessened—has been proved to be fallacious, and experience shows that when specialist treatment is provided at a clinic parents are often able and willing to refund its cost—which in such circumstances is not great—and that the treatment of minor ailments, when systematically carried out, tends definitely to diminish the number of children absent from school, and to this extent to increase the amount of the Government grant for schools attendance. A final argument put forward in favour of an authority establishing its own clinic is that many clinics are staffed by medical practitioners, or by specialists in the whole-time service of the authority. At the end of the period under consideration about 180 private practitioners, including dental surgeons, were taking part in the treatment administered at school clinics, in addition to the whole-time officers. These figures do not include ophthalmic surgeons employed exclusively in refraction work, nor any medical practitioners carrying out treatment on premises other than school clinics. They do, however, illustrate the part which the medical practitioner can take in an organized scheme of treatment, in which both the authority and their officers on the one hand, and the private practitioner on the other, co-operate in the prevention or mitigation of disease.

Dental Clinics.

There are now 180 dental clinics at work in addition to the arrangements by which children are treated in dental hospitals, dispensaries, or at private dental surgeries, or by perambulating dentists employed by a combination of authorities. There are also a certain number of dental clinics maintained by the generosity of voluntary donors. In regard to the principles, the report states that in the conduct of any dental clinic it may establish an authority should keep in view preventive medicine. To some authorities it would seem that the obvious course was to deal first with the children whose mouths presented the greatest amount of defect, but, on account of the great volume of work to be done, such a policy would be found to be quite impracticable apart from its prohibitive cost. It is on the children between the ages of 6 and 8 that efforts should be concentrated, the aim being not palliation, but prevention. The scheme of treatment should aim at conservative dentistry in the broadest sense of the term, thus including not only the stopping or other treatment of early cases of decay, but a variety of measures calculated to prevent the onset of caries. In regard to the existing prevalence of dental disease, the figures supplied in regard to entrants vary between 79.1 in the case of Bradford and 21.2 in the county area of Shropshire (children having less than four teeth defective); the percentage of children who had perfectly sound teeth on leaving was in Shropshire 1.6 and in Bradford 13.3. Confirmation comes from one area of a statement previously made elsewhere—namely, that the poorer the children, the rougher their social conditions and home comforts, the less the prevalence of caries. From another area comes a reasoned argument to the effect that caries is a contagious disorder. In some parts of the country toothbrush drill is an established feature of school work.

(To be continued.)

THE second International Eugenics Congress will be held in New York in the latter part of September, 1915. Dr. Henry Fairfield Osborn has been elected president and Dr. Alexander Graham Bell honorary president.

REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD FOR THE YEAR ENDING MARCH 31, 1913.

(Continued from page 327.)

III.

Offensive Trades.

THERE are three reports on offensive trades—linoleum manufacture, rubber regeneration, and maggot breeding. The two former do not afford any justification for serious measures, but the third certainly appears to require some control. Maggot breeding is the natural corollary of the great extension of workmen's fishing clubs, which have created a great demand for maggots. The maggots are bred in warmed closed sheds upon diseased meat from knackers' yards. The two dangers are the objectionable odour and the enormous number of blue-bottle flies.

Food Inspection.

The report on meat inspection shows that the authorities are very watchful, but the fact that a comparatively large quantity of tuberculous meat from the Argentine has been found in the London markets, but not in the provinces, appears to indicate that the inspection in the provincial cities is still inadequate. There is an important recommendation as to the manner of dealing with epidemics of meat poisoning. In the past the whole of the material appears to have been sent to public analysts for examination for chemical impurities to the neglect of bacteriological investigation, and it is advised that the coroners in all districts should be requested to associate a competent bacteriologist with this work. Judging from recent epidemics it appears that the great danger consists in the contamination of healthy pork by the intestinal contents of diseased pigs on the premises of pork butchers.

The attempts of the Board to deal with various methods of "improving" flour appear to have received a check by the failure of one prosecution, and fresh legislation will be required to check tampering with the nation's food.

The question of milk preservatives has been the subject of some new regulations, but secret preservatives are still advertised. One of these on examination was found to consist largely of potassium fluoride. In view of this, it is satisfactory to note that prosecutions have already been successful and that little difficulty is anticipated in dealing with such sophistications under the wide powers given to local authorities by the Milk and Cream Regulations, 1912.

Vaccinal Condition of Cases of Small-pox occurring in 1912.

A table relating to 105 of the cases is given. In all 121 were notified, but 12 of these were importations from abroad; 2 had no eruption, and were therefore very doubtful; whilst a third was very doubtful. Of these 121 cases, 61 had been vaccinated and had cicatrices (2 fatal cases); 1 fatal case was stated to have been vaccinated, but showed no cicatrices; 26 had not been vaccinated and had no cicatrices (4 deaths); 6 cases had been vaccinated during the incubation period (none fatal); and 5, none of which were fatal, had been revaccinated.

The Board's Pathological Laboratory.

In addition to the routine work on plague specimens, food, etc., special attention has been devoted to some aspects of the tuberculosis problem. The nature of the bacilli responsible for tuberculosis in children is under investigation, and a report is presented on the examination of samples of milk, butter, and cream for tubercle bacilli. Drs. Eastwood and Griffith remark that, although valuable work is being performed in several centres on the infection of these products by tubercle bacilli, yet comparison of the results from different laboratories is impossible owing to the striking differences of technique. Their own technique for the examination of butter consists essentially of injecting the deposit won by centrifugalizing a warm emulsion of butter in saline. They point out the danger of mistaking for tuberculosis the lesions produced in the guinea-pig by other acid-fast bacilli when fat is at the same time introduced into the peritoneum. They emphasize strongly the difficulty of detecting tubercle bacilli in milk which is so dirty that the contaminating organisms are alone fatal to the guinea-pigs, and point out the evils

which may ensue when the farmer discovers that dirty milk is more likely to escape detection than clean milk. They have used antiformin in order to kill off the contaminating organisms, but, although a certain degree of success has been attained, the results were not entirely satisfactory.

Causes of Death in Measles.

Dr. Thursfield first passes the available statistics under review, and shows that the current opinion—that measles in itself is rarely fatal—is well founded. "It has been assumed that the pneumococcus is the main cause of the fatal bronchopneumonia, an assumption which has received very little critical investigation." This statement might be challenged, as the part played by the streptococcus is recognized in several popular textbooks. In order to criticize this assumption the bacteriological findings in 35 fatal cases are carefully enumerated. *Streptococcus pyogenes* was identified in 9 cases, and was found in pure culture in the heart's blood. In 5 cases the infecting organism was apparently the pneumococcus, which was found in the heart's blood in 4 cases. Four cases were apparently due to the *Bacillus influenzae*, 3 to the *Staphylococcus pyogenes aureus*, 4 to a mixed infection with *Streptococcus pyogenes* and the last-named organism. There were in addition 5 other cases where the organism was a streptococcus of doubtful character. Most of the cases had bronchopneumonia. There can thus be little doubt but that the streptococcus plays a more important part than the pneumococcus in the etiology of the bronchopneumonia. In the majority of patients who die from streptococcus infection there is well-marked bronchopneumonia, but this is not necessarily the case. The probable source of the infecting organism is a septic condition of the pharynx, mouth, and fauces; this is in agreement with the results of Lorey, who was able to isolate—in streptococcal cases—the infecting organism in almost pure culture from the fauces. These cases have no clinical feature by which they can be recognized, although they die towards the middle or end of the second week, whilst the pneumococcal cases, if they die at all, die in the earlier stages—towards the end of the first week or the beginning of the second. Next in importance comes the pneumococcus, which appears to be less virulent. The frequency with which the *B. influenzae* occurs apparently differs in different epidemics, as investigators have obtained different figures. As to the actual cause of death, septicaemia was the most important, accounting for 18 out of the 35 cases, whilst bronchopneumonia was the actual cause of death in 13.

The practical points resulting from the investigation are that it would be best to isolate all these cases of streptococcal infection from other cases of measles, but, failing this counsel of perfection, it is advisable to take all possible precautions to prevent the carrying of streptococcal infection from patient to patient. The use of sensitized vaccines is finally suggested, but without any evidence that they are efficacious.

Morgan's Bacillus and Summer Diarrhoea.

Dr. C. J. Lewis has continued his investigation into the bacteriology of summer diarrhoea. The present report relates to the agglutination reactions of Morgan's bacillus. Sixteen serums were prepared by the immunization of rabbits with sixteen selected strains of the bacillus; 242 cultures of Morgan's No. 1 bacillus, 8 of Morgan's No. 2, and 3 other cultures belonging to the same group were then tested against these serums. It was found that there were biological differences, as evidenced by the agglutination reactions between strains of bacilli which showed identical fermentation reactions. All the bacilli grouped as Morgan's No. 1 agglutinated with one or more of the serums produced by the injection of one of these sixteen strains. The source of the bacilli—whether from the faeces of healthy infants, from cases of diarrhoea, or from *post-mortem* specimens—did not necessarily influence the agglutination reactions. Neither the 8 cultures of Morgan's No. 2 bacillus nor the other 3 cultures from the same group agglutinated with the serums from Morgan's No. 1 bacillus.

Dr. Moore Alexander has continued his researches on rather different lines. More attention has been paid to the bacilli which produce acid but not gas in lactose media. Such bacilli were found in 7 per cent. of 100 normal children and in 11 per cent. of diarrhoea cases. Sixty-seven feeding experiments were performed with different strains, but only 8 produced fatal results. It is concluded that these organisms are not of much importance in the production of intestinal disturbances.

ROYAL COMMISSION ON VENEREAL DISEASES.

Deafness.

AT the twelfth meeting of the Royal Commission on Venereal Diseases, held on January 23rd, evidence was given by Dr. J. Kerr Love, Aural Surgeon to the Royal Infirmary of Glasgow, Aurist to the Glasgow School Board and to the National Bureau for the Deaf.

Dr. Love's evidence dealt largely with the importance of syphilis as a cause of deafness in children. This syphilitic deafness, he said, was essentially a disease due to untreated syphilis amongst the poor. He was of opinion that about 25 per cent. of the cases of congenital deafness were due to syphilis, and that this form of deafness was hardly ever cured; better general health could be obtained for the children by treatment, but the restoration of hearing was rarely possible. The cost of education in the case of a deaf child was at least five times as great as in the case of a normal child, so that even from the financial point of view alone the matter was a very serious one.

Dr. Love illustrated the effect of syphilis on child life by showing a number of family trees of families affected with syphilis; the records of twenty-one families showed that two-thirds of the children born were born dead, or if alive were blind or deaf or both.

He considered that improved treatment of syphilis was urgently demanded, and that this treatment should be placed within the reach of all. He thought that some form of notification of the disease was desirable, but that universal and compulsory notification was not at present feasible.

It might, however, be prudent to attack syphilis by a flank movement and to notify certain conditions which were often due to congenital syphilis, following up the information obtained by treatment of syphilis if the Wassermann reaction or any other test that might be applied indicated its presence.

Military Experience.

At the thirteenth meeting Major Harrison, R.A.M.C., Pathologist to the Royal Army Medical Hospital, Rochester Row, gave evidence. He said that the chief cause of the late manifestations of syphilis was inadequate treatment, and that since the treatment of syphilis in the army had been systematized malignant syphilis had become almost unknown. Adequate treatment should be commenced at the earliest possible stage after the establishment of the diagnosis, and should include prolonged observation clinically and by all laboratory tests until the doctor was satisfied.

Major Harrison described the methods of diagnosis in use in the army, and stated that the diagnosis of syphilis, which in former years was often difficult, had now become as exact as that of almost any other disease. He referred also to the importance of gonorrhoea, and gave an account of the methods adopted at the Rochester Row Hospital in connexion with this disease.

Major Harrison was of opinion that it was very important that both medical practitioners and the general public should be educated with regard to venereal diseases, and he laid stress on the desirability of obtaining legislation to prevent unqualified persons from treating these diseases. With regard to the question of notification, he advocated a system of confidential notification at the option of the local authority.

In view of the importance of providing facilities for diagnosis in order to secure early treatment, he thought district and county laboratories should be established under the direction of a central national laboratory, and he submitted a scheme for such a national laboratory service.

MEDICAL MEN: THEIR PLACE AND INFLUENCE IN THE STATE.

By Christopher Addison, M.D., F.R.C.S., M.P.,
Formerly Lecturer on Anatomy, St. Bartholomew's Hospital; Examiner in Anatomy, the Universities of London and Cambridge; Chairman of the Board of Intermediate Medical Studies, the University of London, etc.

[The subjoined is a verbatim report of the part of Dr. Addison's speech delivered in response to the toast of his health, proposed by Mr. Lloyd George and Mr. C. B. Lockwood, at the banquet given to Dr. Addison on February 6th, which dealt with general matters as distinguished from those parts of his speech appropriate to the special occasion, which are reported in the description of the dinner.]

A new phase is coming over public opinion. The fact that the health of the people is a national concern would have been consented to around nearly every fireside these fifty years or more, and much has been done in consequence. Ill health has always meant a great loss both of energy and treasure; but now that sickness, on a national basis, can be expressed in terms of so many tens of thousands of pounds paid out weekly to the sick, now that it appeals, not through any roundabout channel of the Poor Law or otherwise, but directly to the Britisher's pocket, the problem has emerged from the general into the particular. It arrests the attention of every citizen, and stands before us as demanding well-considered scientific and practical effort, not only towards an earlier and more effective treatment of sickness, but towards an increased prevention of its occurrence.

This is a time when, if medicine can spare more men than she has hitherto done for the public service, there is surely need of their help. Their influence both on legislation and administration might be of the utmost value to the community. I say advisedly "to the community," for we shall all agree that the public interest must always come first; that it is a short-sighted and, in the end, a suicidal policy that seeks to promote the interest of any class at the expense of the general interest; that, in fact, the best interest of any class is most promoted by making it as far as possible an efficient and necessary minister to the common well-being.

I believe that the people welcome, just as they really need, any help and guidance that medicine can afford. They are glad of the light of any knowledge that we can bring into the common stock—not knowledge that is pedantic and apart, but common knowledge.

Of course, in public life you may have to meet the cheap and shallow cavilling at politicians generally which suggests that they are less sincere than the rest of people. It is a mixture of chaff and moonshine. Politicians are of divers sorts, of course, like other people, and they have their peculiar trials and difficulties. Sometimes they have to contend against all manner of unworthy suspicion. I am sure, however, that there is amongst them as high an average of men of real sincerity and unselfish devotion to duty as there is in any other class. I believe, Sir, that you would say that the road of political life is an uneven road, and sometimes a very hard one, but that it is worth while journeying upon; that there is a welcome and abundant room upon it for industrious and intelligent wayfarers of all shades of opinion. For medical men at any rate, at this time, political life affords unusual opportunities for useful service.

Simplification of Public Administration.

In the matter, for example, of the organization of our Public Health services. No one looking fairly into this question can fail to be struck by the confusion it now presents. It is a medley of authorities with all its inevitable waste of effort. There are, however, some respects in which even the existing system will automatically bring some improvements, and it may be interesting to mention two of these.

Two of the heavy items of cost in the Poor Law medical service are those connected with tuberculosis and the sickness of old age. With respect to tuberculosis, the large grants which you have made to county and county borough councils to enable them to make provision for the treatment of *all* persons in their area suffering from tuberculosis will gradually, as the schemes which now have been approved for so many areas are got into operation, remove tuberculosis from the Poor Law. Similarly, in regard to aged persons under the provisions of the National Insurance Act whereby medical benefit does not cease at the age of 70, but continues throughout life, it will come to pass, as those who are now insured persons enter the ranks of the aged, that they will be entitled to medical attendance under the insurance service and will not need to apply to the guardians.

These are welcome changes, but we cannot survey the present position of affairs without being convinced that much could be gained by simplification and by the securing in an increased degree of a common aim and direction.

Think of all the different sets of inspectors that may be concerned, for instance, in the home of a London worker. If the vaccination of a child, or a medical order in the case of poverty is required, we look to the Poor Law guardians; if a child has contracted an infectious disease, then it passes into the charge of the Metropolitan Asylums Board, whilst the home from which the child has been removed is dealt with by the inspector and medical officer of the local council; if a child is found amiss at school then it may come under the school medical service, administered by the County Council under the Board of Education; should the condition of a factory in which one of the family works come into question, then we look to the staff appointed under the Home Office; if the worker is sick, then the Insurance Committee, responsible to the Insurance Commissioners, is concerned; should he prove to be tuberculous, the Borough Council, the County Council, and the Metropolitan Asylums Board, as well as the Insurance Committee, may also be called on to share the responsibility. Truly, we are a patient people.

There are, however, limits to what can be done by organization. The facts that have been brought to light through the inspection of school children and the revelations of ill health amongst workers now being made under the operation of the National Insurance Act show clearly that we must also aim at developing a service which will provide for an earlier and more accurate diagnosis, as well as for earlier and more effective treatment.

Possibilities of Medical Practice in the Future.

In this connexion, may I say, with great respect, that I think some medical men would be less fidgety than they are, when possible future developments are discussed, if they kept in mind certain elementary facts which no Government could possibly ignore? In the first place, any satisfactory service must be one that will attract and *keep* an adequate number of capable men; secondly, it must be one that in its operation contains incentives to, facilities for, and encouragement of, increased efficiency; and, thirdly, it must seek to make use, not only for the treatment but for the prevention of disease, of that intimate personal relation and trust which so commonly exists between medical men and their patients.

The separation of the medical service from the provision of drugs under the Insurance Act was made the subject of adverse criticism, but I think it is generally agreed now that it was a step in the right direction. We want drugs to occupy a proper perspective, and not to conceal the need that there is so often of better food, fresh air, a clean home, and temperate living.

Many suggestions that have been made as to possible future developments are worthy of careful thought. We can see, for example, that it might be of great value if arrangements could be made in suitable places for medical men to work in groups, where for certain purposes they could combine at a common centre for mutual help, and have access to better means for making or confirming diagnosis. Some such an arrangement would provide a valuable stimulus to efficiency, would help to keep men more up to date, and prevent the development of that

separateness and isolation which leads so many medical men to live in their own lonely furrow. What an advantage a nursing service would be if it could be combined with such a system! But there is a great scarcity of nurses. The supply is not equal to the demand, notwithstanding the great numbers of unselfish women who devote themselves to it. The scarcity, I believe, will remain so long as we pay probationers a smaller wage than a novice in the kitchen, and expect a sufficiency of women to undertake the complex duties and grave responsibilities of a trained nurse for such a salary as can be demanded by any moderately competent cook. I believe, indeed, that it would be easier to provide a service of consultants than of nurses.

At this point I would like to say that I think that the great hospital question, with goodwill and careful thought, is capable of a solution that will not only not injure, but will use and strengthen our great existing institutions.

I hope myself also to live to see the day when study leave is an essential part of our medical service.

You may say that these are dreams. But one may be pardoned sometimes the luxury of dreaming. They are such dreams as if we turn our thoughts to them, with care and without prejudice, we help to provide a base and substance for the fabric of our vision.

Increased Prevention of Disease.

We may, indeed, do very much by improved treatment, and every one who is sick, and all of us, when those near to us are affected, know that too high a value cannot be placed upon it. But there is, I think, something of a greater and more enduring value even than this to be done. It is to use all our organization, all the knowledge, all the art and science of medicine towards an increased prevention of disease.

The grant, made to enable local authorities to deal with all tuberculous persons, is a very notable advance as a preventive measure. As the dispensaries and the other machinery get into working, not only the health of those who are notified, but that of those living with them, will come under review—their food, their habits of life, and labour. The indirect and educative effects of these provisions will be very far-reaching.

In the same way that grant, which you made for the first time two years ago, and with a whole heart I know, to assist local authorities in the treatment of those ailments of school children which have been revealed by medical inspection, is operating, and will continue to operate, with great effect as a preventive measure. It has given an enormous stimulus to treatment, to the provision of open-air schools, to the cultivation of physical training, and the rest. The grant has grown. I hope it will continue to grow. Call it an extra torpedo boat, a destroyer or what you will, but do not take it off the estimates.

The State, however, has no right to ask any class of men to do the impossible. It confronts the medical profession with six hundred thousand ill-nourished children in our elementary schools, with three hundred thousand who have adenoids and so forth; it deplores the waste of infant life; it points to an army of factory girls and women workers with anaemia, chronic indigestion, etc., and it is beginning to say to the medical profession, "We want these things altered. We want these people to be healthier. Will you help us to treat them?" It would be invaluable if the medical profession after fair, complete, and organized consideration, but in a full and fearless manner, were to say to the State:

"Yes! we will turn to the task with all good-will and do the best we can; but we cannot undertake to make these children healthy by drugs. They need this and that—good food, fresh air, a clean and well ventilated home. So long as these things are absent, so long as many of these children, with too little sleep, pass half their hours in the stuffy, stagnant air of an overcrowded room, so long will they crowd into our clinics and out-patient departments, rank behind rank."

I hope also that it would be added: "We claim also that those whose duty it is to make reports upon the conditions of labour and home life of the people should be free to tell the truth, and the whole truth, without fear or favour, and should be given a proper security of tenure of office." They would also, I believe, go on to say: "We will help as best we can to abate this waste of child life, but do you, by your elementary schools, by secondary schools, by schools for mothers, by any other means at your disposal, do what can be done by persuasion and instruction, to secure that the girls and young women of this decade, when they become mothers in the next, will know better than to give their infants sop, will know that it is milk they need, and, best of all, their own.

"These anaemic girls, these dyspeptic women, are not to be put right by medicines alone. The hours they work, the conditions they work under, are often also concerned, as well as their habits of life and diet. It is useless for us to tell people to take proper food who have not the means of obtaining it, who sometimes are ignorant of how to cook it when they have obtained it, and who often enough are paying what should be an economic rent for a decent home but are obtaining only a couple of tenement rooms which have no fireplace and other facilities for preparing and cooking a meal, be they ever so willing and able. Do you use your schools and other agencies to the full in giving to the people the knowledge of these matters, of an appreciation of the value and meaning of cleanliness and temperance, and of other things which are of so grave importance in their daily life."

The State, on its part, could rightly reply: "Tell us, then, in plain terms, in terms that the people can transform into daily practice, what we should teach them and what standards we should adopt."

There is no limit to the usefulness of a proper and enlightened co-operation between medicine and the State, and its influence would be felt in every department of national life.

The Research Penny.

The number of subjects, however, in which medicine could give clear and definite guidance are far too few, and for this reason I believe that the setting up of the medical research scheme may come to be regarded as one of the most important contributions in recent times to the advancement of public health. When you determined to set aside a penny for each insured person out of the State's contribution, which might be devoted to the purposes of research, it did not, I think, receive much attention. It occupies only half a dozen lines in a long and complicated Act, and was rather lost sight of at the time. But the fact that it provides the Medical Research Committee with an income of £57,000 a year will not be forgotten. At last the organization and assistance of this work in the country on comprehensive lines becomes a practical possibility. I know that you are right in that you have told us you will welcome a search for truth, a careful ascertainment of facts, an examination into causes to be pursued, not only in the laboratory, but in the mine and the factory, in the shop and the home, that you hope that in its operation this undertaking may stimulate the best work, and be of a helpful influence in the medical schools and universities, and provide, what we have hitherto lacked in this respect in this country, a proper opportunity for a real career to proved men of a suitable type.

There is abundance of work to do. "The fields are white unto the harvest." We know well enough that we cannot over-estimate the work that medical men do at the bedside of the patient. Let us make it as skilled as we can. Usually it means help and an added sense of security; sometimes it means the revelation of a truth that is hard to bear. Let us use this intimate relation and the influence that it brings, wisely and to the uttermost. But the community has a growing need for the services of medical men in the wider sphere to which I have referred. There is a place for them there in which their help and influence as citizens and as trained men should be felt, in the education and preservation of healthy and clean-living people, in the moulding of our laws, in the administration of them, and throughout the whole organism of society. This is a place they well may occupy; in doing so they become, in a public and collective, as well as in a private and individual capacity, the trusted counsellors and honoured servants of the commonwealth.

THE DINNER.

Mr. LLOYD GEORGE was in the chair. The dinner had been organized by a committee composed of the following gentlemen:

The Right Hon. Lord Sandhurst, P.C.	Dr. Lauriston Shaw
Sir Clifford Allbutt, K.C.B., F.R.S.	Dr. Mott, F.R.S.
Sir Arbuthnot Lane	Dr. Arthur Latham
Sir Almroth Wright, F.R.S.	Dr. Shore
Sir Victor Horsley, F.R.S.	Dr. Hugh Thursfield
Sir Shirley Murphy	Dr. Ewen Maclean (Cardiff)
Sir Robert Philip	Dr. Alexander Macphail
Colonel Sir William Leishman, F.R.S.	Dr. Grant Andrew (Glasgow)
The Right Hon. R. Farquharson, P.C., M.D.	Dr. W. Langdon Brown
Professor Sims Woodhead	Dr. H. Morley Fletcher
Professor Keith, F.R.S.	Dr. Adam Fulton (Nottingham)
Professor Arthur Thomson	Mr. D. F. Todd (Sunderland)
Professor William Wright	Dr. Buist (Dundee)
Professor Arthur Hall	Dr. C. A. Fleming (Bradford-on-Avon)
Professor A. M. Patterson	Dr. Norman Walker (Edinburgh)
Professor William Bulloch, F.R.S.	Dr. Leonard Hill, F.R.S.
Mr. G. Lenthal Cheatle, C.B.	Dr. A. C. Farquharson (Durham)
Mr. C. B. Lockwood	Mr. J. Y. W. Macalister
Mr. C. J. Bond (Leicester)	Mr. Walter Jessop
	Dr. B. A. Richmond.

Those present numbered about 300, and among them were a large number of the members of the medical profession, teachers of anatomy, whose ranks Dr. Addison has only recently left, and other friends not members of the medical profession. After the Chairman had given the usual loyal toasts, Dr. MILLS, who with Sir John Collie acted as secretary of the dinner, read a letter from Lord Moulton of Bank, Chairman of the Medical Research Committee, many members of which were present, expressing his regret that, owing to the alteration in the date of the dinner, he was unable to be present, and speaking in the highest terms of the help which Dr. Addison had given during the labours of that committee.

Mr. LLOYD GEORGE, who was very warmly received, then proposed the health of Dr. Addison in a speech which has already been very fully reported in the daily newspapers. The gathering, he said, showed the esteem in which the guest was held in every sphere in which he had been associated, but for himself he would regard him primarily as a politician, and if he were as good a doctor as a politician, the profession which he had left for a political life had lost a very great deal. The reason why Dr. Addison had got on in the House of Commons was because he possessed quality, and because he had courage and was a first-rate fighter. Discussing his other characteristics, he laid stress on the soundness of his judgement, the unflinching nature of his loyalty, not only to his profession but also to the causes which he adopted, and his tenacity of purpose. He knew the anatomy of a fact, and this was a very important thing. Speaking of the Insurance Act, Mr. Lloyd George said that when the differences with the medical profession looked blackest, Dr. Addison never despaired; he remained absolutely loyal to his profession, but was convinced that matters could be so arranged that the medical profession would ultimately be satisfied. Speaking then of the working of National Insurance, Mr. Lloyd George said that it was estimated that there were 22,500 general practitioners in Great Britain, and that there were 20,000 on the panels, subject to the qualification that this number included the names of doctors who were on more than one panel. The sum of 4½ millions had been distributed among these doctors during the year. That meant an average of £230 for each doctor. In London the average was £330, in Birmingham £380, in Liverpool £370, and in Durham £230. These sums, he said, were in respect of barely one-third of the population. Assuming that the rate for the rest was the same—and he had once been told that it would be better—the general practitioner in London would get an average income of £1,000 a year, in Birmingham and Liverpool would get £1.100 a year, in Manchester £900, and in Durham £700 a year. Some doctors made considerably more, some considerably less, but he maintained that the rate of remuneration had undoubtedly been raised. Referring to the five towns dealt with in the Plender report, he compared the figures then obtained with the estimates for the first year under the Insurance Act. He claimed that they showed an increase of from £150 to £200 a year on the average receipts. This increased pay meant, no doubt, more work, but he did not suppose the doctor objected to more work if he got more pay. It was a very good thing from the point of view of the community; it must mean that millions of people were now getting medical attendance who had previously not had any at all. After a reference to the articles published in the *Times* some time ago on "The Revolt of the Junior Medical Officer, an Effect of the Insurance Act," in which it was stated that the remuneration of assistants and locumtenents had increased very greatly, Mr. Lloyd George said that he had received letters from doctors who stated that they had been ruined because they did not go on the panel in time. He was sorry for it, and could only advise them to go on the panel. That was the position at the present moment: that the remuneration of the medical profession generally was increased. He was frankly glad of it, and would infinitely rather that the profession had beaten him in the bargain than that they should feel that on the whole the State had treated them shabbily. "I do not say," he continued, "that there are not a good many things that could be improved, amended, and altered. All experience teaches things of that sort, and you can only do it gradually." Returning to the subject of his toast, the Chancellor said that a man of Dr. Addison's type was needed in politics, especially at the present time. The State was feeling a deeper sense of responsibility for the well-being of every individual. They were taking a great health survey of the nation. Dr. Addison was not a mere trade unionist; he was a man who took a broad view and a high view of the great functions of the profession to which he belonged. The survey of the nation that was being made under the Insurance Act was including families and persons who had never had a doctor to visit their households before. Gradually the doctors would be able to advise the committees as to what was really going on down below, where the hand of the State had never reached before, except in punishment. The hand of mercy, through the doctor, was going down to pick up those poor wretches. That was why he was delighted that the profession had Dr. Addison to represent it in Parliament, and why as a politician and a member of the Government he was there to propose the toast and to wish him long life, health, and strength. (Cheers)

Mr. C. B. LOCKWOOD, consulting surgeon to St. Bartholomew's Hospital, said that he spoke as a teacher and one of the oldest friends of Dr. Addison. Dr. Addison, he said, had been a most capable teacher of anatomy, and the loss to the profession when he gave up this calling to take up politics was great. The gain to the profession by the same act was, however, still greater. He spoke of his valuable work on the Departmental Committee on Tuberculosis and of the importance of the duties assigned to the Medical Research Committee. On such matters Dr. Addison's knowledge and trained intellect would be fruitful in service to the community. While difficulties had existed at the start of the Insurance Act, much of the trouble had passed away, and many of those who had opposed it remained to pray and, as Mr. Lloyd George had stated, to take part in the collection. He was not afraid of failure in regard to the quality of the men needed to work the Act. That must be good. The quantity, however, was a different matter. Better emoluments would tempt more and more men to take part, and he presumed that the number of those entries into the medical schools would grow proportionately with the demand. He hoped that entrance scholarships might be founded to tempt capable youths who could not otherwise afford to go through the course of study. Sooner or later the medical schools would be found to be too small to accommodate all the students, and he had long thought that the Poor Law infirmaries, or municipal hospitals, as he preferred to call them, should be utilized for this purpose.

Dr. ADDISON, who on rising to respond was very cordially received, said: Mr. Lloyd George, Mr. Lockwood, and Gentlemen,—It is difficult, very difficult, on an occasion like this to express in a full and proper measure the gratefulness which I feel to you who render me so great a kindness. Your understanding of this, however, makes you lenient and generous to your guest, and on it I can rely. I thank you, Mr. Lloyd George, you, Mr. Lockwood,

and you, gentlemen and friends, with all my heart. It is very seldom that events of this kind occur in the lives of any of us, and the knowledge of this only makes me the more sensible of a singular good fortune and of your encouraging friendship. It is certain that, whatever may be the aims and efforts, the anxieties or the vicissitudes of the time to come, the recollection of this evening must remain a fresh and treasured memory and be a constant stimulus to work and hope. There are many here besides myself who were pupils of yours, Mr. Lockwood; I should think that, without exception, they would agree that we learnt from you something more important even than the facts of anatomy and the art of surgery, distinguished as you are for the accuracy and precision of your exposition of them. We learnt, to borrow a phrase of your own, that men's opinions after all are of little enduring moment, but that the reasons for them may be of much consequence; that a careful ascertainment of the facts, and honest and fearless dealing with them, are essential to real success in any enterprise. Sometimes the qualities which youthful discipleship attributes to a teacher are found with ripening experience not to be fully warranted; but I believe that the longer most of your pupils live, the more impressed they become with the wisdom and value of your precept and practice. For this reason, I cannot but take a real pride in the fact that you are associated with this toast. One sees around us, Sir, old friends and new. Those who in the city of Sheffield gave me a first opportunity for work and responsibility. Friends of twenty years or so in the field of anatomy. We have fought side by side, or against one another, many a time, fairly, but with a common purpose. He is a poor fellow who has no pride in his own craft. Making full allowance for this, however, I do not shrink from saying that you will go far, Sir, in the ranks of medicine to find a wider-minded and more capable set of men than British anatomists, taking them all together. We used to think sometimes that that great hierarchy who use consulting rooms looked down upon us, but that day is past. There are many here too, Sir, who have been staunch supporters in a combat—recent, but now happily past, and one which I believe will not be resumed. There are some, too, who equally sincerely were opponents. There are others, also, personal friends and more, to whose strong loyalty and unselfish labour I owe so much in my constituency. And now, may I say, Sir, how well I know all that your presence here this evening means, how great an honour you do to me and my friends, and that it is not possible to thank you as I would like. The fact that you have set aside an evening for this purpose out of a life that is full of work in great matters and with enormous responsibilities speaks for itself. All present here, Sir, do not agree with your political views or mine, but we shall all agree on this—that there is probably not a place in the land, not even the smallest village, where there cannot be found some who bless your name, and some who do the opposite. It is more needful for your guest than for yourself to bear in mind the exhortation: "Beware when all men speak well of you." For my part I make no cloak of it. I am proud that you are here, because I know, and it has been my privilege to have many opportunities of learning, that through your fortunes you have one fixed purpose—to use your powers to the utmost in the furtherance of enterprises that you believe to be for the betterment of the condition of the people. I have myself a good deal of confidence that in time to come the medical profession will recognize that these great plans which your genius conceived and power initiated have formed the starting point for improvements, not only in the public health, but in the science and character of the practice of medicine, which were both necessary and fundamental. Dr. Addison then proceeded to make the observations printed in full above.

Dr. Lauriston Shaw proposed the health of the Chairman, and Mr. Lloyd George, in the course of a short reply, said that he could not have imagined a year ago that he would so soon have dined—he would not say with impunity—with a representative gathering of doctors such as were present that evening, but he well recognized that those who fought the hardest proved in the long run to be the best friends. He had learnt to understand the medical profession infinitely better than he did when he started. In a few words he spoke in terms of the highest admiration of the statesmanlike address which Dr. Addison had delivered. He would like this address to be published as a separate document and circulated throughout the whole kingdom. It would enlighten public opinion. The medical profession should enlighten and guide public opinion as to what could be gained by co-operation between the public and the medical profession. He thanked the proposer of the toast and those present for the welcome they had extended to him.

THE VACCINATION QUESTION IN THE LIGHT OF MODERN EXPERIENCE.

Dr. C. Killick Millard on February 4th concluded a course of three lectures on the vaccination question in the light of modern experience, arranged by the Chadwick Trustees.

In his first lecture Dr. Millard said that when he first went to Leicester his views on the subject were strictly orthodox, but in consequence of his experience of small-pox in Leicester, he had been obliged to modify those views considerably. He attributed the bitterness felt by the opponents of vaccination to the compulsory clauses of the Vaccination Acts. There was also the repulsion which many persons felt to the introduction of a disease into a healthy child for the sake of preventing another disease, the risk of contracting which was problematical. He set out the following propositions as those to which he had been brought by his own observations:

1. I believe absolutely in vaccination, though with certain important reservations, and I differ *in toto* from the antivaccinist when he asserts that vaccination is a "myth" and a "delusion." I agree entirely with the provaccinist that recent vaccination confers on the individual protection against small-pox, which, for practical purposes, is complete, though unfortunately only temporary.

2. Vaccination, repeated as often as necessary, is invaluable for protecting those who for any reason are specially exposed to the infection of small-pox—for example, doctors and nurses.

3. It is also of very great value for protecting persons after actual exposure to infection—that is, small-pox "contacts."

4. I agree entirely with the provaccinist that vaccination has a remarkable power of modifying and mitigating small-pox for many years after its power to protect against attack has worn out. Moreover, the protection conferred by vaccination can be renewed by revaccination.

5. On the other hand, I agree with the antivaccinist in doubting the value to the community at the present day of infantile vaccination as provided by law. I think that an altogether exaggerated view has been taken as to the effect of such vaccination in preventing the spread of small-pox, which is the real problem before us.

6. I agree with the antivaccinist that sanitation, notification, isolation, surveillance of contacts, and other modern measures which are becoming generally adopted, have played a more important part in the abolition of small-pox from this country during the past thirty or forty years than infantile vaccination.

7. I think the antivaccinist is right when he contends that the drawbacks to infantile vaccination and the injuries to health caused by it are not sufficiently recognized by the medical profession, who, in their sincere anxiety to defend vaccination, have been inclined to minimize these drawbacks.

8. On the other hand, I quite admit that the antivaccinist, in his hostility to vaccination, has frequently run into the opposite extreme and grossly exaggerated these drawbacks, whilst endeavouring to prejudice the question of vaccination by making wild assertions about the nature and origin of vaccine lymph, etc.

9. There is distinct evidence that small-pox is leaving this country in spite of the increasing neglect of vaccination, and it seems probable that such neglect of vaccination will continue to increase until the great majority of the population has become unvaccinated. I am inclined to believe that when this happens the problem of small-pox prevention will very possibly be simplified and made more easy rather than more difficult.

10. The great difficulty in controlling the spread of small-pox at the present day is the occurrence of very mild unrecognized cases of the disease which spread infection broadcast before any precautions can be taken. It is an important fact, the significance of which does not appear to be sufficiently appreciated, that these mild unrecognized cases which do so much mischief, and which go so far to thwart our efforts to control the spread of the disease, occur almost entirely amongst vaccinated persons and *because they were so vaccinated*. In other words, it would seem that infantile vaccination, by its very success in mitigating small-pox after its power to protect from attack has worn out, may have a distinct tendency to encourage the spread of the disease. It is possible that this tendency more than neutralizes any benefit which the community derives from the fact that vaccination largely protects the child population from small-pox.

Dr. Millard proceeded to elaborate his thesis. Dealing first with the proposition that vaccination had a protective influence against small-pox so far as the individual was concerned, he said that he regarded this as axiomatic, and practically the whole of his case was based upon it. The protective influence of vaccination upon the individual was not the real vaccination question, which was, What was the protective influence of vaccination upon the community? The distinction between the individual and the community had been largely overlooked. He showed a number of diagrams illustrating the fall in small-pox mortality in London, in England and Wales, and in Leicester. In each case the fall was chiefly noticeable since the "era of sanitation," but especially was this the case in Leicester. The diagrams also showed that a similar and equally striking fall had occurred in certain other zymotic diseases; also that, although the proportion of infants vaccinated had been declining for a number of years, the decline in small-pox mortality had gone on. This was very evident in the case of Leicester. Referring to the Royal Commission on Vaccination, he said that it undoubtedly went a long way towards abolishing compulsion. Many of the Commissioners naturally hesitated to take such a step, because, as they said, "the experiment had never been tried." That was over fifteen years ago. Since then much further experience had been obtained, all tending to show that universal vaccination was less important than was formerly supposed.

In his second lecture Dr. Millard discussed the experience gained in the control of small-pox during the seventeen years which had elapsed since the Royal Commission presented its final report in 1896. As a result of the loophole afforded by the conscience clause of the Act of 1898, infantile vaccination had been increasingly neglected. At the same time greatly increased attention had been paid to modern methods of dealing with small-pox, such as hospital isolation, disinfection, surveillance, and vaccination of contacts, etc., and small-pox mortality had continued to decrease until, during the past eight or nine years, it had been almost a negligible quantity. In 1897–8 a very severe epidemic had occurred at Middlesbrough, a town in which infantile vaccination had been carried out with exemplary thoroughness, but in which sanitation was very unsatisfactory. There had also been a serious epidemic at Dewsbury, where vaccination had been much neglected, but the absence of adequate and proper means of isolating the disease quite accounted for the magnitude of this outbreak. In 1902–4 epidemics occurred in a number of towns, including London, but in most the disease was kept fairly well under control. Moreover, in very many other towns and districts where the disease was introduced it failed to get a hold and was quickly suppressed. Provided only that the cases were promptly recognized and reported, small-pox appeared to be one of the easiest of zymotic diseases to stamp out where modern methods of dealing with it were employed. Dr. Millard expressed his belief that the extent to which infantile vaccination was practised had very little to do with this. Small-pox was a disease which under modern conditions spread chiefly through adults and not through children, and the latter were the only section of the population which infantile vaccination really protected. The real difficulty in controlling the spread of the disease lay in the occurrence of very mild cases, so trifling in their symptoms that their true nature was not recognized. Either the persons attacked consulted no doctor, or the medical man called in failed to diagnose their complaint as small-pox. Consequently, the cases were not reported to the authorities, the persons attacked were not isolated, and no precautions were taken. The very mild cases which were apt to escape recognition occurred chiefly amongst persons who had been vaccinated, but whose vaccination was no longer able to protect them from attack. As instances of the mischief done by modified cases of the disease in vaccinated persons he quoted the following cases:

1. The vaccinated girl, Annie Levy, aged 12, who, owing to the failure of the medical men to recognize the disease, gave rise to the serious outbreak in connexion with the Mile End Poor Law Infirmary in 1911, and who infected—directly or indirectly—52 other persons, ten of whom lost their lives. He suggested that if this girl had never been vaccinated, she would have had an unmodified and more characteristic attack, and whilst it would have been worse for her personally, it was unlikely that the nature of her illness would have been unrecognized and the whole outbreak would probably have been prevented.

2. The outbreak at Kirkcaldy in 1912, which resulted in 43 cases and 14 deaths, was entirely due to the fact that the first case, in a vaccinated lad of 14, was not recognized as small-pox.

3. The outbreak at Newhaven last year, which resulted in 22 cases and 5 deaths. It was caused by a sailor—no doubt vaccinated, though this fact never appears to have been mentioned—who had been staying at the house where eleven of the cases occurred and who whilst there suffered from a slight illness which the medical officer of health believes to have been small-pox, though this was not recognized at the time.

4. In Halifax, in 1903, the medical officer of health traced 40 cases of small-pox to a well-vaccinated man, a tailor, who had so slight an attack that he did not lie up. Another vaccinated man, E. W., whose attack was not recognized, infected 21 known cases and possibly 5 others.

Dr. Millard said that other towns—Coventry, Cardiff, Leicester, Salford, Bristol, Newcastle, Oldham, Manchester, etc.—had all had similar experience, and quoted the following from the annual report of Dr. James Niven, M.O.H., Manchester.

> It is not too much to say that by far the most important factor in the spread of small-pox in Manchester has been the overlooking of cases. . . . The attack, as a rule, was so mild that no medical advice was sought, or, as happened in not a few instances, was not recognized as small-pox by the medical attendant. In fact, this matter is of so much importance that it is not too much to say that if there had been no case overlooked there would have been practically no small-pox outbreak in Manchester.

It was true that sometimes very mild unrecognized cases might occur in unvaccinated persons, and give rise to outbreaks. This happened in respect of an outbreak in Leicester in 1903, which originated in two slight unrecognized cases in young women who had never been vaccinated. But there was this important difference—in such cases the mild and benignant character of the attack was a natural characteristic and was transmitted, with the result that only a mild type of disease was perpetuated. Thus, in the Leicester outbreak referred to, although 43 cases were infected only one case proved fatal. But with vaccinated cases the apparent mildness was artificial or "acquired," and was not transmitted. The severity of the type of disease spread by these very mild vaccinated cases had often been observed, and Dr. Millard said he believed that this was one explanation of the terribly high fatality so often seen amongst the unvaccinated minority in many epidemics. Further, when small-pox attacked vaccinated persons, it did not always manifest a mild type. If the protection had entirely worn out, as was often the case after the lapse of years, the attack would be as severe as if the person had never been vaccinated. This was the explanation of the severe and fatal cases of small-pox that occurred among vaccinated persons in most epidemics. With regard to infantile vaccination, he said that it seemed certain that it would continue to fall more and more into disuse, with the result that the country must depend in future upon hospital isolation, etc. It was unreasonable as well as impracticable, however, to expect the smaller towns and districts to make really adequate provision as regards hospital accommodation for such a remote emergency as a serious outbreak of small-pox. Moreover, such small-pox hospitals as did exist were being increasingly utilized for other purposes. Yet should the emergency arise and the necessary hospital accommodation not be forthcoming immediately, or prove insufficient, a great disaster might readily occur. This was what happened at Gloucester, Middlesbrough, Dewsbury, and elsewhere, and it might easily have been prevented had the Local Government Board been prepared to offer prompt assistance of a practical kind instead of merely giving advice. The possibility of a serious epidemic of small-pox in any part of the country was a national danger which the Government should be prepared to deal with. Dr. Millard suggested that the Local Government Board should keep portable hospital accommodation in constant readiness, will full equipment, including nurses and doctors, to be dispatched at a day's notice to any town or district which was in danger of being overpowered or which applied for assistance. Every detail would, of course, be carefully thought out in advance and arrangements made with large hospitals or nursing institutions for the supply of nurses when required. It the military authorities could do all this, why not the national guardians of

the public health? The expense would be trifling as compared with what had hitherto been spent on vaccination.

In his third lecture Dr. Millard said that it was now thirty years since compulsory infantile vaccination was abandoned in Leicester, and during that period only about 12.3 per cent. of the children born had been registered as vaccinated. The great value of Leicester's experience lay in the fact that it constituted a sort of "control" experiment. In other towns the great reduction which had taken place in small-pox mortality was attributed to infantile vaccination. In Leicester, without infantile vaccination, a similar but even more striking reduction in small-pox mortality had taken place. Hence it was reasonable to doubt if infantile vaccination was the real cause of the reduction anywhere. Moreover, there was another cause, adequate to explain the decline in small-pox, which was common to the whole country, namely, the advent of the sanitary era with all that it included—for example, notification, isolation, disinfection, etc., as well as an immense improvement in sanitary conditions generally—less overcrowding, less filth, and a higher standard of living. Leicester obtained compulsory notification of disease as early as 1878, being one of the first towns to obtain this provision. She preferred to concentrate on sanitation rather than on infantile vaccination, and the result had been a conspicuous success. The deaths, not only from small-pox, but from all other diseases, had been reduced, and the reduction was greater proportionately than in most towns. Dealing with the history of small-pox in Leicester, he contrasted the very serious epidemic which occurred in 1872, and which resulted in 346 deaths, with the three subsequent epidemics which between them had caused only 46 deaths. In the former no serious effort was made to stop the spread of the disease. There was no notification, practically no isolation, no disinfection, and the town was most insanitary. It was important to remember that those responsible for the actual carrying out of the Leicester method had always been believers in the efficacy of vaccination to protect the individual, and had never hesitated to use it for protecting the small-pox staff (for which purpose it was invaluable) and such persons as had been exposed to infection. He regarded the power of vaccination to confer immunity, even after exposure to infection, as a very strong argument against the necessity for infantile vaccination.

Dr. Millard concluded his course by saying that he was satisfied that modern measures, if perfected and promptly applied, were quite adequate for dealing with casual importations of small-pox into this country, even though infantile vaccination became entirely neglected. The chief danger lay in unrecognized cases, especially when occurring in the tramp class. In the rather remote contingency of a really serious epidemic of small-pox occurring again in Leicester, or in any town, he would advise every one to get vaccinated, even though they had already been once vaccinated. It was only recent vaccination that could really be trusted to protect. Nothing was so fallacious in the face of real danger as to trust to vaccination performed many years before.

THE STAMPING OUT OF TUBERCULOSIS.

At a well-attended meeting arranged by the Sunderland Division, held under the chairmanship of Dr. Todd, on January 29th, Dr. Sims Woodhead, Professor of Pathology in the University of Cambridge, delivered an address on how to stamp out tuberculosis.

Professor Woodhead said that as a pathologist he was engaged particularly in finding out the causes of disease. Engaged in that work, and not having the stimulus of the curative side of medicine, pathologists were apt to become pessimistic as to the progress they were making in their fight against disease. Nevertheless, in connexion with tuberculosis, even they could not but be struck by the contrasts that were presented fifty years ago and to-day. At one time, before very much was known about tuberculosis, they all of them, both medical men and general public, were essentially pessimistic in their attitude towards this disease. They looked upon it as something almost beyond the possibility of cure. Fortunately that was no longer the case. It had been found that a very large number of cases of tuberculosis had been cured. The first indication of this fact came by way of the *post-mortem* table. In making autopsies on patients who had succumbed to various diseases it was found that a large percentage of the patients had suffered from tuberculosis at one time of their lives, and had been cured. Indeed, it was calculated that 80 or 90 per cent. of the people who died in later life had at some period or other during their life suffered from tuberculosis and had recovered. The pathologist was thus able to take a wider outlook than the clinician and to see the interdependence of disease producer and resistant or non-resistant tissue. The real advance made by the medical profession in the cure of consumption came when the tubercle bacillus was discovered. As they knew, it was only as the causes of disease had been discovered that they had been able to make proper headway against disease, especially those diseases of the infective type. Tuberculosis was one of the most important of this group. They must look upon tuberculosis as being caused by an organism that could live both inside and outside the body, and it was important that they should study it carefully in both those aspects. Research had revealed that the tubercle bacillus was probably modified by its surroundings, and that, like every other living organism, it adapted itself to the conditions in which it had to live. It could live on dead organic matter; it could live in different animals; and they often found the tubercle bacillus flourishing in conditions in which they did not expect it to do well. It was found in the snake, in the rat, and in various domestic animals. It was once thought that the goat was immune from tuberculosis, but it had now been found that even the goat was susceptible, though on account of its open-air life it was much less subject to "natural" infection than the cow or the calf. This was an important discovery, which suggested the importance of fresh air in combating the advance of the disease organism. The tubercle bacillus was practically everywhere, but it was present in larger quantities in some positions than in others, and wherever it was numerous they had potential danger. Infection depended upon two factors—first, the amount of infected material; and, secondly, the susceptibility or insusceptibility of those who came into contact with that material. They ought to try to diminish the aggregation of the infected material in any one place. In houses, workshops, and all places where people congregated they should try and bring down infection to the smallest possible limits. They had to recognize that the susceptibility of one person was greater than another, and that the susceptibility of children was greater than that of adults. They must also bend their energies to increase the resistance to infection in the individual. That was the main question with which they as doctors, and as persons charged with the preservation of public health, had to deal. They had, he said, many means of defence against tubercle bacilli. First of all, there was the blood. The white corpuscles of the blood possessed the power of killing these organisms, and indeed there were sufficient defences in the body to deal with a number of them. With healthy mucous membranes, it was almost impossible for the tubercle bacillus to pass through the intestinal canal into the body, and so it happened that a certain number of people might drink milk from a tuberculous cow without developing tuberculosis, but they must remember how frail was the defence of children against the bacillus, and seek to stop infection from that and other sources in the interests of the weaker section of the community. The great thing to aim at after doing away with gross infection—large quantities of tubercle bacilli—to minimize the chances of infection was the building up of the defences of the patient. They had to remember that the well-nourished patient was always the patient possessing the greater powers of resistance. They found that as the cost of living had fallen, the mortality from phthisis had fallen. He did not introduce this question of cost of living with any political object, but wished simply to point out, for instance, that the reduction in the cost of flour and other articles of food was always followed by a fall in the death-rate from tuberculosis. This question of a well-nourished body was important, for they found that the tubercle bacillus flourished best in devitalized tissue or in people who were below par. Indeed, it could not develop unless supported by great numbers in healthy, well-nourished tissues. They

had made marked progress in stimulating the defences against the tubercle bacilli and in controlling infection in recent years. In the last fifty years the death-rate from tuberculosis had declined 50 per cent., and in children the decrease was 70 per cent. With, perhaps, the exception of Denmark, England was making more progress in this matter than any other country in the world. The work was worth doing because it was increasing our efficiency as a nation enormously, besides being advantageous from an economic point of view. With regard to methods of attack they must look well to their milk supplies. The milk supply should be carefully guarded, and that could only be done by inspection at the source. Tubercle bacilli found in milk were highly active and always dangerous. Tuberculous patients should be isolated to prevent them becoming centres of infection. The open, or infective, cases should be collected together in hospitals and should be trained to disinfect themselves and everything that came away from them. That was done in Italy. Patients who were not infective should be treated in sanatoriums and helped to recover. Then there was the treatment at dispensaries with tuberculin. Properly used on properly selected cases, tuberculin might be used with advantage, but it must be remembered that tuberculin was very powerful, and therefore might be a very dangerous instrument if not properly used. In this connexion he wished to utter a warning—they must not expect to cure every patient sent to a sanatorium or to a tuberculin dispensary; if they did, they would be woefully disappointed. It was important, too, that they should have better housing conditions if they were to successfully fight the tubercle organism. They wanted more room and more fresh air in their workshops and in their dwellings. The most promising phase of the crusade against tuberculosis was, of course, that of prevention. In every large centre they should have open-air schools for delicate children to attend in the summer months. These would do an enormous amount of good, and need not be very expensive. They could do more against tuberculosis in one year in that way than in five years' treatment of actual tuberculous cases.

The lecture was illustrated by a number of charts and diagrams exhibited by means of photographic lantern slides. At the close Dr. Woodhead was cordially thanked, on the motion of Dr. MORRISON, seconded by Dr. DIX.

PLAGUE INVESTIGATION IN INDIA.

THE Advisory Committee for the Investigation of Plague in India has issued an eighth report which appears as the Third Plague Supplement to the *Journal of Hygiene* (January 14th). It includes eight papers, and is illustrated by numerous photographs and drawings. The following is a summary of the contents:

LXIV.—*The Influence of Cultivation in Serum-containing Media upon the Virulence and Immunizing Properties of the Plague Bacillus.*

Mr. Sydney Rowland's paper on this subject (which is illustrated by a plate) states that the virulence of plague bacilli ordinarily grown on broth is increased by growing them on heated horse serum, or on Fraenkel's medium with crystallized egg albumen added, but is reduced by growth on fresh serum. The medium of growth affects the antigenic properties also. After a single injection of nucleo-protein made from broth-grown bacilli rats are well protected against the subsequent injection of broth bacilli, but much less well against serum bacilli; but the injection of nucleo-protein prepared from serum bacilli confers an immunity against broth and serum bacilli, which is comparable to that obtained by the injection of the living organisms. Vaccination with serum bacilli or derivatives from them would appear to be in practice the more efficient method of immunization, since the flea infects itself with a serum race when feeding on the rat.

LXV.—*The Influence of the Medium in which the Plague Bacillus is propagated upon the Facility with which it is Ingested by Human Leucocytes.*

Dr. R. St.John Brooks finds that human leucocytes freely ingest virulent plague bacilli which have been grown on broth, agar, or in heated serum from man, guinea-pig, or rat, but the phagocytosis is markedly less when the bacilli are taken direct from the glands or heart blood of rats dead of plague, and this insusceptibility of the animal bacilli may continue for several subcultures on agar, though it eventually disappears. A similar reduction in phagocytosis is seen with bacilli which have been grown on fresh horse—or rat—serum.

LXVI.—*The Morphology of the Plague Bacillus.*

A paper on this subject by Mr. Sydney Rowland is illustrated by seven plates which show very clearly the great diversity of forms, resembling streptococci, streptothrices, moulds, etc., which the plague bacillus may present under different conditions of growth. Definite capsulation is rarely met with (though it may occur—for example, at the site of inoculation in animals), and is never seen in broth cultures grown at 20° C. At 36°, however, some of the organisms possess an envelope clearly demonstrable under special conditions of illumination. This envelope, which has an indefinite outline, and is soluble in dilute alkalis, fresh serum or immune horse-serum, is well seen in organisms taken from the spleen of plague rats, and appears also in most of the individuals in cultures grown on media containing serum.

LXVII.—*Observations on the Mechanism of the Transmission of Plague by Fleas.*

As Drs. A. W. Bacot and C. J. Martin state, it appears to be certain that the flea does not transmit plague through an infection of its salivary glands; the bacilli are not found in the insect outside the alimentary tract. It is further clear that it is possible for infection to occur through the puncture made by the flea. The writers were able to infect rats by applying to recent flea-bites the stomach contents of infected fleas, and the rat may infect itself by rubbing the faeces of the fleas into the bites. They obtained, however, a much greater proportion of infections when they applied the cut surface of the spleen of a plague rat to the flea-bite, the bacilli in this material being more virulent and insusceptible to phagocytosis by human leucocytes, whereas the bacilli in flea stomachs were readily taken up. They show, further, that under conditions which exclude infection by the faeces of the fleas, *X. cheopis* and *C. fasciatus* can infect during the act of sucking. In a proportion of fleas fed on infected animals the bacilli develop to such an extent as to obstruct the entrance to the stomach, closing the proventriculus with a plug which extends into the oesophagus. Such fleas can still suck blood, and do so with great pertinacity, but the blood does not reach the stomach, and only distends the oesophagus which is infected. On the cessation of the suction the blood is forced back into the wound. Fleas in this state do not necessarily die from the obstruction, the plug may autolyse, and the passage again become pervious; but they are in danger of drying up in hot dry weather, and it is suggested that this fact may explain to some extent why in India epidemic plague is confined to the cooler and moister seasons, and particularly why in Northern and Central India the epidemics are abruptly terminated on the onset of the hot dry weather. This paper is illustrated by three plates and four figures in the text.

LXVIII.—*Influence of the Medium in which B. pestis is Propagated upon its Virulence.*

Mr. Sydney Rowland shows that the addition of egg white, serum protein, or crystallized egg albumen to the culture medium raises the virulence of *B. pestis* very considerably. Such cultures, as also broth and serum cultures, undergo a reduction of virulence when propagated on fresh rat serum, and differ in this respect from cultures on fresh rat serum of organisms taken directly from the spleen of plague rats. The latter resist for a time the depressant action of the fresh serum, and it is suggested that infection may depend on the capacity of the infecting organisms to produce such a resistant race.

LXIX.—*A Study of the Bionomics of the Common Rat-fleas and other Species associated with Human Habitations with Special Reference to the Influence of Temperature and Humidity at Various Periods of the Life-History of the Insect.*

In a paper illustrated by eight plates Dr. A. Bacot reports an extensive and elaborate investigation of the effect of

external conditions on the development of the eggs, larvae, pupae, and adults of various fleas. It is shown that, taking its different stages into account, a flea may survive for very long periods without a host being present—for example, *C. fasciatus* for 22 months, *P. irritans* for 19 months, *X. cheopis* 10 months, *Ct. canis* 18 months, and *C. gallinae* 12 months.

LXX.—*On the Survival of Bacteria in the Alimentary Canal of Fleas during the Metamorphosis from Larva to Adult.*

Dr. A. Bacot states that while the alimentary canal of flea-larvae may become contaminated with various organisms (such as *B. pyocyaneus, Staphylococci, B. enteritidis*, Gaertner), no good evidence was found to show that the infection persists through the pupal stage. *B. pestis* was only rarely found to infect the larval gut, and extensive multiplication such as occurs in the adult was never met with.

LXXI.—*The Effect of the Vapours of Various Insecticides upon Fleas (Ceratophyllus fasciatus and Xenopsylla cheopis) at each Stage of their Life-History and upon the Bed-bug (Cimex lectularius) in its Larval Stage.*

Dr. A. Bacot experimented with the following insecticides: Solutions of pure phenol, lysol, benzine and formaline, commercial benzine, paraffin oil, flake naphthalene, and crushed camphor. Details of their action are given, and a consideration of the practical results of the inquiry is added. Naphthalene was found to be the most generally effective agent in all stages, and dissolved in benzine could be poured into cracks and crevices. A soap-carbolic or soap-petroleum emulsion to which flake naphthalene is added is suggested for use in rat holes.

ROYAL MEDICAL BENEVOLENT FUND.

AT the January meeting of the committee fourteen cases were considered, and grants amounting to £138 made to twelve of the applicants. Appended is an abstract of the cases relieved:

Daughter, aged 47, of late M.D., L.R.C.P.Lond., who practised in Wimpole Street. Income £19 a year, and has lost a home through the recent death of a friend whom she nursed for a couple of years. Is temporarily quite broken down in health. Voted £13.

Widow, aged 63, of L.S.A. No income, and is in bad health; endeavours to support herself by needlework and occasional nursing. Relieved three times, £22. Voted £12.

Widow, aged 76, of L.R.C.P.Edin., who practised in Warwickshire. Since husband's death several years ago has supported herself by letting lodgings, but finds it increasingly difficult to do so. Children unable to help. Relieved twice, £24. Voted £12.

Daughter, aged 59, of late M.R.C.S., who practised in Somersetshire. No income, and chronic ill health, which makes regular employment impossible; precarious earnings from needlework. Relieved three times, £36. Voted £12.

Widow, aged 66, of M.R.C.S., who practised in Kent. No income, no children; endeavours to maintain herself by taking boarders. Relieved three times, £18. Voted £12.

Widow, aged 63, of L.S.A., who practised in London. No income, and has been incapacitated for several weeks by severe illness; slight help from a sister-in-law. Relieved once, £12. Voted £12.

Widow, aged 68, of L.R.C.P.Lond. Is practically destitute, and has no children or friends who can help. Relieved four times, £48. Voted £12.

Widow, aged 43, of M.D., R.U.I., who practised in County Durham. Lets rooms to supplement an allowance of £25 yearly for the benefit of only child, aged 5; health indifferent. Relieved three times, £25. Voted £5.

Daughter, aged 61, of late M.R.C.S., who practised in London. Supported herself for thirty-five years as governess or school matron, and exhausted her small savings by helping a brother in bad health. Only income a small pension from a charitable society. Relieved seven times, £81. Voted £12.

Widow, aged 53, of M.B., C.M.Edin., who practised in Perthshire. Has an income of £20 a year, and takes boarders; seven children, of whom two are partially dependent and none able to help. Relieved fourteen times, £162. Voted £12.

Daughter, aged 38, of late M.R.C.S., who practised in Yorkshire. Used to be a nurse, but was obliged to give up her work on account of ill health, which necessitated three or four serious operations; now endeavours to maintain herself by needlework and making marmalade. Relieved nine times, £85. Voted £12.

Daughter, aged 64, of late M.R.C.S., who practised in Devonshire. Has £10 a year, and lives with a sister whose only income is an annuity from this fund. Relieved once, £12. Voted £12.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, W.

MENTAL DEFICIENTS AND THE BOARD OF CONTROL.

A CONFERENCE was held on January 22nd between the Provisional Committee of the Central Association for the Care of the Mentally Defective and representatives of the County Councils Association, the London County Council, and the Poor Law Unions Association. Mr. LESLIE SCOTT, K.C., M.P., Chairman of the Provisional Committee, was in the chair, and Sir William Byrne, the Chairman of the Board of Control, and two other members of the Board were present.

In the course of the proceedings Sir W. BYRNE explained the financial situation in regard to the Mental Deficiency Act. He said that the Board of Control had made its application to the Treasury in view of the estimates for 1913–14, and that the Treasury had acceded to practically everything. There would therefore be a grant in aid of the expenses to be incurred by local authorities very slightly less than the maximum of £150,000 set down in the Act. There would be in addition a grant founded on most careful estimates, in respect of one-half of the cost of the maintenance by local authorities of defectives of a criminal type, who were sent to certified and local institutions. They were the defectives dealt with by the Courts or by the Secretary of State, and who had been sent to prison or to reformatory schools. Then there were those who would be paid for by the Government direct, the violent and dangerous defectives, for whom an additional provision had been made to provide a State institution, which, it was hoped, would be ready by April 1st. In addition to that, a substantial amount had been put at the disposal of the Board for the assistance of the voluntary associations. In addition to that a small, but what he hoped would prove a very useful, grant in aid of research had been secured. In considering whether any given expenditure should be approved or not, the Board of Control would deem it judicious expenditure to add to the duties of existing officers and to give them some extra remuneration, instead of appointing special officers.

Dr. BRACKENBURY asked whether the provision as to payment for enumeration applied to all types of defectives mentioned in Subsection 2.

Sir WILLIAM BYRNE replied that in the draft Regulation it would be found that this point would be met. There was one regulation relating to the enumeration of defectives as to whom they had duties, and another regulation with respect to the enumeration of defectives as to whom they had powers.

In the course of further discussion Dr. POTTS asked if the Board of Control, whilst allocating these funds to the local associations, would also be prepared to allocate a sum to the Central Association to make a record of the names of defectives, so as to establish a system of tracing those defectives who were lost. In Birmingham about 20 per cent. of the cases were lost. In the case of those defectives coming before the police it was important to have a central register.

Sir WILLIAM BYRNE replied that in contemplation of such work and of other work of a similar nature the Board had obtained power from the Treasury to contribute to a central association.

In reply to the CHAIRMAN,

Sir WILLIAM BYRNE said that the Board of Control was aware that there was a vast amount of knowledge in the country in the bosoms of individuals and societies who had been working most excellently for the benefit of defectives for many years, and thought that a central association established to carry out the work under Section 48 would be of the greatest assistance to the Board. It would facilitate general communications, it would save the issue of many circulars, and would in many respects assist the Board. If a central association were established on representative lines it might well be that in time, when its constitution was established and its utility had become obvious, it might undertake a large number of other duties; one of such duties might be a distribution of the funds allocated to societies—not of local authority funds in any way, but of voluntary funds allocated to voluntary people.

In reply to a further question from the CHAIRMAN, he added that this meant that if the local associations, which were really the electors of the central body,

thought fit, the Board would leave it entirely to their discretion.

The Chairman suggested that the training of craft masters could best be done through the instrumentality of the Central Association by the interchange of facilities between the local associations, with the approval of the Board of Control.

Sir William Byrne said the Board had not yet considered that, and he was not sure that it would have power to contribute to that particular work without definite Treasury authority. Instruction must be practical and must be given in institutions, and it remained to consider whether, when the provision in a certain institution for the instruction of a certain number of attendants, or probationary attendants, had increased the legitimate expenses of the maintenance of the institution, the Government could contribute towards the cost.

The Chairman drew attention to Section 25 of the Act enabling "such steps to be taken as might be necessary for ensuring suitable treatment for defectives."

Sir William Byrne said that instruction of this kind could in the abstract be brought under that heading if thought fit.

The Chairman added that craft masters could not be trained except in proper institutions under people who knew how to do it.

Mr. Caird pointed out that every asylum had to train its own nurses and attendants and its own medical officers, there being no channel of communication between one asylum and another. If there were a number of associations working in the same way as the asylums now it would be very unfortunate. If there was any body that could in any way centralize them and have a record of the people who were trained so that they could be interchanged, and also have eventually some scheme of promotion, it would ultimately be of extreme advantage.

The Chairman added that possibly a system of certificates might also be arranged.

Mr. Harcourt E. Clare, Clerk to the Lancashire Asylums Board, moved two resolutions, which were ultimately carried in the following form:

1. That, in the opinion of this Conference, the administration of the Act by the statutory authorities may be materially assisted and rendered more complete and less expensive by the assistance, within proper limits, that can be given by local voluntary associations co-ordinated in their work by a central association.

2. That the County Councils Association and the Association of Municipal Corporations be requested to invite the Chairman or Mayor (as the case may be) of each statutory authority to call a conference of representative persons interested in the subject to discuss the question of forming local voluntary associations within their area, as contemplated by Section 48 of the Act, and recommended in the circular from the Home Office.

LITERARY NOTES.

The Candid is the title of a "quarterly review of public affairs, political, scientific, social, and literary," conducted by Mr. Thomas Gibson Bowles. It is said, in a brief introduction, that "the aim of this review is to deal with public affairs faithfully and frankly, and to treat them with candour, having sole regard to the public welfare." We know what Puritans meant by "dealing faithfully" with any one who came under their ban. It is much in the same spirit that Mr. Gibson Bowles deals with such subjects as the "new corruption: the caucus—sale of honours" on the one side and the impotence of the Opposition on the other. He might have taken for the motto of his review the lines—

> I care not a fig
> For Tory or Whig
> But I sit in a bowl and kick round me.

There is an article on the Insurance Act which we venture to commend to the attention of our readers. An article is devoted to "Science and Life" and another to "Modern Disease." The periodical is admirably printed.

Dr. Henry Barnes (Carlisle) writes. With reference to your interesting leading article in the Journal of January 31st on "The Physician in English History," I think most of your readers will agree that you have done well to call attention to the high esteem in which eminent members of the profession have been held by their royal patients as well as by Ministers of State. It would, of course, be quite impossible to give a complete list of those who have been thus distinguished, but there is one name which has been omitted and which is especially worthy of mention. In the address which I had the honour to deliver as President of the Association at the Carlisle meeting in 1896 I made special reference to the illness and death of Edward I, which took place within a few miles of this city, and the following extract from the address may, perhaps, be considered worthy of reproduction. After referring to the parliaments held in Carlisle and the legislation on river pollution, I described the illness and death of the king as follows:

> His illness lasted several months. The infirm state of his health began when he was at Winchester during the season of Lent in 1305. Later on he began to suffer from dysentery, and spent the winter at Lanercost. When on his journey from York to Carlisle, his sufferings increased so much that on September 8th Richard de Montpellier was ordered to proceed to London to procure remedies. The royal physician was Nicholas de Tyngewyke, and he was held in high esteem by the king, as may be gathered from the terms in which the king wrote of him to the Pope, when soliciting some ecclesiastical preferment. Writing on October 7th, 1306, Edward renews a request which he had previously made to the Pope in regard to the preferment of his "dilectus clericus—Magister Nicholaus de Tyngewyke, medicus noster utpote pro personâ honestae vitae, bonae conversationis, eminentis scientiae, habilisque ad quam liber dignitatem ecclesiasticam, nostro judicio, obtinendam." With the help of his skilful physician the king's health was so far restored that he contemplated resuming the command of his forces in a fresh campaign against Bruce, and after making a solemn offering in the Cathedral Church of this city, of the horses and litter he had been accustomed to use, he mounted his charger on July 3rd and left Carlisle, but his death took place on July 7th, 1307.

It is but right to state that Dr. Norman Moore, in his Linacre Lecture, *The Physician in English History*, briefly refers to "Nicholas Tynchewyke," who lectured on medicine at Oxford, and of whom Edward I on October 7th, 1306, said:

> . . . to whom, after God, we owe thanks for our recovery from the illness which lately oppressed us (Rymer, *Foedera*, ii, 1077-8).

A specific for tuberculosis of which a good deal has been heard lately is turtle serum. It is interesting to learn that the therapeutic virtues of the turtle were held in great honour among the inhabitants of Saint James, one of the Cape Verde Islands, many centuries ago as a remedy for leprosy. According to an old traveller, large turtles which came at low water to feed on the grass were turned over on their backs by the natives and killed; in their blood persons afflicted with leprosy bathed. When the patients were dry, they were so very stiff for two or three days that they could not bathe; afterwards they felt well. Internally the flesh and fat of the turtle purged them, and if this treatment were continued for two years they were cured. This statement is made on the authority of M. Ch. de la Roncière in his *Histoire de la Marine Française*. It is recorded that Louis XI, to "correct the acrimony" of his blood after an apoplectic seizure took fearsome medicines. Legend says the blood of children, but the truth seems to be that it was the blood of turtles which he tried to get. M. de la Roncière says that on July 8th, 1483, a short time after the attack, the king sent the shipmaster, Georges le Clerc, to the Cape de Verde Islands "to seek for certain things which closely touched the wellbeing and health of his person." It was hinted that Louis suspected himself to be a leper, and the Cape de Verde expedition seems to confirm this. But whether he was a leper or not he was destined never to taste the turtle remedy, for he died on August 30th, before the return of the expedition. We do not know whether the turtle was ever used as a remedy for leprosy or any other disease.

At a meeting of the Académie de Médecine on January 13th, M. Thoinot presented, on behalf of Drs. Ch. Vallon, physician to the Saint Anne Asylum, and Genil-Perrin, assistant *chef de clinique* of the Paris Faculty, an essay entitled *The First Book on Malingering* (J. B. Silvaticus, 1550–1621). It is described as an analysis of the work of Silvaticus, *De iis qui morbum simulant deprehendendis liber*, published at Milan in 1595. Two later editions appeared at Frankfort. The book is said to be two years earlier in date than the *De Relationibus Medicorum* of Fortunatus Fidelis, the most ancient treatise on forensic medicine, which was published in 1602. The *Quaestiones Medico-Legales* of Zacchias did not appear till 1624.

British Medical Journal.

SATURDAY, FEBRUARY 14th, 1914.

THE PREVENTION OF ANTE-NATAL DEATH.

Intimately associated with the question of the declining birth-rate are the subjects of ante-natal hygiene and the care of the woman, both before and subsequent to her delivery. The striking figures brought together by Dr. Amand Routh (p. 355) may well determine us to consider very seriously this aspect of the question. For a long time efforts have been mainly directed to the reduction of infantile mortality, and the success attending them has been made sufficiently obvious by the reduction of the rate among infants under one year of age in 1912 to 95 per 1,000 births. But when we are brought face to face with the statement that practically as many infants die during fetal life as during the first year of their independent existence, we are confronted with a problem which clearly requires that means shall be concerted with the view of attempting to prevent this colossal waste of human life. There can be little doubt that suitable measures in this direction would be immediately followed by beneficial results, but how the complete solution of the problem is to be reached is not so obvious.

As Dr. Ballantyne points out (p. 349), our knowledge of the exact biological nature of pregnancy is far from perfect, and it is as yet an undecided question whether it should be regarded as parasitism in which the mother sacrifices herself for her child, or as a harmonious symbiosis in which two lives are interlocked for the benefit of both. Recent research has shown that during its course very definite changes are taking place in the maternal blood, and the organs and tissues of the mother are activated to a greater vitality. At the same time it is only too often to be observed that the border line of physiology is overstepped and the confines of pathology entered.

This lack of detailed knowledge need not, however, obscure the broad facts nor prevent us from determining our actions thereby. Though the list of conditions set forth as being possible causes of the ante-natal death of the fetus is not so long nor so alarming as might perhaps have been expected, it should impress on us the fact that the task of advising a woman throughout a pregnancy is not one that should be lightly undertaken, and there is not the slightest doubt that many calamities could be prevented by a rational medical supervision during pregnancy. It cannot be too forcibly urged that although pregnancy may be physiological it is physiology at high pressure, and that the treatment of its tragedies should be very largely prophylactic. The success of a lying-in charity should not be measured by the number of abnormalities dealt with, but by the proportion of normal labours. The great majority of such abnormalities could be prevented by inspection of patients at intervals by competent persons. This is, of course, more difficult to arrange in the case of the poorer classes, to whom loss of time from their employment means so often loss of money just at a time when their expenses are about to be increased by the new arrival. For this inadequate care of women during the period of their pregnancy the public is largely to blame, as the medical attendant is commonly not summoned early enough. The fault is frequently due to ignorance, and much could be done to remove the amazing superstition and lack of knowledge that still are so prevalent, especially among the poorer classes of the community, who so often regard the symptoms which to the medical mind are danger signals as unpleasant but necessary concomitants of pregnancy.

The suggestion of a pre-maternity benefit in connexion with the Insurance Act is worthy of most serious consideration. The poverty of the expectant mother must have a direct influence on the nutrition of the child, and her mental and physical state would be much improved by the knowledge that there was some provision for such contingencies as might arise.

The later months of a pregnancy are at best not unattended with mental and physical stress, and emphatically call for release from the strain of wage-earning labour. To inflict upon the prospective mother not only the duty of nourishing her unborn child but also a daily struggle as a breadwinner, is as unprofitable to the State at it is unfair to the woman and her family. It is an anomaly that the conduct of a medical man should be called in question by those who probably do not appreciate the low standard of health of women engaged in industrial occupations should he grant a certificate of incapacity for industrial work to a woman during those later months of pregnancy that make such serious calls upon her physical endurance.

Politicians sociologists, and eugenists have frequently discussed, not without heat, the question whether for the betterment of the race it is more important that the number of children should be limited by the means and surroundings of the parents, or whether it is more desirable that attention should be devoted mainly to the production of the maximum number of children, regardless of the type of child or the means available for its existence. Into this controversy we do not propose to enter. What concerns us at the moment is that when conception has taken place the child should be guarded from all preventable accidents and its future rendered as assured as possible.

Again, the question as to the desirability of a woman who is the subject of chronic disease becoming pregnant is one that must inevitably be settled by the circumstances of the individual case, and any communal attempt to place upon her restrictions, legislative or other, will be regarded by some as interfering with the liberty of the subject, and by most at best a doubtful expedient. The relation of the disease to the prospective child is, however, one about which there can be no question, and it is the clear duty of the medical man and the layman to co-operate in the attempt to make the best of the situation.

Dr. Amand Routh has pointed out that one of the most serious causes of intrauterine death is syphilis. Our ignorance as to its potency in this direction is paralleled by our lack of knowledge of the general prevalence of this disease in this country. It is to be hoped that the Royal Commission which is at present engaged in the study of venereal disease in general will not forget the vast importance of this particular branch of their subject. The nation has recently sanctioned the expenditure of much time and money on the investigation of the tuberculosis

problem and the treatment of the tuberculous person. Is it too much to ask that an organized national service should be instituted to investigate this grievous problem of ante-natal mortality?

TUMOURS PRODUCED BY VIRUSES.

THE classification of true tumours has in the nature of things never been rigid, and many growths which in the past were included among cancers have had to be lopped off and placed amongst the granulomas. Within recent years two such growths excited much interest, and were by many originally considered to be true malignant neoplasms. One of these was the so-called lymphosarcoma of dogs, a tumour of a highly infectious nature, the causal agent of which has not yet been isolated; its structure is histologically identical with round-cell sarcoma, and its clinical characters correspond. The other was the endemic "adenocarcinoma" of trout in hatcheries, in all probability a thyroid hyperplasia due to abnormal dietetic conditions. Recently another series—the "transplantable fowl sarcomas"—has been added by Fujinami and Inamato, and by Peyton Rous and his collaborators. The Japanese workers discovered a myxosarcoma in a hen and succeeded in transplanting it to other hens, but though this tumour had certain characteristics which rendered uncertain its inclusion amongst the true malignant growths, yet they brought forward no evidence of its causation by a virus. Rous has now described three different connective tissue growths of fowls, which he has succeeded in propagating in pullets not only by grafts of the original tumours, but also by means of a filtrable virus obtained from them. These he calls "sarcoma," and it is on this ground that great difference of opinion may be expected.

There are some who would dismiss from the true tumours all cellular proliferations due to any virus—using this term in its broadest sense—and there are others, now few in number and somewhat subdued of recent years, who, obsessed with the parasitic theory of cancer, will doubtless clamour for the inclusion of such proliferations amongst the neoplasms without further question. If we keep before our minds the simple facts that in mammals, and even in man, no pathologist can lay his hand on his heart and say that he can always sharply differentiate between a granuloma and a connective tissue neoplasm, and that in birds our knowledge of pathological histology practically does not exist, then we shall agree in regarding these growths as doubtful at the best—interesting certainly and well worth study, but far from giving a foundation on which to rear theories or build conclusions applicable to cancer in general.

The first tumour described by Rous in 1910 occurred in the pectoral region of a young Plymouth Rock hen. It was removed by operation, and small portions were reimplanted in the opposite side and into the peritoneal cavity of the same bird. Portions were also injected into two other fowls of the same setting. A month afterwards the original hen died of intraperitoneal growths, and in one of the others a large nodule developed. On further transplantation the percentage of successful inoculations rose to 100 per cent. in Plymouth Rock hens, but at no time could the tumour be inoculated into other breeds, into ducks, pigeons, or laboratory mammals. Thus its specificity was very great.

In structure the tumour had the histological appearance of spindle-celled sarcoma, and though there was usually a well-marked capsule, the tumour tended to infiltrate surrounding tissues. The grafts were slow to appear and increased slowly in size in the first generations, but in the later good-sized tumours formed in three weeks, and generally produced fatal results in a month. Coincidentally with this increased rate of growth, the frequency with which metastases occurred in the internal organs likewise increased. The reinoculation of fowls that had proved negative to a previous inoculation was always unsuccessful, and a study of the grafts at intervals in such refractory animals showed that these grafts either died of inanition or, more often, though they became vascularized, a very intense lymphocyte reaction occurred around them and destroyed the cell growth. This vascularization of a graft in an immune animal is in striking contrast to what occurs in the case of undoubted carcinoma in mice and rats. Before attaching weight to the lymphocyte reaction it must be borne in mind that the lymphocytes in fowls form about 40 per cent. of their white cells. There was, however, no general lymphocytosis. The tumour on broad general lines conformed to the behaviour of experimental neoplasms in mammals. It was, however, capable of propagation by dried and powdered tumour tissue. But the most interesting feature was that the filtrate of tumour emulsion that passed through a medium Berkefeld filter impervious to *Bacillus prodigiosus*—a filtrate, therefore, free of cells—could set up tumours identical in structure to the original. The tumours arising from the injection of the filtered juice were slow in appearing and slow in growth, but, when a small quantity of Kieselguhr was added to the fluid, the percentage success was higher, and the growths appeared more quickly and were more diffuse. It seemed as if the diatomaceous earth produced sufficient trauma to lower the resistance of the normal connective tissue cells, so that the active agent in the injected fluid stimulated these cells to neoplastic activity. Though the filtered fluid of itself produced tumours, yet the added factor of trauma was a most important one in determining the frequency and the localization of tumours when the injection was made into the general circulation. The other two tumours have followed pretty much the same lines.

The second tumour, found like the first in a young Plymouth Rock hen, was a hard mixed growth of cartilage and bone arising from the keel of the sternum. It was considered to be an osteochondrosarcoma. A portion was removed from its surface and transplanted into young hens. The gap thus left in the original tumour neither fungated nor filled up. Transplantation gave a fairly high percentage of success even in the first generations, a most unusual occurrence in the case of mouse tumours which are definite carcinomata. Though the grafts employed were mostly cartilaginous, yet the resulting growth was first of prechondral tissue with subsequent formation of cartilage at its centre. If prechondral tissue instead was injected no growth resulted. As the cartilage transformation of the successful grafts proceeded the growth of the tumours tended to become stationary and to retrogress. If the animal lived long enough the whole tumour was sometimes converted into bone. The calcified matrix was eroded by osteoclasts to form trabeculae between which red bone marrow appeared, and the question of the source of this bone marrow arises. The whole process of transformation from the connective tissue up to the final stage with bone marrow formation deviates in several important particulars from what we know of the stages of normal bone formation. In contradistinction to the first tumour, this growth was easily transplantable

into hens of alien breeds, but not into pigeons. The resulting tumours remained local and generally encapsuled. In only one case did metastases occur, and even in that case the interpretation is doubtful. The results of intravenous inoculation were not satisfactory.

The third tumour was considered to be a spindle-celled sarcoma of a fairly definite histological pattern, and occurred in the gizzard of a Leghorn hen, with another, probably secondary, tumour in the left leg. Portions were transplanted into young Leghorn hens, but the transplantation success was small at first. It gradually increased, especially when, in subsequent generations, the grafts were inoculated into Plymouth Rocks. Growth was very slow, but when the tumours reached a large size, metastases tended to form near the knee-joints, and near the first wing-joint—situations particularly liable to trauma. The viscera were usually free from metastases, but sometimes a few nodules were found in the lungs. The tumours invaded and replaced neighbouring structures, even eroding bone. In susceptible animals there was an absence of cellular reaction around the growths. Retrogression of growths was not infrequent, but whether or not immunity was established in these cases was not determined. The tumours failed to grow in pigeons, rats, or mice. The intravenous inoculation of tumour emulsion was unsuccessful.

The most important point with regard to the three growths is that they are all capable of propagation by the injection of their filtered juice, and by desiccated tumour tissue, and two of them by glycerinated emulsions. The viruses in the three cases seem to be specifically different, and will produce only growths histologically similar to those from which the virus was derived.

There must, therefore, be more or less conversion of surrounding tissues of the host into tumour material when a graft is inoculated. In the case of mouse tumours much work has been done on this point, and it is agreed by all that the tissues of the host in the latter case do not participate in the growth, except in so far as they provide supporting stroma. It is strange that tumours resulting from the transplantation of these fowl sarcomata should grow so quickly in comparison with those resulting from the filtered virus, even when large doses of the latter are injected. Whether the virus is after all a living substance or a chemical substance has not been settled, and it is still a moot point whether the secondary tumours are metastases of cells from the original growth or local proliferation induced by conveyance of the active agent. Trauma is undoubtedly a very important factor, but the absence of infectivity in these tumours is marked. The attempts of numerous workers to obtain from mammalian neoplasms of undisputed characters any virus capable of causing neoplastic change have invariably failed, and until much more work has been done on these interesting so-called sarcomas of fowls the mere association of a filtrable virus with their causation will not entitle them to be classed amongst malignant tumours any more than would be the case with growths due to the actinomyces or the filtrable virus of sheep-pox.

THE RECIPROCAL RESPONSIBILITIES OF MEDICINE AND THE STATE.

WE would invite the impartial attention of readers to the interesting profession of faith made by Dr. Addison in the speech reported elsewhere in this issue (p. 379). In it we have the opinions of a Radical politician with a medical—that is to say a biological—training, and a good many years ago Mr. C. S. Loch made the very true observation that the social problems the country has to solve are in their essence biological. It is interesting, therefore, and cannot fail to be instructive to observe how the present state and future prospects of the medical profession strike a Radical doctor. Shortly, it seems to come to this, that in his opinion the knowledge possessed by the medical profession is necessary to the people in order that they may advance along the right path, that the people desire and will welcome the help of the medical profession, and that the State must learn, if it has not yet learnt, to make much greater use of medical knowledge than in the past. Experience, we are inclined to believe, proves that the rate at which the State moves cannot for any long period be faster than that at which general public opinion moves, and Dr. Addison, Radical though he be, affirms that it is the duty of the State to ask the medical profession to tell it in plain terms what should be taught and what standards the State should adopt. He recognizes or implies that the State is disposed to ask the medical profession to do impossibilities. Though the medical profession may do its duty towards the State by pointing, officially and unofficially, to defects—in, for example, the nourishment of school children, in the care of motherhood, and in housing conditions—it has in itself no means of remedying them. He has the courage to say, too, that if the people are to have the advantage of the full and free expression of the convictions of medical workers the men charged to report shall be free to tell the truth, and the whole truth, without fear or favour, and should be given proper security of tenure of office. As evidence of his readiness to give practical effect to this opinion we may state that he is at present actively co-operating with the Association in endeavouring to promote legislation to provide for security of tenure for medical officers of health.

The honour done to Dr. Addison last week was very conspicuous, and the promoters endeavoured to divest the occasion of political significance; they may be said to have succeeded, so far as that object is possible of attainment in respect of any occasion on which a prominent politician takes part and on which legislative achievements must inevitably be discussed. The hosts, however, included men of every shade of political opinion, and many of those present were drawn there by their desire to do honour to Dr. Addison as a man of science, or by cords of personal friendship and esteem. No one who has watched impartially the short political career Dr. Addison has behind him, including his conduct during the stormy and tangled proceedings by which the passage of the insurance scheme through Parliament was attended, can doubt his sincere desire to better the conditions of life among the poorer industrial classes, or his essential loyalty to the profession in which he was educated, and of which he remains a working member, though his work lies in the political and not in the clinical or administrative spheres. During the discussions of the Insurance Bill in Parliament, Dr. Addison readily gave attention to any suggestions made to him by the British Medical Association, and there was never any doubt as to the attitude he was prepared to take. If he was able to approve a proposed amendment, he supported it both inside and outside the House of Commons whole-heartedly, and the measure of success which attended his efforts was due not only to the goodness of the cause he espoused but to the impression of honesty and sincerity his conduct

inspired in his political associates and among politicians of all parties. If, as the Association had with regret on several occasions to realize, he was unable to approve a proposal, it was always obvious that the refusal of his support was due to conviction, and made after full consideration. We may regret the attitude he took on these occasions, and many members of the profession may have resented the ardent support he gave generally to the provisions of the Insurance Act in regard to medical benefit, but as an ally he deserved gratitude and as an opponent respect.

TOWN PLANNING.

Although more than four years have elapsed since the Housing, Town Planning, etc., Act, 1909, was placed on the Statute Book, only two town-planning schemes had been finally approved by the Local Government Board up to the end of 1913, and both had been prepared by the Birmingham Corporation. It must not be supposed, however, that this small number is any measure of the activity which has been displayed as a direct result of the town-planning sections of the Act. There must be no confusion between an improvement scheme and a town-planning scheme. The former relates to areas already built upon, and has to be carried out mainly by the enforcement of by-laws. Additional air space is provided by the pulling down or alteration of existing buildings, and roadways are widened or reconstructed through districts already populated. A town-planning scheme, on the other hand, is for the purpose of securing proper sanitary conditions, amenity, and convenience in connexion with the laying out and use of land which is in course of development, or which appears likely to be used for building purposes. Such a scheme can start with an area on which there may not be a single house. It is thus possible to plan the most desirable position for the main road or roads, and to define the side roads, which, though of ample width between the houses to be erected on either side, may have a comparatively narrow road construction for the light traffic which is likely to use it. An improvement scheme must leave factories, workshops, public buildings, and large or small houses on their existing sites, but a town-planning scheme can decide in advance just where these may be placed, having regard to the general convenience and amenity. In an improvement scheme the local authority is concerned only with the owners of the property in question, but the very essence of town planning is a cordial co-operation between the local authority or authorities and the owners of adjoining properties. The effects of town planning are so far-reaching that it is of the first importance to proceed slowly and deliberately, so that no ill-digested scheme through its failure shall prevent the bringing forward of others.

The first step to be taken by a local authority desirous of taking advantage of the Act of 1909 is to give notice to the landowners and others concerned of its intention to apply for the sanction of the Local Government Board to the preparation of a scheme. Plans and maps must be deposited for the information of any one even remotely interested, and at least one meeting must be held between the local authority and the owners for the purpose of considering the scheme. At the same time, every effort must be made, by means of conferences, etc., to secure co-operation between the owners and the local authority. A special resolution of the authority must then be passed applying for sanction to prepare a scheme. Sanction having been obtained, notices must be given to landowners, ratepayers, and others, and opportunity afforded for objections to be made, which must be sent in, together with much detailed information, when the scheme is submitted to the Local Government Board. Since the passing of the Act application for sanction to prepare schemes has been made by fifty separate authorities with respect to sixty-six schemes. In fourteen instances the applications are still under the consideration of the Board, and sanction has been given as regards forty authorities and fifty schemes.

The procedure in preparing a town-planning scheme is directed by regulations made by the Local Government Board, and, in view of the proceedings being of so entirely novel a character so far as this country is concerned, it was perhaps necessary that they should be of a detailed and comprehensive character. They certainly do not err on the side of simplicity, and one writer describes them as a "veritable jungle of maps, notices, advertisements, draft schemes, draft orders, resolutions, copies of documents, etc." Even the Board has come to consider the desirability of clearing a way through this thicket, for at the inaugural dinner of the newly formed Town Planning Institute Mr. Burns stated that very shortly there would be issued simplified and improved regulations which he hoped would result in accelerating the progress of the town-planning movement. If as many as fifty local authorities have been courageous enough to bring forward schemes under the provisions of the present cumbrous regulations, it may be anticipated with confidence that when these have been made less complex the question of town planning will be considered seriously by many other municipalities.

VACCINATION AND SMALL-POX.

We publish elsewhere in this issue a summary of Dr. C. Killick Millard's recent Chadwick Lectures on the vaccination question in the light of modern experience, and also an important criticism of some of his conclusions by Sir Ronald Ross. The issues raised are too wide-reaching to be discussed in detail here, but we may briefly notice one or two points. Dr. Millard, while fully accepting the view that vaccination is a valuable prophylactic against small-pox, doubts the utility of compulsory infantile vaccination. His reasons for this opinion may be summarized under two headings. In the first place he considers that the present low prevalence of small-pox in such communities as Leicester, where infant vaccination has been greatly neglected, points to other factors, in particular generally improved sanitation, as of paramount importance in determining the incidence of the disease. In the second place he considers that the modification of clinical small-pox consequent on previous vaccination renders the diagnosis and control of the disease difficult. The second may be compared with the arguments adduced in the eighteenth century against the practice of inoculation,[1] and it must be admitted to have some force if we are to assume that revaccination is to continue to be neglected. Evidently, however, if general revaccination were enforced, no such difficulty would arise, because, by hypothesis, the fatality would be negligible. In fact, Dr. Millard's argument might be treated, with some justification, as a plea for the extension of compulsory vaccination rather than for the relaxation of the existing law. The first reason assigned by Dr. Millard for his belief raises problems of general epidemiological interest. The quantitative laws which describe the course of epidemic diseases have in recent

[1] Creighton's *History of Epidemics in Britain*, ii. 607.

years been made the object of special inquiry by several workers, among whom Sir Ronald Ross and Dr. John Brownlee may be specially mentioned, and an extended report on the subject was presented to the Section of Hygiene and Preventive Medicine of the recent International Medical Congress in London by Mr. Major Greenwood, junr. The work of these investigators makes it clear that there is a serious risk of error in the facile attribution of changes in the level of epidemic prevalence to measures of general sanitary reform. Brownlee has shown that the course of a small-pox epidemic is such as to imply the fulfilment of conditions capable of mathematical description, and that it is improbable that such course has been, or can be, much modified by ordinary sanitary measures. Greenwood has pointed out that the secular history of scarlet fever also suggests the relative unimportance of sanitary measures as causative agents, and Ross has conclusively demonstrated that the descriptive epidemiology of malaria is amenable to mathematical treatment. Sir Ronald Ross's work is particularly relevant to the case under discussion. As will be seen from his letter, it is quite arguable that the failure of the Leicester conditions to generate an epidemic may not be due to general sanitary administration but rather to the proportion of inflammable material not having attained a critical value. We may conceive that, as the psychologist would say, a certain limen must be attained before the strength of stimulus is sufficient to elicit a response. It will be readily admitted that, were this contention to express a truth, the gravity of the consequences of neglecting vaccination could hardly be over-estimated. It is, of course, arguable that Sydenham's belief in the succession of diseases, his conception that epidemic maladies, like individuals and races, have a period of rise, decline, and fall, is applicable to small-pox; that the *materies morbi* of the disease has yielded in the struggle for existence against competing parasitic organisms, and is becoming extinct. This may be true, but we do not know; and when we consider the remarkable intermissions and remissions which have characterized the secular history of such diseases as scarlet fever and bubonic plague, it would be imprudent to attach much importance to the relatively short period during which small-pox has been in abeyance. We may be dealing, not with an extinct, but with a smouldering volcano. These considerations should make us hesitate to accept Dr. Millard's conclusions, although we must all recognize the candour with which he has expressed them.

PRIVATE ARRANGEMENTS BY INSURED PERSONS WITH UNQUALIFIED PERSONS.

By the courtesy of the Insurance Commissioners (England) we have received as we go to press a memorandum issued by the Commissioners with regard to persons making their own arrangements under Section 15 (3) of the National Insurance Act, 1911. It is published in the SUPPLEMENT for this week. The memorandum, which is addressed to Insurance Committees, deals *inter alia* with the procedure an Insurance Committee should adopt in respect of persons to whom it proposes to give permission to make their own arrangements otherwise than with duly qualified practitioners. The legal interpretation placed upon paragraph (3) of Section 15 of the National Insurance Act, and accepted by the Government during the passage of the measure through Parliament in 1911, is that neither in this section nor elsewhere in the Act are private arrangements forbidden to be made with unqualified persons, such as herbalists, provided that the approved society is willing to accept as proof of sickness and disability the evidence of such unqualified practitioners. In the memorandum now issued the Insurance Commissioners point out to Insurance Committees that it will not be possible for such committees to judge of the satisfactoriness of any arrangements made with unqualified persons by the standards applicable to the panel system, and that accordingly paragraph (2) of Article 44 of the Medical Benefit Regulations issued last month, leaves the matter at the discretion of the committee, which "may make such contribution . . . as they think fit." The memorandum proceeds to point out that private arrangements with unqualified persons, like all other private arrangements, are subject to the application of the conditions of the Exchequer grant, that these conditions require *inter alia* that the person undertaking treatment should also undertake to provide domiciliary treatment for tuberculosis, in accordance with the Local Government Board Order of July 26th, 1912; and that, as it is not legally open to any person other than a duly qualified medical practitioner to perform this service, it is clear that no arrangements otherwise than with qualified practitioners can earn the grant to which these conditions attach. An Insurance Committee is therefore reminded that it cannot rely upon receiving any sum from the Exchequer grant in respect of treatment afforded by unqualified persons. The Commissioners further advise the Insurance Committee to make it clear to persons desirous of being treated by an unqualified person that in the probable event of a reduction in their share of the Grant the maximum sum available to them would be limited to the sum (amounting, with the State proportion, to 6s.) which is payable in respect of the applicant by his approved society, or out of his account in the Deposit Contributors Fund, or from the Exempt Persons Fund as the case may be. The regulations only admit of a contribution being made by an Insurance Committee to the expense of arrangements for treatment by an unqualified person if the insured persons pay at a fixed capitation rate; the difficulty of equating the value of services rendered under widely varying systems with a view to framing a scale for the calculation of contributions on an attendance basis would, in the Commissioners' opinion, prove almost insuperable in practice. It is to be anticipated that the matter in all its aspects will be further considered at the meeting of the Executive Committee of the General Medical Council which will take place on February 23rd.

PROFESSOR EHRLICH IN PARIS.

On February 2nd Professor Ehrlich, on the invitation of Professor Pozzi, paid a visit to the Hôpital Broca, where he was received in the theatre of the Gynaecological Clinic of the Faculty. Among those present were: Professor Gley, Drs. Jeanselme and Hudelo, *chefs de service*, all the residents and dressers, and the doctors, French and foreign, who are working in the hospital. After a few words of welcome by Professor Pozzi, in whose wards injections of salvarsan were practised by M. Emery for the first time in Paris in September, 1910, Dr. Jeanselme delivered an address, in which he said he was one of the first doctors in France to whom the German professor had given the remedy. His personal statistics showed that none of the patients to whom he had given a sufficient number of injections before the appearance of secondary symptoms showed any further development of the disease after a period of three and a half years. These patients he looked upon as absolutely cured. The possibility of reinfection was, said M. Jeanselme, one of the surest proofs of the extinction of syphilis. Whereas during twenty-five years of practice he had not seen a single case of reinfection that was not open to criticism, in the three years during which the new method had been in use four undoubted cases of syphilitic reinfection had come under his notice. The longer the disease had existed the less hold the remedy had on it; this was particularly the case when colonies of the treponema developed in the meninges. He had systematically

treated all syphilitics with meningeal lesions who had come under his care, and he had reached the conclusion, in which his fellow-workers agreed, that salvarsan might overpower syphilis in that region, although it was the chief centre of resistance of the treponema; success could, however, be obtained only as the reward of great perseverance on the part of the physician and the patient. One of his patients now under observation received in thirty months fifty injections, representing 20 grams of salvarsan. M. Jeanselme went on to say that for some time past he had associated with intravenous injections of salvarsan injections of neo-salvarsan into the subarachnoid space. The object of these combined injections was, on the one hand, to introduce the remedy into the substance of the tissues: on the other, to bring it directly into contact with the diseased meninges. He thought it possible that tabes and general paralysis might be favourably influenced by this intensive treatment. M. Jeanselme added that he knew of no therapeutic agent so powerful as salvarsan in counteracting the feticidal effect of syphilis. All the pregnant women treated by him in the most virulent stage of syphilis with salvarsan had been delivered at term, or almost at term, of living children, for the most part of average weight. Mercurial treatment, on the other hand, gave results infinitely less favourable. In 75 per cent. of cases pregnancy under such conditions ended in abortion or stillbirth. With regard to the future of the children born of syphilitic mothers who had been treated with salvarsan, M. Jeanselme said that, speaking generally, when treatment had been begun before the fourth month of pregnancy the baby seemed to escape the maternal infection. For the last three years M. Vernes had conducted biological researches on the Wassermann reaction, which made it possible to gauge the activity of the infection and to reveal latent syphilis, and on lumbar puncture, which gave information as to the state of the nerve centres. Before, during, and after treatment these laboratory tests were indispensable methods of control, and should be taken as guides by the practitioner. He concluded by saying that the new method, which was at first received by some with distrust and by others with scepticism, had now in France only a few inveterate opponents. Every day it was gaining ground. M. Hudelo said he had treated more than 1,200 patients, and had given more than 12,000 injections in the last three and a half years, and his conclusions agreed with those of M. Jeanselme. Professor Ehrlich, who was deeply moved, expressed his thanks for the honour done him, and said that it was in Paris his ideas had been best understood and his method best applied. It was, indeed, largely to the medical profession of France that the triumph of salvarsan was due. Failures had been noted chiefly in cases of syphilis of the nervous system. The reason was that his technique was based on experiments, and in animals nervous lesions were not produced as in man. The statements of MM. Jeanselme and Hudelo as to the rapidity of the disappearance of secondary lesions, the state of health of children born of syphilitic women treated by salvarsan, and the possibility of syphilitic reinfection after a course of the remedy were of the very highest importance.

THE THERAPEUTIC USES OF THE ASS.

THE ancients, as is generally known, anticipated in a crude fashion certain modern developments of therapeutics. In Pliny's *Historia Naturalis* will be found an amazing collection of preparations in which the various organs of every known animal figure among the active ingredients. Many of the uses to which these fearsome compounds were put are wholly fanciful, or depend on a wrong analogy, and what good they did may be set down to the credit of suggestion. In some, however, can be seen the outlines of a scientific opotherapy casting its shadow before. With these adumbrations, interesting as the subject is, we do not propose to deal here. We only wish, by a brief sketch of the part played by one particular animal in the therapeutics of a former day, to show how little our professional forbears wasted in their applications of the organic matter at their disposal to medicine. In the *Book of Medicines*, a collection of lectures translated from the Syriac by Dr. Wallis Budge, the ass figures prominently among the ingredients of prescriptions. Dr. Julien Roshem, in *Paris Médical* of November 1st, 1913, gives an account of the manifold therapeutic virtues which, even in times comparatively modern, were attributed to that humble friend of man. His hair was believed to be the sovran'st thing on earth for quieting the night terrors of children; they were put to sleep on mattresses and pillows stuffed with it. In general, substances taken from the ass were credited with the property of calming excitement and even furious mania, the idea being that the notions of meekness and want of spirit, which were supposed to be characteristic of the animal, were opposed to violence. A piece of linen was soaked in the blood, which had to be taken from behind the ears, and then dipped in water, which was drunk by the patient. Michaël states that he cured a number of maniacs at the Court of Altenburg and elsewhere with ass's blood, but he increased the potency of the remedy by putting the blood-stained rag into a decoction of anagallis or hypericum, both plants supposed to be useful in cases of possession by the devil and bewitchment. Ass's blood was also believed to cure falling sickness. The skin, the fat, and the flesh were also used. The Ngo-Kiao, a preparation formerly used by the Chinese and the Annamese, was a sort of paste made from the skin of a black ass. The skin, says an old writer, was cut into small pieces, which were steeped in water taken from a particular well at Peking, to which simples were added. This decoction dissolved phlegm and favoured the play and elasticity of the lung, and was thought to be a remedy for phthisis. Unfortunately, the skin of the ass was often replaced by that of the mule, the horse, the camel, sometimes even by old boots. Evidently "substitution" is not an American invention. Ass's fat was used to give the colour of normal skin to scars. The same substance entered into the composition of an ointment which cured paralysis and gout. Ass's flesh was used in consumption, and the milk of the animal was believed to be a specific in that disease. About 1650 Sylvius Delebœ complained that at that time the inconstancy of fashion was causing cow's milk to be preferred to that of the ass. Rozière de la Chassagne, in his *Manuel des Pulmoniques* (1770), places ass's milk in the second place—below woman's, but above that of the cow. Late in the eighteenth century Madame Cornélis, whose magnificent house in Soho Square had long been a meeting ground for London society, and who is said by Casanova to have made, when she was at the height of her glory, eighty thousand a year out of subscription dances and other facilities offered for dissipation, was reduced to selling ass's milk in St. James's Park. In the nineteenth century Guéneau de Mussy had a word to say in favour of ass's milk, which he recommended mixed with syrup of quinine in the colliquative diarrhœa of consumptives. In our day there are still some who believe in the special antiphthisical properties of ass's milk. How are we to explain the persistent favour with which that substance was regarded for centuries as a cure for phthisis? The ancients, at whom we are too apt to laugh, had, it is true, no laboratories; but in clinical observation they were the equals, if not the superiors, of modern doctors. It is curious to note the distrust and even the dislike with which many of them regarded cow's milk. Nevertheless, they knew nothing of tuberculosis of the cow's udder, nor did they know that the ass is especially resistant to this infection. They went entirely by

their experience. Ass's milk was credited with special nutritive and detergent properties, and it was therefore believed to be indicated in diseases of the stomach, in abscess of the kidneys, stone of the bladder, and gout. It was supposed to act by opening the bowels, cleansing the urinary passages, and stimulating the menstrual flux. Ass's dung was used as a remedy in haemorrhages of all kinds, and the animal's urine was prescribed to nephritics, and was supposed to be a deodorizer in ozaena. The hoof was used in falling sickness, and in epilepsy scrapings were given in doses of half a scruple to a scruple. The ash of the hoof mixed with oil was supposed to disperse scrofulous glands and abscesses, to cure chilblains, and to heal cracks in the skin. The horny warts on the knee of the ass had the property of making the hair grow, and so powerful was the effect of this application that it was believed that if a woman rubbed her face with them she got a beard. Here is a hint for seekers after a "hair restorer."

AUGMENTATION OF BACTERIAL TOXICITY BY DISTILLED WATER.

In 1912 Hort and Penfold, working in the former's laboratory at the Lister Institute, brought forward evidence to show that variation in the volume of the diluent has a profound effect upon the toxic action of bacterial cultures. If, for example, constant fractions of a broth culture of *B. typhosus*, suspended in small constant volumes of freshly distilled water, were injected intravenously into healthy rabbits, it was found that the toxic effect as expressed in fever was also constant. If, however, the small quantities of water were replaced by large quantities—the fraction of broth culture remaining constant—it was found that death often ensued in an hour or two. Control observations showed that neither fever nor death was ever produced by injection of pure water alone, either in small or large quantities—that is, within the limits recorded. Death never followed the injection of small fractions of broth culture either alone or in small quantities of water. A similar augmentation of toxic effect was also produced, though not constantly, by substitution of normal saline for water. Finally, it was shown that the effect could be produced by injecting the water or saline before the broth cultures. In a paper appearing in to-day's issue Penfold and Violle record the results of further experimental work conducted on similar lines. These authors now show that distilled water administered simultaneously with, or prior to, the culture or filtrate markedly increases the toxic action of many organisms, and notably of the cholera vibrio, with which the majority of the experiments deals. Extremely minute quantities of culture or filtrate which would, if given alone, be completely atoxic are rendered acutely and fatally toxic when administered with distilled water. With regard to the explanation of this action, the authors show that haemolysis of red cells plays at least some part. Administration of the culture with a quantity of lysed red cells, which by itself would be quite atoxic, produces fatal intoxication. It is well known that many cholera strains secrete a haemolysin, while other organisms which do not possess this power are, however, able to break down red cells when growing in actual contact with them. It is possible, therefore, that the form of intoxication described by Hort, Penfold, and Violle may shed some light on the etiology of certain types of bacterial intoxication which at present are little understood. Doubtless, also, it may have an important bearing on problems associated with anaphylaxis.

UNINSURED CONSUMPTIVES AND SANATORIUM BENEFIT.

The earnest appeal on behalf of the Sanatorium Fund of the Charity Organization Society, made on February 2nd by the Chairman of the society's council and the Presidents of the Royal Colleges of Physicians and Surgeons in England, should meet with a prompt and generous response. The report of the sanatorium work done by the society during the years 1902–12, quoted in our columns on January 10th and adopted as a text by the signatories of the appeal, must carry conviction to the most sceptical minds that an amount of success is obtainable by means of sanatorium treatment which fully justifies continuance and amplification of the system. The fact that 50 per cent. of the cases treated have been rendered capable of work cannot be gainsaid, while the more remote effects of the segregation of such cases for longer or shorter periods must have reacted for good upon the community. Armed with sufficient funds, the Charity Organization Society can offer somewhat better terms to the uninsured consumptive than are open at the present moment to those who are insured. The provision of sanatorium benefit under the Act proceeds but slowly. The number of applicants is large, and it is to be feared that the demands of the many who desire it may curtail the chances of the few who obtain it and lead to their dismissal from institutional treatment before they have had time to reap its full benefit, to make room for others whose claims have to be met. The efforts of the Local Government Board to bring about a uniform system for adoption by all providing authorities are beginning to materialize, and we note that a working agreement has recently been arrived at between the insurance and the county authorities in Surrey, which is worthy of consideration as a model for others to work by. The details, of which an account may be found in the *National Insurance Gazette* for February 7th, provide for the appointment of a competent tuberculosis officer, reserving the right of recommendation and nomination of patients to the County Insurance Committee. This right is to be subject to the certificate of the tuberculosis officer, and until sufficient accommodation can be provided it can only be nominal, but it is intended that in the future the committee shall endeavour to exercise complete control over admissions to benefit, whether by domiciliary, dispensary, or sanatorium treatment. The difficult problem as to how to deal with the dependants of insured consumptives has not as yet been satisfactorily solved, and although in some counties their treatment is undertaken, in others they remain unprovided for. A uniform scheme for all counties and a uniform system of recording cases is greatly to be desired.

LAW AND MEDICINE.

Lawyers profess to have little respect for medical evidence, mainly, we believe, for the reason that so few questions bearing on medical science admit of the simple answer "Yes" or "No" so dear to the legal mind. Then, of course, doctors occasionally differ in opinion, but the lawyer who is inclined to scoff should remember that he makes his living by differing from his learned friend. Pope's famous line,

> Who shall decide when doctors disagree?

so often quoted as if it applied to doctors of medicine, really refers to doctors of divinity, or, more strictly, of casuistry. If a doctor in the witness-box tries to explain his evidence, he is generally told not to make a speech. On the other hand, judges and counsel claim full liberty to discuss medical questions, and the results are sometimes tragic. More often, however, they are, to the scientific mind, merely laughable. A curious story is told in the *Journal de médecine de Bordeaux* of February 8th, which, even if it be not strictly historical, serves well to illustrate the courage with which a lawyer will meet an argument that from the medical point of view is absolutely crushing. A labourer on the quays at Bordeaux was charged with criminal assault on a little girl of 12. A medical examination showed that the child was suffering from

gonorrhoea. The accused was then examined, but no trace of gonococcal infection was found. The diagnosis in the case of the little girl was then revised to vaginitis. At the trial a number of witnesses gave evidence, the child cried, and the accused vigorously protested his innocence. Then came the advocate-general, who dwelt eloquently on the relaxation of morals, on the sanctity of the family, on the bad antecedents of the accused. In time, of course, he had to come to the medical evidence. Turning to the counsel for the defence, he said: "My learned friend will bring forward an argument which he thinks conclusive. He will tell the court that as his client is not suffering from gonorrhoea he cannot have given the disease to the little girl who has been before you, and that consequently he cannot be guilty. But who shall tell you, gentlemen, that this man who is not an example of morality, this man who is a pillar of houses of ill-fame, is not also suffering from *vaginitis?*" *Solvuntur risu tabulae.* As we have hinted, we are not sure that this edifying story is absolutely accurate, but even if it is not true, we say with Æsop "this fable shows" what lawyers are capable of in dealing with medical evidence.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF WALES.

A very influential deputation representing the University of Wales waited on the Chancellor of the Exchequer on February 12th. The deputation was introduced by Mr. David Davies, M.P. Lord Kenyon, Senior Deputy-Chancellor of the University of Wales, who spoke first, was followed by Lord Merthyr, President of the University College of South Wales and Monmouthshire at Cardiff. Afterwards Professor Hepburn, of the Medical Faculty, described the great opportunities which existed in Cardiff for the clinical teaching of medicine, surgery, gynaecology, mental diseases, tropical diseases, and infectious diseases, and for research. He indicated that there would be over 1,500 beds available for clinical teaching. Sir Almroth Wright, in a very interesting speech, expressed his strong approval of the unit system, which Lord Kenyon had indicated to be the ideal actuating those who were seeking to complete the medical school of the University of Wales. Dr. Maclean also spoke; and the Chancellor of the Exchequer, in reply, after observing that this was one of the most influential deputations he had received from Wales in connexion with an educational problem which affected the interests of the community at large, said that, on behalf of the Government, he could promise to give a very substantial contribution towards the scheme, provided Lord Kenyon's promises to raise funds in Wales for the extension of the medical school were carried out. He was pleased to hear that Sir William James Thomas had already promised the sum of £30,000 towards the completion of a part of the block of buildings that was necessary for the medical school. He was also very pleased to hear from Colonel Bruce Vaughan that a most generous anonymous donor had offered the magnificent sum of £60,000 to complete the whole of the buildings required for carrying out the scheme for the medical school of the University of Wales in all its teaching departments, and these buildings would give medical practitioners in the Principality opportunity to become acquainted with all new important developments in the treatment of disease, and provide adequate facilities for enabling Wales to take its proper share in medical research. Mr. David Davies, M.P., on behalf of the deputation, cordially thanked the Chancellor of the Exchequer for his sympathetic reply.

Dr. F. W. Mott, F.R.S., has been elected a foreign corresponding member of the Neurological Society of Paris, of which M. Pierre Marie is president.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Ministerial Changes.

As has already been announced in the press, Mr. Masterman has received his promotion to Cabinet rank, and the appointment which he has received is that of Chancellor of the Duchy of Lancaster. We understand, however, that this will mean no change in Mr. Masterman's position as head of the Joint Committee of National Insurance Commissioners.

It has been felt for a long time that the holding of the post of Financial Secretary to the Treasury and at the same time that of Chairman of the Joint Committee of National Insurance was establishing an undesirable association between the Treasury and a spending department, and the separation of the two offices has been inevitable for some time. It is commonly surmised that Mr. Edwin Montagu will succeed Mr. Masterman as Financial Secretary to the Treasury.

Another important change of interest to the medical and public health services is the change of offices which is to be made by Mr. John Burns in his transference from the Local Government Board to the Board of Trade in succession to Mr. Sydney Buxton. Mr. Herbert Samuel will become the new President of the Local Government Board, being succeeded at the Post Office by Mr. Hobhouse, previously Chancellor of the Duchy of Lancaster. It appears to be generally agreed that Mr. Herbert Samuel is specially fitted to be in charge of the important constructive work which falls to be undertaken by the Local Government Board in connexion with the legislative and other changes foreshadowed by the Government.

Opening of Parliament.

A sentence in the King's Speech which will be of interest to the medical profession is that which relates to the proposals dealing with housing and education. It is in the following terms:

> Measures will be presented dealing with the housing of the industrial and agricultural population; to give effect to the proposals, which were announced last session, for the development of a national system of education.

A comprehensive housing survey as an initial measure has already been promised by the Government, and it would appear to afford a favourable opportunity for pressing forward the claims to provide security of tenure to medical officers of health, inspectors, and others who are concerned with this work.

The sentence in the King's Speech with relation to education appears to suggest proposals of a wider scope than those which were commonly anticipated in the press, and it is believed that a considerable development of nursery and open-air schools, as well as encouragement of the physical and health side of the work of the educational authorities, are likely to form a part of the Government's programme.

Another portion of the King's Speech which evoked favourable comment from members interested in social questions was that in which it was promised that measures would be introduced "to amend the law with respect to the treatment and punishment of young offenders."

The final sentence in the King's Speech, to the effect that measures may be introduced "if time and opportunity permit, for other purposes of social reform," evoked amused and interested comment. It obviously leaves the door open for the introduction of almost any measure in addition to those already indicated; but, in view of the enormous amount of work which will have to be undertaken by Parliament during the coming session, it would not be very hazardous to prophesy that time and opportunity will *not* permit of other considerable measures being dealt with.

The debate on Tuesday and Wednesday, February 10th and 11th, was solely confined to an amendment moved by Mr. Walter Long in connexion with the Home Rule Bill.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

THIRD ALL-INDIA SANITARY CONFERENCE.

THE third All-India Sanitary Conference was opened at Lucknow on January 19th by the President, Sir Harcourt Butler, member of the Governor-General's Council in charge of the Department of Education, who welcomed the congress in the name of the Government, and introduced Sir Malcolm Morris, K.C.V.O., and Sir Edward Buck, K.C.S.I.

ADDRESS BY SIR HARCOURT BUTLER.

The President said that the year's retrospect showed steady advance in many directions, and in both hygiene and research the results gave ground for hope. The number of deputy sanitary commissioners had increased by four, and these officers were now allotted: three to Bengal; two each to Madras, the United Provinces, and Bihar and Orissa; and one each to the Punjab, the North-West Frontier Province, and Burma. Three of these appointments were reserved for officers of the Indian Medical Service, and the remaining nine were open to medical men recruited in India, of whom eight—all Indians—had already been appointed. In addition, 39 first-class and 104 second-class health officers would be appointed to the municipalities. The Government was meeting the cost of the new appointments of deputy sanitary commissioner on the scale sanctioned for Indians, and was giving a subvention amounting to half the pay of first and second class health officers. Special attention was being paid to the training of sanitary inspectors. Bengal, the United Provinces, the Punjab, and, he believed, Burma, had followed the examples of Madras and Bombay, and it was hoped that training classes would shortly be opened in Bihar and Orissa.

The non-recurring grants for urban sanitation in 1913–14 amounted to £1,000,000 sterling, exclusive of the sum paid for special claims in the North-West Frontier Province, Delhi, Bangalore, Indore, Quetta, and Mercara. The recurring grants in the same year amounted to £300,000 sterling, and one-ninth of this was reserved for research and antimalarial projects. In the provinces which benefited by the transfer to district boards of the entire net proceeds of the land cess, amounting to over £546,000 a year, there would be no difficulty in financing sound schemes of rural sanitation, including the improvement of rural water supplies, antimalarial measures, the protection of grain stores, and general sanitation. Since the inception of the Research Fund £95,600 had been disbursed in accordance with the advice of the Scientific Advisory Board. At present, under the Indian Research Fund Association, nine medical officers were working on special malaria inquiries in seven provinces, and the establishment had been sanctioned in Rangoon of a Pasteur Institute, the director of which would combine bacteriological and serological research with his routine work. It was proposed to institute at Poona an investigation to fix bacteriological standards of purity for drinking water; inquiries would also be made into the etiology of leprosy, of fevers of uncertain origin, and of diabetes, which, though not a tropical disease, led to the loss of many valuable lives in India. At Benares an elaborate practical experiment in water filtration would be carried out, with the object of ascertaining the best methods of silt removal, and determining the relative merits of different types of mechanical filters and sedimentation, both with and without the addition of chemicals.

After mentioning that an Indian gentleman, Dr. Awati, who had been working at South Kensington, had been appointed medical entomologist, he referred to the reports of Major James on the protection of India from yellow fever and on the practicability of *Stegomyia* reduction in Indian seaports. After inviting contributions to the *Indian Journal of Medical Research*, he went on to discuss the importance of the work of the Provincial Pilgrim Committees. The report of the Pilgrim Committee which toured in the United Provinces in 1912–13 was under consideration, and the Government, after considering a report by Mr. G. Adams, of the Indian Civil Service, had decided to make a grant for the improvement of the great Badrinath Pilgrim Route.

After a short analysis of the business to come before the conference, he referred to the inquiry instituted by the Government into the teaching of hygiene in schools and colleges and the personal hygiene of students, and in conclusion touched upon the necessity, if any real advance in domestic or personal hygiene was to be achieved, of convincing the women of India of this necessity. The first step in this direction was to encourage medical women to preach the gospel of health inside the zenana and cautiously to develop a system of nurse district visitors and sanitary inspectresses.

ORGANIZATION OF THE CONGRESS.

The congress, which continued its business until January 24th, was conducted in sections; on January 25th and 26th visitors were taken to Benares, Magh Mela, and Allahabad, and the congress was concluded on January 27th by a full session.

ADDRESS BY THE DIRECTOR-GENERAL, I.M.S.

Sir Pardey Lukis, Director-General of the Indian Medical Service, in an address in which he opened the proceedings of the Research Section, observed that the congress differed from its two predecessors, inasmuch as the necessity for separating the deliberations of the General Malarial Committee from those of the Sanitary Conference had ceased, since the Malarial Committee was now a subcommittee under the Scientific Advisory Board of the Indian Research Fund Association. In a reference to the founding of the *Indian Journal of Medical Research* he expressed the obligations of all concerned to Major Robertson and Captain Norman White for the enormous amount of time and labour they had devoted to making the journal a success.

Antimalarial Measures.

With regard to antimalarial measures, he said that Major Graham's interesting and valuable report of a malaria survey of Meerut municipality in 1911 was still under consideration. There had been a very great decline in the prevalence of malaria in Meerut, the best explanation for which seemed to be found in the broad drainage operations between 1875 and 1879; they had been followed in the two decennia 1888–1897 and 1898–1907 by a saving of approximately 9,000 lives during the months of September, October, and November alone, with a corresponding decrease in sickness and consequent economic gain. These results appeared to justify the method of practical malaria surveys which Major Robertson had introduced in Nagina and Saharanpur in 1909. He found that it might be possible in practice to neglect the less important and more temporary sources of danger, and yet attain a considerable degree of success if careful preliminary surveys were made. He found out definitely and accurately the chief danger points, which could be dealt with thoroughly in ways independent of any help or co-operation on the part of the general public. Major Robertson held that even if complete abolition of the disease were impracticable, a marked and permanent decrease in malarial prevalance might thus be obtained at a moderate cost, and the Government had allotted funds to carry out such measures as an experiment at Nagina and Saharanpur.

Dealing with the question of jungle clearing—as to which Sir Pardey Lukis said there was great diversity of opinion—he observed that the proposal of the Indian Research Fund to allot to Bengal a considerable sum of money to carry out an extensive experiment of jungle clearing in the vicinity of inhabited areas had not been carried out, owing to the attitude assumed by the Provincial Malaria Committee. The Provincial Committee was of opinion that extensive jungle clearing in Bengal villages was impracticable. Upon this he made the following observations:

> It appears to me that this decision is due to a misapprehension of the intentions of the Scientific Advisory Board. The Provincial Committee, acting upon the reports of Major Fry and Dr. Bentley, take the "jungle" to mean all vegetation, including fruit trees and bamboos. I need hardly say that we never intended any such wholesale destruction of valuable property; all we aimed at was the eradication of rank undergrowth and scrub and useless trees. The

condition of affairs round a Bengal village was ably described by Buchanan one hundred years ago as quoted by Bentley himself in the November number of the *Indian Medical Record*. He says "the great variety of lofty flower and fruit-bearing trees and the luxuriant bamboos by which the cottages are shaded would render their situation delightful, did not rank weeds and bushes, which shoot up with increasing vigour in every corner that is not in constant cultivation, prevent all circulation of air, preserve a constant damp noisome vapour and harbour a great variety of loathsome and pernicious animals." This is the condition we want to remedy. Dr. Bentley, in the last paragraph of his able paper, "On the reaction of mosquitos to artificial light," alludes to the generally-accepted theory that a screen of trees is beneficial as a protection against malaria and mosquitos. The question here, however, is not one of a screen of trees; it concerns the eradication of scrub or undergrowth. We have, moreover, in Major Marjoribank's suggestive paper on "Malaria in the Island of Salsette" striking evidence of the deleterious effect of jungle around the village site. He shows that it is possible to map out a series of "*isosplens*"; that the most malarious villages are those at the foot of the hills where the jungle is densest and that the malarial endemicity steadily decreases as you go farther and farther from the jungle belt. To explain this he advances the very plausible theory that the scrub and jungle afford shelter and humidity to the female mosquito, thus enabling her to live on into the dry season and increasing the period of her infectivity towards man. Major O'Gorman Lalor, too, in his recently published report on "Malaria in the Katha district" advocates as a measure of practical utility the cutting down and burning of all scrub jungle twice yearly in, and for a radius of one mile around, every malaria-stricken centre of population.

Blackwater Fever.

After referring to the observations of Wade-Brown, which seemed to show that haematin was probably the circulating toxin which caused malarial anaemia, Sir Pardey Lukis went on to consider the subject of blackwater fever. The most recent work appeared to endorse the opinion that without malaria there was no blackwater fever, though it was not certain that they stood towards one another in the relation of cause and effect. Leishman had suggested that the cell inclusions might be of the nature of chlamydozoa; and though Balfour and most other observers doubted the parasitic nature of these inclusions, or that they played any part in the causation of blackwater fever, Leishman, in a recent article, while admitting that there was no actual proof of the existence of a specific virus, argued that the chlamydozoal hypothesis was not inconsistent with well established facts. The association between blackwater fever and malaria might be explained if it were assumed that the chlamydozoal virus was transmitted by mosquitos, or by some other insect with a similar geographical distribution, and pointed out that of the four diseases known to be distributed by mosquitos, two (yellow fever and dengue) were due to filter-passing viruses. Leishman had also suggested as an explanation of the connexion between malaria and blackwater fever the possibility of the malarial parasite being itself subject to disease.

Relapsing Fever.

Sir Pardey Lukis then drew attention to Major Bisset's paper on relapsing fever in the Meerut district, in which he confirmed Mackie's observation that *P. vestimentorum* is a carrier of the disease, and also Nicolle's observation that relapsing fever is transmitted by the accidental crushing of the lice during scratching, the mere bite being innocuous. Bisset insisted on an active crusade against lice, and that they should not be killed in the common manner by crushing them between the finger nails. The importance of a crusade against lice was further emphasized by Major McKechnie's report on a fever occurring at Bhim Tal which he believed to be true typhus, the carrier of which according to Nicolle is *P. vestimentorum*, though Patton, Husband, and McWalters incriminated *Cimex lectularius*, at any rate so far as Indian gaols were concerned. A suggestion made by Captain Brown that relapsing fever in the Meerut district might be conveyed by one of the harvest bugs also deserved investigation.

Yellow Fever.

Speaking of Major James's antistegomyia campaign in Colombo, Sir Pardey Lukis said that he understood that the operations were carried out in the heart of the business section of the city, and were incomplete owing to the fact that it was impossible to deal with certain important breeding places such as roof gutters and water storage cisterns. In spite of these drawbacks and of the fact that the area dealt with was only separated by the width of several streets from similar sections in which no operations were undertaken, it was possible in the course of six investigations, made at intervals of five days, to reduce the potential breeding places by 60 per cent., and the actual breeding places from 275 to 4. Tests made with regard to the numbers of *Stegomyia* appeared to show that they had been materially reduced. The Government of Bengal had accepted Major Gilchrist's recommendation to make a systematic investigation of the *Stegomyia* problem in typical areas of Calcutta. The importance in this connexion of securing throughout the twenty-four hours a high pressure service had been impressed upon the corporation, and the question of the control reservoirs, cisterns, etc., was under consideration. The relationship, if any, of *Stegomyia scutellaris* to yellow fever was discussed, and it would appear that the evidence available was held to indicate that it was probably not related. The West African Yellow Fever Commission having suggested the desirability, in view of the possible advent of yellow fever in India, of making an investigation into the etiology of fevers of short duration, Major McCarrison had been selected to make a special inquiry.

Plague.

Sir Pardey Lukis concluded his address by calling attention to certain observations on the relation of the rat to plague. Captain Norman White had observed that in Lucknow during the hot weather of 1911 most of the young rats were females, and that there had been some adverse influence causing the destruction of adult females. This was not plague. The process went on, but was compensated, for during nearly two months only females appeared to be born. The observation had an important bearing on the suggestion that the most efficacious method of diminishing the rat population in a given area was to catch rats, liberate the males, and destroy the females; it was said that by so doing breeding was markedly diminished, and that the young ones born were increasingly liable to be eaten by the proportionately increased male rats. The ease and rapidity with which the balance of the two sexes was readjusted in Lucknow indicated that any such measures of rat destruction were not likely to meet with success, at any rate so far as *Mus rattus* was concerned.

Sir Pardey Lukis also mentioned the observation of Dr. C. J. Martin, contributed to the tropical section of the International Medical Congress in London, which showed that the accepted view that the plague bacillus was conveyed as the result of faecal contamination of the puncture and not by the actual bite was erroneous.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Lister Memorial Institute for Research in Edinburgh.

In announcing last week that a good beginning had been made for the proposed Lister memorial institute for research in Edinburgh, owing to the contributions of the University of Edinburgh and the Royal Colleges of Physicians and Surgeons, it was by a clerical error stated that the total sum required was £190,000; the amount should have been given as £100,000. We can only express the hope and expectation that the remaining £75,000 will quickly be obtained to provide an adequate memorial to Lord Lister in Edinburgh. The work he did there in the earliest days before he went to Glasgow, and afterwards when he returned to Edinburgh as professor, has added one of the most remarkable chapters to the history of that illustrious school.

CONFERENCE OF SCOTTISH MATERNITY HOSPITALS IN EDINBURGH.

At the conference of representatives of the four Scottish maternity hospitals held in Edinburgh on February 4th (see JOURNAL for January 31st, p. 268), some interesting facts regarding the effects produced by the maternity benefit under the Insurance Act emerged during discussion. Mr. Middleton, Chairman of the Board of Managers of the Edinburgh Royal Maternity Hospital, presided; Glasgow Maternity Hospital was represented by Professors Jardine and Bryce, and by Mr. Guy; Aberdeen by the Rev. Mr. Smith; Dundee by Dr. Fraser; the Edinburgh Hospital by Sir Halliday Croom, Dr. J. W. Ballantyne, and Dr. Haig Ferguson; the associated Edinburgh dispensaries by Drs. Keppie Paterson and J. L. Green; and the Board of Directors of the Edinburgh Hospital by Sir Ludovic Grant, Councillor Buchan, and Mr. T. M. Gardiner. It was stated that Edinburgh had made agreements with nine societies and Glasgow with twenty-four, and in each city there were several other societies which were voluntarily carrying out the mandates of their members; Dundee had no formal agreements, but had verbal understandings with a considerable proportion of the societies, which either retained the charge or sent the relatives to the hospital with the money; and Aberdeen had entered into correspondence with many of the approved societies, suggesting a charge, and the great majority of the societies whose members had received treatment had agreed thereto. In Edinburgh a flat rate of 15s. for both intern and extern cases had been charged; in Glasgow there had been differentiation, normal intern and extern cases being charged not less than 10s., and operative not less than 15s.; Dundee had a flat rate of 10s. for both intern and extern; and Aberdeen had charged 10s. for intern and 7s. 6d. for extern cases. In Edinburgh only a small proportion of the insured persons had paid the 15s., a few had paid less, and the vast majority nothing, so that the sum received worked out at 4s. 1d. for each; in Glasgow the average amount received per patient was 3s. 9d., and per birth 4s. 5½d.; Dundee had received its charge from about 80 per cent. of its cases; and Aberdeen had had practically no difficulty in recovering its charges. The experience of Edinburgh and Glasgow as to the number of cases was curiously similar: in each hospital there was a fall in the attendance both in the intern and the extern departments: in Edinburgh the intern cases had fallen from 633 in 1912 to 489 in 1913, and the extern ones from 1,282 in 1912 to 995 in 1913, whilst in Glasgow the drop in the intern had been from 1,458 to 1,424, and in the extern from 3,031 to 2,066, so that in each case the fall was exactly 22 per cent. In Dundee there was actually a small increase in the intern cases, but the extern had diminished markedly so that the net fall worked out at 15 per cent.; in Aberdeen there was a falling off both in the intern and extern departments, which represented a drop of 35 per cent. Exact figures were not presented for the associated dispensaries in Edinburgh, but it seemed that in all of them there had been a decrease, which had been partly recovered from when the charge was taken off. It was also reported that the Edinburgh Hospital had not of late been insisting upon the 15s. rate, and that patients had been making more use again of the services of the medical staff. There was a consensus of opinion in all the four hospitals that unskilled women (neighbours and the like) were being employed in place of trained nurses and doctors or medical students working under doctors, and there was absolute unanimity that it was desirable that a Midwives Bill for Scotland should be pressed forward as rapidly as possible with a view to eliminating this unskilled competition. It was also felt generally that a sum not less than 5s. and not more than 10s. should be fixed upon as fair remuneration to the hospitals. The result of the conference will probably be the presentation of a joint statement to the Scottish Insurance Commissioners.

EDINBURGH HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN AND MATERNITY PRACTICE.

The annual meeting of the subscribers to this institution, with which is conjoined the Hospice Maternity Centre in the High Street of Edinburgh, was held on February 3rd, Lady Salvesen presiding. During the year 463 patients had been admitted to the hospital, as against 349 the previous year (when, however, a ward of 14 beds had been closed for lack of funds), and 44 children had been treated in the new children's ward. The Hospice Maternity Centre, with its large number of maternity out-patients, 8 beds for cases demanding hospital treatment, and resident nurses training in midwifery, had necessarily had a year of adjustment to the new conditions brought about by the maternity benefit of the Insurance Act. The expected diminution in the number of cases had not occurred; there had been 202 this year, as compared with 184 last year. The income for the year was £3,444 18s. 2d. and the expenditure £3,463 14s. 3d.

ABERDEEN.

On February 6th Dr. Matthew Hay, Medical Officer to the City of Aberdeen, delivered a lecture on occupation and health to the Aberdeen Workers' Educational Association. He began by referring to the benefit to the health of workers which had followed the reduction of hours of labour that had taken place, more especially in the course of the last half century. This reduction had not, however, affected all classes alike. Young women in shops had been late in reaping any real advantage from legislative control. Dr. Hay also referred to the unhealthy effect of overtime and night work, saying that the activities of the body and its power of resisting illness and the effects of fatigue were much less during the hours of night than those of day. He showed a table of the relative proportion of sickness among the day and night policemen of Aberdeen, and pointed out that the proportion was nearly twice as high among the men on night duty as among those on day duty. That was not due to the effect of exposure to night air, otherwise consumptive patients who slept in the open sheds at the City Hospital would have had their illness aggravated. His advice was never to work or sit up late, and to stop at 10, or at the very latest, at 11 p.m. With regard to the proper ventilation of workrooms, the lecturer alluded to the modern treatment of tuberculous patients, and said that whatever hygienic measure was good for the cure of disease was trebly good for the prevention of disease and the maintenance of health. In referring to particular occupations, Dr. Hay mentioned those in which gritty, insoluble dust was inhaled, and called attention especially to the effect of silica, which in almost pure form constituted ordinary sand and flint, but also formed a large part of such minerals as granite. Particles of silica were usually sharp-edged, and when drawn into the lungs appeared to scarify the surface of the air tubes, facilitating the entrance of tubercle germs. The baneful effects of such dust were observed in Aberdeen in the somewhat high mortality from phthisis among stonecutters, which, however, appeared to be decreasing in the last three or four years. This mortality was also high amongst stonecutters in Edinburgh working in certain sandstones, the cutlery grinders of Sheffield, and especially among the tin miners of Cornwall and the gold miners of the Transvaal. Some other kinds of dust (such as coal dust) did not tend to increase the occurrence of phthisis. The problem of dealing satisfactorily with the dust of granite yards had not yet been solved.

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

Mr. Charles Richard Whittaker, F.R.C.S.Edin., L.R.C.P. and S.Edin., F.R.S.Edin., Senior Demonstrator in Anatomy at Surgeons' Hall, has been appointed a Lecturer on Biology in the School of Medicine of the Royal Colleges, Edinburgh. Mr. Whittaker is the author of a *Manual of Surgical Anatomy* and of *Essentials of Surface Anatomy*.

THE ROYAL DISPENSARY AND VACCINE INSTITUTION.

Among the long-established medical charities of Edinburgh the Royal Dispensary and Vaccine Institution has an honourable place. Its very name, Vaccine Institution, carries the mind far back to Jennerian times. As a matter of fact, this is the 137th year of its existence, and the annual report (presented on January 31st) gives ample evidence of continued vitality. The number of patients who availed themselves of the services of the dispensary staff in 1913 was 5,266; the diminution, as compared with previous years, was probably to be ascribed to the National Insurance Act. The revenue was £576 and the expenditure £550.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

PREVENTION OF INFANT MORTALITY.

LAST week, at a meeting of the Society for the Prevention of Infant Mortality, held in the Mansion House, Dublin, the third annual report of the Dublin Committee was read. It stated that 130 ladies were working as voluntary health visitors, and had paid 23,000 visits to mothers and their infants during the last year; £104 had been expended on milk and dinner tickets, and 1,800 articles of clothing had been distributed. Many of the visitors were occupied in various pursuits during the day and did this work in their spare time. While tangible results were difficult to show in an educative work of this kind, spread over a large population, the Committee was confident that the work was of a very beneficial character, and highly appreciated by the poor. The work was entirely voluntary, there were no paid officials, and every penny subscribed was spent on the poor. The secretary, Dr. Cassidy, said he had no hesitation in stating that fully 50 or 60 per cent. of the infant mortality in Dublin was the result of injudicious feeding, due to the ignorance of the mother rather than to starvation, and one of the first conditions of improvement in that direction was that the slums should be swept away, and that the housing conditions should be improved.

MILK AND NATIONAL HEALTH.

Last week Mr. T. W. Russell, M.P., Vice-President of the Department of Agriculture, received a deputation from the Women's National Health Association, which urged the adoption of the recommendations of the Vice-regal Commission on the Milk Supply. Lady Aberdeen, who introduced the deputation, said that the association wished to urge the inauguration of the educational campaign which the Commission had recommended, and in which the association was prepared to render every assistance to the department. Its instructors in domestic economy already did a great deal in this way. In domestic economy courses special attention should be paid to the actual value of milk as a food, and they asked if it might not be possible for the department to issue a pamphlet of a popular kind and on popular lines, embodying the recommendations of the Commission. The second recommendation of the Commission that the deputation wished to lay stress on was that dealing with the organization of the milk supply, and they hoped that in the Land Bill the Vice-President would be able to act on the suggestion of the Commission and secure the addition of a clause which would permit of the extension of the powers of the Estates Commissioners and the Congested Districts Board to enable them to allocate land for the grazing of milch-cows in connexion with the sale of any estate. It was hoped also that the Chief Secretary and the Vice-President of the Department would combine to bring in a short bill making the use of the long tube babies' bottle illegal. The deputation finally considered that the proposal of the Commission that there should be co-ordinating committees of the Local Government Board and of the department for the carrying out of the dairies, cowsheds, and milkshops order should, if possible, be acted on. Sir John Lentaigne said there was no question that the continuous absorption of tuberculous milk produced the diseases which were termed surgical tuberculosis—that is, tuberculosis of the glands, joints, and bones. Sir William Thompson pointed out that last year, of the deaths of children under 5 years, 79 per cent. were due to infection from milk. In England the proportion worked out at 12 per cent. less. Abdominal tuberculosis, which was solely due to milk, accounted for 23 per cent. of the deaths in 1913.

Mr. Russell said he would do all he could to help the association in its efforts. The dairies, cowsheds, and milkshops order was not fully administered. In Kildare he was recently told that it was a dead letter. He was afraid there was much truth in the statement, and that in large parts of the country the order was not administered at all. He could not agree with the suggestion of co-operation between the Local Government Board and the Department of Agriculture. Referring to the administration of the Tuberculosis in Cattle Order, he said the department had made a beginning, and he had been successful in obtaining from the Chancellor of the Exchequer £25,000 for the compensation of the owners of cattle condemned and destroyed. He did not, however, hold out much hope of legislation in the present Parliament, but, as far as administration was concerned, the work would be undertaken at once.

NORTH DUBLIN UNION AND VACCINATION.

At the meeting of the Board of Guardians of the North Dublin Union last week a motion was proposed "that the resolution adopted in December, 1911, be rescinded and that all the regulations in connexion with the Vaccination Acts be fully carried out." One of the guardians stated that three times the motion had been defeated with increasing majorities. In three years 17,000 parents in Ireland had said, "We will not allow our children to be vaccinated." Since vaccination was stopped infantile mortality had decreased. The motion was defeated by 18 votes to 5.

England and Wales.

WALES.

THE WELSH NATIONAL TUBERCULOSIS SANATORIUM.

AN interesting description of the plans of the King Edward VII Welsh National Memorial Sanatorium at Pont-y-Wal, South Wales, was given at a meeting of the Royal Sanitary Institute, on February 10th, by the architect of the buildings, Mr. E. T. Hall, F.R.I.B.A. A discussion followed on the cost and construction of sanatoriums under the Insurance Act.

Mr. David Davies, M.P., who presided, said that it had been felt in Wales that there could be no more fitting memorial to the late King Edward than a crusade against tuberculosis, which was especially prevalent in the Principality. The scheme had three main provisions: the education of the public in hygiene; the provision of tuberculosis officers, visiting stations, and hospitals; and the erection of sanatoriums. It was decided to have two large sanatoriums rather than a number of small ones; one would be placed in North and one in South Wales. The local authorities and county councils, with one exception, had joined with the Memorial Association. Mr. Davies combated the idea that tuberculosis sanatoriums should be quite temporary structures, on the ground that they became in time impregnated with infection. There was nothing in sanatorium buildings to retain infection; they were safer in that respect than private dwellings. On the question of cost, Mr. Davies said it was almost impossible, with every economy, to erect satisfactory sanatoriums within the limit of £150 a bed suggested by the Departmental Committee on Tuberculosis.

Mr. E. T. Hall proceeded to explain the numerous plans which were exhibited on the walls of the hall. He mentioned that the Pont-y-Wal Sanatorium was the largest in the kingdom. The site was ideal—an estate of about 375 acres, sloping generally to the south, but undulating and well wooded, and commanding beautiful views of mountain ranges. The pavilions were arranged in parallel rows one behind the other and facing south; the men's and the women's sections were separated by the administration block and the hospital. A covered way ran at right angles athwart the centre of the buildings, and the depth of the site over which the buildings extended was about 700 feet. The site sloped so conveniently that each row of pavilions gave an uninterrupted view over the pavilion in front of it. Mr. Hall described in detail the expedients adopted in the endeavour to approximate to the cost of construction recommended by the Departmental Committee. As there was very little variation of level in the site from east to west no foundations were digged, but each line of pavilions would be placed on a concrete raft 6 in. thick. The pavilions were of ferro-concrete, with 3 in. external walls. Plastering and glazed brickwork were omitted generally, the walls being rendered smooth and distempered. The drainage would be by a duplicated system—one main pipe for soil and another for rain-

water. There would be an outfall tank for dealing with sewage. The lighting and power would be by electricity, steam boilers in duplicate being provided. An accumulator plant would obviate a night shift at the power station. It was proposed to heat with steam pipes and radiators the nursing block, children's pavilions, patients' dining and writing halls, the staff dining rooms, and the corridors of men's quarters. There would be no heat in the ambulant wards or workshops. Accommodation was provided for 125 male and 75 female ambulant patients, 48 children, 6 children in isolation, and 50 men and women requiring special nursing. This, with a staff of 73 brought the total to be housed to nearly 400 In regard to cost, Mr. Hall thought the figure of £150 per bed (including land and buildings) to be far too inelastic. Sanatoriums had cost £300 per bed in many cases; it was setting an impossible task to provide such institutions at half that cost. The inclusion of the cost of land would tend to make local authorities economize unduly in the size of sites.

Dr. Robertson, M.O.H. Birmingham, in opening the discussion, said Mr. Hall was to be congratulated on producing the best example of the British design of sanatorium. From a medical point of view the South Wales Sanatorium would be as efficient as could be wished for. Speaking of the experience of Birmingham, Dr. Robertson remarked that an adapted building near the city had been found in practice to be more satisfactory than a specially erected sanatorium sixty miles away. The friends of the patients visited the nearer one more readily, and the educational results were invaluable. People came to realize that fresh air, even though it were town air, was potent against tuberculosis. The surroundings of a sanatorium were important because the patients were there for some months, and interesting walks were advantageous. The kind of soil did not seem of great consequence in the case of an institution where people were constantly in the open air. Adequate grounds were necessary, but too much became a nuisance, and the medical superintendent had perhaps to add farming to his responsibilities. He wished the size of the patients' rooms could have been 10 ft. square instead of 8 ft., and he agreed that electric light was the only kind possible, as gas was affected by the constant draughts in sanatoriums. In Birmingham it was found that twice as many women as men went to the sanatorium; the breadwinner could not so easily avail himself of treatment.

Dr. Louis Parkes, M.O.H. Chelsea, remarked that in London sanatorium treatment was being provided in buildings erected for other purposes; the matter was being dealt with in a very half-hearted fashion. Keeping down the cost of sanatoriums could be carried too far; unless patients were provided for reasonably well they could not be persuaded to stay. He was not sure that the South Wales scheme did not err on the side of cheapness.

Mr. Hall, in his reply to various questions and suggestions, said that it would not be practicable to have glass verandahs in front of the pavilions on account of the excessive heat in summer. Projecting blinds would be excellent if funds permitted. Provision was made in the present scheme for the use of the north side of the pavilions in hot weather. The doors to the cubicles would only be shut in very inclement weather. Linoleum was not used as a floor covering because it was held that the condensation of moisture from the atmosphere, running down from the walls, caused such materials to rot. The larger number of pavilions was provided on the male side; if the women patients were found to be the more numerous a transposition could easily be effected.

THE African Society has published in a pamphlet with the title, *The Relation of Big Game to Sleeping Sickness*, a paper read before it last June by Dr. Warrington Yorke, Director of the Runcorn Research Laboratories, Liverpool School of Tropical Medicine. The argument of the pamphlet follows the same line as that of the article by Dr. Yorke, published in the JOURNAL of June 21st, 1913. The objects of the African Society, founded in commemoration of the work of Miss Mary Kingsley, are not only the investigation of the institutions and customs of the native races, but also the advancement of the commercial and industrial development of Africa in the manner best fitted to secure the welfare of its inhabitants.

Special Correspondence.

PARIS.

Intravenous Injections of Glucose.—Vaccine in Typhoid Cases.—Tetanus Cured by Serum Injections.

DR. ENRIQUEZ, in a paper read by him recently before the Academy of Medicine, described the results obtained by intravenous injections of a solution of glucose in the strength of 300 parts per 1,000 and appreciably hypertonic. He advocated their use in the case of debilitated patients before operations, and stated that in such cases the effect had been invariably good. His practice was to give a dose of from 250 to 300 c.cm. in the course of an hour, and repeat it twice or three times daily. In no case was evidence of haemolysis observed; the liver seemed capable of transforming this large quantity of glucose into glycogen without difficulty. In some cases of myocarditis with oliguria improvement was marked, the flow of urine becoming normal within a short period. In patients suffering from inanition following cancerous stenosis of the bowel the injections produced marked improvement in their general condition.

At Montauban in the South of France a severe epidemic of typhoid fever prevailed during September to October last year, and during its progress 3,000 recruits joined the garrison and were all vaccinated with Vincent's vaccine. The soldiers who already resided in Montauban were also vaccinated, and many of the inhabitants of the town took like precautions. Amongst the vaccinated no case of typhoid occurred. Of the 4,941 vaccinated, only 27 had febrile reaction, and in most instances it was infinitesimal. Parallel results were recently observed in the French army in Morocco.

Dr. Josué has reported favourable results from serum treatment of tetanus in two recent cases. One of the patients received in all 21 injections of serum, amounting to 980 c.cm., and the other 27 injections, amounting to 850 c.cm. The daily dose was 50 c.cm., and this was maintained until the patients showed considerable improvement. Dr. Josué maintains that subcutaneous injections are much preferable to intravenous or spinal, as they entail less risk of producing an attack of tetanic contractures. Both the cases mentioned ended in recovery.

Correspondence.

THE FLARE PHENOMENON IN SMALL-POX EPIDEMIOLOGY.

SIR,—I was not able to attend the recent Chadwick Public Lectures on "Vaccination in the Light of Modern Experience," given by Dr. Killick Millard, Medical Officer, Leicester, but have read with much interest the abstracts of the lectures which have been supplied to me.

Though I have no right to say anything on the subject of small-pox and vaccination, I should like to record a note upon a general epidemiological point raised by Dr. Millard. He fully admits the value of vaccination against infection in the individual, but questions whether general compulsory infantile vaccination is so necessary as a public health measure as is supposed, and cites the case of Leicester as one in which small-pox has been much reduced, although a very slight amount of infantile vaccination is now being carried out there. I have often been inclined to agree partially with this position as the result of my own studies of epidemiology, especially from the mathematical side, of which an account will be found in the second edition of my book on *The Prevention of Malaria* (Murray).[1]

According to these studies the spread of disease must depend upon the existence of a large number of factors, the increase or decrease of which is likely to cause changes in the amount of the disease present; and the only way by which we can study such variations is the mathematical way. Now my own investigations on the equations of insect-borne diseases have led me to think

[1] See also article by Dr. M. Greenwood, jun., on Hygiene and Preventive Medicine, Seventeenth International Congress of Medicine, London.

that the relation of such diseases to all the factors is by no means always a constant relation. That is to say that a very small increase of one of the factors may, under certain conditions, cause a very large increase in the amount of the disease. Thus, for malaria, I calculate that if the malaria-bearing mosquitos in a locality have a certain low ratio to the human beings—which I call the critical ratio—the disease will only just be able to maintain itself in that locality. If, however, the ratio of mosquitos to human beings is now doubled, the amount of malaria will not only be doubled, but will probably increase from, say, 1 per 1,000 of population to something like half the population, all the other factors remaining the same. Of course, the equations are by no means final; but nevertheless, I infer that something like this does occur in connexion with most of the factors concerned in epidemics. That is, the variation of the disease is often much more or much less than the variation in the individual factors; and I use the term "flare phenomenon" to denote this principle. It is a principle which depends upon the nature of the mathematical function connecting the amount of the disease with the various factors concerned in its spread, and the possible existence of this principle appears to be much overlooked in medical writings on epidemiology.

Now the non-immunity of children is certainly one of the factors in the spread of small-pox. If we diminish it by vaccination to a certain critical level, we may reduce small-pox almost to the vanishing point, just as I think that we can reduce malaria by diminishing the anopheline factor to a similar level. But if the vaccination of infants is so much neglected that the non-immunity ratio rises much over this critical point, an immense increase of the amount of small-pox may take place; that is to say, the "flare phenomenon" will suddenly come into evidence. In other words, I presume that infantile vaccination, imperfect as it has been in Britain, has nevertheless had the same effect regarding small-pox as mosquito reduction to near the critical point has probably had upon malaria in many localities.

Dr. Millard's points seem to be very moderately and reasonably stated, but I doubt whether they would all withstand a careful mathematical inquiry. For example, I fancy that he overrates the value of the Leicester experiment, because, as remarked before, that is only a small island with a high non-immunity factor in the midst of a large area in which that factor has been much more thoroughly reduced by vaccination. Hence the good results which he claims for Leicester may be due just as much to the protection afforded to it by the vaccinated bulwark by which it is surrounded as by the general sanitary work to which he gives the credit. In fact, the spread of disease in a large population must depend principally upon averages. If the non-immunity factor is allowed to become as high throughout Britain as it is in Leicester, a severe epidemic might set in at any moment. But of this it is impossible to speak until the mathematical side has been fully studied; and I think that such a study is now urgently demanded in connexion with this great subject. The mere evidence of doctors and laymen, such as that which was given before the Royal Commission on Vaccination, is not sufficient without the critical quantitative investigation referred to.—I am, etc.,

London, W., Feb. 7th. RONALD ROSS.

HEART DISEASE AND THE PUBLIC HEALTH.

SIR,—Your editorial annotation under the above heading in the JOURNAL of February 7th reveals a fearful mortality from diseases of the circulatory apparatus in Germany, but otherwise the work of Dr. Karl Grassmann does not appear to me new or illuminating. The two distinguished clinicians whom he mentions, and whose names you quote with approval, have done nothing, so far as I am aware, towards the prevention of heart disease. To give a favourable prognosis in cases of extrasystolic arrhythmia may serve to prevent unnecessary and harmful interference with the course of such cases, but, so far as I can see, that has nothing to do with their prevention. It seems that Dr. Grassmann thinks that some of the acute inflammatory diseases of the heart cannot be made amenable to preventive measures. If not, why not? In a case of acute rheumatism why should the valves of the left side of the heart be more liable to inflammatory mischief than those of the right side unless for the greater mechanical strain to which they are subjected? "Systematized care and relative cure of heart patients" may keep them longer in the fighting line; but it is certainly not prevention. "The diagnostic and therapeutic weapons which we possess must be employed more fully than they are to-day, and the skill of the few in regard to such intricate measurements as are revealed in electrocardiograms and the like must be fully available everywhere." What, again, has this got to do with prevention? In my address on Preventive Medicine, the Medicine of the Future, in Montreal in 1911,[1] I said that with many authorities it is not the popular method to anticipate disease; they prefer to get hold of a case of heart-block, cardiac arrhythmia, or angina pectoris, and then they can make something out of their cases in more senses than one. But I want to educate the public into the habit of taking an interest in their own health. We have here got a large field for preventive medicine, but it is very difficult for a practitioner to prevent disease when he is not consulted.

"Institutional treatment and nursing should be supplied at the public expense, since the State will profit by the diminution of unemployment due to ill health, and by the prolongation of the working life of the individual." One does not expect very much logic in the present day, but I think it would be safe to say that such claptrap as this is only suited for the medical profession, for those interested in the *statu quo*—the treatment of disease rather than its prevention. There is here no question of segregation to prevent infection. What economic interest can the State possibly have in disease? When a man is wounded in the battle of life his prospective value to the State must depend on the cost of his restoration to the fighting line. As prevention is usually cheaper than cure, the interest of the State should lie in the preservation of health rather than in the treatment of disease. More has been done for malaria and other tropical diseases by the discovery of the intermediate hosts than by all the treatment which has gone on for hundreds of years. When a man is ill his chief value, *quâ* illness, is to himself and his doctor. It is only when he is restored to health that he becomes of any value to others.

A very pertinent question is, How far is the medical profession responsible for many of the circulatory disturbances of the present day? What is being done for their prevention or eradication? The prevention of heart disease must rest with physiology rather than with pathology, and it is because the problem has been usually tackled at the wrong end that so little progress has been made. I long ago stated that a knowledge of the circulation, to be of any therapeutic value, must include every part of the circuit. Diseases of the heart most frequently arise from causes acting on the periphery, and hence there is here no room for specialism; yet in the treatment of heart disease the drug (digitalis) which is most frequently employed is one which materially interferes with the peripheral circulation. If I were giving any very general directions in the prevention of heart disease, I would be inclined to say: Lead an active life, be very temperate in food and drink (especially the latter), and avoid any physician who has written on the merits of digitalis. I long since found out some of the evil effects of digitalis. In 1881 a relative of mine, after a severe and protracted illness, got a dilated heart and pseudo-angina. On my advice he saw a great authority on diseases of the heart and, in my opinion, the greatest clinician in this kingdom since the days of Graves and Stokes. He prescribed digitalis, which seemed to answer admirably at first, but after a time my friend got short of breath on exertion, and about the end of six months he consulted the physician again; but that eminent authority did not recognize that his treatment might have anything to do with the condition. He thought he found signs of thoracic aneurysm, and this diagnosis was confirmed by his then clinical assistant, a man who afterwards rose to great eminence in our profession. I received a cautious but rather gloomy letter, which made me send for my friend, whom I had not seen for eight or ten months. I came to the conclusion that his aorta was simply dilated from the prolonged use of digitalis, and I told him that, as he was not thirty, it should get all right. Both of the physicians have since

[1] BRITISH MEDICAL JOURNAL, 1911, vol. i. p. 1357.

died of heart disease, and my friend is still going strong' though he is not a great patron of Johnnie Walker.—I am, etc.,

Liverpool, Feb. 8th. JAMES BARR.

AUTO-INTOXICATION AND SUBINFECTION.

SIR,—Professor Adami, in his long article on chronic intestinal stasis in the BRITISH MEDICAL JOURNAL of January 24th, says that the word "auto-intoxication" is used "by those who ought to know better," among whom he is good enough to include me, his objection to the word being that the poisons concerned are "produced by invading bacteria of extrinsic origin." He goes on: "Poisons originating within the alimentary canal originate outside the body every whit as much as if they had their origin . . . on the skin." I think this is somewhat pedantic carping; "entozoa" are animals living in the alimentary canal, and the word has been used for a very long time without anybody raising this objection to its use. But, further, "auto-intoxication" implies nothing about the place in which the poisons are formed. It means, as Professor Adami "ought to know," self-poisoning, and consequently his argument about whether the interior of the alimentary canal ought or ought not to be considered the "inside" of the body is beside the point.—I am, etc.,

Birmingham, Feb. 4th. ROBERT SAUNDBY.

THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

SIR,—After reading the letter of Dr. Armstrong-Jones in the BRITISH MEDICAL JOURNAL of February 7th, I submit that he has wholly misconceived the object of my own letter, which he subjects to criticism. There is in the latter no room for personal aspersion, nor, incidentally, for personal appreciation. It is perhaps unfortunate, and it is regretted on my own part, as far as may be necessary, that I did not happen to see the fuller report in the *Lancet*, but the failure, for physical reasons, to thus instruct myself is surely an insufficient ground to allege a possible loss of reputation for accuracy, the more so as my letter was intended for the eyes which had read in your columns what was written and said on the subject. This small item is not important enough to cast on me the duty of exhaustively examining all reports on the subject.

The point of real importance is that, if it were sufficiently known and appreciated that Lord Halsbury did accept a draft clause covering all the points under debate, there would have been less need to go on talking them over. After Hannibal crossed the Alps he did not think it necessary to repeat his labours, with a risk of possible failure. My suggestion is that for this purpose the Alps have been crossed. Expert feeling is entirely in favour of greater freedom in the legalized treatment of early cases. The attainment of the object in hand must depend on others being brought over to concur with expert feeling; legal instincts and popular apprehension need to be overcome. Since legal and legislative caution are much depended on by the public to ensure justice and right in all relations to insanity, surely it is a cardinal advantage to have satisfied that caution in the person of Lord Halsbury. Why, then, go back on this? Why raise a suspicion of lost unanimity among experts by constant papers, debates, etc.? Why not proclaim that the matter was long ago debated and accepted by the highest authority? Lastly, why not go forward on the clear assumption that only the opportunity for limited lunacy legislation is wanting for the full attainment of success?

It will be well to keep strictly apart the two branches of the subject: First, the question of which is the best way for treating incipient insanity under the present law—for example, by receiving houses, specially devised hospitals, attached to asylums or to the asylum service, etc.; secondly, the treatment under fresh legislation, which will permit us to dispense to a great extent with all official institutions, houses, etc. The latter is, I take it, that which chiefly relates to rational treatment.—I am, etc.,

Ticehurst, Feb. 7th. H. H. NEWINGTON.

MEDICAL OFFICERS OF HEALTH AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—It was with very great interest I read your note on page 267 of the BRITISH MEDICAL JOURNAL, January 31st, and also a letter on page 344, February 7th.

It seems to me that the dissatisfaction is not really with the British Medical Association but with the health service in general.

The dissatisfaction is perhaps most acute among men who are partly or entirely engaged in school medical inspection. The rate of pay in the health service is, with a few exceptions, very poor, and consequently it is rapidly being recognized as a "blind alley" occupation. Further, for those engaged partly or entirely in school work, there is the added disadvantage of a monotonous and often thankless task, which contains relatively very little of real medical interest.

The medical officers of health, being poorly paid, have in many towns been appointed as school medical officers simply to increase their salaries, and as a consequence the work has to be done by so-called assistant school medical officers whose salaries are even much worse, namely, £250 to £350 (with but two exceptions). The fact that larger incomes are now being made by the vast majority of practitioners has magnified the already long-felt grievance.

I suggest that a committee be at once formed to deal with the matter. Further, I would suggest that it consist of one-third medical officers of health, one-third assistant school medical officers, and the other third men not in the health services.—I am, etc.,

February 9th. M.D., D.P.H.

*** The matter referred to in the above letter ha already been the subject of consideration at a conference between the British Medical Association and the Society of Medical Officers of Health; among the representatives of the latter body were two representatives of the newly-formed school medical officers' group. Certain recommendations were made by that conference for improvement in the conditions of employment of school medical officers, which are to be considered at a joint meeting of the Public Health and Medico-Political Committees of the British Medical Association, to be held on February 20th, after which, no doubt, a report will be made through the Council to the Divisions.

THE TRUTH ABOUT THE INDIAN MEDICAL SERVICE.

SIR,—Nearly all the disadvantages of the Indian Medical Service enumerated by your correspondent "M.B., F.R.C.S." have been in existence for some years. If, then, it be only recently that candidates have fallen off in number and quality, the main cause may be clearly indicated in the Secretary of State's circular to the Government of India inquiring whether the duties of civil surgeons could be performed by "qualified practitioners recruited in India." It is this suggestion which has caused general misgiving concerning the future of the service, and also, be it noted, apprehension among the European officials and residents who are entitled, or accustomed, to attendance by Indian Medical Service officers.—I am, etc.,

February 10th. SERO IN INDIS.

OPERATIVE SURGERY.

THE reviewer of Mr. D. C. L. Fitzwilliams's book on *Operative Surgery*[1] has sent us the following note, which we publish, not to vindicate the competence of our contributor, but on account of the intrinsic importance of the subject. Any waste of energy in education, and especially in the crowded medical curriculum, is a proper subject for criticism in the interests of the profession.

2nd February, 1914.

In spite of Mr. D. C. L. Fitzwilliams's letter, I see no good reason to change the opinion I formed of his book. You have been good enough to reply already to the personal remarks and on the general question of the value of operative surgery as now taught. Some of the details in Mr. Fitzwilliams's letter merit further notice.

[1] BRITISH MEDICAL JOURNAL, January 17th, p. 149, and January 31st, p. 277.

I do not in the least despise the great names associated with the many varieties of amputation of the foot. But I do believe that it is unfair to burden the student with the details of these operations, and it seems to me that this portion of operative surgery should be taught by inculcating general principles only, trusting the student when he becomes operator to put these into practice, and do what most surgeons have to do in any case—cut his coat according to his cloth. Certainly there are many amputations of the foot which are classical, and which every operating surgeon ought to know; but the student should not be asked to know more than one or two at most, and, if he were in after years called upon to amputate, he could be safely trusted to do good work with general principles in his mind.

The dexterity acquired in *post-mortem* operations is of little or no value when one comes to deal with the living subject. A knowledge of the surgical anatomy of the part may be obtained, but that knowledge should have been attained in the dissecting room, where too often surgical anatomy is neglected. Again, it is out of the question that the student may learn, by the practice of *post-mortem* operations, to cope with "unexpected difficulties."

As to the question of the number of amputations which are performed in the present day, Mr. Fitzwilliams may be surprised to know it, but many house-surgeons work for months without seeing an amputation at all. In the hospital to which I am attached as senior assistant surgeon there are 400 surgical beds, and I find that in the year 1912 the total number of operations performed on in-patients was 6,169; there were 61 primary major amputations, 50 secondary major amputations, and 134 amputations of fingers and toes. There are eight visiting surgeons, and among them only 111 major amputations were performed in that year, so that each surgeon performed on an average only 14 amputations in that year, leaving out of account the operations of fingers and toes. Now this hospital is situated in the midst of a very great industrial area, and draws its cases not only from the city, but from a large manufacturing district around it. I do not consider, therefore, that I exaggerated when I said in the review that in big hospitals months may pass without an amputation, and that the house-surgeons hardly ever see operations of that kind at all. It is this knowledge which prompts me to express the opinion that the student could be better occupied than in performing *post-mortem* amputations.

The same arguments hold good in regard to excisions and ligature of arteries in their continuity. In the same hospital in the same year, 1912, the number of excisions of joints was only 22, and the number of ligature of arteries was only 14. I have never been able to understand how excision of a healthy joint on the cadaver could fit a surgeon for the operation of excision of a diseased joint on the living subject.

I fear my belief concerning operations for ventrifixation of the uterus is in no wise shaken. It is obvious that the operations mentioned in the review, and omitted by Mr. Fitzwilliams in his book, could not be performed on the cadaver, while the operation he does mention certainly could. That the textbooks he quotes do not describe these operations is not to their credit. But it is possible that these books do not describe gynaecological operations at all; certainly in the newer edition of Thomson and Miles's *Operative Surgery*, reviewed in the same number of the BRITISH MEDICAL JOURNAL as Mr. Fitzwilliams's book, operations on the uterus do not find a place.

Of course if Mr. Fitzwilliams sets himself to write a book on *post-mortem* surgery in the belief that it is the best form of training for the surgeon, I have no objection. But the profession should clearly understand that such a work should not be used as a guide in everyday surgery on the living subject.

A NEW sporting model 11-h.p. Humber with standard chassis has been made. It is fitted with a sporting two-seater body, Sankey steel wheels (with spare carried in the boot), special hood, screen, and electric lighting set.

THE Victoria League is organizing an Imperial Health Conference to be held at the Imperial Institute next May. In connexion with it there will be an exhibition illustrating the care of child life and town planning. Miss R. V. Gill, of the Victoria League, is Secretary of the conference, which will include a section of child life; and the exhibition is being organized by Mr. T. Nicholson, Co-partnership Tenants Housing Council, 6, Bloomsbury Square, W.C.

The Services.

INDIAN MEDICAL SERVICE.

THE Secretary of State has decided that officers under the Indian Army Leave Rules will only be allowed to take leave for one year in the first instance, including study leave; and those who are under Civil Service Leave Rules will be strictly limited to two years, unless this period is extended on medical certificate.

THE PUBLIC SERVICES COMMISSION.

The Indian Public Services Commission resumed its sittings in Calcutta on December 15th, 1913, and took evidence concerning the educational, engineering, and medical services successively. The case of the medical service in Bengal was taken up on January 12th. Lord Islington presided over the sittings. Lieutenant-Colonel W. J. Buchanan, C.I.E., Inspector-General of Prisons, Bengal, and Rai Bihari Lal Pande, Bahadur, civil surgeon of Azamgarh, as representing the Provincial Medical Service, sat as co-opted members of the Commission.

Bengal.

Colonel G. F. A. Harris, C.S.I., Inspector-General of Civil Hospitals, Bengal, was the first witness. He stated that, in his opinion, the diminution in competition for the service was due to the uncertainty of getting and retaining appointments. He was not prepared to offer an opinion as to the desirability of establishing station hospitals, but thought that it would be several years before such a change could be fully carried out. He did not consider that the work of the medical service could be done as well by private practitioners engaged on short contracts as by members of a service, the latter being more easily replaced, better disciplined, and better administrators. He was in favour of the system whereby officers were transferred from military to civil duty. Even in the smallest stations keen officers could find opportunity of enlarging their experience in practice. He thought that the four medical colleges in Calcutta were deserving of Government aid, and that the training they gave was good. To Sir Valentine Chirol he answered that professorial chairs were filled by the best men without respect to seniority; he admitted that the best available man should be appointed, whether a service man or not. Out of eleven chairs in Calcutta, nine were now reserved for the Indian Medical Service. To throw these chairs open would injure the popularity of the service. He thought that a separate female medical service could not be worked throughout the country, though it might be successful in the Presidency towns. He was strongly in favour of granting study leave to civil assistant surgeons.

Lieutenant-Colonel Leonard Rogers, F.R.C.P., C.I.E., Professor of Pathology, Calcutta, thought that officers should be transferred from military to civil employment with between two and five years' service. He thought that the pay of the Indian Medical Service should be increased by 30 per cent. owing to increased cost of living and diminution of private practice. The value of private practice was now only about one-third of that of twenty years ago. Gaol allowances should be increased in proportion to the amount of time taken up by gaol work.

Captain J. C. Gillman, representing the Military Assistant Surgeons of the Subordinate Medical Department, objected to the application to his service of the term "subordinate." He said that there was some difficulty in getting sufficient recruits for the department, and asked that the rules regarding parentage of candidates should be strictly enforced, cases having occurred in which the sons of native Christians had called themselves, and had been admitted as, Anglo-Indians.

Civil Assistant Surgeon Kedar Nath Das, Bengal, asked that more civil surgeoncies might be allotted to his service. He considered that experience in England was to be desired, but was not essential. He did not think that Indians would have greater opportunity of learning midwifery in England than in India. He thought that professors should only be allowed consulting, not general, private practice.

On January 13th Dr. Mrigendra Lal Mitra, formerly a civil assistant surgeon, now a private practitioner in Calcutta, said that none of the private medical colleges in Calcutta received aid from the State. To give them such aid would in some degree meet the grievances of independent medical practitioners. He was in favour of registration of the profession. He would like to see beds in hospitals allotted to private practitioners, and considered that professorial chairs should be given to the best men, irrespective of race or service. He thought that only men who had done research work should be appointed as professors. Vacant civil surgeoncies should be publicly advertised. He thought that there would be no difficulty in getting men to fill such posts in remote districts. A certain number of listed posts should be open to members of the subordinate service, and to private practitioners. Civil surgeons interfered with the practice of independent practitioners because they had a monopoly of the hospitals. He thought that medical relief, medical education, and sanitation should be freed from Government control and placed under local bodies.

Major W. W. Clemesha, Sanitary Commissioner, Bengal, wished to see closer union between the administrative and the bacteriological departments. There had been a great sanitary awakening in India during the last ten years, but even now the demand for sanitary reform in Bengal was chiefly a "paper"

demand. A good school of hygiene was much required in India. There was much apathy in the smaller municipalities. He preferred European assistants because English experience was necessary for high ideals of sanitation, and Indians did not take their own countrymen seriously as sanitary officers.

Burma.

On the afternoon of January 13th the case of the medical services in Burma was taken up. Major Dee, I.M.S., Rangoon, Lieutenant P. Macarthy, I.S.M.D., Superintendent, Central Gaol, Heuzada, and Civil Assistant Surgeon Subramaniam were co-opted as members of the Commission for the Burma evidence.

Major F. A. L. Hammond, I.M.S., Civil Surgeon, Maymyo, said that the medical service was shorthanded in Burma. Civil surgeons there had therefore harder work than in other provinces, and difficulty in getting leave. He thought that officers should get into civil employ as soon as possible, after the completion of two years' military duty. The present rates of pay were insufficient, private practice was less than it used to be, and Burma is a very expensive province to live in. Towns were springing up so rapidly in Burma that the medical service was inadequate to cope with the work.*

Lieutenant W. St M. Heffernan, I.S.M.D. (Civil Surgeon, Yemethin), said that he would like to see the standard of the subordinate service, which he represented, raised to that of the civil assistant surgeons.

Assistant Surgeon R. S. Aiyar, L.R.C.P., objected to the periodical examinations which assistant surgeons had to undergo, and thought that they should be replaced by study leave. Conditions in Burma differed greatly from those in India, and the increased cost of living required special allowances.

Bihar and Orissa.

On January 14th the Commission heard evidence from the medical services of the new province of Bihar and Orissa, Colonel Buchanan and Assistant Surgeon Pande again sitting as co-opted members.

Lieutenant-Colonel Bawa Jiwan Singh, I.M.S., Inspector-General of Prisons, said he had served in the Gaol Department since 1899. He considered that the department should be officered from the Indian Medical Service. He would like to see more central and fewer district gaols. The prospects of promotion in the department were good, but there was a grievance about their pay. Superintendents of gaols were allowed to take consulting practice, but did not get much.

Lieutenant-Colonel J. C. S. Vaughan, Civil Surgeon, Bhagalpur, said that two to three years' military duty was sufficient before joining civil work. Private practitioners were allowed to see the work in Government hospitals, but he had never known them appointed on the honorary staff. He allowed his assistants to do as much operating work as possible, but pointed out that, if an accident occurred, the civil surgeon might be blamed for delegating work.

Military Assistant Surgeon A. E. Baptist said that he would like to see his department qualified equally with the civil assistant surgeons, but not to be combined in one service.

Rai Baroda Kanta Rey, Bahadur, Civil Assistant Surgeon, said that members of his service complained of insufficient opportunity to perform surgical operations. He had known a case in which forfeiture had been enforced of the bond which officers of his service have to sign.

Research.

Major W. F. Harvey, Director, Central Research Institute, Kasauli, said that his department was too small. The cadre should be increased, so as to include the sanitary department, professors of pathology, and of other subjects taught in tropical schools, such as zoology and entomology. He would increase the cadre at once by twenty officers. The department had been unpopular, but now applications were more numerous. Private practice should not be allowed. A compensating allowance should be given instead. Unless the department became more popular, it would be necessary to recruit for it from outside the Indian Medical Service.

Evidence of Private Practitioners.

Dr. Nil Ratan Sircar, private practitioner, Calcutta, stated that the war reserve of the Indian Medical Service was illusory. On the Chairman pointing out that numerous Indian Medical Service officers were withdrawn from civil employment to service in the Afghan and China wars, he said that fact would to some extent modify his statements. He advocated a wider field for selection of specialists for research work. He thought that the grievances of private practitioners would be met to some extent if Government subsidized private institutions. He was in favour of private practitioners being placed on the staff of Government hospitals. He was in favour of a medical registration Act, though there were difficulties in the way. Professional appointments, he considered, should be transferred from the control of the medical department to that of the Director of Public Instruction. He thought that Indian students were benefited by going to England after finishing their medical course in India.

Dr A. Caddy, private practitioner, Calcutta, said he recognized the need of the military reserve of the Indian Medical Service. He thought that medical officers should work in civil hospitals before they did their military duty. The sooner they left military for civil employ the better. He considered the present pay of the Indian Medical Service ample. He did not think European medical men would accept honorary posts on the staff of Government hospitals without salary, as in England. He was in favour of Government aiding private medical institutions, provided their standard was kept up to that of those maintained by Government. Private practitioners should have an opportunity of filling professorial chairs. He thought that specialists of the standing of F.R.C.S. should be induced to come to India by the offer of salaries equal to those of judges of the High Courts. He considered a registration Act desirable, but not urgent.

Assam.

The Commission co-opted Lieutenant-Colonel H. E. Banatvala, I.M.S., officiating Inspector-General of Civil Hospitals, Assam, for hearing the evidence from that province.

Captain L. B. Scott, I.M.S., said that the medical officers in Assam were all Europeans. Service in the province was unpopular, because there were few good civil surgeoncies. Medical officers should be on one cadre with those in Bengal. He considered the terms given by the Family Pension Fund were not as good as those offered by private insurance companies.

Military Assistant Surgeon C. R. W. Bancroft said that there were nine military assistant surgeons serving in Assam, of whom three held civil surgeoncies. He preferred a separate cadre for his service. They wanted study leave on furlough pay, like the Indian Medical Service.

Civil Assistant Surgeon S. M. Mukerji said that there were about thirty civil assistant surgeons serving in Assam. None of them held civil surgeoncies. His service asked for two civil surgeoncies and two other equivalent posts. They would prefer to be on one cadre with the men in Bengal.

* The *Pioneer Mail* of December 12th, 1913, states that the Burma Chamber of Commerce has addressed to the Local Government a memorial stating that the number of officers of the Indian Medical Service posted to the province is inadequate. The Chamber complain that rapidly growing commercial centres are left without medical officers, and give a list of ten such places to which civil surgeons should be posted; that the Rangoon General Hospital is understaffed; and that the development of the Burma Medical School is thereby retarded. It is added that no material for an independent medical service exists in the province. The complaints of the Chamber appear almost identical with the evidence of Major F. A. L. Hammond.

Universities and Colleges.

UNIVERSITY OF LONDON.

We are informed that the Departmental Committee on the University of London, appointed to recommend, after consultation with the bodies and persons concerned, the specific arrangements and provisions which may be immediately adopted in order that effect may be given to the scheme of the Report of the Royal Commission on University Education in London, has now resumed its sittings. The Committee has invited the observations of the Senate of the University upon the proposals of the recent Royal Commission with regard to the admission of external students to the examinations of the university for degrees, regard being had to the principles upon which the report is based. The Committee would also be glad to receive, not later than March 14th, reasoned statements bearing upon these proposals from other bodies and persons concerned.

UNIVERSITY OF BRISTOL.

The following candidates have been approved at the examination indicated

Second M.B., Ch.B. (*Part I*).—E. J. Ball, D. G. Cossham, Eva Richmond, Evelyn B. Salter.

UNIVERSITY OF MANCHESTER.

Prizes.

The following awards have been made:

Practical Anatomy Medal, F. C. Ormerod; *proxime accessit*, Nesta Perry.

Senior Anatomy Medal: J. A. Panton.

Tom Jones Exhibition in Anatomy (and Junior Medal): F. H. Anderson; Norman Kletz, Francis White (equal).

The last two candidates resigned in favour of F. H. Anderson, to whom the award was made.

TRINITY COLLEGE, DUBLIN.

Diploma in Public Health.

The following candidates passed Part I of the examination for this diploma, January 26th–30th:

E. M. Franklin, Dorothy K. Milne, P. H. Lemass, G. E. Palmer, R. H. Cummins Lyons.

Obituary.

JULIA COCK, M.D.,

CONSULTING PHYSICIAN TO THE NEW HOSPITAL FOR WOMEN, AND DEAN OF THE LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE death of Miss Julia Cock, M.D., occurred on February 7th, after a long illness.

Julia Ann Hornblower Cock was born in 1860. Early in life she felt the need of a wider sphere than that of home for developing her powers, and she found her opportunity, in 1877, when she joined the group of pioneer women who were opening the medical profession to women. Her career as a student was distinguished. She took Irish and Scottish qualifications, and honours in the Brux. M.D.

In 1887 Miss Cock was appointed a member of the out-patient, and, in 1892, of the in-patient, staff of the New Hospital for Women. For twenty-three years the interests of her professional life centred round her work as visiting physician to the hospital. The equipment and the development of the pathological department of the New Hospital for Women owed much to Miss Cock. Her contributions to the literature include articles in the BRITISH MEDICAL JOURNAL, the *Encyclopaedia Medica*, and the *Transactions* of the Pathological Society of London, the most notable being perhaps the record of a case of deciduoma malignum in 1896, one of the earliest diagnosed in England. For fifteen years Miss Cock acted as joint lecturer in medicine at the London (Royal Free Hospital) School of Medicine for Women. Her administrative ability was recognized early, and for many years was of inestimable service in the Medical School. For eleven years she held office as Dean of the School, and previously she worked for many years in the capacity of Subdean in co-operation with Mrs. Garrett Anderson, who was then Dean. The welfare of the school was constantly in her mind, and the high place it has taken in recent years is largely due to her wise statesmanship.



DR. JULIA COCK.

One of her chief aims in the administration of the school was to encourage self-government among the students, and the spirit of freedom and the sense of public duty. She wished the school life to fit the students to take their part later in public and professional life—in other words, to train them in citizenship. There were hardly any rules in the school, but she instituted the offices of students' representative, both in the hospital and the school, by which the students themselves elected one of their body to be in special communication with the dean, and so to take a share in the government of the school. Later, she instituted the students' council, a representative parliament of the students in which all school affairs were fully discussed. For many years she was president of this council. One of the last projects which she had in mind was the reorganization of the students' union on a wider basis and on more permanent lines. She attached enormous importance to the training of medical students in order to develop a wider outlook on life. She never sought for or encouraged personal intimacy with the students, but no student who sought her advice failed to find sympathy and understanding. She attached little value to popularity, or to professional success except from the scientific point of view.

It should not be forgotten that Miss Cock was a pioneer in this country of the medical inspection of schools, of the importance of which she was firmly convinced many years before it was generally accepted. She wrote a memorandum on the medical inspection of schools for the Royal Commission on Secondary Education in 1895. At the time this was considered a counsel of perfection, but the soundness of her views has been proved by the fact that medical inspection of schools is now practically universal.

Miss Cock possessed rare gifts. She was a scientist, she had public spirit and the supreme gift of friendship. She was greatly loved and honoured, and her loss is deeply mourned.

DR. MARY SCHARLIEB (London) writes: I had the honour and pleasure of knowing Miss Julia Cock from the very beginning of her medical life. I remember her, a pretty girl of 18, attending Professor Schäfer's biology class at the London (Royal Free Hospital) School of Medicine for Women. Subsequently we shared our rooms as students, and I had the opportunity of seeing her accurate, careful work, of noting the logical grasp of her mind, and the zest and intelligence with which she approached her studies. Later on at the hospital, as a clerk to the late Dr. Evan Buchanan Baxter, Miss Cock showed how well she was able to apply in the ward what she had learnt in the study. She qualified in November, 1882, and in 1890 she took the M.D.Brussels *avec grande distinction*.

For many years Miss Cock held the appointment of physician to the New Hospital for Women, and will long be remembered by the many clerks who worked under her. Her powers of diagnosis were remarkable, and often seemed to amount to a well-guided intuition. Her work as a teacher was very successful, for she not only knew her subject but had the gifts of logical thought and of impressive language.

In spite of lifelong delicacy and difficulties that would have daunted a less courageous woman, Miss Cock's life from 1890 until very near the end was one of strenuous work. Amongst other offices she held that of examiner for the Board of Education and of women proposers for Government insurance. Her work as medical inspector of the North London Collegiate School for Girls and of the Camden School for Girls was a model of thoroughness and originality. I well remember accompanying her on one of her visits to what was then known as "Miss Buss's School." Miss Cock managed every one, mistresses and girls alike, with a happy mixture of firmness and *bonhomie* that could only have been inspired by an adequate knowledge of her duties, and a comfortable assurance that she was the right woman to carry out the work. The result was that every one liked her, every one worked with her, and that thousands of girls had reason to thank Miss Cock for her wise management of their physical health.

In addition to these outside duties, and also in addition to the claims of her large private practice, Miss Cock found time to contribute to medical literature. She wrote the article on Medical Inspection of Secondary Schools for Girls in the fifth volume of the Report of the Royal Commission on Secondary Education; she also contributed an admirable article on Arthritis to the *Encyclopaedia*

Medica, published under the editorship of Dr. Chalmers Watson, of Edinburgh. Times change and knowledge increases, yet although Miss Cock would have been the first to wish to amend anything that was out of date in her pathology or treatment, no one can help acknowledging the accuracy of her observation and the human interest that informed everything she wrote.

The great work of Miss Cock's life, however, was in relation to the School of Medicine for Women. She succeeded Mrs. Garrett Anderson as Dean in 1903, and from that time she guided the affairs of the school with great ability and success. Her clearness of thought, her knowledge of men and affairs, united to unfailing charm and good temper, enabled her to surmount the many difficulties that naturally occurred in the relations of the school with the hospital, the university, and the Board of Education. Miss Cock's whole heart was bound up in the welfare of the school, and when she lay dying the one thought that troubled her was that the future of the school is yet uncertain. She knew that the Report of the Royal Commission on the University of London could not fail to have a profound effect on all the great medical schools of the metropolis. Her ardent desire was that it might be granted to her once more to pilot the school into safety, and her one regret was the impossibility that she should live to do it. Miss Cock's last illness was prolonged and painful. From the beginning she foresaw the inevitable end, but with high courage and cheerfulness she continued to lecture and to fill her office as dean up to the last possible moment, and then retired to her cottage in the country to await release.

Once more the London School of Medicine for Women has been fortunate in having a wise ruler, an efficient guide, and a splendid example for its students.

JOHNSTONE BROWN, M.B., C.M.Glasg.,

JOHANNESBURG.

It is with great regret that we have to announce the death of Dr. Johnstone Brown, which took place in Johannesburg on December 28th, 1913. The fatal illness was of very short duration, as Dr. Brown was busy in his practice up till December 18th. We understand that he suffered from an acute abdominal disease, and that an operation was performed, but without success.

Johnstone Brown was born in 1871 in a Presbyterian manse in the South of Scotland. His father was the Rev. Matthew Brown, Hightae, Dumfriesshire, who for health's sake left this charge and became minister of a Presbyterian church in East London, South Africa. Dr. Brown's medical education was received entirely in the University of Glasgow, where he had a brilliant career; he graduated in 1893. Within a year he settled in Ficksburg, Orange Free State. The South African war made material changes in his fortunes. His partner had taken the oath of allegiance to Kruger and, rather than fight for the Boers, fled to Basutoland. Brown, being a neutral, continued in charge of the practice and of any wounded Boers and British who came his way. Ficksburg was in disputed territory and was sometimes in the possession of one side and sometimes in that of the other. He persistently refused to go out as a medical man on Boer commandoes, and at one time was imprisoned for fourteen days. He then saw clearly that it was dangerous for him to remain, so he crossed the Caledon Drift, walked down through Basutoland and offered his services to the British military authorities, who by this time were in possession of Bloemfontein. He was placed in charge of the enteric patients in the General Military Hospital at Standerton. After the war Dr. Brown settled in Johannesburg, where he soon established himself in the affections of the people as a hard-working, conscientious, kindly man, and built up a big practice. He was always keen in public work. He was Senior Physician to the Johannesburg Hospital, Surgeon-Captain of the Witwatersrand Rifles, and Medical Adviser to the Police and the Fire Brigade. He took an active part in the work of the Johannesburg Branch of the British Medical Association and was its Treasurer. He was held in extraordinary affection by all, and was noted for the unselfish and lavish manner in which he spent himself both for his patients and for every cause with which he was identified. His funeral was a remarkable public demonstration. A motor fire engine bore the coffin, and there was an escort of the fire brigade with a detachment of his rifle regiment and representatives of many public bodies in Johannesburg.

Dr. Brown was married five years ago, and great sympathy is felt for his widow.

Dr. John Patrick (Glasgow) writes:

The news of the death of Johnstone Brown has come as a great shock to many Glasgow men. He graduated in 1893; as a student he left a distinct mark on the memory of all the men of that year. He was noted specially for his tremendous capacity for work, for his unconquerable perseverance, and for his outstanding ability.

Brown took little part in the playing life of college; he never seemed to find time for play, his work was his pleasure. His usual place was at or near the top of every class he attended. But his student life was not altogether given up to grinding. In these days he carried on a boys' mission class on one night in the week in connexion with his church, and identified himself closely with other branches of Church work. This side of his life was not known except to a few of his fellows, but those who did see it knew him on that account to be a man of strong Christian character.

When South Africa absorbed him we in Glasgow heard little of him, but occasional scraps of news filtered through, especially in the years immediately following the war, and we were glad to know of the success which came to him, as it was bound to come to one possessing such qualities as his.

Even the briefest personal recollections of Johnstone Brown would be incomplete without reference to the lady to whose example and influence he owed much of the great good that was in him, his "aunt-mother," Miss A. M. Brown, with whom he lived during his school and university course. Miss Brown, who now mourns the loss of her boy so bitterly, was engaged as a nurse in the South African war, and was stationed for five years at the base hospital, Pietermaritzburg. She was well known to Lord Roberts, whose keen eye and apt memory for faces picked her out from amongst a crowd years after when he passed through Edinburgh. To her, as well as to his widow, all fellow-students of Johnstone Brown unite in expressing sympathy.

Mr. William Bale, J.P., one of the oldest and most respected practitioners of Stockport, died at his residence in that town on January 31st, in his 79th year. He was born at Stockport, and received his professional education at Manchester and at Westminster Hospital. He was admitted M.R.C.S.Eng. in 1862 and L.S.A. in 1863. He settled in practice in his native town in 1862, and was for upwards of thirty years district medical officer and public vaccinator for the Stockport Union. Other professional offices held by him included those of certifying factory surgeon and medical officer for the London and North-Western Railway. He was a very old member of the British Medical Association. He was appointed a borough magistrate in 1878. For about thirty years he was prominent in the local Volunteer Corps, retiring with the rank of Surgeon-Major. For the greater part of his life Mr. Bale was associated with the public affairs of his native town. An active member of the Stockport Conservative Association, he was a leading figure at elections in the old Heaton Norris Ward when the contests there were fought with such tenacity as to lead on one occasion to an assize trial. Mr. Bale was for some time a member of the Council. He was a trustee of the Stockport Savings Bank. The number of public offices held by him shows the confidence reposed in him by his fellow citizens. At the Police Court the Mayor made reference from the Bench to the death of Mr. Bale, and expressed sincere sympathy with the bereaved widow and family. Mr. Helm, solicitor, supplemented his worship's remarks with appropriate words on behalf of the advocates practising in the court. The funeral, which was attended by representatives of the borough Bench, among them Dr. Rayner, Treasurer of the British Medical Association, by the Chief Constable, and by representatives of the Stockport Union, and the Stockport Medical Society, took place on February 3rd. Mr. Bale leaves a widow, four sons, and a daughter. One of the sons, Dr. William Barker Bale, is a member of the medical profession.

SURGEON-MAJOR OLIVER THOMAS DUKE, Bengal Medical Service (retired), died at Folkestone on January 29th. He was born on January 14th, 1843, the eldest son of the late Dr. Thomas O. Duke, of Clapham. Colonel Joshua Duke, also of the Indian Medical Service, was his younger brother. After going through the medical course at Guy's, he took the diploma of M.R.C.S. in 1864, that of L.S.A. in 1865, and the degree of M.B.Lond. in 1867. He entered the Indian Medical Service as assistant surgeon on October 1st, 1869, passing in first of a large batch. He became surgeon on July 1st, 1873, surgeon-major on October 1st, 1881, and retired on February 22nd, 1887, as soon as he had completed his time for the earliest pension. During the early years of his service he was attached successively to the 3rd Bengal Infantry, the 10th Bengal Cavalry (Hodson's Horse), and the 3rd Punjab Cavalry. He then entered the Political Department as medical officer of the Kelat Agency; afterwards he gave up professional work and was appointed political assistant to the Agent to the Governor-General in Biluchistan. In that capacity he served through the Afghan war, was mentioned in dispatches, in G.G.O. No. 610 of 1879, and received the medal. After the war he was posted as political officer at Kelat. After his retirement from India he served in the Auxiliary Forces, being appointed lieutenant-colonel of the 5th Battalion of the Rifle Brigade on February 18th, 1891. He also made several unsuccessful attempts to enter the House of Commons, standing as a Unionist three times for the South, or Luton, division of Bedfordshire—at the general election of 1892, at a by-election later in the same year, and again in 1895; on the two later occasions he greatly reduced the adverse majority. In 1900 he opposed the late Sir Henry Campbell-Bannerman in the Stirling Burghs.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Henry Bange, professor of gynaecology in the Chicago Polyclinic, who suddenly expired when performing an operation in a patient's house, on December 24th, aged 65; Dr. Bartels, lecturer on anatomy in the University of Königsberg; Dr. Wilhelm Bernouilli, of Basel, a well-known botanist, aged 75; and Dr. Frederick Charles Busch, professor of physiology in the Medical Department of the University of Buffalo, New York, and assistant in the State Department for the Study of Malignant Disease, aged 40.

Medico-Legal.

CLAIM AGAINST A SPECIALIST ON CATARRH AND DEAFNESS.

AT the Norwich County Court, on January 19th, His Honour Judge Mulligan heard an application in the case of Eastell *v.* Shirley. It appeared, from a report in the *Eastern Daily Express*, that the plaintiff had brought suit against the defendant, Elmer Shirley, of 6, Great James Street, London, W.C., to recover the sum of £1 1s. and 2s. costs. The amount claimed and the costs having been paid into court, the plaintiff applied for costs on the higher scale, on the ground that the case was one which should be fought in the public interest.

Mr. Joseph, appearing for the plaintiff, said that his client suffered from deafness. He saw an advertisement by the defendant announcing a cure for catarrh and deafness. It was stated in the advertisement that the one guinea which was charged for the treatment would be returned "without any quibble" if no benefit were felt after ten days. The plaintiff sent his guinea and answered a long list of questions addressed to him. Having experienced no benefit, he returned the apparatus and asked for his money back. No notice was taken of this request, but after repeated applications he received a letter saying that the parcel had not come to hand. Subsequent inquiry showed that the defendant merely had letters delivered to him at 6, Great James Street. A summons was ultimately issued, and in the end the defendant paid into court the guinea and 2s. cost of plaint. His proper name was Edward Thomas Marr, of 24, Tower Road West, St. Leonards-on-Sea, but he traded under various aliases, such as "Hilton Forbes, Sanalak, Ltd." and "The All Remedies' Company." He (Mr. Joseph) applied for costs on the higher scale on the ground that the defendant was preying upon the credulity of people. There might be hundreds not able to get their guineas back because they had not the means to go into court to obtain their rights.

His Honour, in giving judgement, pointed out that the defendant apparently accepted the patient's own opinion as to whether or not benefit had resulted from the treatment. With the treatment the defendant sent the plaintiff a guarantee which was probably the most material document in the case. It was dated from 6, Great James Street, and there was a photograph, presumably of the defendant, in one corner, and the name Sanalak, Ltd., in another. It was headed, "My guarantee," and thereunder followed these words: "I, Elmer Shirley, hereby undertake to send to the holder of this guarantee my complete system of deafness and catarrh cure on a ten days' trial, and if the patient does not in his or her opinion derive any benefit, I will, at the termination thereof, refund the whole of the money paid without any deduction whatsoever. (Signed) Elmer Shirley." The plaintiff tried the remedy and found it inefficacious, and had asked for his money back. To recover it he had incurred very considerable expense. In his Honour's view it was in the interests of the public, and especially of the poorer classes and of those who suffer from deafness and catarrh, that the defendant's method of procedure and so-called "system" should be made known. He therefore gave costs on the higher scale (Scale C).

INQUEST ON A HERBALIST'S PATIENT.

THE Worcester coroner (Mr. W. B. Hulme) held an inquest on February 10th concerning the death of Mrs. Rosine Daniels, aged 54, of Ombersley Road, Worcester. Mr. J. R. Anthony appeared for the National Association of Medical Herbalists of Great Britain, Limited, and for Mr. Charles Burden, herbalist, of 16, Bridge Street, Worcester, who had attended the deceased.

The coroner, in opening the inquest, said that Mrs. Daniels was attended by a local medical man two or three years ago, but apparently her illness was not serious. During the past year she had been treated by Mr. Charles Burden. On the previous Friday Dr. Wellesley Coombs was called in, and he found Mrs. Daniels in a dying condition. The next day he went again, in company with Dr. T. Gostling, and Mrs. Daniels was then in such a condition that there was no chance of her recovery, and she died two hours later. The difficulty in the matter, said the coroner, was that Mr. Burden, so far as he knew, had no qualification, but had taken it upon himself to treat her. It would be a serious matter if Mr. Burden had treated her improperly.

Miss Daniels, daughter of deceased, said her mother had been unwell for a little over a year. Mr. Burden had been providing her with medicine and went to see her several times. About three months ago she became worse, and it was then that Mr. Burden commenced to visit her. He told witness that her mother had had an abscess on one side of the bowels, and that it had burst; the poison from that had dispersed over her body, causing blood poisoning. Witness suggested to her mother many times that she should have a doctor, but she said she had faith in Mr. Burden. He told witness that her mother had worm fever.

Mr. Anthony suggested to witness that her mother went to Mr. Burden because she had no confidence in her doctor.

Witness said her mother said, "Dear Dr. Coombs has saved life in this house several times. He saved me when I had typhoid, and now he has saved me again." Witness affirmed that Mr. Burden told her mother to get up even when she was "in a bath of perspiration."

Mr. Tom Bates, jun., surgeon, said that after making a *post-mortem* examination he believed that death was due to uraemia. In reply to the Coroner he said it was impossible to say whether deceased would still be living if she had been attended by a medical man three months ago.

Dr. S. Wellesley Coombs said he attended Mrs. Daniels about three years ago for some trivial ailment. He saw her again on Friday, and she was then covered with a red rash. Her armpits, groins, wrists, and back were raw, and nearly all her hair was off. Her temperature was 98° and her pulse 80. She was only semi-conscious, and was practically dying. He was present at the *post-mortem* examination, and agreed with Mr. Bates. He could not say whether, had a doctor been called earlier, she would have recovered. He believed that if the skin had been in a healthy state death might not have taken place when it did. He had no reason to believe that she had been given any improper medicine.

Mr. Burden said that in the early part of 1913 Mrs. Daniels came to him and asked him to prescribe for her. He gave her medicine, and in November, after he had ceased to give her medicine, he was called to her and found her suffering from blood poisoning. There were several abscesses in her. He gave her roots called "blue flag" and "black sampson" to cleanse the blood, and dandelion to act on the liver and kidneys. At the time the rash was not all over the body, but about a fortnight later it spread all over her. She told him that her daughter had sponged her back, and he said she must have taken cold. He did not think it necessary to send for a doctor. He was a member of the National Society of Herbalists, and had been trained at their college at Southport. He did not, until Wednesday, anticipate her death. Witness gave a notification of her death, ascribing it to blood poisoning.

The Coroner, addressing the jury, said Mr. Burden's knowledge was nothing like that of an ordinary medical man; an ordinary doctor would have been able to diagnose her disease. The doctors giving evidence had said that they could not say whether, if she had been attended by a doctor, she would still be living, nor could they say whether the herbs administered would have been injurious. If that were so, any case against Mr. Burden fell to the ground. Unless the doctors could say that Mrs. Daniels's life was shortened by what Mr. Burden did there could be no charge against him in any way. The jury returned a verdict in accordance with the medical evidence. They made no comment.

Medical News.

AT the meeting of the Royal Sanitary Institute in Leeds, on Friday, February 27th, Dr. J. Spottiswoode Cameron will open a discussion on house-flies. On the following day visits will be paid to various objects of sanitary interest in Leeds.

THE annual general meeting of the committee of the Royal Medical Benevolent Fund will be held at 15, Wimpole Street, on Tuesday, February 17th, at 4 p.m., and will be followed by the annual general meeting of subscribers at 4.30 p.m.

AT the meeting of the Royal Society on Thursday next Professor G. Elliot Smith, F.R.S., will read a paper on the brain of primitive man, with special reference to the cranial cast and skull of Eoanthropus (the Piltdown man), and Professor J. W. W. Stephens, M.D., will describe a new malarial parasite of man.

AT the meeting of the South Middlesex Division of the British Medical Association, to be held at the Free Library, Twickenham, on Wednesday evening, March 18th, Sir John Collie will read a paper on the business side of medical practice. The members of the Division will be glad to welcome members of adjacent Divisions to this meeting.

THE Local Government Board in England has issued a list, revised to January 31st, of sanatoriums approved by the Local Government Board under the National Insurance Act, 1911, for England and Wales, with the names of the administrative counties and county boroughs in which the sanatoriums are situated, and the date on which the approval expires in each case. The return can be obtained from any bookseller, price 1d., or by post, from Messrs. Wyman and Sons, Fetter Lane, London, E.C., 2d.

THE Milroy Lectures, before the Royal College of Physicians, to be given by Dr. F. Shufflebotham, of Newcastle-under-Lyme, will deal with the hygienic aspect of the coal-mining industry in the United Kingdom. The lectures will take place at the College on February 19th, 24th, and 26th, and March 3rd and 5th at 5 p.m. Dr. Shufflebotham will pay special attention to the conditions under which coal-miners work, to the causation and prevention of accidents and explosions, and will deal with the questions of poisonous gases—mines, dust, high temperatures, as well as with miner's nystagmus, beat-hand, beat-elbow, and miner's skin diseases. The lectures will be illustrated by lantern slides, and at the lecture on miner's nystagmus on March 3rd there will be a demonstration on living cases. The Goulstonian Lectures on rheumatoid arthritis will be given by Dr. M. A. Cassidy on March 10th, 12th, and 17th, the Lumleian Lectures by Dr. J. A. Ormerod on some of the modern theories concerning hysteria on March 19th, 24th, and 26th, and the Oliver-Sharpey Lectures by Dr. F. G. Hopkins on March 31st and April 2nd. This course will deal with some effects which follow upon disturbances in the chemical reaction of the blood.

IN our issue of January 4th, 1913, attention was called to the useful work carried out by the trustees of the Cicely Northcote Trust at St. Thomas's Hospital. The report of another year's work is now before us and contains a warm eulogium of the lady almoner and her assistants by leading members of the medical and surgical staff, who are able to testify from personal experience to the value of the work that is being done. Originally employed with the object of preventing hospital abuse, the lady almoner has now become in other directions an institution in many hospitals. She is indeed the friend in need of any hospital patient whose circumstances militate against the success of treatment. The case of incipient disease can enter the hospital with a light heart before his condition has advanced to a dangerous stage if he knows that a sympathetic eye is being kept upon his family during his enforced absence. The mother has less compunction in leaving the children to others' care, and many a case has been treated in time and brought to a successful issue because the mental anxiety of the patient has been relieved by the knowledge that the home is being watched and cared for by skilled advisers. The success of surgical operations often depends upon intelligent after-care, and the work of the surgeon is too often undone by carelessness or ignorance at home. Home visitation, tactfully carried out, can prevent any such disasters. Perhaps the most valuable of all the work undertaken by the almoners of the trust is in connexion with consumptives, but in every direction the circle of its operation keeps widening, and additional funds are now asked for. The strongly-worded commendations of the medical staff of St. Thomas's cannot fail to enlist fresh support and at the same time to stimulate imitation of such beneficent work in other hospitals.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C. on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London*.

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2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MARRIAGE OF FIRST COUSINS.

EUGENICS invites our opinion on the following case. A. and B. are first cousins on both sides, that is, their fathers were brothers and their mothers sisters. A. is a healthy man of 42, B. a healthy woman of 40, a widow of eight years' standing, with three healthy living children by her first husband, who was also a first cousin. A marriage between A. and B. has been arranged, and our correspondent has been asked to give an opinion as to the probability of further children, and as to whether the blood relationship is likely to have any injurious effect on the character of offspring if born.

*** The desirability or otherwise of such close in-breeding depends upon the character of the stock in question. If several generations have possessed a clean bill of health and a high level of physical and mental characters, such a mating might be regarded with favour. Since, however, such complete information is rarely available, most medical men would, we think, deprecate the marriage of near relatives on the ground that latent defects may have a greater chance of appearing among the offspring. With regard to the fertility of such marriages, it is usually held by breeders that close inbreeding is associated with lessened fertility, but we are not acquainted with any adequate statistics in the case of man. It may be remarked that in our correspondent's case the probability of a large family is in any case extremely small owing to the age of the wife. According to the recently published census of Scotland (vol. iii, Cd. 7163) of 2,401 completed marriages in which the wife was 40 at the date of marriage 57.1 per cent. were sterile, and the observed average size of family was less than one.

LETTERS, NOTES, ETC.

SHIP SURGEONS.

WE are informed that under the revised arrangements which have just been concluded the rate of remuneration of ship surgeons on the South American mail steamers of the Royal Mail Steam Packet Company and the Pacific Steam Navigation Company has been fixed at £12 10s. per month; on the Royal Mail Steam Packet Company's West Indian, Canadian, and "D" Class steamers to South America the pay is now £14 10s. per month. In addition to this pay they are allowed to charge fees for professional attendance on passengers as follows: 5s. a visit to first class and 2s. 6d. a visit to second class passengers. Surgeons on the company's steamers have a private cabin and a surgery set aside for their use, and there is also a hospital fitted with every modern convenience. Hospital attendants are carried on the mail boats, and doctors on the Royal Mail Steam Packet Company's mail steamers are in addition allowed a personal servant. Application for appointments on the Royal Mail Steam Packet Company's steamers should be made to the company at 18, Moorgate Street, London, E.C., and on the Pacific Line boats to the Pacific Steam Navigation Company, 31, James Street, Liverpool.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

A SERIES OF CASES OF APPENDICITIS IN CHILDREN.*

BY

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AND

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In submitting for your consideration a series of cases of appendicitis occurring in children, we wish to draw attention to certain points which have appealed to us as being of special importance and to the conclusions we have drawn therefrom. All the patients were children under 13 years of age, and all were treated in the Aberdeen Royal Hospital for Sick Children. Out of a total of 200 cases, 126 were admitted and operated on during an acute attack.

Table showing the Condition in 200 Cases of Appendicitis in Children.

Chronic and recurrent	74
Acute cases (126):	
Acute catarrhal	28
Acute catarrhal with pelvic abscess	1
Acute catarrhal with spreading peritonitis ...	2
Acute gangrenous	10
Acute gangrenous with commencing or localized peritonitis	10
Acute gangrenous with spreading or diffuse peritonitis	35
Gangrenous with multiple abscess	7
Gangrenous with localized abscess not adherent to the anterior abdominal wall ...	24
Appendicular abscess adherent to the anterior abdominal wall	6
Appendicitis complicated by intestinal obstruction (catarrhal 1, gangrenous 1, with abscess 1)	3
	200

The mortality in the acute cases was 19, or 15 per cent. This includes one death under an anaesthetic. In the chronic and recurrent cases there was no mortality.

Two deaths occurred from intestinal obstruction complicating appendicitis, 2 from subphrenic abscess (1 + empyema). The other fatal cases were cases of diffuse peritonitis or of multiple abscess. In these cases (with one exception) the symptoms had been present in some degree for several days before admission, and in all of them the patient's general condition at the time of admission was very bad. Two cases developed septic pneumonia several days after admission, and died. In a few cases recovery was complicated by pleurisy, with a moderate amount of effusion which cleared up. In one case a small interlobular empyema was discovered about a month after operation for acute diffuse peritonitis.

No case of "ether pneumonia or bronchitis" occurred in the whole series, and no case of "delayed anaesthetic poisoning." One case of acute intestinal obstruction occurred two days after operation for acute gangrenous appendicitis. A piece of omentum was found fixed by a fresh adhesion to the lower end of the ileum, and the bowel above this was widely distended. This was relieved by operation, and the patient recovered.

The appendix was not removed in any case where there was an abscess adherent to the anterior abdominal wall, nor in several cases of localized abscess not adherent to the anterior abdominal wall. In all the other cases it was removed. In a small proportion of cases (about 6), where drainage had to be carried out for a prolonged period through a paracentral incision, a ventral hernia appeared some time after. A post-operative hernia has not been observed in any case where a simple muscle-splitting side incision was used, nor in any case where a paracentral incision was used and was sutured up at the time of operation.

* Read by one of us (A. M.) before the Aberdeen Medico-Chirurgical Society.

Detailed Review of Sixty Acute Cases.

A more detailed and uniform system of case-stating recently introduced has enabled us to make a more accurate study of the individual cases than was previously possible, and a closer review of the notes on 60 of the most recent acute cases seems likely to be of value. In this series there are not included any cases previously reported.[1]

Of these 60 cases, 11 were acute catarrhal, 1 acute catarrhal with pelvic abscess, and 1 acute catarrhal with diffuse peritonitis; acute gangrenous, 6; acute gangrenous with commencing or localized peritonitis, 3; acute gangrenous with spreading or diffuse peritonitis, 21 (1 with perforation of the caecum); acute gangrenous with localized abscess, 13; acute gangrenous with multiple abscess, 4.

The ages of these patients ranged from 3 to 13 years. There is a history of previous attacks noted in only 10 of these cases.

With regard to symptoms, the classical symptoms of abdominal pain and tenderness, and vomiting or sickness, accompanied by some elevation of the temperature and of the pulse-rate, appear to have been present in practically all these cases; but frequently one of these symptoms predominated over the others. A difficult stage for diagnosis of the exact intra-abdominal condition is in many cases just after the initial storm, when the pain, tenderness, and sickness have passed off or moderated. At this time one is very apt to think that the patient is improving, but for the fact that the pulse-rate is steadily increasing, a point for the observation of which repeated examination is necessary.

Except in several cases of localized abscess, in every other case in this series note has been made of the fact that abdominal respiratory movement was greatly diminished, and this is a most important point in cases in which tenderness and rigidity are not well marked—for example:

CASE D.—Female, aged 4. Two days before admission an attack of sickness and vomiting, with complaint of abdominal pain. Tenderness was made out (at the commencement of the attack) about the umbilicus and in the right iliac fossa. On admission the child looked very ill; pulse-rate 144, temperature 101°; no rigidity or tenderness could be made out after careful examination, and nothing definite could be made out from rectal examination; but, on the strength of the history, the pulse-rate, and on account of the fact that there was practically no abdominal respiratory movement, the abdomen was opened, and a large collection of pus was found in the pelvis communicating with a smaller collection, which surrounded a gangrenous appendix lying high up in the right iliac fossa. But for the fact of there having been no abdominal respiratory movement this patient would probably not have been operated on at once.

Dr. Sandeman has recently drawn our attention to the fact that in acute peritonitis in children a very frequent attitude for the child to adopt is to lie with the back of the head supported by both hands. The explanation of this appears to us to be that this position helps to keep the abdominal muscles fixed, and also allows for a freer movement of the thoracic muscles employed in respiration.

In those cases in which a gangrenous appendix was found surrounded by a small collection of pus completely shut off behind the caecum or the ascending colon it has been noted that muscular rigidity and superficial tenderness on palpation often appeared later in the course of the attack than is usually the case.

The Significance of Diarrhoea.

In 6 cases diarrhoea was a prominent symptom; 4 of these 6 cases died and in all a diffuse peritonitis was found at operation. Such cases appear often to be misleading, as the appendicular symptoms are apt to be overlooked, the case being regarded at first as a simple enteritis. It would also appear that cases of appendicitis in which diarrhoea is present at the beginning of the attack are usually of a specially virulent type, and that the prognosis in such cases should be specially guarded, even although there has been no delay in recognizing that appendicular trouble is present. The history of one of these cases (Case 1) is of interest:

The patient—female, aged 4 years—took ill three days before admission with sickness, vomiting, and diarrhoea, and complained of severe abdominal pain. An aperient medicine was given by the parent. Symptoms continued, and a doctor gave

an opiate, which gave apparent relief, but on the third day the condition was critical, and tenderness was made out on palpation in the right iliac fossa. At operation a gangrenous appendix was found, with an extensive spreading peritonitis.

In cases of enteritis accompanied by abdominal pain, but without appendicular trouble, one finds that if any abdominal tenderness be present, it is usually over the regions of the transverse or, more likely, the descending colon, although it must always be kept in mind that inflammation in an appendix which is situated up under the liver may simulate this.

Frequent Micturition.

In 4 cases there is a history of pain and frequency of micturition. It is noteworthy that painful and frequent micturition is present when the inflammation is localized in the pelvis, as in an inflamed appendix adherent in the pelvis, in a localized pelvic abscess, and sometimes in the early stages of a spreading peritonitis, when the appendix occupies a low situation. When pus is not bound down in the pelvis, a diffuse septic peritonitis does not seem often to be accompanied by these symptoms. Such localized pelvic mischief is generally easily detected by rectal examination when this is tolerated, as in two cases where it was noted (before operation) that rectal examination elicited great tenderness only when pressure was made toward the upper part of the right side of the pelvis. In each case a gangrenous appendix was found lying at the brim. Otherwise rectal examination has not proved of much value, and it is often not tolerated by young patients. One case of pelvic abscess is of special interest. There had been complaint of pain and frequency of micturition, the frequency amounting almost to incontinence. On the abdomen being opened in the middle line, the bladder was found distended almost up to the level of the umbilicus, although the patient had passed 5 oz. of urine immediately before operation. A large abscess was found below the bladder, which, by its upward pressure, had practically divided the bladder into an upper and a lower compartment.

In a larger number of cases a bacteriological examination was made, and in the majority of cases a streptococcus or *B. coli*, or, more commonly, both together, were found present.

Prognosis.

Out of these 60 acute cases there is a mortality of 9. In 4 cases diarrhoea was from the first an outstanding symptom. All of these cases appear to have had a high degree of infection from the first, and the presence of the diarrhoea may possibly have accounted for the fact that none were sent to hospital before the third day of their illness. In each case the general condition on admission was very bad. Another patient was ill for three weeks before admission with a left-sided pleurisy, and the exact date of the onset of his appendicular trouble is very uncertain. On admission a gangrenous appendix, with spreading peritonitis, was found. A great many recent adhesions were found about the lower end of the ileum. One week after his first operation he developed signs of acute intestinal obstruction, for which an ileo-colostomy was done, but a fistula developed two days later, and he did not recover.

A case of multiple abscess from a gangrenous appendix died three and a half hours after operation. The history was one of seven days' illness. Aperients administered by the mother failed to relieve his early symptoms, and after this he was treated with repeated doses of opium for three days and then sent into hospital, as his condition had become very grave.

A male child, aged 3½ years, was found, after a five days' illness, to have a gangrenous appendix with perforation of the caecum and a spreading peritonitis. The appendix was removed, the perforation closed, and the pelvis drained, but the child died from toxaemia fifteen days after operation. In this case there was a suspicion of typhoid fever, but blood examinations proved negative.

A diagnosis of tuberculous peritonitis accounted for three weeks' initial treatment of a case of periappendicular abscess. At operation a gangrenous appendix was found with a large abscess. The appendix was removed without any special difficulty and the abscess drained. The wall of the caecum appeared to be very unhealthy, and a fistula developed in several days. An attempt was made to close this by a second operation, but it was not permanently successful, and the patient died from inanition about six weeks after the first operation. One case of diffuse peritonitis developed a basal pneumonia on the fifth day after operation and died three days later.

In reviewing these cases the most striking point to be noticed is the direct bearing which the duration of illness has on the severity of the patient's condition on admission, on the length of time occupied in convalescence, and on the death-rate. No case operated on in the first or second day of illness died. The average period of illness in the fatal cases was six days.

Although in several instances a dose of opium was given before the patient was sent off on a long journey to hospital, in only two cases is there any record of opium having been given in repeated doses as part of treatment. In both these cases the patient's condition on admission was very grave, and both died. The figures shown at the beginning demonstrate the strikingly large proportion of cases in which gangrene of the appendix with peritonitis was present, and this is the more striking when one knows that a great number of these patients were sent to hospital as soon as possible after the first visit of their medical attendant. In this connexion, we think it right to draw attention to the fact that in several of the best textbooks the virulent character of appendicitis in early life is not sufficiently emphasized. In Keen's *System of Surgery* we find the following statements in a paragraph on appendicitis in children:[2]

Suppuration is the rule, but general peritonitis is less frequent.

The appendix of infants is not so prone to perforation or gangrene.

The omentum comes to the rescue more frequently and earlier in children than in adults.

Our experience has been in direct opposition to these statements. The percentage of cases of diffuse peritonitis has been much greater in children than in adults. Gangrene and perforation are extremely common. While operating for appendicitis and for other abdominal conditions, we have frequently remarked on the fact that the omentum appeared to be relatively small, and we have often found that no attempt has been made on its part to shut off an inflammatory focus which may have been present for several days.

Acute appendicitis in a child is therefore a most serious condition. In many of our cases the intra-abdominal condition was much worse than the clinical symptoms gave one any indication of. In short, these cases are always worse than they appear to be. We have had several cases of diffuse peritonitis with stinking effusion where the children had been playing in the street within twelve hours before admission to hospital. In several other instances patients have walked into the out-patient department complaining of indefinite abdominal discomfort, and on examination large localized pelvic abscesses have been found. Most of these gave some history of a short illness having occurred about a week previously.

Although no death occurred in any of the cases operated on within the first twenty-four hours, in many the extent of the peritonitis and the fetid character of the effusion necessitated prolonged drainage.

CONCLUSIONS.

A consideration of the foregoing confirms our previous opinions[1] as to the type of acute appendicitis most commonly found in children, and as to the line of treatment likely to give the best results. It appears to us to justify the following conclusions:

That acute appendicitis in children is a not uncommon disease.

That it is possible to recognize it with greater accuracy than was previously the case.

That a great number of acute cases will end in a diffuse peritonitis.

That it is impossible for any one to correctly prophesy how any given case may terminate.

That complaint of abdominal pain, especially when accompanied by sickness, should always provoke most careful inquiry and examination.

That the increasing appreciation on the part of the laity of the possible significance of these symptoms is tending to lessen the death-rate from appendicitis.

In such cases, until acute appendicitis can be excluded by the medical attendant, the patient must be kept under especially careful observation, and when appendicitis has been diagnosed, or even strongly suspected, the case should be treated surgically.

Then, further, that no aperient medicine should be given by the mouth or by any other route.

That all food should be withheld, and rectal salines may be given after the lower bowel has been cleared by an enema. Whenever an acute abdominal condition is suspected the patient should be kept in a semi-recumbent position, in order that any septic products may gravitate to the pelvis instead of tending to become diffused throughout the upper abdomen. This point needs emphasis, as it is by no means systematically attended to.

That under no circumstances should opium be given to a child whose symptoms in any way suggest the possibility of an acute abdomen being present, although in cases where a definite diagnosis has been made a single dose of opium sufficient to relieve pain is of the greatest advantage to a patient who has to travel some distance to hospital.

In this connexion we suggest that it would be of advantage to the community if cottage hospitals throughout the country could more fully utilize the services of experienced operators for the treatment of acute cases occurring in their immediate neighbourhood.

Lastly, that it will be of advantage to the medical attendant himself, and therefore to his patients, if, where at all possible, he makes a point of being present at operation on a patient whom he has had under his observation, and whom he has sent into hospital for treatment.

REFERENCES.

[1] Mitchell, Contribution to the Study of Appendicitis in Children, *British Journal of Diseases of Children*, 1912. [2] Keen's *System of Surgery*, 1908, The Surgery of Appendix Vermiformis, by John B. Murphy, M.D.

SOME OBSERVATIONS ON THE OPERATIVE TREATMENT OF FRACTURES BY METAL PLATES AND SCREWS.*

BY WILLIAM SHEEN, M.S., F.R.C.S.,

SURGEON, KING EDWARD VII'S HOSPITAL, CARDIFF.

THESE observations do not profess to be complete, but raise certain points which seem worthy of consideration and discussion. They are based on 25 cases of operation on the long bones in adults by Lane's plates and screws, and on a survey of some of the recent literature of the subject.

Preliminary Remarks on Non-operative Treatment.

It ought to be an axiom that every paper on the operative treatment of fractures should start by emphasizing the necessity and importance of the frequent study and practice of non-operative treatment, and such necessity I desire to emphasize. Particularly does the necessity arise in hospitals with attached medical schools, whence the students go to all parts of the world to practise under all manner of circumstances—it may be far from hospitals, from *x*-ray apparatus, from special environment, and from specially skilled hands. Many fractures do not need, many cannot get, operative treatment. Fractures are common, occur anywhere, and often have to be treated where they occur. Just as the *x* ray should not supplant other methods of diagnosis, so the operative should not cause to be ignored other methods of treatment. Non-operative reduction, often only possible under full general anaesthesia, the intelligent use of suitable fixation apparatus, and the use of massage and movements may none of them get full attention in hospitals where operative treatment is entirely the vogue. There is an obligation upon surgeons, particularly those engaged in teaching, to see that the non-operative treatment of fractures is never neglected.

Selection of Cases for Operation.

The cases for operation can be divided broadly into two classes: First, that in which operation is a necessity to avoid or remedy a deformed, disabled, more or less useless limb; secondly, that in which operation is more likely to give a better result—a nearer perfect limb—than no operation, although skilled non-operative treatment may be followed by good functional recovery. Cases of the second class should never be operated on except by practised hands, with special tools and in the very special aseptic environment necessary. Given such circumstances, there is undoubtedly this large second class of cases in which better results can be obtained with operative than with non-operative treatment—results which can often be described as perfect—and the operation risks, in cases selected with due regard to the general health and the local condition, are small. Many surgical advances have been brought temporarily into disrepute, not only by the failures resulting from inexperience, but also by the selection of only difficult or late cases for operation. So with fractures, operators at first had many disappointing results; but with increasing knowledge of the imperfect end-results obtained in many cases not operated on came a widening of the operative field, so as to include easy and early cases, and this widening, coupled with improved technique, led to greater operative success, giving patients better limbs, and enabling them to live more useful lives.

Early and Late Cases.

These are two distinct classes. A case is early when the bone can be brought into perfect alignment and the broken ends and pieces imbricated. This may be possible for as long as two months after the injury. A case is late when callus and bone ends have to be removed to obtain alignment. After a week or ten days it becomes increasingly difficult, as time goes on, to obtain perfect imbrication and alignment. The late cases are much less satisfactory to operate on than the early ones. In the late cases the trauma is greater, and there is therefore more risk of sepsis and of shock; the bone ends cannot usually be got into absolutely perfect apposition; it is difficult to avoid some "winding-up" of one fragment on to the other; from removal of bone limb-shortening results. Each late case operated on is a reproach to its early treatment.

Should Fresh Compound Fractures be Operated on?

The answer to this question should not be a universal "No." When the bone has just punctured the skin and then gone back, it is best to wait until the wound is healed, retaining the broken bone in the best possible position meanwhile. Where the wound is a wide one with exposed projecting fragments, plates and screws should be used, and although there will almost certainly be more or less sepsis and they will have to be removed later, a good position is maintained, and often union in a good position results. If such a fracture is left to heal the healing may take many weeks; the operation will be difficult, through much scar tissue, to encounter perhaps irremediable deformity.

The Value of X Rays.

Much of the fascination of this class of operation centres round the beautiful *x*-ray pictures before and after operation. An *x*-ray photograph before operation, in whatever plane taken, must have the anticathode of the tube plumb over the seat of fracture; otherwise, in these "shadow pictures, the "deformity will be distorted—either disguised or exaggerated. An *x*-ray photograph after operation which shows perfect alignment and perfect position of plates and screws may not mean a perfect functional result. Such photographs may be obtained from fractures where sepsis is present, and where later in the case screws loosen and plates become displaced with accompanying deformity; or they may be obtained where there is excess of painful callus or crippling stiffness of a neighbouring joint. The conscientious operator must record his results not only in terms of *x*-ray photographs, but also having regard to all points which concern the functional capacity of the limb.

Avoidance of Shock.

In operations on fractures of the femur, particularly late operations in debilitated middle-aged patients, there is risk of death from shock. Two such late cases on which I operated died from shock. In another late case I sent the patient back from the operating table because of his weak condition, and operated later. I now operate on femur cases under spinal anaesthesia; stimulants are given before operation, food is not withheld for long; if the patient is particularly weak, subcutaneous infusion of saline is given during the operation; the operation is

* Read before the South Wales and Monmouthshire Branch of the British Medical Association, December 4th, 1913. A number of illustrative skiagrams were shown at the meeting.

expedited as much as possible: this is helped by the present practice of not suturing the deeper wound structures. With these precautions I have had no further trouble.

Some Points in Technique.

Lane's minutely aseptic technique should be followed. To avoid putting even the gloved hands into the wound is a counsel of perfection. With those less experienced and dextrous, and less well equipped with special instruments than Lane, the hands must sometimes enter the wound. There is no objection to the gloves being thick, and they are then less likely to be pricked or torn.

After the usual long incision, the skin should be turned back a little before the cloths are attached to it. In some situations making skin flaps gives best access. The mops of sterile gauze are wrung out of boiled saline; there is usually no ligaturing or suturing; if, because of tension, some silkworm-gut sutures are required in the skin in addition to Michel's clips, each suture should carry two needles, so that the skin may be penetrated from within outwards on each side of the wound; thus there is no risk of germs being carried in from the deeper layers of the skin to the subcutaneous tissues.

The Plates and Screws.

The drill and screw must be appropriately related in size, the drill being the same size as the shank of the screw—that is, the screw without its thread.

Good strong ordinary steel should be used for the plates, and thin plates, the strength of which must be especially cared for, for smaller, lighter bones, such as the radius. Screws should be threaded to the head, and there should be a proper relation between screw heads and holes in plates. Screws must be just long enough to penetrate the compact tissue of the bone. These are points, small but important, to some of which attention may not be given. A plate must have at least two holes on each side of the fracture line; otherwise it may swing. Plates of special material and screws of special design seem to be unnecessary.

Do Screws Loosen apart from Sepsis?

This is a disputed point, and merits further inquiry. To me it seems that they may loosen and that they may not. They will loosen if the drill hole is too big for the screw: if they are not tight and firm in the bone at the end of the operation; if there is much strain on the plate after operation, such strain being either due to the plate not having been fixed accurately (by bending if necessary) in contact with the bone along the whole length of the plate, or to early movements of the limb when it is not adequately supported at the fracture seat. Apart from sepsis screws will, if of proper size for the drill holes, if fixed firmly in healthy bone and not subjected to undue strain, remain tight.

Sampson,[1] detailing Lane's cases in children, concludes that "rarefying osteitis," causing loosening of screws, probably does not occur except as the result of organisms introduced from without. Hey Groves (as I heard him at the recent International Medical Congress, and I trust I am not misquoting) says that screws frequently loosen apart from sepsis, and the proper thing to do is to use screws which perforate the bone right through, and are fixed on the other side by nuts. (This procedure must sometimes add to the technical difficulties of the operation.) My experience is that occasionally the screws loosen apart from sepsis; it occurred in the femur, due, I think, to too great strain on the screws from too early movement.

The Management of the Periosteum.

I have been accustomed to strip the periosteum back; in my early cases (usually not with complete success) to resuture it; in my later cases to ignore it. Subperiosteally the exposure of the bones is easier and more bloodless, and the plates and screws can be fixed more accurately. Macewen[2] has shown, contrary to the usual ideas, that the function of periosteum is not to produce bone but to limit its production. Wide stripping of the periosteum has in my experience been followed by the formation of excessive painful callus in the case of the femur, but not with other bones. To introduce the fingers into the wound for suturing is a departure from Lane's technique; introduced suture material also adds to the risk of sepsis; it is often impossible to get the periosteum together. Bearing these facts in mind, I am inclined in future femur cases to try wrapping a piece of detached fascia lata round the plated bone to limit callus formation.

Sampson[3] (he is referring to children) writes: "The periosteum receives no special consideration. It is stripped off the bone . . . and no steps taken to restore it." Lane[4] writes: "The ends of the broken bone are freely defined, the periosteum being divided and separated if necessary." On the other hand, we have Beckman[5] stating that "The periosteum should be saved wherever possible . . . a plate . . . should be placed on top of the periosteum, and not underneath it." Lane Joynt[6] writes: "I never disturb the periosteum if it can be avoided."

Callus Formation after Operation.

There are two aspects of callus formation to be considered: too little callus, and too much. As slight mobility favours callus formation, firm fixation of the fragments by plates and screws may delay it. Too little callus is adverse to union only in unhealthy subjects—for example, with syphilis, or in operations on old ununited or malunited fractures, where the reparative power of the bone is lessened. In the former the condition causing bad general health must be dealt with; in the latter some form of congestion helps union, either by letting the plated limb hang suitably supported or by the use of a congestion bandage. I recommend that in all cases of non-union after plating with no obvious cause a Wassermann reaction should be taken.

Too much callus has only troubled me with the femur, where with perfect asepsis and a perfect *x*-ray picture I have seen callus formation to such excess as to resemble a sarcoma of the bone. Probably this resulted from wide stripping of the periosteum. It is in such a case that in future I should try fascia lata wrapping.

Stiffness of Neighbouring Joints following Operation.

This has been with me an almost constant trouble with the knee after plating the femur in adults—equally when I have splinted the parts and when I have practised joint movements from the first. Sampson[7] (cases in children) says: "Early passive movement seems to cause a secondary stiffness" (presumably of neighbouring joints). This stiffness (like too much callus) may occur where there is perfect asepsis and perfect *x*-ray pictures. It requires long and persevering treatment for its removal.

After-Treatment.

No plating is satisfactory unless the bone junction is perfectly firm so that the weight of the limb can be borne by it. Bearing this in mind, is any external support necessary, and can the patient get about any earlier than with non operative treatment? Sampson[8] says: "No curtailment of the period usually allowed with conservative treatment is permitted." My experience is that the femur requires fixation (but not continuous extension) as with conservative treatment. With other bones a sling or quite light support is all that is necessary. Careful massage and passive movements are commenced at the end of a week or ten days. Support must be continued for as long as with conservative treatment. "Congestion" treatment is of value after the plating of old fractures.

Occurrence of Sepsis.

Apart from plating of compound fractures *per primam*, I have only had one septic case. This was a femur in which the lower end was broken into many pieces; a plate used had to be removed; union eventually resulted. In 21 cases—some between 3 and 4 years old—the plates and screws remain in and give no trouble.

Comparison with Other Operative Measures.

I have used wire, Lambotte's apparatus and bone collars. Nothing permits such perfect alignment and imbrication as plates and screws. Wire is obviously ineffective. It is difficult consistently to avoid sepsis with apparatus which comes from the bone to the exterior like Lambotte's. Perfect fixation may be impossible with intramedullary splints made from the patient's tibia. It may be that in some cases such an intramedullary splint coupled with the use of a plate or plates will prove the best treatment.

References.

[1] *Lancet*, August 17th, 1912, p. 433. [2] Macewen: *The Growth of Bone*, Glasgow, 1911. [3] Loc. cit. [4] British Medical Journal, November 30th, 1912, p. 1532. [5] Mayo Clinics, 1912, p. 675. [6] *Lancet*, March 1st, 1913, p. 624. [7] Loc. cit. [8] Loc. cit.

CONGENITAL DEFORMITY OF FEMUR.

BY

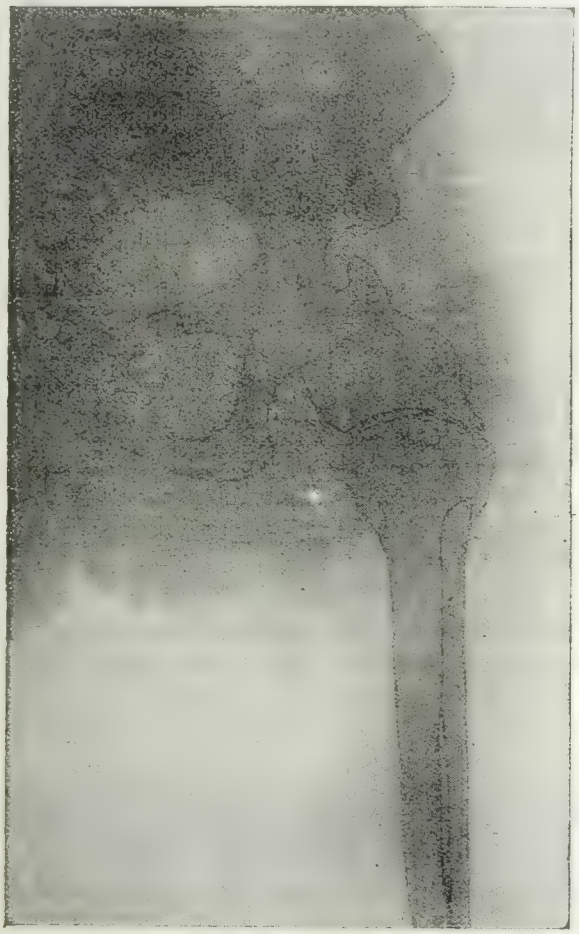
CONOR MAGUIRE, M.D., M.Ch.,

CLAREMORRIS, MAYO, IRELAND.

THE following is a case of congenital deformity of the femur which I trust you will consider sufficiently interesting for publication in the BRITISH MEDICAL JOURNAL:

A full-grown girl, who walks with the aid of a crutch and stick, consulted me about having an extension made for a short leg.

I found that the right leg is shortened in a very peculiar and unusual way. The knee-joint is placed quite close up to the hip, as if there were no femur intervening between the upper end of the tibia and the acetabulum. The leg and foot of the short limb, although thin and small from



Reproduced from a tracing made on the original skiagram.

want of use, are otherwise normal; the sole of the foot reaches to about the level of the knee of the full-grown limb, so that when the patient stands beside an ordinary chair she can support herself firmly by placing the short limb on the seat of the chair. The limb is about 17 or 18 in. shorter than the other; she has fairly good muscular power in it, and can move it about in any direction.

I sent her to Fannin, of Dublin, who took considerable trouble and fitted a very good extension. While she was in Dublin, Dr. R. Lane Joynt *x*-rayed the limb, and kindly sent me the skiagram, which shows very clearly the condition of the bones. The upper end of the tibia forms a joint close up to the hip with a femur which has no shaft, and apparently consists of upper and lower epiphyses joined together.

As I am not within reach of a large library, I am unable to speak as to the rarity of the condition, but have not been able to trace any similar cases reported.

The question as to what precisely happened during the development of the femur shaft in this case I must leave to some one better versed in embryology than I. The fundamental cartilage for the femur is laid down as early as the sixth or seventh week, and a centre of ossification appears in the shaft as early as the second month, according to some authorities. What seems difficult to explain in the above case is the complete absence of the shaft of the femur, which is the first part to be formed; while the extremities of the bone—said to be formed as enlargements of the ends of the shaft—are present. We might also inquire how it was that the lower end of the femur was pulled up and joined on to the upper end.

I must acknowledge with thanks Dr. Lane Joynt's kindness in taking the skiagram and sending it to me.

A CASE OF CHIMNEY-SWEEP'S CANCER, AND A SUGGESTION AS TO THE PATHOLOGY OF CANCER.

By D. A. CROW, M.B., Ch.B.Edin.,

LATE HOUSE-SURGEON, ROYAL BUCKINGHAMSHIRE HOSPITAL, AYLESBURY.

THE following case presents interesting features which make it worthy of record:

J. O., aged 57, by occupation a chimney-sweep, was admitted to the Royal Buckinghamshire Hospital on October 19th, 1911, suffering from a growth on the scrotum; duration five years.

History.

In 1906 he noticed a hard lump, about the size of a pea, underneath the skin on the front of the scrotum; about eighteen months afterwards it reached the size of a small marble, and ulcerated. It never gave pain, but steadily increased in size.

Previous Health.

He was for several years employed as a sweep's boy to climb chimneys; since then he has been regularly employed in sweeping in the ordinary way. He admits that he has never been very careful to keep clean, and only had a bath about once in three weeks. His brothers used to sleep in the same bed. In 1904 the patient developed a warty growth on the dorsum of the right hand, over the middle of the fourth metacarpal; it developed painlessly, and apparently presented the usual aspect of an epithelioma. In 1906 it had reached the size of a crown piece, and was removed at Guy's Hospital by a J-shaped incision passing 3 in. up the ulnar border of the forearm; the epitrochlear gland was also removed. The result of this operation seems to have been perfect.

Family History.

The patient's father was a sweep for fifty-five years, and died when 64. He developed a scrotal cancer, which was removed about seven years before his death; the cause of death is not known.

One brother died at the age of 45, having had a cancer of the cheek for six years; it started over the right malar bone and spread in all directions until at death it measured about 3 or 4 in. across. He had been a sweep ever since he was a boy.

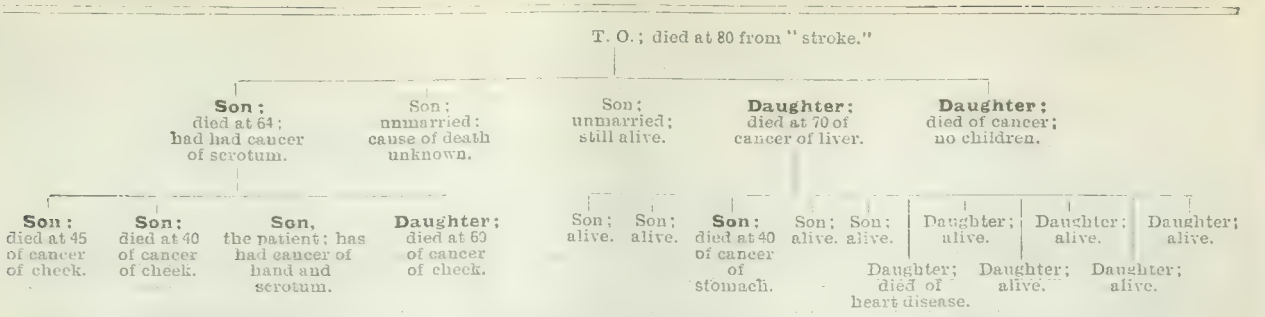
Another brother died at the age of about 40, having suffered also from cancer of the right cheek; this growth had been noticed for about five years; at the time of death the tumour was about 3 in. across. He also had been a sweep since he was a boy.

The patient's sister died aged about 60; she had suffered for eight years from a cancer of the right cheek in the same situation as her brother's.

The father's sister died, aged 70, from, as was stated, cancer of the liver. A son of this woman died, aged 40, from cancer of the stomach. Another of the father's sisters died of cancer; situation not known.

On Examination.

The skin presented many of the characteristic appearances which Sir James Paget described in the skin of those exposed to soot and paraffin irritation. Thus the skin of the forehead was thin and slightly rough, and there were six or seven separate circular hyperaemic and slightly scaly patches; the nose had similar patches; on the left eyelid was a small pedunculated white wart. The margins of the ears showed small nodules where more than usual cornification had occurred. On the back were about forty small irregular hyperaemic areas, not raised and not very scaly. In the right axilla there was a remarkable group of about twenty-five white pedunculated warts, the largest being about ¼ in. long and the smallest almost invisible to the naked eye. In addition there were three or four raised flattened red lumps about ⅛ or ¼ in. in diameter. In the left axilla the only abnormality visible was one of these latter. The skin over the dorsum of both hands, but especially of the left, showed marked thinning, redness and scaliness, with here and there local cornifications, causing in two or three cases well-defined large warts, one specially prominent being observed over the head of the third metacarpal of the left hand. On the skin of the scrotum, chiefly where it came into contact with the thighs, were five or six small white pedunculated warts.



On the anterior aspect of the scrotum there was an irregularly oval area about 2 in. by 1 in., raised above the level of the healthy skin. The surface of this area was red, smooth, and devoid of skin; the edges were rounded and thickened, and in some places actually overhanging, so as to cause a definite sulcus round the mass. Towards the centre of the area there was a smooth, round, whitish nodule about ½ in. round. The whole mass was very hard and quite painless. There was no glandular enlargement to be made out on palpation.

On the legs were two or three small warts; only the dorsum of the foot showed very thin, rough, scaly skin.

Operation.

Operation was performed on October 21st by Mr. Perrin. The growth was removed with a wide margin; the inguinal glands were not touched. The patient made a good recovery.

Histology.

A portion of the growth was sent to the Clinical Research Association; the report on it is as follows: "This growth is a rather atypical squamous epithelioma. It is composed of ingrowing masses of epithelial cells, which infiltrate the tissues and cause a marked round cell tissue reaction. There are no cell nests nor keratinoid changes."

The interesting features of the case are the family history, the condition of the skin, and the previous tumour. With regard to the previous tumour, the patient must have had two primary cancerous growths at the same time, as he says he was aware of the nodule under the skin of the scrotum whilst at Guy's Hospital, but considering it of no importance did not mention the fact.

The literature on the subject conveys the impression that sweeps are not unusually liable to develop cancer on parts of the body other than the scrotum; but it is interesting to notice that of the five growths which occurred in these four sweeps three were not on the scrotum. The patient said that a neighbour of his, who was a sweep, had his ear removed on account of cancer.

Amongst the theories which have been put forward to account for the phenomena of cancer growth as a result of soot irritation, there is one which attributes the new growth to the presence in the soot of a powerful deoxidizing chemical, such as sulphurous acid. If this be the true explanation it brings sweep's cancer into line with cancer in other situations, for it is fairly obvious that cancer tends to arise in those tissues which from any cause lack a good supply of oxygen. To take examples: Cancer arising in scar tissue is by no means uncommon; cases are met with in the scars left by burns or disease, such as lupus; scar tissue in the cervix uteri is very frequently the seat of carcinoma; scars of gastric ulcers are liable to the disease. Again, cancer of the lip and tongue is always preceded by an overgrowth of fibrous tissue from chronic irritation, and this results in a deficient oxygen supply; in the same way cancer will occur in a gall bladder which has been subjected to chronic irritation from gall stones. Cancer develops in the sigmoid flexure of the colon after prolonged irritation of hard faecal matter, which must induce a fibrous overgrowth. In the breast fibrous tissue replaces secreting tissue, and the resulting tissues are but poorly supplied with oxygen.

Primary growth in the lung, where oxygen abounds, is extremely rare; growth in the liver, which receives a large proportion of venous blood, is usually extremely rapid. Fatty tissue, which at no time of life is richly supplied with blood, is liable to give rise to fatty tumours at any age; whereas it is only when the nutrition of the skin and mucous membrane is becoming impoverished as regards oxygen supply, on account of changes due to degeneration of the vessel walls, that tumour growth in the epithelium is met.

If the organism of cancer were demonstrated, and if it were shown to have anaërobic tendencies, the explanation of the predisposition of fibrotic tissues to new growth would become somewhat more easy to understand. The researches of Smith and Townsend, of Washington,[1] have clearly demonstrated a bacterial origin for the crown-gall of plants, and this is a pathological condition which has the very closest similarity to animal tumour growth, even as regards the occurrence of metastatic growths. The organism was successfully cultivated only after repeated failures. It was found that the organism is scarce in the tissues, that it takes a very long time to appear on a culture plate, but that, when isolated, it very easily gives rise to new growths on inoculating the tissues of the plant. This suggests that the reason why the cancer organism has not been demonstrated in the tissues is because of the small number present; it also suggests that the causes which hitherto prevented the cultivation of the crown-gall organism may be the same causes which prevent the isolation of the cancer organism.

Might it not be that the inoculation experiments with crushed cancer tissue fail because they are not carried out in tissues predisposed to cancer infection?

This view that cancer always arises in tissues deprived of a full share of oxygen and is probably due to an organism, is very easy to criticize. Nevertheless, it attempts to explain the relation of age and chronic irritation to new growth, and in this respect very many cancer theories are found wanting.

Reference.

[1] *Crown-gall of Plants: Its Cause and Remedy.* By E. F. Smith, N. E. Brown, and C. O. Townsend, United States Department of Agriculture, Washington, February, 1911.

THE TUNING-FORK AND STETHOSCOPE IN THE ESTIMATION OF ABDOMINAL AND THORACIC VISCERA.*

By JAMES CANTLIE, M.B., F.R.C.S.,

Surgeon to the Seamen's Hospital Society.

For some years I have used the tuning-fork-stethoscope method in preference to, or along with, palpation and percussion when attempting to outline with precision such organs as the liver, spleen, stomach, caecum, heart, etc. My desire, in the first instance, was to ascertain more accurately than is possible by percussion and palpation the area occupied by the liver and spleen, as these are the chief solid organs affected by tropical diseases; but I found that the hollow viscera also—the stomach, the caecum, etc.—lent themselves to the tuning-fork-stethoscope method of ascertaining their dimensions.

I extended the use of the method to the organs of the chest, and found that several conditions were more precisely ascertainable by this than by the methods of diagnosis in use heretofore. To gauge the exact area occupied by the liver, for instance, by percussion alone can never give results more than approximately accurate, whilst at times it is difficult, and occasionally impossible, owing to pain, distension, etc., to define its outline with any degree of precision. Palpation is applicable to the lowest strip and border of the liver only, and even in the healthy state it is often a matter of opinion rather than an actual clinical fact where its lower border really ends. When, on the other hand, the liver is widely adherent or tender; when the abdomen is tense from distension, or ascitic fluid is present, the lower limit of the liver is still more obscure.

* Being an account of a demonstration at the London School of Tropical Medicine to members of the International Medical Congress, August, 1913.

The principle involved in the use of the tuning-fork-stethoscope method is that when the stethoscope is placed over an organ, be it a solid organ such as the liver, spleen, heart, etc., or a hollow organ such as the stomach or caecum, and the vibrating tuning-fork is applied on the surface of the body over one or other of these organs, the note of the tuning-fork manifests by its loudness the limit of the organ under examination, and the moment the



Fig. 1.—Examining liver in front of axillary line, standing on right side of patient.

limits are passed the note becomes faint, distant, or inaudible.

The Tuning-fork.

I have tried many forms and kinds of tuning-forks, some high pitched, some low pitched, some forks with flattened or button-shaped ends, and some with narrow ends. The best results are obtained by a fork made for me by Messrs. Mayer and Meltzer. Its note is G sharp, and the end of the stem of the fork is not flattened, but has a rather narrow, blunt end. The fork may be set vibrating by striking it against anything hard—the heel of the boot if nothing else is available—and whilst loudly vibrating the end or stem is pressed lightly but firmly on the skin. A tuning-fork with an arrangement attached whereby a hammer is made to strike the end of one of the prongs is convenient, but not at all a necessary arrangement.

The note heard when the stethoscope is placed on the skin over any one of the organs mentioned and the tuning-fork is applied seems to proceed from the point

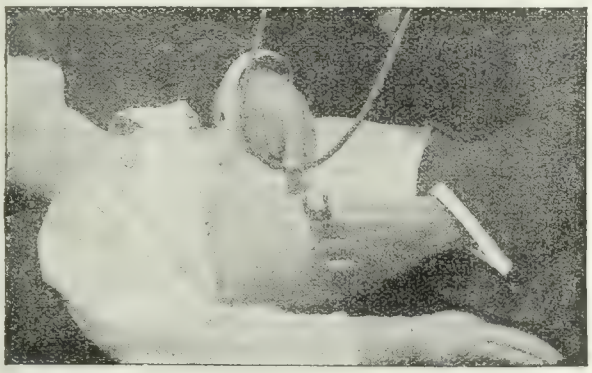


Fig. 2.—Examining liver in axillary line, standing on left side of patient.

where the fork impinges on the skin; but when the fork passes from off the organ over which the stethoscope is placed, the sound not only becomes fainter, but it seems to proceed from the free or distal end of the fork and *not* from the point where it touches the skin. By a little practice this peculiarity becomes a useful adjunct to the mere loudness or faintness of the sound in the matter of diagnosis.

The practical application of the tuning-fork-stethoscope method as applied, say, to the liver is as follows: Place the stethoscope (binaural) on the lower part of the right chest wall, just above the lower right true rib cartilages, and about 1 in. behind a line drawn downwards from the right nipple (see Figs. 4, 5, etc.). The tuning-fork is now made to travel from the region of the chest midway between the sternum and the nipple line (Fig. 4) downwards over the liver. The note heard when the tuning-fork is over the lung is faint and distant, but the moment it reaches the area of the liver the note is loudly heard, and in turn when



Fig. 3.—A tuning-fork with hammer attached.

the lower limit of the liver is reached, and the tuning-fork has other abdominal organs beneath it, the sound suddenly fades away to a faintly distant hum. The degree of pressure necessary varies. Over the chest the end of the fork has only to be gently held against the skin, but when a careful examination has to be made to gauge the limit of the lower edge of the liver, as in stout people or in cases of distension from gas in the intestine or fluid in the peritoneal cavity, the fork has to be pressed fairly deeply at times, so that the piece of intestine may be pushed aside or the fluid between the abdominal wall and the liver displaced.

Fig. 5 shows the application of the tuning-fork over the heart, liver, and stomach, and it is at once evident from the diagram that along the middle line of the body the loud sounds are over the liver, and the faint sounds are over the heart above and the stomach below.

The upper and lower limits of the liver may be quickly and accurately ascertained by rapidly passing the tuning-fork all round its presumed border, when any divergence from the regular outline is at once perceptible, and discrepancy between the relative sizes of the two sides of the liver at once brought to light.

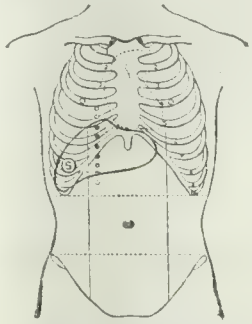


Fig. 4.—Liver, vertical dimensions; s, stethoscope; • tuning-fork loudly heard; o, tuning-fork over lung and gastro-intestinal tract faintly heard.

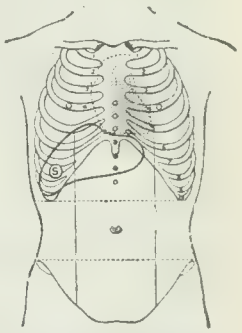


Fig. 5.—s, Stethoscope applied; • loud notes over liver; o, faint sound over heart and stomach.

Liver and Splenic Enlargements.—At times it is well-nigh impossible by palpation or by percussion to know where the enlarged liver ends on the left if the spleen happens to be enlarged as well, and vice versa, for the two organs may be actually in contact. The tuning-fork-stethoscope method at once settles the point; for if the stethoscope is placed over the liver the sounds will be practically inaudible when the spleen is beneath the tuning-fork; similarly, when the stethoscope is placed over the enlarged spleen, the tuning-fork, when super-

imposed over the liver, is inaudible or but faintly heard (Fig. 6).

An effusion into the pleura is at once detected by the tuning-fork. As the diagram explains, the tuning-fork is heard only over the liver when the stethoscope is superimposed over that organ, and but faintly heard, or is wholly inaudible, when it is applied over the lung, over the seat of the effusion into the pleura, and over the abdominal contents below the liver. This is a fact of great clinical assistance, for neither by percussion, palpation, nor by auscultation can it be positively diagnosed whether the dullness and absence of breath sounds is due to effusion into the pleura or is due to the liver being pushed upwards towards the lung by abdominal distension, etc. In the same way a congestion of the base of the right lung—a not uncommon feature in the tropics—is readily distinguishable from congestion or inflammation of the liver (Fig. 7).

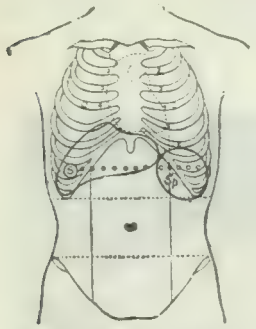


Fig. 6.—When liver and spleen touch. s, Stethoscope over liver distinguishes — • loud sounds over liver; and, o, no sounds heard over spleen.

Passing from the solid viscera to a hollow viscus—the stomach—it will be found that the tuning-fork answers true, for by this method the dimensions of the stomach

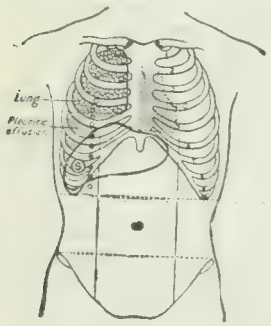


Fig. 7.—Effusion into pleura. s, Stethoscope: Tract of tuning fork from lung to abdomen; • loud sounds; o, faint sounds.

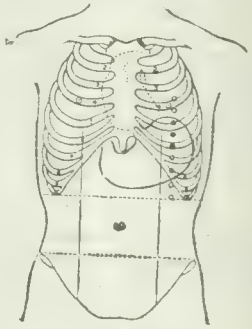


Fig. 8.—With stethoscope placed anywhere over stomach. • Loud sounds heard; o, faint sounds heard.

are definable with precision; the writer has tested the accuracy of the method in question with that of *x*-ray examinations, whether by screen or photographs, and finds the tuning-fork is as accurate as the *x*-ray findings (Fig. 8).

The dimensions of the caecum can also be accurately told, and the difficulty at times to be certain whether an apparently movable caecum is not really a movable right kidney is at once settled. The track of the large bowel can also be followed for some distance, for when the stethoscope is placed upon the caecum the vibrating tuning-fork can be heard as it is carried along the ascending colon and across the body along the transverse colon as far at least as the middle line. In various abdominal, pathological, and other conditions, the tuning-fork method of diagnosis may be of service, and has proved so in the writer's hands. The dimensions of a pregnant uterus, of an ovarian cyst, of a large uterine fibroid, etc., can be readily gauged by the tuning-fork-stethoscope method.

In fractured bones the method under discussion is also applicable. When a thigh bone or any of the large bones of the limbs are fractured anywhere along the shaft, the stethoscope placed over one end, say over the great trochanter of a fractured femur, the vibrating tuning-fork placed on the lower end of the bone, just above the knee, cannot be heard so well as on the femur of the sound side. A fractured rib can also be recognized from its intact neighbours, and when the stethoscope is placed far back on the shaft and the tuning-fork far forward, it is easy to detect the difference between the note in the fractured rib or ribs and the sound given out by the ribs above and below. A doubtful fracture of the sternum or of the collar bone can be detected in a similar manner.

The dimensions of the heart, and its relation to the lungs, can be readily gauged when the stethoscope is placed on the chest over the cardiac area and the tuning-fork is made to pass in various directions over the area occupied by the lungs around the heart.

I have been making observations on the different tones which seem specific to different affections of the liver; that a fatty liver conducts sound less loudly than a cirrhosed liver is certain, and so with other ailments, but the evidence is not sufficiently advanced to tabulate the sounds peculiar to each condition.

When applying the tuning-fork it is better not to drag it along the skin, but to raise it and "dab" it on the skin at short intervals. As the limits are made out they may be marked by a pencil in the usual way.

EPIDEMIC CERVICAL ADENITIS WITH CARDIAC COMPLICATIONS.

By S. T. PRUEN, M.D.,

CONSULTING PHYSICIAN, HOSPITAL FOR SICK CHILDREN, CHELTENHAM.

DURING the autumn and early winter of 1912 I saw several cases of tonsillitis, accompanied by unusually tender cervical glands, but not by any other complications so far as I remember. Convalescence was very slow, and I accounted for their unusual severity by calling them influenzal.

In the middle of January, 1913, a young lady came from Hastings to stay at my house, and almost at once developed tonsillitis, with swollen and tender cervical glands. My daughter was attacked a day or two later; a few days after I developed the same condition, with, in addition, very troublesome subacute laryngitis, and it was some weeks before I felt quite well. Later in January I saw two more cases, similar in all respects, and equally tedious. In February I was called to see a man, aged 40, who had just come down from Sheffield.

CASE I.

This patient had a temperature of 102° F. and a sore throat, accompanied by swollen and very tender cervical glands, and was feeling very ill. A few days later a diphtheria-like growth appeared in both tonsils, and spread to the pillars of the fauces and the soft palate. I felt sure the case was not one of diphtheria, and sent a swab from the growth to Dr. Collins, who reported: "Streptococcus; no Klebs-Loeffler bacillus." Two days later Dr. Collins saw the case with me, and took a specimen, the examination of which confirmed the result of the first. Dr. Collins prepared a vaccine, and I inoculated the patient several times, but the entire diphtheria-like growths came away just before I injected the first dose. The patient was three weeks before he could leave his bed, and several more before he recovered his strength. The heart sounds were feeble, and occasionally intermittent, but there was no dilatation and no bruit. The urine was normal throughout.

CASE II.

My next case was a lady, aged 40, who had slight tonsillitis and a few rather enlarged, very tender glands. In a week or two a mitral murmur had developed. After many weeks she quite regained her strength, but did not quite lose the murmur. She was much weaker than could apparently be accounted for by the disease; and I tried to satisfy myself by saying that she had had an influenzal throat.

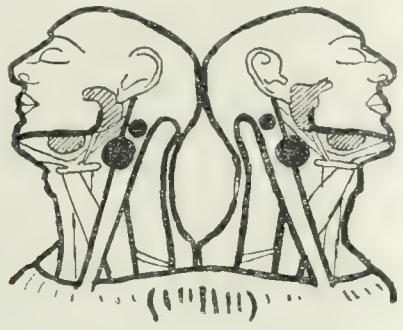
By this time I had heard that Dr. Kirkland considered these cases, of which he had seen several, to be instances of a new disease. Cases began to multiply, and I had six in one house. I realized that they were astonishingly like one another, but not quite like anything else I knew, and that they were infectious and bred true.

CASE III.

A boy, aged 9, at school, had an attack early in May. The right tonsil was swollen and congested, the inflammation spread over the anterior and posterior pillars of the fauces, and the cervical lymphatic glands on the same side became so enlarged that the case looked like a severe attack of mumps. The glands enlarged were the parotid and submaxillary lymphatic glands, and a gland which I shortly began to observe was almost unvaryingly enlarged in these cases, as it also is occasionally in other tonsillar troubles. It lies in the angle where the facial vein opens into the internal jugular, and when enlarged is easily felt a fingerbreadth below the angle of the jaw. I will speak of this as the jugulo-facial gland; Kuttner calls it the *Haupt-ganglion*. The boy had a temperature varying

from 100° to 104° F., with a good deal of headache and general ache. In a fortnight his doctor thought him cured, and I agreed with him. He was my nephew, and so was removed to my house to convalesce. Two days later the whole trouble started over again, but this time on the left side; the urine was normal, he had no heart disorder, and was convalescent in a fortnight, but it was several weeks before he was fit for his normal amount of exercise.

Whilst I was looking after this boy in my own house I was faced with an epidemic of the same disease at an institution where there are 120 men; about 22 men went down in the first ten days.



Child. Tonsils congested; glands slightly tender; mitral and aortic murmurs; dilatation of heart.

CASE IV.

One of the first was a man, L., who came in with a very slight sore throat, and slightly enlarged and tender glands, but with a temperature of 104° F. He appeared to be desperately ill from the first. For the first week he had constant rigors, axillary temperatures of 105°, 105.4°, 106.4°, and 103.6° F., violent delirium, incontinence of urine, and occasional haemorrhages from both mouth and bowel. A swab from his throat, taken at the commencement of his illness, was sterile. Dr. Collins drew off some of his blood, and found a long variety of streptococcus with pronounced haemolytic properties. He then made a vaccine from it, but when it was ready the patient was so ill that he thought it hardly worth while to make an injection, yet he did so, and after several injections the man recovered. His life was saved, I have no doubt, by the vaccine. This patient never had any cardiac trouble, and four months later he was able to take a light post as teacher.

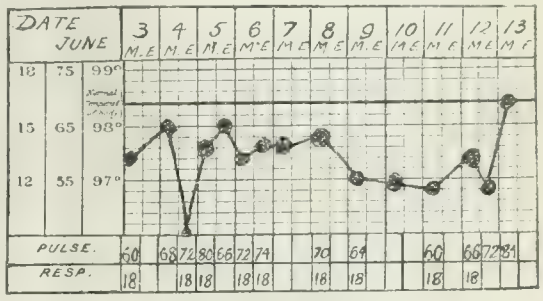
This contrasts with the previous one. In the one case severe glandular trouble and no serious complications. In the other case almost no gland trouble, but severe septicaemia. This has been my experience throughout—the more severe the gland trouble the less severe the complications.

CASE V.

The next case, W., came in with a temperature of 102° F. Like L., he appeared very ill, but had no severe disturbance of the throat or glands. In consultation with Dr. Collins I inoculated him with L.'s vaccine. In forty-eight hours he was well, though weak. He had previously been put to bed and a purgative given, as he was constipated and had a very foul tongue, so that the rapid recovery after the vaccine may have been a coincidence. In a week he was able to sit up a short time; in another week he was able to return home, but he was not fit for work for still another month.

CASE VI.

A few days before either L. or W. were taken ill, a man, A., came in with his throat congested but not much swollen; the cervical glands, though tender, were only slightly enlarged. The temperature, which varied between 99° and 100° F., subsided during the week, as did most of his other symptoms. The heart was examined night and morning. On June 1st, about ten days after A.'s admission, when he was apparently convalescent, I noticed a very slight systolic bruit with the first sound. Next day there was a loud murmur with the first sound, and a less marked one with the second. The following day both murmurs were equally well marked, and the heart's apex was half an inch beyond the nipple line. On June 4th the murmur with the second sound was diminishing in

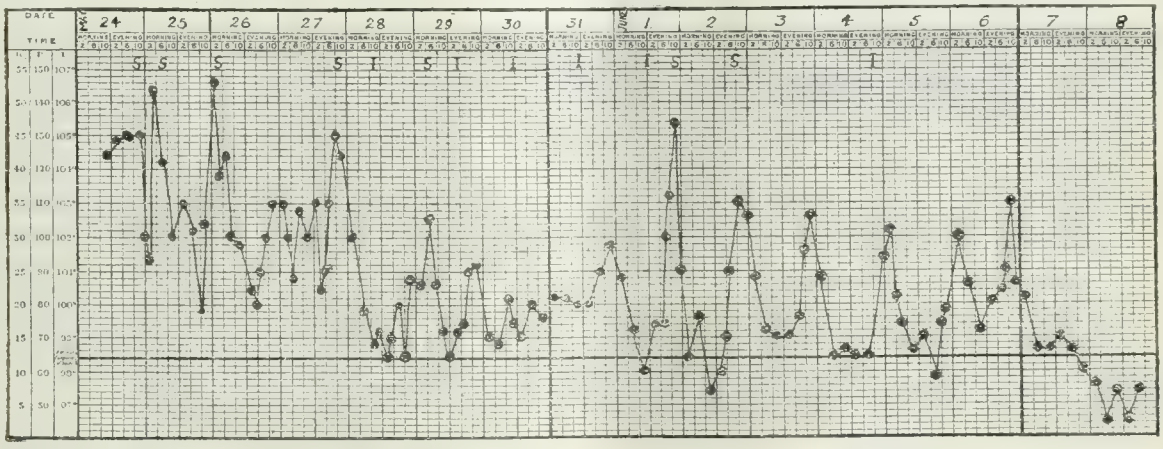


Case VI.

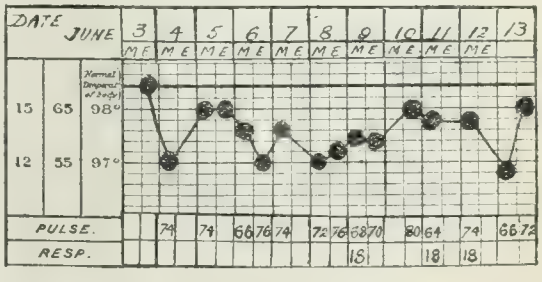
intensity, and on the day after the murmur with the first sound had begun to diminish and the dilatation decreased. In a few more days the murmur with the second sound had almost disappeared. The temperature during the whole cardiac trouble had varied between 97° and 98° F., and the pulse between 60 and 70. Four months later he could walk two or three miles, but he had not regained his full strength, and had not recommenced work. The mitral murmur still remains.

CASE VII.

On the same day that A. developed endocarditis, another man, Dt., was seen with slight throat and gland trouble, so slight that he was admitted only for isolation. Next day I found a distinct though slight systolic murmur with the first sound; the temperature was 97° F. and the pulse 74. He said that



Case IV.—I, Inoculation. S, Sponging.



Case VII.

he felt quite well. By evening the murmur was much more distinct, and by the next day there was a murmur with the second sound as well, and the heart's dullness had extended beyond the nipple line. During the next ten days the murmurs

diminished in intensity, the pulse varied between 64 and 74, and the temperature between 97° and 98° F. By the middle of June the apex had retreated to the nipple line, there was a systolic murmur still at the mitral, a reduplicated second sound, and a loud systolic murmur over the pulmonary valves; the pulse was 88, and regular in force. He can now walk slowly for two miles, but cannot manage hills or walk quickly. On standing up the pulse goes up from 80 to 95. The murmurs are still present, but not so well marked.

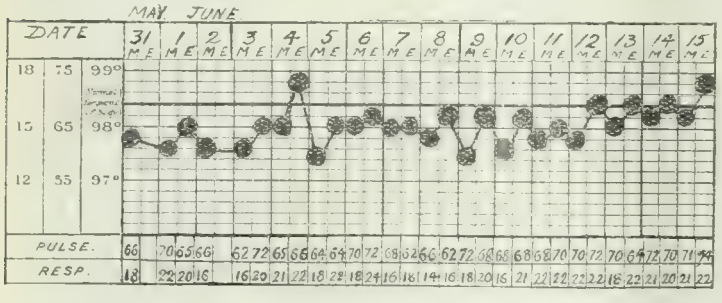
Case VIII.

Another man, B., who came in at the same time with still slighter throat and gland trouble, was at once sent to his home in the town, and told to send for his doctor. A week later he came back to visit his fellow sufferers, but said he had been so well that he had not sent for his doctor. I found a very slight systolic murmur with the first sound. I told him he must call in his doctor, who informed me in the evening that B. had loud murmurs with both sounds heard over all the areas. I saw him again next day and verified the diagnosis. In this case the murmurs developed in about six hours, whilst the heart dilated and began to beat irregularly. In a few days matters quieted down, and left him with only a mitral murmur, but the dilatation did not quite go down for over two months. During all this time the temperature was subnormal, and the pulse about 80. He still has a systolic murmur, an irregular beat, and the pulse when he stands up rises from 84 to 104.

We had about twenty cases at this time at the institution, and amongst them four cases of endocarditis and one of acute septicaemia, besides other complications; I was at the same time having similar experience outside, as were also some of my colleagues. Altogether I had about sixty cases, fourteen with cardiac complications.

Case IX.

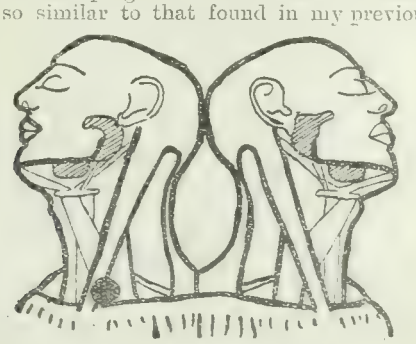
In the middle of May I was called to a master at a school, Dd., aged 27. He seemed so ill that I removed him from his lodgings to a nursing home. I examined his heart daily for a fortnight. At the end of that time a faint murmur could just be noticed over the mitral area, both before and after the second sound. The next day there was a very obvious murmur over the aortic valves, and the pulse became of the water hammer



Case IX.

type. On the following day there was a well-marked murmur with the first sound audible all over the heart, and the heart itself became noticeably dilated. The temperature was subnormal from early in the illness. Four months later the heart condition had improved, and the patient looked and felt better, but there was still some dilatation. There was a diastolic and possibly systolic murmur with the second sound, a rough first sound, and an accentuated pulmonary.

The onset and progress of the heart condition in this case was so similar to that found in my previous cases,



Case X.—Adult. No throat trouble; gland very tender three days; mitral murmur persistent.

that I felt sure this must be another case of the same disease, although there was no history to support my conclusion, and no evidence of sore throat or enlarged glands during the entire illness.

Case X.

In the beginning of June I was called to see a lady who had an enlarged and very tender gland between the sternal and clavicular heads of the left sterno-mastoid muscle. There were some other slightly enlarged glands behind the sterno-mastoid and in the posterior triangle on the same side, but they were of old standing, were not tender, and apparently had nothing to do with the present attack. The gland diminished in tenderness and daily decreased in size, so that as I had examined the heart and found nothing wrong with it, I felt, after a week, that I could not reasonably go on visiting her.

Case XI.

Three days later I was asked to see, in a house where I already was attending the mistress, who had been suffering from a severe attack of the disease, a lady's maid, who had congested fauces, red and swollen tonsils, but only one gland enlarged and very tender. It was the same gland as that in my previous case. This condition of throat and neck, with the obvious source of infection, left no doubt in my mind that this patient also was suffering from the disease.

I now felt more than ever sure that my previous patient must have been suffering from it too. I accordingly examined her chest, and found a distinct systolic mitral murmur. The next day this was more marked, and there was slight dilatation, which passed away in a day or two, and there has been no extension to other valves; the cardiac condition has improved, so that the patient, four months later, could take moderate walks, but the mitral murmur has not disappeared. As in the other cases the temperature has been subnormal throughout.

We thus had three cases occurring simultaneously. One had a typical throat with one typical enlarged and tender gland, in a house with other cases of the disease. Another had no apparent throat trouble, but the same typical gland, followed within a week by cardiac trouble. The third, after being unwell for a couple of weeks, with no obvious symptoms, suddenly developed a very typical attack of endocarditis of a more serious nature than that of any other cases, but not otherwise different from them. I have seen other complications in a few cases.

Case XII.

A man, P., developed spreading phlegmonous inflammation of the left tonsil and surrounding parts, which pushed the structures half an inch beyond the middle line, blocking the faucial opening. I tried to evacuate the pus by inserting a cataract knife for ½ in. into the tonsil through the distended soft palate, but without result. Finally a small abscess burst behind the tonsil, and the swelling subsided, but so gradually that for weeks afterwards the palate was still damaged to such an extent that it might easily have been mistaken for partial paralysis following on diphtheria.

These large phlegmonous inflammations, concealing a quite small and deep-seated focus of pus, seem to be a not uncommon feature both in throat and neck in these cases. I think, too, they explain one point in a letter from America which I will refer to further on.

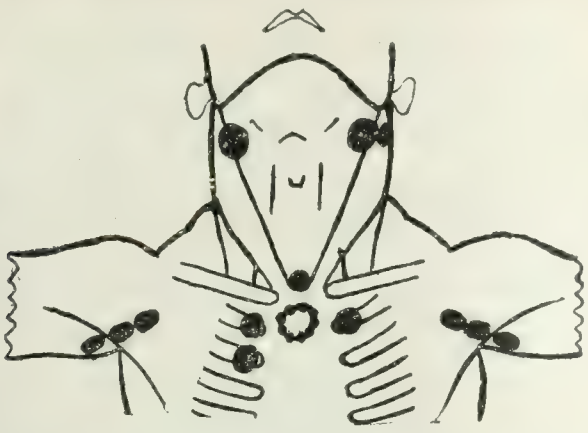
Case XIII.

Another man developed orchitis, a not very painful swelling of the body of one testis. This subsided within a fortnight.

Case XIV.

W. M., aged 19, developed a curious train of symptoms. On July 5th his right tonsil began to swell, but did not cause much discomfort. The jugulo-facial gland on both sides, and one just behind it on the left, were enlarged and moderately tender, as also was one just behind the sternal notch. Two days later spots, tender on pressure—due, I imagine, to inflamed glands—appeared at the sternal ends of the right first and second and left first intercostal spaces. Next day the humeral chain of glands in the left axilla became swollen and tender, and on the following day those in the right axilla. On this same day a harsh, stridulous sound, so loud as to mask the heart sounds, and best heard in the first right intercostal space near the sternum with both expiration and inspiration, was observed. It had the character of the sound which would be expected to be produced by an enlarged gland pressing on the trachea. Next day, July 10th, it was hardly audible, and the glands in the axilla had almost ceased to be tender. The tender spots in the intercostal spaces and the glands in the neck also improved. On July 12th he sat in an easy chair for a short time, and next day for a few hours, but felt giddy on standing. He had a feeble heart-beat between each ordinary beat; this disappeared after two hours' rest in bed. He was several weeks before he felt quite himself again. With the exception of the first day or two, when the temperature was slightly raised, he had a subnormal temperature and a pulse varying from 54 to 64 throughout his illness and a good part of his convalescence.

That a gland could make such an impression on the trachea as I have described is evident to me from a case which I attended this year. I was called one night to see



Case XIV. Youth. Slight tonsillar congestion; glands enlarged three days; stridulous breathing two days; intermittent irregular beat.

a boy, aged 15, with urgent dyspnoea. No air could be heard entering the right lung; the heart was labouring heavily, and the right side so distended that it could be detected by palpation and percussion 2½ in. to the right of the mid-sternal line. There were no other signs or symptoms. Hypodermic injections of strychnine, the inhalation of oxygen, and the application of poultices relieved him. Twenty-four hours later the dyspnoea suddenly came on more urgently than before, and artificial respiration only staved off the end for an hour. Dr. Kirkland saw the boy with me during life, and also attended the *post-mortem* examination next day. We found the right heart extremely engorged; the middle and lower lobes of the right lung were quite black with engorgement, and a fragment sank in water. There were some enlarged glands pressing on the right bronchus, which was flattened, contracted, and for the space of 1½ in. below the branch to the upper lobe intensely congested inside. Dr. Collins examined the engorged lung, and found it sterile. Whether this was another instance of the glandular infection we have been considering I do not know; but if W. M.'s gland on his trachea had been twice as swollen as it actually was I think he must have died, and that his end would have been even more speedy than was this boy's.

Pain in the occiput and back of the neck, and even tenderness on deep pressure in this region, were frequent, and as the retropharyngeal glands are so easily injected experimentally from any portion of the naso-pharynx and tonsillar region, I am inclined to think that the enlargement of these glands must be a constant accompaniment of this disease. If they were much involved the trouble would easily spread through the suboccipital triangle, and account for the symptoms described. The tonsil drains both directly into the upper cervical glands, especially the jugulo-facial, and indirectly into them through the submaxillary glands. The tonsillar inflammation, even when quite slight and superficial, extends over the pillars into the mouth and pharynx both very freely and very early, and the wide-spreading nature of this primary trouble is no doubt responsible for the wide-spread glandular infection which follows the onset of the disease. But the still more widely-spread glandular infection which is apt to follow later is no doubt due to the virulence of the poison spreading rapidly from gland to gland. This was shown by many of my cases, but by none quite so conspicuously as by that of W. M., whose glands were evidently infected through one another, for there was quite obviously no mischief in any of the areas, for instance, drained by the lymphatics of the humeral glands.

I have seen letters describing extensive epidemics of this disease in two or three towns in England. I have myself had cases who arrived in Cheltenham with the disease on them from three other towns in England, and medical friends, nurses, and laymen have told me of, or written to me about, epidemics or groups of cases occurring in fifteen other towns of Great Britain and Ireland. I also know of cases in Belgium, France, Saxony, and America. Some of my correspondents may be mistaken, but it is highly improbable that all are.

A nurse wrote to me from a town in North America to say that there had been an epidemic in the boarding house in which she lived, and that thirteen patients had been ill with it. They had inflammation of the tonsils and adjacent structures, and swollen necks. They had been attended by two physicians, who called in a specialist, and one patient had her tonsil lanced seven times. There has evidently been an epidemic of a similar but much more serious nature in the United States, but I will not refer to that as Dr. Kirkland is describing it in detail.

The incubation period in my cases seemed to be three or four days.

The feature of this disease that most strikes an observer is the unusually large, unusually tender, and unusually numerous glands, so large and so tender that on more than one occasion both medical men and laymen have asked me the question, "Are you quite sure that this is not a case of oriental plague?"

But, though the swollen and tender glands are the features that at once arrest the observer's attention, yet the importance of this new disease lies in the insidious onset of cardiac lesions, which are in most cases slight: the dilatation, under rest, is temporary, but a murmur may persist. So devoid of premonitory symptoms is this complication, and so very widespread the disease, that one cannot help feeling that there must be at the present time a large number of unsuspected cases with cardiac lesions who are walking about and, by doing so, endangering the integrity of their hearts. We have to deal with a "silent endocarditis," not as a clinical curiosity, but as a prevalent disease.

I am not prepared to determine the nosology of this epidemic disorder. It is not mumps or rheumatism, nor septic tonsillitis; nor, as I was at first disposed to call it, for want of a better term, influenza; nor is it glandular fever, from which it differs by the absence of nephritis, except in some cases, and of enlargement of the spleen, liver, mesenteric, inguinal, and axillary glands, and by the presence in almost all cases of tonsillitis and pharyngitis, and in many of mild carditis or endocarditis. Moreover, adults are more frequently attacked than adolescents, and adolescents than children. I am disposed to think it is a new or hitherto unrecognized infectious disorder, and that it is caused by a streptococcus, probably a new variety.

EPIDEMIC CERVICAL ADENITIS WITH CARDIAC COMPLICATIONS.

By ROBERT KIRKLAND, M.B.,

CONSULTING PHYSICIAN, CHELTENHAM GENERAL HOSPITAL.

In October, 1912, I saw, in consultation with Mr. Buckell, a boy aged about 14, with cardiac mischief quite unlike anything I had previously seen.

Some time before he had consulted Mr. Buckell on account of not feeling very fit. Mr. Buckell examined his chest and found nothing amiss. He told him to rest in bed; the temperature, taken morning and evening, was normal, and the pulse was quiet and regular. But in a few days a murmur appeared at the mitral orifice. It was then I saw him. The boy was healthy looking, there was no pallor, the tongue was clean, there was no definite evidence of throat trouble, no glandular swelling in the neck, no rash on body or limbs, no joint pains or swelling; no history of growing pains or past chorea. The pulse was 72, regular in volume and rhythm, the temperature was normal, there was no sweating, and there was nothing abnormal in the urine. The apex beat was in the normal position, but there was a soft systolic bruit at the apex conducted towards the axilla, and a slightly accentuated second pulmonary sound.

Sixteen days later Mr. Buckell again asked me to see the lad. The mischief now had extended from the mitral to the aortic valve, and we had the see-saw murmur of aortic obstruction and regurgitation. The slow smouldering endocardial fire had done this great damage without the boy feeling or looking ill, for his temperature all this time had reached 99° F. on one occasion only, and his pulse was never quick and always regular; there was no joint pain or swelling, and no sweats; there was no enlarged painful spleen or haematuria or embolic phenomena on skin or in the lungs. We could call it an infective endocarditis, and there our knowledge ended, for Dr. Collins examined the blood and found it sterile.

Sir William Osler was consulted, who confirmed our diagnosis as far as it went. We thought the portal of entry for the infective agent must be the tonsils. It was not like a rheumatic infection; to call it so was simple begging the question.

On February 28th, 1913, I was asked by Dr. Longridge to see a little boy he thought was suffering from endocarditis. He had had a sore throat, with swollen and painful glands in the neck, and a slight temperature. The heart's apex was in the nipple line—the normal position in a boy of his age—but there was a systolic murmur at the apex, heard round towards the axilla, with a slightly accentuated pulmonary second sound.

Bearing these cases in mind I began to be on the outlook for a new infection, or for a new behaviour of an old infection, and in March I think I found the former. It seems to me to be a definite entity, for it breeds true.

The malady begins with malaise, sore throat, pain and stiffness in the neck, sometimes on one side sometimes on both, occasionally aching of the back and limbs. The glands of the neck are early affected.

In one of my early cases, within three days of the onset the glands on the right side of the neck were much swollen. These subsided, only to be followed by enormous swelling of the same glands on the left side. This became brawny, painful, and very tender, and in about a fortnight I detected fluctuation. On cutting down, under an anaesthetic, deep-seated pus was evacuated.

The first gland to be affected was usually that behind the posterior belly of the digastric muscle, then the glands in front, beneath, and behind the sterno-mastoid muscle. The appearance of the neck in some cases resembled mumps, but in no case was the parotid involved, nor was there severe epigastric pain and vomiting to indicate affection of the pancreas. In a few cases the swelling of the neck resembled bubonic plague, but never were the groin glands enlarged, always the neck. In three cases I know of suppuration of the glands occurred. The temperature ranged from 99° F. in slight cases to, in severe cases, 103° F., and on one occasion I believe to 106.6 F. The throat was sometimes red, glazy, and erysipelatous-looking: in other cases it looked like follicular tonsillitis, while yet in others there was a membrane indistinguishable from that of diphtheria except that it was perhaps whiter.

The period of incubation seemed to be about four days. It affected all ages, from 2 upwards. I should say that in about 10 per cent. of the cases I saw the myocardium or endocardium was affected, and this began usually about the end of the first week. As Dr. Pruen has pointed out, the heart was affected chiefly in those cases with slight glandular swelling.

In two undoubted cases of this illness the inflammatory mischief spread quietly, as in Mr. Buckell's case, from the mitral valve. And in one doubtful case we had a primary aortic affection, a systolic murmur being heard over the aorta, and low down on the left side of the sternum a diastolic bruit, with a reduplicated second sound, the bruit following the second of the two sounds. With Dr. Longridge I saw a lady suffering from this disease, whose heart and general condition pointed to malignant endocarditis, but there was no splenic enlargement or embolic phenomena. She ultimately recovered.

In my experience primary acute nephritis never followed: the infection, perhaps, in one or two cases lit up a fresh attack in old damaged kidneys. The prognosis as to life was good, except when there was high temperature, bronchopneumonia, or granular kidneys. None of the heart cases I saw died, but some still bear the effects of the myocardial or endocardial trouble.

Swabs taken from the throat revealed a streptococcus, and the blood examination, when it was positive, showed also a streptococcus, haemolytic in one case.

It may be said that all this sounds like scarlet or rheumatic fever, both considered by many to be also due to a streptococcus. But this new illness never began, in my experience, with initial vomiting; the tongue was never strawberry-looking, and afterwards raspberry-like when peeling was over, and no rash, as far as I know, occurred except in one fatal case, when an erysipelatous rash appeared on forearm and leg. There was no infraclavicular formation of pinholes towards the end of the first week, and, as I have already said, nephritis was not a sequela. I was told it was most likely aberrant scarlet fever, but every case cannot be aberrant in a totality of hundreds.

It was not acute rheumatism, similar as the cardiac conditions were, for we never had in grown-up people the intensely painful blush-red swelling, flitting about from joint to joint, or the profuse acid, sour-smelling sweats. Moreover, in rheumatism we have not the typical neck glandular swelling, and it is not an infectious disease as we understand it.

It was not diphtheria, for in every case I had knowledge of, when a swab was taken from the throat, the bacteriologist's report was: "Streptococci present, no Klebs-Loeffler bacilli." The membrane in the throat in a few cases looked suspiciously like that of diphtheria, but repeated examinations in one such case brought back the same report—"No Klebs-Loeffler present." In cases in which suppuration occurred in the glands some may suspect diphtheria because the *Streptococcus pyogenes* is a frequent attendant of the Klebs-Loeffler bacillus. But the latter was never found, and in my own case, where suppuration occurred, there was no membrane on the throat. We had no characteristic ozaena, no palatal paralysis, strabismus, ptosis, or loss of power of accommodation; never was the larynx affected. The heart condition in diphtheria, with its very slow or very quick arrhythmic pulse and the physical signs of gallop rhythm, or embryocardia, probably due to a neuritis of the cardiac nerves, was quite unlike that of this disorder.

I have received the following letter from a friend—one of the ablest physicians in the south-west of England:

Many thanks for your interesting letter. I recognize the accuracy of your clinical description of these cases. I have seen a number of them and have been at a loss what to call them; in fact, one of my own relatives has just had a mild attack. The posterior wall of the pharynx was very red, glazed and painful, neck glands swollen, and aching in back and legs. No Klebs-Loeffler bacilli, but streptococci. I have also seen at least two cases of endocarditis of a subacute character following on. I think there is no doubt you have spotted a new infection.

At the International Medical Congress in August I made the acquaintance of Doctors Libman and Baehr, physicians to the Mount Sinai Hospital, New York, who had brought over with them about 50 specimens of subacute infective endocarditis, due to a streptococcal infection. The vegetations appeared first on the left auricular surface where the blood stream impinges, then on the mitral valve and chordae tendineae. In two cases aneurysm of the mitral valve resulted, which was well shown in the specimens, as was also the site of the vegetations. In other cases, from embolic streptococci being carried to the vasa vasorum or from infarcts lodging and then causing softening of the arterial walls, aneurysms, especially of the femoral, popliteal and superior mesenteric arteries, resulted. The kidney lesions in these cases were remarkable. The kidney resembled the large white kidney, without much roughening of the capsule, but with interstitial changes. Microscopically, several glomeruli could be seen to be embolized with adhesion of the glomerulus to Bowman's capsule through cell proliferation—a glomerular nephritis.

The symptoms were hectic temperature, anaemia, splenic enlargement and pains in the bones, especially over the sternum on percussion; this they assured me was a striking and well-marked phenomenon. When the auricular surface only was affected there were no bruits, but as the mitral or aortic valves became involved, the corresponding murmurs appeared.

Dr. Baehr told me that many of his cases were sent into hospital with the diagnosis of Banti's disease, the anaemia, cardiac bruits, and splenic enlargement suggesting this. But the liver was never enlarged to any extent. The symptoms of the kidney lesion were haematuria, then anasarca, later uraemia. The urine was albuminous, excessive in quantity, but of high specific gravity, never of a low specific gravity. This is remarkable and was distinctive of the illness. In some cases painful nodules occurred on the sides of the extremities of the fingers and on the thenar and hypothenar eminences. They lasted for from twelve to twenty-four hours. In some of the cases the bacteria disappeared and the vegetations on the auricular surface and valves smoothed and healed.

The illness lasted for from four to eighteen months. The majority of cases ended fatally; there were a few spontaneous recoveries, and a few recoveries were attributed to various forms of treatment. When death

occurred it was sometimes from profound anaemia, sometimes from embolism, but mostly from uraemia.

The microbe causing the endocarditis, isolated in 73 out of 75 cases, was almost always a streptococcus of a peculiar type, intermediate between the pneumococcus and the ordinary streptococci, to which Dr. Libman gave the name *Streptococcus mitis*. It was not the same as the rheumatic diplococcus of Poynton and Paine.

The streptococcic infection which I have tried to describe, and which I consider possesses definite features, does not, of course, resemble that of Dr. Libman and Dr. Baehr. But it is suggestive that in New York there should have been cases of subacute streptococcal endocarditis, and that in Cheltenham we should have many cases of streptococcic throat, a certain number of which developed endocarditis and myocarditis.

Within the last few months some observers who have had cases of sore throat followed by cardiac disease in children, have isolated a streptococcus which they call the *Streptococcus rheumaticus*. I have a shrewd suspicion that a goodly proportion of these cases come under our category. Our epidemic was certainly not acute rheumatism, for although in children it is possible to have cardiac trouble without muscular pains or joint manifestations, in adults this is rare.

The heart conditions in our cases were unlike malignant endocarditis. The heart became affected about the end of the first week, the signs being those of myocarditis or endocarditis. The latter was of a slow, smouldering type, followed sometimes by permanent damage to the valves; but in other cases, as far as we know at present, by recovery. We never saw embolic phenomena. In fact, what astonished me was to see patients developing cardiac disease under one's very eyes, placidly lying, not feeling at all ill, not anaemic, with a quiet pulse, and usually normal temperature. The pulse, however, shot up on the patient changing from the recumbent to the sitting posture. I feel sure that if the heart had not been examined no one would have suspected heart mischief.

The streptococcus responsible for this malady is certainly not the *Streptococcus mitis* of Dr. Libman. In a report of the Clinical Research Association on one of Dr. Pruen's cases the *Streptococcus salivarius* and *Streptococcus pyogenes* were found. The latter, of course, were met with in the cases where suppuration occurred in the neck gland.

Some of my colleagues suspected the milk supply as being the probable source of the outbreak. I cannot be sure of this, because my patients had milk from different supplies, and my first definite case of the illness had his own cows on his own estate, carefully tended and looked after, and the only other person to contract the disease was his agent, who had paid him a flying visit to discuss business matters with him when ill. Other patients had it, too, who drank only milk that had been boiled. Two patients also developed the illness immediately on their arrival here from Woolwich and Sheffield. Unquestionably milk is an excellent medium for the multiplication and growth of streptococci which might gain access to it from mastitis in cows, or from those handling the milk, suffering from the disease, as in some cases of scarlet fever epidemics.

THE tenth Congress of the German Roentgen Society will be held in Berlin in April (19th to 21st), under the presidency of Dr. Max Levy-Dorn. The secretary is Dr. Immelmann, Berlin W. 35, Lützowstrasse, 72. There will be an exhibition in connexion with the congress.

THE Board of Trade has addressed a letter to the Secretary of the Liverpool School of Tropical Medicine thanking it for arranging an exhibit illustrating the prevention and cure of tropical diseases at the International Exhibition at Ghent last year. The Board expresses its thanks to Professor J. W. W. Stephens, who represented the school on the committee of organization, and Professor R. Newstead, who collaborated with him in the preparation of the exhibits relating to malaria, sleeping sickness, yellow fever, and ankylostomiasis. The collections illustrating these diseases, the first of their kind to be contributed by this country to an international exhibition abroad, were among the most important features of the tropical diseases section of the exhibition. The Board hopes that it may be found possible to demonstrate even more fully on a future occasion the activities of British medical institutions in the field of tropical medicine.

CHRONICALLY ENLARGED TONSILS AND THEIR TREATMENT.

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IN the question whether these tonsils should be completely or partially removed, or treated by one of the many methods which are advocated, certain points require consideration.

Anatomy and Situation.

The tonsillar crypts, with rare exceptions, extend to the capsule, and when they become infected it is impossible to say to what depth the invasion extends. On removing tonsils apparently only enlarged, it is a common thing to squeeze out septic matter or to find one or more septic foci lying beneath the capsule. This occurs not only in definitely septic tonsils, but also in those which only appear enlarged. Partial removal is of little value in such a condition. The plicae semilunaris and triangularis play an important part in the retention of foreign substances and prevention of drainage of the crypts which they cover. They do not embrace a small tonsil very closely, but as it enlarges they become more closely applied to its surface and offer increasing obstruction to drainage. The crypts which are most frequently and severely diseased are those covered by the semilunar fold, and these are generally left when the tonsil is partially removed.

The situation of the tonsil renders it very liable to infection, being constantly bathed in septic fluid and exposed to injury, especially when enlarged, by hard particles of food. When enlarged it pushes the palato-glossus and palato-pharyngeus muscles apart and impedes their action. The movement of the soft palate being interfered with, the character and tone of the voice suffer. The posterior pillar of the fauces being pushed backwards narrows the sides of the oro-pharynx, and in some cases causes obstruction to the Eustachian orifice. Partial removal of the tonsil does little to relieve these conditions.

Function.

As far as is known, the principal function of the tonsil is to act as a barrier to the entrance of bacteria into the system. The healthy tonsil easily disposes of bacteria, and the viscid secretion which it manufactures retains bacteria which come in contact with it and destroys them by its bacteriolytic action. When, however, its resistance is lost, the tonsil becomes an ideal culture bed for bacteria.

The secretion (the first line of defence) is often dried up in mouth-breathers, and they are the class most frequently affected by tonsillar troubles. Another factor is their lowered vitality, in which the tonsil shares, due to imperfect preparation and assimilation of air for respiration and the lack of nasal stimulus to deep breathing.

As in other parts of the body, the lymphoid tissue of the tonsil produces lymphocytes, but if it is diseased or weakened it is doubtful if it can perform this function to any appreciable extent.

Masini advanced the theory that the tonsil has an internal secretion after the nature of the suprarenal gland, but this has not been confirmed.

Chronic Enlargement of the Tonsil.

Many theories have been advanced to account for this, and while in some enlargements other causes may be at work, the most reasonable explanation in most cases appears to be some local irritation. As mentioned above, the form and situation of the tonsil favour the entrance of bacteria, and it is not surprising to find enlargement in a gland so constantly exposed to infection, when one considers that enlargement in other glands is most commonly brought about by chronic irritation.

The course of events is briefly as follows: The tonsil becomes infected, and three things may happen: (1) It recovers completely; (2) it recovers, but with weakened resistance, which allows it to be from time to time reinfected; (3) some chronic irritation remains. In the two last named conditions the resulting hyperaemia brings about hypertrophy of the tonsil and later the formation of fibrous tissue. Examination of a number of

tonsils supports this view. Those removed from young children are generally softer and more friable than those found in older children or adults, but if the history of tonsillar trouble is definitely of short duration in older patients, the tonsils are generally like those removed from young children.

If the infection occurs early in life, or at first is not sufficiently severe to cause inconvenience, the enlargement may be overlooked until it has reached a large size or until fibrous tissue has developed. Certain enlarged tonsils recover their protective function and if causing no symptoms may be left intact.

Septic tonsils are generally enlarged, and tonsils which are removed owing to their size are often found to be septic, which affords further evidence that (*a*) chonic irritation is generally the cause of enlargement, and that (*b*) enlarged tonsils are commonly of low resisting power.

A small tonsil the subject of repeated attacks of inflammation may result when thrombosis of one or more of the small vessels supplying it occurs, either during an attack of inflammation or by the subsequent formation of fibrous tissue.*

Malignant endocarditis, recurrent attacks of iritis, septic thrombo-phlebitis, labyrinthitis, meningitis—the latter two following suppurative otitis media—are some of the many complications which have been traced to diseased tonsils.

The deformities of the chest, retarded growth, and the mental condition of children with obstruction to nasal respiration brought about by tonsils and adenoids, are constantly in evidence, and if left without operation, under the plea that they will outgrow the condition, children grow up handicapped, both bodily and mentally. About 80 to 90 per cent. of tuberculous glands of the neck have their origin in tonsillar infection. By extension the glands of the thorax may be involved, or the parietal pleura at the apex of the lung with extension to the visceral layer and the underlying lung may be directly infected.

Out of 1,986 tonsils removed for various causes, and examined for tubercle, 5.9 per cent. were found to be tuberculous, and the appearance of the tonsil does not give any indication of the presence of tubercle except in extremely rare cases. An objection put forward against the removal of tonsils has been that dissemination of tubercle may occur. This may happen if partial removal is practised, but if the disease is localized in the tonsil complete removal extirpates it. Even when the glands in the neck are affected, they often subside when the primary focus in the tonsil is removed.

During diphtheria epidemics, it is constantly noticed that the great majority of the patients have chronically enlarged tonsils, although these may not in many cases have caused inconvenience. Professor Beattie of Liverpool has informed me that he considers the tonsil to be one of the main channels of infection in rheumatism. In a recently published paper he and Yates give the results of a series of investigations, in which 20 tonsillar cases are included. In 15 there was a history of tonsillitis and rheumatism, and on inoculating rabbits with cultures prepared from these tonsils, 7 developed arthritis, and the streptococci were recovered from the joints. They point out that this streptococcus, which causes the arthritis, can only be identified by inoculation, and that many varieties are found in the tonsillar region. The inoculations were performed from isolated colonies, and so in the 8 unsuccessful cases the wrong colony may have been selected. The degree of virulence of the bacteria, the dose employed, and the resisting power of the rabbit are also factors which may affect the experiment. In the remaining 5 cases (swabs from sore throats in which the history was unknown), 1 rabbit developed arthritis, the other 4 septicæmia. The constantly recurring history of tonsillitis in patients with chorea is an interesting point in this connexion.

Until the bacteriology of scarlet fever is known, nothing can be definitely stated; but those who see most of this disease are of the opinion that the tonsil is one of the most frequent, if not the main, channels of infection.

The following points strongly suggest this:

1. Tonsillitis is the earliest symptom of the disease.

2. The severity of the throat symptoms and of the attack are closely connected.

3. The discharges from the throat and nose are highly infectious, and are capable of spreading the disease long after desquamation is complete.

4. Epidemics of scarlet fever and diphtheria often appear about the same time, or run concurrently, and although it is more common for scarlatina cases to develop diphtheria, the reverse sequence is by no means unknown. A mixed infection is often seen.

5. Children suffering from septic tonsils or prone to tonsillar inflammation supply a very large number of cases.

Through the kindness of Drs. Armstong, Kerr, and Clegg, I was lately enabled to examine the throats in 273 cases of scarlet fever. In 4 there was a definite history of the partial removal of the tonsils, and it may have been practised more often. In one other case the tonsils had been removed, but a large pad of adenoids was present. In another case (a mild one) there was a small piece of tonsil tissue on one side.

In 131 school children of the same class, examined by the courtesy of Dr. Foggin, the partial operation had been done in 4 at least, and the complete operation in 4. No complete operation was included in the fever group, yet it had been done four times in rather less than half the number of healthy children.

In 239 of Group 1 the tonsils were large, and, although enlargement is expected in this disease, very many gave one the impression that the enlargement had existed previously.

Amongst the convalescents very large tonsils were the rule rather than the exception when all other glandular swelling had subsided. In Group 2 between 30 and 40 had large tonsils. If one allows so large a margin as 33 per cent. for tonsils which had been normal in size before the attack of scarlet fever, there is still a large difference between the proportions of enlarged tonsils in the two groups.

A more systematic examination into a large number of cases will be required to clear up the point definitely, but I think it will be found that scarlet fever occurs more frequently in those who suffer from chronically enlarged tonsils, and, if this is the case, it will be a further argument in favour of complete removal, when operation is required.

Treatment.

If a child otherwise healthy has enlarged tonsils of moderate size which have not caused any symptoms for some time past, it need not be operated on, or if at the time of operation for adenoids no septic matter can be squeezed out of such tonsils they may be left, provided the matter is explained to the parents and the child can subsequently be examined from time to time. Such enlargement may be of a temporary nature or due to one of the other causes of chronic enlargement, or the tonsil may have recovered its protective function.

Splitting up and cauterizing the crypts has a very limited application, at times causes severe inflammation, and by no means invariably cures. X-ray applications and lymphatic gland extract have both been recently tried, and successes reported in reducing the size of the tonsil; even if they reduce the size of the tonsil it may still contain septic or caseous foci, or remain weakened. While these methods are *sub judice* tonsillotomy and tonsillectomy remain where there is apparently simple enlargement. All septic tonsils should be completely removed.

For tonsillotomy it is claimed that (*a*) it is less severe, (*b*) often satisfactory, (*c*) causes less haemorrhage, (*d*) portion left will carry on the tonsil function. If a large number of cases are compared it will be found that the immediate shock is about equal in both operations, but the endeavours which are often made to remove a little more tissue in the partial removal often leads to considerable trauma. In consequence there is more post-operation pain in such cases.

Partial removal leaves remains of crypts which easily become infected, and attacks of tonsillitis may still occur or become more frequent. In complete removal the raw surface is larger, but the tonsil is loosely attached to its bed and shells out easily with less trauma, leaving no crypts to infect. The partial operation often is satisfactory, but often is not, and subsequent operation is required, either on account of tonsillitis or recurrence of

* The size of the tonsil is best judged by making the patient gag, by palpation, or by using an instrument such as that devised by Tilley.

the enlargement. In a condition such as tonsillar enlargement, a patient is justified in expecting a cure after operation.

In adults either complete or partial removal is a much more severe operation than in children, and the risk of haemorrhage is greater in both cases, though possibly greater when the tonsil is enucleated. As the operation is generally required owing to the tonsil being septic, the risk must be taken, unless the diathermic apparatus is available.

It is very doubtful if the haemorrhage after tonsillotomy is less than after tonsillectomy in children. The tonsillar vessels are very small when they enter the organ. After enucleation they retract in healthy muscle tissue, and so easily close. In tonsillotomy they are slightly smaller when cut, but have not the firm tissue to help contraction, or may be held open by fibrous tissue. In enucleation the bleeding is sharp, but rapidly ceases; in partial removal there is more oozing after operation. Secondary haemorrhage may possibly occur oftener after complete removal, but this is very doubtful and it is extremely rare. In over 1,000 cases in the past few years I have had no trouble with secondary haemorrhage. Improvement so rapidly and permanently follows complete removal that it is very doubtful if the severity of the operation is greater or convalescence prolonged.

If the tonsillar function were of importance, one would expect that the ill effects of complete removal would have already been shown, but improvement of health has been the universal rule, and, as mentioned above, a tonsil enlarged from chronic irritation is generally one of lowered resistance, and it is also doubtful whether it produces many lymphocytes.

If it were possible to say that a tonsil is healthy but enlarged owing to its endeavour to overcome a shortage of these cells and that it produced an appreciable number, then one would be justified in doing a partial operation.

The disadvantages of tonsillotomy are:

1. Subsequent operation or operations may be required owing to recurrence of enlargement, or to attacks of tonsillitis. I have removed tonsils from a boy who had had three previous operations.

2. The portion of the tonsil most liable to disease—namely, that covered by the semilunar fold—is that most often left; in other cases deep septic or caseous foci are left and brought nearer to infection.

3. Partial removal may be the starting point of tonsillitis, or the attacks may be more frequent after the operation.

4. Partial removal of a tuberculous tonsil may result in the dissemination of the disease.

5. When the pillars of the fauces are widely separated, partial removal does little or nothing to relieve the effects of this condition.

None of these objections apply to tonsillectomy, and only in public speakers and singers, where the voice may be altered by the operation, need one hesitate. In older people, or if haemorrhage is feared, the tonsils can be removed by diathermy.

Considerable attention has been paid to the minimizing of haemorrhage. Crushing through the tissues with a blunt-bladed guillotine appears to have the disadvantage that bruising will occur, and if so, infection of the raw surface will be more severe than if the blade had a dulled edge. Theoretically the risk of secondary haemorrhage appears to be increased.

Messrs. Whillis and Pybus's operation is a most satisfactory method, and the whole operation can be completed in less than a minute. If two sizes of guillotine (their pattern or Heath's) are used, according to the size of the tonsil, one rarely requires two incisions for any tonsil. The edge of the blade should be somewhat dulled, as by this means haemorrhage is lessened.

If after operation the gag is relaxed, firm but gentle pressure is applied to the raw surfaces with mops on handles and the face and head are bathed with cold water, the haemorrhage is considerably lessened.

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EARACHE OF OBSCURE ORIGIN.

BY

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PAIN in the ear and mastoid region may be due to irritation of any branch of the second and third division of the fifth, the seventh, ninth, or tenth nerves, of the cutaneous nerves of the neck, and the carotid sympathetic plexus. Certain toxaemias may also cause it.[1]

I have described previously cases due to sphenoidal sinus disease and to stimulation of the posterior end of the inferior turbinal.[2]

The cases described below are interesting in that aural pain was the complaint for which the patients consulted me. In both cases the tympanum was apparently normal. The first gives an almost perfect mimicry of sphenoidal sinus empyema.

CASE I.—*Meningeal Exudation.*

A middle-aged woman, well nourished, and apparently healthy, complained of pain in the right ear of a few days' duration. The pain was constant and suggested furunculosis of the external meatus. Examination and testing with tuning-forks gave negative results.

I did not consider the matter serious, but the patient returned in a few days, and then complained of severe occipital pain, pain at the back of the eyes; the original pain in the ear was decreasing in severity. This suggested to me the possibility of acute suppuration in the ethmo-sphenoidal group of sinuses. This was rendered more probable by the nasal examination, which showed that the left nostril was rather narrow, but otherwise not abnormal. The septum was not markedly deflected. The right nostril was wide, the inferior turbinal was somewhat atrophied, and there was crusting on the posterior pharyngeal wall, which reappeared despite frequent nasal lavage. The fronto-ethmoidal and antral sinuses on both sides were quite satisfactory on transillumination.

I was surprised to find marked oedema of both optic discs, and a minute haemorrhage into the right disc. Examination of the urine was entirely negative. By snipping away (under cocaine) a small portion of the middle turbinal, and next day catheterizing the sphenoidal sinus, I was able to prove that that sinus was not at fault. I therefore obtained the opinion of Dr. T. M. Bride, of the Eye Hospital, who was almost certain that the case was one of specific papilloedema. She was immediately placed upon potassium iodide 20 grains thrice a day, with hydrarg. cum creta 1 grain. In three days vision had risen from $\frac{6}{36}$ to $\frac{6}{6}$ in the left eye; the right eye was not so fully recovered. The pains had entirely disappeared, and she "felt fine." Recovery was complete and rapid.

I can only conclude that this was a case of specific meningeal exudation limited to the sphenoidal region, thus simulating the reflex pains of a sphenoidal empyema. The pain in the ear and auricle resembling furunculosis was most probably reflected along the auriculo-temporal division of the inferior maxillary.

CASE II.—*Chronic Osteo-periostitis.*

A well-nourished woman came to me complaining of severe tympano-mastoid pain on the left side. The opposite mastoid had been operated upon some time previously. All medical methods of treatment had proved futile, and she demanded more radical treatment. The middle ear was apparently normal, but there was some doughy oedematous swelling over and just above the mastoid. I opened the mastoid in the usual way, and found the periosteum thickened and hyperaemic. Haemorrhage was profuse. After considerable trouble a small antrum was found deeply situated. The bone was so hard that it broke a piece out of each of two new gouges. The electric burr was practically useless, so hard and ivory-like was the bone. The middle fossa and lateral sinus were exposed as a matter of routine, but nothing with the exception of this sclerosed bone was found sufficient to cause the symptoms. Owing to the trauma and consequent possibility of necrosis, the wound was not entirely closed. After healing the mastoid region became free from pain, but still there was slight oedema above the mastoid. She was ordered massage over this area for half an hour twice daily, and in six weeks the oedema had entirely subsided.

I considered the pathology of this case to be a chronic osteo-periostitis, probably of "rheumatic" nature, and corresponding to the nodes met with in other parts of the bony skeleton.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ENDOTHELIOMA OF THE JEJUNUM.

On reading the interesting case of "perforation of a growth of the small intestine," reported by Mr. J. Phillips, of Bradford, in the Journal of January 17th, p. 142, I was reminded of a somewhat similar case, the brief notes of which I append.

On March 29th, 1912, I was called into the country to see a gentleman, aged 56, who twelve hours previously had been seized with sudden acute pain in the abdomen, followed by collapse and vomiting. He had definite signs of diffuse peritonitis, and a diagnosis of acute fulminating appendicitis was made. I brought him back in my car at once to a nursing home, and operated immediately. On opening the abdomen, extensive peritonitis with free turbid fluid was found; the appendix, at once sought for, was obviously not the cause; on further search, a growth was found in the small bowel, about the size of a pigeon's egg; its end was gangrenous, and had perforated. A wide, rapid resection with end-to-end anastomosis was done, the fluid mopped out, and the abdomen closed, the wound in the abdominal wall being drained. Rapid convalescence followed. The report on the growth from the Clinical Research Association was:

> The wall of this intestine is infiltrated and destroyed by a malignant growth having the structure of a sarcoma. It is composed of spindle cells arranged in interlacing bundles with a scanty stroma containing thin-walled vessels.

A prolonged course of injections with Coley's fluid followed. On October 10th, 1912, I was again called out to see him, with a forty-eight hours' history of pain in the abdomen and vomiting, the latter now having a slightly faecal odour. He was once again taken back in the car to the home, and the abdomen opened, when the obstruction was found to be due to a coil of small gut strangulated by a band of omentum, which was adherent to the bowel close to the site of anastomosis. In the mesentery of the small intestine two hard calcareous glands about the size of small walnuts were present, and I thought that possibly the Coley's fluid had helped to cause this change in glands that were malignant although they might have been old tuberculous ones.

Rapid recovery followed, and the patient is at the present moment apparently in perfect health.

Leicester. F. Bolton Carter, M.S., F.R.C.S.

A CASE OF CEREBRAL EMBOLISM.

The patient, a woman aged 43, had at the age of 16 years an attack of rheumatic fever, which left mitral stenosis and regurgitation. During the past ten years I have attended her on several occasions for bronchitic attacks. Some six weeks ago I was called to see her on account of dyspnoea and cough and oedema of the legs. Rest in bed, low diet, and a digitalis mixture soon caused these symptoms to disappear.

About a fortnight ago she contracted a chill and remained in bed for three days. Her cough and dyspnoea returned, and on January 31st, at 9.30 p.m., I was called to see her. She was semi-conscious and with a very feeble pulse, and the legs were oedematous. She was put to bed. She became unconscious with great suddenness, and this was accompanied by all the signs of shock. She had left-sided paralysis and remained unconscious for twenty-eight hours, and then died.

The interesting points in connexion with this case are:

1. That we are apt to forget that mitral stenosis is frequently associated with cerebral embolism.

2. That right-sided hemiplegia is most frequent in cerebral embolism on account of obvious anatomical reasons.

3. The chill, so called, was doubtless an attack of influenza (which was prevalent at the time), as it was accompanied by fever, cephalalgia, and aching in the limbs, with pains in the neck and sore throat. Doubtless the influenzal toxin, acting upon a weakened cardiac musculature, caused stasis, with the formation of a clot and the subsequent liberation of an embolus.

Bedford. S. J. Ross.

Reports

on

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

ROYAL VICTORIA HOSPITAL, BELFAST.

A CASE OF PSEUDO-CHYLOUS ASCITES.*

(By William Calwell, M.D., Physician to the Royal Victoria Hospital.)

A man, E. O'N., aged 28, a carter, was admitted on May 5th, 1913, under Sir William Whitla; he shortly afterwards came under my care owing to Sir William's absence. Nothing is known of the family history; the mother, one brother, and two sisters are dead, but the causes are unknown. He had enjoyed good health, but had been rather a heavy smoker and drinker.

About Christmas, 1912, he commenced to vomit about an hour after food; about February, 1913, he noticed a swelling in the abdomen. It grew larger and became painful, and in May he noticed his left leg and both feet swollen. On admission nothing abnormal was found in the circulatory, respiratory, or nervous systems. The abdomen measured 33½ in., and gave evidence of free fluid in the peritoneal cavity; no free hydrochloric acid was found in some vomit; a quantitative von Pirquet and a Moro's test both proved negative. On July 5th the abdomen measured 36½ in., and the next day I drew off 3 pints of a white milky fluid, specific gravity 1010; it was unchanged on shaking with ether, or with liquor potassae and ether, leaving a slight stain on blotting paper. Under the microscope a large number of round cells were seen, varying in size from that of the red blood corpuscles to one three times its size; these granular cells cleared with a little acetic acid leaving a nucleus visible; no cream layer formed on standing, and no change was found after prolonged centrifugalization; a specimen was sent to Professor Milroy, of the Queen's University, Belfast. When the patient left hospital on July 24th the abdominal circumference was 36 in., and there was little change in his general condition; he has not since been seen or heard of.

The literature of chylous and pseudo-chylous ascites is now extensive; one of the earliest recognized instances of the former was a male patient under Sir William Whitla, published in the Journal of 1884. The fluid was carefully examined during life, and the specimen dissected after death by the late Professor Redfern. There was tuberculous ulceration of the receptaculum chyli, with escape of the chyle into the peritoneal cavity; the fluid was practically chyle. The chief characteristics of chylous ascites are: It accumulates rapidly; it is yellowish-white in colour; there is a creamy layer on both standing and centrifugalizing; under the microscope there are fine fat globules; the specific gravity generally exceeds 1012; the total solids are greater than 4 per cent.; the fat content is high; cholesterine is invariably found, and lecithin occurs only in traces.

In pseudo-chylous we do not find any injury to the lymphatic system; there is no constant connexion or relation with other diseases; the fluid collects more slowly after tapping; it is a pure milky white; its opacity varies at successive tappings; it is odourless; a cream does not form on standing; centrifugalizing has no effect; the specific gravity is less than 1012; solid contents rarely exceed 2 per cent.; the fat content is low; the most characteristic lipine substance is lecithin, and the opalescence is due to a combination of lecithin with globulin: the fluid resists putrefaction; the prognosis is grave; 70 per cent. of the cases that have been followed up have died. An exhaustive paper, with a full description of the physical and chemical examination of four cases by Mackenzie-Wallis and Schölberg and another by Marrack are to be found in the *Quarterly Journal of Medicine*. Most of the details of the above description are taken from this paper and from Professor Milroy's analysis. Cases have also from time to time been reported in the various medical journals and before the Royal Society of Medicine.

*Read at a meeting of the Ulster Branch of the British Medical Association.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.

THE fourth winter scientific meeting of the Newcastle-on-Tyne Division of the British Medical Association was held at the Royal Victoria Infirmary, Newcastle-on-Tyne, on January 23rd. During the whole course of the afternoon a pathological museum was on view, the specimens being provided by the Pathological Department of the Infirmary and various private individuals.

Respiratory Diseases.—Dr. T. M. ALLISON gave a lecture on respiratory diseases, and laid special stress on some points in their diagnosis and treatment. He first of all dealt with common colds and asthma, and drew attention to the very unsatisfactory treatment of the former complaint. As regards asthma, he considered nearly every case to be due to some reflex originating in the nasal mucous membrane, and in his description of its treatment mentioned that toxin had given him very highly satisfactory results. He next dealt with influenza, diphtheria, and rheumatism; he strongly recommended the administration of antidiphtherial serum by the mouth in preference to subcutaneous injection. As regards acute rheumatism, he laid stress on the fact that it should be regarded as a respiratory disease, occurring only in mouth breathers and originating in an affection of the tonsils. He then proceeded to deal with various complaints of the lungs, such as bronchitis, bronchiectasis, and phthisis, and strongly recommended the administration of potassium iodide in the treatment of pneumonia, as it had a marked influence in bringing on the crisis and materially cutting short the disease.

Inflammation of the Labyrinth.—He was followed by Mr. DAVID RANKEN, who took as his subject the diagnosis and treatment of inflammation of the labyrinth. He drew attention to the necessity of thoroughly understanding the anatomy of the parts involved, and gave a brief description of the vestibule, the semicircular canals, and the cochlea. He then described the functional testing of both the semicircular canals and the cochlea, and in the case of the former laid stress upon the importance of a history of previous labyrinthine attacks, and of the presence or absence of spontaneous nystagmus. He then described the various methods of testing these two portions of the labyrinth, and illustrated his remarks by means of instruments. He classified inflammation of the labyrinth under four headings: (1) Circumscribed, (2) serous, (3) manifest purulent, and (4) latent purulent labyrinthitis. He described the appropriate treatment for each disease, and drew attention to the similarity and differential diagnosis between cerebellar abscess and purulent labyrinthitis. His remarks were illustrated by a series of lantern slides showing certain pathological conditions.

Malignant Disease of the Mouth.—After the tea interval Mr. W. G. RICHARDSON read a paper on malignant diseases of the mouth, and illustrated his remarks by patients upon whom he had operated.

Refraction in School Children.—He was followed by Mr. A. S. PERCIVAL, whose subject was the treatment of errors of refraction in school children. He laid stress on the importance of proceeding in an orderly systematic manner—for example, insisting upon having a report from the school teachers on all the children who seemed to have difficulty in seeing, headache troubles, or ignorance of their letters. The routine examination of the eyes was described, and the lecturer laid special stress on the type of instruction that must be given in the case of myopic children. In such cases the work should be raised to nearly the level of their eyes, and all writing should be done at a high sloping desk with the illumination coming over the left shoulder, so that the letters as they were written may not fall in the shadow of the writing hand. It was of the utmost importance that such children should not depress their eyes, but if necessary their heads might be slightly bent downwards.

Fibroid Conditions of the Uterus. — Dr. E. NAPIER BURNETT then read a paper on fibroid conditions of the uterus, and in demonstrating the life-history of the various structures in the uterine wall gave coloured lantern illustrations of the normal histology. Diagrams and pictures were shown illustrative of the elastoid tissues that develop in and around the uterine vessels after parturition. The microscopical photographs clearly demonstrated the development of a new vascular system within the walls of the old vessels as part of the involution process.

This closed the proceedings for the afternoon. The next meeting will take place on Friday, February 20th, at the Royal Victoria Infirmary, Newcastle-on-Tyne.

SUSSEX BRANCH: BRIGHTON DIVISION.

A SCIENTIFIC meeting of the Division was held on January 28th, when Dr. H. GERVIS, Chairman of the Division, presided.

Congenital Pulmonary Stenosis.—Dr. WALTER BROADBENT showed three cases of congenital pulmonary stenosis. The first was a woman aged 36, who was married and had one child, an unusual circumstance in a person with this defect. The other two were a boy and a girl of 7 and 8 years of age respectively, who were a marked contrast. The boy was cyanosed, and Dr. Broadbent expressed the opinion that a patent foramen ovale was also present. The girl, however, showed no sign of the heart defect except on exertion. In all the cases the physical signs were well marked.

Ophthalmic Cases.—Dr. H. H. TAYLOR showed a woman with well-marked thrombosis of the inferior temporal artery of the retina, and a case of glaucoma. In the latter he had performed the operation of trephining, and he pointed out the difficulty of obtaining satisfactory results from the various forms of operation that had been introduced: simple iridectomy, which, while satisfactory in acute, was not successful in chronic cases; iridectomy, the iris being intentionally caught in the wound, and drainage through an opening made in the sclerotic by trephining. The latter, the most useful of the procedures, was not easy to perform with the instruments hitherto in use. He showed Elliot's trephine as the most handy and useful, and stated that he had applied an electrical dental engine to the drill used by Elliot, and, although at present the arrangement he had in use was a makeshift and was susceptible of improvement, which he was having carried out, it had proved a great advance on other methods. Mr. E. TREACHER COLLINS expressed the surprise he had felt at the suggestion of using an electric drill, but had examined the apparatus with much interest. In the treatment of glaucoma, which was due to the blocking of the filtration angle of the eye, two quite different forms presented themselves—the acute, in which a simple iridectomy was most satisfactory, and the chronic, which, on account of the adhesion of the iris, did not respond to such treatment. In some cases where by accident the iris had been caught in the operation wound, the leakage resulting had led to relief of the symptoms, and a deliberate production of this condition had therefore been sought. The danger of the proceeding, as might be expected, had proved considerable. The operation of trephining, which he thought was now recognized as the proper treatment, provided a passage for the fluid through the "filtration scar" or "fistula." The causes of retinal haemorrhage were albuminuric retinitis, diabetic retinitis, and thrombosis, and it was for purposes of prognosis—no treatment being available for the condition—of great importance to distinguish. In cases of haemorrhage due to retinitis the outlook was necessarily gloomy, but in thrombosis there was no material danger to life, and it might be hoped that the sight would return more or less by the circulation becoming restored by the canalization of the clot.

Cases of Chronic Nervous Disease.—Dr. DONALD HALL showed a case of disseminated insular sclerosis in a man, who presented the usual slow but not steady progress, there being periods of considerable duration when no increase of the symptoms were observable. He showed also a girl aged 19 with advanced and rapidly increasing Friedreich's ataxia.

Deformities due to Osteomyelitis of the Spine.—Dr. L. A. PARRY showed a case illustrating some deformities produced as a result of osteomyelitis of the spine following an attack of suppurating appendicitis. The patient, a boy

of 15, had an attack of appendicitis two and a half years ago. He was operated on and an abscess was drained, but a sinus remained unclosed for some time. Vaccines were injected and the sinus soon closed. A short time after symptoms of paralysis showed themselves, gradually developing in two or three days. The left leg and the left muscles of the back were those chiefly affected, though the right leg was to some slight extent attacked. Now, some two years later, the boy had a large S-shaped curve of the spine, with the convexity to the right, and wasting and paresis of the muscles of the left side of the spine and of the left thigh. He was being treated by massage, exercises, and suspension by the arms and chin in a special chair for three hours daily; he wore a spinal support. As the result of this treatment he had improved considerably, the curve being much less marked. He was now able to walk five miles without fatigue. Very few examples of osteomyelitis of the spine following appendicitis had been recorded. The patient had been seen by Mr. Tubby and by Mr. Robert Jones, who both concurred in the diagnosis.

Tetany.—Dr. MORTON PALMER, of Worthing, read notes of an interesting case of rapid death from tetany due apparently to absorption of toxins from a dilated stomach. He referred to the literature of the subject and noted that surgical treatment, such as gastro-enterostomy, as practised by Moynihan and others, seemed the only possible remedy. Dr. W. BROADBENT said that when house-surgeon at St. Mary's Hospital he contracted diphtheria, and, perhaps as a result of the line of treatment then adopted for that disease, got a dilated stomach and had three severe attacks of tetany within twenty-four hours. He described his sensations until in the first attack he lost consciousness. Fortunately, he remained able to swallow the mixture of sal volatile and bromide which was administered with almost immediate relief to the symptoms. The two later attacks, not so severe, readily responded to similar treatment, and he felt thankful to have escaped the surgeon. He had treated a gentleman with enlarged stomach who had attacks of tetany by lavage, and noticed that if the stomach were distended owing to a somewhat undue amount of fluid being used spasms came on, which were immediately stopped by relieving the tension by withdrawing fluid.

Cirrhosis of the Liver.—Dr. HOBHOUSE read a short account of various febrile cases in which there were no definite causes to be detected during life, but in which on examination *post mortem* cirrhosis of the liver was found. Alcoholism could not account for all, or indeed most, of those cases; he had seen cases in quite young children, but in this connexion mentioned that one child had an alcoholic mother, which might possibly account for intrauterine liver disease. One striking case was that of a young woman supposed to have typhoid fever, but in whose case the Widal reaction was negative, the spleen not enlarged and there was no eruption. She died five days after admission to the hospital. Dr. Hobhouse suggested that such cases should be kept in mind when febrile symptoms not otherwise explicable were encountered.

WE learn from the *Medical Record* that the proposal to establish Government control of radium-bearing ores which may hereafter be found on the public domain of the United States, and for the construction of a Government reduction plant, has taken shape in a bill prepared for introduction into Congress. It provides that all public lands of the United States on which radium-bearing ores are located shall be subject to exploration and occupation under the mining laws, on condition that the United States shall have exclusive right to purchase part or all of the product of such lands to the amount of public need; it authorizes the Government to construct and operate plants for the extraction of radium as it may desire; it authorizes the Government, through the Secretary of the Interior, to buy radium-bearing ores mined from the public lands at prices to be fixed by the Government, and based upon semi-annual investigations of the cost of production and reasonable profits to the miners; and it permits the Federal Government to buy radium from other sources than the United States, and to sell the by-products of radium production by the Government plant, and to dispose of the radium extracted there in such manner as will best subserve the public welfare.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Friday, February 13th, 1914.

CHARTERS J. SYMONDS, F.R.C.S., President, in the Chair.

Splenectomy in Splenic Anaemia and other Conditions.

DR. T. R. WHIPHAM described under the title of splenic anaemia 4 cases occurring in the father and three children of one family. The blood counts in them all were very similar and the differential counts practically identical. The lymphocytes and polymorphonuclears were correspondingly increased. The red cells were diminished and showed alteration in size, shape, and nucleation. Another feature was eosinophilia, which might possibly be explained by the presence of a tapeworm in the father, but this was not so in the case of the children. Dr. Whipham did not think splenectomy was indicated for the father and a boy, who were in a fairly good state of health, but it had to be considered in the cases of the two other children (girls), who had marked anaemia and whose blood had deteriorated lately.

Mr. PERCY SARGENT showed a case of splenic anaemia after splenectomy. The patient, a girl aged 10, recovered from the operation, but six weeks later severe haematemesis occurred and was followed by pyrexia and a varying amount of diarrhoea. The leucopenia was replaced by a considerable leucocytosis, but now, thirteen months later, the blood had become normal except for a slight increase of lymphocytes.

Mr. GEOFFREY HOFFMANN showed a girl, aged 12, from whom the spleen had been removed. She had had haematemesis, epistaxis, purpura, and melaena. The blood condition rapidly improved after the operation, and was still normal more than two years later.

Dr. HERBERT FRENCH and Mr. PHILIP TURNER showed a boy, aged 5, whose case had been diagnosed as one of splenic anaemia of the infantile form, and who had rapidly recovered after splenectomy. A younger sister had a similar condition. He thought that the cause was probably syphilis, although antisyphilitic treatment had been unsuccessful.

Sir J. BLAND-SUTTON advised splenectomy for the boy shown by Dr. Whipham. He thought the result would be so good that it would afterwards be performed for the other cases of the family, the father excepted.

Mr. G. R. WARD disagreed with the diagnosis in the family group of cases. There was slight yellowness present, due to blood destruction. The blood counts were typical of acholuric jaundice.

Dr. PARKES WEBER agreed with Mr. Ward. If enlargement of the spleen occurred in a family in which adults as well as children were affected, and was associated with anaemia, the condition was the same as that of haemolytic jaundice, although jaundice might not be present. No member of the family had leucopenia—a fact which was strong evidence against splenic anaemia. Dr. French's cases belonged to a class which formed a group in themselves, in which cachexia and anaemia and splenic enlargement were associated with congenital syphilis, but antisyphilitic treatment did no good. They were not syphilitic, but were engrafted on a syphilitic base.

Sir WILLIAM OSLER said that the remittent fever accompanied by eosinophilia in Dr. Whipham's cases indicated trichinosis, in which the eosinophilia often persisted. He also considered them examples of a form of haemolytic jaundice. He referred to the importance of distinguishing cases of congenital syphilitic cirrhosis of the liver accompanied by enlargement of the spleen and haematemesis from splenic anaemia. He had long urged the value of excision of spleen in the latter, and it had been shown emphatically that this procedure produced a cure.

Dr. C. R. BOX said the patient shown by Dr. French had formerly been under his care, and he regarded the case as an example of von Jaksch's anaemia. The case showed that splenectomy did good in that condition. He had treated a similar case in which there was slight increase of fragility of the red cells. The spleen was removed, and though the patient died from an abscess in the stump, the blood condition improved greatly. There was a connecting

link between cases of von Jaksch's anaemia, of acholuric jaundice, and of the splenic anaemia of adults.

Cases of acholuric and haemolytic jaundice were shown by Dr. ESSEX WYNTER and Sir J. BLAND-SUTTON, Dr. HUGH THURSFIELD, and Sir BERTRAND DAWSON. Dr. Wynter and Sir J. Bland-Sutton's case was one of congenital acholuric jaundice in which complete recovery had taken place rapidly after splenectomy. Dr. WYNTER said that he had found that in such cases it was usual for an excess of cells to be present after removal of the spleen, but this afterwards subsided. It looked as though there was a compensatory overproduction which persisted for a time. In considering the advantages of splenectomy one ought to regard not only the possibility of a fatal issue, but also the chances of enjoying the full functions of life.

Dr. THURSFIELD'S case was also one of congenital acholuric jaundice which had recovered after splenectomy. He insisted on the importance of separating out such cases from those of splenic anaemia. He thought that the fragility of the red corpuscles was a definite means of distinguishing acholuric jaundice. In true splenic anaemia this was either normal or less than normal.

Sir BERTRAND DAWSON thought that they would have to recast their present classification of such cases. He recounted cases of haemolytic jaundice without increased fragility. The jaundice was due to overproduction of bile pigments, and it was possible that the spleen might be so destructive that it broke up corpuscles of normal fragility. He regarded the manufacture of the precursors of bile pigment as a function of the spleen. Fragility persisted in spite of removal of spleen, and this was so in the case on which Sir Spencer Wells had operated, and which was now under the speaker's care. In haemolytic jaundice there were phases of so-called bilious attacks and bile in the urine; he was in the habit of exploring the gall bladder in such cases, and commonly found either gall stones or bile mud present, a condition which should be dealt with first. In cases in young people a large spleen was found, but this was not necessarily so, and in older patients haemolysis probably occurred without splenic enlargement.

Dr. PARKES WEBER said that the association with gall stones had been described by Gilbert, but the proportion of the cases was not large. The speaker had suggested the name "splenomegalic anaemia" for those cases in which there were anaemia and haemolysis, but no jaundice. He suspected that the presence of bile pigment in the blood without bile salts might be the cause of the increase of the fragility. In obstructive jaundice, where both were present, there was an increased resistance.

Dr. JAMES GALLOWAY showed a case which he regarded as a case of splenic anaemia of the Banti type. There had been very severe gastro-intestinal haemorrhages, and the spleen was considerably enlarged. There was no evidence of syphilis. An ascites had appeared rapidly, which he suggested might be due to portal thrombosis. He invited opinions as to the advisability of removal of the spleen.

Mr. W. D. SPANTON said that, with the progress of surgery, excision of the spleen had become justifiable. In 1866–75 the mortality was 75 per cent., in 1876–85, 59 per cent., and in 1886–1895, 16 per cent.

Other speakers favoured removal of the spleen in Dr. Galloway's case.

Kala-azar.

Fleet Surgeon P. W. BASSETT-SMITH showed a case in an adult from Malta. Every fourth day the man was being treated by intramuscular injections of atoxyl and of a vaccine prepared from his own cultivated bodies obtained by puncture of the liver. Constant counter-irritation had been applied to the splenic area, and yeast had been given to increase, if possible, the white cells. During the ten months he had been under treatment he had not lost ground. No question of splenectomy arose in this case.

SECTION OF PATHOLOGY.

AT a meeting on February 17th Mr. RUPERT FARRANT read a paper on the *Pathological changes of the thyroid in disease*, which will be published. Dr. THIELE read a paper on the work carried out by Dr. Embleton and himself on the *Channels of spread in bacterial infection*. They had experimented with various bacteria by painting on the glans penis, the urethral mucosa, conjunctiva; by feeding, by inhalation, by inoculation into the serous cavities, including the subarachnoid space, and by injection into the cerebral substance. They concluded (1) that bacterial spread was primarily by way of the lymphatics, the bacteria rapidly passing to the thoracic duct and blood stream, and rapidly undergoing general dissemination; (2) that bacteria did not have specific sites of predilection peculiar to themselves. With every infection, after bacteria had gained access to the thoracic duct, a general dissemination occurred, and if looked for at the proper time the bacteria could be found in every tissue; the sites in which they could ultimately be found depending on the rate at which they were destroyed in that organ. (3) The lungs did not act as efficient filters. (4) Whenever bacteria occurred in the blood they were excreted in the urine, and there was no need to suppose an increased permeability of the kidney for this purpose. (5) Bacteria could not pass from the lymphatics into the urine. The capsular lymphatics of the kidney might be full of bacteria, but they only got into the urine after they had gained access to the blood. (6) Even when general bacterial dissemination occurred, the serous cavities remained free from infection for a very long time. Mr. A. CLIFFORD MORSON read a paper on *The changes which occur in malignant tumours on exposure to the gamma rays of radium*. His procedure was as follows: A small portion of the growth was removed before exposure to the rays for the purpose of comparison between the radiated and the non-radiated cancer cell. On removal of the tube of radium, which in every case was embedded in the tumour for periods varying from fifteen to twenty-four hours, that part of the growth in actual contact with the tube of radium was excised. Further portions of the tumour were removed for microscopical examination at intervals of forty-eight hours to two months. The tissues submitted to the action of the gamma rays, when removed by the scalpel, appeared to be completely insensitive. Within fifteen hours of the commencement of radiation the malignant cells in the immediate vicinity of the tube of radium began to degenerate. The nuclei became irregular in shape, and in places were broken up into one or more fragments. Twenty-four hours later all that could be seen was a structureless mass, embedded in which were a few cells in various stages of degeneration. In the region of the growth where the intensity of the rays was less the cells might also be seen to be altered. Their normal arrangement was lost, and the malignant mass was broken up into isolated groups of cells. In some microscopic sections a definite line of demarcation had been seen between the degenerating cells and the unaltered malignant cells. Perhaps this observation might assist in determining the radius of action of a known quantity of radium when inserted into a growth whose microscopic characters had been previously investigated. If, three days following radiation, a part of what remained of the growth were removed further changes would be noted. The connective tissue cells had commenced to proliferate, and those malignant cells which had escaped immediate death showed apparent vacuolation with greatly enlarged nuclei. In a considerable number of cases, within fourteen days of the application of the radium, absence of cancer cells could be demonstrated. On the other hand, some growths appeared more resistant to the action of the gamma rays, and if microscopic examination were made as long as two months after radiation, malignant cells would be detected, though changed from the normal. The cells showed a peculiar vacuolated appearance, with swollen nuclei. Around the malignant cells would be observed dense fibrous tissue. He had proved that the rapid degeneration of the cells of a carcinoma when exposed to the gamma rays was not due to the presence of the metal tube containing the radium. He considered that the effect of exposing malignant growths to the gamma rays of radium was twofold: First, rapid degeneration of the malignant cells in the immediate vicinity of the tube of radium; secondly, apparent vacuolation and enlargement of nuclei of those cells beyond the degeneration zone. The action of the radium on the connective tissue cells showed its similarity to the attempt of Nature to arrest the growth of cancer

through overgrowth of fibrous tissue. Considerable difficulty arose when an attempt was made to interpret the meaning of the changes described. He suggested that the tissue fluids must play some part in causing so rapid a degeneration of the malignant cell; possibly the change produced in the cancer cell by the rays of radium was a chemical one, and it was only when in contact with certain constituents of the blood or lymph that these degenerative changes could take effect. A knowledge of the degree of sensibility of individual malignant cells, on exposure to the gamma rays, he held to be the keystone to improvement of treatment of cancer with radium. He had found that the cells of those tumours which were known as round-cell sarcoma were very sensitive to the action of radium; but the spindle cells of a periosteal sarcoma were more resistant to the rays. The carcinomata showed remarkable differences in sensibility. In the squamous cell variety degenerative changes in the cells such as keratinization tended to be increased by exposure to radiation. The sensitiveness of squamous cell carcinoma of the cervix uteri he had found to be greater in those cases which gave rise to severe haemorrhage than in other varieties. His experience of the effect of the gamma rays on different varieties of spheroidal cell carcinoma was too limited to warrant him in making a definite statement. The overgrowth of the connective tissue elements of a carcinomatous tumour after radiation had an important bearing on the subsequent changes in those cancer cells which might have escaped immediate destruction on exposure to the gamma rays. It was not improbable that in course of time malignant cells which had survived radiation would be killed by the contraction of newly-formed connective tissue. The action of radium on pathological tissue was essentially a selected one. His investigations on the action of radium on metastases had been limited to 4 cases, but he ventured to say that apart from the direct effect of the rays on adjacent glands there were striking changes in distant metastases, which obviously diminished in size. It was possible that the absorption of degenerated and degenerating cancer cells at the primary site due to exposure to the gamma rays, led to the formation of some substance which not only retarded the growth of the malignant cell at a distance, but also stimulated the connective tissue cells to proliferate. Further work was necessary to determine whether the cells of human carcinoma which disappeared in the body when exposed to radium likewise conferred any degree of immunity such as was shown to be the case with irradiated mouse tumour. Much research work remained to be done before radium therapy, in relation to the treatment of cancer, could be placed on a sound scientific basis. At the present time all that could be claimed was that certain microscopic and macroscopic observations had been made which compelled them to continue this line of research.

MEDICAL SOCIETY OF LONDON.

Decompression in Intracranial Haemorrhage.

AT a meeting held on February 9th, Sir DAVID FERRIER, President, in the chair, Mr. L. B. RAWLING opened a discussion on the value of the operation of decompression in cases of intracranial haemorrhage the outcome either of accident or disease. He first discussed concussion and compression in their relation to decompression, and then drew attention to the type of case which urgently demanded operative treatment. He alluded briefly to the more important clinical signs of compression, referred to Leonard Hill's experiments as to the various effects produced by an increase of intracranial pressure, and pointed out the pathological conditions present in the great majority of cases of traumatic compression. Clinical and *post-mortem* evidence proved that something could be done, and ought to be done, in the average case of severe head injury. Before discussing the various decompression operations, Mr. Rawling alluded to lumbar puncture and venesection as adjuncts to operative treatment, expressing himself as opposed to the former method and in favour of the second. With respect to decompression operations, there were various essentials, more especially with respect to "likely" and "silent" areas of the brain—"likely" with regard to the discovery of the lesion existent, "silent" in respect to the hernial protrusion that might result after the operation. The two main sites for decompression were in the cerebellar and temporal regions. When performed in the latter situation, the operation of choice was the intermusculo-temporal operation of Harvey Cushing. Mr. Rawling expressed himself as greatly in favour of the temporal operation. The side on which the operation should be carried out, the size of the opening in the skull, and the necessity of opening the dura mater, were all referred to, after which the technique of the operation was taken in detail. Dr. P. HAMILL spoke from his experience gained by experimental investigation in cats carried out by Mr. J. E. H. Roberts and himself. Decompression was indicated in certain cases of cerebral haemorrhage, especially in those fulminant cases in which coma rapidly set in with great respiratory embarrassment. The operation was an efficient method of lowering the pressure. In most cases a general anaesthetic was unnecessary and inadvisable. The chief points which might be urged in its favour were: (1) The danger was small as compared with the condition of the patient; (2) the results on recovery would probably be better, since there would probably be less scarring; (3) the risks of pneumonia were less if there was restoration of normal breathing; (4) many cases of subtentorial haemorrhage could probably be saved; (5) numerous successes had been recorded. Mr. J. E. H. ROBERTS said that the investigations of Dr. Hamill and himself had shown three additional points which had not been mentioned: (1) That the effects of haemorrhage were due to compression and not to the injury itself; (2) that artificial respiration should be readily obtainable; (3) that the application of decompression to the meningeal haemorrhages of the newly born was advisable, and had been successfully performed. Mr. C. A. BALLANCE urged that operation was the rational treatment in all forms of intracranial haemorrhage, and laid especial stress on fracture of the base and acute apoplexy, conditions which hitherto had seldom been considered as urgently demanding surgical intervention. Mr. W. G. SPENCER said he preferred the suboccipital site for decompression when the site of the lesion was unknown. He thought that cats were unsuitable animals for the experimental investigations which had been done. The PRESIDENT said there were many things other than pressure to be considered in cases of spontaneous apoplexy, and that he would be very guarded in recommending the operation for that condition.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

AT a meeting on January 30th, the President, Dr. J. F. O'CARROLL, who was in the chair, showed a boy, aged 16, who got, in June, 1913, several wettings and sat in his wet clothes. Stiffness when getting up from a seat was noticed soon after, and about three months later feebleness in walking ensued. Weakness of the upper limb followed, and there was shrinkage of the muscles of the shoulder girdle. There was also a little palatal paralysis. The symptoms suggested *Juvenile dystrophy*, but there was nothing positive about it. Dr. G. PEACOCKE showed a man suffering from *Anterior poliomyelitis*. He had been affected at the age of 45. Dr. ELLA WEBB and Dr. F. C. PURSER discussed the subject. Dr. PEACOCKE read notes of a case of *Fatal anaemia* in a man aged 43 years. His symptoms dated from February, 1913, when he suffered from pain after food, vomiting, weakness, and anaemia. Under treatment these symptoms almost entirely disappeared, but after a time returned. He first came under observation in August, 1913. He gradually became weaker, and died on December 2nd. His temperature was irregular, but never exceeded 100° F. No tumour could be felt in the abdomen, the walls of which were markedly rigid. Heart and lungs normal. A *post-mortem* examination revealed no evidence of disease. In the absence of any malignant disease or disease of the adrenals, was this a case of pernicious anaemia, although the blood examination showed a low colour index—0.5—and there were no changes in the erythrocytes except some poikilocytosis? Dr. NESBITT said he felt rather disappointed at the result of the necropsy, as he expected that the case would have been found to be one of Addison's disease, particularly when there was such marked pigmentation. Dr.

Nesbitt reported a *Fatality after 0.4 gram salvarsan intravenously* in a poorly developed man of 25, the subject of syphilis, either congenital or acquired early in life. Death took place twenty-five hours after the injection, which was followed by two rigors, with symptoms of collapse. At the autopsy multiple gummata of the liver were found, the remaining organs being healthy. Dr. H. C. Earl, in showing the pathological specimens, said the most striking organ was the liver, which contained numerous gummata, both large and small, of which sections were shown under microscope. On the epiglottis the mucous membrane was a good deal thickened, but not ulcerated. The kidneys appeared normal, but considerably congested. In the upper portion of the spine the third, fourth, and fifth cervical vertebrae were necrosed. The laminae was removed, and the cord seemed unaffected, and the dura mater was unaffected. The heart was healthy. The brain was not obtained. Dr. Meldon said he would have been diffident about giving a dose of salvarsan in such a case on account of the dyspnoea. In a doubtful case he thought it best to first put the patient on mercury and potassium iodide, in order to destroy as many of the spirochaetes as possible, and thus lessen the reaction afterwards. He considered it was rather soon to expect arsenic poisoning, and thought it must have been some vital process. Dr. O'Kelly did not know if the brain had been examined, but he would be suspicious of some lesion in the case. Dr. Lilienstein (Germany) recalled the case of a patient aged 52, who died in one hour after an injection of salvarsan, and mentioned that in that case the patient showed evidence of marked arterio-sclerosis. In another case the patient developed a complete paraplegia, after salvarsan, and died of pneumonia. Dr. Henry Moore said apropos of a cerebral cause of death that it was Ehrlich's idea that all local lesions, within twelve hours after injection, swelled up enormously, and during this swelling, if there were any syphilitic lesion in the brain, it would cause compression and kill the patient. In the case reported by Dr. Nesbitt, however, the dangerous period from this point of view had probably passed. He had never seen a liver showing so many gummata. Dr. Nesbitt, in reply, said the brain was not examined, as it did not occur to him that the patient died from nervous or brain involvement. There was no loss of consciousness, paralysis, or anything of that sort. There was no arterio-sclerosis. Although he had always used distilled water he had always experienced smart reactions. Dr. Lilienstein demonstrated to the Section his *Apparatus for producing phlebostasis*, and detailed its uses in cardiac disease.

MANCHESTER MEDICAL SOCIETY.

At a meeting held on February 4th, Dr. Donald, President in the chair, Mr. William Thorburn gave an address on the *Present position of cerebral surgery*. He proposed to confine his remarks to the surgery of epilepsy and new growths of the brain—a branch of surgery that until quite recently did not admit of scientific review, owing to the lack of statistics that covered any large number of cases. During the past year this absence of statistical basis had, as regards tumours, been filled in from various clinics, and in particular from the Queen Square Hospital. From his own statistics the number of successful cases of the surgical treatment of epilepsy worked out in round numbers at 25 per cent. The most satisfactory type of case was the traumatic, and the more definite the history of trauma the greater was the probability of cure. Idiopathic epilepsy was an extremely unsatisfactory condition for surgical treatment. The operation for epilepsy was necessarily a decompression, and involved a craniectomy in all cases. Bony spiculae, when present, were removed from the cortex; such cysts as were found were evacuated and their walls destroyed. These abnormalities, however, were not common. Adhesions between the brain and the dura, or between the dura and the cranium, were common; these were separated and strips of Cargile membrane interposed. Damaged cortex, when present, was removed. The bony defect in the cranium never caused any difficulty in the after-course of the case. The results obtained in Manchester, at Queen Square, and in von Eiselsberg's clinic were compared as regards the operative treatment of cerebral tumours. These results were by no means so depressing as they appear at first sight from the published statistics. It must be remembered that many of the patients were moribund at the time of operation; in most the tumour was malignant, and anything in the nature of a radical removal was out of the question; the results of such operations should be judged only in comparison with the probable result in the case of a malignant tumour of the breast in which the only course admissible was excision of the tumour nodule itself. An operation for a cerebral tumour should be approached from the standpoint of a decompression only, and the growth only being removed when it was superficial and visible; anything in the nature of exploring the brain substance should not be attempted. What was aimed at was the prolongation of life for a time, the lessening of pain, and the relief of blindness. Judged from this standpoint the operative treatment of cerebral tumours was rational and satisfactory. Exposure of the cerebral cortex was a procedure associated with little if any danger; laceration of the brain substance, as must necessarily occur if the growth were sought for, was dangerous and in most cases useless. Operations for cerebellar tumours were not as a rule satisfactory. In the case of cerebello-pontine growths, there was a marked tendency as the tumour developed for the brain stem to become twisted, and this twisting, being gradual, was tolerated up to a certain point; removal of the growth, or even a simple decompression if performed in the usual manner resulted in the sudden release of this strain, a rapid "untwisting" of the brain stem, and as a rule, rapid death from oedema or haemorrhage into the bulb. In such growths the performance of decompression should be as gradual as possible, the operation being performed in three stages at least. At the close of his address Mr. Thorburn showed many specimens illustrative of his remarks.

LIVERPOOL MEDICAL INSTITUTION.

At a meeting held on February 5th, Mr. Adair Dighton read a short paper on *Submucous resection of the nasal septum*. He considered that the operation should not be performed before the fifteenth to seventeenth year, nor where there was any evidence of active syphilis. He did not believe in a general anaesthetic, and he emphasized the fact that it was deviation in the upper portion of the septum which was serious. Dr. Armstrong and Dr. Hay referred to the danger of employing adrenalin when the patient was under chloroform. Mr. Arthur Evans described the *Removal of a sequestrum and involucrum from the upper arm of a child*. Within six months there was full functional recovery; no bone grafts were needed and no foreign bodies introduced. Mr. Murray referred to the tendency to suppurative pericarditis in cases of osteomyelitis. He related a case in which he had evacuated the pus from the pericardium, after which the boy recovered. Mr. Monsarrat held that as a general rule the diaphysis should not be removed. Dr. McMurray emphasized the importance of the marrow when bone was implanted. Mr. Simpson spoke, and Mr. Evans replied. Dr. Hubert Armstrong, in a paper entitled *Some clinical manifestations of congenital syphilis*, introduced the subject with an expression of opinion that the type of disease as now seen was decreasing in the severity of the symptoms, but that syphilitic disease of the central nervous system was increasing in frequency. The fulminating case of the infant who practically rotted away despite energetic treatment was becoming a rarity. Recent Wassermann statistics in children were reviewed, and owing to the complication and expense in blood, time and money of this reaction, the need of the perfection of Noguchi's "luetin" cuti-reaction was emphasized. On the clinical side Dr. Armstrong did not regard marasmus in which there were no other signs of inherited lues as syphilitic in the true sense, though he thought there were probably cases in which marasmus resulted from the toxic effect of maternal syphilis upon the ovum without actual infection. Such cases would not respond to antisyphilitic treatment. In regard to the part played in the production of congenital deformities by syphilis the opinion was expressed, backed by clinical and Wassermann evidence, that though it was an undoubted factor in a number of cases it was not so in the majority, which had some other origin. Two rashes

(pemphigus neonatorum and eczema seborrhoicum), sometimes mistaken for syphilitic lesions, were described and the diagnosis elucidated. Photographs of a case of "cauliflower" tumour of the anus, a papillomatous mass the size of a large orange in a boy of 9, and of another patient, a child of 8 months, with gangrene of the foot, diagnosed as a combination of Raynaud's disease and congenital syphilis, were thrown on the screen, and a case of paroxysmal haemoglobinuria in a boy of 3 related. Other manifestations were touched on, and Dr. Armstrong concluded with a review of the effects of inherited syphilis upon the nervous system. Syphilitic meningitis in children gave a clinical picture resembling that of the posterior basic or meningococcal type. The treatment differing so greatly, early lumbar puncture was essential for diagnosis. Prognosis was fairly good, but blindness, deafness, and mental impairment liable to follow permanently. Hemiplegia was often preceded by convulsions and was frequently recurrent, the prognosis of functional recovery decreasing after each attack. Illustrative cases were quoted, including one of the fatal termination of untreated cerebral syphilis, death ensuing upon convulsions after the patient—a boy of 11, whose first symptoms dated from a hemiplegia at 7—had gradually become diplegic with extreme spasticity, and imbecile. The paper was discussed by Dr. HOPE, Dr. BARENDT, Professor BEATTIE, Dr. GULLAN, Dr. MACALISTER, Mr. MURRAY, Dr. MCKENNA, Dr. WARRINGTON, and Dr. WILSON; and Dr. ARMSTRONG replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting, held on January 30th, Dr. T. WARDROP GRIFFITH, President, in the chair, a discussion on *Glycosuria* was opened in a paper by Dr. W. HALE WHITE. Dr. MAXWELL TELLING said the most important part of the problem of glycosuria was the treatment of the diabetic. There was no cut-and-dried routine for these cases; each patient was a law unto itself. The most careful analyses and chemical investigations were required before the nitrogenous equilibrium and carbohydrate tolerance was determined, and only then would a satisfactory diet scheme be formulated. Dr. CAMMIDGE said an attempt should always be made to render the urine sugar-free, but it was even more essential that the patient should be put in nitrogenous equilibrium. So long as more nitrogen was being passed in the excreta than was taken in the food the patient could not improve, even if his urine were free from sugar. The highly nitrogenous diet often given to diabetics certainly did a great deal of harm in many instances. As much attention should be given to determining the optimum protein intake as to the quantitative regulation of the carbohydrates of the diet. In both instances the problem could be attacked satisfactorily only by balancing the results of analysis of twenty-four-hour collections of the urine against the nitrogen and sugar content of a series of test diet. In some cases it would be found that the tolerance of the patient for a particular form of carbohydrate was much greater than for others, and that by administering this under suitable conditions a glycosuria which otherwise resisted treatment might be made to disappear. This was particularly the case when, as happened occasionally, the persistent sugar was levulose. The earlier treatment could be commenced the more satisfactory would be the result. Dr. J. LE F. C. BURROW pointed out a few experimental facts with regard to the influence of ductless glands on diabetes. The PRESIDENT, Dr. T. CHURTON, Mr. A. L. WHITEHEAD, Mr. S. SAMUEL, and Dr. A. G. BARRS also took part in the discussion. Dr. CARLTON OLDFIELD showed two specimens of *Dermoid tumour which obstructed labour* by blocking the pelvic cavity: (1) Primipara, very ill; uterus in tetanic contraction; child *in extremis*; delivery by Caesarean section; tumour removed during puerperium. (2) Multipara; general condition of mother and child good; tumour removed by abdomen after first withdrawing uterus through long incision; labour progressed during suturing wound, so that head was found on perineum at end of operation. Mothers did well, and left the hospital with living children. Dr. R. A. VEALE showed a case of *Wasting of the peroneal and quadriceps muscles* following a blow on the leg. Mr. G. CONSTABLE HAYES showed: (1) A case with a history of *Ulceration of the soft palate and pharynx* on and off for four years; during the whole of that period the patient was under mercury and potassium iodide. When seen three weeks ago the whole of the soft palate, and extending slightly on to the hard palate and pharynx, was one large granulomatous mass with a deep central fissure. After two injections of 0.6 gram of salvarsan, at a week's interval, the whole mass was reduced to about half its original size. The pathological report (by Dr. M. J. Stewart) stated that the Wassermann reaction was positive. The palatal lesion was essentially a plasma-cell infiltration of the subepithelial tissues. There was no evidence either of tubercle or of new growth. (2) *Complete nasal obstruction* for fourteen months. No definite history of syphilis; Wassermann reaction strongly positive. On examination there was marked hard thickening of the skin over the whole nose and also of the mucous membrane inside the anterior half of the nose; 0.6 gram salvarsan given twice at weekly intervals was followed by marked reduction of the swelling. Dr. C. W. VINING showed a case of an *Enlarged spleen* in a boy of 12, with a negative blood picture and a trace of bile in the urine. The diagnosis lay between splenic anaemia, congenital lues, and splenomegalic cirrhosis. The latter diagnosis was favoured owing to the presence of bile in the urine. Mr. J. F. DOBSON showed a case of *Osteitis deformans*. The disease originated six years ago in an enlargement of the left tibia. Enlargements of other bones soon followed, and at the present time both tibiae, both femora, the clavicle, sternum, spine, and cranial bones were extensively diseased. The patient had lost 4 st. in weight. No sign of the development of sarcoma.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on January 30th, Mr. A. ERNEST MAYLARD, President, in the chair, Dr. WILLIAM GUNN discussed *The presence of complement in infectious diseases*. In enteric fever he had found complement always present, and as a rule more abundant throughout the period of pyrexia than during convalescence. Diminution in its amount in favourable cases seemed to coincide with the production of immune body. Severity of the attack bore some relation to the amount of complement present. In patients who were very ill complement as well as immune body might be produced slowly, or only a weak type of complement might be present. In patients moderately ill a relatively small amount of complement seemed to indicate the presence of a considerable amount of immune body, but not sufficient to terminate the attack. In the intermediate type of illness, the most common, a large amount of complement was usually found. During relapses complement was increased, and diminished when recovery was taking place. Death from enteric fever appeared to be due chiefly to absence of immune body. Complement and immune body were not produced in any fixed ratio to one another. In the majority of cases of erysipelas examined complement was present in greater amount during the acute stage than during convalescence, the diminution apparently coinciding with the production of immune body. In diphtheria varying results were obtained. In 10 severe cases complement was greater in amount during the acute stage than during convalescence. In 5 moderately severe cases the amount was greater during convalescence. In 4 cases little or no complement was present during the whole illness; while in 2 cases of fatal diphtheria of the haemorrhagic type complement was relatively abundant shortly before death. In 6 mild cases of scarlet fever no definite type of variation in the amount of complement occurred. In 10 more severe cases a diminution was observed during the pyretic period, with, in 6 of these, an increase during convalescence. In 4 cases of scarlatinal nephritis little or no complement was found. In 2 fatal malignant cases a large amount of complement was present at the time of death. In measles the variations of complement were small and seemed to follow no definite rule. In typhus fever complement seemed to be less in amount during the period of illness than during convalescence, while in lobar pneumonia it was present in greater amount during the acute stage than during convalescence. Dr. ADAM PATRICK described some *Atypical coli-typhoid bacilli in typhoid urines*. It was found during

the investigation of bacilluria in men suffering from enteric fever that in 6 cases out of 17 the bacilli were not typhoid bacilli, but members of the typhoid-coli group not previously described. *B. coli* occurred in none of the male cases, but was present in 6 out of 7 cases of bacilluria in women with enteric fever. The atypical bacilli appeared in the urine rather after the time for typhoid bacilluria, continued for quite a short time, and appeared to cause no constitutional disturbance. Though practically unaffected by antityphoid serum, they were agglutinated in varying degrees by the serum of the patient from which each was isolated. Having been stored on agar slopes at about 6°C., they were found, on re-examination a year later, to have acquired greater fermentative powers with regard to certain sugars. This property had usually been described as developing by continued growth and subculture of an organism in a solution of the sugar, but with these bacilli the power, though afterwards increased by subculture, developed in many instances spontaneously. Dr. J. P. KINLOCH discussed *The excretion of salt and nitrogen in the nephritis of scarlatina and diphtheria*. Dr. W. M. ELLIOTT spoke of *The Wassermann reaction in children of the poorer classes*. His investigation had aimed at ascertaining whether the wasted and unhealthy condition so often found in such children had a syphilitic basis. Of 43 children who were ill-nourished, pale, flabby, and sometimes with sores about the mouth or nose, 6 gave a positive and 2 a probable positive reaction, though only 3 of the 8 showed signs of syphilis. Of 45 children who were apparently in good health, 3 gave a positive and 1 a probable positive reaction, only 1 of the 4 showing signs of syphilis. Of 42 children who were well nourished but had nasal or aural discharge, 5 gave a positive and 1 a probable positive reaction, and none showed any sign of syphilis. The conclusion drawn was that the proportion of cases in which the impairment of health was due to syphilis was small, and yet sufficiently large to indicate the desirability of applying the Wassermann test to such children with a view to treatment.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT a meeting held on February 13th, Dr. A. K. CHALMERS, President, in the chair, Dr. WILLIAM HANNA, Assistant Medical Officer of Health of the Port of Liverpool, introduced a discussion on the *Use of refrigeration in the preservation of foods*. He said refrigeration afforded a ready means of obtaining a cheap and plentiful supply of food, and expressed the opinion that every means was now being taken to obtain and keep the supply wholesome by the constant attention of the producer abroad to the methods of inspection and handling, and by a thorough examination on the landing of the supplies in this country. The methods of refrigeration adopted depended chiefly on the scientific fact that expanding air or vapourizing substances, such as sulphurous acid, carbonic acid, or ammonia, in assuming the gaseous form abstracted heat from the atmosphere or other bodies in the neighbourhood. The brine circulation process which was used in the carriage of chilled or frozen meat on board ship differed from the cold-air blast system in that the refrigerating agent did not enter the cool chamber, but was used to reduce the temperature of a brine solution which circulated through pipes in the storage chambers. The temperature in the different rooms was obtained by regulating the quantity of brine passing through the pipes, and it had been found that in order to keep an even temperature it was better to circulate a large quantity of brine at a temperature just below that required than to circulate small quantities much below that temperature. For long voyages the freezing of meat was indispensable, the meat having to be thawed out before it could be utilized. Experience had shown that it would keep with proper care as well as freshly killed meat after being taken from the refrigerator, even in high temperature. Where meat had to be kept for a shorter period, such as twenty-one to twenty-eight days, the chilling process was carried out, though it required great care and the transport needed constant supervision. The use of cold air in the transport had enabled the banana trade from the West Indies to be developed to a considerable extent. The bunches of green fruit were carried in holds chilled by air currents which had passed over brine coils. The temperature was usually 12° to 13° C., and the fruit after landing had to be ripened for market by dry heat, which was never more than 21° C. Dr. A. W. J. MCFADDEN said the United States Government had issued regulations limiting the time during which food might be kept in cold storage. While this might be desirable where food supplies were abundant it was hardly likely to be necessary in this country. Sir SHIRLEY MURPHY, referring to the effect of refrigerating on the flavour of meat, thought the flavour might even be improved. Dr. R. DUDFIELD considered that refrigerating processes might be applied to milk and cream in order that the use of preservatives should be abolished. Dr. E. H. T. NASH and Dr. G. T. CATTELL also took part in the discussion.

HARVEIAN SOCIETY OF LONDON.

AT a meeting on February 12th, Mr. J. JACKSON CLARKE, President, in the chair, Dr. WILLIAM HUNTER opened a discussion on *Oral sepsis in its medical and surgical aspects*. The seriousness of the condition lay not so much in its mere presence as in its association with open wounds in the mouth. The peculiar anatomical disposition of the teeth made the proximity of sepis particularly dangerous. He spoke of the frequency of tonsillitis and chronic inflammatory conditions of the naso-pharynx when oral sepsis was present. Septic gastritis was a common complication. Septic anaemia arising from this source was frequently superadded to other diseases, such as phthisis, nephritis, and specific fevers, and might constitute a serious disease in itself. He regarded pernicious anaemia as a disease *sui generis*, but intensified by anaemia of septic origin, and treatment devoted to this factor had greatly improved the prognosis. He did not advocate such wholesale extraction of the teeth as was sometimes performed. What was needed was the advent of an era of antiseptic medicine comparable to that of antiseptic surgery. Mr. W. H. DOLAMORE, speaking from the point of view of the dental surgeon, said he did not think that wholesale removal of the teeth was justifiable except in comparatively rare cases where severe systemic disorders followed. Dr. C. BUTTAR said that he would like to ask the wholesale extractors and the vaccinists what proportion of their cases could be described as cures? Did the percentage justify the pain, the disappointment, and the distress of an edentulous lower jaw caused in those who were not benefited by the treatment? In his own practice, amongst 10 patients treated by different specialists, only one professed to be relieved of his symptoms. Dr. Buttar narrated several cases in which extreme measures had been far from satisfactory. Dr. G. COATS thought it was very questionable whether chronic irido-cyclitis was connected with oral sepsis. Post-operative inflammation might be due to it, and therefore septic teeth should be removed before intra-orbital operations. Mr. D. C. L. FITZWILLIAMS corroborated Dr. Hunter's view that tuberculosis of glands was engrafted on adenitis arising from oral sepsis, and agreed with him as to the importance of septic teeth in causing tonsillitis.

A STATE and national campaign against the promiscuous use and sale of cocaine and heroin has been started in New York.

THE Royal Automobile Club and Automobile Association and Motor Union, in pursuance of their policy of protecting the interests of motorists, have been examining private bills introduced into Parliament this session, and find that in a number of instances local authorities are proposing to take power to impose extra charges for water used for washing private motor cars. As this is opposed to the principle that, generally speaking, water used for washing private motor cars comes within "domestic purposes," steps are being taken to oppose such proposals. Attention is also being given to railway bills giving power to cross roads on the level, and to tramway bills which threaten to obstruct the highway. Satisfaction is expressed with a provision in a bill of the Bolton Corporation which seeks power to compel slowly moving vehicles to keep on the near side of the road.

Reviews.

THE ARSENIC TREATMENT OF SYPHILIS.

AMIDST the superabundance of literature and the conflicting opinions concerning the merits or demerits of the new arsenical preparations in the treatment of syphilis, it is difficult for the ordinary practitioner to arrive at a satisfactory conclusion. Dr. MENTBERGER'S book on the arsenical treatment of syphilis[1] will be of great help in this direction, for it is, in our opinion, the most unbiassed and scientific exposition of the whole subject that has yet been published. After a historical introduction dealing with the treatment of syphilis and other diseases by means of inorganic and organic preparations of arsenic, the greater part of the book is devoted to the subject of salvarsan. The author brings forward an abundance of convincing proof of the toxic action of salvarsan, and shows that the after-effects of this drug can be explained easily on the theory of arsenical intoxication and by no other. The numerous theories put forward by Ehrlich, Wechselmann, and others to explain those after-effects in any other way than by the toxic action of arsenic all receive careful attention, and are all shown to be without foundation. In fact, after reading Dr. Mentberger's critical demolition of these theories it appears astonishing that many of them could have been advanced by scientific men, for they are not based on scientific data. For instance, the fallacy of the endotoxin theory, which attributes the after-effects of salvarsan to the liberation of endotoxins set free by the destruction of spirochaetes, is shown by the fact that the same symptoms occur in non-syphilitic cases. The fallacy of the "impure water" theory, which attributes the symptoms to chemical or bacterial impurities in the saline solution or distilled water, is shown by the fact that the symptoms occur when little or no water is used, as in subcutaneous injection, by the fact that water containing such impurities produced no symptoms in rabbits, and by the fact that such symptoms do not occur after large saline infusions used in surgical and other conditions. Mentberger attributes the so-called "neuro-recurrences" to the direct neurotropic action of salvarsan on the nerves, which predisposes them to the further effects of syphilis.

Having proved that salvarsan has an undoubted toxic action, due to the high percentage of arsenic which it contains (34 per cent.), Mentberger next considers the causes of the deaths which have occurred after its administration. Of these he has collected the formidable total of 274, which does not include cases occurring in infants. He divides them into three groups: (1) Those due to the direct toxic action of arsenic; (2) those indirectly due to this; (3) those in which the drug was used when there were contraindications. The first group comprises 31 per cent. of the total, and includes especially cases of haemorrhagic encephalitis, which, as Mentberger points out, is known to occur after poisoning by arsenic and many other inorganic or organic substances. It is interesting to note that 41 of the fatal cases occurred after the injection of salvarsan in non-syphilitic affections.

The author concludes that, although salvarsan is a useful addition to the therapeutics of syphilis, it cannot replace mercury and the iodides. He thinks it indicated in primary syphilis, with a view to abortive treatment, but holds that the abortion of syphilis cannot be proved till cases have been observed for at least ten years, and also because spontaneous cure may occur. He considers that it should be used also in secondary erosions, to cut short the period of contagion; in malignant syphilis, in severe cases of congenital syphilis, in tertiary affections of vital organs, and in the rare cases which are refractory to mercury. He advises, however, great caution in its use, and strict observance of the contraindications, though these cannot unfortunately always be ascertained beforehand. Finally, he advises that the patient should always be informed "that salvarsan, even after numerous injections, does not cure syphilis, and that prolonged intermittent mercurial treatment is absolutely necessary afterwards." We cordially recommend all those using or proposing to use salvarsan to read Dr. Mentberger's book.

[1] *Entwicklung und gegenwärtiger Stand der Arsentherapie der Syphilis.* Von Dr. med. V. Mentberger. Jena: G. Fischer. 1913. (Med. 8vo. pp. 348. Mk. 9.)

THE FIFTH NERVE.

THE *Map Scheme of the Sensory Distribution of the Fifth Nerve*[2] prepared by Dr. L. HEMINGTON PEGLER differs from modern exemplars in its hard diagrammatic features, and in the absence of much attempt to represent the relative position of structures. While we fear it will attain little popularity with the undergraduate student, it can and probably will be of some considerable assistance to the busy general practitioner who wishes to refresh his memory of the details of distribution of the trigeminal nerve or to elucidate the causation of one of those "referred symptoms" so frequently associated with lesions of this nerve. The work, which is singularly accurate for a first edition, must have entailed no small amount of labour, care, and ingenuity. It suffers, like all anatomical textbooks which are unfortunate enough to be born in these calamitous days, from the deplorable confusion which exists in anatomical nomenclature. The text accompanying the atlas shows a certain want of sequence, and such a sentence as this, for example, "Turning to the interior (of the nasal fossa) or cavum, the posterior slope of the roof at the level of the rostrum of the sphenoid is supplied by a few of the lateral posterior superior nasal nerves which pass posteriorly in the muco-periosteum, avoiding the spheno-palatine foramen," is likely to weary the reader. Still, on the lines which the author has adopted the atlas has much to commend it.

THE PSYCHOLOGY OF EDUCATION.

MR. LANE FOX PITT intends his small book, *The Purpose of Education*,[3] to explain the values of education from a psychological standpoint. The author insists on the need for a re-examination of such values in the light of modern psychology, devoting his pages to principles rather than to detail. Speaking of personality, he deprecates hasty division of people into "good" and "bad," and judgements of character by what is temporarily uppermost; seeing that personalities, like icebergs, show only a small and changing portion, at any one time, above the waters of consciousness. Life is a constant interaction between person and surroundings; from these limiting fetters we cannot escape; true liberty is found only in the grasp of truth which harmonizes and explains the apparent chaos of "complexes." The variability of even the most fixed elements of life, such as instincts, ought to warn us against the stupid notion that "betterment" is only to be found in things outside ourselves, as if we were something fixed and central. It follows that the present "unrest" cannot be healed by mere change of environment, but requires an adaptability only to be attained by the cultivation of intelligent volition, not by the blind following of instincts regarded as fixed points. From the latter view follows a narrow outlook on life, and a striving for "tangible results" of action rather than the ennobling of character. The author sees in "reputation" only a fallible index of character, not however to be neglected; in commercial values he finds a mere travesty of real values, which grow from within, and know nothing of competition, having their spring in love which seeks no reward. In the education of character, the necessary evils of specialization are touched upon; but if specialization is properly handled, it is not thought to be subversive of that versatility which is requisite to the fulfilment of high social excellence. Our environment itself is not simple but multiplex, consisting not only of material things but social and spiritual elements. The experiences of religious "conversion" are regarded as being cataclysmal rather in appearance than in fact; but sudden changes of this kind are thought to be less healthy than steady gradual growth.

As to the writer's general philosophic outlook, there is little to quarrel with, as it provides a usefully wide educational ideal; yet one cannot but feel that since the book is intended for the general intelligent public, the manner of statement is too abstract and difficult; there is some lack

[2] *Map of the Scheme of the Sensory Distribution of the Fifth Nerve (Trigeminus), with its Ganglia and Connections.* With Text. By L. H. Pegler, M.D., M.R.C.S. London: Baillière, Tindall, and Cox. 1913. (Demy 4to. text pp. 38; 4 figures. 21s. net.)

[3] *The Purpose of Education.* An Examination of the Educational Problem in the Light of Psychological Research. By St. George Lane Fox Pitt. Cambridge: The University Press. 1913. (Crown 8vo. pp. 91. 2s. 6d. net.)

of crispness of expression, and obscurity is sometimes due to careless writing. A far freer use of illustration would have been helpful to many, even if it had somewhat increased the number of pages. The popularizer must be clear and lucid. This defect is likely to diminish the number of people who will benefit from a short and really interesting exposition of sound educational doctrine.

BURDETT'S HOSPITALS AND CHARITIES.

THE issue of *Burdett's Hospitals and Charities*[4] for 1914 is the twenty-fifth. It makes its appearance earlier in the year than usual, an object which Sir HENRY BURDETT states in his preface he has long had in view; his success in this respect will make the volume still more useful. The preface states further that the volume contains the audited statements of account of some 6,000 separate institutions for the period ending December 31st, 1912. Its value, therefore, as a work of reference need not be enlarged upon even for the benefit of those who are not familiar with previous issues. The first chapter deals in general terms with the income and expenditure of the voluntary charities, including hospitals, dispensaries, convalescent homes, missionary societies, orphanages, homes and charities, institutions for the blind, the deaf and dumb, the chronic and incurable cases, and the administrative and collecting societies. The second chapter deals with King Edward's Hospital Fund and the League of Mercy; the third with the nursing departments, in which the necessity for separate accounts in the interests of economy is again insisted upon; then follow chapters on Hospital Saturday and Sunday Funds, on missions, on convalescent institutions, on orphanages, and on the blind, the deaf, and the dumb. Two chapters deal with hospital finance in 1912, under the headings of income and expenditure respectively; there is also a chapter on the United States, Canada, Australia, and India, and a further chapter containing notes on the construction and enlargement of hospitals during the year. The main part of the book consists of a directory of hospitals and dispensaries, but it contains also lists of nursing institutions, public and private, of sanatoriums for consumption, and of private asylums.

NOTES ON BOOKS.

THE volume containing the *Minutes of the General Medical Council*[5] and of its various committees for the year 1913 (vol. I) has been issued. Among the sixteen appendices is one containing the report of the Education Committee on the question of raising the standard of preliminary examinations, which was discussed by the Council during its May session. We have also received a copy of the *General Index* to the Minutes of the General Medical Council, including those of the Executive and Dental Committees and of its three branch councils. The *Index* covers the years 1903 to 1913 (vols. xl to l).

Those members of the profession who are called upon to administer tuberculin will find *Plain Rules for the Use of Tuberculin*,[6] by Dr. R. ALLAN BENNETT, a useful guide. The book is as unpretentious as its title, and aims only at giving explicit directions to those who have not hitherto had experience of this treatment. The method of obtaining the various dilutions, and tables setting forth the amount of bacillary substance in each fraction of a cubic centimetre, are given. Then follow full directions how to sterilize the syringe and the dosage to employ. The author believes in spreading the course over eighteen months or two years. He starts with P.T.O., and afterwards proceeds with T.R., and, if these are well borne, goes on to Old Tuberculin. The doses are to be so regulated that the patient should never have much reaction, which, although at times unavoidable, should always be regarded as a mistake, and as such to be guarded against. The author says little of the dangers of administering tuberculin; although admitting that such exist, he regards them as arising from the idiosyncrasy of the patient, and therefore not to be foreseen. The results of 150 cases, judged by the absence of bacilli from the sputum and the capacity to work, are given in an appendix.

[4] *Burdett's Hospitals and Charities.* By Sir Henry Burdett, K.C.B., K.C.V.O. Twenty-fifth year. 1914. London: The Scientific Press, Limited. (Cr. 8vo, pp. 986. 10s. 6d. net.)

[5] London: Constable and Company. 1914. *Minutes*, 12s.; *Index*, 2s. 6d.

[6] *Plain Rules for the Use of Tuberculin.* By R. Allan Bennett, M.B.Lond. Bristol: J. Wright and Son, Ltd.; London: Simpkin, Marshall, etc., Ltd.; Toronto: Macmillan Co., Ltd. 1914. (Demy 8vo, pp. 48; charts. 2s. 6d. net.)

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

Evidence of Sir Arthur Downes.

At the fourteenth meeting of the Royal Commission on Venereal Diseases evidence was given by Sir Arthur Downes, the Senior Medical Inspector for Poor Law purposes of the Local Government Board, and by Dr. E. B. Sherlock, of the Metropolitan Asylums Board.

Sir Arthur Downes stated that the general opinion expressed by Poor Law medical officers in London was that venereal diseases are less prevalent and milder in type amongst the poor than they were formerly. The opinions of provincial medical officers varied somewhat, but on the whole they appeared to be to the same effect; there were, however, some exceptions, chiefly in seaport towns. His general impression was that the prevalence of venereal disease amongst the very poor was not large.

He explained that under the Poor Law venereal diseases were on exactly the same plane as all other diseases, and that it was the duty of Poor Law authorities to afford relief to all persons in urgent need of any important assistance—such as medical assistance—which they were unable to provide for themselves. Sir Arthur said that although Poor Law authorities did not necessarily insist on venereal cases being treated in an institution, he believed that a considerable proportion of the authorities objected to affording outside treatment in the case of these diseases. This, he thought, might have the effect of deterring some people from coming for treatment.

At the present time the use of the more recent methods of diagnosis and treatment in connexion with venereal diseases was confined to a number of the more important Poor Law authorities. In some of the large unions salvarsan treatment was in use and the Wassermann test was applied. In London a very fine system of Poor Law infirmaries had been provided, almost all of which were equal in their administration to general hospitals; most of these infirmaries were able to set apart special wards for venereal cases, though they could not always reserve those wards entirely, the number of cases not being sufficient to justify their setting aside beds which were very valuable. Most of the London unions sent their Wassermann tests to the Wassermann Institute or the Clinical Research or some pathological laboratory. In the case of the small country unions laboratory provision could not be expected, but the powers of the guardians to pay for diagnosis and to send patients for treatment in special institutions were very elastic; they had also wide powers of combining amongst themselves for any special purpose.

Referring to the recommendation of the Royal Commission on the Poor Laws that, subject to certain safeguards against abuse, the public assistance authority should have power to detain cases of venereal disease when medically certified to be dangerous to others, Sir Arthur Downes said that he could only support this proposal if the detention was not of a penal character, and was so arranged as to be as little deterrent as possible.

Treatment and Education.

At the fifteenth meeting, held on February 2nd, evidence was given by Dr. Helen Wilson.

Dr. Wilson said that it was now generally recognized that it was quite futile to attempt for venereal diseases such isolation as was practised in regard to acute infectious diseases, the main reason being that in a large proportion of cases venereal diseases did not prevent the sufferer from following his ordinary avocation, that they were easily concealed, and that there were strong motives for concealment. The objects to be aimed at were, first, to bring every sufferer under efficient treatment at the earliest possible moment, thereby shortening the infective period; and, secondly, to secure his own intelligent co-operation, both for his own cure and for the protection of his associates. She did not think that compulsory notification would ever be a material help in diminishing these diseases, but that any attempt to deal with these diseases otherwise than on voluntary lines would array a tremendous

amount of opposition: if voluntary methods were given a fair and intelligent trial, she was convinced that the residuum of cases would be comparatively small, and that probably means could be found for dealing with them.

As regards the organization of medical treatment, Dr. Wilson thought that the hard and fast line which had been drawn between these diseases and all others should be abolished. Admission to institutions and treatment of the diseases should not be governed by inquiries as to the method in which the disease was contracted; and the nursing and all other arrangements should be as good in the wards for the treatment of these diseases as in any others. Names like "Lock" and "Magdalene" for special wards or hospitals had a deterrent effect and should be avoided. She laid stress on the importance of providing evening clinics for out-patients.

Dr. Wilson was of opinion that further instruction was needed for medical students and nurses, and that the education of the general public in matters of sex hygiene was of the highest importance. She doubted whether it would be wise to introduce systematic class instruction in elementary schools, and she was certainly of opinion that in these schools there should be no instruction dealing with diseases. In the first instance parents and teachers needed preparation for the work of instructing children. She understood that in some few training colleges this matter was already receiving attention and teachers were being trained, not with the object of giving class lessons, but to enable them to speak to the older children privately when they saw occasion to do so. In some schools in America the plan had been tried of inducing the mothers to come and hear about the subject in the first place and afterwards of beginning a course of lessons to the girls, the mothers being invited to be present the whole time. Dr. Wilson considered this arrangement of teaching the girls in the presence of the mothers to be an admirable one as helping to secure what was most wanted—that the girls should be in the position to speak frankly to their mothers in private about the subject.

Naval Hospitals.

At the sixteenth meeting Surgeon Scott, R.N., who was until recently in charge of the Naval Hospital at Chatham, gave evidence respecting the methods of treatment and results obtained in naval hospitals.

SYPHILIS IN THE CAUSATION OF INSANITY.

The fourth annual report of the Scottish Western Asylums Research Institute, presented by the director, Dr. Ivy Mackenzie, gives an interesting account of work carried out in the laboratory. He deals rather with general conclusions derived from investigations, and details are not given except in a few instances regarding serological data; in fact, the report, which occupies about fifty pages, is rather of the nature of a lay sermon on the causes of insanity and the social conditions which underlie them. One half of the report, and in our opinion by far the most valuable part because the most definite, deals with the question of syphilis and insanity.

By the employment of the Wassermann reaction, correlated with clinical investigation in hospital and asylum practice, Dr. Ivy Mackenzie has done excellent work regarding the prevalence of syphilis in Western Scotland; his results are in close agreement with those of the valuable investigations of Carl Browning and Kate Fraser. The statistical data of these observers show conclusively that syphilis is very prevalent in Glasgow, and this is in accord with the very high incidence of general paralysis and other diseases engendered by the syphilitic virus. Dr. Mackenzie rightly calls attention to the failure of treatment of general paralysis and congenital mental defects by the new methods; he emphasizes the importance of "influencing the conditions under which syphilis is spread," and "of utilizing the latest and most effective means of diagnosis and treatment, so as if possible to curtail its course." Most of the witnesses who have given evidence before the Royal Commission now sitting have laid great stress upon this.

Attention is called to the great difference in the incidence of syphilis shown in the admissions to asylums drawing their patients from industrial centres and those from rural districts; this has long been known and commented upon, but a striking example is afforded by the very high incidence at the Glasgow Parish Asylum at Gartloch, where, out of 258 admissions, 54 were syphilitics—presumably nearly all general paralytics—whereas at Lochgilphead, which draws its patients almost entirely from the rural districts of Bute and Argyll, not a single case of general paralysis was admitted in which the syphilis had not been contracted outside the district.

Dr. Gilmour, pathologist to the Gartloch Asylum, states that over 20 per cent. of the male admissions are general paralytics—a very high incidence indeed; the percentage of the London County Asylums is 15. Inasmuch as the death-rate from general paralysis about equals the admission-rate, it is probable that the annual percentage of deaths from general paralysis in a stationary population affords in a measure a comparative indication of the number of cases of syphilitic infection which occurred annually ten to fifteen years ago.

Dr. Mackenzie has examined the blood of 786 insane patients; of that number 234 were supposed from clinical examination to be general paralytics, and of these 221 gave a positive Wassermann reaction. Of 64 cases of idiocy and imbecility 16 gave a positive reaction (25 per cent.). Altogether, of the 786 cases examined 347 gave a positive reaction. A systematic examination of patients admitted to his wards at the Victoria Infirmary showed that 15 per cent. gave evidence of syphilis.

Another source of information drawn upon is afforded by records of cases received from medical friends in practice. Lastly, Dr. Mackenzie brings forward evidence to show that venereal disease is most prevalent among the poorer classes where the housing conditions are the most defective.

There is a valuable and interesting chapter on "General Conclusions on the Incidence of Syphilis," in which social problems are judiciously discussed, sanitary and curative measures considered, and prophylactic and moral measures urged.

Under the head "Insanities of Adolescence," a general account is given of the work done by Dr. Mackenzie in conjunction with Dr. Marshall, who has undertaken the clinical investigation, and this must be regarded as of a preliminary nature, for the work is still in progress. The importance is emphasized of differentiating among so-called cases of adolescent insanity those that are "functional" or transient from those that are organic or permanent. The authors believe that it would be well to dispense with the conception underlying the term "adolescent insanity."

The last chapter is on the meaning and importance of research work. There is much in this with which we can agree; especially should it be widely known that "as a rule those who engage in research work in psychiatry run a risk of being side-tracked in the general promotion of scientific workers." It is a primary necessity that a research laboratory should be well staffed and that the staff should be well paid, for research work is not only of great importance to the asylum authorities, but to the whole community. Three millions were spent last year in the housing and treatment of lunatics. We might ask how much has been expended in trying to find out the causation of insanity, for in this only lies the hope of arriving at a means of prevention. Asylums have been built costing £400 or £500 a bed, but do statistics show that the recovery-rate is any better or the death-rate any less? It is time that a fraction of this enormous sum of money should be spent on brains instead of bricks.

In concluding this notice of the report, we would suggest that Dr. Mackenzie would have done well to omit such remarks as "panicky legislation as exemplified in the Mental Deficiency Bill," "and social legislation now making itself felt in every corner of society, and faddists and fanatics, with their theories of heredity and degeneration, have secured the means of becoming a real menace to personal and family freedom." It is not wise to introduce politics into a scientific report.

An intelligence department under the direction of Mr. Harold K. Ellison has been established at the office of the High Commissioner for Australia, 72, Victoria Street, London, S.W. The latest official information is filed and collated, and inquiries are answered.

THE PROVISION OF RADIUM FOR THERAPEUTIC PURPOSES.

RADIUM has so greatly impressed the popular imagination that it is not surprising to find the pulses of generosity being quickened whenever it is suggested that a supply be purchased by public subscription. One of the first places in this country to obtain some radium in response to a public appeal was the city of Hull, where five years ago, as the result of a medical man's letter in the local press, the sum of £1,000 was quickly forthcoming. The radium purchased was handed over to the Health Committee of the corporation. More recently, newspaper funds in London, Liverpool, and elsewhere have achieved success, and an account of the steps that are being taken in Manchester is given below by our correspondent in that city.

It would be churlish even to seem to discourage such displays of public spirit, but the question may be raised whether the present moment, with radium at £20 the milligram, and only procurable even at that figure after some months' delay, is opportune for public purchases on any large scale. It is always possible that some fresh discovery of radium-bearing ore may suddenly relax the stringency of the radium market, or that a new departure in physics may open up a practical substitute. In saying this we are thinking of the possibilities of some important development in the production of x rays, towards which some of the results of recent research seem to be pointing. The cost of a supply of radium commensurate with the needs of a large community would much more than suffice to equip a good x-ray department. Nevertheless, it cannot be denied that, whatever the eccentricities of its market price, radium has a very high specific value, and that its future, particularly in the treatment of new growths, is full of promise.

One result of these local efforts to secure a supply is that the problem of the custody of the radium, and its proper control and employment, has arisen. It is one with which the medical profession in each locality is nearly concerned. The general hospitals first suggest themselves as suitable custodians, and the plan would have the advantage of providing ward accommodation for certain classes of cases likely to benefit by radium treatment. The alternative is the establishment of a local radium institute, detached from the voluntary hospitals, but, as in Paris and now in Manchester, working in harmony with them.

The controlling body of such an institute should comprise a medical representative of each hospital, and one or more physicists as well as representatives of the donor. A separate institute presents the advantage that it would be easy to arrange on equitable terms for the treatment of paying patients, and in this way part of the annual expenditure might be met. Whether the patient were poor or rich the institute should only undertake to treat him on the recommendation of a general practitioner, who should be asked to undertake the after-treatment and to confer with the medical superintendent of the institute as to the necessity for a second course. At the Radium Institute in London, in the case of paying patients, a consultation fee of 2 guineas is charged, while the fees for treatment range from 2 to 5 guineas a sitting, according to the amount of radium employed and the nature of the case. A very different and much less ambitious procedure is followed at Hull, where there is no institute, the town's radium being kept in a safe in the Guildhall. It is lent as required to institutions or to private practitioners by the medical officer of health. It is supplied free for the treatment of any patient (private or institutional) whose income or that of his family does not exceed £2 a week, and a charge of 1s. is made for every £ or fraction of a £ over that income. The period of loan is forty-eight hours, and a signed agreement is made between the borrowing practitioner and the corporation, providing for indemnity in the event of damage or loss, and also for the furnishing of information as to the progress and result of the treatment.

The question of establishing a special institute or keeping the radium at a voluntary hospital will in practice probably be determined by the amount of radium at disposal. The Radium Institute in London possesses 4 grams of radium bromide. One expert whom we addressed on the subject was of opinion that it would be absurd to set up an institute and employ a medical director, an assistant, and a nurse, if the amount of radium available was only, say, 200 mg.; in his opinion, at least 1 gram would be wanted, otherwise he thought the radium had better be handed over to the local hospitals, or rather to the chief of them. Another expert—like the former, a physicist and not a medical man—expressed the view that 200 mg. would be a satisfactory nucleus for an institute, and that, if there was a reasonable chance of subsequently increasing the amount, a modest start might be made on that basis. It is worthy of note that in Berlin—where, however, the hospitals also have supplies of radium—the central radium institute recently opened began with 200 mg., and that the electro-therapeutic institute attached to the Cancer Hospital at Brompton started with a supply of 250 mg., which has since, we believe, been increased. Apart altogether from the question of a special institute, much good work can be done with smaller amounts than 200 mg., but that is a convenient figure for the reason that it permits a liberal choice of applicators. Half the amount, or 1 decigram, for example, might be contained in a couple of sealed glass tubes for insertion in cavities and passages, each tube holding 50 mg., which is an amount frequently used in treating a case. Part of the remaining decigram could be held in varnish and spread on plaques of various sizes and shapes. The amount of radium salt per square centimetre of applicator is usually 3 mg. and upwards, and a score or more of such applicators may be desirable. It is also well to keep a quantity of radium free for the purpose of pumping off emanation; 25 mg. held in solution would ensure a constant supply, available for medical purposes and also for experiment. A considerable initial expenditure, and to some extent an annual charge for renewal, would be involved in the provision of filters, protective appliances, measuring instruments such as electroscopes and the like. But the main annual charge upon an institute would be the salaries of the staff, and the constitution of the staff must necessarily depend upon local considerations and upon the amount of radium with which it is possible to work. In a properly equipped institute there would be, in addition to the medical superintendent, one or more nurses, and a technical assistant versed in physical chemistry, who would have charge of the laboratory work, the making of the emanation, and the like.

RADIUM FOR MANCHESTER AND NEIGHBOURHOOD.

(From our Correspondent in Manchester.)

The movement for obtaining a supply of radium for Manchester and neighbourhood, which was started by Dr. Milligan, has been taken up in a vigorous way, and has been materially assisted by a generous gift of £2,000 by Mr. Alderman Edward Holt. In a letter, dated February 3rd, to the Lord Mayor, Mr. Holt, in offering to provide the sum of £2,000 "for the purchase of radium for public use," suggested the formation of a committee for the purchase and control, consisting of one layman and one medical man from each of the following hospitals—Cancer, Skin, Royal Infirmary, Northern, Southern, Salford and Ancoats, two representatives of the Victoria University, the Lord Mayor for the time being, Sir W. H. Vaudrey, and Mr. R. B. Longridge. The Lord Mayor invited representatives of these institutions to meet at the Town Hall on February 13th, and after luncheon a conference was held, at which Dr. Milligan explained what was proposed and what had been done. The question had already been discussed by the board of management of the Royal Infirmary, and arrangements had been made by which subscriptions for the purpose might be sent to the secretary of the infirmary. Alderman Holt, however, advocated the establishment of only one central fund, and the feeling of the meeting was strongly in favour of only one appeal being made to the public. A resolution to this effect was carried on the motion of Sir W. H. Vaudrey, and a subcommittee was formed to meet a committee of the infirmary with the object of arranging for the institution of only one fund. A general committee was also appointed, consisting of representatives of the principal hospitals of Manchester and Salford, together with Professor Weiss, Dr. Schuster, and Sir E. Rutherford

representing the university, and with the Lord Mayor, the Town Clerk, Sir W. H. Vaudrey, Mr. Longridge, Professor Wild, and Dr. Milligan, who will act as honorary secretary; the committee has power to add to its numbers. A Technical and Scientific Subcommittee was also formed, consisting of Sir E. Rutherford, Professor Murray, Dr. Hopkinson, Dr. Schuster, Professor Wild, Dr. P. White, and Dr. Milligan, who will act as secretary. Up to the present, February 16th, the total donations promised, in addition to Alderman Holt's £2,000, amount to rather over £1,900. Emphasis is laid on the desire to make clear that there is no intention to limit the operations of the fund to Manchester, but to include neighbouring areas.

SCIENCE NOTES.

The issue of *Nature* for January 29th contains a more detailed account of the new *x*-ray tube invented by Mr. W. Coolidge of New York than has hitherto been published in this country. The principal feature of the apparatus is a small spiral of tungsten wire, which, when strongly heated by an electric current, becomes a source of electrons, and thus serves as the kathode of the tube. Surrounding the spiral there is a tungsten ring connected with the negative pole of an induction coil or static machine. This electrified ring repels the electrons from the hot wire so as to bring them to an approximate focus upon a tungsten target (antikathode), where *x* rays of varying degrees of penetration are produced. The vacuum within the tube is extremely high, and comparatively wide variations of it do not appear to affect the working of the apparatus. The most striking advantage of Mr. Coolidge's tube over the usual kind lies, perhaps, it is said, in the readiness with which it can be controlled. The output of *x* rays is simply a function of the temperature of the hot kathode, all other factors remaining the same. When once set in action the bulb requires little attention. Thus a tube of this design has been run continuously for about an hour, taking 25 milliampères of current through it for the whole time, and emitting a uniform radiation of intense penetration. The idea underlying the invention is not, our contemporary states, quite new, for Dr. Lilienfeldt of Leipzig recently introduced a focus tube in which the source of electrons is a heated body. The opinion is expressed that the new tube marks an important step in the progress of radiography and possibly radio-therapy.

In his recent presidential address before the Roentgen Society,[1] Professor A. W. Porter, F.R.S., described a special investigation he has been carrying out, with Mr. C. Cuthbertson, in order to determine the refractive index of radium emanation. The work was undertaken, not so much for the intrinsic interest attached to the index in question, but because of the practical certainty that the emanation is a gas of the series to which the non-valent elements (helium, neon, etc.) belong. The refractive indices of these elements had been determined previously, and were found to be connected by certain simple relations. It seemed possible, therefore, that by an extension of these relations the emanation could be made to fall into line with the other elements in the series. As often happens in work of the kind, the procedure was more interesting than the results, but the methods employed were of too intricate a nature to be summarized. The work was hampered by the very small quantity of emanation at the investigators' disposal, and the calculation of the refractivity had to be made by a specially designed and exceedingly minute interferometer. The value obtained for the emanation by experiment was fifty-one times that of helium, but the results in some respects were discordant, and the investigators admit that as yet they have not succeeded in establishing the figure finally and authoritatively. They have been able to prove, however, that it must be very high—higher, in fact, than that of any known gas. The refractivities of the non-valent elements are proportional to simple integers as follows (taking helium as unity):

[1] *Journal of the Roentgen Society*, January, 1914.

	Refractivities.	Atomic Weights.
Helium	1	4
Neon	2	20
Argon	3	40
Krypton	12	82
Xenon	20	128
Emanation	?	216

(If it is borne in mind that the refractivity of helium is about one-eighth that of air, the comparison of the elements can be made with this more familiar substance.)

The probable atomic weight of emanation fixes this gas two places below xenon, and by making certain assumptions and calculations Professor Porter predicts for the refractivity of radium emanation a value forty times that of helium.

LITERARY NOTES.

The *Red Cross* is the title of the official organ of the British Red Cross Society, the first number of which appeared on January 15th. Sir Frederick Treves contributes an article on the Red Cross in war, and Dr. F. M. Sandwith gives an account of the origin of Red Cross training centres. A communication of particular interest is the Diary of the British Red Cross Units on War Service in Turkey, by the Director, Major Doughty-Wylie, C.M.G. The new periodical will be published monthly.

We learn from the *Glasgow Medical Journal* the interesting fact that the late Dr. Weir Mitchell was the great-grandson of an Ayrshire man, Collector John Mitchell, a friend of Robert Burns, whose superior he was in the Excise. It is stated on the authority of Chambers that

> At Mitchell's death there was found in his repositories a whole sheaf of first copies of poems and songs by Burns on which it was understood that he had been asked to give his opinion. The bundle was lost by the family and has never since been heard of.

We may add that Weir Mitchell's father was also a well-known physician and a poet.

Reference was made in an article on the London School of Tropical Medicine which appeared in the British Medical Journal of February 7th to the fact that till comparatively recent times doctors whose professional sphere of action was to be in the tropics had no means of learning about the diseases they would have to deal with in hot climates. A startling example of the utter want of appreciation on the part of the Government of the need for such instruction is afforded by the career of the famous Orientalist, poet and collector of Border and other ballads, John Leyden, whose early death is mourned by Scott in *The Lord of the Isles*:

> Quench'd is his lamp of varied lore,
> That loved the light of song to pour;
> A distant and a deadly shore
> Has Leyden's cold remains.

Scott introduced Leyden, who was poor and unknown, to literary society in Edinburgh. Lockhart, in his *Memoirs of Walter Scott*, says:

> These new friendships led to a great change in Leyden's position, purposes, and prospects. He was presently received into the best society of Edinburgh, where his strange, wild uncouthness of demeanour does not seem to have at all interfered with the general appreciation of his genius, his gigantic endowments, and really amiable virtues. Fixing his ambition on the East, where he hoped to rival the achievements of Sir William Jones, he at length, about the beginning of 1802, obtained the promise of some literary appointment in the East India Company's service; but when the time drew near, it was discovered that the patronage of the season had been exhausted, with the exception of one *surgeon-assistant's* commission—which had been with difficulty secured for him by Mr. William Dundas; who, moreover, was obliged to inform him that if he accepted it he must be qualified to pass his medical trials within six months. This news, which would have crushed any other man's hopes to the dust, was only a welcome fillip to the ardour of Leyden. He that same hour grappled with a new science, in full confidence that whatever ordinary men could do in three or four years, his energy could accomplish in as many months; took his degree accordingly in the beginning of 1803, having just before published his

beautiful poem, *The Scenes of Infancy*; sailed to India; raised for himself, within seven short years, the reputation of the most marvellous of Orientalists; and died, in the midst of the proudest hopes, at the same age with Burns and Byron, in 1811.

Leyden was a genius, but to qualify as a doctor even in those easy-going days in six months was an almost superhuman feat. The moral we wish to point, however, lies in the fact that even the most light-hearted Government could send a man to take charge of the health and lives of people in India after such scanty preparation.

The ninth International Congress of Zoology recently held at Monaco adopted the following resolution, which concerns all writers of books on scientific subjects:

> In view of the damage which authors may suffer in regard to their property in their discoveries, in consequence of the custom of publishers to place in books issued by them in the second half of the year the date of the following year, the wish is expressed that publishing houses should abandon this custom and give to every scientific publication the exact date of its appearance, not only in respect of the year but also of the month and the day.

The attention of publishers, syndicates of booksellers, and in particular—as far as regards Paris—the Cercle de la Librairie—was called by the Congress to this resolution.

The late Professor Eliot Norton, of Harvard, had many friends among the leading men of letters in this country. He was particularly intimate with Carlyle, whose early letters, correspondence with Goethe and reminiscences (1826–36) he edited. In his own correspondence, recently published—(*Letters of Charles Eliot Norton, with Biographical Comment by his Daughter, Sarah Norton, and M. A. de Wolfe Howe.* Constable and Co. 1913. In 2 vols.)—there are several letters to the late Dr. Weir Mitchell which are of interest as showing the sympathy that existed between the two men in matters of art and literature. Several have a more personal character. For instance, writing to Mitchell on March 5th, 1904, Norton says:

> It was a pleasant deed of yours to write to me of your 75th birthday, and to give me a chance (though belated, but none the worse for being so) to add my good wishes and congratulations to those of the friends who have a special and private right to celebrate it. It is a good age to which to have lived, with all one's faculties alert and vigorous and obedient as ever. And the seventy-five years over which your life extends have been on the whole the most interesting and the most important period in the whole history of man. The changes in the material and in the moral world alike have been far greater and more essential than in any corresponding period in the past. While the limits of the universe have been inconceivably extended, this little trifle of a world of ours has been steadily shrinking in size. There never was such a breaking down of old creeds, such a dispelling of the phantom army of the gods, and such a generally agnostic regard towards the great Unknown and Incomprehensible. The discovery of America, the invention of gunpowder, the printing press, wrought no such effect upon the lives and thoughts of mankind as the compelling of steam and electricity to man's use have done. And so on. But how about the individual man? It seems to me that but a few have been able to take advantage of these changes and make the best of them, and that the many have suffered morally for the time being.
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> What should the good wishes be for his seventy-five-years-old friend of one who is himself seventy-six? They should be what he would wish for himself—first, health; second, freedom from heavy sorrow; third, life, so long as the grasshopper does not become a burden; fourth, a painless death and a happy memory in the hearts of a few friends.

The reference to a "painless death" recalls the fact that Norton was an advocate of euthanasia, with proper safeguards. Writing to Mitchell on May 22nd, 1908, Norton says

> I thank you for sending to me a copy of your excellent address to the graduating class of nurses at the New York Hospital. It is a delightfully characteristic discourse, full of the wisdom of keen insight and long experience; full, too, of genial humour and of kindly view of humanity. The contrast which you draw between the conditions of the sick-room in charge of a trained nurse and those which were familiar to us in our earlier years is very striking. Nowhere else has the comfort of life been so much increased during the past half century as in the sick-room, where comfort is most needed.
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> In thinking of you, I often reflect on the happiness that must attend you in the memory of the services you have rendered to those who have most needed human service and sympathy. The great and good physician who has had a long career has a happiness in looking back over his life which no other man can rival. He at least has done positive good, relieved suffering, restored strength and renewed hope. I congratulate you affectionately on the blessing of such a retrospect.

We know on the authority of "my Uncle Toby" that our armies swore terribly in Flanders. Perhaps we should do them no great injustice if we were to assume that they were also, as Iago describes the Englishman of his day, "most potent in potting." In an interesting volume, entitled *The Life of a Regimental Officer during the Great War 1793–1815, compiled from the correspondence of Colonel Samuel Rice, C.B., K.H., 51st Light Infantry, and from other sources* (Blackwood and Sons, 1913), Lieutenant-Colonel A. F. Mockler-Ferryman, speaking of the period about 1793, says:

> It is perhaps unjust to describe the officers as hard drinkers, if by that is meant that they were all drunkards, or that they drank harder than did their civilian friends and relatives. The morals of the army were possibly no worse than the morals of general society at that period, for it was an age of heavy drinking, when respectable and respected old gentlemen drank themselves under the table every evening, and boasted of the number of bottles of port which they could consume at a sitting. Yet, if the opinions of Bunbury and other writers holding somewhat similar views of the British army in pre-Peninsular times are to be accepted, it cannot be maintained that the tone among the officers of ordinary regiments of the line was of a high order. Some certainly drank a great deal more than was good for them; otherwise it would hardly have been necessary to put in print in the standing orders of a certain regiment the caution that "the Surgeon and his Mate must always be strictly sober."

This at any rate is a testimony to the value placed on the services of the medical officers.

Orthopédie et Tuberculose Chirurgicale is the title of a French review the first number of which appeared in January. Its object is stated to be to group French and foreign work on orthopaedics and surgical tuberculosis, and to make known what is done in France in that branch of the surgery of children. The editor is Dr. V. Ménard, director of the Seaside Hospital of Berck-sur-Mer, and his assistants, Drs. Jacques Calvé and Louis Lamy, are his collaborators. A large number of French and foreign specialists have promised to contribute. The first number contains the following original articles:—Dr. V. Ménard: Orthopaedic Cure of Tuberculous Hunchback: Dr. Fritz Lange: Progress in the Transplantation of Tendons; Dr. Robert W. Lovett: Treatment of Scoliosis; Dr. Gauvain: Alton Hospital and College; Dr. Lamy: Spiroid Twisting of the Tibia; Drs. Mackenzie Forbes and Rupert Delorme: Treatment of Scoliosis by Rotation; Dr. Jacques Calvé: A Case of Anomaly of One of the Transverse Processes of the Fifth Lumbar Vertebra. In addition to these articles there are reviews of books and abstracts. The periodical, which is excellently printed on good paper and well illustrated, is published by J. B. Baillière et fils, 19, rue Hautefeuille, Paris.

Knowledge for February contains an interesting contribution on Elizabethan Botany, by Mr. H. John Gray. Written chiefly with a view to extolling the medicinal virtues of plants, a strong family likeness runs through all the old herbals. Moreover, the old worthies copied very freely from one another, sometimes with acknowledgement and sometimes without. Pliny is often referred to as the authority for some particular statement, and his views were always treated with the greatest respect by the herbalists of the sixteenth and seventeenth centuries. That the acknowledgement in this case does not always spring from a desire to give credit where credit is due is shown by a passage in Culpeper, who, often quoting the classic writer in connexion with the name "anemone" (wind-flower) adds, "Pliny is my author; if it be not so, blame him." The same writer adopted a highly convenient method of curtailing his literary labours. If the plant under review happens to be of wide distribution, and generally plentiful, it is dismissed with a few words drawing attention to its commonness. For instance, Culpeper soon tires of the numerous family of buttercups. Some are described in detail, while for the rest the reader is reminded that "unless you turn your head into a hedge you cannot but see them as you walk"—doubtless an accurate, though scarcely an illuminating statement. In vain do we seek enlightenment from this celebrated herbalist concerning the tansy, which is referred to as "so well known that it needeth no description." The same remark is made in connexion with stinging nettles, together with the cheerful reminder that "they may be found by feeling in the darkest night."

British Medical Journal.

SATURDAY, FEBRUARY 21st, 1914.

THE UNIVERSITY OF WALES.

The announcement which we were able to make last week that an anonymous donor had offered the munificent sum of £60,000, supplementing a gift of £30,000 already made by Sir William James Thomas, to complete the buildings required for the medical school of the University of Wales, and the promise given by the Chancellor of the Exchequer, on behalf of the Government, to make a very substantial contribution towards the scheme, affords an opportunity of reviewing very briefly the development of higher education in the Principality. In doing this we are able to draw upon the *Calendar*[1] of the university for the academic year 1913-14, issued recently under the authority of the governing body by the Registrar, Mr. J. Mortimer Angus, M.A.

The story covers a very short space of time, but it contains all the elements of a romance. Universities are amongst the most valuable of the gifts bequeathed to us by the Middle Ages. Wales in early days had its monastic colleges, centres of learning and of widespread culture, but the Welsh University as it stands to-day is the creation of the last twenty years or so. The Royal Charter which constituted it was not granted until the year 1893, and the present year will be drawing to its close before the "university in and for Wales (including therein the county of Monmouth)" will have attained its majority.

In tracing back its history it is interesting to observe that what may be considered the first practical steps towards the realization of the ideals and aspirations of the Welsh people for the National University, as it now exists, were taken in London at a meeting of the Cymmrodorion Section of the National Eisteddfod (Albert Hall, 1887), held under the presidency of Principal Thomas Charles Edwards of Aberystwyth. On that occasion Principal Viriamu Jones, then the head of the University College of South Wales and Monmouthshire, opened a discussion on "the future development of the Welsh Educational System," in which he dwelt on "the growing need of some higher existing educational authority than any at present existing in Wales—an organization of a completing kind, binding together what is at present, more or less, separated and individual educational work"—and entered a strong plea for "a Welsh university to give unity of purpose and consolidation of result to Welsh educational effort." Principal Reichel of the North Wales College and others took part in the discussion, and in the result the opinion was expressed, in a formal resolution, that "definite action should be taken to impress upon the Government of the day the desire of the Welsh people for the establishment of a Welsh University."

At this time there existed three University Colleges in Wales, in addition to St. David's College at Lampeter, which was erected (1822-27) "for the reception and education of persons destined for Holy Orders," and incorporated by Royal Charter in February, 1828, and the various Nonconformist colleges, mainly theological, at Bala, Brecon, Carmarthen, Trevecca, Pontypool, and Haverfordwest. The first of the University Colleges was opened at Aberystwyth (in a building purchased some five years earlier) in October, 1872, as the result of unparalleled voluntary efforts by an enlightened democracy, not only unassisted, but to a great measure hampered, by an unwilling and obdurate Treasury. A prolonged struggle followed for State assistance for Wales in the matter of higher education. Welsh parliamentary representatives of all parties joined in challenging and pressing the Government on the subject in the House of Commons, and eventually Lord Spencer, the then Lord President of the Council in Mr. Gladstone's Government, announced the appointment of a Departmental Committee to inquire into the condition of intermediate and higher education in Wales, with the late Lord Aberdare as its chairman. The report of this Departmental Committee (which was issued in August, 1881) is rightly looked upon as the educational charter of modern Wales. Immediately upon its publication the Welsh people took energetic action with the view of realizing its recommendations. In the following year (1882) they succeeded in obtaining for the first time a Treasury grant for the University College of Wales (Aberystwyth) amounting to £4,000, the full sum suggested by the committee. In 1883 (after a lively competition for the honour against other towns) the University College of South Wales was opened at Cardiff and endowed with a similar grant, and a year later a third University College was established at Bangor. The recommendation of the Departmental Committee was limited to two colleges, but when the "battle of the sites" in North Wales was decided in favour of Bangor, the friends of the existing college at Aberystwyth, whose grant had been reduced, stood by the earlier institution, and in a short time the three colleges were placed on an equal footing. Within ten years of the result thus indicated the University of Wales was established with Aberystwyth, Bangor, and Cardiff as its constituent colleges.

To revert to the steps taken for the establishment of a university, we find that the Cymmrodorion Society, at the request of the meeting already mentioned, convened a conference of educational leaders with a view to an agreement on the subject. The arrangements were mainly carried out by Sir Isambard Owen, now Vice-Chancellor of the University of Bristol, who at that time was physician to St. George's Hospital, London. The conference, which was presided over by Professor (now the Right Hon. Sir John) Rhys, of Jesus College, Oxford, met at Shrewsbury in 1888, and passed the following resolution: "That in the opinion of this conference it is expedient that the provision for intermediate and collegiate education in Wales and Monmouthshire should be completed by a university organization." This resolution was strongly supported in the country, and at a subsequent conference, held in London, it was decided to make an application to the Government "for a charter to constitute a university for Wales on the same general lines as the charter already granted to the Victoria University, with such modifications as may be required by the peculiar conditions and circumstances of Wales."

A difference of opinion as to whether the university should be exclusively a teaching or an examining body retarded matters for a time. The trend of opinion went in favour of a teaching university; further conferences

[1] *The Calendar of the University of Wales (Prifysgol Cymru)*. Oswestry: Woodhall, Minshall, Thomas, and Co., Caxton Press. 1913. (1s. 6d., post free.)

were held, a Draft Charter Committee was nominated, and a proposed University Charter was submitted in the first instance to public examination and subsequently (in 1893) to the Lord President of the Council (then Lord Kimberley). With a few amendments, it was approved by the Council, and was ordered to be laid on the table of both Houses of Parliament. In the House of Lords it met with some opposition from the supporters of St. David's College, Lampeter, and in the House of Commons it was opposed on the ground that it contained no provision for granting degrees to non-collegiate students, but it was adopted, and the charter received the Royal Assent and was duly sealed on November 30th, 1893. The medical profession may well take pride in the fact that in the actual drafting of the charter and in the practical steps that secured its adoption no one had a larger share than Dr. Isambard Owen, who became as Deputy Chancellor the head of the executive body of the new university. "For the smooth and efficient conduct of its business, no less than for the framing of its charter and its statutes, the University of Wales," writes its fullest historian, "owes most to the precision, the skill, and the administrative tact and capacity of Sir Isambard Owen."

The granting of the charter was followed by an annual grant of £3,000, afterwards raised to £4,000, from the Treasury, and the first meeting of the University Court constituted under the charter was held at the Privy Council Office in London in April, 1894. A little later Lord Aberdare, to whose noble services Wales was so deeply indebted, was unanimously elected first Chancellor of the University, but he died before his installation. The position was soon afterwards graciously accepted by the Prince of Wales (afterwards King Edward VII), and he was duly installed as Chancellor amid a remarkable demonstration of popular enthusiasm at Aberystwyth on June 26th, 1896.

The university as constituted and organized "bore the impress of the genius of Principal Viriamu Jones," to quote again the historian, "more than that of any other single man," and it was therefore fitting by right of service, as well as by virtue of seniority, that he should become the first Vice-Chancellor of the University, and first Chairman of the Senate. At the installation the Chancellor conferred the first honorary degrees of the university on the Princess of Wales (Queen Alexandra), Mr. Gladstone, Lord Spencer (Chancellor of the Victoria University of Manchester), and Lord Herschell (Chancellor of the University of London).

King Edward, on his accession to the throne, resigned the office of Chancellor and accepted the title of "Protector" of the University, the Prince of Wales (now King George V) accepting the chancellorship, with Lord Kenyon and Mr. Lynn Thomas, C.B., F.R.C.S., at the present time, as Deputy Chancellors.

Both in regard to its constitution and its government the University of Wales is the most democratic institution of its kind in the kingdom. Its court represents wide and varied educational interests, and includes persons appointed by the Lord President of the Council, the county councils and county boroughs, the courts, councils, and senates of the three constituent colleges, the Guild of Graduates, the head teachers of intermediate and elementary schools, the Central Intermediate Education Board, and the Associated Theological Colleges. The principals of the three constituent colleges in turn fill the office of Vice-Chancellor, and the principals with the heads of departments form the senate of the university. The Guild of Graduates comprises all graduates of the colleges and all members of the teaching staff. The authority of the senate is supreme in academical matters, subject to the formal sanction of the University Court. Each constituent college has the right of initiative in proposing courses of study, but all proposals must be submitted to the University Senate before they are presented to the court for acceptance. The court cannot promulgate, alter, or abrogate any statute, regulation, or by-law affecting schemes of study or examination except on the recommendation of the senate or after the senate has had reasonable opportunity of considering and reporting on the matter. The faculties of the university are those of arts or letters, science, music, law, medicine, and theology or divinity, and the university is entitled to confer degrees in each faculty. Women are not only admitted to degrees, but are eligible as members of every constituent body of the university and of any office connected therewith.

In the Faculty of Medicine the qualifying period for an initial degree is not less than six academic years, and not less than three of these must be spent in study in one of the constituent colleges, the remainder in some school of medicine approved by the court. No person can be admitted to a degree in medicine unless he has been already admitted to a degree in arts or science in the University of Wales or some other university approved by the court for this purpose. Certificates and diplomas in public health may be granted by the court under due regulations to persons being practitioners of medicine registered under the Medical Act.

A standing committee of advice, called the "Medical Board," has been set up, consisting of one person appointed by the President for the time being of the Royal College of Physicians of London, the Royal College of Surgeons of England, the General Medical Council, the Council of the British Medical Association, and of four persons skilled in medicine or surgery appointed by the court, in addition to such members of the university as are heads of departments, etc., in the Faculty of Medicine. The duties of the board are the approval of schemes of study or examination for degrees, and of schools of medicine and universities for certain purposes, and the appointment of examiners, subject to a final decision by the court. In 1911 the university was empowered by Act of Parliament to hold examinations and to grant diplomas under 49 and 50 Vic., c. 48, and to choose a member of the General Medical Council.

The movement for the expansion of the provision made for the Faculty of Medicine in the university is now well on foot, and at Cardiff a great development in this respect will shortly take place. The departments in the college include those of human anatomy, physiology, pathology, bacteriology, materia medica and pharmacology, public health, and hygiene.

Mr. Lynn Thomas, who at present holds the office of Deputy Vice-Chancellor in the university and of surgeon to the Cardiff Infirmary, is actively supporting the movement, and the philanthropic efforts of Colonel Bruce Vaughan, backed by the princely generosity of Sir William James Thomas, will very shortly provide the accommodation for a large extension of the work now carried on at the college, and lay the foundations broad and wide of a school of medicine at Cardiff which it is intended shall be second to none in the kingdom.

The story of the progress of higher education in Wales cannot be fully told without some reference to

the establishment of the National Library and the National Museum, which are now being erected, partly by voluntary effort and partly by Government aid, the one at Aberystwyth and the other at Cardiff, but space will not permit us to enter into this interesting field. It may, however, be mentioned that both these institutions are specially indebted to the medical profession. The gift of the unique library formerly at Peniarth and of his personal collection from Llanstephan by Sir John Williams to the library at Aberystwyth secured the institution for that town and conferred an inestimable boon upon the Welsh people. The success of the National Museum at Cardiff owes a great deal to the activity of Dr. Charles Vachell, who for many years was one of the honorary curators of the Municipal Museum in that city, now transferred to the national institution which is in course of erection in Cathays Park.

THE TREATMENT, STUDY, AND CONTROL OF VENEREAL DISEASES.

ONLY a few years ago the subject of venereal diseases was unmentionable in the public press in England and ignored by the powers that be. All this is changed, and these diseases are now openly spoken of in the daily papers and are the subject of an elaborate inquiry by a Royal Commission.

We published a couple of months ago the substance of a report by the Out-patient Committee of the London Hospital, of which Mr. Ludovic Goetz is chairman, recommending that special arrangements should be made for the early treatment of syphilis on modern principles and for the detailed record and study of the clinical results. In view especially of the necessity of keeping patients treated with salvarsan under observation during the course, the committee recommended that a certain number of beds should be provided, and it is now announced that the Grocers' Company has generously promised to provide the necessary indoor accommodation at the cost of £7,000 to £10,000. We note also that a special course of lectures on syphilology is now in progress in the London Hospital Medical College, and will continue until the end of next month. The earlier lectures of the course are devoted to microbiology, general pathology and serum reaction, and to histology; the remainder will be clinical, dealing with the primary and secondary lesions of the skin; with the heart and blood vessels; the bones, joints, testis, and tongue; the viscera; the eye; the ear, nose, and throat; with ante-natal pathology and congenital syphilis, and with the nervous system. The course is intended for advanced students and for post-graduates, and will, we presume, be repeated once or twice a year. It is supplementary or introductory to the actual training of students in the out-patient departments and wards.

The effect on the great mass of disease produced by the action of a single hospital cannot obviously be very great, but if every general hospital in London and in all large towns were to follow the example set by the London Hospital, the effect of their combined efforts would be considerable, even when regard is had only to the actual number of cases treated. It would have another most important effect, inasmuch as it would in a few years afford invaluable information as to the real magnitude of the problem. The London Hospital has considered it advisable to provide a series of small wards for the treatment of these cases, and intends to take in both mother and infant in cases of congenital syphilis. The action of the London Hospital will no doubt turn the attention of other general hospitals to their duty in this matter, and when the matter is carefully considered it will probably be found that in most hospitals steps can be taken to make a start at an early date. Are there not in some hospitals empty wards out of use for want of funds?

The question has recently been discussed whether it would not be better to establish special hospitals for the treatment of venereal diseases. The balance of opinion appears to be in favour of treating cases of syphilis and other venereal diseases in the large general hospitals. This, we think, is the better course to adopt, owing to the protean nature of these diseases and their invasion of nearly every department of medicine. In fact, a proposal to establish special hospitals for these diseases, if carried out completely, would almost amount to the creation of a new set of general hospitals, for syphilis has been said to constitute "a third of pathology," and gonorrhoea "nearly half gynaecology." The case for treating these diseases in the existing general hospitals is clinched by the argument that they would there be available for clinical teaching, which has perhaps of late been somewhat overshadowed by laboratory work.

With regard to the type of case and the class of patient to be admitted to these wards, difficulties will no doubt arise and much discrimination will be necessary. In this connexion we would recommend that two objects should be kept in view—first, the admission of cases of all kinds suitable for the clinical teaching of students and practitioners; secondly, the exclusion of those who can afford to pay the piper for the tune they have called. In other words, stringent measures should be taken against hospital abuse, for there is little doubt that the free treatment of all and sundry for venereal disease (which has been suggested in certain quarters) would not in the long run have the effect of diminishing the incidence of venereal disease. We would also urge that special consideration should be shown to those who have become infected through no fault of their own—cases of wives infected by their husbands, cases of accidental infection, and especially cases of congenital syphilis.

There is little doubt that the time is fast approaching when the public health service will be required to adopt measures for the prevention of the spread of venereal diseases. So far as we are aware, very little has yet been accomplished in this country in this connexion. Action has been taken in a more or less tentative manner in Glasgow, Birmingham, and in the metropolitan boroughs of Chelsea and Lewisham, and possibly elsewhere, but medical officers of health have not yet come to any very definite conclusion as to what administrative measures should be adopted. Included among these should certainly be facilities to medical practitioners for the early recognition of the various forms of the disease, and in certain cases assistance in the treatment, either institutional or otherwise, should be recommended for it.

It is of interest to note that in Queensland the Legislature has taken some very bold steps with respect to venereal diseases. By an Order in Council, which came into force on April 1st, 1913, syphilis, both primary and secondary, and gonorrhoea have been made compulsorily notifiable in certain portions of the colony. The certificate of notification which is required to be given sets out the sex, age, occupation, and marital condition of the person notified, and the stage of the disease or its duration. The name and address of the person is not disclosed, but he is

denoted by a number or other reference in the records of the medical practitioner notifying. A very drastic section of the Order enacts that if the Commissioner of Public Health or any medical practitioner suspects that any person is infected with venereal disease, the Commissioner may, in writing, require such person to submit himself or herself for examination by clinical or bacteriological methods. Such requisition must state the name of the medical practitioner to whom the suspected person is required to submit for examination.

In a circular letter addressed to the medical practitioners in Brisbane the Commissioner of Public Health states that after the publication of the Order making venereal diseases notifiable, persons, other than a medical practitioner or a person acting under a practitioner's direct instructions, are forbidden under heavy penalties to attend on or treat any person suffering from venereal disease within the area to which the Order applies. In order to lessen any hardship which might thus occur it is intended to establish a dispensary for venereal diseases, under the control of the Department of Public Health, in connexion with the Brisbane General Hospital, a department where free out-patient treatment can be obtained without unnecessary questions or inquiries. A very useful and informing pamphlet for public information has been drawn up by the Commissioner of Public Health in which the seriousness of the different forms of venereal disease is pointed out, and explaining how free treatment can be obtained.

The Queensland Order should be of considerable interest to those public health officers who may be called upon to advise their authorities as regards administrative procedure in this country. It is based, it will be observed, on a system of compulsory notification modified in a manner which it is hoped wil meet the objection to the application of the principle to venereal disease. This objection is founded on the belief that notification by name in the ordinary way with all that that would entail might make the patient reluctant to seek advice from a qualified medical practitioner, and so encourage increased resort to quacks.

MEDICAL CERTIFICATES.

Two letters are published in the SUPPLEMENT this week to which we would invite the attention of all members of the profession, whether on the panel or not, because they deal with a matter which nearly touches the honour of the profession. The one is the reprint of a letter addressed by Professor Saundby to the *Birmingham Daily Post;* the other is a letter from Dr. J. H. Keay, of Greenwich, published under the title of "A State Medical Service," but in which reference is made in the concluding paragraph to the subject with which Professor Saundby deals. Both Professor Saundby and Dr. Keay have earned the right to be heard when they speak frankly to the profession, and if the warning they give is not heeded every rank and grade in the profession will be involved in a common disgrace.

In November, 1911, the General Medical Council reissued various warning notices it had published from time to time, and added to them another with regard to the giving of medical certificates. In the preamble of the document the Council set out that in the interests of the medical profession it was considered advisable to bring to the notice of its members certain resolutions adopted from time to time as expressing the views of the Council upon certain forms of professional misconduct which had been or might be dealt with as amounting to "infamous conduct in a professional respect" within the meaning of Section 29 of the Medical Act, 1858. The new notice, numbered VI in the document, begins with the following statement: "Whereas registered medical practitioners are in certain cases bound by law to give, or may be from time to time called upon or requested to give, certificates signed by them in their professional capacity, for subsequent use either in courts of justice or for administrative purposes." It goes on to enumerate a number of classes of certificates, but indicates that the list does not purport to be complete; among those enumerated are certificates in connexion with sick benefit, insurance, and friendly societies, and in connexion with workmen's compensation. Clearly certificates given to approved societies or otherwise under the Insurance Act are included. The notice concludes as follows: "Whereas it has been made to appear to the General Council from time to time that some registered medical practitioners have given and signed untrue, misleading, or improper certificates of the above specified or other descriptions. Now, therefore, the General Medical Council hereby give notice that any registered medical practitioner who shall be shown to have given any untrue, misleading, or improper certificate, *whether relating to the several matters above specified or otherwise* [the italics are in the original], is liable to be adjudged by them to be guilty of 'infamous conduct in a professional respect,' and to have his name erased from the *Medical Register* under Section 29 of the Medical Act, 1858."

We are very well aware of the difficulties which beset the path of the practitioner under the Insurance Act who desires to deal fairly with his patient on the one hand, and with the approved societies and the State on the other. These difficulties are not fully understood and appreciated by the officials of approved societies, and we have reason to believe that they have presented the case from their point of view in a very strong light before the Departmental Committee now sitting to inquire into the alleged prevalence of excessive claims for sickness benefit under the Insurance Act. The British Medical Association will take care that the other side of the matter is clearly and fully placed before the Departmental Committee. There is, for example, the acknowledged difficulty experienced in every public service, including the military forces of all countries, in detecting malingering and obtaining adequate evidence of deliberate fraud; in many instances proof can be obtained only by strict watching in hospital, and even then the ingenuity of the malingerer may for some time outwit even experienced observers. Then there are the cases in which the patient, often a woman, has some curious mental kink, commonly labelled hysteria, leading to the exercise of most perverse ingenuity in causing or aggravating local conditions, often of a painful and disagreeable nature; of such cases Dr. Norman Walker gave some striking instances in a clinical lecture on dermatitis artefacta, published with a coloured illustration in the JOURNAL some years ago.[1] In one instance, though both Dr. Walker and the experienced nurse in charge were convinced that the skin lesions were produced artificially, they were unable to confirm their suspicions until after a fortnight of careful watching. Then there is the question of the definition of the term "incapable of work" in the certificate. A man may be quite incapable of doing full work, or doing his own work, but quite

[1] BRITISH MEDICAL JOURNAL, 1910, vol. i. p. 1181.

capable of doing light work or some other kind of work, and this fact is recognized in the administration of the Workmen's Compensation Act; it will have to be recognized also under the Insurance Act. Lastly, to touch only on one other point, there is the difficulty of making an early diagnosis at the moment when the certificate has to be signed, the impropriety of specifying a distinct disease at a stage when a positive diagnosis is impossible, and the expediency, therefore, in such cases and in some others, of confining the statement in the certificate to the mention of some prominent symptom.

The public and approved society officials must be educated on these matters, but this very necessity makes it all the more essential that every individual member of the profession working under the Insurance Act, or giving sickness certificates for any purpose, should interpret very strictly his duties in this respect and be scrupulous to avoid even the appearance of evil. We have no doubt that the General Medical Council means what it says, and will deal severely with any registered medical practitioner who, to quote the words of the notice, may be proved to "have given and signed untrue, misleading, or improper certificates."

FROM PLATO TO SIR JAMES BARR.

"THE science of eugenics has the positive aspect of encouraging the multiplication of the morally, intellectually, and physically fit, and the negative aspect of preventing further degeneration by discouraging or preventing the multiplication of the unfit." We quote from a recently published address[1] delivered by Sir James Barr before the Sociological Society of Sheffield University. In taking for his subject "The Positive Aspect of Eugenics," Sir James has displayed characteristic courage; it is an aspect whose dangerous possibilities are evidently realized by the majority of eugenic propagandists, for we hear very little about it. No eugenist has yet been bold enough to demand with Plato that "those of our young men who distinguish themselves in the field or elsewhere should receive, along with other privileges and rewards, more liberal permission to associate with the women, in order that, under colour of this pretext, the greatest number of children may be the issue of such parents." Plato makes Glaucon agree with Socrates that, granted the undeniable fact of the amenability of human beings to the same laws which govern purity of breed in dogs or game birds, it follows that "the best of both sexes ought to be brought together as often as possible, and the worst as seldom as possible, and that the issue of the former unions ought to be reared, and that of the latter abandoned, if the flock is to attain to first-rate excellence." The logic may be irrefutable, but, since its enforcement would make short work of existing matrimonial sanctions, it is as yet for the most part diplomatically ignored by those who are so zealously endeavouring to popularize the eugenic ideal. It would be a mistake to represent Plato as a supporter of "free love"; the transient unions which he prescribed for members of his ruling caste were to be subject to the approval of the magistracy, and their consummation preceded by a religious ceremony. But the revival of his proposals would hardly be conducive to that active interest in the eugenic movement on the part of leading members of the Anglican Church from which Sir James Barr derives gratification at present. Needless to say, there is not a word in Sir James Barr's address which could bear the construction of a covert attack upon our monogamic institutions. Indeed, he expressly repudiates any such intention. He contrasts the deplorable record of the Jukes family in America, with its 1,200 degenerate descendants of one reprobate father, with that of the 1,394 good citizens who traced their descent from the Rev. Jonathan Edwards, divine and metaphysician, which included 13 presidents, 64 professors, 100 clergymen, 75 officers, 60 doctors, 60 authors, 180 judges, advocates, or solicitors, 80 civil servants, 3 senators, a vice-president of the nation, many State governors, members of Congress, and mayors, and apparently not one black sheep. He deplores the wasted opportunity of the recent "feeble-minded Act for the feeble-minded," which he thinks unlikely to diminish the output of mentally-deficient children by 5 per cent., "whereas radical and less expensive measures might lessen the output by 50 to 80 per cent." So far, in fact, as we can judge, he is content, on the negative side, to minimize the undesirable births, and, on the positive, to encourage in various ways the desirable. "We want," he says, "to raise the average physique and intelligence of the community. . . . Our selective death-rate has been largely abolished, and now we wish to establish a selective birth-rate." As to the desirability of this moderate aim all reasonable persons must agree; but the differences of opinion become acute when the question how far compulsion as distinct from moral suasion is to be the means of attainment comes to be decided. On this point Sir James is among the stalwarts; his contempt for the results of legislation in the past seems in no way to have shaken his faith in its future possibilities. But, in this respect again, some eugenists would, we presume, be less moderate; they would demand not merely better but the best possible births, and at any cost to existing institutions. "The illegitimate or chance child, the result of strong passion rather than of subdued love, is often," says Sir James Barr, "an exceptionally able individual," and no doubt he could quote many instances. Was not Leonardo, one of the ablest men who ever lived, a case in point? With such questions as these we, to whom the public naturally and rightly turns for guidance in these matters, are likely to be faced more and more insistently in the near future. All the more grateful should we be to Sir James Barr for calling attention to the need of making up our minds as far as possible, in the light of our as yet very imperfect knowledge, as to the line we mean to take, and the advice we mean to give. It needs more courage than most of us can boast to venture into the arena of a controversy so fraught with revolutionary promptings.

[1] The Positive Aspect of Eugenics. By Sir James Barr, M.D., LL.D. *The American Practitioner*. November, 1913.

THE VIRUS OF ACUTE POLIOMYELITIS.

THE fact that the microbe causing acute poliomyelitis can pass through a Berkefeld filter, and is therefore a filterable virus as it is called, was proved in America and France as long ago as 1909. The discovery finally discredited the various cocci and other bacteria that had been described as the cause of this epidemic disease by a number of observers. It has been followed up with great thoroughness and patience in the laboratories of the Rockefeller Institute for Medical Research in New York by Flexner and Noguchi, who have recently[1] given a full description of the way in which the virus may be grown and its microscopic appearances. The method of cultivation that has made these authors successful where so many have failed is that devised by Noguchi for the cultivation of spirochaetes. The culture medium consists essentially of unheated and sterile human ascitic fluid to which has been added a fragment of sterile fresh tissue—a piece of rabbit's kidney is commonly employed. The exclusion of oxygen is necessary, and the medium is covered with a deep layer of sterile paraffin oil; to obtain the initial growth from a fragment of infected nervous tissue it may be necessary to use the anaërobic jar. The culture tubes are incu-

[1] *Journal of Experimental Medicine*. New York, 1913, xviii, 461.

bated at 37° C. Growth of the virus shows itself as an opalescence appearing after about five days, and increasing until spontaneous precipitation occurs towards the end of a fortnight. Cultures have also been obtained on solid media. The virus, as has been indicated, can be grown directly from fresh pieces of the brain or cord of patients who have died of the disease, or from similar specimens taken from monkeys that have been inoculated with the natural or cultivated virus for experimental purposes. More than this, the virus can be almost as readily grown from fragments of infected nervous tissue that have been kept in 50 per cent. glycerine at low temperatures (2° to 4° C.) for as long as a year. This fact may be taken as evidence of the resisting power of the virus—its firm hold on life. The micro-organism itself is not very easily stained. The best results have been yielded by the methods of Giemsa and of Gram. The staining reactions are variable, and depend to some extent on the culture medium. Stained specimens display the microbe as a globoid body measuring from 0.15 to 0.3 micron in diameter, occurring in pairs, chains, or masses, according to the conditions of growth and multiplication. Within the tissues of infected human beings and animals the chains do not occur. The authors cautiously refuse to say what place in the scale of living things these globoid bodies occupy. It is obvious that the cultural conditions are those that apply more particularly to the bacteria. It is often hard to obtain the initial culture of the virus, as if, once it had adapted itself to the parasitic state, it developed with greater difficulty in saprophytic conditions. But it has been recoverable whenever the nervous tissues have proved infectious when injected into experimental animals; in other words, infectivity of the nervous organs and the presence of the microbe exist together. But it is only the exceptional cultures that possess a degree of pathogenicity sufficient to cause experimental poliomyelitis; a pathogenic strain may still be pathogenic at different and even remote generations. This fact, as the authors point out, makes it most improbable that two factors are at work in the cultures, one the globoid bodies already described, the other some ultramicroscopic virus that has hitherto escaped recognition, but is really the infecting agent in poliomyelitis. Their conclusion is that the globoid bodies really do fulfil the conditions hitherto demanded for the establishment of causal relation between an extraneous parasite and a specific disease. They exist in the infectious and diseased organs; they are not, as far as is known, common saprophytes, or associated with any other pathological condition; on inoculation they produce the experimental disease in monkeys, and they can be recovered from them in pure culture.

THE PASTEUR INSTITUTE.

IN the *Revue des Deux Mondes* of February 1st M. Charles Nordmann gives an interesting account of the Pasteur Institute, the silver jubilee of which was celebrated in Paris with appropriate ceremonial on November 15th, 1913. He relates how, after the value of the inoculation treatment of hydrophobia had been proved by the first successful cases, it was decided to found the institute; by a public international subscription, opened for the purpose on the initiative of the Académie des Sciences, a sum of £100,000 was quickly collected. It is well known that Pasteur met with opposition so fierce from various quarters that about the time of the foundation of the institute he used to say, sadly, "I did not know I had so many enemies." Some legends have grown up about the beginnings of the institute which are dissipated by M. Nordmann. Thus there is a widespread belief that the first patient treated was the shepherd-boy named J. B. Jupille, of Villers-Farlay, in the Jura, who was badly bitten by a mad dog on protecting some younger boys. The first patient treated was an Alsatian boy named Joseph Meister, who was bitten by a rabid dog in fourteen places. Details of these cases are given by René Vallery-Radot in his *Life of Pasteur*. It is interesting to learn that both Meister and Jupille are now employed in the Pasteur Institute, in the courtyard of which the latter can admire a fine piece of sculpture representing his fight with the dog. The purchase of a site at Vaugirard and the building and fitting up of laboratories absorbed £60,000, leaving in 1888 only £40,000 for the endowment of the institute. This soon became inadequate; there was no room for the workers and the supply of apparatus was insufficient. But money was wanting. This was obtained by a public subscription opened after the Congress of Budapest in 1894, when M. Roux made public his discovery of the serum treatment of diphtheria. About £40,000 was raised in this way. This enabled the managers of the institute to instal in the domain of Garches, which was lent for the purpose by the State, well arranged stables where a large number of horses could be immunized so as to furnish Roux's serum. Several generous anonymous donations furnished the means of acquiring a site of 14,000 square metres just opposite the institute; on this were built the biological institute and the Pasteur Hospital, which were completed in 1900. The hospital contains 120 beds, and makes no demand on the funds of the institute. From 1900 to the end of 1913 the total number of patients admitted was 14,415, who spent in all 350,676 days in the hospital, to that extent relieving the Assistance Publique of the cost of their maintenance. Among the benefactors of the institute, the foremost place for munificence is taken by the late M. Osiris. His bequest enabled the institute recently to enlarge its laboratories and increase the working staff. During the past eighteen years the institute has supplied about 1,932,000 flasks of therapeutic serums—antidiphtherial, antitetanic, antiplague, antistreptococcic, antimeningococcic. During the past twenty-eight years 33,000 patients have undergone the antirabic treatment; in this number there have been only 129 deaths. During the same period more than 40 million doses of anthrax vaccine, and more than 10 million doses of *rouget* vaccine were sent out; these figures do not include thousands of bottles of a bacillary culture made by M. Danysz for the destruction of field-mice and rats. The Pasteur Institute has now a personnel numbering more than 150, three great teaching departments, and a very large number of laboratories admirably equipped for research. In addition to the mother house in Paris, there are similar institutes at Lille, Nhatrang (Assam), Saigon (Cochin China), Brazzaville (Congo), and Algiers.

THE CALLOUSNESS OF THE CRIMINAL.

THOSE present in court at the recent "sack murder" trial at Liverpool were amazed at the light-heartedness with which the prisoners went through the ordeal. Bali, the man sentenced to death, was afterwards heard singing in his cell. The callousness of criminals has often been the subject of comment, and has sometimes deceived worthy people into a belief that the coolness shown by them in the dock was a sign of innocence. This point is well dealt with by Mr. Thomas Holmes, Secretary of the Howard Association, in his book entitled *Known to the Police* (London, 1908). Mr. Holmes has had an almost unequalled experience of criminals of all kinds. As a boy he often saw Palmer, whom he describes as a bluff, hearty fellow, well liked by those who knew him, and in particular by the poor, whom he often doctored for nothing. When he heard of the calmness of the murderer during the trial and of the firmness with which he went to the scaffold, he felt that the Rugeley poisoner must have been supported by his feeling of innocence. Murderers, he thought, had fearsome consciences; "they were haunted by a sense of their guilt, and by the eyes or spirits of their victims." Since then Mr. Holmes has seen

enough to justify him in saying that a calm and brave bearing is more likely to be indicative of guilt than of innocence. Innocent persons charged with crime become excited and confused; they often contradict themselves, and do not stick at lying when attempting to defend themselves. Of murderers, he says that in his experience they have several characteristics in common: not one seemed to feel any sense of shame; not one showed any nervousness or fear of the consequences; those who admitted their guilt appeared to think that what they had done was right; those who denied it did so with cool assurance, and seemed to treat the charge with contempt; not one of them betrayed the slightest sorrow; they were all quite lucid mentally, and remarkably quick to see a point in their favour; none of them seemed to realize the position in which they stood as it was realized by ordinary people. Mr. Holmes asked the chaplain of a large prison whether he had ever seen any one who was about to suffer the death penalty for a premeditated and cleverly contrived murder exhibit any sense of remorse, sorrow or fear. The chaplain's answer was "that he had performed his last sad offices for a considerable number of such prisoners, and that he had discovered neither fear nor remorse in any of them." Mr. Holmes—somewhat rashly, we think—concludes that none of these criminals was thoroughly sane. Abnormal they undoubtedly were, but that is quite a different thing. The whole history of crime shows that deliberate murderers are by nature callous to the suffering of their fellow creatures, though oddly enough they are often extremely fond of animals. There is a significant story of one of the leaders in the Reign of Terror to whom the mother of a young man condemned to the guillotine went to plead for mercy to her son. She was repulsed with the greatest brutality, and as she was turning away blinded by her tears she accidentally trod on the paw of the revolutionist's pet dog. The man flew into a passion and shrieked, "Madam, have you no humanity?" Williams, on whose crimes De Quincey based his famous essay on Murder as one of the Fine Arts, had, as Sydney Smith said of Horner, the ten commandments written on his face. In the very midst of the general alarm caused by the reports of his cold-blooded murders, a young girl said to him, in the course of a conversation on the crimes, that, though she would be frightened out of her senses if she awoke to find a man by her bedside, "with you, Mr. Williams, I should not be afraid, because I know I should be quite safe." The Marquise de Brinvilliers, who appeared in the wards of the Paris Hôtel-Dieu as an angel of mercy, distributed poisoned sweetmeats among the patients, and sat by their bedside to study their agony. The Mannings took their meals over the place in their kitchen where they had buried their murdered apprentice; Deeming, who danced over the place where he had laid his wife and children in concrete, was considered a good fellow by his boon companions at the pothouse. It was the callousness with which Crippen gave his evidence that really put the rope round his neck. We need not wonder that murderers are callous, for it is their callousness that makes them murderers. It is impossible otherwise to understand how a man can sit day by day at table with a wife whom he is slowly doing to death with poison. We need not, like Hamlet, put it down on our tablets, but we should never forget that a man—or, for that matter, a woman—may smile and smile and be a villain.

THE STAGE AS A PULPIT OF HYGIENE.

EVEN those who are far less well informed than Macaulay's omniscient schoolboy are aware that the origin of the modern theatre is to be found in the miracle play of the Middle Ages, when the Church endeavoured to bring home the great truths of Christianity by presenting them to an unlettered audience in dramatic form. Modern dramatists, therefore, who use the stage as a mouthpiece for their own convictions have but restored it to its original function, with this difference—that the authors of the mediaeval mysteries were only concerned with the spiritual welfare of their audiences, whilst the twentieth-century playwright is far more interested in the discussion of social problems than in questions of dogma. It is only of recent years, however, that medical questions have attracted the attention of playgoers and playwrights alike, and the stage has become a medium for the instruction of the public in its hygienic duties. The experiment, it must be confessed, has not always been successful. Thirty years ago Ibsen's fearless exposition of the inexorable laws of Nature caused *Ghosts* to be banned in almost every theatre in Europe, and in our own time M. Brieux's courageous attempt to enforce the same lesson has resulted in his terrible play *Les Avariés* suffering the same fate. A movement is now on foot, however, to assist the work of the Royal Commission on Venereal Diseases by the public production of the latter play. A private *matinée* performance of Mr. John Pollock's admirable English version, *Damaged Goods*, was given by the Authors' Producing Society, under the auspices of the Society for Race Betterment, at the Little Theatre on February 16th. Praiseworthy as are the intentions of the producers, it remains to be seen if they have acted wisely in selecting this particular play as an object-lesson of the wretchedness arising from ignorance and false shame. *Damaged Goods* differs from *Ghosts* inasmuch as it leaves little or nothing to the imagination of the audience; and it is open to question whether the author's lack of reticence may not in the end defeat its own object. There can be no doubt, however, as to his sincerity; and the story of Georges Dupont's marriage and its unhappy sequel is in its way as powerful a piece of tragic writing as Ibsen's description of the fate that finally overtakes Chamberlain Alving's only son. *Damaged Goods* was played for the first time in this country before a crowded audience, the play being preceded by a short speech by Mr. Henry Arthur Jones, who expressed the opinion that the success of salvarsan in killing the poison of syphilis—the particular kind of "damage" with which M. Brieux deals—would also kill the moral of the play. An interesting practical commentary on this opinion is afforded by the announcement that the German Imperial Health Bureau is reported to have decided to make a careful inquiry into the danger to life said in some quarters to be caused by the use of salvarsan.

AUTOMATIC TELEPHONY AND TIME-KEEPING AT KING'S COLLEGE HOSPITAL.

THE new building of King's College Hospital in south-east London is telephonically and chronometrically one of the most up-to-date in the world. It shares with one or two hospitals in Germany the distinction of having an automatic telephone service on a large scale, linking all its departments in direct and immediate correspondence. At the invitation of Messrs. Siemens Brothers and Company, Limited, who have been responsible for the installation at Denmark Hill, a party, having first visited the automatic exchange and telephone departments of Siemens's works at Woolwich, saw the system at work at King's College Hospital. What takes place when a call is "put through" automatically can only be described by resorting to a good deal of technical jargon, but from the telephone-user's point of view the procedure is quite simple, although the absence of slurred numbers and of all asperity on the part of the dumb "operator" may seem a little strange at first. The actual instruments, ninety of which are installed at King's College Hospital, with provision for sixty more, are only distinguishable from those in general use in that each of them bears a dial with figure spaces numbered 0 to 9. If it is desired to call number 58, the dial is

turned first to the space marked 5, and then to the space marked 8. These successive movements interrupt the circuits for five and for eight times respectively, actuating certain magnets which carry a contact maker, first to a position at the row of fifties on what is known as the "connector bank," where the lines are brought into juxtaposition at the exchange, and then to the eighth contact in that row. This is sufficient to establish connexion, and the connexion is unmade as required by replacing the receiver, which operates a releasing magnet and brings back this affair of many parts to the normal position. Three-figure and four-figure systems are equally practicable, though naturally involving more elaborate plant, and are already in use in some public exchanges. The first cost of such a system is comparatively large, but the annual charges are reduced, partly owing to the elimination of the operator. Beyond a brief daily inspection by the engineer, the exchange system at King's Coll ge Hospital is altogether independent of the human brain and hand. The telephones are not the only examples of wired wizardry at the same institution, for it also boasts 120 electric clocks, all of them absolutely silent, and actuated magnetically, minute by minute, by impulses sent from a central control. The staff-arrival indicator is equally up to date; the hall porter, by depressing a single key, not only announces on the board at the entrance the arrival of a particular member of the staff, but also sounds a buzzer in the wards which the doctor is about to visit. All these arrangements, including the clocks, are worked from the same battery of accumulators as the telephone system, and the general impression is one of almost uncanny promptitude. One catches oneself wishing that some time, when it did not matter, the intelligent mechanism may be caught out in a blunder. As it stands, it is too severe a rebuke to our frailty.

NEW CLINICAL LABORATORY AT ADDENBROOKE'S HOSPITAL.

A NEW clinical laboratory at Addenbrooke's Hospital, Cambridge, founded by Mrs. Bonnett in memory of her son, the late John Bonnett, was opened by the Regius Professor of Physic on February 13th. The laboratory is an important addition to the resources of the hospital, which has hitherto been dependent on the courtesy of the university authorities for allowing clinical investigations required by the hospital to be carried out in the medical schools. Before the ceremony some fifty members of the Cambridge Medical Society were entertained at luncheon in the hall of Downing College by the Master, Professor Howard Marsh, who referred to the long period of service John Bonnett had given to the hospital, to his estimable qualities, and to the generosity of his mother in building and endowing a clinical laboratory to keep his memory alive. Dr. Malden responded on behalf of Mrs. Bonnett. The laboratory, which is situated at the north end of the hospital, consists on the ground floor of a cold storage mortuary with freezing plant, a *post-mortem* room, a mortuary chapel, and waiting-room for friends. A doorway on the right cuts off these rooms from the laboratory, which comprises a dark room for photography and spectroscope work, a chemical laboratory, and a room for sterilizing and washing up. Upstairs there is a small storeroom, a room for histology, and a large bacteriological laboratory. Sir Clifford Allbutt, in declaring the laboratory open, remarked that such institutions were a necessary part of a modern hospital, and related his early endeavours to get such a laboratory started. He dwelt on the necessity for a close connexion between pathological investigation and the clinical work in the wards, and the danger of the study of pathology becoming too academic if divorced from the wards. Professor Sims Woodhead endorsed the Regius Professor's remarks, and spoke of the value of the addition to the resources of the hospital provided by Mrs. Bonnett's generosity.

THE FATHER OF EUGENICS.

LAST Monday the Eugenics Education Society commemorated the anniversary of the birth of Sir Francis Galton, which took place on February 16th, 1822. It is intended to hold a similar celebration every year as the anniversary comes round. Major Leonard Darwin, the president of the society, who was in the chair, said that in honouring the memory of the pioneer of eugenic thought it was desired to give outward expression to the belief that posterity would owe a great debt to the man who first made it possible to start a campaign in favour of racial advancement. The aim of eugenics was to increase the probability of the men of the future being hereditarily endowed with noble qualities, and Galton not only taught how that aim might be accomplished, but he also showed in his own person what those noble qualities were. Sir Francis Darwin delivered a lecture, in which he said that Galton's experiments were frequently tried on himself. Thus, when a pupil at the Birmingham Hospital, he determined on a personal test of the *British Pharmacopœia*. He determined to dose himself alphabetically, but he got no further than C., where he was finally discouraged by the violent effects of croton oil. But his most interesting experiments were made on his own mind. He was doubtless the only man who ever tried to solve the mystery of free will by systematic self observations. Again, did any one else ever compel himself to acquire the terror of a savage for his idols by an imaginative gazing on the image of Mr. Punch, as he appeared outside his well-known pages? In the same way he contrived to build up the sensations of a madman, which lasted an hour or so longer than he bargained for. These experiments had a certain interest in relation to his studies in eugenics. Galton believed that a semi-religious horror of non-eugenic marriages might be developed. It seemed possible that the strength of his own imagination led him to think this easier of accomplishment than it seems to more prosaic folks. After making a name as a traveller and meteorologist he gradually settled into the line of work by which he would always be remembered—the study of heredity leading up to his work in eugenics. He was profoundly impressed by reading *The Origin of Species* in 1859, and it was this that led him to take up with fresh energy inquiries into heredity which had long interested him. He characteristically ascribed the ease with which he assimilated that book to the fact that he and Darwin had a common grandfather in Erasmus Darwin. His first publication on evolution was in 1865, when he wrote two remarkable articles in *Macmillan's Magazine*. There were the germs of nearly all his future work. His first book was *Hereditary Genius*, which to many readers seemed his greatest work. It was on reading this book that Darwin wrote in a letter to Galton: "I must exhale myself, or something will go wrong in my inside; I do not think I ever in all my life read anything more interesting and original." Galton was also celebrated for his application of statistical methods to the general problem of inheritance—a profound study which led him to formulate what was known as the ancestral law. By future ages he would be remembered pre-eminently with gratitude and admiration as the founder of the science of eugenics. Though he had written on eugenics in 1865, and though he cared for the subject with an almost passionate zeal, yet the biological writings ending in eugenics formed a procession nearly forty years in extent. In this he showed his practical wisdom and his scientific restraint. By his munificent Eugenic Foundation at University College he finally proved to the world the value he set on this science.

FORMAL notice is given among the advertisements this week (p. 7) that the Middlemore Prize of the British Medical Association, founded by the late Mr. Richard Middlemore, F.R.C.S., of Birmingham, will be awarded

this year to the writer of the best essay on the physiology of vision and fusion, excluding the question of colour vision. The prize consists of a cheque for £50, and an illuminated certificate. Essays in competition, to be signed with a pseudonym and accompanied by a sealed envelope containing the name and address of the writer, must reach the Medical Secretary, British Medical Association, on or before May 30th.

THE American General Education Board has given £150,000 towards an endowment of £300,000 for the medical department of Washington University, St. Louis, to create full-time teaching and research departments in medicine, surgery, and paediatrics. The gift is coupled with conditions similar to those made in regard to the grant made to Johns Hopkins medical department a short time ago—that is to say, all teachers in these departments, while free to render any medical or surgical service, shall be debarred from deriving any personal gain from such service. Their entire time must be devoted to hospital work, to teaching, and to research in their several specialities.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Debate on the Address.—The whole of the time of the House has been occupied up to the evening of Thursday, February 19th, with the debate on the Address. The Home Rule question occupied the first two days and the South African question the third day. On Friday, February 13th, an interesting discussion took place on accidents in mines and railways. On Monday, February 16th, the time was occupied by the Welsh disestablishment and tariff reform questions. On Tuesday, February 17th, there was a general discussion on the land and housing questions, followed on Wednesday and Thursday by amendments raising questions of the disturbances in Dublin, and various other matters of no professional interest. On Wednesday in next week, February 25th, a Unionist member, Mr. George Hamilton, has a place entitling him to call attention to the working of the Insurance Act, and to move a resolution which, it is understood, will invite the Government to appoint a committee to consider cases of hardship revealed by the working of the Act, and decide whether its compulsory features should be retained. In this connexion it may be noted that Mr. Bonar Law, in his letter to the Unionist candidate at the by-election for South-West Bethnal Green, renewed his statement that should the party he leads again come into power, it will appoint "a committee—non-political, impartial, and competent—to study not only the working of the Act, but the whole principle on which it is based, and to consider whether even now it would not be in the interest of the nation to change it into a voluntary system."

Ballot for Bills.—In the ballot for the introduction of bills those members who are particularly interested in medical questions were singularly unfortunate. The fifteenth place was secured by Mr. Glyn-Jones, who has announced his intention to introduce a bill to provide for the registration and qualification of persons entitled to act as assistants to pharmacists in the compounding of prescriptions of duly qualified practitioners. The bill has been put down for second reading on Friday, April 3rd; but as it occupies the third place on that day, it is very questionable whether it will be reached.

State Registration of Nurses.—In reply to Dr. Chapple, the Home Secretary said that his attention had not during the last few months been called to incidences of the abuse of nurses' uniform. The police would make inquiry, but, so far as they were aware, such cases were of very rare occurrence. Recent bills on the subject of the registration of nurses had not touched on this matter, and there would be serious difficulties in framing any provision of the nature suggested. He could not make any promise with regard to a bill for the State registration of nurses.

Cruelty to Animals Act (Appointment to Advisory Body).—Colonel Burn asked the Home Secretary whether he had received a memorial from the National Canine Defence League, signed by 5,480 persons, protesting against the appointment of Sir John Rose Bradford as a member of the advisory body under the Cruelty to Animals Act of 1876; and if so, whether he proposed to take any action thereon.—Mr. McKenna: The answer to the first part of the question is in the affirmative; to the second, in the negative. I would refer the hon. member to the statement which I made on this matter in the course of a debate in this House on March 18th last.

Tuberculosis Order Expenses.—In reply to Mr. Bathurst, the President of the Board of Agriculture said that the administrative expenses in respect of the Tuberculosis Order, 1913, in England and Wales had substantially exceeded the amount of compensation paid under that Order. The Board had made representations to the Treasury in respect to revision of the basis of valuation and the scale of compensation prescribed in the Order. Any unexpected balance from the Board's estimate at the end of the financial year would in the usual course be surrendered to the Treasury.

Vaccination.—Mr. Touche asked the President of the Local Government Board if he had received a communication from the guardians of the poor of the parish of St. Mary, Islington, regretting that recent legislation had made the vaccination law practically inoperative, and expressing a hope that the Government would appoint a committee to inquire into the carrying out of the clauses of the Act of 1906 relating to conscientious objections; whether it was proposed to take any, and if so what, action in the matter; or whether he was satisfied that the progress of vaccination throughout the country might now be discouraged.—Mr. Herbert Samuel said that he had received the communication referred to, but, as at present advised, did not think it necessary to appoint the committee suggested. Mr. Touche also asked the President of the Local Government Board to state the number of exemptions from vaccination in each of the three years before the statutory declaration took the place of an appearance before a magistrate for a certificate, and the number of exemptions in each year subsequently.—Mr. Herbert Samuel said the figures were as follows: 1905, 43,341; 1906, 52,391; 1907, 57,675; 1908, 162,799;[1] 1909, 190,689; 1910, 230,947; 1911, 248,483; 1912, 275,929. The figures for 1913 had not yet been received.

Blind People.—The Prime Minister promised to give consideration to the suggestion contained in a question asked by Mr. Snowdon as follows: If, in view of the fact that there are 5,000 blind people in the workhouses, 5,000 in receipt of parish relief, 7,000 begging their bread in the streets, and 3,000 employed in institutions whose average wages are less than 10s. per week, and in view of the statement that there are charities for the blind amounting to between two and three millions, he will consider the need for an inquiry into the condition of the blind with the object of devising some scheme of national assistance which will remove these people from having to accept pauper relief or beg for their bread?

Serum for Swine Fever.—In reply to Mr. Orde-Powlett, the President of the Board of Agriculture said that the second interim report of the Departmental Committee on swine fever published recently showed that the experiments made with serum in other countries had already been very carefully investigated on behalf of the Board. Similar experiments were to be made without delay on infected premises in this country, and at the same time the Board would continue to keep itself regularly informed of any new developments abroad.

[1] The Vaccination Act, 1907, substituting a statutory declaration for a certificate, signed by justices, of conscientious objection, came into operation on January 1st, 1908.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

The New South Wales Branch of the British Medical Association and the Friendly Societies.

On January 1st 3,000 lodge appointments were formally rendered vacant by the expiration of the notice given by the members of the New South Wales Branch of the British Medical Association who are engaged in lodge practice to terminate their lodge agreements under the old conditions. If the friendly societies desire to secure their services again, they can only do so by agreeing to sign the new form of lodge agreement which has been approved by the Branch. In a certain number of cases the lodges have agreed to the terms required by the medical officers, but in others the lodges are seeking to secure medical officers from other States and from abroad. The secretary of the Friendly Societies Association states that his association had failed to get the lodge doctors to sign the new agreement they had submitted to them, but for all that several lodges had decided to be independent. The agreement just expired provided for an annual rate per member of 16s. in the city, 18s. in the suburbs, and 18s. to 20s. in the country according to mileage. The new agreement of the British Medical Association required 19s., 21s., and 26s. respectively. The Friendly Societies Association had proposed as an alternative 20s., 20s., and 21s. to 24s., with modifications of the restrictive conditions demanded by the doctors. As this has been rejected by the great majority of the lodge doctors, the friendly societies have recommended the various lodges to pool their contributions and to form a fund to assist members requiring medical attendance, and in a considerable number of cases this is now being done. The scheme of pooling the funds has the drawback that it is expensive. It is claimed, however, that it will secure a better service, inasmuch as the members may select their own doctor and that they will be better treated than if they were ordinary "lodge patients." Under this scheme it will be necessary for the members to pay increased contributions, and it is expected that a percentage of the doctor's account will be paid by the member himself. It is recognized by friendly societies that though this scheme may succeed in some of the better class suburbs, in the poorer quarters it will be a failure.

It is thus seen to what extremities the lodges will go rather than sign the new agreement. But it is manifestly impossible for the lodges to secure sufficient medical officers outside the British Medical Association, and it is probably only a matter of a few months before the great majority of the lodge doctors will be reappointed under the more favourable terms of the Common Lodge Agreement. In the meantime, however, new complications may arise at the country hospitals. In one country town the resignation of one of the medical men was accepted by five of the friendly societies, but one other accepted the new British Medical Association agreement. The lodges have obtained the services of a medical man who is not a member of the British Medical Association. The other doctors in the town will not recognize the "blackleg doctor" either professionally or otherwise, but it is possible that the Government may insist on the appointment of this medical man to the staff of the local hospital. In such a case the other medical officers may resign, and it is rumoured that the nurses, who all belong to the Australasian Trained Nurses' Association, may follow suit.

In view of the disturbed state of public opinion on the matter, the Council of the New South Wales Branch of the British Medical Association, through the President, Dr. Sydney Jamieson, has published the following pronouncement in the daily press:

> In September, 1912, as the result of a conference presided over by the Hon. Fred. Flowers, a common form of agreement was arrived at and approved of as suitable for the friendly society lodges and the members of the British Medical Association in their mutual relations; and the members of the British Medical Association Council and the representatives of the friendly societies at the conference agreed to go back to their respective bodies and advocate its adoption. The members of the British Medical Association Council fulfilled their pledges, but the friendly society representatives did not; and the present unsatisfactory state of things has arisen from their breach of faith.
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> The Council of the British Medical Association is satisfied that the common form of agreement as it stands is a just, reasonable, and simple agreement for the purpose for which it was intended by the 1912 conference. This view has been recently confirmed by a large and representative meeting of the members of the Association, at which it was unanimously resolved that the form of agreement should not be altered.
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> It is desired by the Council to give this agreement a fair trial. Should it be found by experience that it works detrimentally in any way, it is capable of being amended at any time by a committee with an independent chairman. All that we want is fair dealing and no favour to either side. It was sincerely hoped that the new year would open with harmony prevailing between the members of the medical profession and the members of the friendly societies. As far as our profession is concerned, we can honestly say that not only has that been our sincere wish, but that that has also actuated us at every stage of the dispute.

It is hoped that the profession in England will take note of these facts, and that no medical man will be induced to take up any lodge appointments in New South Wales without first satisfying himself that he is not thereby acting detrimentally either to his own interests or those of his profession.

Tuberculosis in New South Wales.

In the year 1877 1.4 persons per 1,000 died from tuberculosis in this State; in 1882 the rate had risen to 1.5; in 1885 it rose to 1.7. In 1887 it dropped to 1.5 again, as a result, it is said, of a general awakening of the people to the necessity for hygiene and sanitary cleanliness. In 1892 it was down to 1.2; in 1897 it fell to 1, and in 1907 it was 0.8. The figures for 1913 are not yet available, but it is anticipated that there will be a still further fall in the rate to be recorded. There are several institutions in this State for the treatment of cases of tuberculosis. Besides the three private sanatoriums, there is a Government hospital for tuberculosis at Waterfall on the South Coast. This can accommodate 330 patients, and is used for the worst cases. On January 1st, 1913, there were 271 patients in this institution. During last year there were admitted 571 new cases, a total of 842 under treatment. On January 1st, 1914, there were 309 patients in this hospital, consisting of 220 males and 89 females. The death-rate was fairly high in view of the serious nature of the cases admitted. At the Queen Victoria Homes at Wentworth Falls and Thirlmere only the early cases are admitted, and the results obtained are excellent, and the death-rate very low.

At the three Government institutions, Newington, Rookwood, and Waterfall, and the three private sanatoriums, there is accommodation for an average daily number of 2,323 patients, and the annual expenditure on all of these is about £62,370.

Dinner to Dr. G. E. Miles.

On January 9th, 1914, Dr. Geo. E. Miles was entertained at a complimentary dinner in Sydney on the eve of his going to England on long leave after nearly twenty-nine years' service in the Lunacy Department of the New South Wales Government, and nearly eighteen years as medical superintendent of Rydalmere Hospital for the Insane, Paramatta. The chair was taken by Dr. Eric Sinclair, Inspector-General of the Insane, and among those present were Drs. W. C. Williamson (Deputy Inspector-General of the Insane and Medical Superintendent, Hospital for Insane, Paramatta), McDonall (Medical Superintendent, Gladesville), Hogg (Medical Superintendent, Kenmore), E. T. Thring, Chisolm Ross (formerly Medical Superintendent, Hospital for Insane, Callan Park), Harold Browne, Wallace, Andrew Davidson (formerly Medical Superintendent, Hospital for Insane, Callan Park), Millard (Medical Superintendent, Coast Hospital), Gordon McLeod, Underwood Prior, Moore Sampson, Lloyd Allen, and Oliver Latham. Valedictory speeches were made by Drs. Sinclair, Williamson, and Thring, and Dr. Miles responded.

GASTRO-ENTERITIS IN NEW SOUTH WALES.

In the year 1912, of 3,707 infants under 1 year of age who died in New South Wales, 1,163 died from diarrhœa and enteritis, the highest mortality being between the ages of 6 and 11 months. For the five years prior to 1912 the proportion of deaths from this cause per 1,000 births was 25.3, and in 1912 it was 27.4. The country proportion was only 17.7 and 19.2 respectively. Among the legitimate children the rate was 19.6 per 1,000 births, while among the illegitimate the rate was 69.2. Since 1903 the epidemic has shown a marked decrease, the rate in that year being 36.67. In 1911 it was down to 16.82. To assist in combating this heavy mortality from gastro-enteritis the Government has recently opened a new hospital for babies suffering from this complaint. It is situated on the south side of the harbour in a healthy locality about six miles from the city. It provides accommodation for some forty patients, and has been called the "Lady Edeline Babies' Home," after Lady Edeline Strickland, the wife of our present State Governor. Dr. Paton, the Director-General of Public Health, is the chairman of the committee appointed by the Government to manage this institution.

This is not, however, the only hospital in Sydney which is doing work of this kind. Some years ago the Benevolent Society of New South Wales opened a special hospital for infants suffering from gastro-enteritis, which is called the Renwick Hospital, after the late Sir Arthur Renwick, M.D., who was chairman of the board of this society for many years.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

THIRD ALL-INDIA SANITARY CONFERENCE.

THE third All-India Sanitary Conference was held at Lucknow from January 19th to 27th. Five days were devoted to the reading of papers and to discussions on numerous sanitary subjects, three days to excursions to inspect important sanitary arrangements, while the business of the conference was wound up on the ninth and last day by passing twenty-one important resolutions as to the sanitary requirements of the country. In last week's issue (February 14th, page 396) the opening address by the president, Sir Harcourt Butler (the member of the Governor-General's Council in charge of educational, medical, and sanitary affairs), and that delivered by Sir Charles Pardey Lukis, K.C.S.I., (Director-General of the Indian Medical Service) were given.

On the night of January 21st the members of the conference left by special train for Hardwar, the site of the greatest annual *mela*, or pilgrim fair, in India. The whole of January 22nd was devoted to inspection of the sanitary arrangements for the *mela*, as well as those for the permanent sanitation of Hardwar town, including a proposed water supply and drainage scheme; the new weir for the headworks of the Ganges canal was also visited. On the night of January 22nd the visitors returned to Lucknow. January 25th was devoted to a visit to Benares, another great centre of pilgrimage, although at Benares the pilgrims come in gradually all the year round, not, as at Hardwar and Allahabad, in enormous numbers for one short period every year. On January 26th the visitors went on to Allahabad and inspected the site of the great pilgrim fair held there, at the confluence of the Ganges and the Jumna, the *Magh mela*. On the mornings of January 21st and January 24th the new sanitary arrangements of Lucknow were inspected by members, without interfering with the regular work of the congress on these days; and on the evening of January 23rd, the *Taluqdars* (landed nobility) of Oudh entertained Sir Harcourt and the members of the conference at dinner at the Kaisarbagh Baradari, at which 150 guests were present.

The subjects discussed at the conference were numerous and important. They may be summarized as follows:

The reclamation of land by silt deposit, with reference to the mitigation of malaria. Sir Edward Buck, K.C.S.I., I.C.S.(ret.), formerly member of the Governor-General's Council, urged the necessity for the preparation of drainage maps. Professor Howard of Pusa described his experiments in drainage, by which not only was waterlogging diminished, but ploughing was rendered easier and cheaper. Major Buck read a note on the silting operations on the Western Jumna Canal. The Hon. Mr. C. H. Hutton read a paper on the utilization of silt in Italy, and Major W. W. Clemesha, Sanitary Commissioner, Bengal, described the silting up of the Bistupur *bhil* (swamp) at Barhampur, in Bengal, with special reference to its effect on malaria.

Drainage and sanitation in rural areas were discussed in papers by the Hon. R. R. Pantulu Guru for Madras, and the Hon. Rai Sri Ram Bahadur for the United Provinces, the discussion being continued by other members.

The medical inspection of schools and the teaching of hygiene were the subjects of several papers and of the next discussion.

Flies and their reduction was the subject of a paper by Major C. Young. Major Marjoribanks described the good effects of a special system of pitting nightsoil. Sir C. P. Lukis pointed out that the use of petroleum derivatives as disinfectants involved the destruction of the material treated as manure—a great drawback—as one object of the pitting system was to increase the agricultural value of land.

Women's service and infantile mortality. The proposal for the formation of a women's domestic sanitary service for India was put forward in a paper by Dr. Benson. Mr. Orr spoke of the useful work done by nurses in Bombay. A great field was open for voluntary workers in India. Dr. Rozdon read a paper on infantile mortality in India, and advocated a Medical Registration Act for India and improvement of the milk supply. Dr. Sousa pointed out the necessity for the formation of societies of Indian ladies and gentlemen with this end in view. Dr. Koilash Chandra Bose stated that infant mortality was largely due to four causes—early marriages, poverty, poor milk, and the ignorance of *dhais* (native midwives). Dr. B. B. Brahmachari said that the problem of infantile mortality was social, and insisted on the necessity of educating girls. Dr. Turner also referred to the need of education for mothers and *dhais*; and mentioned that each municipal dispensary in Bombay now had a trained nurse on its staff, while domestic hygiene was taught by house-to-house visiting, and the Bombay Corporation had provided funds for assisting mothers during their period of lying-in.

The notification of infectious diseases was advocated by Dr. de Mello, Lieutenant-Colonel Drake-Brockman, Dr. K. C. Bose, and Dr. B. B. Brahmachari. Majors Greig and Clemesha discussed the question whether beri-beri should be notifiable.

Tuberculosis. Dr. Wanless said that tuberculosis was greatly on the increase in India, and urged that every dispensary should have a tuberculosis shelter. Major Sprawson advocated wards rather than shelters. Dr. Newell thought the increase apparent more than real. A paper on antituberculosis measures in India, by Majors Sprawson and Cochrane, emphasized the necessity for better housing for the poor and improved town planning. Dr. Lankester thought that there was a real and great increase in the disease, particularly among the more poorly paid clerks and students. He warned the conference against the dangers of tuberculin in unskilled hands, a point which was also emphasized by Sir Malcolm Morris, who advocated treatment at home rather than in sanatoriums.

The milk trade and milk standards. Dr. Mann said that little milk was used by the poor in towns. Sir C. P. Lukis drew attention to the large amount of condensed milk now used in India and to its frequent contamination. Dr. Newell thought that the expense of feeding cattle was responsible for the high price of milk. In winding up the discussion, Dr. Mann pointed out that success could only be obtained by co-operation with the *gwalas* (cowkeepers), not by working against them.

Water supply. Waterworks and drainage by-laws and the assessment of water rates were discussed in the Engineering Section in papers by Majors Oldham and Madeley.

Lectures. On the evening of January 20th two lectures, illustrated by lantern slides, were given in the Medical College by Major McCarrison on goitre, and by Major S. R. Christophers on malaria.

(To be continued.)

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

EXTENSION OF POST-GRADUATE TEACHING IN EDINBURGH.

It will be remembered that during the past two years the second fortnight of July has been definitively included in the scope of the systematized course of post-graduate teaching in medicine in Edinburgh in connexion with the university and the royal colleges. The course which has hitherto occupied this fortnight has been one on diseases and defects of children. Arrangements have now been made to give another series of clinics and demonstrations in these two weeks, to be called the Course of Obstetrics and Gynaecology. The teaching will extend from Monday, July 20th, to Saturday, August 1st; the number of post-graduates attending will be limited to ten, and the inclusive fee will be 7 guineas. The arrangements for the first week are as follows: On each day from Monday to Friday Dr. J. W. Ballantyne will give an obstetric clinic at the Royal Maternity Hospital from 10 to 11 o'clock; from 11 to 1 there will be a gynaecological clinic at the Royal Infirmary by Dr. N. T. Brewis; this will be followed by an interval from 1 to 3; from 3 to 4 Dr. Berry Hart will give a series of demonstrations on sectional anatomy and placenta praevia; and from 4 to 5 there will be demonstrations by Drs. Barbour and R. W. Johnstone on practical gynaecological pathology. In the second week (July 27th to August 1st) Dr. Ballantyne will again give obstetric clinics at the hospital from 10 to 11; Dr. Barbour will give gynaecological clinics at the Royal Infirmary from 11 to 1, and Dr. Haig Ferguson from 1 to 2; there will be an interval from 2 to 3; Dr. Berry Hart will give demonstrations on eclampsia, deformed pelves and operations, on abortion, and on puerperal septicaemia from 3 to 4; and Dr. James Young will have a course of practical gynaecological pathology from 4 to 5. On the two Saturdays Dr. Haultain will perform gynaecological operations in the morning. There will also be opportunities furnished to small numbers of post-graduates to see the ordinary and operative work in the Royal Maternity Hospital at other hours in the twenty-four. This course is in addition to what has already been done in the months of August and September; it will not take the place of the obstetric and gynaecological teaching in September, and Dr. Ballantyne's Saturday clinics on diseases of pregnancy in August will be continued as in the past. Further information can be got from the Secretary of the Post-graduate Courses at the University New Buildings.

MEDICAL TREATMENT IN SCHOOLS.

A comprehensive scheme for the medical after-treatment of school children was considered at a conference in Glasgow of representatives of the various school boards in the county area convened by the Lanark County Council Committee on Secondary Education. A scheme was outlined to provide for the establishment of district centres for the treatment of visual and dental defects, the total estimated cost being £1,200, and it was pointed out that if nothing were done for diseases of the ear, nose, and throat on a comprehensive basis, the duty of providing for them would rest on individual school boards. It was suggested that a tentative experimental scheme might be devised to operate, say, during a year, with a view to testing by the treatment of individual cases, selected in proportion over the whole district, how a general scheme would be likely to operate both from the points of efficiency and cost. The chairman explained that it was impossible for the smaller boards in the county to have an adequate system of medical treatment, and unless some combined scheme was carried out the rural districts would derive no benefit from the Act of 1913. General approval of the scheme was expressed, although Dr. Brodie (Wishaw) regarded the cost as hugely under-estimated. A synopsis will be sent to each board, and they will be requested to consider it, and reply by the end of the present month to the county committee.

GLASGOW ROYAL INFIRMARY.

The report submitted to the annual general meeting in connexion with the Glasgow Royal Infirmary was held on the 9th inst., Lord Provost Stevenson presiding. The report submitted showed that during the past year the admissions were 9,661, as compared with 8,787 during the previous year. Of 9,650 patients treated to a conclusion, 931 died, a mortality-rate of 9.6 per cent.; of these, 349 died within forty-eight hours of admission, and, excluding these cases, the mortality-rate was 6.2 per cent. The average daily number resident was 656.8; the average residence of those treated to a conclusion, 24.85 days; the greatest number on any one day was 711. At the outdoor department there were: 8,290 medical cases, as against 14,371 the previous year, involving 16,860 attendances, as against 30,085; 8,291 surgical cases, involving 31,664 attendances, as against 13,786, with 48,677 attendances; 7,912 cases of special diseases, with 19,378 attendances, as compared with 9,576 cases and 22,240 attendances. The total number of accidents and urgent cases was 16,772, against 17,145; and the number of these admitted was 6,168, against 5,598; 6,099 patients attended the electrical department during the year. Of these, 388 attended for treatment, 37 for electro-diagnosis, and 5,674 for *x*-ray examination. The total number of *x*-ray examinations was 6,615. The average cost of each fully occupied bed was £78 19s. 4d., against £76 15s. 4d. in the year 1912; and the average cost of each patient treated to a conclusion was £5 7s. 5¾d., against £5 11s. 7¾d. in the previous year. *Ophthalmic Department:* The number of patients treated in the wards during the year was 1,051, against 1,045 in 1912, being an increase of 6; and 13,644 patients attended the dispensary for the first time, against 14,146 in 1912, the total number of attendances at the dispensary being 43,535. The average residence of in-patients was 12.1 days against 12.2 days in 1912. The number remaining in the institution on December 31st, 1913, was 26, against 31 in 1912. The total ordinary revenue for the year was £28,426 and the ordinary expenditure £53,548, showing a deficiency on the year's working of over £25,000. The extraordinary revenue amounted to £56,109, and the expenditure to £303.

The Lord Provost, in proposing the adoption of the report, pressed the claim of the infirmary for increased support, and the seconder suggested that the city should erect a small hospital for dealing with cases of accidents, thus allowing more room for some of the 900 people waiting admission to the medical and surgical wards of the Royal Infirmary.

GLASGOW ODONTOLOGICAL SOCIETY.

The tenth annual dinner of the Glasgow Odontological Society was held on February 7th. In submitting the civic toast during the evening Dr. Noble spoke of the need for the corporation placing dental treatment within the reach of all classes. Hitherto, he said, qualified treatment was available to only two classes—the necessitous poor who received free treatment at the dental hospital and those who were able to pay the professional fees. They were now trying to meet the case of the intervening classes. A Scottish dentists' association had been formed, every member of which was a qualified practitioner, and by opening shops as dental clinics it was intended to provide treatment to the working classes. Already two such clinics had been opened—one in Partick, the other on the south side. It was hoped to extend the clinic scheme to every town and village in Scotland where they were required. The clinics could also be used for the treatment of school children. Bailie Bruce Murray in acknowledging the toast referred to the evils of unqualified practice in the city. He instanced cases of canvassers for unqualified firms, one such concern having thirty such canvassers. The subject was unfortunately treated with levity and ignorance by the authorities.

SCOTTISH NURSING CONFERENCE.

Following upon the successful Nursing Conference held in Glasgow last week, it has been decided to hold a similar exhibition and conference in Edinburgh in February next year. One of the best sessions of the Glasgow Conference was that devoted to the consideration of a Midwives Act for Scotland. Dr. A. K. Chalmers, medical officer of health for Glasgow, read a paper on this subject, in which he stated that half of the midwives were without satisfactory training, they were untrained in any definite sense; it was a curious result of the increased payments possible under the maternity benefit sections of the Insurance Act that a number of old women had re-entered

practice as midwives. A letter was read from Dr. J. W. Ballantyne, Edinburgh, warmly supporting the view that there should be a Midwives Act for Scotland: it should not be a replica of the English Act, but an improvement on it: provision should be made for obtaining medical aid in abnormal cases, and for the payment of the medical men called in by the local authorities. Miss Paterson, one of the Scottish Insurance Commissioners, said that it was admitted by the Central Midwives Board in England that the women trained in Scotland were among the best on the register, and it was not fair that these women should have to face the competition of untrained women. A resolution favouring the passing of an Act was adopted unanimously.

The Romance of X Rays.

Dr. J. F. Hall-Edwards, of Birmingham General Hospital, delivered an address to the members of the Philosophical Institution, Edinburgh, on February 10th, on the subject of the romance of *x* rays. Regarded at first as harmless, these rays had been discovered to be very dangerous. No fewer than fifteen men had died as the result of contact with *x* rays, and there were throughout the world many dozens of crippled men like himself. Now, however, the *x*-ray apparatus was absolutely safe, not only for the patients, but for the operators, and compared with the dozen or so who had died, many thousands of lives had been saved, so that *x* rays had helped the interests of the world in a very high degree. It is well that lectures such as the above should be given to institutions like the Philosophical, so that the public may have the opportunity of hearing at first hand the truth about the risks and value of new methods of treatment from those well qualified (as Dr. Hall-Edwards assuredly is) to speak.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Proposed Radium Institute in Dublin.

At the last meeting of the Royal Dublin Society on the recommendation of the Committee of Science and its Industrial Applications a sum of £1,000 was voted for the purchase of radium, to be added to the society's present stock. The minutes of the subcommittee appointed to report on the steps to be taken to found a radium institute in Dublin were approved, and it was asked to frame a scheme for submission to the next meeting of the council under which the radium it is now decided to purchase, together with that already in the society's possession, shall be utilized.

Epidemic of Infantile Paralysis.

A serious outbreak of infantile paralysis has occurred in Irvinestown Union, co. Fermanagh. At present the medical officer, Dr. Aiken, has about 12 cases under treatment. The cases appear to be of an acute type, the children complaining of headache at night, and showing paralysis of the limbs on the following morning.

Suspension of Nursing Staff.

The entire nursing staff in connexion with the fever hospital in Strabane Workhouse was suspended by the board of guardians at their last weekly meeting. At the request of the guardians the Local Government Board has agreed to hold an inquiry into the nursing of the Strabane Fever Hospital.

Workhouse Inmate's Death from Burns.

A coroner's jury returned a verdict of accidental death from burns in the case of an inmate of the Magherafelt Workhouse, whose clothes caught fire on January 22nd. She died on January 30th. The jury added a rider to the effect that the fire guards in each ward should be locked, and that flannel or non-inflammable flannelette should be provided for nightdresses for the inmates.

First Aid in Asylums.

The Inspectors of Lunacy have issued their report relative to the death of a patient in the Monaghan Asylum some time ago by hanging. The report states that all precautions appear to have been taken, but it was unfortunate that those who discovered the patient were not competent to commence artificial respiration at once.

Medical Officers' Superannuation.

The Corporation of Sligo at its last meeting unanimously confirmed a resolution granting the full retiring allowance of £13 6s. 8d. a year to Dr. John Laird, who recently resigned his position as consulting sanitary officer of the borough.

At the last meeting of the Castlederg Board of Guardians a resolution was passed that a superannuation allowance of £116 16s. 11d. be granted Dr. Thomas Leary, who for over fifty-one years was medical officer of Castlederg Workhouse.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

The Manchester Royal Infirmary.

The annual report presented to the trustees of the Manchester Royal Infirmary at a meeting on February 13th showed that during the last year the number of patients treated was 68,781, of whom 9,049 were in-patients. The daily average number of beds occupied was 460, and the average stay of the patients was 18.57 days. The finances of the institution are still a cause of some concern, as the ordinary income of the infirmary itself was only £34,787 against an expenditure of £37,914, while the income of the Barnes Convalescent Home was only £3,213 against an expenditure of £5,557. There was thus a total deficit of £5,471 on the year. What makes the matter even worse is that the ordinary voluntary income last year only amounted to £15,320, the remainder of the income being derived from investments, patients' contributions, the absorption of all available legacies and by encroachment on the capital, and the report rightly states that "when the immense volume of business and wealth of Manchester is considered, £15,320 does not seem to be an adequate sum to be allotted to the maintenance of Manchester's premier charity." In moving the adoption of the report, the chairman of the board, Sir William Cobbett, called attention to the special appeal which is being made for funds for the building and equipment of the new central branch for accidents and out-patients. The cost of this branch will be about £25,000, and the subscriptions received up to the present amount to £18,701, which still leaves over £6,000 to be raised before the branch can be opened free from debt. The chairman also referred to the recent decision of the board to open a new surgical unit at the infirmary. This will entail an additional expenditure of £3,000 a year, and, in view of the general financial position, the board had only decided to undertake this great further responsibility because of the urgent appeals from a large number of patients waiting for admission. He earnestly hoped that additional subscriptions would be received so that their finances could be placed in a more satisfactory position than they had been for some time past. Dean Welldon also took the opportunity of expressing the hope that the courageous action of the board in opening the new surgical unit would meet with a generous response from the public.

Explosions in Mines.

A popular lecture was given on February 9th at the Manchester University by Professor H. B. Dixon on explosions in mines. Professor Dixon is professor of chemistry at the university and a member of the Home Office Committee on Mine Explosions, and has for some time been engaged in conducting experiments on a large scale at the specially equipped dépôt at Eskmeals. He said that a study of the great explosions of late years had shown that while firedamp might often be the initial cause of an explosion, the main cause of the violence was the ignition of the coal dust which was thrown up in vast clouds in the mine. Experiments had shown that a mixture of coal dust and various inert and incombustible dusts in equal proportions by weight could not be ignited even by such a flame as was produced by firing a charge

of 24 oz. of blasting powder from a cannon. Under certain conditions, however, such a mixture of coal dust and inert dust could be fired, and the later experiments at Eskmeals had been made with a view to discover how much gas must be added to this mixture to make it explosive. Though a definite figure had not yet been obtained it had been found that certainly over 2 per cent. gas would have to be added to the air to make the mixture explosive. In very gassy mines the proportion of inert dust would have to be increased, but it was now felt to be necessary to insist that this inert dust should be put in. It should be light, and so placed that whenever a concussion started up the coal dust, the inert dust would be raised at the same time. There would then be a mixture that would not explode, as the inert dust would cool it down below the ignition point. To illustrate his points to the audience, Professor Dixon repeated on a small scale some of the experiments which have been carried out at Eskmeals.

LIVERPOOL.

Liverpool Hospitals.

THE Lord Mayor, who presided at the annual meeting of the Royal Southern Hospital on February 10th, outlined a scheme which he is preparing in order to place the Liverpool medical charities on a satisfactory financial basis. At present the financial condition of many of the charities gives rise to grave concern. The lists of subscribers to the various hospitals show the same names recurring time after time. The number of subscribers is small, though they give generously. Under the new scheme an effort will be made to reach the mass of the public who do not subscribe. An appeal will be made, not by the individual hospitals, but by the Lord Mayor on behalf of the medical charities as a whole. In connexion with each trade, profession, and business in the city, subcommittees will be formed to see that those of their own calling are fulfilling their duty in reference to the hospitals. Statistics are being prepared showing what classes of the community are supporting hospital work and what sources of revenue are still unbroached.

Tuberculosis.

Some delay has occurred in the completion of the plans for the new Municipal Sanatorium for Tuberculosis at Fazakerley. The Hospitals Committee of the City Council is anxious to erect durable buildings adequate to the local estimate of the needs of the city. The Local Government Board, which, of course, contributes to the cost, relies on the statistics of the Astor Report, and is favouring some curtailment of building and of expense.

Special Correspondence.

BUDAPEST.

Epidemic Diseases in Hungary.

SOME interesting facts concerning the statistics of epidemic diseases in Hungary have been brought to light by Dr. Julius Pikler, whose book on this important subject is based upon the figures published by the Commission of the Hungarian Bureau of Statistics. The author points out that ever since the year 1874 the death-rate from epidemic diseases in Hungary has shown a steady decrease except in the case of scarlet fever, which has remained almost stationary since 1876. Small-pox, typhus exanthematicus and cholera, on the other hand, at present only appear sporadically, and are usually suppressed at once; moreover it should be remembered that these diseases are invariably imported into Budapest, the infection being traced in every case to some source without the city. Typhoid, on the whole, has been less frequent in Hungary since the improvement of the sewage system and waterworks. During the last two years, however, there has been an increase in the number of cases of typhoid in Budapest, and since the source of infection can hardly be in the city itself, every effort is made to obtain the history of each fresh case, so that measures may be taken to check the evil at the fountain head. Scarlet fever has also been more or less endemic in Budapest for several decades. In a table showing the scarlet fever statistics for the last three years in forty-six European cities, Budapest ranks successively as the forty-first, forty-second, and forty-third, the only towns occupying a lower place on the list being Bukarest, Lemberg, Odessa, St. Petersburg, and Warsaw. The reason for these alarming figures is to be found in the terrible poverty prevailing in the lower quarters of Budapest and in the ignorance and indifference that too often accompanies it. From 85 to 90 per cent. of the deaths from scarlet fever in that city take place amongst the poorer classes, and are in great part due to the insanitary conditions in which they live and the overcrowding of their houses, the common practice of receiving a number of lodgers night after night in one room being a potent factor in the spread of disease as well as an obstacle to the isolation of the patient. Any material improvement in the condition of the poorer classes in Budapest, therefore, would do much to eliminate scarlet fever from their midst, or at any rate would help to solve a problem which threatens to become a very pressing one. In the meantime, however, the only effectual means of checking the spread of infection is strict isolation, whilst it is of the utmost importance that every case of scarlet fever should be reported at once to the proper authorities. At the present moment the statistical returns prove beyond all doubt that more than half the cases are never registered, and in the poorer quarters of the city the mortality is extremely high. The only remedy for this abuse would be to open a special "epidemic bureau," worked by energetic and reliable doctors, having under them a staff of men whose duty it would be to find out and report every case of scarlet fever in the city. The doctors, besides visiting the various cases, would be required to supervise the removal of patients to the fever hospital, the disinfection of their houses, etc., whilst not the least important part of their duties would be the discovery of the source of the epidemic. The work of an organization of this kind could be greatly facilitated by the systematic medical supervision of school children such as is now carried out in England and Germany.

With regard to the isolation of scarlet-fever patients, there is no doubt that the question is often complicated by the fact that it is not always easy to diagnose the disease in its early stages, particularly where there is little or no rash. Much of this difficulty might be overcome if the medical course included six months' attendance at a fever hospital. It is very important that club doctors, above all, should be capable of recognizing the earliest signs of scarlet fever, since their examination of their patients must of necessity be very rapid and the symptoms of incipient disease might be easily overlooked by one who was not an expert in diagnosis. Competent club doctors are particularly necessary in Budapest, where out of a population of 1,000,000 more than 400,000 persons are members of sick clubs. But a correct diagnosis, important as it is, is not everything; and when the doctor has notified his case he has often considerable difficulty in isolating his patient.

A warning label on the front door may keep away visitors, but the different members of the household will probably continue to go to their offices or workshops, and to travel in public conveyances, thus scattering infection broadcast amongst all whom they meet. The poor, who regard the doctrine of infection and disinfection as a superstition of the rich, resent their bedding being taken to the dispensary for fumigation, and evade the law by hiding it in the house of a neighbour, who probably falls a victim to his generosity, and in his turn helps to spread the disease in a similar manner. There can be no doubt that, except in those cases where the patient and his nurse can be completely isolated from the rest of the family, and the doctor can rely upon the intelligent co-operation of the entire household, the proper place for a case of scarlet fever is the fever hospital. This fact has at last been recognized by the State, and a number of fever hospitals for the accommodation of patients during an epidemic will shortly be erected, whilst every effort is to be made to overcome popular prejudice against such institutions by most careful attention to the comfort and well-being of their inmates. One cause for the dislike of hospitals entertained by the general public is the fear of infection from other patients. That this fear is not wholly

groundless is proved by Dr. Preisich, who, in an article which appeared in the *Gyógyászat*, states that during the year 1912 as many as 137 persons suffering from scarlet fever caught other diseases, such as measles, diphtheria, varicella, etc., and in some cases more than one; whilst 81 cases of diphtheria and varicella caught scarlet fever. This danger, of course, can be avoided only by building special hospitals for every form of contagious disease. At the present moment the chief source of infection is the provinces, where, owing to the defective hygiene, sporadic cases of scarlet fever are constantly occurring, and may easily become the precursors of a formidable epidemic throughout the whole country. The utmost vigilance, therefore, should be maintained in country districts, and every precaution taken to prevent the infection being carried into towns. The same care should be observed with regard to diphtheria, which is as much a menace to the public health as scarlet fever, though, thanks to the modern treatment of this disease by serums, the mortality is now considerably less.

Correspondence.

THE NATURE OF PREGNANCY.

SIR,—Dr. Ballantyne's exceedingly interesting paper in the JOURNAL of February 14th invites discussion on many grounds. I wish more particularly to comment on the immunological bearings of pregnancy to which he has referred.

There is one sentence with which especially I am in disagreement;

> Even if it be proved that in some respects pregnancy is an instance of reaction to an antigen, it does not necessarily follow that from all points of view it is to be grouped with diseases.

Now I am sure that all workers in immunology will at once certify that where an immunity relation is discovered between two bodies it is the very essence of any reaction between the two. By immunity reaction I mean one or other of those standard laboratory tests which are being so fully worked out in matters of acquired or artificial immunity. Inherent or natural immunity is a problem still more subtle and elusive, and, for present purposes, need not be further mentioned.

Hormonal changes no doubt are associated with all questions of immunity, but the prime and essential thing is the immunity reaction *per se*. This alone gives reason for classing the relationship as immunological.

The question for Dr. Ballantyne, then, is not: What bearing has proof of immunity reactions on the question at issue? but, Have immunity reactions been certainly demonstrated? Grant that these have been demonstrated and all that remains is nomenclature—which, after all, is a matter of secondary importance. To label a healthy pregnant woman as the subject of an immunity reaction in relation to the ovum is to state a fact, but to label her as "suffering from a disease" seems unnecessarily incongruous. There is no such incongruity, however, in expressing the relationship as one of host and parasite, and for this reason I have always preferred what Dr. Ballantyne considers a less subtle term.

The same difficulty is met with in labour—the culmination of pregnancy. This is a physiological process, yet no product of conception can be discharged without the formation of a large and, at first, unprotected "wound"—the placental site.

So long, then, as we fully appreciate the intimate and essential nature of the reaction, the dangerous possibilities that may arise from a lack of its full development, and that our treatment of symptoms when they arise is to be based on our knowledge of immunological processes in general, may not nomenclature be left to take care of itself?

Personally, after more than three years' work on the subject, I am fully convinced that there is an immunity reaction between the mother and the ovum. My earliest positive results were obtained without a knowledge of, and by a different technique from, those of Fieux and Mauriac, and since that time a mass of work from recognized laboratories has made it clear that sensitization reactions and complement fixation tests are in reality positive during some or other period of pregnancy. These two I consider the most important; the significance of Abderhalden's results I am more ready to leave to the judgement of future years.

Still further, it seems to me that Dr. Ballantyne has scarcely differentiated sufficiently between the ovum and the fetus. At no time does the latter show any of the cytological inco-ordination which characterizes the invading trophoblast. There is, too, much clinical evidence that the fetus suffers *pari passu* with the mother in toxic pregnancy. In my article, to which Dr. Ballantyne has so kindly referred, I attempted to explain away the sensitization which occurs on injection of fetal (as distinguished from placental) extracts into the same species. Since then I have obtained evidence that not only the pregnant guinea-pig, but also the newly-born guinea-pig, is sensitive to homologous placenta. If this be confirmed much of the anomaly and confusion will be cleared up. Mother and fetus may then be admitted as existing in harmony, as Paul Bar has for years insisted, and every one who (like myself) has had the privilege of his clinic must always be appreciative of his work. There remains the placental link between the two, and in this we have now, I take it, full proof of an antigen character.

It is difficult to compress within the compass of a letter all that one would like to say on the subject, but I trust that I have made it plain that the admission of an immunity reaction between the mother and any part of the ovum has a significance which cannot be gainsaid by any "more welcome hypothesis" of "bracing strain."—I am, etc.,

Liverpool, Feb. 17th. H. LEITH MURRAY.

SIR,—The address by Dr. Ballantyne in the JOURNAL of February 14th on the nature of pregnancy and its practical bearings, is not only well conceived, but pregnant of facts and suggestions which it is to be hoped will bear fruit. Professor Bar's views are interesting to me, and further research is sure to clear up many present difficulties in regard to the ailments during pregnancy. The danger signals of pregnancy which Dr. Ballantyne thinks the pre-maternity nurse should look for are haemorrhage, excessive vomiting, extreme constipation, persistent headache. From my experiments and observations I have little doubt that all the ailments of pregnancy, as well as the great bulk of disease generally, are due to deficient elimination. Whatever view may be held as to the effect of the child upon the mother, the fact that the menstrual discharge ceases when pregnancy occurs, points to a great change, which must affect every organ. When in practice I used the sphygmograph, and found that the tension was increased during the pregnant state, the tracing resembling that from a case of Bright's disease of the kidney. Albuminuria is supposed to be in some way connected with eclampsia in the puerperal state. With a pulse of high tension as the normal pulse of pregnancy, it may require very little to increase the tension and cause disease. I find that the tension of the pulse varies with the food even in health, and a pulse of high tension can be very quickly reduced by attention to diet. Albuminuria may occur during pregnancy without eclampsia. I have seen the urine boil solid, and the confinement quite normal; so that in pregnancy we may have not only a pulse of high tension, but albumin in the urine and no eclampsia. From that fact we may infer that some other organ than the kidney is at fault when eclampsia occurs. I saw a case of eclampsia in which the convulsions continued after delivery, and jaundice was noticed as well as dropsy. Leucin and tyrosin were found in the urine, and a grave prognosis given by the consultant; nevertheless, by the action of a diuretic, the dropsy disappeared and recovery was uninterrupted. In that case elimination was at fault, and there can be little doubt that the copious diuresis saved the patient. It that case we had not only renal but hepatic stasis, both due, there can be little doubt, to intestinal stasis; and I feel sure that if the pregnant woman knew how to live so as to keep all the eliminating organs active, her health would not suffer.

As to the decreasing birth-rate, if our marriage laws were altered, and every woman had one child, we would have more children, but unless our luxurious habits and

customs can be changed the birth-rate in wedlock is not likely to increase.—I am, etc.,

Hawick, Feb. 14th. JOHN HADDON, M.D.

THE FALLING BIRTH-RATE.

SIR,—Why do Dr. J. W. Ballantyne and Dr. Amand Routh deplore the falling birth-rate though it is causing no fall in the population's rate of increase? Even in France the death-rate declines with the birth-rate; moreover, her recently published records for the first six months of 1913 show that there were 8,000 more births than during the same period of the previous year, but that there were 12,000 more deaths—in other words, that a rise of her birth-rate was accompanied by a still greater rise of the death-rate. Dr. Routh says that "every method of artificial prevention of conception is harmful in both its physical and its moral effect." Is there any scientific evidence to support such a sweeping statement?—I am, etc.,

BINNIE DUNLOP, M.B., Ch.B.

Alexandra Court, S.W., Feb. 17th.

THE DURATION OF GESTATION IN WOMAN.

SIR,—In these days of scientific acumen and advancement it is very evident that our present method of estimating the age of a human embryo from the date of the cessation of the last menstruation is not only fallacious but unscientific. The sole reason for thus reckoning is, because menstruation under ordinary circumstances is invariably inhibited by pregnancy.

In a paper in the *Edinburgh Medical Journal* (January) I have endeavoured to prove that fertilization in woman may take place at any time during the intermenstrual epoch—with the exception of the three days immediately preceding a menstrual period—and that when fertilization has taken place gestation does not begin until three days before the time when the first menstrual period inhibited by fertilization would have made its appearance, that is, gestation in every case begins at a fixed and definite time.

Reckoning from the day the menstrual discharge appears until it again reappears the menstrual epoch varies in different women, but these variations have no influence upon the length of time it takes the embryo to complete its development and growth in the uterus. Under ordinary physiological conditions the gestation period for a human fetus is as definite as the incubation period for a chick in the egg.

The duration of gestation in woman is eight months of thirty-one days *plus* the three days preceding the first inhibited menstruation, and the eight months must be reckoned from the day on which the first suppressed menstruation would under ordinary circumstances have made its appearace.—I am, etc.,

London, W., Jan. 23rd. JAMES OLIVER, M.D., F.R.S.Edin.

DORSAL EXAMINATION IN UNDIAGNOSED ABDOMINAL AFFECTIONS.

SIR,—Dorsal percussion, had it not been already available, would have been worth inventing for the benefit of the operating surgeon. His responsibilities teach him circumspection; but the physician's diagnosis is not less dependent upon a thoroughly good look "all round." Any help it could afford is most wanted in the obscure abdominal conditions which fail to yield any evidence to an anterior examination, and for the physician in the large variety of symptoms attributed to appendicitis. If I might venture to supplement my paper on "Pre-operative Diagnosis of Appendicitis"[1] with a brief remark—the uncertainty which often remains after searching abdominal examinations, and which urges the surgeon to operate and silences the physician's objections, suggests the desirability of two further attempts in another direction. The first of these would be to show that in any given case a dorsal examination likewise failed to reveal any abnormal appendicular signs, and that an operation was unnecessary. If, however, that local dorsal test were to prove inconclusive, the second endeavour should be to localize the cause of the unexplained symptoms elsewhere, by a complete dorsal examination in search of some definite abnormality. Both these methods should be tried before any doubtful case is submitted to appendicectomy; but the second one also applies to the entire field of abdominal diagnosis. In many conditions where a thorough abdominal examination is either impossible without an anaesthetic or inadvisable, some information might be obtained from a dorsal examination even by the simplest methods, by reason of the dorsal fixation of all the important organs except the small intestine and transverse colon. The possibility of mapping some of them out by careful percussion is a matter of demonstration. Some practical gain would accrue from the renewed discussion on appendicitis if it could lead to our combining forces for a systematic study of that method.

Apart from appendicitis, the most recent illustration of that need is contained in the "Remarks on Acute Pancreatitis," recently published by A. J. Blaxland and G. P. C. Claridge,[2] which are of great pathological value, and not least instructive clinically. It does not appear from the notes of their 7 cases that pancreatic disease was suspected in any of them before it was discovered in 5 cases at the laparotomy, and in 2, which were not operated, at the necropsy. Although it is stated that in all of them the pancreas was found after death to be more or less enlarged, the abdominal examination did not yield that chief and almost only diagnostic physical sign; in most of them the abdomen was retracted. It might, perhaps, have been yielded by a dorsal percussion of the pancreas to which these cases point as an indispensable clinical desideratum. This does not seem to have been attempted, except by Piorry, before 1899, when I endeavoured to obtain by dorsal percussion evidence of a suspected carcinoma of the head of the gland.[3] Since then I have been able to demonstrate that the outline of the pancreas can be mapped out in any normal subject with greater accuracy than abdominal palpation can define it.[4] The same applies to the dorsal percussion of the renal dullness for the help which it may afford to the diagnosis of any considerable enlargement of the inaccessible suprarenal gland. The easiest opportunity in all cases is the subacute or chronic stage, but the urgency arises in the acute conditions which exclude any deep abdominal palpation. The information may often prove incomplete and inconclusive, but, so far as it goes, it is always a genuine report of the deep-seated conditions, unadulterated by the pressures and displacements inseparable from deep palpation, and it is obtainable without inflicting any pain or hurt other than might arise from posture.

The method may not be quite easy; but in view of the important issues at stake the technical difficulty ought not to be lightly assumed to be insuperable.

Greater difficulties have been overcome in skiascopy and in most of our modern surgical methods, such as explorations of the bladder or ureters, and many others. The least we can do is to qualify by adequate practice to give it a competent trial as an essential complement to the anterior examination in all obscure abdominal affections, and as the only available substitute for abdominal palpation in the urgency of some of them. The objection based upon initial individual failures in unpractised hands does not stop the teaching of any of our indispensable arts and crafts. With sufficient opportunities students would soon discover for themselves that the more thorough method of percussion is by far the most simple; and that it is the only "easy" one for those who find any special difficulty in acquiring the proficiency required of them as a qualification to practise.—I am, etc.,

London, W., Jan. 21st. WM. EWART.

CANCER OF THE RECTUM.

SIR,—Will you allow me to make clear my position in respect to the dissemination of cancer of the rectum?

In the game of chess an easy method of securing victory is to move the opponent's pieces as well as one's own. The writer of your leading article on "Cancer of the Rectum" in your issue of January 31st unconsciously adopts this method. He says that Mr. Cole's investigations "refute the deductions of Handley, based on the examination of a single specimen, that the disease in an early stage disseminates widely in lymphatic plexuses in

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1912, p. 1741.

[2] BRITISH MEDICAL JOURNAL, vol. ii, 1913, p. 1423.

[3] BRITISH MEDICAL JOURNAL, vol. ii, 1899, pp. 1167–70.

[4] Cf. *Proc. Roy. Soc. Med.*, June, 1910.

the bowel wall." I have not made any such general statement.

Let me recall the circumstances in which my first case was published. I had recently formed the opinion that in the method of staining by mucicarmine I had found an instrument of great potential value for the study of the dissemination of cancer of mucous origin. It appeared likely that my own opportunities of applying the method would be restricted. I published my admittedly incomplete results in order to bring forward this method and to enlist the interest of others in a subject too large to be dealt with by a single worker. It is at least possible that but for my action the work of Mr. Lenthal Cheatle, Mr. Percival Cole, and Mr. K. W. Monsarrat would not have seen the light. If so, I need seek no further defence. My only regret is that my observations on the invasion of the anterior abdominal wall in gastric carcinoma, made by the same method and published at the same time, have not hitherto borne similar fruit.

I have found the appearances which, in my opinion, indicate permeation of the mucous lymphatic plexus in two cases of rectal cancer. I have been unable to find them in perhaps fifteen cases. The negative observations made by other observers and by myself show that this method of spread is rarer than I had thought, but they leave my positive results untouched. In the words of Claude Bernard, *Des faits négatifs, quelque nombreux qu'ils soient, ne détruisent jamais un seul fait positif.*—I am, etc.,

February 17th. W. SAMPSON HANDLEY.

THE INDIAN MEDICAL SERVICE.

SIR,—I am pleased to see that in your memorandum on the causes of discontent in the Indian Medical Service, the Family Pension Fund, as one, is enumerated. On this subject I would like to give you a concrete example in my own case. I married as a lieutenant-colonel, and, what with the donation, "disparity of ages," etc., I was made to pay down a cash sum of over £300, as well as I remember. When I got promotion to surgeon-general, I was compelled to go into Class I and pay the donation of, as well as I remember, over £200. I married a second time, and then again I was made to pay the donation towards Class I, just as if I had not paid it before, and, on account of my age and the disparity of ages between my wife and myself, the total sum I had to pay was, I think, over £500. All this in addition to a heavy monthly tax. This amounted to £50 a year while I was on the active list and now amounts to £25 a year. I may say that the big sums above named can be paid at once if the victim has the money, or can be met by twelve monthly instalments, subject to 4 per cent. interest. It seemed so outrageous that I should be called on to pay the donation for admission to Class I a second time, that I communicated with the Pay Examiner, but got no satisfaction. On arriving in England I wrote to the India Office, but all I got was a gruff reply, the incivility of which offended me, and added to my sense of injustice. In addition to heavy monthly payments, I have had to find sums aggregating something like £1,000; and if my wife died before me, all that would be left would be a pension of £40 a year for my little girl till marriage. If she also died, not a penny of all that money would go to my estate. It would be hard to persuade me that I could not have done better by insuring in a good office, or that I have been justly dealt with. My feeling of injustice over having to pay a second donation for admission to Class I is so great that nothing but a refund of it would remove it. In the matter of the disparity of ages, I feel that in justice I ought only to have been called on to pay the difference.

The memorandum deals chiefly with the point of view of the civil Indian Medical Service, but there is also grave discontent on the military side. I think the chief cause of this is the antiquated regimental system. No self-respecting man can be satisfied with his position in a regiment after he attains field rank. It is bad enough as a major, but as a lieutenant-colonel it is infinitely worse. Apart from this, there is the feeling that the system is antiquated and gives no opportunity for progress, such as has occurred in the Royal Army Medical Corps.

Then there is the question of promotion. Military principal medical officerships are open to men who have spent their lives on the civil side, while no military man can expect to get a civil principal medical officership. There is only one surgeon-generalship open to the military man, but it is also open to the civilian. Further, a man who has spent all his time on the military side can never rise to the top of the tree; he can never be principal medical officer in India (I retain the old titles), for that is reserved for the home service, and he can never be Director-General, I.M.S., for that is reserved for the civil surgeon. Further, no military man has ever been appointed to the India Office Board, so far as I am aware.—I am, etc.,

February 7th. SURGEON-GENERAL, I.M.S. (RET.)

INSPECTORS FOR SCHOOLS FOR MOTHERS.

SIR,—One may with safety hazard the guess that the medical inspector whose findings are quoted (in the JOURNAL of January 31st, p. 270) by Dr. J. Howard Jones "was never a mother." In their wisdom most Boards decide that posts of this kind, when thrown open to women, shall be the preserve of the unmarried. The policy of the London County Council is particularly flagrant in this respect—witness the school service. One might reasonably imagine that an older married woman would be better qualified to advise the mothers who bring their children up for medical inspection than the most brilliant female celibate direct from hospital, full of scientific information and enthusiastic in her work, but lacking in the more complete formation of character which married life, happy or the reverse, is bound to bring, and often betraying an ignorance of common domestic facts which these mothers are quick to appreciate. They can judge on these matters, and unfortunately base their further conclusions on the inspector's medical attainments accordingly.

It is utterly wrong that celibacy should be thus subsidized. Women who are reputed above the average are carefully selected, given comfortable salaries, and made to sign an agreement that they will resign on marriage. Ex-holders of whole-time inspectorships are as a rule quite unfitted to start general practice, of which they have no experience, so it is tantamount to asking a woman who joins the service either to bind herself to celibacy or to give up her profession entirely at the end of a few years—a sacrifice many do not feel prepared to make, and one which cannot be good for themselves, their husbands, or the nation, if made unwillingly.

Every case should be judged on its own merits. If a married woman be incapable of doing her work, get rid of her by all means, but in many instances she will not only be as good, but better than when single. Why, in the name of common sense, interfere with her any more than with the many married school teachers whose influence amongst children is so entirely for good?—I am, etc.,

February 2nd. SPES.

INSPECTORS OF THE MENTALLY DEFICIENT.

SIR,—In your issue of the 14th inst. particulars of three posts of inspectors under the Board of Control are given, with salaries attached, namely: (1) £500, rising to £800 by annual increments of £20. (2) £400, rising to £600 by annual increments of £20. (3) £350, rising to £550 by annual increments of £20. The only difference between the first two posts is that a knowledge of Welsh is essential for the first: and between them and the third is that a woman is to be appointed.

Are the mentally deficient more so and more numerous in Wales, and are the duties so onerous in the Principality that there is such a discrepancy in the salaries offered? And, at last, is the candidate with the higher efficiency and greater experience to be appointed to the more remunerative post?—I am, etc.,

February 16th. W. M. S.

THE RATIONAL TREATMENT OF INCIPIENT INSANITY.

SIR,—Again I must call attention to Dr. H. H. Newington's first letter in your issue of January 31st, in which he asserts categorically that "nowhere, either in the debate

at the Medico-Legal Society nor in Dr. Armstrong-Jones's paper which initiated the debate, was there any mention" of a clause drafted and accepted by Lord Halsbury for the treatment of early or incipient insanity. The gist of this letter was to claim priority of action in this matter for another society, which, as I stated, was a point not in debate, as I had made this clear in my paper, fully reported in the *Lancet*, January 17th, 1914, and which Dr. Newington acknowledged he had failed to read. In his letter[1] he evidently resents my pointing this out, but a fair-minded commentator is expected to be familiar with the text of his argument or cease to be considered a reliable critic. I cannot be held responsible if Dr. Newington, for "physical reasons" or any other, falls into inaccuracies of statement, because he does not choose to undertake "the duty of examining exhaustively" the material of his criticism. He complains rightly in his letter to you (February 14th, p. 402) of the legal and legislative caution which seems to have delayed action in this respect, but suggests there is no need to talk further on the matter, and during the last eight years he has certainly acted consistently with this view, for I am not aware of any record of his having considered the subject in any capacity or in any form since 1905.

I do not understand that part of Dr. Newington's letter in which he apparently claims to be a Hannibal who had cleared the ground for legal action in this matter. Even his warmest admirers would be unwilling to agree entirely to the distinction implied by this comparison, although analogy would go some distance in support of it. He, like Hannibal, had a full exchequer, and possibly ample followers. The parallel may yet be extended when it is remembered that the efforts of both ended in defeat—certainly not discreditable, but decisive.

As I stated on the occasion of the discussion and since, the time is now ripe for further action and fresh effort, the munificence of Dr. Henry Maudsley having once more brought forward this urgent need for a change in the law to treat incipient insanity on more humane as well as on more rational lines.

A committee of the Medico-Legal Society has met, and among its members are Lord Russell (the Chairman), and Sir William J. Collins, whose support accomplished practical legislation in a direction in which the efforts of Dr. Newington also failed. Now, however, an opportunity is being afforded once more to the British Medical Association and to the Medico-Psychological Association to help in this important matter; and it is hoped the modern Hannibal may also accept the aid of Hasdrubal (in the shape of this Committee), but with more hope of ultimate success than distinguished his memorable prototype.—I am, etc.,

Claybury, Feb. 14th. ROBERT ARMSTRONG-JONES.

[1] BRITISH MEDICAL JOURNAL, February 14th.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—F. W. W. Griffin, J. P. Hill.
M.C.—S. H. Ronquette.
M.B., B.C.—H. A. Douglas, W. B. Gourlay, W. D. Ross, J. W. Tonks.
B.C.—J. P. Hill, R. W. Ironside.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on January 28th.

Recognition of Teachers.

The following have been recognized as teachers of the University in the subjects and at the institutions indicated:

Guy's Hospital Medical School.—Mr. Harold Chapple (Midwifery and Diseases of Women), Dr. Alfred J. Clark (Pharmacology), Mr. Robert Davies-Colley (Surgery), Mr. Charles H. Fagge (Anatomy), Mr. George H. Hunt (Medicine), Mr. Patrick P. Laidlaw (Experimental Pathology), Mr. Thomas B. Layton (Laryngology), Dr. Gilbert W. de P. Nicholson (Pathology—Morbid Histology), Mr. Robert D. Rowlands (Anatomy).

St. George's Hospital Medical School.—Mr. George F. D. Smith (Midwifery).

London School of Medicine for Women.—Mr. James Berry (Surgery).

Bucknill Fund at University College.

The University College Committee reported that a further sum of £95 14s. 10d. had been received from the residue of the estate of the late Sir John Charles Bucknill, who bequeathed one-third of his residuary estate to University College for the purpose of founding a medical scholarship.

Study of Anthropology.

The Vice-Chancellor stated that he had accepted an invitation to be present, in his official capacity, at a conference summoned at the Drapers' Hall for February 19th on the initiative of the Joint Committee of the British Association for the Advancement of Science, and of the Royal Anthropological Institute of Great Britain and Ireland, for the further promotion and extension of the study of anthropology in the universities of Great Britain.

Appointment of Representatives.

Dr. W. F. Corfield, B.S., was appointed a governor of the Colchester Royal Grammar School, and Professor H. R. Kenwood the representative of the university (also in respect of University College), at the twenty-ninth congress of the Royal Sanitary Institute at Blackpool in July next.

Board of Intermediate Medical Studies.

Dr. A. J. Clark (Guy's Hospital Medical School) has been added to the Board of Intermediate Medical Studies.

Committee of Medical Members of the Senate.

Dr. Frederick Taylor, F.R.C.P., has been elected Chairman of the Committee of Medical Members of the Senate for the remainder of the year 1913–14.

Semon Lecture in Laryngology.

Professor Gustav Killian (Berlin) will deliver the Semon Lecture for 1914 at the Royal Society of Medicine, Wimpole Street, W., on Thursday, May 28th, at 5 p.m.

Advanced Lectures in Medicine.

The lecture on the action of radium upon animal cells, by Dr. H. Beckton, at the Middlesex Hospital, will be given on March 6th, at 5 p.m., and not March 4th, as previously announced.

Medals for the M.D. Examination.

University medals in connexion with the M.D. examination for internal and external students, December, 1913, have been awarded as follows: Branch I (Medicine), to Mr. Geoffrey Hadfield, B.S., of St. Bartholomew's Hospital; Branch IV (Midwifery and Diseases of Women), to Mr. Arthur A. Straton, B.S., of St. Mary's Hospital; Branch VI (Tropical Medicine), to Captain Robert Kelsall, B.S., of the Victoria University of Manchester and London School of Tropical Medicine.

Gilchrist Studentship for Women.

The Senate will proceed shortly to an appointment to the Gilchrist Studentship for Women of £100 tenable for one year by a graduate of the university who is prepared to take a course of study in an approved institution in preparation for some profession. Candidates must have graduated in honours in the University of London, and must be of not more than three years' standing from their first graduation. Applications must be received by the Principal not later than February 28th.

Medical Entrance Scholarships and Exhibitions, 1914.

A combined examination for medical entrance scholarships and exhibitions tenable in the faculties of medical sciences of University College and King's College, and in the medical schools of Westminster Hospital, London School of Medicine for Women, University College Hospital, and King's College Hospital, will be held in London by the London Inter-Collegiate Scholarships' Board in July, 1914. Copies of the regulations governing the scholarships and exhibitions may be obtained on application to the Secretary of the Inter-Collegiate Scholarships' Board, University College, Gower Street, W.C., or from the Secretaries or Deans of the respective colleges or medical schools concerned.

UNIVERSITY OF LIVERPOOL.

Appointments.

THE following appointments are announced: Dr. Warrington Yorke to the Walter Myers Chair of Parasitology; Dr. W. Permewan to be Lecturer in Laryngology, vice Dr. Middlemass Hunt.

SCOTTISH STUDENTS' REPRESENTATIVE COUNCILS.

THE annual conference of the students' representative councils of the Scottish universities was held this year in Glasgow. Professor Ferguson, in the absence of Principal Sir Donald MacAlister, welcomed the delegates, and expressed the hope that the debates would result in securing something which would be of advantage both to the students and the universities as a whole. He hoped that effect would be given to the motion that there should be lectureships on the history of medicine in each of the universities. Nothing would be more conducive to the interests of medical science and progress than such lectureships. Scotland was greatly behind in that respect compared with other places. He did not advocate these lectureships as part of the medical curriculum, as the curriculum was already too heavy. The motion was adopted by the conference. A motion "that the authorities be petitioned to make the

preliminary examination in Medicine uniform with the preliminary examination for Arts and Science degrees" was also carried. Among other resolutions which were adopted were the following

That the conference, in view of the fact that previous motions unanimously passed by the whole Scottish student body have been totally disregarded by the various University Courts and Senatus when sent to them for their consideration, should lay the matter before the members of Parliament for the Scottish universities, so that they may take what steps they think fit to remedy this state of matters.

That the conference deprecate the excessive part played by the University Courts in rectorial elections and in the conduct of the rectorial addresses.

That the conference approve of the general wearing of academic dress by the students of the universities of Scotland, and of the compulsory wearing of such dress on all official occasions, and crave the Senatus of each university so to ordain.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary council was held on February 12th, Sir Rickman J. Godlee, President, in the chair.

Honorary Fellow.

Professor V. A. Oppel, Professor of Surgery at the Imperial Academy of Medicine at St. Petersburg, was introduced, and signed the roll of Honorary Fellows and was presented with the Diploma of Honorary Fellowship.

Issue of Diplomas.

Diplomas of membership were granted to ninety-seven candidates found qualified at the recent examinations, and Diplomas in Public Health were granted, with the Royal College of Physicians, to twenty-three candidates found qualified.

Bradshaw Lecturer.

The President reported that he had chosen Sir Frederic Eve as Bradshaw Lecturer for the ensuing collegiate year.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

On February 2nd the following registered medical practitioners, having passed the necessary examination, were duly admitted Licentiates in Midwifery of the College:

Narayen Vinayek Ajinkya, C. L. A. de Silva, Sarat Chandra Mitra, W. S. Rörich.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the President and Council of the Royal College of Surgeons held on February 5th, Sir Lambert H. Ormsby, Past President of the College, was elected the representative of the College on the General Council of Medical Education and Registration of the United Kingdom.

Annual Dinner.

The annual Charter Day dinner of the Royal College of Surgeons in Ireland took place in the College Hall on February 11th. The President of the College (Dr. R. D. Purefoy) occupied the chair. The Lord-Lieutenant sat on the President's right hand, and the Master of the Rolls on his left. In proposing the health of the Lord-Lieutenant, the President referred to the work done by the Countess of Aberdeen in alleviating the conditions of the poor and sick of this country. Dr. F. Conway Dwyer, Vice-President, proposed the toast of "The Guests," which was responded to by the Master of the Rolls and the Rev. Dr. Mahaffy. Sir Charles Cameron proposed the toast of the "Sister College," the Royal College of Physicians. On behalf of the Council of the College, His Excellency the Lord-Lieutenant presented to the President a solid silver salver in recognition of his services to the College during the past two years. A diamond and pearl pendant was also presented to the President's sister, Miss Purefoy. During the course of the evening songs were contributed by Messrs. Charles Kelly, Melford D'Alton, J. R. Morgan, and John Horan.

CONJOINT BOARD IN ENGLAND.

At a meeting of comitia of the Royal College of Physicians on January 29th, and of the Council of the Royal College of Surgeons on February 12th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred by each College on the following ninety-seven candidates who had passed the Final Examination in Medicine, Surgery, and Midwifery of the Conjoint Examining Board:

A. D. Anderson, E. B. Argles, H. A. Ash, G. Aspinall-Stivala, C. H. B. Avarne, E. R. Bailey (L.D.S.Eng.), A. C. Ballance, Framroz Dossabhoy Bana (M.B., B.S.Bombay), F. M. Barnes, W. C. P. Barrett, M. H. Barton, F. P. Bennett, A. H. F. Bizarro (M.D.Lisbon), P. R. Boswell, A. Bouchage (M.D.Paris), F. C. S. Broome, D. A. Carmichael (M.D.Kingston), Hari Chand (L.M. and S.Punjab), Seemampillai Francis Chellappah (L.M. and S.Ceylon), Trimbak Lakshman Chiplonkar, E. L. Christoffelsz, W. H. Cornelius (L.D.S.Eng.), F. H. L. Cunningham, J. C. Davies, L. R. Gothin de Glanville, R. M. de Mowbray, C. K. G. Dick, Kashinath Jaideo Dikshit (L.M. and S.Bombay), R. H. Dix, P. Dyorkovitz, G. D. East, Mohammed El Bakry, R. Errington, Alma Percy Ford, A. N. Garrod, N. Gray, F. H. Gumpy, H. Gwynne-Jones, W. R. H. Heddy, D. A. Henderson (M.B.Toronto), C. L. Herklots, E. S. W. Hirsch, G. A. Hodgson, T. J. H. Hoskin, Nilkanth Shriram Jatar, D. W. Jones, G. L. Jones, T. A. Jones, Mahomed Moose Khan, J. G. L'Etang, G. H. S. Letchworth, R. J. McN. Love, N. P. L. Lumb, R. G. Lyster, K. H. McMillan, D. G. Meltac, J. E. Margnat (M.D.Paris), F. D. Marsh, E. H. Marshall, W. H. Marshall, J. H. Mather, R. K. Merson, G. C. Metcalfe, L. E. Napier, H. G. Oliver, W. J. Paramore, C. F. Pedley, R. A. Preston, J. L. Pyriston, G. B. Pritchard (L.D.S.Eng.), W. R. Pryn, H. J. Rawson, S. A. Riddett (L.D.S.Eng.), G. D. Robertson, P. H. C. C. Schmidt (M.D.Freiburg), A. G. Shera, C. Sherris, R. Silcock, F. G. A. Smyth, T. R. Snelling, A. H. Southam, M. T. W. Steedman, C. K. Sylvester, J. B. Thackeray, Mom Chow Thavara, F. Tooth, H. Topham, T. R. Trounce (L.D.S.Eng.), D. S. Twigg, Jagannath Balkrishna Vaidya (L.M. and S.Bombay), R. E. S. Waddington, G. H. D. Webb, F. E. Weerasooria (L.M. and S.Ceylon), J. R. White (M.B., B.S.New Zealand), S. B. White, L. C. Wilkinson, and J. F. W. Wyer.

Diplomas in Public Health.

Diplomas in Public Health were also conferred upon the following (in conjunction with the Royal College of Surgeons):

C. N. Atlee, W. J. E. Bell (Captain, R.A.M.C.), Rose Lilian Humphrey Davy, C. L. Dunn (Captain, I.M.S.), Irene Davy Eaton, Maud Tresilian Fere, A. B. Fry (Major, I.M.S.), C. J. Galbraith, Maharaj Krishna Kapur (L.M. and S., Punjab), Nariman Bejanji Kolsavala (L.M. and S., Bombay), N. Low (Captain, R.A.M.C.), D. McIntyre, Marjorie Eva Middleton, A. H. Moore, C. C. Morrell, W. W. Pratt, Keshava Narayana Rau (M.B., C.M., Madras), R. O. Sibley, C. L. Sutherland, J. M. Todesco, F. E. Wilson (Captain, I.M.S.), J. H. Wood, and Jamsetji Hormusji Writer (L.M. and S., Bombay).

The Services.

THE REWARD OF RESEARCH IN INDIA.

Sir Ronald Ross has sent us a copy of correspondence which he had two years ago with the India Office, and asks us to publish it, as it shows the position adopted by British Governments towards medical investigations—a point to which he drew attention in the article published in the Journal of February 7th. Although his Indian investigations of 1891–99 did not at first form any part of his official duties, and though they cost him money, time, and loss of advancement, it would appear that the India Office does not feel itself in any way to be indebted to him for the work. This is the more remarkable since the disease which he successfully investigated causes, by official estimates, more than a million deaths a year in India in ordinary years, and much more than that in epidemic years. From that time to this, he tells us, he has received no thanks from the Indian Government for his work. It might be interesting to compare the facts given in his letter printed below with the handsome list of salaries displayed in *Whitaker's Almanack* as being given to able officials, who, however, have worked in fields which are probably of less advantage to the Indian public. Obviously the more difficult investigations are scarcely likely to be undertaken unless there is some prospect of professional reward for them when successful; and it would be interesting to ask what British Colonial Governments do to encourage such labours. We have recently published other letters regarding the Indian Medical Service. We recognize that some great improvements have been made in that service, but certainly think that research in it would be more stimulated if highly successful efforts in this direction were to receive proper recognition. The correspondence is as follows:

[Copy.]

To the Under Secretary of State,
India Office, Whitehall, London. March 7th, 1912.

Sir,—I joined the Indian Medical Service in 1881 and retired from it in 1899 as major, with the first pension of about £292 a year. It has been recently suggested to me that I have grounds for petitioning for one of the higher-scale pensions which are sometimes given to officers of the Indian Medical Service, and I now have the honour to write to ask whether such an application would be in order.

I may mention that during my eighteen years' service in India I was engaged from about 1891 to 1899 in very laborious studies on the mode of infection in malaria; that these studies were at first carried out during my own leisure, and always occasioned me very considerable expense, partly in consequence of the frequent changes of station involved and partly because I was obliged to decline accepting a civil post which had been kindly offered to me. Towards the end of the service the researches were successful and showed that malaria is carried by mosquitos. Since then I have been engaged at this university as professor of tropical medicine, and during this period have taught a considerable number of officers of the Indian Medical Service, and have continued researches and writings on the subject of tropical diseases, which I believe have been and will be of benefit to India. I do not know whether such matters can be taken into consideration, but beg leave to lay them before you.

Sir William Lever, Bart., Chairman of this School of Tropical Medicine, authorizes me to say that he will support this application if referred to.—I have the honour to be, Sir, your most obedient Servant,

(Signed) R. Ross

Military Department,
India Office, London, S.W.
M. 3079.

India Office,
Whitehall,
London, S.W.
April 3rd, 1912.

Sir, In reply to your letter of March 7th, 1912, I am directed to inform you that having regard to the fact that you applied voluntarily to retire from the Indian Medical Service in order that you might accept the offer of the Lectureship in Tropical Diseases at the Liverpool University, the Secretary of State for India in Council, while recognizing the value of your work in connexion with the cause and prevention of malaria and allied diseases, regrets that he is unable to sanction the grant to you of a special additional pension from Indian revenues.—I am, Sir, your obedient Servant,

(Signature not certainly legible.)

Professor Sir Ronald Ross, K.C.B.,
The University, Liverpool.

The Under Secretary of State,
India Office, London.

April 15th, 1912.

Sir,—I beg to acknowledge your letter No. M. 3079 of April 3rd informing me that the Secretary of State is unable to sanction the grant to me of a special additional pension from Indian revenues, in regard to the fact that I applied voluntarily to retire from the Indian Medical Service. When I wrote my letter of March 7th, I was under the impression that such additional pensions were given for good work done during service, and did not know that retirement under the rules of the service is any bar to the receipt of them.—I am, Sir, your obedient Servant,

(Signed) R. Ross.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting was held at 34, Copthall Avenue, E.C., on Tuesday, February 10th. In the absence of Dr. Balding, Surgeon-General Evatt, President of the Association, was in the chair.

Dispute at Burnley.—The Honorary Secretary reported that the Burnley dispute had been referred to a committee consisting of representatives of the local profession and of the guardians in equal numbers, with the district inspector of the Local Government Board as chairman. Several meetings of this committee had been held, but hitherto no agreement had been come to.

Insurance Fees.—The Honorary Secretary said he was glad to be able to report that the statement made by him at the last Council meeting, to the effect that the medical officers of the Bethnal Green Infirmary permitted the guardians to retain fees paid them by the Insurance Committee for attendance on panel patients among the guardians' employees, was incorrect. He added that he had done his utmost at the recent Representative Meeting of the British Medical Association in London to prevent the rescinding of the latter portion of the resolution condemning the surrender of panel fees by Poor Law medical officers passed at the Brighton meeting of the British Medical Association, but the resolution had been considerably watered down.

District Medical Officers and Police Cases.—The council next considered the abuse of Poor Law administration by the police authorities at Wigan, where a district medical officer had been required to act as assistant police surgeon. A memorial had been sent by the association to the Local Government Board; a letter received in reply contained the following passage: "I am to point out that under the Board's Regulations it is the duty of a district medical officer, upon receipt of an order from the relieving officer, to attend a case at any place within his district. If he should consider that the order was improperly given it would be open to him subsequently to make representations on the subject to the Board of Guardians. Upon the information before the Board it appears to them that the cases in which the district medical officer was summoned to attend were in general cases in which there was prima facie evidence of destitution and not cases of persons under arrest, which the Board understand are dealt with entirely by the police surgeon." The council expressed regret at the tenor of the letter, holding that the system tended to jeopardize the safety of unfortunates in the hands of the police, who might often require immediate attendance, and much time might be lost in applying for a medical order. In all other parts of England and Wales the police surgeon was summoned, or the nearest medical practitioner.

Federation.—The council approved the principle of federation of all sectional Poor Law officers' associations, proposed by the National Poor Law Officers' Association.

Annual Meeting.—It was resolved, on the invitation of the Mayor of Burnley, to hold the annual meeting of the Poor Law Medical Officers' Association in that town on Thursday, July 2nd.

Poor Law Institutions Order, 1913.—This order, which comes into force on April 1st next, would, it was pointed out, add considerably to the duties of indoor medical officers, but contained no mention of any extra payment. The council decided to seek further information from indoor Poor Law medical officers as to (1) the number of sick in the institution; (2) the total number of inmates; (3) salary; and (4) extra work thrown upon them by the order. The honorary secretary and Dr. Thackray Parsons undertook to draw up a report on the subject.

Obituary.

DR. HANS SCHLIMPERT.

PRIVATDOCENT; ASSISTANT IN THE UNIVERSITÄTS-FRAUENKLINIK, FREIBURG.

ONE of the most notable figures at the annual meeting of the British Medical Association in Brighton last July was that of Dr. Hans Schlimpert of the Freiburg University; and members, especially of the Section of Obstetrics and Gynaecology, will learn with great regret of his tragic death on January 25th. He had felt slightly indisposed for a few days, and on January 19th he was compelled to break off suddenly in the middle of his lecture, saying, "Gentlemen, I must beg you to excuse me. I have a commencing appendicitis." On the following evening he called in his chief, Geheimrath Krönig, begging him to operate immediately, but although this was done within the hour, there was little hope of his recovery; he lingered for a few days, bearing pain with the greatest fortitude, and died a few hours after a second hopeless operation on January 25th.

Few men seemed to have a more brilliant future. He was able, extraordinarily painstaking, and had a great capacity for hard work and endurance. Those of his colleagues who knew him intimately will never forget the kindly help he always willingly gave, his great courtesy, his goodness, and the unfailing interest he took in his patients. He had done valuable scientific work in connexion with the etiology and pathology of tuberculosis of the generative organs, under Professor Schmorl at Dresden, and later, under Professor Krönig at Freiburg. After patient research he came to the conclusion that tuberculosis of the generative organs was not, as formerly was thought, a primary ascending tuberculosis, but a secondary affection, arising probably through the blood channels, or lymphatic vessels, from, say, an existing phthisis pulmonalis. From the study of a very large amount of pathological material he came to the conclusion that death was seldom due to the genital tuberculosis, but to tuberculosis of some other part of the organism.

His special work, however, was in anaesthesia. Not satisfied with chloroform and ether, especially with the effect of ether on the respiratory system, he tried by means of intravenous methods to ensure a better and safer anaesthesia. His work in improving Bier's lumbar anaesthesia is now well known. He first made use of sacral anaesthesia for abdominal surgery; he had the happy inspiration that by changing the position of the patient the anaesthetic could be injected into the extra-dural space and so reach the nerves which supply the abdominal cavity. Shortly before his death he began anatomical researches as to the possibility of interrupting the sensory and motor nerve conduction to the abdominal cavity, and two days after his first operation he was busy correcting the proofs of this work.

When Abderhalden published his essay on the serum reaction of pregnancy, Schlimpert was one of the first to investigate the value of the reaction and to confirm and improve upon it. Only a short time before his death he had finished a monograph on the etiology and treatment of septic peritonitis, another attempt to discover some means of preventing this complication; and it seems an irony of fate that at the end of his work he should have come to the conclusion that we only succeed in curing those cases in which the less virulent micro-organisms are present. He himself was an example of this conclusion; no single symptom of peritonitis was spared him; he never murmured; it was only at the height of his pain that he said, "I could never have believed that death from peritonitis could have been so terrible."

His love of truthfulness, his sincerity, his loyalty to his colleagues, his sense of humour, his great love of his parents and his home, were among the qualities that endeared him to his friends and colleagues, and made him

one of those personalities the profession can ill afford to lose. Krönig, in his address to his students, spoke of him as a friend, a hero, and the chosen leader of the coming generation in gynaecology; and because of the spirit of internationalism that has so pervaded all the medicine and surgery of this age, we venture to think that our sympathy and sorrow for the loss of so brilliant a gynaecologist will be accepted by his friends in all parts of Europe.

OTTAVIO MORISANI, M.D., SENATOR OF ITALY,
PROFESSOR OF OBSTETRICS AND GYNAECOLOGY, UNIVERSITY OF NAPLES.

PROFESSOR OTTAVIO MORISANI, who died at Naples on January 24th, was one of the most distinguished obstetricians in Europe. Born at Formicola, in the province of Caserta, in 1835, he studied medicine at Naples and took his doctor's degree at the university of that city in 1855, when he was barely 20 years of age. His first inclination was towards surgery. In 1860 he was appointed surgeon-extraordinary to the Hospital of the Incurabili, and he translated Nélaton's *Pathologie Chirurgicale* and Malgaigne's *Médecine Opératoire*. From 1864 onwards, however, he devoted himself wholly to midwifery and diseases of women. In 1867 he qualified as a lecturer in the University of Naples, and in 1874 he was appointed professor of clinical obstetrics. Soon afterwards he became director of the Clinical Institute of Obstetrics and Gynaecology at Naples. He was the author of three books, which have gone through several editions and become classics in the literature of the speciality. These are *Obstetrics in Synoptical Tables*, which was published in 1865; a *Manual of Obstetrical Operations*, which appeared in 1878, and a *Manual of Obstetrics*, which was issued in 1883. He was also the author of several other writings. He gained a worldwide reputation, and enjoyed the confidence of the King and Queen of Italy; he officiated at the birth of the Princess Jolanda and the Crown Prince Umberto. Many distinctions, Italian and foreign, were conferred on him. For a great number of years he was vice-president of the Società Italiana di Ostetricia e Ginecologia. He was the founder and editor of the *Archivio di Ostetricia e Ginecologia*, a periodical which has a great reputation among specialists. In 1907 he was disabled by an attack of hemiplegia, and retired with the title of Emeritus Professor.

Professor Morisani was a teacher of the first order, and a number of students who are now prominent as obstetricians and gynaecologists were his pupils. At the International Obstetrical Congress held in Rome in 1894 Professor Leopold hailed him as the most brilliant light of European obstetrics. In 1890 he was made a Senator of Italy. In 1895 he was elected a corresponding member and in 1909 an Associate of the Paris Academy of Medicine. At a meeting of that body on February 3rd the President, M. Ch. Perier, said that Professor Pinard had supplied him with the following appreciation of Morisani's work:

> These works were the obstetrical gospel of many generations. Morisani was famous as an obstetrician all the world over, but the finest gem in his crown is the tenacious and indefatigable struggle he made for the revival of Sigault's operation—symphysiotomy.

His active propaganda, the President added, helped to free obstetricians from a scientific opprobrium—embryotomy of the living child or feticide. It was said of Morisani that his intelligence and his heart were as big as his body was little.

MANY medical friends and former fellow-students will learn with much regret of the death of Dr. ARTHUR REGINALD HARDY, of Buxton, on February 2nd. He was the son of the late Rev. Isaac J. Hardy, of Buxton, and early showed a desire to enter the medical profession. In 1902 he began his studies at the Owens College Medical School. During his student days he developed pulmonary tuberculosis, which severely handicapped his academic career, in spite of the eager determination he showed that his illness should not interfere with what he regarded as his chosen life's work. He obtained the diploma of L.S.A. in 1908, and subsequently settled down to the double task of maintaining his health and establishing a practice in Buxton. Until just over a year ago, when his health became more seriously impaired, he had made excellent progress in building up a practice, and was gaining name and fame for himself in the special branch of medical science connected with the treatment of rheumatism, rheumatoid arthritis, gout, etc., by the Buxton thermal waters, and in the newer methods of applying medical electricity for the alleviation of these diseases. Dr. Hardy was of a most sincere and kindly disposition, and an admirable friend. He had a wonderful enthusiasm for his work, which often impelled him to draw too largely on his strength, and showed itself in a remarkable way, even when fighting a losing battle with an insidious disease. Possessed of a keen and logical mind, Dr. Hardy had increased his natural gifts by very wide and varied reading, and it is deeply to be regretted that a cruel fate should have prevented the perfecting of those intellectual abilities by years of experience, and that a life so full of promise should thus have been brought to an untimely close.

LIEUTENANT-COLONEL ROBERT DOVETON HODSON, of Trowbridge, Wilts, and of the R.A.M.C.(retired), died at Bournemouth on January 30th, aged 59. He was born on December 14th, 1854, educated at Guy's and St. Mary's Hospitals, took the diplomas of M.R.C.S. and the L.R.C.P. Edin. in 1876, and entered the Army Medical Department, as it was then called, on August 5th, 1877. He became Surgeon-Major on August 5th, 1889, and Lieutenant-Colonel on August 5th, 1897, retiring on attaining the age of 55 on December 14th, 1909. He served in the Afghan war of 1878–80, took part in the occupation of Kandahar, and received the Afghan medal; also in South Africa in 1899–1900, where he served in the operations in Cape Colony, and received the Queen's medal with two clasps.

CAPTAIN PERCY FARRANT, of the Royal Army Medical Corps, died at Sierra Leone on February 10th, aged 32. He took the diplomas of M.R.C.S. and L.R.C.P. in 1905, and entered the Royal Army Medical Corps, from which he was seconded to serve as house-surgeon to the Westminster Hospital. He served in Jamaica for three years; a full year's service in Sierra Leone would have ended on February 27th.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. John G. Cecil, till recently professor of the principles of medicine and clinical medicine in the University of Louisville, aged 58; Dr. Giuseppe Cesari, professor of materia medica in the University of Modena; Dr. Alexander O. Erskine, emeritus professor of obstetrics and paediatrics in the Memphis Hospital Medical College, and sometime Dean of the College, aged 81; Professor Heinrich Grabower, of Berlin, well known by his researches on the innervation of the larynx and on ozaena, aged 64; Dr. A. Laguesse, formerly professor of natural history in the Medical School of Dijon, aged 85; Dr. Lefèvre, representative of the Seine Department in the French Senate, aged 80; Mrs. E. Musson, professor of otology in the Woman's Medical College of Pennsylvania at Philadelphia; Professor Neufeld, assistant director of the Royal Nutrition and Food Stuff Research Institute of Würzburg, aged 48; Dr. Openchovsky, professor of clinical therapeutics in the Medical Faculty of Charkow; Dr. Emil Pernitza, formerly physician to St. Joseph's Hospital for Children, Vienna; Dr. Charles Phelps, for forty years a member of the staff of Bellevue Hospital, New York, and author of a textbook entitled *Injuries to the Brain* and of other works on surgical subjects, aged 79; and Dr. Volmer, for many years medical director of the Catholic Hospital of St. Hedwige, Berlin, aged 81.

THE Board of Agriculture's second interim report of the Departmental Committee on Swine Fever states that inoculation with serum alone is of no practical value, and that all known methods of vaccination or simultaneous inoculation with serum and virus exposes the animal to risk and renders it infective to others. Further experiments are necessary in the hope of finding an effective form of vaccination.

Medico-Legal.

THE BRITISH MEDICAL ASSOCIATION: ALTERATION OF MEMORANDUM AND ARTICLES.

ON Tuesday, February 17th, Mr. Justice Warrington heard a petition which was presented pursuant to the Companies' Consolidation Act, 1908, to alter the terms of the Association's Memorandum of Association.

Mr. Colquhoun Dill (instructed by Messrs. Hempsons) supported the application, which was not opposed.

His Lordship made an order confirming the alterations proposed at the extraordinary meeting of December 5th, 1913, and subsequently confirmed at a meeting on December 30th, 1913, as published in the SUPPLEMENT of January 3rd, 1914, p. 3.

PUNISHING INFIRMARY CHILDREN.

ON February 11th the Lord Chief Justice, sitting with a special jury, heard a case in which Dr. William John Charles Keats, medical superintendent of the Camberwell Infirmary, sought to recover damages for libel from Mr. J. C. Connolly, editor of the *Dulwich Post*. Mr. McCall, K.C., and Mr. Neilson (on behalf of the London and Counties Medical Protection Society) appeared for the plaintiff. The defendant appeared in person.

The plaintiff's case was that when a guardians' election was pending in March, 1913, the defendant, who was a very prominent local politician, published a report of a meeting of the guardians at which a report made by the plaintiff had been considered. This report related to certain grave cases of insubordination in the wards as a result of which the plaintiff had been compelled to administer corporal punishment to certain boys. In dealing with it on March 22nd, 1913, the defendant headed his column: "Dr. Keats' Cat of Five Tails. Flogging Children in the Infirmary." On May 3rd another article appeared, headed "Guardians and Flogging. Dr. Keats' Invisible Whip." This purported to be a report of a guardians' meeting, but plaintiff complained that the defendant had selected from a long discussion what answered his purpose.

The defendant, who had pleaded fair comment, said in the course of the case that he had no feeling against the plaintiff.

The jury returned a verdict for the plaintiff and awarded £100 damages.

Judgement was entered accordingly with costs.

*** In a somewhat similar action brought by the same plaintiff against the *London Budget*, the plaintiff was awarded £100 damages (see BRITISH MEDICAL JOURNAL, January 31st, 1914, p. 279).

Medical News.

PROFESSOR POZZI, the well-known gynaecologist of the Hospital Broca, Paris, has been made a Grand Officer of the Legion of Honour.

THE annual dinner of the Association of Public Vaccinators of England and Wales will be held at the Royal York Hotel, Brighton, on March 14th.

A COURSE of lectures on syphilology is being given at the London Hospital. The course commenced on February 3rd and will terminate on March 27th.

AN association for the prevention of the abuse of opium has been formed in Java. The American and Chinese Consuls have been elected honorary members.

THE British Commercial Gas Association informs us that a gas-heated refuse destructor for the incineration of household refuse can now be obtained in this country.

SIR SHIRLEY F. MURPHY, M.D., has been appointed Deputy Chairman of the Trade Board established by the Board of Trade for those branches of trades specified in the Trade Boards (Shirtmaking) Order, 1913.

MR. HERBERT TILLEY, surgeon, Ear and Throat Department, University College Hospital, has been elected a corresponding member of the Laryngological Society of Berlin.

THE State Medical Service Association proposes to hold a public meeting in Essex Hall, Essex Street, Strand, on or about March 25th to discuss the responsibilities of the State for the national health.

THE *Imperator* of the Hamburg-Amerika Line, the largest liner afloat (52,171 tons), will leave Southampton on April 3rd, and is due to arrive in New York on April 9th. To members of the International Congress of Surgery, which is to be opened in New York on April 13th, a special concession of 25 per cent. will be allowed. They will be able to return by vessels of this line sailing from New York on April 15th, 23rd, 30th, and May 2nd and 9th.

DR. J. IRELAND BOWES, who recently resigned the office of medical superintendent of the Wilts County Asylum, which he had held for between thirty and forty years, has been presented by the officers and staff with a pair of five-branch candelabra in silver. He was also the recipient of a silver-mounted walking-stick and silver-mounted briar pipe from the male and female patients respectively.

THE first (American) National Conference on Race Betterment, which was held at Battle Creek, Michigan, January 8th to 12th, was attended by some 400 men and women. The programme included discussions on race degeneration and the advocacy of various reforms; among these were the frequent medical examination of people supposed to be healthy, sound habits of living, and open-air schools and playgrounds.

THE next award of the scholarship founded in honour of Mr. James Smith Turner to help students who have financial difficulty in completing the dental curriculum will be made after an examination to be held during April, 1914. Candidates can obtain printed forms of application from the Secretary, British Dental Association, 19, Hanover Square, London, W.: the forms must be returned duly filled up by March 15th.

THE Massachusetts State Board of Charity has had plans and specifications prepared for a new leper infirmary to be built on Penikese Island at an estimated cost of £5,000. Two sections of the infirmary will be set apart for the scientific study of the disease; one of these will be equipped with the æ-ray and other modern apparatus. There will be accommodation for bedridden patients suffering from pneumonia and consumption, affections which follow close on the latent period of leprosy.

THE American Association of Medical Jurisprudence, which has recently been incorporated under the laws of the State of New York, has for its object the investigation, study, and advancement of the science of medical jurisprudence. The membership, which is limited to 200, is composed of medical practitioners and lawyers from all parts of the United States. Dr. Reynold Webb Wilcox is the president. The new association will hold its first meeting on the first Saturday in May.

DR. MARTIN F. SLOAN, Assistant in Medicine at the Johns Hopkins Medical School, has been engaged for three months to introduce the treatment of pulmonary tuberculosis by induced pneumothorax at the United States Public Health Service Sanatorium, Fort Stanton, New Mexico. That institution is said to offer a good field for the employment of induced pneumothorax because of the large number of advanced cases and the opportunity the Government affords to retain under treatment patients who are disabled for a long time. Of the 200 patients, all adult males, who are now in the sanatorium, 30 have been selected as suitable cases for the treatment.

SINCE Routh's statistics of Caesarean section were published at the St. Petersburg meeting of the International Obstetrical Congress in 1910 the operation has become even more generalized than was at that time foreseen. French obstetricians admit that some of their own teachers underrate its difficulties, yet both in France and other Continental countries it is increasing in favour and in the excellence of the results. The evidence of Dr. Asa Davis of New York (*Amer. Journ. Obstet.*, December, 1912, p. 1017), who makes a short median incision above the umbilicus, shows that Caesarean section has become almost popular across the Atlantic. "Once start a series of these operations," he writes, "and the history of the snowball which increases with every turn is repeated. These patients see the result of the operation, and they come for subsequent delivery by this method. They know of friends who have had difficult labours, perhaps repeated stillbirths due to contracted pelvis, and they send them to be delivered by Caesarean section. Formerly it was necessary to persuade these women to allow this form of delivery even under conditions which presented no other way to secure a living child. To-day they accept our decision to deliver the child through the abdomen as readily as they do a forceps operation." Dr. Davis's related experiences fully support his assertion.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C. on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.B. asks for information as to the treatment of sterility in the female by the use of ovarian extracts or similar preparations.

ENQUIRER asks for information as to the procedure in the electrical treatment of chilblains by constant current and saline solution.

W. M. asks whether the expense of purchasing his first motor car can be deducted for income-tax purposes.

*** Prima facie such expenditure is an outlay of capital and as such is not deductible (Rule 3, Case I, Schedule D), except to the extent to which it represents a renewal of any former conveyance.

D. M. asks to be recommended book or books on instinct in man or animals.

*** The following list may be useful: Lloyd Morgan, *Instinct and Experience.* Hobhouse, *Mind in Evolution.* McDougall, *Social Psychology (Man).* Washburn, *Animal Mind.* Romanes, *Animal Intelligence; Mental Evolution in Man; Senses of Animals.* Fabre, *Souvenirs entomologiques* (ten volumes, one or two of which have been translated).

ANSWERS.

J. R. W.—(1) Apply to the Director of Special Inquiries, Board of Education, Whitehall. (2) *Psychanalysis*, by A. A. Brill, Ph.B., M.D., p. 118, gives a list of words for word association and the method of using them. It would be much better for the inquirer to make his own list.

LETTERS, NOTES, ETC.

THE CHILD STUDY SOCIETY.

UNDER the auspices of the Child Study Society of London, a course of lectures will be delivered at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W. One lecture, on speech defects of children, has already been given by Mr. E. W. Spearman, of New York. The following is a list of those still to be delivered: March 5th, Miss C. C. Grayson, The Sense of Humour in Children; March 19th, Professor J. J. Findlay, The Dramatic Impulse in Children; April 2nd, Dr. Leonard Guthrie, The Nervous Child; April 23rd (joint meeting with the Charity Organization Society), the Rev. J. C. Pringle, Raising the Standard of Child Upbringing; May 7th (joint meeting with the Parents' National Education Union), Miss Ellen A. Parish and W. F. Sheppard, Sc.D., Education in Early Childhood before School Age. All the lectures will be delivered on Thursdays at 7.30 p.m. The annual meeting of the society will be held on Thursday, March 19th, at 6.30 p.m. The Honorary Secretary is Mr. W. J. Durrie Mulford.

RAT-BITE FEVER.

DR. ALEX. KING (Castries, St. Lucia, B.W.I.) writes: The publication in the BRITISH MEDICAL JOURNAL of some cases of "rat-bite fever" has recalled a case I saw some six years ago. The mate of a tramp steamer which arrived here from Chilian and Peruvian parts showed me his hand with the fresh scar of an ulcer on one knuckle. It had evidently been much inflamed and brawny, but was then healed. He stated that over a month earlier a rat got loose in the cabin during a meal. All hands gave chase; the mate cornered the rat and caught it in his hands, whereupon it bit him on the knuckle. The bite soon healed—it was a mere scratch—but ten days later the skin over the knuckle became red and painful, very soon breaking down into an ulcer. During this time a rigor occurred, followed by fever lasting about a week, after which the ulcer healed, the fever dropped, and the patient felt well, but very weak. After a week or ten days the whole process was gone through again. I saw him in the quiescent period, and failed to connect the story with anything I had ever heard of. There had obviously been (1) the introduction of infection by the rat's teeth, (2) an incubation period of ten days, (3) local reaction at the site of inoculation coincident with the maturing of the infection. There was no pus or other discharge to investigate when I saw him, and blood films showed nothing abnormal. I have since heard that he had another relapse soon after I saw him, when he was so ill that he had to leave the ship, and my informant lost sight of him.

HEALTH IN WEST AFRICA.

TIMEO (late M.O., W.A.M.S.) writes: Will you allow me to make a few remarks on Dr. Mackintosh's letter in your issue of February 7th? The question of the health of white men in West Africa requires a more thorough examination into statistics than any Government or company dare make.

To my mind the following ought to be considered before minimizing in any way the risk one runs by going to such a place:

1. The number of tours made by each man (European) on the "coast." This will include a number of men who only serve a few months out there.
2. Length of tour—longest and shortest.
3. Effect on mental and bodily health (temper not forgetting), noting particularly the matter of suicide.
4. How long any ill effect lasts after leaving the coast.

Who of us is absolutely sound? All the big firms, as well as the Government, have their candidates medically examined. I submit that Dr. Mackintosh's letter is one to do harm rather than good. If I am asked my advice about any one going to the Coast, I say, "If you don't mind risking your life, go; but if you value your life, and above all your health, don't; an invalid's life may be worse than death."

Dr. Mackintosh has spent eleven years in West African service; how many of those who went out with him on his first tour are now alive and well? Of this I am certain, the relatives of those who go out there think badly enough of it, or there would not be so much sorrow when the boat leaves Prince's Landing Stage every week.

ADVICE TO SHIP SURGEONS.

OUTWARD BOUND sends the following words of advice to ship surgeons or those intending to make a voyage as such:

If possible see the ship for yourself and examine the hospitals, operating room, surgery, and also the quarters provided for your own accommodation. Find out the rules of the ship and insist on a hospital steward, who will be under your orders, being carried. This must be done before you sign on.

Insist on your right to charge saloon and second class passengers for all professional work done or advice given, whether they wish treatment for illness contracted before coming on board or after joining the ship.

Refuse to sign on unless you are paid at least £15 15s. a month, or claim a capitation fee of, say, one penny a head a day for all on board.

Remember that it is the duty of every medical man to improve things for himself and the profession in general, and that of all the ship's company the surgeon is the only one who will not be treated professionally in case he meets with an accident or illness during the voyage.

With these points in mind ship surgeons ought to ask £25 a month, and if they stand together will get it.

NEW NOSES FOR THE MILLION.

PROFESSOR ZINSSER has published (*Muench. med. Woch.*, December 9th, 1913) the composition of a mass for making a new organ to replace a deformed nose. The mass consists of 50 grams of gelatine, moistened with water and melted over a water bath. To this is added 100 grams of glycerine, the mixture being stirred the while. Zinc oxide, cinnabar or ultramarine blue may be added to suit the complexion. A healthy nose of a size and shape suitable for the patient's face is selected, and a plaster cast taken. The inside of the cast is oiled, and the mass is moulded into it. Especial care must be taken to make the upper part of the bridge of the new nose fade gradually away to a very thin line; the nostrils are rendered patent by means of a warm knitting-needle after the model has been removed from the mould. The under-surface is then slightly warmed and fitted to the skin of the face, which must be perfectly dry, a little adhesive mastix or gum arabic being previously applied. The transition between nose and real skin may then, it is said, be rendered practically invisible by gently stroking the edges with a cotton-wool pad dipped in hot water, and the toilet is completed by the application of a little face powder. Such a nose, we are told, will last for several days, and the patient learns to prepare new models as often as necessary. We should imagine that some skill would be required in learning to use a handkerchief with success during a cold. But no doubt even this might be achieved.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

An Anthropological Study
OF
SOME PORTRAITS OF SHAKESPEARE AND OF BURNS.

By ARTHUR KEITH, M.D., F.R.S.,
CONSERVATOR OF THE MUSEUM, ROYAL COLLEGE OF SURGEONS, ENGLAND; PRESIDENT OF THE ANTHROPOLOGICAL INSTITUTE.

[*With Special Plate.*]

I became interested in the bust and numerous portraits of Shakespeare in the following manner: Three years ago Mr. H. Oatway came to the Museum of the Royal College of Surgeons, bringing with him a terra-cotta mask he had discovered in the shop of a curio dealer in one of the English Midland counties. The mask† represented the features of Shakespeare—those features with which the monument at Stratford-on-Avon has made us familiar. There were numerous differences in detail when the bust and mask were compared, and the question had arisen whether the newly-discovered mask might not be a squeeze—a modelled-up squeeze was the term Mr. Konody used in his description—from the cast which is said to have been taken from Shakespeare's face after death.[1] To assist me in settling the problem, Mr. Oatway helped in every way; he placed at my disposal measurements of the original bust at Stratford, two casts made from the bust, one of them bearing the well-known Bullock cast; and he obtained photographs of the various portraits and busts which are believed to represent Shakespeare. My investigations of the Oatway mask yielded only negative results. As in the original bust, the eyes are open, the eyelids and eyeballs are modelled on conventional lines, the lips are full, slightly parted, and shaped so as to represent the condition in life. Neither the original bust nor the Oatway mask show any trace or mark of having been taken from a cast or model of a dead man's face. It was also plain that there was a direct genetic relationship between the original bust and the Oatway mask, for every curl in the hair of the original bust was accurately reproduced in the terra-cotta mask. The features of the original—the Stratford—bust appear to me to be modelled about 10 per cent. above the dimensions of an average Englishman's face. In Mr. Oatway's mask the features come within the normal range. In particular, the nose is smaller and more compressed than in the original; in taking a death mask, the nose and lips are always compressed by the weight of the plaster. We also found, however, that a terra-cotta mask shrinks as it dries, and its various parts do not shrink equally. Although the origin of Mr. Oatway's mask cannot be regarded as finally settled, yet it is not unlikely that it represents a cast from the monument at Stratford-on-Avon, and that its peculiarities are due to unequal shrinkage. In this manner I was introduced to the mysteries of Shakespeare's portraits.

It was a fortunate circumstance that at the time I was investigating Mr. Oatway's mask Mr. M. H. Spielmann‡ was finishing a systematic examination of the evidence relating to the history of the monument at Stratford-on-Avon, and to the authenticity of the numerous portraits of Shakespeare. His final opinion is that only the monument itself and the Droeshout portrait can be regarded as well authenticated—as having been in existence soon after Shakespeare's death in 1616. As regards the monument, even Mr. Spielmann has reservations; he is of opinion that its sculptor, Gerrard Johnson, "evolved" the head and neck, and that there is an inconsistency between the proportions of the head and face. In his exciting book entitled *Bacon is Shakespeare*, Sir E. Durning-Lawrence refuses to regard either the monument or the Droeshout portrait as an authentic document. As regards the portrait, he has written[2]:

It is almost inconceivable that people with eyes to see should have looked at the so-called portrait for 287 years without perceiving that it consists of a ridiculous, putty-faced mask fixed upon a stuffed dummy, clothed in a thick coat.

The monument, in Sir Edwin's opinion, represents a flat-headed Chinaman, and was made, he believes, more than a century after Shakespeare's death. The doubts cast on the authenticity of the monument, first by Mrs. Stopes,[3] and later by Sir Edwin Durning-Lawrence, have been cleared away by the late Mr. Andrew Lang,[4] and by lectures given at the Royal Institution by Mr. M. H. Spielmann in the same year. Anything we can know concerning the personal appearance, and of the racial character of the greatest Englishman has to be gathered from these two sources: the monument at Stratford-on-Avon, and the Droeshout portrait. Two other documents relating to Shakespeare have a special interest for me. One of these is the Davenant bust now in the Garrick Club, London. It was discovered in 1849, when the Duke's Theatre in Portugal Row, Lincoln's Inn Fields, was demolished to make room for an extension of the Museum of the Royal College of Surgeons. It was at one time in the possession of my predecessor, Sir Richard Owen. In the same year (1849) Dr. Becker came from Germany bringing with him the "Kesselstadt mask"§ of Shakespeare, which he submitted to Owen for examination. I do not think that either the bust or the mask can be regarded as "original documents."

If, then, we are to know the outward appearance of Shakespeare—to measure those characters of the head which are of particular interest to students of the human body—we must deduce them from either the Droeshout portrait or the Stratford monument. If the bust represented on the monument is largely imaginary, then the blunders of the sculptor will become manifest when we apply to it the various criteria which are used when heads and skulls are examined by modern anthropological methods. The remarkable dimensions which the sculptor of the Stratford bust has given to Shakespeare's head become manifest when an exact drawing is made of the crown from above (Fig. 1). Within a drawing of the

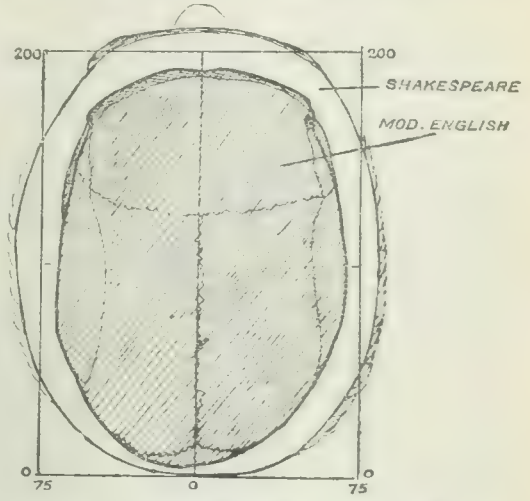


Fig. 1.—The crown of Shakespeare's head as represented in the Stratford bust, with the corresponding view of a skull of moderate size. Both are drawn to the same scale.

crown I have placed a drawing of a skull of a modern Englishman—poised in the same position and drawn to the same scale as the Shakespearean bust. It is at once seen that there is a double contrast—one of shape and one of size. The skull of the Englishman, slightly under average dimensions, is 188 mm. long; when covered with flesh the head would have been 8 mm. more—196 mm. Shakespeare's head is 212 mm. long; his skull should have measured 204 mm.—a long skull—reaching well towards the maximum limit of cranial length. In width, there is a much greater difference; the modern skull is 137 mm. wide; in life, the width of the head would have measured 10 mm. more—147 mm. The width of Shakespeare's head, as represented in his bust, is 168 mm. His skull should have measured 158 mm.—a wide skull—reaching well towards the limits of maximum width. In the modern skull the width represents 73 per cent. of the length; in

* Abstract of evening discourse at the Royal Institution, February 20th, 1914.

† The mask is described and figured by Mr. P. G. Konody in the *Illustrated London News*, July 17th, 1911.

‡ Mr. Spielmann is now preparing for publication a work which gives the results of his inquiries into the Shakespeare portraits. See his essay reprinted from the Stratford edition.

§ I have not seen this mask, but from the drawing and measurements given by Mr. William Page (study of Shakespeare's portraits, 1877), I have come to the conclusion that the mask is not that of Shakespeare.

Shakespeare's bust the width represents 77.5 per cent. of the length. As tested by measurement the Shakespeare's head falls neither into the long-headed group nor into the round or short-headed, but within the intermediate group. Yet, when we come to examine the bust in profile all the features which characterize the short-headed type of men become manifest.

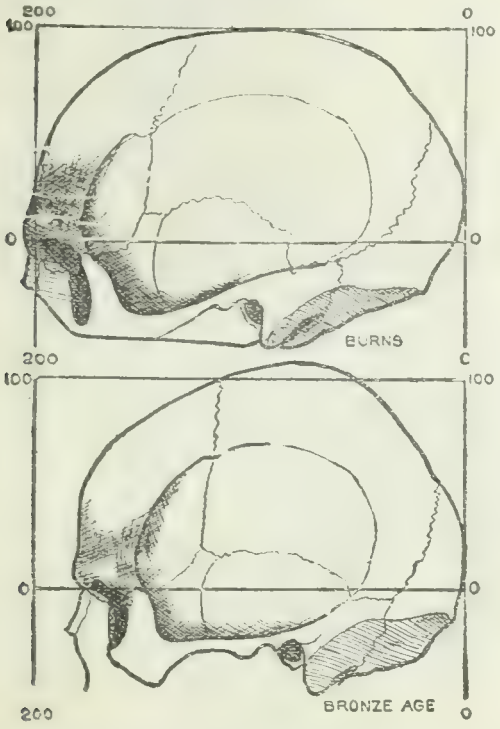


Fig. 2.—Profile of the cast of the skull of Robert Burns, a representative of the long-headed type of man, contrasted with a skull of the Bronze Age—a representative of the short type.

To those who have given no special attention to the form of human heads it may seem that the short-headed and the long-headed are but variants of one type. The difference is much greater than a mere individual variation; it is a radical difference. It is fortunate for my present purpose that Robert Burns was a good representative of the long-headed type of man. In Fig. 2 the profile of his skull is contrasted with a drawing made from the skull of the short-headed race which reached England for the first time at the close of the Neolithic period—some 2,000 years before the time of Christ. A glance at those two figures reveals an essential difference in conformation—a difference which is chiefly confined to that part of the head which lies behind the ear-holes. In Burns, the long-headed, the occiput forms a backward, projecting eminence; in the short skull the occiput is flattened, as if it had been compressed from behind by the application of a board during infancy. There is another difference between these two types of heads: in the long head the vault is low and flat; in the round head the vault wells upward to a crown, as if the brain, when compressed from behind, had forced up the middle part of the roof of the skull. How it has come about that there is this radical difference between the two prevailing types of human heads in Europe we do not know: there is a secret buried here which has not been discovered as yet. All we are certain of is that the long heads are the offspring of one line of human descent—the round heads, of the type here described, of quite a different line. They must have sprung originally from a common stock.

When we come to study the Shakespeare bust in true profile, there can be no doubt as to the type of man it represents; he is depicted for us in the Stratford monument as a representative example of the short-headed type. All but in one respect, the dimensions exceed those of any skull of this type known to me. We have seen that, in length and breadth measurements, Shakespeare's head approaches the maximum head. This is also true of its height. The bust represents the crown as rising 150 mm. above the level of the ear-holes—for, although the ears are covered by the ample side-locks of hair, the position of their passages can be fixed approximately. The "auricular" height of the skull—deducting 7 mm. for the thickness of the scalp on the crown—should have measured 143 mm.—almost a maximum amount. When I first noted those maximum dimensions of the head of Shakespeare, as portrayed by Gerrard Johnson, I was inclined to suppose the good sculptor had wished to give the poet a head which would be in keeping with a brain of marvellous power. Either that, or he had taken a sculptor's licence with the absolute dimensions of Shakespeare's head, and enlarged them to give to his subject that imposing dignity which increased size can give a modelled head. The width of the forehead, at the level of the eye-brows, is represented in the Stratford bust as 120 mm.—quite 10 mm. beyond what a forehead, shaped as Shakespeare's is, should measure. The face is 15 mm. longer than one would expect. If we suppose that the sculptor had added 8 to 10 per cent. to the actual measurements of the head he really portrayed, then, in every respect, the head represented in the Stratford monument as that of Shakespeare becomes a representative specimen of the short-headed

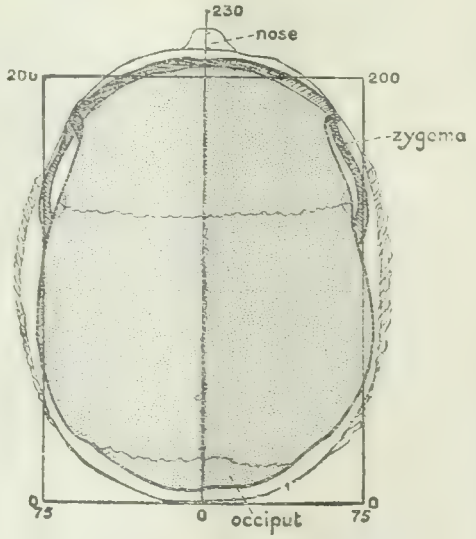


Fig. 4.—The crown of Shakespeare's bust from above, with the corresponding outline of a Bronze Age skull inset. The skull has been enlarged 10 per cent.

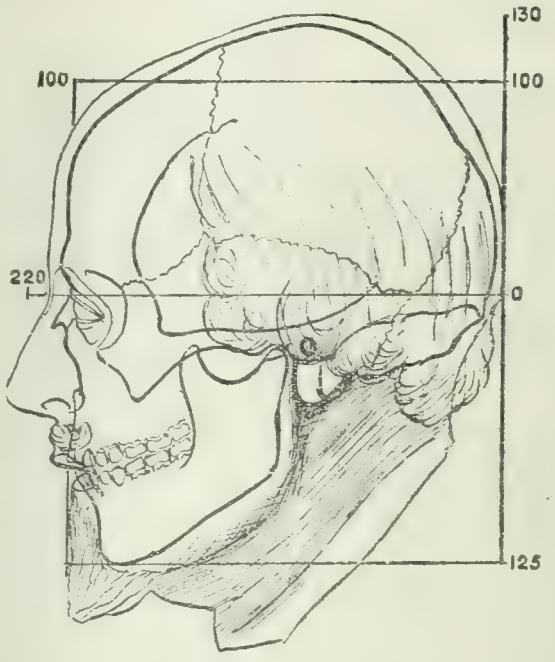


Fig. 3.—Profile of Shakespeare's bust with drawing of a skull of a Bronze Age man inset; the dimensions of the skull being enlarged 10 per cent.

type. I had reason, when seeking for an explanation of certain features of Shakespeare's forehead, to measure Chantrey's bust of Sir Walter Scott in the National Portrait Gallery. I found in that case—and it is so in many others—the sculptor had modelled the head about 10 per cent. above the actual dimensions. I think Gerrard Johnson took a similar liberty.

In Fig. 3 I have taken the skull of a man who lived in Kent during the Bronze Age—the period which succeeded the Neolithic—and have done, in regard to the dimensions, what I suppose Gerrard Johnson did to Shakespeare's features—enlarged them 10 per cent. It will be seen how accurately the skull—thus enlarged—fits within the Stratford bust. From the accuracy of the fit, we may be certain that the man who wrought the Stratford bust did not portray an imaginary head, but had before him an actual subject or model, and that subject was of the short-headed type. Was it Shakespeare's head which was portrayed? Mr. Spielmann assures us that the men who paid for the monument knew Shakespeare's features and were satisfied with the likeness. They would not be satisfied, we may presume, with a radical alteration of the shape of the head. We cannot suppose that the sculptor gave the poet a typical short head to satisfy those who had paid him for a true likeness.

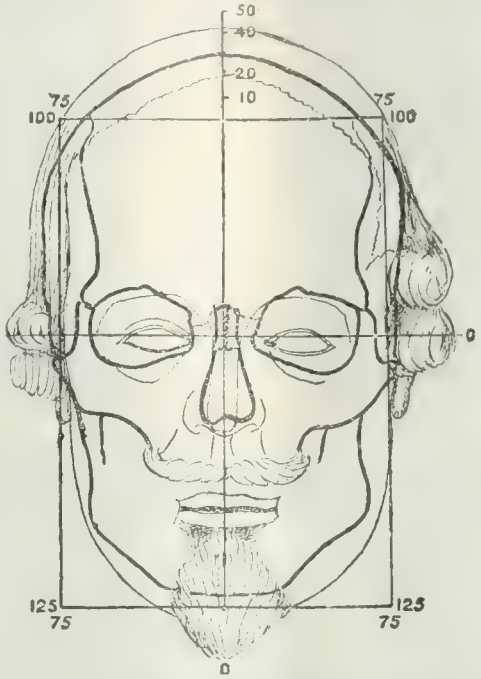


Fig. 5.—Full face view of Shakespeare's skull with similar view of a Bronze Age skull inset. The skull is enlarged 10 per cent.

It is not only from the side that the Bronze Age skull fits within Shakespeare's bust, the fit is equally good when we view its inset from above and from the front (Figs. 4 and 5). The poet is thus represented—if we allow a reduction of 10 per cent. in face and head—as a man with facial features of average dimensions. The face, when so reduced, measures from the root of the nose to the lower margin of the chin just over 120 mm.; its width, from the zygomatic arch of one cheek to that of the other, is a little over 130 mm. The mean length of the face of a modern Englishman is 120.7 mm.; its width 132 mm. Indeed, if we presume that the sculptor added about 10 per cent. to the actual dimensions, then, in size of head and face, Shakespeare might be regarded as a representative individual of the short or round-headed type.

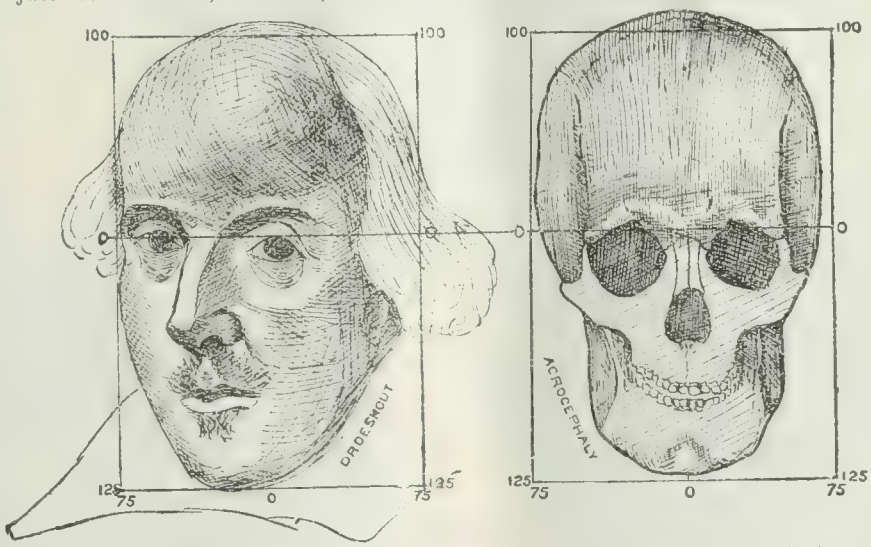


Fig. 6.—A free copy of the Droeshout portrait compared with an acrocephalic skull.

If there is any truth in the Stratford bust—if it represents the features of Shakespeare—then there is no doubt that our national poet is a product of the round-head strip of humanity. We are certain at least that Shakespeare does not belong to the early British breed, for not a trace of a "round-head" has been found in England earlier than the age at which men began to replace their stone weapons with implements made of bronze. In the Neolithic period we have evidence that the "round-heads" were pushing their way westwards through Central Europe towards the coasts of the North Sea. In the Bronze period, commencing about 2,000 B.C., they began to arrive in Britain. They gradually permeated every part of the country—England, Wales, Scotland, and Ireland—but at no period did they form the majority of our population. If I call those round-headed people Celts, I use the term in the same sense as Continental anthropologists do—in what I believe to be the true sense. In England we speak of the Celtic fringe, and refer this fringe to the people of Wales, the western parts of Scotland and of Ireland. The majority of the inhabitants of these parts are long-headed people; they are permeated by a round-headed element added by the invaders of the Bronze Age. At a later date—in the Roman and Saxon periods—other additions to our population were made of the long-headed type.

Shakespeare is a descendant of the Bronze Age invaders—the true Celts. That is a remarkable fact, for it is this same short-headed stock—spread abroad in Central Europe, throughout Germany, France, and Italy—which has produced the world's finest artists.

Looking away for a minute from the question of type, it is of interest to see what size of brain the Stratford bust suggests for Shakespeare. If we accept the dimensions of the bust as real and not enlarged, we must estimate the dimensions of the skull as follows: Length, 204 mm.; width, 158 mm.; auricular height, 143 mm. Employing one of the formulae invented by Miss Lee and Professor Pearson for estimating the size of the brain from the dimensions of the skull, we find that Shakespeare's brain capacity was a little over 1,900 c.cm.—not an impossible amount. Cuvier's brain capacity was over 1,900 c.cm.; Cromwell and Byron are said to have had brain capacities well over 2,000 c.cm. The average Englishman has to be content with a capacity of 1,477; the average Scot, according to Sir William Turner,[5] with one of a cubic centimetre more. Scotland also had her invasion of round-heads during the Bronze Age, and, as in England, the type still persists, forming nearly 30 per cent. of her population. Sir William Turner noted that the people with the long heads had the larger brains. He found that the mean capacity for short-headed Scots is 1,469 c.cm.; for long-headed ones, 1,516. The short-headed type has the smaller brain. If we suppose—and I think we must accept the supposition—that the Stratford head has to be reduced about 10 per cent. to find the true dimensions of Shakespeare's brain, then the power of the poet's brain must be

ascribed to quality rather than quantity. In the reduced scale, the length of the head would be 184 mm.; width, 143 mm.; auricular height, 129 mm.; the brain capacity, 1,540 c.cm.—a rather large brain for a short-headed man.

I shall deal briefly with Shakespeare's features as represented in the Droeshout portrait. I feel certain that it is a rather crude engraving made from some previous portrait or drawing which was placed at Droeshout's disposal five or six years after Shakespeare's death. Such a portrait as that known as the "Felton," now in the possession of Mr. Burdett-Coutts, might well have served as the original from which Droeshout worked. The Droeshout portrait is simply the Felton portrait with certain marks of age superadded—loss of hair and bagginess beneath the eyes. The loftiness and the modelling of the forehead in the Felton and Droeshout portraits suggests an abnormal development of Shakespeare's head. In every race of mankind there occasionally appear individuals with remarkably high heads — individuals in whom the vault rises up to form a "tower" or "sugar-loaf." The condition is due to a maldevelopment in the base of the skull. The front part of the base is prematurely arrested in its growth, with the result that the developing brain, in order to find room, has to raise up the crown into the characteristic sugar-loaf form. The condition is now recognized as a distinct kind of maldevelopment known as *acrocephaly*. Sir Walter Scott was certainly the subject of this condition—at least to a mild degree. Was Shakespeare also a subject of acrocephaly?

If the Droeshout portrait be set side by side with a skull which shows the acrocephalic condition, it is seen that the vault of the skull rises higher than does the dome of the Droeshout head. When the acrocephalic skull is viewed in profile and placed within the outline of the Stratford bust, it is seen that all grounds for suspecting acrocephaly in Shakespeare disappear. The most characteristic feature of the acrocephalic head is its shortness from back to front. The head of Shakespeare's bust is relatively long. Yet, both bust and portrait show certain features with which we are familiar in acrocephalic skulls—features which do not exist in skulls of the Bronze Age type. The short skulls of the Bronze Age period are remarkable for their prominent, well-developed eyebrow ridges. In acrocephalic skulls these ridges are not well marked, and the lower part of the forehead is often retracted or drawn inwards. But it is also true that in sensitive, less robust, delicately moulded human heads of the short type, the eyebrow ridges remain undeveloped. I am therefore of opinion that the lofty dome given to Shakespeare's head is due not to acrocephaly, or any pathological condition, but represents the well sprung vault and delicately moulded forehead seen in the more highly evolved of modernized round heads.

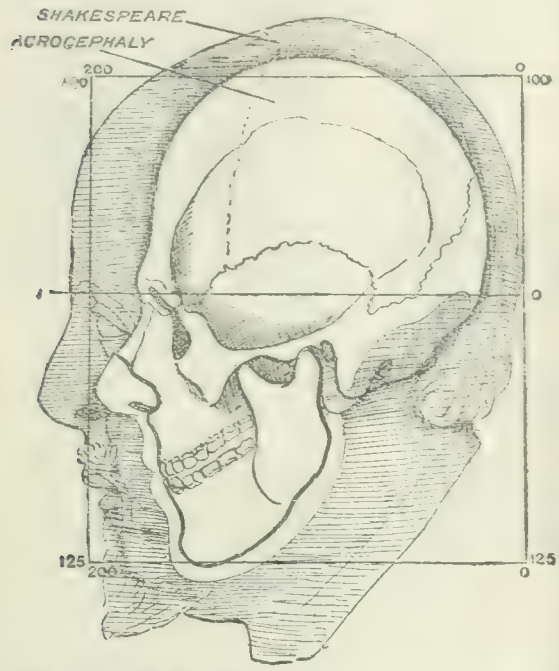


Fig. 7.—Skull showing the malformation known as acrocephaly set within a profile of the Stratford bust. Both are drawn to the same scale.

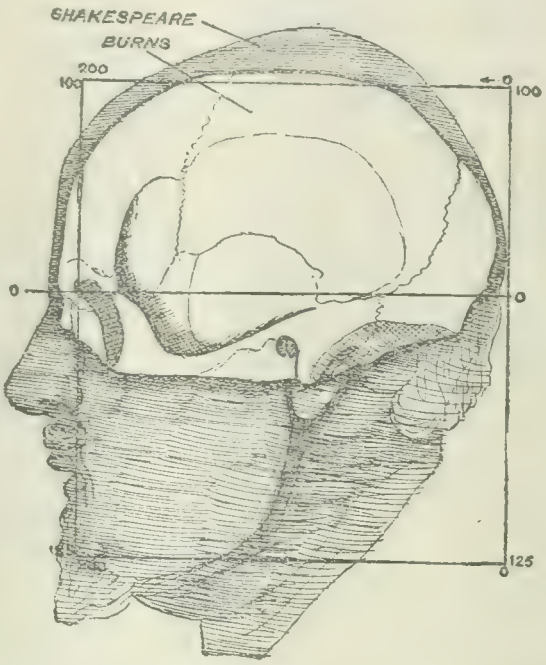


Fig. 8.—Profile of the cranial cast of Robert Burns set within a profile of the bust of William Shakespeare. Both are drawn to the same scale.

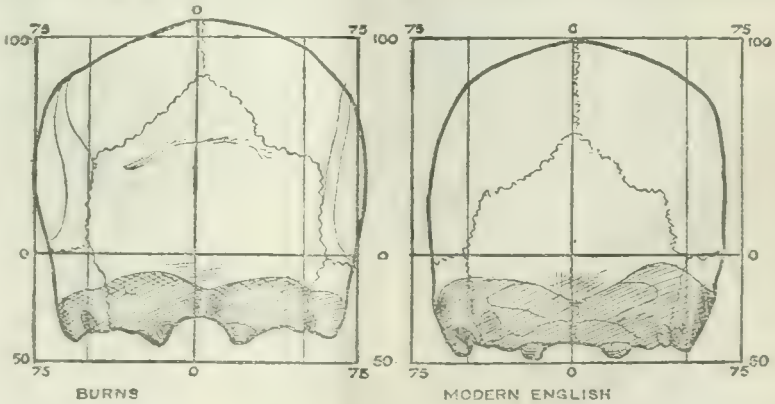
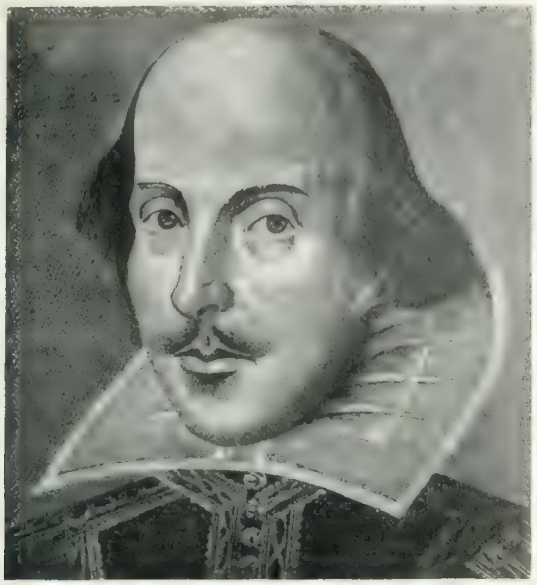


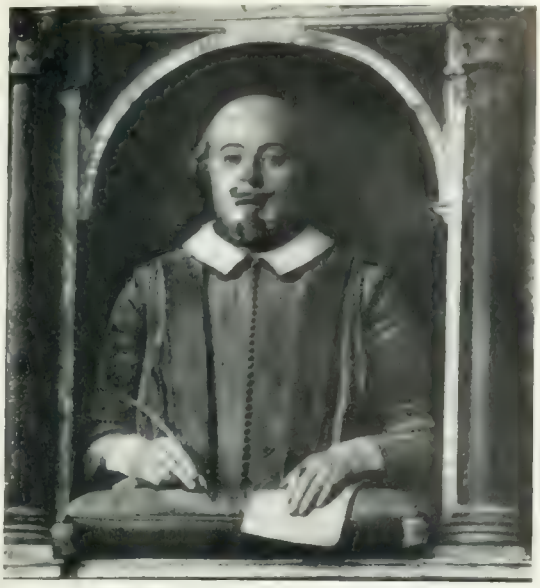
Fig. 9.—Posterior view of the cranial cast of Robert Burns contrasted with a modern skull (capacity 1,425 c.cm.). Both are drawn to the same scale and oriented on the same plane.

I have already mentioned that my attention was drawn to the portraits and bust of Shakespeare by the visit of Mr. Oatway to the Museum of the College of Surgeons. It was a similar happy chance which sent certain information concerning Robert Burns my way. Less than a year ago I received a letter from Mr. Barrington Nash, well known to students of Raeburn and of Burns, informing me that he had in his possession two valuable documents relating to both his heroes. One of them was a life-size portrait of Burns by Raeburn; the other a cast of the poet's skull. I was not aware of the existence of either, but a visit to Mr. Nash's studio in Chelsea made me realize their great and permanent value, especially their utility for my present purposes.

That the cranial cast, which has been presented to the



SHAKESPEARE: DROESHOUT PORTRAIT.
(Photo Mansell and Co.)



SHAKESPEARE: MONUMENT AT STRATFORD.
(Photo Mansell and Co.)



SHAKESPEARE: THE OATWAY MASK.



BURNS: RAEBURN'S PORTRAIT.
(From the *Sphere*.)



BURNS: NASMYTH'S PORTRAIT.
(National Portrait Gallery.)

Museum of the Royal College of Surgeons by Mr. Nash, was made from the poet's skull there can be no doubt. Its history is well known. Burns died in 1796 at the age of 37. In 1834, thirty-eight years after the poet's death, his widow, Jean Armour, died. At that time Dr. George Combe was stimulating the study of phrenology in Scotland, and when the grave was opened in 1834 Dr. Blacklock and Mr. McDiarmid, editor of the *Dumfries Courier*, took the opportunity of making a plaster cast of the poet's skull. Dr. George Combe published very accurate drawings of the skull, with an account of his examination, couched in the phrenological language of the day. The cast, as may be seen from the drawings which accompany his paper, is not complete; it includes the whole of the part which contains the brain; but, in front, stops short at the lower borders of the orbits.

The outstanding features of the skull of Robert Burns become at once apparent when we set it within the profile of Shakespeare's bust, both being drawn to the same scale and oriented in the same plane. We have seen that Shakespeare's head has been represented in large dimensions; but as regards length the Scot's skull is the longer. Its length—206 mm.—is remarkable. In 117 skulls of Scotsmen, drawn from all parts of the country, Sir William Turner found eight which measured 200 mm. or more in length, but the longest was 2 mm. shorter than the poet's skull. In life the poet's head must have measured 216 mm. in length—a head of altogether exceptional length. Examination of Fig. 8 also shows that the heads of Shakespeare and Burns represent contrasted types—one is an example of the short-headed, the other of the long. The two national poets come of radically different stocks. In Fig. 2 I have already contrasted Burns's skull with the Bronze Age type. If the projecting occiput of the Scottish skull were pressed forwards and the vault consequently raised, it would fit comfortably within the outline of the Stratford bust (see Fig. 8).

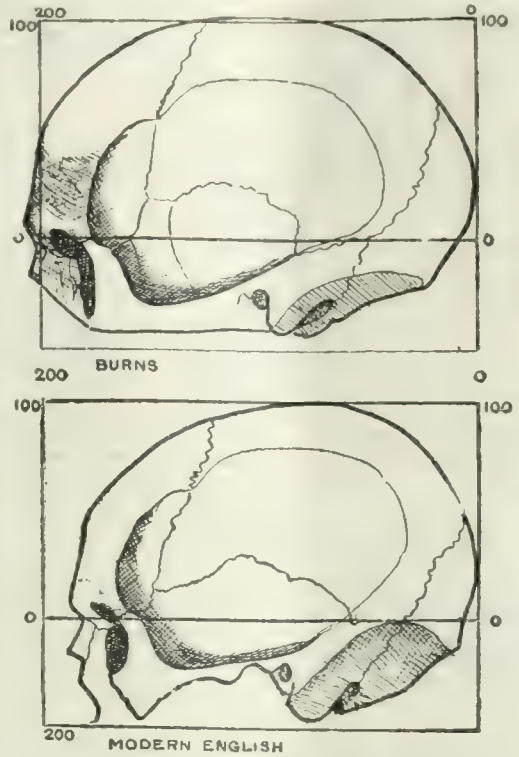


Fig. 10.—Profile of Burns's skull compared with another of the same type, but of average dimensions. Both are oriented on the same plane and drawn to the same scale.

The remarkable size of Burns's skull becomes apparent when we contrast it with a skull of ordinary dimensions. In Fig. 9 an instructive comparison is made, the contrasted skulls being examined from behind. Burns's skull is very broad—155.5 mm., as contrasted with 137 mm., the width of the skull used for comparison. Its height is less remarkable—the vault rises 125 mm. above the ear passages. In the skull used for comparison the auricular height is 116 mm. From these dimensions it will be seen that the poet's brain was much above the average size. Using the same formula as was employed in estimating the size of Shakespeare's brain, we find that the capacity of Burns's skull must have been about 1,730 c.cm. In the average Scot the capacity is 1,478 c.cm. Burns had a brain at least 200 c.cm. above the average of his countrymen. The length of the cast is 206 mm., its width 153.5 mm.; the width is 74.5 per cent. of the length. In type of skull Burns belonged to the long-headed group.

When a profile view of Burns's skull is compared with a corresponding view of a skull of the same type, but of rather less than average capacity, its remarkable dimensions become apparent.

There are two features of the poet's skull which are worthy of attention. One is its excessive length. As regards height, there is little difference between the type skull and the poet's. One other feature is the compression or apparent flattening of the poet's skull in a vertical direction. The part of the base to which the neck was attached is shaded in both skulls drawn in Fig. 10. The area for the attachment of the poet's neck is exceptionally flat. In life, his head must have appeared to be closely set to the neck. That feature is very apparent in Raeburn's portrait of Burns. It is not so apparent in the Nasmyth portrait, for reasons to be given later.

The one feature which strikes the expert when Burns's skull is viewed from the front and contrasted with a skull of moderate dimensions is the size of the orbits. They are of average width (39 mm.), but their height or vertical diameter (45 mm.) is altogether uncommon—11 mm. more than Sir William Turner found to be the average in skulls of Scotsmen. The eyebrow ridges are strongly marked, in contrast to the slight development indicated for those of Shakespeare in the Stratford bust. The face was slightly above the average in width (135 mm.), and from the various portraits we may infer it had about the average length—120 mm. Thus, while Burns's face was of average size—with long, aquiline nose, deep, capacious eye-sockets, and robust eyebrow ridges—his head or cranial case was far above the average size. Sir Walter Scott was of opinion that the portraits of Burns failed to represent the massiveness of his features. The artist probably found that if he gave full value to the head, the face appeared dwarfed.

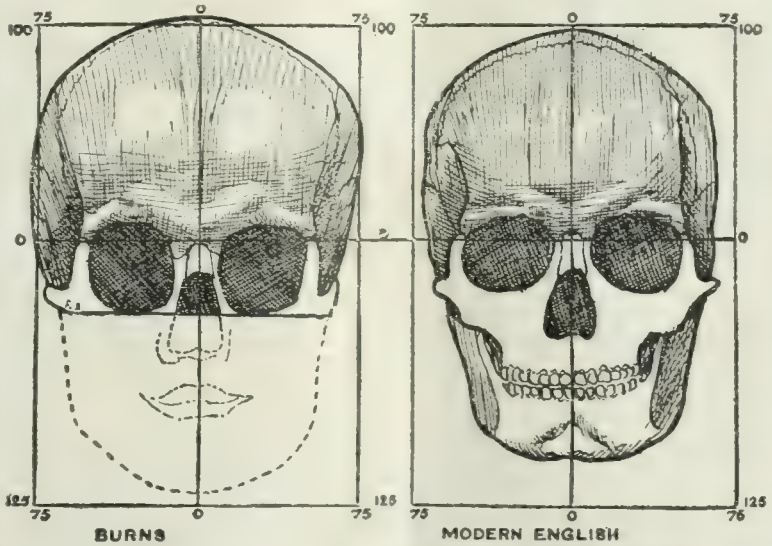


Fig. 11.—Anterior view of the cranial cast of Robert Burns compared with the same aspect of a skull of moderate dimensions.

Burns's skull represents an ancient type. In Fig. 12 I have reproduced a drawing of his skull from above; side by side I have placed a similar drawing of the Olmo skull. This skull was discovered deeply embedded in a

deposit formed in the bottom of an ancient silted-up lake in the north of Italy. The animal remains found in the same deposit belong to an early part of the Pleistocene period. In size and shape the skulls of the very ancient Italian and of the Scottish poet are in close agreement.

It is when we inquire into the racial origin of Burns that the value of the cranial cast as a document becomes evident. As I examined the cast, its resemblance to certain skulls discovered and described by Professor Bryce became manifest. In 1896, and again in 1900, Professor Bryce explored the cairns of Arran[6] systematically and thoroughly, and placed the results of his investigations on record. In two cairns—those of Torlin and Clachaig—he found the remains of a number of human individuals; six of the skulls were sufficiently preserved to give us an exact conception of the head form of the people who lived in Arran and interred their dead in megalithic chambered cairns. They were people living in the Stone Age, before bronze was introduced to Scotland. We may safely regard them as belonging to a period which ended at least 2,000 years before the time of Christ.

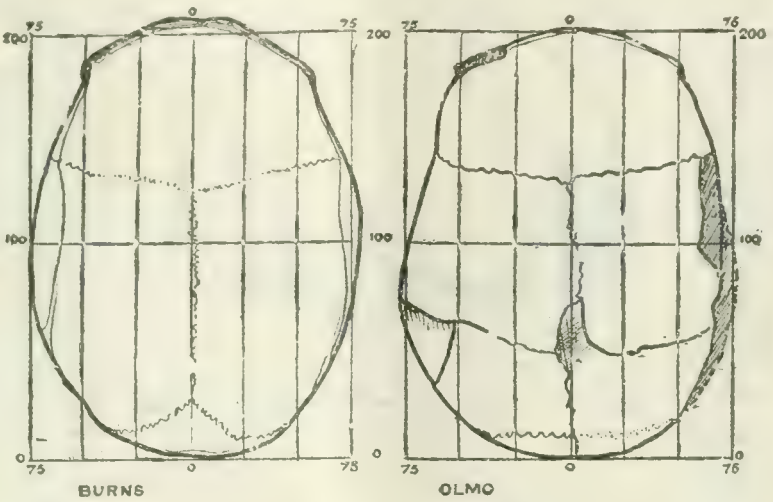


Fig. 12.—View of the cast of Burns's skull seen from above and contrasted with a similar view of the Olmo skull.

Now, the type of skull found by Professor Bryce in the cairns of Arran is just that represented by the skull of Robert Burns.* Of the six skulls, one was 210 mm. long, another 201 mm. In Fig. 13 one of these skulls—one of the most complete from the cairn at Clachaig—is represented. The outline of Burns's skull, drawn to the same scale, is indicated by a stippled line. There can be no doubt as to the identity of types. The poet's skull is fuller and wider than the Neolithic ones. In the Neolithic period—4,000 years or more before our time—the race to which Burns belonged lived in the country round the Firth of Clyde. We find that the ancestor of the poet who settled in Kincardine and took the name of Burness was originally Walter Campbell of Argyll. His mother, Agnes Brown, was an Ayrshire woman. Burns, then, is a direct descendant of the long-headed people who lived in England and Scotland during the Neolithic period—at least, during the later part of that period. Where the long-headed European races were evolved, where they came from, we do not know. They were certainly of the same stock as that race which goes by the name of Iberian. When they reached Britain they found that country already populated by a long-headed and closely allied race.

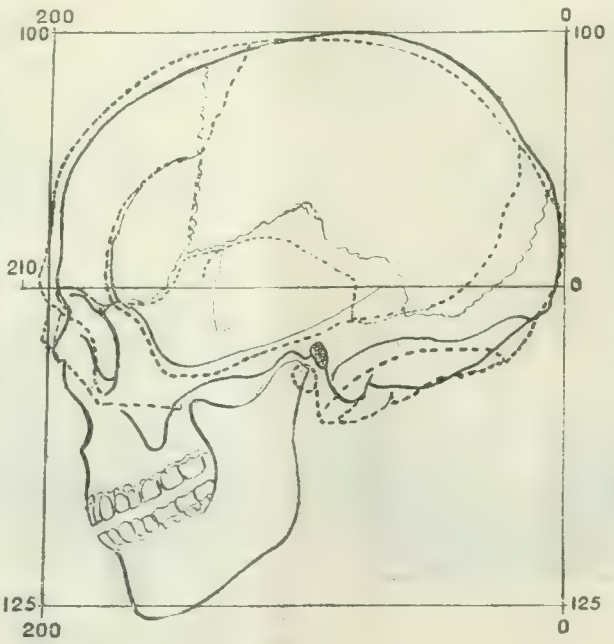


Fig. 13.

Thus we have in Shakespeare and Burns—in our two national poets—representatives of two of the most divergent of European stocks. If we use the term "Celt" in the same sense as it is employed on the Continent, then we must call Shakespeare a Celt—a descendant of the round-headed people who invaded England in the Bronze Age. Burns is from the western fringe, usually called "Celtic," but which in truth is pre-Celtic. He comes of the long-headed stock which inhabited our country before the Bronze Age—probably before the Neolithic Age dawned. Is it possible that we may explain the extraordinary difference in the working of their brains by the diversity of their racial origin?

Of the Raeburn portrait it is not for me to speak. That the portrait is that of Burns I have no doubt. The features of the cranial cast are manifest in the portrait. Those who have seen the Raeburn portrait have seen Burns.

REFERENCES.

[1] See *Illustrated London News*, June 17th, 1911. [2] *The Shakespeare Myth*, 1912. [3] *Monthly Review*, 1904. [4] *Morning Post*, July 5th, 1912. [5] Craniology of the People of Scotland, *Trans. Roy. Soc. Edin.*, 1903, fol. 40, p. 547. [6] See *Proc. Soc. Antiq.*, 1902, p. 79. [7] See an address on the portraiture of Robert Burns, delivered in the Royal Glasgow Institute of Fine Arts, by E. Barrington Nash (Paisley Gardner, 1896).

* Skulls of exactly the same type occur in the long barrows of the South of England.

LAST year Grigaut described a simple test for the detection of urobilin and bilirubin in the faeces, which has been compared by Jovine with the sublimate reaction of Schmidt and Strasburger. Out of eighteen specimens the reaction was more rapid and intense than with sublimate in one-third, and in one-fifth the sublimate test failed, while Grigaut's test was positive. The method is to dilute a small quantity of faeces with boiling water, then add one volume of pure hydrochloric acid and a few drops of iron perchloride, diluted to 1 in 20; this is poured on the surface of the liquid without agitation. Two layers of liquid are formed, which permit appreciation in the same tube of urobilin and bilirubin. A pink coloration of the lower layer indicates the presence of urobilin, while a green colour in the upper layer shows bilirubin; the reaction appears at once, while Schmidt and Strasburger's sublimate test requires twenty-four hours. The method is so simple, and the reagents so generally available, that if it should prove to be as trustworthy as Jovine affirms, it will be a valuable addition to clinical methods. We draw attention to it in order that it may be thoroughly tried.

THE Russian Minister of Public Instruction has placed £10,000 at the disposal of the St. Petersburg Academy of Sciences, to be devoted to the search for radio-active ores in different parts of the empire.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY FRANK SHUFFLEBOTHAM, M.A., M.D.CANTAB., J.P.,

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT FOR THE NORTH STAFFORDSHIRE DISTRICT.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—In the first place, I wish to thank you for the great honour you have conferred upon me in appointing me to be the Milroy Lecturer for this year, and I specially appreciate this distinction because it gives me the opportunity of bringing before the College, as representing the medical profession, the hygienic aspect of what may be regarded as the most important industry in the United Kingdom—that of coal-mining.

Whether it be looked at from the point of view of numbers or of skilled work or from an economic aspect, it may be said that the coal-mining industry occupies the premier position of all industries in this country, and from a medical point of view the manifold problems which are associated with the coal-miner's life and work are of the greatest scientific interest, and at the same time they affect the life and well-being of all the workers engaged in this industry. More than a million men and boys are engaged in coal-mining in Great Britain, and they are distributed in the different coalfields in the various parts of the country. The miner's work is peculiar in that he not only works away from the light of day, but also because he is working underground in an atmosphere which has to be artificially treated to make it possible for him to conduct his daily work, and at great depths under varying conditions of temperature, humidity, and atmospheric pressure. His work involves a daily struggle with the forces of nature, and it is common knowledge that he is subject from the very nature of his employment to conditions which make this industry one of the most dangerous in which any man can find employment.

HISTORY OF THE INDUSTRY.

Although this country was celebrated for its mineral productions from the remotest times, we know nothing of the coal industry until the thirteenth century, although the Romans could not have been wholly unacquainted with coal during their occupation of the country.

The earliest records point to the sea coast of Northumberland and the shores of the Firth of Forth as the localities where the industry had its beginning, and in these districts the coal was found as an outcrop of the carboniferous strata which were exposed to the seashore. In the fifteenth and sixteenth centuries successful endeavours were made to obtain coal from greater depths, and with this development the natural ventilation of the mine became a matter of difficulty, and the gases of the mine were recognized as having a poisonous effect upon the miners. It is interesting to note that the first medical man who speaks of the question of poisonous gases of mines was the famous Dr. Caius, at one time President of the Royal College of Physicians, who, writing in the middle of the sixteenth century of certain coal mines in the northern part of Britain, said: "The unwholesome vapours whereof are so pernicious to the hired labourers that they would immediately destroy them if they did not get out of the way as soon as the flame of their lamps becomes blue and is consumed."

One of the earliest records of an accident due to fire-damp is that contained in the register of St. Mary's Church, Gateshead, in 1621, where reference is made to a man who was "burned in a pit"; and in 1640 an explosion is recorded in a colliery at Mostyn in Flintshire, which was sunk to the depth of between 20 and 30 fathoms. From time to time precautions of all kinds have been adopted with the object of preventing explosions, but unfortunately there has been no cessation in their occurrence up to the present day, even with the discovery of the safety lamp and the improvements which have taken place in the construction of this device from time to time. With increased knowledge and the application of science to the practice of mining, and even with the advantage of stringent mining laws and systematic inspections by trained engineers, at the present time we cannot say that the miner is free from the terrible risks.

The recent explosion at Senghenydd in South Wales has been the greatest mining disaster this country has ever experienced, 427 lives being lost, although the death roll in this case is easily surpassed by the Courrières disaster, which took place in the North of France in 1906, when 1,100 miners were killed.

DISTRIBUTION OF COALFIELDS.

The coalfields in this country are situated in the North of England, in the Midlands, South Wales, and Scotland, and there are undeveloped coalfields of considerable extent in Nottingham, South Yorkshire, and the south-east part of Kent, districts which are now given up to agriculture, but which in the near future may be coal-mining centres. In Ireland there are only between 800 and 900 employed.

The number of coal mines worked at the present time in this country approximate 3,300; 1,089,000 persons are engaged in or about the mines, of which number 879,000 work underground. Of the underground workers 50,000 are boys between the ages of 14 and 15. Of the surface workers, 210,000 in number, 6,500 are females, of whom 900 are under the age of 16. At the present time the law forbids females working underground, and the employment of women and girls on the surface is practically limited to Scotland and Lancashire.

During the last twenty years there has been an increase, steady and almost regular, in the number of employees in this industry.

CONDITIONS OF WORK UNDERGROUND.

The conditions of work underground depend to a large extent upon the depth and the temperature of the mine. Professor Cadman of Birmingham has published observations which have been made in many mines of different depths and in different parts of the globe with the object of finding the ratio of the increase of temperature with the increase of depth. The temperature of gradient, when measured in feet per increase of 1° F., differs from 49.2 to as much as 220 ft. per degree, but the average gradient for coal mines in Great Britain works out at about 72 ft. per 1° F. The temperature of mines may also be influenced by the direct oxidation of the coal seam during the process of mining, but from a medical point of view the consideration of the temperature of the mine air read with the wet bulb thermometer is what concerns us most from a practical standpoint with regard to the working efficiency of the collier whose work lies in mines of such temperatures. In a report of the Royal Commission on Mines on the ventilation of coal mines Cadman and Walley found in many mines the wet bulb readings exceeding 80° F., and in one instance 87° was recorded.

These considerations are of the greatest importance from a health point of view when applied to mines of great depth. There are many mines in this country at the present time over half a mile deep, and in Lancashire there is one mine whose depth approaches 4,000 ft. In the future, in the development of the unworked coal seams of this country, there is no doubt that the coal seams will only be obtained at increased depth.

With regard to the illumination of mines, one can only regret that with the most efficient forms of safety lamps the candle-power is so low. Speaking generally, the candle-power of the ordinary Davy lamp is only 0.12, while the types of lamps of improved pattern now generally used in coal mines rarely have a candle-power which exceeds 0.6, even when new and in a thoroughly clean condition. Electric lamps give a better light than the ordinary safety lamp, but it must be remembered that the functions of the safety lamp are not only those of illumination, but, equally important, they are the means by which in the hands of expert miners inflammable gas can be detected, and the great drawback to the employment of the electric lamp is that its only use is of

illumination, and therefore it can never be used universally without the concurrent use of the ordinary safety lamp.

The sanitation of mines is a question which has been entirely neglected in the mines of this country up to a few years ago, but now it is incumbent upon all colliery owners to provide proper sanitary arrangement in their mines. Through lack of sanitation, ankylostomiasis played a great havoc for many years among the coal-miners of Westphalia, Belgium, and Austria, and it was a piece of good luck for the English coal-miner that the mines of this country never became infected. An epidemic of typhoid fever which broke out among the miners at Leigh, in Lancashire, some years ago undoubtedly assumed serious proportions on account of the insanitary condition of the mines.

Domestic Circumstances.

Considerable attention has been paid of late years to the housing conditions of miners. Mining villages have often to be created away from centres of population, and in too many instances the houses provided have been houses for miners and not homes for men, necessitating the special attention of the authorities. Where coalfields existed there soon arose a large number of mining villages and towns, and the vital statistics of a county were soon profoundly altered in consequence.

For instance, one may begin the subject of infantile mortality. A study of this rate in England and Wales shows that the infantile mortality is highest in the counties which are the seat of the textile industries and in those counties which are the centres of the mining industry. In the former there exists to a large extent the employment of female labour and of married women, but this factor in the case of mining can be ignored. Any inquiry into the cause of the high infant death-rate in mining communities soon leads to the consideration of the habits, and above all the domestic conditions under which the miner lives. The chief factors in the production of a high infantile mortality are poverty, intemperance, and defects of sanitation.

Poverty in the case of miners can be practically passed over as a determining agent, as it is much more likely to be secondary to other causes. The miner's wage is relatively a high one, and it is significant that police proceedings for drunkenness are highest in the mining counties. This, in itself, while pointing to intemperance as a contributory factor, opens up the question of habits, which is of no slight import in the investigation of death-rates, or of the sanitary conditions of the home. It may be briefly stated here that all the circumstances seem to have an interacting effect on each other, so that a vicious circle of conditions is continually in operation.

That the domestic circumstances of the miner are generally deplorable is evident from the reports of the medical officers of the mining counties in Scotland to the Local Government Board. From these reports it appears that in the counties of Midlothian, Linlithgow, Kinross, Stirling, Dumbarton, and Lanark, out of 33,355 houses occupied by miners, 18,582 (which is equivalent to 55.7 per cent. of the whole) are only two-roomed tenements, while 3,866 (or 11.3 per cent.) are only one-roomed dwellings. We thus see that of the mining houses in these counties 67 per cent. of them have only either one or two rooms.

In some districts the housing accommodation is so deficient near the mine that miners are obliged to walk considerable distances from their homes to their work. This is particularly the case where the mines are situated in some agricultural districts, and in North Staffordshire and Shropshire there are many cases where the miners walk or cycle six and seven miles to and from work at the beginning and end of the shift.

The mine owners of South Yorkshire and Nottinghamshire have recognized the advantages and the necessity of better housing conditions by providing houses that are larger, more sanitary, and are built in surroundings which admit of a freer and better ventilation, thus realizing that the social conditions of the miner form a very important part in the welfare of the whole industry.

Mortality of Miners.

Accidents are the chief danger to which miners are exposed in the course of their employment, and more deaths are attributable to accidents than to any other individual cause. The Registrar-General's returns for England and Wales have consistently shown that the coal-mining industry has a higher mortality figure for accidents than all other industries, with the exception of seamen and fishermen and general labourers in industrial districts. Dr. Tatham's report to the Registrar-General for 1908 shows the comparative mortality from various causes of all males, both occupied and retired, and the corresponding figures for coal-miners.

	Mortality Figures from Accidents.
All occupied males	... 100
Platelayers, railway labourers, etc. ...	... 158
Railway engine-drivers, guards, etc. ...	... 174
Dock and wharf labourers	... 185
Coal-miners	... 212
General labourers in industrial districts	... 209
Bargemen and lightermen	... 407
Seamen, etc.	... 459

From this table it appears that the mortality figure from accidents is more than twice as great as the figure for accidents for the whole male community, which, of course, includes miners, and among miners it is nearly twice as great as that of diseases of the respiratory system. The lives of railway workers and dock and wharf labourers appear to be at great advantage as compared with that of a coal-miner.

It is, however, very satisfactory to note that among colliers the mortality figure from accidents has diminished by 25 per cent. during the last ten years.

Coal-miners appear to suffer to a large extent from diseases of the lungs; on the other hand, the death-rate from tuberculous phthisis is abnormally low, and it should be noted that deaths from alcoholism and diseases of the liver and of the kidneys are very much below the average of occupied men in this country. Further, while the figures due to accidents are abnormally high, the "mortality figure" from all causes of death is only 88 for coal-miners, as compared with 100 for all occupied males, indicating that as far as "mortality figures" show, the coal-miner's occupation compares favourably with that of the average worker.

Fatal Accidents.

From one cause or other in the last ten years 12,750 men and boys have been killed in the mines of this country. The average for these ten years is greater than the average for any of the three previous decades, but, if one estimates the death-rates from accidents per 1,000 persons employed, we find that for the last ten years, from 1903 to 1912, the average is 1.33, and it is lower than it has ever been before in any decade.

Between 1893 and 1902 the average was 1.39
Between 1883 and 1892 the average was 1.81
Between 1873 and 1882 the average was 2.24

The figures relate to all employed persons in and about collieries, including those who work on the surface. If one reviews the death-rate among underground workers only, one finds that the death-rate per 1,000 is higher:

1873 to 1882	2.57
1883 to 1892	2.01
1893 to 1902	1.52
1903 to 1912	1.46

When one compares the death-rate from accidents per 1,000 persons employed in the principal mining countries in Europe—France, Prussia, Belgium, and Great Britain—and after remembering that 1906 was an abnormal year in France owing to the Courrières disaster, the figures show that death from accidents in mines in France is less than it is in both Prussia and Great Britain, and the figures for Prussia seem to be extraordinarily high as compared with those of the three other countries.

Further, during the past thirty years there has been a great improvement in the death-rate from accidents per million tons of mineral obtained, the figures being as follows:

	Average Death-rate per Million Tons.
1873 to 1882	... 7.42
1883 to 1892	... 5.65
1893 to 1902	... 4.7
1903 to 1912	... 4.76

This table shows very little improvement in the last ten years, but this apparent state of things is due to the fact that in 1905, 1909, and 1910 there were explosions of either

fire-damp or coal dust which caused death to over 100 people, and as a result the figures for the last ten years have been materially swollen.

NON-FATAL ACCIDENTS.

The official statistics do not show the number of non-fatal accidents which occurred each year prior to 1908, but in the years from 1908 to 1912 no less than 771,500 workpeople were injured in the mines to such an extent that they were incapacitated from work for more than one week, and in the year 1911 the figures rose for that year alone to 166,616.

For every million tons of coal that is brought from the mine to the surface, between four and five persons are killed and more than 550 are injured, and, speaking generally, 17 per cent. of underground workers are injured every year in the pursuit of their employment.

The number of accidents, both fatal and non-fatal, for the year 1912 shows a reduction in all the coal districts in England, and this is due to the fact that during the coal strike the majority of the pits in the country were closed for six weeks.

CAUSES OF ACCIDENTS.

The chief source of both fatal and non-fatal accidents in mines is due to falls of ground, that is to say, falls of the roof or sides in the working places or roadways of the mines. One can say that for many years fatal accidents due to this cause constitute nearly one-half of the total number of fatal accidents which take place underground. The same thing may be said of the non-fatal accidents which occur in mines.

Next to falls of ground, haulage accidents of various kinds and shaft accidents occupy the most important position, and the number of deaths and injuries produced by explosions of fire-damp or coal dust is comparatively small in number.

Among other causes of accidents, one must mention those produced by explosives, eruptions of water, electricity, machinery, and underground fires, as well as those which occur on the surface.

THE NATURE AND SEVERITY OF NON-FATAL ACCIDENTS.

It has been found that in addition to 1,200 or 1,300 men being killed in the mines of this country each year, more than 160,000 each year are injured by accidents which are not fatal. From the information gained by statistics drawn up by the Home Office in connexion with the Workmen's Compensation Act, we learn that a greater number of persons are disabled for two to four weeks than for any other stated period. In 1910, 80,000 persons were disabled for this period of time, and in 1911, 86,000 were so disabled. Roughly speaking, 50,000 miners are injured every year in such a way as to incapacitate them for work for between one month and three months. The number of injuries which cause incapacity between one week and two weeks is extremely small, being about 8 per cent. of the total; but almost as important as the yearly death-roll is the number of miners who are incapacitated each year, and who have not recovered at the end of one year. This number amounts to something like 12,000 a year. This large number does not only represent so many broken bones or lost limbs, but it includes many diseased conditions, directly set up as a result of the injury they have sustained, and medical men who work in colliery districts have almost daily experience of the effect of trauma as a causation of disease or the aggravation of some pathological condition which had previously existed. I feel that we are only beginning to understand to what extent trauma does influence disease, and in the mining districts we have a great mass of material upon which observations can be made in this direction.

INJURY AND DISEASE.

In concluding the lecture, I wish to speak of the subject of disease set up or aggravated by accident, with special reference to the influence of injury upon tuberculosis, not only because of the many thousands of people who are affected with this disease, but also because of the far-reaching effects of injury upon the onset and course of this disease. Briefly, one may say that tuberculous arthritis may be set up as a result, or certainly be aggravated as a result, of an injury to a joint; a crushed chest may be regarded as the beginning of tuberculous pleurisy or phthisis; or an injury such as a strain, apart from more violent injuries, may aggravate a tuberculous condition of the lungs, so as to even result in a fatal issue; and in cases where tuberculous meningitis has followed a blow on the head, or where tuberculous peritonitis has dated back to an injury of the abdomen, one can reasonably infer that there is some direct connexion between the original injury and the subsequent pathological condition. In the same way, periostitis, nephritis, cystitis of a tuberculous nature, may in certain cases be said to result from an injury to the region of the diseased part; and undoubtedly trauma may play a prominent part in the etiology of Pott's disease of the spine. We thus see what an important part injury plays in the onset and course of tuberculosis, and the same may be said of many other diseases.

The sedentary life imposed on a miner by an accident might produce, in those who have previously led vigorous lives, fatty degeneration of the muscles and even of the heart; gout and rheumatism may be set up as a result of the same cause, and it is common experience among medical men who practise in a mining district to find that enforced sedentary habits among miners frequently lead to indigestion, constipation, and haemorrhoids.

NERVOUS DISEASES.

I feel I cannot leave this subject without referring to the various nervous diseases which may result from accident or injury. The influence of injury upon diseases of the nervous system has been more fully considered than that on any other part of the human body. Pearce Bailey has written an exhaustive work upon this subject, and he gives us not only the benefit of his own experience, but he examines all the literature upon this important subject, and he comes to the conclusion that trauma has a decided influence upon the causation of many well-known recognized nervous conditions, such as neuralgia, neuritis, locomotor ataxy, paraplegia, disseminated sclerosis, paralysis agitans, epilepsy, insanity, and the functional conditions which we know as hysteria and neurasthenia.

The commonest nervous sequela of all kinds of injuries among miners is neurasthenia. I do not suppose that there is any class of men so liable to this condition as colliers, and I attribute this frequency to the dangerous nature of the collier's work and to the influence of heredity. There is no industry where heredity plays such an important part as in the mining industry. Officials and workmen alike are sons and grandsons of those who have worked in the pits before them. The risks to which the miner is subject must have some effect upon his nervous system, and his appearance going to work shows a marked difference from the appearance of workmen engaged in other industries. Pottery employees are found early in the morning whistling and laughing as they go to work, but my experience of colliers is that their facial expression indicates mental sadness, although the collier would probably deny that that was so. As far as I can judge, a miner's frame of mind on going to work is one of unconscious apprehension, and the effect of this mental condition from one year to another, and from one generation to another, has an important influence, in my opinion, upon the etiology of neurasthenia in this class of men.

WANT OF PROPER TREATMENT.

The nature of the work and heredity are the two predisposing causes. The exciting cause is some injury, generally an injury to the back, of a comparatively trivial character, and I believe that the neurasthenia in many cases is a direct result of want of proper treatment in the early stages of the injury. As a rule, a miner who sustains a sprained back is treated with some local application, either of the nature of plaster or liniment; he is under the treatment of either his club or panel doctor, or he may attend very occasionally the out-patient department of a local hospital. But, apart from this, he has no treatment, and he simply loafs about with a stiff and painful back, and soon develops a neurasthenic condition. If these patients were treated at the very onset with massage and movements, their incapacity for work would be extremely short in the vast majority of cases, and the men would return to work without having contracted any functional nervous symptoms. Want of treatment is most disastrous to the man, to his family, and to his employer,

because when neurasthenia is definitely set up in these cases the treatment which would deal satisfactorily with his condition is not at the man's disposal. In these cases only Weir Mitchell treatment is of any avail, yet how seldom can a miner working in mining districts, remote from great hospital centres, have the advantage of what is the only treatment which will result in an efficient cure!

I have seen so many of these neurasthenic cases in North Staffordshire that I feel convinced that malingering plays practically no part in this class of case, and it should not be forgotten that one attack of neurasthenia, even if the condition improves to such an extent that the man is able to resume some form of employment, may predispose to another attack, even after a slight injury, and on one occasion I saw a coal-miner with typical symptoms who had met with no injury at all; he had been working with another man as his companion in a new cutting when the roof fell in and injured his fellow-worker, and the uninjured man was so upset at this occurrence that he became very nervous, and within a few days he presented characteristic symptoms of neurasthenia.

THE PATHOLOGICAL CHANGES OF THE THYROID IN DISEASE.

BY

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In a paper on hyperthyroidism[1] (published in this JOURNAL last November) it was shown that the pathological changes of exophthalmic goitre could only to a certain extent be reproduced by thyroid feeding in cats, rabbits, guinea-pigs, and dormice, and, as was to be expected, hyperplasia of the thyroid was one of the changes that could not be reproduced. In another paper[2] it was demonstrated that a hyperplasia of the thyroid microscopically similar to that of exophthalmic goitre was to be found in diseases such as infantile diarrhoea, measles, diphtheria, and whooping-cough, and that it could be artificially induced in guinea-pigs by the injection of diphtheria toxin. Hale White[3] first pointed out that if a large series of thyroids were examined they would be found to vary greatly. This was confirmed by Simpson,[5] who described thyroid changes in certain acute diseases, and by Marine and Lenhart, who examined a series of 73 from various conditions. No attempt has yet been made to separate the diseases according to their action on the thyroid.

The object of this paper is to point out those diseases and toxaemias that do and those that do not produce an alteration in the thyroid, to describe the pathological changes in the gland, to demonstrate them by a series of illustrations, to compare them with those seen in goitre, and to note when these changes are associated with signs of thyroid excess.

The work is based on some 700 thyroids collected from *post-mortem* examinations during the last five years, but, as I have been unable to procure them from man in certain of the rarer diseases, recourse has been had to guinea-pigs and inoculation, though it is hoped that in time these may be confirmed by specimens obtained from man. There is no wish to be dogmatic from the appearance of single sections; doubtful cases have been as far as possible eliminated.

It is proposed to take the micro-organisms in alphabetical order.

BACILLI.

Bacillus aërogenes capsulatus.

The thyroids were taken from 2 cases of spreading traumatic gangrene, the one thirty-six hours, and the other four days, after infection. Pure cultures of the bacillus were grown in the first case: the thyroid showed no change. In the second case other micro-organisms were present, and the thyroid presented a complete hyperplasia with total colloid absorption.

Bacillus anthracis.

Five guinea-pigs were inoculated with anthrax and the thyroids obtained after death. Sections showed total colloid absorption, cell hyperplasia, and some intervesicular haemorrhage. The change took place within two days.

Bacillus coli communis.

Three guinea-pigs received intraperitoneal injections of *Bacillus coli communis*. An illustration represented the thyroid of one of them that died after two inoculations, one on the sixteenth day and the other twenty-four hours before death: it showed total colloid absorption, marked cell hyperplasia and intervesicular haemorrhage.

Coliform Bacillus.

Cultures of this organism were grown from the faeces of a patient affected with endemic goitre. It is the organism that has been described by Major McCarrison[6] as the one that produces endemic goitre in the Gilgit Valley; its characteristics are that it merely decolorizes sucrose-litmus and produces no indol. Emulsions from a culture were injected into the peritoneal cavity of three guinea-pigs: they each received two injections to give them a coliform septicaemia. The effect on the thyroid was to produce total colloid absorption and cell hyperplasia.

Bacillus diphtheriae.

The thyroids have been collected from 8 cases of diphtheria: they show an active hyperplasia, and will be described in full later.

Bacillus of Dysentery.

Three guinea-pigs were inoculated with emulsions of Flexner's bacillus and three with Shiga's bacillus. They both showed total colloid absorption with intervesicular haemorrhage; cell hyperplasia was rather more marked from the injection of Shiga's bacillus. Fig. 1 represents the thyroid from one that received two injections of Shiga's bacillus on the eleventh day and twenty-four hours before death.

Asylum Dysentery.

The glands were taken from 9 cases of asylum dysentery, and no change was observed in 3 cases before the fifth day; on the fifth day and on the sixth colloid absorption with commencing hyperplasia was present; at the end of a month complete hyperplasia had taken place, but at the end of several months the glands were found to have reverted to the colloid state.

Gaertner's Bacillus.

The thyroids were taken from 12 cases of infantile diarrhoea; an active hyperplasia was found, the degree of which varied with the duration of the disease.

Bacillus mallei.

Three guinea-pigs were inoculated with glanders. Fig. 2 represents the thyroids of one that died in twenty-four hours. It shows total colloid absorption, extreme cell hyperplasia and intervesicular haemorrhage. The change produced in this short space of time is quite remarkable.

Bacillus of Tetanus.

Three guinea-pigs were inoculated with an emulsion of the tetanus bacillus. A coloured photomicrograph of the thyroid of one that died five days after the inoculation served as a good example of the acute haemorrhagic change, though the degree of cell hyperplasia was not so marked as in some other toxaemias. This appearance is borne out by the appearance of a child's thyroid taken twelve days after an injury and four days after the commencement of tetanic convulsions.

Tubercle Bacillus.

The changes of the thyroid in tuberculosis have been gauged from 48 cases. They vary according to the type of infection. The acute miliary form produces a complete thyroid hyperplasia, the chronic a colloid hyperplasia. These reactions will be fully described later.

Bacillus typhosus.

The thyroids have been obtained from 2 cases of typhoid fever, four weeks and nine weeks respectively after infection; practically no change was found. In the specimen of four weeks' duration there was a slight chronic hyperplasia, with some excess of colloid, all but negligible.

COCCI.

Gonococcus.

No thyroid has been obtained from any case of gonococcic septicaemia, but two have been taken, one from a case of gonorrhoea that died as the result of an injury, the other from a case that died from lobar

* Read before the Pathological Section of the Royal Society of Medicine.

pneumonia; they both appeared quite normal, and showed no sign of any reaction. These two cases are, of course, insufficient from which to state that the thyroid does not react to the gonococcus.

Meningococcus.

The thyroids taken from 2 cases of cerebro-spinal meningitis in which the meningococcus had been isolated from the cerebro-spinal fluid showed but a slight change of colloid hyperplasia. The date of death after the onset of the disease was in one instance the twelfth and in the other the forty-second day.

Micrococcus catarrhalis.

Three guinea-pigs were injected with an emulsion containing the *Micrococcus catarrhalis* and were killed on the eleventh day; an acute hyperplasia was found.

Micrococcus melitensis.

Twelve Maltese goats whose serum reaction showed that they were infected with Malta fever were killed and their thyroids examined. Hyperplasia was found, which varied from a slight chronic change with excess of colloid to an extreme hyperplasia with total colloid absorption.

Pneumococcus.

Clinically, two main varieties of pneumonia are described in man, lobar pneumonia and bronchopneumonia.

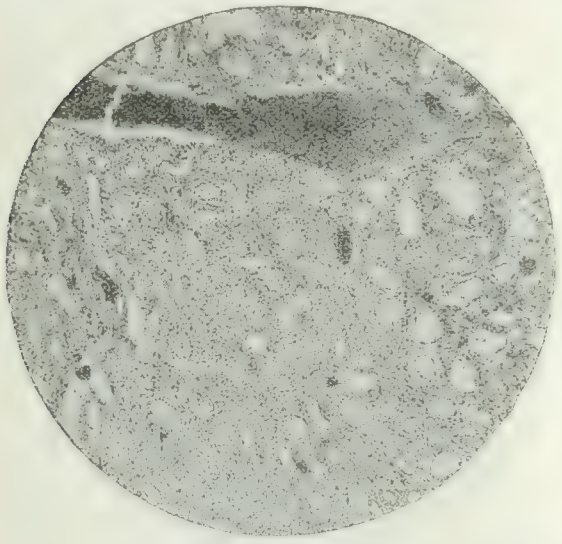


Fig. 1.—Guinea-pig's thyroid after two inoculations with Shiga's bacillus on the eleventh day and twenty-four hours before death. Total colloid absorption, cell hyperplasia, and intervesicular haemorrhage. Acute haemorrhagic hyperplasia.

The bacteriology of the two is thought to be different. Lobar pneumonia is said to be produced by the pneumococcus, whilst bronchopneumonia is said to be capable of production by many micro-organisms. The thyroids have been taken from 39 cases, 27 being bronchopneumonia and 12 lobar. The microscopic appearances were found to vary according to the variety of infection. Fig. 3 represents two thyroids to show the comparison in the effect produced by lobar pneumonia and bronchopneumonia; the right-hand one was taken from a case of lobar pneumonia of five days' duration; it shows no trace of any reaction. The left-hand one was taken from a case of bronchopneumonia of eight days' duration; it shows a complete hyperplasia. Thus, whereas the infecting micro-organisms of bronchopneumonia may produce a thyroid hyperplasia, the pneumococcus of lobar pneumonia is incapable of doing so.

Staphylococcus.

The thyroids taken from 8 cases of septicaemia due to the *Staphylococcus pyogenes aureus* and *albus* showed no evidence of any thyroid reaction.

Streptococcus.

The thyroids have been taken from 41 cases of streptococcic septicaemia and other infections commonly thought to be due to some variety of streptococcus: *Streptococcus anginosus* of scarlet fever, *Streptococcus equinus* from bone infections in the horse, *Streptococcus erysipelatis* from erysipelas, *Streptococcus faecalis* from streptococcic septicaemia, *Streptococcus puerperalis* from puerperal fever, and *Streptococcus rheumaticus* from malignant endocarditis. The effect of these diseases was found to vary. No opinion could be given of the effect of erysipelas, as complications capable of producing a thyroid change were present. Cases infected with *Streptococcus equinus*, *faecalis*, or *pneumoniae* presented normal thyroids. The thyroids from cases of scarlet fever showed a colloid hyperplasia. These changes have been described by K. E. Gregor.[7] No thyroid changes other than the hyperplasia of pregnancy were found in 6 cases of puerperal fever.

Eleven thyroids were examined from cases of malignant endocarditis and rheumatic fever; the age of the patients varied from 8 to 55, and the duration of the disease, in the acute cases, from seven days to seven months, and in the chronic had existed over a period of years. The acute cases may be classified into three groups, though the bacteriology has not been completely worked out. First, cases of malignant endocarditis in which a streptococcus was found in the blood; secondly, those in which it was not found; and thirdly, those described as acute rheumatic fever in which again no micro-organism was found. Of the 2 cases of malignant endocarditis in which a streptococcus was found in the blood, the thyroid of one was quite normal, but the other presented a slight colloid hyperplasia. The cases of malignant endocarditis in which the streptococcus was not found showed some colloid hyperplasia, whilst the 3 cases of rheumatic fever showed a well-marked colloid hyperplasia. Uncomplicated cases of old endocarditis showed an intervesicular

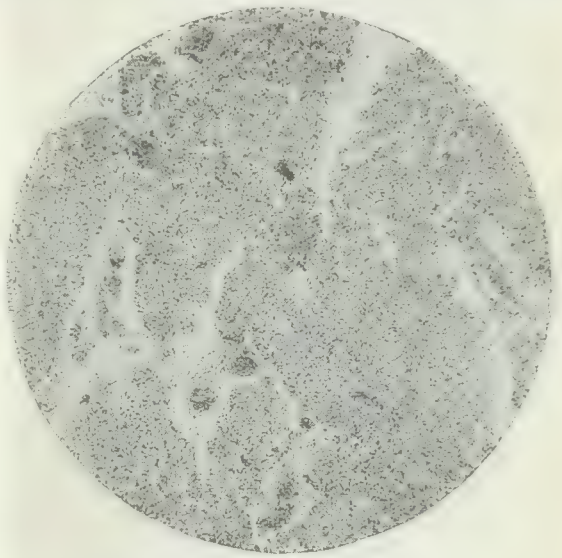


Fig. 2.—Complete hyperplasia produced in guinea-pig's thyroid twenty-four hours after inoculation with *B. mallei*.

fibrosis, but cases with renal and other complications from cardiac incompetence showed as well absorption of the colloid and stages towards a complete hyperplasia. From these results one concludes that the streptococcus has no effect on the thyroid except in scarlet and rheumatic fever, but the changes in these diseases may be due to the presence of other micro-organisms.

Acute Surgical Infections.

The acute surgical infections, such as appendix abscess, intestinal obstruction, acute general peritonitis, produce no change in the thyroid. This led me to suppose, and to state in a preliminary paper, that the *Bacillus coli communis* had no effect on the thyroid, but it has just been demonstrated that when it is injected into guinea-pigs an acute hyperplasia is produced. This apparent difference may be ascribed to the rapidity with which the *Bacillus coli* dies out in the presence of excess of streptococci, so that these infections must be regarded as streptococcal.

PROTOZOA.

Coccidiosis.

The thyroids taken from rabbits affected with coccidiosis showed no evidence of any change.

Spirochaeta pallida.

Up to the present I have been unable to collect any thyroids from cases of primary or secondary syphilis, but a hyperplasia has been described in cases of malignant secondary syphilis. The thyroids from two cases of congenital syphilis showed extreme hyperplasia, but nothing

can be deduced from this, as there was coexisting syphilitic cirrhosis of the liver with ascites. The thyroids taken from 19 cases of general paralysis of the insane and from other late syphilitic affections, such as multiple gummata and arteritis, show some excessive intervesicular fibrosis.

Malaria (Blackwater Fever).

The thyroid taken from a case of blackwater fever of five days' duration showed granulation and partial absorption of the colloid, with commencing acute hyperplasia. There was a two years' history of malaria with three definite attacks. The last attack was the only one accompanied by haemoglobinuria.

STREPTOTHRIX.

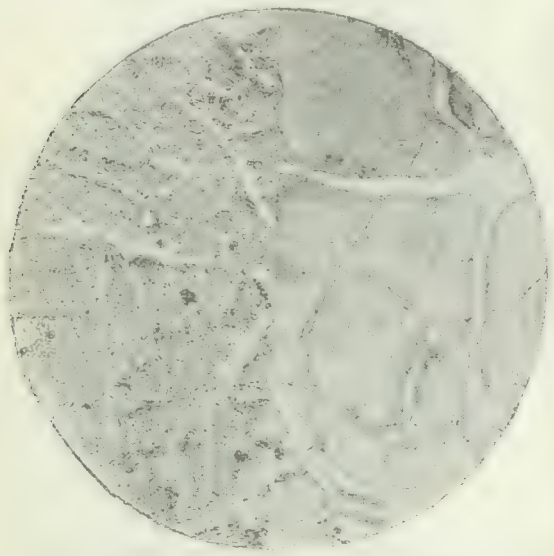
Actinomycosis.

The thyroids were taken from 2 cases of actinomycosis, one of eight and a half and one of four months' duration. An illustration showed mild chronic hyperplasia with excessive colloid formation; the small newly formed vesicles were squeezed up between the large. In the second specimen they appeared as encapsuled adenomata.

DISEASES DUE TO UNKNOWN ORGANISMS.

Measles.

The thyroids from 8 cases of measles all showed an extreme hyperplasia, the degree of which varied with the duration of the disease.



Left. Right.

Fig. 3.—Two human thyroids taken from cases of pneumonia; the left-hand one shows complete hyperplasia after eight days' bronchopneumonia; the right-hand one shows a normal thyroid after five days' lobar pneumonia.

Acute Anterior Poliomyelitis.

The thyroid from a case of acute anterior poliomyelitis showed a mild chronic hyperplasia with cell increase and excess of colloid.

Polyserositis.

A case of polyserositis due to some unknown cause produced no change in the thyroid.

Small-pox.

I have been unable to obtain the thyroids from any cases dead of small-pox; changes have been described by other observers.

Whooping-cough.

Extreme thyroid hyperplasia was found in 3 cases of whooping-cough.

MALIGNANT DISEASE.

The thyroids taken from 31 cases of sarcoma and carcinoma showed no evidence of any reaction. The cells were small, flattened, and appeared inactive, except in those cases in which death occurred from some intercurrent infection capable of producing a thyroid change.

GLAND DISEASES.

Addison's Disease.

The thyroids taken from cases of Addison's disease were found to vary according to the infection that produced the disease. An illustration represented two thyroids from cases of tuberculosis of the suprarenals; the right half showed an extreme degree of hyperplasia, the left half a slight colloid hyperplasia. This difference is to be accounted for by the presence of tuberculosis elsewhere; in the left half it was practically limited to the suprarenal, whilst in the right pulmonary and other tuberculosis was present. Absence of the suprarenal secretion appears to produce no thyroid change.

Cirrhosis of the Liver.

The thyroids taken from 6 cases of cirrhosis of the liver all showed considerable fibrosis, but between the strands of fibrous tissue complete hyperplasia with total colloid absorption was found. The degree of this hyperplasia varied somewhat. It was most marked in the late stages of cirrhosis combined with ascites.

Diabetes.

The thyroids were taken from 3 cases of diabetes caused by fibrosis of the pancreas; they showed no hyperplasia. Two of the cases had died of coma and the other of exhaustion. One concludes that diabetes and its accompanying acidosis have no effect on the thyroid.

Jaundice.

Jaundice produces no thyroid change, for no hyperplasia was found in cases dead from carcinoma of the liver or gall bladder, even though accompanied by severe jaundice.

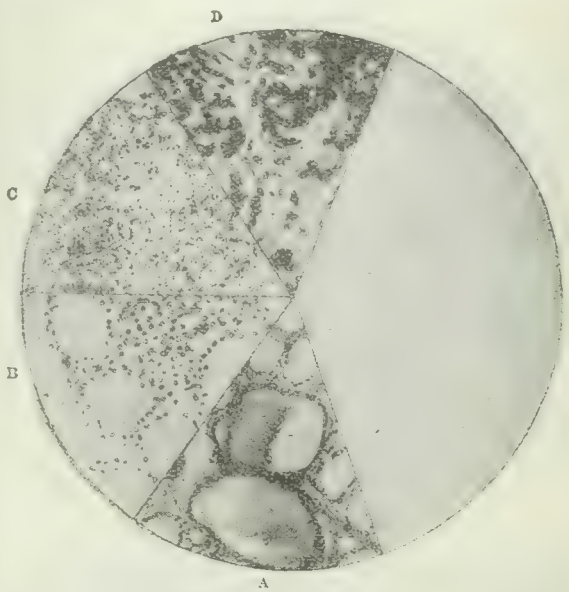


Fig. 4.—Four human thyroids taken from cases of diphtheria dead on the fourth, seventh, seventh, and twelfth days. (A) On the fourth day the colloid is granular and partially absorbed; (B) on the seventh day it is totally absorbed; (C) on the seventh day there is cell proliferation and infolding of the walls of the vesicles; (D) on the twelfth day the vesicles cannot be distinguished, and the cells are columnar in shape.

Diseases of the Kidney.

Some acute inflammatory conditions of the kidney cause a thyroid reaction, whilst others seem to have no such effect. In chronic interstitial nephritis the thyroids sometimes appear quite normal, even though the cases died of uraemia; in others there is an excessive formation of fibrous tissue, which is, perhaps, a late effect of the original toxaemia that caused the nephritis; while, again, others show an extreme hyperplasia, the most marked case of which was associated with gout. In other words, renal disorders, either acute or chronic, are not necessarily accompanied by thyroid changes, though these may occur.

BLOOD DISEASES.

Lymphadenoma.

The thyroids taken from a case of Hodgkin's disease of one year's duration showed no thyroid reaction.

Lymphatic Leukaemia.

The thyroid taken from a case of lymphatic leukaemia showed no change.

Pernicious Anaemia.

The thyroid taken from a case of pernicious anaemia showed a well-marked colloid hyperplasia.

Artificial Toxaemias.

In a former article it was proved from the injection of 15 horses and some 50 guinea-pigs that thyroid hyperplasia could be produced by the injection of diphtheria toxin. From the injection of 6 guinea-pigs it was found that similar effects could be produced by substances such as abrin and ricin. An illustration represented a guinea-pig's thyroid fourteen days after an injection of 0.0000025 gram of ricin; extreme cell hyperplasia and colloid absorption was shown. Ten times this dose was used in the injections of abrin. From these examples the conclusion is drawn that thyroid hyperplasia is caused by certain toxins; that is, that it is not caused by micro-organisms, but by the toxins that certain micro-organisms produce.

Description of the Thyroid Changes.

It will have been noticed from the preceding illustrations that the degree of hyperplasia has varied from a total absence of colloid and cell increase with intervesicular haemorrhage—acute haemorrhagic hyperplasia—to a slight cell increase, accompanied by abundant masses of colloid—colloid hyperplasia. From observations on thyroid, obtained from man and animals, one finds that the thyroid change is dependent on the amount, virulence, and duration of the toxaemia with a slight variation in the individual. In making these observations it is necessary to take into account the age of the patient, as the vesicles are smaller and the gland more cellular in early than in later life.

The diseases and toxaemias may be divided into three groups according to the effect that they have on the thyroid. In the first are those that produce no thyroid change; in the second those that slightly stimulate it and induce a colloid hyperplasia; in the third those that have a marked effect and cause a complete or acute thyroid hyperplasia:

Group I.—*Diseases which produce no Effect.*

Bacilli: Typhoid.

Cocci:

Gonococcus (?)	Staph. albus	Strep. puerperalis
Pneumococcus	Strep. equinus	Strep. rheumaticus
Staph. aureus	Strep. faecalis	Acute surgical

Protozoa: Coccidiosis.

Diseases due to Unknown Micro-organisms: Polyserositis; carcinoma; sarcoma.

Gland Diseases: Addison's disease; diabetes; jaundice.

Blood Diseases: Lymphadenoma; lymphatic leukaemia.

Group II.—*Diseases which induce a Colloid or Chronic Hyperplasia.*

Bacilli: Coliform (chronic in man); tuberculosis (chronic).

Cocci: Micrococcus melitensis; meningococcus (slight).

Protozoa: Syphilis (tertiary).

Streptothrix: Actinomycosis.

Diseases due to Unknown Micro-organisms: Acute anterior poliomyelitis; rheumatic fever; scarlet fever.

Gland Diseases: Chronic nephritis.

Blood Diseases: Pernicious anaemia.

Group III.—*Diseases which cause a Complete or Acute Hyperplasia.*

Bacilli:

Aërogenes capsulatus (?)	Dysentery (Flexner)
Anthrax	Dysentery (Shiga)
Coliform—acute (guinea-pigs)	Gaertner
Diphtheria (man)	Mallei
Diphtheria toxin (horses, guinea-pigs)	Tetanus
Dysentery (asylum)	Tuberculosis (acute)

Cocci: Micrococcus catarrhalis.

Protozoa: Syphilis (secondary); malaria.

Diseases due to Unknown Micro-organisms: Measles; broncho-pneumonia; small-pox (?); whooping-cough.

Gland Diseases: Chronic nephritis; cirrhosis of liver.

Artificial Toxaemias: Abrin; ricin; diphtheria toxin.

Judging from the effect of tuberculosis, one concludes that when the toxaemias of Group III are small in amount and chronic in duration they may produce a colloid hyperplasia instead of a complete hyperplasia, but no increase in the intensity or duration of the toxaemias of Group I will enable them to have the effect of either Group II or Group III.

Acute and Complete Hyperplasia.

The first change that the thyroid undergoes as the result of an acute toxaemia is an alteration in the colloid material. It loses its staining capacity, becomes granular, vacuolated, and finally disappears. During this change the gland is congested with perhaps intervesicular haemorrhage. The walls of the empty vesicles become plicated, the short or flat epithelial cells lining the vesicles become high cubical, and finally columnar and greatly increased in number. The plication of the walls and the cell increase go on until the vesicles, as such, are indistinguishable; during the transition the appearance is given of villous processes growing from the walls of the vesicles. When the hyperplasia is complete, the gland is hypertrophied, but its store of secretion is exhausted. The distinction between the acute and the complete hyperplasia is that in the acute the intervesicular haemorrhage is the most marked feature, the cell and vesicular changes have not progressed as far as that seen in the complete. The length of time that it takes to undergo a complete hyperplasia varies with the toxaemia and its intensity; the whole change may take place in twenty-four hours, as was shown in Fig. 2, which represented the thyroid of a guinea-pig twenty-four hours after an inoculation with glanders.

Diphtheria may be taken as a fair example of the acute toxaemias that act on the thyroid. Fig. 4 represents four thyroids taken from cases dead of diphtheria on the fourth, seventh, seventh, and twelfth days respectively. The stages in the production of complete thyroid hyperplasia are shown. In (A), on the fourth day, the colloid is granular and partially absorbed; in (B), on the seventh day, it has been totally absorbed, and the cells have commenced to increase in number and to elongate; in (C), also on the seventh day, a further change is shown; the walls of the vesicles are infolded, so that the outline of the vesicles can only just be distinguished; the cells are proliferated; in (D), on the twelfth day, the vesicles cannot be distinguished, and the cells are columnar in shape.

So certain is this hyperplasia that the thyroids taken from any one of these acute infections can be arranged in the order of the duration of the disease as it corresponds to the degree of hyperplasia, allowance being made for the very acute infections which can be noted by the extreme degree of intervesicular extravasation. From a series it is possible to estimate the duration of a toxaemia by making a comparison of the hyperplasia with a series the duration of which is known. It has also served to differentiate one disease from another. A thyroid was sent to me as being from a case of tuberculous meningitis, but, as it showed no hyperplasia, inquiry was made, and it was found that the diagnosis *intra vitam* was tuberculous meningitis; but *post-mortem* examination showed it to be a case of pneumococcic meningitis. The pneumococcus, as previously shown, produces no thyroid hyperplasia, whilst tuberculosis does.

The Involution of Acute Hyperplasia.

The question now arises as to the manner in which acute or complete hyperplasia involutes back to normal. Guinea-pigs were inoculated with sublethal doses of micro-organisms and the animals killed at various dates after recovery and the thyroid changes noted. It was found that the vesicles were reformed by the direct transformation of the cells into colloid material. This process is well seen in the horse that has been injected with diphtheria toxin; collections of cells are found arranged more or less concentrically; the outer two or three layers stain normally, but as the rows are traced towards the centre the staining capacity diminishes and they become brown in colour, partially broken up, and are, towards the centre, indistinguishable from the colloid material. The vesicles are at first small in size and full of colloid; they enlarge as fresh colloid is formed, and the lining cells become flattened. The blood that had been extravasated into the intervesicular spaces is invaded by a round-celled infiltration and transformed into young fibrous tissue. To sum up, the involution of an acute hyperplasia is associated with three distinct changes: The reformation of the vesicles by the direct change of the cells into colloid, the enlargement of the vesicles with the squeezing up of the cells between them, and the intervesicular fibrosis. At the end of the process there is some destruction of thyroid tissue with fibrosis. During the involution different portions of the gland may present different stages, so that colloid material may be absent in one part and in excess in another.

The difference between the involution of the acute and the complete hyperplasia is that fibrosis is the most marked feature of the acute and excessive colloid formation in the complete. The production of thyroid fibrosis will be further considered in a later paper.

An illustration represented the thyroid of a guinea-pig killed twenty days after inoculation with glanders; it showed the formation of young fibrous tissue and new vesicles. Another illustration represented the thyroid from a guinea-pig thirty days after a sublethal injection of abrin; the gland had undergone involution and the vesicles were small in size, sparse in number, full of colloid, and separated by strands of fibrous tissue.

An acute toxaemia thus causes a cycle of thyroid changes. First, there is an acute hyperplasia in which the gland becomes hypertrophied and exhausted; when the toxin is overcome the gland involutes back to normal, but the effect of the toxaemia is evident by the diminution of thyroid tissue and the intervesicular fibrosis. In the less acute toxaemias the cell hyperplasia is more marked and the subsequent formation of excess of colloid during involution.



Fig. 5.—Six human thyroids from cases of tuberculosis. A, After three weeks' miliary tuberculosis, an active hyperplasia, with colloid absorption. B, After seven weeks' miliary tuberculosis, a more marked hyperplasia, with some intervesicular fibrosis. C, After three months' miliary tuberculosis, a complete hyperplasia. D, Chronic tuberculosis; early colloid hyperplasia; small vesicles amidst surrounding cell proliferation. E, Further stage of chronic tuberculosis, an increased colloid hyperplasia; the vesicles are larger, but unequal in size and packed with colloid; the cell proliferation is squeezed up between them. F, The final stage of fibrosis.

Production and Involution of Chronic or Colloid Hyperplasia.

The effect of the toxaemias in Group II and the chronic forms of Group III is at first to cause some granulation and vacuolation of the colloid. The granulation is coarser than that found in the acute hyperplasias; it is indicative of some colloid absorption. The lining cells become high cubical and are proliferated; between the vesicles there may be several rows. The vesicles are at first of equal and of normal size, the gland is congested. The degree of this change varies with the toxaemia—the greater the intensity the greater the absorption of colloid and cell proliferation. The further change is brought about because the new formation of colloid from the proliferated cells is greater than the colloid absorption. The result is that large vesicles are formed and are distended with densely packed colloid which cracks on the microtome. In the colloid may be seen sprig-like projections of cells called by Marine reversions; between the large vesicles fresh ones are formed from the cell proliferation, so that at this stage the vesicles are of unequal size; some are larger and some smaller than normal. The chronic congestion of the gland leads to intervesicular fibrosis. The cell proliferation and colloid formation may proceed for some years, but eventually the gland becomes cirrhotic with destruction of thyroid tissue; the small portion of active gland left then undergoes an active hyperplasia. Thus there are three characteristic stages in chronic hyperplasia: First, when the vesicles are of equal size, the colloid is partially absorbed and coarsely granular and the cells are proliferated; secondly, when the vesicles are of unequal size and packed with colloid with cell hyperplasia between them; and, thirdly, when the gland is cirrhotic with deficiency of thyroid tissue.

Tuberculosis may be taken as a typical example of the chronic toxaemias, but the miliary variety must be regarded as an acute or subacute toxaemia. The two may be taken together and arranged in one complete thyroid circle and be followed over a period of years, and the comparison seen between the complete and the colloid hyperplasia. Fig. 5 represents six thyroids taken from cases of tuberculosis. They are arranged in a circle passing up to the complete hyperplasia and involuting down towards normal. A, B, and C are from cases of miliary tubercle; D, E, and F are from cases of chronic tuberculosis. A represents a thyroid from a case of miliary

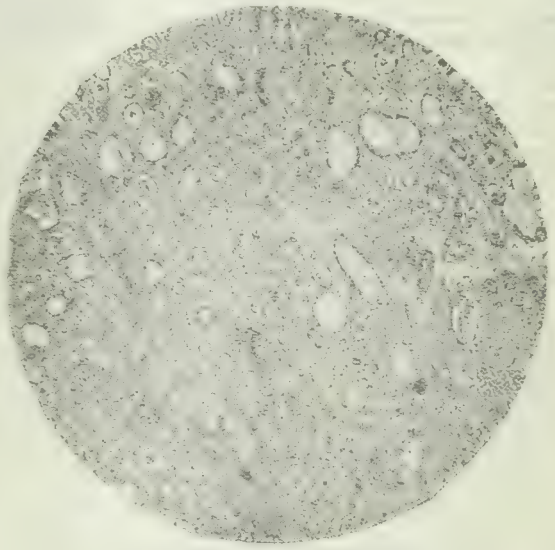


Fig. 6.—Thyroid from a case of cirrhosis of the liver; cirrhotic thyroid, intervesicular fibrosis, with complete hyperplasia.

tubercle of three weeks' duration; it shows an active hyperplasia with colloid absorption. B represents a thyroid after seven weeks' miliary tubercle; it shows a further hyperplasia with some intervesicular fibrosis. C shows a complete hyperplasia after three months' miliary tubercle; the thyroid hyperplasia has here reached its height. D, taken from a case of chronic tuberculosis, shows a colloid hyperplasia in its first stage. E shows a colloid hyperplasia in its second stage; the vesicles are of unequal size and packed with colloid; between them is the cell hyperplasia. In F the thyroid is represented by a mass of fibrous tissue. This fibrosis is independent of the local tubercles seen in the illustration. The series of changes seen in Fig. 5 could not occur in such typical form in any one case, since the disease in such severity as is illustrated in A, B, C would have proved fatal at too early a stage to permit of the changes shown in D, E, F.

The extent of these changes varies according to the amount, intensity, and duration of the toxaemia. These thyroid cycles must be altered accordingly, and the final condition of the gland after involution will also vary in the extent of the destruction that has been produced. In Fig. 5 the thyroid is represented as being finally left in a state of almost complete fibrosis, but the final condition may be anywhere between this fibrosis and the normal according to the degree and duration of hyperplasia.

It is to be specially noted that colloid hyperplasia can be produced by three different conditions: First, during the involution following an acute toxaemia: secondly, during the production, and thirdly, during the involution following a chronic toxaemia.

COMPARISON OF THE EFFECTS OF THE SINGLE TOXAEMIAS WITH THE PATHOLOGICAL CHANGES FOUND IN GOITRE.

The microscopical appearances of the thyroid during these cycles correspond to those described in goitre by Marine and Lenhart; exophthalmic goitre represents the complete hyperplasia, and in the course of time involutes through a stage of colloid hyperplasia to a condition of fibrosis. An illustration of this was given in a previous paper. Endemic goitre, as described by Marine and Lenhart, corresponds to a colloid hyperplasia due to the effect of a chronic toxaemia, the final result of which is the destruction of thyroid tissue with fibrosis.

The size of the glands would appear to be not so greatly affected by the toxaemias as might be expected. The absorption of the colloid and the crenation of the vesicles, which would reduce the size in the first stage of acute hyperplasia, appears to be largely counteracted by the intervesicular extravasation. During the stage of involution the gland tends to increase in size, as is suggested by the squeezing up of the cells between the enlarging vesicles. In the very acute toxaemias, however, the gland is swollen from extravasation, while in the later stages it is smaller than normal, as is suggested by the diminution of the number of vesicles. In the chronic toxaemias the gland is increased in size in both stages. Comparing the variations in size from the toxaemias with the alteration in goitre, one finds that the gland may or may not be enlarged in exophthalmic goitre, but that the thyroid in endemic goitre shows considerable enlargement; thus the thyroids in the acute toxaemias and in exophthalmic goitre may be of the same size, but there is a great disparity between the chronic toxaemias and endemic goitre.

No signs of thyroid excess are found in the hyperplasia of either the acute or the chronic toxaemias nor in the colloid hyperplasia of endemic goitre, though they are found in the hyperplasia of exophthalmic goitre. So it may be said that there are two main differences between the hyperplasias of the toxaemias and the hyperplasias of the goitres, one the hyperthyroidism of exophthalmic goitre when compared to the complete hyperplasia of the toxaemias, and the other the increase in size seen in endemic goitre compared to that of the chronic toxaemias.

REPEATED AND DOUBLE TOXAEMIAS.

Repeated toxaemias, or at any rate repeated injections of diphtheria toxin, lead not only to the production of thyroid hyperplasia, but also to the formation of antitoxin. It was found from observations on 15 horses that the hyperplasia decreased as the antitoxic value of the serum increased. (For a full account see *Lancet*,[2] December 27th, 1913.) The antitoxin in the serum protected the thyroid from the action of the toxin. Unfortunately, practically nothing is known of the production of antitoxin, or even whether antitoxins are formed in the toxaemias other than that of diphtheria. So this can only be applied to the extent of saying that it is probable that the toxaemias that are counteracted by the formation of antitoxin only produce a thyroid hyperplasia when antitoxin is absent or deficient.

To give the effect of a second toxaemia acting on the thyroid before recovery is complete from the first, guinea-pigs were injected twice with emulsions of *Bacillus coli communis*, *B. mallei*, and of dysentery and other micro-organisms; it was found that an increased haemorrhagic hyperplasia was produced.

The result of an acute toxaemia supervening on a chronic can be seen in man when miliary develops on chronic tuberculosis, but the toxaemia only differs in intensity. An illustration showed the thyroid of a man who developed miliary on tuberculosis of two years' duration; extreme hyperplasia was shown amongst excess of fibrous tissue. The gland was not increased in size, but after the onset of miliary tuberculosis exophthalmos developed, and *post mortem* there was no reason to account for this beyond the hyperplasia of the thyroid. Signs of hyperthyroidism developed in this way one would expect to be rare, as the toxin of miliary tuberculosis would have to act during the stage of active colloid hyperplasia, not during the stage of involution or fibrosis; also the acuteness of the toxaemia would mask the symptoms except exophthalmos, even if it did not cause death before its production.

Of the toxaemias that have been described, cirrhosis of the liver is an example in which a subacute toxaemia develops on a chronic; at the onset of ascites a subacute toxaemia arises which acts together with the existing toxaemia caused by the deficiency of the liver. Observations have been made on the occurrence of exophthalmos in cases of cirrhosis of the liver, and it has been found in 10 out of 12; it may be either unilateral or bilateral. It occurred in both hypertrophic and atrophic cirrhosis with or without ascites, but it was most marked in the late cases of cirrhosis with ascites. The photograph shows double exophthalmos in a late case of cirrhosis with ascites, and Fig. 6 shows the cirrhotic thyroid that has undergone complete hyperplasia. It was previously noted that chronic interstitial nephritis is sometimes associated with complete thyroid hyperplasia. This disease may be taken as an example of a steadily increasing toxaemia with exacerbations in the later stages. There is no enlargement of the thyroid, yet exophthalmos would appear from the literature to be not uncommon. Professor Barker[9] found it in 16 out of 33 of his cases at the Johns Hopkins Hospital, and he stated that it was not due to chronic arterial hypertension and that it varied with the exacerbations of the disease. From personal observations on a small number of cases it was noted, but in a smaller percentage. Levison[10] also described it in chronic nephritis, and stated that it occurred in other chronic toxaemias.



Fig. 7.—Photograph. Cirrhosis of the liver, with ascites, and exophthalmos.

These examples are of importance in that they serve to bridge over the gap between the thyroid changes and hyperthyroidism of the toxaemias and those of goitre. These considerations enable one to trace the effect of diseases on the thyroid from birth upwards, and they lead to the production, prevention and cure of certain thyroid conditions.

The experimental portion of this work was done in Professor A. R. Cushny's laboratory at University College, and I am much indebted to him for his care and advice. The infective injections were made at the Lister Institute, for which I am indebted to Dr. J. C. G. Ledingham and Dr. Schutz. The morbid material was largely obtained from the Westminster Hospital; for this and for his advice I am very grateful to Dr. R. G. Hebb, also to Dr. Braxton Hicks, Dr. Lazarus-Barlow, Colonel Blenkinsop, D.S.O., Dr. A. Davies, Dr. R. R. Elworthy, Dr. A. C. Inman, Major Kennedy, Dr. F. W. Mott, Dr. O. P. N. Pearn, Dr. J. D. Rolleston, Dr. G. L. Thompson, Dr. F. M. Turner, and Dr. Them Zammitt. The photomicrographs were taken at the Bethlem Royal Hospital, for which I am indebted to Dr. W. H. B. Stoddart and Mr. Crow.

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THE fifth congress of French-speaking practitioners of medicine is to be held in Paris on April 14th and two following days. There will be an exposition of apparatus, drawings, etc., in connexion with the congress.

A MEETING of members of the Italian Chamber of Deputies was recently held for the purpose of appointing a medico-parliamentary committee to watch the course of legislation in regard to questions of public hygiene. Professor Santoliquido was in the chair. Drs. Maffi, Bussi, and Morisani were chosen as secretaries. There is no president and no council.

DISSEMINATION IN CARCINOMA OF THE RECTUM.

By JAMES W. HESLOP, M.B., M.R.C.S.,
Honorary Surgical Registrar, Royal Victoria Infirmary, Newcastle-on-Tyne.

The following case is important in many ways. It proves conclusively that the extramural spread of carcinoma of the rectum may be very far advanced, even into the abdomen, whilst the primary focus in the wall is small and difficult of recognition. It demonstrates the value of the laparotomy which necessarily precedes abdomino-perineal resection of the rectum in determining the presence or absence of secondary intraperitoneal deposits, which may contraindicate an extensive and useless removal. Limited removal as obtained by perineal excision, or even Kraske's operation, in this case would have left most of the disease uneradicated, despite the low position of the malignant ulcer on the rectal wall. Occurring in a young man, it shows that the age incidence of carcinoma is variable, and that its virulence is probably greater in the young than in the old.

The case is recorded in the endeavour to contribute in some slight measure towards the settlement of the controversy between the importance of the intramural as opposed to the extramural spread of carcinoma of the rectum, which has been the subject of articles from Mr. Sampson Handley, Mr. Lenthal Cheatle, and others.

G. G., a miner, aged 26, was admitted to the Royal Victoria Infirmary on February 24th, 1913, with a history of five months' pain in the lower abdomen, occasional vomiting, and, later, the appearance of piles, with passage of slime per anum. Examination by the rectum showed the presence of a small indurated ulcer, the size of a threepenny piece, situated on the posterior rectal wall about a quarter of an inch above the anal margin. This was only discovered after several rectal examinations, and then by the base of the finger, not the tip. The ulcer was excised, and microscopical examination showed a spheroidal-celled type of carcinoma with a tendency to colloidal degeneration.

Abdomino-perineal resection was performed by Mr. Angus on February 28th, 1913. Median laparotomy was first done below the umbilicus. On the parietal peritoneum just above the left pelvic brim was a tiny white nodule, which was excised. Careful search revealed no others, and many present expressed doubts as to its malignancy. The pelvic colon was divided near its middle and abdomino-perineal removal completed in the usual way after the proximal cut end of the pelvic colon had been fixed through a separate incision in the left iliac fossa as an inguinal colostomy.

The specimen consisted of half the pelvic colon, the rectum, and anal canal. It showed where the small ulcer had been excised. In the cellular tissue around the posterior rectal wall was a chain of hard, infiltrated glands, varying from the size of an almond below to a pea at the top of the specimen. Macroscopically the glands, on section, showed a hard exterior with a cavity in the centre, containing soft mucoid material.

A gland and the deposit on the parietal peritoneum were sent for microscopical examination. The following is the report of the pathologist (Professor Stuart McDonald):

"The gland is extensively infiltrated with a spheroidal-celled type of cancer, which is undergoing colloidal degeneration. The peritoneal deposit is also diffusely infiltrated with carcinoma. There is, however, a tendency to tubule formation and a columnar-celled type of growth."

The patient made a good recovery, was discharged from hospital on April 9th, 1913, and in February, 1914, was well and free from recurrence.

I am indebted to Mr. Angus for permission to publish this case.

SOME OBSERVATIONS ON THE EFFECTS OF ADRENALIN.

By MALCOLM DONALDSON, M.B., B.C.Cantab.,
Demonstrator of Midwifery, St. Bartholomew's Hospital Medical School.

This article is illustrated by only a small number of observations, but my reason for publishing it is the hope that it may stimulate others to investigate the subject more thoroughly before giving a drug which, in my own opinion, is in the majority of cases really harmful. The use of adrenalin in cases of shock and collapse is advocated in almost every book that mentions the treatment of this condition. There is no doubt that this drug will bring back the pulse in a case where no pulse could previously be felt, but at great expense to the heart.

The present article is based on observations of eight normal people, who were either students or members of the junior staff, and of six patients, one of whom was suffering from collapse following *ante-partum* and *post-partum* haemorrhage.

Observations on Normal Persons.

All these observations, except one, were made in the early morning, whilst the subject was still in bed. The one exception was myself, the observations being made when I was warded with a septic hand and in bed for that reason.

In every case a hypodermic injection of normal saline (5 minims) was given as a control, so that the psychical element was entirely eliminated. The results may be summarized as follows:

In seven cases there were subjective and objective symptoms, the subjective symptoms being so marked that not one case was willing to undergo any more observations. In the eighth case, however, there was no effect. Most of the subjects complained of breathlessness and feeling cold.

The objective symptoms were as follows: In severe cases there was obvious increase in frequency of respiration. In most cases the subject became somewhat blanched. The systolic pressure was raised; the greatest rise was 45 mm. of mercury, the least 15 mm. In six cases the pulse-rate was raised more than 15 beats a minute; in the most marked case it was raised 52 beats a minute. In the seventh case no change in pulse-rate could be detected.

Table I.—*Normal Persons.*

Case.	Change in Pulse-rate.	Change in Systolic Pressure.	Dose of 1/1000.	Subjective Symptoms.
1	60–112	140–185	♏ v	Very severe.
2	50–75	125–145	♏ v	Very severe.
3	66–84	112–145	♏ v	Severe.
4	A 60–70	100–125	♏ iv	Moderate.
	B 70–79	125–135	♏ v	Moderate.
5	55–80	95–140	♏ v	Very severe.
6	70–95	115–130	♏ iv	Very severe.
7	A 70–79	145–160	♏ iij	Very severe.
	B 79–70	160–175	♏ v	Slight.

Space forbids the publishing charts of all these cases; the most marked case alone is shown (Chart 1).

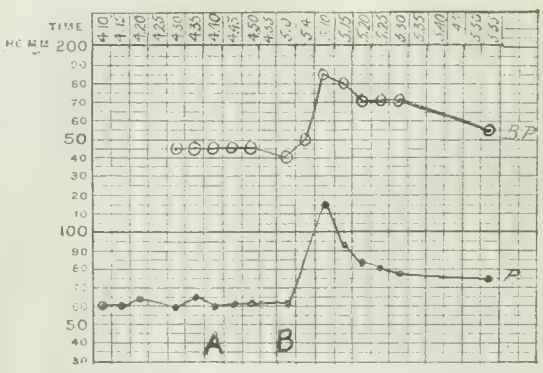


Chart 1: The first case of the first series. At 4.40 p.m. (marked A) ♏v of physiological saline was injected. At 5 p.m. ♏v of 1/1000 adrenalin was injected subcutaneously just below the clavicle. Within 30 seconds subjective signs were felt. BP = Blood pressure; P = pulse.

Observations on Patients.

Of the six cases on which observations were made, five had marked symptoms after the injections, but in the sixth case there was no result.

TABLE II.—*Patients.*

No. of Case.	Change in Pulse.	Change in Pressure.	Dose of 1/1000.	Subjective Symptoms.
1	80–130	135–145	m x	Severe.
2	100–120	130–150	m viij	Very severe.
3	10?–120	120–145	m v	Slight.
	100–125	130–145	m v	Slight.
4	75–110	135–170	m v	*Nil.*
5	120?–105	100–300 + +	m xx	Patient collapsed before and after.
6	120–130	130–130	m v	—

It is unnecessary to quote all these cases in detail, and a few remarks in addition to the charts of Cases 1 (Chart 2) and 5 (Chart 3) will be sufficient.

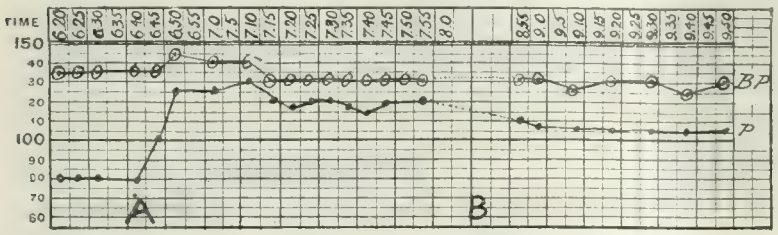


Chart 2: Case 1 of the second series. At 6.40 an injection of adrenalin 1/1000 m x was given. B represents an interval of one hour during which no observations were made. BP = Blood pressure in mm. Hg; P = pulse.

The first case was a woman of 50 who had had an operation about two hours previously; her pulse before the operation was about 60; after the operation it was 80, but quite regular. Twenty-five minutes after the injection the pulse was 130 and irregular. The systolic pressure at first rose slightly, then fell slightly. Three hours later the pulse returned to 100, and the patient made an uninterrupted recovery. The subjective symptom was that of cold.

In the second case the patient had a rigor, and blankets and hot bottles were applied; symptoms rapidly passed off, and the patient made an uninterrupted recovery.

The fifth case was much collapsed from haemorrhage, and the 20 mm. of adrenalin was given in a pint of saline, and for this reason all the effects cannot be said to be due to the adrenalin, but to those people who have seen many salines given it will not be difficult to see that most of the effect was due to the drug. The radial pulse, which was very weak before the injection, improved for a short time, but soon disappeared. The patient was infused a second time with saline only, but died later in the day.

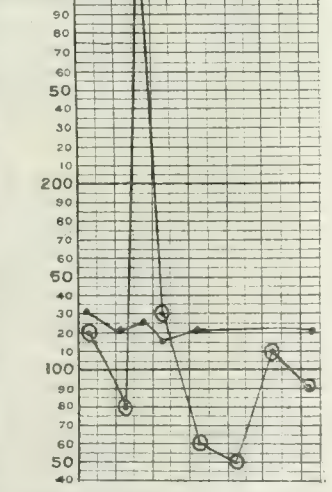


Chart 3: Case 5 of the second series. At 11.25, 1 pint of saline + 1/1000 adrenalin m xx was given intravenously. At 11.55 half a pint of saline was given intravenously without any adrenalin.

In all three charts the observation on systolic pressures are marked by circles with dots in them, and the pulse by simple dots.

The sixth case showed no changes in the pulse, which was already rapid.

The cases of most value for showing the result of treatment by the drug are those in which shock was only very slight, and in those cases the benefit was such that I do not intend to use adrenalin again for the treatment of shock and collapse. It is for the pharmacologist to explain the action of this drug, but as one of the people on whom observations were made, I would suggest that its vaso-constrictor action is by no means its chief action, but that there is in addition a cardio-accelerator and cardio-augmentator action.

It is well known that adrenalin is very often used in the relief of asthma with instantaneous results, but two patients have told me that "it made their heart beat so hard that they thought they were about to die."

ALCOHOL, HOUSING CONDITIONS, AND CONSUMPTION.

BY HAROLD VALLOW, M.D.,
TUBERCULOSIS OFFICER, BRADFORD.

THE campaign against tuberculosis, which has been greatly strengthened by the sanatorium provisions of the National Insurance Act, is not likely to be entirely successful unless certain inquiries are made which will enable us to deal effectively with the predisposing causes of consumption.

Sanatorium, hospital, dispensary, and domiciliary treatment, while doing a great deal to alleviate the sufferings of the majority of the consumptive patients, and in a fair percentage of the early cases producing a cure, are not capable of rooting out this terrible disease entirely. Those of us who have been engaged in this work for some time feel the necessity for knowing the actual predisposing causes, and how far each is responsible, in order that they may be removed.

I have investigated two predisposing causes of this disease — alcoholism and housing. I have chosen alcoholism as an indication of the habits of the people which can only be removed by education, and have endeavoured to determine how far it can affect either the onset or the progression of tuberculosis, and housing conditions as one that can be remedied by the State.

The investigation is by no means complete, and can be extended in other areas, when the whole of the results ascertained by different observers can be compared and useful statistics drawn up.

I. ALCOHOLISM.

I have personally investigated 301 cases of tuberculosis in Bradford, including men, women, and children.

Of 117 men—	*Of 100 women –*
33.33 per cent. were drinkers	8 per cent. were drinkers
40.17 per cent. were moderate drinkers	36 per cent. were moderate drinkers
26.5 per cent. were teetotalers	56 per cent. were teetotalers

Of 84 children, 100 per cent. were teetotalers

Of these 84 children—

In 7.14 per cent. both parents were drinkers
In 22.61 per cent. one of the parents was a drinker
In 29.75 per cent. one or both parents were drinkers

Dr. Crowley, in 1900, after a careful inquiry into the alcoholic habits of 62 adult male patients admitted into a Poor Law sanatorium for consumptives, including a considerable number above the "pauper" class, found that 43.6 per cent. were heavy drinkers, 40.3 per cent. moderate drinkers, and 16.1 per cent. teetotalers. Friedrich, investigating 451 cases of phthisis, found that 133 were alcoholic—that is, 29.5 per cent. Dr. Villy, investigating 25 adult male cases of phthisis in his private practice, found that 40 per cent. were drinkers.

Adding together these four sets of figures from independent investigators, it appears that of 655 adult male cases of consumption 209 were admittedly drinkers—a percentage of 31.9 per cent.

It is necessary to compare these figures with the drinking habits of the population in order to show whether there is a larger number of heavy drinkers amongst consumptives than the normal population. This is an extremely difficult matter, and can only be estimated statistically, or by inquiries from a small proportion of the population (a sample population).

(*a*) A statistical estimation of drinkers in the United Kingdom, calculated by George Wilson, B.A., Secretary, United Kingdom Alliance, on figures given by Dr. Branthwaite, the Home Office Inspector under the Inebriates Acts in England and Wales, and made referable to Bradford, shows that 1.71 per cent. males and 1.48 per cent. females "drink more freely than is consistent with strict moderation, or are occasionally drunken."

(*b*) An estimate from a sample population was made in respect of 133 males (over 18), including 23 male relief

cases, 100 of the working class, and 10 of slightly better positions, and 100 women.

Of 133 men—	*Of 100 women—*
10.53 per cent. were admittedly drinkers	2 per cent. were heavy drinkers
68.4 per cent. were moderate drinkers	29 per cent. were moderate drinkers
21.07 per cent. were teetotalers	69 per cent. were teetotalers

The figures of drinking habits of the sample population are much higher than those obtained by the statistical estimation; they have been taken from the same class of people as were those for the drinking habits of the consumptive patients.

It would appear that alcoholism is more prevalent amongst the male consumptive patients than amongst the normal male population, and it also appears to be in excess amongst the females.

It does not necessarily mean that alcohol, of itself, has a great deal to do with the onset or progression of consumption, but it does mean that alcoholism, with its associates—late hours, irregular feeding, the poverty which it may entail, the crowding together in ill-ventilated public-houses where the best hygienic conditions do not obtain—has a considerable bearing on the consumptive question.

If alcoholic habits can be taken as an indication of the habits of consumptive patients of the poorer class, these figures point to the conclusion which I have held for some considerable time—that if consumption is to be eradicated the habits of a large number of the patients will have to be greatly improved.

II. Housing.

Mr. Dunne, the Secretary of the Charity Organization Society, and myself have investigated the housing conditions of 1,307 cases of tuberculosis. I have had placed at my disposal the reports on 865 of these cases visited by the nurses attached to the staff at the dispensary.

Of the 1,307 cases of tuberculosis investigated—

1,244 live in private houses and the remainder live in common lodging-houses, etc.

Of the 1,244 living in private houses—
376 live in a through house,
868 live in a back-to-back house.

Therefore, for every 1 tuberculous person living in a through house there are 2.3 living in a back-to-back house.

These figures may be compared with those derived from the Census, 1911. The actual number of back-to-back houses in Bradford is not known, but, as a general rule there, a three or less roomed house is a back-to-back. There are 30,834 houses with three or fewer rooms in Bradford, containing 105,744 persons, and 177,577 persons live in through houses. Therefore, for every 1 person in Bradford living in a through house, 0.595 live in a back-to-back.

Some conditions prevalent in the housing of the working classes are more likely to be remedied by education than by the State. One of these is overcrowding, which leads directly to close contact of the individual in the house.

I am of opinion that prolonged intimate contact of tuberculous patients with healthy persons is likely to lead to the development of tuberculosis in a fair percentage of these persons.

From 20 to 30 per cent. of contacts examined at the dispensary have been found to be suffering from one or other form of consumption; therefore I have had the sleeping arrangements investigated in the houses where there are tuberculous patients, and have tabulated the results:

Sleeping Arrangements in Houses with Tuberculous Persons.

I. Separate Bed-room.	II. Separate Bed, but Others in the Room.	III. No Separate Bed; Others in Bed.	IV. Kitchen.		V Downstairs in Front Room.
			Alone.	With Others.	
	1 2 3 4 5	1 2 3 4			
323	8 10 3 1 2	345 20 7 28	13	9	15

This table is almost self-explanatory. The numbers 1, 2, 3, 4, 5, under the heading of "Separate bed" (column II), indicate the number of others in the room. The figures below represent the number of consumptive patients sleeping under these conditions—that is, under the heading of "Separate bed, but others in the room," there are 8 consumptive patients in Bradford sleeping with one other in the room, 10 with two others, 3 with three others, and so on.

Cleanliness.	*Sanitary Conveniences.*
569 were clean.	476 had a w.c.
215 were dirty.	338 had a privy.
81 were very dirty.	51 had a plug closet.

These figures point to the following conclusions:

1. That there is more phthisis in back-to-back houses with no through ventilation than in good, through, well ventilated houses.

2. That as contact with tuberculosis cases is likely to play an important part in the spread of the disease, it is necessary that the people concerned should be told of the great danger they are running, as there is ample proof that such a danger does exist.

3. That the cleanliness of the houses is not all that is desirable and may also play a part of no inconsiderable value, but the proportion of sanitary conveniences very little.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A NOTE ON ONANISM AND ITS EFFECTS ON THE MAN.

As the word "onanism" is so often wrongly used as a synonym for masturbation, it may be as well to begin by stating that what is here meant is the interruption of coitus before emission with the object of preventing conception—a practice as old at least as the Bible story of Onan, and how much older nobody knows.

Apart from its influence on the declining birth-rate, the reasons why I wish to say a word about this particular form of conjugal check or "fraud" are: That it is widely prevalent at the present time; that if persisted in it is probably always injurious sooner or later—to the man at any rate; and that its evil effects do not appear to be adequately recognized.

I do not propose now to discuss details. I only want to say just enough about its effect on the husband to attract, perchance, the interest of some of those who may not have thought about the matter, and especially of the family doctor to whom opportunities for advising and warning would chiefly occur. As regards the wife, I will not venture to say more than that the effect on her probably depends mainly on the extent to which sexual feeling is present in each individual woman—a matter about which little is accurately known.

The most likely explanation of the widespread prevalence of onanism seems to be that it does not require help from outside, and consequently it is resorted to by well-meaning people who would hesitate to use either mechanical or chemical means, and who look upon onanism as the least unnatural and therefore the best way of achieving their purpose, instead of, as it really is, the worst of all ways. It is a deplorable fact that there are so many people who practise it among those who are best qualified to produce good and useful citizens. Occasionally a man soon finds out for himself that the practice is affecting his health, and abandons it. Probably much more frequently it is continued for a considerable time and sometimes for many years. Then, after a period which varies greatly according to the nervous organization of the patient, he becomes irritable, nervous, and depressed, and by-and-by may present a more or less typical picture of what is now called neurasthenia. Sometimes accompanying, sometimes preceding, and sometimes following the onset of nervous symptoms there is in many cases impairment or total loss of sexual desire and pleasure, together with impairment of power varying in degree up to complete impotence. I have also seen acquired aspermia, which could be attributed to no other cause than onanism.

As accounting to some extent for insufficient recognition of ill effects it should be borne in mind that a man does not usually seek advice about onanism directly. This is

partly perhaps because it has not occurred to him that it is harmful and partly because he considers it a strictly private affair and is unwilling to mention it even to his medical adviser. But however this may be I have found in practice that this cause of ill health, unless definitely inquired for, is very likely to be overlooked. Of course, I do not mean to suggest that a doctor should question his patients indiscriminately, but I do suggest that he should keep the potentiality at the back of his mind, to be made use of on occasion, as, for example, in neuropathic conditions for which no other cause can be found, or which resist the usual methods of treatment.

Arthur Cooper,
Consulting Surgeon to the Westminster General Dispensary.
London, W.

TREATMENT OF DUPUYTREN'S CONTRACTION BY INJECTIONS OF FIBROLYSIN BOTH BEFORE AND AFTER OPERATION.

The interesting article by Mr. Tubby in the British Medical Journal for November 8th, 1913, recalled a case of Dupuytren's contraction on which I operated in 1911.

J. C., aged 55, had been operated on about five years previously at another hospital, but the contraction had recurred and prevented him from engaging in his favourite pastime of pianoforte playing.

While waiting till he could conveniently give up the time to have the operation performed, I noticed in various journals notes of cases of Dupuytren's contraction treated by fibrolysin, and it occurred to me that it would be an advantage to get as much improvement as possible before operating, and to soften the scar as much as possible by means of fibrolysin. I therefore gave four injections of fibrolysin in the arm on September 26th and 29th, and on October 3rd and 6th. On October 12th, 1911, he was admitted to the Victoria Hospital, Wynberg, and I dissected out the contracted bands of fascia by means of two flaps as described in Cheyne and Burghard's *Surgical Treatment*. When dressed on October 18th the wound was healed except at one end where the skin was too short to cover the underlying structures when the fingers were extended. This soon healed over, and one month after the operation fibrolysin injections were again commenced. These caused the hand and fingers to swell, owing, I think, to the softening of the new scar tissue, and had to be discontinued for a time, and afterwards renewed in smaller doses, commencing with half a cubic centimetre. A light metal splint was made which he wore at night for many months, exercising the fingers in the daytime.

The result has been most gratifying. His hand and fingers are now quite straight and supple, and he can play the piano and stretch more than an octave; there is no appreciable difference between the right hand and the left.

O. J. Currie, M.B., M.R.C.S.,
Surgeon to Victoria Hospital, Wynberg, Cape Town.

Literature.

Cheyne and Burghard: *Manual of Surgical Treatment*, Part I, p. 30.
Lengemann: *Medical Review*, vol. vii, 1904, p. 430.
Sandwell: British Medical Journal, February 17th, 1906.
Strong: *Lancet*, August 21st, 1909.
Lawrie: Ibid., March 30th, 1907.
Tubby: British Medical Journal, November 8th, 1913.

EMBOLISM OF RETINAL ARTERY.

As the books on the eye to which I have referred index only embolism of the central artery of the retina, the following case may be of interest. A farm servant of about 17 complained of bad sight in the left eye. The ophthalmoscope showed pallor confined to the region of the internal branch of the retinal artery. Otherwise both eyes were practically normal. There was slight conjunctivitis in both eyes, and the heart gave signs of dilatation—the apex sound was not clear. In a day or two he had signs of influenza, with dullness in the left chest and neuralgia over the left eye. Thereafter the fundus improved, and so did vision. As he did not complain of fatigue he was allowed to continue light work on the farm throughout, as he requested. Treatment was by chalybeate and blister over the orbit.

London, W.C. J. Reid, M.D.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH:

Pathological and Clinical Section.

At a meeting on January 30th Dr. Stanley showed a woman with evidence of *Pressure on cranial nerves*. Mr. Billington showed a specimen of *Fractured astragalus* removed from a man who sustained a compound fracture of the bone by stepping backwards from the towing path and falling heavily into the well of a coal barge. The fracture was a transverse one. The bone had been replaced at the time of the injury, but some weeks later the fragments had to be removed to allow the wound to heal. The functional result, as regards the foot, was quite good. Mr. Woodman showed a specimen of *Fibro-sarcoma* removed from the skin over the middle part of the tibia in the centre of the calf. It was freely movable and very vascular on the surface. Dr. Ball showed specimens of *Vertebrae and ribs in a case of diffuse septic meningitis*. Gelatinous tumours were present in the diploic tissue. Dr. Leonard Parsons showed a case of the *Werding-Hoffmann type of progressive spinal muscular atrophy* of young children. A male child, quite normal until 5 months old, at the age of 2½ years was quite unable to stand or sit or to hold up its head for more than a minute or two. No movements of any kind were possible at the hip, but flexion and extension of toes were well performed. There was also fair degree of flexion and extension of ankle-joints. The arms could not be raised to the level of the shoulders except with considerable difficulty. The intercostal and abdominal muscles were markedly wasted and paralysed. Breathing was diaphragmatic. The fingers were long and thin; in grasping, the first and second fingers were chiefly used and slowly, so that the action resembled that of the large claws of a lobster. There was a fair amount of hypotonia, and marked and striking flaccidity of the muscles; the tendon-jerks were absent. Wasting was most marked round the pelvic girdle. No sensory changes. Cranial nerves normal. Faint reaction to strong galvanic current in biceps and triceps in upper limb, none in deltoids; good reaction in muscles of forearm. In the lower limb a considerable current was borne without pain; no reaction in muscles of thigh, and slight contraction only in peronei and extensors of toes and in muscles of calf. No polar changes. Dr. Emanuel and Mr. Billington showed a man after the operation of *Laminectomy for paraplegia*. A butcher, aged 36, was admitted into Queen's Hospital on April 28th, 1913, with complete loss of power in the legs and abdominal muscles. There was nearly complete anaesthesia below a horizontal line midway between the umbilicus and the intermammary line, and complete loss of the sense of position of the lower limbs and involuntary muscular spasms in the legs. Bedsores were present over the sacrum, buttocks, and heels. There was knee clonus, ankle clonus, extensor plantar reflexes, and the abdominal and cremasteric reflexes were absent. There was no incontinence of urine or faeces. These symptoms had come on three months before his admission, and within a week the patient, from being a perfectly healthy and able-bodied man, had passed to the condition just described. Examination of the spine revealed an old angular deformity involving the fifth, sixth, seventh, and eighth dorsal vertebrae. The symptoms suggested compression paraplegia from spinal caries, and on May 8th, 1913, Mr. Billington removed the spines and laminae of four dorsal vertebrae, exposing healthy cord above and below the site of compression. For 2½ in. the dura mater was covered with granulation tissue, and on raising it from the front of the spinal cord a cavity was entered which contained a small amount of thick pus and breaking down tuberculous débris. The cavity was drained by a small tube, and a poroplastic jacket applied. The result was most satisfactory. The patient left the hospital five weeks later, and already sensation showed signs of becoming restored. Three months after the operation he could move the toes, a month later he could sit in a chair, in another he could walk with the aid of a stick and chair. In January, 1914,

eight months after the operation, he travelled alone from Stafford to Birmingham, and was able to walk several miles, albeit with a spastic gait.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

Thursday, February 5th, 1914.

W. S. A. GRIFFITH, M.D., in the Chair.

Fibroma of Hymen.

DR. HERBERT SPENCER showed a specimen of fibroma of the hymen, of the size of a pigeon's egg, removed from a married woman, aged 28, a *virgo intacta*. The tumour was a very cellular fibroma, and was ulcerated on the surface. It grew from the right half of the hymen, which formed its pedicle. Dr. Spencer knew of no record of such a case. The patient remained well after three and three-quarter years. Remarks were made by Dr. STEVENS and Mr. CLIFFORD WHITE.

Degenerated Myomatous Uterus.

Dr. HERBERT SPENCER showed a degenerated myomatous uterus resembling the pregnant organ, weighing 7¾ lb., removed by total abdominal hysterectomy from a virgin, aged 43. It closely resembled a pregnant uterus, which it was thought to be by experienced gynaecologists present at the operation. A section showing four myomata embedded in jelly, the result of degeneration, further increased the similarity. Dr. Spencer pointed out the value of bulging of the lower segment — which he believed never occurred in ordinary pregnancy—and of the absence of ballottement. True ballottement he had never met with in any tumour except the pregnant uterus, but if the jelly in this case had become liquefied it was possible that ballottement might have been obtained. Remarks were made by the PRESIDENT, Dr. EARDLEY HOLLAND, Dr. WILLIAMSON, Dr. AMAND ROUTH, Dr. BLACKER, Dr. MAXWELL, and Professor BRIGGS; and Dr. SPENCER replied.

Caesarean Section.

Dr. STEVENS related three cases of Caesarean section. (1) The patient, aged 20, was admitted to Queen Charlotte's Hospital on account of obstructed labour due to a pelvic tumour. This was her second pregnancy, the first having terminated normally. On examination the head was found high up and the os three-quarters dilated. There was much oedema of the cervix. A soft tumour was felt behind the cervix bulging the posterior vaginal wall forwards below the head. It was thought to be an ovarian dermoid. It could not be pushed up. Caesarean section was performed, and difficulty was experienced in releasing the fetal head from the pelvic cavity. After closing the uterine incision in the ordinary way, the tumour behind the uterus was investigated, and found to be one half of a double uterus with its Fallopian tube and round ligament complete. It was freely movable from the pregnant half. As the patient had already gone through one normal delivery, it was decided to leave the double uterus alone. A complete decidual cast of the unimpregnated half of the uterus was passed on the third day. The patient did well. (2) This case occurred in a primigravida, aged 27, in the twenty-fourth week of pregnancy. A great many fits had occurred during the day before admission to Queen Charlotte's Hospital, and during the following night. On admission the patient was quite unconscious. The urine was very scanty and loaded with albumin. The fundus uteri reached the level of the umbilicus. There were no uterine contractions, and per vaginam the cervix was long and rigid. Vaginal Caesarean section (vaginal hysterotomy) was performed. The operation presented no difficulties, the cervix being closed by interrupted catgut sutures. The fetus and placenta were delivered through the incision without any great trouble. The coma gradually lessened after the operation, and the patient could be roused on the day following to drink fluids. On the third morning after she was conscious, and made a very good recovery. When examined on the fourteenth day the vaginal incision and the cervix had healed completely. (3) The patient was aged 33, married five years; no previous pregnancy. She was first seen in March, 1913, and found to have a fibroid the size of an orange low down on the posterior surface of the uterus, and others at the fundus. The cervical fibroid could not be pushed above the brim. Pregnancy had practically been prevented during the five years of her married life. As she seemed anxious to have a child, it was suggested that a normal sexual life should be led, and she became pregnant soon after April 1st, 1913. In June the uterus was definitely enlarged, and although the cervical fibroid remained fixed it was decided to let the patient go to term and perform Caesarean section. This was done at the Mildmay Memorial Hospital on January 8th, 1914, the uterus being eventrated to see if myomectomy were possible. It was then found that the supposed cervical tumour was really in the lower part of the uterine body, the whole expansion of pregnancy having occurred at the expense of the anterior uterine wall, the posterior being occupied by the large fibroid. There were other fibroids also. Multiple myomectomy, together with Caesarean section, seemed out of the question, as it involved many incisions and much mutilation. Supravaginal Caesarean hysterectomy was therefore performed. The patient did well, except for troublesome distension and vomiting of large amounts of fluid, accompanied with collapse, which occurred on the eighth and twelfth days, due to dilatation of the stomach. Remarks were made by the PRESIDENT, Professor BRIGGS, Dr. HERBERT SPENCER, and Dr. BARRIS; and Dr. STEVENS replied.

Congenital Sacro-coccygeal Tumour.

Mr. GORDON LEY showed a specimen removed by Mr. Preston Maxwell at the hospital at Yung Chung, China, from the left buttock of a girl aged 16. It had existed since birth, and for thirteen years there had been sinuses, discharging sebaceous material, in the gluteal cleft. The specimen consisted of a cyst, lined by skin, into which projected a well-formed hand with three fingers. The skin was covered by hair. In the wall of the cyst were bones, two of which resembled ribs. Accompanying the cyst was a piece of bowel opening on a skin-covered surface. In microscopical sections this resembled the recto cutaneous junction. Mr. Ley said such a tumour might arise (1) from a primary germinal blastomere, (2) from a totipotential cell derived from post-primary blastomere. The inclusion of a twin save along the great longitudinal fissure was impossible, owing to the attachment of the amnion of the parent fetus. He suggested that the tumour probably arose from an aberrant totipotential cell or from a totipotential cell at the posterior growing point. The comparative frequency of sacro-coccygeal tumours made the latter hypothesis the more probable.

Uncontrollable Uterine Haemorrhage.

Drs. H. BRIGGS and R. A. HENDRY (Liverpool) presented a report on 104 bleeding uteri after hysterectomy. The collection of uteri from the Gynaecological Laboratory of the University of Liverpool between April, 1901, and July, 1913, was arranged in three divisions—(1) 10, aged 28 to 35; (2) 81, aged 36 to 55 (delayed climacteric); (3) 13, aged 50 to 72 (post-climacteric haemorrhage). Tables were produced—(1) of the position, weights, and measurements of the uterus; (2) of the haemorrhage, its age incidence, its mode of onset, its puerperal relation, its duration, and its relation to the thickness of the endometrium; (3) of parity; and (4) of complications. The familiar effects of uterine haemorrhage varied vastly from a grave secondary anaemia to an almost inappreciable invalidism or inconvenience: there was a small percentage of uncontrollable uterine haemorrhages. A typical bleeding uterus was described. Curettage was reviewed in its efficacy and failure in both exploration and treatment. In non-malignant cases the limiting line against repeated curettage must somehow be drawn. The total 40 local complications from the same or a dissimilar cause, distributed amongst 33 cases, left 71 uncomplicated cases in which the bleeding uterus reigned uninfluenced by collateral local disease. Dr. Hendry, as Ethel Boyce Fellow in Gynaecological Pathology during the past three years, had examined the 104 uteri; 3 were sacrificed to mincing in unsuccessful searches for haemolytic lipoids; 101 were submitted to a histological inquiry in reference to (*a*) the musculature; (*b*) the fibrous tissue; (*c*) the elastic tissue; (*d*) the blood

vessels; (c) the evidences of infection. Under these headings the pathological report was presented in detail, while eighteen *post-mortem* uteri were examined as controls. From the clinical and pathological evidence embodied in the report, it might be deduced that uncontrollable uterine haemorrhage was a functional disturbance. The disturbers, local and general, were numerous and varied. Amongst them, arterio-sclerosis, fibrosis uteri, chronic metritis, and chronic infective endometritis had been appraised too highly and too widely within the fields of gynaecological pathology and treatment. Remarks were made by the PRESIDENT, Dr. WILLIAMSON, Dr. WILLETT, Dr. HENDRY, and Dr. HANDFIELD JONES; and Professor BRIGGS replied.

SURGICAL SECTION.

AT a meeting on February 10th, Mr. MAKINS, President, in the chair, Mr. W. G. SPENCER read a paper on the *Thyroglossal tract*, illustrated by specimens from his own collection and from the Royal College of Surgeons. He said the characteristic feature of thyroid tissue was the presence of vesicles containing colloid. In vertebrates below mammals there was only a median thyroid rudiment; the lateral portions did not contain colloid. In the higher animals the median and lateral rudiments united. The thyroglossal tract extended from the pyramidal lobe to the foramen caecum, and was in no stage of its development a duct. The formation of thyroid tissue along the tract usually meant that the median rudiment was deficient: the enlargement generally occurred at or about puberty near the root of the tongue. Treatment depended on the recognition of the thyroid isthmus: if this could not be felt, it was inadvisable to operate, as myxoedema or cachexia strumipriva subsequently developed. He quoted examples in support. In these cases he recommended potassium iodide, or the application of *x* rays or pigmentum iodi. If the lump were so large as to obstruct respiration, he recommended cauterization or partial excision. The cases rarely became malignant. Thyroglossal cysts developed from the blind end of the epithelial tract, and during removal it was sometimes sufficient to hook up the hyoid bone, but if the cyst extended high up the hyoid bone had to be divided; this was always necessary in recurrent cases. He had cured one case that had had eight previous operations. Mr. BETHAM ROBINSON said cysts usually developed in the lower part of the tract, and were often associated with latent suppuration; this was due to inflammation of the lymphoid tissue that lined the tract. A clear distinction must be made between sublingual thyroids and dermoids of the tongue. Mr. W. G. HOWARTH said the majority of cases were seen by the laryngologists. Of 80 recorded cases, 75 were females, 22 per cent. were myxoedematous, and only 5 per cent. became myxoedematous after operation. He had recently performed excision in 2 cases; in one the isthmus and lateral lobe were present, but in the other no isthmus could be felt. Mr. MAKINS had removed a lingual thyroid in 1 case without the occurrence of myxoedema. Mr. CURTIS read a paper on the most efficient method of *Drainage in septic peritonitis*. He thought that the mortality was higher than was essential, and ascribed it to imperfect drainage, and recommended routine bilateral subphrenic drainage with drainage of the pelvis from its most dependent part, the posterior fornix in the female and the rectum in the male. The peritoneal cavity should be thoroughly washed out with several pints of saline. He showed instruments intended for the introduction of drainage tubes and gauze. Mr. BETHAM ROBINSON thought hypogastric drainage could be improved upon, but he preferred sponging rather than lavage of the peritoneal cavity. Mr. SPENCER GRIFFITH said it was very rarely necessary for an obstetrician to drain the abdomen for septic peritonitis; he thought that acute pelvic abscesses should be drained through Douglas's pouch. Mr. FAGGE thought the introduction of Fowler's position and free rectal saline had abolished the older methods described by Mr. Curtis; he was certain that he now obtained much better results than formerly. His motto was to remove the cause and get out as quickly as possible. Mr. JAMES BERRY recommended bilateral loin drainage in cases of perforated stomach; local pelvic abscesses he drained through the vagina or rectum. Mr. J. D. MALCOLM thought the handling and the action of the carbolic as an irritant on the peritoneum led to the free formation of fluid, which had to be drained if necessary by multiple openings. Mr. SAMPSON HANDLEY thought Fowler's position did away with the necessity of loin drainage, and that peritoneal lavage was now not done sufficiently.

SECTION OF SURGERY: SUBSECTION OF PROCTOLOGY.

AT a meeting on February 11th, Mr. SWINFORD EDWARDS in the chair, Mr. HAMILTON DRUMMOND read a paper on the *Anatomy of the vessels of the pelvic colon and the rectum*, with especial reference to abdomino-perineal excision. The anastomoses were shown by a series of radiographs of the injected vessels; they were very variable and the last loop was often very small. The PRESIDENT said that he had always feared sloughing in his cases of abdomino-perineal excision, and recorded 2 cases in which this had occurred. Mr. LOCKHART MUMMERY said the blood supply was uncertain and trouble resulted from division too far down, not from division too far back. He thought the vital point was to leave the anastomosis between the last sigmoid branch and the inferior haemorrhoidal. Mr. IVOR BACK recorded a case of *Multiple polypi of the colon becoming malignant*. The disease in this case followed dysentery. He performed abdomino-perineal excision and left a permanent colotomy through the left rectus at the level of the umbilicus; great difficulty was experienced in joining the two ends of the sigmoid. Adenomata were found much higher up than was expected and some were left; at the end of seven weeks sigmoidoscopy showed that they had completely disappeared. The patient subsequently obtained complete control and could now follow her occupation. Mr. GORDON WATSON showed a specimen of multiple polypi; it presented a carcinoma with adenomata above and below. Four years after removal recurrence had taken place in the scar, which ulcerated into a vessel. *Post mortem*, secondary deposits were found in the liver. Mr. NORBURY spoke of a case of multiple polypi in a male, aged 32, accompanied by prolapse. The appearance suggested malignancy higher up, but exploration showed no sign of it. The colon was pulled up and fixed to the abdominal wall, and appendicostomy performed; the patient made a good recovery, and the sigmoid polypi perceptibly decreased. Mr. LOCKHART MUMMERY said the fact that there were 6 cases on the programme showed the rapidity with which the disease had come to the front. He thought the condition was definitely precancerous, and that operation was useless unless the colon was removed. Mr. CHARTERS SYMONDS had been struck by the association of polypi with malignant disease. In a case of carcinoma of the caecum he had found them only on the distal side; he thought it doubtful whether the disease was the result of polypoid degeneration or whether the polypi were caused by the irritation. He had a case at the Evelina Hospital of a child, aged 6, whose rectum at one time was full of polypi, but subsequently they had all disappeared. Mr. SWINFORD EDWARDS was opposed to Mr. Mummery's view. Mr. LOCKHART MUMMERY quoted a case of polypi associated with worms, in which they disappeared when the worms were treated. Mr. GORDON WATSON showed a *post-mortem* specimen from a girl who had been submitted to *Treatment by radium through a colostomy opening for inoperable carcinoma*. Mr. STEPHEN FENWICK showed a case of *Transplantation of the ileum*. The patient when first seen was found to have acute intestinal obstruction from a growth at the brim of the pelvis. Colotomy was first performed; later the growth was removed, and the colotomy and the rectum united by a portion of ileum fixed by Murphy's buttons. Twenty-four hours later it sloughed and had to be removed. The colostomy had gradually closed, and the patient now had one normal motion a day. Mr. BACK advocated caecostomy. Mr. MUMMERY preferred transverse colostomy. Mr. HAMILTON DRUMMOND showed photomicrographs of the saccules of the large intestine on the epidiascope.

SECTION OF OPHTHALMOLOGY.

AT an adjourned meeting on February 16th, Sir ANDERSON CRITCHETT, C.V.O., in the chair, the discussion on the *Use of salvarsan in ophthalmic practice* (BRITISH MEDICAL JOURNAL, February 14th, p. 370) was resumed by

Lieutenant-Colonel R. H. ELLIOT, I.M.S., who said he had had no experience with neo-salvarsan. As he had had an experience of optic atrophy following the use of soamin, he asked the Surgeon-General's assistance in getting reports of cases in which the same calamity followed the use of salvarsan, but none were reported, and he believed the reason was that they did not occur. On the other hand, it was their experience that those cases which presented signs of optic neuritis, of presumably syphilitic origin, acted excellently to the remedy. In his large practice in Madras, the intramuscular method was abandoned in favour of the intravenous, largely on account of the pain caused by the former, which in many cases necessitated the use of morphine. A Wassermann test was done in each case, and the administration was not continued after that test was negative. Mercury and iodide were always given in the intervals. The most striking benefits were obtained in recent or acute cases involving the uveal tract. With muscle palsies and optic neuritis the results were very satisfactory, though not with tabetic conditions. He knew of two deaths following the use of salvarsan, both in marasmic patients, who probably would not have lived long in any case. With regard to sympathetic ophthalmitis, Gifford, of Omaha, from the results obtained in it from atoxyl and salvarsan, argued that it was a general protozoal disease. Mr. E. ERSKINE HENDERSON reported 2 cases of severe *Irido-cyclitis following cataract extraction* on the eighth and tenth day respectively. Ordinary treatment supplemented by staphylococcal vaccines were of no use, but after two doses of neo-salvarsan both patients recovered. In one, a man of 54, he got, after needling, $\frac{6}{9}$ and J.1. In the other, a woman aged 72, iridotomy would probably be necessary. Mr. Henderson was led to make a trial of the drug in these cases from the results obtained in sympathetic ophthalmia, as these two eyes were of a type that might have led to that affection, and if the remedy were used in the sympathetic eye, why not in the exciter? Dr. ALEXANDER FLEMING said there seemed to be no real evidence that the drug had produced an evil effect on any eye; no cases of optic nerve trouble had followed its use at St. Mary's Hospital. He preferred salvarsan to neo-salvarsan, though the latter was very easy to use. He had never seen much benefit from salvarsan in interstitial keratitis. In one case a chancre of the inner canthus disappeared in a few days under the treatment. In choroiditis the result was very rapid and complete. In one case an Argyll-Robertson pupil, in a case diagnosed by a physician as tabes, became a normal pupil under the treatment. Major HARRISON thought there could be no doubt about the beneficial effects of salvarsan. He had seen a case in which omission to use salvarsan on account of its supposed neurotrophic effect on cerebral nerves resulted in a calamity. By spacing out the doses at intervals of not less than a fortnight, there was no fear of any cumulative effect. If a case seemed to indicate more frequent doses, he thought there would be little danger. He had not had any catastrophes in his practice with salvarsan. Mr. J. B. LAWFORD read notes of a severe case of post-operative plastic iritis treated by neo-salvarsan, the patient being a man, aged 60, suffering from acute gout. Extraction and iridectomy was followed by hazy cornea, ciliary injection, exudation, and the formation of a hypopyon. A mixed staphylococcus vaccine produced no visible effect. Nineteen days after the operation 0.9 gram of neo-salvarsan was injected intravenously, and in two days there was definite improvement; four days later the hypopyon was very small, and the congestion was diminishing. The patient went home, but came back later, and the hypopyon had returned. A similar dose of neo-salvarsan was injected, and almost immediately the eye became brighter, and there was general marked improvement. Mr. BROWNING, in answer to a number of questions, admitted that the blood count by which one could forecast the onset of sympathetic trouble was not infallible, but it was true in the great proportion of cases. The discovery of this particular blood count did not mean that the eye would be inevitably excised; efforts to save the eye would be persisted in as long as they were of any avail. Mr. BASIL LANG pointed out that many of these cases of injury of the ciliary region occurred in children, and it should be remembered that the total number of leucocytes in the blood varied from the moment of birth until after puberty. Until the second or third year of age 80 per cent. of the blood cells present were of the lymphocyte type—that is, large mononuclears, large lymphocytes, and small lymphocytes. Therefore, the fact of finding a child with such a blood count must not be taken to mean that it was on the eve of sympathetic ophthalmia. He believed salvarsan to be a very good tonic.

SECTION OF OTOLOGY.

AT a meeting on February 20th, Mr. RICHARD LAKE, President, in the chair, Mr. C. E. WEST showed and fully described a case of *Chronic suppurative otitis media* of desperate gravity in a child, aged 5, who recovered after repeated operations. There was a long history of chronic discharge on both sides. This had ceased for a time, and then came on again on the right side. For a week there had been headache, vomiting, and progressive drowsiness. On admission the patient was only semi-conscious. The radical mastoid operation was done, and cholesteatoma found, as well as extradural suppuration. A sinus was also found leading to the interior of the cerebellum. Two drachms of foul pus were evacuated. Cultures yielded pure streptococci. On lumbar puncture the fluid was sterile; 650 cells per cubic centimetre, 93 per cent. lymphocytes. Eight days later the pulse fell to 62. A second operation evacuated a drachm of pus. Reaccumulation led to removal of bone on the outer side of the sinus, and a fresh collection of pus in the cerebellum was drained away by a tube placed deeply. Next day the child was much worse; pulse 60, respirations less than 10 per minute. Three weeks after the first operation Mr. West did a wide removal of the tabular part of the occipital bone and underlying dura mater, and the exposed cerebellum was scooped out until the region of the abscess was widely exposed; it was largely necrotic, and contained scattered collections of pus. The operation was followed by intravenous infusion. There was great weakness with wasting of the right limbs; some temporary loss of co-ordination in them was recovered from. Owing to the hernia cerebri, two months later a large flap of scalp and periosteum was slung downwards to cover the hernia, and the bared bone was grafted. The great shock which ensued was recovered from after pituitrin and intravenous saline were used. During the last twelve months the health of the patient had been satisfactory, and the hernia had become smaller and firmer. Mr. MUECKE said that in Mr. Hunter Tod's clinic at the London Hospital the best drain for these cases was found to be a double silver tracheotomy tube, so that the inner tube could be removed and cleansed, and then returned. Dr. WESTMACOTT and Mr. SYDNEY SCOTT also spoke. Mr. H. J. DAVIS showed a case of *Herpes zoster of the auricle* in a woman, aged 26. There was oedema with tenderness behind the left ear, and a papular and vesicular eruption on the back of the auricle, mastoid process, and left cheek. This eruption had been preceded by great pain. Mr. W. M. MOLLISON exhibited a microscopical section through a right temporal bone from a case of *Lateral sinus thrombosis*, showing that infection had spread through a small vessel in the bone. The child died from a generalized infection, and abscesses were found in the lungs. He also showed a patient, aged 16, who came to the hospital on account of *Left-sided facial paralysis*. Dr. W. Johnson diagnosed a tumour of the left cerebello-pontine angle. There was nystagmus and defective vision, especially in the left eye, which also reacted but feebly to light, while there was papilloedema on both sides, especially the left. Both ear membranes were normal, but the walk was somewhat ataxic, and there was a spontaneous pointing error to the right with the left arm. Mr. G. J. JENKINS showed a case of *Malignant disease of the ear* and a series of serial microscopic sections of the temporal bone, labyrinth, and middle ear, showing ankylosis of the stapes and otosclerosis. Dr. KELSON exhibited a man, aged 43, in whom *Ménière's symptoms* had been relieved for three months by the operation of uncapping the external semicircular canal, at which some perilymph escaped.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Section of Obstetrics on February 6th, Sir WILLIAM J. SMYLY in the chair, the CHAIRMAN showed a *Fibromyoma* from a girl aged 21 on whom he had been asked to do an ovariotomy. On opening the abdomen the

uterus and ovaries were found to be healthy. On the right side was the tumour which was shelled out of the broad ligament. Although it was cyst-like in appearance, on a knife being inserted nothing came out. The tumour was entirely intraligamentous except a very small part embedded in the right wall of the uterus. He had never seen so large a myoma in a girl at such an early age. The pathological examination showed the specimen to be a myoma. Dr. FITZGIBBON discussed the case. Dr. HASTINGS TWEEDY read a paper on *Laceration of the perineum and its operative treatment*. In the majority of tears the levator fibres were not severed, but were torn from their attachments to the mid-line of the perineum. This dragging away anteceded rupture of the skin and other superficial structures, so that one often saw vigorous efforts to support the perineum conducted at a time long after its important elements had been torn away. The method of mass suturing with the patient lying on her side could be made an ideal operation, for with minimum effort maximum results were obtained. The lowest morbidity percentage-rate was seen in the practice of those who conducted obstetrics with least surgical interference, and this applied to hospital as well as to that of private practice. A slight modification of Lawson Tait's perineorrhaphy was all that was required to bring about perfect adaptation of the levator and other muscles in secondary repair of the perineum. Dr. FITZGIBBON agreed that it was of importance to lift the tongue of mucous membrane towards the vagina and away from the anus. It was his practice to suture the perineum while the patient was in the lateral position, and before the placenta came away, as at that time the anaesthesia was generally sufficiently deep to permit of doing so. He preferred silkworm gut on account of its non-absorbent qualities, and looked upon it as an advantage to have sutures which would not absorb lochia and carry it into the wound. Dr. JELLETT did not consider that one could appreciate the extent or importance of tears extending up the posterior vaginal wall unless the patient were in such a position that this wall could be clearly seen. He did not think that this was possible while she was in the lateral position. He considered that the dorsal position was the most suitable for almost every part of obstetrical work, including normal labour, and pointed out the tendency in the practice of the Continent and of America to substitute the dorsal for the lateral position. He also showed drawings of an operation to illustrate the repair of chronic lacerations of the perineum, and called particular attention to the necessity for suturing the levator ani muscle separately. He had been performing this operation for the last six or seven years, and had quite abandoned the old Lawson Tait operation. Dr. SOLOMONS inquired what Dr. Tweedy meant by "support of the perineum before the blood comes," as it had been his experience that the latter often occurred while the head was still far up in the vagina. He always adopted the lateral position, except where the vagina was torn very high up and required catgut sutures. He always used silkworm gut. Dr. MADILL suggested the grouping of tears as slight, large, and complete. The first healed uniformly, but he found the large tears did not heal up in many cases. Whether this was due to the use of catgut or not he did not know, but why they should not heal up if the operation were fairly aseptic he was at a loss to understand. He considered that there were objections to suturing lacerations in the second stage which more than counterbalanced the advantages. It was better to wait till the placenta was away before suturing. Dr. M'ALLISTER said that as the result of work in which he had taken part last year, and of operations which he had seen, he considered that in those procedures in which the muscles of the pelvic floor were exposed in the process of repair the muscle fibres first met with were not portions of the levator ani, but the remains of the transversus perinei profundus muscles. To display the levator ani muscle satisfactorily one must either retract, or in some cases temporarily divide and reflect, the transversus perinei profundus. It was in bad cases of prolapse that such thorough repair of the levator ani was particularly called for. Sir WILLIAM SMYLY said he regarded the division into three degrees of laceration as of practical importance; the great majority of tears were slight, but there were bad cases in which the muscles were torn, and, as Dr. Tweedy had pointed out, tears through the sphincter muscle formed a distinct group. The object of the operation was to bring things back to their original condition, or as near to it as possible. The loose tongue of mucous membrane was the posterior vaginal wall, and by stitching it to the anterior end of the skin wound the triangular shape of the perineal body was restored, and the muscles should then be brought together between vagina and rectum. He preferred operating with the patient in the dorsal position, because, amongst other reasons, both hands were free, whereas in the lateral the left had to act as a speculum. Dr. TWEEDY, in replying, said the operation that could be conducted with the minimum amount of handling was best for the patient, and this was demonstrated by the low morbidity-rate obtaining in the Rotunda, where the smallest amount of interference was practised. Regarding lacerations in the anterior walls of the vagina, these were rarely attended to, and here also he considered that the minimum operative interference held good. He always pinned his faith to the mass suture. The old Lawson Tait operation fell into disuse because it did not bring in the muscles, but the modified form of operation in which the curved needle was used worked admirably.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on February 11th, Sir HALLIDAY CROOM, the President, who was in the chair, reported a case of *Eight months tubal pregnancy without symptoms*. The patient was a woman, married eight years without children, who was sent to hospital as a case of hydramnios. The abdomen was greatly distended with fluid, and in it what appeared to be a pregnant uterus could be felt. A provisional diagnosis of tuberculous peritonitis was made. She died suddenly, and *post-mortem* examination revealed diffuse tuberculous peritonitis. Imbedded in the adhesions was a tumour corresponding in size to a full-term pregnant uterus. Through a ragged opening on the left side behind a fetal foot projected. It was supposed to be a ruptured uterus, but subsequent examination proved it to be an extrauterine sac containing a fetus approaching term. The uterus lay below the sac, and measured 4½ in. The special interest of the case lay in the fact that pregnancy had reached this stage of development with no symptoms, even when rupture had taken place. Dr. FORDYCE had seen a somewhat similar case in Manchester. There had been absence of menstruation for eleven months. The swelling was considered an extraperitoneal cyst, but turned out to be an ectopic pregnancy. Dr. HAIG FERGUSON had seen the case reported, and had thought it was merely a tuberculous peritonitis, with no pregnancy. Dr. Haig Ferguson reported a case which raised *Some ethical questions, eugenic and obstetric*. The patient was an unmarried girl of 18, weak and facile in character, seven and a half months pregnant, with a diagonal conjugate of 3¼ in. (that is, conjugata vera of 2½ in.). The pelvis was uniformly contracted. She was past the time for induction, and the only treatment possible was Caesarean section. From the eugenic standpoint, it was probably advisable to sterilize her; but, with no further risk of pregnancy, she might become a great social evil in a community, where syphilis and gonorrhoea were practically unknown and where the fear of conception was the only factor that controlled promiscuous intercourse amongst the young people. It was right to give her one more chance should she marry. Apart from the social reasons, there was the legal risk incurred by the operator who sterilized her. The parents wished their daughter to be sterilized and were willing to sign an authorization, and did not want the girl to know what had been done. It might be said that medical men had nothing to do with the social or moral aspects in such a case; but, on the other hand, they had to do nothing, however justifiable in itself medically, which was likely to bring difficulties into a community. Dr. BERRY HART thought the right thing was to do Caesarean section and nothing more. Dr. HAULTAIN said the girl was under his care in the hospital. She seemed quite intelligent, and although she allowed him to choose his own treatment, he did Caesarean section without sterilization, because she did not come under the category of the mentally degenerate. It was possible that she might marry and become a respectable citizen,

Professor JARDINE thought in this case a simple Caesarean section was the right thing. Dr. BARBOUR thought that the effect of having a child would be likely to restore the girl and make her a better member of society. Sir HALLIDAY CROOM did not think that sterilization was justified. Dr. HAIG FERGUSON, in reply, said he believed that Dr. Haultain had done the right thing, assuming that the woman was not mentally degenerate. In the case of mental feebleness, by the Mental Deficiency and Lunacy (Scotland) Act, the parents' consent to sterilization would have been valid against a legal action.

MANCHESTER PATHOLOGICAL SOCIETY.

AT a meeting on February 11th, Dr. BROWN in the chair, Dr. J. S. C. DOUGLAS read a paper on *The leucocytic reaction after repeated serum injections.* In an experiment on man a leucocytosis followed the subcutaneous injection of normal horse serum and also of diphtheria antitoxin given a few days later, but when antistreptococcic serum was subsequently introduced none was observed. This failure of leucocytosis in the third experimental period was discussed, and, with the aid of experiments on rabbits, it was shown that neither the presence of antibody in the serum nor the induction of the anaphylactic disease would serve as an explanation, but that it was possibly due to some failure of the leucocytic system to respond to the repeated serum injections, similar to that found by Jörgensen in the formation of agglutinin after repeated doses of antigen. The possible bearing of this observation on the treatment of patients with repeated injections of serums was pointed out. Dr. P. R. COOPER described a case of *Perforating ulcer of the aorta* which had caused fatal haemothorax. The patient was a tiler, aged 45, who had complained of pain in the left side and upper dorsal region of two or three months' duration. He was distinctly anaemic. There was no evidence of syphilis, but a probable history of influenza shortly prior to the commencement of symptoms. There was absence of any confirmatory signs or symptoms pointing to spinal disease, aneurysm, and gastric or duodenal ulcer. At the autopsy the left pleural cavity was filled with blood clot; the lung and pleura were adherent to the spine at the sides of the fifth and sixth dorsal vertebrae. It was through a rent in this adhesion that blood had evidently escaped from the aorta, and a hole was found into the vessel about 1 in. in diameter. The adjacent bodies of the fifth and sixth dorsal vertebrae were partly eroded. There was no trace of any aneurysmal sac, and the aorta was otherwise normal except for some patches of atheroma. It was suggested that the condition might have been due to a circumscribed aortitis, probably influenzal in origin. Mr. JOHN MORLEY described a case of *Acute perforating diverticulitis of the pelvic colon.* The patient was a man, aged 50, who was sent into Ancoats Hospital as a case of retention of urine. There was a history of pain in the left lower abdomen for a week, much worse the two days before admission, attended with constant painful desire to micturate, and great difficulty in the act. A silver catheter was passed without difficulty, and the urine, beyond containing some albumin, was not abnormal. There was frequent vomiting, and absolute constipation in spite of enemata. The abdomen was generally distended and tender, and somewhat rigid, but chiefly so in the left iliac fossa. There was shifting dullness in the left flank. The diagnosis lay between peritonitis originating in a misplaced appendix, in acute perforating diverticulitis of the pelvic colon, or in thrombosis of the inferior mesenteric vessels. Operation under spinal anaesthesia revealed general peritonitis. The appendix was normal, but the pelvic colon was thickened and adherent to the bladder. In spite of peritoneal toilet and drainage the patient died five hours later. On *post-mortem* examination a necrotic perforation was found in the pelvic colon the size of a threepenny piece. Round this, projecting into the bases of the appendices epiploicae were several small diverticula, or herniae mucosae. It seemed plain that faecal impaction in one of these pouches had led to gangrene of the pouch and perforation. Diverticula of the pelvic colon were found in elderly subjects with chronic constipation. The complications which might give rise to symptoms were as follows: (1) Chronic thickening of the pelvic colon and plastic adhesions (peridiverticulitis) producing a mass that simulated cancer; (2) cancer might supervene on chronic diverticulitis; (3) acute inflammation due to faecal impaction might give rise to (*a*) general peritonitis, or (*b*) a localized abscess; such an abscess might rupture into the bladder, producing (*c*) a vesico-intestinal fistula. The adhesion to the bladder and intense pain on micturition in the case under discussion indicates that such a fistula was within a little of being produced. Dr. CHAS. H. MELLAND gave an account of a case of *Congenital heart disease*, in which it was recognized that the apex beat was to the right and the liver dullness on the left. At the *post-mortem* examination—the child, 15 months old, was an in-patient at the Northern Children's Hospital—complete transposition of all the viscera was found. The heart showed all the usual features of stenosis of the pulmonary orifice, with imperfect ventricular septum and patent ductus arteriosus. The occurrence of the widespread congenital defect with the cardiac lesion strongly suggests that the congenital heart disease in this case—and he believed in all others—was purely a developmental defect, and not in any way due either to fetal rheumatism or to congenital syphilis. Dr. Melland also showed macroscopic and microscopic specimens from a case of *Melanotic sarcoma.* The patient was admitted to the Ancoats Hospital with enormous enlargement of the liver and ascites. There was the history of a removal twelve years before of one of his eyes for melanotic sarcoma, and at the *post-mortem* examination melanotic sarcomata were found widely disseminated in the organs and tissues of the body. As no other primary source was to be detected, it was of interest to speculate what occurred in the long period between the removal of the primary growth and the general dissemination of secondary tumours. Dr. Melland also showed specimens from a case of *General lympho-sarcomatosis.* The boy, aged 12, had glands enlarged in the neck and one axilla for six years. These varied in size during that period, occasionally almost disappearing under arsenic, in the way typical of Hodgkin's disease. In the end treatment failed, and at the autopsy it was found that extensive dissemination had occurred chiefly in the abdominal organs. Liver, pancreas, kidneys, and abdominal lymph glands were invaded, and in some cases almost replaced, by lympho-sarcomatous masses. Whether these were true secondary growths or the result of general sarcomatous transformation of pre-existing lymphoid tissue was difficult to be certain of, but the fact that the Peyer's patches were extensively affected seemed to point to the latter explanation as the more likely.

UNITED SERVICES MEDICAL SOCIETY.

AT a meeting on February 12th Colonel S. WESTCOTT, C.M.G., A.M.S., read a paper on the *Siege of Ladysmith.* He was first placed in medical charge of the convent, which had been equipped for the treatment of the wounded, and he described some of the most interesting cases that came under his care there. Later, as a consequence of the removal of the sick and wounded, together with the sick women and children, to the neutral camp at Intombi, the medical arrangements were modified, and he was appointed secretary to the P.M.O. of this camp. He described the arrangements made for treating the sick and wounded at Intombi, and the difficulty of the task, owing chiefly to want of sufficient personnel. On November 11th the first two cases of enteric fever arrived, heralding an outbreak that eventally numbered 2,250. When to these were added 2,000 cases of dysentery, not to mention the wounded and other cases of illness, the difficulty of caring for these with a medical establishment of 22 officers, 32 nursing sisters, 38 non-commissioned officers, and 305 orderlies, of whom only 69 were trained men, could be appreciated. There was, besides, a large staff of Indian and Kaffir labourers, whose duties were scavenging, refuse removal, laundry work, and grave digging, etc., and these needed constant supervision. At the commencement of the siege a long investment was not anticipated, and the food supply was thought to be sufficient. With the delay in the arrival of the expected relief and the reverses to Buller's force, the rations were gradually cut down until on January 28th the ordinary ration was 1 lb. of bread made from wheat or maize,

1 lb. of horse or mule meat, ¼ oz. tea, 1½ oz. sugar; vinegar was used as an antiscorbutic instead of lime juice, and there was no milk except for the sick. Colonel Westcott described the various rations used for the sick. Drugs they had in plenty. He discussed the mode of development of the outbreak of enteric fever and the causes that led to its continuation. He noted that penetrating abdominal wounds were not nearly as fatal as would have been expected, and read notes of cases of such injuries. Colonel Westcott concluded his paper with a word of tribute to the high qualities of the late General Sir George White and Colonel (now Sir Edward) Ward.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a clinical meeting held on February 3rd. Dr. JANE WALKER, President, in the chair. Dr. ELEANOR SOLTAU showed two cases of *Phthisis treated by the production of artificial pneumothorax*. (1) A woman who had been admitted into Maltings Farm Sanatorium in 1911 suffering from advanced phthisis with cavitation of the left lung; during the earlier part of 1912 she had frequent haemoptysis. A pneumothorax was induced in March, 1912, and maintained until April, 1913. Her condition had improved greatly, and she was at present earning her living as a domestic servant. The lung had not completely expanded, and the chest wall had accommodated itself to the collapsed lung. (2) A male who had been admitted into Maltings Farm Sanatorium in September, 1913, in an apparently hopeless condition, with a temperature of 103° to 104°, rapid pulse, and crepitations over the whole of the right lung. In November, 1913, an artificial pneumothorax had been induced and maintained until the present time. He had made steady progress, the temperature was now normal, and he was able to walk two miles a day. Dr. LESBIA LEPPER showed a girl, aged 8, who had suffered for two years from *Progressive weakness of the legs*. There was spastic paraplegia, with some inco-ordination, slurred speech, active knee-jerks, ankle clonus, extensor plantar responses. Sensation was unaltered, the eyes did not react to light, the mental condition had changed. The mother had ulcerated legs, and gave a positive Wassermann reaction. The child also gave a positive Wassermann reaction from both blood and cerebro-spinal fluid. The patient was treated by salvarsan—two doses of 0.2 gram each at a fortnight's interval. The Wassermann reaction remained positive. Her condition was provisionally diagnosed as juvenile general paralysis of the insane. Dr. MABEL PAINE showed (1) a case of *Congenital malformation of both hands*, each thumb having three phalanges, the trapezium and trapezoid being united and an os centrale being present in each wrist; (2) a case of *Double cystic disease of the kidneys*. Dr. FLORENCE STONEY showed (1) a case of *Scirrhus of the breast* sent to her as incurable two and a half years ago, and treated ever since by *x* rays; (2) a case of *Fibroid disease of the uterus*, in which, by means of *x*-ray treatment, the tumour had been reduced from 5 in. to 2½ in. above the pubes and a premature menopause had been induced. Dr. ROSE JORDAN showed charts and cases illustrating *Diagnosis and treatment by means of tuberculin*. A woman, aged 25, with fairly advanced pulmonary tuberculosis and tubercle bacilli in the sputum, had been treated with tuberculin from December, 1912, to June, 1913. Her weight had increased from 7 st. 3 lb. to 8 st. 4¾ lb.; the sputum and cough had disappeared. She was married in July, 1913, and was now feeling very well and weighed 8 st. 9¼ lb. Another woman had started treatment in October, 1911, with eight sinuses of the left hip, which had discharged profusely for twenty-five years. After two months' treatment one sinus had healed; in June, 1912, four sinuses had healed and the others were discharging scarcely at all. She had been treated progressively with P.T.O., P.T., Old T. up to 1 c.cm., and B.E. up to 4 c.cm. A case of lupus had improved to a certain extent under tuberculin treatment, but her condition grew worse whenever the injections were discontinued. Dr. AGNES SAVILL showed a case of *General eczema*, present since childhood, which had resisted all kinds of treatment, but had improved immediately on administration of 1 gr. of thyroid a day.

Reviews.

DISORDERS OF THE HEART.

DR. MORISON, in the preface of his recently published book, *The Sensory and Motor Disorders of the Heart*,[1] says that he does not "expect the views expressed by himself, which are rather conservative, to be endorsed by all," and he is probably right in his anticipation, for his opinions on many points certainly run counter to those which are at present received. Still, many of his contentions deserve careful consideration, for it must always be remembered that the heresy of to-day in matters medical may be the orthodoxy of to-morrow, just as the orthodoxy of yesterday is often heterodox to-day. The book is divided into three sections: the first, on the nature of cardiac action, consists mainly of a discussion of the anatomy and physiology of the nodal system. The presence of neural structures in the sinu-auricular node, the auriculo-ventricular bundle, and the auriculo-ventricular node is emphasized, and myogenic conceptions of cardiac rhythm are questioned. The author does not agree that nodal tissue is a remnant of the primitive cardiac tube, and maintains that "the auriculo-ventricular node, at any rate, is a peculiar innervated structure, which continues to grow with the ventricle at a comparatively late period in the development of the heart, and penetrates those chambers on the same lines as do the nerves and vessels of the organ"; it is for him "a highly developed structure taking the initiative under nervous excitation and control, in elaborating the stimulus to ventricular action." The importance of the nervous system and the part played by nervous structures in affections of the heart is emphasized throughout the book, while great weight is attached to the conception of a "triplex functional unit of blood cell and nerve." The second section, dealing with sensory disorders of the heart, is almost entirely a discussion of angina pectoris and allied conditions. It is contended that angina is due to a great variety of conditions affecting the cardiac and aortic systems, the only feature common to all being pain. Intravascular aneurysms of the coronary arteries by irritating nervous structures in the vessel of the wall, cramp in limited areas of cardiac muscle crushing in its tonic grip sensory nerve endings, difficult circulation in the nutrient arteries of the heart and coronary thrombi are all recognized as producing varieties of angina. Aortitic angina, aortic aneurysmal angina, intra- and extra-neuritic angina, neuralgic angina, endocardial angina, vasomotor and compound angina pectoris, are described; and chapters are devoted to the diagnosis, prognosis, and treatment of cardiac pain. The final section, on disorders of cardiac motion, is the most controversial part of the book, as many of the cherished opinions of the neo-cardiologists, to use a word Dr. Morison employs, are disputed, and a new classification with an original nomenclature is proposed, auricular flutter becomes auricular tachycardia, and the effects of atropine in this condition are used as an argument against the existence of heart-block in these cases, flutter being regarded as an auricular neurosis. The conception of tachycardia as a condition of massed ventricular extrasystole is referred to with approval. Auricular fibrillation is classified as arrhythmic tachycardial ventricular extrasystolia. Doubt is cast on the accepted explanation, and the suggestion is made "that there is a possibility or even probability of the ventricle taking the initiative in the production of that condition of the auricle in which, vainly trying to perform its function, it collapses in fibrillation." The author feels that Mackenzie's conception of nodal rhythm was "too completely abandoned on the advent of 'auricular fibrillation.'" What is usually described as heart-block is discussed under the head of ventricular bradycardia. By an obvious slip of the pen the date of Chauveau's paper on auriculo-ventricular dissociation is given as 1892 instead of 1885. Dr. Morison's views are, perhaps, best summed up in the statement he makes on page 200: "The considerations I have mentioned, however, I submit, point to an active participation of the nervous system in the genesis of both systole and extrasystole in the production alike of

[1] *The Sensory and Motor Disorders of the Heart, their Nature and Treatment*. By A. Morison, M.D., F.R.C.P. London: Baillière, Tindall, and Cox. 1914. (Med. 8vo, pp. 269; 51 figures. 7s. 6d. net.)

the normal and abnormal forms of cardiac motion which have already been more fully considered." There are chapters on hypertonia and hypotonia and on the prognosis and treatment of disorders of cardiac motion. While scarcely suitable for students preparing for examination, the book merits careful perusal and consideration by all interested in the study of cardiac affections, as it contains many striking criticisms of current theories and a new marshalling of ascertained facts.

The fact that a second edition of Dr. THOMAS LEWIS'S little book, *Clinical Disorders of the Heart Beat*,[2] should be required in less than two years from the issue of the first edition is a proof not only that a great interest is taken by the profession in the newer methods of cardiac investigation, but also that the work has been appreciated. The second edition differs but slightly from the first, except that a chapter has been added on auricular flutter; advantage has, however, been taken of the opportunity to correct a few typographical errors and to improve the phraseology in places. The tables of cases observed by the author have been extended by the addition of cases seen since the previous edition was issued. Auricular flutter is defined "as a condition in which the normal beats of the auricle are submerged by contractions of this chamber in response to a series of new, rhythmic, and pathological impulses, varying in rate from 200 to 350 per minute," and it is stated that "perhaps the most notable feature of flutter or extreme acceleration of the auricle is its almost invariable association with heart-block." The author has collected a series of 27 cases, consisting of 22 males and only 5 females; the condition is usually associated with advanced years. He finds that most frequently the ventricular rate is half that of the auricle and that digitalis or strophanthus in full doses always reduces it; having obtained this effect, the dosage can be increased, when fibrillation is set up. The remedy should then be withdrawn, when the fibrillation vanishes in most cases and the normal rhythm is immediately resumed. He speaks with confidence of the success of this treatment. The book may be safely recommended as one of the best short expositions of modern views on the various disorders of the heart beat.

THE HISTORY OF MODERN CHEMISTRY.

THE fourteen years which have elapsed since the appearance of Sir WILLIAM TILDEN'S *Progress of Scientific Chemistry*[3] have contributed a vast amount of new matter to the details of chemical knowledge, and have also been rich in the new development of fundamental conceptions which must greatly affect the work of the future. The preparation of the second edition, which has recently been published, has necessitated, therefore, a good deal of work in the way of supplementing the material previously embodied in the book, and the result is an excellent account of the development of the science, as regards its broad lines, from about 1837 to the present time. The idea of the work is to provide for the student a clear statement of the successive steps which have led to the system of theory generally accepted by chemists at the present day, and this object is certainly well attained; in addition, the more general reader who is not wholly ignorant of science will find in it a fascinating story told in such a way as to be quite easy to follow.

Among recent developments, the one most likely to occur first to the mind is the discovery of radio-activity and the new conception of the nature of atoms which the observed phenomena have necessitated. In a new chapter devoted to this subject the author remarks that the advances already made may be summarized for the chemist by the statements that the discovery has added some thirty-seven new substances to the list of "elements"; it has provided new methods of experimental research; and it has thrown some light on the tantalizing problem presented by the periodic law, and encouraged further speculation as to the origin and life-history of the elements. Some of the facts mentioned in this chapter show incidentally the immense advance that has been made in the instruments of research over those accessible to chemists at the commencement of the Victorian era; thus, in the investigation of the density of niton (radium emanation) by Gray and Ramsay, the reader is informed "that the volume of gas measured was only about $\frac{1}{10}$ c.mm., and its weight about $\frac{1}{20000}$ mg., and that a balance was required which would indicate a difference not greater than $\frac{1}{2000000}$ mg." The atomic weights deduced from these experiments ranged from 218 to 227, the average being 223, while the figure arrived at from other considerations was 222.4, a sufficiently satisfactory agreement in the circumstances!

The liquefaction of the most resistant gases has also been accomplished beyond any doubt only in very recent years. It was on May 10th, 1898, that about 20 c.cm. of liquid hydrogen were obtained in the laboratory of the Royal Institution; since then larger quantities have been obtained, and at about 16° above absolute zero hydrogen has been changed to a waxy solid. Helium, which has only been known for a few years, proved even more difficult to liquefy than hydrogen; its atomic weight is 4, but presumably the fact that its molecules are monatomic is the cause of the greater resistance it offers. It was not until 1908 that the difficulties were at length overcome and liquid helium obtained with a boiling point of about 4.5° absolute; when this was caused to boil under diminished pressure the temperature fell to about 2.5° absolute, probably the lowest temperature ever obtained, but the helium did not solidify. From the point of view of this book, the chief interest of these facts does not lie in the individual accomplishments, but in the near approach to the absolute zero of temperature, about which there has been much speculation. Sir William Tilden points out, however, that ordinary methods of determining temperature are not available in such cases, and the estimates arrived at can only be approximate; he thinks it likely, therefore, that the absolute zero of the thermometric scale will remain for some time a subject upon which the scientific imagination can continue to be exercised.

A very useful new feature of the book is the introduction at the end of each chapter of short biographical notices of the deceased chemists whose work is dealt with, with references to the sources from which fuller information on their work can be obtained; in the case of living investigators the notes are restricted to the statement of the present position of each, as set forth in the list of members of the Royal or other learned society. Very little fault can be found with anything in the book; as the only instance noted of over-dogmatic statement we may quote the remark on p. 218 that "to say that Pasteur effectually and finally disposed of the doctrine which affirmed the possibility of spontaneous generation . . . is to repeat what is familiar to all the world."

THE PREVENTION OF CONCEPTION.

DR. MAX HIRSCH, in his work upon abortion and the prevention of conception in their relation to the fall in the birth-rate,[4] deals with matters which are everywhere arousing a more than passing interest at the present time. Feticide, or the destruction of the embryo in the womb, is no new thing; it is not, as he says, a modern social malady, but the prevention of conception on a large scale is a novel phenomenon among civilized nations. Both of them have a bearing upon the fall in the birth-rate. Dr. Hirsch is a gynaecologist, and looks at these phenomena of our times from the standpoint of midwifery and diseases of women. He does not shirk the statistical aspects of the subject, but he is not overburdened with figures, and he emphasizes the obstetrical bearings of the matter in detail. Although criminal abortion is no new thing, Dr. Hirsch brings forward an array of data which seem to show that it is a much more frequent practice than it was some twenty or thirty years ago. He quotes Bertillon's work, in which it is stated that no fewer than 50,000 criminal abortions take place in Paris in a year, and he takes note of Tissier's suggestion that numerous Englishwomen resort to that city to be relieved of their pregnancies.

He thinks that criminal abortions account for 80 per cent. of all miscarriages, and he indicates the two ways in

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[2] *Clinical Disorders of the Heart Beat.* By Th. Lewis, M.D., D.Sc., F.R.C.P. Second edition. London: Shaw and Sons. 1913. (Demy 8vo, pp. 128; 54 figures. 5s. net.)

[3] *The Progress of Scientific Chemistry in Our Own Times, with Biographical Notices.* By Sir William A. Tilden, F.R.S., D.Sc.Lond., Sc.D.Dub., D.Sc.Vict., LL.D.Birm. Second edition. London: Longmans, Green, and Co. 1913. (Post 8vo, pp. 378; 229 figures, 1 plate. 7s. 6d. net.)

[4] *Fruchtabtreibung und Präventivverkehr im Zusammenhang mit dem Geburtenrückgang.* Von Dr. M. Hirsch. Würzburg: C. Kabitzsch. 1913. (Roy. 8vo, pp. 275. Mk. 6.)

which the practice has to do with the fall in the birth-rate—namely, by diminishing the number of births directly and by setting up inflammatory and other morbid states in the pelvis, which indirectly lead to fewer conceptions in the future. There is a full and interesting chapter on the motives of action in criminal abortions; in turn such matters as illegitimate pregnancies, the influence of poverty in legitimate ones, the entrance of women into business and the professions, the increase of militarism, the later age of marriage, divorces, the fear of the pains of labour and of the dangers of confinement and the lying-in period, and the methods of modern obstetrics are all considered. Another chapter looks at the falling birth-rate and discusses such possible explanations as love of comfort and wealth, the preoccupation with business, and the pressure of economic necessity making childbearing too expensive an addition to the other calls upon the household exchequer.

By far the largest part of the book, however, is devoted to the means which are available for the campaign against the falling birth-rate and abortion-mongering. To this subject eleven chapters are given. A large number of measures is referred to and their value estimated. Amongst these may be mentioned the prohibition of the sale of abortifacients, the obligation upon the medical profession to afford information about abortions, Winckel's system, the prohibition of anticonceptional expedients, the teaching of the hygiene of reproduction, the reform of midwife's practice, the changed attitude of the medical profession on the questions of the prevention of pregnancy as a therapeutic means and of the induction of abortion for health reasons (therapeutic feticide), the scrutiny of eugenics and its proposed control of mating and procreating, the giving of a painless labour and a safe puerperium, marriage reform, and the reduction of the preponderance in the number of women in the population.

Dr. Hirsch's book is a mine of information on a subject about which at present information is difficult to obtain, and it may be commended to the attention of birth-rate commissions and public bodies interested in or legislating concerning the lessening fertility of the civilised nations of the world.

RELIGIONS AND THE GERM PLASM.

EVERY student of religious systems must be impressed by the fact that, in their development and sequence, they manifest a remarkable independence of prudential motives and power of overriding personal aims and interests to their own mysterious ends. The individuals—nay, even the races—which are the instruments of their advancement, act as if in the grip of some impersonal power, impelling them in directions often the very reverse of those which their every-day reason would approve. In Dr. REICHARDT'S work, *The Significance of Ancient Religions*,[5] we are offered, in explanation of this impelling power, a theory which, being biological not metaphysical, does, if accepted, relate the phenomena of the growth and succession of the great religions to the other facts of individual and social development. Dr. Reichardt believes that the human germ plasm, in addition to that portion which is concerned in the ontogenetic reproduction of established characters, includes a "virginal" residuum capable, on fertilization, of becoming the starting point of new structural and functional endowments. In consequence of the fertilization of this "virginal" portion of the germ plasm, he believes that some 7,000 years ago a process was initiated which has had as its organic result the acquirement by humanity of a new mind-organ—the uppermost layers of cells in the cerebral cortex—and that to its psychic and social manifestations the religious history of the civilized races of mankind is due. The primary fertilization of the "virginal" portion of the germ plasm results in its conversion into what the author terms "generic substance," but produces no immediate effect upon the human organism. To effect this, a secondary and specific fertilization of this "generic substance" is required, the result of which is the production of a racial differentiation of the individuals in whose development the fully fertilized "generic substance" takes part. Thus the entire process, conceived as resulting in the new mind-organ referred to above, is represented as a vast curve or "generic wave" propagating itself over the course of the past seven thousand years through smaller "racial" waves, each initiated by the specific fertilization of the "generic substance" and each averaging about one thousand years. The racial waves identified by the author are those which resulted in the civilizations of the early dynastic Egyptians, the Babylonians, Persians, Hindus, Jews, Greeks, Romans, Mohammedans, Mediaeval Catholicism, and Protestantism; and it will be noted that the genesis of a new wave is not necessarily synchronous with the complete subsidence of its predecessor. It should further be observed that, whereas the main tendency of the individual racial movements is favourable to social organization, that of the larger "generic" process has revealed a disintegrating power. Dr. Reichardt distinguishes two phases of human evolution, the first belonging to the period marked by the ascent and the second by the descent of the "generic wave." In the first a progressive process of religious idealism grips the individual with increasing force, and completely overwhelms civilization in its efforts to provide for the worship of the gods. In the second, the religious development loses its vigour, gradually decays, and allows civilization once more to establish itself on its old basis. The greater part of the volume is occupied by an ingenious endeavour to identify in the successive stages of religious development the psychic manifestations of an advance towards full integral function of that upper cortical cell stratum, which, it is assumed, was at first entirely, and is even yet in great measure, isolated from the more primitive portions of the cerebrum. The phenomena of primitive religions are in the author's opinion, broadly speaking, phenomena of mental dissociation, of subjective life. The book, though somewhat overconfident in tone, is interesting.

[5] *The Significance of Ancient Religions.* By E. Noel Reichardt, M.D.Lond. London: George Allen and Co. 1912. (Demy 8vo, pp. 470. 12s. 6d. net.)

BACTERIOLOGY.

MANY books on bacteriology have appeared since the first edition of MUIR and RITCHIE was published in 1897, but the fact that this work has reached its sixth edition is evidence that it easily holds its own. Although it is possible that the student at first may find the book[6] a little more difficult than some of the more elementary works, nevertheless familiarity with it will show a concise and up to-date account of bacteria that are pathogenic to human beings. The book is written essentially for students and practitioners of medicine, and the problem of how to limit the ground which a book on bacteriology might cover is thus simplified. In previous editions we have often noticed an absence of any account of the pathogenic fungi, but in this the authors have remedied the deficiency, and we find illustrations of ringworms, sporotrichosis, blastomycosis, microsporon, etc. Another feature is the section on the bacteriology of milk. New photomicrographs have been added, and though it may seem ungrateful to ask for more, we would venture to suggest that in the next edition much assistance could be given to workers by the addition of illustrations of *Bacillus botulinus* and the Bulgarian bacillus and its allies, and perhaps more spore-bearing organisms. There is no noticeable increase in the size of the book, and we read it again with much pleasure. We can only once more express our high appreciation of it.

NOTES ON BOOKS.

DR. A. T. HOPKIRK, the author of a short book on *Influenza*,[7] seeks to disarm criticism at the outset by stating in his preface that the book is not intended as a medical monograph; if he had stated at the same time the class of reader for whom he had written it, the task of judging the work would have been made easier. His summary of the history of the disease, while short, is good. Starting with various plagues of antiquity, which have been claimed by some writers as epidemics of influenza, he quickly passes to the first fully authentic account of the disease, the outbreak in 1173. He lays down as a

[6] *Manual of Bacteriology.* By R. Muir, M.A., M.D., Sc.D., F.R.S.; and J. Ritchie, M.A., M.D., F.R.C.P.Edin. Sixth edition. London: H. Frowde; Hodder and Stoughton. 1913. (Cr. 8vo, pp. 760; 192 illustrations, 6 plates. 10s. 6d. net.)

[7] *Influenza: its History, Cause, and Treatment.* By A. F. Hopkirk, M.D.Jena. London and Felling-on-Tyne: The Walter Scott Publishing Co. 1913. (Cr. 8vo, pp. 229. 3s. 6d.)

guiding rule in examining doubtful cases that the morbidity is always very great and the mortality small. The accounts of later epidemics contain a list of the countries affected, with dates, the direction of spread, noteworthy symptoms and sequelae, and atmospheric and meteorological conditions. The pandemic of 1889-90 is examined in more detail. Of particular interest is the work of English physicians during the outbreak of 1782 in establishing the contagiousness of influenza. Extracts from the evidence collected by Dr. Edward Grey and published in 1784 are given in some detail. That supplied by Haygarth of Chester shows a spirit of scientific caution and observation. Coming to modern times the author describes the identification of the causal organism, and gives a short account of the morphology and general reactions of the bacillus. The symptoms are next treated, and the differences displayed in the more recent epidemics pointed out. So far the book appears to be written entirely for the medical profession. In the section on treatment, however, the author evidently wavers in his inclination, and while much could only interest the physician, he is mainly concerned with the nursing world, and indeed at times with amateur nurses more especially. His section on dietetics is full, and an appendix containing a number of recipes for invalid cookery should prove useful. While each section of the work is good we can think of no one class of reader to whom the whole book would appeal.

Mr. H. W. CARSON'S little volume on *Asepsis and How to Secure It*[8] is one of the publications of the pocket guide series. It is intended for nurses primarily. The story of the rise and growth of aseptic surgery is interestingly and very clearly, though shortly, told. The author keeps strictly to his plan of indicating what asepsis is and how it can be secured. One who has already some knowledge of the subject can read it through quickly, but there is sufficient detail in it to demand careful study by the nurse who takes it up for the first time. It would be money well spent if this handy little book were put into the hands of every probationer when she enters the hospital. There is a good sprinkling of diagrams and illustrations which very materially help the comprehension of the text.

Calm Yourself[9] is the arresting title under which Dr. G. L. WALTON publishes a lecture delivered in March, 1913, at the Harvard Medical School. He believes that by a species of auto-suggestive psychotherapy it is possible to curb and ultimately destroy the pernicious habit of taking trifles to heart, and that, "if such a millennium could be attained the actual amount of effective work in the world would be easily doubled." He quotes Marcus Aurelius and Epictetus in support of his contention that, granted the right point of view, it is possible to turn to advantage those petty annoyances of which we are so prone to complain. We should regard them as tests of our progress in self-control, and welcome them accordingly. The lecture is well worth reading.

The third edition of Dr. HART'S *How to Cut the Drug Bill*[10] is commended by the author to the special attention of those general practitioners who are engaged in the work arising out of the Insurance Act. By its use he is confident that, without sacrifice of efficiency, a substantial economy may be effected in the provision of medical benefit. The evident popularity of the book is justified by the fact that it contains a great deal of useful information clearly and systematically set forth.

[8] *Asepsis and How to Secure It.* By H. W. Carson, F.R.C.S.Eng. London: The Scientific Press, Ltd. (5 × 4, pp 58; 14 figures. 1s. net.)
[9] *Calm Yourself.* By G. L. Walton, M.D. Boston and New York: Houghton, Mifflin Company. 1913. (Fcap. 8vo, pp. 46. 2s.)
[10] *The Practitioner's Vade Mecum, or How to Cut the Drug Bill.* By A. H. Hart, M.S., M.D. London: John Bale, Sons, and Danielsson, Limited. 1913. Third edition, or National Insurance Edition. (Cr. 8vo, pp. 155. 2s. 6d. net.)

ROYAL MEDICAL BENEVOLENT FUND.

AT the February meeting of the Committee 26 cases were considered, and grants amounting to £278 voted to 23 of the applicants. Appended is an abstract of the cases relieved.

1. Widow, aged 58, of M.R.C.S., L.S.A. Since husband's death about a year ago has supported herself as nurse-companion, but has recently been obliged to give up the post, and requires assistance whilst obtaining another; children unable to help. Voted £5.

2. Widow, aged 45, of M.R.C.S., L.R.C.P. Receives a small sum quarterly as payment for the practice, but requires a little help for unavoidable expenses; two children, aged 16 and 14. Voted £5.

3. M.D.St. Andrews, aged 76. Has done excellent work as visiting physician to different institutions, but has never had much private practice, and has now come to an end of his resources; practically incapacitated by the infirmities of old age. Elected to an annuity of £20.

4. Widow, aged 61, of M.R.C.S., L.R.C.P. Has devoted her means to the education of her children and is now quite unprovided for. Voted £12.

5. Daughter, aged 32, of L.R.C.P., L.R.C.S. Used to be a mental nurse, but for several months past has been in very bad health and is ordered a change, which she cannot afford. Voted £10.

6. Widow, aged 59, of L.R.C.P., L.R.C.S.Irel. Supported her husband during a long illness, and is now quite broken down in health; children unable to help. Voted £18.

7. Widow, aged 58, of L.R.C.S.Edin. No income; precarious earnings from needlework and letting lodgings and slight help from children. Relieved five times, £66. Voted £12.

8. Daughter, aged 66, of late M.R.C.S., L.S.A. Was comfortably provided for by her father but was defrauded by her trustee and is now dependent on a small annuity from a charitable society. Relieved three times, £48. Voted £12.

9. Widow, aged 85, of M.R.C.S., L.S.A. Has a small income, but is obliged to ask for assistance owing to the afflictions of her children, three of whom are deaf and dumb. Relieved eleven times, £70. Voted £10.

10. Widow, aged 65, of M.R.C.S. After husband's death endeavoured to establish a boarding-house at the seaside but lost all her capital. Now has a situation as cook but feels she is unequal to the work, which is very hard. Relieved three times, £36. Voted £12.

11. Widow, aged 47, of L.S.A. Two children, aged 11 and 9, and finds her small income insufficient for unavoidable expenses. Relieved once, £5. Voted £12.

12. Daughter, aged 58, of late M.R.C.S. Is mentally afflicted and obliged to live under supervision at the expense of two sisters who each have to earn their living. Relieved nine times, £81. Voted £10.

13. M.D.Edin., aged 53. Met with a severe accident two years ago, and is not yet able to support himself again; dependent on a widowed sister whose income is small. Relieved once, £12. Voted £18.

14. Widow, aged 67, of L.R.C.P., L.R.C.S.Edin. Supplements a pension from a charitable society by teaching and letting lodgings, but has had her rooms empty for several months and has incurred unavoidable expenses through the illness of her daughter who is a governess. Relieved fourteen times, £102. Voted £10.

15. Daughter, aged 47, of late F.R.C.S. No income and incapacitated by gastric ulcer. Relieved fifteen times, £129. Voted £12.

16. Daughter, aged 53, of late F.R.C.S. No income and such indifferent health that she finds it most difficult to get a situation, and impossible to retain one. Relieved eight times, £52. Voted £12.

17. Widow, aged 45, of M.B., C.M.Edin. Left unprovided for at husband's death after a long illness; seven children, of whom three are self-supporting and the remainder dependent. Only income £12 a year from another society. Relieved twice, £32. Voted £20.

18. Daughter, aged 57, of late M.R.C.S. Health so indifferent that she can only earn a few shillings a week, and is practically dependent on this fund and another charity. Relieved six times, £96. Voted £18.

19. Widow, aged 64, of M.R.C.S. Injured her right hand several years ago, and has found it practically impossible to obtain employment; slight help from children. Relieved ten times, £118. Voted £12.

20. Widow, aged 46, of L.S.A. Left quite unprovided for at husband's death three years ago, and endeavours to support herself by letting lodgings at a seaside resort, but has had a very bad season; two children, aged 10 and 8. Relieved once, £5. Voted £10.

21. Daughter, aged 62, of late M.R.C.S. Only income a small Government annuity purchased a few months ago with a legacy, and suffers from a permanent affliction which renders occupation practically impossible. Relieved three times, £36. Voted £6.

22. Widow, aged 40, of M.B., C.M.Aberd. Only income a small monthly grant from another society, and is incapacitated by a chronic complaint; two children, aged 14 and 13. Voted £12.

23. Daughter, aged 42, of late M.D.St. Andrews. Has supported herself for some years by massage, but broke her right forearm some months ago, and is still incapacitated. Relieved twice, £20. Voted £10.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

A NATIONAL league for the destruction of flies, rats, and other animals dangerous to the public health has been founded in Paris. The president of the provisional committee is Professor Raphael Blanchard.



View of Aberdeen.
(Painting by A. Nasmyth, from a drawing by R. Scaton

EIGHTY-SECOND ANNUAL MEETING
of the
British Medical Association,
ABERDEEN, JULY, 1914.*

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

SOME FAMOUS ABERDONIANS.

Aberdeen has been the cradle of a good many famous men and the "sapient nurse" of a very large number who have earned distinction in every walk of life. At the half-yearly dinner of the Aberdeen University Club on May 21st, 1913, Professor W. J. R. Simpson, C.M.G., who was in the chair, said that he had been in many lands, and wherever he had been he had always found Aberdeen graduates in prominent positions. In Cairo there was Grant Bey, whose Egyptian collection was now in the University of Aberdeen. In India there was Sir James Westland, whom he described as the ablest financier that India had ever had. There was Colonel Alcock, Sir George King (Director of the Botanical Gardens), followed by Sir David Prain (now Director of the Royal Botanical Gardens at Kew). In Cape Town he found Sir David Gill, famous for his astronomical discoveries. In Simons Town he found his old friend, Sir James Porter, afterwards Director-General of the Navy. A short account of some of the men who have made Aberdeen illustrious may be of interest to members of the Association who propose to attend the annual meeting.

Pious Founders.

The first place in honour belongs to William Elphinstone, Bishop of Aberdeen, and founder of King's College. Elphinstone was an Aberdonian by adoption; by birth and education he belonged to Glasgow. His life was written by Hector Boece, his contemporary and friend, who was the first Principal of the university founded by the bishop. There seems to be no doubt that Elphinstone was born out of wedlock, with the added stigma that his father was a priest. He was probably born in Glasgow in 1431. He is said to have made such progress in learning when he was a child that "his genius surpassed his years and gave great promise of his future eminence." Boece says that the boy's disposition made him beloved by William

* Articles on Aberdeen were published in the Journal on January 3rd, p. 35; on January 10th, p. 97; and on January 17th, p. 151.

Turnbull, Bishop of Glasgow; indeed, that prelate would never sit down to supper until he had sent for William and heard him recite some verses or exercises. When he was nearly twenty years of age Elphinstone gave himself to the study of logic and physics. This must have been about 1451, the year of the foundation of Glasgow University. In the earliest records of the university among the names of students incorporated is that of Willelmus Elphinstone. He was thus one of the first students to enter the new university, and his career there was very brilliant. In 1456, being, says his biographer, perfect in philosophy, he graduated M.A. and was ordained priest. After graduation he for a time managed his father's estate. Although that must have been a useful training for him in the work of administration which was afterwards to fall upon him, his eagerness for learning made him return to college to study canon law. He then practised in the courts of justice, and was very successful; it is said that he pleaded so zealously in the cause of equity and justice that he was regarded as "a patron of righteousness and the advocate of the poor and miserable." He next did parochial duty as a priest in the parish of Kirkmichael, whether in Ayrshire or in Nithsdale is uncertain. There for four years he devoted himself to his pastoral duties, without neglecting study. A wealthy uncle, Lawrence Elphinstone, not wishing his aptitude for public affairs to lie idle, recommended him to go abroad to acquire foreign manners and learning, and provided liberally for his expenses. Accordingly in 1462 William proceeded to the University of Paris, which was then the chief centre of learning. So successfully did he apply himself to his studies that he gained, according to Boece, the admiration of all Paris, and his professors elected him to the post of first reader in canon law. For six years he attracted students in ever-increasing numbers. Having taken his degree in the Sacred Decretals as Doctor of Decrees, he left Paris in 1468 and went to Orleans, the great law university of France throughout the Middle Ages, and the true source of the influence exerted by Roman Law on the law of Scotland. There he spent several years, and such was his reputation that the Parliament of Paris more than once sought his advice. In 1471 he was recalled by his parents to Scotland, and soon after his arrival in Glasgow the Bishop (Andrew Muirhead) appointed him official or episcopal judge of the diocese, the highest legal position within his jurisdiction. The university conferred on Elphinstone the honorary degree of Licentiate in Canon Law, and in 1474 he was chosen Lord Rector. In 1478 he was promoted to be Official of Lothian in the diocese of St. Andrews. In these positions he displayed the greatest impartiality in the administration of justice, having, says Boece, "this saying always in his mouth, that he who spares bad men is an enemy of good men." James III invited him to Court, and he rose rapidly to the highest legal positions in the State. He was sent with the Bishop of Dunkeld and the Earl of Buchan on an embassy to Louis XI, and to him is mainly attributed the success of the mission. On reaching home he was presented by the king to the Bishopric of Ross, and under this title he took his seat in Parliament, though it appears he never occupied the see. He had a great influence over the king, which he used for the benefit of the country. He was appointed ambassador to England whenever any disagreement seemed likely to occur between the two countries. For his services in that capacity he was in 1483 made Bishop of Aberdeen. The year following he was appointed one of the Commissioners to meet others named by Richard III of England in order to arrange the terms of a peace between the two kingdoms. Again the success of the conference was mainly due to Elphinstone. In 1488 he was made High Chancellor of Scotland. About this period a war broke out between the king and his son, afterwards James IV. Elphinstone used all his influence to bring about a friendly settlement, but without avail. After the violent death of the king he retired to his diocese and employed himself in making regulations for the clergy and in restoring the services of the Church. He ordained, says Boece,

> the chant to be celebrated in the ancient manner, appointed John Malison, an experienced musician and a worthy man, to direct the service in the church of Aberdeen and to keep the rituals. To this man the people of Aberdeen are indebted for their knowledge of music and to him they are also indebted for every performance in that science and for the exact celebration of service in the said church. There was scarce a considerable singer in the city who did not take his lessons from him.



Fig. 1.—Bishop Elphinstone, Founder of King's College.

Elphinstone also set himself to reform abuses among the clergy. In 1488 he was present at the crowning of James IV. Soon afterwards he was sent on an embassy to arrange a marriage between that prince and the daughter of the Emperor Maximilian the First, but on his arrival at the Austrian Court he found that the princess had been promised to the heir of the Spanish crown. On his way home he concluded a treaty with the States of Holland, with which Scotland had been at strife for some time. On his return to his native country in 1492 he was made Lord Privy Seal, and in the same year he was one of the Commissioners who met at Edinburgh and renewed the truce with England. By his advice the king exercised justice on his lawless subjects in the Highlands and Islands, who, according to Boece, "without the interference of the royal authority are always quarrelling among themselves." Something like peace having been restored to Scotland, Elphinstone turned his attention to what had ever been dearest to his heart—the promotion of learning and religion. After the troubles which followed Flodden he set out for Edinburgh to attend a meeting of Parliament. He was taken ill there and died in the 84th year of his age on October 25th, 1514. He was buried in the college chapel at Aberdeen, under a black marble stone with a canopy, on the first step leading to the high altar. Over the stone originally were eight figures in brass representing the four cardinal virtues, the three Christian graces, and Contemplation. These, again, supported a layer of stone on which rested the recumbent ecclesiastical and political surroundings. These ornaments were removed long ago. The portrait of Elphinstone which hangs in the hall of King's College is said to be a copy from an older one, most probably taken from life. It represents the bishop clothed in a rich cope, with rings on his

fingers and wearing a gorgeous mitre. His hands are clasped as in prayer, and his pastoral staff is held up by his arm. James Bruce[1] says that in the library of King's College are preserved two series of MS. volumes on the Canon Law, which, from an inscription on them believed to be in the handwriting of Boece, appear to have belonged to Elphinstone, and to have been compiled by him, the writing being in all probability the work of an amanuensis. The tradition in the college is that these are the very lectures which Elphinstone delivered at Paris when he was professor of Canon Law there. The history of the foundation of the University has already been told.[2] Elphinstone endowed the college with lands which he had purchased for its support, and made a bequest in his will of £10,000 Scots for the carrying out of his plan. Various bequests of land were at the same time made to the university by the king. From this institution, says Bishop Lesley, who had been a student there,

> as from a fountain, have flowed many illustrious men who have illuminated all Scotland with the light of Christ from above; or imbued with the principles of jurisprudence, have ruled the State in peace and justice with the utmost applause.

James Bruce not inappropriately calls Elphinstone the William of Wykeham of Scotland. The Bishop also projected the building of the Bridge of Dee, and gathered materials and provided money for the purpose. Though he did not live to see the bridge finished, and it is even doubtful whether he saw it begun, he is still entitled to the credit of the conception. He thus showed himself a Pontiff or *Pontifex* in the true sense of the term. Elphinstone, according to Boece,

> had such an active and vigorous mind that he was never at a loss in public or private business; alike qualified for civil or religious matters; the greatest lawyer, the ablest statesman, the most accomplished orator of his time, and the truest friend to the tranquillity, peace, and glory of his country; his constitution as hardy and vigorous as his mind, unbroken by any labour, exercise or duty, whether public or private. Age itself, the common and inevitable disease of man, though it weakened did not break his spirit; and at the age of 83 he transacted the most weighty business of the nation with superior acuteness, his capacity and faculty as unimpaired, his memory always strong. His old age was pleasing and respectable without moroseness, anxiety, peevishness or melancholy, or the least effect on his excellent temper.

After making allowance for the exaggeration of friendship and the exuberance of Boece's eloquence, it may fairly be concluded that Elphinstone, besides being a great man was *integer vitae scelerisque purus* at a time when Churchmen were often not bright exemplars of morality.

Elphinstone was succeeded in the See of Aberdeen by Alexander Gordon, of whom scarcely anything is recorded further than that he was "a person of good learning and of a grave disposition." He was bishop for little more than three years, and in 1518 was succeeded by Gavin Dunbar. That prelate's principal object was to carry to a successful issue the various good works in which Elphinstone had been engaged when struck down by death. He completed the cathedral and contributed largely to its decoration. He erected the south transept, which is called his aisle; there is his effigy on an altar under a flowered arch, at the base of which his arms are cut out. Owing to the destruction of a large part of the cathedral, this now lies outside the present building. Dunbar also made the ceiling of the cathedral and finished the south side of King's College. He completed the building of the bridge across the Dee, the inception of which was due to Elphinstone.

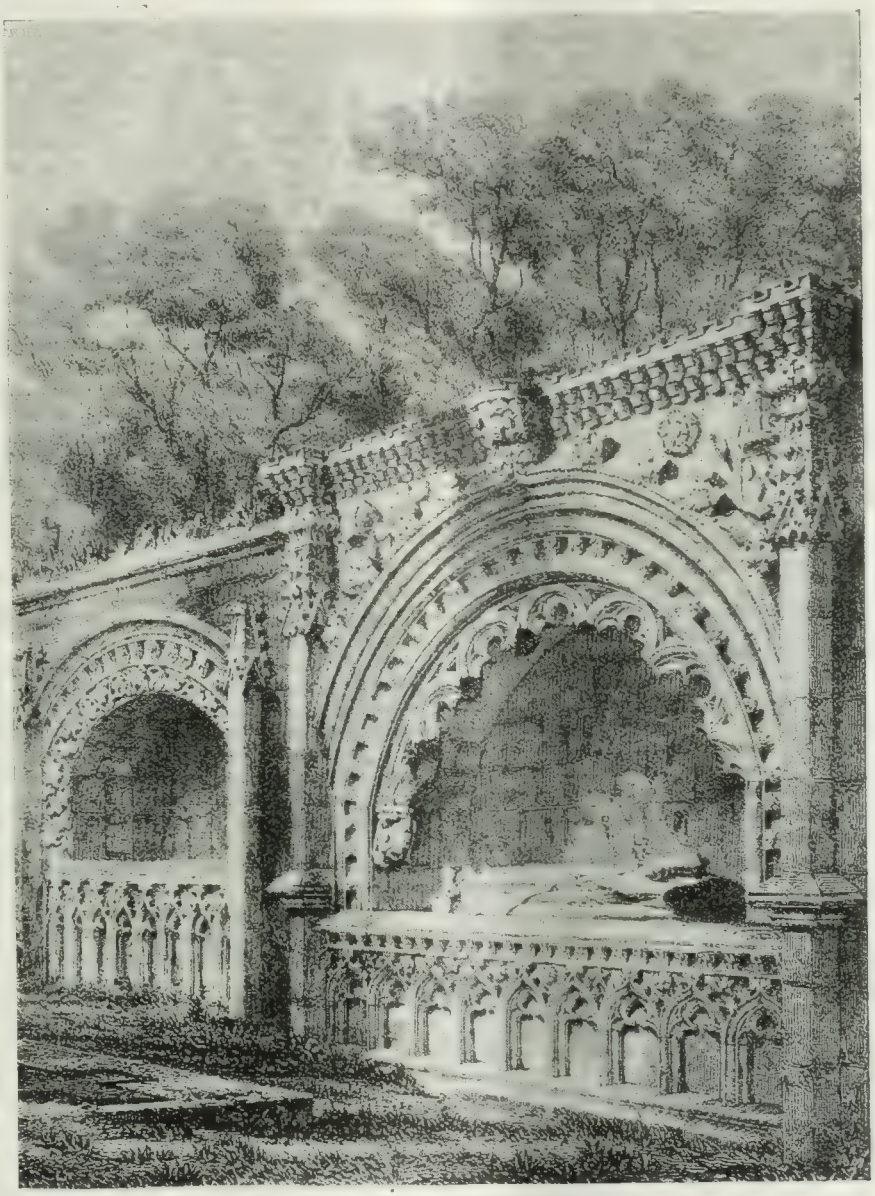


Fig. 2.—Tomb of Bishop Dunbar.

After mentioning this bridge, James Bruce says[3]:

> Since the reformation there has, we believe, been no building of bridges by the clergy in this country with the solitary exception of the erection of St. Devenick's Bridge by Dr. Morison of Banchory.

Dunbar founded a hospital for the support and maintenance of twelve poor men. This building was on the north side of the Chanonry. The inmates were called "beadsmen," and were, according to Bruce, maintained in it till a time then (1841) comparatively recent, when the houses and ground were sold and the funds applied to the maintenance of twenty-one poor men as outdoor pensioners. Dunbar died at St. Andrews on March 9th, 1532. Whilst he was

[1] *Lives of Eminent Men of Aberdeen.* Aberdeen, MDCCCXLI.
[2] BRITISH MEDICAL JOURNAL, January 10th, 1914, p. 97.
[3] *Op. cit.*

bishop he spent the whole revenues of the see in charity and beneficence. He showed the same love of learning, the same taste for artistic beauty, the same patriotism, and the same Christian spirit as Elphinstone.

The founder of Marischal College was George Keith, the fifth Earl Marischal of Scotland. He succeeded his grandfather, "William that kept the tower" (Dunnottar, where he spent some time in seclusion) in 1581. George had witnessed the struggle between the old religion and the reformation while an undergraduate at King's College. He was strongly on the side of the reformers; how much this may have been due to rivalry with the Huntly family, who were staunchly Catholic, we need not inquire. The young Lord Marischal's views were confirmed by a course of study at Geneva, where he came under the influence of Beza. He went about for some time from one European court to another, making acquaintance with men who then ruled the destinies of nations and gaining an insight into affairs. On his return he threw himself into the struggles of the time, and in 1592 he was appointed King's Commissioner for Aberdeen, Banff, and Kincardineshire. In this capacity his attention was called to the state of King's College. He found that although commissions had sat and schemes had been drafted since 1584, nothing had been done. He solved the difficulty by creating a new university, independent of the old one, and, indeed, hostile to it. Marischal College was founded with the revenues of the Abbey of Deer, the lands of the Knights Templar in Kincardine, and the property of the Black and White Friars in Aberdeen. The Town Council helped by giving the Monastery of the Grey Friars as the home of the college. "In this way," says Mr. J. M. Bulloch, "the Roman Catholic Church was the means of endowing both the universities in Aberdeen."[4] The Earl Marischal died in his castle of Dunnottar, near Stonehaven, in 1623. It is one of the ironies of history that the estates of the descendants of this pillar of Protestantism were less than a century later forfeited on account of the part taken by George, the tenth Earl Marischal, and his younger brother in the rebellion of 1715. After serving as a general in the Russian army with high distinction, James offered his sword to Frederic the Great of Prussia, who at once made him a Field Marshal. He was killed at the battle of Hochkirch on October 14th, 1758. A regiment in the German army is still called after him, and the Kaiser some years ago gave a statue of him to Peterhead in Aberdeenshire, which is close to the old castle of the Keiths at Inverugie. The Earl Marischal also got employment from Frederic, who made him Governor of Neufchatel. He died at Berlin in 1788. Macaulay, in his essay on Frederic, says:

> The associates of his hours of relaxation were, for the most part foreigners. Britain furnished to the royal circle two distinguished men, born in the highest rank, and driven by civil dissensions from the land to which, under happier circumstances, their talents and virtues might have been a source of strength and glory. George Keith, Earl Marischal of Scotland, had taken arms for the house of Stuart in 1715; and his younger brother James, then only 17 years old, had fought gallantly by his side. When all was lost they retired together to the Continent, roved from country to country, served under various standards, and so bore themselves as to win the respect and goodwill of many who had no love for the Jacobite cause. Their long wanderings terminated at Potsdam; nor had Frederic any associates who deserved or obtained so large a share of his esteem. They were not only accomplished men, but nobles and warriors, capable of serving him in war and diplomacy as well as amusing him at supper. Alone of all his companions they appear never to have had reason to complain of his demeanour towards them. Some of those who knew the palace best pronounced that Lord Marischal was the only human being whom Frederic ever really loved.

(To be continued.)

[4] *A History of the University of Aberdeen, 1495-1895.* London, MDCCCXCV.

In a report presented some time ago to the Hartlepool Board of Guardians, the District Medical Officer, Dr. G. F. E. Morgan, recommended the removal of all phthisical patients to an isolation hospital or sanatorium, and that domiciliary or shelter treatment should only be allowed when the patients could be strictly isolated. He considered that dispensary treatment should not be allowed in any circumstances, and that all houses which had contained phthisical patients should be thoroughly disinfected.

ROYAL COMMISSION ON VENEREAL DISEASES.

The following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

Evidence of Commissioners in Lunacy.

At the seventeenth meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. Coupland and Dr. Bond, Commissioners in Lunacy.

The witnesses stated that since 1876 the figures published by the Lunacy Commissioners showed that there had been a gradual rise in the recorded proportion of syphilitics admitted to asylums, but it could not be inferred that this increase denoted an increasing incidence in actual prevalence of syphilis; the increase shown in the figures might mean nothing beyond more thorough investigation and observation in respect to this particular. Throughout the whole period there had been a preponderance in the proportion of male cases in the private over that in the pauper class, and generally a similar but less markedly higher incidence in females of the pauper than in those of the private class. For the period 1908–12 the figures showed that of the male admissions 11.8 per cent. of the private cases and 8.7 per cent. of the pauper cases were syphilitics; for females the corresponding figures were 0.7 per cent. among private and 1.4 per cent. among pauper patients.

Much variation in the degree of incidence appears in the inmates of different asylums, but, speaking generally, those institutions that receive inmates from industrial districts show higher ratios than those which deal mainly with an agricultural and rural community. About 60 per cent. of the cases known to be syphilitic admitted in the period 1908–12 were general paralytics.

Evidence of Sir Thomas Barlow.

At the eighteenth meeting evidence was given by Sir Thomas Barlow, Bart., K.C.V.O., President of the Royal College of Physicians.

Sir Thomas dealt first with the importance of congenital syphilis and its effect as a hindrance to the birth-rate and to healthy development. He described how syphilis frequently manifested itself in the offspring of a woman affected by the disease—in producing first one or more miscarriages, and afterwards children apparently healthy at birth, but sooner or later suffering from various affections. He stated that the life of these children at school, especially amongst the humbler classes, was most unpromising, and that many of them became perfectly useless members of society. He also drew attention to the fact that syphilitic infants were notably liable to convulsions, and that in these children the convulsions might inaugurate very serious diseases of the brain.

Sir Thomas next gave illustrations of the latency of the disease, and pointed out the importance of realizing how very widespread the damage caused by congenital syphilis might be; he said that causes for which no explanation could be given might revive manifestations of congenital syphilis in many different situations. He emphasized the importance in cases of this kind of maintaining continuous supervision of both parents and families. He considered that the ideal method of treatment and prophylaxis would be, given a syphilitic infant, that both parents should be under medical supervision and medical inspection at frequent intervals, and other children of the family born subsequently should also be inspected at frequent intervals, and that this surveillance should continue for several years.

Sir Thomas said it was very difficult to estimate whether venereal diseases were less prevalent at the present time than formerly. He thought, however, that there was a general improvement in the morality of the population, and that the higher standard obtaining ought in time to produce less prevalence of the diseases. He thought the outlook very hopeful for any educational crusade that might arise out of the work of the Commission, as the public mind was in a state of most promising preparedness to receive admonition, and to recognize the moral obligation of these things being dealt with. He was of

opinion that special education or instruction on these subjects was very desirable. It might be begun possibly in the public schools but certainly in the university period. More generally he thought that instruction should be given directly young people were sent to work.

In any educational measures he would urge that medical practitioners, and if possible family doctors, should be the backbone of the organization. Besides the family doctor he thought that for young children the person to impart knowledge was the mother. He believed that something had been done in Western Canada in the way of special teaching to women of sexual conditions, and this teaching had been of a wholesome character, and had been given without any offence whatever.

Sir Thomas was not in favour of notification of venereal diseases, and it was his opinion that there was much more to hope from general enlightenment and education. Apart from education, he considered that what was required practically was the provision of facilities for effective and complete treatment in the early stages and the improvement of those facilities to the utmost. He also strongly advocated the subsidization by the Government of pathological research.

BOARD OF EDUCATION.

Fifth Annual Report of the Medical Officer.

(*Continued from page 377.*)

Physically Defective Children.

The number of children certified under the Elementary Education (Blind and Deaf Children) Act, 1893, and the Elementary Education (Defective and Epileptic Children) Act, 1899, increased by 16, thus raising the total to 355. The existing school accommodation is now as follows; For the blind, 2,405; for the deaf, 4,359; for the mentally defective, 13,451; for the physically defective, 5,260; for the phthisical, 162; for the epileptic, 488. There is also accommodation in open-air schools for 840, while in addition special classes for children suffering from a high degree of myopia and the partly blind are held in twelve areas. For the successful working of myopia classes the children must have a reasonable degree of visual acuity. It should be equal, Mr. Bishop Harman finds, to $\frac{6}{18}$. Those responsible for the training of the blind, whether in the classroom or at play, should realize the importance of inculcating principles of self-reliance and self-management in young blind pupils. Their education at all stages should include a large share of manual work. Gardening and poultry keeping now form part of the educational schemes for the blind in two areas, and there is evidence of a broadening out of the education of blind children. In regard to the deaf Sir George Newman points out that a young deaf-mute naturally expressed himself by gesture, and there is a certain danger in checking this tendency in a child whose mental powers are awakening to full vigour before an effective substitute has been established in its mind. There is satisfactory evidence that children who have acquired the use of speech at school commonly make use of it both at home and at work in after-life.

The Mental Deficiency Act.

The figures supplied in the report as to the mental condition of school children suggest that no common standard of dullness and backwardness has at present been adopted. The percentage of children belonging to this category ranges from as low as 0.8 per cent. in some areas to as high as 14.6 per cent. in others. The figures relating to feeble-minded children show less variation; they range from 0.5 to 1.50 per cent.

In view of the fact that the Mental Deficiency Act comes into operation next April, the question of mental development in relation to school work is considered in detail. In regard to children over 7 and under 16, a local authority under the Act will have no concern with any mentally deficient children whose names and addresses have not been reported to it by the corresponding local education authority; hence the operation of the Act will to a large extent hinge on the work done by school medical officers. It will be their duty to be fully acquainted with the mental condition of every child within their areas, and when this is found to be defective, to determine whether the deficiency is merely dullness or backwardness, or of such a kind or degree as to justify a diagnosis of feeble-mindedness, imbecility, or idiocy. A school medical officer who finds that a child is feeble-minded will then have to decide whether it is capable of benefiting from education in a special class. In addition he will have to advise his own authority as to any child over the age of 7 whose name and address ought to be put forward to the local authority under the Mental Deficiency Act either because it is deemed to be ineducable at a special school, or because though educable its presence would be detrimental to other children; also as to any child which requires supervision or guardianship other than that of its parents, or is about to leave a special school but will still need educational treatment or guardianship. In cases of doubt the Board of Education is the final authority. Sir George Newman points out that generally speaking when there is any difficulty in deciding whether a child is feebleminded or simply dull or backward, it should be treated in the first instance as though belonging to the latter category; similarly, when doubt exists as to the educability of a child further trial should be made in a special class. In a good many areas a great deal of work in these directions is already being done.

Open-air Education.

In a recent review of the Chadwick lectures delivered by Sir George Newman we summarized the facts which are held to justify the statement in the present report that "the evidence of the benefit of open-air education to the majority of children submitted to it is absolutely solid and substantial." The report states that the movement in its favour is spreading not only in Great Britain, but on the Continent. In some hundreds of schools in London and Wales classes are now being held in the playground, and there has been a marked development in the direction of school gardening, school journeys, and nature study. Many open-air class-rooms have been provided, and in many other ways the genius of open-air education is manifesting itself. In some areas all the requirements of open-air education are fulfilled more or less completely, and illustrations are supplied of various buildings suited to the purpose which have been already erected or are planned. The term "open-air education," it is pointed out, does not merely mean school in the open air, but a system which presents the following among other characteristics: It provides for the children (*a*) fresh air and sunlight and a proper and sufficient diet; (*b*) adequate rest and sleep, including not less than ten hours at night time and rest of from one and a half to two hours at midday; (*c*) the teaching and practice of the hygienic way of life—that is to say, of personal cleanliness by means of baths and exercise through games and physical training; (*d*) individual attention to the bodies and minds of any children who are physically defective, invalided, backward, or slow; (*e*) continuous oversight by medical men, and the application of prompt treatment to such conditions as adenoids, dental caries, and anaemia; (*f*) the use of special educational measures, these aiming at making the child's work more objective, more manual, "more expressive of its own capacity for doing and making."

Miscellaneous Subjects.

The remaining sections of the report deal in detail with such subjects as the education of teachers on physical training, schools for mothers, the teaching of infant care and mother-craft, the extension of medical inspection to children over school age but not yet adults in the eyes of the law, and the supply of meals. An account of some of Sir George Newman's views on these questions, especially the last of them, will be found in our summaries for previous years. In the present volume dancing, swimming, organized playground and indoor games, are discussed, as also physical exercises for infants and the equipment of gymnasiums. In regard to the provision of meals, the number of authorities expending money from the rates on the provision of food increased during the year by 18 per cent., part of this increase being due to the occurrence of a coal strike. Most local authorities treat the provision of meals as a form of relief, but the Board holds that since malnutrition is a medical question the provision of meals should be under the control of the

school medical officer, while in regard to whether a given child should be provided with or denied a meal, the main consideration should be not whether its parents are in a position to supply it with food, but whether it will benefit educationally if a school meal is given to it.

SCIENCE NOTES.

No convincing explanation of the rare condition of Bence-Jones proteinuria has hitherto been given. The presence of this peculiar protein in the urine is not characteristic of any one disease, having been met with in multiple myeloma, lymphatic leukaemia, some cases of carcinoma associated with secondary deposits in bone, and occasionally in other conditions. To the four cases of its occurrence in chronic lymphatic leukaemia, Boggs and Guthrie (*Johns Hopkins Hospital Bulletin*, December, 1913) have now added other four cases, three of them being of the myeloid type, and all in the chronic stage. In three of these cases they had the opportunity of following out the effects of the new benzol treatment on the excretion of Bence-Jones protein. In two cases, one of the myeloid and the other of the lymphatic type, there was a gradual diminution in the amount and finally a complete disappearance of the protein in the urine. This occurred *pari passu* with the diminution of the leucocytosis and the approach of the bone marrow to the normal. The observation is of considerable importance in that it strengthens the previously expressed views of the authors, founded on a review of all the known cases of Bence-Jones proteinuria, that the condition is not dependent on any one disease but is an expression of lesions of the bone marrow affecting endogenous metabolism.

A conference on the extension of the study and of the practical applications of anthropology in the universities of Great Britain, called by the joint committee of the British Association and the Royal Anthropological Institute, was held at Drapers' Hall, London, on February 19th, under the presidency of Lord Selborne. Sir Henry Craik, M.P., dwelt on the necessity of equipping young men who were to be administrators in remote parts of the empire with a knowledge of the habits, customs, and social and religious ideas of the people among whom they would work. He moved a resolution endorsing the recommendations of the joint committee; this was seconded by Sir Everard Im Thurn, representing the Royal Geographical Society, and supported by Professor Keith, president of the Institute, who said that it was desired to systematize the information already obtained and place it at the disposal of every graduate. He had frequently met men returned from remote parts of the empire who expressed to him regret that, owing to want of knowledge, they had made many mistakes and lost many opportunities. Mr. J. H. Jenkins, speaking as a representative of the London Chamber of Commerce, said that millions of pounds were wasted by commercial firms owing to the representatives they sent out having little or no knowledge of the people with whom they wished to trade. A resolution authorizing the joint committee to ask the Prime Minister to appoint an Interdepartmental Committee to advise the Government as to the steps it should take was moved by Sir Hercules Read, seconded by the President of Magdalen College, Oxford, and supported by Dr. Duckworth (Cambridge), Professor J. G. Frazer, and Dr. Herringham (Vice-Chancellor of the University of London). Both resolutions were carried unanimously.

In a paper communicated to a recent meeting of the Royal Society, Professor G. Dreyer and Dr. E. W. A. Walker state that they have arrived, on different grounds, at the same conclusion as Moore, who found that in warm-blooded animals of the same species but different weights the dosage of drugs must be calculated in relation to body surface. This was to be explained on the view that the concentration in the plasma of any given substance administered was dependent on the volume of blood circulated, which itself was proportional to body surface in any given species. The results as to dosage calculated from one species of animal could not be directly applied to another species merely by taking surface into consideration, since tolerance and intolerance were specific characters. They concluded by stating that for the human subject dosage, in relation to surface, works out very simply as, approximately:

At 21 years...	... Full dose.	At 3-4 years...	... $\frac{1}{3}$ dose.
At 15 years...	... $\frac{2}{3}$ dose.	At 1 year ...	... $\frac{1}{4}$ dose.
At 9-10 years	... $\frac{1}{2}$ dose.	In early months	... $\frac{1}{10}$ dose.

From the report of the Monte Rosa Expedition of 1911, under the direction of Mr. J. Barcroft, F.R.S., it appears that at an elevation of about 9,000 ft. there was a slight decrease in the alkalinity of the blood in resting persons. The effect of exercise was tested by climbing 1,000 ft. from sea level, and from an elevation of 9,000 ft.; in both cases there was a diminution in the alkalinity of the blood, but at the same rate of climbing it was much greater at high altitudes. The change in the alkalinity caused by exercise, whether at high or low altitudes, was found to be entirely accounted for by the production of lactic acid.

The organism isolated by McGowan from the trachea of dogs suffering from distemper, and considered by him to be the causal agent of that disease, has been isolated under similar conditions by other observers. The specificity of the organism is not universally admitted, and the chief veterinary journal in this country, though it has noted a communication confirmatory of McGowan's observations, has yet been strangely silent regarding the original work. Perhaps one of the chief factors militating against the acceptance of the specificity of the organism was the fact that McGowan found the same organism in a laboratory epidemic affecting various other animals as well, and it is generally believed that canine distemper is a disease standing well by itself and not communicable to other kinds of animals. Theobald Smith has recently published the results of a study extending over many years on the epidemic pneumonia of guinea-pigs. He found this to be due to two organisms occurring singly or more often in combination, the pneumococcus and McGowan's bacillus. He recalls the fact that McGowan found the bacillus in the trachea of healthy guinea-pigs, and Theobald Smith thinks this may have been due to the fact that they had been through a previous attack of pneumonia. The organism remains for long periods afterwards attached to the cilia of the air tubes or in old pneumonic foci, and recurring epidemics may thus be accounted for. Theobald Smith hints that canine distemper may not be such a special disease after all, but merely one particular manifestation produced by a certain organism of quite definite characters, which is also capable of bringing about other infectious pulmonary diseases in other animals.

LITERARY NOTES.

In the JOURNAL of December 27th, 1913, p. 1635, reference was made to the punishment of one Roger Clerk of Wandsworth, who had offered to cure a woman and received a fee. As the patient got no better her husband summoned Clerk, who was proved to be ignorant and illiterate, and who was therefore sentenced to be led through the middle of the city riding, to an accompaniment of trumpets and pipes, on a horse without a saddle, with the parchment and whetstone (the recognized symbol of a liar) hung about his neck. This was in 1382. The story may be found in Mr. L. F. Salzmann's entertaining book, *Mediaeval Byways* (London, Constable and Co., Ltd., 1913). In the memoirs of Casanova there is an account of a similar punishment inflicted on the leading midwife of Bologna. The charge was that she had helped the mistress of a great noble to pass off a supposititious child on him. Casanova hearing a great noise one morning, looked out and saw a woman, naked to the waist, paraded through the streets tied to an ass, the public executioner flogging her as she went. This was the midwife who had taken part in the fraud. The supposed mother was allowed to go free.

We are informed that the German Emperor has been pleased to accept a copy of *A Day with the Corps-Students in Germany*, by Sir Lees Knowles, Bart., C.V.O., which has recently been published by Simpkin, Marshall, and Co.

British Medical Journal.

SATURDAY, FEBRUARY 28TH, 1914.

THE OPPORTUNITY OF THE GENERAL PRACTITIONER.

It is nearly three years since the National Insurance Bill was presented to the House of Commons, and we have had one year's working experience of the Act into which it was transformed.

It was inevitable that at such a time of change the attention of every practitioner should be temporarily diverted to the business side of his work. The records of the meetings of Branches and Divisions during the last two years show a marked diminution in the time devoted to the scientific work of the profession. It is to be hoped that no further revolution is to be looked for in the near future, and that the discussion of the conditions of the work of the general practitioner will give place to a renewal of vigour in attacking the work itself. Already, indeed, reports of recent meetings of several Branches and Divisions have afforded evidence of the desire to resume regular meetings for clinical discussion, and of the intention to make systematic arrangements for holding them at suitable intervals at one or more convenient centres within the area.

Dr. Mackenzie's article[1] on the practice of clinical medicine makes for a new outlook at a singularly opportune time. There is no doubt that patients are feeling impelled to consult their doctors in increased numbers and with increased frequency since Medical Benefit came into being. The doctors are perhaps justified in complaining that their time is taken up and their energies wasted in the treatment of trivial ailments which hitherto have not been deemed sufficiently serious to require their attention. This work, looked at from one point of view, presents itself as a dreary form of drudgery and adds to the almost intolerable feeling of bodily and mental weariness which, at times, every practitioner feels. But in the total sum of human discomfort these trivial ailments form a large element. They take away largely from the joy of life, and lead to a diminished resistance to the attacks of more serious disease. Some practitioners have been distressed to find among their new clients, especially among working women, cases of impairment of health which have meant months and years of work done under difficulties that might have been relieved long ago by rest and timely treatment. The tired headache and nervous dyspepsia of the seamstress and the aching muscles and ligaments of the manual labourer are indeed trivial—unless we suffer from them ourselves.

Is it not possible to take another view and transform this drudgery into an interesting field of research, presenting great possibilities of gaining accurate knowledge of causation and pathology, and, above all, of prophylaxis and treatment? Do we know these ailments in a sufficiently scientific sense, and are we prepared to say that we can relieve them effectually? It is to the general practitioner alone that the opportunity for acquiring this knowledge comes, and it is to him that the sufferer will most naturally appeal for help. The temptation to self-drugging and the absorption of unlimited quantities of secret remedies has been largely removed under the conditions produced by the National Insurance scheme. There is offered to the practitioner an enlarged opportunity not only for the study of disease in its least complicated condition, but also for earning the gratitude of his patients and their subsequent willing co-operation in facing the more difficult problems of medical science. For these apparently trivial ailments have another aspect. Many of them are the forerunners of serious disease which we recognize on its full fruition with a feeling of dismay and hopelessness. Duodenal ulcer and Bright's disease we now know are preceded by symptoms the significance of which can be recognized at times when the pathological processes to which they are due are still amenable to treatment. But what of appendicitis, pyelitis, gall stones, and many other grave conditions which seem to come from the unknown? Are we not daily missing the significance of symptoms only because we fail to recognize them? Surely we must abandon the cataclysmic element in the evolution of disease, and believe that there are earlier symptoms of many grave complaints which only await appreciation to be used as danger signals. Here again it is the general practitioner alone who, in his daily contact with these at present obscure signs, can help to widen the sphere of medical science. We have used the label "preventable diseases" for those which come under the domain of the sanitary authorities, and associate it entirely with microbic diseases. It would be wise for us to restore the word "prevent" to its earlier use—the only use known to Bacon and Shakespeare—a use crystallized for many in the Book of Common Prayer, and to "go before" the illness which it is often impossible to cure, avoiding the restriction of the term to infectious disorders.

Clinical research has too long been associated exclusively with work in a hospital. It has been assumed that for such work the patient must be so ill as to be confined to bed. This obsession may have been due in part to the pecuniary relations existing between a practitioner and a private patient. Too great attention to a patient has been as open to misconstruction as too little. In work under the insurance scheme the keenly sensitive practitioner will no longer be withheld from investigating and observing any case with all the care and minuteness he desires, and we feel justified in thinking that these keen, earnest clinicians are being turned out of our hospitals in at least as large numbers as ever before. What is wanted is that the same spirit should be applied in conditions totally dissimilar and less obviously attractive. It may be found that the satisfaction from work in this region may even be of greater depth. The contemplation of advanced cases in the medical wards of a hospital is apt to breed a spirit of agnosticism and hopelessness with regard to the capacity of medicine to relieve disease—the attitude of mind which treats a majority of cases with rest in bed and the compound tincture of cardamoms. But in the firing line of the medical army, where the general practitioner spends his days and nights, such a spirit is impossible or leads to disaster to patient and practitioner alike.

Dr. Mackenzie indicates the large field of symptomatology and therapeutics that lies waiting to be tilled. A single furrow well and straightly made would give purpose to any man's lifework, even with no thought to the distinction which may tardily follow. The Association already, in the meetings of

[1] British Medical Journal, January 3rd, p. 17.

the Divisions and Branches, offers means for the discussion and correlation of such scattered work as would give it the vitality and publicity which make for healthy growth. Whether a central bureau for its collection and sifting could be established is a question which might well occupy the attention of the central bodies of the Association.

The importance of the work of the general practitioner has attained a larger recognition. It is a tardy acknowledgement of work that has been done in obscurity by men who have served their generation faithfully, and who have been content to leave the larger issues to other hands. But the practice of medicine is now coming into the open, and we cannot fail to see the reaction on the practitioner himself. There will inevitably develop the knowledge to himself of the position of dignity and responsibility which he individually and collectively holds. We look forward with confidence to the larger part he is destined to take in the advancement of research in etiology of chronic diseases, and the advancement of clinical medicine generally.

THE EFFECT OF DIET IN EXPERIMENTAL CANCER.

THE factors that influence the growth of animals have of late been the subject of a considerable amount of investigation. McCollum and Davies, following up the preliminary work of Mendel and Osborne, employed for their experiments rats fed on a dietary composed of pure casein, carbohydrates, and mixtures of pure salts; in some cases they replaced part of the carbohydrates with lard. They found that young rats were very sensitive to variations in the character of the salt mixture supplied, but with certain mixtures they were able to obtain practically normal growth for periods varying from 70 to 120 days. Beyond that time there was practically no increase in body weight while this diet was maintained. The rats remained in apparently good nutritive condition on such a diet for many weeks after growth had ceased. They were, however, still capable of growth, as could be demonstrated by changing the diet to their natural foodstuffs. This fact would point to the conclusion that on mixtures of purified food substances the animals ran short of some organic complex which is essential to further growth, but without which they could maintain a fairly good nutritive condition. McCollum and Davies attribute the failure of further growth to a lack of ether-soluble substances in the diet. If ether extract of egg or of butter was added to the purified food growth was again resumed. It is not a case of absence of fats from the dietary, because the effect on growth was not obtained when lard or olive oil was supplied. The addition of lecithin and cholesterol gave doubtful results. The resumption of growth may be the result of supplying some indispensable complex in the ether extract of egg or of butter, or it may be the result of a stimulating action of some substance accompanying the lipoids. Hopkins observed that small quantities of milk added to rations of purified foodstuffs exerted an influence on the growth of rats which was out of all proportion to the added nitrogen or calorific value.

The findings of Mendel and Osborne that certain purified diets completely arrested the growth of rats without materially influencing their general condition, raised the question of the effect of such diets on transplanted tumours. In these experiments the animals are not starved in any but a specific sense—that is, only certain elements essential to normal growth were lacking from the diet. The relation of nutrition and growth to a transplanted tumour was investigated by Sweet, Corson-White, and Saxon. The question to be answered was, Could a cancer grow in a body rendered incapable of normal cell growth? Rats which were half or three-quarters grown were used, and were fed for two weeks on a slightly modified Mendel-Osborne diet before being inoculated with the Flexner-Jobling rat carcinoma. The diet consisted of gluten 18 per cent., starch 24.5 per cent., lard 27 per cent., lactose 23 per cent., salt mixture 2.5 per cent., and agar 5 per cent. The ordinary laboratory diet was supplied to the control animals. Similar experiments were conducted on mice. The results were that the number of cases in which the transplantation of tumours was successful was markedly reduced by the diet that arrested normal body growth, and on such a diet, too, the rate of growth of the tumours was much slower and the number of retrogressions much higher than was the case in animals supplied with the normal diet. A further observation made in the course of these experiments was not less important. On a diet restricted to oats and water or 2 per cent. potassium iodide animals gave a higher percentage of successful transplantations, and the average size of the resulting tumours was much larger than in control animals. It is concluded that the tumour cell is subject to the same laws of growth as the normal somatic cells—a conclusion which is, perhaps, not justified from the experiments.

The effects of a carbohydrate-free diet on the growth of transplantable sarcoma of rats has been very carefully studied by Van Alstyne and Beebe. The diet consisted of casein and lard. The control animals were fed on bread. A sufficiently large number of animals were used to meet the possible criticism of fortuitous results that might with justice be made against the observations of certain other experimenters. It must be remembered that in the case of most transplantable tumours, and perhaps more especially in sarcomata than in carcinomata, great fluctuations in the percentage success of transplantations occur from time to time. When the percentage success was low, Van Alstyne and Beebe found that the number of successful transplants was very much lower in the animals fed on the carbohydrate-free diet than was the case in the normally fed control animals. When the tumour reached a "virulent" stage—that is to say, when it was capable of producing 100 per cent. of successful results—it was found that the primary success was the same in both sets of animals. The after-history was, however, markedly different. In the carbohydrate-free series the number of retrogressions of tumours was out of all comparison with the few that occurred in those fed on ordinary diet, and the average weight of tumours in the former set was very much smaller than in the latter. The carbohydrate-free diet was given for periods of three weeks to two months before the tumours were inoculated, and the experiments seem to leave no doubt that the composition of the diet was an important factor in enabling the rats to resist the tumour after growth had started. In order to make quite certain that the effects were due to the omission of carbohydrates and not to some extraneous factor, a series of experiments was made on rats fed on casein and lard alone, as contrasted with those fed on casein, lard, and lactose. The two series of 26, after being a month on these diets, were inoculated with tumour material. There was 100 per cent. success in each case. In the carbohydrate-free

series 2 rats died of the tumour, 4 died from other causes, and in 20 the tumours disappeared. In the series in which lactose was also given, in 2 cases the tumour disappeared, but the other 24 all died from the tumours. A striking point about the experiments was that the average weight of the animals under the carbohydrate-free regimen was never lower than that of the control series, and as a matter of fact increased more than in the latter.

A lack of carbohydrate in the diet thus produced such an influence on the rats as made them more resistant to tumour growth when the tumour material was in an "avirulent" stage; when the material was "virulent" the resistance was shown by the effect on the subsequent progress of the tumours. Leo Loeb has claimed that casein exerts some peculiar inhibitory influence on the growth of tumours, but this is not borne out by the above experiments, and it would appear from them that the lactose actually renders the animals more susceptible to tumour growth.

THE INCREASED SHORTAGE OF MEDICAL OFFICERS FOR THE NAVY.

THE address of the Director-General, R.N., on the medical service of the navy, delivered to the students of Edinburgh University, and printed in the SUPPLEMENT to this issue, was, on the ground that it covered, admirable in manner and matter. The present position of medical work in the navy, and the manifold new arrangements and improvements of recent years, were lucidly and fairly stated. The serious and steadily increasing shortage of medical officers was apparently attributed to the persistence of the belief in the medical schools that the navy's medical service had remained in the condition it was thirty or forty years ago. We cannot altogether endorse this view, and believe that we need not go beyond the present to find the real causes. The regulations of 1910 for the entry of surgeons are as fully set forth, as widely circulated, and as well known in all the medical schools of the kingdom as those of the sister service. We doubt whether the Director-General carried conviction to the minds of his audience on this point, for we note that the Dean of the Medical Faculty in his concluding remarks significantly made the supply of the right sort of candidates contingent on an official promise of opportunities for good professional work and proper pay. When these promises have been given, the university authorities will be prepared to do for the navy what they are now doing for the army and give freely of their best.

Ten years ago an establishment of 594 medical officers was laid down for the fleet of those days, but since then the personnel of the fleet has gone on mounting up. In 1909-10 it had reached 128,000 officers and men, and in 1913-14 it had risen to 146,000, and additions are already in view. In spite of this the medical officers have become fewer and fewer. Even if we include 13 acting surgeons under instruction, and not yet part of the effective force, the total number of medical officers is to-day only 536—that is to say, the service is 58 short of the establishment of ten years ago for a fleet many thousands less than we have to-day. It is further to be observed that the medical establishment was in 1904, in relation to the total force of the navy, numerically lower than that of any other great navy—indeed, hardly half as numerous as the medical establishments of some of them. We are drifting on to a position in which the medical service will be numerically inadequate even for peace. Medical officers are already overworked in many shore establishments, while the great majority are afloat and for the most part tied to a monotonous existence round these shores. The navy is no longer the pleasant and varied service it was when the country had considerable squadrons on all the seas of the globe.

The failure to publish the report of the Durnford Committee was very regrettable; it gave rise to a crop of rumours as to reductions in proposed scales of pay and with respect to other matters. From this cause a feeling of distrust of the Admiralty has arisen, and many suitable candidates have been deterred from entering the service. Yet given reasonably attractive conditions, there is little doubt that a sufficiency of candidates of high standing would be forthcoming. For several years now the establishment of the Army Medical Service has been up to or over its full strength of upwards of 1,000 officers. At the recent entrance examination 42 candidates competed for 12 commissions, and the successful men with one exception all held university degrees in medicine. The latter-day efficiency of this service is effecting remarkable economies. Compared with the sick-rates in the army ten years ago the fall has been so great that 6,000 more men were at duty instead of in hospital during the past year. The extra expenditure on medical efficiency is thus paying handsomely over and over again.

This is in the main due to causes which can be briefly summarized. The first is that officers of the medical service now have complete autonomy in the management and administration of medical affairs in the army. The new regulations issued by the Admiralty at the end of last year[1] partially conceded this in the navy, but partially only. Secondly, the army has a medical establishment numerically sufficient for the work and also to afford time for research, and reasonable leave and freedom to officers. At present in the navy these things cannot be. Thirdly, a large number of specialist and other appointments in, for example, public health, research, surgery, pathology, and gynaecology, have been provided in the army, but there are, we believe, not half a dozen appointments all told in the navy coming under this category. Fourthly, in the army there is a reasonable proportion of appointments in the two higher ranks, so that for an establishment of 1,000 officers, 42 of these ranks are on continuous full pay. In the navy in the two higher ranks there are 19 appointments for an establishment of 595 officers, and of these only 11 are full pay appointments. Continuous employment and special scales of pay or allowances abroad, and notably in India, are advantages which the army medical officer has over his naval brother. Lastly, reference must be made to the rather delicate matter of the honours the Crown is advised to confer on medical officers who have deserved well of the country. In the current monthly *Army List* 56 decorations are shown as held by medical officers on the Active List, while the monthly *Navy List* shows only 12 decorations held by naval medical officers (Victorian Order 6, C.B. 3, and D.S.O. 3). In 1912 the Civil Division of the Order of the Bath was enlarged to permit a more liberal distribution to naval officers. Since then four batches of C.B.'s have been issued to between 20 and 30 naval officers, but only one medical officer has been decorated. The conclusion seems inevitable that the value of medical services to the navy is not adequately appreciated, and that those who in the last

[1] BRITISH MEDICAL JOURNAL, December 6th, 1913, p. 1312.

resort are responsible to the nation for its efficiency have not yet learnt the lesson the War Office, the India Office, and the Colonial Office have learnt, often by bitter experience.

The medical service of the navy has always been handicapped by the inevitable discomforts of sea life and separation from home. On this account in the past the authorities have recognized that higher scales of pay, up to as much sometimes as 7 per cent., should be given to naval as compared with army medical officers. But this is not carried out in practice. Revision of the scales of pay, etc., of all officers has, we believe, become an urgent necessity. We may begin at the top and take as an illustration the fact that the pay of the Director-General of the Royal Navy is £200 and his retiring pension £175 a year less than those of the Director-General of the Army Medical Service, a disparity at once apparent to any one glancing at the regulations, and a poor advertisement for the naval service.

When these matters are put on an equitable footing—and this ought not to be a difficult or tedious task if the authorities are in earnest—then, but not till then, will the Edinburgh and other great teaching schools be in a position to recommend the Naval Medical Service as a fitting career for some of the best of their young men.

THE INSURANCE ACT AND THE HOUSE OF COMMONS.

QUESTIONS as to the degree of popularity or unpopularity of the Insurance Act have been much discussed lately in connexion with the by-elections. The suggestion that the Act could be administered on a voluntary basis formed the subject of debate in the House of Commons on Wednesday, February 25th, and it appears to be generally agreed that such a project is entirely visionary and impracticable. A report of the debate will be found in the SUPPLEMENT. So far as the general accounts which are given by Members who have been in close touch with their constituents during the recess are concerned, it appears that on the whole, as the number of those who have received benefits increases, the Act is receiving a very solid measure of public support, and Members generally seem disposed to dismiss the notion that there is or is likely to arise any substantial demand either for its withdrawal or for an alteration in its compulsory basis. In most districts it appears to be working smoothly and to receive the co-operation of men of all political parties. At the same time, a large number of Members speak of receiving complaints on various matters, and express the opinion that many of them are well founded, and should be dealt with as completely and as soon as possible. They appear to resolve themselves into three groups. In the first place, it is evident that many insured persons receive harsh treatment at the hands of their societies, and complaints of the delay in the payment of benefits and of fines for infringing rules of which they were in ignorance are frequent. Some societies appear to be acquiring a bad name because on various pretexts they have expelled members who have applied for sick pay. The charge of having signed a false statement in their application form is that most commonly mentioned in this respect, and it certainly appears that the machinery provided under the Act for securing to members their right as against the officers of their societies needs to be made more simple in its operation and easier to be understood and used by insured persons generally. The second series of complaints relates to medical benefit, and it is impossible to conceal the fact that the action of a few medical men has done a great deal towards alienating the sympathy of the present House of Commons from the medical profession. Arbitrary and unsympathetic action by some one doctor forms the basis of a complaint which is retold by one Member to many others, and leads them to forget the fact that the vast majority of men who work alongside the one complained of are doing their duty fully, and showing every consideration to the insured, and making no distinction between them and their other patients. There is a good deal of talk in the lobby of the House of Commons of complaints to the effect that medical men treat insured persons differently from their other patients—keep them waiting, decline to attend to calls, and so forth—and a few members, who have never been very friendly to the medical profession, getting hold of scattered cases of this kind, do without doubt contribute in a considerable measure to the unfriendly feeling which is manifested towards the medical profession. The third class of complaint, which Members appear to consider less substantial than the foregoing, relates to the claims upon sick pay and the signing of sick certificates. So far as medical men are concerned, the chief allegations made are that sometimes sick certificates are signed without proper care, and are given too freely, and that sometimes certificates for the same person give a different diagnosis from week to week. There is a tendency to assume that such variations must be due to laxity. A good many of these complaints, on examination, turn out to be founded largely on hearsay; but one cannot resist the conclusion that the interest of medical men, so far as the Insurance Act is concerned, is largely involved in the removal to the utmost possible extent of causes of complaints of this kind. Whether the claims for sick pay exceed the actuarial estimate or not, as is suggested in respect to some women's societies by various questions in the House, it is difficult at this time to express an opinion. It has been evident all along that it was possible that the distribution of the women members in special societies might lead to those societies which have a large proportion of members engaged in certain factories and industries (as in the textile industry) running the risk of heavier charges upon their funds than in the case of other societies with a more mixed women membership. Considerations of this kind must not be confused with the tables of the accumulated funds under insurance given by Mr. Benn in reply to a question in the House last week.[1] They relate to the collective accumulations of all the societies and involve the amounts provided towards the sinking fund necessary to be established, as well as the funds which are accumulated on account of disablement benefit.

THE ANCESTRY OF MAN.

THE controversy which has arisen with regard to the reconstruction of the Piltdown skull was advanced another stage at the meeting of the Royal Society last week, when Professor Elliot Smith read a paper on the brain of primitive man, with special reference to the cranial cast and skull of *Eoanthropus* (the Piltdown man). He prefaced his address by observing that at the meeting of the British Association in Dundee, 1912, before, that is to say, the discovery of the Piltdown skull, he had expressed the view that the higher development of the brain must have preceded the adoption of the erect posture and the use of speech. He discussed the difficulties that attended any attempt to reconstruct "the Piltdown skull" from the few damaged fragments that had been recovered, and called attention to a large series of points of anatomical detail which indicated the only way in which these difficulties could satisfactorily be circumvented. The cranial cast obtained when thus reconstituted was compared with those obtained from the calvaria of *Pithecanthropus;* the Mousterian series of crania (especially those found at Neanderthal, Gibraltar, La Chapelle-aux-Saints, and La Quina); those representing Aurignacian and later times;

[1] SUPPLEMENT, p. 120.

and a number of cranial casts and actual brains of primitive types of modern men and apes. The results, he held, went to prove that the small brain of *Eoanthropus*, though definitely human in its characters, represented a more primitive and generalized type than that of the genus *Homo*. Nevertheless, it could be regarded as a very close approximation to the kind of brain possessed by the earliest representatives of the real *Homo*, and as the type from which the brains of the different primitive kinds of men, Mousterian, Tasmanian (and Australian), Bushman, Negro, etc., no less than those of the other modern human races had been derived, as the result of more or less well-defined specializations in varying directions. He considered that from the features of its brain *Pithecanthropus* must be included in the family Hominidae, but both it and *Eoanthropus* could be looked upon as divergent specializations of the original genus of the family. *Pithecanthropus* represented the unprogressive branch which survived into Pleistocene times before it became extinct; *Eoanthropus* the progressive phylum from which the genus *Homo* was derived. Professor Elliot Smith devoted special attention to the study of the temporal region of the brain, which in all of these fossil men (not excluding *Pithecanthropus*) revealed, he said, features of great morphological interest. He expressed the opinion that the increased size of the brain (as a whole) distinctive of the Hominidae, among the Primates, was intimately related to the acquisition of the power of articulate speech, and that the very earliest representatives of the family must have possessed in some slight degree the definite faculty of intercommunication one with another by means of vocal sounds. He was therefore quite prepared for finding that the jaw of *Eoanthropus* possessed marked simian characters and did not show evidence of the development of the muscles used in articulation. The development of asymmetry of the brain was necessarily incidental to the acquisition of human characteristics, and must have been already present in the original Hominidae.

A FRENCH VIEW OF AMERICAN UNIVERSITIES.

In a recent number of the *Journal des Débats*, M. Emile Boutroux, of the Académie Française, who has just returned from a lecturing tour of the United States, gives his impressions of various American universities which he visited. On October 22nd he was present at the graduation ceremonies at Princeton, and was greatly struck by what he saw, especially by the religious character of the function. The conception which ran through all the speeches was the danger to learning, especially in the United States, of a specialization which, owing to the rapid progress of knowledge, is becoming constantly narrower. The view was strongly expressed that not only the average man, but the scholar and the scientist, must strive to maintain the supremacy of that general culture, that integrity of faculty and aptitude, without which human society would degenerate into a purely animal community, and the scientist in particular into a technician incapable of invention or judicious generalization. Notably in America, the need is keenly felt of superimposing on the special studies which supply to the mind materials for thought and action such culture of the intellect itself as will ensure the noblest and best possible use of these materials. M. Boutroux also brought away an agreeable impression of Yale. He admired the attention and courteous demeanour of the students, and he had no difficulty in believing their teachers when they spoke to him of the spirit of duty and morality by which their pupils were animated. He convinced himself that the religious service with which at Yale, as at the other American universities, the work of the day was begun was not an empty formality. He realized the truth of Mr. Roosevelt's saying that "religion and liberty are natural allies, and go forward hand in hand." M. Boutroux finished up his round of inspection, as we may call it, by a visit to the Rockefeller Institute in New York. He describes the installation as admirable, and says the resources at the disposal of the investigators are almost unlimited. In return only one thing is asked of them—that they shall produce. If some years pass without the workers showing any interesting result, they are simply thanked for their services and are replaced by others from whom more is looked for. We hope that M. Boutroux is mistaken; if he is not, those in whose hands lies the management of the Rockefeller Institute must have a wrong idea of scientific work. To apply the hustling methods of the factory, the workshop, or the bank, to the laboratory is a grievous mistake even from the business point of view. It tends to the hasty output of immature results, which retard instead of advancing the discovery and application of new truths. It tends also to constant striving after sensationalism, a thing absolutely opposed to the scientific spirit. M. Boutroux seems gently to hint at these objections when he says that Nature herself has need of a period of incubation for the production of her finest works. He adds that the genius of man is a mixture of the conscious and the unconscious, in which the latter plays a part as difficult to regulate as it is powerful and indispensable.

THE PATHOLOGY OF LOVE.

Love-sickness is familiar to most of us, but chiefly as a poetical fancy. We know, of course, that the pangs of despised love occasionally find expression in loss of appetite, wasting and depression of spirits, but even in the vast catalogue of symptoms given by Burton in his *Anatomy of Melancholy* there are none peculiar to the disease In regard to the pathology, he says: "Abraham Hoffemannus, *lib. 1. amor conjugal., cap.* 2, p. 22, relates out of Plato how that Empedocles, the philosopher, was present at the cutting up of one that died for love, 'his heart was combust, his liver smoky, his lungs dried up, insomuch that he verily believed his soul was either sodden or roasted through the vehemency of love's fire.' Which belike made a modern writer of amorous emblems express love's fury by a pot hanging over the fire, and Cupid blowing the coals. As the heat consumes the water, '*Sic sua consumit viscera caecus amor,*' so doth love dry up his radical moisture." The Dutch masters, notably Jan Steen and Gerard Dow, are fond of painting the *minne pym*, or love sickness, in the form of a languorous maiden. There is often a doctor beside her peering into a urine flask. From an Italian medical journal of recent date we learn that Dr. F. Barrett, whom we are unable to identify, and to whose work no reference is given, holds that love is an intoxication of the nervous centres. The circulatory system may be affected, especially if the patient is young and is suffering from a first attack. This recalls to us Galen's story of how he diagnosed the case of a young girl who was thought by her anxious parents to be dying. Believing that nothing more than love-sickness was the matter, the astute physician had the suspected object brought into her presence, meanwhile keeping his hand on her wrist. The sight of the young man quickened the maiden's pulse to a rate that left no doubt in Galen's mind as to the cause of her indisposition. Dr. Barrett, we are told, has made researches on the blood of people in love, and has found marked leucocytosis. If the disease is not speedily cured, love may lead to neurasthenia, and even insanity; it also predisposes to tuberculosis. It is high time, he concludes, that we should think of devising a purely medical treatment for love. What form is this to take? The bacillus of love has not yet been discovered, and therefore no vaccine is available for the cure of the disease. Montaigne also thought that love should be treated by medicine. As translated by John Florio, he says: "Philosophy thinketh she hath not il imployed hir meanes, having yeelded the soveraign rule

of our mind, and the authoritie to restraine our appetites, unto reason. Amongst which, those who judge there is none more violent than those which love begetteth, have this for their opinion, that they holde both of body and soule: and man is wholly possessed with them: so that health is selfe depended of them, and physick is sometimes constrained to serve them." We are left in the dark by Dr. Barrett as to the exact line of "purely medical treatment" to be adopted for the cure of love, and we venture to think that it will laugh at physic as it proverbially does at locksmiths. It is probable that none of the many methods described in Ovid's *Remedia Amoris* has ever cured any lover of his disease. The chief difficulty in the way of successful treatment lies in the fact that the patient, as a rule, does not wish to be cured.

THE ASYLUM SERVICE.

IN commenting last October on the position of assistant medical officers of asylums we ventured the opinion that they should agree in drawing up a case stating the disabilities under which they labour. During the winter an Association of Assistant Medical Officers of Asylums in England and Wales was formed, and meetings were held in various parts of the country at which the position was discussed. Dr. F. J. Stuart, Berry Wood, Northampton, the honorary secretary of this association, has now on its behalf issued to the visiting committees of public asylums in England and Wales a statement setting out the disabilities of the assistant medical officers under various heads. It is pointed out in the first place that the remuneration of assistant medical officers has for many years been inadequate for professional men, and has been accepted in view of the possibility of promotion to the position of medical superintendent. Owing to the rapid growth in the size of new asylums and the enlargement of older existing buildings there has been a disproportionate increase in the number of assistant medical officers as compared with that of medical superintendents, while at the same time the work of assistant medical officers has become more responsible and has demanded more mature experience. Many assistant medical officers have no reasonable assurance that they will rise above the level of senior or second assistant medical officer, which in the majority of cases entails the obligation to remain unmarried. It is reasonably claimed that, as the prospect of promotion to the office of superintendent is now remote, provision should be made for assigning a separate house to assistant officers of a certain standing. With regard to the important subject of study and research, it is stated that facilities for modern medical treatment and the accommodation for such clinical laboratory work as is carried on in general hospitals are too seldom provided, and that the number of medical officers in this country carrying on special work compares very unfavourably with the standard which medical opinion considers to be essential in other departments and with the progress in the study of psychiatry made in other countries. The report of the Medico-Psychological Association of Great Britain and Ireland[1] showed that in foreign countries encouragement was given to men entering the asylum service to make a special study of psychiatry, and the statement now issued by the assistant medical officers takes the same line, and suggests that study leave should be granted to assistant medical officers to enable them to obtain one of the diplomas in psychiatry granted by universities. The statement, which is very concise, is remarkable for its closeness of argument and moderation of tone. It will not, we are sure, be ignored by asylum committees, who already find so great a difficulty in obtaining assistant medical officers, that it is stated that a quarter of the asylums at the present time have not the number of permanent assistant medical officers the committees consider adequate.

[1] See BRITISH MEDICAL JOURNAL, November 29th, 1913, p. 1447.

THE PSYCHOLOGICAL EFFECTS OF FOG.

WE think it is in *Lady Windermere's Fan* that one of the characters propounds the question whether it is the fog that makes the serious people or the serious people who make the fog. While the capacity of very serious people to create an atmosphere of intellectual fog about them may be admitted, it is unquestionable that fog causes mental depression to a degree which may have evil and even disastrous results to persons in a low state of vitality. We remember a winter when there was a veritable plague of darkness in London, the pall of fog hardly ever lifting during two or three weeks. It was noticed at the time by many observers that many patients in hospital, who before seemed to have a good chance of recovery, died, apparently of the devitalizing effect of the fog. Much has been done since then for the abatement of the smoke nuisance, and the present generation happily knows little of the "London particulars" which used to afflict the dwellers in the metropolis thirty years ago. In some parts of America, notably in Pittsburgh, the matter is now receiving attention. The Mellon Institute in that industrial centre has recently established a smoke investigation staff to study the subject of atmospheric pollution by smoke. Dr. I. E. Wallace Wallin, Director of the Psychological Clinic at the University of Pittsburgh, and a member of that staff has, we learn from the *Medical Record*, published a small book dealing with the problem, in which the question is discussed mainly from the psychological standpoint. The mental effects of smoke and smoke-produced weather states are, he says, both direct and indirect. The indirect effects are induced by bodily changes caused by smoke or smoke-produced weather states, while the direct effects are due to the influences of the mind's own state upon its subsequent thoughts, disposition, and conduct. Dr. Wallin points out that dark clouds have a depressing effect. They may cause fear in children, reduce working efficiency and labour returns, produce eyestrain, give rise to restlessness, and foreboding in the insane, and increase drunkenness. He urges the adoption of concerted efforts to control or at least to abate the smoke nuisance. Much may be accomplished by arousing public feeling against the continuance of an evil which, as has been shown by the results of the work of the Smoke Abatement Society here, can be mitigated by properly directed effort.

TRAINED NURSES' ANNUITY FUND.

WE feel sure that very many members of the medical profession would be glad to help the Trained Nurses' Annuity Fund for disabled nurses if they were acquainted with its beneficent purpose. It is in its fortieth year of existence, for it was inaugurated by the late Lady Bloomfield as a private venture long before the Royal National Pension Fund came into existence. It started well, but rather dropped out of public notice when Queen Alexandra displayed her great interest for nurses in founding and helping the Royal National Pension Fund. For years it languished, but the last ten years have shown a revival of activity and an annual increase in the funds, which have increased from five to over fifteen thousand pounds in that time. The fund raised to perpetuate the memory of the late Miss Florence Nightingale materially helped by assigning £4,000 to found memorial annuities. With the increase in number of trained nurses there has been a sad increase in the number prematurely disabled, and though the Trained Nurses' Annuity Fund gives thirty two annuities, the number of approved applicants on its books is more than double that number, and we are assured would be enormously increased if the council of the fund could offer any hope of early help. The difficulty is that, the annuities being paid solely out of interest on invested funds, no additional annuity can be granted until about £500 to £600 has been raised, and the total fresh

income each year is at present not more than about £400. Medical men know well how often their patients express their appreciation of the services rendered by a nurse; it would be an easy and a gracious act in such cases for a doctor to point out that a very appropriate method of showing that appreciation would be by a subscription or donation to this fund. There is also another method of assisting the fund. Energetic helpers are much needed, and there must be many ex-nurses who have married and yet have leisure which they might well utilize in many ways, either on the council, which would be glad to receive them, or as outside helpers in collecting money. One recent method of raising money has been by a sale of work; in the last two years nurses have enthusiastically helped by sending in needlework themselves and by buying that sent in, and a circular is now in course of issue inviting the co-operation of matrons in and around London in organizing a similar sale for this year. Here, too, practical help is much wanted. The affairs of the fund are administered by a council, of which Her Royal Highness Princess Christian is president; among its members are Lady Barlow, wife of the President of the Royal College of Physicians of London; Lady Champneys, wife of the President of the Royal Society of Medicine; Miss Sydney Browne, late of the War Office Nursing Department; and Miss Law, Matron of the Royal Hospital, Chelsea. The fund gives annuities varying in amount, but so arranged that no nurse shall have less than 10s. a week or its equivalent from all sources available to her; 13s. a week is the maximum, so that when a nurse attains the age of 70 and an old age pension, part of the grant can be reduced and rendered available for a younger nurse. The honorary secretary, Dr. Ogier Ward, of 73, Cheapside, will be grateful for offers of help and glad to give any further information.

THE MEDICAL AND DENTISTS' REGISTERS.

The *Medical Register*[1] for 1914 contains 41,940 names; this is an increase of 501 over last year, of 1,021 over the average for the last five years, and of 5,335 over the average of the last twenty-four years. During the year 1913 the number of names added by registration was 1,168, and the number of names restored was 79. The number of names removed was 746; of these, 651 were removed on evidence of death, 2 on ceasing to practise, 5 under the penal clauses of the Medical Act, and 88 under Section XIV of the Medical Act, which authorizes the Registrar to remove the name from the *Register* if a letter of inquiry sent to the registered address is not answered. It should be noted that recently the Council instructed the Registrar to issue letters of inquiry to all practitioners whose names are on the *Register* in alphabetical order from A to L. The letter required an acknowledgement of its receipt and of the receipt of the warning statements the Council has issued, a print of which was included with the application. In a letter published in the Journal of October 4th, 1913, the Registrar stated that he is obliged to send communications to registered addresses only, but makes a practice of using every available source of information. When his efforts in this direction fail and no reply is received, Section XIV of the Medical Act leaves no alternative, and the name must be removed. The style of the volume has been altered, the page has been broadened from 6 in. to 6¾ in., and in this way few entries occupy more than two lines, and many do not occupy more than one. The length of the page has also been increased from 9 in. to 9¾ in. By these expedients, in spite of the increase in the number of names, the number of pages has been reduced from 1,913 to 1,232, and the thickness of the volume by 1 in. Similar changes have been made in the form of the *Dentists' Register*.[2] The total number of names on this register is 5,275; the number added during the year was 195, and 13 names were restored. Over 68 per cent. of the names on the *Dentists' Register* are those of licentiates or graduates in dentistry, and over 31 per cent. are the names of persons who on their own declaration were in bona-fide practice of dentistry on the appointed day. There are five colonial dentists, and sixteen foreign dentists, of whom six hold degrees from the University of Harvard, and ten from that of Michigan—degrees formerly registrable in the foreign list.

[1] London: Constable and Co. 10s. 6d.
[2] London: Constable and Co. 3s. 4d.

The Royal Society of Medicine has acquired from Lord Howard de Walden a lease for 999 years of the site upon which the fine new building of the society has been erected. The lease is subject to a moderate ground rent, and for all reasonable purposes the society has a free hand to deal with the property. The title deeds are accompanied by a certificate of their validity from the Land Registry.

Surgeon-General Gorgas, the chief of the sanitary department at Panama until his appointment the other day to be Surgeon-General of the United States Army, is expected to reach this country shortly on his return from his mission to South Africa. It is proposed to entertain Surgeon-General Gorgas and his two companions, Dr. Darling and Major Noble, at a complimentary dinner in London on March 23rd. The chair will be taken by Sir Thomas Barlow, President of the Royal College of Physicians, who will be supported by Sir Rickman Godlee, President of the Royal College of Surgeons; Sir Francis H. Champneys, President of the Royal Society of Medicine; Sir David Ferrier, F.R.S., President of the Medical Society of London; Sir Havelock Charles, G.C.V.O., President of the Society of Tropical Medicine and Hygiene; by the Regius Professors of Medicine in Oxford and Cambridge, and by the Directors of the Medical Services of the Royal Navy and Army. Among those who have accepted invitations to be present are the Colonial Secretary, Mr. Lewis Harcourt, and Viscount Bryce.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Debate on the Address.—The Debate on the Address was concluded in the House of Commons on Thursday, February 19th. On that day an interesting discussion occurred on an amendment moved by Sir John Spear raising the question of the relation of local to imperial taxation. In the course of the debate an important announcement was made by the Chancellor of the Exchequer, on behalf of the Government, to the effect that proposals would be laid before the House during the coming session, under which the Government proposed to provide relief for local ratepayers, and in particular to increase the imperial contributions towards education and other special services.

Mr. Masterman.—Mr. Masterman is continuing his duties in presiding over the Joint Committee of National Insurance, and it is anticipated that after a short holiday, which is rendered necessary by the state of his health, he will be able to re-enter the House for another constituency. Various constituencies have been mentioned in the public press, but we believe that all of them may be taken to be the result of guesswork.

Employment of Children and School Attendance Bill.—This bill was introduced by Mr. Denman on Friday, February 20th, and was read a second time by 187 votes to 35. As the bill stands at present it abolishes the exemptions from school attendance below the age of 13 and the half-time exemptions above that age. It gives local authorities power to prolong the school attendance age to 16 instead of 14. It also prohibits the street trading of boys under 15

and of girls under 18, and, if passed in its present form, would take the place of the existing law, which enables local authorities to make by-laws on these matters up to the age of 16. It would also enable local educational authorities to adopt a licensing system for the street trading of boys between the ages of 15 and 17, and a further clause of the bill would enable local educational authorities to require attendance at continuation classes. In the course of the debate Mr. Denman introduced some interesting statistics showing the large proportion of children employed in casual trades between the ages of 14 and 16 as compared with the small proportion in other more stable industries, and Mr. Goldstone produced some striking statistics with regard to the vitality of cotton operators, in view of the fact that a large number of these were half-timers. He stated, on the authority of a doctor in Burnley, that 29.9 per cent. of the deaths of cotton operatives occur between the ages of 10 and 25, whilst amongst labourers the percentage of deaths is 6.8 between the same ages.

Birth-rate.—The Prime Minister, in reply to Sir Walter Essex, said he understood that the matter of the progressive decline in the birth-rate in the United Kingdom was the subject of an inquiry on which the Local Government Board and the General Register Office were represented. It did not, therefore, seem that any further inquiry was necessary at present.

Provision of Meals for School Children.—Mr. J. A. Pease, in reply to Captain Faber, said that the latest returns from local education authorities taking action under the Education (Provision of Meals) Act, 1906, were those in respect of the year ended March 31st, 1913. These returns did not state the number of children fed under its provisions in urban and rural schools respectively, but the following table showed, for all local education authorities concerned, the total average attendance in the schools in the areas where school feeding was taking place, and the total number of children fed:

	Total Average Attendance at Schools.	Total Number of Children Fed.
Counties—		
England	597,768	49,951
Wales	137,677	12,436
Urban districts—		
England	193,965	18,220
Wales	70,057	28,447
Municipal boroughs—		
England	190,989	13,233
Wales	5,760	390
County boroughs—		
England	1,428,069	124,068
Wales	74,561	10,982
London	649,031	100,579

Crown Property and Housing.—Mr. C. Bathurst asked whether, in view of the fact that house property owned by the State enjoys immunity from the provisions of the Public Health Acts and the Housing of the Working Classes Acts, and that in consequence difficulties sometimes arose between local sanitary authorities and State officials as to whether such house property was fit for human habitation and ought to be closed or demolished; and that administrative action in the interests of public health, while taken against a private individual, could only be adopted as against the State as the result of a voluntary concession; and seeing that in the Forest of Dean and elsewhere the system had proved bad for cottagers, State officials, and local sanitary authorities alike, the Government would introduce a bill subjecting as a matter of course such property to the provisions of the above-mentioned Acts?—The Parliamentary Secretary to the Local Government Board said that although the Crown was not bound by the Acts referred to by the hon. member, it had for some time past been the rule, as regards all properties under the management of the Commissioners of Woods, whether in the Forest of Dean or elsewhere, to comply voluntarily with the requirements of the local sanitary authorities just as though the Crown were bound, and he was not aware that this system had proved a bad one, nor did he see that there was any necessity for the suggested legislation on the subject.

Vaccination Certificates.—Mr. Rendall asked the Home Secretary whether he was aware that certain benches of magistrates had agreed that no individual magistrate in their petty sessional division should sign vaccination exemptions when applied to until the applicants had attended at the magistrates' clerk's office for a note of registration, costing the applicant 1s.; whether such action by a bench of magistrates had received his sanction; if not, whether persons who had paid such fees could compel their return; and whether it was the duty of a magistrate to sign an exemption order at any reasonable hour if satisfied of the conscientious objection to vaccination of the applicant.—Mr. McKenna said he had no information on this matter which had not previously been brought to his notice. He was not aware of any grounds on which a magistrate would be justified in requiring an applicant to attend at the clerk's office before taking his statutory declaration under the Vaccination Act, 1907. The fees payable in any petty sessional division were regulated by the approved table of fees in force in the division. He was afraid he was unable to express any opinion as to whether the fees paid in the cases mentioned could be recovered by the applicant. It was the duty of the magistrates to give effect to the statute by affording facilities for the taking of declarations, but he could not say that there was a direct legal obligation on any individual magistrate to take such declarations. The magistrate was not required to inquire into the conscientious objection of the applicant. The declaration could be taken by a commissioner for oaths or other authorized person as well as by a justice.

Anthrax.—In reply to Mr. C. Bathurst, the Home Secretary said that the Home Office regulations made under the Factories and Workshops Act, and applying to anthrax in factories and workshops, could not be extended to wharves and other places where horsehair, hides, skins, and pigs' bristles were dealt with, because they were made under the old Factory Act of 1891, which applied only to factories and workshops; but he hoped to be able shortly, when certain inquiries now in hand had been completed, to replace these rules by fuller regulations under the Factory and Workshop Act of 1901, and the question of applying these regulations to wharves and warehouses where the danger might arise would receive very careful consideration. Mr. McKenna, in a further reply to Mr. Bathurst, said that he realized the importance of greater co-operation between his Department and the Board of Agriculture in respect of fatal diseases common both to animals and men.

Race Suicide.—Mr. Lynch asked whether it was an offence to sell appliances favouring what was called race suicide; and, if so, why the police authorities had failed to prosecute in the numerous cases in which these appliances were openly advertised and sold in shops in London; whether the sale of these articles was an offence only when associated with the expression of heterodox opinion; and whether he contemplated introducing a bill to render devout people who sold these articles also liable to penalties. The Home Secretary said that there had not been an authoritative decision of the Courts on this question, but he was advised that the sale of such articles was not in itself illegal, though the circumstances in which the goods were sold or offered for sale might be such as to make the proceeding unlawful. The religious beliefs of the seller would, of course, have no bearing on the question.

In reply to a question asked in the Italian Chamber of Deputies as to the foundation of a school of tropical pathology in the medical faculty of the University of Naples, the Minister of Public Instruction said the Government was studying the matter in connexion with a proposed reorganization of the medical faculties of the country.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

NEWCASTLE-UPON-TYNE.

BANQUET OF THE GLASGOW UNIVERSITY CLUB.

THE annual banquet of the North of England Glasgow University Club was held in the Station Hotel on February 20th. Eighty gentlemen sat down to dinner. The chair was occupied by the President, Dr. James Chalmers, of Sunderland. At previous banquets the company has been almost entirely composed of medical men, but on this occasion a pleasing feature was the large sprinkling of clergymen who had come to do honour to one of the guests. Professor John Ferguson (Chemistry), Professor the Rev. James Cooper (Church History), and Sir George Thomas Beatson, K.C.B., were the principal guests, with, in addition, the Rev. Dr. Gee, Principal of University College, Durham, and Dr. Edington, of Glasgow. Telegrams had been sent to the Chancellor of the University (Lord Rosebery), and to Principal Sir Donald MacAlister expressing wishes for their speedy recovery from illness, and in the course of the evening replies were received. That from Lord Rosebery ran as follows: "Many thanks for kind message; am getting on very well."

After the Royal toasts had been proposed from the chair, Dr. Forsyth submitted that of "The Imperial Forces," to which Sir George Beatson, in a speech marked by thoughtful consideration and appreciation of our responsibilities, national and Imperial, made a graceful and fitting reply. In the course of his remarks the Rev. A. Simmons, to whom had been entrusted the toast of the evening, "Alma Mater and our Guests," was at times delightfully reminiscent. In his reply Professor Ferguson alluded to the great changes which had taken place in the personnel of the university by the removal of old and familiar faces; to the increase in the teaching staff, which in his day had risen from 18 professors to 35, making, with the lecturers and assistants, a teaching body of 200; and to new structural developments, such as laboratories and other facilities for practical study. Alterations, too, had taken place in the degree requirements of some of the faculties by the introduction of options, but the Faculty of Medicine did not lend itself to be thus influenced by current opinion nor by modern demands. To Professor Ferguson the study of medicine should begin, as, fortunately, it still did, with anatomy and chemistry, for in the application of chemistry to physiology and pathology lay the useful research of the future. In the art and science of medicine Glasgow University held her own and would continue to do so. In two years it would be exactly half a century since Professor Allen Thomson cut the first sod for the buildings on Gilmore Hill. Equally happy, interesting, and instructive was Professor Cooper in his reply. Mr. James Thompson gave the toast of "Other universities and seats of learning," which the Rev. Dr. Gee suitably acknowledged. Dr. D. Wells Patterson proposed in felicitous terms success to the Glasgow University Club, and coupling the toast with the name of the president drew from him a neat and inspiriting reply. An interesting feature in the evening's proceedings was the reading by the president of a description in verse (sent by Dr. John Freeland Fergus of Glasgow) of the haunts, the antics, and vicissitudes of the leucocytes in phagocytosis. The president, the honorary secretary (Dr. Dunlop), and the honorary treasurer (Dr. Hudson) are to be congratulated upon a most successful and an enjoyable banquet.

PROFESSOR RUTHERFORD MORISON.

It is proposed to hold the annual dinner of the past and present students of the University of Durham College of Medicine on Wednesday, May 6th, when a presentation will be made to Professor Rutherford Morison on the occasion of his retirement from the active staff of the Royal Victoria Infirmary, and in recognition of his services as a clinical teacher. The honorary secretaries are Messrs. F. J. Nattrass and E. C. G. Parker, College of Medicine.

MANCHESTER AND DISTRICT.

TREATMENT OF MINOR INJURIES.

A LARGE and appreciative audience gathered at the Osborne Theatre, Manchester, on February 16th, when the proceeds of the performance were devoted to the Ancoats Hospital. Nurses of the hospital were in attendance, and during the evening they made a collection which realized over £10, and it is expected that the total amount from the performance will reach about £100. The Lord Mayor, who was accompanied by the Lady Mayoress, was present, and an opportunity was afforded to him of saying a few words as to the work done at the hospital. Owing to its position a large number of accident cases are taken to the Ancoats Hospital; during the last year the number was 21,898. The total number of in-patients treated was 2,113, and of out-patients 6,873. The Lord Mayor said that such a record of work needed to be widely known, as the management had to meet expenses which approached £10,000 a year. The performance was the latest addition to the generosity of the proprietors of the theatre, Messrs. Broadhead, as this was the seventeenth year in which a performance had been given for the hospital, and something like £1,300 altogether had been handed over to its funds. On behalf of the hospital management the Lord Mayor presented to Mr. Percy Broadhead a silver rose-bowl as a mark of their grateful appreciation.

At the annual meeting of the governors of the hospital, held on February 19th, it was stated that there had been a considerable decrease in the number of out-patients and accidents treated during the year, but a great increase in the number of in-patients. Both these effects were attributed to the Insurance Act. Many of the minor accidents and ailments were now being treated by the doctors working under the Insurance Act, and the report stated that "As far as the Committee are able to judge at present, the Act has increased, and will continue to increase, the demand for beds at the hospital, but will relieve the institution of the care of minor ailments and accidents." The average type of cases dealt with at the hospital is of a more serious character, and thus the total amount of work done and the cost of the treatment is steadily increasing. It was suggested at the meeting that the Ancoats employers should allow the Workpeople's Fund Committee and the Hospital Saturday Committee to hold meetings for the workpeople at their works.

As bearing on the above statement as to the larger number of cases, formerly treated at hospitals, now treated by practitioners working under the Insurance Act, it may be noted that at the annual meeting of the District Provident and Charity Organization Society of Manchester and Salford, held on February 10th, it was stated that the total number of investigations made by the society during the last year was 71,007, which is 9,000 less than in the preceding year, and this decrease was accounted for almost entirely by the decrease in the number of cases visited by the officers of the society for the Royal Infirmary and the Salford and Northern Hospitals. It was added that this was one of the effects of the Insurance Act, as many people now received treatment at home who formerly attended at the out-patient departments of the hospitals. The Act had also had the effect of damaging the Provident Dispensaries, as it had been found necessary to close three of the nine dispensaries belonging to the society. This was partly due to the difficulty of obtaining doctors for the dispensaries and partly owing to the fact that many of the former subscribers were now insured persons and obtained their treatment from doctors working under the Act.

TREATMENT OF TUBERCULOSIS IN SALFORD.

At a meeting of the Salford Insurance Committee, held on February 19th, a report was presented by the Sanatorium Benefit Subcommittee as to the treatment of insured persons suffering from tuberculosis during the last year. The Drinkwater Park Hospital, belonging to the Salford Corporation, which had previously been used as a small-pox hospital, was adapted and opened for tuberculous cases on February 13th, 1913, with accommodation for 18 males and 15 females, but unfortunately, owing to an outbreak of small-pox, it had to be closed for tuberculous cases from July 18th to September 18th. The Salford Insurance Committee entered into an agree-

ment with the corporation for the treatment of persons recommended for sanatorium benefit in an institutional form, and, in addition to the Drinkwater Park Hospital, a few cases have been sent to the Crossley Sanatorium. The number of tuberculous cases admitted to the hospital up to December 31st was 213; this included readmissions, and the actual number of patients treated was 177. The number that remained in the hospital on December 31st was 30. Of the total number, 142 were insured persons and 35 non-insured. All cases before admission are examined at the Tuberculosis Dispensary, and as far as possible only those who appear to have a reasonable chance of recovery are admitted. The average stay in the hospital is six weeks, as this is stated to have proved sufficiently long for the purpose of education and commencement of treatment. The combined treatment by graduated exercise and labour along with tuberculin injections has been carried out in 88 per cent. of the cases admitted, and in no case has any bad result been noticed from the injections of tuberculin, though it is found advisable to keep the patients under close observation at the commencement of the treatment, and this is only possible in an institution. Treatment by continuous inhalation has been carried out in 10 cases, and it is stated that it has been found to act as a sedative for most forms of cough, diminishing the amount of expectoration, and in this way helping to promote healing, and to prevent further spread of the infection. When discharged from the hospital 31 patients received domiciliary treatment, while 145 continued their treatment at the Tuberculosis Dispensary, which is opened in the evenings for tuberculin injections. Twelve cases were admitted for the purpose of diagnosis. All these reacted to tuberculin, and were detained for treatment. These cases were in the very early stage, and improved rapidly under treatment. At the Tuberculosis Dispensary there were 3,689 attendances on insured persons, and 3,613 on non-insured, and tuberculin was administered 2,007 times for the insured and 275 times for the non-insured. Reports were made to the Insurance Committee on 424 new cases and 389 reconsidered cases, and 4,146 visits were made to the homes of patients by the nurses. The total number of cases that received treatment during the year from January 15th, 1913, to January 11th, 1914, and the approximate expenditure chargeable to the Sanatorium Benefit Fund for each class were: Sanatorium treatment 59, costing £1,440; hospital treatment at Drinkwater Park 147, costing £1,317; dispensary treatment 215, costing £700; and domiciliary treatment by the panel doctors 231, costing £2,136. It thus appears that in round figures each case at a sanatorium cost the insurance funds about £24, the hospital cases cost under £9, dispensary cases cost about £3 5s., and domiciliary cases cost rather over £9 each. Of the 421 patients treated at either a sanatorium or at the hospital or the dispensary, 199 still remained under treatment at the end of December, and of the 222 in whom treatment had been concluded, 126 were discharged as fit for work, 39 as improved, 36 without improvement, and 13 worse, while 1 had died and 7 had discontinued treatment for other than medical reasons. Of the 231 cases which received domiciliary treatment, 95 were still under treatment at the end of December; and of the 136 whose treatment was concluded, 6 were discharged as fit for work, 71 were recommended for other forms of treatment, 9 discontinued treatment for other than medical reasons, 4 were admitted to the Salford Union Hospital, and 46 had died. These records for domiciliary treatment cannot, of course, be compared with the records for cases receiving institutional treatment, as practically all the bad and hopeless cases are left for the domiciliary treatment. It is recognized that the accommodation at Drinkwater Park is by no means sufficient, and it is expected that the new sanatorium which the corporation is erecting at Marple with 100 beds will be ready for occupation about the middle of 1915. The greatest difficulty has been experienced in obtaining accommodation for Salford cases in any other sanatorium, and it was suggested at the meeting of the Insurance Committee that until the Marple building is completed either additional sheds should be erected at Drinkwater Park or a suitable country home rented to which suitable cases might be sent. But the difficulty is that the sanatorium benefit fund is insufficient to meet further expenditure, and it is doubtful whether it will be sufficient, even when the Marple sanatorium is ready, to pay for all the cases which would best be treated in a sanatorium.

BRISTOL.

The Royal Infirmary.

The annual meeting of the governors of the Royal Infirmary was held on February 17th. Sir George White, the president, in moving the report, said that the total ordinary income was £12,783 and legacies £7,909; there was due to bankers £6,646, a grand total of £27,338. Expenditure had been £20,228, and added to this was the extraordinary expenditure and the deficit of £7,110. Subscriptions had slightly increased; on the other hand, workmen's contributions were down by £78. There had been 42,051 out patients, a decrease of 16,872, which was no doubt due to the Insurance Act. On in-patients there had been an increase; the number in 1912 was 5,049 and 5,394 in the past year. During the last ten years there had been an increase of 2,000 in-patients a year, though fortunately the cost had not grown in the same ratio. It being the first complete year of the King Edward Memorial Infirmary, Sir George White referred to a few of the outstanding matters in connexion with the extension. An addition of 180 beds had been made, raising the total to 350; there were now six operating rooms, and the number of operations done was 2,464. A ward in the old building had been converted into a maternity ward, in which 63 births had taken place. The cost of the building had been £137,000. The report was adopted.

In discussing the report Alderman Sheppard said that he thought some means might be adopted to remedy the falling off of workmen's subscriptions. Workpeople were often told that this was a charitable institution. This caused some offence. There had been considerable discussion in connexion with the working-class organization on this question, and he would like to suggest that some such measures as had been taken at Leicester and Newcastle should be adopted. He thought that if workpeople were expected to subscribe, their voice should be heard in the management. Mr. Sennington said he was the chairman of a league which desired that the representation should be of a democratic character. He thought the worker's side of life had not reached the managers of the institution, and that there were things which went on in them to which they objected.

On being asked by the President to state them, he said he was not open to explain them, but they happened some years ago.

Mr. Widdicombe said that the workers were getting more and more into their heads that they did not get fair play for the money they subscribed. There was a growing and determined feeling that if they could not have representation on such a body they would withhold their subscriptions. They heard serious things said as to treatment received, but would not get fair and full investigation till they had representation.

The President asked for the charges, but Mr. Widdicombe said they wished to know whether they were right or wrong.

Mrs. Stone objected to the word "charity" because the workpeople were asked to contribute.

The President said that he believed that the management of the infirmary would compare favourably with any institution in the kingdom, even in the matter of deficit. He referred to a newspaper report of a meeting at which Mr. Sennington was stated to have said "they were going to be governed in this matter in Bristol by the Labour party. They were not going to let any member go off on their own. If they found some of them working for the present governors they must be changed. They wanted fighters there in the future, and the more fighters they had the more reform they would get." This attitude did did not commend itself to him or the meeting as the best for the patients. The rules laid down how the committee were to be elected.

A member of the Labour group called attention to the rule which does not allow any subscriber to vote till he had subscribed six months, and the President said that was so, but he had not pressed the rule in the case of one member who voted.

When the election of the committee came on Mr. Widdicombe proposed the name of Mr. Sheppard, but that gentleman declined to be nominated.

In replying to a vote of thanks to the President, Sir George White said that for the first time there had been a discordant note in their proceedings, but they were not going to be threatened by Mr. Widdicombe, who claimed to represent the workers, though he thought many more present might claim that. He would, when the time came, be able to prove the absence of foundation of the charges that had been hinted against the doctors and nurses. They had been threatened that, as theirs was the first meeting of any medical charity in Bristol, they would have to run the gauntlet of this new movement. The spirit which had been displayed showed how right they were in not recognizing it.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Scottish Association for the Medical Education of Women.

A letter, dated February 20th, is being sent to the life members and former members of the Scottish Association for the Medical Education of Women by Mr. Alexander T. Hunter, clerk and treasurer, in which the position of the association is stated. This is the association to which reference was made in the Journal recently[1] as having made an attempt to have the classes in the university thrown open to women students or to get the university to provide in some way for their teaching intramurally. The letter, after some introductory clauses giving details regarding events up to 1908, continues: "Early in 1909 it became apparent that the activities of the Association were coming to an end, and since that time nothing has been done towards the furtherance of the objects for which the Association was formed." It may be remarked, however, that the medical education of women has been continued extramurally without a break since 1908 in other buildings, but with practically the same staff of lecturers. The letter goes on to state that the trustees of the association have been considering the propriety of having the association wound up, and its assets distributed or disposed of; they are desirous that matters should be put upon a businesslike footing, and that they should be discharged of their obligations as trustees. It is further stated that "in order to do this it will be necessary to resuscitate the association with a view to making up a new membership roll for the current year, and to appoint office-bearers so as to define exactly who are entitled to vote. The roll of members consisted of life members and of persons paying at least 10s. 6d. as an annual subscription; and this letter asks whether the former subscribers of half a guinea or more will "contribute for the current year, and so aid in the winding up of the Association." A meeting of the association is to be called for the purpose of electing office-bearers, and thereafter a special meeting may be held for considering a resolution for the dissolution of the association, and proposals for distribution or disposal of the association's assets and discharge of the trustees. The assets, it is stated, consist of £350 or thereby in cash, and certain furniture, books, etc.

Tuberculosis Treatment in Edinburgh.

Another stage has now been reached in the transference to the Corporation of the City of Edinburgh of the Victoria Hospital and other institutions for the treatment of tuberculosis (see the Journal for July 12th, 1913, p. 96). On February 17th the Public Health Committee of the Edinburgh Town Council considered the minute of agreement between the trustees of the Royal Victoria Hospital for Consumption and the Town Council with regard to the proposed transference of the sanatorium at Craigleith, the tuberculosis dispensary in Spittal Street, and the farm colony for tuberculous patients at Lasswade to the corporation in connexion with the campaign against consumption, to which recent action arising out of the Insurance Act has given so great an impetus. The first part of the agreement provides that the Corporation shall apply for parliamentary sanction for confirmation of the present agreement and for power for the hospital authorities to carry out the transfer; the conveyance is to be made out one month after the confirmation. The second part has reference to the undertaking by the local authority to hold, administer, and carry on the institutions so transferred for the purposes for which they were established, and provides that for a period of ten years from the date of such transfer the Royal Victoria Hospital and Farm Colony shall not be used for the treatment of cases of pulmonary consumption in an advanced stage at the date of admission. The Corporation is also to take over as many of the medical staff, nurses, and others at the hospital, dispensary, and farm colony as may be willing to enter the Corporation service at a not lower rate of remuneration; the Corporation to relieve the other parties of all monetary obligations secured over the three places. The third part of the agreement provides that any sums which, prior to the present date, may have been received by the first parties towards the institutions shall be applied as directed, and the second parties shall be entitled to apply for, uplift, and discharge any sums to which they may be entitled as having come in place of the first parties. The fourth clause is very important. It sets out that inasmuch as the constitution of the Royal Victoria Hospital contemplates, among other things, the promotion of the advancement of medical science with reference to consumption and other allied diseases, and the first parties are in possession of certain invested or lying funds which would be applicable to such objects, and certain gifts and bequests have been intimated, it is desirable that the existing constitution should continue for the purpose of administering such funds; therefore it is suggested that the first parties should continue to act under the constitution and rules of the Royal Victoria Hospital in furtherance of the objects contemplated, and retain the property and receive funds which may be given to them towards the objects contemplated, including, if they are so advised, the establishment of a chair or lectureship in Edinburgh University. There was considerable discussion in the committee regarding this clause, which would really form a trust for a lectureship, and it was remitted in order that certain points in it should be made clearer. The fifth article provides that, in the event of the chair or lectureship being established, all facilities are to be provided in the farm colony for teaching. The Corporation will not, however, be held bound to make any addition or improvement with regard to the existing classrooms, laboratory, and library further than it thinks proper for its own purposes; and if these are to be used by the university for teaching, they are to be given on the terms that the university pay for lighting, heating, and attendance. The sixth article deals with the appointment of Sir Robert Philip as consulting officer and consulting physician, and the seventh and eighth articles are operative clauses. It will be remembered that Sir Robert Philip was appointed consultant under the agreement between the Corporation and the Burgh Insurance Committee; in respect thereof he will act as consulting tuberculosis officer and consulting physician at the Victoria Hospital and Farm Colony so long as he holds the above appointment. The foregoing minute was submitted to the Town Council at its meeting on Tuesday, February 24th, when it was decided in view of the magnitude of the scheme to remit the matter to the Public Health Committee for further consideration.

Glasgow Nursing Conference and Exhibition.

At the opening of the Medical, Nursing, and Health Conference and Exhibition, Professor Glaister said that it would not be overestimating the effect of public medical service of a philanthropic character to say that close upon 300,000 people above the rank of those requiring the services of the Poor Law received medical assistance in medical institutions in Glasgow every year; that over 30,000 received medical assistance under the Poor Law; and that until the enactment of the National Insurance Act there were 76,000 people of both sexes who had formed themselves voluntarily into societies to secure for themselves, in addition to other benefits, medical assistance during illness.

During the conference numerous papers were read on various aspects of the nursing service. The exhibition included an interesting collection of instruments,

[1] British Medical Journal, 1914, vol. i, p. 338.

appliances, drugs, foods, etc. The "hospital exhibit" gave some idea of the special features of the most up-to-date Scottish hospitals; the "public health exhibit" showed what steps the various authorities are taking to safeguard the health of the community; and a valuable historical exhibit lent by Dr. W. J. Dilling of Aberdeen, included an Egyptian section, Greek and Roman and Early and Middle English medicine, old pharmacy, medical and surgical instruments; also eye instruments, prints and books illustrating the history of medicine, portraits of eminent medical men of the past, and a number of Red Cross exhibits, among which were the "first field dressing" and an emergency rations tin, both from the South African war.

The Munro Lectures: Cremation Among the Syro-Hittites.

Mr. D. G. Hogarth, Keeper of the Ashmolean Museum, Oxford, in the course of the fifth of the Munro Lectures (February 20th) which he is giving this winter in the University of Edinburgh specially dealt with Syro-Hittite burials. Cremation began about 1200 B.C., when a body of foreign peoples swept down through Syria and used the Hittite script and to a certain extent Hittite art; it then took the place of inhumation, and it was fully established in the ninth and tenth centuries before Christ. Dolls were buried in cinerary urns along with the remains of boys and girls; in the latter case the dolls were usually standing figures of a maternal kind, whilst in the former they were of the nature of horsemen. Cremation has been regarded as rare because our knowledge of these early times had come to us chiefly through the literature of Greece and Rome; but, if the whole world were taken as it was known through anthropology, the preponderance of people who burned their dead was enormous. It was under the influence of strong religious beliefs that people practised cremation.

Cameron Prize in Therapeutics.

The Senatus Academicus of the University of Edinburgh has awarded the Cameron Prize, given "for highly important and valuable additions to practical therapeutics" to Professor Paul Ehrlich, Director of the Royal Institution for Experimental Therapeutics, Frankfort, in recognition of his discovery of salvarsan, of his researches on numerous synthetic organic compounds of arsenic, and of his important work on immunity.

Foundation of an Anaesthetic Society for Scotland.

A dinner, held on Friday, February 20th, at the Balmoral Hotel, Edinburgh, was attended by anaesthetists from Edinburgh, Glasgow, Aberdeen, and Dundee. Dr. D. C. A. McAllum of Edinburgh was in the chair. Edinburgh was further represented by Drs. Gibbs, Torrance Thomson, Jones, and Ross; Glasgow by Drs. Paton Boyd, Lamb, Napier, and Fairlie; Aberdeen by Dr. Johnsten, and Dundee by Dr. Mills. Apologies were read from Dr. Home Henderson of Glasgow and Drs. Ogston and Robertson of Aberdeen. At a business meeting held after the dinner it was resolved to form a society, to be known as the Scottish Society of Anaesthetists, the objects of which should be "to further the study of the science and practice of anaesthetics and the proper teaching thereof." It was resolved to limit the membership of the society to those practising the speciality of anaesthetics, but that other members of the profession interested in the subject might be invited as guests to the meeting to take part in the reading and discussion of papers. Office-bearers were appointed as follows: President, Dr. D. C. A. McAllum; Vice-President, Dr. Paton Boyd; and Secretary-Treasurer, Dr. Stuart Ross. Drs. Torrance Thomson, Lamb, Mills, and Johnston represent Edinburgh, Glasgow, Dundee, and Aberdeen respectively on the executive. It is intended to hold two meetings yearly—in April and October—taking each of the four cities in rotation.

Defective Children.

The Health Committee of the Edinburgh School Board has been considering the Mental Deficiency and Lunacy (Scotland) Act, 1913, which comes into force on May 13th next, along with a memorandum which had been prepared by the clerk, and has reported that, with a view to ascertaining what additional provision is necessary for the education of mentally defective children, a complete survey should be made of all children within the Board's district between the ages of 5 and 16 who come within the scope of the Act. Having obtained a complete list of the children to be dealt with, it will be necessary to classify these into two groups: (*a*) Children who are considered educable; and (*b*) non-educable. In the case of the latter, the names and addresses will be forwarded to the Parish Council, whose duty it will be to make the necessary provision for them.

Ross Memorial Hospital, Dingwall.

The annual meeting of the subscribers to the Ross Memorial Hospital was held recently. Sir Hector Munro, who presided, referred to the loss the hospital had sustained through the death of Dr. Adam, who for many years was one of the medical attendants. Sir Hector also referred to the resignation of Dr. Bruce, who, since the opening of the hospital forty years ago, had acted as Medical Superintendent, and devoted much time and trouble to its management.

The annual report showed that during the year 205 patients had been admitted to the hospital, which, with the addition of 35 remaining in the hospital at the end of 1912, made 240 in all. The daily average of beds occupied was 21.7. The total number of patients admitted since the opening of the hospital in 1874 was 4,012.

The subscribers appointed a committee to consider the question of revising the constitution and rules. The hope was expressed that the hospital would benefit by a grant from the Highlands and Islands Medical Service Board.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Dublin Slums.

The report of the Departmental Committee appointed by the Local Government Board to inquire into the housing conditions of the working classes in Dublin was published last week. It recognizes that the existing conditions of tenement life are both physically and morally bad, and admits the necessity for reform, which must have as its ultimate object the abolition of the tenement system as it exists. Dealing with the administration of the Acts of Parliament and the Corporation by-laws, the Committee states that the existing powers have not been rigidly administered. The power to enforce registration has been ignored, and the closing powers of the Corporation have not been stringently applied. The report finds that three members of the Corporation are returned as owning, or being interested in, nine, nineteen, and eighteen tenement houses respectively. Some of the property is classed as "third class property" by the sanitary staff, or in other words, it is unfit for human habitation. Ten other members of the Corporation own, or are interested in, tenement houses. The report exposes the scandal of the rebate system, which was designed to encourage and reward decent and conscientious management of tenement property.

The Commissioners are of opinion that some of the members of the Corporation who own tenements have been improperly allowed a rebate. In some cases the conditions laid down by the Corporation for the granting of rebates were not complied with, owing to the superintendent medical officer of health having dispensed in certain cases with the by-laws governing tenement houses. The opinion is expressed that with a more judicious and firm administration of the powers given to the Corporation in the last thirty-five years it should have been possible to have produced a better state of affairs than exists at present. The Committee expressed the opinion that every working-class family should be provided with a self-contained dwelling of sufficient size to prevent overcrowding and admit the separation of the sexes. A number of first-class tenement houses lend themselves to remodelling, and it is recommended that the Corporation should have power to compel owners to do this work, and, if they fail, the houses should be declared unfit for habitation and demolished. The minimum of new housing

accommodation required is 14,000 houses or dwellings, and these should be erected on virgin soil on the outskirts of the city. More than 1,100 acres of suitable land for building purposes are said to be available within the city boundary. The cost of such schemes cannot be borne by the ratepayers alone, and the committee think that the State should give generous assistance, particularly in the way of assisting private enterprise. One of the Commissioners, however, though he signed the report, made the following reservation:

I do not accept any statement which expresses or implies that the sanitary administration of the Dublin Corporation is, or has been, defective, or that it is in any way responsible for the present housing conditions in Dublin. What the Corporation (during the short time it has had powers to act) has done is to reduce by thousands the number of tenement houses, compel the introduction of the water-carriage system of sewage, and reduce enormously the zymotic death-rate. What the Corporation has left undone is, in my opinion, beyond its power to effect in practice.

The following is a summarized statement of a return submitted by the Corporation showing the distribution of families in the tenement houses in Dublin:—

First class tenement houses: 811 are occupied by from 1 to 5 families; 632 by from 6 to 10 families; 45 by from 11 to 15 families; 6 by from 16 to 19 families.

Second and third class tenement houses: 2,459 houses occupied by from 1 to 5 families; 1,146 by from 6 to 10 families; 59 by from 11 to 15 families; 1 house by 16 families; 1 house by 17 and 1 house by 24 families.

The suggestion for a special housing authority is rejected, and the Committee considers that the origin and conduct of housing schemes must remain in the hands of the Corporation.

During an inquiry by the Local Government Board into an application by the South Dublin Rural District Council for sanction to borrow £60,750, the estimated cost of the erection of 270 cottages, one doctor, giving evidence, stated that he had been constantly reporting to the Board on the condition of the cottages in the area under question; they were old, dilapidated, ill-ventilated, and without any sort of sanitary arrangements. In his opinion they were unfit for habitation. Another medical officer said that the houses he had inspected were in a hopeless and shocking condition, overcrowded, and unfit for habitation; he found on two occasions on which he had visited it over forty-five persons inhabiting a large brick house, and he believed the number was even more. The house was in a horrible condition. The Vice-Chairman of the Council stated that fifty to sixty persons frequently lodged in this house, and it was so overcrowded that people had to sleep on the landings. In connexion with a housing inquiry for an improvement scheme promoted by the North Dublin District Council, one applicant for a new cottage stated that he had two boarded-out children from the workhouse, and that his cottage had been condemned by the doctor as being unfit for human habitation. The inspector suggested that was a curious state of affairs that children should be allowed out from the workhouse to a house which was unfit for human habitation.

St. Patrick's Nurses' Home.

The report submitted at the annual meeting of the St. Patrick's Nurses' Home in the hall of the Royal College of Physicians by Sir John William Moore stated that the work carried on by the institution during 1913 showed a decrease both in the number of cases undertaken and in the number of visits paid; the former amounted to 2,553 and the latter to 53,009. This was partly to be accounted for by the exceptionally fine and consequently healthy summer and autumn, but partly by the fact that in various districts, where the institution's nurses had previously worked by themselves, nurses belonging to other agencies had been established. The committee, however, having realized that in 1912 the demands made upon the staff were too heavy, felt that the nurses had been as fully occupied in 1913 as was advisable in the interest of both patients and nurses.

Infantile Paralysis in Fermanagh.

The outbreak of infantile paralysis in the Irvinestown district continues to spread and two deaths have occurred. Parents are so alarmed that in some cases they are sending their children out of the district. The Local Government Board medical inspector visited the affected areas last week.

The Rotunda Hospital.

The board of governors of the Rotunda Hospital at their last meeting elected Dr. T. P. C. Kirkpatrick a governor in recognition of his eminent services to the hospital in writing its history. This is an honour that is ordinarily conferred on those who have subscribed to the funds of the hospital a sum of not less than £100.

South Charitable Infirmary and County Hospital.

The report presented to the annual meeting of the South Charitable Infirmary and County Hospital, Cork, on February 13th stated that the number of patients had increased both on the medical and on the surgical side. The medical side received a large number of severe cases of infantile diarrhœa in July, August, and September; many of these infants were admitted in a moribund condition. On the surgical side there were 22 deaths out of 778 cases; 13 deaths occurred subsequent to operation, a death-rate of 1.6 per cent. There were 445 major operations, many of which were of a very serious character, and this was a considerable increase on previous years. The report of the extern departments, as usual, showed a very large number of cases treated, the number of attendances being close on 15,000. The daily average of beds occupied was 82.7.

During the year an anonymous donor had contributed £500 for the more thorough equipment and development of the *x*-ray department, which was now under the care of a special medical man. On the recommendation of the staff an honorary anaesthetist was appointed, a former house-surgeon being selected for the position.

India.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Third All-India Sanitary Conference.

(*Concluded from page 448.*)

Malaria. A paper on malaria in Goa was read by Dr. de Mello, in the Wynaad by Captain Horne, and in Salsette (Bombay) by Major Marjoribanks. Dr. Bentley pointed out that even in malarious towns the centre was often fairly free. The benefits of jungle clearing as an antimalarial measure were discussed by Sir C. P. Lukis, Dr. Bentley, Lieutenant-Colonel Rogers, Major Clemesha, and others. The general opinion was that the problem in Bengal differed greatly from that in other provinces.

Cholera was the subject of a paper by Major Greig.

Guinea-worm was discussed in two papers by Major Liston and Dr. Turkhud. The prevalence of the disease in India was ascribed to the suspicion, ignorance, and indifference of the people.

Town planning and improvements was the subject of several papers by Mr. Orr on Bombay, Mr. R. R. Pantalu Gum on Madras, and Mr. Iyengar on Bangalore. The problem of the new capital at Delhi was referred to by several of the speakers.

Kala-azar was treated in important papers by Captain Mackie, by Lieutenant-Colonel Rogers, and by Captain M. Young. Lieutenant-Colonel Rogers read an abstract of a paper by Dr. Dodds Price and himself, which was published at full length in the Journal of February 7th (p. 285). The measures advocated were segregation, evacuation of infected huts and lines, and treatment by special travelling dispensaries. Dr. Bentley referred to his own experiences of the disease in Assam. Major Patton and Captain Mackie discussed the incidence of the parasite.

Mosquitos. A synopsis of Indian *Anopheles* was put forward by Major Christophers.

Bacteriology. Major Clemesha described some experiments on typhoid bacilli in water. Dr. L. F. Hirst read a paper on the bacteriology of well water in Colombo. Major McCarrison advocated chemical purification, by iodine or by chlorine. Mr. Hutton described experiments on filtration in mechanical filters at the King Institute, Guindy, Madras.

Plague, which has now been endemic and epidemic in India for nearly eighteen years (since 1896), was the subject of papers by Captain Kunhardt, by Lieutenant-Colonel Browning Smith, and by Major Liston. These papers were followed by a long and interesting discussion.

Vital statistics was the subject of papers by Dr. Bentley and by Captain M. Young. Both advocated the appointment of medical men as registrars. Dr. Bentley complained that in Bengal, even among the educated classes, there was no public opinion in favour of registration. In the discussion which followed, the fact was generally recognized that not much improvement can be looked for in the registration of vital statistics in India, as long as the reporting of deaths, and of their causes, is entrusted to the *chokidar*, or village watchman. The fact is that, outside important municipalities, India is not yet sufficiently advanced in civilization for much hope of improvement in this respect. In rural areas there is no possible agency, except the *chokidar*, by which the work can be carried out. The *chokidar* in Bengal does get the actual numbers of births and deaths registered fairly correctly, considering the circumstances, though the causes assigned for the deaths registered are far from accurate.

Water supply and drainage systems, treated chiefly from the point of view of the engineer, were the subjects of the last discussion.

Concluding Meeting.

After the excursions on January 25th and 26th, the conference met on January 27th for the last time, and wound up its business by the adoption of twenty-one resolutions, which may be very briefly summarized as follows:

1. Further study of malaria by a small expert committee desirable.
2. Necessity for improvement in rural sanitation, with special reference to (*a*) the provision of protected water supply in school compounds, markets, fairs, police stations, courts, etc.; (*b*) provision of more travelling dispensaries; (*c*) teaching of elementary hygiene in schools; (*d*) instruction of midwives; (*e*) formation of village sanitary committees; (*f*) appointment of health officers in rural areas; (*g*) construction of a few model villages, laid out on sanitary principles, in selected localities; (*h*) extension of village sites in congested areas.
3. Medical inspection of schools desirable.
4. Necessity for better collection and disposal of refuse in towns.
5. Education of mothers and *dhais* required to reduce infant mortality.
6. Improvement of vital statistics necessary.
7. Special measures required to deal with tuberculosis.
8. Danger of use of tuberculin in unskilled hands.
9. A chemical standard for purity of milk should be fixed.
10. Adulteration of milk to be prevented.
11. Municipalities must introduce and enforce building, water, and drainage by-laws.
12. Town planning a legitimate object of municipal expenditure.
13. Compensation for insanitary buildings to be limited to site value.
14. Establishment of sanitary engineers to be increased.
15. Value of malaria surveys.
16. Necessity for inquiry into dangers of rice cultivation near houses.
17. Bungalows in malarial areas should be screened.
18. All anophelines should be included in genus *Anopheles*.
19. Importance of plague measures during "off season."
20. Various other subjects proposed for discussion and treatment.
21. A joint secretary required for Engineering Section of conference.

These resolutions, perhaps, represent a counsel of perfection rather than what may be hoped for in the near future. In India, of all places, it is necessary to bear in mind the maxim *festina lente*, and to carry the people with us in all sanitary improvement, bearing in mind that the standards approved by Indian medical men, educated on European lines, are far above those of the educated community, still more of the general mass of the people. Without the cordial co-operation of the people, rules and regulations will effect very little improvement.

The conference ended with a short address by Sir James Meston, the Lieutenant-Governor of the United Provinces, who was received by Sir Harcourt Butler and the members of the conference. Sir Harcourt Butler, in welcoming the Lieutenant-Governor, conveyed to the members of the conference a message from the Viceroy appreciating their work. He stated that this, the third, annual sanitary conference had been most successful, and that in future such conferences would probably be held at longer intervals. Sir James Meston, in a short speech, congratulated the conference on the termination of its labours, which were thoroughly appreciated by Government. He then touched upon some of the difficulties which faced a provincial government in its dealings with sanitary questions—plague, malaria, water supply and drainage—paying a well-deserved tribute to his adviser on such matters, Colonel C. C. Manifold, the Inspector-General of Civil Hospitals; and pointed out how, in dealing with sanitary matters, Government was opposed by the dead weight of ignorant aversion to change, of ancient usage, and of social susceptibilities. While it was the task of Government to move this mountain, he asked the aid of the educated community in creating an enlightened public feeling on such questions.

Special Correspondence.

BERLIN.

The Abderhalden Serum Reaction in Pregnancy.—The Bacteriology of Infantile Epidemic Paralysis.—The Clinical Importance of Thoracic Configuration in Children.

THERE is every indication that the value of Abderhalden's serum reaction in pregnancy will shortly become the subject of much controversy. Hitherto by far the greater number of workers in this field have confirmed and acclaimed his results, and it is all the more surprising and dramatic, therefore, that the very first serious check to his assertions should emanate from so high and recognized an authority as Professor Leonor Michaelis, the Director of the Bacteriological Laboratory at the Urban Krankenhaus. He has worked in conjunction with Dr. v. Lagermarck, his assistant, who anticipated any possible objection on the score of faulty technique by studying the method under Abderhalden himself at Halle. The result of a very large number of experiments which Michaelis and v. Lagermarck have now published (*Deut. med. Woch.*) would seem to show that the reactions of serum from pregnant women do not in any way differ from those exhibited by the serums of non-pregnant women, or even men. The reaction of serum *plus* placenta was practically never a weaker positive than serum alone, although it frequently happened that serum *plus* placenta reacted in the same way as serum alone. A placental serum often gave a negative reaction, and every now and then a definitely positive one. Michaelis therefore denies the presence of a specific ferment in Abderhalden's sense, in the serum of pregnant women. Abderhalden's reply to these statements is being awaited with the liveliest interest by Berlin physicians.

A most interesting paper on the bacteriology of infantile epidemic paralysis has been published (*Deut. med. Woch.*) by Kling and Pettersson of Stockholm, who inoculated a monkey (*Macacus cinicus*) with the water used for rinsing the mouths of a family—two daughters, one son, and the wife of a man of 41, who after a febrile illness of three days with paraplegia died on the fourth with symptoms of asphyxia. The litre of water to be used was evaporated carefully to 75 c.cm. and filtered under aseptic precautions, and the whole then injected into the monkey, which became gradually paralysed and died (time not stated). An emulsion of the spinal cord of this animal was injected into a second, which also died paralysed and exhibited the same cord changes as the first. This experiment would appear to establish the view that the disease may be spread by carriers, in whom there is no sign of ill health (as in diphtheria) by way of the secretions of the mouth and

nose. The authors explain their failure to produce this important result in a previous experiment to their employment of too small a quantity of oral secretion.

Professor Czerny, of the Children's Department of the Charité Hospital, recently, in opening a discussion on the clinical importance of thoracic configuration in children at the Society of the Charité Hospital Physicians, expressed the opinion that among the cases of pulmonary phthisis so rarely met with in young children, it was those with an elevated as opposed to a depressed configuration of the chest that most frequently developed the disease. Professor Freund, a well-known Strassburg gynaecologist, in discussing the influence of thoracic deviations as predisposing to pulmonary phthisis in young children, had supported the generally accepted theory that depression predisposed to apical infections. Czerny's researches tended to show that the greatest alteration in the shape of the chest took place at the time when the child began to walk, and changed the prone position for the erect. From this time onward the thoracic shape assumed its definite type, and rapidly or slowly lost the elevated barrel shape of infancy. In the discussion which followed, Professor Hofbauer of Vienna maintained that the extent of the respiratory oscillations were of far greater importance in this respect than the chest configuration, for the former alone determined the circulation of blood and lymph in the apices of the lungs, and counteracted the tendency to circulation stasis and dead air space, at the point where infection usually took its origin.

Correspondence.

THE NATURE OF PREGNANCY.

Sir,—Dr. Ballantyne has rendered a distinct service to accuracy in scientific thinking by his paper on "The Nature of Pregnancy." Nomenclature can never claim accuracy so long as the idea behind the name remains vague and doubtful. For long it was customary to think that the term "parasitism" fully embraced the relationship between the fetus and its mother. This can no longer be accepted, for this term implies a mutual hostility between the intruder and its host that is absent during pregnancy, let Dr. Leith Murray say what he will.

The physical conditions alone indicate a willing partnership, in which the partners each contribute something to the other's welfare. The body of the mother is specially developed for the reception of the fetus; a certain organ is set aside wholly for this function; the changes it periodically undergoes mean nothing if not a preparation for this supreme duty. In so far as we understand the complicated nature of the maternal response, we find nothing at variance with the idea of a mutually serviceable and harmonious life in life. The idea even that the ovum implants itself in the mother's womb only after a local destruction of tissue, though this in itself would not necessarily imply a mutual hostility, is only a partial view of the case. For, as has been demonstrated, even from the earliest stages, the willingness on the maternal side is manifest in the spontaneous character of the response, a response that implies the employment of all the local resources in the service of the ovum. The local suffusing of the tissues with blood and fluid is called forth by a ready physiological response, and is not, as used to be thought, due to a mere assault on the part of the intruder. The decidual reaction, the barrier that was thought to be erected by the mother in self-defence, is no longer to be considered merely as such. It is as much necessary to the welfare of the ovum, and is a method by which alone its strangling and detachment, by the very readiness of the maternal response, is rendered impossible. Without it the mucosa would bleed into itself in a heroic menstrual flow. Then, in addition, the harmony between mother and child is seen in the anticipatory development and ultimate functioning of the breasts.

All these interrelationships, were there no others, bespeaking as they do a perfect and willing harmony, refute the term "parasitism." How can we reasonably think of parasitism when we remember that the whole womanly organism is attuned continually to this higher task, and that only with its fulfilment are the greater duties rendered? Was there nothing else, we are supplied with an ample record of the part contributed by the child to this harmony by the fact that only with this culmination is the woman's life completely realized.

I believe that, even were it proved that antibodies are elaborated during pregnancy, it would not affect the argument in the least. For antibodies in themselves are merely an evidence of a healthy organism maintaining itself in a state of equilibrium. All that the demonstration of their existence would do would be to open up new avenues for us to wonder at the perfection of the living harmony and to show that our interpretation of an antibody must be enlarged to allow of its being embraced under the category of physiology. Its existence in pregnancy would be no more an evidence of an inherent hostility between ovum and mother than is the presence of a decidua. Antibodies admittedly may exist where there is a diseased condition, but so may also secretion of milk from the breasts. And yet nobody would contend that the presence of milk in the breasts is necessarily an indication of an abnormal state. Were antibodies generated during pregnancy, they could only be considered as an addition to the various physiological processes by which harmful elements are got rid of in ordinary life.

But, as Dr. Ballantyne says, the evidence in favour of an immunity reaction in pregnancy is not convincing. *A priori* it would seem impossible that it could apply except in a secondary and incidental manner, for is not pregnancy throughout, so far as the mother is concerned, a gradually accumulating maternal response, which reaches its zenith only with labour? There is nothing to suggest a gradually developing immunization, and there is everything in favour of the idea that the response is willing and spontaneous. And, if there is an anti-ovum immunity able at the end of gestation to contend with a full-term pregnancy, how is it that, within a month or two, another and minute ovum may be tolerated?

The idea of a mutual hostility between mother and child, moreover, disregards the whole story of evolution. One of the greatest chapters in this story tells of the gradually accumulating harmonies developed between mother and child. Nowhere is there a mutation of a discord into a concord, but merely a slow evolution of the harmony of relationships. An apparently good argument in favour of antagonisms inherent in the reproductive functions might be, and has been, drawn from the insect world, where the male is crushed, torn, or even devoured by its mate during the sexual act, or where the female expires after laying her eggs. The argument is only apparent, for the fate of these animals, cruel and terrible as it seems to our human eyes, is physiological and normal. Who can say, moreover, that the fate here decreed is because of the sexual act? This act is much more reasonably considered as the grand climax of a life which ends because its duties are fulfilled.

In considering the mutual relationship between mother and child we must avoid any argument drawn from the details. To recognize the reality our outlook must be broad. We must beware of seeing only one side of the question. The child sucks its mother's blood, it is true, but every cell and every organ in the mother's body does likewise, and yet we do not think of parasitism here. In both cases the apparent loss to the mother is shown to be ultimately no loss, but a veritable gain. So with the placenta; the normal and right thing is a separation from the uterine wall; the abnormal thing is a failure to separate. Details, which are in themselves an apparent evidence of hostility, are in reality the substance of which the harmony is composed. The earth and sun at most times exercise an opposing attraction on the moon; but this apparent hostility of action is in reality of the essence of the harmony that binds the heavenly bodies together.

Whilst the healthy relationshp between mother and child is one of harmony, the delicacy of this adjustment, Dr. Ballantyne shows, is (as in other complex physiological processes) such that it may pass over into the abnormal with comparative readiness.

Dr. Ballantyne's contribution to what may be called the philosophy of pregnancy is valuable, in my belief, as a strong refutation of the parasitic and pathological ideas. Pregnancy is not a mere self-immolation on the part of the mother at the shrine of the race, though one of the grandest things in nature, the maternal instinct, has been possible only because of the self-sacrifice which the maternal

functions have called forth. Pregnancy is a self-realization, and, in contributing to this, the child plays a part travestied by the term "parasitism." It is, as Paul Bar says, "le plus bel exemple de symbiose homogène harmonique."—I am, etc.,

Edinburgh, Feb. 22nd. JAMES YOUNG.

THE FALLING BIRTH-RATE.

SIR,—Dr. Dunlop says that the falling birth-rate is causing no fall in the population's rate of increase, owing to the decline also of the death-rate. The following data, taken from the Registrar-General's report for 1911, show that he is mistaken.

The effect of diminished fertility between the years 1876–1880 and 1911 (p. xxii) was a fall of 12.74 on the birth-rate allowing for difference in the proportion of married and single women, aged 15 to 45, in the population. Applying this figure to the 1911 population, the total loss of births comes out at 460,727, the 430,193 quoted in my lecture on Ante-natal hygiene (BRITISH MEDICAL JOURNAL, February 14th, p. 356), taken from the Registrar-General's report (p. xxi), applies to legitimate births only. The standardized death-rate (p 20) has fallen from 19.9 in 1876–1880 to 14.3 in 1911, so that the fall in the death-rate, allowing for the altered age and sex constitution of the population, is 5.6 per 1,000. This rate represents 202,517 deaths saved to the 1911 population, and the difference between this number and the 460,727 births lost, or 258,210, represents lives lost to England and Wales by the combined effect of the changes which have occurred in fertility and mortality.

If natural increase alone is taken, without allowance for change in constitution of the population, it is shown (p. 20, table 6) that in 1876 natural increase—that is the birth-rate, 36.3, less the death-rate, 20.9—equals 15.4; in 1911, when the birth-rate was 24.4 and the death-rate was 14.6, the natural increase was 9.8. The difference between 15.4 and 9.8 (5.6) when applied to the 1911 population gives approximately the loss of lives shown above.

Dr. Dunlop alludes also to my "sweeping statement" that "every method of artificial prevention of conception is harmful in both its physical and moral effect," and says that this cannot be scientifically proved. Perhaps not. Nevertheless, I believe it to be true. This matter was only a side issue in my lecture, and I do not wish to enter upon a discussion of that question beyond these few words: I am sure that there is a definite tendency towards local and general physical ailments, mental disquietude, and lowering of the moral tone in persons who for lengthened periods, or perhaps for most of their active sexual life, pervert the vital physiological act of sexual intercourse by artificial methods of prevention. Such methods do away with all the spontaneity and completeness of the act, and no function can be thus perverted for long periods without the system suffering in all its constituent parts. Professional experience has taught me that these results do follow.—I am, etc.,

London, W., Feb. 24th. AMAND ROUTH, M.D., F.R.C.P.

SIR,—Dr. Binnie Dunlop wonders at others deploring the fall in the birth-rate, and says that this is causing no fall in the population's rate of increase. If he reflects for a moment he will see that he is mistaken.

It is true that a fall in the death-rate has accompanied the fall in the birth-rate, and this is particularly noticeable in the fall of the infant death-rate, and in regard to this latter there may be a causal relation between it and the diminished birth rate; perhaps, for example, when there are fewer births the children born are, on the whole, more viable from natural or circumstantial reasons. But in regard to numbers, the fall in the death-rate does not nearly compensate for the fall in the birth-rate. The 1911 census returns show that the rate of increase in England and Wales for the ten years ending April, 1911, compared with the rate of increase in the previous ten years had gone back from 12.2 to 10.9 per cent., and the rate has diminished more rapidly since 1911. In some districts in England the numbers of births and deaths registered per annum now closely approximate, and the diminution in the natural increase—that is, the actual difference between the numbers of births and deaths—is very marked indeed, and threatening to become a natural decrease.

A diminished birth-rate must have the effect of increasing the death-rate, at least for a good many years, and I am bold to opine that this is what is about to happen in England. There will be a rise in the death-rate as the result of a lowered birth-rate This cannot fail to be so unless some saving influence, such as the discovery of a preventive for cancer, begins to operate to counteract the effect of the fewer births. Because, for many years the lowered birth-rate will lead to a relative decrease in numbers in the population at those lower ages at which there are fewest deaths, and a relative increase in the population at those highest ages at which there are most deaths. And not only are the deaths fewer at the younger ages, after 5 years of age, but the numbers constituting the whole population are greater at those younger ages, and the death-rate at these ages, calculated upon the numbers living at these ages, is therefore much less than the whole death-rate.

Thus the annual death-rates in this town for succeeding age groups, at per 1,000 living in the population at those same age groups, will serve to demonstrate how the diminished birth-rate will have an effect in raising the general death-rate.

Cheltenham—Population 48,942.

Death-rate in 1913 at ages	0– 5	per 1,000 living at ages	0– 5	...	29
,, ,,	5–25	,, ,,	5–25	...	2
,, ,,	25–65	,, ,,	25–65	...	11
Death-rate in 1913 at age 65 and upwards per 1,000 living at age 65 and upwards				...	77

The above statement will vary from a similar statement for the whole country only in that degree in which the age distribution of Cheltenham's population differs from that of the whole country.

Numbers per 1,000,000 of the Population at the above Age Groups.

	England and Wales.	Cheltenham
0– 5 years ...	... 106,857 ...	80,074
5–25 ,, ...	... 380,055 ...	370,356
25–65 ,, ...	... 461,007 ...	468,452
65 and upwards...	... 52,081 ...	84,998

During those years that a lowered birth-rate is diminishing the population, there must be an adverse effect upon the number of available mothers of child-bearing age, which will react in further lessening the birth-rate.

What, therefore, are some of the disadvantages of the falling birth-rate? (1) A diminution of national numbers and of corresponding national power and importance; (2) a relative decrease in the more healthy and virile part of the populace, and consequent less power for multiplication, performance, resistance, and defence; (3) a comparative increase for many years to come in the numbers of the diseased, effete, senile, and useless; (4) a loss in youth, hope, beauty, optimism, activity, progress. And if anyone here cries "in folly," well, I fear the "wisdom" of age will not do more than compensate for its pessimism and melancholy.

There is also the spoiling effect upon character of being the only child, and the limiting effect upon genius caused by the family consisting uniquely of a firstborn. In short, a lowered birth-rate means national decadence both in numbers and powers.—I am, etc.,

Cheltenham, Feb. 22nd. J. H. GARRETT, M.D., D.P.H.

SIR,—We have it on good authority that there are about 15,000,000 persons always on the verge of starvation in these islands, where the annual production of wealth is about £2,000,000,000 sterling.

How any sane or just-minded man can, in face of these facts, advocate an increased output of children requires, in my opinion, some explanation.—I am, etc.,

London, E.C., Feb. 23rd. HENRY GEO. DIXON.

SIR,—Dr. Binnie Dunlop will find some useful information in Newsholme's *Vital Statistics*, third edition, pp. 96, 97.—I am, etc.,

Blackhall, Feb. 23rd. GEORGE STEWART.

INSPECTORS OF THE MENTALLY DEFICIENT.

Sir,—We understand that the posts advertised in your issues of February 14th and 21st for two medical inspectors, a man and a woman, under the Board of Control (Mental Deficiency Act) are identical as regards the work required, but the payment offered is different, being £350, rising to £550, for the woman, and £400, rising to £600, for the man.

The Association of Registered Medical Women, supported by the British Medical Association, has strenuously upheld the principle that where men and women practitioners are doing identical work the rate of payment should be the same. The attempt to obtain a woman's services at a cheaper rate than those of a man is not only unfair to the woman, but is likely to introduce a form of competition between practitioners of the two sexes prejudicial to both and to the best interests of the medical profession.

We hope that medical women will not accept the salary offered, and that the Board of Control will see fit to reconsider their decision and to remove the inequality.—We are, etc.,

Jane Walker,
President of the Registered Medical Women's Association.
F. May Dickinson Berry,
Chairman of Committee.

Sir,—The advertisement inserted by the Board of Control in your issue of February 14th, calling for applications for inspectors, whose duties are outlined, restricts women to the third and lowest position, carrying a salary 12½ per cent. less than that of the second position. Such a restriction violates the principle of equal pay and opportunity for men and women in the profession. It is a departure from the precedent the Association has established in Great Britain, and is significant, as it follows two glaring cases of underpayment of women in other parts of the empire where Branches of the British Medical Association exist. The case of the proposed women's medical service for India is too well known and recent to need more than mention. The other case is in Australia, where the State of New South Wales has appointed several school medical officers, men at £500 a year *plus* £150 allowance *plus* travelling expenses, and women at £400 and no allowance (travelling expenses were not specified in the advertisement for women, though presumably they would be given under the Civil Service Regulations). The New South Wales advertisement stated that women would be chiefly employed near railways. This is an entirely disingenuous excuse in a country where young women teachers are sent to isolated bush schools, and bush nurses are engaged in the remote country parts for duties far more arduous than any school doctor will ever be called upon to perform.

How important it is to resist the present attempt of the Board of Control to differentiate in favour of one sex in the medical service may be judged from the Australian experience. The disproportion of payment between men and women in the Civil Service, which in one State now reaches over 40 per cent., began a few years ago in another State, when owing to a misleading advertisement a woman with special experience accepted 9 per cent. (actually £50) less than a man with no special knowledge or experience of the duties required.

The success of the British Medical Association in maintaining the principle of equal pay in Great Britain has been so good that one was led to suppose that here at least the claim of women was fully established. Apparently their footing is not yet very sure, and though they have demonstrated that they are indispensable to the health service of the State, yet the spirit of the old Adam that would exploit them is not dead.

A union of medical women throughout the empire at least, which has been long desired by many, would allow women to make their attitude unmistakable on the question of cheap labour with its corollary of poor work, or any other attempt to undermine the standards of the profession by means of them.

But valuable as such a formal statement would be, the question of cheap labour by the underpayment of women is a question for the profession as a whole, for men as much as for women. If men are so indifferent or so short-sighted as to allow a precedent of underselling to be established, the time cannot be far off when they will find the positions open to them fewer in number and less adequately paid.—I am, etc.,

London, S.W., Feb. 23rd. Mary Booth, M.B., C.M.Edin.

ORGANIZATION GONE MAD.

Sir,—As a former member of the Council for some years I have frequently heard voiced the determination of the Organization Committee and of the Representative Body to so arrange the Divisions that each member would be able to attend their meetings without waste of time or expense.

In Lincolnshire the ancient divisions, made hundreds of years before the advent of railways, are the Parts of Lindsey, of Kesteven, and of Holland. It appears that at a meeting held on November 8th, 1912, at which non-members of the Association were present, "it was decided to support the suggestion that Kesteven be made a Division area." This was done for purely panel purposes. I should doubt if a map was produced at the meeting, or if many of the members could have passed an examination on the geographical extent of this ancient division of Lincolnshire.

What is the result? The Bracebridge Asylum, which serves the Parts of Lindsey and Holland, is situate in the Parts of Kesteven, it is within half a mile of the boundary of the city of Lincoln, and it is actually within the county of the city of Lincoln; and yet to attend Divisional meetings the medical officers will have to go to Lincoln station, a distance of nearly two miles, and then travel to Grantham, which is nearly thirty miles off. Further, men who practise in Lincoln but live in the suburbs are put to the same inconvenience.

It is now proposed, also for purely panel purposes, that the Boston Division should be coterminous with the Parts of Holland. This means that they would cut off from their Division the whole of Spilsby Union and certain parts of the Boston Union; and it is proposed that these dismembered parts should be driven into the Lincoln Division. This means that members from Spilsby and Skegness will have to pass through Boston to attend a Divisional meeting at Lincoln. The journey there and back will occupy four hours, and the whole time taken up will be over seven hours, at a cost for railway fare of 7s. 8d.

Many parts of the county of Lincoln are difficult of access by the railway, and in any scheme for dividing it up into Divisions it ought to be considered as a whole; if individuals are to be practically disfranchised purely to save a little trouble to those who have gone on the panel, I am afraid it will not tend to popularize the British Medical Association.—I am, etc.,

Lincoln, Feb. 23rd. W. A. Carline.

SMALL-POX AND VACCINATION IN THE LIGHT OF MODERN EXPERIENCE.

Sir,—I have read with interest the letter from Sir Ronald Ross in your issue of February 14th. It is something to find that so eminent an epidemiologist is inclined to agree with my contention that "infantile vaccination is not so necessary as a public health measure as is usually supposed."

The aspect of the question which Sir Ronald especially refers to—namely, "flare phenomena" in connexion with small-pox epidemics—is certainly deserving of further study, as at present our knowledge is still very incomplete. We have had several examples of these "flare phenomena" in Leicester, but they have afforded little support to the theory that the non-immunity of the child population is a particularly important factor in the causation or extension of small-pox epidemics where modern methods for dealing with the disease are efficiently carried out. In my Chadwick lectures, which I hope shortly to publish, particulars are given of a very remarkable "flare" which occurred in Leicester in April, 1903. It was undoubtedly a great surprise to all who closely watched the experience of Leicester at that time to observe how small a part in the epidemic the school children (nearly 90 per cent. of whom were unvaccinated) played. It was the same in the 1904 epidemic, and also in that of 1893. Moreover, Dewsbury, another unvaccinated town, has had a similar

experience. With Gloucester it was otherwise, I admit, though there were good reasons to account for this. But even in Gloucester I do not think it can be contended that certain school outbreaks which occurred were at all sufficient to account for the "flare," which was such a feature of the epidemic. The school outbreaks were merely incidents of the "flare," rather than its cause.—I am, etc.,

Leicester, Feb. 24th. C. KILLICK MILLARD.

LITHOPAEDION.

SIR,—I notice in your issue of December 27th, 1913, page 1624, a report by J. B. Fraser of a case of lithopaedion that had been retained in the abdomen of the mother many years, during which time she gave birth to several children. He suggests that possibly the period is the "world's record."

Perhaps he and others of your readers would be interested to know that there is in this museum a lithopaedion that was retained in the abdomen of the mother fifty-five years, during which time she bore five living children. I think that this case goes eleven years beyond Fraser's. The specimen was removed at autopsy. The case was published in full in the *Transactions of the Tennessee Medical Society*, 1886-8, page 85.—I am, etc.,

Army Medical Museum and Library, Washington, U.S.A., Feb. 7th. W. S. LAMB.

PNEUMONIA: ITS NATURE AND TREATMENT.

SIR,—Dr. Giles (January 31st, 1914, p. 273) relates that his father in 1871 included potassium iodide and creosote in his treatment of pneumonia. But it appears to me that this treatment has little analogy to the one I advocate, even if the doses of the two drugs in each treatment are similar, for the inclusion of the other things mentioned makes a great difference. At all events, we understand from the letter that when father and son were practising together and using some such prescription, or, at all events, one quite different to mine, their mortality did not exceed that of their neighbours.

Now, it cannot be too clearly understood that my mortality in about fifty cases is absolutely *nil*, with this exception: Recently I was called to an old lady who had been ill for five days, and had evidently suffered from considerable vascular degeneration before she contracted pneumonia. She died the day after, and even during the short time I attended her the specific was not given quite regularly. The temperature was 99 when I saw her. It is hardly fair to count such a case.

The remarkable results above mentioned include a large number of cases of aborted pneumonia. These were not so numerous at first, when the prescription had hardly assumed its settled form: and this is an argument against introducing untried variations. Why not use the prescription as it stands?

R	Pot. iodidi	ʒj
	Creosoti	ʒss
	Spirit. rect.	ʒij
	Ext. glycyrrh. liq.	ʒiij
	Aq. ... ... ad	ʒvj

Misce; ʒss quartis horis.

It should be used till the temperature is normal, when a tonic should be substituted. When we consider the terrible annual holocaust from pneumonia, the loss of great human assets to the State, and the danger that truth uncherished may fall lower and lower beneath the débris of time, to be rescued by a later civilization to the shame of ours, is it too much to ask once again from senior contemporary and junior for a fair trial of this specific?—I am, etc.,

London, N., Feb. 2nd. ARTHUR J. MATHISON.

RADIUM AND CANCER.

SIR,—In the issue of the BRITISH MEDICAL JOURNAL of February 21st, p. 427, there appears a report of a paper read by me at the Pathological Section of the Royal Society of Medicine on February 17th on the changes which occur in malignant tumours on exposure to the gamma rays of radium. Your reporter, in referring to my remarks on the possible changes in metastases, states that:

> His investigations on the action of radium on metastases had been limited to four cases, but he ventured to say that, apart from the direct effect of the rays on adjacent glands, there were striking changes in distant metastases, which obviously diminished in size.

Inadvertently, this commits me to a statement which I neither made nor am in a position to make, and at the present juncture accuracy in reference to the effect of radium in cancer is necessary above all things. The actual words I used in my paper were as follows:

> A statement on this subject (of changes in metastases) must necessarily be guarded at the present time, for the evidence in favour of any change is extremely slender. However, in the case of secondary deposits in lymphatic glands, though the material at my disposal has been limited to four cases, I have observed slight changes which encourage me to make further investigations.

You will at once perceive that the words "distant metastases" imports into my remarks suggestions which were not there.—I am, etc.,

London, W., Feb. 24th. A. CLIFFORD MORSON.

VIBRATION AUSCULTATION AS AN AID TO PHYSICAL DIAGNOSIS IN THORACIC AND ABDOMINAL DISEASE.

SIR,—I should not venture to comment upon Dr. James Cantlie's lecture upon the use of the tuning-fork as an aid to physical diagnosis were it not that some statements have appeared in the public press recently, claiming for Dr. Cantlie's observation an exaggerated merit, as if it were a new and original method of vibration auscultation. My friend, Dr. Walter Kidd, has very kindly called attention to the fact that these observations are not new, and he cites a lecture on the subject delivered by me at the Brompton Hospital some years ago. I shrink from writing on medical subjects in the public press, and so far I have paid no attention to Dr. Cantlie's claim for priority, but the article that appears in last week's issue of your journal enables me to say that this is the third time in the last few years that some one has announced as an original discovery this use of the tuning-fork.

I enclose a reprint of the lecture referred to. This was published in the *Practitioner* for February, 1902, and was entitled "Auscultatory Percussion as a Means of Diagnosis in Thoracic Disease."

I described in this article the use of the tuning-fork in the case of cavities containing air or gaseous products, whether thoracic or abdominal, and its value by means of auscultation of its vibrations in mapping out the solid viscera or in defining the line of demarcation between two dull areas differing in density, such as that between a fluid effusion in the pleural cavity and the cardiac dullness. I have been accustomed to use these methods for many years.

I have no wish to detract from the value of Dr. James Cantlie's observations, and am only glad to find that he gives independent testimony to the usefulness of this means of examination in certain cases, and has amplified it. I do not for a moment suggest that the articles that have appeared in the public press are due to Dr. Cantlie's initiative, but I do venture to suggest to him that, before claiming originality for these methods, he might have looked up the small literature of the subject.

I may, perhaps, be allowed in this place to thank Dr. Walter Kidd for having for the second time called attention to the lecture of mine to which I refer.—I am, etc.,

London, W., Feb. 24th. S. H. HABERSHON.

THE ETIOLOGY OF BERI-BERI.

SIR,—Dr. W. J. J. Arnold, in the JOURNAL of February 7th, makes a useful protest against the too ready acceptance of the rice-eating theory of the origin of this disease. After all, a single well-proved exception is logically sufficient to quash such a generalization. A short time ago I examined here in London the crew of a Norwegian ship just arrived from South America. There were about twenty cases of beri-beri, wet and dry, on board. So far as I could find out, the disease was new to the ship, and rice was not used at all. Nor could it be shown to be

directly due to overcrowding, as the incidence was heavier among the officers than among the men.

There must, therefore, be some other cause than the eating of decorticated rice. This is as much as to say that decorticated rice is not the cause at all.—I am, etc.,

London, E.C., Feb. 11th. W. J. GALT.

Obituary.

HENRY SKELTON, M.D.,

DOWNEND, BRISTOL.

By the death, on December 7th, 1913, of Dr. Henry Skelton, Bristol has lost one of the most experienced and active of its practitioners and the Division of the British Medical Association one of the older of its members. For some forty years he lived at Downend, in the wooded outskirts of Gloucestershire, those parklands upon which Kingswood looks down, stretching between the steeples of Stapleton and Winterbourne, and fringing the growing edge of industrial Bristol.

Here he enjoyed to the full the medical life, taking work in every way in which it comes to the willing and the capable. Appointed by public bodies and institutions, and by private, and trusted by his neighbours of all degrees, he illustrated in himself the doctor's acceptance and access, where and when (to give a felicitous turn to the words of the poet):

> Pallida mors aequo pulsat pede pauperum tabernas
> Regumque turres.

He had been a medallist at Charing Cross Hospital in 1867; at Westminster Hospital he was house-physician; the M.R.C.S.Eng. he took in 1869. He drew also from the Scottish schools in years of fame, having become an Edinburgh Licenciate in 1867, and a member of the College in 1877; he added to these in 1885 the M.D. of St. Andrews. In 1887 he published in the *Lancet* an account of haemophilia affecting three members of a family—a subject which, with later and exacters tudies in physiology and heredity, retains its fascination. Fond of teaching, he was successful with his Red Cross classes, the latest of which in 1913 won a challenge cup at Gloucester.

Dr. Skelton was of a most genial and kindly disposition; a man of a strict sense of justice he bore well the honours of seniority amongst his local fellow-practitioners. He showed to great advantage as a host; his house was a most pleasant one, an old Tudor hunting box, in a wing of which—his music room—he might entertain those in Bristol who, like himself, were accomplished instrumentalists. On his lawns and to his rose garden he loved to gather summer parties; with a single guest he would discourse over wine the local or larger politics of the public-spirited man; or, with a younger acquaintance, renew the zest and interests of the schools. To his parish church he was devoted, and added to its embellishment; and, venturing further than the churchwarden's privileges and the lectern, he qualified for the Bishop's licence as a lay reader, and served that office faithfully.

His fatal illness was a short three weeks of angina pectoris; knowing from the first its significance and end, he bore with patience and fortitude his last days of pain. His last obsequies at Downend were honoured by the presence of a crowd of patients and friends, by whom his name will long be remembered with affection and pride.

WILLIAM BRYCE, M.D.,

EDINBURGH.

DR. WILLIAM BRYCE died at his residence at 34, Greenhill Gardens, Edinburgh, on February 21st, at the advanced age of nearly 93 years. He was a "son of the manse," having been born at Killaig, near Coleraine, in Ireland, where his father, the Rev. James Bryce, was Presbyterian minister. The Rev. James Bryce was well known among the ecclesiastics of his time, first as minister of the Anti-Burgher Church at Wick, and later as founder of the Church of the Associate Presbytery which seceded from the Presbyterian Synod of Ulster. Dr. Bryce was brought up at Killaig, and began, at a little later age than most men to study medicine, first at Dublin and then at Edinburgh. He graduated M.D. at the last-named university in 1853, gaining a gold medal for his thesis. A year or two later he settled at Dalkeith, near Edinburgh, entering into private practice, and acting also as surgeon to the Duke of Buccleuch's Militia there. In 1868 he removed to Edinburgh, being followed in Dalkeith by Dr. Alexander Ballantyne (now of Gullane). Dr. Bryce practised for many years in Charlotte Square. It was in Charlotte Square also that his brother, the late Dr. Archibald Hamilton Bryce, presided over the Collegiate School, a well-known educational establishment at that time. Another brother, Dr. James Bryce, was head of the Glasgow High School, and yet another brother has been M.P. for the Inverness Burghs since 1906. Dr. Bryce is survived by his widow (who was a Miss Hastie of Eskbank), by a daughter and by three sons, including Dr. Thomas Bryce, Professor of Anatomy in Glasgow. Dr. Bryce had leanings to homoeopathy; he laid great stress upon the importance of thoroughly mixing the constituents of prescriptions, and he was ever ready to take a critical position in respect to drugs (such as calomel) which were enjoying what he regarded as too high a degree of popularity. He was a keen golfer, curler, and bowler. The cause of death was acute pneumonia.

THE LATE DR. REGINALD HARDY.—Dr. Reginald Broadbent (London, N.) writes: As a very old friend of the late Dr. Reginald Hardy, of Buxton, I should be glad if you would allow me to add a few words to your obituary notice which appears in the JOURNAL of February 21st. In addition to being an enthusiast in his professional work, Dr. Hardy was something of an athlete, and possessed physical courage of a high order. He was an expert swimmer, and when quite a lad jumped from the end of the Brighton Pier to save a drowning man. And when living in Leicester he saved a child who had fallen into the canal. He took great interest in first aid work, and this led to his becoming a student at Owens College, Manchester. When he first entered, and whilst still a stranger, he won for his college the "inter-varsity" prize for swimming. In Buxton he organized and became captain of the harriers, sometimes running ten miles across the moors. His fine character, and the great interest he took in his work would have won for him a high place in general practice if his life had been spared; indeed, he had already made a good reputation in Buxton. He thought that the disease which proved fatal was introduced into his system from cuts when making *post-mortem* examinations as a student. Great sympathy must be felt for his widowed mother, whose only son he was.

DR. ROBERT MOORE BOWMAN, who died at Ripon recently at the advanced age of 92, was the son of Mr. James Moore Bowman, surgeon, of Ripon, who died during his mayoralty in 1834. Dr. R. M. Bowman obtained the diploma of M.R.C.S.Eng. in 1845, and that of L.S.A. in 1849. He had been in practice in Ripon for seventy years, and, although he had lived retired for some years, he still retained some of his old patients. He was active in the saddle for many years, and attended the meets of the York and Ainsty and Bedale. He was appointed a magistrate for the Liberty of Ripon and the West Riding in 1898, and was a regular attendant on the bench.

DR. JOHN MONTAGU CUTHBERTSON, who died at Droitwich on February 13th at the age of 72, was born in Ayrshire in 1841. He received his medical education at the University of Glasgow and obtained the diploma of L.R.C.P.Edin. in 1868; he became a Fellow of the Royal Faculty of Physicians and Surgeons of Glasgow in 1878. He practised first at Windhill and then at Shipley, Yorks. He settled in Droitwich in 1878, and with the growth of the place as a cure for rheumatism in its brine baths, he became known to a wider circle than is given to the lot of the general practitioner in a country town, and won for himself many friends. He never took part in the political work of the town, though frequently pressed to do so; and for thirty-five years was never known to take a holiday.

He was medical officer for the Droitwich Union, and his fortnightly return was, until a week before his death, always sent in by himself. He was a keen lover of horses, and provided many free meals for the ponies of the salt-hawker class, now a dying feature in the industry of the borough. He was appointed a county magistrate in 1910. He leaves a widow and two sons, one of whom is in the profession and the other farming in Vancouver Island.

Fleet Surgeon Alfred Hutton Jeremy, R.N., of H.M.S. *Implacable*, who died in London recently, was the son of the late Rev. D. D. Jeremy. He received his medical education at Trinity College, Dublin, and qualified M.B., B.Ch., B.A.O.Dub. in 1890.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. E. Doak Capps, one of the founders of the Fort Worth (Texas) School of Medicine, and professor of diseases of the brain and nervous system in that institution, aged 46; Dr. N. Duchesne, President of the Medico-Chirurgical Society of Liége; Dr. W. G. Ewing, formerly professor of materia medica at the University of Nashville and Vanderbilt University, and president of the faculty of the medical department of the University of Tennessee, aged 65; Dr. Friedrich Löe, of Berlin, said to be the oldest member of the medical profession in Germany, and one of the founders of the Society of Scientific Medicine, to which Rudolf Virchow communicated the first fruits of his researches; Professor Nietner, of Berlin, an active worker in the war against tuberculosis, aged 58; Dr. Albert Pendin, head of the third therapeutic section of the Obuchow Hospital for Women till he was disabled by illness in 1907, aged 43; and Dr. Volckers, sometime professor of clinical ophthalmology in the University of Kiel.

Medico-Legal.

PARTNERSHIP AGREEMENTS.

A. buys a third share of a practice from B. at two and a half years' purchase on the average receipts of the previous three years, which include moneys from both receipts from a surgery situated some distance (about three-quarters of a mile) from the private residences and also a salary for a public appointment under the guardians. At the end of six years A. is able to exercise an option in the agreement to purchase a further sixth of the practice on the same lines, and does so. In the agreement there is a clause which permits either partner to exercise an option to dissolve partnership at the end of ten years, giving a previous six months' notice in writing. B. exercises this option, and continues to hold the public appointment, and also continues to take on the lease of the surgery. Would it be a usual procedure for B. to pay A. out under these two heads or not?

*** There should be a clause in the deed of partnership settling the way in which the dissolution is to be carried out. In its absence, either partner might claim to have the value of the practice realized and divided in proportion to the shares of the partners. In that case either partner might bid for the whole. It would, of course, always be open to the partners to settle the matter between themselves by mutual agreement. The usual procedure, as stated above, is laid down in the deed of partnership, and a very common arrangement is that, on the dissolution, each partner shall continue to practise independently, each retaining what patients he may happen to have at the time of the dissolution. In that case, the one possessing a public appointment at the time would retain it as his own. If the surgery had been worked in common the value would have to be ascertained, and whoever kept it would have to reimburse the other for his share in it. Another common arrangement is that on a dissolution the outgoing partner is to be paid on his retirement the value of his share, but is required to give an undertaking not to practise within a reasonable radius of his old residence.

A fund is being raised in Sheffield for the purchase of radium for therapeutic purposes. Mr. Denys Hague, formerly of Sheffield, has given £1,000, and other subscriptions amount to £225.

The Services.

ARMY MEDICAL SERVICE.

Royal Army Medical Corps.

The following is a list of successful candidates for commissions in the Royal Army Medical Corps at the competition held in London in January, 1914, for which 42 candidates entered:

Name.	Medical School.	Qualifications.	Marks.
*Thompson, T. O.	Oxford University and St. George's Hospital	B.A., M.B., B.Ch. Univ. Oxford	601.5
Linzell, S. J. ..	Edinburgh University	M.B., Ch.B.Univ. Edinburgh	584.5
*Shore, S. R. ...	Cambridge University and St. Bartholomew's Hospital	B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond.	580
*Gill, J. G. ...	Edinburgh University	M.B., B.Ch.Univ. Edinburgh	565.5
*Stubbs, J. W. C.	Trinity College, Dublin	B.A., M.B., B.Ch., B.A.O.Univ. Dublin	557.5
*Hattersley, S. M.	Cambridge University, and St. Bartholomew's Hospital	B.A., M.B.Cantab., M.R.C.S.Eng., L.R.C.P.Lond.	556
*Rintoul, D. W....	St. Andrews University	M.B., B.S.St. Andrews	552
Watson, A. ..	Edinburgh University	M.B., Ch.B., D.P.H., D.T.M.Univ. Edinburgh	547.5
Lothian, N. V. ...	Glasgow University	B.Sc., M.B., B.Ch. Univ. Glasgow	545
*Breen, T. F. P....	Trinity College, Dublin	B.A., M.B., B.Ch., B.A.O. Univ. Dublin	540.5
Gwynne, J. F. G.	Sheffield University	M.B., Ch.B.Univ. Sheffield	533
Menzies, A. J. A.	Edinburgh University	M.A., M.B., Ch.B. Univ. Edinburgh	529

* These gentlemen, being in possession of certificates obtained in the Officers' Training Corps, were awarded service marks under paragraph 71 of the Regulations for the Officers' Training Corps.

Universities and Colleges.

UNIVERSITY OF BRISTOL.

The following candidate was approved at the examination indicated:

M.B., Ch.B.—Maurice Charles Barber.

CONJOINT EXAMINATIONS IN IRELAND.

The following candidates have passed the examination held by the Royal College of Physicians and the Royal College of Surgeons:

D.P.H.—Henry Blyth, Captain Howard Crossle, I.M.S. (with honours), Henry Lloyd.

Medical News.

The annual general meeting of the Royal Medical Benevolent Fund Guild will be held on Tuesday next at University College Hospital Medical School, University Street, Gower Street, W.C., when the Viscountess Bryce will take the chair at 3 p.m.

A discussion on arterio-sclerosis will be opened at a meeting of the Chelsea Clinical Society in the club rooms of the St. George's Hospital Medical School on Tuesday, March 10th, at 8.30 p.m., when Professor Leonard Hill will read a paper on new facts concerning the measurement of blood pressure in man.

The Pasteur Institute of Paris has invited directors of similar institutes and antirabic services throughout the world to a conference on hydrophobia with special reference to etiology, prophylaxis, treatment, and statistics. The conference will meet in the Pasteur Institute (25, rue Dutot, Paris, XV) during Eastertide, April 7th to 10th, 1915. Applications for membership will be received up to January 1st, 1915.

A work entitled *Plague and Pestilence in Literature and Art*, by Dr. Raymond Crawfurd, is announced by the Oxford University Press. The book contains a series of 31 reproductions of plague pictures, principally well-known paintings. Dr. Crawfurd is the author of two other works of medico-literary interest, *The Last Days of Charles II* and *The King's Evil*, both of which have been reviewed in the British Medical Journal.

THE number of voluntary aid detachments in the county of London in the third quarter of 1913 was 79, with a personnel of 2,230. Of these detachments 68 had been inspected, and the total personnel present at inspection was 1,248. The County Director, Colonel Valentine Matthews, late R.A.M.C.(Vols.), states that judging from the reports of the inspecting officer and his own personal observations the work done is distinctly progressive and encouraging. He recommends that detachments which are so far disorganized as not to have been inspected for two years in succession should not be retained on the registered list.

DR. R. T. LEIPER, Helminthologist of the London School of Tropical Medicine and Wandsworth Scholar, has left London for the East, with Surgeon E. L. Atkinson, R.N., and Mr. Cherry-Garrard, both of whom accompanied the Antarctic Expedition. The object of the expedition is to ascertain the mode of spread of trematode diseases of man, especially bilharziasis; investigations will also be made into ankylostomiasis, which has wrought such havoc among the coolies on the tea and rubber estates. The expedition has been subsidized by a grant from the Colonial Office, and the United States Rubber Company have offered facilities for the study of medical problems on their estates in Sumatra.

THE assistant medical officers in the hospital service (other than asylums) of the Metropolitan Asylums Board have formed an association to promote the interests of assistant medical officers, to afford an opportunity for the discussion of the disabilities under which they find themselves, and to make united representations to the Board for their remedy. The Metropolitan Asylums Board has under its control not only asylums for the insane and the mentally deficient, but also hospitals for infectious diseases, for tuberculosis, and for children's diseases. This hospital service constitutes a distinct branch, and we are aware that for a good many years past much dissatisfaction with their position has existed among its members. This dissatisfaction, having regard to the responsible and onerous nature of their duties, is well grounded; they do not receive the recognition nor the emolument which are their proper due, and we hope that the Metropolitan Asylums Board may shortly see the advisability of putting the service on a satisfactory basis.

A SUMMARY of the first progress report of the Thompson-McFadden Pellagra Commission by Drs. J. F. Siler, P. E. Garrison, and Ward J. McNeal was published in the *Journal of the American Medical Association* of January 3rd, 1914. The following are the principal conclusions arrived at by these investigators: "(1) The supposition that the ingestion of good or spoiled maize is the essential cause of pellagra is not supported by our study. (2) Pellagra is in all probability a specific infectious disease communicable from person to person by means at present unknown. (3) We have discovered no evidence incriminating flies of the genus *Simulium* in the causation of pellagra, except their universal distribution throughout the area studied. If it is distributed by a blood-sucking insect, *Stomoxys calcitrans* would appear to be the most probable carrier. (4) We are inclined to regard intimate association in the household and the contamination of food with the excretions of pellagrins as possible modes of distribution of the disease. (5) No specific cause of pellagra has been recognized."

IN 1912 a Joint Committee composed of representatives of the New York Academy of Medicine, the Obstetrical Society, the Surgical Society, the New York Association for Advanced Medical Education, and the Medical Society of the County of New York, was appointed to formulate some plan for making the vast amount of clinical material in New York readily available to medical practitioners. The Academy of Medicine was decidedly in favour of such a scheme, but lacked funds to carry it into effect. The Society for the Advancement of Clinical Study in New York was therefore organized to finance the project. In January, 1913, it established a Bureau of Clinical Information at the Academy of Medicine, under the direction of its present executive committee, and has since carried on the work of daily posting of operations on the hospital bulletin board, and the maintenance of a *Bulletin* for regular fixed clinics. The bureau cannot fail to be of great use to medical visitors to New York. Communications should be addressed to Dr. George Gray Ward, jun., Secretary, 17, West 43rd Street, New York.

DR. CARDENAS, who has been appointed by the Government of Venezuela Minister Plenipotentiary to France, is a member of the medical profession. He is the son of a doctor, and was born at Tariba in 1875. In 1896 he took the degree of Doctor of Medicine at Caracas, and afterwards worked in the Paris hospitals and laboratories for seven years. He then went to Germany to study Bier's method, and came to England to work under Sir Almroth Wright. He represented the Government of Venezuela at the International Congress of Medicine held in Paris in 1900, and at that held in Madrid in 1903. Last year he was sent by his Government on a confidential mission to the King of Spain. He has been consul-general of his country for Spain, England, and Germany. Holding that medical science must play a great part in the economic and social life of peoples, he has taken interest in tropical pathology, and he was one of the original members of the Paris Society of Tropical Medicine and Hygiene. He has been a leader of sanitary reform in Venezuela, and with the support of President Gomez he has done much for the suppression of yellow fever and malaria in Venezuela.

THE usual monthly meeting of the Executive Committee of the Medical Sickness and Accident Society was held at 429, Strand, W.C., on February 20th. Dr. F. J. Allan was in the chair. The principal business before the meeting was the consideration of the annual and quinquennial reports, which were duly approved and passed, the results in both cases being of a highly satisfactory nature. The claims for the month of January show a marked decrease and consequently a substantial margin in favour of the society. It was reported that the new and additional proposals both showed a large increase on the same month of last year. The society has now been established for thirty years, having been started in March, 1884, and experience has proved conclusively that one of the first and most important rules of such an undertaking is the restriction of management expenses. The society is limited to 10 per cent. of the premium income, but this has never been reached, and, in fact, for the first twenty-five years it was only a fraction over 5 per cent. The balance of this allowance has assisted in paying bonuses. The total amount paid to members in the form of bonus since 1884 has now reached the sum of £19,000. All information can be obtained from the Secretary of the Society, Mr. Bertram Sutton, F.C.I.I., 33, Chancery Lane, W.C.

A MEETING of the Child Study Society, presided over by Mrs. Wilton Phipps, was held at the Royal Sanitary Institute on February 19th, when an interesting lecture on speech defects in children was given by Mr. E. W. Scripture, of New York. Mr. Scripture said that one of the most common forms of defective speech in children was that known as mechanical lisping, caused either by some defect of the lips such as harelip, by a cleft or highly-arched palate, by defects of the teeth, leading to the malformation known as the overshot and undershot jaw, or by some lesion of the nerves of the larynx. In harelip or cleft palate it was necessary to have recourse to surgery, whilst in very early childhood the dentist could sometimes prevent the troubles arising from misshapen jaws. The form of speech known as ataxic, on the other hand, was incurable. Other forms of defective speech amongst children were motor aphasia and infantile spasticity, whilst meningitis and chorea also caused a characteristically faulty articulation. There was also a large group of speech defects the result, not of disease, but of certain mental conditions. Amongst these were negligent lisping, due to the child's falling into bad habits and not paying proper attention to its speech, hysterical mutism, common even in quite young children, and stuttering which had its origin in what Mr. Scripture termed "timidity neurosis," a mental condition which took different forms in different people. Stuttering, said Mr. Scripture, was caused solely by fear or shyness of other people, and the stutterer was nearly always abnormal, or, at least, markedly different from the average man. The mental condition was usually disturbed, so that the child might almost be described as living in a continual state of stage fright. Added to this were other peculiarities, such as cramps of the lips, larynx, abdomen, and diaphragm, and the presence of accessory sounds in the speech. Another peculiarity common to most stutterers was the power to speak normally in an abnormal voice. Treatment consisted in getting rid of the subconscious fear in which this distressing malady had its source; if this could be effected, the stutter vanished. With regard to deaf-mutes, the lecturer said that, since every human being possessed the faculty of speech, there was no reason that the deaf should always be dumb, and therefore every deaf child could be taught to speak to a certain extent. Much could also be done, by means of certain apparatus, to improve the enunciation of the congenitally deaf.

Letters, Notes, and Answers.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631. Gerrard. EDITOR, BRITISH MEDICAL JOURNAL.
2670. Gerrard. BRITISH MEDICAL ASSOCIATION.
2634. Gerrard. MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MARRIAGE OF FIRST COUSINS.

WITH reference to an answer to "Eugenics" which appeared under the above heading in the issue of February 14th, "Ariston Metron" asks us to state whether "there is any definite and conclusive evidence substantiating the vague and indefinite statements that are made in regard to the marriage of cousins." He goes on to remark that such statements would lead one to suppose that the majority of the children in deaf and dumb schools were the offspring of cousins; the fact of some relative having been born deaf and dumb alters the case completely. It shows a defect in the family history, and even with our present limited knowledge of the laws of heredity, that such a defect would tend to show itself in the subsequent offspring would only naturally be expected. But there is the other side of the picture. Suppose it were possible to mate two perfectly healthy cousins, free of hereditary weakness or so-called taint, why should not the offspring also be of perfect health and condition?

*** Our correspondent is, we think, correct in his surmise that very little exact knowledge has been attained on this subject. Indeed, an appreciation of the degree to which cousins resemble one another (an almost indispensible preliminary to other inquiries) has only been published recently —*On the Measurement of the Resemblance of First Cousins*, by Elderton and Pearson. (London: Dulau and Co.) In the existing state of knowledge it does not seem prudent to make any more definite statement than that contained in our reply to "Eugenics."

ANSWERS.

TREATMENT OF STERILITY IN THE FEMALE.

DR. LEONARD J. KIDD (London) advises "M.B." to try thyroid extract. In 1912 Weil treated successfully three women who had been sterile for years; conception followed in each case after a few months' use of iodothyrin tablets; he began with one daily, and increased this gradually up to one or two thrice daily. The plan of Marion Sims sometimes succeeds without any treatment: connexion is reserved for the morning after breakfast; the wife breakfasts in bed and keeps warm; the husband must also have breakfasted and be warm. Probably night is the worst of all possible times for those women who conceive with difficulty. As the thyroid acts similarly on the testis and ovary, it is worth trying thyroid extract on the husband also.

PAYMENT FOR NOTIFICATION CERTIFICATES.

S.—Although a sanitary authority might insist upon a certificate under the Infectious Disease (Notification) Act, 1889, being made out on the prescribed form, it is customary for such to be accepted when sent in some other form, such as on a sheet of notepaper, though whenever possible the prescribed form should be used. It is quite possible that the applications for payment made by our correspondent have been overlooked. A further application should be made to the clerk to the council. If payment is not then forthcoming the only course left open is to sue the council for the amount in the county court.

LETTERS, NOTES, ETC.

BY an oversight of the Editor of the *London Hospital Gazette*, it was omitted to be stated that the Clinical Supplement in the February number, entitled "Puerperal Pyrexia," was a paper read before the London Hospital Medical Society on December 11th, 1913, by Dr. Gordon Luker, obstetric tutor and registrar to the hospital.

RAPID DELIVERY IN ECLAMPSIA.

DR. T. IRELAND (North Berwick) writes: In the BRITISH MEDICAL JOURNAL of January 17th I noticed a paper by Dr. Jardine, of Glasgow, on the successful treatment of puerperal eclampsia by hypodermic injections of "veratrone." The results obtained by him in a series of cases of some six or seven in number appear to have been eminently satisfactory, and quite consistent with those previously obtained by my friend Dr. F. W. N. Haultain of Edinburgh, of whose paper, as read before the Edinburgh Obstetrical Society in July, 1913, I have now a reprint from the *Edinburgh Medical Journal* of October last before me. I believe that I am correct in saying that the preparation veratrone for hypodermic use in such cases was made specially by Messrs. Parke, Davis, and Co., on the suggestion of Dr. Haultain, and that to him alone is due the credit of the introduction of this apparently most successful form of treatment in a very dangerous malady. As Dr. Jardine is on the list of members of the Edinburgh Obstetrical Society, and possibly may occasionally read its *Transactions*, it is unfortunate that he should have omitted to mention the origin of this new preparation.

INCREASED SUBSCRIPTION TO THE ASSOCIATION AND MOTOR CAR INSURANCE.

T. W. A. writes: May I point out that motorists can, by insuring through the Medical Insurance Agency (429, Strand), save the extra amount which the increased subscription entails? In 1913 I insured my car, not through the Medical Insurance Agency, but have done so this year, and in my case the result is:

	1913.	1914.
Subscriptions to Association ...	£1 5 0	£2 2 0
Insurance of car	10 0 0	8 2 0
	£11 5 0	£10 4 0

which amounts to a saving of 21s., or about 12 gallons of petrol.

ADVICE TO SHIP SURGEONS.

ANOTHER OUTWARD BOUNDER writes: My advice to ship surgeons is to refuse money from passengers unless they have the right to claim it. For to accept a "present" is to accept a tip, and to lower oneself to the level of a ship's steward. Self-respect and the respect of others should come before finance. Companies tacitly or actually permit the practice, as it tends to keep salaries down. "Outward Bound's" suggestion of £25 a month and private practice is in fact exorbitant, except in very large ships with a large number of steerage passengers; £15 a month compares very favourably with the salary of officers who have spent many years at sea and who have to work very much harder than the surgeon, except possibly when there are many steerage passengers. I have spent three years at sea, in the P. and O. Company years ago and more recently in the Royal Mail and Elder Dempster Companies, and my work has seldom taken more than an hour each day. Nevertheless a surgeon's time is worth £15 a month and board and lodging. Surgeons ought to insist on a cabin apart from the surgery. It is in the highest degree unhygienic to see venereal and other sores in one's bedroom.

VERB. SAP. writes: Applying to the agents for a round voyage as a ship surgeon I learnt that they could secure me such post in one of three lines, the voyage being 6 to 7 weeks, 24 days, and 23 days respectively. On calling for particulars I learnt that my duties were: (*a*) To attend passengers and crew free, and that on no account should I be allowed to charge or receive any fee from any passenger; (*b*) to make a daily inspection of the ship, and enter on a log any illness existing on board; (*c*) to sign health certificates at each port of call, and report personally to the health officers as to health of passengers and crew; (*d*) provide myself and wear company's uniform (about 5 guineas); (*e*) sign on as one of the crew under the Merchant Shipping Act, obey all commands, and not to leave the ship at any of the ports of call without the previous consent of the captain or officer in command. For emoluments I was to receive wages at the rate of one shilling a month, dine in the saloon, free bunk in the surgery (generally an inside cabin), pay for all alcoholic drinks and mineral waters, and pay my own expenses to and from and on and off the ship. In addition I learnt that certain tips were expected from the surgeon at the end of the voyage, namely: Cabin steward 10s., table steward 10s., bath steward 10s., night steward 5s. (boots), bar steward 2s. 6d., library steward 2s. 6d., boastwain 2s. 6d. After making further inquiries I dropped negotiations, but have been assured that well qualified and established men accept these posts.

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THE VISCERAL LESIONS OF PURPURA AND ALLIED CONDITIONS.

BY

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INTRODUCTION.

In his well-known work on *Cutaneous Diseases* (1808) Willan first reported the occurrence of visceral symptoms in a case of purpura of great severity, with vomiting, excruciating abdominal pain, diarrhoea and bloody stools. In addition to purpura, there were "anasarcous swellings on the thighs and hands," evidently angio-neurotic oedema, and on the back of the hands two gangrenous sloughs. It is particularly interesting that Willan should have thus noted the polymorphous character of the skin eruption. Olivier (d'Angers),[1] in 1827, gave a good account of the abdominal complications of purpura; and Henoch,[2] 1874, and Couty,[3] 1876, described the cases more fully, and now the combination of purpura with abdominal pains is called after the late distinguished Berlin paediatrist. Since then there have been scores of communications; I have myself reported long series of cases;[4] and Pratt has given a good summary of our present knowledge in vol. iv of my *System of Medicine*. The general literature of purpura to 1909 is given in the first and second series of the *Index Catalogue of the Surgeon-General's Library*. An excellent analysis of the recorded cases with abdominal symptoms to 1889 is given by v. Dusch and Hoche in the *Henoch Festschrift*, Berlin, 1890.

CHARACTER OF THE SKIN LESIONS.

From the anatomical standpoint four lesions are met with in the cases under consideration. All are exudative, in which the blood elements—either the red blood corpuscles alone, the serum alone, or both combined—pass out of the vessels.

1. *Purpura.*

This, the most common lesion, is either simple or associated with swelling, purpura urticans, and with oedema of the hands and feet or about the joints, particularly the knees and elbows. The larger areas may be capped with bullae—purpura bullosa. There are cases in which the vesicular character of the purpura is very striking. A man aged 34 was admitted in his fourth severe attack of purpura. The backs of the hands were covered with simple purpura; just below the right elbow was a fresh eruption of blebs looking like herpes, some on hyperaemic, some on purpuric bases. Two inches above the left condyle was a patch of pearly vesicles, solid, not on reddened base; above the joint of the other elbow was a raised bulla 2 cm. by 7 mm. with haemorrhagic contents. Over the right second rib were two patches of pemphigoid purpura, one 2 by 3 cm., the other 1½ cm. in length. Practically all varieties of purpura are seen, reaching to the severest grade of morbus maculosus werlhoffii.

2. *Effusion.*

Effusions of serum alone, forming the ordinary wheals of urticaria or the patches of angio-neurotic oedema, are the next in frequency of occurrence. The clinical features may be those of ordinary urticaria or of angio-neurotic oedema.

3. *Erythema.*

Erythema, either diffuse and with or without swelling, or localized, as in the common form of erythema exudativum multiforme; sometimes patches have the appearance of erythema nodosum. In Case XIII[5] of my series a patient had attacks of violent colic for months without skin lesions, and then was admitted with a typical attack of erythema multiforme on hands, forearms, face; on the legs some of the patches were exactly like erythema nodosum.

4. *Necrotic Areas.*

When a localized infiltration of blood and serum is very intense in a patch of considerable size, bullae form and the superficial layers of the skin necrose, leaving an open ulcer. This is more frequently seen in the severer types of purpura, with large serous exudation, but it may occur in intense erythema, as in that most typical of all varieties, chilblains.

There are two outstanding clinical features—first, the recurrence of attacks at long or short intervals over periods ranging from a few months to many years, and secondly, the morphological inconstancy of the skin lesions. In Willan's case purpura, angio-neurotic oedema, and necrotic sloughs were present in one attack. Within a few weeks the patient may run the gamut of a skin atlas—purpura, oedema, exudative erythema, pemphigoid lesions, etc.; or in the same individual followed for many years the skin lesions may differ in the different attacks. Very many of my reported cases followed for years have shown these polymorphic characters.

Even the unusually stable, hereditary form of angio-neurotic oedema may present erythematous lesions of the worst type. For years I had correspondence with a Mrs. W., aged 54, of California, a victim of aggravated angio-neurotic oedema of twenty years' standing; a case illustrating how terrible the disease may be. Her mother had the same affection. The attack began when she was 27, after the birth of her second child. Oedema would come on at any time, anywhere, accompanied with severe vomiting, often of blood. Tea, coffee, or strawberries would bring on an attack within three hours. The face and throat were much affected. The attacks usually began with red spots like wheals on the cheeks. The outlines of the neck would be obliterated. She came into hospital, October 4th, 1904, in an attack, with infiltration of the inner side of the left arm and elbow, with black and blue spots, and the right arm enormously oedematous, with a vivid erythema extending up and down the arm. There was no fever, no enlargement of the spleen, no albumin in the urine. A specially interesting thing was to find that this patient belonged to the New Jersey family of hereditary angio-neurotic oedema, which I described in 1888.[6] She was the great-great-granddaughter of the man, aged 92 (who had been taken as a boy to see the famous Benjamin Rush), who so kindly worked out for me the family history. It is worth noting that another member of this family had had her appendix removed for the colic associated with oedema, and two had died of oedema of the glottis.

VISCERAL LESIONS.

The visceral lesions are of two types. First, mechanical, due to the presence of exudate in the walls of the stomach or intestine, effusion of blood on a mucous surface, or into the substance of an organ; secondly, inflammatory, as nephritis, less often endocarditis, pleurisy, pericarditis, pneumonia, or peritonitis.

The cases have a dual etiology, infectious and metabolic. Purpura, with or without erythema and exudative lesions, may follow gonorrhoea, otitis media, parturition, phimosis, and local lesions of the skin. The rheumatic poison is believed to be responsible for a large group; and in the case of a child with severe purpura in the third and again in the fifth year, chorea in the sixth without endocarditis, severe urticaria in the same year with ill-health, chills, fever, and well-marked endocarditis, such a view is probably correct. The arthritis, too, is held to indicate the same cause, but it may have a very different explanation. The bacteriological examination of these cases has not been very satisfactory—no unanimity has been reached as to the organisms. On the other hand, there is a large group in which the lesions are an expression of perverted metabolism. Chronic angio-neurotic oedema, urticaria, and some forms of purpura are possibly anaphylactic phenomena in persons sensitized for certain protein substances. It is interesting to note that experimental sensitization may be transmitted. Hay fever, the idiosyncrasy to iodine, quinine, to strawberries and shellfish, are all manifestations of this supersensitiveness. The phenomena of serum sickness reproduce in a graphic way the features of the skin diseases which the French group under erythema. The local oedemas, the urticaria, the purpura, the arthritis, the vomiting, and the persistence for years of the sensitiveness, are paralleled by the lifelong liability to recurrence in some cases of angio-neurotic oedema and of purpura.

The diverse localization, the variable character of the exudate, now serum alone, now blood, or blood and serum together, are points that await explanation. The actual exudate is conditioned by the epithelial cells of the capillary wall, damaged by a circulating poison, as so well shown in experiments with snake venom. But it may only be some such subtle change in the blood serum as takes place in the peripheral circulation in paroxysmal haemoglobinaemia. In one patient exposure to a temperature near the freezing point at once brought out a crop of urticaria on the face; and Wild[7] reports a severe purpura following exposure to a great heat. Before long the anaphylactic key will unlock the mystery of these cases. The malignant purpura of the specific fevers and of the rare primary form may be anaphylactic phenomena. The following observation bears out the idea that the primary action of the noxious agent is on the epithelial wall. In a case of purpura fulminans seen with Dr. Brock at Rome[8] the skin was plum-coloured on the third day. Having abdominal distress at the outset, the man had put a large mustard leaf below the navel, which had reddened but not blistered an area of skin 6 by 8 inches. Everywhere else but into the skin of this region haemorrhage had occurred. The same blood had circulated, but the stimulating influence of the mustard had effected a change in the capillary walls of the area, enabling them to resist an injury to which all others had succumbed.

Cerebral Manifestations.

There are two groups of cases—the one with transient attacks of paresis, such as occur in Raynaud's disease and in arterio-sclerosis; the other in which the paralysis is due to coarse haemorrhage.

In Case XV[9] a man, aged 29, had had from the age of 12 recurring attacks of urticaria, angio-neurotic oedema, colic, purpura, haematuria, and albuminuria. When 13 he had a sudden attack of hemiplegia, which lasted for twenty-four hours, and during the year he had five or six attacks, in which for a few hours or for an entire day he lost the power of the arm or leg, usually on the left side. Some of these occurred in association with outbreaks of oedema.

It is possible that the following case is of the same nature:

Recurring Purpura for Six Years; Hemiplegia in an Attack; Angio-neurotic Oedema of Arms, Hands, and Feet.

Mrs. M. E. C., aged 69, seen with Dr. Cameron, October 5th, 1903.

The patient was a very healthy woman, of good family history. She had had five children. She was very strong and well until six years ago, since when she had had recurring attacks of purpura on the legs and feet, rarely on the hands or face. Once she had a few spots on the conjunctivae. Never during this entire period for more than a week or ten days has the skin of the legs not shown haemorrhages. They came out in successive crops, and were usually associated with marked swelling of the feet. At first there was no swelling of the joints, but lately the knees and ankles have been painful and swollen in the attacks. She had seen scores of doctors, and in consequence of the attacks had become progressively debilitated.

For the past two years she had had on the arms and face remarkable swellings. In a few hours the hands would swell to such an extent that to take off the dress the sleeve had to be ripped. Big knot-like swellings as large as an egg would appear on the forehead, and the elbows and the knees would frequently swell. These swellings were never red, and there was never purpura with them. They would often coincide with a severe outbreak of purpura on the legs.

Two years ago, during the onset of an unusually severe outbreak of purpura, she had an attack with slight loss of consciousness, and for two days could not speak, and there was paresis of the right side, which gradually disappeared, and she got quite well. She had had at intervals bad bronchial attacks, but never colic.

She was a very thin, delicate-looking woman, pale and sallow. The pulse was regular, the heart's action fairly strong and regular. There was no swelling of the gums. The legs, from the knees down, were swollen, both ankles were enlarged, and the right little finger. From the hips to the toes the skin was of a very dark colour, from old faded haemorrhages, and there was an outbreak of fresh purpura in many places, very thickly set over the ankles, almost uniform. There was no heart murmur; no enlargement of the spleen or of the liver.

Coarse haemorrhage into the brain is not very common in purpura, but there are a good many cases in the literature;[10] I have notes of only three.

Purpura Haemorrhagica, Hemiplegia.

On February 27th, 1902, I saw, with Dr. Wegefarth and Dr. Thayer, Mr. F., aged 21. The condition was as follows: Resting on his left side, apparently sleeping, he could not be roused to consciousness. Blood was trickling from the left nostril; both had been plugged. He was breathing 24 to the minute; the pulse was 56, rather jerky. The superficial veins of the hands were very full. The pupils were dilated and inactive. The face was covered with numerous petechiae, of large size. There were many bluish subcutaneous haemorrhages, and one or two subconjunctival. The skin of the body generally presented numerous petechiae, and in places quite large blotches of haemorrhage. On the thighs there were large subcutaneous infiltrations. On the back haemorrhages had occurred into the acne spots, many of which were capped with haemorrhagic scabs. There was bleeding from the gums, and there were haemorrhages beneath the submucosa of the lips. In a basin near by there was half a pint of dark, bloody fluid, and a large fresh clot was attached to the plug in the nostril. On turning him over, the left arm seemed specially limp, and he did not move it; it dropped "dead," and was much more relaxed than on the other side. No difference in the facial muscles. The left leg seemed more relaxed than the other, and the nurse said that he had not moved the limb on that side since morning.

The patient had been a healthy young fellow. There was no history of bleeding in the family. When a child of 2, after a fit of passion, he had had an attack of haemorrhage from the stomach. He had had occasional "nose-bleed," but nothing of any moment. Three weeks ago he had bleeding from the nose, which had been rather troublesome. On Sunday, February 23rd, he had recurrence, and Dr. Wegefarth had to plug the nostrils. On Monday and Tuesday it was noticed that he had a few petechial spots about his face and legs. On Tuesday and Wednesday he was up and about, but he had a little bleeding from the gums. On Wednesday the haemorrhages into the skin became more abundant; he had bleeding from the nose and from gums, and in the evening he began to have vomiting of blood, and has vomited four or five times since. He became very much worse to-day, and has been comatose. The blood coagulation time was not specially delayed.

Recurring Epistaxis, Purpura, Hemiplegia, Haemorrhage into the Brain.

In a case of Dr. Bressler's a man, aged 63, had occasionally had rheumatism, and for some months before his fatal illness recurring epistaxis. He then began to have bleeding from the mouth and gums, with purple spots over the body. When seen on June 28th he was pale, the body covered with numerous purpuric spots, the left foot swollen. The examination of the organs was negative. On July 4th, at 9 p.m., he had convulsions, limited to the left side. He became deeply comatose and unconscious; the paralysis persisted, and he died on July 5th.

At the autopsy the viscera looked healthy. On the right side of the brain there was a large subdural haemorrhage, covering the whole of the dura and the outer part of the frontal lobe. Immediately behind the fissure of Rolando was a clot as big a walnut extending into the brain substance.

Attacks of Purpura in the 7th Year, with Nausea and Colic; when 16 admitted with Purpura, Vomiting, Colic, Aphasia, and Right Hemiplegia; Operation; Death.

C. B., aged 16, admitted March 24th, 1904, with paralysis on the right side, aphasia, and blotches of haemorrhage in the skin. No history of haemorrhages in the family.

She was healthy until her 7th year, when she had scarlet fever, not a severe attack, after which purple spots began to appear periodically, sometimes once a month, sometimes less frequently, scattered over the body, face, and arms. The spots ranged in size from a small coin to the palm of the hand. She was treated for this trouble in the out-patient department on

March 20th, 1897, and in June, 1897. In both of these attacks there was a history also of nausea and vomiting and abdominal pain. She had also bleeding from the nose. On March 24th, 1904, she was admitted, giving a history of having had the same recurrences of the skin trouble, and occasionally with attacks of nausea, vomiting, and pain. In one of these attacks in February of this year she had pain and swelling in the left ankle-joint, but no redness. She has only menstruated once, when she was about 12 years old.

She looks a strong, well-developed girl. The present illness began on March 22nd. She had been in her usual health, and had gone out to an evening party with some friends. Returning, she became suddenly unable to speak clearly. She herself was aware of this, and said that there was some difficulty in swallowing. She slept restlessly, and on the 23rd still had an inability to get the right word; no trouble in walking. On Thursday morning, the 24th, she was not so well, but she walked a considerable distance to the hospital. It was found that she could not speak. She moved her right hand and forearm a little, but she could not raise the arm to her head. There was no sign of paralysis of the face or of the leg. During the examination in the out-patient department she had a severe convulsion, beginning on the right side of the face and involving the arm and the hand. She had a second convulsion shortly afterwards, after which she became unconscious. There were numerous haemorrhages scattered over the skin, particularly on the chest, along the arms, and several large areas on the legs. The gums were not swollen; no bleeding from the mucous membranes. The blood count after admission gave red blood corpuscles 4,500,000, leucocytes 14,800, haemoglobin 20 per cent.; blood coagulation time 14½ minutes. Blood pressure 125 mm. The physical examination of the thorax and abdomen was negative. The spleen was not enlarged.

On the following morning I saw the patient at the ward visit. There was no sign of paralysis of the face. She could not speak, and she took very little interest in her surroundings. The right leg was not paralysed. I was proceeding to examine her chest when she began to twitch the forefinger of the right hand; then the fingers extended, the arm began to twitch, the head turned to the right, the eyes became staring, and in a few moments she had a general convulsion. She lay in a state of coma all day, and had five convulsions. Fresh haemorrhages appeared over the skin of the body and limbs. The condition seemed to justify operation in the hope that it was a cortical clot. Dr. Cushing exposed the left motor area, and found the dura very tense and the brain and subpial space of a uniform deep cherry colour, but no free clot. For the next three days she seemed better. There were no fresh convulsions, and she seemed to understand what was said, and on the 26th she made attempts at talking. She gradually became more comatose, and died on the 29th. There was no autopsy. The urine contained a trace of albumin, but no tube casts.

Ocular Lesions.

In anaemia and leukaemia, in cachectic states, and in arterio-sclerosis retinal haemorrhage is common, conjunctival less frequent. In the haemorrhagic types of the specific fevers extensive bleeding may take place, and in black small-pox I have seen the corneae sunk in a wall of subconjunctival haemorrhage. When in ophthalmic doubt I turn to de Schweinitz, but even in his encyclopaedic handbook I can find no reference to some of the complications here described, and the cases indicate how serious may be the lesions in the forms of skin disease under consideration.

In purpura haemorrhagica bleeding may take place into the eyeball. In the fatal case seen with Dr. Wegefarth and Dr. Thayer the right eye was completely filled with blood clot.

Recurring Purpura for Years; Haemorrhage from the Conjunctiva.

A woman, aged 63 (seen with Dr. F. F. Smith), whose mother and twin sister had both died of purpura, began to have haemorrhages when about 54, passing blood occasionally from the bowels and from the kidneys. Two years later she had severe attacks of epistaxis. In 1902 she had haemorrhage from the right conjunctiva for twelve days, which was only controlled by compresses. When I saw her she had had severe pains in the legs and had had outbreaks of purpura in the course of the superficial nerves.

Purpura Haemorrhagica, Haemorrhages into Right Eye with Detachment of Retina.

In a severe and fatal case of purpura, Frank A., aged 22, admitted January 1st, 1895, Dr. Randolph reported on January 5th widespread haemorrhages in the right eye with detachment of the retina on the inner and lower half; many retinal haemorrhages also in the left eye.

There is another group of extraordinary interest in which the eyes are seriously inflamed in connexion with the skin lesions of the erythema group. The cases are rare.

Recurring Colic; Angio-neurotic Oedema and Erythema on and off for Five Years; Freedom for a Couple of Years; Recurrence with Iritis and Retinal Haemorrhage; Ophthalmitis; Removal of Eye.

On March 30th, 1901, I saw P. M. M., aged 41, a patient of Dr. Billings and Dr. George Fiske of Chicago, who had had a very chequered medical history. During 1890, at intervals, he had severe attacks of colic, and appendicitis was suspected. Previous to this he had had once an eruption on the skin. In 1891 swellings appeared in the fleshy part of the legs, which were sometimes red, sometimes not. They were called erythema, and in one attack the well-known dermatologist, Dr. Hyde, diagnosed erythema nodosum. With the attacks he had iritis of great severity. These attacks recurred during the next few years, so that his life was a burden. He sometimes had severe pharyngitis. In September, 1895, with swellings in the calves and thighs, sometimes red, sometimes not, and stiff ankles, he had iritis and acute orchitis. At Christmas, 1895, he had choroido-retinitis. Then for a year or two he was better. The attacks recurred in April, 1900. He was operated upon for iritis, and in May, 1900, the left eye had to be taken out. He was better until January, 1901, though he had slight attacks of the swellings; then the right eye became involved—slight retinal haemorrhages—and he was again threatened with iritis. In October and November he was much troubled with the swellings, which would come and go, appearing suddenly and lasting eight or ten hours, recurring during three or four days—evidently in part haemorrhagic, as the skin was often left with a deep brown stain. He had several slight attacks of swellings about the elbows and once on the thumb. A month ago he appeared to have a slight erosion on the cornea. Of the patient's two children, one has had swellings in the right leg and in the thigh, very like those that afflicted the father. There have been no changes in the blood or in the urine. He has tried all possible plans of treatment without receiving any benefit.

There can be no doubt that this case belongs to the group under consideration. The swellings sometimes resembled erythema nodosum, sometimes angio-neurotic oedema. How tragic this ocular association may be is shown by the following case.

On Third Day of Febrile Attack, Purpura, Iritis, with Ocular Haemorrhage; Blindness.

Mary E., aged 8, seen May 21st, with Dr. Jones of Mount Washington. She had been a healthy girl, with good family history. She was seen first by the doctor in a slight febrile attack without any local features. On the third day there was an outbreak of purpura all over the body, some spots as large as 8 or 10 mm. in diameter and slightly raised. The hands and wrists and ankles were swollen. She became delirious, and was very ill. On the third day of the attack haemorrhagic spots appeared on the conjunctivae, and there was intense pain in the eyes.

Dr. Randolph determined the presence of iritis with severe haemorrhage. The condition of the eyes grew rapidly worse, and within three days the sight was completely lost. The child remained very ill for seven weeks, with recurring attacks of purpura. After the first week the fever was slight, there were no changes in the urine, and the child gradually recovered, but with extensive degeneration in both eyeballs—the lenses opaque and adherent to the irides.

In this last case, also of great severity, the child has fortunately recovered with some vision.

Purpura; Colic; Infiltrated Areas of Skin with Necrosis; Acute Iritis and Capsulitis.

R. A., aged 7, admitted to the Radcliffe Infirmary under Dr. Mallam on May 21st, 1912.

On Friday, May 17th, he was at school. In the evening he complained of pains in the legs, and was much disturbed all night. He was seen by Dr. Venning of Steeple Aston on Saturday, and throughout that day and on Sunday he became much worse; there were vomiting and diarrhoea; the temperature rose on Saturday, and in the evening he became delirious. On Sunday his mother first noticed purple patches on the skin, and on that day he began to complain of pain in the eyes, but they looked all right on Monday. As he seemed very ill, and the temperature was rising, he was sent in to the infirmary. There were purpuric spots on the arms and legs, and several large ones formed by the coalescence of smaller ones. On the right shoulder was a raised patch with a deep inflammatory base, 4 cm. in length by 2 cm. in width, covered by a haemorrhagic bleb. There were three others of this character, one on the right leg and two on the buttocks. The right shoulder was slightly swollen, both elbows tender, but the skin not red.

The following is an abstract of Mr. Adams's note on the eyes: Corneae dull and steamy, conjunctivae injected, anterior chambers filled with a cloudy exudate which hides the iris except at the periphery. In the left eye inflammation not so intense, but a film of exudate spreads over the iris, and there was a collection of yellowish material in the lower half of the anterior chamber, but without a straight margin, as in hypopyon. In neither eye is there much ciliary injection. On the 23rd both eyes were better, the corneae brighter, but there were central films of opacity on the anterior capsule of the lens, and the cornea of the right eye was still dull.

For the first two days in hospital the temperature ranged between 102.5° and 103°. On the 23rd he was given 20 c.cm. of an antistreptococcic serum. On the 24th the right elbow was more swollen and the left elbow was also stiff. The skin spots were subsiding, but the larger areas were covered with haemorrhagic blebs. On the 25th he had an attack of abdominal pain. The large patch on the skin of the right shoulder was less swollen, but presented a dirty-looking necrotic centre. The blood count was: Red blood corpuscles, 3 millions; haemoglobin, 50 per cent.; leucocytes, 13,100. The spleen was not enlarged. On the 25th and 26th the temperature remained about 101°; on the 27th, 28th, and 29th it fell, and became normal on June 2nd.

On June 1st Mr. Adams's eye note was: *Left eye*, cornea bright, central opacity on anterior capsule of lens is smaller. *Right eye*, iris still very muddy, pupil irregular, much injection of the cornea and conjunctiva. The patient's general condition was much better, and from this time on he improved rapidly.

Gastro-intestinal Symptoms.

To these, the most distressing though not the most dangerous of the visceral complications, the name of Henoch is given when associated with purpura, though they occur with any member of the erythema group of skin lesions. The manifestations may be for years abdominal without skin eruptions.

Colic is the common symptom, and occurred in 25 out of 29 cases analysed in 1904.[11] The attacks may be transient, lasting only a few minutes, but recurring several times during the course of the day. They may be of great severity, causing the patient to writhe in the bed. They occur most frequently at night. The attacks are independent of diet, and occur with the skin rash or in the intervals of the outbreaks until the rash fades. In protracted cases the colic may not appear for a couple of months, and then be very severe. The position of the pain is usually central, and may radiate to all parts; very often the child cannot fix upon the spot accurately. I have never met with an instance in which the pain was limited to the right iliac fossa. The abdomen is usually flat, not painful on pressure, without increase in the muscle tension, though it may often be difficult to palpate the child satisfactorily. There may be marked tenderness along the transverse colon.

Vomiting, with or without pain, is perhaps quite as frequent as colic, with which it is very often associated. If the child has eaten recently, the food is vomited with mucus and watery fluid, and, if the vomiting is very severe, flakes of blood. It may be frequent, without pain, and there are remarkable gastric crises such as I described in Case I of my first series,[12] in which, with the colic and vomiting, the patient had fever and delirium. In some attacks there were no skin lesions.

Vomiting of blood is common enough in severe types of purpura. It may also occur in connexion with colic in milder forms which have no extensive cutaneous haemorrhages or bleeding from other mucous surfaces.

Diarrhoea, which is not nearly so common as vomiting, is of two types; increased frequency of the stools, either lienteric or watery, three to six in the day, with blood and mucus. With severe purpura the blood may be in large amount, colouring the entire stool, and very little changed. In the ordinary cases with the colic the stools contain mucus streaked with blood. In connexion with the diagnosis the colic, frequency of the stools, and the blood may be highly suggestive of intussusception, for which, indeed, operation has been performed.

The study of the conditions under which the gastro-intestinal crises occur is of special importance. It may be useful to group them as follows:

First, *cases without skin lesions.* On several occasions I have drawn attention to this interesting type. In Case I, a man aged 27 had for six years attacks of colic with diarrhoea, always associated with raised blotches of erythema, forming large whelks and wheals, which turned black. For two years he has had the abdominal pains without any skin lesions. In Case XIII the patient was operated upon in November, 1896, for an ovarian tumour, and one week after she had the first attack of abdominal pain, and two subsequently while she was in hospital, in each of which morphine had to be given. For six months the attacks recurred every week or ten days, often of such severity that she had to cry out. It was a dry colic, and never associated with a skin rash. Then on June 3rd she was admitted to hospital with fever in an outbreak of typical exudative erythema—hands and feet, face and neck. The attack was very severe, but she recovered after two relapses. Subsequently she had very little colic, but in 1931, in Russia, she had haemorrhage from the stomach. On February 12th, 1902, while leaving the theatre, she had profuse haematemesis, which was repeated during the night. The next morning I saw her in a state of profound anaemia, with the most striking cadaveric odour I have ever noted. She died that evening. In Case XVIII,[13] a child, aged 7, had swellings of the knees in the first year; from the second to the seventh recurring attacks of adbominal pain with vomiting, but no skin rashes: admitted in an attack of pain, with vomiting, with purpura and urticaria, outbreaks of which occurred during her admission. The following is an illustrative case in which the gastro-intestinal attacks were of great severity, occurring at intervals of from a few weeks to two or three months between the first and tenth years; the skin lesions were only occasionally present.

Attacks of Fever with Colic and Gastro-intestinal Trouble from 1st to 10th Year; Recurring Outbreaks of Urticaria, Purpura, and a Vesicular Rash; Good Health in the Intervals; Gradual Recovery.

Alex. L. C., aged 10, seen May 11th, 1903, with Dr. Moorhead of Bath, was a healthy baby; weighed 8¼ lb., but did not thrive till weaned. From the first year he has had recurring attacks of gastro-intestinal trouble, beginning usually with slight fever for one day, then abdominal pain of a colicky character, sometimes with a shivering fit so that the bed would shake; not often vomiting, usually some diarrhoea. The fever persists for two or three days, the pain for four or five. The abdomen sometimes becomes swollen. The stools often contain large quantities of mucus, and in one of the worst attacks which he had at 5 years there was blood. The urine was never abnormal. He has never had any swelling of the joints. These attacks have recurred at intervals of from a few weeks to two or three months ever since his first year. With many of the attacks he has had remarkable skin rashes, most frequently like ordinary hives occurring on the legs and arms, and they come out in successive crops. On several occasions the skin eruption has been purple, and the spots persisted. In one attack the diagnosis was made of chicken-pox, as the arms and legs and the entire trunk were covered with small spots which became vesiculated. In the intervals between the attacks he is very well. His mother thinks that diet has no special influence.

There is nothing in the family history; there are two other healthy children. He is a well-grown boy with a good colour, and weighs 4½ st.; the tongue is clean; teeth are good; skin of the face clear; the chest is well formed, good expansion; abdomen natural looking, no distension, everywhere soft, no tenderness; descending colon readily felt; spleen not palpable; pylorus not palpable; no distension anywhere of the colon; liver is not enlarged; right kidney just palpable; upper limit of liver flatness is on the fifth; apex beat of heart in normal situation; no enlargement of organ; heart sounds are clear; joints not enlarged, nowhere tender; no fibroid nodules; the skin is everywhere clear, nowhere any trace of old spots. The attacks are evidently of great severity, but they are fortunately lessening. He only had two in 1907, and has had no attacks since November. His stay at Bath has improved his general health very much, and he looks now in good condition. I heard of this case two years later; the attacks have diminished in frequency, and he has grown much stronger.

It is quite possible that certain cases of children with obscure cramps may belong to this type. In my third paper[14] I have referred to a family in which the mother, until puberty, had attacks of colic and vomiting. Three children have had hives very badly, and the boy, aged 13, had had for nine years, at intervals of from a month or two, sometimes for a couple of weeks, every day severe colic, occasionally of extreme severity. There was never pain in skin rash.

Secondly, *in association with haemophilia.* In this disease, as is well known, it is not simply a matter of bleeding from accidental blows or cuts, but there are spontaneous haemorrhages, cutaneous, arthritic, and visceral. With the latter the symptoms may suggest the acute abdomen. I saw on his deathbed a few months ago, with Dr. Birch, a boy, a bleeder from infancy, who had twice had haemorrhage into the peritoneum, once producing a condition highly suggestive of acute peritonitis.

In Larned's[15] case a haemophilic subject on August 24th, 1907, had a curious abdominal attack which was diagnosed Henoch's purpura. There was general abdominal pain and distension. There was no marked muscle spasm in the right iliac fossa, and no special point of tenderness.

One is doubtful whether this was really a case of haemophilia, according to the more strict definition introduced by Bulloch, as the history is somewhat indefinite, and both women and men of the family have bled; yet the patient had had frequent epistaxis, there had been difficulty in checking bleeding from slight wounds, and in 1902 he nearly bled to death after an operation for ingrowing toenail.

An Oxford patient, evidently a bleeder, frequently admitted to the Radcliffe Infirmary, has had on several occasions severe attacks of abdominal pain. On September 17th, 1905, he noticed pain in the abdomen; on the 18th, 19th, and 20th the pain was severe, and he remained in bed. The bowels were loose, and the stools were dark-coloured. On the 21st he was sick at the stomach, and the vomitus was blood-stained; on the morning of the 23rd the pain was again very severe, requiring a third of a grain of morphine for its relief. There was a large subcutaneous haemorrhage along the inner side of the left leg; there were no other haemorrhages. The colic recurred at intervals in less severe attacks for a week or more, and gradually disappeared. Twice before he has had attacks similar to the present, the last one three years ago, and both associated with blood in the vomitus and in the stools. He has had altogether four or five attacks of this character.

In this family, the history of which was worked out by the late Dr. Leckey, there was no trace of a bleeder. The mother knew of no case in her family, in which there is a marked tuberculosis history. She has two sons and two daughters; both of the sons, of whom the younger is the patient, have shown from birth a marked tendency to bleed. The father states that they were never expected to live, as they bled profusely from cuts, often from the nose; slight bruises would be followed by enormous haemorrhages beneath the skin; extraction of teeth in both was followed by protracted bleeding. The brother, who had had epistaxis, cutaneous haemorrhages, and bleedings into the joints, accompanied with great pain, became tuberculous and had profuse haemoptysis, and died at the age of 27.

The patient himself I have seen frequently, and it is difficult to escape the conclusion that both he and his brother were genuine bleeders. He has had all varieties of bleeding—cutaneous, spontaneous blotches, has bled profusely from accidental cuts, after extraction of the teeth, and slight blows would be followed by enormous bruises. He has had many attacks of swelling of the knees, with pain and haemorrhage into and about them.

Thirdly, *with ordinary urticaria.* I have seen a number of cases illustrating this association. No. xiv of my reported series, a physician, in whose case I was very much interested, had from his twentieth year, at intervals of a few months, most extraordinary outbreaks of urticaria, with nausea, vomiting, and abdominal pain. He finally died in an attack which began in the usual way, persisted, and passed into one of fatal purpura haemorrhagica.

For Five Years recurring Attacks of Urticaria, with much Oedema, Vomiting, and Abdominal Distress.

I saw on October 25th, 1901, a man who to the age of 45 had been very healthy, without special digestive disturbance. For five years his life had been a burden with recurring attacks of urticaria, associated with vomiting of an aggravated type. For an hour or two before the attack he has a feeling of uneasiness, sometimes shivering, or even a positive chill, then the wheals come out over all parts, as a rule several hours before the vomiting comes on. In bad attacks the skin rash is very extensive; the whole body appears swollen, the hands are puffy and covered with red and oedematous blotches, the lips are swollen and stiff. The vomiting lasts from ten to twenty-four hours; nothing stays on the stomach; there is never actual pain, but a great deal of distress with the vomiting. He has never been jaundiced, and he had no diarrhoea. At first he thought that indiscretion in diet brought on the attacks, but regulating the food had been tried without success. In the five years the longest interval between the attacks was three and a half months; he has had one every month for the past six months. He was very large and stout when the attacks came on, and in the five years he lost 70 lb. in weight! He now looks a man in excellent health; good colour, with clean tongue; and the most careful examination revealed nothing wrong in any of his systems. His blood coagulation time was normal. Prolonged treatment with grey powder and calcium lactate gave him great relief, and he passed several months without an attack.

A very similar case has been reported by Dr. J. J. Pringle. For nearly fourteen years a man had recurring attacks of urticaria of great intensity, with many of which there was profuse haematemesis. I heard from Dr. Pringle recently that this patient has recovered completely, and is now a healthy man of 80 years.

Fourthly, *angio-neurotic oedema.* In the ordinary forms in which there is transient oedema of the eyelid, or of the forehead, or of one hand, there is not often colic, but in the severer varieties the gastro-intestinal crises may be a special feature. I have already referred to it in the family form, in which it is apparently very common. The abdominal attacks may occur alone, or with very slight swelling. The following is a good illustration, occurring also in the familial variety.

Father and Sister the Subjects of Angio-neurotic Oedema. Attacks from the Fourth Year of great severity, usually of Oedema, but sometimes Erythema, associated at times with Vomiting and Pain.

Miss F., aged 58, referred to me April 7th, 1910, by Dr. Martyn of Exmouth, who wished me to study the case, knowing my interest in the subject.

Family History.—Father died at 86 of strangulated hernia. He had been subject to attacks of swelling all through his life. The daughter had seen him in many of these. Sometimes one arm would swell to double the natural size. Some of the attacks were of great severity, and associated with great pain in the abdomen and sickness. They did not diminish as he grew older, and he rarely passed a month without an attack. His mother was not subject to it. The family consists of one brother and two sisters. The brother has never been attacked. The sister, now aged 60, began to have attacks at her 29th year. The swellings are chiefly in the hands and feet, and she only occasionally has vomiting and diarrhoea with them. She has six children, none of whom have been affected.

The patient began to have attacks at the age of 4; all through her childhood she was greatly troubled, and of late years they have recurred with great frequency. At one time she would pass six weeks or two months without an attack, then they came on one in a month, then every ten or twelve days; now she rarely passes a week without swelling somewhere. They come on any part of the body, not so much on the face now as formerly. She has had attacks which were supposed to be erysipelas, so swollen, red, puffy, and oedematous were the eyelids and face. Now the attacks are generally in the hands or arms or somewhere on the trunk. She can tell a little while before they come on, as she feels very heavy and dull and has attacks of yawning. The swelling lasts for from three to six hours, rarely for twenty-four or thirty-six. The spots are generally pale-looking, occasionally red and shining. She never remembers to have seen red or black spots, nor has she had any haemorrhage from the mucous membrane. As a rule with the swelling there is an uneasy sensation in the abdomen, often amounting to actual colic; then she has retching and vomiting, but never diarrhoea. She has had severe abdominal attacks without the skin swelling.

Fifthly, the largest group in which the gastro-intestinal symptoms occur in connexion with simple purpura with or without urticaria. To-day the frequency with which these attacks are mistaken for appendicitis makes the condition important. Take, for example, the following case, which I saw preliminary to the surgeon being called in, as the symptoms were so suggestive of the acute abdomen.

H. V., aged 15, seen with Dr. Wainwright, May 23rd, 1908. He has been always strong and well, with the exception of a tendency from the sixth month of age to what his mother calls the "bumps." On and off, at intervals of from a few weeks to six months, spots came out over the skin, sometimes like ordinary hives, sometimes like flea-bites. He has never had a very severe attack. The mother attributed the condition to indiscretions in diet. Lately he has had, as a rule, two or three attacks a year, most commonly on the arms and legs. They take two or three days to disappear, and sometimes come out in crops. Early in May he was at Brighton, and he complained of some pains in the legs and wrists. Shortly after May 12th the attack came on with slight fever, and he had to go to bed. The next day he was covered—arms, legs, and back of the neck—with bright red spots, the individual ones raised with marked erythema between them. They began to fade and left the skin stained. Every few days there have been recurrences. The last crop came out yesterday. On the 13th he began to have pain in the abdomen, not localized, not associated with vomiting, and not increased by food. During the next few days it became more intense, occurring in paroxysms, and on the 19th he had several very severe attacks, and appendicitis was suspected. The abdomen was never distended. It was tender in the flanks below the costal border, not over the appendix. He had no vomiting, no diarrhoea, but the stools were singularly offensive. On the 20th he passed a small mass like orange pulp streaked with blood. The urine was normal. On the 12th and 13th the temperature was normal, on the 14th, in the evening, 100°; since then it has varied between 99° and 101°. Last night it was 101°, and 100° this morning. At 4 o'clock yesterday morning he had a slight chilly feeling.

Examination.—Rather a delicate-looking boy: tongue lightly furred; a spot like a recent wheal on his left cheek. He does not look very ill, and gives a very good account of himself. *Skin:* Arms and legs covered with fading urticaria and with stains of former patches. On the arms are several fresh spots. The legs to the upper part of the thigh are covered with the same fading stains, and there are a few fresh wheals, no purpura, no spots on the trunk. There is no arthritis. *Abdomen:* Flat, natural looking; respiratory movements a little restricted, but he takes a deep breath without wincing; the appendix region not tender. Nothing abnormal in chest. The boy made a rapid recovery.

The following case was admitted to the surgical ward of the Radcliffe Infirmary:

R. D. B., aged 20, was admitted April 1st, 1912, supposed to have appendicitis or intestinal obstruction. Two weeks before he had had pain in the lower part of the abdomen and had vomited twice. Last week he again had abdominal pain and slight stiffness and swelling of the calf of the right leg. The abdominal pain had increased, and he was admitted to the surgical ward. There was no distension of the abdomen, but he had pain, and the motions contained some mucus streaked with blood. Within twenty-four hours of admission he complained of stiffness in the elbows, and was found to have purpura, so that he was transferred to Dr. Collier's ward. He was a healthy-looking man of good colour; he complained of pain in the epigastrium and stiffness of the elbows. There were purpuric spots upon the right external malleolus, both elbows, and the left shoulder. One of these patches was large and raised with a diameter of about 1 cm. The heart and lungs were normal: the spleen could not be felt: the liver was not enlarged. The urine had a specific gravity of 1010, with a slight cloud of albumin, no blood. Red blood cells were 5,100,000; haemoglobin, 95 per cent.; leucocytes 11,200.

On the first day after admission he vomited after each meal, and there were streaks of blood. The pain was less, though he had a sharp attack during the night. There was an extension of the purpura both in legs and arms. On April 12th there was a small amount of blood in the stools, and he vomited several times. On April 13th and 14th no vomiting; the purpura was fading, but on the dorsum of the left foot there was a definite haemorrhagic bleb. On April 15th he had an attack of abdominal pain and vomited once. From this time on he improved rapidly, the albumin disappeared from the urine, and he was discharged well on May 1st.

I have known at least five cases admitted to the surgical wards, and many instances of operation for appendicitis have been reported in the literature. Sutherland[16] has collected many of these, and the more recent ones have been collected by Withington[17] and by Seymour Barling.[18] The condition found with operation has been local infiltration of the bowel wall with blood or with serum. In the majority of cases the ileum has been involved. In a case reported by Jacobson[19] the appendix itself was involved in haemorrhagic oedema. In a woman aged 37, with fever and pain in the right side, operation showed an acutely inflamed haemorrhagic appendix. Following the operation the patient had haemoptysis, epistaxis, and an outbreak of purpura.

Lastly, *intussusception* may complicate abdominal purpura or angio-neurotic oedema. One can understand how easily this may follow local infiltration of the bowel wall. Several cases have been operated upon successfully by Tonking,[20] Lett,[21] and Seymour Barling. In Lett's case death followed a second attack of intussusception. Without the characteristic sausage-shaped tumour the diagnosis is difficult, as the frequent small stools of blood and mucus—often, indeed, large amounts of blood—are not uncommon features in abdominal purpura. As the difficulty in examination may be great, in a doubtful case an anaesthetic should be administered. It is well to remember, however, that a palpable tumour may be caused by a massive exudate into the bowel wall itself, Greig's case;[22] by a clot in the lumen of the bowel, as in FitzWilliam's case,[23] or by a massive haemorrhage into the mesentery, as reported by Lett. In a case reported by Parkinson[24] operation was performed for suspected intussusception. Death occurred on the following day. *General peritonitis* was found with haemorrhages in the walls of both large and small intestines. In a case reported by Vierhuff[25] an adult with purpura haemorrhagica and blood in the stools and symptoms of intussusception recovered after passing a piece of the bowel. A remarkable case of peritonitis is reported by Silbermann.[26] A child, aged 10, had purpura, arthritis, fever, colic, haemorrhage from the stomach and the bowels; in a relapse there were symptoms of the acute abdomen and of diffused peritonitis. *Post mortem* a small perforation was found in the fundus of the stomach.

Renal Complications.

These are the most serious of the whole group. I have excluded the haematuria when one of the manifestations of purpura haemorrhagica, that is to say, in cases of widespread bleeding into the skin and from the mucous membranes.

In the ordinary angio-neurotic oedema there may be transient albuminuria, but nephritis is rare. In my third paper I called attention to the seriousness of nephritis as

a complication of the erythema group. Of the seven deaths in that series five were with uraemia. I have now additional cases to record. All of the cases had albumin with tube casts or blood. All but one of the cases with nephritis had purpura. No case had angio-neurotic oedema alone. Four had recurring attacks of polymorphic skin lesions. The cases fall into three groups.

1. Those which ran an acute course with dropsy, and death in uraemia within three months. Cases III and VIII of my published series[27] resembled ordinary severe nephritis with dropsy. Death occurred in both within twelve weeks of the onset. One was a child of 6, the other a child of 5, in whom nephritis came on in association with recurring purpura. In two other cases, Nos. XIX and XXVI[28] nephritis was a terminal event in a long series of skin and visceral manifestations, in one case in the seventh and in the other in the eighth month of the illness.

2. In a second group the albumin disappears and the patients get perfectly well. There were ten of such in the series. It may take several months before the albumin disappears. The general health may be excellent, while the urine shows a large amount of albumin and many tube casts.

Thirdly, in a fortunately small number of cases the nephritis becomes chronic. In the three reported here for the first time, albumin and casts have persisted for months. The danger is the gradual development of a progressive nephritis with the usual secondary cardio-vascular changes. I saw frequently with the late Dr. Prentice of Washington a boy who in his 13th year had three typical attacks of Henoch's purpura with acute nephritis. In the following year he had several terribly severe outbreaks, in one of which large haemorrhages into the skin sloughed. The boy was shown by Dr. Prentice at the Association of American Physicians with dropsy, albuminuria, retinitis, increased tension, stiff arteries, and hypertrophied heart.

The following cases, not yet reported, will give a general idea of the severer forms of nephritis.

Epistaxis; Pains in Hip and Swelling of Legs following a Wetting; Purpura; Recurrence of Attacks; Slight Fever; Haematuria; Much Albumin, Tube Casts; Angio-neurotic Oedema; Gradual Recovery; Persistence of Albumin in Large Amount Nine Months after Convalescence.

Harry C. (admitted to the Radcliffe Infirmary, under Dr. Mallam, February 2nd, 1912), aged about 20, with negative family history, and uniformly good health, except that for the last five or six years he has had frequent epistaxis. He got a wetting on Saturday, January 6th, 1912. On the 9th and two or three days subsequently he felt pain in the right hip; then he noticed that his legs began to swell at night, and three or four days later red spots came out on the skin of his legs. He was able to go on with his work, though he felt stiff and sore. He slept well and had a good appetite.

I saw him on Tuesday, February 6th. He then had an extensive purpuric rash on the skin of the legs—a fresh crop, he said—and there were signs of old spots. Both feet and ankles were slightly oedematous. The abdomen seemed normal. The backs of the hands were puffy and oedematous. The urine had a fair amount of albumin and a little blood, with numerous epithelial casts. He got better rapidly and sat up. In a few days he had another attack of purpura. On the 9th he complained for the first time of pain in the abdomen and vomited in the evening. He had slight fever, up to 100.5°. For a week he was better and the purpura faded. Then on the 18th he had sudden swelling of the right hand, which on the following day spread up the right arm to the elbow, and the left hand was also swollen. Every day there was slight abdominal pain. The temperature on February 18th was 101.2°; still albumin in the urine and a trace of blood.

On February 20th he had swelling of the right upper eyelid. He passed a small quantity of bright red blood from the bowel. On the 21st he had haematuria; on the 22nd he looked very ill. He vomited five or six times during the night, had a great deal of abdominal pain, the right eyelid was much swollen, the oedema was in spots petechial. Numerous granular casts and many blood corpuscles in the urine. On the 23rd a fresh crop of purpura appeared about the elbows and knees, and the vomiting persisted. For the next week he had at intervals paroxysms of severe abdominal pain. The vomiting was better, the swelling of the eyelids disappeared, but he had successive crops of purpura about the wrists and ankles. Early in March he began to improve, the pains disappeared, and up to the 15th he had no reappearance of the purpura. The albumin was still present on his discharge, and he had lost 15½ lb.

October 21st, 1913. He came back for examination today. He looks perfectly well, has gained his normal weight, has a good colour, general examination negative. Apex beat is in normal situation, arteries are not sclerotic, urine still shows a large amount of albumin, and in the centrifugalized specimen many tube casts, chiefly hyaline, a few granular.

Severe Attack of Henoch's Purpura, with Necrosis, and Ulceration of Spots on the Legs; Nephritis; Many Slight Recurrences; Admission in a Sharp Attack, with Abdominal Pain and Haematuria; after Several Relapses, Discharged Cured, but with Much Albumin in the Urine.

Gladys B., aged 14, admitted under Dr. Brooks, June 23rd, 1913, with pains in the legs and purpuric eruption. She was in the Leicester Infirmary in the winter with a severe attack of Henoch's purpura, haematuria, with albuminuria and tube casts. There were extensive haemorrhagic lesions on the legs, many of which broke down, leaving ulcers which took a long time to heal. Since leaving the infirmary she has had several attacks of purpura fever. On admission she had no fever, but a purpuric eruption on the legs, which on the following day extended to the hands and arms; some of the spots were raised and urticarial. Urine: Specific gravity 1014, moderate amount of blood, much albumin, Esbach 0.3. On the 26th she had severe vomiting, no pain, but she brought up a little blood. During July she had recurring attacks of urticaria and purpura. Once she had bleeding from the gums and she has had several attacks of abdominal pain. The haematuria has been persistent. There was blood until the week of her discharge. The specific gravity of the urine was about 1015, the albumin was always very abundant, and there were a moderate number of hyaline and epithelial tube casts. She left the infirmary on October 1st very much better, having gained in weight.

I saw her again on October 14th. She looked well, general condition good. There was still a very large amount of albumin, curdy and thick, occupying the greater part of the test tube above the acid. There were a few hyaline and epithelial tube casts.

She was readmitted in November, another mild attack of purpura. There was no change in the urine.

Dr. Sturrock has allowed me to make a reference to the following remarkable case at present under his care:

On June 11th, I saw with him a lad, aged 9. A week previously he had a sudden swelling at the back of the right hand. That night he had an attack of colic. A few days later there was an eruption of purpura on the feet and legs and slightly on the arms. The temperature was 100–101°. For the first month colic was the troublesome symptom. The first crop of spots faded, and were succeeded by others of the same description. Urine was normal.

During July he had occasional attacks of colic, and spots at intervals. On the 20th he had another profuse outbreak, covering the arms and legs and abdomen, with several large confluent patches over the knees, arms, and shoulders, and some of the spots were raised and firm. He had had some vomiting, and had brought up some blood. Afterwards he had had blood and mucus in the stools. This morning he had a large bloody stool with clots. In the afternoon he began to vomit, and brought up much blood and mucus. In the absence of Dr. Sturrock I was called hurriedly about 3 o'clock, and his condition looked very serious. Purpura had extended. The spots were very thickly set on the abdomen and about the joints. The pulse was 140. He was very nauseated and looked collapsed. Dr. Gibson at once prepared fresh human blood serum, of which he had three injections of 10 c.cm. within twelve hours. Whether *post hoc* or *propter hoc* it is difficult to say, but he improved rapidly. He had no further vomiting, and for ten days steadily improved. Albumin appeared in the urine, but not in large amounts.

Towards the end of July haematuria appeared. The urine at times was bloody, at others smoky. There was a large amount of albumin and a few tube casts. During August the boy's condition was on the whole better, but the urine remained smoky with much albumin. About

the middle of the third week he had an attack of angio-neurotic oedema, involving first one side of the forehead, then the whole face, and lasting four or five days, without redness. He continued to have at intervals crops of spots.

About September 1st spots appeared on the backs of the hands, about the ankles and calves, of a different character—raised, infiltrated, haemorrhagic—from 3 to 6 mm. in extent, bright red in colour, and firm to the touch. Scattered among them were seven or eight hemispherical, yellowish-brown spots of a molluscoid character. On the back of the right leg were two pemphigoid blebs, with narrow red areolae, one of which was 1¼ cm. in diameter. Both were extraordinarily firm and solid. Scattered over the trunk were a few reddish raised papules, several of which were capped with small blebs. The urine has increased in amounts of 60, 70, 80 oz. in the day, and almost every specimen is smoky; sometimes there is a bright red sample. I examined on September 15th two samples, evening and morning. The amount of albumin in both was large and thick and curdy. Specific gravity in the morning 1004, in the evening 1012. Many blood corpuscles; both samples were centrifugalized, and in a large number of slides there were only a few hyaline casts.

In October and November the skin lesions were better, but he lost in weight, and there has been no change in the urine. Occasionally in the morning it was free from blood, but as a rule it was smoky and contained much albumin, but only occasionally a tube cast. On October 20th, on the left arm, there appeared one of those curious solid blebs about the size of a large pea, quite firm, hemispherical in shape, and the skin about it not reddened but infiltrated, and solid to the touch. During December he was on the whole better, and passed from 60 to 70 oz. of urine. There has been only occasionally spots, sometimes petechiae; sometimes solid, raised, red papules about the elbows and knees. The tongue cleaned. The worst feature is the recurrence, at intervals of from a week to ten days, of attacks of vomiting, with which, as a rule, the amount of urine diminishes; the temperature above 100, sometimes 101; and during these attacks there is an occasional tinge of blood in the urine. As a rule the specific gravity is very low—1004, 1006—the amount of albumin very large, tube casts scanty.

The anatomical lesions of this type of nephritis with purpura have not been much studied. I have not had a *post portem* examination on any one of my fatal cases. Through the kindness of Dr. W. T. Watson[29] and Dr. W. A. MacCallum I saw the kidneys of a typical case in which death occurred with dropsy at the end of the sixth week from the outbreak of purpura. There was no endocarditis, the spleen was greatly enlarged, the kidneys were enormous, each measuring 12 by 7 cm.; the cortices were pale, the striations distinct, and the glomeruli stood out as translucent nodules like miliary tubercles; there were a few small haemorrhages. In addition to the extensive degeneration of the epithelium, the tubules were filled with desquamated cells, hyaline casts, and red blood corpuscles. The glomeruli showed remarkable changes. Every tuft was much compressed within by a new growth of the capsular sheath, forming a crescentic mass. Dr. MacCallum tells me that this is a type described as adhesive glomerulo-nephritis, in which, with great proliferation of the epithelium, there is also a new growth of connective tissue within the capsules.

Clinically, there are several features of great interest in this type of nephritis. Long after all signs of cutaneous symptoms have disappeared haematuria may persist for months, just enough, perhaps, to tinge the urine.

Secondly, the albumin is unusually abundant, thick and curdy. Thirdly, with large amounts of blood and albumin, tube casts may be absent and scanty. Fourthly, dropsy may be absent, even when the nephritis has persisted for months, as in the three cases at present under observation. And lastly, for months after the patient has recovered his usual health, albumin may persist in the urine in large amount.

The *diagnosis* of the nephritis associated with the skin rashes of the erythema group is as a rule easy, only it must be borne in mind that oedema may not be present, and that the nephritis may persist long after the cutaneous symptoms have disappeared.

The combination of nephritis with a skin rash in which the erythema predominates may lead to the diagnosis of scarlet fever. On June 25th, 1894, I saw in the examining room of the Johns Hopkins Hospital, with Dr. Hewettson, a man aged 23. Three months before he had a skin rash, said to be scarlet fever associated with arthritis, urticaria, and general anasarca. These symptoms gradually disappeared, and he got quite well. Three weeks ago he began again to have pains and swellings in the knees, wrists, and ankles, and purple blotches have occurred in crops on the skin of the legs. The patient was a healthy, well-nourished man, not anaemic, and it was hard to credit that he had had anasarca three months ago. From the groins to the ankles the skin of the legs was covered with urticaria and purpura; there were none on the feet; the urine was not albuminous. He thought—and I was inclined to agree—that the rash at the onset was of much the same character, but more extensive, as that which now exists.

It is also to be remembered that purpura is a by no means uncommon complication of chronic interstitial nephritis. I have notes on a number of cases of this type, and my experience bears out that of Stephen Mackenzie as to the great frequency of this complication. One is, however, sometimes deceived, as in the young chronic interstitial nephritis is consistent with excellent health, and the patient may be admitted with the features of ordinary Henoch's purpura. This happened in the following case.

Jessie S., aged 13, was admitted to the Radcliffe Infirmary, under Dr. Collier, on December 13th, 1911, complaining of pain in the stomach and headache. She has had nocturnal enuresis for five years, and lately she has begun to have vomiting. She looks fairly healthy; the tongue is clean, the teeth are good, there is nothing in the throat, nothing in examination of the chest and abdomen. The urine was 1012, acid, 0.35 per cent. albumin with Esbach, and microscopically a few hyaline and granular casts. She is deaf, and complains of a little pain in the right ear. She has no fever. For the first ten days she was in a curious state, very drowsy, and had vomiting at intervals; then about the 20th the vomiting became more constant (five or six times a day), and the amount of albumin increased. The urine was acid; specific gravity about 1010. She has had a slight attack of abdominal pain. On the 19th and 20th she had severe bleeding from the nose on both sides, and the nostrils had to be plugged. On the 21st there was a raised papular rash on the arms, chiefly the extensor surfaces; in places diffuse erythema, in others small raised red spots. On the abdomen there was an extensive outbreak of purpura; on the anterior surfaces of the thighs a number of larger raised haemorrhagic spots; none on the legs. The urine during the past few days has become turbid and contains numerous streptococci, which have been cultivated. The patient has become very thin, is very restless at night, much disturbed by the vomiting. Albumin ranges from 0.2 to 0.35 per cent.; specific gravity 1010 to 1012. The was no fever; there were no retinal changes, and there was nothing suggestive in the cardio-vascular state. On January 25th there was a fresh outbreak of spots, many of them raised and abundant on the face and forehead. Over the arms the combination of erythema and mottling suggested measles. On the 26th the child had severe abdominal pain and was very drowsy; the urine contained a large amount of albumin, was a little turbid, and had numerous streptococci. She complained of pain in the right side of the face, and gradually the parotid became swollen. The amount of albumin increased; the child grew rapidly worse, became very drowsy, and died on January 28th. *Post-mortem* examination showed (to our surprise) only a fragment of the left kidney, and the right kidney in a state of extreme interstitial nephritis. The left parotid was suppurating.

Manifestly this was a case of latent interstitial nephritis with uraemic symptoms, shown by the vomiting and the drowsiness, in which we were deceived by a combination of abdominal pains and purpura.

Cardiac Complications.

Heart murmurs are common and usually of little significance in debilitated or anaemic children. Endocarditis may be a complication of the infectious purpuras, rheumatic or septic. In what Cheadle used to call the rheumatic cycle the skin lesions and endocarditis may coincide, as in the child already referred to, with outbreaks of purpura and

chorea in the third year, and in the fifth a severe attack of urticaria, during which endocarditis was discovered. It occasionally occurs in very severe cases of what is called purpura rheumatica, but it must be rare. The complication was not present in the long series of cases on which Platt based his article. I saw with Dr. Musser a boy with arthritis, purpura, and fever, in whom under observation a loud mitral murmur occurred, which persisted after convalescence. In the septic forms of purpura associated with gonorrhoea, puerperal fever, or a local skin lesion endocarditis is more common and is usually latent.

Respiratory Complications.

In the various forms of purpura respiratory symptoms are not common, but there have been in my series several cases with very remarkable and serious features. In No. II, a boy, aged 10, had for five years an extraordinary sequence of skin lesions, purpura, urticaria, oedema, and erythema. In several attacks he had a bronchial wheezing; then asthma and emphysema came on, and he died in an acute attack of pneumonia with pericarditis. In No. XXVI, a girl, aged 24, with recurring attacks of erythema and purpura, had severe pneumonia during an outbreak. Five months later she died of acute nephritis. No. XI, a child, died of pneumonia a month after an attack of purpura.

The association of asthma and urticaria is an old story. In a case of whooping-cough in an adult asthma persisted for more than eighteen months, and the attacks were associated with intolerable itching between the shoulders and very often an outbreak of urticaria in this region.

Very serious respiratory complications occur in angio-neurotic oedema. Dyspnoea may follow great swelling of the neck externally, or, as in a girl from California, seen with Dr. Hale White, the swelling of the tongue and the fauces may be sufficient to obstruct breathing.

The chief danger is oedema of the glottis. Two members of the New Jersey family I have reported died from this cause; both father and daughter as reported by Griffith,[30] and a man aged 21 had tracheotomy performed twice, and in a third attack died before assistance could be reached.[31] The oedema may be in the trachea, as in the extraordinary case reported by Radolf.[32] A woman aged 63 began to have attacks of erythema and oedema affecting, in the course of three years, lips, nose, ears, legs, and face, usually transient. Twice the mucous membrane of the trachea became swollen, causing great stridor; the second attack proved fatal.

Among other complications may be mentioned the frequency with which the spleen is enlarged; the liver, too, may be swollen. In one case a woman aged 50 was admitted with purpura, abdominal pain, and a temperature of 104°. The pain was high in the region of the gall bladder, and was probably due to gall stones, as jaundice appeared on the following day.

Parotitis is not uncommon in the acute infections with which purpura is associated, such as malignant endocarditis and pneumonia. In such a case as that described under renal symptoms, in which the purpura was a terminal event in a chronic interstitial nephritis, the accompanying parotitis was of the same nature; sepsis was present. But in the following case, under the care of Dr. C. J. Wood, the parotitis occurred in one of these remarkable instances of acute febrile erythema with purpura, in which the patient had half a dozen relapses of great severity.

J. C., aged 22, a medical student with good family history, was strong and well until the present illness. On November 1st he had a chill, with headache, vomiting, and the temperature rose to 105°. On the second day an eruption appeared all over the body, purplish-red in colour, which lasted for two days. The temperature persisted, with much fever and headache; on the fifth day the right parotid gland became swollen and tender. The symptoms gradually disappeared, and the parotid subsided, and at the end of ten days he was quite well. As mumps were about, it was thought possible to be an anomalous case. He went back to his studies for three days; then with chilliness and headache a second attack came on; the temperature rose to 105°, and on the second day a rash appeared—raised spots, 1 cm. in diameter, some looking like ordinary hives, others of a deep purple colour. With this attack there was nausea and vomiting, but no abdominal pain. At the end of three days he felt quite well. He had in all six or eight of these attacks. In one there was an outbreak of ordinary purpura on the hands and feet. In the third and fourth attacks the knees, ankles, and shoulders were slightly swollen and tender; the superficial lymph glands became enlarged, but not the spleen. In one attack there was a slight conjunctival haemorrhage; the bowels were constipated, but considering the severity of the attacks the general health was not much disturbed. There was no anaemia; there was always a slight leucocytosis. The attacks gradually wore away and the young man recovered.

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ORAL SEPSIS SIMULATING HENOCH'S PURPURA.

BY T. S. BRADBURN, M.R.C.S., D.P.H.

A GROOM, aged 28, was first seen by me on February 3rd, 1913. His previous health had been always good, and his family history was good also.

At the end of an ordinary day's work in the stable, just before Christmas, 1912, he was suddenly seized by a shivering fit, had pains in all his joints, and a general feeling of malaise. He passed a restless night, and the next morning noticed that his legs were covered with blotches. He stayed in bed for a fortnight and got a little better; but, on getting up at the end of this time, he caught, in his own words, another cold, and the joint pains, which had never quite gone, returned with increased severity, and he again broke out in blotches over the legs and lower part of the stomach. In addition, he now had pains in the abdomen, severe, spasmodic, not related to food, and, while intermittent, never absent for many minutes. He remained in this condition up to the date when I first saw him—approximately six weeks from the commencement of his illness.

He was a well-developed, muscular man, rather flushed, and looking ill. He was quite rational and answered intelligently, but every few minutes he would roll about in bed groaning from abdominal pain.

His pulse was 90, large, soft, and regular; the temperature was 99.2° F., and he was sweating slightly; the tongue was clean. There were no physical signs in the chest; the abdomen was slightly distended uniformly, but nowhere tender, and he suffered deep palpation all over without flinching. Pain was not elicited in the right iliac fossa, and there was no superficial skin tenderness anywhere. There was no visible peristalsis and no sign of fluid. The bowels had moved that morning. There was neither swelling nor tenderness of any of the joints. Over the lower part of the abdomen, on the thighs, legs, and small of the back were scattered purpuric spots, not raised, not fading on pressure, and varying in colour from brown to red.

I was quite at a loss for a diagnosis, and as the man was evidently in great pain, chiefly abdominal, I advised that he should be taken at once to the hospital. He was admitted accordingly to the Wolverhampton General Hospital under Dr. Malet, to whom I am indebted for permission to publish the case. To Dr. Rattrie, the resident medical officer, I am under much obligation for the use of the notes he took while the patient was under his care.

At the hospital it was found that there was blood in the patient's motions and also in the urine.

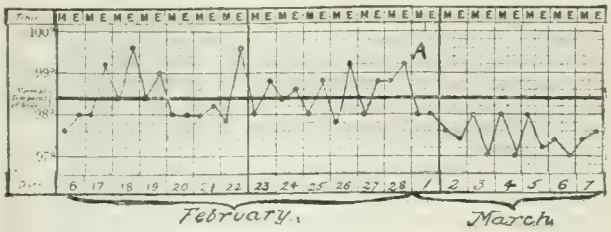
Widal's test being negative, he was given calcium lactate, gr. x t.d.s., and a provisional diagnosis of Henoch's purpura was made.

As there was no improvement at the end of a week, his blood was sent to the Clinical Research Society to be tested against the paratyphoid group of organisms. The report, dated February 11th, 1913, was:

The serum agglutinates paratyphoid B in 1 in 10, 1 in 25, 1 in 50, partial with 1 in 100, but none with 1 in 200. Negative to paratyphoid A. No reaction is obtained in controls of either organism made with normal serum.

The dose of calcium lactate was doubled, still without benefit. At the end of a fortnight his condition was very much as on admission, though the spasmodic attacks of abdominal pain were rather less frequent. The purpura continued to break out over his body, fading in one place and appearing in another, and there was still blood in the faeces and urine. The temperature from February 16th till just before his discharge is shown in the chart.

It was my custom to visit him about once a week, and on February 27th Dr. Rattrie and I again examined the patient carefully. Our opinion was that sepsis somewhere was keeping up the condition, and on looking into his mouth we found it full of septic and carious stumps.



A = Anaesthetic. Teeth extracted.

On March 1st, under an anaesthetic, all the decayed teeth were removed. The result on the temperature is seen in the chart. From that day all his symptoms disappeared, and he left the hospital practically well. In a few weeks he was back at work, and he has remained well since.

FURTHER NOTE UPON A CASE OF HYSTERICAL MONOPLEGIA FOLLOWING ELECTRIC SHOCK.

By PURVES STEWART, M.D., F.R.C.P.,
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This case was recorded in a previous number of the British Medical Journal (December 20th, 1913, p. 1580). It is unnecessary to repeat the history in detail. Briefly, the patient, a young man of 21, after an electric shock to the left hand, developed sudden paralysis of the left upper limb, at first spastic in type, later with complete flaccidity and with total anaesthesia of the limb to all forms of stimuli up to the level of the shoulder-joint (see Fig. 1). It will be remembered that pins could be thrust through the anaesthetic skin without causing bleeding. Nevertheless, the skin of the limb showed normal reaction to a fly-blister; also it sweated normally after pilocarpin administered hypodermically.



Fig. 1.—Hysterical monoplegia of left upper limb. Photograph taken when symptoms had lasted nine months. The black line indicates the upper limit of the anaesthesia. The patient is attempting to elevate both shoulders.

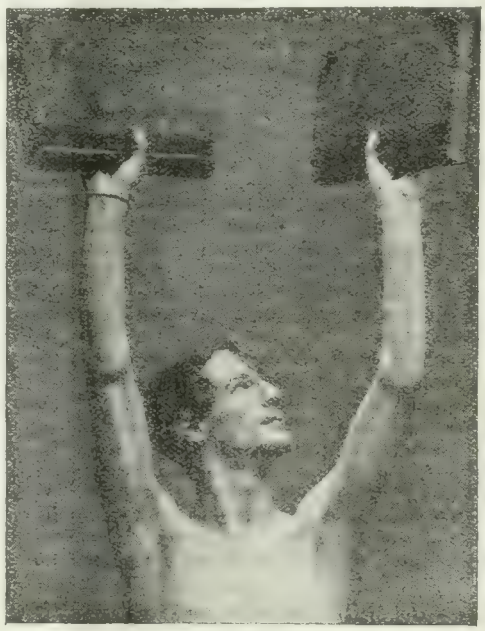


Fig. 2.—Hysterical monoplegia of left upper limb of eleven months' duration. The same patient after the administration of a general anaesthetic. The anaesthesia has completely disappeared, and the motor functions are normal.

Nine months after the accident he was admitted to Westminster Hospital, where, for a further period of over two and a half months various forms of suggestive treatment were tried, including strong electrical stimulation to the paralysed limb, the application of cutaneous irritants—such as *Mucuna pruriens*—to the anaesthetic area of the skin, and so on. Despite these measures, however, the clinical phenomena remained at a standstill, and we therefore decided to send the patient for suggestive treatment to a medical colleague who was a skilled hypnotist of high reputation. For over two months repeated and assiduous attempts at curative suggestion were made at the psycho-therapeutic clinic, but without producing the slightest effect upon the patient's symptoms. In fact, if anything, he became worse, inasmuch as the limit of cutaneous anaesthesia and analgesia advanced in a proximal direction on to the trunk, so as to include the outer part of the pectoral region in front and a similar area over the scapula behind. By the end of January, 1914, the medical hypnotist wrote that neither he nor his assistant could do anything more for the patient.

Accordingly, the patient having been over two and a half months in hospital, and the paralysis having now lasted eleven months from the time of the original electric shock, we decided, before discharging the patient, to try the effect of giving him a general anaesthetic, in the hope of loosening his obsession during the stage of delirium produced by the inhalation of ether freely mixed with air. This was accordingly done on January 20th. The patient was placed on a couch with chest and arms exposed. He was then given ether and nitrous oxide, with plenty of air, so as to prolong the stage of excitement. The normal right arm was fixed to the trunk by a bandage; the paralysed left arm was allowed to hang free. Within a few seconds, whilst the anaesthetic was being administered, and without any suggestion on the part of the physician, the patient began to make slight movements of the paralysed arm, and in a short time these amounted to violent fighting movements, in which the patient tried to snatch the mask out of the hands of the anaesthetist. After a

few minutes the general anaesthetic was discontinued, and the patient passed into a hypnotic state, during which voluntary movements of the previously paralysed limb were normally executed in response to verbal commands, reinforced by occasional painful stimuli, such as twisting the ear, pressing the supraorbital notch, pricking the previously anaesthetic limb, etc. During this stage analgesia of the opposite limb was temporarily suggested, and pins could be passed through the skin without pain. Lastly, it was suggested that all his sensory and motor disabilities should disappear, and, as the effects of the ether passed off, this was found to be actually the case.

Ever since his séance with ether and nitrous oxide, the patient has remained able to move the limb normally at all joints (see Fig. 2), whilst all varieties of cutaneous and other stimuli are promptly and normally recognized.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY FRANK SHUFFLEBOTHAM, M.A., M.D.Cantab., J.P.,

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LECTURE II.

Causes of Explosions.

Up to a comparatively short time ago colliery explosions were attributed to the inflammability of fire-damp; but in a modern well-ventilated mine, while the explosion of fire-damp may be the initial agent, it plays practically no part in the actual explosion in the workings. An explosion can be produced readily by firing a mixture of coal dust and air, and the proportions necessary to form an inflammable mixture are, roughly speaking, 1 lb. of coal dust to 160 cubic feet of air.

Coal Dust Watering.

The finer the coal dust the more explosive. While fire-damp explosions begin at the working face, coal dust explosions usually take place in the main haulage roads. The coal dust may be ignited either by a blown-out shot (a shot that had been put into the hole in such a manner as to be blown backwards without blasting the rock or coal), or by the exposed flame of a broken safety lamp, by a fused electric cable, or by sparks emitted from coal-cutting machines. In other cases, however, there has been an initial explosion of fire-damp at the working face, carried through the workings by the ignition of coal dust, and a large number of explosions have been caused through the ignition of fire-damp by naked lights in pits where safety lamps are not employed.

Fire-damp explosions can be and are prevented by improved methods of ventilation and by the early detection of the fire-damp in small quantities by means of the cap over the flame of the safety lamp. In considering the prevention of coal dust explosions, the first problem is how to prevent the accumulation of coal dust. The presence of coal dust is inevitable in a mine. The removal of dust by periodical sweeping of the roadways, sides, and roof has been advocated, but a more effective method is by watering the roadways, a method practised for some years in Germany and Belgium, and successfully adopted in many mines in this country. It is necessary to water the sides and roof as well as the roadways. It is, however, the general opinion that watering can never, for various reasons, be universally adopted, and spraying might under certain conditions have an injurious effect upon the miners' health. Again, falls of ground are more numerous in wet mines than in dry. Dust removal and spraying may be of some use, but they do not entirely remove the danger, though it may be hoped that as a result of the Government experiments at Eskmeals a possible remedy is near at hand.

Poisonous Gases.

The poisonous gases found naturally in mines are black-damp, fire-damp, carbonic acid, and, in small quantities, sulphuretted hydrogen and sulphurous acid; as a result of explosives we may also find oxides of nitrogen. Carbon monoxide is invariably generated as the result of an explosion, whether of fire-damp or coal dust.

Black-damp.

This is the residual gas after oxidation of materials present in the coal, oxygen of the air being taken up with the formation of carbonic acid. It is found more or less in all mines, and always in the return air of the upcast ventilating shaft.

The composition of black-damp varies under different conditions, but, speaking generally, it is a mixture containing about 87 per cent. of nitrogen and 13 per cent. of carbon dioxide. It is probably formed in the process of oxidation of iron pyrites which is present in the coal. This sulphide is oxidized to sulphuric acid and sulphate of iron, and as calcium carbonate in the form of calcite is also present in the coal, calcium sulphate is formed with the liberation of carbonic acid, and, according to Haldane, the process may be represented by the following equation:

$$4FeS_2+15O_2+8CaCO_3-8CO_2+8CaSO_4+2Fe_2O_3.$$

Black-damp as a rule has a greater specific gravity than air, and consequently is found on the floor in low-lying workings, but there are cases in which black-damp is lighter than air, cases in which the black-damp contains less than 5 per cent. of carbonic acid (Cadman), or when it is mixed with other gases, such as fire-damp. When there is an accumulation of black-damp lighter than air it is most important that it should not be examined except with a safety-lamp, on account of the possibility of the presence of fire-damp. With a falling barometer the percentage of black-damp may be very greatly increased, and to such an extent in some workings that it is necessary for the miners to suspend their operations.

This gas is recognized by the safety lamp from the fact that when present in small quantities the flame will only burn dimly, and when in larger quantities the flame may be extinguished altogether. This is due to the lack of oxygen, and not to the presence of carbonic acid.

The effects of black-damp on the human subject are due to the presence of carbonic acid and the deficiency of oxygen. The initial symptoms are shortness of breath, quickened pulse, and increased respiration-rate, followed by headache and giddiness. If the victim is unable to get away he may be overcome with drowsiness, and if the black-damp be of sufficiently high percentage he may become insensible and eventually die. Before death there may be marked cyanosis, and the heart may continue to beat for some little time after the breathing has stopped. Death is always due to suffocation or to injuries produced as the result of a fall when the miner is overcome by the gas.

Treatment.—It is most important to get the victim into pure air as soon as possible, and if breathing has stopped, artificial respiration should be resorted to without delay. If the heart has not stopped and oxygen be administered at the same time there is every chance of recovery. If oxygen be available in the pit the rescuer should administer the gas to the sufferer if he be unconscious without removing him, and artificial respiration should be carried out by a colleague.

The *post-mortem* appearances due to black-damp poisoning are similar to those of asphyxia.

Fire-damp.

The constitution of fire-damp is at the present time a matter of controversy. Dr. Haldane holds that it is pure methane, and he has found that the fire-damp met with in lead mines, shale mines, and the Cleveland ironstone mines has also reacted as pure methane. On the other hand, Le Chatelier finds that fire-damp in French coal mines apparently consists of two constituents, one of which is combustible and the other non-combustible, the former constituting in some cases about 95 per cent. of the

whole. Chamberlin, in the United States, has found that, in addition to methane, paraffines and olefines are also present in small percentages, and in Germany, associated with certain kinds of coal, ethane is also said to be found as a constituent of fire-damp. Methane (CH_4), a completely colourless and odourless gas, exists in the coal seams at a high pressure, which sometimes may be as great as 400 lb. to the square inch. The air in abandoned workings often contains a considerable percentage of methane, derived not only from the coal, but from the decomposition of old timber props.

The specific gravity is 0.559, air being 1, and thus the gas is always found in the highest places of the mine. It burns with a bluish flame, and when mixed with air forms an explosive mixture, the explosive character of which varies with the proportions of the two gases, the most explosive mixture being reached when methane forms about 10 per cent. of the mixture with air. The lower limit of inflammability is 5.5 per cent. of fire-damp in a mixture of methane and air, and this limit seems to be pretty well established; the upper limit of inflammability does not extend beyond 15 per cent., and the combustion in many instances may not be complete when the proportion is greater than 13 per cent. of methane. No explosion can take place in a mixture of methane and air if the temperature of the flame be lower than 740° C. The limit of inflammability will depend to some extent upon the atmospheric pressure, and by increasing the pressure a mixture containing less than 5.5 per cent. of methane may become explosive, and conversely if the pressure be diminished a mixture containing a greater percentage of methane than 5.5 may not explode.

When methane is present the flame of the safety lamp flickers and a pale, non-luminous, slightly blue cap is seen above the ordinary flame. The observations and experiments of Professor Cadman have made it possible to estimate roughly the percentage of methane in mine air by measuring the height of the cap as compared with a test flame of a standardized and measured height. His observations when recorded in an atmosphere containing 3.7 per cent. of fire-damp show as follows:

Height of Testing Flame in Inches.	Height of Cap in Inches.
0.1	0.85
0.2	1.1
0.3	1.4
0.4	1.75

0.5 cap not seen; testing flame too luminous.

While a mixture is not inflammable unless 5.5 per cent. of methane is present, methane can be detected by means of the luminous cap when it is present to the extent of only 1 per cent.; but it is impossible to see the tip of the cap unless at least 2 per cent. of methane is present in the mine air.

Fire-damp has no direct deleterious effect on man. It simply dilutes the oxygen of the air so that its action may be regarded as the same as that of nitrogen, or, to put it in other words, it is due to deficiency of oxygen. Life is not endangered until the percentage of fire-damp reaches somewhere about 70, although when the percentage is between 40 and 50 the respiration-rate and the pulse-rate will be increased, and there will be palpitation of the heart, cyanosis of the face, and pronounced muscular weakness. Fatal accidents sometimes result from miners walking into an accumulation of pure fire-damp.

When the mine air contains fire-damp to the extent of 5.5 per cent., or the lower limit of inflammability, even if there is no explosion, the flame of the safety lamp is extinguished; this fact is an indication of the presence of fire-damp, and should be of great use to exploring parties.

Treatment.—The treatment of poisoning by fire-damp consists in restoring the patient to pure air, and the application of artificial respiration in severe cases. Oxygen should be applied wherever available in all serious cases.

The *post-mortem* appearances after poisoning by fire-damp are not unlike those found in cases of black-damp poisoning; they are those of asphyxia.

After-damp.

This term is applied to the gases after an explosion. Haldane has described it as a variable mixture of nitrogen, carbonic acid, and carbon monoxide, together with air; in dust explosions there may also be present a little sulphurous acid or sulphuretted hydrogen and various products of the dry distillation of coal. While sulphurous acid and sulphuretted hydrogen are highly poisonous bodies, still the deleterious properties of after-damp are undoubtedly due in nearly every case to carbon monoxide. After-damp may be found under several different conditions as a result of incomplete combustion, as from a gob-fire, or as a product of combustion of a blasting explosive.

When fire-damp ignites in the presence of an excess of air, carbonic acid and water are formed, but when the proportion of air is not sufficient for complete oxidation, carbon monoxide is produced as well as carbonic acid. We may infer from *post-mortem* observations that death in the vast majority of cases is due to carbon monoxide poisoning, and that, speaking generally, there is never sufficient air to bring about complete oxidation. When sulphurous acid or sulphuretted hydrogen are present the after-damp acquires a characteristic and unpleasant smell, but otherwise it is odourless. Carbon monoxide has an affinity for haemoglobin which at the ordinary body temperature is more than 300 times greater than that of oxygen, producing the stable body carboxyhaemoglobin. The effect of the gas is cumulative; 0.4 per cent. in the air will produce a fatal result if the air be breathed for a sufficiently long time, but after an explosion from 2 to 5 per cent. of carbon monoxide is generally found, and as a consequence death rapidly ensues. Leonard Hill regards 0.05 per cent. as the highest allowable limit of after-damp in the atmosphere of a mine. Pure carbon monoxide burns in air with a bluish flame, but when diluted to the extent found in after-damp a naked candle and a safety lamp will continue to burn in it. After-damp is best detected by means of a mouse or a small bird, such as a canary, either of which will show symptoms of poisoning very much sooner than the human owing to the rate of metabolism in these small animals being very many times greater than that of man.

Symptoms.—The symptoms of carbon monoxide poisoning depend upon the amount of gas inhaled and the amount of carboxyhaemoglobin formed in the blood. If the air contain only a small percentage of the gas the symptoms are headache, nausea and palpitation, and shortness of breath and giddiness on exertion; with a larger amount of gas headache may be accompanied by singing or buzzing in the ears and throbbing of the temples, but the most striking symptom is always muscular weakness. If the gas be present in the air to the extent of 0.05 per cent. the limit which Dr. Hill has laid down, slight giddiness results after inhaling it for half an hour; if carbon monoxide be present to the extent of 0.1 per cent. there is inability to walk after half an hour; if 0.2 per cent. be present there is loss of consciousness after half an hour, and with 1 per cent. loss of consciousness results after a few minutes and death rapidly ensues. Drowsiness, and even unconsciousness, occur in a large number of non-fatal cases, and in fatal cases death may be ushered in by convulsions and coma. Exposure to this gas in cases which recover may produce a deep-red blotchy appearance of the face, which has been noticed for as long as fourteen days after the explosion, and in some cases the characteristic rosy flush which is associated with carbon monoxide poisoning has been observed. Chauffard has found an extreme exaggeration of the olecranon reflex, while the knee-jerks were not exaggerated to the same extent, and he noticed that Babinski's sign was positive on both sides. Sometimes we find incontinence of the bowels and retention of the urine, and transient glycosuria may be observed for a few days. The pupils may be fully dilated and insensible to light, and Ruata records as a symptom acute delirium, which in one case lasted for five days.

Examination of the Blood.—If blood be saturated with carbon monoxide it has a bright scarlet or cherry colour, but the blood from the body of a man directly killed by carbon monoxide has a dark purplish-red colour, the dark colour being due to an admixture of carboxyhaemoglobin with reduced haemoglobin. On spectroscopic examination blood which contains carbon monoxide shows two definite observation bands between D and E. If the blood be saturated with carbon monoxide, the addition of ammonium sulphide produces no effect, thus differing in this respect from healthy blood. Haldane has devised a colorimetric test which is both simpler and much more

delicate than the spectroscope. A drop of blood from a patient who is supposed to be suffering from carbon monoxide-poisoning is diluted with about a hundred times its volume of water, and compared with a solution of the same depth of colour from normal blood obtained from the lobe of the ear or a prick of the finger. Part of the solution of normal blood is saturated with coal gas and changes from yellow to pink. We thus have three solutions: (1) The solution of blood from the supposed case of carbon monoxide poisoning, (2) a solution of normal blood diluted to the same extent as No. 1, and (3) the normal blood through which coal gas has passed. These three solutions are then poured into narrow test tubes of equal diameter, and a comparison is made. If the depth of colour of the first solution appears to be greater than that of the other two solutions water must be added until the tints are exactly the same, but if the depth of colour is less than the two solutions then a few more drops of blood are added for the same purpose. We are now able to compare the tints of the three solutions, and a rough estimate can be made of the degree of saturation by noting the amount of water or blood, as the case may be, which it has been necessary to add to the first solution to ensure the same depth of colour. Normal blood, when diluted with water, is yellow in colour, while blood containing carboxyhaemoglobin is pink, and it is upon this observation that the colorimetric test is made.

Notes on After-damp Poisoning at Senghenydd.

I paid a visit to Senghenydd two days after the terrible explosion which occurred there in October, 1913, and had the opportunity of examining many men who were rescued from the pit on the day following the explosion. The principal clinical features of these cases were that in those who had been badly gassed the pulse-rate was most irregular, not only as regards frequency, but as regards volume and character, and examination of the pulse gave no indication of the physical condition of the patient. At one time the pulse might be slow, feeble, and irregular, apparently the pulse of a patient slowly sinking; but, without apparent cause, ten minutes afterwards the pulse would be of normal rate and would have materially improved in quality. Dr. Philip James of Senghenydd, the principal medical officer to the colliery, told me that this was a special feature of these cases, and it made it impossible to give a correct prognosis to the friends of the patient.

The large majority of these cases showed large erythematous patches of a bright cherry colour with clearly defined margins, but of irregular shape; they varied in size from areas of 6 in. long by 4 or 5 in. broad down to areas 1½ in. long by ½ in. broad. They were tender and tense, with a considerable amount of induration around the patches. The patches were principally located upon the buttocks, sometimes only on one side. When both sides of the buttocks were affected the patches were not symmetrical. I am not aware that this condition had been described before, and in some cases they were reported to me as superficial burns. I am sure they were not burns, not only because of the location of the rash, but also because there was no blister over any of these areas; further, some patches developed for days after the explosion. The induration was very slow in clearing up. Six weeks after the explosion the patches were smaller and the induration had subsided to a large extent, but not completely. The skin over the patches was discoloured, and there was desquamation, while the follicles were prominent. The oedema around the patches had disappeared, and there was hyperaesthesia over the patch of skin which remained, and anaesthesia over the area of skin which had been originally affected.

The third striking clinical point was the development of peroneal palsy, or ankle-drop, in many of the cases who were rescued. Previous writers have recorded paralysis of different kinds as being a symptom of carbon monoxide poisoning, but I have never found any special reference to peripheral neuritis affecting the peroneal nerve and causing ankle-drop. This symptom developed from two to four days after the explosion. The early symptoms were pains in the legs, there was tenderness along the peroneal nerve, and talipes equino-varus. The peroneal paralysis passed on from the acute to the chronic stage, and in some cases I fear that the paralysis will be permanent. Six weeks after the explosion the symptoms were loss of power of dorsiflexion of the foot. In one or two instances there was complete paralysis in this respect, and in some diminished power of plantar flexion. The cutaneous reflexes were absent over the area of skin supplied by the peroneal nerve and in some cases irregular areas of skin, apart from the distribution of this nerve, were similarly affected.

After many explosions it has been frequently observed that pneumonia of a particularly dangerous type was a frequent sequela, and the Senghenydd explosion was no exception. Several of the patients developed pneumonia almost immediately they had been rescued. The temperature was very little raised, the pulse was variable in frequency and quality, the respirations were quick, and the expectoration from the onset contained blood of a dark blue colour. Examination showed irregular patches of dullness on both sides of the lung.

Retention of urine was a striking symptom in every case, and in two cases there was paralysis of the sphincter ani.

I do not propose to give details of the cases which I examined at Senghenydd, as they are being carefully observed by Dr. Ivor Davies, of Cardiff, who will shortly publish an account of the clinical aspect of after-damp poisoning.

After-effects of Carbon Monoxide Poisoning.

The after-effects of carbon monoxide poisoning are often serious, and may be so varied as to suggest the possibility that the patient is suffering from some other disease. Headache may persist for weeks, and I have known severe headache to persist for six months. Symptoms of indigestion may also persist for an equally long time. In cases which recover within a few weeks we may find that muscular weakness, pains in the legs, and aching of the knees and ankles are complained of as after-effects for some days, and there are recorded cases in which these symptoms were present for a week or two after the explosion. Other noticeable symptoms are coldness, heaviness, and numbness of the legs and feet, and, occasionally, shooting pains. These symptoms are, in my opinion, due to neuritis.

The after-effects of carbon monoxide poisoning upon the human subject are entirely confined to the central nervous system. Mental symptoms, disturbance of memory, changes in the voice and speech, hemiplegia, and monoplegia all denote some toxic effect on the brain; sclerosis of the spinal cord, poliomyelitis indicate pathological changes in the spinal cord, and we have seen that peripheral neuritis is one of the most frequent sequelae of this poison, and these toxic effects produced by carbon monoxide are so similar to the toxic effects produced by other poisons that it almost seems as if toxaemia, no matter how produced, has the same effects upon the central nervous system.

A large number of miners are pale, and it is a matter of speculation whether the paleness is due to the daily inhalation of very small quantities of carbon monoxide. This peculiarity cannot be the result of working underground for forty-eight hours each week without some further cause, and it may be a subject for further observation, and even research, whether this condition might not result from breathing some deleterious gas, such as carbon monoxide, in very small quantities. I have taken blood counts of many miners, and have examined the blood for carbon monoxide, but with only negative results. Sir Thomas Oliver has questioned whether miner's nystagmus may not be due to the toxic effect upon the central nervous system of small quantities of carbon monoxide continuously inhaled while the miner is at work in the pit.

Treatment.

It is important to remove the man into fresh air with as little delay as possible and without undue exertion, and it is equally important that he should be kept warm so as to diminish the risk of after-complications. In some cases artificial respiration must be resorted to, and it is generally admitted that Schäfer's method is the best. In apparently hopeless cases patients have been revived after artificial respiration has been practised for three or four hours. The artificial respiration must be carried out in fresh air on the surface and not in the vitiated atmosphere of the mine.

Oxygen is of the greatest assistance in restoring patients suffering from after-damp, but it should be warmed by passing from the cylinder into an india-rubber bag placed in a bucket of hot water; the gas may thus be brought to the atmospheric temperature or a little higher.

Wilcox and Collingwood have recommended the inhalation of alcoholic vapour along with oxygen, and they claim that this mixture has a most beneficial action on the heart. Stimulants are of the greatest use in assisting the action of the heart, and of these sal-volatile by the mouth or hypodermic injections of strychnine have been found useful; adrenalin and pituitrin have also been recommended to increase the blood pressure. Venesection and transfusion of defibrinated blood have been tried in individual cases, and Mr. William Sheen of Cardiff has recommended in severe cases, where there is unconsciousness, that the patient be transfused with defibrinated blood on one side and that venesection be carried out on the other side.

The burns very often are of a serious nature and require special care. The skin affections, especially those which are angioneurotic, are best treated with powders rather than ointments, although if there be great pain it may be necessary to apply an opium lotion.

As the treatment of pneumonia is very largely a matter of nursing it is essential that patients should be attended by trained nurses from the very onset of the pneumonic symptoms. While Red Cross nurses may be very willing to do what they are told and may have very good intentions, unless they have been properly trained as nurses their efforts in cases such as these may be in many cases of little avail. I wish to emphasize this point because I feel that it is useless to rescue men from a mine after an explosion at great personal risk to the members of the rescue parties unless everything possible is done to save the lives of those who are rescued. There should be some proper arrangement for the immediate treatment of men who are rescued from explosions. I suggest that a few beds should be kept in the office to meet the immediate needs of men who are gassed, that in each colliery district there should be a cottage hospital with a few beds so that ordinary accidents may be treated in an efficient way and without delay, and then in the big centre we should have the large general hospital where serious injuries may be dealt with if no risk is incurred to the patient in removing him from the mine or from the cottage hospital.

The experience at Senghenydd clearly points to the fact that cases of peripheral neuritis will not cure themselves, and it is most important for patients to have the advantage of massage and electric treatment carried out under medical supervision and in a systematic way at the earliest possible moment. In the Senghenydd cases the amount of damage done to the nerves by the carbon monoxide was extensive, judging from the rapidity with which atrophy of the muscles set in, and it is not sufficient in such cases for the patients to be treated at home, and probably by themselves, with simply liniments and medicines. As systematic massage and electric treatment can only be carried out in hospitals or institutions, it is most desirable that the patient be admitted for this treatment at the earliest possible moment, and before atrophy of the muscles supervenes.

The *post-mortem* appearances due to after-damp poisoning are for the most part characteristic of poisoning by carbon monoxide, but they may be associated with other conditions—the bodies may be severely burned as a result of exposure to flames, or there may be extensive wounds due to falls of ground produced by the explosion. Pneumonia in some instances may be the cause of death.

Sulphuretted Hydrogen.

Sulphuretted hydrogen may be found in mines under varying circumstances. It may be found mixed with fire-damp, or it may be found associated with gases which are given off from coal which has undergone spontaneous combustion, known as white-damp, choke-damp, or in some districts gob-stinks. It may also be a product of the chemical action of the ignition of some of the explosives. It is an extremely poisonous gas; it causes irritation of the eyes and the respiratory tract, with conjunctivitis, nasal catarrh, and pharyngitis; in severe cases there may be bronchitis, bronchopneumonia or lobar pneumonia, sometimes of a septic type.

Smoke.

In the case of an underground fire, smoke may be emitted in such large quantities as to be of danger to the workers, not only in the immediate vicinity of the fire but in any part of the workings where the smoke may be carried by the ventilating current. Carbon monoxide is the dangerous constituent of the smoke, although traces of sulphuretted hydrogen and sulphurous acid and nitrous fumes may also be present.

Sulphurous Acid.

Sulphurous acid is sometimes produced in small quantities along with after-damp. It causes irritation of the eyes and of the respiratory passages; with 0.003 per cent. the symptoms of irritation are most marked, and as little as 0.001 per cent. may produce some irritation of the conjunctiva and the air passages. Apart from conjunctivitis, the most common symptom noticed after inhaling an atmosphere containing sulphurous acid is bronchitis; the expectoration may contain blood mixed with the mucus, and as a result of the violent paroxysms of coughing in severe cases haemoptysis may be noticed. In some cases we find symptoms which affect the digestive organs, and dyspepsia of a more or less severe type may be set up.

Nitrous Fumes.

Nitrous fumes are very dangerous to life. The nitrous oxide (NO_2), which is the principal irritating constituent of nitrous fumes, when inhaled and absorbed into the system, unites with the haemoglobin of the blood and displaces the oxygen. While the patient is exposed to the fumes there may be momentary symptoms of irritation, such as smarting of the eyes, cough, expectoration, feeling of suffocation, and sickness; but these symptoms may pass away for some hours; then, sometimes quite suddenly, more serious symptoms may arise—shortness of breath, cough, feeling of suffocation, cyanosis, and difficulty of breathing. Septic bronchitis and bronchopneumonia are frequent sequelae, and the patient may die within a few days. In non-fatal cases the illness may extend over several weeks, and if the exposure to the gas has taken place in the early or mid winter there may be chronic bronchitis until the warm weather appears again. If a strip of white blotting paper be moistened with a solution of starch and a little potassium iodide and slightly acidified and exposed to nitrous fumes, even when present to a very low percentage, it becomes blue owing to the liberation of free iodine.

Rambousek says that in the treatment of patients who have been exposed to nitrous fumes the inhalation of oxygen is perhaps the most important remedy, and should always be tried. He also states that chloroform may be used, not because it produces any actual curative effect, but because some of the symptoms may be abated by its inhalation, and narcosis in this way induced.

Cases due to Explosives.

When miners are using the cartridges which contain the explosives, the men who are working at that place seek safety at some distance before the shot is fired. Gunpowder, gelignite, bobbinite, and samsonite are the four explosives most commonly used in the coal mines of this country. Gunpowder is a mechanical mixture of sulphur, potassium chlorate, and charcoal, and when it explodes gives off carbonic acid and nitrogen in large quantities along with a small quantity of sulphuretted hydrogen and carbon monoxide. Gelignite is a mixture of nitro-glycerine and sodium nitrate, and contains 65 per cent. of the former body. On detonation it gives off carbon monoxide. There are two kinds of bobbinite, both of which contain about 65 per cent. of potassium nitrate, from 18 to 20 per cent. of charcoal, and 2½ per cent. of sulphur; but in one preparation there is added a mixture of the sulphates of ammonium and copper, while in the other we find a mixture of rice or maize starch with paraffin wax. With this explosive nitrous fumes and sulphuretted hydrogen in addition to carbon monoxide may be given off.

We are thus faced with the same problems in connexion with the gassing as a result of explosives as we have been in gassing after explosions. Haldane points out that the most serious accidents in mines from gases from explosives

are due to the accidental burning of the explosives and not due to detonation. When these explosives burn quietly it is found that a large proportion of nitrous fumes are produced.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE ELECTRICAL TREATMENT OF INTESTINAL STASIS.

I HAVE read with much interest the papers and subsequent discussion on auto-intoxication. That stasis in the bowels is responsible for much misery cannot be doubted, nor is it confined to the "idle rich," as Dr. Arthur Brock would have us believe. On the contrary, the trouble is very common in women who have to earn their own living by occupations which do not permit them to obtain sufficient fresh air and exercise. Some of these unfortunates suffer so long in silence that they are beyond any form of purely medical aid, even when first seen. For such, short-circuiting, or even colectomy, offers the only hope of relief.

In many, if not the majority, of cases, however, operation is unnecessary. It is, I think, commonly agreed that lack of tone in the system generally, and in the intestinal and abdominal musculature in particular, is the initial cause of the trouble. Abdominal belts and paraffin are merely props; massage and exercises will cure cases in their early stages; but for bad cases, which are yet not the worst, electricity is essential. Many forms may be used, but the rhythmically interrupted sinusoidal and static-induced currents appear to give the best results, and these results are fairly rapidly produced.

Improvement in the constipation sets in within a fortnight, and *pari passu* with this there is a gain in appetite, energy, and weight. The tongue cleans, and headaches disappear. There is no class of case in which electrical treatment may be prescribed with greater confidence; and it may be laid down that any case in which the diagnosis of stasis is established by a bismuth meal, and which is not at all improved by six weeks' electrical stimulation, properly carried out daily, can be cured only by operation. If colitis is present as well, with tenderness, a preliminary course of *x* rays and high-frequency may be necessary.

The cures, when made, are genuine cures, in that the previously lacking nervous and muscular tone has been restored: but relapse may occur after some months if the original depressing conditions are not removed.

The mere fact that ordinary medical measures, even combined with massage, have failed to cure a patient, does not, in my opinion, justify a recommendation to operate. Skilful electrical treatment, carried out by a qualified medical man in person, will cure quite 50 per cent. of such obstinate cases, and nearly all the milder ones. It will do so without pain, without risk, and—what is to many a most important matter — without interfering with the earning of daily bread.

Darlington. FRANCIS HERNAMAN-JOHNSON, M.D.

HYDATID OF THE OMENTUM.

R. B., a Brahmin woman, aged 30, came into hospital in June, 1913, with a history of the abdomen having enlarged gradually for two or three years. She had considerable pain in the abdomen, which was greatly enlarged, and on palpation about twenty movable rounded swellings could be felt. They were tense, and felt cystic; some were very hard. They reached from the costal margin to the groins, and varied in size from a hazel nut to a large orange. The enlarged spleen was also felt. On vaginal examination the uterus appeared normal; one cystic movable swelling, about the size of an orange, could be found in the right fornix.

I showed the case to two doctors of large experience, and neither had seen a similar case before.

The patient clamoured for operation owing to the discomfort of the enormous abdomen, but I could not operate for three weeks, as the abdomen was covered with psoriasis. Meanwhile it continued to enlarge.

When the skin condition had improved I operated, assisted by Dr. Holland. On opening the abdomen we found it filled with cystic swellings of all sizes up to a fetal head; they were attached to the omentum—some very loosely, others wrapped up in it. They proved to be hydatid cysts, not daughter cysts enclosed in a capsule, but numerous cysts, all separate in the omentum, and many contained daughter cysts, while some only held fluid. Some were easily shelled out of their omental covering, others had to be very carefully separated, and necessitated many ligatures as the omentum was very vascular. After we had removed forty-two cysts we thought it best to leave the remaining dozen or so behind, as they were deeply embedded in omentum and would have taken some time to remove, and the patient, whose pulse had been poor from the start, did not appear to be able to stand any more. As it was, her condition was very critical for two or three hours after she was taken off the table, and for the next three days the pulse was about 160. She gradually improved. Three weeks after the operation she was again anaesthetized, for a swelling the size of an orange had formed in the epigastrium; this was opened and some 4 oz. of pus evacuated; this was evidently one of the cysts that had been left behind. Soon after another cyst near it also enlarged, and I tapped it and drew off clear hydatid fluid. The patient left the hospital fairly well, but returned two months or so later. There was a sinus and some of the cysts had again increased in size. She left before the sinus healed.

Shortly after this case another Brahmin came in with irregular masses in the abdomen and in great pain. She was very exhausted, but as she could not live on as she was I operated, and found, as I expected, that it was another case of hydatids of the omentum. This case was much more advanced than the first: many cysts had broken down, many contained pus, and the whole made up an adherent matted mass impossible to remove. The patient lived twenty-four hours—then collapsed suddenly.

By a rather curious coincidence I this year excised the eye in two Pathans; both cases proved to be hydatid of the orbit, the first I had seen.

E. GERTRUDE STUART, M.B.Lond.

Zenana Mission Hospital, Quetta, India.

DEATH DURING ETHER ANAESTHESIA: STATUS LYMPHATICUS.

M. B., female, aged 3½, was admitted to the Montreal General Hospital on November 12th, 1913, for bilateral talipes valgus. She had been a premature infant (eighth month), and had been artificially fed. At the age of 18 months she had had acute anterior poliomyelitis. In September, 1913, she underwent the operation of tonsillotomy under general anaesthesia.

At the time of her admission she appeared a well-nourished child, and presented no signs of rickets. Examination of the heart and lungs was negative. The anterior and posterior cervical glands were palpable. There was no apparent enlargement of the spleen. The urine was normal. On November 15th, 1913, she was given ether by the open method for a tendon-grafting operation. The course of the anaesthesia was uneventful until about an hour after its commencement, when the operation was nearly completed. Breathing then became somewhat gasping in character, and within a minute ceased. Artificial respiration was immediately commenced. Oxygen, camphor, and strychnine were administered, but without success. Respiration was never re-established.

At the autopsy the following conditions were found: The thyroid gland was normal. The thymus gland was greatly enlarged, especially on the left side. There was slight enlargement of the heart. The bronchial lymph glands were hypertrophied and showed areas of caseation. A caseous gland was present in the posterior mediastinum in close contact with the branch of the left pulmonary vein from the lower lobe. The spleen was enlarged. Peyer's patches and the solitary follicles in the large intestine were enlarged and very prominent. There was hypertrophy of the mesenteric glands. The pancreas, liver, kidneys, adrenals, and brain were normal.

W. B. HOWELL, M.D.McGill,
Anaesthetist to the Montreal General Hospital.

CONGENITAL DEFORMITY OF FEMUR.

DR. CONOR MAGUIRE may be interested to hear that while I was pathologist at the West Riding Asylum, Wakefield, in 1908 I saw one case of congenital deformity of the femur which was very similar to that he describes in the JOURNAL of February 21st. The patient was an inmate of the asylum, and died at the age of 79 of senile dementia.

The left leg was much shortened, due apparently to absence of the femur, the knee-joint being at the hip and the foot only reaching the level of the knee in the normal limb. The foot was everted but otherwise normal; I am uncertain as to whether the fibula was rudimentary or normal.

The man had been a hawker, and used to get about by kneeling on the normal leg and walking with the short one, and managed very well, I believe. At the *post-mortem* examination the kidneys were found to be lobulated, but no other congenital abnormalities were found.

I write from notes taken at the time, and two photographs taken after death, which, although showing the condition very well, are scarcely good enough to reproduce. I regret that no *x*-ray photograph was taken of the limb, though I am inclined to think the condition would be very similar to that in Dr. Maguire's case.

Buxton. FLORENCE THEOBALDS, M.D.Edin.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

JOHANNESBURG HOSPITAL.

REMOVAL OF A SECOND STONE FROM AN ONLY KIDNEY.

(By H. TEMPLE MURSELL, M.B., M.C., F.R.C.S.E., Extra Honorary Surgeon to the Hospital.)

IN July, 1911, a male European patient, aged 41, was admitted under my care. Three years previously he had pain in the sacro-lumbar region. Six weeks later pain was limited to the right renal region, and he passed "bits like limestone and black fluff with it" in his urine. There was no obvious blood. He remained well for four months. Similar attacks had occurred at intervals of some months since. After the pain, which was a true renal colic, he passed fragments of calculus.

On admission his urine was loaded with pus, and had apparently been so ever since his last attack ten days previously. He stated that before that he had never noticed his water thick. The right kidney was enlarged and tender. There was some indefinite left renal pain. The urine was acid, and 45 oz. were passed in twenty-four hours. X-ray examination showed two small bean-sized calculi in the left kidney, and one fairly large cortico-pelvic calculus in the right kidney. The indigo-carmine test showed light green urine after thirty-five minutes. The cystoscope proved that from the right side unstained purulent urine was passing, and from the left side a light green urine.

First Operation.

On July 11th, 1911, the right kidney was exposed through an oblique lumbar incision. A pus sac was found at the lower pole of the kidney, and an oxalate stone the size and shape of a large flat hazel nut, weighing 40 grains when dried, was removed. The kidney space was drained.

On July 14th the patient was doing well, and he passed 40 oz. of urine by the urethra in addition to free urinary leakage from the right loin. By July 20th there was no leakage.

On August 15th there was still some pus in the urine. The patient felt perfectly well, and was up and about. X rays showed no shadow on the right side, but two shadows were demonstrable in the left renal region. The patient refused to allow any operative measure on the left side, although warned of the inevitable destruction of the left kidney if he delayed operation too long. He left hospital and returned to work shortly afterwards.

Second Operation.

In August, 1912, the patient was readmitted to hospital under the care of my colleague, Dr. George Murray, as I was absent in England. The left kidney was found to be completely destroyed in a condition of pyonephrosis, and was excised.

The patient remained well till May, 1913, when he began to pass fragments of calculus the size of coarse moist brown sugar granules, and there was some pus in the urine. X rays showed a definite shadow in the right kidney region, apparently at the junction of parenchyma and pelvis. The patient again refused operation.

In October, 1913, he had temporary mitral blockage and anuria, but still declined operation.

Third Operation.

On December 17th, 1913, he was again admitted to hospital. X rays showed a definite shadow as before.

On December 19th the right kidney was exposed by oblique lumbar incision. A calculus the size and shape of a broad almond, weighing 28 grains when dried, was found in a calyx in the lower part of the upper pole, and removed. This calculus was soft and friable, being mainly phosphatic.

On December 22nd 14 oz. of urine were passed by the urethra. The urine was blood-stained and alkaline. Urotropin and acid sodium phosphate were given twice daily.

On January 27th, 1914, the patient was up and about, feeling perfectly well. He passed 50 to 60 oz. of urine in the twenty-four hours, acid in reaction, clear, and free from albumin, and specific gravity 1010.

So far as one could judge he was doing well on about one-third of his proper renal tissue. He had no urinary symptoms of any kind, and showed no indication of renal inadequacy.

LONDON HOSPITAL.

A CASE OF CALCULOUS ANURIA.

(By HUGH LETT, M.B., F.R.C.S., Surgeon to the London Hospital with Charge of Out-patients.)

A. W., a large stout man aged 40, was sent on June 18th, 1913, by Dr. Tughan. For the previous three weeks he had had frequent attacks of pain in the left side of the abdomen and left lumbar region; for three days the pain had been much more severe. It was almost continuous, and radiated downwards from the left renal angle to the left groin and testicle. It was so severe that it made him cry out and sweat; he vomited frequently. At the beginning of the attack micturition was frequent; at first only small quantities of blood-stained urine were passed, later it was passed in larger quantities, until 6 a.m. on June 18th, when complete suppression set in. The patient was admitted late on June 18th. Owing to his size, abdominal examination was difficult, but there was tenderness and resistance to palpation in the left lumbar region; there was no dullness above the pubes. The left testicle was tender. He was evidently in great pain, his tongue was thickly coated with white fur, the temperature was 100.4°, and the pulse 90.

Previous History.

The patient had suffered from attacks of renal colic for a number of years, and had been operated upon successfully six years previously in Charing Cross Hospital by Mr. Waterhouse, who removed an impacted calculus from the left ureter by the iliac route. Since this operation he had had several attacks of renal colic on the right and left sides alternately, and had passed several small calculi. The last attack of pain on the right side had occurred twelve months ago.

On June 19th he was still in great pain, and had passed no urine since his admission. Skiagrams of the kidneys, ureters, and bladder showed two small calculi in the pelvic portion of the right ureter, and also a small calculus in the upper end of the left ureter.

Operation.

The operation was undertaken at 3 p.m. on June 19th, on the fourth day of the attack of renal colic, when there had been complete suppression of urine for thirty-three hours.

The bladder was empty; 10 oz. of saline solution were run in through a soft rubber catheter. On attempting to catheterize the right ureter an obstruction was met with 2 in. from the ureteric orifice, which the catheter could not pass. The catheter was then introduced into the left ureter, and passed freely nearly up to the left kidney. There was no evidence of any obstruction or narrowing of the ureter at the site of the previous operation.

The patient was then placed in the right lateral position, and the left kidney explored by the usual oblique lumbar incision. The operation was very difficult, owing to the fact that the space between the last rib and the crest of the ilium was extremely small, and to the thickness of the abdominal wall, for the patient was not only fat, but also very muscular. The perirenal fat was much thickened and lobulated, and densely adherent to the upper pole of the kidney. The kidney itself was very large, and appeared to be about twice its normal size; it was deeply congested, tense, and its lobes were clearly defined. The pelvis of the kidney and ureter were not dilated and were apparently empty. The kidney was incised through its convex border and the pelvis carefully explored with the finger, but no calculus was found. Blood flowed very freely from the cut surface; no urine escaped.

The lumbar incision was prolonged downwards and forwards and the ureter explored. About an inch below the lower pole of the kidney a calculus was felt. An attempt was made to push it back into the pelvis of the kidney so that it might be removed through the incision in the cortex, but as this was not successful the ureter was incised and the stone removed. It proved to be an irregular oxalate calculus the size of a cherry stone. A sound slipped readily down the ureter into the bladder and met with no obstruction.

A drainage tube was passed through the incision in the kidney into its pelvis, and the rest of the kidney wound was closed by catgut sutures. The incision in the ureter was left open. The muscles were sutured with chromic catgut and the skin with silkworm gut.

After-History.

During the next twelve hours 44 oz. of urine were passed naturally, and there was also a free escape of blood-stained fluid into the dressings. On the morning of June 21st the urine was free from blood, and 114 oz. of urine had been passed during the previous twenty-four hours.

Subsequent progress was slightly delayed by some congestion at the bases of the lungs, but otherwise the patient made an excellent recovery, and the wound healed rapidly.

He was allowed to get up on the twelfth day after the operation, but shortly afterwards complained of pain in the right lower abdomen. This was associated with frequency of micturition, and in a few hours' time he passed two small calculi, each the size of a pea, which were evidently those which the *x* rays had shown in the pelvic portion of the right ureter. After he had passed the calculi the patient was quite comfortable. I saw him again on December 11th; he was in excellent health, and had had no further attacks. The wound was sound, and showed no signs of weakness.

Remarks.

The question as to which kidney should be operated upon was decided by the fact that this attack of anuria was associated with renal colic on the left side, proving that until the onset of the anuria the left kidney was carrying on its functions. There was no doubt about the presence of calculi in the right ureter, but as there had been no renal colic on that side for at least a year it was impossible to tell to what extent the right kidney was diseased, and how far it would be capable of carrying on the work of both kidneys if the calculi were removed.

If the left kidney had been so much diseased that it appeared unequal to the task of acting alone, it would have been necessary to complete the operation by removing the calculi from the right ureter.

THE tenth meeting of the French Prehistoric Congress will be held at Aurillac, in the department of Cantal, in August (23rd to 29th).

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

A MEETING of the Birmingham Branch was held at the Medical Institute on February 19th. Mr. W. F. HASLAM was in the chair, and thirty members were present. The annual report was read and adopted.

Cases. — Mr. LEEDHAM-GREEN showed two patients: (1) A young woman on whom he had operated some eighteen months ago for tuberculosis affecting the ascending and transverse colon. At the operation the small intestine was anastomosed into the sigmoid flexure and the colon removed. The patient made a rapid recovery and had been in excellent health ever since. The bowels act normally, and the patient experiences not the slightest inconvenience from the removal of the colon. (2) A young man operated on three and a half years ago for severe exophthalmic goitre. The operation was attended by most excellent results; every symptom of the disease disappeared, and the patient soon returned to work, which for the last two years had been of a very heavy character. Dr. D. PRIESTLEY SMITH spoke, and Mr. LEEDHAM-GREEN replied.

Caesarean Section.—Dr. THOMAS WILSON read a paper on Caesarean section, its indications and results. Dr. PURSLOW and Dr. SMALLWOOD SAVAGE spoke, and Dr. WILSON replied.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.

THE fifth of the winter scientific demonstrations of the Newcastle-upon-Tyne Division of the British Medical Association was held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on February 20th. There was an excellent attendance.

Inflammation and Tumour Formation.—The first paper of the afternoon was a contribution, which will be published in full, by Mr. C. F. M. SAINT, on this subject.

Chorea and Choreiform Movements.—He was followed by Professor THOMAS BEATTIE, who gave an address on chorea and choreiform movements. He reviewed the differential diagnosis from the head nodding of infants; convulsive tick, or facial spasm; habit spasms; hysterical choreiform movements, varying in degree from the rhythmical movements of a limb or limbs to the major varieties resulting from emotion, and exemplified in the well-known instances resulting from religious fervour; mimetic choreiform movements which were really hysterical and not true chorea; post-hemiplegic choreiform movements, which he ascribed to the involvement of the optic thalamus; choreiform movements resulting from cerebellar disease, such as occurred in certain cerebellar tumours and in Friedreich's ataxia; and, lastly, Huntington's chorea. He demonstrated typical examples of hysterical choreiform movements, post-hemiplegic chorea, and Huntington's chorea. In speaking of true chorea he referred to the varying degrees of intensity in Sydenham's chorea minor, and reviewed the various pathological explanations, expressing his belief that the symptoms were due to irritation of the cerebral cortex by some toxin circulating in the blood, and that such toxin was frequently, though not universally rheumatic. He mentioned pre-choreic paresis and hemichorea, and stated that the latter condition was never, on close examination, strictly unilateral. In speaking of the chorea of pregnancy he distinguished between chorea occurring during pregnancy and true chorea gravidarum. He believed the artificial induction of labour was not good treatment, and was seldom necessary. He spoke with special emphasis upon the subject of acute chorea or chorea insaniens, and said that the urgent need was the induction of sleep. If such patients went beyond the sixth day without sleep they usually died, and his practice had been to administer ½ drachm of chloralamide every hour until sleep was induced. Usually after prolonged sleep the patients awoke mentally quieted, able to swallow food, and with greatly diminished movements.

In reviewing the treatment of chorea he expressed his disbelief in the utility of arsenic, and advocated rest, segregation, and sedatives.

Congenital Dislocation of the Hip.—An interval for tea then ensued, after which a paper was read by Mr. A. M. MARTIN on the treatment of congenital dislocation of the hip. He reviewed the pathology of the condition, and pointed out that in every case there was an acetabulum, although this was shallow and filled with fat and fibrous tissue. After showing the importance of early treatment, he detailed the main symptoms and signs. He pointed out that in consequence of walking, the head of the bone became further separated from the acetabulum, and difficulty of reduction was correspondingly increased. Two methods of treatment were to be recommended—namely, reduction with incision and reduction without incision. He did not recommend any form of operation before the age of 2 years, and said that in the majority of cases below 6 years of age the second method of treatment proved successful. It was only in cases in which this method of treatment failed that open operation was indicated. The lecturer then showed skiagrams illustrative of his remarks.

National Insurance Act.—Dr. E. F. PRATT next read a paper on experiences of the National Health Insurance Act, which will be published in a subsequent issue.

Diseases of Accessory Sinuses of the Nose.—He was followed by Dr. T. H. LIVINGSTONE, who took as his subject some common diseases of the accessory sinuses of the nose, with special reference to acute and chronic catarrh. He drew attention to the importance of a thorough acquaintance with the anatomy of the nose and neighbouring cavities, and emphasized the importance of the taking of radiographs before operation. He drew attention to the dangerous proximity of the brain and orbit to the ethmoidal cells, and next proceeded to deal with the function of the various sinuses. As regards chronic catarrh, he considered it to be more frequent than was generally supposed, and in emphasizing the importance of posterior rhinoscopy said that crusting in the naso-pharynx generally meant sphenoidal or posterior ethmoidal disease, but was often treated for months as a naso-pharyngeal catarrh. He laid stress on the importance of a systematic diagnosis between involvement of the various sinuses, and in describing the treatment of acute disease advocated the importance of facilitating discharge and relieving pain. As regards chronic disease of the accessory sinuses, he advised, in the case of the antrum of Highmore, lavage, a subsequent large opening through the naso-antral wall, or, in case of failure, the Caldwell-Luc operation. As regards the frontal sinus, lavage, in his opinion, seldom cured; and in the case of the ethmoidal cells and sphenoidal sinus he advocated free ventilation and proper drainage.

Next Meeting.—This concluded the proceedings for the afternoon. The sixth meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, March 20th.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

Tuesday, February 24th, 1914.

Dr. PERCY KIDD, Vice-President, in the Chair.

Paroxysmal Tachycardia in a Child.

DR. R. HUTCHISON AND DR. J. PARKINSON read a paper on a case of paroxysmal tachycardia in a child aged $2\frac{3}{4}$ years. Dr. Hutchison said that this condition had not hitherto been described in so young a child. When admitted into hospital he looked healthy, but the heart was rapid, the neck was pulsating, and a pulsating liver was felt. The symptoms had been present for ten days. There was nothing of significance in either the family or the personal history. Two days later the child appeared quite normal and the liver had receded. He knew of no other cardiac condition which could be accompanied by this sudden cessation of symptoms. Three days later, after sitting up in bed, the patient suddenly had another attack. A similar clinical picture reappeared, the pulse-rate being 245 per minute. This attack lasted twenty hours and ceased as abruptly as the former. During the next ten days the child was perfectly well, the pulse-rate being 64 to 80 per minute, and the tracings showing merely a sinus arrhythmia. He was then discharged from hospital. From that time (June 26th, 1913) until September 22nd, 1913, he remained well. On that day a third attack began, which lasted twelve hours, the pulse-rate being 215 per minute. A fourth attack occurred on October 3rd, the pulse-rate on this occasion being 213. The child appeared cheerful and no abnormal signs were seen beyond the rapid pulsation in the neck and over the precordia. The liver was not enlarged. This attack lasted forty-eight hours. There had been no relapse since. The Wassermann reaction was negative. Dr. PARKINSON demonstrated the cardiograms which had been taken and which bore out the diagnosis. Dr. G. A. SUTHERLAND thought it important that a distinction should be drawn between cases of paroxysmal tachycardia accompanying diseased conditions of the heart and those with a normal heart. He considered that the auricle contracted while the ventricle was still in a state of contraction, and that this explained the large venous wave demonstrable in tracings of the condition which he showed, and also the large pulsating liver. All the symptoms of cardiac failure might result from disturbance of the rhythm merely. Dr. ALEXANDER MORISON regarded the rapid beats as originating in the ventricle and not in the auricle, since digitalis had not the same effect on them as it had on those of auricular fibrillation. Dr. PERCY KIDD recorded a case in a boy aged $4\frac{1}{2}$, which apparently dated from an attack of measles. The heart ultimately failed rapidly, and *post mortem* it was found to be generally dilated, with slight hypertrophy of the right ventricle and left auricle, but without valvular lesion.

Secondary or Symptomatic Leukaemia.

Dr. GORDON R. WARD read a paper on this subject, with special reference to cancer with bone metastases. The object of the paper was to show that, like anaemias, leukaemias might be divided into primary and secondary forms. Primary leukaemia was the form usually *known* as leukaemia, in which the blood-forming organs reacted to an unknown stimulus, possibly to excessive white blood destruction. In secondary leukaemia the stimulus was less, and so the complete blood picture was seldom met with. He subdivided secondary or symptomatic leukaemia into two classes: Lymphocythaemic, associated particularly with septic diseases; and (2) myelocythaemic, associated particularly with cancer. He quoted instances, however, in which the myelocythaemic form occurred with sepsis, and with various other diseases, mentioning especially variola. His conclusions were that a condition of secondary leukaemia occurred, which was distinct from primary leukaemia, and that it was analogous to secondary haemolytic anaemia. A complete blood picture of the primary forms of the diseases occurred in neither of the secondary forms.

Dr. F. PARKES WEBER disagreed with the classification which Dr. Ward had made. The varieties of secondary leukaemia which he described were more properly varieties of leucocytosis.

Dr. ROBERT HUTCHISON thought that with advancing knowledge the present nomenclature of blood diseases would be replaced by a better one. He did not favour the division of leukaemias into primary and secondary forms.

SECTION OF ANAESTHETICS.

AT a meeting on February 6th, Dr. J. BLUMFELD, President, in the chair, Mr. ROBERT E. KELLY read a paper on *Intratracheal anaesthesia.* He said the intratracheal method was an artificial respiratory method first, and an anaesthetization method secondarily, and obstructed respiration, the only danger in ether anaesthesia, in a large percentage of cases was absolutely eliminated. After dealing with the physiology of respiration, he said that life could be maintained without respiratory movements by forcing air down the trachea, as shown by Meltzer and Auer; this had been tried in cases of poisoning when the respiratory centre had been paralysed. In reference to thoracic surgery, this method was a great improvement on the "positive and negative" pressure cabinets. In the latter the disadvantages were that the thorax and head were in different atmospheres, and also asepsis became

difficult. By this method work had been done in the American experimental laboratories on the heart, lungs, and great vessels in animals. The anaesthetist was entirely out of the way; blood, pus, and vomited matter were not inspired, and extreme accuracy of dosage could be maintained. Owing to the lessened respiratory movements manipulations in the upper part of the abdomen were facilitated. In nearly 300 cases vomiting and sore throats from passage of the catheter were rare, and no fatalities had occurred. Mr. H. E. G. BOYLE said he did not consider the method suitable or advisable for all cases. It was pre-eminently suitable for intrathoracic surgery, and he mentioned a case of pyopneumothorax, in which about 3 oz. of pus had been blown out of the trachea. In cases of goitre, the surgeon could pull on the growth with impunity, although care must be taken not to kink the trachea. If required, the patient could easily be brought round sufficiently to cough before completion of the operation. A mixture of oxygen and ether could also be substituted for air-laden ether. It was a satisfactory method for cleft palate, removal of upper jaw, and operations in the neck. In an operation for removal of tongue and glands through the mouth and neck, and in which a ligature of a big vein had slipped, the patient had only been saved from being drowned by his own blood by the presence of the intratracheal catheter, which kept the trachea free. The introduction of the catheter was the most difficult part of the method. Dr. F. E. SHIPWAY agreed with Mr. Kelly that the method was essentially one of artificial respiration. Among the advantages a free airway was always present, and cyanosis could not arise; the administration was even and constant; the power of excluding blood, etc., from the larynx and lungs; the field of operation in head and neck operations could be kept sterile. In abdominal operations relaxation was very good and respiratory movement slight, and shock was also diminished. He thought the vapour administered by this method should be warmed to body heat. Dr. M. S. PEMBREY spoke of physiological observations upon intratracheal anaesthesia, made in conjunction with Dr. Shipway and Mr. G. Marshall, who had investigated the blood pressure. The rate of ventilation had averaged about 16 litres per minute, and extremes varied from 8 to 30 litres per minute. A rate of 30 litres or more produced apnoea, but this was inadvisable. Respiratory movements showed that the pressure was not too great for the anaesthetized muscles. The ease with which a light anaesthesia could be maintained was the outstanding merit of the method. Mr. GEOFFREY MARSHALL said that he had taken records of blood pressure during anaesthesia by this method. Compared with other methods, it was striking that there was very slight fall of blood pressure during a long operation. During the operation the blood pressure varied 5–10 mm. mercury about the mean pressure. Blood pressure was found to vary directly with the CO_2 tension. Dr. WILLIAM HILL considered that insufflation of anaesthetics under pressure was inadvisable except in thoracotomic operations. For goitres, for instance, orotracheal intubation with a funnel or Junker's apparatus was all that was needed. He used this method for oesophageal work, and in other operations where there was tendency to obstruction of the trachea. To prevent blood, etc., entering the air passages he used a thin white rubber collar, which was attached to the orotracheal catheter, and rested on the ventricular bands. He showed patterns of laryngoscopes, and the method of introducing the catheters was demonstrated on a patient under cocaine. Dr. G. A. H. BARTON thought that the endotracheal method had only a limited application, and that for ordinary cases it offered no advantages. Mr. T. B. LAYTON said that he had had experience of the method, and for throat and nose operations had liked it very much. The great advantage was that there was no need to stop to mop up every trickle of blood that passed to the back of the mouth. Dr. W. J. MCCARDIE said the weak point of the method was the depth of anaesthesia necessary to introduce the catheter, and which was frequently not safe in cases of goitre and intestinal obstruction. Mr. KELLY replied.

SECTIONS OF NEUROLOGY, OPHTHALMOLOGY, AND OTOLOGY.

At a conjoint meeting on February 26th, Mr. WILLIAM THORBURN in the chair, a discussion on *Nystagmus* was opened by Mr. W. T. HOLMES SPICER, who traced the history of our knowledge of the condition, and showed that the movements of the eyeballs varied from large and obvious excursions down to movements only perceptible by the ophthalmoscope. In nearly 50 per cent. of 200 cases he found that the movements were in a horizontal direction; in about 15 per cent. rotary, in about 12 per cent. vertical, in 4 per cent. mixed, in 2 per cent. irregular, in 2 per cent. circumductory, and in 1 per cent. were condivergent or disjunctive. The horizontal and vertical forms varied greatly in rapidity of movement and in range, and were nearly always conjugate, but in a few cases they were condivergent. The rotary cases were nearly always conjugate, but condivergent ones had been seen. Circumductory movements were usually conjugate; he had never seen one which was not. They were often rhythmical. Use of the eyes was essential to the existence of nystagmus. The eyes were quiet during sleep, and sometimes so in the dark. It sometimes happened that on covering one eye, oscillations commenced in both. Unilateral nystagmus was not uncommon, and the movements were usually vertical, but not always. If the nystagmus had been recently acquired, a sensation of movement of objects was produced, but this was never noticed in the congenital cases. Nystagmus did not occur in those born blind, or who became so very soon after birth. It often became more marked with fatigue; in some cases light produced it, and in some it became more apparent in the dark. Some persons were able to produce nystagmus at will. The most important causative factor was a defective retinal image, due to either a corneal or a lenticular lesion or to some abnormal nerve or retinal condition. Errors of refraction had not been proved to cause this, but corrections of high degrees of astigmatism had often led to great improvement, or even to cessation of the nystagmus. Many of these patients had large refractive errors. Albinos and those with excessive pigmentation often had nystagmus. The pigment which affected eyes in this manner was usually supposed to be that of the retinal epithelium, but this could not be recognized by the ophthalmoscope, as the choroidal pigment masked it, and this might really be the case in those which were not obviously albinotic. In some cases the nystagmus was hereditary, but its cause not definitely ascertained. As regards occupation nystagmus, the weight of evidence was on the side of bad fixation being the primary cause, and besides miners compositors were often affected. In spasmus nutans the head movements preceded the nystagmus by a few weeks, and they bore no relation to each other. The condition was supposed to be due to an instability of the motor centres. Dr. JAMES TAYLOR said that nystagmus, though usually associated with visual defects, was sometimes due to labyrinthine and nerve diseases. With regard to the brain, nystagmus was most likely to follow disturbance of some co-ordinating mechanism in near relationship to the mid-brain, pons, and cerebellum. It was seen in disseminated sclerosis, Friedreich's ataxy, and syringomyelia. It was common in cerebellar disease, and in unilateral lesions. In most cases of cerebellar disease nystagmus was found, as also it was in local lesions in the vicinity of Deiter's nucleus. Besides the central motor mechanism, the peripheral nervous mechanism might produce it. The muscles themselves might cause it, as in myasthenia gravis. Mr. SYDNEY SCOTT thought labyrinthine conditions undoubtedly produced nystagmus. Rhythmic nystagmus might be produced in normal people by applying excessive stimuli to the semicircular canals, such as by rapid rotation, irrigating the ear with hot or cold water, or the galvanic current. He described the anatomy and physiology of these canals, and expressed the view that "the deviation of the head and eyes is in the same direction as the current in the endolymph, and the nystagmus is in the opposite direction." He had met with twenty-three examples of the "fistel symptom," and in nearly every case he had been able to verify the existence of a labyrinthine fistula, though many cases of fistula occurred without the "fistel symptom" being produced. As regards spontaneous labyrinthine nystagmus, it resembled induced nystagmus in kind and degree, being always symmetrical and generally unilateral. The less acute forms were sometimes seen in cases of acute or chronic otitis media. Spontaneous rhythmic rotary nystagmus to one side was also met with when the opposite labyrinth had become functionless, and

disappeared again when both became destroyed. If the labyrinth were stimulated in cases of total blindness, such as resulted from primary optic atrophy unaccompanied by intracranial disease, rhythmic nystagmus could be provoked by rotation or irrigation. When one labyrinth was defunct spontaneous nystagmus could be arrested by pressure on the carotid sheath of the normal side. It was possible to measure the strength of the stimulus required to produce nystagmus, for sometimes it was easier to be obtained on one side than the other.

DERMATOLOGICAL SECTION.

AT a meeting on February 19th Dr. J. H. STOWERS, Vice-President, in the chair, the following were among the exhibits: Dr. GRAHAM LITTLE: (1) A case of *Extensive congenital milium* on the face, neck, and body of a baby aged four months; (2) a woman who presented large and small *Patches of atrophic skin* on the neck and shoulders; she had been seen by Sir Jonathan Hutchinson and by Dr. Payne fifteen years ago, when the condition was designated "lardaceous disease of the skin" by the former and "papyrus skin" by the latter; (3) a little girl with *Favus* of the glabrous skin of the neck. A perfect favus "cup" had been present and cultures showed the fungus to be the *Achorion quinckeanum*. There were no mice in the patient's house, but two cats and seven canaries were kept, the father being a bird fancier. The scalp was not affected. Dr. SEQUEIRA said he saw very few cases of favus now at the London Hospital. Dr. MACLEOD had had a case, diagnosed clinically as ringworm, in which fungus was found in abundance in the feathers of a canary from which the infection was derived, and another recent case which showed extremely small pin's-head-sized scutula on glabrous skin. Mr. J. E. R. MCDONAGH: A man, aged 41, with a *"Ringed eruption" on the penis*, occurring in the circumference of the scar of a sore contracted nineteen years previously. Four weekly intravenous injections of salvarsan, with intramuscular injections of mercury and potassium iodide, had been given, but with little effect upon the lesions. The Wassermann test had given a doubtful positive reaction. The chronicity of the lesions, the limited localization, with no ascertainable symptoms of a generalized infection, the weak positive Wassermann's reaction, and the failure of treatment to cure the lesions, suggested to the exhibitor that the condition was an aberrant form of syphilis in which only the spores had been able to develop asexually. Dr. H. G. ADAMSON demonstrated lantern slides of four cases of the *Epithelioma adenoides cysticum of* Brooke. There were seven cases in one family, four of which he had seen. Brooke's cases had now been shown to be trichoepitheliomata. The exhibitor regarded the tumours as embryonic hair follicles which were stimulated to growth at puberty, and rodent ulcers as due to a similar process occurring later in life. Dr. EDDOWES, Dr. MACLEOD, and Dr. WHITFIELD discussed the case. Dr. SEQUEIRA said Sir Frederic Eve was the first to propound the hair follicle origin of rodent ulcer, and pointed out that the latter was by no means a growth occurring only in old age, some cases beginning in the second decennium. Dr. ADAMSON: A case of *Adult urticaria pigmentosa* of five years' duration, in a woman aged 44, whose trunk and limbs were covered with freckle-like lesions associated with an urticarial element. Dr. W. T. FREEMAN exhibited an extensive *Bromide eruption* in a young child. Dr. J. A. NIXON brought forward (1) *A case for diagnosis*. The patient was a middle-aged woman who presented large discoloured patches on the back, with a cicatricial patch, resembling a keloid, in the centre of the affected area; there was also a second patch of affected skin above the sacrum. He regarded the case as one of sclerodermia. The Wassermann reaction was negative and sections showed only fibrous tissue. Dr. BOLAM suggested the possibility of an artefact, with which suggestion Dr. ADAMSON agreed. Dr. STAINER regarded it as a typical case of sclerodermia, and the CHAIRMAN was also in favour of this diagnosis. Dr. EDDOWES said sclerodermia was never typical, and he had seen patches showing different characters in the same patient. Dr. PARKES WEBER thought it most unlikely that this was a self-produced eruption. (2) A case of *Acanthosis nigricans* in a woman of 39. She had noticed the appearance of warty growths all over her body last summer, and more recently discoloration and thickening of the skin in the flexures. There was no evidence of visceral disease and all the functions were normal. Suprarenal, pituitary, and thyroid extracts had been tried. Dr. PERNET exhibited a woman of 56 suffering from an untreated *Rodent ulcer of the face* of four years' duration. Dr. NORMAN MEACHEN: A girl, aged 10, with an extensive *Hairy mole*, chiefly affecting the "bathing drawers" area, which was said to have begun at the age of 5. There were also three large lipomatous swellings, situated upon the mole, and atrophy of the thigh muscles on the right side. There a distinct history of maternal impression. The CHAIRMAN had seen two cases of a similar character recently. Dr. MACLEOD: (1) A girl, aged 6, with *Bald patches on the scalp* of two years' duration, following severe impetigo. The patches were dotted over with small papillomatous outgrowths. There was no history of favus or ringworm. Dr. ADAMSON and Dr. JAMES GALLOWAY discussed the case, and, in reply, Dr. MACLEOD said the hair generally grew normally after kerion; that was also Dr. SEQUEIRA's experience. (2) A case of *Grouped comedones* in a girl aged 2 years. The lesions were probably the result of camphorated oil and turpentine which had been rubbed on the skin by the mother for bronchitis. A comedo was examined for acne bacilli with negative results. Dr. RUSSEL WILKINSON (introduced by Mr. MCDONAGH): A case of *Dermatitis herpetiformis* of thirteen months' duration, in a man of 42, whose whole body was covered with a generalized herpetiform eruption. He denied having had syphilis, but the Wassermann reaction was tested twice and was strongly positive on each occasion. Two injections of salvarsan had been given, and resulted in great improvement of the eruption. The blood count suggested a pseudo-leukaemic state. Dr. KNOWSLEY SIBLEY: A woman, aged 42, suffering from *Lupus erythematosus* affecting the face, mouth, and scalp. Dr. SEQUEIRA said that one of his clinical assistants had found lesions in the mouth in 28 per cent. of cases of lupus erythematosus. Dr. DUDLEY CORBETT: A girl, aged 15, with *Hypertrophic lichen planus* on the right arm of five years' duration and linear in distribution; it had been much improved by one-third of a pastille dose of *x* rays. Dr. MACLEOD thought the condition might be naevoid. Dr. MACCORMAC: A case of *Polycythaemia rubra* in a man aged 64. The condition began six years ago. The small blood vessels could be very distinctly seen on the face, and the skin was of a reddish-blue colour, which was also well marked on the mucous membranes. Apart from a feeling of lassitude his general condition was fairly good. Dr. J. H. SEQUEIRA brought forward a case of *Multiple idiopathic pigmented sarcoma* which he had shown at the International Congress. The case was shown in order to illustrate the disappearance of the infiltrating growth which had taken place as the result of *x*-ray treatment.

MEDICAL SOCIETY OF LONDON.

AT a meeting held on February 23rd, Sir DAVID FERRIER President, in the chair, the following cases and pathological specimens were shown:—Dr. J. PORTER PARKINSON: (1) *Syphilitic cirrhosis of liver* in a woman aged 42. Both the spleen and liver had been greatly enlarged, but had shrunk considerably, the former being distorted and converted into irregular masses. Tapping had been necessary for ascites on two occasions. The Wassermann reaction was positive. (2) A case of *Patent ductus arteriosus* in a girl aged 6 years. A loud murmur occupying nearly the whole of the cardiac cycle and accompanied by a systolic thrill was best heard at the second left interspace. The cardiac dullness reached to the upper border of the second costal cartilage. A radiogram showed enlargement of the heart and a shadow, due to the pulmonary artery. Dr. C. E. LAKIN: Organs from a case of *Haemochromatosis, with primary carcinoma of the liver*. The appearances of the heart muscle, lymphatic glands, pancreas, liver, and spleen were characteristic of the condition. They contained quantities of haemosiderin, but showed little fibrosis. Dr. EDMUND CAUTLEY and Mr. N. BISHOP HARMAN: *Syphiloma of heart* from a girl aged 19, who had died suddenly. The wall of the right ventricle and the interventricular septum were extensively infiltrated with hard fibrous new tissue, which microscopically seemed to be a gumma. There had been no

symptoms during life, and there was no other syphilitic lesion. Dr. W. H. WILLCOX: *Tumour in the region of the sella turcica* in a woman aged 45. Severe abdominal pain, vomiting, diarrhoea, dimness of vision, and drowsiness were succeeded by delirium and coma. At this time there was ptosis of the right eyelid, with some facial weakness of the right side. The pupils were unequal, but reacted to light. Absence of knee-jerks was accompanied by an extensor plantar response. The urine was normal, except for a trace of albumin. No optic neuritis. After four days' unconsciousness she was able to speak but was quite blind. Weakness of the right arm was noticed, and complete ophthalmoplegia of the right eye. She gradually recovered under treatment by mercury and potassium iodide. Wassermann's test was positive. Between four and five months later Argyll Robertson pupils were present with a well-marked bitemporal hemianopia. A radiogram showed a marked enlargement of the sella turcica. Dr. S. A. K. WILSON regarded the case as one of syphilitic basal meningitis, accompanied by ependymitis and distension of the third ventricle. Dr. W. ESSEX WYNTER: *Femoral drainage for ascites in advanced cirrhosis.* Ascites was present, but the operation had been successful in preventing the need for repeated tapping. Dr. R. A. YOUNG: *Acquired double mitral disease in a transposed heart* in a girl aged 10 years and 10 months. Transposition was confirmed by *x* rays, the stomach also being on the right side. Dr. E. A. COCKAYNE: Specimen of rheumatic nodules on the heart.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on February 19th, Dr. E. W. HOPE in the chair, Mr. R. E. KELLY read a note on a *Case of fracture dislocation of shoulder.* The humerus was in three pieces; the head had become attached to the side of the shaft. Mr. Kelly freed it from the shaft and planted it in its proper position. It became united and gave an excellent result. Dr. E. W. HOPE and Mr. RUSHTON PARKER joined in the discussion. Mr. N. G. CHAVASSE reported a case of fracture dislocation successfully operated on by Mr. Douglas-Crawford. Mr. T. C. LITLER JONES related cases in which it had been necessary to remove the broken portion of the bone from the shoulder joint. Mr. G. P. NEWBOLT referred to the value of pulling the arm right above the shoulder in the reduction of the dislocation. Mr. R. E. KELLY, in reply, discussed the regeneration of bone. Mr. F. C. LARKIN also took part in the discussion. Dr. N. PERCY MARSH read a paper on *Three cases of lymphatic leukaemia in children.* The ages of the children were respectively 11, 4¼, and 3. The three children died within a few days or weeks of the onset of the symptoms. In his experience arsenic and blood serum were useless. In concluding he dealt with the etiology and pathology of the condition. Dr. E. W. HOPE spoke. Dr. T. R. BRADSHAW related a case, and upheld the view that the essential pathology was that of a neoplasm. Dr. H. R. HURTER referred to a case of multiple myeloma which ended in a lymphatic leukaemia, and suggested that such a sequence of events threw some light on the pathology of acute lymphatic leukaemia. Professor R. J. M. BUCHANAN, in discussing the paper, stated that the blood picture of a myelogenous leukaemia tended to show a change towards the lymphatic type as the disease became more acute or towards the end of the patient's life. In a relapse subsequent to treatment by *x* rays the blood was more lymphatic in character. The value of thymus as a haemostatic was emphasized. Dr. N. P. MARSH replied. Mr. G. P. NEWBOLT read a paper on some cases of *Disease affecting the pylorus and necessitating gastro-enterostomy.* He related a number of cases illustrating the various points raised. Among other matters discussed was the difficulty of diagnosing the nature of certain growths, even when exposed by the surgeon, and the importance of having a pathological report at the time of the first operation. He referred to the question of the value of pylorectomy, which, in his opinion, when undertaken for malignant disease, was almost always disastrous. He held a more favourable view of operations for palpable tumour of the stomach than was usual ten or fifteen years ago. He also related a case in which the hernia of the small intestine had taken place in the lesser omentum. Mr. F. C. LARKIN, Mr. RUSHTON PARKER, Mr. K. MONSARRAT, Dr. NATHAN RAW, and Mr. T. C. LITLER JONES discussed the paper. Mr. G. P. NEWBOLT replied.

CARDIFF MEDICAL SOCIETY.

AT a meeting on February 10th the following cases and specimens were shown:—Dr. MCLEAN: An *Ectopic gestation* from the right side. A corresponding condition had occurred in the same patient on the left side a few years before. Mr. WILLIAM SHEEN: A patient who had had *Hemithyroidectomy* performed eight days before. The transverse scar was in the fold of the neck and was already quite inconspicuous. Mr. GEARY GRANT: A child with *Syndactyly of both hands.* There was separation of the proximal portions of the digits, but clubbing and adhesion of the terminal parts. No other members of the family had had any developmental errors. Mr. WILLIAM SHEEN made a communication on *Bullet wounds*, referring particularly to those occurring in civil practice. He described the various weapons and projectiles used, from the toy pistol to the latest military weapons, including a description of sporting guns and cartridges. He also showed a number of cartridges from the Bulgarian war. After indicating the various factors which determined the amount of damage, he described and illustrated the best methods of localizing and removing bullets lodged in the tissues. He showed the telephone probe, including a modification which he had devised, where the same pair of forceps detected and extracted the bullet. Finally he briefly related a number of illustrative cases.

ULSTER MEDICAL SOCIETY.

AT a meeting on February 12th, Mr. A. B. MITCHELL, F.R.C.S.I., President, in the chair, Dr. W. CALWELL, in a paper on *Some less known points in pleural effusion*, dealt with negative pressure in the pleural cavities due to the elastic retraction of the lungs, and showed the effect on the distribution of pleural effusion and displacement of organs; effusion, he said, did not enter the complementary pleural sinus till the pressure was positive, and greater than the pressure in the adjacent portion of the abdomen. He next examined the question of interlobar effusions, and the varying signs of interlobar empyema. Mr. A. FULLERTON, in a paper on *Operations on the gall bladder and bile ducts*, distributed in tabulated form a list of 29 successive cases without a death. Dr. J. C. RANKIN, in a paper on *The problem of tuberculosis as illustrated by lupus*, showed the connexion between the recent researches on the lymphatic system and the spread of tubercle.

At a further meeting, on February 26th, Professor SYMMERS, in a paper on *Acute pancreatitis*, described a case of sudden death in an alcoholic, in whom an acute hyperaemic injection in the region of the smaller curvature of the stomach and an acute reddish degeneration of the pancreas were found, without other cause of death. This case occurred some time ago, and since then he had observed 24 like cases, in all of which the brain and heart had been carefully examined, and nothing was present to account for the sudden death. The condition of the pancreas was not really an inflammation, but a death of the pancreatic cells: under the microscope the staining revealed more a softening and death of the cells without inflammatory infiltration with small cells, so that at parts one could not say what was in the field. He connected these four phenomena into a syndrome—sudden death, alcoholism, the peculiar stippled hyperaemia of the stomach, and the pancreas necrosis—but could not give a satisfactory explanation. No previous complaint had been made by the patients, and many were of strong physique. Dr. J. E. MACILWAINE read a paper, illustrated with lantern slides, on the *Electro-cardiographic method of examining the heart beat.* He explained the theory of the subject and the working of the instrument, and showed a number of illustrations of normal action, and then of the various forms of arrhythmia which he had taken in the Royal Victoria Hospital. A full discussion followed all papers.

Reviews.

ENDEMIC GOITRE.

MAJOR MCCARRISON'S Milroy Lectures,[1] delivered at the Royal College of Physicians of London last year, represent the results of ten years' work on the problems of endemic goitre, and form a really valuable contribution to our knowledge of this important malady. Its importance, indeed, is greater in other countries than in our own. Forty years ago there were half a million goitrous persons in France alone; in parts of Himalayan India not less than a fifth of the inhabitants are similarly affected, and few countries are free from its presence. Geographically, its association with mountainous regions is most striking. From the earliest times it has popularly been attributed to drinking certain waters, and there can be no doubt that the popular view was commonly correct; it has been confirmed by experiments on man and animals carried out in many countries by many different observers. What is the toxic agent in the water that produces goitre? Major McCarrison's experiments have proved that thyroid enlargement can be produced in man within a few weeks by the administration of the suspended matter separated from goitre-producing waters by filtration. But if the matter is boiled it becomes ineffective; further, it has been found to be incapable of passing through the pores of a Berkefeld filter. Hence it seems likely that some minute living agent is the cause of endemic goitre, and that it may exist in the soil, and the author brings much collateral evidence to establish these points. He compares the analogous disease observed in Brazil, and described by Chagas as parasitic thyroiditis; this is an acute infectious disorder, often fatal to infants, conveyed from case to case by biting insects, and caused by a trypanosome. Endemic goitre has always proved sterile on cultivation, and Major McCarrison is careful to guard against the charge of undue adhesion to a single theory of the causation of the disease. His own experience has shown that in the Himalayas endemic goitre can be cured by the exhibition of intestinal antiseptics, as if the *contagium vivum* of the disease found its habitat in the alimentary tract. Similarly its occurrence can be prevented by ensuring a supply of pure water and tolerably cleanly conditions of housing and feeding. But he recognizes that there may be several causes of thyroid enlargement, and that his own *contagium vivum*, when it is at last isolated and identified, is certainly not the only cause of endemic or epidemic enlargement of the thyroid gland. Much work yet remains to be done on the various problems that still await solution. Major McCarrison's book gives a good account of what he has done, aided by grants from the Indian Government and from the Science Committee of the British Medical Association, and contains a full and up-to-date summary of contemporary work upon the subject. It is well written, and may be cordially recommended to the attention of medical men, sociologists, travellers, and others whose attention is directed to endemic goitre.

In two still more recent publications[2] Major McCarrison discusses the etiology of endemic cretinism, as illustrated by breeding experiments with rats, and the causation of goitre in the pupils living in a military school at Sanawar. As for the rats, he finds that some 4 or 5 per cent. of the progeny of goitrous parents are born cretins. The cretin rat is born small, with ill-developed limbs, curved spine, little hair, and weighs perhaps 3 grams to the 7 grams of the more normal members of the litter; under the microscope its thyroid and parathyroid glands are seen to consist almost wholly of fibroblasts, the parenchymatous cells being few in number and showing degenerative changes. Only one-third of the offspring of goitrous rats are normal; about one-third are born with congenital disease of the parathyroid glands and nearly two-thirds with congenital goitre. The author brings forward good reasons for believing that the congenital cretinism and congenital goitre now described in the rat are both due to the action on the fetal thyroid of toxic substances derived from the maternal intestine. He adds that these experimental observations offer strong arguments in favour of the truth of the hypothesis he put forward in 1908 to explain the occurrence of congenital cretinism and goitre in man. The nervous symptoms, from which a third of all cretins suffer, he attributes to parathyroid defect, and he is strongly of the opinion that the parathyroid glands are quite distinct from the thyroid, both in nature and function, although he has never found them diseased when the thyroid gland was normal.

His investigation into the etiology of the occurrence of goitre in the military school at Sanawar, a hill station 6,000 ft. above sea level, towards the foot of the Himalayas, led him to conclude that the drinking water supplied to the children was at fault. The school, or asylum as it is called, contains about 280 boys and 220 girls, two-thirds of them Europeans. During the last fifteen years over 100 of the 500 pupils, on the average, have been goitrous. Yet only about 2 per cent. of the children living in the neighbouring hill station of Kasauli, with far less favourable sanitary and hygienic conditions generally, showed signs of goitre. In neither Sanawar nor Kasauli were the native wild rats found to be goitrous. It is pointed out that long residence in the Sanawar school increases the liability to goitre; thus 80 per cent. of the children who had lived there for eight years were goitrous. Spontaneous recovery occurred in about 9 per cent. of the cases all told, in 11 per cent. of the boys and 7 per cent. of the girls. Major McCarrison was able to show that in all probability the goitrigenous infection was not conveyed by an insect carrier, and was not in any way connected with the geological conformation of the countryside at Sanawar. But a thorough bacteriological examination of the drinking water showed that during the rainy months *B. coli communis* could be grown freely from it, while *B. enteritidis sporogenes* was also frequently present. This and other evidence proved that faecal contamination of the Sanawar water was habitual, and the conclusion is drawn that it also contained the unspecified *contagium vivum* of goitre. The water at Kasauli, on the other hand, was found to be of exceptional purity. The experiment of purifying a portion of the Sanawar water with chlorine and with iodine was accordingly tried. The purified water was supplied to the boys' school and barracks for a period of seven months, while use of the unpurified water was continued at the girls' school and barracks. A marked fall in the percentage of cases of goitre among the boys ensued; the girls meanwhile exhibited a slight increase in the percentage, at each age-period. Major McCarrison does not adhere slavishly to the water theory of goitre, but he considers it certain that the provision of a supply of chemically and bacteriologically pure water at Sanawar would eradicate the tendency to goitre that is now so prevalent at the school he investigated there.

[1] *The Etiology of Endemic Goitre.* Being the Milroy Lectures delivered at the Royal College of Physicians of London in January, 1913. By R. McCarrison, M.D., Major I.M.S., R.U.I., M.R.C.P.Lond. London: John Bale, Sons, and Danielsson, Ltd. 1913. (Med. 8vo, pp. 222; 1 map; 59 figures. 10s. 6d.)

[2] *The Indian Journal of Medical Research*, Calcutta, 1914, i, pp. 505, 536.

BACTERIOLOGY OF WATER.

BACTERIOLOGY has within recent years become so extensive, and opinions have advanced and varied so frequently, that a series of well-digested essays entitled *Studies in Water Supply*, by Dr. HOUSTON,[3] affords a kind of relief from the perusal of ordinary textbooks. So much research is being done that working conclusions must be largely of a tentative character, and the life of a textbook of bacteriology is necessarily limited. The value of these essays is the greater in that they are the result of personal experience and investigation, and contain the interesting results of an important and laborious inquiry into the innocency of London water as distributed to the consumer. A perusal of the articles published from time to time on the reports relating to London water, issued periodically by Dr. Houston as Director of Water Examination for the Metropolitan Water Board, will have led readers interested in the subject to desire to have the matured opinions of a recognized and honest worker brought together in a single volume. The water supply of London is mainly from a river origin of admittedly undesirable character, and the difficulties which have had to be faced constitute an extreme

[3] *Studies in Water Supply.* By A. C. Houston, D.Sc., M.B., C.M. London: Macmillan and Co., Limited. 1913. (Med. 8vo, pp. 212; 43 figures. 5s. net.)

case. In Chapter II pathogenic tests are discussed, and the value of streptococci is ably upheld, though Dr. Houston is cautious enough to add, in regard to raw river water, that wholesale condemnation is not to be regarded as urgently necessary as a result of this test alone. Bacteriologists have classified waters, and are now better able than ever to detect and estimate the amount of objectionable pollution; but it must be borne in mind that standards of number and even kinds of microbes applicable to one particular water supply may be inadmissible when applied to other types. It is not merely or primarily the count of bacteria, but their variety and source which are of importance. Again, in using the presence of the *Bacillus coli* as an indication of pollution of intestinal origin, the fact must not be overlooked that excreta of birds and animals contain this organism; at present it appears to be impossible to distinguish the source of the bacillus. This test finds its highest utility as a means of determining the efficiency of filtration, and incidentally the value of storage. The name and experience of Dr. Houston are vouchers for originality and honest intent. He upholds very strongly the efficiency of storage, and to demonstrate his unqualified faith and confirm his scientific experiments he has himself drunk on the twenty-fourth day of storage half a pint of artificially infected water without experiencing any harmful results. He regards storage antecedent to filtration as the best possible safeguard. Further, he has advocated persistently, as the fruit of prolonged diligent labour, a "safety period" of storage. In the case of the London supply such a statement helps to remove the lurking suspicion of some anent the curve of the incidence of enteric fever in London referred to by Sir Shirley Murphy in 1894; there is further the resolution passed by the British Medical Association at Liverpool in 1912. The efforts to maintain the London water at maximum purity have never before been so perfectly organized. Storage is a comprehensive term, and within it may be embraced other processes, as abstraction, filtration, coagulation, sterilization, devitalization, and sedimentation, and all these subjects are lucidly discussed in their varied aspects in Chapters III to VI. Emphasis has been laid on this question of storage, because in this measure many water-vending authorities might find a solution to their present difficulties. A very interesting and practical review of water as a cause of disease is given in Chapter VII. Dr. Houston regards accidental contamination as a more likely causation of illness than any quality inherent in the supply, but we must not forget that the methods of purification are not always blameless. Excellent advice to waterworks authorities is given on page 107, and the rest of the chapter is devoted to practical illustrations drawn from actual outbreaks, with the intent to demonstrate that a direct causative connexion between water and decreased mortality is perhaps hardly warrantable in all cases. This is evident in the decline in the incidence of tuberculosis, pneumonia, and respiratory disease, none of which can be regarded as water-borne. Laboratory (clerical and routine) methods for bacteriological investigations are detailed in Chapters IX and X, and special methods are discussed in Chapter XI, which contains valuable hints for similar workers. The type is clear and restful to the eye, while the illustrations and diagrams (43 in number) simplify consideration. There are no fewer than thirty-eight tables, most of them extremely instructive. A perusal of this volume must broaden the ideas of the student and enlighten any reader interested in the potability of water supplies.

A third edition of PRESCOTT and WINSLOW'S *Elements of Water Bacteriology*[4] has been issued. In the interval of five years since the issue of the second edition knowledge has greatly extended, and its increasing practical application to sanitary bacteriology has made a new edition necessary. Bacteriology is now regarded as the most direct and delicate test or guide to the safety and suitability of potable waters, and it is also useful for classification purposes. The authors take an orthodox position with regard to the necessity of chemical analysis, and the inspection of the sources of all waters requiring examination. They hold that the real application of chemistry begins where that of bacteriology ends. Sources of error and difficulties in the manipulation of bacteriology, such as time, storage, exposure, and temperature, are carefully criticized. In interpreting the colon bacillus test, they are satisfied that their number, and not their mere presence, serves best as an indication of noxious pollution. The fact is emphasized that the character of organisms present, and utilized as tests, are of more importance than quantitative estimations. Chapter VII deals with the significance of the colon bacillus test in various types of water, and the deductions on page 149 are valuable. Chapter X is particularly interesting to the sanitarian. Preliminary enrichment of the sample to be examined is strongly advocated, and the lactose bile test is held up as the most satisfactory for the colon group of bacilli, because it has been demonstrated that normal waters contain few lactose fermenting organisms growing at 37° C., which is regarded as the "optimum" temperature. The authors also regard the presence of streptococci as established proof of pollution, and hope that ultimately this organism may aid in helping to distinguish between human and animal pollution. One gathers from the general reading of the book that the authors hold that the presence of *Bacillus enteritidis sporogenes* tells little, and does not afford any satisfactory indication of either recent or dangerous pollution like the presence of streptococci. Chapter XII is devoted to an important consideration of shellfish, which are generally eaten in an uncooked or partly cooked condition. It is not comforting to read that most of the processes of cooking to which these foods are subjected are insufficient to destroy disease-producing germs, and do not remove from mussels even the risk of enteric infection. The book is divided with well thought out continuity into twelve chapters, and the subheadings are extremely useful. The index is ample; there is a very full bibliography, and it is worthy of remark that some 266 authors are referred to in the text. Towards the end of the book there is a useful appendix on culture media. The book will be found useful in the laboratory, and instructive to the ordinary student, not only for its practical worth, but as indicating the lines on which, and to what extent, contemporary workers in America are applying up-to-date developments in bacteriology to aid sanitary work and the maintenance of wholesome water supplies.

[4] *Elements of Water Bacteriology, with Special Reference to Sanitary Water Analysis.* By S. C. Prescott and C. E. A. Winslow. Third edition, rewritten. New York: J. Wiley and Sons. London: Chapman and Hall. 1913. (Post 8vo, pp. 332. 7s. 6d. net.)

CLINICAL PATHOLOGY.

CLINICAL pathology is an indefinite term that in recent years has been used in connexion with the investigation of diseased processes in the living patient. The development of this line of medical research has resulted in the publication of many new books purporting to deal with the subject; but so varied are the possibilities of this "living pathology" that different books on clinical pathology have attacked the subject from entirely different aspects. Often, also, it is evident that they have ignored the principle that the true reason for publishing a new book is to present new work or old work in a new form to meet a demand. A book on clinical pathology should be two-sided. First, a guide book devoid of technique is needed by the practitioner who wishes to learn the value of methods of diagnosis and treatment which are much talked of and often recent enough to be out of perspective; this might with truth be called "applied pathology." For the laboratory worker and for the practitioner who wishes to carry out his own investigations a work on laboratory methods, carefully selected, is necessary. Of the former there are but few, of the latter many, and to these practical works belongs PANTON'S *Clinical Pathology*.[5] It cannot be said that there are no other works dealing with this same subject, but it differs from many in that it is devoid of redundance. The writer has wisely confined himself to describing the simpler and proved methods of research suitable for the student and practitioner. The sections deal respectively with blood, bacteriology, puncture fluids, urine, alimentary system, eye and skin and respiratory tract. There is a final chapter on

[5] *Clinical Pathology.* By P. N. Panton, M.A., M.B., B.C. London: J. and A. Churchill. 1913. (Med. 8vo, pp. 456; 13 plates, 45 figures. 12s. 6d. net.)

histology and methods which is not usually included in such books. The subject matter is good, though the language in places is a little loose and the facts a little disconnected. There is a good chapter dealing with the variations in acidity of the urine and acidosis. There are many who would disagree with the old view here put forth that the cell casts may be derived from the tubular epithelium. The chemistry of the blood is but poorly dealt with, but here, perhaps, the author considers that there are no simple yet reliable methods of research. A notable feature is the sane attitude adopted by Dr. Panton in emphasizing the fact that the deductions drawn from any test should never be made from the test alone without a knowledge of the clinical data and an appreciation of the test and its significance. The book is one which we can recommend for the student, though we think it has been published at too high a price—a fault of many recent medical works.

The revision of the sixth edition of Sir Anthony Bowlby's well-known book on *Surgical Pathology*[6] has been most carefully and efficiently carried out by Dr. Andrewes. There are, on the whole, few changes. The chapter on arterial disease has been rewritten, and a chapter on the formation of gall stones and their results has been added. The aspect of the book is not altered, it still retains its convenient handy size. Most textbooks on surgery include a section on surgical pathology, and it has been asked whether it is wise to issue a separate book on the subject. That the profession wishes its pathology served separately, as it wishes its treatment served separately, is shown by the way in which this volume continues its well-deserved popularity. It seems to us that the distinct flavour of likeableness which pervades the book is due to its straightforward, simple, narrative style and the absence of overloading with references and bibliography. Temptations to wander afield into the regions of speculation are steadily resisted, for the author recognizes that his readers are concerned with first acquiring a knowledge of surgical pathology; only in later studies do they desire theory. It is probably with this in view that the author adheres to established beliefs. For example, the present tendency to exclude myeloid sarcoma from the malignant diseases and to baptise it anew as myeloma, an innocent tumour, is resisted. Then again the classification of tumours employed is quite the simplest, dividing them into three great groups—connective tissue group, epithelial tumours, and the teratomata. The place of the endotheliomata is amongst the epithelial tumours; a strict histological classification would place them amongst the connective tissue tumours, as indeed they appear naturally to be. The book is very fully illustrated, though many will find the pictures somewhat insignificant in appearance in comparison with the elaborate diagrams and illustrations of all kinds commonly found in surgical literature. We certainly think that there is a distinct place for such a book as this, and we have great pleasure in once more bringing it to the notice of the profession.

INSURANCE ACT LAW.

The sixth volume of Messrs. Butterworth's well-known series of law reports[7] contains an addendum which makes it valuable to others besides members of the legal profession. According to the preface, the learned editors have decided to publish reports of insurance cases; and as legal questions of general interest are bound to arise sooner or later under the National Insurance Act, it will be useful to have them collected together in an authoritative form. Two or three of those reported in this volume are of direct interest to the medical profession.

In Scottish Insurance Commissioners *v.* Royal Infirmary of Edinburgh it was held that the managers of the infirmary, having no control over the medical staff in their treatment of patients, were not their employers. Consequently it was decided that theirs was not employment within the meaning of Part I of the Act, and that they were not insured persons.

In another case (*re* Employment of Poor Law Officers, p. N. 128) the position of Poor Law officers was considered in the Irish Court. Following Murphy *v.* Guardians of Enniscorthy Union (1908), 2 Jr. R. 609, the court held that the Poor Law medical officer is not within Part I of the National Insurance Act, 1911.

It is to be observed that county court decisions are not reported. This, we understand, is in accordance with the universal practice observed among those who edit law reports, as the rulings of a county court judge are not regarded as authoritative, except possibly by some of his colleagues.

NOTES ON BOOKS.

Dr. David Fraser Harris has contributed to the Home University Library a book entitled *Nerves*,[8] which, within a short compass, gives an accurate account of the general anatomy and physiology of the human nervous system. Clearly and pleasantly written, the book may be read with advantage not only by laymen, but by any practitioner who wishes to refresh his memory on the important matters with which it deals. The author is a believer in the existence of a specialized form of nerve energy of which he considers that Nissl's granules are the physical basis. The book is illustrated by diagrams, and concludes with some reflections upon the bearing of nerve physiology upon educational methods.

The Microtomist's Vade Mecum,[9] by Mr. Arthur Bolles Lee, is an old-established work of great value. It has now appeared as a seventh edition, the first having been published as long ago as 1885. The editions have appeared at intervals of three, five, and lastly eight years, the longest interval being perhaps due to a larger edition, but more probably to the increasing production of similar books, and the larger incorporation of technical methods in textbooks of histology, etc. An important improvement in histological technique has been effected, since the publication of the last edition, by Gibson's new mounting media. These media—camsal, balsam, and euparal—afford ready and safe means of mounting direct from alcohol, without the use of clearing agents. They confer on unstained or insufficiently stained elements just the required degree of visibility, thus enabling details invisible in the usual mounts to be seen. What a blessing for medical students to be able to dispense with clearing fluids, and take their sections straight from alcohol to the mounting fluid! Euparal is a mixture of camsal, sandarac, eucalyptol, paraldehyde. Before transferring the tissue to euparal 95 per cent. alcohol is preferred by Mr. Lee, but even at a pinch 70 per cent. will do. "These media work very kindly, and do not dry too rapidly. They are not oxidant, and preserve delicate stains. The mounts seem to keep perfectly without scaling." The low index of refraction of euparal is just right for the most delicate cytological researches, giving just the desired increase of visibility to unstained elements. "Unstained spindles, which are totally invisible in balsam, become strongly visible in the most minute details in euparal."

Gardening Simplified[10] is one of the best books ever produced for the benefit of the ambitious but inexperienced gardener. It is really an album of boldly designed drawings reproduced after the manner of woodcuts, recalling those of the old herbals. Facing each is a page of text. The anonymous author says of the drawings showing the method of planting fruit trees and shrubs that "the reader who studies the accompanying illustrations should be left in no manner of doubt as to what is the correct procedure," and as much may be said of the whole fifty. In fact, the drawings—they are signed "G. Clarke"—are so good and clear that they make the text almost superfluous.

[6] *Surgical Pathology and Morbid Anatomy.* By Sir Anthony Bowlby, C.M.G., F.R.C.S. Sixth Edition. Edited with the assistance of Dr. Andrewes. London: J. and A. Churchill. 1913. (Demy 8vo, pp. 666; 200 figures. 10s. 6d. net.)

[7] *Butterworth's Workmen's Compensation Cases.* Vol. vi. (New series.) Being a continuation of *Minton-Senhouse's Workmen's Compensation Cases.* By His Honour Judge Ruegg, K.C., and Douglas Knocker, Esq., of the Middle Temple, and South-Eastern Circuit, Barrister-at-Law, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H. Lond. London: Butterworth and Co. 1913. (Demy 8vo, pp. 253. 7s. 6d. net.)

[8] *Nerves.* By D. F. Harris, M.D., C.M., B.Sc.Lond., D.Sc.Birm. F.R.S.E. Home University Library of Modern Knowledge, No. 79. New York: H. Holt and Co. London: Williams and Norgate. 1913. (Fcap. 8vo, pp. 254. 1s. net.)

[9] *The Microtomist's Vade Mecum.* By Arthur Bolles Lee. Seventh edition. London: J. and A. Churchill. 1913. (Med. 8vo, pp. 536. 15s. net.)

[10] *Gardening Simplified: An Illustrated Guide to Successful Gardening.* London: The Cable Printing and Publishing Company, Limited. (Demy 4to. pp. 102; 50 illustrations. 1s.)

EIGHTY-SECOND ANNUAL MEETING

of the

British Medical Association,

ABERDEEN, JULY, 1914.*

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

SOME FAMOUS ABERDONIANS.

(*Continued from page 492.*)

POETS.

Aberdeen has been fertile in the production of writers of various kinds. It still is a great recruiting ground for journalists; it has been truly said that Aberdonians swarm in that "street of adventure," Fleet Street.

First in order of time and by no means last in merit among Aberdonian writers is the poet-historian, John Barbour. The date of his birth is uncertain, some putting it between 1316 and 1319, and Pinkerton, the distinguished antiquary, ten years later. This, however, is conjecture. What appears to be certain is that Barbour was Archdeacon of Aberdeen in 1357, when he was chosen by his bishop to be one of the Commissioners appointed to take steps for procuring the liberation of King David from the hands of the English. The rank held by him in the Church proves that he had received a learned education, and it has been supposed that he had studied in a School of Divinity and Canon Law which had existed at Aberdeen since the reign of Alexander II. This, too, is conjecture. There is evidence that in 1364 he was granted permission to pass through England with four horsemen for the purpose of studying at Oxford or elsewhere. In 1368 he obtained another passport to enable him to go to France for purposes of study. The work by which his name still lives in histories of literature is *The Bruce*. The author has recorded, not only the date of composition of this historical poem, but the age at which he wrote it. This, he says,

> Wes the year of grace
> A thousand, thre Hundyr, sevynty
> And Fyve; of hys eld sexty.

Barbour's work is the oldest poem of any length in the literature of Scotland. It has been highly praised by many good judges, and its popularity is shown by the numerous editions which have been published. Pinkerton says that between 1616 and 1790, the date of his own edition, the work had gone through about twenty impressions. It is an epic, and tells in heroic style the story of Robert Bruce, who broke "proud Edward's power" at Bannockburn. Barbour shows everywhere a fine spirit of chivalry and a love of freedom. Lord Hailes, Pinkerton, and Walter Scott, besides older authorities, have borne witness to the accuracy of his narrative. His account of the battle of Bannockburn, the six hundredth anniversary of which falls in the present year, has been discredited by some, but the substantial truth of his narrative has recently been vindicated by Mr. W. M. Mackenzie. Barbour died about the beginning of 1395, and was buried in the Cathedral of St. Machar. He is the father of Scottish literature, and the question may justly be asked, Why has Aberdeen no memorial of Scotland's first national poet?

Another poet, distinguished in his day among scholars (for he wrote in Latin), was Dr. Arthur Johnston. He was born in 1587, and was educated at King's College, of which he was afterwards rector. Having taken up the study of medicine, he left Scotland about the year 1608 in order to improve himself in his profession, and resided many years on the Continent. He took the degree of Doctor of Medicine at Padua in 1610. After travelling over Italy and visiting Germany, Denmark, Holland, and England, he settled in France, where he married twice. At an early age he gained a considerable reputation as a writer of Latin verse. Sir Thomas Urquhart says: "He was laureated poet at Paris, and that most deservedly." This probably means nothing more than that he gained a prize. He returned to Scotland in 1632 after an absence of twenty-four years. In that year his *Epigrammata* and *Parerga* were printed at Aberdeen. On the title-page of his poems Johnston is called Medicus Regius. From some verses entitled *Ad Medicos Regios* it appears that the appointment had been promised him both by James and Charles whenever a vacancy should occur among the royal physicians, and he complains of the obstacle placed in the way of his preferment by the physicians living longer than they were entitled to do and not letting Nature take her fair course. Several of his poems deal with medicine or its professors, and he shows considerable ingenuity in dealing with subjects that might not seem to lend themselves to poetic treatment; for instance, one of his poems is addressed to a young lady suffering from small-pox, and another to the town council in favour of a midwife who had been locked up on account of her scurrilous tongue. All Johnston's verse is richly decorated with classical imagery. A complete edition of the *Parerga* appeared in 1637, and was republished by Principal Sir William Duguid Geddes for the New Spalding Club in 1892. Johnston's best work is his Latin version of the Psalms, which was published at Aberdeen in the same year. He also composed a number of evangelical and biblical canticles, in one of which he manages to compress the ten commandments into six lines. He died at Oxford in 1641 in his fifty-fourth year, and was buried there. Dr. Johnson places him next to Buchanan among the Latin poets of Scotland.

Space will not allow us to mention most of the skilled writers of verse whom Aberdeen may claim as her sons. A few words must, however, be said about James Beattie, author of *The Minstrel*, which brought its author great fame in his lifetime, and even now is not altogether forgotten. It is written in the Spenserian stanza, and contains pleasing descriptions of Nature inspired by the scenery around Fordoun at the foot of the Grampians, where it was written. The hero, Edwin, is the poet himself. Beattie was a schoolmaster there after graduating M.A. in Marischal College in 1753. He wrote other poems which added little to his reputation. In 1760 he was appointed Professor of Moral Philosophy and Logic in Marischal College. In 1770 he published an *Essay on Truth*, a popular but superficial treatise. This and his *Elements of Moral Science* have long rested undisturbed amid the dust of libraries. As a writer on philosophy Beattie may be taken as an example of what Disraeli called the "forcible feeble," as may be seen by any one who will

* Articles on Aberdeen were published in the JOURNAL on January 3rd, p. 35; on January 10th, p. 97; on January 17th, p. 151; and February 28th, p. 489.

take the trouble to glance at his attacks on David Hume. Nevertheless, he had a great reputation in his day, and was a friend of Johnson and other well-known men of the time. His book received the august approval of George III, who gave him a pension of £200 a year. His portrait was painted by Joshua Reynolds. He died in 1793.

Skinner, of Longside, famous in Scotland as the author of *Tullochgorum*, should also be included among Aberdeen poets. When Robert Burns visited the city an exchange of courtesies took place between the two brothers in Apollo.

The city justly glories in her association with the great name of Byron, who was entered as a pupil of the old grammar school probably in January, 1795, when he was only 7 years of age, and remained there for four years. There is a familiar story (possibly legendary) that "on his coming to school the first morning after his accession to the peerage was known, and on calling out his name in the catalogue, no longer as 'Georgi Byron Gordon,' but as 'Georgi Domine de Byron,' he did not reply with the usual expected 'Adsum,' but, feeling the gaze of all his school-fellows, burst into tears and ran out." How lasting were his memories of Scotland is shown by passages quoted in a previous article.[1]



The Chanonry from the Cathedral.

Historians.

Of historians Aberdeen has produced many, but only a very few can be mentioned here. The first in time is Barbour, whose poem, *The Bruce*, is acknowledged by the best authorities to be an accurate history of the stormy career of the champion of Scottish independence. After him came Hector Boece, of whom it may be said that he was a poet or "maker," for he invented heroes and events, and also authorities when he needed them. His *Lives of the Bishops of Aberdeen*, based largely on materials collected by Elphinstone, appeared in 1522, and his *History of Scotland*, by which his name is preserved, in 1527. He was educated at the Montaigu College of the University of Paris; there he was a contemporary of Erasmus, with whom he continued to correspond throughout his life. He won distinction as a scholar in Paris, and was for six years one of the Regents of Montaigu, where he read lectures in philosophy. He was induced by Elphinstone to come to Aberdeen as principal of the new university. He was also professor of the liberal arts, and was a sound teacher and a good administrator. It has been unkindly said of his history of Scotland that one might as well try to number the stars as to count the lies in it, but for anything which came within the range of his own knowledge he is a trustworthy authority. He lived in the "magnifick edifice" of the college which Elphinstone "caused build," but this was not finished till near the close of Dunbar's episcopate. Boece died in 1536, and was buried in the college chapel. It is interesting to note that Boece had some knowledge of medicine, and was called in consultation to the bedside of the dying Abbot of Kinloss. It may have been due to him that Elphinstone included a Mediciner among the teaching staff of his foundation.

John Lesley, Bishop of Ross, the chief adviser of Mary Queen of Scots in her ecclesiastical policy, and her ambassador to Elizabeth in 1568, was educated at King's. He wrote a history of Scotland, entitled *De Origine, Moribus et Rebus Gestis Scotorum*, which was published in 1578. The Latin style is considered by good judges as inferior only to that of George Buchanan. Lesley's best known work is his *Defence of the Honour of Marie Quene of Scotland*, which appeared in 1569. He also wrote the *History of Scotland from 1436 to 1561*, a continuation of Boece which was published by the Bannatyne Club from a manuscript in the possession of the Earl of Leven and Melville in 1830. Among several other works written by the bishop is a pamphlet, entitled *De illustrium foeminarum in republica administranda authoritate*, published at Rheims in 1580, which might be interesting to many at the present day. Lesley, after a crowded and eventful life, died in 1596 in a monastery at Guirtenburg near Brussels, where he sought peace in his last days.

The most widely known of the historians is Gilbert Burnet, who was born in 1643, and graduated at Marischal College in 1657. He became Bishop of Salisbury in 1689. He wrote, besides many other works, a *History of the Reformation of the Church of England*, for which he received the thanks of both Houses of Parliament. He is best known now by his *History of His Own Time*, published several years after his death, which took place in 1715. Both the book and the author have been fiercely criticized, but on the whole it is a valuable record.

William Guthrie, who was educated at Aberdeen, came to London in 1730. He was engaged by Cave to touch up, for the *Gentleman's Magazine*, the rough notes of parliamentary debates gathered from various sources, often from the attendants and messengers of the two Houses. In this task he was succeeded by Samuel Johnson, who, as is well known, wrote in a garret many of the masterpieces of British eloquence which used to be quoted in reading books. Guthrie afterwards wrote a *History of England* in four volumes, a *History of Scotland* in ten volumes, and a *History of the World* in twelve volumes.

James Macpherson, who entered at King's in 1752 and migrated to Marischal in 1754, is known as the translator, possibly the inventor, of the Ossianic poems which made a sensation in the eighteenth century, and excited the admiration of Napoleon, whose literary taste was scarcely equal to his military genius. Macpherson was also the author of some historical works, among which may be mentioned *A History of Great Britain from the Restoration to the Accession of the House of Hanover*, published in 1775. Cosmo Innes, author of the *Fasti Aberdonenses* and other antiquarian works, was a student at King's, but did not graduate.

The highest place among the historians produced by Aberdeen belongs to John Hill Burton, who graduated

[1] British Medical Journal, January 3rd, 1914.

M.A. at Marischal College in 1829. His *History of Scotland* is still one of the leading authorities on the subject. Burton was a man of multifarious energies in the literary sphere. To mention only two of his chief achievements: he edited the works of Jeremy Bentham and wrote the life of David Hume. His literary gift has been inherited by his daughter, Mrs. Rodger, whose entertaining book on Aberdeen doctors[2] is amusing as well as interesting not only to Aberdonians but to all medical readers.

Mr. John Malcolm Bulloch deserves special mention here for his *History of the University of Aberdeen*, issued on the occasion of the four hundredth anniversary of the foundation of that seat of learning. Mr. Bulloch has since devoted himself to researches on the family of Gordon, which formerly dominated the North of Scotland; the results of this labour of love are embodied in *The Gay Gordons* (1908) and many pamphlets on the Gordon genealogy. He is also the editor of the *House of Gordon* for the New Spalding Club.

Artists.

Aberdeen may well pride itself on having produced George Jamesone, who was born there in the year 1587, and is acknowledged to be one of the greatest of Scottish painters. He was educated at the Grammar School and the University (probably Marischal College), and afterwards studied painting at Antwerp under Rubens. Among his fellow students was Vandyke. In 1619 Jamesone returned to Aberdeen, where he pursued his profession as a portrait painter. According to Walpole he had much of Vandyke's second manner, and some of his works have occasionally been attributed to that great master. According to Allan Cunningham, "He was the first native of our island who refused to limit himself to miniatures, and transferred life of the natural dimensions to his canvass." Charles I sat to Jamesone for his portrait at Edinburgh in 1633. Among other celebrated men whom Jamesone painted were the famous Marquis of Montrose, General David Leslie, and George Heriot ("Jingling Geordie" of the *Fortunes of Nigel*). He died at Edinburgh in 1644 in the 57th year of his age. Arthur Johnston called him the Scottish Apelles; Walpole, the Vandyke of Scotland. Till Reynolds England had no artist worthy of being named above him in his own line. Jamesone had a house westward from the Well of Spa, with a fine garden known as the Four Neukit Garden. He built the house and painted it with his own hand. He suffered from stone, and is said to have got relief from the spring; such was the reputation of its waters that they were sent to France for the relief of the sick. It is said that Byron went to the Well of Spa every morning with his mother to drink the waters. Jamesone is commemorated by a stained glass window in the east end of the south wall of the cathedral.

Among other artists whom Aberdeen can claim as her sons may be mentioned John Phillip, born in 1817, the son of a shoemaker, who began his artistic career as apprentice to a house painter; and Sir George Reid. Gibbs, the architect, who was educated at Marischal College, should be numbered among the artists. He designed the Radcliffe Library at Oxford and the churches of St. Martin-in-the-Fields and St. Mary le Strand, in London, and that of St. Nicholas, in Aberdeen.

Scholars and Teachers.

In the Bull creating the University of Aberdeen it is stated that Alexander VI had been moved to take that step:

> That the realm may be adorned with the gifts of science; that the university may produce men eminent for their ripe judgement, crowned with the graces of virtue, and learned in the teachings of the various faculties; and that there may be therein a cool fountain of whose fullness all the faithful in Christ may drink, streaming thither from every quarter in their desire to be adorned with learning and virtue.

This intention has been abundantly fulfilled, and ever since its foundation the university has been a centre of intellectual life not only to the north, cut off from the world, as the Pope said, "by firths and very lofty mountains," but to the whole British Empire. The art of printing, the most powerful agency in the diffusion of learning, had been introduced into Scotland in the early part of the sixteenth century, when Elphinstone got an exclusive privilege for Walter Chepman and Andrew Myllar, of Edinburgh, to set up a printing press at Edinburgh. The first book printed by them was the *Breviarium Aberdonense*. This, in addition to the church office, contained the first lives of Scottish saints, some of which were contributed by Elphinstone himself. In 1622 Edward Raban, "the Caxton of Aberdeen," a native of England who was following his craft at St. Andrews, was induced by the Provost of Aberdeen and Bishop Patrick Forbes to establish his printing press in that city. He was an author as well as a printer, and among his works was a vindication of woman under the title *The Glorie of Man consisting in the Excellence and Perfection of Woman*; this shows that on what is now called the feminist question Raban was far in advance of his time. In 1626 he began the publication of an almanack, believed to be the earliest in Scotland. He died in 1649.

Aberdeen has given to the world many ripe scholars and a host of successful teachers. Among the former may be mentioned Edward Valpy, M.A. of King's College (1809), afterwards headmaster of the grammar school at Norwich, author of a number of school books which had a great vogue in their day; Alexander Cruden, Marischal College (1713), author of the famous *Concordance* to the Scriptures; Thomas Ruddiman, M.A. King's (1694), the author of the *Rudiments*, out of which Scottish boys learnt Latin for more than a century; James Melvin, M.A. Marischal (1813), Rector of the Aberdeen Grammar School and famous as a Latin scholar in the North; John Stuart Blackie (Marischal College, 1821–24), the eccentric professor of Greek and originator of the movement for the foundation of a Chair of Celtic Literature at Edinburgh; John Stuart-Glennie, M.A. Marischal (1849), author of Greek folk songs from the Ottoman Provinces of Northern Hellas and other works; Sir William Mitchell Ramsay, late Professor of Humanity, whose works on the travels of St. Paul and on the early Church have made his name celebrated among theologians as well as among archaeologists; and Sir William Geddes, well known as a great scholar.

Aberdeen has produced many Orientalists, foremost among whom may be placed William Robertson Smith, M.A. (1865). James Legge, the Professor of Chinese at Oxford, said to be the greatest Sinologue that Europe has produced, who published a series of the Chinese classics with translations in seven volumes, was educated at King's College, where he graduated M.A. in 1835. Mention may appropriately be made here of Inspector-General Sir William Mackenzie (M.A. King's, 1830, M.D. 1856), who translated into Hindustani Gregory's *Practice of Physic* and Thomson's *Conspectus of the British Pharmacopoeia*.

Some idea of the number of scholars and teachers produced by Aberdeen may be got from an interesting article by J. F. Kellas Johnstone, entitled "The Aberdeen Educator," in *Studies in the History of the University*, edited by P. J. Anderson, one of the volumes of the Quatercentenary publications. Many fine scholars and excellent teachers are sent out from Aberdeen, who blush unseen in remote parish schools.

Among the scientific teachers shines the name of James Clerk Maxwell, the great physicist who was professor at Marischal College from 1856 to 1860; Sir John Struthers, Professor of Anatomy; James McGillivray, one of the ablest naturalists Scotland has produced; Wyville Thomson, whose name is associated with the *Challenger* expedition; and a number of naturalists, zoologists, and botanists. Aberdeen has always been remarkably prolific in mathematicians.

Philosophers and Writers.

Alexander Ross, immortalized in the couplet in *Hudibras*—

> There was an excellent sage philosopher
> That had read Alexander Ross over,

was an early graduate of Marischal College. He became headmaster of King Edward VI Free Grammar School at Southampton and private chaplain to King Charles I. He was a voluminous writer and an ardent controversialist, who opposed Galileo and Copernicus, corrected the *Vulgar Errours* of Sir Thomas Browne in a work entitled *Medicus Medicatus, or the Physician's Religion Cured*, and lashed with his criticism Sir Kenelm Digby, Spinoza, and Thomas Hobbes, and many others of less note.

[2] Ella Hill Burton Rodger: *Aberdeen Doctors at Home and Abroad*. Blackwood: Edinburgh and London. MDCCCXCIII.

Thomas Reid, a man whose influence on philosophic thought has been very great and far-reaching, was by birth and education an Aberdonian. It is interesting to note that his mother belonged to the family of the Gregories; therefore he may be claimed as an example of the inheritance of great intellectual power. He graduated at Marischal College in 1726 at the age of 16, and was then Librarian of the University for ten years, during which he gave himself to the study of mathematics. In 1752 he was elected Professor of Philosophy at King's College, and in 1764 appeared his *Enquiry into the Human Mind on the Principles of Common Sense*. After publishing several other philosophic treatises, he died in 1796.

Another famous Aberdeen philosopher was Alexander Bain, whose reign, especially in the domain of psychology, was almost absolute in this country in the Seventies. Aberdeen, it is said, was described by a learned German as a city on the North Sea with a university in which Bain was professor. How early his turn for logical reasoning was displayed is shown by the story that when he was a small boy his mother was trying to teach him the Lord's Prayer. She asked him to repeat "Our Father which art in Heaven." The baby rationalist said, "Hoo can I say that, when I see him there in the shöpe?" He was a thinker who had the good sense to apply scientific principles of psychology in the spirit of Johannes Müller's maxim, *Psychologus nemo nisi physiologus*. But although his name will live in the history of philosophy, the place of his works is already the bookshelf rather than the student's table. George Croom Robertson was a pupil of Bain's who upheld his master's principles both as Grote Professor of Philosophy of Mind and Logic in University College, London, and as editor of *Mind*.

Among writers whose Alma Mater is Aberdeen, in addition to those already named we should mention Sir Thomas Urquhart of Cromarty (King's, 1622), author of the well-known translation of Rabelais, which, as Hamlet says, gives the very form and pressure of the original. Reminiscences of Aberdeen will be found in the *Random Records* of George Colman the younger, who, leaving Oxford after a short and stormy career, was banished by his father to the more austere life of Aberdeen. Of more modern writers, Professor David Masson, M.A., Marischal (1839), historian, essayist, and critic, is best known by his exhaustive work on Milton and his times. Among journalists may be named John Douglas Cook, the first editor of the *Saturday Review*; Archibald Forbes, the war correspondent; Professor Minto, whose inspiration fired the ambition of many a lad with literary tastes; and Sir William Robertson Nicoll.

(*To be continued.*)

ONE HUNDRED YEARS AGO.

Dr. Prichard, Ethnologist and Physician.

In the late Dr. Hack Tuke's life of James Cowles Prichard in the *Dictionary of National Biography*,[1] the following statement occurs: "On 29th February, 1814, he [Dr. Prichard] was elected physician to the Bristol Infirmary." There is obviously an inaccuracy here, for the month of February in 1814 had not twenty-nine days. The volume of Errata leaves the inaccuracy as it stands, and so we remain in doubt as to the exact day of the election. That, however, is a small matter, for it is with Dr. Prichard himself that this article is concerned. Not long before his appointment to the Bristol Infirmary Prichard had published his *Researches as to the Physical History of Man*,[2] and had thus laid the foundation of the science of anthropology in these islands. Dr. Prichard's active life may be regarded as extending from 1808 (when he graduated M.D. in Edinburgh) to 1848, when he died at the age of 62. The special department of medicine to which he devoted himself alternatively with anthropology was neurology and insanity, and so he travelled through life with his pair of horses ("man" and "mania," we may call them), not always pursuing an accurately straight course, but rather tending to move in curving tracks and with a certain degree of disconcerting jolting at times as one of the two animals strained harder at the shaft. Dr. Hack Tuke writes: "As an investigator into both mental science and anthropology, Prichard ranks very high; had he not divided his energies between the two subjects, he would doubtless have achieved results in one of them that would have entitled him to a place among the greatest of men of science."

James Cowles Prichard was not a native of Bristol, for at his birth his parents were at the pretty little town of Ross on the Wye, in Herefordshire, the home of John Kyrle (Pope's "Man of Ross"), the eminent philanthropist "on £500 a year." Prichard's father, "a cultivated man, of great poetical imagination," and a member of the Society of Friends, moved to Bristol, and there young Prichard continued his education, studying medicine in 1802, and gaining an extraordinary knowledge of French, Italian, Spanish, and modern Greek, for which, of course, there was great opportunity in the famous seaport town. "Bristowe shippe and sayle" had for centuries been the "second city" in England, yielding only to London in importance; but now things were going against her, and Liverpool, which had no seven miles of river between her and the sea, was passing her by. Yet Bristol was still a great centre, and doubtless Prichard had his wits sharpened in the city, where the saying is that a Jew cannot live and the merchants sleep with one eye open. It is more important, however, to remember that Richard Bright was a Bristolian, and that both he and Henry Holland (afterwards Sir Henry) studied medicine at Bristol, in London (St. Thomas's), and at Edinburgh. Now Prichard also studied medicine in these three cities, and he was two years older than Holland and three years Bright's senior. In the early years of the nineteenth century all the three lads were doubtless known to each other, and there was a fourth, John Bishop Estlin, who was a year older than Prichard, with whom likewise they must have been well acquainted, for Holland, at any rate, attended the school in Bristol presided over by Estlin's father (John Prior Estlin), and Prichard (in 1811) married Estlin's sister. John Bishop Estlin studied medicine like the others at Bristol and Edinburgh, but chose Guy's Hospital instead of St. Thomas's as his London school. We can fairly imagine the four youths forming a friendly coterie, and, Bristolians all (by birth or residence), chumming together wherever they happened to be. All achieved fame, and the coterie still has its meeting-place—in the volumes of the *Dictionary of National Biography*, the Elysian fields where walk the British worthies.

It was a somewhat exciting Bristol to live in at the time when Prichard and his friends were residing there. The days of 1793, when in connexion with a matter of tolls and toll-gates public feeling ran high, had not been forgotten, and the cry, "Give 'em Bristol Bridge," was still to be heard now and again when the mob of roughs was out for mischief. There was to be another great riot in 1831, visible and audible, we daresay, to the Dr. Prichard of that time, busy with his books on mental diseases and anthropology, and somewhat suggestive to his mind of the "moral insanity" about which he had written so much. At present, however, he had only recently settled in practice, had been married for two years or so, and had a son James, afterwards to be distinguished at Oxford by gaining an open Fellowship at Oriel and other honours (his medical son, Augustin, was not born till 1818): he had been elected physician to St. Peter's Hospital in 1811, and now was proud to write after his name physician to the Bristol Infirmary. In his new post in the infirmary he was following in the footsteps of Dr. Andrew Carrick, a Scotsman, and one wonders whether he was the one who tempted the youth of Bristol to seek, for one or two *anni medici* at least, the northern metropolis. He had also Dr. J. G. Swayne, the bearer of a name always of honourable mention in medical Bristol, as one of his professional friends. The "second city" on the Avon had sons with medical attainments of which she might well be proud, and Dr. Prichard added to his medical gifts those of a deep knowledge of philosophy and a well cultivated literary style. Bristol at that time was the home of much that was best in English literature. Thomas Chatterton, the "marvellous boy," had died in 1770, "the most extraordinary young man," said Dr. Johnson, "that has encountered my knowledge"; but he had been followed by Southey, the poet who tried to be a doctor, by Coleridge, "dreaming and discovering words mystic and musical,"

[1] *Dictionary of National Biography*, vol. xlvi. p. 344, 1896.
[2] Prichard, James Cowles. *Researches as to the Physical History of Man*. London: J. and A. Arch. 1813.

by Robert Lovell, the Quaker poet, by Hannah More, called by Garrick "Nine," as an embodiment of all the Muses, and by "Perdita" (Mary Darby).

Prichard had begun to show his interest in anthropology when he was in Edinburgh, for his thesis for the M.D. there in 1808 was entitled *De humani generis varietate*, and in his case the seed planted in his graduation thesis grew into a tree which carried leaves and bore fruit all the rest of his life. The medical thesis has its advantages and its disadvantages, but it has in some instances, as in Prichard's, focussed a young doctor's attention upon a subject of interest before his mind had become filled to overflowing with the details and routine of ordinary professional life. We can well imagine, too, that the port of Bristol, with its many men of many kinds often directed his thoughts towards the engrossing subject of the origin of the races of mankind.

The study of the comparative anatomy of human races had been begun by Blumenbach, but their comparative physiology and psychology were first entered upon by the Bristol physician. The following sentence—it is a long one—will give some idea of the thoughts expressed in detail in his works; it is from his *Researches into the Physical History of Mankind*, and it may be quoted as a purple patch or ornate passage, written, we may suppose, under the exaltation and exhilaration of the grand mental picture which was outspread before him as he thought of the greatness of his theme. "The proper study of mankind is man" Pope had sung, and, before him, Pierre Charron had written, *La vraie science et le vrai étude de l'homme c'est l'homme*. Prichard set himself to that study and helped mightily to build up that science. Here is the passage; the "person" referred to is one who has never realized the diversities of the races of mankind:

> If such a person, after surveying some brilliant ceremony or court pageant in one of the splendid cities of Europe, were suddenly carried into a hamlet in Negroland, at the hour when the sable tribes recreate themselves with dancing and barbarous music, or if he were transported to the saline plains over which bald and tawny Mongolians roam, differing but little in hue from the yellow soil of their steppes, brightened by the saffron flowers of the iris and tulip; if he were placed near the solitary dens of the Bushmen, where the lean and hungry savage crouches in silence, like a beast of prey watching with fixed eyes the birds which enter his pitfall, or the insects and reptiles which chance may bring within his grasp; if he were carried into the midst of an Australian forest, where the squalid companions of kangaroos may be seen crawling in procession, in imitation of quadrupeds—would the spectator of such phenomena imagine the different groups which he had surveyed to be the offspring of one family, and if he were led to adopt that opinion, how would he attempt to account for the striking diversities in their aspect and manner of existence?

Yet the outcome of all Prichard's work was the conclusion that "all human races are of one species and of one family."[3] Between these two termini, however—between the *terminus a quo* of the diversities of the races of men and the *terminus ad quem* of the generalization that all mankind is descended from one family—there lay many years of investigation and many pages of print. For, whilst Prichard was not exactly a voluminous writer, his books, even on ethnology alone, form a considerable row on a library shelf. A beginning was made with his Edinburgh thesis, a book of 149 pages, published in 1808; then followed, in 1813, his *Researches as to the Physical History of Man*, with 558 pages, a considerable expansion of the thesis of five years before; an *Analysis of the Egyptian Mythology* came from his pen in 1819, and he had already written for the *Philosophical Magazine* (in 1815) an article on the *Cosmogony of Moses*, as well as a paper on a geological subject (*On the Floetz Strata of England*) for T. Thomson's *Annals of Philosophy*; a second edition of the *Researches*, in two volumes, appeared in 1826, and a third, in five volumes, between 1836 and 1847; a supplement took the form of the *Eastern Origin of the Celtic Nations* (published first in 1831 and republished and edited by R. G. Latham in 1857); in it he first proved the position of Celtic languages as a branch of the Indo-European tongues; he wrote on the *Extinction of Some Varieties of the Human Race* for the meeting of the British Association in Birmingham in 1839; and in the year before his death (when he had removed from Bristol and was living in London) he gave an address before the Ethnological Society on the *Relations of Ethnology to other Branches of Knowledge*. Nor must we forget his readable *Natural History of Man*, more popular than the *Researches*, which appeared in 1843 (third edition in 1848); its brilliantly coloured plates, representing Papuans, and Tudas, Aleutians, and Mandans, and Ojibways, and Bushmen, and Kafirs, must surely be in the memory of those of us who were happy in our childhood to have access to a copy of Prichard's entertaining volume. In it he ascribed the endowment of a soul to the inferior tribes in creation, "to the creatures which he (man) has tamed to be the servile instruments of his will, or slays for his daily food." He dedicated his *Natural History* to the Chevalier Bunsen, Envoy Extraordinary and Minister Plenipotentiary of his Majesty the King of Prussia to the Court of Great Britain.

But Prichard worked hard also at his practice, which rapidly extended, until he was known far and near as a consultant whose boldness in treatment was sometimes accompanied by most gratifying results; his two hospital appointments enabled him to accumulate abundant clinical material for the study of diseases of the brain and nervous system; and his mind, specially trained in metaphysics by Dugald Stewart in Edinburgh and in mathematics and classics at Trinity College, Cambridge, and at St. John's and Trinity College, Oxford, was formulating the views on insanity and allied diseases which ultimately were set forth in his *Treatise on Diseases of the Nervous System* (1822), in his *Treatise on Insanity* (1837), and in his book on the *Different Forms of Insanity in relation to Jurisprudence* (1842). His work along these lines led to his being appointed a Commissioner in Lunacy. The value of his researches in insanity may be a little difficult to assign, but he seems to have been the first to recognize and describe "moral insanity," granting, of course, the existence of such a morbid entity. At any rate, his statements on the subject were thought-provoking enough, and led to much controversy.

All these things were still in his mind, only in embryo, as he walked into the Bristol Infirmary in the end of February or the beginning of March, 1814. But he had the mind to accomplish them, and years enough were given to him, and in the end honours, too, came to him, so that he was made a Fellow of the Royal Society, a Corresponding Member of the Institute of France, an Honorary Member of the Cambridge Philosophical Society, of the Russian Imperial Geographical Society, of the Philosophical Society and the Oriental Society of America, of the Academy of Natural Sciences at New York, and of the Royal Academy of Medicine of Paris. He was President of the Ethnological Society at the time of his death, and for one year had been President of the Provincial Medical and Surgical Association. He gave the Address on Medicine when the Association met in Oxford in 1835, and he was made an M.D. of the university there. In the midst of all his honours he retained an intense devotion to the study of the subjects which had brought his fame, and he had likewise a love of the classics, which was lifelong. Dr. J. G. Swayne tells a story of him which may be placed about the year 1834. Swayne, then a lad of about 15, had met Dr. Prichard at the house of a relative one Saturday afternoon, and the doctor drove him back to Bristol in his carriage. Their conversation was on the long Greek words in the *Clouds* of Aristophanes. The lad found that Prichard was acquainted with them all; in fact, he said somewhat ruefully (as we can imagine) when he told the incident, "He seemed to know the whole play by heart."

It may be, as Dr. Hack Tuke thought, that Dr. Prichard would have been among the greatest of men of science if he had devoted himself solely to one or other of his two interests—either to ethnology or to medical practice, and particularly to insanity; but one cannot tell, for it may be that his hours spent in anthropological investigation lightened and relieved the monotony of medical practice, and it may also be that his gratuitous services rendered to his poor patients in his own free dispensary at Bristol in the early days of his professional life kept warm and keen his sympathy with mankind in general, and excited his desire to throw some light on the far-back origin of the various races of men in particular. It is said of one of King David's brave warriors that he attained not to the first three, and it may be so with Dr. Prichard in his works

[3] Prichard, J. C.: *The Natural History of Man*, comprising inquiries into the modifying influence of physical and moral agencies on the different tribes of the human family, p. 546. London. 1848.

on anthropology and insanity; but, assuredly (to change the metaphor), we could not easily spare the stones he has built into that great pyramid of scientific knowledge which rises higher with each generation of men, and which each generation thinks is just about to touch the very skies. Let no doctor think that the practice of his profession debars him from taking an interest in any subject outside of medicine whose study is worthy the attention of a mind trained as his has necessarily been in his undergraduate days; if it have a remote bearing upon medicine, such as anthropology had for Prichard, so much the better. Burton, in his *Anatomy of Melancholy*, said he had "a desire to be *aliquis in omnibus, nullus in singulis* (somebody in everything, no authority in anything), which Plato commends . . . as fit to be imprinted in all curious wits, not be a slave of one science, or dwell altogether in one subject, as most do, but to rove abroad, *centum puer artium*, to have an oar in every man's boat"; but for most of us this desire scarcely shows itself to the point of demonstration.

HUMAN AND BOVINE TUBERCULOSIS IN CHILDREN.

Two important papers on the frequency with which tuberculosis occurs in London children and the extent to which they show infection with tubercle bacilli of the bovine type have recently been issued by the Local Government Board in a Blue Book.* In and about Edinburgh, tuberculous arthritis, ostitis, and adenitis in children are habitually due to infection with tubercle bacilli of the bovine type, as was shown by Fraser in 1912, and further by Mitchell in 1914 in a paper that will be found in the BRITISH MEDICAL JOURNAL, January 17th, p. 125. Fraser found the bovine bacillus in 41 cases, the human in 23, both together in 3; Mitchell recovered the bovine bacillus from no fewer than 65 out of his 72 patients with tuberculous glands in the neck, the human type of bacillus in only 7. But in Germany and Italy the case is quite different. Gaffky found the bovine type of bacillus in but 3 out of 78 Berlin children; Gosio found it only in 1 of 122 cases of tuberculosis in Italian children and adults. The question as to the frequency with which tuberculosis occurs in children, and the relative frequencies with which tubercle bacilli of the human and the bovine types are to be found are not of academic interest merely. They are of importance because they determine the preventive measures to keep the spread of tuberculosis in check, and because they define the direction in which such measures must advance.

The main results of the investigations published in the present report may be summarized in the following table:

Number of cases examined	223
Number free from tubercle bacilli	89
Number infected with tubercle bacilli	134
Tubercle bacilli dead	21
Tubercle bacilli living	113
Bacilli of human type	93
Bacilli of bovine type	19
Bacilli of both types	1
Number of cases without visible tuberculous lesions, but with tubercle bacilli in the glands ...	7

The material was derived from unselected children up to the age of 10 dying from all causes—disease and injury—in hospitals and other institutions, for the most part in London. The statistics do not justify any direct inference as to the extent of the incidence of tuberculous infection in the general juvenile population; 87 of the 134 children had died of tuberculosis. It is clear that tuberculous lesions, or infection without visible lesions, must be common in sick children, as tubercle bacilli were recovered from the bodies of 47 dying from other diseases or from trauma. Of the 19 cases infected with bovine bacilli alone, 11 died from tuberculosis. In both papers full descriptions of the methods of experiment are given.

It may be noted that in the 89 cases recorded as showing no evidence of infection with tubercle bacilli, no visible lesions of tuberculosis could be found in any part of the body, and the inoculation experiments with emulsions of the bronchial and mesenteric glands were negative in every instance. As for the distribution of the tuberculous lesions, and the evidence it threw on the probable portal of entry of the tubercle bacillus, the authors of the first paper make the following statements: They found evidence of tuberculosis in 94 out of the 150 children examined. In 22 cases the anatomical evidence was strongly in favour of the view that the lymphatic glands directly draining the alimentary tract were primarily infected; in 3 the bacilli were of the human type, in 12 of the bovine type, and in 7 they were apparently dead. In 52 cases the anatomical evidence was definitely in favour of primary infection through the respiratory tract; in 43 of these the bacilli were of human type, in 1 of bovine type, in 8 they appeared to be dead. In the remaining 20 cases the anatomical evidence as to the portal of entry was inconclusive; in 19 the bacilli were of the human type, in the twentieth they were apparently dead. The author of the second paper points out that, theoretically, it is possible that ingested tubercle bacilli should find their way directly, by means of the lymph or blood stream, to the lungs or bronchial glands, without producing lesions *en route*, thus simulating inhalation tuberculosis. This has been found to be true in the dog, by direct experiment; but good reasons are adduced for believing that in man direct infection of the thoracic organs by way of the alimentary tract is exceedingly infrequent.

As for the tests employed to determine the type of tubercle bacillus, it is recommended that for routine use the rabbit should be chosen. The bacilli to be tested may be given intravenously, in which case the dose should not exceed 0.01 mg., or subcutaneously, when not less than 10.0 mg. should be injected; only young and vigorous subcultures on solidified serum should be employed. If the bacilli are of the bovine type, a rapidly progressive tuberculosis fatal within six weeks is invariably produced; if they are of the human type, a slowly progressive tuberculosis not fatal in three months results, and the lesions found *post mortem* are different in extent and type.

The authors of the first paper give some interesting figures showing the impossibility of distinguishing tubercle bacilli of the human and bovine types from one another by mere microscopical examination. It is generally assumed that long and beaded forms are characteristic of the human type, and that short and uniformly stained bacilli, without admixture of the former, are of the bovine type. After the work of deciding the type of bacillus by culture and animal experiment had been completed, they examined 121 of their smear preparations with a view to determining how far the type of bacillus present could be diagnosed microscopically. In 61 smears the bacilli were of moderate length and showed no indication as to type; in 52 cases (47 human and 5 bovine) a correct inference was drawn; in 8 cases (6 human and 2 bovine) a definite inference appeared possible, but proved to be incorrect. But the two types could always be distinguished culturally, if cultures were made on carefully chosen media in sufficient number. They recommend three such media; and according to differences in the rapidity and abundance of their growth, the various strains of tubercle bacilli may be differentiated as dysgonic (feeble growers, the bovine type) or eugonic (free growers, the human type). Some excellent plates illustrating the cultural differences between the two types are given, and in both papers the literature of the subject is quoted.

THE fourteenth Medical Study Tour (Voyage d'Etudes Médicales, best known by its short title V.E.M.) to the mineral water, seaside, and climatic stations of France, will take place this year from August 30th to September 12th under the presidency of Professor Landouzy. The following are the places to be visited: Vittel, Contrexéville, Martigny, Bourbonne, Plombières, Bains-les-Bains, Luxeuil, Bussang, Gérardmer, La Schlucht, Le Honech, Nancy, Mondorf, Saint-Amand, Berck, Forges-les-Eaux, Bagnoles de-l'Orne. A detailed programme will be published in April. All communications relative to the tour should be addressed to Dr. Carron de la Carrière, 2, rue Lincoln, or to Dr. Jouaust, 4, rue Frédéric-Bastiat, Paris.

* I. The Incidence and Bacteriological Characteristics of Tuberculous Infection in Children. By Arthur Eastwood, M.D., and Fred Griffith, M.B. II. An Inquiry, based on a series of Autopsies, into the Occurrence and Distribution of Tuberculous Infection in Children, and its Relation to the Bovine and the Human Types of Tubercle Bacilli respectively. By A Stanley Griffith, M.D. Reports to the Local Government Board on Public Health and Medical Subjects. New series, No 88. London, 1914. (2s. 3d.)

A RETROSPECT OF THE GERMAN INSURANCE STRUGGLE.

THE agreement of Berlin (see BRITISH MEDICAL JOURNAL January 10th, page 96) marks the end of a stage in the strife long waged between the medical profession and the insurance societies in Germany. In order to obtain a clear impression of the real causes of this fight it is necessary to recall the fact that after a period of close on thirty years, during which many tentative expedients found a place in various amending Acts, existing regulations were supplanted by an extremely complicated piece of legislation—the new Imperial Insurance Order—which came into force on January 1st, 1914. This order not only extends compulsory insurance to upwards of 22,000,000 individuals, but also gives a very large number of persons an opportunity to take advantage of the scheme by becoming voluntarily insured. The total population of the German Empire in 1912 is estimated at 64,000,000, and it is stated that in some districts close on 95 per cent. of the inhabitants may be affected.

In the early days of insurance in Germany the medical profession stood to gain much in a pecuniary sense, since before 1883 the class which became insured obtained the greater part of its medical attendance without payment. But as time went on, and the insurance societies increased in number and in power, a change came over the scene. The doctors were ground between the upper and the nether millstone. The societies forced the individual practitioner to sign contracts very greatly to his disadvantage. The societies required the doctors to undertake to treat an increasing number of insured persons at a beggarly pittance, and refused to recognize any intermediary, such as the committee of a medical association, between the medical man and the committee of the society. In those days the Federation of Doctors' Societies was the only organization in the profession from which assistance might have come, but this body failed to rise to the situation, contenting itself by sending petitions to the various Legislatures of the several States of the German Empire. These efforts were without result, but in 1900 the Leipzig League was founded, and three years later combined with the Doctors' Federation, and, under the leadership of Dr. Hartmann, began a careful organization of the profession. How well it did its work is shown by the fact that during the autumn of 1913 only 150 members of the profession, numbering altogether in Germany 32,000, were willing to take service in defiance of the advice and decisions of the Leipzig League.

In spite of the grinding and unworthy conditions which it was attempted to impose upon it, the medical profession in Germany has never been really opposed to the principle of national insurance, partly because it recognized that the system was doing an immeasurable amount of good, and partly because the majority of the members of the Leipzig League believed that a service on healthy, prosperous, and honourable lines would be developed through the influence the League could exert on the authorities. Moreover, it must not be forgotten that the German citizen is accustomed to discipline and impressed by the advantages of being a unit in a disciplined force.

Such was the position in the summer of 1913, when the Leipzig League set to work to prepare contracts of service with the new insurance societies for 1914. The principles which the League laid down as its minimum terms were: (1) The right of the profession to combine to protect itself against lay control in medical matters and to regulate the conditions of service; (2) the introduction of free choice of doctor, whenever this was possible, and (3) the institution of arbitration courts composed of an equal number of members of either party. The method of remuneration was held to be a question of secondary importance, and it was held that the amount might be determined locally, provided that a rate consonant with the dignity of the profession was adopted. Negotiations between the representatives of the Federation of Insurance Societies on the one hand, and the Leipzig League, acting with the Doctors' Federation, on the other, proceeded slowly during the summer, and in October the Leipzig League considered it advisable to take the initiative in a conciliatory spirit. It accordingly submitted to the insurance societies a draft agreement (see BRITISH MEDICAL JOURNAL, November 1st, 1913, p. 1170), which, while embodying the three principles, contained at the same time numerous important concessions to the insurance societies. The societies refused to accept this draft agreement. The ostensible reason assigned was that some of the provisions could not be applied in certain districts. The real reason was that the societies believed that, if once the right of combination was conceded to the doctors, the power of the societies to control their medical staffs would vanish. This refusal brought matters to a deadlock. The Leipzig League did not see its way to make further concessions, and the insurance societies relied on the power of the purse. At this stage the outlook, owing to the excellent manner in which details of organization had been worked out, seemed favourable to the doctors in every district save three. The three exceptions were Berlin, Dresden, and Hamburg. An account of the struggle in Berlin was given in some detail in the BRITISH MEDICAL JOURNAL during November and December, 1913. Briefly stated, the want of adequate organization in Berlin, due no doubt to the conflicting interests which usually prevail among dwellers in large cities, rendered it clear from the start that exceptional conditions existed there. The Leipzig League was informed that it was useless to expect that any general arrangement would be applicable to Berlin. Separate negotiations then took place, and a special agreement was settled under which the doctors did not gain as much as had been hoped. Later facts came to light which seemed to prove that the failure in Berlin was due to the action of a medical man holding a prominent position both in the society of insurance doctors and in insurance circles, whose influence, it was said, had been exerted in a direction opposed to the wishes of the profession. Formal charges have been brought against this individual; the proceedings of the ethical court have not yet begun, and therefore we refrain from commenting on the allegations made against him. On October 26th a general representative meeting of the profession, held in Berlin, endorsed the decision of the Leipzig League that no service should be rendered in any district until satisfactory terms had been obtained in all. The possibility of a strike, which now seemed imminent, had already alarmed the Governments of some of the Federal States. They offered to intermediate, and in Bavaria, Würtemberg, and some other districts agreements on terms which embodied all that the Leipzig League claimed for the doctors were reached. The profession, however, in these States, bound by its undertaking to the Leipzig League, refused to ratify these agreements, pending the conclusion of a general peace for the whole empire. The Prussian Government, called upon to follow the lead of the other States, responded, late in the year, by a decree frankly hostile to the profession. The time for a settlement was then becoming very short. The Leipzig League had already issued instructions regulating the conduct of its members, if no agreement were reached by January 1st. The alternatives open to the insurance societies were either to import "outside" medical men to give medical attendance to their members, or to apply for permission to pay a sum of money in lieu of free medical treatment to the insured person when ill. The first alternative could not be applied over the whole country, because only 150 practitioners, many of whom had already earned for themselves a somewhat doubtful reputation during the Cologne and other insurance strikes, were available. In regard to the latter alternative, it was recognized that the expense would be heavy for the societies and for their individual members. With the object of preventing a national disaster, the medical faculties of the universities at the eleventh hour offered their good services to find a solution. As has been reported in a previous issue, their action has been, for the moment at least, crowned with success. What is now known as the Berlin agreement was drafted and has been accepted. It provides that the Leipzig League shall ratify all the contracts drawn up at an earlier date; that in the case of new societies, and in places in which conditions of service had not been agreed upon, the local profession and the insurance societies shall form a Contracts Committee, the majority of the medical members of which shall be doctors doing contract practice; that an official list of practitioners desirous of accepting contract practice shall be kept; and that the contracts shall be drawn up by this

committee without reference to any other organization. It provided also for setting up arbitration courts and for determining the rate of remuneration locally. In regard to the free choice of doctor or other system of service, a somewhat vague provision was inserted, according to which the existing system was not to be changed, save when good reason for the change could be adduced. It was arranged that the contracts made in accordance with this agreement were to run for ten years. The Leipzig League had to accept the distasteful provision that it would undertake to indemnify the strike breakers for the loss of employment. The contracts these gentlemen had signed were to be terminated as rapidly as possible, and the insurance societies were to be asked to contribute an extra 5 pf. per insured person annually to an indemnity fund. The number of insured persons is about 22,000,000, so that the sum involved would be 1,100,000 marks (about £55,000). It was estimated that this sum represented half the amount required to pay off the strike breakers. The Leipzig League undertook to attempt to obtain posts elsewhere for these practitioners. The League asked the insurance societies to deduct .10 pf. per insured person from the moneys payable to the doctors, and after adding the 5 pf. contribution from their own funds, to place the whole amount, which it was estimated would amount to about £165,000, into a special account. Some of the societies, however, have refused to contribute the 5 pf., and if the terms of the agreement are kept in other respects the League will be compelled to find the money which the societies were asked to pay. If the League is able to find posts for the strike breakers the amount to be paid in compensation will be proportionately reduced, but it remains to be seen how far the League will be successful in this.

In some districts new contracts have been prepared in accordance with the terms of the Berlin agreement; in others negotiations are proceeding which may or may not be fruitful. In other districts it appears to be unlikely that any settlement will be effected; the medical men in these districts anticipate difficulties, and even fear that the controversy may be renewed. It is clear that much careful diplomacy will still be required before it can be said that the Berlin agreement has led to a real peace.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the nineteenth meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. Carl Browning, Director of Clinical Pathology and Lecturer in the Glasgow University. His evidence was based on the account which recently appeared in the medical press of the work done at his laboratory.[1]

He advocated the widest possible routine application of methods of diagnosis for syphilis; it would be a wise thing, he thought, to examine the blood of every patient at every hospital, and to include the blood test as one of the items in the medical examination of school children. If this could be systematically carried out for a few years it would have an enormous effect on the reduction of disease by leading to good treatment. Good work was being done by a number of corporations, including Glasgow, who were prepared, at the public expense, to examine specimens of blood sent to them. Early detection of the disease should be followed by free treatment; he thought that in treatment lay one of the roads to success in stamping out the disease.

Dr. Browning was convinced of the great efficacy of salvarsan; it was possible with a dose of salvarsan to do what might take a course of mercury to accomplish, or what a course of mercury might fail to accomplish.

He was opposed to notification of syphilis at the present time, because he feared that it might deter people from coming for treatment; but he was inclined to agree with the suggestion of Dr. Kerr Love that some of the manifestations of congenital syphilis might with advantage be made notifiable.

[1] Dr. Browning's paper, Investigations on Syphilis as Affecting the Health of the Community, was published in the BRITISH MEDICAL JOURNAL of January 10th, p. 77.

SCIENCE NOTES.

PARTICULARLY in Belgium, France, and England, a serious attempt is at present being made to subdivide the Neolithic period in a manner similar to that which has been adopted so satisfactorily for the Palaeolithic period. The pioneer in this country is Dr. Allen Sturge, whose views are well and clearly summarized in his presidential address published in the *Proceedings of the Prehistoric Society of East Anglia*, vol. i, Part III.[1] Dr. Sturge seeks by attention to patination, striation, iron-moulding and lustre to divide the Neolithic flint implements into at least seven groups, and argues that the possibility of such discrimination is due to the influence of a succession of glaciations within the Neolithic period; the recurrences of this glaciation he fixes by an ingenious use of the Draysonian and Crollian theories at intervals of 30,000 years. Whether Dr. Sturge is correct or not—and few we imagine would go the whole way with him—he has stimulated renewed interest in the old subject of flint. It is remarkable that in any gravel it should be possible to pick out so many varieties of flint as regards patination and that we should be yet so far from possessing any scientific explanation of the variations. Among the other articles in the *Proceedings* of general interest is a defence of the "humanity" of the pre-river valley implements of the Ipswich district by Mr. Reid Moir. That the Chellean implement was separated by a wide gulf from the earliest implement made by man is quite certain; that the earlier examples of his handiwork are to be found in Western Europe is almost equally certain, so that it behoves us to discuss with care, moderation and persistency any evidence which may be brought forward bearing upon the identification of such examples. Whether Mr. Reid Moir is right or wrong in his opinions he is undoubtedly right in keeping the Ipswich "find" before the eyes of a not infrequently stiff-necked and blind public.

Bulloch and Cramer (*Proc. Roy. Soc.*, January 1st, 1914) have investigated the lipoids of transplantable tumours of rats and mice. The total lipoids were extracted by chloroform and by analyses divided into cholesterin and cholesterin esters, phosphatides, cerebrosides, and ordinary non-phosphorized fats. Comparing slowly-growing mouse carcinoma with the healthy portions of rapidly-growing tumours, they found that the total lipoid content was the same, that the cholesterin formed 1 per cent. of the total solids of the slowly-growing tumours, but existed merely as a trace in those of rapid growth, and that the phosphatides were more abundant in the latter. In neither case were cerebrosides or cholesterin esters present. The bulk of the total lipoids in both cases consisted of ordinary fats. In the necrotic part of the more rapidly-growing tumours the total lipoids were trebled and consisted mostly of ordinary fats and to a less extent of phosphatides. Different strains of mouse carcinoma showed variations in chemical composition. Thus chemical differences exist between cells derived from the same kind of tissue just as marked biological differences may exist between various mammary cancers. Whether these chemical differences are referable to differences in rate of growth can only be determined by further investigation. Very marked differences, both quantitatively and qualitatively, were found to exist in the lipoids of tumours from different tissues. Thus, in comparing the findings in rat sarcoma and mouse carcinoma, it was seen that, though the total lipoids were fairly equal, there was a complete change in the proportions of the various lipoids present. In the case of sarcoma the phosphorized fats represented 40 per cent. of the total as against a maximum of 10 per cent. in carcinoma, and cerebrosides, which are absent from carcinoma, were present in as much as 2 per cent. of the dried sarcoma tissue. The cholesterin content in the case of sarcoma was similar in amount to that found in the slowly-growing carcinoma. It will be interesting to learn if these findings are constant.

[1] *Proceedings of the Prehistoric Society of East Anglia for 1912-13.* Edited by W. G. Clark, Honorary Secretary. Vol. i, Part III. London: H. K. Lewis. 1913. (Demy 8vo, pp. 245-382. 3s. 6d. net.)

LITERARY NOTES.

MESSRS. THOMAS MURBY AND CO. (6, Bouverie Street, E.C.) will shortly publish a book, entitled *The Mind at Work*, which is described as a handbook of applied psychology. It is edited by Mr. Geoffrey Rhodes, and contains contributions by Dr. Charles Buttar, Mr. E. J. Foley, and Professor L. L. Bernard, Ph.D. The following table of contents shows the nature and scope of the work:—Editor's Introduction: I. The Anatomy of the Brain and Nervous System; by Dr. Buttar. II. The Physiology of the Brain and Nervous System; by Dr. Buttar. III. General Remarks on the Science of Psychology—Distinction from other Sciences—Terminology; by E. J. Foley. IV. Methods and Data of the Science—Experimental Work; by E. J. Foley. V. Consciousness—Sensation—Connection between the two; by E. J. Foley. VI. Modes of Consciousness—Association—Retention—Attention; by E. J. Foley. VII. Sensation — Classification — Intensity — Weber's Law—Quality; by E. J. Foley. VIII. Special Sensation—Sight; by E. J. Foley. IX. Hearing; by E. J. Foley. X. Other Sensations—Touch—Smell; by E. J. Foley. XI. Cognition—Ideation; by E. J. Foley. XII. Mechanism of the Will; by Geoffrey Rhodes. XIII. The Unity of Consciousness—Subconscious Zone: Dreams, Suggestion, Hypnotism, etc.; by Geoffrey Rhodes. XIV. Applications of Psychology to Social Problems; by Professor Bernard. Bibliography. Chief Psychological Terms.

The February number of the *Indian Medical Gazette* gives an account of the contents of the history of the Indian Medical Service, by Lieutenant-Colonel Crawford, which we recently announced was nearly ready for publication. The first chapter deals with our early connexion with India from the days when three small vessels under a charter from Queen Elizabeth sailed in 1591. The East Indian Company or Association of Merchant Adventurers received their charter from Queen Elizabeth on December 31st, 1600. The first of the company's ships sailed forthwith and to each ship were appointed "Surgeons toe." Ralph Salter of the *Red Dragon*, James Lovering of the *Hector*, Christopher Newchurch of the *Ascension*, and John Gammon of the *Susan*, were the first European surgeons of the company's service, if we except the names of those who went on the unsuccessful voyage of 1582. Lieutenant-Colonel Crawford, in telling the story of Gabriel Boughton, says the account given by most historians is largely legendary; Boughton, however, did undoubtedly obtain a *farman* in favour of the company from Shah Shuja. The early history of Madras and Bombay is related, with many interesting details of the life of that day. A chapter is devoted to Bengal and the Bay, and "the mid-day halt" of Charnock, which was the beginning of Calcutta (August 24th, 1690). Another deals with the story of William Hamilton and the famous Embassy to Delhi. Hamilton is described as "of all medical officers who have served in India the most famous, and certainly the greatest benefactor of his country." A chapter is given to John Zephaniah Howell, surgeon, Mayor of Calcutta, prisoner in the Black Hole, and for a short time Governor of Bengal. A sketch of the careers of Howell, Hamilton, and Boughton appeared in the BRITISH MEDICAL JOURNAL of May 25th, 1907. A chapter of Lieutenant-Colonel Crawford's work describes the foundation of the Indian Medical Service as a graded service or establishment by an order which took effect from January 1st, 1764. In another chapter the growth of the service is traced; twice in the eighteenth century an attempt was made to create two separate services, and twice it failed.

Turgot is said to be the author of the famous line celebrating the achievement of Benjamin Franklin when he made his experiment with the kite which demonstrated the electric nature of lightning:

> Eripuit coelo fulmen sceptrumque tyrannis.

Nogaret sent Franklin the following French translation with many pompous eulogies:

> Il ôte au ciel la foudre et le sceptre aux tyrans.

Franklin answered:

> Sir,—I have received the letter in which after overwhelming me with a torrent of compliments which caused me a painful sensation because I can never hope to deserve them, you ask my opinion on the translation of a Latin verse. I am too little of a connoisseur of the elegancies and delicacies of your excellent language to dare to sit as judge on the poetry which must be found in that verse. I will only point out to you two inaccuracies in the original verse. Notwithstanding my experiments on electricity the lightning continues to fall before our noses and our beards, and as regards the tyrant there were more than a million of us engaged in tearing the sceptre from his hands.

The correspondence is a piquant contrast between the effervescent enthusiasm of the Frenchman and the Anglo-Saxon stolidity, not unrelieved by a satiric touch, of the American.

Leprosy was looked upon with such horror in the Middle Ages that the most drastic methods of dealing with its unhappy victims were deemed justifiable. The leper was practically cut off from fellowship with his kind. The extent to which provision was made in this country for their segregation may be gathered from Sir James Simpson's well-known articles in the *Edinburgh Medical and Surgical Journal* (1846-47), reprinted in his *Archæological Essays* (Edinburgh, 1873). Perhaps the fullest account of the subject is given in *La Lèpre à travers les siècles et les contrées* by the late Zambaco Pacha (Masson, Paris, 1914). A writer in the *Progrès Médical* has founded on this work an interesting article on the way in which leprosy was dealt with in France. According to Guy de Chauliac any one under suspicion of being a leper had to have his blood tested with salt, vinegar, and the urine of a young man. If he was declared to be healthy, the priest publicly pronounced absolution in church. If the case was doubtful, the suspect had to submit to twenty-two examinations. When a person was adjudged to be a leper the civil authorities informed the parish priest and the sentence of isolation was pronounced.

> The church was hung with black; imitations of the tombs of lepers formerly expelled from society were put up; and there, before the public who were present though keeping at a distance, the leper, conducted by the rector of the leper house, escorted by his relations and friends and placed in front of the choir, heard the mass for the dead said for him. After this, stretched on a litter of ropes, he was covered with a shroud and carried to the cemetery, where a yawning grave had been dug for him. The priest threw earth on the head of the leper, after which he was taken to the leper house and admitted there in due form.

In towns where there was no large leper house the ritual was not so solemn. The leper was taken to his hut and then exhorted to live virtuously. The following written instructions were left with him:

> As long as you are ill, you will go into no house but your hut. You will not sleep out, you will not go into a mill, you will not look into a fountain or a well, and you will eat only by yourself. You will go into no dwelling, you will not go into a church. When you speak to a person you will place yourself to leeward of him. You will sound your rattle when you ask for alms. You will not wander far from your dwelling unless you are clad in your leper's blouse which will be of uncoloured coarse stuff in order that you may be recognized. You will drink at no stream, but only at your own barrel with your dish. You will not get water at other wells or fountain than your own. You will not touch the rope of a well without gloves. You will not touch anything which you are buying until it is yours. You will wear your gloves and will touch nothing with the bare hand. You will not walk outside nor sleep at night outside your dwelling without the leave of your parish priest and of the official. You will not have connexion with any other woman than your own wife. You will not touch children nor give them anything. I forbid you to eat and drink in company except with lepers.

Then the priest blessed the furniture and the utensils of the leper—barrel, funnel, dish, bedclothes, basin, pot. In front of the hut he planted a wooden cross with a box to receive the alms of the passers-by. The priest put in his own offering first, and the people followed his example. The leper henceforth was an outcast from the world. He was civilly dead; he could neither make a contract, nor inherit, nor make a will. He could only contract marriage with a woman who was willing to marry him knowing him to be what he was. Lepers had the beard and the hair of the head shaved, and carried on the shoulder a red badge, a goose's foot or a hand. Some cultivated the garden of the leper house. Others went begging for the community. They nursed each other. Those who had means took a servant, who according to the regulations had to be of such an age that there was no chance of her conceiving.

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THE SCHOOL OF TROPICAL MEDICINE OF INDIA AT CALCUTTA.

THE advantages of Calcutta as the site for a great school of tropical medicine were first emphasized in the *Englishman* in March, 1910, and in the following month by a leading article in our columns (April 23rd, 1910, p. 1010). In June of the same year the Medical Section of the Asiatic Society of Bengal suggested that suitable objects for a memorial to King Edward VII would be a sanatorium for phthisis and a school of tropical medicine in Calcutta. In July, 1910, the Government of India, on the advice of Sir Pardey Lukis, took up the matter, and suggested to the Government of Bengal that a beginning might be made by arranging that post-graduate lectures on tropical medicine, pathology, and biology should be given by three of the professors of the Calcutta Medical College, in addition to their ordinary duties. For want of laboratory accommodation this idea could not be carried out, and plans were submitted for taking up additional land adjoining the Medical College, and erecting new laboratories to accommodate the already sanctioned biological laboratory of the Medical College on the ground floor and those of the new School of Tropical Medicine above. The original designs were made for a very small site, but the question of taking up further land to provide for future extensions was raised, and eventually the Government of India decided in favour of the larger area. This necessitated the consideration of new plans about a year ago. Once more unexpected difficulties arose, as, after great efforts had resulted in orders being passed for building at once on a greatly enlarged scale, the Calcutta Improvement Trust caused nearly all the labour to be thrown away by claiming over one-third of the site for the extension and widening of a road to form the new central 100-ft. thoroughfare of Calcutta. The position was now critical, as the whole scheme was once more thrown in the melting-pot within one year of the date fixed for opening the school. After a month of negotiation, arrangements were made to construct a three-storied building, with foundations for a fourth, on the restricted site, and later to recover most of the lost area when the new road has been made by closing a narrow street between the site and the present pathological laboratory of the Medical College. In addition, a piece of land larger than that surrendered to the Trust is being acquired to the south of the original site, which will allow a special hospital for tropical diseases to be constructed as an integral part of the school. This will render it possible to carry out clinical research under the most favourable conditions for obtaining practical results.

The scheme has consequently emerged with increased strength from each crisis that occurred during its incubation stage. The third set of plans prepared by the consulting architect, Mr. H. A. Crouch, provide accommodation for some eight or more research workers, and will be worthy of the greatest city of India, as may be gathered from the illustrated description published elsewhere. A course in hygiene for a Diploma in Public Health will be instituted as soon as accommodation can be supplied.

The new laboratories, it is hoped, will be ready by the beginning of next November, when it is proposed to open the school. As the hospital will not be ready until at least a year later, beds will be provided for the professor of tropical medicine in the Medical College Hospital and in the cholera and dysentery wards, with the right of teaching on other cases of tropical disease in the general wards. A full staff of whole-time professors will be appointed by the Government of India, while it is expected that funds will be subscribed by the great industries of India to provide for several additional research workers, proposals to this effect made by Lieutenant-Colonel Leonard Rogers having been very well received by the Tea, Jute, and Mining Associations.

Unfortunately the Bengal Government cannot at present provide the necessary funds for building the small hospital for tropical diseases, but efforts are being made to raise the money by subscription. Lord Carmichael, Governor of Bengal, is heartily supporting this appeal. As the work of the new institution must materially benefit other tropical countries besides India, it will be of truly Imperial importance. There are few families in Great Britain who have not some member working in the tropics, for whose health anxiety is felt. The life-saving work already done in Calcutta during recent years on cholera, dysentery, etc., by one or two workers should suffice to convince all those directly interested and the public at large that the first school of tropical medicine situated in India is worthy of substantial financial support from the old country. Any such help will be greatly appreciated by those research workers who are devoting their lives to medical investigations in remote parts of the Empire, under very unfavourable climatic conditions, as compared with their fellow workers at home.

THE FIELD SERVICE RATION.

A MOST interesting report has been issued by the War Office on two experimental marches carried out for the purpose of deciding a scale of field service rations. The report is an example of one of the many great services the Army Medical Advisory Board is rendering to the country, and at the same time exemplifies the benefit which flows from exact scientific investigation.

The party which carried out the first march consisted of twenty men chosen from seventy-six volunteers. No special selection as regards habits or physique was made, but only men physically fit for active service were taken. In addition there were three officers of the Royal Army Medical Corps—Lieutenant-Colonel C. H. Melville, Major W. W. O. Beveridge, D.S.O., of the Advisory Board, and Captain N. Dunbar Walker in direct medical charge. Captain Body was in command of the party. Drs. John Haldane and Pembrey assisted in the experiment. Suitable transport was taken, and the party was provided with single-fly bell tents. The weather conditions (October) were as unfavourable as they could well have been. "Rain fell on almost every day, and heavily on most days; and it is no exaggeration to say that neither men nor officers slept in dry beds or put on dry underclothing at any time throughout the duration of the experiment;

nevertheless, the health of the men was excellent throughout." Here is a fact which can be forced home with great advantage against the over-coddling tendencies of the day. To confine children and keep them from exercise because of rough weather lessens their vigour and health; no risk results from exposure to such weather.

The total work done was by no means excessive, in view of the exertions that may fairly be expected on field service; the party were saved from the incessant checks so common when large bodies of troops move along a road. They were saved, too, from the dust and increase of moisture in the air, the effect of which on all the men in a long column except those at the head is important. The energy value of the ration was 3,465 calories gross; this is slightly less than the standard laid down by Atwater for moderate work, 1,000 calories less than that for hard work, and 750 calories less than that supplied to convicts in England at hard labour. The rations consisted of corned beef or fresh beef, wholemeal biscuits (considered too hard) and bread, a vegetable ration, jam, sugar, salt, and tea. Tobacco was allowed, but most preferred private supplies. Taste has changed and the service tobaccco is too strong for the palate of the modern soldier. During the last five days the average loss in weight was just over ½ lb. in the case of the men, and about ¾ lb. in the case of the four officers. It was calculated that the men were losing 62 grams of fat and 170 grams of flesh during these last five days. The conclusion reached was that a ration of 4,500 calories should be furnished and a certain elasticity allowed, up to 5,000 calories, for example, for big men. "This ration cannot be furnished without undue concentration under a weight of 3¾ lb. to 4 lb." It was suggested that the ration should be increased particularly in the matter of fat by the addition of 2 oz. of bacon and 2 oz. of cheese, and by 4 oz. of jam, 2 oz. of dried peas, beans, or lentils, or 2 oz. of oatmeal, and a coffee, milk, and sugar block. This was found to bring the ration up to 4,600 calories, and 3 lb. 10 oz. in weight. Doubling the bacon would give 5,200 calories. An issue of pickles or other condiments was also advised (1½ oz. to 2 oz.) as valuable for antiscorbutic properties.

The second march was undertaken by 20 other men under command of Lieutenant J. B. Taylor. The ration was raised to an average of 4,511 calories; the addition of bacon and cheese, more jam, and a larger bulk furnished by porridge was much appreciated. The pickles were not liked, and almost without exception the men preferred corned beef and biscuits to fresh meat and bread. At the conclusion of the experiment many were sorry it was over; the men were not hungry, and looked in good condition, while at the end of the former march the men had been hungry, and presented all the appearances of commencing starvation. The weights underwent an initial rise, more prolonged in the second than the first march; subsequently there was a fall, much less in extent in the second than in the first experiment; the final weight was rather above the starting point in the second experiment, and distinctly below it in the first.

The effect of training in this longer march was found to lessen the demand for "water available" due almost certainly to more efficient condition. As long as a man is in soft condition his water supply needs far more careful regulation than when he has got into good campaigning condition. During the first march the girth of the leg muscles was found to increase, while that of the chest diminished, and the conclusion was reached that muscles in action grow at the expense of other parts.

In consequence of these results bacon and cheese have been added to the field ration, and the calorie value raised to a level adequate for service, the Army Council having approved a proposal that the field service ration should be 3 lb. in weight and 4,500 calories. The addition of a mincing machine to each company's equipment is also being tried, and the reduction of the soldier's load by the transference of some ammunition from the man to the transport wagons has also been approved. In the report on the health of the army for 1912 we note that "arrangements have been made for the distribution to all commands of sets of diagrams to assist officers instructing their companies in sanitary subjects," and the statement that "progress in general knowledge of sanitation among all ranks continues to be made, and its effect is shown in the improved sanitary conditions now maintained in barracks." Commanding officers more and more realize their responsibility for the sanitary conditions, and co-operate with medical officers. The health of the troops has been good, and this in the main is attributed to improvements in their quarters, feeding, conditions of training, and general environment. The troops now attain a high standard of excellence in regard to their fitness for war; "this is best achieved by inspecting every man of a unit once a month, any man in doubtful state of health receiving special attention." By the enforcement of this routine the capabilities of each individual for successfully enduring the special stress of manœuvres or campaign are accurately and regularly gauged.

THE SERUM DIAGNOSIS OF TUBERCULOSIS.

THE high percentage of reactions in the human subject to the test inoculation of tuberculins, when the individual is to all intents and purposes in good health, militates against its worth as a means of diagnosing active tuberculosis, though it by no means follows that it may not be a true indication of the presence of some dormant or healed tuberculous lesion. It was said that 100 per cent. of cases examined at the Morgue in Paris revealed evidence of old lesions. No statistics are available for this country, but it would probably not be an overstatement to say that in a quarter of all *post-mortem* examinations traces of former tuberculosis are found, and it has been shown that in healed lesions, even though densely fibrotic or even calcareous, the bacilli still exist in a condition capable of setting up disease. Thus the process of healing may often be an imprisonment and not an annihilation of the microbes. It is therefore not difficult to understand the prevalence of reactors to tuberculin amongst the healthy. This is of more or less academic importance, but in practice we have to deal with active manifestations, and the diagnosis is not always easy. All the tuberculin reactions suffer from being much too sensitive. What is desired is a means whereby active tubercle can be detected. The tuberculo-opsonic index, provided the range of error of technique is allowed for, has proved of considerable value, but several observations have to be made before a trustworthy opinion can be given on any case. In this instance, the opsonic index being theoretically a measure of the response of the body to an infection, the test should give indications of active disease or its absence.

The work that has been done hitherto on the lines of the complement-deviation method of Bordet and Gengou has been very unsatisfactory in its results in tuberculosis, but the recent observations of Besredka and his collaborators at the Pasteur Institute promise to afford a more reliable method of diagnosis. Besredka, by the use of a special culture medium —egg broth—which contains neither peptone nor glycerine, claims to be able to grow the tubercle bacillus just as easily and quickly as an ordinary streptococcus. Such a medium, after three weeks of growth of the bacillus, heated and deprived of its organisms, constitutes the crude tuberculin which he employs in his complement-deviation tests. The tuberculin contains only negligible traces of substances capable of influencing haemolysis, and is thus suitable for the method employed. The delicacy of the reaction was established experimentally on rabbits and guinea-pigs. Fifty guinea-pigs were inoculated subcutaneously with a centimilligram of tubercle bacilli, and the blood was examined for the presence of immune substances daily. The reaction was negative on the first day, doubtful on the two succeeding days, and positive from the fourth day onwards. On examination of the bodies of the animals it was found that the reaction was positive when the lesion was scarcely, if at all, visible to the naked eye. For a more exact study of the course of the disease and a more accurate account of the reaction rabbits were chosen, because blood could be removed from them several times without sacrificing them, and, further, because the rabbit reacts differently to the tubercle virus according as it is from human or bovine sources. Both kinds of bacilli were injected intravenously, subcutaneously, intraperitoneally, or intradurally. It is of interest to note that whichever virus was injected the reaction body produced in the serum was apparently indifferent when tested with either tuberculin. When either the human or bovine bacilli were injected intravenously the serum did not show any antibody for twenty days; for the next twenty days there was more or less fixation of complement, but the further course of the inquiry was arrested by the death of the animals owing to the rapid progress of the disease. In the case of intraperitoneal inoculation the reactions were different according as the organism used was human or bovine in origin. In the former case the serum reaction was positive from the sixteenth day, changing to negative about the seventieth day, and again becoming positive at the 135th day, whilst the autopsy showed very discrete splenic nodules; in the latter case there was at no time a positive reaction, the animal dying in forty-one days with large splenic lesions. In subcutaneous injection the differences were more marked; with the bovine virus there was never any trace of antibodies in the serum, and the animal died with advanced lesions; with the human virus the serum reaction was positive from the sixteenth day, negative from the seventieth, and positive again from the hundredth day, and the necropsy a month afterwards showed scarcely perceptible lesions. Thus, there would seem to be a close parallelism between the susceptibility of the tuberculous rabbit and the content of antibody in the blood. Intradural injection was followed by negative reaction of the serum, save for a short time when it was feeble. In this case the strength of the reaction corresponds with the resistance of the animal; the more intense and lasting the reaction the better the animal resists infection. Almost non-existent in the case of inoculation of the bovine virus, it is, on the other hand, very marked in the case of the human virus. These findings have an importance in view of the results of the reaction when applied to the detection of tuberculosis in man.

Whether or not the reaction is positive in all stages of pulmonary tuberculosis, whether it exists in other tuberculous manifestations, its constancy in the same individual, its possible variations with the general condition, and the effects of intercurrent illnesses are points that must be established before reliance can be placed upon it. Most of these questions are answered in the various communications that have been made on the subject.

Besredka and Manoukhine reported the results of the examination of the serum in 900 persons; in the case of 750 of them the serum was being examined at the Pasteur Institute by the Wassermann reaction. The result of the tuberculosis reaction was that 69 (9.2 per cent.) were positive, 16 (2.1 per cent.) were partial, and 665 (88.7 per cent.) were negative. The majority of those reacting positively or partially showed lesions which were actually or suspiciously tuberculous, but it has to be borne in mind that serums which fix the syphilitic antigen strongly would show the same tendency towards the tuberculous antigen, seeing that it contains similar lipoid constituents. Of those, 88.7 per cent., that reacted negatively, a few on clinical examination were found to have doubtful signs of old tuberculous lesions. The serum of 43 cases of which the clinical history was previously known gave negative reactions. Further, 107 cases from a hospital for tuberculosis gave positive reactions whilst the disease was in the first stage, partial reactions in more advanced stages, and quite negative reactions in cases approaching a fatal termination.

In a subsequent communication Besredka and Jupille state their general conclusions founded on the examination of 570 cases. A certain number of normal cases showed a slight fixative power apparently corresponding with the results of the cutaneous reaction in healthy subjects. Serums which are strongly positive to the Wassermann reaction are positive to the tuberculosis reaction, and it would therefore be necessary to perform the two reactions together in testing all serums, and if the two were positive no definite opinion could be given. But in absolutely healthy subjects the reaction was frankly negative. It was constant in almost all the forms of the disease. In the third stage of phthisis with cavities, cachexia, and fever, the reaction was partial or absent. In glandular and meningeal tuberculosis the reaction was usually negative. In a number of suspected cases with doubtful or negative clinical signs a positive reaction was obtained, and in some of these after death it was possible to demonstrate small but unmistakable lesions.

Kuss, Leredde, and Rubenstein, who give useful details regarding the technique of the reaction, examined the serum of 160 individuals, 57 of whom were sanatorium patients. They found that 89 per cent. of the patients with well-marked pulmonary tuberculosis gave a positive reaction; that the non-tuberculous subjects, excluding those who had a positive Wassermann reaction, were negative to the tuberculosis test, and that in afebrile non-progressive phthisis two-thirds of the cases were positive.

Finally, Inmar tested the reaction with the serum of patients at the Brompton Hospital. In a preliminary series of tests on 52 patients with tubercle bacilli in the sputum he found that all but two gave positive reactions. In subsequent examinations he adopted quantitative methods. Of 100 cases of

undisputed pulmonary tuberculosis 95 gave a positive reaction, and of 100 non-tuberculous cases 76 were quite negative. In 50 suspects with no tubercle bacilli in the sputum 20 were negative. His conclusions are that a negative reaction indicates either the absence of a tuberculous lesion or the arrest of a previously active lesion, and that a positive reaction, especially with a serum diluted 1:32, indicates active tuberculosis.

The general opinion of the various workers who have tried Besredka's method is that it is of great clinical value both in diagnosis and prognosis. The reaction is very sensitive and corresponds to the degree of evolution of the disease. In healing lesions it becomes negative, probably owing to the fact that the bacilli are being shut in and prevented from pouring their toxin into the circulation; in cases that are progressing rapidly to a fatal issue the response of the body by the production of antibodies is failing and the reaction becomes negative.

APPOINTMENT BY APPROVED SOCIETIES OF REFEREES FOR INSURANCE ACT PURPOSES.

MANY representations are being made to the central office of the Association as to attempts, apparently only too often successful, by approved societies to secure medical referees for Insurance Act purposes at what cannot but be regarded, in view of the responsibility of the work, as totally inadequate fees. The policy of the Association, as defined at the Special Representative Meeting in December last, in regard to official referees under the Insurance Act is that these officers should be men of such standing in the profession that their opinions would be received with respect by other practitioners; that they should be whole-time officers, appointed by the Commissioners, and only removable by them; and that they should have a salary of at least £750 per annum, with a prospect of pension. The object aimed at is that these officers should be absolutely independent of all the local parties concerned, and, by reason of their position of independence and their assured professional status, be able to render really effective service to the insured persons, the approved societies, and the medical profession. There is no doubt that in the immediate future the question of official referees must receive the serious attention of the Commissioners, but in the meantime many of the approved societies are appointing part or whole time officers on terms and conditions which cannot be expected to lead to satisfactory results. As to such part-time officers the Representative Meeting in December expressed the opinion that they ought to receive a minimum fee of 10s. 6d. for each case. Several Divisions have followed up the resolution of the Representative Meeting by passing a similar resolution binding their own members not to accept a lower fee, but other Divisions seem to have taken no steps in the matter. This absence of local action has led to regrettable anomalies. In many areas practitioners of good standing, who have been approached by the societies with offers of 5s. or 7s. 6d. per case, have indignantly refused such appointments, and it is obvious that the system, or want of system, of the societies as regards these appointments, has not only led to irritation among insured persons and dissatisfaction in the medical profession, but cannot be expected to have the desired effect of reducing claims on sickness benefit. Pending action by the Commissioners in appointing referees with a recognized status, the situation would be probably best dealt with by each Division passing a resolution on the lines of that of the Special Representative Meeting, stating the minimum terms on which its members should accept part-time appointments as referees. Unless this is done we shall continue to see practitioners accepting fees in one area which are rejected in neighbouring areas, though the work is the same in each case and requires high qualifications of judgement and experience in those who can hope successfully to undertake it.

ELECTION OF LOCAL MEDICAL COMMITTEE FOR LONDON.

THE election of the statutory Local Medical Committee for the County of London is being conducted by the Metropolitan Counties Branch of the British Medical Association. After much consideration and discussion a scheme which appears to meet with the approval of most sections of the medical community has been arranged. The particulars of this scheme are now in the post and will be received by every medical man in London. Nominations are required to represent the several interests of panel men, non-panel men, medical staffs of hospitals, medical officers of health, Poor Law doctors and medical women. Nominations may be made by any registered medical practitioner in London; the candidate need not necessarily reside in London, but it is necessary to specify for what borough or interest he is put forward as a candidate. All practitioners in the area are strongly urged to vote in this election. The clause providing for the setting up of Local Medical Committees was introduced into the principal Act at the instance of the British Medical Association as a safeguard to the general interests of the profession; failure to take advantage of this provision by abstention from voting will seriously diminish the weight of the influence which may and ought to be exercised by this Committee.

WELSH UNIVERSITY MEDICAL SCHOOL.

IN connexion with the deputation which recently waited on the Chancellor of the Exchequer in support of the application for a special Treasury grant to assist in the establishment and maintenance of a complete medical school in Cardiff, we understand that a small committee has been appointed to advise the Treasury as to the amount of any special grant which might be made, and the conditions under which it might be made. The committee will also, we understand, take into consideration the plans for the new buildings which have been prepared in response to a generous offer of a private donor to provide a sum of £90,000 to cover the provision of the necessary buildings. The committee which has been appointed by the Board of Education consists of Sir William McCormick, Secretary to the Carnegie Trust for the Universities of Scotland; Sir George Newman, chief medical officer to the Board of Education; and Dr. Addison, M.P.; with a representative of the Treasury, and Mr. A. L. Hetherington as Secretary.

A NAVAL SURGEON AT CAMPERDOWN.

IN the January number of the *Liverpool Medico-Chirurgical Journal* Mr. R. W. Murray tells the story of the famous sea fight off Camperdown on October 11th, 1797, and of the part played therein by Robert Young, surgeon of the *Ardent*, one of the British ships engaged. During the latter part of the eighteenth century the medical service of the navy seems to have been recruited chiefly from Wales. French, Dutch, and Russian doctors also seem to have been given warrants, probably, Mr. Murray thinks, after the ships in which they were serving had been captured. Even with these reinforcements the service was inadequate in point of numbers and, generally speaking, poor in quality. Whyte of the *Atlas* in 1800 complains of the professional incompetence and want of general education of surgeons' assistants generally. Their conduct, too, left much to be desired. The service was unpopular. The surgeon worked in the cockpit, which, being below the waterline, was artificially lighted by candles in horn lanterns. Readers of *Roderick Random* will remember Smollett's description of the place

where naval surgeons had to do their work in those days and of the conditions in which that work had to be done. In such a place and under such conditions Robert Young had to work in the *Ardent* in 1797. He had no mate to help him, and after the battle, which began about 1 p.m., he was busy operating and dressing till nearly 4 in the morning. "So great," he says, "was my fatigue that I began several amputations under a dread of sinking before I should have secured the blood vessels. Ninety were brought down during the action; the whole cockpit, deck, cabins, wing berths, and part of cable tier, together with my platform and preparations for dressing, were covered with them." After some remarks on the slight amount of bleeding from arteries after gunshot or splinter wounds, he goes on: "Melancholy cries for assistance were addressed to me from every side, by wounded and dying, and piteous moans and bewailings from pain and despair. In the midst of the agonizing scenes I was enabled to preserve myself firm and collected, and, embracing in my mind the whole of the situation, to direct my attentions where the greatest and most essential services could be performed. Some with wounds, bad indeed, and painful, but slight in comparison with the dreadful condition of others, were most vociferous for my assistance. These I was obliged to reprimand with severity, as their noise disturbed the last moments of the dying. I cheered and commended the patient fortitude of others, and sometimes extorted a smile of satisfaction from the mangled sufferers, and succeeded to throw momentary gleams of cheerfulness amidst so many horrors. The man whose leg I first amputated, Rich Traverse, had not uttered a groan or complaint from the time he was brought down, and several, exulting in the news of the victory, declared they regretted not the loss of their limbs." Young's narrative concludes: "After the action ceased, fifteen or sixteen dead bodies were removed before it was possible to get a platform cleared and come at the materials for operating and dressing—those I had prepared being covered over with the bodies and blood and the store-room door blocked up. I have the satisfaction to say that of those who survived to undergo amputation or be dressed, all were found next morning in the gunroom, where they were placed, in as comfortable a state as possible, and on the third day were conveyed to shore in a keel in good spirits, cheering the ships at going away, smoking their pipes and jesting as they sailed along, answering the cheers of the populace who received them on Yarmouth Quay." We may justly feel a pride in the naval surgeon who worked so strenuously to relieve the sufferings of these brave men. Duncan, the victorious admiral, was rewarded with the title of Viscount and a pension of £2,000; the surgeon's recompense was the feeling that he had done his duty.

A CHALLENGE FROM THE PROFESSION.

AT the annual meeting of the Middlesex Hospital last week Prince Alexander of Teck, in moving the adoption of the reports and accounts, said that the donor of the gift of £10,000 made a year ago, and subsequently increased to £15,000, for the purpose of building an institute of pathology, was Sir John Bland-Sutton. In making the announcement, Prince Alexander said that the public did not adequately appreciate what the large hospitals did for them; the relief of suffering was only one of their functions, another was the education of successive generations of medical men. The effect of the establishment of the institute rendered possible by Sir John Bland-Sutton's generosity would facilitate diagnosis, tend to perfect treatment, and in both ways add considerably to the efficiency of the hospital as a centre of treatment and teaching. In the letter sanctioning the mention of his name, Sir John Bland-Sutton said that he had preferred to remain anonymous for a time, inasmuch as he would have to take part in the organization of the institute, and he did not desire to exercise any undue influence. As his colleagues had now agreed on the chief points in the organization, there was no longer any need for anonymity. He added that the maintenance of the institute would entail considerable annual expenditure, and concluded by expressing the hope that some benevolent friend of the hospital would be generous enough to endow the directorship. No more effective way of impressing upon the public the paramount importance of the creation of such institutes in connexion with all large teaching hospitals could have been found. Such a challenge from a member of the profession, who began his career by doing much hard and comparatively thankless work, appreciated only by his own profession—and only by the most farseeing of them—will, we hope, speedily be taken up by members of the public. A good many years ago, when Sir John Bland-Sutton was a young man and was bringing to the Pathological Society of London one specimen after another of disease in animals—many of them derived from the prosector's room of the Zoological Society—Sir James Paget, who was then president, said, with that humorous sidelong glance which those who knew him will remember, that he could almost hope that the energy shown in this stimulating and suggestive line of investigation might not be diverted into other and more lucrative channels. If Sir James Paget had lived he might have been reconciled to the diversion by the purpose to which Sir John Bland-Sutton has devoted some of his savings.

A HERCULES OF HYGIENE.

DR. WILLIAM CRAWFORD GORGAS, now Surgeon-General of the United States Army, may fitly be called a Hercules of modern hygiene, for he has cleansed places compared with which the stables of Augeas were sweet and wholesome. No man of the present day has done more to impress on the public mind the value to nations or to individuals of scientifically directed hygiene. Havana, which had for centuries been a stronghold of yellow fever, was cleared of the disease by Dr. Gorgas and his colleagues in nine months. But his greatest labour has been the cleansing of Panama of the diseases—notably yellow fever, malaria, and dysentery—which defeated the attempt made by the French to make a canal through the Isthmus. The workers died like flies, and after a struggle which lasted twenty-three years the French retired baffled from the plague-smitten zone. When in 1904 the United States undertook to complete the work, it was recognized that success or failure was largely a matter of sanitation. The problem of the canal was in fact a health problem. Fortunately, after the usual bureaucratic difficulties had been overcome, Dr. Gorgas was given full sanitary control of the Panama zone. It was, as Sir William Osler said in an address delivered at the London School of Tropical Medicine on October 26th, 1909, "a colossal task in itself to undertake the cleaning of the city of Panama, which had been for centuries a pest-house, and the mortality of which, even after the American occupation, reached one month as high as 71 per 1,000 living. There have been a great many brilliant illustrations of the practical application of science in preserving the health of a community and in saving life, but it is safe to say, considering the circumstances, the past history, and the extraordinary difficulties to be overcome, the work accomplished by the Isthmian Canal Commission is unique. 1905 largely dealt with organization; yellow fever was got rid of, and at the end of the year the total mortality among the whites had fallen to 8 per 1,000, but among the blacks it was still high—44. For three years, with a progressively increasing staff, which had risen to above 40,000, of whom more than 12,000 were white, the death-rate progressively fell. Of the six important tropical diseases, plague, which reached the Isthmus one year, was quickly held in check. Yellow fever, the most dreaded of them all, has not been present for three years. Beri-beri,

which in 1906 caused 68 deaths, in 1908 caused only 38. The hook-worm disease, ankylostomiasis, has steadily decreased. From the very outset malaria has been taken as the measure of sanitary efficiency. Throughout the French occupation it was the chief enemy to be considered, not only because of its fatality, but on account of the prolonged incapacity following infection. . . . But it is when the general figures are taken that we see the extraordinary reduction that has taken place. Out of every 1,000 engaged in 1908, only a third of the number died that died in 1906, and half the number that died in 1907. The death-rate among white males has fallen to 3.84 per 1,000. The rate among the 2,674 American women and children connected with the Commission was only 3.72 per 1,000. But by far the most gratifying reduction is among the blacks, the rate of which had fallen to the surprisingly low figure in 1908 of 12.76 per 1,000; in 1906 it was 47 per 1,000. A remarkable result is that in 1908 the combined tropical diseases—malaria, dysentery, and beri-beri—killed fewer than the two great killing diseases of the temperate zone, pneumonia and tuberculosis—127 in one group and 137 in the other. The whole story is expressed in two words, 'effective organization,' and the special value of this experiment in sanitation is that it has been made, and made successfully, in one of the great plague spots of the world." Surgeon-General Gorgas has been honoured in his own country, and it remains for us to show how fully we appreciate the greatness of his achievement. He has recently been fulfilling a sanitary mission in South Africa, and proposes to visit our shores on his way home. It was announced in the JOURNAL of February 28th that he and his two companions, Dr. Darling and Major Noble, are to be entertained at a complimentary dinner on March 23rd. The chair will be taken by Sir Thomas Barlow, who will be supported by Sir Rickman Godlee, Sir Francis Champneys, Sir David Ferrier, Sir Havelock Charles, Sir William Osler, Sir Clifford Allbutt, and the Directors of the Medical Services of the Royal Navy and the Army. The Colonial Secretary, Mr. Lewis Harcourt, and Viscount Bryce have accepted invitations to be present, and it is hoped that the attendance will, in point of numbers as well as distinction, be worthy of the occasion. The dinner will take place at the Savoy Hotel.

NATIONAL EDUCATION.

MONEY to an immense sum is spent every year in this country on education, but it is an outlay on which the average citizen has fewer definitely formulated ideas than on any other. Education is to him somewhat of a fetish; he is afraid to do without it yet he does not wholly believe in it, so he spends largely but grudgingly, spoiling the gift in the giving. National education has in this country been marred as a modern State organization. In earlier days, the days of foundations and grammar schools, it had a genuinely natural growth, and was part and parcel of the national life and feeling. But evil days followed, when the youth of the nation were no more than potential "hands," to be crushed into the shape of workshop and factory before the gristle of its bones had taken on the stiffening of maturity. A national scheme of education born into the lap of such days must needs bear the marks of its nursing. Unwelcomed by the captains of industry, denied the guidance of experience, it flourished on the enthusiasm of the educationalist. Small wonder, then, that it early showed a bias towards theory as against practice. Add to this the troubles of pastors and masters intent to exercise lordship and rule over the freedom of the infant limbs, and contest its heritage at every step, and there is this herculean infant of some 50 years, giant-headed, wry-necked, crooked-limbed, and with a squint that even the warmest-hearted foster-mother cannot hide! Mr. Whitehouse, M.P., has written a book[1] which is an argument for, and a scheme of, reform.—a plan for balancing the head, shaping the bent limbs, and restoring a perspective in vision. It is set out shortly, simply, and fairly. The ninety pages of its print can be read in an evening; they will bear re-reading on more than one evening. The subject matter is strictly topical. It would appear that the Government intends at no distant date to remodel or in some way rearrange the general educational scheme of the country, so that the book is a timely aid to those who are interested. Still more is the study of it a necessity to those who profess they are not interested: it will lighten their darkness, to the end that their taxes will be paid with a greater satisfaction than now, whilst to the medical man the subject and the book should especially appeal. He owes much to education. He has been raised from the scullion to a councillor of the nation by reason of sound thought and sound education, and he owes it to the nation that he should return in his measure that which he has received. One point in Mr. Whitehouse's argument should be made much of—the necessity for raising the status of the teacher. Personality tells in every sphere, but in none more certainly than in the schools.

THE SERUM REACTION IN PREGNANCY.

OUR Berlin correspondent writes: Professor Abderhalden has not long delayed his reply to the vigorous criticisms[2] levelled at his pregnancy reaction (by dialysis) by the Berlin bacteriologist, Professor Michaelis. He has published a letter in the *Deut. med. Woch.*, in which he pointed out that Professor Michaelis had ignored the fact that it was originally the optical method that had led to the discovery of proteolytic ferments in the serum of pregnant women; that the optical method could be relied on as free from all sources of error and had never failed him yet, and that when the dialytic and the optical results were compared a due correspondence had always been forthcoming. Inasmuch as the optical method entailed great expense on apparatus, he had hitherto utilized mainly the dialytic procedure, but he maintained that Professor Michaelis should have worked out controls by the optical method before he took it upon himself to publish a fundamental criticism of the dialytic results. The results of Michaelis and those of his colleague, Dr. v. Lagermarck, are, Professor Abderhalden points out, very much at variance with those of numerous investigators at home and abroad, and were, moreover, based on too small a foundation of facts. Abderhalden concludes his reply with the statement that none of the university clinics had returned such poor reports on his method as that of Professor Michaelis, and that the percentage of erroneous diagnoses in about 1,000 cases examined varied, but had not anywhere exceeded 10 per cent.

A BLAZING INDISCRETION.

LONDON has lately had an opportunity of exercising that faculty of cynical humour which is stated to be one of its characteristics. It is a tolerant place, and is inclined to attribute most errors of judgement to simple blundering and not to innate wickedness. An eruption of large circulars printed in black and red has recently been witnessed announcing the advent of a *Family Encyclopaedia of Medicine*, and the reader was amazed to find on the inner pages of this circular a long list of names of consultants and specialists, beginning with baronets and knights and ending with others who have not yet attained to such dignities. Amazement began to give place to

[1] *A National System of Education.* By J. H. Whitehouse, M.P. Cambridge: The University Press. 1913. (Med. 8vo, pp. 92; 2s. 6d. net.)

[2] BRITISH MEDICAL JOURNAL, February 28th, p. 508.

amusement when at the foot of the inner page it was read that "Those who consult the *Family Encyclopaedia of Medicine* will do so in the knowledge that the treatment given for every disease is the treatment approved by a specialist who has made it his life study—a specialist who can command a fee of two guineas for a brief consultation, or £100 or more for an operation." We have received from Dr. H. H. Riddle, the editor of the *Encyclopaedia*, a letter, published in another column, in which he expresses his regret that during his absence from London owing to illness the publishers of the *Encyclopaedia* advertised the names of the distinguished persons referred to in a manner "most contrary to the ethics of the profession," and that neither he nor those, whose assistance he desired to acknowledge in the preface, were aware that their names were to be advertised in this fashion. He adds that he has taken steps to assure himself that in the future when advertising the *Encyclopaedia* the publishers "will have due regard to the ethics of the medical profession," and in reply to an inquiry the vice-chairman of the Amalgamated Press Limited has courteously informed us that further leaflets and advertisements of the kind will not in future be issued, but that a few advertisements are appearing this week in the weekly papers which went to press some time ago. He adds that the Amalgamated Press has not the least wish to cause annoyance to members of the medical profession. We have received a number of letters, some of them critical, from members of the profession who have received copies of the circular through newsagents, and others explanatory, from those whose names appear in the circular, and on the early pages of the first number of the *Encyclopaedia*. Letters of protest from certain of them have also appeared in the *Daily Mail*. There seems to have been some difference of opinion between the editor of the *Encyclopaedia* and his co-operators as to the degree of responsibility which the latter accepted, and both sides would appear now to regret the undue publicity which has been given to the names in the circular and in certain advertisements and articles in the daily papers. It seems quite clear that someone has blundered, and possibly some further explanation defining the attitude of the co operators may presently be forthcoming. We certainly think that such an explanation is due, and we are therefore glad to be informed that a meeting of the members of the profession whose names have been mentioned as jointly responsible for the *Family Encyclopaedia of Medicine* has been called to consider what concerted measures can be taken in the interests both of professional ethics and of public policy.

AFTER-CARE ASSOCIATION.

THE annual meeting of the After-Care Association was held last week at the Royal College of Physicians of London under the presidency of Sir Thomas Barlow. The report of the council presented by the secretary, Mr. Thornhill Roxby, showed a year of considerable activity; 377 applications for assistance had been received, and some cases discharged on trial from asylums as well as those reported recovered had been helped to make a fresh start in the workaday world. The income received during the year amounted to £2,410 1s. 7d., but of this sum over £1,166 consisted of legacies, which will be invested. Subscriptions and donations were lower by £135 than in the previous year, so that charitable contributions are still urgently needed. Sir Thomas Barlow referred to the good work of the association in helping to set on their feet again those unfortunates whose mental affliction had for a time rendered them unfit to pursue their callings. There were other societies which strove to bridge over for the poor the interval between recovery from physical illness and return to wage-earning, but this association was alone in similarly succouring those who had been laid aside by mental disease. Two points in the work of the After-Care Association seemed to him to deserve special commendation—its economy of administration and its unstinted personal service. Sir George Savage, in moving the adoption of the report, furnished details of cases in which much benefit had been effected, and referred to the absolute necessity of kindly aid during the period of consolidation of convalescence to prevent relapse and promote permanence of recovery. He trusted that his own work as treasurer might become heavier in the interests of the poor clients of the association. Dr. F. R. P. Taylor seconded; and Mr. Trevor (Commissioner in Lunacy), in supporting the resolution, spoke of the sympathy with the work of the association felt by himself and his colleagues at the Board of Control, and expressed his approval of the extension of the society's operations so as to include cases discharged on probation; local branches of the association might very usefully help in the non-official oversight of such cases. The report was unanimously adopted, and after speeches by Drs. Coupland, Percy Smith, H. Rayner, Stansfield, the Rev. W. H. Stephens and others, the proceedings concluded with tea, hospitably provided at the college.

DOCTORS IN THE LAY PRESS.

WE learn from the *Medical Record* of February 14th that at a recent meeting of the Medical Society of the County of New York a report of an investigation made by the *Comitia minora* at the request of the Board of Censors was presented. In it attention was called to "the rapidly increasing number of publications in the lay press concerning the professional activities of many prominent members of the society," which were described as "self-laudation rather than public health education." While admitting the right of the public to receive information on the progress of medical science, the report stated that what was printed "should be the substantial truth, and not the possibly immature ideas of an enthusiast, who may awaken false hopes, and by the unsuccessful outcome of his efforts lower the confidence of the public in the profession." After the reading of the report the society unanimously adopted resolutions requesting that its members, when giving information to the lay press, should do so in an impersonal manner, and in strict conformity with the well-known principles of medical ethics.

ROYAL MEDICAL BENEVOLENT FUND GUILD.

VISCOUNTESS BRYCE presided over the annual general meeting of the Royal Medical Benevolent Fund Guild, which was held at University College Hospital Medical School, Gower Street, on Tuesday, March 3rd. The fifth annual report, which was read by Sir John Tweedy, president of the fund, stated that the formation of new branches, the increase in the number of subscribers, and the keenness with which the work was carried on were highly satisfactory. The financial report was read by Mrs. Scharlieb, the honorary treasurer, who announced that a balance of £351 7s. 9d. remained to the credit of the guild at the close of the last financial year, whilst the balances of the provincial branches amounted to £373 1s. 7d. The guild had also received a gift of money, which would bring in an annuity of £47 1s. 8d. for the next ten years. Mrs. Scharlieb added that though the guild was little known and its work was carried on very quietly, it had already accomplished a good deal in the direction of helping the widows and orphans of medical men. What was now needed was a larger number of helpers and also the formation of new branches, preferably at the popular seaside places, where the presence of a constant stream of well-to-do invalids and convalescents would ensure a large number of subscribers. Lady Bryce, who moved the adoption of the report and balance sheet, remarked that one of the

most striking points to be observed in connexion with the guild was the great and increasing need for personal service. At the present moment there was great difficulty in avoiding over-organization in charities. A certain amount of organization was, of course, inevitable, but when benevolence was put on a thoroughly business-like footing one was apt to miss the personal service. The Royal Medical Benevolent Fund Guild therefore afforded an almost unique opportunity for those who wished to practise the truest form of charity and by their sympathy and personal service bring brightness into the lives of others. The motion was seconded by Sir Rickman Godlee and carried unanimously.

THE ASYLUM MEDICAL SERVICE.

Since the Visiting Committee of the Durham County Council issued, last October, to corresponding authorities in other counties a circular letter inquiring whether they approved the proposal to hold a conference on the present position of the asylum medical service and to formulate a scheme for its improvement the matter has not been allowed to sleep. Replies were received from thirty-seven counties, and in nineteen cases were definitely in favour of the proposal. It will be noted that the Durham County Committee did not approach county borough committees and the committees of important registered hospitals for the insane, but it is understood that some of these bodies also have expressed their approval of the proposed conference, and the clerk of the Visiting Committee of Durham County Asylum (19, Elvet Bridge, Durham) will be glad to receive notifications to this effect. The Durham Committee has sent a further circular letter to the bodies previously addressed asking them to confirm their adherence to the proposal for a conference, and to express an opinion on a suggestion which has been made, to the effect that it would be desirable to extend the scope of the conference so as to include for discussion other important questions relating to lunacy administration in addition to the matter of the present position of the asylum medical service. The first annual general meeting of the Association of Assistant Medical Officers of Asylums in England and Wales will be held at the Westminster Palace Hotel, London, S.W., on Saturday, March 14th, at 3.15 p.m.

INCIPIENT INSANITY.

The Council of the Medico-Psychological Association of Great Britain and Ireland, at its meeting on February 19th, accepted the invitation of the Medico-Legal Society to confer with a committee of that society as to the steps which should be taken to carry out the opinion expressed by the society, as the result of a discussion concluded last January, that the early treatment of incipient insanity without certification would be advantageous. The Council of the Medico-Psychological Association appointed six of its members as a committee for this purpose, and expressed a strong wish to act in conjunction with the British Medical Association in this matter, as it has acted with the Association on several previous occasions in seeking amendment of the Lunacy Acts.

THE INCREASED SHORTAGE OF MEDICAL OFFICERS FOR THE NAVY.

Medical officers of the Royal Navy who desire to make representations to the Association with regard to the circumstances which are producing the present shortage of medical officers are requested to address their communications to the Medical Secretary, British Medical Association, 429, Strand, London, W.C., who will prepare a statement of the suggestions they contain for the consideration of the Council of the British Medical Association.

The committee of the Lister Memorial Fund has commissioned Sir Thomas Brock, R.A., to execute a medallion portrait of the late Lord Lister, to be placed in Westminster Abbey. This will form part of the International Memorial to commemorate the priceless services of Lord Lister to the cause of science and the alleviation of human suffering. Further subscriptions are required to enable the committee to carry out adequately the proposed scheme for the establishment of an International Lister Memorial Fund for the advancement of surgery. Among the subscriptions recently received are the following: American Surgical Association, £135; received through Dr. W. W. Keen of Philadelphia, £35 (second donation); Committee of Surgeons in Holland, £125; Faculty of Medicine, University of Copenhagen, £109; members of the medical profession in Victoria (Australia), £91; medical and surgical societies in Japan, £31; Union of Swedish Hospital Surgeons, £20; Newcastle-on-Tyne Committee and members of the Clinical Society, £113; City of Belfast Committee, £54. Donations may be sent to the honorary treasurers of the fund (Lord Rothschild and Sir Watson Cheyne), at the Royal Society, Burlington House, W.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

University of London.—Sir Philip Magnus asked whether the Government intended to introduce this session a bill for the reorganization of the University of London, in general accordance with the recommendations of the Royal Commission on University Education in London; and, if so, whether that bill would be presented as a separate measure, or as part of the measure for the development of a national system of education, to which reference was made in the gracious speech from the Throne?—The Prime Minister: Pending the report of the Departmental Committee on the University of London, I am not in a position to announce the intentions of the Government. It will probably be convenient and desirable to deal with this question in a separate measure.

Election of Direct Representatives.—Mr. Ellis Griffith, Under Secretary of State, Home Department, has introduced a short bill to remove a defect which experience has revealed in the Medical Act of 1886. That Act did not contain any provision by which a person elected to fill a casual vacancy on the General Medical Council should continue in office only for the residue of the term of office of his predecessor. The result has been that instead of one general election for direct representatives being held once in five years, elections of individuals have occurred at irregular intervals. As the expense of the election of a single representative amounts to almost as much as the election of several, an unnecessary burden has been cast on the finances of the Council. In future a direct representative elected to fill a casual vacancy will hold office for the remainder of the term for which his predecessor would have held it. A further provision of the bill removes the obligation to fill a casual vacancy which occurs less than twelve months from the date of the next general election. The bill also provides that the time within which elections must be held to fill any vacancy, whether caused by expiry of term of office, death, or resignation, shall be forty days after the receipt of the precept of the returning officer, instead of twenty-one days as in the principal Act. It has been found in practice that although only one candidate may eventually be nominated, the short time allowed after the receipt of the precept has made it necessary immediately to prepare for a contested election; and thereby a considerable expenditure is often unnecessarily incurred.

Nurses' Registration.—On Tuesday, March 3rd, Dr. Chapple, under the ten minutes rule, obtained leave of the House to introduce the Nurses Registration Bill, which was opposed by Mr. Handel Booth. On a division, Dr. Chapple obtained leave to introduce the bill by 311 votes to 82. Supporters of the bill should not be discouraged owing to the fact that its introduction was opposed. Doubtless Mr. Handel Booth and other members would be found opposed to the measure on second reading, and severe critics in Committee; but on Tuesday afternoon it may be mentioned, as a sidelight on parliamentary proceedings, that a snap division was anticipated, and it is pretty certain that some supporters of the Government would have challenged a division on the motion even if it had not been opposed in a speech. The reason that a division would have been challenged was that it would have afforded an opportunity of testing the strength of the Opposition in response to the call of the division bell.

Defective and Epileptic Children's Bill.—After a short debate, this bill obtained a second reading on Wednesday, March 4th, by 341 votes to 35. A summary of the alterations in the bill of this year, in response to the criticisms made last year, was given in the Supplement last week, p. 107.

Criminal Lunatic Asylums.—Mr. Touche asked the Home Secretary whether persons confined in criminal lunatic asylums were allowed to see legal advisers and private doctors.—Mr. McKenna said that if sufficient occasion arose for a visit from a legal adviser, the visit would be allowed. The patients were under the care of the highly qualified medical staff of the asylum, and a consultation with a private medical practitioner would not be necessary save in wholly exceptional circumstances. Mr. Touche asked (1) whether, in the Broadmoor criminal lunatic prison, parts of prisoners' letters to friends were erased by the prison authorities because they were contrary to the regulations; whether copies of the regulations were posted up in the prison or supplied to the prisoners; and (2) whether letters written to their relatives and friends by prisoners in the Broadmoor criminal lunatic prison were sometimes stopped, while prisoners were left to understand that they had been dispatched.—Mr. McKenna replied as follows: Letters from lunatics are sometimes quite unfit to send out of the asylum, and have to be stopped or partially erased. It must be a matter for the discretion of the medical officers having charge of lunatics to decide when this has to be done. No regulations could be laid down defining the circumstances which render such a course necessary, but the regulations require all letters so stopped to be laid before the council of supervision of the asylum at their next meeting.

Diphtheria.—Mr. Astor asked the President of the Local Government Board whether there had been an outbreak of diphtheria in Upper Norwood; whether 117 cases had been reported; whether the cause of the outbreak had been traced to the milk supply; whether on one farm supplying milk to the neighbourhood one milker had an ulcer on his finger which proved to be infected with diphtheria germs, and another had sores on his hands infected with diphtheria germs, and whether several of the men on the dairy were found to carry diphtheria germs in their throats.—Mr. Herbert Samuel said that the outbreak, which affected several sanitary districts, had been investigated by one of the Board's medical inspectors, who was preparing a report on the subject, which would be published shortly.

Machine-skimmed Condensed Milk.—The President of the Local Government Board informed Mr. Barnston that the question of issuing an order under the Public Health (Regulations as to Food) Act, 1907, regulating the sale of machine-skimmed milk, or taking other action to give effect to the recommendations in Dr. Coutts's report of August, 1911, to the Board on the use of condensed milks as infants' foods, was now under consideration, but he was not in a position to make a statement on the matter.

Milk Supply.—In reply to Mr. Astor, Mr. Herbert Samuel circulated a statement with the names of the local authorities in whose districts provisions based on the Model Milk Clauses are in force, and the dates of the local Acts including those provisions. It appears from the list, which was circulated with *Hansard* of March 2nd, that the local Acts were obtained in 9 cases in 1899, in 17 in 1900, in 17 in 1901, in 10 in 1902, in 15 in 1903, in 16 in 1904, in 5 in 1905, in 1 in 1906, in 4 in 1907, in 6 in 1908, and in 2 in 1909.

Vaccination.—In reply to Mr. Bridgeman, the President said that the Local Government Board had received resolutions from 118 Poor Law unions stating that the present system was rendering the vaccination laws inoperative, and asking for an inquiry into the working of the conscience clause. He referred also to figures he had given on February 17th, which were published in the Journal of February 21st. In reply to Mr. William Harvey, the Home Secretary said that some complaints had been received with regard to the difficulty persons in some parts of the country found in getting a justice of the peace to witness a declaration of conscientious objection. He had no reason to believe that the difficulty was of frequent occurrence.

Foot and Mouth Disease.—In reply to Mr. Charles Bathurst, Mr. Herbert Lewis, Parliamentary Secretary to the Local Government Board, said that the report on the investigation into the nature, origin, and mode of communication of foot and mouth disease instituted by the Board in India was nearly ready, and would probably be issued in a few weeks. In reply to another question by Mr. Bathurst, Mr. Lewis said that the Board of Agriculture did not ascertain by bacteriological examination or otherwise the presence of germs of the disease in fodder, hides, bones, and other animal offals found upon the infected premises, and proved to have been imported from foreign countries where the disease was prevalent. This was not done on account of the risk of spreading infection. He referred to the answers of Sir Stewart Stockman on pages 34 and 36 of the Minutes of Evidence taken before the Departmental Committee which reported two years ago. In reply to Mr. Kilbride, Mr. Birrell said that it was true that butchers had recently landed at Greenore carrying implements used in slaughtering animals at Birkenhead, which were in a dirty condition and covered with congealed blood and hair. It had not been ascertained whether the animals slaughtered had been infected with foot and mouth disease, but both men and implements were carefully disinfected at Greenore; he hoped that the interdepartmental conference would result in steps being taken to safeguard Ireland against the danger of infection by this means.

In view of the prospective visit of the King and Queen to Paris, the British colony in that city held in February a general meeting for the purpose of considering what steps it should take to accord Their Majesties a welcome. The deliberations ended in the constitution of a large committee, representative of all branches of the community, to formulate a scheme. The medical representatives selected were Dr. Leonard Robinson and Dr. Hogg.

Regulations recently issued provide that, subject to the sanction of the War Office, Territorial Force nurses will be allowed to volunteer for service in any war in which this country is neutral, either under the British Red Cross Society or any other organization approved by the Foreign Office. They will also be permitted to offer their services with the Q.A.I.M.N.S. Reserve or under the Red Cross Society in campaigns in which this country is engaged. Permission will be given to a certain number not exceeding twelve from each hospital, selected by the Matron-in-Chief; the application must in the first place be made to the War Office through the principal matron.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

SIR CHARLES CAMERON'S REPLY TO THE HOUSING COMMITTEE'S REPORT.

THE medical superintendent officer of health for Dublin, Sir Charles Cameron, has written to the daily press a reply to the strictures contained in the report of the Housing Committee on the Dublin sanitary authorities. Sir Charles states that in the first year he was appointed the Corporation adopted on his suggestion the Acts relating to the Housing of the Working Classes, and he gave a long list of places where working-class dwellings could be erected. The following passage occurred in his report: "More than half of Dublin requires to be rebuilt." In 1909 he addressed a communication to the Corporation on the housing question, urging the imposition of a rate of 6d. in the £ to raising money for building new houses. He characterizes as utterly incorrect the statements in the report that very little reduction in the death-rate has been effected, and that, as regards congestion, the tenement houses are worse than they were in 1880. He states that in that year the death-rate was 37.8 per 1,000 persons living, and the death-rate from infectious diseases was 9.28. In 1913 the death-rate was 21.3 and the rate from infectious diseases was 2.4. With regard to the charge that rebates in the rates were improperly allowed, Sir Charles says that only once did he allow a rebate of taxes without the concurrence of the inspector, and in that case he allowed the rebate because, after the inspector's report, some improvements were carried out. With regard to the question of sanitary accommodation, the day he was appointed chief medical officer of health he determined to abolish the abominable storage of filth, and to force on tenement houses the water carriage system. In order to carry out this improvement he had a survey made of the 24,211 inhabited houses in Dublin. The information so obtained, and contained in five large volumes, enabled Sir Charles Cameron to take action in getting rid of the insanitary midden system, and Dublin is to-day in respect of sewage a water-carriage city. With regard to the censure in reference to not having a sufficient number of closets, he states that he gave a sufficient explanation of this in his evidence, but no reference is made to it in the report. The whole sanitary staff are unanimous that in existing circumstances there is adequate sanitary accommodation in the tenement houses, and that an increase is undesirable. In conclusion, he points out the exceptional condition of Dublin, which makes its conversion into an ideal city a problem almost insoluble; 75.8 per cent. of the families reside in tenements, and the proportion of the very poor is unduly large. About 400 notices to quit for non-payment of rent are served every week. In the vast majority of cases when these notices are issued the tenants become careless as to the condition of their tenements, and sometimes injure them.

DUBLIN COUNTY COUNCIL AND THE MILK COMMISSION REPORT.

At the last quarterly meeting of the Dublin County Council the Chairman of the Pembroke Urban Council proposed a resolution approving and endorsing the recommendations contained in the final report of the Irish Milk Commission, and it was passed unanimously. The proposer of the resolution referred to the outbreak of typhoid fever in the Pembroke district about three months ago, in which the infection had been traced to a dairy where a patient was lying ill with typhoid fever. While everything that was possible was quickly and successfully done on that occasion by the Pembroke Committee and officials, it was desirable from a general point of view to consider the granting to urban and rural sanitary authorities of additional powers in these and other circumstances. The two most important recommendations of the Milk Commission were the compulsory notification of disease in a dairyman's family, and the granting of powers to urban and rural authorities to control outside dairies from which the milk supply of their district was derived. Possibly some of the recommendations might necessitate fresh legislation, but effect could, he thought, be given to the majority, if not the whole, of them by co-operation between the Government departments and local authorities concerned.

THE PROVISION OF SANATORIUMS.

Deputations—one objecting to the proposed site of the County Sanatorium and the other in favour of it—appeared before the Management Committee of the Wexford County Council last week. The Principal of the Tate Protestant School said that there was great danger of infection by having the sanatorium in the vicinity of the town and school. Dr. Browne, Local Government Board inspector, and Dr. O'Connor, tuberculosis officer, disagreed with this view. Dr. Browne said that the site selected at Wexford was an admirable one, and there was no danger of infection. The Chairman said the duty of the committee was to do all they could to meet the wishes of the opposing parties, but if a more suitable site could not be obtained within a convenient distance, he thought they would be wise to stick to the present proposal. The committee then inspected other sites in the neighbourhood, and decided that they were unsuitable, and the selection was therefore approved. At the last quarterly meeting of the Louth County Council a recommendation was received from the Finance Committee to establish a sanatorium at Ravensdale. A motion, that the council for the present continue the arrangement with Peamount, was carried on a division.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

TUBERCULOSIS ARRANGEMENTS IN EDINBURGH.

As was briefly intimated in last week's number of the JOURNAL (p. 505), the town council of Edinburgh at its meeting on February 24th remitted its Public Health Committee's draft minute of agreement with the trustees and management of the Royal Victoria Hospital for Consumption back to the committee for further consideration. In favour of the adoption of the minute it was urged that the city would then have adequate facilities for the proper treatment of consumption, and would have at its disposal in its various institutions 350 beds for patients at all the stages of the disease. It was pointed out, on the other hand, that the scheme was a very large one, that the liability upon the rates in respect of the treatment of phthisis alone was £12,000, that it was proposed to take over a voluntary institution (a procedure which might form a precedent), and that it was also proposed that all the endowments of that institution, past and future, should be conveyed to the University of Edinburgh.

ROYAL EDINBURGH MENTAL HOSPITAL, MORNINGSIDE.

Dr. George M. Robertson's annual report on the work done in the Royal Edinburgh Mental Hospital is always full of interest, and that dealing with the year 1913 is no exception. The hospital is now a centenarian, and this was the hundred-and-first annual report. Of course, there have been many changes, not the least being the removal a few years ago of the parochial cases to Bangour and the consequent greater appropriation of the hospital to the care and treatment of private patients. Of nearly 900 patients resident at the two separate establishments—Craig House and the West House—which make up the hospital, nearly 500 are private cases. They are drawn from all parts of Scotland and from England, so that for this and the other reason given above no estimate of the amount or proportion of insanity can be drawn from their number.

Causation.

With causation Dr. Robertson deals in illuminating fashion. Hereditary influences are found at work in 40 per cent. of the cases; senile decay and alcohol accounted for about 12 per cent. each; and the fourth most frequent cause was syphilitic infection. Nothing is more remarkable than the way in which the Wassermann reaction has revealed the presence of syphilis in so large a percentage of cases of mental disease. It is interesting in this connexion to note how shy the newspaper press in Scotland still seems to be of the word "syphilis"; one of

the two Edinburgh evening papers which comments most intelligently upon Dr. Robertson's report veils this fourth cause of insanity under the euphemism "bad living," and the other refers vaguely to "vicious habits." The report hopes for much from the Mental Deficiency Act, but expects even more benefit from the Royal Commission on Venereal Disease. A very interesting paragraph is that dealing with the age incidence of the four causal varieties of insanity—the first period, that of early adult life and adolescence, is that of the hereditary insanities; the last period is that of the insanities of decay (senile decay); and the intermediate period is that of the acquired insanities (alcohol, syphilis). The following sentence has a note of hope in it:

> One half of the insanity that occurs in men between the ages of 35 and 55 is largely preventable, and is mainly due to the two causes which have been mentioned (alcohol, syphilis), and from the report of the last census it appears that insanity at this period is becoming less frequent.

With regard to senile decay as a factor, Dr. Robertson notes that there was an increase in the number of admissions of persons above 65 years of age; this, however, did not mean that insanity was increasing among the aged. "The true explanation of the large number of aged admissions is the recognition of marked senile confusion and deterioration as a form of certifiable insanity and the knowledge that in no other institution is the nursing and care of these feeble and helpless, but often troublesome patients better provided for than in our mental hospitals."

Insanity and Racial Decadence.

The question, Is insanity increasing? is difficult to answer, a fact which Dr. Robertson freely admits; but all the same he tries to do so. It is well established that the actual number of insane has increased during the last decade—a glance at the census returns shows that at once—but this statistical fact does not answer the question. For one reason the statistics embrace the first fifteen years of life, as well as the last period of existence; now it is well known that the birth-rate has been falling, whilst the expectation of a number of extra years has been given to the aged, and consequently fewer persons are entering the first period of life, whilst more persons linger on into the last period. Insanity is much more frequent in these later years, and so an increase in the number of the aged people surviving will bring with it an increase in the number of cases of mental disease. There may be no true increase; but, as Dr. Robertson says, the important question to be asked is this: Is the liability to insanity greater than it formerly was? In the early adult (from fifteen to thirty-four years) there is evidence of a slight increase, but the disturbing factor of emigration enters to vitiate conclusions, for we cannot but believe that the huge majority of the emigrants were of sound mind as well as of healthy body. With regard to the middle age group (thirty-five to fifty-four years) the frequency of insanity has fallen; this is the substratum of the hope expressed in respect of mental disease in the time of life when the preventable causes are in action. Dr. Robertson says:

> As it is during this period that the nervous stresses of modern civilization are chiefly borne, and the penalties for alcoholic and other excesses are usually paid, the fears of those who regard the race as becoming decadent and succumbing to these conditions are found to be groundless; there is no clear proof that the exactions of a strenuous life tend to increase the amount of insanity, and there is evidence to the contrary. Insanity is most prevalent not in busy cities, but in rural districts with a stationary or falling population; but the reason for this greater prevalence may be the emigration of the young and fit.

On the other hand, there has been a marked increase in amount of insanity of the senile kind. Whilst it may be that this increase is due to the reduction of the death-rate and the prolongation of life with more invalidism, there is another possible explanation. The children of aged parents no longer marry and settle down beside them and look after them in their age and infirmity, but scatter over the country or emigrate; the parents, therefore, are thrown upon the authorities to be looked after, and hence a greater number enter the mental hospitals as being the places in which they can be cared for best. So we reach the paradoxical but hope-inspiring result that although the number of cases of insanity has risen, there is some solid ground for thinking that the liability to insanity is diminishing, and that it has indeed diminished for the middle period of life when the effects of temperance, self-control, adequate nourishment, and healthier surroundings would first appear.

The Mental Advantages of Work.

Another lesson which the report teaches is that the constantly exercised mind is the healthy one, and that the strenuous life is no danger of itself but only if it drive the individual to attempt to make it less so by having recourse to alcohol and narcotics. It is safer to let the brain wear out by work, if it does, than to encourage it to rust out by laziness or be eaten out vice.

Domiciliary Inquiry.

One other matter in the report calls for comment and approbation—the appointment of a qualified medical man to carry out as his sole duty and work the visiting of the homes and families of the parochial patients sent to the institution, and thus to inquire into the hereditary and environmental causes which may be at work. The institution pays the working expenses, and the medical man receives a grant from the Carnegie Trust.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

Insanity and Mental Defect in London.

A Declining Rate of Increase.

The London Council had before it on March 3rd a summary of the returns furnished by the clerks to the London boards of guardians as to the number of lunatics chargeable to the county on January 1st, 1914, including private patients and criminal lunatics. The number for whose accommodation the Council was responsible was shown to have increased, but the increase (272) was less by nearly 50 per cent. than that shown on January 1st, 1913 (501), and was practically the same as that of the year before (271). The average annual increase in twenty-four years was 462. The rate of increase in the total number of lunatics, including those in the care of the Metropolitan Asylums Board, in workhouses, or with friends was also declining, though the rate of declension was not so marked; the increase this year was 353, as against 506 in 1913 and 530 in 1912. The average annual increase was 521. The Asylums Committee remarked that it was important to mark the variations in these figures because the number of lunatics for whom the county was directly responsible would be found to vary according as there was or was not accommodation available in the Metropolitan Asylums Board's institutions for the special class of case these institutions were provided to receive. The number of patients (uncertified) who were in workhouses or at home with friends, under the cognizance of Poor Law authorities, had increased by 21 to 511. The number of criminal lunatics for whom the county was responsible was reduced to 34; the Committee had made representations to the Home Office as to the inadvisability of this class of patient being sent to county asylums. At first sight it might seem curious that, although the annual increase in the number of lunatics was apparently declining, the Committee was finding very great difficulty in meeting demands for the admission of new cases. But the question of asylum accommodation really resolved itself into one of comparative admission and exit rates, and with a steadily (albeit slowly) declining death and discharge rate accumulation of chronic cases in the asylums, with corresponding need for further accommodation, was bound to occur. The total number of patients in the London asylums (19,524) was 71 higher than last year. The total number boarded out was 979, which compared with 763 on January 1st, 1913. The Committee observed that when the medical statistics of the asylums for the past year were available further light would be thrown on the figures mentioned, and they would be discussed in more detail in the annual report.

Pressure upon Male Asylum Accommodation.

In another report the Asylums Committee stated that very soon all the accommodation obtainable for London cases in asylums controlled by other authorities would be exhausted, and the number of beds immediately available in London asylums was quite inadequate to meet requirements. At present the Committee was considerably in arrear with accommodation for male patients, though for females it hoped soon to be able to meet all outstanding demands. The whole of the accommodation now or about to become available for men was some eighteen beds in arrear of the demands made upon it, and there was no prospect of any speedy improvement in this state of affairs. The new eleventh asylum for 2,000 patients now in course of construction would not be ready for occupation in less than four years. To overcome the difficulty the Asylums Committee submitted proposals for taking a five years' lease of premises near Manningtree, Essex, affording accommodation for 50 male patients. The Commissioners in Lunacy had given their consent. The Council approved the proposal.

Co-ordination of the Mental Deficiency and Lunacy Acts.

The London County Council has decided that the Mental Deficiency Act, 1913, shall be administered (if Parliament permits) by a committee, which shall also be responsible for the control of the insane asylums, and application is being made to Parliament this session for power to deprive the Asylums Committee of its special powers and independence under the Lunacy Acts and to merge its duties in those of the new committee required to be set up under the Mental Deficiency Act. In the meantime the Committee for the Care of the Mentally Defective and the Asylums Committee will consist practically of the same persons, but the two branches of work will be kept distinct. The General Purposes Committee, reporting to the Council on March 3rd on the organization of the service for the care of all kinds of mentally defective persons, indicated that when the temporary arrangements indicated above came to an end, the Council would probably be invited to place the general supervision of the arrangements for the treatment of persons under the Mental Deficiency and Lunacy Acts in the hands of one officer. This would only be the natural corollary of the Council's decision to combine the two services with a view to co-ordinating the treatment of all persons suffering from mental defect. At present there was no one person occupying the position of a chief professional or executive officer in the asylums service. There was a clerk or administrative officer, and each asylum was superintended by its own professional or executive head. For the interim period, pending a decision by the new committee when it was in possession of full powers, the professional and executive work, so far as it had reference to the Mental Deficiency Act, should be controlled by the medical officer of health for the county, the arrangements for the asylums work being continued as at present for the time being. No doubt a large proportion of the persons to be dealt with under the Mental Deficiency Act would be ascertained by notification from the schools, and the new Act appeared to require continuous medical action from the first stages during childhood to the stage of certification for institutional treatment or guardianship. The officer upon whom it would devolve, in the great majority of cases, to select children for notification to the Committee for the Care of the Mentally Defective was the medical officer of health in his capacity of school medical officer, so that his appointment, as suggested, would be in accordance with the intention of the Act.

Some discussion took place as to the most appropriate name for the new committee, and it was decided to call it the Asylums and Mental Deficiency Committee. It was suggested that the membership should be somewhat enlarged as compared with the Asylums Committee, but on the other hand it was declared that difficulty was found in getting members to serve on the present Committee responsible for the care of the insane. The Council approved the main lines of the scheme and referred to a Committee the question of the size of the new authority.

SHEFFIELD.

EVENING CLINIC FOR THE TREATMENT OF VENEREAL DISEASE.

ALTHOUGH syphilis is not nearly so widespread in Sheffield as in some other large towns, we believe that the city is to be the first in the country to have an evening clinic for the treatment of venereal disease. The expense of efficient treatment for syphilis along modern lines is rendering it increasingly difficult for members of the working classes to obtain really thorough treatment. Experience has likewise proved that, under present conditions, they cannot avail themselves of the out-patient departments of the hospitals. If a working man asks permission to absent himself from work at regular intervals, suspicion is aroused, and he is very apt to lose his job at the first convenient opportunity. An examination of the records of the Dermatological Department of the Royal Infirmary for the last few years has shown that practically every patient ceases to attend before there is any likelihood that the disease has been eradicated. The staff of the infirmary has, therefore, with the full permission of the weekly board, decided to open an evening clinic for the purpose of treating men suffering from these diseases. Patients will be treated without recommendations, but will be required to bring a note from a medical practitioner. The department will be available for consultation with practitioners and for examination for spirochaetes in doubtful cases. Four beds are being set apart for salvarsan treatment, and it is hoped that it will be found possible to admit many of the patients over the week end for salvarsan treatment, so that their work will not be seriously affected. The clinic will be open every Wednesday evening at 7.30 p.m. The first clinic was held on March 4th. It has been arranged that the dermatologist, a physician, and a surgeon shall attend. Owing to the cordial co-operation of Professor H. R. Dean, who is honorary pathologist to the infirmary, matters have been so arranged that full use can be made of all pathological methods of diagnosis. Dr. Rupert Hallam will be pleased to supply any information as to the organization of the clinic.

THE EDGAR ALLEN INSTITUTE FOR MECHANICAL THERAPEUTICS.

This institute was founded three years ago by Mr. Edgar Allen, who had received much benefit from the Zander treatment as carried out in some Continental cities. Finding that there were no facilities for such treatment available, he determined to furnish an institute for the City of Sheffield. He took care to secure the co-operation of the medical profession. Before the matter was finally settled the Secretary of the Sheffield Division visited a large institute at Aix-les-Bains, and reported his observations to the Division. The instruments to be employed in Sheffield were selected by the Secretary, who was able to exclude several which appeared to be open to abuse. A medical director was obtained, who spent several months studying Swedish methods in Stockholm. Mr. Allen provided the building, the apparatus, and guaranteed the costs for the first three years. The management of the institute was vested in a committee which includes five representative medical men. The institute undertakes to treat only persons who have been recommended for treatment by their own medical attendant. The period of three years during which Mr. Allen agreed to pay all expenses is now almost completed, and the committee are appealing for funds. The present is, therefore, a suitable opportunity for reviewing the work of the institute.

Since its foundation there has been a steady increase in the number of patients, whilst the equipment has been supplemented by the provision of apparatus for administration of radiant heat and electrical treatment.

The number of patients treated in the first year was 505, and 668 in the second year. There are at present from 160 to 170 attendances a day. The conditions treated are chiefly the results of accidents and injuries, chronic joint diseases, and paralyses of various kinds, with, of course, the addition of a fair number of cases of neurasthenia. The results have been good in the traumatic cases, and it is claimed that 137 out of 318 in this class have returned to work. The results in cases of joint diseases have not

been so good; but this, of course, was to be expected. Very few cases of heart and lung disease have been treated.

We believe that it is generally acknowledged that the institute has been very successful in many obstinate cases of disability resulting from accidents, and this has been acknowledged by some of the large firms in the city, which are undertaking to pay for any of their accident cases that may be sent to the institute. There is a graded system of payments according to the means of the patient, certain hours being reserved for paying patients. Mr. Allen thinks that the institute has had a fair trial, and that it should now become self-supporting. The insurance companies and the societies which benefit by the work of the institute are being asked to subscribe. The financial position is briefly as follows: The annual expenditure is about £1,600, whilst the fees received amount to £700, leaving a deficiency of about £900. An appeal was issued by the committee a few days ago, and we are given to understand that already about £450 has been promised. A system of "recommendations" has been adopted. This ready response suggests that the financial position of the institute will be assured for a few years at least. The relations obtaining between the institute and the profession are, we believe, satisfactory. There is criticism in some quarters, but on most sides the loyal attitude adopted by the institute to the medical profession has been recognized, whilst it has proved a great convenience to have at hand an institution to which certain chronic cases can be referred for treatment without fear that they will be exploited for profit in a commercial manner.

BIRMINGHAM.

The Tuberculosis Department of the General Dispensary.

The tuberculosis department of the Birmingham General Dispensary is dealing with a large number of patients; during last year, 760 new cases were treated, not including the contacts examined and found not to be tuberculous. Of this total only 113 were persons who came under the provisions of the National Insurance Act. The attendances of patients during the year numbered 21,329, an average of 70 per each working day. The patients are visited at their homes by the nursing staff during their treatment at the dispensary, and also at stated intervals after the patients have been discharged with the disease arrested. The home visiting of the patients is one of the most valuable functions of the department.

Sir William Cook Memorial Home for Consumptives.

During the past year the establishment of the sanatorium on Romsley Hill, by the Birmingham Hospital Saturday Fund as a memorial to the late Sir William Cook, has made great progress. The original scheme was for 50 to 60 patients, but until sufficient funds could be collected it was decided to provide only thirty beds. When the National Insurance Act came into force it gave a favourable opportunity to extend the scheme so as to increase the accommodation. Grants are being received from the Treasury towards the larger scheme, but a very considerable sum remains to be provided if the sanatorium is to be opened free of debt in May of this year. The Memorial Home will contain 104 beds, 64 for men and 40 for women, and it is expected that this number will be adequate to meet the requirements of the Hospital Saturday Fund.

Birmingham and Midland Hospital for Children.

The new building of the Birmingham and Midland Free Hospital for Sick Children is progressing rapidly, and it is anticipated that the opening ceremony will take place in the summer of 1915. It will consist of an in-patient department only, and, in order that it may be opened free of debt, £9,000 is still required. During the past year the committee of the hospital has become strongly impressed with the necessity for removing the out-patient department to the site of the new hospital. It is at present situated in Steelhouse Lane, and the accommodation is inadequate for the large number of out-patients who attend. The cost of building a new out-patient department would be about £10,000, but very considerable economies in the annual expenditure would ensue. The ground rent of the present out-patient department building, which is £100 per annum, would cease, and a considerable saving in the cost of the staff would result from having the two departments on the same site. In 1913 the number of patients was: In-patients 914, out-patients 13,897, and casualties 628.

India.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

The Calcutta School of Tropical Medicine.

After suffering many vicissitudes, the plans for the building of the School of Tropical Medicine in Calcutta were passed last year, and the foundation was laid by the Governor of Bengal, Lord Carmichael, at the end of last month. The Government of India has provided 6 lakhs for the site and the laboratory and has agreed to contribute towards the upkeep of the school, and has thus emphasized the imperial character of the enterprise.

The building will provide accommodation for whole-time research workers in addition to the teaching staff, and for each such worker the sum of 4 lakhs of rupees, or annual subscriptions amounting to 20,000 rupees, guaranteed for at least five years, will be required. The laboratories have been designed so as to allow of expansion in the future when funds are available. The institute is established for the investigation on practical lines of cases of tropical diseases in the Calcutta hospitals. The result of the work carried out will be, it is hoped, to evolve more accurate means of diagnosis and improved forms of treatment; the pharmacology of Indian drugs will be included within the scope of the institute. It is considered that the fact that it is being established in a great centre of population and in association with the large hospital of the Calcutta Medical College will add greatly to its possibilities of usefulness. The establishment of a special hospital on a site immediately adjacent to the laboratories and forming an integral part of the institute is also contemplated in order to render it possible to make special investigations of diseases with the best chance of obtaining practical results. For this purpose a sum of 2½ lakhs of rupees is urgently required. In an appeal to the public for assistance it is pointed out that both the Pasteur Institute in Paris and the Koch Institute in Berlin were originally built without any organic connexion with a hospital, but that in both cases it was subsequently found necessary to construct special hospitals in direct connexion with them, in order to allow of the most useful type of research work being undertaken.

At the Rockefeller Institute in New York a large hospital was from the first built side by side with it, and the remarkable results obtained by this conjunction of a special hospital and laboratories are well known. A special appeal is made to the princes, noblemen, and commercial magnates of India to furnish the funds necessary to enable the school of tropical medicine of India and the research laboratories in Calcutta to take full advantage of the opportunities which can be afforded, and in particular an appeal is made to wealthy Bengalis to provide scholarships to enable natives of India to be trained in research and to enter upon the path of investigation as soon as they have been adequately trained to follow this difficult path. The Honorary Secretary of the fund is Lieutenant-Colonel Leonard Rogers, I.M.S., Professor of Pathology in the Calcutta Medical College, and communications may be addressed to him at the College; cheques should be made payable to the "School of Tropical Medicine Endowment Fund."

The illustration shows the building as it will appear when complete. It is in three stories, but the foundations are designed to carry a fourth story when the funds subscribed shall justify its erection. The entrance will be in the new Central Road of Calcutta, 100 ft. wide, which the Improvement Trust is constructing. The general disposition of the building is shown in the accompanying block plans of the first and second floors. The ground floor of the north wing will contain the biological

laboratory of the Medical College, and on the south side two large rooms for bio-chemistry and experimental pharmacology respectively. The first floor will contain the teaching portion of the School of Tropical Medicine; the lecture theatre will be on the south side; in the north wing will be a practical classroom for microscopical teaching; it will contain at first 56 seats, but the number can be increased if necessary. On this floor there is a general pathology and bacteriology research room, in which post-graduates will be encouraged to resort to research methods in working out their cases by bacteriological and other examinations. There is also a laboratory for protozoology and a work room for the director. The lecture theatre can be darkened, and is arranged for the use of the epidiascope and a kinematograph. On the second floor is a library over the lecture theatre, while the whole of the wing, which has a north light, is to be devoted to research laboratories, and will contain four separate working rooms, one of which will be kept permanently at a temperature not exceeding 70° F. all the year round to facilitate certain kinds of work. A large sterilizing room for the preparation of culture media completes the arrangements of this floor.



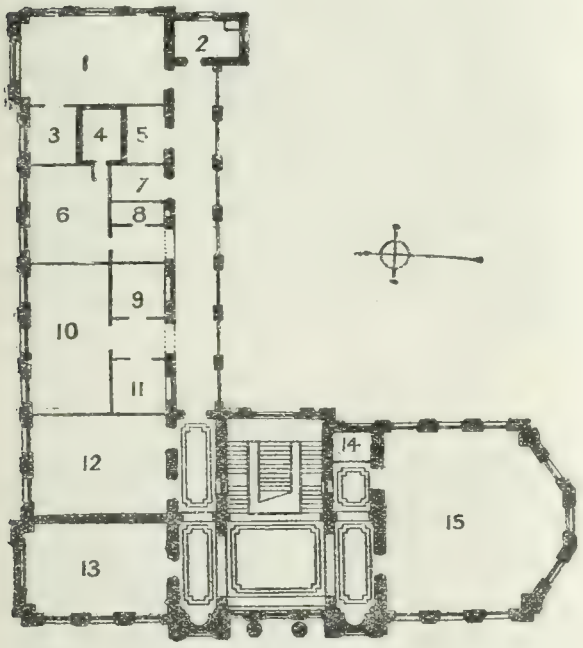
THE SCHOOL OF TROPICAL MEDICINE, CALCUTTA.

THE HEALTH OF BOMBAY.

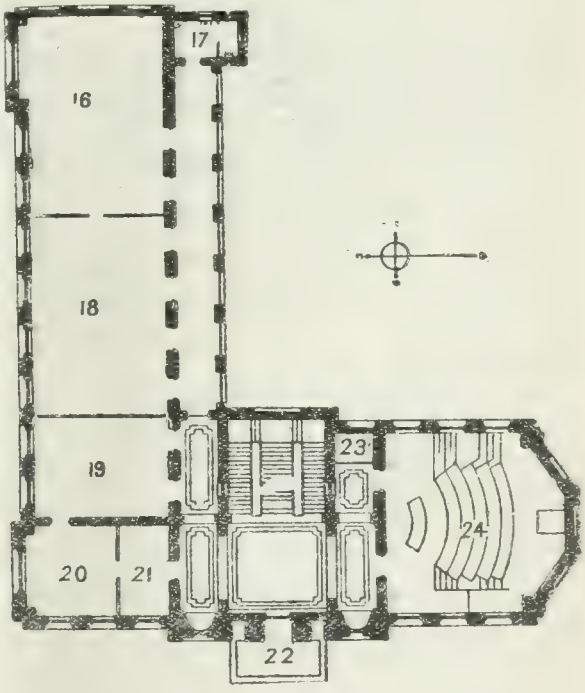
The health of Bombay during 1913 was remarkably satisfactory; this was in part due to a great decline in plague, which, though it occurred in epidemic form, was as mild as in 1912. There was a considerable diminution in the number of births, which were 1,874 fewer than in 1912, and 177 below the average of the preceding ten years. A special census of children under 2 years of age, taken in May in certain of the poorer parts of the city, seemed to show that the decrease was due to a temporary emigration of women. A new park containing 136 acres is being laid out by the municipal corporation, and another of 79 acres by the Improvement Trust. Both are near the racecourse at Mahaluxmi. If the proposal to lay out a golf course on the Turf Club's property near by is carried out Bombay will, within five years, have a big "lung" close to the city consisting of two parks, a racecourse, and golf links.

THE RIPON HOSPITAL, SIMLA.

It is proposed to erect a new operating room, an out-patient block, and women doctors' quarters for the Dufferin Ward of the Ripon Hospital, Simla, at an estimated cost of Rs. 20,000, and the Municipal Committee, Simla, has suggested that the Central Committee of the Dufferin Fund should be asked to share the cost of this work with the Simla Municipal Committee, less the amount of the donation given by His Highness the Gackwar of Baroda. There is also a proposal for adding a third story to the main block of the Ripon Hospital, and towards this the Simla Municipal Committee has decided to contribute Rs. 20,000.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

1, Sterilizing; 2, animals; 3, experimental operations; 4, cold store; 5, machine room; 6 temperate room; 7, coils; 8, store; 9, store; 10, assistants' research; 11, store; 12, research; 13, professors; 14, lift; 15, library; 16, research; 17, lavatory; 18, classroom; 19, protozoology; 20, assistant professors' research; 21, office; 22, open terrace; 23, lift; 24, lecture theatre.

THE late Mr. Philip Whitcombe, who, as stated in the notice in the JOURNAL of February 7th, was probably the oldest doctor in the country when he died at Gravesend on January 24th, aged 97, left £15,321.

Correspondence.

THE MEDICAL SERVICE, R.N.

SIR,—The address of Surgeon-General May, the Director-General of the Naval Medical Service, which was given at Edinburgh, and also the leading article, both of which were published in the BRITISH MEDICAL JOURNAL of February 28th, call attention to a very serious condition of affairs in our first line of defence. In times past we have sometimes found the navy the more popular service, and sometimes the army, according to the care and organization and pay of these two important branches of State service. There is, as you point out, at the present time considerable competition for vacancies in the military service, but little or none for the naval service. Although there are at least 18,000 more naval men to be looked after than there were five years ago, yet there are now 58 fewer medical officers than what was laid down as being the requirements for that time. Considering the immense wastage which would occur in war, this state of affairs wears a very grave aspect. There is one wise move which the Admiralty has taken in recent years, and that is the establishment of the Royal Naval Volunteer Reserve; and among that most useful and well reported upon body of men there are about sixty surgeons, all of whom have their war stations assigned to them, and on the outbreak of hostilities they would be at once available for naval service. The naval hospitals are at the present time thoroughly undermanned, even for peace times; but in war the work could not possibly be coped with—certainly not without calling up every reserve surgeon who could be found.

From an intimate personal acquaintance with some of our large ship and naval hospitals, both on duty, as a visitor, and even as a patient myself, I claim that these hospitals are in no way inferior to our well-equipped civil hospitals which abound in London and elsewhere. Every possible advantage is well used by the surgeons not only to keep abreast of modern medicine and surgery (and the courses now allowed in London are fully appreciated), but a vast amount of clinical and pathological research work is carried out by those in charge for the further elucidation of disease. Naval hospitals have this great advantage over others, that their patients are kept in and watched until they are fit to return to duty, and are never turned out half cured to attend as out-patients in order to make room for others, as is inevitable in civil hospitals. I can imagine no better field of work for a surgeon than to be on the staff of one of our large naval hospitals, either at home or abroad.

Truer words were never spoken than when you state in your leading article that "medical officers are already overworked in many shore establishments, while the great majority are afloat, and for the most part tied to a monotonous existence round these shores." With the huge fleets now constantly employed about the Channel and North Sea the lot of a naval officer is not what it used to be. The ships are better, and the medical equipment is infinitely superior to what it was a few years ago, but the invaliding is enormous from pneumonia and rheumatism in our rigorous climate. The sick-bay is healthy, and as far as possible well ventilated, but there is one point which calls for alteration, and which is keenly felt by the surgeons—and that is the fact that the sick-bay staff have only the sick-bay in which to live, to mess, and to sleep. I well know the crowded state of the modern man-of-war, but surely the constructors could arrange something better than this. What would the civil hospital authorities think of an institution where the nurses were supposed to live, eat, and sleep in the wards with their patients? How would it be possible for the surgeons and physicians to gain sufficient quiet and freedom from noise for, say, the examination of chests and other delicate investigations, if the wards were filled with nurses off duty who were using it as a place in which to spend their free time? This sort of thing is most damping to the enthusiasm of a surgeon who, perhaps, wishes to carry out some careful examination of his patients during the evening, when the noise and commotion of drills, gunnery, and such-like disturbing factors has usually ceased.

Then there is one other thing which should seriously attract the attention of the Admiralty, and that is the provision of specialists in various branches of medical science. The day has passed when one could say that the naval medical officer must be an all-round man and all would be well. He is that and more too very often, but every one must realize that to expect a man to be an expert in everything is as absurd as to expect the executive officer to be an expert in gunnery, torpedo, navigation, engineering, submarine, and aërial work. Still, there is no reason why the lieutenant should not be an all-round naval officer, having a working knowledge of these various branches but a specialist in one of them. Why cannot the Admiralty wheel into line with the War Office, and have some of their surgeons specially trained in diseases of the eye, ear, throat, radiography, pathology, and bacteriology, and let at least one such man be attached to all the large naval hospitals? If this were known to be the case, there are plenty of men who would take care to get special training in special departments. All this would greatly add to the attractions of the service as well as to the efficient treatment of the injured and diseased.

It is very difficult for the naval surgeons themselves to make such statements as these while they are on full pay and are employed, but we who are Naval Reserve surgeons, and who cannot by any stretch of imagination be considered to have an axe of our own to grind, can well point out the obvious defects of a system in which we at times find ourselves employed. I sincerely hope that all R.N.V.R. surgeons, who cannot fail to make their own observations, will not be backward in doing what they can to point out things which might well be taken into consideration by the authorities, and which would tend to improve the service in our own particular line. Far be it from me unduly to exalt that branch of the service to which I happen to belong, but one cannot help seeing of what great service to the navy the many distinguished men would be who ashore are on the staffs of some of our largest hospitals and medical schools.

Few people outside the navy realize what an enormous strain would be put upon the medical department in the event of hostilities between modern fleets, and it behoves us to be prepared for any eventualities which may occur. It is of the utmost consequence that the Naval Medical Service should be in every way efficient, and if circumstances obtain which tend to make this splendid service unpopular, let such things be remedied as soon as possible, so that in the time of stress we shall feel assured that our gallant seamen are able to receive the very best medical services with which it is possible to provide them.—I am, etc.,

London, W., March 2nd. C. DEVEREUX MARSHALL.

THE WORK OF THE ASSOCIATION.

SIR,—"You may say that these are dreams" were the words Dr. Addison used in his masterly speech on February 6th[1] when describing the ideal position of medicine in the State. The more one thinks of these dreams the less visionary they become. The speaker put into words what probably were the ideals of most of those who heard him; not a few must have wondered how his suggestions were to be carried into practice, and to some probably the thought occurred, "What can the British Medical Association do to help, or will it try to help at all?" To me it seems that our Association has here a wonderful opportunity not only to rouse itself from the lethargy which has followed the great fight, to reunite its factions, and to strengthen itself, but also to take that active and leading part in advancing the science and practice of medicine and promoting the well-being of the community which all men desire, and which its history and its position demand.

There is no doubt among public men a real desire, gradually becoming less vague and less crude, for a more generally available, more completely efficient medical service, and Dr. Addison expressed in telling sentences this hitherto barely articulate wish. He said that we should aim at getting a better organization and co-operation of our existing medical services; earlier and more accurate diagnosis, better combination for help in, and centres for

[1] BRITISH MEDICAL JOURNAL, February 14th.

means of diagnosis; earlier and more effective treatment; increased attractions for the best men; incentives to and facilities for increased efficiency; better means for the prevention of disease; better food, air, homes, and clean living for the people; readier and more adequate means of advising the State; a Ministry of Health; and he also said that we must use both for treatment and prevention that intimate personal relation and trust which exists between medical men and their patients.

Surely there is no item in that programme that would not receive the practically unanimous support of the profession, and which might not be supported by the British Medical Association. If we believe the accomplishment of each of these to be essential, ought we not at once to set to work to achieve our object, and to do it so that it may be carried out in the manner which we think best? There is nothing in that long programme that our Association cannot, if it will, shape, modify, help to bring about, or itself accomplish. This is not the place to show how; what I would urge is the necessity. We must first realize that there is a very rapidly growing movement in favour of a State Medical Service, and it is gaining ground because it is believed by many that only by means of such a service can the above proposals be carried out. We must realize, too, that a State service is already in part established—the Poor Law medical service, the treatment of lunacy and infectious diseases, the public health service, and lately the treatment of school children and the treatment of tuberculosis, are but a part of the greater scheme, a scheme not likely to be completely developed all at once like the National Health Insurance, but bit by bit as occasion and necessity arise, and so more difficult to oppose, but more easy to modify.

We must decide without undue delay what our policy is to be, either a sullen opposition to or an active support of a State Medical Service, or a policy which has for its aim the attainment by other means of the objects which the advocates of a State service desire. A policy which will make every endeavour to render what we have more fit and more effective; a policy that will not attempt to stop the stream of progress, but to direct its course and make it drive the machinery of public wellbeing; not a great fight against what may be an unpopular act of reform, but a great effort for the amelioration of the community that would make that act unnecessary. Such a policy could not fail to obtain the sympathy and the support of the public, the politician, and the statesman.

We, if only we choose, have through our Association the power to direct the course of such progressive legislation as we consider necessary, and at the same time to improve the conditions of our service in its scientific, its economic, and its social aspects.

Such a policy would appeal to all sections of the profession, and now is the time to adopt it. The line that was for a time drawn between the panel and the non-panel practitioner is rapidly being erased; the sectarian spirit that was tainting the whole work of the Association and making it distasteful to many is fast dying out, and a line of action that will work in the interests of every class of medical man and neglect none will not only prevent the loss of energy that results from so many contending forces, but will strengthen our union more than any sort of charter ever could.

No revolution is required in our constitution, but an active constructive policy that will provide for better organization both of members and executive—including the establishment of an Insurance Act department, properly representative of panel practitioners, so that the Association, while protecting their interests and helping them to develop the efficiency of their work, will not be in any way likely to neglect the interests of any of its other members—the better organization and the advancement of our scientific work, and the promoting, supporting, or modifying of any legislation or action that will further our professional ideals.

There must be in our profession men statesmen enough to conduct our affairs so that we may succeed in satisfying our ambition to see our Association a great and beneficent power. Representatives and Councillors are soon to be elected; we who elect have a duty to perform that calls for more than usual thought.—I am, etc.,

CHAS. E. S. FLEMMING.

Bradford-on-Avon, March 1st.

THE SERUM REACTION OF PREGNANCY AND OF CANCER.

SIR,—On reading Dr. Ballantyne's lecture in your pages of February 14th, one cannot help noting that to all appearance he has forgotten the table which, following my work on *The Span of Gestation* (Jena, 1897), he placed upon page 3 of his monumental book on *Antenatal Pathology*, etc., 1904. In this he marked off correctly an embryonic period during which, as many embryological researches show, the trophoblast is actively growing and extending. To this period the term "harmonious symbiosis" cannot be applied. During this time there is no symbiosis, but instead the trophoblast is acting as an antisite, that is, as an organism which feeds upon its host, inverts the products, and does not live as a parasite or commensal—namely, at the same table as the host. The latter is true of the subsequent portion of the gestation, which is a real symbiosis.

Some time ago Professor Abderhalden[1] announced an ingenious and highly scientific test for pregnancy. In this the positive or negative ferment reaction of blood serum upon boiled trophoblastic villi is noted. It is always positive in cases of pregnancy. In the preface (p. viii) he writes: "This observation enables a recognition of pregnancy." When I read this, almost a year ago, I wrote on the margin of the page the words "or of cancer." The test was really the outcome of his finds, that the blood, in order to protect the organism from foreign albumins, produces ferments, which digest them. In the case of trophoblast he admits that its albumins are not *Artfremd* or species-foreign, but regards them as foreign to the blood. In my opinion, based on upwards of twenty years' work upon trophoblast and other asexual structures, this "serum test" depends upon two facts, which act at different periods of the gestation. The first is, that the trophoblast during the first seven weeks of the gestation produces a proteolytic (antitryptic) ferment, which gets into the blood; the second, that during the succeeding portion of the gestation to its close trypsin is produced, in order to digest the trophoblast. In this connexion it is significant that the "serum reaction" is greater beyond the second month than before the close of this. Incidentally be it remarked that he expresses (p. 84) views as to the nature of eclampsia very similar to those announced by me some years ago, and possibly, when his researches lead him to advocate the use of amylopsin in eclampsia, the suggestion will be taken up at once.

In the *Journal of the American Medical Association* (February 7th, p. 437) there is a paper upon this test for cancer from the pen of Dr. Otto Lowy, bearing the title, "A Serum Reaction as an Aid in the Diagnosis of Cancer." Consciously or unconsciously, Dr. Lowy is a disciple of my embryological teachings. He begins his paper by a reference to Abderhalden's test for pregnancy, and then, wonderful to say, he proceeds to apply it to the diagnosis of cancer. As recorded by the author, the success of this was complete. That is to say, from the chemical standpoint Dr. Lowy has furnished a complete scientific confirmation, and a chemical proof, of the truth of the conclusion I drew nearly ten years ago, that cancer was "an irresponsible trophoblast." While not following him in his advocacy of this test as a preliminary to surgical operation, it may be remarked that it would be a far better scientific test of the nature of a growth than microscopical examination. In my opinion, the scientific logical following up of his finds would lead to an advocacy of the enzyme treatment of cancer. Had he done this successfully he might have had much more convincing results than were obtained in 1906–7, for (it took me six years to get them) the injections which I should now advise for this are twenty times as strong as they were in 1906; and while in all probability they are strong enough to cope with any ordinary case of cancer, and properly used are quite painless, there are still others in reserve which are very much stronger, and which will keep indefinitely in any climate.

Dr. Lowy's finds throw, I think, some light on the explanation given by Abderhalden of the *rationale* of his test in pregnancy—that is, during the trophoblastic period. Any proteolytic ferment produced by the human blood must be of the nature of trypsin, but trypsin in the

[1] Emil Abderhalden: *Schutzfermente des tierischen Organismus.* Berlin. 1912. Loc. cit., p. 79.

maternal blood during the first seven weeks of gestation would bring this to a close by destroying the trophoblast. In the test as applied to cancer, a tryptic ferment such as trypsin cannot be concerned, owing to the well-known antitryptic properties of the blood in most, if not in all, cancer cases. To this ferment I gave the name of "malignin." If, however—which is impossible—the ferment in Dr. Lowy's cases were trypsin produced by the organism as a reaction to the cancer, the argument for the use of pancreatic ferments in all cancer cases would be all the more cogent. But what at the moment I am concerned with is that Dr. Lowy has confirmed, and to the hilt, the truth of my conclusion that cancer is "an irresponsible trophoblast." One might state this in another way—that cancer and trophoblast are identical.—I am, etc.,

Edinburgh, Feb. 28th. J. BEARD.

THE NATURE OF PREGNANCY.

SIR,—I fear there is at present little possibility of agreement between my friend Dr. James Young and myself. Quite prepared for argument, I am, however, surprised at the focus of our difference.

Frankly, I know nothing of the "philosophical" aspects of an antigen (to which his letter is largely devoted), but at the same time I incline to the belief that Dr. Young is scarcely in a position to discuss the immunological bearings of an antigen.

I do not wish unnecessarily to repeat the points of my last letter, but I must, I see, again insist that the first question to be settled is the actual occurrence in pregnancy of complement fixation and sensitization reactions. If Dr. Young denies these, it will then be possible to discuss the matter on the basis of his reasons for this denial. But, if he can be brought to admit them, I think he may be safely left to the tender mercies of any and every expert immunologist. He will be told that he fails to draw sufficient distinction between an immunity reaction (which may no doubt be accompanied by very complex hormonal alterations) and a simple hormonal reaction—as is evidenced by his association of antibodies and the secretion of milk. He will be told further that the body is not haphazardly lavish with its production of acquired antibodies, and that such a development has never been known to occur except there be some alien material, living or dead, adversely affecting it.

I see no evidence in Dr. Young's letter that he has appreciated the evidence in favour of a subdivision of the ovum into an antigenic part (the trophoblast) and a non-antigenic part (the fetus). He is of the opinion that in considering the relationship it is better to avoid any argument drawn from details. Quite apart from the question of what is detail and what is not detail, this is surely a strange doctrine to come from one who has done so much invaluable histological work as Dr. Young.

He considers the "local suffusing of the tissues with blood and fluid" to be a ready physiological response and to indicate maternal willingness; but I must ask him in what light he views the same phenomenon when it occurs after the admission of streptococci, let us say, beneath the epithelial surface barrier. The work of Loeb and others, too, on the artificial production of the maternal placenta discounts much of his detailed argument.

Finally, I must ask him to re read my letter, when he will find that the only brief I hold for nomenclature is one which pleads that the condition shall be regarded, and if necessary treated, as an instance of an immunity relationship The words "parasite" and "disease" have merely served as a medium for attempting to express in non-technical language the interpretation which workers in immunology feel bound to apply to certain of the phenomena which they have demonstrated.—I am, etc.,

Liverpool, March 3rd. H. LEITH MURRAY.

SIR,—To many it must be a matter of lament that the type of address given by Dr. Ballantyne in his "The Nature of Pregnancy and its Practical Bearings" is not more frequent in current medical literature. It seems to lift medicine out of its narrow rut, and push its frontiers into other territories.

Of the three broad views given from which we can regard pregnancy—parasitic, morbid, or symbiotic—that the last should be most welcome to Dr. Ballantyne's philosopher-mind is not surprising.

The first two hypotheses are interesting exercises for thought, as providing similar points in phenomena of different categories, but they have no great value from a sociological or moral standpoint, and it is questionable how far their likeness can be pursued with profit to shed light on the management of pregnancy and its deviations from normal. Now it is highly important to society which of these theories the profession openly supports. The devil can quote scripture, and the laity is not inapt at using medical opinion when it serves its purpose. A woman is scarcely helped to regard pregnancy as a sacred office when science tells her she is merely fostering some low form of life, or that she is a museum of morbidity.

The address, though delivered to a medical audience, contains much that is exoteric, dealing as it does in general with "this great matter of reproduction," as well as technical, and is engrossing from its wide range of treatment of the subject, from precipitins and fixation complements to politics and philosophy, and in the last few lines I fancy I can read in a recognition of some world-principle, the Thing-in-itself of Kant, or some Divine end to which the whole world moves.—I am, etc.,

Bow, North Devon, Feb. 22nd. ARTHUR KING.

THE FALLING BIRTH-RATE.

SIR,—Following the lead of the Registrar-General in his report for 1911, Dr. Amand Routh exaggerates the fall in our rate of increase of population. That year was one of high death-rate, and of correspondingly low increase, owing to the very hot summer. So when the exceptionally low rate of increase in 1911 is compared with the exceptionally high rate in the period 1876–85, the impression is given that the population is rapidly becoming stationary. The following table will show how much the birth-rate and how little our rate of increase have fallen in the last twenty-six years.

	Birth-rate.	Death-rate.	Rate of Increase.
1886–90	31.4	18.9	12.5
1891–95	30.5	18.7	11.8
1896–1900	29.3	17.7	11.6
1901–05	28.2	16 0	12.2
1906–10	26.2	14.7	11.5
1911	24.4	14.6	9.8
1912	23.8	13.3	10.5

What I said in my letter, however, was that "it [the falling birth-rate] is causing no fall in the population's rate of increase"; and the only objection which could be offered to this statement would be that the diminished fertility having been mainly among the fitter classes had caused the slight reduction in our capacity for supporting an increase. Table LXXII of the Registrar-General's report for 1910 gives the rates of natural increase in different countries from 1881 to 1910, and shows that the falling birth-rate in Holland, Germany, Denmark, Austria, Hungary, Italy, Switzerland, and Spain has been accompanied by an actual acceleration of their rate of increase. According to Sundbärg's statistics, the same is even the case with Europe as a whole—a remarkable proof that the falling birth-rate causes no diminution in the population's rate of increase, which depends on the power of supporting population and not of producing it.

The improvement in Holland, and in the physique as well as in the number of its inhabitants, is particularly striking; and if we were to follow her example by helping the poor and the diseased to limit their families proportionately to their means and health, we would probably raise our rate of increase, and certainly improve the quality of our race. Now that practically all but the poor and unfit are limiting their families, every fall of the birth-rate will be accompanied by a corresponding fall of the death-rate; and this will go on until our death-rate reaches that of a sufficiently-fed community—namely, about 9 per 1,000 per annum as in New Zealand. As we

are able to sustain a rate of increase of at least 10 per 1,000 per annum, it may confidently be asserted that our death-rate will continue diminishing, and our population go on increasing by over 1,300 a day, until the time when our birth-rate will have fallen to 19 per 1,000 per annum. Dr. J. H. Garrett's argument that a declining birth-rate must shortly mean a rising death-rate is based on the mistaken assumption that longevity will remain the same.

Having become convinced that poverty, prostitution, and venereal disease can only be reduced to the minimum by encouraging early marriage and small families, I feel it to be most urgent—on humanitarian, eugenic, and political grounds—that we should take up the subject in a scientific and disinterested spirit worthy of our profession; and I earnestly hope that the many colleagues who are of the same opinion will support this appeal. In conclusion, I would like to draw attention to the article on the falling birth-rate by Dr. J. A. Rigby of Preston in the February number of the *Nineteenth Century*.—I am, etc.,

London, S.W., March 2nd. BINNIE DUNLOP, M.B., Ch.B.

SIR,—In the letters on the above subject in your issue of February 28th I see no reference whatever to emigration as a causal factor.

As a general practitioner I may say that in this district I have seen no evidence of prevention of conception amongst the working classes, who are those chiefly responsible for the increase of population.

On the other hand, as medical officer of health, I have seen a population of 15,181 according to the census of 1901, diminished to 14,129 in 1911. During this period the births in the district exceeded the deaths by 1,852; yet there has been a diminution of population.

Births and Deaths for the Ten Years, 1901-10.

	Births.	Deaths.
1901	437	226
1902	407	215
1903	430	189
1904	409	214
1905	407	202
1906	414	175
1907	366	204
1908	322	109
1909	316	178
1910	343	207
	3,851	1,999

It will be noticed from the above figures that the births suddenly diminished when the tide of emigration began in 1907, from 414 to 366, 322 and 316 in the following years. This, I contend, was practically solely due to emigration.

One cannot obtain from shipping agents in the neighbouring towns the much-to-be-desired returns of the ages of all emigrants and the parishes from which they went. It would be invaluable if one could.

I do not wish to contend that unnatural causes have no relation to falling birth-rate in England, but that emigration is the most potent factor in producing it.—I am, etc.,

PRIDEAUX G. SELBY,
Medical Officer of Health Faversham Rural District.

Teynham, Kent, March 1st.

THE PATHOLOGY OF CANCER.

SIR,—In the JOURNAL of February 21st is an article by Mr. D. A. Crow, in which he throws out a suggestion as to the etiology of cancer. His idea is that it is due to an anaërobic parasite, which therefore tends to flourish in tissues with a poor arterial blood supply, such as scar tissue. I thought the parasitic theory of cancer was dead. Cancerous tissue is no more parasitic than the ovum which derives its nourishment from the stroma in which it lies. It comes from within the organism, not from without, and observers are now looking more to bio-chemistry to explain its origin. Even the changes which occur in malignant tumours on exposure to radium are being attributed to chemical action. It is only, however, when the cancer cell is in contact with certain constituents of the blood or lymph that these degenerative changes can take effect (Clifford Morson).

I have elsewhere[1] advanced a theory which will explain better than that of Mr. Crow the relation of age and chronic irritation to malignant new growth. Briefly, it is this: persistent irritation results in the local production of myriads of young and active cells. What is it that keeps these cells from over-multiplying? How is it that the supply is just equal to the demand? Because there is present in the organism a growth regulator, a chemical substance, or rather a combination of chemical substances, which governs the growth and development of the cells. This regulator of cell growth is apt to become deficient after middle age, owing to senile degeneration of the glands responsible for its production. In old age, for instance, we find evidences of deficient thyroid secretion in the inactivity of the nervous system, the yellow appearance and shrivelling of the skin, and the loss of its appendages; the defective nutrition of the osseous system and the gradual return to a state of infantilism indicate failure of the pituitary, and the loss of stimulation of the heart and blood vessels and of the sympathetic nervous system point to diminished suprarenal secretion. Life and growth are chemico-physical phenomena based on metabolism of protoplasm, and undoubtedly the hormones of the ductless glands, by means of their chemical activities, have a profound influence on metabolism, and therefore on growth. Perfect metabolism means perfect health; cancer is an effect of disordered metabolism. Unfortunately, we are not yet acquainted with all the different phases of the chemical activities of the living cell, nor with the finer disorders of the ductless glands and the disturbances of metabolism thereby caused. When these difficulties are got over, as I suppose they must be in time, we shall be very near the solution of the cancer problem. We shall "rule by obeying Nature's powers."—I am, etc.,

Wigan, Feb. 25th. J. THOMSON SHIRLAW.

[1] *Liverpool Medico-Chirurgical Journal*, July, 1913.

CANCER OF THE RECTUM.

SIR,—Mr. Percival Cole and Mr. Sampson Handley have commented on statements made in the article on cancer of the rectum published in the BRITISH MEDICAL JOURNAL of January 31st, 1914, and some answer appears to be called for from the writer of the article in question.

Mr. Cole protests that a recent paper of his was cited to support the view that complete abdomino-perineal excision of the rectum cannot be considered a necessary procedure. No such view was put forward in the article. What was actually stated was that operations less extensive than a complete abdomino-perineal amputation had not yet been proved by pathological anatomy to be indefensible. Whatever investigation on the extramural spread of the disease may show in the future, this plain statement of fact unquestionably represents the position at present. The view held as to extramural extension was sufficiently indicated by the references to "the increased security against recurrence which a pelvic dissection gives," but as the object of the article was to summarize demonstrated facts and not to plead for any particular procedure this view was not emphasized. This lack of emphasis is perhaps responsible for Mr. Cole's misreading of the argument.

Mr. Handley says that he has not made any general statement that the disease in an early stage disseminates widely in lymphatic plexuses in the bowel wall. In his Hunterian Lectures[1] Mr. Handley stated that his examination of a single specimen of rectal cancer showed that "permeation occurs in rectal cancer," that "permeation may extend very widely in the mucous plexus," that "in view of the extent of mucous permeation revealed, excision of a considerable length of the bowel above the growth and of the bowel below down to and including the sphincters is evidently a right practice." Whether the first two of these quotations make general statements or not is arguable, but the deduction drawn in the third is certainly general. If the first two statements are not to be considered general, the deduction is illogical.

The writer does not derive any satisfaction from an argument on the exact meaning of words with men like Mr. Cole and Mr. Handley, who are doing and have done work which is placing the pathological anatomy of this disease on a sure basis, but he cannot admit the misstatements alleged.—I am, etc.,

February 23rd. THE WRITER OF THE ARTICLE.

[1] BRITISH MEDICAL JOURNAL, April 16th, 1910.

TREATMENT OF LEUKAEMIA.

Sir,—In the British Medical Journal of February 14th, p. 374, your reviewer discusses the treatment of leukaemia especially by the benzol method of treatment, and in the same number, on page 369, it is recorded that Dr. Rolleston and Mr. E. J. Boyd at the Royal Society of Medicine showed a case of lymphatic leukaemia which had received the same treatment.

I should like to draw the attention of those interested in this method to the case treated by benzol brought before the Clinical Section of the Royal Society of Medicine by Dr. Parkes Weber at the December meeting. Dr. Weber treated this man from August 15th to October 20th last, but as the result was quite unsatisfactory with a gradual diminution in red blood cells and a gradual increase in white ones, Dr. Weber handed the case over to me for *x*-ray treatment.

I commenced Roentgen-ray treatment on October 21st, continuing once a week afterwards. On October 21st, October 28th, and November 4th the *x* rays were applied directly over the enlarged spleen anteriorly. On November 11th and November 18th they were applied to the spleen from the back and left side. On November 25th they were applied over the sternum, femora, and long bones of the arms. On December 2nd they were applied again directly to the spleen anteriorly. At each sitting a full Sabouraud pastille dose was given. The hardest kind (as most penetrating) of *x*-ray tube was used, the penetration being 8 to 9 on the Benoist scale: the rays were applied through 2 mm. of aluminium so as to filter out any soft rays left.

Although the case may not be an actual cure, I am quite sure that the properly applied *x*-ray treatment of leukaemia is a more effective method of controlling the disease than any other at present known. The essence of the treatment consists, to my mind, in the proper filtration of the *x* rays for this kind of disease. The *x*-ray tube must be one of high vacuum, and any soft rays must even then be filtered out through a thick layer of aluminium. I have had several cases in which the results have been eminently satisfactory, and I know that the disease is not quite so fatal as is sometimes assumed, as a gentleman who was suffering from the worst type of the disease over six years ago, and who was seen by two eminent physicians, whose prognosis was very bad, is alive and well at the present moment.

I believe the *x* ray applications have a distinct influence in destroying the erratic formation of eccentric white cells. *Pari passu* with the limitation and destruction of these cells, which appear to be the origin of the toxaemia produced, there is an increase of the red blood cells and a rapid improvement in the condition of the patient.—I am, etc.,

London, W., Feb. 17th. James Metcalfe.

THE ADVERTISEMENTS OF THE "FAMILY ENCYCLOPAEDIA OF MEDICINE."

Sir,—I wish through the medium of your columns to express my deep regret that while I was out of town ill the publishers of my *Family Encyclopaedia of Medicine*, in an excess of zeal to make all due acknowledgement of the assistance a large number of my friends and acquaintances in the profession have given me in the way of revising and correcting special articles in the book, have advertised their names in a manner most contrary to the ethics of the profession.

It is scarcely necessary to say that both I myself and those whose assistance I have to acknowledge in my preface were quite unaware that their names were to be advertised in this fashion.

I have also taken steps to assure myself that in the future, when drawing up advertisements for the *Family Encyclopaedia of Medicine*, the publishers will have due regard to the ethics of the medical profession.—I am, etc.,

Chelsea, S.W., March 2nd. Hugh H. Riddle.

PNEUMONIA: ITS NATURE AND TREATMENT.

Sir,—As an honest man I must yield to the superiority of Mr. Arthur J. Mathison's results. I never had 50 consecutive cases of pneumonia without a death.—I am, etc.,

Bletchley, March 2nd. P. B. Giles.

MEDICINE IN INDIA.

Sir,—To-day in India much interest is expressed in the daily and other journals about a question which has already received attention from the medical profession at home, and which is a frequent subject of conversation among doctors in India. Briefly put, the question is this: Is it to the best interests of the people of India—native and European—that the medical care of the community should be confided more frequently than it now is to practitioners who are natives of the country, and who have received their professional training in India?

In working out an answer to this question it must be kept in mind that at present, and to a very large extent, the members of the Indian Medical Service are entrusted by the Government of India with the medical care of the people of India and of the Europeans resident among them. To any one thinking about it, several points, each more or less important and demanding consideration, will present themselves.

There is, however, one consideration which I venture to urge is of overwhelming importance in the settlement of this question, and which, it seems to me, outweighs all the other considerations put together, and it is this: The medical care of every community in every country ought to be entrusted to the best available medical practitioners. No one, I venture to say, will dispute the assertion that in India the medical practitioners best able to deal with disease from the point of view of its treatment and its prevention have been educated in European medical schools, and hold from them qualifications to practise medicine. Until in India the professional training and qualifications to practise medicine of the ordinary practitioner are brought up to the present European standard it would surely be most blameworthy to entrust the care of the health of Indians and Europeans to a body of medical practitioners who, for years to come, cannot be placed on an equality with practitioners of European training.

Until practitioners can be found in India who are as well qualified to meet the emergencies of medical work as are the members of the Indian Medical Service, it would be grossly unfair to the native and European populations of British India to entrust the care of the public health to practitioners less well fitted to guard it than those to whom this important duty is now confided.

The decision at which the Government at home may come touching this gravely important question must have far-reaching consequences. The evidence of the widespread prevalence of preventable disease in India is of overwhelming force. In this connexion may be mentioned the prevalence of malaria, tuberculosis, small-pox, typhoid fever, cholera, diseases of the skin, diseases of the eye, rabies, and of many other preventable diseases. In view of all this it must occur to any one who gives thought to the subject that this is not the time in which the British Government should entertain the proposal to hand over, in any measure, the care of the public health of British India to practitioners who are not possessed of the best available professional qualifications.

When one spends even a few months in India one begins to realize the tremendous responsibilities which rest upon the British people and the Government both at home and in India in the task they have undertaken in their rule over the destinies of the hundreds of millions of Indians, the vast majority of whom are practically altogether dependent for their well-being and well-doing upon good government. As a physician it has lately, during my stay of a few months in India, struck me most forcibly that in matters medical we at home do not realize the vast amount of good that could be done among the people of India by a sufficient number of highly trained and trustworthy medical practitioners such as we have, though in very insufficient numbers, in the members of the Indian Medical Service. It is almost impossible to grasp the fact that there are people who now seem to advocate the lowering of the standard of qualification for the proper performance of medical duties in the service of India and its inhabitants. It is the raising, not the lowering, of that standard which should be seriously considered both by the Government at home and in India.—I am, etc.,

Calcutta, Feb. 12th. G. A. Heron.

Obituary.

EDWARD SKINNER, L.R.C.P., M.R.C.S.,

FORMERLY LECTURER ON OSTEOLOGY IN THE UNIVERSITY OF SHEFFIELD.

By the death of Dr. Edward Skinner, on February 12th, the profession in Sheffield has lost one of its most popular members. Dr. Skinner, who came of an old Sheffield family, was the son of Dr. William Skinner, who practised in Red Hill, and who was at one time connected with the old medical school. Dr. Edward Skinner, who was 66 years of age, received his education at the Sheffield Medical School and at University College, London. He obtained the diploma of L.R.C.P.Edin. in 1870, and was admitted a Member of the Royal College of Surgeons of England and a Licentiate of the Apothecaries' Society in 1871. After spending some years with his father, he started practice on his own account in Devonshire Street, and soon acquired one of the largest working-class practices in Sheffield. In 1883 he joined the staff of the old medical school as Lecturer on Anatomy, and for many years Dr. Skinner and the late Mr. Simeon Snell divided the lectures on anatomy between them. In 1896 the Arthur Jackson Chair of Anatomy was founded and filled by Dr. Christopher Addison, but Dr. Skinner continued to lecture on osteology until his health began to fail three or four years ago. He was one of the old school of general practitioners who in addition to carrying on practice under even less favourable conditions than at present, also contrived to keep going in their midst a medical school. To lecture at nine o'clock three mornings in the week during the winter months was no light undertaking for a man who had what was probably the largest visiting list in the city, in addition to having his nights disturbed by a large midwifery practice. There is now in Sheffield an efficient Medical Department of the University of great value to the profession in the district, who owe a deep debt of gratitude to men like Edward Skinner who kept the school alive during the dark period of the Eighties and the early Nineties. His great popularity was due to his personal qualities: he was a man of simple, straightforward character, who was always on good terms with his colleagues. He ever looked upon the best side of men and things. With the poor of the city he was extremely popular, for they never sent for him in vain, and we believe that he never sued a patient during the whole of his career. He was a member of the British Medical Association and of the Sheffield Medico-Chirurgical Society. He took a keen interest in cricket, and was a member of the Yorkshire Cricket Club. In politics he was a Conservative, in religion a Churchman.



EDWARD SKINNER.
(Photograph by G. T. Y. Dickinson, Sheffield.)

A memorial service was held at St. George's Church Sheffield, on February 14th, and was attended by a large number of representative medical men, while the streets outside were filled by the poor of the neighbourhood.

His loss will be regretted by all who knew him, and this includes almost the whole of the profession in Sheffield.

JAMES FERRIER CLARKE, L.R.C.P., L.R.C.S.I.

DR. J. FERRIER CLARKE, who, until a few years ago was one of the best-known practitioners in South London, died at Canterbury in January at the close of a somewhat prolonged illness.

The eldest son of Mr. Peter Rae Clarke, of Willow Park, Dublin, James Ferrier Clarke was born in 1840, and received his general education at Bromsgrove and Trinity College, Dublin. His first intention was to enter the army, but a distinct bent in his composition towards science induced him finally to enter the profession of medicine. His career as a medical student was one of distinction, the honours that he won including the Cussack medal and the senior exhibition at Steevens' Hospital, Dublin. In 1861 he became L.R.C.S., L.R.C.P.I., and in the following year, after a period of study at the Rotunda Hospital, received also the licence in midwifery; in addition, he pursued special courses in venereal diseases and insanity. A year or two later he came to England, and eventually obtained appointment as medical officer of health of Farnworth in Lancashire, being the first occupant of that post.

The greater part of his professional work, however, was done at Mitcham, in which he settled at a time when it was still practically in the country, and where he remained in practice for over thirty years. He held there several appointments, including the surgeoncy to the metropolitan police and the post office, and the reputation that he acquired often led to his services being sought by residents in other areas. His success was due to his possession of much clinical acumen in the diagnosis and treatment of disease, and to the thoroughness with which he was ever ready to devote himself to the interests either of his patients or his private friends. This latter quality was evidenced even when he was a student, for on one occasion he saved the life of a hospital patient by the prompt oral suction of a blocked tracheotomy tube. From Mitcham he moved to Balham some six or seven years ago, after a long illness which made him feel unfit to work as hard as formerly, and there he maintained for five years a home for residential patients. Last September his health again failed, and after several changes of quarters he went to Canterbury. His first failure in health was due to the long strain thrown upon him by circumstances connected with the South African war; four of his family were at the front, his youngest daughter as a nurse from beginning to end of the war, and three of his sons in different regiments. Two of the latter died during the war, one having been a prisoner among the Boers for a long period. Dr. Ferrier Clarke was twice married, his second wife, to whom he was married in 1882, being a daughter of the late Mr. Frederick Gale, of Mitcham. It was in that town that his burial took place, his funeral being attended by a large number of his old friends and patients.

DR. THEODORE MAXWELL, who died at Woolwich on February 13th, was the son of the Rev. F. Maxwell, and was born at Barnsley in March, 1849. He received his early education at the Felstead Grammar School and at a private school at Enfield. Afterwards he went to University College, London, and graduated B.Sc.Lond. in 1868; two years previously he had entered King's College, Cambridge, and in that university he graduated B.A. in 1870, M.B. in 1872, and M.D. in 1876. In 1882 he took the D.P.H., and in 1873 became F.R.C.S.Edin. He was also a Fellow of the Chemical Society. After acting as house-physician at Addenbrooke's Hospital, he became interested in missionary work, and in 1874, accompanied by his wife, he went to Srinagar, Kashmir, where the Maharajah had made a grant of land for a hospital; its erection was commenced in 1875, but Dr. Maxwell's health broke down, and he had to return to England. He began to practise in Hanwell, and in 1878 settled at Woolwich, where he continued to practise until his retirement. Dr. Maxwell was a remarkable linguist, and in 1890 published a most laborious work entitled *Terminologia Medica Polyglotta*. In this he selected French as the key language; the equivalents were given in Latin, English, German, Italian, Spanish, and Russian, and conversely the Latin, English, German, Italian, and Spanish terms were translated into French or

into French and English. He was also very much interested in printing, and in 1895 founded the Amateur Printers' Association, of which he became honorary secretary. Dr. Maxwell's death was due to bronchitis following influenza. The memorial service at St. John's Church, Woolwich, was attended by a large number of persons, and included representatives of institutions in which Dr. Maxwell was interested.

DR. ROSWELL PARK, whose name is well known from his association with the institution for cancer research at Buffalo, died suddenly at his house in that place on February 15th, in his sixty-second year. He was born in 1852, and after graduating B.A. in 1872 and M.A. in 1875 at Racine College, Wisconsin, studied medicine at North-Western University, where he took his doctor's degree in 1876. After filling the appointment of demonstrator of anatomy at the Women's Medical College of Chicago, he became adjunct professor of anatomy and later professor of the same subject at his own Alma Mater. He was then lecturer on surgery in Rush Medical College, Chicago, and in 1883 was appointed professor of surgery in the University of Buffalo. He was also surgeon to the Buffalo General Hospital. He was one of the surgeons who were called to attend Professor McKinley when he was shot in 1901. Dr. Roswell Park was associate editor of the *Annals of Surgery*, and the author of several books, including two works on modern surgery, a history of medicine, and a volume of essays.

MAJOR EDWARD DORSET FARMAR-BRINGHURST, F.R.C.S., R.A.M.C. (ret.), eldest son of the late Lieutenant-Colonel W. M. Farmar, of Dorset Lodge, Bournemouth, died at St. George's Hospital, London, on January 30th, after an operation. He was a student at St. George's Hospital and at Edinburgh, and took the diplomas of L.R.C.P.Edin. in 1877 and F.R.C.S.Edin. in 1880. In 1877 he went to Australia as medical officer to a party of seven, amongst whom was the late Sir John Coode, who had been consulted by the Government of Victoria as to the possibility of cutting a canal from Melbourne to Sandridge at the head of Hobson's Bay, to carry off the floods of Yarra Yarra River. Major Bringhurst went to the Ballarat Gold Diggings, and inspected the Penal Prison at Coburg built on the star principle, and later the party went on to Tasmania and New Zealand. Afterwards he served in India, and in 1882, when attached to the Royal Artillery at Woolwich, volunteered for active service in Egypt in the Arabi rebellion; after the bombardment of Alexandria in July, he was attached to the cavalry brigade at Ismailia. He received the medal and Khedivial star. In 1833 he went to South Africa, and in 1888 was in charge of a field hospital in Zululand; he was present at the operations against Dinizulu, and saw the last shot fired in connexion with the closing scene of the Zulu rebellion. In 1889 he went to India from Ireland, and served in the Madras Presidency at Secunderabad; at Bangalore, and at Poonamallee, near Madras, a large invaliding dépôt to which all invalids from the entire Presidency are drafted, and a most responsible post. In 1891 he was transferred to Upper Burma in medical charge of Bhamo on the Chinese Frontier. He was afterwards in charge of Shwebo, and received the thanks of Brigadier-General G. B. Wolseley, C.B., for his care of the sick and wounded from the Wuntho Column, after the operations against the Swaban of Wuntho. In 1895 he was on the Malabar Coast of India, and organized the medical arrangements for British troops sent from Wellington to the Neilgherries against the Moplahs in the Malapuram district. He returned to England in 1896, and was stationed in the North-Eastern District with head quarters at York, as Company Officer, No. 8 Company, Medical Staff Corps, distributed over fifteen stations extending from Berwick-on-Tweed to Leicester. He retired in 1898. He was elected a Fellow of the Royal Geographical Society in 1899.

THE school authorities of Montclair, New Jersey, have issued orders prohibiting the teaching of sex hygiene in the public schools. The teachers are also forbidden to lend or to offer to lend books on this subject to their pupils.

The Services.

ROYAL ARMY MEDICAL CORPS.

EXAMINATION FOR COMMISSIONS.

As announced in the advertisement columns, an examination for not less than twelve commissions in the Royal Army Medical Corps will be held on July 29th. Applications to compete should be forwarded to the Secretary, War Office, by July 20th.

Universities and Colleges.

UNIVERSITY OF SHEFFIELD.

THE Council, at its meeting on March 2nd, made the following appointments: (1) Mr. L. Southerns, B.A.Camb., B.Sc.Lond., to the post of Assistant Lecturer and Demonstrator in Physics, in succession to Dr. R. T. Beatty, resigned. (2) Mr. A. Pringle Jameson, B.Sc.Aberd., to the post of Assistant Lecturer and Demonstrator in Zoology, in succession to Mr. T. J. Evans, resigned.

UNIVERSITY OF BIRMINGHAM.

THE number of registered students in the university amounted to 1,013 during last session, and the following table gives details of their distribution, and compares the numbers with those of the two previous years:

	1912-13.	1911-12.	1910-11.
Faculty of Science	220	234	239
Faculty of Arts	279	294	281
Faculty of Commerce	36	28	28
Faculty of Medicine	79	93	85
Total matriculated	614	649	633
Unmatriculated	399	383	384
Total	1,013	1,032	1,017

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

The Dr. Jessie MacGregor Prize for Medical Science.

APPLICATIONS are now invited from medical women who are either graduates of Edinburgh University or holders of the triple qualification diploma for the above prize, which is of the value of £75. The prize, which is offered triennially, will be awarded to the candidate who presents the best record of original work in the science of medicine, published or unpublished, during the last three years. Applications should reach the Convener of Trustees, Royal College of Physicians, Edinburgh, not later than May 1st, 1914. The award will be made in July.

Medical News.

AT the recent examination for sanitary inspectors under the Public Health, London, Act, 1891, held by the Sanitary Inspectors' Examination Board, seventeen passed, of whom eleven were women.

THE Schorstein Memorial Lecture will be delivered by Dr. Henry Head, F.R.S., in the anatomical theatre of the London Hospital Medical College on March 19th and 26th, at 4.15 p.m., the subject selected being the clinical aspects of syphilis of the nervous system. The attendance of members of the profession is cordially invited.

SIR EDWARD SCHÄFER, Professor of Physiology in the University of Edinburgh, will give the foundation lecture at the twenty-first anniversary meeting of the University College Union Society at the College, Gower Street, on Thursday, March 19th. The lecture will deal with certain desirable adjuncts to a university education.

MR. WALDORF ASTOR, M.P., will preside at a meeting of the Royal Sanitary Institute at 90, Buckingham Palace Road, on Tuesday next, at 7.30, when a discussion on social conditions in relation to public health will be opened by Dr. Hilda Clark, who will deal with tuberculosis, and Dr. F. E. Fremantle, who will deal with the housing question.

A COURSE of clinics is being held at the Royal Hospital for Diseases of the Chest Medical School, City Road, E.C., during the month of March. The clinics are conducted in the various departments—cardiac, laryngological, *x* ray, dental, and the prevention of consumption. Further particulars can be obtained on application to the Dean at the hospital.

AT a meeting of the Manchester Fellows of the Royal College of Surgeons, held on February 25th, it was resolved that it is advisable that a member of the Manchester Medical School should be a candidate for the next ensuing vacancy on the council of the college, and Professor W. Thorburn, Senior Surgeon to the Royal Infirmary, was asked and agreed to be nominated.

THE line of the total eclipse of the sun in August next crosses Norway, and tourists by the R.M.S.P. ocean yachting steamer *Arcadian* will have an opportunity of witnessing the eclipse, for on August 21st, the date of the eclipse, the vessel will be in the vicinity of the Alsten and Torghatten Isles, which are on the line of the central eclipse.

A CONFERENCE on the subject of measures which might be taken for the prevention or mitigation of summer diarrhœa among infants in the districts surrounding the institution will be held at the Queen's Hospital for Children, Hackney Road, Bethnal Green, on Wednesday next. The chair will be taken by the Earl of Shaftesbury at 8.30 p.m.

THE next Oxford Ophthalmological Congress will assemble at Keble College on the evening of Wednesday, July 8th, and will meet on the two following days. A discussion on the Workmen's Compensation Act in injuries of the eye will be opened by Mr. William Robinson, F.R.C.S., of Sunderland. Members willing to show cases or specimens, or to give demonstrations, are requested to communicate with the Honorary Secretary, Mr. Sydney Stephenson, 33, Welbeck Street, London, W.

The second congress of the French Association of School Doctors will be held this year at Lyons on July 30th and 31st and August 1st. The questions proposed for discussion are: The teaching of hygiene in primary schools in France and in foreign countries; the teaching of sex hygiene in schools; the organization of the medical service in *lycées* and secondary schools; baths in schools. All communications relative to the congress should be in the hands of Dr. Weigert, 3, Cours Morand, Lyons, on or before July 5th.

A THREE months' course of lectures and demonstrations in hospital administration for the Diploma in Public Health will be given on Mondays and Thursdays at 5 p.m., beginning on Monday, April 6th, at the North-Western Hospital, Hampstead, N.W., by Dr. J. MacCombie, medical superintendent, and at the Grove Hospital, Tooting, by Dr. J. E. Beggs, medical superintendent. The fee for the course is £3 3s. Further particulars can be obtained on application to the Clerk to the Metropolitan Asylums Board, Embankment, E.C.

THE Radium Institute of Philadelphia was incorporated on February 10th under the laws of the State of Delaware to "build, maintain, and operate hospitals and institutions for the treatment of cancer and other diseases." The capital stock is £50,000, and it is said that arrangements have been made for the supply of all the radium that will be required when the institute is opened. A site has been found and building will be begun within the next few weeks.

THE Finsbury and Islington Medical Societies are giving a dance at Princes Galleries, Piccadilly, W., on Wednesday, March 25th, at which all medical men and their friends will be welcome. Tickets—price 7s. 6d., including a buffet supper—may be obtained from any of the members of the societies, or from the Honorary Dance Secretaries, Dr. J. N. Glaister, 96, Upper Street, Islington, N.; Dr. J. E. Jackson, 15, Huntingdon Street, Barnsbury, N.; or Dr. W. F. Roe, 12, Northampton Square, E.C.

IT has been arranged to hold a course of instruction in venereal diseases for post-graduates and students at the London Lock Hospital, commencing in April and lasting for three months. It is intended to hold three such courses every year; each course will consist of clinics on four days a week, twelve lectures, and practical demonstrations in the various methods of treatment. The fee for the three months' course is 3 guineas. Further particulars can be obtained from Mr. J. E. R. McDonagh, F.R.C.S., at the hospital, 91, Dean Street, Soho. Members can arrange to obtain instruction in pathological work from the pathologist.

AT the annual dinner of the West London Medico-Chirurgical Society on February 19th, the special feature of the evening was the presentation of the society's triennial gold medal to Professor Arthur Keith. The other official guests included the respective presidents of the Royal Society of Medicine, of the Medical Society of London, of the Harveian and of the Chelsea Clinical Societies, together with Mr. Betteridge, secretary of the West London Hospital, at which the society's meetings are held, and Dr. Mott. In proposing the toast of the West London Medico-Chirurgical Society, the President, Dr. F. S. Palmer, spoke feelingly of the late Mr. Keetley, to whose support the society during the earlier years of its existence was greatly indebted. In responding, Colonel T. M. Hendley dwelt on the great advantages the society offers to those occupied in general practice in West London. The evening ended with a toast to the Chairman, which was proposed by Dr. F. de Havilland Hall, and duly acknowledged.

THE following fifteen candidates have been selected by the Council of the Royal Society to be recommended for election into the society: Edgar J. Allen, Director of the Plymouth Laboratory of the Royal Marine Biological Association and editor of the *Journal* of that association; Richard Assheton; Geoffrey T. Bennett, Lecturer in Mathematics, Emmanuel College, Cambridge; Rowland H. Biffen, M.A., Professor of Agricultural Botany, Cambridge; Arthur E. Boycott, M.D.Oxon., Professor of Pathology in the University of Manchester; Clive Cuthbertson; Henry H. Dale, M.D.Camb., Director of the Wellcome Physiological Research Laboratory, London; Arthur Stanley Eddington, Plumian Professor of Astronomy at Cambridge; Edmund J. Garwood, M.A.Cantab., Professor of Geology, University of London (University College); Thomas Henry Havelock, M.A., D.Sc., Lecturer in Applied Mathematics, Armstrong College, University of Durham; Thomas Martin Lowry, D.Sc.Lond., Lecturer in Physiological Chemistry and Electro-Chemistry, City and Guilds London College; D. Noel Paton, M.D., Regius Professor of Physiology, University of Glasgow; Siegfried Ruhemann, M.A., University Lecturer in Organic Chemistry, Cambridge; Samuel Walter J. Smith; and Thomas Edward Stanton.

THE Halifax Division of the British Medical Association and the Halifax and District Medical Society combine their organizations in the arrangements for the annual medical dinner, which took place this year on February 19th. This was the first public dinner in the reconstructed and modernized White Swan Hotel, the renovation of which meets a long-felt want in the town. The attendance was excellent, over seventy being present. Among the guests were Professor Wardrop Griffith (Leeds University), Dr. Oldfield (Leeds), Dr. Basil Hughes (Bradford), the three special lecturers for the current session of the Halifax and District Medical Society; Dr. Cairns (President of the Huddersfield Medical Society), Dr. Sykes (President of the Bradford Medical Society), and Mr. J. F. Hirst (President of the Royal Halifax Infirmary Board) were also present. In addition to the usual loyal toast only two others were given. "Our Guests" was proposed by Dr. Councillor Branson and responded to by Professor Wardrop Griffith. The health of "The Chairman" (Dr. Hughes, President of the Halifax and District Medical Society) was proposed by Dr. Drury (Chairman of the Halifax Division of the British Medical Association). A most enjoyable programme of music followed. Mr. G. F. Barnett, of Liverpool, a tenor of exceptional quality, and Mrs. Drury (who accompanied throughout) contributed songs and duets. Mr. A. Dixon enlivened the proceedings with inimitable humorous songs and recitals.

A GREAT deal of prominence has been given during the last few days to the change which certain of the composite insurance offices have made with regard to insurance in respect of motor cars. The Medical Insurance Agency has given careful attention to motor car insurance, and for some years has been able to recommend forms of policy which cover points to which prominence is now given. Certain improvements were made at the beginning of the year, including insurance against personal accidents to the insured and the extension of medical expenses benefit to include passengers. Further, it was arranged to make no extra charge while the car was on the Continent, and to extend the legal defence clause. The agency has recommended, though not exclusively, the "Doctor's Policy" comprising all the ordinary benefits, including those mentioned above, and in addition compensation during repair. Motor car owners who have previously held this policy have now the choice of continuing as before under the operation of the clause by which a rebate of 25 per cent. was allowed if no claim had been made during the operation of the policy, or of taking out a new policy including the additional benefits in which the no-claim rebate would be reduced to 10 per cent. In consequence of the action taken by the composite companies the rates under the doctor's policy have been reduced to meet the competition. Further particulars can be obtained from the Secretary of the Medical Insurance Agency, Mr. Guy Elliston, 429, Strand, W.C. The agency is in a position to effect insurances on advantageous terms with any office.

Letters, Notes, and Answers.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

OXALURIA.

R.A.M.C. would be grateful for suggestions for the treatment of an officer, aged 53, who suffers periodical attacks of renal colic. Oxalates are present in the urine, and our correspondent wishes to know what articles of diet, especially fruits, he should avoid. There is no suspicion of renal or vesical calculus at present.

ERYTHROMELALGIA.

DELTA asks for suggestions on the treatment of a case of erythromelalgia of two and a half years' duration. The part affected is the left foot. Massage with the high-frequency current gives some relief to the pain, but the condition has been practically stationary for the last year. Galvanism and hot air did harm. Trinitrin, thyroid extract, and calcium lactate, and a vegetarian diet without tea or coffee have been tried without effect.

PAROXYSMAL TACHYCARDIA.

A. W. asks for suggestions for the alleviation of severe attacks of paroxysmal tachycardia. The pulse rises to over 200, and distressing nausea and retching accompany the attacks, which last from three to seven hours. Would there be any increased danger of heart failure by placing the patient under chloroform or by giving morphine? Hitherto he has found hypodermic injections of morphine gr. ¼ with atropine give some relief.

MOTOR-CAR TRAVELLING FOR YOUNG CHILDREN.

CUSTOS INFANTUM writes: I should like to know what is the experience as to the evil effects, if any, produced on young children by taking long journeys in open cars. The question is of importance now that travelling by road is adopted for even long distances in preference to going by rail. I have been diffident in expressing an opinion when consulted on this point, and also hesitate about taking my own children some hundreds of miles by road when on holiday. The effects might, I think, be considered as it affected children under 5 years, from 5 to 10 years, and above that age.

LETTERS, NOTES, ETC.

VIBRATION AUSCULTATION AS AN AID TO PHYSICAL DIAGNOSIS IN THORACIC AND ABDOMINAL DISEASE.

DR. S. H. HABERSHON (London, W.) writes: In the letter on the above subject that you were good enough to publish in the JOURNAL of February 28th, I mentioned the name of Dr. Walter Kidd as the friend who was kind enough to call attention to my lecture on the use of the tuning-fork. I should have said Dr. Leonard J. Kidd, and I owe an apology to both gentlemen for the lapse of memory.

TOWARDS THE RECOGNITION OF THE IMMEDIATE CAUSE OF CANCER.

MR. J. JACKSON CLARKE (London) writes: During the past twenty-one years, in spite of improvements in treatment, the death-rate from cancer has not fallen. According to a recent computation (R. Hingston Fox, *Lancet*, January 17th, 1914), malignant disease accounts for one in nine deaths at and after the age of 25, and in women between the ages of 40 and 60 for one death in every five. To these must be added the numerous deaths in children from sarcoma. These serious considerations lead me to recall to your memory that on the 20th of May, 1893, there was published in the BRITISH MEDICAL JOURNAL the full report of a committee on a number of observations and conclusions which I had brought before the Pathological Society of London. That report had an immediate and lasting effect on the course of investigation into cancer in all the civilized world. Two years ago was published a book of mine which is an appeal to those who are responsible for the direction of cancer research in this country to reconsider the possibility of cancer being caused by protozoa. Having had no response to this appeal, I now feel it to be my duty to offer to show once again before what represents the same society the same specimens of cystic ureteritis, squamous-celled epithelioma, cancer of the breast and uterus, etc., sarcoma of the breast and of the testis, etc., and syphilis and certain well known protozoa. The colours of those specimens that are stained with carmine or haematoxylin remain almost unchanged, and though the aniline-stained specimens are faded, coloured drawings made when they were still fresh will serve to recall the original appearances. If my offer is accepted, I shall invite the five gentlemen who signed the report referred to above to come forward and discuss in open meeting the objective features of the specimens on view in the light of recent observations on the pathology of syphilis and of our present knowledge of the protozoa, and more especially of the chromidial condition as seen in some of the *Sarcodina*, that class of the protozoa to which the amoebae belong.

RAPID DELIVERY IN ECLAMPSIA.

DR. ROBERT JARDINE (Glasgow) writes: In the JOURNAL of February 28th Dr. T. Ireland indirectly accuses me of trying to filch from Dr. Haultain the honour of having introduced veratrone in the treatment of eclampsia. Nothing was further from my thoughts. In its original form my short article was sent as a letter to the Editor as a protest against rapid delivery in eclampsia, and I took the opportunity of drawing attention to the use of veratrone and gave short notes of a series of cases under treatment. By the Editor's request the letter form was given up, and a note was added stating the nature and strength of the preparation.

I am quite familiar with Dr. Haultain's paper, and if I had been writing an article on the treatment of eclampsia by veratrone I would have referred to it. Incidentally, I may remark that there is no mention in it that the preparation was made at the request of Dr. Haultain.

If Dr. Ireland is a reader of the *Edinburgh Obstetrical Transactions* he ought to be familiar with the fact that I was using veratrum viride many years ago. I would like to draw his attention to a short quotation from a book published by me in 1911: "Years ago I gave a trial to veratrum viride, but gave it up, as I found the preparations were not reliable. Within the last few months I have been using veratrone, the active principle of veratrum viride, and have got very good results from it. It is put up in 1 c.cm. doses for hypodermic use. This is the full dose. It has a very marked effect in lowering the pulse-rate and tension, and it tends to check the fits." Three years' experience of its use confirms this opinion. Although I wrote and published this more than two years before Dr. Haultain's paper appeared, I can assure Dr. Ireland that I lay no claim to having introduced this method of treatment. It was introduced many years ago, in America I think, but the preparations used were uncertain in their action, and, as I have already stated, I gave up using the unreliable preparations until the active principle, veratrone, was placed on the market by Messrs. Parke, Davis and Co.

Now, Sir, I do not know with what authority Dr. Ireland writes on this matter, but I most strongly object to the baseless insinuation he has made against me.

DR. GAVIN BARBOUR (London, S.E.) writes: I have read Dr. Ireland's letter in your issue of February 28th. I do not know when Dr. Haultain first used veratrone in eclampsia; possibly he used it before 1913, when he read his paper, but I do know that Dr. Jardine, of Glasgow, stated in his book, *Delayed and Complicated Labour*, which was published in 1911, that veratrone injected hypodermically has a marked effect in lowering the pulse-rate and tension in eclampsia and in helping to check fits. Nor can I say whether Parke, Davis and Co. made veratrone specially for Dr. Haultain, but the preparation, to my knowledge, has been on that firm's lists since 1905. If priority in publication in this country is claimed, surely the honours lie with Dr. Jardine.

A WATER-WITCH.

A CORRESPONDENT in Ireland has been inspired by reading the references to the analysis of urine during pregnancy in the JOURNAL of February 14th to send the following story:

In my own neighbourhood in the days of my boyhood, there was a "wise woman" renowned far and near, and many to my own knowledge went long distances to consult her in all sorts of difficulties and diseases, real and imaginary. This wonderful woman to inspire confidence in her clients would tell them as soon as they appeared the first time, who they were, where they came from, and the cause of their coming, without apparently having any previous knowledge of their existence. Neighbours of ours, a well-to-do couple, were several years married without any children. At last the wife believed herself pregnant, but the husband had doubts. He went to consult the wise woman several miles away, who directed him to bring her a sample of his wife's urine. The idea did not appeal to the wife, but she did not like to disobey openly. She procured a specimen of goat's urine and sent the husband off innocent of the deception practised on him. The wise woman, after prolonged examination and investigation, announced that the patient was going to have twins, and in due course the goat kidded, and her forecast was realized. Her reputation was henceforth established unassailably. The wise woman not only forestalled science, she went further. Not even the best of us can undertake to diagnose twin pregnancies by the urine.

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A Lecture
ON
THE DIAGNOSIS OF TABES DORSALIS.

DELIVERED AT THE SEAMEN'S HOSPITAL, GREENWICH,
BY
GORDON HOLMES, M.D.DUBL.,
ASSISTANT PHYSICIAN TO CHARING CROSS HOSPITAL, AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE diagnosis of tabes dorsalis or locomotor ataxy, as it is still often called in this country, unquestionably offers difficulties, not merely to the general practitioner whose opportunities of studying the earliest manifestations of the disease and observing its rarer symptoms are not frequent, but also to specialists in different branches of medicine whom the patient may consult for one or other of its symptoms.

It is thus quite common to meet patients who have been operated upon by surgeons for various abdominal conditions in whom the symptoms were due wholly to gastric crises; I have lately seen a patient in whom five exploratory abdominal operations were performed—while the acute swelling and disintegration of joints due to Charcot's arthropathy is occasionally a source of error and has led to serious operative interference and even to amputation.

Similarly, the progressive loss of vision due to optic atrophy, or the ocular palsies so common in tabes, may offer difficulties in diagnosis to the ophthalmic surgeon; and the vesical and rectal affections, or the laryngeal palsies and crises, may be confused with similar symptoms due to local or other causes. But the difficulties which the private practitioner encounters are even greater, as it is usually from him that the patient first seeks aid, and it is he who commonly sees the case in the earliest stages of the disease when its characteristic features are not yet developed. Thus in hospital and private work the practising neurologist is often consulted by patients in whom the sudden onset of pains in the legs have been mistaken for rheumatism, neuritis, or sciatica; a disturbance of gait which may be largely subjective for a "spinal sclerosis," and numbness of the upper limbs associated with awkwardness or feebleness of movement for neuritis or "an obscure nervous disease."

But these difficulties in diagnosis and the errors they lead to can be easily understood when the facts are borne in mind that tabes dorsalis offers extremely variable clinical pictures, and is remarkably protean in its manifestations, and that on the other hand the physical symptoms on which most textbooks of medicine teach the practitioner to rely are very inconstant, and one or other may be absent in even the late stages of the disease.

These symptoms and physical signs which are usually emphasized as of importance in the diagnosis of the disease are: A staggering gait, Romberg's sign, absence of the knee-jerks, and the Argyll Robertson phenomenon, or inactivity to light of pupils that still contract well on accommodation.

All of these symptoms must have a physical basis, and their presence depends on the affection of special specific fibres or neurons that may escape for long, or through the whole course of the illness. Thus those fibres which, when involved, lead to the presence of the Argyll Robertson sign—which they are is still under discussion—may persist intact, though the pathological process be advanced in other systems of fibres; while the posterior roots, which are usually the most seriously affected, contain several categories of fibres which may degenerate separately and independently of one another. Loss of the knee-jerk, for instance, depends on degeneration of those fibres or their collaterals that pass to the motor cells in the ventral horns of the spinal cord, while Romberg's sign, which is only evidence of disturbance of the appreciation of posture and of change of position in the lower limbs, is due to degeneration of another set of fibres which may be affected together with or apart from the reflex collaterals. Similarly the ataxic gait, though as a rule largely dependent on loss of the sense of position, may be due to affection of yet another set of root fibres which terminate in Clarke's column, through which unconscious afferent impulses are conveyed to the cerebellum, which is known to exercise a constant controlling and co-ordinating influence on volitional movement, and especially on those which maintain equilibrium.

It is therefore easily understood that any one of these so-called cardinal symptoms may be absent in even advanced cases, and their presence is therefore not essential or necessary for the diagnosis of tabes dorsalis.

In a considerable proportion of early cases the knee-jerks, for instance, persist or may be even exaggerated, and occasionally remain so till late in the disease. Again, if the sense of position is intact or only slightly affected, Romberg's sign, or great unsteadiness when the eyes are closed, does not occur; while the Argyll Robertson sign appears only when certain optic-pupillary fibres happen to be affected.

On the other hand, symptoms and signs scarcely less common than some of the above may develop when the neuronic disease involves other portions of the nervous system. Tabetic blindness is, for instance, due to a primary atrophy of the fibres of the optic nerve; vesical symptoms to that of those that control the normal functions of the bladder and its sphincters, and gastric crises probably to lesions in the afferent sympathetic fibres.

If these symptoms and signs called cardinal are not always sufficient to assure the diagnosis of the disease, especially in its earlier stages when diagnosis is most difficult but most important, we must consider on what signs accurate diagnosis can be based. It is not, however, my intention to attempt in this lecture a review of the clinical features of the disease, which indeed can be obtained from any textbook, but to describe briefly certain signs which are essentially practical, that is, easily investigated and yet of prime importance in the differential diagnosis of tabes dorsalis.

PAIN AND PARAESTHESIA.

From the pathological point of view tabes is a disease of the sensory, or, more correctly, of the afferent, systems, and we may therefore expect to find sensory symptoms and disturbances of sensation its most characteristic feature; and it is certainly so. It is the pains or paraesthesiae that most often bring the patient under observation, and even from the earliest stages disturbances of sensation are the most significant and the most valuable of the physical signs.

In all nervous diseases the history of the onset and development and the subjective features of the illness are of enormous importance for the diagnosis; sometimes, indeed, as in epilepsy, the diagnosis must be based almost entirely upon them, and tabes dorsalis is no exception to the rule. When the patient's story is fully and carefully taken, directed, of course, by the physician towards the issues that appear most important and pertinent, but not confused by leading questions, much valuable information can be obtained. The description of the lightning pains, for instance, their irregular incidence, their momentary duration, their intense sharp or burning nature, and the soreness and stiffness they leave behind, is most significant, and, in fact, almost characteristic of the disease. They are liable to be confused only with the pains of a bilateral or general neuritis, or with those that result from lesions of the dorsal spinal roots or of the nerve trunks. But in taking such a history the most important point is to insist that both patient and physician attach the same meaning to the same terms. "Shooting pains" or "lightning pains" are, for instance, often employed to describe pains in no way similar to those of tabes, and it is quite common to meet patients seeking advice for "rheumaticky pains" in the legs, which, on further questioning, are found to be characteristic lightning pains; dull, persistent, aching pains, such as are usually described as "rheumatic," do, of course, occur in tabes.

But the common girdle sensations, or persistent or intermittent local thoracic or abdominal pains, are even more frequently sources of error or confusion than the pains in the limbs. It is surprising the number of cases that are operated on for some intra-abdominal complaint, or "explored" unnecessarily when a little patience in analysing or completing the patient's history would have been sufficient to indicate the necessity for fuller examination. The girdle sensation, for instance, is frequently a feeling of acute distension,

or of being blown out, and a patient whom I recently saw had been operated on — of course without the slightest effect—probably on the diagnosis of intestinal obstruction, as vomiting and constipation were associated with it, as they frequently are. And another patient with persistent right-sided abdominal pain, which on investigation was found to extend round the whole of this half of the trunk, and uniformly over several peripheral root areas, and thus apart from the complete cutaneous analgesia with which it was associated was unlike pain of abdominal origin, had been twice operated on—in the region of the appendix, and in the neighbourhood of the gall bladder or duodenum.

Similarly, the common paraesthesiae, the sensation of numbness or loss of feeling, especially in the distal portions of the limbs, and the feeling of walking on air or on a thick carpet or cushion, which, as Hughlings Jackson pointed out, is due to disturbance of the sense of position in the lower limbs and not to cutaneous loss, often fail to direct attention to, or raise a suspicion of, tabes dorsalis.

Analgesia.

But it is the sensory disturbances, revealed only by examination, and of which the patient is often unconscious, that afford the most valuable and characteristic diagnostic signs.

That which is easiest to investigate, and is at the same time the most important, is the analgesia, or the diminished or lost sensibility to pain, whether produced by cutaneous stimuli, as by a pin-prick, or evoked by pressure on the deeper structures, as the muscles, tendons, and bones.

When sensation to cutaneous pain is tested with the point of a sharp steel pin or needle, widespread disturbances are usually found in even the earlier stages of the disease. But even this simple test requires some care, as the insertion of a pin-point evokes, as well as pain, an idea of sharpness, by which the nature of the stimulus can be often recognized in even analgesic areas, and unintelligent patients may consequently make replies that may confuse the observer. This difficulty is obviated by placing the point against the tip of the observer's index or middle finger and pressing gently with the finger on the patient as the pin penetrates his skin; then, too, the patient can be asked to reply whether each contact is only a touch, or if there is a prick as well. This may be known as the "covered point method."

The earliest loss of sensibility to pin-prick is usually found on the lower limbs; it is most marked on their distal segments, and diminishes gradually in intensity toward the groins. It does not correspond to peripheral root distribution, as it is not as a rule greater on the buttocks, which are innervated by the sacral roots, than on the front of the thighs, which are supplied by the upper lumbar, though more distinct on the feet and legs, in part of the territory of the first sacral and lower lumbar roots, than in either. Occasionally, however, a tendency to root area limitation is present.

At first, and often in the later stages of the disease, this disturbance of sensibility to pain is only partial; either the pain evoked by the stimulus is less than that the prick produces elsewhere, or more commonly it is found that when the pricks are of moderate intensity but sufficient to cause pain in the normal person, only a certain proportion are recognized.

As the disease advances this hypalgesia becomes gradually more and more intense, and not uncommonly patients even in the so-called pre-ataxic stage appreciate no discomfort from a pin-prick on any portion of the lower limbs.

Before this stage is reached certain anomalies of sensation to pain are often present, which are extremely characteristic of tabes dorsalis. The most common of these is a delay in the perception of pain, as two or more seconds may elapse between the prick and the patient's reply or reaction to it. In other cases a prick apparently excites abnormal sensations, which are described as burning or tingling, or the pain it evokes may persist unnaturally; under these circumstances the patient very commonly attempts to "rub the feeling away."

Almost as common, even in early cases, as disturbance of pain sensibility in the legs is a zone of diminished or absolute loss of pain around the trunk, to which Lachr first drew attention. The upper margin of this zone almost constantly lies at the level of the second rib in front—that is, the level at which the areas of the cervical and dorsal roots meet, while it may extend downwards only a few inches or as far as the groins. As a rule, however, the hypalgesia is greatest between the second ribs and the nipples, while the zone around the trunk immediately above the groins and buttocks is that which generally escapes longest. The loss of pain sensibility in this trunk zone is usually more profound than that on the legs; when it is only partial it can be easily demonstrated by making a series of pricks from below upwards to the clavicles or on to the neck; then the patient easily distinguishes the difference between the sensations evoked by the same stimuli in the hypalgesic and in the normal parts, and often reacts vigorously when the latter is reached.

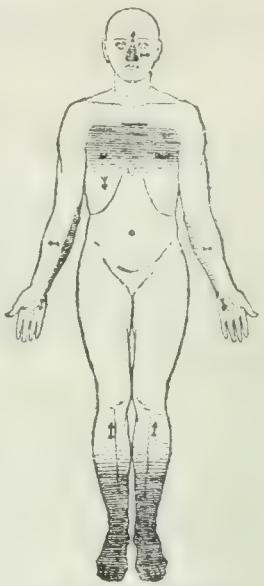


Diagram to illustrate the more common distribution of the alteration in sensibility to pain in tabes dorsalis. The arrows indicate the directions in which the analgesia tends to spread.

Frequently the analgesic or hypalgesic zone around the thorax is continuous along the axilla, with an area of diminished sensibility to pin-prick on the ulnar borders of the arms; but this usually occurs later in the disease. Often this area on the arms is not continuous with the thoracic zone. It is variable in extent, and may be represented by a narrow band in the inner border of the forearm, or may comprise the whole ulnar half of the limb, including the two or three ulnar fingers. Here, too, as on the legs, the insensibility is rarely absolute, and is often represented only by the relative insensibility of these areas as compared with the radial border of the arm. Unlike the analgesia on the legs, that on the arms is usually radicular in distribution, the skin area of the first dorsal root being generally first involved, but it may spread over the whole limb.

Years ago Duchenne observed that the face is occasionally analgesic in tabes, or rather that portion of it which is supplied by the trigeminal nerve—that is, roughly, all except the skin immediately in front of the ear; he spoke of it as "*le masque tabétique*," but this is certainly a rare occurrence. On the other hand, some loss of sensibility to pin-prick is extremely common on an irregular and indefinite area in the centre of the face, especially on the nose and the neighbouring portion of the cheeks; this has attracted my attention for the last ten years at least, and I have frequently found it an extremely valuable sign in the diagnosis of tabes. It is remarkably common, and it may occur very early in the disease; some years ago, in examining a large number of cases, I found it in about 70 per cent. It is further important as sensory loss of this distribution is not found in any other central or peripheral nervous disease, except, perhaps, in leprosy. It is easily demonstrated; for, as any one can ascertain on himself, on probably no part of the body is the prick of a sharp pin so painful as on the nose and the adjoining portions of the cheeks, and it is exactly here that sensibility to pain is often either lost or diminished in tabes. The area affected may vary from a small patch on the nose to the greater part of the face, until, indeed, it forms a typical *masque tabétique*. It is best tested by the "covered point" method, and if slight the loss of sensibility on the nose and cheeks may be apparent only when contrasted with that of a normal area, as over the angle of the jaw or on the neck.

The diminution, loss or alteration of sensibility to pin-prick in some or all of these areas—that is, the distal portions of the lower limbs, the thoracic zone, the radial borders of the arms, and especially the central portion of the face—constitutes the most common, the most definite, and the most characteristic physical sign of tabes dorsalis.

It is frequently present when the knee-jerks and the pupillary reactions are normal, and before ataxia or other prominent symptoms develop, and it is consequently the most important phenomenon in the diagnosis of the disease.

Deep Analgesia.

But the pain produced by pressure on the deep structures of the body is almost as constantly affected, and when it is altered it is an equally important—perhaps more important—symptom, for though cutaneous analgesia may be found in peripheral neuritis and other diseases, deep analgesia is almost peculiar to tabes, excepting syringomyelia and a few rarer central affections.

If any muscle, as those of the calf, is pinched firmly between the fingers and thumb, or pressed upon strongly by any blunt object, as the end of a pencil, considerable pain of a peculiar intolerable character is produced, but in tabes even the strongest pressure may evoke no discomfort. Similarly, pressure over the bones, as on the tibia or tarsus, may be painless, and firm pinching of the tendo Achillis or other tendon, which, if sufficiently strong, is most excruciating to the normal person, may give no pain or only slight discomfort. Insensibility of the tendo Achillis has been described as Abadie's sign.

This diminution or loss to pressure pain is often present in the earliest stages of the disease; it is usually first found and is generally most pronounced in the distal portions of the lower limbs, and diminishes proximalwards, but it can be often demonstrated on the trunk, and even in the upper limbs.

This insensibility to painful pressure is not limited to the somatic structures, as the testicles can be often squeezed firmly without giving discomfort, as well as the trachea, eyeballs, and other structures in advanced cases.

The value of this deep analgesia in the diagnosis of tabes lies in the fact that it can be easily demonstrated if present, and that it is so characteristic of this disease. But, as in all other signs of tabes, it may be absent or little pronounced in the early stages of the disease.

Disturbances of Tactile Sensibility.

Other forms of sensibility also suffer in tabes, but their disturbance is less characteristic and pathognomonic, and therefore less significant for diagnosis, though they form an integral part of the disease, and are important in the interpretation of its symptoms.

Touch is on the whole much less affected than pain sensibility, but some hypo-aesthesia to light touch, as with a wisp of cotton-wool or a camel-hair brush, can be often discovered in the early stages of the disease, and may be intense in advanced cases. It is usually most pronounced in the distal portions of the lower and upper extremities, and diminishes gradually towards the hips and shoulders. As a rule, the loss does not correspond to root distribution, though a zone of diminished tactile sensibility can be often demonstrated by careful testing over the analgesic thoracic area even in early cases. I have rarely found definite anaesthesia on the face except when, as occasionally happens, the trigeminal nerve is completely degenerated. Occasionally a touch, and especially a moving contact, as the rubbing of the patient's clothes over the skin, may excite considerable pain and discomfort. This phenomenon has been frequently described as hyperaesthesia, but on careful examination it is usually found that there is actual diminution of sensibility with a raised threshold over the areas where it exists. Lannois's term *aphalgesia*, or pain to contact, is therefore more suitable. This condition is evidently related to the exaggerated reaction to thermal stimuli which we shall consider immediately.

Heat.

Thermal sensibility is more commonly and more seriously affected than tactility, but its examination is so difficult, and without great care may lead the practitioner so easily into error or confusion, that its significance must not be emphasized in a lecture which attempts to be essentially practical. The appreciation of moderate degrees of both heat and cold is often lost early or much diminished, especially over the legs and feet and on the zone round the trunk, over the same distribution and parallel with the analgesia. The upper extremities are usually affected only late. The extreme degrees of heat and cold, and especially the latter, can usually evoke sensations, unless the disease is severe, though they may be confused by the patient, cold being described as "very hot" or "something burning," or heat as "very cold." Or over certain areas, more especially on the front of the abdomen or on the back, cold and occasionally heat produce more discomfort than in the normal person, and even actual pain; many tabetics, for instance, cannot bear a drop of cold water on their bodies, though the limbs may be more or less insensitive to temperature, and to others a hot bath may be intolerable.

Sense of Position.

Finally, the sense of position and sensory faculties related to it, as the recognition of form by touch, the appreciation of weight and the distinction of two simultaneous contacts, are regularly affected in tabes and are the basis of many of its more obvious disturbances, as the ataxia of movements which cannot be controlled by vision, and the uselessness of limbs which are strong and not very inco-ordinate in movement. Romberg's sign and the difficulty in maintaining the erect attitude or walking in the dark, are wholly due to disturbance of the sense of position, while the common complaint of tabetics that they cannot write properly or use their hands in finer actions, is due to the same cause or to disturbance of other forms of sensation. In fact, the control of movement and the purposeful employment of the limbs is dependent on these sensory impressions, and may be practically undisturbed, despite severe or complete loss of tactile, pain and thermal sensibility.

The investigation of these forms of sensation is, however, tedious and difficult and demands much time and the intelligent co-operation of the patient. For practical diagnostic purposes, only the sense of position requires notice. Its affection in tabes is extremely variable, and there is no doubt that it may persist intact till relatively late in the disease. In certain patients it is, however, an early sign, and can be always demonstrated first in the distal segments of the extremities, and, as a rule, in the lower earlier than in the upper limbs. Romberg's sign is a convenient but rough method of estimating its affection in the lower limbs and at the hips.

Though I emphasize the great importance of sensory changes in the diagnosis of tabes, it must be admitted that occasionally in early cases, as in patients who come under observation with a primary optic atrophy and only later develop tabetic symptoms, even careful examination may fail to reveal them, but at this stage most other signs of the disease are usually absent too.

REFLEXES.

After the examination of sensation we must turn to the state of the reflexes as a guide to the diagnosis of tabes, but this is less important and less reliable, for the tendon-jerks or deep reflexes which frequently disappear in this disease may be lost in many other relatively common affections, as neuritis and infective and toxic conditions, and in a certain proportion of tabetic patients they persist till late in the disease; on the other hand, the superficial reflexes, as the abdominal and the plantar, usually remain unaltered.

Though most textbooks emphasize the loss of the knee-jerks as the most important sign of tabes, and many practitioners are reluctant to diagnose this disease if the knee-jerks persist, there is no doubt that these reflexes can be elicited in a considerable proportion of early cases, as when it is the upper limbs that are chiefly affected, for example, in "cervical tabes," or when the patient seeks advice for isolated symptoms, as pains, gastric crises or ocular disturbances.

Further, in certain cases the knee-jerks are actually exaggerated, owing, perhaps, to the coincidence of syphilitic spinal lesions or a meningitis. And it must be remembered that though it is generally assumed that the absence or presence of the knee-jerks is easily determined, it not uncommonly happens that the practitioner is unable to obtain them though they are normal; this is generally due to the patient, consciously or unconsciously, keeping the flexors of the knee contracted, and to obviate this danger the observer should always place his fingers on the tendons of the hamstrings when testing the jerk to make sure they are relaxed. This difficulty is less liable to occur if the jerks are tested as the patient lies on his back, and the

observer raises the knee only with his left hand placed in the popliteal space; or, as I always do when in doubt, as the subject lies on his side with the lower limbs slightly flexed and his attention diverted. I have, for instance, seen persons claiming compensation for serious nervous injuries of which the only evidence was reputed absence of the knee-jerks, though they could be at once and readily obtained by this method.

The practitioner's attention is generally focussed on the knee-jerks, but these are scarcely more important than the ankle-jerks in the diagnosis of tabes, and the ankle-jerks are often lost much earlier in the disease; further, if present, they are more easily elicited than the knee-jerks. The arm-jerks, that is the biceps or flexor, and the triceps-jerks, on the other hand, often persist much longer, unless the disease affects chiefly the cervical roots of the spinal cord.

The abdominal reflexes usually remain unaltered unless there is considerable anaesthesia of the abdominal wall, but the plantar reflexes are often difficult to obtain when there is much sensory loss in the soles of the feet. Their absence is therefore of no significance, but when they can be obtained the response is a normal flexor movement of the great toe. Babinski's sign does not occur in uncomplicated tabes.

Ocular Signs.

It is unnecessary to emphasize the significance of the pupillary and ocular signs of tabes dorsalis. As is generally recognized, Argyll Robertson's sign, or the inactivity on exposure to light of pupils that contract briskly on accommodation, is extremely common and very characteristic, but even this is often absent in relatively advanced cases, and the disturbance of the light reaction is occasionally not typical. The pupils, for instance, may react, but more slowly and incompletely than normally, or one only may react poorly or not at all. Loss of the consensual reflex—that is, failure of one pupil to contract on the sudden exposure of the opposite eye to light—seems to be often the first sign of any anomaly in its reaction. In tabes the pupils are also characteristically small, but not always so, and they are frequently unequal in size and irregular in outline, though this is usually regarded as more characteristic of general paralysis, which, indeed both etiologically and pathologically is not sharply separable from tabes. It must not be forgotten that in addition to tabes and general paralysis, Argyll Robertson pupils may occur in cerebro-spinal syphilis, and more rarely in certain lesions in the neighbourhood of the upper end of the mid-brain.

The most common and characteristic of the other ocular signs is a slight ptosis, which gives a peculiar, almost pathognomonic, expression to the tabetic, by which those who frequently see the disease can often diagnose it at the first glance. The lids hang low, and there is at the same time a compensatory wrinkling of the forehead, but on the attempt to look up no evidence of paresis of the levator palpebrarum is usually visible.

Isolated ocular palsies producing squint and diplopia, or ptosis are common early and initial symptoms, and the diagnosis of their cause often gives considerable difficulty. They present no special features suggestive of tabes, excepting the chance coincidence of unequal, irregular, or inactive pupils. Slowly progressive blindness due to a primary optic atrophy is also a not uncommon early symptom; tabes is perhaps the most common cause of this condition, and should always be suspected if the blindness is slowly progressive, if the loss of sight is not due to a central scotoma, and if ophthalmoscopic examination reveals the appearances of a primary optic atrophy.

As we are considering chiefly the facts on which a diagnosis of tabes can be most easily and most definitely made, it is not necessary to refer to the character of the frequent disturbances in the functions of the sphincters, or the features of the crises and trophic disturbances that occur in the disease.

Wassermann Reaction.

But, as in other branches of medicine, the aid of laboratory methods is gradually becoming more and more important in clinical neurology, and the clinical pathologist has now means of diagnosing tabes with an extraordinary accuracy even from its earliest stage.

It is now generally admitted that, as Erb, Gowers, and Fournier originally maintained, tabes is a post-syphilitic disease, and the diagnosis of tabes necessarily postulates a previous syphilitic infection. But tabes, as its congener general paralysis, develops as a rule several years after the infection, and is rarely, as Mott has emphasized, associated with any evidence of active syphilitic processes, and it is consequently not surprising that a positive Wassermann reaction should be obtained in the blood serum in only a moderately large percentage of cases of tabes—in from 60 to 75 per cent. Further, as a positive Wassermann reaction may be found in the serum of any person who has had syphilis, it is evident that this test is of little value in the diagnosis of tabes, and more especially so since it can be often abolished by proper antisyphilitic treatment, by mercury or salvarsan. On the other hand, when the cerebro-spinal fluid obtained by lumbar puncture is tested quantitatively, to the Wassermann reaction—that is, when larger proportions of cerebro-spinal fluid are used than are employed in the original method—a positive reaction is obtained almost constantly, as Hauptmann first showed, or according to Nonne in at least 95 per cent. of the cases. If a negative reaction carried out in this manner does not therefore exclude it, it makes the diagnosis of tabes at least improbable.

But further and not less valuable evidence may be obtained by the microscopical and chemical examination of the cerebro-spinal fluid. Normally this fluid contains very few free cells, but in tabes there is almost invariably a great increase of lymphocytes in it, which can be easily determined by examining a centrifugalized deposit, or more accurately by counting the cells in a ruled chamber under the microscope. The amount of globulin in the fluid is also increased in tabes, and this increase can be easily demonstrated by Noguchi's butyric acid test, or by half saturating the fluid with ammonium sulphate.

As, however, a positive Wassermann reaction to the quantitative method, and an excess of cells and of globulin in the cerebro-spinal fluid also occurs in general paralysis and in certain cases of cerebro-spinal syphilis, these laboratory tests cannot decide for or against the existence of tabes without the co-operation of careful clinical examination.

Summary.

We may therefore conclude that the characteristic subjective and objectively demonstrable disturbances of sensation are usually the earliest, the most important and the most unequivocal clinical signs of tabes dorsalis; that they are frequently associated with loss of certain of the deep reflexes, especially of the ankle-jerks and knee-jerks, and with pupillary, ocular and other less frequent symptoms and physical signs; and that modern serological, cytological and chemical methods can supplement and confirm the clinical diagnosis based on these clinical signs, and make the positive or negative diagnosis of tabes dorsalis as certain as anything can be certain in clinical medicine.

THE New York State Nurses' Association is (we learn from the *Medical Record*) endeavouring to standardize the education of the nurse. This movement received the approval of the New York State Federation of Women's Clubs at its annual meeting at Buffalo in October, 1913. A bill introduced into the New York State Legislature last winter was successfully opposed on the ground that it sought by legislation to limit the right to use the word "nurse" as a title to those who had been duly licensed. There is already in existence a law which protects the title "registered nurse" or the abbreviated "R.N." The Nurses' Association, however, points out that this title in usage does not help the public to discriminate between the "fitly trained" and the "unfit" nurse; people are confused by the many terms which are in general use, such as "certified," "trained," "graduate," "domestic," and "practical." On the initiative of the association a bill, virtually the same as that rejected last year, will be introduced during the course of the present session. It is not intended that the proposed law shall be used for the prosecution of a mother for nursing her child, or a maid for nursing her mistress, or any one for nursing another person, as long as the title "nurse" is not used professionally. The definition in the bill is as follows: "To practise as a nurse within the meaning of the article shall include the care of the sick or injured as a nurse or registered nurse."

THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM BY INTRATHECAL INJECTIONS.

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SYPHILIS is much the most common cause of organic disease of the nervous system. When it attacks the central nervous system it gives rise to two sharply differentiated forms of disease—so-called cerebro-spinal syphilis and parasyphilis. Inasmuch, however, as both forms are now known to be produced by the *Spirochaeta pallida*, the term "parasyphilis" must be abandoned. Rather should we speak of "interstitial" and "parenchymatous" syphilis of the nervous system.

In the interstitial variety the non-parenchymatous tissues of the nervous system—the meninges, the blood vessels, the neuroglia—are primarily affected (with the production of gummata, meningitis, meningo-encephalitis, meningo-myelitis, endo-vasculitis, etc.), the neurons being secondarily involved, for example, by compression and ischaemic softening. In the parenchymatous variety, of which the most frequent manifestations are general paralysis, tabes, and tabo-paresis, the spirochaete toxin appears to act upon the affected neurons directly.

These two varieties of syphilitic nervous disease exhibit certain striking contrasts: The *interstitial* variety occurs, on an average, two and a half years after infection, though it often shows itself much earlier. It is more apt to develop after a "virulent" than a "mild" infection, evidence of gross syphilitic disease of the skin, bones, and mucous membranes being frequently forthcoming. The symptoms tend to begin suddenly, and the morbid process not infrequently remains stationary, or even retrogrades. Finally, vigorous treatment by means of mercury, potassium iodide, or salvarsan has both a powerful prophylactic and a powerful curative influence on the disease. On the other hand, the *parenchymatous* variety develops on an average twelve years (Head gives fourteen) after infection. It occurs for the most part after "mild" infection, and evidence of gross lesions of the skin, etc., is rarely to be obtained. The symptoms begin insidiously, and the morbid process steadily progresses to a fatal termination. Finally—and most important of all—treatment by mercury, iodide, or salvarsan has little, if any, prophylactic, and the former two at least have practically no curative, influence on the disease.*

MacIntosh and others have sought to explain the parenchymatous variety as being the result of sensitizing, during the early period of infection, of the central nervous system, so that when subsequently attacked by a local invasion of spirochaetes the sensitized (anaphylactic) tissue undergoes parenchymatous degeneration. This explanation is possibly quite right, as far as it goes, but it does not cover the whole ground. How, for example, are we to account for the mildness of the infection in parenchymatous syphilis? We seem compelled to postulate one of two alternatives—either the virus of parenchymatous syphilis is different from that of interstitial syphilis, or the patients respond differently in the two cases to the same virus. How, again, are we to explain the intractability of parenchymatous syphilis to antisyphilitic treatment? Mott has suggested that in this variety the spirochaete exists in a latent granular intraneuronic form, and that the granules from time to time develop into active spirochaetes. It is conceivable that the parasites, ensconced within the nerve cells of the central nervous system, might be difficult to reach with remedies. The true explanation, however, is probably to be sought for in the difficulty of getting spirillicidal substances to percolate the capillaries of the central nervous system. It is probable that the spirillicidal action of mercury and arsenic is not direct, that it is effected by means of antibodies † to which these drugs give rise, and that these antibodies never gain entrance to the perineuronic lymph stream. It is noteworthy in this connexion that the blood of a syphilitic patient may give a strong positive Wassermann reaction while his cerebro-spinal fluid gives not the faintest response. There is, indeed, abundant evidence that the capillaries of the central nervous system are very jealous as to what substances shall be permitted to enter the perineuronic lymph stream, for of all cells of the body the neurons are the most susceptible to chemic influences. Not only are these capillaries impermeable to the substance which is responsible for the Wassermann reaction, but also to the compounds of mercury and arsenic, neither of which metals can be extracted from the central nervous system *post mortem*, no matter how lavishly they have been administered. It is, moreover, well known that both the central nervous system and the cerebro-spinal fluid remain unstained in jaundice, and a similar absence of staining is noticeable after the intravenous injection of large quantities of trypan blue.

The problem, therefore, which confronts us in the treatment of parenchymatous syphilis is how to get the spirillicidal antibodies to enter the perineuronic lymph stream. This end can be gained by intrathecal injections of salvarsanized serum. Whether or not we accept the view of Mott—that the cerebro-spinal fluid constitutes the lymph of the central nervous system—certain it is that substances introduced into the subarachnoid space do actually penetrate the central nervous system. If trypan blue be injected through a trephine hole into the cranial subarachnoid space above the tentorium cerebelli, not only the cortex cerebri, but the entire cerebro-spinal axis is found *post mortem* to be stained. If, on the other hand, the pigment be injected into the spinal subarachnoid space, by means of a lumbar puncture, the cortex cerebri remains unstained, the staining in these cases being confined to the spinal cord and brain stem. It would appear that the cerebro-spinal fluid flows from the cranium spinalwards—probably in a meagre current—and also that some slight ebb and flow takes place between the fluid in the subarachnoid space at the base of the cranium and the spinal subarachnoid space, in accordance with variations in the quantity of intracranial blood.

That medicaments injected into the spinal subarachnoid space do, in some measure at least, reach the cranial cavity is shown by the fact that cocaine thus introduced causes anaesthesia of the entire body, so that by this means it is possible, for example, to enucleate an eyeball painlessly.

It will thus be seen that intrathecal spinal injections afford a ready means of bringing remedial agents into immediate relation with the neurons of the spinal cord and brain stem. (Quite recently my colleague, Dr. Golla, has shown that pigment injected intrathecally actually enters the perineuronic lymph spaces.) While it is probable that the neurons of the cortex cerebri may in some degree be reached in this way, a far more effectual means of reaching them would undoubtedly be by injecting the cranial subarachnoid space through a trephine hole, but up to the present I have not seen my way to adopt this method.

In our choice of remedies for intrathecal injections we are met with the difficulty that in attempting to kill the spirochaetes we may do serious injury to the nervous system. By adopting the method introduced by Swift of the Rockefeller Institute, and carried out by Fisher of the Rochwood Hospital, Kingston, Canada, and in this country by George Robertson and Mott, of injecting salvarsanized serum intrathecally in cases of parenchymatous syphilis, no injurious results ensue, while, in many cases at least, a marked improvement of the symptoms results. The treatment adopted in the cases here recorded differs somewhat from that of Swift, notably in the employment of neo-salvarsan, in the much longer interval allowed between the salvarsan and intrathecal injections, and in the mode of separating the serum from the blood clot.

The patient, prepared as for general anaesthesia, is given 0.9 gram of neo-salvarsan intrathecally, while at the same time a course of mercury is begun. He is kept in bed on a light diet for a couple of days. After an interval of a week the dose of salvarsan is repeated, and two hours later 4 oz. of blood are drawn off from a vein by means of a syringe and transferred to a 4-oz. bottle duly sterilized. The bottle is then placed in a jar containing a 1 in 20 carbolic solution, and set aside in a cool place. After twelve hours the serum has separated sufficiently for injection. It will be found to be somewhat stained with haemoglobin and to contain a few erythrocytes, but no harm comes from the injection of these. The advantage

* It is too early yet to speak of the prophylactic influence of salvarsan on parenchymatous syphilis of the nervous system.

† Mott concludes that mercury and arsenic are spirillicidal either by causing the development of antibodies or by furthering their spirillicidal action.

of allowing the clot to separate out in this way over the more rapid process of centrifuging the blood is that it offers less opportunity for septic contamination.

The serum thus prepared is injected by means of a lumbar puncture made in the usual way, into the spinal subarachnoid space, a quantity of cerebro-spinal fluid, equal to the amount of serum to be injected, being first allowed to escape. Some of this is collected in sterilized test tubes for testing purposes, but not until the fluid runs quite clear—unmixed, that is, with any blood.

Water, distilled under personal supervision, must be employed for the salvarsan injection, and it need hardly be said that the intravenous and intrathecal injections must be carried out under the strictest aseptic precautions. Olive oil, which has a much higher boiling point than water, is employed for sterilizing the syringes and needles, and it has the further great advantage of not blunting the needles.

The reaction of the blood serum and the cerebro-spinal fluid to the Wassermann test, and the condition of this fluid in respect to lymphocytosis, give important indications not only with regard to the diagnosis of syphilis of the central nervous system, but also as to the effects of treatment upon it. A few words may therefore be said on these tests here.

Interstitial Syphilis.—A positive Wassermann reaction of the serum may or may not be present. Even when the serum gives the reaction in an intense degree, the cerebro-spinal fluid may not show the slightest reaction. The majority of cases, even with active meningitis and enormous leucocytosis of the fluid, give a negative reaction of the latter. Antisyphilitic treatment generally causes a speedy disappearance of the positive reaction, both as regards the serum and the fluid, the effect being more rapid in the latter than in the former case. In only about one quarter of the cases of interstitial syphilis of the nervous system is there well marked lymphocytosis of the fluid. This yields to antisyphilitic treatment.

Parenchymatous Syphilis.—In dementia paralytica, tabo-paresis, and actively progressing tabes, both the serum and the fluid practically always give a strong positive reaction. In quiescent tabes both may give a negative reaction. In tabes a negative reaction is slightly more common for the serum than for the fluid, and the strength of the reaction is somewhat less than for dementia paralytica. A negative reaction both for the serum and the fluid practically excludes the latter disease. The spirochaetes, lodged as they are within the central nervous system, cannot be reached by the blood; hence treatment by mercury or iodide has no effect upon the Wassermann reaction either of the serum or the fluid. Salvarsan alone has little or no effect, but the intrathecal injections of salvarsanized serum causes a diminution, or even disappearance, of the reaction. This result is more easy to obtain in tabes than in dementia paralytica. The lymphocytosis is equally amenable to this form of treatment; salvarsan alone actually increases it.

The results of the intrathecal method in the cases of syphilis of the central nervous system are set forth below. Five of the patients are under my own care. I am able to include the other five through the courtesy of my colleagues, Dr. Frederick Palmer and Dr. Eric Macnamara, who have kindly placed them at my disposal. The list includes 8 cases of parenchymatous syphilis (5 cases of tabes, 2 of tabo-paresis, and 1 case of dementia paralytica), and 2 cases of interstitial syphilis.

Four Cases of Tabes which have had Two Series of Injections.

1. G. F., bricklayer (under Dr. Macnamara). The reaction of the cerebro-spinal fluid to the Wassermann and globulin tests was positive, both before and after injection. The lymphocytosis per c.mm. was 66 before and 25 after injection. *Symptoms and signs:* Return of knee-jerks; some very slight reaction to light in left pupil; Rombergism less; inco-ordination less; ataxia less; hypotonia of muscles less; no return of lightning pains; area of loss of sensation diminished. Before treatment the patient had marked incontinence of urine; he is now able to hold water 2½ hours. His general health is better; he has gained 12 lb. in weight, and has returned to work.

2. J. G., grocer (under Dr. Campbell). The cerebro-spinal fluid reacted positively both to the Wassermann and the globulin test, before injection, but negatively after. The lymphocytosis per c.mm. fell from 37 before treatment to 4 after. *Symptoms and signs:* Rombergism less; lightning pains better (one slight attack since treatment); subjective sensations better. Before treatment there was retention of urine; the catheter is not required now. The patient shows marked improvement in general health, and has gained 7 lb. in weight.

3. W. T., postman (under Dr. Palmer). Before treatment both Wassermann and globulin reactions were positive; after treatment both were negative. The leucocytosis per c.mm. fell from 80 before to 4 after treatment. *Symptoms and signs:* Rombergism less; no return of lightning pains; one attack of gastric crisis, much less severe; ataxia much less; vasti on left side felt to contract. There are no urinary symptoms. The patient's general health is better, and his weight shows an increase of 8 lb.

4. W. H., waiter (under Dr. Macnamara). Before treatment the cerebro-spinal fluid reacted positively to both the Wassermann and globulin tests; after treatment both tests showed a negative reaction (in the Wassermann test the cerebro-spinal fluid was blood-stained and there were many red cells). The lymphocytosis per c.mm., which was 8 before treatment, rose to 10 after. *Symptoms and signs:* Ataxia is less; no return of lightning pains; there is still marked inco-ordination. No urinary symptoms. The patient's general condition shows some improvement, and he has gained 6 lb. in weight.

One Case of Tabes, with Primary Optic Atrophy, which has had One Series of Injections.

M. W., clerk (under Dr. Campbell). The reaction of the cerebro-spinal fluid to the Wassermann and globulin tests was positive before treatment. The lymphocytosis was 144 per c.mm. Neither the tests nor the lymphocytosis have been retaken. *Symptoms and signs:* No alteration in vision; entire disappearance of lightning pains. There was slight retention of urine, which has improved under the treatment. The patient feels better in general health; he has not been weighed.

One Case of General Paralysis of the Insane (Advanced) which had had Three Series of Injections.

M. W. (under Dr. Campbell). Before treatment the reaction of the cerebro-spinal fluid was positive to both the Wassermann and globulin tests. After treatment the Wassermann test was weakly positive, and the globulin test negative. The lymphocytosis, which was 47 per c.mm. before treatment, fell to 26 per c.mm. The patient was at first taciturn and morose; he is now somewhat elated and has some memory for recent events. Weight not taken.

Two Cases of Tabo-Paresis which have had only One Series of Injections.

1. G. S., electrician (under Dr. Campbell). Both Wassermann and globulin tests positive before treatment. Lymphocytosis, 60 per c.mm. The cerebro-spinal fluid not tested since treatment. *Mental state:* Memory much improved; he now answers questions quickly. *Physical signs and symptoms:* Speech improved; inco-ordination better; ? left pupil reacts sluggishly; subjective sensations improved. His weight has increased by 10 lb. Has worked ever since he left hospital.

2. F. B., painter (under Dr. Macnamara). Wassermann and globulin tests positive before treatment. Lymphocytosis, 25 per c.mm. Cerebro-spinal fluid not yet retested. *Mental state:* His memory is better; he is more controllable. *Physical signs and symptoms:* Inco-ordination better; speech and writing improved. He has lost 3 lb. in weight, probably due to want of nourishment outside hospital.

Two Cases of Interstitial Syphilis; One Series of Injections.

1. N. G., costermonger (under Dr. Campbell). Before treatment the Wassermann reaction was positive and the globulin reaction negative. Lymphocytosis, 35 per c.mm. Cerebro-spinal fluid not yet retested. *Physical signs and symptoms:* Ataxia and Rombergism much improved. *Urinary symptoms:* Retention greatly improved. The patient was not weighed.

2. J. S., carman (under Dr. Palmer). Wassermann and globulin tests both positive. Lymphocytosis, 29 per c.mm. Cerebro-spinal fluid not yet retested. The patient's mental condition has improved under treatment; the pains are much less.

It will be seen from the list of cases that improvement has occurred in many directions:

Cerebro-spinal Fluid.—Leucocytosis: There was a fall in all four cases in which a second examination was made; namely, from 66 to 25, from 36 to 4, from 80 to 4, from 46 to 26. Wassermann reaction: In three of the five cases in which a second examination was made a positive reaction was converted into a negative one; in one of the other two a strong positive one was converted into a weak positive. Globulin test: In four of the five cases in which globulin was tested for a positive reaction was converted into a negative one.

Weight.—In the first four cases (all tabetics) the weight rapidly went up by 12, 7, 8, and 6 lb. respectively. In one of the two tabo-paretic cases it increased by 10 lb.; in the other there was a loss of 3 lb.

Ataxia and Rombergism.—In all the cases in which these symptoms were present they showed a marked improvement.

Lightning Pains.—These when present were exaggerated for the first twelve hours or so after the intrathecal injection. Thereafter they disappeared. In one case they reappeared, but disappeared after the second injection.

Knee-jerks.—In one of Dr. Macnamara's cases the lost knee-jerks not only returned but in an exaggerated degree. In another case, though the jerks did not return, the quadriceps could be felt to contract.

Urinary Symptoms.—In all cases in which these were present they showed improvement.

General Health.—Nearly all the patients expressed themselves as feeling much better as the result of the treatment. This improvement in the general health has, indeed, been one of the most striking results of the treatment.

While it would be impossible wholly to eliminate the influence of suggestion in bringing about some of the improvement referred to (for example, the diminution of the ataxia, lightning pains, and urinary disturbances), other effects of the treatment (for example, the rapid increase of weight,* the return of the lost knee-jerks, and the marked changes for the better in the cerebro-spinal fluid) obviously cannot be placed to its credit.

CONCLUSIONS.

In parenchymatous syphilis the intrathecal treatment is the only one yet devised which is capable of arresting the morbid process. It acts by destroying the spirochaetes within the central nervous system and the cerebro-spinal fluid. The treatment should be begun as early as possible. Neurons, once destroyed, are incapable of regeneration. Unfortunately, cases of general paralysis and tabes rarely come before us until wide tracts of nervous tissue have been irretrievably damaged.

The intrathecal treatment is also indicated in cases of interstitial syphilis, especially of the spinal cord, which do not readily respond to salvarsan, mercury, or iodide of potassium. The latter drug should be given in not less than drachm doses three or even four times daily.

All the details in connexion with the injections were supervised and carried out by Mr. H. E. Batten, and to his unremitting care the entire absence of any kind of complication is to be attributed. To him I am also indebted for careful notes of the cases. The examination of the blood and cerebro-spinal fluid were undertaken by Dr. Braxton Hicks with his accustomed care and skill.

NOTE.—Since this paper was written Mr. Ballance has treated two of my patients suffering from general paralysis by introducing salvarsanized serum intracranially. The operation was well borne, and both patients made a speedy recovery. It is yet too early to speak positively of the therapeutic result, though the indications, in one of the cases at least, are distinctly hopeful.

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SOME PROBLEMS IN THE TREATMENT OF VENEREAL DISEASES.†

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THE problem of the treatment of venereal diseases is at present creating a considerable amount of interest in the medical profession, more especially from the standpoint of the relationship of these diseases to the general health of the community. In the light of modern research it has been shown that they are far-reaching in their consequences, and are more prevalent than was hitherto supposed. By means of laboratory tests it has been found that many diseases of obscure origin are now traced to the incidence of venereal disease either in the individual himself or in his parents before him. It is a subject which is closely related to such questions as infant mortality, care of the blind and insane, the maintenance of mentally defectives, and the treatment of patients under the Poor Law administration. If so much evil arises from the transmission of venereal diseases as we are led to believe, and if they influence the creation of the unfit, then it is the duty of the State to attack the source and take measures leading to eradication if possible. Such measures in time will be found to lessen the present financial expenditure upon institutions for the reception of mental and moral degenerates. Eradication of venereal diseases, or even a certain degree of control over their dissemination, would cause a considerable diminution in the numbers of those blinded by ophthalmia neonatorum, and those mental deficients who go to swell our pauper and criminal classes. One could almost have wished that the Royal Commission had not been appointed until some time later, when, as the result of further investigation, the evidence of the prevalence of venereal diseases, more especially among the poorer classes, would have been so overwhelming that the public itself would have awakened up to a sense of the dangers and the necessity for some measures of reform.

NOTIFICATION.

In the discussion of methods for prevention and treatment the most prominent question is that of notification. It is argued that if this measure has done so much for the control of other contagious diseases, why should it not be employed successfully with regard to venereal diseases? Two arguments against notification to the public health authority may be mentioned. The first is that the length of time taken for the treatment and cure of syphilis would be out of all proportion to that required for the treatment of other diseases—such as diphtheria or scarlet fever—and would necessitate a very great expenditure on the part of the State, and a loss of the wage-earning capacity of the individual under treatment. This argument has much in its favour, but when compared with tuberculosis it is unfounded, although the latter disease having a more direct influence upon the shortening of life appeals for more active measures for its treatment. The second reason against notification is that it conveys with it a moral stigma, and brands the individual as an outcast from the society of his family and friends. It is admitted by all that private interest must give way to public safety, but if the history of many patients suffering from venereal disease were known, the punishment seems out of all proportion to the transgression, which has been committed in so many cases through ignorance, or under the influence of strong temptation; not to mention those cases of the innocent victims of disease, hereditary or acquired. Even if notification on the usual lines were enforced, evasions would be so numerous that the ends of the measure would be entirely defeated. In private practice, more especially, many conditions suggesting the presence of venereal disease would be purposely ignored, and cases requiring skilled advice and treatment would seek relief at the hands of unqualified persons who at least were free from the duties of a moral policeman. Notification in a modified form, however, is necessary if we are going to cope with these diseases in any efficient manner. We must have an estimate as to their prevalence and suitable measures for prevention will follow. Our information as to the amount of venereal diseases in the community is at present confined to the publication of clinical records of groups of cases, and to investigations as to the origin of certain clinical manifestations by means of bacteriological and serological methods. These, however, as a rule apply to the hospital class of patient, and not to private practice. Statements in the lay press as to the percentage of the general community having acquired venereal disease are entirely without any scientific or accurate basis, as any numbers estimated hitherto by the medical profession are in the form of ratios to those suffering from other pathological conditions, and not to average healthy individuals. The majority of statistics so given are supplied from patients of the hospital or lower classes, among whom, for obvious reasons, the percentage is greater. We want much more work on the lines of that published by Dr. Carl Browning.[1]

Statistics as to the returns on death certificates are utterly worthless and their discussion a waste of time. As long as the certificate is public property and not a confidential document, the medical attendant will endeavour to allocate the cause of death to some other source when possible. It will ever be *De mortuis nil nisi bonum.* The medical profession is the only one for the supervision and treatment of venereal diseases: it is in close confidential relationship with the community, and to it should be entrusted all measures of notification and

* The difficulty of getting tabetics to put on weight is well known.

† Read at the Scottish Nursing Conference.

treatment. Registers could be kept and reported to a central medical authority, so as to be available for the collection of statistics: for the prevention of the overlapping of cases in the hands of practitioners the names and addresses of the patients should be obtained. These registers should not be available for perusal by the general public, just as case-books and hospital reports are confidential at present. If information were required at any time, it could be given with regard to numbers in a district, or in a particular trade, etc., but no clue would be permitted as to the identity of any individual. The public health authorities have a considerable number of non-medical assistants in their departments, and for this reason an objection could be raised as to the advisability of notification in this direction. No police supervision or its equivalent should be permitted unless in very exceptional cases and only where indicated by the medical profession.

The treatment of venereal diseases resolves itself into two divisions: I, Preventive; and II, Curative.

I. Preventive Methods.

Prostitution.

Although in the present discussion the moral aspect of the question is not touched upon, yet mention must be made of the part played by prostitution in the dissemination of disease. Prostitution in a country, it is well recognized, is a source of great danger to the community, and efficient methods for its control have baffled legislation of all times. That prostitution will ever be abolished is a matter of much doubt when we consider its history (Sanger[2]). We can do much in the meantime to abolish compulsory prostitution for women by making them socially and economically independent in other directions, so that it will be no longer a means of livelihood, but a profession from choice. In time the State will profit by the increased good health on the part of its citizens. A knowledge of the evils of prostitution and its consequences should be disseminated; this in itself would help as a deterrent to those tempted to engage in it as a calling. All remedial measures for venereal diseases hitherto directed against prostitution were instituted with a view to strike the evil at its source; and in the face of the investigations of Ferguson Watson, as quoted by Browning, where out of 104 girls, aged 14 to 18, of the better and poorer class of prostitutes all gave a positive Wassermann reaction, it is not surprising that legislation should be demanded. But, with regard to the inspection and control of prostitutes as carried out in other countries, are there any drawbacks to the system? Apart from all moral considerations, the segregation and cutting off from employment of a large number of individuals for the purpose of treatment will have as its consequence, as conditions at present exist, the filling up of their places by uninfected recruits, and in this way there would be an even greater dissemination of the disease among women than hitherto. In addition to the professional prostitute there is the clandestine one, who is said to be a source of greater danger. This class would never come under control, as the individuals are unknown to any authority. If control regulations were in force, examination and treatment would necessitate a considerable expenditure of public money, as owing to the nature of the disease the period of quarantine is somewhat prolonged. For although the patient herself may be certified as cured, we cannot say how long she is potentially infective to others. On returning to her profession reinfection may take place immediately and dissemination occur before the next period of inspection is due. This is the weak point in the administration of the regulations and renders them useless. In such regulations there is no provision made for the inspection of the carrier of the disease to the rest of the community, and any legislation would be entirely ineffectual unless means were taken to ensure that women should have a certain amount of protection, and assurance that they are not to be exposed to reinfection after having undergone the penalties of treatment. If prostitution is to be encouraged and regulated by the State as some would have us believe, then it is an honourable profession, and it is only logical that it should be made as safe as possible for those engaged in it. Such assurance of safety would involve the inspection of the male carrier of infection. In Britain venereal disease is not more prevalent than in those countries where there is State control. Indeed, if we were to credit statistics and opinions as to the prevalence of venereal disease as a causative factor in many pathological conditions we would conclude that we had less on the whole than our Continental neighbours. It is obvious that if there is to be any regulation or control as in other contagious diseases, there is to be no distinction of sex, so as to ensure the efficiency of those methods of administration. This matter, I venture to assert, can be safely left in the hands of the medical profession.

Transmission of Infection.

Life-long segregation of the mentally deficient is a necessary measure of reform, and would in time do much towards lessening disease, as this class is responsible for a considerable amount of spread of infection, and for the transmission of hereditary tendencies to their possible offspring.

It should be looked upon as a penal offence to communicate knowingly these diseases to others who are already unaffected or are ignorant of their consequences. Is it too much to ask of a State in some future time that when it enforces, as it does at present, a form of licence for the legality of the marriage ceremony, this licence should contain a clause as to the necessity of the partners being in a state of health not injurious to one another or to the children which they may eventually bring into the world? More amendments as to the laws on separation and divorce should be enacted to deal specially with those cases where it is found that one or other partner is the victim of venereal disease. When we look at children born into the world with evidence of congenital hereditary disease we question the advisability of the continuance of such a union, which should have had as its original aim the upbringing of a healthy offspring.

Notification of Premature Births.

Dr. Amand Routh[3] has suggested that all specimens of abortion and premature births should be systematically examined with the view of ascertaining the causation of such conditions. I would suggest, further, the compulsory notification of all abortions and premature births to the public health authority, on the lines of notification of stillbirths as carried out in Glasgow. By this means we would have not only an accurate estimate of the amount of loss of ante-natal life and its probable causes, but facilities would be given for the examination of all such specimens, and methods suggested for the treatment of the mother and other members of the family if it were found on examination the condition was due to syphilitic infection. Notification of ophthalmia neonatorum as carried out in Glasgow has done something towards the provision of free treatment for the mothers of those children notified.

II. Curative Methods.

All measures for the treatment of venereal diseases should be in the hands of the medical profession only, and for this reason treatment by unqualified persons should be a punishable offence. The aim of all methods should be as far as possible to induce patients to present themselves readily for treatment without the fear of any moral stigma being attached to that form of treatment. On this one point depends the success of the methods and the possible eradication of these diseases, rather than upon any system of inspection or control. In consideration of this suggestion we ask, What are the methods of treatment in existence at present? In private practice the difficulties of treatment are not great, as the patients by their education are more alive to the dangers of the diseases and therefore seek early treatment without any fear of breach of confidence on the part of the medical attendant. But among the industrial classes, for whom treatment is provided by State or charitable institutions, there is a considerable degree of uncertainty as to the publication of the nature of the disease, in so far as its treatment has to be carried out under the direction of an institution or department set aside for these special diseases and frequently labelled as such. Respectable members of the working class community, who may in many cases be the innocent victims of the disease, naturally shrink from the suspicion of moral degradation which treatment so frequently conveys. Such places as lock hospitals and

venereal wards in the Poor Law infirmaries are, with a few exceptions, the only institutions where at present residential treatment can be procured. In the large infirmaries and hospitals there is practically little provision (Dr. Johnstone's report[4]) made for such patients, nor are they encouraged in their attendance as out-patients. Where the women of the prostitute class obtain free treatment is a matter of uncertainty. Our hospitals make the excuse that they are kept up by voluntary contributions for the relief of the deserving poor and not for the encouragement of vice. With our present-day knowledge such excuses are invalid.

Admission into a lock hospital practically means notification, and a sojourn in the venereal wards of some of our workhouses is little better than incarceration in a prison, the patients being looked upon as moral lepers and isolated accordingly. All such places should be abolished, and treatment should be carried out in the general hospitals, where no distinction is made between the patients other than that confined to the division into special disease departments. No labelling under the term "venereal diseases" should be permitted. At the expiry of residential treatment as advised by the medical attendant, patients should be advised to attend as out-patients for a considerable period, both for treatment and for observation. Out-patient departments should be provided at hours suitable for those who would be most likely to attend. It should be the aim of the medical attendant to induce patients to bring the other members of the family for treatment if required. Advice should be given as to the prevention and spread of infection. It must be noted, in view of the general prevalence of the administration of salvarsan for syphilis, that residence in hospital may only imply one or two days at varying intervals of time, and that a limited number of beds will serve for the accommodation of a large number of patients. Therefore even a few beds set apart in some of the casualty departments of large hospitals would be of immense benefit, if in the meantime no other accommodation could be provided. The argument that such diseases, being of the nature of notifiable diseases, should be treated in institutions under the control of the public health authority is not to be accepted, as it would mean a continuance of the present system of isolated departments bearing the stamp and reputation of such.

In those cases where a patient has been under treatment for venereal disease, and where he or she is engaged in some industrial occupation, a continuance of which, while in an infective condition, would be a source of danger to the community, power should be given to the medical attendant to enforce further treatment or exclusion from occupation. This suggestion has to be considered with caution, as it might lead to the avoidance of treatment at the hands of qualified practitioners. It is a subject of much difficulty to ascertain how far we should act for the public good and yet preserve the liberty and interests of the individual, more especially in such cases as those with infective sores who insist upon returning to the factory or workshop. Legislation is required for that class who are a danger to themselves and to others as the result of their own ignorance. Regulations and punishment with regard to the verminous conditions of school children do not prove irksome except in those cases of the submerged classes who always require State aid and protection. Some years ago, when assistant surgeon at the Lock Hospital, I was frequently struck with the want of power for the detention of infective women, who would insist on returning to work for mainly economic reasons before their cure was complete. Some cases showing infective syphilitic lesions earned a livelihood in factories for the manufacture of confectionery, etc. In private practice the medical attendant should impress upon the patient the advantage of being kept under observation, just as is done for any other disease of a long standing and serious nature.

Every facility should be provided freely by the public health authority to practitioners to enable them to confirm the diagnosis of venereal diseases—serological and bacteriological. Salvarsan and other drugs should be obtainable for those who are unable to meet the expenditure. In this city Dr. Chalmers, M.O.H., has made arrangements for the carrying out of the Wassermann test free to any practitioner. In the Royal Infirmary there is a ward for the treatment of venereal diseases in men, and we hope in the near future to have one for women patients. An out-patient department has been instituted lately in the infirmary under the care of specialists in these diseases, and lectures are arranged for the students in attendance. Courses of lectures on modern methods of diagnosis and treatment should be arranged by university and hospital authorities for practitioners, students, and nurses, and greater scope should be given for clinical and laboratory research. Much more will be done by methods such as here suggested than have been obtained hitherto when venereal diseases were looked upon as a deterrent or just retribution for the breaking of the moral code. In time a knowledge of their dangers will be disseminated judiciously by the medical profession through the community, and prevention will follow, just as we have broken through the ignorance of the causes of such diseases as malaria, typhoid, and plague.

As to the treatment of venereal diseases by actual clinical methods I have little to say in addition to what has been said by others. One word of caution with regard to dependence upon salvarsan alone in the treatment of syphilis. While thoroughly in agreement as to its efficacy, I find prolonged treatment by mercury is necessary in many cases in addition, and although to all appearance cured a patient should be kept under observation for a considerable period of time before we can confidently assert that he or she is entirely free from the risk of communicating the disease to others.

Conclusions.

I.—*Preventive Methods.*

1. That all measures which have as their aim the prevention of compulsory prostitution for economic reasons should be encouraged.

2. That legislation should be directed towards the permanent segregation of the mentally deficient.

3. That the judicious education of the people by the medical profession should be undertaken with a view to promote a knowledge of the dangers of venereal diseases both to the individual and to the community.

4. That it should be a penal offence for any one to communicate knowingly venereal disease to others who are unaffected or are ignorant of its consequences.

5. That compulsory notification of all abortions and premature births should be given to the public health authority, and that facilities could be obtained from that authority for the carrying out of diagnostic methods as to the possible cause of such conditions.

II.—*Curative Methods.*

1. That all measures of treatment should have as their aim the encouragement of patients to present themselves for observation without the fear of any moral stigma being attached.

2. That all methods of treatment and notification should be in the hands of the medical profession only, and that treatment by unqualified persons should be a punishable offence.

3. That advice should be given to patients to continue under observation for a prolonged period of time. Methods of precaution to be adopted for the prevention of the spread of the disease to others should be indicated, and other members of the family should be induced to present themselves for observation and treatment if required.

4. That treatment should be carried out in the wards and out-patient departments of the general infirmaries and hospitals, and that all special institutions for the treatment of venereal diseases, such as lock hospitals, should be abolished as such.

5. That in those cases of venereal diseases where the patient is in an infective condition, and where he or she is engaged in a trade or occupation the continuance of which would prove a danger to the community, powers should be given to the medical attendant to enforce further treatment or to prevent resumption of that occupation.

6. That in no way should there be police supervision or control of persons infected with venereal disease except at the instigation of the medical profession.

7. That public health authorities should provide methods of diagnosis and treatment for private practitioners in the

case of patients who are unable to afford the expense of such.

8. That more specialized lectures for practitioners, students, and nurses should be given on venereal diseases, and opportunities for clinical and laboratory research.

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ARSENO-THERAPY IN SYPHILIS, WITH MORE PARTICULAR REFERENCE TO "GALYL."

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ALMOST since the introduction of syphilis into Europe, three of the heavy metals—mercury, arsenic, antimony—and their salts have been used in its curative treatment. Of these, mercury has until recently held pride of place, because the *dosis curativa* of both arsenic and antimony was so much greater than the *dosis tolerata* as to render them too dangerous for continued use. For this reason, therefore, they held until recently the mere secondary position of adjuvants; and it was not until it was shown that relatively enormous doses of the organic salts of arsenic could be tolerated in the successful experimental treatment of spirilloses and trypanosomiases that the possibility of using these synthetic preparations in the analogous disease—syphilis—occurred to clinicians.

Naturally the idea, once mooted, was eagerly acted upon. In the last six years, therefore, a considerable number of these organic preparations have been tried successfully, and already an enormous literature has arisen therefrom. At the London Lock Hospitals we have had experience of a number of these—atoxyl (soamin), orsudan, arsacetin, arsenophenylglycin, hectine, salvarsan, neo-salvarsan, and lately galyl. All of these have had rapidly curative effects in certain of the lesions of syphilis, particularly in those occurring on mucous surfaces—primary sores, condylomata, mucous plaques—less markedly on some of the secondary eruptions and tertiary lesions, least of all on the general adenitis of the secondary stage.

All these substances have one characteristic in common—the presence in their molecule of one or more benzene chains in which one of the hydrogen atoms has been replaced by an atom of arsenic; and it is to that their efficacy was and is due.



Therapeutically, most of these earlier substances were excellent; but the selective action on the optic nerve, producing amaurosis after the use of some of them, has caused all before salvarsan to be rejected, and many are now almost forgotten, although some of us who used them still remember how exceedingly rapid and gratifying the clinical results following their administration were.

SALVARSAN AND NEO-SALVARSAN.

Remembering these former disasters, when salvarsan was introduced syphilologists were naturally chary of using it at first; but the accumulated experience of the last four years has largely calmed this fear, and now several hundred injections a month are given at the London Lock Hospitals, with practically no fear of any disturbing complications. Nevertheless, a study of the literature shows that, although no such spectacular catastrophe as total blindness is likely to follow the use of salvarsan, yet the substance is not without danger, even in competent hands.

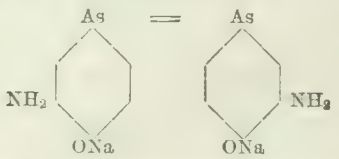
Mouneyrat,[1] the discoverer of "hectine," states from the results of experiments on animals, that in acute salvarsan poisoning death is due to an "intense congestion, with minute haemorrhagic foci in the brain, liver, kidneys, spleen, and lungs," and that both salvarsan and neo-salvarsan can produce haemorrhagic meningo-encephalitis. Delayed salvarsan poisoning, he states,[2] is due to the substance being "*un corps neurotrope*," since, in spite of assertions to the contrary, a certain proportion of each injection, varying with the individual, becomes fixed by the nervous tissues. The toxicity, however, he maintains, is not due to the arsenic content, but rather to the presence in its molecule of functional groups rendering it vaso-dilator, and allowing it to fasten on nervous tissue—"acting towards the nerve nuclei in exactly the same manner as the basic dyes, fuchsin, thionin, methylene blue, and vesuvian—bodies whose basic character is due to the same functional group present in salvarsan." That there is considerable clinical support for these statements is undoubted. We have seen an acute nephritis, almost fatal, set up by one injection, and we now refuse to use either salvarsan or neo-salvarsan in any case with albuminuria which will not yield first to mercury. Moreover, evidence is slowly accumulating showing that salvarsan and neo-salvarsan occasionally have a special affinity for the eighth nerve. Several cases of stone deafness have occurred within our knowledge after an injection; and any tendency towards deafness is now, therefore, looked upon at the Lock Hospitals as a distinct contraindication to their use.

Galyl.

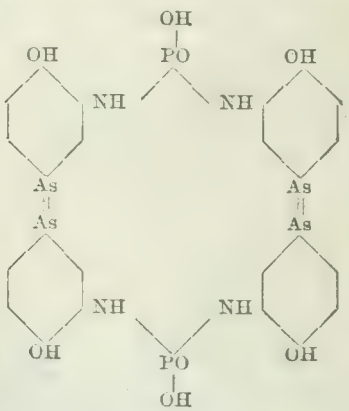
Although, then, our experience with salvarsan and neo-salvarsan, extending now to some three thousand cases, has been exceedingly fortunate as regards complications, yet, recognizing that most of our patients are drawn from young and otherwise healthy lives, and that it is in older lives that delayed symptoms are more likely to occur, we are always ready to try any improvement offered which has any claim to be free from such risks.

Mouneyrat has synthesized two such bodies, "galyl" and "ludyl," which he claims to be without vaso-dilator tendencies, and less neurotropic than salvarsan. By his courtesy a small supply of galyl, sufficient for ten cases, was sent to us in July, 1913.

Chemically, it is a rather more complex body than salvarsan. As sent out, salvarsan is the di-hydrochlorate of dioxy-diamido-arsenobenzol; and as injected, after neutralization, its formula (neglecting the "CH's" of the benzene chain) is:



Galyl is "tetroxy-diphosphamino-diarsenobenzene," with the formula:



Its arsenic content is 35.3 per cent., its phosphorus content 7.2 per cent. As sent out for intravenous injection in ampoules, it is a light yellow powder consisting of galyl and an appropriate amount of sodium carbonate to make it easily soluble in distilled water, forming an isotonic solution. It must be prepared immediately before use.

The average dosage for a male is 0.45 gram for the first, 0.5 gram for the second, and 0.55 gram for the third injection; for a woman 0.4 gram, 0.5 gram, 0.5 gram. The dose is calculated as being 8 to 8½ mg. per kilo of body weight in the adult male, and 7 to 7½ mg. in the female.

For solution, 30 c.cm. of distilled water per decigram is used—that is, 150 c.cm. for 0.5 gram.

It is recommended that three injections should be given at intervals of a week; and it is stated that the Wassermann reaction is generally negative one month after the last injection.

During the autumn of last year, by permission of Mr. Charles Gibbs and Mr. Arthur Shillitoe, to whom I am indebted for permission to record these cases, the supply sent was used at the Harrow Road Lock Hospital for Women.

Obviously it would be impossible on this small experience to make any wide generalizations; but it can be stated that the injections were easily borne, there were no complications at the time, the clinical results were as rapid as with salvarsan, and we have had no delayed sequelae.

Appended are short notes on the first three cases:

CASE I.

E. H., a woman aged 20, admitted July 8th, 1913, with primary sore on the left labium majus, commencing venereal warts, and amygdaloid glands in groin. No other signs. Wassermann reaction positive. Had two injections of galyl, 0.45 gram, at intervals of a fortnight. Sore healed in three weeks. Was then put on weekly injections of mercury 1 grain, for nine weeks. In all, had three months' combined treatment. Condition on discharge: No signs except anaemia, and glands still marked. Refused Wassermann test.

CASE II.

G. G., aged 19, admitted July 28th, 1913, with scabies and a maculo-papular eruption, ulcerated tonsils, marked condylomata on left labium majus, and general adenitis. Wassermann reaction positive. Had two injections of galyl, 0.45 gram, and sulphur baths for scabies. Condylomata, throat, and rash all gone on August 15th. Discharged herself August 24th, saying she was now quite well.

CASE III.

G. R., aged 22, admitted September 2nd, 1913, with primary sore on the right labium majus, present five weeks, condylomatous masses extending back from the labia over the perineum to the anal margin, ulcerated tonsils, and marked adenitis. Treated with pills for five weeks before admission. Wassermann reaction positive. Had two injections of galyl, 0.5 gram, at intervals of a week, followed by an eight weeks' course of injections of mercury 1 grain weekly. The condylomata and throat healed in a fortnight, the primary sore in a month. The glands were markedly diminished, but did not disappear. Two months after the first injection the Wassermann reaction was doubtful. The patient discharged herself November 26th, 1913. No lesions visible.

The contraindications to galyl are the same as those for salvarsan, namely, cardiac, hepatic, renal, and probably nervous diseases. The temperature sometimes rises after the first injection, and as the substance is eliminated through the bowels there is often some diarrhoea. One of our cases had a bad attack of vomiting; but as this occurred to seven patients injected with salvarsan, and eight with neo-salvarsan, on the same day, we put it down to something in the distilled water and saline used, although these were carefully prepared in our own stills on the morning of injection.

Intolerance is said to be rare; and when it does occur it is mostly in women. It is considered to be present when the temperature remains above 101° F., and is associated with vomiting. In such cases the dose must be diminished by half. Markedly cachectic or anaemic patients must be very carefully watched.

It will be noted that although, for reasons of caution, we did not at first follow the maker's suggestion of a weekly injection for three weeks, the clinical results were, nevertheless, very good. Afterwards, when we found that weekly injections appeared quite safe, we used them, with increasingly rapid results.

Unfortunately, however, it is very difficult to keep the class of patient we have to deal with in hospital after visible signs have disappeared, or to get them to return for observation when they leave; and so we have no Wassermann after-results to round off the picture. This, however, appeared to us of little consequence, because, in spite of the optimism of the discoverers, we had entertained no hopes of curing the disease by means of these three suggested injections; and so we put all the cases upon mercurial injections at once, continuing them as long as the patients remained in hospital. Indeed, we do the same now with all our salvarsan cases, since no one with an extensive experience now hopes to cure all cases of syphilis with three or more injections of salvarsan alone.

The Present Position of Arseno-therapy.

It may be possible in an early primary case to abort the disease with three or more injections of salvarsan. But even that is doubtful, as cases in which the Wassermann reaction have remained negative for a year often show a positive reaction again after that period. In the face of secondary manifestations, it is so risky to depend on salvarsan alone as to be almost unjustifiable. In tertiary lesions salvarsan should be used only in the expectation of clearing symptoms.

Two courses, therefore, are open to us. One is to give a set of three or more injections of salvarsan, neo-salvarsan, or galyl, in the first month or six weeks after the disease has come under observation, following it up by a full course of mercury, continuous or intermittent, with an occasional injection of salvarsan, if one thinks it worth while, spread over the next two years. After this, treatment may reasonably stop, with the proviso that the blood should be tested every six months for the next eighteen months to make certain that all is right.

This is the obviously safe treatment. It may, possibly, be unnecessarily safe; but it is the treatment one would recommend to one's best friend—the treatment one would adopt oneself if one were so unfortunate as to acquire the disease—and that is, after all, the ultimate criterion.

But it is a tedious method, and possibly unnecessary. The experience of the officers of the Royal Army Medical Corps at the Rochester Row Hospital suggests that it may be considerably shortened. The results there, following a course of intermittent salvarsan and mercury, appear to be excellent. They commence with one full dose of salvarsan, follow it with nine weekly injections of mercury, and wind up with a second injection of salvarsan. This makes about a three months' course; and in many of the patients it is stated the reaction has remained negative for a year afterwards. For greater safety it has been suggested that another dose of salvarsan should be sandwiched in the middle of this course, making, now, one salvarsan, five mercury injections; one salvarsan, five mercury injections; and a final salvarsan injection.

These two courses, known respectively as the "191" and the "15151" methods, have been tried, and are still being tried, at the Harrow Road Lock Hospital. The results of the first series have been collected by Lieutenant Corbett, R.A.M.C., late house-surgeon at Harrow Road, but are not yet published. Without anticipating his paper it is permissible to say that our results are not anything like as good as those obtained at Rochester Row—a large percentage of our cases giving a positive Wassermann reaction at the end of this course, before and after a final provocative salvarsan injection. This may possibly be due to the known greater intractability of women to treatment in this disease, or to another factor—the use of neo-salvarsan in a large proportion of the cases—for there seems to be little doubt that, judging from the Wassermann results, neo-salvarsan is not nearly as powerful a drug as salvarsan. The only advantages it possesses, indeed, seem to be its solubility and its neutral character. Even these advantages, however, are very slight, as we find that, with well drilled assistants and all the conditions favourable, it is possible to give twelve intravenous injections of salvarsan in an hour as against sixteen of neo-salvarsan.

SUMMARY.

Collecting all the evidence together, then, we may say that any of these substances—salvarsan, neo-salvarsan, or galyl—can be used with apparent safety. Whether galyl possesses the extra advantages claimed for it we have not yet had enough experience to decide. That salvarsan has advantages over neo-salvarsan would seem to be indicated by the Wassermann results. How galyl compares with either of them in this respect we do not as yet know. Finally, it would appear that mercury is regaining once more its old position as the main stand-by in the treatment of syphilis; and that the real progress of arseno-therapy lies not in the direction of complete cure, but rather in its rapid healing effects on the early, highly contagious stages of the disease—truly an almost inestimable boon from the standpoint of the public health and the well-being of the nation.

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THE DIAGNOSIS AND TREATMENT OF CHRONIC GONORRHOEA AND ITS LOCAL COMPLICATIONS.*

BY

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It has, until recently, been the habit in this country to look upon gonorrhoea as a trivial affection, and only within the last few years have the severe and dangerous sequelae of this condition been recognized.

Neisser, the discoverer of the gonococcus, considers that gonorrhoea is the most widespread of all the infectious diseases, with the exception of measles, and that probably this disease is one of the most common causes of sterility, and his observations appear to be confirmed by other observers. Luys states: "There can be no question that uncured gonorrhoea is one of the most frequent causes of a declining birth-rate, that it cripples an endless number of men, and that it renders legions of women sterile." It appears to be highly probable that over 50 per cent. of the inflammatory pelvic troubles so often met with in young married women are due to gonococcal infection by the husband, who, to do him justice, is usually quite ignorant that he was not completely cured before marriage. It is a matter of great regret—indeed I feel inclined to put the matter more strongly and to say that it is a shame to our profession—that so many men are told that they are free from all infection, and are given permission to marry before any systematic, thorough, and scientific examination has been made on which such an opinion can be logically based. The average young man is not a blackguard, and if he were told by his medical man that after an attack of gonorrhoea he must not marry until repeated examination enables a clean bill of health to be given, and that if he does marry before such permission is received he will run a grave risk of infecting his bride, he will, in the great majority of cases, follow his doctor's advice.

I consider, therefore, that the responsibility of the prevalence of inflammatory pelvic conditions in young married women is shared equally between the doctor and the husband—indeed, in many cases the doctor is the more to blame. It behoves us, therefore, to remember that if we do not constitute ourselves the champions of the innocent wife and unborn children, we shall deserve to be considered their enemies. It is, however, only by a systematic and thorough routine examination that entails time, trouble, and skill that we are able to give an opinion that is of any real value, or to state with any assurance that cure has been effected.

Chronicity, or so-called latency of gonorrhoea, has a definite cause, and this cause can always be found if a systematic search is made for it. Criminals who are wanted by the police do not frequent the main thoroughfares, but frequent side streets and alleys; so the gonococcus may lurk unsuspected in the ducts and glands that surround the urethra along its whole length. A cessation of an obvious urethral discharge simply means that the main thoroughfare is clear, but is no evidence that all the periurethral ducts and glands are uninfected.

Diagnosis.

For a proper examination it is almost essential that the patient, whether male or female, should be examined on one of the many examination chairs devised for this purpose.

Male.

In the male the routine examination should consist of:

Examination of Urethral Discharge.

As regards the amount, whether continuous or only morning drop; the colour, whether yellow, white, or blood-stained, and the bacteriology.

Examination of the Urine for Threads or Turbidity.

Many methods have been devised. The two which appear to be most reliable are Kollmann's five-glass method and Luys's four-glass method. In the former the first glass contains the washings of the anterior urethra. Weak boracic lotion is used, and the anterior urethra is washed out with a syringe until the fluid is clear and free from threads. The second glass contains the clear syringe washing, and is used as a control. The urine is now passed into the third, fourth, and fifth glasses successively. If threads appear in the first glass but the urine in the third, fourth, and fifth glasses is clear, the case is one of simple anterior urethritis. The size, shape, and weight of the threads are of importance. If the threads are long mucous threads and float, they are the result of superficial catarrh of the urethra; whilst, if they are small and comma-shaped, and are suspended in the urine, they come from Littré's glands. If the third, fourth, and fifth glasses containing urine contain threads, post-urethritis is present; and if the threads are short, thick, and heavy, or comma-shaped, they come from the prostate. If all the glasses are turbid and the fifth glass the most turbid, cystitis is present.

When using Luys's four-glass method the urine is passed into four glasses successively. Luys considers that this method is sufficiently accurate for routine method of examination, and that it permits the differential diagnosis of anterior and posterior urethritis. He says, "If the contents of the first glass fail to cleanse the anterior urethra, those of the second, and *a fortiori* those of the third will do so; and if the fourth glass contains heavy flakes, while the second and third do not, or only contain a few, then the diagnosis of posterior urethritis is certain." After standing for half an hour in a cool place the urine of the glass containing threads or turbidity is centrifuged, and the centrifuged deposit examined microscopically for nature of cells and organisms found.

In the case of chronic gonorrhoea, the gonococcus is often very difficult to detect, and prolonged search is necessary. If the urine is turbid, some of the urine is treated with a little acetic acid, when the turbidity will disappear if due to phosphates.

Examination of the Urethra and Glands Connected with it.

If the lips of the meatus are stuck together, or show any discharge, a chronic inflammation of the urethra is probably present. Examination of the meatus and fossa navicularis is simplified if a small speculum is used. Paraurethral ducts and suppurating follicles must be carefully looked for, and a small blunt-pointed stilette may be of considerable assistance in this exploration. If acute inflammation of the urethra can be eliminated, and the urine in the first glass is not turbid, the anterior urethra should be examined by means of a straight metal sound or flexible gum-elastic bougie passed down it, and the whole length of the urethra carefully palpated for the presence of inflamed, thickened, or painful areas or stricture. The urethra should then be gently massaged on the sound, after which the anterior urethra should be washed out and again examined for pus and threads. In this way infection of any of the glands in the anterior urethra will be detected.

Cowper's glands should be now examined, and for this purpose the patient is placed on his back in the lithotomy position, and the first finger of the right hand passed into the rectum, its palmar surface forwards. The finger inside the rectum is then hooked forward first to one side and then to the other, and the thumb on the outside approximated to the finger in the rectum. A small tender tumour will indicate inflammation of Cowper's gland, which may be either unilateral or bilateral.

For the examination of the prostate and vesiculae seminales, the patient stands, leaning forward, and the first finger is inserted in the rectum with the palmar surface downwards. The prostate is examined through the anterior wall of the rectum, and both its middle and lateral lobes massaged, and note is made of any tenderness. The bladder, which should previously be partly filled with boracic lotion, is now emptied, and the fluid examined for pus or threads. The vesiculae seminales cannot usually be felt in health, but if enlarged or inflamed, will be felt above the prostate between the anterior wall of the rectum and the bladder. They should be examined at the same time as the prostate.

*Read before the Southern Branch of the British Medical Association.

The next step consists of examination of the urethra by means of the urethroscope. Luys, in his most interesting and valuable *Textbook of Gonorrhoea*,[1] says:

> The urethroscope should be accepted nowadays as a common instrument for exploring the urethra for diagnostic purposes. It gives infinitely more accurate information than any other method of examination. For therapeutic purposes it gives the means of treating the lesions with astonishing precision and efficiency. It is indispensable in the treatment of chronic urethritis.

Before passing the urethroscope it must be ascertained by means of metal sounds that the urethra will admit the instrument, and if the lumen is not large enough, sufficient time must be devoted to the gradual dilatation of the urethra up to the required dimensions for easy passage of the instrument.

The condition of the mucous membrane in chronic urethritis has been classified under two heads—(1) soft infiltration and (2) hard infiltration. In the former the mucous membrane is swollen and red, and in the latter contracted and pale, one being a condition of hyperaemia and the other of sclerosis. The appearance of the mucous membrane in a condition of soft infiltration is that of an inflamed hyperaemic and swollen mucous membrane. The area affected may be small or large, and one or several patches may be present. The openings of Littré's glands and the lacunae of Morgagni all appear as little red points, and pus can be seen coming out of them. Papillomatous hyperplasia of the mucous membrane is often met with in the condition of soft infiltration.

In hard infiltration, which is a later step, and must always have been preceded by a condition of soft infiltration, the thickened and sclerotic patches, which are really the early stages of a stricture, offer resistance to the passage of the instrument. The mucous membrane is pale and anaemic; the epithelium is pale, but there may be little nodules or ulcerated surfaces, and the lumen of the urethra appears as an elongated funnel with rigid walls.

Female.

In the female a similar procedure is adopted, and consists of:

Examination of Vulval Discharge.

As regards locality, whether the discharge appears to come from Bartholin's glands, from the urethra, or from the vagina; the colour and quantity of the discharge; and its bacteriology.

Bartholin's Glands.

The glands are examined and palpated by means of one finger in the vagina and one on the outside of each labium majus. If no pain, tenderness, or swelling is felt, an attempt is made to express any pus which may be present, which is then examined bacteriologically.

The Urethra.

If on careful inspection there be any sign of pus, it is collected on a platinum loop, and examined bacteriologically. The follicles just within and around the meatus are also carefully examined. The next step should be that of milking the urethra. For this purpose the first finger, with the palmar surface anterior, is introduced into the vagina as far as it will go up into the anterior fornix. It is now gently pressed against the anterior vaginal wall and withdrawn slowly along the urethra, pressing gently, so as to express any pus. If a bead of pus is obtained, it is collected and examined.

Examination of the Urine.

Luys recommends the four-glass method, when in the female; a simple urethritis is shown by turbidity in the first glass, while the third and fourth glasses will contain clear urine. All the glasses will be turbid if cystitis is present.

Examination of the Cervix.

A vaginal speculum is passed and the cervix examined for any discharge, which is removed with a platinum loop and examined bacteriologically. Luys recommends that as a negative result is often obtained by this examination, a sterile cotton-wool plug should be introduced into the cervix and left for twenty-four hours, when it is removed and examined bacteriologically.

TREATMENT.

Gonorrhoea, being an infection due to a specific micro-organism, must be treated both generally and locally.

General treatment is carried out with the view of raising the resistance of the body to the attacks of the organism, neutralizing the toxins produced by the organisms, and increasing the bactericidal power of the host.

In local treatment the object is to kill and wash away the organisms from the foci in which they have established themselves, and to obtain the evacuation and drainage of pent-up infected material; and to allow the immunizing and curative fluids to complete the cure.

In all chronic pyogenic infections it is important that the patient should live as hygienic a life as possible. With chronic gonorrhoea, in which the only symptoms may be threads in the urine, it is not necessary to insist on complete abstinence from all alcohol; strict moderation should, however, be practised, and generally the least harmful form of alcohol is weak whisky and soda. Sexual excitement and exercise liable to produce irritation of the urethra, such as riding or cycling, must be avoided.

Great things have been hoped for from vaccine-therapy, but personally I have been disappointed in the majority of cases of chronic gonorrhoea and its complications. As regards the value of vaccine treatment in acute gonorrhoea, Major L. W. Harrison, R.A.M.C., with his very large experience, is of the opinion that a smaller percentage of patients who receive vaccine treatment develop complications and chronic gonorrhoea than those who have not received this treatment. Vaccine treatment may therefore be considered as of some value in regard to the prophylaxis of chronic gonorrhoea. It is also, I think, of undoubted use in gonorrhoeal rheumatism, but that condition is beyond the scope of this paper. Gonorrhoeal phylacogen has been shown by Major Harrison, who has investigated this remedy, to be of doubtful if any value in chronic gonorrhoea.

Besredka's sensitized vaccines have been well reported on by Dr. Cruveilhier of Paris, who considers that cases of chronic gonorrhoea have been benefited by them. The matter requires further investigation before any definite opinion can be formed.

I have only a small personal experience of the curative power of Nicolle and Blaizot's much advertised preparation "Dmegon"; though some cases have apparently been benefited by its use, I am not much impressed with its therapeutic merits. The method of preparation has not been disclosed, but the drug is stated to be free from toxicity, that it can be preserved indefinitely, and that cure is obtained in from three to ten days with from two to six intramuscular inoculations.

Chronic gonorrhoea is due to a combination of (1) chronic urethritis proper, by which I mean localized inflammation or ulceration of the urethral mucous membrane; and (2) chronic infection of glands connected with the urethra. No system of treatment is likely to be successful unless both these features are dealt with.

I divide the local treatment under two heads, the first being treatment directed for the cure of the urethra proper, and the second treatment directed to the cure of affected glands.

(*a*) *Posterior Irrigation.*

By this we mean passing antiseptic solutions into the bladder, from which they are returned in the normal way. The solutions of most value are:

Potassium permanganate (1 in 8,000 to 1 in 4,000).
Silver salts, particularly protargol and albargin (1 in 2,000 to 1 in 1,000).
Mercury oxycyanide (1 in 10,000 to 1 in 2,000). This should not be given if the patient has recently been taking iodides by the mouth, as severe cystitis and urethritis is liable to be induced owing to the formation of mercury iodide *in situ*.

Before the first two or three irrigations it is usually advisable to anaesthetize the urethra with a 1 per cent. solution of stovaine. Cocaine should not be used, as several cases of sudden death following its use have been recorded. The patient having emptied his bladder, about 10 c.cm. of 1 per cent. solution of stovaine is injected with a large syringe and retained in the urethra for about five minutes. Any form of irrigator can be used, the reservoir of which should have a capacity of at least two quarts. I use a Wyndham-Powell glass shield and nozzle, which is connected to the reservoir by rubber tubing. The reservoir

should be about 4 ft. above the patient, who should be lying on his back on the examining chair. The solution should be used at about body temperature, with the exception of protargol, which is easily decomposed, and so should only be used with distilled water and in cold solution.

The shield and cannula are held in the right hand, and the glans with the left. The nozzle is now inserted into the meatus and the urethra filled with the solution. The nozzle is now withdrawn and the fluid escapes. This manœuvre is repeated until a pint of the solution has been used, when the anterior urethra will have been thoroughly cleansed. The nozzle is now kept in the meatus and pressed against it, so that no fluid escapes. The patient is now told to endeavour to make water in order to relax the sphincter of the bladder, and in the majority of cases the fluid will then flow easily into the bladder, and it is allowed to flow until the patient expresses a desire to empty his bladder. About two quarts of solution should be used, and the posterior irrigation should be given about three times a week. If the patient contracts and resists so that an easy flow is not obtained the irrigation must be discontinued.

(b) Injection by Guyon's Method.

A 1 to 3 per cent. solution of silver nitrate is employed. A hollow olivary-pointed bougie is used, the openings being behind the heel of the olive, so that the stream is projected forwards. The bougie is introduced into the bladder, and the nozzle of the syringe fitted to the end of the bougie. The bougie is now slowly withdrawn, and at the same time the piston of the syringe is depressed, so that the urethra is filled with the solution. At the same time the thumb and forefinger of the left hand press the lips of the meatus against the bougie, so that no fluid is allowed to escape. The solution should be retained for five minutes.

Considerable local reaction may follow this method of treatment, which should not be repeated at shorter intervals than one week.

(c) Ionization of the Urethra.

Silver and zinc salts are used in a solution of ½ to 1 per cent. of silver nitrate and 2 per cent. of zinc sulphate. The positive electrode consists of a hollow vulcanite bougie pierced with holes by which the fluid containing the salts in solution is introduced into the urethra. The large negative or indifferent electrode, which usually consists of lead covered with moistened flannel, is placed on the abdomen or thigh. The current should be slowly worked up from 1 to 10 milliampères, according to the tolerance of the patient, and the current should be applied for about a quarter of an hour. The treatment should be given not oftener than once a week.

(d) Dissolvent Medicated Bougies.

In these the vehicle is cocoa butter or gelatine with which the drug to be applied (zinc sulphate, silver nitrate, etc.) has been mixed. The only ones I have used are those sold under the names of "Sil-Mer-Zincs" (Mitchell's) which consist of a mixture of silver, mercury, and zinc salts in a gelatine and glycerine basis, and are supplied with little linen hoods. They should be inserted on retiring to rest, and the linen hood, which contains a little cotton-wool, should be tied over the glans. The bougie will then slowly dissolve, and the medicament will remain in contact during the night and be washed out when the patient passes water in the morning.

(e) Heated Bougies.

Major L. W. Harrison, R.A.M.C., has reported the results of the treatment of a series of cases by means of Valentine's water-heated bougie; he considers the results he has obtained very promising. Major Harrison[2] uses the following technique:

An atropine suppository gr. 1/100 is administered to the patient the night before and again on the same morning. Immediately before the bougie is passed, his urethra is irrigated in the usual manner. He then lies on a couch, and is adequately protected with a waterproof sheet. The sterilized and lubricated bougie is connected by its inner tube to a rubber tube leading from an irrigator which is filled with water at 114° F., and placed about 18 in. above the couch. This rubber tube is provided with a clip; to the lateral tube is attached another short rubber tube to lead away the water to a conveniently placed bucket. The bougie is then passed into the bladder, and the clip opened to allow the water to flow from the irrigator down the inner tube of the bougie and back by the outer tube to the outlet. The temperature of the water in the irrigator is gradually raised to 125° F. by putting more hot water to it, and at this temperature the water is allowed to flow from the bougie for twenty-five to thirty minutes.

Treatment of Infective Glands.

The three methods employed consist of the massage of the glands connected with the urethra, dilatation of the urethra, and destruction of foci in and around the urethral wall by cauterization or incision.

For massage of the lacunae of Morgagni and Littré's glands a straight anterior urethral metal sound is inserted, as large as can with comfort be admitted into the urethra, and the urethra massaged round it. After withdrawal of the sound the anterior urethra should be irrigated.

Massage of the prostate and vesiculae seminales has been dealt with already. A second variety of prostatic massage can, however, be used with advantage. In this case, having partially filled the bladder with boracic solution, a curved metal sound, as large as possible, is passed, and the prostate is massaged against the sound by means of the finger in the rectum. More efficient massage can thus be obtained, as the sound gives something firm to press against. Only gentle massage must be employed.

The technique of the massage of Cowper's gland has also been given previously.

The object of dilatation of the urethra is to distend the mucous membrane and to squeeze out any small collections of infected material that may have accumulated in the glands or ducts of the mucous membrane.

For dilatation of the anterior urethra, short straight metal sounds are used, and for the posterior urethra long curved ones. The patient empties his bladder, which is then partially filled with boric acid solution. When treating the anterior urethra, the largest sized sound which can be admitted with ease and comfort is found, and this is taken as the first of the series. Not more than three sounds are passed at each visit, and there should not be more than three dilatations a week. The anterior urethra should be dilated up to No. 20 English size. As, however, the penile portion of the urethra is narrower than the prostatic, it is obvious that complete dilatation of the prostatic urethra cannot be obtained in this way. We must, therefore, after dilating the anterior and posterior urethra as much as possible with a curved metal bougie, use Kollmann's dilator. In this instrument the dilating portion is collapsible, so that it can pass through the penile urethra, and on reaching the prostatic urethra, can be opened out by means of a screw in the handle. The amount of dilatation is accurately measured by a dial which is worked in connexion with the screw. Dilatation should be very slow, and pain is an indication that dilatation has proceeded far enough for that day. This method of dilatation should not be applied more than twice a week, and when the maximum dilatation has been reached at each sitting, the dilator should be left in the urethra at the fullest dilatation for five minutes before it is collapsed and removed. Kollmann's dilator is usually covered with a rubber sheath before introduction, in order to prevent nipping of the mucous membrane between the four blades of the dilator when the instrument is closed for withdrawal from the urethra. As in the case of dilatation of the urethra with the metal sound, the bladder is partially filled with boric acid solution before dilatation takes place, and after dilatation the bladder is emptied, thus washing away any débris which may have collected as a result of the dilatation, and which may then be examined cytologically and bacteriologically.

For the destruction of foci in or around the urethra an electric cautery is used in conjunction with the urethroscope, a fine platinum-pointed cautery being introduced through the urethroscope tube, and the operation being performed with the assistance of the urethroscope lamp. The cautery can be used for opening small abscesses, for cauterizing local ulcerated areas, or for the removal of proliferation of the mucous membrane. Luys has found this method of treatment safe and free from complication, and has only encountered haemorrhage twice out of many hundred cases, and this haemorrhage was easily controlled by irrigation with very hot water. He recommends that

after cauterization a posterior irrigation with 1 in 4,000 mercury oxycyanide should be given to avoid any danger of secondary infection.

The treatment of urethritis in the female is similar to that in the male, except that with posterior irrigation a female catheter takes the place of a Wyndham-Powell nozzle. The anterior urethra should be well washed out with the catheter before the catheter is passed on to the bladder. For vaginitis, douchings of 1 in 4,000 permanganate are employed, which may be followed by tamponage with iodoform gauze.

Cervicitis should be treating by swabbing the cervical canal with pledgets of cotton-wool soaked in a solution of sodium bicarbonate. In this way the tenacious mucus is removed, so that the bactericidal drug can be brought into direct contact with the infected surface. Occasionally curettage of the canal is advantageous. The cervical canal is now swabbed with liniment of iodine or a strong solution of silver nitrate.

Gonorrhoeal inflammation of Bartholin's glands is treated by incision or excision of the gland. Total excision is usually recommended, and care must be taken, when possible, to remove the gland intact. If the duct only is infected, incision is sufficient.

REFERENCES.

[1] *Traité de la Blennorragie*, by Georges Luys, translated by A. Foerster. [2] *A Manual of Venereal Diseases*, second edition, by Officers of R.A.M.C.

A CASE OF OTITIC MENINGITIS AND CEREBELLAR ABSCESS, WITH RECOVERY.

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RECOVERY in cases of otitic meningitis is sufficiently rare to merit publication when it occurs. The case recorded below illustrates the possibility of recovery when all the classical signs of the disease have become established, and are even further complicated by the presence of a cerebellar abscess.

History.

A. D., a girl of 17, was seen by one of us in consultation on the evening of August 13th. A week previously she had complained of severe occipital headache which had gradually become worse, until within the previous forty-eight hours delirium, high fever, and other signs of meningitis had supervened. There was an offensive discharge from the right ear, but the mother of the patient was emphatic that the discharge had commenced since the illness began. Subsequent inquiries from the patient have failed to elicit a history extending more than a week previous to the commencement of the illness. On examination the patient presented a typical picture of acute meningitis. She was semiconscious, but could be roused, when she immediately complained of pain in the head and back. There had been vomiting throughout the day. The pulse was 108, temperature 103° F., marked head retraction, definite Kernig's sign, and general hyperaesthesia. There was no ocular palsy and no nystagmus, but the optic discs were very red and the veins were distended. An attempt at lumbar puncture had failed, owing to the rigidity and restlessness. She was at once sent to the Royal Infirmary, where a second attempt at lumbar puncture was also unsuccessful. The next day the ears were carefully examined, and she was submitted to operation. It had been thought that the otitis might have been secondary to cerebro-spinal meningitis, but the examination showed that there must undoubtedly have been some old trouble in the middle ear.

Operation.

On August 14th, under a general anaesthetic, a lumbar puncture was performed, and a few drops of turbid cerebro-spinal fluid were obtained with difficulty. A radical mastoid operation was then performed. Pus was present in the antrum, and this was traced back into the posterior fossa, where a large extradural collection of pus was evacuated. The dura in this region was softened and disintegrated. The bone was widely removed over the posterior fossa, and internally along the posterior surface of the petrous nearly to the internal auditory meatus.

After-Course.

On the following day the right external rectus was seen to be paralysed. The patient progressed favourably for some time, the meningeal symptoms gradually subsiding, although the temperature remained raised and variable until August 23rd, when it fell to normal. This continued for five days, when she began to complain again of the headache, and on August 29th the temperature rose to 100°, and she vomited twice. The pulse-rate became subnormal, varying between 55 and 70, with occasional rises to 90. The temperature varied between 98° and 100° until September 8th, when it registered 97°. The vomiting continued.

The large bony wound became gradually filled up by a hernia of the cerebellum. Mr. G. H. Pooley kindly examined the fundi, and reported, "No optic neuritis; edges of discs a little blurred," on September 1st. The absence of optic neuritis at this time is probably accounted for by the free decompression.

On September 5th a probe introduced into the hernia allowed a scanty quantity of serous fluid to escape. On September 8th a pus-seeker was introduced into the hernia and an abscess containing about 1½ oz. of thick greenish pus evacuated. A soft rubber drain tube was left *in situ*. The pulse at once improved, and the patient expressed herself as much better and the vomiting abated; after three days, however, it recurred. The pulse remained about 110 and the temperature about normal. The vomiting continued at intervals until the beginning of October, when the tube was removed.

The persistence of the vomiting after the evacuation of the abscess caused considerable difficulty in diagnosis at the time, and was probably due to the presence of the drainage tube. This might have been removed at an earlier date, as the discharge through the tube practically ceased after a few days. It was thought desirable, however, to preserve the track in case future exploration might be necessary. There was such a complete absence of mental disturbance that, in spite of the persistence of the vomiting and of the dysdiadokokinesis, it seemed hardly probable that there was any further intracranial mischief. There was a marked acetone odour in the breath, and this raised the question of "toxic" vomiting. Accordingly, a twenty-four hours specimen of urine was submitted for examination in the clinical laboratory. The result was as follows:

> Quantity 312 c.cm. Total nitrogen 3.92 grams, ammonia nitrogen 0.308 gram (ammonia coefficient, therefore, 9.42 per cent.). No albumin, no sugar, slight diacetic acid reaction, but a very strong acetone reaction.

The low total nitrogen illustrates the severity of the vomiting, and renders the coefficient of 9.42 per cent. of no value as an index of toxic acidosis. The hernia quickly subsided, and gradually the wound healed. The paralysis of the right sixth nerve completely disappeared after about a month, and the patient left the infirmary on December 10th.

REMARKS.

Lumbar Puncture.—When, under an anaesthetic, the spinal thecae were at last tapped it was found that there was no evidence of increased pressure, and only a very small quantity of fluid could be obtained. This is sometimes the case in meningitis, and is usually ascribed to the presence of adhesions which prevent the free circulation of the fluid. In our case it may have been due to pressure exerted by the cerebellum in the neighbourhood of the foramen of Magendie. The fluid obtained was sent to the clinical laboratory, and the clinical pathologist (Mr. W. W. King) reported as follows: No reduction of Fehling's fluid, numerous polymorphonuclear leucocytes, endothelial cells and lymphocytes, large number of Gram-positive diplococci, which are found mainly inside the polymorphonuclears, cultures sterile in eighteen hours. A piece of bone removed from the mastoid was submitted to bacteriological examination, and revealed the presence of a mixed infection with staphylococci, streptococci, Gram-positive diplococci, and a Gram-negative motile bacillus rather similar to the *B. pyocyaneus*, but not producing any of the characteristic pigment on subculture.

Diagnosis.—Is there sufficient warrant in these findings for the diagnosis of meningitis as appended to the report

of the case? It must be admitted that not even the presence of pus cells and organisms in the cerebro-spinal fluid are sufficient evidence for a diagnosis of meningitis, as it has been proved that the same may be found in cases of uncomplicated abscess of the brain or in extradural abscess. In the absence of *post-mortem* evidence we cannot be certain that there existed a true meningitis, but the important practical point is that, even when all the classical signs of meningitis are fully developed and are confirmed by the finding of pus cells and organisms in the cerebro-spinal fluid, there is still a possibility of recovery under energetic surgical treatment. No vaccines were used in the treatment of this case.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

Delivered before the Royal College of Physicians of London.

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LECTURE III.

Dust.

Fibroid lung (such as potters suffer from) is rare amongst coal-miners, and anthracosis does not seem to entail disablement. But while coal dust does not seem to be an irritant of the lung the shale dust and flue dust used in mines to dilute coal dust, with a view to prevent explosions, owing to their siliceous character might adversely affect the coal-miner's lungs. The spraying of mines to render the coal dust less liable to explosion might cause a humidity which, when added to a high temperature and darkness, might be deleterious to the coal-miner's health and prove favourable to the development of ankylostomiasis, now unknown in British coal mines. More than two hundred years ago the importance of dust as one of the principal causes of industrial diseases was recognized by Ramazini, who at that time was the professor of medicine at Modena University. In this country, however, the subject attracted little attention until the middle of the nineteenth century, when the researches of Dr. Greenhow, of the Middlesex Hospital, placed it upon a scientific basis. Other observers, notably Arlidge, Haldane, and Sir Thomas Oliver, have made valuable contributions to the subject. In coal mines siliceous dust is produced when new workings are opened up and when new roadways are cut out, but in well established mines the vast majority of workers only came in contact with coal dust.

The Coal Mines Regulation Act has not only been to some extent instrumental in diminishing the number of accidents in mines, but it has done something equally important in another direction. Prior to the passing of this Act, one of the principal diseases from which miners suffered was fibrosis of the lungs, or miner's phthisis, and Dr. Greenhow's collection of miners' lungs in the museum of the Middlesex Hospital shows that this disease was in many cases the actual cause of death. The statistics of the Registrar-General also show that the mortality figure for miners from diseases of the respiratory system was at one time very much greater than it is now. At the present time in Great Britain fibrosis of the lung among miners can be said to be practically non-existent, and its disappearance can be wholly attributed to the enforced improvements in the ventilation of mines, to improvements in illumination, and to shorter working hours. The evidence given before the Departmental Committee on Industrial Diseases, which sat in 1906 and 1907, was practically unanimous on these points. Professor Murray, of Manchester, who for many years was consulting physician to the North of England United Coalowners' Association, and also physician to the Royal Victoria Infirmary, Newcastle-upon-Tyne, stated that he had never seen a case of fibrosis of the lungs in miners, and Sir Thomas Oliver said that there had not been a case of miner's phthisis in the Newcastle-upon-Tyne Royal Infirmary for more than ten years; similar evidence was given by other medical men with large experience of colliery practice. Though fibroid phthisis does not affect coal-miners at the present time in this country, still anthracosis, or infiltration of the lung with coal dust, is widely found. I have already mentioned that workers who are employed in making new roads in the mine may be exposed to the inhalation of siliceous dust, and in the ganister mines of Durham, Yorkshire, and other counties the irritating nature of the rock dust produces fibrosis of an aggravated type.

Tuberculosis among Coal-Miners.

Tuberculosis of the lungs is not so commonly found among coal-miners as among many other occupations, and the statistics of the Registrar-General with regard to mortality from this cause show that while the mortality figure for all occupied males in England and Wales is 175, that for the coal-miner is only 85; metalliferous miners, however, are not so fortunate in this respect, the figure for the Cornish tin-miner being 838 (the highest on the list of all occupations), the copper-miner 501, and the lead-miner 344. With regard to other diseases of the respiratory system, while the mortality figure for all occupied males is 78, that for the coal-miner is 140. The copper-miner heads the list with 665, the tin-miner coming second with a mortality figure of 653, while the lead-miner has a mortality figure of 187; the potter and the Sheffield grinder—frequent victims of this disease—are represented by mortality figures of 361 and 173 respectively.

In the United States great attention has been paid to the subject of tuberculosis among coal-miners by Wainwright and Nicholls, whose experience is drawn from observations made in a coal-mining centre with a population of about 100,000 people. They have found that, taking the percentage of deaths from all lung diseases among miners as 100, the following table shows the percentage of the coal-miners and the other occupied males in the district:

	All Lung Diseases.	Tuberculosis of the Lungs.	Asthma	Pneumonia.
Coal-miners	100	14	29	42
Other occupied males	114	41	7	54

They hold that "miner's asthma" is clinically chronic bronchitis and emphysema, and that it is associated with epithelial irritation and thickening of the connective tissue and consequent loss of elasticity.

It has been asserted by many authorities that coal dust has germicidal properties, and in favour of this view we have the experience of colliery surgeons who record that extensive wounds full of coal dust heal rapidly, and even lacerated wounds sustained through injuries in coal mines can be stitched up without hesitation; veterinary surgeons have similar experience in the treatment of pit ponies. As a result of their experiments Wainwright and Nicholls dismissed the theory that coal dust possesses any germicidal property; they believe that coal dust in the lungs does exert a real protective influence against the tubercle bacilli, but that the reduced mortality from tuberculosis is not due to any antiseptic property of the coal dust but to its stimulating effect on the lung tissue and increased growth of connective tissue. Among other experiments they kept guinea-pigs for two months in an atmosphere of coal dust and afterwards a pure culture of tubercle bacilli was injected. Animals were treated similarly who had not been subjected to the coal dust. They found that in the latter cases tubercle was found in the lung on *post-mortem* examination, but that in the former case no tubercles could be detected. Nicholls advances the theory that the protective influence of the coal dust is due to the action of the soluble calcium salts which form a large proportion of the ash of the coal dust.

Ganister Lung.

The mining of ganister—a hard, close-grained siliceous stone obtained from under the coal seam—is carried out in

this country in Yorkshire, Durham, and North and South Wales. There are eighteen mines employing 600 workmen underground, and the mortality due to pulmonary disease is very high. Ganister miners are subject to fibrosis of the lung on account of the irritation of the siliceous particles which form a large percentage of the mineral. In the process of mining ganister the atmosphere at the working face becomes charged with fine dust as a result of drilling and blasting, and the regulations require the workings to be sprayed so as to mitigate the evil.

The mortality statistics for this industry have been prepared by the Home Office officials and published in the Annual Report of the Chief Inspector of Factories for 1912. The pathology of fibrosis of the lung due to the inhalation of ganister dust has been investigated by Andrews, whose report was published in 1900.

Miner's Phthisis in Cornwall.

The mortality from lung diseases among the Cornish miners has been known to be very high for many years past. The statistics of the Registrar-General during the years 1900 to 1902 show a large preponderance of deaths from lung disease among the miners of Cornwall. Between the ages of 35 and 45 there were 33.2 deaths per 1,000 living, while the statistics taken from all the coal-miners employed in England and Wales only amounted to 3.5 per 1,000, and for ironstone-miners 3.2, while the figure for occupied males of England and Wales was 5.9 per 1,000. Between the ages of 45 and 55, 32.2 per 1,000 of Cornish miners died from this cause, compared with 7.8 per 1,000 among coal-miners, 6.5 per 1,000 among ironstone-miners, and 8.6 per 1,000 among all occupied males. Between the ages of 55 and 65 the figure is 42.6 per 1,000 for Cornish miners, 18.7 for coal-miners, and 13 per 1,000 for ironstone-miners.

The very large mortality from lung diseases among the Cornish miners, as compared with coal and ironstone miners who work in different parts of England and Wales, especially between the ages of 35 and 45, was brought to the notice of the Government, with the result that a committee, of which Dr. Haldane was the chairman, was appointed to inquire into the health of miners employed in Cornwall. An investigation of the cause of death of all miners who had died in the Redruth district during the three years 1900 to 1902 and who had been employed in the mines since boyhood showed that the causes of death among men who had at any time worked machine drills was as follows:

Cause of Death.	Number.	Average Age at Death.
Lung diseases	133	37.2 years.
Other causes	9	
	142	

Of these men, 63 had worked in mines abroad only, 41 both in Cornwall and abroad, and 38 in Cornwall only. Among men who had never worked machine drills lung diseases were responsible for 120 deaths, while 59 died from other causes. The average age at death among these men was 53 years.

From these figures it is seen that exposure to dust from working machine drills not only predisposes to lung trouble but also to an early death, and it is surprising that the difference in the average age at death should be so great as 16 years. The report of the committee states that the death-rate among machine drill men from respiratory diseases was about 15 times, and their total death-rate about 8 times that for the average of occupied males in this country; or, to make another comparison, the death-rate among machine men from respiratory diseases was about 30 times, and the total death-rate about 10 times as great as that among colliers or ironstone-miners of the same age.

The miner's phthisis found in Cornwall is caused by the silica-laden atmosphere of the mine; the symptoms and course of the disease are exactly the same as those of potter's asthma or stonemason's phthisis, but the mortality tables appear to indicate that the risk to life on account of respiratory diseases among tin-miners is greater than that of any other occupation, even when the workers are exposed to the inhalation of siliceous dust. The mortality figures for file-makers, potters, scissor-makers, and tin-miners as taken from the Registrar-General's report, which was published in 1908, are as follows:

Occupation.	Phthisis and Diseases of Respiratory System.	Phthisis.	Diseases of Respiratory System.	Diseases of the Circulatory System.
File-makers	712	387	325	198
Potters	758	285	473	219
Scissor-makers ...	848	533	315	215
Tin-miners	1,557	816	741	154

The result of this inquiry was to prove that the excessive death-rate from lung diseases was due to the inhalation of the stone dust. The committee expressed the opinion that the dust produced by rock drills could easily be prevented by a very small jet of water, and that the dust from blasting the close ends of the mine could be laid by a powerful jet of water and air. Regulations were introduced immediately after this report to deal with this question, and as a result there have certainly been some improvements in this respect, although it cannot be expected that the mortality statistics for a disease which is very insidious in its onset and chronic in its course can show a great improvement in so short a time as eight or ten years.

Miner's Phthisis in the Transvaal.

Sir Thomas Oliver was the first physician to draw attention to the serious lung trouble which prevailed in the Transvaal mines; his attention was directed to this subject through the number of miners who returned from the Transvaal to Northumberland and Durham mines after the conclusion of the South African war suffering from a disease which could not be distinguished as regards either symptoms or physical signs from pneumoconiosis. He attributed the condition to inhalation of rock dust while working in the mines on the Rand. The question was brought to the notice of the South African Government, which appointed a Commission. Its report, published in 1912, states that out of 3,462 underground miners who were specially examined and their history obtained, no fewer than 31.6 per cent. were affected with miner's phthisis, and it was estimated that out of 11,400, the total number of miners in South Africa, the number affected could not be far from 3,600. Among machine drillers, 47.5 per cent. were victims of the disease, while among those who had never done machine drilling 21 per cent. were affected. The inquiry was confined to European workers, and there was no investigation made into the health of natives or coloured workers. Although 31.6 per cent. of the men examined were suffering from miner's phthisis at the time of the examination, it was estimated that 90 per cent. of the workers would eventually contract the disease. It was found that amongst European miners tuberculosis existed to the extent of 3.6 per cent. amongst those who were not affected by pneumoconiosis, and that of those affected by the latter disease 10 per cent. of them were tuberculous.

Symptoms and Physical Signs of Fibroid Lung.

As a rule, shortness of breath is the first symptom of this disease, and the patient may find that dyspnœa easily comes on after slight exertion. In the early stages the patient is liable to a dry winter cough, always worse in the early morning, and is generally paroxysmal in character. The patient may be subject to frequent bronchial colds, when there will be the ordinary expectoration of bronchitis. As the disease proceeds the succeeding attacks become slowly and progressively more severe in character.

Examination of the chest in the early stages shows very little more than wheezing and symptoms of bronchitis, but as the disease advances emphysema becomes more prominent. In cases of moderate severity there is dullness, which is most commonly found at the bases of the lungs. The course of fibroid lung may be apyrexial for many years. A patient suffering from fibroid lung is in

many cases pale and anaemic, and there is generally clubbing of the finger-nails. In cases complicated by tuberculosis the expectoration contains tubercle bacilli, there is pyrexia, night sweatings, and progressive emaciation. In the final stages of the disease symptoms arise which are directly due to dilatation of the right side of the heart.

The diagnosis of fibroid lung from bronchitis of a mild form is not easy in the early stages. The symptom which is of the greatest importance is the shortness of breath, which in the early stage is out of all proportion to the amount of consolidation, as well as to the symptoms which would be associated in an ordinary case of chronic bronchitis. In more advanced cases the physician must carefully consider the history of the case—the chronic nature of the disease as well as the nature of the occupation—before finally deciding that the symptoms are due to fibroid lung, and this diagnosis will be confirmed when he finds definite signs of consolidation of the lung. The differential diagnosis of fibroid lung from ordinary cases of chronic bronchitis and emphysema is made when evidence is found of dullness on percussion and auscultation. In addition, we may find that there is a little increase in the body temperature with chronic bronchitis, while in cases of uncomplicated fibroid lung the temperature may remain normal. Chronic tuberculosis of the lung can, as a rule, easily be distinguished from fibroid lung. The temperature chart will be most helpful, and while sometimes a little cavitation is found in cases of fibroid lung the physical characters of this condition are very different from those found in tuberculous cases, and tubercle bacilli are not present in the sputum.

With regard to the prognosis, Sir Thomas Oliver, whose experience of this disease is unrivalled in this country, states that when once the disease is thoroughly established the outlook is far from good, but that in the early stages, if the patient changes to a more healthy employment, the chances of recovery are not altogether hopeless. The same writer emphasizes the fact that pneumoconiosis favours tuberculous infection, and when this occurs the prognosis is much more grave. He regards haemoptysis as a very serious symptom, and points out that in some cases acute pneumonia supervenes with a rapidly fatal result.

Treatment.

There is no disease to which the saying "Prevention is better than cure" is more applicable than to the case of those miners who are exposed to such conditions which may result in them contracting fibroid lung. It is most important, when it is known that the dust of a mine contains irritating particles, such as quartz or hard metalliferous dust, that means should be taken, either by ventilation or by spraying with water, to render the atmosphere of the mine as free from dust as possible, and I have already indicated that in this country the Coal Mines Regulation Act has rendered fibroid lung among miners an almost unknown disease, and it is to be hoped that in endeavouring to prevent explosions in this country by adding the so-called inert dusts the atmosphere of the mine will not be vitiated by a quartz-containing dust.

In early cases of fibroid lungs it is important for the worker to be removed from his occupation and transferred to a healthier one, and it is advisable for him to improve, if possible, his home surroundings. Of drugs in treating this disease from the medicinal point of view, potassium iodide, nux vomica, and ammonium carbonate are probably the most useful.

Professor Beattie's Experiments.

The most recent observations upon the effect of dust upon health have been made by Professor Beattie, of Liverpool, who when at Sheffield made many observations upon the effect of stone dust upon the health of grinders in the cutlery industry. He found that fibrosis of the lung could be produced in guinea-pigs after a comparatively short exposure to the dust from the cutler's grinding wheel, and having established that fact he proceeded to carry out experiments by exposing guinea-pigs to coal dust and shale dust; the atmosphere thus produced was very much more dusty than would usually be found in mines.

In the cases of animals exposed to coal dust alone and also to powdered shale alone, 6 in each series were exposed for a limited time and then allowed to live in the ordinary atmosphere until the end of the experiments, and the remaining 9, as well as those subjected to a mixture of coal dust and powdered shale, were exposed on five days a week throughout the whole of the experiments. All the animals were killed fifty-one days after the first day of exposure to the dusts. The lungs were examined microscopically in every case. The lungs of the animals exposed to the mixed dust could not be distinguished microscopically from the lungs exposed to either coal dust or shale dust, although he admits that they appeared to approximate more closely to the shale dust than to the coal dust lung. He found that both with regard to coal dust and powdered shale particles of these dusts had reached the lungs, and that they were readily distinguishable from one another, and could be seen in the air spaces in the connective tissue framework and also in the lymphatic vessels of the lungs. In some of the animals the dust could be seen in abundance, and the irritating effect upon the lung tissue was quite evident although in an early stage.

The conclusions which Professor Beattie draws from these experiments I will give in his own words:

> (1) That the effects produced in the lungs of guinea-pigs which have been exposed to the inhalation of dust correspond with those produced on man. (2) That the effects produced vary with the time of exposure and particularly with the quantity and quality of the dust which is inhaled. (3) The more concentrated the dust in the atmosphere the more rapidly will fibrosis be produced, and the more irritating the dust the more intense will be the fibrosis. (4) The inhalation of such stone dusts as are rich in silica seems to be particularly injurious, and (5) that the powdered shale used in these experiments does not produce more irritation in the lungs than does coal dust, and judging by the comparatively non-injurious effects of coal dust on the general health of the workers, powdered shale may also be regarded as comparatively harmless.

In these experiments the powdered shale dust was obtained from the Altofts Colliery near Wakefield, and it appears that as far as this shale dust is concerned it may be regarded as innocuous if the conditions under which Professor Beattie performed his experiments upon the guinea-pigs may be regarded as similar to the conditions which prevail in a coal mine in which shale dust is used.

In my opinion the conditions are wholly dissimilar, as I understand that the various dusts were forcibly blown into the throats of the animals instead of being slowly inhaled as would be the case in the mine.

Dr. Beattie appears to have lost sight of the importance of the size of the dust granules in making his investigations. Only fine dust enters the lungs, and only fine dust would render coal dust inert, so that we are only concerned with the employment of shale dust or any other inert dust to render the coal dust of the mine non-inflammable. Analyses by Dr. Mellor, of Stoke-upon-Trent, show the importance of further investigation and experiments into the question of the kinds of dust which shall be used for the purpose of preventing explosions. A dust which contains 35 per cent. of quartz and nearly 50 per cent. of argillaceous matter must be viewed with profound distrust if the health of the worker is to be considered. It would appear that if this method were employed, while one evil was being remedied another insidious evil would be produced, and it is possible that we might have a condition of things in English mines similar to what prevails on the Rand and in Australia. This trouble would not be apparent at the beginning; some years might elapse before the disastrous effects of the inhalation of this siliceous dust would be seen, but when the condition of fibroid lung has been set up the course of the disease would run in the same way as we have found it in the South African miners, among the grinders of Sheffield, and as was formerly found among the Staffordshire potters.

THE INFLUENCE OF TEMPERATURE ON THE HEALTH OF MINERS.

The tables of Professor Cadman and Mr. Walley show that the dry-bulb temperature of some of the mines of this country registers 95.5°, 96°, 92°, 97.8°, 88.8° and 87° F., and the same observers found that the wet-bulb readings in certain mines were 79°, 82.5°, 77°, 79.8°, 82°, 81.5°, and 87° F. in different mines, and I have made observations myself in coal mines where the dry-bulb

reading has registered as much as 90° and the wet bulb over 80° F. It will therefore be seen that in a considerable number of mines in this country the men are working at very high temperatures, and it cannot be denied that these temperatures are not only injurious to the health of the worker, but without doubt they have a considerable effect upon their working capacity. From the experiments of Dr. Fraser Harris at Birmingham University upon the human subject it appears that high temperatures with a high degree of moisture increase the pulse-rate and the body temperature and cause a considerable loss of body weight; the respiration-rate is not changed out of proportion to the increased pulse-rate. Professor Langlois of Paris has shown that in an atmosphere at a temperature exceeding 77° F. (wet bulb) ventilation exercised a considerable influence. At 86° F. (wet bulb) the subject, even when resting, was very uncomfortable, if not inconvenienced; in a non-ventilated atmosphere exceeding 77° (wet bulb), the body temperature rose 1.8° to 2.7° F., and the blood pressure was increased by 18 to 25 c.cm. of mercury. The quantity of water evaporated varied according to the temperature and to the hygrometrical state of the atmosphere.

Haldane, as a result of experiments which he has made upon the effect of working at high wet-bulb temperatures, summarizes the results of his experiments as follows: "It is clear that in still and warm air what matters to the persons present is neither the temperature of the air nor its relative saturation, nor the absolute percentage of aqueous vapour present, but the temperature shown by the wet-bulb thermometer. If this exceeds a certain point, about 78° F., continuous hard work becomes impracticable, and beyond 88° it becomes impracticable for ordinary persons even to stay for long periods in such air, although practice may increase to some extent the limit which can be tolerated. In moving air, on the other hand, the limit is extended upwards by several degrees. Men working a rock drill in a hot end or rise in a mine, for instance, have the great advantage that the air is kept in constant motion by the exhaust air from the drill, and that as this exhaust air is very dry, the wet-bulb thermometer at the working place is considerably reduced, even if the rock be wet or damped by a jet or spray of water to prevent dust." And when giving evidence before a Departmental Committee on the humidity and ventilation in cotton-weaving sheds, Dr. Haldane said that he should propose that 75° F. (wet bulb) be taken as a maximum, and below this temperature there should always be a difference of 2° between the two thermometers; 70° (wet bulb) is the temperature which the Home Office specify as the maximum for a factory, but he considered that in the special conditions in Lancashire weaving sheds, and limiting the 75° to the summer heat—the warmer part of the year—there should be no objection to going to 75°.

Dr. Pembrey, as the result of observations upon himself and medical students and soldiers, was of opinion that 70° F. by the wet bulb should be the maximum, and he pointed out that at lower temperatures work could be done at a faster rate more efficiently and with less fatigue and injury to health, and that the effect of work in a warm moist atmosphere is to increase the temperature, pulse-rate, and loss of moisture out of proportion to the work done.

The question of wet-bulb temperatures in coal mines has become all the more important on account of the spraying by water of coal seams and roadways for the purpose of preventing explosions, and it can be easily understood that in mines of high temperature with an atmosphere saturated with moisture, while the risk of explosions is diminished the working conditions are less favourable both to the health of the miner and to his efficiency as a workman apart from the consideration of explosions.

According to the French mining law any temperature exceeding 77° F. on the wet-bulb thermometer must be considered high.

Another important point in connexion with the watering of mines where the temperature exceeds 70° is that favourable conditions are being created for the development of ankylostomiasis should the disease be introduced into the pit. Up to the present English coal mines have not, as far as we know, been infected with this disease, but when it is remembered that the disease is frequent in the tropics and in the mines of South Africa, India, and South America, and that a large number of men return home to resume work in the mines of this country, we cannot shut our eyes to the possibility of infection of the mines of this country.

In addition to these possible sources of infection, a large number of Poles work both in the coal mines of Scotland and also in South Wales, and these workers may also be carriers of the disease. On the opening up of the Kentish coalfield, where the seams are of great depth and the temperature correspondingly high, there may be an inrush of French and Belgian or even Polish miners, and I think it behoves the management of these pits to keep a keen look-out for the possibility of ankylostomiasis being found among them.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

AIDS IN RECTAL AND VESICO-VAGINAL SURGERY.

IN the BRITISH MEDICAL JOURNAL of January 31st there are some remarks on cancer of the rectum in relation to Mr. Cripps's figures, which naturally, with the trend of modern advance, lean towards the more radical abdomino-perineal operation, but with unusual fairness, on account of the supposed comparative immunity it affords. Having watched a large number of the "radical" operations in different cities, I never came away with the impression that they were completed with the primary object in view carried out—namely, an efficient removal of the lymphatic tissues related to the excised portion of bowel. Any surgeon who has an easy has a callous conscience.

Considering all things, it behoves some, for a time at least, to be satisfied with safer and less mutilating procedures, and I suppose it is justifiable to suggest anything likely to render these more efficient or more easy. Next to that, sphincter control should be the chief aim.

Having excised the rectum some months ago by Kocher's mode, I found the suturing of the proximal to the distal end of the gut remarkably easy by the following method: I procured a smooth, stout stick, some inches long, and made a circular groove at one end. This end I introduced into the proximal part of the bowel by way of the anal canal for a short distance. I then tied a tape by a slip knot round the bowel so as to fix it a little distance from its cut edge into the groove. It was then easy to invaginate the upper end of the bowel into the lower by partially withdrawing the stick and easy also to apply sutures. The tape was then removed.

The other procedure was adopted for vesico-vaginal fistula. In the case under operation the bladder was so contracted and the parts so difficult of access for suturing that it was no easy matter to succeed. In this difficulty the following simple means was carried out: I introduced a child's air balloon, drawn over an endoscopic tube, into the bladder and inflated it by a cycle pump. This, of course, distended the bladder and greatly facilitated the further steps.

London, N.W. JAMES MACMUNN.

PREGNANCY WITH IMPERFORATE HYMEN.

A PRIMIPARA, aged 24, engaged me to attend her at her confinement, and in due course I received notice from the nurse that the patient was in labour, and that there was something the nurse could not understand. On my arrival the pains were strong, and the head was obviously bulging the perineum; but in front of the head there was stretched tightly over it the hymen, with a small hole in it, situated just posteriorly to the urethral orifice. I was able to insert one blade of a pair of scissors through the opening, and divided the membrane, labour being then quite natural. Later I ascertained from the husband that coitus had always been difficult, and he thought that the act had never been complete. One can imagine that when the hymen was not on the stretch by the pressure of the head the orifice must have been exceptionally small, which makes conception the more remarkable.

Northwich. R. MANWARING-WHITE, M.D.Edin.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

EDINBURGH BRANCH.

CLINICAL MEETING.

THE winter clinical meeting of the Branch took place at Edinburgh on February 27th; the place of assemblage was the Royal Infirmary, and the proceedings, which occupied the greater part of the day, were very well attended, members of other Scottish Branches being present in addition to those resident within the area of the Edinburgh Branch.

Museum.—Among their arrangements the officers of the Branch included a museum, which was open in Ward 4 of the Royal Infirmary from 10 a.m. to 6.30 p.m. The number of exhibits was large, and their interesting character was proved by the amount of attention they attracted. The contributors included the Pathological, Surgical, and Medical Jurisprudence Departments of the University and the Pathological and Dermatological Departments of the Royal Infirmary, in addition to private contributors such as Professor Caird, Mr. C. W. Cathcart, Mr. Stiles, Dr. William Fordyce, Mr. A. P. Mitchell, Dr. Chalmers Watson, Dr. Hope Fowler, Dr. J. P. McGowan, Dr. J. D. Comrie, Mr. G. L. Chiene, Mr. Wade, Mr. John Fraser, Dr. Edmund Price, Mr. E. S. Carmichael, Mr. J. W. Struthers, Mr. D. P. D. Wilkie, Mr. Beesly, Dr. Cramer, Dr. Boyd, Dr. J. S. Fraser, and Dr. J. K. Milne Dickie.

Demonstrations.—A series of demonstrations in different departments of the infirmary commenced at 11 a.m., one on the treatment of syphilis being given by Mr. A. A. SCOT-SKIRVING; on neurological work, by Dr. J. J. GRAHAM BROWN; on the therapeutic uses of radium, by Dr. DAWSON TURNER; on *x*-ray diagnosis, by Drs. HOPE FOWLER and MCKENDRICK; while Dr. WILLIAM SYM and Dr. NORMAN WALKER demonstrated ophthalmic and dermatological cases respectively. Also thrown open was the laboratory for clinical research, its work being demonstrated by Drs. H. RAINY and W. T. RITCHIE.

Clinical Cases.—In the afternoon a number of cases were shown by members of the staffs of the Chalmers Hospital, the Royal Hospital for Sick Children, Leith Hospital, and the Royal Infirmary, the following being among them:—Dr. E. S. CARMICHAEL: A baby which had suffered from *Melaena neonatorum* and had been treated when aged 3 days by infusion of blood derived from its father. Dr. EDWIN BRAMWELL and Mr. BEESLY: A woman, aged 35, who, in December, 1912, was found to have an irremovable *Glioma of the right frontal lobe*, and was treated by decompression. Professor ALEXIS THOMSON: A boy, aged 14, in whom *Paraplegia* had set in subsequent to a fall from a height. The condition, however, was found to be due really to malignant disease of a vertebra; a metastatic growth had occurred in the right tibia. Dr. CHALMERS WATSON: A case of *Diabetes mellitus* of eighteen months' duration. The patient had been troubled with severe constipation for years, and the urine contained over 30 grains of sugar per ounce. Use of the *x* rays after a bismuth test meal showed marked retardation of food in the duodenum, and this raised the question of whether the existence of a catarrhal condition of the mucous membrane, with an infection spreading upwards into the pancreas, was a possible cause of the condition. Dr. R. A. FLEMING: A case of probable *Embolism of the left posterior tibial artery.* The patient, a man aged 37, was an army gymnastic instructor, who had a long history of endocarditis, without much or any rheumatism. About three weeks previously to the date on which the case was shown he suddenly developed pain in the left leg below the knee, which involved more particularly the great and little toes. The foot became cold and there was much numbness and tingling. It was difficult to feel any pulsation in any of the arteries of the foot, and the pain suggested that probably the posterior tibial artery had been at least partially occluded by an embolus. Considerable benefit had resulted from gentle massage. Mr. JOHN FRASER: A child, aged 15 months, the subject of *Congenital deficiency of one tibia.* As time went on the growing fibula on that side displaced the foot inwards to a right angle; subsequently the child was submitted to an operation, which consisted in straightening the bent fibula and supplying the gap in the tibia by transplanting the fibula from the opposite leg. The child's legs were now straight and it could walk. Dr. J. J. GRAHAM BROWN: A case resembling *Spinal progressive muscular atrophy* in process of cure. From the cerebro-spinal fluid of this patient there had been obtained a micro-organism resembling that of distemper. The organism was shown in the museum by Dr. J. J. MCGOWAN with an actual micro-organism of distemper for comparison.

Address.—The proceedings concluded with an address on the subject of urinary antiseptics, delivered by Mr. J. THOMSON WALKER, of London, who dealt more particularly with the practical bearing of recent investigations into excretion of the products of urotropin.

STAFFORDSHIRE BRANCH.

THE second general meeting of the session was held at Stafford on February 26th. Mr. W. F. CHOLMELEY, President, was in the chair, and twenty-three other members were present.

Subacute Meningitis.—Dr. J. A. CODD showed a girl, aged 6, who had recovered almost completely from an attack of subacute meningitis. Drugs, including ipecacuanha, were tried without benefit, but improvement followed the use of a vaccine prepared by Dr. Boyd from the cerebro-spinal fluid. Lumbar puncture and injection of vaccine had to be repeated as relapses occurred. The child could now feed herself and walk fairly well, and the knee-jerks had returned to normal. But a week ago she had an attack of drowsiness, with some headache. The diagnosis had to be made from tuberculous peritonitis, typhoid fever, and cerebellar tumour. Dr. WILLIAM BOYD said the cerebro-spinal fluid was clear but under pressure. The centrifuged deposit showed increase of cellular elements and an increase of lymphocytes. A bacillus of coliform type was found and cultivated, but did not stain with Gram's method and was motile. Clumping occurred with the patient's serum diluted 1 in 120; improvement followed each injection of vaccine, and ceased when the vaccine was stopped. Dr. Boyd showed a film demonstrating the bacillus.

Infectious Diseases of School Children.—Dr. JOHN PRIESTLEY (Senior School Medical Inspector, Staffordshire) read a paper on a curious numerical relationship in the incidence of the common infectious diseases of school children. He said that for several years there had been noticed a curious semblance of regularity in the proportionate numbers of common infectious diseases suffered by elementary school children. That the infectious diseases were not equally infectious was one of their best known characteristics. Few people went through life without having had measles, but many escaped scarlet fever and diphtheria, but that there might be an orderly gradation of infectiousness was a new idea. When medical inspection was started in 1908, the inspectors were instructed to inquire whether the children had had measles, whooping-cough, etc., and to mark down all positive answers on the schedule card. If the child was stated not to have had a disease, or if there was no information one way or the other, the space was left blank to be filled up at a future inspection. If the mother attended, inquiry was made of her. In the absence of the mother the head teacher was questioned. Frequently the evidence would be that of the child itself. If the inspector were doubtful about the fact after hearing the evidence then again the space was left blank. This was the method until 1910, by which time it had become apparent that the bulk of the information was that which the head teacher furnished. It was therefore deemed best to save the time of the medical inspector, and let the head teacher fill in the statements independently. The only change to be noticed since the head teachers had had the recording entirely in their own hands was that the cases of mumps had increased very greatly. This was not surprising in view of the popular habit of calling all glandular swellings in the neck mumps. The information thus collected must have been of a casual nature. Diseases must again and again have been forgotten. In many cases the diagnosis must have been that of the mother alone; all sorts of innocent

rashes had no doubt been dubbed measles, etc. But though the absolute values of the facts might be highly questionable their relative values might not be so far out. In the long run probably all the records would suffer equally from forgetfulness, and one disease would be, more or less, as liable to mistake as another. The casual nature of the primary information only rendered the resultant approach to uniformity the more strange. The records were as follows:

Number of Cases of Diseases Recorded.

Year.	Total No. of Children Examined.	Measles.	Whooping Cough.	Chicken-pox.	Scarlet Fever.	Mumps.	Diphtheria.
1908	9,576	2,517	1,178	643	284	169	99
1909	20,474	4,708	2,321	1,300	733	426	167
1910	21,814	7,392	3,344	1,866	1,284	614	328
1911	19,948	7,198	3,357	1,932	1,161	1,299	321
1912	18,299	6,263	2,933	1,630	1,019	1,600	299
1913	16,578	5,382	2,246	1,169	751	1,239	230
Totals	106,689	33,460	15,379	8,540	5,262	5,347	1,444

Each year the children were a mixture of ages: 5–6, 8–9, 12–13, and 13–14; after three years children of 5–6 began to reappear as children of 8–9, and after four and five years respectively children of 8–9 began to reappear as children of 12–13 or 13–14. Hence in the grand total of children examined there was some overlapping; the figure indicated "inquiries" rather than "children." By taking the number of cases of measles recorded each year as 1,000, and stating the numbers of the other diseases as the proportionate parts of 1,000, the following table was obtained:

Order of Diseases according to their Incidence.

	Measles.	Whooping-cough.	Chicken-pox.	Scarlet Fever.	Mumps.	Diphtheria.
Theoretical order of geometrical progression.	1,000	500	250	125	62	31
Actual order:						
In 1908 ...	1,000	468	255	112	67	39
1909 ...	1,000	493	276	155	90	35
1910 ...	1,000	452	252	173	83	44
1911* ...	1,000	466	268	161	180	44
1912* ...	1,000	468	260	167	255	47
1913* ...	1,000	418	217	139	229	43
In the totals of the 6 years	1,000	454	256	157	159	43

* Original data no longer supervised by medical inspectors.

There was an obvious approximation to the order of geometrical progression, but it would not be wise to overemphasize the resemblance until a wider series of observations had been obtained. The resemblance was by no means always very close; and it was remarkably out of truth in the case of mumps; but it was curious that this deviation from type in the case of mumps should have coincided with the giving up of the critical supervision of the details of the inquiry by the medical officers. The meaning of the tables, if there was any meaning in the appearance of order, seemed to be that there was a regular gradation of practical infectiveness. Practical infectiveness might be roughly defined as the product of virulence (or susceptibility) and opportunity, and therefore a regular gradation might be due either to the fact that children had a regular gradation of susceptibility to different diseases, or that, the susceptibility to all diseases being the same, the children had had in a definite gradation fewer opportunities of contracting infection in some diseases than in others. In either case the matter was extremely difficult to understand. In the meantime it was curious to reflect that, mumps apart, if any time within the last six years the number of cases of, say, diphtheria or chicken-pox had been given, it would have been possible to estimate with considerable accuracy the numbers of all the other diseases occurring the same year. The paper was discussed by DRS. MALET, GEORGE REID, EDGE, and CLENDINNEN; and DR. PRIESTLEY replied.

Meningitis in Children.—DR. WILLIAM MITCHELL SMITH, in a paper on meningitis in children, first described the anatomical details and then discussed the operation of lumbar puncture. It was pointed out that when the foramen of Magendie was obliterated lumbar puncture could not relieve the symptoms of increased intracranial pressure. The cytological and bacteriological examinations of the cerebro-spinal fluid were commented upon and the inferences to be drawn therefrom discussed. The classifications of meningitis according to the type of cells found or the chances of recovery were mentioned, but Osler's classification was adopted, and a table was distributed giving the nature of onset, point of attack, and the chief characters of the cerebro-spinal fluid in each type. The special features of the various types were detailed, the symptoms and differential diagnosis being fully described as well as the treatment. The investigations of Stiles, in which 90 per cent. of cases of glandular tuberculosis and 67 per cent. of tuberculosis of bones and joints were found to be due to the bovine bacillus, which was found in 19 per cent. of apparently healthy tonsils, were referred to. Dr. Mitchell Smith was strongly of opinion that all cow's milk should be sterilized by boiling, or at least pasteurized, before being given to children. He suggested that medical officers of health should distribute, on the registration of the birth of a child, an appropriate leaflet concerning the dangers of unsterilized milk. He considered that the danger of infection by tuberculous milk was greater in rural than in urban districts. The paper was discussed by DRS. RUSSELL, GEORGE REID, and EDGE and Mr. DEANESLY; and DR. MITCHELL SMITH replied.

Exhibition of Pathological Specimens.—Mr. DEANESLY showed: (1) An intussusception which had protruded from the anus for eight days. Laparotomy was done, and the irreducible portion successfully removed by Barker's method. (2) A stone removed by excision, through the bladder, of the prolapsed lower end of the ureter in which it was incarcerated. (3) A tubal abortion removed by the vagina. Mr. R. ALCOCK showed 1.050 gall stones from the gall bladder; the stones were of the size of millet seed and each was faceted. DRS. CODD and BOYD showed specimens from a case of malignant endocarditis; the heart was exhibited, showing numerous vegetations on the mitral cusps, and also the infarcts in the following regions: (*a*) Spleen, (*b*) kidney (left), (*c*) lenticular nucleus (right), (*d*) superior mesenteric artery, and (*e*) brachial artery. Mr. CHOLMELEY showed an intussusception—chiefly of the large intestine—of long standing which he had successfully excised. A lateral anastomosis was performed. Dr. EDGE showed: (1) A large tubo-ovarian abscess excised entire; (2) a microscopical specimen showing cancer of the urethra, from a woman aged 55.

Dinner.—The meeting was followed by a dinner, at which twenty-three members were present.

Epsom College.—A collection in aid of Epsom College realized £1 2s.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.

A CLINICAL and medico-political meeting was held on February 27th at the Manor Lodge, Upper Clapton, by invitation of Dr. C. F. Hadfield. Dr. T. HOBBS CRAMPTON, Chairman of the Division, took the chair; nineteen members and one visitor were present.

Exhibition of Specimens.

The following specimens were shown:

DR. BRANDER: (1) The brain and spinal cord from two cases of cerebro-spinal meningitis, and notes of a third case in the Hackney Infirmary which had recovered. The value of lumbar puncture for differential diagnosis and treatment was described; in subsequent discussion DR. GOODALL gave a summary of the results of the practice in the Eastern Fever Hospital, and a member present gave a vivid description of his personal feelings under the

operation. (2) The liver from a case of acute yellow atrophy. (3) Aorta and heart from a case of aneurysm; death was immediately due to haemorrhage, haematemesis, and melaena, but no obvious rupture of the sac was evident *post mortem*.

Dr. GOODALL showed two larynges showing post-scarlatinal ulceration, and discussed the cases as to differential diagnosis from Vincent's angina: also photographs of a case of fulminating purpura haemorrhagica.

Dr. S. WILSON showed an impacted ureteric stone from a man found asphyxiated in a small bathroom, 8 ft. square, with a geyser, imperfectly ventilated.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTIONS OF NEUROLOGY, OPHTHALMOLOGY, AND OTOLOGY.

AT the resumed discussion on *Nystagmus* on March 4th—Sir ANDERSON CRITCHETT, President of the Section of Ophthalmology, in the chair—Dr. T. LISTER LLEWELLYN dealt with the relation of miner's nystagmus to general nystagmus. In the former the oscillation of the eyeballs was only one, though an important one, of the physical signs and symptoms. In miners the nystagmus produced marked subjective symptoms, while an ordinary person with nystagmus might not have noticed it. In miners the oscillation was of a rotatory character, and was usually equally marked in both eyes. The nystagmus was increased on exertion or by making the patient look up. It was usually brought to a standstill when the eyes were directed downwards. In general nystagmus the eye oscillation was generally lateral. The conditions producing nystagmus were those causing an inexact image to be formed on the retina: this was so in optic atrophy, marked errors of refraction, and corneal opacities. Albinism, with its lack of visual definition, was always associated with nystagmus. In dull illumination there was a tendency to use the peripheral portion of the retina. Arlt and Edridge-Green suggested that the movements had the object of bringing fresh portions of the retina into play. The miner in his work not only found great dullness, but almost a complete absence of colour relief. In the better lighted mines there were but few cases of nystagmus. He related some very interesting observations on the lighting power of reflections from ordinary walls, which was practically absent from the face of the coal. Moreover, to be out of the way of the pick, the lamp was often 6 ft. or more from the face of the coal, and the available light was often not more than one-third of a candle-power, and it fell on a substance capable of absorbing 86 per cent. of the rays. Safety-lamp pits were hotbeds of the disease. Of 900 consecutive cases of miner's nystagmus, 870 had worked with safety lamps and 30 with candles, and 20 of the latter had at some time worked with safety lamps. He had noticed that several of the most severe cases of miner's nystagmus had fair hair and light-coloured eyes. He did not agree with Snell that miner's nystagmus was due to the strain produced by the unnatural position of head and eyes while holing: the man really looked straight at the spot to which he directed his pick. Moreover, working in an unnatural position in a good light did not cause the disease. These patients complained of loss of sight, especially at night time, of headache, giddiness, and intolerance of light. Marked cases caused mental depression, and there might be tremor of eyelids, eyebrows, and even of the shoulders. The ultimate cause of the condition was want of co-ordination in the mid-brain ocular centre of Gowers, governing the associated movements of the eyes. Dr. DAN MCKENZIE agreed with Dr. Llewellyn, and he had found, while practising in a Scottish mining district, that there were very few cases of nystagmus among the miners, and they used naked lights, hence the illumination was superior to that given by the safety lamp. He agreed, too, that the movement of the endolymph in the semicircular canal was never a steady round-and-round circulation. It was a wave motion. He suggested that usually the rise or fall in endolymphatic pressure in the ampulla was quickly relieved by local excess of fluid passing into the finer position of the canal, and so round its undilated end, and this rapid equalization of pressure prevented undue stimulation of the end-organ But when there was sustained pressure, as in continued rotation, the relief could not be brought about sufficiently rapidly, and excessive stimulation of the nerve ending would ensue, causing nystagmus and vertigo. With regard to spontaneous nystagmus of the labyrinth storm, the direction of this nystagmus should not be taken as the faithful guide as to which was the affected labyrinth, or to distinguish acute labyrinthitis from cerebellar abscess. He urged that the vestibular tests should be employed in all cases of mild or severe perceptive deafness, as it was useful for diagnosis and prognosis. Mr. R. J. COULTER (Newport) endorsed the views put forth by Dr. Llewellyn, and agreed that there was a neurosis as well as the oscillation of the eyes in subjects of miner's nystagmus. The idea that it was due to gases in the mine was quite given up. He exhibited a safety lamp which had been used eight hours, one not yet used, and a miner's electric lamp, and narrated a case in which a miner, about to give up work on account of nystagmus, was provided with an electric lamp, and was still working, some two months later. Mr. N. BISHOP HARMAN analysed his results in the case of a series of 1,100 blind children under 16 years of age. Of this number 289 had nystagmus, and he classified them in groups according to the ocular conditions present

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 4th, Dr. JOHN PLAYFAIR presiding, Dr. JOHN D. COMRIE, in a paper on the *Phenol-sulphonephthalein test of the renal function*, said its principle was the estimation by colorimetry of the percentage recovery in the urine of a known amount of phenol-sulphonephthalein injected intramuscularly. The urine was collected at one, two, and three hourly intervals. In healthy persons the average recovery was 75 to 80 per cent. The results of the test in 50 conditions of disease were given. In 18 cases of parenchymatous nephritis there was an average of 30 per cent.—a great reduction. In 3 cases of interstitial nephritis the result was about 55 per cent. In heart disease the variations were considerable in different cases, ranging from 65 per cent. in conditions of passive venous renal congestion and transient albuminuria to 35 per cent. in cases of senile cardiac disease with general arterio-sclerosis. In diabetes mellitus the excretion was diminished to from 30 to 40 per cent. Dr. GOODALL remarked that the capacity of the urine to excrete urea might not correspond with the phenol-phthalein excretion, and one of the cases shown seemed to exhibit such a divergence. Nitrogen estimation of the urine would probably test the secretory function of the kidney if the diet and other factors were properly controlled. Dr. J. S. FRASER, in the course of an epidiascope demonstration of specimens of *Labyrinth suppuration*, said infection of the inner ear occurred once in every hundred cases of otitis media, and usually as the result of acute exacerbation in a chronic case; it was therefore important to exclude this complication by careful testing of the labyrinthine functions. From the middle ear the infection might spread to the labyrinth by the round window, the oval window, by a fistula of the external canal, or of the promontory. The result might be a spontaneous cure in mild cases; a greater or less permanent impairment of labyrinthine functions; or an extension to intracranial structures, setting up meningitis, cerebellar abscess, or sinus thrombosis. Dr. LOGAN TURNER said that when middle-ear disease was complicated by labyrinthine infection the risk of intracranial complications was much greater. It was of great importance that in every case of mastoid operation the labyrinth tests should be performed. Dr. DAWSON TURNER described a case of carcinoma of the post-cricoid region, involving the larynx, sent to him for radium treatment by Dr. Logan Turner. The patient was a female, aged 38 years, and the inoperable tumour was causing both dyspnoea and dysphagia. These were relieved by gastrostomy and tracheotomy, and an attempt was then made to apply radium to the tumour by the mouth. This having failed, a subhyoid pharyngotomy was done, and a tube of 10 mg. of radium bromide was repeatedly applied, sometimes to the surface of the growth, and sometimes embedded in it. The total dose from September, 1913, to January, 1914, was 5,090 mg. hours. The tumours had shrunk considerably in size, and the patient had improved much in general health.

DR. LOGAN TURNER said the average duration of life in such cases was three months from the first appearance of symptoms. The present patient had had her life prolonged considerably beyond this period, as she was first seen by him in May, 1913. MR. SCOT SKIRVING described a similar retardation of growth by radium treatment of an extensive epithelioma of the floor of the mouth.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on February 20th, MR. A. ERNEST MAYLARD, President, in the chair, SIR JOHN COLLIE, in an address on *Malingering*, said that a malingerer—a person who feigned sickness or deliberately induced or protracted an illness—must be distinguished from a valetudinarian—a person who, being morbidly solicitous about his health, unconsciously simulated disease or exaggerated symptoms. Many such people, if thrown out of work by accident or illness, might be converted into chronic invalids or induced to return to work, according to the attitude taken up by the medical man in attendance. It was therefore of the utmost importance that at the earliest possible moment a return to occupation, however light, should be recommended. The practitioner who, feeling that he had to treat a mental as well as a physical condition, substituted for medication the modern methods of psycho-therapeutics, would have fewer patients suffering from traumatic neurasthenia and neuropathic conditions generally. In the increase of malingering now threatened fictitious skin diseases were likely to play an important part, and the criteria by which artificially produced changes might be distinguished from the lesions characteristic of the various skin affections deserved careful study. A genuine secondary dermatitis might be set up by scratching and might mask the original artificial eruption, and a genuine pre-existing skin disease was sometimes wilfully aggravated and kept up by patients who profited by continued disability. On the other hand, a particular occupation might have been followed for years without the skin suffering, and yet from lowered vitality or other causes the skin resistance might give way and a true dermatitis ensue. For the detection of simulated unilateral blindness an ingenious test had been invented by Dr. von Haselberg of Hamburg, consisting of parti-coloured letters and figures used in conjunction with red and green glasses. It was based on the fact that nothing coloured red could be distinguished as red if seen through a red glass. To be successfully applied the test must be carried out with great caution. One of the most difficult things in medico-legal medicine was to state with any degree of accuracy the amount of disability resulting from impairment of the hand as a whole or any of its digits separately or together. This difficulty was enhanced by the invariable habit patients had, when being examined with a view to fitness for work, of involuntary watching every movement they were asked to make, with the result that the malingerer consciously, and the honest man unconsciously, restrained all movement. No real information could be gained unless the patient's view was entirely obscured, either by a book or newspaper held in front of his eyes, or, better, by blindfolding of his eyes. By various devices also a malingerer might be taken off his guard and led to execute movements of which he had professed himself quite incapable. Loss of substance, the result of sloughing or suppuration of ulcerated wounds, when it took place in large muscles, sometimes produced an unsightliness out of all proportion to the diminution of power resulting from the accident. It was not infrequent, therefore, to find that during the process of healing, which was necessarily slow, a man had, consciously or unconsciously, been directed by actual loss of tissue to exaggerate the resulting disability. It was not unnatural for a layman to associate loss of substance with corresponding loss of function, making no allowance for the surplus power with which Nature had lavishly supplied man, and this was exactly the class of case in which the judicial authorities, if unassisted by a medical referee, were apt to sympathise unduly with the plaintiff.

LIVERPOOL MEDICAL INSTITUTION.

AT the third pathological meeting, on January 29th, DR. E. W. HOPE, President, in the chair, the exhibits included specimens from a case in which epithelioma occurred both in the hand and lip of the same patient. They were shown by MR. THELWALL THOMAS and DR. BIGLAND. MR. RUSHTON PARKER, giving a demonstration on the subject of *Pedunculated exostoses and enchondromata*, expressed the opinion that they were due to an aberrant portion of early cartilage wandering from the epiphysis to the shaft of the bone. DR. LEITH MURRAY, in a paper on the *Immunological relationships of mother, fœtus, and placenta*, summarized the evidence in favour of the truly immunological status of the pregnant condition. He reviewed the work of many investigators, and stated the results of his own investigations. In regard to sensitization reactions, he had found no evidence in toxic pregnancy (eclampsia) of an anaphylactic reaction. In regard to the direction of further research, it was important, he thought, to appreciate that the problem was one of immunity production. The phase character of toxic pregnancy (hyperemesis in the first half and "eclampsism" in the second half) might bear some relation to the demonstrated immunity phases—that is, antitoxic and lytic. He also supplied evidence that a fœtus took no part in the production of immunity, but was sensitized equally with the mother to a placental antigen.

At the fourth pathological meeting, on February 26th, DR. W. B. WARRINGTON, Vice-President, in the chair, MR. K. W. MONSARRAT showed an ulcer of the pylorus which macroscopically appeared malignant but microscopically proved to be innocent; and, discussing the production of prostatic stones, held that they were formed in the gland itself. The other exhibits included:—MR. G. P. NEWBOLT: A *Carcinomatous cyst* of the breast in a woman whose other breast had been removed thirty years previously for carcinoma. PROFESSOR ERNEST GLYNN: A specimen of *Acute fibrous pericarditis in a horse*. PROFESSOR GLYNN and DR. ABRAM: A liver from a man aged 27, showing cirrhosis. MR. JEANS and DR. HOLLAND: *Urethral calculi*, 240 in number, obtained from a pouch growing from the urethra. PROFESSOR ERNEST GLYNN described a case of dysentery due to the Y bacillus, which had been isolated by Dr. Bamforth from a patient in the Royal Infirmary, DR. BUCHANAN giving details of the clinical picture and of the treatment. DR. GOWLAND demonstrated a method of reconstructing embryos in wax. The method of preparing the sections, the drawing of them with the help of the "Edinger" projection apparatus, and the means by which the drawings were converted into wax plates, were explained with the aid of specimens and lantern slides. Dr. Gowland pointed out the great necessity for co-operation in this branch of work between the practising physician and surgeon on the one hand, and the pure scientist on the other hand.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on February 4th, MR. R. G. HOGARTH, President, in the chair, MR. KENNETH BLACK, in a paper on *Dupuytren's contraction*, pointed out that care should be taken not to confuse congenital forms of digital contraction, nor contractions following wounds, abscesses, and burns, with the condition. Dupuytren's contraction was a disease in which the palmar fascia alone was actively diseased. The speaker then gave an outline of an investigation into the causation of the disease recently conducted by a committee at the Home Office, which was required to report as to whether the disease was one incident to workmen subject to palmar stresses, and should be scheduled under the Workmen's Compensation Act. On the basis of 240 cases which had come to the speaker's notice, he concluded that the causation of the disease would eventually prove to be some internal factor, and that palmar stresses were not the cause. In regard to treatment, subcutaneous operation was desirable in most cases.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on February 13th, DR. T. WARDROP GRIFFITH, President, in the chair, the following were among the exhibits:—DR. W. H. MAXWELL TELLING and MR. S. W. DAW: A case of *Rheumatoid arthritis* in a patient who had been unable to walk for five years; the knees had then been straightened forcibly after tenotomies, and the

patient could now walk in caliper splints. Mr. H. COLLINSON: A *Ureteral calculus* which had been passed spontaneously. Previously it could be felt by a ureteral catheter, which passed beyond it, and olive oil had been injected into the ureter above the calculus. Mr. A. D. SHARP: A patient with a *Dental cyst* invading the antrum of Highmore. A skiagram showed that it involved the larger part of the antrum. It was proposed to treat the case after the radical method of dealing with chronic antral empyema. Mr. J. F. DOBSON: Specimens from cases illustrating the *Association of acute appendicitis with tuberculosis of the ileo-colic glands.*

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 6th, Dr. F. S. PALMER, President, in the chair, Dr. HARRY CAMPBELL, having read a paper on the *Treatment of syphilis of the central nervous system*, in which he described among other things the results so far obtained by injections of salvarsanized serum into the spinal canal, Dr. F. S. PALMER said there was strong evidence to support the view that the infection was in every case widespread in the meninges of the brain and cord, and that it occurred about the same time as the appearance of the cutaneous rash. The best results were obtained by the inunction method of giving mercury, as at Aachen, but the new method of giving salvarsanized serum seemed to hold out some promise in the treatment of tabes and general paralysis of the insane. One tabetic patient of his own had been greatly benefited. Mr. BALLANCE said that in two cases of general paralysis of the insane of Dr. Campbell's he had introduced 40 c.cm. of serum into the anterior cornu of the lateral ventricle; the serum was given with about 50 c.cm. of normal saline solution. No ill effects followed in either case, and in one patient signs of improvement had occurred; the other was too recent to report. The serum was introduced into the ventricle because the researches of Key and Retzius showed that there was no communication between the subdural and subarachnoid spaces except in the Pacchionian bodies. Dr. E. FEARNSIDES said that a positive Wassermann reaction in the cerebro-spinal fluid with a negative reaction in the blood serum was so common that lumbar puncture should be done in all cases in which new symptoms developed after treatment. The effects of treatment should always be controlled by frequent examinations of the cerebro-spinal fluid. Mr. H. E. BATTEN found that in cases in which an intravenous injection of salvarsan had been given a marked leucocytosis occurred, but after an intrathecal injection of salvarsanized serum lymphocytosis was always diminished. In one case of tabes treated with serum he had seen the knee-jerks return and the patient became able to resume work.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting in Liverpool on February 20th, Dr. WILLETT (Liverpool), President, in the chair, Dr. GEMMELL (Liverpool) exhibited a specimen of *Carcinoma of the cervix* in an 8-para, aged 34, which had apparently commenced during pregnancy, and caused haemorrhage during the later months. Labour was normal, but the haemorrhage continued and there was pain referred to the right hip and thigh. On examination the cervix was found enlarged, and its inner surface rough and boggy. The uterus was removed by pelvic dissection, the patient making a good recovery. Microscopic section showed a glandular carcinoma. He also reported a case in which a *Solid ovarian tumour* caused dystocia and necessitated Caesarean section. The patient was a 2-para, the first confinement being normal. Twelve hours after the commencement of labour her doctor found the head obstructed by a hard swelling, which filled the pelvis. This tumour could not be moved, so Caesarean section was performed, and subsequently a solid tumour of the left ovary, the size of a fetal head, was removed. Convalescence was complicated by a cystic swelling over the sacrum, which eventually had to be opened. Dr. DOUGAL (Manchester) recorded a case in which *Ectopic pregnancy* occurred twice in the same patient. In July, 1912, the patient, then a primipara, aged 28, went two weeks over her period, and eventually was operated upon for a ruptured ectopic pregnancy of the right tube, which, together with the ovary, was removed. Menstruation was now regular for fourteen months, when she again went over her period for two weeks, and was now operated upon for a ruptured ectopic pregnancy of the left tube.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

AT the quarterly meeting, held at Storthes Hall Asylum, West Riding, on February 19th, under the presidency of Dr. JAMES CHAMBERS, Dr. DEVINE (Wakefield Asylum), in a paper on the *Clinical significance of katatonic symptoms*, said that these were not necessarily significant of a deteriorating process; the syndrome was frequently observed as a phase of the various forms of relapsing psychosis. Absence of confusion indicated a favourable prognosis, but symptomatological diagnosis was not always possible. Especial attention should be paid to the make-up of the personality. Cases which deteriorated were usually found to have exhibited constitutional traits of an abnormal character before the outbreak of the psychosis. These habits were described under the heading of "the shut-in personality." The cases which recovered were dependent upon a hysterical or cyclothymic constitution, each with special reaction tendencies. Dr. H. SALTER GETTINGS (Wakefield), in a short communication on bacteriological investigations on *Asylum dysentery*, stated that the bacilli belonged to the group which did not touch lactose, and that he had found non-fermenting colonies in 44 out of 84 samples. In 39 the *Bacillus dysenteriae* was present. The bacillus was not always present in the same patient, and this in some degree accounted for the high percentage of failures to isolate the organism. Drs. W. H. ROBINSON and GETTINGS, in a communication on *The pathology of general paralysis*, quoted four cases. In two the Wassermann reaction was negative, but the clinical symptoms and microscopic *post-mortem* appearances were typical of general paralysis. Microscopically, however, they proved to be arterio-sclerotic in origin, and the spirochaete was not found in smears. In the other two cases the clinical and naked-eye symptoms were those of general paralysis of the insane, and the Wassermann reaction was positive. These cases proved microscopically to be general paralysis of the insane, and the spirochaete was isolated in both cases. Dr. GETTINGS thought that clinical general paralysis of the insane might be of two origins, and this might explain the controversy between the "no syphilis, no general paralysis" school and holders of other views.

THE late Dr. Alfred Godson, ex-president of the Stockport Medical Society, left estate of the gross value of £59,668, of which £26,441 is net personalty.

AT a recent meeting of the Scientific Committee of the Italian Society for the Advancement of Science, under the presidency of Professor Camillo Golgi, the resolutions passed at the Congress held at Siena were discussed. Among these resolutions the most important had reference to the organization of researches on bacterial flora of the soil, and the promotion of a scheme for printing a popular edition of the works of Galileo. Arrangements were also made for the organization of a congress to be held at Bari next October.

THE eighth International Congress of Criminal Anthropology will be held at Budapest in September (14th to 17th). The honorary president is the Hungarian Minister of Justice, Eugen von Balogh. Among the members of the committee are Dr. Hans Kurella (Bonn), Professor Aschaffenburg (Cologne), Professor Enrico Ferri (Rome), Dr. Gina Lombroso-Ferrero (Turin), and Professor Sommer (Giessen). The subjects proposed for discussion are: The danger of criminals from the medical and legal points of view; deformities of the skull as a note of degeneration; and senile psychical changes from the criminological point of view, and social defence. Summaries of communications should be addressed to the President of the Congress, Secretary of State Julius Riekl von Bellye, Budapest. At the inaugural meeting of the Congress the Lombroso prize of £40 will be awarded for the best essay or the most important discovery in the field of criminal anthropology published between 1911 and 1914.

Reviews.

A FRENCH TEXTBOOK OF PSYCHIATRY.

THE well known work of Professor RÉGIS of Bordeaux on psychiatry[1] forms one of a series of excellent manuals for students of medicine published under the direction of Professor Testut of Lyons. The first edition of this book was published in 1884, and its popularity is shown by the fact that it has reached a fifth edition; it has received also a distinction of merit from the Faculty of Medicine of Paris, from the Academy of Medicine, and the Institute (Academy of Sciences).

The methodical arrangement of the work and its comprehensive and lucid exposition exhibits the mind of a master with a wide and extensive experience as physician and teacher. Professor Régis in the 1230 pages of the book has condensed a very wide knowledge of the contemporary literature of the subject, yet although the work contains so much detailed information the author never loses the thread of his argument, nor does he fail to present a clear picture of the clinical aspects of the various diseases of the mind and their pathogenesis.

The first twenty pages are devoted to a historical introduction, divided into four periods. Under the title of General Pathology there are three chapters: the first deals with generalizations concerning psychopathies, etiology, evolution, and pathological anatomy; the second is devoted to general symptomatology or semeiology; the third to classification.

Psycho-analysis is so much in evidence at present that we turn to the pages of the book to see what Professor Régis teaches. After giving three pages to an explanation of Freud's doctrine, the author comes to the conclusion that the methods employed by Freud and his disciples to unravel the complex and bring it to the light of day are in practice very untrustworthy and very uncertain. Professor Régis, however, admits that the theory of Freud is not without "grandeur." It has not only the attractions of a psychological doctrine, but, as has been remarked, of a religious doctrine also; this Professor Régis thinks accounts for its fame and the passion with which it is attacked or defended.

A valuable feature of the manual is the interesting descriptions it contains of the evolution of the knowledge of a disease; we may take as an example dementia praecox, which so many associate with the name of Kraepelin as to believe that the great German psychiatrist had discovered it, whereas he merely elaborated the clinical picture and divided into types a form of insanity well known to the authorities on insanity as far back as Willis (1672), who, in a chapter on stupidity or moroseness, points out that young people who were bright, alert, and sometimes even brilliant in childhood, may in adolescence be stricken with obtusion and hebetude. Indeed Morel in his great work, *Traité des maladies mentales* (1860), in different passages makes allusion to what he himself calls *démence précoce*. In his *Études cliniques* he gives a picture of a katatonic condition which Professor Régis quotes; it refers to the most important and obvious clinical signs of the disease, namely the suggestibility, the stereotypism of attitudes, of gesture and of speech, the katatonia, the grimacings, the ties and the negativism, called by him "nihilism." The author concludes by saying that not only did Morel in 1851-53 give a true clinical summary of *démence précoce* which by priority belongs to him in great part, but made also many other important additions to the knowledge of psychiatry. Professor Régis does not, however, allude to the fact that Clouston gave an excellent clinical description of this disease, which he termed "insanity of adolescence." We are glad, however, to note that while claiming his just due for Morel, the author acknowledges the great merit of the services rendered by the German authors, Kraepelin, Kahl Baum, and Hecker in resuscitating dementia praecox, and of grouping under this one term a series of similar states having for their essential foundation a special process of progressive and rapid psychical decadence in young people. He divides dementia praecox into two great groups—constitutional or degenerative and post-confusional, a type which differs altogether from the former, as it occurs without marked anterior predisposition; the pathological process begins by an attack of acute toxic or infectious mental confusion. In the course of this acute attack or in consequence of it phenomena of stupor with the characteristic complex of symptoms of katatonia are produced. This condition often terminates in complete recovery; it is only in cases which are incurable that the patients at length become demented.

Whether the views of the author concerning a post-confusional dementia praecox be accepted or not, it is generally admitted that cases occur which so simulate this disease that a serious error in prognosis might be made if the physician hastily arrived at a judgement that a katatonic stuporose patient was necessarily suffering from an incurable disease of the mind without fully considering the facts of heredity and environment in relation to the probable causative factors which led to the mental derangement in combination with the evolution and progress of the symptoms. Régis says: "The tendency is more and more, in fact, to consider dementia praecox as a psychosis of intoxication, in particular as a psychosis of autointoxication of sexual origin (Kraepelin, Thisch) or even of more general autointoxication (Régis, Sérieux, Masselon, Feghif, and others)." There follows an excellent clinical account of each of the three types—katatonic, hebephrenic, and paranoidal—with photographs of patients illustrating the principal objective signs.

In a review it is impossible to do more than refer to certain portions of the work, but, to show how completely German as well as French psychiatry is considered, we turn to arterio-sclerosis in order to see whether the author has considered a disease known as Alzheimer's disease, and we find an excellent account taken from Kraepelin. Professor Régis, however, remarks that, though the clinical symptoms constitute a characteristic syndrome, the anatomo-pathological conditions are met with in other conditions, notably in the dementia of arterio-sclerosis.

More than one hundred pages are devoted to general paralysis, and as Professor Régis has always maintained the syphilitic origin of this disease, having been one of the first to describe the juvenile form of this malady in congenital syphilitics, we are not surprised to find in this work an account of the latest researches on the existence of the spirochaete in the brain, the discovery of which by Noguchi forms the last link in the chain of evidence proving syphilis to be the essential cause. Considerable attention is devoted to the pathology of general paralysis, and many coloured plates are given; the picture of the fourth ventricle showing the granulations, however, is rather crude, and fails to give a proper idea of the condition. The author refers to Ford Robertson's account of the diphtheroid organism in relation to the causation and treatment of general paralysis. He states that Candler confirmed this work, but this is a mistake, for Candler came to the same conclusion as A. Marie, that the organism could in no way be regarded as having any causative influence in the production of general paralysis.

The second part of the book deals with medico-legal practice; there is a bibliography of German and French authors, but we confess to disappointment at not finding the names of Maudsley and Mercier.

In conclusion, we can strongly recommend this admirable work to all who are interested in the study and practice of psychiatry.

[1] *Précis de Psychiatrie.* By Professor E. Régis. Fifth edition. Paris: O. Doin et fils. (98 figures in the text and 7 plates, of which 5 are coloured. Fr. 12.)

PSYCHO-ANALYSIS.

IN Dr. ERNEST JONES's book, *Papers on Psycho-analysis*,[2] we have a statement at great length of Freud's psychology. There is special pleading on behalf of its almost universal applicability, assertion that its opponents have never given psycho-analysis a trial and have condemned it ignorantly, denunciation of other methods of psycho-therapeutic treatment as futile, and a few records of cases believed to have been cured. At the end of it all the reader is left with an unsatisfied feeling, perhaps only content with the statement towards the end of the book that "up to the present psycho-analysis has not revealed a great deal of importance from the point of view of education." Whether the reason for this lies "in the fact that those who have worked

[2] *Papers on Psycho-analysis.* By Ernest Jones. M.D.Lond., M.R.C.P.Lond. London: Baillière, Tindall, and Cox. 1913. (Demy 8vo. pp. 447. 10s. 6d. net.)

with the method have as a rule become trained in *scepticism and caution*" (italics ours) may be doubted. But it is sincerely to be hoped that the day is far distant when the investigation of the sexual content of a child's mind will be adopted as part of the armamentarium of those who direct education in this country.

One of the characteristics of the Freudian would seem to be exaggerated statement. Dr. Jones describes as "most brilliant" the demonstration by Freud that "a number of mental processes owe their origin to causes unknown to, and unsuspected by, the individual." Dr. Jones goes one better and maintains that "the large majority of mental processes in a normal person arise from sources unsuspected by him." This leads on to the dethronement of "intellectual processes" from their place of pride, and the recognition of the importance of feeling; so that the scientific psychology of the future is "feeling psychology." The debased intellectual process, too cowardly apparently to face the truth, resents the interference of feeling; consequently subtle and complex "concealment mechanisms" come into play to hide from the individual the feeling the acceptance of which he resists. The greater the resistance the more complex the mechanism. Now a great deal of all this seems to be a mixture of platitude, exaggeration and topsy-turvy argument. First of all, the mind is split up into two parts, the "conscious" and the "unconscious"—a very dangerous distinction to make if it masks the unity of the individual. Secondly, the "brilliant demonstration" of Freud seems to be rather a platitudinous statement of the fact that the attention cannot be occupied with a thousand things at the same moment, and that processes tend to become automatic. Thirdly, the idea that unpleasant feelings, important and unimportant, try to force themselves up from the unconscious into the conscious, and that they are repressed by elaborate mechanisms because of the resistance to their acceptance, seems to be open to the suspicion that it may be a reversal of what normally takes place. The Freudian endeavours to prove this hypothesis by the investigation of cases of pathological perversion, and in doing so appears to forget processes of physiological health. Instead of considering normal human life as a carefully adjusted balance between various activities, one of which —the sexual instinct—is of such importance that the others are liable at times to overflow into it, especially under the stimulus of pathological conditions—instead of this, the Freudian produces the impression that to him life is one long sexual pursuit, in which every image of the mind is suggestive either of the penis or of the vulva. He appears to hold that normal life consists in a stage of infantile autoerotism passing through narcissism to a period of masturbation; thence to a homosexual stage, which leads finally to the hetero-sexual condition in the healthy individual. As an explanation of sexual perversion the patient is imagined to have stopped short in one of the early stages. The decent minded sufferers are supposed to repress from consciousness the suffering caused by their arrested development, and replace it by obsessions; while the indecent ultimately find themselves in the police court. Such a conception seems to us a travesty of life. There is no doubt that sexual instinct, prematurely excited, may play too large a part in life, and that other ideas may overflow into it. But in this it resembles any other activity in which the individual may become too much absorbed. For instance, Dr. Jones, a convinced Freudian, relates how on one occasion in writing a letter beginning, "Dear Fred," he was amazed to find that he had written "Dear Freud." After psycho-analysing himself for a page and a half, Dr. Jones came to the conclusion that the mistake was "the manifestation of a snobbish wish that he might be on sufficiently close personal terms with Professor Freud to allow such a familiar mode of address"!

We will take this somewhat slender story as a peg whereon to hang our own sketchy conceptions. The writer of this review was sitting in an hotel lounge jotting down notes on Dr. Jones's book. All round were many people who, having eaten a good dinner and drunk good wine, were enjoying a newspaper or a cigar. All seemed to be under the influence of a feeling of intense well-being. But in none of them was there the slightest sign that the feeling was due to gratification of their sexual instincts. Neither the dinner, nor the alcohol, nor the cigar appeared to have the slightest erotic effect upon them. In the meantime it happened that a string band was discoursing music of sorts, and in the course of the programme there occurred one of those sensuous, semi-Oriental compositions, such as are played at music halls what time a so-called classical dancer disports herself. Now the writer had heard this music many times before; but as he is either not fully appreciative of musical suggestion or else is not super erotic, he had never really attached any particularly sexual meaning to it. Nor was there the slightest evidence that it had any influence on the sexual feelings of the old gentlemen in the room; they probably regarded it as a pretty tune, and, like so many other things in this life, it went "in at one ear and out at the other." But the writer was reading Dr. Jones, who is a Freudian; the word-association of Freud is sex; and the erotic nature of the music was suddenly borne in upon the mind. Is it not possible that the explanation of such a result is to be found in a conception of the mind based upon the structure of the central nervous system rather than in the view that the sexual feelings are always struggling to the surface, that they are kept in a supposed state of "repression" by a fictitious "psychic censor," or that the appreciation of the erotic nature of the music was some kind of "fulfilment of a wish"?

Now the whole of the nervous system is regarded as built up of an immense number of sensori-motor arcs, tracks along which impulses for sensation and motion travel. The more complicated the life of the individual the more numerous and complex the paths which are laid down. Certain tracks used habitually become pushed out of their connexion with consciousness; they have to do with reflex and automatic activities. The tracks which have to do with more difficult and complicated reactions are on a higher plane, and impulses passing through them obtrude themselves into consciousness. But the connexions between the tracks are numerous, and irritation applied at one end of a track, to which the response is simple in normal conditions, may overflow into other neighbouring tracks. Similarly with the mind, the sexual path being of enormous importance to the race is very open, and easily allows influences from other paths to flow into it. But this does not mean that it is perpetually struggling into consciousness. Sexual gratification gives rise to a feeling of satisfaction; but this is not the same as saying that all feelings of satisfaction have a sexual basis. To pour out one's woes to another and obtain his sympathy gives a feeling of satisfaction. To say that the friendships felt as a result of this sympathetic attitude is due to sexual *libido* is preposterous. In certain perverted individuals it is conceivable that the impulse passing through the reflex arc of sympathy at the sight of a friend may overflow into the ever-ready sexual arc, and lead to homosexuality. But there is not the slightest reason to write as if homosexuality were the natural result of friendship; rather it would seem that friendship in the abnormal may lead to homosexuality.

Similarly with the so-called Oedipus complex, to which Dr. Jones devotes a chapter. Why assume that the incestuous love of parents is a primitive tendency of human beings? Why try to twist nightmares into an explanation of hatred of a father for interfering with a son's assumed incestuous love for his mother? In all these dreams great use is made of "symbolism"; but the impression left on one's mind by reading books on psycho-analysis is that a given object may be symbolic of anything one may want to make use of in interpreting the dream. In Ireland there are certain curious structures known as "round towers." Probably they were erected at a time when things which were round were more fashionable than things which were square. However, some pre-Freudian antiquary who could not appreciate the advantage of simplicity in explanation, and was possibly of an erotic turn of mind, anticipated Freud, and announced that these "round towers" were of phallic origin. This opinion is not, we believe, any longer accepted by the learned.

From a careful consideration of published cases we venture to suggest that though psycho-analysis may be of some use in the diagnosis of a few difficult obsessional troubles, and is sometimes stated to have definitely relieved a particular symptom, yet there is by no means

sufficient evidence of complete cure to justify the obvious dangers of the method. On the other hand, there is a considerable body of evidence leading to the conclusion that Freudians attach far too much importance to their method, and it is well to remind them that just as the phallic worshipper will discover the phallus in sticks or stones, in round towers, or mushrooms or asparagus, so the Freudian will find Freud everywhere. And so we conclude by suggesting to Dr. Jones that his worship of Professor Freud is too complete to justify amazement when he discovered that the path in his brain which should have produced "Dear Fred" had leaked into the very full stream devoted to the almost identical "Dear Freud."

LIP-READING.

MEDICAL men are sometimes asked to recommend to patients becoming deaf a manual of *Lip-Reading*, and Mr. NITCHIE has recently supplied a book with this title.[3] The work is divided into two parts: first, explanatory and directive, telling how to practise; secondly, giving materials and exercises, or telling what to practise. Lip-reading is so presented that it can be studied and mastered by the hard-of-hearing without the help of a teacher, though such help is, of course, an advantage to that class, and is a necessity for those congenitally deaf. Chapter I treats of the power of the eye as a substitute for deaf ears, and quotes a sentence from Dr. John Bulmer, who wrote long ago of "that subtile art which may enable one with an observant eie to see what any man speake by the moving of his lips." The difficulty of seeing some sounds is commented on, such as the aspirate, *k*, hard *g*, *ng*, etc.; and quickness of mind as well as quickness of eye must be cultivated to secure success. The author is himself deaf, but a good lip-reader, and states that three lessons a week for three months will in the majority of cases suffice for the serviceable acquisition of the art. Teaching aims are discussed in Chapter II, and much value is rightly attached to the teacher's personality. In the chapter addressed to the friends of the deaf objection is properly taken to shouting or over-grimacing by well-meaning interviewers, while stress is laid on the folly of denying deafness when it exists. Some useful hints are given as to conversation practice, such as to watch the eyes as well as the lips of the speaker, and to have him so placed that his face will be well lighted; the utility of mirror practice is the subject of an admirable chapter. Part II consists of daily practical exercises, with model stories and conversations, lessons on lip movements, contrasted sounds, etc. The form of the mouth and lips in producing vowels is well illustrated. We are pleased to be able to commend the book as an excellent practical guide both for teachers and taught.

NOTES ON BOOKS.

DR. LYTH has given much enthusiasm and patient continued observation to the *Studies on the Influence of Thermal Environment on the Circulation and the Body Heat*.[4] He would, we believe, have been better advised had he published the results of his observations in some scientific journal, as such work is apt to be overlooked if published in a separate volume. He has recorded—mainly on himself—the effect of warmth produced by excessive coverings in bed and of cold due to cold wind or cold moving water, using the rectal temperature, blood pressure, and pulse frequency as indices. Perhaps the most interesting result he obtained was that the pulse frequency is increased by cold wind or moving cold water. This is no doubt true for Dr. Lyth, but similar observations on others would be required before it could be accepted as of general application. So far as the reviewer's observations go he has found an increase of the pulse rate, but not very notable. The method of reading blood pressure adopted by Dr. Lyth is not one which can be recommended.

We have received a copy of the fourth edition of a small pamphlet on National Health Insurance by Dr. J. T. RICHARDS,[5] which purports to be a plain exposition for employers and employed of the principal Act and the Amending Act. Any attempt to expound the Insurance Acts in the short space of fourteen small pages must be confined to the widest generalities, but if the object be to provide for the public a plain statement of the main features of the Act which affect the working classes, it is quite possible that this pamphlet may be even more successful than the elaborate memorandums of the Commissioners. At any rate, it can easily be read and understood by those who have neither the time nor the inclination to read more detailed explanations which often need an interpreter to be understood. It is perhaps a pity that the alterations made by the Amending Act have not been incorporated in the text but have been collected together in a sort of prelude, to which back reference has constantly to be made in reading the text. In the sixpenny edition marginal references to the Acts are given which greatly increase the value, and the author has succeeded in avoiding giving erroneous ideas—often a difficult task when too great conciseness is attempted.

The power of recognizing flowers varies greatly, very much in the same way as the power of what is called "remembering" faces. Some people if once shown a flower will apparently without an effort remember its name, its appearance at different seasons of the year, and its properties. Others, in spite of much greater exertions, never attain the same confidence. A small book belonging to the series of "People's Books" has been written by Mr. MACGREGOR SKENE, B.Sc., Lecturer on Vegetable Physiology in the University of Aberdeen, to help both classes, but especially the latter. Its title is *Wild Flowers*,[6] and its peculiar quality is that the plants are arranged in ten colour-groups, which are subdivided as may be necessary, according to other characters. The task of identification is very greatly simplified by a complete set of black and white drawings, which are very characteristic.

A seventh edition of the *Illustrated Medical Dictionary*,[7] by Dr. W. A. NEWMAN DORLAND, of Chicago, has been issued within less than two years of the appearance of the sixth. The preface tells us that 5,000 new terms have been defined in this new edition. Great as we knew the recent additions to medical terminology to have been, we were not prepared to be told that it was quite so large as this: the explanation appears to be the application of proper names to various symptoms, methods of treatment, surgical operations, and laboratory reactions and tests. These proper names appear in their alphabetical order, and also, as a rule, in a classified list of tests, signs, and so on. For instance, if we look up Babinski's reflex, we are told that he is a physician in Paris, born in 1857, and are referred to "reflex." Whether this duplication is really necessary we rather doubt, but, if it is a mistake, it is a mistake in the right direction. The dictionary is undoubtedly a valuable work of reference, and has stood the test of time. The same editor has published the eighth edition of a small *Pocket Dictionary*,[8] which has undergone a similar process of revision and expansion, and in this volume the proper names, so far as we have observed, occur, as a rule, only once.

A second edition of the *Pocket Cyclopaedia of Medicine and Surgery*,[9] based upon the second edition of Gould and Pyle's *Cyclopaedia of Practical Medicine and Surgery*, has been edited by Dr. R. J. E. SCOTT, of New York. He has subjected the text to revision, has incorporated many new articles, while omitting a few of the old ones, and has largely increased the number of cross references. It is a marvel of comprehensiveness and compression, and the illustrations are all really useful.

[3] *Lip-Reading: Principles and Practice.* By E. B. Nitchie, B.A. London: Methuen and Co. 1913. (Cr. 8vo, pp. 338. 5s. net.)

[4] *Studies of the Influence of Thermal Environment on the Circulation and the Body Heat.* By Edgar R. Lyth, M.B.Durh., M.R.C.S.Eng. London: John Bale, Sons, and Danielsson, Ltd. 1913. (Demy 8vo, pp. 76; 15 charts. 2s. 6d. net.)

[5] *National Health Insurance. What to Pay? To have what? Who? When? How? A Plain Exposition of the Act with Amendment Act Alterations.* By J. T. Richards, B.Sc., M.B. Published by W. Pull and Co., Clapham Junction, S.W. (Twopence, or with Marginal References to the Acts, 6d.)

[6] *Wild Flowers.* By MacGregor Skene, B.Sc. London: T. C. and E. C. Jack; New York and Edinburgh: Dodge Publishing Company. (Fcap. 8vo, pp. 90; 200 figures. 6d. net.)

[7] *Illustrated Medical Dictionary.* Seventh edition, revised and enlarged. By W. A. Newman Dorland, A.M., M.D. London and Philadelphia: W. B. Saunders Company. 1913. (Medium 8vo, pp. 1107. 19s. net.)

[8] *The Pocket Medical Dictionary.* Eighth edition, revised and enlarged. By W. A. Newman Dorland, A.M., M.D. London and Philadelphia: W. B. Saunders Company. 1913. (Fcap. 8vo, pp. 677. 5s. net.)

[9] *Pocket Encyclopaedia of Medicine and Surgery.* Second edition, revised and enlarged. Edited by Dr. R. J. E. Scott. London: H. K. Lewis. 1913. (Pott 8vo. 5s. net.)

THE GROWTH OF THE BRITISH MEDICAL ASSOCIATION.

THE historian of twentieth century myths will find material for an interesting chapter of his work in the varied comments which have appeared in the daily press with reference to the British Medical Association. At times the Association is vested with despotic powers over the lives and actions of the "doctors," its organization is perfect, its funds inexhaustible, and disobedience of its behests spells professional ruin. The public in general and Ministers in particular are exhorted to make a stand against this menacing development of syndicalism. At other times the finger of scorn is pointed, and the public learns that the British Medical Association has outlived its usefulness, that public spirited medical men (near relatives of the "eminent Harley Street physician" whose pathological discoveries are communicated to the world in the columns of some daily newspapers) are dissociating themselves from its policy, and that the membership roll is being rapidly depleted.

We do not propose to discuss the mutually destructive charges which have been levelled at the policy of the Association; our lay critics may be safely left to answer one another, if they think it worth while. It will, however, be of interest to some of our readers if we provide an analysis of the statistical data upon which a judgement as to the growth and present numerical strength of the Association may be based.

Although the Association was actually founded in the thirties of last century, its scope and methods in the earlier years of its existence were so different from those of our own time that no comparison can usefully be made. A convenient starting point for statistical purposes is afforded by the year 1872, when a financial secretary was appointed and the general organization, although very different, still presented a similarity with that now in existence.

Table I contains the numbers of members on the roll as at December 31st of each year from 1872 to 1913, and the figures are plotted (as small circles) on Diagram 1.

In examining this diagram, attention should be concentrated, in the first place, upon the circles representing the annual membership for the series of years ending with 1910. It will be noticed that, although there are minor irregularities, the series tend to lie upon a straight line sloping upwards—in fact, the closeness of their approximation to such a line is very remarkable. Some of the minor irregularities are indeed of interest to the historian of the Association: thus the practical stagnation of 1903 recalls the increase of subscription which took effect in that year; but these fluctuations from the path of a straight line are, as we have said, small, and we cannot doubt that such a line adequately represents the course of events down to the year 1911. In the year 1911 we find a relatively large increase in membership, followed by a smaller, but still abnormal, rise in 1912 and a marked fall in 1913.

The explanation of these changes is a matter of such recent history that we need not formulate it, but what is very material is to ascertain how the Association now stands. The problem is as follows: The profession has passed through a great crisis; this crisis has left its marks on our membership roll. Do we, now that the immediate violence of the tempest has spent itself, stand numerically in a better or a worse position than might reasonably have been anticipated had the normal course of development been allowed to proceed?

Had the statistical history of the Association prior to 1911 been other than it was, an answer to this question might have been difficult or impossible to frame.

TABLE I.—*Membership of the British Medical Association on December 31st in each of the Years 1872-1913.*

Year.	Membership.	Year.	Membership.	Year.	Membership.
1872	4,700	1886	11,600	1900	18,382
1873	5,400	1887	12,000	1901	18,402
1874	5,700	1888	12,265	1902	18,758
1875	6,112	1889	12,897	1903	18,747
1876	7,000	1890	13,360	1904	19,176
1877	7,147	1891	13,861	1905	19,600
1878	7,536	1892	14,267	1906	20,993
1879	7,810	1893	14,703	1907	21,124
1880	8,052	1894	14,090	1908	21,163
1881	9,202	1895	16,000	1909	21,405
1882	9,563	1896	16,332	1910	22,448
1883	10,050	1897	16,995	1911	25,301
1884	10,600	1898	17,746	1912	26,568
1885	11,249	1899	18,185	1913	24,376

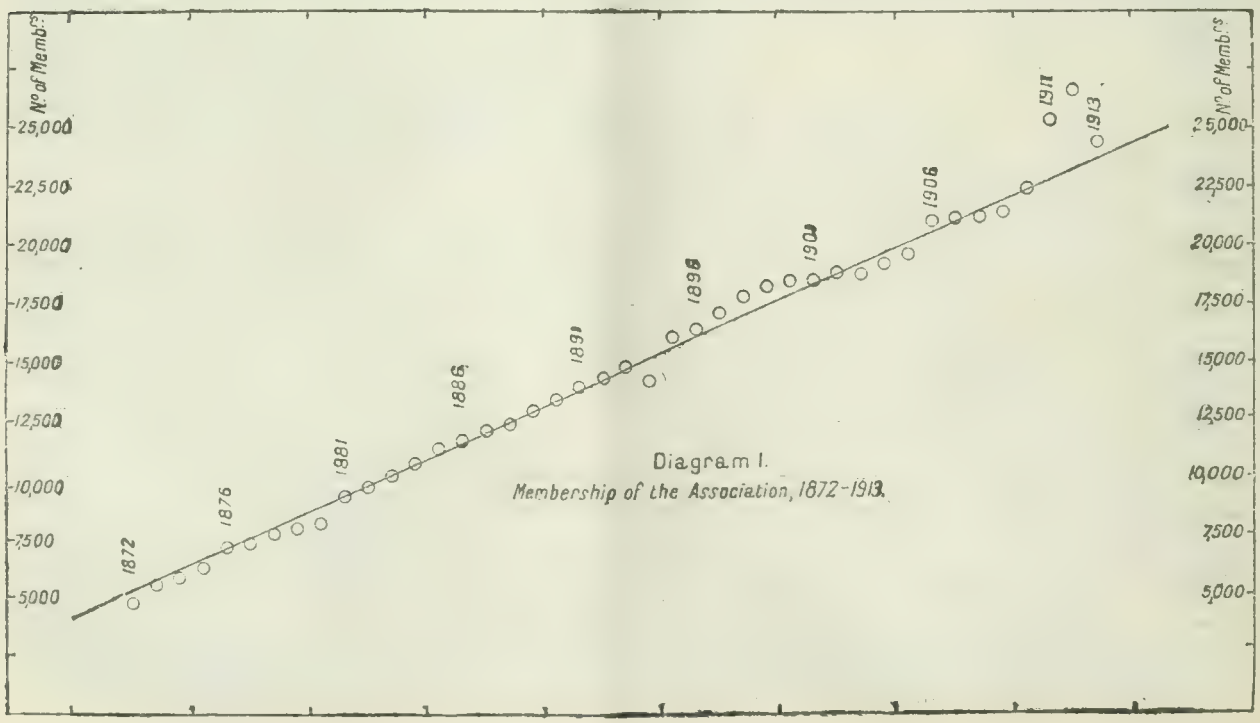


Diagram I.
Membership of the Association, 1872-1913.

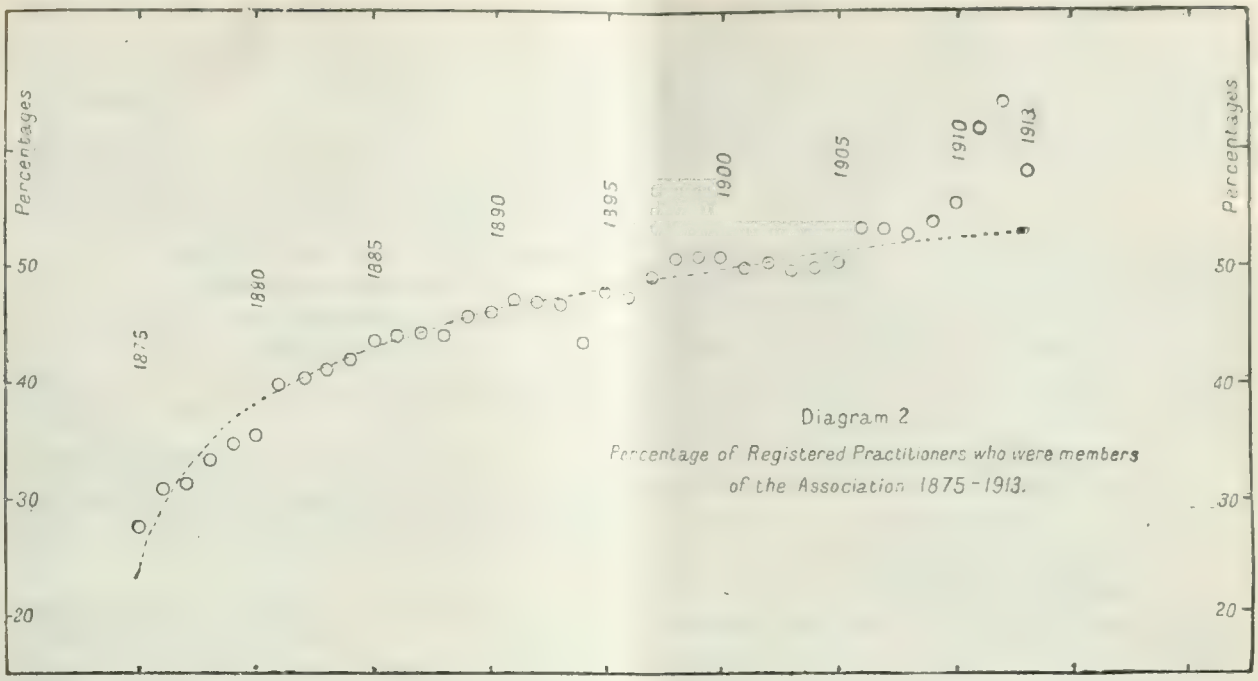


Diagram 2

Percentage of Registered Practitioners who were members of the Association 1875-1913.

In the actual circumstances it is unexpectedly easy to arrive at a definite conclusion. As we have pointed out, the membership curve up to 1910 is very nearly a straight line; we need, therefore, merely fit to the series of years 1872–1910 a straight line, and carrying it forward to 1913 (the last year for which comparable figures exist) determine what would probably have been the number of members in December, 1913, had the old rate of increase been maintained. A straight line was accordingly fitted by the usual statistical process (that of finding the constants of a line such that the sum of the squares of the distances of all the observed values from it should be as small as possible) and appears on the diagram it will be seen how good a fit the line is. From this line, either graphically or by calculation, we deduce that, had the old rate of progression gone on the number of members on December 31st, 1913, would have been 23,696. The actual number was 24,376, a surplus of 680. In other words, the Association was at that date better off, to the tune of 680 members, than could have been predicted on the basis of a long previous experience.

This result is very gratifying, even more gratifying than appears at first sight. It is obvious that no organization can continue to increase indefinitely by constant increments, since such a rate of progress must eventually result in an impossibly large number of members. Growth may follow the straight line law, or proceed on a path indistinguishable from a straight line, for a long period: but sooner or later the line must bend over and ascend less and less steeply. It might reasonably have been expected that such a fate would already have been experienced by the British Medical Association, but this has not been so; its general rate of growth has not diminished, but increased.

We now turn to an even more interesting aspect of the same problem. We have seen that the absolute growth of the Association down to the end of 1913 has been highly satisfactory. But it might be objected that this finding is consistent with a relative diminution; thus, if the number of persons eligible for membership—that is, registered medical practitioners—had been increasing with enhanced rapidity as we approach the present date, then an Association which grew by approximately constant annual increments would not be maintaining its position. To test this matter the following method was devised. The names on the *Medical Register* on the first of January in each year from 1876[1] to 1914 are available, and these figures give the numerical strength of the profession on December 31st of the previous year. The percentage numbers of registered practitioners who were also members of the British Medical Association in each year were then calculated; the data

[1] Down to 1875 no such data were ascertained or preserved (see *Medical Register*, 1914, p. lxvi).

TABLE II.—*Names on the Medical Register and Percentage Membership of the British Medical Association, 1875–1913.*

Year.	Names on the *Medical Register*.	Percentage Membership of the Association.	Year.	Names on the *Medical Register*.	Percentage Membership of the Association.
1875	22,200	27.53	1895	33,601	47.62
1876	22,713	30.82	1896	34,478	47.37
1877	22,841	31.29	1897	34,642	49.06
1878	22,600	33.35	1898	35,057	50.62
1879	22,516	34.69	1899	35,836	50.75
1880	22,936	35.11	1900	36,355	50.56
1881	23,275	39.54	1901	36,912	49.85
1882	23,801	40.18	1902	37,232	50.38
1883	24,517	40.99	1903	37,878	49.49
1884	25,321	41.86	1904	38,492	49.82
1885	25,998	43.27	1905	39,060	50.18
1886	26,452	43.85	1906	39,529	53.11
1887	27,246	44.04	1907	39,827	53.04
1888	27,939	43.90	1908	40,257	52.57
1889	28,348	45.50	1909	39,818	53.76
1890	29,163	45.81	1910	40,483	55.45
1891	29,555	46.90	1911	40,913	61.84
1892	30,590	46.64	1912	41,439	64.11
1893	31,644	46.46	1913	41,940	58.12
1894	32,637	43.17			

are contained in Table II, and the percentages plotted as small circles on Diagram 2. This material is not so satisfactory for analytical purposes as the absolute figures for the following reasons. The names on the *Medical Register* in each year do not quite accurately represent the population of medical practitioners; notwithstanding the care taken to secure correctness, the *Register* must include several names of deceased persons, and is subjected at intervals to drastic revision. Thus the decline in 1909 was due to the removal of many names of persons who failed to return the official circular to the Registrar, and does not mark a real decline in the medical population. Further, the percentages underestimate what may be

termed the working strength of the Association, since the *Register* includes an undefined number of holders of medical qualifications, who for various reasons, such as residence abroad or the occupancy of non-medical or official posts, can hardly be deemed *in pari materia* with the rest of the medical population. These facts account for some of the irregularity in the distribution, but it will be seen that even here the arrangement is orderly. The next step was to fit a curve to the 1875–1910 experience with the object of gauging the present position. It was evident that the simple process employed in the case of absolute numbers would not be successful. As we have said, even in the case of absolute numbers, an indefinite growth by constant increments could not be expected to obtain; *a fortiori* in the case of percentages the straight line rule must be inapplicable, since growth will necessarily cease when 100 per cent. of the profession are enrolled in our ranks. Evidently, then, the curve of growth must be one the gradient of which steadily diminishes as one approaches the theoretical limit, tending, therefore, towards running parallel with the base at that value. The simplest curve fulfilling effectively these conditions is of the form:

$$y = A \log B x,$$

where y is the percentage membership,
x the year (measured from 1874 as origin),
and A and B are constants.

Such a curve was fitted to the 1875–1910 percentages, and is shown as a dotted line on Diagram 2; the method of fitting was similar to that employed in the previous case. It will be seen that the curve is a very fair representation of the trend up to 1910. It is not so good a fit as the straight line was to the absolute numbers, and the distribution of the points between 1905–10 suggests that so simple a law as the logarithmic does not quite adequately represent the experience, the real rate of increase having been somewhat faster than the curve suggests. Still, this is perhaps the closest representation of the facts that we can procure without very complex and laborious investigation. Applying our curve as a basis of prediction, we infer that on December 31st, 1913, the membership of the Association would have been 53 per cent. The observed figure was 58.12 per cent.—that is, about 5 per cent. more registered practitioners were enrolled than we should have expected. For the reasons just stated it would not be right to attach too much importance to the exact figure, but the general result seems to be unequivocal. We are entitled to conclude that the relative membership of the Association on December 31st, 1913, was not less satisfactory than its absolute strength, and that both had reached points which compare favourably with what might have been anticipated from the experience prior to 1911.

These results will be gratifying to those who believe that such steady progress is highly conducive to the safeguarding of the honour, interests, and public utility of the medical profession.

In the preceding analysis we have confined our attention to the statistics relating to the period ending on December 31st of last year. These are, indeed, the only data from which adequate conclusions can be drawn, and, in the ordinary way, it would not be necessary to make any reference to more recent events. We cannot, however, pass over in silence the fact that a considerable change was introduced on January 1st of the present year by the increase of the subscription from 25s. to £2 2s. Had it been possible to compile statistics giving the membership on February 1st in each year we could have included the present membership in our survey, but this was unfortunately impossible. The actual number of members of the Association in February, 1914, was 23,245. To compare the membership in any February with that of the previous December would be illegitimate, since in the former month the majority of members who are resigning have announced the fact, while the influx of new members does not normally attain its maximum until later in the year. It is, therefore, impossible to base a reasonable conjecture as to the probable number of members at the end of the year upon the February data. Some light, however, can be thrown on the problem by considering the effect produced by the last increase in subscription, which took effect in 1903. On this basis we find that even were the February membership to receive no additions throughout the year, the net diminution for the year would be proportionally less than occurred in 1903, account being taken of the fact that the present increase of subscription is substantially greater than the former one. This, we think, is a very encouraging state of affairs.

We have now completed our review of the membership statistics, and have formulated the conclusions deduced by a dispassionate analysis of the data. Enough has been done to dispel various illusions fostered by guesses and to warrant members of the British Medical Association in facing the future with confidence and hope.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the twentieth meeting of the Royal Commission on Venereal Diseases evidence was given by Mr. Ballance, Chief Surgeon of the Metropolitan Police and Surgeon to St. Thomas's Hospital, and by Mr. Richardson, of the National Association of Medical Herbalists of Great Britain.

The Metropolis.

Mr. Ballance said that the amount of venereal disease among the police was very slight. Formerly police officers reporting themselves sick from venereal diseases were looked upon as defaulters, their pay was stopped usually for a week, and they were generally put on half-pay afterwards. In May, 1911, the system was entirely changed, and it was decided that venereal disease should be treated like ordinary sickness. The result had been that most of those affected with venereal disease had reported themselves sick to the divisional surgeon and had not tried to keep it secret. As many cases as could be accommodated were sent to the military hospital, but if that hospital was unable to receive them they were sent to the nearest large general hospital. Mr. Ballance thought that the number of syphilitic patients had increased, but that this was due to the fact that the men appreciated the treatment at the military hospital; he did not think that there was any increase of prevalence of the disease amongst the force. The change of system had had the good effect of securing treatment at an early stage. Out of 83 constables reported as treated in the primary stage at the military hospital, only 3 developed secondary symptoms. Out of 116 other consecutive cases, only 8 had had clinical relapses. He considered that these figures were quite wonderful.

From his experience at St. Thomas's Hospital, Mr. Ballance thought that in recent years there were fewer serious venereal cases than formerly; this he thought was due to the early treatment of the cases, instead of their being neglected or untreated as in the old days. He very much doubted whether the actual prevalence had diminished. Questioned as to the use of salvarsan, he said that in the cases in which he had used it he had never seen any danger arise from it, only good.

Herbal Treatment.

Mr. Richardson said that he was an M.D. of Cincinnati. At the present time the degree course there was four years, but when he qualified twenty-five years ago the course was of two years' duration. He did not think that venereal diseases were so common to-day as they were twenty-five years ago; education was such that men did not commit themselves as much as they did in the past. Mr. Richardson said that he relied on herbal treatment for venereal diseases; he was not conversant with the results that had been obtained by the use of salvarsan; nor was he familiar with the Wassermann test, which he said he had not used because he had not found it of importance. With regard to syphilis, he said that if there were no manifestations after a course of treatment, say, of three or four months, he would conclude that there were no disease germs in the body.

Ireland.

At the twenty-first meeting evidence was given by Dr. Brian O'Brien, Medical Inspector of the Local Government Board for Ireland. Dr. O'Brien said that

for the purposes of his evidence he had visited all the larger towns in Ireland and many of the smaller ones, as well as a certain number of rural districts, and that the impression made upon him was that there was a decline of venereal disease in the country districts and small towns. It was his opinion that venereal disease, syphilis especially, was almost non-existent in the rural portions of Ireland, and uncommon in the smaller towns. There was special prevalence in Dublin, and among the causes contributing to this prevalence he mentioned poverty, bad housing, and the fact that Dublin was the refuge of people from the greater part of Ireland who were doing no good for themselves. There was also some prevalence of the diseases in Belfast, but to a much less extent than in Dublin. The treatment of the diseases in Ireland at the present time was, he thought, very inadequate. His two main recommendations were that means should be provided for improved diagnosis, and that institutional treatment should be subsidized. There would be advantage, he thought, in providing out-patient departments at general hospitals which would be open in the evening; a considerable number of men might thus be attracted to be treated promptly and efficiently. He was, however, inclined to doubt whether a very large proportion of the women would present themselves for treatment. Dr. O'Brien was opposed to the notification of venereal disease; he did not think that the medical profession would be willing to notify; and if they did, fewer people would go to them for treatment.

THE CARNEGIE TRUST FOR THE UNIVERSITIES OF SCOTLAND.

ANNUAL REPORT FOR 1912–13.

EACH annual report issued by the Executive Committee of the Carnegie Trust for the Universities of Scotland has its own particular features of interest. Last year's dealt specially with the subject of the payment of class fees—a matter respecting which there can be, and have been, two opinions; but this year's (submitted to the trustees on February 25th)[1] is concerned with the endowment of post-graduate study and research, about which there can hardly be any great conflict of view. Further, the end of the academic year 1912–13 marks also the close of the second quinquennium of the Trust's scheme of endowment of research, as well as of its other scheme of distribution of grants to the universities and colleges of Scotland, and the time is suitable for a review and retrospect.

Endowment of Post-Graduate Study and Research.

The endowment of post-graduate study and research is not concerned with medicine alone, but includes also the historical, economic, and linguistic sciences (reported upon by Professor Hume Brown) and the purely physical and chemical sciences (reported on by Dr. James J. Dobbie), although of course the two last-named subjects are closely related to medical science.

Professor James Ritchie, whose own Chair in the University of Edinburgh is an instance of a research rather than of a teaching professorship, reports upon the research work in biological and medical science. The following sentence from Professor Ritchie's report is particularly important as touching not so much the immediate as the more distant future of research work. After stating that the scheme has had a far-reaching effect on the whole academic life of Scotland, he goes on to say:

> There has been a growing recognition of the principle that a university does not attain its true ideal merely by efficiently training its students, but that it can only continue to be a living force when its members devote themselves to original inquiries; in the realization of this wider ideal in Scotland the mainstay has been the support which research has received from the Carnegie Trust; not only has generous assistance been given to the heads of scientific departments and to those holding junior appointments, but the Research Fellows form a body of men who on promotion carry with them into the life of the universities the habit of research.

So far as medicine is concerned the Carnegie Trust's benefactions to research fall into two parts: there is the help given to its Scholars, Fellows, and Grantees for individual work; and there is the aid which it gives through the laboratory of the Royal College of Physicians in Edinburgh to research in general. Through its fellowships, scholarships, and grants the Trust reaches all workers, from the newly fledged graduate to men well advanced in professional life and experience.

Fellows of the Carnegie Trust.

The Fellowships are given on the merit of work already published, and the list of Fellows includes the names of Dr. Berry Hart, Dr. Williamina Abel, Dr. Thomas Addis, Dr. T. Graham Brown, Dr. Dorothy E. Lindsay, Dr. James Lochhead, Dr. Hugh Maclean, Dr. John Tait, Dr. Robert A. Krause, Dr. Ivy McKenzie, and Dr. James W. Dawson; the number and scope of the articles already published by the Fellows are guarantee of the excellent work being done by them.

Scholars of the Carnegie Trust.

Scholarships are given on the evidence of experts regarding the applicants' special fitness for the work proposed, and the fact that so many former Carnegie Scholars are now Carnegie Fellows proves that the allocation of the scholarships in the past has been well guided. There are twenty-four scholars at present working at biological and medical subjects; but Professor Ritchie's comment upon these and upon their predecessors is of importance. It is as follows:

> Of the twenty-four scholars remaining [seven of the beneficiaries resigned their scholarships before they had done more than commence work, mostly because they had obtained other positions] most have done good work, though from the standpoint of research there have been to a greater extent than in the previous quinquennium regrettable interruptions of careers of promise from early preferment coming to the beneficiaries.

It would seem as if the gaining of a Carnegie Scholarship is acting rather as a passport to coveted positions in the profession than as a means of furthering research, and it is difficult to see how this can be avoided save by tying the successful applicants down to so many years' work in research, a procedure which is hardly desirable. Professor Ritchie has another criticism to make:

> In one or two cases trouble has arisen in consequence of scholars taking advantage of their position merely to prosecute post-graduate study, and it is probable that in the future either steps must be taken for this being prevented or provision must frankly be made for meeting the educational requirements of certain of the younger Scottish graduates.

Professor Ritchie here touches upon a matter to which reference was made in this JOURNAL last year (September 6th, 1913, p. 599), when we expressed regret that the executive of the Trust regarded the payment of fees for post-graduates taking out post-graduate classes as outside the sphere of their benefactions. Surely one of the immediate objects of the Carnegie Trust is to give aid to train the graduates of the Scottish Universities as thoroughly as possible along the lines in which they show aptitude; and it is difficult to see how this can be done if post-graduate study is not to be brought within the financial range of the most promising of the graduates. If this were done, and if, for instance, the students (under the Trust) who distinguished themselves in their professional examinations knew that the Trust would be ready to aid them financially to obtain post-graduate instruction in the universities of their own land or elsewhere, they would be much less likely to apply for scholarships with the secondary motive of prosecuting post-graduate study referred to by Professor Ritchie, and incidentally they would thereafter be much better qualified to carry out research work of the highest order as scholars.

Grantees of the Carnegie Trust.

Of the work of the grantees, as the third body of beneficiaries is named, little requires to be said, and no criticism is needed. They have generally been the heads of university departments or university lecturers or demonstrators, and have had, therefore, considerable experience in research already. The very fact that the

[1] The Carnegie Trust for the Universities of Scotland. Twelfth Annual Report (for the year 1912–13), submitted by the Executive Committee to the Trustees on February 25th, 1914. Edinburgh: Printed at the University Press by T. and A. Constable, Printers to His Majesty. 1914. (Pp. 188.)

grantees include in their ranks such men as Professor T. H. Bryce of Glasgow, Professor Herring of St. Andrews, Professor Noel Paton of Glasgow, Professor Sir Edward Schäfer of Edinburgh, and Professors Stockman, Robert Muir, and James Ritchie himself, gives them a high standing, and disarms criticism of the Trust in this direction. The details of the work done given in Appendix A may be referred to if confirmation be desired.

Financial Aid to Research.

For the past five years the money given by the Trust for the help of research under the headings of Fellowships, Scholarships, and Grants has been £35,698 1s. 6d., and of this sum £13,119 has gone to work in medicine and the allied subjects of anthropology and embryology. There can be no doubt, therefore, that medicine, as was indeed to be expected, has had the largest aid given to it of all the departments (the others are physics, chemistry, natural history, and history) which have received help. It is interesting that the department to receive the next largest amount has been history, with a total of £11,053.

Royal College of Physicians' Laboratory and the Lister Memorial Institute.

In addition, however, to the help thus given to research in medicine as above described, there has been the aid to the carrying on of the laboratory of the Royal College of Physicians of Edinburgh, the institution which is soon to be merged in the new Lister Memorial Institute for Research in the same city. The report states that in 1903 the laboratory was purchased by the Trust, under an agreement for five years with the Royal College of Physicians and the Royal College of Surgeons, by which these bodies continued their annual contributions of £750 and £200 respectively towards working expenses. This agreement was then renewed for a second period of five years. But before the close of the second five years new circumstances arose which have had the effect of bringing the University of Edinburgh into the scheme. The report continues:

> During 1913 the benefaction which had been accumulating under the will of the late Mr. Robert Irvine for the establishment of a Chair of Bacteriology in the University of Edinburgh reached maturity, and Dr. James Ritchie, the superintendent of the laboratory, was elected to the professorship. Following on this appointment an agreement was entered into whereby the university, in addition to providing the stipend of its professor, became a contributor to the expenses of the laboratory, and in return provision was made in the laboratory for the accommodation of members of the university who were prosecuting bacteriological investigation. As part of this agreement it was arranged that Dr. Ritchie should continue to act as superintendent of the laboratory. While the immediate needs of the University Department of Bacteriology were thus met, it had for some time been understood that the University, the Royal College of Physicians, and the Royal College of Surgeons had resolved to inaugurate under their joint control a great institute of medical research, as a memorial to the connexion of Lord Lister with the Edinburgh Medical School. It is proposed that in this institute the Royal College of Physicians' laboratory should be merged, and that provision should at the same time be made for university teaching in pathology and in bacteriology. The scheme has now been fully elaborated, and an appeal is being issued to the public for the necessary financial support. Through the assistance given by the Carnegie Trust in its third quinquennial distribution the University of Edinburgh has been enabled to contribute a sum of £10,000, and we learn that the Royal Colleges are contributing a sum of £15,000 to inaugurate the memorial. We most cordially welcome this movement for a combined advance on the part of the active forces of the Edinburgh Medical School, and trust that at no distant date they will be able to record the successful establishment of the new institute.

The report of the Carnegie Trust, therefore, makes clear some matters which were not fully elucidated in previous references to the new Lister Memorial Institute which have appeared in the JOURNAL (*vide* the numbers for January 24th, p. 215, and for February 7th, p. 338). Apart from this, it remains to be recorded that during the last quinquennial period the Trust has met the excess of expenditure over income of the laboratory, amounting to £4,305, and this with £2,600 for the previous five years makes a total of £6,905; this is in addition, of course, to the capital sum of £10,000 invested in the laboratory buildings.

Conclusion.

The report deals with many other matters, but the business concerned with the aiding of research by individual grants and, less directly but no less really, through the laboratory of the Royal College of Physicians bulks so largely that it has been thought advisable to deal with it alone in this analysis of the work of the Trust. No one can fail to see that, although criticism may be fairly employed upon some of its details, the scheme of endowment of post-graduate study and research has added notably to the opportunities for scientific investigation in medicine in this country.

SCIENCE NOTES.

THE Roentgen Society, which has recently appointed a committee to report upon the question of *x*-ray dosage, held a discussion on March 3rd on the subject of the selection, standardization, and measurement of *x* rays. With regard to the question of selection, the president of the society, Professor A. W. Porter, expressed the opinion that in the radiographic and radio-therapeutic departments of the future a graduated series of tubes would be available, each giving rays of a different penetrating power. He believed that by taking into account the exponential function by which the rays are reduced continually to half value at equal successive distances, and the coefficient of absorption, it would be possible to calculate mathematically what the penetrating power should be in order that the maximum radiation effect might be received at the particular depth required. If a complete battery of tubes were available—or perhaps the new Coolidge tube would obviate the necessity for a battery—then it would be merely a question of selecting the tube the rays from which had a penetrating power equal to the reciprocal of the given depth. In the subsequent discussion some scepticism was shown as to the possibility of carrying out radio-therapeutic work with mathematical accuracy, but the opinion was expressed by another physicist, Dr. G. W. C. Kaye, that a battery of tubes, each constructed with an anticathode of a different metal, would be used in the future, and that if the same metal were used for the screen as for the anticathode, an almost entirely homogeneous beam of rays would result. Mr. W. L. Schall, B.Sc., who introduced the subject of *x*-ray measurement, demonstrated the latest instrument for defining the quality of an *x*-ray beam. This is the half-value *Härtemesser* of Dr. Christen, who measures *x*-ray quality or hardness by the thickness of the layer of water which will reduce the *x*-ray intensity to half the original value. As it is impossible to use water for this purpose, he employs the artificial resin known as bakelite, which is a condensation product composed of carbolic acid and formaldehyde, and is used in an infusible and insoluble state. Bakelite has the same Roentgen opacity as distilled water, and the fluorescence through the various thicknesses of a graded bakelite wedge is compared with that obtained through a pierced metal plate. So close is the identity in respect of *x*-ray absorption between bakelite and water that if a lump of the substance be placed in water and a radiograph be made, the outline of the bakelite will not be visible on the plate.

In continuation of experiments on the restoration of paralysed muscle by nerve anastomosis, Professor R. Kennedy, M.D., has reported to the Royal Society the results of experiments on the fore limb of the dog. The nerves supplying the entire musculature below the elbow were so anastomosed that the normal nerve supply of the extensor group of muscles was eliminated, and that of the flexor group made to supply not only its own group but also the extensor group, and *vice versa*. Recovery of co-ordinated movements in experiments in which supply of extensor muscles had been eliminated commenced at 96 and 93 days respectively, and was very complete by 126 and 123 days respectively. Where both groups were supplied by the extensor nerve supply recovery was shown

at 81 and 59 days respectively; in the second of these cases the animal made an excellent recovery at 79 days. The brain was exposed and examined before death to ascertain the condition of cortical centres. This was successfully done in one of the first type of experiment and in two of the second. The centre which normally produced contraction of muscles supplied by the eliminated nerve or nerves was inexcitable, and in the other centre (either the normal flexion or normal extension centre according to the form of experiment) contraction of both groups was evoked, and at no part of the centre could separation of these contractions be obtained. A case of tendon grafting, as described by Nicoladoni, shows that the gastrocnemius might, in such circumstances, be able to produce both flexion and extension movements of foot.

LITERARY NOTES.

SIR JOHN BYERS, in introducing Mr. E. J. M'Kean, who delivered a lecture on Ulster folklore at Belfast on February 24th, made some interesting remarks on the subject of which he has made a special study. He believed that owing to the great number of racial strains in the North of Ireland there was no part of the United Kingdom in which there was such a varied wealth of folklore as in Ulster. It was about 500 or 600 years B.C. that the Gaels first set foot in Ireland, but before their invasion there existed the ancient inhabitants of Ulster—the "Ulidians." More accurate information was still needed about these early pre-Celtic peoples. Some of them were Picts, who inhabited that part of North-East Ulster known as Dalriada, while others were the Firbolgs, who, it was thought, came from Greece, and who had a language which had affinities to Berber and Basque. Then, from the beginning of the ninth to the eleventh centuries, came the Danes, while in 1177 the Anglo-Normans arrived with their leader, Sir John De Courcy, in that barony of County Down known as Lecale. The next immigration was the Ulster Plantation of English and Scottish settlers in the reign of James I. The former brought with them the current English and the traditions and customs of the Elizabethan era, while the latter conveyed the language of Allan Ramsay and Robert Burns, as well as many folk-customs and also words of French origin, owing to the close association that existed between France and Scotland. It was about 1685 that the Huguenots came to the North of Ireland, while still later—from the period of the 1688 revolution on to the time of the French Revolution of 1789 and the Napoleonic wars—there was a close connexion between Ireland and France through the existence of the "Irish Brigades," as well as through the educational institutions of Paris and Douai, etc. Owing to all these factors an immense amount of folklore existed in Ulster, much of which had still to be explored. Sir John Byers said the oldest folk-custom in Ulster was the one known as "cutting the churn." It carried them back to the very ancient Greek myths of Osiris, Demeter, and Proserpine. An immense literature had grown up about the "fairies," and, in the works of the Ulster poets, William Allingham and Moira O'Neill there were constant references to the "wee folk" and the "good folk," but there was still a great deal of uncollected material about the fairies which was handed down orally from one generation to another. He remembered vividly as a boy the pleasure with which he both saw and heard the Christmas rhymers in County Armagh. They came clothed in a sort of fantastic dress (some with blackened faces), carrying sticks shaped like swords, during the Christmas week, and, having entered the kitchens of country houses, they in turn—each one introducing his successor—went through a sort of folk-drama, in which such characters as St. George, a Turkey warrior, Beelzebub, a doctor, St. Patrick, Oliver Cromwell, and "Davy," or "Divil Dowt" or "Doubt" (evidently Do out), were presented. In this little play there were three features—first, the presentation of the various characters, then a dramatic incident in the form of a fight, ending in the apparent death and subsequent revival of one of the characters by the doctor; and, thirdly, the collection. He had published the North Antrim variety of the rhymes. In Donegal, curiously, the rhymers were called mummers. Mr. Lepper had shown that these rhymers were not to be found out of Ulster, except, perhaps, in county Wexford. They still existed in several Northern localities. It was probable that this old folk-drama was introduced into Ulster by the English Plantation settlers. It was simply the North of Ireland variant of the old folk-play of St. George, which in turn was evolved from the still older sword and morris dances. The central incident of the play—the apparent death of one of the characters and his revival through the skill of the doctor—was meant to symbolize the "renovean" or annual death of the year and its annual resurrection in spring. Another form of the St. George play was the Easter "pace egg" of Lancashire, and the "Guisers" (disguisers) of Staffordshire, and the "Guizards" play of Scotland. This "mumming," or folk-drama, was probably a survival of the old Roman custom of masquerading during the annual revels of the Saturnalia.

In the JOURNAL of August 23rd, 1913, reference was made to the custom of solemnly trying and executing animals for stealing and other offences which existed in some countries in the Middle Ages. It would appear that the custom has not yet completely died out in Turkey. The *Chronique Médicale* of March 1st quotes from the *Cri de Paris* the following "official text" of a sentence delivered not long ago by the Naib of Sandikli:

> Among destructive animals, let the moles without eyes take notice:
>
> Tokatli Oghlou Ahmet, an inhabitant of Sandikli, has lodged a complaint against you in our tribunal of the Chéri, charging you with having destroyed his potatoes in his field situated at Keur-Kapou, bounded by the lands of X. . .
>
> I warn you expressly henceforth not to destroy his crops. If notwithstanding this warning, you continue to destroy them, be assured that the complaints will be transmitted to God.
>
> In witness whereof the present summons has been sent.
>
> S/ Mehmed Said, Naib of Sandikli.

As the poor moles without eyes could not read this warning notice, one is tempted to hope that the purport of it was conveyed to them in some other way.

It is, perhaps, merely repeating an obvious truism to say that the male sex has always been more prolific in genius than the female. The connexion between genius and mental instability is now acknowledged to be a very close one; and it is interesting, therefore, to find an article by Dr. John Priestley appearing in the February number of *The Child*, in which the author declares that boys suffer from nervous disorders in childhood to a far greater extent than girls. This is supported by the statistics quoted by the author, who adds that in two complaints only have girls a preponderance of cases of nervous disease—namely, chorea and headache. In the remaining nervous and mental disorders boys are markedly worse off than girls, a fact which seems to justify the truth of the old nursery saying that male children are more difficult to rear than their sisters. The statistics, indeed, "seem to suggest some essential difference of stability of the nervous system as between growing boys and girls"; but Dr. Priestley has no theory to offer in explanation of this curious fact. "It is well known," he tells us, "that the brain of girls reaches its maximum weight at the seventh year of age, while that of boys goes on growing till about puberty; it might, therefore, be urged in explanation that a still growing organ would be more liable to disorder than one whose growth had ceased." But since it has been definitely ascertained that "the relative immunity of girls is not entirely, if at all, dependent on the earlier cessation of the growth of the brain," we have to remain satisfied with the fact that the nervous system of girls is apparently more stable than that of boys, who have to pay for their higher intellectual faculties by passing through a period of nervous strain and tension before they are fit to take part in the battle of life. Amongst the children of the working classes the "half-time" system is undoubtedly responsible for much of the suffering caused in after-life by a prematurely overtaxed nervous system, and a plea on behalf of the child wage-earner has been contributed by Miss Miriam Pease to the February number of *The Child*. The same number also contains an interesting article by Mr. Edred M. Corner on the important part played by the chest in the physical development of growing children, and an account, by the Rev. W. Hodson Smith, of the sanatorium for tuberculous children belonging to the National Children's Home and Orphanage at Harpenden.

British Medical Journal.

SATURDAY, MARCH 14TH, 1914.

SPONTANEOUS CURE IN CANCER.

A NEW French medical monthly periodical, the *Annales de Médecine*, issued its first number at the beginning of this year. It is to contain original articles and critical reviews dealing with medicine in all its aspects. Of the making of new periodicals concerned with special lines of research or with special branches of medical science there is, nowadays, no end, as the six editors of the new *Annales* point out, but they believe there is room in France for a new periodical dealing with general medicine in its widest sense, and we wish them all success in their venture; it is convenient in size and shape, well printed, and abounds in illustrations of unusual excellence.

One of the five articles contained in the first number discusses the defences of the human organism against carcinoma. The author, M. H. Rubens Duval,[1] points out that many of the malignant tumours removed by the surgeon contain abundant microscopic evidence that the organism has been reacting to the irritation they cause, and has done what it can to cause their spontaneous regression. The sclerosis of the fibrous tissue round a cancer often leads to the death of masses of the cancer cells, as Sampson Handley and others have pointed out, and this may be regarded as a "defensive reaction" of these connective tissues by teleologists. The blood vessels join in the defence by obliterative processes, which still further cut off the supply of nutrition to the cancer cells. In addition, there is a great increase in the number of the elastic tissue fibres, and the collagen fibres often exhibit a metachromatic staining reaction that is taken as further evidence of a defensive response. Again, around many carcinomas there is a great immigration of lymphoid cells, and centres of lymphoid tissue may develop in their neighbourhood. Rubens Duval claims this as another defensive reaction of the organism, and says that it may be the first stage of a fibrosis round the growth. In the case of ulcerating cancers, both mononuclear and polymorphonuclear cells appear in their neighbourhood, and the resulting picture is that of a subacute inflammation that may or may not be successful in preventing the spread of the neoplasm. In certain cases the inflammatory cells here are eosinophile; the interpretation of this phenomenon is left open. In other instances the inflammatory reaction is polymorphonuclear, particularly when the new growth has become infected with bacteria; it is often not possible to say how far the immigration of polymorphonuclear leucocytes is due to this infection, and how far it is due to the presence of the cancerous new growth.

As regards the modifications exhibited by the carcinomatous cells themselves, loss of vitality may be indicated in several ways. This is well shown by the results of treatment with radium. Radium causes the rapid necrosis and dissolution of some of the cancerous cells, others are similarly destroyed but more slowly, while others exhibit a phase of monstrous hypertrophy as a preliminary to rapid disintegration; and, as a final condition, some of them appear to be converted into normal cells (epithelial cells in the case of an epithelioma), and to ripen and run the natural course of evolution characteristic of the cells from which the malignant neoplasm originally arose. What are the changes induced by the defensive reactions of the connective tissues and leucocytes described above? Up to a certain point they are very similar. Rubens Duval points out that the cancer cells may undergo direct necrosis, or necrosis after an initial stage of monstrous hypertrophy; in either case the change is the result of an interference with nutrition, and any spontaneous cure that may result is obtained by the destruction of the cancerous cells. The conversion of the cells into normal cells that have lost all tendency to malignancy, and live to run a normal course, by a process of maturative evolution, is seen only after treatment with radium, and does not occur spontaneously so far as is known. Such a conversion, however, may well underlie the numerous spontaneous recoveries from malignant neoplasms that have been recorded in the literature, and represents a method of cure that is most highly desirable.

[1] *Annales de Médecine*, Paris, 1914, I, 75.

AMBULANCES FOR LONDON—AT LAST!

FOR more than a decade we have consistently and persistently advocated the provision of an adequate rapid ambulance service for accidents and other casualties occurring in streets and public places in London. We welcomed the scheme laid before the London County Council by Sir William Collins in 1902 and 1905, and it is with a sense of relief, qualified with regret for needless and vexatious delay, that we learn that the Council on Tuesday last adopted a tentative scheme drawn up on similar lines at an estimated capital cost of £5,400 and of expenditure for maintenance of from £9,000 to £10,500 a year.

Since the Metropolitan Ambulances Act of 1909 was placed on the Statute Book the County Council has been able, if it had been willing, to supply the service now tardily approved. There never was any validity in the plea for procrastination, excused but not justified by questions as to the authority which should control and maintain the service, or as to the need of further information as to the machinery required, or as to the cost of working the service. Nine years ago much valuable information on all these questions had been collected by the medical officer of the Council. The inadequacy of the London service compared with provincial towns and foreign cities had been proved up to the hilt. The need for rapid motor ambulances to supersede wheel litters and hand stretchers had been established. The value of the use of the telephone as the means of summons had been emphasized. The advantage of association with such a service as the fire brigade had been pointed out. The preventable suffering endured by the victims of street accidents under the haphazard system then in vogue had been registered in casualty departments of the general hospitals, and proclaimed in convincing statistics. Since then the number of street accidents and casualties has doubled, and it must be with feelings akin to remorse that those who successfully obstructed the establishment of this beneficent service, now at last tentatively permitted to be initiated, can reflect upon the volume of avoidable injury and suffering for which their

failure in municipal duty or indifference to the claims of common humanity is responsible.

Those who have endeavoured, despite all sorts of active hostility and obstructive apathy, to push forward this great reform, have ever been liable, as the debate in the Council again showed (see p. 615), to be impaled on one or other of the horns of a financial dilemma. The economic custodians of the ratepayers' purse, if a tentative scheme were foreshadowed, at once demanded to know both the extent and the expenditure which a complete and adequate scheme for the whole metropolis must imply and involve. On the other hand, if a complete and adequate scheme were presented (so far, indeed, as such could be formulated with any approach to precision), the party of economy found the large eventual expenditure sufficiently terrifying to enable them to frustrate the trial of the most modest of tentative proposals. Thus in 1906 the House of Lords Committee, under Lord Camperdown's chairmanship, threw out the powers sought by the County Council to establish and maintain an ambulance service, not because such service was not desirable, but because the total expenditure for a full and complete scheme had not been definitely stated. In 1905, when a scheme for some twenty or thirty ambulance stations dotted over London had been formulated by the Ambulance Subcommittee, the Finance Committee of the Council barred further progress in obtaining parliamentary powers unless a more limited and experimental scheme were substituted for the larger proposals.

In moving the report last Tuesday, Major Gray frankly admitted that he and others who had previously been led to think that a really adequate service for London already existed in the various appliances possessed by the boards of guardians, borough councils, the Asylums Board, the Port Authority, etc., and only needed "co-ordination," had been completely misled. In an article which appeared in the JOURNAL on July 26th, 1913, entitled "How not to work an ambulance service for London," we exposed both the genesis and futility of this specious suggestion. Nevertheless, some two years were wasted by the Council in seeking and obtaining clauses in its General Powers Act of last session to enable it to construct a service out of materials which are now admitted not to exist. It is now agreed on all hands that "the responsibility for the organization and provision of an efficient system must rest with the Council." All this was pointed out in the debate on the ambulance clauses in the General Powers Bill in the House of Lords on August 6th, 1913, by Lord Leigh, the Earl of Mayo, and Lord Welby. It had been previously pointed out in the dissentient memorandum to the report of the Home Office Committee of 1909, and indeed in reports to the Council in 1902 and 1905 and repeatedly in our own columns. However, it would seem that every possible and impossible route of evasion has now been exhaustively examined and rejected, and we can only hope that as much energy will be shown in inaugurating the only method which has been proved to be workable as has been laboriously displayed in the repeated investigation of admittedly impossible schemes. The *Times* has consistently advocated the scheme now approved, and on March 9th, referring to this "long delayed reform," remarked that "the scheme now propounded is virtually that proposed to the County Council in 1905 by Sir William Collins, and again elaborated by him in his dissentient memorandum to the Home Office Committee Report in 1909. The proposal to use the Asylums Board and other local authorities' appliances advocated by Sir Kenelm Digby and Lord Stamford in the report of the Home Office Committee and authorized by the General Powers Act, 1913, is abandoned. All the powers required for working the new scheme were obtained in 1909 by the Metropolitan Ambulances Act." That is a correct summary of the situation, and we rejoice that this humane reform, which has had our sympathy and support for so many years, has at length, after many disappointments, arrived at fruition.

THE TRAUMATIC NEUROSES.

DURING the last five and twenty years Mr. William Thorburn has had to investigate many thousands of cases of traumatic neurosis, and in a presidential address read before the Neurological Section of the Royal Society of Medicine[1] he gives a most interesting account of the development and psychology of the complaint. Before 1880 it was supposed that concussion of the spinal cord was the cause of these mysterious cases. After that date, however, it was generally recognized that the functions of the brain were primarily at fault, and that the cases showed a tendency to be associated with claims for pecuniary compensation, and to recover after the settlement of such claims. The expressions "neuroses," "traumatic neuroses," "neurasthenia," "hysteria," came into use, and it was realized that the patients were suffering from functional rather than from organic disease. Indeed, after examining over five thousand cases of traumatic neurosis and an untold number of patients with injuries to their backs, Mr. Thorburn is able to say that he has not yet been able to trace to injury a single example of locomotor ataxy or disseminated sclerosis. Fifteen years ago he classified sufferers from traumatic neurosis into four classes, according as the cases were acute or chronic, predominatingly neurasthenic or hysterical. For example, a patient with a neurosis of the acute neurasthenic type as the result of accident presents the picture more commonly recognized as acute shock. Alternatively the accident may produce a condition of acute hysteria in the patient, though this is a less frequent occurrence, with a psychical and emotional explosion or an arrest of mental activity and volition. The chronic cases may be similarly divided. The victim of chronic traumatic neurasthenia complains of irritability, insomnia, dyspepsia, palpitations, loss of attention and business capacity; the picture is, in fact, just that of "railway spine," to use its old name. The patient with chronic traumatic hysteria exhibits a complete or partial hemianaesthesia of some sort, without complete loss of function; if, for example, there is hemianopsia, the patient may not see or realize objects on his blind side, but he avoids them as he goes about. This classification is still of practical service.

The possibility of obtaining financial compensation for injury is most important in determining the occurrence of a traumatic neurosis. The condition is unknown in children, who are ignorant of the ways of this wicked world. It is not seen in the victims of earthquakes. It is very rare in the case of owners of motor cars and their friends or companions, although such people are often injured in the motor accidents that are so common nowadays. Further light on the matter is thrown by the fact that those who are drunk or heavily asleep at the time of an accident are little liable to develop

[1] *Proc. Roy. Soc. Med.*, London, 1913, Neurological Section, vii, 1.

traumatic neurosis. Mr. Thorburn lays especial stress on the two emotions of fear and anger in the production of these cases—emotions that are no less important than the knowledge that compensation for injury may be obtainable. There is much practical truth in the answer made by the business man who was asked after an accident, "Are you hurt?" and replied, "I don't know; I haven't seen my lawyer yet." The patient fears that his health may be permanently injured, and is angry with those whom he holds responsible for the accident.

The whole object of treatment is to get the accident out of the patient's mind and to encourage him to recover. Recovery is therefore impossible while medical examinations and re-examinations, interviews with solicitors, legal proceedings and the like are pending. The prognosis is good, inasmuch as all the patients recover up to a point, many of them completely; the sooner litigation is over the better, as recovery is likely to be slower the longer the case has gone on. The effect of the Workmen's Compensation Act has proved most unfortunate by increasing enormously the number of cases of traumatic neurasthenia. Before 1897 compensation was awarded on the basis of a lump sum paid down; the patient then knew what to expect, and could devote his attention to getting well. At the present time, however, weekly payments during disability often take the place of the lump sum. The patient has, therefore, no direct incentive to return to work; he suffers from a constant anxiety lest he should lose his allowance, and this really prevents the cure of his neurosis. The employer, who has probably paid an insurance company to relieve him of all liability, has no interest in the patient's recovery or return to work. In fact, the essentials in the treatment of the traumatic neuroses are three: First, the early settlement of litigation; secondly, the payment of compensation in the form of a lump sum, and not an allowance; and, thirdly, treatment by a medical man who can inspire the patient with confidence that he will be cured.

VISIT OF THE CHAIRMAN OF COUNCIL TO AUSTRALASIA.

Dr. J. A. Macdonald, Chairman of the Council of the British Medical Association, who left England a few days before Christmas, at the request of the Council, in response to the invitation of the Australasian members that the parent Association should be represented at the Australasian Medical Congress at Auckland, New Zealand, in February, reached Melbourne on January 26th. In a private letter from Sydney he writes: "The weather has been merciful; at no time have I found the heat oppressive. I certainly got a warm reception at Perth and Adelaide, where the temperature was 104° and 103° in the shade; however, it was so dry that it caused no inconvenience. I had no chance of meeting any of the medical men at Perth, as I had not expected to be able to go there. Adelaide is a delightful city, well laid out with fine broad streets and good buildings, but, as there was a dust storm blowing, it was pleasanter to stay indoors." Only a few hours could be spent there, but they were turned to the best advantage, and Dr. Macdonald had the opportunity of meeting many members of the profession in the city, and was entertained at lunch by the Branch Council. At Melbourne, which was reached on a cold and rainy day, he spent several days, one of which was devoted to a trip to Geelong, where a luncheon was given in his honour, at which every member of the profession in the locality was present. On January 27th he was entertained at dinner by the Branch Council under the chairmanship of the President, Dr. A. L. Kenny, and on January 29th he attended a meeting of the Victorian Branch, at which between eighty and ninety members were present, and delivered an address, which was published in the *Australian Medical Journal*, on the history and administration of the National Insurance Act in the United Kingdom. Dr. Honman, who was in the chair in the absence of the President, who had started that morning for New Zealand, recalled the fact that Dr. Macdonald's services as Chairman of the Council of the British Medical Association had been so valued that at the expiration of the usual term of three years he was re-elected for another period. Dr. Macdonald had been in the fighting ranks of the profession in the Insurance Act campaign in the United Kingdom, and his advice could not fail to be valuable to the Branches in Australia at a moment when the Government was making inquiries with a view to introducing an Insurance Act for the Commonwealth. Dr. Macdonald spoke on the main features of the fight made by the Association, pointing out that they were chiefly directed to the provision of a wage limit, against professional control by committees, and in favour of free choice of doctor, and of better terms than were at first offered. In a great measure these conditions had, he said, been obtained, but there was still wide difference of opinion as to the beneficial operation of the Act in any direction. Dr. Macdonald on leaving Melbourne travelled overland to Sydney, and on the way was greeted at every stopping place by local members of the profession. At Albany, where there is a change of gauge at the junction of the two States, he received a very cordial reception from the local profession.

DINNER TO SURGEON-GENERAL GORGAS.

The dinner to Dr. Gorgas on March 23rd, when he will be passing through this country on his way from his mission in South Africa to take up the duties of Surgeon-General of the United States Army, will be attended by the American Ambassador, the Consul-General for the United States of America (Mr. John L. Griffith), and the Right Hon. Austen Chamberlain, M.P., in addition to Viscount Bryce and Mr. Lewis Harcourt, Secretary of State for the Colonies, who, as has already been announced, have accepted invitations to be present. To the list of those who are taking an active part in making the arrangements should be added Sir Ronald Ross, K.C.B., F.R.S., of the Liverpool School of Tropical Medicine; Dr. F. M. Sandwith, of the London School of Tropical Medicine, and Sir Frederick Treves, Bart., G.C.V.O. Among those who propose to attend the dinner are Sir John Tweedy, F.R.C.S., Dr. Arthur Newsholme, C.B., medical officer to the Local Government Board; Sir John Rose Bradford, K.C.M.G., Secretary of the Royal Society; Sir Anderson Critchett, Sir Anthony Bowlby, and Sir Frederic S. Eve. Sir Thomas Barlow, President of the Royal College of Physicians, will be in the chair, and will be supported by Sir Rickman Godlee, President of the Royal College of Surgeons; Sir Francis Champneys, President of the Royal Society of Medicine; Sir David Ferrier, F.R.S., President of the Medical Society of London; Sir Havelock Charles, President of the Society of Tropical Medicine and Hygiene; the Regius Professors of Medicine in Oxford and Cambridge, and the Director-Generals of the Medical Services of the Royal Navy and of the Army. The dinner will be held at the Savoy Hotel, and a notification of intention to attend should be sent to Mr. J. Y. W. MacAlister at the Royal Society of Medicine, 1, Wimpole Street, W., accompanied by a cheque for 25s.

THE TEACHING OF TROPICAL HYGIENE.

In an account of the recent extensions of the London School of Tropical Medicine, published in the British Medical Journal of November 1st, 1913, reference was

made to a proposed enlargement of the scope of the teaching there given. It was pointed out that it had become evident that if many of the scourges which impair efficiency, undermine health, and destroy life in the tropics are to be fought successfully, reliance must to a large extent be placed on prophylaxis rather than on treatment. Hitherto provision for the instruction of doctors who look to the tropics as a field for their professional activity in the special problems of sanitation with which they will have to deal has been inadequate. It was added that to remedy this deficiency the school intended to establish a course of tropical sanitation, to be conducted independently of the ordinary course in tropical medicine. This has now been done, and particulars of the course are given in the new prospectus of the school, an advance proof of which has been sent to us. There are to be two courses annually, beginning respectively on May 1st and October 1st, and each extending over a period of eight weeks. Ten lectures and demonstrations on entomology will be given by Colonel A. Alcock, I.M.S.; these will deal with the tropical environment, and the insects and other animal carriers of disease will be fully described. Dr. Herbert Williams will give three lectures and two demonstrations on port hygiene. Professor R. Tanner Hewlett will give eight lectures and demonstrations on bacteriology, and Dr. B. H. Wedd will give a laboratory course on the same subject. Eight lectures and demonstrations on hygiene and public health will be given by Professor W. J. Simpson, C.M.G., who will deal with public health administration in the tropics, with town planning and building laws, with insanitary areas and houses unfit for habitation, with nuisances, and with infectious diseases. Dr. Wedd will give a practical course on hygiene. Dr. Arnold Chaplin will give two lectures and demonstrations on the care of the sick on board ship in the tropics. Dr. R. T. Leiper, on his return from a scientific expedition in which he is now engaged, will give four lectures and demonstrations on helminthology, and Dr. C. M. Wenyon will give four lectures and demonstrations on protozoology. Mr. S. F. Corby will give six lectures and demonstrations on elementary surveying and sanitary engineering, including the drainage of streets and buildings, earth closets and latrines, sanitary fittings for use in connexion with water drainage systems and plumbing work. From this outline of the work it will be seen that the course is comprehensive and largely practical. It is intended to show the application of the methods of research by which knowledge of tropical medicine has been accumulated during the last fifteen years. Within that period there has been a great improvement in the health of all tropical dependencies, especially in parts such as the West Coast of Africa, formerly not inaptly described as the white man's grave. But a great deal more still remains to be done. The sanitary conditions of many of the villages and stations in the tropics are now similar to those which existed in English villages fifty and even a hundred years ago, and the object of the new course of instruction of the London School of Tropical Medicine is to teach men who carry the light of science to these remote parts how to remove the causes of disease and destroy the invisible enemies which claim so large a tribute of human lives. We owe a duty not only to the men who do the work of the empire, but to the natives whom we have taken under our protection. One of the greatest evils against which they have to be safeguarded is their ignorance of hygiene. It is recorded that Pitt once in a fine speech on slavery, delivered in the House of Commons when the dawn was breaking, used with striking effect the lines of Virgil:

> Nosque ubi primus equis Oriens afflavit anhelis,
> Illic sera rubens accendit lumina Vesper.

Nothing could better express the contrast between our own country, where the sun of a brighter day of hygiene has risen, and the tropical climes where the dim lamps of evening are just beginning to make the sanitary darkness visible. We have taken upon ourselves a burden which we cannot shirk without loss of prestige and, what is worse, the sense of a duty unfulfilled. The development of the London School of Tropical Medicine here described, therefore, marks a new step forward, the importance of which will be appreciated by the profession. Full information as to the new course may be obtained on application to the Secretary, Seamen's Hospital, Greenwich, London, S.E.

THE TRAINING OF MIDWIVES.

THE tenth annual meeting of the Association for Promoting the Training and Supply of Midwives was held at 16, Draycott Place, Chelsea, on March 6th. The Duchess of Montrose, who presided, said that the importance of the work which the Association was doing in reducing infant mortality and other evils could not be over-estimated. Scotland was still far behind England in the matter of trained midwives, and the untrained midwife still flourished, but a Midwives Act was to be introduced shortly which should do much to eliminate untrained women. The Duchess added that the training home which she had started at Govan was now recognized by the Commissioners under the Insurance Act. A far higher standard of training was required at the present day, and she was glad that the Association laid stress on that point, for the infant mortality of this country still continued to be a serious blot upon our administration. Mrs. Wallace Bruce, who moved the adoption of the annual report, said the association had passed through troubled times since its formation ten years ago, but it was now firmly established, and there was every reason to believe that it was doing, and would continue to do, good and useful work. Nineteen midwives had been trained by the association during the past year, and many of them would in course of time refund, either wholly or in part, the cost of their training. The association encouraged this spirit of independence, which not only helped to lighten its financial burden, but prevented the women from feeling they were objects of charity. It was hoped the difficult question of the payment of doctors' fees would be included in the Insurance Act; there must be some definite assurance of ultimate payment by a public authority in cases of need, so that no medical man could refuse to answer a summons in these cases. The report and balance sheet, which showed a decrease of £30 in the subscriptions received during the past year, having been adopted, a short address on midwifery in the provinces was delivered by Dr. George Reid, County Medical Officer for Staffordshire. Dr. Reid said that whilst he did not suggest that the association was capable of training women for the whole field of health visiting, he did suggest that women could be trained comparatively easily to do that portion of health visiting which was essential from the point of view of tuberculosis prevention. For the first time in public health experience the Government had assigned a large sum for institutions and a further sum for their maintenance. But there were still large gaps in the scheme which had to be filled up, and one of these was the essential assistance of the health visitor. It was quite useless to go to the expense of sanatorium or dispensary treatment unless there was some one in touch with the household of the patient who should see that the instructions given were properly carried out. Dr. Reid concluded by saying that he was organizing a complete system of health visiting in Staffordshire, where it was proposed to subsidize the nursing associations; and if such associations as that for Promoting the Training and Supply of Midwives were to take up that work as part of their training, he believed much overlapping might be avoided.

FUN AND HUMOUR IN CHILDHOOD.

A PAPER on the sense of humour in children was read by Miss C. C. Graveson, of the Goldsmiths' College, New Cross, at a meeting of the Child Study Society, at the Royal Sanitary Institute, Buckingham Palace Road, on March 5th. Miss Graveson said that the title of her paper ought rather to have been the sense of fun in children, for she had come to the conclusion that children as a class had very little sense of humour. Humour depended largely upon the perception of hidden and unexpected relations between persons and situations, and this the child was naturally incapable of appreciating. Roughly speaking, it might be said that children under 14 possessed the rudiments of wit and had a keen perception of the ludicrous and the comic; but very few, save those who were older and more serious than their years, had any spontaneous appreciation of real humour. It was interesting to note that the better children were educated and the wider the range of their ideas, the quicker was their discernment of humour; but for appreciation of broad comedy the more educated civilized child could probably be beaten easily by the child of the slums. Much of the child's early sense of humour manifested itself in a frank enjoyment of whatever appeared to him unusual, and consequently grotesque, and this sometimes verged on callousness and even cruelty; and his first attempts at humour usually took the form of puns and nicknames and the cruder forms of practical joking. Whatever was odd or unfamiliar provoked his laughter; and from a physiological point of view a good laugh was worth far more than breathing exercises or organized games. A wild abandonment to mirth was one of the most notable signs of a healthy child; and the mental atmosphere which made this abandonment possible was adverse to the dry and subtle forms of humour which appealed to the adult mind. A sense of humour in men and women served as a shield between them and the cares and responsibilities of life; and children, who knew nothing of the one, had consequently neither need nor knowledge of the other. It is clear that Miss Graveson has observed children for herself, and her estimate of their mental attitude in this respect will appeal to all lovers of children. The dominating factor in the healthy child mind is curiosity, and if it wearies in the search for a cause, as it very quickly does, it gives itself up to the mere novelty of the experience and lapses either into silent wonder or finds relief in laughter at the incongruity of the incident with its previous experience. In this respect, as might perhaps have been anticipated, the child's mind is more or less in the same stage as the savage, and has not reached that of the English peasant, whose chief intellectual joy is to draw out a stranger, often assuming an air of the densest stupidity to achieve his purpose and thereby to win the applause of his fellows, which will be expressed later when the self-satisfied victim has departed. Miss Graveson's point is of practical importance, for the habitual absence of humour in the child may be very annoying to the adult and lead to regrettable incidents.

GERMAN ARMY SURGEONS.

THE Berlin Society of Military Surgeons celebrated the fiftieth anniversary of its foundation on February 20th. The society has a membership of 300; the President is Professor von Schjerning, Surgeon-General of the German Army. General von Falkenhayn, Minister for War, who presided at the celebration, took occasion to announce that an Imperial decree had abolished offensive distinctions hitherto made between military surgeons and combatant officers. Henceforth detachments of troops commanded by non-commissioned officers will salute military surgeons in the same way as combatant officers are saluted, and surgeons in the military hospitals will have direct disciplinary authority over the soldiers under treatment. Medical officers will be buried with military honours, and on campaign they will wear the officer's sash. This announcement marks a great change in the position of medical, or, as they are called, sanitary, officers in the German army. Hitherto they have occupied a subordinate position, having none of the privileges allowed to combatants. However high might be their rank, or however large the hospital in which they served, they had no power to inflict punishment on subordinates for dereliction of duty or breaches of discipline. By a stroke of the pen the Emperor has swept away these anomalies. There only remains the question of precedence; that, too, will probably be settled in due course. It is hoped that these reforms will attract to the army a large number of doctors who have hitherto held aloof, not caring to submit to the indignities imposed upon them by the conditions of military service.

THE FUTURE OF MEDICINE AT CAMBRIDGE.

THE Senate of the University of Cambridge will consider further, on Saturday, March 14th, the proposal of the Special Board for Medicine to apply to the Board of Education for a grant to the medical department. The proposal is supported by the whole of the resident members of the Special Board for Medicine and by every Cambridge examiner who is a member of the Board. It has also received the support of a number of members of the Senate unconnected with the departments of the university concerned with the teaching of medical students. In a fly-sheet issued on March 10th these members state that the advantages which the medical school would derive from the suggested grant are many and certain, and the risks involved in its acceptance small and remote. The power of the Legislature to interfere in any manner, or to any extent, in the organization and teaching of the university already exists, and will remain unaffected. The unsatisfied claims of the different studies upon the resources of the university are many and urgent, and the suggested grant to the medical school would meet some of the demands, and would so far be a relief to the university. Another fly-sheet was issued on March 11th by the members of the Senate directly connected with the teaching of medical students. In it they state that it is expected that the grant available from the Board of Education will amount to over £4,000 a year, and that the Senate has already been notified by them that without immediate help of this kind it will be impossible to maintain the reasonable efficiency of the manifold departments of science, elementary and applied, which are now essential parts of a great school of medicine. The university is not itself able to give a tenth part of this additional assistance, and no further help is at present available from the colleges, which already give very liberal assistance, direct and indirect, to the school. The fly-leaf states that the only reasons given for rejecting the proposal are based on fear —fear of inspection of the school by outside persons, and fear of interference with university teaching by outside criticisms. The fly-leaf proceeds to point out, in reply to the argument that the acceptance of the grant would put university teaching under the control of a Government department, that this is not the case. The conditions under which the grant will be made and continued would only be such as to secure that the size and efficiency of the school, in respect of which the amount of the grant was originally fixed, remained substantially undiminished, and that the money was actually spent in forwarding the objects for which it was granted. The Board of Education had explicitly denied that it would have or would claim the power to decide or discuss the character of the scientific instruction given or interfere with any internal affairs. The fear that acceptance might involve interference with the university and colleges is shown to be chimerical, and in reply to the question whether a grant for students would

be applicable for purposes of research, a statement is quoted in which the Board of Education had said that it "will necessarily have regard to the extent to which the teaching staff encourage the advanced students to prosecute research and the extent to which the teachers avoid undertaking duties likely to interfere with the efficient discharge of their work in connexion with the courses aided by these grants. In particular, regard will be had to the number of students who are taking diplomas, degrees or post-graduate courses respectively in calculating the rate of the grant." It has been asked whether it was intended to make Cambridge a place of complete medical instruction; to this the members of the Board reply emphatically that they have no wish or intention to change the present system under which most of the Cambridge medical students go to London for their clinical education, and the conditions of the grant would have no such effect. It was, however, intended to return to the arrangements in force a few years ago, when it was found that in each year a few students, chiefly those engaged in research or other work, were enabled to obtain clinical instruction in Cambridge. The only addition to the staff contemplated was that of a teacher of midwifery. In addition, the signatories of the fly-leaf point out that Cambridge affords admirable facilities for clinical research and post-graduate work in medicine and surgery, and it was in view of this possibility that the Special Board suggested the allocation of an annual sum of £400 to the clinical department of Addenbrooke's Hospital. The other fly-leaf from which we have already quoted concluded by pointing out that "the university has profited very largely by benefactions which have not been unsolicited. If the Senate were to refuse to avail itself of the resources within its reach, would it be consonant with the dignity of the university that continued efforts should be made to obtain benefactions on the ground of financial pressure?"

DR. STEEVENS' HOSPITAL.

DR. STEEVENS' HOSPITAL, though not the oldest hospital in Dublin, is the first of the modern hospitals built in the Irish capital. It was founded at the beginning of the eighteenth century by the munificence of Dr. Richard Steevens, and its doors have never, during the past 180 years, been closed against the indigent sick. Dr. T. Percy C. Kirkpatrick, the historian of the medical school of Trinity College, has compiled a calendar of anniversaries which is offered to the friends of Dr. Steevens' Hospital "as a memento of happy days, of hard work, or of suffering relieved."[1] Besides this, these anniversaries have a wider interest as marking certain steps in the evolution of the modern hospital, and recording incidents which throw light on the manners and customs of those connected with hospitals in former days. The hospital was established in 1720. On May 25th, 1721, it is recorded that the Rev. Jonathan Swift, Dean of St. Patrick's, was at the request of Madame Steevens elected one of the trustees, and on February 23rd, 1732, the Dean paid £20 as a subscription to the funds. On December 30th, 1727, Esther Johnson (Swift's "Stella") signed her will, leaving money to found the chaplaincy of the hospital. On July 14th, 1726, took place the first recorded meeting of the trustees in the hospital building. On April 25th, 1730, the law incorporating the hospital came into force, and it was opened for the reception of patients on July 23rd, 1733. A few days before, on July 10th, the governors met and appointed the first physicians, surgeons, and nurses to the hospital. The dawn of a new sanitary era apparently dates from May 12th, 1795, when the governors requested the architect to submit an estimate for the construction of water-closets, "the same being absolutely necessary." It is recorded that on June 25th, 1802, His Excellency the Lord Lieutenant presented through the Commissary-General fifty pairs of blankets "new but soiled." But even this munificent gift did not meet the requirements of the hospital, for on December 18th, 1818, it is stated that the governors petitioned Parliament for a grant in aid of the hospital. The usual internal troubles seem to have begun early, for on October 20th, 1735, we find that the governors, at the request of Madame Steevens, ordered that Mr. Owen Lewis, the surgeon, be dismissed the service of the hospital: one wonders what he had done to incur Madame's displeasure. On August 10th, 1810, the governors met to consider a dispute between Mr. Luke Wall, apothecary, and Nurse Fitzpatrick. This can scarcely be the same Nurse Fitzpatrick of whom it is recorded under date November 3rd, 1849, that she was restored to her place by the governors, after she had taken the pledge. On September 26th, 1789, a nurse was discharged for drunkenness. These are the only cases of intemperance in nurses recorded in Dr. Kirkpatrick's *Calendar of Anniversaries*; this may, perhaps, be taken to show that the Dublin nurses were of far higher character than those in the London hospitals in the mid-Victorian period, if Miss Florence Nightingale's experience was not altogether exceptional. The other entries mainly relate to appointments, resignations, deaths, and other common incidents of hospital history. It is amusing, however, to find it solemnly recorded that on January 4th, 1866, the chaplain was censured for disfiguring the gallery by having the windows of his apartments "stuffed with old clothes." Perhaps the reverend gentleman suffered from too free ventilation.

[1] *Dr. Steevens' Hospital: a Calendar of Anniversaries.* Compiled by T. Percy C. Kirkpatrick, M.D., Physician to the Hospital. Dublin: Hanna and Neale. 1913. (6d.)

THE FAMILY ENCYCLOPAEDIA OF MEDICINE.

WE are informed that at a meeting of those members of the profession whose names have been associated with the recently published *Family Encyclopaedia of Medicine* the following statement was unanimously agreed to: "As prominence has been given to our names in the advertisements of a book entitled *The Family Encyclopaedia of Medicine* we desire to state: (1) That we are in no sense responsible for the plan or the scope of the book in question, or for the manner in which it has been introduced to the public. (2) That our sole connexion with it consists in our having obliged a fellow medical man by agreeing to correct, at his request, made to us individually and privately, certain articles which he had in preparation for a book on domestic medicine. (3) We never gave authority for the use which has been made of our names. We may add that we have received assurances from the editor and publishers of the book in question that our names will be removed from such future numbers as are not already in print. It is needless to add that in no case was there any pecuniary consideration."

LONDON BOYS.

THE Hollington Club, in Camberwell, began in the smallest of ways twenty-one years ago; it then occupied the cellar of a coffee shop. It now has fine premises, and a membership of close on 200. It is run in the interests of working lads, and is divided into junior and senior sections, the former taking boys aged from 10 to 14, the latter 14 to 19. Recently there has been attached a girls' club for the sisters of the members. The club provides the usual educational and social side, together with a bathing and gymnasium equipment that any place might be proud of; we note the use of the bath is compulsory. Dr. Mackenzie, of St. Thomas's,[1] records the results of the examinations of the members for four years. The examination follows the lines of those common to the medical inspection of school children, except that the relations are so far personal that he is able to give general advice to the lads. He tabulates the records of physical conditions, and they are

[1] *Medical Control in a Boys' Club.* Being the Report of a Physical Survey and Medical Work done at the Hollington Club, Camberwell, 1909-1913. By H. G. K. G. Mackenzie, M.D.

of interest in that the small number of cases he has to deal with enables him to cover much ground. Generally the conditions found were good—better, he confesses, than he had expected. The height and girth measurements were barely average; but this he considers a racial character. Teeth were good; only 11 per cent. had bad teeth. The average of good vision was poor, but he does not state what standard he adopted to mark the defective line. "A perfectly normal throat was (rather to my surprise) quite common." So also with the heart, though he records some wide and probably congenital variations of the pulse-rate. The most notable feature of his report is the number of cases of cyclical albuminuria discovered, no less than 8.6 per cent. of the lads showing this phenomenon. Dr. Mackenzie concludes that this examination does not tend to confirm the alarmist statements of the high percentage of "defectives" among modern children; rather the children appeared to be "by no means badly equipped for the race of life." Both the authorities of the club and Dr. Mackenzie are to be congratulated on the public spirit shown in their work.

THE SCHOOLROOM WINDOW.

An interesting survey of the subject of school lighting is undertaken by Dr. Elwin H. Nash in a paper read at a recent meeting of the Medical Officers of Schools Association.[1] Although taking all illumination for his province, Dr. Nash does not overlook the fact that, so far as day schools are concerned, the arrangement of windows is far more important than the arrangement of lamps. Save in midwinter, it happens but rarely that day scholars work under artificial light. The day lighting of existing schools is also the more difficult side of the illumination problem, because, while it may be a simple matter to redistribute the points of artificial light, the windows are an integral part of the school design. With regard to the position of windows in a classroom, Dr. Nash supports the orthodox view that left lateral lighting is the ideal, although he does not condemn bilateral lighting quite so unsparingly as some of the speakers who followed him in discussion. He believes, indeed, that a satisfactory system of bilateral lighting can be found, but in such an arrangement the lighting on the right hand side of the scholars must be quite small and near to the ceiling. Even if this additional window space adds only slightly to lighting values, it has its importance from the point of view of ventilation. The method of multilateral lighting seems to be generally condemned; it is an illusory attempt, according to Mr. Bishop Harman, to realize the conditions of open-air illumination. It may be taken as an axiom that light which comes from the front or back of the scholars is undesirable. Dr. Nash finds that the lighting in rooms which have a solid wall opposite the window wall is considerably better at the desks adjoining that side of the room than it is in rooms with a borrowed light, looking out perhaps upon a corridor or central hall. In large schoolrooms of the old type a partition is often glazed in its upper part, with some vague idea of assisting the lighting. A far better illuminating effect would be obtained if the partition were made solid throughout, and coloured pale green. As to artificial lighting, Dr. Nash has regretfully to put the indirect method out of court on the ground of expense, although by this method, in which the light is thrown from the lamp on to the ceiling and redirected into the room, a very diffused illumination is made possible. With direct lighting, glare and shadow are the almost unavoidable price of cheapness. It is possible, nevertheless, to eliminate the inconvenient shadows of indirect lighting by introducing a larger number of units, or by increasing their power and placing them at a greater distance from the desk. One wonders, by the way, what kind of shadows must have been produced in some of the schools of France when an author of that country, quoted by Dr. Nash, laid it down as a necessary provision (with gas) that "the lights shall not be near enough to heat the children's heads"!

[1] *School Hygiene*, February.

A WORLD ON ALL FOURS.

Ovid tells us in his *Metamorphoses* that the deity

> Os homini sublime dedit coelumque tueri
> Jussit.

Now that the thoughts of men are turned more and more away from heaven, we naturally look towards the earth. The physical disadvantages of the upright posture are strongly insisted on, and one might believe that the average man is like Theodore Hook, who complained, when a friend called at an inconveniently early hour, that he had been caught with his guts about his legs. To remove the numerous evils attributed to the upright posture some surgeons would relieve us of the greater part of our intestinal tract. We have no doubt that as a purely surgical proposition this method is as efficacious as it is drastic. But there is another way, and we are sure that those who may have been scared by the dreadful catalogue of ills for which the intestine is held accountable will be grateful to us for bringing it to their notice. The thing is as simple as Columbus's demonstration of the manner in which an egg can be made to stand on end, a problem which in its way was also one of postural difficulty. In a lecture delivered at Leipzig, Dr. Klotz, accepting the logical consequences of modern teaching, boldly declared that the remedy was that the human race should return to the habit of their remote ancestors, and once more walk on all fours. He said that the upright position has induced in our organism modifications which are not without importance in respect of the free action of the vital functions. The blood circulates with much greater difficulty, and that is the primary cause of arterio-sclerosis and many other diseases. It is beyond doubt, he says, that the hygiene of the future will re-establish the horizontal position of the human trunk. This reform will particularly benefit circulation and respiration, and it is easy, according to this prophet, to foresee that not only life will be more comfortable, but that it will have a much longer duration than at present. So we shall all, by and by, in the words of Hamlet, be crawling twixt earth and heaven. The vision of mankind on all fours may be found inspiring by the futurist disciple of the gospel of health. If fulfilled it will, at any rate, have this result—a change of fashion in women's garments will be necessary. Whether this is to be regarded as an aesthetic improvement or not is a question we do not presume to discuss. Even men will be obliged to adapt their clothes to the hygienic position. The race will also have to re-educate itself in the movements required. The ascent of the Scala Santa on the knees is, we believe, a painful exercise for the most devout pilgrim; but what is that to a dance on all fours in a crowded ballroom?

THE MEDICAL SOCIETY OF LONDON.

The anniversary dinners of the Medical Society of London are always very well attended, and the 141st dinner, which took place at the Hotel Métropole on March 4th, was no exception to this rule. The gathering, indeed, was singularly well representative of medicine and the allied sciences, for apart from members of the society itself and private guests, there were also officially present the presidents of at least a dozen other medical and scientific societies, in addition to the President of the Royal College of Surgeons, the Master of the Society of Apothecaries, the Directors-General of the Medical Departments of the Navy and of the Army, the President of the India Medical Board, the Dean of the Faculty of Medicine of the University of London, the Regius Professor of Physic of the University of Cambridge, and the Professor of Surgery in the same university. An admirable account of the past

history of the society was supplied by Sir David Ferrier, its president, when proposing a toast to its future, and actuality was lent to his list of those to whom the Fothergillian medal had been awarded by an announcement that it had been decided to confer the honour this year on Professor Adami, of Montreal, in acknowledgement of his work in pathology and its application to practical medicine and surgery. It was hoped that he would be present to receive the award at the conversazione to be given by the society in May. The medal was founded by the society's own founder, Lettsom, in honour of the man—Dr. John Fothergill—who introduced Lettsom himself to London practice. Sir David Ferrier had also a good deal to say as to Lettsom's versatility. Apart from founding the society, which he stipulated should consist, in the first instance at any rate, of an equal number of physicians, surgeons, and general practitioners, he was credited with having made an annual income of between £10,000 and £12,000 a year, and with introducing into England the cultivation of the mangold-wurzel. One of Lettsom's rules was that every Fellow of the society in turn should either read a paper or pay a fine in the shape of 5s., or, alternatively, he could supply a book of this value, and this circumstance no doubt helped to account for the society's possession of so large a library and the inclusion therein of so many rare and valuable works. Some thirty years after its foundation a serious quarrel led to the secession of a good many members, and thence to the foundation of the Medico-Chirurgical Society, which had since developed into the Royal Society of Medicine. In view of the existence of that institution doubt had been expressed in some quarters whether there was really any utility in smaller societies continuing their existence, but these doubts were in no wise shared by the speaker. It would be a pity if that and other small societies lost their independence. At its meetings every subject came under discussion, while in essence the Royal Society of Medicine was an educational federation of specialities. The toast was acknowledged by Mr. Warren Low, who was able to produce evidence that the society, both financially and otherwise, was in an exceedingly healthy condition. Apart from the great value of the library, the balance of assets over liabilities was above £5,000; and effect was still secured for Lettsom's original aim, for the discussions were not confined to any one class of practitioner, and the meetings, though well attended, were never too large for every one to make himself heard without undue effort.

THE third International Opium Conference will, at the instance of the Netherlands Government, take place at the Hague next May to consider the putting into force of the opium convention of 1912. At the invitation of Sir Edward Grey, Sir William Collins and Mr. Max Müller have again consented to act as plenipotentiaries for Great Britain.

WE are informed that there will be not less than four vacancies to be filled at the election of members of council of the Royal College of Surgeons of England on July 2nd. Three members, as usual, retire in rotation—Sir Henry Morris, Bart., and Mr. F. Richardson Cross, both re-elected in 1906, and Mr. C. A. Ballance, who was elected in 1910 as substitute for Mr. G. A. Wright. Mr. Jonathan Hutchinson, elected in 1913, intends to resign his seat owing to pressure of hospital work. We understand that Mr. Ballance will offer himself for re-election, and that among the candidates not already members of council are Mr. McAdam Eccles, Mr. Stanley Boyd, Mr. P. Macleod Yearsley, Mr. Walter G. Spencer, Mr. H. S. Pendlebury, and Mr. William Thorburn, who, as mentioned last week, consented at the request of a meeting of Fellows resident in Manchester to come forward as a representative of the Manchester Medical School.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Medical Practitioners (Register Charges).—Mr. Astor asked the Secretary of State for the Home Department whether, under the provisions of the Medical Act of 1858, it was the duty of the Registrar to keep the Register of Medical Practitioners corrected; whether a fee was charged by the General Medical Council for recording in such register the qualifications of medical practitioners; whether, as a result, medical practitioners in many cases did not record their qualifications fully; and whether, in view of the importance of having an accurate official register, he would consider the advisability of consulting the General Medical Council with a view to enabling medical practitioners to record their qualifications free of charge.—Mr. McKenna: Under Section 14 of the Medical Act, 1858, it is the duty of the Registrar of the General Medical Council to keep the Register of Medical Practitioners correct in accordance with the provisions of the said Act and the Orders and Regulations of the General Council. Under Section 15 of the Act, a fee not exceeding £5 is payable for entering in the register the names and qualifications of persons entitled to be registered. Under Section 30 of the Act every registered person who obtains any higher degree or any qualification other than that in respect of which he has been registered is entitled to have such higher degree or additional qualification inserted in the register on payment of such fee as the General Medical Council appoint. I understand that this fee is £1. I am informed that there is nothing to show that many medical practitioners are deterred by the fee from registering additional qualifications; that it is, in fact, becoming more and more the custom for them to register such qualifications; and that the General Medical Council are not in a position to dispense with this source of income, which amounted last year to about £750.

The University of Sheffield Bill.—This bill was read a second time on Friday, March 6th. The bill is designed to remove certain existing disabilities. The memoranda accompanying the bill set out the position as follows: "An example of the disability suffered by Sheffield occurs in the case of persons seeking admission as solicitors. By Section 2 of the Solicitors Act, 1860, such persons are admitted to practice after only three years of service under articles of clerkship if they have taken the degree of Bachelor of Arts or of Laws at either Oxford, Cambridge, Dublin, Durham, or London. This privilege of those older universities was included in those extended to Manchester, Liverpool, and Leeds by the general language of the Acts of 1888 and 1904 above referred to. For want of a like statutory extension of the privileges of Sheffield, where a Faculty of Law was instituted in 1908, its graduates seeking admission as solicitors still have to serve under articles of five instead of three years. A like disability in the case of the University of Bristol was removed by Section 9 of the University of Bristol Act, 1909." The operative clause of the bill is as follows:

> Wherever any office is or shall be open to graduates of the Universities of Oxford, Cambridge, and London, the Victoria University of Manchester, the University of Liverpool, and the University of Leeds, or wherever any privilege or exemption has been or shall be given by any Act of Parliament or regulation of any public authority to graduates of the Universities of Oxford, Cambridge, and London, the Victoria University of Manchester, the University of Liverpool, and the University of Leeds, graduates of the University of Sheffield having the degree which would be a qualification if it had been granted by the University of Oxford, Cambridge, or London, the Victoria University of Manchester, the University of Liverpool, or the University of Leeds, may become candidates for and may hold any such office and shall be entitled to all such privileges, as fully as graduates of any of the last-mentioned universities.

London University: External Students.—Mr. Rowlands asked the President of the Board of Education whether the Departmental Committee now drafting legislation on the subject of the future government, scope, and functions of London University would be compelled to accept in full the recommendations of the Royal Commission with respect to external students, or whether it would be able

to advise the retention unimpaired of the rights and privileges these students at present enjoy.—Mr. J. A. Pease: The answer to the first part of the question is in the negative. As regards the second part of the question, the committee are, of course, bound in making their recommendations to have regard to their terms of reference, which do not, however, require them to adhere in detail to the recommendations of the Royal Commission, and I have every reason to believe that the committee appreciate the importance of devising arrangements which will make adequate provision for the continuance of external degrees.

National University of Ireland.—Mr. Ginnell asked for an explanation of the sum of £5,536 7s., stated in the accounts of the National University of Ireland to have been paid as remuneration to examiners other than professors, by giving the names of these examiners, with the amount paid to each, the number of days occupied, the number of students examined, and the subjects in which they were examined.—Mr. Birrell said: The Registrar of the National University informs me that the amount stated in the question is composed of: (1) £2,558 17s., paid to the extern examiners for the examinations of the year 1912; (2) £2,750 12s. paid to the professors and lecturers of the constituent colleges and the recognized teachers of the recognized college for the examination of students of the late Royal University of Ireland at the examinations of the year 1912: and (3) £226 18s., paid to the assistant examiners for the matriculation examinations, summer and autumn, 1912. The examinations of the university are held in the spring, summer, and the autumn of each year, and extend over a period varying between three and five weeks on each occasion. The number of students examined at the examinations of the year 1912 was: Spring, 240; summer, 719: autumn, 646. Matriculation: summer, 571; autumn, 269. Total, 2,445. The subjects of examination are those set forth in the calendars of the university and its constituent colleges. The names of the extern examiners, of the professors, lecturers and recognized teachers, and of the assistant examiners, with the amount paid to each, were furnished in Mr. Birrell's answer.

Experiments upon Living Animals.—Colonel Burn asked the Lord Advocate whether any action had been taken by the Procurator Fiscal of Edinburgh with regard to the Irish terrier belonging to Mr. Donald Morrison of Edinburgh, which was lost in December, 1913, and which returned to his master some six weeks later, limping and with a scar stretching from the paw to the first joint, and wearing a new collar, marked "Surgical Department."—The Lord Advocate (Mr. Munro) said that inquiry into the circumstances was made by the Procurator Fiscal, and elicited the following facts: (1) That an experiment was performed on the dog in virtue of a licence under the Cruelty to Animals Act, 1876; (2) that the dog was purchased for the purpose of the experiment from an individual bona-fide believed to be the owner; and (3) that no evidence was obtained which would justify the institution of proceedings against anybody for theft of the dog.

Poor Law Institutions (England and Wales).—In reply to Mr. Astor, the President of the Local Government Board said that he was unable to furnish precise information as to the total number of beds actually available at the present time in Poor Law institutions in England and Wales, but the number in 1908 was estimated as 299,947. Since that time additional accommodation had been provided, especially for children in homes apart from the workhouse, but he could not give the exact figures.

Measles.—Mr. Astor asked the President of the Local Government Board how many local authorities had during the past three years added measles to the list of notifiable diseases under the Infectious Diseases (Notification) Act; and how many had since received permission to revoke the orders.—Mr. Herbert Samuel said that since January 1st, 1911, twenty local authorities, with the Local Government Board's approval, had made orders extending the application of the Infectious Diseases (Notification) Act to measles. One of these authorities subsequently obtained the Board's approval to the revocation of the order.

Examination of Sputum.—Mr. Astor asked how many local authorities had provided for the free examination of sputum; and how many had not yet made such provision.—Mr. H. Lewis said the Local Government Board had no exact information on the subject. Speaking generally, the schemes of treatment which were now being developed by the councils of counties and county boroughs included arrangements for the examination of the sputum of patients attending institutions provided by these councils.

Food and Drugs Bill.—Mr. Gibbs asked the President of the Local Government Board if his attention had been called to the resolutions passed by chambers of commerce and other trade organizations throughout the country objecting to the provisions of the Sale of Food and Drugs Bill, 1913, which was introduced in the House of Commons last session; and whether, in face of this opposition, His Majesty's Government proposed to proceed with the measure.—The President of the Local Government Board said he was not yet in a position to say whether the bill would be reintroduced this session, but in any case it would not be without modifications, and he would take care that ample notice was given.

Sewage Trade Effluents.—In reply to Mr. Sherwell, the President of the Local Government Board said that in view of the expected issue of the final Report of the Royal Commission on Sewage Disposal, the question of introducing the proposed bill for dealing with the question of sewage and trade effluents had for the present been postponed.

Vaccination.

Repeal Bill.

A bill to repeal the Vaccination Acts has been presented by Mr. Black, supported by Sir John M'Callum, Mr. James Parker, Mr. Kellaway, Mr. George Greenwood, Mr. Snowden, Mr. Chancellor, Mr. Pointer, Mr. Lees Smith, Mr. Crooks, Mr. Hancock, Mr. Edgar Jones, and Mr. Bentham.

Post Office Life Insurance Scheme.

Mr. Snowden asked the Postmaster-General whether he was aware that, in the Post Office life insurance scheme, a regulation was inserted by which those who were unvaccinated had to consent that, in the event of their death from small-pox, only the amount actually paid in premiums should be paid to their relatives instead of the full amount insured for; why a similar clause was not inserted in the policies of vaccinated persons; whether under the National Insurance Act submission to vaccination was not made a condition for the receipt of benefits; and, seeing that conscientious objection to vaccination had been recognized by law in this country since 1898, was he now prepared to amend the regulation under notice of his life insurance scheme.—Mr. Hobhouse: The National Debt Commissioners, on whose behalf insurance contracts are granted by the Post Office, after examining the general practice of insurance offices, recognized an increased risk in the case of the insurance of unvaccinated persons. They considered, therefore, that this should be met by a provision that, in the case of an unvaccinated person dying from small-pox, the payment should be limited to a return of the premiums paid.

Exemptions: Scotland.

Captain Gilmour asked the Secretary for Scotland the number of exemptions from vaccination in each of the three years before a statutory declaration took the place of an appearance before a magistrate for a certificate; and the number of exemptions in each year subsequently.—Mr. McKinnon Wood said that prior to the passing of the Vaccination (Scotland) Act, 1907, which authorized the making in Scotland of statutory declarations of conscientious objection to vaccination no provision existed, as in England, for the granting by magistrates of exemptions from vaccination. The numbers of such statutory declarations made in respect of births registered in subsequent years were as follows:

1907	7,258
1908	15,846
1909	22,746
1910	26,954
*1911	29,582
*1912	32,863

*These figures have not yet been published, and are subject to revision.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

London County Council.

Ambulance Service for the Metropolis.

The General Purposes Committee presented to the London County Council on March 10th further details of the ambulance scheme for the metropolis which has been in preparation since the Council decided that it could not delegate its powers in this matter to the Metropolitan Asylums Board (BRITISH MEDICAL JOURNAL, December 20th, 1913, p. 1606). The Committee stated that the scheme now proposed could only be a tentative one providing a service which in the future might be augmented or varied as experience might direct. The Committee reaffirmed the opinion, to which it has lately come, that existing appliances could only be used as supplemental to a service to be established by the Council, which itself must meet the primary needs of the public.

The Committee gave figures supplied by the Commissioner of Police, showing the number of accidents and cases of illness in the streets during each of the twenty-four hours in the months of September, October, and November, 1913. It appeared that by far the greater number of accidents occurred during the luncheon hours and during the period from 5 to 7 p.m. The total number of cases in the three months were: Accidents, 4,434; cases of illness, 1,309. Without taking into account cases conveyed by the police to local doctors, of which no statistics were available, or accidents in factories and workshops, estimated by the Home Office at from 8,000 to 10,000 a year, the number of cases of accident and illness in London was estimated at 20,700 a year. The Committee therefore proposed to provide for an estimated number of 27,700 cases, but as the dangers from street traffic were exceptionally great in London it was likely that this limit would be exceeded.

It was proposed that the service should be available for cases of accident and illness in the streets, and for cases of accident in factories and private premises, but not for the conveyance of sick persons from private houses. The motor ambulance at Hampstead General Hospital would be used as an adjunct to the service, as also would be any other rapid ambulances belonging to public authorities which might be placed at the disposal of the council from time to time. The scheme provided for control by the fire brigade department, subject to the advice on medical questions of the medical officer of health. Six stations would be provided, three north and three south of the Thames—namely, at Fulham; Devonshire Mews, Harley Street; Shoreditch; Southwark; Lee, S.E.; and Brixton Hill, Lambeth. Each station would have one ambulance, except Shoreditch, which would have two. Where possible existing buildings would be used; otherwise temporary iron buildings would be provided, so that removal would be easy if experience showed that the sites were not the most suitable ones. From these stations the Committee believed that all parts of the county could be served. The ambulances would be petrol driven, as electrically propelled ones would not be suitable where the neighbourhood was hilly or long distances had to be covered. After exhaustive consideration of various types of stretcher appliances, the Committee decided in favour of the collapsible dhooly as used in Glasgow—canvas supported by removable poles—with the addition of an attachment, only used in Glasgow at the Royal Infirmary, to keep the canvas rigid. Each ambulance would be equipped also with a plain board stretcher for use in removal of cases such as fractured pelvis, where a collapsible stretcher might cause harm. In the ambulance itself a spring mattress covered with air beds would be provided. As the scheme developed, direct telephonic communication would be established, probably with some of the larger general hospitals. The adoption of a complete system of street call boxes was not considered necessary; other large towns had found that sufficient facilities now existed by means of the ordinary telephone service. The central ambulance station would have direct communication with as many telephone exchanges as might be desirable. In some cities the police maintained or had access to telephones in kiosks placed near important traffic centres, and it might be desirable to suggest to the Commissioner of Police the inauguration of a similar system in London. In central London no difficulty should arise in using the ordinary telephone system, and in the outlying districts, where telephones were not so numerous, the Committee believed that residents who had telephones would gladly assist in rendering the service efficient by placing their telephone at the service of any constable in uniform. The houses of such residents might be indicated, perhaps, by the attachment of small notification plates.

The Committee found itself unable to give any detailed estimates as to cost, but submitted estimates of £5,400 for for the purchase of motor ambulances and £2,000 for adaptation of buildings, provision of temporary ones, etc. The annual expenditure for maintenance might be from £9,000 to £10,500. The Committee asked for authority to proceed with a scheme on the lines indicated above.

In a report on the financial aspects of the scheme, the Finance Committee expressed the hope that it would be possible to have an effective scheme at a cost well within the figures indicated by the General Purposes Committee.

Discussion.

Mr. Ernest Gray, Chairman of the General Purposes Committee, in moving the adoption of the scheme, said he was now perfectly satisfied that no authority, except the City of London Corporation, had any motor ambulances which could be used for accident cases. He was aware that members of the Council had asserted this for years, but he did not regret the time and labour given to investigation, because now the point was finally settled. The present scheme placed upon the police constable the responsibility of determining whether a hand litter or a motor ambulance should be sent for. He admitted that this was a serious responsibility, and only experience would show how it would be borne. It was impossible, on grounds of expense, to dot London with call boxes, and it would be better to secure private co-operation in the matter of the use of telephones. He was hopeful that from the time the call was received at the central station and passed on to the appropriate ambulance station to the departure of the ambulance would not be longer as a rule than forty-five seconds. He expected from the medical profession considerable criticism of the stretchers proposed. Most local authorities having ambulance services arranged for a number of stretchers on each ambulance, and the sufferer was removed from the stretcher to the ambulance and from the ambulance to the stretcher, and so to the hospital bed. The advantage of the proposed dhooly method was that a patient would be moved slightly in order to place the canvas under him, and then no further disturbance would be necessary until the hospital bed was reached, and if it was not desirable to move him even then, the canvas stretcher could be left there, the ambulance having an adequate supply. He expected to be told that this was a mean, niggardly scheme, and altogether insufficient. He agreed that it was insufficient, but it provided a nucleus and would meet immediate needs.

Sir John Benn described the scheme as not only belated but inadequate for the needs of London. The Metropolitan Asylums Board in its proposals provided for an annual expenditure of £16,000, and for eighteen stations instead of six (or seven with the Hampstead ambulance) as now proposed.

Mr. J. D. Gilbert thought this must be the cheapest ambulance system possible for London. There would be in one case a single ambulance for a population of 750,000, and in another two ambulances to a population of 1,581,000.

Mr. T. F. Hobson criticized the comment of the Finance Committee, quoted above, and remarked that no possible reduction could be made on the present estimates. It had been found, in the light of experience, that the Hampstead ambulance could serve a population four times greater than at first supposed, and he believed the six stations would be adequate, especially as the police would still convey on hand litters cases occurring near a hospital.

Mr. Edward Smith described the scheme as totally inadequate, and said that the efforts made both within the Council and outside, by the medical journals, Sir William Collins and others, deserved a better result.

Mr. H. Gosling spoke of the need of a riverside ambulance service, in addition to that of the Port of London Authority, to deal with the numerous accidents occurring.

The Council passed a resolution empowering the General Purposes Committee to proceed with the scheme, and Mr. Ernest Gray accepted an amendment whereby the scheme was specifically described as "tentative."

Control of Nursing Homes and Massage Establishments.

The Parliamentary Committee reported that petitions had been presented by various borough councils against the clauses of the L.C.C. General Powers Bill, by which it is sought to obtain control of nursing homes and massage establishments.[1] The borough councils urged that this work could be efficiently done as an extension of their powers under the Disorderly Houses Act. In order to conciliate this opposition, the Parliamentary Committee proposed to agree to amendments making the borough councils the authorities to register premises used for the reception or treatment of persons requiring nursing or massage, manicure, chiropody, light or other baths, or other similar treatment, and to administer the provisions of the bill. The Public Control Committee, in a special report, urged that the powers of registration, at any rate, should be retained by the County Council.

In the course of discussion of a proposal that the report should be referred back for further consideration, the Rev. Dr. Scott Lidgett remarked that if there could be an unfortunate suggestion it was that the administration of the proposed powers should be handed over to the borough councils on the ground that they already dealt with the Disorderly Houses Act. What would be the attitude of the House of Commons if the Council brought forward a proposal which cast an aspersion upon all institutions concerned with these forms of treatment, including nursing homes? An important industry like this might need supervision in order that its respectable side might be protected from the slur of association with those who followed degrading practices, but the Council ought not to make itself a party to a suggestion that the industry as a whole could fairly be classed with immoral traffic.

On a division, the reference back was lost by 61 votes to 44. The Council had not completed the consideration of the matter at the hour of adjournment, and it is probable that the bill will come before the House of Commons for the second reading before the Council has another opportunity of dealing with the subject.

HULL.

A NEW SCHOOL MEDICAL SERVICE.

AT a recent meeting the City Council adopted a new scheme for fulfilling the duties thrown upon it by the Education (Administrative Provisions) Act; it will necessitate loss of appointment by seven medical men who at present serve the education authority of the area as part-time officers at salaries of £120 a year, but two or three of them are expected to continue to serve as whole-time officers. Hitherto the authority has relied entirely upon the work of part-time officers, even in the case of its chief medical officer, while in the way of supplying treatment for the defects discovered at inspections it has aimed merely at dealing with verminous conditions. Last year the Board of Education criticized the plan, expressing doubt as to whether any scheme which did not include the employment of at least one whole-time officer could possibly be satisfactory, and holding that better arrangements ought to be made for "following up" and for securing adequate treatment for each defective child. The new scheme provides for the appointment of a whole-time school medical officer and at least two whole-time assistants, such medical officer being responsible also for the supervision of the feeding of necessitous children and the working of the open-air school which it is proposed to provide. The scheme also includes the opening of a school clinic at which the treatment of enlarged tonsils and adenoids, of ringworm, scabies, and ophthalmia, as also of dental caries, will be undertaken. The salary of the school medical officer has been fixed at £500, rising to £600, and Dr. J. W. Fraser, who up to the present has been acting as part-time senior medical officer, has been appointed to the post. As one of his assistants has been appointed Dr. M. S. Maclean, a woman doctor, who has also hitherto been working part-time. The scheme will come into operation at the beginning of next October.

[1] BRITISH MEDICAL JOURNAL, November 15th, 1913, p. 1326.

BRISTOL.

LORD MAYOR'S HOSPITAL SUNDAY FUND.

THE first distribution of the Lord Mayor's Hospital Sunday Fund was made on March 2nd, when it was announced that the number of collections was 440 and the amount received £1,879 0s. 2d. There were on the list over fifty more places at which collections had been made than in the previous year. The fund was allocated as follows: Royal Infirmary, £696; the General Hospital, £584; the Children's Hospital, £216; the Eye Hospital, £104; the Orthopaedic Hospital, £20; the Lock Hospital, £10; and the Eye Dispensary, £5.

HOSPITAL FOR CHILDREN AND WOMEN.

The report presented to the annual meeting of the Royal Hospital for Sick Children and Women on March 2nd showed that during the year 1,247 women and 3,626 children had attended the out-patient department and 574 women and 626 children had been treated in the dental department. To the wards 902 children and 76 women had been admitted, making an average stay of 23.8 days for each person. The warming of the wards and the fitting of the electric light throughout the hospital had been completed during the year and had added much to the comfort of the patients and workers in the wards. The treasurer in presenting his report said that the receipts had been £4,602 14s. 1d. and the expenditure £5,241 7s. 5d., leaving a debit balance of £638 13s. 4d., an increase of £278 on the year.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE FALLING BIRTH-RATE IN SCOTLAND.

THROUGH a reorganization of methods the Registrar-General for Scotland is able to give the birth-rate for 1913, although the annual report will not be ready for some months. It is 25.5 per 1,000, and is the lowest yet recorded, being 28.4 per cent. less than 1876. The natural increase of the year, the excess of births over deaths, amounts to 47,476, being 2,903 less than in the previous year, 4,487 less than the mean of the natural increases of the preceding five years, and 6,199 less than the mean of those of the preceding ten years. It is less than the natural increase of all years since 1895. The number of marriages in the year (33,689) was a maximum; the previous greatest number in any one year (since registration was instituted) was 33,298 in 1907.

DINNER OF THE EDINBURGH BRANCH.

The members of the Edinburgh Branch, on February 27th, wound up a long clinical day at the Royal Infirmary (see page 592) by a dinner party at the Balmoral Hotel, when Mr. C. W. Cathcart, President of the Branch, presided over a gathering which included representatives of nearly all Scottish Branches of the Association, as well as Mr. Thomson Walker of London, who earlier in the day had delivered a formal address. Among the toasts was one to the British Medical Association, which was proposed by a member of its Council, Dr. Moorhouse, and acknowledged by Dr. Douglas, the President of the Fife Branch. Each delivered an excellent speech, both emphasizing the need of maintaining the Association's strength, as also the desirability of continuing to aim at attaining unity of purpose and harmony in the whole medical profession. Another toast was to "Scientific Medicine," which was proposed by the Chairman himself, who coupled it with the name of the guest of the evening, Mr. Thomson Walker. Here, again, both speakers took much the same line, each dwelling on the desirability of promoting the scientific side of the work of the Association and maintaining it at a high level. Scientific knowledge should be pursued not only for its own sake, but should be incorporated into the everyday

work of practitioners of all classes. The toast to the guests was proposed by Mr. W. J. Stuart in an entertaining speech, which called forth suitable replies both from Mr. F. K. Smith, Honorary Secretary of the Aberdeen Branch, and from Dr. W. Alexander, Senior President of the Royal Medical Society. In an appreciative speech, which was exceedingly well received, Dr. Edwin Bramwell then proposed a toast to the president, Mr. Cathcart, which was duly honoured. Nominally this brought the evening's proceedings to an end, but an addendum was made to the list of toasts by Dr. Martin of Haddington, who, moving a toast to the honorary secretaries, Dr. John Stevens and Dr. John Eason, pointed out how much labour in preparing for the proceedings of the day had fallen on their shoulders, and how much its success was due to the energy and tact that they had brought to bear on the work. It was very cordially received and acknowledged by Dr. Eason. Other pleasant features of the evening were some songs and recitations contributed by the President, and by Dr. George Mackie, Dr. A. D. Webster, Dr. Rorie, and Dr. William Fordyce, the two latter singing inimitable ballads of their own creation.

Forthcoming Royal Visit to Glasgow.

Intimation has been made that the King and Queen will pay a visit to Glasgow on Tuesday, July 7th, and arrangements are in progress for two ceremonials in connexion with hospitals in the city during the visit. In the forenoon their Majesties will drive in procession to the Royal Infirmary, where the ceremony of opening the new buildings will take place. King George (then Prince of Wales) laid the foundation stone of the new buildings on April 24th, 1907. Building was begun, however, two years earlier, and the magnitude of the undertaking may be judged from the fact that the transition from the old to the new structure—carried out without any cessation of the work of the institution—has occupied practically ten years, and has cost £500,000. After luncheon their Majesties will drive in procession to Yorkhill, where the new Royal Hospital for Sick Children will be formally opened. This institution has outgrown its old home, and four years ago the directors procured the splendid site of eleven acres at Yorkhill, where the new hospital is approaching completion. The cost of the building and site is estimated at £140,000, of which £125,000 has already been raised. Accommodation is provided meantime for 200 cots.

Glasgow Benevolent Fund Guild.

The annual meeting of the Glasgow branch of the Royal Medical Benevolent Fund Guild was held in the Royal Infirmary on March 5th. Miss A. McCall Anderson, the secretary, in her report stated that the branch was inaugurated in October, 1911, because it became known that several cases in Glasgow were being assisted from the fund. The guild gave help also by means of lady visitors, if this was agreeable to the beneficiaries, and this was almost universally welcomed. During last year the subscribers numbered 121, an increase of 74 since the previous report. Dr. James Adams stated that the Royal Faculty of Physicians and Surgeons proposed that if it had funds to spare from its own benevolent fund assistance would be given to the guild.

Organization of Post-Graduate Teaching in Glasgow.

Within the past few weeks two schemes have been brought forward, which it is hoped will lead to greater recognition of Glasgow as a teaching centre and as a place of scientific research. On the one hand, it is proposed to organize the post-graduate teaching, and on the other to encourage the publication of local work in the *Glasgow Medical Journal*. It has long been felt that if the great bulk of work carried on in Glasgow was brought together in one journal definitely associated with Glasgow, it would greatly benefit the scientific reputation of the school. With this in view, it was recently decided to appoint an editorial committee with representation from the different hospitals and laboratories, so that the *Journal* may be better able to keep in touch with the new work which is being carried on. Hitherto no attempt has been made to co-ordinate the post-graduate medical teaching carried on in the various local institutions. It is to be hoped that the unanimity which prevailed at a recent meeting held in the university will result in a comprehensive scheme for organized post-graduate teaching. In response to a circular signed by the Dean of the Medical Faculty, the teaching staff of the university, medical schools and hospitals, met to consider the matter. Sir Donald MacAlister, who made his first appearance after his recent illness, presided. He stated that recently he had been appointed by the Privy Council the British Representative to the International Bureau for Post-Graduate Instruction in Berlin, which is intended to diffuse information as to post-graduate courses and systems of instruction. While preparing the report on the conditions of post-graduate instruction in the United Kingdom, he had been struck with the sporadic nature and imperfectly organized character of the post-graduate work in this country. A great deal was being done by individual scholars, but there was nothing like the organization shown in Germany, France, and the United States. With regard to Glasgow, he had been able in his report to present items of a general nature, but he felt that the school could make a more imposing appearance if it appeared as a unit rather than as having more or less occasional courses. He had every sympathy with any effort to give Glasgow its proper place in what was becoming an international scheme. Further, as a member of the Highlands and Islands Medical Service Board, he was impressed with the need of a well-understood and well-organized arrangement whereby doctors in these parts should have periodical facilities for refreshing their medical knowledge. It was subsequently agreed to co-ordinate the post-graduate teaching in Glasgow and to appoint a committee representative of the various teaching bodies and hospitals to consider the steps necessary. Dr. W. R. Jack consented to act as temporary secretary to communicate with those bodies entitled to nominate members of committee, and to arrange for another general meeting early in May, to which the committee would report.

Radium for Glasgow.

Some important statements with reference to the use of radium in the treatment of cancer and as to a movement for securing a quantity for Glasgow were made at the recent meetings in connexion with the Glasgow Royal Samaritan Hospital for Women. The subject was introduced by Dr. Nigel Stark at the meeting of the Ladies' Auxiliary Association, and his proposal was that Glasgow should not wait on the results of experiments being made elsewhere, but should have a quantity valued at £1,000 to begin with. Lady Stirling Maxwell, who presided, said that a movement was on foot in Glasgow to secure £6,000 worth of radium for the city. At the annual meeting of subscribers to the hospital further reference was made to the subject by Dr. A. W. Russell, who spoke of the central body being formed in Glasgow for the purpose of acquiring a quantity of radium for the city, applications for which would be dealt with under expert advice and control.

Royal Society for Relief to Incurables in their Own Homes.

This old Edinburgh medical charity—it was founded 108 years ago—held its annual meeting on February 27th, when Lord Provost Inches occupied the chair. It was reported that there were 529 annuitants at present on the roll: there had been 268 applications during the year, but of these only 87 had been admitted, the state of the funds not warranting the admission of a larger number. There were 53 annuitants on the Dunlop Cancer Fund, and there had been 33 deaths. It was stated that the operations of the society were widespread, and dealt with a phase of suffering humanity throughout the whole north and east of Scotland up to the Orkney and Shetland Islands. The expenditure exceeded the income by £116.

Scottish National Institution for the Education of Imbecile Children.

Sir David Paulin presided over the annual meeting of the Scottish National Institution for the Education of Imbecile Children which was held in Edinburgh on February 26th. It was reported that the average number of children on the register was 377, or 18 more than last year. Among the admissions for the year had been 9 cases of Mongolian imbecility, children who so closely resembled one another that they might have been taken for brothers and sisters, although as a matter of fact they came from

all parts of Scotland and from all classes of society. The directors were looking to the new Mental Deficiency Bill to relieve the necessities of the present situation in Scotland where provision for the care and training of imbecile children was totally inadequate; at the same time they were awaiting with some apprehension the demands it might make upon their institution, which was already full. Dr. R. D. Clarkson, the Medical Superintendent, believed that the usefulness of the institution, which is situated at Larbert in Stirlingshire, would be even greater in the future than it had been.

Glasgow Corporation and Bellefield Sanatorium.

A further step has now been taken in connexion with the proposed transfer of Bellefield Sanatorium to the Glasgow public health authorities, already noted in the BRITISH MEDICAL JOURNAL. A circular has been issued by the council of the Association for the Prevention of Consumption to the members of the Glasgow Branch asking for the required approval of the sale to the Corporation at the price of £10,000 agreed upon, and a special meeting of the Branch has been arranged to carry through the arrangements should this approval be given. The council express regret at the circumstances which called for the transfer of part of their work, but state that this work having been superseded by the National Insurance Act and the Public Health (Scotland) Act, it is in the best public interest that the offer of the Corporation be accepted.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Congested Districts Boards.

At the last meeting of the Killala District Council, co. Kerry, Dr. Crowley, medical officer of the Ballycastle district, said that in Belderrig the Congested Districts Board had erected houses for its tenants, with the exception of one man, who was living in a wretched hovel, which he had to share with pigs and cattle. Another tenant was living in a wretched cabin, containing a bedroom and kitchen; there were two children and two cattle in the bedroom, and there were also cattle in the kitchen, where the man and two other children slept. In another townland there were two families; one was a tenant of the board, which had built the house—part of the floor was covered with water; the house was 1¼ miles from the nearest public road, and in the two families there were sixteen children, none of whom could get to school. It was, he said, a scandal that the board should permit their tenants to live in such wretched hovels and under such conditions. The Chairman said that the board was not doing as much as it ought. People were being wiped out day by day by fever, consumption, and other preventable diseases.

Dinners for School Children.

The report presented to the fourth annual meeting of the Ladies' School Dinner Committee, held under the chairmanship of Sir Charles Cameron, in the Mansion House, Dublin, last week, stated that dinners had been provided for 450 children daily during the year, and that since October the work of the committee had been almost doubled, and the number of dinners increased to 650 daily; dinners were also given on Saturdays and during the Christmas holidays, and breakfasts were given daily, including Sundays. Some of the children paid ½d. for the dinner, but most of them received it free; it consisted of a pint of Irish stew, or pea soup and bread. The children are improved in health and looks, and the school attendance has greatly increased. The committee urged the extension of the Free Meals Act to Ireland, so that the dinners could be given in every poor school in Ireland where judged necessary.

Dr. Boyd Barrett proposed a resolution, calling upon the Irish members of Parliament to press upon the attention of the Government the necessity of extending to Ireland the provisions of the Education (Provision of Meals) Act of 1906, with such alteration as Irish conditions make desirable. This was seconded by Dr Dunne, and carried.

Registrar-General's Annual Returns.

In the Dublin Registration Area, which consists of the city of Dublin and the urban districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown, the number of births registered during 1913 was 11,224 (5,813 boys and 5,411 girls), an annual rate of 27.9 per 1,000 of the estimated population. The average rate for the preceding ten years was 28.6 per 1,000. Of the total births 9,635, or 31 per 1,000 of the population, occurred in the city, and 1,589, or only 17 per 1,000, in the urban districts. The corrected death-rate was equal to 20.1 per 1,000 of the estimated population, as against an average of 21.7 per 1,000 for the previous ten years. The total deaths, which included those of 568 persons admitted into public institutions from localities outside the area, were equivalent to a rate of 21.5 per 1,000, the average for the preceding ten years being 22.8 per 1,000. The rates in different parts of the area ranged from 11.7 for Finglas and Glasnevin to 25.6 for South City No. 2.

Vaccination and Salaries in the South Dublin Union.

At the meeting of the board of guardians of the South Dublin Union, held last week, the following letters were received from the Local Government Board:

The Local Government Board for Ireland have had under consideration the resolution of the board of guardians of the South Dublin Union of December 10th last, proposing that the present scale of salary, £140 to £200 a year, for the dispensary medical staff of the Union be amended, and that in future the scale be £140 a year, rising by annual increments to a maximum salary in each case of £225 a year, to be attained after a service of fifteen years. The Local Government Board note that the suggested scales would not alter the present initial salary, but would merely raise the maximum salary from £200 to £225 a year, and they observe that the ground put forward in support of the proposal is that the vaccination fees of the medical officers have diminished in consequence of the failure of the guardians to enforce the Vaccination Acts. The Board have to point out that the scale of salary of a medical officer covers the discharge of his duties under the Medical Charities Act, and that he is entitled to statutory fees for public vaccinations under the Vaccination Acts, and they consider that these fees could not properly be commuted for a fixed annual payment. The Board must, therefore, decline to accord their sanction to the guardians' proposal in this matter.

The Board addressed a separate communication to the guardians on the subject of the administration of the Vaccination Acts in the South Dublin Union. In this the figures for the years 1909 and 1913 inclusive were set out, showing approximately a diminution of nearly 4,700 in the primary vaccinations at the dispensaries:

This result, it was stated, was due to the failure of the guardians to enforce the Vaccination Acts. The guardians, as the local body entrusted by the Legislature with the statutory duty of promoting the vaccination of the people, would find themselves in a very unenviable position should an epidemic of small-pox take place in their district, an event which might occur at any moment, should they fail in their duty to secure for the people the immunity afforded by successful vaccination. The ravages of small-pox amongst the unvaccinated were at all times deplorable, and an outbreak now, with the enormous number of unvaccinated children in the union, would undoubtedly be accompanied by a very high death-rate, and a general disturbance of trade. Unless the guardians were able to secure that the people in their district are vaccinated, it would be incumbent on the board to make pressing representations to the Corporation and the South Dublin Rural District Council to provide adequate hospital accommodation for a large number of small-pox cases. The provision of the necessary hospital buildings alone would involve the ratepayers in a heavy expenditure, and there would, in addition, be the cost of equipment and maintenance. The board would, in the interests alike of the infant population and the public health, earnestly urge the guardians to reconsider their decision and administer the Vaccination Acts within the union.

The Chairman said that the letters were most important, and a suggestion by the Clerk that the medical officers of the several medical dispensary districts should be asked to furnish reports as to the number of unvaccinated children in their respective districts was adopted and the necessary order made.

A NEW emergency ward in St. Vincent's Hospital, New York, was opened on February 16th for the reception of disabled seamen. It is intended as a memorial of Dr. Francis Norman O'Loughlin, who went down in the *Titanic*.

Special Correspondence.

BERLIN.

The Modern Treatment of Syphilis.

DR. DREUW is one of the Berlin "Polizeiärzte." Among his duties is the medical supervision of prostitutes, but he is otherwise entirely unknown in scientific circles, and the notoriety which his recent agitation against the unrestricted sale and use of salvarsan has gained for him is hardly one on which he can be congratulated. His official position as a State servant doubtless aided him in his campaign, which resulted on March 4th in questions being addressed in Parliament to the Chancellor himself by four medical men as to: (1) Whether there was any truth in the statements that several hundred deaths had been directly caused by salvarsan; (2) whether salvarsan could be obtained without restriction by the public; (3) if he was aware that the quantity of arsenic in the prescribed doses of the remedy by far exceeded that laid down in the Imperial Pharmacopoeia; and (4) whether the reported deaths and injuries to health could be attributed to the excess of this poison in the drug.

A reply was made for the Chancellor by Ministerial-direktor v. Jonquières, who stated that, inasmuch as the notification of deaths due to salvarsan was not compulsory, the Government had no material on which to base an answer to the first question except the statistical and other reports in the medical press, which attributed these accidents to faulty technique in administration, idiosyncrasy to arsenic in the patient, or peculiarities in the course of the disease itself. It would seem from this evidence that only a portion of the total number of deaths reported could be directly attributed to salvarsan itself, and it was certainly a fact that an overwhelming majority of the practitioners who had used the drug consistently had published favourable opinions of its efficacy. He did not therefore think it advisable that any restrictions designed to limit the administration of the remedy would be for the public good, but he promised that the future publications on this highly important matter should have the continued attention of the Imperial Government.

It was a very interesting coincidence that the debate on the modern treatment of syphilis in the Berliner medizinische Gesellschaft should have taken place on the same day as the parliamentary discussion. This debate was intended to be in the nature of a retrospect and summary of the therapeutic advances since the introduction of salvarsan. Professor Orth was in the chair, and introduced Professor Lesser (of the Charité), who opened the discussion with the remark that he should do his utmost to maintain throughout a moderate and unbiassed attitude. Schaudinn's discovery of the *Spirochaeta pallida*, the reaction of Wassermann, and Ehrlich's salvarsan had, he said, entirely altered the therapeutic aspect of syphilis in the last few years. It was now possible to make a definite diagnosis of syphilis in some cases a fortnight after infection—that is, at a time when generalization had not taken place—and the profession was therefore nowadays in a far better position than formerly to aim at abortive treatment with salvarsan and mercury, with or without excision of the primary chancre. He was of opinion that both for attempts at cure by the abortive method and for the treatment of syphilis in all stages, the combined use of salvarsan and mercury offered the best chances of success. If the Wassermann reaction remained consistently negative for two to three years, then and then only, he regarded the patient as cured, and this principle he considered held good even for early "aborted" cases. There was no doubt that there had been an increase in the number of instances of true reinfection of late, a fact which supported the view that real cures were becoming more frequent. He thought that a sharp therapeutic distinction should be drawn between primary cases with a negative Wassermann reaction and those with secondary symptoms and a positive reaction, in which the spirochaetes had become generalized. In the former Ehrlich's remedy should be administered at once, in the latter only after a fortnight's mercurial treatment, preferably by calomel injections. In this way he believed it possible to avoid violent reactions from spirochaetal toxins. He regarded five to six weeks' continued mercurial treatment, with three injections of salvarsan, as an energetic course; as a moderate course, one which implied four to five weeks of treatment; and as inefficient, one which was completed in less than four weeks. According to Lesser's experience, 62 per cent. of cases were cured by the energetic method, 32 per cent. by the moderate, and only 14 per cent. by the inadequate—all cases being controlled by the Wassermann reaction. Fournier's classical intermittent administration method was, he thought, still indicated at the present time, and he was himself in the habit of giving five to six courses in the first three years after infection, even if the Wassermann reaction remained negative throughout. In tertiary cases he also advised the preliminary administration of mercury before injection of salvarsan, and in cases in which the Wassermann reaction remained obstinately positive, without clinical manifestations of any kind, the aim should be elimination, as it was just such patients who were liable to develop tabes or general paralysis. Even when these disorders had become manifest salvarsan had proved very effective in his hands in checking the lancinating pains and the ataxia, although he could not convince himself of a single case of cure, hitherto, by its agency. For congenital syphilis he thought the drug of the highest value, and he was certain that many children who must otherwise have died of the disease had thus been preserved. Regarding the mode of administration there could be no two opinions that the intravenous was the method of choice. The intramuscular had been almost universally discarded. He gave three to four injections of 0.3 to 0.4 gram in men, and 0.2 to 0.3 gram in women, in both at intervals of ten to fourteen days. Children received 5 mg. per kilo of body weight at the same intervals. Reactions had greatly decreased since preliminary mercurial injections had been given, and fears on the score of damage to the eye by arsenic had now been proved unfounded, for in the reported cases a specific retinitis had already been present at the time of the injection, or the preparation used was atoxyl, and not salvarsan. Neurorecurrences were undoubtedly syphilitic, and not organotropic. The total number of deaths due to salvarsan in which no side-issues could be raised was 87, a very small number when the enormous number of cases injected was taken into account. He thought he had saved a case in which threatening symptoms of poisoning had arisen after injection, by venesection and infusion of saline intravenously and by the rectum.

Professor Wechselmann (of the Virchow Krankenhaus), to whom Ehrlich had given his first samples of salvarsan for hospital administration, spoke next, and proved himself, as he has always been regarded, the apostle of salvarsan therapy. He denied the efficacy of a mercurial combination treatment, and spoke of a case which after two years' treatment by intensive mercurial injection and inunction for "galloping syphilis" without success, had been completely cured by him with two injections of salvarsan. The man had since married and become the father of a healthy child. In contradistinction to Lesser's well-considered utterances he spoke with some excitement, and on a basis of 45,000 injections at his clinic denied that salvarsan was a poison. He had seen only one death, and that was in a case in which combined mercurial treatment had been given, nor had a case of erythema or anaphylaxis ever occurred in his practice. In one patient he had given a very large number of consecutive injections of 0.5 gram with complete tolerance, and he thought that a new modification recently sent him by Ehrlich would prove even less toxic than the present samples. He believed that mercury actually enhanced the toxicity of salvarsan, and in those cases in which a haemorrhagic nephritis had occurred he suggested that the mercury had previously damaged the renal capillaries, and that the administration of salvarsan had then set free further quantities of mercury, which had completely destroyed the epithelium and led to the patient's death. He admitted that care must be exercised in administering the drug to cases in which cerebral damage by syphilis (especially thromboses) had been established, but the only direct contraindications to its use were, in his opinion, Addison's disease and the status lymphaticus.

PARIS.

Hydroceles of Syphilitic Origin.—Chondrectomy in Asthma.—Treatment of Haematemesis.—Diagnosis of Slight Pleural Effusions.

DRS. DUFOUR AND THIERS have recently examined a number of cases of hydrocele with the view of establishing the relationship of this disease, when diagnosed as "idiopathic," with syphilis. They reported the results of their inquiry to the Société Médicale des Hôpitaux and made recommendations as to the treatment of such cases. In three of the cases examined a distinct history of syphilis was found and the Wassermann reaction was positive. In a fourth the Wassermann reaction was positive in the blood and in the hydrocele fluid, while in another case the reaction was negative in the blood, but positive in the hydrocele fluid. In several other cases a positive Wassermann reaction was obtained in the blood or the hydrocele fluid, or in both—in fact, in no case of hydrocele of old standing examined, and not due to trauma, was a negative reaction found. These results led Drs. Dufour and Thiers to the conclusion that syphilis is the cause of such hydroceles, and that the proper treatment in such cases is medical antispecific treatment.

M. Lenormant reported to the Surgical Society the favourable results of chondrectomy of the costal cartilages obtained in a case of asthma. The patient, a man of 20, had suffered from recurrent attacks since the age of 12. He was rickety, and the chest expansion was very deficient owing to impaired mobility of the chest wall. The first operation was performed in 1911, when five ribs were freed and the muscle interposed to prevent union of the cartilage taking place. Immediately after operation there was a marked improvement in the respiratory movements, and later the attacks of asthma became much less frequent and the dyspnoea ceased. M. Lenormant performed a second operation on the lower ribs, removing a part of the costal cartilages as in the first operation. The patient had an attack of bronchitis shortly after the operation. The final result, however, is that the man's general condition is now much improved and the respiratory capacity increased. But a certain amount of union of the costal cartilages has now occurred, in spite of the interposition of the muscles. M. Tuffier, who had formerly performed such operations, stated that while the immediate result was good, he could not say the same thing regarding the late results, as the costal cartilages were apt to reattach themselves in a few years.

Dr. Renon reported to the Société Médicale des Hôpitaux his results of emetine treatment in haematemesis. In 5 cases of haematemesis with marked melaena the administration of 6 cg. of emetine stopped the haemorrhage completely and no recurrence was observed. In 2 cases of cirrhosis of the liver, in 1 case of ulcerating enterocolitis, and in 1 of tuberculous ulceration of the bowel the haemostatic action was immediately produced. The last case reported was one of uraemic ulceration of the stomach: in it too the result was favourable. To prevent all possibility of recurrence the treatment was continued for a few days, the second and third dose being reduced to 2 cg. instead of 5 cg.

To the same society Dr. Ramond reported the results of further inquiries as to the significance of muscular spasm in pleurisy, and the value of spasm of the spinal muscles and the quadrati lumborum as a diagnostic sign in mild pleural effusions. When nothing is found by auscultation or percussion, and when this spasm alone is found, one can be fairly certain that some effusion exists. The quantity of fluid is frequently small and often bilateral. That communication exists between the two pleural cavities through the lymphatics Dr. Ramond believes he has proved by injection, and it is by this route that the infection spreads in benign and latent cases of pleural effusion. Some connexion also exists through the lymphatics with the peritoneal cavity, and may give rise to a localized subdiaphragmatic peritonitis, though physical signs are absent, apart from the slight pleural effusion.

THE late Mr. Bertram Thornton, consulting surgeon to the Royal Sea-bathing Hospital, Margate, left estate of the gross value of £12,334, of which £10,694 is net personalty.

Correspondence.

THE MEDICAL SERVICE, R.N.

SIR,—I read with interest the address of the Naval Medical Director-General to the medical students of Edinburgh University, published in the SUPPLEMENT of the JOURNAL of February 28th, and with very great pleasure your leading article of the same date.

As I withdrew from the navy eighteen months ago after twelve years' service, I hope you will allow me to give you the benefit of my recent experience in the service in the hope of throwing some fresh light on the causes of its present unpopularity.

Surgeon-General May's address was a candid admission that the present shortage of medical officers in the navy is a grave danger to the country. It is urgent that the causes of this shortage should be thoroughly understood, both by the profession and by the Admiralty, in order that a remedy may be found. Practising my profession as I now do in Portsmouth, I frequently come in contact with naval medical officers, and so learn at first hand that discontent with the present state of affairs is widespread among them. The present shortage naturally entails more work and less leave for those in the service. Nearly all shore establishments and some ships are undermanned. This shortage is more particularly noticeable in the junior ranks, consequently many of the senior men find themselves doing the work of juniors—keeping medical guards, etc. Fewer men can be spared for hospital courses.

In the hospitals, routine duties such as rounds, inspections, training of staff, etc., take up so considerable an amount of the time of the small staff, that less time in consequence can be devoted to the purely professional work, and thus it is that little or no research or original work is done in naval hospitals. There is sufficient work in a large naval hospital for nearly double the present staff. Part of the increased number should include specialists such as ophthalmic and aural surgeons, bacteriologists, radiographers, anaesthetists, and several highly-trained general surgeons. By specialist I do not mean a medical officer appointed for special work who has not had previously some special training, but one who has had at least six or twelve months' training at his speciality and become qualified by examination. Once qualified, he should (as in other branches of the navy and in the army and Indian medical services) receive some small increment of pay and be employed in his speciality whenever possible. Such employment could easily be found for him, even at sea; why should there not be one such in each large squadron? As to general surgery, only the best men should be selected early in their service career for this important work, and they should get as much employment in this branch as possible.

There is not sufficient operative surgical work in the service in peace times to afford practice for more than a few men. The others should be content with an occasional hospital course. First aid is probably all that the medical officer of a fighting ship after an engagement will be called on to give; most of the surgery will be done in hospital ships or base hospitals.

The employment of specialists in the navy would reduce the large numbers invalided from the service, and thus effect a big economy in men and also in money, for the training of a seaman or stoker costs the State a good deal of money, which is dead loss should that man be invalided.

I have recently devoted my time to ear, nose, and throat surgery, and know what an immense field the navy presents for this class of work. Annually there is a large list of invalidings under the heading of "Diseases of the ear." I consider that a few surgeons trained in this speciality and given fair scope, and not hampered by grandmotherly red tape as to anaesthetics, etc., would quickly reduce the numbers invalided under this head. Similarly a few well trained ophthalmic surgeons would well repay the State for their employment. Eye work is very difficult work, and requires constant practice. It is impossible to expect the average medical officer to do reliable work in this branch, even though he gets an occasional three months' hospital course.

True economy in a medical service is not to invalid

highly trained men because there are no specialists to treat them, but to give them the best possible treatment, and, if that fails, then to invalid them.

There are some other factors leading to discontent that I should like to mention. A certain proportion of medical officers who enter the navy have professional zeal and ability. Certain others join to see the world. The present system of dividing up the good professional work among both classes is not satisfactory. It does not please either. The former get too little work to satisfy their professional cravings; the latter often get work they do not want, and in which they do not take an interest.

I have known men who have been appointed to a naval hospital although it was the last billet they desired; while I have known others, and good men too, whose ambition it was to get a hospital appointment who have never been given one during their whole service career.

Now I hold that the zealous and able men should get the good professional work where possible in preference to the lazy and indifferent. Give the latter an occasional hospital course and keep them at sea or in barracks. The best men should spend the greater part of their time in the hospitals.

In other services, the examination test (though not a perfect one I admit) is used in selection. In the navy, in my experience, the getting of a high place at examinations or the winning of prizes is no guarantee of getting a hospital appointment.

The Dean of the Faculty of Medicine, in thanking the Director-General for his address at Edinburgh, touched a vital spot when he said he would recommend the navy as a career to good men if the Director-General would promise "plenty of good work to be done."

What is the remedy for the present state of affairs? First of all, more money for the Department from the Treasury. This would provide for a larger establishment, increase of pay, specialists' pay, more hospital billets, a few research billets, more hospital courses, hospital ships, etc. The Naval Medical Department should have autonomy in naval medical affairs. There should be a much larger proportion of senior men promoted and kept employed. The best work should be given to the best men, paying due regard to the examination test in the selection of the best men. Such work should be rewarded by more rapid promotion, as in the sister services. At sea more consideration should be given to the medical officer in the choice of his cabin.

The increased expenditure on the above reforms would be more than counterbalanced by increased efficiency. There would be a much lower sickness and invaliding rate. This has been proved by the Army Medical Service in recent years. Let the Admiralty act in a straightforward manner with the profession. Let the recommendations of the Durnford Committee be published. Since they were pigeonholed the Naval Medical Service and the profession mistrust the Admiralty. The recent small concessions have done little to improve matters.

The Admiralty, however, is an admirable business concern. It pays the lowest market price for its medical officers, and if it can get sufficient of them to join under present conditions, it will not spend money in improving the conditions of service.

The army took the lesson of the South African war to heart. Let the Admiralty learn the lesson in time and face the serious question of the present shortage of medical officers in the navy and the unpopularity of the service with the profession ashore.—I am, etc.,

G. HARLEY ROSS, B.A., M.B.,
Late Staff Surgeon, Royal Navy.

Portsmouth, March 6th.

SIR,—As I spent four years in the Royal Navy and am still on the emergency list, I believe, and as I am one of the few naval doctors who is at liberty to publish his experience, I think that it may be of use to intending candidates if some additional points are mentioned. One cannot help agreeing with the remarks in the leading article in the JOURNAL of February 28th, but neither the Director-General nor the writer of the article has laid sufficient stress on the chief reason which keeps men out of the navy. A doctor is a man educated with practical knowledge, and wants to exercise this knowledge to make a career to compensate him for the difficult work he has done and to place him in the position he deserves. If he goes into practice or into the army he has an opportunity to do it and to excel; unfortunately, in the navy this is not the case. The Director-General, in his speech at Edinburgh, emphasized the possibility for tropical disease research. Most of the ships nowadays are occupied in steaming round in circles in the North Sea carrying out "evolutions." Inducement by payment, even if adequate, is all very well; but one cannot get away from the fact that a medical man is "in the way" in a battleship, certainly in peace time. In naval phraseology, he is an "idler"; he has little or nothing to do professionally, and he has to occupy his time as best he can. It is a matter of dispute whether he could be of much service in action, with shells weighing tons bursting in and around the ship, and the Director-General himself seems to think that he will be able to render first aid only. It is a bold statement to make, but the navy does not seem to be a practical life-service for a purposeful medical man; firing guns at targets representing imaginary enemies (who for the time being do not fire back) may be interesting to men brought up from childhood with an enthusiasm for it as a prevention of war; but for men brought up acquainted with disease and real death, this occupation becomes monotonous after a year or two, especially as they can take no active part in it. In my experience this is the chief disadvantage of the Naval Medical Service.

As far as the ships are concerned, could we not respectfully suggest to the Admiralty that they again consider some short service scheme such as the steamship companies have? Appoint young medical men for the commission only (two years), and pay them excellently for wasting their time, because there is little doubt that this is what it amounts to. Life afloat in the navy is not what it used to be. The incessant noise of the guns and rattle of machinery, the wallowing of heavy battleships in wintry seas round the northern and eastern coasts of Great Britain, is the lot of the majority of our modern warlike mariners.

Speaking generally, there is no medical work apart from venereal disease, and a few—remarkably few—accidents. As the leading article points out, a married naval surgeon is bound to keep up two establishments—in his home and in his ship; and he may be absent from his family for months at a time. This might be compensated were there a prospect of professional eminence or wealth; but at present it has to be done for a salary and prospects which were considered poor under much better conditions twenty-five years ago. Most of the naval doctors I knew were waiting for their pensions; and I have no doubt it is the same to-day.

A short service scheme, drastic as the change may appear, might induce young medical men into the navy provided they were very well paid, and provided that at the end of two years—they should not be encouraged to stay longer—they could receive a bonus to start them in civil life. The naval hospital administration under these conditions seems to be the difficult point; but would it not be possible to place these hospitals under the medical charge of civilians? The Director-General is trying to resurrect the service under the old conditions: he may succeed for a time, but the repeated deficiency of applicants for vacancies, and the necessity for the Director-General's appeal itself, shows that something in the present principle is wrong.—I am, etc.,

H. C. Ross.

London, Feb. 28th.

SMALL-POX AND VACCINATION IN THE LIGHT OF MODERN EXPERIENCE.

SIR,—As one whose home is in Sydney, New South Wales, a city which has recently suffered enormous financial loss through the dislocation of trade due to an outbreak of small-pox in a practically unvaccinated community, I have read with regret the views expressed by Dr. Millard, for they seem to lend support to the opponents of compulsory vaccination.

Dr. Millard admits the power of vaccination to protect against small-pox. Apart from any academic discussion or of such a question as the "flare phenomenon," surely in these days of preventive medicine and as a matter of practical politics, it is wiser to avail ourselves to the full of such a proved method, even to the extent of making

revaccination compulsory, rather than wait till there is an outbreak of small-pox before beginning to vaccinate the contacts. This last attitude reminds me of the views of some of your politicians, who, in the event of England being invaded by a foreign foe, advocate the training of her young men after invasion has begun, rather than render such invasion impossible by training them beforehand.

In the one case vaccination can be performed properly with all due precautions, and with an adequate supply of good lymph always available. On the other hand, when an epidemic breaks out, there is a rush for vaccination, not only by the contacts, but by many of the unvaccinated portion of the community. The consequence is that the operation is apt to be hastily and inefficiently done, owing to the large number of patients who have to be dealt with and the difficulty of obtaining a sufficient quantity of reliable lymph. The consequences are a number of "bad arms," and even cases of serious illness. Such things should not happen, I may be told; but, as a matter of fact, we know they will happen. This leads to a further prejudice against vaccination—an operation which, if done in infancy, as it should be done, is practically harmless. One must grant that if the State insists on vaccination it should provide facilities for the proper performance of it.

Recently, when discussing the question of small-pox in Germany with a young surgeon in Berlin, he said, "Here we have it not." I think, Sir, in your JOURNAL, a few years ago, I saw it stated that the German textbooks of medicine no longer described the disease, as it was non-existent in their country. Is it not possible we may be under some disadvantages in our democratic countries, where many believe in the "born" doctor and the "born" politician, and important matters of finance and public health are dealt with by men who lack the preliminary training necessary to render them capable of dealing with such subjects?

As a resident in a distant commonwealth and an imperialist I have no desire to appear anti-British, but I do not hesitate to say that the democracy of Great Britain and Australia might do worse, both in the question of vaccination and in the larger field of patriotism, than imitate the Germans.—I am, etc.,

Frankfort-a-M., March 9th. WM. CHISHOLM.

THE NATURE OF PREGNANCY.

SIR,—This argument is of too great general importance to allow the introduction of personalities, and I do not propose to follow Dr. Leith Murray along these lines.

My objection is to the complaisant and, I believe, very restricted outlook of those who believe that, were an immunity reaction demonstrable, it must dominate our idea of pregnancy. The essential conditions are, we can be certain, absolutely outside any immunity classification. Pregnancy means a developing child in an expanding uterus, and a multitude of hormonal activities. And yet, because a few observers claim to have, under certain conditions, detected an antigenic ingredient in the placenta, we are asked to shut our eyes to the structural, functional, and psychical evidences of a great harmony, and to describe it by such worthless and incomplete terms as "reaction to an antigen" or "parasitism." Where Dr. Murray and his friends imagine they detect discord they are seeing non-essentials. In fact, so trifling a part would an antigen play in the healthy state that it would only be formed to be immediately neutralized.

This is my objection, and the original ground of argument, but I can see agreement emerging when Dr. Leith Murray admits that "the words 'parasite' and 'disease' have merely served as a medium for attempting to express in non-technical language" his interpretation of the immunological relationship. Let us leave the pathologist to discover imaginary superficial resemblances between a healthy pregnancy and "disease," but what I plead for is an accurate scientific conception of the whole. I would therefore point out to Dr. Murray that expressions, anything but non-technical in nature, which he has used, and which imply in pregnancy "a relationship comparable rather to that of a host and parasite than to any hormonal interaction," can only mean that, in his belief, the evidence of the harmony is overshadowed by that of the disease.

Dr. Leith Murray makes an ingenious attempt to extricate himself from a difficult position by supposing that, whilst the fetus and mother live in a state of symbiosis, it is the placenta that is the parasite (or antigen). The inadequacy of this view is evident at once when we remember that the structural and functional nature of the relationship between mother and child is determined exactly by the nature of the placental link. The complicated nutritional functions, and the many hormonal activities of which it is the probable seat, are the very essence of the harmony of the double life or symbiosis.

I must again make it clear that I have nowhere pretended to possess a brief for the non-existence of an immunity reaction. I merely ventured to support Dr. Ballantyne in his statement that, of this, there is as yet no convincing evidence, and that, for reasons emphasized during this argument, their existence could not affect our ultimate conception of pregnancy. Let Dr. Leith Murray, or any other, provide us with such evidence, and I for one will gladly accept its importance. Important it certainly will be if we can show an antigen in a healthy homologous organ. Meanwhile we must acknowledge that, if there be such, the healthy organism is fully capable of maintaining itself in a condition of equilibrium and of continuing the symbiosis undisturbed.

That Dr. Murray's inability to recognize the difference between pregnancy and disease is not limited to the immunological aspect, however, is evident from his question, in which he implies a resemblance between the changes induced in the mucosa by streptococci and by the ovum. The differences are fundamental. The "suffusing of the issues with blood and fluid" often actually occurs before the imbedding of the ovum. Comparative studies show that the menstrual process is essentially a change in anticipation of imbedding, and in response to a hormone. With gestation, changes identical in nature, but more intense, occur round the ovum, where they are wanted, and are prevented throughout the rest of the mucosa, where they are not wanted, by the decidual alteration. The nest formed in the decidua is more wonderfully adaptive than that of any bird. The infective organism meets quite other conditions; every effort is made to strangle the invaders, and this usually succeeds. I very much suspect that Dr. Leith Murray has been deceived by certain superficial resemblances, such as engorgement of vessels, oedema, etc. Even here, however, there are great differences in degree and kind in the two conditions. An increased flow of blood is necessary in both cases, and it can be got from one source only. The water from the same river may flush a drain or serve a city.

Dr. Murray, I believe, shows a similar disregard for logic when he states that Loeb's interesting work on the artificial production of a decidual reaction discounts my view of the nature and function of the maternal placenta. It no more follows that, because irritation, tubercle, etc., may provoke a decidual change, the decidua must therefore be looked upon as a reaction to an irritant and nothing more, than it follows that, because disease may provoke a secretion of milk from the breasts, a mammary secretion is always to be attributed to a diseased state.—I am, etc.,

Edinburgh, March 8th. JAMES YOUNG.

THE PATHOLOGY OF CANCER.

SIR,—I am grateful to Dr. Thomson Shirlaw for his criticism of my paper on cancer which appeared in the JOURNAL of February 21st.

I most willingly agree that we must study the biochemical aspects of the problem, but I do not agree to limit biochemistry to the products of the internally secreting glands; toxins, bacterial and otherwise, and the substances causing the original overgrowth in reponse to chronic irritation must also be included.

Dr. Shirlaw argues that the regulator of cell growth is deficient after middle age on account of senile degeneration of the ductless glands, and that, therefore, malignant growth is liable to occur. This regulator presumably implies an inhibitor of cell multiplication, and I do not see much evidence in favour of the view that hormones normally exercise the function of inhibiting a tendency to overgrowth; it is somewhat illogical to state that the skin shrivels because a growth inhibitor ceases to act; and the fact that acromegaly results from a hyperplasia of the pituitary gland is also contrary to the theory. Indeed, it is more reasonable to consider the influence of the

ductless glands as growth-encouraging and never growth-inhibiting. I am willing to believe that pressure is one of the main factors involved in the limiting of cell multiplication resulting from physiological stimulation. If, for example, by some mischance, the incisor teeth of a rodent are not opposed, there is a more or less unlimited growth uninfluenced by hormones; and similarly in the case of John Hunter's transplantation experiments.

It is not very evident that hormones have an influence in preventing tumour growth, though this is more doubtful to me as I will mention before concluding. Why, for instance, is cancer somewhat uncommon in very old people, and is of slow progress when it does occur; the growth-inhibiting influence must be more completely removed at that time of life than at any other: and one would scarcely expect to find tumours of these ductless glands (for example, in exophthalmic goitre) actually engaged in the formation of growth regulating material. But having regard to our immense ignorance I am very disinclined to be dogmatic, and I only mention a few difficulties which occur to me in regard to the hormone theory.

I cannot help continuing to believe that organisms are concerned in cancer growth. Supposing the hormone theory to be true; that every one's ductless glands atrophy; and that every one possesses scar tissue; there would seem almost of necessity to be another factor wanting—an accidental occurrence, such as infection—otherwise every one would die of cancer; this factor has not been proved to be an infection, but when we reflect that organisms can produce malignant growths and metastases in plants the suggestion that it may be so gains some support; we know that bacterial toxins are most powerful cell proliferators; it is therefore not unreasonable to regard them with suspicion when endeavouring to discover the cause of the furious proliferation which we call cancer.

I have sometimes wondered if we have developed during the long ages of a struggle for the perpetuation of species a resistance to this hypothetical organism of cancer until after the reproductive period of life is past. Nature, intent on the welfare of the species, has no object in preserving life after it has reproduced itself, and the elimination of the cancerous after middle age does not affect the continuity of the species. It is conceivable that internal secretion is related to this immunity, if it exists.—I am, etc.,

Brighton, March 8th. D. A. CROW, M.B., Ch.B.

THE EFFECTS OF ADRENALIN.

SIR,—We owe a debt of gratitude to Dr. Malcolm Donaldson for his paper on the effects of adrenalin, in the JOURNAL of February 28th. In adrenalin we have a very powerful remedy, and it is important that those who have used it extensively should make known their results, in order that more definite information may be obtained with regard to its effects.

It is commonly believed that repeated doses of adrenalin lead to a permanent raising of the blood pressure. I believe this is an entire misapprehension, and an instance of practical experience disproving theory. I have used adrenalin extensively for the relief of asthmatic attacks during the last five years, and in a large number of cases I have noted its effect upon the blood pressure. I have found that immediately after an injection there is a rise of pressure varying from 5 to 20 mm. of Hg. This is followed by a fall which usually brings the pressure below its original level.

I believe that it is only when the pressure begins to fall that relief of asthma is felt. In every case in which I have seen adrenalin frequently used a permanent reduction of the pressure has resulted. In one case a patient has had several thousand injections, and his blood pressure is now below 100 mm. I consider that the dosage is very important. The effect varies so greatly in different persons that I do not think more than 5 minims should be given for the first dose. Most patients soon acquire a certain amount of tolerance, and after a few injections feel no unpleasant initial symptoms. As a rule, the dose required to give relief can be gradually reduced. I have had no experience of giving adrenalin in large doses for syncope, but from what I have seen of the effects of small doses in certain cases I should say that large doses should always be looked upon with suspicion.—I am, etc.,

London, W., March 1st. ALEXANDER FRANCIS.

THE POSITION OF CHLOROFORM.

SIR,—In the last few weeks several cases of death during surgical operations, performed under various kinds of anaesthesia, have been recorded in the medical and lay press. From the evidence it appears to me that none of these deaths could have occurred if chloroform, properly administered, had been the anaesthetic employed. In order to make this matter clearly intelligible a brief retrospect is necessary. Ever since chloroform was discovered by the late Sir James Simpson there have been two distinct schools of anaesthesia, which, for convenience, we may still call the Edinburgh and the London schools. The Edinburgh school, represented by Professor Syme, watched the breathing alone for the effect of the anaesthetic—"you never see anyone here with his finger on the pulse while chloroform is given": the London school watched the breathing and the pulse as well.

At first sight it might appear that the anaesthetist who watches the pulse as well as the breathing is doing more for the safety of his patient than he who watches the respiration alone. This, however, is not the case. The anaesthetist who watches the pulse for the effect of chloroform is doing the one thing which makes the administration dangerous, and which must make a certain percentage of deaths inevitable. A study of the known action of chloroform makes this manifest. The uncomplicated effect of chloroform is to cause a regular and continuous vasomotor fall of the blood pressure, with, first, unconsciousness, then anaesthesia, and then stoppage of the respiration; the heart afterwards runs down and stops. Suppose that in a number of experiments the pulse alone were watched for the effect of poisoning by chloroform. The first sign of heart failure given by the pulse would merely indicate to the experimenter that the breathing had stopped some time before, and every case would die. In the second place, clinically, to prevent the inhalation of an overdose and to keep the heart intact during anaesthesia, the whole of the chloroformist's undivided attention must be concentrated on the patient's breathing. It is evident from these two facts that the danger of watching the pulse in an ordinary chloroform administration is fairly proportioned to the amount of attention the chloroformist bestows upon it. It follows further that to watch the pulse at all for the effect of chloroform is to introduce an element of danger into the administration which has no existence when the breathing alone is properly attended to.

The Hyderabad Commission on Chloroform, with Sir Lauder Brunton and Sir Gerald Bomford as its working members, was appointed by the Nizam to decide which of the two schools was right, the Edinburgh or the London school. The Commission proved that the Edinburgh method of chloroform administration is safe and the London method unsafe. The final outcome of Brunton's and Bomford's all-important experimental discoveries was that the Edinburgh method of giving chloroform was brought to perfection, its safety being now assured in every surgical case which is fit for an operation. Unfortunately, the work of the Hyderabad Commission has been boycotted in London, and as a consequence the Edinburgh method is ignored, and dangerous principles of anaesthesia are alone taught in all our medical schools. This teaching bears fruit in the shape of occasional fatalities, to account for which the terms "heart failure," "chloroform syncope," "the status lymphaticus," and "shock" have crept into everyday use, and are accepted without question in the coroners' courts, the usual result of the inquests which are held on these cases being that the patient is blamed for dying, while the anaesthetist is praised for his efforts to revive him. Nevertheless, such meaningless expressions as heart failure, chloroform syncope, the status lymphaticus, and shock are of great importance, since they illustrate the vital differences which still separate the London and the Edinburgh schools of chloroform administration. According to the former, they presuppose dangerous conditions in anaesthesia which are not only unknown to the latter, but can never occur when chloroform is properly given. There must be something radically wrong with surgery when the very pleas which are honestly advanced by the London school in justification of deaths under anaesthetics are regarded by the Edinburgh school as the most convincing possible proof of

maladministration. If what I have said is true—and it can readily be confuted if it is not—the whole position of surgical anaesthesia is eminently unsatisfactory and demands the most searching examination by the British Medical Association. It is a grave reproach to surgery that dangerous methods of anaesthesia are employed in English hospitals and taught in English medical schools, while a method of giving chloroform is available which is easy to carry out and easy to teach, and is entirely free from risk.—I am, etc.,

Hove, March 9th. E. LAWRIE.

THE PORTRAITS OF BURNS.

SIR,—Though I read with very great interest Dr. Keith's discourse on Shakespeare and Burns,[1] and while I consider that by his profound and novel study he has laid all true Burnsians under a deep debt of gratitude, I nevertheless feel I must protest against his statements that the Scottish poet had a "long, aquiline nose," and that "those who have seen the Raeburn portrait have seen Burns."

In his own department Dr. Keith is supreme, and there must be few who would dare to controvert any conclusion based by him on anthropological knowledge. But the plain man has ways of his own—which, of course, may be quite wrong—of arriving at conclusions, and for long he has wrestled with this particular Burns problem. Thus it is that I venture to differ from Dr. Keith, and would respectfully draw his attention to the following arguments, which to me appear incontrovertible:

1. Most, if not all, Scotsmen who have studied the question believe that there never was a portrait of Burns by Raeburn.

2. The differences between the Nasmyth and the "Raeburn" portrait are so extreme as to preclude the possibility of the two pictures having been painted from the same model. The hair of the Nasmyth is smooth and orderly, while that of the "Raeburn" is rough and unkempt. The large, round, deep, and sunken eye-sockets of the Nasmyth are in no way comparable to the long, oval, shallow, and superficial ones of the "Raeburn"; moreover, it seems to me, with all respect to Dr. Keith, that the former accord better with his remarks about the orbits of Burns's skull, of which he gives a diagram in Fig. 11. The medium-sized (some would say small) and slightly tip-tilted nose of the Nasmyth is quite different from the long aquiline organ with drooping point of the "Raeburn." In the Nasmyth the upper lip is so long as to be remarkable, in the "Raeburn" this is not so. Further, the thin firm lips and shut mouth of the Nasmyth are in marked contrast to the somewhat open mouth and thick lips—the upper pouting and the lower overhanging—of the "Raeburn." In the Nasmyth the chin is large and square, and the poet is heavy jowled; in the "Raeburn" the chin is receding, small, round, and almost pointed, while the lower jaw is inconspicuous. The difference in the length of the neck is of less moment, for, though in the "Raeburn" the neck is practically non-existent, it is very short in the Nasmyth. Finally, the cheek bones of the Nasmyth are more prominent ("higher") than those of the "Raeburn." How can these two portraits, so fundamentally different, represent the same man?

In addition to Nasmyth, Burns gave sittings to other artists—namely, Taylor, house and coach painter; Beugo, engraver; Miers, silhouettist; and Reid, painter of miniatures. These various craftsmen worked independently of one another, and, though it cannot be said that any one of their works is the very counterpart of Nasmyth's, it is readily discovered that they all agree in endowing Burns with the same characteristic features that Nasmyth gave him. The *retroussé* nose is not evident in the Taylor portrait, but is quite decided in the Beugo engraving, and becomes positively clamant in the silhouette and miniature, which are full profiles. Could we have stronger proof that Mr. Barrington Nash's "Raeburn" is not a portrait of Robert Burns?

3. In the *Annual Burns Chronicle* for 1895 there are gathered together by Mr. D. McNaught portraits of the direct descendants of Robert Burns. A strong family likeness can be traced through them all, and though it cannot be said that any of them, with one exception, bears *en masse* a striking resemblance to the Nasmyth portrait, it is quite easy to show that when analysed they possess all the details of feature that distinguish the Nasmyth from the "Raeburn," already enumerated by me. Besides, where pose and hair admit, the characteristics of the cranial cast as pointed out by Dr. Keith are manifest—long, broad head, flattened crown, and bulging occiput. In the case of the poet's great-granddaughter, Miss Margaret Constance Burns Hutchinson, the resemblance to the Nasmyth portrait is positively startling, and has frequently been commented on. It is, of course, admitted that Nasmyth idealized his subject; at the same time it must be obvious to all that he took no liberties with truth.—I am, etc.,

East Kilbride, March 3rd. JOHN W. FINDLAY, M.D.

[1] BRITISH MEDICAL JOURNAL, February 28th, 1914.

PELLAGRA.

SIR,—While pellagra has long been known to occur in Italy and Spain, where the inhabitants partake of maize, usually in the form of *polenta*, which is obtained from its raw flour, it is unknown in the Canary Islands, where the staple nourishment of the people consists of *Gofio*, which was the food of the Guanches, that fine race of fair-skinned athletic men which peopled those islands down to the time of Columbus. Having no other cereal but oats, they made their *Gofio* from it. After carefully roasting the grain in large earthenware pans, it was ground in stone hand mills; it was then mixed into a paste by shaking with either milk or water, generally the latter, in small bags made from the skin of young goats, and kneaded.

The rural population of the Canaries in the present day lives mainly on this excellent food, prepared in the same way as at the time of the Guanches—that is, by first roasting and then grinding a mixture of equal parts of wheat and maize.

Pellagra has never been known to occur in the Canary Islands, as far as I know, and it would not have escaped the notice of many physicians familiar with it in Spain who have practised in these islands. The explanation, to my mind, is very simple. The roasting of the grain destroys the injurious element, whatever this may be, and prevents the appearance of this illness.

Some twenty-six years ago a famous American orthopaedic surgeon, the late Dr. Charles Fayette Taylor, visited Tenerife. Being very much struck by the healthy look of the people and the extreme rarity of rickets and deformities, he took the pains to inquire carefully how the peasants were fed. He was so struck by the merits of *Gofio* that on his return to the United States he published a long and enthusiastic article recommending it as the ideal food for the people of his country, where maize was so abundant and cheap.

Before Indian corn can be discarded in the etiology of the sporadic cases of pellagra occurring in England, as recent writers appear to me to do somewhat hastily, it would be worth while to inquire closely whether maize in some form or other can be positively excluded in recently observed cases, or whether, on the other hand, such patients have at some time or another partaken of it in the form of some sort of flour. Until this is done, considering the large amount of evidence in Italy and Spain connecting pellagra and maize, and also that in the United States, where there are many pellagrous patients and maize and its flour are extensively consumed, I do not think that Indian corn can be safely dismissed from the etiology of this illness.

On the other hand, considering that another malady, beri-beri, has long been associated with the eating of rice, and that much depends upon the form in which it is consumed, also that many of the symptoms of beri-beri are due to peripheral neuritis and other nerve changes, it is logical to conclude that maize or whatever pernicious principle it sometimes contains similarly affects the nervous system, and thus brings about pellagra.

The good and healthy condition of the teeth is another striking feature amongst the people fed on *Gofio*, as it was amongst the Guanches, judging by the skulls that are preserved of that wonderful race of men, who are also of interest to modern surgery, as they used to practise successfully the operation of trephining, notwithstanding that their only instruments were sharp pieces of obsidian stone.—I am, etc.,

Tenerife, Nov. 17th, 1913. GEORGE V. PEREZ.

THE RELATION BETWEEN THE BOVINOID TUBERCLE BACILLI FOUND IN MAN AND TRUE BOVINE TUBERCLE BACILLI.

SIR,—With reference to the valuable communications on bovine tuberculosis which have appeared recently in the JOURNAL, there are some important points which require further attention.

In the first place, it must be noted that although some investigators—for example, the British Royal Commission, Frazer, Philp Mitchell, Raw, Weber—have found bacilli of bovine type in tuberculous children, such evidence is no proof that the children were infected by tuberculous cattle: the source of infection may have been other human beings infected with tubercle bacilli of a similar bovine type. Working quite independently of the writer, Ralph Vincent also has arrived at this conclusion.

Secondly, it has not yet been proved how many—if any at all—of the tubercle bacilli of bovine type found in the tuberculous children were really identical with the true bovine tubercle bacilli of cattle. It must be remembered that, up to the present, the assumption of this identity has been based on evidence obtained by very careful cultural observations, and the study of the pathogenic effects produced by each of the two kinds of bacilli *on animals alone* but not on man. All the reliable evidence so far obtained from observations of the effects of the bacilli *on man* strongly suggests that the true bovine tubercle bacillus is not strictly identical with the bacillus of bovine type found in tuberculous human beings. Thus, by inoculations made on himself, Carl Spengler demonstrated that whereas the true bovine bacilli are relatively harmless to man,[1] on the other hand, the bacilli of bovine type found in human beings are exceedingly virulent and capable of causing extremely severe toxic symptoms—indeed, the latter type nearly caused death.[2] Spengler's observations are confirmed by similar investigations made by v. Baumgarten[3] and Klemperer,[4] who likewise demonstrated the relative harmlessness of the true bovine tubercle bacillus to human beings; the investigations of the Italian and Japanese Governments carried out under the direction of Gosio and Kitasato, respectively, are additional confirmation; further important evidence which harmonizes with Spengler's conclusions is to be found in the researches carried out by Koch, Kossel, Möllers, Weber, Emmett Holt (of New York), Ungermann, and Burnet, amongst many others.

Spengler has especially studied the tubercle bacillus of bovine type found in man; he calls this bacillus *Typus humano-longus*.[5] Under certain conditions the virulence of *humano-longus* is greatly diminished; this would partly account for the mild course of the disease seen in so many cervical gland, bone and joint cases in children. Further, it is very probable that the true bovine bacillus plays an important part in immunizing children against *humano-longus*, just as the virus of vaccinia immunizes so well against variola. Indeed, from the results of his researches and other evidence, Spengler has advanced the hypothesis that the true bovine tubercle bacillus may be regarded as a jennerized *humano-longus*, the latter, by animal-passage on cattle, having lost its severe pathogenic action towards man, thereby becoming changed into the relatively harmless true bovine tubercle bacillus. In his admirable communication on the subject,[6] Clive Riviere has also alluded to the probable immunizing action of the true bovine bacillus on man under the ordinary conditions of life.

Since morphological and cultural tests, and animal investigations, do not appear to be capable of helping us to distinguish a relatively harmless true bovine bacillus from a *humano-longus* which is highly dangerous to man, therefore a laboratory method for distinguishing between the two is urgently needed.

Possibly, in the recent ultramicroscopic researches[7] carried out by Spengler on the toxins of the tubercle bacilli some solution of the problem may be found. In this communication only a few interesting points can be touched on concerning these investigations. Bouillon pure cultures of the tubercle bacilli to be tested are prepared. The emulsified surface-growth on each flask of bouillon is well shaken with the liquid in the flask and, after standing, the contents are filtered. The filtrate—the "toxin"—is diluted to a strength of 1 in 10 with saline, and then examined in an ultra-microscope arranged for investigations on colloids. The following have been observed:

Type of Tubercle Bacillus from which the Toxin was Obtained.	Colour of the Cone of Light Observed in the Ultra-Microscope.
Typus humanus brevis, Koch.	Grass green.
Typus humano-longus, Spengler. (The tubercle bacillus of bovine type cultivated from human beings.)	Greenish-blue.
True bovine tubercle bacillus isolated from cattle.	Soft blue (N.B.—*No trace of green*).

In those toxins which I have examined there has been no difficulty in distinguishing between the soft blue light obtained with the toxin of true bovine bacilli and the distinctly greenish-blue light characteristic of the toxin of *humano-longus*.

Obviously, it is urgently necessary to repeat these observations, using tubercle bacilli of bovine type obtained from a very large number of tuberculous human beings resident in many different districts and countries.

Thus it will be seen that a great deal more work remains to be accomplished before we shall be in a position to state that the tubercle bacilli of bovine type found in tuberculous human beings have been communicated from tuberculous cattle to man. Some cases may be found to be due to cattle, but, in order to prove this, the necessary evidence must be obtained.

In the meantime it is extremely desirable that every effort should be made to ensure a clean and pure milk supply. Amongst others, Lord Rayleigh, Sir John Byers, and Mr. Robert Mond have shown how this can be accomplished in a practical manner.—I am, etc.,

WALTER H. FEARIS.

Department of Bacteriology, King's College, London, W.C., March 7th.

[1] Carl Spengler, *Deut. med. Woch.*, 1904, No. 31; 1905, Nos. 31 and 34.
[2] Carl Spengler, *Zeitschr. f. exper. Path. u. Therap.*, 1909, Bd. VI.
[3] v. Baumgarten, *Berl. klin. Woch.*, 1901, p. 894.
[4] Klemperer, *Zeit f. klin. Med.*, Bd. LVI, p. 241.
[5] Carl Spengler, *Tuberkulose- und Syphilis-Arbeiten*, H. Erfurt, Davos, 1911, pp. 405, 446.
[6] BRITISH MEDICAL JOURNAL, January 24th.
[7] Carl Spengler, loc. cit., p. 451 et seq. Carl Spengler, L'Immunité Sanguine, *Journ. Méd. Français*, August 15th, 1913.

THE FALLING BIRTH-RATE.

SIR,—Dr. Binnie Dunlop suggests that there exists some causal relationship between a falling birth-rate and a rising death-rate in France. The falling birth-rate is due to the skill with which the art of preventing conception is practised by the vast majority of married couples; the high death-rate is due to the neglect of sanitation which prevails throughout the whole country. The French death-rate has long been, and still remains, much higher than that of any of her northern neighbours. In Paris the deaths from tuberculosis and typhoid fever are, as a rule, two or three times more numerous in relation to population than those in Berlin and London. The population of France during the past thirty years would have shown a decrease had it not been for immigration—the gradual naturalization and assimilation of foreigners, a million to a million and a half, sojourning on her soil. The French have been carrying on a gigantic system of artificial selection; and, unless we are to believe that the firstborn are as a rule the best of the possible broods, we must doubt whether the selection has been favourable to the physiological progress of the race. The effects upon the physique and the *moral* of the parents and offspring where the family is restricted to an average of two have been discussed by the late M. Bertillon, and they were exhaustively examined by M. Desmoulins in a book translated (from the tenth edition) into English some time ago. From the point of view of the statesman, the question was handled by two distinguished ex-Prime Ministers at the Paris Hygiene Congress in May last. M. Léon Bourgeois and M. Ribot both enlarged upon the growing peril in which France stands owing to her enormous numerical inferiority to her mighty neighbour and the widening disparity from year to year. M. Ribot ended his speech with these words: "This country is sick, and it ought to be proclaimed aloud. The French race is withering. All the powers of Government must be concentrated upon grappling with this peril." Whatever doubt may exist with regard to the quality of the

individual citizens, there can be no dispute about the numbers.

In 1871 the populations of France and Germany were about equal; now France has about 40,000,000, Germany about 70,000,000. France has not enough people for her home requirements; she has none to send to her vast oversea possessions. Human nature on one side of the Channel does not differ fundamentally from that on the other, and similar causes acting upon our own people must in time produce like effects. The question of numbers has once more been gone into thoroughly by Dr. Dudfield. His report was summarized in the *Times* of February 3rd. If, as he believes, the fall in our birth-rate goes on as at present, we shall in a few years be in a position similar to that of France. We shall be no longer able to make any response to the cry for people of their own blood more and more insistently put forth by our colonies and dominions—territories ten or twenty times greater than those of France, and all suited to European settlers.—I am, etc.,

Earlswood, Feb. 21st. HENRY SEWILL.

SALARIES OF RESIDENT MEDICAL OFFICERS.

SIR,—I think it is time the British Medical Association took some steps in regard to the salaries paid by public authorities to resident and assistant medical officers of hospitals and sanatoriums.

The Association has been successful in obtaining minimum salaries of £250 per annum for all non-resident whole-time appointments, whereas advertisements carrying salaries as low as £100 per annum are published in the columns of the BRITISH MEDICAL JOURNAL for Poor Law fever hospital and sanatorium resident appointments. Board and lodging for a single man is not worth more than £80 per annum. It is therefore utterly irrational that a public authority should be compelled to pay at least £250 per annum for some of its officers, while officers under the same authority holding resident appointments are only receiving a total of £180 to £200 in cash and kind.

The resident officers work for longer hours than school or assistant medical officers of health, having seven days' duty a week besides some night work, and only fourteen to twenty-eight days off duty per annum, as public holidays and Sundays make no difference in the routine of an institution.

The Astor Report suggested a commencing salary of £500 per annum with a house for medical superintendents of sanatoriums, but salaries offered so far are £100 to £300, with demands for unmarried men, as the authorities will not go to the expense of providing married men's quarters.

The superintendence of a sanatorium demands considerable clinical and administrative ability, besides a large amount of tact in dealing with their very difficult patients. Men of suitable experience are not likely to be attracted by the salary and prospects at present offered. I therefore think the Association should insist on salaries of not less than £180 per annum with board and lodging for all whole-time resident appointments under public authorities, excluding the voluntary hospitals. For sanatorium superintendents or principal medical officers the salaries paid should not be less than the value of our services as estimated by a departmental report—namely, £500 per annum with house. Tuberculosis officers are paid this salary, so there is no reason why resident officers holding responsible positions should not be equally well remunerated.—I am, etc.,

March 1st. R. M. O.

DIAGNOSIS OF SYPHILIS.

SIR,—The Public Health Committee of the Borough of Wimbledon have made arrangements for the carrying out of the Wassermann reaction on behalf of the residents in this district. I am afraid that Dr. Parkes's arrangements at Chelsea, as set forth in his letter of November 22nd, 1913, would to a certain extent defeat his objects, as he demands that the name of the patient shall be supplied. My authority have agreed that no names shall be supplied, so that there shall be no question of anything being revealed. In order to get over the difficulty of Section 133 of the Public Health Act the practitioners are asked to certify (1) that the patient on whose behalf the Wassermann test is being made is a resident within the borough, and (2) that the patient is not in a position to pay the fee for such an examination. Thus I think there will be no difficulty which might be encountered if the patients feared that their names were to be given to a third party.—I am, etc.,

Wimbledon, March 9th. ELWIN H. T. NASH, Medical Officer of Health.

The Services.

THE ARMY ESTIMATES.

A DIGEST attached to the Army Estimates affords much help in an attempt to analyse the vast mass of statistics contained therein. We can only note a few of the more prominent items in the numbers, distribution, and cost of the army.

Numbers.

In the Regular Army Establishments, exclusive of India, the number of officers and men of all ranks for 1914 is 186,400 as against 185,600 in 1913. It is well known that at present the number is not up to that nominal strength. There is a shortage of 8,000 men in the infantry, which is accounted for by an abnormal number passing to the reserve, and by disturbance in recruiting, attributed to "brisk employment, emigration, and exceptional demand of men for the navy." To stimulate recruiting advertisements on the advantages of the army have of late been spread over the entire kingdom, for hitherto nearly all official attention has been paid to the town-recruiting centres to the neglect of whole districts in the United Kingdom where a soldier is seldom, and a recruiter never, seen. The Secretary very justly thinks that "the recruiting problem is bound up with the question of civil employment to ex-soldiers."

Finance.

The following shows the effective and non-effective charges in a comparison of years:

Year.	Effective.	Non-Effective.	Total.
1909–10 ...	£23,647,000 ...	£3,788,000 ...	£27,435,000
1914–15 ...	£24,888,000 ...	£3,957,000 ...	£28,845,000

It is averred that the actual cost of the army is only a quarter of a million more now than the lowest point since the war, and this notwithstanding a new million provided for aviation. The growth of pension charges is automatic, and cannot be controlled.

Aviation.

It is stated that the progress in aeroplane construction is so rapid and continuous that it would be unwise to move too fast; while liability to become suddenly unserviceable is so constant that it is impossible at any given time to say how many machines are effective.

Special Reserve.

This is not in a satisfactory position, but it is hoped that the measures being taken will increase it to an effective strength; the strength of officers and men of all ranks is at present about 81,000.

Territorial Forces.

On January 1st, 1914, the Territorial forces numbered 9,366 officers and 239,000 other ranks, being 72 officers more and 14,200 men fewer than in 1913. This serious reduction is ascribed not to unsatisfactory recruiting, but to an abnormal exodus of 61,000 men in 1913, on completion of a four years' engagement, being 23,000 above 1912.

The War Secretary lays great stress on the sufficient training of the men in camps of instruction, and with this view has, in order to assist the "fifteen-day camper," increased the bounty from 20s. to 30s. for yeomanry, and to men of other arms up to 20s. Such bounties, together with other grants for training of officers and cadets, will increase the estimates by about £200,000, but the money will be well spent if the object in view is attained.

National Reserve.

The National Reserve has increased from 190,000 on January 1st, 1913, to 217,000 on the same day in 1914; of this 13,000 officers and men have taken Class I obligation (service at home and abroad), and over 45,000 Class II (service at home).

It has been a marvel to many of the public ever since the memorable review, June, 1912, in Hyde Park—which, it was then stated, astonished the War Minister—that the War Office has not made more of this great and fine body of ex-soldiers. Of course not a few of them may from age

and infirmity be unfitted for active work; yet there is a vast body of trained men, who, with weapons in their hands which they know how to use, could line hedges and ditches against an invader with good effect.

India.

The strength of the regular European army, all ranks, in India is for 1914-15, 75,897, against 75,886 in 1913. There are 321 R.A.M.C. officers on the Indian Establishment.

Royal Army Medical Corps.

The establishment of the R.A.M.C. (exclusive of India) under Vote A, page 12, is as under:

Officers.		Other Ranks.		Total.
663	...	3,797	...	4,460

Of the officers 41 are quartermasters; and of the total officers about 140 are serving abroad in the Colonies and the rest at home. The cost is about £331,000 a year, not including about £107,000 for the nursing establishment, civilian practitioners, medicines and appliances, R.A.M. College, etc.

The total number of army medical officers seems to be about 940, with in addition a few in the higher administrative grade; which may be taken as the number required for the efficient working of the Corps at home and abroad.

The greatest strength of the then Army Medical Department is recorded in the Blue Book No. 1 for 1861 as about 1,140, the result of the influx in Crimean and Mutiny times. From that time it fluctuated, but gradually sank to about 800 during the controversy over unification and reorganization, and at that figure the service became unworkable for proper duties and reliefs. Then the medical service was lifted out of a rut of contumely and neglect, and a highly efficient and respected Royal Corps formed. With what result? Let the present Secretary of State for War bear most generous testimony in the following extract from the White Paper just presented to the House of Commons:

Owing to the admirable work accomplished by the Royal Army Medical Corps, and to the greater care with which recruits are selected and trained, the health of the army has of late years improved to a remarkable extent. Full statistics will be found in the report of Sir Launcelot Gubbins on the Health of the Army for 1912, recently published; but I may here record that as compared with the averages for the period 1889 to 1898, admissions to hospital have fallen from 997.3 per 1,000 to 426.3; deaths from 9.03 to 3.26; invalids sent home from 26.56 to 8.42; invalids discharged from 15.36 to 8.25; and the ratio constantly sick from 59.85 to 23.72.

These figures include India and the Colonies as well as the United Kingdom. The army, in short, is extremely healthy, and as compared with the years before the South African war, some 7,000 fewer men are absent from duty through being in hospital.

THE REWARD FOR RESEARCH IN INDIA.

THE following letter has been received from Professor W. J. Simpson, C.M.G.:

I read with much interest and regret the reply of the Indian Government to Sir Ronald Ross's letter (BRITISH MEDICAL JOURNAL, February 21st, p. 456), asking whether one of the higher scale pensions which are sometimes given to Indian medical officers could be granted to him. One would have thought that the Indian Government would have been delighted to seize the opportunity of showing their appreciation of the valuable services of one of their officers and of one who has been the means of bringing such high honour to the Indian services.

What has the Indian Government done for him? Absolutely nothing. Yet there is no doubt of the value of his discovery to India. His work, carried out under great difficulties in India, and largely at his own expense, has benefited to an enormous extent the community of which the Indian Government has charge, and it is now the recognized basis for the prevention of malaria, not only in India but in every part of the world. Surely scientific work of this magnitude should not only be recognized but also rewarded by those who have chiefly benefited by it. The most suitable method of appreciation would be the very practical one of giving him a special pension.

INDIAN MEDICAL SERVICE.

THE PUBLIC SERVICES COMMISSION.

Madras.

THE Royal Commission on the Public Services in India took evidence about the Medical Department at Madras on February 5th and 6th. Major G. G. Giffard, C.S.I., I.M.S., and Mr. A. P. Fernandez, Civil Surgeon of Rajahmundry, sat as co-opted members of the Commission, to represent the Imperial and Provincial Services respectively.

Surgeon-General W. B. Bannerman, C.S.I., Head of the Madras Medical Service, was the first and most important witness. He stated that he had twenty-nine and a half years' service. There were five Indians in the Indian Medical Service in Madras Presidency. None of them had any special qualifications, only pass degrees. While in military employ, a medical officer could, if energetic, keep up his practice. Sir Ronald Ross made his opportunities for achieving his reputation while in military employ in South India. If more station hospitals were established, it would lessen the number of Indian Medical Service men desirous of civil employment. It would be well to have a sanitary service for the whole of India. Indian Medical Service officers joining the sanitary service had to possess a diploma in public health. Almost every professor in the Madras Medical College had a special degree in his own subject. It was well to have the opportunity of interchange between men working in the field and those working at research. He was not in favour of employing private practitioners in Government hospitals as honorary surgeons in order to increase their experience. The teaching in the local medical college was not equal to that in England owing to lack of staff and of special departments. He had frequently to refuse leave of officers owing to insufficiency of the leave reserve. Military assistant surgeons should be educated up to the same standard as civil assistant surgeons. There had been instances of officers of the Indian Medical Service being relegated to military duty as unsuitable for civil employ. In Madras there were forty-one private practitioners, of whom six were Europeans. Of these only Dr. Nair and Surgeon-Major Clarence Smith had special degrees. Fewer men were now going up for the Indian Medical Service, and competition had fallen off. No difficulty was experienced in getting qualified men as professors in the medical colleges. There would be no difficulty in filling these posts by specialists from England if a sufficient rate of pay were given. But to appoint outsiders would affect recruitment for the Indian Medical Service. He did not consider that private practitioners should be placed in independent charge of wards in Government hospitals. He thought that Indians should not be allowed to compete for the Indian Medical Service unless they had had a three years' training in England, but for passing the examination the training in Madras was sufficient. He would like to see the term "subordinate medical service" abolished and replaced by that of "Madras Medical Service."

Major A. P. Miller, I.M.S., Chemical Examiner, was in favour of a three years' training in England for Indians before they were allowed to go up for the Indian Medical Service. That might reduce the numbers, but would improve the quality. A large increase in the numbers of Indians in the Indian Medical Service would affect recruiting, not only for the Indian Medical Service, but for all Indian services. Medical officers, on joining, should be trained for some time in a large general hospital before going on to military duty. He was opposed to appointments in the Madras Medical College being made by the Government of India, which had little acquaintance with the work of men in Madras. He considered that the salaries of Indian Medical Service officers should be increased by one-third. The Family Pension Fund was unpopular; it was the general belief that the actuarial basis was incorrect.

Major M. N. Chowdhuri, I.M.S., Civil Surgeon, Guntur, was in favour of three years' European training for Indians before they were allowed to compete for the Indian Medical Service. Newly joined medical officers should spend six months in a general hospital before joining a regiment. Competent professors could be found in the Indian Medical Service. The appointment of outsiders to these posts would affect recruiting. The work of a district medical officer was so heavy and his duties so varied and numerous that he had no time for research. He had never heard of sepoys objecting to Indians as regimental doctors.

Captain A. W. J. Lynsdale, I.S.M.D., Assistant Professor of Materia Medica, said that two civil surgeoncies in Madras were open to military assistant surgeons. His Service asked for more pay and for study leave. He did not think that the general educational standard for entrance—that of the Cambridge Senior Local Examinations—required to be further raised.

The Hon. Dr. T. M. Nair, Member of the Madras Legislative Council, said that he would retain the Indian Medical Service for general purposes, and to special posts would appoint individuals on contract. A war reserve was unnecessary. Such a reserve might be replaced by volunteers from among private practitioners, who would respond with enthusiasm in time of war. He had himself offered his services during the Boer war, but they were not accepted. He would allow private practitioners to work in Government hospitals as honorary surgeons and physicians. He had himself worked for some time as honorary surgeon in the Madras General Hospital, but had resigned because his position was not sufficiently recognized. Professors were changed too frequently. He would import special men from England as professors on adequate rates of pay. Indian Medical Service officers might be attached to them as assistants. The prospects of the provincial medical service were not encouraging. The best Indian talent was not attracted to the study of medicine. Great part of the *mofussil* had no attraction for private practitioners. A Government service was necessary for those districts. He contemplated the abolition of private practice for Government medical officers.

Major W. A. Justice, I.M.S., Sanitary Commissioner, Madras, thought that sanitary officers should be acquainted with research work, though they need not be experts. He was not in

favour of amalgamation of the sanitary and bacteriological departments, though interchange of men would be of benefit.

Lieutenant-Colonel T. J. Macnamara, I.M.S., Inspector-General of Prisons, said that in Madras most superintendents of central gaols were not medical men. The system of appointing Indian Medical Service men as superintendents was best, both for economy and efficiency, as a separate medical officer was not required. The system of appointing non-medical superintendents had been given up in the other provinces. Men who entered as deputy gaolers were not likely to be successful as superintendents; nor was the appointment of police officers desirable. Indian Medical Service officers should join the department in their first four years' service and undergo training in a central gaol. Specially selected civil assistant surgeons might make satisfactory superintendents.

Dr. M. Vijiaraghavalu, private practitioner, admitted the necessity of maintaining a medical service, but thought that the question of a war reserve should be left to the military authorities. He was in favour of appointing qualified private practitioners as honorary physicians and surgeons in Government hospitals. He thought that more special hospitals for women should be established by Government. He would advertise in England and India for men to fill posts as professors.

Dr. C. B. Rama Rao, civil surgeon, Tellicherry, said that he represented the civil assistant surgeons. He had thirty-two years' service, and had been a civil surgeon nearly two years. He thought that his service should be called the "civil medical service." He would abolish departmental promotion examinations and give study leave. He advocated an increase of salary for his service; they got little private practice, had to work on Sundays and holidays, and often could not get the leave they had earned, owing to difficulty in relieving them. Assistant surgeons were not given sufficient opportunity of acquiring experience by the performance of major surgical operations. Some of the best men in his service had resigned, because they were dissatisfied with their condition and prospects. He would advertise for men to fill posts as professors. Some of these posts should be filled by Indians. He had himself been an assistant professor for twenty years. Others had held these posts for twenty-four, nineteen, and fifteen years, and were qualified to be professors. Only a few civil surgeoncies were open to assistant surgeons. He thought the military reserve unnecessarily large. He would hand over a few wards in all hospitals to private practitioners.

(To be continued.)

TERRITORIAL FORCE, R.A.M.C.

Scottish Hospitals.

THE annual "at home" of the Third and Fourth Scottish General Hospitals staffs was held at the head quarters, Yorkhill Parade, Glasgow. Colonel Napier, who presided, said that the hospital units were at full strength, and a good class of recruits had replaced the time-expired men. During the past year the training at the Victoria Infirmary had been successfully carried through, and this would be very serviceable to the men when they went to their annual camp, which would be at Cosham this summer instead of Shorncliffe. During the evening Sergeant-Major Thomson showed an excellent set of lantern slides illustrating camp life and active service with the Royal Army Medical Corps.

At the annual meeting of the Highland Division Nursing Service Guild held at Aberdeen on March 4th, with Lord Provost Maitland in the chair, Colonel Stockwell, D.S.O., explained that the buildings had all been allotted, and found suitable for the accommodation of the Highland base hospital, but where these buildings were he was not at liberty to say.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—P. H. Bahr, R. M. Courtauld.
M.B.—W. A. Anderson, M. Avent, E. J. Bradley, A. C. Clifford, G. D. East, J. M. Jarvie, G. N. Stathers, E. S. Taylor, R. W. Willcocks.
B.C.—W. A. Anderson, E. J. Bradley, A. C. Clifford, G. D. East, G. N. Stathers, R. W. Willcocks.

UNIVERSITY OF BRISTOL.

Appointments.

DR. NIERENSTEIN, Lecturer in Bio-Chemistry, has been appointed to deliver a short course of lectures in immuno-chemistry during the month of May. Dr. Rendle Short has been appointed a Lecturer in Physiology.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

AT the meeting of the Committee of the School, held on March 9th, it was decided to appoint Dr. B. Blacklock to the Directorship of the Runcorn Research Laboratory.

This laboratory was established in 1905 for the purpose of working up the material brought back by the various scientific expeditions which have been dispatched by the school from time to time to the tropics. The rapid accumulation of material and the large number of valuable scientific papers published by workers in the laboratory soon made it an important centre for research in tropical medicine. The collection of living trypanosomes and other parasites causing fatal disease in man and domestic stock in the tropics maintained at Runcorn for teaching and research purposes is one of the largest in the world.

Dr. Blacklock, who has had great experience of tropical diseases both in Africa, where he has spent three years, and in this country, is the fifth director of the laboratory. His predecessors were Dr. Wolferstan Thomas, now studying yellow fever in Manaos, Brazil; Dr. J. L. Todd, now Professor of Parasitology at the McGill University, Montreal; Dr. Anton Breinl, now Director of the Australian Institute of Tropical Medicine; and Dr. Warrington Yorke, now Professor of Parasitology at the University of Liverpool.

Obituary.

J. E. O'SULLIVAN, L.R.C.P. AND S.EDIN., J.P.,

FORMERLY REPRESENTATIVE OF THE LIVERPOOL DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

DR. O'SULLIVAN died at his residence, 37, Shaw Street, Liverpool, on the morning of March 6th. He had been in precarious health for the last six months or more, suffering from disorder of the heart and high blood pressure. It would appear that while suffering from a heart attack he intended to take a dose of sal volatile to relieve his sufferings and inadvertently took a solution of morphine instead.

Jerome Eugene O'Sullivan was a native of Cork, and was educated at Queen's College in that city and at Edinburgh; he took the diplomas of L.R.C.P. and S.Edin. in 1879 and had long practised in Liverpool. He settled in the district in which he afterwards practised at the time of his marriage about twenty years ago, and was a well known figure in the city, of which he became a magistrate in 1907. During the strike in 1911 he responded to the call upon him as a magistrate and took his full share of the responsibility when the Riot Act was read. By way of revenge bricks were thrown at the windows of his house, but Dr. O'Sullivan continued to discharge his duties fearlessly. Dr. O'Sullivan took a prominent part in the controversy with regard to the Insurance Act, of which he was a strong opponent. He was the Representative of the Liverpool Division for several years, and frequently spoke at Representative Meetings during discussions on the Insurance Act. He steadfastly refused to join the panel. Recently he was elected president of the local branch of the non-panel organization. Though many of his professional brethren disagreed with him on matters of medical politics, every one admitted his sincerity and consistency throughout the struggle, and admired the courage and ability with which he stated his views.

He was a staunch Roman Catholic, acted as physician to St. Francis Xavier's clergy, was honorary treasurer to the Catholic Blind Asylum, the Cripples' Home, Shaw Street, and a visiting justice at Walton Gaol. He was of studious habits and an omnivorous reader, but history was his favourite form of literature, and by his friends he was regarded as an authority on certain periods of French history.

SIR JAMES BARR sends us the following appreciation:

The medical profession is much the poorer by the death of Dr. J. E. O'Sullivan, as he belonged to a distinctive type which is not too common in the present day. He was always characteristically professional in his attitude and proud of his calling, though he much deplored many of the modern business tendencies. He was a man of considerable culture and wide reading, who could always, both in speaking and writing, express himself clearly and fluently in good polished English. He was also a good Latin scholar. He belonged to a medical family, there being three brothers in the profession, one of whom became a Jesuit priest, and the other, Dr. D. A. O'Sullivan, for some time a member of the Council of the British Medical Association, now of West Kensington, survives him.

He was a fiery and warm-hearted Celt, who held strong opinions and was never afraid of expressing them, but those who knew him intimately, as was my pleasure and privilege, always found in him a staunch and loyal friend.

We diverged as the poles both in politics and religion, but that never interfered with our friendship. Though he was a devout and strong Catholic he never sacrificed his independence of judgement, and I think among his intimate friends would be found more Protestants than Catholics.

He took a very active part in opposition to the Insurance Bill and Act, and was ever careful to point out that he was not opposed to the general principle of insurance but only to the provisions of the Act as they affected the medical profession. He frequently took the trouble to state that his opposition was not based on political grounds as he was a Radical and a Home Ruler, and often, to my amusement, he took up the cudgels on my behalf when I was falsely aspersed as being actuated by political motives. When I said to him, "Why trouble? what does it matter what a politician may say"? he would retort, "Oh! you must and should pay some attention to public opinion." This deference to public opinion was possibly one of his little weaknesses; he was a strong opponent and keen fighter, but always very sensitive to any attack on his honour. Although his practice lay largely among the insurance class he would not sacrifice principle for pelf, and under no consideration would he do anything which, in his opinion, was derogatory to the honour and dignity of the medical profession. He was elected the first president of the non-panel association in this district. His strenuous work in opposition to the Act told rather severely on his emotional temperament, and although he appeared always ready for the fray, only those who knew him intimately could judge the damaging effects of a hard day's fight on his hypersensitive nervous system.

As a magistrate he took an active part in civic duties, and his judgements were ever fair, though always tempered with mercy. During the great strike of 1911 he was one of the two mounted magistrates who accompanied the 18th Hussars and took an active part in quelling the riots. In his domestic relations he was exceedingly happy, and he has left a devoted wife to mourn his untimely end.

At the funeral there was a very large attendance of medical men and the general public.

THE sudden death of Dr. THOMAS O'CONOR DONELAN, Senior Assistant Medical Officer of the Middlesex Asylum, Napsbury, St. Albans, on February 22nd, from double pneumonia, at the early age of 41, was a loss to the institution with which he had been so closely connected for nine years, where his genial manner and efficient services were fully appreciated and his enthusiasms admired. To his friends—and he had many both in England and in Ireland—the loss was that of one they had learnt to respect in the ordinary intercourse of life, and in closer intimacy to love and to esteem. He was educated at Clongowes Wood College, Kildare; at the Royal College of Surgeons in Ireland, and the Catholic University School of Medicine, Dublin. After obtaining the diplomas of L.R.C.P.I. and L.R.C.S.I. in 1898, he became clinical assistant at the West Riding Asylum, Wakefield, and was subsequently assistant medical officer at Camberwell House Asylum and the London County Asylum, Cane Hill. Donelan always remembered that he was an Irishman and a Dublin man; and his friends always remembered that he was a Donelan of Sylanmore, near Tuam, one of the oldest and most respected families in the county of Galway. The sincerest sympathy is felt for his brothers and sisters in their loss.

BY the death of Dr. FORBES ROBERTSON MUTCH at the comparatively early age of 58 the medical profession and the people of Nottingham have sustained an irreparable loss. Born in the parish of Udny in Aberdeenshire, Dr. Mutch studied medicine at the University of Aberdeen, where he graduated M.B. and C.M. in 1879, and M.D. in 1886. Soon after graduation he settled in Nottingham, where he rapidly became one of the busiest, hardest working, and most conscientious medical practitioners in the city. As is so often the case with busy men, Dr. Mutch found time to devote much energy to the welfare of the community in which he lived; he represented in the Liberal interests one of the wards of the city for twenty-four years, and in 1898-99 occupied the office of sheriff. For nine years he was Chairman of the Health Committee, and on his resignation was presented with an illuminated memorial by the Nottingham Medico-Chirurgical Society, whose president he was during the session of 1898-99. In the same year he was appointed surgeon to the Nottingham Samaritan Hospital for Women, a post he held till the time of his death. He took a keen and active interest in the hospital and his work there, where his loss is sincerely felt by his colleagues and by all with whom he came in contact. In the early part of last year Dr. Mutch developed cancer of the colon, and in May had an operation with a view to the removal of the growth, which, however, was found impossible, owing to extension of the disease to the lymphatic glands and the liver. Short-circuiting—ileum to colon—was performed, which gave relief till a few months ago, when symptoms of obstruction came on, the obstruction eventually becoming complete. A second operation was performed. The ileum was reinserted into the caecum, and colotomy performed. Relief was again obtained, but, the disease continuing its progress, death took place from exhaustion on February 21st. As evidence of Dr. Mutch's courage it may be said that both operations were performed at his express desire, and that he continued to work till a few weeks before his death.

WE regret to record the death of Dr. GARNETT WILSON, of Glasgow, after a long and trying illness borne with great fortitude. He studied in Edinburgh, and after settling in Glasgow he soon acquired a large practice. His patients were devoted to him, not only because he was an able medical adviser, but because he was possessed of the kindly sympathy which is so helpful to suffering humanity. He was physician to the Glasgow Hospital for Diseases of Women for a number of years, and was always interested in every advance in his profession. He was an expert angler and a good musician, and his company was greatly enjoyed at many medical gatherings both in Edinburgh and Glasgow. He leaves a wife and two sons, the elder of whom is at present assistant to Professor Muir in the University of Glasgow. He was laid to rest in the beautifully situated cemetery at Largs on February 25th, and a large number of medical men and patients attended the funeral.

PROFESSOR PAUL SPILLMANN, who died on February 22nd, was born at Nancy, on February 16th, 1844, and had, therefore, just completed the three score and ten years which is the traditional span of human life. He began his studies in his native city, and in 1865 proceeded to Paris, where he gained by competition the coveted post of interne des hôpitaux in 1868. He took his doctor's degree in the following year, the subject of his thesis being syphilides of the vulva. He had already published in the *Archives Générales de Médecine* memoirs on pseudo-leukaemia and pulmonary tuberculosis; and in 1869 he contributed to the same periodical an article embodying the results of researches on the artificial production of tubercle. Returning to Nancy he became professeur agrégé in the medical school, and after fourteen years of teaching in that capacity he was in 1887 appointed professor of clinical medicine. That chair he held for twenty-seven years. He was elected a corresponding member of the Académie de Médecine in 1891, and an Associate in 1910. Among his contributions to medical literature are memoirs on tumours of the fourth ventricle, polyneuritis in mercurial poisoning, acromegaly, neurofibromatosis, xanthelasma in diabetes, the value of adrenalin extract in Addison's disease, the treatment of chlorosis with ovarian extract, and of cirrhosis of the liver by hepatine. He was the author of several books, among which may be mentioned a manual of medical diagnosis, which was translated into Spanish and Italian, and a treatise on rickets. He was as much at home in German as in French, and translated Frey's work on histology, Weber's on climatotherapy and balneotherapy, and Finger's on syphilis. Spillmann organized a campaign against tuberculosis in Nancy, and took a leading part in establishing a sanatorium. He was a man of amiable disposition and of great charity. He was beloved alike by patients and students.

Public Health
AND
POOR LAW MEDICAL SERVICES.

OPHTHALMIA NEONATORUM.

THE Local Government Board has issued an order making ophthalmia neonatorum everywhere notifiable throughout England and Wales. Hitherto it has been notifiable only in areas whose sanitary authorities have obtained special permission to include it in the schedule of notifiable diseases. The order defines ophthalmia neonatorum as a purulent discharge from the eyes of an infant commencing within twenty-one days of its birth. Every case is notifiable by a medical man unless previously notified by a certified midwife in attendance. The fee for notification by a medical man is 2s. 6d. when the case occurs in his private practice, and 1s. when it occurs in his practice as medical officer of any public body or institution. The fee to a midwife is also 1s. The notification must include precise information as to the date of the child's birth and of the onset of the disease, and the name and address of its parent or other person having charge of it. The order comes into force on April 1st.

Medico-Legal.

WORKMEN'S COMPENSATION CASES.

THE RISKS OF THE ONE EYED.

IN a case which came before the First Division of the Court of Session in Edinburgh on appeal from the Sheriff Substitute at Dumbarton on March 6th, the point was whether a miner who had lost the sight of one eye owing to an accident could refuse to resume his former occupation on the ground that the risk involved in the work was such as to entitle him to refuse.

The Lord President said that the appellant's incapacity due to the injury had ceased, and his wage-earning capacity was unimpaired. If another accident took place the result would be serious—complete loss of sight, but the risk of another accident had not been increased by the appellant's loss of one eye. The consequences of another accident could not be attributed directly or indirectly to the accident which befell the appellant in April last. To decide otherwise would be to decide that for a one-eyed man employment at the working face as a miner was always an unsuitable employment.

OBESITY.

In another case which came before the same Division on the same day the claimant, a miner, who had been injured by a fall of coal in 1910, claimed that his incapacity from work arose from the fact that he had been doing no hard work during three years, and that his age, 63, coupled with a natural tendency to obesity, had rendered him less fit for labour of any kind, so that he could only now engage in a sedentary occupation, such as that of watchman.

The Sheriff Substitute found that the incapacity from work had ceased, but the Division, Lord Johnston dissenting, recalled the judgement, and remitted the case to Sheriff Substitute to fix compensation.

The Lord President said that the injury incapacitated the workman for active work; and the result of his enforced abstention was to increase his natural tendency to obesity; so that when the immediate effect of the accident had come to an end, he was unfit to resume his former employment. However remote, however indirect, however improbable, however unnatural the result might be, nevertheless, if it was the result of the accident which befell him, he was entitled to have compensation. Here the chain of causation appeared to be complete.

Lord Johnston held that there was no true connexion between the workman's present state and the original accident, which left him in partial incapacity in the sense of the statute.

Medical News.

THE meeting of the Royal Society on Thursday next will be a "meeting for discussion." The topic for discussion will be the constitution of the atom, and the subject will be introduced by Sir E. Rutherford.

A DISCUSSION on the need for research in antenatal pathology is to be introduced by Dr. Amand Routh at a meeting of the Obstetrical and Gynaecological Section of the Royal Society of Medicine on April 2nd.

A LECTURE on climate as tested by fossil plants will be delivered by Professor A. T. Seward, F.R.S., of Cambridge, at a meeting of the Royal Meteorological Society at the Institute of Civil Engineers, Great George Street, Westminster, on Wednesday next, at 7.30 p.m.

THE annual dinner of the British Oto-Laryngological Society will take place on the evening of Wednesday, March 18th, at the Trocadero Restaurant, Piccadilly Circus, W. Mr. Charles J. Heath, F.R.C.S., will take the chair at 7.30 p.m.

A SERIES of post-graduate courses will be given in Dusseldorf during this year. The first course, addressed to railway and mining practitioners, will begin on May 4th. Particulars can be obtained from Professor Dr. Hoffmann at the Akademie für praktische Medizin, Moorenstrasse, Dusseldorf.

MEDICAL INSPECTOR WILLIAM C. BRAISTED has been appointed Surgeon-General of the United States Navy, in succession to Surgeon-General Stokes, whose term of service expired on February 6th. In making the appointment Secretary Daniels paid a warm tribute to the work done by the retiring surgeon-general, saying that never before had the standing and reputation of the medical corps of the navy been so high.

EXTENSIONS in several departments of the hot mineral baths of Bath have been opened this week, in readiness for the spring season. The demand for douche-massage treatment, the electric hot-air baths, and Plombières douches has been so great during the past few years that the corporation has been compelled to make facilities for these methods of treatment available until the larger scheme in contemplation for the development of the bathing establishment is carried out.

THE principal tables published in the annual summary issued by the Registrar-General for England and Wales will in future be issued with the quarterly return for December in each year, and the issue of the summary as a separate publication will be discontinued. In the issue for December, 1913, which has just appeared, the summary relating to the year 1913 occupies 28 pages, the tables being numbered XVI–XXVII. The price of this issue of the quarterly return is 1s.

THE British Fire Prevention Committee has appointed two subcommittees to test the relative efficiency of various liquids and chemicals (proprietary and non-proprietary) which are alleged to be of utility in dealing with outbreaks of fire. In accordance with its usual practice, the committee is asking a number of public offices, institutions, and factories to put at its disposal for testing purposes the materials or appliances habitually kept by them for the purpose indicated.

DR. J. N. PRING, as the result of an investigation of the occurrence of ozone in the atmosphere at various altitudes ranging up to 20 kilometres finds that in the Alps, at an altitude of 2,100 metres, the mean concentration of ozone is about 2.5 parts, and at an altitude of 3,600 metres about 5 parts by volume in 1 million of air. In this country the mean quantity found between ground level and an altitude of 20 kilometres was about 2 parts by volume in 1 million. No trace either of hydrogen peroxide or nitrogen peroxide could be detected in these cases.

AN Educational Inquiry Committee, of which Mr. A. G. Brackenbury, 8, John Street, Adelphi, W.C., is the secretary, proposes to establish in London a central office for recording efforts now being made to carry out educational researches. It is also proposed to provide funds for research grants. The subjects regarded as immediately calling for investigation are: The evolutionary development of the human mind and its practical bearing upon education; and the means of distinguishing between, and the methods of treating, the slow and the quickly maturing types of intellect. The annual subscription is: For members of committees, 10s.; for ordinary members, 5s.; for associates, 2s. 6d.

WE are asked to state that hospitals in the County of London, or within nine miles of Charing Cross, desiring to participate in the grants made by King Edward's Hospital Fund for London for the year 1914 must make application before March 31st to the Honorary Secretaries, 7, Walbrook, E.C. Applications will also be considered from convalescent homes situated within the above boundaries, or which, being situated outside, take a large proportion of patients from London. Applications will also be considered from sanatoriums for consumption which take patients from London, or are prepared to place beds at the disposal of the fund for the use of patients from London hospitals.

THE National League for Physical Education and Improvement informs us that in the North of England there have already been two or three successful prosecutions for vending as uninflammable a flannelette which did not deserve that description. The prosecutions were made possible by the Fabrics (Misdescription) Act, which was promoted by the league and came into force at the beginning of this year. Attention has frequently been drawn in these columns to the great loss of life, more particularly

among young children, brought about by the wearing of inflammable dress material, especially flannelette. Over a hundred fatalities due to the use of inflammable flannelette were recorded in various newspapers even during the last sixteen weeks or so of last year, despite the fact that for several years past endeavours have been made to draw attention to the risks involved.

At the request of the Dominion Government General Sir Ian Hamilton, Inspector-General of the Oversea Forces of the British Empire, made an official inspection of the Canadian forces last summer. His Report on the Military Institutions of Canada, recently issued, is most comprehensive and takes up the whole subject of national defence and the method of ensuring it. The purport of the inspection was to ascertain whether in sufficiency and efficiency the units of the Canadian army serve their intended purpose, and whether the organization, administration, and training gives in return the full value for the money expended. The inspector prefaces his report by the statement that nothing less is expected of him than the whole naked truth, and he proceeds to show wherein the various services are deficient for their purposes in numbers, organization, and training. With regard to the medical department of the Active Militia, with which we are more immediately concerned, he states that "in Canada, as elsewhere, the Medical Corps keeps well ahead of every other branch of the service in the completeness of its preparations for war—a state of affairs due largely to the whole-hearted support it receives from the medical profession in all its grades. A militia is, or rather ought to be, the expression for purposes of war of every form of national activity, and other departments of national life, such as the railways, the telegraph companies, etc., might well take a leaf out of the doctors' book, and set to work to organize themselves for the defence of their country." The units yet to be formed in order to complete the war organization are given in a special appendix, and we note that among "the most serious deficiencies" are seven field ambulances, including one cavalry ambulance. Reference is made to the voluntary aid detachment system which has been undertaken by the Order of St. John, which has already formed fifteen ambulance divisions and three nursing divisions. The inspector considers that "the units produced by this voluntary aid system are hardly yet in a position to render effective assistance on active service." It is but fair to state that the system had not then been two years in existence.

At the March afternoon meeting of the Eugenics Education Society, on March 5th, when Major Darwin presided, an interesting paper on education and eugenics was read by Mr. M. W. Keatinge, Reader in Education in the University of Oxford, who said that if it were the case that the aims of eugenics could most easily be attained through education those aims should in the main be dictated by the educationist rather than by the biologist. As a rule, however, the modern biologist virtually asserted disbelief in education as a factor in biology. But in spite of all that had been said to the contrary, education of the right kind was the chief instrument by which the aims of the eugenists might best be carried out. The science of education sought answers to two questions: Who should be educated, and what kind of education should be given to those selected for the privilege? In neither case could an answer be given except in terms of heredity and selection, for if education were to be effective there must be some inborn qualities in the child to render him capable of profiting by it. If the State wanted leaders with driving power, it must educate the offspring of the class in which the principle of selection had acted most directly and with the greatest force, for education could not turn a feeble character into a forcible one. Education had merely a directive power, but vigour was produced by selection. As regards the class in which selection in marriage was most markedly found, Mr. Keatinge said that in the lower as in the higher grades of society there was practically no selection as far as the man was concerned; ornamental qualities and superficial good looks were the determining factors in his choice. It was amongst the professional classes that selection in marriage was most likely to be found; but here the higher standard of living and the increased demand for comforts and luxuries had caused a tendency to deferred marriage and smaller families that should be combated at all costs. The introduction to modern society of truer and saner standards was the work of education; and once that work was done the pressure would be relieved and large families would once more be seen amongst the professional classes. It was by bringing about this salutary reform in modern ideals that education could further the aims of the eugenists in an effectual and satisfactory manner.

Letters, Notes, and Answers.

Authors desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

QUANDARY asks where a lady could be put quickly through a course of instruction in dispensing, so as to avoid the usual two days a week course which involves needless expense in lodgings.

COUNTRYMAN would be glad to know of any home that would take in free, or for a very small weekly sum, a girl of 16 who suffers from continual side-to-side movement of the head. Industrial and rescue homes have refused her because of the habit. She is intelligent and able to work, and needs probably only the discipline of a home to be cured, as the habit was completely cured by suggestion for three months.

THE WRITINGS OF DR. JOHN STEDMAN.

DR. BOSWALL WATSON (9, York Mansions, Battersea Park, S.W.) is anxious to obtain copies of the following books by Dr. John Stedman of Edinburgh: *Laelius and Hortensia*, published 1782; *Physiological Essays and Observations*, published 1769; *Moral Tales*, published 1784.

ANSWERS.

S. W.—*Diseases of the Stomach, including Dietetics and Medicinal Treatment*, by George Roe Lockwood, M.D., (H. K. Lewis, London, 1913, 25s. net) will, we think, be found to fulfil our correspondent's requirements.

OXALURIA.

G. F. O. writes in reply to "R.A.M.C.": A patient of mine was operated upon for renal calculus and two oxalate stones removed; he was then quite well for two months, when an attack of renal colic occurred, followed a week later by vesical colic, which terminated in the passage of a third calculus. All this time there was a considerable quantity of oxalates in the urine, and no attempt at treatment by diet. Two weeks later another attack of renal colic occurred, and the patient was put upon the following diet. He passed two more stones a few days later, and has since been free from trouble and working hard for five months. He was allowed to take meats, fowl, game, fish, bread, rice and other farinaceous foods, potatoes, peas, beans, coffee, and apples (sparingly); he was forbidden milk, tea, cocoa, green and root vegetables, fruits, eggs, jellies, and rhubarb. The apple is, unfortunately, the only oxalate-free fruit, and the patient was, of course, forced to drink large quantities of water.

DR. REGINALD POLLARD (London) writes: My advice to "R.A.M.C." is: (1) Be efficiently skiagraphed; (2) try to avoid any wrong that may be causing dyspepsia; (3) go to Vittel or Contrexéville (not before the end of May); if he cannot do that, drink the waters at home, taking, say, a bottle every morning fasting for three weeks: First day, two ¾ tumblers; second day, three ¾ tumblers; third day, three tumblers full, at intervals of fifteen minutes, and stopping three-quarters of an hour before breakfast; more at 4 p.m. in place of afternoon tea (say one or two tumblers). Avoid rhubarb, spinach, sorrel, asparagus, strong tea and coffee, pepper, tomatoes, cocoa. Avoid food causing fermentation in the intestines—port wine (bottled), sweet champagne, etc. At other times drink a glass of water at bedtime and on rising, and eat sparingly of rich food.

LETTERS, NOTES, ETC.

ADVICE TO SHIP SURGEONS.

SURGEON-GENERAL GEORGE J. H. EVATT, C.B. (A.M.S. retired) (London), writes: For thirty years I have unceasingly sympathized with "ship surgeons." They seem to be nobody's children, and their grievances are rarely, if ever, studied. This neglect acts on the status of the medical profession, and calls for study and eventual reform. I offer the following suggestions:

1. *Responsibility of the Marine Department of the Board of Trade.*—Just as this subdepartment is responsible for the deck officers of the Mercantile Marine, so it should be responsible for the medical officers of ships at sea.

2. *Official Handbook of Duties of a "Ship Surgeon."*—The Marine Department should print and circulate a pamphlet stating the duties of a medical officer of a ship as to sanitary powers, inspection of food, clothing and lodgement of the crew or passengers, a *précis* of quarantine regulations and of the tests for physical efficiency of officers and men of the merchant service.

3. *Examination in Details of above Handbook.*—The Marine Department to be responsible that all medical officers know the details of the above book and to issue certificate to that effect to applicants after test by the superintending medical officers, Board of Trade, at the great ports.

4. *The Marine Department to Issue Annually an Official List of Effective Medical Officers for Ships.*—The names of officers qualified under Section 3, paragraph above, to be printed annually in a list, and the local representative at the great ports of the Board of Trade to be empowered to issue emergency certificates of efficiency effective for the current year of issue.

5. *Report on Health and Sanitary Condition during the Voyage.*—The medical officer to send in a report on the health and sanitary condition of the crew and passengers of the ship at the end of the voyage.

6. *Scale of Male and Female Nurses to be Laid Down.*—A scale of trained male and female sick attendants to be laid down by the Marine Department for each passenger ship, if not now done; efficiency reports to be sent in by the medical officer of the ship.

7. *Definition of Hospital Space Allowed and its Equipment.*—This to be done if not now done.

8. *Medical Officers' Quarters and Dispensary Space.*—This to be specially considered—often very defective.

9. *Misconduct.*—All reports of misconduct or drunkenness to be sent on by the Marine Department to the General Medical Council for disciplinary action if considered needful, or certificate to be withdrawn in minor cases.

10. *Model Agreement.*—A form of model agreement might be laid down by the State.

11. *Pay.*—Pay, unless otherwise fixed, to be same as surgeons Royal Navy.

12. *The Physical Health of the Medical Officer.*—A medical certificate of health is needed for the medical officer, to prevent medical invalids from taking up the work unless actually fit.

13. *Conduct.*—A medical man applying to the Board of Trade for approval should produce certificates of character from two or more medical men, in affidavit form—to ensure thorough accuracy—and these certificates to be not more than six months old. This is essential, so as to exclude defective types of medical men.

Finally, the public are travelling more year by year. Frequent complaint is made of inefficiency in certain cases of medical officers of ships. It is well nigh impossible for any private organizations to regulate the medical service of passenger ships; that is, in my opinion, essentially the duty of the official marine authorities of the Board of Trade.

EAR COUGH.

MR. GEORGE HAMILTON, M.B., B.S.Lond. (Chichester), writes: Mr. Arthur Barford's case, recorded under the above heading in the BRITISH MEDICAL JOURNAL of February 14th, p. 368, while illustrating the physiological fact of clinical interest, seems to have moved him to an explanation thereof, too vague to carry conviction.

The connexion of Arnold's nerve with the vagal ganglion of the root is well known, but the suggestion that "irritation conveyed to the trunk of the vagus by Arnold's nerve and then referred to the respiratory tracts which are supplied by that trunk" possibly causes the cough, is hard to follow. The stimulus due to irritation of Arnold's nerve must reach the "respiratory tracts" either as a sensory or a motor phenomenon, if it reaches them at all. The former alternative seems negatived by the fact that the sensory vagal fibres are centripetal, and so the impulse could not reach the "respiratory tracts" as a sensory impression and thereby provoke a cough. If, however, stimulation of the sensory Arnold's nerve produces a motor impulse travelling to the "respiratory tracts" by way of the spinal accessory fibres of the vagus nerve, doubtless closure of the glottis would occur, but that is not a cough.

Mr. Barford has overlooked the fact that the diaphragm and abdominal muscles are essential to the production of a cough, as section of the cervical cord above the origin of the phrenic nerve demonstrates. So then the only explanations possible are:

1. That the impulse travels direct to the vagus nucleus (avoiding the respiratory tracts, except for reflex closure of the glottis) and thence the various muscles are stimulated by impulses travelling along the appropriate paths; or

2. That the impulse, reaching the vagal ganglia, travels thence as a motor impulse to the laryngeal muscles per vagum, and to the diaphragm per communicating branches to the cervical plexus.

Certainly stimulation of the "respiratory tracts" appears out of the question as the cause of the cough.

THE PATHOLOGY OF CANCER.

DR. J. BARKER SMITH (Herne Hill, S.E.) writes: The letters of Drs. Shirlaw and Jackson Clarke in the JOURNAL of March 7th with respect to cancer have made me bring forward some laboratory notes which concern the question of metabolism. Gautrelet in the work reviewed by you a few years ago, *Physiologie Uroséméiologique*, speaks very positively of a lowering of the fixed elements of urine, and especially of the acidity and urea, in the absence of peptone, as indicating the cancer diathesis. So from the investigations of Dr. Elsie Royle, *The Urine in Malignant Disease*, we gather the same, associated with a higher uric acid percentage. Joulie, in his *Urologie Pratique*, says he has always found hypoacidity in all cancer cases examined by him. His "acidity" would relate to the blood acidity, determined by lime water or sucrate of lime. He also argues our duties in diathesis and in recidive cases. In following my work of urine analysis the last year or two this outlook of changed metabolism has made me think—What suggestion does the daily urine of patients with malignant disease offer of a change of metabolism in the absence of the "biological standard" of two of these authors, so difficult to obtain? In my list of pathological urine analyses, amounting to twenty since the beginning of this year, I am keeping account not only of the "blood acidity" and the salt, but of the various coefficients or relative percentages. For example, the specific gravity terminals are largely due to salt and urea, hence if uric acid be higher, as suggested, in the urine of malignant cases, such uric acid used as a dividend and the terminals as a divisor should afford some suggestion of the lowering of solids; where salt is lowered the quotient should be still higher. Taking the 20 cases of pathological urine analysed by me for other doctors I find that the quotients give a gamut from six to forty in the third decimal place, when the uric acid is divided by the terminals of the specific gravity. Take, for example, the highest quotient, prima facie the most suggestive, 0.5 per 1,000 uric acid, terminals of specific gravity twelve, quotient 0.041. Sodium chloride is 0.4 per cent. The lowest quotient, namely, 0.006, is uric acid 0.2 per 1,000, terminals thirty (1030). Salt, 1.1 per cent. The next important percentage relation, the lower the most suspicious, is that of total phosphates, in terms of phosphoric anhydride, as a dividend and the uric acid as a divisor, suggested by the work of Dr. Elsie Royle. Here my total cases give whole numbers from two to fourteen. The two cases above give respectively: The high quotient, phosphoric anhydride 1 per 1,000, uric acid 0.5, quotient two; the low quotient, phosphoric anhydride 3.5 per 1,000, uric acid 0.2, quotient seventeen. Such show the extremes of the gamut for the 20 cases. Also we notice that three simple experiments only are needed to continue in definite cases such investigations, namely, specific gravity, phosphoric anhydride, and uric acid.

CLINICAL ASPECTS OF ANAPHYLAXIS.

LAY CORRESPONDENT writes: In the JOURNAL of November 22nd, 1913, p. 1358, Dr. E. W. Goodall, in his paper on anaphylaxis, says he is not sure that we know of any article of diet except shellfish (mussels, crabs) and a few fruits (strawberries, raspberries) which is capable of producing anaphylaxis; and Dr. R. Broadbent, in a memorandum in the JOURNAL of January 3rd, cites a case in which anaphylaxis was produced by milk powder. It may interest both these gentlemen to know that anaphylaxis has repeatedly been produced in two of my children by the following articles of diet. Elder child, now 5 years old, suffered from severe urticaria twice after taking oatmeal jelly, made according to Rotch's receipt (oatmeal then discontinued). Suffered twice after taking a teaspoonful of malt mixture prescribed by a children's specialist (malt then discontinued). Suffered twice after a cup of fresh goat's milk and once after fresh cow's milk (supplied by a well-known London milk laboratory, and therefore presumably pure).

The younger child, now 15 months old, has since he was weaned at 9 months had urticaria repeatedly after taking goat's milk and cow's milk, both whole and diluted with barley water. The rash is typically urticarial. It comes on immediately after, or even during, the meal. There are large raised patches on the body, but it is worst on the neck and face. Sometimes the oedema is so great that the eyes are nearly closed. The rash is accompanied by shivering and general malaise. The symptoms disappear in a few hours as a rule, but in the case of the attack following the oatmeal jelly the oedema did not subside for twenty-four hours.

I may perhaps mention that my eldest son, aged 8 years, has suffered from asthma from the smell of horses all his life. All three children are strong and healthy.

ERRATUM.

OWING to a printer's error, the letters F.R.C.S., F.R.S.E., were placed after the name of Mr. J. Beard, D.Sc., in the list of contents of the JOURNAL of March 7th.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
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An average line contains six words.

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NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

An Address
ON
THE ART OF PRESCRIBING.

DELIVERED BEFORE THE ST. MARY'S HOSPITAL MEDICAL SOCIETY.

BY
ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P.LOND.,
CONSULTING PHYSICIAN TO ST. MARY'S HOSPITAL.

THE decline in the art of prescribing is a subject which has given me cause for much painful reflection for several years, and it is one which, in my opinion, affects very closely the welfare of the public as well as the usefulness and dignity of the medical profession. I think there cannot be the slightest doubt that the art of prescribing—that is, of ordering suitable remedies in suitable forms for the treatment of morbid conditions—is declining, and that this very important function of the medical man is being replaced by what I consider to be the slovenly habit of writing an order for some proprietary preparation or for some compressed form of drug, and then dignifying such an order with the title of a prescription. There is, I think, a tendency at the present time, in this era of brilliant discoveries in medicine, pathology, and bacteriology, and in this age of splendid advances in surgery, to neglect the treatment of common and minor ailments by drugs. Let me, however, impress upon you that in the treatment of such ailments lies the principal part of your work as medical practitioners, and that the gauge by which your success in practice will be mainly measured, and the esteem in which to a great extent you will be held by your patients, will depend upon the success you attain in the treatment and cure of what may superficially appear to be but trifling ailments, but which, none the less, as departures from ordinary health, are naturally considered by the individual sufferers as important, and therefore as deserving the careful attention and the skilled therapeutic resources of the medical man.

There is a tendency nowadays to adopt a sceptical attitude as to the utility of drugs, to regard them as mere placebos. It is an attitude which I have specially observed in those who have neglected to acquire any thorough knowledge of the use of drugs and of their methods of correct administration. Do not be over-influenced by the brilliant work that has been done, and is still being done, in the inoculation departments of this and other hospitals. While pleading for greater attention to the art of prescribing, I have no intention of questioning the usefulness of inoculation treatment, since I am fairly constantly employing it in my own department of work, and am therefore well acquainted with its utility in certain diseases. But it is a method of treatment which has its limitations, and you will find, when you are in general practice, that the great bulk of the ailments you will be called upon to treat are not cases for inoculation treatment, but require the prescription of drugs.

In my opinion, the main reasons for the present decadence in the art of prescribing are the altogether inadequate attention given to the teaching of the subject by the majority of the members of the staffs of the various teaching hospitals, and the scanty test applied by so many of the examining bodies as to the possession of a knowledge of rational prescribing on the part of candidates presenting themselves for the final examinations. The want of attention to the teaching of the subject in our large hospitals is certainly in some measure due to the over-pressure of work consequent on the number of patients that have to be seen and treated in a given time—an over-pressure which necessitates, to some extent, the ordering of medicines already prepared according to some formulae in the hospital pharmacopoeia. The prescribing of these ready-made medicines undoubtedly saves the time of the physician or surgeon and of the dispenser, but, unfortunately, the outcome of the custom of ordering ready-made mixtures, etc., is that the students soon fall into the habit and carry it with them into private practice. Consequently they have no opportunity of acquiring confidence in their own powers to write a useful prescription, and so fall a ready prey to the temptations offered them by manufacturers to prescribe some ready-made proprietary medicine or some form of a compressed drug. It has been stated that the hospital practice of ordering mixtures, pills, etc., by the titles under which they appear in the hospital pharmacopoeia is not detrimental to the acquisition of a knowledge of correct prescribing, since the student can always refer to the pharmacopoeia for information as to the composition and strength of the medicine ordered. I, however, strongly maintain that the information so obtained is in no sense comparable to the educational advantages of hearing the dictation of a prescription in full. There is no better method of acquiring a knowledge of correct dosage, and of the avoidance of incompatible ingredients, than by hearing the physician or surgeon dictate his prescription, comment on the dosage of the ingredients, and give his reasons for the employment of such ingredients. On the other hand, if it is left to the student to look up the composition of a medicine from the hospital pharmacopoeia he is apt to forget to do so, and certainly he can never in that way either acquire a tithe of the knowledge or retain the information so well in his memory, as by hearing the dictation of a prescription in full.

There is a growing practice which is rapidly threatening to undermine to a great extent what I consider to be the skilled and rational employment of therapeutic agents in the treatment of disease. I refer to the too general use of powerful drugs in compressed forms and of proprietary preparations. I do not for one moment wish to suggest that the various forms of compressed drugs have not their proper uses; undoubtedly lamellae and tabellae of active principles in the hands of medical men are most convenient and useful for hypodermic and occasionally for other forms of administration; but it is the ready facility with which powerful drugs prepared in this form are obtained by the public which constitutes so grave a danger, a facility which is responsible to a great extent for the increasing practice of self-drugging—a state of affairs which I am afraid has been brought about by these preparations being so indiscriminately and so largely prescribed by medical men. Equally bad is the use of some of the proprietary preparations which are so speciously puffed, and with the samples and laudatory advertisements of which we are so profusely deluged, tempting the medical man as they do to the enervating habit of thinking that the writing of an order for such a preparation is the writing of a prescription, and gradually rendering him absolutely impotent to exercise the true art of prescribing. What a travesty on the art of prescribing it is for a patient to be given a so-called prescription which merely orders, say, No. 4 Mixture (Smith and Jones)! Can anything be more degrading than the spectacle of a duly qualified medical man lowering himself to be the mere exploiter of a puffed and probably over-vaunted preparation? It appears to me that such so-called prescribing is nearly on a par with the dosing that is carried out on those ships which carry a medicine chest but have no surgeon on board. The bottles of medicine in the chest are duly numbered, and with them is a book describing the symptoms which require a dose of such-and-such a numbered mixture. Many of you may remember the tale of the ship's steward who went to the captain stating that a sailor had some symptoms which, according to the book, required a dose of No. 9 mixture, but that No. 9 bottle was empty. "That does not matter," said the captain, who in the emergency almost rose to the level of many a modern prescriber, "give him equal parts of No. 4 and No. 5."

There is another aspect of this subject to which I wish to direct your attention. The practice of writing an order for a particular form of compressed drug, or for a proprietary preparation—for I cannot dignify such an act as the writing of a prescription—is apt to encourage patients to recommend such proprietary articles to their immediate friends who, in their opinion, are suffering from similar symptoms or from what they imagine to be a similar complaint. I need scarcely point out to you that what has been ordered as suitable treatment for A. may be remarkably bad for A.'s friends, and may be productive of serious harm to them. Moreover, to look at the matter from another point of view, by giving your patients the opportunity of recommending these proprietary articles to their friends, you are simply playing into the hands, and the pockets, of the manufacturers of those preparations.

You may, perhaps, say that if you write an orthodox prescription for a medicine the patient is just as likely to recommend that to his friends. As an actual fact my experience is that such is not nearly so likely to occur as when a patient can name a proprietary article which can be readily purchased of any pharmacist or at any drug store.

It is simply appalling to witness the habit that has grown up of people keeping in their houses and carrying about in their dressing-cases compressed forms of powerful drugs which they employ to relieve pain, either by taking them internally or by hypodermic administration, quite losing sight of the fact that the removal of the cause of the pain is much more important than the removal of the pain itself. Moreover, the temporary relief of pain frequently prevents the sufferer from seeking medical advice until the diseased condition which is the cause of the pain has become thoroughly established, and, therefore, more difficult to cure. In addition, the facility with which these forms of compressed drugs can be obtained and administered encourages that most evil of habits, the taking of narcotic drugs. Let me strongly advise you never to prescribe drugs of a sedative nature, such as antipyrin, antifebrin, etc., by such names, but by their scientific terms. For instance, order antipyrin as phenazone, antifebrin as acetanilide, and so on. In addition, never order them in compressed forms, but prescribe them to be taken in cachets or as powders. It is frequently my fate in my private consulting-room for patients to present for my inspection and supposed edification the so-called prescriptions of some of the very minor lights of medicine. These documents are frequently mere orders for some proprietary preparation possessing an outlandish name, the composition of which is generally absolutely unknown to the prescriber, whilst for its supposed therapeutic effects he has to depend on the statements of the manufacturer of the article. These orders are to me sad illustrations of the ease with which the writers have departed from the path of therapeutic righteousness—across each one there appears to my mental eye written the word "Ichabod." On the other hand, it has frequently been my privilege to see the prescriptions of one who certainly ranks amongst the greatest and most scientific of physicians that in the past graced the staff of this hospital, and it is at once apparent that each prescription has been carefully thought out and adjusted to the individual needs of the patient. To me these prescriptions, which are never debased by an order for a proprietary medicine, are grand therapeutic lessons.

What are the factors, then, which make for success in the art of prescribing? I will place them before you in the following groups: (I) A sound acquaintance with the therapeutic uses of drugs. (II) A thorough knowledge of the doses of drugs. (III) The avoidance of the mixing of drugs that are incompatible. (IV) The administration of drugs which are nauseous or distasteful in such a form or combination as to be palatable to the patient.

I. *Knowledge of Therapeutic Uses.*

It is unnecessary to insist on the importance of a sound acquaintance with the therapeutic uses of drugs as an essential preliminary to the art of prescribing, but I am not a believer in a medical man making use of a large number of drugs. Speaking for myself my armamentarium of drugs is purposely a comparatively limited one, but then I know them thoroughly, their action, their uses, and their doses. By all means give new remedies a fair trial, but do not be too prone to abandon old and proved drugs for new ones. In this respect you may well take to heart the advice given by Polonius—

> Those friends thou hast, and their adoption tried,
> Grapple them to thy soul with hoops of steel,
> But do not dull thy palm with entertainment
> Of each new-hatch'd unfledged comrade.

You will find when you are in practice that in the *British Pharmaceutical Codex* you have a work that will be of inestimable value in maintaining your prescribing at the highest possible level. It is a book that contains many useful formulae, and especially I would direct your attention to its incomparable collection of formulae for nebulae or sprays.

II. *Knowledge of Doses.*

A thorough knowledge of the doses of drugs is essential to success in the art of prescribing. Learn your doses well. Many medical men shirk writing prescriptions because they are in doubt about the doses, and so fall back on the employment of proprietary preparations. Here I am in complete accord with the plea recently put forward by Dr. Leftwich as to simplification of doses. To remember, for instance, the different doses of the various tinctures in the *British Pharmacopoeia* is a great burden to the medical man, and there is no reason why the great majority of the tinctures should not be made of such a strength as to possess the same dose. Inability to remember the proper dose of a drug has sometimes led to the omission of the most suitable preparation, and on some occasions has even caused the death of the patient.

III. *Incompatibles.*

A successful combination of drugs demands not only a knowledge of their therapeutic action, but also of their chemical properties, in order to prevent the mixing of drugs which are incompatible with one another, unless such combination is deliberately intended in order to produce a new remedy. It might be contended that the question of incompatibility could be entirely avoided by prescribing in a medicine a single drug, but as against the use of a single drug it must be remembered that the combination of a drug with other drugs possessing a similar mode of action powerfully increases the action of the remedy. The following are illustrations of the more important drugs that are incompatible:

1. Acids and alkalis, including the carbonates and bicarbonates, should not be prescribed together, unless it is intended that they should be mixed at the moment of administration in order to make an effervescing mixture. This is an easy rule to remember, but all the same mistakes not uncommonly occur. For instance, in the treatment of chronic bronchitis ammonium carbonate and some preparation of squill are frequently and usefully prescribed together, but it should be remembered that the preparation of squill that should always be employed in such a mixture is the tincture, since the acetum, the oxymel, and the syrup all contain acetic acid. Again, aspirin should not be prescribed with an alkaline carbonate or bicarbonate, as I have frequently known it to be, since it is the acetyl-salicylic acid, and undergoes decomposition associated with effervescence if mixed with such drugs.

2. Alkaloidal solutions should never be prescribed with alkalis or the alkaline carbonates and bicarbonates, since these set free the alkaloid, which in many cases is precipitated or crystallizes out, with the consequent danger of the major portion of it being taken in the last dose. I will give two useful illustrations, of mistakes that are occasionally made in this direction. It is by no means uncommon to see liquor strychninae and liquor arsenicalis prescribed together, but they should not be, as the latter is an alkaline solution of arsenic. If strychnine and arsenic are to be given together, as they so frequently are in the treatment of some diseases of the nervous system, the liquor strychninae should always be prescribed with the liquor arsenici hydrochloricus, which is an acid solution of arsenic, and so prevents the precipitation of the strychnine; another proper method of combination of these drugs is to prescribe the arsenic and strychnine in pill form. Again, I have seen several prescriptions in which the liquor strychninae has been ordered along with the aromatic spirit of ammonia, which is an alkaline solution, and therefore incompatible with it.

3. A very useful method of administering both mercury and potassium iodide in the treatment of syphilis is to prescribe together in a mixture the liquor hydrargyri perchloridi with potassium iodide. This is a perfectly correct combination to prescribe, since the biniodide of mercury which is formed is kept in solution by the excess of potassium iodide as a double iodide of mercury and potassium, but it should be remembered that this double salt is Mayer's reagent, which precipitates practically all alkaloids, even if present in only minute amounts. The combination, therefore, of the liquor hydrargyri perchloridi and potassium iodide is incompatible with any alkaloidal solution, or with any tincture containing an alkaloid.

4. Spiritus aetheris nitrosi (sweet spirit of nitre) should not be prescribed with iodides or bromides, since the free nitrous acid contained in it would set free respectively iodine or bromine, with liberation of nitric oxide.

5. Sodium nitrite and ammonium bromide are two drugs which are frequently used in the treatment of high arterial tension, but they should not be prescribed together in liquid form, as they produce an explosive mixture. What decomposition takes place I do not know, and I have never seen these drugs mentioned as incompatibles, but I place the information before you as the result of an experience gained as an error in my own prescribing. On three occasions the bottle of medicine containing these two drugs burst, very much to the alarm of the patient, but fortunately without inflicting any damage.

6. Pepsin should never be prescribed along with alkaline substances, as it is rendered inert by them. It is best prescribed in solid form, but if given in a mixture the acid glycerine of pepsin is the preferable combination.

7. Heavy insoluble salts, such as the bismuth and some of the magnesium salts, can be suspended by means of a mucilage; but this should not be done when the magnesium peroxide is prescribed, since that salt sets into hard masses when mixed with mucilage. Magnesium peroxide is, in my experience, one of the most useful drugs in the treatment of hyperchlorhydria; but when so used it should be prescribed either as a powder to be taken stirred up in a little milk, or as a mixture suspended in some simple water, such as peppermint water.

IV. *Palatable Prescriptions.*

The last factor that makes for success in the art of prescribing, and one too frequently neglected by medical men, is the administration of drugs which are nauseous or distasteful in such a form or combination as to be palatable to the patient. With our present choice of the numerous preparations of drugs and of flavouring agents, and with the improved methods of administration, there is no necessity for a medicine to be given to a patient which should be offensive to the senses of taste and smell. It should nowadays be considered a discredit to the prescriber to order a nauseous medicine, which, considering how great is the influence of the mind on the body, must seriously detract from its useful therapeutic action. Neglect of this rule frequently induces patients to employ proprietary articles, which are generally compounded in a very palatable form, and so leads to the habit of self-drugging. For instance, most of the drugs in the form of powders which possess an unpleasant taste or smell can be given in cachets or gelatine capsules, and so are swallowed without any discomfort to the patient. Guaiacum, which is one of the most useful drugs in the prophylactic treatment of gout, should never be prescribed in the form of the tincture, which makes a most nauseous mixture, but in the form of guaiacum resin in cachets. The bitter taste of nux vomica is unpleasant to many patients, but in its place the compound glycero-phosphate syrup can be prescribed, or the extract of nux vomica can be given in pills. All pills should be ordered to be gelatine-coated or silvered, so that they can be taken in an absolutely tasteless form.

Illustrative Prescriptions.

I will now give a few illustrations of some prescriptions which I have found most useful in my own practice, and which comply with the rules that I have laid down. Potassium iodide is a drug that I very frequently prescribe in the treatment of the various forms of fibrositis, and I invariably order it in the following combination: Taking an average dose for an adult, it consists of: Potassium iodide 10 grains, the compound glycero-phosphate syrup (*B.P.C.*) 2 drachms, spirit of chloroform 12 minims, and peppermint water to the fluid ounce. The compound glycero-phosphate syrup disguises the taste and counteracts the depressing effect of the iodide, while the spirit of chloroform and peppermint water act as preservatives, and so prevent the bacterial growth which otherwise would occur in the diluted syrup.

An extremely useful mixture for the relief of irritable cough, and especially of the troublesome post-influenzal cough, consists of morphine hydrochloride $\frac{1}{24}$ grain, heroin hydrochloride $\frac{1}{24}$ grain, apomorphine hydrochloride $\frac{1}{15}$ grain, dilute hydrochloric acid 5 minims, syrup of Virginian prune $\frac{1}{2}$ drachm, and chloroform water to half an ounce. This constitutes the tablespoonful dose, which should be taken every four hours. The medicine is very palatable, and the presence of the hydrochloric acid effectually prevents the precipitation of any of the alkaloids.

For the relief of pain, when the employment of morphine is not desired, a combination of analgesics is much more effective than the use of one alone. A most useful prescription for the relief of the pain of sciatica consists of novaspirin 7 grains, pyramidon 6 grains, quinine salicylate $1\frac{1}{2}$ grains, and codeia $\frac{1}{3}$ grain. This is prescribed in a cachet, which is to be taken every four hours.

A simple but effective medicine for the relief of ordinary headache consists of ammonium bromide 10 grains, phenazone 10 grains, caffein citrate 5 grains, and chloroform water 1 fl. oz. This constitutes a single dose, which as a rule rapidly relieves the headache, but if necessary it may be repeated in two hours.

The most effective combination in my experience for the internal treatment of acute and subacute gout is a pill containing colchicine $\frac{1}{70}$ grain, sugar of milk $\frac{1}{2}$ grain, extract of nux vomica $\frac{1}{4}$ grain, extract of hyoscyamus $\frac{1}{2}$ grain, and extract of gentian sufficient to make the pill. The object of the sugar of milk is to allow the colchicine to be triturated with it before working it up with the extracts, as otherwise the minute amount of the alkaloid would not be evenly diffused throughout the pill mass, and so the risk of a poisonous dose of colchicine getting into one pill might be incurred. One pill is to be taken every three or four hours according to the severity of the attack, which is rapidly relieved by this treatment.

Gastric flatulence is a very common and annoying ailment, for which almost immediate relief can be obtained by a mixture containing in each dose aromatic spirit of ammonia 25 minims, spirit of chloroform 15 minims, spirit of peppermint 12 minims, and spirit of cajeput 8 minims. This combination constitutes a teaspoonful dose, which is to be taken in a wineglassful of water whenever the flatulence is troublesome.

For external use in the relief of pain, whether due to fibrositis, neuritis, or neuralgia, the following combination is most useful: Chloral hydrate 6 drachms, camphor 6 drachms, and menthol 3 drachms are well rubbed together in a mortar, when the three solids form a liquid without the addition of any fluid. This liquid should be painted over the painful area and gently rubbed in, when rapid relief from the pain is usually obtained. For those patients who object to the sensation of coldness produced by the menthol the equal parts of chloral hydrate and camphor can be used instead, as they also form a liquid when triturated together.

In conclusion, let me beg of you to endeavour during your studentship here to cultivate by every means in your power a knowledge of the art of prescribing. Let me entreat you never to become the instrument by which your patients may be tempted to drift into the habit of self-treatment by compressed and other easily administered drugs—a habit which is tending to displace the true therapeutic art, and which is gradually diverting into the hands of purely commercial men that function which should remain the prerogative and the glory of the medical man.

A NATIONAL League for the Protection of Infants has been formed in Italy. Its head quarters are at Bologna, and the President is Professor Carlo Comba of Florence. Local committees are to be formed in various centres.

THE following are said to be, in round numbers, the number of universities and students in the various countries of Europe during the past academic year. Germany has 21 universities and 49,000 students: Italy comes next with 21 universities and 24,000 students. The corresponding figures for the other countries and universities are: France, 16 and 32,000; United Kingdom, 15 and 25,000; Austria-Hungary, 11 and 30,000; Russia, 9 and 23,000; Spain, 9 and 12,000; Roumania, 7 and 5,000; Switzerland, 7 and 6,500; Holland, 5 and 4,000; Belgium, 5 and 5,000; Sweden, 3 and 5,000; Portugal has 2 universities; Norway and Greece have each one; the number of students is not stated. Taken together the universities of Europe number 131, with a total of some 230,000 students. Berlin heads the list with 13,884; Paris stands second with 12,985.

An Address
ON
THE BUSINESS SIDE OF MEDICAL PRACTICE.

DELIVERED TO THE SOUTH MIDDLESEX DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

BY SIR JOHN COLLIE, M.D., J.P.

IN the economic order we doctors do what other people do who supply the world with things it needs, and we supply them at a price. Nevertheless, we are not tradesmen. How, then, does the profession, of which we are so justly proud, differ from trade?

John Ruskin says precedence is always given to the soldier over the merchant "because he holds his life at the service of the State." He says, "Our estimate of him is based on this ultimate fact—of which we are well assured—that, put him in a fortress breach, with all the pleasures of the world behind him, and only death and his duty in front of him, he will keep his face to the front." The trader is supposed to think, and always think only of himself and his wage, and seldom, if ever, of the public; whereas the quality of the work done is the dominating factor in the daily life of every honest practising physician. Good and faithful service for the sake of being at peace with the conception of our highest ideals, that is the standard we all—from the highest to the humblest—are assumed to have ever before us. "Caveat emptor" is the stern watchword of the tradesman; "Noblesse oblige" is engraven deeply in the soul, and on the escutcheon, of every professor of the healing art.

As a rule, we do not care to discuss the subject of the proper reward of our services, for it is said to savour of commercialism; but, as you have asked me to address you on the business side of the profession, let us for this evening put all affectation aside. Scientific ability and business capacity are not incompatible.

In these days, wealth not knowledge, ostentatious display not ability, is worshipped by the majority of mankind. You are judged, it has been said, by the creases in your trousers, not by the creases in your brain. Wealth determines status. To make money is therefore a necessity. Fortunately, unlike the vulgar plutocrat, you need not spend it.

Remember that the cards must always be shuffled, and, if patients leave you, from a business point of view it does not really matter if your total income for the year is as large or larger than the year before. Your object should be not to have the largest but the best practice.

If you attend patients gratuitously, take as your reward the pleasure you are entitled to if you are seeing them without hope of any benefit; but remember it is charity, not business.

Successful men never neglect the treatment of a patient's personality. It is always difficult to listen to the recital of an irrelevant family history and of details which are obviously unimportant. The details may be trivial, but it is a fundamental truth that you cannot succeed in treatment unless you have the confidence of your patient, and this you certainly will not have if you do not listen to the recital of his woes. The torrent may often be stopped by a well-directed remark which shows that you have divined the whole history.

Consultations.

It is always unbusinesslike to discourage consultations when friends suggest them. If a fatal issue results, lifelong regrets rankle in the minds of those who perpetually blame themselves for not insisting on what they felt was their right. Apart from the right which patients not unnaturally think they have to do what they consider the best for those dependent on them, it is thoroughly bad business to do anything which will later on make a grief more poignant or pave the way for reflections upon the professional capacity of the medical attendant. If your diagnosis and treatment is, as of course it will be in most cases, that of the hospital physician or surgeon, you will be more firmly established than ever in the confidence of the household, but if, on the other hand, the fresh eye sees some short cut to recovery from a painful and lingering illness, what right would you have had to deny it to those who entrust their lives to you? Those who discourage consultations may know their profession, but they do not understand human nature, and they have yet to learn the business side of their art.

Certificates.

In the matter of medical certificates nothing is easier and more alluring than to allow our sympathies full play and to be generous—at another's expense. Sentiment and business make an ill-matched co-partnership. It is so easy to pity the poor working man at the expense of his master. That gentleman probably has his own ways of dispensing charities; at any rate, he has not commissioned you to do it vicariously. He places you in the position of a judge when he asks you whether his workman is fit or unfit for work. The affectation of generosity under these circumstances is the besetting sin of our county court judges. It was Savage who said that in coming to a conclusion we do so along one of two lines, judgement or sentiment, that these lines are parallel, and therefore never meet. In this matter, and indeed in all matters, there is only one way to be just, and that is to settle everything by judgement and nothing by sentiment.

The Law Courts.

Medical certificates in legal cases should always be given with great caution. What should one do when asked to examine an injured person by both employer and employee, or by two parties to a suit in an action at common law? There is a general impression that, having given a certificate to one side, it is disloyal, indeed dishonourable, to fish, as it were, on both sides of the stream, and furnish a report to what the lawyers call "the other side." Now, surely, this attitude assumes a very low standard. If you have given a certificate for a plaintiff which exaggerates his injuries, or if, acting for the defendant, you have given a certificate which minimizes what exists, obviously it would be impossible to report on the case to the opposite party to a suit. We medical men are not partisans in law suits; unlike the attorney, we have no "other side" to consider. Solicitors and barristers are paid to make the best case they can for their client. The doctor certifies facts as found, or should do so. There is, therefore, no reason whatever why a certificate should not be furnished to both parties, and a fee charged to each. Of two things, however, you must be scrupulously careful. First, the facts must be presented exactly in the same way in both instances, indeed, the safest plan is to make the second report a copy of the first. Secondly, both parties should be acquainted with the fact that such a duplicate certificate had been issued. Loyalty demands this.

It is always advisable to retain an exact copy of all letters and reports on medico-legal cases. This can be done with great ease by means of one of the many devices to be found in the market; the best, perhaps, is the use of a thin duplicating paper, suitable for use with any typewriter. Where a typewriter is not used, carbon paper suitable for pen-and-ink work, can be procured.

In few things does the old adage, that "What is worth doing at all is worth doing well," better apply than in the medical examination of a claimant who is seeking damages for personal injuries.

In giving medical evidence in courts of law you must be prepared to give reasons for your deductions. The fact that the plaintiff is your patient must not influence you one jot or tittle. State the facts and remain unbiassed. A thorough examination of the case is the best way to ensure your being a good witness. Note what is present, but think of the symptoms that may be absent. Be accurate. Do not guess. Measure. Before going into court discuss the case with an argumentative medical friend. You will not have much difficulty in finding one. When in the box speak slowly and distinctly. Do not speak faster than the judge can write. If asked a question, and you feel that an answer "Yes" or "No" is not sufficient, first answer "Yes" or "No," and then amplify it. You have a perfect right to do so; insist on your right; but you must say "Yes" or "No" first. "No, because," is a useful method of introducing some extra information which you may wish the court to have.

Never lose your temper, however irritated. Nothing pleases examining counsel better than this. Do not be offended if counsel insinuates that you are a gross perjurer, and the judge, in summing up, leaves it an open question whether the charitable view should be taken that either you are very unobservant or much misguided. Remember that the case must go against somebody, and that if you do have these pleasantries levelled at your head, your medical friend who is opposed to you has been saved what he possibly might have been foolish enough to take seriously.

Agreements.

In arranging for partnership or assistant agreements commit the bargain to paper at the earliest possible date, and this should always be done before the new arrangement is entered upon. In matters of agreement most people mean to act fairly by one another, but no one has a memory which is perfect, and verbal contracts are apt to be remembered only in part: therefore always have a fully drawn out, written, and signed agreement which has been duly witnessed.

Life and Fire Insurance.

No man would be so misguided as not to have taken out both life and fire policies. Unfortunately there are many who neither insure against sickness and accident nor against damage to their professional reputation. In these days of the growing independence of the working classes, and at a time when the accident laws have brought into being a degraded type of solicitor who battens upon blackmail, in which he schools his client, it is worse than folly to neglect to join either the Medical Defence Union or the London and Counties Protection Society. Herbert Kaufman, in the *Efficient Age*, says the more you are talked about the more you will be lied about. For a small entrance fee and annual subscription one may protect one's reputation and one's pocket against these harpies, and for a small additional annual premium one can insure oneself up to some two or three thousand pounds against the "costs of the other side and damages." The case has, of course, to be accepted by the council of one of the bodies to which you belong. Nowadays no one who desires to lie peacefully in his bed, or who wishes to safeguard his hard-earned savings and to ensure his jealously guarded reputation against evil report, will doubt for one moment the importance of subscribing for medical defence.

The duty of making provision for incapacity, or for dependants in the event of death, is painfully brought home by the perusal of the Royal Medical Benevolent Fund Report. In the year 1912 the society expended £2,600 in annual allowances—chiefly of £20—to 133 annuitants, many of whom had been on the register for years. Grants amounting to £2,595 were also made in 228 other cases of special and urgent need. The society's last report lays bare the fact in a pitiful way that numbers of medical men, although at one time in good practice, have come down to the direst poverty in their old age, in many cases apparently on account of lack of foresight. It is distressing to read of widows obliged to do menial work in order to provide food for their children; daughters untrained in any special branch of work obliged to earn, as best they may, a living.

Accounts.

The intervals at which medical accounts should be rendered is always a perplexing problem to a young medical man. It will be well if he recognizes early in his career that the public has a very short memory. Evening and night visits, which are so wearing, are often forgotten by a patient long before the account goes in. Small wonder, then, that a man who was very grateful for much kindly assistance in the early weeks of January, should almost have forgotten the occasion, and perhaps raise his eyebrows when your little bill is presented on July 1st

The custom, which prevails in the higher branches of both the legal and medical profession, of looking upon the fee as an honorarium and giving no credit is admirable, but in your sphere of work this, in the vast majority of cases, except in the case of the very poor, is a practical impossibility.

Quarterly accounts have the advantage of automatically weeding out those who never intend to pay at all. Depend upon it, if you are really doing good work, you need have no fear about the effect of asking for your fees. Some medical men I have met willingly allow a large number of patients to run up small accounts, which they know cannot be paid, and indeed they never really expect it. This is not done from philanthropy, but from the mistaken idea that it enhances the value of their practice. It is bad business. It certainly will increase the number of your patients, it will increase the working expenses, it undoubtedly makes large inroads on your well-deserved leisure; but believe me, the gain, if any gain there be, is wholly disproportionate to the wearing labour expended. Frequently, when a patient is in receipt of a small but regular salary, the suggestion that payment be made by periodical instalments would be gladly accepted. Suppose that when a man in this position saves to pay his doctor's bill, an occasion arises which demands money, the probability is very great that the money laid aside to meet the doctor's bill will be appropriated. It is not right, of course, but with the money in hand very few could resist the temptation; if it has been paid over, the temptation cannot arise, and the doctor is better off.

Book-keeping.

There is no special system of book-keeping of universal application, and I am not going to recommend any system. There is, however, one imperative qualification necessary in all systems, and that is that the books should be capable of being balanced half-yearly or yearly.

The results for the half-year or the year should be summarized in the shape of a profit and loss account and balance sheet. In this concise form important points are brought into prominence and grasped with a clearness impossible in any other way. Many men are apt to think of book-keeping as an unimportant matter, but it cannot be a small matter, because upon it may depend one's financial stability, peace of mind, capacity for continuing work, future independence, and provision for dependants in the event of death.

Every one who has any private income, however small, should keep two banking accounts at the same bank. The first, No. 1, is his ordinary current account, into which he should pay all moneys he receives, whether he has been paid in cash or cheques. It is an excellent rule never to spend a penny which has not come to you through your banking account. Never get cheques which have been paid to you cashed by the local tradesman. Never pay your chauffeur with your midwifery fees. Every single item received from your practice from one year's end to another should go through your banking account No. 1. If you have been tempted to use a sovereign which someone has paid you unexpectedly on a round, or if you have bought stamps with the 2s. 6d. which some patient left at the surgery, then draw a cheque for the amount, cash it, and pay the money into your bank. Thus, and thus only, can you make your banker your book-keeper.

If you die suddenly, or wish to sell your practice, then, and then only, whether your other business books are kept well or not, the lawyer or the medical agency, or the purchaser who wades through your effects, will rejoice to find one method of knowing the gross receipts, and getting some idea of the real intrinsic value of the business, and will from your bank book alone tell the total cash receipts from the practice upon which to found the purchase price. Thirty years ago I thought of buying a practice in Manchester, and was looking through the cash book which the doctor represented as his complete and sole income from patients. I drew his attention on the first page to the following item: To sale of gamecock, 10s. I am not for one moment suggesting that you should not religiously keep a day book, a debtor's ledger, and a cash book, but assuming that you have been unwise enough to omit one or all of these, or that they have been imperfectly kept, or not regularly balanced, you will thus always be able to ascertain the gross income from your practice in any given year.

At the end of every year the books should be balanced, and, believe me, if you cannot balance them yourself, or have not time, the comparatively small sum which a professional accountant will charge, say one or two guineas, will be well repaid. If you are to keep the end in view ever before you, you must know definitely in black and white if your car, garden, or domestic expenses are increasing. If they are, then you will at least stop and

think why it is so, and whether you are getting the *quid pro quo*, whether, indeed, you can afford it, and above all, whether this increase in expenditure is preventing provision for a rainy day. In short, proper book-keeping teaches one to live within one's means. It has also incidentally the advantage of helping one to render a proper return to the Income Tax Commissioners. Your annual balance will of necessity show the charges properly made against your business. You will thus protect yourself against over assessment by the Income Tax Commissioners. Surveyors of taxes are very apt to form extravagant opinions of professional men's incomes, and assess accordingly. It is very difficult to upset such assessment without proper books of account.

I have assumed that the doctor under consideration is a successful man, but let us for a moment assume that he is not. Surely it is equally, if not more, important for the struggling practitioner, who does not make ends meet, that he should be in a position to know whether it is worth his while to struggle on in the endeavour to make a success of a threatening failure.

It is, indeed, difficult to learn business habits if they have not been taught, and the medical curriculum is already full—too full. Unfortunately, no man ever learns to do one thing by doing something else. Proper books of account and a yearly balance will save much anxiety, and are the only passport to financial stability.

Every one should keep an accurate account of his business expenses, for if they are not known they cannot be kept in check, and are likely to equal or exceed the income. An accurate record is also important in order to make all legitimate deductions when preparing income tax returns.

It has occurred to me that a short enumeration of the more important of the usual business expenses might be of value to those who are commencing practice.

Fees for pathological examinations.
Drugs.
Surgical instruments and medical books.
Subscriptions to medical societies (including the British Medical Association).
Medical assistance (whether locum tenens or otherwise).
Postage; telephone rental and calls.
Accountancy fees.
Wages (including board) of any extra domestic servants rendered necessary by the practice.
Workmen's Compensation and National Health Insurances.
All carriage or motor expenses, including repairs, renewals (which are not capital additions), licences and insurances of car and man, also depreciation of car.
If you have a separate surgery, its whole cost must be deducted before the profits are arrived at. If your profession is carried on wholly or in part at your residence, a proportion of the rent (not exceeding two-thirds), rates, taxes, lighting, heating, and repairs must be debited. The proportion of rent deducted will of course correspond to the value of the portion of the house set apart for professional purposes.
Bad debts should be estimated and deducted, and also a percentage for depreciation of furniture, etc., of the surgery and consulting-room.
Life insurance premiums may be deducted, provided they do not exceed one-sixth of the income.

All these items, with the exception of the depreciation of the car, are proper deductions to make when preparing your income tax returns.

It should clearly be understood that when you purchase a motor car, you are merely transferring money (capital) from one investment to another, and that you must not think of the money paid for your new investment (the car) as one of the expenses of the year in which it is bought. When, however, the car depreciates, and you are necessarily at the expense of buying a new one, the loss which you suffer from the sale is clearly an expense, and is to be set against the profits for the year in which the expense is incurred, namely, when you buy the new car.

Note, however, that should your tastes lead you to purchase a higher horse-power car, and therefore lead you to a further expenditure of capital, it is not chargeable as an expense against the profits of the year. It is a little difficult to appreciate this, but it is very important to understand the Income Commissioner's view. If I take a concrete example, it will probably best explain how replacements can be charged.

Assume you buy a car (No. 1) for £300, and later purchase another car (No. 2) for £500. The purchase of both cars is only a transference of your capital (say from stocks and shares) to capital in motor cars. Suppose, however, you do not want to keep two cars, and are, in fact, buying No. 2 because No. 1 is already worn out, and that car No. 1, which you bought for £300, is sold for £80, you are entitled to look upon the difference, which is £220, as one of your expenses *when you buy a new car*. This is the amount that you are entitled to charge against the profits as "renewals." It is true you are replacing a £300 car by one costing £500, but the extra money paid for extra luxury is merely extra capital invested. You are only entitled to look upon the loss of capital in the first car as a "renewal" when a new car is bought and replaces the first.

Similarly, when car No. 2 gets worn out, or unfashionable, and you have designs on No. 3 at £700, if you sell No. 2, which cost £500, for £170, the cost of renewal (that is, the amount you are entitled to charge against profits) is the difference—namely, £330.

Income for tax purposes is returned on the average of the three preceding years, so any renewal of cars will be spread over that period, and will not make a suspiciously big drop in any one year.

The Acquisition of Capital.

It is the duty of every man, even from the time when he commences practice, to endeavour to save something each year, and, as the practice increases, this sum of course should be larger. Most prudent men who wish to earn an honourable competence and a solid reputation do this. I strongly urge you to go one step further, a step which will make all the difference between that honourable independence which we all hope for, and a hard, unprovided-for old age, which we all dread. Never spend capital. Never spend the interest of capital. There is no excuse for doing so. It is the provision which you have earmarked, which you are saving for your dependants in the event of your death, and for yourself when past work. Assuming your income has not declined, you obviously should not require last year's savings, or the interest on these savings, for this year's expenses. You saved last year because you more than met the expenses of that year, for you had a surplus. What you then saved is now capital, and I want you to look upon all capital, and the interest it brings, as a thing apart from your ordinary income and expenditure. In this way only can professional men with small incomes and no pension provide for their dependants and for their declining years. Oliver Wendell Holmes said, "Put not your trust in money, but put your money in trust," and a greater than the American doctor said with arresting impressiveness, "Whatsoever a man soweth that shall he also reap," which is as true in the conduct of business as it is in ethics.

To save money in general practice is, I know, difficult, but it can be done. The essential of success is "a clear and steadfast view of the end."

I wonder how many of us realize that money invested at 5 per cent. with compound interest doubles itself in fourteen and a half years. Every hundred pounds you save under these conditions will later on be two hundred. A rough method of ascertaining in how many years money will double itself at any given rate of interest is to divide 70 by the rate of interest, and the quotient represents the number of years which money at that rate of interest takes to double itself at compound interest. But as you cannot have your cake and eat it, it is a *sine quâ non* that your capital be safe and that you never touch the interest. You must not be tempted from such considerations by a desire to live in greater style. It is so easy to appease your conscience by saying that to do so will impress your patients and that, therefore, it is good business. In truth, if you want a plausible excuse for any extravagance or for increasing any expenditure you can get no better. Believe me, you must carefully plod along the straight path, remembering that display is vulgar, and that it is neither becoming nor wise for men of science to compete with the *nouveaux riches*. Although it is perfectly true that the life of a man does not consist in the abundance of the things that he possesses, this is not a text which will give you much comfort if you have to depend on others when past work, or have to leave your family unprovided for. Remember, it is neither parsimony nor meanness to keep ever before you the necessity of saving when it means the welfare of those whom you love and may at any time leave behind.

A systematic regular study of accounts teaches one to appreciate the difference between capital and income; it is no exaggeration to say that a full realization of the distinction between what is really capital and what should

be treated as income has accounted for many a comparatively poor man becoming rich, and confusion on this point has accounted for many a rich man becoming poor.

Investments.

We doctors have neither the necessary information nor the time to watch the many influences which affect industrial enterprises; therefore, whatever your business friends may recommend, eschew investments which are directly influenced by trade depressions and by the commercial markets generally.

A safe method of investing is to buy well-known foreign Government stocks. This may—indeed, in one sense it does—show a want of confidence in things insular; but it is my method, and that of many whose methods I admire, and I recommend it to you. The first consideration is the safety of the capital; and the second that the interest is reasonable and paid regularly, and these stocks in the main fulfil these conditions.

One advantage in buying Government stock is that the brokerage fee is small. The price of investing £100 in any Government Stock is about 3s., whereas the same amount of money invested in £1 shares of a commercial undertaking may be anything up to about 25s.; this may be a comparatively small matter, but it is a consideration. For instance, no one will deny that great countries such as China and Japan and many of the South American Republics are in a thoroughly solvent condition, and it is to be remembered that many countries besides England have large monetary interests in those States, and that their finances are carefully scrutinized by the great financial houses of all the capitals of the world. Most of these bonds are redeemable at par in a given number of years, so that even if the capital value goes down there is the comfortable feeling that in a certain number of years they must pay the purchaser or his heirs the full amount. Suppose any Government stock, owing to internal troubles, drops even 10 per cent., there is no need to sell. The holder can always get his 5 per cent. interest, and, as is already explained, the capital is redeemable at par. If circumstances arise where ready money is imperative, even then he need not sell, for the bank will, if the bonds are deposited, always advance money at about 5 per cent. upon a good stock.

Medical men who have a large circle of acquaintances often get perfectly honest but misguided advice from men who are in business in the City. Do not forget that all such advice is gratuitous, the true value of which we all know. Every man is an enthusiast when he thinks he can make, or advise his friend in making, money in any way other than by the sweat of his brow. If you listen, as so many do, to these advisers, you will find a gradual accumulation of investments of a heterogeneous and nondescript nature, many of them worthless—some which will depreciate in such a way as to cause you much anxiety, and others which will give you no return at all for your capital. I need not labour this point. We all know innumerable instances. Only the other day a medical man, now engaged in the hard grind of an East End practice, told me that some years ago he was worth a large sum, but that he lost it all within a few weeks, explaining that a friend had advised him *to put it all* in certain mills which at the time were giving a good return.

Beware of shares that are not fully paid up. You will be told that there is not the least likelihood of the unpaid capital ever being called; but think what it would mean should your informant be mistaken! Always know the full extent of your liability; therefore, never buy shares subject to calls. Never join a syndicate which has an unlimited liability, even though it may be formed merely to take over a company.

It is an old saying: Never put all your eggs in one basket. Most careful people distribute their investments, and place comparatively small sums in a large number of widely different stocks. It is a good plan to have some regard to geographical position and not to buy too many Government bonds of one country, or even of one continent. The wider the distribution, the less likelihood is there of trade depression or a great war materially influencing the dividends. I know one man who invests £25 in each concern. I know another who makes £200 his standard, and another, whose means are more ample, distributes his investments in parcels of £400 or £500. Now it may be said that small driblets of dividends coming in from these various investments (assuming, for instance, that the income from private sources has gradually mounted, as it certainly will, to a considerable amount per annum) would be irksome, and involve a good deal of trouble. There is no doubt also that there would be a temptation to a weak man to cash and use these for current expenses, but this difficulty is easily surmounted.

All share certificates and bearer and other bonds should be deposited with a banker. As each small investment is made, a notice is sent to the secretary to pay dividends into the bank. The banker, as he has your bonds for safe custody, will credit you with bearer bond coupons as they mature. Now comes the most important piece of advice I have to give you. Have all the amounts paid, not into your current account, but into a separate account, which may be called account No. 2. This is the essence of the whole scheme of saving which I am urging you to adopt. No. 2 account is your saving account. In it you will see your dividends (interest) gradually accumulate. You will never touch it, it is not yours to spend. You have set it aside to keep those you love when you are gone, but every now and then as it grows, you will invest the interest as fresh capital, and so it will grow, and as years pass, dark forebodings of the future will press less heavily, and that gain which sweetens labour will give you a real satisfaction, and that glorious feeling of being independent which my woefully extravagant bard sang of, but never knew.

You will therefore have two accounts always open. First, the ordinary current account into which, as I have already explained, you will pay *all* moneys received from practice, and from which you will from time to time make investments as the account permits. Second, the No. 2 account, into which you, or those whom you authorize, will pay all your dividends—that is, all interest accruing from invested funds, and any moneys other than those direct from your profession. From No. 1 account you will pay your current expenses. From No. 2 account you will only draw when you wish to invest the interest.

In this way not only will you soon realize whether you are or are not saving money, but you will appreciate intimately how much of what you are spending year by year is coming from investment, and how much from practice, for, as the time passes, and you cross the meridian of life, you will often, with some anxiety, ask yourself: If I were forced to, can I live without working? It is obviously prudent that you should at all times be in a position to know whether your income from practice alone—not your total income—is on the upward or downward grade. By adopting the methods I have indicated these questions can be answered with little or no expenditure of time or trouble, and are, I assure you, well worthy of your serious consideration.

Speculation.

May I earnestly warn you against the evils of gambling on the Stock Exchange? We all work so hard for our living that the unearned increment appeals to us. That knowing friend who is evidently comfortably off, and who makes a good living out of stocks and shares, is dangerous. Remember that he does not make his money in the way he is advising you to make yours. Stockbrokers make their income, not from buying and selling stocks and shares for themselves, but they thrive from the commissions on stocks and shares they buy and sell for other people. If your so-called investments lead you to take a livelier interest than usual in the evening paper, and the Stock Exchange prices are the first things you turn to, depend upon it your so-called investment is a speculation.

Medical men have neither the time, the ability, nor the money to profit by the rise and fall of speculative stocks, and the sooner you recognize this the more likely you are to retain your hard-earned savings. You may not believe this, but take it from me that you will sooner or later. Experience is a very good schoolmaster, but in these matters he is apt to be very expensive. M. Paul Leroy-Beaulieu, the famous French economist, says:

> Experience shows that, with extremely rare exceptions, all speculators end up by ruining themselves. There is not one out of ten who, if he lives to an ordinary age, does not end his days in poverty.
>
> The necessity of always increasing his commitments, the blind faith in his own judgement and lucky star engendered by an occasional success, the enormous sums that he has to pay

in brokerages and commissions, interest on loans, the necessity sometimes of realizing in unfavourable markets, and then the unforeseen which sooner or later comes to spoil the plans of every speculator—all these elements united will eventually ruin the most experienced speculator if he does not withdraw; and this he never does.

It is a great error on the part of the public to believe that large fortunes are made by speculation; not one in a hundred is made, although many are lost by this means. Take the twenty or thirty large fortunes in any country, and see if even one of them owes its existence to speculation. It will be found that bona fide industrial, commercial, or financial dealings well and economically conducted, and wise and far-seeing investments, the profits of which were not realized in one or two Stock Exchange settlements, but after five, eight, or even ten years of waiting, formed the base of most of these fortunes.

It is an utterly unsound basis to proceed upon to look to a special providence to perform miracles for you, and give you what is called "luck." By all means seize the opportunities that come your way, and use them to the best advantage, and, should you meet with what we are all pleased to term "bad luck," make sure that it is not the result of incorrect premisses, or a judgement founded upon imperfect or insufficient knowledge. Search diligently where you miscalculated, or how you came to be betrayed into mismanagement. If you would avoid much that passes for bad luck, leave nothing to chance, always calculate from afar.

If there is one thing that you may certainly rest assured about, it is this—that you will never get big results without expenditure in some form or other. Everything must be bought. Success is the completion, the coping stone of a carefully planned, laboriously executed, deliberate campaign against failure. Even when it is attained it sometimes brings disappointments, but remember that the reward is in the doing. If your judgement has been sound, if you have moulded yourself to your environment, and, as far as may be, moulded your environment to yourself, if you have shown an energetic individualism, and if you have realized the full significance of your own potentiality in your relationships to your surroundings, success must follow.

Success may take the form of financial gain, social aggrandisement, or self-satisfaction. Now, apart from the proper provision for old age and your dependants, financial success is not desirable in the medical profession, for it cannot be attained (except by the few) without making sacrifices which are inimical to the growth of those qualities which ennoble our work. Of social success I have nothing to say, except that it is Dead Sea fruit. The success which brings true self-satisfaction is the Mecca to which I would endeavour to point you, for unlike those ephemeral successes to which I have referred, but like the heaven and hell of the new theology, she is with you now; if you woo her successfully she is your abiding portion.

To be successful you should know how to depute work to others—work of which they are capable, but which if performed by yourself would interfere with the proper development of your career. The hard-worked general practitioner who wastes precious time (which could be more profitably or enjoyably spent) doing his own dispensing or his own book-keeping, has much to learn; but he is probably one who never will.

It is impossible to carry on the affairs of life without causing loss and inconvenience to others, and this cannot be avoided if we are to be successful. It cannot be that to exercise your ordinary rights is to do wrong, otherwise competition of all forms is ethically unsound.

Courage is a *sine quâ non* of success. No one who deliberately schools himself to take the line of least resistance in conduct will ever hold his head high. Dr. Claye Shaw points out that—

> Whatever way success is achieved, there are four mental necessities—namely, a clear view of the end, a judicious indifference to the sentiments aroused by the sweeping away of obstacles, an indomitable energy, a power to resist the temptation to rest on the soporific plains of mediocrity.

As a concise statement this is excellent, and so far as social and commercial or political success is concerned, it is capable of absolute application. It does not require much modification to adapt it to success in our own profession. The much good we do would become more if the essentials enunciated by Shaw were kept well in view.

I have addressed you upon the business side of your profession, and I have not said a word, I am convinced, which is incompatible with the highest aims and ideals we ever entertain. I hold the view that it is essential we should have made the most of opportunities that have presented themselves, and have placed our affairs on a sound business basis before we can incur risks, and display the attributes which our service demands.

In the routine of your work, in the seclusion of the sick chamber, you are almost daily called upon to exercise qualities which show evidence of unostentatious courage, whole-hearted devotion, and a self-abnegation which calls forth qualities of the highest order—greater, I venture to say, than those applauded and honoured in our sister professions. In the unromantic monotony of the commonplace of your daily life, deeds of self-sacrifice have to be performed which are not prompted by the glamour of fame or the desire for profit, but simply because duty calls Your reward is in the doing.

An Address
ON
MEDICAL ETIQUETTE, ETHICS, AND POLITICS.

Delivered to the Medical Society of University College, Dundee.

By R. C. BUIST, M.A., M.D.,

Dundee.

To our friend the man in the street medical etiquette is like the metaphysics of the pulpit to the bewildered listener, one of those things which he does not understand and which he has a strong presumption is at bottom nothing more intelligible than a means of evading awkward questions. But in ordinary society the knowledge of certain conventional observances is the badge of membership, and in medicine from time to time and place to place varied conventions have been established for those who would exercise the freedom of the craft. The conventions of etiquette are, in their simplest form, attempts to guard against the foolish some essential conditions of common intercourse, but systems of etiquette may dedevelop into an elaborate ritual which becomes the end and aim of its own devotions. One of Molière's doctors would rather not cure a patient than treat him with remedies other than those which the faculty had sanctioned, and under his care the apothecary's children died in four days, where another might have kept them dragging on for more than three months. Let us take a middle course, and while recognizing that

> Regulations and rules
> Are fences for fools:
> The wise don't need them;
> The wicked won't heed them,

admit that we are ourselves partly each, so that rules may be at times useful if only as mnemonics.

To the diffident etiquette is a protection, as you may find at the outset of practice in the imperative rule which commands a call on your professional neighbours. This should be obeyed without delay. You are colleagues, and no one can tell how soon some patient's life may depend upon your mutual understanding. The rule is to be interpreted reasonably where the profession is numerous and the area large. Under such conditions you are not expected to make your nights burdensome by marching the confines of a large city, but you will find the difficulty greatly reduced if you have had the wisdom to join the British Medical Association where you qualify, and as soon as you qualify, since you will then be transferred automatically to the list of any Division to which you may go, and be summoned to the meetings, which I counsel you to attend.

The second occasion for etiquette is where a patient comes who has previously been under the care of another. Here the rules vary somewhat from place to place, and you should as soon as may be find out the local variety. You will avoid many occasions of misunderstanding if when you are requested to accept the transfer of a patient during an illness you make it an invariable rule to com-

municate first with the doctor who has been in attendance, but in any case let there be no mystery or secrecy in the matter. It is an event of every day for patients to change their doctor, and, whether they come or go, you should treat the matter as you would an occurrence of the non-medical world. No matter how great a share of your work one patient may be, you will never be aught but a slave until you can see him come and go as if this were a natural event as impersonal as the tide. There is no property in patients, though even yet some seem to hold opinions like those expressed by Molière's doctor, whom we have already consulted, when he says: "Your prospective son-in-law has been constituted my patient. His illness, which has been given me to cure, is a property which belongs to me, and which I reckon among my assets."

The third occasion for etiquette is when you have to see a patient who is still under the care of a colleague. In whatever capacity you may have so to do, unless an emergency admits of no delay, the first step is to communicate with the colleague in attendance, and if in emergency this be impossible, the communication should be made at the earliest practicable moment afterwards. For the more detailed ceremonial of consultation you should refer to the careful reports issued by the British Medical Association on the ethics of consultation. This affords an excellent transition from mere etiquette or customs that have been settled in one form, and might equally well have been settled in another, to the wider principles which are more aptly described as ethics. These principles are themselves conventions, but they involve the application to medical instances of principles which lie deep at the roots of that greatest of conventions, our civilization itself.

The principles of medical ethics are those according to which you are expected to regulate your actions as a medical practitioner. Some have asserted that they involve nothing but the application of the golden rule. A glance at the history and present condition of Christendom shows that this is a more difficult matter than would appear from the simple statement. We may, therefore, look at some of the relations created for us by entry into the medical profession and the duties which present themselves in each of them. First of all, the medical practitioner has duties to himself as human being. It is becoming more and more the lot of the profession to have to make official record of its daily doings. Let me counsel you to protect yourself against yourself by developing the habit of making such records at once. Done, the trouble becomes subconscious; undone, it is cumulatively heavier, a weariness to the flesh and a burden to the spirit. As in the personal relation the due performance of routine is a protection, so in a familial relation is the due observance of domestic routine. For emergencies no rule is dominant, but urgency is relatively rare, and I commend to you the sacred duty of eating your dinner in due season. To speak of familial relations raises almost at once the question of marriage, with regard to which, in the folklore of medical prudence, you will find the maxim that "it is profitable for a doctor to be married." The negative form would have been truer and would have left logical room for the equally true statement that it is not unprofitable for a doctor to be unmarried. You should have better reasons for marriage than the fact that some folks prefer a married doctor; others have other tastes. The matter of dress is weighty in inverse proportion to the worth of the man and the intelligence of his *clientèle*. It is important, even though to the maxim "dress makes the doctor" the cynic adds that "some doctors make a living by their heads and others by their tailors."

The relation to the patient is the primary reason for the doctor's being, and the cardinal principle of your duties is to furnish the best that the medical profession can supply for his needs. Not only must the best within your own knowledge be brought forth, but the limits of this knowledge must be honestly recognized, and inside them must be found a knowledge of the way to the best that is available. This is true in whatever circumstances the patient comes into our hands. Be he parochial, insurance, hospital, or private patient, he is entitled to the best that the profession can do for him. Some of the profession have not yet realized the actual raising of the level of medical performance which the Insurance Acts have placed within their power. Unfortunately the measure of our failure is likely to influence the immediate future of the profession fully more than the extent of our own achievement.

If our first duty is to give honestly of our knowledge, the second duty is to give fully. You leave college now with an extent of clinical practice at your finger-ends of which five-and-twenty years ago we barely dreamed. The danger that I see before you is that of failing to realize the opportunities you have of using it. So far as my observation of the finished product of our medical schools goes, I seem to note the absence of signs both of personal initiative and also of consciousness of the fact that each case lays before you unsolved physiological problems. Though you may satisfy your patient by your treatment without applying the methods which the school has placed in your hands, you must not flatter yourselves that medicine thus applied is scientific. Till you have answered the physiological and pathological questions raised you do not understand your patient, nor have you quitted yourself of your responsibilities towards him. The scientific practice of medicine is a matter of your mental attitude, not of laboratories. Never guess a thing you can measure, or as Clouston put it: "Never be opinionative when you can be scientific."

Dr. J. Marion Sims, the American gynaecologist, was one day, when the guest of Professor A. R. Simpson, introduced by him to the class. He was of course greeted by cries of "Speech! speech!" In reply he told the following story: "Well, gentlemen, I did not reckon to address you, but I think it might be useful to you if I tell you how I started practice. I had been two years at college, and had got my M.D. degree, and my father was very proud of me, and he said to me, 'Marion, I'm going to take an office for you.' Well, he took an office, and he put up a brass plate as long as your arm, 'J. Marion Sims, Physician, Surgeon, and Accoucheur.' I was very proud of that brass plate, and I used to go out three times a day to look at it. But no one else seemed to look at it, and I had sat in that office for three weeks when one day the mayor's coachman came in and said to me, 'Marion, I've known your father as a citizen of this city for many years, and I'd like to do what I can for you. My little girl's sick, and I'd like you to come along and see what's wrong with my little girl.' I went along with him and saw the little girl, and she was sick. I didn't know what was wrong with her, but I knew that I had in my office a book about diseases of children, so I said, 'If you come along to my office in an hour I'll give you something that'll do your little girl some good.' And I went back to my office, and got down the book on diseases of children. I couldn't make out what was wrong with the little girl. But it was a good book, and very conveniently arranged, and at the end there was a list of prescriptions suitable for children, so I took the first prescription in the list and made it up, and when the father came I said to him, 'Give your little girl a teaspoonful of this medicine every four hours, and I'll come along to-morrow and see how she is getting along.' Well, next day the little girl wasn't any better, so I said, 'If you send along to my office in an hour, I'll give you something that'll suit her better, and I'll look in again to-morrow.' This time I gave her the second prescription. Next day she wasn't any better, so I made up the third prescription; and next day the little girl was dead. It was two weeks more before any person came into my office, and then the mayor himself came in, and he said, 'Marion, I've known your father as a respected citizen of this city for a long time, and I'd like you to come along and see my little girl; she's sick.' So I went along and saw the mayor's little girl. And she was just like the other little girl, and again I didn't know what was wrong with her. But I thought that as the prescriptions at the beginning of the list had done so little for the coachman's girl, I'd try the prescription at the end of the list. Well, next day the little girl wasn't any better, so I tried the second last prescription, and next day the mayor's little girl was dead. Gentlemen, I went back to my office, and I unscrewed that brass plate, and put it down a well in the backyard of that office, and then I went back to college for two years."

The other aspect of medical ethics which arises in relation to the patient is that of professional secrecy. This duty is absolute until it is overridden by some higher duty, if there be any. In Britain the interests of justice may

absolve you once you are called as witness in a court of law, where, with the consent of the patient or without it, you are bound to give such evidence as the judge may hold relevant. Apart from this, the duty is absolute. Without the consent of the patient, no facts, medical or other, which you have learnt in the course of attendance on him may be communicated. In some cases where the law requires notification the consent is implied, but it is no part of your duty to act as detective. This sometimes raises questions of great difficulty, especially in relation to the presence of communicable disease. Here, however, your duty ends, when you have fully and clearly impressed upon the patient his own responsibilities towards those with whom he may come into contact. In family circles and in small communities it is often difficult to parry indiscreet questions, but the sooner you cultivate the habit the easier it will become, for the sooner will be established your reputation as to the uselessness of asking you questions. Questions by an employer should only be answered when the employee has given instructions to this effect, and when mistress and maid are concerned it is usually best to have both present. It may be convenient for the mistress to know that her maid is pregnant, but the information is the maid's, not yours.

Entry into the medical profession brings on you also personal responsibilities to your individual colleagues. In the matter of professional consultation I have referred you already to the report on the ethics of consultation, but there is another matter less formal but no less important—the estimates you make and the opinions you may express of your colleagues. You may have read the lines:

> Within my earthly temple there's a crowd;
> There's one of us that's humble, one that's proud;
> There's one that's broken-hearted for his sins,
> And one that unrepentant sits and grins;
> There's one who loves his neighbour as himself,
> And one who cares for naught but fame and pelf.
> From such corroding care I should be free,
> If once I could determine which is Me.

Looking into the witches' cauldron of the soul may be no easy task, but I have long ago come to the conclusion that there is no act with which one will credit another that he is not himself capable of being tempted to do. You may recall the anecdote of Lord Inglis, who one day, in the robing room at the Court of Session, said to his colleagues: "It has sometimes occurred to me that there is no crime in the calendar which I have not been at one time or other tempted to commit." The fact expressed is by no means set aside by Lord Young's query: "When was your lordship last tempted to commit concealment of pregnancy?"

One day a patient called on the late Dr. James Murphy of Sunderland, and said that he had already been to one of his rivals. Dr. Murphy replied, "I have no rivals; which of my friends was it?" The curse of medical life is the jealousy which keeps men looking on each other as rivals. Get rid of it, and you and your neighbour will be happier and not poorer men. The principle which must pervade all the mutual exchange of service which makes the medical colleagueship helpful is that you must never use to his disadvantage an opportunity which a neighbour has given you. There can be no mutual trust if you are ready to use his introduction to any patient for the purpose of supplanting him. A patient has the right to change his doctor, and a patient to whom you have been introduced by a colleague has the choice of the whole medical profession, except yourself.

The duties of medical life extend not only to the personal relations, but involve you in responsibilities to knowledge. Early in the *Harzreise* Heine says: "In the university town there is a continual come and go, and every three years there is a new generation of students. In this everlasting human tide the wave of each term drives forth the other, and only the old professors remain standing amid the universal movement; immovable, like the pyramids of Egypt, only that in these university pyramids there is no wisdom hidden." I would not have you take Heine too literally, but it is true in the main that it is the wisdom of the past that you find in the universities as at present organized. There is so much to do and so little time to do it in that we must keep you on the main lines and help to train your hands and eyes, and we can do little to create that forward-looking spirit which is the mainspring of human progress. Except in so far as we are ourselves engaged in research, we have little opportunity of infecting you with the wholesome virus. But there is a great possibility in your hands, and you are furnished with the clinical armamentarium for attacking it. In hospital and in the school you have seen grave forms of illness when they were already developed, but the task of tracing the origin of these grave conditions in the slighter complaints which meet the general practitioner, and of tracing their etiology back to individual and social habit or tradition, and so into problems of education and economics, is still before us, and it can only be tackled by those who go into ordinary practice. You will each, it is to be hoped, have time on your hands in the early years of practice, and in insured patients you create no bills by much attendance. Devote yourselves to the careful study of how your patients come to be ill, and you will do your share in solving the greatest of our problems, the prevention of disease. If you need encouragement, read Dr. James Mackenzie's article in the BRITISH MEDICAL JOURNAL a few weeks back.

From your profession as a whole and from the nation you belong to you have many privileges which require some recognition in the form of service to the interests of both. So we come into medical politics. You cannot fulfil your ethical duties if you neglect politics. In the truism that the interests of the public and those of the medical profession coincide we find another of those simple sayings which admit of much casuistry in their application. So much depends on the measure you apply to interest, and I advise you to re-examine any standard by which the two faces give discordant readings. The present position of medical politics is one of transition. In the past the profession supplied in a disorderly way the demands of the individual for medical attendance, and was on the whole remunerated by fees. Though some will probably not agree with the statement, this system had broken down. Owing to the economic conditions under which it had to be exercised, large numbers of the population could not secure medical attendance as soon as they needed and as much as they needed, and partial relief had been given by large organized medical charities and by much unrecognized medical charity in the form of unpaid bills. A section of the profession contends that the association of remuneration with the individual medical attendance, fee per attendance, is the only healthy stimulus to satisfactory relations between doctor and patient. Others, who stigmatize this a trade rather than a professional view, advocate a salaried medical service. At the moment we are in a state between the two, and you may have your share in deciding how long this stage is to last, and in what direction we are to move from it. There is no doubt whatever that the system of individual employment is on its trial, and if it is not able to justify itself by results in the health of the worker and in the fair administration of his sickness benefit, the profession will soon be subjected to another form of organization. You will certainly have to consider the questions of a salaried medical service and of the one-portal system of admission to the *Medical Register*.

It is not my purpose to state for you the points at issue. You will find them keenly debated in the medical journals. I wish, however, to say some things with regard to your own attitude on professional questions and the points of view from which they are to be regarded. First of all, let me commend to you a modest optimism. You will soon meet prophets of evil, but among the few things that are left to us for matters of belief hold fast an unswerving faith in the law of inertia and in its biological embodiment the law of heredity. Fashions vary and conventions are in constant flux, but the qualities which have led to the great achievements in medicine are rooted deep in the human character, which has been passed on to us almost unchanged through the few thousands of years for which we have a continuous record. Look as we may upon the present modern worship of the golden calf, the medical profession can meet any conditions of organization that may be in store for it with the confident expectation that honesty of purpose, fearless love of truth, and unreserved devotion will be the characters it will display, as they have been displayed by those whose torch we must some day hand on.

In dealing with questions of medical politics you have to meet forces coming from outside the profession. During

the very keen debates which took place two years ago, when the attitude of the profession was one of conflict with the Government, one often heard opinions expressed that seemed to imply wilful perverseness in those with whom we were dealing. Should you be involved in any similar controversy, I advise you to regard the Chancellor of the Exchequer of your time as one of the cosmic forces. The Minister merely expresses social tendencies, and though you may not be able to see their origins, you have to take them into account as certainly as you must regard the law of gravitation when you go down a stair. If you remember this you may be able to do good business and to direct the current of events which, on any other plan, will sweep you away in spite of your impotent spatterings. You cannot solve the problems of medical politics if you confine your view to professional conditions alone, and you must credit others with an honesty of purpose equal to your own. You may take it for certain that while medical considerations and the wish of the medical profession may have determining weight if other things are equal, a system of medical organization will be stable only in so far as it can justify itself by the results it produces for the community.

If it is important to take a detached view of the forces at work outside, it is equally important to take a sane view of the powers available within the profession. I have already, and from another point, advised you to join the British Medical Association, and I do so here again since it offers the readiest way in which you may discharge part of your responsibility to the profession. It is, of course, true that the organization of the profession will go on whether you join or not, but its momentum is proportional to the mass, and you can add yourself. Organization will secure advantages for the profession, and of these the outsider cannot divest himself, though he may avoid sharing in their cost. The Association is the agent of our collective bargaining. It has not the organization of a trade union, and some would fain have it formally enrolled in this category. The Association and a trade union each in its place can take very efficient action, but only so long as the opinion of the members consents to the course taken. When this support is absent, trade union and Association are likewise impotent. You will find those most ready for vigorous action who have a definite opinion, and the more narrow its basis the more ready are they to demand the assent of others. Vigorous action is not necessarily effective. If the Association is usefully to intervene in public affairs, the members must find leaders whose ability they recognize and must give them a free hand to carry out as they best can a policy which commands general assent. No democratic organization can usefully interfere in the details of business. Settle your policy; seek your leaders and trust them.

CANCER, PUBLIC AUTHORITIES, AND THE PUBLIC.

By CHARLES P. CHILDE, B.A., F.R.C.S.,
VICE-CHAIRMAN, HEALTH COMMITTEE, PORTSMOUTH TOWN COUNCIL.

THE following communication is published in the hope that it may catch the eye and merit the attention of medical officers of health, and that through them the subject of it may come up for the consideration of Public Health Committees.

The Health Committee of the Portsmouth Town Council has for several months had the subject matter of this communication under its consideration, and has submitted certain resolutions which have been adopted by the Council, and will shortly take effect in this neighbourhood. The Portsmouth Town Council, at all times progressive in matters of public health, is, I believe, the first, in this country at all events, to have taken action on these lines. The reference to the Health Committee from the Council was as follows:

> To consider in conjunction with the medical officer of health any possible means of securing the earlier treatment of people suffering from cancer, and to report to the Council at an early date.

A subcommittee was formed which gave the matter earnest consideration, with the result that certain recommendations approved by the Health Committee were sent forward to the Council, and were adopted by an overwhelming majority.

To medical men, and especially to surgeons who are called upon to deal with cancer by the only known method of cure—namely, operative removal—the necessity of endeavouring to secure its earlier adoption is one of the most pressing medical problems of to-day. This is quite evident on reading any discussion during recent years on cancer and its treatment; for whatever different views may be expressed as to the best operative measures for its cure or relief, the point on which there is an absolute consensus of opinion is that until cases can be submitted to treatment earlier than at present it is impossible to expect any sensible measure of success. Though the cause of cancer remains undiscovered, its local origin has during the present generation been universally accepted by the profession. It would be beside the point to enter here into the evidence—clinical, microscopical, experimental, and, most convincing of all, surgical (for during this period it has been proved over and over again to have been cured)—of the fact that cancer in the first instance is a local disease confined at first to the part it attacks, and that it destroys life by its continued growth locally and by its centrifugal spread from its local site of origin. Such being the case, it follows that for every case of cancer which occurs in a situation accessible to surgical removal a time exists, be it short or be it long, during which it is capable of cure, and the measure of success in its treatment depends directly on the ability of its victim to avail himself of this time. Now cancer in far the majority of instances does occur in situations in which it is surgically removable. In women cancer of the breast and generative tract, according to a statistical study based on the cancer records of the Middlesex Hospital by Lazarus-Barlow, accounts for 80 per cent. of the disease. In men 80 per cent. of all cancers affect the alimentary tract, the whole of which, with the possible exception of the pharynx and œsophagus, is readily accessible to the surgeon. Roughly speaking, it may be said that four-fifths of all cancers in both sexes are accessible to surgical removal, and are therefore potentially curable. Yet how few are cured! The reason is not far to seek, and is perfectly well recognized by the profession. It is that early cancer gives rise to no symptoms calculated to warn the patient, unless he is alert, of the abyss on which he stands, and that the person attacked with cancer, though the danger signal is usually hoisted early enough and clearly enough, is in most instances totally unaware that there is anything serious the matter with him. This is literally true of the hospital class of patient. I have gone carefully into the matter myself, and any medical man who has the opportunity can test the truth of it. If a woman of the hospital class with advanced cancer of the breast or uterus is asked how long she has known that she had a tumour of the breast or irregular bleeding, the common answer is anything between six and eighteen months. If she is next asked why, knowing this, she did not apply earlier, the almost invariable answer is to the effect: "I felt well; it caused me no pain; I did not think it was anything serious." A similar reply will almost invariably be elicited from a man with advanced cancer of the lip or mouth.

If these people have any knowledge at all of cancer, owing to friends or relatives having died of it, it is that of a person wasted to a shadow, suffering all the tortures of hell, and eventually dying a miserable death. It never enters their head that the painless little tumour in the breast, or the slight irregular bleeding, or the small sore on the tongue is the same disease. Among the educated classes ignorance too accounts more than anything else for delay in seeking advice. This also I have tested. Fear has some share in it; the dread that they may be told that they have cancer, which they regard as tantamount to a death sentence. This fear, it will be noted, is due to ignorance of what it is possible to do for early cancer; and it is not to be supposed that the majority of educated men and women, provided they knew that cancer was curable if they sought advice at once, and knew equally well that it was inevitably fatal if they delayed, would hesitate between the two alternatives. It is the unwarranted ignorant conviction that if they have cancer it is a fatal disease, which causes them to put off. Dread, too, of operation weighs with some, but I do not think

with many nowadays. People have become so accustomed to surgical operations, the painlessness and all but exceptional safe course of them is so well known to the public, that fear of operation does not, I think, account for much delay. At all events we do not find it so in other diseases. If a patient is told he has a dangerous illness and that surgical operation gives him the best chance of life, he rarely refuses it. When people apply with advanced cancer, and are told that surgical operation gives them the only chance, even though it be a poor one, they very rarely refuse it. When these various matters are weighed up it comes to this—that sheer ignorance of the gravity of the complaint is far the most potent factor making for delay, the only other factor of importance being the dread people have of being told they are suffering from what they regard as an inevitably fatal malady. This also has its origin in ignorance of the disease in question.

Such being the case it may pertinently be asked if it does not become the duty of public authorities, one of whose chief functions is the care of the health of the community they serve, to endeavour to remedy this state of affairs, and to endeavour to do this in the only possible way—namely, by educating the public in the danger signals of cancer, by giving them such information as will make it, at all events, possible for them to apply in time to save their lives. Personally I think it is their duty. It may be contended that there are both difficulties and objections. Let us examine them. Take the difficulties first. Though it may be difficult to educate the public, though it may be difficult to make any fact about this or any other disease common knowledge, yet if attention is riveted on a few important points, and on the common sites of cancer, the matters for the public to know are extremely simple. So that the task is not *a priori* hopeless. It has never been tried. We are going to try it at Portsmouth. Practically every case of cancer of the uterus occurring after the menopause should be caught in the early and curable stage. Every woman should know that bleeding occurring after the menopause means for practical purposes cancer, and curable cancer. It is a definite and simple fact. Every woman should know that a lump appearing in the breast after 40 years of age is much more probably cancer than anything else, and if she loses no time, cancer which is curable. It is a fact, definite and extremely simple. Every man should know that a wart or sore appearing spontaneously on the lower lip after forty-five years of age is in all probability cancer, and cancer easily curable if he does not wait. It is again a fact, definite and simple. Examples could easily be multiplied. It will be recognized how simple and few and definite are the facts the knowledge of which would enable the sufferers from most cancers—not all, but most cancers—to have at all events a fighting chance of saving their lives. For educative purposes the age incidence of the disease is of great value, and may be put roughly at 40 years or thereabouts. Cancer before this age is comparatively rare, and for instructional purposes, not absolute exactitude, but definiteness and simplicity, are requisite. Below will be found the danger signals of cancer which the Portsmouth Town Council intends to place in the hands of the public.

Next consider the possible objections to the instruction of the public in the danger signals of cancer. They are two, and they found what I consider quite natural and reasonable expression in the discussions on the subject both before the Health Committee and the Council. There is first of all the objection to publishing in the press, for all and sundry to read, matters which are calculated to offend in some quarters customary notions of decency, matters which from life-long habit have become so familiar to the medical mind that they do not jar on its sense of propriety as they very naturally do on the lay mind accustomed to move in a different atmosphere. This, after all, although a natural, is a purely sentimental objection. Whenever a deviation takes place from the beaten track, some sort of a shock occurs. It usually soon wears off; what people were shocked at yesterday they take as a matter of course to-day. But even if there was a great deal to be said in support of any sentimental objection, will it be seriously contended that it should have any consideration whatever when weighed against the attempt to save the lives of those afflicted with one of the most common and deadly scourges to which the human race is liable? To my mind, biassed though it may be by my medical training, the situation has only to be explained to any reasonable being to convince him that any sentimental objection, however plausible, should not bar the way for a single moment. The second, a sounder objection, is that such information may alarm the public. Let this for the moment be granted. I hold that it is better even to alarm the public than to stand idly by and see the public commit involuntary suicide. But it may be questioned, whether, so far from alarming the public, it will not have the exactly opposite effect and give the public increased confidence. In the crusade against tuberculosis the public, the educated public at all events, has become enlightened on many uncomfortable facts about this disease, such for instance as the omnipresence of the tubercle bacillus, the facility of its access to the system through milk, the infectiousness of tuberculosis, the virulence of the sputum of infected persons, etc.

Yet there is no evidence of mental unrest or uneasiness on account of acquaintance with these facts. There is rather, I think, a feeling of increased confidence and hope abroad in regard to this disease. But even supposing the equanimity of some few nervous people has been disturbed owing to dissemination of knowledge on these points, the interests of the community as a whole have been so obviously served by the power which such knowledge confers on it, both of avoiding tuberculosis and of combating it when present, that there has been no hesitation as to the course to be adopted.

That the two above objections to the education of the public exist in the danger signals of cancer is admitted. But the question is, Does the contemplated advantage outweigh such objections? If cancer is a local disease and can be cured, as undoubtedly it can in many situations, provided it is treated early enough; and if thousands of lives are lost annually through its victims, owing to sheer ignorance, not applying early enough for efficient treatment, as is also unquestionably the case, are objections of this nature of sufficient weight to override the attempt to remedy this state of things? We have got to make a choice. On one side are ranged the comfortable sentiments of those who have not got cancer, and the possible alarms of those who have not got cancer and never will get cancer through fear of getting it; on the other side are the realities of those who have got cancer, of those afflicted with almost, if not quite, the most widespread, fatal, and terrible disease known. The question is, In whose behalf should our efforts be directed?

The above objections were the only ones raised in the discussion on the subject, and the Council, composed mostly of laymen of sound common sense and business capacity, with a full knowledge of both aspects of the question, showed, in my opinion, a fine judgement and a fine courage in determining almost unanimously to make a bold attempt to come to closer quarters with this deadly scourge.

With this end in view, three resolutions were passed in the Council meeting on October 28th of last year. The first resolution was to the effect that a meeting should be called to which the nurses of the town and ladies interested in social, medical, and charitable work should be invited for the purpose of hearing a lecture on cancer. The object is to commence a system of education on the early signs of cancer, the possibility of its cure, and the folly of delay in seeking medical advice. The kind of people invited, and whom it is hoped to interest, are those who either in their professional capacity or their charitable ministrations come into frequent contact with the poor and uneducated classes. The Central Midwives Board has issued written instructions to midwives on the early signs of cancer of the uterus. The idea is to extend dissemination of knowledge to others than midwives, and to make it embrace other common situations of cancer. It is hoped that such a lecture will be given annually, as frequent repetition will be required to forward education in this direction.

The second resolution was the following: "That provision be made for the microscopical examination of material in connexion with cancer free of charge." It is recognized that the only reliable information in early cancer and in doubtful cases comes from the microscope, and the object is to encourage medical men to make use of

this method of detection earlier and more frequently. It puts it also within the means of every patient to obtain a competent histological report in any case in which there is the least suspicion of cancer whenever the situation of the disease renders this possible. It puts the patient, however poor, on an equal footing with his richer neighbour in the struggle against the disease. It is hoped, however, that in the case of those who can afford it a charge will be made, as while I hold it to be the duty of public authorities to provide medical necessities for the poor, it is no part of their duty to provide medical luxuries for the rich.

The third resolution is the following: "That your committee be authorized to publish monthly in the local press the following notice:

"BOROUGH OF PORTSMOUTH.

"The only cure for cancer at present known is its early and complete removal. Cancer, if removed early, has been proved conclusively to be a curable disease. If neglected, and not removed in its earliest stage, it is practically invariably fatal. The paramount importance of its early recognition and early removal is therefore evident. For this purpose the assistance both of the public and the medical profession is requisite, and a grave responsibility rests on both. It is only by their mutual co-operation that the ravages of this terrible disease can be lessened. The following information should be of vital assistance to the public. It is no exaggeration to say that, if acted upon, the result would be the saving annually of many hundreds of lives, which at present are inevitably lost.

"1. Cancer, in its early and curable stage, gives rise to no pain or symptoms of ill health whatever.

"2. Nevertheless, in its commonest situations, the signs of it in its early stage are conspicuously manifest. To wit, these:

"3. In case of any swelling occurring in the breast of a woman after 40 years of age, a medical man should at once be consulted. A large proportion of such swellings are cancer.

"4. Any bleeding, however trivial, occurring after the change of life means almost invariably cancer, and cancer which is then curable. If neglected till pain occurs, it means cancer which is almost always incurable.

"5. Any irregular bleeding occurring at the change of life should invariably be submitted to a doctor's investigation. It is not the natural method of the onset of the change of life, and in a large number of cases means commencing cancer.

"6. Any wart or sore occurring on the lower lip in a man after 45 years of age is almost certainly cancer. If removed at once the cure is certain, if neglected the result is inevitably fatal.

"7. Any sore or swelling occurring on the tongue or inside of the mouth in a man after 45 years of age should be submitted to investigation without a moment's delay, and the decision at once arrived at by an expert microscopical examination whether it is cancer or not. A very large proportion of such sores or swellings occurring at this time of life are cancer, and if neglected for even a few weeks the result is almost inevitably fatal. If removed at once the prospect of cure is good.

"8. Any bleeding occurring from the bowel after 45 years of age, commonly supposed by the public to be "piles," should be submitted to investigation at once. A large proportion of such cases are cancer, which at this stage is perfectly curable.

"9. When warts, moles, or other growths on the skin are exposed to constant irritation they should be immediately removed. A large number of them, if neglected, terminate in cancer.

"10. Avoid irritation of the tongue and cheeks by broken, jagged teeth, and of the lower lip by clay pipes. Many of these irritations, if neglected, terminate in cancer.

"11. It is desirable that rooms occupied by a person suffering from cancer should be cleaned and disinfected from time to time."

This public notice may possibly give rise to some adverse criticism. The necessity for the widespread knowledge of some such facts as these before anything really hopeful can be done for cancer has been discussed above and need not be repeated. It will be noted that no attempt is made to deal at all exhaustively with the symptoms of cancer. It was felt that this would only confuse the public and serve no useful purpose. Just the commonest situations of the disease, and those in which its presence could hardly escape the notice of the victim and the commonest times at which it appears, have been emphasized.

I may say in conclusion that the Local Government Board was approached with the view of obtaining its consent to making cancer a notifiable disease, and I believe I am correct in saying that it has been approached from other quarters with a similar request. The idea was that it would make for the earlier detection of cancer, because if a medical man were attending a doubtful case and knew that if it was cancer, compulsory notification was required of him, it would be an inducement to him, should such inducement be necessary, to act on the second resolution and obtain a microscopical report, which is recognized as the only reliable criterion in early cancer. The request to the Local Government Board was not acceded to. Government departments are notoriously conservative and difficult to move. Possibly, if the Board is similarly pressed from other quarters, it may be induced to reconsider its decision.

Whether the above means, adopted after due consideration, are the best for endeavouring to instruct the public in the early danger signals of cancer may be a matter of opinion; what is no matter of opinion at all is this, that unless and until some means are found of disseminating such knowledge, though there may be cures of cancer here and there, owing to accidentally favourable circumstances, these can only form the exceptions that go to prove the rule of its uniform fatality, and that there can be no sensible reduction in its appalling mortality. This mortality amounted in the British Isles for the five years 1906–1910 to 939 per 1,000,000 for all persons.

EXPERIENCES OF THE NATIONAL HEALTH INSURANCE ACT.*

BY E. F. PRATT, M.D.

IN approaching so highly contentious a subject as the Insurance Act one is confronted at the outset with a great difficulty; perhaps I should rather say a fear—a fear of exaggeration—for, whether one be a friend or opponent of the measure, one may be tempted to concentrate one's mental vision more particularly on those experiences which more than others appear to support one's own views.

As it has fallen to my lot to have the honour of relating to you some of my experiences, I have endeavoured in the course of this short paper to give an absolutely impartial and unbiassed account of the working of the Act. I have also been at some pains to collect opinions from my colleagues, from insured persons themselves, and from friendly society officials.

Twelve months ago I think a great many of us felt discouraged and downhearted, for we were then, owing to the precipitate haste with which the Act was introduced, in an almost chaotic condition. We were all surfeited with a heavy crop of rare fruit in the shape of red cards; we were all feeling symptoms of incipient scrivener's palsy from signing those cards; we were exasperated by the wretchedly cumbersome day books, and the forefingers and thumbs of our right hands were in a chronic state of mourning through handling the carbon papers of the day book and prescription book. The discontent and discouragement, and the thirst for revenge on the introducer of the Act continued more or less during the whole of the first quarter, but my conscience compels me to admit that that vengeful thirst was considerably allayed on April 16th with the arrival of our first cheque. We then began to think that there might be something in the Insurance Act after all. Although one felt inclined to do anything rather than bless the red cards, they served a very useful purpose, as the following anecdote will show.

An insured person, suffering from a bad cough, called one day to see a certain colleague of mine, who naturally asked to see the man's card. The card was produced, and my colleague was surprised to read "E. F. Pratt" on the back of it. This was at once pointed out to the man, who, however, replied that he had had a bottle of medicine from Dr. Pratt, but, as it had done him no good, and as he understood the Act allowed free choice of doctor, he thought he would try someone else. Now, had it not been for that little red card my colleague might have used up no end of brain cells in endeavouring to stop the cough of a person for whom he would receive no payment.

The day books were, to put it mildly, simply awful, and it was very welcome news to most of us when we heard they were to be discontinued and their places taken by record cards. When the latter were introduced we welcomed them with open arms, and, following out a hint from a colleague, I commenced a numerical system, which I have found exceedingly easy to work. I ordered a stock of plain visiting cards, and each patient coming under

* A paper read at the winter scientific demonstration of the Newcastle-on-Tyne Division, British Medical Association, February 29th, 1914.

treatment has his record card numbered, and he himself is given one of the plain visiting cards with a corresponding number, as well as my initials and the year written on it by me; for example, suppose a man called Archibald Campbell McTavish McPherson comes to consult me, I fill up the record card with his name and address and a number. I then fill up a visiting card with a corresponding number, my initials, and the year, and give it to him, at the same time explaining that I wish him to bring that card with him every time he comes during the remainder of the year. In this way I am able to pick out the record card of every patient who comes to see me in a few seconds, and I am most particular, and I think rightly so, about entering up every consultation or visit, as the case may be.

The cards of those on the visiting list are also numbered on the first visit and kept all together in a place by themselves. Then, as each patient is removed from the visiting list, his card is put in its correct numerical position amongst the other cards of those persons who come to the surgery to consult me. I have had no difficulty with this system. In 99 per cent. of cases the person produces his number; the remaining 1 per cent.—the forgetful ones—never fail either to make a special journey the next day to show me their number or else they send it to me through the post.

While on the subject of record cards, I should like to mention the matter of "occupation." It is really astonishing to find how difficult it is to get a correct answer to the question, What is your occupation? Only about a third of the patients seem to understand it; the great majority of the remainder tell me where they work—Armstrong's, Hawthorn's, etc., as the case may be. A few are under the impression I am asking them their religion, and one man, on my putting the question to him, replied that he was a Scotchman. I cannot say, but of course that may be an occupation of itself.

Has the Act in any way affected the self respect of the medical man? I think at first most of us felt that the work might be more or less degrading—degrading not through the kind of work done or the type of cases treated, but degrading inasmuch as what had been looked upon for years as the most unselfish and most self-denying of all occupations would now be nothing more nor less than a commercial undertaking. Let us take for granted that this be true. Is there, then, any shame in acting commercially so long as we do so honestly and uprightly? I think not; nor do I think for one moment that the Act has made the profession of medicine any the less unselfish or self-denying. The hesitation we felt at first was really after all only sentimental, and what our grandfathers would have refused to contemplate we, in more modern times, under changed conditions, fighting for our very existence a Chancellor who, though "comparatively a poor man," has certainly shown pronounced commercial instincts—we, I say, sinking our prejudices, executed a tactical retreat, and accepted the Act.

Now has this acceptance been justified by results? After a year's working we are able to think more calmly, the perspective is more correct, and the conclusions which we can draw are of much greater value than were our anticipations twelve months ago.

First of all as to the amout of work done. Here there can be no two opinions, for it is easy to prove that our work has increased enormously, and even such an eccentric person as Mr. Handel Booth will be compelled to admit, when he sees the figures, that we have worked, and worked hard, for every penny we have received. Here are some figures that may interest you. I have taken the last six months of 1913 as being a much better period for my purpose than the first six months of the year. From July 1st to December 31st I paid visits and gave consultations to the large number of 3,665. My cheques for that period totalled approximately £305, so that I take it that for each visit or consultation I received the magnificent fee of 1s. 8d. Mr. Lloyd George said a few nights ago that the lawyers only wished they had such an opportunity of making money as the doctors. I find it quite easy to picture the expression on my lawyer's face if I were to offer him 1s. 8d. for his advice. Still, we must not forget that this money is certain and that we have no drugs to pay for. The certainty of payment is very consoling, and when I find that my ledgers contain £4,000 of bad debts which have accumulated since I commenced practice twenty years ago, I ask myself whether it is better to book an uncertain 2s. 6d. or work for a safe 1s. 8d.

In the same speech Mr. Lloyd George made the remark that by the Insurance Act he had given an average yearly income of something over £200 to every man on the panel. He quite forgot—it is wonderful how convenient a memory can be—to tell his audience how much each man was losing through private patients becoming insured persons. In a mixed practice like mine, if we suppose that my income from the panel amounts to £500, then I should be quite within the mark by saying that I am losing £300 a year, making a net increase of only £200. That is to say, if, before the panel, I was receiving £300 a year, or £150 a half-year, from persons who are now insured, now I am receiving £500 a year, or £250 a half-year. But think what this means. Before the Act, for £150 I would make visits or hold consultations to the number of 1,200—that is, reckoning a minimum of 2s. 6d. a time. Now, taking as a basis the figures I have already given of work done, I find that with a panel bringing me in £250 in six months I should have paid visits or held consultations to the number of 3,000, reckoning 1s. 8d. as the pay for each visit or consultation; but as I was previously receiving £150 for the 1,200 visits, it follows that I am now only receiving £100 extra for 1,800 visits, which works out at 1s. 1d. a time. Even if we allow for medicines supp'ied you will see that there is still a very large margin of difference. It does not require a very mathematical brain to see that the increase of work is out of all proportion to the increase of income. Up to the present moment the Chancellor has not apologized.

It is natural, then, that we should feel it galling sometimes to have to attend people as panel patients who are quite in a position to pay bills as private patients, and I think it is a pity that some scheme has not yet been adopted to allow of the fixing of a wage limit.

Out of these 3,665 visits and consultations I have been able to gather some interesting data.

With regard to diseases, the respiratory tract claims first place:

The respiratory tract	...	477 attendances
The gastro-intestinal tract	...	412 ,,
Rheumatism claims	...	356 ,,
Heart disease claims...	...	207 ,,
Influenza claims ...	...	119 ,,
Anaemias claim ...	...	99 ,,
Neurasthenia claims...	...	94 ,,
Neuritis claims ...	...	77 ,,
Conjunctivitis claims	...	31 ,,

Twenty-nine people were "run down."

The remainder of the attendances were for a long list of miscellaneous ailments, including migraines, whitlows, boils, carbuncles, and wounds and fractures.

I find the greatest number of attendances I paid on any one patient during the six months was 91 (and this patient was previously a good paying patient of fifteen years' standing), and the smallest number was 1.

Dividing the patients into sexes, I find that—

Men and boys received ...	...	2,778 visits
Women and girls received	...	887 ,,

or in the proportion of three to one.

I remember a year ago my colleagues and I were all hoping we should get very few women on our panels, as we fully expected to find that the women and girls would require so much more attention than the men and boys. The figures I have just given show that my fears were groundless. The proportion of males to females on my list is exactly the same as the proportion of those under treatment, namely, three to one. Altogether, out of a mean average of 1,866 on my panel during the last six months of 1913, persons to the number of 751 were under treatment, an average of rather less than five attendances each. Of these, 567 were males and 184 females, that is, as I have already stated, in the proportion of three to one. So we have a curious coincidence, namely:

Proportion of males to females on my panel	3 to 1
Proportion of visits to males as compared with visits to females...	3 to 1
Proportion of males under treatment to females under treatment	3 to 1

while in the whole of the United Kingdom the proportion of insured males to insured females is 2.4 to 1.

In discussing the ages my tables are unfortunately not complete, as I have found it impossible to get even the average age of my panel list.

However, I can give you, dividing the ages into quinquennial periods, the percentage of attendances each period received.

Age.						
20 years and under			received	674	attendances	= 18.5 %
20–25	...	...	,,	577	,,	= 16.0 %
25–30	...	...	,,	288	,,	= 7.5 %
30–35	...	...	,,	530	,,	= 14.5 %
35–40	...	...	,,	447	,,	= 12.5 %
40–45	...	...	,,	300	,,	= 8.0 %
45–50	...	...	,,	184	,,	= 5.0 %
50–55	...	...	,,	203	,,	= 5.5 %
55–60	...	...	,,	220	,,	= 6.0 %
60 and over		...	,,	242	,,	= 6.5 %
				3,665		100.0 %

What effect, if any, has the Act had on the morals of the insured person? In all classes of society in all countries there is always a certain section of the community the members of which believe in getting all they can with as little outlay as possible, and to those people the Insurance Act has been a great temptation. First of all there is the case of the member of a friendly society who prior to the Act was drawing 10s. to 12s. a week sick benefit. Such a man, especially if he were married, would think twice before staying off work. But give this man an additional 10s. weekly, an additional sick benefit which we must remember is due to him, and for which he does not forget he has paid by a compulsory deduction from his wages, and he will only think once about attempting to get a certificate from his doctor, so that he too may enjoy some of that refreshing fruit that had been so freely promised him.

Then, again, there is the case of the woman who earns as a charwoman or day-girl 3s. 6d. to 5s. a week. Can we blame such a person who, feeling a bad cold coming on, elects to stay at home and be comfortably nursed, knowing that she can draw as sick pay a sum equal to double her wages? In these days of servant famine, too, she is not scared by the bogey of losing her situation, for, if she lose the one, she will find dozens of people ready to give her another.

I think that an amendment of the Act whereby the amount of sick pay would be limited to a certain proportion of the wages is imperative. At any rate I am sure that such an amendment would greatly diminish the number of claimants on the sick list of the approved societies.

I do not always blame the girls, for my experience teaches me that the mistresses themselves are sometimes at fault. One mistress actually expected me to give her cook a sick certificate because she (the mistress) was going away for a fortnight's holiday, and wanted to lock up the house. She said she thought her cook was run down, and that a fortnight's rest *with sick pay* would do her good. I asked her if she would have thought of sending her cook away in this manner if she (the mistress) had been staying at home. She replied: "Oh, no! I couldn't do without my cook"! Needless to say I refused a certificate, pointing out to her that it was customary only to give a certificate of necessity and not of convenience.

Another female patient came to me last November and said she was run down and would like a certificate, as she thought a month's rest would do her good. After telling her that I also would like a month's rest, I asked her if she could undertake some work for the following week if necessary. She replied that she could, as she was then out of employment. Of course I refused the certificate.

I quote these two cases as instances of the difficulty which men on the panel meet, and I am absolutely certain that the blackguarding to which we have been exposed time and time again at the meetings of various friendly and trade societies has been quite undeserved. In this district, at any rate, the medical men have all done their best to discover and prevent malingering, and I have no reason to think that the rest of the country as a whole would show any difference.

Quite a goodly number of persons have asked for sick certificates only to be refused by me, and perhaps I am not astonished to hear that I have gained the reputation of being a hard man. In spite of this I was agreeably surprised to find that only one person had taken advantage of the December option and had transferred to another panel. This shows that people generally do still have respect for an honest opinion. In the case of the one patient who left me, if my diagnosis were incorrect I deserved to lose her; on the other hand, if I were right then I was better off without her.

Of cases of cold calculating malingering I have had none. At the beginning the red flag of malingering was waved so frantically and frequently before our faces that one got into the habit of looking with suspicion on every patient who turned up, but I believe that a great many cases of so-called malingering are the products solely of the super-suspicious minds of a few insurance and friendly society agents.

The first certificates were a great nuisance, as they were far too elaborate. Those at present in use are easier, and on the whole satisfactory, but I think it is a pity that all the approved societies do not fall into line and have a uniform card made to last twenty-six weeks. This could easily be initialled by the practitioner, and he would be saved writing out the name of the person and his or her disease on a fresh continuation certificate each week.

One society, the North-Eastern Railway Servants' Pension Society, would easily carry off the prize if one were offered for the most complicated certificate ingenuity could devise.

I occasionally hear of complaints, and my attention has been twice drawn to charges made against panel men by the highly virtuous editor of a certain weekly paper, but, even if a case of neglect here and there be substantiated, the general public should remember that even doctors are only human. It is so easy for a lay person to forget that a doctor is not a machine. A few years of practice soon teach us that the great majority of these scare messages are quite trivial, and after a hard day's work, preceded probably by a very disturbed night, one can understand a man hesitating to turn out at midnight to see a patient who has probably been already ill several days, only to find when he arrives at the person's home that the case is not by any means urgent, and to be told that the patient was really much worse yesterday.

I took the trouble to investigate one case in which a man thought he had a grievance against his doctor. It appeared that this man had been treated by his doctor for a "cold in the throat." As he did not get better quickly enough to please himself, he went to another doctor, who told him that he had "chronic *sub*jection of the lungs," and that "*pew*monia" was threatened. Truly a pitiful condition! I am happily able to tell you that the "pewmonia" was successfully arrested, and that the condition of the lungs is now in complete "subjection."

In the opinion of some people, the Insurance Act is not solely intended for sickness and unemployment benefit. A colleague of mine related to me an experience of his which bears out this statement. One Sunday evening he was told that a patient was waiting to see him in his consulting-room. On going there he found a man, who informed him that he was a panel patient. On my colleague remonstrating with him for coming on a Sunday, the man replied that he did not want medicine, but he wanted the loan of half a sovereign to bail out his brother, who had been "run in" the night before.

My experience of the maternity benefit is good. When the woman gets the money—and, like most of our wives, she usually takes good care of that—it must be of the greatest possible help to her.

Sanatorium benefit is yet in its infancy, but when the sanatoriums necessary are all built (and heaven alone knows when that will be), and if such able men are in control as we have in this district, the advantages must be enormous.

The position of the deposit contributor is shamefully pitiful. A private patient of mine contracted acute rheumatism in December, 1912. This was afterwards complicated by a double pneumonia, and he became a panel patient in January, 1913. In April I asked him if he were drawing his sick pay regularly. He told me he had applied for it, but he found that, owing to deductions, the total sum standing to his credit was only 10s. 8d. And he had become a deposit contributor because he thought the Government safer than any approved society.

On the whole, I think in this district the Act, so far as the medical part is concerned, is now working smoothly, and the fact that during the whole of 1913 it was only necessary to call one meeting of the Medical Service Subcommittee, and that for the purpose of electing a chairman, speaks for itself. This state of things is largely due to the amiable relations that have always existed between the Local Medical and the Insurance Committees. I consider we owe a debt of gratitude, on the medical side, to Dr. Don and Mr. Willan and the other members of the Local Medical Committee, and on the lay side, to Mr. Stableforth, Mr. Schultz, and the Insurance Committee as a whole, for the excellent work done, during a trying time, in our interests. The Insurance Committee has always endeavoured to meet our expressed wishes, to help us in our difficulties, and last, but not least, has been most punctual in its payments to us.

There is one arrangement under the Act to which the committee quite willingly agreed which is deserving of all praise—I refer to the limiting of consulting hours to 9 to 9.30 a.m. and 6 to 7 p.m. I appreciate the 7 o'clock limit most. The sonatas of Beethoven are delightful; the music of Schubert is charming; the musical cadence in Grinling's voice when reciting his own poetry, and in Campbell's when, with exquisite pathos, he sends it reverberating among the "Mountains of Morne," cannot be denied; the booming sonorousness of Russell is a thing to be remembered; but there is nothing so pleasing to my ear, so full of a nameless charm, so wholesome and refreshing, as the sound of my hall clock striking 7.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

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LECTURE IV.

MINERS' NYSTAGMUS.

MINERS' nystagmus must be regarded as the commonest of all occupational diseases. This may be due to the fact that the mining industry is, after agriculture, the largest industry in the country. In my opinion the number of cases of miners' nystagmus far exceeds the numbers which would be given in compensation statistics, which take account only of cases in which undoubted incapacity for work has been produced, and not of the much larger numbers of early cases in which the patients are able to continue in their employment.

This disease was first recognized by Gillett of Sheffield about 1854, although no case was mentioned in medical literature until 1861, when the symptoms were described by de Conde, a Belgian physician. Cases were reported by Pepp Müller as early as 1860, by von Graefe in 1873, and by Bell Taylor of Nottingham and by Neiden in 1874. In this country we are indebted to a very large extent to the observations and writings of the late Simeon Snell and for his pioneer work on this many-sided disease; in France, Dransart occupies a similar position.

The disease is now recognized in this country and in all the principal coal-mining countries as a disease affecting the earning capacity of coal-miners, and in 1907 it was scheduled as an occupational disease under the Workmen's Compensation Act in order to entitle sufferers to compensation.

FREQUENCY OF THE DISEASE.

Dr. Court has stated, as a result of the examination of several thousands of workmen, that 35 per cent. of coal-getters are subject to this disease to some extent, Snell estimated that 5 per cent. of all colliery workers were affected, but he did not discriminate between different kinds of work in the coal pit. Nieden, who examined nearly 30,000 coal-miners, agrees with Snell that the frequency of nystagmus in underground workers is somewhere about 5 per cent. In the North of France, Dransart and Famechon have given 10 per cent. as the number affected. Romiee and Thibert of Liége during 1908 and 1910 examined 5,000 workmen in twenty-seven collieries. More than three-fifths were coal-getters, and on the average 21 per cent. were affected with symptoms of nystagmus; in collieries lighted by lamps burning heavy oils 37 per cent. of the coal-getters were affected. Romiee had made a similar inquiry in the same district in the years 1877–8, and the result of his later inquiry was to show a marked diminution in the number of cases as well as in the severity of the symptoms. Stassen, who in 1909 examined 3,385 colliers descending into the pit, and also on their return to the surface, found that 15 per cent. of the workers were affected before commencing their work, and 22 per cent. at the end of the shift.

Roger of Hondeng-Geognies, as a result of examining over 7,000 workmen, came to the conclusion that 17.5 per cent. were suffering from nystagmus. Libert, the Chief Inspector of Mines to the Belgian Government, found different percentages of miners affected in different districts. In one series of examinations which he conducted with the help of Romiee and Thibert he found that of 305 workmen examined in one pit 73 were affected with miners' nystagmus, giving a percentage of 23.9, and he refers to a memoir dealing with 3,685 workmen, among whom 704 showed symptoms of this disease, or a percentage of 19.1. The following table gives details of the work and the frequency of nystagmus among the different classes of workers:

	No. Examined.	No. of Cases of Nystagmus.	Percentage.
Deputies	76	33	43.4
Workers at the face	1,346	432	32.11
Workers in stone	374	77	20.6
Timberers and repairers	332	94	28.3
Hauliers, horse drivers, and hookers on	626	45	7.2
Putters	542	22	4.1
Miscellaneous	389	1	0.03
	3,685	704	9.1

Nystagmus is almost unknown in ironstone and metalliferous mines, and in naked-light pits from which coal is obtained it is very much less frequent than in mines in which safety lamps are used. In two naked-light colliery districts in which over 12,000 underground workmen were employed, Llewellyn records that there was only one known case of miners' nystagmus. This, however, may be accounted for by the fact that this was the only case for which compensation was paid, and a systematic examination of the men would probably reveal that many more workers were affected.

Llewellyn, as a result of careful examination of 173 officials, chiefly firemen, found that 61, or 35.2 per cent. were affected with nystagmus of a latent type. He draws a distinction between the grave types of this disease and the milder types which he calls "latent," and the same classification has been made by Dransart and Famechon.

Symptoms of nystagmus are most commonly found among miners engaged in holing, a process which consists of cutting the coal seam so as to get out the coal in pieces as large as possible. The holer lies on his side with his knees drawn up and his head thrown backwards, and he strikes the coal with a horizontal swing, the lamp being placed near his feet. He may undercut the seam or "top cut" it, but in either case the muscles of the eyeballs are continually in a strained position, generally in an upward or oblique direction. As a result of this eyestrain the elevator muscles suffer from strain and cramp. Similar effects are found in other muscles, producing wry-neck, twitching of the eyelids, and tremors of the head. Holers

as a class are undoubtedly more predisposed to nystagmus from the nature of their constrained work; hewers and the loaders who are working at the face come next in liability to the onset of the disease. Dransart and Snell considered that 97 per cent. of the cases of miners' nystagmus are found among coal-hewers. Romiee, on the other hand, believes that timberers and roadmen form a much larger percentage, varying from 7 to 30 per cent. of the cases of nystagmus found in different districts. All observers agree that the workmen who work hardest and who earn the best wages are most likely to be affected. The disease is also found among loaders, datallers, packers, as well as among the firemen and colliery managers, and in these occupations, like that of the holer, eyestrain may be produced through lowness of the roof of the roadways and the workings in the mine.

Age.

Miners' nystagmus seldom occurs before the age of 25, and not usually before a miner has worked for ten years underground. It would seem that the longer a man has worked in the pit the more likely is he to develop nystagmus. This may be regarded as a general rule which may be applied to all workers up to the time when they have worked thirty years in the pit, after which they do not appear to be so susceptible. The youngest case that has come under Llewellyn's notice is a boy aged 15, and 47 of his first 600 cases developed the disease before the age of 25. In McMurray's series of 120 cases, nine of the patients were 25 years and under. The shortest time in which the disease has been known to develop after underground work is five months.

Symptoms.

In miners' nystagmus we are dealing not with a disease localized to the eyes, but with a general disease one symptom of which is oscillation of the eyeballs. I believe that the term "miners' nystagmus" is unfortunate, as it simply relates to one symptom of this complaint, and the symptoms are not confined to oscillation of the eyeballs and effects resulting from this phenomenon. There may be, and generally are, symptoms such as headache, nausea, attacks of giddiness, muscular tremors, twitching of the muscles in different parts of the body, especially the muscles of the eyelids and the face and neck; neurasthenia may be a prominent symptom, with its associated conditions, such as a quickened pulse, exaggerated reflexes, increased vasomotor irritability, sleeplessness and nervous depression. All these symptoms may be present in any case of miners' nystagmus, but in many cases only some of them are present, and at given times the prominent symptom —the oscillation of the eyeballs—may actually be absent, although the patient is undoubtedly suffering from this disease.

Headache.

Headache, in cases of moderate severity perhaps the most frequent symptom, may vary in the same patient from time to time, and its character may vary in different patients according to whether there is any refractive error or not. When there is loss of muscle balance due to uncorrected astigmatism the headache will be most pronounced in the occipital region, but if there be no refractive error it is common to find that the headache is frontal. In some cases the patient complains of tightness round the head. The headaches may be aggravated either by physical or mental exertion; stooping, walking downhill, lacing the boots, getting into bed or getting out of bed, have all been described as causes for the headache coming on, as well as for increasing the severity of this symptom, and mental work, even going to see the doctor for medical examination, is also a frequent cause of aggravation of this symptom. In many cases headache is continuous, although it may be better at some times than others, and will be aggravated in the way which I have just indicated.

Giddiness.

Attacks of giddiness are frequent. In some instances the giddiness may only come on when the patient is bending down or when he is exerting himself, and the patient may fall down either on the surface or in the pit. As a result of this giddiness injuries may occur, and I have seen one case of burns which resulted from the patient falling over the fire. This symptom, therefore, is of great importance, not only from a point of view of the patient's welfare, but as a symptom that totally incapacitates him from work.

Vomiting and Nausea.

These two symptoms most usually occur after exertion, especially in those cases with a marked degree of astigmatism. Some patients complain that the nausea is worse on getting up in the morning, and in those who have come under my observation I am convinced that this is due to the nystagmus and not to other causes which might produce this symptom, such as excessive drinking overnight.

They must be recognized as important symptoms of miners' nystagmus, and in some cases are those which first attract the patient's notice. He consults his doctor complaining of biliousness; he may never have suffered from indigestion, and there may be no apparent cause, as far as the examination of the stomach is concerned, to account for this trouble.

Subjective Eye Symptoms.

The commonest complaint associated with miners' nystagmus is the jumping about or flickering of the lights in the pit or the gas lights on the surface. One patient may complain that he notices that the lights in the pit whirl round in rings; another may complain that the lights flicker, and run into each other; a third may state that he perceives that at night the gas lamps, the candle light, and everything flickers, just as he has seen cinema pictures flickering; and a fourth may say that the lights whirl round like wheels of light.

Photophobia is a common symptom of miners' nystagmus, and the medical man who is examining the patient has confirmation of the presence of this symptom by the fact that the miner when out of doors generally wears his cap over his eyes to protect them from the light. As Llewellyn remarks, when in the sunlight many of them wear smoked glasses.

Night Blindness.

Night blindness is undoubtedly one of the most characteristic symptoms of miners' nystagmus, and it is regarded by Court and Llewellyn as being present in about 75 per cent. of all cases. Harrison Butler has found the symptom in 60 per cent. of his cases. On the other hand, Snell stated that it was very rare, and Romiee that it never occurred. If night blindness be regarded as indicating that the symptoms of miners' nystagmus are worse in the night time than in the day, then it must be regarded as a very frequent symptom, and my own experience coincides with that of Court and Llewellyn. McMurray is of opinion that night blindness does not exist at all in cases of miners' nystagmus, and that the symptoms are worse at twilight because of the changing light, and not because of the absence of light. Among the rarer subjective symptoms are double vision and photopsia.

General Nervous Symptoms.

Patients suffering from miners' nystagmus very often complain of nervousness, sleeplessness, and mental depression. In some cases these feelings of nervousness appear before any of the other symptoms of the disease, and, if examination of the eye be neglected, the conclusion might be that the patient was suffering from neurasthenia and not from miners' nystagmus. There is the general facial expression which is common to a neurasthenic; there are the complaints of vague aches and pains in different parts of the body, which shift about from one limb to another. The patient may complain of being highly nervous, of being easily upset, of sleeping badly at nights, and of constant mental worry; on examination one may find general arterial throbbing and quickened pulse; exaggerated reflexes and increased vasomotor irritability may be found—or, in a word, the well-known standard symptoms of neurasthenia. Mental symptoms of a more serious nature occur in some few cases; the nervous depression is so great occasionally that the patients have suicidal tendencies.

Physical Signs.

Movements of the Eyes.

In a typical case the movement of the eyeballs is rotatory, rhythmic and involuntary in nature, but may

vary in different patients in direction of movement as well as in frequency; in exceptional cases to and fro movements are found as well. All observers are agreed that vertical nystagmus is of very rare occurrence. The disease usually affects both eyes, but cases have been observed of unilateral nystagmus; in cases of coal-miners who have had the misfortune to lose one eye I have seen nystagmic movements of the muscular stump after the eye has been removed, and I have also seen a rhythmic oscillation of a shrunken eye. The movement may be different in direction in each eye, and the rate will vary in different patients and in the same patient at different times. In the majority of cases both eyes move at the same rate. The frequency in ordinary cases is from 100 to 300 oscillations a minute, but in some the movements are so rapid that it is impossible to count them. According to Snell, the rate of movement is from 60 to 120; Romiee regards from 120 to 500 as the rate of movement, while Llewellyn believes that, generally speaking, the rate is between 100 and 350, although in the cases in which he was unable to count them on account of the great rapidity he estimates the figure at about 500 a minute. The range of movement varies from 1 millimetre to 1 centimetre. Sometimes the movements are so rapid and the excursion so short that it is impossible to detect the oscillation of the eyeball without the use of an ophthalmoscope. Llewellyn has pointed out that the fine rapid movements are much more constant in rhythm than the coarser movements, which are slower and more irregular.

The oscillations are increased by exertion, by excitement, by looking upwards, by rapid movements of the head, either horizontal or vertical, by bending the head and raising it quickly, or during the fixation of some distant object, and in cases in which no oscillations are obvious on medical examination they may be induced by the same means. In some cases, however, where the miner has been absent from work for a considerable time this procedure may not be sufficient to induce the oscillations, and they can be made evident only by placing the miner in a position similar to that in which he works in the mine, and by asking him to go through the same movements of his arms in a darkened room as he would perform in the pit while at work. The oscillations may be arrested by looking down and resting the eyes, and entirely stopped on strong convergence of the eyes; they cease during sleep. Romiee has pointed out that the severity of an attack of nystagmus can be to some extent estimated by the ease with which the oscillation of the eyeball can be induced or exaggerated.

Clonic Spasms of the Eyelids.

Clonic spasm of the eyelids is a common and in some cases the most prominent objective symptom. Sometimes it is an early, sometimes a late symptom, and very often it may remain after the oscillation of the eyeball has ceased. Llewellyn has pointed out that the movements of the eyelid associated with nystagmus are of two kinds, the coarse blinking movement and the fine tremor or clonic spasm, and in the former, although the movements may be quick, they are tonic and not clonic in nature. The rapidity of the clonic movements may exceed 100 a minute, and in some cases the movements may be so quick that it is impossible to count them. These movements may be exaggerated and made more obvious by adopting the same means as I previously described in discussing oscillation of the eyeballs.

Llewellyn found muscular movements of the eyelids in 136 cases out of 600 cases, and McMurray in 28 out of 186 cases. In the latter series of cases McMurray states that in 7 cases clonic spasm of the eyelids was the most troublesome symptom in the early stages of the disease, but it was the first symptom to disappear under proper treatment. In other cases the spasm occurred when apparently the disease was progressing satisfactorily, and in others, again—the most numerous class—the spasm occurred when the disease had almost disappeared. Other observers have found that clonic spasm of the eyelids has been the most persistent of the objective symptoms of miners' nystagmus. The frequency of the clonic spasm and the oscillation of the eyeballs are independent of each other. Ptosis may be observed when the patient has tilted the head back to steady it, but there is no loss of muscular power.

Muscular Tremors.

In addition to oscillation of the eyeballs and clonic spasm we may often find tremors of the facial muscles, of the eyebrows, and even of the whole head. Llewellyn found tremor of the head in 27 per cent. of his cases; McMurray found it after exertion to be an almost invariable symptom, and my own experience coincides with that of the latter observer.

The muscles of the neck and shoulder may also be affected, and in some cases the spasm of the muscles of the neck may be so pronounced that the head is held backwards and wry-neck produced. Very fine tremor of the extended hands is frequently seen, but whether it should be regarded as a symptom of this disease or as a manifestation of neurasthenia it is difficult to say.

Gait.

The gait of a typical case of miners' nystagmus is characteristic. The patient endeavours to compensate for his visual defect by throwing the head backwards and keeping the eyes down and walking stiffly. In severe cases the gait may be ataxic.

Vision.

Many observers are of the opinion that some optic defect is one of the principal factors in the production of miners' nystagmus. We may find evidence of old injury to the eye, such as corneal opacities, while less frequently we find early cataracts, glaucoma, or symptoms pointing to old iritis, but a large percentage of cases show errors of refraction. Brown and Mackenzie found such errors present in 90 per cent., astigmatism accounting for 48 per cent., hypermetropia for 27 per cent., and myopia for 15 per cent. Through the kindness of Mr. McMurray, of Stoke-on-Trent, I have been able to look through his notes of 120 cases of miners' nystagmus, from which it appears that over two-thirds have some refractive error. At the Oxford Ophthalmological Congress in 1912 Harrison Butler stated that 45 per cent. of his cases showed refractive errors, Folker found 75 per cent., Llewellyn 83 per cent., and Normal over 90 per cent. in 200 cases. On the other hand, such authorities as Snell and Dransart considered that there was little association of refractive error with miners' nystagmus.

Astigmatism of various kinds is the commonest form of refractive error; it accounted for nearly half of Llewellyn's cases, and hypermetropic cases were largely in excess of myopic ones. From McMurray's notes I find that of 64 cases in which the observations were complete, there were of hypermetropic astigmatism 24 cases with the rule and 28 against the rule, while in myopic cases 12 were against the rule, without a single one with the rule.

Visual acuity is nearly always diminished, even in convalescent cases where there is no oscillation of the eyeballs. In severe types of nystagmus where the oscillatory movements of the eyeball are constant, it is impossible to estimate the field of vision. Out of between 60 and 70 cases of coal-miners' nystagmus, Cridland found it possible to take the field of vision in 25. Nearly all the patients he investigated were men who had been compelled to give up their work on account of the severity of the symptoms. The results of his examination of these cases showed:

1. That contraction existed for white, blue, and red in practically all the cases examined.
2. The contraction was of the concentric type and symmetrical in shape, although not always in depth.
3. In the majority of cases the colours were in their correct order, but occasionally interlacing of the red and blue occurred, the correct order being recovered as the case improved.
4. The contractions for red and blue were generally greater than those for white and rather greater for red than blue.
5. By grouping the cases into mild, moderate, and severe types the fields broadly showed corresponding contractions.
6. Speaking generally, as the disease improved the fields of vision improved, but contraction persisted as long as any subjective symptoms were present, and although oscillatory movements could not be elicited by any test.
7. Most of the cases showed more or less marked signs of such symptoms as clonic spasm of the eyelid, twitching of the neck, etc., but there seems to be no direct relationship between the presence and degree of these signs.

Cridland points out that there is a great similarity between the fields in miners' nystagmus and in traumatic neurasthenia, and throws out the suggestion that the alteration in the field of vision in nystagmus cases is of

the same nature as that found in traumatic neurasthenia. If we keep in mind the possibility of miners' nystagmus being a neurosis of the same nature as neurasthenia, and that neurasthenia and miners' nystagmus are so often associated in the same subject, and that each may be induced by an injury in many cases, I think we may infer that nystagmus itself should be regarded as a local symptom of neurasthenia.

The condition known as hippus, or the rapid and spasmodic variation of the size of the pupils independent of the action of light and accommodation, may be present, and, according to Dransart, slight paralysis of accommodation exists in almost every case.

Injection of the eyelids and the eyes is frequently observed, and conjunctivitis, sometimes of a chronic nature, may also be present.

I have noticed in many cases of miners' nystagmus that when the patient is sitting down and has put his head between his legs for a short time, say a minute or so, on raising his head the eyes not only have the oscillations and clonic spasm, the oscillations being more marked, but there has been a prominent bulging of the eyes, almost bordering on exophthalmos, accompanied by marked injection. I have found this symptom sometimes of the greatest value in doubtful cases.

Onset of the Disease.

In some cases the onset is gradual, and on the average we may say that twelve months may elapse between the appearance of the first symptoms and the time when the patient consults his doctor. On the other hand, in some cases the onset is strikingly sudden, and when it is so it is generally the result of some debilitating illness, such as influenza or the result of an accident either to the eye or to other parts of the body. The disease may develop in a few months after a miner has worked regularly for twenty or thirty years in the mine without any apparent trouble. When the patient first consults his doctor he may be unconscious of the oscillation of the eyeballs, and he may have no suspicion that he is suffering from miners' nystagmus. He may complain of some of the objective symptoms already described, such as headache, giddiness, and the unsteadiness of the lights in the mine. In another group of cases we may find that the symptoms complained of are purely nervous; the man may tell his doctor that he is simply run down or fearing a nervous breakdown, and symptoms of neurasthenia preponderate to such an extent that miners' nystagmus may be overlooked.

The progress of the disease may depend upon many conditions. Just as illness or an accident may be the cause of the sudden onset of the disease, they may aggravate any form of nystagmus and convert a mild or a latent case into a serious one. If the accident sets up a neurasthenic condition which previously did not exist, the symptoms associated with nystagmus will be still more serious. Excessive drinking or smoking may intensify the condition, and several times I have known miners with a mild degree of nystagmus who have been able to follow their employment without any inconvenience suddenly become unable to do so on account of the nystagmus after a drinking bout, and the incapacity has continued for a considerable time, although the effects of the drink have disappeared in a few days.

If a miner suffering from this complaint continues in the occupation at which he contracted it, the symptoms will in the course of time increase and assume a more serious form. On the other hand, for the disease to be arrested the sufferer must entirely give up work in the pit.

The period of recovery will depend largely upon the severity of the symptoms and upon the manner in which the treatment is carried out. Even after recovery relapse is very common, and sometimes under conditions favourable to the aggravation of the disease the patient may have several relapses.

DIAGNOSIS.

It is first of all necessary to decide whether the prominent objective symptoms are due to the nature of the man's employment or not. Nystagmus, or oscillation of the eyeballs, is associated with several diseases of the brain and spinal cord, such as Friedreich's ataxia, syringomyelia, disseminated sclerosis and tumour of the cerebellum, as well as some congenital diseases of the eye, but the history of the case and the presence of other symptoms should be sufficient to make a differential diagnosis from cases of miners' nystagmus.

In all these conditions the movements of the eyeballs or the actual nystagmus are different from those found in cases of miners' nystagmus, in which the movements are much more forcible and rapid, and can be exaggerated much more easily by the methods described.

Clonic spasm of the eyelid is found in many other conditions apart from miners' nystagmus; but by systematic examination it is easy, if the other symptoms are considered, to decide in the case of a miner whether the twitching of the eyelids is due to nystagmus. If, associated with nystagmus and clonic spasm of the eyelids, there are some of the other symptoms to which I have referred, such as headache, giddiness, or muscular tremors, there should be no difficulty in making a diagnosis of miners' nystagmus. It is both important and interesting to know that, although nystagmus may be found in those conditions of the brain and spinal cord to which I have already referred—Friedreich's ataxia, etc.—in these conditions clonic spasm of the eyelids is never found. In a miner, therefore, who shows the two objective symptoms of miners' nystagmus and clonic spasm one can be certain of the diagnosis of miners' nystagmus.

If no oscillation of the eyeball is to be observed, care is necessary in order to come to a reliable conclusion. Not only may the oscillations be present at some times and not at others, but there are undoubtedly some cases of miners' nystagmus in which no oscillation of the eyeballs is observed at all. In such cases clonic spasm of the eyelids may be the most prominent objective symptom, and if with it headaches, giddiness, muscular tremors, and neurasthenia are found, unaccompanied by any of those conditions which may produce clonic spasm by itself, I think that, apart from the subjective symptoms, the diagnosis of miners' nystagmus is justifiable. Llewellyn points out that it is necessary to exclude cases of high myopia, of which he has seen two examples, as well as such congenital conditions as hereditary nystagmus or albinism.

(To be continued.)

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE TREATMENT OF RINGWORM.

RINGWORM is such an intractable disease, such a bugbear to schoolmasters and parents of children attending school, that any quicker and more efficient treatment than that known to us at present would be welcomed. Hence I am glad to bring before school medical officers and others a very simple and efficient treatment which leads to rapid cure. The part being first washed with a strong solution of sodium bicarbonate, is swabbed with a piece of lint moistened with spirit of ether to remove grease, painted with tincture of iodine, and an ethyl chloride spray immediately applied. I find it best to work with a pair of ethyl chloride tubes in each hand, as a larger area is covered in quicker time. The deeper the disease process the longer the spray must be applied. It should be used until the integument gets china white and then stopped. It will be found that in twenty-four to forty-eight hours the patch of ringworm has become quiescent. The smallest commencing spots should be looked for and treated in a similar manner, when they also will disappear in from a few days to a week. In ringworm of the scalp three or four applications of iodine and spray are required, but on the face or smooth surfaces one application suffices.

I have succeeded in curing ringworm of months' standing in one week by this method, and it has never failed me since I first thought it out over a year ago. In most of my cases the patients got infected from cattle.

Ethyl iodide readily destroys the tubercle bacillus, and thus might be expected to destroy hyphomycetes; but an ointment of ethyl iodide 25 per cent., I found, will blister, and thus my central idea was to obtain a very minute amount of ethyl iodide which might not penetrate further than the outer layer of the skin by painting on tincture

of iodine and next applying the ethyl chloride spray. I considered a minute amount of ethyl iodide would be formed at the site of the disease sufficient to penetrate the upper epidermic layers, effected by the freezing action of the ethyl chloride.

Ardrahan, co. Galway. C. H. FOLEY, M.B.

LYMPHANGIOPLASTY IN ELEPHANTIASIS.

WHEN you published the articles on lymphangioplasty by Mr. W. Sampson Handley, M.S., I read them with great interest, especially where he referred to elephantiasis. Shortly afterwards some bad leg ulcers, complicated with elephantiasis, were admitted into the London Mission Society Hospital, Tsao Shih, near Hankow. Such ulcers are formidable, having a thick rim of epidermis impervious to treatment.

I ventured to try lymphangioplasty, using Chinese silk, fairly thick. The threads were entered just above the ulcer and brought out above the knee, using two different routes. The results were most striking, for new growth of epidermis was visible the next day, and a rapid cure resulted.

I would recommend this as a perfectly safe method and astonishingly efficient, for which we are much indebted to Mr. Sampson Handley's research.

Hankow. E. F. WILLS.

A RARE FORM OF DISLOCATIÓN OF THE HUMERUS.

HAVING read in the EPITOME of October 4th, 1913, an account of Cipollino's report of a similar case (*Gazz. degli Osped.*, August 5th, 1913) I am tempted to place this one on record.

A man, aged 40, was admitted to Faringdon Cottage Hospital on the afternoon of May 20th, 1913, suffering from severe injury to his right arm. The man was a farm labourer, and was working at a hay-cutting machine driven by a belt from an oil engine; he considered it necessary to make some adjustment to the machine near the belt pulley, and while so doing his right arm was caught by the belt and drawn violently over the pulley; he was pulled forwards, and the arm was therefore drawn directly upwards with great force. First aid was rendered on the spot, and the man was removed to hospital, where I examined him and found the following condition: There was extensive laceration of the right forearm on its inner and anterior aspects, the skin was largely torn away, and the muscles considerably lacerated, while the whole was ingrained with large quantities of chopped hay, hayseed, and mud. The arm was found to be freely movable in any direction, and could easily be rotated for more than a complete turn. Further examination showed that the glenoid cavity was empty, and that the head of the humerus was projecting into the axilla through a button-hole in the skin; the head of the bone and the wound were also covered with hayseed and dirt; there was no fracture, nor could any other lesion be detected.

Under an anaesthetic the wounds were cleaned with iodine and the dislocation reduced, enlargement of the button-hole in the skin of the axilla being required before this could be effected. The muscles of the forearm were stitched, and also such skin as could be used was stitched in position. A drain was left through the wound in the axilla into the joint cavity. Considerable suppuration followed for about a week, and then gradually ceased, the forearm giving much more trouble than the shoulder-joint. The patient left the hospital with some impairment of movement in the shoulder-joint, but this has since improved, and he has now a really useful arm, any impaired movement being due to adhesions, which are being gradually broken down and giving freer movement.

This dislocation was caused in exactly the same way as that recorded by Cipollino—that is to say, by the arm being violently dragged upwards; but the result was more fortunate in that one was able to save the humeral head and thus preserve the joint.

ALFRED E. TURNBULL,
Honorary Surgeon, Faringdon Cottage Hospital.

ACCORDING to the *Berliner Tageblatt*, the Chamber of Deputies of the Grand Duchy of Oldenburg has passed a law imposing a tax on unmarried men.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

AT a meeting on March 9th, Sir DAVID FERRIER, President, in the chair, Mr. HAYWARD PINCH, opening a discussion on *Radium-therapy*, gave an account of the procedure in vogue and some of the results obtained at the Radium Institute. Both radium salts and radium emanations were used. Although radium emanations deteriorated rapidly, this fault could be compensated for easily, and this method of administration had the great advantages that the radiation was practically uniform throughout the applicators; also that it was much more adaptable because it was susceptible of condensation into a small bulk. The screen which he found of greatest use was one of 1 mm. silver. Whenever it was possible to bury the tube in a growth to be treated, this should be done, for the degree of emanation utilized was at least four times as great by this method. In the case of capillary naevi a preliminary diascopy was useful, and if by gentle pressure blanching was caused, the result of treatment would probably be good. Venous naevi reacted successfully if no pulsating vessel could be felt. Pruritus benefited only if it was associated with definite lesions. Psoriasis improved, but recurred. Keloid did better than by any other method of treatment. Warts often disappeared after one exposure, but moles were not influenced so favourably, and a scar often remained. Radium-therapy was useful for tuberculosis of glands when no operation was permitted, but Finsen light was preferable for tuberculosis of skin. Treatment of fibromyomata of the uterus had been followed by cessation, first of the metrorrhagia and then of the menorrhagia. From the point of radium-therapy, rodent ulcer presented two types—a hypertrophic nodular type, which was almost certainly cured by radium, and an ulcerative type with overhanging edges and a gelatinous base, which was less influenced by it. As for new growths, those which reacted best were the sarcomata, particularly those of the naso-pharynx and the lympho-sarcomata. He advised great caution in the publication of results at present, and in the use of the word "cure" as applied to the treatment of cancer. Sir FREDERICK TREVES said that the high price of radium was the result of the great demand for it, and that no corner, commercially speaking, existed. There was a prospect of additional sources of supply becoming available, and he expected that it would be cheaper, but never cheap. Much so-called radium was of very inferior quality. Terms of amount which were frequently used in radium-therapy were of no value, as the strengths varied greatly, and there were many different salts, each containing a different percentage of the metal. There was every probability that the technique might be improved. Sir ALFRED PEARCE GOULD appreciated the caution advised by Mr. Pinch. The introduction of radium into growths was much better than its application to their surfaces. Mr. A. CLIFFORD MORSON spoke of his researches into the histological appearances of new growths after radium treatment. The malignant cells underwent degeneration not only in the growth itself but also in the glands secondarily affected. Dr. HERBERT WILLIAMSON said he used radium in carcinoma of the cervix after operation, applying it through the open vaginal wound with the object of subjecting to its emanations the outlying cancerous tissue. It was too early to judge of the results. Only inoperable cases had been treated. The results had been better in inoperable cases of carcinoma of the body of the uterus. He had only employed it for fibromyomata where operation was contraindicated, and had treated two cases in which no uterine haemorrhage at all had followed. Mr. T. H. KELLOCK spoke of the necrosis and destruction of healthy tissues which might result. He doubted whether radium ought only to be used for inoperable cases, and did not think it a rational procedure to use radium after the growth had been removed. Mr. DOUGLAS HARMER said that radium had proved of great value in the treatment of cancer of the upper respiratory tract, and produced sometimes shortening of the growth, arrest of haemorrhage, and relief of pain. The last, however, might be made worse. In most cases improve-

ment was only temporary, but in rare instances it might last for months, or even years. The best results were seen in cases of rapidly growing sarcoma. Dr. FINZI referred to the factors which influence success or failure in the radium-therapy of malignant disease. The more rapid the growth the more likely was it to respond readily. In the late stages of the disease, the patient's resistance being low, the radium would do no good. It was essential to treat the disease thoroughly as well as the outlying parts, but excessive radiation caused sloughing. It was better to use long applications infrequently than short applications at frequent intervals. The gamma rays were the most useful. It was necessary to use large quantities of radium. He spoke of the value of burying the radium around the growth close to its growing edge. Dr. LEWIS JONES emphasized the importance of detailed study of the after-histories of the cases which had been treated by radium.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

AT a meeting on February 20th, Mr. R. D. PUREFOY, President, in the chair, Mr. D. KENNEDY exhibited a case of *Ectopia vesicae after operation*. This patient was shown twelve months ago. In describing the operation he said, as far as he knew, the exact operation had not been carried out before. It consisted in opening the abdominal cavity above the rudimentary bladder. This facilitated the freeing of the rudimentary bladder off the abdominal wall. Having freed the bladder, the ureters and bladder were lifted out of the cavity altogether. A long incision was then made in the rectum, and into the cavity was dropped all the bladder wall that was present. This being done, a fixation suture was inserted between the bladder wall and the rectum. The remaining steps of the operation consisted in suturing the rectum, leaving an opening for the passage of the ureters. At the time of operation the child was less than 4 years old, and at this age no plastic operation could be attempted on the abdominal wall, and, as a result, the child developed a ventral hernia. There was no ascending infection, which was sometimes met with in this operation. As to the child's capacity to hold urine, at present there seemed a slight leakage from the rectum from time to time, but at intervals of from two to three hours the child passed water in considerable quantities. He would hope that in time this leakage would altogether disappear. If he were again called upon to perform this operation the only alteration he would be inclined to make was to transplant the bladder wall in the sigmoid. During the operation, to save the ureters from injury, he passed a probe through each ureter, and left it there until he was practically finished. Mr. C. A. BALL said he had shown a boy five years ago upon whom he had operated for this condition by Peter's extraperitoneal operation. This operation had the advantage that there was no risk of infection of the peritoneum. He did not know if it could be performed on the female, but it was a quicker operation, and the result in his case was satisfactory. The boy had always control except in the morning, when the bowels were inclined to move, but for the remainder of the day the child was quite comfortable. An interesting question arose in connexion with these cases—that is, what effect the urine had on setting up cancer in the rectum? In his case, after two years the patient was bleeding badly from the rectum, and several little adenomatous growths were to be seen, and one was inclined to fear that such might subsequently become malignant. Mr. GUNN said these cases were much more difficult than they appeared. The method adopted was very interesting, but he suggested that if a rectal examination was made it would probably be found that there was no bladder left. He had experience of such a case, and it appeared to him that the bladder blood supply was cut off. He did not consider that there was very great risk of ascending infection. Mr. BLAYNEY said as regards the disposition of the mucous membrane of the bladder he understood Mr. Kennedy to say that he pushed it backwards, so that the mucous membrane would be looking directly backwards towards the pelvis. As regards the implantation of the ureters into the sigmoid flexure, it had been shown that, if the ureters are implanted high up, urine poisoning was likely to arise, but when implanted low down this could be prevented. It was safer to confine the implantation to the lower end of the rectum. Mr. WHEELER doubted if there was any real risk of infection from implantation. The procedure adopted in this type of case seemed more or less settled. Mr. KENNEDY, replying, said that the literature on the subject, so far as ascending infection was concerned, was hopeless, and from that point of view alone one would despair of being able to do any good in these cases. He joined issue with Mr. Wheeler as to the mode of procedure being settled—that is, transplanting the ureter into the rectum. He was under the impression that this practice had been discarded. The best results had been published of cases where the trigone had been transplanted. The transplantation of the ureters alone seemed to have been a complete failure, and, looking at it from an anatomical and physiological point of view, the transplantation of the ureters alone did not seem to hold out as good a hope. With regard to Mr. Gunn's point, the bladder was left practically as it was, so that any blood supply it had originally was retained. He would, however, make a rectal examination as suggested. The bladder was dropped into the rectum in the same position as it was originally, and was not rotated in the least.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on March 11th, Sir HALLIDAY CROOM presiding, Dr. JAMES YOUNG, in a paper and epidiascopic demonstration, discussed the *Etiology of eclampsia*. He referred to the well recognized fact that albuminuria and eclampsia are especially apt to be associated with red infarcts in the placenta. As, however, one found eclampsia with an apparently healthy placenta and no toxaemia where there was definite infarction, the association, though something of a mystery, was thought to be unimportant. Dr. Young showed from many points of view that infarction was due to involvement of the maternal vessels and not due to disease of the fetal vessels. It had long been known that the chorionic elements could live where there was no fetal circulation—for example, in the early trophoblast, in hydatid mole, and in chorion-epithelioma. In accidental haemorrhage, which was known to be especially associated with albuminuria and eclampsia, he showed evidence of placental disease in apparently healthy placentae. This disease would only be possible where a certain time elapsed between the haemorrhage and the removal of the placenta. In this way it was possible to explain the fact that in only about 50 per cent. of cases was there a toxaemia. Dr. Young referred to experimental proof of his thesis that the placenta was the source of the toxaemia. He had isolated a substance from healthy placentae, appropriately treated, that induced severe convulsions in animals and, in addition, focal necrosis in the liver, a change that was recognized to be specially characteristic of eclampsia. Dr. BERRY HART did not believe that infection was due to involvement of the maternal, but to involvement of the fetal, vessels. Drs. BALLANTYNE and FORDYCE thought similarly. Dr. OLIPHANT NICHOLSON thought that his investigations supported Dr. Young's beliefs with regard to the cause of eclampsia. Dr. J. W. BALLANTYNE, in a paper on *Still-births' registration*, pointed out the extraordinary diversity of practice which existed in different parts of the world, and even in different parts of the British Empire, with regard to the registration of dead-born and still-born babies, and in respect of the definitions of live, dead, and still-birth accepted for official use in these different places. There was a veritable jungle of legislative, official, and lexicographic divergencies of theory and practice. He was of opinion that the jungle had been entered by not following the straight path of the study of ante-natal and intra-natal physiology, and he thought that the only way out was to investigate and to restate the conditions of life and death before and during birth. The word "still-birth," for instance, should not be regarded as synonymous with dead-birth, but should be reserved for those cases in which there was a hesitancy in the smooth passage of ante-natal into post-natal life; whilst not having quite put off the characters of the life before birth the child showed a delayed putting on of those which marked life after birth. A still-born infant might be resuscitated or "trans-animated" (as he proposed to call it), and therefore it could not have been dead. He pleaded for a revision of

the terminology of the subject before a Still-births Registration Bill stereotyped the definitions for ever. It was really an Ante-natal Deaths Registration Bill which was required.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

At a meeting on March 6th, Mr. A. Ernest Maylard, President, in the chair, Professor Munro Kerr recorded a series of abdominal cases in women, among which were the following: (1) A woman, aged 32, operated on in September, 1910, for a tumour in the right side, close by the pelvic brim, and diagnosed as probably renal but possibly ovarian. Nephrectomy was performed, and the tumour proved to be an encapsuled "renal hypernephroma." The patient had a normal labour at term a year later, and was now very well. (2) A woman, aged 54, operated on for a tumour which was regarded as probably a malignant tumour of the right ovary. It proved to be a retrocaecal fibromyoma, which had probably been at one time connected with the uterus but had become detached. (3) A woman, aged 34, who for six years had suffered from attacks of pain in the left side associated with great sickness. At the operation there was found, alongside the normal left ureter, a second left ureter greatly distended, opening above into the pelvis of the kidney and attached below to the wall of the bladder, but impervious. Excision of this abnormal ureter had to be followed seven days later by nephrectomy, as the pelvis of the kidney had apparently been torn and leakage was occurring. *Post mortem* the other kidney appeared normal but rather small. Dr. David Newman gave an account of six recent cases in which lumbar nephrectomy had been performed, Dr. J. A. G. Burton showing the preparations and microscopic sections. They included (1) a case of *Aneurysm of the renal artery*, characterized by occasional profuse haematuria. On removal of the left kidney its pelvis was found to be completely filled by the aneurysm, the wall of which pressed upon and was adherent to the mucous membrane of the pelvis. (2) A case of *Renal varix*, characterized by haematuria lasting three weeks, and ultimately very profuse, but without pain. On exploring the left kidney a large varix was found in the pelvis close to the lower pole. A wedge-shaped section of the kidney was resected, and the surface fixed by sutures. In all the cases cystoscopy proved invaluable in determining which kidney was affected. The result of operation was in every case satisfactory. Dr. J. Mill Renton, speaking of tuberculosis of the kidney, said that probably the commonest initial symptom was frequency of micturition associated with pyuria, and soon afterwards with pain before, after, or during micturition. Haemorrhage might first attract attention. These symptoms might continue for a long time without any renal pain, tenderness, or rigidity. Thus, in a case which came to *post-mortem* examination the right kidney consisted of two or three small cavities, and the left showed very extensive tuberculous disease, yet at no time had there been pain in the renal region. It was not an invariable rule that when one kidney was tuberculous and the other sound, the one ureter mouth appeared diseased and the other healthy. Thus, in a case cited, both ureters were affected, and only by ureteral catherization was it determined which kidney was diseased. Nephrectomy was performed, and the patient was still well after two years. In another case the right ureter mouth appeared healthy, but had a patch of tuberculous deposit near it, while the left showed only slight hyperaemia. The urine from the latter, however, was of low specific gravity and contained tubercle bacilli, while that from the former was normal. A markedly tuberculous left kidney was removed, and the patient did well. A tuberculous condition was sometimes masked by a *Bacillus coli* infection, as in a case referred to. Tuberculin treatment had been very successful in the case of a woman who was found by catheterization to have only one functionating kidney, and that tuberculous.

ROYAL SOCIETY OF MEDICINE.

Clinical Section.

At a meeting on March 13th, Mr. Charters J. Symonds, President, in the chair, the following were among the cases exhibited:—Mr. Henry Curtis: A case of *Primary squamous epithelioma* of the exterior of the left nostril, illustrating the radical modern operation. The patient was a man aged 43. A very large skin flap had been turned up which allowed removal *en masse* of the glands which were extensively involved. Dr. Hildred B. Carlill: A case of *Spastic smile*, with spasm of the upper extremity, in a woman aged 52. The persistent spasm of the facial muscles producing the smile had been noticed for two years. Articulation was very imperfect; the swallowing was normal. There was a coarse tremor of the right arm. Dr. S. A. Kinnier Wilson suggested that the causative lesion implicated the left red nucleus, and was subthalamic in position. Mr. J. E. H. Roberts: An old-standing *Brachial paralysis* with subluxation of the shoulder-joint and anterior dislocation of the head of the radius. The paralysis had been noticed when the patient, now aged 17, was 3 days old. There was a subspinous dislocation of the head of the humerus. Dr. Hector Mackenzie: A case of *Multiple carcinomata of bone* in a woman aged 45. Both shoulders were very prominent, and the posterior deltoid regions on both sides were swollen, tense, and tender. Expansile pulsation was present over the swellings, and a systolic murmur was audible over them. Radiograms showed that the upper part of the right humerus was expanded into a large rounded tumour, and that on the left side a large tumour replaced a considerable part of the scapula. He thought that the bone tumours were secondary to primary disease of the right kidney. Mr. H. W. Carson: *A case of malignant disease of the male breast* in a patient aged 65. It was scirrhous in type, and had been noticed for between seven and eight years. It was thought to be inoperable. Mr. E. M. Corner: An instance of *Fracture of the spine of the tibia* in a young man, sustained when he was playing football. A heavy man fell on the outer side of the knee of the patient's extended limb. Shortly after the accident all movements of the joint were fair except flexion, which was restricted and painful. A skiagram showed the nature of the injury. Mr. V. Z. Cope: (1) A case of *Extradural haemorrhage* causing slight aphasia from pressure over Broca's convolution in a man, aged 29, ten days after the patient had been struck over the left temple. An ounce or more of blood clot and two depressed pieces of bone were removed from over the motor speech area. Complete recovery had followed. (2) A girl aged 14, who had suffered from *Sensory aphasia* following an injury, and had recovered after removal of a clot from beneath the dura over the angular gyrus and upper part of the temporo-sphenoidal lobe. Mr. W. H. Battle: A case of old-standing *Fracture-dislocation of the cervical spine.* X rays showed dislocation of the fifth and sixth cervical vertebrae. There was slight general weakness and some spasticity of the muscles of the trunk and legs. There was incomplete loss of appreciation of a pin-prick over the area supplied by the eighth cervical segment, with complete loss below it. Mr. T. H. Kellock: *Osteogenesis imperfecta* in a boy aged 4. Skiagrams showed marked attenuation of the long bones and the bones of the tarsus. There was very little compact tissue, and the medullary tissue was almost "spider-web"-like in appearance. Dr. R. O. Moon: A case of *Aneurysm of the ascending aorta* in a woman aged 37. The Wassermann reaction was positive. Mr. P. P. Cole: A specimen from a case of *Tumour of the thigh.* Microscopically this proved to be a myxochondroma. After two months' unsuccessful treatment by radium, amputation through the hip-joint had been performed.

Surgical Section.

At a meeting on March 10th, the President, Mr. Makins, in the chair, Mr. Herbert J. Paterson, in an address on *Gastro-jejunostomy*, said that during the last fifteen years there had been a great improvement in the results of gastro-jejunostomy; but it was due, he thought, to a general advance in surgical technique rather than to the method employed. The opening should be made as near the pylorus as possible, and as this was impossible in the posterior short loop operation, this method was unsound physiologically; the anterior was physiologically good, but bad anatomically. Gastro-jejunostomy was a physiological, not a drainage, operation, and the good effects were due to the regurgitation of bile and pancreatic juice into the stomach; the proof of this supposition lay in the

constant increase in the mineral chlorides of the gastric contents after gastro-jejunostomy. They were regurgitated through the anastomosis, because the total chlorides were diminished, and after undoing a gastro-jejunostomy the mineral chlorides again diminished. If an entero-enterostomy were performed, the increase did not occur; in cases with a marked increase of bile in the gastric contents there was a marked excess of mineral chlorides. Increase of mineral chlorides did not follow other operations. The average amount of bile regurgitated was 5 to 10 per cent. The type of operation was less important than the manner in which it was performed, and the chief cause of failure was its performance without proper indication. Occlusion of the pylorus was unnecessary; as gastro-jejunostomy was a physiological operation, it was rational in the treatment of gastric haemorrhage, and it was as efficient in the treatment of ulcers of the body of the stomach as for ulcers near the pylorus; it was preferable to excision. Sir FREDERIC EVE agreed with the main conclusions of Mr. Paterson; the stoma should be placed as near the pylorus as possible, as the gastric contents then passed through it, whilst if it was made in the cardiac end they passed through the pylorus. He had obtained excellent results after gastro-jejunostomy in cases where the ulceration was at the cardiac end. Excision of a callus ulcer was unnecessary. It increased the mortality to 10 per cent., and the occurrence of cancer on an ulcer was very rare. Dr. HERTZ said that his *x*-ray investigations showed conclusively that gastro-jejunostomy was purely a drainage operation. It was possible to watch the stomach empty itself through the opening even in cases where there was no obstruction to the pylorus; his work agreed with that of the French and German radiographers. The good results obtained were entirely due to the complete rest given to the ulcer; it could only be replaced by the use of a stomach tube, whilst Mr. Paterson's chemical theory could be equally brought about by the administration of alkalis. Some cases of gastric ulcer were not improved by the operation, and he had seen one in which the opening though patent did not drain it, gave no relief. The excellent results of the operation for duodenal ulcer were due to the complete rest given to the ulcer. The good effect of Roux's operation were inexplicable according to the chemical theory. Gastro-jejunostomy should not be performed for gastrectasis. Mr. DOBSON (Leeds) thought excision should be discarded for posterior ulcers and those along the lesser curvature. For anterior ulcers he recommended excision and gastro-enterostomy. The opening should not be placed too near the ulcer, owing to the possibility of the occurrence of hour glass contraction with the opening below. Gastro-jejunal ulcers could be prevented by accurate suturing. Mr. MAKINS thought that the most successful cases were those when the operation was performed for pyloric obstruction. When practicable partial gastrectomy was most satisfactory.

SECTION OF PSYCHIATRY.

AT a meeting on March 10th, Sir GEORGE SAVAGE, President, in the chair, Mr. WILLIAM MCDOUGALL, F.R.S., in a paper on the *Definition of the sexual instinct*, said that the present attitude of both academic and medical psychologists on the nature and rôle of instinct in general, and in particular the instinct of sex, was chaotic; and it was only by co-operation of medical with other psychologists that a right understanding of sex instinct could be expected. Those who turned to the standard works on psychology for an authoritative statement on the part played by the sex instinct in human life were disappointed. Even William James, who fully recognized the value of human instincts, scarcely touched on that of sex. There was a perpetuation of the error that instinctive action was merely compound reflex action. The erroneous views could be classified into two groups: (1) those which were unduly simple, representing the sex instinct as merely the tendency to respond to certain disagreeable sense-stimuli with movements which abolished the disagreeable and procured pleasurable sensations; (2) those which ascribed to the sex instinct a variety of mental and bodily processes which originated in other and distinct roots. A prevalent error was to confound the parental with the sex instinct; it was largely due to the ambiguous employment of the term "love," as well as to certain similarities of behaviour prompted by these instincts, and the biological ends served by them. Some authors also—erroneously, as he contended—considered modesty, jealousy, and masochistic and sadistic tendencies were components of the sex instinct. The Freudian doctrine comprised several errors. Against the view that the sex instinct arose from the desire for pleasurable gratification was the fact that in some cases the instinct continued after complete castration. He strongly disagreed as to Freud's contention that the sex instinct was normally present in infancy; it appeared to have its earliest beginnings at about the eighth year, and progressed steadily to puberty. Though the sex instinct was admittedly complex, it must not be regarded as comprising two distinct impulses. Professor W. BROWN (King's College) pointed out that Freud's ideas were based, not on *a priori* considerations, but on careful psycho-analysis. At first one felt somewhat repelled by Freud's doctrines, but if, as was necessary, one treated his language metaphorically, one saw much more clearly. The study of dreams was also very helpful. Dr. M. D. EDER also defended Freud, and considered that the parental and the sex instinct were closely allied. It was difficult to know exactly at what age the sex instinct commenced, and those who practised psycho-analysis did not agree about it. He thought the author had, in his paper, looked only backward, and hence ignored the strong aspirative power in man. Mr. SHAND pointed out how diverse were the meanings attached to the word "instinct." He thought it might be defined as an inherited disposition, excited innately by certain stimuli, and invoking innately, in response, certain specific types of behaviour; and he proceeded to elaborate this thesis by observations on the lower animals. Dr. D. FORSYTH also spoke, and the opener replied.

SUBSECTION OF ORTHOPAEDICS.

AT a meeting on March 3rd, Mr. MUIRHEAD LITTLE in the chair, the following were among the exhibits:—Mr. J. E. H. ROBERTS: A case of *Calvé's pseudo-coxalgic* in a boy aged 8, with a sixteen months' history of a limp and pain in the right knee. The right hip was then slightly flexed, with limitation of abduction and external rotation; the thigh was wasted ½ in. There was no bony change, and tuberculosis was diagnosed and treated. A skiagram now showed flattening of the epiphysis, irregularity of the line, and division of the ossific nuclei with thickening of the neck of the femur and slight change in the acetabulum. The etiology was unknown, but it was not tuberculous, syphilitic, nor rachitic. Mr. MAX PAGE: A case of *Astragalectomy* for a malunited fracture dislocation of the ankle in a female aged 30. The injury was complicated by a portion of the articular surface of the tibia being broken off and displaced backwards and downwards, thus fixing the foot in a position of talipes equinus. Six weeks after the injury the fibula was divided, the foot dislocated outwards and the astragalus removed as the callus formation prevented reduction. The patient walked in two months. Mr. BLUNDELL BANKART: (1) A case of *Bilateral Charcot's disease* of the tarsus in a female aged 45. Five years previously she had "rheumatism" of all her joints, which remained in her feet. Both ankles were enlarged, with extreme valgus deformity and laxity of the subastragaloid joints. The signs of tabes were well marked. (2) A case of *Macrodactyly* with anterior metatarsalgia in a female aged 42. At birth she had two great toes on the left foot. There was pain and thickening beneath the head of the second metatarsal and general enlargement of the second toe. A skiagram showed diffuse irregular cartilaginous overgrowth on the head of the second metatarsal, the proximal phalanx, the cuboid, and the anterior end of the os calcis. (3) A case of *Ankylosis of the temporo-maxillary joint* in a girl aged 3. She had never been able to open her mouth properly, the lower jaw was small, ill-developed, and the lower teeth lay behind the line of the upper. The chin was displaced to the left, and the right condyle was normally prominent. The front teeth were separated ¼ in. Mr. LAMING EVANS: (1) A case of *Scoliosis of a functional character* in a female aged 21. A curvature was noticed at the age of 14, two years after a fall. She now had a left lumbar scoliosis with deviation of the whole trunk to the left, so that the vertebra prominens lay above the outer side of the left buttock. Three skiagrams had shown diminished opacity of the second and upper part of the body of the third lumbar vertebrae; no alteration had

taken place in two years. He suggested that the scoliosis was due to this obscure change, though clinically it appeared to be functional. (2) A case of *Scoliosis associated with primary myopathy* in a male aged 10. The upper six dorsal vertebrae were markedly deviated to the right with extreme rotation; there was no increase in the lumbar lordosis such as is commonly seen. The pectoralis major, teres major, latissimus dorsi, biceps and triceps had atrophied. The tensor fasciae femoris was hypertrophied, and both tendo Achilles were contracted. He said these cases usually showed lumbar lordosis with dorsal kyphosis before lateral deviation.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting on March 3rd, Dr. JANE WALKER, President, in the chair, Dr. FLORENCE LAMBERT, in a paper on *Treatment by massage, medical gymnastics, and ionization*, recorded two cases of enuresis treated by means of abdominal massage, exercises to strengthen the pelvic floor, and rectal vibrations. The first patient, an intelligent girl, aged 14, had double congenital hip disease, infantile paralysis of both feet, and had suffered from incontinence of urine since birth. She was wet eight or nine times a day, and two or three times at night, and had no control whatever over micturition. Immediately after the commencement of treatment she ceased to wet her bed at night, and after twenty-two sittings she rarely wet herself more than once in twenty-four hours. A year later she had improved in every way, and very rarely wet herself at all. The other patient, a child aged 5, had suffered from double incontinence since birth. She had been treated at four hospitals without improvement, and two slight operations had been performed on the anus. She had complete incontinence and attacks of obstinate constipation sometimes lasting a fortnight. Two months after the commencement of treatment, combined with enemata on alternate days and paraffin twice daily, the bowels were quite regular, and she had gained complete control. Two cases of movable kidney had been successfully treated by abdominal massage, vibrations, and exercises. One patient suffered from severe attacks of renal colic; the right kidney, situated in the iliac fossa, was enlarged and very tender, while the left reached below the umbilicus; the abdominal muscles were very flabby. After one month's treatment she had no pain, the kidney was no longer tender, and both kidneys were in their normal positions. Eighteen months later she was still perfectly well, and was able to dispense with her belt. Speaking next of cases of chronic subcutaneous fibrosis and myositis, being usually accompanied by either chronic constipation or pyorrhoea alveolaris, abdominal treatment was applied to them as a matter of routine. For the treatment of infiltrations in the deep muscles she applied radiant heat and ionization. Large pads were used and strong currents employed—from 80 to 150 milliampères for thirty minutes. One patient had come with a diagnosis of sciatica, for which she had suffered for three years; she had been treated elsewhere by injections of alcohol and ionization without improvement. She was unable to walk unless doubled up and supporting her hands on her knees, and then with great pain. The speaker found fibrositis of the right lumbar, sacral and gluteal muscles, but no sciatica. At the end of two months' treatment she was completely cured and able to ride a bicycle. Dr. LILIAN CHESNEY, in a paper on *Some disadvantages of being too thorough*, dealt largely with the working of the Insurance Act in Sheffield, and gave instances to show the impossibility of a doctor with a large panel practice being even thorough enough.

THE International League against Epilepsy will hold its annual meeting this year in September (6th to 12th) at Berne at the same time as the International Congress of Neurology, Psychiatry, and Psychology, the meeting of the Society of German Neurologists and that of Swiss Neurologists. Professor Kocher will deliver an address on the surgical treatment of epilepsy. Many other communications have been promised and will be announced when the final programme is issued. Communications relative to the meeting should be addressed to Professor Th. Kocher, Berne, or to Dr. A. Ulrich, Töddisstrasse 6, Zürich.

Reviews.

PRESCRIBING.

THE art of prescribing has been almost lost since manufacturing and competitive chemists began to flood the markets of the world with all sorts of combinations of drugs carefully selected, elegantly prepared, and loudly advertised. The new pharmacy, if it may be so designated, appeals to the public and to some medical practitioners who find it easier to prescribe the "mixture so-and-so" or the "capsule this or that" of such-and-such a chemist than to set forth in full terms the constituents of a prescription. In the interests of scientific medicine and of the accurate adaptation of therapeutic measures to the requirements of the sufferer this is to be regretted. It tends to substitute a rule-of-thumb prescription of drugs which approximately fulfil the indications of the case for the older fashioned but more desirable practice of selecting the drugs and assessing their dosage according to the individual necessities, family tendencies, and environmental circumstances of each patient, both at the time of his illness and in accordance with the circumstances of its occurrence. To remedy this tendency many books have recently been published dealing with the art and practice of prescribing, and among these one of the latest is a small work by Mr. ARTHUR PRITCHARD, entitled *Practical Prescribing*.[1] The plan on which Mr. Pritchard's book is arranged is novel, and, though it involves the recital of many details on which the busy practitioner may not care to spend time, it has the advantage of dealing with the disease under consideration not only in its classical outlines, but also in its practical manifestations in quoted cases. The prescription tables and clinical notes are arranged side by side so as to indicate the principles upon which drugs are selected and combined throughout the various stages of the illness. A commentary and notes by the author are added at the end of each disease dealt with, so that the description becomes a clinical record of the illness with a detailed record of daily events and of the treatment as adapted to the progress and vicissitudes of the case, with a final summing up discussing the physiological and therapeutic actions of the drugs employed and the ultimate results obtained. No classification of diseases has been followed, and there are many omissions. Among infective diseases only influenza and measles are mentioned; chlorosis is the only blood disorder referred to; there is no mention under "Diseases of the Heart and Blood Vessels" of aortic disease or aneurysm; and disorders of spleen, pancreas, peritoneum, and pelvic organs are wholly left out. Within the compass of a book of this size it was, perhaps, impossible to deal with every disease to which the human body is liable, but from the point of view of general usefulness, an elimination of some of the less important diseases and their replacement by others of more frequent occurrence, and therefore in greater need of practical guidance in treatment, would add to the value of Mr. Pritchard's volume. The plan of the book is well described in its title, and though the actual formularies of prescriptions are not so much a matter of importance as the principles of drug selection and the methods of combination, yet the practical application of therapeutic knowledge to the art of prescription writing is illustrated in every page. In his preface the author says that his "first object has been to supply a number of prescriptions, and to explain them," and this he has succeeded in accomplishing with such a measure of success as should make his work appeal to those who prefer to acquire their knowledge from practical and clinical records rather than from didactic lectures and scientific disquisitions. The book is pleasantly written, and is furnished with a useful and complete index.

In his preface to the small volume on the *Essentials of Prescription Writing*,[2] Dr. EGGLESTON states that "the work is a crystallization of the author's experience in teaching the subject, and has been prepared with a view

[1] *Practical Prescribing. (With Clinical Notes.)* By Arthur H. Pritchard, M.R.C.S., L.R.C.P., R.N.(ret.). 1913. London: Henry Frowde; and Hodder and Stoughton. (Cr. 8vo, pp. 317. 6s. net.)

[2] *Essentials of Prescription Writing.* By Cary Eggleston, M.D., Instructor in Pharmacology, Cornell University Medical College, New York City. Philadelphia and London: W. B. Saunders Company. 1913. (Fcap. 8vo, pp. 115. 5s. net.)

of reducing the burden of the already overworked student." "Crystallizations" of this kind are not infrequently temptations to idleness, and tend to foster a habit of temporary memorizing rather than the more solid acquisition of lasting knowledge. In this small book, however, it is fair to say that much of this evil has been avoided, and the fundamental principles on which the art of prescription writing depend are set forth succinctly and with commendable brevity. It may be doubtful whether in such a small work so much as two chapters comprising thirty-two pages need have been devoted to the grammar of Latin. Every student should be called upon at his preliminary examination to show sufficient knowledge of this language to make such elementary facts as these chapters contain unnecessary in a work addressed to men who either are, or are about to be, qualified members of the medical profession. The chapters dealing with practical pharmacy will repay perusal by those who wish to acquire the art of prescribing in a sound and logical way. The dosage of drugs is discussed with the widest view of their applicability, and attention is drawn to the importance of considering such questions as age, sex, idiosyncrasy, and personal type in arriving at a wise decision as to the amount of the dose and the frequency with which it should be repeated. The remarks upon incompatibility are useful, though perhaps a little sketchy. The small volume will prove specially attractive to those who desire to rub up their knowledge of prescribing to meet the immediate requirements of a pass examination.

Dr. MACDONALD, of Leven, has written *The Practitioner's Practical Prescriber*[3] with the intention that it should fill a want in the busy practitioner's armamentarium and supply him with a pocket formulary to which he can refer with confidence on every occasion of doubt or emergency. The plan of the book follows that adopted by Whitla in his *Dictionary of Treatment;* diseases are arranged alphabetically and discussed individually in so far as their treatment is concerned. One obvious objection to such a scheme is that in a volume so limited as to be of pocket size the information, while it overlaps in many places, in others must be so scanty as to be without much practical value. The former point is conspicuous again and again in Dr. Macdonald's book, and the latter is illustrated in the paragraph dealing with the treatment of inflammation. Under this heading the only directions given are thus stated: "Externally apply hot fomentations with 1 in 20 carbolic lotion." Surely such a general statement can be of little or no use to any qualified man! All the directions that are given for the treatment of cardiac disorders are thus stated under "Heart": "For mitral stenosis, with engorgement of portal circulation, blue pill and a compound rhubarb pill should be given at night, and a saline in the morning, and the following mixture thrice daily: Tinct. strophanth. min. v; ferri et ammon. cit. gr. v.; aq. cinn. ad ʒj. For aortic regurgitation, opium often acts like a charm." This is a synopsis of a very large and difficult subject which is not only inadequate but, in its omissions, even dangerous. If there is a condition of cardiac trouble in which one drug more than all others is indicated it is mitral disease with failing compensation, and yet digitalis is not even mentioned. Dr. Macdonald talks of a "very good routine prescription" for dyspepsia, and gives his formula; but is any routine prescription for a disorder which is so variable, and which owes so much to idiosyncrasy, habits of life, and a hundred and one other causes, either commendable or justifiable? In his directions for the treatment of gout colchicum is not mentioned, and all that is directed to be done for the management of a case of scarlet fever is to "swab the throat with a brush (previously moistened) dipped in" glycerine of tannic and carbolic acids. Other instances might be quoted to show that this volume, though well-intentioned, requires careful revision in order to bring it up to the standard of usefulness which it certainly would attain if it were less ambitious in scope and more comprehensive in essential details. The posological tables given in the second part of the book are useful and very convenient for reference, but the diet tables are meagre.

[3] *The Practitioner's Practical Prescriber.* By D. M. Macdonald, M.D. London: Henry Frowde; and Hodder and Stoughton. 1913. (Post 8vo, pp. 198. 5s.)

Dr. BASTEDO's book on *Materia Medica, Pharmacology, Therapeutics, and Prescription Writing*[4] is based upon lectures delivered by him at Columbia University, and is intended to serve as a work of reference for the busy practitioner and as a guide to the efficient adaptation of therapeutic and pharmacological science to the prevention and cure of disease. The work is divided into three parts: the first dealing with pharmaceutic preparations, dosage, and methods of administration; the second with separate remedies considered either individually or in groups of similar action, disinfectants and antiseptics, and animal extracts; and the third with prescription writing, with special reference to measures, Latin terminology, abbreviations, elegance, and compatibility. The main object of the physician's calling being to secure the health and promote the recovery of his patient, it is essential that he should be familiar with all the important available means of preventive and curative treatment. The subject is a very large one and cannot be mastered in every detail by even the most diligent student, but Dr. Bastedo musters his facts in such orderly manner as to enable the reader readily to find detailed information on any subject connected with remedial management on which he may be doubtful or have become rusty. He points out that varieties of treatment may be grouped conveniently under the following headings—hygienic, mechanical, operative, physical, hydrotherapeutic, dietetic, psychotherapeutic, and pharmaceutic—but the bulk of his treatise is devoted to the science and art of therapeutics. There is a useful chapter on dosage, and special attention is directed to an "age-weight rule," whereby, in most instances, the quantities suitable for children at various ages can be arrived at. The recent advance in knowledge of the disorders of the heart and circulation has prompted the author to devote special attention to the therapeutic effect of digitalis and the allied group of remedies. He gives a summarized account of the physiology of the circulation, discusses the effect of drugs on the heart in health and disease, and insists in regard to digitalis, which is nowadays being used with much greater freedom than formerly, that though the margin of safety is a large one, its effects must be carefully watched and its administration stopped under certain conditions which he enumerates as evidences of the limits of toleration having been reached. He regards an intermitting ventricle, premature heart beat, and bradycardia as counter-indications to its exhibition. The question of alcohol in all its various uses is treated in considerable detail, and the effects upon the various organs and tissues are described. Though not disapproving of stimulants, in proper moderation, as useful aids to digestion and pleasant accessories to the daily regimen, Dr. Bastedo, while leaving every man to be his own judge as to whether, in normal health, he is at his best with or without them, advocates only their occasional use in disease, and believes that even medicinal doses increase the susceptibility to bacterial invasion, and add to the risk of toxaemic intoxication in all varieties of acute illness. He recognizes the need for discrimination in the use and adaptation of alcoholic stimulants to the idiosyncrasies and habits of the individual, for he says, "when it is known that the patient has been an alcohol habitué, it is criminal to prescribe an alcoholic drink, and it is the duty of the physician to consider well before prescribing any medicine with a distinctly alcoholic or vinous flavour. In sickness it is equally imperative to use judgement before cutting off the alcohol from a drinker; for it will not do, for example, to stop the whisky of a chronic drinker during an attack of pneumonia." The practical application of the subject-matter of this volume is summed up in Part III, which is devoted to prescriptions. The writing of prescriptions is, in the author's experience, "the dread of the young medical practitioner," because of his fears lest he may not express himself correctly, of distrust in his power to order a palatable and compatible mixture, and of terror of the chemist's criticisms should he make mistakes. If these are good and true reasons for the proverbial incapacity on the part of most young doctors to write correctly simple combinations of drugs for the treatment of their patients, then there must be in America, as there certainly is in this

[4] *Materia Medica, Pharmacology, Therapeutics, and Prescription Writing for Students and Practitioners.* By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University. Philadelphia and London: W. B. Saunders Company. 1913. (Med. 8vo, pp. 603; illustrated. 15s. net.)

country, urgent need for better and more practical methods of education during the period of undergraduate study. The conscientious man who desires to do his best for his patients will always remedy the defects of his college training after he enters upon practice, and books like this will guide him correctly to the knowledge that is essential to his success and reputation. But such an essential part of medical training should not be a matter of his choice after graduation, but a subject of instruction and practice and examination-test before he exchanges the classroom and hospital for the personal responsibilities and duties of a fully qualified physician. Dr. Bastedo's book is pleasantly written, well illustrated, and carefully arranged. It may be confidently recommended to all who desire to improve and bring up to date their information on the important subject of treatment.

CHEMISTRY.

THE borderland in which the sciences of physics and chemistry meet—usually referred to as physico-chemistry—has already grown almost to the dimensions of an independent territory, and is continually increasing in extent. It is possible to have a considerable practical knowledge of chemistry, and yet know very little of this department of the science, and any one desiring to become acquainted with it must be prepared to give separate study to it. Textbooks dealing with it are far less numerous than those devoted to one or other of the practical branches; it is not only for this reason, however, that Dr. F. H. GETMAN'S *Outlines of Theoretical Chemistry*[5] is to be welcomed, but also because it is an admirably clear and up-to-date exposition of the subject. It is impossible in a brief notice to do more than indicate some of the matters dealt with, which include gas equations, solution phenomena and theories, osmosis, the colloidal state, thermo-chemistry, the phase rule, chemical kinetics, ionization, actino-chemistry, etc. The work is based on the author's experience in teaching the subject; mathematical formulae are used somewhat freely, but the calculus is only introduced when quite necessary, and no other demand is made on a knowledge of higher mathematics. Most of the chapters conclude with a number of problems to be worked out, with a view to fixing in the student's mind the principles and methods of calculation which are discussed. The book, which meets a distinct want, can be heartily recommended.

The importance of sugar as a food and as an article of commerce, and the number of important industries, such as brewing, in which sugar plays a leading part, are no doubt among the principal causes which have led to the whole sugar group being thoroughly studied by organic chemists in recent years. The same considerations also make it desirable that the principal results of these chemical investigations should be presented in a convenient form for the information of the many persons interested; this is the function which will be fulfilled by the book entitled *Sugars and their Simple Derivatives*,[6] by Dr. J. E. MACKENZIE. In this little work, based on a course of lectures given at Edinburgh University and elsewhere, the chemistry of the numerous members of the sugar group is expounded and the manufacture of the principal ones is described, while chapters are also devoted to fermentation, metabolism, and the glucosides. Little or nothing of importance seems to have been omitted, and the matter is very clearly presented. It is a little unfortunate to perpetuate the use of the term "saccharate" for the combinations of alkalis and alkali-earths with saccharose, such as $C_{12}H_{21}NaO_{11}$, and $C_{12}H_{22}O_{11}$, CaO, $2H_2O$, as well as for the true saccharates or salts of saccharic acid, such as $(CHOH)_4(COOK)_2$; the same term is here used for both without comment or explanation. The reference on page 41 to "solutions of various salts containing 115 to 180 per cent. of their weight of the salt" seems to require explanation or emendation, but throughout the book faults of commission or omission appear to be extremely rare.

[5] *Outlines of Theoretical Chemistry.* By F. H. Getman, Ph.D., Associate Professor of Chemistry in Bryn Mawr College. London: Chapman and Hall, Limited. 1913. (Demy 8vo, pp. 478; 102 figures. 15s. net.)

[6] *Sugars and their Simple Derivatives.* By John E. Mackenzie, D.Sc. Ph.D., Lecturer on Chemistry, University of Edinburgh. London: Gurney and Jackson. 1913. (Med. 8vo, pp. 258. 7s. 6d. net.)

Organic Chemistry for Students of Medicine,[7] by Professor JAMES WALKER, is an attempt to present a fairly complete course of study in such a way as to effect the most economical use of the rather short time allotted to it in the medical curriculum. It is not intended to cover the course for any particular examination, but is written rather with a view to the fact that in the study of physiology, pharmacology, and pathology the student requires a somewhat detailed knowledge of numerous substances and processes pertaining to the domain of organic chemistry, as well as of the general principles of the science. As far as possible, therefore, the substances described and used for the purpose of the general discussions are such as are of direct medical interest. The purification and analysis of organic compounds and the determination of molecular weights, etc., are first dealt with; then some of the simplest compounds, and proteins, alkaloids, etc., are reached after about 300 pages. The order followed is not quite that usually taken in textbooks on the subject, but appears to be consistent with its clear exposition. In line 10 of page 37 the word "organic" appears instead of "inorganic," but no other errors of importance have been noted in the book.

Mr. A. W. STEWART'S *Manual of Practical Chemistry for Public Health Students*[8] is intended especially for those studying for the Diploma of Public Health. It contains brief directions for a course of laboratory work, including the analysis of air, water, food, etc. Some indifference to accuracy is shown, as, for example, in such statements as "40 grm. of caustic soda dissolved in 1,000 cc. water would constitute a normal solution," or, in the absence of any directions for ensuring neutrality before applying the tests given for acetic, citric, and tartaric acids, whereby they are vitiated, and students may easily be led astray. A candidate at the examination for the D.P.H. ought to possess a sounder knowledge of chemical work than will be gleaned from this little book.

THE SECOND SCHOOL CONFERENCE ON DIET AND COOKERY.

THIS book[9] has taken longer to review than any tackled for many months. One could see 500 pages of solid print within a vivid green cover under the most catching title, *Rearing an Imperial Race*, and concluded that here was something in a Kiplingesque vein. Yet there was difficulty in finding out what it was all about, there seemed no beginning and no end to the thing; just page after page of paragraphs, each headed with some scintillating phrase that did not always run with the text of the paragraph. At last the riddle was solved. The book is the report of a conference on the feeding of school children, but the raw pabulum of the tough members of that conference has been cooked and thrice digested by the editor thereof into something which he, no doubt with the best intentions, felt sure would tickle the public taste. We venture to doubt his judgement.

The editor seems to have had a very poor opinion of the work of the contributors to the conference. No doubt to each of these his own contribution was dear as the apple of his eye. But the improving editor has split and sliced up these apples, soused them and soaked them, fried them, and grilled them, until they are cooked almost beyond recognition. And as though to make sure and certain of the transformation he has further extracted the core from each argument by stars and daggers that draw off the eye of the reader to his own massive footnotes. Rarely has such an example of overcookery been seen, and that by a secretary of a National Food Reform Association which exists to save good food from being spoiled by bad cooks! If Mr. HECHT wanted to produce a book of excerpts on feeding, under the title of "Rearing an Imperial Race," why did he not do so? He is unmistakably diligent; but

[7] *Organic Chemistry for Students of Medicine.* By James Walker, LL.D., F.R.S., Professor of Chemistry, University of Edinburgh. London: Gurney and Jackson. 1913. (Demy 8vo, pp. 339. 6s. net.)

[8] *A Manual of Practical Chemistry for Public Health Students.* Especially arranged for those studying for the D.P.H. By A. W. Stewart, D.Sc., Assistant Demonstrator of Chemistry at the Royal Institute of Public Health. London: John Bale, Sons, and Danielsson. 1913. (Cr. 8vo, pp. 76, interleaved. 3s. 6d. net.)

[9] *Rearing an Imperial Race: Containing a full Report of the Second Guildhall School Conference on Diet, Cookery, and Hygiene, with Dietaries, etc.* By C. E. Hecht, M.A. London: The St. Catherine Press. 1913. (Demy 8vo, pp. 556; 14 illustrations. 7s. 6d. net.)

as cook of the conference report he is not a success. Instead of appearing as good sound toothsome stuff, it now seems like a vegetarian steak!

It has been written above that this is the report of a Guildhall conference, but that is not strictly correct. Pages i to xlviii are editorial excorpts and introduction, and pp. 307 to 494 are other editorial extracts from the writings of others elsewhere. Some of these are scarcely felicitous, to wit: "I maintain that the money spent in so-called cookery teaching in the English board schools for the last thirty years has practically been wasted, and each generation has progressed in waste, rather than in thrift and domestic economy, where the Germans beat us hollow. For example, how many of our working men's wives know that two salt herrings are equal to the nitrogen intake adequate for the requirements of a man doing hard manual labour? An English labourer will turn up his nose at a herring for his dinner, while the well-taught Germans consume three-quarters of the herrings caught on the English and Scottish coasts." Comment is needless.

The conference, pp. 1 to 306 (or much less if the extraneous footnotes are eliminated), was a good conference. Many good papers were read on the feeding of children at home and at school. Feeding at school means the provision of meals for those attending public elementary schools. This was thoroughly dealt with from the physical, educational, and economic points of view. There were also able papers on the teaching of personal hygiene, food values, domestic cookery, and catering, and on the feeding of children attending open air schools and schools for defectives.

NOTES ON BOOKS.

MOST people with engagements to make or keep have suffered inconvenience from the irregularity of our present calendar. In his work on *The Reform of the Calendar*[10] Mr. ALEXANDER PHILIP expatiates on the manifold shortcomings of our present system—indeed, like most reformers, he rather tends to exaggerate its evils, and discusses proposals for reform. Mr. Philip naturally considers that a perpetual calendar in which each day of the month always falls upon the same day of the week, combined with a fixed date for the celebration of Easter, is the ideal, but he holds that religious feeling is at present too strong to allow any such drastic reform a chance of being adopted. Pending this, he advocates the division of the year into months, all of thirty-one or thirty days—namely, January 31, February 30, March 30, April 31, May 30, June 30, July 31, August 30, September 30, October 31, November 30, December 31. The leap year adjustment is to be made by the addition of a day to June. It is claimed that this change would bring numerous advantages; *inter alia*, there would be four successive quarterly periods of equal length—ninety-one days—leaving one odd day over at the end of the year. There is no doubt much to be said in favour of Mr. Philip's proposal, but we confess to thinking that the importance of the matter is less than he would have us believe.

Professor W. T. COUNCILMAN'S book on *Disease and Its Causes*[11] may be recommended to the general public and also to those students who are just starting their practical work in hospital, offering as it does a brief and comprehensive view of the subject. The author views disease from the scientific aspect and devotes much of his limited space to the infectious diseases. He includes a short account of the history of bacteriology, with special reference to anthrax. The theories of bacterial infection and immunity are lucidly explained and the principle of antitoxin treatment dealt with. Neoplasms are only briefly discussed, but the main known facts are mentioned; the chief theories of the causation of tumours are examined, but no definite opinion is expressed and no indication given of the immense amount of research and speculation devoted to these subjects during recent years. The section on heredity and insanity shows marked signs of compression, and the author's meaning is to be grasped only with difficulty even by a reader who has a preliminary knowledge of the subject. The volume is free from those sweeping generalizations which lack of space and a desire to simplify the subject induce many authors of books of this type to employ. The only one to which exception may be taken is the statement that the causes of disease are extrinsic. This is surely open to argument. The final conclusion of the author after examining all the brilliant work of the past fifty years—that "there seems to be a balance maintained between the restriction of disease by prevention and the increased influence of social conditions which are themselves factors of disease"—seems unduly pessimistic.

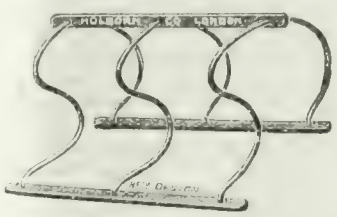
[10] *The Reform of the Calendar*. By A. Philip, M.A., LL.B., F.R.S.Edin. London: Kegan Paul, Trench, Trübner and Co., Limited; New York: E. P. Dutton and Co. 1914. (Med. 8vo, pp. xii +127. 4s. 6d. net.)

[11] *Disease and Its Causes*. By W. T. Councilman, A.M., M.D., LL.D. New York: H. Holt and Co.; London: Williams and Norgate. 1913. (Fcap. 8vo. pp. 254; 22 figures. 50 cents.)

MEDICAL AND SURGICAL APPLIANCES.

A Leg-cradle.

DR. B. RICHARDSON BILLINGS (Folkestone) writes: As the result of practical experience, I have designed and registered a leg-cradle, modified from the ordinary pattern as the illustration will show. The hoops are, on one side, made concave in the lower part of their ordinary convexity, this hollowing-out allowing the uninjured leg to lie comfortably parallel alongside its fellow, and not in a splayed-out condition, as is the case with ordinary patterns. Without any prompting, the patients on whom I have tried it after the old sort, testify as to its superiority on the score of comfort, while the price is no more than that of the ordinary pattern. The Holborn Surgical Instrument Company, Ltd., have most ably carried out my idea from my model and sketches.



MEDICINAL AND DIETETIC ARTICLES.

Propacsin, a New Local Anaesthetic.

AMONG the many local anaesthetics which have been prepared synthetically in recent years para-amido-benzoic ethyl ester (anaesthesin) has taken an important place, and is one of the limited number which received official recognition in the last edition of the German *Pharmacopoeia*. Experiments with the compounds most closely allied to this have led to the putting forward of para-amido-benzoic propyl ester, or "propaesin," as an improvement; it is claimed that it is a more powerful local anaesthetic and practically or completely non-toxic. We have examined a specimen of this compound submitted by Messrs. B. Kühn and Co., London, E.C.; it is a neutral white powder of slightly bitter taste, only slightly soluble in water, but easily soluble in alcohol and other organic solvents. It can, of course, be employed in a variety of forms.

Zymine Peptonizing Powders.

Messrs. Fairchild Brothers and Foster, London, E.C., have submitted a specimen of a smaller packet of their peptonizing powders, which they have recently put on the market; this package contains six tubes of the powder. The usefulness of these powders for the preparation of peptonized milk is well known.

Hexalet.

Under the name "hexalet" the J. D. Riedel Company (London, E.C.) have introduced a combination of hexamethylene-tetramine and sulpho-salicylic acid in molecular proportions. It is claimed that this combines the antiseptic action of the former—due to the formaldehyde liberated in the body—with the astringent property of the latter, and that it is of value in inflammations of the bladder. A sample submitted for our examination consisted of a white crystalline powder of pleasant acid taste, easily soluble in water; the aqueous solution gives off formaldehyde when heated. It appears likely to prove a useful combination.

Iodex Preparations.

Messrs. Menley and James (Menley House, Farringdon Road, London, E.C.), the agents for iodex, which is described as a stainless ointment, containing 5 per cent. of iodine, have put on the market two preparations which may be found useful. One preparation is an iodex suppository and the other an iodex pessary. The applications are suggested for use in cases in which it is desired to obtain the therapeutic effects of free iodine.

THE INTERNATIONAL CONTROL OF DRUGS OF ADDICTION.*

As announced in the last number of the JOURNAL a third International Opium Conference will assemble at the Hague next May, on the invitation of the Netherlands Government, and Sir William Collins, K.C.V.O., and Mr. Max Müller, C.B., M.V.O., will again be the delegates to represent Great Britain.

It will be remembered that the underlying principle which has inspired this international movement is the control of the production and distribution not only of opium, but of morphine and cocaine and other drugs which may be shown to be liable to similar abuse.

There has quite recently been presented to both Houses of Parliament a white paper (Cd. 7276) which throws a good deal of light on the present position of the International Opium Convention of 1912. It contains the instructions given to the British delegates to the second International Conference held at the Hague in July, 1913, the report of the British delegates of that Conference, the final protocol then drawn up, and some subsequent correspondence between the British Minister to the Netherlands, the Hon. Sir Alan Johnstone, and Sir Edward Grey.

From this parliamentary paper we learn how the twelve signatory Powers to the original Convention grew to twenty-two by the commencement of the Second Conference, and to forty at the present time. The British delegates were instructed on June 30th, 1913, that they were to announce that the moment was not then ripe for ratification of the Convention by His Majesty's Government. This, however, was to be clearly intimated to imply not a refusal but a postponement, and meanwhile the British delegates were instructed to use their best endeavours to secure the signature of the Convention by those nationalities which had up till then failed to co-operate, or had even refused to sign the Convention by means of the supplementary protocol provided for the purpose. Indeed, it would appear that such suspensory action on the part of Great Britain was deemed likely to be more effective in securing almost worldwide co-operation than a possibly premature ratification might prove to be.

The report, signed by Mr. Max Müller and Sir William Collins, recites the procedure adopted by the Conference. It would appear that it soon became manifest that the great majority of the twenty-two countries represented were ready to deposit their ratifications forthwith, but five Powers, including France, Germany, Great Britain, and Portugal, were not then willing to take that decisive step.

This second Conference had been called together by virtue of Article 23 of the Convention, which provided that:

> In the event of the signatures of all the Powers not having been obtained on the date of the 31st December, 1912, the Government of the Netherlands will immediately invite the Powers who have signed by that date to appoint delegates to examine at the Hague the possibility of depositing their ratifications notwithstanding.

The Conference had no difficulty in deciding that those Powers who were ready to make deposit of their ratifications should be at liberty to do so, notwithstanding the absence of the signatures to the Convention of certain of the Powers whose co-operation had been invited. The remaining work of the Conference consisted principally in classifying the abstaining Powers into certain groups according to whether they had failed to sign by reason of misapprehension as to the fresh legislation that would be necessitated, or by reason of their co-operation being superfluous in view of the stringent domestic laws already in force, or for any other reason, explicit or implicit, and in devising appropriate communications to meet the respective cases. The British delegates in their report state:

> Our instructions were to direct our efforts to securing the co-operation of the signatory Governments in such measures as in the opinion of the delegates were most likely to induce those countries which, for one reason or another, had not yet signed to sign the Convention without further delay, and thus enable His Majesty's Government to ratify. A perusal of the final protocol will, we think, show that we have succeeded in carrying out our instructions to the letter. . . . In our report on the work of the first Conference we claimed to have established a new principle of international morality in laying down that, in regard to the traffic in these harmful drugs, it was not sufficient for a particular State to take measures for the protection of its own subjects, but that it must also assist the efforts of other countries by organizing international control over the traffic in these drugs; but we pointed out that, in order to give adequate effect to this principle, a substantial degree of unanimity among the nations of the world as to the measures to be adopted was essential. We now claim that a long step has been made towards the attainment of that unanimity. The second Conference has served to review the international position and accelerate the pace.

In the final protocol referred to is embodied a resolution of the Conference which gave, as it were, a fresh point of departure over and above the procedure contemplated by Article 23 of the Convention of 1912 already alluded to. This resolution declared that:

> Should the signature of all the Powers invited in accordance with paragraph 1 of Article 23 not be obtained by the 31st December, 1913, the Government of the Netherlands will immediately request the signatory Powers to appoint delegates to proceed to the Hague to examine into the possibility of putting into effect the International Opium Convention of 23rd January, 1912.

From the enclosure contained in a letter from the British Minister at the Hague to Sir Edward Grey, dated January 30th, 1914, it appears that the only Powers which had been invited to sign the Convention and had not done so by December 31st, 1912, were Austria-Hungary, Turkey, Servia, Bulgaria, Greece, and Uruguay, the last three had, however, declared that they would shortly sign. Moreover, seven signatory Powers had by the end of last year already ratified the Convention, namely, Denmark, Siam, Guatemala, Honduras, Venezuela, the United States of America, and Portugal. It would therefore appear that the question of ratification by Great Britain must forthwith be seriously considered, and the third Conference will have to examine into the possibility of proceeding to put the Convention into force despite the abstention of Turkey and Servia, and possibly also of Austria-Hungary.

We gather from the terms of the concluding paragraph of Article 23, and the first paragraph of Article 24 of the Convention that the coming into force of the Convention will take place automatically three months after the receipt of the last instrument of ratification of the signatory Powers. If, therefore, the ratifications of all the forty-three Powers which have already signed, or have announced their intention to sign the Convention, were deposited by the date of the assembly of the third Conference in May next, and even if the three outstanding Powers were not in the meanwhile to sign and ratify, we may expect to see the Convention come into force, *proprio motu*, in August next. It would seem from the report of the British delegates that the difficulty of Austria-Hungary in agreeing to signature was the assumed necessity of first introducing fresh legislation; it is therefore highly probable that, inasmuch as it has been explained that legislation is consequent upon ratification and not antecedent to signature and ratification of the Convention, the scruples of the dual monarchy will be removed. It may well be, therefore, that the Convention will come into force without the co-operation of Turkey and Servia. The abstention of these Powers, both producers of opium, is presumed to be owing to "economic" reasons, and the co-operating Powers may have to consider how far their non-inclusion will impair the value of the Convention and what action may be advisable in consequence.

Behind and beyond the coming into force of the Convention, however, is the larger and far more difficult question of enacting legislation, ordinances, or regulations in the various countries to give both national and international effect to the operative articles of the Convention. The bills, or *projets de loi*, are to be prepared not later than six months after the Convention has come into force, and to be presented to the legislative bodies within the same period or in the session next following the expiration of that period. It is finally contemplated that a date shall be internationally agreed upon for the coming into operation of such legislative enactments. The task of comparing and equating the statutes of more than forty nationalities will be one of considerable magnitude and delicacy, and as regards our own country and the British dominions and colonies it will imply a considerable volume of entirely new pharmacy law. We assume that the departments concerned are already engaged in considering and preparing the draft bills that will be required for the Imperial Parliament as well as for India and our Crown Colonies and possessions in the Far East.

* See JOURNAL, February 3rd and December 7th, 1912; May 17th, July 19th, October 25th, and December 20th, 1913

EIGHTY-SECOND ANNUAL MEETING

of the

British Medical Association,

ABERDEEN, JULY, 1914.*

THE Eighty-second Annual Meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The President-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28th. The Sectional Meetings will be held on July 29th, 30th, and 31st. As at present arranged, there will be sixteen sections. The Annual Representative Meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of Divisions and Branches will be held on July 29th.

SOME FAMOUS ABERDONIANS.

(*Concluded from page 544.*)

MEN OF ACTION.

Aberdeen has sent out many of the men who have helped to build and consolidate the empire. Among them may be mentioned Sir James Outram, who though of English birth belongs to Aberdeen by adoption. He was educated at Marischal College, and played a great part in India from 1819, when he received a cadetship, till the Mutiny, when his name became a household word. There used to be a Bombay service saying, "A fox is a fool and a lion a coward compared with James Outram." Sir Robert Hamilton, Sir George Strahan, Sir James Stirling, and Colonel Francis Duncan, M.P., were at school together, "a rare galaxy of talent," as Dr. Moir truly says.

DIVINES AND LAWYERS.

For divines and lawyers reference should be made to the *Studies in the History of the University*, published on the occasion of the quatercentenary. One of the greatest names among the divines is that of George Campbell, author of *Essay on Miracles*, in which he replied to Hume's famous argument so effectively as to move that placid philosopher to a mild protest, and of the *Philosophy of Rhetoric*. Campbell was a pioneer in biblical criticism. Many others might be mentioned, but the list of eminent divines would stretch too long. Mention must, however, be made of Robert Hall, the famous Baptist preacher, who took his M.B. degree, after a brilliant academic career, at King's College in 1785.

Of lawyers we need only mention James Burnett, Lord Monboddo, who was famous in the eighteenth century for his theory that men were descended from monkeys; Sir William Grant, Master of the Rolls, and a very great lawyer in the early part of the eighteenth century; and Sir James Macintosh (1765–1832), a man of encyclopaedic learning who was educated at King's College. After qualifying in medicine at Edinburgh, he turned his attention to the law and gained a great name at the English Bar. He is probably best remembered now by his *Vindiciae Gallicae*, a defence of the French Revolution in answer to Burke, which was published in 1791. He was invited by the Emperor Alexander to codify the laws of Russia, but was compelled to decline. Among his friends were Burke, Pitt, Wilberforce, Canning, Romilly, Jeffrey, Brougham, Sydney Smith, Rogers, Campbell, Byron, Macaulay, and many other men of note.

PHYSICIANS AND SURGEONS.

Aberdeen, since the union of the two colleges, has been the centre of medical science in the north of Scotland, and has produced a large number of men who have won distinction in every part of the empire. Even before the fusion Aberdeen could boast of many distinguished doctors. Among them may be counted Sir Patrick Dun, Marischal College (1658–62), President of the Irish College of Physicians, "physician to the State and Lord Lieutenant." He left money for the endowment of professorships; the hospital which bears his name was founded in 1800, and contributed greatly to the development of the "School of Physic" in Ireland.

Another famous Aberdeen doctor was John Arbuthnot, at once the brightest and the most learned of the wits of the reign of Queen Anne. He was educated at Marischal College, where he graduated M.A. in 1685. There, it is to be presumed, he acquired the erudition which was shown in his *Tables of Ancient Coins*, and his contributions to *Martinus Scriblerus*, in which he co-operated with Pope and Swift, supplying, it is believed, most of the classic and other learning. Arbuthnot seems to have become a physician "by second intention," as he made his living for some years by teaching mathematics, in which he was remarkably proficient. It does not appear where or how he studied medicine, but after writing, in June, 1696, to the Master of University College, Oxford, where he was tutor to a young man, that he was "resolved on some other course of life," we find him graduating Doctor of Medicine at St. Andrews on September 11th of the same year. He became physician to Queen Anne. Of his close friendship with Pope, Swift, and other wits of the time it is unnecessary to speak. What manner of man he was may be gathered from the way in which these men speak of him. It is enough to recall that Swift writing to Pope says: "Oh! if the world had but a dozen Arbuthnots in it, I would burn my *Travels*."

In the early part of the eighteenth century the Gregories came on the scene. They held sway from 1725 to 1766, a father and two sons succeeding each other in the post of Mediciner. They were the first to lecture in English instead of Latin. The youngest, John Gregory, afterwards migrated to Edinburgh, where he was professor of physic from 1766 to 1773. The Gregories tried to vitalize the teaching of medicine in Aberdeen, but when John migrated to Edinburgh the spirit died out. The Gregories belonged to the clan M'Gregor, a name which had been proscribed by an order of the Privy Council as early as 1603. Of James Gregorie, who was Medicine till 1733, it is related that his cousin Rob Roy lived with him in Aberdeen while he was raising recruits for the Jacobite cause. So well pleased was the formidable visitor with his entertainment that he offered to take his host's young son and "make a man of him." This incident was used by Scott, who reversed the position, making Bailie Nicol Jarvie of Glasgow offer to take Rob Roy's sons and make them honest merchants. The boy whom Rob Roy wished to make a man of grew up to be professor of medicine. He was of an irritable temper, and when this showed itself people used to say, "Ah! this comes of having been educated by Rob Roy." The story of the Gregories has been told by Agnes Grainger Stewart in her book *The Academic Gregories*, one of the Famous Scots series. It need only be said here that from the middle of the seventeenth century to the middle of the nineteenth Gregories were teaching mathematics or medicine at Aberdeen or in one of the other Scottish universities. Galton in his book on *Hereditary Genius* cites the

* Articles on Aberdeen were published in the JOURNAL on January 3rd, p. 35; on January 10th, p. 97; on January 17th, p. 151; on February 28th, p. 489; and on March 7th, p. 541.

Gregory family as a striking example of hereditary scientific gifts.

Dr. George Cheyne was a physician who won fame and fortune in London, where he began to practise in 1702. He became famous by his book on *The English Malady*, or hypochondriasis, which was highly thought of by Samuel Johnson, himself a sufferer from the disease. In the preface to his *Essay of Health and Long Life*, published in 1724, he gives a list of his writings, which included treatises on mathematics, fevers, gout, etc. In a footnote to a passage in Boswell's *Life of Johnson*, where Cheyne is mentioned, it is said: "He does not appear to have received any regular diploma." Yet on the title page of the work just referred to he is described as M.D., F.R.S. Even Dr. Payne, in the *Dictionary of National Biography*, says that from what university he obtained his medical degree cannot be discovered. He got it from King's College in a somewhat remarkable way, as may be gathered from the following entry in the records of the University:

8th September, 1701.
Mr. George Cheyne allowed to be graduat doctor in medicine *gratis*, because he's not onely our owne countryman, and at present not rich, but is recommended by the ablest and most learned physitians in Edinburgh as one of the best mathematicians in Europe; and for his skill in medicine he hath given a sufficient indication of that by his learned tractat de Febribus, which hath made him famous abroad as well as at home; and he being just now goeing to England upon invitation of some of the members of the Royal Society.

Having become extremely corpulent owing to good living, Cheyne reduced himself from 32 stone to a moderate weight by means of a milk and vegetable diet. He continued to preach the doctrine of *moderata diaeta* to the end of his life. He died at Bath, on the waters of which he wrote a popular treatise, which went through half a dozen editions, in 1743.



Old House in Guest Row (occupied by Duke of Cumberland).

Another medical celebrity who came to London from Aberdeen was George Fordyce (1736–1802). He taught chemistry, materia medica, and the practice of physic for nearly thirty years, lecturing on all three subjects in succession from 7 to 10 on six mornings in the week the whole year through. His teaching attracted large numbers of students. He was appointed physician to St. Thomas's Hospital in 1770, and was elected F.R.S. in 1776. He had a great reputation as a physician. He was a good chemist and mineralogist. Perhaps he is best known to modern readers of literature about doctors by his remarkable system of diet, which is described by William Wadd in *Nugae Canorae*:

This celebrated lecturer dined every day for more than twenty years at Dolly's Chop-house. His researches in comparative anatomy had led him to conclude that man, through custom, eats oftener than nature requires, one meal a day being sufficient for that noble animal the lion. At four o'clock, his accustomed hour of dining, the Doctor regularly took the seat at a table always reserved for him, on which were placed a silver tankard full of strong ale, a bottle of port wine, and a measure containing a quarter of a pint of brandy. The moment the waiter announced him, the cook put a pound and a half of rump-steak on the grid-iron, and on the table some delicate trifle, as a *bonne bouche*, to serve until the steak was ready. This was sometimes half a broiled chicken, sometimes a plate of fish: when he had eaten this, he took one glass of brandy, and then proceeded to devour his steak. When he had finished his meal, he took the remainder of his brandy, having, during his dinner, drunk the tankard of ale, and afterwards the bottle of port! He thus daily spent an hour and a half of his time, and then returned to his house in Essex-street, to give his six o'clock Lecture on Chemistry. He made no other meal until his return next day, at four o'clock, to Dolly's.

Fordyce died of gout in 1802. He was the author of a treatise on digestion, a dissertation on fevers, and other works. He made a number of valuable observations on the temperature of the human body.

A relation of George who rose to eminence was Sir William Fordyce (1724–1792). He was educated at Marischal College, but did not take a medical degree there. He was created M.D. of Cambridge by royal mandate in 1770. He had served in the Guards in three campaigns. He had a very large practice, and was "sent for to greater distances and received greater sums than almost any physician of his time." He acquired a large fortune. He was the author of a *Review of the Venereal Disease* (1767), which went to five editions and was translated into German, and of a treatise on putrid fevers (1773), which reached a fourth edition and was also translated into German. He was a Fellow of the Royal Society, and was Rector of Marischal College in 1790–91. He died in 1792, and bequeathed his medical library and £1,000 for a lectureship on agricultural chemistry and natural history at Aberdeen.

Of the many other medical celebrities connected with Aberdeen only the most cursory mention can be made. Tobias Smollett, the novelist, though not educated at Aberdeen, received the M.D. degree in 1750. Sir Walter Farquhar was a close friend of William Pitt and other leading men of the time, and had a very large practice among people of fashion. Sir James McGrigor, chief of the medical department in the Peninsular War, graduated M.A. at Marischal College in 1788 and M.D. in 1804. Of him Wellington, who was not prodigal of praise, wrote:

I have every reason to be satisfied with the manner in which he conducted the department under his direction, and I consider him one of the most industrious, able, and successful public servants I have ever met with.

McGrigor was afterwards Director-General of the Medical Service, and the University of Aberdeen elected him its Lord Rector three times—in 1826, 1827, and again in 1841.

Neil Arnott, inventor of the water bed, the stove, and ventilator which bear his name, and of many other ingenious contrivances, graduated M.A. at Marischal College in 1805. In 1814 he was created M.D. by the University. In the words of Sir Arthur Helps, "His whole life was given to the service of his fellow-men." A truer reformer in the

best sense of the word never existed. He was the author of *Elements of Physics*, which within a few years was translated into every language of civilized Europe. He founded scholarships for experimental physics not only in his own Alma Mater, but in the other universities of Scotland, and in the University of London, to the Senate of which he was nominated on its foundation.

Francis Adams, M.R.C.S., who graduated M.A. at King's in 1813, practised at Banchory on Deeside. He made a great name among medical scholars by his translations of the works of Hippocrates and Paul of Aegina. He was called by Dr. John Brown, author of *Rab and his Friends*, "*doctissimus medicorum Britannorum*." Brown, on paying Adams a chance visit, says he found him at breakfast, ready for his round, and amusing himself with pencilling down a translation of an ode of Horace into Greek verse. With all his learning Adams was a thoroughly practical country doctor.

Alexander Kilgour, called by John Brown the "modern Sydenham," was professor of medicine in King's College from 1839 to 1849. He was senior physician to the Aberdeen Infirmary for many years, and had a large consulting practice in the north of Scotland. He did much to awaken the people of the Granite City to the importance of sanitation.

Sir Erasmus Wilson, the distinguished dermatologist and president of the Royal College of Surgeons of England, was partly educated at King's College. In 1882 he founded the chair of pathology in the University of Aberdeen. To his munificence London owes Cleopatra's Needle which was dug from the sands of Alexandria, where it had lain half buried for many centuries, and now stands on the Embankment.

Sir James Clark was educated at Aberdeen, where he graduated M.A. He afterwards obtained the M.D. at Edinburgh in 1817. He was in the navy for some years and afterwards practised in Rome. He wrote on phthisis, on which he was in his day accounted an authority. He visited the springs and baths of Germany, and at one of these health resorts met Prince Leopold, afterwards King of the Belgians, who made him his physician, and in 1834 got for him the appointment of physician to the Duchess of Kent. On Victoria's accession he was made physician-in-ordinary to the Queen who put the greatest trust in him, till his death in 1870. He served on several Royal Commissions, and was a member of the Senate of London University, and of the General Medical Council. He is described by Edmund Alexander Parkes as a "man of singular moral power, and of very balanced and even mind; in character most lovable; the incarnation of beneficence and affection."

Of William Pirrie, for many years professor of surgery and author of a once popular textbook; of Keith, whose skill in dealing with stone of the bladder used to be referred to by Sir Henry Thompson in his lectures; of Matthews Duncan, who rose to world-wide celebrity; and of Sir Andrew Clark, Gladstone's physician, and famous in London as the "starving doctor," much might be said, but they are so near our own day that a detailed notice would be superfluous.

Of living Aberdeen doctors may be mentioned Sir James Reid, Sir William MacGregor, Governor of Queensland, who long ago abandoned medicine for the work of colonial administration, in which he has been conspicuously successful; Sir Patrick Manson, who may be called the Father of Tropical Medicine; Professor Arthur Keith, Conservator of the Museum of the Royal College of Surgeons; Dr. William Bulloch, of the London Hospital, one of our foremost bacteriologists; and Sir Alexander Ogston, President-Elect of the British Medical Association, the leading surgeon in the North.

In this hurried sketch there must necessarily be many omissions, and possibly mistakes *quas aut incuria fudit aut humana cavit natura*. Enough, however, has been said to show that Aberdeen has sent forth a vast number of men who have done splendid work in many spheres of activity at home, and who have borne the white man's burden in every part of the empire.

We cannot conclude without a word of grateful acknowledgement to Dr. James Galloway, himself a distinguished graduate of Aberdeen, for his courtesy in lending pictures for reproduction and books which have been used as authorities in this series of articles.

MOTORING MATTERS FOR MEDICAL MEN.

SOME PHASES OF THE LIGHT CAR PROBLEM.

By H. Massac Buist.

At a period when the development of manufacturing resources and the evolution of design is resulting, not in mere local assemblers, but in the most responsible and largely established motor-car constructors devoting their resources to the evolution of cars that are variously styled "small" and "light," the degree of accomplishment actually attained and the problems still to be solved become matters of direct personal interest to a vast number of members of the medical profession. While we may take it that the question of cost enters to comparatively a small extent into the problem as concerns the specialist, whose chief needs are for a luxurious town carriage, assuredly for the vast majority of members of the profession the question of cost is the first as reliability is the last phase of the problem.

The Full Meaning of Cost.

Therefore, let us have clearly in mind the fact that cost is not a simple proposition of the amount of cash to be disbursed to acquire a motor vehicle. That is part only of the proposition, but not the whole. No less important is the question of maintenance or running costs. We may reckon these headings as accounting each for 33.3 per cent. of the proportion of cost; the remaining 33.3 is cost as it figures under the heading of satisfactory wearing life, because the second-hand value of the car is little enough nowadays, and it will become vastly less as time passes. Therefore, by far the wisest way is to regard all expenditure on the acquisition and use of a motor vehicle as money sunk and non-recoverable. It follows that the net cost of the vehicle completely ready for the road should be divided over the number of years of wearing life of the machine, and the result should be added to maintenance costs. If the inquirer will do this he will know as exactly as is reasonably possible precisely what class of vehicle he can afford to maintain in connexion with his practice. Unfortunately, however, the average procedure is to argue that he has so much money in hand with which to purchase a machine, and, for the rest, he will not go very minutely into maintenance costs, and as for wearing life and what he is to do by the time the vehicle he may think of acquiring is past further service, that is a problem, or a combination of problems, with which he will not bother his mind in the present.

The Genesis of the Light Car.

In considering the case of the various efforts that are being made to produce a new class of motor vehicle, which for convenience may be styled the light car, it is as well to look at motor history to see what lessons it teaches us. In the first place, we have been told invariably at the introduction of each car which of its period has marked a distinct advance, that it stands out from the ruck admittedly at the moment of its introduction, but that we must expect such extra powers of performance to be achieved at the cost of wearing life. Happily that is a gloomy form of prophecy that has been given the lie by events in every important case without exception, from the inception of the motor industry to the present day. In the second place, practically for ten years past progress has been made in motor-car production proper in every direction save in the single one of reducing the weight of vehicles of the medium or large power class. Thirdly, the light or the small car is not, as some would have us believe, an entirely fresh proposition. On the contrary, the motor movement had its beginnings over a quarter of a century ago in voiturettes or light vehicles. Ten years ago the biggest outputs were for still another class of light machine called the small car, which in most cases—such as the Wolseley-Siddeley in England, the Cadillac in America, or the De Dion in France, to name a few outstanding examples—were light machines embodying not a little of cycle engineering constructional practice. They were chiefly of the single cylinder sort, and they were limited in the matter of actual power, so that from 6 to 10 actual horse-power was all that could be expected.

DIFFERENCES WROUGHT IN A DECADE.

Where is the difference to-day? In all the best directed efforts we see that whereas the single cylinder was in a big majority ten years ago—at the time, for example, of the Royal Automobile Club's small car trials at Hereford in August, 1904—to-day the four-cylinder, water-cooled motor is the type most in evidence, though not a few light cars are currently marketed with two-cylinder motors. Nevertheless, cumulative experience as well as the public demands undoubtedly points to the four-cylinder engine. Nominally, in light cars to-day, it is rated at about 9½ h.p., the vehicle weighing at most 12¼ to 13 cwt. Actually, in the best examples, these engines can give anything from 18 to 26 h.p., so that we have, after an interval of ten years, not only approximately from three to four times the horse-power being put in a vehicle of a given weight, with the result of an enormous increase in the range of its performance, but we have besides small cars which are proportionately more powerful for their weight than even the average medium and large car. Yet we have had, in this country at any rate, no officially conducted trial to which the inquirer may refer for first-hand, absolutely reliable, and utterly independent evidence as to what the light cars of 1913–14 can do in a test of any appreciable length or severity. This is all the more regrettable, first, because manufacturers as well as potential purchasers need evidence of this character; and, secondly, because it will be appreciated from the points I have brought out that the results obtained with one and two cylinder, small, light cars in official trials ten years ago cannot in any sense be applied to the four-cylinder, water-cooled types of 1914.

REGRETTABLE ABSENCE OF OFFICIAL DATA.

The medical man's first and last need in the case of any vehicle is reliability. It is therefore imperative to point out in his interests this absence of any current official data to which he can refer for inquiries under this head. It is further matter for keen regret that the only light car trial of any duration on the programme for this season is the Royal Automobile Club's test from May 4th to 9th under practically the same scheme as its historic small car trial of 1904. The test will be an interesting one under two heads, first, because approximately sixty vehicles will figure in the entry list; and, secondly, because it will show how the light two and four cylinder car of 1914 differs from the one and two cylinder cars of ten years ago of approximately the same cost. The rules stipulate that no machine may weigh more than 1,500 lb. completely ready for the road, the engine limit being fixed at 1,400 c.cm. Makers may build vehicles as light as they like, and make the engines as small as they choose. From an exhaustive point of view, however, the trial will not be anything like sufficient. Unfortunately we shall have to wait until the summer of 1915 for something reasonably severe under this heading, for it has been agreed between the bodies concerned that the Royal Automobile Club will not promote any light car trial next year, but will instead leave the Scottish Automobile Club to organize a light car trial in the Highlands in 1915.

LIGHTNESS NO LESS IMPORTANT THAN CHEAPNESS.

Meantime the needs of a section of the medical profession have to be met. Doubtless under the head of initial cost America can provide various articles as cheap, and some of them cheaper, than our dependable light cars. But the cheap American motor car is still a vehicle heavier, therefore more costly to maintain, than the light car ought to be and is. Therefore, while pointing out, on the one hand, the need for exceeding caution in face of the untried nature of light cars as a general proposition, the next stage is to inquire whether or not there are being produced to-day any types of vehicles by firms whose record and experience furnish a guarantee of a sufficient sort.

One of the first things the inquirer observes is that Vickers's concern—the Electric and Ordnance Accessories Company of Aston, Birmingham—is beginning to give delivery this month of a vehicle styled the Stellite light car, which has been designed and carried through exhaustive experimental stages by Vickers's other concern—the Wolseley Tool and Motor Car Company, which is making the four-cylinder engines for the Stellite light cars, that are sold under guarantee. Though sundry examples of these machines have been made and tried for a lengthy period, no example of the vehicle was shown either at the Pleasure Car Exhibition or at the Motor Cycle Show at Olympia, but specimens have been introduced to the public at the Scottish and sundry other exhibitions. The first thing that will strike anybody about a proposition of this sort is that it comes from a firm that did more in its time than any other British concern to introduce the cheap light car a decade ago. At the beginning of this century the single cylinder 6 h.p. Wolseley-Siddeley light cars, costing £175 complete, were the vehicles with which the firm's reputation was first made, and which did enormous service in developing motoring in these islands. The Wolseley engineering and manufacturing staff has evolved the modern product styled the Stellite light car. The method of production may also be described as Wolseley, in that the heads of all the departments and the foreman in charge of the Electric and Ordnance Accessory Company's shops concerned with the production of this new vehicle are Wolseley men, so that to all intents and purposes this is a Wolseley car factory under another roof.

A POLICY AND ITS PRODUCT.

So much for credentials. What lends even greater prominence to this latest enterprise of Vickers's is the brains that are embodied in the construction of the vehicle. Here has been no attempt to reproduce a big car in little, because, as steelmakers as well as motor manufacturers, the Vickers-Wolseley combine knows full well, what the public is so apt to miss, that if you are endeavouring to supply a big car in miniature at a low price you must either cut the workmanship, or the material, or you must skimp the design. These are points which the inquirer will do well to bear in mind when studying the constructional details of any vehicle brought forward under the guise of a light car. In the particular case in question the construction of the vehicle has been determined entirely by the policy on which the enterprise rests. That policy is this, that the vehicle must embody as fine materials and workmanship as the most expensive Wolseley cars. Having studied these Stellite cars in process of manufacture, I can state that it is a policy that is being carried out in practice. Apart from quality of material and workmanship, the other factors to be embodied in the vehicle were laid down as refinement of running, lightness to ensure cheap running costs, simplicity, and durability. After very lengthy trials there has been evolved a vehicle which has approximately 50 per cent. fewer parts than the present standardized middle or large size motor car, yet which has all the parts necessary to the new vehicle. The weight is therefore kept down without skimping of material, and the amount of labour necessary to the production of the machine is also reduced to the minimum, so that the best workmanship can be used throughout.

PROPORTIONATELY HIGH ENGINE POWER.

The features of construction include what may be called the essentials demanded by the user in quest of refinement as well as efficiency. Thus the springing, by a patented form of quarter elliptic fore as well as aft, results in the vehicle holding the road well; yet I found it impossible, when taking it at full speed over pot-hole surfaces, to get a jar or crash of any sort; the machine floats. Again, you have evenly balanced power production from a four-cylinder water-cooled engine of 62 mm. bore by 89 mm. piston travel, otherwise of 1,076 c.cm. capacity. The efficiency, though coming within the cycle-car engine volume, may be judged from the fact that one of these motors has given 26 h.p. on the bench, though, of course, that full power is not got on the road. Nevertheless, as the machine weighs about 12 to 12¼ cwt. completely ready for the road, it will be appreciated that it is proportionately more powerfully engined than ordinary pleasure vehicles of almost any size. For example, who could name the standard and non-racing or sporting type of car weighing 25 cwt. complete with all accessories which has a motor that could give 52 h.p. on the bench? or who could name the machine weighing 37½ cwt. in complete running order which has a motor that can develop 78 h.p. on the bench?

RANGE AND REFINEMENT OF SERVICE.

It will be realized, therefore, that the Stellite light car has proportionately a very powerful engine, though the

power is provided in what may be called a very small packet. The small volume of the motor enables practically all the chassis space to be used for the body accommodation. In the case of the two-seater vehicle, the passengers are seated in an ideal position, midway between the two axles.

Silence and smoothness of working are ensured by the under worm-driven back axle in combination with a compact gearbox, giving two forward speeds and a reverse, so that the machine is intended to do practically all its work, save starting and ascending steep hills, on the through, therefore silent, drive. The indirect, or low, speed, moreover, works so quietly as not to be noticeable to those on the car. Its power of speed is by no means negligible. I found in traffic that it can pick up on top speed and take advantage of an opening of the way in the most extraordinary fashion, being second to no big car in this connexion. All ordinary hills can also be negotiated on the through drive, so that in the course of an average day's tour of anything from 100 to 200 miles the car will not be on the low speed for more than 5 per cent. to 7 per cent. of the way.

Three Main Units.

The scheme of construction is to build the vehicle in three main units, the first of which consists in the front axle assembled as a unit with quarter elliptic springs and plates for attaching those springs to the wooden side members of the frame. The second unit consists of the four-cylinder motor with its control gear (including clutch and brake pedals), which are bolted direct to the armoured wood frame. The third main unit consists of the enclosed propeller shaft, the back axle, with its combination worm-driven gearbox, and the rear quarter elliptic springs. Therefore we have in brief the outstanding features which make for refinement, yet a great number of parts embraced in the construction of an ordinary car have been eliminated. The net result is that the machine can be marketed to retail complete for 150 guineas, including lamps, horn, hood, screen, and, in fact, all accessories ready for the road, the vehicle being marketed in two alternative colour schemes, dark green or fawn.

Abandoning Complication for Simplicity.

Owing to the manner in which the public is misinformed from time to time concerning motoring, I can imagine some folk saying, "Yes, very wonderful; but what a pity they do not improve the vehicle by adding a third speed and charging a few pounds more." In the first place, it is gravely questionable if a third speed would improve a machine of this character; in the second, the provision of such an extra would entirely alter the constructional character of the vehicle. For example, it would be necessary to add an extra striking rod for operating the additional speed, and that, again, would entail a complete redesigning of the gear for carrying the speed-operating rods, so that they should be stronger in proportion; there would thus gradually be taken away the whole character and aim of a car which was described to me by a very brilliant American automobile engineer as the biggest brain wave he had discovered in the course of his recent inquiries as to what we were doing in the British industry. The policy behind this proposition is not to imitate conventional car practice as we know it to-day, but to evolve something entirely fresh. Therefore, as this vehicle develops in the process of time in common with all motor machinery, it will be found, not that parts are added to it, but that parts will gradually be subtracted from the scheme. Thus, if it could be proved to the manufacturers that for the same money they could supply a third speed, their policy would not be to supply it, but to continue to supply the machine in its present condition, subtracting from the retail price of it the cost of the imaginary third speed. I put the matter in these various aspects so that the real point behind the construction of the machine may be appreciated, for at this period it is extremely difficult to discover sound brains in the many propositions brought forward under the guise of light cars.

A Fresh Start and what it Proves.

The Stellite light car is a machine that needs no excuse for being manufactured. It marks a fresh starting-off point, and it reveals more forcibly than anything I have yet come across the extraordinary advance that has really been made in modern engineering in ten years. Here, for £17 10s. less than we had in the extraordinarily cheap Wolseley single-cylinder cars of 1904, we have not a one but a four-cylinder machine of practically more than three times the power previously available, with a consequent extraordinary gain of flexibility as well as a vast increase of speed powers in the standardized article; we have great economy of petrol and tyres—(a detachable wheel, tyre, and tube complete cost only £3)—and we have a refinement of working, alike in absence of vibration and in quietude, by reason of the worm-driven back axle system, which can scarcely be exceeded in the most costly cars of the day. It is to be remembered, of course, that by increasing the powers of performance so extraordinarily the machine has to be proportionately many times stronger than the small car of ten years ago, because of the shocks to which it is subjected. Here, too, you come on the invisible but none the less evident thing—the vast improvement that has been made in metallurgy in the interval.

During this first year 1,500 Stellite light cars are to be produced. I have dwelt on the original ideas behind the construction of this vehicle at the moment because none of them are freakish, all of them are practical, and they result in an extraordinarily cheap production; it is supplied with a three-seater body for £170. The story of the development of this enterprise—which, in my view, marks the first notable effort made by a British manufacturing firm of a responsible and established sort to start afresh and utilize all the resources of the motor industry to attack the problem of the cheap light car that shall be found to be durable and refined—will be followed with particular interest by members of the medical profession, for it is a type of car that will undoubtedly make motoring history. Its handiness is such, too, that it can be used by the country doctor with particular advantage because of the ease with which he can drive it about lanes and under conditions in which it is difficult to manœuvre a motor car weighing a ton or more. The petrol consumption works out not much short of 40 miles to the gallon, and at the normal engine speed of 1,600 revolutions a minute the car travels at 24 miles an hour, the range of speed on the flat with the direct drive being officially returned as from 8 to 35 miles an hour. Actually, I have far exceeded the higher rate of travel on one of these standard cars.

A German Light Car.

One of the features of the Olympia Show was the introduction by the firm of Morgan, of Long Acre and Old Bond Street, the British concessionaries for the well-known German Adler cars, of a light car of the four-cylinder water-cooled sort, of 10½ h.p., according to the Royal Automobile Club rating, the bore measurement being 65 mm. and the piston travel 98 mm., giving an engine volume of 1,301 c.cm., so that this vehicle also comes under the three-guinea tax. This machine has three forward speeds, and is made in two lengths of wheelbase according to whether the individual user desires the coachwork to provide seating accommodation in the tandem fashion or side by side. The price with either of these types of body, hood, wind screen, two acetylene head lamps, with independent generators, two paraffin side lamps, a tail lamp, horn, jack, pump, tool-box and kit, is 200 guineas. Wire wheels are used, those manufactured under the Rudge-Whitworth detachable license being supplied for 10 guineas extra. One of the firm's aims in producing this vehicle is to meet the needs of the medical man who desires that his motoring costs should be light. Though probably the longer wheelbase, tandem-seated model holds the road best, for my part, the more conventional side-by-side seating is the type that makes the stronger appeal. The petrol consumption is calculated to average 35 miles to the gallon. The tyres, being of small size, are cheap; while the fact that the machine scales approximately 11 cwt. should ensure light maintenance costs under this head.

On the Road.

I found that with the shorter wheelbase of the two the suspension is quite good for so light a chassis and so moderate priced a vehicle. The gears are easy to change and reasonably quiet. They are furnished, not for ornament, but for use, for it is not intended that this should be a

machine that will do all its work on top speed. On the contrary, the gears are there to save the motor being over-strained and to enable it to be run at its most economical revolutions. The wheel-lock proved exceedingly handy. One can turn a complete circle in the average roadway, a point of particular importance to the medical man. Apart from the gain of having the seats side by side, of course, the shorter wheelbase used for the sociable body enables the vehicle to turn in shorter compass, which is particularly handy for service in the country in negotiating lanes and so forth. From a driver's point of view the control of the Adler light car is simple. The ignition is self-advancing and retarding, the control of the engine-speed being entirely by the throttle through a single lever on the face of the steering wheel, for this car differs from the average, particularly in that there is no accelerator pedal. Both the foot and the hand brakes proved efficient. Though light the car has much of the characteristics of the Adler firm's larger vehicles. A Morgan-Adler small car secured one of the eighteen gold medals awarded among the fifty-three light cars which were entered for the London to Exeter and back twenty-four hours' run, undertaken under stormy weather conditions.

The Pioneer French Small Car.

Among the firms which pioneered the small-car movement in a manner that has been of use to the country doctor, none has stood out more conspicuously than the De Dion-Bouton. Beginning with the production of steam vehicles, it came presently to petrol, and the little single-cylinder machines with tubular frames made motoring history in the last century. They cost more to buy than the four-cylinder light cars that are beginning to be put on the market to-day, and they had not as much power or refinement. This comparatively old-time enterprise, moreover, is particularly interesting to study at the moment because it enables us to judge concerning the possibilities of low-priced small cars wearing, for it must be an ill bargain to acquire a machine which will not serve for more than a year or two. On the occasion of the opening by the De Dion Company of its latest enterprise—coach-building and repair works at Edgware Road, Cricklewood, four miles and three-quarters from Marble Arch—I was at the pains to go into the details of the stores department, and observed the orders that come in daily for parts of models that were not made after 1899, so that the latest of such machines have all been on the road fully fifteen years. They are little single-cylinder vehicles, and the parts required are chiefly piston rings, pistons, and so forth; in other words, moving parts that it is essential to replace because they have been quite worn out in service.

Fifteen Years' Service and Still Useful.

It will be allowed that if any small, light car of moderate cost can last ten years in daily service the owner will have found the investment profitable. Yet here we discover machines which have exceeded that limit by 50 per cent., and which are still running well after a replacement or two. In the interval the firm has, of course, done notable things in producing small size four-cylinder cars; in fact, all along the line it has served the medical profession well. The latest enterprise of the British branch represents the removal of the repairs works from Islington, the removal of the stores from Great Marlborough Street, and the start of a coach-building section for reproducing bodies of standard quality at moderate prices. For this new branch men have been engaged who have conducted successful coachbuilding businesses in the Midlands. The fact of having the repairs department under the same roof as the coachbuilding is, of course, handy. It is well known that after the average chassis has been sent to the coach-builder's for painting and to have the body mounted it needs testing again. Further, the new arrangement makes for economy in that it is not necessary to send here or there a lorry with tyres and kindred gear in the case of every vehicle, according to the individual coachmaker's whereabouts. Instead, all necessary parts are stored in the premises where the bodies are made. Though handy to London and readily accessible by three means—rail, tram, and motor bus—the works are situated in a field, and the natural lighting of them is good, while in plan they represent the latest constructional methods to ensure that the staff shall labour under the most healthy conditions. I saw all sorts of bodies being made—some for the large eight-cylinder vehicles, the designs alike of the covered and of the open types being sensible and pleasing while the workmanship and general finish were certainly excellent. I gather that a minimum of ten coats of paint goes to the standard body, and a couple of dozen to some types.

THE MEDICAL INSURANCE AGENCY.

When the Workmen's Compensation Act was passed it was generally felt that the extent of the liability of employers in respect of domestic servants, grooms, chauffeurs and gardeners, and of casual labour such as that of charwomen, was clearly a risk which every prudent man would wish to cover by insurance. Medical practitioners also had to have regard to the liability which might arise in respect of dispensers, nurses, and, possibly, assistants in their employment. The matter was discussed in the British Medical Journal and in the *Lancet*, and it was suggested that arrangements should be made to effect policies for medical men covering the whole liability with regard to the new Act, including any special professional risks that might arise. A committee was formed, consisting of representatives of the *Lancet*, and members of the British Medical Association, under the chairmanship of the late Dr. Radcliffe Crocker. The Council of the British Medical Association, though it did not see its way to take any official part, looked on the proposal with benevolent eyes, and Mr. Guy Elliston, the Financial Secretary of the Association, became the manager of the Agency which the Medical Insurance Committee at once set up.

From the first it was resolved that the agency should not be limited to workmen's compensation, but should include life, fire, personal accident and sickness, burglary, motor car, or any other form of insurance, and that the business should be placed with any insurance company or underwriter deemed to offer the best terms and security.

The heading of life assurance covers policies under which the premiums are payable either up to a certain age or throughout life, the sum assured being payable either at a given age or at death.

Sir John Collie refers in his address (page 639) to the difficulty experienced in making suitable investments, but does not mention the method of Endowment Assurances. Under this plan there are no markets to be watched, and moreover, income tax on the premiums paid is saved. In our issue of July 15th, 1911, this aspect of endowment assurances was dealt with at length, and the actual results under an endowment assurance were compared with an ordinary investment. It will be interesting now to give a further illustration of the operation of endowment assurance. By the same policy the insuring person may arrange to receive either a lump sum on attaining the age of, say, 65, or a pension at that age, and may exercise his option on attaining the age, while at the same time insuring a lump sum in the event of death at an earlier age. The following examples show the benefits which can be secured by a healthy male at the ages stated for an annual outlay of £10, and the cost of providing a pension of £100 per annum.

Endowment Assurance.

Benefits Obtainable for an Annual Premium of £10.

Age.	Annual Premium.	Sum Payable at Death.	Option at Age 65.	
			Lump Sum Payable Including Bonuses	Or Pension.
	£	£	£	£ s. d.
30	10	342	620	64 16 10
35	10	279	478	49 19 8
40	10	223	360	37 12 10
45	10	171	261	27 5 10
50	10	123	178	18 12 2

Cost of providing an Annual Pension of £100 to commence at Age 65.

Age.	Annual Premium.	Sum payable at Death.	Option at Age 65.	
			Lump Sum	Or Pension.
	£ s. d.	£	£	£
30	15 8 0	528	957	100
35	20 0 5	560	957	100
40	26 10 8	594	957	100
45	36 11 8	628	957	100
50	53 15 9	664	957	100

The business of the Medical Insurance Agency has grown steadily, and in the course of its development workmen's insurance risks have become a minor part of the whole work. The increased employment of motor cars by medical men has led to a rapid development of the business of insuring against the risks arising out of their use. The agency, while ready to carry through insurance with any office doing this class of business, was early able to recommend an underwriters' policy specially designed to meet the needs of medical men, to whom, when they have once set up a motor car, it quickly becomes necessary for the proper conduct of their practice. Recently certain composite insurance offices have moved in the same direction and have offered very low rates. The Medical Insurance Agency is in a position to give its clients the advantage of these rates, and in addition the specially favourable conditions it is able to offer.

The Medical Insurance Agency does not trade for profit, and is, therefore, able to arrange special concessions to policy holders so that the net rates charged to its clients compare favourably with those which can be obtained through any other agency or office. In addition, it has had during past years, after paying all expenses, surpluses out of which grants have been made to medical charities, including the Royal Medical and the Irish Medical Benevolent Funds, the Royal Medical Benevolent Fund Guild, and the benevolent funds of Epsom College.

On the lamented death of Dr. Radcliffe Crocker, he was succeeded as chairman by Dr. G. E. Haslip (London), and the other members of the Committee of Management include Sir Frederic Hewitt, K.C.V.O., and the Editor of the *Lancet* representing that paper, Dr. D. J. Mackintosh, M.V.O., with the Medical Secretary of the British Medical Association, and the Editor of the BRITISH MEDICAL JOURNAL.

Full particulars can be obtained on application to the agent, Mr. Guy Elliston, at 429, Strand, London, W.C.

UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.

THE annual meeting of this association was held in the Medical Institute, Birmingham, on March 14th, the President, Professor J. T. J. MORRISON, F.R.C.S., in the chair.

Report of Council for 1913.

During the past year no member has applied for assistance or advice. This lack of activity is not to be taken as a proof that there are no questions affecting police surgeons calling for reform or amelioration, and the council reiterates its views expressed last year as follows: "At present the chief value of the association would seem to be that it provides the machinery for ascertaining the views of members, and for taking corporate action when necessary. The council recommends that the opportunity of conference offered at the annual meetings of the British Medical Association be taken advantage of by the reading and discussion of papers on topics within the province of police surgeons. By this means decisions could be recorded with a view to betterment of the conditions regulating the functions of the members. Reform tending to encourage scientific medico-legal practice would react beneficially on the community and on police surgeons alike."

Members who find it difficult to attend the annual meeting are invited to submit inquiries and suggestions for the consideration of the council.

The rate of remuneration of police surgeons has been reviewed in the light of the capitation payments under the National Insurance Act, and in several districts local action has been successful in advancing the previously inadequate scale. The council cordially recognizes the good offices of the British Medical Association in contributing to this redress of an admitted grievance.

It is satisfactory to note that a knowledge of "first aid" is now generally regarded as part of the equipment of the police force. Instruction in ambulance work is fittingly given by police surgeons, and the fee payable is not less than 1 guinea per lecture. Where this practice has not been introduced, members are advised to bring the matter to the notice of the local authorities.

In October last a communication was received from the Secretary of the Poor Law Medical Officers' Association calling attention to a matter of interest to our association. It appears that the Wigan police convey to the Bridewell persons found ill in the streets, and by the agency of the relieving officer the Poor Law medical officer is required to attend. The local police surgeons undertake to visit sick prisoners, but the patients in question are not prisoners, nor are they invariably paupers. The procedure disclosed is open to serious objection, and the council recommends the association to express agreement with the protests which have been made by the Poor Law Medical Officers' Association and the British Medical Association.

The report was received and adopted.

Election of Officers.—The following officers were elected for the ensuing year:

President: Professor J. T. J. Morrison, Birmingham. *Vice-Presidents:* Sir Henry Littlejohn, Edinburgh; Dr. H. W. Oulton, Dublin; Mr. F. W. Lowndes, Liverpool; Mr. Nelson Hardy, London. *Treasurer:* Mr. J. Paul Bush, Bristol. *Honorary Secretaries:* Dr. Hugh Powell, Cheltenham; Dr. Hartley Bunting, Birmingham. *Council:* Dr. H. Barnes, Carlisle; Dr. J. F. Craig, Birmingham; Mr. G. H. Heald, Leeds; Mr. W. J. Heslop, Manchester; Dr. F. T. Higgs, Dudley; Dr. C. E. Hoar, Maidstone; Dr. L. Maybury, Portsmouth; Dr. H. W. B. Plummer, West Bromwich; Mr. W. Powell, Cheltenham; Mr. W. M. Roocroft, Wigan; Mr. W. Roughton, London; Dr. J. Young, Bristol.

LITERARY NOTES.

To the men of action produced by Aberdeen who are commemorated elsewhere may perhaps be added the famous soldado Major Dugald Dalgetty, of whom we are told in the *Legend of Montrose* that—

> The only peaceful part of his life had been spent at Mareschal College, Aberdeen; and he had forgot the little he learned there, except the arts of darning his own hose and despatching his commons with unusual celerity, both of which had since been kept in good exercise by the necessity of frequent practice.

When asked by some one who witnessed his prowess as a trencherman why he ate so very fast and so very long, the major replied that the former quality he had acquired while he filled a place at the bursars' table at the Mareschal College of Aberdeen, "when," said he, "if you do not move your jaws as fast as a pair of castanets, you were very unlikely to get anything to put between them."

The contents of the March number of the *British Review* are as varied and interesting as usual. Mr. Hilaire Belloc discusses the military argument against the Channel tunnel. His view appears to be expressed in the following sentence:

> No one will pretend that the saving of sea-sickness to rich travellers in an hour's journey, the getting of a few more thousand tourists into England, weighs against the risk—small as it may be—that is involved.

Dr. F. W. Macran contributes an interesting article on scholasticism and modern thought, in which he makes the interesting statement that John Henry Newman was the greatest of the English disciples of Kant. Richard Fitzwalter gives charming pen pictures of Tipperary and Mayo. George Frederick Turner continues his story, "The Red Virgin."

In a recently published book of reminiscences by Henry Cabot Lodge, it is related that when Oliver Wendell Holmes started in private practice he put on his door a placard bearing the intimation, "The smallest fevers thankfully received and gratefully acknowledged." In the same book there is an admirable description of a certain type of mind with which most of us have been brought into contact in the business of life. Speaking of a friend of the highest character, but not very brilliant intellect, F. E. Parker said that "if he had lived in the Middle Ages he would have gone to the stake for a principle under a misapprehension as to the facts." Such a combination of inflexible principle with narrowness of mind in persons having authority has done incalculable harm in every sphere of human activity.

British Medical Journal.

SATURDAY, MARCH 21ST, 1914.

THE ART OF PRESCRIBING.

WITH the multiplication of subjects considered essential by educational authorities for the proper equipment of the medical student before the onerous work of his student career is crowned with the reward of a licence to practise, there has arisen a tendency to undervalue, in some directions, the relation of the student's training to the responsible duties he must later on independently undertake in the active conflict with disease in the individual patient. Medicine is becoming year by year more complex and absorbing. The constant addition to the curriculum of new classes in science has tended to displace tuition in the art of applying the knowledge thus gained, and to leave it more and more to be acquired, very much at haphazard, after the student has been hall-marked with a qualification which admits him to the *Register*.

The trend of modern education is in the direction of replacing didactic lectures by clinical instruction and personal experience during the later years of the student's apprenticeship. In the opinion of many who are well qualified to judge, too little time is allowed for this practical side of medical education, and too much, in the earlier years of the curriculum, is devoted to ancillary subjects which might advantageously be relegated to the preliminary examinations. As the regulations now stand the number of classes necessary to qualify him for admission to the final tests requisite for a licence to practise make five years all too short to acquire more than a mere introduction to the complete knowledge which goes to make up the mental equipment of the modern well-educated medical man. In consequence the application of his scientific acquirements to the practical necessities of his art is, in many aspects of his education, either entirely neglected or perfunctorily taught, because opportunity enough cannot be found, while he is still an undergraduate, for giving suitable instruction in the adaptation of the science and art of medicine to the alleviation of suffering and the cure of disease. In the class-rooms he is made familiar with the sciences which contribute to an appreciation of anatomical facts and biological relationships; in the laboratories he is initiated into an acquaintance with physiological processes, organic chemistry, therapeutic methods and bacteriological problems; at the bedside he learns the rudiments of physical diagnosis, and the hospital methods of routine management and case registration; in the special departments he acquires a passing familiarity with those conditions of disease which are peculiar to this, that, or the other organ or system of the body; and in the *post-mortem* rooms he makes acquaintance with the final lethal results of disease.

When all this has been accomplished and the examiners throughout the earlier professional trials have been satisfied with the candidate's proficiency, he ultimately arrives at the final test of his efficiency, and this ought to connote the concentration of all the information he has acquired on the ultimate object of his collegiate education—its practical application to suffering men and women. In many instances he has achieved such a mastery of physical signs, subjective symptoms, laboratory and chemical tests, and etiological and pathological data that he readily proves himself a competent, even if still inexperienced, diagnostician possessed of a fair working acquaintance with prognostic possibilities and *post-mortem* revelations. But the number of graduands who are insufficiently trained in the application of theoretical knowledge to the treatment of the patient with a view to the cure or alleviation of his disease constitutes a serious reflection on our present system of training. Every examiner knows that a large proportion of candidates, though otherwise brilliant men, are incapable of writing correctly a series of prescriptions, and are quite unfamiliar with the rudiments of dietetics. They have been accustomed in their ward experience to use and to order the hospital formularies under the short designations by which they are represented in the hospital pharmacopoeia, while their experience of dietary is limited to "No. 1, 2, or 3," or "milk," "fish," or "convalescent," as the case may be. Few of them have had time or interest enough to make themselves familiar either with the details of the prescriptions in daily use or with the constituent parts of the various diets which they see supplied to the patients who have been brought under their observation.

In the address by Dr. Luff on the art of prescribing, published in another column, this glaring fault in medical education is referred to. "The main reasons," he says, "for the present decadence in the art of prescribing are the altogether inadequate attention given to the teaching of the subject by the majority of the members of the staffs of the various teaching hospitals, and the scanty test applied by so many of the examining bodies as to the possession of a knowledge of rational prescribing on the part of candidates presenting themselves for the final examinations." There can be no doubt that Dr. Luff here touches the root of a serious evil. With such imperfect training the newly qualified medical man is started on his career. The continuance of the early hospital practice of writing no prescription at length is encouraged by the ease with which proprietary formulae may be ordered under a short title, and by the pocket-book temptations to this slovenly style of prescribing gratuitously furnished annually to every member of the profession by an increasing army of enterprising chemists. There is a further danger attached to this plan of stereotyped medication because the chemist is apt to utilize his pocket-book—usually made attractive to many of its recipients by including within its covers visiting lists, engagement sheets, and almost the whole requisites for a doctor's book-keeping—for the introduction of new and frequently untried drugs declared to be capable of all sorts of marvellous effects. The inevitable result is that these are often ordered without any personal experience of their value or possible danger.

The easy road to the therapeutic treatment of disease which the adventurous chemist thus provides, combined with inadequate teaching and the sceptical attitude adopted by a certain section of the profession as to the utility of drugs as curative agents, has tended to engender the belief in the minds of many who are still on the threshold of professional experience that the efficacy of pharmaceutical remedies has been overrated; that their adaptation to the requirements of the sick has been overdone; and that, in the light of modern knowledge, they must be superseded by vaccine

inoculations; electrical, balneological, and mechanical systems of treatment; surgical voyages of discovery; and, these failing, by a system of mere expectancy. All these methods have their suitable place in the management of the sick, and when properly selected their curative value admits of no denial. But it must be a matter of regret to those who were trained in the older views of drug values, and have from experience proved the records of our forefathers not to be without foundation in fact, that the craze for novelty and the present-day tendency to belittle the achievements of the past and regard them as the feeble expressions of unenlightened gropings in the dark, is unhappily responsible for a growing mistrust in all therapeutic measures which depend for their results on the administration of medicaments according to ancient and well-tried methods.

From the earliest dawn of medical practice drugs have been among the weapons with which the physician has endeavoured to combat the ravages of disease, and even at the present day the natural instinct of sick humanity is to seek relief for suffering and discomfort in medication of some sort. The fact that over-credulity in the efficiency of pills and potions has led to habits which have engendered scepticism as to the value they really possess is no reason why the other extreme of believing all drugs to be mere concessions to an antiquated blind belief in nostrums should be encouraged or condoned. Drugs have as great a value to-day as ever; even a greater value from the more accurate information which therapeutic investigation and pharmaceutical discovery has provided with regard to their possibilities and equally in regard to their limitations. The physician whose experience enables him to believe in the faithful service to be expected from remedial preparations with whose potentialities he has made himself familiar, and who trusts not to routine formularies whencesoever they come, but writes his prescription, *secundum artem*, to meet the indications and requirements of each individual patient, possesses an accomplishment which will continue to command success when many of the more recent plans of treatment—useful though these be—prove inadequate either to mitigate suffering or to promote cure.

That this aspect of curative medicine still maintains some hold on the professional mind is evidenced by the thoughtful and instructive address of Dr. Luff, not less than by the numerous books dealing with pharmacy and therapeutics which are still written for the instruction and guidance of the practitioner. Reference to several of these works will be found in another part of this issue, and we would strongly recommend their perusal to our readers, and especially to those who, while open to receive and utilize every new method of treatment proved to be of curative value, are yet unshaken in their belief that drugs, suitably chosen and judiciously combined, have their place in the campaign which it is the business of the physician to wage against disease.

THE ECONOMICS OF MEDICAL PRACTICE.

THIS issue of the JOURNAL contains several addresses in which the personal and economic side of medical practice at the present day are discussed. Dr. R. C. Buist, in an address to the Medical Society of University College, Dundee, has some helpful things to say about medical etiquette and medical ethics, the professional ideals by which a practitioner of medicine should be inspired, and the attitude of mind in which he should approach the consideration of political movements which concern his calling. Mr. C. P. Childe, who is both senior surgeon to the Royal Portsmouth Hospital and vice-chairman of the Health Committee of that town, appeals to the profession to use its great influence with the public to put in force measures which medical experience proves may be expected to diminish the large and increasing mortality from cancer, and explains the system which has been instituted in Portsmouth. Dr. Pratt relates in a very interesting way his experience of the working of medical benefit under the Insurance Act in a great industrial district in the North, and makes some valuable suggestions for its improvement; and Sir John Collie, in the course of an address on the business side of medical practice, gives some admirable advice with regard to consultations, certificates, the position of medical men in the law courts, and the necessity for every practitioner being thoroughly honest with himself, and ascertaining annually his real expenditure and financial position. With regard to the acquisition of capital, investment, and speculation Sir John Collie has some shrewd observations to make, but there is one which we feel must be turned against himself. It is his warning against the "perfectly honest but misguided advice" about stock exchange investments given by friends; he says truly that it is of no more value than other gratuitous advice. Does not the warning apply to his own advice about "great countries such as China and Japan, and many of the South American republics"? Even with the qualifications and explanations attached to it by the speaker the advice is of very questionable value, and one who had acted upon it within the last six or seven years might well to-day see reason to regret it. Many such stocks are of the speculative order.

The advice usually given is not to put all your eggs in one basket, and Sir John Collie does well to quote the saying. The idea is carried out in practice by the various trust companies in which, for a consideration, experts place their financial experience and skill at the disposal of the shareholders. But the advice about the eggs and the basket has been so well drummed into the public mind that most of these companies, which have recently been doing well, have won so much popularity that their shares are no longer at a price so attractive as a few years ago. It is, in fact, a question whether a medical man seeking to make provision for his old age, or for his family in case of his early death, acts wisely in taking his eggs to the stock market at all. Even "the sweet simplicity" of the three per cents. proved deceptive.

In the majority of cases the object a medical man has in view is to save enough money to ensure some comfort for his own old age and that of his wife, should she survive him, as is probable, while at the same time providing against the dire consequences to wife and children should death overtake the bread-winner early in life. Under the stimulus of competition insurance business has been developed with so much increased intelligence during the last twenty or thirty years that it is quite a question whether the best way of investing is not through one or more policies. Sir John Collie's references to insurance are inadequate, and, in fact, antiquated. At the present day a man at an insurable age—under 60, to take a rather extreme limit—can arrange to take out a policy or policies to suit almost any particular domestic circumstances. If a man lives to old age, if he saves money steadily, if he invests his savings well, and if he does not during his working years spend

the dividends, he may do better for himself and his family than the man who insures at an early age and increases his insurance as he gets on in the world. But we have here four "ifs," and there will often be great temptations not always to fulfil the three last conditions, and the first no man can be sure of fulfilling. In any policy of the kind under consideration, one of the conditions of which is the payment of a sum of money on early death, even if it be only the return of the premiums, the policy holder has to pay something for the accommodation, although in a well-managed company which succeeds in paying bonuses regularly, he may have to pay very little. But in effecting a policy, it is necessary to look very closely into the conditions and to consider carefully what their effect will be in various possible contingencies. There are, for instance, policies which ensure a man on attaining the age of 65 a round sum or a pension for life. The premiums, if a man begin in early middle life, are not onerous, and for a small increase in the premium the insurer can arrange that the amount of the premiums shall be returned at death before 65. For the man himself this may be a good investment. If at 65 he is in indifferent health he can draw out his accumulated savings in cash. Even if he draws the pension and only enjoys it for a few years, it may not greatly concern him personally that the insurance company profits by the amount of the pension it would have been liable to pay him for the twelve years which is about the expectation of life at that age. But though a suitable partial provision, it is not a complete provision for a man who may leave a widow and one or more children—perhaps daughters, who will not at the age then reached easily earn their own living. He therefore requires another policy, or perhaps several, or a combined policy providing for this contingency.

There is, in the first place, the ordinary life policy, which ensures a certain capital sum at death at any age, though the longer a man lives the greater, as a rule, it will be, owing to bonus additions. Such a policy effected at, say, 30 years of age in a first class office will secure not only provision for dependants, but, by way of surrender value at the age at which a pension would have become due, a return of premiums paid, so that the actual insurance may cost even less than the interest on the premiums paid. In many cases this form of policy may, perhaps, be the most suitable; but the capital sum must, on the death of the insured person, be dealt with in some way by his executors, either by investment at the market price of the day, which may be favourable or unfavourable, or by way of the purchase of annuities for the dependants he leaves behind him. Many men will think, and most men used to think, that they had done all that could reasonably be expected of them when they had done so much. To-day some may be disposed to consider whether they cannot, during their working time of life, make more satisfactory provision by taking out pension policies for wife and dependent children.

A drawback inherent in all investments by way of insurance is the necessity of keeping up the premiums whatever happens, but the modern facilities granted by life assurance companies have gone a long way to meet this difficulty. As an alternative to surrendering the policy, which in the earlier years at least necessarily involves some sacrifice, paid-up policies will be granted for proportionate parts of the original sum assured. As an illustration, a policy under which it has been arranged to pay a fixed maximum number of premiums, as in an endowment assurance, or a limited payment life policy, may be taken. If twenty premiums in all are payable, the policy can be discontinued after the second premium, at least, has been paid, and a fully paid-up assurance granted for one-twentieth part of the original amount in respect of each premium so paid. The man who is earning a good income can do more than this, for he can insure that all his policies are kept in force and the premiums paid during incapacity, temporary or permanent.

The man who proceeds on the other principle of investing savings and all dividends on earlier savings may when the lean year of sickness comes suspend the operation of his sinking fund—in fact, he may regard this as a contingency to be kept in view when he embarks on the course. But it is a contingency which may be otherwise provided for, and the failure to touch on it is a curious omission from Sir John Collie's address. Every man ought to insure against the consequences of being laid aside by sickness or accident. Many companies undertake this class of business, but it can probably best be done by medical men through the Medical Sickness and Accident Insurance Society or the Medical Insurance Agency, which both understand a medical man's needs.

In taking out a fire policy the advisability of making provision for expense arising, not only for the cost of repairing or rebuilding the house and replacing furniture, but also for the expense of hiring a temporary residence, which may be very considerable, is sometimes forgotten, as is also the necessity of a complete inventory of the contents of the house, which should be kept, not in the house itself, but at the bank or some other safe place. The insurance company will only pay on proof of loss, and few men know how many blankets and chairs, and coal-scuttles, and kitchen utensils they have until called upon to replace them. It is in such circumstances as these that an influential agency whose business connexions are of value to the insurance companies is able to render service to policy-holders, in the first instance, by pointing out the risks which should be covered and rendering advice generally, and later by seeing that claims are reasonably and promptly met.

Similar considerations apply to a motor car; there is not only the cost of repairing and replacing it after an accident, but also the expense of hiring while it is under repair. There is in this case the risk also of injury to persons on the road or to a passenger. These third party risks have been provided for in the doctor's policy recommended for some years by the Medical Insurance Agency (see page 666). Some of the composite companies have become alive to these facts, and are offering very low rates to attract business; but the Agency, which has several years' experience, can do as well or better.

That it is only common prudence to insure against liabilities which may arise under the Workmen's Compensation Act is so generally recognized that it can hardly be necessary to do more than point out that every person employed whose total emoluments do not amount to £250 a year is within the Act. Not only domestic servants, but nurses, dispensers, surgery attendants, gardeners, grooms, chauffeurs, and all persons casually employed are included. Nowadays probably the emoluments of most assistants put them above the income limit.

Finally, in taking leave of the subject of insurance, let it be said that it must be looked upon strictly as a matter of business. Insurance companies and underwriters are not benevolent institutions. They give the market value and charge the market prices, like the grocer. If the grocer gives away gaudy milk

jugs to the customers who have bought three pounds of tea, everybody knows that the cost of the jug has been calculated before the price or the quality of the tea is settled. But there are people who seem to think that insurance business is conducted on unbusinesslike principles, and that they can get a policy for less than its cost. Let them look at the terms of the policy, and they will find that they get sixpennyworth for sixpence, although in saying this we do not wish to deter any one from subscribing to any newspaper so generous as to give policies away; it is not necessary to look a gift horse in the mouth.

RED CROSS ORGANIZATION.

THE King has approved the appointment by the Secretary of State for War of a Committee to inquire into the relations between the British Red Cross Society and the St. John Ambulance Association. His Majesty is the patron of both, but it is an open secret that for some years there has been friction between them.

The efficient organization of Red Cross work is a matter of national importance. It is acknowledged in all countries that the regular military medical services must in war be supplemented by voluntary aid, that offers of such aid must be systematized and co-ordinated in time of peace, that the organizing body by which this co-ordination is carried out must have the official sanction of the authorities of the navy and army, and that it must be so constituted as to entitle it to international recognition

The British Red Cross Society grew out of the British National Society for Aid to the Sick and Wounded in War, which was established in 1870 at the beginning of the Franco-German war in accordance with the decisions of the Geneva Conference of 1863 and the Geneva Convention of 1864. During that war, and during other wars in the next thirty years, this society did an immense amount of good work. It rendered service during the Balkan wars in 1876-78, 1885-86, and 1867-98, as well as in the military operations in which this country was concerned in Egypt and South Africa. During the Boer war the society gave great assistance to the National Red Cross Committee, and after that war the British Red Cross Society was established on its present basis. It is recognized by the Admiralty and the War Office, and by the Governments and National Red Cross Societies of foreign countries. It thus has an international status, and is an indispensable part of our organization for war, as well as a body through which this country can give Red Cross aid to other countries engaged in war.

The "scheme for the organization of voluntary aid in case of invasion" drawn up by the British Red Cross Society is designed to show how voluntary aid may be organized to supplement the territorial medical service; it has been arranged on lines similar to those followed by certain foreign countries where organizations for the relief of sick and wounded in war have reached a high standard of efficiency. The work of the British Red Cross Society at home comprises the encouragement of the formation of voluntary aid detachments, and the training of their members in first aid, home nursing and sanitation, and as stretcher-bearers, sanitary attendants, hospital orderlies, nurses, cooks, etc. It is the body recognized by the War Office for this purpose in connexion with the medical organization of the Territorial Forces, and the County Associations of the Territorial Force are recommended to delegate the formation and organization of voluntary aid detachments to the British Red Cross Society. In June last the British Red Cross Society had registered at the War Office 1,741 voluntary aid detachments with a total personnel of 50,517. It gives certificates in first aid and home nursing after training and examination, and also recognizes corresponding certificates from all the bodies recognized for this purpose by the War Office. These bodies include the county councils, the St. John Ambulance Association, and the St. Andrew's Ambulance Association (Scotland). Its funds are derived from the subscriptions of members, associates, and adherents.

The St. John Ambulance Association has for many years done much useful work in giving training in first aid, and has organized the St. John Ambulance Brigade. It gives certificates in first aid and home nursing, and has raised voluntary aid detachments, both men and women, which have received recognition from County Associations. The association is the child of the Order of St. John of Jerusalem in England, which seeks to perpetuate some of the features of mediaeval chivalry. It confers certain dignities, such as Knight and Lady of Justice, Knight and Lady of Grace, and Honorary Serving Brother, and maintains an ophthalmic hospital at Jerusalem. It has also a commercial side, and derives a considerable annual sum, forming apparrently the major part of its income, from the sale of stores and charges in respect of instruction. Another source of income appears to be from members' "foundations" and "oblations." Foundations would seem to be of the nature of entrance fees to the dignities of the order, and oblations to be the annual subscriptions of the knights and ladies.

The difficulties which have arisen between the British Red Cross Society and the St. John Ambulance Association appear at first sight to be in the main due to differences of opinion and practice in matters of detail. In reality it seems probable that they go deeper, and depend upon differences in the conception of the way in which work of this nature should be organized at the present day. The British Red Cross Society has received the official recognition of the Admiralty and War Office as the organization responsible for the Red Cross movement throughout the empire, but the work is now not only national but international. The feeling of brotherhood among nations has grown, and the compassion felt for our own sick and wounded has been extended to the enemy, and to both sides in a war in which we are not directly involved. A national body which desires to render medical aid in war can place itself in the most advantageous position only by obtaining international sanction and recognition, and to obtain this sanction it must conform to international regulations and conventions. One nation after another has found it advisable to place its national Red Cross organization on a uniform international footing, and in this process an appearance of conflict with existing national institutions which have been unwilling to conform to new conditions has arisen. This has occurred in France, and also in Germany, where, though the Samaritan Society was long established and well administered, the State has in its international relations found it necessary to act through the Red Cross Society alone.

In this country the differences between the two societies whose members are actuated by the same humanitarian motives ought not to prove impossible of adjustment.

CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

THE conference of representatives of Local Medical Committees which met in Brighton during the annual meeting of the British Medical Association last July asked the Association to call such a conference annually, either during the annual meeting or at some earlier time as might be found expedient. The formation of the Panel Committees since that date modified the position to some extent, although, as a matter of fact, the membership of both committees is in many districts identical. In view of various proposals which had been made for the organization of these committees it was decided by the Council of the Association to call a conference early in the year, and the meeting took place on Friday last, when Mr. D. F. Todd, of Sunderland, was elected to the chair. A detailed report of the proceedings will be found in the SUPPLEMENT. It will be seen that the Conference, which was attended by over 120 representatives from all parts of Great Britain and one representative from Ireland, decided to form a central organization to co-ordinate the work of Local Medical and Panel Committees under the Insurance Act. It was decided, after debate, that the new organization should include both Local Medical and Panel Committees. A most interesting discussion took place on the relation of the new organization to the British Medical Association, and it cannot but gratify all those who favour the closer organization of the profession to note that it was decided that the new body should work in sympathy with the Association. The feeling of gratitude and loyalty to the Association was, indeed, marked throughout the whole proceedings. A small provisional committee was appointed to prepare a draft scheme of constitution to be submitted to the Local Medical and Panel Committees. The financial aspects were separately considered; the ruling of the Insurance Commissioners that no portion of the levy for Panel Committees' expenses, provided under the amending Act of 1913, could be used for organization purposes was recognized as creating a difficulty. It was agreed to recommend local committees to depend upon a voluntary levy, and the contribution from the local committees to the central organization was fixed on a basis of £1 for every 20,000 insured persons or part thereof. The consideration of various general questions arising out of the working of the Insurance Act occupied the Conference for some time. Resolutions were passed condemning any suggestion of the administration of medical benefit by approved societies, and urging the desirability of making the panel system a success so as to avoid the possibility of setting up a whole-time service. Certain decisions were arrived at concerning the conditions of appointment of medical referees, the issue of medical certificates, contracting out, the drug tariff, and some other matters. A noticeable feature of the proceedings was the sympathetic reception of a statement as to the position of the Irish profession in relation to the Insurance Acts, which was placed before the Conference with marked ability by Dr. Doolin, the only Irish representative present. The position in Ireland differs from that which exists in Great Britain, inasmuch as the medical benefit clauses of the Act do not apply; but serious difficulties have arisen with regard to medical certification. Dr. Doolin's very clear statement is published in the SUPPLEMENT (p. 167). Considering that the Conference was to all intents a new venture, and that in the nature of things its deliberations were of a somewhat informal and experimental character, the business-like way in which it was carried out reflects credit not only on the Chairman, Mr. D. F. Todd, whose conduct of the proceedings met with great acceptance, but also on the members of the Conference generally. The business was concluded on Friday evening, and we understand that the provisional committee appointed by the Conference held a preliminary meeting on the following day, and will meet again on April 4th.

HOSPITALS AND THE PUBLIC IN ENGLAND AND ITALY.

AN English physician writes to us from Rome (March 10th) as follows: Public opinion in Great Britain does not concern itself very greatly with the details of hospital administration, although public subscription supplies the means by which most hospitals are carried on. Even if it were proposed to close one of our great institutions, or to transport it from the centre to the periphery of a large town, some adverse comments might be heard, but it is hardly likely that the whole population would rise up in angry protest to demand the reversal of such a decision. Such an uprising, however, has recently been witnessed in Rome, inflamed by a proposal, doubtless made after very careful consideration, to close certain antiquated and presumably insanitary hospitals in the more crowded parts of the city, and to treat the ordinary round of non-paying patients at the great modern institution, known as the Policlinico, situated in an open district well outside the walls. The great company of foreign visitors at the present time crowding the hotels of Rome were confronted on the morning of March 9th with the strange spectacle of a busy town deliberately refraining from any other business than that of popular agitation by way of public meetings in all the central streets and great piazzas. Traffic of every sort was suspended, every shop was closed, and even the itinerant vendors of flowers and picture postcards were conspicuously absent. Mass meetings, resolutions of a fiery character, and finally collisions with the authorities, resulting in some broken heads, occupied the day, and bade fair to continue for twenty-four hours more, but for the timely conclusion of a compromise between the hospital authorities, the Government, and the outraged populace. However difficult it may be for the undemonstrative Briton to comprehend the marvellous unanimity with which this great demonstration was carried out, it nevertheless points to certain defects in the provision of medical and surgical aid in large towns, more especially at the present time when the much talked of decentralization of the great London hospitals has been started by the removal of King's College Hospital to Denmark Hill. It is clearly impossible that the great hospitals can always be situated in the near neighbourhood of the poorer classes whom they are established to serve. But it is not equally clear that patients should be obliged to travel long distances in order to obtain advice as to their actual need for treatment. The system of local dispensaries, or receiving rooms, in connexion with hospitals has found favour in America and in some Continental towns, and has been from time to time advocated, but not seriously acted upon, in our own country. With the gradual establishment of tuberculosis dispensaries to winnow the various manifestations of tuberculosis and to direct them into their appropriate channels for treatment, a beginning will be made which may lead to a more comprehensive scheme for dealing with disease in general. The fiery indignation of the Roman citizens has made it manifest that any curtailment of the existing privileges of the sick poor in their city will not be tolerated, and may lead to a general betterment of the conditions under which such privileges can be enjoyed. A general strike of all classes of employed persons has thus proved a powerful weapon, but it is not likely to be used on behalf of the suffering poor by the somewhat apathetic supporters of British hospitals. It may nevertheless serve to emphasize the need for a more practical distribution of local centres for diagnosis in densely populated districts, a need which becomes even greater as the facilities for treatment are moved further and further afield.

THE INSURANCE DIFFICULTY IN GERMANY.

THE Berlin Agreement, as has been pointed out in the BRITISH MEDICAL JOURNAL on several occasions, contained the terms of peace. The doctors, acting through their mouthpiece, the Leipzig League, accepted these terms in the hope that the compromise would lead to smooth working and a better understanding between them and the insurance societies. One point, however, was of paramount importance. This was the removal of the strike-breakers, on conditions set out in Section XI (see BRITISH MEDICAL JOURNAL, January 10th, 1914, p. 96). So important was this that the Leipzig League considered it advisable to ask the profession to make a considerable financial sacrifice to pay off these practitioners. We learn from the *Aerztliche Mitteilungen* (the official organ of the Leipzig League) of March 13th, 1914, that in the ten weeks which have elapsed since the signing of the agreement the insurance societies in many places have done nothing toward carrying out their obligations under the agreement in regard to the strike-breaker. Section XI stipulated that both contracting parties should endeavour to bring about a determination of the contracts which the strike-breakers had signed during the dispute, and that they should try to find other posts for them. It was provided, also, that the various Governments should support these efforts. During the ten weeks there has been an active as well as a passive disregard of these terms. We are informed that in Breslau and Elbing the insurance societies have definitely refused to release the strike-breakers from their contracts, while in Stettin the societies have asked the local profession to work side by side with these men. In many other towns the societies have neither taken the initiative nor have they agreed to any of the doctors' proposals. The Governments, too, have failed to carry out their obligations. In some instances this failure has been passive, but the *Aerztliche Mitteilungen* finds cause for uneasiness in a letter addressed to the Arnsberg Chamber of Commerce by the Minister, Herr Delbrück, in which he stated that it was highly desirable that all the insurance societies should contribute the 5 Pf. a head toward the fund for compensating the strike-breakers. "For," he continued, "all the societies, even if they now come to terms with the medical profession, will after a comparatively short time be in a position to utilize the services of new doctors. The Berlin Agreement will materially facilitate the societies obtaining the services of the new doctors." This vague remark may perhaps be attributed to a careless style of writing, but it certainly is calculated to create an impression that the societies may reckon on regaining the services of the strike-breakers after the lapse of a short time. These considerations have led the Leipzig League to demand an immediate fulfilment of the terms of the agreement. The patience of the doctors is exhausted, and if there is no improvement in the state of things by April 1st the doctors will throw off the yoke of the agreement and declare war. The Imperial Government evidently takes a serious view of the situation, for on March 11th the Secretary of the Interior received a deputation of representatives of the doctors and of the insurance societies. The representatives of the insurance societies undertook to urge the societies in the affected areas to carry out the terms of Section XI.

BYZANTINE MEDICINE.

SIR CLIFFORD ALLBUTT'S Finlayson Memorial Lecture, reprinted from the *Glasgow Medical Journal*, is a masterly survey of the decay of Greek medicine under the Byzantine Empire. The part of Byzantium, he says, in European civilization was almost wholly one of conservation and embalmment. The free living thought of Greece was enmeshed in a web of superstition woven of Eastern phantasies. The positive medicine of the Hippocratic tradition became blended with cults of the Sea Mater from Phrygia, of Isis and Serapis from Egypt, of Mithra from Persia, of Syrian Baalism—"cults brought in partly by the subtle waves of the spiritual atmosphere, in part more directly by sophists, slaves, freedmen, and, as it is recorded, by certain peripatetic missionaries of the foreign and mystical creeds." More baneful than these cults—each of which, as Sir Clifford Allbutt does well to remind us, held its own aspect of truth—was the corrupting influence of magic, "always the black shadow of mysticism." Byzantium lasted a thousand years, and to last that time a State must have had great virtues. In the domain of science, however, Byzantine thought was sterile. Demonism entered deeply into the conceptions of the West as well as the East, and closely attached itself to medicine. Its pallid reflection may, in the words of the lecturer, be perceived even yet in the "morbid entities" still emanating from distinguished physicians in our midst. The milder Olympian divinities were degraded, after the Assyrio-Chaldean and mediaeval type, into a devil's troop; and medicine became a quasi-sacerdotal function, a scheme of exorcism. Most of the fathers of the Church rejected material means of healing on the ground that to make use of such methods was to deify earthly things. Yet even then wisdom found a voice in some enlightened men, though it is to be feared that, as Falstaff says, no man regarded it. Ulpian, the famous lawyer, was unwilling to admit exorcists as legitimate practitioners, saying: "Si incantavit, si imprecatus est, si, ut vulgari verbo impostorum utar, exorcizavit, non sunt ista medicinae genera; tametsi sint qui hos sibi profuisse cum predicatione adfirmant." We see in our own day a strong tendency in so-called "cultured" people to return to a sublimated kind of demonism and to treatment akin to exorcism; and the false prophets of faith-healing number many followers who affirm that they have derived benefit from their spiritual ministrations. Demonism and magic sapped the foundations of pathology and therapeutics of the Byzantine and Middle Ages. To these causes of decay Sir Clifford Allbutt adds a superstitious belief in drugs. Hippocratic therapeutics, he says, had been rational, and such as diet, exercises, baths and climate, but in Byzantine times these rational methods were superseded by a belief in the quasi-magical virtues of a medley of drugs. A considerable body of what the lecturer calls "recipe medicine" dates from Scribonius Largus, who wrote in the reign of Claudius; from his work as from a quarry many other writers—Greek and neo-Latin—stole their materials. Sir Clifford Allbutt touches on the subject of hospitals, which he shows existed before Christianity. "To hospitals as charities there were many gradations; from Asclepian temples, surgeon's apartments where patients were received — ἴατρεια, officinae medicinae—valetudinaria for slaves, hospitals for special diseases such as leprosy, and many other medical institutions often attended by several doctors, and some of them having a public status. Under the Flavian emperors, when Christianity was young, such institutions, planned on the corridor system and governed by strict rules of cleanliness, purification, nursing, and good cookery, were already highly developed. And before Christ we read of hospitals in provinces, especially the Greek provinces, under public control, with doctors officially appointed to them." We have touched only on a few outstanding points in Sir Clifford Allbutt's lecture, but it is interesting and informing throughout. He wears his weight of learning like a flower, and makes the dry bones of his somewhat arid subject live, clothing them with the warm flesh of a graceful style. We hope we have said enough to induce those of our readers who are interested in the history of medicine to read the Finlayson Memorial Lecture for themselves

THE FUTURE OF MEDICINE AT CAMBRIDGE.

THE Senate of the University of Cambridge determined on Saturday last to approve the policy of applying to the Board of Education for a grant for the medical department. The grounds on which this application was advocated were stated in our columns last week (p. 610), and in principle were founded on the need felt by the Special Board for Medicine of immediate help if the reasonable efficiency of the manifold departments of science, elementary and applied, now essential parts of a great school of medicine, were to be maintained. Since the colleges are unable to increase the very liberal assistance, direct and indirect, which they have given and are giving to the school, and since the university itself is not in a position to provide a tenth part of the additional assistance, the need for extraneous aid was evident. The main argument relied upon by the opponents of the proposal was that Government assistance would mean Government control, and that in that way the autonomy of the university might be diminished. This is a line of argument which we desire to treat with every respect, because it is essential to the progress of science and learning that the universities should retain their freedom. The force of the argument is, however, materially diminished when it is remembered that the universities and university colleges in this country, including the University of Cambridge itself, already receive assistance from the State, and that the Board of Education explicitly denies that it seeks power to decide or discuss the character of the scientific instruction given or to interfere with any internal affairs of the university. Its function would be limited to ascertaining, before advising the making or continuance of the grant, that the size and efficiency of the school was maintained, that the teaching staff encouraged the advanced students to prosecute research, and that the teachers themselves avoided undertaking duties likely to interfere with the efficient discharge of their work in connexion with the courses aided by Government grant. The recommendation of the Board of Medical Studies was accepted at the meeting of the Senate on March 14th by 267 votes to 235, a majority of 32.

THE SALINITY OF SEAS AND ESTUARIES.

A MODERN school of oceanographers attributes the salinity of sea water entirely to the washing of salts from the land by rain and rivers, and at least one authority has gone so far as to base a calculation of the age of the earth on the assumption that the oceans were originally filled with fresh water. Although certain physical facts are against this supposition, there is little doubt that in lower river and estuarial waters the salinity (which, of course, is much smaller than that of the open sea) is connected more or less with sewage disposal and river pollution. Accompanying an Atlantic pilot chart for January, 1914, issued by the United States Navy, we find a brief abstract of some interesting salinity observations made by Dr. Myer Coplans, of the University of Leeds, in the course of two passages, outward and return, from the Bristol Channel to the River St. Lawrence. Dr. Coplans carried out his work with most painstaking thoroughness, and, although he is content to have made out a *prima facie* case for further extended observations, he was able to throw by inference some light upon the alterations of North Atlantic salinity in the proximity of icebergs; and it is possible, also, that the results of his observations may have a bearing upon the economics of Newfoundland fisheries. The salinity belts of the North Atlantic have higher maximums than those of any other open sea, and it is an achievement of no small oceanographic importance to have had this salinity determined with such frequency as to form practically a continuous cross-ocean record. But Dr. Coplans's river tests, which extended as far up the St. Lawrence as Montreal, are interesting also for the reason that they have a public health significance. Along the hundred and fifty miles of river which separate Quebec from Montreal, he found that wherever there was a temporary rise of salinity the ship was approaching the mouth of a tributary. The waters of Lake St. Peter, which lies halfway between these two Canadian cities, proved to be much more pregnant with saline, possibly owing to sewage, than those of the lower river, and the high salinity was fairly constant right up to Montreal. This is due, in Dr. Coplans's opinion, to the fact that the sewage of Ottawa, Montreal, and elsewhere, is being deposited on the broad waters of the lake, which thus seems in some danger of becoming a kind of open drain for eastern Canada. The importance of this observation lies in the fact that from this very place the ocean-going steamships plying to and from Montreal have been in the habit of taking their fresh water. In Dr. Coplans's tests the water was taken in a continuous stream 18 ft. below the surface, and the salinity measured by electro-conductivity. The salinometer consisted of a U-tube in which the conductivity of a certain column of water was measured between platinum points on copper electrodes. A special compensatory mechanism eliminated automatically the effect of temperatures on conductivity, so that the only changes recorded were those introduced by changes of the saline content. An ohmmeter measured the insulation resistances and conductances, and the readings were given on a scale specially made to connect the values of the conductance with the salinity of the water. With the notation adopted, the saline conductivity of the open sea is approximately 1,000 units, that of Thames water 8 units, of St. Lawrence water 4 units, and of the water of certain municipal supplies 1 to 2 units. Although there are areas of greater salinity and greater dilution in the Atlantic, it is remarkable how small is the range of variation once outside the sphere of influence of the Bristol Channel and the Gulf of St. Lawrence.

THE CINEMATOGRAPH IN AID OF RESEARCH.

As has often been pointed out the antivivisectionist agitators trade on the ignorance of the people. The grossest falsehoods are recklessly cast about, on the principle that if you throw mud enough some will stick. The best way of fighting a propaganda as foolish as it is inhuman is to show the truth by making known in a lucid and simple style the aims and achievements of scientific medicine in its struggle to discover the causes of disease and to protect mankind from their operation. This work is very successfully done by the Research Defence Society, which has issued a series of pamphlets in which the results of scientific investigation are explained and facts that carry conviction are set forth in language understanded of the people. Moreover, lectures are delivered in which the same truths are enforced with the help of lantern demonstrations. Now, we learn, a still more effective method is to be adopted. The directors of Messrs. Pathé Frères have placed any nine films in their rich collection at the disposal of Mr. Stephen Paget for two guineas. This number is enough for an hour's lecture. Among the films in the catalogue we note the following: The cholera bacillus, from specimens derived from cases of the disease in Bombay; the digestive juices, taken at the Pasteur Institute, showing the process of obtaining the intestinal and pancreatic juices; the *Filaria loa* in the blood of an infected person; the mechanism of phagocytosis; the microbe of relapsing fever; the mosquito, showing the characteristics of the insect and how, by asphyxiating the larvae, its development is prevented; *Spirochaeta pallida* and the effect of the injection of salvarsan on the parasite; and the trypanosome which produces sleeping sickness and transmission by the tsetse fly. The cinematographic pictures will reach people too idle to read literature on the results of research or too indifferent to attend lectures on

the subject. It will bring before them what has been done and what is being done for the suppression and prevention of disease, and it will do this in a manner that cannot fail to arrest attention, for as Horace says—

> Segnius irritant animos demissa per aurem
> Quam quae sunt oculis subjecta fidelibus.

It should be added that any one can order a set of films through Mr. Paget (21, Ladbroke Square, W.) at a cheap rate; and in most towns of any considerable size there is no difficulty in hiring the cinema apparatus at a low cost.

THE WEST AFRICAN MEDICAL STAFF.

On the first day of this year the administrative union of two of the most important British colonies on the West Coast of Africa—Northern and Southern Nigeria—was formally achieved, but this fact has not been followed by any cessation in the disquiet among members of the West African Medical Staff, to which we drew attention in our issue for October 18th, 1913. On the contrary, it has increased, and is now so widespread and deep that it would be well for the Colonial Office to undertake an inquiry into its underlying causes without delay. In anticipation of that step, it would be advisable for the West African Medical Staff to prepare for submission to the Colonial Office a carefully considered statement of the objections it feels to the alterations of the conditions of service which have already taken place or are threatened, and to submit it for signature to as many members of the service as are within easy reach. The co-operation of men other than those stationed in Nigeria is desirable, because what seem to us the most solid causes of discontent are of such a kind that ultimately, if not forthwith, they must affect all members of the West African Staff alike. It may seem strange—as it is certainly unfortunate—that there should be any reason for such action as that suggested, because very few years have passed since the Secretary of State for the Colonies adopted nearly all the recommendations made to him by a Departmental Committee after very careful inquiry, and these were well calculated to secure for the West African Colonies not only an efficient but contented and popular service. Among them was one to the effect that the Colonial Office should be furnished with a Medical Advisory Board, and that board was duly appointed, and is still in existence. Recent events, however, suggest that either it is not being consulted at all, or that its advice is being neglected owing to the influence exercised over the Secretary of State by the strong personality of some officer on whose opinion he has learnt to rely but who is not thoroughly conversant with the details of the investigation in question, and who is imbued with erroneous notions as to the malleability of the medical profession. In this connexion it is to be remembered that a certain tincture of idealism is probably always present in the mental composition of great administrators, and it is easy to conceive such a man working out in his own mind and strongly advocating some scheme for the control of medical matters on the West Coast which, though academically attractive, would in practice be totally unworkable. Even, however, if the West Coast were a good place for administrative experiments of a medical order, we are quite certain that if the plan of operations so carefully formulated five years ago were now varied in such fashion as to make the attractions of the West African Medical Staff less considerable than they are, the Colonial Office would before long find that its task of filling vacancies by thoroughly desirable men had become impossible.

INFANT WELFARE CENTRES.

The decline in the birth-rate, which during the last few decades has aroused the alarm of statesmen in almost every country in Europe, has had one beneficial result, inasmuch as it has stimulated efforts to bring about a corresponding decrease in infant mortality. Civilized countries, at the present moment, vie with each other in striving to better the conditions under which their children live. In England much of the improvement for some years past has been due to the institutions known as "infant consultations" and schools for mothers, where women of the working classes are taught how to rear their children and encouraged to seek advice and assistance from those well qualified to bestow it. A short sketch of the useful work performed by these excellent institutions is given by Mr. I. G. Gibbon, D.Sc., in an interesting pamphlet on *Infant Welfare Centres*,[1] in which he supplements a previous report issued three years ago by a detailed account of the progress made since the year 1910. In this it is pointed out that the field of activity open to Infant Welfare Centres has increased and is still increasing. The movement is only the growth of the last six years, the first school for mothers in this country having been started in 1907, and nearly fifty out of the two hundred centres now in existence have come into being since 1911; many more are urgently needed. "A total of some 200 Consultations and Schools is not large in proportion to the needs of the country," remarks Dr. Gibbon, who elsewhere calls attention to the fact that the rural districts of England are at present practically untouched by the movement, although the yearly toll of child life in country places is still very heavy. Dr. Gibbon pleads for a far wider extension of the work both in town and country, for "the multiplication of small institutions closely linked together in common effort"; and he strongly urges the enlistment of intelligent working-class women as assistants at the various centres, where they would undoubtedly prove of great service in dealing with mothers belonging to the same rank in life. Dr. Gibbon writes with the utmost frankness, and has not hesitated to lay his finger upon the weak spots of a movement which, like all other human undertakings, is liable to be drawn into the "labyrinths and wilds of error." His report, however, is on the whole extremely encouraging; and the reader lays it aside with the conviction that the Infant Welfare Centres are supplying a long-felt and pressing want, and that they are carrying on a work which should prove of infinite value not only to the present generation but to those still to come.

REPORT OF THE JOHN LUCAS WALKER FUND.

In 1886 Mr. John Lucas Walker, barrister-at-law, left by will the sum of about £10,000 to be spent in the promotion of scientific or literary research in Cambridge or London. It was determined to devote the fund to the furtherance of original research in pathology; managers were appointed to administer it, under the Professor of Pathology in the University of Cambridge, and since 1887 its income has been for the most part paid out in studentships and special grants for the purchase of apparatus. At first a single student was appointed; in 1892 it was resolved that a second should be elected. The report recently issued gives a full account of the way in which the fund has been administered, and the changes that have been made in its regulations from time to time. The greater part of it is devoted to a list of the various medical men who have held the studentships, with accounts of the work done and the papers published by its successive holders. There can be no doubt that the managers have been extraordinarily successful in their search for promising candidates to carry out pathological investigations. Their lists justify the reasonable pride with which they dwell on the results of their twenty-seven years' activity. The report, dated January, 1914, forms most interesting and inspiring reading.

[1] London: The National League for Physical Education and Improvement, 4, Tavistock Square, W.C. 1913. (Pp. 52. 6d. net.)

In addition to the names mentioned last week, Mr Stanley Boyd, surgeon to Charing Cross Hospital, will be a candidate at the election to the Council of the Royal College of Surgeons of England next July.

THE sixtieth birthdays of Professor Ehrlich and Professor von Behring have just been celebrated. Paul Ehrlich was born in Silesia on March 14th and Emil Behring in West Prussia on March 15th, 1854. The three chief weekly medical papers published in Germany have issued what may be called special numbers in celebration of these anniversaries. The *Berliner klinische Wochenschrift*, in addition to papers in German by distinguished men of science in Germany, Austria, Switzerland, Denmark, Norway, Holland, Russia, and Roumania, has articles in French by Professor Richet, Dr. Calmette, MM. Bordet and Delange (of the Pasteur Institute, Brussels), and by MM. Roux and Metchnikoff (of the Pasteur Institute, Paris), in Italian by Professor Maragliano, and in the English language from Flexner and Carrell (of the Rockefeller Institute, New York), and from Dr. Noguchi. The *Deutsche medizinische Wochenschrift* publishes portraits of both professors, and a series of articles bearing more or less upon the departments of chemiotherapy and serum-therapy in which they are respectively most distinguished. The *Münchener medizinische Wochenschrift* publishes a series of papers in honour of Ehrlich and a portrait taken in 1896, when he was director of the Serum Institute at Steglitz.

SURGEON-GENERAL GORGAS reached this country on March 17th, on the conclusion of his mission (undertaken at the invitation of the Johannesburg Chamber of Mines) to examine into the sanitary condition under which the workmen employed at the mines live. Surgeon-General Gorgas, who was accompanied by Major Noble and Dr. Darling, spent three months in Johannesburg, and has made suggestions, especially in regard to the housing of natives, which it is hoped will diminish the mortality from pneumonia and tuberculosis among the natives employed in the mines. It appears that in Panama for the first two or three years the death-rate from pneumonia among negroes was as heavy as it has been in South Africa. On Monday next Dr. Gorgas will deliver a lecture at a special meeting of the Royal Society of Medicine (1, Wimpole Street), at 5 p.m., on his work at Panama. The complimentary dinner to Dr. Gorgas will take place in the evening of the same day at the Savoy Hotel, London, when Sir Thomas Barlow will take the chair at 8 p.m. Among those who have expressed their intention to be present since we last referred to the matter are the Archbishop of Canterbury, Dr. Hollis, President of the British Medical Association, and Dr. W. J. R. Simpson, C.M.G., Professor of Hygiene at King's College, and Lecturer on Tropical Hygiene in the London School of Tropical Medicine. Tickets for the dinner (25s.) can be obtained on application to Mr. J. Y. W. MacAlister, the Royal Society of Medicine, 1, Wimpole Street, W. We are asked to state that in consequence of the date fixed for this dinner the meeting of the Medical Society of London on Monday next has been postponed until Monday, March 30th, when the following papers will be read: Sir StClair Thomson, M.D., "Three Years' Sanatorium Experience of Laryngeal Tuberculosis"; Mr. T. B. Layton, "Tonsils and Adenoids in Children; a Plea for Fewer Operations."

THE fourth National Congress of the Federation of Anti-tuberculosis Organizations in Italy will be held at Genoa in October (1st to 8th). Among the questions to be discussed are open-air schools; collective measures against the diffusion of tuberculosis; antituberculosis legislation, including compulsory notification.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Blind: Interdepartmental Committee to be Appointed.—An interesting discussion took place in the House of Commons on Wednesday, March 11th, on the following motion of Mr. Wardle, the Labour member for Stockport, for which he had been successful in the ballot:

> That, in the opinion of this House, the present system of voluntary effort in aid of the blind people of this country does not adequately meet their necessities, and that the State should make provision whereby capable blind people might be made industrially self-supporting, and the incapable and infirm maintained in a proper and humane manner.

Mr. Wardle contended that, on account of their condition, the blind quite rightly made a strong claim on the sympathy and help of the community, and stated that, in order to secure adequate treatment and opportunity, assistance of the State was required. He said there were, so far as could be learnt, 26,336 blind people in England and Wales, and in the United Kingdom somewhere between 32,000 and 34,000. It had been asserted that of these blind people 5,000 were in workhouses, 5,000 were receiving parish relief, and 7,000 begging their bread. Of the whole number apparently only 3,000 were employed in voluntary institutions, and, even in their case, the wages they received were less than 10s. a week. Out of 3,552 sightless persons in the metropolitan area 1,210 were inmates of the workhouses. There were two classes of blind people—the class capable of doing something towards earning their own living, and the class incapable and infirm. It was not asked for the capable that they should not do something towards earning their living; what was asked for them was that they should receive help and assistance in trying to solve that problem, and that they should get training and have employment found for them. Charitable institutions provided training for some 2,310 persons. "Charity," he said, "has also found a lot of money for the blind. Large sums have been left as bequests, and nobody knows exactly how much has been left in this way, but it is variously estimated at the capital sum of between £2,000,000 and £3,000,000. If this sum were properly invested it would no doubt bring in an annual income of about £100,000. The capital does not seem to be entrenched upon, and a large part of the income appears to go in salaries of permanent officials and the expenses of keeping the organizations going. Out of the total number of the blind there are only about 5,800 who are receiving small pensions, averaging not more than £10 per annum. For the disbursement of these charities there are no less than fifty different organizations, with the result that there is overlapping, waste, and great expense, and it is not the sightless who are getting the major part of the benefit. I am informed that the cost of obtaining subscriptions for these institutions and charities ranges from 25 per cent. to 33 per cent. of the proceeds." Mr. Wardle said that about two and a half years ago the Local Government Board made a permissive Order dealing with ophthalmia neonatorum. This year, as the last act of the late President of the Local Government Board, that Order was made compulsory, and he was very glad that it had been made a notifiable disease. No less than 25 per cent. of the cases of blindness were said to be due to the failure to attend to this disease in its very early stages. In 1851 the proportion of the blind to our population was 1 in 900. In 1901 it had been reduced to 1 in 1,285, and according to the Census return for 1911 it was then 1 in 1,370. It was still a very large proportion of the population, and if the compulsory Order had been made in 1851 it was probable that the number of the blind would not have been more than half what it was at the present time. Finally, Mr. Wardle pressed for the co-operation of the State and municipalities in dealing with this problem. Mr. Bowerman, Mr. Hayes Fisher, Mr. T. P. O'Connor, Mr. Alden, Colonel Burn, and other members supported Mr. Wardle. Mr. Burgoyne, also in support, gave some interesting figures as to the age incidence of blindness with

reference to the amount due to ophthalmia neonatorum; he said that there were in England and Wales alone something like 25,000 blind people. Half of these people became blind after the years when they might have been at school—a very important point in discussing this particular phase. Less than 2,500 were under the age of 15. Only about 7,000 were between the ages of 15 and 45, and of the remainder between 15,000 and 16,000 were from 45 years upwards. Mr. Lewis, Parliamentary Secretary of the Local Government Board, said that the Government heartily welcomed the debate. He gave some interesting details with respect to the age, sex, and occupation incidence of blind people. The age incidence of blindness was, he said, a matter of very considerable importance. In 1911, in England and Wales, the proportion per million of the male population under 5 years of age who were blind was 130, and the proportion advanced considerably at later ages. There were over 350 per million between the ages of 20 and 25; 1,200 per million between 45 and 55; and no less than 8,000 per million between 75 and 85. The affliction, therefore, was essentially in large measure an affliction of age. Women were less subject to blindness than men except at a very advanced age. Taking the whole population, 760 out of every million males were blind; but the number amongst females was only a little over 700. The difference between males and females was very striking in respect of occupation. Out of the total number of blind persons of the age of 10 years and upwards, 35 per cent. of the males were occupied as against only 9 per cent. of the females; these figures indicated that the need for finding occupation was much more acute in the case of the women than of the men. Both males and females were chiefly engaged in willow, cane, and rush working, and basket-making. But there was this difference, that the females were almost entirely engaged in these avocations, while among the males there was a considerable variety of occupations. He described the work of the educational authorities with regard to the blind, and intimated the possibility of increased Treasury assistance in the near future. Parliament had passed the Elementary Education (Blind and Deaf Children) Act, 1893, which provided for the compulsory education of the blind from the age of 5 to that of 16. Under that Act accommodation was provided for 2,400 blind children at forty-one day and residential schools, and there were actually over 1,900 on the register of those schools. On the whole there was ample accommodation for blind children who needed education, and there was no indication that there was any considerable number of blind children in the various parts of the country not attending school. The Board of Education was entitled to regard that with some satisfaction. Mr. Lewis also pointed out that a large proportion of the aged blind in Poor Law institutions suffered from paralysis or other physical disabilities, in addition to their blindness, and he gave evidence to show the benefits which some had received from the Old Age Pensions and Insurance Acts. With respect to ophthalmia neonatorum, he said that 36 per cent. of the blindness among school children at the present time was due to this disease. The action already being taken by municipalities under the voluntary powers they at present possessed had been conducive of good results. Very few cases occurred in which children were afflicted with blindness when proper precautions had been taken, and he trusted the action of the Local Government Board, to be taken at an early date, would have the effect throughout the country of greatly lessening the suffering and loss of sight which this disease caused at the present time. Finally, he agreed that further action was necessary, and said that the time had arrived when a great step forward ought to be taken in this direction; it would, however, be extremely unwise for the Government to move in this matter without making due and proper inquiries. A bill had been drafted by the labours of a number of societies interested in this question. The Government departments had not had an opportunity of considering that bill. The Government proposed, without loss of time, to appoint an Interdepartmental Committee to consider the whole question. The resolution of the House would be interpreted as meaning that the time had arrived when the question must be inquired into, and the results of that inquiry considered carefully and in a sympathetic spirit, with due regard to all public interests concerned.

The Dogs Bill. This bill, which prohibits the performance of experiments on dogs, has been reintroduced again this year by Sir Frederick Banbury. He did not secure a day for the bill in the ballot, but selected Friday, April 17th, which had been left vacant by members who were fortunate in the ballot, as it was the Friday after Easter. It is, of course, possible that the House may be sitting on that day, and the bill is at present the first order on the paper, so that the opponents of the measure will need to be on the alert. Should any of the other private bills, however, which have now passed second reading, get through Committee by that date, they will take precedence of the Dogs Bill, so that it is quite possible that, even if the House is sitting, it may not, when the time arrives, become the first order of the day.

Vaccination Acts (Repeal).—The short bill to repeal the Vaccination Acts, which as announced last week has been introduced by Mr. Black and other members, contains the following provisions: The first clause proposes to repeal the Vaccination Acts as enumerated in the schedule attached to the bill. The second clause prohibits the payment of public money for vaccination or for the supply of lymph; and the third clause makes it unlawful to require vaccination as a condition of entry into any of the public services. No day has been secured for the bill, so that the chances of its getting further are very remote.

Milk and Dairies Bill.—In reply to Mr. C. Bathurst and Mr. Harry Lawson, the President of the Local Government Board said that he could not make a definite statement with regard to the introduction of a milk and dairies bill. He was in communication with the representatives of the various interests affected, and if the bill was introduced it would be in a form somewhat different from the bill of last session.

Infectious Diseases (Notification) Acts.—Mr. Astor asked how many local authorities had during the last twelve months requested the Board to apply the provisions of the Infectious Diseases (Notification) Acts to the first case of measles and whooping-cough occurring in a household; and how many local authorities had drawn the attention of the Local Government Board to the great difficulty experienced in dealing with "carriers" of diphtheria, and had asked the Board to permit legislation to enable sanitary authorities to treat the "carriers" as persons suffering from an infectious disease.—The Parliamentary Secretary to the Local Government Board (Mr. Herbert Lewis) said that the Devon County Council in December last passed a resolution requesting the Board to apply the provisions of the Notification Acts to the first case of measles and whooping-cough occurring in a household. No other local authority had made any such application in the last twelve months. Legislation would be required to give effect to the proposal. In answer to the second part of the question, four or five sanitary authorities had recently drawn the Board's attention to various difficulties in dealing with "carriers" of diphtheria, and the Devon County Council had suggested that legislation should be promoted to enable sanitary authorities to treat "carriers" as persons suffering from infectious disease.

Enteric Fever.—Mr. Astor asked the President of the Local Government Board in how many instances in 1912 and 1913 were cases of enteric traced to infection conveyed through milk.—Mr. Herbert Samuel replied that there was no complete information available as to the number of instances during the two years in which cases of enteric fever were traced to infection conveyed through milk. The medical inspectors of the Local Government Board had investigated four separate outbreaks of enteric fever in which, taken together, infected milk was held to be responsible for, approximately, 200 cases. In addition, the M.O.H. of Bradford reported an outbreak in 1912 in which about 100 cases were held to have resulted from milk infection. A few other instances, on a smaller scale, in which milk was suspected, had been brought to notice. For further details he referred to the paragraphs on the subject on pages xvii–xix of the annual report of the Medical Officer of the Board for last year.

Ventilation of the House of Commons.—The Select Committee on the Ventilation of the House of Commons held its second meeting this session on March 12th. The whole of the time of the Committee was taken up by the further examination of Mr. A. P. Patey, formerly resident engineer of the House of Commons, and one of the engineers on the staff of the Office of Works. Mr. Patey suggested that the air admitted into the debating chamber was of insufficient humidity during the winter months, and he believed that this was due to the fact that the warming apparatus was nearer to the chamber than the spraying machinery, and that the subsequent warming of the air by lowering the humidity was responsible for some of the depressing effects complained of by members. He suggested that the relative positions of the apparatus required should be altered, and that the fog filters when required should, if possible, be near the entrance of the air tunnels, and that, after the air had been warmed to the requisite degree, the necessary humidity should be imparted to it by the sprays before it was admitted into the chamber. His cross-examination by members of the Committee related to these questions, and a considerable amount of time was taken up in a discussion as to the amount of air which was required, the velocity it should possess, and the position at which it could best be admitted. The general impression received from the questions of the members of the Committee was that they were inclined to think that the admission of air in a rapid current through the floor, as prevails at present, was in a large degree responsible for many of the unsatisfactory conditions of which members complain.

Infectious Disease (Compensation for Workers).—In reply to Mr. Astor, the President of the Local Government Board said that twelve local authorities had in the last three years obtained power by local Acts to compensate persons for giving up their employment at the request of the council or of the medical officer of health, for the purpose of preventing the spread of infectious disease. In addition, seven local authorities had obtained power by local Act during the same period to compensate dairymen who ceased to supply milk, and two to compensate common lodging-house keepers for the closing of their lodging-houses in similar circumstances.

School Clinics.—In reply to Mr. John Williams, the Parliamentary Secretary to the Board of Education (Mr. Trevelyan) said the number of local education authorities in England and Wales that had established school clinics for the treatment of children attending public elementary schools was 115. The total number of clinics was approximately 200. The reports of the school medical officers showed that in a large percentage of cases the treatment had been effective. The Monmouthshire education authority had established a clinic at Newport for treating defects of eyesight. The establishment of further school clinics was under consideration.

Milk Supply (Edinburgh).—Mr. James Hogge asked whether 15 per cent. of the milk supply in Edinburgh contained living tubercle; whether this was twice the average of the large towns in the United Kingdom, and what steps were being taken to cope with this condition of affairs.—Mr. McKinnon Wood replied that he was informed that the M.O.H. for Edinburgh stated that investigations carried on for several years showed that only in exceptional cases was the presence of tubercle detected in samples of milk taken in the city. He had no reason to doubt that efficient measures of inspection and examination were in operation, and that as regards its milk supply Edinburgh would compare favourably with other large towns. Edinburgh occupied a good position when its statistics of mortality from all forms of tuberculosis were compared with the statistics for other large towns in Scotland.

Boracic Acid in Cream.—Mr. Peto asked whether the President of the Board of Agriculture could make a definite regulation under Section 4 of the Sale of Food and Drugs Act, 1899, fixing the limit of boracic acid to be allowed to be used in preserving cream at 35 grains to 1 lb., or 0.5 per cent., which was the amount recommended by the Departmental Committee (1901) on Preservatives for Use in Butter.—The President of the Board of Agriculture said that he was not satisfied that it was desirable in the public interest to make a regulation defining the quantity of boracic acid which might be added to cream as a preservative. The matter was under consideration in consultation with the Local Government Board.

Medical Officers of Health.—Mr. Astor asked the President of the Local Government Board how many full-time and how many part-time medical officers of health were employed by local authorities in England and Wales; how many of the former received a salary of £500 or over; and how many received less than £500.—Mr. Herbert Samuel stated that the figures, so far as they could be ascertained from the Local Government Board's records, were as follows:

Authorities.	Number of Medical Officers of Health not in Private Practice.	Number not in Private Practice who receive Total Remuneration of £500 or over.	Number not in Private Practice who receive Total Remuneration less than £500.	Number of Medical Officers of Health engaged in Private Practice.
Counties	61	49	12	—
City of London	30	30	—	—
Port of London				
Metropolitan boroughs ...				
Other sanitary authorities	221	159	62	1,125
Total	312	238	74	1,125

Rural Population.—In reply to Mr. Royds, the President of the Local Government Board said that the figures of 1901 showed a decrease in the population in rural districts in England and Wales of 637,533, or 7.9 per cent., on those of the previous census, and the figures o 1911 an increase of 438,068, or 5.9 per cent., over 1901. The rural districts, both in 1901 and 1911, had a smaller area than those of the preceding census. In reply to a supplementary question by Mr. Cassel, Mr. H. Samuel said that the agricultural population should not be confused with the population in the rural districts. "Rural districts" had a technical meaning: it meant districts under a rural authority, and included a great number of mining districts, the population of which had been rapidly increasing.

House Accommodation, Rochdale.—Sir Arthur Griffith-Boscawen called attention by a question to the recent report of the M.O.H. of Rochdale, in which it was stated that there were 5,482 not-through houses in Rochdale, of which 3,470 were back-to-back; Manchester had got rid of over 5,000 back-to-back houses in the last six years, and Salford had reduced the number of such houses from 2,525 to 73.—Mr. Herbert Lewis stated that the Local Government Board was in communication with the Town Council of Rochdale on the subject, and was awaiting a reply.

Labourers' Cottages (Ireland).—In reply to Mr. O'Donnell, Mr. Birrell supplied the following table as to the number and cost of the cottages provided in the districts concerned:

	On March 31st, 1913.		Average Cost per Cottage having regard to Loans Sanctioned.
	Built.	Authorized.	
			£
Banbridge	105	167	200
Hillsborough	75	149	198
Moira	123	197	221
Killarney	300	440	153
Listowel	725	812	151

Royal Commission on Quarries and Mines.—The Home Secretary informed Mr. Ellis Davies that the Royal Commission on Quarries and Metalliferous Mines had not yet finally settled its report, but expected to have it ready in the course of next month.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE SCHOOL OF TROPICAL MEDICINE AT CALCUTTA.

The Laying of the Foundation Stone by Lord Carmichael, Governor of Bengal.

ON February 24th the foundation stone of the School of Tropical Medicine in Calcutta was laid by Lord Carmichael, Governor of Bengal, in the presence of a distinguished gathering. Lord and Lady Carmichael were received by Colonel Harris, Inspector-General of Civil Hospitals, and Colonel Calvert, Principal of the Medical College, who presented the College Council to their Excellencies.

Colonel Harris opened the proceedings with a lengthy speech, in which he reviewed the history of medical research in India from the early days of Annesley and Twining to the present time. He pointed out the immense advantages of Calcutta as the locality of the first school of tropical medicine to be founded in a tropical country. He referred to the work of American doctors in Cuba, the Philippine Islands, and Panama as evidence of the practical importance of medical research in reducing the mortality of tropical diseases and making it possible for Europeans to carry out great works in hot climates. He next described the arrangements of the laboratories of which the stone was being laid, and stated that, including the biological laboratory for the students of the Medical College and the site for a small hospital for tropical diseases, they would cost 11½ lakhs (£76,667). The Government of India had already given 6 lakhs, and an extension to accommodate teaching for a diploma in public health at a cost of 1 lakh was under consideration. The fees for the courses would cover only a very small part of the cost of upkeep. Colonel Harris made an eloquent appeal for liberal endowments from all parts of India to enable full use to be made of the new laboratories in the investigation of the many important problems in tropical medicine in India. An additional sum of 2½ lakhs was urgently required to build the hospital for tropical diseases to enable the researches to be carried out on the most practical lines, and further large sums for the endowment of beds in the hospital. The staff would consist of a professor of tropical medicine, with fully 40 beds under his control; a professor of bacteriology and pathology, a professor of protozoology, a professor of entomology and helminthology, a professor of biochemistry and serology, and a professor of pharmacology (to investigate in a scientific manner Indian drugs), with an adequate staff of demonstrators. One of the professors would presumably be appointed Director of the Institute, a post which will not be permanently tied down to any particular chair. The staff would be whole-time men, and prohibited from engaging in general private practice. A diploma in tropical medicine would be granted, and as the institution would be an imperial one the nominations to the chairs would be made by the Government of India, so as to obtain the best men in or outside the Government services.

Surgeon-General Sir C. P. Lukis, K.C.S.I., Director-General of the Indian Medical Service, in a brief speech conveyed the goodwill and best wishes of the Government of India for the success of the Calcutta School of Tropical Medicine, and dwelt on the immense importance of the work before it. He expressed keenest personal interest in the scheme, which had originated from him in March, 1910, and the pleasure it gave him to witness the laying of the foundation stone of an institution which he was convinced would at no distant date develop into one of the most important centres of medical research, not merely in the Far East, but in the whole world.

The stone was then laid by Lord Carmichael, and on his return to the dais Lieutenant-Colonel Leonard Rogers presented his report as Honorary Secretary of the School of Tropical Medicine Endowment Fund, and announced that in the few weeks which had elapsed since his appeal had been issued, donations had been given or promised amounting to a total of Rs. 1,17,952 (£7,865). The tea, jute, and mining industries were favourably considering his appeal for Rs. 20,000 a year for five years from each to enable additional research workers to be employed. Seven members of the Calcutta Trades Association had contributed Rs. 1,650, while it was hoped that substantial help would be received from the Chamber of Commerce and the Calcutta Corporation, as well as from the great Indian railway companies.

A number of Indian gentlemen who had contributed liberally to the endowment fund were then presented to His Excellency, including Kumar Birendra Chardr Singha of the Paikpara Raj, who is generously giving Rs. 50,000.

Lord Carmichael said that no official act as governor had given him greater pleasure than to lay the foundation stone of an institution which would be so useful to mankind. He hoped that money would be liberally subscribed in India as it had been subscribed for similar institutions in America and in England. In India the money so subscribed was likely to yield even more fruitful results, for the opportunities for research were greater. Colonel Leonard Rogers had told him that in more than one-third of the cases he had examined *post mortem* at the Medical College death was due to tropical disease; no other city could afford such an opportunity. The variety of clinical and pathological material available would be greater than it could be in England, and there would be a five months course of instruction in place of the two or three months required in the English schools. The question put by those who proposed to give money to the school might be: Will it pay? To that there could be but one answer: It would pay. There was the classic instance of the Panama Canal. There was the case of Khartoum, where the work of the Wellcome laboratories had been paid for again and again, and there was the instance of Malta fever where the money expended in ascertaining its cause had not only been amply repaid, but had resulted in a substantial saving to the Government. He believed that the time was at hand when it would be possible to deal effectually with dysentery, cholera, and leprosy. Kala-azar took so great a toll of life in Bengal, that it was an even greater cause of mortality than malaria. What was known of that disease really amounted to the knowledge that there was very much more to be known. A war must be carried on not only against mosquitos but other insects which were disease carriers, and money spent in finding out how to deal with them would be money well spent. After a reference to the possibility of the introduction of yellow fever into India, His Excellency said that there were many other subjects waiting for Colonel Rogers and other enthusiasts to learn and to teach, and it was for the public to help Colonel Rogers and his co-workers to do what they believed they could do, for they had shown that they had good reasons for that belief. He appealed to Europeans who made careers and sometimes fortunes in India, and also to native Indians proud of their motherland, and mentioned that a bed in the proposed special hospital could be endowed for Rs. 5,000. The Government was ready to do all it could, and he only regretted that the Viceroy, who took a deep interest in the scheme, had not been able to be present to lay the foundation stone; he had, however, received the following telegram from Lord Hardinge:

> My heartiest good wishes for to-morrow's ceremony in which, and in all that it stands for, I am deeply interested. I am sanguine that the school of which you are about to lay the foundation-stone will make a great name for itself in the field of tropical medicine for the study of which this country offers such unrivalled opportunities.

Calcutta, in the establishment of the school of tropical medicine, was leading the way in the East, and Lord Carmichael believed that her citizens would take care that whatever other places might do, Calcutta would always keep the lead, and in keeping it win the admiration not only of all Indians but of all civilized peoples.

The proceedings terminated by a hearty vote of thanks to His Excellency proposed by the Hon. Mr. A. M. Monteath, and seconded by Rai Dr. Kailash Chundur Bose Bahadur, C.I.E., through whose good offices a large number of the donations to the endowment fund had been received.

THE medical practitioners of Blois have issued a collective circular to their patients requesting them not to send for them or to call at their houses on Sundays, except for really serious cases, confinements, and accidents.

England and Wales.

WALES.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF WALES.

IN a letter addressed to Lord Merthyr, President of the University College of South Wales and Monmouthshire, Colonel Bruce Vaughan gives further particulars with regard to the gift of £60,000 to the Medical School of the University of Wales, supplementing the gift of £30,000 made not long ago by Sir William James Thomas. The anonymous donor intends that the sum shall be devoted to establishing a public health laboratory for the city and county which shall include provision for bacteriology (and pathology, if necessary), and shall contain large and well-equipped laboratories for research. The donor is willing also to provide the necessary accommodation for the complete medical school building not already included in the generous gift of Sir W. J. Thomas. The conditions attached to the gift are as follows:

1. That College authorities will provide, without cost to the donor, a site for the school of preventive medicine now occupied by the eight houses in The Parade, Tredegarville, and also a site on the Newport Road for the departments of anatomy, medicine, surgery, midwifery, etc.
2. That the amount (£2,000) promised by the County Council as a contribution to the public health department shall be available, and any other gift by the Cardiff City Council for a like purpose, shall be allocated towards its building and equipment.
3. That the £10,000 suggested from another source should also be used towards the erection of this building.
4. The last and most important condition—and upon this mainly depends this offer—that the grant made by the Treasury in addition to the present grant of £1,500 shall, in the opinion of Sir William Osler, the Regius Professor of Medicine at Oxford, be an adequate one for a first-rate, up-to-date Medical School.

The donor in making the offer said that he believed that no other need of the Principality was so urgent as provision for investigation and research leading to advance in preventive medicine, which will be the result of the establishment of a full medical school. No other scheme could produce such far-reaching and important results, and there was none which would be so certain to command the loyal and hearty co-operation of all sorts and conditions of persons in Wales. Though the present state of medical science required large resources for its advancement, the return in benefits to mankind had been, and he believed would continue to be, great, out of all proportion to the money expended.

MANCHESTER AND DISTRICT.

PROFESSIONAL CONFIDENCES IN LAW COURTS.

THE difficulty in which medical men are often placed when they are called on in court to reveal facts which they have learnt from private patients was exemplified last week in the Manchester County Court. It appears that Dr. George Edgar Helme, of Rusholme, had been attending a workman as a private patient and received a fee from him, and was then called as a witness for the employers from whom the workman was claiming compensation for an alleged accident. The counsel for the employers was about to question Dr. Helme as to what had passed between him and the workman when Judge Mellor intervened and said it was unprofessional conduct for a doctor to make such disclosures. He then questioned Dr. Helme, who admitted that the man had paid him a fee for attending him privately, and he presumed that he would also be paid for giving evidence in court on behalf of the employers. The judge then asked if he thought it professional conduct to take money from both sides and to disclose what a private patient had told him. Dr. Helme said he considered it right to disclose the facts in court, but the judge then said he was astonished to hear it, as statements by a private patient were privileged. Mr. Ray, the counsel for the workman, objected to the doctor being heard, on the ground that it would be a breach of professional conduct on the part of any medical man to take money from a patient and then go over to the other side and disclose what he had learnt. The judge then refused to accept Dr. Helme's evidence, and added that he intended to take up the position which had been taken up by Lord Russell of Killowen, who, in a similar case, had expressed himself in the strongest terms and had refused to allow the doctor to give evidence. "He could conceive of conditions, as in a criminal trial, where the doctor would be bound to divulge certain things, but in private litigation he could not conceive any excuse whatever for divulging what a doctor found in those intimate and sacred relations which should exist between a doctor and his patient in the secrecy of the sick room." Mr. Burgis, the counsel for the employers, said he was responsible for the calling of the doctor, and he differed from the judge as to the law on the subject, but the judge replied that he would not accept such evidence until some superior court had said he was wrong, as he knew that was the line taken by several judges, such as Sir Francis Jeune.

The strong remarks of the judge were perhaps naturally taken as a serious reflection on Dr. Edgar Helme's conduct, though all who know him would ridicule the idea that he would ever dream of unnecessarily divulging any professional confidences, much less that he would attempt to get money from both sides in any case, and Judge Mellor evidently felt that his own remarks in court had unintentionally given a wrong impression. Accordingly, on the following day, on taking his seat in court, he very handsomely apologized. He said that the action of the insurance company had placed Dr. Helme in an awkward position, as he had to attend to a subpoena. He (the judge) had suggested that it was not quite the thing to put Dr. Helme into the witness box, but as they insisted on it and wanted a ruling and talked of what sort of proceedings they would take, he let him go into the witness box. Judge Mellor then continued, as reported in the *Manchester Evening Chronicle*:

> I fully expected that the gentleman would have said to me, "Am I to answer these questions?" and have asked for my protection, which is the usual way to do, and I should have said at once that he need not answer the questions. Certain things were said, objection was taken and a breach of contract was mentioned, but I do not think that has got so much to do with it.
>
> I put it on the ground of the intimate relations which exist between a doctor and his patient as regards what is somewhat loosely called professional etiquette, and I have known instances where, in such circumstances, the evidence of the doctor has been refused, and the doctor has been protected. But it seems that I sort of suggested that this gentleman had sold the information which he had received, as doctor to the patient, to the other side.
>
> Now, that is not at all what I intended, and I don't think that I said it, and if anybody is under the impression that I should think that a gentleman of Mr. Helme's position would do a thing of that sort I take the very first public occasion I can to say that I never for one moment meant to suggest such a thing. And I am very sorry that anything I said should be considered derogatory to a gentleman who holds the high position that Mr. Helme does.
>
> I have no doubt he did not know what position to take up. He had got a subpoena, and thought he was bound to answer, and he never asked me for my protection. I intended to say that doctors should not be put, in private litigation, into such an exceedingly difficult position.
>
> I mention this because I should not like it to be suggested that I intended anything of the sort, and I think it is only due to him that I should publicly say so.

LANCASHIRE.

RESIGNATION OF THE STAFF OF THE ROYAL VICTORIA HOSPITAL, BLACKPOOL.

A DIFFICULTY which arose recently between the medical staff and the board of management of the Victoria Hospital, Blackpool, has now reached a very serious stage. We are informed that in November a proposal was made to appoint a house-surgeon, and that the honorary secretary of the medical board, Mr. W. B. Richardson, expressed the opinion that before proceeding with the appointment improvements should be made in the quality and quantity of the food at that time supplied to the nursing staff. At the next meeting of the board of management a subcommittee was appointed to investigate the matter, and examined the three sisters and a senior probationer. After a later meeting of this subcommittee the two senior sisters were informed that in the best interests

of the hospital it was deemed advisable that they should send in their resignations, but that if they preferred they would be paid a month's salary and could leave at once. At a special meeting of the medical board held on the following day, at which Dr. Molloy, honorary consulting physician, was in the chair, a resolution was passed by the unanimous vote of the acting members present, asking the board of management to reconsider its decision, which appeared to be too drastic, especially as the medical board did not believe that the nurses had any intention to be disloyal to the matron. The board of management declined to reconsider its decision, but assured the medical board that the future of those most intimately concerned would not be allowed to be prejudiced by recent events. A conference between the subcommittee and the medical staff led to no result, and on January 11th four of the five members of the medical staff handed in their resignations, to take effect in a month. The honorary secretary of the medical board marked his disapproval of the board of management's conduct by resigning his position on that body. A further conference took place between the medical staff and the board of management three days before the resignations took effect, but no understanding was reached. It was subsequently announced that Dr. John Findlay, of Blackpool, and Mr. G. H. Urquhart, of St. Anne's-on-Sea, a health resort some five miles from the hospital, had been appointed to the honorary medical staff, and a couple of days later it was stated that Mr. William Foote, M.B., B.Ch., B.A.O., lately resident medical officer of the Royal City of Dublin Hospital, had been appointed house-surgeon. Mr. Urquhart, on learning the circumstances, tendered his resignation, and at a meeting of the local medical profession on March 14th the following resolution was passed unanimously:

> We, the undersigned, members of the medical profession resident in Blackpool, being persuaded that the attitude of the Board of Management to the late members of the honorary medical staff is prejudicial to the interests of the patients and of the town generally, pledge ourselves not to accept any appointment on the Victoria Hospital staff until there is a complete reorganization of the Board of Management, and feel that all future appointments should be open to the profession generally.

This resolution makes it clear that the medical men in the town considered the position taken up by the four members of the medical staff was justified, as the calling for the immediate resignation of the sisters seemed tantamount to dismissing them for telling their employers—when commanded by them to do so—their opinion respecting the hospital's food supply. The sisters had not made any complaints and had not volunteered any evidence, and though the statements they made were followed by changes in the dietary the sisters were punished by being called upon to resign, whilst the person or persons responsible for the unsatisfactory state of things went, so far as is known, unpunished.

In the circumstances set out above, the medical men of the town feel they are entitled to ask for the support of the Association and of the profession in general.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CENTENARY OF SIR PATRICK DUN'S HOSPITAL.

A LARGELY attended meeting of the friends of Sir Patrick Dun's Hospital was held in the board room of the hospital last week to arrange for the celebration of the bicentenary of Sir Patrick Dun, who died in 1714. Sir Charles Ball, Bart., surgeon to the hospital, who presided, said that the time was appropriate to commemorate the centenary of the foundation of the hospital and also the bicentenary of the death of Sir Patrick Dun, who went to Ireland as an army surgeon, was present at the battle of the Boyne, and was said to have treated the Prince of Orange for some slight injury. Subsequently Sir Patrick Dun settled in Dublin, and at his death left certain estates he had in Ireland to be used for medical purposes after the death of his wife. Lady Dun died in 1748, and there was considerable trouble in the distribution of the estates. Certain amounts were left for professorships in the College of Physicians, and for the establishment of a library there. The value of the property had increased very considerably in the interval between the date of the will and the death of Lady Dun. Eventually the Irish Houses of Parliament passed what was known as the Medical Act of 1800, and under that Act certain portions of the property went to the College of Physicians, and the balance for the erection and equipment of the present hospital, which was therefore founded a little over a hundred years ago. It is certain that some sort of hospital for the reception of patients was opened 106 years ago. In the present hall of the hospital was a notice giving the name of the hospital, and its date of erection as 1814. That date evidently referred to the time when the central portion of the hospital, which was used for some time for the hall of the College of Physicians, was erected. Sir Patrick Dun's, like most of the other Dublin hospitals, was very badly in need of funds. It was often said that with such a large foundation endowment public subscriptions were not required. At one time the income derived from the property left by Sir Patrick Dun amounted to £1,500 a year, but since the estates had been sold to the tenants the annual income did not exceed £500, whereas the cost of running the hospital was about £6,000 a year. Every year the expenses of the hospital were increasing, food cost more, new means of treatment and diagnosis cost more, and almost every day patients had to be turned away from the hospital owing to want of funds or want of room. At present the hospital's overdraft on the bank amounted to about £4,000. Dr. James Craig said the medical staff were giving their services willingly to the work of the hospital, and he trusted there would be such a response to the appeal about to be made that they would not be hampered in their work for want of funds. It was decided to open a subscription list to cover the initial expenses of the work of organization, and most of those present contributed to this fund.

CIVIC EXHIBITION IN DUBLIN.

The condition of the housing of the working classes and the problem of the poor in Dublin having been brought into prominence during the last few months, the Housing and Town-planning Association called a conference of representatives of various organizations interested in the subject when it was decided to hold a civic exhibition in Dublin during next summer and autumn, at which all that concerns the welfare of the citizen should be illustrated. A Council has been formed, and an Executive Committee appointed to carry out this project. Mr. John Nolen, of Cambridge, Mass., a gentleman of exceptional experience in the management of civic exhibitions and in all that makes for city improvement, has been engaged as manager. The purpose of such exhibitions is to illustrate methods of dealing with the main problems which concern municipal life, such as housing of the people, lighting and cleansing, water supply, milk and food supplies and inspection, care of the sick and poor, hospitals and benevolent institutions, and the education of the young. The Local Government Board has promised to undertake a civic survey of Dublin, and there is an earnest desire that a carefully considered plan should be laid down for the improvement of Dublin. The Lord Lieutenant has generously offered a prize of £500 for the best plan on the understanding that the competition will be adjudicated on by experts of international reputation. The Vice-President of the Department of Agriculture and Technical Instruction has promised its co-operation, and a number of organizations have already promised their support, and the Executive Committee is taking steps to invite the help of all organizations and associations throughout Ireland likely to take an interest in the exhibition.

TUBERCULOSIS IN ANTRIM.

The county of Antrim seems to be behindhand in dealing with the subject of the treatment of tuberculosis. It has recently proposed to devote the inadequate amount of £600 to this purpose. The Lisburn and District Medical Guild has published a letter stating that in 1912 there were 512 deaths from tuberculosis in the county, from which it is estimated that at least 4,096 people are suffering from tuberculosis either in its pulmonary or surgical form, and that as about half of these are not insured the number with which the county council propose to deal by this vote of £600 must be about 2,048. At a meeting of

the guild on February 25th the following resolution was adopted:

That we strongly urge the Antrim County Council to adequately consider the state of their county as to tuberculosis, and that we deplore the smallness of the grant (£600) voted by the Council for treating this disease, and that a copy of this resolution be sent to each county councillor and to the press.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

DENTISTRY IN EDINBURGH.

THE annual general meeting of the Odonto-Chirurgical Society of Scotland was held in Edinburgh on March 13th. Mr. G. J. Goldie (Dublin), the president of the society, presided, and the treasurer made his statement. The funds at January 1st, 1913, had been £401 6s. 1d.; the income for the year had brought the charge side of the account to £452 18s. 3d., and the funds (after allowance for expenditure) at December 31st, 1913, were £414 7s. 7d. The office-bearers for the ensuing year were elected, and Dr. J. Sim Wallace, L.D.S., read a paper on some recent investigations and their bearing on a theory of the causation of dental caries (with special relation to mucus and saliva), which was followed by a discussion.

In the evening the annual dinner was held in the Caledonian Station Hotel, Edinburgh, when some sixty sat down. Mr. G. J. Goldie presided. The toast of the "British Dental Association" was proposed by Mr. James Watt, W.S., and acknowledged by Dr. Guy (Edinburgh), president-designate of the association. The toast of the "Odonto-Chirurgical Society" was proposed by Dr. Sim Wallace, and replied to by the President in an amusing speech. Besides following the fashion of tonsillitis, appendicitis, etc., to extremes, the medical profession, he said, had exaggerated the importance of pyorrhœa. There was at this moment in London a plague of all diseases ending in "itis." They were all due to pyorrhœa, and out the teeth had to come in bushels. He thought many mistakes were due to the fact that the dental and medical professions did not come more often together. The toast of the "Royal College of Surgeons" was proposed by Mr. B. Sherratt, and acknowledged by Professor Caird, President. Mr. J. W. A. M'Gowan (Glasgow) proposed the "Edinburgh Dental Hospital and School," and pleaded for greater support. Councillor Malcolm Stuart, W.S., Secretary, in reply, announced that Lord Rosebery had consented to head the extension fund with £100.

At the twenty-second annual general meeting of the Incorporated Edinburgh Dental Hospital and School on March 10th, when Dr. William Guy, the dean of the school, presided, it was reported that during the year sixteen new pupils had been apprenticed to the incorporation, and that there were ninety-four students on the roll as against eighty-six in the previous year. The necessity for enlargement or extension of the present premises was becoming more pressing, and the directors had purchased No. 30, Chambers Street, which would ultimately be incorporated into the extended building. The adoption of the report was moved by Professor Alexis Thomson, who said that dental matters had become of increasing importance. Formerly very few people went to the dentist unless they were forced to do so, whereas nowadays not only was dentistry regarded as a most important service to be purchased by the wealthy and well-to-do, but likewise as an aid (in the hands of experts) which should be available for the poorest in the land. Lister's great work had only recently come to be regarded as important in connexion with the teeth. Decomposition within the mouth was a very important cause of ill-health, and for its diminution among the public generally they must look to efficient dentistry among school children, and this could not be practised unless a larger number of efficient dentists was provided. The report and appeal for funds were unanimously adopted.

EDINBURGH MATERNITY HOME FOR RESCUE WORK.

The annual meeting of those interested in what is called the Lauriston Home for Maternity Rescue Work was held on March 5th. In this home girls who are illegitimately pregnant are cared for till the time of their confinement, when they are transferred to the wards of the Royal Maternity Hospital, which is situated on the opposite side of the street (Lauriston Place); further, if any one of them become seriously ill before labour she can be moved over the way into the prematernity ward of the hospital. The report showed that the number of girls admitted during the past year (53) showed a decrease as compared with the previous eight years, during which period the average yearly number had been from 65 to 70. Nearly four-fifths of the total number of admissions to the institution had been of the domestic servant class, a fact which led Dr. Wallace Williamson, who moved the adoption of the report, to point out that the number of domestic servants in Edinburgh was much above the average, for the city was so largely a residential one. The loneliness and lack of friends of these girls may also be adduced in attempting to explain the disproportionate number of admissions to the above home. The Bishop of Edinburgh, who took part in the proceedings, commented upon the youth of the girls, and said he thought there was something wrong with the educational system in not giving a child the necessary knowledge to enable her to meet the dangers of a great city. One-third of the total admissions were girls in their "teens," from mere children of 15 upwards.

ABERDEEN MATERNITY HOSPITAL.

Lord Provost Maitland presided at the annual meeting of the Aberdeen Maternity Hospital held on March 10th. The report showed that the total revenue for the year, inclusive of legacies, was £2,389 11s. 1d., leaving a total deficiency on the working of the institution of £2,432 8s. 8d. During the year the number of patients who attended was 296, of which 185 received treatment at the hospital. The Rev. James Smith, who moved the adoption of the report, said that their relation to the Insurance Act caused directors great anxiety. Their relations with friendly societies were conspicuously satisfactory. They had been able to form friendly relations with no less than thirty of the principal approved societies in Aberdeen—a very large proportion—and these were paying most willingly 7s. 6d. for outdoor treatment to their members and 10s. for indoor treatment. The fall in the number of patients would, he was satisfied, be readjusted when the people began to realize that, instead of paying 30s. or 20s. as the case might be for private maternity treatment, they could obtain it at the Maternity Hospital for 10s. or 7s. 6d. Principal George Adam Smith, in seconding, said he was glad to see that during the year the opportunities the institution afforded to senior medical students had been taken advantage of by a considerably larger number than was the case last year. Although the total financial deficiency had been reduced throughout the year by means of legacies, there was a deficiency upon the year's transactions of not less than £124. He hoped it would go forth to the public that it was impossible to carry on an institution of that kind upon the amount of support it was at present receiving.

HEALTH OF SCHOOL CHILDREN IN EAST LOTHIAN.

Dr. Buchanan, in his third report to the County of East Lothian Secondary Education Committee, has made some rather alarming statements regarding the medical defects which inspection of the school children had disclosed. He said that even on a most generous estimate there were no more than 20 per cent. of the children in the county with perfect teeth; in other words, there were about 6,000 children whose teeth required dental treatment, and this meant an expense from £600 to £700 a year. About 12 or 15 per cent. of the children suffered from extensive decay, and to give them treatment would cost about £150. To do this a school dentist could be engaged for whole or part time, or the services of local dentists could be made use of and remunerated at a rate of, say, 10s. an hour. He favoured the latter plan. There was also a great deal of defective vision, and he was of opinion that the most economical and practical manner of dealing with it was to send the children to Edinburgh for treatment, combining, if possible, with one of the Edinburgh school authorities; each case would probably cost from 15s. to £1, and as there were about seventy children discovered each year suffering from defective sight, the expense would be about £50 or £70. Enlarged tonsils and discharging ears were other defects observed, but the dental and ocular were the

most immediately pressing. A special subcommittee was appointed to consider the question and report. It may be added that, during the year, 3,262 children were examined —1,633 boys and 1,629 girls—and that there were 1,877 re-examinations. Of the boys, 2.8 per cent. were backward in regard to mental capacity, and of the girls 1.04; 0.3 per cent. of the boys were mentally deficient, and 0.06 of the girls.

Special Correspondence.

BERLIN.

*The Modern Treatment of Syphilis.**

THE third speaker in this important debate was another venereal authority, Professor Blaschko, whose opinions on the efficacy of salvarsan as a curative agent are well known, and whose conviction it is that mercury is inferior to it in this respect. He cited his experience of its partial successes in cases of tabes, in many of which there had been a restoration of lost reflexes and disappearance of the girdle pains, results which had very rarely followed intensive mercurial treatment. He repeated the warnings which he had uttered at the London International Congress last year, against the employment of large doses, and declared that with small injections every danger was excluded. He believed that it was a mistake to attempt a comparison of the respective values of mercury and salvarsan, and the fact that the former seemed more potent in gummatous infiltrations and the latter in causing the disappearance of fresh cutaneous eruptions, was a strong argument in favour of a combined administration. He was therefore quite unable to understand the attitude of Professor Wechselmann, who, he was quite sure, did not realize how many of his cases came subsequently to be treated at other hospitals with mercury. The keynote of treatment should be not rapidity but thoroughness. The Wassermann reaction had, in spite of our ignorance of its meaning, completely altered our outlook with regard to syphilis, and its machinery was admittedly of far greater delicacy than any clinical sign or symptom; he believed, however, that it was a mistake to base treatment entirely on its readings. He confessed himself a strong advocate of the intermittent continued treatment first introduced by Fournier. He then referred to the interesting statistics calculated from Austrian military syphilitic tables. Of 4,134 cases, 77 per cent. of those energetically treated were still quite well twenty to thirty years later, whilst of those treated inefficiently only 36 per cent. had escaped all sequelae. It was especially to be noted that of the so-called "non-recurring" cases no fewer than 65 per cent. had ultimately developed tabes or general paralysis, thus confirming the modern idea that the milder the primary manifestations the greater the liability to parenchymatous disease of the central nervous system in later years. The majority of such cases occurred as a rule fifteen to twenty years after the initial infection, and it was therefore still too soon to estimate the effect of salvarsan on the statistics of these terrible afflictions.

Professor Citron, of the Charité, spoke very strongly in favour of controlling treatment by the Wassermann reaction, and bore testimony to its value in the elucidation of doubtful cases, especially those which he designated "*lues asymptomatica*"; in these there was an undoubted tendency to the future development of aortic aneurysm or tabes, and they might be just as infectious to other individuals and to their own children as cases in which the specific signs of the disease were clinically manifest. He preferred, therefore, to carry on treatment until both the blood and the cerebro-spinal fluid exhibited a negative reaction, and the aim of the syphilologist should be to exterminate every spirochaete in the organism. The iodides had a marked effect in causing the disappearance of tertiary signs, but it was well established that they did not effect a cure—a fact that was borne out by the persistence in such cases of a positive Wassermann reaction. In other words, iodides did not destroy the virus. The best means available for this purpose was the combined exhibition of salvarsan and mercury. Professor Citron was firmly convinced that the best method of introducing mercury was by inunction, and warned his hearers that sublimate and other soluble salts had not nearly the same value for injection purposes as calomel and grey oil. His practice in the treatment of tabetics was to prescribe inunction with mercury for seven months consecutively, and to administer at the same time weekly injections of salvarsan. Such intensive treatment necessarily implied the most careful clinical and urinary examinations throughout. He had never had a death from salvarsan, and only once in 1910, had he met with dangerous symptoms, and that was in a case treated as an out-patient. He gave the full dose, namely, 0.6 gram salvarsan and 0.9 gram neo-salvarsan. The Herxheimer reaction had manifested itself not infrequently after each injection of salvarsan in tabetics, either as a gastric crisis or an attack of lighting pains, and he had noted temporary swelling of the liver or spleen on similar occasions. He regarded severe renal disease as a contraindication to all forms of intensive arsenical medication, and warned his hearers never to give salvarsan to patients who were suffering at the time from any acute catarrhal manifestations such as a simple cold or acute laryngitis, but to wait until such time as the microbic virulence had abated. Such precautions applied particularly to patients with diphtheria and pneumonia.

* Continued from page 619.

Friedmann's Tubercle Emulsion.

Professor Vulpius and his assistant Dr. Laubenheimer, in the orthopaedic department of the University of Heidelburg, have published their rather unfortunate experiences with a total of 46 cases treated strictly according to Friedmann's precepts; 31 cases received intramuscular injections; 5 of them developed fever, and one of them, a child, exhibited serious reaction with vomiting, apathy, and jaundice, from which it recovered only after some time. In 8 of these cases there was intramuscular infiltration, and in one of them a fistula formed. The remaining 15 cases were injected simultaneously with the emulsion intravenously and intramuscularly, and only one of them was apyretic. Two of them became very seriously ill; one was only saved with difficulty, and the other, a case of costal and epididymitic tuberculosis, died the following day in coma. The *post-mortem* examination revealed pulmonary oedema and dilated heart, and suggested sepsis and cardiac paralysis as a a cause of death. In no single case could Vulpius assure himself that the disease had been favourably influenced; his assistant examined bacteriologically the remaining ampoules which had accompanied the lethal sample. Only 2 ampoules out of 13 contained turtle bacilli in pure culture. The remainder had been contaminated with bacteria of various kinds, amongst which the *Staphylococcus pyogenes aureus* proved itself very virulent when injected into animals. Vulpius therefore urges that the manufacture of Friedmann's emulsion should be placed under State control as is already the case with curative serums of other kinds.

The Fall in the Birth-Rate.

The Reichstag is shortly to occupy itself with a consideration of certain facts and suggestions brought to public notice by some of the Socialist deputies. They concern the advertisement and sale of articles designed to interfere with pregnancy and conception, and the deputies urge upon the Legislature the pressing necessity of forbidding by statute, subject to very severe penalties, the exploitation of any such articles, except in the columns of scientific, medical, or pharmaceutical journals. It is pointed out in medical circles that laws against the sale and use of articles for interfering with pregnancy are already very stringent. It would appear to be the fact, moreover, that there are ways of preventing conception known to the public which no amount of legislation can possibly affect, and that the only scientific and rational means of checking the decline in the birth-rate is by improving the conditions under which the poor have to bear and feed their offspring.

Mouse Cancer and the Gamma Rays.

Professor Wassermann, who has set himself to study the effect of radio-active substances on mouse carcinoma, has recorded the results of two very striking experiments in the current number of the *Deutsche medizinische Wochenschrift*. The first experiment was held to prove that the gamma rays of mesothorium acted directly on the tumour

cells, and not through the blood or other organic intermediary. An emulsion of the cells in Ringer's fluid, kept at 37° C., was found to retain its malignancy in subsequent transplantation experiments for many hours, but such an emulsion, if exposed to mesothorium for only three hours, quite failed, under the most rigid control, to reproduce the original tumour in other mice. Professor Wassermann, in discussing the nature of this action, set himself to inquire whether the irradiated cell was destroyed, or whether the rays merely interfered with the function of malignant proliferation. For the purpose of settling this important question, he used Neisser's bioscopic methylene blue test. This substance when in watery solution is reduced in the presence of living cells, and loses its blue colour more or less completely. It was found that the irradiated cells were just as potent to effect this reduction as the emulsion which had not been exposed. Professor Wassermann therefore concluded that radio-active substances act on carcinoma by virtue of their power to disturb the function of malignant proliferation, and that they do not effectively destroy their physiological vitality. On these grounds he maintains that the action of radio-active substances on malignant tumours in man is an elective effect on the proliferative capacity of the specific neoplasm present, and that the greater this capacity—that is, the more rapidly the tumour is growing—the more susceptible and sensitive the cells composing it to the action of the gamma rays.

The Abderhalden Reaction.

In continuation of a former note on this topic (see British Medical Journal, February 28th, p. 508) in which the adverse criticisms of Professor Michaelis and his assistant, Dr. v. Lagermarck, were shortly summarized, it will interest many readers to hear that the *Muenchener medizinische Wochenschrift* has just published two further contributions, both from Professor Müller's clinic in Munich, and deserving, therefore, of the highest consideration. The first is from the pen of Dr. L. Flatow, who, sensible of the variable and inconstant value of a dialytic membrane, has applied to the research the coagulation method recommended by Abderhalden himself (British Medical Journal, March 7th, p. 555) in his reply to Michaelis's criticisms. The results of Flatow's inquiry would seem to confirm the negative opinion, for he states that the "placental" reaction can be obtained under ordinary conditions as well as by the serum of pregnant women, and that the ferments of normal blood serum appear to be far more efficient, both quantitatively and qualitatively, in producing placental proteolysis. The other writer, Dr. Kämmerer, who kept strictly to the method by dialysis, after making every possible allowance for experimental error comes to the conclusion that both for pregnancy and malignant disease the reaction of Abderhalden is unreliable.

Correspondence.

THE NAVAL MEDICAL SERVICE.

Sir,—Owing to the kindness of Surgeon-General May, the Director-General of the Naval Medical Service, I have to-day been enabled to see the plans of the sick bays which are being constructed in the latest battleships. These plans show a very great advance on anything which exists in ships at present in commission. Naturally I had no knowledge of these arrangements when I wrote the letter you published in the British Medical Journal of March 7th.

In the large ships now under construction the arrangements appear to me to be about as perfect as anything could be. That portion of the sick bay which is devoted to "cot cases," and which might be termed "the ward," is entirely separated from the living and messing quarters of the sick-berth staff. What would correspond to the out-patient department ashore, and which in a ship would be used by those men who only require to be seen by the surgeon occasionally and are capable of duty, is quite separate from the "ward." There is a space for isolation cases, a consulting-room for the surgeons, a dispensary, and a well equipped operating theatre. The whole of this department is on the main deck just abaft the foc's'le. It is bulkheaded off in such a way that it is unnecessary, and in fact impossible, for men to walk through it and disturb those inside. It is as near an approach to a shore hospital as is feasible in a ship whose primary duty is that of a fighting unit. The details, such as water supply, ventilation, sanitary arrangements, and the many things which are necessary in a modern hospital, have all been arranged and provided for. I feel only too pleased to make this statement and to acknowledge that in these circumstances some of the criticisms which I made are unnecessary, because the need for them has vanished.

May I further explain a little more in detail the idea I had when I suggested that men with qualifications in special branches of medicine and surgery should be attached to the naval hospitals ashore? I fully realize that it would be impossible to enter surgeons as specialists only, but what I do consider would be a great advance, and one which would materially add to the efficiency of the service, is this: A certain number of surgeons should be encouraged to become trained in special branches of medical science, and in the naval hospitals these specially qualified men should, for the time being (in addition to other work, if necessary), be responsible for cases such as would be treated at special hospitals ashore. After, say, a couple of years at this work they would have to go to sea again and do their ordinary turn of duty, but even in the fleet it would be known that a certain surgeon in a certain ship was a specially trained man, and he would be available as a sort of consultant in his branch for any cases which might occur in the fleet in which he happened to be serving. In order to carry this out it would be necessary that these men should have special allowances at least while they were employed as specialists ashore just as the gunnery or torpedo specialists get extra pay when employed in their particular department. If this were known to be the case I feel sure that many a man would be attracted to the service, and that many of those already in it would make a point of qualifying for such appointments, much to the advantage of the patients who would come under their care. I feel sure that some such arrangement as this would tend to make the Naval Medical Service more popular, and without hesitation I claim it to be one of the best, if not the best, of any of those at present existing.

May I further express my thanks to the Director-General for his kindness in discussing some of these matters with me?—I am, etc.,

London, W., March 16th. C. Devereux Marshall.

Sir,—The dearth of candidates for the appointments of naval surgeon is caused by several things, but the main I believe to be the fear entertained by many young men that they may not be able "to stick" the discipline and monotony of constant sea service. A few years ago I know many were willing to try the service "just to see what it was like," but they did not think it worth the trouble of undergoing the hardship and worry of a competitive examination wherein the minimum qualifying marks are 50 per cent. in all the subjects, on the off chance of their liking the calling. Of course, since then the Insurance Act has come, but there are still, I believe, many good men who would like to sample the service and compete to stay on if they like it and "their faces fit." They hold they have been adjudged by their licensing boards as in every way qualified to treat sick and hurt men, women, and children, and they are registered by the State as such. They hold they are surely qualified temporarily to look after the health of a shipful of strong men under the supervision of a senior medical officer.

The remedy, therefore, seems plain. Enter surgeons for two years or thereabouts without examination, give them an outfit allowance, cut down their kit, supply them with gold-lace shoulder straps to use instead of epaulettes, also swords. Give them a few weeks' practical instruction on the laws and and customs of the navy at one of the dépôts, and draft them to sea-going ships. At the end of the two years, if they want to stay on and make the navy their profession, they should be given a six months' course at Greenwich in medicine, surgery, and bacteriology, and at its end have to undergo examination with a 50 per cent. minimum in each subject. It would be a matter of deferred examination only, and picked men.

There is, in spite of what some of your correspondents say, little room in the navy for specialists bar those in

higher operative surgery and bacteriology. As in the army, medical officers who qualify in these subjects ought to receive extra pay.

The Director-General, in his recent Edinburgh speech, said the naval medical officers thirty-five years ago "were not up to the mark." Many excellent young surgeons entered then, and if some failed to keep abreast of medical and surgical advance and became incompetent it was the fault of the service, which did not insist on, nor afford opportunities for, professional study. The Director-General asked young Scottish medical men to come into the service for honour and glory. Alas! in the piping times of peace there is not much of either, of necessity, for the medical branch. Entry for continuous service therefore resolves itself into a matter of sordid bawbees to a very great extent, I fear.

I have nothing to say against the service. I have had some of the bitters and some of the sweets, and, best of all, I have my modest pension. I have recommended several young men to enter, who are now serving. They have not cursed me so far, but they are still very young, I admit.—I am, etc.,

March 15th. Fleet Surgeon (Ret.).

PORTRAITS OF BURNS.

Sir,—Dr. John Findlay's courteous letter[1] gives me an opportunity of laying before your readers certain points of evidence relating to the authenticity of the Raeburn portrait of Burns which I had to omit from my lecture. It is quite true that in 1889, when Mr. Barrington Nash came to the conclusion that the portrait reproduced in my article[2] was a portrait of Burns by Raeburn, there was no record to show that the poet and the painter had ever met. It was known that they were in Edinburgh at the same time. Near the end of 1889 the following letter from Raeburn was discovered:

York Place, Edinburgh,
December 1st, 1803.

Gentlemen,—I enclose you a receipt for a case containing Burns' portrait, and I have no doubt you will get it soon and safe, and I flatter myself with the hope of its meeting with your approbation, than which, I assure you, nothing will give me more pleasure.

I have twenty guineas for a portrait the size of Burns's. I do not wish you to remit the money to me, for, as I have money to pay in London, I shall, after receiving your permission, draw upon you for the amount.

I am, with much respect, gentlemen,
Your most obedient servant,
Henry Raeburn.

That letter was found amongst the papers of Messrs. Cadell and Davies, who published the first London edition (1787) of Burns's poems, and in 1823 brought out an edition "elegantly printed, in 4 vols. 8°, with a portrait of the Author from an original portrait by Raeburn." It will be observed that, when Raeburn forwarded the portrait of Burns to Cadell and Davies (1803) the poet had been dead for seven years (1796). One cannot suppose that Raeburn would have supplied a portrait which was merely a copy of the Nasmyth. The small portrait which Raeburn did supply is now in the possession of Mr. Barrington Nash as well as the large one, which Mr. Nash permitted me to reproduce in my lecture. It is the small Cadell and Davies portrait which, to my mind, supplies the convincing evidence that the large portrait, which, Mr. Nash maintains, was painted by Raeburn and does represent a portrait of Burns, is indeed a true portrait of the poet. I admit that a comparison of the Nasmyth with the large Raeburn portrait does leave one in doubt, but when I placed the small Raeburn portrait between the two all my doubts disappeared. A strict comparison of the cranial cast—it is a misfortune that the lower part of the face is missing from that cast—with the Raeburn portrait convinces me that it does reproduce faithfully the essential anatomical features of the cast. I do not think it would be impossible in modern portraiture to find the same man represented with just as great divergence as in the Raeburn and Nasmyth renderings of Burns. The Nasmyth portrait represents a handsome, characterless young man about town; the Raeburn a real living, "thundery" man. If ever Raeburn's papers should come to light I feel with Mr. Nash that the last doubt will be removed as regards the authenticity of the large Raeburn portrait.—I am, etc.,

London, W.C., March 15th. Arthur Keith.

[1] British Medical Journal, March 14th, p. 624.
[2] Ibid., February 28th, p. 461.

THE NATURE OF PREGNANCY.

Sir,—I think that I can best reply to Dr. Young by quoting a sentence from Dr. Ballantyne's most interesting paper:

> There is no denying the fact that the existence of these reactions in the blood of the pregnant woman, if it can be proved to the satisfaction of the bacteriologist and the clinician, does support the view that gestation has an effect upon the mother resembling that of an infectious fever and even of malignant disease.

Here we have expressed a reasonable caution as to the admission of immunity reactions as proved factors in pregnancy. No one can quarrel with this view. At the same time, when Dr. Ballantyne wrote this sentence he was obviously convinced that, if they be once admitted, they must figure very largely in our general conception of the relationships of the mother and ovum, as largely, in fact, as they have for long in infective disease and more recently in malignancy. I would have been loth to intervene with my original letter had I not—in imagination it may be—seen evidence in another part of the paper of a certain hesitancy in fully accepting the view so clearly laid down in the sentence I have quoted.

Dr. Young, with a plea for accuracy in scientific thinking, is pleased to write of the antigens of pregnancy as of trifling importance and as being immediately neutralized. As a worker for years in immunology, not alone in pregnancy but in disease generally, I simply do not know what he means, and I must clearly point out to him how greatly he differs from the considered opinion of Dr. Ballantyne. So long as this chasm separates us I see little good in continuing the discussion.

Dr. Young seems to imagine that, finding myself in a difficult position, I have attempted to extricate myself by "supposing" this or that. I must remind him that, in regard to the sensitization of both mother and fetus, I am not merely theorizing but stating results which I have obtained experimentally. Possibly my results may not be confirmed later by other workers, or even by myself; but, so far as they go, surely an actual result merits some other term than an "ingenious supposition." Further, I fail to see why my view of the placental link should be considered inadequate merely because, as we all know, that organ, among its other attributes, happens to be a diffusion membrane.

I drew a rough parallel between the engorgement of pregnancy and that of bacterial infection in an attempt to show that flushing of the tissues need not indicate "willingness" on the part of the organism. Dr. Young considers that the two processes differ in totality, and refers to the ultimate strangulation of invading organisms. He will not agree with me, I suppose (and, so far, I certainly cannot prove it to him), if I suggest that the invading trophoblast is similarly strangled in the course of pregnancy. I merely mention this to him to show that the evidence of "willingness" on the part of the mother is capable of an explanation other than that given by him.

Finally, I am content to leave the matter practically where Dr. Ballantyne (to whom all thanks are due for his very illuminating paper) puts it in the sentence quoted. The first necessity is to prove to the general satisfaction that immunity reactions do occur in pregnancy.—I am, etc.,

Liverpool, March 17th. H. Leith Murray.

THE PATHOLOGY OF CANCER.

Sir,—Dr. Crow, in his letter in the Journal of March 14th, presumes too much. He must not infer that a regulator of cell growth is necessarily an inhibitor. It co-ordinates the various activities of the cell, and, like Justice with the scales, keeps the balance true. His statement that cancer is uncommon in very old people is rather sweeping; I should be inclined to say that these persons are old because their ductless glands have remained wonderfully efficient, and that, therefore, they do not develop cancer. All tumours, including cancer, become much more common as age advances, so that in old people they can often be counted by the score (Mansell Moullin),

Dr. Crow must acknowledge that the ductless glands are relatively much larger in the young, where metabolism and growth are very active; anabolism is in excess of katabolism, but the secretions of the glands are in sufficient abundance to limit the lines along which multiplication of the cells takes place, as determined by long years of evolution.

During middle life, the metabolic balance is about even; the glands have diminished in size, as the regulating secretion is not so much required. But after the meridian of life is passed the metabolic balance is again disturbed; katabolism is now in excess of anabolism, and the amount of growth regulator is rapidly becoming less. The critical period is now approaching. Whereas normally the millions of cells which comprise the organism have developed, lived together, and now decay in unison, in cancer, cells which have for a long time been irritated, become mutinous, and decline to decay; on the contrary, they live and flourish at the expense of their neighbours, and in this sense are parasitic. Why is this? Simply because constant irritation connotes constant death and continual replacement, so that the cells at that part are particularly young and robust. Moreover, their functional activities are no longer kept in check by the secretions of the ductless glands, and they become insane. To put it in another way, the irritated cells are differentiated and unlike other parts, and therefore become a centre of unlike reactions to incident forces. I quote Sir James Goodhart:

> Are we wrong to expect that, if a complex body is possessed of energy or many centres of energy for orderly growth and development, this disposition or force will not now and then slip its leash and run off on its own account? An analogy of this kind seems to me to convey a workable conception of a scheme of malignancy, where ordered growth diverges by successive steps of variation, of indulgence in function, until cancer appears, until malignancy becomes the insanity, shall I say, of function.

I hold that the "force" for orderly growth and development is the chemical action of the secretions of the ductless glands. I, of course, agree that there are difficulties in regard to the hormone theory. It is quite impossible to say, for instance, whether the failure of supply of the regulating secretion is or is not due to an all-round and equal degeneration of the glands; and, again, while we may admit that the total functional result of these secretions is perfect metabolism, which means perfect and even growth, there is an intermixture of effects; we do not know how much is due to each gland separately. —I am, etc.,

Wigan, March 16th. J. THOMSON SHIRLAW.

THE FALLING BIRTH-RATE.

SIR,—I notice that one of your correspondents on this subject[1] remarks that "in Paris the deaths from tuberculosis and typhoid fever are, as a rule, two or three times more numerous in relation to population than those in Berlin and London."

No doubt your correspondent is correct in matter of fact, but the implication that the mortality from typhoid fever is heavy is totally mistaken. On reference to the health and mortality statistics issued weekly by the municipality of Paris, I find that typhoid fever caused last week four deaths, as against 3 in the previous week, the average number being 5; 43 new cases were reported, as against 31 the previous week and 36 the average of the season. In a population of some 2½ millions, this gives us a mortality of less than 1 in 500,000 and a disease-incidence of about 1 in 75,000 -a fairly safe risk.

In London's population of 4½ millions I find, for the month of January, 1914, 85 notified cases of enteric fever with 16 deaths, or a weekly average of about 21 cases and 4 deaths.

Of course typhoid fever is a preventable disease, and should be absent from our statistics, but in these days of unlimited expenditure for military and naval purposes and very limited national expenditure on urban sanitation, we must be thankful for small mercies. It is, at least, obvious that typhoid fever is of small account, as a causal factor, in a decreasing or stationary population.

With regard to tuberculosis, I fear that your correspondent is nearer the mark, for in Paris the mortality from that disease totals well over 200 weekly.—I am, etc.,

Paris, March 15th. A. A. WARDEN.

[1] BRITISH MEDICAL JOURNAL, March 14th, 1914, p. 625.

SIR,—Mr. Henry Sewill says I suggested "that there exists some causal relationship between a falling birth-rate and a rising death-rate in France." Yet here is what I wrote: "Even in France the death-rate declines with the birth-rate; moreover, her recently published records for the first six months of 1913 show that there were 8,000 more births than during the same period of the previous year, but that there were 12,000 more deaths; in other words, that a rise of her birth-rate was accompanied by a still greater rise of her death-rate."

It does not surprise me, therefore, that the rest of Mr. Sewill's letter is very much a repetition, with which Malthusians are familiar, of the *répopulateur* misunderstanding of the population question. For example, he says that "the population of France during the past thirty years would have shown a decrease had it not been for immigration." Page 135 of the Registrar-General's seventy-third annual report happens to give France's population, births and deaths for every year from 1881 to 1910. The population in 1881 was 37,590,000, in 1910 it was 39,339,000—an actual increase of 1,749,000. The columns of births when added up make 25,687,627, and the deaths 24,317,527—a natural increase of 1,370,100. Therefore the immigration in these thirty years was 1,749,000 *minus* 1,370,100, or only 378,900 of the 1,749,000 increase.

As Mr. Sewill points out, "The French death-rate has long been, and still remains, much higher than that of any of her northern neighbours." Fortunately, like theirs, it still falls with every decline of the birth-rate. To make it fall faster than the birth-rate, and thereby to quicken her rate of natural increase, France must either increase her food-producing and food-buying powers more quickly or she must imitate Holland and specially reduce the birth-rate among the poor and unfit. She does not seem to have the huge supplies of coal and iron which have enabled her northern neighbours to multiply so rapidly.

Being diffident about taking up more of your valuable space, I beg you will allow me to repeat my offer to give to any doctor interested a copy of *The Small Family System*, recently published, which discusses this subject. I have already replied to a large number of applications for the book and received many expressions of hearty agreement with it. I was as ignorant as the majority of my colleagues are of Malthus's supremely important population doctrine, and of neo-Malthusianism, until my independent essay on over-population happily led me to hear of the Malthusian League. I now realize that an excessive death-rate (that is, over 10 per 1,000 per annum) is due to people begetting more children than they can afford to maintain, and that if the birth-rate of this and other countries were now to become stationary, nothing that medical science could do—not even by discovering a cure for cancer—would prevent the death-rate from becoming stationary. I would like to add that Dr. Drysdale is to read a paper on "The Empire and the Birth-rate," and show his original population diagrams, on Tuesday, March 24th, at 4 p.m., before the Royal Colonial Institute.—I am, etc.,

24, Alexandra Court, S.W., March 14th. BINNIE DUNLOP, M.B., Ch.B.

SALARIES OF RESIDENT MEDICAL OFFICERS.

SIR,—I desire very heartily to endorse the sentiments expressed by "R.M.O." in the JOURNAL of March 14th, and more particularly those relating to the medical superintendents of sanatoriums. It is an extraordinary fact that the salaries of resident medical officers and medical superintendents of sanatoriums are, as a rule, much smaller than those of tuberculosis officers.

Dr. Halliday Sutherland stated recently that to call a building a sanatorium did not make it one, and this is only too true. In any sanatorium, properly so-called, there must be constant methodical medical supervision or else the results obtained will be disappointing or even disastrous. A certain tuberculosis officer who, I may say, acknowledges the efficacy of sanatorium treatment, informed me recently that many of the phthisical patients sent from his dispensary to a neighbouring sanatorium returned in no way benefited. A number, indeed, were rather the worse of the treatment received, or perhaps one should say became worse as a result of the absence of treatment. In the sanatorium referred to, the medical

attendance consists in a practitioner "looking in" once a day.

Again, one not infrequently sees advertisements for resident medical officers for sanatoriums, the remuneration offered being £100 to £150 per annum. Such a salary does not and never will attract men of experience, and a sanatorium without an experienced resident medical officer may be very aptly compared to a motor car without a chauffeur. If, then, local authorities desire to ensure success for the sanatorium part of their tuberculosis schemes the first essential is that in every sanatorium there should be a resident medical superintendent, experienced not only in administration, but also in the treatment of phthisis. To obtain this a minimum salary of £400 would have to be offered. In any tuberculosis scheme the tuberculosis officer and the medical superintendent of the sanatorium are both important factors, but no valid reason can be put forward why the salary of the latter should be less than that of the former. —I am, etc.,

March 16th. M.D.

TUBERCULOSIS MEDICAL OFFICERS.

SIR,—The appointment of tuberculosis medical officers having now become general throughout the country, it has occurred to me that the formation of an association of such officers is a matter worthy of consideration.

If such an association came into existence tuberculosis medical officers would be provided with a means thereby of meeting, and thus have the opportunity afforded to them of discussing together, and amongst themselves, various topics connected with their particular field of labour. This I think would be a most desirable thing. It would tend to their mutual benefit, and also to the advancement of the treatment of the patients of whom they have charge. Cases could be compared, opinions interchanged, difficulties met with in practice discussed, etc.

Local authorities are framing a general attack upon tuberculosis, and the tuberculosis medical officer is the important factor of the authority responsible for the treatment of the disease in their area. With an association such as I suggest a much greater benefit would accrue from the interchange of knowledge thus afforded than by each individual officer working single-handed in his own field. The object of the attack on the disease is to ultimately—and in the shortest possible space of time—stamp it out altogether. We ought to leave nothing undone which will assist us in our efforts to bring about this result.

In such, then, lies the object of my appeal, and I hope to see some expressions of opinion on the matter in reply hereto. If the general opinion is in favour of an association being founded, a preliminary meeting to formally discuss matters in connexion therewith could easily be called. Such an association as I suggest has, I believe, already been formed in Ireland.—I am, etc.,

J. T. CROWE,
Tuberculosis Medical Officer for Leicestershire.

33, Bowling Green Street, Leicester, March 17th.

The Services.

INDIAN MEDICAL SERVICE.

THE PUBLIC SERVICES COMMISSION.

(Continued from page 628.)

BOMBAY.

THE Commission, during its session at Bombay, took evidence concerning the Medical Department on February 13th and 16th. Lieutenant-Colonel C. T. Hudson, I.M.S., Captain H. A. Lafond, and Assistant Surgeon D. E. Kothewala sat as co-opted members, representing the Indian Medical Service, the Military, and the Civil Submedical Departments respectively.

Lieutenant J. E. B. Macqueen, representing the Military Subordinate Medical Department, was the first witness. He stated that his service asked for increased pay and study leave; also that the rules limiting recruitment to Europeans and Anglo-Indians should be enforced, many Goanese Indians being admitted at present.

Surgeon-General R. W. S. Lyons, head of the Bombay Medical Service, thought that Indians entering the Indian Medical Service should have spent two years in study in England. Officers appointed as Professors in the Medical College were fully qualified for their posts, except that they had no previous teaching experience. It would not be practicable to get competent professors from Europe, as they would drop out of competition at home while in India, and on their return would find that their Indian experience told against them, not in their favour. The training given in the Bombay Medical College was superior to that of Calcutta or Lahore, but not equal to that given in England, where teaching staff and appliances were much greater. In Bombay private practitioners had been doing hospital work for some years past, and they would work in the new King Edward Hospital when it was opened. Indian Medical Service officers in the Bombay Presidency had very little private practice. To forbid them all practice would be unfair to the general public. Competition for the service was not so severe as it used to be.

Lieutenant-Colonel J. B. Smith, I.M.S., gave evidence on behalf of the Indian Medical Service in the Bombay Presidency. He said that civil surgeons did not make very much by practice. He said that one civil surgeon made more than 600 rupees a month, one from 400 to 500 rupees, three over 300 rupees, five over 200 rupees, three about 126 rupees, and seven about 100 rupees a month. This gave an average of about 200 rupees.

Assistant Surgeon B. E. Ghaswala, representing the civil assistant surgeons, objected to the title of "assistant surgeon," and asked that the members of his service should be allowed to use the title of "Dr." They also required an increase of pay. Private practice had much diminished of recent years.

Major C. S. Lowson, I.M.S., Inspector-General of Prisons, was in favour of an Imperial Gaol Department. All the prisons in Bombay, except two, had Indian superintendents. Where there were European prisoners, a European superintendent was required. No gaol in Bombay received European prisoners only.

Major F. H. C. Hutchinson, I.M.S., Sanitary Commissioner, complained of the monotony of the work in the sanitary department, the chief duty of which was the supervision and inspection of vaccination. It was essential that this work should be done by medical men. At present sanitary work was entirely subordinated to vaccination. A separate staff should be appointed for vaccination. Sanitary officers, if relieved of vaccination, could do much more important work.

The Bombay Medical Union, a society of Indian medical practitioners in Bombay, submitted a memorial, dated May 1st, 1913, to the Commission asking for "the equalizing the status, privileges, and emoluments of Indian aspirants for the medical services with those of their European compeers, especially in the higher grades." As the means by which this equalization is to be accomplished it suggested the entire abolition of the civil branch of the Indian Medical Service and the substitution for it of a purely civil medical service, recruited in India, to fill all civil medical posts, from that of the Surgeon-General with the Government of India downwards, including all professorships in the medical colleges and all appointments in the sanitary and bacteriological departments as well as the ordinary civil surgeoncies. The representation stated that, under the withering shadow of the "noxious overgrowth" of the Indian Medical Service the Indian profession is dwarfed, that the growth of Indian medical science and research is stunted, and that the members of the Indian Medical Service, with few exceptions, exhibit no capacity for research in tropical disease. The memorial suggested that the military branch of the Indian Medical Service might continue to exist, either as a purely military medical department of the Indian army or as an Indian section of the Royal Army Medical Corps, allowing free exchange with the Home branch, but in either case must be open, as at present, to all British subjects. In criticizing the statement that the civil branch of the Indian Medical Service is necessary as a war reserve, the memorial stated that "a more absurd theory it is impossible to conceive." The memorialists further asserted that none of the men in civil employ could be spared for war service, and that, "so far, not more than two officers have been called on military duty in the largest expedition on record." Lord Morley's dispatches of 1908–09, advocating the substitution of Indian medical practitioners for members of the Indian Medical Service in civil employ, are quoted with high praise, but the changes suggested by the memorial were more sweeping. A subject of complaint is that, owing to the distance and the expense of the journey, the open competition for the Indian Medical Service in England was practically closed to Indians. The memorialists further ask that the professors in the medical colleges, even when recruited in India, should be entirely debarred from general practice, and allowed only consulting practice. The civil surgeons also, even when all Indians, should be strictly confined to consulting practice. As regards the civil assistant surgeons, the memorial points out how low the pay and how poor the prospects are in this service, as compared to those of analogous departments, the Provincial Judicial and Executive Services. The memorial also criticized the Military Assistant Surgeons Service, which is recruited exclusively from Europeans and Eurasians, and serves with British troops only, except that a certain number of its members are in civil employ as a war reserve. The memorialists asked that this service should be amalgamated with that of the Military Sub-assistant Surgeons (formerly Hospital Assistants).

Dr. Sir Bhalchandra Krishna and Dr. Jehangir J. Cursetzi gave evidence on behalf of the Bombay Medical Union, which they said had 189 members. All qualified practitioners were eligible for membership. They had no European members, but "two or three dozen" of their members had European qualifications. They claimed that Indian graduates were fully equal to Europeans, and asked for the entire abolition of the civil side of the Indian Medical Service. That

service should be made a purely military service, either as a separate service or as an Indian branch of the Royal Army Medical Corps, but in either case must be open to Indians. They suggested the formation of an Indian civil medical service, with provincial and subordinate medical services under it. The present war reserve was too large. In time of war an adequate war reserve could be filled by private practitioners volunteering for active service.

Dr. R. Row gave evidence on behalf of private practitioners in Bombay, whose views, he said, were not necessarily represented by the Medical Union. They did not desire to do away with the Indian Medical Service, but wished the opportunity of hospital work. It was desirable that Indians entering the higher branches of the medical service should have a year's training in England. He would like to see the number of professorships in the medical colleges increased and subprofessors appointed. Private practitioners would be willing to give up their practices to take these chairs, and, if qualified, should be appointed professors. The present hospital staff had more beds under their charge than they could properly attend. He was in favour of restricting the practice of Indian Medical Service officers, but to forbid practice altogether would be unjust to the general public. A woman's medical service, he thought, was desirable.

Miss Annette Benson, who represented the lady doctors of Bombay, said that the Cama was the only hospital in Bombay exclusively for women and controlled by women doctors. Other civil hospitals received female patients, but they were treated by male doctors. There should be a female medical service on the same lines as the Indian Medical Service. The Dufferin Fund did not adequately meet the necessities of the case; it brought the needs of the women and children into view, but did not meet them. The recent reorganization of the employees of the Dufferin Fund only provided a service of twenty-five individuals for the whole of India. A first class body of professional women was required in India, but could not be developed under the present scheme. A Government female service was required, as part of the official routine, organized and developed by whole-time professional officials. Government should control the agencies to which the care of the health of women and children was entrusted. The Dufferin Fund was quite inadequate for this purpose. It was originally intended to produce a desire for and recognition of the need of the services of women doctors.

PROFESSORS AND SPECIALISTS.

WITH regard to Surgeon-General Bannerman's evidence before the Commission, Dr. V. P. Gonsalves (London) writes:

> Surgeon-General Bannerman is reported in your columns (March 14th, p. 627) to have stated in his evidence before the Public Services Commission at Madras that no difficulty was experienced in getting qualified men as professors in the medical colleges, and that almost every professor had a special degree in his own subject.
>
> On looking into the India Office List I find Lieutenant-Colonel Giffard, I.M.S., principal of the Medical College, was first commissioned in 1890, was in military employ till 1897, when he was appointed resident surgeon, General Hospital, and professor of pathology, Medical College; then he became district medical and sanitary officer, Chinglepet; he was then made third physician, General Hospital, and professor of materia medica, 1901; then became first surgeon, General Hospital, and professor of surgery, Medical College, 1903; then was made professor of midwifery, Medical College, and obstetric physician, Maternity Hospital, 1906.
>
> Major A. Miller, I.M.S., was first commissioned in July, 1896, in military employ till 1901, held various officiating appointments in Madras till 1903, when he was appointed district medical and sanitary officer; in 1911 appointed chemical examiner and professor of chemistry, Medical College. Lieutenant-Colonel Elliot, I.M.S., has been professor of biology, Presidency College, Madras; professor of anatomy, Medical College; district medical and sanitary officer, assistant physician, General Hospital; professor of physiology, Professor of ophthalmology, surgeon, Eye Hospital, Madras.
>
> There is no need of more instances nor of comment on my part.
>
> Surgeon-General Bannerman, I.M.S., also said that there would be no difficulty in filling these important posts by specialists from England if a sufficient rate of pay was given. He seems to imply that the salary which Indian Medical Service officers get would not attract specialists from Europe. It is found, however, that the services of Mr. Hankin, a scientist of European reputation, were secured for the United Provinces on a salary of Rs. 800–1,000, whereas for the same work Indian Medical Service officers get Rs. 1,500–1,800. His work has been brilliant and successful. When it was suggested that other experts should be imported, the Government, acting on the advice of its officers, opposed it on the ground "that it seems doubtful to the Government of India if officers so recruited (experts like Mr. Hankin) would make as suitable lecturers in medical schools as medical officers of the army." The real obstacle to the appointment of specialists from England is the opposition of the Indian Medical Service officers, for whom all the best posts are reserved. Efficiency, economy, and statesmanship demand a reform of the present system.

Universities and Colleges.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on February 25th.

Paul Philip Reitlinger Prize.

It was resolved to amend the regulation of this prize in order to increase its value from £30 to £40 for award in 1914, such increase to continue in respect of subsequent awards so long as the unexpended balance due to the non-award of the prize in 1913 permits. The subject selected for the prize in 1915 is the economic condition of the people in England in 1815 in comparison with the present day.

Regulations for M.B., B.S. Examinations.

It was resolved that in and after 1916 the words "in the wards" be added after the words "clinical clerk" in line 4 of Section (3).

Appointment of Representatives.

Dr. Frederick Taylor was reappointed the representative of the University on the General Medical Council, and Sir William Collins was appointed to represent the University at the three hundredth anniversary of the foundation of the University of Groningen in June and July, 1914.

Advanced Lectures in Physiology.

A course of eight lectures on the rate of the blood flow in man in health and disease will be given in the Physiological Laboratory of the University by Dr. G. N. Stewart, Professor of Experimental Medicine, Western Reserve University, Cleveland, U.S.A., at 5 p.m. on Tuesdays, commencing May 5th.

University Studentship in Physiology.

A University studentship in physiology of the value of £50 for one year will be awarded to a student qualified to undertake research in physiology, and will be tenable in a physiological laboratory of the University or of a school of the University. The studentship will be awarded annually if a candidate of sufficient merit shall present himself; a student will not be eligible for re-election. Applications must reach the Principal by May 31st, 1914.

Rogers Prize.

The Rogers Prize of £100 will be awarded for an essay or dissertation on the nature of pyrexia and its relation to micro-organisms. Full particulars can be obtained on application to the Principal.

Appointments Board.

Mr. H. J. Crawford, B.A., has been appointed secretary to the Appointments Board in succession to Dr. A. D. Denning. The fee for registration is 5s. The Board registers the qualifications of graduates of the University, of graduates of other universities who are students in London, and of undergraduates in their last term. Approximately 2,500 posts have been notified to suitably qualified graduates within the past twelve months, but it not infrequently happens that the secretary is notified of appointments at home and abroad for which candidates on the present register do not possess the required qualifications, or for which for some reason they do not wish to apply. Mr. Crawford attends at the University, South Kensington, on Wednesday afternoon from 2 to 5, and on Thursday from 12 to 1.30, or at other times by arrangement.

UNIVERSITY OF BRISTOL.

THE following candidates have been approved at the examination indicated:

SECOND M.B., CH.B.—F. C. A. Frith, D. L. Lees, G. S. Lewis, A. D. Symons.

THE UNIVERSITY OF BIRMINGHAM.

DR. J. E. H. SAWYER has been appointed Assistant to the Chair of Medicine.

Professor Bostock Hill will represent the University at the twenty-ninth Congress of the Royal Sanitary Institute, to be held in Blackpool in July next.

UNIVERSITY OF ABERDEEN.

Finance.

THE Aberdeen University Court met on March 10th, Principal George Adam Smith presiding, when Professor Matthew Hay submitted the accounts for the year. He said that owing mainly to a larger revenue from students' fees the surplus revenue of the general fund of the University rose during the year to £2,496, as compared with £2,044 in the preceding year and £804 (excluding an exceptional payment) in 1910–11. The steady growth in the number of students was one of the most pleasing features in the progress of the University from a financial as well as from an educational standpoint. For some years there had been a growing excess of revenue from students' fees. Last year the excess thus contributed to the revenues of the general fund amounted to £4,213, as against £3,630 in the preceding year, 1911–12, and £3,001 in 1910–11. This increasing financial prosperity could not, however, be safely relied upon to continue, and it would be unwise to carry more than a modest proportion of it into what might be termed the steady

and more or less permanent load of administrative and staffing purposes. The University had in hand a further large extension of the buildings at King's College which would probably cost not less than £20,000, although for this a large grant had recently been promised from the Carnegie Trust. Then the question of a scheme of pensions for lecturers had to be faced. The University was pledged also to the institution of an adequate curriculum of instruction in forestry, and a scheme for a new botanical department at the Botanic Gardens had frequently been advocated. After discharging obligations already definitely incurred, and after adding the whole surplus revenue for the year, the general fund reserve would not exceed £5,000. In addition to the Carnegie Trust an important source of additional financial strength in the last three years was the annual grant of £9,000 from the Treasury. None of the Treasury money was available for the erection of buildings or for capitalised endowments.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary council was held on March 12th, 1914, with Sir Rickman J. Godlee, President, in the chair.

Medical Officers of Health and Fixity of Tenure, etc.

The President stated that in pursuance of the wish expressed by the Council at its last meeting he and the Vice-Presidents had received at the College the following medical officers of health: Dr. Herbert Jones, of Hereford (Honorary Secretary of the Society of Medical Officers of Health); Mr. F. E. Fremantle, F.R.C.S., of Hertford; Professor Bostock Hill, of Birmingham; Dr. H. H. I. Hitchon, M.R.C.S., of Heywood, Lancs.; and Dr. R. A. Dunn, M.R.C.S., of Hertford. The President reported the result of their conference. It was resolved to address the following memorandum to the President of the Local Government Board.

Memorandum.

"The attention of the Council of the Royal College of Surgeons has been directed to the desire of the medical officers of health under the Local Government Board to secure *fixity of tenure* and some definite system of *superannuation and pensions*, and they have been asked to support the endeavour which is now being made to bring this matter under the consideration of His Majesty's Government.

"The Council are aware that this is no new question and that it may be considered from more than one point of view. They have endeavoured to make themselves acquainted with the arguments put forward on both sides and the facts so far as they have been able to ascertain them.

"Though feeling a special interest in the diplomates of the College, the Council recognize that, if the request cannot be supported on public grounds, it is not worthy of consideration. It is to this point of view therefore that they have exclusively directed their attention.

"It appears to the Council that there must be something wrong with a system under which the guardians of the public health hold appointments terminable at short notice under those whose interests are likely to be interfered with by the exposure of insanitary conditions or the suggestion of sanitary improvement. Yet this is what the present system in many districts involves. The Council have been impressed by the confession of men occupying important positions that they are conscious of being influenced in the discharge of their duties by the fear of losing their appointments.

"Moreover, it is often stated that the medical profession is becoming more and more alive to the unattractiveness of public health appointments, even those commanding good salaries, where the tenure is insecure and there is no system of superannuation. It appears likely, therefore, that the quality of the applicants for them will deteriorate.

"Considering the vital importance of the matter at stake the Council, whilst fully recognizing the weight of the arguments adduced against the proposed change, which they have endeavoured to consider impartially, cannot think that these are strong enough to outweigh those in favour of the request of the medical officers of health.

"The Council, therefore, feel that it would be for the advantage of the community if security of tenure with a corresponding system of superannuation were granted to medical officers of health under the Local Government Board, and they venture to express the hope that it may be possible for His Majesty's ministers to give favourable consideration to the representations which are now being made to them on these questions."

Central Midwives Board.

The thanks of the Council were given to Mr. C. H. Golding-Bird for his services as the College representative on the above board, and he was re-elected.

General Medical Council.

Sir Henry Morris was re-elected as the College representative on the General Medical Council for the ensuing year.

Resignation of Mr. Jonathan Hutchinson.

The President stated that the vacancy on the Council caused by Mr. Jonathan Hutchinson's resignation, which was due to the pressure of hospital work, would be filled up at the annual meeting of Fellows in July.

UNQUALIFIED PRACTICE.

THE Clerk to the Society of Apothecaries of London informs us that at a recent meeting of the Court of Assistants the following resolution was passed:

> That it is desirable that the attention of the medical profession should be drawn by means of notices in the medical papers to the prevalence of unqualified medical practice and the advisability of reporting cases of such practice to the Society, to be dealt with by the Society under the penal powers contained in the Apothecaries Act, 1815.

Under the powers referred to in the resolution the Society is enabled to recover from an unqualified practitioner a sum of £20, and it has been found in many cases that this penalty has been very effective in putting down quack practitioners. In recent years very few cases have been brought to the notice of the Society, but it is not to be supposed that the Society has become in any way unwilling to take up such cases, and, in fact, is very anxious to do so, both in the interests of the public and the medical profession.

Medico-Legal.

PRIEST *v.* THE EDMONTON GUARDIANS.

Question of Superannuation.

IN this case the board of guardians had rescinded a resolution granting superannuation to a retired medical officer. The plaintiff was a district medical officer, and in receipt of an average annual salary of £105, and had paid the usual deductions in respect of superannuation. From 1905 he suffered from defective vision, and in 1911 became incapable of discharging the duties of his office. He resigned on January 1st, 1912, and was granted a superannuation allowance of £53. The defendants in July, 1913, rescinded their resolution as to superannuation on the ground that the plaintiff was not incapable of discharging the duties of his office with efficiency by reason of permanent infirmity of body or at all.

Mr. W. H. Jessop gave evidence that the plaintiff suffered from nyctalopia and also from high myopia. The plaintiff in his evidence, as reported in the *Times*, said that he had continued to be medical officer to the Waltham Joint Hospital Board and the Royal Small Arms Factory, medical officer of health, and divisional surgeon of police. He and his partner joined the panel, and if, owing to his nyctalopia, he was unable to go to patients at night his partner took his place. His work as district medical officer involved seeing patients at places which he could not reach by motor car, and which were very dark.

The question left to the jury by Mr. Justice Horridge was whether the plaintiff at the time he resigned and received superannuation was incapable of discharging the duties of his office with efficiency by reason of permanent infirmity of body. The jury answered in the affirmative, and the judge made a declaration that the plaintiff was entitled to the superannuation allowance claimed.

The solicitors for the plaintiff were Messrs. Hempsons, instructed by the Medical Defence Union.

Public Health
AND
POOR LAW MEDICAL SERVICES.

PUBLIC ABATTOIRS.

PRIVATE slaughterhouses for the most part conduct their operations so quietly that probably very many people are quite unaware that hundreds of these establishments are still in active existence, even in many large centres of the population in England and Wales. This, however, is the conclusion that must be drawn from a report recently issued by the Model Abattoir Society, and, seeing that the private slaughter of animals for sale as food in towns has long been illegal in many quite small British colonies, the fact represents a curious commentary on the civilization of the mother country. Until some ten or fifteen years ago the movement in favour of abolishing private slaughterhouses was making good progress, but of late years it has been sluggish, and it is the object of the society to make it more active. Butchers as a class are seemingly opposed to the movement, and many public authorities are under the impression that abattoirs are expensive. The report, however, justifies the belief that butchers have really nothing to lose by being compelled to resort to public abattoirs, and that the latter need not cost much to establish, and once at work should be self-supporting. Much information on the latter point, together with plans for building and maintaining abattoirs, is supplied by Mr. Stephen Ayling, consulting architect to the society. The object of the society, whose president and treasurer respectively are Sir James Crichton-Browne and Professor H. Kenwood, is primarily humanitarian, but the views indicated by Sir James Crichton-Browne in a preface to the effect that success for the society's efforts are to be desired in the interests of the public health are no doubt well founded. Diseased meat is a cause of disease in human beings, and the sale of diseased meat still goes on and must remain a matter of comparative facility as long as

private slaughter-houses are tolerated. Butchers, he adds, are honourable men, but they are not, like the associates of Brutus, "all honourable men." There are black sheep or grey sheep amongst them, as there are in every calling. The seizures that take place from time to time in butchers' shops attest that, but these seizures very imperfectly indicate the amount of diseased meat that is placed on the market. It is meat in a state of more or less advanced putrefaction that is seized, because putrefaction is easily recognized, and much diseased meat from private slaughter-houses slips through the shops into the domestic larder undetected because its blemishes are hidden even from the skilled eye by the trimming and preparation it has undergone. It is only by inspection of the animal before slaughtering, and at the time of slaughtering, and of the carcass immediately after slaughtering, that a trustworthy guarantee as to the soundness of meat can be given, and such inspection can only be adequately carried out in a public slaughter-house. The large number of private slaughter-houses in the large towns where they exist, their scattered situation, and different times at which slaughtering takes place in them, make it impossible for the medical officer of health or sanitary inspector to supervise them efficiently. Hence Sir James Crichton-Browne holds that the public is insufficiently protected against unwholesome meat when private slaughter-houses exist.

Obituary.

GEORGE ERNEST HERMAN, M.B., F.R.C.P.LOND., F.R.C.S.ENG.,

CONSULTING OBSTETRIC PHYSICIAN, LONDON HOSPITAL,

WE regret to have to record the death, from acute pneumonia, after an illness of two days, of Dr. G. E Herman, which occurred at his residence, Caer Glou, Cam, Gloucestershire, on March 11th.

George Ernest Herman, who was born on February 8th, 1849, received his medical education at the London Hospital, and took the diploma of M.R.C.S. in 1870. After a short period in general practice he took the Fellowship of the Royal College of Surgeons of England in 1875, and was appointed assistant obstetric physician to the London Hospital in the following year. In 1879 he graduated M.B.Lond. with honours, and in 1885 was elected a Fellow of the Royal College of Physicians of London. He became obstetric physician to the London Hospital in 1883, and for many years was engaged in consulting obstetrical and gynaecological practice in London. He was one of the most active Fellows of the Obstetrical Society of London, now known as the Obstetrical and Gynaecological Section of the Royal Society of Medicine. In 1893–5 he held the office of president of the old society; he was interested in improving the education of midwives, who, until the Act was passed, were examined by the society, which awarded them diplomas greatly valued by the profession. Dr. Herman prepared important papers for reading and discussion at the society, and those on uterine prolapse and displacement were of a value far above the level of average communications of this familiar type. His textbook, *Diseases of Women*, is still deservedly popular under the editorship of another. It was commenced rather late in life, and the author could most reasonably claim in the preface to his first edition that he had already one qualification not always possessed by the authors of such publications, and that was clinical experience. His *Difficult Labour* was another really good book, and his *First Lines in Midwifery* and *Student's Handbook of Gynaecology* were excellent manuals, the first in particular. He became physician to the General Lying-in Hospital and to the Royal Maternity Charity, was president for one year to the Hunterian Society, and examiner in midwifery to the Universities of Oxford and Cambridge and the Conjoint Board in England. He was a member of the British Medical Association, and in 1898, at the annual meeting in Edinburgh, was vice-president of the Section of Obstetrics and Diseases of Women. Dr. Herman was a kindly man of somewhat reserved aspect and manner.

DR. H. RUSSELL ANDREWS, Obstetric Physician to the London Hospital, writes: By the death of George Ernest Herman very many old London Hospital men have lost a valued friend and adviser for whom they had a real affection. Successive generations of resident accoucheurs felt an affection and respect for him which was almost filial, and this feeling was shared by the sisters, nurses, and students. His rather abrupt manner, which made conversation with him difficult at times, was partly due to shyness, for he had a most genial and warm-hearted nature, and partly to his habit—very marked at times—of using no unnecessary words. This habit is seen in his writings, where his short sentences remind those who knew him of his way of speaking. Few men wrote as they talked to such a degree as Dr. Herman. If he looked through a paper or report of a case prepared for publication by a junior who asked him to correct and amend it, the first thing that he did was to scratch out all the "very's" and most of the adjectives. He hated shams, and his teaching was downright, dogmatic, and characterized by common sense. He always wished to give younger men a chance, and was untiring in his efforts to help them in any way that he could. He taught his residents and students to be tolerant of the opinions of others. Often when a resident was inclined—as residents are inclined—to scoff at a diagnosis which came from outside the hospital, he would say: "If Dr. So-and-So said this he must have had good grounds for saying so, and we may take it that he was correct, at any rate at the time when he made the statement." However much a junior might have erred in diagnosis or treatment he was never snubbed, but could count on receiving instruction and courteous treatment. Dr. Herman's sense of humour helped to lighten the burden of hospital work, and never diminished his sympathy for his patients, who were devoted to him. His manner of introducing a new resident accoucheur to a more than usually loquacious and importunate chronic out-patient was inimitable: "Mrs. ———, this is Dr. So-and-So, a gentleman who is specially interested in your complaint, and will go into it thoroughly when I leave." The esteem in which he was held by his old residents was shown when he was entertained at dinner by them on his retirement from active hospital work in 1903, many of them travelling from distant parts of the country to do honour to their old chief. His speech on that occasion began as follows: "As has been well said, there is more joy over one senior that resigneth than over ninety and nine just appointed persons." His advice and judicial weighing of a difficult subject were highly appreciated in the hospital medical council, where his happy knack of summing up a matter in terse and adequate phraseology was made use of on many occasions.

FRANCIS VACHER, F.R.C.S.EDIN., M.R.C.P.EDIN., F.C.S., J.P.,

CONSULTING SURGEON TO THE BIRKENHEAD AND WIRRALL CHILDREN'S HOSPITAL; PAST PRESIDENT, SOCIETY OF MEDICAL OFFICERS OF HEALTH.

IT is with deep regret that we have to record the death of Mr. Francis Vacher, of Birkenhead, which occurred on board the ss. *Orsova*, a short distance from Port Said, on February 25th. Mr. Vacher was born at Brompton in 1843, and was the son of Mr. T. B. Vacher, the head of the well-known firm of parliamentary printers. After being educated privately, he studied at the West Kensington School of Art, and later pursued his artistic studies in Germany. When he had reached the age of 20 he decided that he would take up medicine as a career, and in 1864 matriculated in the University of Edinburgh, subsequently obtaining the diplomas of the Royal Colleges of Physicians and Surgeons, Edinburgh. His first medical post was that of house-surgeon at the Royal Maternity Hospital, Edinburgh, where he made some researches into the question of seduction in Edinburgh. One unexpected fact which he brought out was that where the social positions of the man and woman differed greatly the woman was more frequently in the higher position—that is to say, it was more often the footman who seduced the daughter of the house than the son of the house who seduced the maidservant. After acting as house-surgeon to the Birkenhead Borough Hospital for four years, he was appointed Medical Officer of Health in 1873 to the borough of Birkenhead, a position which he held until 1891, retiring under circumstances entirely honourable to him, but much less so to the Corporation of Birkenhead. Two years later he was elected a part-time medical officer of health for the county of Cheshire, and in 1896 became a whole-time officer, retiring in 1909. His annual reports were very complete; the last filled over 550 pages, and contained a full history of the sanitary administration of the county.

The formation of the North-Western Association of Medical Officers of Health in 1875 was due almost entirely to the initiative of Vacher, who was its secretary throughout its existence; after it became the North-Western Branch of the Society of Medical Officers of Health he was secretary until 1894. In 1895 he was elected president not only of the branch but of the parent society, of which he continued an active member. In addition to a large number of contributions to public health and medical societies, he published in 1892 the *Food Inspector's Handbook*, which is now in its sixth edition, and in later years *Dangerous Infectious Diseases*, *A Healthy Home*, and *Defects in Plumbing and Drainage Work*. He was a Fellow of the Royal Sanitary Institute, a member of the Société Française d'Hygiène, a freeman of the City of London, and a past master of the Tallow Chandlers' Company.

As a public speaker Vacher was not at his best, but as a writer of pure English he had few equals in the medical profession, and his terse, graphic diction, whether in a report to a local authority or in a presidential address, might serve as models to public health officers of the present day. Socially Vacher was a delightful companion, for his outlook was large and his experiences varied, and he could discourse on many subjects in a manner which had an added charm from the old world graciousness which was one of his characteristics.

Mr. Vacher leaves to mourn their loss a widow, two sons, and four daughters.

Medical News.

DR. H. MACNAUGHTON-JONES has been elected an honorary member of the Belgian Society of Gynaecology and Obstetrics.

A DISCUSSION on the certification of milk and its effect on the milk supply will be opened by Mr. Wilfred Buckley, of Basingstoke, at a meeting of the Royal Sanitary Institute to be held at the University of Birmingham on Friday evening, March 27th.

IT is announced that the Mount Vernon Hospital at Hampstead has been purchased by the Medical Research Committee appointed under the Insurance Act for £35,000, payable as to £11,000 in cash and the remainder in four instalments of £6,000 a year. It is understood that it is intended to use the building as a central research institute and hospital.

ON March 18th, at Colchester, a complimentary dinner was given by the members of the North-East Essex Division of the British Medical Association to Dr. W. Leigh Day, Dr. W. F. A. Clowes, and Dr. Stanley Worts, in recognition of their strenuous efforts on behalf of the profession during the contest with regard to the Insurance Act. During the evening each of these gentlemen was presented with a silver bowl suitably engraved. The presentations were made by Dr. J. H. Salter, who presided at the dinner.

THE annual congress of the Ophthalmological Society of the United Kingdom will be held, under the presidency of Mr. F. Richardson Cross, on Thursday, Friday, and Saturday, April 23rd, 24th, and 25th. The meetings will take place at the rooms of the Royal Society of Medicine, 1, Wimpole Street. On the mornings of Thursday and Saturday papers will be read from 10 a.m. till 1 p.m.; on Friday morning there will be a discussion, to be opened by Mr. E. Treacher Collins and Lieutenant-Colonel H. Herbert, on post-operative complications of cataract extraction. The annual business meeting will be held at 4 p.m. on Thursday, and at 5 p.m. on the same day Professor Uhthoff of Breslau will deliver the Bowman Lecture on the importance of ophthalmology in brain surgery. Members of the society and their friends will dine together on Thursday evening. It has been arranged to hold a clinical meeting on Friday afternoon at the Central London Ophthalmic Hospital, Judd Street, W.C. During the congress a museum of objects of ophthalmic interest will be arranged in the Bowman Library at the Royal Society of Medicine. Communications respecting the scientific meetings should be addressed to Mr. G. Coats, 50, Queen Anne Street, W.; respecting the museum to Mr. M. S. Mayou, 50, Cavendish Square, W.; and respecting the dinner to Mr. Elmore Brewerton, 84, Wimpole Street, W.

THERE was a pleasant little ceremony at Shrewton, in Wiltshire, at the end of last month, when Dr. Charles Eddowes, an old and valued member of the British Medical Association, was the recipient of a presentation from a very large number of old patients and friends resident in that neighbourhood. Dr. Eddowes retired a short time ago after over fifty years' work in and for Shrewton, and the address presented to him recorded the great regard and deep affection which he had won from all classes by the unvarying kindness, courtesy, and attention ever displayed by him in the discharge of his many duties. The address was accompanied by a bag of sovereigns, which the chairman described as representing the golden opinions the donors held of their friend. The presentation was made on Dr. Eddowes's 77th birthday, and among those present were several grown-up grandchildren.

THE National Land and Home League has issued a report of its work so far as it concerns rural education. Two topics have had main attention: (1) The training and remuneration of the teaching staff; (2) the better adaptation of the curriculum of the schools to the needs of the country districts. For the effective selection and training it looks with much satisfaction to the sanction of the Board of Education for a return to a modified scheme of "pupil teacher" appointments. The association of promising scholars with the teaching of their own school is found to provide a very efficient test of the suitability of the prospective teacher for the vocation, and it affords a very effective practical counterblast to the severely academic tendencies of the training colleges. On the need for the better payment of teachers the public have had effective illustration in the recent troubles of the Education Committee of a home county. On the matter of curriculum the writers point out that the present-day code presents a serious drawback in that "it is calculated to turn the children of the village into good townsmen." They recommend the extensive introduction and adoption of practical work and the "manual method" into all schools, both town and country. By the manual method they do not mean the teaching of definite trades, but the practice of all and any variety of hand work found to train hand and eye and give discipline by requiring attention and care. In many rural districts most interesting experiments have been carried out by energetic teachers in strictly agricultural subjects, such as horticulture, poultry keeping, bee keeping, milking, and goat keeping; and in one school a very successful and profitable excursion into pig fattening was made. No one can fail to be interested in such an essentially homely and valuable propaganda.

A PORTRAIT of Sir William Ramsay, painted by Mr. Mark Millbanks, was presented last Wednesday to University College by Professor Norman J. Collie on behalf of the Portrait Committee, and a replica was given to Lady Ramsay. Professor Collie referred to the early discoveries of Sir William Ramsay in physical chemistry while he was an assistant at Glasgow and professor at Bristol. The first of his discoveries after he came to University College in 1887 was that, made in conjunction with Lord Rayleigh, of the new gas in the atmosphere, argon. After argon came helium, unknown until then as a terrestrial element. In consequence of these results it seemed probable that there were yet more elements to be found, and Sir William Ramsay searched for them with the help of Dr. Travers. It took them practically five years to get out and separate the new gases, xenon, crypton, and neon. The discovery of any of these elements would have been enough to make any person famous, and they constituted one of the most remarkable pieces of work that any chemist had yet accomplished. Such great discoveries could not be expected every year, but if there were any to be made they could always rely upon it that Sir William Ramsay would make them. He was the finest experimentalist he had ever known, but they knew him also at University College as a man, and they knew that he had always been ready to give help in every direction. He was a man of infinite kindness and infinite capacity and wonderful cleverness. The Vice-Chancellor (Dr. W. P. Herringham) accepted the portrait on behalf of the university, and said that he was spoken of as an inspirer and a cordial helper of other men's work, and that was the rarest and most precious and valuable of all gifts to anybody connected with a university. Dr. Gregory Foster then presented a replica of the portrait to Lady Ramsay; and Sir William Ramsay said that the only omission in Professor Collie's speech was the absence of any reference as to the part he had played in his researches. He thanked his assistants and students and others with whom he had been associated, and said that he and Lady Ramsay did not intend to sever their connexion with University College.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

AFFLICTED asks if there is any reliable mechanical apparatus for counteracting the falling in and indrawing of the alae nasi. If the tip of the nose is pushed up with the finger, there is abundant air passage-way; otherwise the indrawing of the alae renders mouth breathing necessary. Wearing a mechanical apparatus might stiffen out the alae after a time.

MOTORING IN RHINITIS.

ROSACEAE has been told that motoring has been found to cure several obstinate cases of chronic rhinitis with inflammation of accessory cavities of the nose; he would be glad to have this opinion confirmed or otherwise by readers of the BRITISH MEDICAL JOURNAL.

ANSWERS.

F. H. K.—For the examination on operative surgery for the Fellowship of the Royal College of Surgeons of Edinburgh, Kocher's book would probably be found more useful than Binnie's. It has the disadvantage, however, that Kocher's methods take precedence of others, and any candidate will be well advised to have beside him another of the smaller books on operative surgery, such as the volumes by Thomson and Miles or Waring.

MARRIAGE OF FIRST COUSINS.

DR. E. N. M. ROSS (London) writes: The Bakhtiaris, one of the most advanced tribes in Persia, make it a rule that a man's wife should, if possible, be his first cousin, preferably his father's brother's daughter. Contrary to my preconceived ideas, I found the children of such marriages as a rule mentally and physically superior to the children of the other wives, though brought up under precisely similar conditions.

SERUM DIAGNOSIS OF TUBERCULOSIS.

IN reply to several correspondents we may say that the papers on which the article on this subject published in the JOURNAL of March 7th was chiefly founded are the following: (1) Besredka and Jupille, *Annales de l'Institut Pasteur*, November 25th, 1913; (2) Besredka and Manoukhine, *Comptes rendus de Soc. de Biologie*, February 6th, 1914; (3) Besredka and Jupille, ibid., February 13th, 1914; (4) Kuss, Leredde, and Rubenstein, ibid., February 20th, 1914; (5) Inman, ibid., February 20th, 1914.

COLOTOMY BELT AND PAD.

J.—A celluloid cap with raised ring and holes in the edge of the cap, so that it may be stitched to the colotomy belt, is in the market, and is a much more satisfactory apparatus than the rubber appliance. This celluloid cap is fitted to a belt and not to a truss. It is made by a manufacturer called Franklin, who supplies the trade only. Our correspondent should be able to obtain this from any good firm of instrument makers. We may remark that Harrison Cripps doubts whether any apparatus answers better than a pad of flannel bandage. The following description is taken from his recent work on rectal cancer: "A piece of lint 3 in. square smeared with simple ointment should be placed over the opening; above this a small pad of boric wool may be applied, the whole being covered with a large flat pad of cotton-wool protected by gutta-percha tissue. The pad may be kept in position by a few turns of a wide flannel bandage, using a perineal strap if necessary."

LETTERS, NOTES, ETC.

MILWARD FUND.

MR. WILLIAM SHEEN, Honorary Treasurer (2, St. Andrew's Crescent, Cardiff), writes: Since the list was published a subscription of £5 5s. has been received from Mr. W. Sampson Handley, London.

THE TREATMENT OF BRONCHIAL ASTHMA.

A GENERAL PRACTITIONER writes: During the last few years great strides have been made in the treatment of various diseases. I regret to say bronchial asthma is not of them, yet sufferers from this dreadful malady deserve our sympathy and help. How do we treat a patient suffering from bronchial asthma to-day? If we are called in during a paroxysm, we endeavour to give immediate relief in various ways, such as inhalation of chloroform, hypodermic injections of morphine and atropine—which should be used with great care, especially if there is much bronchial secretion—or adrenalin, which is a dangerous drug to play with. Between the attacks we prescribe a mixture containing potassium iodide or liquor arsenicalis in increasing doses. We also diet our patient, and see that his bowels are kept freely open. Our patient is no better with this treatment, so after a time we send him to a surgeon, who removes any nasal polypi that may be present, portions of turbinates, and puts straight a deflected septum. After this treatment the patient is often worse than he was before, so we now send him to a physician who specializes in vaccines; a vaccine is prepared from the patient's sputum, and from time to time injected. This treatment is often successful for a time, but invariably the attacks come on again, so the patient is now sent to a dentist; his teeth are extracted, with no good permanent result. Finally, our patient is advised to live in some country where the climate would suit him. What a humiliating position for a doctor! I hope the time is not far distant when some brilliant member of the profession will find out what bronchial asthma is, then we can expect to treat our cases successfully.

DIET AND APPENDICITIS.

DR. JOSIAH OLDFIELD writes from Tunis: May I support my theories on the prevention and early treatment of appendicitis (which you allowed me to formulate in one of your January issues) by recording my observations in the Arab Hospital at Tunis? I find that the Arabs eat little or no meat for a week or two at a time, and then may have a large flesh meat feast when an animal is killed. I find that their daily diet consists of grains, vegetables, dried fruits (dates, figs, raisins), some legumens, milk, cheese, and eggs. I find, further, that oil is largely used as an integral part of every meal, nearly everything being cooked with oil; and, lastly, I have the authority of the senior surgeon to the Sadiki Hospital (a purely Arab Hospital, situated in the middle of the souks of Old Tunis) in saying that appendicitis is a comparatively rare and surgically unimportant disease amongst Arabs. If my theories are correct—(1) that the anaërobic micro-organisms of the intestines produce intestinal contents of a virulently poisonous character when they act upon flesh foods; and (2) that it is the carrying through the intestinal wall of this virulently poisonous material by micro-organisms penetrating the weakest part of the intestinal wall in the neighbourhood of the appendix, which makes appendicitis so serious a disease—then the best treatment and the best preventive measures are: (1) Cut off flesh foods; (2) give 1 to 2 oz. of castor oil to sweep on the micro-organisms completely past the vulnerable part; (3) give 1 oz. of olive oil daily with a drachm of castor oil until all symptoms have disappeared; and this is a treatment I have found most valuable.

BIRDS' NESTS.

BIRD lovers had an excellent opportunity for supplying themselves with all the adjuncts necessary for indulging in this interesting hobby at an exhibition of nesting boxes and bird-feeding appliances held by the Selborne Society from March 2nd to the 14th, in their offices at 42, Bloomsbury Square. A very large variety of nesting boxes was on view, and the ingenuity of the designers had evidently been exerted to the utmost to make these artificial substitutes resemble as closely as possible the natural homes of the different species of English birds. Every device likely to induce wild birds to nest close to human habitations had been employed, and many of the boxes were so constructed that it would be possible for the owner to keep the nest under observation without disturbing its occupants. The exhibits also included a large number of the latest feeding appliances, made for hanging on to trees or fixing against walls. Both nesting boxes and feeding bottles were planned with a view to protecting the birds from the depredations of the household cat, so that the possessor of a garden at the present moment need no longer fear to have it full of

"Birds over the boughis sheen,
Singing of love among the leavis small."

THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM BY INTRATHECAL INJECTIONS: A CORRECTION.

OUR attention has been called to an error of some consequence in Dr. Harry Campbell's article on this subject in the JOURNAL of March 14th. On page 577, col. 2, line 12 from foot, it is stated that 0.9 gram of neo-salvarsan should be given "intrathecally." The last word should have been "intravenously."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

SYSTOLIC AND DIASTOLIC BLOOD PRESSURE ESTIMATION, WITH SPECIAL REFERENCE TO THE AUDITORY METHOD.*

BY

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AND

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(From the Physiological Laboratory.)

It is being gradually recognized that systolic pressure estimation, though valuable, gives very insufficient information regarding circulatory conditions in health and disease, and that a knowledge of the range of pressure change during the whole cardiac cycle would be of great importance in various ways.

The auditory method, employed in a certain way, offers distinct advantages in the estimation of systolic pressure, but its greatest importance lies in its relation to the estimation of diastolic pressure.

Significance of Diastolic Pressure.

The importance of a knowledge of diastolic pressure—the constant element in blood pressure, as Marey called it, in contradistinction to the variable systolic element—need hardly be enlarged upon. It is the load which the tissues of the arterial wall have to bear continuously during the life of the individual, the transitory systolic rises that constitute the pulse being superadded. The diastolic pressure is important not only with regard to the mechanical stress upon these tissues, but probably also with regard to the influence of an excessively high diastolic pressure upon their blood supply, especially in the vessels of the lower extremity, where, in the erect posture, the diastolic pressure is greatly augmented by the influence of gravity. The problem of the maintenance of an efficient capillary circulation in the walls of an elastic tube distended by a high internal pressure is an interesting one.

Diastolic pressure in the aorta is a measure of the strain which the aortic valve-flaps have to stand, and it is obvious that tear and wear resulting from this strain must be seriously augmented by a continued excess of pressure. Sir William Osler attaches much importance to the influence of high diastolic pressure, depending on excessive muscular exertion, in the causation of aortic incompetence in what is sometimes termed "athlete's heart."

Aortic diastolic pressure constitutes the resistance to be overcome in the forcing open of the aortic valves in the early part of the systole of the left ventricle.

Diastolic pressure estimation is valuable with reference to the gauging of the peripheral resistance. *Ceteris paribus*, an increase of this resistance involves a rise of diastolic pressure and vice versa. But it is essential to bear in mind that certain other factors have to be kept clearly in view and given due weight in the interpretation of the meaning of the diastolic pressure indications. Apart from changes in peripheral resistance, the diastolic pressure may vary markedly as a result of changes in the rate of the heart beat, a quickened cardiac action tending *per se* to raise the diastolic level, as there is less time for the pressure to fall between the systolic elevations—that is, less time for blood to pass out from the arterial tube into the capillaries.

Conversely an excessively slow ventricular rhythm (for example, in heart-block, etc.) will *per se* give long intervals for the arterial pressure to fall, thus tending to lower the level of diastolic pressure considerably. This is indicated diagrammatically by the dotted lines in Fig. 1. The tendency to a lowering of the diastolic pressure in this way may of course be compensated or over-compensated by other vascular adjustments, so that a quick pulse-rate may coexist with a normal or low diastolic pressure.

The effect of such alterations in the heart's action must naturally be allowed for in appraising the significance of a change in the diastolic pressure readings.

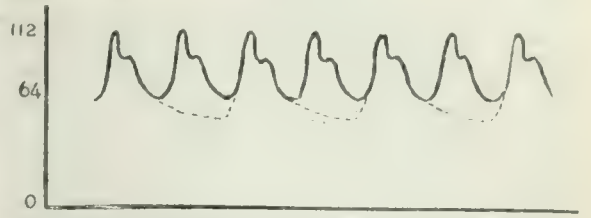


Fig. 1.—To illustrate the effect of slowing of the heart in lowering the diastolic pressure. If the heart-rate is halved the pressure has time to fall much further between the beats, as indicated by the dotted lines.

Again, a stiffening or loss of elasticity in the arterial system influences in an important way the actual height of the diastolic pressure and its relation to the height of the systolic pressure. The left ventricle pumping blood into the normally elastic arterial system of tubes produces lower systolic and higher diastolic pressures than would be present in a system of relatively inelastic or stiffened vessels. With an absolutely rigid system of tubes there would be a high systolic pressure at each pumping act, and a fall of pressure to zero between the pumping acts. It follows that the more the human arterial system approaches the condition of a rigid, as contrasted with an elastic, system of tubes the greater will be the tendency to a lowering of the diastolic pressure—with a concomitant heightening of the systolic pressure.

From these considerations it is evident that the tendency of a heightened peripheral resistance to raise the diastolic pressure may be opposed and more or less extensively modified by a stiffening of the arteries tending to lower the diastolic pressure, so that the presence of an increased peripheral resistance may be more or less completely masked, as far as a rise in diastolic pressure is concerned.

On the other hand, it is manifest that a high diastolic reading, obtained when the arterial system is stiffened and the heart-rate is not fast, must be of very great significance as an indication of increased peripheral resistance.

A change of 15 or 20 mm. in the diastolic pressure estimated under similar conditions (rest, posture, etc.) and unattended by any such alteration in the heart-rate as might in large measure account for the diastolic change, possesses a significance with regard to the behaviour of the peripheral resistance vastly greater than could be attached to a similar alteration in the reading of systolic pressure.

Significance of the Pulse Pressure.

Many of the published estimates of the pulse pressure or range between the systolic and the diastolic level are no doubt vitiated by the erroneous values ascribed in a proportion of cases to the systolic pressure by taking the first readings of obliteration pressure, thus giving in certain instances a serious exaggeration of the actual systolic pressure. On the other hand, by the use of the maximum oscillation and some other methods too high estimates of diastolic pressure have often been made, while the taking of the lower limit of the sound in the auditory method as the diastolic index, as is a common practice at present, inevitably results in many instances in a wholly erroneous underestimate of the diastolic pressure.

It need hardly be said that most important information as to the state of the circulation, beyond what can be deduced from an estimation of the systolic or diastolic pressures singly, is to be obtained from a knowledge of the relation between these two—the pulse pressure. Obviously it is not merely the pressure of blood that is important, but also the velocity of the flow, determining the amount of blood which the organs receive per unit of time.

Assuming the competence of the aortic valves, it may be stated broadly that with the heart at a normal or moderate rate a defective range of pressure variation at systole and diastole—that is, a diminished pulse pressure—indicates a slowed flow of blood from the arteries into the capillaries. Thus there may be a good systolic pressure together with a lessened blood flow; this is indicated by

*Read at the Medico-Chirurgical Society of Aberdeen on December 4th, 1913.

the failure of the pressure to fall to the usual extent between the beats, the rate of the heart being of course kept in view as a factor. The converse of this rule only holds good within certain limits.

The formula that pulse pressure × pulse-rate is proportionate to the cardiac output and the velocity of the blood flow is not applicable in certain conditions (circulatory shock, etc.). Thus, in some pathological conditions there may be an extensive pulse pressure with a very defective mass movement of the blood.

The condition of aortic regurgitation, in which blood escapes from the arterial tube backwards as well as forwards, is, of course, a very special case that stands by itself.

Various observations have been made on the meaning and influence of alterations in pulse pressure.

In cases of haemorrhage it has been found by Wiggers that a progressively diminishing pulse pressure is suggestive of a continuance of the haemorrhage.

It has, of course, been long known that pulsation in the blood stream supplied to perfused organs has a very important beneficial influence upon the condition of the tissues and on the rate of perfusion.

Some ten years ago Erlanger and Hooker studied the relation of pulse pressure to renal activity: later the subject was pursued by Hooker and recently by Gesell. These investigations have produced important evidence; they concur in the finding that, as a rule, the amount of urine varies directly with the magnitude of the pulse pressure, also of the amount of urea, chlorides, etc., while in albuminuria the amount of albumin varies inversely as the magnitude of the pulse pressure. Gesell also suggests that the increased pulse pressure produced by digitalis and strophanthus may *per se* largely account for the diuresis caused by these drugs.

The Auditory Method.

The auditory method, first suggested by Korotkoff of St. Petersburg in 1905, has so far been applied only on a very limited scale. In this country it has been recommended by Dr. George Oliver. It has been felt that there is no adequate basis of definite evidence as to the interpretation of the phenomena, at least in relation to diastolic pressure.

A prolonged investigation which we have carried out in recent years on both the experimental and clinical sides has yielded very definite results which enable us to predict for this method, applied and interpreted on lines that we have found to be reliable, a wide sphere of usefulness. From an exhaustive comparison with other methods we find that the auditory method can be made, with simple appliances and in very little time, to yield results that are unequalled, as regards range of information, precision, and reliability, by those derived from other methods, even when the latter involve time-consuming and relatively laborious procedures with more elaborate and cumbrous forms of apparatus.

The Apparatus Used.

After an extended trial of various apparatus, we use for routine examination an ordinary armlet (12 cm. broad) applied to the upper arm (not the forearm) and inflated by an ordinary ball filler, a mercury manometer (for example, Martin's form) to measure the armlet pressure, and an auditory tambour or phonendoscope (for example, Oliver's*) to auscultate the artery. This very sensitive tambour, strapped on the arm on the distal side of the armlet, has the great advantage, as compared with an ordinary binaural stethoscope or an ordinary phonendoscope, of leaving the hands of the observer free—an essential point in the application of the method as we employ it.† The tambour must be placed over the artery at the bend of the elbow close to the distal side of the armlet, and must be kept applied to the skin without exerting any appreciable pressure. It has, of course, long been a familiar fact that strong pressure applied to an artery by the end of a stethoscope causes production of sound in the vessel, the sound produced being commonly described as a murmur. Oliver remarks that it really has the character of a throb. We find that in the femoral a loud murmur is usually produced; in an artery like the radial a sharp throb or thud; in the brachial a thud, tolerably pure or with a murmurish quality. Very considerable pressure with the tambour is needed to elicit sounds in this way. With any reasonable care in the application of the tambour there is no danger of fallacy from this cause in the use of the auditory method.

We have often used the Oliver screw compressor for inflating; it is very convenient for graduating the armlet pressure accurately by running it up and down a little near the critical point where the systolic or diastolic index is being obtained, the screw being easily turned a little forwards or backwards by one hand. The screw compressor is most conveniently used with an armlet bag of sufficiently small capacity to suit the capacity of the compressor, as is the case with the Oliver armlet, the bag going only part of the way round the limb. With a bag of larger capacity (like that of the ordinary armlet) embracing the limb completely, more than one fill of the compressor is needed, the tube to the armlet being pinched while the compressor is refilled; or, if so desired, a combination of ball filler and screw compressor may be used for rapid inflation and easy and accurate graduation of the pressure.‡ While the Oliver armlet gives good results upon the upper arm—care being taken that the bag is applied on the inner side over the brachial artery—we do not recommend it for application to the leg; we have found that the tactile indications obtained from the posterior tibial and dorsalis pedis arteries may sometimes be influenced by the position of the bag on the outer or inner sides of the leg. The presence of two bones with more than one large artery may evidently involve danger of fallacy when a compressing bag is used which goes only partially round the limb.

Where compactness and lightness are specially desired in the apparatus, the Oliver mercurial compressed air manometer is a convenient substitute for the ordinary mercury manometer; in a recent form the tube and scale are inclined at an angle suitable for easy reading. (The instrument should first be tested with a mercury manometer to make sure that the readings indicated on its scale are actually correct.) In its most compact and portable form the auditory apparatus may thus consist of armlet, ball filler, mercurial compressed air manometer, and auditory tambour; when the degree of compactness is not so essential, a mercury manometer (for example, Martin's) is to be preferred for measuring the armlet pressure.

Application of the Auditory Method.

In making an estimation (see Fig. 2), the armlet pressure is first raised well above systolic pressure, as indicated by



Fig. 2.

the disappearance of the pulse, tested by the ordinary tactile method. When this is done, no sound is heard over the brachial artery at the elbow. The armlet pressure is then gradually lowered, and as soon as this pressure fails to keep the artery obliterated and blood begins to force its way beneath the armlet at each heart beat, a sound is heard in the form of a distinct thud. The beginning of this sound serves as the index of systolic

* Supplied by Hawksley, 357, Oxford Street, London, W.

† We somewhat prefer the tambour attached to a separate band to the more recent form where it is held in position by a strap connected to the armlet.

‡ We have sometimes used, in conjunction with a ball filler alone, compression of the armlet by hand to vary the pressure up and down near the critical point.

pressure, affording a very sharp and precise indication. With a finger on the artery it is recognized that the beginning of this sound comes at least as early as the reappearance of the pulse tested by the tactile method; indeed, the former is usually a few millimetres above the latter for example, 5 to 10 mm. The commencement of the sound is in no case below the tactile indication when the auditory method is working properly. The armlet pressure being gradually lowered, the sound becomes louder and may develop a murmurish quality, as Oliver describes it. At a lower level it diminishes in intensity, at one point rather suddenly becoming weaker, and at the same time changing in character from a clear to a duller sound. This change in intensity and character may (1) be very speedily followed by extinction of the sound, or may (2) on the other hand, be followed by persistence of the sound through a very considerable range of further lowering of the armlet pressure (for example, 20 to 30 mm., etc.). The weakening and dulling of the sound we regard as the index of diastolic pressure, for reasons to be stated later, in opposition to the view that extinction of the sound constitutes the diastolic index. The lower limit of the sound is an indication which seems to be at present very widely adopted as the basis of interpretation of diastolic readings and used in the calculation of pulse pressures, etc. Quiet surroundings are, of course, necessary for the precise recognition of sound persisting below the diastolic index. It is in young adults that marked persistence has, in our experience, been most frequently observed; in older persons, and in most cases examined in the wards of a general hospital, extinction of the sound has very speedily followed the occurrence of the change which constitutes the diastolic index.

The normal relation of the auditory and tactile systolic indices is of great importance; we wish to lay stress upon the concurrent estimation and comparison of these two indices as an essential part of the routine application of the auditory method of estimating systolic and diastolic blood pressures. The auditory reading should always be *at least as high* as the tactile reading; very often it is somewhat higher—a few millimetres, up to 10 mm., etc. An auditory reading lower in value than the tactile one at once impugns the accuracy of the auditory results, and shows that the conditions are such as to make the auditory indications, both systolic and diastolic, erroneous. Such conditions may be constituted by improper application of the auditory tambour over the artery, anatomical variation of the latter, etc., and may be remediable. If attention to the adjustment of the apparatus does not raise the auditory index to or above the level of the tactile index, the auditory method is to be regarded as inapplicable; we have rarely met with such a case. Abnormal lowering of the auditory as compared with the tactile index means that the former is erroneous, and there is no good ground for assuming that the alteration of the sound at a lower level of armlet pressure which constitutes the diastolic index should in these circumstances afford any valid evidence as to the height of the diastolic pressure.

By the use of the auditory method it is easy to estimate, with an accuracy not otherwise attainable, the influence of various agencies on the blood pressure—the slight variations associated with the normal respiratory movements, as well as slower periodic variations; the changes occurring in Müller's and Valsalva's experiments; the effects of voluntary muscular contraction in other limbs, the muscles of the limb embraced by the armlet being, of course, kept relaxed, etc.

Estimation of Systolic Pressure.

As far as systolic pressure is concerned, the chief advantage of the auditory method is that the sense of hearing is substituted for the somewhat more fallible tactile sense. The auditory index shows more precisely when the systolic jet of blood begins to arrive on the distal side of the armlet, being more accurate than the finger in detecting such beginning, and serving as a sharper indication of the point where the intra-arterial systolic pressure begins to overpass the external or armlet pressure. The use of the auditory method in this connexion is open to certain possibilities of fallacy that may affect the obliteration method used by the tactile plan—for example, the state of the arterial wall, regarding which investigations have been carried out by many workers in this country, by Russell, Oliver, Herringham, Hill and his collaborators, and by ourselves; in America by Janeway and Park, etc. In a former investigation we reached the conclusion that the condition of the arterial wall plays no important part in the vast majority of blood pressure estimations, either in the healthy state or in diseased conditions, but that in a certain number of cases with resistant brachial arteries, exaggerated readings of systolic pressure may be obtained. In these cases the method of continued local compression, as already described, is found to be very valuable in minimizing the chance of error. We close the brachial artery by digital pressure (two fingers) about the middle of the arm for from two to three minutes, and then at once reapply the armlet and take another systolic reading. Resistance of the arterial wall, if present, is thus almost completely set aside, and a corrected reading of systolic blood pressure is obtained. When the artery feels resistant to palpation (it may be noted in passing that the condition of the radial artery is no sure guide to the condition of the brachial, the latter being very frequently in a worse state) we first make an obliteration reading in the usual way, then slip down the armlet sufficiently to enable digital pressure to be applied as above stated; the armlet is then put in position again and the second reading taken. In this way it is commonly possible to equalize readings which at first gave widely differing values in different arteries, the high readings from a resistant artery being reduced to the level found in a non-resistant one, but not below that level; further compression induces no further reduction. This method does not equalize the arm-leg readings in cases of aortic regurgitation.

Estimation of Diastolic Pressure.

Comparatively little attention is given at present to diastolic pressure, a fact that is not surprising in view of the very general conviction that no practicable and reliable method of estimating it is available. Some years ago Professor C. J. Martin expressed an emphatic opinion that the systolic pressure is the only one that can be estimated with any accuracy—a conclusion affirmed also by many other observers, and widely accepted at the present time.

In the study of diastolic pressure the methods that have been most frequently used are those based on the principle of maximum oscillation or pulsation—Marey's principle, namely, that when the intra-arterial pressure is counterbalanced by an equal extra-arterial pressure the artery will pulsate most largely, showing maximum volume oscillations at the pulse-beats. The application of this principle has been studied by Mosso, Roy and Adami, Hill and Barnard, Recklinghausen, Howell and Brush, Erlanger, Martin, and others. For a statement of the conflicting views that have been held as to the relation of the oscillation to the internal pressure—whether diastolic or mean pressure, etc.—we must refer to our paper in *Heart*, 1914, v, 153.

In the same paper we comment on some other methods (Strassburger, Masing, Sahli, and others), worked on a different plan, and depending on the recognition (by finger or sphygmograph), not of volume changes in the length of artery compressed by the armlet, but on changes in the artery distally to the armlet.

The Diastolic Index by the Auditory Method.

A circulatory schema was arranged so that the actual systolic and diastolic pressures within an excised surviving artery were measured by maximum and minimum manometers, graphic records of pulsation or volume oscillation being obtained and the concomitant auditory phenomena being examined while the artery, enclosed in a tube or miniature "armlet," was subjected to various degrees of compression.

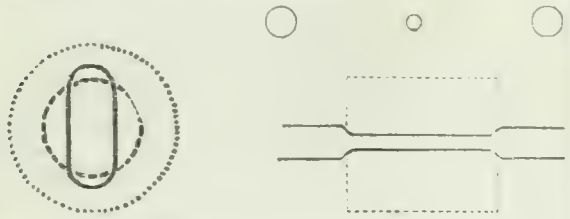
We have correlated the results obtained from this experimental schema under precise conditions with those yielded by an extended series of observations made in normal and pathological conditions in man by one of us (G. S. M.) in conjunction with Mr. J. R. Murray, M.B., in which three methods were employed concurrently: (1) the auditory, (2) the ordinary tactile, and (3) the graphic method by the use of the Erlanger apparatus. (An account of this investigation will be published elsewhere.) We have also used the Pachon sphygmo-oscillometer and found it to be by far the best of the forms of apparatus (yielding

visual indications) which we have employed. By an ingenious arrangement the aneroid capsule has an equality of pressures maintained on its outer and inner surfaces, and the middle movement indicating the range of oscillation is a very sensitive one. Of course, the spring manometer which shows the armlet pressure needs, as all such instruments do, to be checked by a mercury manometer from time to time. We frequently use the sphygmo-oscillometer in conjunction with an ordinary armlet applied to the arm, in preference to the narrower armlet applied round the wrist by Pachon. Unfortunately in some cases, as with the Erlanger apparatus, it is difficult to recognize a definite point of sudden and marked declension in the oscillation magnitude. But in many cases, where such declension was marked, the Pachon diastolic index represented by the level of armlet pressure immediately after the declension corresponded with remarkable exactness with the weakening and dulling of the sound which constitutes the auditory index: the oscillations of the needle and alteration in the sound varied together very strikingly. By using the data derived from these various sources we have been enabled to arrive at very definite conclusions as to the validity and the true interpretation of the results yielded by the auditory method.

We have stated as our index of diastolic pressure the weakening and dulling of the sound which occurs at a certain level in the process of lowering of the armlet pressure, in opposition to the widely accepted view that the extinction of the sound is to be taken as the diastolic index.

We find that the weakening and dulling coincides with the point at which the arterial tube just ceases to be flattened by the external pressure between the pulse beats. We ascertained, with the help of the experimental schema, that at this point the sound declines very markedly, the sharper sound evidently being produced by the sudden opening up by the systolic wave of the tube, which had been in some degree flattened by external pressure in the interval between the pulse beats; vibration associated with the sudden change in the shape of the tube is evidently responsible for the character of the sound. We have also had recourse to animal experiment for the verification of the auditory index.*

In Fig. 3 A the outer circle (dotted line) represents the



A Fig. 3. B

size of the artery when distended by diastolic pressure—that is, in what we term the diastolic position. (The further expansion normally occurring with each systolic wave is relatively slight, and is not indicated here.) The inner circle (broken line) represents the undistended vessel, empty, or filled with blood at zero pressure—what we call the zero position, the position assumed by the arterial tube (between the pulse-beats) when the internal diastolic pressure is counterbalanced by an equivalent amount of external (or armlet) pressure.

With a further addition (an excess) of external pressure the vessel ceases to undergo diminution in the circular form, but becomes more or less markedly flattened. By the term "half flattening" we mean a condition where the distortion has reached such a point that the shorter diameter of the flattened tube is approximately one half of the diameter of the undistended circular vessel in the zero position. (See Fig. 3 A, unbroken line.) In a normally elastic artery such an increase of external pressure as induces half flattening between the beats elicits maximum oscillation of the arterial volume at each pulse-beat, accompanied by a very loud sound, often murmurish in character. In a relatively inelastic artery a greater increase of external pressure, inducing a degree of flattening greater than half flattening, is needed to elicit the maximum oscillation.

* An account of these results will be published elsewhere.

The persistence of the sound below the level of diastolic pressure—below the point where the external pressure is sufficient to cause some distortion of the tube from the circular form between the beats—is obviously due to sound production under conditions that differ in respect of the fact that the arterial tube retains its circular form all the time, there being no flattening between the beats. The length of artery embraced by the armlet is constricted (not flattened) by the external pressure. The influence of the external pressure is to counterbalance an equivalent amount of internal pressure, and produce an effect such as would result from a similar reduction of the internal pressure in the length of artery in question—that is, the length of artery embraced by the armlet would be less distended by internal diastolic pressure than the parts proximal to and distal to the armlet, as indicated in Fig. 3 B. At each systole there is a sudden expansion of the constricted tube, a much more extensive movement than the very slight systolic expansion of the unconstricted portions of the artery not embraced by the armlet. Possibly the chief seats of sound production are in the regions where the constricted and unconstricted portions become continuous.

In aortic regurgitation where the artery is suddenly expanded by the very large systolic wave sound commonly persists to very low levels and often to zero armlet pressure, being easily audible without the application of any external pressure at all.

Normal Diastolic Pressure and Pulse Pressure.

In the arms of a series of healthy young adults (examined in the sitting position) the average diastolic pressure was found to be about 65 mm. (with a range from 50 to 80 mm.) by the auditory method; this average differed little from that obtained from Erlanger tracings as interpreted by an index (not the same as Erlanger's) which we have adopted on experimental evidence. These values are much lower than those commonly stated for diastolic pressure.

In pathological subjects, on the other hand, there is much divergence between the auditory and the Erlanger results: we accept the former as more reliable, on evidence derived from various sources.

The average pulse pressure in the series of normal adults above referred to was about 46 mm.

Recognition of Differences in Diastolic Pressure induced by Gravity.

We have often been able to estimate in similar fashion the diastolic pressure in the lower extremity, the armlet being placed upon the leg and the auditory tambour over the posterior tibial artery. The same procedure is followed in first comparing the auditory and tactile systolic indices and then ascertaining the auditory diastolic indication in the usual way. The diastolic reading, like the systolic, naturally varies according as the person is in the recumbent or in the erect position, or in the resting state. In the former case, in healthy individuals, with arm and leg at the same level, the diastolic index, like the systolic, is got at corresponding levels; the change in the sound over the posterior tibial artery is, as a rule, perfectly definite. In the standing or sitting positions, on the other hand, the diastolic pressure reading necessarily exceeds to a large extent that obtained from the arm, as also does the systolic reading.† Thus, in the sitting position, such diastolic readings as these were obtained—arm 75 mm., leg 125 mm. The vertical difference between the level of the two armlets was found to be 69 cm.; the leg pressure was necessarily augmented by the weight of a column of blood 69 cm. long. As this corresponds to a pressure 52 mm. Hg, it accounts for the difference in the arm-leg readings as compared with the equality (75 mm.) found in arm and leg in the recumbent position. These results are confirmatory of the accuracy of the auditory method for both systolic and diastolic pressures with considerable differences in the conditions present, with blood pressures at very different levels, etc. Correspondence of *tactile systolic* readings in arm and leg, hydrostatic difference being allowed for, was found some time ago by Hill and Flack, and verified in our own observations.

† The systolic auditory reading was 115 in the arm and 165 in the leg; the pressure difference between the systolic and diastolic levels (pulse pressure) was thus equal (40 mm.) in arm and leg.

Von Recklinghausen had postulated such correspondence. Similarly when the subject is lying down (in the horizontal position, or with the head lowered), and one leg is flexed at right angles to the trunk, the diastolic reading got from the lower part of the leg shows a reduction in accordance with the hydrostatic difference.

The influence of the altered conditions induced by local warming and cooling was also tested. Estimations were made before and after a limb had been kept immersed for some time in hot or cold water; the readings were compared with those made simultaneously on another limb. Sometimes one limb was warmed and another cooled, and a comparison made between the two. No appreciable difference was found in the readings under these different conditions.

We have also compared the auditory indications with those yielded by the oscillation method in (1) arm and leg at the same level, (2) arm and leg at different levels, and (3) leg at different levels, with results similar to those obtained in the arm.

The Auditory Method in Cases of Aortic Regurgitation.

The frequent presence in this disease of the well-known sounds (systolic thud or double murmur) audible without the application of any armlet pressure introduces new conditions. But the presence of such sound does not, as a rule, interfere with the recognition of the diastolic index, the sudden weakening and dulling being usually very well marked.

Comparison of Tactile and Auditory Systolic Indices as Means of Avoiding Certain Fallacies.

This comparison is essential is connexion with the estimation of both systolic and diastolic pressures. In regard to the former cases of difficulty occur, though rarely. An armlet pressure (for example, 300 mm.) very much above what is needed to obliterate the pulse, as tested by the tactile method (for example, 183 mm.), may fail to abolish the sound in the usual way, the sound being conducted past the obliterated area of artery, probably along the bone. Obviously the usual systolic index afforded by the upper limit of the sound is not applicable in such cases. While the armlet pressure is being lowered from a level far above the tactile systolic level a sudden increase in the intensity of the sound with the usual relation to the tactile index may occur and constitute, in all probability, the true systolic index in these instances. Such conditions have been noticed by one of us (G. S. M.), in conjunction with Mr. J. R. Murray, in a case of aortic regurgitation, and in one healthy student, a good athlete, in whom the sound at the elbow was found to persist at levels of armlet pressure far above what was necessary to obliterate the brachial artery as evidenced by the tactile method.

The estimation of diastolic pressure is not interfered with in such cases, the usual index being easily recognizable.

The comparison in question at once reveals inefficient working of the auditory method, due to an incorrect situation of the auditory tambour, stasis of blood in the limb from excessively and quite unnecessarily prolonged compression,* or the existence of an artery of insufficient size; both systolic and diastolic auditory indications may be vitiated by such conditions, though cases of unavoidable difficulty seem to be very rare. Danger of erroneous interpretation is readily obviated in the way stated. The applicability of the auditory method to the forearm has to be determined in this way; in some instances it fails, in others it gives quite satisfactory results.

The same test is essential in applying the method to the small arms of children; down to the age of 8 years we have obtained surprisingly good results in these.

Advantages of the Auditory Method.

The simplicity, ease, and rapidity of this method are strong points in its favour. It gives all the information that is to be obtained by more cumbrous and time-consuming methods, and that with greater precision, the index being a much sharper one than is present in other methods; it also causes less disturbance to the patient than slower methods, which involve a longer compression with the armlet. In the cases where the Erlanger or the Pachon apparatus give dubious or unreadable indications, the auditory method has always in our experience given a definite verdict. It is greatly superior to the palpatory and sphygmographic methods that have been proposed. We are satisfied that all the evidence as to diastolic pressure gained by the other methods, and much more also, can be better obtained by the quick and simple auditory method. The diastolic estimation in this way is as easy as that of systolic pressure, and is relatively little, if at all, complicated by certain sources of fallacy (for example, state of arterial wall) which may come into question in systolic estimation.

This method, measuring the diastolic as well as the systolic pressure, has the great advantage, as compared with the ordinary tactile method, of giving the numerical range of pressure variation in the artery during the whole cycle of the pulse beat, that is, the pulse pressure range.

* The accuracy of the auditory indications may be seriously impaired from this cause if the compression be unduly prolonged.

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SYSTOLIC AND DIASTOLIC BLOOD PRESSURES IN AORTIC REGURGITATION.

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THE arm-leg differences in the obliteration readings of systolic blood pressure observable in cases of aortic regurgitation when one armlet is applied to the upper arm and another to the calf of the leg are now very well known. Such discrepancy was first described by Hill, Flack and Holtzman,[5] and later by Hare,[2] Hill and Rowlands,[4] Rolleston,[3] and others, the tactile method being employed to detect the disappearance and reappearance of the pulse. In view of the remarkable differences observed, sometimes amounting to as much as 100, 150 mm. Hg, or more, the question naturally arises as to what is the "blood-pressure,"* and whether the arm or leg reading is the better indication of the aortic systolic pressure. The conditions are strikingly in contrast with those obtaining in the normal subject, the systolic arm-leg readings in the latter, tested in the same way (in the recumbent position with arm and leg at the same level), being equal. It may be recalled that in presumably normal animals under experimental conditions Hürthle, using his spring manometer, recorded higher systolic pressures in the femoral than in the carotid artery and this was confirmed by Dawson working with valved manometers. But no evidence has been advanced to show the existence of such conditions in the normal human subject.

Nearly a year ago, when studying blood pressures in aortic cases, I observed some further differences of other kinds, and have repeated these observations many times, in 20 cases of aortic regurgitation. These differences affect both systolic and diastolic pressures in the different segments of the upper and lower limbs—quite a different matter from the arm-leg discrepancy in the tactile *systolic* readings from the upper arm and calf of the leg, above referred to.

METHODS.

In the present inquiry the systolic estimations were made by the auditory and tactile methods used in combination as already described by MacWilliam and Melvin[7]; the diastolic readings were obtained by the auditory method, using the sudden dulling and weakening of the sound as the diastolic index, after the application of the auditory method had been verified by comparing the auditory and tactile indices and finding the former to be at least as high as, or rather higher than, the latter. The

* Rolleston noted a difference of 210 mm. in one case and 195 mm. in another.

oscillatory method, with the aid of the Erlanger and the Pachon apparatus, was sometimes employed for purposes of comparison.

For the arm, forearm, and leg, a 12 cm. armlet was used; for the thigh a broader one (17 cm.) except in cases where the thigh was a small one. The two armlets were compared and found to give identical readings on normal subjects.

When the armlet was on the upper arm the auditory tambour was placed near the bend of the elbow in the usual way, while the tactile reading was made from the radial artery; with the armlet on the forearm, both auditory and tactile indications were got from the radial artery. In the case of the thigh, the popliteal artery was used for the auditory, and the posterior tibial or dorsalis pedis for the tactile indices.* The popliteal artery was found to be too deep for satisfactory tactile examination; sometimes the auditory indications obtained from it were of doubtful reliability, and in such cases they were not taken as giving precise numerical values.

In some persons (normal and diseased) the forearm does not give satisfactory results by the auditory method; the applicability of the method has first to be tested in each case in the way stated—by comparison of the auditory and tactile indices. In aortic regurgitation the forearm commonly gives perfectly definite and satisfactory indications.

In examining the limbs two plans were employed. In one two armlets were used, one on the upper arm on one side, and the second on the forearm on the other side, the two armlets being connected with one inflator and manometer. Simultaneous estimations were thus made in the arm and forearm.

By the other plan one armlet was used successively upon arm and forearm, the observations being repeated and the two segments examined alternately to prevent danger of fallacy from a change in the pressure occurring during the observations. The results were relied upon only when the pressure in one segment was found to be unchanged on returning to it after examining the other. Often these alternate estimations were made several times, and, as a rule, with very constant results. In these circumstances there is no reason to doubt the accuracy of the values obtained by the method of successive (or alternate) examination; any other view would involve the preposterous assumption that changes were occurring in the actual diastolic pressure in such a way that the readings from the arm taken at intervals maintained one value, while those from the forearm taken alternately showed another constant value.

The terms "proximal" and "distal" segments of the limbs are applied to the upper arm and thigh, and to forearm and leg respectively, in the sense of these being proximal and distal portions of the limbs that are available for the application of an armlet to test the obliteration pressure in the usual way.

Results.

The notable differences in systolic and in diastolic pressure found to exist in the upper and lower limbs, and in different segments of these limbs in aortic regurgitation, are in contrast with the results obtained by the same methods, applied in similar fashion, to normal persons. (The subjects were, of course, examined in the recumbent position.)

New facts were also brought out in connexion with the behaviour of the sounds heard in different arteries in cases of aortic regurgitation, (*a*) without the application of external pressure and (*b*) with varying amounts of armlet pressure.

The sharp differentiation of the inequalities of pressure about to be described affords further illustration of the precision of the auditory indications.

Differences in Systolic Pressure.

By the tactile method it is easy to determine not only the existence of higher pressures in the lower extremity than in the upper, but also, as a rule, higher pressures in the distal than in the proximal segments of the upper and lower limbs. This is shown in the subjoined tabular statement of a number of cases. It is to be noted in those instances in which there is little or no difference in the arm-forearm readings—as in Nos. 9, 10, 12—there is, as a rule, little or no difference in the thigh-leg values.

In No. 8, where the forearm tactile reading is lower than the upper arm, and where there is no appreciable thigh-leg difference, the diagnosis of aortic regurgitation was a very doubtful one. Moreover, in this case there was virtual agreement between the auditory systolic readings in the two limb segments—that is, forearm =120 mm. and upper arm=122 mm.

TABLE I.—*Tactile Systolic Readings in Aortic Regurgitation.*

No.	Pulse-rate.	Fore-arm.	Upper Arm.	Calf.	Thigh.
1	85	112	109	148	—
2	65	193	182	280	262
3	87	134	116	158	140
4	75	138	134	173	154
6	112	150	130	190	—
7	86	170	163	230	189
8	74	106	122	126	120
9	64	125	124	206	202
10	72	132	133	183	182
11	84	124	120	—	164
12	67	184	182	200	198
13	70	170	172	185	175
17	80	135	125	194	174
18	94	156	136	182	150
19	76	200	182	296	226
Average ...	79.4	148.6	142	196.5	179.7

In Table II comparative pressures in the upper limb are stated. The forearm systolic average is 7.4 mm. above the upper arm by the tactile and 7.8 mm. by the auditory method.

TABLE II.—*Comparative Pressures in the Upper Limb.*

No.	Forearm.			Upper Arm.		
	T.S.	A.S.	A.D.	T.S.	A.S.	A.D.
1	123	130	62	130	130	55
2	193	214	65	182	200	65
3	134	134	78	120	126	60
8	106	120	78	118	122	74
9	125	135	62	124	135	45
12	184	204	80	182	210	75
14	142	156	75	135	145	65
15	191	193	105	194	196	95
16*a*	130	182	102	154	180	92
16*b*	120	140	85	135	135	78
17	137	130	50	125	127	40
18	156	170	80	136	142	50
19	200	210	75	182	194	70
Average ...	155	164.8	76.6	147.6	157	68.4

Table III gives comparative values in the lower limb. The average systolic reading from the calf is 16 mm. above the thigh average by the tactile and 24 mm. by the auditory index.

*The tactile index from the posterior tibial and dorsalis pedis (used in Table I) is, of course, a perfectly valid one, comparable to the use of the radial index with compression of the upper arm.

TABLE III. *Comparative Pressures in the Lower Limb.*

No.	Calf.			Thigh.		
	T.S.	A.S.	A.D.	T.S.	A.S.	A.D.
2	280	300	72	262	240+	72
4	173	184	66	154	172	54
8	126	130	96	120	126	82
12	270	210	100	198	220	98
17	194	220	50	174	190	44
18	182	212	70	150	164	50
Average ...	192.5	209.3	75.6	176.3	185.3	66.6

From the above figures it is evident that the differences in systolic values between the proximal and distal segments of the limbs by both the methods, while not extensive, are perfectly definite and very appreciable. They stand in sharp contrast to what is found in normal limbs examined in the same fashion; in the latter the pressure differences, while not extensive, are distinctly in the opposite direction—that is, the average readings from the proximal segments are appreciably higher than those from the distal segments.

The higher systolic pressures in the distal segments of the limbs may be interpreted as being due to an augmentation of the height of the systolic wave by a reflected wave from the periphery. Such augmentation can be easily demonstrated, as occurring under certain conditions, with a circulatory schema. Von Kries[6] and Tigerstedt[10] suggested an explanation of this sort to account for the higher systolic pressures that have been observed under experimental conditions in animals in the femoral artery as compared with the carotid (Hürthle,[5] Dawson[1]). The systolic differences between the limb segments above referred to are, of course, very small in amount compared to the difference between the upper and lower limbs that has been found in cases of aortic regurgitation.

Comparative values of systolic pressures in the proximal and distal segments of the upper and lower limbs obtained by the tactile and auditory methods are contained in Tables II and III, Nos. 2, 8, 12, 17, 18, the averages of which are given later. (The auditory diastolic results included in the tables are dealt with later.) In these it is seen that the systolic averages by both methods come in a descending series—(1) calf, (2) thigh, (3) forearm, (4) upper arm, the calf reading being about 50 mm. by the tactile and 54 mm. by the auditory method above the average for the upper arm, while the thigh and forearm show intermediate values. The thigh exceeds the upper arm by 32 mm. by the tactile and 26 mm. by the auditory index; the forearm exceeds the arm by 7 mm. by the tactile and 11 mm. by the auditory method.

Differences in Diastolic Pressure.

It is agreed by all observers that the diastolic pressure readings obtained from the various accessible arteries are practically equal in the normal state. It has been found by careful measurements with valved manometers, as in Dawson's[1] investigation, that the diastolic pressure is practically constant throughout the larger vessels, with the exception that the femoral pressure has been found to be slightly lower (by 8 mm.) than the carotid. Thus the innominate and the brachial arteries showed identical readings (for example, 101 mm. Hg, in the dog.)

Even in abnormal conditions there is little evidence of discrepancy. Oliver,[8] using the oscillatory method with an armlet, recorded certain differences between forearm and arm in some aged (nonagenarian) persons; these differences were very slight in amount (5 mm. or less), and were in favour of the upper arm.

In the present investigation very notable differences in diastolic readings were obtained from different arteries by the auditory method; the oscillatory method (especially the Pachon sphygmo-oscillometer) was also often employed. When the Pachon apparatus gave quite unequivocal indications (which was not always the case) these corresponded closely with the auditory results.

A series of levels of diastolic pressure was found to exist, the pressure being lower nearer the heart and rising in value in the more distally-situated arteries, and ascending series of values being obtained in the following order, (*a*) upper arm, (*b*) forearm and thigh, and (*c*) calf of leg.

This is shown by comparing the different values obtained in the four segments in 5 cases in which the readings from all the four segments were considered entirely satisfactory in the same individual. The averages for these 5 cases are as follows:

	Forearm.	Upper Arm.	Calf.	Thigh.
Systolic	155.2	148.6	198.4	180.8
Diastolic ...	70.6	60.8	77.6	69.2

This relationship of the various diastolic levels is clearly indicative of the influence of the valvular leak at the beginning of the arterial tube telling more markedly in lowering the diastolic pressure the nearer the artery is to the heart.

The tabular statements already given (see Tables II and III) show decidedly lower diastolic pressures in the proximal than in the distal segments. The average difference in Table II between arm and forearm is seen to be 10.2 mm., and in Table III between thigh and leg 9 mm. (The averages in Tables II and III cannot be compared as they do not both include the same cases, Table II containing many more than Table III.)

It is obviously important to make a careful comparison with the same apparatus and under similar conditions between the limbs of normal subjects and those of persons suffering from aortic regurgitation and other morbid conditions.

Examples of Simultaneous Estimation of one Upper Arm and the other Forearm.

	Forearm.	Upper Arm.
(*a*) Aortic regurgitation.		
(1) Auditory systolic	140	135
,, diastolic	85	78
(2) Auditory systolic	140	138
,, diastolic	85	75
(3) Auditory systolic	140	133
,, diastolic	85	75
(*b*) Normal.		
Auditory systolic	119	120
,, diastolic	80	80
(*c*) Pathological (nephritis) with no aortic regurgitation.		
Auditory systolic	170	162
,, diastolic	110	110

Similar diastolic values were obtained in these three cases by the Pachon sphygmo-oscillometer.

Behaviour of the Sound heard in the Arteries.

Occurrence of Sound without External Pressure.—In some cases the systolic sound is heard in all the arteries (brachial, radial, popliteal, posterior tibial, and dorsalis pedis) without the application of armlet pressure at all. In other instances the sound is audible in some, but not all, of these; it is absent (*a*) most frequently in the posterior tibial and dorsalis pedis, (*b*) next in the radial, (*c*) least frequently in the brachial. The presence of sound in the arteries, apart from the application of external pressure, is strongly suggestive of aortic regurgitation; but, on the other hand, the sound is often absent in this disease—at least, in the limb arteries, the brachial being the seat of its most common occurrence as far as the limbs are concerned. The fading away of the sound is apparently related to distance from the heart. The fact that this systolic sound is frequently present in the carotids while absent in any of the limb vessels affords further proof of this. With regard to the double murmur of Duroziez, I have found it present in all the limb segments in one patient—a patient who was in the last stages of aortic disease and who died about six hours after the observations were made. In this patient the double character of the murmur was extinguished when the external pressure was raised slightly above the systolic pressure as indicated by the tactile method, a single sound persisting.

Persistence of Sound Below the Diastolic Index under the Influence of External Pressure.—In the series of auditory phenomena this constitutes what is commonly

termed the fourth phase—that is, the phase between (*a*) the change from a clear to a duller weakened sound, and (*b*) the extinction of the sound (fifth phase). As the armlet pressure is being lowered and the diastolic index has been passed (beginning of the fourth phase), the sound, even when the armlet pressure has fallen to zero, may persist in some arteries, while it may disappear much earlier in others—that is, at higher levels of armlet pressure. Such levels vary in different limbs and segments of limbs. With the armlet in different situations the extent to which the sound persists below the diastolic index is (*a*) greatest in the upper arm, (*b*) next in the forearm, and (*c*) least in the calf of the leg. The rule seems to be that the sound disappears earlier in the distal segment of a limb than in the proximal one, and in the lower limb earlier than in the upper. (It has been already stated that the precise values obtained from the popliteal arteries are in some cases open to question, but the broad relation between the results got with the armlet on the thigh and the leg respectively are clear enough.) Thus there may be abolition of the sound at armlet pressures of 30 mm., etc., in the leg, while in the arm and forearm the sound continues to be audible even after the armlet pressure has been reduced to zero. The sound often persisted down to zero in the upper arm, though extinguished in other parts while the armlet pressure was still at considerable heights—for example, in one case 80 mm. on the leg and 60 mm. on the forearm; in another case, 53 mm. on the leg and 38 mm. on the forearm; in a third, 70 mm. on the leg and 60 mm. on the forearm.

Duration of Persistence of Sound below Diastolic Index in Limb Segments.

The extraordinary variability in the levels of armlet pressure at which the sound disappears in different limb segments constitutes additional evidence that the lower limit of the sound cannot be taken as an index of diastolic pressure; according to such an index the diastolic pressure would be represented as varying in the different arteries in an obviously impossible fashion.

In the leg extinction of the sound may almost immediately follow the change which constitutes the diastolic index, while in the arm of the same person the sound may persist till the armlet pressure has fallen to a much lower level.

Differences (in mm. Hg) between Diastolic Index and Extinction of Sound.

Number.	Forearm.	Upper Arm.	Calf.
1	3	7	—
2	15	5	7
3	—	10	10
4	—	4	6
8	—	18	9
9	62	45	34
10	8	45	5
12	10	15	10
13	—	20	20
15	15	7	—
16	32	67	—
17	10	30	20
18	20	50	—
19	15	70	10
Average ...	13·5	28·0	9·3

In order to test the influence of a regurgitant leak at the central pump upon the pressures at different distances along the stream, experiments were performed with a circulatory schema, similar in a general way to that described in former papers from this laboratory.[7]

A syringe, worked in regular fashion by a motor, supplied a pulsating stream through the schema. At two points in the stream at different distances from the pump sets of valved manometers, proximal and distal, were connected so as to measure the pressures, especially the minimum or diastolic pressures at these points. The relation of the pressures in the proximal and distal manometers was determined when the pumping syringe was provided with efficient valves. Comparative observations were then made after valvular defect, causing regurgitation into the syringe, had been induced. It was found that the diastolic pressure in the proximal manometer was reduced relatively to that in the distal manometer, the fall of pressure, induced by regurgitation, at the central end or origin of the pulsating stream telling on the proximal portion of the stream and its associated manometer more than on the more distal portion and its manometer.

I have to record my thanks to Professor MacWilliam for much kind assistance and advice during this investigation, and also to the honorary staff of the Aberdeen Royal Infirmary (where the clinical part of this investigation has been carried out) for permission to investigate the cases in their wards.

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THREE CASES OF PANCREATIC CYST.

BY

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THE following three cases of pancreatic cyst, which have been operated on successfully, were of different types, the first an isolated cyst in connexion with the back of the head and the other two of the prepancreatic or peripancreatic variety.

The first, apart from other features, was of interest from the point of view of diagnosis. The possibility of the existence of an enlarged gall bladder was considered, but the freedom of the cyst from the liver and its apparently deep and retroperitoneal situation made this improbable.

The two other cases had much in common clinically. In Case III the cyst pushed its way forwards between the stomach and the transverse colon, perhaps in the more usual direction. In Case II the cyst projected above the stomach, pushing it downwards and to the left. They were both what Körte, Osler, and others have described as "pseudo-cysts," but not of that form to which the same term is also applied in which the effusion occurs primarily into the lesser sac of the peritoneum. The onset of both was attended by acute symptoms, starting without any apparent cause, and both were associated with destructive changes in the gland tissue.

CASE I.—*Cyst of the Head of the Pancreas: Enucleation.*

A married woman, aged 31, was seen by me in November, 1912, in consultation with Dr. Tonking, and she gave the following history. About twelve months before she commenced to have frequent action of the bowels to the extent of four to five actions in the day; this occurred in attacks lasting two or three days, and then she was well for two or three weeks. Recently, when the attacks occurred, the daily actions were not as numerous. There was griping pain at these times, but none in the intervals, and she had never passed blood or mucus: they were accompanied by distension, but there was never any sickness. There had been no appreciable loss of flesh. She stated that the trouble almost immediately followed the birth of a child, and that seven years before, also after the birth of a child, she developed asthma, which only ceased at this last birth. There had never been any jaundice.

Examination showed a prominence under the right rectus above the umbilical line, not extending beyond the mid-line; here a rounded lump about the size of an orange could be felt definitely elastic on deep palpation, which was not movable vertically, but could be displaced laterally into the inner part of the left hypochondriac region. The belly generally was soft, without any intestinal distension or visible peristaisis. The diagnosis seemed to be a retroperitoneal cyst below the pylorus, and probably connected with the head of the pancreas.

She was sent into St. Thomas's Hospital, and further investigation showed that her pulse and temperature were normal, and that there was considerable visceroptosis, which was confirmed by a bismuth meal, the stomach and transverse colon both being considerably dropped, but there was no evidence of any obstruction.

The operation was performed on November 27th. On opening the abdomen through the right rectus a tumour was found behind the vertical part of the duodenum and also on its mesial aspect; the larger part of the swelling was above the level of attachment of the transverse mesocolon, which crossed the duodenum at a lower level than normal. A vertical incision was made through the peritoneum on the outer side of the duodenum as low as the mesocolon, and the duodenum was turned over towards the mid-line, when a rounded grey cystic swelling was exposed. This was packed round with gauze and tapped, when a thin yellowish mucoid fluid drained away. The cyst wall was then dissected off the back of the duodenum, and the common bile duct was exposed, running down and entering the latter. The deep aspect of the cyst was in close apposition with the inferior vena cava for 1½ in., and had to be dissected from it with very great care; a small vein coming off it at the upper part had to be cut and ligatured. The cyst was quite free from the kidney, and was connected with the back of the upper part of the head of the pancreas; in its removal Wirsung's duct was not seen. After dry sponging the duodenum was replaced, and the peritoneum stitched with fine catgut except at one spot, into which a fine drain with a wick was placed. The abdominal wall was sutured in layers. The cyst wall showed some thinned compressed pancreatic tissue, and had a smooth lining which the microscope confirmed; the fluid collected was not sufficient for any extended examination, but it gave no evidence of urea, and a very few mononuclear cells were present.

During the first three days after the operation frequent attacks of vomiting gave some anxiety, but it then passed off and was not repeated. Except for a slight rise of temperature and pulse during the first twenty-four hours these were always at the normal level. There was practically no pain or inconvenience. The wick was removed from the tube on the 29th, and there was very little discharge, and on December 3rd the tube itself was taken out and replaced by a plug. On removing this on the morning of the 5th a lot of glairy purulent fluid escaped: some of this was collected and examined in the clinical laboratory, but no proteolytic or amyloptic ferments were detected. Her subsequent progress was uneventful; she was up on the 12th, and left for home on the 20th.

The first question that has to be considered in this case is, Was it really a pancreatic cyst, or was it a retro-peritoneal cyst derived from some Wolffian remains? This can be answered, I think, from the fact that the wall of the cyst consisted of thinned pancreatic tissue. That being so, it was a true cyst due to retention.

Removal of the cyst by dissection has a very limited application, as the size, situation, and nature of the cyst do not allow of such radical measures; thus the instances are rare where it has been accomplished. The operation presented no special difficulty except in the dissection of the collapsed cyst wall from the vena cava.

Case II.—*Cyst Projecting between the Liver and Stomach: Drainage.*

A single woman, aged 33, was admitted into St. Thomas's Hospital under my colleague Dr. Turney on October 14th, 1909.

In the previous November, while at her work of a servant, she was seized with violent pain in the right side, accompanied by the vomiting of green fluid looking like bile and tasting very bitter. This pain, with varying severity, continued up to admission, and was then very marked. The vomiting was not repeated until April, and then she was in an infirmary for six weeks, where she had frequent attacks. After being in a convalescent home she went back to her situation, but the vomiting soon started again and took place at about weekly intervals. During the fortnight previous to admission she had vomited after every meal, and the pain was very much worse. Meat and vegetables caused pain, and there was a marked distaste for fatty foods; her diet had consisted of milk, bread, and boiled rice. There was considerable flatulence and eructations; no haematemesis, melaena, or jaundice; the bowels were natural. She had lost a lot of weight during her illness.

On admission the upper part of the abdomen in the median line was seen to be markedly full, and here could be felt a rounded elastic mass, moving slightly with respiration. Below the liver dullness and above the mass was a resonant area; no thrill could be obtained over it. Except for this lump the abdomen seemed normal. The pulse and temperature were normal. The tongue was furred. There was no other evidence of disease. A blood count was normal, and Cammidge's test C was positive. The *x*-ray report was that the greater curvature of the stomach was two inches below the umbilicus, and that some gas was present just below the left dome of the diaphragm.

She was transferred to my care, and on October 22nd I operated. A vertical incision was made through the left rectus just outside the median line when a cystic swelling presented. There were no adhesions of this to the abdominal wall, and it was quite free from the under surface of the liver. The swelling was pushing forwards the gastro-hepatic omentum, especially at its upper and right part, and here it appeared brownish, due to the colour of the fluid beneath; on the left side, adjacent to the lesser curvature, several vessels were seen, and the stomach itself was pushed downwards and to the left. On cutting through the gastro-hepatic omentum there was a gush of a light-coloured, almost clear fluid under great tension, followed by a milky fluid having a sediment. The main part of the wall of the cavity seemed entirely smooth, but just to the left of the spinal column there was a hernia of ragged pancreatic tissue coming through a hole the size of half a crown; of this, several pieces of a yellow-brown colour were removed. The cavity appeared on the right side to extend to the limits of the lesser sac, passed down behind the stomach, and went away on the left towards the spleen; here more of the pancreas and the left kidney could be defined in the posterior wall. No patches of fat necrosis were seen. The opening in the sac wall was stitched to the parietal peritoneum, and tubes with wicks were put in, one long one going to the left.

The smooth nature of the cyst wall and the relation of the necrotic area to the cyst suggested that the gland tissue bulged into a peripancreatic cyst which by gradual distension had come to be practically coequal with the median part of the lesser sac. That the sac was not lesser sac alone was shown by the absence of adhesions or lymph coagula in the cyst, and if it had been so one might have expected especially that the anterior surface of the gastro-hepatic omentum would have shown signs of inflammation, and probably been adherent to the under surface of the liver.

Examination of the fluid showed a few epithelial cells, but no digestive properties were demonstrated. The pieces of the gland removed showed necrosis, with areas of acute and chronic inflammation, with a large amount of golden brown pigment.

The next morning the wicks and plug were removed, and afterwards a good deal of haemorrhage occurred. As this was not efficiently controlled by plugging, an anaesthetic was given and the bleeding point sought for; this proved to be a branch of the coronary artery. Saline infusion was necessary, and ernutin was injected. The same night the temperature went up to 102.2°, with pulse 136; but in the morning they were much reduced, and she seemed better.

On October 25th the plugs were removed without any further bleeding. Both legs were swollen. The temperature was 98.8° F. and pulse 96 in the morning, with rise in the evening to 100.2° and 104. Her subsequent progress may be summed up as follows: The temperature was irregular between the normal line and 102° for a fortnight, afterwards becoming normal, the pulse at the same time being on the average 90; the discharge from the wound gradually reduced, and by the end of the year was very slight, but its alkaline digestive character caused considerable irritation of the surrounding skin. The oedema of the lower limbs gradually reduced from above downwards, but for a while there remained a considerable amount about the ankles.

The patient has been seen several times since she left the hospital, and there has been no sign of any re-formation of the cyst.

Points that may be noted in this case are: (1) That the onset of the trouble was acute without any obvious cause, such as injury; (2) that there was pancreatitis, probably due to an infection, associated with some haemorrhage into, and subsequent necrosis of, the gland tissue, and accompanied by the gradual formation of a prepancreatic cyst; and (3) that the cystic collection from its tension had its own fibrous capsule and only occupied part of the lesser sac; it was not a collection in the lesser sac.

Case III.—*Cyst Projecting between the Stomach and Transverse Colon: Drainage.*

A male, aged 48, was first seen by Dr. Crosby on September 29th, 1908, for acute pain in the epigastrium, associated with vomiting and constipation, and temperature 101° F., and pulse 150.

On three separate occasions previously he had had acute attacks of pain with vomiting; the first attack was some three years before. The pain was always in the epigastric region, and the vomit contained food, mucus, and bile.

This fresh attack lasted for about four days, no food being retained at all. There was no obvious swelling over the seat of pain, but there was dullness on percussion: slight jaundice was noticed. The patient gradually improved until October 14th, when a swelling was found in the epigastric region. After a consultation operation was advised, and on October 22nd Dr. Crosby opened the abdomen.

A mid-line incision was made above the umbilicus, and the stomach immediately presented in the wound. It was found that the stomach was tightly stretched over a fluctuating tumour, pushing it upwards, and to which its posterior surface was adherent; the tumour obliterated the cavity of the lesser sac, and the collection of fluid was in it or behind it. As the cystic collection could not be separated from surrounding structures it was tapped, and 2 quarts of fluid were drawn off. The opening into the sac was brought up to the abdominal wall and stitched to the parietal peritoneum; a drain was inserted, and the rest of the wound stitched up.

He made a good recovery, and was able to get about and take walking exercise and eat his ordinary food until the middle of February. The sinus was kept open all the time, but only a small amount of fluid came away. There was a daily action of the bowels, and his urine was normal.

The report by the Clinical Research Association on the fluid removed was as follows: An opalescent fluid of neutral reaction to litmus with its opalescence due partly to finely emulsified fat and partly to the presence of abundant bacteria. Under the

microscope there are to be seen bacteria, minute fat globules, and cellular detritus.

The fluid is practically free from albumin. The fermentative action of the fluid has been tested upon fibrin, egg albumen, starch, and butter fat, with the following results:

1 There is slight but quite definite proteolytic action upon the fibrin and coagulated albumin.

2. There is marked diastatic action upon starch, which is converted into a reducing sugar which yields the osazone of iso-maltose.

3. Butter fat is emulsified, but does not undergo sufficient splitting within two hours to show any acid production by the litmus test.

From its general characters and reactions there is good reason for believing that the fluid is from a pancreatic cyst.

On February 17th, 1909, the patient was again seized with violent pain in the epigastrium with vomiting and constipation; the vomit consisted of bile-stained mucus. No food could be retained in the stomach. The pain, which was spasmodic, and passed through to the back, passed off in about three days, and the bowels were well opened by castor oil and magnesium sulphate. The ingestion of food was associated with discomfort about half an hour after, and there were occasional attacks of pain at other times. Some thickening was now made out to the right side of the middle line in the epigastrium, and more discharge had come from the sinus. His progress was not satisfactory; his general condition was not so good, his pulse was quick without elevation of temperature, there was loss of sleep, and the bowels did not act without drugs. He complained a good deal of acidity, and there were occasional attacks of retching with expulsion of mucus, at times bile-stained. He was not able to take anything beyond peptonized milk and some meat jelly.

On March 4th he came to London and placed himself under my care. He seemed very weak and considerably wasted, his pulse was 132, and temperature 99° F.; he was constipated and had frequent attacks of retching.

Examination of the abdomen showed no distension of the stomach. To the right of the old incision there was marked fullness behind the right rectus, passing up under the costal margin, and over this area it was comparatively dull, tender, and definitely elastic. His urine showed nothing abnormal. On the 5th a bismuth meal was given, and four hours later he was examined by Dr. Greg, who found that the bismuth was all retained in the stomach, mainly in two portions, one at the cardiac end and the other at the pyloric. The right dome of the diaphragm was distinctly raised. The diagnosis made was that there was a cystic collection on the right side, probably again in relation with the pancreas, and that pressure was taking place on the pyloric end of the stomach, interfering with the normal exit of the stomach contents.

The temperature on March 6th and 7th was subnormal, rising on the 8th to 100.2°; the pulse varied between 120 and 136.

On the afternoon of March 8th I operated on him. Dr. Crosby being present. The incision was made in the line of the former one, keeping to the right of the sinus. The lower border of the stomach was seen, and the gastro-colic omentum was divided vertically to expose the convexity of a large cystic collection to the right of the mid-line. Careful division over its greatest prominence opened a large cavity which passed away to the right and upwards to below the diaphragm. A considerable amount of dirty turbid fluid escaped which was not offensive, and from the cavity was withdrawn a necrotic piece of tissue, about 2 in. by 1¼ in., which looked like pancreas. Into the cavity a tube with a wick was inserted, and this was loosely packed round with gauze. The old sinus was dilated up and a tube was inserted.

Examination of the fluid showed it to be swarming with bacteria, and it gave a pancreatic reaction; the necrotic tissue was pancreas.

The operation was followed by immediate reduction of the temperature to about or below the normal line, and this was maintained; reduction in the pulse-rate took place very gradually, and was probably due to the irritation of the sympathetic nerve plexuses in relation with the cavity. During the first few days there was coughed up at times some blood-stained sputum, unexplained by any physical signs in the chest, though it seemed it might be due to small emboli. Vomiting and nausea ceased after the operation, and the appetite gradually returned, and was inclined to be excessive. With the increase of food the discharge from the tube was very much increased, and considerable irritation of the surrounding skin was produced. As this increased flow was due to the active secretion of the pancreas, on the 16th it was decided to limit the secretion by stopping carbohydrates, reducing the albuminous food, and increasing fats; at the same time 15 grains of sodium bicarbonate were given every four hours. The effect of this treatment immediately bore fruit, and the discharge gradually lessened so that the tubes were able to be left out. On leaving the home on April 14th there was a small sinus left from which there was a very little discharge.

On April 15th he had an attack of pain in the old region, nausea and rise of temperature. He certainly had not eaten discreetly, but he thought he had caught cold. He was re-admitted to the home on the 20th with local tenderness and slight jaundice—temperature 103° and pulse 116. In two days he was practically all right again, and he left on the 25th.

About a fortnight afterwards some localized thrombosis of the right saphena vein appeared, which with rest soon subsided. In all other ways he was very much better, except for the persistence of a small sinus.

On June 29th, 1909, he reported that he could not get about much as the leg still swelled. The sinus discharged from a tablespoonful to less than a teaspoonful in twenty-four hours. There had been no return of pain since leaving the home.

The report on November 26th, 1909, was that there was a very small amount of discharge. The diet was still very carefully attended to, and there had been no attacks of pain. His condition was so much improved that he was able to attend to his business.

For the purpose of this paper Dr. Crosby has kindly sent me the following up-to-date report:

The patient is in good health, and is able to play golf. There is still a sinus from which a small amount of thin glairy fluid exudes. He is careful with his diet, but does not keep up such rigorous restrictions as at first. About a year or more ago there was slight loss of weight, but this was regained, and he expresses himself now as feeling very well, and is able to do a full day's work at his business. When I last examined his abdomen there was nothing abnormal to be noted; the liver was normal in size, and there was no tenderness over the region of the pancreas.

This case was also acute in origin, the early symptoms suggesting some acute intestinal obstruction. From what was found at operation it was obviously due to an inflammation of the pancreas, attended by rapid cyst formation, but whether this was in the lesser sac or behind it was not determined; it may be assumed, I think, that it was not in the lesser sac. The development of the second collection illustrates a very likely sequel in these cases. Whether this was into the old cavity or not could not be made out; it was, however, quite separate from the track of the sinus, and much more to the right. I was inclined to view it as a fresh cystic collection altogether, not in the lesser sac, although its position would have done well for a localized collection in the upward extension of the latter to the right above the pancreas.

Attention may be drawn to the marked benefit of the dieting in reducing both the amount of the discharge and lessening its irritating character.

A RENAL CYST CAUSING CHRONIC INTESTINAL OBSTRUCTION.

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I HAVE been unable to find record of a case similar to the following:

History.

The patient, a woman 52 years of age, stated that for the past three years she had noticed a lump on the left side of her abdomen, which had been getting larger, and seemed to move about. During these three years she had suffered from intermittent attacks of abdominal pain and vomiting. The attacks were associated with constipation, and she had been unable to get her bowels open without the constant use of aperients. Of late they had become more frequent and severe.

State on Examination.

Marked intestinal peristalsis could be seen going on in the neighbourhood of the umbilicus; the abdomen moved well on respiration, and there was no tenderness on palpation. In the left iliac fossa was an elastic swelling the size of a large cocoa nut, which moved slightly with respiration; it could be pushed without difficulty over to the right side of the abdomen, and on turning the patient on to that side the tumour also fell across. The latter always returned to its original situation in the left iliac fossa, and appeared to have a pedicle or point of attachment in the left lumbar region. The left flank was resonant and there was no bulging here.

Operation.

A 6-inch incision was made to the inner side of the left linea semilunaris, the rectus sheath was opened, and the left rectus muscle pulled towards the middle line. On opening the peritoneal cavity a large pedunculated tumour of a cystic nature was seen, which was springing from the posterior abdominal wall in the angle between the transverse and descending colons; several large vessels were seen encircling the neck of the tumour. The transverse colon was hypertrophied and dilated, while the descending colon was small and contracted. Obstruction was being caused by pressure on the splenic flexure of the colon, where it passed round the pedicle of the tumour.

On dividing the posterior peritoneum round the neck of the tumour and pulling strongly on the latter the lower pole of the left kidney was brought into view, and it was seen that the tumour was growing from this organ. Removal necessitated

cutting into the substance of the kidney; the cut [illegible] surfaces were brought together with catgut stitches, the edges of the opening in the posterior parietal peritoneum united, and the abdominal cavity closed without drainage.

Result.

There was some haematuria during the week following the operation, otherwise recovery was uneventful, and the patient a year after the operation is quite well.

Character of the Tumour.

The tumour proved to be a thin-walled cyst containing clear fluid. The pathological report states that the wall of the cyst consists of renal tissue, undergoing fibrosis in parts.

Remarks.

The interest of this case lies first in the difficulty of diagnosis. The swelling appeared to be cystic and to have a point of attachment in the left lumbar region. The diagnosis made before operation was that of a mesenteric cyst, and even when the abdomen was opened this was the impression given; it was only when the left kidney came into view that the true nature of the case became clear. A renal condition had not been considered, as there was no swelling or resistance in the left loin and the latter area was resonant; also the extreme mobility of the tumour and its obvious intraperitoneal nature seemed opposed to a condition connected with the kidney.

Renal tumours either have the colon in front of them or push it towards the middle line; it is rare to find them becoming pedunculated and to all intents and purposes intraperitoneal structures to the inner side of the colon, as in this case. Large single renal cysts may be of a serous nature springing from the cortex of the kidney while the rest of the kidney is healthy, or they may be paranephric cysts originating in renal or adrenal rests. Both serous and paranephric cysts may be connected with the pelvis or one of the calices of the kidney by a narrow channel.

The symptoms which these large cysts give rise to are due to pressure on surrounding organs.

The second point of interest in this case is the chronic intestinal obstruction produced. This, I think, was brought about in two ways: in the first place, the splenic flexure of the colon was constricted where it passed round the neck of the cyst, and in the second place, the heavy cyst itself was pressing upon the descending colon.

SUBCUTANEOUS INJECTIONS OF EMETINE IN PULMONARY TUBERCULOSIS.

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In April, 1913, my attention was drawn to a communication in *La Presse Médicale*, of Paris, from Drs. Flandin and Joltrain, in which they reported that they had commenced to use hypodermic injections of emetine for the treatment of haemorrhage in tuberculosis of the lungs, and that the results had been far and away more satisfactory than those obtained by them from any other method. Having at that time several cases of haemorrhage, both severe and slight, under my care at the Battersea Tuberculosis Dispensary, I communicated with Dr. Flandin, asking him for particulars of his method of using the drug. He was good enough to send me by return notes on the cases he had till then treated with emetine, and also a letter giving his conclusions on the action of the drug. He said:

Emetine acts on the haemorrhage, but in an irregular manner on the fever. When it has to do with haemorrhage of the congestive period of tuberculosis the stoppage of the bleeding is absolute; when it has to do with the haemorrhage in a tuberculous patient at the period of softening or of cavity formation, the bleeding stops under the influence of emetine, but for several days the patient expectorates black spots, as if expelling the blood secreted in the bronchial tubes. The effect of the emetine does not seem to be of very long duration.

It is good after the arrest of the haemorrhage to continue for several days a daily injection. I have seen in one case the haemorrhage stopped by the emetine recommence after the cessation of the injections, and stopped again immediately after a single injection.

The experience of Dr. Flandin decided me to try the effects of the drug, and suitables cases soon presented themselves. At first I strictly confined myself to cases of haemorrhage on the lines that Dr. Flandin had indicated, and with regard to its use in such cases I can endorse all that he claims for it.

Some of the cases on whom I used it had only slight and occasional haemorrhage but copious expectoration, and it was observed that not only did all traces of blood disappear from the sputum, but that the sputum itself decreased or ceased. This observation induced me to employ the drug in some cases of copious expectoration alone, and the results have been sufficiently striking to justify my mentioning them to the profession, in the hope that others will be induced to further investigate the properties of emetine in relation to its effects on congestive and inflammatory conditions of the lungs.

I have now used it on over forty cases, and have endeavoured to note its effect both on haemorrhage and on expectoration. As above stated, I endorse Dr. Flandin's remarks on its effect on haemorrhage, but as he is about to publish the results of his experience with it, I will not enlarge on that aspect of its use.

As I am not aware of anything having been published with regard to its effect on expectoration and cough, I need make no apology for giving my experiences. In analysing these, I find that the cases divide themselves into three groups:

I. Bronchitis in which no tuberculosis can be demonstrated.
II. Cases which are tuberculous, but which do not reveal tubercle bacilli in the sputum.
III. Cases which do reveal tubercle in the sputum.

Group I.—Many patients referred to the dispensary to have a diagnosis made on them are found to belong to this group. It has been pointed out to me that the title of this communication relates to the use of emetine in pulmonary tuberculosis, and that this first group are not tuberculous cases at all. It has to be remembered, however, that all inflammatory conditions of the lungs and air passages prepare the soil for the growth of the tubercle bacillus and that such persons are the very ones who are liable to become tuberculous. Anything, therefore, which assists in keeping his tissues in a healthy condition preserves the resisting power of the individual and is a factor in preventing this disease.

Provided the heart's action is not impaired, cases in Group I nearly always improve rapidly on emetine. The expectoration disappears, and on auscultation the moist sounds cease to be heard. This improvement is not transitory, but remains after the injections of emetine are discontinued. It has often been very striking how subjective and objective improvement have accompanied each other, the patients voluntarily stating that they have felt better since the emetine was begun. It has, however, to be emphasized that the heart's action must not be weak. If it be weak the bronchitis does not improve. Unfortunately many cases of bronchitis, both complicated and uncomplicated with tuberculous disease, have such a weakness of the heart, and this must be remedied before emetine is of any use.

Once only, when I pushed the dose a little beyond the usual amount, the patient complained of slight nausea. This passed off immediately on the drug being withheld, and I have observed no other undesirable effect which could be attributed to its use.

The following case may be cited to illustrate the group:

A. B., female, aged 9. For several months had had a cough with expectoration, which latterly had become copious. In such a young child's sputum tubercle bacilli are seldom found, but we examine it in all cases that have expectoration. In this case the sputum was examined three times carefully, with a negative result each time. Von Pirquet's test was applied twice and was negative both times. There was no dullness to be made out in the lung and no noticeable prolongation of expiration, but moist crepitations were heard all over. During three weeks injections of emetine were given twice weekly, and after the last injection the breath sounds were clear and the cough gone. No other treatment was given.

This is a recent case, and I still have her under observation.

Group II.—Several cases with physical signs and histories pointing to tuberculous disease, and giving good reactions to subcutaneous injections of tuberculin, but in whose sputum no tubercle bacilli could be found, have been treated with emetine, and with no other drug. These

have all improved, and some have become clinically well. I have not yet determined whether the reaction to subcutaneous injections of tuberculin is altered, as I wish a few more months to elapse before doing this test.

In all these cases it has to be remembered that the home conditions were supervised and faults corrected wherever possible, and I quite admit that these hygienic measures in themselves are sometimes sufficient to induce a cure. After allowing for all that, I am convinced that improvement has been more rapid and more universal in the cases that got emetine. The expectoration dries up and the cough disappears.

Dr. Flandin's remark that the drug acts on the congestive stage of the disease is quite at one with my own observation. I assume that in the second group it acts on the bronchitis, whether this precedes the tuberculous disease or is secondary to it, but I do not consider that it acts on the tuberculous disease itself.

Some of these cases, after preliminary treatment with emetine, have responded particularly well to tuberculin.

A good case to illustrate this second group is the following:

Mrs. C., aged 29, had been treated at another dispensary for over a year, but she admitted that she had been very irregular in attendance, and came here on moving into Battersea. She had severe cough and expectoration. Both apices were dull and full of moist crepitations, and she was steadily losing weight. No tubercle bacilli could be found in her sputum. Her temperature was normal and steady; $\frac{1}{10}$ mg. of Koch's old tuberculin was injected, and in six hours her temperature rose to 100.8°. On the reaction subsiding therapeutic doses of tuberculin were given, but neither her symptoms nor her physical signs improved.

Emetine was given twice weekly for four weeks, by which time the moist sounds and the expectoration had disappeared and the cough troubled her only in the morning. Tuberculin was then recommenced. That is four months ago. The lung condition has steadily improved since, and no dullness can now be made out. Her weight has gone up 8 lb. She is clinically well, and feels in a fitter condition than she has done for years.

Group III.—Cases with tubercle bacilli in the sputum. With this group I am not able to give generalizations, as the results are not nearly so regular. In some cases I have ceased using it as, so far as one could judge, it was producing no effect.

In some cases improvement followed its use, but immediately its administration was discontinued the symptoms returned, and as this is a new use the drug is being put to I hesitate to continue it indefinitely.

As above stated, the slight feeling of nausea has been the only undesired effect that could be attributed to emetine. It remains to be seen whether such nausea is a disadvantage, but until we have more experience I prefer not to persist with it in such cases.

When the heart's action is weak one has learnt not to expect the lungs to clear up. In these cases the congestion is secondary to the weakened circulation, and is quite compatible with the theory that the drug acts on congestion when it is primary in the lungs or secondary to tuberculous disease there. One case with mitral incompetence, but with compensation well established, did very well.

In conclusion, while I do not consider that the drug has any effect on the tubercle bacillus, I believe it is a valuable addition to our weapons for reducing congestive conditions in the lungs, and that, therefore, it is both a preventive and curative agent in tuberculosis.

The drug has hitherto been prepared for use in dysentery, in which disease it is given in very much larger doses than Dr. Flandin used; and my experience corroborates his—that small doses are best for these lung cases. He gave 0.04 cg. of the salt. I used Whiffen and Sons' ampoules, which contain $\frac{1}{2}$ gram of emetine in 15 minims of distilled water. By diluting this in four parts of water, 1 minim equals 0.04 cg., and I have come to consider 4 minims of this dilution a suitable dose to give when the object is to control expectoration or lessen congestion.

THERE is a serious shortage in the number of medical officers of the French army. The reasons given are that the work is very heavy, and involves much clerical labour, that the pay is too small, and that the position in relation to combatant officers is unsatisfactory. Moreover, the recent deprivation of titles carrying a military significance has caused the service to become unpopular.

AN ECONOMICAL TREATMENT OF INEBRIATES.

BY A. M. ROSEBRUGH, M.D.TORONTO,
MEDICAL OFFICER OF THE ONTARIO SOCIETY FOR THE REFORMATION OF INEBRIATES.

THE probation officer of the society visits the police cells in the morning before the opening of the court and offers a helping hand to any of the prisoners charged with drunkenness who seem really desirous of reformation. He also visits the juvenile court and takes charge of drunken non-supporters of their families who may be committed to his care. After discharge by the court the case is dealt with according to circumstances. He may be brought to my office for office treatment, or he may be taken to the cottage hospital of the society for treatment there.

The inebriate signs a pledge agreeing to take treatment for at least three weeks. In most cases, however, the treatment extends beyond that period. We endeavour to keep in touch with our cases indefinitely, more especially in periodical cases.

The families of our patients are visited, employment found, temporary help given where and when necessary. Reconciliation between man and wife in many cases is effected, and an effort made to place the family upon a higher plane of life and living.

Medical Treatment.

For practical purposes I divide inebriates into the following classes—namely, first, cases in which there is a constant crave for "drink"; secondly, cases in which this crave is periodic; and, thirdly, cases in which there is no crave. In the latter class the inebriate drinks to be social or to drown sorrow. For this class the Christian missionary, or the clergyman, or the farm colony is indicated rather than medical treatment.

In the case of the periodical drinker, the character of the periodicity requires to be studied, and the return of the drink period anticipated and provided for.

It is, however, the inebriates with the constant crave for drink that contribute most largely to swell the great army of drunkards. The medical treatment extends over a period of at least three weeks.

Hospital Treatment.

The treatment, whether in hospital or elsewhere, is commenced with calomel at bedtime and "salts" or "seidlitz" the following morning.

Acute gastritis in hospital cases is treated with $\frac{1}{2}$-grain doses of calomel given every half-hour for five hours, followed six or eight hours later with salts or "seidlitz." In case of acute alcoholism the treatment commences with a hypodermic injection of apomorphine $\frac{1}{15}$ grain, and, if this is not followed in ten or fifteen minutes by emesis, a second injection is administered, but with a dose of $\frac{1}{20}$ grain only.

In cases of nervousness, 30-grain doses of potassium bromide, well diluted in water, are given every three hours.

A hypodermic injection of strychnine $\frac{1}{30}$ grain is administered every six hours. One ounce of a solution of capsicum, 6 grains to the ounce, is given every two hours. The bromide solution is suspended when no longer necessary for relieving nervousness.

The hypodermic solution of strychnine is suspended at the end of six days, and on the seventh day the following mixture is substituted: Tincture of capsicum, 1 drachm; a solution of the fluid extract of quassia and the tincture of ignatia, 1½ drachms of each to 8 oz. of water. Dose, a tablespoonful every hour while awake. The tincture of nux vomica may be substituted for the ignatia—the same quantity (1½ drachms to the 8-oz. mixture). This mixture is continued until the end of the full time of three weeks' treatment. The capsicum may be omitted, however, at the end of two weeks. Whisky and water may be given to patients for two or three days at the outset of treatment when there is a crave for it.

Office Treatment.

If the patient has a good home, and can be trusted to carry out the treatment faithfully, and has lost the crave

for "drink," and more especially if the probation officer is both judicious and zealous, the man, after the first week of hospital treatment, may be permitted to continue the treatment in the form of office treatment. We find that the great majority of the cases that come under our care can be satisfactorily treated as office patients. This is less expensive than hospital treatment, and has enabled us to reach a much larger number than would have been possible otherwise.

With the office treatment the hypodermic injections of strychnine and apomorphine are omitted. Either the calomel and salts treatment, or a laxative of some sort is given at the outset, and the bowels kept loose for a few days. The medical treatment proper is commenced with the following mixture: Tincture of capsicum, 1 drachm; tincture of ignatia (or nux vomica), 1½ drachms; water, 8 oz. Dose, a tablespoonful every hour while awake. After ten days this mixture is changed to the following: Fluid extract of quassia, 2 drachms, and tincture of ignatia (or nux vomica), 1½ drachms; water, 8 oz. Dose, a tablespoonful every hour while awake. This mixture is continued until the end of the third week of treatment. The patient calls for treatment every day during the first week, every second day during the second week, and every third day during the third week. After this he is seen occasionally by the probation officer, who is expected to keep in touch with the case as long as possible, and especially so if the trouble is periodic.

While, with our treatment, the crave for drink is relieved in less than three weeks, we do not claim that this crave is removed permanently. Some of our cases go for years without making a break, while others make a break in a few months. We warn periodical cases to return in good time for prophylactic treatment. We have on our list a few cases that require to be nursed in this manner. Between times they are respectable, and supporters of their families. Some of them go for many months without making a break.

Our treatment is a tonic for the nerve centres, and leaves the patient wonderfully improved in health and strength, with good appetite and good digestion.

In some cases, for convenience sake, I sometimes give strychnine tablets instead of medicine in a liquid form—the $\frac{1}{30}$ grain every hour for from twelve to fourteen hours a day, but I never give a prescription for such strong medication; they are given to the patients personally.

After my experience of ten years with ignatia, nux vomica, and strychnine with the doses mentioned, I fail to understand the timidity of high authorities in making use of these drugs. One high authority speaks of the use of strychnine in these cases as follows: "A cautious use of strychnine in small doses, $\frac{1}{60}$ grain every four hours, will be found valuable." Another high authority speaks of using the extract of nux vomica, ¼ grain, night and morning in these cases. The same authority speaks of giving strychnine, $\frac{1}{30}$ grain once a day, or the $\frac{1}{60}$ grain twice a day. For several years in Montreal, police-court cases have received medical treatment very similar to the treatment herein described.

The Emetic Treatment.

In the case of a number of our repeaters I have made use of the emetic treatment, lasting three or four days, and with encouraging results. The treatment is followed up, however, with a full course of the nerve tonic. The treatment has its advantages and its disadvantages. It places the inebriate on his feet, enables him to go to work in less than a week, gives him a disgust for the sight and smell of all intoxicants, and this disgust may last from a few months to a year or more. The drawbacks are that it requires the constant attendance of the physician, or a specially trained nurse for six or eight hours a day for at least three days; and, secondly, it cannot be administered with safety to a patient with a weak heart.

THE first Congress of the Association of French-speaking Gynaecologists and Obstetricians will be held at Lyons in October (1st to 3rd). The questions proposed for discussion are: (1) The value of the different laparotomy incisions in gynaecology and obstetrics, (2) the biological diagnosis of gestation, (3) early getting up after delivery and operation, (4) indications and technique of hysterectomy in suppurative conditions of the appendages.

The Milroy Lectures

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY FRANK SHUFFLEBOTHAM, M.A., M.D.CANTAB., J.P.,

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT FOR THE NORTH STAFFORDSHIRE DISTRICT.

LECTURE IV.

MINERS' NYSTAGMUS.

(Continued from page 651.)

THE CAUSATION OF MINERS' NYSTAGMUS.

THE four most important factors which we have to consider are:

1. Defective illumination in the mine caused by the low candle power of the safety lamp.
2. The peculiar cramped position in which miners work, especially the holers and other workers employed at the coal face.
3. The refractive errors found among the miners themselves.
4. The frequent injuries which miners sustain during their employment and more especially injuries to the eye itself.

It cannot be said in any case that miners' nystagmus can be caused by any one of these conditions alone, and the truth probably is that the onset of the disease is due to a combination of circumstances.

Defective Illumination.

We may say, however, that except at the pit bottom we always have defective illumination in the coal mines of this country; further, in perhaps the majority of cases we have a cramped position at work; refractive errors are at least as common among miners as among other sections of the community, and there is no doubt miners are, by the nature of their employment, especially liable to small injuries to the eye such as abrasions of the cornea. On the surface a worker can see when danger is coming and protect his eyes by means of his eyelids, but in the defectively lighted pit this is impossible.

The general feeling at the present time is that deficient illumination of the mine is the principal factor. In the evidence given before the Departmental Committee on Industrial Diseases in 1907 the opinion was expressed by many experienced miners that nystagmus had come into existence among miners since the introduction of the safety lamp, and statistics undoubtedly show that at the present time nystagmus is much more frequent among men who work in pits lighted by safety lamps than in those in which open lights or candles are employed.

In the experience of Sir Frank Brain, in the collieries in the Forest of Dean, where open lights are entirely used, only one case of nystagmus has come within the scope of the Workmen's Compensation Act since it became a scheduled disease seven years ago; and in the Black Country, where the illumination has been almost entirely carried out by open lights, miners' nystagmus is comparatively rare. In Scotland, again, where candles are used to a very large extent instead of safety lamps, nystagmus is much less frequent than in England and Wales.

In the metalliferous mines of this country (not including ironstone mines), where naked lights are universally used, miners' nystagmus is an unknown disease, and in the ironstone mines it is rare. Coal is often found along with ironstone in the same workings, and in such mines it may be necessary to use safety lamps; again, iron and coal are usually found in the same districts, and men frequently pass from one class of work to another. In the last ten years I have only seen three cases of miners' nystagmus among ironstone workers who have always been employed in naked-light pits and who have never worked in coal seams, and it is generally admitted that such cases are comparatively rare.

The candle power of a tallow candle will vary according to the number of candles to the pound, but roughly speaking we may say that the candle power of an ordinary

naked light varies from 0.75 to 1.5. The candle power of a new Davy safety lamp is 0.2, of a Clanny 0.68, but these figures are materially reduced when the lamp is in use in the pit. The illuminating power begins to be reduced as soon as the miner commences to work, and slowly and progressively diminishes on account of the dusty atmosphere and also from the fact that no attention can be paid to the condition of the wick or the inside of the glass. In order to give the maximum candle power the lamp must be kept perfectly cleaned, the wick trimmed, and the oil good; the miner always has to contend with the shadows which are cast by the bonnet and the oil reservoir, while in the case of an open light, whether it be a lamp or a candle, the illumination is constant throughout the day. There is no doubt, too, that the miner does not get the full benefit in the mine of the candle power of his lamp on account of a certain amount of absorption of light by the coal surface, and another factor which will tend to diminish the candle power of the lamp is deficient ventilation in the workings. The difference of the candle power between the readings measured in the main intake and the main return may vary to the extent of from 25 to 35 per cent.

Cramped Position.

The second factor in the production of this disease—the cramped position of the miner while at work—is one to which the late Simeon Snell paid special importance. He believed that the nystagmus of miners was a myopathy dependent on the peculiar position assumed by a certain class of men in the mine. Tomlin states that Snell's position depends upon three points: (1) The strain on the elevators (oblique) of the eyeball; (2) the position of the miner; and (3) the consequent fatigue of the elevator muscles of the eyes, that is to say, the superior rectus, the inferior oblique, and the internal and external recti muscles. Snell believed that the position of the miner at his work was the prime and essential cause of miners' nystagmus irrespective of the deficient illumination in the pit. A great controversy has waged around Snell's theory. He was under the impression that the disease was practically confined to holers and deputies, the workers who might be subjected to the strain of the elevator muscles, but observations from every coalfield in England now go to prove that the disease is found to a very large extent among the other workers in a pit, the timberers, the datallers, the roadmen, as well as those employed in other occupations. In the Forest of Dean and in Somerset, owing to the thin seams of coal, the collier is obliged to assume a more or less reclining position, and if Snell's theory be correct one would expect nystagmus to be very common in these coalfields, but I have already stated it practically does not exist. On the other hand, according to Elworthy, the great majority of the colliers in Ebbw Vale work in the upright position, and yet nystagmus exists in a considerable percentage of the men employed.

Refraction Errors.

There is a growing opinion that errors of refraction play a most important part in the causation of the disease, and there is no doubt that injuries to the eye or general injuries to other parts of the body may be the determining factor in the onset of symptoms.

Injuries.

In Llewellyn's series of cases there was an injury to the eyes in 36 patients, an injury to the head in 35 cases, and injuries to other parts of the body in 23 cases.

It is the common experience of medical men working in colliery districts that symptoms of miners' nystagmus are frequently set up after an injury to the back, and occasionally shock by itself and without any injury to the body may be regarded as responsible for the beginning of the disease.

In considering the symptoms of miners' nystagmus, I paid special attention to the association with neurasthenia, and I believe, with Jamieson Evans, that there is a distinct type of this disease. I am not prepared to say unreservedly that miners' nystagmus is a local manifestation of neurasthenia, nor, on the other hand, that neurasthenia in these cases is directly due to miners' nystagmus, but one cannot dissociate these two conditions in a large number of cases.

Heredity.

The personal factor is a point that has to be taken into consideration. Certain workers seem to be specially prone to the complaint, and Snell suggested that in certain families an undoubted hereditary tendency to the disease prevailed. Jamieson Evans and Llewellyn have also found an apparently hereditary tendency in a certain number of their cases.

Prognosis.

Speaking generally, if treatment is conscientiously carried out, the outlook is quite favourable. Mild cases recover in the course of a few months if the patient be removed from his work underground, but the symptoms in severe cases may not abate for many years, even when the miner has been properly treated and has not worked under adverse conditions.

If the symptoms result from an injury to the eye, or if they are associated with an error of refraction or such a condition as cataract or glaucoma, the prognosis is not favourable, and while the correction of refractive errors does a great deal to shorten the course of the disease, still, when the refractive error is of a high degree, even the correction for this defect may not cause speedy recovery.

When neurasthenia is present to any extent the prognosis is less favourable than under any other conditions. There is a great tendency for patients suffering from this neurasthenic type to look on their future in the gloomiest way, and many believe their working days are over. This frame of mind not only keeps alight the general nervous symptoms, but retards the cure of the eye trouble.

Marked interference with the visual acuity, the presence of nystagmus in a plane below the horizontal, muscular tremors of the neck and shoulders, and ataxic gait must all be regarded as most serious symptoms, and just as a drinking bout or excessive smoking may hasten the onset of symptoms which will prevent the man from working, so over-indulgence will in these respects cause exacerbation of the severity of the complaint.

When a young miner contracts this disease it may be taken that there is some predisposition to it, and a tendency to relapse should he return to work in the mine; in the case of old men the difficulty lies in the slowness of the recovery on account of age and lessened powers of resistance.

In all uncomplicated cases, by which I mean those in which there is no permanent injury to the eye such as a corneal opacity or traumatic cataract, the chances of recovery are greater the sooner the man gives up underground work, and some of the worst cases in Llewellyn's experience have occurred in men who have struggled on with their work in spite of the disease.

Mild cases which have apparently recovered may frequently be followed by a relapse if the patients return to their old occupation underground, especially when they are employed at the coal face. Even in miners suffering from this disease who do not go back to their work, and when apparently their symptoms have cleared up under treatment there may be a relapse after influenza or an injury, or, as has already been indicated, after excessive drinking, and in one case I have known, a relapse has occurred after going to a cinematograph performance.

Treatment.

Personal.

In severe cases it is necessary for the man to give up work entirely and to have complete rest. If the examination of the eyes shows any refractive error this should be corrected by glasses, and in many cases after the patient has become accustomed to the altered conditions under which the muscles of the eye work he obtains some relief, at all events from such subjective symptoms as headaches, giddiness, and nausea, while in some cases these symptoms disappear altogether.

Neurasthenic symptoms must be treated in the ordinary way, and if the patient is suffering from neurasthenia of a marked degree Weir Mitchell treatment may be advised for a period of from four to six weeks. I do not think sufficient attention has been paid to the application of Weir Mitchell treatment in cases of nystagmus, and I believe that the association of miners' nystagmus with neurasthenia has not been sufficiently recognized. As far as I know, Weir Mitchell treatment is only properly

carried out in England in nursing institutions, or in perhaps, one or two hospitals in London devoted exclusively to the treatment of nervous diseases, but in view of the fact that there are many hundreds, if not several thousands, of coal-miners in the different colliery districts of this country incapacitated for work on account of miners' nystagmus associated with neurasthenia, from an economic point of view it is most desirable that arrangements should be made in the hospital centres of colliery districts to provide the best possible treatment in order to bring about speedy recovery. The best that can be done at the present time is generally to advise massage in the patient's home, although this cannot be carried out unless the employer or insurance company is prepared to bear the burden of the expense, as the charges, speaking generally, are beyond the means of the average working man. In some cases the patient may be sent to such a hospital as the Devonshire Hospital at Buxton, where a course of massage and baths will do a great deal of good. Convalescent cases derive great benefit from change of air, especially at bracing seaside resorts.

In mild cases and in cases which are convalescent a change of employment on the surface may result in great benefit, because the patient's mind is occupied, and he is not worrying about himself; further, the exercise which ordinary manual work necessitates will do a great deal towards improving the nervous system.

Some consider that on recovery the miner may be allowed to work in the pit again, and this practice is prevalent to a large extent in all mining districts, but I think to reduce the risk of recurrence it is advisable to place the man at work of such a kind that he is less liable to contract the disease than at his previous employment; for instance, a man who has worked as a holer might be employed as a roadman or a dataller; but if there be any recurrence after this return to different work, then the man should never be allowed to work in the pit again.

If the nervous symptoms are pronounced, and if the appetite is poor and there is sleeplessness, glycerophosphates and bromides may be given with good results, and among the other drugs which have been found to be successful are strychnine, quinine, and nux vomica. Ronnee has advised the local application to the eye of eserine drops in a 3 per cent. solution three times a day. Atropine has been tried without success. Tenotomy has been recommended, but in every case, as far as I know, has yielded disappointing results.

PREVENTIVE MEASURES.

Improvement in Illumination of the Mine.

Even with the introduction of a safety lamp of higher candle power than those used at the present time it is essential that the lamp should be kept clean, and Llewellyn points out that the importance of careful cleaning with machine brushes cannot be over-estimated, and that great care should be taken to use good glass, to keep the lamp in proper repair, and to replace any loose and worn-out burner or washer. Every man on his way to and from the face should be compelled to use a shade. In many districts, where this has been the custom, any man omitting this precaution would be at once assailed by his fellow-workmen. The dancing of the lamps in front is very trying to all, but it is most serious to a man with nystagmus.

Coal-cutting Machines.

It is generally recognized that holers and miners working at the coal face are more frequently affected with miners' nystagmus than the other workers in the mine, and the substitution of mechanical power for manual labour will undoubtedly cause a reduction in the number of cases of nystagmus. Llewellyn has pointed out that in six collieries where coal-cutting machines were used exclusively the percentage of cases of nystagmus was 0.49, whereas in twenty-two collieries in which no machines were used the percentage was 0.81. It is pleasing to note that the number of coal-cutting machines is extended considerably every year, and it is to be hoped that this will have its effect in reducing the number of cases of this disease.

Ventilation.

It is the general opinion of working miners themselves that bad air in the mine is the exciting cause of this disease. Whether this be so or not, there is no doubt that bad air has a deleterious effect upon the general conditions of the miner, and, as impaired general health is a predisposing cause of the onset of the disease, efficient ventilation in the mine is an important factor in its prevention.

Examination for Ocular Defect.

McMurray has suggested that all miners should be subjected to a systematic examination of the eyes, so that cases with any refractive error, or with any other ocular defect, can be prevented from commencing or continuing this kind of work. In my opinion this would greatly diminish the incidence of nystagmic cases, but I question whether the Miners' Federation would consent to the institution of such an examination, as it would mean at the present time dismissal of thousands of miners who have worked in the pit all their lives, and who are continuing to do regular and efficient work; and, further, it would mean the constant elimination at each periodic examination of numbers of workers, who would be deprived of their means of livelihood, and with little chance of gaining employment elsewhere, unless it be in the ranks of the casual labourer. If, however, a periodic examination were made, and the power of dismissal were prohibited in case of any ocular defects other than miners' nystagmus being discovered, then it has been suggested that the workers should be induced to wear spectacles when on the surface in the hope that by the correction of the refractive error the symptoms of the disease will be decreased in severity.

INCAPACITY FOR WORK.

Miners' nystagmus is essentially an industrial disease. In spite of the various theories for the explanation of the symptoms, it cannot be denied that the complaint is one which is a direct result of the conditions under which the miner works; and in view of the fact that it is a disease to which the Workmen's Compensation Act applies, it is important to consider to what extent incapacity for work may result from this complaint.

There is no necessary relation between the objective and subjective symptoms. Cases in which the movements are very slight may be accompanied by distressing headaches, attacks of giddiness, and other subjective symptoms, while well-marked oscillations sometimes cause no trouble. It is difficult to tell whether a miner suffering from nystagmus is incapacitated from work or not, and Dr. Moody of Stoke-upon-Trent, when giving evidence before the Departmental Committee on Industrial Diseases in 1907, said that it was almost impossible to distinguish between a coal-miner who has oscillation of the eyeballs but who is able to work, and the miner who has the same symptom and is incapacitated; the only way in which he was able to judge was by the past history of the man; and Professor Murray, in his evidence before the same committee, admitted that it was very difficult to disprove the assertions of a coal-miner with the characteristic nystagmic movements of the eyeballs who stated that he was unable to work.

The objective symptoms by themselves may not cause any discomfort or incapacity for work, but when associated with subjective symptoms we may have a case of total incapacity for work. A great deal, however, depends upon the subjective symptoms, for the existence and severity of which we are compelled to trust to the patient's honesty.

When tremors of the head, clonic spasms of the eyelids, or neurasthenic symptoms are observed, there can be no doubt as to the severity of the symptoms. In doubtful cases we must be guided by the man's own record. If he has been a steady, hardworking man, his account of the subjective symptoms must have due weight, and it cannot be forgotten that, speaking generally, miners' nystagmus occurs among those workers who are most attentive to their work, and who are regarded as the best workmen.

Meighan has classified the degrees of incapacity for work under three headings:

1. Those slightly affected—men who suffer to a slight extent from the characteristic oscillations of the eyeballs, especially when they assume positions that strain the muscles of the eye. These men continue work, and never become incapacitated. He believes that 5 per cent. of all miners are affected slightly.
2. Those who suffer from the oscillations and feel giddy at times. These should be obliged to leave off the work in which

they are engaged. They may require a rest for six months, but should not return to their old employment.

3. Those who suffer badly from oscillations, headaches, giddiness, and the other symptoms mentioned previously. These should give up underground work entirely, and never return to it.

When the large proportion of underground workers in whom nystagmic movements of the eye can be observed is remembered it cannot be doubted that the disease may cause little inconvenience, but cases of a severe and distressing nature cause total incapacity for work for a considerable period of time. In some instances patients have been unable to do any kind of work, even light work on the surface of the mine, for several years.

It is most important that firemen and deputies who have suffered from this disease should be able to detect the blue cap which appears over the flame of the safety lamp before they are allowed to return to their own employment, and it has been suggested that, considering the great responsibility that rests upon them for the safety of the pit, if they have once had the disease and been incapacitated on account of it, they should have their eyes tested once in every three months.

Complete incapacity for work undoubtedly may occur in cases in which nystagmus is absent or has disappeared, but in which clonic spasm and other subjective symptoms of miners' nystagmus are complained of.

Giddiness is the most troublesome subjective symptom from the point of view of capacity for work, and even when the other symptoms, whether they be subjective or objective, are only slight, if attacks of giddiness are at all frequent and come on without any warning, then the patient must be regarded as totally incapable of work, and it is not safe to give him light work, even on the surface of the mine.

I have shown the frequent association of ocular defects with miners' nystagmus, and the capacity for work after a proper course of treatment will undoubtedly depend upon the actual condition of the eye, and one-eyed men who suffer to any pronounced extent from this disease must be regarded as totally and permanently incapacitated for work underground.

Cases of miners' nystagmus in which neurasthenia is a prominent symptom must be regarded as of a severe type, and although the eye symptoms may be not of a pronounced character, the nervous symptoms are such as to cause total disability for work. Like all other neurasthenic conditions, this may last for years, unless the patient undergoes a suitable course of treatment, such as prescribed by Weir Mitchell.

Malingering.

In considering the question of malingering we must not lose sight of the fact that the disease is not merely localized to the eye, but may affect the general nervous system.

All observers are agreed that it is impossible to imitate the nystagmic movements of the eye, so that there can be no malingering with regard to this the most prominent objective symptom. There is a difference of opinion as to whether clonic spasm of the eyelids can be simulated or not, but careful observation in any given case will easily detect malingering, as it is impossible for the patient to sustain, for more than a minute or so, the twitching of the eyelids, and further, a skilled observer will perceive that the voluntary movements induced by a malingerer are altogether different from those seen in true cases of clonic spasm of the eyelids. Dr. Moody has pointed out that the movements in the latter case are quicker and finer, and if a miner attempts voluntarily to blink his eyelids quickly he must bring other muscles into play, apart from those which actually blink the eyes, and, in Dr. Moody's opinion, the man would be easily found out. It should be clearly and widely known among all miners who may have imagined that the simulation of this symptom is an easy matter, that they are entirely mistaken, and that if they try to do so before a skilled observer they will be almost immediately found out.

We may therefore say that the two principal objective symptoms cannot be simulated, and if a man is known to have attacks of giddiness and to fall about, to be suffering from night blindness, and when tested by Cridland's method, from a diminished field of vision, there can be no question as to the genuineness of the case. Difficulty may arise in mild cases where patients are capable of following some kind of employment, such as light work on the surface or in an occupation independent of coal-mining. In many cases miners with a definite oscillation of the eyeballs are able to do their work without any complaint for years in the absence of headache, dizziness, and other subjective symptoms; but if a miner suffering from such a mild degree of the disease suddenly becomes aware of the presence of nystagmus, should he, for the purpose of claiming compensation under the Workmen's Compensation Act, desire to make complaints of headache, giddiness, feelings of sickness, and other symptoms for the existence of which we have to trust to his honesty, it would be most difficult to disprove the statements. The examining doctor would have to take into consideration the man's record for work and his demeanour while under observation, and assistance might be given by friends and neighbours who could testify one way or another as to the man's general state of health.

In dealing with such cases it is absolutely necessary to make a complete examination of the man and a special examination of his eyes, and I believe that a great deal of help would be obtained by paying special attention to the extent to which the field of vision is limited.

There are undoubtedly many cases of miners who know that they are suffering from miners' nystagmus, but who go on working in spite of the complaint, and it is only when they give up work, either on account of bad trade or a strike, or because of some quarrel with an official or their employer, that they make a claim for compensation. During the coal strike of 1912 many such cases were recorded in the different coal districts of this country.

In all disputed cases I would suggest that the medical referee under the Workmen's Compensation Act should rely not only upon his own examination and the reports submitted to him by the medical advisers of the workmen and the employers, but that he should also take into consideration either verbal or written statements of workpeople or other persons who can speak as to the man's previous history and his general condition of health.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

DEFICIENCY OF LEFT HALF OF DIAPHRAGM WITH DISPLACEMENT OF STOMACH AND OTHER ABDOMINAL ORGANS.

A MAN aged 43 years, working in a coal mine, was hurt last year by a stone falling on his head. He apparently recovered from this injury; he died recently. I was instructed by the coroner to make a *post-mortem* examination to ascertain whether the injury received had anything to do with the cause of death. I was also informed that this man had had other injuries previously, among them a fractured femur.

At the *post-mortem* examination I found the following anomalies:

On opening the chest and examining the left half I found it occupied by the whole of the stomach, which was distended and as large as a Rugby football; with it was the transverse colon, the left lobe of the liver, and the omentum. The left lung was lying compressed against the vertebral column, and weighed only 9½ oz. The heart was pushed over to the right side, resting upon the left lobe of the liver, upon which it had made a distinct depression. In the left half of the diaphragm was a large opening, through which the stomach and other organs mentioned had passed. Through this hole I was able to pass my fist with ease; the edges of the opening were smooth, and did not show any signs of recent tearing. The right lung occupied the whole of the right half of the chest and was in a state of red hepatization. The cause of death I gave as pneumonia.

The interesting points in this case are: The abnormal position of the abdominal organs had not been diagnosed during life. The man had been anaesthetized without any ill effects.

I notice in the Paris Letter in the BRITISH MEDICAL JOURNAL of January 24th, 1914, mention of a case of diaphragmatic hernia, where the *x* rays revealed the greater part of the intestines in the left chest.

Lawrence mentions a case of deficiency of the left half of the diaphragm with displacement of the stomach. The patient died of double pneumonia.[1] Other cases are recorded in the same book. Drs. Brady, Readman, and Gibson were present at the autopsy, and agreed that the conditions found in this man were due to congenital deficiency of the left half of the diaphragm.

E. HODKINSON MONKS,
Honorary Surgeon, Royal Albert Edward Infirmary, Wigan; Police Surgeon.

A CASE OF LUPUS VULGARIS CURED BY TINCTURE OF IODINE.

IN June, 1913, I was asked to see a case of "sores" of the neck. The patient was a Hindu woman aged about 21 years. She gave a history of having suffered from ulceration of the face and neck for the past six years.

On examination I found on each cheek a large ulcerated patch extending from the lobe of the ear to within about 1 in. of the chin, and following the line of the lower jaw. These patches were irregular in outline, and were healing in a few places, as indicated by cicatrices, but were everywhere else clearly spreading. A third patch similar to the other two was found directly below the left clavicle, reaching from the centre of the sternum almost to the point of the shoulder.

All these patches of ulceration presented the typical appearance of lupus vulgaris, with the "apple jelly" appearance at the spreading margins and the crusts of dried discharge over the ulcerated portion. The diagnosis was confirmed by observing the ulceration invading a portion of cicatrix where it had healed up before. The cervical glands on both sides of the neck were enlarged and hard from septic absorption. No other signs of tuberculosis in the lungs or other organs could be detected; the patient was of poor physique, and was very anaemic and weakly.

I put her on an iron and arsenic mixture internally and recommended a more plentiful diet than she had been accustomed to. Locally I ordered the whole diseased area to be freed from crusts and dried discharges by sodium bicarbonate poultices and to be painted with tincture of iodine daily. Improvement daily set in under this treatment, and the whole area became paler in colour and less inflamed looking. I now destroyed one or two of the largest nodules by applying pure carbolic acid to them and increased the tincture of iodine to double strength. Steady improvement resulted and the ulcers began to heal up; the discharge was also greatly lessened. The only dressings used were strips of gauze held in position over the raw surface by sticking plaster, so that the gauze was not actually in contact with the ulcer, the object being to prevent flies settling on the wounds.

This treatment was continued till November, 1913, when the whole area had completely healed over, and no trace of the disease remained except the cicatrices. These were supple and freely movable upon the subjacent tissues. There was no puckering due to cicatricial contraction. The surrounding skin appeared normal. The cervical glands were no longer palpable. The patient's whole appearance was altered; she appeared in good health and stated that she felt well and strong.

In view of the good results obtained by this treatment in five months in a case of six years' standing I am anxious to try it again in other cases, and perhaps the matter may prove of interest to those practitioners who have to aim at curing this disease with the minimum of unsightly cicatrices and subsequent deformity.

E. G. KENNEDY, M.B.,
Captain, I.M.S.
Ferozepore.

[1] *Anomalies and Curiosities of Medicine.* By Gould and Pyle.

THE Society of Medical Heads of the Laboratories of Radiology and Electro-radiotherapy of the Paris Hospitals has arranged a series of theoretical and practical lectures to be given twice a year, in May and November, on electrology, radiology, and radium-therapy. Each course will extend over a month. The next series will begin on Monday, May 4th, at 4.30 p.m., in the theatre of the Hôpital de la Pitié, when the inaugural lecture will be given by Professor d'Arsonval. The course is free. Particulars may be obtained on application to Dr. Delherm, of the Hôpital de la Pitié, Boulevard de l'Hôpital 83, Paris (XIIIe); or Dr. Aubourg, of the Hôpital Boucicaut, rue de la Convention 62, Paris (XVe).

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

AT a meeting of the Pathological and Clinical Section of the Branch on March 6th, Dr. PURSLOW in the chair, the following were among the exhibits:—Mr. BILLINGTON: A case of *Von Recklinghausen's disease* in a man aged 37, who had pain in the left leg and left groin of one year's duration. Numerous superficial tumours had been present since childhood all over his body; they had increased in number recently, and were soft but not tender to touch. The family history was interesting, the mother having one tumour on her right arm; two sisters had many tumours under the skin, while one sister, who had died of "cancer," had growths all over her body. Until recently the patient had suffered no inconvenience from his tumours, and in early life had been a professional gymnast. Mr. SEYMOUR BARLING: A case of *Cervical rib* in a woman, aged 31, who complained of pain in the inner side of the left arm. It had been present on and off for six months, and became worse after working; it passed down to the inner three fingers; there was no muscular wasting; a skiagram showed a small bony projection on either side of the seventh cervical vertebra. Mr. BEATSON HIRD: A case of *Diplopia* in an unmarried woman, aged 24, who had recently been confined. On January 12th she had attended at the Eye Hospital complaining of diplopia, when she stated that she had seen double for one week, and had headache. She had bilateral paralysis of the sixth cranial nerve, complete on the right side. The hearing on the left side was impaired (nerve deafness), and she had bilateral optic neuritis. The Wassermann test was positive. Since then she had been an in-patient at the General Hospital under Dr. Stacey Wilson, where she had antisyphilitic treatment and a course of hectine. She had now practically recovered; there being diplopia only on looking to the extreme right, while the optic neuritis had almost gone. Dr. PURSLOW: A specimen of *Uterine fibroid showing advanced calcareous degeneration.* It was removed by abdominal hysterectomy from a married nullipara, 48 years of age, who had suffered from dysmenorrhoea and at times during the past eight years from retention of urine necessitating the use of a catheter. The tumour, which was the size of a four months pregnancy, had undergone such marked calcification in its centre that a saw had to be used to divide it. Dr. STANLEY: A patient with an obscure form of lung consolidation. Dr. KAUFFMANN: A patient with an aneurysm of the heart. Mr. L. GAMGEE: Two specimens of *Hypernephroma of the kidney.*

NORTH WALES BRANCH: DENBIGH AND FLINT DIVISION.

A MEETING of the Denbigh and Flint Division, held at Wrexham on March 12th, Dr. J. E. H. DAVIES of that town presiding, was mainly devoted to the discussion of cases of clinical interest. The proceedings included a paper by Dr. E. L. MIDDLETON on the subject of *Myasthenia gravis*, his remarks being illustrated by an instance of this disease in a young woman. He also showed a case of neuro-muscular atrophy in a young man in whom the muscles permanently affected were the peronei. Dr. J. C. DAVIES brought forward several cases, three of them being instances of *Exophthalmos.* One of these patients was a typical example of Graves's disease; the second exhibited double exophthalmos, but no other allied phenomena; while in the third case the exophthalmos was limited to one eye, and was evidently due to a local cause, the patient having sustained some years previously a fracture of the outer wall of the orbit. Dr. Davies also showed a patient who had been under his treatment for compound comminuted fracture of the upper third of the femur; the injury occurred while the patient was shot-firing in a coal mine, and a few days later it was found that embedded in the muscles was a piece of stone measuring 3 in. in one diameter and 1¾ in. in the other. This was removed and the patient then made an uninterrupted recovery. A fifth case was shown

in order to obtain the opinion of members as to its nature. The patient was a girl, aged 9, who had a hard circumscribed swelling in the left temporal region, which was first noticed subsequently to the receipt by her of a blow with a brush. Some members favoured a diagnosis of haematoma under the temporal fascia, others one of osseous sarcoma. Dr. F. S. ROWLAND, Honorary Secretary of the Division, read a brief paper relating to the etiology, diagnosis, and treatment of hydatidiform degeneration of the chorionic villi, illustrating it by a recent specimen of a placenta of two and a half months' growth, in which the phenomenon was present. At the beginning of the meeting reference was made to the death of the late Dr. Charles Duce, and a resolution expressing the sympathy of the Division with his wife in her loss was formally adopted. A wreath had already been sent in the name of the Division to Mrs. Duce on the day of the funeral, and a letter thanking the Division for its dispatch was read.

OXFORD AND READING BRANCH: OXFORD DIVISION.

AT a meeting of the Division at the Radcliffe Infirmary on March 13th, Dr. O'KELLY in the chair, Sir WILLIAM OSLER, speaking of *The diagnosis of early pulmonary tuberculosis*, said that one of the reasons why tuberculosis often escaped early detection was that symptoms were sometimes so scanty that even when the patient did seek the advice of a physician it was not thought necessary to strip the patient, and the examination was consequently incomplete. There might be much disease present in the lungs without any marked symptoms, the cough being slight and little or no fever being present. In children the lesion might be at the root of the lungs, and thus insusceptible of detection by ordinary physical signs. The latter might often be absent, even in cases in which tubercle could be detected in the sputum and the focus of disease might be so small as to be clinically unrecognizable. On the other hand, some cases which clinically appeared to be instances of tuberculosis, but in which tubercle bacilli were not detected in the sputum, had turned out to be non-tuberculous. In New York this was the case in more than 50 per cent. of the patients sent to the tuberculosis dispensary for treatment. The next speaker was Dr. CLIVE RIVIERE, who emphasized the value of watching for lagging in the apical respiration when the head was bent forward, and also dwelt on that of light percussion, it being noted in particular whether the pitch was sharp or flat. Opposite points on the chest, he observed, were only comparable during the same respiratory phases, and any difference between them became chiefly apparent at the end of respiration. Besides testing the sputum for tubercle bacilli, it was useful to apply the albumin test, for this, when present, indicated the involvement of the lung parenchyma. It might also be useful to take the patient's temperature every four hours, in addition to noting the effect of exercise on his temperature changes. Dr. J. A. D. RADCLIFFE, of the King's Sanatorium, Midhurst, speaking of the value of complement fixation, said it was important to use as antigen a young culture of tubercle bacilli (which should not be sterilized) and to standardize the various reagents used in the reaction, especially the complement. Out of a total of 403 cases with tubercle bacilli in the sputum he had found 86.1 per cent. gave a positive reaction, while the serum of 152 controls in every case gave a negative reaction. He had tested 42 doubtful cases by complement fixation, by tuberculin and the opsonic index, and divided them into three groups. In the first group 12 cases, in which no focal nor febrile reaction occurred, there was no complement fixation and no fluctuation in the opsonic index. In the second group 19 cases, without focal reaction, the complement test was negative in all, and opsonic test negative in 18. In the third group 11 cases, in which the focal reaction was positive, the complement test was positive in 8 and negative in 3, while the opsonic index showed fluctuations in 7. In the discussion Drs. O'KELLY, BROOKS, STOBIE, ESTHER CARLING, DUIGAN, CARTER, GIBSON, and GILLETT took part.

PERTH BRANCH.

AT the annual clinical meeting of the Perth Branch on March 11th, Dr. ROBERT STIRLING in the chair, the proceedings included the delivery of two addresses illustrated by limelight slides, the exhibition and discussion of a series of cases, and several demonstrations. The first address was given by Dr. W. T. RITCHIE of Edinburgh, who dealt with the nature and significance of different forms of tachycardia as shown by means of the polygraph and the electrocardiograph, while in the second address Dr. PIRIE of Dundee considered in detail the diagnosis of diseases of the stomach by means of *x* rays. Some cases of tuberculous osteomyelitis were recorded by Mr. PRICE, Senior Surgeon of the Royal Infirmary, his description of their condition before and after operation being aided by radiograms; he also dealt in the same fashion with a case in which fracture of the pelvis had been associated with rupture of the urethra. Dr. MAITLAND HUME showed a case of congenital dislocation of the hips, illustrating his remarks by skiagrams; he was followed by Dr. J. HUME, who read a paper dealing with acute rheumatism occurring in childhood. Dr. EDWARDS, in addition to giving a demonstration illustrative of the Wassermann reaction and its application, brought forward an instance of congenital dislocation of the head of the radius occurring both in a mother and in her daughter, and also submitted for diagnosis a case of tumour of the chest wall. A series of microscopic specimens and one of radiograms were shown by Drs. LYELL and MEEK.

The meeting was held at the Royal Infirmary, and, in addition to being well attended, led to some excellent discussions. Just before the scientific proceedings commenced a short business meeting was held for the purpose of considering model rules for the Branch. Those submitted were duly approved, but it was decided not to have them printed until the question of the boundaries of the Branch, which it was thought ought to be coterminous with those of the county, had been further considered.

Reports of Societies.

UNITED SERVICES MEDICAL SOCIETY.

AT a meeting on March 12th, Major E. T. F. BIRRELL, R.A.M.C., gave an account of his *Experiences in the Balkan wars*. He went out under the British Red Cross Association, and was appointed commandant for the Red Cross services in Bulgaria. Two units were dispatched to Bulgaria, each consisting of three surgeons, four dressers (medical students), and twelve men as nursing orderlies, general duty orderlies, and cooks. The equipment of each section was practically the medical and ordnance equipment of a section of a field ambulance without tents or vehicles, but with the addition of the then field pattern of *x*-ray apparatus, a small petrol engine, and some special surgical equipment. The units on arrival at Sofia received orders to proceed to the front and open a hospital there. The journey as far as Jamboli was accomplished by rail. During the journey three types of ambulance trains were met with: (1) In Servia, a specially fitted up train consisting of covered baggage wagons for the patients, painted white with red crosses, and each fitted inside with eight wooden berths in two tiers, besides ordinary passenger coaches for the surgeons and attendants. (2) In Bulgaria, ordinary passenger coaches, the wounded sitting or lying on the seats. (3) Ordinary baggage wagons, with straw or matting for the patients to lie upon. Major Birrell described the journey by road to Kirk Kilisse from Jamboli, and the difficulty of getting the men together in the morning when distributed overnight in billets. When the units arrived at Kirk Kilisse the wounded were just beginning to come in from Chatalja, where heavy fighting was going on; the slighter cases came first, but many looked worn and hungry, and many of the more severely wounded arrived with their bandages soaked with pus and blood. The hospitals were crowded, even to the passages and landings. The Red Cross units were given a building in which to set up their hospital. Convoys of wounded were organized from time to time, the vehicles used being bullock and buffalo carts, both of which were innocent of any springs. The wounded were simply placed on fodder on the floor of the wagon. Very severe cases were, however, generally placed on litters with high sides and thick mattresses, which minimized the jolting considerably; as far as is known no medical personnel accom-

panied them, certainly no doctor. At many stations the Bulgarian Red Cross Association had established rest camps, or at least places where bread could be obtained. The great problem at Kirk Kilisse was the supply of water. There was none laid on to the hospital; the supply had to be carried in barrels on bullock wagons. For drinking purposes the water was purified by the addition of sodium bisulphate; no ill effects could be traced to the drinking water. Flies were a great pest; they swarmed in the tents and hospital; no attempt could be made to destroy the breeding places of the flies, as these were too widespread. Cholera and enteric were the diseases of most interest, though no cases of the former came to the hospitals at Kirk Kilisse, but at Chatalja there were some 23,000 cases with 3,000 deaths, a very low death-rate. Enteric fever was fairly common during the first war, but in the second only one case was seen. Most of the cases during the first war were treated in the Russian hospital by Dr. Clarke with vaccine provided by the Royal Army Medical College. The results were very satisfactory, and Dr. C. Clarke was going to publish them. The Bulgarian war ration was satisfactory as regards its energy value. A most interesting point, however, was the sugar hunger from which both staff and patients suffered. Regarding the effects of the sharp-pointed Turkish bullet, there did not appear to be any difference in the character of the wounds when compared with those from the ogival-tipped Servian bullet. All the wounded were septic. Among the wounded received from Chatalja, those in which there was any likelihood of haemorrhage had been plugged, and this was a very fruitful cause of sepsis. In both wars the value of iodine as an antiseptic was abundantly proved. A watery solution was used, and this was found to be very satisfactory, The use of iodine has been condemned by foreign observers in the Balkan wars; this was no doubt due to the abuse of the drug which was noticed. The favourite Bulgarian application to a wound was a strong alcoholic solution of iodine, on a swab on the end of a stick, and the result was a blackening of the raw surfaces, and a total absence of granulations. The use of *x* rays proved of enormous value; not only was time saved in diagnosis, but the treatment was rendered easy and accurate.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT a meeting on March 13th, Dr. A. K. CHALMERS, President, in the chair, Dr. A. S. M. MACGREGOR, Tuberculosis Officer for Glasgow, read a paper on *Studies in the epidemiology of phthisis*, in which he referred at the outset to some of the difficulties surrounding inquiries into the incidence of phthisis which were based on notification results. Clinical standards appeared to differ in different places and at different age periods, and increase in facilities for early detection accounted for considerable variation in different localities and even in successive years in the same locality. Quoting from the 1912 report of Dr. Robertson of Birmingham, he pointed out that the proportion of cases notified to 100 deaths varied from 173 in Sheffield to 327 in Glasgow and 475 in Portsmouth. There appeared to be considerable diversity of practice as between various places, applicable to all age periods, but it was particularly evident in the case of school children. For the double purpose of testing the accuracy of the notifications received in Glasgow and of getting into touch with practical issues, an endeavour had been made to follow the cases notified in one year during the following years. Out of the 3,425 cases notified in 1910, nearly 53 per cent. had died; 6 per cent. had left the city, 10 per cent. had disappeared and were not traced, and 14 per cent. were not found at the addresses given in the notification. The remaining 16 per cent., or nearly 500 cases, were still alive, and 14 per cent. were at home and 2 per cent. in institutions. Of those cases under 15 years of age, nearly all died within one or two years of being notified, a larger proportion at this age group died from other causes than phthisis, a larger proportion was lost sight of, and a much larger proportion survived than at the other age groups. This pointed to the relatively short duration of fatal phthisis in children, and suggested the existence of a very chronic and easily arrested type of the disease in them. It was regarded as an axiom in antituberculosis work that the members of a family in which a case of tuberculosis occurred should be subjected to medical scrutiny for the detection of other and early cases. A record had been kept in Glasgow of the number of cases found among contacts, and, comparing this with the number that might have been expected from the incidence of the disease among the whole population, it appeared that there were actually 63 more cases than might have been expected, and in one year (1913) two fewer cases than might be expected. These results did not indicate that the setting up of elaborate administrative machinery for the examination of contacts would be attended by the discovery of more than a relatively small proportion of the cases which occurred in the course of a year. Dr. W. G. WILLOUGHBY emphasized the importance of following up the notified cases and of keeping statistics regarding them. In Eastbourne there was one death to five notifications. Dr. R. VEITCH CLARK pointed out the difficulty of deciding in many cases whether infection was from the home of the patient or from his employment. He advocated a more prolonged treatment than was now undergone, when he anticipated better results would follow. Dr. E. W. HOPE deprecated the inflated hopes that were held out with respect to the forms of treatment of tuberculosis. He thought that at least one half of the value of sanatorium treatment lay in the isolation of the infected person. Sir SHIRLEY MURPHY asked that in similar investigations to those made by Dr. MacGregor information should be given of the social condition of those affected. Dr. CALDWELL SMITH considered that the number of persons who completely recovered was extremely small, though if a large number of children were notified the number of recoveries would be increased. Dr. E. H. T. NASH said that in Wimbledon there was one death from phthisis to two notifications. He referred to the fact that whereas a post office official was sent to a sanatorium within a week of a diagnosis of phthisis being made, in the case of persons insured under the Insurance Act two months elapsed. Dr. ALFRED GREENWOOD was certain that when tuberculosis dispensaries had got into working order there would be much better results in regard to the working capacity of tuberculous persons.

ROYAL SOCIETY OF MEDICINE.

SECTION OF PATHOLOGY.

AT a meeting on March 17th, Dr. ANDREWES in the chair, Dr. GASKELL, in a paper on *Renal changes in infective endocarditis*, described these as being of two varieties. Both, however, were due to the same pathological process—namely, the carriage of ulcerated particles from the heart valves or wall into the vessels of the organ. Large particles produced septic infarction of the organ; small particles lodged in the glomerular capillaries and gave rise to a peculiar form of nephritis, first distinguished by Löhlein and called by him "embolic focal nephritis." This was characterized clinically by repeated or continuous haemorrhages into the tubules. The changes in the tubules were of minor importance. The lesions in the kidney apparently tended to heal; consequently the infection was only temporary. The condition occurred in the course of an endocarditis associated with the *Streptococcus salivarius*; in other infections it seldom or never occurred. Experimental inoculation of rabbits with *S. salivarius* had been in most cases negative as regards kidney lesions, but in one case he had been able to detect lesions characteristic of embolic focal nephritis. Mr. S. G. SHATTOCK, speaking of a large tumour which had been removed from a patient's back by Sir William Fergusson, and was at present in the museum of the Royal College of Surgeons, said it belonged to a group of neoplasms first described clinically by Edward Cock of Guy's Hospital in 1853. Sir James Goodhart had referred briefly to such from the anatomical side. The author had seen and examined one or two, but they were rare and still little known to clinicians. They were benign epithelial tumours arising in connexion with hair follicles, and, though benign, closely resembled squamous-celled carcinomata in structure. The author suggested for them the name *Folliculoma*. Calcification of the keratinizing epithelium occurred in varying degrees but it might be absent. They were not of the kind described by Malherbe (1881) as calcifying epitheliomata of the sebaceous glands,

which were keratinizing and calcifying papilliferous cysts of the hair follicles. In birds there were peculiar "tumours" due to the retention of feathers in groups of follicles accompanied with the accumulation of desquamated epithelium—ptero-follicular cysts as distinguished from pilo-follicular. These were, however, more comparable to rhinophyma in the human subject than to the proper new formation — folliculoma. It might be noted that the feather follicle was unprovided with sebaceous glands. The peculiarity of the tumour exhibited was its remarkable opacity and whiteness. T is was not due to calcification, nor was it due to the kind of saponification which rendered the fat opaque in "fat necrosis." The last possibility was excluded by microchemical tests; the opacity persisted after the action of ether and alcohol, and the addition of hydrochloric acid produced no change; there was no liberation of droplets of oleic acid from any calcium oleate present, such as occurred in the case of the saponified fat in fat necrosis. The singular physical characters were due to the presence of a skein in the epithelial cells, of vast collections of which cells the growth consisted; this skein occurred in cells answering to the stratum corneum; in some cells it was coarse and open, in others closer and finer. It apparently was the same in kind as the delicate felt-work in the cells of the stratum corneum of the thick epidermis from the heel. Using the term "eleidin" rather as a generic one than as meaning absolutely the granules and flakes in the stratum granulosum, the author ventured to name the tumour in question an *eleidoma*, after Virchow's manner of using such a term as "psammoma," for though the last was an endothelioma, it was one in which a particularly large amount of calcification of the endothelial whorls took place; and the master had thought this of sufficient importance to deserve a distinctive name.

Section of Laryngology.

At a meeting on March 6th, Dr. D. R. Paterson, President, in the chair, the following were among the exhibits:—Mr. H. J. Davis: (1) A preparation from a child, aged 2, showing the left recurrent laryngeal nerve involved in a mass of lymphomatous glands. Sir Felix Semon remarked that laryngeal paralysis in children rarely resulted from lymphomatous glands. (2) A man, aged 70, the subject of necrosis of the hard palate. It had existed ever since he was 10 years old. The President suggested that it was due to congenital syphilis. (3) A man, aged 50, showing a large pulsating vessel on the posterior wall of pharynx. Mr. Harmer thought that the vessel was an abnormally placed internal carotid artery, and related a case in which a complete coil of that artery was removed during an operation for adenoids. (4) A woman, aged 30, with redness, infiltration, and oedema of the nose and both cheeks of six months' duration; there was also an empyema of the left antrum. The President remarked that signs of antral suppuration described as typical of this condition in surgical textbooks were rarely encountered. Dr. E. A. Peters suggested that the condition in the case shown was entirely due to a septic fissure in the right nasal vestibule. Mr. Stuart Low: A man, aged 50, the subject of columnar-celled epithelioma of the nasal cavity and left antrum. Mr. Herbert Tilley: A case of laryngeal tumour, the growth being probably an adenoma of the right ventricular band. Mr. F. A. Rose disagreed with the report upon the microscopical section shown with the case, and suggested that the apparent growth was a chronic inflammatory condition. Sir Felix Semon thought the case was one of tuberculous laryngitis. Mr. E. D. D. Davis, relating a similar case, stated that Mr. Shattock would not give a definite opinion upon the microscropical section obtained from it. Later on the patient showed signs of tubercle of the lung. Mr. C. W. M. Hope: Two cases of acute suppurative frontal sinusitis, which in both instances was ascribed to bathing. Dr. E. A. Peters: A case of lupus of the nose associated with lupus or chronic tuberculosis of the larynx commencing in the left ventricle. Improvement had followed the use of a bacillary emulsion, but later on, when the patient became pregnant, there was a relapse and consolidation of the right lung. Sir StClair Thomson said that it was not unusual for women with nasal lupus to develop phthisis after marriage and motherhood.

HARVEIAN SOCIETY OF LONDON.

At a meeting held on March 12th, Mr. J. Jackson Clarke, President, in the chair, Mr. D'Arcy Power, in delivering the Harveian Lecture, discussed English medicine and surgery under Edward III. The practice and practitioners of medicine of the fourteenth century, he said, were worthy of careful study, for, whilst they were in touch with the older beliefs and traditions, they were endowed with the knowledge of science which had been gained by Roger Bacon and Robert Grosseteste. All classes of the medical profession had abundant opportunity for practising their calling, and surgery, especially, was in a fair way of becoming a science. This progress suddenly came to an end with the Wars of the Roses, and all was lost for many years. The speaker then sketched the life of John Arderne, illustrating his remarks by photographs from a manuscript of his works which had not hitherto been thoroughly examined. It was an abstract of Arderne's *Liber Receptarum*, arranged in the same order as the corresponding chapters in Bernard of Gordon's *Lilium Medicinae*, which was the ordinary manual of surgery of the period. It was clear from his treatment of a case of impacted stone in the urethra and of serious primary haemorrhage that his surgical treatment was far in advance of his time, for he used cleanliness and sponge pressure. Among other patients he treated one, John Collier, Mayor of Northampton, for fistula in ano. His patients were usually designated merely by their armorial bearings. The treatment of the sick was in the hands of the same classes of practitioner as at the present time—the physician, the surgeon, the family medical attendant, and the quack. The apothecary was a tradesman. The physician was usually, but not necessarily, a Churchman. The operating surgeon as a class was in a lower position than the physician, and was in a transition stage; the master surgeons, however, were held in some estimation. The best of the operating surgeons did good work and almost succeeded in making surgery a profession. The barbers acted in their public capacity as health officers, having charge of the gates of the city and segregating the lepers. Little was known of the apothecaries of the period. The address concluded with an account of the hospitals of the time, the description being aided by illustrations.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

At a pathological meeting on February 27th, Dr. T. Wardrop Griffith, President, in the chair, Dr. C. W. Vining showed a specimen from a case of bilateral *Cortical infarction* found *post mortem* in a girl, aged 16, who had died of general peritonitis following acute intestinal obstruction. It was pointed out that this kidney condition was rare, and when it did occur it was usually in cases of death due to eclampsia at childbirth. Dr. G. W. Watson showed a portion of lung and a spleen from a case of *Phthisis* which terminated fatally six to eight weeks after the onset of symptoms. The signs in the chest extended very rapidly during the last four weeks of life, and death occurred suddenly from a severe haemoptysis. The spleen showed a massive infarction. It was suggested that the cause of this infarction, and also that of multiple small infarctions which were present in the kidneys, was probably detachment of portions of clot from thrombosed pulmonary veins.

At a meeting on March 13th, Dr. T. Wardrop Griffith, President, in the chair, Dr. W. H. Maxwell Telling, in a paper on *Treatment by suggestion*, advocated a serious study of the methods of suggestion and psycho-therapy, so that they might be employed with precision instead of indeliberately and unscientifically as at present. Though hypnosis, one branch of psycho-therapy, was occasionally useful, he said it was but seldom required, and had positive drawbacks in many cases. More permanent results could be obtained by the method of Dubois—by explanation to and re-education of the patient by graduated conversations. Great benefit resulted from the employment of deliberate suggestion in regard to hospital cases. The "rest cure" had been largely used in unsuitable cases, with consequent aggravation of the symptoms;

more often a "work cure" was required for the restoration to normal of the patient's perverted over-attention to his own ailments. Dr. R. G. M. LADELL showed an unmarried woman, aged 41, who had a history of occasional vomiting over two years, gradually increasing in frequency. She had become very emaciated, and drug treatment and other like measures had no effect. Laparotomy was performed in July, 1912, but no morbid condition was found and nothing done beyond dividing some peritoneal adhesions. A slight improvement was noted, but the case relapsed to the former state. In January, 1913, she was treated by *Hypnotic suggestion* and deep sleep and amnesia were obtained from the first. The patient was completely cured after about a dozen sittings, and no relapse had occurred so far. Mr. W. THOMPSON showed: (1) Two calculi which were impacted in the ureter near the base of the bladder and had been removed by the extraperitoneal operation. (2) A calculus from a case which had been regarded as one of appendicitis; appendicectomy was performed, but the symptoms persisted. X-ray examination then revealed a calculus impacted in the ureter. Dr. C. OLDFIELD showed a specimen from a patient, aged 30, in whom an *Ectopic pregnancy* had continued to the sixth month of gestation. A year previously the patient had had the cervix dilated and curetted for sterility, and six months later missed her period for the first time. Three weeks later there began symptoms (chiefly vaginal blood discharge and pelvic pain), which continued with intervals up to December, 1913, after which abdominal symptoms with more bleeding were the leading features. The physical signs suggested a retroverted gravid uterus, for which it had been mistaken, and eventually an operation was undertaken. A partly macerated six months fetus was found lying free amongst the small intestine, and the placenta, large and infiltrated with blood clot, was attached to the pelvic organs and firmly adherent to the right tube. This, the site of original implantation, was removed with the placenta attached. Separation of placenta resulted in free haemorrhage, which soon stopped. The abdomen was closed without drainage, and the patient was making a satisfactory recovery. Mr. S. W. DAW gave a demonstration of a method of reducing intussusception by forceps dilatation at the point of constriction. Dr. A. H. MILLER demonstrated a method of growing tubercle bacilli on media prepared from sperm oil and other waxy substances. Mr. J. F. DOBSON showed specimens from some cases of nephrectomy. In one case a closed tuberculous pyonephrosis on the right side, probably of many years' duration, was associated with tuberculous disease of both testicles and of the prostate. After investigation of the secreting capacity of the left kidney by cystoscopic examination, the diseased kidney was removed. The patient improved very quickly after the operation, and the painful enlargement of the testicles diminished rapidly.

MANCHESTER MEDICAL SOCIETY.

AT a meeting on March 4th Dr. W. WILSON, in a paper on the *Relation of the throat and nose to some diseases met with in general practice*, expressed an opinion that the generally accepted views regarding the function of the erectile tissue of the nose were incorrect. The lining mucosa of the air sinuses, if healthy, warmed and moistened the inspired air. The erectile tissue could be removed, and no harmful effects would follow. The anterior portion of the middle turbinal was of extreme importance in this respect, as it was full in the line of the inspiratory stream. Nasal suppuration was one of the chief causes of pneumonia, bronchopneumonia, and flatulent dyspepsia. Influenza, gout, and rheumatism were the commonest causes of nose and throat troubles. Influenza, tonsillitis, acute rheumatism, and some forms of appendicitis, were all manifestations of the same infection. The tonsils should be completely enucleated if they were at all affected in acute or chronic rheumatism. In children the tonsils and any adenoids present should be removed on the first signs of nervous irritability, anaemia, and "growing pains"; this would prevent most of the severe cardiac affections of childhood. "Neurosis" of the upper respiratory tract could usually be traced to some minute organic lesion. Tonsils should not be enucleated before the age of 4 years. Dr. A. A. MUMFORD, in a paper on *The estimation of physique and stamina of children for school purposes*, emphasized the necessity for distinguishing physique—this being really structure—from stamina, which was the sustained capacity for utilizing structure and putting forth mental and physical energy. The problem increased with adolescence, as the structure was incomplete and future capabilities were unknown. The various methods adopted in the past were suitable only for estimating the bodily growth and for nutrition.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 11th, Dr. WATSON-WILLIAMS in the chair, Dr. D. A. ALEXANDER showed a case of *Varicosity of the collateral venous circulation* resulting from thrombosis of the common iliac vein during enteric fever. Dr. F. H. EDGEWORTH, in some notes on a case of *Enlarged thyroid with tachycardia*, said he did not regard it as one of Graves's disease owing to the absence of wasting, and the regularity of the heart's action, and because the administration of thyroid extract brought about a cure. He suggested that the tachycardia was possibly due to pressure of the thyroid on the vagi. Mr. C. F. WALTERS described four cases in which he had tried the autoplastic intramedullary bone method of pegging fractures. A portion of the patient's tibial crest was used to manufacture the peg. The method was not successful, union being slow and faulty; in two of the cases fracture of the tibia resulted from weakening at the site of removal of the peg. Mr. HEY GROVES, in the course of the demonstration of a loan collection illustrating the operative treatment of fractures, emphasized the advantage of bolts which go right through the bone over screws which he said soon became loose. Mr. GREER thought the use of bolts involved too extensive a trauma and too long an operation. He had found Lambotte's apparatus of great use. Mr. SHEEN said that he was doubtful as to the final result in operated cases. A bad anatomical result coupled with a good functional result was, he believed, of frequent occurrence.

MIDLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting in Birmingham, on March 3rd, Mr. CHRISTOPHER MARTIN, Vice-President, in the chair, the following were among the exhibits:—Dr. PURSLOW (Birmingham): A specimen of *Pyometra due to intracervical cancer*. It had been removed from a multipara 59 years of age, who complained of irregular haemorrhage of fifteen months' duration following several years' amenorrhoea. There had also been difficulty in micturition. On examination, a symmetrical tumour was found reaching above the pubes and filling the pouch of Douglas. This was diagnosed as an enlarged and retroflexed uterus. The cervix was situated high up behind the pubes, and only the posterior lip could be reached by the finger. This was normal. A degenerated fibroid was suspected, and it was not until the abdomen was opened that the exact nature of the disease was recognized. Panhysterectomy was performed, and the patient made a good recovery. The unusual features of the case were the large size of the pyometra, the uterus containing 2 pints of foul-smelling pus, and the fact that the cervical carcinoma could not be felt on digital examination per vaginam. Dr. FURNEAUX JORDAN (Birmingham): A specimen of *Double ovarian cystic tumour of intraligamentary development*. Dr. EDGE (Birmingham): A specimen from a case of *Carcinoma of the ovary* in which metastasis was present at the base of the appendix vermiformis. On discussion of the case the specimen was referred to a pathological subcommittee. Dr. THOMAS WILSON (Birmingham): A specimen from a case of *Concealed accidental haemorrhage* in which Caesarean hysterectomy had been performed, and was followed by recovery. The uterus showed extensive subperitoneal and intramuscular haemorrhages, these being most evident at the uterine cornua. Microscopical preparations showed extreme degeneration of the myomatous elements in the uterine wall. The degeneration appeared to be hyaline, but its exact nature was so far undetermined. Dr. EDGE (Birmingham) recorded a case of *Inversion of the uterus* in a 3-para, aged 28, who was admitted to the Women's Hospital, Birmingham, on

August 17th, 1913. Five days previously she had given birth to her fourth child and had been attended by a midwife. No exact details were obtainable as to what had previously transpired, but she was sent into hospital as a case of puerperal fever following *post-partum* haemorrhage. On admission the woman was acutely ill, with a pulse of 160 and temperature 104° F. Preparations were made for obtaining a swab from the uterine cavity, but upon vaginal examination a rounded mass was felt within the vagina. Bimanually the uterus was absent, and a diagnosis was made of "uterine inversion." It seemed hopeless to perform any abdominal or vaginal section. Nevertheless, by dilatation of the cervix from above and reduction of the parts last inverted the condition was gradually reduced. The uterine cavity was cleansed with hydrogen peroxide and packed with iodoform gauze. The following day the patient's temperature was 105° and pulse 150. She was treated with polyvalent antistreptococcic serum, and eventually made a perfect recovery.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.

AT a meeting on February 25th, Dr. J. COUBRO POTTER in the chair, the exhibits included a case of *Tinnitus, associated with suicidal tendencies*. It was shown by Dr. POTTER and Mr. IBBOTSON with a view to eliciting opinions as to the propriety of treating the case by operation. The patient was a woman. The tinnitus commenced before the deafness, and was first noticed within two hours of administration of a general anaesthetic for an operation on an ingrowing toenail. There was no previous history of any ear trouble. The condition was steadily becoming worse, and although there was some impairment of hearing it was not great. There was no sign of labyrinthine trouble. The blood pressure was 140. The patient had been treated with the usual drugs, by catheterization, electricity, and by pilocarpine injections and counter-irritation, but all without benefit. The case had been twice examined by a neurologist, who could detect no signs of an organic central nervous lesion. Mr. CHARLES HEATH said the patient did not appear to be at all distressed by the noises, and the deafness was of the middle-ear type; such cases often got well by other means of treatment than operation. If an operation were performed at all it should be a radical mastoid operation, and not at first such a dangerous procedure as opening the labyrinth. Dr. WALKER WOOD said the history of the case, immediately following an operation to the foot, the curiously apathetic vacant appearance of the patient, the negative findings in the functional examination of the ear, and the patient's age, all suggested to him a mental condition. He was strongly adverse to an operation upon the ear, and would be inclined to try the effect of suggestive treatment. Lumbar puncture sometimes had a wonderful effect in cases of tinnitus of obscure origin. Mr. C. HAYNES LOVELL agreed that the condition was functional, and thought the suggestion of hypnotic treatment a good one. Mr. CHARLES HEATH, having described some cases on which he had recently had occasion to perform mastoid operations, remarked in connexion with one of them that, though pain, fever, discharge, and deafness had lasted for a month, they were not considered reasons for intervention by the medical man in charge of the case; it was only when a swelling appeared behind the ear that he thought a mastoid operation required. Misled by textbooks, he became anxious when the most urgent symptoms had subsided and drainage had become established, and was not anxious when danger was present. Such a case justified a persistent demand for a revision of the teaching concerning the symptoms justifying a mastoid operation. In consequence of the extensive destruction of bone, the cavity remaining after the operation was five times as large as it would have been had it taken place within a few hours or days of the commencement of acute disease. The after-treatment, therefore, would last for months, thus prolonging the patient's discomfort and the surgeon's labour. Dr. FREDERICK SPICER pointed out the great difficulty of the general practitioner in making a decision as to the necessity or otherwise for a mastoid operation. It was difficult for an otologist at times to decide if an operation was required, and necessarily it must be much more difficult for the family doctor. Though he agreed that the indications for operation required revising, he could not quite agree with the dictum "that a persistently discharging ear without pain means danger to hearing and a discharging ear with pain danger to life." According to that view, every discharging ear ought to be operated upon. He hoped Mr. Heath would clearly state what he considered were the indications for performing a mastoid operation. In reply, Mr. HEATH pointed out that the treatment must depend upon the aural surgeon's ideal. If his ambition extended to the prevention of deafness from aural suppuration, he must arrest discharge before it had done harm to the tympanic apparatus, and this frequently entailed the performance of a conservative mastoid operation within a few days or weeks of the commencement of disease according to the urgency of symptoms and condition of hearing. If, however, the aural surgeon—as some did—held the power of hearing in little estimation, and was content with saving life, then he might allow the discharge to continue until the patient died of old age, or until dangerous symptoms appeared, and then perform a radical mastoid operation.

Reviews.

AN AMERICAN CANCER RESEARCH FUND.

THE studies in cancer and allied subjects conducted under the George Crocker Special Research Fund at Columbia University within the last two or three years have now been published in three separate volumes of the reports of the George Crocker Cancer Research Fund.[1] They contain important communications on a subject which is exciting universally so much attention.

The first volume, a review of recent work on experimental cancer, is written wholly by Dr. W. H. WOGLOM, who was some time assistant to Dr. Bashford. Hitherto we have sadly lacked any extensive review of the experimental investigation of cancer, and the deficiency was ill supplied by the references with which almost every writer on the subject pads out his published papers. True observations, false observations, changing views, preliminary conclusions, opinions, theories, and the controversies of schools have been so mixed together that it is difficult for one engaged in the department of study to pick his way through the mass, and almost hopeless for others. A critical survey of the work has not been attempted by Dr. Woglom because much of it is new and "our ideas regarding the disease are so chaotic that fair criticism and evaluation are wellnigh impossible," yet the mere statement of the work implies a wide knowledge and at the same time a discriminating judgement and an unprejudiced view. Dr. Woglom's monograph exhibits these qualities. Chemical and bacteriological studies are wisely omitted because, up to the present, they have been practically fruitless—an opinion which, it is hoped, the future will modify. But by restoring order amongst the host of biological observations Dr. Woglom has done a signal service to all interested in the recent work on cancer. In a brief historical review he gives an account of the theories that have held sway from the time of Hippocrates. The Egyptians, he notes, were acquainted with cancer as early as 1500 B.C., and operative removal with the application of salves to prevent recurrence was practised in India even before that period. Some of the hypotheses of the dark ages are as convincing as many of recent date. The history of the attempts to produce tumours *de novo* is very fully related, and is an interesting story of disappointed hopes. Almost the whole experimental work of recent years has been based on the first successful attempt of Hanau to transplant malignant tumours from one animal to another of the same species; but the transmissibility of cancer had previously been deduced from clinical experience and accidental transference. Following on Hanau came Morau with more extended observations, but it is to Jensen that we owe the great impetus that opened up a new and fertile means for the experimental study of cancer. The consideration of

[1] *Studies in Cancer and Allied Subjects: The Study of Experimental Cancer.* A Review conducted under the George Crocker Special Research Fund at Columbia University. Vol. I. By W. H. Woglom, M.D. Vol. II, Pathology. Vol. III, From the Departments of Zoology, Surgery, Clinical Pathology, and Biological Chemistry. London: H. Frowde; New York: Lemcke and Buechner. 1913. (Dbl. roy. 8vo, vol. i, pp. 298; vol. ii, pp. 264, 32 plates; vol. iii, pp. 318. 5 dols. each.)

the transplanted tumour, the changes that the grafts undergo in certain circumstances, and their relation to the host are the subject of a most interesting chapter. Perhaps the most difficult part of the whole subject is that of immunity. The observations have been so numerous and conflicting that it is almost impossible to obtain a general agreement on any one point. Dr. Woglom steers a careful course amongst them, though undoubtedly the views of the staff of the Imperial Cancer Research Fund are mostly regarded. The discussion of the occurrence of spontaneous tumour growths in animals and their etiological considerations, the description of borderland cancers, and the accounts of therapeutic experiments on malignant disease form valuable reviews of recent work. Dr. Woglom's survey is as interesting as it is necessary.

The second volume, introduced by a short general article by Professor MacCallum, is mainly a series of reprints of contributions to various scientific journals, fourteen being by Dr. Isaac Levin, alone or in collaboration with Dr. Sittenfield, eleven by Drs. Lambert and Hanes, and two by Drs. Frank and Unger. The majority of Dr. Levin's papers deal with experiments in the production of immunity to tumour inoculations in rats. Probably owing to the fact that the articles have all previously appeared from time to time in journals, the succeeding papers include very full accounts of the contents of the preceding, so that one is presented with a story on the lines of the house that Jack built. The new facts contributed by Dr. Levin are so hedged about by a general talk around the subject that they are apt to be overlooked. In a paper on the statistical study of cancer of the uterus, for example, one half has no connexion with the subject, whilst the rest, as well as a statistical study on cancer in general, need never have been written if the author had known of the studies previously published from the Middlesex Hospital Laboratories on far larger numbers of cases more accurately recorded. Ehrlich's theory of athrepsia, the hormone theory of causation, and the formation of metastases are the subjects of chapters well worth study. The discussion of "specific stroma reaction" is somewhat marred by an inaccurate appreciation of the common use of the term. A very interesting series of experiments on the influence of mouse-rat parabiosis on transplanted sarcoma is reported by Dr. Lambert. The volume is especially valuable because of the successful attempts detailed by Lambert and Hanes to grow sarcoma and carcinoma cells in plasma outside the animal body. They have used the method of Carrel and Burrows to study not only the growth of cells *in vitro*, but also the effects of numerous substances upon them. Drs. Frank and Unger, in an experimental study of the mammary gland, found that the physiological hyperplasia of the gland is not explicable by the simple chemical stimulus assumed by Starling. Attempts at production of hyperplasia by artificial means were to a great extent negative, and the subtle process of nature cannot be imitated with present methods. A long paper on the function of the ovary, excellent though it is, has very little bearing on the subject of cancer.

The third volume contains a large number of contributions from the departments of zoology, surgery, chemical pathology, and biological chemistry of Columbia University. The contributions are numerous, of unequal merit, and varied in their subjects; the majority are merely prospectings over a wide field, and superficial borings in the hope that some seam may be struck that will afterwards prove fertile. Such a method of conducting research is not to be condemned even though the results may not be immediately apparent, and it is possible that by it some valuable fact may be discovered, probably by good luck, which will shed fresh light on the problems of cancer. Certainly some of the results, though not bearing directly on the subject, are worth obtaining from other points of view, but it is questionable if such inco-ordinated researches should be grouped together ostensibly as cancer research. The experiments in rogeneration and cell division in uronychia, and the effects of mutilation by cutting in paramecium, are important contributions to our knowledge of the mechanism of division in lowly forms of cell life. The experiments of Bulloch on the internal secretions and malignant tumours, though in the main negative, are very ably and instructively summarized. Woglom's crucial experiments on the question of immunity produced by inoculation of the host's own tissues are landmarks in cancer research. They are the best contributions to the volume. The tryptophan test for cancer of the stomach is enthusiastically supported by Weinstein and just as enthusiastically opposed in a subsequent paper by Sandford and Rosenbloom. The studies of Ottenburg and his co-workers on isoagglutinins are good contributions to general serology; most of the others are very poor.

SPIRITUAL DIRECTOR AND PHYSICIAN.

In the English translation (1891) of *My Water Cure*, Father Kneipp of Worishofen, Bavaria, writes: "I have successfully cured many cases of cancer in early stages. All applications were chiefly directed towards purifying the blood and saps." Such remarks are calculated to raise suspicion in the minds of most medical practitioners. But whatever claims may be made at the present day on behalf of the Kneipp Institute, its chaplain, Father RAYMOND, has succeeded in writing a book of 330 pages[2] with only one solitary reference to hydrotherapy. And in this reference to the use of the water cure in the treatment of nervous diseases no excessive claims are made, while the importance of the physician in prescribing and regulating its application is fully recognized.

Father Raymond is described as having been a "sufferer from neurosis" himself, and his book is interesting as a practical treatise on what is called "spiritual healing." He writes with sympathy, and with surprising knowledge for a non-medical author, on the neuroses, hysteria, psychasthenia, and such symptoms as obsessions and scruples. And it is in these conditions alone that he claims to effect benefit by his ministrations. If such restraint were exercised by spiritual healers in this country, and if they were content, as Father Raymond appears to be, to insist upon the union of effort on the part of the priest and of the doctor, there would be far less reason for criticism of the methods of procedure adopted by certain irresponsible persons. For there can be little doubt in the mind of any medical man of reasonably broad views that the appeal to religious sentiment may be made useful in assisting recovery in suitable cases. The subject bristles with difficulties; but it ought not to be impossible to establish an understanding between the Church and medicine, whereby the physician's prerogatives would be safeguarded on the one hand, while on the other the clergy would receive better recognition of their ministrations and some satisfaction for their aspirations. Unfortunately there has been a tendency on the part of a section of the Church to attempt the revival of what is termed the "ministry of healing," involving an exaggerated belief in the efficacy of prayer, of unction, and of the laying on of hands. To induce in sufferers from organic disease the belief that these religious observances can effect a cure is to return to the worst form of mediaeval superstition. Their action should be regarded as reinforcing the faith and courage of the patient, and as not differing essentially from ordinary forms of suggestion.

The appeal of Father Raymond's book is, of course, chiefly to the Roman Catholic, to whom obedience to his spiritual director comes as a natural result of his faith. With great earnestness and enthusiasm Father Raymond lays down the duty of obedience, and shows how the mind of the patient may be weaned thereby from his obsession. The book is full of apt quotation from the saints and leaders of the Roman Catholic Church. We conclude with a quotation from St. Francis de Sales—a quaint simile: "Those who are in charge of others and are required by their position to correct the faulty, will sometimes have to speak truths that are not easy of digestion. In these cases they must cook them at the ardent fire of charity and kindness, so that all the harshness may be taken from them. Otherwise they will be providing sour fruit, which will cause pain rather than solid nourishment."

FLYING.

THE book on *Flying*,[3] in which Mr. GUSTAV HAMEL and Mr. CHARLES C. TURNER give their practical experiences,

[2] *Spiritual Director and Physician.* From the French of Rev. Fr. V. Raymond, O.P., Chaplain to the Kneipp Institute at Worishofen (Bavaria). Translated by Dom Aloysius Smith, C.R.L. London: R. and T. Washbourne, Limited. 1914. (Cr. 8vo, pp. 343. 5s. net.)

[3] *Flying: Some Practical Experiences.* By Gustav Hamel and Chas. C. Turner. London: Longmans, Green and Co. 1914. (Med. 8vo, pp. 355; illustrated. 12s. 6d. net.)

is a fascinating volume, not only for those who have an ambition to fly, but also for him or her who has no desire to fly even as a passenger. It deals with technicalities with sufficient fullness to make the reader feel that he is really getting a grasp of the subject, but not so fully as to confuse or weary him. He learns something of the theory of the various modes of descent, and what banking means and how it is done, what it means to be stalled, and what are rollers, and half-rollers, and wulliwas. He gets to understand some of the difficulties of the airman, his mental attitude when flying, and the attraction of flying as a sport. The attractions are the speed, for speed has always appealed to something in the spirit of man, the immense views obtained, and finally, and perhaps chiefly, the skill required to fly well and safely. While a man is in the air his vigilance can never for a moment be relaxed, and the authors admit that in a stormy wind flying becomes extremely arduous work, so that the pilot may be forced to seek some respite by turning the machine until the wind is abeam, in which position it is easier to keep level than when flying with or against the wind. The authors partly reveal, without directly discussing, some of the physiology and psychology of flying. Apart from cold—which can be more or less guarded against—and fatigue, the chief difficulties of a physiological nature are related to the confusion of the sense of direction and the uncertainty in estimating speed. The aeroplane is always influenced by the movement of the stratum of air in which it is, and of which it, so to say, forms a part, and as it is always in motion, it is always encountering a strong draught of air against it. If it is going with the flow of air, its own motion is added to the proper motion of the air, but as it is moving through the stratum of air at, say, sixty miles an hour, the movement of translation approaches the sum of the two motions, and the aviator has a gale in his face. If he is going against the wind, his movement of translation is the difference between the rate of the wind and the rate his engine imparts to the aeroplane, but there is equally a gale in his face, and unless he can see the earth and note the rate at which he passes landmarks, he cannot tell what his movement of translation is, although he may know that his engine is making so many revolutions a minute, and that the aeroplane ought therefore to be progressing so many miles an hour. His means of knowing how the wind is blowing and with what strength are very inadequate; its force and strength may vary rapidly, and this seems specially to happen near large bodies of water. It is clear, from two experiences of Mr. Hamel's here related, that the most skilled pilot may wholly fail, from his general sensations and impressions, to judge correctly what is happening.

> In a flight [across the Channel] early in 1913, on leaving the English side a west wind was met, and the course was set accordingly. After flying for a little more than twenty minutes the aviator thought he ought to be somewhere near the French coast, but no land appeared. Presently he sighted a fishing boat, and instead of the machine shooting past it approached quite slowly. Then the same thing happened with another boat, and the pilot began to realize that, instead of flying between 90 and 100 miles an hour, as he expected, he was actually flying very slowly indeed. The engine was giving its full number of revolutions, and the machine was quite steady, but the fact remained that he was making very little progress. Finally, after an hour, he espied the French coast almost at the spot for which he was making, near Calais, showing that he was on the true course. As soon as he had left the sea and got over the land he came into clear weather, and the machine promptly shot forward at the ninety-miles-an-hour gait at which it had left the English coast.
>
> On another crossing of the Channel in misty weather, the compass went out of order, and Mr. Hamel was only able to pick up the direction from the white wake of a Channel steamer.
>
> Until this friend in need appeared he was in a hopeless quandary, quite unable to tell which was north and which was south, and only certain of the fact that he was on a machine carrying him at a speed of seventy miles an hour in some direction or another, and that in a very short time in the nature of things he would be compelled to come down into the water through exhaustion of petrol.

Scattered through the book are some interesting hints on the psychology of the aviator. When he gets out of touch with map and locality, he is liable to curious illusions:

> A fairly common illusion, if travelling without a compass when the sun is completely hidden, is that the north has changed places with the south, and the aviator feels almost convinced that his chronometer must be wrong, and that it is morning, not evening, or *vice versa*; and that he is flying straight away from his goal instead of towards it!

Another illusion of a rather different kind which we are told is usual is that, with a clear view all round, the earth seems "slightly saucer-shaped, the horizon being on a level with his eye, and the vast plains beneath him seeming to deepen towards the centre"; this is attributed "to subconscious reasoning from the known height of the machine above ground," and we are not able to suggest a better. Something of the same kind may be experienced at the summit of a lofty tower. Another source of mental confusion is the abrupt alterations which occur in the apparent position of the ground to the aviator. In making a sharp spiral descent the beginner has to be on his guard against giddiness, due, as the authors believe, to the fact that the horizon then appears to the aviator as a vertical line, and the landscape seems to be spinning round him. In the manœuvre of upside-down flying the confusion is still greater. Mr. Hucks, in his description of looping the loop for the first time, wrote:

> In looping the loop, when you start the turn you seem to sit still and the whole world revolves around you. The horizon disappears under your feet, and the next thing you see it coming back over your head. The whole thing is done so quickly that you don't know for the moment when you have finished. There was no unpleasant sensation except a rushing of blood to the eyes. I felt thoroughly self-possessed all the time.

The book is well written and put together until we come to the last chapter, entitled, "Some notes on the medical aspect of aviation." This is so odd, that the kindest thing seems to be to suppose that notes got together to serve as part of the foundation for the chapter have by some mistake been printed without revision. On p. 324 we read, "The small brain or cerebellum, which is situated behind and below the great brain or cerebrum (diagram, pp. 326–7), as was first observed by Florens, has for its function the co-ordination of muscular movement," etc. The writer does not mean that Florens was the first to observe that elementary anatomical fact, but the sentence is an example of the style of the writer of the chapter; and when we turn to pp. 326–7, we find large diagrams taken from *Quain's Anatomy*, not of the cerebrum and cerebellum, but of the membranous labyrinth. One part of the chapter consists of transcripts from a valuable article by Professor Dreyer and Dr. Ainley Walker in the *Lancet* (October 25th, 1913); but those authors would, we feel sure, have expressed their arguments and conclusions in less technical terms had they been addressing the general public. Another part reads like a translation from the French. Altogether, we would suggest that in any future edition the material should be better digested and the chapter rewritten.

The interest of the volume is enhanced by numerous illustrations from photographs of aeroplanes, and of the world as seen therefrom. It will, we feel sure, appeal strongly to a very large circle of readers.

NOTES ON BOOKS.

WHEN forty years ago Bellows's *Dictionary for the Pocket, French and English*, appeared, it was generally felt that the arrangement of both alphabets on the same page, the placing of substantives in capitals, the masculines in clarendon type, and the feminine in italic capitals, and the compact and portable form of the book were, when taken together, striking innovations. Technical words used in the arts and in the naval and mercantile marine were included, and this increased the value of the dictionary to the non-literary world of Britons who travel for business, or transact business with Frenchmen at home. One unavoidable disadvantage was the diamond type, trying to the eyes of readers labouring at the same time through the larger but yet more indistinct type so familiar in French medical papers. Mr. MAX BELLOWS has rendered medical readers of foreign works a great service in compiling this *Dictionary of German and English: English and German*.[4] He has closely followed the plan

[4] *Dictionary of German and English: English and German.* By Max Bellows. Proofs revised by Clarence Sherwood, Ph.D. Berlin; and Wilhelm Johann Eggers, M.A. Lond. London: Longmans, Green, and Co. 1912. (Cr. 8vo, pp. 806. Cloth 6s. net; leather 8s. net.)

adopted by his father, John Bellows, in his French dictionary. As this new lexicon is a crown octavo work in fairly large type it has none of the disadvantages of the pocket French dictionary; but Mr. Max Bellows, feeling that there are also great advantages in a portable lexicon, informs us in his preface that the issue of a pocket edition of this new German dictionary is contemplated. The type and gender arrangement, limited to two "founts" in the French work, is extended because of the neuters—those exasperating German neuters which might just as well be masculine or feminine. They are placed in plain Roman type. Several distinguished German professors and official printing office authorities have been consulted. Technical words, including those recently coined in association with automobilism and aviation, are freely admitted. The compilers have done very fairly for medical terms, but, strange to say, "femur" is omitted in the English-German division, but on the other side "Oberschenkel" is rightly given as "femur"; and in the same way "fibula" is absent, but "Wadenbein, fibula" is present. "Kniescheibe" is rendered "knee-cap," but the word "patella" is absent from both divisions. Still, it is not fair to expect a complete medical dictionary to be embedded in a general German lexicon, and this work is really well suited for its purpose. With the advantage of his father's experience and the knowledge of the way in which the public received the French dictionary, Mr. Max Bellows has produced a most useful publication, which our profession will find highly serviceable. The weights and measures, including cubic values, are even more complete than in the French work.

The *Digest of Comments on the Pharmacopœia of the United States for 1911*[5] recently issued as Bulletin No. 87 of the United States Hygienic Laboratory, consists as usual of a very complete summary of papers having any bearing on the subject, published during the year mentioned. Very few of the abstracts are actually of the nature of comments on the *Pharmacopœia*, or refer directly to it, but the subjects dealt with include the composition of drugs and chemicals and tests for the same, their uses, etc. The volume contains about 8,000 short paragraphs arranged under appropriate headings, each with the reference to the original paper; such a collection of the year's work is naturally of great assistance, not only to those concerned in pharmacopœia revision, but also to any one wishing to find references to all that has been published on a given subject in the year. It may be doubted, however, whether the usefulness of the book would not be increased by excluding references to papers which neither contain nor profess to contain anything original, as well as those whose connexion with the subject is very slender. Occasionally the short abstract or summary does not convey the sense of the original—for example, on p. 220, in the section headed "Aloe," appears the following: "An editorial note (BRITISH MEDICAL JOURNAL, 1911, vol. i, p. 1338) discusses the virtues of aloes and potato flour." But the note in question, headed "The virtues of aloes—and of potato flour," drew attention to the analyses of a number of secret remedies, in most of which aloes was the principal ingredient while one consisted of potato flour, and certainly did not discuss the virtues of these substances. In the preface to the volume some interesting remarks occur on the subject of restricting the number of drugs to which official recognition should be given, or which should be included in the syllabuses of teaching institutions; it is held by many authorities in America that the number of medicines introduced into practice is so large that it becomes impossible for a student who takes cognizance of most of them to acquire also a sound and thorough knowledge of the most important. The same danger is by no means absent in Great Britain, though doubtless it is much less acute here, and some of the papers here abstracted, with the editorial remarks, deserve consideration.

[5] *Digest of Comments on the Pharmacopœia of the United States of America, and on the National Formulary* (Third Edition), for the Calendar Year ending December 31st, 1911. By M. G. Motter and M. I. Wilbert. Washington: Government Printing Office. 1913. (Med. 8vo, pp. 683.)

DR. ROBERT LEAMON BOWLES, sometime of Folkestone and later of London, who died on November 15th, 1913, left estate of the gross value of £43,697, of which £42,339 is net personalty.

THE annual meeting of the American Medical Association will be held this year at Atlantic City during the fourth week in June. The House of Delegates will meet on June 22nd, and the Scientific Assembly on June 23rd.

MEDICAL AND SURGICAL APPLIANCES.

A Reliable Battery.

DR. A. G. FAULDS (Glasgow) writes: I have now designed a small battery which has never failed me both in private and in the Glasgow Royal Infirmary, and which I recommend to surgeons who use the electric light. It has the following advantages: Its small bulk enables it to be placed in an ordinary bag together with instruments without the least risk of destroying any of the contents. There can be no leakage of acid, as it is dry. The battery can be placed in any position in a bed, and still be efficient. It is absolutely certain to give a bright constant light, and its weight is only a few ounces. It can be recharged in a few seconds, and made ready for use anywhere; and, lastly, its small cost. The battery complete cost me about 17s. 6d., the rheostat being an extra, but only costing a few shillings. The following is a short description of the one I use, and was made according to my design by Mr. Ballantine, 99, St. Vincent Street, Glasgow. It is encased in a small square box measuring 4⅛ by 3⅜ by 3¼ in. It contains four ordinary pocket-lamp batteries connected in series. It will give a constant pressure of 14 volts steady burning for three to three and a half hours, and much longer if it is used for short periods at intervals—that is, giving an illumination of 5-candle power with a 10-volt lamp for that period. The box is made of a light wood, varnished, and fitted with bore-screw terminals to fit any kind of connecting wires. It is not intended for cautery work, only for lighting purposes. It can be used with the utmost confidence with any electric instrument fitted with a 2, 4, on to a 10-volt lamp. A small rheostat is recommended to be used to safeguard the lamp and adjust the brightness of the light. This is fitted on to one of the terminals. The battery can be recharged at any time and anywhere in a few seconds, so that any one can use it whether in town or country.

Appliance for Plating Fractures.

Mr. HOWARD STEVENSON, F.R.C.S., Assistant Surgeon, Royal Victoria Hospital, Belfast, writes: The accompanying photograph shows a device for keeping the two fragments of a broken bone in apposition during the introduction of screws, and also for maintaining the bone in true position should the screws afterwards become loose as occasionally happens. As will be seen, it consists of a steel plate similar to the well-known type suggested by Sir Arbuthnot Lane, having in addition two light steel clips or springs attached at the ends of the plate. The fragments of bone are exposed in the usual way, brought into apposition and alignment, and the plate pushed on, when the clips will firmly grip the shaft and facilitate the introduction of screws and prevent subsequent alteration in axis or torsion of fragments. The plate is made for me in various sizes by Messrs. John Clarke (Successors), Limited, Donegall Square, Belfast.



MEDICINAL AND DIETETIC ARTICLES.

Emetine.

MESSRS. BURROUGHS, WELLCOME, AND CO. (Holborn Viaduct, E.C.) have put on the market emetine hydrochloride in tabloids containing emetine hydrochloride gr. 1. and in vaporoles (sterilized solutions in small hermetically sealed vessels) containing the same dose available for immediate hypodermic injection.

Hormotone.

Some attention has been given of late to the desirability in certain cases of administering simultaneously extracts of two or more of the ductless glands, and it has been asserted that a synergistic effect may be obtained in this way which is superior to that obtained from extracts of a single gland. Hormotone, prepared by the G. W. Carnrick Company of New York (London office: Hornsey, N.), is a combination intended for use in this way; it is described as a combination of the hormones of the thyroid, pituitary, ovary, testis, pancreas, and spleen, and is claimed to have a marked stimulating effect on metabolism and oxidation, causing an increase in mental, nervous, and muscular activities. A sample submitted to us was in tablets, stated to contain $\frac{1}{5\frac{1}{0}}$ grain each of desiccated thyroid and pituitary, with suitable proportions of the other glands named.

ONE HUNDRED YEARS AGO.

THE GREAT FROST OF 1814 AND THE CENTENARY OF JOHN GOODSIR.

IN the early months of 1814 many people in England possessed of at least a school smattering of Latin were saying with Horace, "Jam satis terris nivis atque dirae grandinis misit Pater" ("Enough, enough of snow and direful hail hath Jove in anger showered upon the land"); and it really was a most inclement season. Here is an account of it given by T. B. of the Public Dispensary (near Carey Street), London, writing on February 28th.[1] He begins with the statement that since the severe winter of 1794–5 this country had not experienced such an intense and continuous cold; but this was on February 23th, and the cold continued till March 20th, so that whilst that of 1794 was more severe at intervals, its duration was less by many weeks.[2] T. B. writes of the weather with a more graphic and descriptive touch than some of our present day meteorologists. Here is his account:

> The early part of December (1813) was raw, chill, and occasionally foggy; but the frost commenced on Sunday the 26th of that month. On Monday the 27th in the forenoon, it was accompanied by a thick fog, which in the evening became so dense as to render all objects at a few feet distance from the eye invisible, even by the aid of torches, to prevent the departure of mail-coaches and other carriages, and to occasion numerous accidents in and near London. This singularly dense and dark state of the atmosphere, which was extremely offensive both to the eyes and lungs from being loaded also with smoke and soot, continued for the space of seven days, with scarcely any change, even at noon, except the appearance of a dim light during the latter; and as the frost was likewise uninterrupted, the houses, railings, shrubs, and trees, and even the cobwebs hanging upon them, became quickly spangled with the freezing humidity of the fog. This terminated at the end of a week with a heavy fall of snow, which was repeated, so as to cover the streets to the depth of several feet, and to interrupt the communication with the country for several days. In the last week of January a partial thaw occurred, which brought great masses of ice down the Thames, which, on the recurrence of the frost, became united between the bridges, and in the first week of February was sufficiently firm to bear great multitudes of people, who were entertained in booths erected upon the ice. A thaw of two or three days broke up the ice, but to the end of February the frost has continued to recur nightly, with partial thaws during the day in the crowded parts of the town. The wind has been almost invariably from the east and north-east, and frequently high, since the disappearance of the fog, which rendered the cold more intense to the sensations, than even the thermometer indicated. On many days, however, the temperature was as low as 15° of Fahrenheit, and it was said to have descended, on some nights, to 11 degrees or even lower.

So matters continued till March 20th, when suddenly, with the oncoming of a west wind, the frost disappeared, the temperature rising at noon from 35° to 49° within two hours. A writer of the period was much struck by an incident which he then saw:

> It was not a little extraordinary at this time (the thermometer at 49 degrees in the shade), and with a bright unclouded sun smiling over them, to witness at least one hundred persons skaiting (*sic*) on the middle of the Serpentine river, and seeming entirely unconscious either of the rapid changes going on around them, or of their own consequent danger.

Again, we can well believe that another tag from Horace would be on many persons' tongues, and "solvitur acris hiems grata vice veris et Favoni" would exactly express the feelings of the crowd. Hard winter was indeed melting with the welcome change to spring, and the west wind. A newspaper meteorologist becomes almost poetic, writing:

> The privations incident to a continued frost have greatly subsided with this felicitous change of weather; the labours of agriculture recommence; the invalid crawls forth hailing the dawn of spring as his deliverance: and every man seems to expect its return with a quicker sense of its beauties and advantages.
>
> The woods were long austere with snow: at last
> Pink leaflets budded on the beech, and fast
> Larches, scattered through pine-tree solitudes,
> Brightened.

There would be many, too, of the less poetical temperament and more weather-wise mind, who would speak of the coincidence that the thaw came just a few hours before the change of the moon, and that the break-up of the frost was on the day of the vernal equinox. As March went on the warm spell, however, gave place to east wind once more, to incessant cold, and to sleety rains; "winter, lingering, chilled the lap of May," and his storms "deformed the day delightless." There can be no doubt it was a thoroughly bad winter, this of 1813–14.

Nor was the bad weather restricted to London and the Thames Valley; it affected the whole of Britain. In Edinburgh, for instance, the months of January and February were known as the time of the "Great Frost"; the Firth of Forth was nearly covered with floating ice from Queensferry upwards.

> From the interstices which remained free the vapour ascending from the water became suddenly condensed, producing the appearance of smoke rising from the surface, exactly as is described to happen in Hudson's Bay and West Greenland at the edges of the ice.[3]

But the thaw came sooner than in the south, for by February 24th the ice had quite disappeared. Some curious results of the prolonged and trying climatic conditions were noted. Thus, the London mails were much delayed in January; that due on the 13th at 7 a.m. did not arrive till 5 p.m.; from the 17th to the 21st it was a day late; but those due on the 22nd, 23rd, 24th, and 25th, did not reach Edinburgh till the evening of the 26th, "a circumstance unprecedented, there never before having been more than three London mails due at one time." *The Chronicle of the Edinburgh Annual Register* (for 1814) gives details of the weather in Exeter, where the fall of snow was greater than had been remembered for forty years; in Shrewsbury, where several of the West Middlesex Militia, who had volunteered for foreign service (for fighting was going on in many parts of the Continent, Napoleon not yet having abdicated and set off for Elba), were frozen to death on their march from Nottingham; in Plymouth, where there was no other method of keeping up communication with the Metropolis and other towns but by horses; in Gloucester, where the Severn was frozen over, and people were riding over on horseback; in Liverpool, where the quantity of ice in the Mersey prevented the boats crossing; in Bristol, where "our floating harbour exhibits quite a novel scene . . . one continued sheet of ice," and where "for the first time in the memory of man" the skater made his appearance below Bristol Bridge; and in the Solway Firth, which seemed like a "large plain covered with hillocks of snow." A letter-writer in Dublin gave various details regarding the state of matters there, including the information that "some medical men venture out in carriages, but they are soon overturned, as there has been no attempt to clear away the snow." The books of the period, too, are full of stories of how printers set up their presses on the frozen Thames and threw off little broadsides describing "Frost Fair"; of the roasting of a sheep upon the ice and its sale in shilling slices, called "Lapland mutton"; of the booths, swings, and merry-go-rounds, and of the less innocent drinking tents filled by females dancing reels. In the midst of all these events came the news, apparently of undoubted credibility, that Napoleon was dead, setting the Stock Exchange into a state of extraordinary bustle ("omnium, which opened at 27½, rapidly rising to 33"), but turning out to be a piece of swindling ("the Berenger hoax"), "omnium gradually declining" again, as doubts began to circulate, and closing at 28½. This was on February 22nd. In strong contrast to these wintry conditions in 1814, we now read in the daily papers a hundred years later, "the month of February was one of exceptional mildness," and there was "an almost complete absence of frost of any importance." So 1914 showed no resemblance in this respect to 1814.

Such was the weather of the early months of 1814, and one turns next to the diseases of the season to take note whether this green Yule made a fat churchyard. As a matter of fact, Yule only just missed being white, for the frost began on December 26th, and so, although Christmas was green, all the succeeding days were white enough right on to the first week of February. The records of the time show that the advent of the frost and fog was marked by an increase in catarrhal affections; they were accompanied by much debility, and showed themselves especially in such a disease as bronchitis asthenica, ending not infrequently in peripneumony (as pneumonia was then called). The Westminster Public Dispensary was situated

[1] *Edinburgh Medical and Surgical Journal*, vol. x. p. 254, 1814.
[2] *Medical and Physical Journal*, vol. xxxi, p. 351, 1814.
[3] Mossman, R. C., *Trans. Roy. Soc. Edin.*, xxxix, p. 100, 1898.

in Carey Street (the south side of which was pulled down to make way for the north side of the Royal Courts of Justice, and another part of it had to make room for King's College Hospital); from the attendances of sick folk at it one can form some notion of the prevalence of disease and of the relative frequency of special maladies. The report for the quarter from November 30th to February 28th, which represented the greatest severity of the weather of this notable winter, contains this sentence:

> The quarterly number of patients has exceeded 700, in an institution which presents an average of little more than 500 per quarter, and nearly 400 of that number have been affected with pulmonary complaints, which are the most unequivocal products of the operation of cold on the human constitution.

The report goes on to state that these complaints had been remarkable not for their numbers only, but also for their violence and fatality, for about 200 of them assumed the form of acute catarrh, and nearly 50 were acute pneumonia. Persons of all ages were affected, but those who suffered most were young children and persons who had passed the middle age, especially those who had in previous years been subject to recurring chronic winter coughs. The report turns for confirmation to the newspapers of the time, and draws attention to the unusual number of people of advanced age who had been cut off by the inclemency of the season.

The dispensary doctor takes occasion to praise blood-letting highly in these pulmonary disorders, which he classes as "peripneumonies."

> We had (he wrote) great satisfaction in witnessing the immediate relief which blood-letting afforded to the most distressing and alarming symptoms: patients who were restless and sleepless and extremely distressed with dyspnoea, almost to a sense of suffocation, who were rambling and delirious, and under a state of the greatest anxiety, were seen immediately to become calm and collected, their countenances brightened, their rattling and heaving respiration became free and noiseless, and in a few minutes they fell into a quiet and sound sleep which continued several hours; the symptoms were, indeed, apt to return, sometimes for several successive periods, but the repetition of the evacuation to the fourth, fifth, or sixth time was found to be followed by the same temporary, and ultimately by permanent, relief.

There can be no question that the Carey Street doctor was a whole-hearted believer in bleeding. There were sceptics about, however, and they had evidently been arguing that the "London constitution" could not be expected to stand so great an abstraction of blood. To them the fervent venesectionist replied:

> From the fatality of the disease, where, from neglect in the beginning, or from apprehension of danger from free blood-letting in London constitutions, this evacuation was neglected or insufficiently used, and from the marked and unequivocal benefits derived from the full employment of it, where the age and constitution permitted, we have been led to doubt the correctness of the opinion, which interdicts the most copious abstraction of blood, in the inhabitants of the metropolis, which in the country is universally allowed.

One feels that to argue with this man was a hopeless task; if a small venesection prove insufficient, then give a large one, and if even a large one cure not (and kill not!), why, then repeat it to the fourth, fifth, or sixth time; and let not the dweller in the metropolis be defrauded of his rightful blood-letting on the score of any fancied delicacy of constitution, but let him bleed with the best of the country bumpkins. His report, however, is not all in vain, for here there is a fact embedded in much that is not indubious:

> Contagious fever has generally been considered as one of the products of a severe winter, in consequence of the close and unventilated state of the habitations of the poor, which the temperature induces them to resort to for the sake of warmth; no such effect, however, has occurred during the present season, the few cases of fever were of a mild type and were not propagated by contagion.

We learn, then, that epidemic sickness was not a prominent feature in the health returns of the wintry winter of 1814, not, at any rate, in Carey Street and the neighbouring district round Lincoln's Inn Fields. This is all the more noteworthy, because we learn from other records that the water supply of the metropolis was considerably affected and that the scarcity of provisions was marked during the months of the great frost.

On the very day (March 20th) when the frost departed, the wife of Dr. John Goodsir, of Anstruther, in Fife, gave birth to a boy, who was to be affectionately known during the twenty-one years from 1846 to 1867 to the medical students of Edinburgh as "Goodsir the Anatomist." Our link with him in these days, 100 years later, is Sir William Turner, who, as every one knows, succeeded Goodsir as Professor of Anatomy in the university of that city. Here, then, we find baby Goodsir making his appearance on this terraqueous globe at the close of the great frost, a harbinger of spring, let us hope, to his mother's heart, after these weary winter months when child-bearing must have been more than usually irksome and exhausting, and when John Goodsir *secundus* must have had many cold and even dangerous nights of travel on obstetric and other medical duties up and down among the fisher folk of Anstruther Wester and Anstruther Easter, and of the countryside round about. The boy had a John Goodsir, too, for a grandfather, the well-known doctor of Largo, not so far away along that same Fife-shire coast; and his mother was great-granddaughter of Grizzel Forbes, the sister of Duncan Forbes, president of the Court of Session. John Goodsir *tertius*, with this good medical and legal blood flowing in his veins, grew up on the Fife coast, and no doubt looked over many a time from his grandfather's place at Largo to that smoky haze on the southern side of the Firth of Forth which he heard the folks calling Edinburgh. At the early age of 12 he went to the College of St. Andrews, where he passed through the four years' course of arts, but did not take a degree, being too much interested, we are told, in the study of metaphysics, and especially in the doctrines of Coleridge. This, let us note, between the years of 12 and 16! Surely there were mental giants on the earth in those days, or very precocious, self-regulating boys. In 1830 he went to Edinburgh, where he was apprenticed to Nasmyth, the surgeon dentist. Between 1830 and 1835 he is found attending Knox's lectures on anatomy and some of the university classes; but for his practical surgery and medicine he was indebted to Syme and Macintosh, both teachers in the extra-mural school. He did not, however, take the degree of M.D., but became a Licentiate of the College of Surgeons; and then for five years he assisted his father in his practice at Anstruther. Fife, however, was not to hold in his activities any more than it did those of his great fellow-townsman, the Disruption-leader of the Free Church, Dr. Thomas Chalmers; he is found back again in Edinburgh, with a fine bit of scientific research, entitled the "Origin and Development of the Pulps and Sacs of the Human Teeth." This work had the great merit of furnishing "a consecutive account of the process of human dentition."

In May, 1840, Goodsir was to be found by those who wished his company in a half-flat at the top of a house (No. 21) in Lothian Street, within sight of the old University of Edinburgh. The half-flat was shared with one of his brothers, with his great friend, Edward Forbes, and with G. E. Day; and it was known as "the barracks," where met that remarkable coterie called "The Universal Brotherhood of the Friends of Truth." To this club, which had been started some years before by Edward Forbes on the model of a German students' club, belonged Samuel Brown, George Wilson, John Hughes Bennet, and some other kindred spirits. It had, however, when Goodsir was in it, "been reconstituted on a more select and less convivial footing."[1] The next landmarks in Goodsir's life were the curatorship of the Museum of the College of Surgeons, the curatorship of the University Museum, and a demonstratorship of anatomy, and finally the professorship of anatomy in the university on the death of Monro, *tertius*, in 1846. In his letter of application, Goodsir stated that he would yield his claims to no one in Britain except Owen, and an appreciative and patriotic town council placed him in the chair by 22 votes to 11. But indeed he had already done a large amount of work of the best kind, as witness his embryological paper on the suprarenal, thyroid, and thymus glands; that on centres of nutrition, and that other on the structure of the placenta. He had written, too, on the structure of bone and on the cystic entozoa. Curiously enough Goodsir nowadays is best known to many of us as the discoverer of the *Sarcina ventriculi*, as the little "woolpack organism" is called, which sometimes inhabits the human stomach.

[1] *Dict. Nat. Biogr.*, xix. p. 588; xxii. p. 138.

Having regard to all the work done, it was no empty compliment either on the part of the giver or the receiver when Virchow dedicated the first edition of his *Cellular-Pathologie* to Goodsir in 1859, for both as an original worker and as professor of anatomy the latter was a giant, and he recognized a fellow-giant in the German pathologist.

Goodsir's career in his later life was not free from mistakes, as witness his attempt to practise surgery and to get himself elected assistant surgeon to the Royal Infirmary, his bohemian mode of existence at Trinity and Wardie, and the dissipation of his energy over pisciculture and agriculture. It is an unhappy picture to draw of him sleeping on a sofa among his papers and his specimens, taking his meals at all hours and at no hours; but all this is forgotten when he is seen, himself stricken with a long illness (disease of the spinal cord), coming to the rescue of Robert Jameson, the invalid professor of natural history in 1853, and giving the lectures for him. "Instead of reading the old lectures he gave an original and brilliant course, remembered long after, which prostrated him so much that he required a year's leave of absence abroad." From this time until his death in 1867 his own professional duties had largely to be performed by deputy, but his lectures he continued to give while strength lasted. He was buried in the grave adjoining that of his old friend, Edward Forbes, in the Dean Cemetery of Edinburgh. From his birth in Anstruther at the close of the great frost in March, 1814, to his death at Edinburgh in March, 1867, Goodsir's years numbered 53, not a great span of life in which to accomplish so much; but, like Ruskin, his constant word of encouragement was "To-day, to-day, to-day."

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the twenty-second meeting of the Royal Commission on Venereal Diseases evidence was given by Mr. D'Arcy Power, Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital, and one of the representatives before the Commission of the Royal College of Surgeons of England and the Royal Society of Medicine.

Evidence of Mr. D'Arcy Power.

Mr. D'Arcy Power said that from the surgeon's point of view he looked upon gonorrhœa as the more serious disease for the individual and syphilis for the race. In general surgery the effects of gonorrhœa were far-reaching, and it was an error to teach that it was a local and curable disease.

Syphilis seemed to Mr. Power to be even more dangerous to the State than to the individual. The expectation of life was materially shortened for a person who had been infected with syphilis; the immediate danger extended to the second generation and the vitality of the stock seemed diminished for several generations. Syphilis gave surgery a large amount of work. It predisposed, Mr. Power thought, to cancer and tubercle. The particular danger of the disease lay in the fact that the subsequent effects bore no necessary relation to the severity of the initial lesions.

Mr. Power thought that a diminution in the incidence of syphilis would best be brought about by better instruction of the medical student, and that each general hospital ought to establish a special department under the control of the senior medical officer. The department should be chiefly an out-patient clinic, and should be held late in the afternoon or in the evening. A few beds might be provided, but the essence of successful treatment in syphilis was early diagnosis and prolonged attendance. The department should be thoroughly equipped with a sufficient staff of pathologists and with the necessary remedies. The expense would no doubt be considerable, but Mr. Power thought that the State would be more than repaid. He believed that the establishment and use of such departments would gradually educate the public to appreciate the dangers and thereby diminish the risk.

Mr. Power did not think that any organized attempt to educate the public with regard to venereal diseases was desirable; he would rather trust to the gradual growth of education through the medical profession. He was not in favour of notification of venereal diseases, at any rate for the present.

Nursing Evidence.

At the twenty-third meeting of the Royal Commission on Venereal Diseases evidence was given by the Hon. Albinia Brodrick, representing the Irish Association and the National Council of Trained Nurses of Great Britain and Ireland, and by Miss Garrett, Matron of the Hospital for Women and Children, Harrow Road.

Miss Brodrick thought that the first important step to be taken with regard to these diseases was to spread knowledge with regard to them and to treat the matter scientifically, instead of as a mysterious something which cannot be talked about. From the nursing point of view she thought that in the past nurses had not been properly taught regarding these diseases, and that it was necessary that in future all nurses should go through some special course of instruction. The education of the general public should include the education of children in the laws of sex. This might be done in the primary schools through the medium of botany, and this would prepare the way for teaching at a later stage regarding the human subject. Special teachers would be required until parents were sufficiently educated to instruct their own children. It was necessary, however, that education on this question should be given to parents and to the general public. In this matter Miss Brodrick said that England was very much behind other nations, and she referred to the work done by the Society of Sanitary and Moral Prophylaxis in New York, and to similar societies in Germany and other countries. Miss Brodrick thought that a great factor in the spread of venereal diseases was the ignorance in which women had designedly been left in regard to it. She condemned the practice in the medical profession of treating women without allowing them to know the nature of the disease. Miss Brodrick thought that greater facilities should be provided for the treatment of venereal diseases, and the evening clinics were specially important. Printed instructions should be given to out-patients dealing with the gravity of the disease, the danger of infecting others and the necessity for carefully carrying out curative measures. The disease should be stated openly, and in the case of women, especially, the results to the offspring clearly pointed out. Miss Brodrick thought that venereal diseases should be notified: at present the notification should be confidential, but later on the notification might be simply as in the case of any other infectious disease.

Miss Garrett said that she had been matron of the Lock Hospital, now called the Hospital for Women and Children, for the past thirteen years. She gave figures of the number of patients treated at the hospital in each year since 1893, and these showed a decrease from 736 patients in that year to 340 in 1912. This fall, she said, was partly due to a change in general conditions, and partly to the fact that in the earlier years women came to the hospital from garrison towns. The figures were also very much influenced by the fact that in the earlier years patients were of a class who left the hospital directly they were free from symptoms; at the present time the patients remained in the hospital for longer periods and finished their treatment. During the present year the number of patients had been much larger than had been the case in corresponding periods for a number of years. Miss Garrett thought this was probably the result of the greater publicity given to the subject during the last few months. The name of the hospital was changed some years ago, and this had had good results in getting rid of prejudice against the hospital; in particular, cases now came to the hospital at an earlier stage of the disease. Most of the patients treated at the hospital were very young girls, the average age being 20, and there were very few professional prostitutes.

Evidence by Dr. Amand Routh.

At the twenty-fourth meeting evidence was given by Dr. Amand Routh, Consulting Physician to the Charing Cross Hospital and to the Samaritan Free Hospital for Women.

Dr. Routh said that from figures which he had obtained he had formed the conclusion that the infant mortality before the period of full birth was as high as in the first

year of life, so that the total mortality during intrauterine life and the first year after birth was about one-fourth of the possible children. He thought that syphilis was the main cause of stillbirths and also probably of a large proportion of early intrauterine deaths, and he suggested various measures which might be adopted with the object of obtaining reliable statistics, of assisting diagnosis, and of facilitating the application of treatment. These measures included the extension of the compulsory registration of stillbirths to the whole country; arrangements under which poor women might receive medical supervision during pregnancy; the provision of prematernity wards in every locality; the formation and endowment of research laboratories in all general and lying-in hospitals; and arrangements for financial assistance to poor pregnant women during the later months of pregnancy. Dr. Routh said he was not in favour of the compulsory notification of venereal diseases, for, unless anonymity could be secured and be believed in, many men and most women would not consult a doctor, but would either remain untreated or consult venereal quacks, who would greatly multiply. He felt that voluntary notification would be entirely unreliable statistically. He advocated the establishment of venereal clinics in all districts, but thought it was important that they should not be known by any name of the nature of "venereal."[1]

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE thirty-seventh annual meeting of this association was held on March 17th (St. Patrick's Day) at the Hotel Cecil, when the outgoing president, Dr. William Douglas, resigned the chair to Sir Havelock Charles, G.C.V.O. The annual report showed that the association continued to flourish, the number of members, including many naval and military medical officers as well as residents abroad, amounting to 631, and the finances being equally satisfactory.

The CHAIRMAN, in proposing a vote of thanks to the retiring president and other officers, said the association was under a great obligation to Dr. William Douglas for the energy with which he, while president, furthered the efforts to make the association better known in the northern counties; the gathering at Manchester last January had been a conspicuous success.

The festival dinner took place the same evening in the Indian Room of the Hotel Cecil, when the President, Sir HAVELOCK CHARLES, took the chair, and upwards of 200 ladies and gentlemen were present. The guests of the Association were Lord MacDonnell and Sir James Digges La Touche, K.C.S.I. The general company included Lady Charles, Lady La Touche, Mr. and Mrs. David Arnott, Sir John Lentaigne, President-elect, Dr. Jocelyn Swan, Chairman of Council, Dr. W. P. Cockle, Honorary Treasurer, and Drs. Gordon Holmes, Shepherd Boyd and W. J. Corbett, the Honorary Secretaries.

The loyal toasts were, as usual, very heartily received, the company joining with considerable fervour in the refrain of "God Save the King," the solo being rendered by Miss Molly Deane. Dr. Douglas eloquently proposed the toast of "Our Defenders," which was acknowledged by Professor CUMMINS, R.A.M.C. Sir JOHN LENTAIGNE proposed "Our Guests," which was responded to by Lord MACDONNELL, who said that he felt doubly drawn to the medical profession because he had been a medical student himself before preparing for the Indian Civil Service, and because his brother, the late Dr. Anthony MacDonnell, M.P., was a member and warm supporter of the association. The toast was also responded to by Sir James Digges La Touche. "The Association" was proposed by Dr. H. MACNAUGHTON-JONES, who said it was an exceptional pleasure to him to associate with the toast the name of a former much beloved pupil who had brought credit on his old college at Cork by his distinguished services to science and the nation—services which had now been rewarded by his being placed in the exalted position he at present occupied. The PRESIDENT, in reply, said he felt it no small honour to be placed in a chair which had been filled by such well known members of the profession as Lord Ilkeston, Sir William MacCormac, Sir Richard Quain, F.R.S., Sir Charles Cuffe, K.C.B., Professor Gerald Yeo, F.R.S., Sir William Whitla, Professor Alexander Macalister, F.R.S., Sir Alfred Keogh, K.C.B., and last, but not least, his dear old friend and teacher, the proposer of the toast. Very pleasant memories were brought up by the sight of Dr. Macnaughton-Jones, and any old Cork student looking at his genial countenance would naturally exclaim, "You made me love you!" The association was doing a two-fold work. It was affording men and women whose early student days were passed in Ireland an opportunity to foregather and renew old friendships. It was also educating the English mind on the subject of the injustice to Ireland done by those public hospitals which restricted honorary appointments in English hospitals to the holders of diplomas from certain English colleges, and thus barred the way to Irishmen who held Irish diplomas of similar standing. A noteworthy fact, moreover, about the association was that during the whole thirty-six years since its foundation there had never once been the slightest interruption of the harmony invariably found among those Irishmen bound together by the common tie of love for the medical profession. During the evening it was announced by Dr. Swan, Chairman of Council, that the Arnott gold medal had this year been awarded to Dr. A. Launcelot Hoops (State Surgeon, Malay Peninsula) for heroism in endeavouring to save the life of a boy who fell into the river Liffey while the doctor was at home on leave. There were, he said, present that evening no fewer than three of those to whom it had in previous years been awarded, namely, Dr. T. J. Crean, V.C., Dr. P. J. Garland, C.M.G., and the President himself. The enjoyment of a very pleasant gathering was much enhanced by songs humorously rendered by Dr. Houston Collison and by the Irish melodies sung by Miss Violet Oppenshaw and Miss Molly Deane.

ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

THE annual meeting of this association was held at the Royal York Hotel, Brighton, on March 14th.

The annual report and the statements of receipts and expenditure were received and adopted. On the motion of the retiring president (Dr. MAUDE), Dr. George Jackson (Plymouth) was unanimously elected president for the ensuing year. Hearty votes of thanks were accorded to Dr. Maude, Dr. Drury, and Mr. Charles Greenwood (organizing secretary) for their services during the past year. Mr. Frank A. Briggs, solicitor, was elected secretary in the place of Mr. Charles Greenwood, whose retirement was received with many expressions of regret.

Vaccination and its Extension.

After the formal business, Dr. DUNCAN FORBES, M.O.H. Brighton, gave an interesting address on vaccination and its extension. Briefly summarized, Dr. Forbes's address was a plea for greater efficiency in vaccination, based on statistical returns of observations among school children as regards the area of vesiculation. He contended that the area of half a square inch total vesiculation approached too near the margin of safety. All sanitarians feared the rapid increase of the unvaccinated population, and every man who had studied the subject at all regretted the ease with which vaccination could be avoided. The percentage of the population which was unvaccinated was each year increasing, and had already reached an alarming figure. The Government should be asked to require in public and private practice, not only a successful vaccination, but a sufficient vaccination, which Dr. Forbes defined as four vaccination marks with a total area of one square inch. All medical officers of health should act as deputy vaccinators during threatened or actual outbreaks of small-pox, and the fees for such vaccination should be credited to the public vaccinator of the district. All known small-pox contacts should be liable to compulsory vaccination or compulsory quarantine. An excellent discussion followed the address, for which Dr. Forbes received the thanks of the meeting.

Annual Dinner.

The annual dinner was held at the same hotel in the evening. Dr. GEORGE JACKSON presided, and among the

[1] Dr. Routh's lecture on ante-natal hygiene and its influence upon infantile mortality was published in the BRITISH MEDICAL JOURNAL on February 14th (p. 355).

guests of the association were Dr. Ainslie Hollis (President of the British Medical Association), Dr. S. Monckton Copeman, F.R.S., Dr. Duncan Forbes (M.O.H. Brighton), Dr. Henry Gervis, J.P. (Chairman of the local Branch, British Medical Association), Dr. Jowers and Dr. Gordon Dill (Senior Surgeon and Senior Physician respectively of the Royal Sussex Hospital), Mr. G. S. Elliston of the *Medical Officer*, and representatives of the *Lancet* and BRITISH MEDICAL JOURNAL. A most enjoyable musical entertainment followed, contributed by Mrs. Drury, Madame Edith Welling, Madame Ethel Harman, and Mr. Norman Richards. Dr. E. Burchell, who acted as local secretary, was heartily thanked for the excellent arrangements made for the visit of the association to Brighton.

THE UNIVERSITY OF THE BLIND.

How rarely we see a blind man! Maybe there is imprinted on our mental retina the vision of an old blind man sitting under the shelter of a railway arch slowly reading the words of the Bible from a great printless book, and we with other schoolboys stood and wondered at the marvel of a man reading with his fingers. But that sight is rare now, and yet there are many blind in this country.

In the East one is never forgetful of the blind and afflicted; they are here, there, and everywhere, at every place of public resort, always making the appeal of their helplessness, like the "man lame from his mother's womb, whom they laid daily at the gate of the temple which is called Beautiful." And if in this ordered Western state of ours the blind man is no longer seen in every place of public resort, there is the more need that care should be taken lest his perpetual darkness be forgotten, and his need of help pass out of mind. To see the blind is no joy to the sighted; the very appearance of their helplessness is a rebuke to the robust vigour of the whole man, and if we are spared the daily vision of this distress, there is the more need that we should be told of their need "lest we forget."

In the past week there has been a real awakening of sympathy with the blind by reason of the action of the King and Queen, who have opened the new premises of the British and Foreign Blind Association, which is now to be known as the "National Institute for the Blind." This institute is in very truth the University of the Blind. It is a place where every energy for the relief of the blind by way of encouraging their own helpfulness is centred. It is the place where by far the greater number of books that are prepared for the blind are printed. It is responsible for the diffusion of knowledge of the best modes of teaching the blind, and to that end it issues a regular magazine in ordinary letterpress for the teachers of the blind—*The Braille Review*, with which the *Teacher of the Blind* has been incorporated. It also issues certain periodicals in Braille type for the use of the blind.*

The National Institute is in no sense a charitable institution for the granting of doles and pensions to the blind, admirable though such charities are in fitting circumstances. It is rather the focus of work for the raising of the status of the blind, by teaching them the blessings of independence and of knowledge such as can be gained by an insight into the thoughts and feelings of the great bright world around them through the literature of our tongue.

The work of this institute is one that must make a strong appeal to every medical man. It was started, and indeed made possible, by the energy and the personal liberality of one medical man, and carried into its present position of vigour by another. It was founded in 1868 by Dr. T. R. Armitage, who was himself blind, and was carried on for many years at his own cost. Later it gained much by the labours of Professor McHardy, an ophthalmic surgeon of world-wide repute. Both of these men have gone to their rest, but their work lives, and awaits full fruition through the generous aid of others who know or will learn the needs of the blind.

We as a profession are intent on the saving of sight; many members of our profession give laborious days to the care of the afflicted, and receive their reward in the success of their labour in saving the sight of the endangered. As a profession we have taken no mean part in awakening the public to the necessity of preventing blindness in the early days of life, and that effort has been rewarded in a very definite diminution of the incidence of ophthalmia neonatorum, and the blindness resulting therefrom. But when all these labours are at their full, and blest with the best success, there must always remain a succession of children who are blind from birth, and of children and adults who are blinded in later years from accident, or causes which the utmost limits of science may fail to prevent or relieve. Whilst we strive for the prevention of blindness we must needs also take care of those who are blind, and secure for them some measure of the pleasure of life which we enjoy to the full. The very gentleness of the blind, their ingratiating smile, and perpetual confidence should make their appeal to us.

Chief amongst the labours of this institute is the printing and sale of books. Books for the blind are amongst the very few that are still precious. Amongst the hosts of cheap productions that litter the bookstalls and cumber our shelves there are few that can rank with the books for the blind in preciousness. They are few and they are costly. The examination of the catalogue of their books and the prices at which they are issued, even by an institute which sells under cost price, brings back one's thoughts to the time when our reading books were so precious as to be heirlooms, and when the books of the few public libraries were chained to the desks of the reading chamber. The reasons for this analogy are the same. Our old books were mostly hand work; and the books for the blind are mainly hand work, and they must always be so. Even the present improved methods of printing the books from plates, and the success that has attended the attempt to print on both sides of the sheets, though they reduce the cost of these books, still leave them costly; for happily the demand can be at no time sufficiently large to secure that vast sale which alone makes our books cheap.

Braille is one of the wonders of the world for its ingenuity. The print is a series of dots embossed on thick Manilla paper. It is read by the touch of the finger. It is written by the pressure of a little instrument like a short shoemaker's awl, and the dots are set in order to form words and sentences by pressing them within the frets of a slip of brass held over the paper. The blind man writes from left to right, pressing the paper down into dimples, then he reverses the sheet and feels the reverse elevations on the paper and finds the words he has written, passing his fingers from right to left. He writes like a Christian and reads like a Hebrew. The facility with which a trained man, or indeed a child, can read and write is remarkable; it is well worth a visit to a blind school to witness the act. Possibly the very facility that can be obtained has given rise to the belief that those who are deprived of the blessings of sight are compensated by an added keenness of their other senses, but there is no good ground for this belief, and we ought no longer to flatter ourselves that they have any compensations of this sort for their loss.

Here is the statement of a man of 60 years; he was blinded at the age of 14, and by dint of strenuous work attained a position that would be creditable to a fully sighted man:

> Don't believe them when people say that blindness brings any improvement of the other senses, any compensation whatever for what is lost. It brings nothing—absolutely nothing. Blindness is a pure deduction. You are a normal person living in the dark—a sighted man minus his sight—that is all! You suffer—or, rather, you submit—or better still, you accommodate yourself to the position—no sighted man knows how! To understand you must endure it. All blind people are, more or less consciously, ashamed of their blindness. We cannot go about, and we know we embarrass even the kindliest of the sighted. My own walking is done at night and in the country. I cannot make myself the subject of observation in the street as I bend my head to listen. But 'tis different in the country. There I can go out, listen to the night sounds, be sensible of the air and the exercise, and really enjoy myself. A stick is all one needs.

We sighted truly cannot understand it; we can only remember our sense of lostness when caught in the darkness of an unfamiliar countryside or when, lost in the impenetrable fog of a city, we heard the sounds of the

* *Progress*, containing articles of interest to the blind, designed to keep them in touch with each other; the *Braille Literary Journal*, containing original contributions and articles selected from reviews and newspapers; the *Braille Musical Magazine*; *The School Magazine*, containing matter for class use; and *Comrades*, a magazine in Braille for boys and girls. All these are in large quarto and embossed on both sides.

traffic and scarce could tell whence they came, or where danger or safety lay.

The lot of the blind girls is even worse. The same blind man writes:

That reminds of the sorrows of the blind girl. They are 50 per cent. more than the men do. They are so overlooked, so left in obscurity, so utterly deprived of all those [illegible] accompaniments, little attentions, and enjoyments which are essential to every woman, and without which life is scarcely bearable to her. The saddest and most pathetic lot in the world is that of the poor blind girl. From childhood to her grave it is one long, dreary course of existing for no reason except that she cannot die. She has no purpose, no object in life, no justification for living another hour. It is emphatically, uniquely sad.

The words of this blind man are more illuminative than any appeal a sighted writer can make. And they go far to press home the claim for aid made by the National Institute for the Blind to provide funds that shall enable them to bring books within the reach of the blind—the poor blind. Their labour is small, their gains are small, but their books are dear. They may well echo the words of the collect, "Lighten our darkness, we beseech Thee, O Lord." And we are able, at the price of a few golf balls, to enlighten it.

We have received two letters from Mr. C. Arthur Pearson, who is the Honorary Treasurer of the National Institute. From the first, which is a general appeal, we may quote the following paragraphs:

The lives of the blind, particularly of the poor blind, are very dull and monotonous, and, short of restoring to them their sight, nothing can be given them of greater value than books. I was discussing the question of our campaign the other day with a lady who has been doing most excellent work among the poor for many years; she said: "I think you are making too much of this question of books for blind people. In my work I often come across blind poor folk, and my observation leads me to believe that they do not want books; they are content to sit still with their hands folded." Now, here was an objection which seems to me to be a great argument in favour of our campaign. I do not want these poor blind people to go on being content to sit with folded hands. I want those folded hands to be busy passing to and fro along the lines of Braille type, and those unimaginative minds to be filled with pictures of the great and wonderful world which their owners cannot see.

The rising generation of the blind have all been taught to read with their finger-tips, and are only too eager for the literature which is now so scarce because it is so dear. And when Braille books are cheap, as I firmly believe a generous public will enable us to make them, the older generation of blind people and those who, like myself, are not stone blind but can no longer see to read, will also welcome and enjoy these books. Old folk, whose sight is lost or seriously impaired, can find a new joy in life by reading Braille books. I am happy to say that I have in the last few months persuaded several such people to learn Braille, with the happiest results.

Braille is not difficult to learn. I mastered its principles in a fortnight, and once that is done it only remains to acquire speed by practice. Expert blind readers can read Braille as swiftly as a sighted person can read rapidly aloud, so books are quickly devoured, and new ones as quickly in demand, for the blind, with their inability to enjoy the ordinary forms of relaxation, have much time for reading.

Mr. Pearson's second letter makes a suggestion which will, perhaps, be of special interest to medical practitioners who may have among their patients persons willing to help in this way. It is as follows:

I wonder if you will allow me a little space in which to talk of a rather important point with regard to the production of Braille books.

There are many kindly sighted people in this country who make these books by hand, and this is also done at various institutions by blind people, particularly at the National Lending Library, so ably managed by Miss Austin.

But the work is necessarily extremely slow, and the entire production of such books does not supply a fraction of the demand for Braille reading matter. I should like by your courtesy to suggest that in future Braille books thus produced should be of a special nature, and not, as is usually the case at present, books of general interest, which can so much better be made in large quantities by machinery.

There are many people who cannot see to read, but have some special pursuit or some special hobby with regard to which they require books that, though of great interest to them, are not of sufficient general interest to warrant their production in quantities. I want to establish a department here, the object of which will be the carrying out of this idea, provided that a sufficient demand and means of supply exist. I shall be very glad if people who are dependent upon Braille for reading will communicate with me, mentioning any particular book of a really special nature which they would like; and if kindly folk who are prepared to make such books will also let me hear from them the rest will be easy, and I feel sure that great advantages will result. I was led to this idea by being told by our chairman, Dr. Ranyard, who possesses, I believe, a unique Braille library), that for many years past [illegible] devoted much of their leisure time to making him Braille books on special subjects.

I hope this letter may perhaps have the result of increasing [illegible] of making Braille books by hand. The work is quite simple and can be easily learnt, and I am sure that much time which is now spent on comparatively useless occupations could be with great advantage employed for this.

The address of the National Institute for the Blind is 206, Great Portland Street, London, W.

SURGEON-GENERAL GORGAS.

THE SANITATION OF PANAMA.

ON Monday afternoon (March 23rd) Surgeon-General GORGAS delivered an address at a meeting of the Royal Society of Medicine, presided over by the President, Sir FRANCIS CHAMPNEYS, and gave some account of the measures taken at Panama to preserve the health of the workmen employed in making the interoceanic canal. Surgeon-General Gorgas said that the canal was some fifty miles in length, and that the United States had jurisdiction over 500 square miles leased from the Panama Republic. One-third of the territory was low and marshy, and for four hundred years it had the reputation of being one of the most unhealthy regions in the world. The French began work on the canal in 1880, the Americans in 1904. During the intervening twenty-four years it had been proved that malaria and yellow fever were transmitted by mosquitos, malaria by the Anopheles, and yellow fever by the Stegomyia. Had the Americans known no more about these two diseases in 1904 than did the French in 1880, he did not believe they could have done better than the French. It was a matter of great pride and gratification to know that the two chief workers in making these two discoveries were men of the Anglo-Saxon race, the one English and the other American. Surgeon-General Gorgas said that he had been selected to take charge of the health work at Panama owing to his four years' experience in Cuba. He described the sanitary and medical arrangements in the Panama Canal zone, and gave statistics of the improvements which had resulted. No case of yellow fever had originated on the isthmus since 1906. In that year the admissions to hospital for malaria were at the rate of 800 per 1,000 workers; in 1913 this rate had been reduced to 76 per 1,000. The death-rate from all causes among the workers, which was about 41 per 1,000 in 1906, was 8 per 1,000 in 1913, and the general death-rate among the total population was now 22 or 23 per 1,000. The work of digging the canal had been carried out chiefly by negro labourers from the West Indies, but a large white force had also been maintained. After the lecture Major Noble, who had served with Surgeon-General Gorgas at Panama, showed a number of lantern slides illustrating the method of draining the land and oiling the mosquito breeding places.

Surgeon-General Gorgas, as we have already mentioned on several occasions, has recently paid a visit (accompanied by Major Noble and Dr. Darling) to South Africa, at the invitation of the Johannesburg Chamber of Mines. It is estimated that 200,000 negroes are employed in the mines, and among them respiratory diseases cause a very high mortality; a part of this is due to malaria. The same experience has been encountered in Panama, where for the first two or three years the death-rate from pneumonia was as heavy as in the South African mines. Tuberculosis was found to be more prevalent in South Africa than in Panama.

On the same evening Surgeon-General Gorgas, who was accompanied by Major Noble and Dr. Darling, was entertained at a complimentary dinner, over which Sir THOMAS BARLOW presided. Among those who were present were the American Ambassador, the Archbishop of Canterbury, the Lord Chancellor, Viscount Bryce, Lord Moulton, the Presidents of the Royal College of Surgeons of England, the British Medical Association, the Royal Society of Medicine, the Medical Society of London, the Society of Tropical Medicine and Hygiene, the Directors-General of the Army and Navy, Sir Frederick Treves, Sir Ronald Ross, Professor W. J. R. Simpson, C.M.G., the American Consul-General, and many leading members of the profession in London and officers of the military medical services.

In proposing the toast of "The President of the United States," Lord BRYCE referred particularly to the work of the Carnegie Institute and of the Rockefeller Institute, with which the International Health Commission was associated. He referred in terms of great enthusiasm to the visit which Mr. Wickliffe Rose, the Director of the Commission, was paying to Egypt, Ceylon, and the Malay States. The Commission had been founded to continue in foreign countries the campaign against ankylostomiasis which had been conducted with such success in the United States. The action of the Rockefeller foundation in providing the means of further investigating and eradicating a disease which caused so much loss and suffering throughout the tropical colonies of the Crown was so exceptionally generous and large-minded as to constitute a new international departure. Lord Bryce said that the President of the United States was a conspicuous example of the fact that a man might have wide learning and brilliant literary gifts united with solid judgement and eminent capacity for the conduct of great affairs.

THE AMERICAN AMBASSADOR, in responding, said that the promotion of General Gorgas was a good example of President Wilson's working method, which he would venture to call the scientific method of administration. Sanitary work in the tropics and the work of government both called for trained scientific minds.

Sir THOMAS BARLOW, in calling on Sir R. Havelock Charles to propose the health of Surgeon-General Gorgas, said that the dinner had been first suggested by Sir William Osler, who was always striving to promote the friendship between the two great branches of the Anglo-Saxon race.

Sir HAVELOCK CHARLES, at the outset, said that General Gorgas had thoroughly justified the wisdom of the great men who elected him for his task. The best man had been chosen for the work, and he had been given a free hand and full responsibility. Havana had been a hotbed of yellow fever for generations; it had been cleared of the disease in nine months by General Gorgas. From the Panama zone he had eliminated the disease which had been the scourge of the French, who in the state of knowledge at that day had not been conscious of the direction from which they had been smitten. Of pessimists we had in this country more than our share, but we had a right to boast of the work of General Gorgas because it was based on the labours of Sir Patrick Manson and Sir Ronald Ross. The public was ever ready to receive the benefits conferred by science, but was too prone to forget the benefactor. There was in the Bible the story of how a city was saved by a poor wise man, but nobody afterwards remembered that same poor wise man. General Gorgas had stamped out yellow fever and plague, and had controlled malaria; he had abolished the panic of fear by day and the terror by night that these diseases inspired. He had shown that selected men could live with as much impunity in Panama as in their own homes. He had inspired confidence by his words and by his acts; he had shown that tropical diseases were amenable to control, and had given to sanitary science a banner that they might be proud to display. The scene of his labours had in the past been the grave of failures and worn-out reputations, a country that men would choose to travel in rather than to live in, and in which a man would find more to observe than to admire. Nelson had there led a party of 200 men, and only ten had returned, while he for long afterwards had borne on his body the marks of the diseases he there contracted. General Gorgas would have an established place in history as a man of will as well as a man of imagination, and as a man of art as well as of reason. As the Roman proverb said, that man lived unworthily through whom no other lived, and he asked how many men were now alive who would have died but for the labours of General Gorgas.

Surgeon-General GORGAS, in replying, said that administrators in Panama were under a great obligation to the brave and tireless and self-sacrificing workers who had made the great discoveries whereby they were able to protect the workers during the construction of the canal. Of the force of some 60,000 men employed in the canal zone, some 45,000 were British subjects—negro labourers from the West Indies. They were most devoted British subjects and an excellent body of men in every way, but inclined to claim the canal—lock, stock, and barrel. Commercial vessels would be using the canal by July 1st, and it would, no doubt, be formally opened next January.

The International Health Commission.

The International Health Commission of the United States of America, to which Viscount Bryce made references, has arisen out of the fund of £20,000,000 guaranteed by Mr. Rockefeller and his friends for the purpose of studying the problems presented by tropical medicine, and a beginning is being made with ankylostomiasis. Mr. Wickliffe Rose, the director of the Commission, has visited several of the West Indian islands and made arrangements with the local authorities, and he has recently conferred in London with a committee of the Colonial Office, which it is intended shall in future work in conjunction with the American Commission. Mr. Rose, who has been joined by Dr. Sandwith, of the London School of Tropical Medicine, left London last week to visit Egypt, Ceylon, the Federated Malay States, and the Philippine Islands. At the present time Dr. Leiper, of the London School of Tropical Medicine, is in China studying bilharziosis under the auspices of the Admiralty and the Colonial Office. It is understood that he will extend his investigation to the occurrence of ankylostomiasis among coolies on tea estates.

Recent Statistics.

The Department of Sanitation of the Isthmian Canal Commission reports (we learn from the *Medical Record*) that during the year 1913 the employees of the Isthmian Canal Commission and the Panama Railroad Company numbered 56,654, and that among these there occurred during the year 473 deaths, giving an annual death-rate per 1,000 of 8.35, the lowest on record. For 1912 the rate was 9.18, and for 1911, 11.02. Among white employees from the United States the death-rate from disease was only 2.50 per 1,000, while the total death-rate for the year among those classed as employees was 5.0 as against 5.52 per 1,000 in 1912. The inclusion of American women and children raised the death-rate from disease among Americans to 3.40, but the inclusion of the officers and men of the United States Army and Marine Corps stationed on the Canal Zone, and their families, lowered the death-rate again to 3.16 per 1,000. Of the deaths among employees during the year, 4 were due to typhoid fever, 6 to dysentery, 47 to pneumonia, 21 to malaria, 24 to organic disease of the heart, 65 to all forms of tuberculosis, 26 to nephritis, and 76 to external violence. Among the 11,943 white employees there were no deaths during the year from either dysentery or typhoid fever. For the total population of the cities of Panama and Colon and the Canal Zone, the death-rate per 1,000 for 1913 was 23.57, an increase over 1912, when the rate was 20.49. One man with small-pox on a ship from Callao, Peru, was isolated at Santo Tomas Hospital during the month of November; he recovered and was discharged in the following month. With this exception, no case of yellow fever, small-pox, or plague originated on or was brought to the isthmus during the year.

LITERARY NOTES.

THE *Journal Belge de Gynécologie et d'Obstétrique* is the title of a new periodical which is to be the official organ of the Belgian Gynaecological and Obstetrical Society. It will be under the scientific direction of Professors Rouffart, Jacobs and Cocq, of the University of Brussels; Fraipont, of the University of Liége; Schockaert, of the University of Louvain, and Dr. Hemoty, of the Maternity Hospital of Antwerp. The general secretary is Dr. Cheval, of Brussels.

Dr. Bradley's preface to the second half of vol. viii of the *Oxford English Dictionary*, to be published immediately, contains the announcement that Mr. C. T. Onions will edit independently the words beginning with SU–SZ. Mr. Onions has already served about twenty years on the dictionary under Sir James Murray and Dr. Bradley, and has published, besides other works, the well-known *Oxford Shakespeare Glossary*. The present distribution of work among the four editors is in vol ix, SP–SQ, Dr. Craigie; ST, Dr. Bradley; SU, Mr. Onions; in vol. x, TR, Sir James Murray. The eight complete

volumes of the *Oxford English Dictionary* have dealt with 182,017 main words, 48,634 subordinate words, and 75,471 combinations: the history of all these being traced, and illustrated by 1,298,136 quotations. Substantial portions of vol. ix have already been published—Si-Speech and T-Thyzle—and with Ti-Trahysh, a beginning has been made of the final volume.

Half the misunderstandings in the world are caused by the neglect of people to explain precisely what they mean. It is taken for granted by many that an idea may be conveyed from the brain of one man to that of another by a kind of telepathy. Too often a doctor gives only vague directions for the management of a patient, with the result of infinite vexation and confusion and possible disaster. The following story of Talleyrand should be laid to heart by all who have to work with others, whether in the sick room or the council chamber. Van de Weyer relates that at a diplomatic conference Talleyrand pointed to a sentence, and remarked, "I suppose this means so and so." To which he got the answer, "Cela va sans dire." Talleyrand retorted, "Oui, certainement, mais cela va mieux en le disant."

Messrs. Longmans and Co. propose to issue a series of monographs on physiology under the editorship of Professor E. H. Starling, dealing especially with those parts of the science in which at the present time research is most active and progress of knowledge most rapid. Each monograph will be entrusted to an author who himself is taking or has taken a leading part in determining the current ideas of physiologists on his topic. The following volumes are in preparation: *The Involuntary Nervous System*, by W. H. Gaskell; *The Physiology of Reflex Action*, by C. S. Sherrington; *The Conduction of the Nervous Impulse*, by Keith Lucas; *The Physiological Basis of the Action of Drugs*, by H. H. Dale; *The Secretion of Urine*, by Arthur R. Cushny; *The Contraction of Voluntary Muscle*, by W. M. Fletcher; *The Cerebral Mechanisms of Speech*, by F. W. Mott; *The Chemical Mechanisms of Integration in the Animal Body*, by Ernest H. Starling.

Messrs. Longmans will also publish a new book, entitled, *Principles of General Physiology*, which is being prepared by Professor W. M. Bayliss. The work will treat of the fundamental properties of animal and vegetable cells and organisms, somewhat on the lines of the *Phénomènes de la Vie* of Claude Bernard. Special attention will be given to phenomena whose laws are not usually to be found in similar books, such as those of reactions in colloidal systems, oxidation, action on surfaces, as well as to secretion, excitation, inhibition, nutrition, and other more strictly "vital" processes.

A sign of the times is the announcement of a new periodical entitled *Archiv für Frauenkunde und Eugenik*. The first number is to be published on April 1st by Curt Kabitzsch of Würzburg. Equally significant of a tone of thought very prevalent at the present day is the announcement of another new periodical entitled *Zeitschrift für Sexualwissenschaft*, which is described as an international journal devoted to the biology, psychology, pathology of sexual life, and all matters falling within that province. This journal, which will be issued monthly, is to be the official organ of the Medical Society for the Scientific Study of Sexual Life and Eugenics, which has its head quarters in Berlin. The journal will appear in April under the editorship of Professor A. Eulenburg and Dr. Iwan Bloch of Berlin. More than 150 scientific men in various parts of the world have promised their collaboration. The first number will contain contributions by Professor Abderhalden, Professor Eulenburg, Dr. Fliess, and others. Sample numbers will be sent on application to the publishers, A. Marcus and E. Webers Verlag (Dr. Jur. Albert Ahn), Thomasstrasse 1, Bonn.

In the *Book of the Rotunda Hospital*, by Dr. Kirkpatrick, edited by Dr. Jellett, are some epigrams, most of which, we think, have already appeared in the BRITISH MEDICAL JOURNAL. The second Master, Fielding Ould, got a degree *speciali gratia* from Trinity College, and this led to a bitter feud between that seat of learning and the College of Physicians in Ireland which lasted many years. When the quarrel was at its height the man-midwife, who had thus by special favour been turned into a doctor, was knighted. This gave rise to the following epigram:

> Sir Fielding Ould is made a Knight,
> He should have been a Lord by right,
> And then each lady's prayer would be
> Oh Lord, good Lord, deliver me!

Again when Evory Kennedy, who was Master in the Thirties, stood in later life for Derry, reference to his candidature was made by John S. Brennan in the following lines:

> An accoucher for Derry! Shame and pity!
> What a reflection on the maiden city!
>
> Rejoice old walls: ye prentice boys be merry,
> Another Great Deliverer for Derry.

Kennedy's friends somewhat feebly replied:

> Remembering King William's fame
> A Deliverer surely has a claim.

Kennedy, it may be added, was not successful.

In Mr. A. E. Shipley's delightful memoir of "J" (John Willis Clark, sometime Registrary of the University of Cambridge) he gives an account of his grandfather, John Clark, founder of the Newcastle Infirmary, and his father William Clark, who, following in the paternal footsteps, studied medicine under Abernethy among others. In July, 1813, Lord Byron, probably introduced by a common friend, Scrope Davies, was corresponding with Clark about a projected journey to the East, but this was abandoned. Four months later, Byron again begged for Clark's company on a journey to "the Zuyder Zee, and, if affairs go on well, Germany and even Italy." This was a critical time in the poet's passionate life, and whether, as Mr. C. Knight Watson writes, it was "from fevers abroad or Miss Milbanke at home, the journey projected in company with Dr. Clark never took place." During the same year Clark proceeded to the medical qualifications of Medicinae Licentiatus sive Practicans in Medicina, but he did not take his M.D. degree until 1827. In 1814 he was a candidate for the professorship of anatomy, but was not elected. The election is memorable from a circumstance in Byron's life, which is related somewhat incorrectly by Moore. The following is the true story as told to Mr. Shipley by Clark himself. Byron came down to Cambridge on purpose to vote for Clark. He entered the Senate House for that purpose, leaning on the arm of Dr. Edward Daniel Clarke. As soon as the undergraduates in the gallery became conscious of his presence, they greeted him with a volley of enthusiastic cheers—a reception for which Byron's avowed antipathy to Cambridge had scarcely prepared him. He left the building, and shortly afterwards Sir John Cam Hobhouse entered it, exclaiming, "Well, I have seen a sight which I could not have believed possible." He went on to relate that on going out of the Senate House in quest of Byron, he found him in the precincts of the Schools sobbing like a child, so completely had the poet been overcome by the rapturous reception he had met with. Clark was elected professor of anatomy in 1817. He took infinite pains in the preparation of his lectures and demonstrations, and was particularly neat in his dissections. On the night of December 2nd, 1833, the Museum of Anatomy was attacked by a mob who considered that Dr. Clark had failed to comply with the provisions of the Anatomy Act in the matter of the body of a pauper received for dissection. The building was ransacked, and considerable damage was done; the Riot Act was read, and many persons were locked up in the schools for the night. The attack was repulsed largely by the aid of the undergraduates. From the date of the outbreak heavy iron bars served to protect the doors and windows of the old dissecting-room until the building was demolished in 1891. Clark was a founder of the Cambridge School of Biology. He died in September, 1869.

La Radiologia Medica is the title of a new periodical which is to be the official organ of the Italian Society of Medical Radiology. The editor is Professor Felice Perussia, of Milan.

British Medical Journal.

SATURDAY, MARCH 28TH, 1914.

ORGANIZATION OF THE PROFESSION IN GERMANY.

THOUGH the difficulties which confront the medical profession in this country and in Germany in connexion with State insurance are not in all respects comparable, some account of the constitution and status of the professional organizations in Germany which have taken up the fight on behalf of the doctors will not be without interest. The only organizations which need now be taken into consideration are the "Federation of German Medical Societies" (*der Deutsche Aerztevereinsbund*) and the "Union of the Doctors of Germany for the Protection of their Economic Interests" (*der Verband der Aerzte Deutschlands zur Wahrung ihrer wirtschaftlichen Interessen*), commonly called the "Leipzig League" (*Leipziger Verband*), owing to the fact that it was founded in that city and still has its central offices there. Up to a short time ago another body existed, called the "Imperial Union of German Doctors" (*Reichsverband deutscher Aerzte*), but this union never succeeded in winning the confidence of the general body of the profession, and has recently been dissolved. It expressed a desire to sign the Berlin Agreement, but this request was refused, and it thereupon passed a formal resolution to the effect that, having formulated the policy embodied in the Berlin Agreement, and having been successful in bringing about the desired state of peace, it had attained its objects, and its continuance was no longer necessary.

The Federation of German Medical Societies is an old organization, for it was founded more than forty years ago, but its early history and activities do not now concern us. In 1900 Dr. Hartmann founded the Leipzig League, as a society which had for its object the safeguarding of the economic interests of the profession. Three years later a proposal that the Leipzig League should be affiliated to the Federation was accepted, and from that time onwards the League has acted as the medico-political branch of the Federation, but has preserved for itself a certain degree of autonomy and independence. In all dealings with official bodies both organizations are cited. On the other hand, the *Aerztliche Mitteilungen*, which at the beginning of this year became the official organ of the Leipzig League, claims that the two are in reality one, and that at present there is only one great professional organization.

The Federation of German Medical Societies is a body representing 384 individual societies, which have a total membership of 21,207. Not individual members but the constituent societies join the Federation. The executive bodies and the officials are elected annually at a meeting which is representative of the whole profession. This meeting is called the Aerztetag. The delegates number over 450. They are elected on a topographical basis, but the election is conducted in each area by the constituent medical society or societies. The Aerztetag discusses medico-political as well as medical matters, and the considered judgement of this body, as reflected in the resolutions passed, is accepted by the members of the medical societies as binding on them, and this is tantamount to saying that the decisions are binding on practically all members of the profession in the empire. The Aerztetag has received a certain degree of official recognition, and in practice the recognition accorded is very considerable, for the authority of the Federation is admitted, albeit tacitly, in the law courts. That is to say, while no mention is made of this body or its powers in the medical laws, not even in those concerned with the constitution of the statutory medical ethical courts, the right of the Aerztetag to speak in the name of the whole profession has in practice been recognized by the ethical courts, by the courts of justice, and by the Imperial Government and the various Federal Governments.

The Leipzig League consists of individual members, and each member pays a subscription direct to the League. This is in addition to the subscription paid by him to the local medical society which is a constituent of the Federation. Every registered medical practitioner who is prepared to subscribe to the rules and regulations of the League is eligible for membership. A member must give twelve months' notice of his intention to resign, and such notice must be given during the month of January in any year. The members elect the officers and executive committees of the League, and no change in its constitution or alteration of its aims and objects can be effected save by the vote of a general meeting, of which due notice must be given. The League has a number of departments. There is an insurance department for life insurance and for the granting of loans, etc., and a pension department for the provision of assistance to widows and orphans of members; but the chief department concerns itself with medico-political matters, and among the methods utilized is the publication of a warning list at the head of which the following notice is printed: "Members are urgently warned against applying for or accepting positions as insurance doctors as advertised in the press. The administration of insurance societies which are hostile to the League offer their posts everywhere, even in the medical press. Before applying for or accepting such a post, members should communicate with the General Secretary of the Leipzig League, Leipzig, Dufourstrasse, 18." A note is added calling the attention of members to other reasons why, in their own interest and in that of the profession, they should not set up in practice or take any kind of post in places mentioned in the list without first communicating with the General Secretary of the League. The machinery for carrying out the work of the League is complicated, but thanks to the careful co-ordination of all the departments and to the great amount of attention which has been paid to detail, it acts smoothly and efficiently.

The German law with regard to State control of societies, associations, or unions differs from English law. The German law provides that a society formed for any purpose which does not include trading for profit may be registered, and this registration confers upon the society certain legal rights and immunities. The essential point would appear to be that a society registered under these conditions must not trade for profit, and an important decision interpreting the law as it affects the position of medical societies was given in the Imperial Court of Justice—the highest court of appeal in such cases—as recently as November, 1913. Proceedings had been taken in the provincial court against two medical societies in Zwickau; the provincial court directed that the

names of the societies should be removed from the register of societies, holding that they were trading for profit, on the ground that they consisted solely of medical men, and that the members, therefore, were all interested in a particular calling which was conducted for the purpose of gain. The societies appealed, and the Imperial Court of Justice decided that they were not formed for the purposes of trading for profit, and did not trade for profit. In thus reversing the judgement of the lower court, this Imperial Court of appeal is understood to have decided that any society may continue to enjoy the full legal rights afforded by registration under the Imperial German law, provided that the society does not as such—that is to say, in its corporate capacity—supply or manufacture goods or provide anything which is saleable, and that such societies as are established for the mutual protection of men engaged in a particular calling are not societies which trade for profit. Incidentally it may be noted that this decision also affects the legal position of insurance societies—that is to say, the societies of insured persons.

A trade union (*Gewerkverein*)—that is to say, an association of persons engaged in the same calling who desire to combine for the purpose of mutual protection—can obtain legal recognition only by registration as a society. The society may fix its subscription, and may require its members to bind themselves to pay levies and fines; the law does not restrict the manner in which a society which is registered disposes of its funds, provided always that it does not trade for profit. If a society as a whole or as a part of its corporate activity engages in selling commodities or services (*wirtschaftlicher Geschäftstrieb*), it cannot be registered under this law, but is subject to the commercial law. The Leipzig League is not a body trading for profit (*wirtschaftlicher Geschäftsbetrieb*), but a society registered for the protection of the economic interests of its members, and the courts cannot interfere with the way in which it applies its funds to carry out any policy adopted in accordance with its by-laws, even though this policy may involve bringing pressure (*Koalitionszwang*) to bear on its own members or on outside bodies. Its powers are therefore wide and its rights are considerable, but there are hard and fast limitations. A member of a society has no right to call another person a strike-breaker, nor to refer to the action of his society as a strike. If he does so he, not the society, may be sued by the person feeling himself attacked, and may be punished. Last autumn a man was sentenced to five months' imprisonment for calling another person a "blackleg." This limitation of the rights of individuals does not affect the rights of the societies; and while its official organ refrains most carefully from using words which would imply that trade union principles are being adopted, the Leipzig League certainly uses every instrument necessary for the carrying out of its policy in the interests of the profession and of the sick.

NEURASTHENIA AMONG EUROPEANS IN INDIA.

THE problem of the acclimatization of Europeans in the tropics has engaged the close attention of scientific workers for some twenty years, but so far a complete solution has not been found. There are some, indeed, who hold that it is insoluble and that the tropics must always remain uninhabitable by white men. On the other hand, Sir Patrick Manson has persistently taught that the whole question of tropical hygiene lies in scientific knowledge and the application of that knowledge to the destruction of the invisible enemies of man which have been the agents in making waste many of the fairest and most fertile regions of the earth. In regard to malaria, that knowledge has been gained and has been applied with striking success by Sir Ronald Ross and others. By the application of knowledge similarly gained, Surgeon-General Gorgas exorcised the demon of yellow fever which had so long held Havana in its deadly grip, and has in ten years transformed Panama from a cistern for foul toads of disease to knot and gender in to a place with a death-rate which compares favourably with that of most cities of the United States.

Successful colonization does not, however, wholly depend on the conquest of microbes. There are other factors which have to be taken into consideration, and, however completely the parasitic causes of disease may be exterminated, there is something in the climate of the tropics that in time undermines efficiency and causes the decay of races formerly energetic and warlike, so that they become unfit to resist an enterprising enemy or even to lead a very active life. In the East the enervating process is reinforced by subtle agencies which have a deteriorating effect on the nervous system. Kipling, in his story "At the End of the Passage," gives a terrible description of the nervous breakdown that often overtakes the hard-worked European in India. The subject was fully discussed by Sir Havelock Charles in a paper read recently before the Society of Tropical Medicine and Hygiene on neurasthenia and its bearing on the decay of northern peoples in India.[1] Speaking from a long experience of India, he said that in the tropics normal persons often experienced symptoms which, when strongly marked, were described as neurasthenic, while those of weaker mental fibre became unbalanced and broke down. The symptoms are variously known in different places as "Punjab head," "Bengal head," "Burmese head"; there is also, according to Dr. Andrew Balfour, a "Sudan head." The following is Sir Havelock Charles's graphic account of this condition: "An officer otherwise in every way a good fellow, becomes short-tempered; forgets names; is troubled with sleeplessness; feels his work too much for him; shirks responsibility; given to making molehills into mountains; procrastinating; susceptible on slight exertion, mental or physical, to fatigue, and with a loss of all powers of concentration." Accompanying this condition there usually are symptoms attributed to "liver." The man is, in fact, unfit for work, and for the recovery of healthful activity a spell of leave at home is required. During much travel in India and Burma, and twelve years' work in Calcutta, Sir Havelock Charles came to recognize these phenomena as the commencing signs of neurasthenia, which he defines as a complex of symptoms induced by nerve exhaustion and associated with, if not causing, an alteration in nutrition. The primary causes are, in his opinion, the humidity and the sun, with its light and heat, which produce an abnormal condition of the body, characterized by lowered pulse-rate and tension, an irritable heart, lessened respiratory function owing to deficiency of intake and rarefaction of the air, extra work thrown on the liver, followed by continued congestion, and atonic dyspepsia leading to chronic auto-intoxication. The climatic conditions lower the powers of resistance and render the individual more

[1] *Transactions*, November, 1913.

liable to fall a victim to the attacks of the specific forms of disease. To these factors must be added the manner of living, which he sums up in the proposition, "The European hustles; the native is placid." There are, Sir Havelock Charles says, animals and plants that cannot exist in certain climates except under special conditions, and the growth of man depends on the same natural laws that influence plants and animals. Light coloured peoples who are fitted to cold climates are damaged when they migrate to hot latitudes. He illustrates his contention by an appeal to history. To India for ages races have migrated from the most various parts. Whether the invaders were white or yellow, the foreigners have universally yielded to the wonderful assimilative powers of Hinduism. They have been absorbed, and have taken on the characteristics of the country. Other invaders have disappeared, and are forgotten. The sovereign Aryan race, under the influence of climate and environment, became lazy and effeminate. The last kingdoms of Bengal and Behar, owing to the nervous exhaustion of the race, fell a prey to the climate and to an environment which sapped their original vigour. The Moghuls at Delhi, who were highly civilized, broke down under pressure from the peoples rising up around them because their energy was worn out.

Sir Havelock Charles warns us that a similar fate would befall us if the white population of India were not kept up to a proper standard by the constant supply of fresh blood from home. He goes on to say that, "while in the temperate zone a great strain of work may be endured without impairment of power, in the tropics the powers of resistance are greatly lowered, and eventually in the predisposed the nerve breakdown called neurasthenia ensues." Does not the whole force of this contrast lie in the words "in the predisposed"? And as neurasthenia occurs also in the predisposed in temperate zones, it all comes to this, that the nervous system, originally in a state of unstable equilibrium, tends to lose its balance more readily in tropical climates. If, as we believe, the tendency of our growing civilization at home has been to create such predisposition, is it surprising that among those who are sent to the tropics the nervous breakdown should occur to a larger extent than before? We are, to put it bluntly, by our system of education, and especially by the strain of competitive examinations, breeding a race of neuropaths who naturally cannot resist the strain of the conditions in which they have to live in the tropics. The men who made our Indian Empire seldom came home at all, or only at very long intervals. Many of them made India their adopted country, and there are many stories of men whose time of service was up being unable to make up their minds at the last moment to leave the land in which they had worked and spent themselves during a lifetime.

We fully agree with Sir Havelock Charles that India cannot be a place of settlement for white folk bringing forth seed after their kind, unless, as has been suggested by Kipling, a colony is founded in the Himalayas. But if we are to hold India we must continue to exercise special care in the selection of the men who are to do the work of the empire under the trying conditions of life which have to be faced there. Sir Havelock Charles has said with justice that it is not every white man who is fitted to serve his country in the tropics. In opening a discussion at the annual meeting of the British Medical Association in London in 1910, he pointed out that the best kind of man for the tropics is the "good ordinary type of Britisher, with a clear head 'well screwed on,' an even temper, not over intellectual, who can take an interest in things around, not unduly introspective; one who can work hard and find pleasure in it, capable of bearing exposure to the sun; one who will practise temperance in all things, with self-control and common sense, meaning that such a one inherits no liability to that neuropathic disposition which requires only a light exciting cause to develop active mental trouble." That is the kind of man who is wanted to guard our Indian frontier and to rule over excitable races; not mandarins, whose chief equipment is the power to acquire a load of booklore and shoot it out to the admiration of a board of examiners. Character is of far more value than mere learning in those who have to rule foreign races. We commend Sir Havelock Charles's important paper to the attention of all concerned in the government of India and the administration of our colonies, and we cannot help adding that it is well for the country that the India Office should have a man so judicious and practical minded as President of its Medical Board.

THE FUTURE OF MEDICAL BENEFIT.

THE Insurance Act Committee at its meeting last week resolved to recommend the Council to include in its annual report to the Representative Body a full statement of the considerations which arise in view of the approaching termination of the period for which the Government undertook to provide a Treasury grant towards the cost of medical benefit, of the complaints which have been made as to excessive claims for sickness benefit, and of the criticisms of the actual or prospective financial status of approved societies. The Committee, being of opinion that these subjects call for most careful consideration, appointed a special subcommittee to draw up a report. It will be remembered, further, that the Annual Representative Meeting last year instructed the Council to make a full report upon the directions in which it might be sought to extend the scope of the Insurance Act, especially with regard to the inclusion of the treatment of children, and dependants, dental treatment, and hospital treatment, and the method of dealing with deposit contributors and casual labourers. The Representative Meeting was of opinion that it was desirable that the Association "should be ready with its policy as to what a National Health Insurance Act should be, not merely from the point of view of the interests of the profession, but also from that of public health and the advancement of medical science." The Representative Meeting directed that this report should be issued to the Divisions for consideration and comment, and submitted, together with a statement of the views of the Divisions thereon, to the next Representative Meeting if possible. In pursuance of this instruction, the Council at its meeting on October 29th, 1913, appointed a special committee, which chose Mr. D. F. Todd to be its chairman.

There can be no doubt of the importance of these matters, and Dr. Addison, M.P., has done a service to the profession by initiating a preliminary discussion. In the course of his brief address at Lambeth, a report of which appears in the SUPPLEMENT, he indicated the directions in which, in his opinion, the existing system of medical benefit might be expected to develop. He showed himself an opponent of doctrinaire schemes and sudden changes, and expressed the hope that the system would be

allowed to grow along such lines of natural development as might be determined by experience, by the discovery of needs, and by the growth of opinion in the profession and among the public. He touched upon some of the improvements which he conceived it possible might be effected in a not distant future.

The Chancellor of the Exchequer said in 1912 that under the National Insurance Scheme modern methods of diagnosis and treatment ought to be made available for insured persons. With this view the medical profession will be in complete agreement, but so far the phrase has not been defined, and we venture to think that the time has come when the profession should set itself to think out its full meaning. We are jealous for the standing and reputation of the profession as, in its corporate capacity, the guardian of the public health, and we are anxious that suggestions for the better organization of the medical service of the country should come spontaneously from the profession itself rather than that improvements should seem to be forced on it from outside. It is for the profession to point out what is needed and to suggest how it may be provided, and for the Government and the House of Commons to find the means. If the ideal is—and we are told it is—that all sick insured persons and all State patients shall be given the best treatment that private patients can command, then we must base our demands on what the present state of medical science and practice render it possible to do for the rich. Now if we leave aside for the moment the important matter of nursing, the main advantage of the rich is that it is usually easy for their medical attendants to obtain a second opinion and the assistance of experts in respect both of diagnosis and treatment. Modern methods of diagnosis include laboratory diagnosis and clinical diagnosis. Dr. Addison puts the provision of laboratory diagnosis first, probably because it will be easier to bring it early into operation. Many public health authorities now have arrangements by which laboratory assistance can be given in the diagnosis of certain notifiable diseases, such as diphtheria and typhoid fever, and a few authorities have extended the system to venereal diseases. During the last ten or twelve years it has been found necessary in hospitals, and in practice among the well-to-do, to have the assistance of laboratory methods in a good many other directions. Among those which at once occur to the mind are blood examinations (cytological and serological), chemical examinations of excreta and discharges, and bacteriological examinations in wound infections and other conditions which may be called non-specific. This clearly is not work which can most efficiently and economically be done by public health authorities. To be of the greatest possible value, not only to individual patients but to the medical service as a whole, it must be regarded first and foremost as a clinical service, in direct contact with the practitioner on the one hand and with the pathological and bacteriological departments of the universities and the clinical laboratories of the hospitals on the other. The hospital is the natural centre of the medical activity of a district, and any statesmanlike handling of the problem will, we believe, take this as a starting point.

The consideration of what is meant by modern methods of clinical diagnosis opens up a still wider field. Dr. Addison suggests that in every district there should be something of the nature of a clinic, where the practitioners in the neighbourhood should be able to consult with their colleagues in any case of difficulty, and where facilities for making examinations in which the use of modern instruments of precision are required would be available. Facilities are needed also for obtaining expert opinion in special diseases or cases of special difficulty. In some districts the hospitals, through their out-patient and special departments, would seem to be the natural places for such consultations with experts and specialists. In others the difficulty could not be completely solved in this way, and if district clinics were to come into existence consultations might be held there with specialists and possibly certain special forms of treatment might be carried out. In other cases they would serve as a step on the ladder which should connect the individual patient with the wards and clinical laboratory of a hospital.

We have not attempted to do more than take a rapid glimpse of a great extent of territory; not only are details of the landscape wanting, but the boundaries of the whole are undetermined. We are, however, convinced that the profession cannot too soon begin the exploration of this unmapped region. Dr. Addison said, very truly as we conceive, that the profession in any district would not be doing more than its duty to the local authorities if, after careful consideration, it made collective representations with regard to the health needs of the district and the disabilities under which it, better than any other calling, knows the people of the district to labour—the bad housing, the defective nutrition due often to ignorance in buying and cooking, the child and mother labour, and the many other conditions of life which stultify the best resources of therapeutics. Should not this doctrine be extended to embrace the duty of the whole profession to the whole country? The desire to better health conditions—using the term in its broadest sense—is very general, but ideas as to how the end is to be gained are vague, and there is a risk that public opinion may be swayed by the one-sided theories of vehement enthusiasts for some particular panacea. Both political parties seem to be agreed that before very long there must be an inquiry into the working of national insurance. So far as medical benefit is concerned—and that benefit is the pivot of the whole scheme—the considered opinion of the medical profession must be essential to any complete solution. The only body capable of giving voice to this opinion is the British Medical Association. Undoubtedly to provide modern methods of diagnosis and treatment alone, leaving aside the question of hospitals, must cost the country more money than is at present available. Dr. Addison recognized this, and from the way he put the matter it would seem not unjustifiable to conclude that this fact is realized by those who have the responsibility and the power to relax the nation's purse-strings. The finding of the money is the business of the Government; the finding of the ideas as to the way in which the money of the nation could most profitably be spent is a matter very largely for the medical profession.

THE MENTAL DEFICIENCY ACT (1913).

The Mental Deficiency Act, which passed through Parliament last session, will come into operation in England and Wales on April 1st. The Mental Deficiency Act (Scotland) does not come into operation until May 15th. Sir William Byrne, recently of the Home Office, who has been appointed Chairman of the Board of Control established under the Act, has been at work for some time in his new offices in Victoria Street, Westminster. The Board of Control consists of the former Commissioners in Lunacy, together with those additional Commissioners

whose names have already been announced. During the coming year the Local Educational Authorities will proceed to make the arrangements under which they will notify to the local authority the children whom they have ascertained to be incapable, by reason of mental defect, of deriving benefit from instruction in special schools or classes. (The provision of special schools, where they have not already been established, is facilitated by the legislation and parliamentary grants arranged for last session.) The local authorities under the Act, which consist of the County and County Borough Councils, will doubtless arrange during the coming year for the selection in their area of one or more medical practitioners who will be specially appointed to examine and report upon defectives in their area. Each local authority also will arrange for the appointment of a committee, which is to be called "The Committee for the Care of the Mentally Defective," and which will consist not only of members of the local authority itself, but of other suitable persons, if they desire to appoint them. The duty is placed upon the local authority, subject to the provisions of the Act and the regulations of the Secretary of State, of ascertaining what persons in their area are defectives subject to be dealt with under the Act, and of taking steps to provide, or secure, suitable accommodation for them. The duty of informing the local authority what children amongst the persons in their area are defective within the meaning of the Act is cast upon the Local Educational Authority, subject to the approval of the Board of Education. This presumably has already been accorded, since the scope and importance of the duties which the Act will throw upon school medical officers were the subject of a long note by Sir George Newman in his last report to the President of the Board of Education. It is evident that active steps cannot be taken until the regulations of the Secretary of State are issued, and the various officers are appointed by the Board of Control who are to assist the Board in the discharge of its duties under the Act. One of the first duties of the Board of Control, obviously, will be to examine and approve of institutions which may have charge of defective persons and to arrange for the grants and other matters connected therewith. The Board also may establish and maintain institutions; but, generally, it is contemplated in the Act that contribution to the expenses of local authorities in connexion with the provision and maintenance of institutions will be the usual mode of procedure. The regulations to be made by the Secretary of State cover a large number of subjects with respect to the management, character, and approval of institutions, as well as their inspection, the classification of patients and matters relating to their notification, transfer, discharge, and many others. It is evident that the machinery for the carrying out of the provisions of the Act will require considerable time and care in its preparation, but the work will doubtless be greatly facilitated owing to the fact that the Act as a whole received the approval of all political parties.

INFANT HYGIENE IN THE MEDICAL CURRICULUM.

THE National Association for the Prevention of Infant Mortality and for the Welfare of Infancy has issued a report by its executive committee, of which Sir Thomas Barlow is chairman, on infant hygiene in the medical curriculum. The report states that the committee has made inquiries of all medical schools and children's hospitals in the United Kingdom where teaching is given as to the present or proposed facilities for the teaching of infant hygiene. These institutions number fifty-one and replies were received from twenty-seven. In four cases (Manchester, Glasgow, Dublin, and Belfast) a course and certificate of special attendance and instruction are required. In six cases (Guy's, Middlesex, St. Batholomew's, Westminster, King's and University Hospitals, London) there is a special department or course of instruction in this subject. At the Royal Free Hospital for Women, London, a weekly infant clinic is to be opened this year. At two special hospitals (Evelina and Great Ormond Street, London), as at the West London Hospital and other hospitals without medical schools, and in the comprehensive course held annually in London under the National Association for the Prevention of Infant Mortality, special instruction is given to graduates. In the remaining medical schools returning replies instruction is considered to be given in the general curriculum of the hospital, sometimes by the physicians, sometimes by the surgeons, sometimes by the obstetricians and gynaecologists, and sometimes by lecturers on general hygiene. The committee expresses the opinion that the preventive aspects of infant hygiene are inadequately appreciated, that sufficient attention is not given to the teaching of the home management of infants, and that the whole subject of infant hygiene holds too subordinate a position in the medical curriculum. It therefore recommends (1) that degree and licence conferring bodies should require from each candidate for the final examination in medicine a certificate of having attended a course of clinical instruction on infant hygiene, to include lectures or demonstrations on the management of infants, and the prophylaxis and treatment of infantile diseases; (2) that such a course should include instruction in the part played by the State in infant hygiene, with special reference to the duties and functions of the medical practitioner, the midwife, the hospital and local sanitary authorities, and the health visitors, and (3) that the certificate required from candidates in midwifery for the final examination should include evidence that they have received instruction in ante-natal pathology and hygiene, and in the management of infants during labour, the puerperium, and the period of lactation. In concluding its report the committee states that the machinery for such a course of instruction already exists in most of the leading centres, and that with a little organization and with a few modifications the existing arrangements could be made to afford the instruction outlined in the report.

HOSPITAL STATISTICS.

THERE is a growing belief that the failure to systematize and render available for those engaged in the study of medical and social problems the statistics accumulating in our hospitals is a serious evil. There are more than 180 institutions in the metropolis from which data might be obtained; confining our attention to the general and special hospitals, excluding fever hospitals, the number exceeds 90, with about 11,000 available beds, used by upwards of 135,000 in-patients annually, the population of a considerable town. Our descendants will think it strange that the possibility of combining these data has been so long neglected. What was perhaps needed to focus attention upon this matter was a practical illustration, and Dr. Hoffman's work on the statistical experience of the Johns Hopkins Hospital[1] appears opportunely. This monograph, appropriately dedicated to Sir William Osler, whose interest in medical statistics is well known, deals with the Johns Hopkins experience from 1892–1911. Following a clearly-worded introduction, in which some of the difficulties inherent in the task of analysing hospital data are described, and a full but rather unsystematically arranged bibliography, we have a detailed tabulation of the experience. This tabulation, which fills more than a hundred pages, reveals many points of interest; thus it is curious to note that while the admission rate of females per 10,000 of population is less than that of males in the case of the white population, the female

[1] *The Statistical Experience Data of the Johns Hopkins Hospital, Baltimore, Md., 1892–1911.* By F. L. Hoffman, LL.D., F.S.S. The Johns Hopkins Hospital Reports Monographs. New Series. No. IV. Baltimore: The Johns Hopkins Press. 1913. (Sup. roy. 8vo, pp. 163. 2 dols.)

admission rate being only 88 per cent. of the male rate, the reverse relation holds in the case of the coloured population, among which the female rate is 136 per cent. of the male rate. Tabulating fatality rates on the basis of the number of patients treated, it appears that with the exception of obstetrical cases, the rates are all higher among the coloured patients, the difference being most striking in the instance of medical admissions among females; the fatality rate for white women in this group was 5.3 per cent., for coloured women it was 15.9. The respective figures for surgical cases are 5.5 and 7.4. As Dr. Hoffman observes, it may be laid down as axiomatic that general hospital fatality rates, unless corrected for age, sex, and kind of treatment, are misleading. The general impression left on the reader's mind by Dr. Hoffman's monograph is that the data, although absolutely numerous, are still not extensive enough to permit of the detailed subclassification which is necessary before very important conclusions can be drawn. This is obviously an additional argument in favour of the co-operative treatment of hospital statistics, and in no way detracts from the merit of the author's performance.

THE UNIVERSITY OF FRASERBURGH.

In the Middle Ages some of the universities of Europe owed their origin to secessions of large bodies of students from one place to another. These migrations were due either to disputes with the town authorities or to the wish to be with some popular teacher. Thus a vast number of students went into the wilderness to sit at the feet of Abelard. According to Mr. Hastings Rashdall, a migration of this sort from Oxford in 1209 led to the establishment of a permanent university at Cambridge. About 1260 there was a similar exodus from Cambridge to Northampton. After three or four years of an existence much disturbed by the part the students took in the Barons' War, a writ issued in the king's name ordered the "entire cessation of the University of Northampton." Another determined effort to found a new university at Stamford was made by the Northern scholars of Oxford when worsted in their battles with the Southerners in 1334. "It required," says Hastings, "the most strenuous exertion of the royal authority to disperse the seventeen masters who persisted in lecturing in spite of the royal prohibition; and until within living memory an oath not to lecture at Stamford was exacted from all candidates for the Mastership at Oxford." With these attempts to found new universities in England it is interesting to compare what happened in the North of Scotland in the sixteenth century. For a short time, besides King's College and the Earl Marischal's Academia at Aberdeen, there existed a third legally constituted university in Fraserburgh, a seaport at the north-east corner of Aberdeenshire. On July 1st, 1592, Sir Alexander Fraser, lineal ancestor of Lord Saltoun, obtained from James VI a grant of lands in that region to be called the burgh and port of Fraser. The deed also granted to him full power and liberty of erecting the college or colleges within the said burgh of Fraser and of erecting a university to which "the usual immunities and privileges were given in the fullest form and in due manner in all respects as is given and granted to each college and university erected or to be erected within our kingdom." Sir Alexander Fraser forthwith set about the erection of buildings for his university. Five years later the Scottish Parliament, on the ground that he has "begwn to edifie and big vp collegis, quhilkis nocht onlie vill tend to the great decoirement of the cuntrey, bot also to the advancement of the loist and tint youthe in bringing them vp in leirning and vertew," decided that he should be reimbursed for part of the "exhorbitant and large expenses" to which he had been put in carrying out his design. From 1600 the work of the newly-founded college went on without interruption for five sessions, but in 1605 the ecclesiastical troubles of the time brought it to an untimely end. The history of this short-lived university has been written by Mr. P. J. Anderson, librarian to the University of Aberdeen.[1] After 1605 no trace of the university is to be found. As late as 1793 a portion of the college buildings consisting of a quadrangular tower of three stories, was still to be seen in Fraserburgh. This tower was demolished many years ago. A large house to the left on entering the town is said to have been built of materials taken from the college. Four stones built into the front of this house bear inscriptions, probably renewed at the time of the removal. These are:

Trust in God, for He is good;
His mercy is for ever.
Give Him thanks for all you have,
For He is the only giver.

These stones are all that remains of the University of Fraserburgh. There is no record of the nature of the course of study there, but in all probability it did not differ in any essential details from those of King's and Marischal. It is not easy to guess the reasons which led to the foundation of a university in such an out-of-the-way place, especially as, in view of there being two others less than fifty miles away, it was superfluous. Some say that it was founded as a place of refuge when the plague was raging in Aberdeen. To others it may not seem rash to conjecture that Sir Alexander Fraser may have wished to found a university in rivalry to the Earl Marischal.

VENTILATION OF THE HOUSE OF COMMONS.

CONSIDERABLE interest has been aroused amongst members with regard to certain instruments which have been placed on the Government side of the House, and attention was drawn to them on March 17th by a question put by Mr. Vincent Kennedy. Professor Leonard Hill, F.R.S., has been conducting some experiments for the Committee on Ventilation, and two pieces of recording apparatus have been fitted on a pillar in one of the seats below the gangway on the Government side of the House. They are intended to show the rate of cooling at the foot and head levels respectively, and it may be mentioned that the one at the head level is known to members as "the bird-cage" and the one at the foot as "the mouse-trap." One of the chief complaints from members has been that owing to the fact that the air is forced up through the floor, the feet get cold and the head hot. We understand that the apparatus devised by Dr. Hill, in conjunction with his colleague, Mr. Griffith, the electrician at the London Hospital, provides automatic records of the rate of cooling at the foot and head levels respectively, and that these records confirm the impressions of members and show that the cooling near the floor is much more rapid than is the case in ordinary healthy circumstances outside. A meeting of the Ventilation Committee was held on Thursday, March 19th, and the time of the Committee appears to have been occupied for the most part in hearing the evidence of members from different parts of the House.

SALVARSAN IN THE GERMAN NAVY.

PROFESSOR EHRLICH'S sixtieth birthday (March 14th), as is the prevalent German custom, was celebrated in many pleasant ways in all scientific circles within, and in not a few without, the empire, but none will have afforded that distinguished savant greater pleasure than the perusal of special editions in his honour of the leading medical journals. The *Muenchener medizinische Wochenschrift* published no fewer than eleven original papers on the subject of salvarsan, and among them one from the pen of a high naval and scientific authority, Dr. Gennerich (Kiel), who has written a great deal on syphilis in the German navy. The present essay, which deserves a place beside the equally careful and conscientious reports

[1] *Crown and Tower.* Edited for University Union Bazaar by J. S. Shewan, Alex. Brown, M.A., B.Sc., C. J. Beattie, M.A.

of Colonel Gibbard and Major Harrison, of the Royal Army Medical Corps, is greatly to his credit, and affords yet further striking proof of the value of Ehrlich's gift to humanity. Gennerich has the great advantage of official and prolonged control of a very large number of cases. His paper is based on 1,200 cases, and embraces a period of three years and eight months, during which he maintained constant supervision by means of physical examination, serum reactions, and, latterly, lumbar puncture. The effect of salvarsan may be gauged in perspective from the fact that there have been no fewer than 17 proved reinfections within periods (under the strictest serological control) varying from three months to a year after the cure of the first infection. Gennerich divides his material for statistical purposes into three periods, which differ both in the numbers treated and in the method of administration adopted. It will suffice here to state shortly that intramuscular injections alone, or combined with intravenous, were given from July, 1910, to March, 1911, and that in the next period—from March, 1911, to March, 1912—the various technical and other difficulties of the intravenous method were overcome, so that since the latter date he has gradually reduced the administration to a most simple procedure, in which only 1 per cent. of the cases (not the injections) develop a subsequent reaction. He has never seen a case of optic or auditory mischief after salvarsan, and says that the two deaths, observed since the commencement of salvarsan therapy in 1910, could not occur with modern precautions. The most important points in the treatment of syphilis are well summarized in his conclusions, and include the advice to abort primary syphilis by salvarsan in every case, but that syphilis of longer duration should be submitted to the intermittent method of salvarsan and calomel injections. Latterly the endolumbar injection every three weeks of 6 to 8 c.cm. of a solution of 0.15 neo-salvarsan in 300 c.cm. sterile normal saline, with equal parts of the liquor, has proved efficacious in his hands, and in sixty-seven injections for central nervous disease there have been no disturbances and considerable improvement of symptoms. The introduction of lumbar spinal injections is the last phase in salvarsan therapy, and seems to be thoroughly established as an immense advance in practical therapeutics as well as a striking example of the application of scientific methods of investigation to the discovery of new remedies.

MUSCULAR ACTION IN WRITING AND PIANO PLAYING.

There is a story of some one in Edinburgh who used to watch in a sort of fascination the shadow, on the blind of a window opposite, of a hand ceaselessly writing far on into the night. This was Walter Scott in his valiant struggle to rid himself of the load of debt which was bearing him down in the last few and evil days of his glorious life. Sir Walter wrote fast, but as far as we know there is no record of the number of words written by him in a given time. It is certain, however, that apart altogether from the intellectual strain of production the work of his hand with the pen must have been enormous. A writer in *Le Rappel* has attempted to measure the muscular expenditure represented by the work of the hand in the act of writing. He says that any person practised in the use of the pen can write on the average thirty words a minute—that is, 1,800 an hour. This, with curves and inflections, represents a length of 300 metres an hour, 3,000 metres in a day of ten hours, or 1,095 kilos (or nearly 700 miles) in a year. Moreover, in writing thirty words a minute, the pen makes on an average 480 curves and inflections, or 28,800 an hour, 280,000 in ten hours—that is, 150,020 kilos, or nearly 100,000 miles a year. If this calculation is even approximately correct, the wonder is that writer's cramp should not be almost universal among slaves of the pen. Sir James Paget once made a calculation of the muscular work done by an accomplished pianist in playing. He told the story in the annual address to the London University Extension Students in 1888.[1] He says: "Mademoiselle Janotha was so good as to play on the piano, at my request, one of the swiftest pieces of music known to her, a *presto* by Mendelssohn. The time it occupied was taken, and the number of notes was counted. She played 5,995 notes in four minutes and three seconds; rather more than twenty-four notes per second. We may, from this, estimate approximately the number of what we may call nervous vibrations transmitted during a given time to and from the brain; from the brain to the muscles, and from the muscles and the organs of hearing and of touch to the brain. Each note required at least two voluntary movements of a finger, the bending down and the raising up; and besides these there were a very large number of lateral movements to and fro of the fingers, as well as many and various movements of the wrists, elbows, shoulders, and feet. It was not possible to count these, but I think I can be sure that they were not less than at the rate of one movement for each note, making altogether not less than three voluntary movements for each note, even if we allow for the chords in which several notes were struck at the same instant. Certainly there were not less than seventy-two distinctive variations in the currents of nerve force transmitted from the brain to the muscles in each second, and each of these variations was determined by a distinct effort of the will. And observe—for herein may seem a chief wonder—each of these movements was directed by the will to a certain place, with a certain force, and a certain speed, at a certain time; and each touch was maintained for a certain length of time. Thus there were, as we may say, five distinct and designed qualities in each of the seventy-two movements in each second. Moreover, each of these movements, determined by the will and exactly effected by transmission of nerve-force from the brain along nerve fibres to the muscles—each of these movements was associated with consciousness of the very position of the finger, each hand, each arm, and each foot, before it was moved and while moving it, and with consciousness of the sound of each note and the force of each touch. Thus there were at least four conscious sensations for each of the twenty-four notes in each second; that is, there were at the rate of ninety-six transmissions of force from the ends of nerve fibres, along their course to the brain, in each of the same seconds during which there were seventy-two transmissions going out from the brain along other nerve fibres to the muscles. And then, add to all this, that during the time, in each second of which the mind was conscious of at least ninety-six sensations, and directed not less than seventy-two movements, it was also remembering each note to be played in its due time and place, and was exercised with the judgement, in the comparison of the playing of this evening with those of time before, and with some of the sentiments which the music was intended to express. It was played from memory, but Mademoiselle Janotha assures me she could have played it as swiftly at sight, though this would have added another to the sensations associated with each note."

THE OPHTHALMOLOGIST AND THE PHYSICIAN.

In the present day there is so great a tendency to specialize in all branches of medical science that it is sometimes difficult to remember how dependent one branch is on the other. It is well at times to be reminded of this, and with regard to the relation of ophthalmology to general medicine, a paper read by Dr. C. O. Hawthorne at the Oxford Ophthalmological Congress last July, and since published, may be studied with advantage. He points out the great need there is for physicians to make

[1] Memoirs and Letters of Sir James Paget. Edited by Stephen Paget. London. 1901. P. 375.

an ophthalmological examination as much a routine as an examination with the stethoscope, and he justly emphasizes the point that, if this were done, physicians and surgeons would very soon realize that it is as a rule altogether unnecessary to dilate the pupil before using the ophthalmoscope. The opinion that it is useless to attempt to examine the fundus oculi without dilating the pupil seems to be commonly held, whereas the real fact is that any one who will gain a little experience in the method will find that it is quite possible in the great majority of cases to ascertain what he wants to know without using a mydriatic. It should only be in those cases in which the pupil is unusually small or when it is desired to see the macula very specially that dilatation should be necessary. The physician is apt to think, for instance, that in certain forms of kidney disease the retina is affected only in the late stages, whereas the ophthalmologist is apt to think kidney disease is usually to be recognized by changes in the retina. Both these ideas carried to this extreme are wrong. The fact really is that the physician should never omit to examine the eyes in all cases in which renal disease is suspected. Ocular palsy and hemianopsia are just as much examples of nervous disease as cases of wrist-drop or hemianaesthesia. For the ophthalmologist to treat ocular palsy with potassium iodide, or merely to diagnose which muscle is involved, is neither rational therapeutics nor scientific investigation. All such cases fall within the domain of the physician, who should train himself adequately to investigate them. To be fully familiar with the conditions revealed by the ophthalmoscope should be the aim, as it is the bounden duty, of the physician, and the ophthalmic surgeon should also recognize that many of the patients who come to him with eye symptoms really require full investigation by the physician.

THE STANDARDIZATION OF TETANUS ANTITOXIN.

THE employment of antitoxin for the prevention and for the cure of tetanus cannot be followed by the best results unless the optimum doses are given. In the case of antitoxins the comparable doses must be expressed in terms of units, which correspond to the amount of serum required to neutralize a given amount of standard toxin. The Ehrlich method of standardization of diphtheria antitoxin, which on the whole works satisfactorily, cannot be utilized for tetanus antitoxin. In October, 1907, the United States Government issued a circular defining the unit to be applied to tetanus antitoxin. Dr. A. MacConkey,[1] who has investigated the reliability of the American method, reports favourably on it. The definition of the unit is "ten times the least quantity of antitetanic serum necessary to save the life of a 350 gram guinea-pig for ninety-six hours against the official test dose of a standard toxin furnished by the Hygienic Laboratory of the Public Health and Marine Hospital Service." Dr. MacConkey gives an account of the technique prescribed for the standardizing tests, and as the result of his experiments concludes that, provided the method be employed with care and the tests repeated from time to time, it may be regarded as simple, accurate, and reliable. It is to be hoped that it will be accepted in all countries for general use. The value of antitoxin as a curative agent can only be ascertained if the records of cases contain a statement of the number of units injected. If the unit varies according to the method of standardization no comparison can be made. It is obvious that records giving the number of cubic centimetres injected have no value unless a statement be made of the unit strength of the sample used. When a uniform unit has been adopted and all records give the dosage in terms of the unit, we may expect that the optimum dose may be established.

[1] *Journal of Hygiene*, vol. xiii, No. 4, January 16th, 1914.

THE WASSERMANN REACTION.

THE *Berliner klinische Wochenschrift*, in its number issued in honour of the sixtieth anniversary of Ehrlich's birth, published an article by Professors v. Wassermann and Lange on the nature of the Wassermann reaction. It is notorious that authoritative opinions on this complex problem are at variance, and disputes on the question of its specificity for syphilis still arise from time to time. In attempts to solve the difficulty blood serum only has hitherto almost exclusively been tested, and, as Wassermann points out, blood serum cannot, owing to its high content of albumin, be entirely freed from substances which are responsible for the phenomenon of autoinhibition (*Eigenhemmung*). He has therefore utilized the cerebro-spinal fluid of patients with general paralysis, and by centrifugalization has reduced the essentials into two component parts—the fluid and the lymphocytes. The latter were kept at 56° C. to encourage autolysis, and it was found that at this temperature the substances specific for the reaction were set free. Control experiments with lumbar fluid from patients with other diseases, and also containing a pathological excess of cells which were similarly allowed to autolyse, were consistently negative. The authors therefore conclude that the reaction is specific, and that the substance or substances responsible for it are contained in the lymphocytic elements of the cerebro-spinal fluid.

TENURE OF MEDICAL OFFICERS OF HEALTH.

THE deputation arranged by the British Medical Association and the Society of Medical Officers of Health, to press for security of tenure for medical officers of health and for superannuation, will be received by the President of the Local Government Board (Mr. Herbert Samuel), the Chancellor of the Exchequer, and the Minister for Education (Mr. Pease), in the Chancellor's room in the House of Commons on Tuesday, March 31st, at 5 o'clock. The deputation will be introduced by Dr. Addison and Sir Philip Magnus.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Smoke Abatement.—In the House of Lords on Tuesday Lord Newton moved the second reading of the Smoke Abatement Bill, which he said had the support of various smoke abatement societies and municipalities. As he saw no hope of the bill becoming law this year he asked the Government to institute an inquiry. Lord Curzon said that in Calcutta legislation had reduced the amount of black smoke by 80 per cent., and that similar legislation was urgently needed in this country, where over 200,000 tons of sulphur were poured out of the chimneys, and 76 tons of soot descended from the sky.—Lord Allendale said that the President of the Local Government Board proposed to appoint a strong Departmental Committee to examine into the present state of the law, and to make proposals for the consideration of Parliament. He hoped that all interests concerned would take part in the inquiry.

Experiments upon Living Animals.—Mr. Chancellor asked the Secretary of State for the Home Department whether he was aware that the annual return of vivisectional experiments had for the past two years been published too late to allow of prosecution for breaches of the law by vivisectors; and whether he would arrange for its publication this year not later than the month of May.—Mr. McKenna, in answer, referred to the replies he had given to similar questions on July 21st, 1913, and July 8th, 1912. Much labour was involved in the preparation of the return, and he could not promise more than that it should be publi he l

as early as possible. The date of the publication of the report did not in any way affect the power to institute proceedings for contraventions of the Act, so far as the Home Office was concerned, as they were reported to the Secretary of State as soon as they were discovered. Mr. Chancellor asked whether the Chancellor of the Exchequer had received the resolution passed at a public meeting held in Hampstead Town Hall on March 10th, presided over by Mr. Cathcart Wason, which protested against the use of the Mount Vernon Hospital for the vivisection of animals.—Mr. Benn said that the resolution had not been received and that the Chairman of the Joint Committee had not yet received from the committee their scheme of research work to be undertaken at the place mentioned, so that he was not yet in a position to consider any matters that might be included in such a scheme. Mr. Cathcart Wason asked whether the Medical Research Committee under the National Insurance Act had acquired Mount Vernon Hospital, Hampstead; and, if so, whether this hospital was to be used solely for the reception and treatment of tuberculosis patients, or was also to be used for purposes of experimental research, including experiments on living animals.—Mr. Benn replied to the first paragraph in the affirmative, but he could not yet add anything to the reply he had just given on the same point.

Cocaine Traffic (India).—In reply to Sir Herbert Roberts, the Under Secretary of State for India (Mr. C. Roberts) said that the Secretary of State was aware of the growth of the cocaine traffic in India, and knew that considerable quantities of the drug were imported from Germany. He was afraid that any international arrangements for the suppression of the illicit traffic in cocaine must await the ratification and coming into force of the Hague Opium Convention. His Majesty's Government was doing all it could to secure the general and early adoption of the Convention. In further reply, Mr. C. Roberts said that he expected that the Convention would be ratified at an early date, and that legislation was being considered and framed with a view to carrying out its provisions.

Opium Imports and Exports.—In reply to Mr. Robinson, Mr. Burns said in the last five years the annual imports of opium had averaged 528,000 lb., and the exports (including a small quantity dried and powdered in the United Kingdom) 235,000 lb., leaving a net quantity of 293,000 lb. A large proportion of this was used in the manufacture of morphine and morphine salts for export, but there were no available statistics as to the quantity actually retained for consumption in the United Kingdom, nor as to the purposes for which, or to the persons to whom, it was distributed.

Sight Tests.—Mr. Lynch asked the President of the Board of Trade how many men had failed in the colour vision test since the adoption of the lantern, and how the results compared with those formerly obtained, and what was the percentage of men who had failed with the lantern test and passed the wool test.—Mr. Burns said that a return would be presented to Parliament shortly which would give full statistics as to the sight tests during the period from April 1st, 1913, when the new colour vision tests came into force, until December 31st, 1913.

School Dental Treatment.—In reply to Mr. C. Bathurst, Mr. Trevelyan stated that the number of local education authorities which had established school clinics limited to treatment of dental defects was seventeen. The number of these clinics was twenty-nine. There were about 200 school clinics of all kinds.

Medical Service, St. Kilda.—In reply to Mr. James Hogge, the Secretary for Scotland (Mr. McKinnon Wood) said that the Highlands and Islands (Medical Service) Board had decided, as a temporary and experimental measure, to send a fully qualified nurse to St. Kilda as soon as arrangements could be made for her to reside there.

Overcrowded Houses.—Mr. Astor asked the number of houses in England and Wales which were overcrowded on the basis of more than two persons to a room.—Mr. Herbert Samuel said that the number of separate houses overcrowded had not been ascertained, tenements being the correct basis for an inquiry of this kind. The census figures of 1911 showed the numbers of separate families and the population overcrowded, on the basis of more than two persons to a room, as follows:

Rooms in Tenement.	Number of Families.	Population.
1	57,835	211,770
2	135,092	804,071
3	130,272	1,023,925
4	81,811	792,716
5	22,484	260,246
6	3,097	41,770
7	294	4,503
8	16	288
9	9	183
Total 1-9 rooms	430,910	3,139,472

Milk Supply (Analysis).—Mr. Astor asked the President of the Local Government Board whether his attention had been called to the results recently obtained by experiments carried out at the Lister Institute in an analysis of samples of milk supplied by high-class milk shops in the West End of London; whether the milk sold for 6d. a quart as nursery milk had been found to contain as many as 6,500,000 bacteria per c.cm.; and whether such milk was considered by the Local Government Board to be suitable for consumption by infants.—Mr. Herbert Samuel replied that he was aware of the statements recently made in the press respecting the examination of certain samples of milk. As he had already indicated, the whole question of milk supply was receiving close attention. In reply to a further question by Mr. Astor, Mr. Samuel said that in the year 1912, the latest year for which complete information was at present available, samples of milk were taken for analysis by every local authority under the Sale of Food and Drugs Acts. The number of samples of milk and cream taken during the year was 52,501.

Vaccination.—Mr. Albert Smith asked why it was found necessary to perform 4,806 primary vaccinations on the children of soldiers in 1912, seeing that only 2,747 such operations were carried out in 1911.—Mr. Baker said that the figures given in the report on the health of the army for 1912 included the army abroad as well as at home. Previously only those for the United Kingdom were given. The figure for 1912, corresponding to that for 1911, as stated in the question, was 2,826. In reply to Mr. J. P. Farrell, Mr. Herbert Samuel said that lymph prepared in the Government lymph establishment was not exported to any of the British possessions for general use, but it was sent from time to time for use by the army and navy. Among the places to which it had been sent were Bermuda, Gibraltar, Jamaica, Malta, Cape Town, and Sierra Leone.

Suffragists (Prison Treatment).—Mr. Astor asked the Home Secretary whether Miss Brady was given bromide or any other hypnotic drug whilst in Holloway.—Mr. McKenna replied that neither bromide nor any other hypnotic drug was given to Miss Brady while she was in Holloway.

Petrol Tax.—Sir J. D. Rees asked why commercial travellers, using motor cars for the purpose of carrying out the duties of their business, were not allowed the same abatement on their petrol as was granted to medical men in the like circumstances.—Mr. Lloyd George replied that all users of trade motors were entitled to a rebate of half the duty on their petrol under the conditions specified in the 5th Schedule to the Finance (1909–10) Act, 1910, and commercial travellers, in common with other traders, were eligible for this rebate.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENT.]

LONDON.

LONDON COUNTY COUNCIL.

Additional Medical Treatment Centres.

THE London County Council has considered proposals by the trustees of the St. Mary, Newington, United Charities for the establishment of a dental department for elementary school children in Newington and Walworth. In response to representations as to the direction in which medical treatment would be most advantageous in the district, the trustees expressed their willingness to include eye treatment and breathing and remedial exercises. The Education Committee stated that special dental inspections of children of 6, 7, and 8 years of age would be conducted in neighbouring schools; preference would be given to children of these ages, but children above 8 years of age would not be excluded. The cost of the scheme would be about £700 a year, and would render necessary the appointment of a dentist working for five sessions a week (each of two and a half hours) at a salary of £200 a year; an anaesthetist at a salary of £50 a year for one session a week; a medical practitioner to attend the centre on one session a week of two hours' duration to see the children referred for remedial or breathing exercises; an instructor at a salary of £80 a year to train children in remedial and breathing exercises; and a nurse to assist the dentist. The Council would bear almost all the cost of salaries in respect of dental treatment, but none of the cost of remedial and breathing exercises. The Board of Education has been asked to approve an aided scheme of treatment on the lines indicated above.

On March 24th the Council decided to enter into an agreement with the Wandsworth Committee of local practitioners for the establishment of a centre in Tooting for dental and ringworm treatment (by *x* rays) to relieve the pressure on accommodation provided for school children at the Wandsworth treatment centre. The cost in the first year was estimated at £790 and in subsequent years at £665, the numbers to be provided for being 1,540 dental cases and 176 ringworm cases.

Reorganization of the School Medical Service.

In order to meet the view of the Board of Education that the efficiency of the school medical service may suffer unless greater variety is introduced into the work of school medical officers, and to meet a further suggestion by the Board that in certain respects the arrangements for medical inspection were capable of improvement,[1] it has been decided to divide the county into five districts instead of four, the staff of each division to be under the control of a divisional officer, and to consist of a nucleus of permanent medical assistants, the remainder of the staff consisting partly of full-time temporary medical assistants appointed for three years only, and partly of temporary part-time medical inspectors. The part-time doctors would only be engaged for three half-days a week, and their duties would be practically confined to inspection, so that there would be additional opportunity to vary the work of the permanent officers. The Board of Education suggested that their duties might be extended to include further examination of visual defects, public health work, including investigations of infectious diseases in schools, medical inspection of children in secondary schools, scholarship candidates, etc., work in connexion with special schools, research and laboratory work, and some share in the working of the administrative arrangements. Furthermore, in order to earn the full 50 per cent. grant towards the cost of medical inspection and treatment, the Board required that provision should be made for completing the scheme of reinspection of children found defective, including the continuous observation of tuberculous children, for special examinations in connexion with visual and aural defects and cases requiring nursing treatment, and for more complete control of outbreaks of infectious disease.

The Education Committee, reporting to the Council on March 24th, proposed that, as from April 1st, 1914, there should be five divisional medical officers at a commencing salary of £500 a year, rising by annual increments of £25 to £600; fifteen full-time permanent medical assistants (three in each district) at salaries commencing at £400 a year and rising by annual increments of £25 to £500 a year; twenty full-time temporary medical assistants at salaries of £400 a year, and eighteen quarter-time school doctors at salaries of £132 a year. The last two classes were only to be appointed for a period of three years. The cost of the increases in staff would be £6,083 in 1914–15 and £7,271 a year ultimately. The Council approved appointments and rearrangements of the school medical staff in order to fill the positions indicated above, passing the following resolutions:

(*a*) That Mr. J. G. Forbes, Mr. A. W. Sikes, and Mr. F. W. Higgs, medical assistants in the public health department, be designated "divisional medical officers."

(*b*) That Mr. F. C. Lewis (£450), a medical assistant in the public health department, be promoted to be a divisional medical officer, at the commencing salary of £500 a year, rising by annual increments of £25 to £600 a year.

(*c*) That the salary (£400 a year since September, 1913) of Mr. T. J. T. McHattie, a medical assistant in the public health department, be increased to £425 a year.

(*d*) That Mr. A. R. Cowell, Mr. H. F. Marris, Dr. R. H. Norman, Dr. W. J. M. Slowan, Mr. A. G. Wells, be appointed medical assistants in the public health department, each at a commencing salary of £425 a year; Mr. L. R. Tosswill, Miss Mabel Russell, and Dr. F. T. H. Wood, to be medical assistants, each at a commencing salary of £400 a year, rising in both instances by £25 a year to £500 a year.

(*e*) That the services of Miss Ruth Balmer, Mr. E. J. Boome, Mr. Cresswell Burrows, Mr. A. M. Davies, Miss J. G. Duncan, Miss M. G. Edis, Miss M. C. Macdonald, Miss E. M. McVail, Mr. E. F. Palgrave, and Mr. O. H. Peters, be temporarily retained for a period not exceeding three years, as medical assistants in the public health department, each at a salary at the rate of £400 a year.

(*f*) That the services of Mr. C. F. Hadfield, Miss Rose Jordan, Mr. F. S. Langmead, Mr. E. J. Morton, Mr. E. B. Smith, and Mr. Oliver K. Williamson, be retained for a period not exceeding two years as quarter-time school doctors each at a salary at the rate of £132 a year.

The list of appointments was completed on March 25th, when the Education Committee of the Council passed the following resolutions:

1. That Mr. R. Browne-Carthew, Mr. E. T. H. Lea, Mr. W. Macewen, Miss M. J. Pirret, Mr. A. B. Raffle, Miss Olive Robertson, Miss D. L. Schwabe, Mr. P. L. Vawdrey, Mr. N. H. Walker, and Mr. S. B. Walsh be temporarily employed as medical assistants in the public health department for a period not exceeding three years, as from April 1st, 1914, each at a salary of £400 a year.
2. That Mr. R. R. Armstrong, Mr. G. C. Chubb, Mr. F. G. Crookshank, Mr. F. S. Dawe, Mr. O. Eichholz, Miss C. A. King, Mr. T. M. Martin, Miss E. M. S. Mecredy, Mr. W. J. Morrish, Mr. A. J. S. Pinchin, Miss B. Tchaykovsky, Mr. S. Verdon-Roe, and Miss H. K. Whittingham be temporarily employed for a period not exceeding two years as quarter-time school doctors, each at a salary of £132 a year.

Medical Inspection of School Children.

During the period from August 1st to December 17th last, 80,619 children attending elementary schools were inspected by the school doctors, and 32,856 were found to require treatment.

Home Environment and Mentality.

Permission has been given for the school organization to be used in connexion with investigations which Mrs. Frances Wood desires to carry out in certain schools with the object of ascertaining whether there is any correlation between the home environment of a child and its mental ability and physical characteristics. The work is to be carried out in the statistical laboratory of the Lister Institute of Preventive Medicine under the direction of Mr. Major Greenwood, junr.

BIRMINGHAM.

MEMORIAL TO THE LATE PROFESSOR JORDAN LLOYD.

AT the Queen's Hospital, Birmingham, on March 19th, there was unveiled a marble bust of the late Professor Jordan Lloyd, who had been for thirty years honorary surgeon to the hospital. The ceremony, which took place at the conclusion of the annual meeting of the governors, was performed by Alderman Clayton, in the absence of the Earl of Dudley. At the same time Alderman Clayton named one of the surgical wards "The Jordan Lloyd

[1] BRITISH MEDICAL JOURNAL, August 2nd, 1913, p. 278.

Memorial Ward." The bust, which stands on an oak pedestal, was executed by Mr. Albert Toft, and is the gift of Mr. Dudley Docker, an intimate friend of the late Mr. Jordan Lloyd.

Before the unveiling ceremony was performed Professor J. T. J. Morrison, senior surgeon to the hospital, said the statement which he was called upon to make was the introduction to a ceremony for which there was no exact precedent in the history of the hospital. Several years ago they placed in the medical building a memorial to a valued friend and physician, Arthur Foxwell, but they were now making a new departure in attaching the name of Jordan Lloyd to an important surgical ward. The proceedings were at once sad and pleasing, sad because they were reminded of their grievous loss and pleasing because they were permitted to pay a tribute to the memory of an eminent surgeon who was to all of them a personal friend. The occasion was unique, and it was so because it was connected with a man who was himself unique. Professor Morrison briefly sketched the early life of Mr. Jordan Lloyd, remarking that the circumstances of his youth gave him no help in the form of adventitious favours of fortune, so that his rapid advance to a leading position in the medical profession was entirely due to his own industry and endowments. He held the post of surgeon to the hospital for thirty years with the highest distinction, for he was one of the foremost surgeons of the time. The extent and depth of his surgical knowledge were remarkable. Personally, he had never met his superior in the art of diagnosis, nor had he ever met his peer as a brilliant operator. Working, as he did, for many years at three public institutions—the Queen's Hospital, the Children's Hospital, and the Infirmary—it was quite safe to say that no surgeon in England had performed a larger number of major operations. There was no scale of values by which the worth of Jordan Lloyd's gratuitous hospital work as a benefaction to the community could be computed. When the increasing need for hospital treatment and the abundant supply of gratuitous professional services available were remembered, it was a matter of surprise that the income was not greater. Let them try and estimate, if possible, the claims of such a life-work as that of Jordan Lloyd upon the community. There was, he ventured to suggest, an unpaid debt of gratitude yet due to the Queen's Hospital from the public of Birmingham. But what was uppermost in their minds now was not so much what Jordan Lloyd did as what Jordan Lloyd was in himself. He was a man of genius, with the rare adjuncts of a sunny disposition and common sense. His strong and clear intellect made him distinguished even in the society of men of first-rate ability: but in addition to his mental gifts he was a man of great courage, of great tenacity of purpose, and possessing a keen sense of truth and justice. All those elements of character, which were very seldom found so developed and assembled in one person, were pervaded with the warmth of a genial soul, whose unfailing currents of cheerfulness and good-humoured mirth made him one of the most delightful companions. His uniform friendliness to all who knew him, high and low alike, was one of his most winning charms. He was always natural and unaffected, irrespective of the social position of the persons in whose company he happened to be, and his affectionate nature made him genuinely sympathetic towards his patients. The Queen's Hospital was a term which denoted a community of persons blended together into one body for a definite humane purpose. Of that body, Jordan Lloyd was a great part—in some respects the greatest single part; and his death was felt as a family bereavement by every one who worked at the hospital. They were the more affected because of the circumstances surrounding his death, for it was an undoubted fact that Jordan Lloyd literally gave his life in the efforts he made on the day of his death—and they were successful efforts—to recover the life of a patient who was in imminent peril. His influence upon those who were associated with him, and who had the great privilege of his friendship, could never be erased. Nevertheless, they welcomed the kindly desires of those who wished that his memory should be cherished in the scene of his devoted services. They were grateful, therefore, to all who had helped forward the proposals which were being carried into effect that day in a way that would be a daily challenge to remembrance and inquiry. By those means, although their friend had vanished, he would continue to exert a silent and beneficent force upon the purpose for which that hospital existed.

Treatment of Insured Persons at the Birmingham Eye Hospital.

Out of the 1,565 in-patients and 31,060 out-patients treated at the Birmingham Eye Hospital in 1913, 624 in-patients and 15,428 out-patients were persons insured under the National Insurance Act. The average stay of the insured patients in the hospital was 16.14 days, and as the average cost of each patient was £3 6s. 4½d. it was evident that great expense was incurred by the hospital in their treatment. Towards the expense not a single payment was received either from approved societies or the Insurance Commissioners.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Nurses' Registration in Scotland.

A meeting of the Association for the Promotion of the Registration of Nurses in Scotland was held in Edinburgh on March 19th. Lord Inverclyde presided, and several members of the medical profession were present. Dr. D. J. Mackintosh, M.V.O., the honorary secretary, presented the report for the year; 264 nurses had joined the association during the year, bringing the membership to 2,908; all the societies interested in the promotion of a bill for the State registration of nurses in Scotland, England, and Ireland had now joined hands and formed a central committee, which had appointed an executive committee; and the latter had issued literature. The advantages of registration were protection of the public as a whole; the prevention of the abuse of nurses' uniform without the stopping of untrained women from working; and the guaranteeing to medical practitioners and the public that in registered nurses they had women whose character had been fully tested, and whose training had been technically sound. Dr. J. M'Cubbin Johnston, the honorary treasurer, submitted the financial statement, and Lord Inverclyde moved the adoption of the report. He said they were glad the bill had been taken up by Dr. Chapple, M.P., and it was satisfactory that in Scotland they were absolutely unanimous in supporting it. Sir Halliday Croom seconded the adoption of the report, and stated that he would like also to see a bill passed for the registration of midwives in Scotland. At the present moment the position was nothing less than scandalous. Under the Insurance Act patients who were to have trained attendance were being attended by people who were without adequate knowledge, and these women were getting insurance fees which, properly, should go to authorized midwives. Dr. Renton (Glasgow), Miss Gill, and Sir James Affleck also spoke.

Health of School Children in Leith.

On the Leith school roll for the year ending July 31st last there were 13,938 children; non-routine examinations were made on 10,682 of them by the medical staff, and routine examinations were made on 2,295, and there were 3,028 cases dealt with clinically. All these figures marked an advance upon the previous year, and, further, only nine objections to the examinations were made by parents. These facts are given in the annual report just issued by the Leith School Board Medical Officer (Dr. A. S. Walker). This document goes on to state that the number of children who are suffering from tuberculosis is appalling. The scheme for the treatment of this disease, it is added, would be completed when there was an open-air school for children drifting towards tuberculosis, and for those others who, having received treatment, were going back to surroundings at home which were insanitary and to the confinement of the ordinary day school. A more hopeful note is struck in that part of the report which deals with "health, appearance, and nutrition." There had been a perceptible improvement in these matters, especially as regarded the infants, and the medical officer thought that this was due in some degree to the mothers applying to the younger members of the

family the advice which they had received regarding the elder children; free meals, too, had no doubt been helpful. The standard of cleanliness had also improved. A less happy state of things was revealed by the large number of children who had to be grouped as "physically defective," and a sinister fact was the increase in the number of children in whom no evidence of vaccination could be detected (31 boys and 33 girls).

Medical Inspection in Glasgow Schools.

The fourth annual report on the medical inspection of children under the Glasgow School Board has been issued by Dr. Ernest T. Roberts, the chief medical officer of the board. Of the total number of children examined during the year ending June 30th last, 67.3 per cent. were found to be normal, and 36.3 to be abnormal. If verminous cases were excluded, the abnormals were 28.1 per cent. The approximate number of children examined for the first time was 35,680, the boys numbering 17,540 and the girls 18,140. In the course of the session 22,606 re-examinations were made of children who had been classified as "abnormal," and 9,392 were found to be cured. If a child was found to be underfed, ill clad, dirty, or verminous the fact was intimated to the parent, and a card indicating how to ameliorate the condition was given. In the event of the parent's non-attendance at the medical inspection a nurse visited the home in order to convey to the mother the doctor's opinion and his directions in regard to the condition of the child. The underfed and ill-clad children reported by the school doctors in the session numbered 256, as compared with 363 in 1911–12, 646 in 1910–11, and 1,078 in 1909–10. During the session 19 centres for the supply of dinners to necessitous children were opened, and 133,844 dinners were supplied. Clothing (in some cases boots only) was supplied to 3,040 children. Physically defective children numbered 1,259, and mentally defective 1,114. In the Board schools 13,025 infants were examined by the oculist, and cards issued to 933, or 7.1 per cent.; 29,656 junior and senior boys were examined by teachers, of whom 7,728, or 26 per cent., were submitted to the oculist, the cards issued to boys being 1,657, or 5.5 per cent. Of 1,212 higher-grade boy pupils, 263, or 21.6 per cent., were submitted to the oculist, and cards issued to 53, or 4.3 per cent. In the other schools, of 3,473 infants examined, cards were issued to 311, or 8.9 per cent., and among 1,169 junior and senior boys, 357 cards were issued. Sixteen blind children were being educated, and there were 54 semi-deaf and semi-mute children attending the classes at Dovehill School.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Radium Institute for Dublin.

As was mentioned recently, the Royal Dublin Society has decided to establish a radium institute. The following committee has now been appointed to take entire charge of this institute: Sir Howard Grubb, Professor John Joly, Professor J. A. M'Clelland, Professor J. Mallett Purser, Professor A. Francis Dixon, Dr. W. E. Adeney, and Professor E. J. McWeeney. It is estimated that at least half a gram of radium will be required, which will cost about £10,000. The Royal Dublin Society has voted a sum of £1,000, and Lord Iveagh has promised a like sum. The radium is to be kept in the chemical laboratory of the society, and emanations derived from it will be available for therapeutic use and research by qualified medical men. Doctors receiving emanations for use in hospital work will be required to furnish confidential reports as to the results obtained.

Ulster Medical Society.

The seventh meeting of the society held in the Medical Institute, Belfast, on March 12th, was a clinical evening, when about thirty cases were demonstrated. The President, Professor Lindsay, Dr. Calwell, Dr. Donnan (Holywood), Dr. McKisack, Dr. Leathem, Mr. Kirk, Mr. Fullerton, Dr. Morrow, Dr. MacIlwaine, Dr. Williamson, Mr. Howard Stevenson, Mr. Crymble, Dr. Rowland Hill, and Mr. Irwin, all showed cases and explained the points of interest. Subsequently Dr. Leslie occupied the chair, and some of the cases were discussed.

On the evening of March 5th, the President of the Ulster Medical Society (Mr. A. B. Mitchell), and Mrs. Mitchell, entertained the members and their wives to an "at home" in the Medical Institute, Belfast. The large lecture room was handsomely decorated, and music and songs added to the enjoyment of the evening. Refreshments were provided in the library. The evening passed off most successfully and was greatly enjoyed by a large company.

Irish Workhouse Association and Boarded-out Children.

At a meeting of the Irish Workhouse Association, held in the Mansion House, Dublin, on March 20th, a discussion on the improvement of the Irish Poor Laws was opened by Mr. A. A. Dickie. The chairman said that the association was specially interested in the subject of the boarding-out of pauper and deserted children. It was anxious to have all pauper children boarded out instead of being reared in the workhouses. As a general rule, when the children were boarded out they learnt a trade, or became good servants and useful citizens, and scarcely ever evinced a desire to return to the workhouse. Mr. Dickie explained that at present boards of guardians in Ireland had nothing like the same power in reference to boarding-out children as the guardians in England: the Irish Workhouse Association was endeavouring to have the Irish system modified on the same lines as the English, and a one-clause bill was being introduced in the House of Lords on behalf of the association. At present the Local Government Board only permitted Irish boards of guardians to board out children who came within their schedule as "orphan and deserted." A great many more children could be so treated — for instance, those of vicious parents, who were likely to contract criminal habits. These children could only be maintained in the workhouse until they were 16 years of age, and the guardians had no power to board such children out at the expense of the ratepayers. There was a large number of such children in the Irish workhouses, particularly in the Dublin, Belfast, and other city institutions of this kind, and they were being reared amidst pauper surroundings. The object of the bill was to enable all such children to be boarded out with respectable foster parents, where they would be likely to learn trades, and grow into useful members of society; it would mean very little, if any, extra expense to the ratepayers. No opposition was anticipated to the bill, which was purely non-contentious and non-political.

Overcrowding in Asylums.

At the last monthly meeting of the Joint Committee of the Kildare and Carlow Lunatic Asylum, Dr. J. A. Greene, R.M.S., said that there were in the institution 276 males and 245 females. As the accommodation provided was for 419, including both males and females, the institution was overcrowded to the extent of 100 patients. This condition rendered the treatment of the patients very difficult, and reduced the prospects of recovery. It was decided to call a special meeting to discuss the matter.

At the last meeting of the Enniscorthy District Asylum Board, Dr. T. Drapes, R.M.S., reported that there were 562 patients in the house, 269 males and 293 females. Overcrowding had existed for a considerable time on the female side. If the admissions continued to increase in the same proportion as in recent years, it would become necessary to take measures to provide increased accommodation.

Special Correspondence.

BERLIN.

The Modern Treatment of Syphilis.

THE following notes conclude (from p. 683) the report of this important discussion at the Berliner medizinische Gesellschaft:

Dr. Isaac assured his audience that salvarsan alone, in doses of 0.3 to 0.4 gram, was capable of aborting syphilis in the early primary infection, and in his own clinic he regarded the use of mercury as superfluous in these cases. He was now convinced that the reactions formerly ascribed to impurities in the water were really the result of excessive salvarsan dosage, and they had not occurred

in his practice since the employment exclusively of neosalvarsan.

Dr. Herzberg's observations were directed chiefly to the surgical side of syphilis, but he had a few words to say on the Noguchi luetin reaction, which in his hands had yielded 100 per cent. positive results in cases of tertiary lesions. He did not think that the Wassermann reaction had thereby lost its value, but regarded the two tests as complementary to each other.

Dr. Fritz Lesser had succeeded with salvarsan alone in "sterilizing" every one of 26 cases which had come to him with the primary lesion only. As a comparison with this result he stated that of 7 cases in which abortive measures by mercury and excision of the chancre had formerly been attempted, 5 had soon returned with a roseola. He considered the Wassermann reaction an indication of the presence of active spirochaetes, and he now made a point of demanding quantitative as well as qualitative reports on the serum examined. He reminded his hearers that the reaction at first increased quantitatively after salvarsan injection to become diminished or abolished later, and the action of mercury on the reaction appeared to be the direct converse of this rule. The treatment should be based on the degree of positivity, and not only on the bare existence thereof.

Professor Oppenheim, speaking as a neurologist, gave the results of the salvarsan treatment of 130 to 135 cases of syphilitic infection of the nervous system, including therein tabes and general paralysis. His observations extended over two years. There were 20 cases of cerebral syphilis, and 8 of these had been successfully treated—that is to say, they had been cured or very much improved. In 3 cases the condition had been definitely aggravated by the injections. Of 15 cases of spinal meningitis 6 had markedly improved, while amongst 50 cases of tabes 10 were very favourably influenced, especially as regards the lightning pains. In 11 of the others, however, he regretted that there had been an aggravation of certain symptoms, notably of the ataxia, and 29 had remained *in statu quo ante*. Of 24 cases of general paralysis 15 had not responded at all, whilst 6 had gone down hill since injection, but in 2 or 3 there had been a prolongation of the periods of remission of symptoms. The total dosage in all these cases averaged from 1 to 2 grams of salvarsan. In conclusion Oppenheim warned his hearers against the danger of over-estimating the favourable nature of results in tabes and paralysis. He reminded them that spontaneous improvement in the former was by no means uncommon, and he characterized the assertions of Professor Citron on the significance in such cases of the Wassermann reaction (see p. 683) as greatly exaggerated. He had seen a large number of tabetics with a positive reaction, in whom there was no tendency to progression of the disease, and whose existence was very tolerable. He had seen two cases of severe encephalitis following salvarsan, but that was in the year 1911, and he had observed no ill effects with the remedy since then, so that on the whole he was inclined to regard the injections as of distinct value in the practice of neurology.

Correspondence.

THE REWARD OF RESEARCH.

SIR,—I am obliged to Professor Simpson for his very kind remarks regarding myself in your issue of March 14th (p. 627) in connexion with notes in your issues of February 7th and 21st last (pp. 319 and 456). But I ventured to mention my own case only in order to attempt to bring to a head the general question of payment of research. I feel very strongly that the time has now come when this matter should receive close attention.

Science has become what I have elsewhere called the premier industry of the world, helping or directing most other industries; and if a nation wishes to keep in the front of progress it should do its part to the world as regards the encouragement of investigation; and this applies especially to the case of investigation of disease. Looking at the matter from this point of view, I ask, Is it (*a*) honourable and (*b*) expedient for any Government or nation to refuse payment to scientific men, especially professional men, whose investigations have been of advantage to the people served by that Government, especially when those investigations have been of no pecuniary advantage to the men who carried them out? So far as I can see, there can be only one answer to this question; and, in fact, the British Parliament fully acknowledged its obligations in such cases when it gave £10,000 to Edward Jenner in 1802 for his work on vaccination, and when it again gave him a second sum of £20,000 five years later. No precedent can be more definite. It admitted once and for all the justice of the claim implied in the question put above.

Two pleas may be raised in opposition. The first of these is that under one form or another the amount of investigation which is being done is almost infinite, and is not measurable for reward. I do not think that this will stand inquiry, for we may at once divide researches into two groups—namely, those which, like many clinical investigations, lead to improved practice, and those which, like sanitary investigations, bring no pecuniary benefit whatever to the men who conduct them, even when they are highly successful. And it is to this last group that I think the principle deserves application (as it received in the case of Jenner). The other plea is that nations and Governments are not bound in any way to pay for work for which they have not contracted—so that there is no obligation for them to reward men of science who have not been legally employed by them for the investigations under reference. But I have ascertained that this view is legally unsound, because the mere utilization of work implies payment. For example, if a farmer allows a labourer to hoe his field, that labourer may demand payment, even if no contract has been entered into; and, in fact, this principle applies to nearly the whole of medical work, in which advice is almost always given without contract. In any case, the precedent of Jenner shows that the ruling of Parliament has been finally given against both these pleas. Apart from the question of national honour involved, that of expediency remains perfectly evident. Doubtless, innumerable small researches will be made even if no rewards are given; but it is to the interest of the world that the more laborious investigations required for the solution of difficult scientific problems should be encouraged as much as possible; and the fact remains that many of those who possess the capacity for such work cannot, under present conditions, afford to touch it, especially in non-remunerative lines.

I have therefore determined to do my best to open the question, and the case of the workers on tropical medicine is an excellent one for the purpose. There is no doubt as to the immense benefit which all tropical countries have received from recent revelations as to the mode of carriage of many of the most important tropical diseases—a benefit which can be measured in the saving, not only of life and health, but of large sums of money previously spent on treatment and invaliding, and of the general loss of prosperity due to such sickness. I venture, therefore, to make the claim that the British Empire is bound in honour (as well as by the precedent of Jenner) to pay the professional men who have rendered this service to it, and I have written to you for the purpose of urging this claim. But I think that a similar claim will lie in regard to many other workers, and believe that a proper representation of the case will ultimately meet with a success which will do more to encourage science and to save human life and health than almost anything else can do. Of course, my position is that of an interested party, but that does not render the argument unsound.—I am, etc.,

London, W., March 19th. RONALD ROSS.

THE NATURE OF PREGNANCY.

SIR,—Lord Halsbury said the other day in another connexion, "There is no fallacy like a false analogy." Is it Dr. Leith Murray's contention that because the blood in pregnancy and disease give similar biochemical reactions—and he may yet prove that alexins are found in the tissues of sterile subjects—the ultimate nature of this great matter of reproduction (quoting Dr. Ballantyne) and disease is identical?

Adopting this view the profession should discourage pregnancy, or perhaps encourage disease, or what seems more agreeable to truth, take opposite sides to Dr. Murray. Dr. Ballantyne, in his address, stepped into a side issue, as if to show that he anticipated what might be urged by

upholders of the theories not so welcome to him as symbiosis.

Dr. Leith Murray remains in this blind alley, and overlabours these tiny points in an infinity of the unknowable. It is all highly interesting, but leads nowhere in particular, and proves nothing, except perhaps the unity of principle running through all things—of life, of change, of motion, and affinities.

And what is the purpose of reproduction, and is it possible that disease, which seems opposed to the life of the individual and the type, is after all of the same category and making for the same end?—I am, etc.,

Bow, North Devon, March 22nd. ARTHUR KING.

SIR,—In the autumn of 1910 I brought before a Divisional meeting some views on this subject.

In the variety of nature are to be recognized processes the continuous working of which Lyell discerned in the inorganic; Darwin in the organic world. In the latter the differentiation of varieties and species counts amongst its factors what Romanes called "physiological isolation." By this he meant a sexual incompatibility between members of the same species, having its foundation in individual differences of the kind, if not of the degree, of those which separate species. Sexual attraction may be said, therefore, to be dogged by sexual repulsion.

The evidence of this will be, maritally, infertility, the relative sterility of Matthews Duncan, or abortion; clinically, all the malaise of gestation from morning sickness to eclampsia; pathologically, the leucocytosis, blood and parenchymatous changes of normal pregnancy; immunologically, the reactions which the methods of Ehrlich are discovering—those of alien serums.

Human conception, then, has hazards like pollination in plant life, and which Marshall Ward, careless of the distinction between physiological and pathological, compared to the infection of the ovary by fungus hyphae. Its hazards and success are those also of grafting: scion and stock may injure each other; the stock may be improved by the scion. Fertilization is more than an impulse to growth: it is a graft of the male upon the female; into the zygote and embryo and placenta, and maternal circulation enter all with which the chromatin rods of the spermatozoon are freighted—the characteristics of a diverse line of descent.

If infrequently and exceptionally disastrous, the state of gestation, notwithstanding its inherent struggle and flaw, is commonly benign—the health more robust, a chlorosis altered, a tuberculous infection suspended—the explanation may be that the maternal tissues are reinvigorated by the graft of a stronger mate.—I am, etc.,

Clifton, March 2nd. DAVID A. ALEXANDER.

THE MEDICAL SERVICE, R.N.

SIR,—I have submitted to the First Lord of the Admiralty the following proposals as to the Royal Naval Medical Service:

1. No further admissions to be made to existing Royal Naval Medical Service or Royal Naval Sick Berth Staff after a certain date.

2. A new organization to be formed called the Marine Division of the Royal Army Medical Corps. This body to include the medical officer of the future and the future personnel of the sick berth staff. This new body to bear the same relation to the Royal Army Medical Corps that the Royal Marines do to the regular army. Military titles, military rank, command power, training, discipline, etc., to be on the lines of the Royal Army Medical Corps, with perhaps petty modifications as existing in the corps of Royal Marines.

3. A dépôt to be formed, say at Plymouth Royal Naval Hospital, for the drill and training of the corps, Aldershot to be used for the higher ambulance instruction.

4. A limited number of officers of the newly proposed corps to be permitted to serve with the army in tropical stations to get tropical experience.

5. Permission to be given for a limited number of officers of the Royal Army Medical Corps to volunteer to take a tour of limited service afloat, but no compulsory power to exist in this matter. Special provision that financial grants equal to allowances on shore be given as "service afloat pay" to the voluntary Royal Army Medical Corps officer.

6. Every effort to be made to draw the two corps into closer union on all scientific matters where possible, and in technical war training for combined action in the field.

Several army medical officers of experience regard these proposals as a possible basis for a future organization.

Finally, it has to be borne in mind that much of the variety and romance attached to life in the old Royal Navy in the way of varied travel and experiences throughout the world has now ceased, and a hard business career in the home seas is and will be the rule. All pay and all boons held out as attractions to enter such a service must be based on purely business principles, and must greatly exceed the old standards.—I am, etc.,

GEORGE J. H. EVATT, M.D.,
Surgeon General.

Junior United Service Club, London, March 22nd.

SIR,—I am glad that "Fleet Surgeon (Ret.)" also suggests a short service scheme for surgeons, and that he thinks there is little room for specialists. The Admiralty does not employ medical officers to provide interesting practice for them, but to supply appropriate medical treatment when required, and to have a safeguard against criticism in the event of accident or emergency. As soon as a seaman is incapacitated, the policy is to invalid him, and to obtain a healthy substitute.

A short service scheme would, I believe, fulfil this purpose for the ships; and possibly the Admiralty might consider one medical officer enough for each ship. The ships cruise in fleets, and intercommunication by boat is nearly always possible; besides, with their high speed, they are seldom far from port.

Each flagship, however, might have an additional surgeon, picked from the short service men, who will then be experienced in naval matters, and who will be charged more with the supervision of the junior surgeons in the other ships. They might be permanently appointed to act as consultants; and they might be enabled to serve a year alternately in a flagship and in a naval hospital—or, better still, if the numbers allow of it, two years in hospital and one at sea. Their alternate years of hospital experience would place them in a position to maintain their supervising work in the fleet, and while in hospital they could have an opportunity to specialize. Teaching them in civil hospitals would hardly be necessary; when at sea they would always have the prospect of returning to their homes and hospital work in less than a year, and, in addition, they would be acquainted with naval routine.

But the majority of the medical personnel would be short service men receiving a good salary for two years with the prospect of a gratuity at the end of it to start them in civil life. I believe that such a scheme would be popular, and meet the requirements.—I am, etc.,

London, W., March 23rd. H. C. ROSS.

TUBERCULOSIS MEDICAL OFFICERS.

SIR,—It is recognized on all hands that the tuberculosis question is a public health question. The Astor Report points out that "sanitary authorities are the bodies primarily concerned in the administration of the public health laws of this country, and they must occupy an important position in any general scheme dealing with tuberculosis," and "it is, therefore, clearly desirable that the schemes which are to be organized by county councils should be so framed as to secure the co-operation of sanitary authorities to the fullest extent" (Interim Report, paragraph 35), and "the chief tuberculosis officer of the dispensary should be . . . in intimate relationship . . . with medical officers of health" (paragraph 27).

Can there, then, be any need for the formation of still another society or association when there is already in existence the Society of Medical Officers of Health, among whose members are a large number of tuberculosis officers? At the meetings of the society, both in the provinces and in London, many discussions take place dealing with tuberculosis, both in its administrative and its clinical aspect, and it would seem that if a society were formed exclusively of tuberculosis officers there would be a tendency to lessen the importance of the public health side of the question of tuberculosis. I hope, therefore, that Dr. J. T. Crowe and his friends will delay taking steps to form such an association as he suggests on page 687 of the BRITISH MEDICAL JOURNAL, until they have been satisfied

that the Society of Medical Officers of Health has failed to meet the need which he points out.—I am, etc.,

HERBERT JONES,
Joint Hon. Secretary, Society of Medical Officers of Health.

Hereford, March 21st.

SIR,—I welcome the letter of Dr. J. T. Crowe in your issue of March 21st as affording a suitable opportunity of bringing to the notice of those interested the existence and aims of the Tuberculosis Society, now in its second year.

This society was a natural outcome of the recently formed tuberculosis service, and its membership includes tuberculosis officers, medical officers of tuberculosis dispensaries and sanatoriums, and other medical practitioners specially interested in tuberculosis. Its formation was the result of a desire on the part of tuberculosis medical officers to have a medium for the discussion of various aspects of the tuberculosis problem, more particularly those connected with their special work.

The honorary presidents of the society are Sir Robert Philip and Sir William Osler. Meetings are held every month at the Royal Society of Medicine, when papers are read and discussed. For the benefit of provincial members these are usually held on a Friday evening. It is intended to hold meetings at various other centres, and the first of these, it is hoped, will be held at Oxford next month, when Sir William Osler will open a discussion on the diagnosis of closed pulmonary tuberculosis.

The present subscription to the society is 5s. a year, and the *Transactions* are published quarterly. The present membership is over fifty, and includes tuberculosis officers from districts as far apart as Cornwall, Lancashire, and Scotland.

I will be glad to send further particulars, or to receive applications for membership from any interested.—I am, etc.,

W. O. PITT,
Tuberculosis Officer for Essex; Honorary Secretary Tuberculosis Society.

66, Upper Walthamstow Road, Walthamstow, Essex.

THE REVACCINATION OF TENNYSON.

SIR,—In the issue of the *Standard* dated March 10th the editor published a review of Mr. Wilfred Ward's recent work on *Men and Matters*, extracting therefrom what was intended to be an amusing story of the revaccination of Mr. Alfred Tennyson—as he then was—by the village doctor, described as using impure vaccine which caused the Poet Laureate to have a bad time.

I am the son of the "village doctor" referred to, and, in justice to my late father, greatly desire to see this untrue story publicly refuted, as well as for the sake of vaccination itself.

Let me say that my late father, Dr. C. W. Hollis, was a particularly able and well-educated medical man. He served—as was the custom in his day—a five years' apprenticeship in a large practice at Portsmouth, afterwards studying at the Hôtel-Dieu, Paris, and at Edinburgh, of which latter university he was a medical graduate. He was then advised to settle in Yarmouth, Isle of Wight, as being a rising neighbourhood. Accordingly he took up his residence in this little town in the year 1843. For over forty years he practised there, soon becoming the trusted and confidential friend and medical adviser of all the good families round about, Freshwater included, for there was no resident medical man there in those days.

The true story of the revaccination of the Poet Laureate, as told me by my late father himself, was as follows:

A case of small-pox was imported to the military hospital, of which my father then had temporary charge, and on being noised abroad, of course a scare was speedily created. Amongst others who consulted my father as to revaccination was Mr. Tennyson, who, however, expressed his belief that as his system was so saturated with tobacco he would never "take." My father replied that if he might bring a recently vaccinated baby which he would carefully select and revaccinate from its arm, he felt certain it *would* take. This was done, and the result was perfect in four points. . . . Mr. Tennyson was very angry, and, failing to observe the precautions advised of keeping the arm at rest and free from being rubbed for a certain time, it became much swollen, very red, and painful—obviously this was not from impure vaccine. In due course the inflammation subsided, and all was well.

I sent a letter giving the above true version of the story, requesting its publication, to the editor of the *Standard* on March 13th, but not the least notice has been taken, and my letter has not appeared in any issue of that paper since. I should therefore be very glad if you would insert this letter in an early number of the BRITISH MEDICAL JOURNAL, not only in justice to my late father's memory, but also lest the incorrect story be taken up by the Antivaccination Society and be made much of in their arguments as an instance of the great danger of the possible use of impure vaccine and its introduction into the human system.—I am, etc.,

Freshwater, I.W., March 20th. ALFRED HOLLIS, M.D.Edin.

SMALL-POX AND VACCINATION IN THE LIGHT OF MODERN EXPERIENCE.

SIR,—Dr. William Chisholm, in his letter published in your issue of March 14th, states that he has read my views on vaccination with regret. He refers to the experience of Sydney, in New South Wales, which recently suffered "enormous financial loss through the dislocation of trade due to an outbreak of small-pox in a practically unvaccinated community." The implication clearly is that it was because of the unvaccinated state of the community that this dislocation of trade and financial loss occurred.

I wish to suggest that the dislocation of trade in Sydney was really due to the unnecessarily stringent measures taken by the authorities, and to the panic and alarm, largely factitious, which existed. I am afraid that the medical profession in Australia contributed in no small measure to encourage this alarm, although I do not wish to suggest that their action was not dictated by thoroughly sincere motives. It is quite certain, however, that the medical men in Australia were anxious to seize the opportunity to secure, if possible, the passage of a law making vaccination compulsory; and they did not hesitate to enlarge upon what they believed to be the terrible danger and risk of small-pox in an unvaccinated community.

The small-pox outbreak in unvaccinated Australia appears to have been of a remarkably mild type, and no doubt this very mildness added greatly to the difficulty of checking its spread. Fortunately, however, the mildness was a natural characteristic and not an acquired one due to vaccination. Consequently the mildness "bred true," and the disease maintained its mild type. I believe that although over 1,000 cases have occurred there have been no deaths, and many of the cases have been of a most trifling character.

Judging by her past history Australia has, so far, had little real cause to regret the absence of compulsory vaccination. She has suffered so little from small-pox that it may reasonably be argued that the injury to health caused by small-pox has been much less than would have resulted from a system of universal vaccination and revaccination.—I am, etc.,

C. KILLICK MILLARD,
Medical Officer of Health.

Leicester, March 20th.

*** The main facts with regard to the epidemic in Sydney were stated by our correspondent in letters published in the JOURNAL of 1913, vol. ii, pp. 572 and 1328.

ARSENO-THERAPY IN SYPHILIS.

SIR,—In his article in the BRITISH MEDICAL JOURNAL of March 14th Mr. Johnston Abraham, F.R.C.S., refers to some cases collected by myself when resident medical officer at the London Lock Hospital, Harrow Road.

As Mr. Abraham's remarks on them may convey an erroneous impression regarding the results obtained at the Military Hospital, Rochester Row, with an apparently similar course of treatment, I should like to point out that the cases referred to and their treatment differ in two material points from those on which the Rochester Row statistics are based.

In the first place, all my cases were women, and were in a much later stage of the disease; hence there was considerably more generalization, as is shown by the fact that all were suffering from severe lesions of the mucous membranes and skin; condylomata and ulcerated throats being the rule rather than the exception among lesions of the former; while among lesions of the

latter leucoderma was present in 42.5 per cent. of the cases, and in a few as late a skin lesion as rupia. The second point I should like to deal with is regarding the doses of salvarsan administered. These were smaller than those given at Rochester Row, 0.6 gram of neo-salvarsan (corresponding to 0.4 gram of salvarsan) was never exceeded in any of the Lock Hospital cases. It may be said that these doses given to women correspond with the larger doses given to men, when the difference in weight between the sexes is considered: this, of course, would be true if weight were the only item to be considered. As, however, it is the number of spirochaetes in a case that counts, it seems only fair to infer that a minimum course of treatment which will produce a negative Wassermann in an early male secondary case will almost certainly fail to do so in an advanced female secondary case when only a "proportional" amount of treatment has been given to the latter though, according to the more advanced stage, there must be more spirochaetes to be dealt with.

One has also to consider the question whether 0.6 gram neo-salvarsan is as potent therapeutically as 0.4 gram salvarsan. Many observers, including Gennerich, E. Hoffmann, and others, maintain that it is not.

My series of cases were not intended to compare statistically with those of the Rochester Row Hospital, though it may appear so from Mr. Abraham's remarks, but only to watch the effect of a somewhat similar form of treatment on more advanced cases with a view of finding, if possible, a course of treatment for this particular class of case.—I am, etc.,

W. V. CORBETT.
Lieutenant, R.A.M.C.

London, S.W., March 18th.

ERYTHEMA AFTER MINE EXPLOSIONS.

SIR,—In the report of my second Milroy Lecture which appears in the BRITISH MEDICAL JOURNAL of March 7th, in connexion with my observations on the Senghenydd explosion, I have omitted to refer to the article by your special correspondent in Wales which appeared in the JOURNAL of November 1st, 1913. In this article the writer describes for the first time the erythematous patches shown in most of the cases rescued on the day following the explosion, and reference is also made to peripheral neuritis, from which many of the rescued men suffered.

To Dr. Ivor Davies of Cardiff, who observed these patches, I am indebted for much assistance; he gave me every facility for examining the rescued men when I visited Senghenydd for the purpose of collecting information in view of the Milroy Lectures.—I am, etc.,

F. SHUFFLEBOTHAM.

Newcastle-under-Lyme, March 13th.

THE MILWARD FUND.

SIR,—Will you allow me through your paper to express a little of the gratitude I feel to all those who have so generously helped me and my boys in our need?

Of the practical sympathy shown us you have just published some of the material results; and only those with children to equip for their work in life can realize the load of responsibility of which I have been relieved by the assurance of good educations for my boys, and of the means to meet their expenses during their apprenticeships.

I cannot hope adequately to express my appreciation of this, and even less can I do so of the constant reminders of sympathy and encouragement that so many have given us since our loss. I can only trust that our gratitude may meet with the same understanding that our many friends have shown us in our sorrow.—I am, etc.,

E. S. DOROTHY MILWARD.

Cardiff, March 23rd.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

A GREENWICH Hospital pension of £50 a year has been awarded to Deputy Inspector-General George B. Murray, R.N., in the vacancy caused by the death of Deputy Inspector-General George Moore, R.N., on February 27th.

Universities and Colleges.

VICTORIA UNIVERSITY OF MANCHESTER.

THE following candidates have been approved at the examination indicated:

D.P.H. (*Both Parts*).—R. D. B. Frew, J. Gibson, G. B. Pemberton, W. W. Stacey.

UNIVERSITY OF SHEFFIELD.

THE following candidates have been approved at the examinations indicated:

SECOND M.B., CH.B. (*All Parts*).—*F. Gamm, †G. K. E. Inman, R. H. Rae, W. Sharrard. (*Anatomy and Physiology only*).—F. G. E. Hill, Florence E. Millard. (*Materia Medica and Pharmacy only*).—Mary Andrews.

* Awarded the Kaye Scholarship in Anatomy and Physiology.
† Passed with distinction in Materia Medica and Pharmacy.

UNIVERSITY OF DURHAM.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., B.S. (*Elementary Anatomy and Biology*).—A. Angus, T. L. Barkas, D. G. P. Bell, J. A. Berry, T. H. Blench, J. A. G. Brewis, N. Briggs, E. D. Charles, H. C. Clifford-Smith, W. A. Freedman, G. A. M. Hall, A. T. Harrison, Mary K. Henegan, D. F. Hocken, G. E. Hyden, W. A. Jaques, R. T. Naismith, L. W. Studdy. (*Chemistry and Physics*).—E. G. Anderson, T. Kirsopp, W. Laing, Freda Newman.

SECOND M.B., B.S. (*Anatomy and Physiology*).—R. V. Brew, Dorothy E. Butcher, Stephanie P. L. H. T. Daniel, H. J. Dingle, C. T. Helsham, D. Henegan, P. Hickey, Phyllis Marriott, C. D. Newman, R. R. Scott, K. Ibrahim Shalaby, S. Abdel Shehid, Iskander Soliman.

Medico-Legal.

DROITWICH BRINE BATHS.

IN the King's Bench Division, on March 18th, it was decided that the clauses of the Merchandize Marks Act apply to the provision of baths if the water used for these be not of the nature and character suggested by the title used in their description. The action commenced last December at Bow Street Police Court, the defendants being the Savoy Turkish Baths Company, Limited, who at that time were issuing a pamphlet suggesting that it was no longer necessary to journey to Droitwich to obtain the health benefits of a brine bath, since the company was now supplying Droitwich brine baths in London itself. It ended in the imposition of a nominal penalty on the defendants withdrawing their plea of not guilty and indicating that the practice to which objection had been taken would no longer be pursued by them. The evidence, given in support of the successful contention of the prosecutors that a water presenting the physical, chemical, and therapeutic properties of Droitwich brine could not be artificially prepared, was to the following effect.

Mr. Ballantyne, F.I.C., said he had visited the Savoy Baths where he had been given a pamphlet, had a "Savoy Brine (Droitwich) Bath," and had taken samples of the water and of the surrounding air. The water was very turbid and its buoyancy was not sensibly different from that of ordinary London water. He was unable to discover any evidence of the presence of radio-activity either in the bath itself or in the air above the water. He had also been supplied by the defendants with a tin of "Droitwich brine crystals" such as were used, he was informed, in making the bath that he had had, and was unable to discover in them any radium or radio-activity. He would not expect to find any evidence of radio-activity in crystals derived from radio-active water if such radio-activity were due to radium emanation, for it would disappear during the evaporation process. The witness then described his investigation of a brine bath at Droitwich itself. The water was clear and colourless and tasted very salt. It was so buoyant that in order to keep him immersed boards had to be fastened across him. The extreme buoyancy of the water was due to the great quantity of solids in solution. The specific gravity was 1.20. The water was pumped up from the earth and in addition to being radio-active it contained radium, while the air of the bath room was radio-active likewise.

Sir James Dewar, F.R.S., said that he had received a sample of Droitwich brine, and on testing it by the liquid hydrogen method found that it contained gases which must be due to radium. He did not believe that by evaporating a water to dryness and then treating the residuum with distilled water the practical equivalent of the original water could be produced. There were too many chemical decompositions and rearrangements.

Dr. A. P. Luff said he had long been in the habit of sending patients to Droitwich for the purpose of securing the treatment there given, and it had never been his practice to order the water of any spa to be used for bathing purposes except at the spa itself. He had seen a copy of Mr Ballantyne's report on the water used by the defendant company and was able to say from a medical point of view that the benefit to be derived from it could not be compared with the benefit to be derived from the brine baths at Droitwich. The density of Droitwich

brine was decidedly of value from a medical point of view, and he also attached great importance to the presence of radio-activity in the Droitwich Brine Baths and in the air of the chambers in which they were given.

Dr. Arthur Fortescue Fox said he had made a special study of the treatment of disease by medicinal waters, and was of opinion that the baths given under the name of "Savoy (Droitwich) Brine Baths" had not any of the medical characteristics of the real Droitwich brine baths. The great density of the Droitwich brine was of therapeutic importance and the radio-activity of the water and of the air surrounding the water of any bath was also of moment. The whole subject was at present under discussion. He did not believe that by re-solution of the crystals derived from any given water a water with therapeutic qualities equivalent to those of the original water could be produced.

Public Health AND POOR LAW MEDICAL SERVICES.

INQUIRIES AS TO DEATH OF PATIENTS ATTENDED BY UNREGISTERED PERSONS.

CERTAIN amendments of the Registrar-General's regulations for registrars of births and deaths have been approved by the Local Government Board (February 9th, 1914) and promulgated. Under the old regulation and instructions a small proportion of uncertified deaths in England and Wales were not reported to coroners. The new regulation is in the nature of an extension of a practice hitherto in vogue, and provide that all uncertified cases shall now be reported to the coroner, in whose discretion it lies to hold an inquest or not. The amended regulation provides as follows:

> Any death for which no certificate of cause of death is produced from a registered medical practitioner must be reported by the registrar to the coroner if this has not been done already.
>
> If no inquest is held and an informant states that the deceased was medically attended by an unregistered medical practitioner and produces any written statement of the cause of death, such written statement must be regarded by the registrar merely as a part of the information tendered by the informant, who is then solely responsible for the particulars so given. Should no written statement be produced, the registrar should represent to the informant the desirability of obtaining it if possible.

Obituary.

SIR A. M. BRANFOOT, K.C.I.E.,

LATE PRESIDENT MEDICAL BOARD, INDIA OFFICE.

SURGEON-GENERAL SIR ARTHUR MUDGE BRANFOOT, K.C.I.E., late President of the India Office Medical Board, died at Folkestone on March 17th, aged 66. He was educated at Guy's Hospital, took the diploma of M.R.C.S. in 1870, that of L.R.C.P.Lond. in 1871, and the degree of M.B.Lond. with honours in 1872. He entered the Madras Medical Service as Assistant Surgeon on March 30th, 1872, became Surgeon on July 1st, 1873, Surgeon-Major on March 30th, 1884, Brigade Surgeon Lieutenant-Colonel on April 1st, 1895, and Colonel on March 1st, 1898, retiring on May 19th, 1903. For many years he held the post of Professor of Midwifery and Gynaecology in the Madras Medical College, and was physician to the Madras General Hospital. On his promotion to colonel he returned to military duty as Administrative Medical Officer of the Burma Division. Soon after his retirement, on January 1st, 1904, he succeeded Sir William Hooper as President of the Medical Board of the India Office, and held that appointment for nearly ten years, till he retired, on attaining the age of 65, on February 28th, 1913. He then settled at The Barn, Chesham Bois, Buckinghamshire. The Army List assigns him no war service. He received the order of C.I.E. on May 21st, 1888, and the K.C.I.E. on December 11th, 1911. The College of Surgeons also conferred upon him an honorary Fellowship in 1906. The honorary rank of Surgeon-General was conferred upon him when he joined the Medical Board, and was continued to him after retirement. In India he left the reputation of being one of the best men, in his own line, who have served in the Indian Medical Service, and those who came before him at the Medical Board during the past ten years will remember him as a most careful and kindly examiner.

H. B. W. PLUMMER, M.D.,

SURGEON TO THE WEST BROMWICH HOSPITAL.

WE regret to have to record the death, in tragic circumstances, of Dr. H. B. W. Plummer, Honorary Surgeon to the West Bromwich District Hospital. Dr. Plummer had suffered some six weeks ago from a severe attack of influenza; contrary to the advice of his medical attendants he insisted upon resuming his work after a few days, and subsequently suffered from the mental and physical depression which so often follows the disease. While suffering in this way he had a difficult case of midwifery on March 15th, which ended in the birth of a stillborn child and the death of the mother. Dr. Plummer took the case very much to heart, and from a letter he left addressed to the coroner it would appear that he had formed the impression that he was directly responsible for the woman's death. This impression, according to the evidence of Dr. L. G. Parsons, assistant physician to the General Hospital, Birmingham, was mistaken, as it was clear that Dr. Plummer had done all that it was possible in the circumstances. Dr. Thomas Wilson, professor of midwifery in the University of Birmingham, said that the woman must have been within measurable distance of death when Dr. Plummer was called in, and that Dr. Plummer had done his best in the case, but that his mind was not at the proper balance at the time, and he took a wrong and distorted view of his responsibilities. Unhappily Dr. Plummer could not see the facts in their true light, and on March 17th he opened an artery in his bath and died before medical assistance could reach him. At the inquest the jury returned a verdict of suicide while of unsound mind, and the coroner paid a high tribute to Dr. Plummer's character and skill. He was, he said, known as an able and skilful surgeon, a man who knew his work well and loved his profession, and whose services to the hospital were of the most devoted and skilful kind.

Henry Beddoes Wetherall Plummer was born fifty-one years ago, and belonged to an old Newcastle family. He received his medical education at the Newcastle school, graduated M.B.Durh. in 1885, and was house surgeon to the Royal Infirmary, Newcastle-on-Tyne. As a student he had a distinguished career and gained various prizes and other distinctions. In 1887 he became M.R.C.S., and in 1893 graduated M.D. in the University of Durham. He first went to West Bromwich as an assistant to Dr. Langley Browne, and afterwards became his partner. He was appointed one of the honorary surgeons of the West Bromwich Hospital in 1898, and was also a member of its board of management. Much sympathy is felt with his mother and with his brother, who is a member of the medical profession, and also with Dr. Langley Browne, so sadly deprived of a partner and friend.

ON Monday, March 2nd, there died at Baillieston, Lanarkshire, Dr. W. R. WILLIS, who had been in practice there for about thirty-five years. Dr. Willis, who was 57 years of age at the time of his death, studied medicine in Glasgow University, and on graduation in 1879 joined his father, the late Dr. George Willis, who had settled in practice in Baillieston about 1849; the practice of father and son in Baillieston extended therefore over the long period of about sixty-five years. The late Dr. W. R. Willis was a man of good all-round knowledge in his profession, and, owing to his frank, genial manner and generous disposition, was a great favourite in the community. For many years he was medical officer for the western district of Old Monkland parish, an office which he held in succession to his father. He took an active interest in all the affairs of his native village, Baillieston, and was also a lifelong member of the British Medical Association. The funeral on March 5th was a very large one, practically every one in Baillieston and surrounding district attending to show their last token of respect for their much-loved doctor. Dr. Willis is survived by a widow and three young daughters.

COLONEL WALTER AUGUSTUS PARKER, A.M.S. (ret.), died at St. Leonards on March 4th. He was born on April 17th, 1849, educated at St. George's, took the M.R.C.S. and L.R.C.P. in 1871, and, after practising for some years at Southampton, entered the Royal Army Medical Corps as surgeon on February 3rd, 1878. He became surgeon-major

on February 3rd, 1890, and surgeon-lieutenant-colonel on February 3rd, 1898, retiring on February 23rd of the same year. He was given the rank of colonel, after his retirement, on October 18th, 1902, for services in England in connexion with the South African war. The Army List assigns him no war service. His first spell of foreign service was in the West Indies; he was sent to Barbados in 1881 to take the place of one of the officers of the Royal Army Medical Corps, who had died during the epidemic of yellow fever then raging in the island. Colonel Parker was the last survivor of four brothers, all of whom entered the medical profession. The eldest, Charles Robert George Parker, took the M.R.C.S. in 1859, entered the Madras Medical Service on January 20th, 1860, retired as a surgeon-major on July 3rd, 1886, and died at Torquay on July 1st, 1900. Colonel Parker was the second. The third, Alfred Henry Parker, went through the London Hospital, took the L.R.C.P. and L.S.A. in 1870, served as assistant colonial surgeon in South Australia, was resident surgeon of Port Lincoln Hospital for five years and of Mount Gambier Hospital for three years, afterwards practised at Bow, London, and died there on August 11th, 1903. The youngest, William Turnour Parker, after some years in the Home Civil Service, went through the medical classes at St. Mary's and St. Thomas's Hospitals, took the L.S.A. in 1884 and the M.R.C.S. in 1887, and practised for twenty years in Fulham. He died on July 7th, 1905. Colonel Parker's son, Major L. E. L. Parker, was also an officer of the Royal Army Medical Corps; he died at Poona on March 25th, 1912.

Medical News.

DR. BARTY KING has been elected a Corresponding Member of the International Congress of the Antituberculosis Association, Berlin.

AT a meeting of the donors and subscribers of the Blackpool Victoria Hospital, on March 20th, it was decided to invite the medical men to appoint a committee to confer with the Board of Management at an early date.

THE authorities of the Chelsea Hospital for Women inform us that the recent charity matinée at the Palladium Theatre, which was attended by Their Majesties the King and Queen, resulted in the rebuilding fund of the hospital benefiting to the extent of £2,000.

AT a meeting of the Royal Society of Medicine on Wednesday, April 8th, at 5 p.m., two demonstrations on colloidal metals will be given: the first by Dr. Paul Ferreyrolles with the cinematograph, and the second by Mr. Henry Crookes with the ultramicroscope.

A MEETING of the State Medical Service Association will be held at Essex Hall, Strand, on Wednesday next, to discuss the responsibility of the State for the national health. Sir George Kekewich will take the chair at 8 p.m.

DR. CARL H. BROWNING, Director of the Laboratory and Clinical Pathologist to the Western Infirmary, Glasgow, has been appointed Director of the new Institute of Pathology at the Middlesex Hospital, the erection of which was made possible by Sir John Bland-Sutton's gift of £15,000.

WE understand that those Fellows who have intimated their intention of seeking election to the Council of the Royal College of Surgeons of England next July are as follows: Mr. Ballance (for re-election), Mr. Stanley Boyd, Mr. F. F. Burghard, Mr. McAdam Eccles, Mr. Raymond Johnson, Mr. J. B. Lawford, Mr. H. S. Pendlebury, Mr. W. G. Spencer, Mr. Wm. Thorburn, Mr. P. Macleod Yearsley. The period for nominating candidates extends from May 26th to July 5th.

A SERIES of popular lectures on hygiene will be delivered on Tuesdays at 7 p.m. at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., commencing on March 31st, when Professor Kenwood will deal with the home: on April 21st Dr. G. S. Graham-Smith will lecture on house-flies and disease: on April 28th Dr. James Kerr will deal with the health of the school child; Dr. M. S. Pembrey will conclude the series with a lecture on physical games *versus* set exercises, on May 5th.

THE recent report of the public analyst for the borough of Paddington states that of fifteen samples of rice examined ten contained small quantities of talc, which, with the addition of a little oil, is used to give a pearly shine to the grain. The inadvisability of removing the minute amount of digestive material—vitamine—which lines each rice grain is pointed out. Of ten samples of pearl barley three proved to be faced with talc in small quantities.

THE Honorary Secretary of the Association of Assistant Medical Officers of Asylums in England and Wales, Dr. F. J. Stuart (Berry Wood, Northampton), informs us that the first annual general meeting was held on March 14th at the Westminster Palace Hotel. The report of the executive committee stated that at an interview with it the Board of Control had discussed in a sympathetic spirit the claims of assistant medical officers with respect to medical work, marriage, quarters, and study leave. The membership of the association is now 130.

THE Board of Agriculture and Fisheries has issued a leaflet on tuberculosis in farm stock, which will be supplied free by the Secretary of the Board (4, Whitehall Place, London, S.W.). The leaflet deals in language as little technical as possible with the nature of the virus, and the method of infection of cattle and swine; it is stated that other domesticated mammals—horses, cats, and dogs—are susceptible to tuberculosis, but that very few cases have been recorded in sheep and goats. The leaflet describes the treatment and preventive measures, and gives an outline of the provisions of the Tuberculosis Order, 1913.

WE are asked to state that members of the profession who may think of applying for appointments as assistant whole-time medical officers are invited to communicate with Dr. A. Ashkenny, 38, George Road, Edgbaston, Birmingham, the secretary of the School Medical Service Group of the Society of Medical Officers of Health. The minimum conditions considered necessary by the Group are that whole-time assistant school medical officers, whose duties include school medical work, should receive a salary of not less than £350 per annum, rising by annual increments of £25 to not less than £500 per annum; that any additional duties outside usual school hours should receive extra remuneration, and that all officers should be entitled to superannuation and security of tenure.

THE usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on March 20th. Dr. F. J. Allan was in the chair. The accounts showed that, although the expected sickness had increased, the amount paid in claims was actually less than that for the same month in the preceding year. It is almost unprecedented for the first two months of the year to show a profit on the expected sickness, but this has been the case this year. It was decided to subscribe to the British Dental Association Benevolent Fund. The thirty-first annual general meeting of the society will be held at 11, Chandos Street, W., on Thursday, April 2nd, at 4.30 p.m. Full prospectus and particulars can be obtained on application to Mr. Bertram Sutton, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

DR. A. W. FORTESCUE SAYRES, Tuberculosis Officer, Devon County Council, in a paper read before the Plymouth Medical Society recently stated that during the year that he had been acting as tuberculosis officer he had been impressed by the number of houses in which it was easy for susceptible members of a family to contract pulmonary tuberculosis from a member of the same household, and had observed that the infection had in many cases thus been directly communicated. He recommended that a uniform method of disinfection of sputum should be instituted in every county, and advised that on the representation of the tuberculosis officer, or a medical man, or after a visit of the medical officer of health, every tuberculous patient with sputum should be provided with: (1) An enamel sputum cup with lid for indoor use; (2) a pocket sputum flask for outdoor use; (3) disinfectant certified as efficient by the medical officer of health and tuberculosis officer. To each patient should be given with these articles printed instructions clearly stating: (*a*) The manner of diluting the disinfectant; (*b*) the amount of the diluted fluid to place in the cup: (*c*) how frequently it should be emptied; (*d*) where it should be emptied (instructions varying as to whether it were a town or country house). The disinfectant used should, he considered, be one of the high coefficient proprietary disinfectants, such as kerol, cyllin, M.O.H. fluid, Cook's cofectant, and izal, which were all known to have a rapid lethal action on the tubercle bacillus, and to be more effective, cheaper, and less poisonous than carbolic. In towns the sputum, after proper disinfection, could safely be discharged into the drainage system, in country districts it should be buried deeply in the garden or burned, if not too large in quantity. The full text of the paper is, we understand, about to be published in the *Medical Officer*.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

WALES wishes to hear of a home, in the neighbourhood of Liverpool or Manchester preferred, where a lady suffering from hemiplegia who now has some use in the arm and is able to stand could be received; about £1 a week could be paid.

A CORRESPONDENT signing himself "Nemo" asks to be referred to any unbiassed scientific literature on the subject of Mr. Arthur Cooper's paper published in the JOURNAL of February 28th, 1914, entitled, "A Note on Onanism and its Effects on the Man."

CYCLE SADDLES.

CYCLIST has a patient who suffers from pruritus ani and a tendency to haemorrhoids on cycling. He is about 50 years of age, and otherwise healthy, but is being hindered in business by these ailments. Our correspondent asks whether this subject has been scientifically considered, and whether any saddle likely to obviate these results can be recommended.

BLACK MILK.

J. D. M. writes: A lady, multipara, not pregnant, has a secretion of black fluid from both breasts, slight pressure causing it to escape. When she first noticed it, it escaped of its own accord when she was in her bath. Three years ago she underwent operation for a large tubal abscess. She has more or less constant muscular rheumatism, but is not laid up with it. She is stout. Any explanation and information from similar cases very acceptable. The patient is not unnaturally worried about it.

*** In Gould and Pyle's *Anomalies and Curiosities of Medicine* it is stated that black milk is spoken of by the Ephemerides and Paullini, and that green milk is also recorded by the same authorities.

ANSWERS.

NICOTINE.—To remove cigarette stains from the fingers it is recommended to rub the stains with a dilute solution of chlorinated soda on lint, then wash well with hot soap and water and pumice stone. If the stains are very deep, pumice stone moistened with dilute hydrochloric acid should be used first. As an alternative treatment an acidified solution of sodium perborate might be tried.

COLLAPSE OF ALAE NASI.

DR. HENRY HICK (New Romney) writes: If "Afflicted" will pack a piece of cotton-wool into the front of the nostril he will find it holds out the ala of that side. The late Mr. Walsham designed an operation (described in the *Lancet* at the time) in which he dissected a strip of membrane from the front of the nostril, and rolling it packed it into this space, so as to act as a permanent prop.

OXALURIA.

DR. H. J. JOHNSTON-LAVIS (Beaulieu) writes in answer to "R.A.M.C." (March 7th): Attend to the patient's bowels, where intestinal dyspepsia leads to the imperfect digestion of carbohydrates and the conversion of part of them into oxalates. Let him drink a litre of Vittel Grande Source, or, if constipated, Source Salée before breakfast. Diminish sugar and carbohydrates in food, as well as gelatines, rhubarb, sorel (*oseille*), spinach, much tomatoes, cocoa, chocolate, etc. As soon as the summer season is reached let the patient do a cure at Vittel or some similar spa, with waters preferably free of chlorides. Hexamethylenetetramine and acid sodium phosphate may be used also with advantage, and should be given well diluted.

PAROXYSMAL TACHYCARDIA.

M. V. writes, in reply to "A. W.": It may be of some slight interest to refer shortly to some personal experience. Twelve or fourteen years ago the affection first came on at very variable intervals—five months to a few days only. I could never satisfy myself that any special treatment for the attacks themselves did any good. In May, 1911, I had two days remarkably free from any cardiac trouble, but on the evening of the third day it came on again, and from that date there have been no free intervals. The digitalis taken seemed to bring about a continual condition of nausea, so that I never sat down to a meal without loathing. I also took cane sugar, about 4 oz. a day. This was found to be very irksome, as very soon it became distinctly distasteful. I then commenced taking the sugar in my coffee and tea—about an ounce in the first cup of coffee, none in the second; the same with the tea. I also began with the refined preparations of digitalis, when the nausea ceased to be a trouble. Latterly I have taken the crystalline digitaline one-sixth of a grain once daily, and have continued with the sugar as mentioned. A gradual improvement has taken place, so that now the pulse, although still irregular, does not go much over 100. I omitted to say that before commencing the treatment now being carried on there was considerable enlargement of the liver, the left lobe especially. That soon went down. The pulse-rate is now about 80 degrees before getting out of bed in the morning, and perhaps 100 degrees, or a little over, the rest of the day. I should say, also, that I am a smoker, but stopping the tobacco does not make the least difference.

LETTERS, NOTES, ETC.

DR. J. F. SPONG (London) calls attention to a typographical error in Dr. Keith's lecture on the portraits of Shakespeare and Burns. He says that Sir E. Durning-Lawrence believes that the Droeshout portrait has a "trick," not a "thick," coat. Dr. Spong also thinks that the portrait shows a left-handed squint.

"SOME FAMOUS ABERDONIANS."

DR. CLIPPINGDALE writes: May I be allowed to supplement the very excellent list of famous Aberdonians recently published in the BRITISH MEDICAL JOURNAL by reference to the two following somewhat eccentric members of the university?

1. The witty, but coarse, author known as "Peter Pindar" was a Dr. John Wolcot, who took his M.D. of Aberdeen in 1767.

2. Sylvester Douglas, who went through a course of medical training at Aberdeen, afterwards practised as an apothecary. Exchanging physics for politics, he became a distinguished diplomatist, and in the year 1800 was raised to the peerage as Viscount Glenbervie, on which occasion a wit wrote:

> Glenbervie, Glenbervie, what's good for the scurvy?
> Let your old trade ne'er be forgot,
> For arms you should quarter a pestle and mortar
> And for crest take a spruce gallipot.

DR. JAMES GILROY (Ecclefechan) writes: Surely any account of the literary celebrities of Aberdeen is not complete if you omit the name of Robert Ogilvie, M.A., LL.D., of Marischal College, author of *Horae Latinae*. He began life as a teacher in the parish school of Banchory Devenick in 1858. He was a great Latin scholar, revelled in the niceties of Ciceronian diction, and was H.M. Inspector of Schools. I remember him and Dr. Middleton well. Both had high ideals, and not a few men of to-day in all professional walks remember one or both with profoundest feelings of gratitude for their splendid work.

None did better work than Dr. Robert Ogilvie. It is a pity that in this our day Latin and Greek are so much laid aside. If men only knew the solace of a half-hour's rehearsal of some of our classical authors in the original tongues, the relief it is, the pure pleasure it gives, we would keep up our knowledge and be better men.

SHIP SURGEONS.

WE are informed that the conditions of service of ship surgeons in the P. and O. Company are now as follows. On all boats, with the exception mentioned the rate of remuneration is £15 a month, with the right to charge first and second saloon passengers 5s. and 2s. 6d. respectively for each consultation. On boats engaged on station duty the rate of pay is £20 a month, with the same right to charge passengers for medical services. All drugs and instruments are found by the company. Surgeons' cabins are now in all cases outside ones, and in all ships there is, in addition, a surgery and hospital cabins. Applications should be addressed to the the Managing Director, P. and O. Company, 122, Leadenhall Street, London, E.C. The terms offered in respect of the South American mail steamers of the Royal Mail Steam Packet Company and the Pacific Steam Navigation Company were published in the JOURNAL of February 14th, p. 408.

GASTRO-ENTEROSTOMY.

DR. ARTHUR F. HERTZ (London, W.) writes: In your account of the discussion on Mr. Paterson's paper, which was read before the Surgical Section of the Royal Society of Medicine, I am reported as saying that gastro-jejunostomy should never be performed for gastrectasis. "Gastrectasis" is, of course, a misprint for "gastrostaxis," as the most definite of all indications for gastro-jejunostomy is the gastrectasis or dilated stomach caused by pyloric obstruction.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
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An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

LISTER: THE LABORATORY AND THE BEDSIDE.

BEING THE PRESIDENTIAL ADDRESS IN THE SECTION OF SURGERY, AUSTRALASIAN MEDICAL CONGRESS, AUCKLAND, NEW ZEALAND, FEBRUARY, 1914.*

BY

R. HAMILTON RUSSELL, F.R.C.S.ENG.,

SENIOR SURGEON TO THE ALFRED HOSPITAL, MELBOURNE.

THE interval that has elapsed since we last met in session has witnessed the turning of a page of unexampled progress and fruitfulness in the history of surgery. The maker of modern surgery has passed from among us, having bequeathed to us a splendid heritage for us to employ as best we may. Much has been written and spoken during the months that have passed about the work and personality of Lord Lister by men who have enjoyed the privilege of intimate association with him, and it would seem that there is good reason why I should make more than a passing allusion to him, for am I not warranted in thinking (if I may be permitted without sacrifice of decorum to obtrude an observation of a nature purely personal to myself) that one incidental but direct result of the teaching of Lister may be discovered in the honour you have done me in setting me in this place? I myself am conscious that it is so, and I rejoice in the knowledge that whatever you have found of worthiness in me I may ascribe it to his influence, his teaching, and his example, and offer it as the only tribute it is in my power to offer to his beloved and honoured memory.

My thoughts revert to the time, now some thirty-five years ago, when I first entered the wards of King's College Hospital as a student under Lister, and began to learn that the making and the dressing of wounds was to be studied as one of the fine arts. It is customary nowadays to contrast what is called the antiseptic methods of Lister with the aseptic methods of the present day, with the more or less tacit implication that there is not merely a difference in method, but in the principle involved.

There seems to be a prevalent idea that the difference is to be found in the fact that whereas Lister was in the habit of applying strong chemical antiseptics to his operation wounds, we have made a great advance in protecting wounds from the injurious contact of antiseptics. So we have; but I must point out that this is an improvement in our methods only, and it became possible when it was proved that air-borne micro-organisms are not to be feared as the cause of wound infection. Prior to this critical discovery it was clearly impossible to prevent whatever antiseptic agent was being used to purify the air from coming into contact also with the wound, but this was quite recognized by Lister as an evil from which, however, in the state of his knowledge as it then existed, there could in the nature of things be no escape. Nevertheless, his desire, constantly expressed, to protect the wound as far as possible from the contact of antiseptic substances was noteworthy; the spray was kept at as great a distance from the wound as possible, consistently with what appeared to be efficiency, and an impermeable layer of varnished oiled silk was placed immediately on the wound to protect it from the irritation of the dressing, and when in the early eighties Lister had convinced himself that the carbolic spray was unnecessary he was prompt to abandon its use gladly; and from the abandonment by Lister himself of the spray we may date the birth of modern aseptic methods.

It is, I imagine, needless for me to observe that my sole object in making these observations is to be found in the interests of historical accuracy. No one would even conceive the thought, when we speak of the great advances that we have made in building up our modern aseptic methods upon the antiseptic methods of Lister, that any derogation from our vast indebtedness to him is conveyed or suggested thereby. What always does occur to me, however, and must be vividly before the view of anybody who knew intimately the working of Lister's mind, is that the contributions that "We" (with a capital W) have made independently of him towards the establishment of present-day surgical methods, do not after all amount to quite so much as we are prone to think. The matter may not appear to be of so much importance as I seem to attach to it, but a mildly cold douche administered to our self-sufficiency is never unwholesome, and I am tempted to venture on another. The transition from the antiseptic methods, as practised by Lister, to the aseptic present-day methods, has not been altogether unattended by loss. It does not present a picture of unqualified progress all along the line, in my humble opinion. There is no doubt that the belief prevailing in the days of my studentship, that the air was a prime source of danger to wounds, and that the access of a puff of air unpurified by the carbolic spray was a source of grave risk to the patient's safety, faulty as we now know it to have been, nevertheless made for the most extraordinary precision and skill in the application of surgical dressings.

It is a common observation of mine to my students that the fine art of surgical dressing has died out with our simpler modern methods; not that I deplore the loss of a ritual which we now know to have been bacteriologically unnecessary, but that splendidly unnecessary ritual carried with it much that was incidentally of real advantage to the patient. For one thing, the dressing had to be so applied that it would remain in place without shifting a hair's breadth for a week if necessary, and the close study of methods of precision designed to accomplish this purpose led quite naturally to the incidental attainment of means to further the comfort of the patient, so that the dressing of a wound by Lister became a very beautiful and complete artistic procedure. I well remember a distinguished visitor, after watching Lister do a dressing, remarking, "The great physician Graves desired that on his tombstone should be inscribed the legend, 'He fed fevers'; I would suggest for your epitaph, 'He dressed wounds.'" With all our vaunted advances and improvements wounds are not dressed nowadays so beautifully as he was wont to dress them; it is quite true that in the vast majority of cases the need for such precision does not exist; for most of our wounds that are not already infected we are able to close without drainage, and in neither case is the antiseptic or aseptic dressing of such supreme importance. Nevertheless it not rarely happens that the exigencies of a special case make urgent demands for accuracy and confidence in our methods of antiseptic dressing of the kind that Lister practised and taught; and, lo! they are forgotten.

Lister stands probably alone among surgeons in that he combined the qualities that make a great experimental investigator with those that are essential to a great clinical observer and student, and his capacity for adjusting the values attaching respectively to the lore of the laboratory and the facts of the bedside always seemed to me unerring and perfect, and to constitute one of the chief secrets, silent and intangible, of his power of sustained achievement.

As narrated by Sir Rickman Godlee in a recent address, his ingenuity and accuracy in devising and carrying out bacteriological experiments called forth expressions of astonishment and admiration from Pasteur, while Sir Michael Foster once referred to him as "one whose career as a practical surgeon we, as physiologists, selfishly deplore, for we see in him a puissant captain." There are few more significant principles contributing to form the substratum of good and successful work at the bedside than a just estimate of the correct relationship between clinical and experimental work, and lack of the requisite clearness of mental vision in this matter is, I believe, one of the most potent causes of unexplained disappointment and failure. We sometimes observe a man of high intellectual power, honest, painstaking, and industrious, who seems to fail unaccountably, and by that I do not mean in respect of worldly advancement and public estimation, but he fails in the actual practice of his profession at the bedside. If I were asked to state in general terms what in my opinion is the most frequent defect that underlies this regrettable phenomenon, I should reply without hesitation, "Inability to distinguish clearly between the teachings of the laboratory and those of the bedside." Let it not be thought for a moment that I underestimate the extreme value of experimental research; quite the reverse is the case. It has sometimes happened to me to be asked by a young aspirant to become a hospital

* Owing to the exigencies of space, a few passages have been omitted.

surgeon and practitioner of surgery how he is to begin. His practice is all in the future. He has not as yet perhaps a hospital appointment. What can he do that will help him to both? What work shall he work at that will, as he expresses it, "lead to something"? My answer is always the same: "Go to the laboratory at the university and work at something; it matters little what, so long as you work. Try to find out all about something, and you will soon find that you know more about your subject than other people do. No fragment of knowledge but has its value, and that value will be enhanced to you a hundredfold if it happens to be your own peculiar possession. Its acquisition will surely lead the way to further important attainments, until presently the widening sphere of your knowledge will begin to touch at various points the province of the worker at the bedside." Some thoughts such as these must come to us when we glance at the earlier scientific work of Lister and note the nature of his inquiries. In respect of science, and particularly those departments of scientific research that are dependent on the microscope for their elucidation, Lister may be said to have been "born in the purple," for his father was a distinguished scientist who made weighty contributions toward the perfecting of the compound microscope. It is not surprising, therefore, that the earliest scientific researches of the famous son should have been guided and influenced by this circumstance, so that we find him at 24 years of age bringing forward noteworthy papers upon such subjects as "The cutaneous pigmentary system of the frog," "The contractile tissue of the iris," "The muscular tissue of the skin," and "The structure of involuntary muscle fibre," all notable equally for minuteness and accuracy of observation and reasoning as for independence of thought and faithfulness and simplicity of description. Very soon we find the subjects that engage his attention are beginning to assume a character of more direct clinical significance, and with researches on "The early stages of inflammation" and the Croonian Lectures on "The coagulation of the blood" we become conscious of the first steps on the path of scientific study which will eventually lead him to the great achievement of his life.

I have made a somewhat long digression preparatory to emphasizing what always seemed to me the almost inspired faculty possessed by Lister of sifting out from the store of his scientific knowledge that which was available for employment in actual practice at the bedside, and putting aside what was too incomplete and theoretical to be reckoned upon. Perhaps no better illustration of this could be advanced than his attitude on the subject of anaesthetics, a matter to which he devoted special interest. Chloroform was the agent exclusively used, and it was always in his hospital practice given by a student. This does not mean that the administrator was ignorant and untaught; on the contrary, he was most thoroughly drilled in the principles that were to guide him in the administration, and those principles were of the simplest. Briefly, the administrator's attention had to be concentrated on keeping the airway free and unimpeded, and by means of certain signs to read the individual patient's condition like a book; but he was not permitted to examine the heart or to feel the pulse.

This last feature of his method has given rise to much wonderment and adverse criticism, and I would like to endeavour, if I may, in a few sentences to set forth what I believe to be the kind of reasoning upon which it rested. Experiment is able to show that if a dangerous overdose of chloroform be given slowly and in proper dilution, cessation of respiration will invariably occur before cessation of the heart's action. It is also well recognized that rapid overdosage by too concentrated vapour of chloroform will cause sudden death. Both of these sources of danger can be quite effectually guarded against, but the finger on the pulse will be of no value in either. But again it is admitted that, apart from either of the above causes, a patient will very rarely suddenly die under chloroform; would the finger on the pulse not prove a serviceable aid in such a case? There is not the slightest reason to suppose that it would; in fact, it is dead certain that it would not. It is true that administrators have stated that they believe they have received valuable warning of danger from the behaviour of the pulse, but how can they possibly tell? Such statements are the merest guesswork. Moreover, there is no reason for supposing that the patient dies because the heart stops beating, because it is just as obviously true to say the heart stops beating because the patient dies. The fact is we concentrate our attention upon the heart simply because it is the first and most tangible object for us to literally put our finger upon; but surely, if we are to probe the mystery of sudden death at all, we must go further back than the heart, to the nervous system that controls it. There has of late years been a small army of skilled workers who have devoted immense efforts toward the elucidation of the mystery that surrounds many examples of death under anaesthetics, and we of Melbourne regard with justifiable pride the fact that we have in our midst a worker in Dr. Embley, who by patient and indefatigable labour has made contributions of lasting value to our store of physiological knowledge bearing on the innervation of the heart and vascular system—a subject peculiarly concerned, as it would seem, with the phenomena of death under anaesthetics.

Nevertheless, valuable as such researches are, it cannot be too clearly stated that any endeavour to carry their teachings from the experimental laboratory to the operating room is likely in the present state of our knowledge to render confusion worse confounded, and to bring about the very disasters they are designed to prevent. Our knowledge of the physiology of the nervous system consists in any case of a small sprinkling of isolated facts, that together constitute only a fraction of a vast territory as yet unexplored. To convert our knowledge of the nervous system into active treatment is only here and there advantageously possible, but the intimate relation between the nervous system and the fact of sudden death is at present entirely outside our field of practical endeavour, and it is well for us to recognize it.

Some few years ago there appeared the report of an address delivered by one of the foremost of our English surgeons, Sir Berkeley Moynihan, under the title of "The pathology of the living." The theme of this discourse, as original in its substance as in its title, was designed to point out that the pathologist can by no means be regarded as the sole repository of pathological knowledge, but that, on the contrary, the sphere of his labours is subject to very distinct and notable limitations in many directions; and that these barriers that oppose themselves to the pathologist can in many cases be readily passed by the observant practical surgeon, and by him alone. So numerous are these instances, that it has come about that the pathological discoveries of the clinical observer constitute a distinct field of pathological knowledge that could never have been opened up and worked by the student of the pathological laboratory and the deadhouse. It would appear at first sight difficult to instance a more striking example of the interrelation between laboratory research and clinical findings than this; nevertheless, it would appear even more remarkable that there should be also an anatomy and embryology of the living—that is to say, a certain field in those subjects in which the anatomist and embryologist must look to the clinician for suggestion and guidance. I think it probable that but for the information provided by clinical experience the embryologist unaided would have known little even to-day of such an obvious arrest of development as hare-lip and cleft palate, while I am pretty sure that such a condition as imperforate rectum would have remained undiscovered altogether, or perhaps have been recorded as a curiosity and enshrined as a museum specimen. I must ask your indulgence in alluding to a matter in which I have had some personal concern, but I would point out that for generations the fact that roughly 23 per cent. of individuals have peritoneal sacs occupying one or other of the commoner seats of hernia had escaped the eye of anatomical research, until reasoning, based upon clinical observation, seemed to render it certain that they must be there; and then they were looked for by Mr. Murray, of Liverpool, and promptly found. Again, the explanation of the remarkable tendency of femoral hernia to pass upward over Poupart's ligament was unknown until the mystery was solved by clinical observation and reasoning, although the causation of the occurrence is entirely a developmental one. The fact, too, that an obturator sac is present in individuals with a frequency that vastly exceeds the frequency of occurrence of the rare obturator hernia is a piece of anatomical knowledge that is, I believe, peculiarly

the property of the Melbourne University Anatomy School. It is significant that the one redoubtable opponent of the saccular theory of hernia is to be found in one of the most distinguished anatomists of our time, Professor Arthur Keith, who occasionally shivers a lance against it, but whose brilliant and valued career has adorned a field into which clinical work has not entered.

I am anxious to pass from this subject to others that have less of a personal colouring, but I cannot forbear to draw attention for a moment to Lister's attitude on the question of what is commonly spoken of as the radical cure of hernia. He was, I believe, the first surgeon of modern times to perform an open operation for non-strangulated hernia, but he frankly disbelieved in the possibility of curing hernia by operation, and with the knowledge in his possession as to the etiology of hernia that view was surely well founded and inevitable. He considered that the proper purpose of operation could only be to render a hernia that was not controllable by a truss amenable to truss treatment; to reduce the irreducible hernia, and to remove adherent omentum from the canal. It was to him inconceivable that by any method of suturing or by any other artificial device, the weak incompetent abdominal wall could be rendered permanently strong and efficient. This view was of course based on the belief current in his day that hernia was the result of weakness of the musculature of the abdominal wall, and is an interesting example of acute and correct reasoning betrayed into error by an unsuspected flaw in the scientific knowledge underlying it. On the other hand, we are now in a position to state conversely that the saccular theory of hernia is essential to the rational conception of any possible operation for permanently curing hernia; or to put the matter in a somewhat different way, if the saccular theory were not true no operation for the cure of hernia would be possible.

Among the numerous enduring impressions that I received when as a mere lad I had the great privilege and delight of sitting at the feet of Lister was a possibly exaggerated distrust of the value of statistics, and of what I may term the statistical method when introduced into the study of surgical questions. I am speaking of a time when the value of antiseptic methods in surgery was regarded as a "question," and the claims advanced by Lister as "not proven." It sounds very absurd now to suggest an appeal to statistics to prove that aseptic wounds are more desirable than infected ones, but that is of course an instance of wisdom coming after the event. In any case, statistics were always being demanded, and what is more to the point, when they were forthcoming they seemed ludicrously incapable of demonstrating anything. It was vain for Lister to aver, as he did time and again, that the matter was not one for statistics at all; that sounded like an evasion. Nevertheless the veriest tiro who saw and was taught to understand his principles and methods could see quite clearly that statistics were not wanted. A famous Continental surgeon, when shown for the first time the phenomenon of the organization of blood clot occurring in a gaping osteotomy wound, exclaimed in astonishment, "Statistics have nothing to do with this." I learnt a great lesson from that incident, and one that has frequently been brought to my memory. That great surgeon did not scruple to draw immense and far reaching conclusions from the thoughtful observation of a single case. Since that day I have very frequently heard a warning uttered as to the danger of generalizing from a single instance, and of the necessity of having a number of cases under review before any safe conclusion can be arrived at. I always think this is rather a pity, and I must confess to a firmly-rooted belief in the supreme value of single instances accurately studied. Whatever happens in any case happens in obedience to pathological law, and the laws of pathology are just as immutable as any of the other laws of nature. Any apparent violation of pathological law can only mean that there is some underlying factor that has escaped our detection, and should impel us to a closer and more searching scrutiny to lay it bare. Whereas, on the other hand, it is very easy to foster an attitude of philosophic agnosticism in the presence of any deviation from the traditional normal, which is a distinct encouragement to put it aside as something dangerous and misleading. A series of hundreds of operations, tabulated and arranged and nicely rounded off in terms of percentages, always seems to me to possess but very limited value, so limited, indeed, that it is strictly confined to one person—the surgeon who performed the operations; and even he can learn nothing from the contemplation of his tables when he has compiled them. The rich experience he will have gained cannot even be expressed in that way, much less can it be imparted to others, for it will consist actually in the sum of a multitude of observations of individual cases, all of them slightly varying one from another, but all of them obeying pathological laws which are fixed, and which never vary. After all, it is not the fact of performing a large number of operations that in itself constitutes real experience, unless in addition the surgeon who performs them possesses the qualities that are essential for a good clinical observer. And what are those qualities? Can they be in any way defined or indicated? Or, better still, can the practical steps by which a surgeon should seek to make himself a good clinical observer be set forth for our help? In order to do this I cannot do better than refer to two of the notable features of Lister's hospital work. First, he visited his wards every day in the week. Secondly, he invariably dressed his operation cases himself for the first few days. We might be tempted at the first blush to write this down as philanthropy, the more readily that the character of Lister displayed in a measure to which my experience can furnish no parallel the true philanthropic instinct. But it was not philanthropy alone that impelled him; there was a practical aim to be achieved. Put shortly and in simple terms, he was profoundly conscious that the daily observation of individual cases is the only sure way to be continuously accumulating knowledge. The mere performance of an operation or of any number of operations can impart knowledge of only a very circumscribed and imperfect character. The close following of a single case from day to day, the close scrutiny of the behaviour of a wound, of the sutures, of the discharges, and of the general phenomena displayed by the patient, will yield a richer harvest of valuable equipment to the surgeon than any amount of operative experience, in which the after-treatment is committed mainly to the charge of others. Of all the practical lessons that I carried away from my studentship under Lister I am disposed to rank the instilment of this principle in the highest place.

The dreadful mystery of malignant disease is being hard pressed by the organized onslaught of a scientific army, but the secret has not yet been dragged forth. The whole world, both medical and lay, is holding its breath at the therapeutic possibilities that may evolve from our better acquaintance with radium, and the wise are also withholding their judgement, but in no carping spirit. The operation of gastro-enterostomy has found itself; its sphere and its limitations have become defined, its value enormously enhanced thereby, and what was quite recently a kind of surgical conflagration has settled down into a steady luminous flame. The conflagration has, however, only passed on a little, and the air is now heavy with accounts of bismuth meals, enteroptoses, and kinks. The dominant fact, nevertheless, is that since these matters are engaging the earnest attention of level-headed and honest workers, we may rest assured that the ultimate result will be a substantial increase in our knowledge. I might allude to numerous other matters that are either comparatively new or as yet imperfectly understood, but I will deal only with one subject prominent in the surgical field that has possessed for me more than ordinary interest.

The question of the treatment of simple fractures, which occupied the attention of the members of this section at our last meeting in Congress, has since then been prominently before the profession, and an organized attempt has been made, by means of a committee appointed by the British Medical Association, to investigate the respective merits of what are known as the operative and the non-operative methods, and to settle the vexed question as to whether it is necessary and right to cut down on recent fractures and fasten the ends of the bone together with plates and screws; or whether we may not rather look to improved methods of non-operative treatment for the amendment of our faulty results. After an exhaustive investigation, a very minutely detailed report was published, which was surprisingly inconclusive. It is true that the results of the operative method showed a slight advantage over those treated without operation, but surely

unless this had been a foregone conclusion, there could never have been any question about the matter to be answered. The case of the advocates of frequent operation was destroyed, moreover, by one strenuous proviso in the report of the committee, substantially to the effect that the resort to open operation should be the sole prerogative of skilled operating surgeons in hospital, while the ordinary practitioner must confine himself to non-operative methods; but seeing that the ordinary practitioner has to learn to treat fractures from skilled surgeons, in hospitals, during his studentship, his chance of learning to treat such injuries properly would obviously become less than ever in proportion to the readiness displayed by his teachers to substitute operative for the more difficult and troublesome non-operative plan.

A most remarkable feature of the whole discussion appears to me to be presented by the fact that for some years past there has been a third method of treatment before the profession, advocated with energy and ability by the highest authority, and for which it is claimed that better results can be obtained than by either the old routine method or by the operative method of Sir Arbuthnot Lane. I refer to the method entitled by its author, Just Lucas-Championnière, "treatment by mobilization and massage." Mention of this method gives me the opportunity of making reference to the great loss the profession of surgery has recently sustained through the death of the distinguished French surgeon. An excellent account of the method has been recently published by an English disciple of Lucas Championnière, Mr. Mennell. Anybody reading for the first time the detailed accounts of the results obtained is likely to find them almost incredible, especially with respect to the rapidity with which union takes place, and the slight amount of shortening in fractures of the femur. Why, then, has this method of treatment not made more rapid headway? To my mind the reason is perfectly clear, in spite of the fact that I am prepared to substantiate with complete confidence the accuracy of the published accounts. The truth is, a most unfortunate tactical blunder was made at the outset in the choice of a title, and the profession has been frightened, and very justly frightened, by the terms "mobilization" and "massage." It might not unnaturally be supposed that mobilization meant some kind of deliberate "moving about," and that "massage" meant "massage," but it is scarcely possible to over-estimate the gulf that separates the real truth of the matter from what would appear at first sight to be the meaning of the terms used to express it. If, instead of "mobilization and massage" the method had been designated "simplicity and common sense" it would have been quite as correctly entitled, and long ere this it would have gained universal acknowledgement, and driven all competitors from the field.

I have no time to devote to a detailed account of the methods we have been adopting in the treatment of fractures, but in a few brief sentences I should like to set out some of the more important conclusions at which we have arrived:

1. The difficulties met with in the treatment of fractures are undoubtedly largely—I do not say entirely—of our own making.

2. The long Liston splint in the case of the thigh; all appliances with foot pieces in the case of the leg and ankle; almost all splints for fractures of the humerus and most splints for the forearm, are ingenious devices for the creation of difficulties.

3. There is usually, if not always, a position of the limb in which the fragments will fall naturally into place, provided they are free to do so.

4. When there are a number of long and powerful muscles acting upon the fragments, as in the case of the thigh, a light extension is necessary to combat the tonic contraction of the muscles.

5. Any apparatus which would be uncomfortable and annoying if applied to an uninjured limb will *a fortiori* be more uncomfortable and more disturbing if applied to an injured one—a simple little common-sense principle that is often strangely overlooked.

6. It is an absolute rule that no recent fracture shall be put up in splints and left for several days; the splints must be taken off frequently, at least every second day, or better every day, the patient encouraged to move the joints, fingers, or toes as the case may be, and generally to carry out the essentials of "mobilization" as laid down by Lucas-Championnière, and take an intelligent interest in his fracture and not be afraid of it.

Here is an illustrative example of the kind of method I have been employing for some time past which may possess some interest:

Some months ago a body of students from the other two large teaching hospitals of Melbourne came by invitation to see the Alfred Hospital, and, among other things, I took them to the bedside of a muscular young footballer, who had been admitted a few days before, and made in substance the following remarks to them: "This is a fracture of the shaft of the femur, about the middle, in a very muscular man, and this is the way we treat such an injury. No long splint is used; simply extension in a comfortable slightly flexed position by means of an arrangement of small pulleys, thin cord, and zinc oxide plaster. The limb is supported comfortably on pillows and abducted. The measuring tape shows there is no shortening whatever. The patient can raise himself up, be propped up at times, and generally move about and make himself comfortable, so that the irksomeness of his confinement to bed is reduced to the minimum. We find that by this method not only are the final results infinitely better than those we formerly were able to obtain, but the period of treatment is shortened by nearly one-half. Firm union is usually obtained in four weeks. I expect it in this case, and shall be disappointed if it does not occur. One of the pieces of knowledge that has come to me since I have been treating fractures in this way is with regard to the extreme rapidity, almost one might say suddenness, with which a bone will unite; it all seems to happen in the course of about the fourth week."

The foregoing are in substance the remarks I made to the students. That which actually happened in that case was as follows: At the end of three weeks there appeared to be no union; three days later, the bones were obviously united with semifirm union, while at the end of four weeks the fracture was absolutely firm. I then discovered that the alinement of the bones was not quite correct, but that there was a slight convexity forwards, causing an exaggeration of the normal anterior curve of the bone. It was not a serious matter, but, in order to correct it, I suspended the leg at the knee, and passed a jack-towel, to which was attached a 20 lb. weight, over the middle of the thigh, and hung it over the opposite side of the bed. I failed, however, to make any impression on the firm union, and after trying for three days in this way gave it up. It was a matter of only trifling importance. At the same time there was in the ward a case of Pott's fracture in a young man. At the end of a fortnight he was allowed to take the splints off during each day, and reapply them at night. At the end of three weeks he left the hospital. These are precisely the type of results obtained, so far as I can discover, by the late Dr. Lucas-Championnière and Mr. Mennell. The method employed, so far from being elaborate and alarming, is at least as simple as the older methods, and quite as easy for the busy general practitioner to master and employ. Moreover, it appears, unless I am greatly mistaken, that the methods that for the last two or three years I have been employing in the treatment of fractures, of which the two cases briefly narrated will serve to roughly indicate the general plan, differ in no essential feature from the methods of Lucas-Championnière. But with this bare allusion I must perforce leave the subject, for which I hope shortly to find some other opportunity for a more detailed statement.

This address has, by intention and design, been about my old master, Lister, and it is not altogether without fitness that it should be brought to a conclusion with the subject of simple and compound fractures, for we all remember that it was in the treatment of compound fractures that modern surgery had its birth. In any case I believe that I gauge the feeling of you all aright if I submit that nothing of an intimate nature that pertains to the personality of Lister can at this juncture fail in interest for members of our profession.

DR. JULIA COCK, Dean of the London School of Medicine for Women, left estate of which £956 is net personalty.

Remarks
ON
INFECTION BY B. COLI IN THE PUERPERIUM, AND ON THE INFECTIVE CONDITIONS OF PREGNANCY.

BY

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Fever during the puerperium is perhaps the cause of more anxiety to the medical practitioner than anything else, and the point of greatest importance at the outset of such cases is to determine the cause, and, if this be of an infective nature, to isolate the organisms with a view to specific treatment.

Etiologically, we may recognize two main groups according as to whether the cause be avoidable, as, for example, in septicaemia, or unavoidable, as in autogenous infections. Here we do not propose to deal with the septicaemic states, in which, though the methods of examination are the same, unfortunately the prognosis is less favourable. Our object is to place on record three striking examples of autogenous infection which we think will be instructive, inasmuch as they have been worked out both from a clinical and pathological aspect from the inception to the termination of the disease.

In many cases of infection which fall under the notice of the general physician the picture is incomplete as regards the onset of the disease, but, in such conditions as the obstetrician meets, this is not the case.

Furthermore, we are of the opinion that, notwithstanding the general acceptance, there is room for some widespread enlightenment on the subject, for of all infective states and acute pyrexias, perhaps these autogenous infections herein exemplified hold out more hope of speedy amelioration after proper diagnosis; indeed, the improvement and frequently the cure is often startling in its rapidity.

As a result of much work on the subject in recent years, the possibility of autogenous infection is now well recognized. Bacteria which normally inhabit certain parts of the body as saprophytes can, under favourable conditions of environment, acquire virulent characters, so that we find the streptococcus or the *B. coli* or the *B. pyocyaneus* (a less frequent inhabitant of the alimentary tract) at times settling down on a diseased endocardium or kidney or other part of the urinary tract and initiating pathological processes. It may be taken that the organisms are constantly entering the blood stream in some numbers, but, under ordinary conditions of health, are easily overcome by the defensive agents. But sometimes these bacteria may settle down to a saprophytic existence in parts of the body usually free from them, so that it is possible for the *B. coli* to live in the female bladder for long periods without producing any disturbance; such probably occurred in Case II of our series.

It is obvious that infection will depend on two factors—namely, the presence of the bacterium, which is a constant factor, and the resistance of the host, which is a variable factor; in conditions of health we find that even the more usually recognized pathogenic bacteria such as the pneumococcus or, less frequently, the diphtheria bacillus, can exist in a harmless state. In normal conditions the balance between these two factors is well maintained.

In pregnant and puerperal women a focus of diminished resistance is met with in the kidneys, taxed often to their utmost with the extra work thrown on them; consequently, infective nephritis is often encountered—so frequently as to have merited the title of "pyelonephritis of pregnancy"*—a suppurative lesion of one or both kidneys, incited by the *B. coli* for the most part, though occasionally by other organisms, associated with fever and pyuria, and often fatal either during the course of pregnancy or in the puerperium. The lesions noted are often extensive destruction and abscess formation of one or both kidneys.

In more favourable cases the infection is restricted to the bladder, and it is important always to determine whether such is the case. During parturition the bladder is liable to mechanical damage of varying degree, so that here again there is a site of diminished resistance which favours the lodgement of bacteria which have been imported, or the exaltation of bacilli that are already present in the bladder.

B. coli is undoubtedly by far the most frequent cause of infection in these conditions, though other organisms, such as the *B. proteus*, staphylococcus, etc., may occur. The source of infection is the intestines, and there is experimental evidence to show that constipation aids the process.

There are several possible channels of infection. It may be by the blood stream, or the bacteria may spread from the exterior along the urethra to the bladder and again along the lymphatics: indeed the female urethra has been shown to possess a constant bacterial flora; it is highly suggestive also in some cases that the bacteria spread directly from the intestines to the bladder. In pyelonephritis it is most likely that infection is of haematogenous origin, whilst in cystitis, perhaps, the ascending infection is the rule, though the direct spread is probable, and, of course, it may be secondary to a renal infection. In many cases of acute *B. coli* cystitis in female children the ascending infection is certainly the most probable.

Now, although the *B. coli* is of intestinal origin, it is important to note that the organisms as found in the urine do not present the typical characters of *B. coli*. It is now well recognized that change of environment produces variations such as are met with, and consequently there are numerous varieties of atypical *B. coli*, so that in carrying out bacteriological investigations in these cases it is not necessary to adopt hair-splitting means of identification.

Symptoms.

Where there exists disease of the bladder or the kidneys the manifestations are fever of indefinite duration, often rigors, and invariably the urine is of high acidity, containing pus and swarming with bacilli. The urine is so acid as to produce scalding in passage. Though the pyrexia may continue for some time, the patient does not manifest general symptoms of such severity as are met with in septicaemia; nor can micro-organisms be found in the blood stream by cultural methods. The condition is one of toxaemia. There is but slight leucocytosis, though in more extensive diseases of the kidneys, where abscess formation is advanced, this may be more marked.

Diagnosis.

The diagnosis of the condition is not difficult; it is futile to rely solely on the clinical manifestations, for the sooner pathological aid is invoked, and the earlier the infection is defined, the more likely will be the patient's chances of recovery. The diagnosis must be made between bacilluria, sapraemia, septicaemia, and septic phlebitis. In all these the course of procedure is the same. Swabs should be taken from the cervical canal and the interior of the uterus, whilst at the same time a catheter specimen of urine should be taken and blood examinations proceeded with. A morphological examination of the blood will reveal the leucocytosis that accompanies inflammation, and purulent accumulations; by blood cultures the micro-organisms in cases of general septicaemia (for the most part streptococci) can be rapidly obtained, and by examination of the urine the characteristic findings in *B. coli* infections—namely, acidity, pyuria, and bacilluria—can be immediately determined, whilst, by cultural methods, the *B. coli* itself can be readily grown. In addition, though merely of corroborative evidence and in no way delaying the treatment, serological methods of diagnosis may be adopted, in order to show the specific relationship between the organism and the disease; in some cases an agglutinative reaction is well developed, and in one of our cases the serum agglutinated the *B. coli* in question when diluted up to four-hundredfold. Though

* Three Cases of Pyelonephritis of Pregnancy (with literature), by Carling and Bernstein, *Westminster Hospital Reports*, vol. xv, 1907.

in others no agglutination reaction can be obtained, yet it is highly probable that by applying more exact serological methods of diagnosis more constant results will be obtained.

Prognosis.

The course of the disease is very variable. Provided one is not dealing with pyelonephritis associated with pregnancy, the condition is not of such gravity as in infections originating in the uterus. It is possible that by general treatment alone these cases may drag on for many weeks and ultimately recover, as no doubt must have occurred in earlier days without the true significance of the infection being determined. It was indeed generally recognized that the severity of puerperal fever had a direct bearing on the time of onset, the most severe cases starting in from one to three days after labour, whilst the onset of the more hopeful cases was often delayed from one week up to as long as three weeks (Case II). With these latter must now be grouped the infections that we recognize as originating in the urinary tract.

It is evident that with modern methods we have eliminated to a large extent the uterine infections which we have already grouped under the heading of avoidable infections, and now with our present knowledge it seems that by prophylactic methods we may be able to avoid or control the infections arising in the urinary tract.

We may summarize the results of treatment under three groups: (1) Cure may result and the bacilli disappear from the urinary tract; or (2) the symptoms may be relieved and the bacilli disappear so long as the patient is kept under treatment, but it will be necessary to give prophylactic doses of vaccines at increasing intervals of time; or (3) the condition may subside and the bacteria continue to inhabit the bladder as harmless saprophytes.

Treatment.

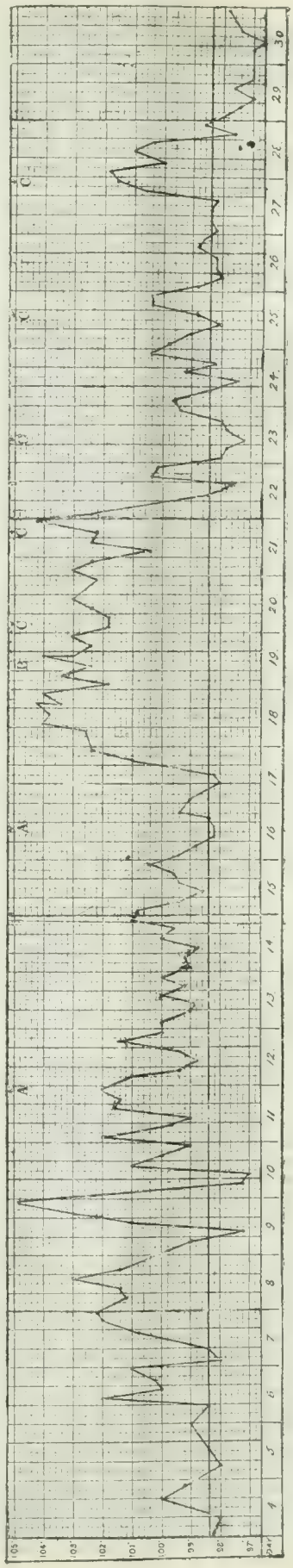
Recognizing, then, that urinary infections may cause serious complications both in pregnancy and during the puerperium, the earlier the condition is determined the better. We have pointed out that the *B. coli* may be present in the bladder for years, and often there is a history of bladder trouble of long standing; no doubt in two of our cases attacks of "ague" were due to transitory exacerbations of such a condition.

So, then, in all cases of pregnancy, and especially in primiparae, if there be symptoms pointing to bladder irritation, or a previous history of so-called ague or malaria, the bacterial examination of a catheter specimen of the urine is indicated. If a condition of bacilluria be found, then a prophylactic course of vaccines is called for, and may prevent serious complications later on.

As regards treatment of the actual infection itself during the puerperium, there can be no doubt that autogenous vaccines give by far the best results. In puerperal fever there has been a tendency to administer immediately antistreptococcus serum; but, though this may give favourable results occasionally in puerperal septicaemias, it is obvious that it can be of no use in *B. coli* infections. It is certain that the stock *B. coli* vaccines are not nearly so efficacious as are the autogenous vaccines, for we have already said that the bacillus alters its characters with its environment, and it is usually one of the many atypical varieties of the *B. coli* which causes the infection. In Case I of our series no improvement followed the administration of a stock *B. coli* vaccine. It may be urged that there must be delay in preparing an autogenous vaccine; but, then, there is no extreme urgency in these infections, and it is possible to hasten the process so that the first dose may be given in less than twenty-four hours.

Urotropin, or washing out the bladder, sometimes gives local relief, but in Case II neither of these methods was adopted, whilst in Case I they had already been tried prior to the vaccine without success, although the bacterial content of the urine was so lessened that a cursory bacterioscopic examination of the urine failed to reveal any of the organisms; as it happened, however, a culture was readily obtained. It is possible that the urotropin may interfere with the growth of the organisms in some cases, and so interfere even with an accurate diagnosis.

The result of vaccine treatment is, as a rule, rapid, and after the first dose even the temperature may fall and the toxic symptoms be relieved, whilst the bacteria may disappear from the urine. But even so, one must be guarded in giving a prognosis of rapid return to health or in discontinuing the treatment too soon; for, though it is easy to control the bacterial activity, in some cases it is difficult and occasionally impossible to entirely inhibit them. Consequently, the vaccines should be continued in increasing doses at increasing intervals of time for several weeks and the further treatment controlled by periodical examinations of the urine. This is well shown in Case II, in which, after ceasing treatment for some weeks, the patient suffered an acute outburst of bacterial activity, which was immediately checked by resource to the vaccine; two months later, though she appeared perfectly well, a few bacilli were still to be found in the urine, and at present she is under observation.



CASE I.—A, Antistreptococcus serum given. B, Stock mixed *B. coli* and streptococcic vaccine. C, Autogenous *B. coli* vaccine given in doses of 10, 25, 32, 50, and 100 million. The chart dates from the time of parturition, and after the thirtieth day there was no further pyrexia.

CASE I.—Primipara, aged 40. (See Chart 1.)

Previous History.—Except that four years ago she was somewhat seriously ill in Italy with a form of "low fever" she was perfectly healthy. An examination of the urine had shown a very slight cloud of albumin on boiling; the reaction was acid; the frequency of micturition was not increased, and there was no other symptom pointing to bladder or kidney trouble.

Parturition.—Labour commenced soon after 9 p.m. and went on normally until 1.30 a.m., when she was seized with intense bladder tenesmus, passing water every two or three minutes, and suffering such severe pain that a hypodermic injection of scopolamin and morphine was given, and the bladder gently irrigated with warm boracic solution. This treatment relieved the urgent symptoms, but

she became very hysterical when the effect of the morphine began to wear off, and at 6.30 a.m., the os being fully dilated and the head well engaged, forceps were applied, and the child delivered easily.

After-History.—Recovery was normal until the fourth day, when the temperature rose to 100°, and she had another severe attack of bladder tenesmus lasting about two hours, and not relieved until the bladder was again irrigated with boracic solution.

Fifth day. Temperature 99°. Lochia sweet and plentiful, urine passed every three hours, but no severe pain.

Sixth day. Slight rigor with temperature 102°, some frequency of micturition, lochia normal.

Seventh to tenth days. Swinging temperature, 97° to 103°. Although the lochia still appeared to be normal, the patient was given an anaesthetic, and while in the lithotomy position a careful examination was made to see if there was any pelvic cellulitis. Everything was quite normal, but swabs were taken from the cervix and interior part of the uterus. After this the uterus was washed out with iodine solution, but when pressure was being made on the fundus of the uterus just before passing the syringe into the uterus about 2 oz. of urine escaped from the bladder and trickled into the vagina and to the cervix. The urine was at once swabbed out and the intrauterine douche given.

Tenth to fifteenth days. The temperature varied between 99° and 101°. Three injections of polyvalent serum were given and a vaginal douche twice daily. The reports on the swabs from the cervix and uterus were negative.

Seventeenth day. About 4 p.m. the patient became very drowsy and by the evening the temperature had risen to 102°, and she could hardly be wakened up.

Eighteenth to twenty-second days. The abdomen became distended, the spleen was enlarged, bowels loose and offensive (twelve actions in the first twenty-four hours). In fact a typical typhoid state with the addition that for three or four hours on the morning of the eighteenth day there was a third attack of bladder tenesmus with actual incontinence of urine for part of the time.

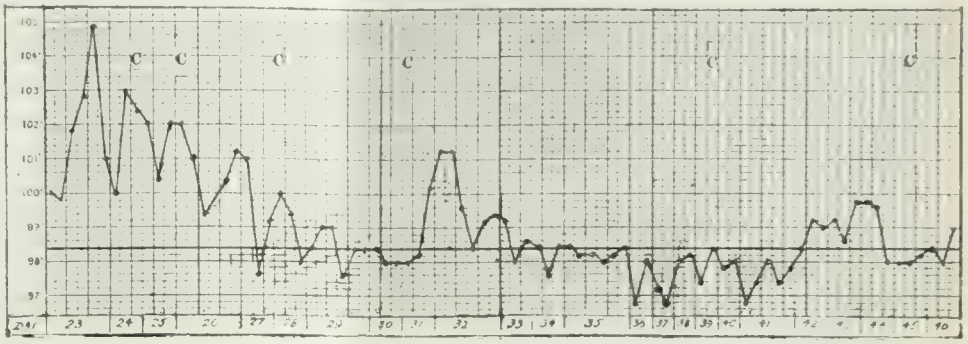
Swabs were again taken from the cervix and uterus, but in addition cultures were made from the urine and blood.

Pathological Findings.—A blood count was performed with a view to determining the possibility of some hidden focus of suppuration. But the leucocytes on no occasion, during the several days that they were examined, reached beyond 15,000 with a normal differential count; so that suppuration was contraindicated. Blood cultures made by inseminating varying quantities of blood taken from the median basilic vein remained sterile throughout. The urine was acid, though not highly so, as urotropin had been given; it contained leucocytes, epithelial cells, and an occasional bacillus. But cultures rapidly produced prolific growths of a coliform bacillus (Gram negative, motile bacillus which produced acid and gas). The cervical swab contained a similar bacillus, but also staphylococci, both of which appeared in cultures. The blood serum withdrawn at the same time was used to carry out the agglutination test with the *B. coli* obtained in cultures; positive results were readily obtained with serum diluted 400 times.

As the lochia still remained normal to all ordinary observations, no further intrauterine or vaginal douches were given; all treatment was directed to diminish the infective condition of the urine. Urotropin and acid sodium phosphate merely caused an improvement in the state of the urine. Antistreptococcus serum had previously been given. To save time an injection of a stock vaccine consisting of a *B. coli* and streptococcus was given, but it was not until a vaccine prepared from her own organism was given that any real progress was made. An interesting observation was that, with this stock mixture, marked activity was noted round the sites of the previous inoculations of the antistreptococcic serum; these were surrounded by extensive erythematous areas. The sudden fall in the temperature on the twenty-second day was immediately after the second dose of the autogenous vaccine.

Twenty-second to twenty-eighth day. Although there was still a certain amount of pyrexia, the patient's general condition was very markedly improved, and, except for a typical attack of joint pain and an urticarial rash after the third dose of autogenous vaccine, there was an excellent recovery.

CASE II.—Primipara, aged 22. For several years had suffered from "feverish attacks" at fairly long intervals. These were put down to influenza. Two years before marriage she was in South Africa, where she had a severe attack of fever, which was said to be due to "some horrid tropical microbe." During the pregnancy she was extremely well, and her mother remarked that the baby was going to put her all right. There were no bladder symptoms, and the labour was uneventful, except that owing to uterine inertia and a muscular pelvic floor forceps were applied after the second stage had lasted two hours. During the first week the evening temperature was usually between 99° and 100°. There was considerable difficulty in passing urine, but a catheter was never used, the patient being allowed to get out of bed in order to empty the bladder. During this time there was also some trouble with the breasts. Nursing was attempted, but by the ninth day the flow of milk ceased. On the tenth day the temperature remained normal, and so continued until the twenty-first day. The lochia had been quite normal throughout and had ceased at the end of a fortnight. With a rise of temperature to 103° F. on the twenty-second day, there was a return of the lochia, the patient complained of severe frontal headache, and felt very ill. There were marked frequency and difficulty in passing the urine, which became thick and cloudy. On the twenty-third day the temperature gradually rose until at 5 p.m. it reached 104.8°. The headache was intense. An examination of the blood revealed nothing abnormal by morphological or cultural methods of examination. A catheter specimen of the urine taken on the morning of the twenty-third day showed the usual findings in *coli* bacilluria. Sufficient growth was obtained in eight hours to proceed with the vaccine, and on the evening of the twenty-fourth day the first dose was given. In this case agglutination tests were entirely negative.



CASE II.—The pyrexia began on the twenty-third day after parturition. C denotes administration of autogenous vaccines in doses of 10, 25, 50, 100, 150, and 200 million. This chart shows a four-hourly temperature after each injection.

Treatment.—The only treatment consisted in administering vaccines, and it was a noteworthy feature that within a few hours after each of the first four injections of the vaccine the patient always became bright and the headache entirely stopped. The temperature was 103° on the twenty-fourth day before the first injection of vaccine, on the twenty-fifth day it reached 102°, on the twenty-sixth day 101°, and on the twenty-eighth day 99°. For three days there were no symptoms of any kind, but there was a slight recrudescence on the twenty-eighth day. Increasing doses of the vaccine were given on the thirty-second, thirty-sixth, and thirty-eighth day, and then at longer intervals. The lady then went to Scotland, and ceased taking the vaccines, but a few weeks later there was an acute exacerbation, with pyrexia, malaise, and toxaemia, resembling the earlier attack. This, however, responded immediately to vaccines, and she was given doses of 350, 400, 450, and 500 million, and then ceased to attend. On her return (eight weeks later) she appeared to be in perfect health, and then on examination of her urine a few *B. coli* were still to be found, but all treatment has since ceased, and it is hoped that the bacteria have settled down to a saprophytic existence. We are indeed of the opinion that such was the case for some years preceding the pregnancy.

CASE III.—Primipara, aged 28.

Previous History.—Had twice been in a nursing home for insomnia and nervous breakdown, and for some years before marriage had been subject to attacks of malaria, supposed to have been initiated abroad. Came to England about the eighth month of pregnancy, but was in excellent health. The pelvis was justo-minor.

As soon as labour commenced she complained of the severity of the pains and was given a hypodermic injection of scopolamin and morphine. While the effect of this lasted she was comparatively quiet and the os dilated well. When dilatation was about half accomplished she became extremely excitable and the bladder was found to be distended nearly to the umbilicus. As she was unable to pass urine, a catheter was passed and 15 oz. of urine, containing sufficient bright red blood to give the appearance of being almost half blood, was drawn off. An attempt was made to deliver with forceps through the partially dilated cervix, but this was unsuccessful and so the child was delivered by turning. For the first week there was nothing special to note except difficulty in passing urine. At the end of the week, however, the temperature rose to 102°. The lochia was quite normal. A catheter specimen of the urine was examined and the *B. coli* found.

The blood examinations in this case were also normal, the leucocytes only numbering 9,000 to the cubic millimetre. The urine contained an extraordinary amount of pus, was highly acid, and contained bacteria, notwithstanding the fact that urotropin had been administered. The blood serum gave slight agglutination reactions with her own *B. coli* when

diluted twenty times. We prepared a vaccine and administered the first dose in twenty-four hours; the reaction from this was very marked, but there was so much improvement that a second injection was given. As insomnia set in again, the patient insisting that this was due to the vaccine, no more was given. She was treated with urotropin and acid sodium phosphate. She continued to have some pyrexia, but the chief trouble was the insomnia, and she was presently sent away for a rest cure, and we lost sight of her.

Conclusions.

It is of practical importance to note that the pathological investigations followed immediately on the clinical examination, and were carried out by ourselves, for the most part at the patient's house; the cultures were made immediately, and in ten hours sufficient growth was obtained to allow us to proceed with the preparation of the vaccine. The first doses were diluted with 0.5 per cent. lysol in normal saline and sterilized at 60° C., incubated for a few hours and again heated to 60° C., and were ready for use within twenty-four hours after seeing the patient. There can be no question as to the advantage of such bedside pathology in rapidly arriving at a diagnosis, or, at least in some cases, in eliminating the possibility of certain diseased states.

PLAGUE IN CEYLON.

BY

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AND

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As is well known, no indigenous cases of plague have ever been known in Ceylon; in fact, various theories have been put forward from time to time to explain this peculiar apparent immunity of the island. In January of this year rumours began to circulate as to the appearance of a new and unknown malady in the Chetties quarter of Colombo. On Saturday, January 24th, a pseudonymous letter, purporting to have been written by a resident in Sea Street, was received at the Public Health Office stating that a new and very fatal disease had appeared in Sea Street about January 15th, and that some 12 or more deaths had occurred. It stated further that the patients were attacked with fever in the morning and died in the evening. A house-to-house inspection, made the same afternoon, disclosed nothing beyond the fact that the residents in Sea Street, and particularly the Chetties, believed that a new and very fatal disease had recently appeared and they were in consequence much alarmed; in fact, they held processions to propitiate their gods and put a stop to the new disease.* The medical registrar of deaths for this district, Miss Rudd, was interviewed, but stated that she had no information on the point. She was, however, asked to report at once any sudden deaths or suspicious cases.

Case I.

On the following afternoon, January 25th, she reported a sudden death in Sea Street. The deceased was a young coast Moorman, named Seyadu Ibrahim Sahib, aged 16, who lived at 64, Sea Street, where he carried on the trade of a dealer in empty packing cases and boxes. He had come from Tondi in India about two months previously, and had been residing at 64, Sea Street ever since, with the exception of a trip to Kurnegalle from January 18th to 22nd. He had been seen in the evening of January 24th, and appeared to be then quite well. At 7.30 a.m., January 25th, he went to consult Dr. Rudd, who found that he had a temperature of 103°. This raised the suspicion of malignant malaria, a disease rampant in Kurnegalle district. He appeared to have no other symptoms. He died at 4.30 p.m. the same day. A judicial *post mortem* examination was carried out that night at 2 a.m. in the presence of both of us, but disclosed nothing to account for the death. The body was well nourished and all the organs looked healthy. There was nothing at all abnormal apparent beyond a very slight congestion of the meninges and a slight enlargement of the spleen; there was no enlargement of any lymphatic glands. By means of a sterile pipette blood was taken by one of us from the heart, and several broth, agar, and serum tubes inoculated; films were also made. The whole spleen was removed, and also several inguinal lymphatic glands, though not enlarged, and apparently quite normal. The organs were placed in a sterile Petri dish, and fifteen minutes later bacteriologically examined by one of us at the Bacteriological Institute, films being made, and a large series of various culture media inoculated.

The films from the spleen stained by the Giemsa method revealed the presence of numerous bipolar staining bacilli, Gram-negative. Films made from the heart blood, too, revealed the presence of bipolar staining bacilli. Such germs were absent in the films made from the inguinal lymphatic glands. Given the presence of bipolar staining bacilli we considered at once the case to be probably one of plague. After thirty-six hours the agar tubes inoculated with heart blood and spleen juice presented numerous delicate dew-like colonies, and the further investigation proved the germ to be the true *Bacillus pestis*.

Case II.

The second case, also a coast Moorman, named Mohamed Gummie, aged 24, occurred on January 29th at 15, Martie's Lane, which is over half a mile from the first case. The deceased in this case carried on the trade of a tea boutique keeper at 2, Cross Street, which is also half a mile from the first case. He was not seen alive by a doctor. His friends stated that he had been ill for only two days, but he had not been to his shop for six days. It was not known whether he had been to Sea Street. He had been in Colombo for over a year. The only history which could be obtained of his illness was that he had high fever and no other symptoms.

The *post-mortem* examination disclosed extreme congestion of the lungs, but not true pneumonia; there was extreme congestion also of the meninges. Otherwise the organs appeared normal and the body was well nourished. The bacteriological examination was positive.

Case III.

The third case was a Tamil male, aged 17, named Muttusamy. Nothing is known of the history of this case beyond the fact that he was brought to the General Hospital by a friend on January 25th. He is stated to have been brought from the Pettah—address unknown. He died on January 29th. At the *post-mortem* examination held by Dr. Mack and one of us nothing abnormal macroscopically could be found to explain the cause of death. The spleen was somewhat enlarged. Bacteriological examination was positive.

In addition to the above three cases, forty-five cases more have occurred to date.

Clinical Type of the Disease.

The type of the disease in our first three cases, and in the enormous majority of the cases seen later, has been septicaemic and most virulent, death taking place within twenty-four to forty-eight hours. The clinical diagnosis of such cases was most difficult; the patient merely complained of high fever and headache; none of the lymphatic glands were enlarged. This explains how so many cases were reported by medical men as cases of pernicious malaria. Recently two cases with buboes (axillary) have been observed. So far we have not come across any cases of the pneumonic type.

Description of the Strains of Bacillus pestis found in our Cases.

The strains derived from the above-mentioned three cases—and we may say from all the other cases we have examined—are culturally identical, and have all the characteristics of the plague bacillus; the germs in the human body and the tissues of animals inoculated with pure cultures are bipolar, staining to 2 to 3 microns in length, and Gram-negative. They are non-motile. On agar, when isolated direct from the tissues, they grow slowly, giving rise to delicate roundish translucid colonies, which later become somewhat more opaque and seldom coalesce. After several transplantations the germ grows much more abundantly, and the colonies may coalesce. Preparations from young agar cultures reveal the presence of very short, almost coccoid, bacilli. On 2½ per cent. salt agar the well-known degenerated, swollen, yeast-like forms appear. In broth the growth is rather scanty, mostly at the bottom of the tubes; the germ grows, forming long chains. On serum the growth is very scanty. Neither serum nor gelatine are liquefied. Milk is not coagulated. Our strains presented the following reactions:

Glucose Levulose Galactose Maltose Mannite Dextrose	Acid, no gas.	Lactose Cane sugar Dulcite	No change.

All our strains produce indol.

* It is remarkable that though accustomed to plague in their own country (all Chetties come from India) they never thought of this malady, and till very recently have always persisted in believing that it was a new disease. This is probably due to the absence in practically all the cases of the signs of the bubonic type of the disease with which they are acquainted.

Pathogenicity.

Our strains are very virulent to all laboratory animals – monkeys, rats, mice, guinea-pigs, rabbits. Monkeys inoculated subcutaneously die within twenty hours, and guinea-pigs within thirty-six to sixty hours. It is interesting to note that the strains isolated from the first three cases, even when inoculated subcutaneously in very small doses, have given rise, so far, to a general septicaemia, and no buboes are found at the *post-mortem* examination of the inoculated animals.

Plague in Ceylon Rats.

A feature of the outbreak of plague in Colombo has been that the human epidemic has not been preceded by an epizootic among rats. Natives of every class, as well as municipal inspectors, deny that there has been any severe mortality among rats in January or previous months; in fact, it was with difficulty that any dead rat could be procured during that time. The first dead rats presenting bipolar-staining bacilli were two examined by one of us on February 5th. From one of these rats the true *B. pestis* was grown; the other presented several contaminations, and the *B. pestis* could not be isolated. During the last few days several rats have been found infected by us and by the municipal bacteriologist.

We would call attention to the fact that rats found naturally infected have so far shown none of the *post-mortem* signs described by so many authors, the principal of which are buboes, the mottled appearance of the liver, and pleural effusion. Nothing is shown by the *post-mortem* examination of our rats so far, except slight hyperaemia of all the organs and slight enlargement of the spleen without necrotic patches. The blood taken from the heart, however, shows the plague bacillus in large numbers.

Conclusions.

1. For the first time in the history of Ceylon plague has broken out in the island, shattering the old general belief held by the public that this disease would never appear in the country.

2. The type of the disease has been septicaemic in all cases observed by us except in two recent ones in which axillary buboes were present. They all died within twenty-four to forty-eight hours from the onset. No cases of the pneumonic type have so far been observed.

3. The disease has probably been imported from some Southern Indian port, but we have been unable to trace it with certainty, and it is noteworthy that no steamers or boats with suspected cases have arrived in Colombo for more than a year. Another hypothesis is that there may be an unrecognized focus of plague in Ceylon.

4. An interesting feature of the outbreak has been the absence—to all appearances at least—of a discovered epizootic among the rats preceding the human epidemic. This suggests that infection took place first among men, and that rats have become infected later.

5. The infected rats so far examined have not shown any buboes, though the heart blood was teeming with plague bacilli. The plague among rats therefore appears to have been of the same type as that among men. It is probable that as soon as the Ceylon strain loses some of its virulence the bubonic type will appear both in rats and man. In man, as stated, we have already found two cases of the latter type.

The fifth Congress of French-speaking Doctors on Physiotherapy will be held in Paris on April 14th and two following days. The questions proposed for discussion are: Myopathies; ptoses; the part played by various physical agents, particularly movement, in psychasthenias. Dr. Bourguignon, assistant director of the electro-therapeutic laboratory at the Salpêtrière, will deliver an address on modern conceptions of the pathogeny and electro-physiology of myopathies. Other questions to be debated are physical agents (diet, electro-therapy, hydrology, hydro-therapy and thermo-therapy, kinesi-therapy, radiographic diagnosis, radio-therapy and radium therapy) in the treatment of gout; physical agents (electro-therapy, hydrology, hydro-therapy, kinesi-therapy, radiographic diagnosis and radio-therapy, thermo-therapy, and light treatment) in ankyloses; physical agents (electro-therapy, Finsen treatment, kinesi-therapy, radio-therapy) in lupus vulgaris.

AN INSTRUMENT FOR THE DETECTION OF SLIGHT DEGREES OF NASAL OBSTRUCTION.

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The relationship between nasal obstruction and chronic deafness due to Eustachian obstruction and chronic adhesive catarrh of the middle ear are well recognized, but it is difficult to say what degree of obstruction is necessary to produce the changes in the ear. In well-marked cases no difficulty is found in determining the presence of an obstruction. As a rule, the patient will volunteer which side of the nose is stopped up, and it simply requires inspection of the nasal cavities to discover the cause. In other cases the patients deny that there is any obstruction in the nose at all, and on examination very little evidence can be seen or demonstrated by the usual instruments, for it must be remembered that many noses, which are functionally perfect, present deviations, crests, etc., on examination, and it is a question whether such play a part in the causation of the deafness.

That slight degree of obstruction can cause serious changes in the ear can be demonstrated by the results of nasal treatment in these cases. Moreover, patients who have never complained of, and, in fact, were unaware of, the presence of obstruction in the nose have expressed the relief nasal treatment has afforded. The explanation is, of course, that they have never known what it was to breathe properly before. From the surgeon's point of view there has been some difficulty in determining in such cases whether surgical interference was justifiable. It is true that instruments have been invented, but they have either been cumbersome or awkward to use, or have only demonstrated expiratory obstruction, and, as inspiratory obstruction is probably the more important factor, they have not been of much use.

To overcome these difficulties the author has designed the rhinomanometer. The objects kept in view were that the instrument should demonstrate both inspiratory and expiratory obstruction, should be easy to use both by the patient and surgeon, should not involve waste of time, and should not be expensive. It consists of a straight glass tube of narrow bore, the distal end of which is finely constricted. To the proximal end is attached a rubber tube ending in a broad nose-piece. The glass tube is about nine inches long, and is graduated into arbitrary divisions. A cylindrical glass vessel is required in which water is placed. The tube is immersed until the water in it rises to a mark on the tube, and the water in the tube and outside are brought to the same level.

The nose-piece is pressed close to one nostril; the other is closed by the thumb pressed upwards from below—not by pressing the ala against the septum. The patient then with his mouth wide open sees how much water he can breathe in and out of the tube in five seconds, breathing as hard as he can. The same procedure is followed with the other nostril. The results give a comparison of the two nostrils with each other, and with an average person.

The average individual can breathe in and out of the instrument five divisions, but from four to six are within the normal range. Anything below four indicates definite obstruction. The results do not indicate any scientific measurement, but determine the presence of obstruction in a quick and easy way. Seeing that the nose-piece must alter the shape of the vestibule to a certain extent, it must be determined beforehand by inspection whether obstruction is present here. For example, collapsed alae or a dislocated columnar cartilage might be the cause of the obstruction. If the instrument gives a normal reading, then the whole obstruction is due to the anterior condition, but if otherwise there must be some posterior obstruction as well. As far as I have been able to determine, an obstruction showing lack of inspiratory power of more than 3 degrees is not curable by simple measures, but demands operative treatment.

The usefulness of the instrument is shown by the following examples:

1. Mrs. P., 36, had obstructive deafness of both ears. She had never felt any nasal obstruction. On examining the nose a

slight deflection of the septum to the right in the upper part was seen. Operation had been refused by a well-known provincial surgeon and previously by the writer. She was given a course of inflation and improved, but the hearing deteriorated afterwards. On using the instrument she was only able to breathe in 3, and out 3.5, divisions on the right side, whilst she could do 5 divisions each way on the left. After a resection of the septum she was able to breathe in and out 5 divisions on the right; the hearing improved considerably, and this has been maintained. Moreover, she volunteered that she breathed much better, although previously she had noticed no obstruction.

2. Mrs. H., 27. Obstructive deafness, without definite nasal obstruction. The instrument showed inspiratory obstruction on the left side, and this was cured by removing a small portion of the middle turbinal which was slightly hypertrophied. The hearing has improved.

3. Mrs. P., 26. Obstructive deafness; was certain her nose was quite clear. Tinnitus was a prominent symptom, and the rhinomanometer showed 1 degree of inspiration only on the right side compared with 5 on the left. After resection of the septum she could inspire 5 degrees on the right. The tinnitus and deafness were much improved after a course of Eustachian inflation, and the improvement has been maintained. A long course of previous treatment had given no results at all.

The cases illustrate the use of the instrument, and, in all, operative treatment had previously been refused either by the writer or other surgeons.

The instrument could also be used in cases of subjective stenosis, where it would show the patient that true obstruction did not exist, and to prove to a patient who is unwilling to undergo an operation the necessity for it.

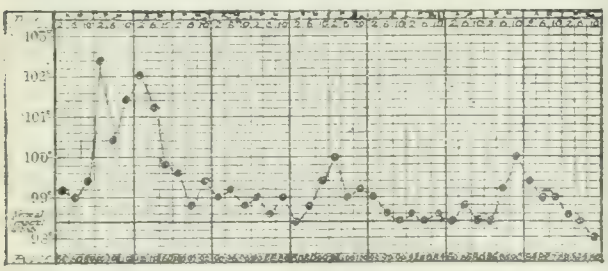
A CASE OF TEMPORO-SPHENOIDAL ABSCESS IN THE COURSE OF CHRONIC OTITIS MEDIA.

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THE following case has been thought worthy of publication, because it is a case of considerable interest with regard to the history, and with regard to the pathological findings from repeated lumbar puncture, and also on account of the actual findings at the time of operation.

W. J., a man aged 25, was sent to the hospital at 5 a.m. on November 8th, 1912. He was said to have had vomiting, convulsions, and a raised temperature, 101° to 102°, during a few hours, and the diagnosis was cerebral complication of chronic otorrhoea.



The history was that he had chronic discharge from the right ear of many years' duration. During the preceding two months slowness of cerebration and general mental dullness had been observed. There was also impairment of memory, and inability to perform his work in a proper and efficient manner. There was no history of rigor or visual affection.

Condition on Admission.

He lay in bed in the semiprone position, and resented questions and all interference. He could be roused to answer only at the end of a lengthened latent period. The pupils were equal, dilated, and reacted normally. Spontaneous nystagmus was not present. The fundi and discs were natural. The respiration was 22, quiet and rhythmical. The body and limbs revealed no cerebral localizing signs. The knee-jerks and deep reflexes were normal. There was a free purulent aural discharge on the right side. There was no mastoid tenderness or swelling.

Lumbar Puncture.

The skin over the third and fourth lumbar interspace was infiltrated with a 1 per cent. solution of novocain, lumbar puncture was performed, and 15 c.cm. of cerebro-spinal fluid, under normal conditions of pressure, were removed. The fluid was very markedly turbid. Microscopical examination revealed acute leucocytosis. Polymorphonuclear leucocytes, 77 per cent.; lymphocytes, 9 per cent.; other cells, 14 per cent. A faint trace of sugar was present, and there were scanty endothelial cells. Micro-organisms were absent (culture tubes remained sterile).

First Operation.

On the same afternoon Dr. Percy Jakins performed the usual radical mastoid operation; a cholesteatomatous deposit, not extensive, was found within the antral cavity; the tegmen tympani was removed, and the overlying dura exposed. Granulations were found in connexion with the dural surface. Pulsation was absent, but there was no bulging, and there was no increase of tension. The tegmen tympani itself had been to all appearances normal. It was thought advisable to postpone further exploration, the operation was concluded in the usual manner, and the patient returned to bed.

After-History.

On the following day there was marked improvement in the general condition. Cerebration was noticeably more brisk; there was less headache, and the temperature fell to 99°. This improvement was maintained during the following day; the patient had no recollection of the operation having taken place.

A second puncture of the lumbar theca resulted in the withdrawal of 10 c.cm. of cerebro-spinal fluid under normal tension. The fluid was clear to the naked eye, and, on centrifugalization, only a very few cells were found. During the next two days there was persistent and somewhat severe headache.

On November 15th symptoms of a very definite cerebral type developed—twitching of fingers of the left hand, incontinence of urine, and extreme drowsiness, and the respiration gradually began to assume the cerebral compression type. The fundi remained natural, and there was no vomiting.

Second Operation.

A third puncture of the spinal theca evacuated 5 c.cm. of fluid, apparently under diminished pressure. The specimen was contaminated with blood through puncture of a spinal vein, but it was otherwise quite clear.

A second operation was performed by Dr. Percy Jakins. The anaesthetic was hardly necessary. The region of the previous mastoid operation was opened up; there was still no undue tension of the exposed dura above the tegmen. A free exposure of the squamous temporal was secured by means of an upward vertical extension of the post-aural incision. With the ½ in. hand trephine a circular piece of bone was removed at a distance of ¾ in. above and slightly behind the external auditory meatus. The dura was immediately exposed. Its surface was found to be excessively tense, non-pulsatile, and in a state of venous engorgement. Crucial incision of the dura was followed by immediate hernia of grey matter, and then by immediate spontaneous rupture of a cerebral abscess, accompanied by an escape of gas. The compressional respiration was almost at once relieved. The depth of the abscess cavity was at least 2 in. A rubber tube was inserted and the wound left open.

Subsequent examination of the pus revealed the presence of *Streptococcus longus* and the *B. proteus vulgaris*. The patient gradually sank, and died at 3.50 a.m. the following day.

Necropsy.

The necropsy revealed an abscess cavity in the right temporo-sphenoidal lobe. It did not extend to the ventricle, which was found to be normal. There was no evidence of meningitis. There was slight discoloration of the dura overlying the tegmen tympani. There was no obvious disease of bone in the region of the tegmen attic. The pyogenic membrane was soft, but yet presented as a well-defined thickened zone or capsule. There was no other focus of suppuration in the brain.

The case presents several points of interest, namely:

1. With regard to the probable duration of the abscess, the thickness of the pyogenic membrane and the large size of the abscess itself are signs that seem to indicate a period of weeks rather than of days.

2. The cerebro-spinal fluid was upon all occasions sterile, both as regards direct and cultural examination. The very marked turbidity of the first specimen formed a most striking contrast to the appearances on a second and third puncture.

3. The significance of these variations with regard to the pathologic content and to the tension of the fluid is perhaps not obvious. It seems, however, clear that turbidity of the cerebro-spinal fluid, even though that turbidity should apparently clear up within a short interval, appearing in the course of chronic suppurative otitis media, and associated with cerebral symptoms, is a combination affording cogent evidence in favour of intracranial sepsis.

4. The absence of dural bulging and of increased dural tension in the region of the tegmen tympani may perhaps be explained by the fact that only a small area of the membrane was here exposed. It can only be said that the dura mater underlying the trephine opening was within the distance of one inch from the tympanic roof, and that here the tension was greatly increased.

5. Doubt remains as to the exact route of infection: if infection was established in the accepted way—by means of an infective stalk passing through the tympanic roof, through the dura, and then along the course of the vessels of the pia mater to their free bifurcation beyond the deep surface of the grey matter—the facts at least show how small may be the changes in these intermediate tissues for the establishment of a large abscess in the temporo-sphenoidal lobe.

I am indebted to Dr. Percy Jakins for his kindness in allowing me to write an account of this case, and also to Dr. Wyatt Wingrave, who has kindly allowed me to make use of his notes with regard to the necropsy and the pathological examination of the cerebro-spinal fluid.

TWO CASES OF OCULAR DISEASE ASSOCIATED WITH PYORRHOEA ALVEOLARIS.

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In view of the increasing attention now being given to oral sepsis in the treatment of systemic diseases, the following reports of eye conditions associated with pyorrhoea alveolaris may be of interest:

Case I.

W. D., aged 23, sought advice complaining that "his sight was becoming bad." He added that he had not been in good health for the past two months, and could not see so well as formerly with his left eye. There was no history of syphilis.

State on Examination.—His vision was found to be:

$$\text{Right eye} = \tfrac{6}{9}\text{; with } \frac{+\ 0.5\text{ D. spher.}}{-\ 1\text{ D. cyl. }180^\circ} = \tfrac{6}{6}.$$

$$\text{Left eye} = \tfrac{6}{36}\text{; with } \frac{+\ 1.75\text{ D. spher.}}{+\ 0.5\text{ D. cyl. }45^\circ} = \tfrac{6}{6}.$$

There was nothing abnormal to be seen externally, but on examining the right fundus the vitreous was found to be slightly hazy. The vitreous of the left eye, however, contained some opacities, and there was evidence of recent choroiditis. The mouth was in a bad state: the gums very unhealthy, while the teeth were carious and broken-down.

Treatment and Result.—The patient was advised to have the mouth attended to at once; he was ordered atropine and rest for the eye, and was given mercury and potassium iodide internally. Two months later the vitreous opacities had cleared up, and the choroidal trouble was better. With the correction already stated, which he was now allowed to wear, his vision was: Right eye = $\frac{6}{6}$; left eye = $\frac{6}{6}$, not improved. The patient admitted that he felt better for his dental treatment.

Case II.

Mrs. G., aged 46, was sent for treatment with an irido-cyclitis in her right eye. She stated that it had become inflamed and irritable six weeks before seeking advice.

State on Examination.—Her left eye had previously been operated upon for cataract, but she had a secondary cataract which required needling. Her vision was: Right eye = $\frac{6}{36}$, not improved; left eye = perception of light, with a fair sense of projection. She had photophobia, well marked ciliary injection, a slight degree of keratitis punctata; in the anterior chamber lay a mass of lymph, while the iris was discoloured and showed some adhesions on dilating. In the fundus was a commencing choroiditis, while there were also some vitreous opacities. The mouth showed both gums and teeth to be in a most unhealthy state. Pus oozed up from the sockets of the teeth, which were practically all carious. In addition the general state of the patient was bad; she was thin, anaemic, and generally out of sorts.

Treatment and Result.—As the patient had only the one eye to depend upon, treatment was somewhat urgent. Accordingly, she had every tooth cleared, upper and lower, and was put upon a mouth wash. Internally, she was given mist. alba with mercury and potassium iodide. She was ordered complete rest and a nourishing liquid, later semi-liquid, diet was given. A fortnight later she said she "felt better than she had done for months." The eye was much quieter, and the iritic adhesions, with the exception of one, had all broken down under the atropin. The ciliary injection had nearly disappeared, while the effusion of lymph had shrunk in size. Two months later the patient's eye was perfectly quiet, and she then discontinued her shade and the treatment. Her vision then was:

Right eye = $\frac{6}{18}$; with + 0.5 D. spher. = $\frac{6}{12}$ (compared with $\frac{6}{36}$ initially).

In addition she had gained 6 lb. in weight, looked better, and said she felt better in health than she had been for some time.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

Delivered before the Royal College of Physicians of London.

By FRANK SHUFFLEBOTHAM, M.A., M.D.Cantab., J.P.,

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT FOR THE NORTH STAFFORDSHIRE DISTRICT.

Lecture V.

BEAT HAND, KNEE, ELBOW AND BUTTOCK.

These terms were not known in some parts of the country, even in mining districts, until they were defined by the Departmental Committee on Industrial Diseases, which reported in 1907.

Beat Hand.

The term "beat hand" signifies an acute inflammation of the subcutaneous tissue of the hand involving its palmar aspect; it may affect the palmar side of the fingers and thumb.

As a rule, the hands of a miner show rough and thickened skin on the palmar side, undoubtedly due to the use of the pick. This condition is almost invariably found in miners past middle age. The areas of skin most often affected are: (1) Along the roots of the fingers; (2) over the ball of the thumb; and (3) over the hypothenar eminence on the inner side of the hand. The skin over the centre of the hand is generally softer than the skin over other parts of the hand, and consequently this part of the hand is less protected, and this is generally the seat of the trouble known as beat hand.

Although in cases of beat hand there is no history of any injury, inoculation probably takes place through an abrasion. In the ordinary course of a miner's work the hands are often knocked and the skin abraded. These injuries may be so trifling as to escape notice, and yet they may be sufficient to permit inoculation with an infective poison. One of the most prominent symptoms, as in other septic conditions, is local throbbing, or, as it is locally known in the North of England, "beating," hence the term "beat hand," and the same explanation applies to beat elbow, beat knee, and beat buttock.

In many cases inflammation goes on to suppuration, and the pus will track along the tendon sheaths, but most often to the back of the hand. The inflammation will be limited by the thickened skin over the palm, but there may be considerable swelling in the centre of the hand, and the skin will be hot and glazed.

The course of the disease will depend upon the treatment which the patient receives. If there be any considerable formation of pus and relief is not given, a general septic condition of the hand and fingers may result, but if early treatment be applied the inflammation clears up in a comparatively short time.

The frequency of the disease among miners may be judged from the statistics compiled by the Home Office of compensation and proceedings under the Workmen's Compensation Act. On the average, between 700 and 800 cases are reported each year in the colliery districts of this country. Beat hand is most frequently found in those districts where the coal seams are hard, and the majority of cases appear to be reported from Northumberland and Durham. The men who are actually coal-getters are most commonly affected, and this can be explained from the fact that it is they who use the pick at their work.

The disease attacks the soft part of the hand, and, speaking generally, soft hands are a predisposing cause of this disease; after a long strike, during which the skin over the hand has become softened, an unusual number of cases may arise when work is resumed.

The most important etiological point with regard to beat hand is the fact that there is no history of an accident in any case, and some colliery doctors call it idiopathic cellulitis of the hand.

The duration of the disease is, on the average, from three to six weeks; the statistics of the Northumberland

and Durham Miners' Permanent Relief Society show that in 1905 there were 55 cases of beat hand out of a membership of 37,000, and the average duration of incapacity for work of these cases was just over three weeks.

Complete recovery takes place in the vast majority of cases, but in some instances permanent deformities of the fingers or hands result.

Treatment.

It is important to recommend hot fomentations from the onset of the treatment. The hand and arm should be kept in a sling, and if there is any increase of temperature the patient should be kept indoors. If pus forms, an excision should be made at once so as to ensure free drainage, and the wound treated by hot antiseptic fomentations. In many cases pus has actually formed when the patient first consults the doctor, and in such cases an incision should be made without delay. Bier's treatment is of the greatest value in cases of beat hand, and should the joints of the fingers or of the hand become stiff as the result of septic infection, it may be necessary, to ensure a good result, that the patient should have an anaesthetic so that the adhesions can be broken down. In such cases massage and passive movement are of the greatest value, and I do not doubt that ionic medication will be of some service in treating obstinate cases. It is most important in all these cases not only to treat the acute septic inflammation, but also to ensure the function of the hand being restored in the shortest possible time.

Beat Elbow.

Beat elbow is acute inflammation round the olecranon. It may affect either the subcutaneous tissue round the elbow-joint or the olecranon bursa, or both these structures, and may spread both upwards and downwards from the elbow-joint and practically involve the whole limb. While complete recovery takes place in the majority of cases in from a month to six weeks, serious complications may set in which result in some permanent disability to the structures round the elbow-joint, causing stiffness of the elbow and weakness of the forearm, and the prognosis is undoubtedly more serious in elderly workers.

Treatment of beat elbow is similar to that of beat hand.

Beat Knee.

Beat knee is an acute inflammation in the subcutaneous tissues round the knee-joint, particularly below the patella. In this connexion it is important to remember the disposition of the bursae about the knee-joint. In the front of the joint there is one between the patella and the skin; there is a smaller one between the upper part of the tuberosity of the tibia and the ligamentum patellae, while a third is placed between the lower part of the tuberosity of the tibia and the skin. On the other side of the joint there are four bursae.

The history of cases of beat knee is similar to that of cases of beat elbow. A case which I saw a little time ago was that of a holer, aged 31, who had always worked in a coal-pit since leaving school, and who suddenly felt a pain in the right knee-joint and was compelled to give up work. He did not know how the trouble came on. I saw him four days after the onset, when there was considerable swelling about the knee, particularly below the patella. He was limping, and walked with a stick. The movement of the knee was good, there was no grating in the joint, and no swelling of the large patella bursa. The knee felt hot and was tender. This case was treated with hot fomentations, and in the course of three weeks the man was back at work again.

This was a simple and uncomplicated case, but one finds, as in beat hand and beat elbow, that there are cases of a severe type with constitutional disturbances and some permanent disability due to thickening and adhesions round the knee-joint. In these cases there may be some permanent lameness, even when the patient has had the knee moved under an anaesthetic.

In all cases of beat hand, beat elbow, and beat knee the importance of massage and passive movement cannot be overestimated in view of the possibility of the permanent deformities to which I have referred.

Beat Buttock.

This is an uncommon condition that is sometimes found due to irritation and friction over the gluteal region. There may be subcutaneous inflammation as well as bursitis, and great pain and discomfort may arise from the nature and situation of the lesion. The symptoms, course, and treatment are identical with those of the foregoing conditions; but in cases of beat buttock there is never any permanent disability, owing to the fact that the trouble is not in the immediate region of any joint.

Workmen's Compensation Act.

According to the provisions of the Workmen's Compensation Act these conditions are regarded as industrial diseases in the occupation of mining only, but the same condition may be found in other occupations. It may be found among steel workers and agricultural labourers; it may also frequently occur among bricklayers and any workers employed in pick and shovel work. It is important to consider in any given case of beat hand whether the condition has been brought on by the nature of the man's employment—that is to say, whether it has been acquired through his working as a miner. It has been pointed out that, as a rule, the miner's hands are very rough, at all events in places, and that the palm of the hand is the least protected part, while small abrasions, perhaps of trifling nature, are almost of daily occurrence. These points are certainly incidental to the employment of mining; but, on the other hand, it is possible for infection to gain entrance into the hand when the man is at home, especially if he is engaged in gardening or following any hobby which involves manual labour. If, however, he has worked regularly as a miner and is suddenly incapacitated on account of beat hand, it would be very difficult for an employer to resist the man's claim for compensation, as the onus would be thrown upon the employer to prove that the beat hand was not due to mining work.

In any given case, the man first of all consults his doctor, who, after making a diagnosis, gives a certificate to the effect that the man is suffering from beat hand; the man is then sent to the certifying surgeon under the Factory Acts for the district, whose duty it is to certify whether the man is suffering or not from beat hand. Every case of beat hand that occurs among miners is one for which compensation is bound to be paid on account of the impossibility of tracing the cause to any other source outside that of the man's employment, but it can be seen that it is not impossible for compensation to be paid for cases of beat hand in which the trouble has been set up in carrying out some work outside that of mining. The same remarks will apply to beat elbow and beat knee.

If subcutaneous cellulitis in the hand or about the elbow or over the patella be due to direct injury, then there will be no question about compensation being paid if the disability for work continues for more than seven days, as the injury in such cases will be covered by the Workmen's Compensation Act as an accident, apart from the scheduled diseases.

Sprained Tenosynovitis about the Wrist.

Inflammation of the synovial membrane of the wrist-joint and of the tendon sheaths with exudation of lymph may occur among miners through the continued jerking and jarring of the pick in the hewing of hard coal. This condition is, according to Dr. James Anderson, more or less specific to the work of a coal-miner, and is, he says, never seen except among coal-hewers. It is most commonly found in Northumberland and Durham, where the coal seams, generally speaking, are hard; there is no evidence to show that it is found among men who work in soft coal. During the year 1911, 184 certificates of disablement were given by the certifying factory surgeons for this complaint in Northumberland and Durham.

The symptoms are swelling and thickening around the affected wrist-joint, stiffness of the joint, pain on movement, and crepitations in the joint due to deposits of lymph within the tendon sheaths. Owing to the laborious nature of a miner's work it is very difficult to say whether a slight accident has occurred or not, or whether a slight strain may not have taken place any day when he is employed in the mine, but speaking generally it may be said that the man suffering from this condition does not complain of a definite accident. He does not know exactly the time when the symptoms arose; at first he may think that a slight sprain has taken place, and may work with it for

weeks, but ultimately the symptoms become more acute, and he is obliged to discontinue his work. In other cases, when the miner is working with a heavy hammer or pick, the wrist may be sprained by a sudden jerk of his tool.

The duration of this disease is, on the average, from two to four weeks, but in those cases in which the workman has persisted in his occupation after the complaint has been definitely set up, the condition may last very much longer, and in some cases for several months. In cases that have become chronic, or in which there is a rheumatic predisposition, or which have been neglected, there may be permanent thickening around the flexor tendons of the wrist; the wrist-joint may be stiff to some extent, there may be pain on flexion of the wrist, and the power of grip may be diminished. Pain may be a prominent symptom apart from movement of the joint, and it may be impossible for the miner to button his clothes, lace his boots, and use a knife and fork.

Treatment.

In acute cases it is advisable either to blister the affected part or to paint the skin with tincture of iodine. Tight pressure by means of a bandage gives relief, and it is necessary to insist upon complete rest for the affected part. In chronic cases support should be given to the wrist by means of a strap, and if there be any thickening or stiffness of the joint massage and passive movements should be employed. In rheumatic or gouty subjects suitable remedies should be given internally, but in the majority of cases, if energetic local treatment be applied, there should be no permanent deformity, and even in those cases in which the treatment is most disappointing there should be nothing worse than weakness of the wrist-joint. When once this condition has been set up there is a tendency to recurrence, but this can be minimized if the miner wears a well-fitting wrist strap on return to work.

Diagnosis.

This depends upon the local symptoms, the absence of any definite injury, and upon the actual nature of the man's work, and, as in cases of beat hand and beat knee, it may be possible for the injury to be set up when carrying out some employment outside mining. Still, if the workman denies that he has been engaged in any work outside that of his ordinary occupation, the employer will be compelled to accept his statement and responsibility for compensation at the same time. Dr. Dickinson Leigh, who practises in the mining districts of Durham, says that he has found a good many of these cases among men who work in ship-yards and engine shops, so that it is possible for a man who has worked in these employments prior to going into the pit to have actually acquired the disease while working in another employment to which the provisions of the Workmen's Compensation Act with regard to this disease do not apply.

Miners' Itch or Miners' Rash.

In many colliery districts coal-miners working in certain pits or certain seams are known to be affected by skin eruptions which they attribute to their employment underground. These eruptions are known as miners' itch or miners' rash, or in some cases they may take their name from the pit where workers in that pit are commonly affected by them.

The lesion may be erythematous or may consist of boils, and the parts affected are generally those exposed to the greatest extent to the coal dust—that is, the lower part of the legs and the forearms, and also those parts where there is the greatest pressure, such as just round the ankles at the upper level of the clog or boot, and also round the waist at the level of the waist-belt. In my experience the disease generally begins as an erythema between the ankles and the knees; there is intense itching, not only while the men are at work, but also when they return home and have washed and gone to bed, and naturally the men endeavour to relieve themselves by scratching the affected part, or at all events rubbing it. The forearms are also affected frequently in the same way, and the erythema may spread to the thighs, the upper parts of the arms and all over the trunk. The feet, upper part of arms, and neck, as a rule, escape. The amount of irritation is so great that the patients are unable to sleep and they are not able to follow their employment. Following the erythema, we frequently find the patient affected by boils; these are most frequently found on the legs and forearms, but may also occur on the back, the chest, and the back of the neck. In some cases, when the boils are small, they may be very numerous, but in other cases they may be very large, almost like small carbuncles, and when this occurs there may be only two or three. I have frequently found the glands in the axilla and the groins enlarged as a result of these boils, and when the latter have been neglected distinct lymphangitis has been set up.

In some cases one finds erythema alone, in others erythema and boils, and in others again boils alone. When the boils appear round the waist at the level of the waist-belt the condition at first sight may look like shingles, but the character of the primary lesion, as well as the absence of the acute neuralgic pains, will enable the diagnosis to be made. The only pain experienced in miners' rash is when the patient is suffering from the discomfort of large boils and from any affection of the lymphatic vessels or glands which may follow.

This disease occurs with considerable frequency, and during the last twelve months I have seen forty such cases. Its course depends entirely upon whether the man gives up work from the onset or not, and the nature of the treatment. If the patient is properly treated and rests at home recovery takes place in from two to four or five weeks, depending upon the severity of the symptoms and whether he is suffering from large boils or lymphatic trouble, and the incapacity for work depends entirely upon the same factors. It should be clearly understood that in many of these cases the patient is totally incapacitated for work for a period of several weeks. Even under treatment the miner may be away from work for as long as six weeks.

Diagnosis.

The diagnosis is generally made correctly by the patients themselves. They are aware that certain pits or seams are known to be places where the rash is commonly contracted, and in no case I have seen has a mistake been made in this direction. If no history were given of the onset of the case or the conditions under which the men worked were not known, the erythema when it appears on the chest is not unlike a mild scarlatiniform rash, but a little less bright; but it is diagnosed from scarlet fever by the fact that the temperature is normal, the fauces and tonsils are not inflamed, and there are no such constitutional symptoms as pains in the limbs, back, and vomiting. Crops of small boils may be diagnosed from drug rashes by their distribution and by the history of the case, and the large boils to which I have referred are, as far as my experience goes, never associated with glycosuria, so that a diabetic origin can be eliminated. We have seen with what frequency accidents occur in mines, and trivial accidents, such as small scratches and bruises, are almost a daily experience of each miner, but in the cases to which I refer there is no history of any such injury. It is important not to overlook the possibility of skin affections in miners being due to ankylostomiasis, and it is necessary, therefore, to distinguish miners' itch from "bunches," the name given to the inflamed skin produced by worm disease.

Treatment.

The treatment will depend upon the character of the symptoms, but in all cases it is advisable for the man to keep away from work until he has recovered. If there be no more than simple erythema, ordinary cleanliness and a dusting powder such as borated talcum or finely powdered boracic acid may be sufficient, but in cases of great irritation liquor carbonis detergens is a useful application, as also is a menthol ointment. Large boils may require opening and treating antiseptically, and in severe cases it may be necessary to open abscesses in the axilla and the groin, and treat them in the same way. For the general debility which follows serious cases quinine, arsenic, and iron are found to be of the greatest value, combined with nourishing food and fresh air.

Etiology.

The cause of this trouble is a matter of great complexity. I have heard from miners working in different pits various accounts. Some attribute it to the high temperature of the workings and the irritation of the coal dust with profuse sweating. Others attribute it to the excessive amount of liquid taken in consequence of the great heat

of the workings, while a third theory is that the complaint is caused through drinking the pit water.

I have investigated this subject to some little extent, and have found that the seams of coal in which the men work who are liable to this disease are invariably of a bituminous nature; in other words, the coal is used for the formation of coke. Again, the seams are invariably hot, with temperatures varying from 80° to 90° and 95° F., and under such conditions there will be to some slight extent continual though slow distillation of the bituminous coal with the formation of not exactly coal-tar products, but at all events bodies which are the result of decomposition of this coal. I believe that the coal dust in these seams may contain some product of distillation which has the same irritating effect on the coal-miner's skin as coal-tar products are well known to have. This explanation may account both for the erythema and for the boils, but when the effect of the high temperature in producing profuse perspiration is taken into consideration, it is easy to see that the tendency for these eruptions to form and develop is increased. As soon as irritation is produced I feel sure that the mechanical irritation of the coal dust itself is also another factor in the aggravation of the complaint. I have had coal dust taken from these seams examined bacteriologically, and have invariably found that it is infected to a considerable extent with staphylococci. This would explain the formation of boils, and I have found the pus taken from the boils to contain the same micro-organism.

There is, however, another explanation. Professor Cadman has pointed out to me that in the seams in which this disease is found iron sulphate is present to a considerable extent; it can be seen on the sides of the roadways, and the dust covering the roadways contains small particles. During the process of oxidation and in the presence of water, free sulphuric acid may be produced, and the mine water in some of these seams is most irritating and acid to the taste. Sulphate of iron is known to be an irritant, and smarting of the eyes may come on immediately after exposure to the dust. Cadman and Walley have noticed that pit water may produce an irritable rash and ulcers upon the skin, and in one pit the water upon analysis was shown to contain

Alumina and oxide of iron	...	0.02	per cent.
Barium chloride	...	0.15	,,
Calcium chloride	...	2.38	,,
Magnesium chloride	...	0.86	,,
Sodium chloride	...	12.93	,,

As these skin affections have not before been recognized they are not covered by the Workmen's Compensation Act, but in view of the trouble being undoubtedly occupational in nature and causing in many cases complete incapacity for work it seems that they should be included in the schedule to this Act in the same way that eczematous eruptions acquired by workpeople owing to the nature of their employment.

The Influence of Legislation upon the Health of Miners.

From the time that coal-mining came to be recognized as an industry in this country laws were passed to regulate it, but they had special reference to the possession of mining property and for the protection of owners against the violence of their workpeople, and it was not until the year 1842 that any legislation was passed that had a direct bearing upon the health of those employed. In this year the employment of female labour underground was forbidden, and regulations were made to improve the conditions of the boys who were engaged in underground workings. From this time onwards many Acts of Parliament have been passed with the object of improving the conditions of labour, and in this way bettering the health of the workers. In 1850 the law provided for the inspection of coal mines; inspectors were appointed by the Home Secretary, and were given power to enter and inspect the works of any colliery both above and below ground and to inquire into all matters relating to the safety of the persons employed. For the first time it was made necessary that notices of accidents causing loss of life should be sent within twenty-four hours to the Home Office, and it was made incumbent upon the owners of pits to provide proper plans of the workings and to maintain them in an accurate condition. Subsequent legislation provided for improved ventilation of the workings and that all pits should have two exits.

The laws with regard to the regulation of coal mines were revised and consolidated in the Coal Mines Regulation Act, 1911, which makes special provisions for increased protection for the workmen by a more systematic method of timbering, by regulations which control the use of electricity in the mines, the use of explosives and the methods of firing shots, and mitigate the risk of haulage and shaft accidents.

Provision is also made for improved ventilation in the mine. Working places where firedamp is present to a greater extent than 2.5 per cent. are deemed to be dangerous, and it is not permissible for men to be employed in an atmosphere charged with firedamp to this extent. Steps have to be taken for the prevention of coal dust. It is now necessary for all colliery owners to provide a sufficient supply of ambulance requisites at convenient places in the mine, and the organization of rescue brigades is compulsory in all the colliery districts not only for the purpose of saving life in cases of explosions, but for recovering the bodies, and helping to put into proper order working places that have been destroyed by the explosion. Facilities have been increased for investigating a mine after an explosion, owing to the fact that it is now incumbent upon colliery proprietors to be able to reverse the ventilating current by means of their machinery on the surface. It is now necessary also for coal owners to provide proper sanitary convenience for the use of the men near the pit bottom and at central places along the roadways, and a clause in the Act enables the workpeople to be provided with baths and washing accommodation on the surface, the cost being defrayed jointly by the employers and the workmen.

The time has, as yet, been too short to appraise the benefits of this Act of Parliament, but, as far as legislation goes, it is certainly a great step in the right direction. But the occurrence of accidents and the prevalence of disease peculiar to the coal-miner does not depend altogether on conditions legislation can effect. The long death roll year by year and the tremendous number of non-fatal accidents are in some instances, perhaps a large number, due to the fact that the human factor enters into these occurrences.

Just as it is impossible to free a nation from drunkenness by Act of Parliament, so it is and will be impossible to free the collier's life from risk of injury. Carelessness or callousness on the part of either the workman or his employer may result in the greatest disasters, and it is a significant fact that if the number of deaths and non-fatal accidents be estimated not as a percentage of the total number of employed, but in relation to each million tons of coal brought to the surface, we find that in the last ten or twelve years no improvement has taken place in this respect.

Time will show what effect the Act will have upon the health of miners, but even if the results are as disappointing in the future as they have been in the past, we should not regard ourselves as at the end of our resources. Something must still be done to reduce the yearly death roll and the large number of non-fatal injuries. It might be necessary to have a more thorough and systematic inspection of mines in order that all the provisions which have been made with the object of diminishing these accidents should be strictly observed, so as to reduce the number of falls of roof, haulage accidents, and the various other accidents which at the present time are regarded as incidental to the miner's daily work, and to see that the law is carried out to the very letter. It may be necessary to consider whether the ordinary mining engineer who has the sole management and control of any given pit is sufficiently trained in modern scientific methods to deal with all the problems with which he may be brought into daily contact. Medical men are inclined to believe that their own profession covers as much if not more ground in the realm of knowledge than any of the other learned professions, but the competent mining engineer is daily brought in contact with problems of geology, of chemistry, of physics, of engineering, of electricity, as well as of the commercial side of his business, and perhaps the time has come for the heads of the mining profession to realize that specialization in mining may be the means not only of working the pits to a greater financial benefit, but also of diminishing to a very large extent the number of injuries

which daily take place. Greater advantage should be taken of the facilities for special training given at such universities as Birmingham and Sheffield, and it seems incredible that, in view of the importance of the profession of mining engineering, comparatively so few students pass through these institutions for the purposes of graduation, although I am happy to say that the numbers now increase year by year.

We have seen that the only hope of diminishing the number of cases of miners' nystagmus is by improving the illumination of the mines, and in my opinion it should be obligatory on colliery owners to supply better illumination along the roadways and at the working face, so that the incidence of this disease in the future shall be materially diminished. Expense will undoubtedly be incurred by the inauguration, say, of electrical lamps in addition to the ordinary safety lamp, but I am confident that the owner will be well repaid for his money, not only by the improved health conditions of the workers, but also because the men will be able to see what they are doing, and it is obvious that they can do their work very much better in a good light than in the wretched light to which they are subjected at the present time.

Great Britain is the only European country in which there is no legislation to regulate the temperature at which men work in coal mines, and I think that this country should be brought into line with the other principal European countries, and employment forbidden in workings where the wet-bulb thermometer reading is so high as to be injurious to health. I am not going to lay down what the limit shall be. That should be a matter for full consideration. But when we realize that the Lancashire weaver, the Staffordshire potter, and the colliers in France, Germany, and Belgium are protected against working in temperatures recognized to be injurious to the health, I do not think it is unreasonable to suggest that legislation should do at least as much for the coal-miner in this country.

I believe that the law should provide for a compulsory medical examination of all applicants for work in coal mines who have been in the tropics or in the colonies or who have worked in European mines or even in the tin mines of Cornwall where ankylostomiasis may prevail. It is only from such sources that the coal mines of this country can be infected, and every means should be taken to prevent any infection ever occurring.

Conclusion.

So much for legislation. Something further can be done and that by the medical profession. It seems strange that industrial diseases should have been neglected in the medical schools of this country and by the vast majority of the leaders of the profession, and that the researches in this branch of medical science have been left to individual effort. There are thousands of medical men working in the industrial districts of England who have never received any training in the medical schools on the diseases which they may be called upon at a moment's notice to diagnose and to treat. Young medical men who go straight from the hospitals to practise in these districts undoubtedly fail in many instances to realize what these industrial diseases are, and their experience, the experience of all medical men in those districts, is gained at the expense of the patient. I think that a great deal can be done to improve the health conditions of coal-miners, and other workers too, if instruction be given at the universities and medical schools in this important branch of medical science. When we think of the tens of thousands of pounds that have been expended in this country upon tropical diseases (with very good results) we cannot but realize how industrial diseases have been neglected, and feel how imperative it is that this matter should have greater attention, and that young men who know that they are going to practise in these industrial districts should have opportunities of making themselves conversant with those diseases and conditions with which they will be brought into daily contact.

The Governor of New Caledonia has issued an order forbidding lepers to carry on any of the following trades: Baker, cook, pastrycook, inn or restaurant keeper, butcher, retail merchant, tailor, old clothes dealer, coach driver, sailor, dock labourer, hairdresser, barber, and domestic servant.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

DERMATITIS VENENATA DUE TO RUNGUS.

In British North Borneo, and especially in the district of Marudu Bay, is found a tree which is called by the natives rungus, or ringus.

The contact of any part of this tree with the skin produces so severe a type of dermatitis that it is worthy of special description.

Within twenty-four hours of handling it, and generally towards nightfall, when it is customary for the natives to go down to the river to bathe, the skin of susceptible persons is affected with a most intolerable itching.

This is followed by the appearance of a rash consisting of clusters of raised red papules, which are noticed first on those parts of the body which have actually come into contact with the poisonous plant, and later spreads over the rest of the body. The appearance of the rash is usually accompanied with some elevation of body temperature and a general sensation of malaise. Within another twenty-four hours these papules have become vesicles, or even large bullae, filled with a clear serous fluid. These tend to become confluent and then burst, their serous contents becoming inspissated and forming yellow crusts. In other more severe cases the bullae become secondarily infected with pyogenic skin organisms—staphylococci, etc.—and when these break the body is covered with foul ulcers.

In such cases there may be considerable fever. The lesions are especially noticeable where skin and mucous membranes meet, as around the lips and the nostrils. The ears also are usually severely attacked.

The disease, if left untreated, generally runs a course of about five to seven days in mild cases, and healing takes place naturally with very little permanent disfiguration, unless the patient has scratched the lesions or otherwise infected them with pus-forming organisms, in which case permanent scars may be left. So far I have not seen or heard of a case of death from simple rungus poisoning, but pneumonia is occasionally a sequel, especially in those cases in which the mouth and nostrils are affected.

The incidence of this type of poisoning is considerable amongst the coolies engaged in cutting jungle with their parangs (short heavy swords used in Malaya). Amongst some 3,000 tobacco and rubber coolies under my observation, there have been about 20 admissions to the various estate hospitals from this cause during the past year. Nearly all the affected persons were Javanese.

These coolies know this tree quite well and its effects upon the skin. They say that it is the contact of the fresh juice which exudes from the cut tree with the body which produces the sores; but this I am inclined to discredit, for Mr. Carlton P. Brooke, the manager of Bongon Tobacco Estate (by whose courtesy I have been enabled to obtain and examine specimens of this tree), assures me that he has known cases of rungus poisoning acquired by sitting upon a heap of the branches which have been cut and dried for months.

The juice from the cut surface of the tree is clear, and exudes between the cortex and the wood. When dry, it is of a dull, pitch-black appearance. The tree itself attains a considerable size. Some of the branches brought to me were three inches in diameter.

The leaves resemble those of the jaborandi. On macerating them in rectified spirit for several days I obtained a chlorophyll-coloured tincture, which, when unfiltered, showed a powdery deposit; this, on microscopic examination, was found to contain many spherules of an intense blue-black colour, some of which possessed a single spicule. These were by far the most noticeable objects. Whether they were the spores of some fungus washed off the surface of the leaves, or droplets of an oleo-resin extracted by the spirit from the leaves I am at present unable to say. One thing is, however, certain—that they cannot produce the disease by mechanical irritation of the skin inasmuch as the filtered tincture, which was free from these bodies, reproduced the lesions in a mild form when painted on the skin experimentally. For the same reason the remainder of the insoluble débris can be excluded as being the causative factor.

One peculiar fact about rungus poisoning is that the disease is contagious. A few days ago I saw a Malay woman whose face and arms were covered with the typical eruption. On questioning her I found that she had not handled the plant herself, but her husband had on the previous day, and been affected thereby. She had evidently contracted it by contact. Some persons are immune, and can handle any part of the tree with impunity. This fact was very quaintly expressed by one of my Chinese dressers, who said, "If a man fear the tree it will hurt him; if he fear it not, the tree hurts not him."

John F. Hornsey, M.B., B.Ch.Oxon.

Ranau, Marudu Bay, British North Borneo.

AN EPIDEMIC RESEMBLING WHOOPING-COUGH.

An epidemic has recently occurred at a boys' preparatory school affecting, out of about seventy boys—boarders and day boys—over thirty, the majority of which I have attended.

The symptoms are very similar to those of whooping-cough. The cough is undoubtedly infectious, and spasmodic in character. It is usually accompanied by rise of temperature (the highest was 102° F.) and the presence of bronchial râles scattered about the lungs lasting as a rule two to three weeks. The cough is much less frequent, and clears up quicker if the patient is kept in bed. In patients without rise of temperature and signs in the lungs, who were allowed to go about as usual, the cough persisted for many weeks. Retching frequently occurred at the end of the cough, with expectoration of muco-pus, but only on very rare occasions was there any vomiting of food. Not one of the boys was ever heard to "whoop."

The first few cases which occurred appeared to be influenza, with pneumonic patches in the lungs. As the pneumonia cleared up the characteristic cough and râles were developed.

The reports in three cases in which the sputum was examined are as follows:

Case I.—The sputum is muco-purulent, and smear preparations show fair numbers of micrococci, many arranged as streptococci. There is also a small number of Gram-negative bacilli of the influenza type. Tubercle bacilli are not detected. The inoculated media yield cultures showing considerable numbers of streptococci and moderate numbers of *Micrococcus catarrhalis*.

Case II.—Smear preparations show a fair number of micrococci, chiefly occurring as diplococci or in short chains. The inoculated media yield cultures showing a considerable number of streptococci with small numbers of *Staphylococcus pyogenes aureus*, the *M. catarrhalis*, and the *M. paratetragenus*. Other organisms are not found.

Case III.—This sputum contains some muco-pus, and smear preparations show fair numbers of micrococci, together with a moderate number of small Gram-negative bacilli of the influenza type. Tubercle bacilli are not detected. The inoculated media yield cultures showing a considerable number of streptococci, moderate numbers of *catarrhalis*, a few diplococci resembling pneumococci, and small numbers of influenza bacilli.

If these were cases of whooping-cough, it is very strange that not one of them "whooped," and it would be interesting to know whether there have been similar epidemics elsewhere.

Surbiton. Norman C. Carver, M.B.

A SIMPLE METHOD OF DETERMINING THE BACILLUS COLI CONTENT OF MILK.

The method consists in growing the organisms in tubes containing a special medium, and counting the gas bubbles produced. In the medium used gas is produced only by organisms of the *Bacilius coli* type.

The medium consists of: Lemco 5 grams, peptone 10 grams, sodium chloride 5 grams, sodium taurocholate 5 grams, lactose 10 grams, gelatine 120 grams, water 1,000 c.cm. This is boiled, neutralized with sodium carbonate, clarified and filtered. It is then poured into test tubes, which are plugged with cotton-wool and sterilized at 100° C. in the steamer. About 15 c.cm. is used in each tube. 10 c.cm. of milk are added to 990 c.cm. of sterile water, and the whole shaken up so as to mix thoroughly. Quantities of 1 c.cm., 0.5 c.cm. and 0.1 c.cm. of the diluted milk are added to a series of tubes at a temperature of 40° C. The tubes are then well shaken and incubated for forty-eight hours at 20° C., when the gas bubbles produced in the medium are counted.

When the process is carefully carried out the divergence in the numbers of gas bubbles in tubes from the same sample, and of the same dilution, does not exceed 5 per cent. of the total average.

P. F. MacGinnis,
Assistant Bacteriologist, Royal College of Science, Dublin.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

ST. THOMAS'S HOSPITAL.

A CASE OF RUPTURE OF THE SPLEEN AND LEFT KIDNEY: RECOVERY AFTER OPERATION.

(By C. Max Page, M.S., F.R.C.S., Surgeon to Out-patients, Victoria Hospital for Children; Demonstrator of Anatomy, St. Thomas's Hospital.)

The following case appears to be of some interest owing to the rarity of recovery from so severe an injury. Subsequent to the accident, both the spleen and kidney were removed through a lumbar incision. Infusion anaesthesia was employed, and it certainly proved an excellent method in this instance.

A. P., aged 39, horse-keeper, was admitted on February 25th, 1912, to St. Thomas's Hospital, under Mr. W. H. Battle, who asked me to deal with the case. I am indebted to him for permission to publish these notes. Twenty hours before admission the man had received a kick from a horse in the left lumbar region; since the injury he had suffered from collapse and severe abdominal pain, and had passed deeply blood-stained urine.

Condition on Admission.—The man, who was of fair physique but small in build, was sweating, blanched, and so collapsed that he could give no account of himself. The pulse-rate was 160 and the beat feeble; respirations 40; temperature 95° F. The left loin was markedly full in comparison to the other side, and dullness extended forward to within an inch of the mid-Poupart line. The abdomen was rigid all over and tender; a moderate degree of tympanites was present; the pain and rigidity were more marked on the left than on the right side. A specimen of urine drawn off by catheter looked like pure blood.

Operation was undertaken at once under hedonal infusion anaesthesia. Anaesthesia was produced after 200 c.cm. of a 75 per cent. solution had been run in; subsequently a further 400 c.cm. were injected at intervals as well as normal saline—of the latter, 1,200 c.cm. were infused. The man was placed on his right side, and a 5-in. oblique incision made extending from the angle between the last rib and spine forwards to within 1 in. of the anterior superior spine on the left side. The muscles were divided directly in the same line, and on opening the kidney pouch a mass of blood-stained fluid and clot welled out. After the clot had been removed, the kidney was found to be completely divided into two nearly equal fragments; the upper one lay loose in the cavity formed by the clot, the lower was merely hanging by what appeared to be a strip of the ureter attached to it. The pedicle of the kidney was retracted into the wound, and blood oozed slightly through the clot which covered it. The ruptured kidney was removed and the pedicle ligatured. The peritoneum was then opened to the outer side of the descending colon and a large quantity of blood-stained fluid at once poured out. On thrusting in the hand, a firm mass was felt just in front of the kidney bed the size of a large Tangerine orange; on inspection this proved to be a haematoma in the attached surface of the descending colon; the lumen of the bowel appeared to be intact, so the mass was left undisturbed. The spleen was then palpated; several fissures were felt on its surface, so it was drawn out through the lumbar wound and inspected. There were several superficial tears in its capsule covered with blood clot, and a fissure extended

into the hilum, from which blood oozed continually. The latter injury seemed to render splenectomy the only satisfactory means of obtaining haemostasis; this was accordingly performed, and the pedicle ligatured with catgut and returned within the peritoneum. The peritoneal cavity was then mopped out with moist plugs; a large quantity of blood and clot was so evacuated. The peritoneum was next sutured and the muscular incision closed with catgut, a drainage tube and wick (leading from the kidney cavity) being left in the posterior part of the incision.

February 26th. The man seemed better, though he complained of abdominal pain. Fluid was taken freely by the mouth: no vomiting. Pulse 130. Urine in twenty-four hours, 12 oz. Temperature 101°.

February 27th. Abdomen still tender. Pulse 120. Urine 76 oz. Temperature 100

February 28th. The tube was removed. The general condition was good. Urine 98 oz. Temperature 99°.

March 1st. A good evacuation of the bowels was obtained after the administration of a simple enema.

His progress to recovery was subsequently uneventful, except for a rise of temperature, on March 3rd, to 103°. He got up on March 12th, and was discharged to a convalescent home on March 22nd, twenty-five days after his operation, the wound being completely healed.

There was no definite enlargement of the lymph glands at this time, nor was such enlargement subsequently observed.

I have seen the man at intervals since. For some months he felt feeble and unable to work much, though he had no pain or other symptoms. He began full work again in the early part of 1913, and when seen in June of that year had completely recovered; the lumbar wound was quite sound, and caused him no inconvenience.

Dr. H. B. Weir examined the man's blood at intervals in the course of the case; the results are tabulated below:

1912:	Feb. 28.	Mar. 3.	April 15.	May 10.	June 11.	Nov. 9.
General Count.						
Red cells	1,200,000	2,518,750	3,815,000	4,807,250	4,504,166	4,512,500
Haemoglobin ...	20%	50%	80%	90%	90%	90%
White cells ...	16,960	21,720	7,440	4,640	7,060	5,020
Differential Count.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Polynuclear neutrophiles	83.25	82.7	54.5	47.3	51.0	59.75
Polynuclear eosinophiles	0.5	2.0	1.75	1.7	5.4	2.75
Small lymphocytes	9.5	8.7	34.25	41.7	32.0	27.5
Large lymphocytes	2.5	2.3	3.75	4.0	6.4	4.5
Large hyaline ...	4.25	4.0	1.75	4.0	4.0	4.75
Mast cells ...	0.0	0.3	1.5	1.3	1.2	0.75

REMARKS.

It will be seen that in the first month after the injury there was a condition of severe secondary anaemia in association with a polymorphonuclear leucocytosis—the latter no doubt a reaction to the operative procedures and the intraperitoneal effusion of blood. The recognized changes[1] which occur after removal of the spleen are a slight eosinophilia which may last for months, a lymphocytosis apparently permanent, and a transient general enlargement of the lymph glands. In this case the eosinophilia was well marked in the blood taken on June 11th, and a definite lymphocytosis was present from April to June. Though many of the lymph glands were palpable when the man was discharged from hospital their condition did not vary much in the course of the following year, and I from a clinical standpoint should not have classed them as abnormal.

Whether removal of the spleen affects the prospect of life remains a matter of opinion. Not enough cases have been observed over a sufficient period to enable us to form a true judgement in the matter. As the function of the spleen in adult life remains ill-defined, we have not even the theoretical knowledge on which to base our speculations.

[1] *Anaemia*. Ehrlich and Lazarus. 1910.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

AT the sixth ordinary meeting, on March 19th, a discussion on the *Diagnosis and treatment of dilated stomach* was opened by Dr. T. SYDNEY SHORT, who pointed out that from a clinical point of view the really important point in stomach condition was this: Could the stomach empty itself into the duodenum? If it could not, treatment was at once required. The most practical division of cases of dilated stomach was (1) the pyloric stenosis class, this including all cases due to tumours and other new growths, and (2) the atonic class, whatever the cause of the condition. He then described different methods of diagnosing these conditions, including use of the stomach tube and the bismuth meal under *x* rays (skiagrams being shown by means of the epidiascope), and pointed out the importance in this connexion of efficient molar teeth, the habit of air-swallowing and the presence of neurasthenia. In regard to medical treatment of the condition and its limitations, reference was made to the method described by the speaker in the BRITISH MEDICAL JOURNAL for January 12th, 1908; it had proved successful in his hands. Indications for surgical treatment were then considered. Mr. GEORGE HEATON contrasted the brilliant results obtained by surgical procedure in cases of dilated stomach due to some form of mechanical obstruction with the disappointing results of surgical interference in cases of atonic dilatation. The presence of the latter condition was indicated by: (1) A history suggestive of symptoms pointing to ulcer; (2) extreme dilatation of the organ; (3) the presence of gastric tetany; and (4) visible peristalsis. The test meal, and, above all, the bismuth meal, were of great value in making a differential diagnosis. He was reluctant to operate on the atonic cases. Gastro-jejunostomy was followed by failure, and gastroplication, of which he had had a limited experience, had also failed. In cases in which proptosis was more marked than dilatation the operation of gastropexy had a certain amount of usefulness. Mr. GILBERT BARLING thought that at present surgical interference in the atonic cases was not justified by the results. He regarded gastroplication and gastropexy as useless operations. The greater his experience of the bismuth meal the more he believed in its value as a diagnostic measure. Mr. GAMGEE said the differential diagnosis between the atonic and mechanical cases was of great importance to the surgeon. He asked the opener of the discussion if there was any difference in the type of vomiting in the two cases. Dr. STACEY WILSON stated that in his experience the atonic stomachs could be made to empty, with immediate relief to the patient, by careful manipulation with the hand on the stomach when the patient was lying down. The patient could be taught to do this for himself. Mr. LUCAS, speaking of the differential diagnosis, referred to the importance of the tests for occult blood. Dr. CODD having spoken, Mr. HALL-EDWARDS gave an epidiascopic demonstration of radiographs taken after administration of bismuth meals. Dr. SHORT, in his reply, stated that absence of vomiting was suggestive of atonic dilatation being present.

NORTH OF ENGLAND BRANCH: NEWCASTLE-UPON-TYNE DIVISION.

THE sixth and last scientific meeting of the current winter session, held on March 20th, included the following proceedings:

Treatment of Simple Fractures.—Professor H. B. ANGUS delivered an address on the treatment of simple fractures, with especial reference to those most troublesome in treatment. By means of lantern slides the treatment of fractures of the humerus were first demonstrated, emphasis being laid upon the fixation of both shoulder and elbow joints. As regards separated epiphysis and fractures in the neighbourhood of the elbow-joint, Mr. Robert Jones's method of flexion without any splint was advocated, the hand being retained by a bandage to the same side of the neck, followed by early movement and massage. In

fractures of the bones of the forearm above the insertion of the pronator radii teres, the importance of putting up the limb in full supination was emphasized, and the methods of carrying out this form of treatment were shown on the screen. Fractures of the upper and lower ends of the femur were next illustrated, and the use of the Hodgen splint explained. Comment was made upon the bad results obtained in Pott's fracture, often due to want of correction of the outward displacement of the foot at the time of reduction of the deformity. The necessity for x-ray photography to correct faults, and the extreme importance of anaesthesia in aiding easy and complete reduction of deformity, were the final points insisted upon by the lecturer.

Empyema Thoracis.—Dr. A. PARKIN, who discussed the subject of empyema thoracis, illustrated his remarks by showing a number of cases and clinical records. Empyema, he said, occurred most commonly near the base of the lung, and when occurring at the apex might be overlooked. It was generally a complication of some other disease—for example pneumonia or phthisis; in fact, a primary purulent pneumonic pleurisy without pneumonia was rare. Pneumococci, staphylococci, and streptococci were all commonly found in the pus, but the tubercle bacilli were not easy to find even in clearly tuberculous cases. In foul-smelling pus the presence of the *B. coli* should always be suspected. A description was also supplied of some of the rarer varieties—for example, empyemata complicating pyaemia, thrombosis of the lateral sinus, stab wounds of the chest, perforation of the oesophagus, liver abscess, and malignant disease of the lung. The history of the case was important in establishing a diagnosis between clear effusion and empyema; the latter was to be expected with a history of pneumonia, and the former with one of pleurisy. In undiagnosed cases of empyema the pus might be retained in the pleural cavity for months, or it might escape by bursting into the bronchus or externally through the chest wall. Cases of "missed" empyema were frequent in children, and the results of discovery and treatment were gratifying. A guarded prognosis should be given in children with acute pneumonia and empyema, and it should be remembered that tuberculous empyema might recur many years afterwards, even when successfully treated in the first instance. Prognosis was generally good unless the condition occurred as a complication of some other serious disease. In regard to treatment, the lecturer said early drainage was very desirable; in most cases local analgesia could be employed.

Diseases of the Genito-Urinary Organs.—Mr. J. CLAY, in the course of a demonstration on the diagnosis of diseases of the genito-urinary organs, laid stress on the importance of early diagnosis, this depending first on a knowledge of all possible causes, and, secondly, on attention to the principle "look and see." Rectal and vaginal examinations were both of importance as a means of detecting stone in the bladder and lower end of the ureter. The urine should always be passed into a clean glass, and in the male the surgeon should watch its passage. In this way stricture of the urethra would be detected. In one case the speaker had seen a stricture of the external urinary meatus lead to incontinence of urine. In strictures of this class cystitis was a common sequela, as the urine was retained and decomposed in the long length of the urethra. He recommended Goldschmidt's irrigation cystoscope, and that a cystoscopic examination of the bladder in cases of painless haematuria should always be made while the haematuria was present, it being always possible to wash out the bladder sufficiently clear to enable one to see if the haemorrhage be from the kidneys or not. The speaker also cited a case of stone both in the bladder and in the kidney, in which after the stones had been removed from both sites the kidney was retained outside the wound for some days and then replaced.

Gold-miner's Phthisis.—Sir THOMAS OLIVER, in the course of an address on gold-miner's phthisis, showed a lung sent to him by Drs. Aitken and Murray, of Johannesburg. It showed in a marked degree the fibrosis met with in miners exposed to dust. It was typically cirrhotic and without the slightest trace of tuberculous disease. During life no tubercle bacilli had been found in the expectoration. After detailing the physical signs likely or expected to be met with in such cases, the speaker drew attention to the possible signs—namely, dullness on percussion of the chest wall, friction, crepitation, and tubular breathing. Some of these signs might be obscured by emphysema; it was a not uncommon experience for a gold-miner on the Rand to be pronounced fit for work after a careful examination and yet to die from miner's phthisis eight or nine weeks later. Deficient expansion of the chest wall and shortness of breath on exertion were the more reliable signs and symptoms. Cough was frequently slight in the early stages, expectoration was not abundant, and haemoptysis was infrequent all through the illness. If tubercle bacilli were present it was usually only in the later stages of the disease. In cases of pneumonokoniosis dust and not tubercle was the cause of the disease. There might be no tuberculosis from first to last, but should it become grafted on parts of the lung which had not become fibrotic this changed the nature of the illness and resulted in the signs and symptoms peculiar to tuberculosis.

Hospital Management.—Mr. R. H. P. ORDE, House-Governor and Secretary of the Royal Victoria Infirmary, Newcastle-on-Tyne, in the course of a paper on hospital management, said that the essential features of a good form of hospital management were that it should cost no more in time, energy, and money than was absolutely necessary, and that those who were engaged in managing should be properly qualified for the task. A membership of nine was sufficiently large for a board of management; the actual number, however, was not of great importance, so long as it did not reach that point when a board of management ended and a debating society began. In regard to the kind of man required, it was recalled that an eminent physiologist had said "that no one should sit on a university council or, as a matter of fact, on a hospital board unless he had been round the world and seen what they were doing in other places." With regard to methods of election a certain number might be representatives of the public bodies of the district, and these might very well be trusted to co-opt the remainder, the board thus formed being allowed to co-opt, as vacancies occurred, all except the representative members, who would continue to be sent by their representative bodies. In many English hospitals the committees of management were overgrown: in place of one board they presented the spectacle of a conglomeration of sub-boards, meeting separately, and reporting to their common parent. Such a system did not tend to expedite business, and was probably an expensive one. In point of time it involved almost invariably a double discussion on any point of importance, frequently of minor points. There was a danger of hospital boards being filled by delegates not managers. Hospitals should be sanctuaries, not battle grounds, where interest fights interest. The speaker also referred to the question of the representation on a hospital board of members of the honorary staff.

YORKSHIRE BRANCH.

AT a meeting of the Branch at the University of Sheffield on March 18th, Dr. STANGER, President, in the chair, the following were among the proceedings:

The Electro-cardiograph in Clinical Diagnosis.

Dr. NAISH, in a paper relating to the use of an electro-cardiograph as an aid to clinical diagnosis, said that hypertrophy of the left ventricle was not infrequently accompanied and obscured by emphysematous dilatation of the lungs, the result being that the grave underlying conditions were liable to remain undetected unless the galvanometer were employed. In cases of valvular disease, in which there was some difficulty in diagnosis owing to a wide distribution of the murmurs, the detection of a right or of a left-sided hypertrophy by means of the electro-cardiograph was very helpful. It was also pointed out that inversion of the T variation in the first two galvanometer leads was of considerable prognostic significance, this point being illustrated by a series of lantern slides relating to cases of Graves's disease and arterio-sclerosis. The paper also showed that in cases of auricular fibrillation detection of ventricular extra-systoles was of much assistance in determining the amount of digitalis to be employed.

Acute Retrocaecal Appendicitis.

Mr. BASIL HUGHES (Bradford), in a paper on the diagnosis and treatment of acute retrocaecal appendicitis

and its complications, pointed out that the retrocaecal pouch varied considerably in different individuals. It was usually of large dimensions in individuals who possessed a movable caecum, and was fairly constantly divided into an outer and inner pouch by a reflection of peritoneum. The roof was usually a more thickened portion of the peritoneal reflection, and would appear to act as a ligament in supporting the caecum. When the appendix occupied a retrocaecal position, it could not follow the downward excursion of a loaded caecum owing to its meso-appendix; consequently there was a tendency for the appendix to get kinked near its base, and so cause stagnation of its contents. An acutely inflamed appendix got shut off in this retrocaecal space, and, if the condition advanced to suppuration, the pus was at first pent up under considerable pressure in this cavity formed by the peritoneum. Hence the pyrexia and pain as early symptoms of this condition. What frequently happened was that the roof of this pocket was perforated and the pus now became retrocolic and extraperitoneal, and burrowing up formed a collection around the right kidney and even a subhepatic abscess. The adjacent position of such an appendix to the caecum and pus under pressure gave rise to an acute typhlitis, and this was attended with diarrhoea and mucus in the stools—a common occurrence in this condition. When the pus had become retrocolic, the pain and temperature subsided, and this was deceiving both to patient and doctor. This form of appendicitis was always associated with pain and tenderness to pressure in the right loin. As this was the most serious form of appendicitis, the following symptoms called for immediate operation, and in no circumstance should the surgeon delay: (*a*) Acute pain limited to a point high up in the right iliac fossa with rigidity of muscles in this situation; (*b*) pain on deep pressure in the right loin; (*c*) high pyrexia associated with a dirty tongue, diarrhoea and passage of mucus in the stools, and a toxic appearance of the patient; (*d*) a leucocytosis. Should there be a sudden amelioration of the pain and falling of the temperature, with tenderness extending higher up in the loin, all the more, then, should the surgeon interfere, as the pus was now retrocolic. It was important to remove the appendix if this could safely be done, and to explore the retrocolic space until the limit of the pus was reached. The surgeon should not be content just to find pus and to insert a tube, but having reached the limit of the abscess (and such abscesses were often multilocular), he should insert a large rubber tube to the limit of the cavity. It was always wise to inoculate an agar slope and make a vaccine from the cultivation, as such vaccines had been of great service in the after-treatment of cases that had shown a tendency to peritonitis or further spread of pus. Their utility could not be doubted, as they had caused marked benefit to accrue in a number of really desperate cases, and these had been too numerous to be coincidences. It was well to make sure before operation that there was no subdiaphragmatic collection. Early operation, removal of the appendix, and a satisfactory exploration of the limits of the spread of the pus; an autogenous vaccine, with the closure of the abdominal wall with through-and-through sutures of silkworm gut, and a large rubber tube were the chief points to be observed, in addition to the necessary feeding and position of the patient, and the appropriate treatment of his bowels. Another very rare complication was ileal gangrene; this in its origin was undoubtedly embolic.

Cases and Specimens.

The proceedings included the demonstration of a number of cases and specimens, among them being the following:—Mr. CUFF: A case of popliteal aneurysm which he had treated by Matas's operation. Mr. CONNELL: A case in which suture of the musculo-spiral nerve had been performed. Mr. H. FINCH: A patient who was the subject of cephalocele. Mr. SINCLAIR WHITE: A case of giant colon; one in which jejunostomy had been carried out for chronic ulcer of the stomach; and an instance of complete rupture of the brachial plexus. He also showed a series of pathological specimens. Previous to the commencement of the formal proceedings members attending the meeting made an examination of the anatomical, physiological, and pathological laboratories of the university, and witnessed a demonstration of the electrocardiograph given by Dr. NAISH at the Royal Hospital.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

At a meeting on March 24th, Dr. SAMUEL WEST, President, in the chair, Dr. J. A. D. RADCLIFFE and Dr. O. L. V. DE WESSELOW, in a paper on the *Diagnosis of incipient closed tuberculosis*, said that the proportion of supposed cases of active tuberculosis in which tubercle bacilli had never been demonstrated was considerable. At the King Edward VII Sanatorium such cases constituted about 25 per cent. of the total admissions, in spite of the employment of the sedimentation method of sputum examination which diminished the group by 40 per cent. It was therefore important to determine what proportion of such cases were actually suffering from active pulmonary tuberculosis. After pointing out certain considerations which suggested that the amount of active disease in this group was not in reality great, the results of complement fixation, opsonic index, and subcutaneous tuberculin tests applied to 42 consecutive non-bacillary patients were detailed. The results of the tests showed very fair agreement and led to the conclusion that 30 out of the 42 cases were not suffering from active pulmonary tubercle but from successfully treated tuberculosis or other conditions. Of the 30 negative cases, none gave a positive focal reaction with tuberculin, 1 only gave incomplete complement fixation, and 1 a diagnostic swing in the opsonic index. Of the 12 apparently active cases, 9 gave a focal reaction to the subcutaneous tuberculin test, in 1 case no focal reaction was detected, and 2 were not tested owing to the extent of their lesions; 9 of the 12 cases gave complete complement fixation, 8 a positive result with the opsonic index, and in 4 cases tubercle bacilli appeared in the sputum in the course of the reaction, confirming the diagnosis. It would therefore appear that if these were representative cases of the group under consideration, about 70 per cent. of non-bacillary patients were not suffering from active tuberculosis. The group was, therefore, quite valueless for statistical purposes. In a paper describing some recent investigations on the *Changes induced in the circulatory apparatus by physical methods of treatment*, Professor THEODORE SCHOTT (Nauheim) said that in cases of heart disease highly gratifying results might be obtained by the use of artificial Nauheim baths prepared with sodium bicarbonate and hydrochloric acid. Their action, however, was decidedly not identical with that of the natural waters. Experiments had been carried out with Strasburger's spirometer volume indicator and O. Frank's reflecting or optical sphygmograph on healthy patients and on others suffering from heart disease. These experiments, the speaker considered, showed that in the case of healthy individuals the natural effervescing baths possessed a powerful dilating action upon the vessels, such as was not to be found either in the plain water bath or in the artificial CO_2 bath of a corresponding temperature. The systolic and diastolic blood pressures in healthy persons were frequently reduced by the effervescing bath in consequence of free vascular dilatation. In accordance with this, the blood pressure, already lowered by a weakened heart, ought to sink still lower, but precisely the opposite took place. This indicated the presence of some other factor which had overcompensated the lowering of the pressure, and which could only be the heart itself. Moreover, the general condition of the patient and the examination of the heart indicated that it became stronger. This increase in strength of the heart's action was confirmed by the increased range of the amplitude of the blood pressure. In cases of hypertonia, on the other hand, Nauheim baths, correctly and methodically employed, diminished the abnormally high blood pressure, and also its amplitude. Slowing of the pulse and improvement of respiration were effected by the resistance exercises, and it would therefore be easily understood that the blood pressure would be influenced by them in the same way as by the effervescing baths. He also spoke of observations obtained by the plethysmograph, and by determining the lapse of time between the pulse in peripheral and central arteries. In relation to the balneological as well as to the gymnastic treatment, the results of the new experiments coincided with the clinical experiences already published.

SECTION OF PSYCHIATRY.

AT a meeting with the British Psychological Society on March 24th, Sir GEORGE SAVAGE in the chair, Dr. HENRY DEVINE read a paper on the *Biological significance of delusions*. He said delusions were the outcome of the reactions to experience, and day dreams had the same psychological structure as delusions. The highest psychic operation was the adaptation of the individual to reality—the co-ordination between desires and circumstances. But this high level of conduct could not always be maintained, and there was a tendency to gratify desires by seeking refuge in inferior mental operations; the latter constituted a method of escape from reality in persons who were unable to adjust themselves by action to difficulties encountered from without. There was always a tendency to seek gratification in inferior mental operations. The tired man went to the theatre, and for a time lived in the realm of romance, and even childhood. The less a person could gratify his impulses by activities, the more he fell back upon psychoses as a refuge. In some cases there was an obvious antagonism between desire and circumstance. The victim of dementia praecox, whose delusions appeared to be chaotic and meaningless, did not succumb to situations of any particular difficulty, but defects in his personality prevented him from adjusting himself to quite ordinary situations. His delusions related to internal conflicts, the nature of which was not apparent on the surface. In one particular case which he mentioned, the history, he said, showed that, owing to unfavourable conditions in early life, there was a fundamental defect of psycho-sexual evolution, which prevented the patient from effectively reacting or responding to situations as they presented themselves. Hence he was relatively isolated from the world, and unable to get into real contact with his surroundings. The resulting complicated delusional formation could be shown to be an attempt at adjustment, each delusional expression indicating a definite purpose, and possessing an individual significance. All the time the patient was keenly sensitive of his own incapacity. His delusional phantasy the author regarded as compensating; it was a substitute for efficient action. One result of this state was that the patient erected a defensive philosophy for himself, which provided food for his internal psychosis. The PRESIDENT, after intimating that the paper would be discussed in conjunction with that of Dr. Rows, read at the Section on January 27th, "The importance of disturbances of the personality in mental disorders," said that in earlier days there was much discussion on the "ego," but he feared little more knowledge had since been acquired. He still adhered to his early impression that man seemed to be built along the gastro-intestinal line, and woman along the reproductive. Dr. A. ERNEST JONES maintained that delusions in such cases as Dr. Devine described were not truly part of the disease process; they were rather healing processes, comparable to a scar following an operation—an evidence of disease, but not part of it. Many held that a physician should try to break down such delusions by argument, etc.; but that did not seem wise, as it would be taking away the patient's biological mode of defence, his bulwark against the world with which he was unable to battle. The delusions should be attacked with the greatest circumspection and slowness. Professor W. BROWN said that in Dr. Rows's paper there was a good deal of assumption that physiological processes were satisfactory explanations of psychological disturbances, if such processes could be found in the case. But the more one studied the question from the psychological point of view, the more one felt that, though the organic sensations were perhaps part of the emotion, emotion contained much more than that. The general trend of psychology was to consider the question from the standpoint of separate instincts rather than of sensations, to adopt a view which was a compromise between the physiological and the psychological. Organic sensations were instances in the development of changes of personality, but not the essence of them. It was difficult to understand how toxic substances could influence changes in personality, regarding that as different from change of tone, such as was felt at puberty. Dr. Devine's paper seemed to offer a much more satisfactory psychological explanation: it supported the Freudian view that there was a rift in the lute quite early, and abnormalities ensued later. Dr. T. W. MITCHELL thought Dr. Rows's paper was of great value to those engaged in psycho-therapeutics, because they were, in their daily work, encountering cases of disintegration of personality which had not passed the shadowy boundary line into insanity. He gave details of a case in his practice which eventuated in a detachment and aloofness from the world. He thought Dr. Rows was keeping in touch with the best psychological thought when he subscribed to the view that efforts formed the nucleus of the ego. Dr. Rows, in replying on the discussion, said that Dr. Devine's paper and his own were mutually helpful. The cases on which both were based showed a psycho-sexual maldevelopment. What it was which sent these people "over the line" he did not know, but it might be some toxic influence acting on the brain cells to interfere with nerve processes. He suggested, with Myers, that the only influence which the emotions had was to emphasize the pleasure or displeasure which accompanied the satisfactory carrying out of the dynamic processes in the brain which were associated with thought. He did not think Professor Brown and he were far apart on this matter, seeing they were agreed that the organ sensations were not a fundamental part of the personality. He related Sherrington's experiments with dogs to show that though section of the cord in the cervical region was done, the dog still showed aversion to dog's meat though it readily ate horseflesh. He concluded by a reminder of the work of Dr. David Orr and himself in connexion with the effect of various toxins on the sympathetic system. Dr. DEVINE also briefly replied.

SECTION OF DISEASES OF CHILDREN.

AT a meeting on February 27th, Dr. LEONARD GUTHRIE, President, in the chair, the following were among the exhibits:—Dr. F. G. CROOKSHANK: A case of *Pre-adolescent dyspituitarism* in a boy aged 13½ years, weighing 10½ st. He was obviously very stout, but the distribution of the fat was feminine, and the external genitals were small. There was some skeletal overgrowth, and the size of the pelvis was notable. There was some definite limitation of the temporal half of the right visual field. A skiagram of the skull showing the sella turcica was exhibited. Mr. J. F. O'MALLEY: An extensive *Cicatricial pharyngeal diaphragm* in a boy aged 5 years. He had been a scarlet fever patient in a fever hospital for about three months, and on his return it was noticed that he "spoke through his nose." He could swallow solids and liquids without difficulty, and there was no interference with breathing. The diaphragm appeared as a continuation downwards of the soft palate, and to be formed by the union of the free edges of the two posterior pillars. It shut off the naso-pharynx from the oro-pharynx, and was complete except at the centre of its upper and lower borders. The upper opening was a small space surrounding the uvula, in which the latter was free to move. At the lower border were two openings, one on each side of a central adhesion, which passed downwards and backwards, and was attached to the posterior wall of the pharynx, opposite the level of the epiglottis. Mr. W. GIRLING BALL: A case of *Cyst of the caecum* in a male child aged 3 months, causing intestinal obstruction. It had been treated by operation, and recovery had followed. The cyst contained clear mucoid fluid, and was not connected with the lumen of the bowel. Mr. L. E. BARRINGTON-WARD: A case of *Mammary enlargement* in a boy aged 10½ years. The left breast formed a swelling the size of an orange, and was tender at times. The enlargement had been noticed for six months. Dr. LEONARD GUTHRIE: A case of probable *Kernicterus* associated with choreiform movements, in a female child aged 1 year and 7 months. It was the second surviving child of a family of nine, five of whom were jaundiced and died shortly after birth. The patient was also jaundiced at birth and remained so for six weeks. It was probably an example of survival from "icterus gravis neonatorum," which was described as "kernicterus," owing to the fact that after death the basal central ganglia were found stained deeply yellow, while the rest of the brain was only slightly tinged. Dr. CAUTLEY: (1) A case of *Multiple subcutaneous cysts* in the arms of a child aged 7 months. The nodules varied in size from a millet seed to a pea in the left arm. Two removed from the right elbow were found to contain clear fluid. (2) A case of *Congenital*

hypertrophic stenosis of the pylorus. When the patient was admitted to hospital the pylorus was palpable and there was marked visible peristalsis. The stools were small, brownish, and contained some faecal matter. In spite of careful treatment and feeding, the child had lost ground, and it had been decided that pyloroplasty should be performed. Dr. Langmead: A well-nourished, healthy looking girl, aged 2 years, who had been treated, when 7 weeks old, for *Congenital hypertrophic stenosis of the pylorus.* The patient was exhibited to show the good effects which might follow medical treatment, even when a pyloric tumour had been felt. Dr. James Burnet: A case of *Urticaria followed by oedema* in an infant aged 2 months. The oedema, which was very extensive, involving the trunk and both arms and legs, appeared five days after the urticaria. There was no heart or kidney trouble. It was suggested that the condition was one of angio-neurotic oedema. Mr. E. G. Gauntlett: A boy aged 9 years, who had not been noticed to limp, but who complained of pain over the front of the left thigh for nine months. Flexion and extension of the hip were free, but abduction, adduction, and rotation were limited. A skiagram showed marked erosion of the epiphysis without any rarefaction of the neck.

Sections of Neurology, Ophthalmology, and Otology.

The discussion on *Nystagmus* was concluded at a meeting on March 17th, when Mr. Richard Lake, President of the Section of Otology, was in the chair. The first speaker, Dr. Wilfred Harris, said that nystagmus should not be assumed to exist unless the lateral movements were persistent and rhythmical during the test; the observer should also determine whether the nystagmus was a symptom of cerebro-spinal disease or was of ocular origin. Cases which did not belong to either of these groups, such as head-nodding, should also be recognized, and in the last-named form usually only one eye was affected. If, in early infancy, macular development was interfered with—such as by anterior polar cataract, so that there was not a clear image on the fovea—the cerebral co-ordination was not brought into play to keep the eye rigid, hence there were constant oscillatory movements. The most intense nystagmus might be an accompaniment of subtentorial disease. Dr. Abrahams explained the *modus operandi* followed by him in obtaining cinematographic records of nystagmoid movements. Mr. O'Malley dealt with the two great types of nystagmus, ocular and vestibular, and exhibited tables of useful subclassification, with suggestions as to etiology. Mr. Harold Grimsdale spoke of his experiences with cases at the Royal Normal College for the Blind. Half the cases of nystagmus there had had ophthalmia neonatorum, and there were a large number of cases in which the nystagmus followed an accident to the cornea. Up to the age of 5 any severe disturbance of the cornea seemed to be followed by nystagmus. But the blind Principal, who lost his sight at the age of 4 following measles, showed no nystagmus. It was said that nystagmus never occurred in blind children, but he quoted a case to the contrary; the patient, a child, lately recovered a fair degree of vision, and the presence of the nystagmus led him to hope that that might be so. Mr. Cridland dealt with the question of the restriction of the fields of vision for red, blue, and white in subjects of miner's nystagmus; this could be observed in the early stage and the improving stage of the condition. Most of the cases showed blepharospasm, neck twitching, etc. The changes in the field were akin to those seen in functional disease, and that lent support to the view that miner's nystagmus was a nervous condition. Mr. Angus Macnab spoke of the relative importance of the rods and cones in different degrees of illumination. He thought the influence of refractive error in the causation of nystagmus must be very small, though errors of muscle balance might have some weight. It would be interesting to ascertain what proportion of affected miners suffered from heterophoria. Mr. Layton said there were great differences of opinion as to the value of vestibular nerve tests, including nystagmus, in the diagnosis of nerve diseases. He was convinced that in a certain number of cases vestibular reaction, when correlated with evidence obtained from other sources, would enable one to clinch a diagnosis or detect a gross lesion, which otherwise would seem equivocal. He thought every neurologist should learn to do these tests or send their patients to otologists who could do so. Dr. Rugg Gunn spoke of nystagmus as it affected albinos. In diseases of the retina associated with degeneration of the rods there was the converse condition to night-blindness. An eye in that condition looking at the spectrum of sunlight found the red end shorten and disappear, while its broadest portion appeared to move towards the violet end. Mr. G. H. Jenkins spoke of labyrinthine nystagmus in relation to various canals. Mr. Holmes Spicer, Dr. James Taylor, and Mr. Sydney Scott replied, and the President suggested that perhaps a committee of representatives of the three sections might present definite conclusions from the various points of view.

LIVERPOOL MEDICAL INSTITUTION.

At a meeting on March 19th, Dr. E. W. Hope, President, in the chair, Mr. Douglas-Crawford, in a note on the treatment of *Malignant stricture of the oesophagus*, expressed the opinion that gastrostomy was not as valuable an operation as jejunostomy, and described 7 cases in which he had performed the latter operation. In the discussion which followed, Mr. F. A. G. Jeans said he looked to the oesophagoscopist for help in the future, and Mr. F. Larkin that he shunned both gastrostomy and jejunostomy. Mr. R. W. Murray threw doubt on the value of any operation in these cases. Did the operations prolong the patient's life or merely his death? Dr. W. C. Oram, in a paper on *X-ray treatment of ringworm of the scalp*, advised that a 10 per cent. ointment of salicylic acid should be rubbed into the scalp after *x*-ray treatment and the head carefully washed. Professor Beattie, in a paper on the *Electric treatment of milk*, said that the two problems to be solved were: (1) Could the pathogenic bacteria be destroyed? (2) Could the milk be turned out free from pathogenic bacteria and yet otherwise unaltered? He then gave a detailed description of the apparatus he employed. A rapidly alternating current was used, and there must be no eddies in the milk and no cessation of flow. He gave an account of numerous experiments showing the effect on the bacteriological content of the milk. So far milk infected by tubercle had been rendered free from tubercle bacilli and the *Bacillus coli* group. Guinea-pigs were freely used in the experiments. The only bacteria left in the milk were sarcinae, sporing bacteria, and occasional streptococci, the *Bacilli coli* group and the tubercle bacilli being invariably killed. Careful examination of the treated milk revealed no difference between it and fresh milk, the milk tasted the same and had the same odour as fresh milk, and its keeping power was greatly increased. The plant was devised and many experiments carried out by Mr. Lewis, of the Bacteriological Laboratory, to whom the success of the experiments was due. The President said that the real object of the investigation was the prevention of infant mortality; 25,000 children had been fed from sterilized humanized milk dépôts in Liverpool in the last fifteen years with most excellent results, but he realized that there was a much better way of dealing with the milk. Mr. G. E. Simpson drew attention to the biochemical aspect of the problem of milk sterilization, mentioning the work of Fröhlich, Holst, and Funk. His own work had shown that the present method of preparation by the Liverpool Corporation did not destroy all the essential antiscorbutic vitamins of fresh milk, and suggested a trial of the biochemical properties of the milk treated by the high electric currents before it was used widely. Dr. R. Stenhouse Williams regarded Professor Beattie's method of sterilizing milk as the best yet discovered, for from the chemical standpoint it left the milk practically as in the raw condition. At the same time the question of its effect upon vitamins was in doubt, and the importance or otherwise of this in sterilized milk used for children should be absolutely settled before any such method was officially adopted. In his view the real question was whether the aim should not be to improve the methods used in the handling, rather than to cover up bad work by sterilization. Mr. Lewis described the electric technicalities of the treatment of the milk. An electro-thermal formula must be satisfied to get the best results

MR GOLDING required more investigation of matters from the chemical and biochemical point of view. Copper electrodes might erode and precipitate copper in the milk, and produce a taint. Dr. MURRAY BLIGH thought the value of the results depended upon the results obtained by feeding the milk so treated to children. Sterilization of milk was a retrograde movement. Professor BEATTIE, in his reply, admitted that a clean milk supply was certainly the ideal, but if it proved impossible to obtain an adequate supply of pure milk then sterilized milk was essential. He agreed that the whole system should be tested for one year before being set up elsewhere.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 20th, Mr. A. ERNEST MAYLARD President, in the chair, Dr. ALEX. MACLENNAN, in a paper on the simplified operation for *The cure of hernia in infants*, said while the radical cure of hernia in the adult possessed a serious morbidity and some mortality, the operation in infants practically possessed neither. In the majority of textbooks herniotomy in infants was advised only in cases of irreducible or strangulated hernia or in cases where truss treatment, properly and continuously applied, had failed to retain the hernia. But truss treatment had many disadvantages, and there was no case known where an actual obliteration of the sac had followed the wearing of a truss, while in many cases, in spite of apparent cure the hernia had reappeared later. Indeed, it was practically certain that no one in later life developed a hernia who had not since infancy a sac ready formed. That the early operation was absolutely safe had been proved by the wholesale radical treatment of hernia in infants attending the Royal Hospital for Sick Children out-patient department. The credit for the initiative in doing hernias in out-patients belonged to Dr. J. H. Nicoll, and the operation which the author performed was so simple that the dangers associated with the radical operation had vanished. The cases selected were infants not over 2 years, in fair general health, with mothers of average intelligence, able and willing to give a little more attention than usual to the child. If phimosis was present the child was circumcised at least one month before the proposed radical operation, though in exceptional circumstances the circumcision and radical cure might be done at the same sitting. Preparatory to operation food was withheld for three hours, but the bowels were not interfered with. Chloroform was the anaesthetic employed. An incision ¾ in. long was made over the internal ring, and the sac, when reached and freed, was treated as in Macewen's operation. No deep sutures were used. The superficial wound was closed by one or two silkworm sutures, and dressed by a roll of gauze made to cover little more than the wound and retained in position by a piece of adhesive rubber plaster. Elaborate dressings were quite unnecessary and only annoyed the infant. After a week the child was brought again to the dispensary to have the stitches removed. Done rapidly through a small incision, with the minimum of manipulations, dissection and stitching, and without violence to the anatomy, this operation entailed little tax on the vitality of the child, and, indeed, caused less distress than a simple circumcision. Dr. THOMAS P. GRANT (and Dr. MATTHEW J. STEWART, Leeds), in a joint note on *Mycloid tumours of tendon sheaths*, said that as such tumours occurred with much greater frequency in the hands than elsewhere, it was supposed that slight and frequently repeated trauma might be of some etiological importance. The chief diagnostic points were that the tumour was small and slowly growing, painless in the earlier stages, and, unless it attained a considerable size, interfered but little with the movement of the tendon. It was freely movable on the bone, and the skin was moved equally freely over it. As a rule these tumours were of very low malignancy, and the treatment in the first instance should be local removal only. In illustration they reported the case of a woman, aged 54, who had a tumour about the size and shape of a haricot bean on the radial aspect of the second phalanx of the left ring finger. Eight months before this appeared she had received a stab from a knitting-needle exactly at this spot. The tumour was excised, and on microscopic examination was found to be largely fibro-sarcomatous in structure, containing, scattered throughout it, giant cells, which stamped the growth as myeloid. It showed evidence of degenerative change apparently of a fatty nature. Dr. ARCHIBALD YOUNG described a case of *Fracture of the carpal scaphoid*, and showed the patient and *x*-ray photographs. The case was remarkable in that the bone was divided by a vertical break into a right and a left half, and one of these was again divided horizontally into a dorsal and a palmar fragment. The injury which caused the fracture had apparently been so trifling as to have escaped the patient's notice at the time. With Dr. J. SHAW DUNN, Dr. YOUNG also showed a large *Sacro-coccygeal teratoma* removed from an infant of 11 months, with relative photographs, radiograms, and microscopic sections. These latter showed tissues derived from all three primitive layers—epiblast, mesoblast, and hypoblast.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.

AT a meeting on March 18th, Mr. C. ADAIR DIGHTON in the chair, Mr. CHARLES HEATH, in the course of an epidiascopic demonstration of the various routes of drainage of the middle ear in the early stage of aural suppuration, stated that prolonged discharge of irritating antral secretion through the tympanum usually led to deafness by bringing about irreparable damage to the delicate tympanic apparatus. Hence this discharge should be arrested before the tympanic damage was so advanced as to cause permanent deafness, an operation being performed if necessary.

Reviews.

A TEXTBOOK OF PSYCHIATRY.

DR. R. H. COLE, in his textbook of *Mental Diseases*,[1] has made a painstaking and conscientious endeavour to state clearly, concisely, and in an interesting manner the main facts which should be known concerning mental diseases, but the general impression left after reading the book is that he has attempted to cover too wide a field of knowledge in a short space.

In Chapters II, III, IV, and V he gives a lucid psychological introduction to mental diseases, which should prove useful to the student who (as is so frequently the case) has no knowledge of psychology. Chapter VII deals with the general causation of insanity. While we are willing to admit the great importance of heredity in relation to insanity, we doubt the advisability of attempting to enter into a discussion of Mendelism applied to human character, for a brief allusion to a few facts can only tend to produce confusion in the mind of the student. The various views, including those of the ancients, are given regarding classification, and the author wisely adopts the clinical classification found in most textbooks.

The clinical descriptions of mental diseases are clear and concise, and the photographs of people suffering with various forms of insanity are excellent; but, in our judgement, photographs are not satisfactory substitutes for the clinical word-pictures of typical cases which form one of the valuable features of the textbooks on insanity by Griesinger, Clouston, and Savage. All the great teachers of medicine have found by experience that illustrative cases are an invaluable means of imparting knowledge, as distinct from information, to both students and practitioners.

We are glad to see that the author, in his chapter on stupor, calls attention to cases of patients "with delusional stupor who become resistive and rigid, and often refuse nourishment, thus resembling katatonia (dementia praecox)," because this condition is toxic in origin, and not degenerative, as is the case with dementia praecox; the prognosis therefore, as Dr. Cole states, is hopeful.

Chapter XIII, on Dementia Praecox, commences with the following statement, which to our minds is likely to be misleading to the student, although not inaccurate: "Dementia is a condition of acquired weak-mindedness in all stages of gradation, from mere 'facility' to complete absence of all the higher mental functions." First, we

[1] *Mental Diseases: A Textbook of Psychiatry for Medical Students and Practitioners.* By R. H. Cole, M.D.Lond., M.R.C.P. London Medical Publications. London: Hodder and Stoughton. 1913. (Demy 8vo, pp. 353; 52 figures. 10s. 6d. net.)

should like to ask: Is it acquired? Is it not more often an inborn deficiency manifesting itself in adolescence? Secondly, we take exception to the employment of the term "facility," which implies the quality of easy performance; it determines choice, and influences volition in a good sense as well as bad. It would, in our opinion, be better to avoid the use of such ambiguous terms. The author states that the term "dementia praecox" was first employed by Pick of Prague, in 1898; he is apparently unaware of the fact that Morel gave an excellent description of the disease, which he termed "démence précoce," in 1851–53—a fact referred to in our recent review of a textbook of psychiatry by Professor Régis.

There is a good clinical account of alcohol and insanity. Likewise the clinical features of general paralysis are clearly and concisely given, but we should like to call the author's attention to the desirability of a more extended account of tabo-paralysis than is to be found in the brief reference of three or four lines on page 228. It is important to know that a case of tabes with the knee-jerk present on one side and absent on the other is very likely to turn out to be a case of tabo-paralysis.

On page 182 Dr. Cole states that although in time the whole of the cortex in general paralysis becomes involved, the most marked changes occur in the Rolandic regions; surely the frontal lobes are earlier affected, and more markedly than the central convolutions. The pathology, apart from the excellent illustrations, is not as clear as it might be. This, however, it must be admitted, is not a great fault, for the pathology of insanity, apart from such organic brain diseases as general paralysis, arterio-sclerosis, and senile decay, is still little understood, and therefore of far less importance in a textbook of insanity for students than accurate and comprehensive clinical information regarding diagnosis, prognosis, and treatment. In these respects the student will find in this work all that he wants set forth in a methodical manner. The portion of the book which commends itself to us most, and which is of the greatest importance to the student and practitioner, are the final chapters dealing with prognosis, the legal relations of insanity and mental deficiency (including an account of the Mental Deficiency Acts), and general treatment. In these chapters the author writes as one who is on the sure ground of personal experience. The details of general treatment and management of patients suffering from various forms of insanity are complete and practical, and we are glad to notice that therapeutic measures are fully discussed. A page is devoted to the explanation of psycho-analysis; but the account, we fear, is too brief to give a student an adequate idea of Freud's theory and the principles underlying the treatment by psycho-analysis. The author, in conclusion, points out the desirability of medical students acquiring a knowledge of psychiatry, and thus avoiding much anxiety when they are confronted in their practice with cases of incipient insanity, and he calls attention to the human interest of the study. The book is of moderate size, well printed, and excellently illustrated; it contains an appendix of the various forms of reception orders and a good index. Taken altogether it is a praiseworthy attempt by a teacher to give a useful and comprehensive account of his subject.

HUMAN ANATOMY.

ALTHOUGH the fifth edition of CUNNINGHAM'S well-known *Manual of Practical Anatomy*[2] was issued only two years ago, under the direction of Professor ARTHUR ROBINSON, another edition has been called for, and already the first volume of this—the sixth edition—has come to hand. In our review of the fifth edition we drew attention to the introduction into that issue of certain new features, one of which, we said, would have far-reaching effects—namely, the new form of anatomical nomenclature adopted in Basel in 1895. That a new edition is necessary so shortly after its incorporation in the textbook under review shows, at any rate, that students generally do not regard the new terms as anything more than temporarily inconvenient, and that there is not, as stated in some quarters, an overwhelming feeling in England against it. With regard to the alterations now made by Professor Robinson, there is not much to call for special mention. The editor tells us in the preface that the whole of the text has been revised, some of the figures altered, and several new ones introduced. A feature of special interest is the insertion at the end of the volume of a series of radiographs of the joints and of the abdominal portion of the alimentary canal, the latter being drawings of radiographs taken after a bismuth meal. These will be most useful to the student, who should in this way and by means of photographs in the dissecting-room be prepared for the study of disease by radiography in the wards. We can only repeat what we have said before, that *Cunningham's Manual of Practical Anatomy* holds a unique position in this country, and its wide popularity under its present editor is clearly indicated by the new issue now demanded.

There are so many good manuals of practical anatomy on the market that at first sight a companion to go with them seems superfluous. But in Dr. E. B. JAMIESON'S *Companion*,[3] which in some respects is unfortunately somewhat like a cram book, the various structures are dealt with under their systems, and so a student during dissection can revise his work from a somewhat different viewpoint, and realize that a structure may be found in other regions besides that which at the moment is engaging his attention. If those who buy the book will use it in this way, and as a means of quick revision after the dissection of the body has been completed, it will be useful. Dr. Jamieson, who has done his work well and carefully, has included at the beginning of the book an excellent condensed account of the bones of the body, and at the end a brief summary of the prevailing views regarding the development of most of the organs. Here, again, it must be understood that as regards embryology the chapter is intended only for those who have read fuller accounts elsewhere, and is included in the hope that it may be useful for purposes of revision. Being intended to assist the student in the revision of his work, the book has no illustrations.

VENTILATION IN TEXTILE WORKS.

THE book on *Ventilation and Humidity in Textile Mills and Factories*,[4] written by the Lecturer on Civil Engineering in the University of Manchester, is addressed to factory owners and mill managers, but contains information of interest to the medical profession. The conditions under which work is carried on in the cotton mills of Lancashire as regards high temperatures and large percentage humidities have on several occasions, owing to complaints by the workers, led to an inquiry on the part of the Home Office. Temperature, humidity, and purity of the air supplied are the three factors to be borne in mind in designing the ventilating plant of a textile factory, and while at the present time less importance is attached than formerly to the amount of carbon dioxide in the air, it still forms the only practical means at our command of estimating the contamination derived from animal exhalations. In 1889 the Cotton Cloth Factories Act stipulated a minimum of 600 cubic feet of air per person employed. In 1897 the carbonic acid in humid sheds was not to exceed 9 volumes per 10,000 so long as the carbon dioxide in the outside air did not exceed 5 volumes per 10,000. To maintain this standard, 2,000 cubic feet of fresh air are required hourly for each operative, so that in a weaving shed there is a complete change of air in an hour. Since the 9-volume standard was fixed, workers in humid atmospheres have complained that high wet-bulb temperatures have a prejudicial effect upon their health. Artificial humidity is in many instances necessary, but many of the weavers object to it under all circumstances. A compromise has therefore been effected whereby the 9 volumes per 10,000 has been altered to 12 volumes per 10,000 or 8 volumes in 10,000 in excess of the outside air, whichever is the greater.

In the manufacture of cotton cloth a damp atmosphere is considered to be a necessity. The practice of infusing artificial humidity came from America in 1872. It was

[2] *Cunningham's Manual of Practical Anatomy.* Revised and edited by Professor A. Robinson. Sixth edition. Vol. I. Superior Extremity; Inferior Extremity; Abdomen. London: H. Frowde; Hodder and Stoughton. 1914. (Cr. 8vo, pp. 703; 16 plates, 255 figures. 10s. 6d. net.)

[3] *A Companion to Manuals of Practical Anatomy.* By E. B. Jamieson, M.D. Edinburgh, Glasgow, and London: H. Frowde; Hodder and Stoughton. 1913. (Fcap. 8vo, pp 549. 6s. net.)

[4] *Ventilation and Humidity in Textile Mills and Factories.* By C. H. Lander, M.Sc., etc. London: Longmans, Green, and Co. 1914 (Crown 8vo, pp. 182; 54 figures. 4s 6d. net.)

introduced to facilitate the weaving of heavily sized calicoes for the Indian market. Yarn absorbs moisture from the surrounding atmosphere, and it yields up moisture to it. The strength of yarn is favourably influenced up to a certain point by the amount of moisture contained in its fibres. A standard moisture of 8½ per cent. is recognized by the Manchester Chamber of Commerce. Any increase above this does not lend any further strength to the yarn.

Mr. LANDER alludes to electrical currents generated during the process of roving; also to the trouble which electrification of the material causes in the weaving sheds.

The atmosphere must be moist also when cotton goods are being sized. In textile factories a common cause of accident is flying shuttles. It has been said that in humid sheds flying shuttles are fewer, and experience rather confirms this, for a flying shuttle is often started by the yarn becoming broken. Anything, therefore, which will diminish this must lessen the chances of accident; but it must be borne in mind that breakage of yarn is not the sole cause of the flying shuttle. The discussion of hygrometry, the percentage humidity used for the various classes of goods, and also days good and bad for weaving finds appropriate space in the book. To the physiological effects of high humidity three pages are devoted. From the medical point of view it is to be regretted that this part of the subject has not been dealt with more fully, but as the author is not a medical man he has done his best by quoting from the writings of Drs. Pembrey and Collis. The various types of machinery for humidifying cotton are explained at considerable length. An interesting chapter deals with the temperature of mills and the influence of the midday and evening break. The book well repays the reader. It ought to serve a useful end.

VENEREAL DISEASES.

MEDICAL men who see that the author of *The Great Scourge and How to End It*[5] is CHRISTABEL PANKHURST, LL.B., will be disposed to assume that it is a political pamphlet, and they will not be altogether mistaken; nevertheless they will do well to read it, for it will tell them something of what a good many of their women patients, especially among the middle classes, are thinking and talking to each other about. The "great scourge" is venereal disease (syphilis and gonorrhoea) and it is to be ended by "votes for women, which will give to women more self reliance and a stronger economic position, and chastity for men." The evil consequences of both syphilis and gonorrhoea to women are set out with great frankness. This, of course, is right, but from the medical point of view the account is so out of perspective that it will produce a false impression on the mind of the reader who has not previously studied the subject. We will not stay to question the statement that 80 per cent. of men are infected with gonorrhoea before they reach the age of 30, because there is medical authority for it, although we believe it to be a gross exaggeration when stated thus as a general proposition. But if the implication is intended to be that anything like the same proportion of men infect their wives with the disease, it is false. No reference is given for the statement quoted from "Price, an American authority," that out of 1,000 abdominal operations 950 were the result of conditions due to gonorrhoea; and it is certain that though it may have been true of some hospital or set of cases somewhere at some time, it is so far from giving a true impression that its effect is tantamount to a misstatement. On the other hand, the serious nature of the sequelae of the disease which may occur in women is not exaggerated, and it is probably true that they are, on the whole, more serious in them than in the male. There is every reason why young women should know of this, but it can serve no good purpose to exaggerate the incurability of gonorrhoea in the male, or the frequency with which it is conveyed to newly married women.

The estimate is hazarded in the book that the percentage of men who contract syphilis is 20. There are no trustworthy data, and this estimate may be too high or too low. Dr. Douglas White, in his evidence recently before the Royal Commission, estimated that there were some three million syphilitics in the United Kingdom. This would be something under 7 per cent. of the whole population—a serious enough proportion; but all such estimates are open to the objection that they are averages for a whole population, and it is pretty certain that the frequency of the disease varies very much among different sections of the population. The Superintendent of Statistics to the Registrar-General for England and Wales, in his evidence before the same Commission, conjectured that syphilis was most prevalent among males of the highest and the lowest of the five social classes he distinguished, and that the three great industries—textile, mining, and agriculture—were exceptionally free from it. It is stated on pp. 74–77 that "syphilis is an important cause of anaemia," that "syphilis is now known to be the cause of Bright's disease, diabetes, hysteria, eye trouble producing blindness," and is "recognized as a predisposing cause of cancer," and also that "epilepsy and idiocy are referable to the same cause." That syphilis may cause all or any of these conditions is true, but from the way in which these statements are made the unwary reader, untrained in logic, may be led to conclude that diabetes or Bright's disease, or even anaemia or hysteria, are proofs or strong evidence that the sufferer has syphilis.

From the social and ethical points of view the book is disappointing. The opportunity is missed of putting the facts fairly and squarely before women who have not studied the matter for themselves. All through they are encouraged to regard themselves as innocent victims. Some are and some are not. It is assumed that venereal "diseases are due to prostitution." Their dissemination is, as a rule, due to unchastity, and can probably always be traced, at one or two removes, to an act of unchastity, and it would have been not only more courageous but more useful to have told women the truth, unpalatable though it might have been. If prostitution could be abolished to-morrow that would not abolish venereal diseases unless the standard of chastity in men and women were raised simultaneously. Many of those who have given most attention to the subject, in fact, believe that abolition would have the contrary effect. We are not defending prostitution, but the cause of social progress is not served by rhetorical statements which ignore half the facts. If this book has the result of causing women to take an intelligent interest in the prevention of venereal diseases it will do good. But if any considerable number of women take the picture it paints as a complete and faithful representation, as may happen to any woman not otherwise informed, it will do harm by preventing the co-operation between the sexes which is essential to the success of any campaign.

[5] *The Great Scourge and How to End It.* By Christabel Pankhurst, LL.B. London: E. Pankhurst. 1913. (Cr. 8vo, pp. 155.)

A MEDICAL DICTIONARY.

IN the JOURNAL of March 25th, 1911 (p. 694), we briefly reviewed the first edition of *Lippincott's New Medical Dictionary*, by Dr. HENRY W. CATTELL. The fact that the book has now reached a third edition[6] is a proof that it has successfully fulfilled its purpose, which was said to be "to furnish the medical student, the practitioner of medicine, the laboratory worker, and whoever has occasion to use a medical dictionary with a single volume of moderate compass." A medical dictionary should reflect in each successive edition the progress of medicine which necessarily entails an increased vocabulary to express new concepts and new discoveries. Accordingly, in this new "Lippincott" we find such words and expressions as neosalvarsan, anociassociation, anastalsis, automobile knee, vasostomy (Belfield's operation), presbyophrenia, ethylism, to name only a few. Every now and then we receive complaints from men who have not closely followed the onward march of medical science about formidable-looking new births of medical nomenclature which are naturally strange to them. Some, perhaps most, of these are formed by methods of etymological barbarism, but they all mean, or are intended to mean, something: and the growth of new ideas and facts is so rapid nowadays, that they increase and multiply at a rate which makes the panting lexicographer toil after them in vain. We have subjected Dr. Cattell's book to the severest test, that of

[6] *Lippincott's New Medical Dictionary.* By Henry W. Cattell, A.M. (Lat.), M.D. (U. of P.), Editor of International Clinics, Fellow of the College of Physicians of Philadelphia, etc. Freely illustrated with figures in the text. Third edition. Philadelphia and London: J. B. Lippincott Company. (21s. net.)

constant use, and have seldom found it wanting. Greater praise than this no maker of dictionaries hath. The book is freely illustrated with figures—apparatus, anatomical regions, morbid appearances, portraits, and so forth—in the text. It is clearly printed and handy to use. The pronunciation of words is indicated, but here we note certain inconsistencies. To our ears such accentuation as "vesical," "vaginal," "umbilical" *pinguc quiddam atque peregrinum sonat*, especially as vesica, vagina, and umbilicus are given as the corresponding substantives. But then should we ever look for consistency in pronunciation? Does not every one say urinal though the noun is urina? Another word and we have done with criticism. If the phraseology of the prize ring is to be given in a medical dictionary, why should not the "mark" be defined as well as the "conk"? And is it really necessary in a book intended for the information of doctors to define the expression "last illness"?

NOTES ON BOOKS.

MISS ARLEY MUNSON, after taking her M.D. at Philadelphia, determined to devote some years to work in India, and in *Jungle Days*[1] gives an account of five years' service as a medical missionary. The book gives no dates, but from the references to the late Sir Denzil Ibbetson and to the Haiderabad floods, the period covered seems to have been about 1903-8. The authoress went to India without any definite post in view, and applied for work under the Dufferin fund; but, on finding that the rules prohibited Christian teaching, determined to join a mission, and got the post of lady doctor to the Wesleyan mission at Medak, sixty miles north of Haiderabad. The book records her experiences of five years' work in this mission, including a fair amount of leave. In three out of five hot weathers spent in India she went to the hills, visiting Simla and Masuri, Kashmir, and Darjiling, in different years. She was also able to visit Calcutta, Benares, Cawnpur, Lucknow, and Delhi during her travels; and as she landed at Bombay and sailed from Madras she saw a good deal of India. She seems to have learnt very little of Indian vernaculars, as her curious phrases and quaint spelling show. She speaks frequently of gypsies as "lombardies." The word should be *lambādi*, a Telugu term for the migratory traders, better known as Banjaras. A stranger perversion is that of *dacoity*, "A camp of Dacoities, Hindus who are born to the caste of robber and murderer" (p. 69). Dacoity means the trade or art of gang robbery. The robber is a *dacoit* (or *dakait*). They are not a hereditary caste; men of every caste may, and do, take up the trade of gang robber. Her free use of the words *queen*, *princess*, and *prince*, in describing her Indian friends, is also exaggerated. The book is nicely got up, and well illustrated by appropriate photographs.

It is now some years since the craze for "slumming" became fashionable, and so many books have been written and the situation of the submerged tenth has been discussed from so many different points of view that it seems almost impossible anything fresh should have been left to say. There can be no higher praise, therefore, than to describe Miss MARJORY HARDCASTLE'S *Halfpenny Alley*[2] as being totally unlike any of the numerous books on slum life and character which have appeared since the dictates of fashion drove the leisured classes to spend some of their superfluous time and money in the service of the poor. It consists of a series of sketches, drawn from the writer's own experiences as a nurse in the East End of London; they bear upon them the hall-mark of truth, and the ragged figures who flit through her pages stand out with startling distinctness against the background of dreary streets and comfortless homes that Miss Hardcastle seems able to bring before her readers with a stroke of the pen. She has not idealized the actors in these sordid little dramas, nor has she indulged in harrowing descriptions of the never-ending struggle for life amongst the poorest of the poor. She has simply written of what she herself has seen and heard in the course of her work amongst them; and in so doing has lifted the veil which hangs between rich and poor, and has given the former a glimpse into the lives led by thousands of their fellow citizens—lives which, in spite of hunger and cold and grinding poverty, are not without their share of the common joys of humanity. Miss Hardcastle writes very tenderly of her humble friends, and her book, with its gentle irony and delicate humour, should serve as an admirable corrective of the distorted views of a certain type of social reformer. The volume is enriched by a charming frontispiece by Lady Stanley, and a short preface has been contributed by Mr. Alexander Paterson.

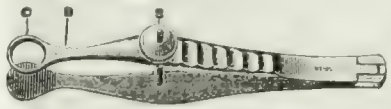
[1] *Jungle Days: Being the Experiences of a Woman Doctor in India.* By Arley Munson, M.D. London and New York: D. Appleton and Co. 1914. (Demy 8vo, pp. 298; illustrated. 10s. 6d. net.)

[2] *Halfpenny Alley.* By Marjory Hardcastle; with an introduction by Alexander Paterson, and a frontispiece by Lady Stanley. London: Smith, Elder, and Co. 1913. (Pp. 239. 5s. net.)

MEDICAL AND SURGICAL APPLIANCES.

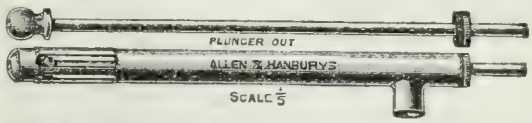
Tarsal Cyst Forceps.

DR. ARTHUR GREENE, M.A., M.D., F.R.C.S.I., Honorary Surgeon, Norfolk and Norwich Eye Infirmary, writes: The frequent use of tarsal cyst forceps has led me to design one with a view to enhancing the advantages of such an instrument. The particular points about the instrument illustrated are: That the opening O is sufficiently large to allow a cyst of large size to be dealt with; that both the upper and lower aspects of the blades are serrated to prevent slipping; that the blades are especially shaped at B to allow for the thicker lid edges; and that pressure is exerted by means of a thumb-screw S, thus permitting not only more accurate adjustment, but also more convenient and gentle manipulation during application and removal than is possible with any form of ratchet arrangement. The forceps is made by Messrs. Weiss and Son, London; but has in error been described in their current ophthalmic catalogue as an expression forceps.



An Intrauterine Douche.

DR. R. DOUGLAS LAURIE (Derby) writes: The accompanying diagram represents a douche which I have found very satisfactory in maternity work. The large size of the channels permits of a copious flow of lotion and an easy, unobstructed return. I have frequently given a couple of gallons of lotion in a few minutes. If the return should be partially blocked by a large clot (I have never found it completely blocked), the inner portion of the instrument can be withdrawn easily without removing the douche. The blunt end is an ample safeguard against perforating the wall of the uterus. The instrument is manufactured for me by Messrs. Allen and Hanburys, 48, Wigmore Street, W.



MEDICINAL AND DIETETIC ARTICLES.

Neo-Bornyval.

THE isovalerate of borneol, also known as bornyval, has been in use for some time as a nerve sedative resembling valerian in its action. The J. D. Riedel Co. (13-14, Walbrook, London, E.C.), the makers of bornyval, have now introduced another form to which they have given the name neo-bornyval; this is bornyl-isovaleryl-glycocollate, and it is claimed that it is less likely to cause eructations while otherwise possessing similar properties to bornyval. It is supplied in perles containing 4 grains each.

Petroleum Emulsions.

The internal administration of petroleum has proved useful in colitis and some other intestinal troubles, and at present appears to be in a good deal of popular favour for the self-treatment of chronic constipation. Messrs. W. Browning and Co. (4, Lambeth Palace Road, London, S.E.) have submitted samples of a series of emulsions of petroleum which they are putting forward under the brand "semprolin." The plain semprolin emulsion is a thick white emulsion of bland taste, stated to contain 60 per cent. of liquid paraffin. Microscopical examination showed the oil to be in a very fine and uniform state of subdivision. A chocolate-flavoured cream is also made, and a series of combinations of the emulsion with various medicaments, including guaiacol, hypophosphites, malt extract and iron, etc.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual general meeting of the London and Counties Medical Protection Society, Limited, was held at its offices in Craven Street, Strand, W.C., on March 25th.

The chair was taken by Dr. C. M. FEGEN, who, after the minutes of the last annual meeting and of two extraordinary general meetings in July and August respectively had been confirmed, said that he was presiding in the absence of Dr. Heron, who had now been practically the president of the society as well as of the council for some time. He was elected to that position in succession to Sir Jonathan Hutchinson, to whom the society had been so much indebted ever since its inception. His death made it necessary to fill the post of president at once, and, in the opinion of the council and of those members of the society who knew anything of its work, there could be only one man in question. Hence Dr. Heron was unanimously appointed president of the society, and of that action the whole of the members would approve. Dr. Heron had been one of those instrumental in the founding of the society, and to him they had long been accustomed to look for every kind of help and guidance, and had never been disappointed. In addition the society had enjoyed his hospitality at a time when it had no offices of its own, and in many ways he might well be considered its chief founder. He was at present abroad, and all would wish him a pleasant holiday. The events of the year had once again more than justified the existence of the society. Its usefulness and the number of cases referred to it for help and assistance steadily increased. The National Insurance Act had already increased the work to be done, and it would do so still further. Difficulties assailed every one brought in any way under the operation of that Act, and it was clear that although there might be good in the Act, it was bound to give rise to a good deal of contentious matter, and thus lead to members seeking the assistance of the society. During the course of the year the council had had to deal with several cases of much interest and importance, one in particular being the action undertaken on behalf of members connected with St. John's Hospital for Diseases of the Skin. The society had taken up their cause because the council conceived that the gentlemen concerned were wrongfully dismissed from the positions they had held so long and with such distinction to themselves in that branch of their profession. The action of the society had been thoroughly justified by the fact that when the case was tried in the High Court damages for wrongful dismissal were obtained. In many cases, however, the council found itself able to assist members without taking their cases into court at all. That fact was a very great asset to members, for no medical man was desirous of appearing in a law court as either defendant or plaintiff. For its success in upholding the interests of its members without recourse to the law courts, as also for its success in those cases which had had to be fought out before a judge, the society was indebted to the able guidance afforded by its solicitors, Messrs. Le Brasseur and Oakley. The finances of the society had during the past year, as in previous years, been under the control of Dr. Heron, the late treasurer, and of Mr. Fullerton, the financial secretary, and they were in excellent condition. Not only was the society still solvent, but, thanks to its scheme of insurance, it was more solvent than ever. The amounts received from members under that scheme had by no means all been expended; thanks to the success of all procedures during the concluded year there was a balance of over £5,000 to the credit of the insurance account. It was a very useful sum, for no one could ever say what would be the attitude of an ordinary British jury; and some day or other a case which the society had felt bound to fight might end in an adverse verdict through no fault of its own and through no fault of the member concerned. This was one reason why the council was endeavouring to build up a large reserve fund, by reassuring the society's risks, so that whatever happened members would be duly protected and the solvency of the society maintained.

The Chairman concluded by moving the adoption of the report. This, among other matter, contained a series of tables setting out the position of the society during last and several previous years. The figures therein fully confirm the statement made by the chairman as to the society having increased its financial strength as well as the number of its members. One table shows that the surplus funds available at the end of the year 1913 were a little over £11,667, while the total sum available in case of need was £39,353. The greater part of the report, however, is taken up by an account of cases in which the society's help was sought during the year. These are classified under various headings, the aim in view seeming to be to record only such cases as bring out a point of special interest. Each of the various sections commences with a brief statement of the special consideration involved in the class of case in question, this particular part of the annual account of the society's work being thus rendered one of permanent interest and utility.

The report and the financial statement having been adopted, the election of officers for the ensuing year was held, and resulted in the appointment of Dr. Heron as president, of Dr. C. M. Fegen as treasurer, and in the reappointment of certain retiring members of council, of all those who held office as vice-president last year, of the solicitors and auditors of the society, and of its secretaries, Dr. Hugh Woods, and Mr. A. G. R. Foulerton.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

Syphilis and the Nervous System.

At the twenty-fifth meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. J. Risien Russell, who had been nominated to appear before the Commission by the Royal College of Physicians.

Dr. Russell's evidence was chiefly concerned with the relation of syphilis to general paralysis, locomotor ataxy, and to nervous diseases as a whole. He was unable to give any statistics, but he stated that he had come to the conclusion that syphilis was very often the cause of nervous diseases, and that without syphilis general paralysis of the insane and locomotor ataxy would not exist. In the case of general paralysis he had not had experience of any form of treatment which resulted in the cure of the disease or in arresting its progress. Locomotor ataxy could, however, be very definitely influenced for good by treatment.

On the subject of the Wassermann test Dr. Russell said that it should only be relied on when performed by some recognized expert and that one negative result should not be regarded as conclusive. He thought that there would be advantage in the standardizing of the test.

Dr. Russell was not in favour of the notification of venereal diseases; such a measure he considered would lead to patients having recourse to quack treatment. The evil of quackery he regarded as very serious, and more especially with respect to venereal diseases; he thought that the law dealing with quack treatment and advertisements needed strengthening.

Statistics.

At the twenty-sixth meeting Dr. Douglas White gave evidence. Dr. White submitted an estimate which he had made of the prevalence of venereal diseases in the United Kingdom. No direct statistical basis was at present available for the purposes of such an estimate; but from a consideration of the existing statistics regarding venereal diseases in this country, and a careful comparison (in which an attempt was made to allow for difference of conditions) with the estimates which had been made as a result of a statistical inquiry in Prussia, Dr. White arrived at the conclusion that there were every year 122,500 fresh cases of venereal disease in London and 800,000 fresh cases in the United Kingdom. He computed that of the 800,000 fresh cases, 114,000 would be syphilis, and the remaining 686,000 cases of gonorrhoea and chancroid. From these figures he deduced that there must be in the United Kingdom some 3 million syphilitics.

As regards syphilis Dr. White compared these results with the estimate obtained by assuming that a certain percentage of cases of syphilis find a conclusion in general

paralysis or locomotor ataxy. The figures obtained from the results of notification in Denmark had led to the conclusion that in that country rather less than 2½ per cent. of syphilities died of general paralysis. In the United Kingdom there were about 2,600 deaths annually from general paralysis and about 700 deaths from locomotor ataxy. If it might be assumed that 3 per cent. of cases of syphilis resulted in deaths from these diseases, the conclusion was reached that there were about 111,000 syphilitic infections annually. This figure Dr. White compared with the 114,000 fresh infections estimated by the indirect method already mentioned.

Dr. White said that he had not had an opportunity of studying some figures recently published in Vienna which were referred to by members of the Commission. These figures suggest that 7½ per cent. of cases of syphilis result in locomotor ataxy or general paralysis, and if that percentage were adopted the estimate of fresh cases would be reduced to about 50,000 annually.

Education.

Passing to the means of combating venereal diseases, Dr. White said that prevention would depend on two elements—facilities for treatment and education of the public. If there were no facilities education would largely fail of its purpose, and if there were no education the facilities would not be fully utilized. He regarded ignorance of the public as the most important factor in the spread of venereal disease, and from reading various official reports from foreign countries he had formed the impression that syphilis and ignorance walked hand in hand. The matter was one of much difficulty, but he thought that it was clear that adolescents of both sexes should be instructed in sex hygiene, and such teaching might be begun in the case of boys at about the age of 16, and in the case of girls at 15. He suggested that at public schools a course of lectures should be given by a selected medical man; and at universities similar lectures, but with more special reference to disease and the need for early treatment in case of its acquisition, should be made compulsory. He recommended a similar procedure for adoption at secondary technical schools and evening schools. In addition, he advocated that the Government should employ a certain number of medical men, and possibly some specially instructed laymen, to give lectures on this subject to the employees at large factories; lady lecturers should be employed in the case of girls. He suggested that the whole procedure ought to be under the control of some central body resembling the societies which exist in Germany and the United States, and this central body might well receive subventions from public funds.

AUSTRALASIAN MEDICAL CONGRESS.

The tenth session of the Australasian Medical Congress was opened at Auckland, N.Z., on Saturday afternoon, February 7th, when the President, Dr. A. Challinor Purchas, and Mrs. Purchas held a reception at their residence. On Sunday special sermons were preached by the Bishop-elect of Auckland in St. Matthew's Church, by the Roman Catholic Bishop in St. Patrick's Cathedral, by the Reverend R. L. Walker in St. Andrew's Presbyterian Church, and by the Rev. R. Inglis in Knox Church.

The business of the Congress commenced on Monday, February 9th, when an inaugural meeting was held in the Town Hall. His Excellency the Governor, the Earl of Liverpool, read the following telegram received through the Secretary of State for the Colonies:

> Please convey to Australasian Medical Congress at its opening my best wishes for the success of its deliberations. His Majesty's Government recognizes the importance of contributions which such Congresses have made to the advancement of medical science, not only in Australasia, but generally, and looks forward with interest to the results of this meeting in New Zealand.

Lord Liverpool extended a sincere and cordial welcome to the members of the Congress, and was followed by the Prime Minister, the Right Hon. W. F. Massey, who welcomed the Congress and referred to the presence of the Honourable W. A. Holman, Premier of New South Wales. After speaking of the importance of so large a gathering of medical men, he said that in their work of eradicating disease it was the duty of the State to give them all possible assistance. A speech in response was made by the Premier of New South Wales.

Dr. A. Challinor Purchas then delivered his inaugural address. He reviewed the advances made in the various departments of medical and surgical science, and discussed in detail some matters of special interest to New Zealand. The antagonism exhibited by the Maoris to European medicine was declining, and there were now several fully qualified Maori medical practitioners doing excellent work in the instruction of their race in the laws of health. The Infant Life Protection Act had enabled the New Zealand Government to do much for the preservation of infant life and the care of the feeble-minded. The mortality among the boarded-out children, previously very high, had been materially diminished by the provision which made it compulsory to hold an inquest on every fatal case. When a magistrate considered it necessary the State now took the place of a parent, and many children were thus given a better chance of life. The State also took charge of dependent, delinquent, and defective children. Dependent children were boarded out up to the age of 14, when they were put to farm work or domestic service under State guardianship till they reached the age of 21. Delinquent children were detained in industrial schools or on a training farm, and defectives were placed in a special institution. Three years' working of State control showed that 90 per cent. of the children were leading respectable and useful lives. After discussing the practical application of bacteriological methods to the prevention of epidemic diseases, the President concluded by observing that science taught mankind how to subjugate the forces of Nature, and how by a course of life and conduct in harmony with Nature's laws and by the exercise of courage, industry, unbiassed judgement, and unwearying patience, man might hope to gain instruction from the works of Nature.

The scientific business of the Congress was transacted in eleven sections. In the Section of Medicine, Dr. Sinclair Gillies of Sydney, in discussing the advances made in bacteriology and preventive medicine, dwelt especially on the ultra-microscopic viruses recently recognized as the causes of certain diseases. He also referred to the various specific biochemical reactions, and to the adaptation to clinical use of physiological methods which contributed largely to more accurate diagnosis. At the same time he pointed out that the clinical pathologist could not take the place of the physician in actual contact with the patient, whose duty it was to estimate the true value of laboratory methods. He dwelt on the great value of the results obtained from the labours and researches of specialists in all departments of medical science, but indicated some of the risks of too exclusive devotion to one special department of medicine, and expressed the opinion that the truly successful practitioner was one who, though not himself a specialist, was ready to avail himself of the assistance of a specialist, and weigh his advice, viewing it from the broadest possible standpoint.

The proceedings of the Section of Surgery were opened by the President, Dr. Hamilton Russell, of Melbourne, in the address which is printed in this issue.

The President of the Section of Diseases of Children, Dr. W. F. Litchfield, Physician to the Royal Alexandra Hospital for Children, Sydney, devoted his address to the consideration of the effect of institutional treatment of infants. He said that since he first wrote on the subject in 1899 evidence had accumulated both in Australia, Europe, and America, showing that the effect of keeping deserted, motherless, or neglected infants in institutions was injurious and attended by a very high mortality. He strongly urged the organization of a thorough system for boarding-out, and said that the State children's departments in most of the Australian states had adopted this policy.

Much cordial hospitality was shown during the Congress week, and opportunities were afforded for excursions to various places of interest. On February 10th a party of over 400 made a motor trip to Titirangi as the guests of the City Council on the occasion of the opening of the Atkinson botanic reserve, and on the same evening there was a large garden party in the grounds of Cintra, arranged by the President and members of the New

Zealand Branch. The Hon. R. H. Rhodes, Minister for Public Health, gave a dinner at the Northern Club to a large party of official representatives at the Congress.

ROYAL MEDICAL BENEVOLENT FUND.

At the last meeting of the committee twenty-four cases were considered, and grants amounting to £267 voted to twenty-two of the applicants. The following is a summary of the cases relieved:

Widow, aged 75, of M.R.C.S.Eng. Only income 5s. per week from old age pension. Health very bad and failing sight. Voted £18.

Widow, aged 62, of M.D.Glasg. After husband's death endeavoured to support herself by taking boarders. In consequence of ill health and lack of boarders, unable to pay her way. Voted £12.

Daughter, aged 65, of M.D.St. Andrews. Takes in paying guests, but illness and bad season cause of distress. Voted £10.

M.D., Q.U.Irel., aged 80. Private practice diminished and only a few panel patients. Voted £18.

Daughter of M.D.Edin., aged 88. Distress caused through foreclosure of mortgages on leasehold property. No income at present. Relieved once, £12. Voted £12.

Widow of M.R.C.S.Glasg., aged 56. Endeavours to earn a little by taking in a boarder. Suffering from chronic rheumatism. Children unable to help. Relieved seven times, £84. Voted £12.

Widow of M.D.Edin., aged 59. Has very indifferent health; children only able to help slightly. Relieved four times, £44. Voted £12.

Daughter of M.R.C.S.Eng., aged 75. Unable to work in consequence of recent accident and old age. Just been elected an out-pensioner of £26 per annum, and has an annuity of £9 15s. 6d. Relieved once, £10. Voted £5.

Daughter of M.R.C.S.Eng., aged 65. Endeavours to earn a little by taking in boarders and just a little assistance from relatives. Cause of present distress death of mother and sister, both of whom had small annuities. Relieved seven times, £84. Voted £12.

Daughter of M.R.C.S.Eng., aged 66. Income from investments only £20 per annum; lives with sister, whose income also is only £20. Distress caused by loss of investments and ill-health. Relieved twice, £24. Voted £18.

Daughter of M.R.C.S.Eng., aged 59. Has invalid mother to nurse. Mother lost income through building society frauds. A little assistance for invalid comforts from the Guild. Relieved twice, £24. Voted £12.

Daughters of M.R.C.S.Eng., aged 41 and 45. Endeavour to earn a living by letting rooms. Bad season cause of present distress. Relieved once, £10. Voted £10.

Widow of L.R.C.P.Edin., aged 56. Unable to earn anything in consequence of bad health. Receives a little help from the Guild. Relieved eight times, £108. Voted £12.

Daughter of M.R.C.S.Eng., aged 50. Difficulty in obtaining suitable employment through unsatisfactory health. Relieved twice, £27. Voted £12.

Widow of M.D.Glasg., aged 69. Income only £14 per annum allowed by friends and a little help in the winter from the Guild for coal. Health bad. Relieved once, £12. Voted £12.

Daughter of M.R.C.S., Trinity College, Dublin, aged 63. Income only £5 per annum from a friend. Has very bad health and quite unable to do anything. Relieved five times, £60. Voted £12.

Daughter of L.R.C.P.Dublin, aged 52. Endeavoured to support herself until two years ago, when health broke down. Income £39 per annum from relatives. Relieved once, £10. Voted £10.

Widow of M.R.C.S.Eng., aged 59. Health bad, and cataract of left eye, and quite blind in right eye. Children quite unable to help. Relieved three times, £30. Voted £10.

Daughter of M.R.C.S.Eng., aged 57. Only able to earn a small sum per week by needlework, and a relative helps to pay the rent. Health bad. Relieved sixteen times, £190 and special £8. Voted £12.

Daughter of L.R.C.P.Eng., aged 67. Blindness and nervous breakdown. Only income £17 per annum from a society. Relieved nine times, £80. Voted £12.

Daughter of M.R.C.S.Eng., aged 46. Endeavours to support herself by letting rooms, but has been unsuccessful recently. Relieved three times, £30. Voted £12.

Widow of M.R.C.S.Eng., aged 66. Suffering from malignant growths of the breast. Endeavoured to earn a little by letting room. Children only able to help very slightly; little help for nourishments from the Guild. Relieved thirteen times, £166. Voted £10.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

A SPECIAL clinic for occupational diseases has been established at Brussels. It is under the direction of Professor René Sand, who, besides treating patients, will give a course of instruction on the diseases and accidents to which working people are liable. This is said to be the first course of the kind given in the French language.

Nova et Vetera.

STANDARD BREAD IN HISTORY.

NOT long ago much was heard about "standard bread." We have no wish to revive the controversy, though we may say that in spite of a certain amount of exaggeration a good case was made out for bread made of the whole grain ground up with the outer coating and germ. By their elimination the vitamines now known to be indispensable for the assimilation of cereals are removed. Some may be interested to learn that in a sense standard bread is as old as King Alfred. The question of the standardization of bread was discussed in great detail and with considerable warmth in 1773 by an "Advocate for the Public Welfare," who signed himself J. H. The title of his pamphlet forms a brief summary of its contents; we therefore quote it in full:

"A Letter on Occasion of the Public Enquiry Concerning the most fit and proper Bread to be assized for general Use: Shewing the Difficulty of executing the Act of the 31st Geo. II. in a beneficial manner to the Poor; the constant Usage and Custom with regard to Bread for many Centuries; the folly of eating Bread known to be made white by Art and Adulteration, and the great Advantages of eating pure Bread made of all the Flour, including the Heart of the Wheat, as the most salutary agreeable and nutritive Aliment. Recommended as an Object of a very serious and important Nature."

We need not stop to inquire how far internal evidence goes to show that the writer may have been personally concerned in the matter. He declares that he has no interest but the love of God and his fellow subjects, and enforces this statement with an edifying curse on "the pen directed by a heart knowingly guilty of a falsehood where so sacred an object is concerned as the health, the pleasure, and the preservation of the poor." To a cynical mind it may seem that he doth protest too much. However this may be, we propose to deal with the pamphlet purely from a historical point of view.

The bread problem exercised the minds of rulers and people from the earliest period of English history. We gather that it was debated in the House of Commons in 1768, when an attempt to make bread better and cheaper was defeated mainly by the opposition of the mealmen and bakers. J. H. says: "Whatever mixtures of grain or qualities of bread might be the food of some of our ancestors, the common standard of bread, from Alfred's time down to the eighth of Queen Anne, was three-fourths of the wheat, which represented all the flour." The assize made by Henry III seems to have been founded on the same principle. We went on well, says the writer, for above 800 years, but in the reign of Queen Anne it was thought proper that there should be a new assize and that three sorts of bread should be assized: "Thereupon the miller, the mealman, and the baker began to divide and subdivide; and instead of flour for bread and the bran that remained, according to ancient practice, whereby the beggar as well as the prince was pleased, assize bread became a mystery and we no longer knew what we were eating. The miller and the mealman divided the flour, but in the attempt to prepare one part for white, another for wheaten, and a third for household bread, the inferior kind could have no portion of the heart of the wheat, and became disagreeable to the taste of those accustomed to finer bread." The household bread was rejected by those who could afford to pay for a better quality, and in great towns the first kind was almost the only one consumed. Experience proved, we are told, that the Act of Queen Anne would not answer the purpose intended; therefore, at the close of the reign of George II a lawyer named Dickenson suggested that instead of three there should be only two sorts of bread, to be called "wheaten" and "household" respectively; and he proposed to divide the flour so that when the best kind of bread cost four, the other should cost but three, and according to the law the quartern loaf was to be in the proportion of 8d. and the household loaf of the same weight 6d. But, our writer argues, "the baker could not possibly sell sixpenny loaves in a sufficient number to live by his trade unless he made them of a great part of pollard and fine bran which very few people chuse to eat, when better is set before their

eyes in every baker's shop." The common people, he adds, rejecting what they called brown bread, took to the wheaten which they called white bread. "The baker, observing the humour upon the article of whiteness, was to make his bread white tho' he should have mixed it with arsenic; and in conjunction with the miller and the mealman, who are frequently the same person, began to play the most injurious tricks that any nation was ever cursed with." The operating cause of the mischief, it is said, has been the attempt to assize different qualities of bread. "People may eat what they please, but if there was only one standard for bread, as there is for our coin, we should have a fairer chance of eating it pure." Let us, then, the writer concludes, revert to the practice of our forefathers, and make our best genuine standard bread of three-fourths of the wheat. "The baker, knowing what part of the wheat his flour ought to be, would work it into his bread with so much the more satisfaction, and, being sensible that we meant to eat genuine bread, he would cease to whiten it by any hurtful art."

It may be added that the celebrated Parmentier, who did so much to popularize the potato in France, made a study of the making of bread when he was chief pharmacist to the armies of the Republic in 1793. He did not appreciate the nutritive value of the component parts of the coats, but he was keenly alive to the possibilities of adulteration created by the desire for white bread.

SCIENCE NOTES.

In a paper by A. J. Walton on variations in the growth of adult mammalian tissue in autogenous and homogenous plasma, communicated recently to the Royal Society by Professor W. Bulloch, F.R.S., the results of experiments performed to obtain information as to the presence in plasma of substances inhibitory to the growth of tissue were related. Several tissues were used and several plasmata were investigated. The first series of experiments was conducted with a view to discovering if tissue grew better in homogenous or autogenous plasma. It was found that there was no direct variation, but the cells grew better in some plasmata than in others. It also became evident that the power of growth varied directly with the nature of the plasmatic medium and was independent of the cells used. Further experiments showed that plasma contained both inhibitory and stimulating substances to the growth of cells; that the inhibitory substances were destroyed by freezing the plasma from one to three days, and that the stimulating substances were also destroyed when the plasma was frozen for a period of six to eight days.

The demonstration of Pfeiffer that the serum of immunized animals could produce destruction of cholera organisms without the presence of phagocytes was hailed by the opponents of Metchnikoff's theory of phagocytosis as proof of the humoral hypothesis of immunity, and the countless test tube experiments with immune serum made in the years since that observation have tended to strengthen the position of the humoralists. But there can be no question that the phenomena observed *in vitro* are far from being identical with what takes place within the body. Wollman, working in Metchnikoff's laboratory, has published some simple and striking experiments on the origin of the alexin or complement that is the active agent in producing destruction of the bacteria or cells against which immunity has been developed. By the use of collodion sacs, through which complement does not pass, he has been able to demonstrate that leucocytes suspended in inactivated serum within such sacs in the abdominal cavity of animals secrete complement, so that when the sensitized cholera vibrios or corpuscles are added to the fluid disintegration takes place. In another series of experiments he showed, by ligaturing the jugular vein and injecting sensitized vibrios or corpuscles into this living test tube, that no disintegration of either took place. These experiments show clearly that bacteriolysis and haemolysis as observed with serum *in vitro* do not correspond with what takes place in the living body. Whether the absence of these phenomena in the circulating blood is due to the absence of complement in a free state or to the fact that the latter has not the necessary conditions for its action, yet it follows none the less, from the point of view of immunity against bacteria, that extracellular bacteriolysis is quite a secondary phenomenon.

LITERARY NOTES.

Mr. Fisher Unwin announces a second edition of Dr. Parkes Weber's book, *Aspects of Death in Art*, which was reviewed in the British Medical Journal of February 18th, 1911 (p. 367).

Professor Freud's book *On Dreams* has been translated by Dr. M. D. Eder from the second German edition, and will be published immediately in an English edition by Mr. Heinemann. Dr. W. Leslie Mackenzie, medical member of the Local Government Board of Scotland, contributes an introduction.

Messrs. Macmillan will shortly publish the report of a joint committee of well-known doctors and clergymen formed to inquire into the meaning and scope of "spiritual," "faith," and "mental" healing, and consider the results of the recent development of these movements. Nineteen meetings, we learn from the *Times*, were held, at which evidence was given by witnesses who had personally practised, or made a study of, the treatment of physical disorders by spiritual or mental influences. Among the members of the committee were the Dean of Westminster (Chairman), Sir Dyce Duckworth (Vice-Chairman), Canon O. V. Childe (Honorary Secretary), the Dean of Durham, the Dean of St. Paul's, the Bishop of Stepney, Sir Clifford Allbutt, and Sir R. Douglas Powell.

Queen Alexandra has been graciously pleased to accept a copy of Dr. C. W. Hutt's work, *Hygiene for Health Visitors, School Nurses, and Social Workers*, recently published by Messrs. P. S. King and Son.

Volume XVIII of the second series of the *Index Catalogue of the Library of the Surgeon-General's Office, United States Army*, comprising authors and subjects from Tetamore to Tzschirner, has recently appeared. It includes 3,865 author titles, representing 4,117 volumes and 2,693 pamphlets, as well as 5,223 subject titles of separate books and pamphlets and 45,525 titles of articles in periodicals.

The famous library of Alexandria is said to have been destroyed by the Arab conquerors. The legend handed down through many generations of historians was that the Caliph Omar, when appealed to, decided on the fate of the priceless manuscripts contained in the library by the summary formula that if they contained doctrines in conformity with those of the Koran they were superfluous, while if they contained anything opposed to the teaching of the Koran they were pernicious and should be destroyed. Accordingly, the manuscripts are said to have been distributed among the baths of the city, where they served as fuel for six months. This story is now held to be of very doubtful authority. But it is too true that at other times, and especially at the suppression of the monasteries in our own country, manuscripts were treated as worthless and put to the vilest uses. It is startling, however, to read that in the reign of light ushered in by the French Republic one and indivisible a request was addressed to the Bureau du Domaine National, by the Director of the Ecole de Santé, which took the place of the old Paris Faculty of Medicine, for archives and other old documents to be used as stoppers for flasks and to serve other uses in the laboratories of the school. Thouret, the "learned Theban" in question, says in a letter dated 30 Fructidor An. IV, that it had occurred to him that this would be a way of saving expense to the nation. He therefore asks that a weight of a hundred pounds of old parchments should be placed at his disposal for the purpose indicated. It would be interesting to know what answer he received from the enlightened citizens to whom his application was made.

The church of St. Baldred, at Whitekirk, which was burnt—it is said by suffragettes—on February 26th, was

an ancient shrine of Our Lady to which pilgrims resorted for many centuries. The first attraction seems to have been a well which was credited with healing properties. The legend is that a Countess of Dunbar, fleeing from pursuers and receiving wounds in her flight, threw herself down by the well, exhausted; she drank of the water and was healed. From that time the fame of the well spread far and wide. In 1309 the monks of Melrose enshrined the well and dedicated it to Our Lady. Pilgrims flocked thither by the thousand. We learn from a writer in the *Aberdeen Daily Journal* of March 2nd that in 1413 there were said to be as many as 15,653 pilgrims of all nations, and the offerings were equal to 1,432 merks. Æneas Sylvius, afterwards Pope Pius II, was put ashore on the East Lothian coast in 1435 to walk over the frozen ground with bare feet to this hallowed spot. But, instead of deriving benefit, prosaic history states that his health was permanently injured by the pilgrimage. Whether he cursed the well or not is unknown, but after that time the water ceased to flow, and to-day there is not a trace of the once famous spring.

Lieutenant-Colonel J. Fallon, R.A.M.C. (Chakrata, India), writes:

> In Literary Notes in your issue of January 24th, you reprove the jocularity of certain contributors to the January number of *Bedrock*, and in a jocular vein also. Jocularity may be permissible when there is no misrepresentation, but would your reviewer point out where Sir Oliver Lodge's critics have said that *all is matter*, and how he infers that these critics hold the position that *there is no riddle?* Moreover, Sir Oliver Lodge went further than merely asserting "that science has not completely solved the riddle of the universe," as will be obvious to any one who reads the Birmingham address. *Bedrock* is a scientific quarterly, and deserves to be read with some attention, which it has not received from your reviewer, as he misstates the positions of Sir Oliver Lodge and his critics.

We do not think that we misstated the position, either of Sir Oliver Lodge or of his critics. A very full summary of the address of the President of the British Association was published in the JOURNAL of September 13th, 1913, p. 686. We certainly hold no brief for spiritualism, which, as we have more than once said, seems to us a peculiarly degrading form of superstition. But, on the other hand, we think dogmatic materialism equally absurd. It was not so much the arguments of certain of the writers in *Bedrock* to which we objected as the supercilious tone in which they were expressed. If the sentence in *Bedrock* for January, p. 461, "In the entire sum of human knowledge the record is unbroken that all events are materially caused," does not mean or imply that there is nothing but matter, we are at a loss to know what signification is to be attached to it. It may be the truth, but men worthy of the name of philosophers do not make sweeping assertions which, owing to the limitations of human knowledge, cannot be proved.

In the March number of the *Journal of the Royal Army Medical Corps*, Major H. A. L. Howell, R.A.M.C., tells the story of the army surgeon and the care of the sick and wounded in the British army from 1715 to 1748. At the death of Queen Anne the total strength of the army had dwindled to 7,813 in Great Britain, 5,000 on the Irish establishment, 1,895 (three regiments) in Flanders, and some regiments and independent companies in the colonies. The army was very unpopular, for the people still remembered Cromwell's military despotism and their fears of James II's army. The commissions of most of the medical officers of Queen Anne's time were confirmed by her successor, and as new regiments were raised surgeons were appointed to them. Major Howell's estimate for 1715 is a minimum of 173 medical officers, staff, regimental surgeons, garrison surgeons, and physicians and surgeons' mates. Among the appointments to the higher ranks during the reign of George I are "Sir Samuel Garth to be Physician General of our Land Forces, October 15th, 1714," and "Sir Hans Sloane, Bart., to be Physician General of our Land Forces in room of Thomas Gibson, Esq., decd., 18th July, 1722." It is not generally known that William Cheselden was at one time an army surgeon, having been commissioned to Colonel Pocock's regiment of foot on March 2nd, 1717. The Physician-General, Surgeon-General, and Apothecary-General each drew pay at 10s. a day. A surgeon in a cavalry regiment drew 6s. a day, one in a foot regiment 4s. a day, and a surgeon's mate 2s. 6d. a day. The army surgeon saw little service in the field in the peaceful reign of George I. In 1741 the war of the Spanish succession broke out. A general hospital was opened at Ghent, of which Dr. Sandilands was physician. There was much sickness there and at Bruges. In 1743 the battle of Dettingen was fought. The Allies left their wounded on the field, having no wagons in which to carry them away. Sir John Ranby, sergeant surgeon to King George, however, says that the arrangements for the wounded were excellent. Sir John was also present at the battle as physician to the Earl of Stair, but he sat in a carriage during the fight. The medical organization in the field during the campaign was the same as that of King William III's army. Briefly, says Major Howell, it was this:

> Each regiment had its surgeon and surgeon's mate. Some regiments had two mates. When in cantonments some building was taken over and converted into a regimental hospital. At such time the regimental sick were treated therein, and only serious cases or those not likely to become fit again for some time were transferred to other hospitals. In addition there were larger hospitals, the grand or general hospitals, in the larger towns and at the base, to which the more serious cases were sent from the regiments. These hospitals had a separate staff of physicians, surgeons, apothecaries, surgeons' mates, purveyors, and nurses. There was also an officer called the Director—usually, but not always, a medical officer—who administered the hospital. There was also at this time an administrative officer called the "Director-General of all the Hospitals." Charles Garnier held this appointment in Flanders in 1744. He belonged to the family which, by letters patent, held the appointment of Apothecary-General to the Army for so many years. There was also a Physician-General to the Hospitals who superintended the medical arrangements in the hospitals. Pringle obtained this appointment in June, 1746. Neither he nor the other physician had anything to do with the medical arrangements in the field. These were apparently directed by the senior surgeon, who also supervised the care of the surgical cases in the hospitals and had a great deal to do with the general medical arrangements, for we find later, in 1748, the great improvement in their management and working attributed to Mr. David Middleton, a surgeon who was afterwards Surgeon-General. During the actual fighting the wounded were attended on the field by the regimental surgeons and their mates, and collected in houses and villages near the battlefield or placed in a few tents carried for the purpose and pitched in the rear of the regiment. Following close behind the advancing troops was another kind of hospital called originally "the Marching Hospital," but now "the Flying Hospital." The Flying Hospital had its own tents and transport, and medical, nursing, and transport personnel. When first instituted, each accommodated 200 sick or wounded men, but, later, we find them on occasion admitting more than this number. It took over the sick and wounded from the regiments, and when the army again advanced transferred its patients to the general hospitals, one of which was always opened from twelve to forty miles behind the troops in the nearest large town on the line of communications.

To the Dettingen campaign we owe the first foreshadowing of the Geneva Convention. On July 28th, 1743, a cartel for exchange of prisoners was concluded at Frankfort. It was entitled "A treaty and agreement for the sick, wounded, and prisoners of war of the auxiliary troops of His Most Christian Majesty and for those of the Allies." One of the articles provides that:

> physicians, apothecaries, directors, and other officers serving in the hospitals or armies shall not be liable to be made prisoners of war, but shall be sent back as soon as possible.

Another was to the effect

> That care shall be taken of the wounded on both sides; that their medicines and food shall be paid for; and that all costs shall be returned on both sides. That it shall be allowed to send them surgeons and their servants, with passports from the generals.

A third provided

> That the sick on both sides shall not be made prisoners; that they may remain with safety in their hospitals, where each of the belligerent and auxiliary parties shall be free to leave them a guard, which shall be sent back, the same as the sick, under the passports of the generals, by the shortest way, and without being liable to be molested or stopped. So likewise shall all commissaries, or muster masters, chaplains, physicians, apothecaries, infirmarians, waiters, or other persons proper to attend the sick; who shall not be liable to be made prisoners, and shall be sent back in the same manner.

We hope to notice the continuation of Major Howell's very interesting article when it appears.

British Medical Journal.

SATURDAY, APRIL 4TH, 1914.

CERTIFICATION UNDER THE NATIONAL INSURANCE ACT.

We make no apology for returning to what may seem to some to be a hackneyed subject, for the importance of this matter is constantly being brought to our notice by correspondence, in interviews, and by articles in the public press. It is evident, too, that some aspects of the question have not yet received the attention they deserve from insurance practitioners. We propose to deal here only with one aspect of the question. It would appear that some practitioners—we are thankful to say they are a minority—entertain the idea that they cannot afford to be strict in the matter of certificates, because if they are, their neighbours—it is always the neighbour who does these things—will be more complacent, and patients will go to them. In the first place, a practitioner who takes this line writes himself down at once as a weak creature, who "either fears his fate too much, or his deserts are small." It does not seem to occur to him that the effect of too much complacency on his reputation with his patients may be far worse than quiet determination and strict impartiality. Some persons may choose a doctor because he is likely to be easy as regards certificates, but this can only seldom happen. What the patient wants is a man who will, in his opinion, be likely to cure him when he is sick, and such a man will have strong opinions of his own, and will not be at all likely to allow the patient to decide when he ought to have a certificate for sickness benefit.

Secondly, a practitioner taking such a line is acting most unfairly to those who endeavour to deal firmly with patients who want to sponge on the funds. The real difficulties in connexion with certificates are numerous enough without having added to them the unfair downward competition of weak-kneed brethren. It is, however, the latter who are referred to in the uncomplimentary references to doctors which are seen in reports of meetings of Insurance Committees and conferences of approved societies, and it is by that class that the profession is often judged, much to the mortification of those who love their profession and like to think of its members as a body of honourable gentlemen.

Again, practitioners who take the line that they cannot afford to be strict in the matter of certification are playing directly into the hands of those who demand a salaried State service. It is the best weapon which that party has, and it is being used with great effect. The point could not have been put more crudely than it was by Mr. Hodge, the Labour member, in the debate in the House of Commons on March 26th. He said: "My experience is that the heavy sickness experienced, particularly with regard to males, is absolutely due to the fact that the doctors do not do the duty that they are paid for doing. If you talk with a doctor and ask him why he gives certificates so indiscriminately, the invariable reply is, 'If I do not give a certificate, they will leave me and go to another doctor who is not so particular.' That experience is not confined to any one society. Every approved society complains of exactly the same thing. The only remedy is a State Medical Service. That would place doctors in such a position that they would not have to dread individuals changing from one panel to another. The doctors have said that they want a system of medical referees established—that is, they want to cast on a second party a responsibility which rests upon them—and that after all that we have heard about the dignity and honour of the medical profession!" It is deplorable to see members of Parliament, from whom one has a right to expect better things, blackening the reputation of a whole profession because of the misdeeds of a few of its members, but, in saying what he did, Mr. Hodge undoubtedly expressed an opinion which is growing. Even those who believe that to make the doctor a State servant would be to diminish the human factor in medical practice, and to upset those relations between doctor and patient which are so valued by the latter when he is really ill—even these tend to be driven, by the plea that the doctor cannot afford to be firm for fear of losing his patient, into demanding some form of inspection, and some greater measure of discipline over the doctors who are working the Act.

We make an earnest appeal to those who realize the danger to the reputation and future of the profession by any paltering with this important question to take up a very firm attitude in relation to it. Steps should be taken in Local Medical and Panel Committees to bring home to those who adopt the view here referred to as regards certification that they are a menace to the whole profession, and that their conduct will not be tolerated. We firmly believe that they are a very small proportion of the profession, but unfortunately their actions are obtaining much publicity, and the whole profession is in danger because of their weakness. One practical way of assisting them to take up a firmer attitude will be for the Panel Committee to come to an early understanding as regards transfers. These should never be granted to persons who ask for them simply in order to seek some other practitioner who will grant certificates which have already been refused. There is, of course, a great temptation to get rid of patients of this kind as quickly as possible, but it is a temptation which should be resisted. In all probability many such patients if refused a transfer will, by the end of the year, when the transfer can be effected without the consent of the doctor, have come to the conclusion that they had better stick to a doctor who knows his own mind than change to one who always takes the line of least resistance. The reputation of people who are too ready to transfer would become known not only to the medical profession but to the approved societies, and the changes would be made difficult. We make these remarks with a full knowledge of the difficulty of refusing certificates to persons who claim to be ill, but with all the evidence at our disposal we cannot shut our eyes to the fact that some practitioners are lax in giving certificates, and have used as supposed justification the wretched excuse which has been taken as the text of this article. Not to speak out would be to betray the best interests of the great mass of the profession.

HEADACHES.

HEADACHE, its cause and treatment, has been selected as one of the subjects to be discussed in the Section of Medicine of the annual meeting of the British Medical Association in Aberdeen next July. No subject of more practical interest and importance could have been chosen, for it will probably not be far wrong to say that headache is the commonest pain to which civilized man—and especially woman—is liable. It is, therefore, evident that every practitioner should be fully prepared to treat this ailment, and that successful cures of headaches will earn for him much gratitude. A reputation is much more likely to be won by an honest attempt to seek out the cause of common diseases and to adopt suitable treatment for them than by effecting an occasional brilliant cure of more rare conditions.

Many headaches have a definite exciting cause, and in a certain proportion of cases the cause can be discovered and removed, with the result that the patient is permanently cured. No case should be treated in a casual and empirical manner. A most thorough examination is called for, and the physician must remember that if he contents himself with ordering a purge and a headache powder some of his patients will consult a more painstaking and better informed practitioner, who may be successful in curing the headache.

In order to save time and avoid mistakes it is advisable to examine these cases upon a definite plan. The history is of importance, and the family history not without value. The habits of the patient must be carefully investigated, and considered with reference to his affliction. If the various systems, the blood, and the organs of special sense be investigated in order, it will rarely happen that enough evidence will not be accumulated to throw light upon the cause of the headaches. In no case of chronic headache must the practitioner omit a careful examination of the eyes with reference to errors of refraction and muscle balance, and unless he himself possess the expert knowledge necessary to make the minute investigation which is demanded, he will earn the gratitude of his patient if he advise him to consult an ophthalmic surgeon. A mydriatic is often necessary in these cases, in young persons almost always, not only to obtain an exact estimate of the refraction, but to detect fine changes in the macular region. This point may be illustrated by the case of an apparently healthy young girl who suffered from chronic headache. Examination of the eyes without a mydriatic revealed quite enough astigmatism to account for the headaches, and no abnormalities were detected in the fundus. Because she had headaches and was young mydriasis was produced (by homatropine), and there was then detected close to the macula a minute haemorrhage, which had not been noted during the ophthalmoscopic examination through a small pupil. Further examination revealed the fact that the patient had polyuria; the urine was of low specific gravity, and contained a trace of albumin. A fortnight later she died in uraemic coma. A very small error of refraction, even less than half a dioptre of astigmatism may in a sensitive individual be the sole cause of chronic headache. Chronic glaucoma is another condition which causes frontal headache before complaint is made of any loss of sight. It is a disaster to overlook this disease.

Again, headache may be due to a nasal condition. Hypertrophy of the middle turbinal and empyemata in the sinuses are often responsible, and here again expert knowledge is necessary. Septic foci in the ear and tonsils, carious teeth and pyorrhoea alveolaris must not be overlooked; the septic intoxication they cause may manifest itself as headache. A cerebral tumour may exist in a semi-latent state for years before it exhibits the classical symptoms. Headache combined with hysterical symptoms should at least awaken a suspicion of such a neoplasm. Cushing has stated that most of the patients with cerebral tumour who have consulted him have at some time or other been regarded as the victims of hysteria.

When the organs of special sense have been investigated, it will be necessary to examine the alimentary system, the urinary system, the generative system, the circulatory and respiratory systems, the nervous system, and the blood. General infections of a chronic character, such as syphilis and malaria, are causes of headache; and the same is true of intoxications, such as chronic lead poisoning, and chronic septic infection, including "rheumatism." Dr. Lobedank has drawn up a scheme for the systematic investigation of headache. Curiously enough, in his little pamphlet,[1] he omits all mention of derangements of the generative system as a cause of headache in women. Nor does he mention the visual aura, scintillating scotomata, and hemianopsia which so very frequently precede the headache in migraine. The practitioner can easily and profitably draw up a scheme for himself; and it is instructive to do this, because the complaint of headache is very common, and because headache is so frequently a symptom of very serious disease. Chronic headache has a chronic cause; acute headache may be the herald of acute disease.

Perhaps these cursory remarks on a large theme may stimulate some readers to look up cases they have treated and ascertain what has been the after-history of their patients, with the view of contributing to the discussion at Aberdeen.

THE ORGANIZATION OF INTERNATIONAL CONGRESSES.

DR. PH. M. VAN DER HAER, assistant secretary of the Permanent Commission of International Congresses of Medicine, has written and the Commission has published a detailed account of its origin, constitution, and work. Incidentally, he discusses the question whether these monster gatherings really contribute to the advancement of medicine, and finds in certain aspects of the Congress in London last August confirmation of the affirmative conclusion to which he is led on *a priori* grounds.

A few years ago many were disposed very seriously to ask whether the International Congresses of Medicine were worth the great amount of trouble and expense imposed on the medical profession of the country in which a congress was held. It was argued that in so huge an assembly interest was diffused, and that a fictitious value was apt to be attached to persons who contrived to give to themselves and to their contributions an appearance of importance which did not properly belong to them and would not have been accorded by their own fellow countrymen or by fellow specialists. It was argued, therefore, that the international congresses of specialists which during the last fifteen or twenty years had come into existence, and had held as a rule successful meetings at which new ideas could be ventilated and at once submitted to expert criticism rendered the continuance of International Congresses of Medicine unnecessary. There

[1] Würzburg: Curt Kabitzsch. (Pp. 72. Price M. 2.)

were others, however, who, while admitting that evils existed, and that the international specialist congresses fulfilled a most useful purpose, yet did not accept the conclusion that the only or the best remedy was to drop the larger general congresses. They maintained that the evils might be prevented by better means of conference between those preparing for the next congress and those who had organized the last, and of both with representatives of all other interested countries. This opinion prevailed, for at the fifteenth International Congress of Medicine at Lisbon in 1906 it was decided to take steps to bring a permanent international commission into existence. At the sixteenth International Congress of Medicine at Budapest in 1909 the Permanent Commission of International Congresses of Medicine was constituted, and its duties were defined to be to choose the place for the next congress, to consider regulations for the conduct of the business of the congress, to arbitrate in any difficulties, and to decide during the congress itself whether a resolution adopted by a section should be brought forward at a plenary session of the congress. The commission was authorized to appoint an executive committee (Bureau) which was to have its offices in the Hague, but was to be at liberty to meet in any other town if its president or the majority of its members so determined.

The proposal made at the Lisbon Congress was warmly taken up in Holland, and at the International Congress of Medicine at Budapest in 1909 Professor Wenckebach, then of Groningen, was appointed secretary of the Permanent Commission. It is not too much to say that the large measure of success the Commission has achieved has been almost wholly due to the liberal, energetic, and businesslike spirit in which the work at the Hague was organized. At the intercession of Professor Wenckebach, the Dutch Government made itself responsible for the expenses of the International Bureau, and Professor Wenckebach then made way for Professor Burger of Amsterdam, who was appointed general secretary, with Dr. van der Haer as assistant secretary. The offices of the Bureau at the Hague were formally opened on March 29th, 1910, by the Minister of the Interior, and the first meeting of the Permanent Commission was held in London in April, 1911, under the chairmanship of the late Dr. Pavy. To that meeting Professor Burger made a very able and comprehensive report, the main propositions of which were embodied in a set of regulations for the governance of future International Congresses of Medicine. It provided for the election of a national committee in each country by the scientific medical organizations of the country, and for a Permanent Commission, consisting of one delegate from each national committee, of the president and secretary of the last and of the next congress, and of the president of the International Association of the Medical Press, with the general secretary and assistant secretary of the Bureau of the Permanent Commission; the Bureau itself is composed of a president, two vice-presidents, and the president of the Press Association, with the secretary and assistant secretary. It was arranged also that there should be an organizing and an executive committee for each congress. The president of the Bureau is now Professor F. von Müller, of Munich, where the next International Congress is to be held, and the vice-presidents are Sir Thomas Barlow, the president of the last Congress, and Baron Calman Müller, president of the Congress at Budapest. The Permanent Commission did useful work during the preparations for the last congress; in particular to it were referred proposals for the admission of new sections or subsections, and for the award of the Congress prizes.

One of the regulations of the Permanent Commission which is perhaps insufficiently known is that its secretaries are authorized to give every facility to specialist congresses which wish to establish permanent international commissions in the office of the Bureau at the Hague. A set of regulations governing this matter have been drawn up, and the scheme presents obvious advantages.

The particular merit which Dr. van der Haer finds in the International Congress in London is that it brought into relief those methods, problems, and results which all departments of medicine have in common, and thereby helped to check the tendency towards the growth of an exaggerated specialism which makes for narrowness. He points to the relatively numerous instances in which two or more sections held joint sessions for the discussion of subjects on the border-line. As he justly says, the questions of greatest interest to the intelligent specialist are just those which pass beyond the boundary of his own particular territory, and co-operation among those who are working in these neighbouring regions is an urgent necessity. Hitherto the relations have too nearly resembled those which existed at one time on the Anglo-Scottish border—indifference, tempered by occasional raids attended by loud defiance and much clashing of dialectic weapons. Let us hope that medical history may have as satisfactory a story to tell of a peaceful and fruitful union.

TWO MEMORANDUMS.

The Supplement for this week contains two memorandums prepared in accordance with the instructions of the Annual Representative Meeting for the information of members, and in the hope that the subjects dealt with will be discussed at early meetings of the Divisions. The first memorandum discusses the steps which may be taken to check the extension of medical aid institutions, and points out the desirability of consulting the staffs of hospitals and enlisting their support. The memorandum does not fail to consider fully the difficulties of the subject, and to suggest means by which they may be overcome. The second memorandum deals with the treatment of tuberculosis, a subject which equally demands immediate consideration from the profession. The memorandum consists of a model scheme for the treatment of tuberculosis prepared by the Insurance Act Committee, and contains recommendations with regard to the payment of medical staffs of voluntary hospitals for the treatment of patients under the tuberculosis medical service. The recommendations on this point have been prepared with the assistance of the honorary medical staffs of hospitals in London and of representatives of the British Hospitals Association, although the approval of the latter body was subject to the result of the discussion of the matter by that association at a general meeting. It is hoped that both these subjects will be fully considered by the Divisions in time to instruct their Representatives on the line that should be taken at the Annual Representative Meeting this year. In view of the fact that information is desired in reply to certain questions in respect of medical aid institutions, the Divisions are asked to hold meetings at an early date so that the replies from every Division may be received by the Medical Secretary not later than May 1st next.

SIGHT TESTS IN THE MERCANTILE MARINE.

The latest regulations for the application of sight tests in the mercantile marine came into force at the beginning of this year, and it seems that difficulties are already being encountered in carrying them out. The matter was

raised in the House of Commons the other day by a question addressed to the President of the Board of Trade by Mr. Peto. It appears that the Imperial Merchant Service Guild has presented an appeal signed by 10,000 captains and officers of the merchant service, protesting against the method of conducting the tests on the ground that they are neither practicable nor just, and therefore inflict hardships on the officers. That this complaint should have been made will not surprise any one who reads the regulations now in force. Before January 1st, 1914, candidates were only required to possess half normal vision when using both eyes together, but the new regulations instructed the examiners to require normal sight in one eye and not less than half normal in the other, of course without glasses. Owing, however, to certain questions asked in Parliament, a promise was given that both eyes would be examined together, and provided that normal vision was obtained there should be no question as to the individual merits of the two eyes. We pointed out at the time that this would allow a man to pass with one seeing eye only, while the other might be as blind as a glass eye. It would also reject the man who had $\frac{6}{9}$ in both eyes—to all intents and purposes normal. Whether the examiners act on this promise we do not know. Another point raised by Mr. Peto was that the Mersey Pilotage Authority left out of account the two lower lines in the Board of Trade test sheet as being unnecessarily severe; if this practice is followed, it means that the vision demanded is $\frac{6}{12}$ only. Mr. Peto asked also whether it was true that the pinhead lights in the lantern test were not used regularly because they were not considered practicable. No definite answers to these questions were made by Mr. John Burns, but if the examiners act in this way they show more intelligence in dealing with a technical matter than might perhaps have been expected. We have pointed out on many occasions the defects of the lantern used by the Board of Trade on the recommendation of the Departmental Committee which whitewashed the existing tests and recommended a lantern in which nearly all the useful features of a colour-testing lamp were omitted. Any one can be made to appear colour-blind if the aperture showing the light be reduced in too great a measure, and, as there is no other means of modifying the light, gross injustice is bound to occur if such an instrument be used. As only red, white, and green glasses are in the lantern, and as this fact is known to all who read the regulations, a person must be very defective who could not judge by illumination and contrast which light was being shown. He could not do so when an excessively small aperture was used, but with this erroneous method a normal-sighted person would make mistakes and so run the risk of being rejected. This question of sight tests will never be settled satisfactorily so long as the examiners in eyesight are totally ignorant of the subject. The examiners are clerks and captains who possess no physiological knowledge, and are as incapable of carrying out an examination of the eye as of the lungs, heart, or kidneys. How much longer shall we have to wait before the Board of Trade will admit that the regulations are mistaken, and are causing injustice to candidates? When shall we have a President of the Board of Trade strong enough to throw over the present regulations and start a new era of contentment and justice by framing regulations on the facts of the case as ascertained by scientific workers who have given special and unbiassed attention to the physiology of the subject?

THE RISKS OF SALVARSAN.

AT a meeting in Munich, called to discuss the risks of salvarsan medication, Dr. von Stokar, who based his remarks on an experience of over 2,000 cases, expressed the opinion that the great majority of unfortunate sequelae were dependent on idiosyncrasy in regard to arsenic, errors of technique, or the use of too large a dose at the first injection. Neither serious organic disease nor lesions of the central nervous system were direct contraindications, provided due precautions were observed, and, as many neurologists had reported, the results in the nervous disease were sometimes exceedingly brilliant. He considered that the omission of salvarsan in the treatment of syphilis was, on the whole, more dangerous than its application, for by our present-day knowledge of the drug the great majority of its dangers could be successfully avoided. The value of salvarsan for an individual case did not approach its uses as an economic factor in the prevention of the disease, for it was generally recognized that the early infectious cases could be sterilized with extreme rapidity, and not only these, but also the obstinate and highly contagious buccal recurrences, which in the past had proved themselves most inveterate and refractory to treatment by mercury. To this class, too, belonged the terribly destructive tertiary manifestations which had been fruitlessly treated in the past with continued administrations of mercury and the iodides. Dr. von Stokar did not think that the two hundred or so fatalities reported could for a moment be weighed in the balance against the many thousands of patients who owed their present good health to its powerful action. Dr. G. E. Nesbitt reported to a recent meeting of the Royal Academy of Medicine in Ireland a case of death after salvarsan. A brief note on the case was given in the JOURNAL of February 21st, p. 429. Full details have now been published in the *Dublin Journal of Medical Science*. The patient, a debilitated man aged 25, was the subject of multiple severe manifestations, which were either due to congenital syphilis or to syphilis acquired in childhood. These manifestations, which appeared at various periods between childhood and adult age, included ulceration of the palate and larynx with laryngeal stenosis, an affection of both eyes (nature not stated), for which double iridectomy was performed, diplopia, and, apparently, periostitis of both tibiae. On admission to hospital he presented the following signs: Depression of the bridge of the nose, obstruction of the naso-pharynx by the scars of old ulceration, scars over both tibiae, deficient air entry into lungs, and rigidity of the cervical vertebrae. The heart and urine were apparently normal. An intravenous injection of 0.4 gram salvarsan was followed by two rigors and vomiting of dark fluid. After apparently recovering from these symptoms he suddenly collapsed and died twenty-five hours after the injection. *Post-mortem* examination showed gummas in the liver, cicatrices in the pharynx and larynx, and necrosis of the fourth and fifth cervical vertebrae, without implication of the dura mater or cord. The heart and kidneys were normal, except that the latter were slightly congested. The brain was not examined. In discussing the cause of death, Nesbitt remarks that symptoms of arsenical poisoning were absent, with the exception of vomiting. It may be observed, however, that there was not much time for them to become obvious. To explain the cause of death he falls back on the theory of endotoxins set free by destruction of large numbers of parasites by salvarsan. But apart from the facts that in this case the dose (0.4 gram) was hardly sufficient for the wholesale destruction of spirochaetes, and also that in such a late stage of the disease spirochaetes were probably not numerous, the endotoxin theory does not explain the cases in which fatalities have occurred after injection of salvarsan in non-syphilitic affections in which spirochaetes were absent. The causes of death after salvarsan are divided by Mentberger[1] into three classes: (1) Those due to the direct toxic action of arsenic; (2) those due to its indirect or secondary action; (3) those in which there were contraindications. The case in question would appear to come under both the second and the third headings. It is unfortunate that the brain was not examined, for the

[1] BRITISH MEDICAL JOURNAL, February 21st, 1914, p. 432.

previous occurrence of diplopia suggests the possibility of the presence of latent basal meningitis, which may have been awakened by the hyperaemic action of arsenic (so-called Herxheimer's reaction) and caused sudden death. A case in which death occurred shortly after a second injection of salvarsan in London is at present the subject of an inquiry by Dr. Waldo, coroner for the City of London and borough of Southwark.

AN AURAL CLINIC.

PROFESSOR VOSS may well say of the municipal aural clinic[1] of Frankfort-on-the-Main that it stands out as "a model institution and that it need not fear comparison with its sister institutions in the universities or larger hospitals at home or abroad." The ingenuity and skill of the medical devisers have apparently been backed up by the municipal authorities with the utmost goodwill and generosity. The clinic occupies four floors, the first being devoted to the policlinic or out-patient department, the second to the clinic (in-patient department) for women and girls of the second and third class and for paying patients, the so-called first class. The third floor contains accommodation for men and boys of the second and third class, the operating theatre and its annexes, the laboratory, and the residence for sisters and the assistant medical officer. In the uppermost story is the anatomical laboratory and museum, a photographic dark room, and apartments for the head sister and nurses. The patients' waiting room serves for ordinary instruction, and in a wing there is a large lecture room provided with an epidiascope. There is an examining room for the investigation of each new patient, and the "treatment room" is divided by screens into four "cabins" or compartments, in each of which is a complete installation for the treatment of the patients very ingeniously arranged. The outfit includes, among other things, an aseptic table with the most modern arrangements and washing apparatus for the surgeon's hands, which, when drawn out from the wall on its bracket, is automatically supplied with water and liquid soap, while simultaneously the lid of the drum of sterilized towels rises. This is typical of the labour-saving character of the devices throughout the whole installation. A feature of particular interest is a sound-proof room for the carrying out of hearing tests. It has three complete sets of walls, one inside the other, and separated from each other by air spaces. The doors are correspondingly complex. The room for the "labyrinthine" tests includes a turntable revolving by means of electricity. Any one who may propose planning an aural clinic will be well advised to study the description of Professor Voss's admirable institution or even go to Frankfort to inspect it.

A REMEDY "APPROVED BY GRACE."

AT the end of many of the recipes in the old family records which shed such an interesting light on the manner of life of our ancestors, there will be found some words to the effect that a particular remedy has been tried with good result. But we have never met with one with the testimony "gratia probatum" appended. A correspondent has sent us a leaflet bearing no date, but evidently of some antiquity, which sets forth the "virtues and effects of the remedy, named medicamentum gratia probatum id est the Remedi approved by Grace." At the top of the first page is a coat of arms purporting to be those of "Tilly." We gather after reading the leaflet through that this is not the Count of Tilly, the famous general who fought against Gustavus Adolphus, and died of a wound received in action in 1632, but one Nikolaas de Koning Tilly of Haarlem, who describes himself as the "author" of the "medicamentum" which he had made since the year 1764, "and so was his Grandfather Claas Tilly before him who was the Chef Inventor of it since the year 1698." It is not the inventor or indeed his wonderful nostrum that interests us so much as the style in which its virtues are proclaimed. We are told that: "This Medicine works maracles with every one, who makes use of it, and the Grace of the Grace of the Omnipotent God is expenenced in it to admiration." The manner of its action is explained as follows: "When you take this Remedy, it unitas it zelf to the Stomach, and is the same as a flying Mercury, not letting the vapours rise without being mixed them. It likewise prevent the most humers from running trough te Veins or Nevers, accompanying them until they pass trough te pores. Thus it communicates it self and leaves its virture, notwithstanding it may expelled afterwards by urine or stool. If you soke fifteen drops of this Remedy after supper before going to bed, it will gently expel all Gravel and Stone without the least inconvenience or distubances and what we admire most is, that it disselven the same time it heales, same inwardly as entwardly." After a recital in the same lucid style of two cases, which, of course, had been treated without success by the most eminent physicians, it is declared that, "Whasoever is willing of take fifteen Drops of this Remedy every we (*sic*) Days, may be sure te beree from the Gravel for a wohle year and it will not cost nim above Thee Gilders or Six Shilling Sterling." But stone and gravel form but a small proportion of the diseases the "medicamentum" was said to cure. "The Remedy is also very exellent tot strengthning the stomach, and dissolving all thick and nitions humours of the same. Is it good for all Bruises in the hands or feet, pans of the Rims, thicknes, all Black and Blue spots, alle kind of Fevers, and indisposition of the Stomach, Liver, Lights or Lungs, Asthma, schortnes of Brenth, Cough, inward or outward sores. Hysterical pains, it advences the Mences, and facilitaties the Urine and stool, restooring tho the same a fresh and wholesome coleur. It cures the feury, the Dropsy, the Frensch Discase, and kills the Worms." Even this is not all. The remedy "curce [this sounds like exorcism] Palpitation of the Heart, all Auxiety Fegrims, Giddiness, and Hedac es by smelling as yoo de Pungary Water, or by putting in the Ears of the sick Person little bal of cetton soaked in de the same Medicamentem . . . You may anoint Ulcers, Malingnant sores and all Cancers &c., be assured of its perfection." There are still more wonderful effects: "All lying in Women that find themselves weak or any other kind of Feeblences, they will find the exellent Effects of this Remedy, if they take it, Sore Legs are cured by Stone in the Bladder [here the remedy would seem to be worse than the disease] let hinsooner agply to tois Remedy than to tho insufferable Surgical Instruments, for as soon as you pinke use of this Bladder, is immediately disselved which can plainly beseen in the Urine appearing in divers figures, in the form of Spides and other insects; it has very often been seen, that the Urine appears congealed like Jelly but this happens when the sick Person has taken this Remedy sometime befsre for the cause of bloody Urine, this same Remedy entirely expels the Stone, converting it into nowder or dust, wich can plainly be seen in the setting of Urinal." It also cures the "Ferca and Abu," mysterious maladies as to the nature of which we cannot hazard a conjecture unless "Abu" be ague. Although the remedy is put forward as a panacea and is "approved by grace" we are solemnly warned by the maker that he finds "not Remedy for those that follow bad Concil or advice." We are rather puzzled as to the exact meaning of the expression "approved by Grace." We are inclined to think that it is meant to have a suggestive effect on the mind of the patient. Perhaps, however, it may be taken to mean that by the grace of God the "medicamentum" had never killed any one. "Marry!" as Sir Thomas More said to

[1] *Die städtische Ohrenklinik Frankfurt-a.-M.* By Professor Dr. O. Voss. Würzburg: C. Kabitzsch. 1913. (Sup. roy. 8vo, pp. 38; 6 plans, 40 figures. M. 3.)

a man who at his suggestion had turned a prose work into rhyme, "this is somewhat." It is not every vendor of a quack medicine who could say as much.

THE METHOD OF SCIENTIFIC RESEARCH.

In an inaugural lecture, delivered at Liverpool University recently, Professor W. C. McC. Lewis,[1] who is the professor of physical chemistry there, put before his hearers some considerations as to the nature of science, particularly exemplified by physical chemistry, in regard to which it is very desirable that students should have clear ideas. At the beginning of the address serious thought is carefully distinguished from the untrained and unco-ordinated exercise of thinking by the quality it possesses in respect of direction. Serious thought has an objective, and however dissimilar the more immediate aims of different lines of directed mental effort may be, ultimately they must all lead to the same goal—namely, the discovery and apprehension of truth. After remarking that the man who is conscious of being continually spurred on to inquire into the why and wherefore of things may make a humble but just claim to the honoured title of philosopher, Professor Lewis went on to ask what we mean when we say that we have explained some phenomenon, and answers that "such explanation, when we analyse it, consists ultimately in the restatement of the phenomenon in terms of mechanics. By restatement I do not mean the mere use of alternative terms, but rather demonstration that the existence of the phenomenon is to be anticipated on the basis of a series of logical mechanical theorems (which we have reason for regarding as true), often with the addition of something which we find necessary as a connecting link, and to which we give the name of 'assumption' or 'hypothesis.'" Such hypothesis must, of course, be tested, and, if verified, constitutes an advance in science. He laid stress on the fact that the scientist should not only possess the imaginative faculty which will bring a new concept into being, but should also possess the critical faculty enabling him to choose aright between a number of possible hypotheses. Research in chemistry and physics could be broadly divided into three classes: in the first, theoretical considerations played the chief part, as in investigations in mathematical physics and theories of electricity, optics, etc.; the second class included researches in which an idea inspired by previous theoretical or experimental results was developed in such a way as to be put to experimental test; while the third class consisted in the accumulation of data, such as the determinations of atomic weights and stoichiometric work in general. Some of the practical advice Professor Lewis gave to those about to embark on their first original investigation deserves to be quoted. In deciding on the subject for investigation the responsibility, he said, naturally rested largely on those under whose guidance the work was to be carried out. In regard to a knowledge of what had been done before, Professor Lewis said: "Some people lay great stress upon an exhaustive examination of the literature as an essential preliminary. Undoubtedly some acquaintance with previous work must be obtained at the outset, but I am inclined to think that the comprehensive survey of earlier investigation, which, of course, must be made in all cases, is best carried out concurrently with the earlier preliminary experiments themselves. This has the advantage of preventing the beginner attacking a subject in a manner which has, perhaps, become stereotyped, and from which mode of attack possibly little more is to be gained, and at the same time it prevents the repetition of already ascertained facts, unless, indeed, the existence of the facts themselves is in doubt." Probably all will admit the soundness of the following advice: "Begin and keep a log of your scientific ideas. Your scientific reading should suggest many such, as well as conversation with fellow workers and observation of unexpected things which nearly always turn up in your own work. By this means you will be gradually accumulating your own stock-in-trade. Do not be in a hurry, however, to draw from it at once. Let a few years, two or three, be spent in research under the direction of some one—or, preferably, more than one—of greater experience, and then sit down and take stock. You will be not a little mortified to find that perhaps 90 per cent. of it is worthless, as Faraday says, in your own maturer judgement; but if, indeed, it does not all disappear, you may well rest content."

[1] *Physical Chemistry and Scientific Thought.* By W. C. McC. Lewis, M.A., D.Sc. An Inaugural Lecture delivered at the University of Liverpool. Liverpool: The University Press. 1914. (Demy 8vo; pp. 20. 1s. net.)

THE ADMINISTRATIVE CONTROL OF SMALL-POX.

Ten years ago more than 75 per cent. of the children born in England and Wales were successfully vaccinated. During the latest year for which statistics are available only 50 per cent. were thus protected against an attack of small-pox. In these circumstances the time is fast approaching when a vast number of the adult population will be unprotected, even by primary vaccination, and who will be the first to succumb to infection should they casually come in contact with it. Vaccination is considered by medical officers of health as such an efficient and formidable weapon for use in any small-pox epidemic that when its efficiency is diminished it behoves them to look with additional care to whatever other lines of defence may be available. For more than ten years only sporadic cases of small-pox have occurred in the British Isles, and it is possible that the majority of medical officers of health have never had to deal administratively with a single case. In view of the ever-increasing number of unprotected persons—and therefore, probably, of the nearer approach of an epidemic—it is eminently desirable that every medical officer of health should consider in detail the steps which he would take in the event of an outbreak occurring in his district. To help him in deciding upon his procedure nothing will be of greater assistance than a careful perusal and reperusal of Dr. W. McC. Wanklyn's little work on *The Administrative Control of Small-pox*,[1] which is a companion volume to *How to Diagnose Small-pox*, by the same author. Dr. Wanklyn has been personally concerned for many years with the outbreaks of small-pox occurring in London, and has thus acquired an experience which has fallen to the lot of only a limited number of medical officers of health. The result of that experience he has set out in graphic and comprehensive terms. The three main principles, he maintains, which must underlie the administrative action of a medical officer of health who has to deal with small-pox are to ascertain what is the extent of the existing mischief, and how it originated; to eradicate what does exist; and to prevent fresh cases, or render them harmless when they occur. The details by which administrative action on these lines may be carried out are elaborated in a practical and thorough manner, and great stress is laid upon the necessity for being ready beforehand to deal with even a single case. Every medical officer of health should be familiar with the incidence of small-pox, at any rate in his own country; and, as far as England and Wales are concerned, it is very easy for him to do so, for each week he receives from the Local Government Board a return of the localities in which infectious diseases have been reported during the previous week. A prudent medical officer of health makes a chart of the cases of small-pox week by week, so that he can see at a glance whether the disease is approaching his own district, or where there may be possible sources of infection. As a rule, medical officers of health receive very little credit or thanks, either for their epidemiological researches or for their

[1] *The Administrative Control of Small-pox.* By W. McC. Wanklyn, B.A.Cantab., M.R.C.S., L.R.C.P., D.P.H. London: Longmans, Green and Co. 1913. (Med. 8vo, pp. 95. 3s. 6d. net.)

administrative activity, but where small-pox is concerned the community does generally appreciate their labours. It well repays them, therefore, to know exactly what to do when faced with this disease. With Dr. Wanklyn's book at hand they would have guidance which should prove invaluable.

THE PRIMIPARA'S IDEAL AGE.

MANY obstetricians have endeavoured to settle by statistics the question of the best age at which a woman may bear her first child. Matthews Duncan, in the last generation, took great interest in this question, and only two years ago Bondy and Marck published their statistics throwing light on the relation of age to maternity. A noteworthy paper on the age most suitable to the first birth has recently been published by Drs. Richter and Hiess of Professor Schauta's clinic in Vienna.[1] The authors analyse 26,091 first labours in which the child was born at full term and weighed over 2,500 grams (5½ lb.). They made nine subdivisions of the series, No. 1 including all mothers under 16, No. 9 all over 30. The intermediate subdivisions were groups of cases, each including two years—17 to 18, 19 to 20, and so on. The percentage of all the usual obstetrical complications is given, as well as that of duration of labour, ratio of male to female children, twin births, etc. The authors conclude that the physiological age for primiparity ranges from 17 to 26, and that the "optimum" falls between the 18th and 23rd year. Complications familiar to obstetricians who have to deal with "old primiparae" steadily increase, as the authors' statistics verify clearly, after 26. Girls under 17 do not fare so badly as might be expected, in view of the fact that pregnancy is in such cases often associated with unfavourable conditions other than obstetrical. Lacerations of the perineum are relatively rarer than among mature primiparae. Among the poorer classes, women over 30 often suffer from the cumulative results of many years' struggle for life, needy gentlewomen being among the worst off in this respect; yet the wealthy are largely exposed to unhealthy influences. Still, the latter do not appear to fare very badly in private practice.

"POLAR ANAEMIA."

IN his thesis for the degree of M.D.Paris, M. Ernest Gourdon, D.Sc., gives an account of the medical aspects of the French Antarctic Expedition in the ship *Français* (1903–5), the first French expedition to winter amongst the polar ice. On July 18th, during the height of the antarctic winter, the second in command of the expedition complained of severe palpitation, with a feeling of great weakness, joint pains, swelling of the legs, and loss of sensation in the skin of the lower extremities. His face was pale, and the mucous membranes pallid, but the gums showed no marginal ulceration or swelling. Dyspnoea was marked. There was hard but not excessive oedema of the legs, reaching up to the knees. The heart sounds were normal at the base, but blurred at the apex, and a metallic murmur following the first sound could be traced along the sternum. The second sound was much accentuated. The absence of any lesions in the mouth or of haemorrhages distinguished this case from the ordinary form of scurvy; it was rather that which has been called "polar anaemia," characterized by asthenia and heart trouble; the diet, however, seems to be the principal if not the sole cause. The patient was put to bed on a milk diet and given digitalis with a little rhubarb at night as a laxative. In addition a procedure was tried which has been employed in other expeditions with good results: the cuddy stove was heated to a white heat, and the patient, stripped to the waist, was exposed to its rays until the skin was reddened. This was repeated every day for some hours; on the second day the heart became quieter, and the pulse less frequent; his strength returned slowly but continuously, and after three months he was able to return to duty, going through the subsequent work of the expedition, which was extremely hard, without any relapse, nor did he afterwards feel any bad effects from his illness. Another member of the expedition showed less marked signs of trouble of the same kind. M. Gourdon believes that in the treatment of these cases it is not sufficient to add fresh meat to the diet, but that in order to effect a rapid cure all preserved articles should be rigidly excluded for a time. He considers, therefore, that it is desirable in all Polar expeditions to shoot as many penguins and seals as possible when they are numerous, and to store up the carcasses for use during the following winter. It may be remembered that in Captain Scott's first expedition some of the members of his party suffered from scurvy during the first winter in spite of the care taken to give only the best preserved provisions with plenty of vegetables. In the following year he provided a large supply of frozen seal meat, and on this diet no further cases of scurvy occurred; this goes to confirm M. Gourdon's views.

[1] *Monats. f. Geb. und Gyn.*, December, 1913, p. 625.

A STUDENTS' STRIKE AT LAHORE.

WE have received from Lahore a copy of some strongly worded resolutions passed at a public meeting held there on February 22nd. "to protest against the aspersions cast by the London Hospital Students' Union against the Indians, and to consider the grievances of the Lahore Medical College students who have been forced to absent themselves by the improper treatment of the Principal." From inquiries made for us at the London Hospital Medical School, we understand that the members of the Christian Union of London Hospital Students put forward a proposal that greater opportunities should be given to non-European students to take part in the collegiate life of the school. At a meeting held to consider this proposal, it was strongly opposed by some students on the ground that the authorities of the London Hospital Medical School had been very generous in the past in opening its doors to students from India, Egypt, and the East generally. We are informed that on the last occasion on which a census was taken the London Hospital school had as many such students on its books as all the other metropolitan medical schools put together. A somewhat heated discussion took place, and the meeting was adjourned for a fortnight. At the second meeting Mr. C. E. Mallet, of the India Office, attended, and spoke warmly on behalf of students from India, and the following resolution was adopted: "This meeting expresses its opinion that great care should be taken in the admission of Oriental students to this hospital, both as regards the type of man and the number of men admitted, and it considers that the distribution of Oriental students amongst the medical schools of the country should be readjusted." This resolution seems to give little if any ground for offence on the part of the Indian students. It is, however, possible that some of the students who objected to the number of Indians already enrolled in the London Hospital Medical School may have used much stronger language about their Indian fellow students, or some of them, and that this language has been quoted in private letters from Indian students in England to their friends in India, and may have formed the basis of the complaints of the Lahore students. As these complaints and the proceedings of the Lahore meeting give no information as to what the aspersions to which they objected may have been, we are reduced to guesswork, for we can hardly suppose that either the students who went on strike at Lahore, or their supporters in the public meeting, could be referring to the resolution quoted above. The Lahore students appear eventually to have realized that a refusal to attend classes in Lahore was not the best means of protesting against allegations said to

have been made by other students in London; for after they had gone on strike they put forward, as a justification for their action, a number of other grievances. The Under Secretary of State for India stated recently, in reply to a question by Mr. Macpherson in the House of Commons, that the strike had come to an end. The *Pioneer* has in fact reported that the majority of the students sought readmission to the college, as required, on or before February 28th, and that the Principal of Lahore Medical College, Lieutenant-Colonel D. W. Sutherland, I.M.S., had informed the students that individuals would be liable to punishment for their share in the strike, by loss of scholarships and loss of time counting as study for graduation, but that no student who acted up o the terms of settlement would be expelled or rusticated. The Punjab Government has ordered an inquiry into the alleged grievances of the students to be held by a committee independent of the college authorities. Till this committee has reported the matter remains *sub judice*.

THE CONTROL OF PLAGUE AND CHOLERA.

Heiser, in a report upon the health of the Philippine Islands for the third quarter of 1913, states that during the early days of September plague-infected rats were found in three houses in the city of Manila. They were the first discovered anywhere in the city since June 24th. There had been no case of human plague since May 21st. All the available force of the Bureau of Health was immediately concentrated on carrying out measures against rats in the vicinity of the three houses. On September 19th, before they were completed, the editor of the *Manila Daily Bulletin*, whose office was in one of the infected areas, contracted plague, and three days later died in hospital. The diagnosis was completely confirmed by laboratory methods. While carrying out the insecticidal and other antiplague measures in his office a mummified rat, or large mouse, was found in a drawer of his desk. There were also in the drawer a number of live fleas, one of which was captured and identified at the Bureau of Science as the rat-flea (*Pulex cheopis*). Stained specimens from this flea showed bipolar staining organisms identical with those of plague. The mummified animal was ground up, and inoculations made from it into healthy laboratory rats produced typical plague in them. During the examination of the storehouse of the grocery store, the kitchen of the restaurant, and other rooms on the first floor of the building in which are the offices of the *Manila Daily Bulletin* there were found four other dead rats that had all appearances of having died of plague. These facts indicate that the prompt antiplague measures carried out very probably prevented an outbreak of the disease in this thickly-populated section, and are further proof of the effectiveness of modern sanitary measures. They afford also a striking example of the transmission of plague by fleas. After an absence of over two years a case of cholera was discovered in the city on August 24th and another on August 25th. The first patient was a Filipino who worked as a carpenter in one of the local hotels, but lived elsewhere, and was said invariably to have taken his meals and slept at his residence. On the evening of August 23rd he left his place of employment apparently in good health. About noon the next day he was seized with violent pains in the stomach, which increased in severity and were accompanied by pains in the muscles of the calves and forearm. There was no diarrhœa. In the evening the man was removed to the hospital, where he died a few minutes after admission. At the necropsy next day the typical pathological lesions of cholera sicca were present; the lower bowel contained a large amount of hard formed faeces, but in the ileum was a rice-water-like fluid, and from it the true cholera vibrio was isolated. The next case came under observation on August 25th in the person of a Filipino employed as cook in a British family in a suburb of Manila and a number of miles away from where the first case occurred; so far as could be ascertained there was no connexion between the two cases. This patient gave a history of having been ill with diarrhœa and cramps in the muscles of the extremities for about a week. The diagnosis in this case also was verified by cultures from the stools, which were of the rice-water character. During the week ended September 20th there were 3 cases; in that ended September 27th, 5; and in that ended October 4th, 8. The first 8 cases occurred in widely separated sections of the city, and investigation failed to trace any connexion between them. Later a number of instances of contact infection were met with. Altogether, from August 24th to October 20th, there were 72 cases, with 45 deaths. A noteworthy fact in connexion with this outbreak is the frequency with which carriers of the true cholera vibrio were found among the contact groups of the true cases of cholera. Such observations show the desirability of having adequate laboratory facilities for examining large groups of the population in order to ascertain to what extent infection exists among them. The first case discovered was in a person who had not been out of Manila for many months previous to his illness, and who had not associated with persons from foreign ports or eaten imported food in a raw state. At the hotel at which he worked, no guest from a foreign country had registered for over seven days before the date on which he was taken ill. So far as was known, there had been no cholera in the Philippines subsequent to October, 1911, and careful investigation failed to show that the disease was introduced from a foreign country by food or persons. The importation of vegetables or other food, which might be eaten in a raw state, from any country except Australia and the United States is prohibited. The stools of passengers from China and Japan and other countries likely to be cholera-infected have been regularly examined since June, 1912, and during 1913 no vibrio carriers were found until after August 24th, and these vibrios did not answer all the tests for cholera organisms. The origin of the outbreak, therefore, cannot be definitely traced, and there is considerable evidence from an epidemiological standpoint that cholera carriers are always present in the Philippines, and in certain circumstances become capable of transmitting the disease. As in former outbreaks, prior to the finding of true cases of cholera a number of deaths, attributed to acute nephritis, occurred at intervals of a few weeks; they were observed in persons who had symptoms of ptomaine poisoning. Similar experience in former outbreaks suggests the belief that these cases may perhaps in some way be associated with cholera outbreaks in the Philippines. All cases of cholera during the outbreak were promptly transferred to hospital, and the premises were disinfected. All contacts were required to wash their hands in a disinfecting solution; a stool specimen was taken from each of them, and in all cases in which they were found to harbour the cholera vibrio they were transferred to hospital for observation. In sections of Manila in which cholera occurred general disinfecting measures were carried out with respect to tight vaults or other receptacles into which cholera organisms might have been deposited and from which there might be any danger that flies or other insects might carry them to food supplies.

The deputation arranged by the British Medical Association and the Society of Medical Officers of Health, which was to have waited upon the Chancellor of the Exchequer, the President of the Local Government Board, and the Minister for Education, on March 31st, to press for security of tenure for medical officers of health and for superannuation, was postponed owing to the indisposition of Mr. Lloyd George.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Feeding of School Children.

On Friday, March 27th, an interesting and valuable debate took place in the House of Commons on the Education (Administrative Provisions) Bill introduced by Mr. Jowett, the Labour member for Bradford. Mr. Jowett for many years past has taken an active interest in this question, and had reason to be gratified with the reception given to his bill by the House, although there were many criticisms on various points of detail. The bill was read a second time without a division, and sent to Grand Committee.

The most important feature of the debate was the announcement of Mr. J. A. Pease, the Minister of Education, in agreeing to the second reading of the bill, that the Government proposed to make a special grant to local authorities in aid of the feeding of school children both during the school terms, during the week ends, and during the holidays. Mr. Jowett's bill does not make the feeding of children compulsory on local authorities directly, but it provides that it shall become compulsory if required by the Education Committee or after special inquiry, as set out in the provisions of Clause 5.

If the Session should run its normal course it is very probable that, in an altered form, this bill may become law. Apart from the provisions for compulsion already referred to, the bill provides for meals being given to children during vacation, and for the removal of the halfpenny in the £ limit on the rates which exists under the present optional Provision of Meals Act.

Mr. Jowett gave some interesting figures as to the records of children fed by the Bradford authorities in respect to their changes in weight during term time and holidays respectively. He said that the experience of Bradford was that, while the schools were in operation and meals were being given, the poor children who needed the meals consistently improved in physique, and that when the schools were closed, if meals were not provided, they deteriorated in physique and lost part of the advantage. A number of children were watched by the school medical officer in order to note the effect during holidays, when there were no meals. The first week during which school meals were given the average gain in weight for the whole of those children was 1 lb. 4 oz. each. The next two weeks a smaller gain was registered, but still a substantial one, being 5½ oz. in the first week and 4½ oz. in the second week. During the Whitsuntide holiday the loss per child on the average was no less than 1 lb. During the ensuing seven weeks of school there was an average gain of 1¾ lb. Four weeks' holiday ensued, and, instead of an improvement in physique, as ought to have occurred, the loss on the average was 1 lb. 2 oz. each. Comparison with other children confirmed the evidence that there was a serious deterioration during the times meals were not given, because the children who had never been on the school meal and who were fed regularly at home, improved consistently in weight during their holidays, just as they did at other times.

Mr. Goldstone based his support of the bill upon the reports of Sir George Newman to the Board of Education, and contended that there was nothing in the bill to relieve any neglectful parents of their proper responsibilities, or to prevent their being severely dealt with.

Sir Frederick Banbury moved the rejection of the bill, in which he was supported by Mr. Courthope, the principal objection being on the ground of its interference with the responsibilities of parents to feed their children.

Mr. J. A. Pease, in recommending the House to give the bill a second reading, pointed out that it must not be forgotten that malnutrition was due to many causes other than lack of food—that it was often associated with improper feeding, bad housing, and other conditions—but he heartily supported the main contention of the mover and seconder of the bill as to the duty of the State to co-operate in improving the health and vigour of children. He suggested that to make compulsion general would be to go in advance of popular opinion, and might have a harmful result in the end. He stated that the proposal of the Government was that Treasury grants should be given to aid and encourage local education authorities to undertake the work, and that the Government would submit proposals in this direction in Committee. He gave a detailed account of the provisions made for the feeding of children in France and Germany, and contended that, whilst the matter was in an experimental stage, it was necessary to arrange that there should be sufficient elasticity.

Sir W. Anson, on behalf of the Opposition, criticized the bill in various particulars, especially with regard to the effect upon the duties and responsibilities of parents. He expressed his desire not to oppose the second reading, and thought that when the matters were gone into carefully in Committee a useful and agreed measure might result.

Mr. Holmes, as an old schoolmaster, vigorously supported the general provisions of the bill; and Mr. Hoare, the member for Chelsea, in a well-informed and interesting speech, expressed his hearty approval of the main object of the measure, which was supported by Colonel Lockwood, Mr. Lough, Mr. Rowntree, and other members.

Sir Henry Craik criticized the bill in the main adversely, and suggested that it should be replaced by a Government measure.

Necessitous School Children (Meals).—In reply to Mr. Hoare, Mr. J. A. Pease said that the number of authorities which provided meals for necessitous children out of the rates under Section 3 of the Education (Provision of Meals) Act, 1906, for the year ending March 31st, 1913, the latest period for which the Board of Education had complete returns, was: England, 94; Wales, 16; total, 110. The number of these authorities which, during the same period, spent actually or approximately up to the maximum of the ½d. rate was: England, 5; Wales, 8; total, 13. No grant was made by the Board of Education in respect of this service.

Elementary Education (Defective and Epileptic Children) Bill.—This bill, which would impose on a Local Education Authority the duty of making provision in special schools (either day schools or residential) for children found mentally defective in its area, and for whom parents were unable to make suitable provision, passed through Committee on Tuesday, March 31st, and was sent down for report to the House. The bill is a short measure of four clauses, and the amendments which have been made in it relate to the protection of the rights of the parents in regard to their being consulted in cases of children found to be mentally defective, and provisions for a special medical examination being made in determining the mental condition of the children. It is not anticipated, in view of the amendments which have been inserted, that the bill will meet with serious opposition in the House, and we may expect it to be passed during the present session.

Cost of Public Education.—In reply to Mr. Chiozza Money, the Chancellor of the Exchequer has furnished a table giving details with respect to expenditure on primary and secondary education in England and Wales, 1903–1913. The figures for 1912–1913 are not complete, but those for 1911–12 showed that expenditure on elementary education by the Board of Education was £12,151,270 and out of the local rates £12,596,715, a total of £24,747,985; on education other than elementary the expenditure by the Board of Education was £2,160,872 and by the local authorities £1,717,711, making a total of £3,878,583.

Deaths Registration and Burials Bill.—The bill to amend the law relating to the registration of deaths and to burials introduced by Mr. Radford on March 25th is intended to guard against crime and premature burial. The memorandum by which it is accompanied contains extracts from the report of the Select Committee on Death Certification (1893), which recommended that means should be devised whereby a medical certificate should be obtained in every case not certified by a registered medical practitioner in attendance.

Milk Adulteration.—Mr. Astor asked the President of the Local Government Board whether his attention had been drawn to the investigations conducted by Dr. Philp Mitchell and Mr. Stiles in regard to the causation of tuberculous cervical glands in infants and children residing in Edinburgh; whether 90 per cent. of the cases examined had been traced to cow's milk containing bovine tubercle bacilli; and whether he proposed to take any steps for the better protection of children from the infection of tuberculosis conveyed by milk?—Mr. Herbert Samuel said he was acquainted with the investigations referred to. Similar investigations had been made on behalf of the Local Government Board, which indicated that tuberculosis in children was often clearly connected with the consumption of tuberculous milk. Legislation is to be proposed to deal with this and other sources of infection and with the adulteration of milk, and he hoped to be able to make a statement with regard to it at an early date.

Sight Tests.—Mr. Peto asked the President of the Board of Trade whether he has seen the appeal to the Board of Trade, signed by over 10,000 captains and officers of the merchant service and presented by the Imperial Merchant Service Guild, protesting against the methods of conducting the Board of Trade sight tests on the ground that they are neither practical nor just and inflict hardships on British certificated captains and officers; whether an appeal is also made to him to abolish the present tests in favour of tests of a more practical nature; and whether, providing it is justified by the tests which he has ordered to take place at Shoeburyness, he will then introduce practical tests in place of those existing.—The President of the Board of Trade (Mr. Burns) said he was aware of the appeal referred to, but could not admit that the allegations were well founded. He would prefer to postpone an answer to the last part of the question until after the demonstration at Shoeburyness. Mr. Peto asked whether, in respect to sight tests imposed upon pilots serving under the Mersey Pilotage Authority, the pinhead lights in their lantern test were not used regularly through not being considered to be practical; whether, as regards the reading of printed letters of a certain size at a distance of 16 ft., the two bottom lines of smaller print included in the Board of Trade test were left out of account by the Mersey Pilotage Authority as being an unnecessarily severe test in form vision; and, if so, whether the views of such an authority would be taken into consideration with the object of modifying the severity of the present Board of Trade tests, and substituting tests more in accord with practical seafaring conditions.—Mr. Burns replied that he could not say how far the statements in the question correctly represented the practice pursued by the Mersey Pilotage Authority, but in any case he did not think that the Board of Trade could properly be guided by that practice.

Lead Poisoning.—Mr. Edgar Jones asked the Home Secretary whether any reduction had taken place in the number of cases of plumbism since the introduction of the new regulations; whether that reduction was more marked in some districts than in others; and, if so, what was deemed to be the cause of the reduction.—Mr. McKenna said that he understood the question to refer to the regulations for smelting of metals. The figures of 1913 of cases of lead poisoning in this industry were less than half those for 1912—26 as compared with 56—and with the exception of 1905 the lowest on record. The decrease, which was most marked in South Wales, was attributed largely to the periodical medical examination of the workers provided for in the regulations.

Army Dispensers and Apothecaries' Assistants.—Mr. McKenna, in reply to a question by Major Archer-Shee, said that he was informed that steps had not been taken by the Pharmaceutical Society to frame by-laws under the provisions contained in Section 4 (*b*) of the Poisons and Pharmacy Act, 1908, with reference to the by-laws enabling army dispensers and apothecaries' assistants to register under the Pharmacy Acts as chemists and druggists. As was indicated by the report of the Departmental Committee, the subject was not free from difficulties, but the society were promoting a bill for the purpose of establishing a register of qualified dispensers which, he was advised, would, if passed, go some way to remove the grievance complained of.

Small-pox in Aberdeen.—Mr. McKinnon Wood stated, in reply to a question by Mr. Astor, that six cases of small-pox had occurred in Aberdeen this year. All had been vaccinated in infancy and none had been revaccinated, though in one case revaccination had been unsuccessfully attempted on three occasions. One death had occurred of a man of 47, who had not been vaccinated since infancy.

Ventilation of the House of Commons.—The Committee on the Ventilation of the House of Commons held a further sitting on Thursday, March 26th. We understand that the whole of the time of the committee was taken up by the evidence and examination of Dr. Leonard Hill, F.R.S., who, as already explained, has for a considerable time been conducting a series of experiments regarding the ventilation of the House.

Tuberculin for Cattle.—In reply to Mr. Stanier, who asked whether the Board of Agriculture had published any information regarding the standard of quality of tuberculin used for stock; and where the tuberculin could be procured, Mr. Runciman referred to the minutes of evidence taken before the Departmental Committee on the Export of Live Stock, 1912 (Cd. 6032). The quality of tuberculin was not discussed in other publications of the Board. The Board were prepared to advise stock owners who inquired where tuberculin of good quality could be obtained.

Johne's Disease.—In reply to questions by Mr. C. Bathurst, the President of the Board of Agriculture has recently stated that the inquiry which is being conducted by the Royal Veterinary College includes the question of diagnosis, and a large number of experiments and observations with regard to the relative reliability of different methods of diagnosis, including the use of "Johnin," a test substance prepared from the causal bacillus, had been made. "Johnin" was now being supplied gratis to veterinary surgeons for testing animals suspected of the disease. The results of the investigation would be published when the facts had been sufficiently ascertained. Incidentally Mr. Runciman promised to pass on to the authors of the word "Johnin" the suggestion that it should be replaced by the term "Johnein," so as to retain a reference to the discoverer.

Swine Fever.—In reply to Mr. Stanier, the President of the Board of Agriculture stated that the serum with which the two veterinary inspectors of the Board were now experimenting was obtained from Hungary, and its quality tested at the Board's laboratory before use. So far one experiment had been made, but others were in contemplation, and over 100 swine had received injections of serum, and were now under observation. He had no information that the German Government was using serum treatment. In reply to Mr. Bathurst, he said that in the five years ending 1913 the amount paid in compensation, after deduction of the proceeds of sales of carcasses of slaughtered animals, was £162,292, and the cost of administration was £260,970, making a total of £423,262. During that period there had been 11,207 outbreaks, and the number of swine slaughtered as diseased or exposed to infection was 131,980. The number of swine so slaughtered in 1913 constituted 1.43 per cent. of the total number of swine in Great Britain as enumerated in June.

Epizootic Abortion.—In reply to Mr. Stanier, the President of the Board of Agriculture has stated that vaccine against epizootic abortion, prepared by the Board, was issued to individuals or committees of farmers, who agreed to arrange for the conduct of experiments. In two counties grants had been made from local funds.

England and Wales.

LONDON.

London County Council.

Dispensary Treatment of Tuberculosis.

It was reported to the London County Council on March 31st that, in order to provide dispensary treatment of tuberculosis, the St. Marylebone Borough Council had entered into arrangements with the authorities of the Middlesex Hospital, the Margaret Street Consumption Hospital, and the St. Marylebone tuberculosis dispensary, under which the institutions would be responsible, primarily, for the clinical side of the work, preventive measures being carried out under the direction of the borough medical officer of health. There would be an interchange of work between the three institutions, so that cases needing *x*-ray or other special treatment might be received at the Middlesex Hospital. The authorities of the Middlesex Hospital did not require payment. The estimated cost of the scheme was £400 a year, and it would make provision for between 1,000 and 1,200 persons, of whom one-third to one-fourth would probably be insured persons. On this basis the cost of each uninsured person would amount to about 10s. a year—considerably less than in other schemes already approved in London. On the understanding that half the cost would be met by Government grant, the County Council agreed to share the remainder equally with the borough council. Mr. Dawes, who is the Chairman of the London Insurance Committee, mentioned that that Committee estimated the proportion of insured persons to be no more than one-fifth or one-sixth.

Salary of the Southern District Coroner.

The Public Control Committee reported that an application had been received from Mr. G. P. Wyatt, coroner for the southern district of London and the Duchy of Lancaster (Clapham), asking that the salary of his office might be substantially increased on account of the large amount of additional work thrown upon coroners by the legislation of the last ten years. The committee reported that it could not recommend an increase in the basis of calculations, which was in this case at the rate of 30s. an inquest, but in view of the increase in the number of inquests, it recommended that the salary of Mr. Wyatt should be increased in proportion.

Dental Treatment in Greenwich.

The Council decided to enter into an agreement with a committee of local practitioners in Greenwich for the establishment there of a centre for the dental and nursing treatment of school children, estimated to cost about £650 a year for 1,540 dental and 660 nursing cases.

The School Medical Service: Women Doctors and Marriage.

When the final appointments in connexion with the reorganization of the school medical service (British Medical Journal, March 28th, p. 735) came before the Council for approval on March 31st, the Rev. Dr. Scott Lidgett took exception to a condition that women doctors should be required to resign on marriage. He held that in public health work in the schools a married woman doctor would be even more useful than an unmarried one. To disqualify a woman from exerting professional influence, *plus* the influence that could only come from a married woman, was doubly wrong. Women in these matters should have as much liberty as men.

It was pointed out by the Chairman of the Education Committee (Mr. J. W. Gilbert) that a standing order of the Council required women to relinquish appointments on marriage. A week ago several other appointments of women doctors were made, and this requirement was enforced. Instead of taking isolated action it would be better to call for a report on the question of principle.

To put himself in order Dr. Scott Lidgett moved the insertion of the condition that women appointed to the school medical service should not be required to resign on marriage.

Mr. E. G. Easton, Chairman of the Asylums Committee, asked for some reason why the salaries of several of the proposed appointments had been fixed as high as £400 a year to commence with. In the asylums branch of the service the Council only paid from £180 to £200 with board and lodging, and these doctors gave whole time to much more important work than was carried out in the schools. Why should not the salaries of asylum medical officers begin at £400?

The discussion had not concluded when the Council adjourned.

Charing Cross Hospital.

At the annual general meeting of Charing Cross Hospital, on March 30th, it was reported that, thanks to the success of various special appeals, the mortgage debt of £100,000 had been reduced to £40,000, and that consequently it had been decided to reopen the wards which some years ago it was found necessary to close. The usefulness of the hospital, it was pointed out, was constantly growing. Apart from its own original work it now had to provide for the medical needs of a population which had formerly looked to King's College Hospital, and in the near future further responsibilities might be thrown upon it by the removal of St. George's Hospital. In the course of the proceedings a letter was read from the president of the hospital, Princess Louise, who said she was greatly pleased to learn from the annual report how well the medical school of the hospital continued to progress, and to know to what a high standard of efficiency its work had risen. It must be a great source of pride to its dean, Dr. William Hunter, to feel how well his hopes were being realized.

University College Hospital.

At the annual meeting of the subscribers to University College Hospital, on March 27th, the chairman mentioned as the most important event of the year the establishment of an inoculation department. A possibility of providing additional wards was under consideration, pressure on the existing accommodation being increasingly great. The working of the National Insurance Act seemed to have led to some diminution in receipts from workmen, but not to any diminution in the calls made on the hospital for the treatment of the more serious cases of ill health and injury occurring among insured persons. The financial deficit on the year's work was less than that of the previous year but still heavy. Apart from increase in the cost of food and wages, every fresh attempt to make use of the latest scientific methods necessarily increased expenditure.

Myope Classes.

During the past few years an organized attempt has been made by the Education Committee of the London County Council to provide suitable education for children whose sight is defective on account of high myopia and other diseases. The first account of the methods employed was given by Mr. N. Bishop Harman in a paper read to the annual meeting of the British Medical Association in 1910. The article appeared in the British Medical Journal (1910, vol. ii, p. 1320). Last year the same author read a paper to the Ophthalmological Section of the Royal Society of Medicine, which appeared in the *Proceedings* of the society (vol. vi, pp. 146–163).

Mr. Bishop Harman pointed out that it was not expedient to train children with defective vision in the special schools for blind children; the children were not blind, and most of them would never become blind. The parents objected to the stigma attached to the child who was taught in a special school for those having defective vision, and eventually the difficulty was met by the formation of "myope classes" in the ordinary schools. This method would be suitable only for towns in which the schools were large enough to furnish a sufficient number of children with defective sight to fill a myope class.

Once a week in London twenty children are examined and are graded as follows:

1. Returned to ordinary schools to receive the regular education.
2. Sent to an elementary school for easy treatment as regards eye work.
3. To receive oral instruction only in the elementary schools.
4. Sent to a myope class.
5. Sent to a school for the blind and partially blind, where they are taught Braille reading and writing.

The myope class must be considered and worked as an integral part of the school. The reasons for this prime necessity are three: (1) A better scheme for work can be

provided by this association; (2) to establish the class as a separate unit is to run the risk that the children leave the school with a stigma upon them; (3) parents object to their children being regarded as "defective," and for this reason the attempt made in the provinces to provide myope classes within the existing blind schools has proved a failure.

The scheme of work laid down for these classes is as follows:

1. Oral teaching with normal children for such subjects as are taught orally to these normal children.

2. Literary knowledge to be learnt without books and pens, by the use of blackboards and chalk, the writing to be done free arm fashion.

3. A very full use of every sort of handicraft that will develop attention, method, and skill, with the minimum use of the eyes.

The classroom must have perfect natural illumination. No work is attempted by artificial light. The windows are placed sufficiently high to leave room for blackboards all round the room. Harman's special desk (Figs. 1 and 2)

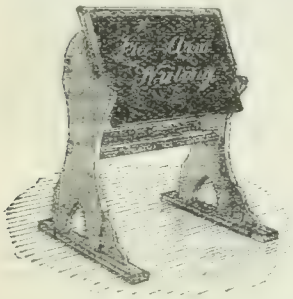


Fig. 1.

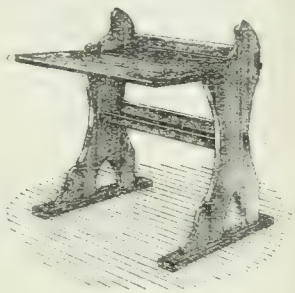


Fig. 2.

is employed. It provides a full-sized blackboard suitably sloped and at a convenient height, and this blackboard turns over to form a table for handiwork. Chalk twice the usual diameter is used, and large thick characters are insisted upon. The ordinary thin blackboard writing is carefully avoided. The number of children in the class is limited to twenty, which experience teaches to be the largest class that can be dealt with.

The literary work and arithmetic is taught with these blackboards and those on the wall. Permanent records are made with white crayon upon sheets of black paper. Another method is printing with rubber-faced types. The letters are 1 in. and 2 in. in height. This printing affords useful training in care and exactness, and is much liked by the children.

Drill and games enter largely into the curriculum. Some children are allowed to play with the normal pupils, but those whose eyes might be injured by rough usage are made to play among themselves.

All sewing is forbidden, but knitting, if done by feeling alone, is permitted to those children who show an aptitude for it. The junior pupils are taught paper folding and felt-weaving in colours. The seniors are taught to model maps, and rough woodwork is allowed where measuring can be done with rulers marked with minimum ¼-inch marks. Advanced basket work is taught, but raffia work is excluded. The girls learn elementary laundry work and cooking.

Only two-thirds of the children in the myope classes are really myopic; the remaining third are short-sighted as a consequence of keratitis and other inflammations of the eye. It has been found that a standard of $\frac{6}{18}$ should be present in the children in the myope class, and all myopes must have suitable correcting glasses. At present children who have only an acuity of $\frac{6}{24}$ are being tried, and it is possible that if they are intelligent they will be satisfactory members of the class. Children with from 6 to 15 dioptres of myopia, according to their ages, are suitable for the myope class. Those with less than 5 dioptres are fit for the ordinary classes if suitable precautions are adopted, as indicated under the heading, "Easy treatment as regards eyework." Those with more than 15 dioptres are suitable for education in the schools for the blind and partially blind with the possible exception from Braille teaching, unless good vision is obtained with correcting glasses. Regular medical supervision by an ophthalmic surgeon is provided for all these children.

The hypothesis that the increase in the degree of myopia, which is so usual in short-sighted children, is caused by close application to books and writing is not accepted by many ophthalmic surgeons, who will not admit that there is such a thing as "school myopia." Since the time when Cohn first propounded this theory, much attention has been devoted in Germany to the question of school hygiene and to the suitable education of myopes. Special treatment has been adopted in Germany for many years, and the result has been disappointing, for the percentage of cases of myopia has remained the same in all the classes of the German schools as it was when Cohn investigated the subject. The fact that very high myopia with fundus changes is usually more common in the agricultural classes in Germany than among the highly educated does not support the theory that school work increases myopia. Myopia of high degree is often found in one eye alone, which would not be the case were the disease due to close work. There can, however, be no doubt that the debilitating effect of constant confinement in classrooms increases the hereditary tendency of the sclera to stretch in cases of myopia, and experience in Sweden has shown that when out-of-door games are introduced into the school curriculum the incidence of myopia falls in a very marked fashion.

WALES.

CARDIFF MEDICAL SOCIETY.

THE annual address to the Cardiff Medical Society was delivered by Mr. Stephen Paget. His subject was "Cinematograph Views of Living Micro-organisms," and this he made exceedingly interesting to a large audience of medical men and their friends. Mr. Paget described at length several groups of organisms—bacilli, spirillae, and spirochaetes—the diseases produced by them, and their intermediate hosts. The films illustrating blood infected by spirochaetes and the struggle between the white corpuscles and the invaders were especially appreciated. Mr. Paget also showed a series of films illustrating the growth and fertilization of flowers. A vote of thanks was proposed to the lecturer by Dr. Charles Vachell and seconded by Dr. D. Paterson. The society's dinner was held in the evening at the Royal Hotel, under the chairmanship of Mr. Cornelius A. Griffiths, President for the year. The usual toasts were honoured, and that of "Our Guest" was proposed in a happy speech by Professor Haycraft, who dwelt on Mr. Paget's valuable services to the Research Defence Society.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

TUBERCULOSIS ARRANGEMENTS IN EDINBURGH.

As was reported recently (see the JOURNAL for February 28th and March 7th, pp. 505 and 559) the negotiations between the Town Council of Edinburgh and the trustees and managers of the Royal Victoria Hospital for Consumption regarding the proposed tuberculosis arrangements have not been so immediately successful as seemed at one time probable. Following upon further conferences between a committee of the Royal Victoria Hospital and a subcommittee of the Public Health Committee of the Town Council, there was a meeting of the last-named body on March 25th, and again there was an adjournment to allow of further negotiations. The point at issue seems to be the question as to the supreme authority under which the new arrangements shall be carried on. Clause 6 in the proposed agreement (see p. 505 of the JOURNAL) suggested that Sir Robert Philip, in view of his close association with the establishment and conduct of the institutions to be taken over by the Town Council—namely, the hospital, dispensary, and farm colony—during twenty-five years, and in view also of the fact that he has already been appointed by the Corporation and Insurance Committee respectively to act as consultant and expert adviser,

should, to such extent as he might find convenient and subject to the instructions and administrative control of the Corporation, act as consulting tuberculosis officer in relation to the dispensary and as consulting physician at the Royal Victoria Hospital and farm colony as long as he holds his appointment as consultant. It may be difficult to adjust the various duties and responsibilities in so complicated and so novel a scheme as that which is under consideration by the Town Council of Edinburgh and its Public Health Committee; but there is surely, in the circumstances, a need for so great a degree of elasticity in the official relationships involved as shall retain Sir Robert Philip's services in the institutions he has done so much to found and carry on.

Dr. W. T. Grenfell of Labrador in Edinburgh.

"Grenfell of Labrador," as he is now called—the M.D. of Oxford, and even the C.M.G. of 1906, being tacitly omitted for the more geographical and no less honourable appellation—gave two lectures in Edinburgh last week. On March 25th he gave a lecture to the members of the Royal Scottish Geographical Society on The Lure of Labrador, and pleaded for the development of that country as a great source of reindeer meat. Dr. Grenfell spoke also of his twenty-two years' experiences in Labrador, and mentioned that they had wireless telegraphy at three hospitals in that country. On the evening of March 26th he gave a popular lecture entitled Mid Snow and Ice in Labrador, and described further the work at the hospital stations which he and his colleagues, including Dr. Grieve, an Edinburgh medical man, were carrying on; much of it was made possible by the generosity of the late Lord Strathcona. The Rev. Dr. Kelman, in moving a vote of thanks to Dr. Grenfell, spoke of the lecturer and of Livingstone as medical men who carried through the cold of Labrador or the heat of Africa the same simple splendid message of love. Sir Alexander Simpson presided.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Royal Victoria Hospital, Belfast.

The annual meeting of the Royal Victoria Hospital, Belfast, was held in the hospital on March 26th. Mr. R. C. Macrory presided. Mr. R. J. Johnstone, honorary secretary of the medical staff, moved the adoption of its report; he drew attention to the work of the hospital, both in the treatment of disease and also in the training of students. The special departments did as much work as the special hospitals in the town. Sir William Whitla, chairman of the medical staff, seconded, and said he desired on behalf of his colleagues to thank the Board of Management for their generosity in granting every request formulated by the medical and surgical staff for the better equipment of the hospital. On the motion of Sir John Byers, a vote of thanks to the Press was adopted.

Dublin Hospital Sunday Fund.

The council of the Dublin Hospital Sunday Fund, in its fortieth annual report, states that collections were made on November 10th, 1913, in 284 places of worship. Eight congregations which had made collections the previous year did not join, and two new congregations sent contributions. The amount collected was £3,301 12s. 4d., being a decrease of £47 5s. 9d. as compared with 1912. The expenses amounted to £233 4s. 10d., or 7.05 per cent. on the total sum collected. With balance from last year there was a sum of £3,120 to be distributed among sixteen institutions.

Medical Officer of Health for Tobercurry.

The Local Government Board has assumed what seems to be an unreasonable attitude towards a proposal recently made by the Tobercurry Board of Guardians for the appointment of a superintendent medical officer of health, at a salary of £40 per annum. Tobercurry is a large union with a population of about 20,000, and has suffered severely for years from outbreaks of typhoid fever. There are four dispensary doctors, and each acts as the medical officer of health of his own district, the average salary for such post being £15 a year. The Local Government Board has written to the guardians pointing out that if the proposed appointment is made three-fourths of the expenses must be borne by the ratepayers, and that the officer appointed must reside within the union. This latter condition cannot be fulfilled, as there is not room for a fifth doctor to make a living, and is all the more absurd because Tobercurry lies midway between the two towns of Sligo and Swinford, both of which are within easy reach by either rail or motor.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

Plague and Travelling Dispensaries in the United Provinces.

From a resolution of Government on the report on plague administration and the working of travelling dispensaries in the United Provinces for the year ending June 30th last, it appears that there was a decrease of 12,648 in the mortality from plague in the year under review, and the number of deaths, 93,160, was the lowest recorded since 1908–9. The most clearly marked changes in the distribution of the disease were to be observed in the Meerut, Allahabad, and Benares divisions, the incidence in the two former being considerably heavier than in the previous year, while the Benares division showed a decrease from 37,014 deaths to 18,736. While the decrease in the province as a whole was satisfactory, the Lieutenant-Governor agreed with the Inspector-General of Civil Hospitals that the unusually heavy mortality in June gave cause for considerable anxiety. The sanction of the Government of India has accordingly been obtained for a considerable strengthening of the staff of travelling dispensaries, and it is hoped that, should a severe outbreak occur, this measure will at least tend to mitigate its severity. In last year's review Sir John Hewett expressed his disappointment at the small number of inoculations performed. In the year under review this rose from 77,318 to 85,137. The increase so far as it goes is satisfactory, but more than half the inoculations were performed in the districts of Gorakhpur, Basti, Ballia, Muzaffarnagar, which all suffered severely from plague both in 1913 and in preceding years. There is still nothing to indicate that inoculation can be pushed with any considerable success except in districts which are and have been for some time suffering from plague in an actively epidemic form. Every effort has been and will be made by the Government to promote inoculation, but as a general measure it can only in the present attitude of the people be regarded as a palliative—useful, indeed, but strictly limited in its operations.

The tendency of the people to resort to evacuation on the appearance of plague has increased, but there is still evidence of a good deal of reluctance on the part of sections of the population to leave their homes. Fear of loss by theft of their property, coupled in some cases with inability to provide themselves with adequate shelters, seem to be the principal causes of this reluctance. Orders have recently been issued to Commissioners authorizing the expenditure of a portion of the plague grants at their disposal on the supply of hutting materials free of cost to really indigent persons willing to evacuate their homes. The question of extended action in this direction, and in the matter of arrangements for the safeguarding of evacuated houses, is under consideration.

The wholesale and indiscriminate destruction of rats has been abandoned for years in these provinces. Experience had clearly established its impracticable character as a general measure for combating outbreaks of plague. Experiments in the destruction of rats by fumigation are, however, being carried out on a limited scale and in selected districts with the object of ascertaining how far it may be possible by this means to check the spread of plague from centres already infected.

The observations on flea infestations in hill stations, referred to in last year's report, were continued up to the end of April, 1913. The conclusion suggested last year—that the danger of a severe epidemic occurring in either Naini Tal or Mussoorie was negligible—was fully borne out

by the further investigations. It has consequently been possible to dispense with any system of inspection in either of these places.

The travelling dispensaries, the number of which was raised to fifty-eight during the course of the year, continue to justify their existence. Though they have not succeeded so far in modifying to any great extent the general attitude of the people towards inoculation, they were responsible for the not inconsiderable total of 38,000 inoculations, whilst in the treatment of diseases other than plague their record is decidedly encouraging. The number of major operations, mostly for cataract, rose from 446 to 1,002, and in all no less than 834,507 patients were treated during the year. There seems to be little doubt that these dispensaries have afforded medical relief to many thousands who, whether from ignorance or apathy, would never have had resort to the ordinary fixed dispensaries.

INDIAN MOTHERHOOD.

Lieutenant-Colonel G. C. Giffard, I.M.S., presided at a lecture at Madras, delivered by Mr. M. Singaravelu Chetty, B.A., B.L., on the subject of "The Coming of Indian Motherhood." In opening the meeting the chairman said that he thought that "motherhood" had long ago "come" into India. What was really meant was, he thought, a scientific and up-to-date knowledge of motherhood.

The lecturer prefaced his remarks by saying that true motherhood meant scientific motherhood, which had not yet come into India. He appealed to the young men present, and pointed out to them that the burden of creating a responsible motherhood among Indians rested upon their shoulders. There were several reasons why the Indian women were not on a par with the English women, but the chief was that the former lacked proper motherhood. The love of the Indian mother was none the less, but the love was only the natural instinct uninfluenced by scientific knowledge. Infantile mortality in India was terribly high, and the present state of motherhood must be replaced by a more rational, comprehensive, and understandable system of motherhood. In doing this Indians must sacrifice some of their pride in their past, and adopt what was best in the Western system, which had gone far ahead in scientific methods. He suggested that the Western system should be adopted "wholesale." He recommended also the education of girls, who were to become the future women of the country, the education imparted being of such a nature as to enable them to know how to become efficient mothers and to make them see that their bodies were something divine and therefore sacred. The educational curriculum at present in force was worth nothing, and the education that an Indian received was lacking in many essentials, and he did not even know how to live and how to enjoy life.

NEW LUNATIC ASYLUM AT RANCHI.

A central asylum for European lunatics of Northern India is to be erected at Ranchi at a cost of over 13 lakhs of rupees. It will have accommodation for 180 lunatics—92 males and 88 females. Plans and detailed estimates are now being prepared by the Government of Behar and Orissa. The Government of India will provide the initial cost, and the recurring charges will be shared by the provinces sending lunatics to the asylum.

Special Correspondence.

VIENNA.

Settlement of the Disputes between the Austrian Doctors and the Sick Clubs.

IN Austria every person who earns his living in the employment either of a private individual or a business firm, except domestic servants and the employees of State or municipal corporations, must belong to one of the local "Krankencasse," or sick clubs. The employer pays one-third and the employee two thirds of the weekly or monthly premium, which varies from 6d. to 2s. 4d. a month, according to the salary. This premium entitles the insured person to medical attendance and medicine, and, if necessary, to a bed in the local hospital, whilst as long as he is unfit for work he receives a bonus which commences at 1s. 6d. and rises to 4s. a day, according to the salary and premium paid. Soon after the establishment of this system disputes arose between the sick clubs and their doctors, because the latter found themselves overworked and underpaid. At that time there was no organized association of the medical profession in Austria. The complaints of the club doctors, therefore, received little recognition; and the clubs continued to pay salaries of £40 and £80 to doctors whose list of patients included from 800 to 1,500 insured persons. In the course of time, however, a medical association was formed in Austria, and the conflicts between the clubs and the profession became more frequent and assumed a different character. Sometimes in districts where the association was strong enough to enforce its own terms they resulted in a victory for the doctor. The clubs then endeavoured to cut down their expenses by amalgamating, so that a certain number of doctors whose contracts had expired could be dismissed and their panels distributed amongst the remainder. This decision was promptly followed by the universal strike of every panel doctor in Lower Austria. About 450 appointments were left vacant by this step; and in spite of the efforts of the clubs to fill the vacancies with well-paid "blacklegs" and the sophistries of their lawyers when the case appeared in court, the strike lasted for over six months, until the clubs were forced to come to terms. These terms were fixed by the association with the help of the Government, and the clubs found themselves obliged to adopt a more conciliatory attitude towards their medical attendants. It was decided that every doctor who had gone on strike should be reappointed, and another 200 appointments made within the next two years. The salaries were to be either on the fixed salary system if there were less than 1,000 persons on the panel (in which case the payment would average from 3s. to 4s. a year for every insured patient) or on the capitation system in all larger communities; the contracts, in every instance, were to be drawn up under the supervision of the association. These rules applied not only to the sick clubs already existing but to all that might be formed subsequently to the drawing up of the regulations; it was decided also that all contracts made by doctors in Lower Austria with factories, corporations, trade unions, or private persons were to be controlled and regulated by the association. On one point only did the clubs make a stand; they refused to accede to the demand of the profession for the dismissal of the "blacklegs" who had filled the posts left vacant by the strike of the club doctors. A compromise was at length effected whereby these doctors—who number about eighteen in all—have been allowed to remain in the service of the clubs until the expiration of their contracts, which will not be renewed, whilst their districts have been apportioned amongst the regular medical officers of the clubs. One result of this arrangement has been that the expenses of the clubs have been considerably increased. The appointment of specialists was also satisfactorily arranged between the contending parties: each district will shortly enjoy the services of a fully qualified staff of specialists, including a certain number of lady doctors for women who prefer to consult one of their own sex. In order to collect sufficient funds for future contingencies, club doctors in Lower Austria have been asked to contribute part of their first month's salary to a special "strike fund," and a large sum has already been collected, the average donation varying from £4 to £6. This is the first time a medical strike has taken place in Austria, and the fact that it has been carried to a successful issue has given great satisfaction to every member of the profession in the country.

PARIS.

Results of Typhoid Vaccination.—Authentic Case of Syphilitic Reinfection. — Uses of India-rubber in Surgery.

DR. CHANTEMESSE has communicated to the Academy of Medicine the promising results of his experimental work in the French army and navy with the heated typhoid vaccine. During 1913 in the army of Algeria, Tunis, and Morocco no case of typhoid occurred in any of the soldiers who had been vaccinated. In the navy and ports of France and the French colonies the figures for over a period of twenty months showed that the number of persons vaccinated was

4,700. In ordinary conditions it is estimated that in such places 1 in 120 men may be attacked by typhoid; not a single case, however, occurred amongst the large number vaccinated. Dr. Chantemesse also reported that during two epidemics, one near Nice, the other in Corsica, whenever the vaccination was practised the epidemic was checked and no new cases occurred. In Havre 500 persons were vaccinated and none of them contracted typhoid. The author states that children tolerate antityphoid vaccination without any unfavourable reaction. In each case four doses of vaccine are given at regular intervals, a monovalent vaccine, sterilized by heating, being used. This vaccine is found to be the most powerful, and at the same time the least irritating. During the past two years Dr. Chantemesse has vaccinated 1,400 persons in the Hôtel-Dieu in Paris, and in 1,184 of these no reaction occurred, while slight reaction was noted in 179 cases, moderate reaction in 33, and in only 7 did a febrile reaction of 104° F. occur.

Dr. Queyrat recently reported to the Société Médicale des Hôpitaux a case of syphilitic reinfection which he was able to study and observe, having treated the patient during his first infection, and likewise during the second attack. The patient came under notice in January, 1911, with a hard chancre on the penis. Antispecific treatment was begun, and in July the patient returned with marked secondaries well scattered over the body. Salvarsan treatment was then instituted, and the signs of syphilis disappeared, and in December, 1911, and in March, 1913, the Wassermann test was negative. On February 20th, 1914, the patient came back to hospital with another hard chancre which was quite typical; spirochaetes were found microscopically, and the Wassermann test is now positive. This would appear to be an undoubted case of syphilitic reinfection.

M. Delbet has been using rubber grafts and splints lately with much success, and recently reported to the Academy of Medicine the methods which he uses, and the cases in which india-rubber can be utilized. Rubber has been used for drainage tubes for a long time, and it is well known that there is no active reaction against this substance by the tissues. Professor Tuffier and Dr. Carrel have shown that the presence of rubber does not produce coagulation of the blood around it, as do so many other foreign bodies; they attribute this to the pseudo-colloid composition of india-rubber. When sterile the rubber causes no reaction or inflammation of the surrounding tissues, and in one case M. Delbet dissected up the extensor tendon of the first phalanx and placed the rubber between the bone and the tendon to form a smooth surface for the tendon to slide over. The result was perfect eight months afterwards. In a case of ventral hernia the abdominal wall was strengthened with a large rubber sheet, and the abdominal wall is now firm, the hernia is reduced, and no undesirable adhesions appear to have formed.

Correspondence.

AUTO-INTOXICATION AND SUBINFECTION.

SIR,—Let me assure my old friend, Dr. Saundby, that entering lately and cheerfully into the lists over the matter of intestinal stasis, when I charged him, it was with no thought to draw blood. It was with no malice that I singled him out, but looking round for a medical companion for Sir Arbuthnot Lane, that it might not seem that the attack was on my surgical brethren alone, I could not help but recognize his crest, and so bore down upon him. For I recalled the frequent reference to "auto-intoxication" in his contribution to the recent discussion at the Royal Society of Medicine.

Now that he would return to the fray, I would in all gentleness admit that my address was, as he says, long, but at the same time beg him to see running throughout it from end to end one long invocation for precision. It is for the sake of clear thinking and clear conclusions, not for any pedantic reason, that I have so holy a hatred of this miserable word "auto-intoxication." And somehow I think—and his letter does not alter my views—that the argument which he regards as pedantic will be accepted as that which precisely pricks the Bouchard bubble. If he so desires, I am quite prepared to acknowledge that should an unfortunate individual poison himself by taking prussic acid, that would be a case of self-poisoning, of *auto-intoxication*; but if we add this example to Dr. Saundby's own intestinal worms, and their effects, and to Bouchard's meat poisoning and cholera, *et hoc genus omne*, what's the good? Where are we? There can be no advance so long as we muddle along in this futile way. The word has to be cast out.

Dr. Chalmers Watson also in the issue of January 31st has, I think, missed the point. His letter makes me wonder whether, with the best will in the world, I have left your readers in doubt as to my firm belief in the frequency of subinfection of gastro-intestinal origin. The more I study the more convinced I am of its frequency and gravity; nay more, I am rejoiced that Sir Arbuthnot Lane has with his strong and persuasive advocacy brought it to the fore. My plea throughout was not against the existence of danger from stasis, but for exact observation. The time has come—our methods are sufficiently developed—for us to realize that each case of the order under discussion demands, and will respond to, a thorough investigation whereby to determine the nature and point of origin of the disorder, and to decide upon the rational treatment.

I imagine that Sir Arbuthnot Lane himself, with his appreciation of and familiarity with the work accomplished by the Mayos, will be the first to agree with me that these two men in a little country town in Illinois—men whom we can almost claim as Englishmen, for their father was born in Manchester—have revolutionized surgical practice to such an extent that it is merely a question of time when the leading hospitals throughout the world must follow the example they have given. They have in fact demonstrated the all-importance of thoroughness and "team work." Their extraordinary success is not due to operative dexterity and inventiveness (though they have familiarized themselves with all that is best in other American and in foreign clinics, and are excellent operators), but to full and exact study and diagnosis of the patient's condition prior to operation. They have pointed out to us the only way, and we must follow.

Now, I think it must be admitted that in most hospitals throughout the English-speaking world—nay, throughout the world in general—the attitude of the staff towards the surgical patient differs markedly from that shown towards the medical. The need for particular treatment of one particular lesion is so obvious as to over-ride other considerations, and so it is that most hospital surgeons acquire the habit of perfunctory in place of systematic study of the general bodily state of each patient. The resident staff take the cue from their seniors. It is only necessary to be called upon to hunt through a series of surgical case reports to realize the wide difference between surgical and medical practice in this respect. Perhaps in the old days these defects were not so glaring. To-day, with the surgeon invading the innermost recesses of the organism, it is absolutely essential that the patient be given the fullest and most expert study, that there be no distinction between the methods of the medical and the surgical wards in this respect. The day is not long enough for either physician or surgeon to master every branch of specialized investigation, or personally to submit each patient to thorough study of every system. Thoroughness can only be attained by co-operative work on the part of a band of experts in many branches—clinical as well as laboratory specialists.

The question is—how can we introduce this system into our great hospitals? I fully foresee the difficulties, but it has to come, and we must be preparing ourselves for its advent. So far as I can see, this system cannot be confined to the surgical section alone. Every patient admitted to the wards, unless suffering from so acute an illness that examination has to be limited to the least possible, should be given the opportunity of a thorough overhaul, not by a single house-physician or house-surgeon and his chief, but by a staff of specialists and their assistants. I know full well that this may seem impossible under present conditions in most hospitals, but if one would set the example the others would be forced to follow. At the present time, in the work of revising the development of the hospital service in connexion with London University, surely this ought to be kept in mind, and the relationship of the medical, surgical, and gynaecological services be so

arranged that each patient, in every department, may secure the benefit and advantages of full routine expert systematic diagnosis of his case. If the hospital patient gain these notable advantages we may rest assured that the private patient will not be behindhand in demanding the same.—I am, etc.,

Montreal, March 16th. J. GEORGE ADAMI.

THE REWARD OF RESEARCH.

SIR,—The letter by Sir Ronald Ross you publish in the JOURNAL of March 28th (p. 738) calls attention to a very curious state of affairs. It is generally recognized, in England at least, that research does not pay, and it is very seldom that a man, however good an observer he may be, can afford to give up his time to research unless he be endowed with considerable private means. This is certainly wrong, and must have done an incalculable amount of mischief in this country.

There is, however, another aspect of the case, and that is the almost superhuman efforts any pioneer in science must put forth to obtain a hearing. The tendency is so great for scientific men to sit on their stools, work at abstract calculations, aided by pen and paper only, and to refuse to examine facts, or even allow a worker to demonstrate his facts before them. Let me recall the attitude of certain scientific men towards the subject of colour-blindness. Dr. Edridge-Green, having studied the subject in all its aspects, was appointed in the year 1889 the adviser to the Board of Trade, and was a member of the International Code of Signals Committee. He was promised also that he should be the permanent paid adviser as soon as the appointment could be made. He then read a paper containing a large number of new facts to the Royal Society in which he stated that the Holmgren wool test for colour-blindness was very defective, and allowed a number of dangerous persons to escape detection. This so upset the armchair scientists that they appointed a committee to decide what was the best test, but the Royal Society refused the request the Board of Trade made—that Dr. Eldridge-Green should represent it on that committee. The committee refused to allow him to demonstrate his facts and cases before them, though they took his evidence, and decided that the wool test was all-sufficient for the purpose. He then had the mortification not only of having his work refused and discredited without having a chance of showing what it was, but they also so dominated the Board of Trade that it did not give him the promised appointment, but appointed the secretary of the committee—a physicist—as adviser instead, and thus ruined the career of a man who would otherwise long ere this have put this still vexed question on a satisfactory basis. On numerous occasions his communications before the Royal Society, and even before the Ophthalmological Society, were rejected (though of late years, owing to the complete change of opinion, numerous papers of his containing the same facts have been published by the Royal Society and in scientific journals here and abroad). When allowed to communicate his work, he was looked upon as a bore whose papers had to be endured, but hardly a person was to be found to examine the facts. After a time, however, a certain official of the Ophthalmological Society who had taken the trouble to examine his facts arose, and much to the surprise of the whole meeting backed him up in all his statements, and got the society to appoint a committee to investigate the claims set forth. I was the secretary of that committee, and there was not a single member of it who failed to see the importance of his contentions. The report of this committee was published in the *Transactions* of the society, vol. xxiv, p. 367, 1904. Still there were some who virtually said: "We do not believe what we have seen with our own eyes because Helmholtz and others have held opposite views."

The Board of Trade got into such manifold difficulties that it appointed a Departmental Committee to investigate the matter. The chief of those who had been responsible for the existing tests was made a member, and many of those who were known advocates of them, but neither Dr. Edridge-Green nor his supporters were represented: and then, to crown all, permission was again refused him to demonstrate his cases, though, as before, his evidence was taken. The Committee adopted two of his test colours for the wool test, and it adopted an inadequate lantern. It had to admit the superiority of the lantern to the wools, for, in spite of the modifications mentioned, the Committee's latest report showed that out of 105 failures 55 failed in both the wool and lantern test, and 50 in the lantern test only, while not one failed in the wool test only. Of those who were rejected with the wool test, about 50 per cent. were found to have no defect of colour vision which would render them unsafe for the reading of coloured signals, though how many dangerous cases got through can only be a matter of speculation.

Every fact which Dr. Edridge-Green has pointed out has been proved up to the hilt. Modern books on physiology and ophthalmology state his theory and facts as facts, though many of his strongest opponents have taken his facts and methods without acknowledgement and without even mentioning his name, while his lantern is the official test of the Royal Navy; but officially he has been quite unrecognized, never having had a vestige of reward for his work, and having endured for years enough cold water to have drowned the energies of any human being. Still, he has lived long enough to have convinced every person who would take the trouble to see his demonstrations. It is obvious to all fair-minded persons that in time, when the armchair critics have passed away, his work will be recognized as by far the most important which has been done on the physiology of vision up till the present time, though he has for so long been treated like Young, who had to resign his professorship of the Royal Institution on account of his views on light, which have since received universal acknowledgement.

Sir Ronald Ross is one of those good men of science who examines facts and is not content to sit down and work out abstruse calculations which are based on statements which have never been verified and which, half the time, are wrong. The lives he has saved by his work on the mosquito are beyond all possible means of calculating, and although he himself has been recognized in many ways his complaint is none the less real, namely, that true science and research is almost entirely unrecognized, and nothing but indomitable perseverance (such as that shown by Dr. Edridge-Green), backed up by private means, is capable of penetrating the armour-plating of prejudice which is such a marked feature of certain so-called men of science, as well as of getting through the official ignorance behind which certain public bodies feel themselves to be so free from attack and danger. I trust that we may some day recognize the work of our own men in a more liberal way than we have been doing in the past, and give them encouragement rather than cold water, and aid them by rewards to perseverance in the elucidation of problems the solution of which we happen, at the time, to be in ignorance.—I am, etc.,

London, W., March 31st. C. DEVEREUX MARSHALL.

THE ART OF PRESCRIBING.

SIR,—In the course of his paper on the art of prescribing, in the BRITISH MEDICAL JOURNAL of March 21st, Dr. Luff refers to the incompatibility of sodium nitrite and ammonium bromide, the mixture of which on three occasions burst the bottle.

As Dr. Luff states that he is unable to account for the incompatibility, he will be interested to know that it is due to the formation of ammonium nitrite by double decomposition, and this decomposes into water and nitrogen, the latter being responsible for the damage.

$$NaNO_2 + NH_4Br = NaBr + NH_4NO_2$$
$$NH_4NO_2 \longrightarrow N_2 + 2H_2O$$

When these substances are mixed at the ordinary winter temperature no chemical change is apparent, but on warming, and especially if the solution be fairly concentrated, the gas is rapidly evolved.

The action of a nitrite on an ammonium salt (usually the chloride, on account of cheapness) is one of the text-book methods of preparing nitrogen. As the ammonium radicle is the cause of the incompatibility, the substitution of potassium or sodium bromide is indicated.

This illustrates a wider aspect of the subject. There are probably many examples of incompatibility known to physicians not capable of a simple explanation as in the above case, but perhaps requiring more or less pharmaceutical work for their complete elucidation. We have among our

members men who are constantly applying for subjects for investigation and whose wants we attempt to supply, and my principal object in writing is to suggest that medical men encountering any difficulties, from incompatibility or otherwise, in connexion with the prescribing of drugs should submit them to the British Pharmaceutical Conference for investigation, or, if preferred, to one of the subcommittees of the British Medical Association, which would no doubt pass them on to us.—I am, etc.,

HORACE FINNEMORE,
Honorary Secretary,
British Pharmaceutical Conference.

Guy's Hospital, London, S.E.

SIR,—Dr. Luff's article on prescribing, in the JOURNAL of March 21st, will have been very widely read, and it may be of interest to know the cost of the seven prescriptions he there recommends, priced according to the drug tariff issued officially by the Commissioners under the Insurance Act. In each case I have estimated the cost of twelve doses, except No. 7, which is priced as prescribed:

	s.	d.
1. Misc. pot. iod.	1	6½
2. Cough mixture	0	7
3. Anodyne mixture...	3	5½
4. Headache mixture	0	11½
5. Gout pill	0	5½
6. Gastric flatulence...	1	1
7. Menthol liniment...	1	10
Average cost about	1	4½

The cost of prescriptions under the Act last year ranged about 7½d., and the profession is blamed for making undue use of the "blank cheque" provided for them by the Chancellor of the Exchequer. It would be instructive to know what the cost would have been if prescriptions had been written according to the *Pharmacopoeia* of one of the larger hospitals, and it would furnish conclusive proof, I am sure, that the charge was as unjust as it was ungenerous.—I am, etc.,

March 31st. "PANEL."

DRUGS OR DIET.

SIR,—Dr. Luff's address on prescribing drugs in some proprietary preparation or some compressed form instead of in the old-fashioned way is, I think, a sign of the times, and it is possible that before long not only will such a handy form of drug as we have in the compressed form be abandoned, but the great majority of drugs be unheard of. I am old enough to remember the ravages of cholera, and the hopelessness of its treatment by any drug; but as soon as we learnt that it was got in water, and gave up using polluted water, cholera disappeared, and there was none to treat in any way. Attention to sanitation has banished other diseases as well as cholera, but many still remain rampant as ever in spite of an army of public health officials, and will remain rampant until the profession realizes that they are due to food. Since I knew that, and have learnt a little of the physiological action of foods, I never think of prescribing any drug, but regulate the diet alone. An example will prove the value of prescribing food in place of drugs. A young woman in the country, who suffered from vomiting her food, was sent to Edinburgh to see a specialist, who, after examining her blood, which was his speciality, prescribed drugs; but she was no better. I prescribed a diet, and the sickness at once stopped. Both the patient and her friends were astonished at the result. To-day I had a call from a native of this district on a visit from Canada, who had had his appendix removed and his intestine short-circuited as well in British Columbia, but still required to be careful as to diet, and had learnt much from personal experience. He told me that the wife of the friend with whom he was staying was a chronic invalid, in bed and regularly under her doctor and taking drugs. He advised her to give up all drugs, and by attention to diet she soon got well. The fact that a layman, by a little knowledge of diet, can cure a case which the physician with his drugs failed to cure ought to make us more anxious to be able to prescribe right food, if by so doing no drugs will be needed. The medical students in Scotland at their inter-university conference have unanimously passed a resolution that dietetics should be taught. In my experience it is unique that students should ask to have another subject added to their curriculum, but the fact that they have done so proves that our students are alive to the value and importance of right diet, and the British Medical Association ought to second the efforts of the students to have dietetics not only taught but be made a compulsory subject of examination for every licence. I am, etc.,

Hawick, March 23rd. JOHN HADDON, M.D.

SMALL POX AND VACCINATION IN THE LIGHT OF MODERN EXPERIENCE.

SIR,—Dr. Killick Millard's letter of March 20th does not alter my opinion. In my letter I certainly did mean to imply that Sydney's financial losses occurred because of the unvaccinated state of the community, and such is still my opinion.

It is suggested that the whole trouble was due rather to unwise action on the part of the authorities and medical profession. My contention is that if the population of Sydney had enjoyed such protection from small-pox as, for instance, does the German army, this outbreak would never have occurred. Even granting that the management of the epidemic was faulty, the epidemic itself was the ultimate cause of the dislocation of trade.

Australia is not altogether an unvaccinated community; for instance, in the State of Victoria, adjoining New South Wales, vaccination is still compulsory, and it was to her capital, Melbourne, that much of Sydney's "up-country" trade was diverted.

The members of the medical profession in Sydney are, on the whole, equal in common sense, intelligence, and professional ability to any other British community; and therefore, in the event of an outbreak of small-pox in any large city can we be sure that errors of judgement will not occur similar to those which Dr. Millard fears took place in Sydney? All cities may not be so fortunate in their medical officer of health as Leicester; and it may prove in the future to be a much more difficult matter to stay an outbreak of small-pox in a totally unvaccinated population than in one in which even 50 per cent. are vaccinated.

It is true that Australia has in the past suffered little from small-pox, but her people have not been entirely unvaccinated. Conditions, too, are changing. In her infancy her small population was isolated. Now, owing to the progress of science and invention, distances are being practically shortened, and in her adolescence Australia is being brought much more into contact with other peoples, and the teeming millions of the East, among whom small-pox is almost endemic, are not many days' steam from her shores. Can we always expect our good fortune to continue?

As I have been travelling I have had little information about this epidemic beyond what I have seen in the papers from time to time. Dr. Killick Millard's views seemed to be expressed in such a scientific spirit and with such moderation that I regret the more that we must, I am afraid—though in all friendliness—agree to differ.—I am, etc.,

Paris, March 30th. WILLIAM CHISHOLM.

THE POSITION OF CHLOROFORM.

SIR,—I feel that I cannot let pass, unchallenged, some of the statements made in the JOURNAL of March 14th, p. 625, by Dr. Lawrie.

Dr. Lawrie would have us believe that chloroform given by the "Edinburgh method" is entirely free from risk. Such was certainly not the case when I was a student at Edinburgh, and, further, it was being largely abandoned by the anaesthetists at the Royal Infirmary.

In 1902 Dr. Luke, who was then an instructor in anaesthetics, described the method in his book as "antiquated and clumsy." To this I would add "dangerous."

Dr. Lawrie suggests that the London anaesthetist has "a friend at court" in the person of the coroner. Has he ever heard of the Procurator Fiscal? The public in Scotland do not hear of the deaths under anaesthesia for the simple reason that there is no coroner, and deaths are reported to the Procurator Fiscal, who may or may not hold an inquiry. That chloroform deaths do occur in Scotland I can assure him from personal knowledge. I only regret that at such short notice I am unable to give statistics of the method in question, for I feel sure he

would be surprised by the mortality of this "easy and entirely free from risk" method.

The second Hyderabad Commission, to which Dr. Lawrie refers, sat in 1890, and concluded that "chloroform was a comparatively safe body used properly." A short time later it was conclusively proved by Gaskell, Leonard Hill, and other physiologists that the technique adopted by the commission was faulty, and hence its conclusions erroneous.

The late Lord Lister himself conducted a series of experiments in the Royal Infirmary, Edinburgh, and found that a 4.5 per cent. to 5 per cent. vapour was easily obtained by the "Edinburgh method." It is now an established belief that a 2.5 per cent. vapour is the limit of safety. Lack of space alone prevents me from replying fully to Dr. Lawrie's contemptuous reference to the terms "heart failure," "chloroform syncope," "the status lymphaticus," and "shock," which he describes as meaningless. For the actual optical demonstration of status lymphaticus I can only refer him to the *post-mortem* room, and perhaps to Dr. Spilsbury, whose experience of this dread condition must be unique.

The position of anaesthetics has never been more strong and satisfactory than it is to-day. The triumphs of surgery are no less the triumphs of anaesthesia, and the patient of to-day demands that the anaesthetist, no less than the surgeon, shall be an expert. I am unacquainted with any teacher or school in London where the student is taught to keep his finger on the pulse, but if he should desire to confirm his suspicions by feeling the pulse, I quite fail to understand Dr. Lawrie's contention that he is threatening his patient with impending dissolution.

I think Dr. Lawrie hits the nail on the head in his last sentence, in which he refers to the method as "easy to carry out." This is unfortunately true. There is no cumbersome apparatus to be carried, the smell is not unpleasant, and there is a tendency for the work-a-day practitioner to follow the line of least resistance and use chloroform as his routine anaesthetic.

In conclusion, I would point out to Dr. Lawrie another factor not generally recognized—that of "race, habits, and customs." The southerner is not, as a rule, so good a subject for chloroform anaesthesia as the Scot. To pour comparatively large quantities of chloroform on to a towel, hold it over the face of the average patient in a London hospital is to court disaster. If Dr. Lawrie will use open ether on the next hundred cases in which he is called upon to administer the anaesthetic, I think he will not fail to be impressed by the comparatively vigorous condition of his patients after the operation.—I am, etc.,

London, N., March 13th. GERALD MORIARTY.

THE MEDICAL SERVICE, R.N.

SIR,—The recent recruiting mission indulged in by the Medical Director-General of the Navy appears to have been attended with the want of success anticipated by those who know the exact condition of affairs.

When will the authorities realize the simple elemental truth that they must make the Naval Medical Service popular within the navy before they can succeed in making it popular without? This common-sense way out of the difficulty met with in obtaining candidates for entry was completely overlooked by the last Director-General, and, from my information, is likely to be similarly neglected by the present holder of that office. That the Naval Medical Service is exceedingly unpopular within is a fact well known to everybody concerned. I could give many reasons for it, but since they must be perfectly acquainted with them at the Medical Department of the Admiralty it would be idle to enumerate any of them. Change in public departments is always slow, but nowhere slower than in this particular one.—I am, etc.,

SHIRLEY HALL BIRT,
Hambledon, Hants, March 31st. Formerly Fleet Surgeon, R.N.

INSURANCE AND INVESTMENT FOR MEDICAL MEN.

SIR,—I am grateful to you for your appreciative reference to my address on the business side of medical practice. I plead guilty to the omission of all reference to the advisability of medical men investing in endowment policies. In the lecture, when delivered, reference was made to the extreme advisability of every one taking out a life insurance policy. My remarks were perhaps unconsciously directed more to those who were making their way in life than to those who were entering the struggle. To any young man starting practice, especially if he purposes marrying early, who wishes to have an easy mind, and is not possessed of capital, insurance, of course, is an absolute necessity.

I would not have troubled you with any reference to your leading article were it not that the impression which one has in reading it is that an endowment policy or policies should take the place of my scheme of investment.

Let us assume that an investment policy payable at 65 is taken out by a young man of 25 or 30. Let us further assume that he is successful, that he lays aside a certain percentage of his income year by year; it would, in my opinion, scarcely be a wise policy to invest year by year his annual savings by investing in further endowment policies.

Apart from the question as to whether such an investment in the case of a long liver would turn out to be really a financial success, it is obvious that should prolonged or permanent incapacity overtake the assured, say at 50 years of age, he would find himself in a very serious position. It is true, as you suggest, that he can arrange so that the premiums may stop in case of ill health, but the annuity must ultimately be diminished in consequence. If, owing to permanent incapacity, his income ceased at about 50, it is but a poor reward for his labours to feel that if he lives for other fifteen years (on what?) he will get an annuity at 65!

Now, it is perfectly true that even those securities which I recommended have fluctuated within the last ten years, but even gilt-edged securities have suffered similar fluctuations and have indicated perhaps greater depreciation.

I quoted the well known phrase of not putting all one's eggs in one basket, and you approvingly referred to my reference. But surely to make life assurance, even endowment policies, the only means of investing is to commit the indiscretion referred to.

In short, my position is this. I believe that it is the bounden duty of every young man to insure his life; that every one should save a percentage of his income; that it is highly advisable that a second endowment policy should be taken out in the quite early years of professional life, but that, having made this reasonable provision for those dependent upon him, as time passes, and some measure of success comes, a judicious investment on the lines which I indicated is due to himself. As we get older and cross the meridian of life it is reasonable to expect some return for years of labour in the shape of relaxation from duty and time to cultivate hobbies. This I sincerely hope will come to many long before they claim their annuities, and in some cases even before their endowment policies mature.

I may, of course, be mistaken, and many may not agree with my views on these matters, but all will, I think, bear me out in this—it is difficult to make money, more difficult to keep it, and still more difficult to invest it properly.—I am, etc.,

London, W., March 30th. JOHN COLLIE.

VISCEROPTOSIS.

SIR,—We are indebted to our cousins in the great United States for many things which, at all events from a surgical standpoint, tend to make life more bearable to the afflicted than it used to be. I draw the line at some new terms that have been imported, tariff free, for the use of our teachers and students. One of the worst is the word at the heading of this letter. It is not English; it is not Latin: it is not Greek. It is an extraordinary jumble, put together, it may be, by some possibly well-meaning surgeon, who has forgotten his early school training. I am sorry to find it once again in the well-edited columns of the current number of our JOURNAL. It occurs in an otherwise exceptionally well written paper by an able surgeon. The Latins used the words "visceratio" and "visceratim." How the "o" gets into the objectionable word (I shall not reproduce it) I cannot understand. Its sadly mixed derivation from "viscera" (Latin) and "ptosis" (Greek) gives us no clue. "Enteroptosis" means the falling or displacement of the viscera, and the

word is derivationally unobjectionable: I only trust when the Oxford lights so far complete their great dictionary that the word will not by sheer persistency find its way into those pages under the letter "V."—I am, etc.,

March 28th. X. Y. Z.

PORTRAITS OF BURNS.

SIR,—When I declared in my letter, printed in the BRITISH MEDICAL JOURNAL of March 14th, that "most, if not all, Scotsmen who have studied the subject believe that there never was a portrait of Burns by Raeburn," I meant the term "portrait" to be understood as signifying a likeness taken from an actual sitter. Such restricted usage of the word may not be justified by custom; but if this narrow interpretation be applied my assertion still stands.

At the time of communicating with you I knew that there existed the letter from Sir Henry Raeburn to Messrs. Caddell and Davies, quoted by Dr. Keith; and I was also aware that further Raeburn correspondence had been brought to light in 1903. Now, I would respectfully draw attention to the fact that Mr. D. McNaught, President of the Burns Federation, and the greatest living authority on everything pertaining to the poet, has in the *Annual Burns Chronicle* for 1908, in an article entitled "The Missing Raeburn Portrait," conclusively proved that the portrait supplied by Raeburn to Messrs. Caddell and Davies was the very thing that Dr. Keith supposes it could not be, namely, "merely a copy of the Nasmyth." Prior to writing on December 11th, 1803, Raeburn dispatched to Messrs. Caddell and Davies on November 14th, 1803, another letter from which Mr. McNaught quotes the following decisive extract:

> I have finished a copy of Burns the poet from the original portrait painted by Mr. Nasmyth. I have shown it to Mr. Cunninghame, who thinks it very like him.

And again from a final letter by Raeburn to Messrs. Caddell and Davies, dated February 22nd, 1804, and evidently a reply to a communication from them acknowledging receipt and approval of his work, Mr. McNaught quotes the subjoined sentence:

> Nothing could be more gratifying to me than the approbation you expressed of the copy I made for you of Robert Burns.

Do not these quotations finally dispose of the supposition that Raeburn ever painted an original portrait of the bard; and, if Raeburn had had a portrait by himself to fall back on, is it not extremely unlikely that he would have copied Nasmyth's? Can Dr. Keith support the contention that either of Mr. Barrington Nash's "Raeburns" is "a copy of Burns the poet from the original portrait painted by Mr. Nasmyth"? I think not.

It is most strange and inexplicable, as Mr. McNaught shows, that though Caddell and Davies advertised, in 1823, in their 3-volume edition of Burns that their 4-volume edition contained "a portrait of the Author from an original picture by Raeburn," the portrait in question is really an engraving after Nasmyth by W. F. Fry. What became of this Caddell and Davies Raeburn after 1823 is absolutely unknown, and so far Mr. Nash has not brought forward a tittle of evidence to link his possessions with it. There is also documentary proof that Raeburn "retouched the face" of the Thomson Nasmyth, and it is likewise said that he "brushed over" the Auchendrane Nasmyth.

I am prepared to allow that Mr. Nash's two portraits, since they possess many features in common, may quite well depict the same person, and agree that the differences between them may be explained away by the smaller having been painted a few years before the larger; but, despite my willingness to be convinced, I cannot believe that these "Raeburns" and the Nasmyth represent the same man; and placing the smaller "Raeburn" between the Nasmyth and the larger "Raeburn" does not, as is the case with Dr. Keith, make "all my doubts disappear." In the Nasmyth the handsome, dreamy, and poetic may be much overdone, but I cannot see how Dr. Keith can dub the possessor of such a large square jaw and firm mouth as "a characterless young man about town." No more does it strike me that this "Raeburn" (the larger portrait), with Jewish cast of feature and weak, sensual expression, represents "a real living 'thundery' man."—I am, etc.,

East Kilbride, March 23rd. JOHN W. FINDLAY, M.D.

THE FALLING BIRTH-RATE.

SIR,—Dr. Binnie Dunlop denies that in his first letter he suggested that "there exists some causal relationship between a falling birth-rate and a rising death-rate in France." If I have misconstrued his meaning I apologize, and I do it perhaps the more readily because in his second letter he makes a statement which seems clearly to convey the meaning which I read into the former.

The declining birth-rate in France has been due in only a minor degree, if at all, to economic causes. Dr. Binnie Dunlop does not seem to know that France is a great exporter of food. She sends out yearly vast quantities of wine, oil, fruit, vegetables, poultry, butter, eggs, and cheese, and sometimes even a little corn. France is enormously wealthy. In agriculture and in stock raising she is, on the whole, much behind this country. She invests her money almost entirely in foreign loans. If a small part of her yearly savings were devoted to development of her internal resources, her soil might be made to support many more millions than at present subsist upon it.

The number of foreigners permanently domiciled in France amounts to 1,500,000. The great bulk of these are engaged in work that might be done by Frenchmen if the supply were equal to the demand.

The French do not marry, or at least do not beget children, unless they have ample means for their social position. The aim is to provide a *dot* big enough to secure a mate for the daughter however unfit for motherhood she may be; and to secure a portion for the son, so that he may be spared the battle of life. The improvident classes, whether married or merely mated, have very small families; and even that portion of the peasantry which up to recent years produced a numerous progeny now limit their families to two or three.

With regard to the present question, there exist some solid facts which no manipulation of figures can overthrow. It is a fact that in 1871 the populations of France and Germany were about equal. It is a fact that, although she sent away in the early years a great number of emigrants, the population of Germany now stands at 70,000,000. It is a fact that, although France during the last forty years has sent away only an insignificant number of emigrants and has absorbed many hundred thousands of immigrants, her numbers now stand at about 40,000,000.—I am, etc.,

Earlswood Common, March 27th. HENRY SEWILL.

The Services.

ROYAL ARMY MEDICAL COLLEGE.

LIEUTENANT-GENERAL SIR JAMES GRIERSON, K.C.B., C.V.O., C.M.G., will present the prizes at the Royal Army Medical College, Grosvenor Road, S.W., on the conclusion of the 107th session, on May 1st.

INDIAN MEDICAL SERVICE.

POSITION OF EUROPEAN OFFICERS.

WE have received the following notes as expressing the disadvantages of the Indian Medical Service as they present themselves to a junior officer of European birth:

In present circumstances the Service favours Indians to the detriment of Englishmen, in that from the start they draw exactly the same pay, but no one is entitled to draw extra pay for work done unless he has passed the Lower Standard Urdu examination. The Indian comes out to his own country and naturally passes his own language examination very quickly, and is enabled to get thereby R.100 more a month, often for doing extra military work. But Urdu is not spoken over large tracts of India, and the Englishman finds himself often in a place where Urdu is not spoken, and the regiment to which he is attached may not be an Urdu-speaking regiment. He therefore has to study a purely theoretical language, and fails to do it quickly. It may take him a year or even two, according to the difficulties as regards teachers, etc., and this makes it more difficult for him to get through the military examinations, which have to be done in about two years and three months or his promotion may be delayed. These examinations are steadily being made harder, as only recently they have introduced the organization and equipment examination, in which questions can be asked about the organization, etc., of the army in any part of the empire. Of course, this again is a purely theoretical subject for a medical man to study, and whereas the lieutenant in the army has several years before having to get through these examinations, in the case of the Medical Service the time is only about two years.

Apart from the questions of expense, which it is usually agreed are more for Englishmen than Indians, the Indians are at present advocating that after passing the entrance examination they should be given a year's education in England; but either they should have had sufficient experience before entering to make their judgement reliable, or else they are not fit for the Service and should do their practical medical work before entering for the examination.

The question of comparison of efficiency is not, perhaps, very suitable for discussion, but English women and children often have objections to being attended by other races; the result is, therefore, that an Indian can only be placed in a station where there are other medical officers, who are called upon to do part of his work in many cases; he has therefore to remain in large stations and obtains: (1) The better cantonments; (2) chances of earlier extra pay; (3) and better chance of passing his military examinations on account of less work at the language.

The Service is therefore unsatisfactory in many ways for Englishmen, and it would seem necessary that reforms should be rapidly introduced—for example, pay should be given for extra work done unless the officer fails to pass his examination in one or two years according to the difficulties he has to contend with. This is the usual custom, as in most branches a year is allowed to complete the examination, and pay is lost after that until the date of passing. Increased pay for the English should also be considered, as they have to return home at their own expense, and receive very little pay during their furlough, when they are attempting to take higher degrees and are involved in extra expenditure on that account, whilst the Indian is already at home.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTIONS TO THE COUNCIL.

As it appears that more than usual interest is being shown in the elections to the Council of the Royal College of Surgeons of England, which will take place next July, it may be convenient to publish some particulars with regard to the Council as at present constituted:

President.—Sir Rickman J. Godlee, Bart. C., (1) 1897, (2) 1905.

Vice-Presidents.—Mr. G. H. Makins, C.B., C. (1) 1903, (2) 1911; Sir F. S. Eve, C. (1) 1904 (substitute), (2) 1907 (substitute), (3) 1912.

Other Members of the Council.—Sir Henry Morris, Bart., C. (1) 1893 (substitute), (2) 1898, (3) 1906; Sir W. Watson Cheyne, Bart., C.B., C. (1) 1897 (substitute), (2) 1901, (3) 1909; Mr. F. Richardson Cross, C. (1) 1898, (2) 1906; Sir A. Pearce Gould, K.C.V.O., C. (1) 1900, (2) 1908; Mr. R. Clement Lucas, C. (1) 1901, (2) 1909; Mr. C. W. Mansell Moullin, C. (1) 1902 (substitute), (2) 1907; Sir Anthony A. Bowlby, C.M.G., C. (1) 1904, (2) 1912; Mr. W. Harrison Cripps, C. (1) 1905 (substitute till 1908), (2) 1909; Mr. Charters J. Symonds, C. 1907; Mr. W. F. Haslam, C. 1908; Mr. C. B. Lockwood, C. (1) 1908 (substitute), (2) 1910; Sir W. Arbuthnot Lane, Bart., C. 1908; Mr. Bilton Pollard, C. 1910; Mr. C. A. Ballance, M.V.O., C. 1910 (substitute for Mr. G. A. Wright till this year, 1914); Sir John Bland-Sutton, C. 1910; Mr. D'Arcy Power, C. 1912; Sir Berkeley G. A. Moynihan, C. 1912 (substitute for Sir H. T. Butlin till 1919); Mr. James Ernest Lane, C. 1913; Mr. L. A. Dunn, C. 1913; Mr. H. J. Waring, C. 1913.

The medical schools are represented as follows:

London:	
St. Bartholomew's	5
Guy's	4
King's	1
London	3
Middlesex	3
St. Mary's	1
St. Thomas's	2
University College	2
Total London schools	21
Provincial:	
Birmingham	1
Bristol	1
Leeds	1
Total Council	24

Nominations for the election next July must be received at the office of the College between May 26th and June 5th, and at present we understand that there are ten candidates for four seats—namely, Mr. Ballance (for re election), Mr. Stanley Boyd, Mr. F. F. Burghard, Mr. McAdam Eccles, Mr. Raymond Johnson, Mr. J. B. Lawford, Mr. H. S. Pendlebury, Mr. W. G. Spencer, Mr. William Thorburn, and Mr. P. Macleod Yearsley. Of the candidates so far announced, only one (Mr. William Thorburn, of Manchester) represents a provincial school.

VICTORIA UNIVERSITY OF MANCHESTER.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., CH.B. (*Part I. Inorganic Chemistry and Physics*).—N. Abdoh, T. H. Almond, Sybil Bailey, T. Colley, H. Dickie, P. Fildes, J. B. Higgins, F. Isaac, G. H. Lees, J. P. Mills, T. O'Brien, Kathleen O'Donnell, H. J. Porter, L. Samuels, *G. H. W. Gough, *V. T. Smith, *Marie Wardman, *Ethel D. Willis, †R. J. Allison, †Frances G. Bullough, †J. Charnley, †L. J. Schwartz. (*Part II. Biology*).—T. H. Almond, Sybil Bailey, G. H. Bowman, Frances G. Bullough, T. Colley, S. E. Critchley, H. Dickie, P. Fildes, G. H. W. Gough, F. L. Heap, F. Isaac, A. W. Kirkham, G. H. Lees, J. P. Mills, T. O'Brien, E. Pigott, H. J. Porter, L. Samuels, A. G. Saunders, L. J. Schwartz, V. T. Smith.

SECOND M.B., CH.B.—E. R. Gilmore, C. R. Sandiford.

THIRD M.B., CH.B. (*Pathology*).—H. W. Bennett, R. Chevassut, E. Granger, J. F. C. O'Meara, J. Rigby.

D.PSYCHOL.MED.—R. B. McKail, J. L. Stephenson.

* Chemistry alone. † Physics alone.

UNIVERSITY OF DURHAM.

THE following were among the degrees conferred at a Convocation on March 28th:

M.D.—S. P. Bedson, W. J. N. Vincent, J. C. Young.

M.D. (*for Practitioners of Fifteen Years' Standing*).—H. W. Collier, G. F. Darker, J. S. Evers, D. McArthur, G. H. Pearce.

M.B.—W. Bell, C. Duncan, W. A. Elliott, I. D. Evans, L. H. W. Iredale, R. R. Lishman, E. R. A. Merewether, S. E. Murray, W. S. Murray, F. J. Nattrass, R. P. Ninnis, C. O'Hagan, I. M. Pirrie, E. Ritson, W. K. Russell, A. Sutcliffe, S. Thompson.

B.S.—W. Bell, W. A. Elliott, L. H. W. Iredale, R. R. Lishman, E. R. A. Merewether, S. E. Murray, W. S. Murray, F. J. Nattrass, R. P. Ninnis, C. O'Hagan, I. M. Pirrie, E. Ritson, W. K. Russell, A. Sutcliffe, S. Thompson.

B.HY.—G. C. M. M'Gonigle, J. Steedman.

The following candidates have been approved at the examinations indicated:

THIRD M.B., B.S. (*All Subjects*).—*C. C. H. Cuff, A. F. R. Dove, G. B. Egerton, G. Irving, H. A. Lake, Grace W. Pailthorpe, R. Selis, H. Williamson. (*Pathology and Elementary Bacteriology only*).—Mary R. Campbell, R. A. Hooper, W. O. F. Sinclair, A. C. Taylor, R. Welch. (*Materia Medica, Pharmacology and Pharmacy, Public Health, Medical Jurisprudence only*).—L. B. Frere, H. K. Graham-Hodgson, D. O. Richards.

* Second class honours.

UNIVERSITY OF ABERDEEN.

THE following were among the degrees conferred at a meeting of the Senate on March 25th:

LL.D. (*Honoris Causâ*).—William Mackay, Historical Writer, Inverness; Peter Chalmers Mitchell, M.A., D.Sc.Oxon., F.R.S., Secretary of the Zoological Society of London; His Excellency the Honourable Walter Hines Page, Ambassador of the United States of America; Alexander Reid Urquhart, M.D., late Physician-Superintendent, Murray's Royal Asylum, Perth.

M.D.—*C. C. Twort, †G. E. Shand, W. Beedie, D. G. Cheyne, D. M. Maciver, A. G. Troup.

M.B., CH.B.—‡A. E. Campbell, §I. G. Bisset, A. S. K. Anderson, J. G. Brown, A. W. H. Cheyne, Elizabeth E. Elmslie, A. R. Fraser, J. B. Fraser, C. M. Geddie, E. Gordon, G. A. Gordon, R. Grey, A. W. Henry, C. B. Hogg, T. M. Horsfall, J. Kirton, Helen Lillie, K. P. Mackenzie, H. Mortimer, J. McG. H. Reid, G. W. Riddell, G. L. Ritchie, J. L. Smith, F. W. Stewart, A. Topping, G. E. Valentine, A. J. Will, J. W. Wood.

D.P.H.—D. G. Cheyne, J. Elder, ‖A. F. Legge, H. J. Rae, W. G. Thomson.

* Highest honours for thesis. † Commendation for thesis.
‡ First class honours. § Second class honours.
‖ Passed with credit.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examinations indicated:

INTERMEDIATE M.B. (*Part I.*).—E. O. Marks, T. P. Chapman, R. T. Stoney, A. G. Wright, F. J. G. Battersby, C. R. L. Littledale, R. Gordon, F. McG. Ferguson, L. Blumberg, W. Garde-Browne, E. Parker, G. Marshall, E. Lipman, J. D. Leahy. (*Part II.*).—Esther V. Adderley, A. F. Grimbly, R. C. B. Ramsay, J. W. Bigger, G. Joughin, J. A. C. Kidd, R. B. N. Smartt, C. B. Bevis, A. L. Wilson, C. F. Brady, C. O. J. Young, C. H. Comerford, A. H. Price, A. H. Watson, E. E. Beatty, T. W. Sweetnam, T. Swanton, A. A. L. Albertyn, M. McG. Russell, T. G. Roche, G. Doran, J. H. C. Walker, R. H. Graham, E. D. T. Hayes.

FINAL M.B. (*Part I.*).—*E. J. McSwiney, *N. McC. Boyce, *F. Harris, *D. Hennessy, *E. W. Craig, *C. D. Pile, G. Bateman, J. M. Ryan, C. C. Albertyn, A. C. Bateman, E. Boyers, E. Ross, W. E. Tyndall, M. B. King, C. McL. West, H. S. Collins, D. C. Pim, E. J. Mannix, A. W. P. Todd, E. Robinson, W. B. Cathcart, F. R. S. Shaw, S. W. Fisher, G. Stanton, A. G. Fisher.

FINAL M.B., CH.B., B.A.O. (*Medicine*).—E. E. Lavy, J. A. Quin, C. P. Kelly, J. C. A. McCalden, E. L. F. Nash, W. R. L. Waters, F. C. Atkinson-Fleming, N. H. H. Haskins, G. Buchanan, T. W. Allen, T. V. Oldham, E. A. P. Murphy, G. A. Bridge, M. J. Ryan, R. J. B. Madden, H. I. G. Rutherford, J. S. English, W. Foot. (*Surgery*): *R. G. Atkins, *J. D. Oliver, T. D. Power, W. H. R. McCarter, F. G. Flood, J. T. McCullagh, Q. V. B. Wallace, T. A. Lawder, R. J. B. Madden, A. Newton-Brady, T. V. Oldham, H. W. Browne, H. C. D. Miller, F. C. Atkinson-Fleming, R. C. Lowe, J. A. Quin, T. J. L. Thompson. (*Midwifery*): *P. W. McKeag, *Dorothy E. Webb, H. C. D. Miller, B. C. O. Sheridan, E. P. H. Vickery, W. J. Ronan, A. Newton-Brady, J. S. Dockrill, E. H. P. Murphy, W. A. Ryan, R. L. Vance.

* Passed on high marks.

DR. ARTHUR E. HORN (Senior Medical Officer) has been appointed a member of the Executive Council and an official member of the Legislative Council of the colony of the Gambia.

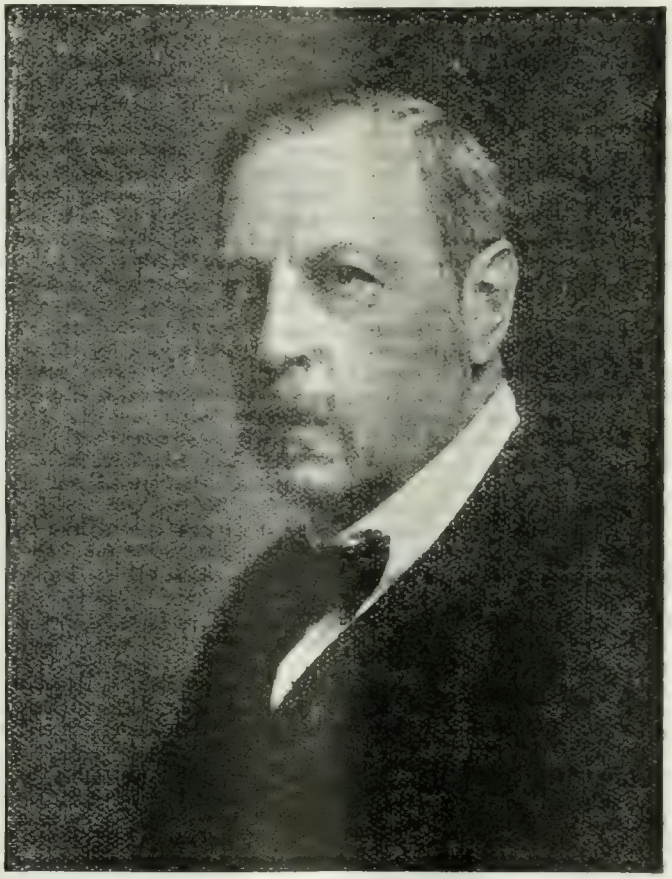
Obituary.

WILLIAM BRUCE CLARKE, M.A., M.B.Oxon., F.R.C.S.,

CONSULTING SURGEON, ST BARTHOLOMEW'S HOSPITAL.

MR. BRUCE CLARKE died on March 28th, at his residence, Oakleigh, Eastbourne, from pneumonia following influenza. He had recently suffered from ill health, and had retired from active practice. He resigned his hospital appointment in 1912.

Bruce Clarke was the son of the Rev. W. W. Clarke, of North Wootton, King's Lynn, Norfolk, and was born in his father's rectory on March 25th, 1850. He received his education at Harrow, and proceeded in due course to Pembroke College, Oxford, becoming Burdett-Coutts Scholar, and otherwise distinguishing himself. His medical studies, though he went for a short time to the University of Leipzig, were mainly pursued at St. Bartholomew's Hospital. He was admitted to the degree of M.B. in 1877, in which year he took the diploma of M.R.C.S.; he passed the Fellowship examination two years later. Before taking any of these qualifications he had filled the appointment of Demonstrator of Comparative Anatomy at Oxford in 1872. He was house-surgeon to Sir William Savory at St. Bartholomew's Hospital in 1878, and house-physician to Dr. James Andrew a year later. He resigned the latter appointment in April, 1880, and in that year was elected Assistant Demonstrator of Anatomy, being promoted a year later to the Senior Demonstratorship.



Photograph by] WILLIAM BRUCE CLARKE. *[Elliott and Fry.*

It was in 1881, the year that he became full Demonstrator, that Bruce Clarke was elected Assistant Surgeon to the West London Hospital, and three years later he was advanced to the appointment of Surgeon. He resigned in 1893. He worked actively at the Hammersmith hospital, and was President of the West London Medico-Chirurgical Society in 1896–7. For one year, 1883–4, Bruce Clarke was attached to St. Peter's Hospital, but resigned after that short tenure of office as the extra duties involved by his promotion in 1884 at St. Bartholomew's and the West London Hospital prevented him from holding so many appointments. Yet he learnt much at St. Peter's about a department of surgery in which he afterwards greatly distinguished himself.

In 1883 Bruce Clarke was elected Assistant Surgeon and in 1902 full Surgeon to St. Bartholomew's Hospital, retiring, at his own request, in 1912 before reaching the age limit; he was also surgeon in the gynaecological ward on the resignation of Mr. Harrison Cripps.

As lecturer in anatomy, a joint appointment in the medical school of his hospital, Bruce Clarke was long familiar with the students of that great institution, for he held the chair from 1889 to 1903. At the end of that term of fourteen years he was elected joint lecturer on surgery, and held the chair for nine years, resigning in 1912. Besides being distinguished as a teacher, he held many examinerships. He was examiner in surgery at Oxford, for instance; and later he was elected on the Court of Examiners at the Royal College of Surgeons, remaining on the Court from 1905 to 1910. Lastly, he was successful in competing for the honour of membership of the Council of that College in 1905, and remained on the Council till 1910.

Mr. Bruce Clarke was for the greater part of his career an active member of the Royal Medical and Chirurgical, and Pathological Societies, contributed many papers to their *Transactions*, and frequently intervened in debate. He was a member of the British Medical Association, and a vice-president of the Section of Surgery at the Annual Meeting in Oxford in 1904.

Bruce Clarke made active use of his pen and is justly known as a distinguished writer on several subjects, visceral surgery in particular. In 1886 he was awarded the Jacksonian Prize at the Royal College of Surgeons for his essay on the diagnosis and treatment of diseases of the kidney amenable to direct surgical interference, on which was founded his well-known textbook; the essay, with addenda, appeared in 1886, and the last issue of his *Handbook of the Surgery of the Kidney* in 1911. The essay, as first published, was really an original work which was ready for the press when Sir Henry Morris's *Surgical Diseases of the Kidney* was issued. The essay did not precede the author's experience. He had learnt much from Thiersch, Ludwig, and Volkmann at Leipzig and Halle, he had gained practical experience of the surgery of the genito-urinary tract at St. Peter's and the West London Hospitals, as well as at St. Bartholomew's, and he was roused to yet greater activity by studying the surgical records and assisting at the hospital practice of Lawson Tait, Knowsley Thornton, and other operators who in the Eighties were illustrious specialists in abdominal surgery. After witnessing their operations and scrutinizing their results, he followed their example and played an active part, together with Treves, Morris, and other general surgeons, in advancing visceral surgery. He practised surgical procedures for the relief of the symptoms caused by movable kidney, preferring nephropexy, on the whole; and he took part in one of the greatest of the newer methods introduced so recently into surgery—namely, the excision of diseased intestine and the plastic union of the adjacent healthy bowel so as to restore the continuity of the alimentary canal. We are used to such surgery now, but Bruce Clarke practised and advocated excision of the caecum twenty-one years ago, when only experts, used to abdominal surgery, undertook such bold innovations.

Personally Bruce Clarke was a scholarly and genial gentleman, and a wide circle of friends deeply regret his loss. He was married twice, and leaves an only son. A memorial service was held in the Church of St. Bartholomew-the-Less on April 1st, and his remains were interred in the cemetery of North Wootton church on the same day.

We are indebted to Mr. C. B. LOCKWOOD, a colleague for many years on the staff of St. Bartholomew's

Hospital, for the following tribute to his friend's memory:

It is hard, indeed hard, to write about a dear friend and companion who has gone for ever. Only a little time has passed since he spoke so happily about his plans for the future; of the country home he was preparing, the garden he was going to have. His heart had been troublesome after his retirement from St. Bartholomew's, but had greatly improved, and he was sanguine of a complete recovery. My memory of Bruce Clarke, and close friendship with him, began in our student days, when he had just come from Oxford. I think he has told me that before entering at Oxford he had begun engineering. In consequence he was somewhat older than the general run of students, a fact to which he would refer in a good-humoured way, and which, of course, he could not help considering a disadvantage. But he attained his house-surgeoncy for Sir William Savory in good time, and a very capable house-surgeon he proved himself to be. Then, too, he was house-physician for Dr. James Andrew, but during a part of his term was not very well, and naturally asked Dr. Andrew to have me for his substitute. Afterwards he became Senior Demonstrator of Anatomy, and it was my good fortune to work with him for many years in the closest terms of intimacy and of friendship. A more loyal and honourable colleague it would have been impossible to find. He was absolutely open and straightforward and trustworthy in every respect. He was an admirable organizer, and had all the arrangements of the anatomical department in perfect order. In those days the discipline of the students became stricter, but they conformed to the change in the right spirit, for they knew that they were dealing with a good-tempered and just man, and of whom they clearly understood that whatever he did was done in the most straightforward way, and with the best interests of the school and of the students always at heart. His demeanour towards his pupils was kindly and pleasant and very good humoured. He taught them by lecture or by demonstrations in a clear, common-sense way, laying stress upon the essentials and upon the principles rather than upon the minuter details. A good teacher, he taught men to think; an honest, upright man, he gave them an example of good conduct. During his demonstratorship he and those who worked with him were linked together in bonds of the most cordial friendship, and worked together in perfect harmony; and much of this was due to the extraordinary good nature and entire unselfishness of him who was their senior colleague, senior in office, and senior in years. We all had for him feelings of true affection, and have lost in him a dear friend.

Although somewhat handicapped by coming up late from Oxford, yet he had not a long wait for his assistant surgeoncy. In those days election to that office was in the hands of the governors, and, if the vacancy was contested, a strenuous election had to be fought. He entered the lists with characteristic energy, organized his voters like an old parliamentary hand, and won against a strong opponent—the late Jonathan Macready. The system which brought two such men into antagonism was not right; it is well that it has been abolished. But the contest was waged in the fairest way, and Bruce Clarke was full of regret and sorrow for the bitter disappointment inflicted upon his opponent. Macready, too, accepted his defeat without a word of recrimination. Throughout that fight neither uttered a hard word nor did an ungenerous deed. Burke's noble phrase, "I will not seek my own advancement by depreciating the merits of my rivals," might well have been theirs. How much those two men were to be admired and respected!

At that most excellent school of surgery, the West London Hospital, Bruce Clarke had already had considerable experience, and was therefore well equipped to enter upon his new office. To surgery he brought that great essential, a sound knowledge of anatomy, and added to it manipulative skill, coolness and resource in emergency, and courage which never failed. He was particularly well adapted for operations which come under the designation of "major," and few could carry through a difficult and complicated hysterectomy better than he.

Bruce Clarke had an engaging personality. Strongly built and energetic, he was fond of country rambles, and had a considerable knowledge of geology, which made his amiable and pleasant companionship yet more interesting. When towards nightfall the quarters were rough and the fare homely, everything was taken as part of the day's march, and borne with imperturbable good nature. But, although so strong looking, he was not endowed with perfect stamina. Long-continued fatigue made him more than tired: it often made him ill. To live with any one for days together on board of a small sailing boat is a revelation in character. Whatever happened on these excursions—and many things used to happen—he was always willing to help at any moment and in any way, and with the utmost alacrity. No wonder that his friends were so fond of him, and so often added an endearing expression to his name. A good friend could not help being a good host, and his kindly hospitality was all the pleasanter when it was seen that he had taken much pains and trouble to provide that which he thought would give pleasure.

In his home he had a carpenter's shop, and was himself a very good craftsman. Many well-made articles came from his hands. But he could turn his hand to anything, and at one time he got much amusement and, it is to be feared, little profit in buying and investigating those paintings which are called speculative, and which are dragged from the dusty gloom of old curiosity shops. Anything to do with architecture was of the greatest interest to him. With the help of an architect he built his house in Harley Street, and afterwards with the help of a carpenter worked out the fittings and decorations. He derived the greatest pleasure in hunting for old Dutch tiles, oak panelling, and antique furniture. A year or two ago he bought one of those old and substantial farm houses in North Wilts; and was almost up to the last occupied in altering it, and making it suitable for his needs. It is sad to think that the pleasures to which he looked forward with so much anticipation will never be his, and no one ever deserved them more.

Bruce Clarke was a real Englishman. Outwardly he gave the impression that he never had a sentimental thought or felt a sensitive impression. But that is the way with the best of the race. Beneath that exterior was an affectionate, tender-hearted human being, who felt acutely, and who had much to endure. To him the misfortunes of his friends were his own misfortunes, and his death has been to them indeed a bitter pang.

Dr. SAMUEL WEST (Consulting Physician to St. Bartholomew's Hospital) writes: The striking feature of Bruce Clarke was the transparent simple honesty of the man. His character was stamped upon his face. He looked what he was, and inspired at once a confidence which was never falsified. His very honesty made him seem a little blunt or short of speech and direct in manner, but one felt instinctively that there was no scheming or finesse in him—that he meant what he said and said what he meant. Kind and good-natured, he never lost his temper, or, no matter what the provocation, let temper get the better of his tongue or judgement. A man of strong opinions and ready to express them, yet he never gave offence. He was careful to study his facts before coming to a conclusion, so that his opinions were always respected by committees, even when they did not carry conviction. He was essentially a peacemaker, and was always ready to meet opposition half way. He had good business instincts and capacity, which were of great use to his colleagues in many ways. Essentially unselfish and not in the least self-seeking, he was always ready to do a kindness in the kindest way, so that he might not seem to confer a favour. This his colleagues, and students without number, know. Though a keen surgeon, he always treated medicine and physicians with respect, and this was not so much the fashion forty years ago. He could understand and appreciate the medical aspects of a case, and so was a surgeon whom physicians were glad to meet.

He was a sterling friend, as more than forty years' experience proved. During all that time I never knew him do or say a thing I could have wished not done or said. The youth was father to the man, for at Oxford he showed the same sterling characters which marked him

throughout life. He made many friends there and after, and kept them all.

One other characteristic of Bruce Clarke was his superabundant energy and physical strength. This makes it difficult to realize that out of a band of contemporaries, few so strong as he, he should be the first to go. He has gone, alas! and left the world the poorer.

JOHN LLOYD ROBERTS, M.B., C.M., D.P.H., J.P.,

PAST PRESIDENT AND FORMERLY HONORARY SECRETARY, NORTH WALES BRANCH, ABERGELE.

It is with much regret that we have to record the death of Dr. J. Lloyd Roberts, which took place at his residence in Abergele on March 19th. He had been in failing health for the last three or four years, and latterly his friends noticed with sorrow that his strength was rapidly giving way and the end approaching, though his indomitable will and keen intellect kept him going in the work of his public offices almost to the last.

Born at Denbigh in 1846, he was the son of the late Rev. R. J. Roberts, M.A., vicar of the town. For his professional training he proceeded to the University of Edinburgh, where he graduated M.B. and C.M. in 1870; in the same year he commenced practice in Denbigh. He soon began to pay special attention to sanitary science, and in 1873 was appointed medical officer of health for the borough of Denbigh, which office he resigned because the town council of those days would not move as fast as the sanitary arrangements of the borough demanded, and as an active, up-to-date medical officer considered necessary. Subsequently he secured practically all the public health appointments in his district—namely, medical officer for the whole of the St. Asaph Union, the Abergele urban and rural districts, and the Prestatyn urban district, appointments which he retained with the confidence of his councils up to his death; he was the oldest medical officer of health in North Wales. In 1888 he took the D.P.H. of the English Conjoint Board.

Whilst resident in Denbigh, in addition to his public offices and private practice, he was for years honorary surgeon to the Denbighshire Infirmary, in which work, and in the management of the institution generally, he took intense interest and put forth strenuous efforts to bring the institution and its methods up to date; though his views did not always commend themselves to the Committee of Management, everybody admired his sincerity of purpose and the ability with which he dealt with such questions.

On leaving his native town for Colwyn Bay some years ago his connexion with the infirmary ceased, but he was elected and remained to the end a member of the consulting staff.

He joined the British Medical Association in the early seventies, and the North Wales Branch never had a more faithful, zealous, and devoted member than John Lloyd Roberts. In 1878 he was elected Honorary Secretary of the Branch, a post which he filled with great credit up to the year 1885, when he became President; during the same year he was one of the vice-presidents of the Section of Public Health at the Annual Meeting of the Association. During his term of office as Secretary he put new life into the Branch by his indomitable energy and largely increased its membership. On his retirement members of the Branch presented him with a massive silver inkstand as a token of their appreciation of his services. He evinced the same active interest in the Association until failing health prevented him.

Dr. Lloyd Roberts, in addition to his professional duties, took his share in public life. For some years he was a member of the Denbigh Town Council, and was appointed a Justice of the Peace for the borough. In his early days he held a commission as Lieutenant in the Denbighshire Rifle Volunteers, and was one of the oldest members of the Royal Denbigh Lodge of Freemasonry. In politics he was a strong Conservative, and actively supported the Conservative organizations in the county. He was a strict and consistent Churchman, and during his residence at Denbigh, being a man of considerable musical ability, was a member of the choir at St. Mary's Church, and filled the office of churchwarden. In 1885 he married a daughter of the late Mr. J. Parry Jones, of Plâs Clough, Denbigh, a former Mayor of the borough, who predeceased him a few years ago, and he is survived by two daughters to mourn his loss. The funeral took place at Llandulas on March 21st.

THE death is reported at Cairo of Captain CHARLES VIVIAN BERESFORD STANLEY, late R.A.M.C., aged 38. He was educated at Trinity College, Dublin, where he took the degrees of M.B., B.Ch., and B.A.O. in 1900, and that of M.D. in 1902; entered the R.A.M.C. as lieutenant on September 1st, 1902; became captain on March 1st, 1906; and retired on October 22nd, 1913. Before entering the R.A.M.C. he served as a civil surgeon in the South African war, taking part in the operations in the Transvaal, Orange River Colony, and Cape Colony, and gaining the Queen's medal with four clasps. On November 15th, 1907, he joined the Egyptian army, and served in the Soudan in the operations at Talodi in Southern Kordofan, gaining the Egyptian medal with clasp. Last year he was stationed at El Obeid in Kordofan. On resigning the service he joined the reserve of officers, and the sanitary department of the Egyptian Government.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Andouard, professor in the Medical School of Nantes, Associate of the Académie de Médecine; Dr. Bertheux, for many years professor of clinical medicine in the Medical School of Rennes; Dr. Charles Esmonet, editorial secretary of the *Progrès médical*, and author of memoirs on the absorption of digestive ferments in the intestine, tuberculosis in patients suffering from typhoid fever, and other scientific subjects, and many articles on the history of medicine, aged 41; Dr. Georg Joachimsthal, professor of orthopaedic surgery in the University of Berlin, director of the University Orthopaedic Policlinic, and author of numerous contributions to the literature of his special province of practice; Dr. Robert C. Moon, of Lansdowne, Pennsylvania, well known for his work among the blind, aged 70; Dr. Ralph Lyman Parsons, of Ossening, New York, a prominent psychiatrist of the United States, and author of many papers dealing with the care and treatment of the insane, aged 85; and Dr. William Kelly Simpson, professor of laryngology in the College of Physicians and Surgeons, Columbia University, New York, aged 58.

Public Health AND POOR LAW MEDICAL SERVICES.

FOOT AND MOUTH DISEASE.

THE Annual Report of the Chief Veterinary Officer of the Board of Agriculture and Fisheries, for 1912, which has been delayed by his prolonged illness, contains an instructive account of the measures adopted by the Board of Agriculture in combating some formidable outbreaks of foot and mouth disease. The outbreaks are divided into three groups.

The first outbreak appears to have originated in Ireland. It was discovered in Liverpool, and inquiry showed that infection had taken place either on board the boat carrying the cattle or in Dublin before shipment. Efforts were made to follow the line of infection through the various markets and into a number of farms. Direct contact appears to have led to infection in the majority of cases, but it is stated that in one instance, a dealer probably carried the infection from the Wakefield Market to his farm on his clothing or his boots. The Chief Veterinary Officer advises that veterinary inspection in local markets should be more adequately carried out. In one market the inspector had only forty minutes for the inspection of about 1,500 animals.

The second group was one the origin of which could not be definitely traced, but which occurred in districts into which cattle from Ireland had been imported in large numbers. The system of veterinary patrol, with daily inspection in many areas, is described in sufficient detail to prove that great vigilance was exercised by the Board, and that necessary measures were carried out with expedition. The affected area is described as one of the most heavily stocked districts in Great Britain. In all 10 outbreaks took place. The actual number of animals infected is not given, but from the account it appears that about 36 animals showed definite signs of foot and mouth lesions. The policy of stamping out the disease by slaughtering all contacts, and often all the cattle and sheep in adjoining fields, was carried out extensively. Whenever it was held that the disease was spreading along the course

of a stream, the advisability of clearing out the animals in the contiguous fields was considered. A very large number of animals was slaughtered; the last case was notified on September 27th, the first outbreak having occurred on July 27th. The third group of epidemics includes those in which no connexion with Ireland could be traced. A number of counties were affected, and in each the same policy as that adopted in the case of the second group was followed. In Leicestershire the spread was checked, but the cost was 286 cattle, 421 sheep, and 12 swine.

In all these epidemics prompt diagnosis and equally prompt slaughtering of the affected animals and all contacts were carried out. But even these drastic measures did not always succeed in checking the spread of the disease at once, and it was only after a careful study of the circumstances, the topography of the areas, and the movements of the cattle that it was possible to gain a mastery over the infection. Isolation cannot be enforced, partly because there is not sufficient accommodation, and partly because the danger of indirect infection by the men employed on the farms would remain. The officers of the Board apparently find it extremely difficult to avoid carrying the disease from animal to animal during inspection, in spite of stringent regulations in regard to the wearing of sterilizable overalls and refraining from handling another animal after an infected one has been examined.

VERMINOUS CHILDREN.

Conviction under the Children's Act.

AT the Stratford Police Court, on March 11th, the Ilford Urban District Council, on the information of the deputy medical officer of health, Dr. G. E. Oates, proceeded under Section 12 of the Children's Act, 1908, against the father of a child attending one of the schools of the local educational authority. It was stated on behalf of the council that the child throughout the last three years had been under the continual observation of the health department, by reason of the verminous condition of its head and its neglected condition. The offence alleged against the father was that having custody of a child, aged 11 years, he unlawfully neglected the said child in a manner likely to cause it unnecessary suffering or injury to its health. There was a second charge, alleging that he caused the child to be so neglected. The parents of the child denied the charges made against them. The justices considered the case proved, but as it was the first of its kind before them, inflicted a penalty of £1 and costs. The Bench expressed its concurrence with the hope expressed by the solicitor for the prosecution that the case would be a warning to other parents.

SCIENTIFIC RESEARCH FOR THE LOCAL GOVERNMENT BOARD.

THE President of the Local Government Board has authorized the following special researches to be paid for out of the annual grant in aid of scientific investigations concerning the causes and processes of disease:

1. An investigation by Dr. Eardley Holland into the cause of stillbirths.
2. A continuation of the Board's inquiry into the cellular contents of milk by Professor Sims Woodhead.
3. A continuation of the Board's inquiry into the causes of premature arterial degeneration by Dr. F. W. Andrewes.
4. An investigation by Dr. M. H. Gordon and Dr. A. E. Gow into the etiology of epidemic diarrhoea in children.

Announcement of further investigations will be made at a later date.

Medico-Legal.

BANKRUPT PATIENT.

A CORRESPONDENT has recently attended a patient who refuses to pay on the ground that he is already a bankrupt; the attendance dates from after his bankruptcy.

*** It is to be feared that our correspondent has little chance of recovering his claim in the County Court; if the account is over £20, and if the bankrupt did not disclose his bankruptcy, it might be possible to proceed by way of a criminal prosecution. Before taking proceedings our correspondent would of course consult his solicitor.

A SUM of £294,644 has been received by King Edward's Hospital Fund for London from the executors of the late Sir Julius C. Wernher, but, large as is the amount, it does not represent everything that the fund will probably receive from this source. The fund is entitled to receive one-twelfth of the value of the residuary estate, and this value may prove to be very much greater than the testator anticipated. The sum already paid to King Edward's Hospital Fund includes a specific bequest of £25,000, while among the other specific bequests in the will for public purposes were gifts of £100,000 to the Imperial College of Science and Technology in South Kensington; of £20,000 to the German Hospital, Dalston; of £5,000 to the London Hospital; and of £250,000 for the purpose of building a university near Cape Town.

Medical News.

THE Institute of Inventors, 20, High Holborn, London, W.C., invite suggestions for the amendment of the Patent and Designs Act.

THE house of the Royal Society of Medicine, 1, Wimpole Street, W., will be closed for the Easter holidays from Thursday, April 9th, to Tuesday, April 14th, both dates inclusive.

AT the meeting of the Pharmaceutical Society of Great Britain, at 17, Bloomsbury Square, W.C., on Tuesday next, at 8 p.m., a paper on the organic derivatives of arsenic and antimony will be read by Professor G. T. Morgan, D.Sc.Lond., Professor of Chemistry in the Royal College of Science, Ireland.

AN exhibition of the arts and industries of the blind will be held at the Church House, Westminster, from June 18th to 24th in connexion with the International Conference on the Blind. Particulars can be obtained from Mr. Stuart Johnson, 64, Denison House, 296, Vauxhall Bridge Road, S.W.

AT the annual meeting of the Society for the Study of Inebriety to be held at the house of the Medical Society of London, Chandos Street, W., on Tuesday next, at 4 p.m., a discussion on the female inebriate will be opened by Lady Henry Somerset, founder and lady superintendent of Duxhurst colony for women inebriates.

THE British Oto-Laryngological Society, which came into existence about a year ago, held its first annual dinner on March 18th. The chair was taken by Mr. Charles Heath, who in the course of a short speech relating to the foundation of the society and its aims, said that the rapid growth in its membership proved that the opportunities afforded by it were fully appreciated. The proceedings included the passage of a vote of thanks to Dr. Walker Wood for the services rendered by him to the society in the capacity of honorary secretary.

As in former years, summer classes for post-graduation work will be held during May at the Glasgow Royal Infirmary. During the first fortnight there will be courses in clinical medicine, diseases of the throat and nose, clinical examination of urine and digestive products, haematology, electro-therapeutics, anaesthetics, and diseases of the ear in children. During the second fortnight courses are offered in clinical surgery, operative surgery, surgical diagnosis, urology, clinical gynaecology, electro-therapeutics, and diseases of the ear in children. Further particulars will be found in our advertisement columns (p. 47). A syllabus giving full details may be had on application to Dr. J. Maxtone Thom, superintendent, at the Infirmary.

THE forty-third Congress of the German Surgical Society will be held at Berlin in April (15th to 18th), under the presidency of Professor W. Müller of Rostock. The programme includes 150 addresses, communications, and demonstrations. The principal subjects proposed for discussion are: The causes and treatment of post-operative hernia; malignant tumours; radium and mesothorium; the permanent results of thyroid transplantation in man (to be introduced by Professor Th. Kocher of Berne); tumours of the bladder. The papers to be read deal with the surgery of the skull, the brain, and the spinal column; and of the thorax, the lungs, the oesophagus; the pancreas, the spleen, the intestine, and the stomach.

ON March 9th a testimonial, towards which a large number of friends and patients had subscribed, was presented to Dr. and Mrs. Alexander R. Coldstream, of Florence, on his retirement after thirty years' practice. The testimonial was in the form of a cheque for £245, enclosed, together with a list of the subscribers, in a silver vase nine inches high, and mounted on an ebony pedestal. The vase is a beautiful piece of *repoussé* work, and around it runs a suitable inscription. Dr. Coldstream is a son of the late Dr. John Coldstream, a well-known Edinburgh physician, who was one of the founders and for many years secretary of the Edinburgh Medical Missionary Society. Dr. Coldstream has been in practice in Florence since 1882, when he succeeded Dr. Young.

IN moving the adoption of the report submitted at the annual meeting of the East London Nursing Society, at the Mansion House on March 30th, Sir Thomas Barlow made reference to a delusion by no means uncommon among the general public—that when home, or district, or village nursing is in question any kind of nurse will do. A district

nurse, he said, should be exceedingly well qualified; this was everywhere true, and especially of the East End of London, for many districts in this area had been shown by the working of the Insurance Act to be understaffed from a medical point of view. This made it all the more necessary that the nurses employed should be both adequately qualified and women of the right, tactful, and sympathetic kind. The report submitted showed that the 21 nurses employed by the society had between them paid 97,182 visits to 5,139 patients, an average of 18.9 a case. The year ended with a small balance in hand.

THE total number of medical students in the universities of Switzerland during the winter session 1913-14 was 2,657. They were distributed among the several universities as follows: Geneva, 853, of whom 254 were women; Berne, 568, of whom 79 were women; Zurich, 566, of whom 79 were women; Lausanne, 345, of whom 65 were women; and Basle, 325, of whom 20 were women. Of the total number of students 1,375 were foreigners; of these 416 were women.

IN accordance with the invitation referred to last week, the medical profession in Blackpool has appointed a committee to confer with the board of management of the Victoria Hospital with regard to administrative reforms. It was notified that consent to a conference was given subject to stipulations, among which were certain resignations. The board at first declared the stipulations to be outside its competence, but local opinion, as gauged by correspondence and editorial comments in the newspapers, seems to be that the board has been misguided, and will eventually see the propriety of giving way all round. This result seems the more probable because the subscribers, desirous apparently of infusing new blood into the administration of the hospital, issued directions at a recent meeting for the enlargement of the board of management by the creation of three additional seats. These are to be filled at a meeting on Monday, April 6th.

PROFESSOR J. J. FINDLAY lectured on the dramatic impulse in children at a meeting of the Child Study Society at the Royal Sanitary Institute on March 19th, when Mr. John W. Gilbert, Chairman of the London County Council Education Committee, presided. Professor Findlay defined the dramatic impulse in children as an effort to find an outward expression of the child's inner nature by means of action, and pleaded that this impulse should be allowed to find a natural outlet untrammelled by artificial restrictions. The child's drama was essentially imitative, because all his experience came from the world outside; and it included every form of action, such as singing, dancing, story-telling, and even clay-modelling, and mud-pies. A very young child usually wove a story or situation which happened to appeal to him into what was incorrectly termed a game, in which the drama was cut down to its simplest elements. As a rule he was only interested subjectively in the situation, which was generally incoherent to spectators, whilst the apparatus was crude. A year or two later he was no longer content to play alone or with two or three others, but formed one of a band of children, some of whom took the part of spectators. Actors and audience alike had grown more critical, and the result was that the play gradually became more rational and coherent until it was finally stereotyped into a formal game. This was probably the origin of the country dances and morris dances. At the age of 11 or 12 the child either stopped acting or began to study it seriously. He began to be afraid to be original, and therefore preferred to act in the plays of others rather than in those composed by himself or his companions. His performance became conventional, and the possibility of original work only appeared after he had reached the age of 18 or 19; during the years of adolescence his powers were in abeyance, and should never be forced. There had recently been a movement in this country in favour of dramatic representations in the schools, and there was danger of the dramatic impulse being degraded in young children unless the plays were worked out and really felt by the children themselves. Once the drama became conventionalized it lost its real office as an expression of the inner life, for children were only too willing to degenerate into little machines. The drama was important for many reasons, one being that it demanded and combined activities in many different directions, and also because it gave opportunities for enlargement and improvement of speech such as could not be obtained from grammar lessons or formal compositions. Above all, it was important because it enabled the child to withstand the meretricious attractions of the world outside by filling his inner life with images of real worth and beauty.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MOTOR BICYCLE.

A MEMBER, nearly 50 years of age, is thinking of using a light motor bicycle, and asks for advice. He wishes to get a light, easily-started machine for riding at slow and moderate paces, but which will be reliable and not give trouble. He asks if it would be advisable to buy a 2-stroke engine, or whether it should be a belt-driven, or chain and belt combination; and if a 2¾-h.p. machine is heavy enough, or should he go in for a 2½-h.p.? He desires to know which of the following would suit him best: (1) Wolf; (2) Levis; (3) Clino; (4) Connaught; (5) Singer; (6) Triumph; (7) Veloce (chain drive).

X-RAY TREATMENT OF RINGWORM.

S. B. C. asks if it is safe to use currents of from 2 to 3, 4 or 5 milliampères through a tube for the *x*-ray treatment of ringworm of the scalp. With a small tube and hard, to get the B tint of Sabouraud's pastille with a current of from ½ to 1 milliampère requires from 10 to 20 or more minutes. In treating the whole scalp by the 5 exposure method, this means that it takes from 1⅓ to 2½ hours to finish. With a current of from 2 to 5 milliampères this time could be very greatly reduced, and he is told that some operators take only from 2 to 3 minutes' exposure for each area. This means that the whole scalp could be irradiated in about three-quarters of an hour. He realizes that with such reduction of time there is greater risk of permanent alopecia; but, apart from this increased risk, is the short method devoid of danger?

ANSWERS.

CYCLE SADDLES.

DR. W. MORLAND HOCKEN (Birkenhead) writes in reply to "Cyclist": I should advise a genuine Christy saddle after an experience of many years and thousands of miles. If the patient is a light weight, say, up to 10 st., a lady's model is the nicest.

DIABETIC DIETING.

OMEGA.—We are advised that as each case of diabetes requires special and individual dieting, and that in particular the amount of carbohydrate food should be adjusted to each individual, it is impossible to recommend the use of fixed diet tables. Any work on dietetics may be used for the construction of dietaries.

THE TREATMENT OF BRONCHIAL ASTHMA.

SEVERAL replies have been received to the inquiry of "A General Practitioner" with regard to the treatment of bronchial asthma (March 21st, p. 692).

Dr. CHARLES G. JARVIS (Paris) writes: Every one must agree that the therapeutics of bronchial asthma are highly unsatisfactory. Every suggestion, however, may be helpful, and I should like to mention the good results obtained in a surprisingly large number of cases by the following combination, which appears to act as an antispasmodic and a cardiac tonic: Caffein valerianate grs. ij, theobromine grs. v, in a cachet. I have found that two to four of those cachets in the twenty-four hours often suffice to ward off the attacks, or, at any rate, to render them less distressing, and the necessity for such potent remedies as morphine or adrenalin is thus obviated. The cachets should be kept in a well-closed box as their odour is unpleasant.

Dr. ALEXANDER FRANCIS (London) writes to call attention to the view put forward by Dr. Francis Hare (BRITISH MEDICAL JOURNAL, 1911, vol. ii, pp. 1443, 1268, 1676; 1912, vol. i, p. 105) to the effect that bronchial asthma is due primarily to disturbance of the vasomotor system. "With an unstable vasomotor centre climatic and other irritations produce a cutaneous vaso-constriction and a compensatory vaso-dilatation elsewhere. If the vaso-dilatation happens to occur in the bronchial tubes, asthma, bronchial catarrh, etc., result. Moreover, the vaso-dilatation supplies a condition favourable to the growth and development of various micro-organisms, and in this way a microbic infection is apt to be added as a complication. Vaccines may destroy the micro-organisms, but they do not get at the root of the matter, and, by lowering the general resistance, not infrequently add to the patient's troubles. An example of the effect of the vasomotor disturbance is to be found in patients who are

susceptible to 'colds.' . . . It is not to be wondered at that the asthmatic condition is not removed by nasal operations, vaccines, and the administration of drugs. I have found that it is possible, by touching various spots on the mucous membrane with a galvano-cautery point to reduce or raise the blood pressure at will, and at the same time to render the vasomotor centre more stable. The effect of high pressure is most marked. The result is obtained, I believe, through the vaso-dilator and vaso-constrictor fibres of the sympathetic. Any mucous membrane will serve, but the nasal mucous membrane is the most accessible and reliable. The more healthy the mucous membrane the better the result. The most difficult cases are those in which mucous polypi exist. After removal of polypi the prognosis is usually worse."

Dr. J. E. MIDDLEMISS (Leeds) directs attention to a report of a case of bronchial asthma successfully treated by hypnotic suggestion published in the JOURNAL of January 24th, p. 194.

LETTERS, NOTES, ETC.

MILWARD FUND.

MR. WILLIAM SHEEN, Honorary Treasurer (2, St. Andrews Crescent, Cardiff), acknowledges a further subscription of £10 to this fund from the Blackburn Division of the British Medical Association, through Dr. J. Shearer, Honorary Secretary.

THE OPHTHALMOLOGIST AND THE PHYSICIAN.

DR. C. O. HAWTHORNE (London, W.) writes: I am indebted for your courteous reference (BRITISH MEDICAL JOURNAL, March 28th) to the contribution made by myself to the Oxford Ophthalmological Congress in July last, and published in the *Ophthalmoscope* for September, 1913. May I say that it is a little difficult from the phrasing of your annotation to know how far this is supposed to summarize my statements on the one hand, or to represent the comments of your contributor on the other? For example, one-third part of the annotation is occupied in emphasizing the possibility of ophthalmoscopic examination without the use of a mydriatic drug; whilst this subject, so far as it is dealt with at all in my paper, occupies at the outside six words. To have travelled to Oxford largely for the purpose of announcing so venerable a commonplace to a body of ophthalmological experts might well be regarded as a fatuous proceeding, and I should be sorry to be suspected of it. Again, you advance the proposition "that the physician should never omit to examine the eyes in all cases in which renal disease is suspected," whereas the whole motive of my argument is the claim that such a limited and restricted use of the ophthalmoscope is an unsound policy, and that the routine investigation of all cases in the medical department of practice ought to include an examination of the fundus and other parts of the eyeball. There are in the annotation certain other phrases for which personally I should decline responsibility, but this letter may be sufficient to indicate that the main credit of the annotation must be carried to your contributor and not to myself.

CHAULMOOGRA OIL.

WE have received a letter from Dr. Ernest E. Francis, chief medical officer of the Assam-Bengal Railway, and technical expert to the Indian Forests Economic Products Company, Limited, stating that much of the chaulmoogra oil on the market is not expressed from the seeds of *Taraktogenos kurzii*, as the crop in 1912 almost completely failed. He states that much of the oil shipped as chaulmoogra oil in 1913 was obtained from the seeds of *Hydnocarpus wightiana*, and that this oil has little therapeutic value in leprosy, while its cost in India is about one-third of that of the oil of *Taraktogenos kurzii*. So far as we are aware, the only thorough investigation that has been made of these oils is that by Power and his colleagues, published in a series of papers in recent years. In one of these by Power and Barrowcliff, published in the *Journal of the Chemical Society*, 1905, p. 884, the authors state that the oils from *Hydnocarpus wightiana* and *H. anthelmintica* have long been used in Western India and China respectively for the same purpose as chaulmoogra oil, and, further, that the oil of *H. wightiana* has been brought to the notice of Europeans as a substitute for chaulmoogra oil, and has been used in the Bombay Presidency with satisfactory results. Their further investigation shows that this oil very closely resembles the oil of *Taraktogenos kurzii* in physical characters and chemical composition. It does not therefore appear to be proved that the oil of *Taraktogenos kurzii* is superior in therapeutic property to that obtained from the seeds of *Hydnocarpus wightiana*.

DILATING THE PUPIL.

MR. B. PRASAD, M.B., Ch.B.Edin., D.T.M.Liv., writing from Delhi, informs us that on a recent occasion, wishing to examine the fundus oculi of a patient thoroughly, he ordered one drop of a 1 per cent. solution of homatropin to be put into each eye every five or ten minutes from 2.30 p.m. until 4 p.m., at which hour the patient was to present himself for examination. On the patient's return at the hour stated the pupils were still not sufficiently dilated, so another drop was placed in each eye, together with a drop of a 2 per cent. cocaine solution. The dilatation then becoming adequate, the patient was examined and sent away. At 8 p.m. Dr. Prasad was asked to visit him, and then found that he was suffering from acute atropine poisoning, the symptoms of which had commenced at 6.30 p.m. Dr. Prasad records the case because the occurrence of atropine poisoning in ophthalmic practice is comparatively rare.

GRATUITOUS CONSULTATIONS.

DR. JOHN WYLLIE, of Hull, informs us of a recent incident which amply supports the view that for a medical man to allow himself to be manœuvred into a position in which he has to express a professional opinion but cannot very well demand a fee in return is not only unbusinesslike, but may sometimes put him into a very invidious position. In a recent arbitration case, Dr. Wyllie says, he had to leave the witness-box feeling that he had made a very bad impression on the court, owing to his inability to supply chapter and verse for his statement that he had seen the claimant in connexion with his injury a long time before the date of a certificate which was before the court. Even on going home and examining his day-book Dr. Wyllie could find nothing to sustain the belief that he had expressed, but then remembered exactly when he had seen the claimant, and why there was no record of the consultation. Several months previously he had been in attendance on the claimant's father, and at the end of a long series of visits he was bothered by the wife into expressing an informal opinion as to the condition of her son's hands. In the circumstances he made no charge, and, therefore, no entry in his books. His moral is, "If any one desires one's opinion it should be theirs—on terms."

THE RESPONSIBILITY OF THE PROFESSION REGARDING VENEREAL DISEASE.

A MEDICAL MAN interested in eugenics writes to emphasize the great responsibility that rests on the medical profession of educating the lay public about the true facts concerning venereal disease:

In our public hospitals, and in our consulting rooms, do we neglect our manifest duty of warning our patients and making them realize their public responsibility to others as well as to themselves? Do we always realize that the responsibility is ours of making the lay public understand the seriousness of the trouble, and how protean it is in its effects, both immediate and remote?

In the case of gonorrhœa, do we consider the part it plays in the female in so many cases of pelvic peritonitis, and that it is the real cause of many cases requiring pelvic operations, often with grave risk to life? How difficult it is to cure? Then surely we ought to do all in our power to make patients see the necessity of active treatment till cured, and how serious is the risk to others.

In the case of syphilis, the case is even worse. What right has a syphilitic person to go about infecting others with this disease, which can be given to quite innocent persons in various ways, or to procreate children tainted and perhaps seriously handicapped by effects of the disease for the whole of their lives?

Consider the many forms of nervous disease that seem to follow it, the very large number of diseases that it seems to give rise to, years afterwards, and then let us ask ourselves this question: What right have we who do know, to allow any patient suffering from venereal disease to go away without first warning him or her of the grave risk from neglecting treatment, and the awful certainty of infecting others? Think of the enormous toll of children killed by it year by year, and of the fact that it has been recently found that at an ordinary hospital for children 10 to 14 per cent. showed signs of inherited syphilis—follow that proportion for 50 to 100 years, and its effect on our race may indeed be awful and disastrous. The other week I attended an out-patient's department and saw many cases of venereal diseases, and not once did I hear any words of advice or warning. Is this right and fair? We know—the public does not. The responsibility must be great, and is ours.

INFANT HYGIENE IN THE MEDICAL CURRICULUM.

IN the note on infant hygiene in the medical curriculum published last week (p. 730) the Royal Free Hospital, Gray's Inn Road, W.C., was inadvertently spoken of as the Royal Free Hospital for Women. The hospital, as is well known, is a general hospital for men, women, and children.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

THREE YEARS' SANATORIUM EXPERIENCE OF LARYNGEAL TUBERCULOSIS.*

BY

SIR STCLAIR THOMSON, M.D., F.R.C.P.LOND., F.R.C.S.ENG.,

PHYSICIAN FOR DISEASES OF THE THROAT IN KING'S COLLEGE HOSPITAL; LARYNGOLOGIST TO KING EDWARD VII SANATORIUM, MIDHURST.

HISTORICAL.

WHEN the International Congress of Medicine met in London thirty-two years ago a communication was read by Krishaber of Paris, in which he announced "his firm conviction that tuberculosis of the larynx, while possibly healing in one part, yet always broke out in another, and so invariably ended fatally, generally within a year, although some cases resisted for two years." About the same time Morell Mackenzie published his well-known textbook, and in that he stated that "the prognosis of laryngeal phthisis is always extremely unfavourable, and it is not certain that any cases ever recover."[1]

Since that date two important events have occurred in the history of tuberculosis: one is the discovery of the tubercle bacillus and the other is the evolution of sanatorium treatment—the former being the chief factor of progress as regards exact diagnosis, and the latter, so far, being the principal improvement in our methods of treatment.

PROGRESS.

We are nowadays able to take a somewhat less gloomy view of tuberculous laryngitis than in the days of Krishaber and Morell Mackenzie, but it yet remains a serious disease. Many medical men, unaware of the progress which has been made, are still possessed with the ideas of former days, and ask incredulously if a case of laryngeal tuberculosis is ever cured? On the other hand, there are laryngologists who, either because a few surprising arrests have come their way or because their sentiment overbalances their judgement, talk confidently of the number of cases they have actively treated and cured. I can only think that their optimism has neutralized their accuracy of observation, or that their cases have not been investigated, and that their after-histories have not been followed up with the completeness which we are able to secure at the Midhurst Sanatorium. Three years of steady work there have shown me that laryngeal tuberculosis is not necessarily the fatal disease it was thirty-two years ago; that progress may be looked for along certain lines; but that the development of lesions in the larynx is still, next to meningitis, the most serious complication of pulmonary tuberculosis. It renders the prognosis twice as gloomy as it would be otherwise, and in the majority of cases—as they present themselves at present—it is incurable.

MATERIAL.

The King Edward VII Sanatorium at Midhurst contains 105 beds. It possesses a very complete and efficient medical staff, consisting of the superintendent with his two assistants, a skilled pathologist with a well-equipped laboratory, and a distinguished visiting staff. There is therefore no difficulty in getting every case investigated most thoroughly, with full reports on the sputum, serum tests, Wassermann reaction, *x*-ray examinations, and so forth. The patients are drawn chiefly from a sedentary class—male and female secretaries, typists, clerks, school teachers, students, shop assistants, clergy, medical men, lawyers, officers of both services, and civil servants—but they are clean-living and intelligent patients, very obedient to instructions, and generally most anxious to assist in securing restoration of health. Every effort is made to admit only the early and promising cases. With a large waiting list there is no advantage to the institution in retaining there any but hopeful cases. I mention all these points to show that my results are drawn from favourable material treated under the most advantageous conditions. I have inspected the larynx of every patient admitted since January, 1911, and, when the throat was found affected or even suspicious, I have re-examined it regularly once a month. In this way I have examined the throats of 795 patients. (See Table A.)

Classification.

I must here explain that a case on admission, after being thoroughly investigated, is placed in one of the three groups of the Turban-Gerhardt classification of phthisical cases. These groups correspond approximately to the description of slight, severe, and advanced disease, and are more fully defined as follows in the official proceedings of the International Tuberculosis Committee:

Group I. Disease of slight severity, limited to small areas of one lobe on either side, and which, in case of infection of both apices, does not extend beyond the spine of scapula or the clavicle, or in case of affection of the apex of one lung does not extend below the second rib in front.

Group II. Disease of slight severity, more extensive than Group I, but affecting at most the whole of one lobe; or severe disease extending at most to one half of one lobe.

Group III. All cases of greater severity than Group II, and all those with considerable cavities.

In addition, many cases are sent in with a provisional diagnosis of tuberculosis, in which a fuller examination fails to discover any active mischief, although possibly a fair proportion show old, arrested, and obsolete lung disease. These cases we are in the habit of putting together and labelling Group IV. It is possible that in other observations many such cases have gone to swell the numbers of Group I and so augment the percentage of cures, but I propose to delete these entirely from my tables and figures, which will therefore deal only with manifest cases of active tuberculosis. (See Table A.)

TABLE A: 1911–1913.

Total number of cases admitted, 795 (Males, 466; Females, 329).

	No. of Cases.	No. of Laryngeal Cases.	Percentage.
Group I	203	28	13.7
Group II	365	99	27.1
Group III	125	51	40.8
Cases of definite pulmonary tuberculosis	693	178	25.6
Group IV	102	0	—
Total cases admitted and examined ...	795		

Proportion of Laryngeal Cases.

Taking, therefore, 693 cases of active and definite pulmonary tuberculosis, the larynx was affected in 178 of these—that is, in a proportion of 25.6 per cent. Cases which were only "suspicious" have not been included in these 178, which embrace only larynges with definite tuberculous lesions. This is a high proportion, considering that we have to do with selected and comparatively early cases. I can only think that it is due to the careful lookout kept on the larynx, and that the percentage is raised by my rejection of Group IV.

Frequency in Each Sex.

This high proportion comes as a surprise, but my next statistic also tends to subvert a commonly accepted figure—I mean the relative frequency of a laryngeal complication in male and female consumptives. (See Table B.)

TABLE B.—*Relative Frequency in Males and Females.*

Total cases, 693.

	No. of Cases.	No. with Laryngeal Disease.	Percentage.
Males	432	104	24.0
Females	261	74	28.3
Total	693	178	

* Paper read before the Medical Society of London (see page 818).

Morell Mackenzie gives the proportion in hospital out-patients as 2.7 male for one female, and according to the *post-mortem* records of ten years at the Brompton Hospital the larynx in pulmonary tuberculosis is infected in 28.85 per cent. of females and in 56.27 per cent. of males.[2] This has commonly been accepted as agreeing with the greater predisposition of males generally to throat affections, and associated with their more frequent abuse of tobacco and alcohol, and exposure to dust in workshops, mines, and factories. Now my cases, male and female, do not come from the industrial classes, and both sexes live under very similar conditions. This may account for the figures, which show that in 432 males the larynx was diseased in 104, or a proportion of 24 per cent., while in 261 females it was diseased in 74, or a proportion of 28.3 per cent. These figures are so approximate that they may be quoted as showing that, under similar conditions, the incidence of laryngeal tuberculosis is much the same for both sexes. I would also point out that my Group IV—that is, doubtful cases—consisted of 68 females and 34 males, exactly twice as many females. Women come more readily to a sanatorium than the male bread-winner, and their various forms of poor health are more apt to simulate tuberculosis. Now, these female cases in other statistics would have gone to reduce the percentage of laryngeal cases and swell the number of cures. I have disregarded them, and this, too, may explain why at Midhurst I find laryngeal disease is as common with women as with men.

Proportion of Laryngeal Cases to Stage of Pulmonary Disease.

The next group of figures is very interesting, as it gives the number of laryngeal cases according to the stage of the pulmonary condition. (In these figures both sexes are grouped together.)

The proportion of laryngeal cases in each group was as follows (see Table C):

TABLE C.—*Proportion of Laryngeal Cases to Stage of Disease (both Sexes).*

	No. of Cases.	No. of Laryngeal Cases.	Percentage.
Group I	203	28	13.7
Group II	365	99	27.1
Group III	125	51	40.8
Total	693	178	25.6

These figures are striking. They first of all reveal what we have not, I venture to think, sufficiently realized—namely, that even in the quite early cases of pulmonary tuberculosis the larynx is involved in the considerable proportion of 13.7 per cent. They fully confirm what we already knew—namely, that the frequency of laryngeal infection steadily increases with the advance of pulmonary disease. We see by Table C that it is twice as frequent in Group II and three times as frequent in Group III as it is in the early cases of Group I.

Mortality in Laryngeal Cases.

With the involvement of the larynx the approach of death is rapidly hastened, as shown in Table D.

TABLE D.—*Mortality of all Patients (a) with Larynx Normal, and (b) with Larynx Diseased, from 1911 onwards.*

	Alive at Date.	Dead.
	Per Cent.	Per Cent.
Larynx normal	73.5	26.5
Larynx diseased	49.1	50.9

I said just now that there was tubercle of the larynx in 13.7 per cent. of Group I cases; but we think tubercle in the larynx is such a momentous complication that when it is met with in even a quite early and favourable case, it is, *ipso facto*, sufficient to transfer that case into the less promising Group II. In other words, there are no laryngeal cases in Group I, and to compare laryngeal and non-laryngeal cases together we must add Groups I and II together thus (we call cases in Groups I and II favourable and in Group III unfavourable):

TABLE E.—*Mortality of Favourable Cases made up of Groups I and II.*

	Alive at Date.	Dead.
	Per Cent.	Per Cent.
Larynx normal	84.4	15.6
Larynx diseased	66.6	33.3

This shows that even in the comparatively early stages of phthisis death comes half as fast again when the larynx is involved. With the unfavourable cases of Group III there is a still more rapid increase in the mortality when the larynx is involved. (See Table F.)

TABLE F.—*Mortality of Unfavourable Cases in Group III.*

	Alive at Date.	Dead.
	Per Cent.	Per Cent.
Larynx normal	46.9	53.0
Larynx diseased	29.6	70.8

These figures in Tables D, E, and F do not comprise my cases of 1913. It is customary at Midhurst to send out a circular in August to all the patients of the preceding year so that last year's patients will not receive their circular and we will not know how they are going on until after next August. In this way our results of lasting arrest of the disease, or of continued vitality, are more exact than in many statistics. Some cases neglect to answer, or are lost sight of, so that the figures may not correspond throughout.

Laryngeal Disease and Prognosis.

These definite and recurring statistics, in all stages of pulmonary tuberculosis, directly contradict the views expressed by some who have swung with the pendulum from the hopeless attitude of a former generation to the too cheerful outlook of some of to-day with fortunate, but possibly limited, experience. One authority has written that he does "not regard mere laryngeal involvement as in any way necessarily adding to the gravity of the patients' outlook."[3] I regret that these three years' experience have led me to other conclusions, and I think it highly important that we should face these disagreeable facts, for prognosis is an important factor in practice, and the relation of laryngeal tuberculosis to the prospects of a patient have, I think, been fully demonstrated by the figures I have given.

RESULTS OF TREATMENT.

Let us now devote a short consideration to the 178 cases of laryngeal tuberculosis I have treated in the sanatorium during these last three years. It will facilitate reference and discussion if I place them in a table which will show the condition they were in on their discharge. (See Table G.)

TABLE G.—*Results of Treatment of 178 Cases.*

	Males.	Females.	Totals.	Per Cent.
Arrested ...	20	17	37	20.78
Improved ...	36	26	62	34.83
Status quo ...	41	21	62	34.83
Worse	7	10	17	9.55
Total ...	104	74	178	

Time will not permit of a full consideration of all the details of this group, and only a few can be touched on. The first thing that strikes one, particularly when compared with the dicta of Krishaber and Morell Mackenzie of thirty-two years ago, is the large number of cases in which the disease has been arrested. In these 37 cases all evidence of a tuberculous process has been arrested,

and I have little doubt that if we could follow up the after-histories with a laryngoscopic examination of the cases discharged as "improved" we should find that a good many could be transferred to the heading of "arrested," for, unfortunately, in many cases the patients only remained some three or four months in the sanatorium—a stay too short to allow of complete healing. Such cases would more than balance any possible relapses which may have occurred amongst my "arrested" cases. The second encouraging point is that more than half of the cases—99, in fact—were either arrested or improved during their stay. The remainder—the 79 composed of cases which were unaltered or which were worse—will, I fear, all do badly. But even here it is noticeable that so many remained *in statu quo*. This is a testimony of the benefit to the larynx induced by sanatorium life—the removal from vitiated and dusty air, the suppression of alcohol, the limitation or abolition of tobacco, the vocal rest, and all the improvement in general health brought about by the regular existence, the abundant nourishment, the rest and exercise, and the other factors of the simple life under constant medical supervision. Only those who have been able to contrast the condition of the tuberculous larynx amongst out-patients—or even in the stuffy homes of many private patients—can appreciate what the sanatorium life can do for it. The congestion and catarrh subside, the dirty ulcers clean, irritation and cough disappear, and all our symptomatic armamentaria of sprays, inhalations, lozenges, powders, insufflations, paints, caustics, and intratracheal injections are uncalled for. Laryngeal cases seldom complain of anything beyond their huskiness and the silence and abstention from tobacco prescribed for it. Without local medication the sanatorium existence prepared the larynx for curative treatment in over 50 per cent. of my cases. It is regrettable that we are not yet armed with more directly curative measures, and that, even if we were, the general condition of the patient in the remaining cases would render them useless.

Spontaneous Arrest.

Of these 37 cases of arrest of tuberculous laryngitis, healing took place in 22 instances without any direct treatment. Silence, more or less complete, is now such a routine measure that I need not lay stress upon it. Its use was the only addition made in these 22 cases to the usual routine of sanatorium streatment. (See Table H.)

TABLE H.—*Arrest of Laryngeal Disease.*

In 178 Cases.

Without local treatment	...	...	22 cases
With use of galvano-cautery	...	...	15 ,,
Total arrested	...	...	37 cases=20.7 %

The Galvano-Cautery.

In the remaining 15 cases cicatrization was brought about by the use of the galvano cautery (see Table I). This was applied in 36 cases. Of the 21 cases which have escaped the rubric of "arrest," 3 are still under treatment, 8 had only one application shortly before the end of their stay, and all the others left the sanatorium as "improved" or "nearly cicatrized." The cases were very carefully selected, and in no instance could any harm, general or local, be traced to the use of the galvano-cautery. Two advanced cases made decided progress towards healing in the larynx, but died from their pulmonary lesions several months after their discharge.

TABLE I.—*Treatment with the Galvano-Cautery.*

In 178 Cases.

Applied in 36 cases, or 20.22 per cent. of all cases.
Arrest in 15 cases, or 41.66 per cent. of cases treated.

Tuberculin.

Tuberculin was used in a good many cases, but I cannot say that I observed any marked beneficial results. In two or three instances some improvement was noticed, but I propose to defer discussion of this.

Local Surgical Measures.

Local surgical measures were employed in only two cases—in one to clear away heaped-up deposit on a ventricular band and allow the galvano-cautery to act on the margin of the infiltration (the case was cured); and in another—also arrested to remove some of the superfluous pachydermatous granulation tissue resulting from the cautery puncture.

Local Palliative Treatment.

Local palliative treatment I do not propose to consider at all. We seldom have any call for it at Midhurst Sanatorium.

CONCLUSIONS.

It is rash to draw up any but the most guarded conclusions in such a variable and chameleon-like disease as laryngeal tuberculosis, but my regular and close observation of the patients admitted to the King Edward VII Sanatorium during the three years 1911-13 have suggested the following:

1. The larynx is frequently involved in pulmonary tuberculosis. Even in the selected cases sent to the sanatorium it is met with in 25.6 per cent.

2. A considerable number of cases (102 out of 795) are sent to a sanatorium without their showing active tuberculosis. These cases, if included in statistics, would largely help to invalidate the foregoing conclusion.

3. In patients of the middle class laryngeal tuberculosis may be met with as frequently in females (28.3 per cent.) as in males (24 per cent.).

4. Laryngeal tuberculosis occurs much more frequently (13.7 per cent.) in the early favourable cases of Group I than is generally recognized.

5. In the more decided cases of Group II this proportion is doubled (27.1 per cent.), and in the advanced cases of Group III it is trebled (40.8 per cent.).

6. The expectation of life amongst consumptives is markedly decreased by the complication of laryngeal tuberculosis.

7. As a factor in prognosis the laryngeal condition deserves much more regard than it has hitherto commanded.

8. Laryngeal tuberculosis may not infrequently be present, although the patient may make no complaint of the throat, and although the voice be unaltered. Hence:

9. The larynx should be carefully inspected in every case of pulmonary tuberculosis.

10. Improvement in lung and larynx frequently, but not necessarily, progresses *pari passu*.

11. In certain cases the larynx improves, while the lung retrogrades. The converse rarely takes place.

12. Arrest of laryngeal tuberculosis can be effected in a sanatorium in 20.7 per cent. of all cases (see Table H).

13. Limited and slight laryngeal lesions, particularly in Groups I and II, may become arrested spontaneously with sanatorium treatment.

14. The galvano-cautery is the best weapon we have at present for local treatment. It was only indicated in 20.22 per cent. of 178 cases (Table I), and it completed the cure in 41.60 per cent. of the cases in which it was employed.

15. These satisfactory results have not, so far as I know, been secured by any methods outside a sanatorium.

16. Sanatorium treatment is at present the first and most valuable method we have for arresting laryngeal tuberculosis.

17. Local measures are much more promising under sanatorium conditions.

18. At present, in many cases, the diagnosis of tuberculosis is too long delayed, or the patient is sent to a sanatorium much too late to effect a cure. Hence:

19. With our present therapeutic resources we must, to get better results, urge the importance of early diagnosis, and then prompt sanatorium treatment.

REFERENCES.

[1] *Diseases of the Throat and Nose*, vol. i, p. 383. London, 1889.
[2] S. H. Habershon, *Journal of Laryngology*, December, 1905.
[3] P. Watson-Williams, ibid., November, 1911, p. 606.

THE report presented to the fifty-sixth annual general meeting of the Royal Dental Hospital, Leicester Square, stated that 19,769 new patients had been treated during the year; the attendances numbered 56,603, and the operations 107,927. There had again been an increase in the anaesthetic cases, the number of patients in that department being 14,167 during the past year. The debt on the building is now £34,247, and the yearly payments of principal and interest on the mortgage amount to £2,580 11s. 2d.

TUBERCULIN TREATMENT AS THE ESSENTIAL METHOD OF DISPENSING SANATORIUM BENEFIT.

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In the first of a series of articles appearing in the *Deutsche medizinische Wochenshrift* in memory of Professor Koch, Professor Loeffler ends with these words:

By the establishment of tuberculin dispensaries such as Wilkinson has introduced, the last, and for the poorest sections of the population the most important, unit would be incorporated with the splendid organizations for fighting tuberculosis, and thus the gigantic problem of eradicating consumption as a disease of the masses would approach nearer its final solution.

The problem of dealing in the best way with a disease which counts its victims by hundreds of thousands in the British Isles may well appal those who have to advise upon a sound means of defence and attack. A generous Parliament has placed 2½ millions at the disposal of the Insurance Commissioners for this very object. This enormous contribution in itself indicates the gigantic nature of the work, but it is by no means certain that even this large sum will be adequate. An enormous amount of good can be done by the judicious expenditure of this money, and all would desire that as little of this money as possible should be spent in the construction of buildings which may prove to have a very limited range of activity, and may ultimately be superseded by less expensive and more effective methods.

The most expensive method of dealing with pulmonary tuberculosis is the provision of sanatoriums, and experience everywhere shows that sanatorium treatment too often ends in failure, especially in the artizan classes. The treatment is costly in itself, but in that the patient must give up his work to secure treatment in a sanatorium, great hardship is suffered by those whose daily bread depends upon the industry of the patient. Sanatorium treatment to be of any real value should be continued for at least six months. There is no other disease for which institutional treatment for a period of six months would be tolerated as a satisfactory method of treatment, because the primary and secondary expenses are prohibitive. Still at the present time the sanatorium seems to hold the field in the eye of authority as the primary and essential weapon for expelling this disease from the community. This is the central idea in the present schemes for treating pulmonary tuberculosis.

Since it can be shown upon the clearest evidence that the money provided by the Government spent in this way could not deal with more than 20,000 out of the 300,000 who, as Mr. Lloyd George tells us, need treatment, and most of the cases thus treated relapse within a few years, even the keenest advocates of sanatorium methods must admit that the vast majority of sufferers are unprovided for. This has long been recognized in Germany, and Professor Loeffler suggests that tuberculin dispensaries may greatly simplify the problem, and bring within reach of the vast majority much needed help and relief.

It has occurred to me that a summary of the results obtained at my tuberculin dispensary in London may be a practical object lesson of the value of our system.

For this purpose I have taken 100 unselected cases that came to our dispensary in 1912. These cases were the first 100 of a series collected in order from my annual report upon the work of the dispensary. I have taken this group of 100 cases just as they came to hand, so as to simplify the statement in percentages and to eliminate the bias of special selection. I will now analyse the nature of these cases, the results of treatment, and the effects of treatment in reducing the risk of infection. In other words, I will review these cases in the three essential aspects: (1) The aspect of diagnosis; (2) the aspect of treatment; (3) the aspect of prophylaxis.

1. The Aspect of Diagnosis.

Nine were rejected because they showed no positive signs of tuberculosis and did not react to tuberculin. One of these cases had attended St. Thomas's Hospital for many weeks, and had been advised by Dr. Perkins to go to a sanatorium for three months. I quite recognize that in certain anergic forms of tuberculosis the reaction to tuberculin may fail. But with negative signs in the lungs I advised this man to consider himself healthy for the present. I shall test him again after an interval, and if this test should also prove to be negative, I shall tell him to consider himself healthy.

Of the remaining 91 cases, 44 had tubercle bacilli in the sputum. Thus, of the cases that came to us for treatment, nearly 50 per cent. were indubitably suffering from tuberculosis, demanding serious attention and the best possible treatment.

Nature of the Cases in which Tubercle Bacilli could not be Demonstrated.

It will be remembered that it was stated by Sir Clifford Allbutt, Sir Lauder Brunton, Sir William Osler, and Dr. Arthur Latham, in their report to the Welsh Committee, that—

The success of the so-called tuberculin dispensaries rests largely on the fact that Class I and Class II are chiefly treated at them. (Class I embraces those patients who become infected and recover without knowing they have been infected. Class II includes those who would recover without any treatment, or by taking a holiday at the seaside.) A further part of their success is due to the many instances in which the diagnosis of the presence of active disease is faulty, with the result that many persons are treated with tuberculin and labelled as "cures" in whom the disease has previously been arrested.

I will merely tabulate in sequence the nature of the cases in which, although tubercle bacilli were not present in the sputum (and I presume that one does not expect to find tubercle bacilli in the sputum in cases of tuberculous pleurisy, or lupus, or tuberculosis of joints or glands), we should still be more than justified in diagnosing tuberculosis, especially if there were a local, and general, and focal reaction with tuberculin.

Four had advanced tuberculosis of joints. One of these also suffered a severe haemorrhage from the lung (1 pint).
Three had severe lupus.
One had had a tuberculous kidney removed.
One had severe tuberculosis of the larynx with ulceration, swelling of the arytenoids, and a granuloma.
One had tuberculous glands of the axilla with four sinuses. (In parenthesis, I may remark that after treatment every sinus healed.)
Two children had enlarged glands in the neck.
One adult had marked crackling râles at the apex, and obvious signs of actual pleurisy. Nowadays I imagine that no skilful clinician would hesitate to pronounce this to be tuberculosis even without a tuberculin test dose.
One adult had crackling râles in the lungs.
Two patients had empyema, each with a sinus discharging for three years and one year respectively.
Three had haemoptysis (one a pint; one several of more than half a pint, with physical signs of the second stage; and one a quart, and the sister of this last patient had died of tuberculosis).
Three had obvious signs of active pleurisy. One with the physical signs of Stage II and pulse 100 to 110. After treatment the pulse fell to 76 to 86.
One had definite fine crackling râles at the apex, which disappeared after treatment.
One had been to Ventnor.
One had been to Brompton, and subsequently to Frimley. Dr. Dick, of Sevenoaks, and the patient himself are independent witnesses of the wisdom of our diagnosis, and the benefit obtained from tuberculin treatment.
One had nursed her sister, who died of consumption, and had herself an evening temperature of 99.8°, 100.2°, and even 101° for three weeks before beginning treatment, and her pulse was 120. After treatment up to 1 c.cm. old tuberculin the temperature was never higher than 99°, and the pulse was 90.
One had been out-patient at Brompton, and was diagnosed by school doctor; two of his sisters had died of consumption within three years.
One went to a sanatorium and gained a stone. On her return she began to lose weight again, and is now back with us, with apparent return of signs and symptoms, hardly three months after leaving the sanatorium. This case is being watched, because if she is quite well there is no need to treat her.
One had an evening temperature of 99.4° to 99.8°; had lost weight, and reacted to 100.2°. After treatment she gained 5 lb.
One had lost weight and strength, and the pulse was 110 to 116. After treatment she gained 8 lb., and recovered her normal health. She reacted to 0.001 c.cm. old tuberculin (100.6°), with marked local and general signs.
One lost 20 lb., and was very weak. Had cough and night sweats, and her mother died of consumption. She reacted to 0.003 c.cm. old tuberculin (103.8°).

One had nursed her sister, who died of consumption. She reacted to 0.005 c.cm. old tuberculin (102.4°).
One came from British Guiana on account of ill health; loss of strength; loss of weight. Reacted (100°) with very typical arm. After treatment he recovered health and energy, and gained 10 lb.
One had severe reaction to 0.001 c.cm. old tuberculin (102°) and many reactions afterwards. After treatment returned to work quite well.
One had loss of health and lost 2 st. in weight, and reacted generally, locally, and focally.
One had tuberculous disease of glands of neck, discharging.
One had mitral stenosis as well. She reacted to 0.003 c.cm. old tuberculin (100.6°). She was treated up to 1 c.cm. old tuberculin, and she is the best judge of the benefit she received.
One had haemoptysis. Lost 1 st. Pulse 100 to 110. After treatment to 1 c.cm. old tuberculin, great improvement; pulse 86.
One reacted, but gave up treatment because it caused such swelling of the arm.
One had general, local, and focal reaction. Cough much worse; pulse 90, and symptoms of malaise and loss of strength. After treatment health restored.

Thus we have accounted for 42 cases out of 47 in which a clinician of ordinary experience could not avoid the diagnosis of tuberculosis in an active form, producing either typical lesions (lupus, arthritis, pleurisy, empyema, abscesses, haemoptysis, ulceration of larynx, enlarged glands, sometimes with sinuses) or the typical symptoms more often associated with tuberculosis than with any other disease—such as great loss of weight, night sweats, rapid pulse, and general loss of health and vigour, in one or two cases with an evening rise of temperature of special significance.

One of the mildest cases that came to us was readily accepted for sanatorium treatment, but it is extremely doubtful whether the treatment will have any lasting effect. However, this mild case had no tubercle bacilli in the sputum, and it remains to be seen whether the sanatorium treatment of this mild case is going to be a success. The patient has already come back to us because she feels in herself that she is losing ground.

Summary.

It will thus be seen that out of 100 cases which came before us in this period not more than 5 could by any stretch of imagination belong to "Class I" and "Class II" of the report of Sir Clifford Allbutt, Sir Lauder Brunton, Sir William Osler, and Dr. Arthur Latham. These authorities, therefore, not merely went out of their way to prejudge our work without knowing anything about it, but made the gratuitous statement that our successes were due to the fact that the cases treated by us would have recovered if they had been sent for a trip to the seaside or without any treatment at all.

I admit that in this series of cases 5 out of 100 might have kept well without treatment; but of these 5, one gave up treatment early because it interfered with her work. Another also gave up treatment, although the treatment caused him to gain 12 lb. Another case of definite disease some years ago was sent by Dr. Silva Jones, and it is possible that this case might have continued well without treatment—how long it would be difficult to say.

Thus the number of cases treated by us in which the tuberculin reaction was the chief factor in the diagnosis of tuberculosis amounts to 3 per cent. I have no hesitation in saying that in every sanatorium quite as many cases would be found in which the diagnosis of tuberculosis was equally problematical, because when I was working in Sydney I rejected, chiefly on account of the absence of physical signs, but also on account of the absence of a reaction to tuberculin, not less than 60 cases which had been condemned to sanatorium treatment by men who were considered competent authorities upon diseases of the lung.

Moreover, by using the tuberculin test upon this present series of cases, I found that in 46 cases out of 100 which were tested with tuberculin, because no tubercle bacilli were to be found, 9 of them did not react, and yet one of these cases, manifesting no physical signs and giving no tuberculin reaction, would have gone to a sanatorium if I had not prevented it.

This series of cases shows, therefore, that while possibly I made a mistake in accepting 3 cases in which the diagnosis was open to question, if one disregards the value of the tuberculin reaction, on the other hand the use of tuberculin enabled us to decide positively that in 9 cases already suspected to be tuberculosis there was no tuberculosis—a decision that would have been quite impossible without the tuberculin test. I am certain that the meaning of a positive reaction to tuberculin is largely misunderstood, and its value much underrated, while the value of a negative reaction to tuberculin seems rarely to occur to the minds of medical men. Within the last two years I have demonstrated to many medical men the great value of a negative test. In no fewer than nine cases in which the diagnosis had been taken for granted, or was considered extremely likely, I proved that the lesion had nothing to do with activity of the tubercle bacillus. In one particular instance a doctor's son had consulted sanatorium authorities, who had advised that the boy should be sent to a sanatorium. I tested him in the most exacting way and he gave not the slightest reaction. Further, it is obvious that in those who have no tuberculosis an injection of tuberculin cannot do any harm. The main effect that I have noticed is that the person thus injected may gain 2 or 3 lb. in weight. If there should be tuberculosis, tuberculin may be the only means of detecting it with certainty. But once it is detected, then it is for other clinical criteria to determine whether the disease is in such a state of activity that it is wise to try and limit and annul its activity by artificially stimulating cell tissue to produce active and specific antibodies.

The danger of not using tuberculin for diagnostic purposes is clearly demonstrated by two cases that came to us from Brompton Hospital—cases that had been examined by Dr. Batty Shaw and pronounced to be free from tuberculosis

One patient with symptoms of asthma and bronchitis came to us within two or three weeks of attending Brompton Hospital, and the first examination of the sputum disclosed tubercle bacilli. Now we may take it for granted that tubercle bacilli were not present when Dr. Batty Shaw made his diagnosis. If, then, a test dose of tuberculin had been given, the mistake in diagnosis would have been avoided. This patient improved very much under tuberculin treatment, and during treatment the tubercle bacilli disappeared from the sputum and have not reappeared.

The second patient was a boy of 16, who looked delicate, and his frame, especially the form of his chest, suggested the tuberculous diathesis. Tubercle bacilli were found in the first examination of the sputum. Under treatment he gained 2 st. and more, and the tubercle bacilli disappeared.

By the use of tuberculin as a diagnostic agent we were able to exclude tuberculosis in 9 cases out of 46, although these cases had been labelled as probably tuberculous, and one of them, but for us, would have gone to a sanatorium. On the other hand, by not using tuberculin for test purposes, a well known hospital physician had excluded tuberculosis when it most certainly existed.

This careful analysis of the nature of the cases that were examined and accepted by me as cases of tuberculosis must surely be sufficient evidence that they do not belong to Class I or Class II in the classification of the authorities already mentioned; they manifested symptoms and physical signs which, without recourse to the tuberculin test would have been considered eminently suitable cases for serious and systematic treatment.

The dispensary has been visited by numbers of medical men, some of whom had the opportunity of examining and observing these patients frequently, and I am ready to appeal to these medical men to vindicate our claim to be competent judges in this field of practical medicine.

It has been necessary for me to enter into these details because in no other way can I show that we are dealing with anything but selected cases or favourable material. It may be interesting also to add that since the Insurance Act came into force we have recommended to the Insurance Committee some scores of cases for sanatorium benefit. Every one of these cases has been subsequently examined by the special expert of this Committee. In only one instance has the correctness of our diagnosis been questioned. In this instance I erred on the side of caution. The man had had tuberculosis, and, as he still reacted to tuberculin, I decided after some hesitation to refer him for treatment.

2. THE ASPECT OF TREATMENT.

Having thus established the fact that at the dispensary more than 95 per cent. of the cases treated belong to Class III and Class IV of the above-mentioned authorities,

we may now proceed to consider the aspect of treatment.

In considering the cases that have come before us we have carefully arranged our plan so that other aids in treatment should, as far as possible, be excluded. In one particular alone has it been necessary sometimes to infringe this general rule. Tuberculin is not a cure for starvation, and as we draw many of our patients from the poorest classes we frequently had to supply food through our Care Committee. Tuberculin treatment requires for its success a certain vitality of tissue, and without proper food this vitality cannot be ensured. But, apart from supplying small quantities of milk to patients, we may say that we have carefully avoided drug treatment, or even the open-air methods. Both of these systems have their value, but if we had adopted them as a matter of principle we should have vitiated our conclusions concerning the value of tuberculin.

Our plan of treatment is to begin with small doses of bovine preparations and then proceed to the stronger tuberculins made from tubercle bacilli of the human type. In the majority of cases we consider that a dose of 1 c.cm. old tuberculin without reaction is sufficient for the first course. It is not always sufficient. It often produces great improvement, but still greater improvement can sometimes be secured by giving also a course of treatment with bacillary emulsion.

Results.

The number of cases examined was 91, and of these 44—nearly 50 per cent.—had tubercle bacilli in the sputum; while 42, without tubercle bacilli in the sputum, had the obvious signs and symptoms of tuberculosis in some form. Of the remaining 5 cases, in which the diagnosis was not so certain and was made chiefly upon the tuberculin reaction, 2 ceased to come after a few visits. I did not urge them to continue, because I felt that possibly by general methods they might be able to successfully resist the disease. Thus at most 3 cases were treated in which, although there had been tuberculous infection, the reasons for recommending tuberculin treatment were not urgent. The decision was left to the patients themselves, and in these 3 cases the patients were well satisfied, so that no great harm was done. With regard to the 86 cases of definite tuberculosis that presented themselves for treatment some were rejected or did not receive treatment for various reasons.

Nineteen of these cases were in Stage III of pulmonary consumption. Twelve of these 19 cases were too late for any hope of successful treatment. Most of them had mixed infections, and some of them went to sanatoriums.
Three others gave up treatment for family troubles. In one instance a woman lost her husband, who was killed by an accident in the street. Two other women were pregnant and could not attend after the child was born.
One patient had cirrhosis of the liver, and alcohol had ruined his health.
Two cases left the district and could not be traced.
One patient had severe asthma and bronchitis, and was recommended to have treatment to the nasal passages before having tuberculin treatment.
One woman elected to go to Brompton Hospital as it was more convenient.
One had a positive Wassermann reaction and was sent away for special treatment.
Two others (one of them in Stage II-III) were found to be unsuitable, and advised to go to a sanatorium.
Apart from the cases in Stage III there were:
Three cases of mixed infection; 1 was sent to a sanatorium, another to Bournemouth.
One man made fair progress, and then progress stopped. In this instance the man could not obtain enough food, and therefore was advised to discontinue treatment.
Three others gave up treatment for various reasons; 1 because it made her arm swell; 1 because it interfered with her work, yet her sister was dying of consumption.
One gained 3 lb. after having treatment, and then left off.

Of the 91 cases 76 had pulmonary tuberculosis, 44 of them with tubercle bacilli in the sputum. Thus 58 per cent. of the lung cases had tubercle bacilli. This proportion is far higher than that in most sanatoriums. This is further evidence that the cases that come to us do not furnish favourable material, and most surely disproves the truth of the judgement passed upon tuberculin dispensaries by Sir Lauder Brunton, Sir Clifford Allbutt, Sir William Osler, and Dr. Latham. Of these:

Twelve were in such a hopeless condition that treatment could not be attempted.
One had a positive Wassermann reaction, and was sent away for special treatment.
Two others, though in Stage II, had very severe and extensive laryngeal tuberculosis.
Three cases had mixed infection, and could not be dealt with.
One case went to Brompton.
Three other cases gave up treatment after a few doses for no particular reason.
Nineteen cases of pulmonary tuberculosis in Stages I and II of the disease, with tubercle bacilli in the sputum, were treated up to full doses, and of these 10 had no tubercle bacilli in the sputum after a full course of treatment. Of the other 9, 1 had no phlegm at all through the day, but in the scanty phlegm of the morning a very few tubercle bacilli were discovered.

Thus treatment caused the disappearance of tubercle bacilli from the sputum in more than 50 per cent. of the cases in Stage I and Stage II. There is no record at all of any of these patients being seriously ill after a reaction, nor was there any evidence supporting the idea that tuberculin given in large doses made the patient worse rather than better.

The number of cases of tuberculosis treated, including pulmonary tuberculosis, was 55. Of these, 50 received at least 1 c.cm. old tuberculin. One patient had in addition 2 c.cm. T.E., one had 3.3 c.cm. T.E., and one 1.5 c.cm. T.E. The remainder received ½ c.cm. of either P.T. or old tuberculin. All but two were benefited. One was neither better nor worse, and one was worse after treatment.

One of the patients came to us with tubercle bacilli in the sputum. Two years previously she had been to Brompton and was advised to live in the country. She lived in the country for two years, and not getting better she came to us. Tubercle bacilli were found, so that the treatment in the country had not cured the disease, and yet living in London and merely having tuberculin injections did her a vast amount of good, and tubercle bacilli disappeared from the sputum.

3. The Aspect of Prophylaxis.

These records show that the treatment given at tuberculin dispensaries in well-marked cases of pulmonary tuberculosis, with tubercle bacilli in the sputum, produces almost uniform improvement, and causes the disappearance of tubercle bacilli from the sputum in a larger percentage of cases than can be claimed by simple sanatorium methods. This result discloses a two-fold advantage: it is the best possible evidence that tuberculin treatment favours the healing of the lung so that tubercle bacilli no longer escape from the tissues; and, next, it converts infectious into non-infectious cases. There are many who say glibly enough, "Prevention is better than cure," and yet refuse to see the great advantage thus gained by rendering infectious cases non-infectious. This is an aspect which should attract medical officers of health. It has been shown again and again by first-class authorities—by Turban, Bandelier, Moeller—as well as by myself that tuberculin treatment yields far better results in this direction than any other method. The results of sanatorium methods alone in diminishing the number of cases discharging tubercle bacilli in the sputum are very disappointing.

I think, too, that a practice is just beginning to come into vogue which may help to establish the value of tuberculin treatment. It has been suggested by myself and others that, if expense is no consideration, one, two, or three months in a sanatorium may be useful. In some cases this is indispensable, especially if there is mixed infection or serious deterioration of the health from other causes. When, however, expense is a serious item, this practice of a short term of sanatorium treatment should only be carried out when it is indispensable. The success often attained by tuberculin treatment alone is such that it is a wise policy first to try what can be done with tuberculin alone at tuberculin dispensaries, so that money should not be thrown away upon sanatorium methods when simpler and cheaper methods can secure equally satisfactory results. These satisfactory results can only be secured at dispensaries where tuberculin is given in a way that fulfils the most exacting conditions required by those who claim to have obtained successful results. The discredit into which the use of tuberculin has fallen is mainly due to the fact that hitherto in England no serious and systematic attempt has been made to test the value of tuberculin given in reasonably large doses in accordance with

the views of Professor Koch and his leading disciples. Beyond a doubt, there is abundant evidence to show that the administration of small doses, even with the control of the evasive opsonic index, has proved to be anything but a success—certainly a partial, perhaps a complete, failure. It is surely wise to give a fair trial to a system which is supported by experiments upon animals, and also by a large number of observations made by competent authorities in the treatment of tuberculosis in human beings.

My own observations compel me to advise the exclusion of cases of lupus, at any rate in adults. Until I came to England I had no opportunity of studying the effects of tuberculin in lupus. I admit that for the most part I have tried tuberculin in very advanced and long-standing cases of lupus, and the results in such cases have been certainly very disappointing. Improvement sometimes follows, but on the whole the remedy, even in large doses, largely fails—certainly in advanced cases.

On the other hand, we have obtained at the dispensary a remarkable uniformity in cases of tuberculosis with discharging sinuses. I have seen sinuses leading from the joints or from glands, or from organs, healing up in the most satisfactory way when large doses of tuberculin have been administered.

In one instance a woman had eight dreadful sinuses leading from the hip-joint. She was reduced to a skeleton, weighed about 7st. 8 lb., could not sleep without morphine, and was utterly miserable. She travelled about fifteen miles twice a week to the dispensary. At the end of a few months four of the sinuses healed. In another few months two more healed, while two resisted. Then, after giving a cubic centimetre of old tuberculin, we put her on a course of T.E., up to two or more centimetres at a dose, and finally all the sinuses were healed. These sinuses had been in existence for years. From the moment tuberculin was given she began to put on weight, and finally reached a weight of more than 10 st. She is now quite free from pain, looks healthy, and the whole character of her life has been changed.

This is an unusual case, but in every other case, apart from empyema, with discharging sinuses, the discharges have ceased, and the ulcers have healed after the use of large doses of tuberculin. The scars formed after this healing process are remarkable for their smoothness and evenness, unlike the puckered and wrinkled scars that form when by chance healing takes place by natural processes.

I have little doubt that when the effects of tuberculin treatment in Stage I and Stage II of pulmonary tuberculosis have been carefully and impartially studied this method of treatment will come to be adopted as the essential method of treating the disease itself, so that the custom in vogue of sending the victims of tuberculosis to sanatoriums will be largely superseded by treatment in special dispensaries. This will be an enormous gain to the unfortunate sufferers, and will tend to lighten the load of the over-burdened taxpayer.

I do not suggest that any method of treatment will be always successful. Some failures are inevitable, even with the best treatment. There are pessimists who think that the results of the treatment of tuberculosis are pretty much the same under all systems. This view should only be expressed by those who have tried the various methods in some logical way and obtained similar results with all of them. Unfortunately, the pessimists who have the loudest voice are those who have never seriously used any method in such a way and for such a length of time as to justify them in forming a just opinion. Certainly better than this is it to cling to some method, as I do, which certainly gives extraordinary results in many cases, in the hope that greater experience and deeper knowledge may extend these beneficent effects to a wider circle of beneficiaries. A true physician must primarily consider and work for the good of the individual, though he should at the same time avoid working against the good of others. The physician's moral duty is obvious, but the victim of the disease may find his moral duty in conflict with his material instincts. From very long experience with tuberculin I have personally no hesitation in strongly recommending that it should be used as a remedy in all cases of simple, uncomplicated tuberculosis, whether in the lungs or elsewhere. I am convinced that in Stage I and Stage II of the disease tuberculin can do more for the patient than sanatorium treatment, especially if the patient has to return to his ordinary occupation in cities. Sanatorium authorities tacitly admit this, because it is part of their principle to provide farm colonies and after-care societies. It is hoped that thus the resistance to the disease will be heightened. The resistance is not necessarily heightened in this way, but so long as the patient lives a free and easy life in the country relapse of the disease may be postponed. Should such cases then return to town conditions it would probably be found that their resistance had been in no way increased. Prolonged sanatorium treatment fails to afford any great protection against relapse, if the patient has to return to his old conditions. If there is one thing that is striking about tuberculin treatment it is that even when the home conditions are not altered, surprisingly good results can be obtained by means of tuberculin, and also that these results last well, because it is unusual to find relapse taking place after tuberculin treatment within a year. It is also a usual experience to find that after a prolonged course by means of large doses of tuberculin the improvement continues long after the treatment is suspended, and relapses are far less frequent and occur much later than in similar cases treated at sanatoriums. If this be true, it is reasonable to expect that in time Insurance Committees will see the wisdom of treating the majority of insured persons suffering from tuberculosis at tuberculin dispensaries, instead of adopting the expensive and too often ineffective method of removing the patient from unfavourable surroundings, placing him in comfortable and pleasant surroundings for a few months, with the expectation that such institutional treatment may arrest the disease—an expectation that is doomed to disappointment in the great majority of cases, because, for one reason, this unfortunate patient must return to the old conditions of home and environment.

A year and a half's experience of the Insurance Act proves that sanatorium benefit, which at one time was to take the form of "first-class hotel accommodation," has now, in the majority of cases, dwindled down to domiciliary treatment by a panel doctor. If the panel doctor is to dispense sanatorium benefit, there can be neither sanatorium treatment nor tuberculin treatment. Both sanatorium treatment and tuberculin treatment demand expert knowledge and experience. The suggestion of the Special Committee of the British Medical Association, that tuberculin treatment should be administered by panel doctors in rotation, has been wisely abandoned. In the majority of cases sanatorium benefit is now dispensed through tuberculosis dispensaries by tuberculosis officers working within the jurisdiction of Public Health officers. I still think that this arrangement is not a wise one, because hitherto health authorities have had little or nothing to do with the treatment of tuberculosis, and accordingly the treatment will depend upon the tuberculosis officers, many of whom are too young to be thoroughly satisfactory officers as consultants. There is, too, a very great danger that the function of the tuberculosis officers will rather tend towards prophylactic measures than the treatment of the individual. The Insurance Act will thereby become a public health Act. I very much doubt whether legislators and the overburdened taxpayers, and even the insured persons themselves, understood that the Insurance Act was to be applied in this way. The money provided by the Insurance Act for the treatment of insured consumptives should be spent exclusively in sanatorium benefit claimed by the insured persons, and any money spent upon tuberculosis officers and tuberculosis dispensaries for the purpose of public health should not be a charge upon the insurance fund. It is strange that the Labour Party entirely fails to grasp the importance of this distinction. Most of the insured persons should have the sympathy of the Labour Party, and the Labour Party should see that money which has been voted by Parliament as a fund to insure against sickness should be distributed entirely among the insured persons in need of benefits, and that not one penny should be spent in carrying on work for which public health departments exist. There is little wonder that the money provided for sanatorium benefit should be completely exhausted when a large part of it has really been spent on services, carried out by the tuberculosis officers, which have nothing whatever to do with the treatment of insured persons. Tuberculosis officers spend a great part of their time in doing public health work instead of devoting their time to the treatment of the insured. I doubt whether a proper

system of dispensing adequate sanatorium benefit to insured persons will be established until there is a differentiation of the function of the tuberculosis officer as the expert in the treatment of tuberculosis in all its forms from that of the medical officer of health, whose business it is to administer measures for the prevention of tuberculosis.

The great danger of bureaucratic government is that systems become stereotyped, and the danger is the more serious when sanatorium and medical benefits have to be administered, because the treatment of disease must fail to give good results as the machinery becomes obsolete and the systems and ideas antiquated. The panel system is on its trial; it must profoundly modify the relations existing between the medical man and his patients. It may tend to convert a large section of the medical profession into dispensary doctors, who may be able to earn a livelihood without ensuring to their patients satisfactory treatment. Some few may be strong enough to rise above such conditions of service, but the tendency will be to convert the medical man into a machine producing work of an inferior quality. I should fear that this must tend to degrade the medical profession as a whole. Legal work of this sort would hardly be worth paying for.

By the scheme evolved by a special committee, which gives the first place to sanatoriums as the chief channel for dispensing sanatorium benefit, failure seems inevitable on financial grounds alone, but perchance the officers of approved societies may save the Act, so far as medical benefits are concerned, from sharing in this failure. While, therefore, there may be no urgent reason for investigating the general results of the Insurance Act, it would be wise, even now, to constitute a commission of inquiry into the results of sanatorium benefit. Such an inquiry would show how many cases have sought relief, how many have been treated, by what system of treatment, and with what success.

I still think it is unwise to enter upon a policy of constructing new sanatoriums until there is evidence from the results obtained in the last year that they have yielded something approaching to "the amazing number of cures" obtained, according to Mr. Lloyd George, in German sanatoriums. At the same time the results of dispensary treatment might be investigated, and although tuberculin has not been used in any uniform way, and too often favourable cases have been transferred from a tuberculin dispensary which is not popular with the Insurance Committee to dispensaries where tuberculin as a remedy is for the most part ignored, still inquiry may show that tuberculin dispensaries have yielded some satisfactory results.

A CONTRIBUTION TO THE CRITICAL STUDY OF THERAPEUTIC STATISTICS.

Being Critical Remarks on the Lecture of Dr. Batty Shaw on the Present Evidence for and against the Use of Tuberculin as a Specific Cure.

BY

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In his lecture, published in the British Medical Journal, May 3rd, 1913, directed against tuberculin treatment, Dr. Batty Shaw starts with a comparison of the serum treatment of diphtheria, the value of which is generally recognized, with tuberculin treatment, of which, in his opinion, the value is less generally known. To me this comparison is altogether inadmissible. No well-informed adherent of tuberculin treatment sees in it anything comparable with the serum treatment of diphtheria, and I have constantly had occasion myself to utter a warning against the popular error that tuberculin treatment is equivalent to antitoxin treatment. This inapt comparison is a constant source of error and confusion and of the incorrect use of tuberculin.

It is also very surprising to me that in combating the value of tuberculin the author shows not the least chronological sense, but reverts time after time to the experiments of Koch. That Koch made a mistake in the interpretation of the results which he then obtained is quite generally recognized by the adherents of tuberculin treatment, and no one bases himself now, as Dr. Batty Shaw appears to assume, on these far-distant experiments. On the contrary, it was the absence of any confirmation of these experiments which was the cause of the almost complete disappearance of tuberculin from medical practice in the Nineties. Dr. Batty Shaw's attack on these experiments and on Koch's teaching seems to me like tilting at windmills. The fact that in spite of Koch's failures tuberculin was not entirely set aside in the practice of scientific physicians, and that with radically altered method and essentially different theoretical conception it is coming into increasing use at the present time, is undoubtedly due to the existence in tuberculin treatment of a useful kernel, which Koch himself was unable to isolate, but whose isolation, as I have shown in my monograph on tuberculin,[1] has since been obtained by an immense outlay of clinical and experimental work. It is not admissible to ignore this work in the way that Dr. Batty Shaw does, especially after the translation of my monograph has made these researches accessible to the English reading public.

It must excite the greatest surprise when the author points in all seriousness to quack medicine, with its reports of all manner of cures and remedies, unable for a moment to stand criticism, as an argument for the assumption that the whole results of modern tuberculin treatment rest only on the confusion between *post hoc* and *propter hoc*. No branch of medical treatment deserves this comparison with quackery less than tuberculin. I contend that no section of therapeutics is better grounded in science and reason, and that this is because this method of treatment has rightly forsaken the ground of rough and deceptive statistical empiricism which, as is evident from the whole train of thought of his lecture, determines Dr. Batty Shaw's attack. By this rational basis and by the careful criticism which is demanded by each individual case, tuberculin treatment is honourably distinguished from quack medicine, as well as by the fact that its reintroduction after the *débâcle* of the Nineties was exclusively due to progress in scientific knowledge. There is therefore a grave injustice in Dr. Batty Shaw's comparison between the quack doctor's lack of criticism and the similar lack which he assumes in the tuberculin therapist, and this reply will show on which side the deficiency really lies.

The theoretical remarks of the author are concerned with things as they appear on the surface, and are very one-sided. The detailed discussion of these would only be possible on a far broader basis, and I refer the reader who wishes seriously to form his own judgement on the subject to my monograph. I will content myself here with taking up a few points which seem to me specially questionable.

In the first place, the author's argument against tuberculin treatment is quite unintelligible when he states that it is improbable that the amboceptor action can make itself felt on the bacilli and on the toxin of the tuberculous nodules, because these nodules are shut off from their surroundings. It would be indeed a boon if such an exclusion existed. There would then be no need to bother our heads any longer about the treatment of tuberculosis. That the action of tuberculin, and therefore of amboceptor, really extends into the interior of the remotest tubercles, has been clinically and anatomically established (the latter especially at the time of Koch's era of tuberculin treatment) by the clinical and anatomical proof of the so-called focal reactions. That the author shares the incorrect view that anaphylatoxin is a combination of complement, amboceptor and antigen, I will be content with just mentioning. His view that in anaphylactic phenomena, which are also at the basis of modern teaching on tuberculin action, no curative side is to be recognized, should find little approval, and is a part of a generalization hardly in unison with physiological thought. The more favourable course of relapses in pneumonia, erysipelas, etc., cannot be considered simply as evidence of immunity in the face of the frequency of such relapses; must it not rather be attributed to the curative action of anaphylaxis, or better of hypersensitiveness (allergy)? And are not the rapid and abbreviated course of revaccination in comparison with primary vaccinia (von Pirquet), and the stormy but curative course of tuberculous infection in the case of cattle previously treated by Behring's method (Römer), or of the reinfection of already tuberculous animals (Koch, Römer) incontro-

vertible examples of the curative action of allergy? This use of the anaphylactic hypersensitiveness in activating the protective mechanism of the organism is so generally recognized to-day that it would be timely if the misleading name, "anaphylaxis," which is properly a "phylaxis" and has evidently misled the author, were to be replaced by the more correct term "allergy."

When Dr. Batty Shaw sees only harmful action in these anaphylactic phenomena, and argues again from the out-of-date experiences of the first tuberculin era of Koch, we must reply that to-day we are treating on quite different principles, and therefore with an entirely different method, and I have taken much trouble in my book to afford a proof that by rational dosage the curative element may be isolated from the harmful in the allergic phenomena and used in the interests of therapy.

The significance of the modern reactionless tuberculin treatment appears to be little recognized by Dr. Batty Shaw. In the experiments instituted by him, and published by Dr. Rigg, in order to test tuberculin treatment, ten patients treated with tuberculin were set against nine treated without tuberculin. The treatment was carried through with febrile reactions contrary to our present principles. Instead of drawing the conclusion that this method of treatment as we now know was incorrect from the fact that under these circumstances the treated did worse than the untreated, which seems to us natural; and the further conclusion that such experiments are unsuited to afford grounds for any conclusions at all; the author only imposes on himself in his unfavourable conclusions a curiously disarming reserve when he says that the unfavourable effect of the treatment might also be ascribed to the confinement to bed by the febrile reactions (not to the reactions themselves?) as the controls were able to go about. Dr. Shaw, however, appears to have had a certain feeling that not merely the confinement to bed, but also the technique in these experiments might excite comment, as later on he published, through Dr. A. C. Watkin, statistics of 22 cases in which the treatment was carried through as far as possible without reactions; these statistics, however, are just as scanty and as little free from objection as the other.

With what little depth the author conceives the whole problem of tuberculin treatment, and with what little thought he criticizes the adherents of tuberculin, is apparent from the fact that he thinks it necessary to defend his negative view of the therapeutic value of tuberculin against the old argument, which is scarcely used nowadays, that tuberculin treatment is an immunization, and that from the possibility of a protective inoculation against typhoid (the author might as well have said any bacterial inoculation in general), it might be concluded that such an inoculation must also succeed in the case of tuberculin. To refute this argument, which is nowadays hardly employed, he calls attention to the essential difference in regard to immunization which exists when the individual in question is healthy and when he is already infected. These are such well-known matters that here again the author pushes an already open door. I do not think that any thoughtful adherent of tuberculin treatment can nowadays be found to contend that tuberculin produces immunity against tuberculosis, since I have shown again and again that the therapeutic action of tuberculin is fundamentally distinct from immunization, and is indeed in a certain sense the converse of it, and that there is in point of fact no actual immunity against tuberculosis, although this does not in any way minimize the value of tuberculin treatment.

I will now touch shortly upon the chief point of Dr. Batty Shaw's statement—namely, on the question whether by his miniature statistics he really refutes the value of tuberculin treatment, and the further question whether I am not right in looking to the study of suitable cases for the proof of the value of tuberculin.

In opposition to his former view, Dr. Batty Shaw now denies the conclusiveness of the older statistics, favourable to tuberculin treatment, stated some time ago by himself in agreement with Turban, Trudeau, and others. He has, as he says, become sceptical because many cases in which he would have expected to see favourable results from tuberculin nevertheless became worse after its use. In addition to this, he has radical doubts regarding the older statistics because in them the cases specially suited for this treatment were selected, although this was indeed a necessity inherent in the nature of the case, and in the limited clinical applicability of tuberculin treatment.

In order at once to clear up these objections against the older statistics, I must take up their defence, although in the tuberculin question I have myself given up any statistical proof of this kind for reasons which I will adduce later on. The selection of cases is a *conditio sine qua non* for rational tuberculin treatment, and this condition cannot be set aside for the purpose of a paltry simplification of the statistical basis.

The recurrence of relapses after tuberculin treatment is naturally no evidence against the value of tuberculin. The opposing view of Dr. Batty Shaw is obviously based on the fact that he is completely dominated by the old view that tuberculin, when it helps, can only help by immunizing for all time. This view has, as I have said, been given up by all tuberculin experts because it has been long disproved by experience. I have, indeed, always opposed this view, and, as soon as it is surrendered, relapses no longer prove anything against the value of tuberculin. Spontaneous recovery is also very frequently followed by relapse, and in this respect nothing more can be demanded from tuberculin than from the spontaneous cure of tuberculosis, especially as tuberculin action is nothing other than a natural process of healing with assistance, a fact which I have always emphasized.

Having in mind this hesitation regarding his own early statistics, Dr. Shaw himself undertook a statistical test of the value of tuberculin treatment in the following manner: Out of a number of cases which had been noted by "tuberculin advocates" as suited for tuberculin treatment, he treated the one half with, the other without, tuberculin; the separation of the two groups, as the author expressly emphasizes, was left entirely to chance. I intend to consider, later on, whether the value which the author sees in the last point, and in the omission of any rational selection of cases suitable for tuberculin treatment, is of real value for the elucidation of the truth.

Even apart from the question of principle, as to how statistics should be drawn up in order not to obscure the truth, both sets of statistics obtained by this process are altogether useless.

In his lecture Dr. Batty Shaw himself mentions the first of these sets of statistics. This was obtained by Dr. Rigg at his suggestion, and has been already mentioned above.[4] It is actually based on nineteen cases. The result of these statistics was to the detriment of tuberculin. Quite apart from the fact that the number of cases is far too small to avoid the probability of a great inequality in the two groups, these statistics are, as I have already stated, totally worthless for the decision of the question of the value of modern tuberculin treatment, because reactions were allowed to occur.

Besides this, Dr. Batty Shaw sent me later a second series of statistics drawn up on his suggestion by Dr. Watkin,[5] in which, if I correctly follow the wording, reactions were avoided but which for the greater part were febrile, and therefore cases neither fairly nor suitably chosen for testing the action of tuberculin. These statistics also are limited to the minute number of twenty two cases; a limitation which, in accordance with the fundamental law of statistics, should never occur in such calculations, and which is least of all admissible in a disease like pulmonary tuberculosis, so difficult to classify and assess, and so irregular in course. Further, the period of observation—three months—was altogether insufficient in order to assess the cases. The author, indeed, contradicts himself, and admits that from such observations not much is to be deduced, and that this is not the object of the communication. But, if not, I must then ask him, Why make the communication at all? But the author finds that a "crying need" exists for the carrying out of similar tests on a larger scale, and he, as well as Dr. Batty Shaw, lays special stress on their method of simultaneous observation of untreated control cases, the neglect of this comparison being, according to them, a chief source of error in earlier statistics.

In opposition to this, I must remark that I cannot recognize the value, the necessity, or the relevance of such statistics at all, and that I hold this assumed control of tuberculin results by simultaneous observation of

untreated cases of similar category as altogether deceptive and misleading, for reasons which will now be stated.

I have in my monograph emphasized the uselessness of the statistical method in general for judging of the value of tuberculin, and given reasons for this view. This judgement is not altered in any way by Dr. Batty Shaw's statistical method, which consists in determining by chance out of the category of cases suitable for tuberculin treatment which shall be treated by tuberculin and which not.

This method suffers from various errors in principle. In the first place, such a determination of treatment by lot would only be permissible if every particular case in the whole statistics (the treated and the untreated) were stringently chosen so as to offer some prospect for tuberculin treatment. For if this condition be not fulfilled, there will be no guarantee, even with far larger numbers than these on which the authors base their statistics, that chance had not brought more unsuitable cases into one or other of the groups. But in this case the statistics give altogether false results. Now, the authors tell us nothing about the fundamental point how the total group of cases (treated and untreated together) was chosen. I have, indeed, some reason to assume that the cases were chosen very unfavourably, since no fewer than twelve out of the twenty-two cases of Watkin were febrile, and were, therefore, in any case, little suited for tuberculin treatment.

A second no less grave error in the miniature statistics published by Dr. Batty Shaw and his pupils lies in the fact that it is wrong to determine in advance a case for tuberculin treatment, and then to carry through this treatment, as it were through thick and thin, with no consideration for the condition of the patient. The foremost principle of tuberculin treatment is that it should be at once stopped if it is seen not to be helping the patient. Now in no single statistical table given by Dr. Batty Shaw is the statement made that tuberculin was omitted when the patient became worse, and since the statistics show that several cases became worse under tuberculin treatment, it must be assumed, so long as the individual cases are not published *in extenso*, that errors in method occur in the materials used for the statistics in no inconsiderable number. It is difficult not to assume that many cases were only treated to the end with tuberculin in the interest of completing the statistics, although an expert in tuberculin treatment would have felt obliged to give up this therapy, after observation of the unfavourable results, it may be even after the first injections. Material containing errors of method cannot be employed for statistical use in a therapeutic question.

Dr. Batty Shaw will probably reply that with such a rigorous use of logic any statistical method such as his, involving division of the cases by lot, is impossible, since many cases will fall out in the course of treatment, and also that in the same way as he questions the correctness of the older statistical methods so in this case also a statistical treatment of the question is altogether impossible. With this view I am in entire agreement, and came indeed in my monograph to the conclusion that the statistical method is one unsuited for giving a clear answer to the question of the value or uselessness of tuberculin. Tuberculosis material is less suited than any other clinical material for statistical use because the cases are so extraordinarily unlike, and cannot satisfactorily be classified in any way, and because in tuberculin treatment everything depends on the individual capacity of reaction, which in any particular case cannot be foreseen.

To prove that this difficulty exists not merely in my own brain I give the following examples: It is a matter of common knowledge that though two cases of tuberculosis may be apparently precisely similar in regard to physical signs, general condition, temperature curve, etc., yet even without any kind of treatment they may run an entirely different course. Under exactly the same external conditions the one may rapidly get well, whilst the other becomes progressively worse, and has a fatal issue. No one who knows anything about tuberculosis will deny this. When, therefore, a therapeutic statistical table is composed of such cases, which are outwardly similar, but in fact quite different in their intimate nature, the results obtained are useless because differences inherent in the material are referred to the treatment. This mistake is, in fact, again and again made in therapeutic statistics, and nowhere does it play a larger part than in tuberculosis.

The possibility of obtaining statistics regarding tuberculin is, therefore, like an attempt to estimate the action of digitalis statistically, an idea which no one has been unreasonable enough to entertain. Since also, in the case of cardiac disease, functional diagnosis in regard to the recognition of the power of recovery is attended by great difficulties and may often, indeed, be impossible, even if not quite so difficult as is the case with tuberculosis, nevertheless, the result of therapeutic statistics of the action of digitalis would be quite uncertain, and we should be altogether in a bad way if the value of digitalis had to be first demonstrated by a statistical method. It would depend on many chances whether, from a statistical comparison of heart cases treated with and without digitalis, the potency or the inertness of digitalis were shown, and different statistics would probably afford diametrically opposite results. In working up digitalis treatment into a great statistical hotch-potch, the danger would be present of deducing the most extraordinary results—such, for instance, as that digitalis has a better action in cases of mitral stenosis than in mitral insufficiency, better in men than in women, better in Englishmen than in Scotsmen, and similar absurdities. Furthermore, it is not only in respect of tuberculin treatment that many a deduction in medical statistics is of such a character, because the statistical method in medicine is often employed by those who have not the most elementary knowledge of the correct principles and of the precautions which must be observed if it is to be freed from the reproach that it is *le mensonge en chiffres*.

If the question be asked, How, then, under such difficult conditions, is any certainty of therapeutic conviction possible? the answer must be that digitalis itself teaches us how the practitioner may make correct therapeutic deductions. If in a certain number of cases from the moment of application of the therapy, whether digitalis or tuberculin, improvement sets in, the practitioner soon comes with good reason to the conclusion that this therapy is useful. On these lines, and only on these lines, can we come to a conviction of the value of digitalis, and on these lines also the usefulness of tuberculin in a certain category of cases of tuberculosis may be deduced. Even in serum therapy, any practitioner of independent judgement bases himself more on the experience attained in particular cases—for which purpose even a modest clinical material suffices—than on the published statistics, which are, with more or less reason, contested again and again on account of the variations in the separate epidemics. And in serum therapy there are obvious reasons for the choice of the statistical method, because here it is a question of a direct antitoxic treatment, which needs no particular selection of cases and no particular intelligence to carry it out, and is therefore much more appropriate for statistical analysis.

There is innate in this kind of deduction, based on a number, though small, of accurately observed cases, also a kind of statistical method, if one may call it so, which affords a much greater guarantee of correctness than the method recommended by Dr. Batty Shaw, which I should call crude statistics. In the clinical method of therapeutic observation of a particular case the statistical element consists in the fact that in a certain number of cases after the treatment has been commenced a change was noted which was not to be expected, and further that this occurs so frequently that a chance coincidence is excluded. The real guarantee of the correctness of the conclusions lies in the fact that the conclusion is based, not merely on the fact of the employment of the particular therapy and of the improvement occurring, but also—and this is far more vital—on the fact of the coincidence in time of the improvement with the commencement of the treatment, whereby the certainty of the elimination of chance increases according to the laws of probability in powers.

This kind of statistics, which is not commonly called by that name, and which might be called *fine* statistics in contrast to the therapeutic *coarse* statistics which I should discard, is the only kind which is admissible in therapy. It permits of the correct application of the principles of probability on which every statistical conclusion is really based, by taking into consideration the factor of coincidence in time. This method incidentally has the advantage

of giving reliable results even in a limited material. It is the method of the practitioner, and without it no rational therapy could have been developed. For even the largest coarse statistics, which answer merely the question of the course of a disease with and without treatment, fail and are deceptive when the conditions are at all complicated. For a decision on surface therapeutic action (such, for instance, as the effect of opening an abscess) the method of coarse statistics may indeed be used, but is as a rule entirely superfluous, because the method of fine statistics which we have indicated—that is to say, the observation of a series of cases treated according to the method in question—answers such questions at sight, and therefore much more quickly and with less trouble. To convince the reader by such a method of fine statistics there is no need to publish tables; it is not only sufficient, but imperative, to do what Dr. Batty Shaw has left undone—to give detailed and critically stated accounts of cases, out of which the reader can himself work out the fine statistics, exactly as he is in the habit of doing in his own practice. The difficulty of obtaining any firm basis for a therapeutic judgement from such published cases is that these often do not correspond to the standards which any critical reader imposes on himself, and that the standards vary largely according to the medical culture of the author.

On this is based the statement which I have often applied especially to the tuberculin question—that therapeutic conviction, in contrast to almost all other human knowledge, can hardly be transmitted, but is almost exclusively attainable by personal observation. In medicine that alone stands on a firm basis which has been clearly seen and experienced personally.

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SOME OBSERVATIONS ON TUBERCULOSIS OF THE KIDNEY,

*WITH ILLUSTRATIVE CASES.**

BY

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ALTHOUGH the pathology of tuberculosis of the kidney is now fairly well understood, the subject is still a difficult one, as it is only by careful cystoscopic and bacteriological examination that satisfactory results can be obtained. In straightforward cases it is comparatively easy to come to an accurate diagnosis; but others are met with in which the symptoms and cystoscopic appearances are so indefinite that it is a matter of extreme difficulty to determine accurately the condition of the kidneys.

While tubercle of the kidney is not a purely primary disease, and there is always some other focus of tubercle in the body, in the bulk of cases this initial lesion is trivial, and the renal infection is by far the most serious condition. If it can be eradicated the patients are usually able themselves to overcome the initial focus.

It has been shown that at a very early stage of renal infection changes are manifest round the mouth of the corresponding ureter, and that before long definite deposits of tubercle are to be seen there. Gradually other parts of the bladder become infected, until finally there may be widespread tuberculous ulceration. The early changes round the mouth of the ureter are very characteristic of renal tubercle, and it is generally held that they are a certain sign of disease of the kidney; and, conversely, that if the mouth of the ureter is healthy the corresponding kidney is also healthy. This is obviously an observation the truth of which is of very great importance, but I will refer later to some exceptions to this rule.

It has also been shown pretty conclusively that if a tuberculous kidney is removed the tuberculous disease of the bladder will gradually heal, although it may be a considerable time before this occurs.

Tuberculous disease of the kidney is probably unilateral in the bulk of cases at the commencement, and may remain so up to a comparatively late date. On the other hand, a few cases occur in which the infection can be shown to be bilateral at what appears to be an early stage of the disease.

SYMPTOMS.

It is very important to recognize that the early and sometimes even the later symptoms are often entirely referred to the bladder. Probably the commonest initial symptom is frequency of micturition associated with a certain degree of pyuria. Frequency continuing with absolutely no pyuria is almost certainly due to some other cause. The frequency is soon associated with pain before, after, or during micturition. Haemorrhage occasionally occurs as an initial symptom, and may be the first thing to attract the patient's attention. These symptoms may continue, now better, now worse, over a very long period without any renal pain, tenderness, or rigidity, even although the disease has commenced in the kidney and is gradually progressing.

Several cases have been met with in which both kidneys were affected, as shown by ureteral catheterization, though the symptoms were entirely referable to the bladder, and there was nothing in the kidney regions to indicate disease. The following case is quoted as an illustration:

CASE I.

A man, aged 27, gave a history of severe frequency and pain, with occasional haemorrhage, extending over three or four years. He was only able to hold water about half an hour, and was wasted and obviously very ill. He stated that he never remembered having any pain in the renal regions, and on examination nothing could be detected beyond possibly a slight fullness in the left lumbar region. A cystoscopic examination of the bladder was made under chloroform with some difficulty, owing to its small capacity. The whole bladder was covered by a white caseous-looking deposit, and it was not possible to make out any landmarks. Tubercle bacilli could not be found in the urine. Ten days later he died suddenly.

At the *post-mortem* examination it was found that the bladder was completely covered by caseous tubercle. The right kidney was of very small size and converted into two or three cavities. The kidney substance was quite gone and the ureter only a fibrous cord. The left kidney was enlarged, but fixed high up under the ribs, which probably explained it not being more definitely palpable. Its pelvis was dilated and lined by caseous tubercle, and there was only a thin rind of kidney substance remaining.

I quote this case as an extreme example to show that even in advanced cases there may be no direct renal symptoms, and that their absence is no indication that the kidneys are not affected. A certain number of cases give rise to renal pain and tumour formation, but they are much less liable to cause difficulty in diagnosis. Suter[1] found that, out of 60 cases, 53 came on account of bladder symptoms alone, and Braach[2] gives the proportion as 85 per cent.

The next case is an ordinary straightforward instance of tuberculosis of the kidney.

CASE II.

A boy, aged 14, had a history of frequency of micturition of six months' duration. There was some pyuria and tubercle bacilli in the urine, but no renal pain, and nothing to be detected in the lumbar regions. On cystoscopic examination the bladder was found to be of good capacity, but definite tuberculous deposits were seen round the mouth of the right ureter. The left ureter appeared quite normal, and the rest of the bladder was healthy.

The right kidney was removed and found to contain a broken-down caseous area which had irrupted into the pelvis. The patient made a good recovery, and eighteen months later was perfectly well in every way. Unfortunately he has since been lost sight of.

This is the type of case most frequently recorded, and many of the writers give the impression that a diseased ureter mouth on one side and a healthy one on the other is invariable, and that unless that is found the case is unsuitable for operation. As Braach[2] and Thomson Walker[3] have pointed out, considerable variation in the appearance of the ureters occurs, and it may be impossible to locate the diseased side by inspection alone. The following case is illustrative of this:

CASE III.

A man, aged 21, with a history of frequency of micturition for nine months, accompanied by severe attacks of pain. There was no renal pain, tenderness, or rigidity, but there was marked pyuria, and tubercle bacilli and a coliform organism were present.

*Read before the Glasgow Medico-Chirurgical Society.

The cystoscopic examination was made under chloroform on account of pain. The bladder as a whole was red and congested, and the prostate bulged into it markedly, especially on the left side. The right ureter looked swollen and thickened, and there were ulcerated areas round it. The left ureter could not be seen. There were some tuberculous deposits on the superior surface. The right ureter could not be catheterized.

He was put on tuberculin, urinary antiseptics, and went to the country. His symptoms improved to a considerable extent, and he was again examined with the cystoscope some months later, when very much the same appearances were found, except that the left ureter could now be seen. While not normal, it looked the healthier of the two.

Eighteen months later he developed pyelitis of his left kidney. Remembering the diseased appearance of his right ureter, one felt afraid that both kidneys were now affected. He had lost weight considerably, and was looking very ill. On cystoscopic examination, the bladder as a whole appeared improved and the prostate much smaller. The left ureter was markedly oedematous and affected. The right was swollen and had still several ulcerated areas round it. I was now able to catheterize it, and got a normal-looking urine of good specific gravity, containing a normal percentage of urea and no pus or tubercle bacilli.

I consequently removed his left kidney, which was very extensively diseased, and he made a very good recovery. Four weeks after operation he was holding his water for four hours. Now, close on two years later, he is absolutely well. His urine is normal, no tubercle bacilli are to be found, and he can hold his urine five to six hours.

This case illustrates the fact that, although a ureteric orifice in a tuberculous bladder may appear thickened and the mucous membrane round it inflamed and even ulcerated, yet the corresponding kidney is not necessarily tuberculous, and the appearance may be entirely due to septic infection of the bladder. If this fact be not kept in mind cases may be rejected which might have done well by operation; the value of ureteral catheterization in these cases is self-evident. The rapidity with which the frequency of micturition improved in this case is striking.

The next case illustrates how an infection by *Bacillus coli* may be superadded to and mask a tuberculous condition.

Case iv.

A woman, aged 21, had been under treatment for *B. coli* infection for fully a year before being seen. She suffered from severe frequency of micturition, but had no renal pain. *B. coli* was present in the urine, but no tubercle bacilli found. Cystoscopic examination showed the left ureter to be markedly diseased and drawn out of position, in the manner Fenwick[4] has described, and pus could be seen coming from it. The right appeared fairly healthy, and catheterization gave a good collection of urine of good specific gravity, containing a normal amount of urea, but with *B. coli* and some pus present. The left ureter, felt per vaginam, was markedly thickened. I exposed the left kidney and opened it, but it was so extensively diseased that I removed it. It was found on examination to be tuberculous. The patient made a good recovery, and is now, a year later, in much better health, but she is still troubled with frequency of micturition to a certain extent.

The next case is interesting on account of its cystoscopic appearances.

Case v

A man, aged 22, with a history of frequency of six months' duration, and recently of some pain in the left renal region. The left kidney could not be palpated, but there was some rigidity on that side. Tubercle bacilli were present in the urine. On cystoscopic examination a patch of tuberculous deposit was seen close to the right ureter, but the mouth itself appeared healthy. The left ureter showed almost no departure from the normal except slight hyperaemia. Catheterization of it gave pale urine of low specific gravity, containing large numbers of tubercle bacilli. The right gave concentrated urine of good specific gravity with normal urea content, and no tubercle bacilli were found.

I exposed the left kidney, which externally looked quite normal, but its ureter was greatly thickened. The kidney and 3 in. of the ureter were accordingly removed, and when the kidney was split open it was seen to be markedly tuberculous. The patient made a good recovery. He is now, nine months later, progressing favourably; he has gained 2 st. in weight, and the frequency of micturition is gradually diminishing.

In this case the ureter on the affected side showed so little departure from the normal that without catheterization it would have been almost impossible to say the kidney was affected.

It is possible to catheterize most cases, if not at the first attempt, then at a later one after treatment of the bladder. Recently I had a case in which it was found quite impossible on account of oedematous folds and granulations at the base of the bladder which could not be got rid of. I finally performed nephrectomy on the left side, removing a markedly tuberculous kidney. Here I relied on the thickening of the left ureter felt per vaginam, the appearance in the bladder and the result of an indigo-carmine injection. The patient made a good recovery from the operation, but it is too soon yet to say anything very definite.

I would like to refer to the case of a woman which I recorded in 1910[5] who came with pus and tubercle bacilli in the urine and an enlarged right kidney. It was found to be her only functionating kidney, the other having probably been destroyed. She was put on tuberculin and is now, four years later, practically free from symptoms and feeling very well.

Diagnosis.

It is important not to be misled by absence of renal pain as this may never occur. In any patient with frequency and pyuria which does not clear up or tends to recur the urine ought to be carefully searched for organisms and the bladder examined with the cystoscope. While in many cases the cystoscopic appearances are fairly typical, the appearance of the ureters may be very indefinite. The mouth of the ureter may appear swollen and even ulcerated, and yet the corresponding kidney may be healthy, and on the other hand it may only show slight hyperaemia and the kidney may be markedly diseased.

If one ureter is frankly tuberculous I catheterize the other one only, but if the condition seems doubtful I catheterize both. Thickening of the ureter felt per vaginam or rectum, as pointed out by Fenwick,[6] is invariably a sign of a diseased kidney.

The catheterized urines should be carefully examined for pus, bacilli, and the percentage of urea. The specific gravity has been found normal or high in healthy urines and distinctly low where the kidney was extensively affected, and in the absence of more accurate tests this may be useful, but more information is required as to its practical value.

Treatment.

Wilbolz[7] reports the study of 316 cases of renal tubercle treated in Switzerland by means other than surgical. Of this number, 70 per cent. died within five years and only 10 per cent. were alive more than five years after the commencement of the disease. In only 5 per cent. had all symptoms ceased after five years, and only one case was well in every respect. Surgical treatment, while not always giving a good result, can claim a much larger number of absolute cures. Braach[8] records that of 203 cases in which nephrectomy was done at the Mayos' Clinic, the operative mortality was 2.9 per cent. Omitting recent cases and those that could not be traced, 142 remained to be considered. Of these, 98, or 69 per cent., were perfectly well or greatly improved more than a year after operation, and 18, or 13 per cent., had experienced little or no improvement in the vesical symptoms. Most of these latter were cases in which the infection had been present for two years or more before operation.

If one is satisfied that the disease is in the kidney, and that the other one is healthy, then I am sure the only satisfactory treatment is nephrectomy, and the earlier it is done the more satisfactory is the result likely to be.

As regards the actual operation, I have always performed lumbar nephrectomy, and have not removed more than 2 to 3 in. of the ureter. In dividing the ureter I inject with pure carbolic, as advised by Mayo, ligature in two places and cut between; the stump is then dropped into the wound. In two cases a sinus persisted for two months and then gradually closed.

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Among the subjects to be discussed at the International Dairy Congress at Bern (June 8th to 10th) are the milk supply of large towns, the utilization of dairy by-products, inspection of milk, and the question whether systematic breeding of cows with a view to the largest production of milk is detrimental to their health. Much of the work of the Congress will be concerned with cheese. Particulars can be obtained from the Secretary of the British Dairy Farmers' Association, 28, Russell Square, London, W.C.

THE SURGERY OF TUBERCULOUS GLANDS.

BY

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THIS paper is based upon 800 cases operated upon in the Kashmir Mission Hospital.

The climate of Kashmir is almost European, and the people are Aryans, but there are great differences in social conditions. The urban population is crowded, with much poverty and no sanitation, but food is cheap, and sunlight abundant.

In India generally we cannot expect to obtain reliable statistics as to the extent of tuberculous adenitis. It is certainly common in the large towns of North India, but few hospitals perform many operations for it of a radical nature, and it would not be easy to collect statistics as to the results.

STATISTICS.

In Kashmir, owing to the continuity of the work under the same surgeons for many years, the figures here collected may be of some value. They include all the cases of excision and scooping out during the past twenty years, but not gland abscesses treated only by incision. Most of the operations were performed by Dr. E. F. Neve or myself, but several other surgeons have shared in the work for short periods, Dr. Rawlence for as much as seven years. There were 767 excisions and about 40 eviscerations.

Sex.

Females predominated (63 per cent.). As this is not a purdah hospital it is remarkable that so many women should have been willing to apply for relief to men doctors, and the actual proportion of women and girls affected is likely to be larger. This may be attributed chiefly to the way in which the females are secluded in unventilated apartments, with very little outdoor exercise.

Age.

Though glandular abscesses in small children are very common, no formal excisions were performed under 5 years of age. Under 10 years, 7 per cent.; under 20 years, 33 per cent.; under 30 years, 45 per cent.; and over this age 15 per cent.

The incidence of enlarged glands in different areas is about as follows, two or more areas being often affected in one patient:

1. Submaxillary and submental, 40 per cent.
2. Parotid and mastoid region, 50 per cent.
3. Upper posterior triangle of neck, 30 per cent.
4. Along carotid sheath, 25 per cent.
5. Supraclavicular, 20 per cent.
6. Axillary and groin, each 2 per cent.
7. Other regions, popliteal, iliac, scapular, etc., 1 per cent.

Period in Hospital.

Under fifteen days, 50 per cent.; under a month, 30 per cent.; up to six weeks, 20 per cent. At least 20 per cent. had sinuses at the time of operation; in these healing was often a little delayed.

Results.

Cured, 75 per cent., but in about 10 per cent. of these some recurrence might be expected, or a second operation needed.

Improved—namely, those with sinuses or unoperated glands—15 per cent.

Left hospital with discharging sinuses and other tuberculous signs, 9 per cent.; left hospital in a weak condition with general tuberculosis, 0.5 per cent.

Died, 0.5 per cent. One death was due to meningitis on the twenty-first day, and three to general debility, with diarrhoea and tuberculous fever, from the twentieth to fortieth days after operation.

PRELIMINARY TREATMENT.

It is difficult to get Indians to realize the importance of attention to the teeth and gums, unhealthy tonsils, adenoids, etc. Often, too, there are discharging ears; and favus, with scalp ulceration, is common. All this needs attention and care. We put medical treatment first, and follow it up with operations. Though in other surgical tuberculosis we employ tuberculin largely, yet for glands we have so far not done so, fearing focal reactions and suppuration; nor have we used *x* rays, except to a very limited extent.

In most cases we find it advisable to adopt decisive measures lest the patients should drift away into the hands of hakims, who would, by blood-letting, starvation, cauterization, or incisions with septic lancets, only accelerate fatal complications. It is not the very poor who suffer; they lead too open-air a life. It is the fairly well-to-do, and these are fair prey to quacks. In quite 10 per cent. of the patients sinuses with mixed infections are present. Kashmiris prefer that abscesses should burst "naturally."

OPERATIVE TREATMENT.

Excision.

We have aimed at removing all chronically enlarged glands above the size of a bean or small marble, but not at extirpating all small gland nodes. We consider it dangerous to try to remove all gland tissue from the neck as infection will then be carried by the lymph stream to the chest. In less than 10 per cent. have we seen recurrences, and it is unlikely that such cases would go to other surgeons in Kashmir for treatment.

Evisceration.

During the earlier period I practised evisceration of the glands, especially in cases with pre-existing sinuses, more than we do at present. At one period, through small incisions, with a blunt instrument I broke down the partitions between glands and scooped them out to a very considerable depth, rubbing with iodine or iodoform paste. This is in deft hands a safe procedure and fairly successful; it may leave sinuses infected with tubercle, though not as much as one would expect. But it is limited to some few very softened glands.

Technique.

Rubber gloves are specially necessary; a special wire frame covered with sterilized cloth is advisable to shut off the face and the anaesthetist from the operation area.

We agree with Jacobson that in many cases of limited extent vertical incisions give the best access, but long incisions down the sterno-mastoid are apt to yield and leave a broad scar. A curved incision from below the mastoid to below the chin following the natural creases gives good access to the parotid and submaxillary regions. If supraclavicular and carotid glands are also affected, Mayo's long curved incision is best, beginning below the mastoid, curving outwards and downwards, and then inwards parallel to the clavicle. The large flap can be turned up, giving access both to the anterior and posterior triangles. We do not leave these for separate occasions as some recommend, but we seldom operate on both sides of the neck at once if the disease is extensive, as it is desirable that the operation should not be prolonged beyond an hour. The flap turned up should be protected with gauze.

The following structures must be safeguarded:

1. The spinal accessory nerve is often endangered. In this series it has been cut four times. It should be joined afterwards; but twice a piece has been excised along with the mass of glands through which it passed. It is well to trace the nerve early in the operation; large incisions assist in doing so.

2. A branch of the facial nerve to the lip is in danger if the incision is too close to the lower jaw.

3. The sterno-mastoid muscle is often deliberately severed. This is seldom necessary; with a large incision it can be drawn to one side, and good access gained to the carotid sheath. If cut it should be carefully sewn with catgut. But the scar is likely to be a little adherent to the muscle and to be deformed.

4. Internal jugular vein. This is easily defined in the middle of the neck, but with deep glands and a limited incision high up the neck it is difficult to avoid it. It is well to begin below and clear upwards. To avoid the danger from aspiration of air it is well to put pressure forceps on the vein. We have never found it necessary to excise any portion of it; nor do we ligature it of set purpose. It has been the source of sudden haemorrhage in six or seven of our operations; lateral suture or pressure forceps left on have sufficed. In two cases the injury was from pulling on adherent structures and so displacing the vein; in others from rupturing lateral veins at their origin. The facial vein is apt to cause troublesome haemorrhage.

5. The facial nerve and the parotid duct should also be mentioned, but they were not injured in any of our operations. When in close proximity to these it is well to scrape rather than to dissect out.

6. I once opened the pleura accidentally, with no ill result.

It is not the patients in whom the enlarged glands are most numerous who give the greatest difficulty. We have repeatedly had to deal with forty or fifty glands in one operation, mostly not adherent and shelling out like potatoes. Old, adherent, caseating glands, or those which

have previously suppurated, give real difficulty when in close contact with nerves or large vessels.

We use blunt-pointed scissors curved on the flat, a strong tissue separator, and special ring-shaped gland forceps with a spring catch and long handles, which enable an assistant to assist the operator.

Drainage should be employed in extensive and doubtful cases. But we do not favour drainage tubes for aseptic cases: a narrow gauze wick suffices. The Kashmir sawdust pads are useful as outside dressings, and, with a well-applied knitted bandage of loose mesh, the head is comfortably fixed almost as if splinted. We remove the drain usually after twenty-four hours, and then do not dress aseptic cases till the ninth day, when the stitches are removed. For ligatures we use locally prepared iodine-chromic gut, and for sutures local silk thread.

So far as I can judge, the end results are very satisfactory. I have not seen pulmonary phthisis as a later complication, nor tuberculous peritonitis.

There is an increase of pulmonary tubercle in Kashmir, but no apparent increase in glandular disease. The climate is favourable, and it is proposed shortly to start a State sanatorium, which is likely to attract tuberculous patients from the plains of North India.

MULTIPLE SUBCUTANEOUS TUBERCULOSIS FOLLOWING CIRCUMCISION AND TREATED BY TUBERCULIN.

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IN April, 1913, a male infant, suffering from several recurring subcutaneous abscesses, was sent to my laboratory at the General Hospital by Dr. A., with a view to diagnosis and vaccine treatment. The appearance of the lesions suggested a tuberculous rather than a pyogenic origin. The child had been circumcised eight months previously, and the practitioner who performed the operation, and who sent the child to town for an opinion was, unknown to us, suffering at the time of the operation from tuberculous laryngitis, which subsequently proved fatal.

History.

At the age of 7 weeks the child was circumcised by Dr. A. The wound suppurated badly, and three weeks later the right inguinal glands enlarged, and an abscess formed which was incised. No laboratory investigation of the pus was made. A week later, what the mother describes as a measles-like rash appeared on the child's face, body, and limbs; this gradually faded, except for several small areas, which became indurated and suppurated at intervals. At the same time the child lost its appetite and became emaciated. As each indurated area softened it was incised, but in most cases failed to heal after several months' treatment. Eight months after the circumcision the child came under my notice.

Condition on Examination.

The child was now 10 months old, emaciated, and hectic. There were numerous suppurating foci on the body, face, and limbs, several of which had failed to heal after incision and evacuation of pus. On the outer margin and the sole of the right foot there were several discharging sinuses, dressed with gauze drains. There was a similar lesion on the left instep. On the outer surface of the right upper arm there were two recently healed scars surrounded by indurated tissue of a purplish red colour. Over each gluteus maximus, and on the right cheek, and over the right lower jaw there were superficial ulcerations with similar purplish indurated edges to those seen on the right upper arm. The prepuce had healed, and in either inguinal region there were healed scars of recent incisions. On the right side a small abscess was pointing, from which 0.5 c.cm. of thick pus was aspirated. No other tuberculous lesions but those indicated could be detected.

Laboratory Investigation.

Films stained by the Gram, Leishman, and Ziehl-Neelsen methods and the usual laboratory media inoculated, and incubated aërobically and anaërobically at 37° C. and 22° C., were all negative. Special attention was given to a possible sporothrix infection by means of cultures on dry glass, etc. A portion of the pus was inoculated subcutaneously into two guinea-pigs, which both showed well-marked tuberculosis when examined four weeks later. Smears from the caseous glands and from the spleen showed numerous long, slender, acid-fast and alcohol-fast bacilli. Cultures from the caseous glands and splenic emulsion of the guinea-pigs were inoculated on plain and glycerine egg medium and on fuchsin egg medium. All the tubes inoculated gave a luxuriant growth of the tubercle bacillus after two weeks' incubation at 37° C. Rabbits were inoculated subcutaneously and intravenously with caseous gland material and splenic emulsion from the guinea-pigs, but were apparently unaffected. At autopsy, two months later, no evidence of tuberculosis was found.

While awaiting the results of the guinea-pig inoculations I inquired of a second doctor who was now in attendance as to a family history of tuberculosis. He kindly informed me that there was no family history of tuberculous disease in either parent, and that the child had never lived in close contact with a tuberculous person. The child had always been breast-fed. Having satisfied myself that the child was in all probability infected at the time of the circumcision by a human type of tubercle bacillus, I was at a loss to account for it till some months later, when the practitioner who performed the operation died suddenly from tuberculous laryngitis, the supposition being that the raw wound was infected by coughing during the operation.

Subsequent History of Case.

Though the child was extremely ill the parents were anxious that "injections" should be tried, seeing that they were in the first place advised to come to town for vaccine treatment. With some misgivings I prescribed weekly injections of P.T.O., starting with 0.0001 c.cm.; they were administered by Dr. B. in gradually increasing doses for several months. Coincident with the administration of tuberculin the child became less fretful, and its appetite and general condition improved. When seen eight months later all the lesions had completely healed, and the child looked the picture of health. The mother informed me that the healing commenced shortly after the tuberculin was first administered.

The case is of interest from the somewhat unusual source of infection, and, considering the child's serious condition, from the rapid improvement which set in coincident with the administration of tuberculin. Moreover, although the infection was widespread, it was, as far as could be ascertained by physical examination, confined to the subcutaneous tissues.

THE POSSIBILITIES OF DOMICILIARY TREATMENT IN PHTHISIS.

BY

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ALTHOUGH considerable progress is being made in the provision of sanatoriums, the vast majority of consumptives perforce remain at home during the greater part of their illness. The problem of domiciliary treatment thus merits careful attention, but doubts have been expressed as to the likelihood of any measure of success resulting from it. This is not the view expressed in the interim report of the Departmental Committee on Tuberculosis as follows:

> It should, however, be borne in mind that a short stay in an institution in which the patient may be educated, followed by a course of home treatment, in shelters, etc., under close supervision, is a form of sanatorium treatment which has certain advantages and which may successfully be adopted in a large number of cases.

In the present article an attempt will be made to show what may be done in an average working-class home. It would be futile to overlook the influence of the locality and of the actual house in which treatment is attempted. It is unfortunate that in many cases the home conditions are such as to hold out scant prospects of success. More-

over, the attitude of the patient and his friends is of vital importance. The treatment of phthisis is usually protracted and makes great demands upon faith and patience. No effort should be spared to make the principles of home treatment intelligible to them and to engage their active support; tact and forbearance are no less essential than a clear idea of what is to be attempted.

The general practitioner, on whom the immediate responsibility for the case devolves, may now avail himself of the services of the tuberculosis officer and nurse, and it is important that there should be intimate co-operation between them. The tuberculosis officer may be of great assistance with regard not only to early diagnosis, but also as to prognosis and the details of treatment. He should meet the patient's doctor at the beginning of treatment, and subsequently at intervals of two or three months. Upon the patient's doctor would devolve the actual supervision of the patient, and in this the assistance of the nurse would be invaluable.

The aim of domiciliary treatment is to bring the patient's immediate surroundings and way of living into as close accord as possible with sanatorium practice. It is therefore desirable that patients should receive a preliminary period of sanatorium treatment. The change in environment often turns the scale towards arrest, and when this has begun, a faithful adherence to the principles of the sanatorium régime will often prove successful in the patient's own home. The educational value of the sanatorium would alone justify its existence. There the hygienic-dietetic conditions are fully realized. The length of stay necessary is conditioned by many factors. For educational purposes six weeks is adequate.

The first essential of home treatment is a separate bed and bedroom. Apart from the danger of infection, it is always difficult to nurse a patient in a room shared with another member of the family. Difficulties sometimes appear insuperable, but even in poor crowded homes it is often possible to draft some of the inmates to the houses of relatives or friends, but a bedstead may have to be provided by some charitable agency. The bedroom should be as plain as possible. All carpets, curtains, superfluous furniture, pictures, etc., should be removed. Windows and door should remain constantly open, the bed being placed so as to avoid draughts. Absence of a fireplace need not disqualify a bedroom, provided that there is a sufficiency of bedclothes, etc.

It is desirable that "open" cases should take their meals in their own room. When this is impracticable and the patient spends much time in the common living room this should likewise be transformed as far as possible. Sometimes the front parlour may be converted into a day room. Doors and windows should remain open, and the patient must be encouraged to keep away from the fireside. He should be sufficiently clad to be able to sit in comfort by the open door.

The nurse should instruct those responsible for cleansing as to the dangers of allowing dust to accumulate, and the advantages of a damp cloth must be carefully explained. Detailed advice must also be given as to suitable clothing, food, etc., and as to the disposal of sputum. On the efficiency of the latter depends the degree of danger to which the other inmates of the house are exposed. On the whole it will be found that paper handkerchiefs, or even pieces of newspaper, commend themselves, being cheap and easily burnt. A paper bag is useful for the soiled papers when out of doors.

Except in hopeless cases patients should possess their own thermometers and record their temperatures night and morning. Ambulant cases should be weighed once a week. They should use the same scales and wear roughly the same clothes. Temperature and weight records should be shown to the doctor at each visit.

The danger of over-exertion is still imperfectly realized. Patients are too often vaguely urged to get out all they can, and excessive autoinoculation results. The amount of exercise that can safely be allowed must be gauged by the patient's temperature and sense of well-being. Whenever the thermometer registers 99° F. (99.5° in women) patients should remain in bed until the temperature returns to normal. In all cases rest for at least three-quarters of an hour before and after meals is advantageous. Patients need to be warned as to the dangers of alcohol. Sympathetic friends too often tempt poor consumptives into public houses, whereas a contribution towards their nourishment would be of real assistance.

A brief dogmatic leaflet should be provided, and may conveniently be fastened to the wall near the bed. The following leaflet has been prepared for the Lancashire County Council and the County Borough of Wigan, and is proving useful:

ADVICE TO CONSUMPTIVES.

(*a*) To Assist Your Own Cure.

1. *Be patient* and obey your doctor's instructions. Consumption is a slow disease and takes time to cure.

2. *Let fresh air be your watchword.* Keep the windows and doors of your living and sleeping rooms widely opened. Do not sit close to the fire; if you feel the cold, put on extra clothing.

3. *Dusty rooms* are always harmful; remove useless articles of furniture, curtains, ornaments, etc. A *damp cloth* should be used for cleansing, instead of an ordinary broom and duster.

4. *Keep your teeth clean* and in good order, so that you can chew and digest your food properly.

5. *Plenty of nourishing and easily digested food* is necessary. *Milk* is especially valuable, and three pints of milk should be taken daily, together with plenty of butter, margarine, dripping, etc. Eat as much fat meat, bacon, kippers, and other fatty foods as you can comfortably digest.

6. *Rest* for at least three-quarters of an hour before and after meals.

7. *Learn to take your own temperature* night and morning, and notice whether you get at all feverish. In health the temperature is 98.4°; whenever your temperature is 99°, stay quietly in bed until it is normal again.

(*b*) To Avoid Giving the Disease to Others.

1. *The "sputum," or "spit,"* is especially dangerous as it contains the living germ of the disease. *Be careful* not to spit just anywhere; spit only into pieces of newspaper or paper handkerchiefs, and burn these as soon as convenient. When out of doors put the soiled papers into a paper bag until you return home, or else use a pocket spitting bottle.

2. *Kissing* should be avoided. Use your own plate, cup, etc.; these articles should be boiled before being washed with the household crockery, or else washed separately.

3. *Sleep in a separate bed* in a room by yourself. The disease may be conveyed to a healthy person through sleeping with a consumptive—for example, a wife sleeping with a consumptive husband.

Nothing, however, can replace the personal advice and supervision of the doctor and nurse. The doctor should see his patient as often as may be required, but at least once a week. Sometimes he may be unable or unwilling to use that degree of firmness requisite for the proper carrying out of the measures above detailed. In such cases the assistance of the tuberculosis officer and nurse will be of value, owing to their greater freedom and independence.

Lack of proper nourishment frequently stultifies any attempt at successful home treatment. Sickness benefit is often almost exhausted before the disease is diagnosed. The special nourishment grant from the Insurance Committee is only applicable to selected cases. Poor Law relief usually proves inadequate to the special needs of these patients. An effort is now being made, through the medium of Care Committees, to provide what is needful.

A shelter is often a valuable adjunct to home treatment, where the circumstances allow of this. The possibility should be considered in every case, especially where there is a garden, yard, or adjacent field. Special training and supervision of the patient are necessary in order to obtain the greatest amount of benefit. It is not usually desirable for females to sleep in a shelter at night. Nothing that has been said above is incompatible with the injection of tuberculin, if this is considered desirable.

Domiciliary treatment depends for its success upon the careful attention to details. The problem is essentially one of hygiene rather than of therapeutics.

M. Armand Gauthier, Senator of the Aude, who has accepted the Portfolio of Marine in M. Doumergue's Ministry, resigned by M. Monis, is a member of the medical profession. He was Minister of Public Works in the Rouvier Cabinet of 1905.

A proposal has been made to found a radium institute in New Zealand. Palmerston North has been chosen, on account of its central situation, as the place for the establishment of the institute. It has been suggested (says the *Australasian Medical Gazette*) that the public of the North Island should be asked to subscribe £10,000 towards the cost, making, together with the Government subsidy, a total of £24,000 for the building and apparatus.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF RIGHT HEMIPLEGIA WHICH RECOVERED VERY RAPIDLY UNDER SALVARSAN.

Gunner C., aged 34, was admitted to the Station Hospital, Secunderabad, on August 23rd, 1913, suffering from complete right hemiplegia. There was no aphasia, but his speech was somewhat indistinct. He stated that he contracted syphilis eleven years before and received two years' continuous treatment with mercury. He had had no reminders since that date. He woke up on August 22nd feeling his right arm somewhat stiff. He rode eight miles, dismounted, and superintended the loading of a wagon. He was then unable to mount without assistance, but rode home after being helped into the saddle. When he woke next morning his right side was completely paralysed. The Wassermann reaction was positive.

On August 24th he was given 0.6 gram of salvarsan intravenously, and he was seized with very severe abdominal pain during the injection. He was put on pot. iod. gr. v and liq. hyd. perchl. 3j, t.d.s.

On August 25th at 9 a.m. he was able to move his right hand very slightly, and by 5 p.m. there was considerably more power in the arm and more in the leg.

August 26th. Further increase of power in arm, and the leg appeared to have quite recovered.

August 27th. Able to raise arm completely at the shoulder joint, face straight, tongue almost straight, and he could walk with very slight assistance.

August 28th. A crop of herpetic vesicles came out on the left ear and the right side of the mouth.

August 31st. Second intravenous injection of 0.6 gram of salvarsan, which was followed by less vomiting and diarrhoea. Knee-jerks + on both sides.

September 9th. Third injection of 0.6 gram of salvarsan intravenously.

September 26th. Wassermann reaction negative fourteen days after third injection; cerebro-spinal fluid also negative.

October 31st. Discharged from hospital to attend as an out-patient. There is good recovery of power in arm and leg. He walks well, but drags the right toe on the ground, especially when excited.

December 6th. Rode to hospital; mounted and dismounted without difficulty. Co-ordination of right arm, with eyes closed, is apparently perfect.

His condition had much improved since his discharge from hospital, and on December 16th his blood gave a negative Wassermann reaction. I presume the case was one of syphilitic endarteritis with resulting thrombosis.

F. J. Porter, D.S.O.,
Major, R.A.M.C. (ret.).

THE ELECTRICAL TREATMENT OF INTESTINAL STASIS.

With reference to the electrical treatment of intestinal stasis referred to by Dr. F. Hernaman-Johnson (March 7th, p. 531), the following notes of a case in point will be of interest:

A lady, aged 55, consulted me last July. She had suffered from constipation for twenty-five years—that is to say, she had not had a natural unaided evacuation of the bowels in that period. For the last five years she had had colitis—that is, her abdomen had been so tender that often she could not bear the pressure of her clothes. She had severe pain daily, until her bowels acted after a high enema. The evacuations contained long strings of mucus. She was very flatulent and dyspeptic. She had learnt to exclude the articles which disagreed most with her, so I made no change there; she was ordered a dessertspoonful of paraffin night and morning.

Six *x*-ray exposures were given of one-quarter of a Sabouraud dose at each sitting, the abdomen being divided roughly into three portions, and each surface receiving two exposures. The upper part of the abdomen was not exposed. These applications were spread over three weeks, and in the intervals between doses the abdomen was exposed to the rays of the 500 candle-power lamp as hot as could be borne for twenty minutes. At the end of a month the pain ceased.

The treatment was then intermitted for six weeks, after which a course of treatment with the static wave current to the abdomen was begun, preceded as before by twenty minutes of the 500 candle-power lamp. This was given thrice a week for about two months, when the bowels began to act naturally, and the sittings were gradually discontinued.

I had a letter from her at the end of February; she has a natural action of the bowels daily, no pain, no dyspepsia, and no mucus in the stools. I have had other cases treated in a similar manner which have benefited, but this, I think, is of particular interest, because it was of long standing and has recovered completely.

London. John J. Grace, F.R.C.S.

THE EFFECTS OF ADRENALIN.

Two communications have appeared in the Journal recently (February 28th, p. 476, March 14th, p. 623) dealing with the therapeutics of adrenalin. It would be very interesting if those who prescribe or use the suprarenal gland in, say 2-grain, tablets would tell their experience of its effects and the dosage they administer. The late Dr. Gibson, of Edinburgh, recommended it for Graves's disease, but I do not know what doses he gave. One person I know took gr. xij of the gland daily with decided benefit. I have also been told that it is used abroad in similar dosage for menorrhagia.

There is a class of case of a neurasthenic order which suffers from sudden inexplicable attacks of tiredness lasting two or three hours, a whole day or more, and the tiredness is accompanied by something akin to melancholia. I have found the daily administration of 2 to 6 grains of suprarenal gland in tablet form for four to seven days at a time of great benefit in some of these cases.

A lady, aged 65, suffering greatly from flushings of the face and head, with noises in the head, benefited from taking gr. ij daily.

In my opinion, there are certain cases in which the gland, not adrenalin, will prove as useful as thyroid gland does in others. Whether continued administration would cause aortic degeneration in man is a point requiring to be settled.

Dunbar. W. J. Burns Selkirk.

THE USE OF THE HEAD MIRROR IN OPHTHALMIC OPERATIONS.

I do not know how far other ophthalmic surgeons have found the head mirror, such as one uses in examining the larynx, serviceable in ophthalmic work. A few months ago a lady came to me, having met with an accident to her eye from the rebound of a thorn bush. The thorn had penetrated the upper eyelid and the sclera, and could easily be seen by the ophthalmoscope lying free in the vitreous humour, well behind the upper half of the lens. After consultation with Mr. Craig, I decided to attempt to remove it, and the ordinary laryngeal head mirror came in very useful, as, with the pupil widely dilated with atropin, one could see the thorn by the reflected light, and watch the ends of the iridectomy forceps appear behind the lens and grasp the thorn, both hands being free for operative work. Assisted by Dr. Davidson, I reflected the conjunctiva above and a little behind the insertion of the external rectus muscle. A considerable time had then to be given in order that all bleeding might cease by the free use of adrenalin and cocaine, before incising the sclera, otherwise blood in the vitreous chamber might have obscured the view; a V-shaped instead of a linear incision was made, so that the thorn could more easily be extracted through such a scleral flap. The thorn was grasped under the operator's sight and removed. There was no material reaction, and the eye some weeks later had almost $\frac{6}{6}$ vision. I have seen the head mirror recommended as useful in ophthalmic work, but a case such as the above illustrates the point very well.

W. M. Killen, M.D.,
Surgeon, Ulster Eye, Ear, and Throat Hospital, Belfast.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

A CASE OF INTUSSUSCEPTION PROTRUDING THROUGH THE ANUS.

[Under the care of Mr. E. Deanesly, F.R.C.S., Senior Surgeon.]

(Reported by Mr. F. R. Scott, House-Surgeon to the Hospital.)

A male child, aged 9 months, was admitted on January 11th, 1914. Eight weeks previously he was taken ill with diarrhœa and vomiting. The stools were slimy and coated with blood. These symptoms continued, in spite of medical treatment, until his admission, with the exception of a temporary remission lasting a few days. Eight days previous to admission the mother found "the back passage coming down." She reduced the protrusion, and did so again four days later with more difficulty, but it returned on the following day, and was down on admission to the hospital. It then protruded some five inches outside the anus, and was obviously an intussusception with two apertures at its apex, one rather larger than the other. The abdomen was soft and not distended, and nothing abnormal could be felt. The child's general condition was good.

Operation.

This was performed immediately under ether and chloroform mixture. Through a median hypogastric incision the whole of the cæcum and of the ascending and transverse colon was found invaginated into the descending colon and rectum, the small intestine emerging from the funnel-shaped "neck" of the intussusception. There was no peritonitis or discoloration of any part of the bowel involved and only moderate distension of the small bowels. A considerable portion of the invagination was undone easily by traction and manipulation, and the protruded portion was similarly manipulated into the rectum. Further reduction becoming increasingly difficult, a longitudinal incision was made into the "sheath" where it was formed by the upper rectum, and through this incision the apex and body of the intussusceptum, a typical sausage-shaped mass, was withdrawn and clamped about 5 in. from the apex. It was then cut straight off and the margins of the invaginated small gut sutured accurately to that of the large, after reducing the calibre of the latter by a few preliminary stitches.

The sutured bowel was now reduced within the sheath, and the incision in the latter closed. It was then easy by a little traction to draw out the small intestine still invaginated until it came to the place of the enterorrhaphy. In the unrolled position of the bowel the new ileo-colic junction lay in the middle line just above the umbilicus. The distal portion of the appendix was observed not to have been taken away with the amputated portion of bowel, but it was not thought necessary to remove it.

Recovery was quite uneventful.

Remarks by Mr. Deanesly.

This case presents several points of interest. It was a classical example of ileo-cæcal invagination carried to the extreme degree of protrusion from the anus. There can be no doubt that the process was gradual, and quite probably extended over the whole eight weeks during which the child had suffered from diarrhœa and vomiting. External protrusion had existed for eight days. That in spite of this the child's condition was not obviously grave may be explained by the comparative looseness of the invaginations and the absence of all vascular strangulation, even in the last 6 in. In this portion, however, there was sufficient engorgement and adhesion to render reduction impossible, and enterectomy was the only course open. The method of amputating and suturing from within the sheath was, I believe, suggested many years ago by Mr. A. E. Barker. It is by far the quickest and easiest method, and in this case was done in a few minutes.

The specimen removed was found to consist of about 3 in. each of cæcum and small intestine, together with the proximal inch of the appendix. The two openings observed in the apex of the mass consisted of the ileo-cæcal valve and the junction of the appendix, and it is curious that the latter opening was considerably the larger of the two.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Some Experiences in Crile's Method of Shockless Surgery (Anoci-association).

At a meeting on March 20th, Mr. R. D. Purefoy, President, in the chair, Mr. W. I. de C. Wheeler, in a paper on Crile's method of shockless surgery, reviewed his own experiences for the past few months, and, while admitting that the theory and practice of the method were not ideal at present, they represented, he thought, that a remarkable advance had been made towards the prevention, either transient or permanent, of ill effects from operations. In many cases after prolonged major operations the patients had little or no sensation of pain, there was no reactionary rise of temperature, no quickening of the pulse, and no manifestation of shock, great or small. It was likely that Crile's discoveries would mark a new era in surgery, and that a development of the principle of anoci-association would be a definite milestone in surgical progress such as marked the control of haemorrhage in the days of John Hunter, and the triumph of asepsis through the efforts of Lister. In attempting to perform operations under conditions which excluded all nocuous stimuli from the brain, it was necessary to pay attention to emotional and psychic stimuli which produced brain-cell changes equal to, if not in excess of, the nocuous stimuli transmitted to the brain by the use of the scalpel during the operation. The technique was simple, but must be conscientiously carried out. The patient, so far as possible, should be relieved from all anxiety and fear, and, for the anxious hour before operation, should be given omnopon and scopolamine or other "fear-eliminating" drug. Every layer of tissues to be divided must be previously injected with ½ per cent. novocain adrenalin solution, which acted rapidly, and before the close of the operation, or earlier if desired, a 0.75 urea-quinine solution should be infiltrated into the tissues to take on the action of the novocain, and to ensure nerve block for the days following operation. For ten years the speaker had used novocain in conjunction with general anaesthesia, and for the past two years had, in addition, administered omnopon and scopolamine prior to operation. For the last few months he had been converted by the work of Crile and the advocacy of Moynihan to a very systematic infiltration of the tissues and to the employment of urea and quinine. The surgeon must recognize three factors to be a successful "anoci-associationist." Emotional and psychic disturbance prior to operation must be reduced to a minimum. Pain and fright must be entirely excluded at the time of operation by the administration of a suitable anaesthetic. The stimuli, which normally were carried by the nerve paths and produced harmful changes in the brain, must be locally anchored by the injection of nerve-blocking solutions—novocain for immediate division, urea and quinine to prevent after-pain and to inhibit mucous stimuli for the days following operation. The President having made some observations, including an inquiry as to the efficacy or otherwise of injecting strychnine when shock developed, Mr. Stoney said he had no practical experience of the subject, but considered that though anoci-association was very sound in theory, in practice it was slightly different. An ordinary surgical operation was not usually associated with a great deal of shock—for instance, the removal of cartilage from the knee, which was one of the cases cited in Mr. Wheeler's paper, was not associated with marked rise in temperature or pulse, or with any great pain. The operations which he found associated with shock, and in which shock was sometimes fatal, were cases of emergency abdominal operation, especially those of strangulation or obstruction,

and in such cases he did not see how anoci-association could be carried out, as one of the reasons for the shock was the handling of the intestines. Unless one infiltrated the whole of the root of the mesentery a great deal of the shock could not be avoided. This procedure he held to be impracticable in such a case on account of the time necessary to carry it out. In extensive amputations or removals of large tumours, one might be able to improve the patient's chances by adopting anoci-association, but for general operative treatment, or where the number of operations to be performed on the same day was large, it was not practicable. The paper having been further discussed, Mr. Wheeler, in reply to the discussion, said he was aware that there were defects in the subject. No doubt, of course, one could get on tolerably well without this procedure, but so much did patients think about an operation that they were accustomed to afterwards date every occurrence from the time of its performance. He held that a slight rise of temperature was due to shock. Crile's idea was to have no shock. He agreed as regards cases of intestinal obstruction. The faster and less complicated the operation in these cases the better would be the result. Urea and quinine did not cause necrosis of the tissues, and local anaesthesia without general anaesthesia was not anoci-association at all. He was of opinion that strychnine was bad to administer in any case of shock.

MEDICAL SOCIETY OF LONDON.

At a meeting on March 30th, Sir David Ferrier, President, in the chair, Sir StClair Thomson read a paper on *Sanatorium experience of laryngeal tuberculosis*, which is published in full at page 801 of this issue. In the discussion which followed, Dr. de Havilland Hall said that he had obtained good results in the past by the use of lactic acid of gradually increasing strengths, but had no doubt they would have been still better if combined with sanatorium treatment. Dr. T. D. Acland said he had seen harm follow the use of tuberculin. Dr. P. H. Hartley spoke of the difficulty of detecting cases early enough for the most favourable prognosis without sending to the sanatorium those which were not definitely tuberculous. Dr. S. V. Pearson asked whether the epiglottis should be removed in cases in which it only was affected. He spoke of the possibility of treatment by nascent iodine. Dr. N. D. Bardswell said that after using all the bacteriological methods, a choice had often to be made between the general clinical picture and the laboratory tests. The whole question of diagnosis was still unsettled. It was probable that in the future some of the cases which at present were considered to be non-tuberculous would be shown to be cases of latent tuberculosis. The larynges of all patients suffering from tuberculosis should be examined periodically. With regard to local treatment, the galvano-cautery gave the best results, but had a very limited sphere of usefulness. Dr. H. Tilley said that he did not treat locally a laryngeal lesion if there were active signs in the chest, and agreed that the galvano-cautery was only applicable for a small percentage of cases. Rest was very important, and everything should be done to prevent coughing. Few methods gave more relief in this respect than the inhalation of vapours, such as those containing creosote. He had obtained good results with the use of nascent iodine in chronic lesions of the lupoid form. Dr. W. Hill pointed out that the paper dealt with statistics of a very limited group of cases, namely, those which obtained admission to a sanatorium, and doubted whether they vitiated earlier statistics. Mr. E. B. Waggett had found that tuberculomata were benefited by the galvano-cautery, whilst the pseudo-oedematous form of laryngeal tuberculosis did badly. Dr. Camac Wilkinson was of opinion that the results obtained by suitable solutions of tuberculin were better than those obtained by other methods. Mr. H. W. Carson spoke of the value of rest and of continuous inhalations for reducing cough. The galvano-cautery did good service in those cases in which the lung condition was quiescent, but the laryngeal lesion ceased to improve. Sir StClair Thomson, in reply, spoke of the little need in sanatoriums for symptomatic treatment. The galvano-cautery imitated Nature's process of healing by producing fibrosis. There were both local and general indications for its use. It was suitable for localized indolent lesions where the general signs were not those of active tuberculosis. In a paper relating to *Tonsils and adenoids in children* Mr. T. B. Layton maintained that their enlargement was often merely temporary and sometimes the result of catarrhal conditions and of dental caries. In his opinion many operations could be avoided if the teeth received attention and systematic breathing exercises were employed. He recounted many complications which might attend operations, in support of his contention that an opportunity should be afforded for the tonsils to subside before an operation was resorted to.

LIVERPOOL MEDICAL INSTITUTION.

At a meeting on Thursday, March 26th, Dr. R. J. M. Buchanan, Vice-President, in the chair, Dr. Nathan Raw, in a note on *The role of tuberculin in tuberculosis*, gave reasons for using opposite strains of tuberculin in his "bovine" and "human" cases. His conclusion after extensive experience was that tuberculin was good in localized tuberculosis, but not if there were secondary infections. Dr. Bradshaw expressed the view that tuberculin would never revolutionize tuberculosis. Dr. Grace Calvert said he found that patients receiving tuberculin showed distinct improvement in many ways, improvements which were not so visible in patients not so treated. Dr. Buchanan thought that the multiplicity of tuberculins on the market led to confusion. Dr. S. W. McLellan, in a paper on *The incidence of pulmonary tuberculosis in children*, pointed out the danger of error arising in statistics from the personal factor of the collector, and how this might be controlled. He considered the disease to be by no means so common in children as was generally supposed. He analysed 162 cases which had been personally investigated at the Liverpool Chest Hospital, all of which had been previously diagnosed as phthisis, and traced their after-history, pointing out that cases of chronic fibroid pneumonia, or bronchiectasis, frequently gave all the so-called classical signs of phthisis, but that the process of these diseases was very chronic, and no tubercle bacilli were ever found in the sputum. Dr. Rundle said that in his opinion anatomical diagnosis was better than clinical. Dr. Logan said he had used Moro's test with success. In his opinion tuberculosis was common in children, and the majority recovered. Drs. Macalister, Marsh, Armstrong, Warrington, and Buchanan all held that pulmonary tuberculosis was rare in children.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

At a meeting in Sheffield, on March 20th, Dr. Willett (Liverpool), President, in the chair, Dr. Dougal (Manchester), described a specimen of *Allantoido-angiopagous twins*. One twin was a typical anencephalic monster, the other belonged to the rarer group of amorphous fetuses. Both twins communicated with one another through the umbilical vessels near the edge of the common placenta. Dr. Clifford (Manchester) recorded a case in which *Ectopic pregnancy* occurred in the stump resulting from the performance of ovariotomy some three months previously. In the meantime the other ovary, which at the first operation was apparently healthy, had become cystic, and, on examination without an anaesthetic, the combined swellings gave the impression of an ordinary pregnancy. Mr. Miles Phillips (Sheffield) reported a case of *Double ovarian tumour* in a very feeble patient aged 68. She had been submitted to ovariotomy, and between two and three weeks later was attacked by acute abdominal pain, which was found to be due to torsion of the pedicle of a second ovarian cyst. At the first operation a huge ovarian cyst, containing thirty pints of fluid, which had extended deeply into the left broad ligament, was removed with the uterus. The second cyst, measuring 5 by 4 by 4 in., was not seen, apparently on account of its long pedicle, of over 5 in., and the Trendelenburg position. The second operation was easy, and the patient made a good recovery. Dr. Arnold W. W. Lea (Manchester): A case in which a large *Ovarian cystoma* gave rise to severe symptoms. Dr. Gray Newton (Sheffield): A case of ovarian

tumour accompanied by ascites and pleural effusion; clinically the symptoms pointed to malignancy, but pathologically the case was one of *Cysto-adenoma*. Dr. Favell (Sheffield): A large *Fibro-myoma of the uterus undergoing sarcomatous transformation in parts*. The patient was aged 47 years, and had noticed the swelling increase in size rapidly for twelve months. Dr. W. E. Fothergill (Manchester), in a paper on *Prolapse of the uterus with hypertrophy of the cervix*, said that he had adopted a further modification in the technique of anterior colporrhaphy combined with amputation of the cervix. Instead of removing a portion of the anterior vaginal wall as one piece and the cervix as a separate piece, he now removed a triangular portion of the anterior vaginal wall, together with the cervix, in one piece. This method gave very neat immediate and very satisfactory remote results. Mr. W. W. King (Sheffield): Three specimens of blighted ova of a few weeks' gestation which had been passed by three different patients shortly after the delivery of full-time children. He regarded them as examples of *Superfetation*, but he specially emphasized their medico-legal importance.

HUNTERIAN SOCIETY.

Annual Clinical Debate.

At a meeting on March 25th, Dr. de Havilland Hall, introducing a discussion on the *Causes and treatment of high blood pressure*, said that blood pressure normally varied with the age and sex of the individual. Placing the figure 1 before the age of any individual gave in millimetres of mercury the pressure appropriate to the age in question, unless the age was over 40, in which case the resulting figure would be above normal. In women the pressure was usually 10 mm. below that of a man of corresponding age. A wide range of variation in pressure was seen in individuals. The custom of certain American life assurance companies, which required a record of the systolic pressure whenever the age of the proposer was upwards of 45, was wise. They fixed a limit of about 150 mm. at and over which no life was accepted on ordinary terms. The time of day and the condition of the nervous system influenced blood pressure—a strong, healthy man had normally a blood pressure 5 to 15 mm. above that of a weakly individual. Active muscular exertion caused an increase, as also did the ingestion of a large amount of liquid, and especially beer. The onset of acute fever and severe pain was also accompanied by increased pressure. Toxaemia of gastro-intestinal origin, due to over-eating, was a very important cause of increased pressure. The constant strain to which the arteries were thereby exposed led to arterio-sclerosis, and that which at first was only a temporary condition—the pre-sclerotic stage of Huchard—became a permanent stage of high tension. Kidney disease was one of the most certain causes of increased pressure; a repeated and constant pressure of over 200 mm. would suggest the presence of some form of nephritis. Gout, lead poisoning, malaria, syphilis, oral sepsis, and alcohol were other causes of high pressure; tea and coffee had some action in the same direction; though tobacco caused an increase of pressure, an habitual smoker usually had low pressure. Mental strain and worry, especially if combined with deficient exercise and too rich living, were potent causes. As for treatment, it was important to recognize that so far from high tension being an enemy which was to be met and overcome, it was often the patient's great ally, and the means whereby the functional activity of his kidneys was maintained and life preserved. On the one hand, disastrous effects might result from injudicious employment of measures to reduce high pressure, and on the other there was danger in a stimulating plan of treatment in arterio-sclerotics with high pressure. In patients with a pressure of 200 mm. and upwards, especially if combined with any signs of heart failure, a period of absolute rest should be enjoined. In patients whose high pressure was partly due to too little exercise, suitable exercise, such as riding, cycling, walking, and golf, should be prescribed. Massage was useful in cases when sufficient exercise could not be taken. The condition of the skin required careful attention; warm baths or Turkish baths might be ordered in suitable cases. The electric light bath and the d'Arsonval current of high frequency often gave good results. If obesity be present the Bergonié system might be warmly recommended. In many cases the Nauheim treatment gave excellent results. Diet was all-important; the quantity as well as the quality of food required careful supervision. Substances rich in nitrogen, such as butchers' meat, should be avoided. Soured milk was useful in dyspeptic cases. Tea and coffee should be taken with great moderation. Alcohol was almost always prejudicial. Abundant drinking of pure (preferably distilled) water was indicated. Tobacco should be indulged in with the greatest moderation, and with anginal symptoms should not be allowed at all. Drugs could play only a secondary part. Calomel, blue pill, and the saline aperients were useful, and iodides, if given in small doses and for a considerable period of time, had a very beneficial effect. Patients with a positive Wassermann reaction should receive mercury, preferably by inunction. In cases of high pressure at the menopause attended with obesity small doses of thyroid extract, together with a combination of bromide and potassium iodide, would be found most useful. If the iodides were badly borne, sodium nitrite in doses of 1 to 2 grains might be given. Lithium hippurate in doses of 1 to 2 grains, given twice daily, would be found to have a good effect. The more powerful and more quickly acting vaso-dilators, such as amyl nitrite, nitro-glycerine, and erythrol tetranitrate, should be reserved for emergencies—for example, anginal or dyspnoeal attacks—rather than used regularly. Blood-letting was of the greatest possible service in certain cases of high blood pressure. Nature itself seems to indicate the appropriate remedy in many cases by the onset of copious epistaxis.

Dr. Langdon Brown said it was difficult to get a correct pressure recorded in nervous subjects; in these a mere attempt to take a record raised the pressure temporarily. A drop in pressure habitually occurred as old age advanced. Men of over 80 usually had a pressure of only about 140 mm. Other causes of high readings besides those mentioned by Dr. de Havilland Hall were the over-action of certain ductless glands, such as the pituitary and suprarenal; the putrefactive diamines formed in the bowel had been shown to be definitely pressor in action. The great and abiding difficulty besetting treatment was lack of knowledge as to the pressure requisite for any given degree of arterio-sclerosis. It was known, however, that a rise of pressure was a conservative measure, and must not be antagonized without reference to its cause. When immediate lowering was desirable, as in anginal attacks, amyl nitrite was the best drug, as nitro-glycerine lowered pressure only for forty minutes; erythrol tetranitrate in ½ grain doses did so for six hours, but sometimes caused severe headache.

Dr. Russell Wells thought it was important to record the diastolic as well as the systolic arterial pressure. In cases of aortic regurgitation, for instance, the systolic pressure as recorded by Riva-Rocci's instrument might be very high, and the diastolic pressure very low; but the continuous strain to which the arterial wall was exposed was not nearly so great as in some cases of arterio-sclerosis, with much lower systolic and higher diastolic pressures. Some experiments made by him with specially constructed rubber tubes showed that they could stand a very high systolic pressure, provided the diastolic pressure was small, while a high diastolic with a comparatively low systolic produced aneurysmal dilatations. Caution should be exercised in regard to lowering even a very high systolic pressure in cases of arterio-sclerosis, and the patient's general condition be duly considered. A patient of his own, who for four years had shown systolic readings, taken with the Riva-Rocci instrument, of 300 mm. of mercury, fell off seriously in his general condition, when these readings fell to 250, and improved again when they returned to their former level.

Dr. O. K. Williamson, urging the importance of using the finger as well as the sphygmomanometer in the diagnosis of high blood pressure, instanced a case of hemiplegia in which, owing to arterial thickening associated with spasm at the site of compression, the instrument yielded a high reading when the actual blood pressure was certainly not above normal, and the symptoms were due to spasm of a branch of the middle cerebral. If in obedience to the instrument one adopted depressant treatment, in such a case the condition might easily pass into

one of cerebral thrombosis, whereas by using the finger also such a grave error could be avoided, and the correct treatment adopted, namely, the use of a vaso-dilator combined with a cardiac stimulant.

Dr. LIONEL CALTHROP (Woodhall Spa) said that many cases of high blood pressure were sent to Woodhall Spa owing to the fact that it was the only mineral water in Great Britain which contained potassium iodide, the value of which in this condition was now established. The water also contained potassium bromide, constituting a useful adjunct to the iodide in irritable states. The action of this water on the bowel and kidneys assisted its beneficial effect. He agreed with Dr. de Havilland Hall that though in some cases Nauheim baths were suitable, yet in others the ordinary hot mineral baths or the electric light baths, which were more eliminative in character, afforded more relief.

Dr. LESLIE THORNE-THORNE said that his investigations of blood pressure in cases of cardiac disease, including a large number of patients undergoing the Nauheim treatment, had convinced him that the record of minimum blood pressure was almost as important as that of the maximum, as there existed two very distinct classes of cases in which hypertension was present, and these two classes could only be differentiated by a comparison of the ratio of the maximum and the minimum blood pressures. In the first class both the maximum and the minimum pressure were raised, but the ratio of the two pressures was altered, there being a greater difference between them than in a normal case. The normal difference between the maximum and minimum blood pressures was about 50 mm. Hg, but in a case of this kind there might be a difference of over 100 mm. Hg between the two readings—for example, the minimum pressure might be 120 mm. Hg and the maximum 250 mm. Hg. A difference of ratio of this kind, he believed, indicated definite vessel degeneration. In the second class both the maximum and the minimum pressure were raised, but the ratio between the two was unaltered; for example, the minimum pressure might be 100 mm. Hg and the maximum 150 mm. Hg. Readings of this kind indicated a raised pressure due solely to hypercontractility of the arteries and capillaries—a pre-sclerotic condition. In the first class suitable treatment might lower the pressure to a certain extent, and would undoubtedly relieve dangerous symptoms; but the decrease in pressure would not be maintained, and if drugs were pressed to try to maintain it, the patient would be rendered worse rather than better. In the second class suitable treatment, notably Nauheim baths and dietary, would, by improving the nutrition and increasing metabolism, bring the pressure down to normal, and this condition might, with care, be maintained for years. Many of the symptoms accompanying hypertension were due to cardiac failure and consequent dilatation, and if this dilatation was treated and cured dangerous and painful symptoms were relieved. He had treated a number of cases of hypertension due to chronic nephritis with "Nauheim" baths, and had obtained very satisfactory results, but it was necessary in this class of case to maintain the baths at a temperature higher than usual, ranging from 98° F. to 96° F., and to give the still, and not the carbonated, baths. The fact that many medical men were under the erroneous impression that a "Nauheim" bath was necessarily a carbonated bath, and therefore started a course with CO_2 baths, was responsible for many failures where such methods were tried.

IN a paper on house-flies and disease, read before the Society of Arts on March 18th, Dr. E. Halford Ross pointed out the importance of the observations of Morgan and Ledingham, that flies caught in houses in which there had been children ill with infantile enteritis carried the bacillus which Morgan had identified in a large number of cases of the disease. This, he held, convicted the house-fly of being a carrier. Dr. Ross referred to an experiment in fly reduction carried out in the Bronx district of New York City. In one area containing 1,725 individuals and 362 children under 5 years of age, an organized campaign was instituted against the insects in courts, yards, waste spaces, and stables. In this area there were 110 cases of infantile diarrhœa, while in another similar untreated area there were 165 cases. The figures, though small, were sufficient, he thought, to show that fly reduction is a promising sanitary measure.

Reviews.

THE RESPIRATORY FUNCTION OF THE BLOOD.

MR. JOSEPH BARCROFT, in the preface to his most valuable and interesting book on *The Respiratory Function of the Blood*,[1] says: "At one time, which seems too long ago, most of my leisure was spent in boats. In them I learned what little I know of research, not of technique or of physiology, but of the qualities essential to those who would venture beyond the visible horizon. The study of my physiological ventures will be found in the following pages. Sometimes I have sailed single-handed, sometimes I have been one of a crew; sometimes I have sent the ship's boat on some expedition without me. I should have liked to have called the book, what it frankly is—a log, did not such a title involve an air of flippancy. After all, the pleasantest memories of a cruise are those of the men with whom one has sailed. The debt which I owe to my colleagues, whether older or younger than myself, will be evident enough to any reader of the book. It leaves me wellnigh bankrupt—a condition well known to most sailors."

Part I of the book opens with a discussion of the specific oxygen capacity of blood, and the author points out that but for the existence of haemoglobin "man might never have attained any activity which the lobster does not possess, or, had he done so, it would have been with a body as minute as the fly's. Blood carries about forty times as much oxygen as the same volume of plasma, and it would take twice the weight of the body in plasma to convey oxygen to the body. The whole basis of its economy therefore hinges upon the accidental possibility of the occurrence and properties of haemoglobin." But why accidental? Has not haemoglobin been evolved to serve a special end as much as any other substance of the organism? On page 17 Mr. Barcroft gives us an excellent coloured plate showing at a glance the percentage saturation at 37° C. of haemoglobin with oxygen corresponding to various oxygen pressures. We welcome the vertical columns, printed in the two colours, of oxy- and reduced oxy-haemoglobin; they are easier for the student to grasp than the curve of dissociation of haemoglobin which is given in the same plate. Having demonstrated the dissociation of oxy-haemoglobin solutions, the author considers the valuable results obtained by himself and his co-workers on the effect of temperature and electrolytes in solution on the affinity of haemoglobin, and on the effect of acid on the dissociation curve of blood. These results have revolutionized the views which were based on Hüfner's study of pure haemoglobin solutions. Mr. Barcroft points out that "in virtue of the fact that the haemoglobin is allied to a protein, the rate of reaction is influenced by the degree of aggregation of the protein elements, and this may vary with the concentration and nature of the electrolytes in which they are placed, and these electrolytes may differ from place to place according as is most suitable for the chemical actions which depend on them. The same considerations may be applied to the local effects of acids and alkalis. Here, then, is a possible basis for biochemical variation, while the chemical properties of haemoglobin are immutable and fixed. The dog has salts of one type in his corpuscles, the pig salts of another; the dog's oxy-haemoglobin breaks up therefore at one velocity, the pig's at another." And what is true of the reaction of haemoglobin is probably true of those of other colloids.

In Part II the author deals with the call for oxygen by the different tissues. In the case of the kidney we note that A. V. Hill contributes a mathematical discussion of the work of the kidney, and points out that "it has been assumed that the minimum work which is necessary to separate a given urine can be calculated merely from the freezing points of urine and blood. This is absolutely fallacious. . . . We can only gain satisfactory results if we know the concentrations in blood and urine of each separate important constituent." If the freezing points of the blood and the urine are different, the concentrations of one or more salts cannot be identical in the two

[1] *The Respiratory Function of the Blood.* By J. Barcroft, M.A., B.Sc., F.R.S. Cambridge: The University Press. 1914. (Sup. roy. 8vo, pp. 330; 156 figures. 18s. net.)

fluids, and therefore no work has been done. The opposite case may exist, in which the freezing points are the same, but in which, nevertheless, there must have been work done, because the molecular concentrations of the salts, though jointly the same in each fluid, are severally different. In Chapter VII are detailed interesting experiments which show that the active diuresis, brought about by replacing part of the plasma with Ringer's solution, is unaccompanied by any increase in oxygen use; on the other hand, diuresis brought about by injection of caffein or sodium sulphate increases the work of the kidney as measured by the oxygen use. Chapter VIII treats of the metabolism of the blood itself, and observations are quoted which show that this is increased by the production of young blood cells either after bleeding or prolonged residence at high altitudes. Mr. J. Richards, manager of a Bolivian mine, found that the definite rise in the haemoglobin value of the blood which occurs at an altitude of 15,000 ft., reached its maximum after seven and a half months' residence. In Chapter IX Mr. Barcroft discusses the regulation of the supply of oxygen to the tissues, and puts forward evidence that metabolites are produced by functional activity, which brings about dilatation of blood vessels supplying the part. The vaso-dilatation produced as a result of metabolites is of much greater importance than the direct action of vaso-dilator nerves. "If the wholesale production of metabolic products can produce rubor, calor, and tumor, it must produce dolor in their train, and so we get the picture of the cardinal symptoms of inflammation produced not merely by a cataclysm in the cell, but by a perversion of a beautiful physiological mechanism, a perversion which has been seized upon by Nature for the ultimate removal of the cause of the calamity."

In discussing the unloading of oxygen from the blood the author points out that as the result of the combined effect on the dissociation of oxy-haemoglobin and of the temperature, salts, and carbonic acid of the blood, the oxygen pressure in the capillaries is raised 100 times what it is in a solution of pure haemoglobin at room temperature, and provision is made for oxygen to diffuse at 100 times the speed into the tissues—and this without sensibly reducing the percentage saturation with oxygen of the blood in the pulmonary alveoli. The blood is not the same when it leaves an organ as when it enters it. In the first place it is warmer; in the second it has acquired carbonic and perhaps other acids; in the third its saline content may have been altered; each of these will have its effect upon the pressure at which the blood holds its oxygen. "The effect of the salts in steadying the degree of aggregation of colloid molecules is probably very great, for in the few observed cases where the change of reaction has been sufficient to produce a measurable change in aggregation, in spite of the salts present, the person observed has been in very abnormal condition, either very much distressed as the result of exercise at high altitudes, or practically moribund"! The researches of Verzar are cited, which show that the pressure of oxygen in the tissues is not *nil*, as is generally taught in the textbooks, but approximates to that in the venous blood.

One of the most interesting discussions in this scholarly book is that in Chapter XIII, on the acquisition of oxygen by the blood in the lung. The rival theories of diffusion and secretion are put forward with fairness and judgement; and in particular we note the divergent results obtained by Haldane and Douglas, using the carmine method of determining the saturation of haemoglobin with CO, and by Hartridge, who used a spectroscopic method. The problem for the upholders of the diffusion theory is to explain the passage of 3,500 c.cm. of oxygen a minute through the pulmonary epithelium during very hard exercise, and not only that amount at sea level, but at least half this amount during effort at an altitude of 24,000 ft. to which the Duke of Abruzzi and his party attained by climbing.

The final chapters deal with the expedition to Teneriffe and Monte Rosa and the study of the blood at high altitudes. Mr. Barcroft contrasts the scenery and climate in their widely different peaks with a few fresh touches that remind us of Stevenson. "What fields of research," he says, "lie in front of the physiologist before he can explain how the subtleties of climatic conditions affect the human mind! How gross seem the avenues at present open to such investigations! At the Alta Vista I became as one incapable of arithmetic—I vow that I would have been at the bottom of the class with the dunce's cap on and that I could not have helped it. At Col d'Olen I have heard two clever and distinguished physiologists pause to discuss whether or no four times eight made thirty-two. At Johannesburg I have been told that a cricket team representing England so lost their nerve that they laughed like children with quite trivial turns in the course of the game and fell an absurdly easy prey to their South African opponents. At the Margherita hut I have seen one of the pleasantest and most considerate of companions behave as though he were suffering from alcoholic excess in a mild degree. What of the surprise that comes to us when we hear of cautious and skilful climbers losing their lives doing extravagantly reckless things? Such incidents are caused by the little recked of cerebral changes which appear from time to time as the incidents of life at high altitudes—the effects of acid intoxication." The essence of the mechanism of adaptation to high altitudes is a speeding up of the whole process of respiration, physical and chemical. The blood is exposed to a lower oxygen pressure and tissues begin to suffer oxygen want—the pulse quickens, respiration becomes deeper and more rapid, the amount of blood which leaves the lung increases perhaps twofold. The relation of acids to bases in the blood is changed by the secretory activity of the kidney and the blood parts with the oxygen to the tissues with greater rapidity. The pressure of carbonic acid in the pulmonary alveolar air is lowered so that that of oxygen may be raised. Thus an adaptation takes place in a few days' time, to be followed more slowly by increased formation of red corpuscles and a greater quantity of haemoglobin.

In certain clinical cases which have been studied, of dyspnoea without cyanosis of cardiac or renal origin, a similar increase in organic acids in the blood has been found, and this is the cause of the dyspnoea.

In the appendix Mr. Barcroft gives a description of the valuable methods of investigating small quantities of blood which he has introduced and which have made his researches possible and so profitable.

PHOTOMICROGRAPHY.

To deal adequately with the whole range of photomicrography in all its varied applications, describing and illustrating the multifarious apparatus which has been devised for its use, and at the same time to give due consideration to its theoretical and practical bearings, in one octavo volume of some 300 pages, might well be considered an almost impossible task; and yet, after a careful perusal of the *Handbook of Photomicrography*,[2] by H. LLOYD HIND and W. BROUGH RANDLES, one must admit that they have succeeded in their task.

The text, which is clear and concise and eminently readable, is accompanied by a wealth of illustrations. All the various camera appliances, from the simplest home-made apparatus to the large camera of Messrs. Zeiss, receive attention; the microscope is well described in theory and in detail, and the different models applicable to photomicrography are described and estimated. A chapter is allotted to lamps and illuminants, in which the new 5 amp. automatic arc lamp (Zeiss) is given "as an example of the type of lamp best adapted for photomicrography." This accords with our own experience; it burns with remarkable steadiness, takes little current, and consequently can be attached to an ordinary wall-plug or lamp holder in the house wiring. In addition, the resistance does not give off the great heat which is so objectionable a feature of lamps of high ampèrage. The chapter on experiments on illumination merits the closest attention, for the question of illumination is the stumbling-block of the inexperienced worker. The various methods of obtaining critical illumination without sacrificing the all-important even lighting of the whole field are set forth practically and clearly.

The subject of photomicrography proper is discussed under the two headings of low power photomicrography

[2] *Handbook of Photomicrography*. By H. Lloyd Hind, B.Sc., F.I.C., and W. Brough Randles, B.Sc. London: G. Routledge and Sons, Ltd. 1913. (Demy 8vo, pp. 304; 161 illustrations. 7s. 6d. net.)

and critical photomicrography, and what we are inclined to regard as the most valuable feature of the book is the way in which directions for each step in every manipulation are given in detail. The difficult subject of the correct use of colour screens, light filters, and colour sensitive plates is admirably treated, and another chapter is assigned to the estimation of exposure. So many and so diverse are the factors governing this subject that the worker, after reading and digesting this section, will in all probability have to "make his own arrangements." The only feasible plan is to make an intelligent guess at the approximate exposure, and then make several trial trips on sections of the same plate; this is the method recommended by the authors. Dark ground illumination and photomicrography by polarized light receive attention, as also the application of the art to metallography, natural history, and bacteriology (both of living and prepared specimens); the preparation and staining of organisms and tissues, both biological and pathological, is accurately treated. An excellent chapter on the different varieties of colour photography is provided, and another dealing with ordinary photographic operations. An appendix of useful formulae brings the volume to a close, and it is a matter for surprise that so much lucid information could have been conveyed in so small a space.

The worker in this department must of necessity be a master of the art of manipulation and illumination of the microscope, and to such this handbook will serve as an agreeable reminder of the necessary details. The plates, taken from photographs, set forth in detail the treatment of the subject, and give a record of the exposure. It would avoid unnecessary trouble if, in referring to a particular illustration, the page on which it appears were quoted in addition to the number of the figure.

OBSTETRICS AND GYNAECOLOGY.

A Textbook of Midwifery,[3] by Dr. R. W. JOHNSTONE, is stated to be the outcome of an attempt to place before the student and practitioner a concise and practical presentment of midwifery. In this attempt the author has met with a considerable degree of success, and for its professed purpose the book can be recommended. The opening sections are devoted to anatomical and physiological considerations and without going into elaborate theories give a concise statement of present day knowledge. Then follows a section describing the course of normal labour with a somewhat detailed account of its management. The mechanism and management of the various abnormal presentations are then dealt with, but in this connexion we feel sure that a more definite account of the best methods of treating the difficulties that may arise would be welcomed by those who do not have the opportunity of handling them frequently. It is quite true that abnormalities of this kind are comparatively rare: at the same time when they do occur the possibilities of disaster to the mother and child are sufficiently great to call for an accurate knowledge of the most suitable methods to meet them when they arise. In the chapters dealing with the pathology of pregnancy a brief statement is made with regard to concurrent diseases and the various toxaemias that may be associated, and the abnormalities and diseases of the uterus, placenta, and membranes. The possible methods of treatment are clearly enumerated, but having done this it would have been of considerable advantage, particularly to the student and practitioner for whom the book has been written, if it were made rather more obvious which method, as the result of his own experience, the author favoured, and which treatment he had adopted and found useful. The pathological conditions associated with labour and the puerperium are handled concisely and are to the point, and we notice with the greatest pleasure that the description of instruments and methods long since obsolete has been deleted from the section dealing with operative obstetrics. The illustrations, which are chiefly the work of Mr. John Grieve, are skilfully drawn, and the author has wisely chosen several others from the larger textbooks on the subject.

[3] *A Textbook of Midwifery: For Students and Practitioners.* By R. W. Johnstone, M.A., M.D., F.R.C.S., M.R.C.P.E. The Edinburgh Medical Series. London: A. and C. Black. 1913. (Cr. 8vo, pp. 511; 264 figures. 10s. 6d.)

In a small volume entitled *Gynaecological Diagnosis and Pathology*,[4] Dr. BARBOUR of Edinburgh and Dr. WATSON of Toronto have joined forces to put before the student of gynaecology a method of study. The authors do not profess to give a complete account of the subject, but having dealt with what is called gynaecological diagnosis in some thirty odd pages they proceed to give a brief account of the pathology of the various morbid conditions by which the female organs may be affected. They have done well to insist on the fact that a sound knowledge of gynaecology depends on a familiarity with the pathological basis of the subject. At the same time we must confess to some disappointment in the portions set aside for what is called gynaecological diagnosis. The book, which is clearly only meant for those who are beginning their studies, commences by giving to the student a brief description of the methods usually adopted in obtaining the history and examining the patient. The three outstanding symptoms—pain, haemorrhage, and vaginal discharge—are briefly discussed, and then the methods and possible findings of a physical examination are related and a list set out of the various conditions found in the fornices. The pathological portion omits all debatable material and states clearly and concisely what the authors consider to be the main points; their conclusions are based on the specimens that they have obtained in their gynaecological practice and examined during the past five years. This part of the work is excellent, but from men of such experience we hoped for more help in diagnosis. This is surely the part of any special branch of surgery that is most difficult. Most people can feel a pelvic lump provided it is big enough; the determination of its actual nature is another matter. It is perfectly true that such knowledge is best obtained first hand; at the same time it does not fall to the lot of every one to have the opportunity of acquiring this skill, and we are sure that any further help the authors can give in this way will prove to be a welcome addition to the next edition of their book. Interspersed among the text are some two hundred odd illustrations taken from actual specimens and well reproduced.

PRISONERS OF WAR.

VERY interesting and timely is the appearance on the eve of the centenary of Waterloo of Dr. T. J. WALKER'S book on *The Dépôt for Prisoners of War at Norman Cross*.[5] It conjures up to our minds the actual events of the struggle between France and England, now that all bitterness has been assuaged by a century of peace. Very skilfully has the author, with the help of Mr. A. Rhodes, built up his picture of the actual life of the prison from relics in the Peterborough Museum, records gathered from all sources, and the scanty actual remains which may still be seen by the side of the Great North Road, five miles from Peterborough.

The book illustrates a side of war which is little considered—the lot of prisoners of war, and the great difficulty in dealing with them humanely by either combatant Power. At first—after 1793—the French and Dutch prisoners were accommodated in special ships ("hulks") at various ports, but as their numbers increased it became necessary to provide prisons on land, among which Norman Cross was the principal, though Dartmoor and Perth prisons were built for the same purpose at a later period in the war. The two last named are now convict prisons, but Norman Cross prison was built of wood and demolished in 1816, two years after the last prisoner had left it. In a space of 42 acres, the actual prison and grounds occupied 22 acres (about twice the size of Trafalgar Square), consisting of a space edged with sixteen wooden buildings which for eighteen years contained a number of prisoners varying from 3,000 to upwards of 6,000. Each building, or "casern," measured 100 by 22 ft., and was intended to contain 500 prisoners, who slept in rows of hammocks, closely packed, and in tiers one above the other. Each of the four quadrangles contained other accessory buildings, offices, storehouse, cookhouse, "black

[4] *Gynaecological Diagnosis and Pathology.* By A. H. F. Barbour, M.D., LL.D., F.R.C.P.Edin., and B. P. Watson, M.D., F.R.C.S.Edin. Edinburgh and London: W. Green and Sons. 1913. (Med. 8vo, pp. 220; 202 figures; 8 plates. 7s. 6d. net.)

[5] *The Dépôt for Prisoners of War at Norman Cross, Huntingdonshire, 1796 to 1816.* By T. J. Walker, M.D., F.R.C.S. London: Constable and Co. 1913. (Med. 8vo, pp. 365; 21 plates. 10s. 6d. net.)

hole" (a sad place of punishment); and that most necessary adjunct, the hospital, and surgeon's house, outside the stockade. The existing plans at Peterborough are supplemented by a model (reproduced in photograph), now in the Hôtel des Invalides at Paris, made by a Frenchman, Foullet, who was imprisoned at Norman Cross for five years. In the centre of the whole was a blockhouse with cannon and sentry-boxes. The only building still remaining is the barrack master's house, now part of the residence of Mr. J. A. Herbert.

At the prison George Borrow's father was quartered in 1812–13, and there the boy, not yet in his teens, got the impression vividly but inaccurately depicted in *Lavengro*. Fortunately, it is proved that Borrow's impression is seriously wrong, and that the charges of cruelties and insufficiency of decent food to which he refers are without foundation. The actual specifications of food contracts are still in existence, and such alterations as were asked and made were rather to suit French taste than to remedy deficiency. It is comforting to find that, miserable as the conditions of confinement were, there does not appear to have been any deliberate cruelty or negligence on the part of either the English Government at Norman Cross or of the French Government at Verdun and other places of imprisonment. The fact that only 1,770 prisoners died in eighteen years is a refutation of the extravagant accusation of the French agent and other writers.

Extraordinary is the picture alike of the degradations and the consolations of prison life which is laid before us. In the first of these the absence of the feminine element and the evils of gambling and money lending play a prominent and a revolting part, vividly described as at Norman Cross, and supplemented from Dartmoor. The consolations are represented by the beautiful extant specimens (figured in the book) of straw marquetry, boxes and bone work, which formed the only means of continuous mental diversion for the better class of prisoner. Personal touches of a pleasing nature are not wanting, chief among them being the character of the Bishop of Moulins, a dignitary-elect of the Roman Church in France, who is indeed stripped of the halo of sanctity with which his name has been surrounded, but who nevertheless, in comparative poverty, ministered continuously to the spiritual needs of his countrymen in the true pastoral spirit. He had been deported from France, owing to his monarchist views; after Napoleon's fall he returned to his country and passed his last four years as Archbishop of Bourges.

Only for six months after the Peace of Amiens (1802) was Norman Cross empty; but from that date till the Treaty of Paris (1814) it was kept fuller than before, as during this time there was less exchange of prisoners. It is an astonishing fact that during the two periods of the war over 300,000 prisoners, for longer or shorter periods, were confined in various places in England.

The book is a monument of painstaking skill, and we heartily commend it to all who wish to get a faithful view of the conditions which obtained for prisoners of war in that fateful period of history.

NOTES ON BOOKS.

DR. SAMUEL W. KELLEY of Cleveland, Ohio, has been encouraged by the success of the first edition of his work entitled *Surgical Diseases of Children*[1] to issue a second edition. In revising the book many changes have been made in the text itself, and a number of notes have been introduced in an appendix, to which the reader is referred by numbers in the text.

Under the title *The Physical Culture of the Child*[2] Professor Dr. HANS SPITZY has written a very long if also a very interesting book. If he takes a rather long time to reach the heart of the subject, there is no reason to complain of a lack of interest when once the preliminaries have been exhausted. The progress of the child is traced from early infancy to the beginnings of adult life. In the chapter dealing with the child at the breast we note on page 34 an interesting photograph depicting the entrance to an infants' room in a large factory in Hanover. Thither the infants of the female employees are brought that they may be suckled three times daily, a provision which speaks volumes for the good sense and humanity of the employers; the practice can hardly fail in the long run to result in the preservation of many lives. Among the earlier chapters those dealing with the gradual development of the infantile movements and power of locomotion are interesting. They are profusely illustrated by photographs showing the habitual postures of the normal infant and the deformities produced by them in infants weakened by rickets and other diseases. The illustrations of the chapters upon the care of children in the period before school begins show the child practising breathing and other exercises, and enjoying sun baths and air baths as well as various kindergarten games. The whole subject of school hygiene is dealt with very fully and clearly. For example, a chapter of twenty-six pages illustrated by twenty-two photographs deals with the essentials of a proper bench for school children, and who shall say that the importance of the question to the nation does not justify the expenditure of space? School games, school gymnastics, and school excursions are fully dealt with and charmingly illustrated. At a time when the inspection of school children is exciting interest in this country, and a close attention, unknown before, is being paid to the physical training of the children in our great cities, a work such as the present, written so that it can be understood by lay readers as well as by medical men, should command attention.

We called attention some months ago to an excellent little brochure on the *Operating Theatre in Private Practice*,[3] by Mr. C. HAMILTON WHITEFORD, in which cheapness and simplicity consistent with thorough efficiency were the main objects advocated. A small supplement has been issued, containing photographs of the theatre and sterilizing room, with descriptions of additions to the appliances during the past year. We commend this pamphlet to those who are concerned in organizing their own operating theatre or who have to advise boards of managers of hospitals.

The most interesting papers of the December number of Dr. J. B. MURPHY'S *Surgical Clinics*[4] are probably those on the surgical treatment of pulmonary tuberculosis, and describing the method of clinical teaching adopted by the author. In the former paper the method of performing artificial pneumothorax by injection of nitrogen for phthisis pulmonalis is described in detail. Readers will be surprised to find that Dr. Murphy's first essays in lung surgery date back to 1895, and that the technique and apparatus are precisely those advocated to-day. Dr. Murphy appears to believe that tuberculin is a useful adjunct to other forms of treatment. In the other paper to which we draw particular attention we are presented with a verbatim report of a students' clinic to demonstrate the clinical methods adopted in teaching. The other papers of this number maintain the high level already attained by its predecessors.

A melancholy interest always attaches to a posthumous work, and admirers of the late Dr. GEORGE H. R. DABBS'S writings will doubtless give a cordial welcome to the charming romance which made its appearance some months after the eyes of its author had been closed in death. *Before Good-Night*[5] is the love story of a medical student and a little flower girl whom he rescues from the London streets, told years after their marriage to their baby daughter in the evening before she goes to bed; and in the sequel, *From Door to Door*, the author has related the history of the daughter's own romance with the squire of the village in which her father is doctor. Dr. Dabbs has woven a very pretty story out of the journey of Andy and Nina along "the flowery path of love." He has described Chaucer's "Sorrowfull Paradis" with a dignity and restraint which are none too common in these days of over-emphasis and exaggeration, and in so doing has written a book which should add considerably to the laurels which already grace his tomb. One lays aside his swan-song with a feeling of regret that death should have imposed an eternal silence upon the possessor of such dainty fancies and so ready and graceful a pen.

[1] *Surgical Diseases of Children*. By Samuel W. Kelley, M.D., LL.D. Second edition, revised and enlarged. New York: E. B. Treat and Co. 1914. (Roy. 8vo, pp. 789; 295 figures. 5 dols.)

[2] *Die Körperliche Erziehung des Kindes*. Von Professor Hans Spitzy. Berlin and Vienna: Urban and Schwarzenberg. 1913. (Sup. roy. 8vo, pp. 424; 194 figures. Unbound, Mk. 15; bound, Mk. 17.)

[3] *Supplement to Illustrate an Operating Theatre in Private Practice*. By C. H. Whiteford, M.R.C.S., L.R.C.P. London: Harrison and Sons. (Cr. 8vo, pp. 6.)

[4] *The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago, December, 1913*. Vol. ii, Part VI. Philadelphia and London: W. B. Saunders and Co. 1913. (Med. 8vo, pp. 188. Paper, 35s. net; cloth, 50s. net, per year.)

[5] *Before Good-Night*; and *From Door to Door*, a sequel to the above. By George H. R. Dabbs, M.D. New edition. London: David Nutt. 1913. (Cr. 8vo, pp. 270. 3s. 6d. net.)

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The thirty-first annual meeting of this society was held in the rooms of the Medical Society of London on April 2nd, under the presidency of Dr. F. J. Allan, Chairman of the Executive Committee.

Chairman's Address.

The Chairman said that it would be seen from the annual report that the society continued to prosper. There had been a net increase of seventy-eight members during the year. Since the beginning of the new year the number of new applicants had been going up at a much higher rate than previously. During the past year the society had paid out £19,384 in sickness benefit, which amount exceeded the expectations; the sum of £20,726 had been actually received in premiums. A list had been compiled showing the different kinds of illnesses from which members had been suffering during the past year; it included 162 cases of influenza, 91 accidents, 56 cases of bronchitis, gout, and lumbago, and 24 cases of phthisis, of whom 14 had been on the fund during the previous years. Out of the total number that were on the list 49 were chronic cases who had been getting half-pay for a considerable number of years. The total funds of the society now amounted to £255,350. The managerial expenses for the year 1913 amounted to 6 per cent. of the premium income, which showed that the business of the society was conducted economically. In view of the heavy depreciations in stock, the committee had considered it desirable to write down the investments as at December 31st by something a little over £6,000. The quinquennial valuation showed that the society was flourishing and in a perfectly sound state. The actuary had recommended that the society might continue its practice of paying bonuses at death or on attainment of 65 years. The amount paid in bonuses during 1913 was £1,528. A new set of rules had been prepared, and would be put before the meeting. In the course of the work of the society it had been constantly found necessary to make small alterations in the original rules of the society to meet particular points not provided for, until at last the Registrar of Friendly Societies stated that he could not allow any more alterations, and suggested that the rules of the society should be recast. There were no important differences between the old rules and the new rules except in one or two instances, but the wording had been in many instances improved and made more simple and harmonious. One important point was that members under the new rules could now insure for larger amounts than hitherto; there had been a good many demands from members desirous of insuring for larger benefits. It had, however, been considered desirable by the committee that in order to safeguard the interests of the society members should sign a declaration that the amount of sickness benefit insured for bore a certain proportion to the individual's income. Tables had also been prepared by which a member could insure for an endowment assurance as well as sickness or accident, and scales had been arranged by which members joining could, if desired, pay a lower premium during the first years and larger premiums after. The last mentioned provision had been introduced chiefly with the view of meeting the needs of younger members of the profession, who in the first few years of practice might not be able to pay the full premiums. Another point dealt with in the new rules was the removal of certain restrictions with regard to investments. The committee was of opinion that there were a good many colonial stocks guaranteed by the Government which would pay a better rate of interest than some of the investments with which the society had hitherto dealt. An important insurance company had recently decided to extend its accident policy from one to three years, but he reminded members that a man who joined their society remained in it until he attained the age limit. He regretted to have to announce the death of Dr. Herman, who at the last annual meeting had retired from the office of treasurer. He was sorry to say that the society were losing one or two members by reason of the age limit, among them being Dr. Brindley James, who was one of the foundation members.

In answer to Dr. Dennis Vinrace, the Chairman stated that five members of the society had had a conference with a subcommittee of the British Medical Association. Should the Association formulate any scheme to include among other things accident and sickness insurance, the Medical Sickness Society would be asked to co operate.

A motion that the report of the committee and the audited accounts for the twelve months ending December 31st, 1913, be received having been duly proposed and seconded, was put to the meeting and carried.

Quinquennial Valuation.

Dr. Harvey Hilliard proposed and Dr. Evans seconded that the valuation report for the quinquennium 1909–13 be received.

The report showed that with regard to the sickness fund, valued at 2½ per cent., there was a surplus of £11,353. The life assurance fund, valued at 3 per cent., showed a surplus of £5,663. During the quinquennium now ended the number of annuity contracts had been reduced from 378 to 321, as no new business has been accepted in this fund since 1894, and in each succeeding quinquennium a large proportionate decrease may be anticipated. The annuity fund, valued at 3 per cent., showed a small deficit.

Dr. T. Dutton stated that he had not received bonuses since that paid to him in 1894. The Chairman pointed out that the bonuses were now only paid on the death of a member or on the attainment of the age limit. If Dr. Dutton could produce to the committee anything to show its legal liability to him he was sure it would have the most careful consideration. The motion that the quinquennial valuation report be received was then carried, with one dissentient.

New Rules.

The proposed new rules were discussed seriatim and approved, with certain minor verbal corrections.

It was proposed by Dr. Dutton and seconded by Dr. Vinrace that the age limit should be altered from 65 to 70. The motion, on being put to the meeting, was lost.

Election of Officers.

The list of officers for the ensuing year submitted to the meeting by the Committee, with the addition of Dr. Brindley James as a vice-chairman, was, after discussion, approved.

Vote of Thanks.

On the motion of Dr. Vinrace, seconded by Dr. Brindley James, a hearty vote of thanks was accorded to the Chairman for the able manner in which he had conducted the meeting. The reply of the Chairman brought the proceedings to a close.

Full particulars of the society can be obtained on application to the Secretary, Mr. Bertram Sutton, 33, Chancery Lane, London, W.C.

ROYAL COMMISSION ON VENEREAL DISEASES.

The following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

Evidence for the Society of Medical Officers of Health.

At the twenty-seventh meeting of the Royal Commission on Venereal Diseases evidence was given on behalf of the Society of Medical Officers of Health by Dr. Chalmers, M.O.H. for Glasgow, and President of the Society; and by Dr. Parkes, M.O.H. for Chelsea. They drew attention to:

1. The lack of exact information regarding the present prevalence of syphilis and other venereal diseases either as causing illness or death.

2. The misleading or incomplete character of certified causes of death, particularly of the remote causes in death from diseases of the nervous or circulatory system.

3. The absence generally of any systematic provision for the recognition and treatment of the diseases in question.

4. The relationship of syphilis to miscarriages, stillbirths and deaths among infants in the first year of life, especially the first four weeks.

The Society of Medical Officers of Health was, they stated, of opinion that administrative action was desirable for the purpose of providing facilities for the recognition and treatment of venereal diseases. They recommended that the local authorities should be required to place at the disposal of medical practitioners facilities for diagnosis by bacteriological and other methods, and that accompanying any such request for examination the practitioner should supply a statement showing the age, sex, condition as to marriage, number of children, and leading features of the disease present, but not including the name of the patient. They did not recommend the adoption of a system of notification in the ordinary sense. They advised that local authorities should also be prepared to arrange for the treatment of persons suffering from venereal diseases either in dispensaries or hospitals under their own responsibility or by arrangement with general hospitals and dispensaries. It was important, they thought, that the facilities provided by the local authority should be available for any person who applied for them, whether that person was a resident in the district of the local authority or not. They recommended that the Local Government Board should issue an Order declaring venereal diseases to be endemic diseases threatening the health of the population, and that the Board should make regulations governing the provision of facilities by the local authorities. It was necessary, they thought, that the local authorities should be assisted by a considerable grant in aid from Government funds.

Dr. Parkes, on his own behalf, submitted a detailed scheme of action by local authorities under regulations to be issued by the Local Government Board. He was of opinion that the whole expenditure incurred by local authorities in regard to these diseases should be borne by Imperial funds. Both Dr. Chalmers and Dr. Parkes were opposed to notification of venereal diseases, but Dr. Parkes thought that after two or three years' experience of systematic action by local authorities against the diseases it would be possible to determine whether any form of compulsory notification could be introduced, and whether penalties should be imposed upon persons who knowing themselves to be suffering from a venereal disease by their conduct exposed other persons to infection.

Evidence by the President of the General Medical Council.

At the twenty-eighth meeting evidence was given by Sir Donald MacAlister, Principal and Vice-Chancellor of Glasgow University and President of the General Medical Council. He described the powers of the General Council in relation to medical education, and the way in which these powers are exercised for the securing the maintenance of such a standard of proficiency as shall guarantee the possession by registered practitioners of the knowledge and skill requisite for efficient practice. With regard to instruction respecting venereal diseases, he said that the first reports made to the General Medical Council and the examination papers used at qualifying examinations, as well as the results of a special inquiry he had made for the purposes of the Commission, enabled him to say that questions on these subjects were set with such regularity by every licensing body that candidates could not fail to be aware of the importance attached to the subject, and of the necessity laid upon them to study it seriously as a condition of success.

On the subject of quack treatment, Sir Donald MacAlister said that the General Council had taken every opportunity to press on the Government of the day the importance of restricting the free practice of medicine, surgery, and midwifery by unqualified persons, and the Council was strongly of opinion that steps ought to be taken to prevent the cruel wrong done by permitting free practice in branches of these subjects on the public without any previous qualification. He pointed out that, without difficulty, veterinary surgeons had obtained an Act which protected them and protected the lower animals, so that no person could use any title suggesting that he had a veterinary qualification or practise as a veterinary surgeon on the lower animals without being qualified. In fact, Parliament had protected the lower animals much more effectively than it had protected human beings against the ravages of the quack. He thought that a special case could be made out for preventing unprofessional treatment of venereal diseases by reason of the severity of these diseases and their effect upon the population.

Nova et Vetera.

SOME MSS. AND BOOKS IN THE BODLEIAN LIBRARY ILLUSTRATING THE EVOLUTION OF BRITISH SURGERY.

A Demonstration by Sir William Osler before the Association of Provincial Surgeons on the Occasion of its Visit to Oxford (March 27th).

THE Bodleian, as it may surprise some to learn, is one of the great medical libraries of the world, particularly rich in MSS., Greek, Latin and Arabic, in Incunabula, and in early English works. Including the Radcliffe collection at the Museums it probably outnumbers any of the special medical libraries of this country, and ranks in importance close after the British Museum.

The history of surgery in Great Britain may be roughly grouped into three periods. The first begins with John of Arderne, an army surgeon of the fourteenth century, whose treatise on *Fistula in ano*, issued in 1376, is the earliest known English surgical work. There are many manuscripts, which have been collated, and the work edited by Mr. D'Arcy Power in 1910. From those in the library there is on exhibition a beautiful fourteenth century example. There are many contemporary and even earlier English manuscripts with surgical references. Pembroke College has lent the *Breviarium Bartholomei*, written in the fourteenth century by John Mirfeld, who was connected with St. Bartholomew's Hospital and Priory, Smithfield. This magnificent manuscript formerly belonged to the Abbey of Abingdon. Four of the fifteen books are devoted to surgery.[1] He gives an account of a case of hydrocephalus tapped by his master with a cautery, in front and behind, and cured. Mirfeld was a pupil of Nicholas of Tyngewick, Fellow of Balliol and physician to Edward I, who practised in Cat Street near where we are now standing. Mr. Madan and Mr. Craster have very kindly put out two other interesting English manuscripts, one of which shows an illuminated figure of a body marked in different regions with the signs of the zodiac, and at the margin directions for venesection. The other is a manuscript written in England, of the Latin translation by Gerard of Cremona of the works of Albucasis, the Arabian surgeon of the eleventh century. From this author was very largely derived the practice of actual cautery, and a drawing in the manuscript shows various instruments for this purpose. The Bodleian possesses two of the earliest known Arabic manuscripts of Albucasis, which were translated by Channing in 1778, and published by the Clarendon Press. One of the volumes is opened to show examples of the cauteries.

In the Middle Ages the art of medicine was largely in the hands of the clergy. Surgery began to be formally separated from physic about the end of the thirteenth century, when the priests were forbidden to practise it; but they kept control by utilizing their barbers to do the minor surgical operations, particularly bleeding. In this way arose the close connexion between barbers and surgeons which persisted for many centuries. From the thirteenth century there were men who practised only surgery, and were known as Master Surgeons, of which there was a small guild in London as early as 1369. The majority of these men were army surgeons. For a short time, early in the fifteenth century, the Guild of Surgeons united with the physicians, forming a conjoint Faculty, under the control of a Director of Medicines. In 1540 the barbers and surgeons merged into the United Company of Barbers and Surgeons, and Holbein's great picture shows Henry VIII giving the charter. The union persisted, in spite of many attempts of the surgeons to break away, until 1745, when the Surgeons' Company was formed, which became in 1801 the Royal College of Surgeons.

In the century following Arderne there is not much to report in English surgery, but in Tudor times there arose

[1] Moore, *Medicine in the British Isles*, 1903.

a remarkable group of surgeons, and the writings of Clowes of St. Bartholomew's Hospital, of Gale, and of Vicary are shown. These Master Surgeons, usually associated with the army, were, as Power remarks, men of good education, wide experience, and sound judgement. Mr. Craster has found a most interesting manuscript of one John Harvy, an army surgeon in the reign of Henry VII, and it is open at the place where he gives directions for making splints. The following is his account of an army surgeon of the period:

He that wyll be a surgyan yn the war muste electe & chuse hym a capteyne or some noble lyberall man that lovyth well men, & know what he wyll lowe hys surgyan a dey. Yff he be a Nobyll man that ys your captayn he wyll lowe you as other noble men do, that ys iis. a day unto the cheuyfte surgyan unto the second surgyan xxd a day the thyrd surgyan xvid. a daye, the iiii surgyan xiid hys seruant vid and a grote a pece of euery sowdyar euery moneth And hys banderyke muste be of hys masters colers a boute hys necke with a spatyll before and be hynd with the kynges armys in lyke manar be sydys the curys that ye shall have a brode aiuoung nobull men & other sowdyars yff he be parfyt in hys syens & be well acquentyd gentyll, close honeste & mery. And also knowe what your master wyll lowe you unto your cofer. Some Nobyll men wyll lowe hys surgyan yff he be lyberall xx nobyls some v some v markes some xlˢ.

Mr. Craster has also put out a parchment with the seal, and attached to it a urinary calculus, oval in shape, about an inch in length, removed without cutting by John Hubbart from the bladder of Beatrice Shrove in 1593—an enduring memorial of his skill. The description is worth quoting:

John Hubbart did take the savde stone owte of her blather whiche stone being here shewed and measured was confessed by the sayd Beatrice as the sayde Elizabeth Sheringham and also by a sonne of the sayd Beatrice Shrove to be the very stone that the sayde Hutbert did take from her without incision or cuttinge any parte of her body.

The direct successors of these men in the next century were two very distinguished surgeons—Woodhull and Wiseman—whose works are shown. Wiseman was a very strong character, who did for English surgery much that his contemporary, Sydenham, did for medicine. The volumes are open at cases, which are admirably described. A contemporary of Wiseman's was Lower, an Oxford man who wrote the well-known tractate on the heart. With Boyle, Christopher Wren, and Willis, he made many experiments upon transfusion. His book is opened at that chapter, and the plate shows the various cannulae. After Wiseman come the three well-known eighteenth century surgeons—Sharp of Guy's, Cheselden of St. Thomas's, and Pott of St. Bartholomew's—whose important works are on exhibit. There is also the report of a remarkable case by Robert Houston of Glasgow—the first operation upon an ovarian tumour, which he freely incised and cured (1701). There is here also the first account of the flap operation in amputation, by James Yonge of Plymouth, a sketch of whom, written some years ago, is opened at a description of his hardships as a naval surgeon. Two famous contributions by Charles White of Manchester, the first descriptive of the resection of the head of the humerus, and his pamphlet on *Phlegmasia Alba Dolens* are here for inspection. There are also two communications of the distinguished Dublin surgeon, Abraham Colles, in one of which he announces his law of the immunity of the mother who has borne a syphilitic child; the other contains the description of the fracture which bears his name.

The second period opens with one of the immortals in our profession—John Hunter, the founder of scientific surgery. His masterpieces are here: *A Treatise on the Venereal Disease: On the Blood; The Human Teeth*, and *Observations on Certain Parts of the Animal Occonomy*. William Hunter's description of arterio-venous aneurysm, and his folio on the gravid uterus will interest every one. John Hunter left a group of splendid students. There is here to be seen the description of Sir Astley Cooper's greatest operation—ligation of the abdominal aorta. Beneath it is a letter from my uncle, Edward Osler, describing the operation which he saw while a student at the United Hospitals in 1817. Abernethy, Parkinson, and Blizzard were all distinguished pupils of Hunter's—Abernethy probably the most famous. I have put out his description of his ligation of the external iliac artery, and also a work of the well-known surgeon, Benjamin Bell, who contested Hunter's views on the unity of gonorrhoea and syphilis; and the account of Parkinson's first operation on appendix abscess (1812).

The first half of the nineteenth century saw an advance in surgical technique, but there were no developments to be compared with the demonstration of ether anaesthesia in Boston in 1846, and the work of Florence Nightingale in the Fifties, in revolutionizing nursing. I have put out Simpson's pamphlet dealing with chloroform, which he used a year after the employment of ether, and Florence Nightingale's *Notes on Nursing* (1859).

The third and final period was introduced by the work of Joseph Lister. You will find on exhibition his first account of antiseptic surgery in the *Lancet* in 1867; two other very interesting early pamphlets describing his early methods, and vol. i of his *Collected Works* which were issued a few years ago from the Clarendon Press.

THE INFECTIVITY OF PULMONARY TUBERCULOSIS.

Report by the Royal College of Physicians of London.

At the Comitia on July 3rd, 1913, a motion was brought forward by Dr. FREMANTLE, and seconded by Dr. LAURISTON SHAW, in the following terms:

> That in view of the exaggerated fear of the infectivity of pulmonary tuberculosis entertained by the public, the consequent unnecessary disabilities imposed upon sufferers from the disease, and the opposition raised in many places to the establishment of institutions for its detection and treatment, a reassuring statement with regard to the degree of danger attaching to contact and communication with tuberculous persons be prepared by the College and issued in its name at an early date.

It was resolved with reference to this:

> That the subject of Dr. Fremantle's motion on the infectivity of pulmonary tuberculosis be referred to a special committee, nominated by the President, which shall make a report to the College at an early date.

The President nominated as members of the Committee Drs. Sharkey, Habershon, Sandwith, Fremantle, and C. J. Martin, F.R.S.

At the Comitia on April 6th the Committee presented the following report, which was adopted.

REPORT ON THE INFECTIVITY OF TUBERCULOSIS.

1. Tuberculosis is an acquired disease, but certain constitutional types may be inherited which render the patient specially susceptible to infection, and there is reason to think that such susceptibility is an inherited character.

2. The infective agent is the tubercle bacillus. This may be contained in the various discharges and excreta of the patient, and especially in the sputum of those suffering from pulmonary tuberculosis. No discharge is infective unless it contains the tubercle bacillus.

3. Cases of tuberculosis of bones, glands, and internal organs from which there is no discharge or which do not furnish any excretion, and cases of arrested pulmonary tuberculosis, have never been proved to be infectious.

(By arrest is here meant that all the symptoms and physical signs of activity have disappeared, and the sputum has either ceased or no longer contains tubercle bacilli.)

4. The means by which tubercle bacilli may enter the body are:

(*a*) *By inoculation* through a wound or abrasion of the skin. This has occasionally occurred to workers in laboratories, *post-mortem* attendants, and others dealing with tuberculous material, and is presumably the way in which lupus is acquired.

(*b*) *By inhalation.* Susceptible animals are readily infected by the inhalation of air containing tubercle bacilli, whether in droplets or suspended as fine dust, but in the spread of the disease among human beings the latter appears to be the more important means of infection. The sputum or other discharges, whether on soiled handkerchiefs, linen, garments, or elsewhere, when dried, may become pulverized, and in this condition may be readily dispersed in the air of a room. That droplets of sputum are less important agents of infection is suggested by the fact that the incidence of consumption upon the staff, nurses, and others engaged in hospitals for the treatment of tuberculous disease, where all discharges are carefully disposed of, is not above the average in the general population.

(c) *By swallowing.* Dust infected by the tubercle bacillus may be conveyed to food and so enter the alimentary canal; or infection may occur more directly in the act of kissing, or by consumptive and healthy persons using the same food utensils. As about 10 per cent. of the milk supplied to large cities contains tubercle bacilli derived from infected cows, this avenue of infection is particularly important in the case of children. The bovine tubercle bacillus is more commonly responsible for tuberculosis in young children than in adults, but the proportion of cases due to it varies very much in different localities.

(d) There is no evidence that tuberculosis can be conveyed to others either by the breath alone, or by emanations from patients, or by their garments, unless soiled by dried sputum or discharges.

5. The spread of tuberculosis is favoured by uncleanliness, overcrowding, and imperfect ventilation, and is hindered by the opposite conditions. Experience in hospitals and other institutions where the following precautionary measures have been thoroughly carried out indicates that by such measures the risk of infection is reduced to a minimum, namely:

(a) The careful disposal and disinfection of the sputum and other discharges.

(b) The disinfection or destruction of soiled handkerchiefs, clothes, and linen.

(c) The removal of dust by frequent moist cleansing of the floors, walls, etc., of the rooms.

(d) The supply of abundant air space and free ventilation with fresh air.

No risk is incurred by living in the immediate neighbourhood of institutions for the treatment of tuberculosis which are properly conducted.

LITERARY NOTES.

THE annual report of the Library Committee of the Philadelphia College of Physicians for the year 1913 states that the total number of volumes in the library, including the bound volumes and 8,808 unbound *Reports* and *Transactions*, is 101,340; there are besides 11,227 unbound theses and dissertations and 78,580 unbound pamphlets. Included in this total are 3,084 volumes known as "reserves," consisting of second copies of some of the more important periodical publications and 3,044 volumes more or less incomplete. The duplicates, which are not included in the total, number 5,315. During the year the library received from all sources 5,391 volumes, 9,760 pamphlets, and 20,793 numbers of various periodicals. Of these, 642 volumes, 846 pamphlets, and 648 numbers of journals were received in exchange. The number of visitors to the library during the year was 8,272, being an increase of 943 as compared with the previous year. The library also possesses a collection of 1,451 loose portraits, including 448 of Fellows of the College; these are arranged in albums and a tray made for the purpose. This collection does not include the paintings, framed engravings, and mounted portraits in printed books and scrapbooks. The total number of portraits in the library is 5,658.

In a paper on sexual diseases and the individual now appearing in the *Journal of State Medicine*, Mr. A. Corbett-Smith says his attention was called by Dr. David Newman of Glasgow to the fact that syphilis appears in the indictment of Cardinal Wolsey before the House of Lords in 1529, as may be gathered from the following passage: "Whereas Your Grace is our Sovereign Lord and Head, in whom standeth all surety and wealth of this realm, the same Lord Cardinal, knowing himself to have the foul and contagious disease of the great pox, broken out upon him in divers places of his body, came daily to your Grace, rowning in your ear and blowing upon your most noble Grace with his perilous and infected breath, in marvellous danger of your Highness." The charge seems quaint to us now, but whether it was well founded or not, it reflects the horror with which people regarded syphilis in those days. It was looked upon as so contagious that it could be contracted by merely sleeping in a bed in which a victim of the disease had slept before.

In Mr. Randall Davies's interesting book *The Greatest House at Chelsey*, lately published by John Lane, the following story is told on the authority of Roper, Sir Thomas More's son-in-law, of the Chancellor's intercession for his daughter Margaret when she lay dying at Chelsea:

At such time as my wife (as many others that year were) was sick of the sweating sickness, who lying in so great extremity of that disease as by no invention or devices that physicians in such case commonly use (of whom she had diverse both expert, wise and well learned then continually attendant upon her) she could be kept from sleep; so that physicians and all others despaired her health and recovery, and gave her over: her father (as he that most entirely tendered her) being in no small heaviness for her, by prayer at God his hands sought to get remedy. Whereupon after his usual manner going up into his new lodging, there in his Chapel upon his knees, with tears most devoutly besought Almighty God that it would like his goodness, unto whom nothing was impossible, if it were his blessed will at his mediation to vouchsafe graciously to hear his petition; where incontinent came into his mind, that a glister should be the only way to help her. Which when he had told the physicians, they by and by confessed that if there were any hope of health, that it was the very best help indeed; much marvelling of themselves that they had not afore remembered it. Then it was immediately ministered unto her sleeping, which she could by no means have been brought unto waking; and albeit after she was thereby throughly awaked, God's marks, evident undoubted token of death, plainly appeared upon her, yet she (contrary to all their expectation) was (it was thought) by her father's fervent prayer miraculously recovered, and at length again to perfect health restored.

Of the accomplishments of Margaret Giggs, who was brought up with More's family, there is a curious anecdote:

It happened that Sir Thomas, some years before his death, had an ague, and passed two or three fits. After, he had a fit out of course, so strange and marvellous that a man would think it impossible; for he felt himself at one time both hot and cold throughout all his body, and not in one part hot and in another cold, for that is not strange, but he felt sensibly and painfully at one time in one place both contrary qualities. He asked the physicians how it might be possible. They answered it could not be. Then this little maid (for then she was very young yet had read Galen) told Sir Thomas that there was such a kind of fever; and forthwith she showed a book of Galen where he avoucheth as much. This gentlewoman after married Doctor John Clement, famous for his singular skill in Greek and in physick.

The complete change which has taken place during the last hundred years in the treatment of lunatics has benefited not only the insane, but all those who fall within the category of mentally defectives. Instead of being left to sink gradually into a state of mental and physical inertia, and in many cases to become a burden upon their family and friends, these unfortunate beings are now gathered together into institutions where they are kept under proper control and taught the trades and handicrafts for which they show most aptitude. The March number of *The Child* contains an interesting article by Mr. A. Bickmore on the industries suitable for feeble-minded children, who often show both taste and skill in basket and rug making, carpentry, wood-carving and similar handicrafts. The actual and tangible result of their labours, however, is not so important as the effect these labours produce upon the health and mental condition of the patients. "During the past ten years," writes Mr. Bickmore, "I have watched the remarkable changes which can be wrought in boys and girls when their time is fully occupied in industrial work. The slouching gait, drooping shoulders, shuffling feet and dull eyes are gone, and in their place are boys and girls with sturdy limbs, well set-up shoulders and clear bright eyes, interested as far as their mental powers will allow in the particular industries in which they are employed, and are, under control, becoming in many cases thoroughly useful workpeople. This great change has been brought about by giving the boys and girls a training similar to what they would receive if they were normal persons receiving their training in a workshop or factory." The question of the mentally deficient child is fully discussed from another point of view by Miss A. H. P. Kirby, whose article on "Child Welfare and Legislation for the Feeble-minded" also appears in the March number of *The Child*. The same number of this excellent magazine contains a short account, by Miss Margaret E. Nuth, of the recent attempt to form an open-air school for the children of well-to-do parents, in the Botanical Gardens; and an article by Dr. H. Macnaughton-Jones on the influence of the cinema on the mind and morals of the rising generation.

British Medical Journal.

SATURDAY, APRIL 11th, 1914.

LARYNGEAL TUBERCULOSIS AND SANATORIUM TREATMENT.

Thirty years ago tuberculosis of the larynx was regarded by the men of the largest experience as practically incurable, and the same view is widely held at the present day. The paper by Sir StClair Thomson, published in this issue of the Journal, shows that this belief is unduly pessimistic. The paper has a special value, inasmuch as it expresses the matured opinion of a careful observer based on a critical analysis of a number of cases which he has been able to study under exceptionally advantageous conditions. As laryngologist to the King Edward VII Sanatorium, Midhurst, he has had the opportunity of examining the larynx of every patient admitted since January, 1911, and when he saw anything to arouse suspicion he has followed up the first inspection by further periodical examinations during the patient's stay in the sanatorium. The total number of cases subjected to this close scrutiny was 795. The result of three years' work has been to convince him that tubercle in the larynx, though one of the most formidable complications of pulmonary tuberculosis, is not inevitably fatal, as it was formerly held to be, and that in a certain proportion of cases—small it is true, but sufficient to give grounds for hope of increase under proper management—the disease is curable.

Sir StClair Thomson has eliminated from his statistics all cases in which there could be any doubt as to the nature of the disease. Many cases are sent to Midhurst which may fairly be regarded as "suspect." In these examination, with the help of all the aids to scientific investigation with which the sanatorium is equipped, fails to reveal any active mischief, though in some there may be evidence of extinct foci. These are not included in Sir StClair Thomson's tables and figures; he has rigorously confined his analysis to "manifest cases of active tuberculosis." He has found in 693 cases which remain after careful sifting that the larynx was affected in 178. In all these the larynx was the seat of definite tuberculous lesions. This gives a percentage of 25.6—a high proportion, as pointed out by the author, considering that he is dealing only with selected and comparatively early cases. Another unexpected result of the analysis of his figures has been to show that the generally received view that the predisposition to laryngeal tuberculosis is much greater in men than in women rests on no solid foundation. He found that whereas in men the larynx was affected in 24 per cent. of cases, in women it was diseased in 28.3 per cent.; the difference is practically a negligible quantity. Such as it is, it may be accounted for by the different conditions in which male and female consumptives live. It must be remembered that the men and women admitted to the Midhurst Sanatorium are drawn from the same class and have not been exposed to the conditions of local irritation by dust, smoke, and so forth under which people employed in factories and workshops have to work. They are carefully selected, and, on the whole, offer the most favourable material for the exercise of medical skill. But when all these things have been taken into account, Sir StClair Thomson's results are very encouraging. In 20.7 per cent. of the cases treated the disease was arrested, and in the 34.83 per cent. described as "improved" he thinks that if the after-histories of the patients could be followed up, it would be found that a good many could be transferred to the category of "arrested." To sum up the results, in more than half the cases of laryngeal tuberculosis which have been treated in the Midhurst Sanatorium during the last three years, the disease was arrested or improved.

This is strong testimony to the beneficial effects of a stay in the sanatorium, where the discipline of strict silence keeps the affected parts at rest and where all the surroundings are scientifically arranged so as to ensure the most favourable conditions for the restoration of health. The influence of rest, combined with abundant nourishment, exercise, pure air, and regularity of life, is strikingly shown by the fact that in no fewer than 22 of the 37 cases in which tuberculous laryngitis was arrested this result was brought about without any direct local treatment. The whole field battery of lozenges, sprays, insufflations, paints, caustics, and intratracheal injections that used to be brought to bear against the disease was dispensed with. In only 15 cases was the arrest effected by local treatment, and for that purpose the galvano-cautery was used. This agent is employed with the object of isolating the local lesion by setting up fibrosis, and thus walling off the diseased from the healthy parts. Local surgical measures were employed in only two cases—in one for the clearing away of heaped-up deposit on a ventricular band, in the other for the removal of pachydermatous granulation tissue resulting from the cautery puncture.

While congratulating Sir StClair Thomson on his results, we venture to hope that at a later period he will tell us what has been the subsequent fate of the patients, not merely in respect of the prolongation of life, but of working efficiency. We should also be glad of further information as to the galvano-cautery treatment. The points on which details are desirable are the mode of application and the indications for the treatment, the general condition of the patient which warrants its use, and the average length of the treatment. Some of these points were raised in the discussion at the Medical Society, which is published in this week's issue of the Journal (p. 818). Sir StClair Thomson's paper, the distinctive features of which are the stress laid on the futility of the older tinkering methods and insistence on the vital importance of sanatorium treatment, was well received by the society before which it was read. We think it may be said that he has established a new standard for the estimation of the fatality of laryngeal tuberculosis by showing that when treated under proper conditions it is curable in a proportion of cases which would rightly have seemed incredible in the presanatorium era.

It will be noted that Sir StClair Thomson has not seen any marked beneficial results from tuberculin treatment. On this point there is still very wide divergence of opinion, and the profession will therefore look forward with "animated expectancy" to the report on the subject by Dr. Noel D. Bardswell, Medical Superintendent of Midhurst Sanatorium.

which is to be published this week.[1] This report is issued with the sanction of the Council and its value is increased by a prefatory note contributed by Professor Karl Pearson. We take this opportunity of calling attention to some of the previous scientific work which has come from officers of the sanatorium and which must be counted as by no means the least valuable of the fruits of that institution. Among these the first place must be given to Dr. Bardswell's paper on the treatment of pulmonary tuberculosis, in which he gives full and critically digested details of the after-histories of the patients who have passed through his hands at Midhurst during the period of five years completed in July, 1911. In the reports of many other institutions the ultimate results are often either omitted or but vaguely mentioned, and this has created a feeling of distrust as to sanatorium statistics. Dr. Bardswell tells the story of his cases in a judicial spirit that inspires confidence. Another excellent piece of work we owe to Midhurst is the essay of Dr. J. A. D. Radcliffe, pathologist to the sanatorium, on mixed and secondary infections in pulmonary tuberculosis, for which the Weber-Parkes prize was awarded to him in 1912.

Enough has, we think, been said to convince the most sceptical that the Midhurst Sanatorium has fully justified its existence. At the opening of the sanatorium, the late King Edward said: "It is our earnest hope that the sanatorium which is now opened, and its research laboratories, equipped with every resource of modern science, may assist to advance the physiological knowledge of pulmonary diseases, and that this institution may, by treating the disease in its early stages, be the means of prolonging the lives of those whose career of honourable usefulness has been interrupted by this terrible malady." Both these objects have been amply fulfilled. The success of the sanatorium which bears the name of the sovereign who uttered these weighty words must be gratifying to Sir Edward Cassel, whose munificence made its foundation possible, and to the committee of management, to whose unstinted efforts so much of that success is due.

THE STATISTICAL METHOD IN THERAPEUTICS.

ELSEWHERE in this issue we publish a criticism by Professor Hermann Sahli of Dr. Batty Shaw's statistical contribution to the study of tuberculin inoculations, and Mr. R. Hamilton Russell, in his address to the Section of Surgery of the Australasian Medical Congress, published in the JOURNAL of April 4th, expressed an opinion of the statistical method as applied to medical problems which agrees in the main with that of Professor Sahli. We do not propose to discuss the merits of the particular controversy between Dr. Batty Shaw and Professor Sahli, but it may be of interest briefly to refer to some general principles of scientific method which seem to be involved.

The impression to be derived from a hasty perusal of the writings of modern statisticians is not likely to be favourable to the claims put forward on behalf of their science for a place among the instruments of medical research. One finds lengthy articles, which drop on the smallest provocation, not like Mr. Silas Wegg into poetry, but into formulae of an amazing complexity, and are interspersed with violently polemical matter. Professor A. explains, in many pages and with the help of hundreds of equations, that Professor B.'s views on, let us say, the general theory of multiple correlation, are certainly incorrect and probably dishonest. In his turn, Professor B., also securely entrenched amid equations and coefficients, hints that the value of Professor A.'s contributions to the theory of statistics is an infinitesimally small quantity of the second (or higher) order. The medical reader who has plodded through many hundred pages of this kind may be pardoned if he asks himself, *Cur quis non prandeat hoc est?* But the controversial excesses of the seventeenth and early eighteenth century philologists cannot obscure the essential value of much they achieved, and we hope that the same may be said of twentieth century statisticians.

How is a judgement on the value of a therapeutic measure attained? We conceive that, in the first place, the method proposed must be rational, that is to say, the possibility of its producing an effect does not involve a denial of ascertained facts. If it be said that osteo-arthritis can be cured by wearing metal rings on the fingers, or that dosing a patient suffering from chronic interstitial nephritis with coloured water will effect a restitution of the damaged tissues, no rebuttal of the claims is required other than a recital of ascertained pathological facts respecting the two diseases. Should a series of cases appear to show success following the use of the rings or the coloured water, we are entitled to assert peremptorily that such statistics are fundamentally erroneous, precisely as the man in the street is entitled to reject any proof that the ratio of the circumference of a circle to its diameter is commensurable, although he may be unable to detect a flaw in the reasoning.

But such cases as these are only frequent in connexion with quack remedies; trained observers rarely advocate methods which involve such contradictions. The problem is usually of the following type: Given that a certain procedure, not intrinsically absurd, is adopted, how can we test its value? We think that any attempt to answer the question really involves the use of some statistical method. Thus we may crudely divide our material into treated or untreated series and simply compare the results; this is the method of "coarse statistics" which Professor Sahli condemns. Then we might either subclassify the data and still compare the categories directly or, by the use of particular artifices, we might endeavour to allow for disturbing influences while preserving the original bulk. A familiar example is that of age and sex corrected mortality or fatality rates, less well-known methods are founded on the theory of multiple correlation. Lastly, we might endeavour mentally to resume all these processes, preserving no written record of them, it being, perhaps, held that some crucial distinctions are of a nature capable of impressing a trained observer, but incapable of transmission by speech or writing. Each of these processes involves the conception of multiple causality either as leading up to certain results or impeding their attainment, and each involves the notion of a series of cases or phenomena.

This idea of a series is involved even when a judgement is ostensibly founded upon a single treated case, since a comparison is implied with some other case or series of cases not so treated which are upon record, or have made an impression on the consciousness of the observer. But these characters are no less than a definition of statistics—"quantitative data affected to a marked extent by a multiplicity of

[1] Preliminary Report on the Treatment of Pulmonary Tuberculosis with Tuberculin. By Noel D. Bardswell, M.D., Medical Superintendent. With a Prefatory Note by Professor Karl Pearson, F.R.S. London: H. K. Lewis, 136, Gower Street, W.C. 1914. (5s.)

causes." It therefore follows that the supposed opposition between statistical and other forms of proof really depends upon a misapprehension of terms, and it is interesting to inquire how it has arisen.

The primary cause was, we think, a failure to perceive that the absence of a written record does not disentitle a process of inference to be classified as statistical. In fact we are every day reaching strictly statistical judgements without recorded data. We cycle through Chelmsford and Colchester, and assert that the latter is the more populous city without having made or recorded a census of the inhabitants and without reading the official reports. But we have performed a statistical operation, for we have mentally compared the extent of the streets, the amounts of traffic in them, and a host of other circumstances each of which is a variable affecting but not uniquely determining a conclusion as to the number of inhabitants. This instance shows why the preservation of a written record, although not essential to the method, is practically desirable; we all know how widely the estimates formed in the way described may differ one from another and from the real truth. These are the grounds upon which it may legitimately be held that the onus of proof rests upon an observer to demonstrate, not merely assert, that the materials upon which his conclusions rests are in the first place appropriate, and in the second incapable of being recorded. How far this burden of proof has been discharged in particular instances we need not here discuss.

A secondary cause of dispute is more subtle, and is rooted in an incomplete enumeration of errors. Thus, suppose we are confronted with the following examples: Small-pox is raging in a town, and two observers, A. and B., each select at random samples of inhabitants who are, we may assume for simplicity's sake, of the same age, sex, and class; A. takes 1,000 and B. takes 50, the attack-rates are computed for vaccinated and unvaccinated persons in each sample, and differences emerge, one sample giving results more favourable to vaccination than the other. The values of these two samples are likely to be quite differently appraised by a theoretical statistician and by a clinician. The former may, on the basis of "probable error" computations, conclude that there is no significant difference between the two; the latter, from a knowledge of the disease and of A.'s and B.'s respective diagnostic powers and methods, may infer that A.'s sample is valueless and that all arguments must be exclusively based upon that of B. Very probably the result will be an angry polemic. The statistician will speak in seathing terms of the clinician's failure to grasp the principles of quantitative reasoning, and the clinician will lament that persons who have never even read a textbook on medicine should presume to lay down the law as to what is and what is not evidence in clinical matters. Both parties to the dispute would, however, be using a statistical method, and both would be using it incorrectly. In all such problems two systems of error are involved—errors of sampling and errors of observation; the theoretical statistician sees the importance of the former because his training enables him to estimate their magnitude, the clinician is impressed by the latter, which his special experience has forced upon his notice. We do not suggest that in current disputes the antithesis has ever been quite so pointed, but we are confident that our illustration does correspond to an actual tendency. The conflict is not between a statistical and some non-statistical method, but between two mutilated statistical processes. We conclude, therefore, that the discussion, in so far as it involves principles of scientific method, is not likely to be fruitful, but in so far as it bears upon current practice it seems to be of importance. To reach solid results, the *entente cordiale* between clinicians and theoretical statisticians will need to be considerably more cordial than it is at present. Whether the co-operation can ever be effective unless theory and practice are combined in one person, whether, pending the millennium, a theoretical statistician with some knowledge of medicine or a medical man with some knowledge of statistical theory is the more scientifically useful person, are all questions of much importance, and deserve considerably more attention than they have yet received. We shall doubtless see for some time to come the theoretical statistician thanking God that he is not as other men or even as this clinician, and the clinician taking precisely the same course. The spectacle is entertaining but not otherwise valuable.

ADMINISTRATION OF THE MENTAL DEFICIENCY ACT.

THE Board of Education has issued Provisional Regulations under Section 2 (2) of the Mental Deficiency Act, 1913, and Model Arrangements for the guidance of Local Education Authorities in carrying out the duties imposed upon them by Section 31 (1) of that Act. The regulations, which have been drawn up in consultation with the Board of Control, refer to notification only, while the model arrangements refer both to the method of ascertaining what children within the area are defective, and also to the duty of notification to the Local Control Authority in certain cases. The Board has issued at the same time an explanatory memorandum from which the following points appear. In certain exceptional cases, as, for instance, low-grade feeble-minded children, the Local Education Authority is to report to the Board of Education before notifying the case to the Local Control Authority; this has been arranged in order to secure a reasonable standard of uniformity of action among authorities. For example, the Board proposes not to admit, as a rule, that an educable feeble-minded child should be notified as causing detriment to the interests of other children unless it has been shown by actual observation in a special school for an adequate length of time that the presence of the child is a source of serious moral danger to the other children; thus the severe character of the mental defect or uncleanly habits would not, unless the circumstances were exceptional, lead the Board to authorize notification to the Local Control Authority. In short, the Board holds that it is only "moral imbeciles" who are detrimental to the interests of other children, and considers that all moral imbeciles are so detrimental. Moreover, it is pointed out that the term "moral imbecile" cannot be applied to children who possess comparatively slight criminal tendencies. The Board contemplates that educable feeble-minded children who require to be placed under supervision or guardianship owing to unfavourable home surroundings, or for some similar reason, should continue in attendance at a day special school; they would thus remain under the Local Education Authority as regards education, while in other respects and out of school hours they would be under the aegis of the Local Control Authority. In an appendix forms of certificate and report are given, which are to be used so as to secure the necessary uniformity. In Schedule F the form of the report occupies two foolscap pages; it is substantially the same as that printed in Appendix E of the annual report for 1911 of the Board's chief medical officer. For the assessment of mental conditions the tests designed by Binet and Semon are recommended.

MEDICAL SCHOOL INSPECTION IN NEW YORK.

In a paper on "Prejudices and superstitions met with in medical school inspection," published by the Department of Health of the City of New York, Dr. Jacob Stobel, Borough Chief, Bureau of Child Hygiene, gives an amusing account of some of the difficulties met with by the school doctor in that cosmopolitan city. In New York, he says, with its 5,000,000 people, its 700 schools, public and others, and its 825,000 school children, the doctor has to deal with a variety of nationalities—"the swarthy Syrian, the flaxen-haired Swede, the confiding loquacious German, the wary and reticent Greek, the suspicious Russian, the doubting Italian"—together with Jewish, Irish, Bohemian, Hungarian, Polish, Slavish, Armenian, French, "colored," Japanese, and Chinese elements. Besides the ignorance and prejudice in regard to sanitation common to them all, each of these races has its own peculiar traditions and superstitions. With this huge mass of obstructiveness the doctor and the district nurse have to contend. Defective eyesight is one of the most frequent causes of backwardness at school, but there is a great objection to glasses, which are regarded as worn "for style," or as making a child look old and ridiculous, and among Jewish mothers particularly, as interfering with a girl's prospects of marriage. Discharges from the ear are considered beneficial as a means of allowing the "poison" to escape; this mischievous belief is still too common in our own country. Suggestions for the relief of obstruction of the nose by the removal of adenoids are met with fatalistic objections. The negress tells the doctor that her child's nasal twang is due to the fact that the "palate am down," followed by the assurance that it can be raised to its proper place by constant pulling of the hair on the top of the unfortunate little one's head. An Irish mother will say, when told that her child's tonsils are enlarged, that "God put them there, and there they'll stay." The negress declares that the Lord made her child as He made her, "and she ain't going to have no one trying to improve on His work." The Jewish mother argues that "if the tonsils are taken out, the throat will be too wide and air will rush into the lungs too quickly and produce inflammation of the chest." Another superstition is that removal of tonsils or adenoids causes a loss of sexual instinct, and that the patient will become hypochondriacal and have suicidal tendencies. Voodooism leads to the use among negro children of different coloured yarn for contagious and other diseases—red for erysipelas, yellow for jaundice, pink for "pink eye," and white for anaemia. This might seem to be a survival of practices founded on the old doctrine of signatures. The Italian is convinced that the crusts of eczema are designed for protective purposes, and that the removal of them would cause death. Some mothers, when told that a child's hair matted together by dirt, lice, and scalp disease, should be cut, will reply that this will stop growth or undermine the strength. The nails, again, must not be cut short, or the child will become a thief or "have his speech retarded"; these consequences are averted by biting them off. When the doctor goes into the Jewish quarter to instruct a mother in the care of her child's mouth and teeth, she shows him her own toothless jaw, and says, "I haven't any teeth either, and I am alive." The negress will tell him that drawing teeth gives the children sore eyes; Dr. Stobel quotes one "mammy" as saying: "I pulls my own chile's teet and they is mighty lucky if they kin git the holes stopped up wid meat and bread." Weakness of memory is explained by the fact that the child will eat "the ends of the bread loaves." Wetting the bed is believed to be due to the child's playing at the fire with matches before he goes to bed, and pallor is attributed to looking into the looking glass late at night. Warts and moles are supposed to be cured by the use of a small piece of meat stolen from a butcher and buried in the ground; the growths shrivel up as the buried meat decomposes. The difficulties caused by the ignorance and superstition of the motley population of New York are so serious that it has been suggested that rational treatment should be made compulsory. Dr. Stobel, however, believes in education of parents more than in legislation, and we think he is right. Already there are signs of the dawn of a better day. The mention of operation for school children does not cause the terror it carried with it some years ago. The tooth-brush is now often seen in humble homes and there are other signs of a growing enlightenment in the matter of health. As the children grow up they will spread the knowledge they have gained at the school. But the process will necessarily be long, for, as Hamlet says, "virtue cannot so inoculate our old stock, but we shall relish of it." One of the most remarkable things about the superstitions in respect of health, as of other things, is that they are so widespread. With local modifications the central idea is the same. Among the most diverse races the history of human civilization is the record of slow emancipation from fantastic beliefs, the source of which is difficult or impossible to trace.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

THE medical interest of this part of the *Oxford English Dictionary*[1] centres not in what may be called the official medical terms which it defines and illustrates (for they are but few in number), but rather in the medical meanings of the ordinary words which crowd its pages. Between *Shastri* and *Shyster* (the alphabetic limits of the present instalment of the *Dictionary*) the only purely medical words seem to be *shingles*, *ship-fever*, and perhaps *shock*, and even these are not technical or special in the strict sense. Though the technical term for shingles is "zona" or "herpes zoster," yet shingles itself has the classical word *cingulus* embedded and partly concealed in it, and the girdle-like distribution of the eruption of this troublesome complaint explains the etymological significance of the name. The earliest use of the word is found in Trevisa (1393) and the latest (which is selected) is from Clifford Allbutt (1899). A quotation of 1546 runs thus: "Our Englysshe women call it the fyre of Saynt Anthonye, or chingles." *Ship-fever* is a name for typhus, and once in the old days (not good ones in this respect) slew its thousands, but is now, both in this and in the form of gaol-distemper, happily almost, if not quite, abolished off the face of sea and earth. *Shock* is carefully defined as "a sudden debilitating effect produced by over-stimulation of nerves, intense pain, violent emotion, or the like; the condition of nervous exhaustion resulting from this." The earliest use of the word in this medical sense is found by Dr. Bradley in Abernethy's *Surgical Observations* of the year 1804. But, as has been said, the more interesting rubrics are the ordinary words used in medical senses. For instance, passing rapidly down the columns of meanings of such a word as *show*, we read, "a sight, a spectacle, a specimen, an apparition, a display, an exhibition, a pageant, a booth," then one comes to such phrases as "to boss the show" and "to give the show away," and then all at once one is startled to meet with "*a sanguino-serous discharge from the vagina prior to labour.*" It certainly is strange to find these medically employed words in the company of so many terms, plain and inoffensive (from the lay point of view). The word "show" in its obstetrical sense reminds us of a curious experience which befell a senior student taking out his midwifery cases. Following the advice of some book

[1] *A New English Dictionary on Historical Principles.* Edited by Sir James A. H. Murray. Shastri-Shyster (Vol. VIII), by Henry Bradley, Hon. M.A.Oxon. Oxford: At the Clarendon Press; London, Edinburgh, Glasgow, New York, Toronto, Melbourne, and Bombay: Oxford University Press: Humphrey Milford. April 1st, 1914. (Price 5s.; $1.25.)

(perhaps Swayne's *Aphorisms*), he asked his first patient being desirous of ascertaining in an easy way whether labour had begun, if she had seen any show, and got the disconcerting reply that she had visited the menagerie! Another obstetrical use of a common word occurs in connexion with *shirt*. Dr. Bradley, with laudable comprehensiveness, gives as one of the meanings of shirt "an inner covering," and mentions the "amnion" or "child's shirt"; the illustrative quotation is from Cotgrave (1611): "th'inmost of the three membranes which enwrap a wombe-lodged infant is called by some Midwives . . . the child's shirt." Some other words with occasional medical significance are *shot* (an inferior quality of ewe, and so a person whom the eugenists would regard as an unfit from the reproductive point of view); *shoot* (to evacuate or discharge excreta); *shivers* (the ague); *shoddy fever* (a kind of bronchitis due to the irritating effect of shoddy dust), and *sheath* (in its anatomical meanings). The word *short* also comes into various combinations which have a semi-medical meaning, such as *short-sighted* (myopic), *short-breathed* and *short-winded* (dyspnoeic), and the less often used *short-eyed* and *short-lunged* (myopic and dyspnoeic). Although this part of the *Dictionary* is not highly distinguished for the importance of its medical terms, it is worthy of special notice, because it is the concluding portion of Volume VIII of the whole work. The ninth volume is more than half done, and Volume X has been begun. The first part appeared in the eighties of the last century.

DANTE AS A SCIENTIST.

DANTE'S knowledge was as a precious gem with many facets; from whatever direction light is thrown upon it in these modern times a facet-flash is sure to come back. A few years ago[1] the Florentine poet's acquaintance with medicine and embryology, and especially with Aristotle's *De Generatione*, was discussed, and the conclusion formed that he had a more real and complete familiarity with the medical literature and practice of his time than that which a dilettante would possess, and that his enrolment in the Guild of Physicians and Apothecaries was no empty form, but was founded upon a certain amount of solid attainment. Dr. D. Lloyd Roberts, in a lecture on *The Scientific Knowledge of Dante*,[2] given to the Manchester Dante Society, takes a slightly wider range for his survey, and exhibits the poet as one of "those who knew" about meteorology, aëronautics, botany, astronomy, geography, and art. Dr. Lloyd Roberts is, perhaps, going a little further than the facts warrant, even as reinforced by Dr. Corrado Ricci, when he states that Dante studied medicine in Bologna, and graduated there after passing the usual examination on the completion of his studies; but there is much internal evidence in the *Commedia* and the *Convivio* to prove a first-hand acquaintance with things medical and scientific as they were then taught in universities. There is, however, little exaggeration in saying that in the *Inferno* Dante outlined a pathology of the Nether Regions, so accurate is his description of the diseases which affected the condemned spirits in Hell; and in a sense he adumbrated the discovery of the circulation of the blood. The instance given of Dante's acquaintance with aëronautics—his ride on Geryon's back down to the Eighth Circle—scarcely justifies Dr. Lloyd Roberts in calling him one of the forerunners of that art "which has of late made such wondrous strides"; but so great enthusiasm for his hero-poet can easily be forgiven the veteran Manchester obstetrician, and all lovers of the Florentine "poet, philosopher, and physician" owe him heartfelt thanks for the sentence with which the address closes, namely, "Throughout many of the great poet's Cantos these transfigured fragments of science, like gorgeous-hued inlays of mosaic, form lustrous stars, irradiating with intrinsic beauty, pregnant with hidden meaning."

[1] BRITISH MEDICAL JOURNAL, February 5th and 12th, and August 13th, 1910.
[2] Manchester: University Press. 1914. (Pp. 28.)

DRUGLESS HEALERS IN THE UNITED STATES.

WE are sometimes told that disease can, and should, be treated without drugs, and it is probable that at the present day not a few physicians use in their practice little in the way of medication beyond the mixture of hope and nux vomica in which the pharmacopoeia of a celebrated authority has been epigrammatically summed up. But in this, as in so many other departures from the old ways, America is far ahead. Not long ago a bill for the regulation of medical practice was before the California Legislature. We learn from the *Pacific Medical Journal* that with the fine catholicity that might be expected in a progressive State recognition was accorded in the proposed law to a motley crowd of "drugless healers" and "wonder workers," as various as the beasts in St. Peter's vision. Provision was made for the admission of all these to examination for a "drugless practitioner's" certificate. Our contemporary gives the following "partial list" of healers eligible for a licence after studying in their particular school for two years of 2,400 hours: "Absent treatment-paths, astrologists, astrological physicians, 'bloodless' healers, charlatanismus practors, chiropathists, mechano-therapeutists, mechanico-vibrationists, mentapaths, mental healers, mental scientists, mental telepathists, chiropodists, chiropractics, Christian science healers, clairvoyant healers, 'Cosmis Urge' physicians, crystal gazing physicians, damphoolismus healers, Divine healers, 'drugless' healers, 'drugless' physicians, electropaths, electro therapeutists, electro-mechano-therapeutists, Emanuel-movementors, faith-healers, fakopaths, fraudopaths, gift healers, health healers, humbugopaths, humanitarianists, hydropaths, hydropathic physicians, lost-manhood professors, magnetopaths, magnetic-electric-physicians, magnetic doctors, metaphysicians, naprapaths, naturopathists, naturopathic physicians, neuropathic physicians, New Thought physicians, New Thought Healers, Newthoughtists, Oculopaths, osteopathists, oxypaths, palm-reading physicians, panopaths, psychic physicians, Psychic Soc Et Tuum, Pneuma-psycho-mana-soma-paths, psycho-medical healers, psycho-paths, psychometropaths, psycho-therapeutists, quackopaths, spirit healers, spiritualistic healers, vibrationists, vitapaths, vitopathic physicians." This list is nearly as long and a good deal more varied than the catalogue of Don Giovanni's conquests. We join with the editor of the *Pacific Medical Journal* in asking for an intelligent definition of these terms. We do not know whether the bill became law, but in any case the amazing variety of forms of irregular practice which flourish so rankly in California is very striking to the unimaginative British mind. Renan said that the only idea he could form of the infinite was derived from the contemplation of the pretensions of quacks. He might, we think, with greater reason have found it in the spectacle of human gullibility which accepts these pretensions as gospel truth.

THE DAINTY DEVICES OF THE ANTI-VIVISECTIONISTS.

WE may claim to have done something to lay bare the workings of the antivivisectionist imagination, in which the yelping of puppies is transformed into howls of tortured dogs, and the nervous twitchings which are sometimes a legacy of distemper into signs of acute suffering. Thanks to the educative propaganda of the Research Defence Society, and to the solvent action of the laws of evidence on the products of an inflamed fancy the public is now able to estimate the true value of the "platform facts" which are the controversial stock-in-trade of the antivivi

sectionists. An instructive example of the recklessness of statement in which these fanatics indulge comes to us from New York. The *Medical Record* of March 14th says that stories were recently set about to the effect that children treated in the hospitals of that city had been inoculated with dangerous diseases as a part of the experimental work done in those institutions. These stories were investigated, and as a result Health Commissioner Goldwater has issued the following statement: "Not only were the children found not to be suffering with the diseases alleged, but it was also shown that there was absolutely no experimental work in any of the diseases with which it was charged they had been inoculated in any of the hospitals of the Department of Health. The charge was made that many of the children attending the public schools in the Bronx were suffering with disease due to experimentation and infection in city hospitals. In particular, B. S. Deutsch addressed a letter to the District Attorney of Bronx County in February, stating that forty-eight children, many of whom were attending the public schools, were suffering with a grave disease. Mr. Deutsch's statement goes on to say that the alleged infection of these children was the result of 'inoculation which occurs without the consent of either the children or their parents, or else as a result of negligence or carelessness within the hospitals.'" The department investigators, adds our contemporary, visited the forty families mentioned in the Deutsch list. Of this number fifteen could not be found at the addresses given. Interviews were obtained with twenty-five families, in which there were thirty-four children. Among these not a single case of the disease suspected was found. There was no evidence of the inoculation of any of these children with serum or vaccine. We need not call in question the good faith of the people who spread these calumnies; but we do say that the will to believe evil leads them to make statements which even a cursory inquiry, conducted in a proper spirit, would prove to be false.

A CUTI-REACTION IN PREGNANCY.

Biological tests for pregnancy are coming in crowds. Whilst discussion is still active over the reliability of the Abderhalden blood test, Dr. Ernest Engelhorn and Dr. Hermann Wintz bring forward a skin reaction which may turn out to be of real value in the detection of the pregnant state.[1] These two writers point out the difficulties or unreliability of the antitryptic test, the cobra venom reaction, and the Abderhalden procedure, and then state that one of them (Engelhorn) conceived the idea of recognizing the hypothetical substances which appear or are supposed to appear in the blood in pregnancy by means of cutaneous inoculation. With von Pirquet's and Noguchi's success in tuberculosis and tertiary syphilis in mind, they made a placental extract, which they named "plazentin," and carried out cutaneous inoculations upon pregnant and non-pregnant persons with it. A reaction was produced in from twelve to forty-eight hours, and was most marked about thirty-six hours after the inoculation. The reaction when positive consisted of an inflammatory swelling and reddening of the inoculation area, with a slight brownish discoloration of the surrounding skin. The upper arm was the part chosen, and controls, consisting of simple scratches with the lancet, were always made alongside of the plazentin inoculation. In all the pregnant women tested (70 in number) the reaction was positive, and in all the non-pregnant adults tested (53) it was negative. In three non-pregnant women in the premenstrual period there was, however, a slight reaction, and in one six-year-old child there was a positive result. The premenstrual result is rather interesting, and may point to the presence of increased proteolytic power in the blood just before menstruation, resembling that found in pregnancy. Of the pregnant women, 9 were between seven and eight weeks, 2 were in the third month, 1 in the fourth, 1 in the fifth, and 57 were between the seventh and tenth months. Of the 53 non-pregnant persons who gave a negative reaction, 13 were men; 12 (including the three pre-menstrual patients with slight reaction) were women with healthy genital organs; 8 suffered from carcinomata, 2 from myomata, 4 from cystomata, 2 from sarcomata, and 3 from disease of the appendages; whilst 9 had various other disorders. The one non-pregnant person giving a positive result was the six-year-old child (before-named) with a vesicular rash. Some puerperal patients were tested: 6 gave a positive reaction, and 8 a negative; it was noteworthy that the positive reactions were all in the first four days of the lying-in period, and the negatives were from the second day onward to the eleventh; further, the positive reaction in the puerperium quickly faded away. The authors are ready to admit that many more observations are needed before the test can be regarded as having a diagnostic value, but the fact that the inoculation of the skin with plazentin gave a positive result in women who were pregnant from the seventh week onward is one which must be taken into account in all future work along these lines, and it may also serve to throw some light upon the question of the real nature of pregnancy, which has been not a little discussed in the pages of the Journal lately.

[1] *Muench. med. Woch.*, March 31st, 1914.

THE PATHOLOGY AND TREATMENT OF OZAENA.

There is nothing new in the suggestion that atrophic rhinitis is an infective condition, but proof of its correctness has been forthcoming only during recent years. In 1899 Dr. Fernando Perez described a bacillus which he named the "cocco-bacillus," which he believed to be the specific causal organism of ozaena. Two instructive papers were read recently before the Berlin Laryngological Society by Dr. Perez and Dr. Gustav Hofer,[1] in which the evidence in favour of the causal connexion between the cocco-bacillus and atrophic rhinitis was fully set out. The bacillus is a non-motile organism, which stains with the aniline dyes, but not by Gram's method. It grows aërobically, and can grow anaërobically (facultative anaërobe). It grows well on the usual media; its colonies are not very characteristic in appearance, but cultures emit a very penetrating and peculiar odour. Pure cultures when inoculated into rabbits produce a well-marked atrophy of the anterior turbinated bones. Dr. Perez further adduces evidence of the contagious nature of true ozaena in support of his contention that a specific micro-organism must be held responsible for the local conditions in the nose. Perhaps the most striking evidence of the specific nature of the cocco-bacillus was that advanced by Dr. Hofer. After describing the manner in which he succeeded in obtaining pure cultures of the bacillus he records the fact that the serum of patients suffering from typical atrophic rhinitis agglutinated his cultures. It is true that he does not give the titre of the agglutination, but presuming that this was low, provided that the controls gave a negative result, and as the local nature of the affection would not be likely to effect a marked degree of general immunity, a low agglutination would suffice for the purposes of identification. His further evidence consists in the clinical records of cases treated by a vaccine of the cocco-bacillus. While he does not claim complete cure of this highly chronic disease, which is characterized by a progressive atrophy of the nasal mucous membrane, he states that the fetid odour was removed, the formation of the incrustations materially diminished, and the accompanying pharyngitis and laryngitis cleared up. These facts need confirmation, but inasmuch as Dr. Perez and Dr. Hofer have worked quite

[1] *Berl. klin. Woch.*, December 29th, 1913.

independently of each other in two different continents there is reason to regard these records as promising from a practical point of view.

IMPERFECT DIFFERENTIATION OF SEX.

In recent years numerous additions have been made to that section of the Hunterian collection at the Royal College of Surgeons of England which illustrates imperfect or abnormal development of the sexual system. Some of the more recently added specimens exemplify those difficult cases in which medical men are called on to settle the question of sex when the external manifestations are ambiguous. These difficulties will be discussed and demonstrated by Professor Keith in the first of a series of museum demonstrations which commence at the Royal College of Surgeons, Lincoln's Inn Fields, on Friday, April 17th, at 5 o'clock. The demonstrations are open to all medical men and students of medicine. The dates and subjects of the remaining demonstrations will be noted in our Diary of the Week.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Dogs Bill.—This bill, introduced by Sir Frederick Banbury, to which reference was made some time ago in these notes, has been put down for second reading on Friday, April 17th, and at present is first order of the day. In consequence of the pressure of business the House will reassemble on Wednesday, April 15th, and it is most likely that Sir Frederick Banbury's bill will be reached, although it may possibly be displaced by some bill which has obtained the Committee stage. It is necessary, therefore, that every effort should be made on the part of those opposed to the provisions of this very drastic bill to influence members of Parliament on the subject and to urge the attendance of those who are opposed to it.

Midwives (Scotland) Bill.—A midwives bill for Scotland, entitled, A Bill to Secure the Better Training of Midwives in Scotland and to Regulate their Practice, was introduced by Mr. Barnes into the House of Commons on March 25th. A bill with the same title was introduced into the House of Lords by Lord Balfour on April 1st.

Assistants to Chemists and Druggists (Qualification) Bill.—This is a small bill which has been introduced by Mr. Glyn-Jones in accordance with a pledge given during the time of the passage of the Insurance Act. It has been prepared by a committee of the Pharmaceutical Society, on behalf of whom Mr. Glyn-Jones introduced it. The second reading was reached on Friday, April 3rd, a few minutes before the rising of the House; Mr. Glyn-Jones was unfortunately unable to secure the second reading for it before 5 o'clock, and the debate therefore stood adjourned.

Tuberculosis Treatment and Children.—In reply to Mr. Astor, the President of the Local Government Board said that in almost every case schemes prepared by local authorities for the treatment of tuberculosis related to the whole population; in 31 cases it had been expressly stated that the scheme would provide for children, and in 18 cases some provision for children had already been made. At the present moment no portion of the £100,000 provisionally allocated for separate institutions for children had actually been spent, but about £30,000 had been conditionally promised, and proposals which would involve further grants of from £30,000 to £40,000 were now under consideration.

Physical Instruction (Scotland).—In reply to the Marquess of Tullibardine, Mr. McKinnon Wood said that the Education Department was not insisting that physical instruction should be given by those who held a diploma from one of the gymnasia recognized by the department in the case of primary schools, but that it was doing so, as a rule, in the case of higher grade and secondary schools. The governors of the Dunfermline College of Hygiene and Physical Training had appointed a Dane to be one of their instructors in physical exercises, and this gentleman had been employed temporarily by the Scottish Education Department for the inspection of physical exercises under the supervision of the chief inspector of that subject. This appointment did not seem to have any possible bearing on the question of the employment by school boards of ex-army men as attendance officers.

Lunacy Notices.—Sir John Jardine asked the Home Secretary with reference to the requirement of the Lunacy Act, 1890, Section 8, Subsection (2), that where a lunatic who had not been personally seen by the judicial authority had been received as a private patient by the manager of an institution for lunatics, or by a person taking charge of him as a single patient, such manager or person must, within twenty-four hours after reception, give the patient a notice in writing of his right to be taken before or visited by a judicial authority, if he could state how many cases had occurred in the five years last past of this direction of law not having been obeyed; whether there had been any instance of a prosecution for the misdemeanour having been instituted by or on behalf of the Lunacy Commissioners; and in what way the liberty of the subject was protected in the case of such incarceration where the above requirement had been ignored and the protection of judicial authority avoided.—Mr. McKenna said: The Lunacy Commissioners are unable to state definitely the number of cases in which notice in writing has not been given, but they believe them to be very few. Where any failure has occurred the person in default has been seriously warned, but there has been no case in which, in their opinion, a prosecution was called for. Where there is a failure to give notice the patient is protected by the report which has to be made to the Commissioners, and by the visits and inquiries which the Commissioners make.

Population (United Kingdom) Males and Females.—In reply to Mr. C. Bathurst, Mr. Herbert Lewis said that the female population of the United Kingdom at the census of 1911 was 23,275,120, and exceeded the male population by 1,328,625; at the census of 1901 the female population was 21,356,313, and exceeded the male population by 1,253,905.

Medical Officers of Health in Ireland.—Mr. Astor asked how many full-time and how many part-time medical officers of health were employed by local authorities in Ireland; how many of the former received a salary of £500 or over; and how many received less than £500?—Mr. Birrell replied that there were 903 medical officers of health, including medical superintendent officers of health and consulting sanitary officers, employed by local authorities in Ireland. Of these only two were full-time officers, and they were paid salaries of £500 a year or over.

Sierra Leone Nursing House.—In reply to Mr. MacCallum Scott, the Secretary of State for the Colonies said that before sanctioning the proposed rule prohibiting patients in the Sierra Leone nursing home from being treated by their private practitioners, he would fully consider the peril to recovery which might arise through denying to patients suffering from a disease the continued medical skill of their regular medical practitioners.

Indian Medical Service.—In reply to Mr. Astor, the Under Secretary of State for India said that no good service pensions of £100 a year had been conferred on retired officers of the Indian Medical Service during the last five years.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

TUBERCULOUS MILK IN EDINBURGH.

DR. PHILP MITCHELL, Ernest Hart Scholar of the British Medical Association, has followed up his report on the infection of children with the bovine tubercle bacillus, published in the BRITISH MEDICAL JOURNAL last January (p. 125), by another report on the results of an investigation into the presence of tubercle bacilli in the milk supply of seven wards of the City of Edinburgh (representing 201 milkshops), published in the April part of the *Edinburgh Medical Journal*. It raises a matter of great practical importance to Edinburgh. It has been commented upon in the newspaper press, and much general interest has been aroused. The investigations were initiated in the Royal Edinburgh Hospital for Sick Children, and confirmed the belief of the staff of that institution that tuberculous milk was a real danger to children. The work was carried out in the Royal College of Physicians laboratory. The chief conclusion formed was that 20 per cent. of samples taken from milk shops in a limited area of Edinburgh contained tubercle bacilli. This fact, following as it does upon the report made in the same *Journal* in February by Dr. James Miller to the effect that 13 per cent. of the 103 samples of milk sold over the counter were infected with living bacilli, has a seriousness which cannot be ignored. It is difficult also to reconcile the findings of Drs. Miller and Mitchell with the statement made by the Secretary for Scotland in the House of Commons on March 10th (see this JOURNAL, p. 678), on the authority of the Medical Officer of Health for Edinburgh, "that investigations carried on for several years show that only in exceptional instances was the presence of tubercle detected in samples of milk taken in the city." Other official statements of a reassuring kind are not lacking, but it is impossible that matters can be left in the state to which they have been brought by the publication of the careful investigations named. Certainly there is need for a more thorough supervision of the milk supply. As Dr. Mitchell writes, "The inadequacy of the existing veterinary inspection of the cows (in the city and country byres) supplying Edinburgh with milk is apparent, when it is stated that one veterinary inspector, besides endeavouring to look after fully 2,000 cows in the city byres, is also expected to supervise the cows in some 250 country byres." Further, Edinburgh's supply of milk from country byres, which yielded almost two-thirds of the total amount of milk consumed daily in the city, and over which there is practically no veterinary supervision, is increasing annually, and so the danger may be regarded as growing and not diminishing with time. Dr. Mitchell proposes, first, the establishment of a sufficient staff of veterinary inspectors; secondly, examination of the cows, reinforced by experimental inoculation of the milk, for the detection of udder tuberculosis; thirdly, legislative measures on the widest base for the whole country; fourthly, the education of the public as to the value of tubercle-free milk and milk products (cream, cheese, butter); and, fifthly, the sterilizing of cow's milk for the feeding of children so long as the present state of things continues.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

The fifty fifth annual general meeting of the contributors to the Royal Edinburgh Hospital for Sick Children was held on April 3rd. Mr. James Clark, C.B., K.C., presided. The report stated that during the past year 2,105 patients had been treated in the wards, a slight decrease on the number for the year 1912; of these, 1,271 were medical and 834 surgical, the former being considerably fewer than in the preceding year, and the latter somewhat more numerous. The difference was due to the fact that during the year the directors had set apart the Charteris Ward for surgical cases instead of the Mackay Smith Ward, and had thus given eight more cots for surgical cases, including two (under Dr. Porter) for ear and throat cases. There were now 69 medical and 50 surgical cots in the hospital. It was announced that a surgeon-dentist to attend to in-patients was to be appointed during the ensuing year (1914), and that the post of consulting surgeon-dentist, now vacant, would not be filled up. During the year Dr. Melville Dunlop's term of office as an ordinary physician came to an end (after fifteen years' service), and the directors placed on record their grateful appreciation of the benefits which the hospital had derived from his professional skill and labour. Dr. J. W. Simpson had been elected an ordinary physician to fill the vacancy thus caused, and Dr. Norman S. Carmichael had been elected an extra physician in room of Dr. Simpson. Dr. Eric S. Craig has been appointed outdoor anaesthetist in place of Dr. John L. Annan (resigned). Some further medical details in the report are of interest. The total number of new cases in the out patient department was 6,890 (4,152 medical and 2,738 surgical), there were 17,461 reattendances and 79 vaccinations. In the medical-electrical department 546 cases were treated and 725 skiagrams were taken. In the ear and throat department 123 operations were performed, and the number of operations in the surgical theatre was 705, whilst 1,403 minor surgical procedures were carried through in the out-patient department. The report stated that the annual income from subscriptions showed a substantial increase, though it still fell short of the ordinary expenditure by £2,957; the deficit had been made up partly from legacies received during the year. The report was adopted on the motion of the Chairman, and a motion by Sir Ludovic Grant, to the effect that the hospital was worthy of support, was also cordially adopted.

EAST LOTHIAN MEDICAL ASSOCIATION.

The third annual dinner of the East Lothian Medical Association was held in the Railway Hotel, Haddington, on February 20th. Dr. Duncan R. Macdonald (Dunbar), president for the year, was in the chair, and Drs. T. P. Caverhill (Haddington) and A. J. de Spiganovicz (Tranent) acted as croupiers. There were twenty-three members and guests present, including Dr. J. C. McVail, Insurance Commissioner. Dr. Alexander James and Professor Alexis Thomson (Edinburgh), representatives, were also present from Mid-Lothian. Apologies for absence were intimated from Professor Caird, P.R.C.S.E.; from Drs. John Keay, John Hunter, and G. A. Dickson, representing the West Lothian profession; and from Drs. Gordon, and J. L. Crombie, and A. Ballantyne.

After dinner the Chairman gave the loyal and patriotic toasts, coupling that of the imperial forces with the names of Major Cameron, R.A.M.C., Lothians and Berwickshire Horse; and Major A. Brook, V.D., 8th Royal Scots (T.F.), clerk to the Haddingtonshire Insurance Committee.

The toast of the evening, the East Lothian Medical Association, was humorously proposed by Dr. Alexander James, who recalled that he was also present at the first annual dinner. Dr. J. D. Black (Dunbar) replied. The health of the guests was proposed by Dr. Maclagan Wedderburn, and acknowledged by Drs. J. C. McVail and A. M. Easterbrook. The Chairman then proposed the toast of "The Secretary of the East Lothian Medical Association," and in the name of the practitioners of the three Lothians (East, Mid, and West) presented Dr. Martine with a substantial cheque in recognition of his work as secretary of the Provisional Medical Committee for the Lothians during the insurance campaign, and as a token of their esteem and goodwill. Dr. Martine suitably replied. The toast, "*Floreat res medica, vivat veritas*," was proposed by Professor Alexis Thomson, and that of the chairman by Dr. G. G. Buchanan, and that of the croupiers by Dr. D. D. Black.

During the evening songs were contributed by Dr. James in his own inimitable style, by Dr. Shea MacLagan Wedderburn, and J. D. Black. With the singing of "Auld Lang Syne" a most enjoyable evening was brought to a conclusion.

The menu card was ornamented by a pen and ink sketch by Mr. R. A. Dakers of old Haddington, showing Bothwell Castle as he believes it to have existed at the time it was inhabited by Mary Queen of Scots. In the foreground is an ancient "leech," carrying in one hand a very big vial containing the elixir of life and in the other a very small poke for his very small fees. A priest is seen entering the castle the leech has just left.

POST-GRADUATE COURSES IN GLASGOW.

As briefly announced last week, a series of post-graduate classes will be held at the Glasgow Royal Infirmary

during May. During the first fortnight Drs. Walter K. Hunter and W. R. Jack will both hold classes in clinical medicine on two days a week. Dr. Robert Fullerton on diseases of the throat and nose twice a week, Dr. John Henderson on the clinical examination of urine and digestive products three times a week, Dr. Alex. Mills Kennedy on haematology three times a week, and Dr. H. P. Fairlie on anaesthetics twice a week. In the second fortnight clinical surgery will be dealt with by Mr. Henry Rutherford daily, and surgical diagnosis by Mr. Donald Duff three times a week. Dr. David Newman and Mr. David Watson will combine to give a course on four days in each week on urology. Clinical gynaecology will be dealt with by Dr. G. Balfour Marshall, Dr. J. M. Munro Kerr, and Mr. James Taylor. Electro-therapeutics will be dealt with during the first fortnight by Dr. Katharine Chapman and in the second fortnight by Dr. James R. Riddell. A course on diseases of the ear will be given by Dr. J. Kerr Love on one day in each week of the four weeks. There will be a special course on operative surgery daily during the second fortnight, given by Mr. Henry Rutherford and Mr. James Battersby. Full particulars as to the hours and fees can be obtained from Dr. J. Maxtone Thom, superintendent at the infirmary.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SIR JOHN BYERS AND ATHLETICS.

SIR JOHN BYERS, who presided at the annual distribution of prizes of the Central Presbyterian Association Gymnasium, Belfast, on April 2nd, said that the object of the founders was the development of the moral, physical, and mental faculties of the members. The aim of true education was not only to get on in the world but also to render people fitted to enjoy the world. Every human being needed some form of relaxation, but it was of the utmost importance that they should be properly educated to enjoy what was the best pleasures. All thoughtful men and women must deplore the time and money wasted now on the mere pursuit of pleasure; the young should be trained to take their amusements in ways that were beneficial, not baneful. Some amusements of youth required downright hard work, and were of the utmost importance in the evolution of the mental faculties. Other amusements took the form of athletic sports and physical culture, which tended to improve their bodily condition and to maintain a high standard of bodily health. In the association's gymnasium, physical training from an educational and health standpoint, as apart from ordinary gymnastics, had been made a special feature; and he, as a medical man, could not speak too highly of such a training. But on the other hand he believed the time had come when thoughtful people must ask, had other forms of organized amusements, such as athletics and football, not gone far enough? His own feeling was, that so long as games were played in moderation and did not interfere with manual work or mental study, they were useful; but it was alleged by competent authorities that among some of the working classes at present the pursuit of sport tended to reduce both the quantity and quality of the output from the workshops, to the great advantage of foreign competitors; was it not time to call a halt? He thought all those who were connected with schools and universities should consider carefully the extremely suggestive remarks made by one of Belfast's most illustrious sons—the Right Hon. Viscount Bryce, O.M., admittedly one of the greatest educationalists of the present day, himself a distinguished athlete in mountain climbing, in his inaugural address at the conference of educational associations held in the University of London at the beginning of this year. He asked, "Why did not English boys care more for learning than they did? The level of interest in the things of the mind had not risen in any class of the community as was expected fifty years ago. The heads of firms in Mexico, South America, the Far East, complained that English youths showed less interest in their work than did their competitors from the European Continent. The latter took pains to master the economic facts and language of the country; they did not spend their time in amusement as soon as they quitted the counting-house in the afternoon. So foreign competitors had been gaining on them in many markets. Why did not the English boy care more for his work in school, and more for knowledge after he left school? Our young people showed less zeal for knowledge than those of many other nations, and certainly less than the Chinese. Was it the fault of the schools or of the parent, or was the passion for amusement now exceptionally strong; or had other competing interests, such as the portentously engrossing interest in athletic competitions to which the constantly growing columns and pages devoted to sport in our newspapers bore witness, grown so rank as to choke the love of knowledge?"

England and Wales.

LONDON.

METROPOLITAN ASYLUMS BOARD.

The Shortage of Nurses.

THE Metropolitan Asylums Board on April 4th received a report of the Hospitals Committee embodying the suggestions of the principal medical officer (Dr. H. E. Cuff) as to the variations of the conditions of employment of the nursing staff necessary to render the service more attractive. In November last (BRITISH MEDICAL JOURNAL, November 12th, 1913, p. 1404) the Board decided that the great difficulty in obtaining sufficient nurses for the infectious hospitals necessitated a careful consideration of the whole subject.

In his report Dr. Cuff discussed the reasons why infirmaries and fever hospitals had been affected more than general hospitals by the present shortage. Fever nursing was looked upon as a blind-alley occupation, and the work was monotonous and isolated the nurse from her friends. Infirmaries and fever hospitals drew their recruits from a class which took up nursing as a means of earning a living, and had been attracted to other fields of work which offered more personal freedom. Apart from the shortage of probationers, there was difficulty in getting trained nurses to act as staff nurses owing to the greater variety of nursing appointments now open to them. Dr. Cuff recommended the reduction of the minimum age on joining to 19 years, and urged in favour of this that the large majority of fever patients were young children, and that scarlet fever and diphtheria were far less serious complaints than they were fifteen years ago. Advertisement was not sufficient to obtain candidates; matrons of other institutions should be asked to act as the Board's agents and efforts should be made to reach secondary and evening school pupils. The salaries paid by the Board were well above the average, but Dr. Cuff thought that the Board must be prepared to compete for nurses with provincial institutions and with other professions, and offer sufficiently attractive terms to compensate for the special disabilities of fever nursing. He recommended increases of salary from £18 to £20 in the case of probationers and proportionate increases in the cases of staff nurses and sisters, with special increases in recommended cases of £2 a year at the end of five years' and ten years' continuous service. Dr. Cuff made two alternative suggestions with regard to extra leave, one of which would involve the appointment of 127 more nurses, and the other of about sixty. He proposed longer annual leave after three years' work, that probationers be engaged for three years instead of two, that a home sister be appointed to superintend the domestic arrangements of the nursing staff and assist in teaching them, that better accommodation be made for nurses in respect of sitting-rooms and recreation rooms, and that improvements be made in the quality of the food.

The Hospitals Committee approved of the proposals as regards a higher scale of salaries, and adopted the smaller of the alternative schemes in regard to additional off-duty hours. It also approved the reduction of the minimum age from 21 to 19, the granting of long service pay, and the other suggestions by Dr. Cuff except, at present, with regard to the provision of recreation rooms. The Board will consider the subject after the Easter recess.

Treatment of Tuberculosis: Sanatorium Provision.

In regard to its undertaking to provide sanatoriums for insured and uninsured persons in London suffering from tuberculosis, the Board decided to accept 150 as the maximum number of men to be received into one sanatorium. This was the view held by the Local Government Board, and it was confirmed by the experience at the Downs Sanatorium. In the case of women, the maximum

number might be increased, if necessary, to 200. The number of sites to be obtained was tentatively fixed at three (two for men and one for women), the number of persons at present under the Board's care being 332 men and 189 women, all insured persons. The Board also decided to appoint an architect to advise as to the construction of sanatoriums, and a medical adviser experienced in the actual administration of a modern open-air sanatorium. As to the treatment of uninsured tuberculous persons, including children, the General Purposes Committee stated that this matter had formed the subject of correspondence with the London County Council for months past, but little progress had been made. There seemed to be no reason why the London County Council should act as a clearing-house between the borough councils and the Asylums Board in regard to tuberculosis any more than it did between the Board and other bodies in regard to fever cases. Such intervention would only cause delay and greater expense, and an alternative course would be for uninsured persons to be dealt with by the Asylums Board under Section 80 of the Public Health (London) Act, 1891, which provides that the expenses incurred by the Board for the maintenance of patients shall be paid by the boards of guardians, such moneys to be repaid to the boards of guardians out of the Metropolitan Common Poor Fund. Though this arrangement differed for the rest of the country, the plan had already been followed in the matter of fever hospital accommodation and treatment, and should logically be extended to the case of tuberculosis. The Board decided to make representations to this effect to the Local Government Board.

MANCHESTER.

ST. MARY'S HOSPITAL.

AT the annual meeting of friends and subscribers of the St. Mary's Hospital for Women and Children, Manchester, held on March 30th, the chairman, Sir F. Forbes Adam, stated that during the past year the total number of patients had decreased from 19,969 to 15,531. When the Insurance Act came into operation, it was fully expected that the out-patients would decrease in number while the in-patients would increase, and that was what had happened. It would be remembered that many people said that the hospitals would be sure to lose many of their subscribers owing to the Act. That was not his opinion nor was it the opinion of the board, and he was glad to say that that had not taken place, as the subscriptions had increased from £12,241 in 1912 to £13,736 in 1913. The funds of the hospital had benefited substantially by the work of the Women's Guild of Service; during the year it had contributed £565, of which £255 was from the Alexandra Flower Day festival. He was specially glad to notice signs of awakening among the citizens of neighbouring towns to their responsibility for the sick poor from their districts who received treatment at St. Mary's Hospital, but even yet the hospital spent a great deal more on people from the outside district, than it received. The working expenses of the year had risen to £15,231, against £14,950 in the previous year. The chairman concluded with an urgent appeal for funds for the new maternity ward. It was frequently necessary to refuse urgent maternity cases, but to open the new ward, which is now lying idle, would mean an increased annual expenditure of about £750. Bishop Welldon, who seconded the adoption of the annual report, said that the record of the year's work showed that the hospital supplied a great need. The financial position was better than in previous years, but he would like to see the hospital self-supporting. Although possibly the maintenance of hospitals would sooner or later devolve on the rates, there would be a great loss if ever that time came—a loss of personal human sympathy, which was the outcome of spontaneous generosity, and if that sympathy were lost the hospitals would lose one of their most agreeable and attractive features.

THE King has granted Dr. Morden Carthew, First Assistant Health Officer to the Local Sanitary Department at Bangkok, permission to wear the Insignia of the Third Class of the Order of the Crown of Siam conferred upon him in recognition of valuable services rendered.

Correspondence.

MEDICAL AID INSTITUTES.

SIR,—The following information was not available at the time that the Medico-Political and Hospitals Committees considered this question, and consequently it was not within the purview of their memorandum.

It is, however, obviously of vital importance that it should be within the knowledge of the Divisions when, between now and May 1st next, they are considering this memorandum.

At a meeting of the Swansea Panel Committee, on February 26th last, at which Dr. Richards, Vice-Chairman of the Welsh Insurance Commission, was present for the purpose of enlightening panel men on various points in connexion with their work, he was asked whether the Welsh Commissioners considered themselves morally bound by undertakings and pledges given by the Chancellor of the Exchequer to the medical profession prior to the passing of the Insurance Act, to which he replied that the Commissioners considered themselves bound by nothing which was not actually in the Act. Upon pressure, too, the following was extracted from him—namely, that the Welsh Commissioners held that any medical contract which was in existence at the time of the passing of the Act—albeit, that since then it had ceased to exist—could now, or at any future time, be resurrected as an "approved" medical institute under Section 15 (4), and its members claim and receive the 9s. capitation grant; and, moreover, that, whether or not the whole 7s. allowed for medical attendance went into the doctor's pocket, or whether it was also utilized for payment for medical attendance on uninsured persons, was no affair of the Commissioners so long as they were satisfied with the medical attendance given to the insured person.

Now, seeing that there is scarcely a town or village, let alone industrial centre, in the whole country which had not at the time of the passing of the Act its sick club or clubs in some form or another, and moreover that there is nothing in the Act to prevent the growth of an approved institute indefinitely, there is nothing to prevent the panel system from being legally replaced to-morrow throughout the length and breadth of the land by a network of "approved" medical aid institutes composed alike of insured and uninsured persons.

In England and Scotland the profession is apparently for the moment safeguarded against this danger by the fact that in these parts of the kingdom the Insurance Commissioners are determined to administer the Act in accordance with its spirit as well as its letter, and will countenance nothing savouring even of a breach of faith. Nevertheless, even they are not all-powerful in their desire to run straight, and the Chesterfield incident referred to in the memorandum must have been as rude a shock to them as it was to the profession.

Consequently it will be well for the Divisions, when considering the memorandum, to put to themselves this question: If the episode at Chesterfield was possible merely to secure a win at one bye-election, what is likely to happen at the next general election?

Nothing but the most determined opposition will avert the danger which threatens.

But for the aggressive hostility displayed by the Swansea Division, including particularly the attitude adopted by the staff of the hospital, it is generally recognized that a huge medical aid institute would have been established in Swansea ten months ago; and for the same reason, while these institutions are still increasing around Cardiff and Newport, where no such action was taken, all attempts during the past ten months—and there have been several—to add to the three already existing in the Swansea district have failed.—I am, etc.,

Swansea, April 5th. W. F. BROOK.

AN EPIDEMIC RESEMBLING WHOOPING-COUGH.

SIR,—I also have had an epidemic in my practice in every respect similar to that recorded by Dr. C. Norman Carver in last week's JOURNAL.—I am, etc.,

Downham, Norfolk, April 5th. G. BLAKE-MASSON.

A "PROFESSOR OF HOSPITAL ADMINISTRATION."

SIR,—I desire to draw attention in your pages to the need of appointing a professor of hospital administration in the Royal Army Medical College, London.

The post, in my opinion, should be held by the officer in charge of the military hospital next the college, in addition to his other duties. At present the commandant of the college, who has ample duties laid on his shoulders, is supposed also to be instructor in hospital administration. No doubt he should have authority over the hospital administration, but he cannot give the needful time to the duties of lecturing, which I would lay on the proposed professor of hospital administration. I have urged this reform for some time, but without success.

In the United States of America a new class of specialists are developing called "hospital experts." They are called in to advise on all questions of structure, administration, rationing, medicine supply, staff duties, and are in fact doing all the duties I have so long urged as needing special study in our army and in England.

The appointment of such a professor at Millbank would not involve expense of any amount. Very able officers are chosen for the post of medical officer-in-charge, but I propose to dignify their work and enhance their importance by giving them professorial status—of course, under the Commandant's general supervision.

I do not well know how to move in these matters except by writing to you, and to the medical profession through you. But I do not write to you for the army alone. It greatly affects the Royal Navy, the Poor Law institutions, and the lunatic asylums.

We need greatly the application of scientific study to the question of the organization, the finance, and the administration of all curative institutions. Unless we study it laymen will surely take it up and push us into the background. Over and over again hospital failures have occurred from want of this administrative knowledge, and we lose ground from such failures. We, in the State service of the army, have been martyred from ignorance in these matters in the past. We are learning the administrative art, but in civil life teaching there is none. The rule-of thumb is our fallacious guide; sooner or later an examination in such administrative matters will be a preliminary to all Poor Law or asylum hospital appointments where administrative knowledge is a factor in efficiency. We in the army greatly need then this professorship. I cannot exaggerate the importance of this matter to all official medical men who are State or municipal public servants.—I am, etc.,

GEORGE J. H. EVATT, M.D.,
Surgeon-General.

Junior United Service Club,
London, S.W., April 1st.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

EXAMINATION FOR APPOINTMENTS AS ACTING SURGEONS.

AT the examination for the Naval Medical Service, held on March 30th and 31st and April 1st and 2nd, seventeen candidates were successful, and obtained the following marks:

Name.	Marks.	Medical School.
Mr. F. C. Hunot	1,805	Guy's Hospital.
Mr. H. B. Parker, M.B. ...	1,728	London Hospital.
Mr. R. F. Quinton	1,685	London Hospital.
Mr. J. L. Priston	1,665	London Hospital.
Mr. M. J. Aitken, M.B. ...	1,665	Glasgow University.
Mr. J. A. Maxwell, M.B., B.A.	1,610	Trinity College, Dublin.
Mr. W. G. Thwaites, M.B.	1,555	Edinburgh University.
Mr. M. S. Moore, M.D., B.A.	1,513	Trinity College, Dublin.
Mr. W. F. Beattie, M.B. ...	1,470	Aberdeen University.
Mr. F. E. Fitzmaurice ...	1,433	University College, Cork.
Mr. C. E. Greerson, M.D. ...	1,408	Aberdeen University.
Mr. T. J. O'Riordan, M.B.	1,385	University College, Cork.
Mr. J. C. Kelly, M.D., B.A.	1,375	Trinity College, Dublin.
Mr. H. W. Fitzroy-Williams, M.B.	1,373	Victoria University, Manchester.
Mr. T. Hill, M.B.	1,343	University College, Cork.
Mr. J. M. Horan	1,295	University College, Cork.
Mr. G. M. Graham, M.B. ...	1,233	Edinburgh University.

The maximum number of marks obtainable is 2,400.

DISTRIBUTION OF PRIZES.

ON the completion of the course of instruction for the winter entry of Acting Surgeons, Royal Navy, the prizes and commissions were distributed on April 2nd by the Medical Director-General of the Navy, Surgeon-General A. W. May, C.B., K.H.P.

The Commander-in-Chief, the Hon. Sir Hedworth Meux, G.C.B., K.C.V.O., was unavoidably absent. Rear-Admiral H. L. Heath, M.V.O., Deputy Surgeons-General W. M. Craig, M.B., C.B., E. R. Dimsey, D.S.O., and A. G. Wildey, and a large number of the senior and other medical officers of ships and establishments of the port were present with their friends.

Surgeon-General J. J. Dennis, M.D., reported that the order of seniority as determined by the aggregate marks obtained at the London, Greenwich, and Haslar examinations were as follows:

	Marks.		Marks.
1. A. R. Sharrod	3,499	7. J. P. Blockley	3,086
2. J. S. Elliott	3,421	8. W. H. Murray	3,052
3. A. J. Tonkinson... ...	3,420	9. G. H. Hawes	3,036
4. T. J. Kilbride	3,275	10. P. B. Wallis	2,964
5. J. R. Haldane	3,213	11. H. C. A. T. Cannon ...	2,931
6. J. S. Harvey	3,155	12. H. J. Hopps	2,842

The Gold Medal had been awarded to Acting Surgeon A. R. Sharrod, formerly of the London Hospital. The Silver Medal to Acting Surgeon J. S. Elliott, formerly of Edinburgh University, and the three Admiralty prizes, Silver-plated Pocket Instrument Cases, were gained by: Acting Surgeon A. R. Sharrod, Group I, Haslar Subjects; Acting Surgeon T. J. Kilbride, Group II, Haslar Subjects; Acting Surgeon A. J. Tonkinson, Greenwich Subjects. Acting Surgeon A. R. Sharrod had been specially commended for obtaining highest marks at the Haslar examination, and for being first in the two Haslar groups, though by the regulations taking only one prize; and Acting Surgeons Sharrod, Elliott, and Wallis for zeal and ability shown in the performance of their ward duties.

The Director-General then presented the prizes and commissions to the surgeons, and addressed them, stating that it gave him great pleasure to attend that function, because it was associated with a new era in the history of the Naval Medical Service. In his younger days he could remember no such examinations. Then naval surgeons were taken on in a haphazard manner. Now that had been all altered, and he hoped for the benefit of the service. He did not intend to congratulate those who had won and commiserate with those who had lost, because the race was not always with the swift, nor the battle to the strong. Other qualities besides a good start were required for success in life—pluck, endurance, and good staying powers. He would, however, congratulate them for two reasons: First, because they were commencing their careers in a profession which was rightly called honourable, and one to which he was sure they would always do honour. Secondly, because they were entering what was the finest service in the world. For that reason their responsibilities were doubled. In these days of blatant self advertisement they would find that in nine cases out of ten the man who talked the loudest and longest was often considered as really the best man. It was, therefore, a relief to turn to a service in which words were looked down upon and a gasbag and sea lawyer despised, and where good work—good sterling silent work—was regarded as of first importance. That was the rule of the navy, and he hoped it would long continue. The duties of the Naval Medical Service were to deal with the physical and moral welfare of the navy. It was a very common thing for people outside the service to imagine that efficiency consisted in the number of ships and to forget that behind the guns and in the ships there were the men. It was upon the efficiency of the personnel that the power of the navy depended. It would be their duty as naval surgeons to make it their life-study to at all times improve the efficiency of the personnel, both as to mind and body. Their work on shore and afloat would be very different. On shore it would not much differ from that of the ordinary hospital work, for naval hospitals were in no way inferior in scientific provision to the ordinary shore hospitals. Their life on board ship, however, would differ very much from anything they had either seen or contemplated in their life on shore. It was their duty to prevent the personnel of the fleet from becoming ill rather than to cure men when they were ill, and to remember that they should place as many efficient men in the fighting line as possible. Prevention of illness must therefore be their aim on board ship. During the last few years great strides had been made in attempts to grapple with the problems of preventive measures, and special attention had been paid to the question of ventilation of ships. The Director-General enlarged upon this question of ventilation, impressing on the surgeons the importance of it. He then dealt with the preparation for war, and in this connexion urged the importance of instructing the men in rendering first aid to the wounded, at the same time reminding them that they would have to consider such matters as transporting the wounded down from the fighting tops and up from the stokeholds, and would have to be prepared to carry out operations under very difficult circumstances. In conclusion he impressed upon his hearers the value of associating themselves with the games, amusements, and sports of their comrades, especially cricket and football.

Surgeon-General Dennis thanked Rear-Admiral Heath for his presence. Rear-Admiral Heath briefly replied and the proceedings closed.

Universities and Colleges.

UNIVERSITY OF EDINBURGH.

THE following candidates have been approved at the examination indicated:

FIRST M.B. (*Zoology*).—R. M. Buncle, D. H. Cameron, W. E. Coutts, R. G. A. Dickson, T. S. Duncan, A. S. Garewal, J. B. Liggins, H. J. Louw, T. K. Lwin, J. B. C. Madge, I. S. Nalwa, Susan A. Robertson, Elizabeth I. Smith, J. F. Stewart, N. W. Stewart, A. Strachan, W. C. Tsoi, M. S. Tun, J. J. Wessels, U. G. Williams. (*Botany*).—W. E. Coutts, P. C. Datta, Mary S. Paterson, J. Riensik, R. Sandilands, H. N. Schrire, E. B. Thounissen, T. J. N. Walker, U. G. Williams. (*Physics*).—E. H. Ablett, G. J. Alexander, Catherine J. Anderson, N. M. Anderson, T. F. Andrew, E. Arosemena, S. B. Aung, G. S. Bainbridge, I. C. C. Barclay, C. Blake, R. F. Boltman, D. R. Bomford, S. Boodoosingh, C. G. Booker, F. G. H. Brown, C. Brownlee, G. Buchanan, R. M. Buncle, R. M. Burnie, R. E. Burns, K. F. Caird, A. Campbell, E. J. Campbell, J. Campbell, E. E. Candlish, E. A. Carmichael, Ruby T. Carr, E. Chonglop, A. C. Y. Chow, Anna G. Christie, G. M. Clark, R. P. Cole, E. H. Connell, J. H. Crawford, W. D. L. Culloo, D. A. Cunningham, J. Davidson, H. M. Deans, A. A. Denham, N. A. Doggart, Isabel A. Don, Jean D. Don, A. E. Dowden, A. M. Duff, D. N. Dutt, W. Y. Eccott, C. G. N. Edwards, D. Fergusson, H. S. Fisher, G. S. Freeman, R. M. Gardner, D. T. P. Gay, M. J. Gibson, H. R. Goldberg, E. H. Goodfellow, E. F. Gordon, W. A. Gray, C. L. Green, G. H. Gunn, L. R. S. Gunson, S. D. Gupta, B. T. Halliwell, A. H. M. Henderson, W. A. Hennessy, L. C. D. Hermitte, L. J. Howie, W. G. Hughes, G. A. Hunter, Laura Hutchings, H. M. Jacobs, J. T. Johnston, N. W. Johnston, A. Klenerman, J. Laltoo, D. C. Lamont, J. Learmont, K. P. Leung, J. K. C. Liddell, H. H. Lim, R. K. S. Lim, M. Lipschitz, G. N. Lomax, T. K. Lwin, W. M. M'Alister, D. I. O. Macaulay, J. C. M'Cartney, J. F. M'Conchie, Anne L. MacDonald, M. Macdonald, R. B. MacGregor, D. P. M'Iver, D. Mackay, G. S. Mackay, H. B. Mackenzie, W. M. MacPhail, A. MacPherson, J. M. MacPherson, R. C. B. Macrae, E. M'Vicker, J. W. M'Vicker, J. B. C. Madge, P. B. Malherbe, J. S. Mann, E. R. Manning, H. O. Marks, M. Melvin, D. J. Micah, J. E. B. Miller, J. K. Mitchell, F. J. C. Moffat, J. C. Moolman, D. M. Morison, T. B. Moyes, J. K. Murray, C. S. Nimmo, A. D. Odling, H. Oliver, D. J. T. Oswald, H. J. Parish, A. Peffers, M. S. Peralta, H. B. Pierce, R. C. Power, A. M. W. Rae, K. N. Rao, W. B. Reid, Annie C. Roberts, Dorothy A. Robertson, W. B. Ross, W. O. N. Rout, L. C. Rudd, J. D. Russell, M. Sash, C. E. Scott, M. Z. Sheriff, C. Simpson, F. W. Simson, D. W. Sinclair, T. Skene, G. M. S. Smith, Janet S. Smith, S. C. Soni, T. R. C. Spence, S. Stein, A. V. Stewart, Marguerite R. Stirling, Eliza J. Stuart, R. J. O. Taylor, E. B. Theunissen, A. A. Thomson, E. J. Thomson, J. Tulloch, M. S. Tun, P. H. J. Turton, W. S. Valentine, A. R. Walker, T. J. M. Walker, R. Wallace, D. T. Watt, J. J. Wessells, T. J. White, K. B. Williamson, J. L. Wilson, J. T. Wilson, C. Wood. (*Chemistry*).—E. H. Ablett, A. Ainslie, G. J. Alexander, Catherine J. Anderson, N. M. Anderson, T. F. Andrew, E. Arosemena, G. S. Bainbridge, R. F. Balmain, I. C. C. Barclay, V. C. Beckerleg, I. A. Beckles, C. Blake, R. F. Boltman, D. R. Bomford, S. Boodoosingh, C. G. Booker, G. Buchanan, R. M. Burnie, R. E. Burns, K. F. Caird, C. A. Calder, A. Campbell, J. Campbell, E. E. Candlish, E. A. Carmichael, Ruby T. Carr, E. Chonglop, A. C. Y. Chow, G. M. Clark, E. H. Connell, J. A. L. Cook, J. H. Crawford, P. C. Datta, J. Davidson, H. M. Deans, A. A. Denham, E. D. D. Dickson, Isabel A. Don, G. D. Don, A. M. Duff, W. J. Dunn, K. J. Ebsworth, W. Y. Eccott, C. G. N. Edwards, D. Fergusson, G. B. Flint, G. S. Freeman, M. F. K. Fung, R. M. Gardner, M. J. Gibson, G. S. Gill, H. A. E. Girby, H. R. Goldberg, E. H. Goodfellow, E. F. Gordon, N. D. P. de V. Graaff, O. Gray, W. A. Gray, C. L. Green, E. F. Griffin, G. H. Gunn, L. R. S. Gunson, S. D. Gupta, J. F. Harte, A. H. M. Henderson, W. A. Hennessy, L. C. D. Hermitte, H. Hoffmann, L. J. Howie, G. A. Hunter, H. M. Jacobs, G. M. W. Johnston, J. T. Johnston, N. W. Johnston, A. Klenerman, J. Laltoo, D. C. Lamont, J. Learmont, J. K. C. Liddell, J. B. Liggins, H. H. Lim, R. K. S. Lim, M. Lipschitz, G. N. Lomax, D. T. M'Ainsh, W. M. M'Alister, D. I. O. Macaulay, J. C. M'Cartney, J. F. M'Conchie, K. M. M'Cracken, M. Macdonald, A. G. MacGillivray, F. P. MacGillivray, R. B. MacGregor, D. P. M'Iver, A. G. Mackay, G. S. Mackay, H. B. Mackenzie, A. W. Mackie, J. F. Mackie, D. W. M'Lean, I. F. Macleod, W. M. MacPhail, A. MacPherson, J. M. Macpherson, R. C. B. Macrae, Elizabeth M'Vicker, J. W. M'Vicker, P. B. Malherbe, J. S. Mann, E. R. Manning, W. J. Manson, H. O. Marks, M. Melvin, C. J. van der Merwe, D. J. Micah, B. St. C. Miller, F. J. C. Moffat, J. C. Moolman, D. M. Morison, J. S. Moroka, T. B. Moyes, F. G. Mulder, A. J. Myburgh, I. S. Nalwa, C. S. Nimmo, A. D. Odling, H. Oliver, D. J. T. Oswald, H. J. Parish, A. Peffers, H. S. Percival, H. B. Pierce, R. C. Power, A. M. W. Rae, K. N. Rao, W. B. Reid, D. G. Robertson, Dorothy A. Robertson, W. O. N. Rout, M. Sash, C. E. Scott, T. S. Scott, T. A. Sellar, J. K. Sen, M. Z. Sheriff, C. Simpson, F. W. Simson, D. W. Sinclair, T. Skene, G. M. S. Smith, J. M. Smith, Janet S. Smith, S. L. Smith, M. R. Soni, S. C. Soni, S. Stein, A. V. Stewart, Marguerite R. Stirling, J. A. H. Sykes, R. J. O. Taylor, E. B. Theunissen, D. F. Thompson, A. A. Thomson, E. J. Thomson, P. H. J. Turton, T. J. M. Walker, R. Wallace, D. T. Watt, J. J. Wessels, T. J. White, K. B. Williamson, J. L. Wilson, J. T. Wilson, C. Wood, M. R. Zada, W. L. Zeeman.

SECOND M.B. (*Anatomy*).—J. J. Ackermann, G. G. Allan, J. Allison, D. Anderson, Sarah Boyd, P. M. Brodie, E. B. Brown, G. G. Campbell, W. E. Canekeratne, E. Chapelle, A. H. Chu, D. Colombos, D. Cook, W. C. Craig, F. R. Cripps, H. N. Daniel, P. W. Edwards, J. W. C. Fairweather, K. Gillis, G. W. Grant, J. A. Hadfield, Elizabeth Harper, T. E. Hastings, C. S. V. Heerden, J. W. A. Hunter, S. N. Kaul, A. Kennedy, J. S. Macbeth, Marjorie I. S. M'Gregor, Annie M. Mackay, A. R. C. M'Kerrow, J. M'Leman, L. R. Macphail, P. T. Majmundar, J. O. Marais, J. M. Martin, F. H. van der Merwe, G. H. Middleton, E. A. Mills, J. S. Munro, R. A. Nathaniel, T. P. Ng, T. P. Farr, D. H. Paterson, A. J. Pollock, J. C. Preston, J. S. Rankin, J. K. Rose, F. B. Sanderson, S. N. Seal, E. O. A. Singer, J. K. Sircar, A. T. Sloan, J. Smellie, G. L. M. Smith, J. H. R. Smith, R. L. Stewart, C. G. Terrell, L. W. Thomas, A. E. P. Vannier, R. Vassie, L. Walker, D. W. Warren, D. M. Young, (*Physiology*).—Janet C. P. Alison, J. Allison, A. G. Anderson, P. Barlow, R. M. Bowman, Sarah Boyd, P. M. Brodie, E. B. Brown, G. G. Campbell, B. T. Chain, D. Chanis, D. Cook, F. R. Cripps, H. N. Daniel, F. X. M. Das, A. R. Erskine, N. P. R. Galloway, K. Gillis, J. G. Gilruth, J. A. Hadfield, J. B. Hanna, Elizabeth Harper, T. E. Hastings, G. W. Haws, C. S. van Heerden, J. L. Hill, N. Jennings, R. N. Johnson, J. I. Kuit, Y. C. Lee, J. T. M. Luslin, J. S. Macbeth, Marjorie I. S. M'Gregor, Annie M. Mackay, J. C. Mackay, G. H. H. Maxwell, R. A. Nathaniel, T. P. Ng, J. M. S. Nichol, A. van der Pool, I. W. Poole, C. D. Ritchie, Joan K. Rose, A. M. Simson, W. A. Sinclair, G. L. M. Smith, D. A. Sprott, R. L. Stewart, S. C. Swinburne, C. G. Terrell, L. W. Thomas, H. B. Thomson, D. W. Warren, D. M. Young.

THIRD M.B. (*Pathology*).—M. H. Alikhan, A. Aziz, G. H. Barry, H. J. Brink, W. W. Brown, W. Brownlie, A. H. de W. Budler, H. W. Burns, F. W. Clark, A. Clarke, C. T. I. Clarke, A. Cleland, M. K. Cooper, J. A. Crawford, T. Crisp, H. J. Davidson, P. C. Davie, J. Dickson, A. V. Dill, A. J. Ferguson, K. C. Ferguson, J. S. Galvin, A. W. Gunn, R. J. M. Horne, A. R. Hudson, L. W. Innes, T. Janakiraniiah, J. M. Johnstone, E. B. Kelley, Muriel H. Kerr, J. L. Lamond, C. M'Donald, J. M'Garrity, W. K. M'Intyre, I. C. Mackay, R. M'Kinlay, C. F. Maclachlan, J. Manuel, J. Milne, G. Morris, J. C. Morris, T. C. StC. Morton, C. H. Newton, F. H. Nixey, J. M. Norman, M. S. N. Panikkar, P. V. Ramanamurty, A. Ravunni, C. Resnekov, W. Richards, P. A. Rostant, C. Russell, J. J. Shannon, N. H. Smith, C. W. Stump, D. R. Thomas, W. G. Thomson, W. Waddell, J. M. Watt, R. R. S. Weatherston, D. Wilson. (*Materia Medica*). R. Andrew, J. S. Armstrong, T. Y. Barkley, T. C. Bowie, W. Brownlie, H. J. Bruwer, A. H. de W. Budler, J. F. M. Campbell, A. G. Clark, A. Clarke, C. T. I. Clarke, M. K. Cooper, T. F. Corkhill, T. Crisp, P. C. Davie, J. Dickson, A. V. Dill, J. G. Dobson, R. B. Eadie, K. C. Ferguson, W. H. Ferguson, G. W. M. Findlay, M. Foster, H. C. Fox, J. H. Fraser, Helen M. Gall, A. M. Ghosh, W. Goldie, F. M. Hatley, J. A. Henderson, J. Hepburn, Y. H. Hoashoo, R. J. M. Horne, A. R. Hudson, E. Jamieson, F. J. C. Johnstone, C. W. S. D. Jones, H. B. Kirk, A. C. Laing, P. W. Lam, H. Lewis, A. J. E. G. Lim, H. B. Lim, G. C. M'Ewan, Marjory Macnaughton, J. Macqueen, J. W. Malcolm, J. Manuel, E. S. Mellor, S. N. Mitra, J. J. Molyneaux, J. C. Morris, T. C. StC. Morton, C. H. Newton, C. P. Penberthy, R. N. Phease, O. D. Price, A. Ravunni, N. L. Reis, C. Resnekov, J. W. Riddoch, C. Russell, W. Shanks, J. W. Simpson, G. H. Sinclair, N. H. Smith, R. B. Stewart, T. M. J. Stewart, C. W. Stump, M. D. Thakore, G. M. Torrance, W. Waddell, W. Williams, D. Wilson, Margaret K. J. Wright, C. W. N. Yow.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., CH.B. (B., Botany; Z., Zoology; P., Physics; C., Chemistry): J. R. P. Alexander (Z., C.), T. Anderson (Z., C.), T. F. Arnott (Z., C.), J. Barlow (Z., C.), *B. Barrowman (Z., C.), R. Bethune (Z., C.), A. Black (Z., C.), D. M. Blair (Z., C.), S. B. Borthwick (Z.), R. R. S. Bowker (Z., C.), R. R. Boyd (Z.), J. A. Bruce (Z.), T. M. Burton (Z., C.), M. J. Cahalane (Z., C.), W. M. Cameron (P.), M. Chalmers (C.), H. A. Cochrane (Z.), J. S. Cook (Z., C.), C. G. Cottie (B., P.), A. M. Davidson (Z., C.), *J. Donald (Z., C.), J. C. Dow (Z., C.), A. B. S. Drysdale (Z., C.), R. T. Duthie (C.), K. H. Dyke (Z.), W. Edgar (Z., C.), E. E. Ferguson (C.), *W. J. Ferguson (Z., C.), A. B. Ferrie (Z., C.), D. Finlayson (Z.), T. Forrest (P., C.), A. D. Fraser (Z.), C. N. Gordon (P.), J. S. M'L. Gray (Z., C.), J. A. Hamilton (Z.), J. C. Harrower (Z., C.), A. Henderson (Z., C.), J. Hill (Z., C.), H. J. Hollis (Z., C.), T. J. Honeyman (B.), J. Hood (Z., C.), *T. O. Howie (Z., C.), D. W. Humble (P., C.), T. Hutchison (Z., C.), M. Hyman (Z., C.), T. H. Irvine (B., P.), J. Irving (Z., C.), R. P. Jack (Z., C.), J. A. Jenkins (P.), J. Johnston (Z., C.), W. Jope (C.), *R. E. Kerr (Z., C.), W. M. Kerr (C.), J. P. Kilty (Z., C.), F. J. Kitt (Z.), J. C. Laurie (Z., C.), P. J. A. Lavelle (B.), *J. R. Learmonth (Z., C.), C. U. Lee (Z., C.), J. E. W. Lee (Z.), A. C. Lindsay (Z., C.), J. Lipschitz (C.), A. J. M'Cartney (C.), W. R. M'Crae (C.), P. J. M'Cusker (B.), W. M. Maclarlane (Z., C.), R. F. M'Gibbon (Z., P.), T. M'Gowan (Z., C.), J. A. C. MacGregor (Z., C.), W. S. M'Intyre (B., Z., P.), J. W. Mackay (Z.), *P. A. Mackay (Z., C.), A. A. M'Laughland (B., Z., P.), *D. Maclean (B., Z.), W. S. L. M'Leish (Z.), W. H. M'Liesh (C.), W. M'Linden (Z., C.), F. K. Macmillan (C.), W. B. M'Queen (Z., C.), A. W. M'Rorie (C., C.), J. Matheson (Z., C.), J. M. Melvin (Z., C.), J. G. Miller (Z.), J. H. Miller (Z., C.), K. S. Miller (B.), N. M'E. Montgomery (B., Z., C.), W. A. Muir (Z.), W. Napier (Z., C.), B. F. Niblock (Z., C.), J. Nicol (Z., C.), *I. L. Oluwole (Z., C.), F. F. Paul (Z., P., C.), J. W. Peden (Z., C.), B. T. Pelham (C.), C. K. T. Pelham (Z., C.), R. J. Peters (Z., C.), T. Poole (B.), J. Prentice (C.), A. W. Rankin (Z., C.), A. Riddell (Z.), J. M. Ritchie (Z., C.), J. J. Robertson (C.), T. Robertson (Z., P.), W. Scotland (Z.), J. Shaw (B.), H. J. A. Simpson (Z.), A. W. Sinclair (C.), J. Smart (P.), A. W. Smith (Z., C.), R. P. Smith (Z., C.), T. Stark (Z.), A. B. Stich (Z.), T. S. Stirling (C.), D. F. Suttie (Z., C.), W. S. Syme (Z.), J. A. K. Taylor (B.), J. T. Taylor (Z.), J. C. Vaughan (Z., C.), A. R. Waddell (C.), W. A. Walker (Z., C.), H. D. Wallace (Z., C.), J. A. Walls (C.), H. Wands (Z.), D. M. Watson (Z.), J. Watt (C.), W. M. Williamson (P., C.), J. W. Wilson (Z., C.), R. MacL. Wilson (Z., C.), W. Wiseman (Z., C.). *Women*: G. Chatterton (Z., C.), *M. M. L. Couper (Z., C.), G. A. Fleming (Z., C.), J. E. Hanson (Z.), J. W. Hepburn (Z., C.), M. R. Knight (Z.), *E. C. Loudon (Z., C.), M. J. Macdonald (Z., C.), I. Q. M'Fadzean (Z.), A. P. M'Gavin (Z.), M. T. M'George (Z., C.), M. E. D. Mackinnon (Z., C.), R. S. Mackinnon (B., P.), M. G. M'Vey (Z.), E. P. Y. Paterson (Z.), M. N. Robertson (C.), A. P. Routledge (Z., C.), M. M. Scanlan (C.), K. Scott (B., Z., C.), J. E. Shortt (Z., C.), M. M. C. Steedman (Z.), L. I. H. Torrance (C.).

SECOND M.B., CH.B (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics): W. D. Allan (M.), J. Alston (A., P.), W. Barras (M.), J. Beveridge (A., P., M.), M. N. Bhattacharjie (A., P.), R. M. S. Boyd (A., M.), A. G. Brand (P.), D. C. Buchanan (M.), D. Cameron (A.), *D. Campbell (M.), M. W. Cantor (M.), J. Chalmers (M.), J. M. D. Clarke (A.), D. H. Coats (M.), W. K. Connell (M.), A. F. Cook (A., P.), J. N. Cruickshank (M.), J. F. Cunningham (A.), J. W. Darglish (A., P.), A. Davidson (A., M.), M. Devers (M.), R. S. Dickie (M.), J. Dunbar (M.), J. F. Duthie (A., P.), T. P. Finlay (P.), J. B. Fisher (A., P., M.), M. M. Frew (M.), W. H. Gibson (A.), N. W. Gilchrist (M.), D. Heard (A.), G. M. Hotherington (A., P.), A. R. Hill (A., P.), T. P. Hutchison (A.), W. F. Kivlichan (P., M.), T. A. Letters (A., P.), R. Lindsay

(M.), F. C. Logan (A., P.), H. E. M'Coll (A., P.), P. Macdiarmid (A., P.), R. W. Macdonald (A., P.), D. J. MacDougall (P.), J. W. Macfarlane (M.), J. P. M'Greehin (A.), J. MacInnes (M.), D. B. M'Intosh (A., M.), J. M. Mackintosh (M.), K. S. Macky (M.), D. M'Laren (A., P., M.), D. M'Neill (A.), E. J. MacPhail (M.), F. R. Martin (M.), J. C. M'I. Matheson (A.), N. Morris (M.), W. W. Morrison (A., P., M.), A. Morton (M.), W. H. Palmer (A., P.), J. A. Paterson (A., P.), T. S. Paterson (A., P., M.), W. J. Poole (A.), T. J. D. Quigley (A., P., M.), R. S. Reid (M.), A. W. Ritchie (M.), K. M. Rodger (A., P.), A. M'A. Scott (A.), T. R. Sinclair (A., P.), A. R. Steinberg (A., P.), P. A. Stewart (P., M.), W. M. Stewart (M.), J. Stirling (M.), J. L. Torley (A., P.), R. N. Walker (A., P.), J. D. Watson (M.), R. S. Weir (A., P.), *C. A. Whittingham (P., M.), R. J. Wilson (P.), J. F. Wylie (A., P.). *Women:* C. B. Buchanan (M.), A. K. Cormack (A.), J. B. Davidson (M.), M. O'R. Gallagher (M.), J. L. Hamilton (A.), F. S. Kirk (A.), M. J. T. Leitch (A., P.), D. M'Cubbin, (A.), M. E. MacIver (A., P.), E. C. M'Vie (A.), A. J. Marshall (A., P.), E. S. Martin (M.), J. L. Munro (M.), H. Y. Murdoch (M.), M. H. Routledge (M.), M. I. Sinclair (A., P.), M. B. D. Wilson (M.).

THIRD M.B., CH.B. P., Pathology; M., Medical Jurisprudence and Public Health): Ismail Abdurahman (P., M.), R. Aitkin (P., M.), W. E. Boyd (P.), S. Bryson (M.), J. Buchanan (P.), W. E. A. Buchanan (P.), D. S. Campbell (P.), J. M. Campbell (M.), J. A. Chrystie (P.), A. M. Clark (M.), W. Combe (P., M.), R. S. Crawford (P., M.), H. P. Crow (P., M.), W. Cunningham (P., M.), F. V. Daeblitz (M.), A. H. Donaldson (P., M.), J. Dunbar (P.), *E. M'M. Dunlop (P., M.), T. Ferguson (M.), H. T. Findlay (M.), T. Flemi g (M.), R. Forbes (P.M.), D. G. Gardiner (P.), R. S. Gibson (P., J. Gilchrist (P., M.), R. K. H. Gillespie (P., M.), C. C. B. Gilmour (P., M.), †J. Glaister (P., M.), W. Gordon (P., M.), R. T. Grant (M.), A. C. Hepburn (P., M.), W. A. Higgins (P., M.), R. Isbister (P., M.), J. C. Knox (P.), R. M. Lang (M.), H. B. Lawrie (P., M.), J. A. Leiper (M.), A. T. Logan (P., M.), P. Y. Lyle (P., M.), R. Lyon (P., M.), H. D. M'Crossan (M.), D. F. Macdonald (M.), D. K. MacDougall (M.), D. M'Farlane (P.), *J. M. Macfie (P.), G. J. M'Gorty (M.), A. M'Innes (P., M.), A. F. M'Intosh (P., M.), D. M'D M'Intyre (P., J. M Mackay (M.), G. Maclean P., M.), P. D. Maclean (P., M.), M. B Macleod (M.), W. Martin (P., M.), T. S. Meighan (P.), T. D. Miller (P., M.), *J. D. Milligan (P., M.), P. O. Moffat (P., M., L. S. Morgan (P., M.), F. W. Morrison (P., M.), H. A. Munro (P., M.), A. W. Panton (M.), J. R. Pate (P., M.), J. Paterson (P., M.), F. P. Rankin (M.), J. K. Reunie (P.), J. Richardson (M.), A. W. Ritchie (P.), K. M'A. Ross (M.), W. J. Scade (P., M.), S. C. Shanks (M.), W. F. Shanks (P.), J. T. Smith (P., M.), J. Smith (P.), A. Stenhouse (M.), D. S. Stevenson (P., M.), R. S. Strachan (M.), R. Taylor (M.), R. T. Todd (P., M.), A. J. v. Spuy (P., M.), G. T. Walker (P., M.), W. J. C. Watt (M.), A. Young (P.), T. Young (P., M.). *Women:* J. F. Henderson (P.), H. I. W. Kerr (M.), M. J. Maclachlan (P., M.), J. L. Munro (P.), M. A. Noble (P., M.), M. A. H. Stewart (P., M.), I. S. Thomson (P., M.), I. H. Younger (M.), M. Walker (M.), M. F. Wood (P., M.).

FINAL.—R. Armstrong, *G. F. Barr, R. W. Brander, W. H. Brown, Ethel Crawford, R. Frew, A. R. H. Gever, A. J. Gibson, T. Gilchrist, D. Hardie, J. W. W. Hewitt, D. Johnston, G. S. Livingston, D. S. M'Bean, C. R. M'Intosh, Jessie G. M'Laren, N. M. F. W. M'Millan, R. M. M'Minn, E. S. Macphee, J. K. Manson, W. S. Martin, W. J. May, W. Meikle, A. D. Moffat, W. L. Peacock, J. M'L. Pickerton, D. R. E. Roberts, R. C. Robertson, *S. Robertson, *S. Robertson, S. D. Robertson, A. M'K. Russell, J. F. Steven, H. Stewart, J. S. Stewart, R. Stewart, I. D. Suttie, *R. Tennent, R. N. Thomson, W. Thomson, J. C. Walker, H. C. Watson, S. A. Watson, Grace B. Whish, A. S. Wilson, T. W. Wylie.

* Passed with distinction in one or more subjects.

QUEEN'S UNIVERSITY OF BELFAST.

THE following candidates have been approved at the examinations indicated:

FIRST M.B. (*Chemistry and Physics*).—S. Acheson, E. Armstrong, J. Barron, J. Black, Winifred W. Boland, *T. M. Boyd, S. P. Breakey, J. H. Calvert, T. G. Campbell, T. I. Candy, J. Caruth, Gladys E. Chambers, S. E. Clarke, J. M. Clearkin, T. J. A. Connolly, *D. Cromie, T. Dickey, S. E. Duff, C. W. A. Emery, S. Fullerton, *W. Graham, D. W. G. Gray, S. Hall, A. H. Henry, J. M. Hosey, Mary E. Irwin, A. E. Keown, M. G. Kierans, Elizabeth A. K. Law, D. Loughridge, G. L. Love, W. J. Lytle, H. F. Magauley, H. M'Clelland, A. B. M'Corkell, J. M'Garvey, D. M'Lister, R. J. M'Neill, E. A. Maguire, G. H. Mansfield, J. A. Martin, A. J. May, Margaret M. Merrick, W. Michael, S. Owens, H. Paul, J. D. Pinkerton, H. Poston, D. A. E. Scott, Ruth M. Slade, L. P. St. J. Story, J. M. Tyrrell, P. S. Walker, A. Watson, *Maud C. Welsh.

* Physics alone.

SECOND M.B., CH.B.—Mary I. Adams, G. V. Allen, C. D. Crawford, F. Ewart, E. Freeman, †H. E. Hall, J. A. Harbison, J. M. M'Cormack, T. J. Marner, *A. J. Millar, W. Napier, W. H. Pedlow, J. Scott, E. S. G. K. Vance, R. Weaver, J. Wilson.

* Physiology alone.

THIRD M.B., CH.B. (*Pathology, Medical Jurisprudence, and Hygiene alone*).—R. M. Beath, S. Millar. (*Pathology and Materia Medica alone*).—A. E. M. Carleton, J. Culconan, C. F. Davey, J. E. Finlay, P. Kane, J. M'Kay, J. R. M. Mackenzie, Sylvia Marsh, J. F. Meenan, W. N. Montgomery, W. Russell, H. S. Smith, J. M. Smith. (*Medical Jurisprudence and Hygiene alone.*)—Eileen M. Bell, D. Corry, M. Gilligan. *Materia Medica alone.*)—R. G. Blair. (*Pathology alone.*)—W. C. M'Cullough.

FINAL. T. M. Adamson, W. W. Allison, W. Faith, J. M'K. Ferguson, W. Gault (with second class honours), H. A. Gillespie, W. S. Lynd, W. MacDermott, V. Magee, V. C. Montgomery, M. Neilson, Edith Robinson, R. S. Ross, H. R. Sinclair, W. J. Smyth. (*Pathology, under Old Regulations.*)—J. Park.

D.P.H. (*Both Parts*). C. Alexander, W. Frier, S. I. Turkington.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examinations indicated:

SECOND M.B. (*Part I.*).—G. Adler, E. M. Atkinson, R. D. Aylward, K. N. G. Bailey, S. E. Barraza, J. C. Blake, H. J. Blampied, J. E. A. Boucaud, G. Bourne, N. J. Boxall, C. H. Bracewell, R. B. Britton, Elsie C. Bulley, Elinor M. Burnett, F. Caldecott, T. Carlyle, D. G. Churcher, *W. E. le G. Clark, A. J. Cokkinis, E. V. Corry, W. A. Date, C. O. Davies, G. V. Davies, E. Deacon, S. C. de Silva Wijeyeratne, Phyllis D. Dixon, H. L. Douglas, M. Edwards, G. W. Elkington, D. W. Evans, Grace H. Ewart, W. Feldman, G. H. FitzGerald, *R. K. Foukes, M. W. Geffen, Nannie Gibson, Dorothy Gilford, L. Gill, E. H. Glenny, H. Gluckman, E. Glynne, Alice M. Griffiths, H. G. Hall, Joan Hardy, L. W. Hefferman, K. R. Hill, Bertha Hinde, E. C. Howe, E. A. Holmes, J. C. C. Howe, G. F. W. Howarth, Amy M. Kerr, J. I. Kühne, F. R. Leblanc, Emily C. Lewis, G. P. Lindsay, Alice L. Lloyd-Williams, K. McFadyean, R. G. Mack, B. Maclean, Gladys Matthews, P. N. Menon, F. Morcos, E. R. D. Nagel, M. H. Oldershaw, A. E. P. Parker, F. Portass, E. D. Pridie, H. N. Pritchett, Olive Rendel, J. C. R. Richardson, G. F. Rodrigues, J. P. Ross, Eleanor M. Scarborough, W. R. J. Scroggie, S. C. Shaw, R. H. Sunderland, N. Tayler, M. B. Tench, B. Thomas, D. J. Thomas, J. H. Thomas, G. E. Tilley, C. M. Titterton, A. R. Tothill, K. R. Traill, K. T. K. Wallington, C. Walters, S. A. T. Ware, F. W. A. Watt, Gladys M. R. Webster, A. D. Weeden, S. T. Wong, S. C. Woodhouse, Irene Yate, F. Young.

SECOND M.B. (*Part II.*).—I. Aubrey, A. R. Balmain, C. D. Banes, C. P. Barber, H. J. Bensted, R. V. Bevan, C. F. Beyers, G. Blurton, Marian N. Bostock, H. G. Broadbridge, W. W. K. Brown, L. A. Célestin, J. E. Cheesman, C. C. Chesterman, Hetty E. Claremont, A. H. Clarke, W. H. Coldwell, J. O. Constantin, M. C. Cooper, R. G. Dani, M. A. B. Demerdash, Hilda M. Denton, Elizabeth C. Eaves, A. W. F. Edmonds, Florence M. Edwards, L. W. Evans, G. Fehrsen, W. Fletcher Barrett, J. L. R. Fortier, A. R. Fuller, W. L. M. Gabriel, A. S. Gravelle, H. M. Gray, L. Grey, Grace M. Gulston, Hilda M. Halliday, R. B. Hawes, W. B. Heywood-Waddington, P. Hughes, J. B. Hume, Helen Ingleby, D. B. S. Jones, P. T. Jones, J. Kyle, E. H. Lake, H. J. Leviseur, D. J. A. Lewis, H. W. Lewis, Annie Lloyd, I. H. Lloyd, †Katharine Lloyd, V. E. Lloyd, †J. E. G. McGibbon, S. A. Malkin, F. C. Mason, D. Menzies, Gladys M. Miall-Smith, G. Moulson, W. H. Nicholls, D. C. Norris, R. V. Norton, J. H. Oonvala, Eleanor J. Partridge, Enid M. Pfeil, J. W. G. Phillips, C. V. Pink, R. V. Powell, S. D. Rhind, T. E. Roberts, K. M. Ross, †E. Sakoschansky, B. Sampson, P. R. J. Schmidt, †M. Schwarz, A. Selbey-Green, A. Shafeek, G. H. Sims, G. P. Tatton, Lily D. Taylor, R. C. Thomas, J. F. Twort, D. J. Valentine, W. J. Vance, H. S. Wacher, M. J. T. Wallis, C. J. B. Way, J. de S. Wijeyeratne, T. P. Williams, A. Williams-Walker, A. Wilson, C. W. Wilson.

* Awarded a mark of distinction. † Distinguished in Anatomy.
‡ Distinguished in Pharmacology.

UNIVERSITY COLLEGE.

THE annual report of University College shows that the total number of students during the session 1912–13 was 2,083. Students from other colleges attending intercollegiate courses numbered 196; the special courses for teachers were attended by 495 persons, and the lectures open to the public without payment were attended by upwards of 3,000 persons. The total revenue from all sources was £66,694 and the total expenditure £173 in excess of this amount. The areas from which the students were drawn are shown in the following table:

	Undergrad. and Non-matric.	Post-Grad. and Research.	Evening.
London and within 30 miles	710	285	458
United Kingdom (rest of) ...	273	73	13
British Empire (rest of) ...	105	28	1
Foreign	90	26	21
Totals	1,178	412	493

The large amount of research work done in the college is shown by the long list of original papers and other publications, including 18 from the department of physiology, 10 from the department of pharmacology, and 8 from that of public health.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held on Monday, April 6th, Sir Thomas Barlow, Bart., K.C.V.O., the President, being in the chair.

President's Address.

The President delivered the usual annual address, in which he referred to the Royal honours conferred on Fellows, Members, and Licentiates during the past year, and to the Harveian Oration and the lectures which had been delivered before the College. He also alluded to the award of medals and prizes, and the various events within the College. He likewise mentioned the gifts which had been made to the College. He read obituary notices of the Fellows who had died during the year—George Ernest Herman, Robert Leaman Bowles, Frank Buzzard, John Charles Thorowgood, Alfred Lewis Galabin, and Philip Frank. Sir Thomas Barlow thanked the Censors' Board and the other Fellows for their unfailing loyalty during the past year, and then vacated the chair.

Election of President.

Dr. P. W. Latham, speaking as the senior Fellow present, proposed a vote of thanks to Sir Thomas Barlow for his address, and for his services to the College, which was carried by acclamation.

The ballot for the election of President then took place, and Sir Thomas Barlow was re-elected by a large majority. The Senior Censor (Sir James Kingston Fowler) delivered to the President the insignia of office. The President gave his faith to the College, and thanked the Fellows for re-electing him.

Communications.

The following communications were received: (1) From the Secretary of the Royal College of Surgeons (three letters). (2) From the Clerk to the Privy Council, dated March 5th, to inform the College that the Sixth International Congress of Thalasso-Therapeutics will be held at Cannes on April 15th. (3) From the Secretary of the Board of Control, dated March 25th, asking for suggestions concerning the use of a grant of money "for the purpose of aiding and encouraging scientific research into the causes and treatment of mental disease and mental defects." The President was asked to nominate a sub-committee who should report to the Council.

Arrangements with Unqualified Persons under the Insurance Act.

A report was received and adopted from the Censors' Board dated March 2nd, concerning the employment of unqualified persons for purposes of treatment under the Insurance Act. The report is published in the SUPPLEMENT (p. 219).

Infectivity of Pulmonary Tuberculosis.

A report, dated February 12th, was received and adopted from the Committee nominated July 3rd, 1913, concerning the infectivity of pulmonary phthisis. The report is published at page 826.

Egyptian Medical School.

The Committee reported that a full report had been received from the visitor, Sir W. Watson Cheyne, Bart., C.B., F.R.S., on the examinations of the Egyptian Medical School and the hospital, and that the Committee had communicated with H.E. the Minister of Education in reference to several points arising out of the visitor's report. Sir Watson Cheyne was thanked for his services.

Recognition of Institutions.

The following institutions, which had been visited by a member of the Committee and reported as fulfilling the requirements of the Board, were added to the list of institutions recognized by the Examining Board in England for instruction in the subjects respectively mentioned: *Chemistry and Physics*—Wellingborough School; The County School, Wrexham. *Biology*—Bradford Technical College. (This college is already recognized for chemistry and physics.)

The fever wards of the Royal Naval Hospital, Chatham (102 beds), were recognized by the Examining Board in England for the course of fever hospital practice required for the Diploma in Public Health.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY council was held on April 2nd, with Sir Rickman J. Godlee, President, in the chair.

The late Mr. Bruce Clarke.

A vote of condolence was passed to the relatives of Mr. Bruce Clarke, a past member of the Council and of the Court of Examiners.

Medical School at Cairo.

The thanks of the Council were given to Sir Watson Cheyne for his services as visitor of the examinations of the Egyptian Medical School at Cairo.

Jacksonian Prize.

This prize was awarded to Mr. J. Howell Evans, F.R.C.S., for his dissertation on the Malformations of the Small Intestine, their Mode of Origin, the Morbid Conditions which arise from them, and their Treatment. The subject for the prize for 1915 is Congenital Dislocations of the Joints; their Pathology and Treatment.

Election to the Fellowship.

Surgeon-General Arthur William May, C.B., R.N., Medical Director-General, Royal Navy, a member of twenty years' standing, was elected a Fellow.

Committee on Factory Lighting.

A letter was read from Mr. F. R. Cross reporting his attendance at the Home Office, on January 29th, to give evidence before the Committee on Factory Lighting, as requested by the Council, and stating that in support of his evidence he was able to lay before the Committee answers to a letter circulated by him among members of the Ophthalmological Society bearing on the questions under consideration.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—*Part I (Chemistry) and Part II (Physics):* *Y. Abdel-Massiah, G. K. Arthur, †Margarita I. Barfield, P. G. Calvert-Jones, J. H. T. Challis, *A. E. Collie, J. C. Collins, †T. H. R. Davies, *L. Dinerstein, A. J. C. Eland, †R. Erskine-Gray, A. A. E. R. Galal, †M. Girgis, *R. V. Hudson, †J. S. H. James, *R. E. Jenkins, G. H. Johnson, †W. A. Jolliffe, *D. J. H. Jones, A. E. A. A. Khair, F. Lawrence, J. E. Lewis, J. S. Lewis, J. C. W. MacBryan, *C. H. Macklin, †J. N. Martin, †R. K. Marwood, *A. Y. Massouda, G. Meadows, *G. Millar, †G. B. Monk, †E. H. F. Morris, *A. A. Osman, W. G. Owen, C. S. Parker, †F. Y. Pearson, †C. F. Rainer, †C. C. Rowland, R. J. Saunders, W. M. Savery, G. A. S. Shacklock, *O. L. C. Sibley, C. G. D. Siggs, †J. A. Sixtman, *E. A. L. Sturridge, *F. A. L. Sturridge, C. P. Thomas, *I. M. Thomson, J. H. Tighe, *B. M. Tonkin, *F. F. Wheeler. *Part III (Elementary Biology):* H. Amin, H. D. Apergis, G. K. Arthur, R. W. C. Ball, L. W. Barber, Margarita S. Barfield, E. J. S. Bonnett, M. V. Boucaud, O. H. Brown, F. Cameron, A. A. Casalis, J. H. T. Challis, J. C. Collins, A. J. Cox, T. H. R. Davies, A. J. C. Eland, M. A. K. El Hennawy, M. Z. A. Emery, F. K. Escritt, H. R. Evans, T. G. Evans, D. C. Farquharson, W. B. Farrington, F. M. T. Flintan, A. A. E. R. Galal, Blanche S. Gardner, R. Hilliard, R. J. Hodgkinson, A. B. Isaacs, E. H. Johnson, G. H. Johnson, W. A. Jolliffe, D. J. H. Jones, J. W. Jones, A. V. Lopes, G. B. Monk, E. H. F. Morris, C. Nicory, H. Nosrat, E. J. Papenfus, C. S. Parker, E. A. Pearson, F. Y. Pearson, C. B. Phillips, C. F. Rainer, R. D. F. Robertson, E. Sanders, G. A. S. Shacklock, K. E. Shellshear, S. W. Southwood, G. E. Spero, S. L. Szpigner, C. P. Thomas, G. McK. Thomas, J. H. Tighe, H. E. Williams, R. G. Wilsnere, V. D. Wyborn, C. Young.

* Passed in Part I only. † Passed in Part II only.

Obituary.

BENJAMIN NEALE DALTON, M.D.LOND.,

LATE OF SOUTH NORWOOD.

ON March 23rd Dr. Benjamin Neale Dalton, a well-known practitioner in South Norwood, died at the age of 70, after an illness of more than five years' duration.

Dr. Dalton was the son of a stockbroker, and was born at Stockwell in February, 1844. He was educated at the City of London School, and in his 20th year, after being for a time a clerk at Lloyds, he entered as a student at Guy's Hospital. There he had a distinguished career; he took the first prize in his first year, in his second year, and in his third year; and in this year also he gained both the Treasurer's gold medals, for medicine and for surgery, and was awarded a prize of £10 for a paper on malformations read before the Physical Society. After obtaining the diploma of L.R.C.P. and M.R.C.S. in 1867, and acting as house-surgeon, he turned his attention to the London University, promptly passing the Preliminary Scientific Examination, and in 1870 the First M.B. examination. He was then appointed Demonstrator of Anatomy in the Medical School, served for two years, and in 1872 took the degree of M.B., obtaining the Scholarship and Gold Medal in Medicine and honours in Obstetric Medicine and in Forensic Medicine. He became M.D. the next year. During his demonstratorship he started the practice in South Norwood which he continued to hold until his final illness. He was an industrious, hard-working man, keenly interested in the scientific side of his profession, acquired a large connexion, and was frequently called in consultation by the neighbouring practitioners. He was a constant attendant at the discussions of the local Branch of the British Medical Association, before which he read several papers. He kept himself acquainted with all modern advances, and preferred as far as possible to make his own laboratory examinations of clinical material provided by his patients. He was a great reader of history, literature, and philosophy; and he was fond of gardening, carpentry, and photography. On his holidays he much enjoyed foreign travel. He was married in 1878, and leaves a widow, three sons, and two daughters.

THE death of Dr. ALEXANDER GUNN, of 44, George Square, Edinburgh, took place on March 28th. He was born in 1844 at Lybster, Caithness, and went to Edinburgh at the age of 14. His early years there were spent in qualifying himself as a chemist and druggist under Dr. Robertson, of George Street in that city. Thereafter he was appointed senior apothecary and dispenser to the Royal Infirmary: this appointment was held for ten years, during which he was able to attend classes at the University and Royal College of Surgeons with a view to qualification in medicine. This accounts for the fact that he was 33 years of age before he took the diplomas of L.R.C.P. and S.Edin.; some nine years later (in 1886) he graduated M.D. of St. Andrews University. He engaged in private practice in Edinburgh, and acted as medical officer to the Amalgamated Society of Engineers. Through his work as apothecary in the Royal Infirmary he was brought into touch with the late Lord Lister's discoveries and investigations in the development of the antiseptic system in surgery. Dr. Gunn's wife died a few months ago, but he is survived by two sons and three daughters. The funeral to the Grange Cemetery was on March 31st.

Surgeon-Lieutenant-Colonel John Joseph O'Reilly, Army Medical Department (retired), died at Twyford Abbey, Willesden, on March 28th, aged 70. After taking the diplomas of L.K.Q.C.P.I. and L.R.C.S.I. in 1865, he entered the army as assistant surgeon on October 2nd, 1865, becoming surgeon in March, 1873, surgeon-major on October 2nd, 1877, and retiring with a step of honorary rank to brigade-surgeon on January 27th, 1886. He served in the Afghan war of 1878–80, and received the medal for that campaign.

Surgeon David Henry Small, Bengal Medical Service (retired), died at Upper Norwood, London, on March 28th, aged 89. He took the diploma of L.R.C.S.Edin. in 1845, and entered the Indian Medical Service as assistant surgeon on November 21st, 1846, becoming surgeon on February 24th, 1860, and retiring on January 1st, 1866. The Army List assigns him no war service. Though more than sixty-seven years have elapsed since Dr. Small entered the army, there are still five officers of the Indian Medical Service senior to him, shown in the Army List as still living.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Delporte, member of the Belgian Chamber of Representatives for Dour (Hainaut); Dr. Pierre Emile Launois, *professeur agrégé* in the Medical Faculty of Paris, and physician to the Laribosière Hospital, author of numerous papers on morbid anatomy, embryology, and pathogeny, aged 57; Dr. George McNaughton, clinical professor of gynaecology in the Long Island College Hospital, Brooklyn, aged 57; "Colonello Medico" Alessandro Pasquale, director of the Italian School of Naval Hygiene; Dr. Thomas Morgan Rotch, professor of paediatrics in the Harvard Medical School, aged 65; Dr. Lazarus Schoney, professor of pathology in the New York Medical College, and author of several works on pathology and biology, aged 76; Dr. L. Udranszky, professor of physiology in the University of Budapest; and Dr. C. Vanlair, sometime professor of medical pathology in the University of Liége, aged 75.

Medical News.

An International Veterinary Congress is to be held in London in August (3rd to 6th).

Dr. Simon, the French psychologist, will lecture to the Eugenics Education Society on "La Mesure de l'Intelligence" on April 28th, at 8.30 p.m., at Burlington House, by kind permission of the Royal Society.

Miss Helen Murray has handed over the sum of £8,000 to the managers of the Western Infirmary, Glasgow, for the purpose of naming a ward in the Infirmary, to be called "The George and Agnes Murray Ward," in memory of her late brother and sister.

We are requested to intimate that the annual Edinburgh dinner of the Indian Medical Service will be held in the Caledonian United Service Club there on Friday, May 29th next. Tickets may be obtained from Colonel James Arnott, 8, Rothesay Place, Edinburgh.

A Congress of the German Society of Tropical Medicine will be held in the Institute for Infectious Diseases, Berlin, April 7th to 9th. Drs. Hartmann, Rodenwald, and Ruge will present reports on dysentery. A large number of other communications is promised.

Dr. Barclay Wiggins, of Hoyland, Yorkshire, has been made an Honorary Associate of the Order of St. John of Jerusalem in England, in recognition of twenty years' service in ambulance and other voluntary causes for the alleviation of pain and suffering.

Dr. J. Arnallt Jones, Colonel, A.D.M.S., Honorary Surgeon to the King, has been appointed assistant commissioner for No. XI District of the St. John Ambulance Brigade. Colonel Jones is assistant director of medical services in the Welsh Division and a member of the Glamorgan Territorial Association.

By the way of disseminating knowledge on the question of the treatment and eradication of tuberculosis, the Insurance Committee of the county of Lanark has procured a cinematograph film, to be exhibited in the picture houses throughout the county, showing the Edinburgh system of dealing with the disease.

An antiopium league has recently been formed in Paris. The honorary president is Professor Charles Richet, the acting president Dr. Jeanselme. Among the persons who have already joined the league are naval officers, members of the clergy and of the legislature. Among the original members are Mgr. Leroy, Bishop of the Congo, Admiral Philibert, and M. J. Chailley, Deputy. The plan of campaign of the league includes a series of addresses on the evils of the opium habit.

A discussion, introduced by Dr. B. A. Peters, on the elimination of cross infection in fever hospitals, will take place at the meeting of the Society of Medical Officers of Health on Friday, April 17th, at 5 p.m., at 1, Upper Montague Street, Russell Square. The question is one of serious concern to hospitals other than fever hospitals, and an invitation is extended to the medical staffs of general and children's hospitals to attend the meeting.

The septennial award under the Acton Endowment of the Royal Institution has this year been made to Professor C. S. Sherrington, Waynflete Professor of Physiology in the University of Oxford, for his work on "The Integrative Function of the Nervous System." Previous awards have been made to Sir George Stokes, Miss Agnes M. Clerke, Sir William and Lady Huggins, and Madame Curie, for achievements in the field of physical science. Professor Sherrington is the first investigator in experimental biology to receive this distinction for the third of a century.

An interesting demonstration of the most recent development in kinematograph appliances was given on April 3rd in the Fyvie Hall of the Polytechnic, Regent street, when Mr. R. Bruce Foster, B.Sc., lectured on the mechanism and working of the new Kinematograph Projector, which has been put upon the market by the engineering firm of Kamm and Co. The invention, which is especially designed for the use of teachers and lecturers, places the film under their immediate control, so that, by merely throwing out a clutch, the film can be arrested at any moment and in such a manner that the picture in the gate is projected as a lantern slide. The danger from fire is reduced to a minimum by means of an apparatus whereby the film can be kept cool while it remains stationary.

Many crimes have been laid at the door of the cinematograph, which is constantly being denounced as a corrupter of childhood and a perverter of youthful morals. There can be no doubt that many of the films shown in picture palaces are utterly unfit for childish eyes; and this is all the more to be regretted because, under proper control, the cinematograph might prove an invaluable ally in the cause of education. Such subjects as history and geography, for example, might be made far more interesting to the average child if he could actually see the persons and places of which he has been told, and which, in nine cases out of ten, arouse no real interest because they are merely names which convey no definite meaning to his mind. Davison's Film Sales Agency, therefore, has done good service in proving what the cinematograph can do in the way of teaching history by recently exhibiting a beautiful set of films illustrating the stirring story of Tyrol's revolt against her French oppressors, her gallant struggle for independence, and the final overthrow of her peasant army, together with the capture and death of their leader, Andreas Hofer. It is a story which should especially appeal to the imagination and quick sympathies of childhood.

The April number of the *British Review* contains an interesting article by E. Boyd Barrett entitled, "How to Complete One's Education." The author sums up his argument in the following proposition: "The three practical effects of school education are (1) character training, (2) intellect training, (3) acquisition of knowledge." He proceeds to show that the master, howsoever he tries to do his duty by his boys, under each of these three heads benefits more from their teaching than they do from his. It is the thought expressed in the old maxim, *Discere si velis, doceas, sic ipse doceris*. Burnell Payne writes on the work of Mr. Hilaire Belloc, whom he considers to be the writer of the best English prose of the day. Among the other contents are poetry, fiction, and politics, which may perhaps be regarded as largely fiction.

The annual report of the Liverpool Medical Institution for the year 1913 presents, among other points of interest, striking evidence of its great utility to others besides those whose names figure on its roll of members. Altogether throughout the year over 90 meetings other than those of the institute itself were held in its building: 21 were meetings of bodies directly connected with the British Medical Association, and 49 those of committees connected with the working of the National Insurance Act, while among other bodies to whom hospitality was

afforded were the North of England Obstetrical and Gynaecological Society, the Northern Association of Medical Women, the Association of Hospital Medical Officers, and the Eugenic Society. The institute itself held 14 ordinary meetings and 6 pathological meetings, the average attendance at the former being as high as 78, and at the latter 56. On the last day of the year the number of honorary members, ordinary members, and associates aggregated 407, this being above the record of any year up to 1908, but somewhat below the average of the past five years.

WE regret to learn that the difficulty which has arisen between the medical profession in Blackpool and the management of the Victoria Hospital in that town has not been adjusted. At the adjourned annual meeting of donors and subscribers on April 6th, the result of the proposal to enlarge the board of management by the election of three additional members was that three lay representatives were chosen, and from the report in the *Blackpool Herald* it does not appear that the tone of the meeting was such as to encourage the hope that this change will have the effect of increasing the probability of the difficulty being arranged. The medical men in Blackpool, as we understand the position, are indisposed to enter into a conference with the board of management unless certain stipulations are fulfilled. The most important of these would appear to be that the number of representatives of the honorary medical staff upon the board of management should be increased by two, and it is recognized as a general principle governing the management of all hospitals that the representation of the acting medical staff on the board of management should be adequate. It is to be hoped that the board of management will see the unwisdom of continuing its present policy, which must tend to diminish the medical efficiency of the hospital.

THE annual report of the Council of the British Hospital Association for the year 1913 stated that the number of members had increased by 33, and was now 416. At the invitation of the British Medical Association, three delegates were appointed to join the Subcommittee dealing with the subject of the treatment by the honorary staffs of voluntary hospitals of cases of tuberculosis in insured persons. These members abstained from voting upon matters submitted to the Committee, on the ground that they had no authority to speak for the hospitals generally. These various matters are to be submitted to the Council for consideration, before the delegates consider themselves empowered to record a definite opinion. The fourth annual conference of the Association was held at Oxford on June 26th and 27th, 1913. Sir William Osler, who was in the chair, delivered an address on "The British Hospital System: Its Efficiency and Need for Development"; and Sir Thomas Oliver and Mr. Keith D. Young, F.R.I.B.A., read papers. Arrangements had been made for the establishment of a central office of the association, at 14, Victoria Street, Westminster, S.W. The fifth annual conference of the association will be held at Newcastle-upon-Tyne on June 18th to 20th next. The Lord Mayor of the city will preside. The programme will be issued to members and others interested in due course. The Council add a paragraph to the report inviting those associated with voluntary hospitals to join the association as members.

AMONG animals, mange in horses was made notifiable some time ago, and the *Veterinary Journal* has expressed an opinion that the Board of Agriculture should likewise schedule mange in dogs, on the ground that with the exception of distemper it is the most contagious disease to which these animals are subject. In the same issue is an account of a case at Stroud, Gloucestershire, in which some puppies suffering from sarcoptic mange infected several human beings in succession. A good many cases of a corresponding order were described by Dr. Leslie Roberts, of Liverpool, in an admirable paper read by him at the Sheffield meeting of the British Medical Association in 1908; he showed also that the sarcoptes of animals was practically indistinguishable from the *Acarus scabiei* of man, except in respect of minute differences of size, and that it shared with various keratomycetes, large and small, the capacity for living indifferently on human or animal skin. The susceptibility of human beings to animal diseases associated with loss of hair, was also described in detail by Professor Sabouraud of Paris at the same meeting, but he devoted most of his attention to achorion, microsporon, and trichophyton. A suggestion that the greater persistence of ringworm among school children in certain areas was probably due to contact with animals was made in the last annual report of the medical officer to the Board of Education for England and Wales, of which a summary appeared in our columns in February.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

LETTERS, NOTES, ETC.

MEDICAL EXAMINATION FOR INSURANCE COMPANIES.

DR. HARRY GREY (Bristol) has sent us the following circular letter received recently from the chief of the Medical Department of the General Accident Fire and Life Assurance Corporation:

"It gives me much pleasure to be in a position to inform you that from this date we shall pay to our medical examiners a fee of one guinea for all medical examinations they may make on our behalf, irrespective of the amount of the sum assured.

"As you no doubt know, it is the almost universal custom of life assurance companies to pay the medical examiners a fee of half a guinea where the sum assured is below a certain amount, and a guinea where the sum assured is above that amount. Our own practice has been to pay the smaller fee on cases up to £250, and one guinea on cases of £250 and over. Some companies do not pay the larger fee unless the sum assured is at least £500. Many medical men consider this to be an unfair distinction, and we on our part have always been aware that it was an arbitrary division, due to the fact that policies for small amounts cannot bear the same expense as large ones.

"However, after giving the subject careful thought, our directors have decided to do away with this distinction. They realize that the profession has always been prepared to give its best work, quite apart from the question of fees, but they feel it is scarcely reasonable to continue to expect medical men to bestow the same amount of time and pains-taking attention on half-guinea cases as they do on those for which they are paid a guinea.

"It is of the utmost importance, however, that applicants proposing for small amounts should be submitted to the same rigorous and careful examination as those who apply for large amounts, and it is in order that we may know that *every case* will receive the best of the examiner's experience, ability, and knowledge, that the same fee will in future be paid in all cases."

In commenting on this statement, Dr. Grey says that he has frequently put before insurance companies the view that the examination for life insurance is to be distinguished from ordinary professional work. In treating a patient the doctor is bound to give the best professional services of which he is capable, whatever the fee may be, whereas an insurance company is asking for medical work in its own commercial interest.

THE WASSERMANN TEST.

"A DOCTOR IN THE COUNTRY" writes to express the opinion that other public authorities should, following the example set by Chelsea and Wimbledon, arrange that the Wassermann test should be applied free of charge for persons who cannot afford to pay for it. The need has been especially impressed upon him of late owing to the fact that he has been treating a patient for whom it is most desirable that the blood should be tested for the Wassermann reaction—not for diagnosis, but as an index for the continuance of treatment, or of leaving it off for a time, say six months, and then having the test applied again. Unfortunately the patient is too poor for this. The nearest hospital is no help as the staff there have no arrangements for obtaining the test. "I have no doubt," he adds, "there are numbers of cases such as I have mentioned, and I feel confident that I am voicing the opinion of practitioners all over the country when I say that for the public weal this matter should be taken up and provided for by the Government."

THE PREVALENCE OF VENEREAL DISEASE.

DR. H. N. ROBSON (Territet) writes: In your issue of March 14th Dr. Louise McIlroy regrets that the Royal Commission was not appointed later, when there would be more evidence of the prevalence of venereal disease among the poorer classes so as to arouse the public. It is quite easy for hospitals in London or elsewhere to take note of all new cases coming up for treatment, which are primarily due to venereal disease, for a period of one month. Multiply the result by twelve, and one could get a fair idea of the number of cases per annum which might be more than interesting and instructive to both the Royal Commission and the medical profession.

EFFECTS OF VACCINATION ON CHRONIC SKIN LESIONS.

SIR JAMES GRANT of Ottawa sends us a reprint of a letter published by him in the *Medical Times and Gazette* of 1863, showing the effect of vaccination on certain skin disorders. The first case was one of palmar psoriasis of five years' duration in a man aged 55, the second was an example of tinea nummularis of the right forearm in a boy aged 13, the fourth was a case of psoriasis lepraformis in a married woman aged 24. In all these cases the inoculation with vaccine virus was followed by recovery. The third case was an example of tuberculous syphilide in a man aged 25; vaccination on the arm was followed in four weeks by the disappearance of the syphilitic lesion.

TREATMENT OF SWALLOWED FOREIGN BODIES.

NORTHERN PRACTITIONER writes: I was called towards evening to see J., aged 4 years, who was said to have swallowed a little toy elephant made of metal, such as is worn on a watch chain. It proved to measure ⅜ in. by ⅝ in. almost, and to weigh 55 grains. The mother said he had it in his mouth about 10 a.m., and one of the household put forward his hand quickly, as though to take it from him, when he jerked back his head and swallowed it. The mother says she gave him two castor oil pilis and a hot bath and made him lie down. When I saw him he had no symptoms; I said he was to get no cas or oil, but to eat bread and potatoes, together with milk if required. The bowels moved at the right time. The next day, at 2.30 p.m., he passed the metal ornament, and was nothing the worse, except a little tired. The interest is that the foreign body had short points, and its shape and legs and trunk, together with its weight, might tend to cause it to lodge at the ileo-caecal valve or other narrowing; in such cases laxatives are contraindicated. I have known a child to swallow and pass a pin an inch long.

BULLOUS DERMATITIS IN RHEUMATOID ARTHRITIS.

DR. D. W. WRIGHT (London, N.) writes: A lady, aged about 50 years, has for many years suffered from an extreme type of rheumatoid arthritis with loss of all but a few limited movements, otherwise she is robust and healthy-looking. During the latter months of 1913 she had uneasy sensations in her hands, arms, and feet, which are greatly deformed. Early in January she was attacked by swelling of both extremities, with heat, pain, and pricking. This was followed by repeated crops of small vesicles, and eventually by the formation of large blebs, some two inches in diameter. Successive crops of these came up for a month or more on both hands and feet, and to a limited extent on the body. Pain was intense One arm was eventually almost denuded of the upper layers of skin. There was no fever, nor did the attack at any time resemble eczema. The conditions gradually subsided. She is now quite recovered, and with rather less joint pains than before the attack. There were no local or general symptoms. The point is whether it was some unusual manifestation of her ailment in the direction of trophic disturbance.

THE ARTIFICIAL PNEUMOTHORAX ASSOCIATION AND JOURNAL.

DR. CLAUDE LILLINGSTON (Gorleston-on-Sea) writes: May I draw the attention of your readers to the existence of the International Association, "Pneumothorax Artificialis," which aims at the study and exchange of ideas on the subject of therapeutic pneumothorax? Professor Forlanini, honorary president of the association, has kindly altered the plan of his journal, *Rivista delle Pubblicazioni sul Pneumotorace Terapeutico*, so as to meet the requirements of the association's members. Originally published in Italian only, it will in the future contain reviews of recent papers on pneumothorax in English, German, and French. It will be published at irregular intervals, and sent free to every member of the association, the annual subscription to which is 8s. I shall be pleased to receive and forward this subscription to the association's secretary, Professor Carpi, and to supply any further information on the subject that it is in my power to give.

NURSING IN THE BUSH.

THE following story, which we find in the *Australasian Medical Gazette* of January 3rd, illustrates the valuable work done by the "bush nurses" in Victoria: "In the back-blocks of Dargo, Gippsland, the wife of a settler was kicked by a horse, and rupture of the intestines resulted. The homestead is in the heart of a forest, and for miles, with but a few cultivated plots, the landscape is thicket and giant gums. A messenger was dispatched in search of the bush nurse, and brought her to the house. The nurse recognized that surgical skill was necessary to save her life. The nearest hospital was 70 miles away, and owing to the heavy rains the roads were almost impassable, and the waterways swollen. Vehicle transit was deemed to be too risky. A number of the settlers resolved to take the unfortunate woman 70 miles by stretcher, four of the farmers deciding to have their turn in carrying her. The nurse lent a hand in making provision for the rugged and wearying journey, and the party left the homestead to hearty cheering from those who had gathered there. The Wonnangatta River and the Truestone and George's creeks were running high, but after a wide detour of the country the farmers found fording places. For four days they trudged on, and in the evening reached Sale, a wearied but yet a happy band. The last stages of the journey were especially trying for the suffering woman, but she held up splendidly in the circumstances. She was taken to a hospital, operated upon, and the latest account was that she was in the convalescent stage."

THE DOCTOR IN FICTION.

MISS GEORGINA F. MALDEN (London, W.) writes: Having read with much interest the article "The Doctor in Fiction in 1814" (January 31st, p. 252), which deals with Dr. Erasmus Percy of Miss Edgeworth's novel *Patronage*, I think your readers may like to know what alterations she afterwards made in the medical part of the book. In the edition printed in 1825, which is, I believe, a reprint of the third edition, whose preface is dated August 1st, 1815, they are as follows: Erasmus never mentions his candidature for the post of physician to a London hospital. He calls on Sir Amyas Courtney because Lady Jane Granville, an old friend of the Percys, gives him an introduction, and he wishes "to avoid offending her ladyship." Sir Amyas invites him to breakfast "one morning when he was confined to the house by an *influenza*." Then occurs the episode of the made shell, but no mention of Dr. Bland or his opinion of it. In the account of Dr. Frumpton the words "forced himself into the College of Physicians" are omitted, and the account of his rupture with Erasmus Percy is rather different. The going round the hospital and the summary clinics are not mentioned. Erasmus writes, "It happened as I was walking home with him (Frumpton) we were stopped in the street" a crowd which had gathered round a poor man who had fallen from a scaffold and broken his leg. Dr. Frumpton immediately said, 'Send for Bland the surgeon, who lives at the corner of the street.' The poor man was carried into a shop; we followed him. I found his leg, besides being broken, was terribly bruised and cut. The surgeon in a few minutes arrived. Mr. Bland, it seems, is a protégé of Frumpton's, who formerly practised human farriery under him. Mr. Bland said the leg must come off, the sooner the better." Erasmus remonstrated, but "Frumpton glared on me with eyes of fury. . . . They prepared for the operation . . . the poor man . . . said . . . 'Don't let 'm.' . . . I . . . declared I would have him carried to St. George's Hospital. . . . The workmen who had brought in the wounded man . . . carried him out before me. . . . I pursued my way to the hospital. . . . At St. George's this poor man was received, attended with the greatest care and skill, . . . his leg will a month hence be as useful as any leg in London." In the first edition Dr. Percy removes O'Brien from the hospital, in the later one he takes him to it, and, when Mr. Gresham is talking to Dr. Percy subsequently, O'Brien says of the "great bare leg" that it "lost him a rich friend anyway and gained him a poor one," with no mention of the election. The other medical episodes of the book—old Panton and the earwig, Miss Spilsbury and the inflammation of the nose, Mr. Gresham's quinsy, and the advice on wigs, "a decent powdered doctor's bob"—no doubt occur in both editions. The episode "painter-jantleman that is not expected" and Mr. Percy's letter of good advice are identical in the two.

THE STUDY OF STATISTICS.

"STATISTICS" has sent us a copy of the table showing the frequency distribution of degrees of corneal astigmatism in mothers and sons which appears on p. 9 of Miss Barrington and Professor Karl Pearson's *Eugenics Laboratory Memoir on the Inheritance of Vision*, and requested us to explain its construction. It is constructed in the following way: The vertical and horizontal columns headed "Totals" record the total numbers of mothers and sons whose degrees of astigmatism fell within the assigned limits. Thus, of 164 mothers, 83 exhibited astigmatics "against the rule," or from 0 to 1.0; 41 fell between 1.25 and 2.0, etc. Similarly for sons, the totals in each group are 40, 52, etc. The other entries are compiled in the following way: 41 mothers fell in the astigmatic class 1.25 to 2.0; of the sons of these mothers 8 were in the class "against the rule" and 0 to 1.0, 16 were in the class 1.25 to 2.0, 4 were in the class 2.25 to 3.0, etc. This vertical column of sons corresponding to mothers with a certain degree of astigmatism is called an "array" of sons. Similarly, corresponding to sons with astigmatism 1.25 to 2.0 (52 in number), we have 26 mothers in the group "against the rule" and 0 to 1.0, 16 in the group 1.25 to 2.0, etc. This is an array of mothers corresponding to sons with an assigned degree of astigmatism (1.25 to 2.0). From such a table the coefficient of correlation can be calculated. Our correspondent will find a very clear account of the subject in *A Primer of Statistics*, by Ethel Elderton and W. Palin Elderton (Black, price 1s. 6d.).

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An Address
ON
SOME DIAGNOSTIC FAILURES.

DELIVERED BEFORE THE SOUTH ESSEX DIVISION OF THE EAST ANGLIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY

H. BATTY SHAW, M.D., F.R.C.P.,

PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

GENTLEMEN,—I propose to discuss with you some cases which I feel are worthy of notice, not only from the fact that you will hear of much that will excite your sympathy, but because it will give you the opportunity of listening to clinical accounts of difficult cases completed by *post-mortem* examination. When your secretary invited me to address you, several subjects were submitted to him, and the choice of the present subject is his. As to the mode of treatment of the subject I must be held entirely responsible, and I have followed out an old plan of never giving the diagnosis until my audience had had an opportunity of thinking it out for themselves. With this purpose in view, I will endeavour to describe my cases fully enough to give you the evidence which is essential and possible, then I will give you my own opinion of what I thought was the matter, and then your own conclusions and mine may be tested by the points discovered at the *post-mortem* examination. Where it is possible I will give you reasons for the failure of this and that clinical test and the precautions which may be taken to avoid your own and my mistakes in the future.

CASE I.—*An Example of Too Great a Reliance upon Clinical Pathology and Too Little upon Bedside Findings.*

I will ask you to picture to yourselves a well-nourished servant girl, aged 23. She had been noticed by those about her to have undergone some curious mental change during the year previous to admission to the hospital, for she had become almost a child again, and would even stop on her errands to play at any game with children in the streets, such as marbles, etc. She had also become more emotional and readily broke down into tears or developed attacks of hysterical laughter. Three weeks before admission she had developed occipital headache and a severe pain in the right lower chest, which was exaggerated by breathing. As an out-patient she was suspected of suffering from typhoid fever, and the agglutinative power of her blood against the typhoid bacillus was found to be positive in dilutions of 1 in 30, 1 in 50, and doubtfully of 1 in 100. On this latter piece of evidence she was admitted to the typhoid ward of the hospital, and the following signs were elicited: Some dullness and fine crepitations were heard at the right base where the pain was, but all these phenomena cleared up in a few days; there was no expectoration at any time of her illness. The temperature was always raised—from 99° to 102.6° during the stay in the hospital, which was of thirteen days' duration when she died; the pulse was 80 to 100 until the day of her death, when it reached 120 to 140; it was always regular. The impulse of the heart was in the fourth space external to the left nipple line; the area of percussion dullness was increased to the left, and there was a soft systolic murmur at the impulse. Vomiting was a feature throughout her illness. There were no typhoid spots; no distension of the abdomen until the last few days of life, and the spleen was always just palpable. There was some tenderness in the right iliac fossa, and the descending colon could be defined as if loaded with faeces; there was constipation requiring enemata; the appetite was bad. A second Widal test was carried out, and gave positive reactions in dilutions of 1 in 30, 1 in 50, and 1 in 100. The nervous system was quite normal in every respect, except that some days after admission she began to be delirious at night, and the headache persisted. On the day of her death the nervous phenomena developed—namely, a double extensor response and some deviation of the right eye to the right. Ophthalmoscopic examination of the right eye showed that the edge of the disc was a little blurred (? early papillitis), and nothing was discovered in the left eye. The persistence of headache and delirium led to the examination of the spinal fluid, which was drawn off by lumbar puncture; it was found to be quite normal, showing no cellular content and no excess of albumin. The courses had been established at puberty, but shortly after failed, and never returned except as very "slight shows." There was a great deal of leucorrhoea, which was not offensive in odour, nor did it reveal the presence of the gonococcus on microscopic examination. Pelvic examination was carried out, and revealed no abnormality. The chest was examined radiographically, and appeared to be quite normal. The patient was diagnosed as one of typhoid fever, and so marked was the delirium that the patient was treated by the cold-bath method, which temporarily had the desired effect; the following day, however, she developed diffuse bronchitis, and the respirations advanced from 20–24 to 28–48 a minute; she became more delirious and comatose, and died on the thirteenth day of her stay in the hospital. The urine was free from any abnormality. The only illness from which she had ever suffered was some affection, it was said, of her heart two and a half years previously. The father was alive and said to be gouty; the mother had died of an unknown cause, and her brother and sister were healthy.

My own opinion of the diagnosis was that the girl had died of typhoid fever, and for this there was the crowning piece of evidence that the Widal test was positive. It would be wrong to say that there were no misgivings, for it was difficult to explain the persistence of the headache when the delirium supervened on such a diagnosis.

The *post-mortem* findings were as follows: There was no trace of typhoid ulceration of the intestine, the only ulceration present being tuberculous, and this was present in two or three places in the ileum, and the peritoneum over these ulcers was soldered on to the adjacent uterus; the heart was quite normal; an infarct was present at the base of the right lung. Evidently the cause of death was due to tuberculosis, for there was great flattening of the convolutions of the brain, the cerebral meninges were thickened and opaque, though no tubercles could be seen (there was no spinal meningitis). Both pleurae were universally adherent, and both lungs and the bronchial glands were freely sown with miliary tubercles. The cavity of the uterus was enlarged and held a drachm of pus, and the cavity walls were caseating; both Fallopian tubes were in a condition of pyosalpinx due to tuberculosis; the spleen showed no tubercles, but the kidneys showed many.

The comment I would pass on the case is this, that too much reliance was placed on the Widal reaction, nor am I in a position to state why it was positive. The golden clinical maxim should not have been disregarded, which says that in typhoid fever the headache gives place to delirium, whereas in meningitis it accompanies it. Too much reliance also was placed on the fact that the spinal fluid was normal. It is well known that the cerebral meninges may be inflamed and the spinal ones escape. It is difficult also to explain why the patient had shown such remarkable mental changes a year before her final illness, but it is conceivable that already meningitis had begun to develop, though not sufficiently to provoke more serious signs and symptoms. The infarction of the lung was probably due to some local thrombosis of a pulmonary artery, and not to an embolus. As for the development of double extensor plantar response, as subsequent details will show, this may quite well be dependent upon purely toxic causes of an origin quite independent of infection. Finally, the tuberculous salpingitis and metritis fully explained the disturbances of menstruation and the leucorrhoea. For the third time in the last few years I have thus met with severe leucorrhoea dependent upon tuberculous metritis.

CASE II.—*An Example of how One or Two Prominent Features Exclude all Thought of Disease of Systems other than the One Responsible for such Symptoms.*

The second case is that of a married woman, aged 40. Several years before admission she had been treated for pneumonia in the left side for three months in a London hospital. She appeared to recover from this entirely. She stated that since the birth of her last child, eight years ago, she had never been well and strong. During the fifteen months prior to admission she had been subject to shortness of breath—at some times worse than others—and had noticed occasionally that she had swelling of both feet, and for six months she had noticed that she had to get up at night three or four times to

pass water. The immediate causes for her seeking admission to the hospital were that swelling had developed in both legs and in the lower part of the body, had missed her chest, but caused a most remarkable puffiness of the eyelids so that she could scarcely see; and, secondly, that her friends had noticed that every now and again her face, instead of being very pale, which was almost natural to her, showed intense blueness. She had had no illness other than the pneumonia referred to, and had escaped the acute specifics of childhood. Her father had died of pulmonary tuberculosis, but the rest of her family, including her two children, were quite well and strong.

I do not remember ever seeing such a curious clinical picture as she presented on admission. She was quite unable to lie flat in bed, and was only comfortable when she rested with her chest and head on a pillow on a table placed across the bed. When she raised her head to answer questions, the combination of pallor and cyanosis and extreme facial dropsy was most remarkable. There were ascites and extreme dropsy of the lower part of the trunk and legs. The cardiac impulse was slightly more forcible than normal, and was placed in the fifth interspace, just internal to the nipple line; there was increase of cardiac dullness to the right; there was no murmur. The veins of the neck were very full, filling from below as well as from above, and they had a pulsation which was ventricular in time. There was diffuse bilateral bronchitis, and dullness at both bases behind. The respiration was always rapid, 48 to 64 a minute. The chest wall was very thinly covered, and was free from oedema. There was no cough or expectoration. The pulse was 96 on admission, but four days later rose to 128, and remained frequent till death. The temperature was subnormal till the last four days of life—that is, till after drainage had been carried out. Vaginal examination revealed nothing but the signs met with in cases of ascites. The very scanty urine was examined five times, and always revealed the presence of albumin, from a trace to a cloud; there was no pus or blood, but numerous granular and a few hyaline casts were found. She was only sick on two occasions on one day. The ascites and dropsy resisted all treatment by means of drugs, so that there was no alternative but to try the effect of drainage by means of incisions over the malleoli. By this means sixteen pints of fluid were removed, and by the tenth day after her admission she was feeling very much better, the facial dropsy disappeared, and the chest cleared so much that adventitious signs could be made out at the extreme bases only. The respiration and pulse, however, remained frequent, and eleven days after admission she began to wander, a few petechiae appeared on her feet, and she died thirteen days after admission. The funduses of the eyes were normal. The systolic blood pressure varied from 96 to 100 mm. There was marked pyorrhoea alveolaris.

The only point which seemed clear to me was that one cause of her death was the failure of the right heart, and I made the provisional diagnosis of morbus cordis.

The findings at the *post-mortem* examination were varied in the extreme. The pericardium contained 6 oz. of clear fluid, and was free from inflammation. The heart weighed 9 oz., and revealed no abnormality but a dilated right ventricle and enlargement of the tricuspid orifice. There were old cavities at the apices of the right upper and lower lobes, and the remainder of this lung was hyperaemic and showed many tubercles with fibrosis around them. The left lung and the bronchial glands showed tubercles; both pleurae were universally adherent. The intestines were normal, and there was some ascitic fluid present. The spleen was enlarged, and showed no tubercles. The liver showed some perihepatitis and slight "nutmeg" change. The kidneys were of normal size, each weighing 4½ oz.; the capsule stripped with difficulty, and the surface was red and finely granular; the cortex was of normal width and the renal vessels were normal; cysts were seen in each kidney; microscopically, there was considerable interstitial fibrosis and round-celled infiltration; glomeruli as a rule were normal; vessels free from endarteritis. Some of these changes may have been suspected by you, but the following features were also discovered: The right middle ear was full of pus, there was a soft yellow tumour growing from the inner aspect of the dura mater indenting the right cerebellar lobe but not adherent to it, and of a non-inflammatory nature; there was a chronic gastric ulcer as large as a shilling near the pylorus and lesser curvature, and having for its base the pancreas; there was tuberculous ulceration of the walls of the uterine cavity; both Fallopian tubes showed extensive tuberculous caseating pyosalpinx, and there were cysts in both ovaries, the larger being the size of an orange.

Comment is hardly necessary in such a case, except to point out the chagrin of the clinician concerned when, after diagnosing successfully one lesion, several other lesions he did not diagnose were brought out at the *post-mortem* examination—sclerosis of the kidneys, otitis media, a cerebellar meningeal tumour and gastric ulcer, and tuberculosis of the lungs, uterus, and Fallopian tubes, and, lastly, double ovarian cysts.

Case III.—*An Example of the Confusion wrought in the Clinical Picture and of the Harm done to a Patient by Exclusion of Carbohydrate from the Diet.*

A married woman, aged 44, suffering from severe haematemesis—three pints during forty-eight hours before admission—giving the following history: Ten years and five years previously she had had severe dyspepsia, pain, and vomiting. Two years ago she had another bout of pain associated with nausea only, and a less severe attack had occurred four months before admission. There was nothing of moment in the family or personal history, except that it was known she had taken alcohol freely of late. She was well nourished but very pale; the mouth was dry and she was very thirsty. The pulse was 108, respirations 22, temperature normal. There was no abdominal tenderness. The maximum impulse was in the fifth space in the nipple line, and a loud systolic murmur was heard at the apex and at the pulmonary cartilage. The central and peripheral nervous system and the urinary functions were normal. She was at once put on rectal feeds.

On the day following admission—that is, April 23rd—she felt better, but was thirsty, gradually got more blanched, and became very restless. Morphine was administered. Pulse 96, temperature 98.8°, respiration 24. On April 24th she was better in the morning, but as the day wore on she became faint and restless again. The two systolic murmurs could not be separated, a very loud systolic murmur being heard all over the precordium. Pulse 112, temperature 100°, respiration 28. Morphine was again administered.

On April 25th, with blood still present in the stools and of recent date, it was decided to operate. Ether was administered after an injection of scopolamine, morphine, and atropine. A chronic ulcer was found near the cardiac orifice, 2 cm. in diameter. The ulcer was stitched across and gastro-jejunostomy was performed.

On April 26th, the day following the operation, she felt fairly well, and peptonized milk or albumin water was administered, which she retained well. The pulse was still rapid, 116. On April 27th the picture changed completely, and from being a placid woman, reasonable and appreciative of all that was being done for her, she became very restless and violent, and occasional quiet was varied by frequent delirious bouts, and the pulse failed. She presented much of the appearance now of grave mental disturbance, and, to our complete discomfiture, the plantar responses, from being flexor, were now extensor on both sides. Speculation as to the cause of this change was very varied, and included possibilities of delirium tremens, meningeal inflammation, cortical thrombosis, etc. Nothing more could be done than to administer sedatives, and she died at 3 p.m. on that day.

At the *post-mortem* examination the surgical operation was found to be quite successful, but a second small acute ulcer was found not far from the one operated upon. The liver was pale and showed fatty degeneration. The kidney capsule was rather freely adherent to the cortex, especially at the sites of small scars, which caused the surface to be irregular. The heart was dilated, and its muscle showed the familiar "tabby cat" striations. The brain and lungs were quite normal. In contrast with the first two cases, this one showed nothing at the *post-mortem* examination which could account for death or the development of the extensor responses.

I have no absolute proof, but I suspect that the prolonged use of rectal feeds without the use of glucose as an ingredient was responsible for the clinical puzzle and the death of the patient. My reasons for thinking so are that two other cases, one an elderly lady and the

other a child, both developed almost identical features after operation; the one was saved by giving large doses of homely sodium bicarbonate, and the other was given glucose—in the one case overcoming acidosis after development and the other preventing it assuming fatal proportions.

CASE IV.—*An Example of how Suppression by the Patient of a Fact in her History completely Misled the Clinician, and also of the Fact that Treatment Destroyed the Patient.*

This case is one the circumstances connected with whose death became a subject of public interest. She was a single woman aged 23, a servant girl, and from a clinical and pathological point of view was of extreme interest. The details of the illness were not without their comical side, though the final opinion to be expressed upon them must be that it was extremely tragic and pitiable.

She was first of all admitted to the diphtheria ward of the hospital because both tonsils were covered with a whitish-yellow membrane. The Klebs-Loeffler bacillus was looked for, but the cultures, etc., were negative. For reasons connected with the cleaning of the ward, she was transferred to a fever hospital. The authorities there were also unable to find the Klebs-Loeffler bacillus, though the appearance of the throat left no doubt as to the nature of the illness. At the end of a fortnight we were requested to take her back, because, although the membrane had disappeared, the patient had vomited incessantly, bringing up blood, so that a diagnosis had been made of gastric ulcer complicating her diphtheria.

On readmission she was found to be wasted, and the abdomen was much hollowed and retracted, recalling the appearance of the abdomen (boat-shaped) met with in chronic meningitis. She complained of pain in the upper abdomen, but it was difficult to say whether it was due to subjacent ulceration or to the strain of the recti muscles brought about by the incessant vomiting. Despite her wasted appearance she retained a good colour. Beyond the fact that she was rather listless her nervous system was quite normal. The temperature was not normal, but rose now and again to about 100°; there was nothing suggestive in the chart beyond the irregularity of the fever. On one occasion a few râles were heard at the right apex; they soon disappeared, and as there was no sputum at that time tubercle bacilli could not be looked for. The heart revealed no abnormality, and the catamenia were quite regular up to six weeks before admission. The material vomited contained food taken, and was acid. In order to obviate any further vomiting she was fed per rectum, and continued to be so fed for eight weeks. I was so puzzled by the appearance of the abdomen and the symptomatology that I asked the advice of a surgical colleague, who was unable to say she had a gastric ulcer, and proposed not to operate. My own opinions varied; sometimes I felt convinced she had tuberculous peritonitis, at others that she was a case of anorexia nervosa, and always there was the possibility of a gastric ulcer. The case excited great interest, and I subsequently sought the opinion of a medical colleague, and on his expression of the opinion that she had a gastric ulcer, my surgical colleague was reluctantly persuaded to operate. Lateral nystagmus was observed. During the eight weeks prior to operation two superficial skin abscesses had developed—one on the right thigh and one on the back—they were opened, and contained staphylococci. Operation for gastric ulcer was performed on February 27th, and as a preliminary a soft oesophageal tube was introduced into the pharynx, but could not be passed successfully by several different operators; at last, with difficulty, a stiff tube was passed into the stomach. On exploring the stomach thickening was found near the pyloric orifice of the stomach; the stomach was opened, and after ascertaining the presence of an ulcer bordered by rather thick edges and much infiltration, the surgeon performed gastro-enterostomy.

The signs and symptoms which developed after the operation were most puzzling. The temperature now became more constantly elevated; the patient took food by the mouth and was less sick, but she was far from being much relieved. Pain developed at the front of the right chest low down, and a few râles were heard over the liver area. Yellow expectoration was coughed up, and on microscopic examination was found to be free from tubercle bacilli.

On the tenth day after the operation nervous manifestations set in, which were extremely difficult to explain. The external recti of both eyeballs became weak, so that there was a tendency for the optic axes to converge, although the patient could deflect each eyeball outwards in concomitant action. The lateral nystagmus noted before operation was still present and more exaggerated. The knee-jerks could not be obtained; there was no ankle clonus, no Achilles jerk, no Kernig's sign, but well marked and persistent double extensor plantar response was observed. There was no paralysis of the limb muscles, no sphincter weakness, and the mental processes were normal; there was no headache. The fundusses of the eyes were examined; a fairly large haemorrhage of some days' date and some smaller ones were found in the right retina, and some older ones in the left eye. Four days after the onset of these nervous phenomena the patient sank and died.

Difficult as had been the diagnosis, up to the operation, it was still greater when the nervous signs had developed, and I could but feel that some grave change had occurred within the head, which had led at least to the development of a double extensor plantar response, meningitis being to me a likely explanation. Lumbar puncture was not performed as the patient was so ill.

At the *post-mortem* examination a small cavity was found at the apex of the right lung, and the lung in the neighbourhood showed numerous miliary tubercles. At the right base an irregular patch of pneumonia was found; the left lung was normal. The oesophagus at the level of the trachea was narrowed and the mucosa destroyed. An ulcer was found near the pylorus, which did not conform in type to the ordinary gastric ulcer, but which caused considerable stenosis. The operation area was quite healthy, and the gastro-enterostomy was quite successful. There was no peritonitis, and all the remaining organs, including the brain, were normal.

At this stage a communication was made by the mother to the effect that, knowing of the critical condition of her daughter, she had ransacked a chest of drawers and found an envelope containing a letter, in which the daughter made the statement that, fearing she would become pregnant, she had swallowed some hydrochloric acid.

It thus became clear what was the nature of the whitish-yellow membrane on the tonsils, and what was the cause of the oesophageal stricture (? basal pneumonia) and the gastric ulcer.

As to the nature of the toxic process which so long after the swallowing of the acid had led to retinal haemorrhages, to the paresis of the external recti, to the nystagmus, and to the double extensor plantar response, little can be advanced beyond the possibility that some or all were associated with the prolonged rectal feeding and acidosis. To complete the story it must be stated that the uterus was quite normal and there were no signs of pregnancy. So far as I know retinal haemorrhages have not been described as a feature of acidosis. The only truly satisfied observer was my house-physician, who had detected evanescent signs which made him think of pulmonary tuberculosis, exactly over the site of the tuberculous lesion found in the lungs.

CASE V.—*An Example very probably of Quincke's Serous Meningitis.*

A young woman aged 28, a telephone operator, on going home from work on January 13th, felt so out of sorts and "shivery," that she decided to call on her doctor on the way. He found she had a temperature of a little over 99°, and thinking she had a "cold," advised her to go to bed at once, and stay there for a day or so instead of continuing with her duties. She did so, but four days after seeing her doctor her "legs gave way" on trying to get up, and she gradually became lethargic and semicomatose. When I first saw her she had been in this condition for seventy-two hours; she had been persuaded to swallow food with difficulty, and I found her lying on her side curled up in bed. She was incontinent of water, and the bowels were constipated. Two years previous to this illness she had fallen down the spiral staircase in the telephone exchange; her legs were much bruised, and she was unable to work for three months. Even then she never became herself again. She had pain in the back of her neck, and instead of joining with the rest of the family in evening games and occupations, she would sit quietly apart from the rest, rather listless. Her father had died at the age of 52 of heart disease, but her mother, brothers, and sisters were quite healthy.

She was admitted to the hospital on January 22nd, and during her stay of a little over two days her temperature (rectal) never reached more than 97.4°, the heart-rate was (?) 40, 40, 60, 52, 50, 48, (?) 40, and 40 on the occasions on which it was counted, and the respiration-rate on the same occasions was (?) 12, 12, 16, 9, 10, (?) 16, and 10.

She was well developed and well nourished, almost completely unconscious, lay curled up in bed, and resisted all attempts to move her limbs. The breathing, though slow, did not show any periodicity. A faint tache cérébrale was elicited. Kernig's sign was obtainable on both sides; attempts to flex the neck did not provoke pain so far as could be told in her semiconscious state. The pupils did not contract briskly to light, and dilated and contracted in slow hippus without apparent cause; the conjunctiva was insensitive or almost so. Occasionally the eyes were kept constantly turned to the right. There was no paralysis of any of the muscles, no spasticity or flaccidity, but general tendency to flexion of the limbs. Occasionally there were slight movements of the arms and fingers. All the reflexes of the arms were absent or greatly depressed. Both knee-jerks and both Achilles jerks were absent, and the plantar responses, when obtained, were flexor; ankle clonus was absent, and with difficulty the abdominal reflexes were obtained in the upper left and lower right quadrants. The eye funduses showed no abnormality of the discs or retinae. Constipation was so marked as to require croton oil for its relief. With difficulty a catheter specimen of urine was obtained, and a good cloud of albumin was discovered on two occasions. There was no sugar. Feeding was carried out by nasal tube. Two attempts were made to obtain spinal fluid by puncture and without success. The difficulty of the case was so great that I asked a surgical colleague to confer with me. We both felt that some intracranial lesion was responsible for the symptoms and signs, and we were greatly influenced by the history of mental change, the pains in the neck, the slow pulse and remarkably slow respiration, the subnormal temperature, and the abolition of reflexes and incontinence of urine. The slowness of the pulse and respiration suggested some subtentorial pressure which was acting upon the medulla. Operation was carried out and the skull opened in the left cerebellar fossa, the opening being continued into the foramen magnum. The dura mater bulged and the cerebro-spinal fluid escaped through a small hole in it at considerable force.

The dura mater was opened freely, and further exploration was deferred until some more favourable opportunity. The opening of the dura mater was promptly followed by a restoration of the breathing to normal—that is, 16 a minute. Unfortunately, however, little else improved, and the patient sank and died within about twelve hours after the operation. I adhered to the possibility of a subtentorial tumour being the cause of the symptoms.

You will scarcely credit it, but the fact remains that the only abnormality found at the necropsy was a mild acute appendicitis, which obviously could not have been responsible for the changes which, beginning two years previously after the fall down the staircase, had culminated in such a curious final picture. The brain revealed no abnormal features, but then it must be remembered that operation with drainage of the cerebro-spinal fluid had probably altered the true condition of affairs. Judging by the clinical features and by the escape at the operation of cerebro-spinal fluid at considerable tension, it seems quite likely, in the absence of other pathological signs, that my patient was an example of Quincke's serous meningitis.

I now will task your patience by one further instance of diagnostic failure. The case is one which personally I feel is a milestone in my progress or the reverse on the road to becoming a physician. Like most beginners I have hitherto felt that molar and molecular death should be accompanied by the discovery of some physical or chemical signs indicative of the cause. In some of the cases I have rehearsed such cause was physical and in others there was reason to believe it was chemical. In the present case I am compelled to admit that the cause was one which conformed to neither, and, for want of evidence to the contrary, I am obliged to admit that at last I have seen death occur, not from anatomical disturbance, including trauma, and not from chemical poisoning, using the term in a broad sense, but from disturbance of vital function by depressing circumstances—indeed, I have at last seen what might be called a physiological death. I do not say I was ignorant of such possibilities, but simply that I had never had the opportunity of seeing such a case and of verifying it by *post-mortem* examination.

CASE VI.—*An Example of Death caused purely by Mental Depression and Excitement.*

A gentleman who had amassed a considerable fortune decided at the age of 60 that he would retire from active work and spend the rest of his days in leisure and in the discharge of duties other than personal ones. He had always been a perfectly healthy man, had never known illness, was a keen sportsman, and led a life which was hygienically perfect. He came of a most healthy stock, free from any trace of insanity or mental weakness. When I say that he invested his wealth in one large commercial enterprise at the age of 60 in order to free himself from keeping watch over a multiplicity of investments, it may be questioned whether after all he had not betrayed his one and only departure from mental balance and sanity.

The fact remains that up to this date his business acumen and judgement had been of a first-rate order. The investment he made turned out badly, and though he was far removed from bankruptcy by this turn in his fortunes, he began to sleep badly a month before he died. Restlessness developed and within a week before death he showed his first delusion. Acute mania developed, and without showing any physical signs of ill-health, he died in a second attack of cardiac failure, the first occurring twelve hours beforehand. The *post-mortem* findings were *nil*. Such forms of death are familiar to alienists, but they are not familiar to those of us who do not spend our energies in the care of insane patients. The experience was to me unique, and seems to bring home to me that my diagnostic failures are after all nothing more than confessions of ignorance of pathology, of physiology, or of faulty history taking. This last case impresses me, and will do so for all time, with the fact that mind is superior to matter, that it can triumph over matter—in fine, the "ego" is after all an element which, if robbed of its normal balance, can play havoc with its tenement.

A COMPARISON OF INFLAMMATION AND TUMOUR FORMATION.*

BY

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PROFESSOR RUTHERFORD MORISON has said that "the tissues react to irritation in two ways: by blood changes and cell proliferation." Inflammation is defined as "the reaction of irritated and damaged tissues which still retain vitality," or "a series of vital changes which occur in the tissues in response to irritation." The irritants are either non-infective or infective; the former comprising mechanical, electrical, chemical and thermal agents, and such things as *x* rays, etc.; the latter including the micro-organisms.

Inflammation may be either acute or chronic, though all gradations are met. Both varieties may be produced by the non-infective or infective irritants. When due to the non-infective irritants the type is determined by the severity of the irritation, whereas, when due to the infective irritants, it is generally determined by their nature—for example, acute inflammation is most commonly produced by the pyogenic bacteria, while chronic inflammation is usually dependent upon tuberculous or syphilitic infection. The degree of inflammation depends, in the non-infective variety, upon the quantity of the causative stimulus, whereas in the infective it depends mainly on its quality.

In *acute inflammation* the blood changes are at a maximum, while the local cell proliferation is, speaking roughly, just sufficient for the repair of the tissues damaged in the process. In such a case the cell proliferation may lead to the regeneration of the tissue destroyed, or, as more usually occurs, the damage is

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repaired by the development of fibrous tissue—that is, a scar.

In *chronic inflammation* the blood changes are less marked, while the cellular proliferation is increased and usually in excess of that required for repair. The result of this is the production of tumour-like formations, the granulomata, which are responsible for the frequent difficulty in distinguishing between tubercle, syphilis, and malignant disease.

Inflammation, however, is not the only response to irritation which we meet with. Some tumours are undoubtedly the direct outcome of irritation, others present indications of their dependence on such a cause, while in a large proportion of them no evidence is at present to hand as to their mode of origin.

The following are some examples of tumours certainly or probably depending on irritation of some kind for their production.

Lipomata.

In those whose work it is to carry luggage or heavy weights on the shoulders—for example, porters—it is not uncommon for a lipoma to develop at the site of irritation, that is, in the subcutaneous tissue on the back of the shoulder region. These are not all of the nature of bursae.

Subsynovial lipomata—for example, lipoma arborescens—commonly occur in cases of osteo-arthritis. Here a chronic irritative condition is present in the joint.

In adiposis dolorosa (Dercum's disease) symmetrical deposits of fat develop, usually with pain, as a rule on the trunk. In some of these cases thyroid insufficiency exists, and the exhibition of thyroid extract may relieve the pain and lead to a diminution in size of the fat deposits.

The so-called "diffuse lipoma," perhaps best seen in the neck, is commonly met with in alcoholics.

In this connexion may be mentioned the excessive deposits of fat associated with tuberculous, syphilitic, or malignant foci, perhaps most commonly in affections of the alimentary canal.

In these examples we find lipomata dependent on mechanical and chemical agents for their production.

Fibromata.

A multilobular fibroma has been found arising in the upper jaw, like an epulis, from the irritation of a tooth plate, and keloids are not rarely found at the site of pressure or sustained irritation. These latter are fibromatous or fibro-sarcomatous in nature.

Fibromyomata.

It is common knowledge that "fibroids" are especially likely to develop in the uterus of nulliparous women, and it is also true that, when the ovarian secretion is suspended, as at the menopause or after oöphorectomy, they may very much diminish in size or disappear. Such an event would suggest the presence of some substance in the ovarian secretion responsible for their appearance. *Adenomatous enlargement of the prostate*, similarly, may entirely disappear as the result of destruction of the testes, by disease or operation.

Papillomata.

Papillomata present some interesting features in relation to the present consideration.

No doubt is entertained of the infectivity of the ordinary skin wart—verruca vulgaris—and the infection may be spread to other parts of the same individual by rubbing, etc., or to other individuals by the common use of towels, and so on. Some infective irritant, which we cannot define, appears to be their direct cause, and the spread of the disease is unquestionably to be attributed to the spread of the infection. There is another variety of wart, in which the skin presents a more or less shrivelled and atrophic condition, associated with chronic irritation—for example, in paraffin workers, after *x*-ray application, following exposure to sun and weather (sailors), and also in senile atrophy of the skin. In all of these the warts are similar, are apparently non-infective, and, when knocked off, give rise to ulcers, which are very slow to heal and are especially likely to become epitheliomatous. The application of irritating dressings to them increases their activity; bland substances must be used.

Again, other irritants may produce papillomata. Thus infective discharges—for example, gonococcal and intestinal—may give rise to them. In gonorrhoea they are seen typically on the vulva and perineum of females and in males round the corona of the glans penis in cases of phimosis; in the case of intestinal discharges they are seen best in the rectum. The removal of the irritating discharge leads to the disappearance of the growths.

In the larynx, in children especially, papillomata are met with apart, so far as we know, from any infective discharge, and tracheotomy leads to their disappearance.

In the secreting glands retention of the secretion often leads to the appearance of papillomata, apparently from the irritation of the retained secretion. Thus, in hydronephrosis from stricture of the ureter, the pelvis and dilated calyces may be covered with small warty growths, and, in the breast, retention of secretion often leads to papilloma in the galactophorous ducts. These examples might be multiplied.

Finally, in adenomata of the glands, especially where cysts develop from the retention of secretion, papillomata are likely to develop. They are seen in adenomata of the salivary glands, thyroid, pancreas, prostate, ovary, testis, and breast. In these cases an infective element is almost certainly out of account. The case of ovarian adenomata with papillomata inside them is of considerable interest. The papillomata may spread through the wall and appear on the peritoneal aspect of the tumours, and subsequently all over the peritoneal cavity. A condition of ascites develops, and everywhere papillomata are seen. Should the offending ovary be removed, all the papillomata may disappear and the ascites entirely clear up.

In the case of the so-called malignant tumours, we can only speak of irritation as a predisposing cause, and I need only mention some of the common examples to bring to mind its very great importance.

The frequency with which sarcoma develops at the site of a recent injury, often severe, precludes the possibility of coincidence.

The irritation which predisposes to carcinoma is chronic in type, and in connexion with it I will quote a passage from Professor Morison's book:

> The smoker's lip, the chimney-sweep's cancer, the paraffin worker's ulcer, the *x*-ray cancer, are popular knowledge. Chronic superficial inflammation (leukoplakia) of the tongue and cheeks, the vulva and penis, so often end in cancer that they are frequently and well described as pre-cancerous conditions. The irritated scar of a burn sustained in youth is certain to develop an epithelioma before the patient arrives at the age of 50. The skin of a face frequently exposed to every variety of weather is likely to develop skin cancer. The breast change described as chronic interstitial mastitis is frequently followed by cancer.

To these might be added the presence of calculi as a predisposing cause of carcinoma of the biliary and urinary systems.

[Mr. Saint here quoted two passages from the leading article on the production of tumours by viruses published in the BRITISH MEDICAL JOURNAL of February 14th, 1914.]

Classification.

For purposes of classification tumours may be divided into non-infective and infective, instead of simple and malignant. The terms are not quite synonymous. The non-infective are comprised entirely of simple tumours, but the infective include not only the malignant growths, but also such definitely infective neoplasms as the papillomata referred to above.

When considering tumours we have to deal not only with the tumour itself but also with the surrounding inflammatory reaction in the tissues. This inflammatory reaction, which doubtless is due in great measure to the presence of the tumour acting as a foreign body, is not wholly so, for, as is well seen in the cancerous growths, it precedes the appearance of any actual tumour. We must thus look upon it as a part of the process of tumour formation, and we therefore see that, even as in inflammation, the process consists of blood changes and cell proliferation, but in this case the blood changes are at a minimum, the cell changes at a maximum.

As inflammation may be either acute or chronic, so also may the process of tumour formation, as evidenced chiefly by the rate of growth. This applies to both non-infective and infective tumours. The tumour itself and the associated surrounding inflammatory reaction vary directly, one with the other, so that in the acute or rapidly growing

tumours a correspondingly acute inflammatory condition surrounds them, while in the tumours of slower growth there is a less acute inflammation. With the slower growth there is necessarily a more definite formation of fibrous tissue, and hence a better defined so-called "capsule," and vice versa.

General and Local Symptoms and Signs.

In inflammation there is a general condition of inflammatory fever, usually absent, or very slight, when due to non-infective causes, and more marked when due to infective organisms. In the tumours a close parallel exists—in the non-infective or simple tumours no general reaction is manifested, while in the infective tumours fever may be present, especially in those described as acute.

The local evidences of inflammation are redness, swelling, heat and pain, and impaired or arrested function. The redness, heat, and pain are, perhaps, especially marked in the acute, while the swelling forms a more prominent part of the chronic variety. In tumours, when slow-growing or chronic, the swelling is all-important, no redness or heat being present; while in the more rapidly-growing or acute types so much redness and heat, and perchance pain, may be associated as to give rise to the diagnosis of an inflammatory condition. This is consistent with what I have said about the associated surrounding inflammation.

The local terminations of inflammation are resolution, fibrosis, or partial or total destruction, which are determined by the degree of interference with the blood supply of the part. The fibrosis is either a primary development or secondary to partial or total destruction, destruction of tissue being for the most part remedied by the development of fibrous tissue.

How do tumours compare with this?

Resolution.—There is no doubt that this occurs. The commonest example we find in the papillomata. I have already mentioned the disappearance of papillomata when the irritant was removed—namely gonorrhoeal warts, rectal and laryngeal growths, and also those in the peritoneal cavity secondary to papillomatous ovarian cysts. It is well recognized, too, that infective skin warts frequently undergo spontaneous disappearance. I have described above the possible disappearance of fibromyomas of the uterus, adenomata of the prostate, and the fatty deposits in adiposis dolorosa. To these I might have added the fat of the diffuse lipomas and also the keloids, which not infrequently disappear when all irritation is removed. But in malignant tumours also examples of resolution are found, perhaps the best in cases of chorion-epithelioma, where removal of the primary focus has led to the disappearance of the secondary deposits. The same may be said for cancer.

Fibrosis.—So much has been said of the part played by fibrous tissue in carcinoma that I need not enter into details concerning it. The perilymphatic fibrosis of Sampson Handley concerns particularly the local extensions of the growth, while the fibrous development in the tumour itself is responsible for many of the clinical signs by which we diagnose the condition. Doubtless the contraction of the increased fibrous tissue formed around the slowly-growing tumours plays some part in the impairment of vascular supply to the tumour, but at the same time we must recognize the tendency for neoplasms to outgrow their blood supply and so to produce a relative ischaemia. This fibrous tissue formation is not limited to cancers, but may be present in non-infective tumours, when of some duration.

Partial Destruction.—In inflammation this is seen in ulceration, caries, abscess formation, and sloughing, and consists in molecular death of the part, or death in very small portions. In tumour growth it is paralleled by degeneration of the tumour tissue, due, as in the case of inflammation, to a more marked impairment of the blood supply than that necessary to produce fibrosis.

Total Destruction.—In the process of inflammation, should the blood supply be completely arrested, the part undergoes total destruction, and the same applies to a tumour—for example, from torsion of the pedicle of an ovarian growth the vessels may be thrombosed and the entire tumour slough off, and the same holds good for extruded uterine polypi, etc. Allied to this we have the degeneration of the tumours in large masses. As in inflammation, a secondary development of fibrous tissue may follow degeneration or death of a part or the whole of a tumour.

Calcification is no uncommon final stage in the history of an inflammatory focus, generally indicating the successful combating of the cause and the cure of the condition. Further, we know that calcification only occurs in dead or dying tissue. Precisely the same occurs in tumour growth, and when degeneration or death of the growth has occurred, calcification may follow and so cure the condition. Seeing that the malignant tumours mostly progress till the death of the patient is produced, this process is most usually seen in the non-infective growths.

Complications.

The complications of tumour growth form an exact parallel with those of inflammation, and depend upon: (1) Extension of the process; (2) healing, especially the development of fibrous tissue; (3) superadded irritation, especially secondary infection, inflammatory or malignant.

Extension of the Process.—When inflammation is due to the non-infective irritants, extension is limited to an increase in the local conditions, and no general effect is produced. When, on the other hand, it is due to the infective irritants—that is, organisms—extension occurs by: (1) Direct transmission—that is, by the natural passages, by wounds, or contiguity of surfaces; (2) continuity of tissue; (3) by lymphatics; and (4) by the blood stream. In the last type the condition may be one of sapraemia (that is, toxaemia), pyaemia (with the discharge of septic emboli into the circulation), or septicaemia (with organisms free in the blood), while a condition known as acute pyaemia may be present, which is a combination of pyaemia and septicaemia. In the tumours exactly the same conditions are found. In the non-infective tumours extension of the process is limited to an increase in the local conditions—that is, the size of the tumour, whereby the mechanical effects are increased. No general effects are produced. In the infective tumours, on the other hand, the modes of spread are the same as we have seen in inflammation due to organismal infection. Thus we have:

1. Direct transmission—by the natural passages. Rare cases have been described in which a deposit of carcinoma in the stomach has appeared secondary to a primary focus in the mouth or oesophagus, and it is possible that those cases of so called multiple primary carcinomata of the colon may have a similar explanation. Infection by contiguity is less rare, and we have examples in the involvement of contiguous serous surfaces—for example, peritoneum or pleura, in the apposed labia majora, where epithelioma of one side may affect the other, and possibly in those doubtful cases of carcinoma of the penis in the husband associated with carcinoma of the cervix in the wife.

2. Extension by continuity of tissue requires no special comment, seeing that it is so commonplace an event.

3. Extension by lymphatics also requires little comment, except that, while it may occur along any of the lymphatic lines, it does so particularly along that of the main drainage of the part. In carcinoma it is more commonly met than in sarcoma.

4. In extension by the blood stream the analogy to inflammation is maintained. Comparable to sapraemia we have the cachexia of malignant disease. In some cases the patient may die profoundly toxic, and *post-mortem* examination disclose only the primary tumour, uncomplicated by any secondary infection, and without metastases.

The ordinary, so-called "chronic" pyaemia is represented in those cases in which emboli from the primary focus reached the blood stream, some being wholly and some partly destroyed, and some giving rise to secondary foci of disease—a similar sequence of events to that found in pyogenic infections. This blood infection is commonest in the sarcomas, but is also found in the carcinomas.

We find the analogies of septicaemia in the leukaemias, in one—namely, chloroma—associated with greenish deposits of sarcomatous tissue, especially in the skull bones. I remember Professor Murray referring to a case in which a medical man performed a *post-mortem* examination on a

case of Hodgkin's disease, and was himself dead within a few weeks of the same condition. The view taken was that he had been infected at the time of the necropsy, and the acute attack which developed simulated septicaemia. Perhaps, however, I ought not to mention Hodgkin's disease in the present connexion.

Again, there are certain cases which appear to be comparable to the acute pyaemias. In these, while the disease may have progressed slowly for some time, we finally get a rapid generalization of the condition with miliary deposits, affecting perhaps chiefly the skin, or diffused throughout the body, and the patient rapidly succumbs. Such cases may be seen in the melanotic sarcomas, or the carcinomas affecting the secreting glands—for example, breast and pancreas.

Healing.—As in inflammation, apart from the occurrence of resolution, fibrosis, either primary or secondary to partial or total destruction, plays a large part in the cure or attempted cure of the condition. The contraction of the fibrous tissue may lead to the same complications in tumour growth as it does in inflammation—for example, stricture of the hollow viscera with obstruction to the outflow of contents, as in intestinal obstruction, retention of urine, etc.

When tumours occur near a surface, there is a tendency for them to become pedunculated, and this, while curative in essence, may also lead to complications. Thus in the hollow viscera, when pedunculated, their attempted expulsion may cause inversion of the viscus affected—for example, intussusception of the intestine, prolapse of the rectum, inversion of the uterus, etc. In the serous cavities their pedunculation may give rise to torsion. The same remarks apply to inflammatory masses, though perhaps they are affected less frequently.

Secondary Infection.—As in inflammation, the secondary infection may be inflammatory or malignant. When inflammatory, it may cure the primary condition, as is well seen in Coley's treatment of sarcoma, but this is not common. The usual result is an increase of both local and general destructive effects, and often a great part of the cachexia present is due to the superadded sepsis. An example of this is seen in the tuberculous foci, which may be completely eradicated by a secondary infection, but are usually rendered much more virulent and destructive. Again, the development of malignant disease on an inflammatory focus is by no means uncommon. Examples may be found in the occurrence of carcinoma on bilary or urinary calculi, or on a chronic ulcer of the leg or stomach, while one expects an epithelioma to develop in due season on a tongue affected with chronic superficial glossitis.

I need not emphasize the predisposing effect which a "simple" tumour has in the subsequent development of malignant disease, but such a development is by no means uncommon.

In illustration, we may take the affections of bones, especially the long bones, in inflammation and tumour growth, to demonstrate the striking similarity between them.

In young bones—that is, before union of the epiphyses—inflammation, both acute and chronic, commences in the region of the epiphysis, on the shaft side of the cartilage, and may remain limited to this position or ultimately affect the whole shaft. Thus we see it in acute septic osteitis, in tuberculous and syphilitic disease, and in the last especially is the tendency to spread to the shaft marked. In the tumours also, whether simple or malignant, the same region is involved. Thus exostoses, which are the commonest simple tumours, are found here; and sarcoma, whether myeloid, endosteal, or "periosteal," is similarly situated. Further, not only is this region common to both conditions, but the same ends of the same bones are more especially chosen in both—that is, the more active epiphyses. Thus, the commonest parts to be affected in both inflammation and tumour growth are the upper ends of the tibia and humerus, and the lower ends of the femur and radius.

In adult bones, on the other hand—that is, after union of the epiphyses—in neither inflammation nor tumour growth is the epiphyseal region specially selected; and further, in both, whereas previously the bone itself was particularly affected, the subperiosteal tissue is now the most involved. Thus, in acute inflammation, we no longer have the typical acute osteitis mentioned above, and the best example of a blood infection, which is rare, is the pyaemic deposit in typhoid fever—that is, the typhoid node. This is usually about the middle of the shaft, and subperiosteal. Similarly tubercle, when it affects adult bones, occurs as a subperiosteal deposit, and does not choose the epiphyseal regions particularly. This is best seen in tuberculous disease of the spine. Further, syphilis is manifested most commonly in the subperiosteal gumma, which chooses the region of the middle of the shaft of the long bones. In sarcoma the same remarks hold good, and in adult bones quite a large proportion are found away from the epiphyseal ends. The tumours are mostly classified as osteo-sarcomas, and here again the subperiosteal tissues appear to be affected most. This was very well demonstrated in Mr. James's Berry's address before the Northumberland and Durham Medical Society last year, when almost all the sarcomas in adult bones were situated away from the epiphyseal ends.

THREE CASES OF TRAUMATIC RUPTURE OF THE SMALL INTESTINE.

By FRANK RADCLIFFE, M.D.,

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THERE is a common belief that the more rare conditions met with at hospitals turn up in runs of three. Those who hold that view will find support for their view in the fact that we have had three cases of traumatic rupture of the small intestine in Oldham in three months. These cases are also of interest on account of the fact that they had many features in common.

CASE I.

A young, strong collier was about to send a tub of coal down an incline in a coalpit when the tub got foul of the line; he stooped down to put matters right, when suddenly the tub started to go, and the rope which was attached to the rear of the tub got entangled round his arm, and he was dragged along the ground to the bottom of the incline. He was taken to the Oldham Royal Infirmary, and found to be covered with superficial abrasions. He complained of abdominal pain, but before his symptoms became, in my opinion at that time, sufficiently clear to justify operation he died, and at the *post-mortem* examination the jejunum was found torn completely across within a few inches of the duodeno-jejunal junction.

CASE II.

A strong man in the prime of life at night attempted to board a rapidly moving electric tramcar. He was seen to seize the handle, but missed his footing; he was dragged by his hands for some distance, and then let go and fell to the ground. He got up and proceeded on foot on his journey, a distance of some two miles. He then became acutely ill and died. At the *post-mortem* examination it was found that the trunk of his body was free from the slightest external sign of injury, but a transverse rupture of the small intestine, within a few inches of the duodeno-jejunal junction, was found.

CASE III.

A man of about 30, a fine specimen of physical humanity, was engaged unloading bales of cotton from a lorry, his duty being to fix two hooks into the bale and, when clear of danger, to shout to another man, who set machinery in motion, first, to wind the bale into the air, and then into the factory. He had fixed the hooks when, before he had got clear, the other man commenced the winding process. The patient clung to the covering of the bale, was lifted by his arms into the air, and fell to the floor, a distance which I could not ascertain; the patient himself said about the height of the hospital ward, but on this point the witnesses were not in agreement; he could not, however, have fallen far, because the only external injury he received was a slight bruise over the malar bone and a little discoloration of the corresponding eye.

He was admitted to the Oldham Royal Infirmary, and I saw him within an hour of the accident; he complained of abdominal pain. There was a suspicion of rigidity in the upper part of the abdomen; the pulse was good (64), and there was nothing more to suggest internal injury. I saw him again three hours later; the rigidity was more pronounced, he had vomited, but the pulse had not appreciably altered.

I determined to operate, more as a precautionary measure than because I could make any, even an approximate, diagnosis. On opening the abdomen above the umbilicus I soon found a transverse rupture of the small intestine within a foot of the duodeno-jejunal junction; the rupture extended about two-thirds of the circumference of the bowel, and about 1½ in. above it there was another partial rupture extending half the circumference of the bowel, but only through the peritoneum and not through the muscular coats. I closed the ruptures, the one in three layers and the other by a single layer of sutures, dry mopped the peritoneal cavity, and introduced a suprapubic

"cigarette drain." The upper incision was closed in three layers. On his return to bed he was put in the Fowler position and continuous rectal saline infusion given. Unfortunately he developed chest symptoms and died on the tenth day after the operation.

At the *post-mortem* examination it was found that the abdominal organs were matted together by recent plastic peritonitis. There was some lymph around the track of the drain; the rupture was closed so as to be watertight. The upper lobe of the right lung was in a condition of grey hepatization, and almost the whole of the left lung was in the same condition. He had clearly died from pneumonia, and not from the abdominal condition.

These three cases have so many points in common that it is difficult to believe that coincidence is a sufficient explanation. They were all well-developed, strong men, in the prime of life; they all suffered accidents which involved them being suddenly and unexpectedly dragged by their arms fully extended above their heads; they none of them complained of violence applied to the abdomen or showed any external evidence of severe injury to that part. Two of them were absolutely free from the slightest abrasion or bruising on the trunk; the other had some superficial skin scratches; none of them showed immediate marked collapse or such symptoms as would lead me to feel certain that any severe internal injury had occurred; each of them had a rupture of the small intestine; in all the rupture was transverse to the long axis of the bowel; and in all the rupture was within a foot of the commencement of the jejunum; and unfortunately all of them died. I have been strongly impressed by these cases, and ask myself whether the mechanism of the rupture was not as follows: When each was suddenly dragged by the arms, the chest would be forced into the position of full inspiration, and the diaphragm raised, as shown by indrawing of the epigastrium; therefore the upper abdominal organs (liver, stomach, and spleen) would be drawn upwards. The pancreas and duodenum are usually considered to be fixed, but any small movement which might take place in these organs would be in an upward direction. At the same time, as one easily finds by standing with the arms extended above the head, the lumbar spine would be markedly arched forwards, and there would be, I think, a very strong contraction of the anterior abdominal muscles made by the patient in the effort to recover himself. I find by examining thin people in this position that the anterior and posterior abdominal walls actually meet. It seems to me that the small intestine would then be suddenly and violently forced down towards the pelvis, and I ask if it is possible that the only part of the small intestine which cannot go downwards, the first part of the jejunum, is so dragged upon as to rupture transversely, just as one finds that a string fixed at one end and jerked by the other, breaks near the fixed end.

The explanation of the mechanism of these cases is of more than academic interest, because, if they can be explained in this or some similar manner, surgeons would, I think, be justified in operating in such accidents on clinical evidence which falls short of that usually associated with acute abdominal conditions, and therefore they would not lose those favourable early hours whilst waiting for indications which in injuries to that part of the intestines have often not appeared until the time favourable for operation has passed. I should not have operated as early as I did in the last of these had I not had in mind the other two cases, and remembered the vagueness of the symptoms for some time after the accident.

I am indebted to Dr. Gerrard, the pathologist to the Oldham Royal Infirmary, for the particulars of the second of these cases, and for his reports upon the *post-mortem* findings in all of them.

WE learn from the *Medical Record* that a bill has recently been introduced into the New York State Legislature which would provide at least one medical judge in each county, three in the Court of Appeals, and three in each Appellate Division of the Supreme Court, to sit when any medical evidence is to be offered. Under the terms of the bill the medical judges would be appointed for five-year terms at £1,440 a year, with an additional allowance of £100 for expenses. They would sit when any evidence as to sanity was to be given, and would advise the court and would instruct the jury as to the correctness of statements and conclusions of medical witnesses.

RUPTURE OF DUODENUM CAUSED BY A BLOW.

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THIS case is of extreme interest, as, beyond diagnosing a subphrenic abscess, I could not be sure as to the original seat of the trouble.

A Hindu, male, aged 25, stated that six weeks before admission to hospital on February 8th, 1914, a wooden plank fell from the ceiling on to his right side while he was asleep. The corner of the plank hit him over the eighth rib in the mid-axillary line. For three weeks he felt a dull aching pain, and then noticed a small swelling, and the pain became severe, especially on respiration; at the same time he said he had fever every day. There was no history of dysentery. The patient was desperately ill, extremely emaciated and in great pain; the evening temperature was 101.8° F., and the pulse 100; a dry cough was very troublesome. Over the centre of the eighth rib was a fluctuating swelling about two inches in diameter; it was extremely painful on palpation. The liver dullness was diminished, reaching to one inch above the costal margin. The abdomen was moderately swollen and hard; it was evident that chronic peritonitis was present. The bowels moved freely, the tongue was coated.

On February 9th, under cocaine, I incised the swelling in the seventh intercostal space in the mid-axillary line, and at once gas and 6 oz. of pus escaped. The odour was faecal. I then introduced my finger and discovered that the eighth rib was denuded of periosteum and very rough. I could then feel an abscess cavity in the right lobe of the liver, and that the liver had fallen away from the chest wall, so that I could only just reach it. Above I could feel the diaphragm, but below nothing. I put a large-sized drainage tube just through the chest wall, and applied an antiseptic dressing and bandage.

The temperature that evening was only 99° F., and after that remained normal. The differential blood count was as follows: Polymorphonuclears 86 per cent.; mononuclears 1.6 per cent.; lymphocytes 12.4 per cent.

The patient improved slightly, the pain being negligible, and he slept soundly. The discharge from the wound was only thick yellow pus. On February 13th I gently washed out with a weak iodine solution. He passed five loose motions a day, with a tinge of blood and slime. The pulse kept rapid, varying between 92 to 100. His condition remained the same until February 16th, when at 7.30 a.m., in spite of the strictest warnings, he suddenly got out of bed and fell back on to the bed in a state of collapse, from which he never recovered; he died at 11.45 a.m.

Post mortem it was found that the posterior surface of the descending portion of the duodenum had ruptured in the long axis of the bowel. The infection then spread round the chest wall, along the eighth rib, pointed, and then infected the liver, forming an abscess cavity. The lower portion of the right lobe of the liver was gangrenous. The peritoneal cavity contained serous fluid, and large masses of clear gelatinous matter.

The history was clear that the injury was the starting point of the illness, and after opening the abscess I realized that we were dealing with some intestinal injury, but the most careful examination of the discharge gave no clue as to what part of the intestinal tract was damaged, as nothing but small quantities of foul, thick pus were discharged through the drainage tube. The actual tear in the duodenum was closed by adhesions, and I think that, considering his wonderful vitality, if the patient had come to hospital earlier, there would have been a reasonable chance of his recovery.

CONDENSATION OBSTRUCTION IN RELATION TO PERICOLITIS AND INTESTINAL KINKING.

BY SPENCER MORT, CH.B., M.D.GLASG., F.R.C.S., F.R.S.EDIN.,
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SINCE interest has been aroused in the presence, pathology, symptomatology, and mode of formation of accessory peritoneal adhesions and bands, causing more or less definite symptoms of alimentary toxaemia, a number of explanations have been advanced. The membranes or bands associated with the names of Jackson and Lane especially have been known and noted since the advent of laparotomy. Only recently has the more correct name "appendicitis" replaced the older one of "perityphlitis";

and though actual acute inflammation arising from the appendix alone was no doubt classed under the other name, I believe that very many of the old surgeons have seen and noted a veil-like matting of the thickened peritoneal cover to the caecum, and simply regarded it as a consequence of inflammatory action. I have seen a large number of cases in which this veil was present over the intestines, and remarked on during laparotomy, without, however, any marked evidence of consequent constriction. Delore and Alamartine subscribe to a theory of repeated and mild peritonitis, which doubtless applies in many instances, as recovery from slight peritonitis is, in my opinion, very common, the complicated protective armoury of the peritoneal sac and omentum being responsible for overcoming many attacks of infection.

Lane imagines a natural reaction in the tissues, which adapt themselves to mobile or distended intestines by developing bands or adhesions as a result of crystallization of the lines of strain. Mayo considers a dislocation of embryonic arrangements of the caecum to result in a thickened pericolic membrane, and Gray and Anderson believe it to be due to excess of physiological fusion—that is, that the caecum in descending from the region of the liver carries with it a fold of omentum, which gets stretched and thinned, losing its fat, and remaining to cover the caecum. The last two theories presume the existence of a membrane throughout life, with later development, if any, of symptoms of the nature of autointoxication or stasis.

Doubtless many extraneous membranes and adhesions are due to the result of microbic action. Lane's theory also has much in its support, and accommodation of parts to altered physiological strain is but natural and reasonable; while Gray and Anderson's theory has much to commend it from anatomical grounds. When kinking occurs, symptoms appear of a gastro-intestinal, toxaemic, or coprostatic variety. Kinking may be due to gravitational pull of a loop of bowel attached by a band, it may be due to altered intra-intestinal or intra-abdominal tension, or to shrinking of the tissue of the band.

My experience is limited to about thirty-two cases of well-marked dense veil formation seen during laparotomy for appendicitis, in which all the patients were over 40 years. In volvulus, too, it is well known that young persons are not usually attacked, and in band obstruction generally, except when due to dense gross adhesion, the patient is often in middle life. I believe this age incidence is not a casual one, and that bands existing previously and without symptoms may develop to a noxious degree, as suggested by me before under the name of "condensation obstruction."[1] Old superficial scars which have been pliable in early life become puckered and hardened as years go on, especially in women after the menopause, in whom stitch marks are commonly felt as button-like prominences; a linear scar is converted into a ridge. Tissue sclerosis is a sign of age, be it in arteries, eye, bone, muscle, brain, or other organ.

In this short communication I wish to suggest, therefore, that many acute abdominal diseases, or chronic conditions, occurring in middle life, are the effect of contraction of former resilient and pliable adhesions—a form of condensation obstruction.

Reference.
[1] *Lancet*, January, 1914.

Mitzmain (*Philippine Journal of Science*, vol. viii, Section B, No. 3, June, 1913) states that surra may be mechanically transmitted by *Tabanus striatus* (Fabricus). For his experiments he used bred flies so as to eliminate fallacies which might have resulted from natural infections. He was successful three times with direct or mechanical transmission by "interrupted" feeding when only a short interval was allowed between the bites on infected and healthy animals. In sixteen experiments the minimum number of flies with which the infection could be transmitted was two. Hereditary transmission was not observed. The maximum length of time for which *Trypanosoma evansi* could be demonstrated microscopically in the gut of this species of fly after feeding on infected blood was thirty hours. The organisms were found in the fly's dejecta two and a half hours after biting the infected animal, and suspensions of flies when injected subcutaneously were found infective for animals from a period of ten hours after the flies had fed on infected blood.

FATAL CASE OF VERONAL POISONING:

RECOVERY OF THE DRUG FROM THE TISSUES AND URINE.

BY

E. RUSSELL, B.Sc., F.I.C., CITY ANALYST, BRISTOL; and GEORGE PARKER, M.A., M.D., PHYSICIAN, BRISTOL GENERAL HOSPITAL

The subject of the following notes was a patient of Dr. G. H. Barker, who has kindly allowed us to publish the case. One of us (G. P.) saw the patient in consultation with Dr. Barker, and the other (E. R.) is responsible for the analysis.

A. B., 50, a restaurant manager, had suffered for some time from mental depression and insomnia, and had on the advice of a friend previously taken veronal, but was warned by Dr. Barker not to do so. He had improved in health considerably. On November 11th he went to bed about 10 p.m., but was heard snoring loudly during the night. Next morning he was found to be deeply comatose and breathing heavily. The pupils were small, but reacted to light, and later on were moderately dilated. There was no evidence of paralysis, but all the limbs were flaccid, except for some little power of resistance in the left arm. No plantar or other reflexes could be obtained. The face was of a natural colour, the skin moist, the temperature raised by about a degree, the pulse was quickened but regular, and the blood pressure was not abnormally high. There was no rigidity of the neck, and no squint. The lungs were fairly normal, but the breathing was rattling from the accumulation of mucus in the upper air passages, and whenever the head was depressed over the side of the bed this ran out in a turbid stream to the amount of an ounce or two, with great relief to the respiration. A stomach tube was introduced, several ounces of clear fluid were drawn off, and the stomach washed out with potassium permanganate. The urine had to be drawn off; it contained neither albumin nor sugar. There was no return of consciousness, and since the patient was unable to swallow he was fed during November 12th and 13th by nutrient enemata and salines, which also contained coffee and strychnine. The bowels failed to act. Very early in the morning of November 14th he became worse, and the temperature rose to the remarkable level of 107.2°. Cold packs were employed, as a bath was not at hand, and the temperature was reduced to 104.5°. The heart acted fairly well, but one lung was now full of moist râles, and after a few hours he died.

A *post-mortem* examination was made next day; rigor mortis and hypostatic congestion were well marked. The brain was normal, and contained no trace of haemorrhage or tumour. The lungs were dark, oedematous, and congested, but no pneumonic consolidation could be found. The kidneys were normal; the liver weighed 60 oz., and was slightly fatty. The heart weighed 17 oz.; there were deposits of fat on the surface, and the muscle showed some degenerative changes; the cavities were dilated, and all contained liquid blood and *post-mortem* clots. The intestines and stomach were normal, except for a little *post-mortem* congestion on the posterior wall of the latter, near the cardiac end. The stomach contained a little grumous mucus only. A culture was made from the cerebro-spinal fluid, but no pathogenic organisms were obtained. There was no trace of injury or violence in any part of the body.

Portions of the brain, viscera, and of the urine drawn off before death were sent for analysis.

It is remarkable how little the decision of the Privy Council to include veronal under Schedule II of the Pharmacy Act as a poison is known to pharmacists.

The Search for Veronal.

Of the urine procured from the patient 175 c.cm. were examined by Willcox's method, as follows:

Lead acetate added in excess, filtered, and excess of lead removed by H_2S; the solution remaining feebly acid to acetic acid, was concentrated at a low temperature to 60 c.cm., a little blood charcoal added and allowed to stand for a few hours, filtered, and evaporated to about 30 c.cm. in a water bath at a temperature below 60° C., extracted with two volumes of ether three times, separated, and ethereal fluid filtered into a tared flask, evaporated off ether at laboratory temperature, and finally under air pump; failing to remove last traces of water by these means, evaporated in water bath below 60° C. until crystals appear.

Weight of crystals, 0.31 gram.

Recrystallized from ether, melting point 183° C.

Recrystallized from water, melting point 186° C.

Mixed with crystals of hippuric acid and succinic acid to obtain cross melting point, melting took place between 150-175° C.

Mixed with crystals of veronal, melting point 186° C., melted at 186° C.

Crystallographic appearances, both rhombic and fan-shaped, were obtained of similar character to those obtained from veronal.

Chemical reactions with Millon's reagent, a white precipitate soluble in excess.

Boiled with KOH, no reaction.

Crystals fused with KOH gave smell of ammonia, and the resulting solid had a rancid smell; the solid disssolved in water gave a slight brown colour with Nessler's reagent.

These chemical and physical reactions afforded adequate evidence that the crystals were veronal.

Portions of the brain and a mixed portion of viscera were examined by the following processes respectively: Treated with about 75 c.cm. of 90 per cent. alcohol acidified with a few drops of acetic acid, macerated and allowed to remain for twenty-four hours at 30° C.; the liquid decanted and the residue treated with feebly acid alcohol four times; the alcoholic extracts mixed, filtered, and evaporated to a syrupy consistency at about 35° C.; 200 c.cm. of absolute alcohol added and allowed to stand, filtered, and again evaporated to a syrup at 35° C.; taken up with water and turbid liquid filtered, concentrated by evaporation at 35° C. to 15 c.cm.; treated with blood charcoal and filtered; extracted with two volumes of ether four times; ether extract filtered and evaporated to dryness at low temperature. A crystalline residue showing similar physical characters to the crystals from the urine was obtained in each of these cases.

Amount of crystals from viscera, 0.0235 gram.

Amount of crystals from brain, 0.0385 gram.

On purifying these crystals a melting point of 184° C., somewhat lower than the melting point of the crystals from the urine, was obtained.

Regarding this evidence as sufficient to show the presence of veronal in the body as well as in the urine, and in view of the fact that the visceral organs were not weighed, it seemed best to construct the probable dose from the urine only. The amount of urine received was 225 c.cm.; it was taken from the bladder seventeen hours after the onset of coma; it does not, therefore, represent the total output of urine in twenty-four hours, in which time 50 per cent. of the veronal is excreted; it is not unreasonable to assume that at least twice this amount of urine was excreted, and that the deceased person took a dose between the fatal dose of 50 grains and the minimum recorded fatal dose of 15 grains.

We are indebted to Mr. F. E. Need, F.C.S., for his assistance with the analytical part of the work.

VERONAL POISONING: CASE OF RECOVERY FROM 125 GRAINS.*

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I was recently called between 8 and 9 one Monday morning to see a healthy young lady of 20, who had not appeared at breakfast at the usual hour, and could not be roused by those who entered her room. She had gone to bed quite as usual the night before, and about 11 a member of the household visited her in bed and kissed her "good-night." The patient remarked as her friend left the room, "I am glad you came to wish me 'good-night,'" and this was her last speech for four days.

I found her quite unconscious; shouting, shaking, slapping, and pin-pricks elicited no response whatever. The eyes were open, eyeballs fixed and staring, pupils semi-dilated, light and corneal reflexes abolished. The cheeks wore what seemed a natural flush, the breathing was perfectly quiet and natural and the pulse full and regular (72). There had been no incontinence of urine or faeces. The patient had been the subject of depression and of baseless misapprehensions regarding her health, which a doctor who had been consulted had tried without success to reason away; two days before a bottle of veronal tabloids had been taken from her and had since disappeared; neither this bottle nor any other clue to the drug taken could be found on looking round the bedroom.

The patient was held up in a sitting position, a cork placed between the jaws, and a stomach tube passed without much difficulty. The stomach was nearly empty, only a little colourless fluid and mucus being withdrawn. After washing out the stomach, half a cup of black coffee was introduced; about 16 oz. of urine, of normal colour, were withdrawn by a catheter. An attempt was made to administer a soap-and-water enema, but the sphincter was not acting. After hypodermic injection of $\frac{1}{30}$ gr. of strychnine, a second attempt was made, and a good evacuation of the bowel followed, after which half a pint of normal saline was injected and retained. I thought it useless to try stimulation by the galvanic or faradic current, but as some time had now elapsed since the dose of coffee, I passed a stomach tube again and gave a second half cup. This was a mistake, for it produced retching, and a little of the half-vomited material found its way into the glottis, threatening suffocation. Cyanosis remained after the choking fit was over, and oxygen was then administered; it was found most useful, not only at this stage, but in the recurring attacks of cyanosis which interrupted the progress of the case. From this point Dr. Walsh was good enough to watch the case with me, and to him I am also indebted for references to some of the other cases cited. We decided to adhere to the treatment already commenced—namely, periodical rectal injections of saline and withdrawals of urine by catheter, with oxygen inhalation for cyanosis, and strychnine hypodermically as the pulse weakened.

These measures were fortunately successful, but not without a period during which the patient appeared to be slipping downhill. It appears from the notes that the catheter was passed six times and 85 oz. of urine in all withdrawn; five saline injections were given, in all 3½ pints, and, in addition, three nutrient enemata, each consisting of 5 oz. milk and white of one egg. The pulse and temperature observations are summarized in the following table:

	Pulse.	Temperature.	Remarks.
Monday:			
Morning ...	72	—	
11.15 p.m. ...	114	99.8°	
Tuesday:			
5.15 a.m. ...	—	—	Cyanosis; oxygen ten minutes.
7 a.m.	120	102.4°	Resp. 40; strychnine $\frac{1}{30}$ gr.
10 a.m. ...	—	—	Rigor; strychnine.
1.30 p.m. ...	130	105°	Râles right and left bases.
3.30 p.m. ...	—	—	First return of corneal reflex.
6 p.m.	88	100.1°	Catheter specimen kept for analysis.
9.30 p.m. ...	92	100.6°	
11.30 p.m. ...	—	—	A few drops of water were swallowed automatically. Restless.
Wednesday:			
12.50 a.m. ...	—	—	Turns herself about.
2 a.m.	92	100°	Resp. 26.
6 a.m.	96	99.8°	Resp. 28.
6.45 a.m. ...	—	—	Opened her eyes.
7 a.m.	—	—	Wept for half an hour.
Noon	—	—	Few drops of water swallowed.
2 p.m.	84	99°	
3 p.m.	64 (!)	100°	Pulse feeble and intermittent; strychnine $\frac{1}{30}$ gr.
4.30 p.m. ...	—	—	Swallowed a spoonful of milk.
5.30 p.m. ...	—	—	Swallowed a spoonful of coffee and brandy.
6.30 p.m. ...	66	99°	
7 p.m.	—	—	Strychnine $\frac{1}{30}$ gr; milk and brandy in spoonfuls. Bowels opened twice.
9.45 p.m. ...	—	—	Drank a glass of water.
10 p.m. ...	68	99°	
11 p.m. ...	—	—	Opened her eyes and cried a good deal.
Thursday:			
1.45 a.m. ...	68	98.8°	Resp. 26.
6 a.m.	82	98°	
8.30 a.m. ...	—	—	Swallowed half a cup of milky tea.
9 a.m.	70	98.2°	Catheter passed for last time.
11.30 a.m. ...	—	—	Has talked rationally.

She slept most of the time, with occasional restless fits, and did not talk any more until Friday morning, when she awoke full of her old misapprehensions and wept a good deal. She was now able to tell us that she had taken a whole bottleful of veronal, twenty-five tabloids five at a time, before getting into bed the night before. She could not remember what she had done with the bottle, but later recalled that she had put it into her sponge bag, where we found it empty. In a day or two she was none the worse for her experience, excepting that a transient erythematous rash appeared on trunk and thighs, and she was in places bruised from attempts to rouse her.

The period of total or partial unconsciousness lasted three and a half days, although the corneal reflex returned in about forty hours. Several fits of weeping preceded her return to speaking consciousness, the mind evidently picking up the emotional attitude which preceded the

*Paper read at the meeting of the Bath and Bristol Branch of the British Medical Association, at Bath, November, 1913.

sleep. The idea of taking veronal occurred to her from reading the newspaper account of the notorious Hove case. Several cases of veronal poisoning have been published since this case, and in more than one instance it is stated that the suggestion arose from it.

In the Hove[1] case 150 grains were supposed to have been taken; the patient was seen within two hours, but died in thirty-two hours. I was at first under the impression that my patient's recovery from 125 grains was a "record," but, as far back as 1904, Hadd[2] recorded a recovery from 135 grains in a young woman; the symptoms were deep stupor, dilated pupils, clonic spasms with retraction of head; pemphigus-like eruption with symmetrical erythematous patches, especially on hands. An eruption appeared rather late in my case also, and Vernet[3] has lately drawn attention to cases of bullous and erythematous veronal rashes.

Shortly after my case Dr. Alexander[4] recorded a recovery from the same amount—125 grains—in a man of 45 whose stomach was washed out within five hours; and Dr. Chitty[5] a similar case of recovery from 125 grains in a man of 40. Unconsciousness in the first case lasted four days; the pupils were contracted. Laing[6] records a case of recovery from 92½ grains in a prize-fighter, who had taken also 150 drops of chlorodyne an hour before the

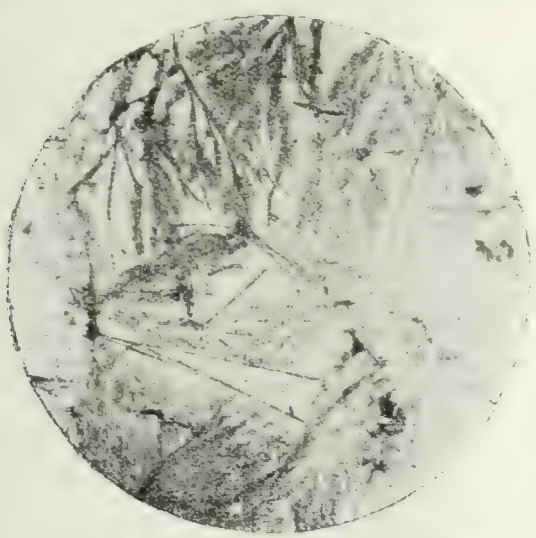


Fig. 1.—Veronal crystals recovered from the urine of the patient.

veronal; he was seen within four hours of finishing the veronal, and recovered consciousness under treatment in two hours. Several other cases of recovery from fairly large doses are on record. Death from 60 grains,[11] 100 grains,[15] 125 grains[16] are recorded, and quite recently one from 90 grains. The largest quantity I have seen recorded as having been swallowed is 232 grains (Ehrlich[7]); this was by a lunatic, who died in twenty hours; the symptoms were respiratory paralysis, cyanosis, contracted reaction-less pupils, scarcely perceptible pulse; 360 milligrams were recovered from the urine. Fraser[8] records the case of a woman who took 120 grains in ten days, was comatose when seen, and died eighty-six hours after; 24 grains were recovered from the urine. Willcox,[9] in opening a discussion on hypnotics at the Brighton Meeting of the British Medical Association, remarks that as small a dose as 15 grains has been fatal, and describes the symptoms accompanying the coma as high temperature, rapid breathing, and the clinical signs of acute pneumonia. This is interesting in connexion with my case, in which on the second day occurred a temperature of 103°, pulse-rate of 130, and respirations 40, with râles at both bases. In moderate doses veronal is stated by Carl Roemer, who has written fully on its pharmacology,[10] to lower somewhat the body temperature, retard the rate of breathing whilst increasing the depth, and lower the blood pressure by dilating the peripheral vessels. He also states that in consequence of its specific paralytic action on the vascular walls it is contra-indicated in cases where dilatation of the vessels should be avoided—for example, in diseases of the kidneys associated with venous congestion. Grober,[11] writing in 1911, after noting that veronal is two to four times more toxic than was commonly supposed, states that it has a marked action on the abdominal vessels, causing periodic rise and fall in blood pressure; in cases of overdose, he says, the abdominal vessels should be compressed, the patient kept warm, and oxygen inhalations administered. Veronal appears rarely to cause vomiting, but a case is recorded in which nausea, persisting vomiting, and vertigo, ending in recovery, ensued after a dose of 70 grains. A dose of veronal is reported as having caused hemiplegia in an aged person.[17]

Bachem[12] points out that, to be of any use, the stomach must be washed out early, since even after large doses only a small portion is found there some hours later; 90 per cent. of that given subcutaneously appears in the urine if only small doses are given; with larger doses 40 to 50 per cent. only. As the faeces only contain small amounts, about half a large dose must be destroyed in the body.

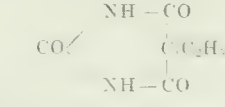
An important distinction to keep in mind is that between veronal and its congeners (of which Willcox[18] cites nine or ten) which are ureides, or derivatives of urea, and sulphonal, trional, and tetronal, which are of totally different constitution, being sulphones or ketone derivatives, containing a characteristic sulphur group. A crude



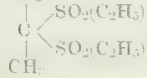
Fig. 2.—Veronal from alcoholic solution.

distinction is that the former group contains no sulphur and the latter no nitrogen.

Veronal is sometimes named "diethyl-malonyl-urea" and sometimes "diethyl-barbituric acid," and its graphic formula is:



whilst sulphonal is dimethyl-methane diethyl sulphone, and its formula is:



One observer of a case of veronal poisoning notes the absence of haematoporphyrinuria. This is not surprising in view of the difference of constitution between sulphonal and veronal.

The chemical tests for veronal are unsatisfactory. It is easily recovered from the urine by slightly acidifying if necessary, evaporating to dryness, extracting with alcohol, evaporating the alcoholic extract to dryness, and extracting with ether, as in Stas's process for the detection of alkaloids. The first quantity of urine withdrawn from my patient's bladder was, contrary to my order, thrown away, but I extracted from 1 oz. of the urine (specific gravity 1026, acid, free from sugar and albumin), obtained forty-eight hours after taking the drug, 25 mg. of purified crystalline ethereal extract, whereas 1 oz. of normal urine

tested as control by the Stas process yielded only 4 mg. of non-crystalline ether extract.

The crystals were dissolved in alcohol and a drop allowed to evaporate on a microscope slide. (Fig. 1.) A rough quarter of a tabloid was then dissolved in 1 oz. of normal urine, which was put through the same process; 53 mg. were recovered and crystallized from alcohol. (Fig. 2.) A single large crystal of veronal was also photographed. Fig. 3 shows sulphonal crystals from

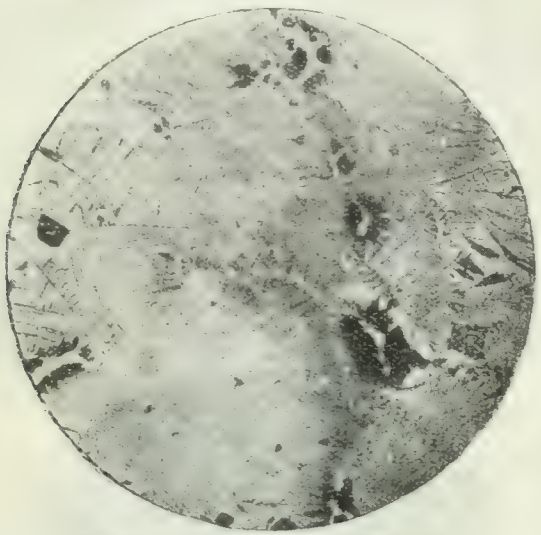


Fig. 3.—Sulphonal from alcoholic solution.

alcohol; the distinction between it and veronal is easy, as they belong to different crystalline systems, and, whether in single crystals or arborescent forms, could not be confounded together. Sulphonal appears to crystallize in the rhombic and veronal in the monoclinic system. Dr. L. C. Davis, Lecturer in Chemistry in the University of Bristol, has been kind enough to point out to me his ingenious method of identifying even small quantities of veronal and other crystals by taking advantage of the fact that when two bodies of similar melting point are mixed the melting point of the mixture is lowered; thus veronal melts at 191° C. and aconitine at about the same temperature, whilst a mixture of equal quantities of the two melts at 160° to 175° C. He also tells me that veronal was synthetized as far back as 1882.

References.

[1] British Medical Journal, 1913, i, 566. [1a] Ibid., 1913, i, 752. [2] *Cent. f. Psychiat.*, 1904. [3] British Medical Journal, 1913, ii, 512. [4] Ibid., 1913, ii, 20. [5] Chitty. [6] British Medical Journal, 1913, i, 283. [7] *Cent. f. Psychiat.*, 1904. [8] British Medical Journal, 1912, ii, 72. [9] Ibid., 1913, ii, 663. [10] *Arch. exp. Path. Phar.*, 1911, 65, 241, 296. [11] *Biochem. Zeitschrift*, 1911, 31, 131. [12] *Arch. exp. Path. Phar.*, 1910, 63, 228. [13] British Medical Journal, 1913, ii, 664. [14] Ibid., 1908, ii, 832. [15] Ibid., 1909, ii, 1154. [16] Ibid., 1909, ii, 1320. [17] Ibid., 1910, ii, 375.

A CASE OF VERONAL POISONING.

BY

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In view of the ease with which veronal has been procured in the past by the general public, the following notes may be of interest.

Miss B., aged 40, had been suffering for some weeks with severe facial neuralgia accompanied by headache, and had been unable to sleep. For this she had on her own initiative taken at times 5 or 7 grains of veronal. On the night in question, her face and head being very bad, and having tried to sleep without avail, she got up and took the box, which contained five capsules containing each 7 grains of veronal, down to the kitchen, and sat down by the fire. She has a confused memory of taking the first capsule, and later on finding the empty box in her hand and throwing it in the fire.

It can therefore be reasonably assumed, in view of the effects to be described, that she took all five capsules—a dose of 35 grains altogether, taken on an empty stomach, and almost immediately absorbed. She does not remember returning to bed.

Her father, on hearing her snoring, which was not her usual habit, got up and found that she could not be roused.

When I saw her she was breathing quietly, the pulse rate was normal, and she looked like a person in a natural but very profound sleep. The pupils were normal, and reacted to light. On pricking her hands or her feet with a pin she drew them away. She could be sufficiently roused by flicking her face with a wet handkerchief to turn her head away and screw up her face. Further efforts resulted in no conscious response, and on leaving the patient alone she relapsed almost immediately into the same profound sleep. She continued in this state for fully fifty hours, when the nurse succeeded in rousing her sufficiently to drink some tea, but she seemed thoroughly dazed, saying nothing, and at once dropping off to sleep again. After seventy-two hours she roused herself, but was able to speak only in a very hesitating and incoherent manner; she complained that everything "looked funny," some of us having three eyes, others four heads, etc. At this time she was quite unable to stand or walk, but could use her arms naturally.

From this time onwards she gradually improved, though she slept more or less thirty-six hours more, and it was not till then that her brain seemed to clear.

In this case there was neither burning nor itching of the skin, nor swelling, such as has been reported in similar cases, and there was no erythema and no vomiting.

THE RESULTS OF NEPHROPEXY.

BY

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Some years ago I published a description of a method of performing nephropexy,[1] which subsequent experience has proved to be simple, safe, and efficient. This was followed by a second paper upon the indications for the operation;[2] both appeared in the British Medical Journal. Having now operated upon upwards of 500 patients and fixed in position more than 800 kidneys, the operations being spread over a period of nearly nine years, a review of the results obtained is interesting and instructive.

The results of nephropexy must be considered from two standpoints, mechanical and therapeutic. This is important, for only when operative success has been obtained is it fair to estimate therapeutic effects. Many failures as regards general benefit are really due to failure to secure successful mechanical results—that is, they must be classed as surgical failures. No one expects a man with a recurrent hernia to have benefited by the operation; and equally, benefit from nephropexy cannot be hoped for unless the kidney has been successfully and permanently restored to its normal position.

Surgical success in operations upon movable kidneys means (1) permanent restoration of the kidney to a position as nearly normal as possible, and (2) absence of unpleasant sequelae such as pain, sinus, and weakness of scar.

Judged from this standpoint, the surgical results in my series of 515 cases have been most satisfactory. There have been 4 deaths, 2 of which were due to pulmonary embolism, 1 to acute dilatation of the stomach and 1 to exhaustion from mania. This gives a mortality of less than 0.8 per cent., which must be considered low in view of the facts that the condition of many of the patients was very unsatisfactory at the time of operation, and that in about two-thirds of them both kidneys were dealt with at the same time.

To my knowledge, in only one instance has the kidney acquired fresh mobility after having been anchored, though almost all the patients have been repeatedly examined by myself and other competent observers. In a few instances there has been pain in the loin due to implication of a nerve in the scar. The pain comes on some weeks after operation, and when severe has been relieved by excision of a length of the affected nerve. In one case a small hernia developed in the scar as the result of a severe strain within a few weeks of the operation, and necessitated a slight further operation. In no case has a sinus resulted, and in no case has any subsequent trouble arisen in the kidney itself. The following extract from the report of a practitioner who performed a *post-mortem* examination upon one of my patients (death being due to a cause unconnected with the operation) seven months after nephropexy indicates how firmly the kidney becomes anchored: "The right kidney was very firmly attached to its moorings, and I could not separate it at all, so did not disturb it." These results compare very favourably with those obtainable in any other branch of surgery, and the operation described in 1907 has proved so satisfactory

that no essential alteration in technique has appeared to be desirable.

The results of nephropexy upon the general health and working efficiency of the patients are less easy to estimate. This is due to the great diversity of the symptoms from which they suffered and the length of time that must necessarily elapse before the full benefit of the operation can be obtained. Apart from such purely local disturbances as Dietl's crises, pain in the loin, etc., nephropexy does not effect a direct cure. The operation rather makes curable by ordinary treatment patients who have hitherto proved incurable. The time required to effect the cure when ill health has existed for many years is considerable, and this is especially so when, as is usually the case, a marked degree of neurasthenia is present. It is useless to estimate results until a full year has elapsed.

Some two years ago, for the purposes of an address before the Chicago Medical Society, I inquired into the progress of 100 consecutive cases, Nos. 151 to 250, in my series. In every case there had been an interval of at least a year between the operation and the report. It was possible to obtain information either from the patient or the doctor in 87 of these cases. Of these, 35 were described as cured, 15 as much better, 28 as better, 6 as slightly better, and 3 as no better. In other words, about 60 per cent. were cured or greatly benefited, 30 per cent. were better, and 10 per cent. were either no better or very little so.

In the above series of cases, 7 were males and 93 females. Of the 93 women, 37 were married and 56 unmarried. In 57 of the cases both kidneys were operated on at the same time; in 32 the right kidney only, and in 11 the left kidney only was fixed. The average age of the patients was 34, the extremes being 15 and 70. The average duration of the symptoms was five years, and in several they had persisted from fifteen to twenty years. In almost every case ordinary forms of treatment had been fully tried and had failed. Of the symptoms, in 21 these were purely local and definitely connected with the kidney; in 9, the digestive system was mainly disturbed; and 3 suffered chiefly from pelvic troubles There were 31 cases of general neurasthenia, 8 of neurasthenia with mental symptoms, the latter being either suicidal impulses or delusions. Seven patients were quite insane at the time of operation. In 21 the symptoms were too mixed to allow of their being grouped.

It is very difficult to form a trustworthy opinion of the extent of the benefit that has resulted from patients' written replies to an inquiry as to their condition. In order to obtain more reliable information regarding the results, I have recently written to nineteen practitioners upon 97 of whose patients I have performed nephropexy. In my opinion the family doctor who has observed and treated the patient, both before and after operation, is best qualified to judge of the value of the operation in respect of that particular patient. Two questions were submitted:

1. Has the operation been a surgical success—that is, have the kidneys remained in position and is the patient free from unpleasant sequelae, such as pain, sinus, or weakness of scar?
2. Has the general benefit that has resulted justified the operation?

My very best thanks are due to these gentlemen for the interest shown and the great care they have taken in obtaining information upon which to base their answers. In almost every instance general impressions have been verified by direct inquiry or actual examination.

Summary of Reports.

1. Dr. Acland, Bideford, N. Devon: 3 patients. In each case the operation has been a surgical success. The general benefit in two patients has fully justified the operation. One patient has had a bad relapse of the old pains in the chest, and is very thin.

2. Dr. Avent, Handsworth, Birmingham: 6 patients. In every case the operation has been successful surgically. Two patients are absolutely cured. In one, the result was one of the most extraordinary and brilliant achievements that I have seen accomplished by surgery. Three patients, who were neurasthenics of many years' standing, without local symptoms, are no better. One patient has been lost sight of.

3. Dr. A. Brice, Moseley, Birmingham: 3 patients. One patient has been lost sight of. In the other two the operation has proved a surgical success, and has been followed by great general benefit.

4. Dr. Wigginton, Moseley, Birmingham: 7 patients. In every case the kidneys have remained in good position and there have been no unpleasant sequelae. In six cases the resulting general benefit has fully justified the operation. One patient, though better, still has her old attacks of abdominal pain.

5. Dr. Dain, Selly Oak, Birmingham: 3 patients. In all three cases the operation has been a surgical success. In the first, operation has made an ordinarily strong woman of a previous semi-invalid. In the second the patient had a stone in the loose kidney. Her general condition is much better than before the operation. In the third the patient recovered slowly from the operation; but her general condition is benefited, and she is improving steadily. In these three cases the general benefit has justified the operation most certainly.

6. Dr. Jerome, Sutton Coldfield: 6 patients. In every case the operation has been surgically successful and free from unpleasant sequelae. In all six cases the benefit has justified the operation, but in some instances the improvement has been greater than in others.

7. Dr. Woodhouse, Llandudno: 7 patients. In every case the operation has been successful surgically, and none of the kidneys have come down again. Further, I have seen other patients who have been operated upon by you, and in none have I found the kidney down again. Out of the many cases I have had operated upon all have been entirely cured of their symptoms or so greatly relieved that they have expressed their gratitude for the help. On the other hand, in several cases in which I have advised operation which has been refused, the patients are still invalids, doing repeated "rest cures" and relapsing every twelve months or so.

8. Dr. Thos. Nelson, Edgbaston: 10 patients. Six patients quite well. Two lost sight of. One much better, but still constipated. One improved, but other conditions interfere with her health.

9. Dr. Hewer, Stratford-on-Avon: 3 patients. In each case the operation has been surgically satisfactory. The first case is very successful and the patient much better. In the second case the nervous and neurasthenic symptoms are as before. The third case is eminently successful, from mental point of view especially.

10. Dr. Berlyn, Edgbaston: 6 patients. The operation has been a surgical success in every case. Four patients, including one lunatic, are quite well or almost so. One patient, a chronic neurasthenic of long standing, is slowly improving. One patient is no better.

11. Dr. W. Pemberton Fooks, Edgbaston: 11 patients. In every case the kidneys have remained in position. One lady has pain in the right side, which interferes with her playing golf. All the eleven patients are much better as a result of the operation, and results have fully justified it. The following is an extract from Dr. Fooks's reply to the inquiry: "You have invited me to state my experience of the results of this operation on patients under my observation. In the first place let me make it clear that from 1904–10 I would not consent to operation on any patient of mine for displaced kidney, but trusted to belts. During these six years I had many cases—some amongst servants—and became convinced that even a partial and intermittent support gives great relief to even housemaids, rendering them capable of carrying on their work with improved health. Provided the kidney could be properly fixed without risk of impairing its function, it appeared to me operation would be justified. Your operation came to my notice, and in March, 1910, I advised Miss M. to have both kidneys fixed in the manner you described. This was the first of a series of 11 cases you have operated upon at my suggestion, and I have no hesitation in saying that every operation has been successful surgically, and the improvement in the patient's general condition justified the operation. The mistress of case No. 1 was so convinced that she was operated on herself three years later, while the brother of No. 3 was operated on two years after his sister. These facts alone demonstrate that No. 1 and No. 3 were quite satisfied that operation cured them."

12. Dr. Walter Hues, Handsworth: 5 patients. In every case the operation was a surgical success. In all 5 cases the resulting benefit justified the operation. "The second case was a girl who was apparently drifting into hopeless invalidism, with only the workhouse infirmary in prospect, on account of her tachycardia, and had spent every penny she had saved in doctoring and rest cures with no result; even at rest her pulse was scarcely countable. I do not think she has lost a single day or even an hour from her work as a laundress since she restarted two months after her operation in May, 1909."

13. Dr. Mary Sturge, Edgbaston: 6 patients. The operation was a surgical success in every case. Five patients are well, or very greatly improved, as a result of the operation. One lady, suffering from delusional melancholia, improved so much that ten weeks after operation her friends, against advice, withdrew her mental nurse, with the result that one day she drowned herself. The following is an extract from Dr. Sturge's letter: "In all the six cases upon whom you operated at my request the kidneys have been efficiently anchored, and there have been no unpleasant sequelae. The general benefit to the patients has amply justified the operation."

14. Dr. Philip Hicks, Leamington: 3 patients. In two patients the operation was entirely successful surgically. Both they and their friends are satisfied that the operation has been justified by results. In one, albuminuria of eighteen years' duration has cleared up. One patient has been lost sight of.

15. Dr. O. R. Lewis, Perry Barr, Birmingham: 3 patients. In the first the patient, a lady, is in excellent health, and has gained 14 lb. in weight. She says she "feels a new woman." The kidneys are in excellent position. The second patient, a nurse, who had been compelled to give up work, writes: "I am pleased to say that I am very well indeed. With the exception of short holidays I have been on duty the whole time since March, 1911, my operation having been the previous August. I frequently walk six or eight miles after twelve hours on duty." The third case, a lunatic, operated on in 1907, I did not attend after her operation, but I see her sometimes looking very well, and have no reason to think that her operation was anything but a complete success.

16. Dr. Prichard, Banbury: 7 patients. In every case the operation was successful surgically. "One patient died of another condition eight months after his operation, and the kidney was found at the *post mortem* to be so firmly attached to its moorings that I did not disturb it." Three patients are quite well. Two are much better and still improving. One is improved. This is the only patient that has not received sufficient benefit fully to justify the operation.

17. Dr. Knott, Sutton Coldfield: 3 patients. In each case the operation has been a surgical success. One patient is perfectly well; one is better; and the third is no better of her nervous symptoms.

18. Dr. Thompson, Halesowen: 2 patients. Both operations have been surgical successes. In the first the operation was done three years ago. The indigestion, from which she had suffered for years, has ceased since she left the nursing home; she has gained 2 st. in weight, and can do her work better than for years previously. The second patient is improving, but sufficient time has not elapsed to estimate the full benefit received.

19. Dr. Starkie, Moseley: 3 patients. In each case the operation has been a surgical success. Two patients are much better, and the general benefit has fully justified the operation. The third case is no better.

Summary of Replies.

Of the 97 patients, information was obtained concerning 92. With the exception of one lady who has pain in her side, the operation has been surgically successful in every case in the sense that the kidneys are satisfactorily anchored, and there are no after-disabilities.

With regard to the general benefits resulting from the operation, 7 patients only are reported as being no better. A large number of cases are described as being "perfectly well," while others are said to have greatly improved in health and general efficiency.

References.

[1] Movable Kidney from a Surgical Standpoint, British Medical Journal, November 30th, 1907. [2] The Indications for Nephropexy, Ibid., May 1st, 1909.

HEART-BLOCK IN A CASE OF PNEUMONIA.

BY

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Rawal Pindi.

Heart-block is a condition which in recent years has attracted much attention in chronic heart disease, but comparatively few cases have been reported in acute affections of the heart. This is probably not due to the great rarity of such cases, but rather to the fact that comparatively little attention has been directed to this variety of the affection. Cases have been described more especially in acute rheumatism and in diphtheria, but also in influenza, ulcerative endocarditis, typhoid, and *Bacillus coli* cystitis.

In the great majority of cases examined *post mortem* inflammatory changes have been found in the conducting tissues. In one described by Price and Ivy Mackenzie as a case of complete heart-block with auricular fibrillation, although there was extreme degeneration and cellular infiltration of the cardiac muscle, no definite change was found in the conducting tissue. As the authors point out, the interpretation of the tracings was not quite clear, and it is possible that the block was not complete. In pneumonia one case without necropsy has been recorded by Magnus-Alsliben:

Case.

A Government mule driver, aged 27, took suddenly ill at Jelum on December 16th, 1913. He was admitted to the Followers' Hospital, Rawal Pindi, three days later. The upper lobe of the right lung was consolidated and the symptoms were those of typical acute croupous pneumonia. The pulse was 120 and the respirations 40. For the next three days his temperature remained between 102° and 104° F., and on December 23rd he had a typical crisis and seemed to be doing quite well. Quite suddenly he showed signs of collapse. He was seen for me that night by the orderly medical officer, who noted that the pulse-rate was only 40. The medicinal treatment had been the administration by the mouth of ammonium carbonate, with 5 minims of liquor strychninae and 7 of tincture of digitalis every four hours from admission. In addition he had 3 oz. of brandy daily from December 22nd.

On the morning of December 24th the digitalis was stopped and strychnine hypodermically with salines rectally were ordered. Morphine ⅓ gr. was prescribed for hiccough, which was very distressing and resisted local epigastric counter-irritation. This was continued till December 28th, when the hiccough was less persistent. The patient had a good night and on the 29th was distinctly better. The pulse-rate had fallen to 30 while the respiration-rate was actually faster than the pulse (35 to 40). On auscultation during the slow rhythm there was no evidence of extrasystoles.

From this date onwards the pulse-rate increased, occasional dropped beats being noticed, particularly after slight exertion such as turning in bed.

The chief interest of the case lies in the sudden incidence of heart-block complicating the pneumonia. That we were dealing with a true heart-block is, I think, clear, even in the absence of polygraphic tracings, as a regular pulse of 30 is unknown as the result of a sinus bradycardia. A pseudo-bradycardia resulting from recurring extrasystoles can be excluded by the absence of any auscultatory evidence of extrasystoles during the slow rhythm.

In view of the fact that the patient had taken 5 drachms of tincture of digitalis, it is probable that the block was due partly to the digitalis but chiefly to a functional defect in the conducting tissues the result of the pneumonic infection. That the block can have been solely the result of the digitalis is extremely unlikely, as, although toxic doses of digitalis may produce a mild degree of partial heart-block, the severer grades of heart-block are never observed except in cases in which there has been a previous defect in conductivity. Further, the fact that the pulse slowed steadily for five days after the digitalis was stopped is very much against the view that the block resulted solely from the digitalis.

Whether this defect in conductivity was the result of toxaemic functional disturbance or of actual inflammatory changes in the bundle it is, in the absence of a necropsy, impossible to say. Judging from the recorded results of necropsies in other infective diseases, the probability would seem to be in favour of an actual inflammatory lesion. There is no evidence that this patient suffered from rheumatic fever or syphilis. The ventricles were perfectly regular so far as stethoscope and finger could judge as soon as the condition was observed, and remained so when the pulse-rate slowed. It was only as the block passed off that dropped beats were observed. These facts raise the presumption either that there was at first a severe partial block with only every third auricular impulse passing (original auricular rate 120), ultimately becoming complete when the pulse-rate fell to 30, or that the block was complete almost from the first, with a high idio-ventricular rate from the pneumonic toxaemia (40), just as one had a high auricular rate (120).

It was at first impossible to make out auricular pulsation in the jugular, and no evidence of auricular activity could be heard on auscultation. At present (January, 1914) the pulse shows occasional dropped beats, and after slight exertion every third beat is missed. During the pause a faint sound is heard, and a wave of pulsation is visible in the right jugular. There is a soft apical systolic bruit. I cannot account for the hiccough on any special grounds. It prevented sleep for three days, and nearly ended the exhausted patient's life.

I am indebted to Lieutenant-Colonel Gee, I.M.S., and to Lieutenant J. D. Wilson, I.M.S., for permission to publish the case, and to the latter for much valuable help in its conduct. Dr. A. W. Falconer, of Aberdeen, kindly looked up some references for me, which were not available here.

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[1] *Heart*, 1911-12, iii, 233. [2] *Zeitschr. f. klin. Med.*, 1910, lxix, 82.

The Berlin Association of Medical Women and a Committee of the German Lyceum Club, formed to promote the foundation of a hospital for women officered by medical women, have combined under the name Hospital Union (E.V.) attached to the German Lyceum Club. The body of directors is composed of women doctors in the proportion of two-thirds to one-third of lay members.

TWO CASES OF DIPHTHERIA WITH UNUSUAL COMPLICATIONS.

BY

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AND

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The following cases, recently under our care in the Croydon Borough Isolation Hospital, are of special interest as showing two complications of diphtheria seldom met with in the practice of infectious fevers and not specifically mentioned in any of the standard textbooks dealing with this subject.

CASE I.—*Pulmonary Abscess.*

A girl, aged 9 years, was sent to the hospital as an ordinary case of laryngeal diphtheria. The symptoms on admission were those of well-pronounced laryngeal obstruction; she was deeply cyanosed, breathing was laboured with marked laryngeal stridor, and she displayed all the distressing symptoms of asphyxia. There was pronounced recession of both supra-sternal and infra-sternal notches, together with indrawing of the intercostal spaces and, indeed, of all the soft parts of the chest. The pulse at the wrist was almost imperceptible, the extremities were cold and blue, and the chance for the child's recovery looked extremely black. Tracheotomy was immediately performed, the opening being made in the trachea just below the cricoid cartilage. No sooner was this done than a large quantity of thick yellow pus mingled with blood spouted from the wound, smothering the operator and his assistants. The actual quantity seemed to be about 4 oz., and another ounce was coughed up by the child while she was yet on the table. A Parker's tracheotomy tube of large size was inserted and tied in, and the child taken back to bed. Colour and pulse rapidly improved, and an hour after the operation the child was sleeping comfortably. During the course of the next four days she continued to cough up pus through the wound, its consistence becoming more glairy and mucoid as the quantity decreased.

The tube was removed on the third day; on the fifth day the discharge had completely ceased, and on the twentieth day the wound had closed. As soon as the child was out of danger, and before removal from the theatre, the throat and pharynx were examined, as there had been no time for this prior to the operation. Both were somewhat congested, but no diphtheritic membrane was present. Swabs of the throat proved negative. A swab of the larynx and of the trachea above the wound, however, distinctly showed the presence of the Klebs-Löffler bacillus, and in culture there was a pure growth of this organism. A smear preparation of the pus was examined but no Klebs-Löffler bacilli were found, the only organisms present being Fraenkel's pneumococcus and some short chains of streptococci. These organisms were also found in culture, but there was entire absence of Klebs-Löffler bacilli. A smear from the wound itself, however, did show the presence of this organism, due probably to an extension of the infection from the larynx. On the first appearance of pus from the wound a retropharyngeal abscess was suspected, but on further investigation these suspicions proved to be unfounded. The chest was examined, and was noted to be somewhat malformed (pigeon-shaped); expansion was poor, especially on the left side; the percussion note was dull over the left lower lobe, the dullness extending to the level of the spine of the scapula, and to a less marked degree above that.

Breath sounds over the affected lung were distinctly impaired, being of the broncho-vesicular type over the apex and upper lobe, and of the bronchial type over the lower. A well defined area about 3 in. in diameter at the level of the inferior angle of the scapula suggested cavitation. Over this region the breath sounds were amphoric, with tinkling râles and abundant moist sounds; there was pronounced increase of the vocal resonance, the whispered voice being very distinctly heard.

Empyema and lung abscess suggested themselves as being at the root of the trouble; failure, however, to find pus in the pleural cavity after two explorations eliminated the former, and, having regard to the signs displayed over the affected area, the latter seemed the more probable. To help in the elucidation of the case an *x*-ray examination of the chest was made by Dr. Stanley Melville, who reported "that the whole of the left side was diffusely opaque, the opacity obscuring any view of the diaphragm on this side. The upper lobe was patchy. The condition suggested thickened pleura with some breaking down of lung tissue." As it was thought that the case might have a tuberculous origin the von Pirquet reaction was sought for on two separate occasions, but without result. A history of long-standing bronchitis was obtained from the mother, but whether the lung abscess was primary or secondary or had anything at all to do with the laryngeal condition seems to be a matter of great doubt. The child made a good recovery, and, with the exception of some signs of fibrosis and bronchiectasis in the left lung, was discharged in good health.

CASE II.—*Paralysis of the Circumflex Nerve.*

C. M., a girl aged 7 years, was admitted as an ordinary case of scarlet fever, with all the signs and symptoms of this disease well developed. In addition to these, membrane was present on both tonsils, and as this suggested the possible presence of diphtheria a swab of the throat was taken, and its examination revealed the Klebs-Löffler bacillus. At the same time it was noted that the condition of the heart was somewhat abnormal, the character of the first sound being altered. Two days after admission she suddenly became collapsed, pulse rapid and feeble, colour poor, extremities cold, and she displayed all the symptoms of heart failure; cardiac stimulants were administered, and she recovered. Several days later it was noticed that there was definite loss of power in the right arm, and it was found that while she was able to use the forearm and hand she could not raise the limb at the shoulder-joint. Comparison with the limb of the opposite side pointed to weakness of the deltoid as being the cause. Signs of paralysis could not be found in any other region. The child was kept completely at rest for fourteen days, the heart symptoms improved, but the arm condition remained the same. About this time wasting began to manifest itself in the affected muscle, and, notwithstanding treatment by massage and strychnine, improvement did not take place. The wasting continued, and on the date of discharge, six weeks after admission, she was still unable to raise the limb. On three successive days after admission 4,000 units of anti-diphtherial serum were administered, and a definite serum rash occurred on the thirteenth day.

The paralysis was evidently one of the circumflex nerve, and was in all probability attributable to the diphtheria toxin, as no other cause seemed to suggest itself.

Several writers have reported cases in which the diphtheria toxin has picked out nerves supplying muscles or groups of muscles, and, taking into account the condition of the heart, which was typically that usually present in severe cases of diphtheria, we feel justified in concluding that this case was of a similar nature.

We are indebted to Dr. R. Veitch Clark, Medical Officer of Health for the County Borough of Croydon, for permission to publish notes of these cases.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TWO UNUSUAL CASES OF ABSCESS OF THE LIVER.

IN the JOURNAL of December 13th, 1913, Dr. Ashton Bond published a case of tropical liver abscess which came under his care in hospital at Toro, Uganda, in which the abscess was situated in the epigastric region. The case was of peculiar interest to me, as it recalled to my mind a very similar case I had to treat while living in a temporary camp, the nearest white settlement being more than 100 miles away. It occurred in a native of North-East Rhodesia in December, 1911. He had been working as a carrier for some time, and had only ceased to work as such ten days previous to my seeing him, though this was difficult to believe, as he presented a most pitiable and anxious appearance. The man was suffering from the most extreme degree of emaciation, and the upper part of the abdomen was greatly swollen and tense. The temperature was 101°, and the pulse 78. Liver dullness was increased both in an upward and downward direction; the spleen could not be felt, owing to the nature of the swelling, which filled the whole of the epigastric and left hypochondriac regions. This swelling, which he said was not painful, was only slightly tender. There was some degree of jaundice, but he had had no rigors or sweats. I was able to get a definite history of previous attacks of dysentery. As his condition called for immediate treatment, and he consented to operation, I had small trees cut down and a table made and covered with grass and placed in a large hut, open on one side, where I operated. On cutting through the abdominal wall, the abscess, about the size of a small cocoanut, was found to be divided into

two compartments, which communicated. It was well shut off from the rest of the abdominal cavity by adhesions. More than a pint of pus was removed at the time, and the cavity was syringed out with a weak solution of iodine, and this procedure was repeated subsequently when the wound was dressed. A drain was left in, and there was a discharge of pus for several days. In the beginning of February, 1912, he left for his home cured.

A second case of tropical abscess occurred in a European, one of the French missionaries stationed near Kasama, North-East Rhodesia, whose illness had begun several months previously with cough, loss of appetite, and emaciation, and until the time when I saw him his illness was regarded by the other White Fathers in the mission as one of incurable phthisis. He was extremely emaciated, had a constant cough, and pain over the liver radiating into the right shoulder; and sweating, which occurred especially at night, was very profuse. Altogether the symptoms were unmistakable and classical. The abscess again appeared to be situated in the epigastric region, there being a tense swelling there which was not tender. I was travelling at the time and without instruments, but wrote to Dr. Storrs at Kasama, who came prepared to operate; but the abscess had burst into the duodenum before his arrival, and since then I have heard that the patient made an uninterrupted recovery.

R. R. MURRAY, M.B.,
F.R.C.S.Ed.

Kawambwa, North Rhodesia.

THE CURE OF ATROPHIC RHINITIS.

IN answer to "Rosaceae's" inquiry in the issue of March 21st as to motoring and rhinitis, I can, if he refers to atrophic rhinitis, venture a suggestion from my own personal experience.

It must be recognized that the muco-purulent discharge —either from the nose itself or some of the sinuses, or both—tends to be pathological for two main reasons, namely: (1) In adult life, when the condition is usually first noticed, a certain degree of atrophy of the secreting glands has occurred, and the watery component of the normal secretion is reduced; (2) the abnormal "roominess" of the nasal cavity is such that the inspired air is robbed of the moisture-giving properties of the turbinates, and this, in addition to greater evaporation on an increased surface area, is a further factor in the dehydration of the discharge. Crusts and ozaena are merely secondary symptoms, due to the drying and subsequent decomposition of the discharge; moreover, a subsequent sinusitis may be due largely to the obstruction caused by a crust.

With these facts in mind it is seen that a motor ride, especially in the brisk air of early morning, so stimulates the remaining glands of the nasal cavity, that the deficiency of water is easily counteracted, and any tenacious discharge and crusts are readily loosened from the surface by *vis a tergo*. This explains why a few miles in a motor car will readily loosen crusts which all the packing and syringing with hot douches from a Higginson's syringe have left behind (*vis a fronte*). The motor ride, therefore, attains the cleansing of the nasal cavities in a more efficient and pleasing manner than approved hospital treatment, but it still remains to be decided whether the atrophy is so slight as to require no further treatment. In some cases, merely half an hour's presence in a warm room is sufficient to again dry the whole surface of the nasal cavity, and I have found that immediately after the ride and a general cleansing out of each nostril, a little packing is necessary, if the comfort is to be maintained during the rest of the day. At first, when the discharge was very bad, I carried this out by means of gauze moistened with boracic ointment, and packed lightly into both middle and inferior meatus, and only removed the pack at night time if going out for a further ride, or before retiring, after douching out the nose and inserting a fresh plug. As the discharge improved I substituted spraying with parolein and packing the inferior meatus only, and eventually sprayed only as occasion demanded—once or twice during the evening.

For months I continued the light pack at bedtime, and when there was any tendency to dryness in the evening or on waking in the early morning, I found this the handiest and most efficient means of comfort.

It must be borne in mind that the character of the epithelium of the nasal cavity in cases of twenty years' standing, has been altered to such an extent that the remaining ciliated cells are no longer sufficient to carry away foreign material, and the nose wash is as essential as a toothbrush. This, however, may now be of a simple nature, and I find that the most convenient method is to use, in a pint or so of warm water each morning, a teaspoonful of a mixture of an equal quantity of salt, borax, and sodium bicarbonate from a convenient canister placed on the washstand. This need only be sniffed up the nostrils and gargled in the throat.

My conclusions are that motoring in itself may cure atrophic rhinitis in young subjects who have not yet had the condition diagnosed, but that in advanced cases, in which the amount of atrophy is such as to cause rapid dehydration of the discharge, further treatment is required; and that in all cases the risk of sinusitis is considerably reduced, the ozaena is cured, and the crusting is less troublesome.

Furthermore, I have found that an early morning walk, a cycle ride, and sea bathing have precisely the same effect as motoring, and that if, by packing and spraying, the formation of crusts can be prevented, a cure may reasonably be expected in an individual of average intelligence and patience.

GILBERT BURNET, M.B., Ch.B.,
Late Clinical Assistant, Ear, Nose, and Throat Department, Edinburgh Royal Infirmary.

Hemel Hempstead.

COEXISTENCE OF EPITHELIOMA AND LABIAL SYPHILOMA.

J. S., aged about 43, is the subject of these two lesions, interesting not only on account of their coexistence, but also in view of the fact that they are often mistaken for each other. A Dutch sailor, he acknowledges various exposures to specific infection, and, in addition, gives a typical history of the development of the malignant tumour. This is situate on the lower lip on the right half and somewhat near the angle. First, there appeared a crack, which, on being subjected to the chafing of a clay pipe, became warty, and is now an eight months' old tumour, about the size of a shilling, with marked induration, rolled-over edge, and rough, uneven surface, with one or two small fissures. There is considerable involvement of mucous membrane and there are frequent twinges of pain. The neighbouring submaxillary and submental glands are enlarged, and I could feel one or two along the carotid of the same side. The diagnosis is very evident, the only factor against it being the age, which is rather early for malignancy.

The specific tumour is on the upper lip at the middle line, but most of it is at the same side as the tumour on the lower. There is an ulcerated surface, "sitting," as it were, on the mucous surface in much the same way as diphtheritic membrane does. It is quite different from that on the lower, having an almost smooth surface with just sufficient moisture to suggest sero-pus. The growth tends to spread towards the nose, involving more skin than mucous membrane, which is (I believe) more or less typical of labial chancre. It is about six weeks old and was very rapid in growth, with a simultaneous enlargement of glands. He had no rash, and never had any other manifestation of specific disease, major or minor.

He attributed this new "wart" to the chafing of the other, which suggests an interesting problem: Can epithelioma spread by such contiguity from one mucous surface to another, assuming irritation and the presence of cracks? Personally I am inclined to think so, though I have never heard of malignancy present in both lips.

Here, as in the former, the age is somewhat late for manifestation of specific sore. The case is also interesting from the point of view of treatment. Should excision of the epithelioma be undertaken in the presence of the other tumour, or should a prolonged mercurial course be undertaken while the malignant tumour is left to engraft itself more fully?

P. J. S. O'GRADY, M.B., B.Ch., B.A.O., L.M.

Fort Elizabeth, Croom.

DR. THOMAS HOOD, P.M.O., Southern Provinces, Nigeria, has been appointed Director of the Medical and Sanitary Service of Nigeria.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

ANCOATS HOSPITAL, MANCHESTER.

ILIO-FEMORAL ANEURYSM TREATED BY LIGATURE OF EXTERNAL ILIAC ARTERY.

(By G. WHITEHEAD, M.B., Ch.B.Manch., late Resident Surgical Officer, Ancoats Hospital, Manchester.)

T. H., a man aged 34, was admitted to Ancoats Hospital, Manchester, on November 17th, 1913, complaining of a "lump in the left groin."

History.—Two months previously he had felt pain in the left knee and inner side of the left thigh, which he took for rheumatism. One month later he felt pain in the left groin, and noticed a swelling of the superficial veins of the left leg. The left foot became swollen after a day's work.

General Health.—Always good, with the exception of enteric fever eight years before, and a chancre on the glans in 1902.

Social History.—The patient was in the army until eight years before the date of admission, having served in India, Jamaica, Cairo, etc. He had had no tropical diseases. During the previous four years he had been a fairly heavy beer drinker, but never took spirits. He was a single man, and did heavy work as a dock labourer.

Condition on Admission.—The patient is a healthy-looking, well-built man. Radial pulses normal, with no sign of thickening or loss of elasticity in arterial walls. Heart normal.

The left leg shows some general swelling, most marked about the ankle, which pits on pressure. The left internal saphenous vein is slightly varicose, and there are small venous stigmata down the thigh. In the left groin is a visible swelling obliterating the sulcus and pulsating rhythmically. It is surrounded by dilated superficial veins. Palpation shows that the swelling is in shape and about the size of a hen's egg; it is situated partly above and partly below Poupart's ligament. Pulsation of a true expansile character is present. Auscultation reveals a loud systolic bruit over the swelling. The Wassermann reaction, kindly taken by Dr. Renshaw, was strongly positive.

Operation, November 21st, 1913.—Spinal anaesthesia with perfect anaesthesia and no complications. Abernethy's incision was made, and the external iliac artery exposed extraperitoneally. It was found to be quite healthy above the sac, and there was ample room to ligature it below the origin of the internal iliac artery. No. 4 catgut was passed by means of an aneurysm needle, and Ballance and Edmunds's stay knot tied, obliterating the artery without rupturing the intima. Pulsation in the sac immediately ceased. The wound was closed and the left leg carefully sterilized and wrapped in sterile cotton-wool. The collateral circulation was quite efficient from the first, and the foot was never cold throughout convalescence. A week later, when the wound was dressed, the aneurysmal sac could be felt as a firm, solid mass in the groin, devoid of pulsation and apparently filled with blood clot.

The patient was allowed to get up at the expiration of three weeks, and showed no signs of abnormal weakness.

He is now (seven weeks later) back at work, and can do light work with comfort, although he complains of some occasional aching in the left calf.

I am indebted to Mr. J. Morley for his permission to publish this case.

THE Health Office of Basel has decided to organize a special exhibition dealing with quackery in Switzerland. Information on the subject can be obtained from Dr. Hunziker, Physikus.

WHAT is described as a eugenic marriage bill was introduced into the New York State Assembly on February 26th. It provides that, before a marriage licence can be obtained, a doctor's certificate must be presented stating that the applicant is "free from physical or mental disease likely to be contagious or hereditary."

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

AT a meeting on March 27th, Dr. J. F. O'CARROLL, President, in the chair, Dr. WALTER G. SMITH related a case of *Carbolic acid poisoning* in a woman aged 34, seven months pregnant, who accidentally swallowed about a teaspoonful of liquid carbolic acid. She quickly lost consciousness, and was brought to hospital in a comatose state. After some hours, under appropriate treatment, she recovered consciousness and made a good recovery. The urine, drawn off by catheter about two hours after taking the poison, was dark yellow, and after a while darkened to a Cairngorm brown colour. Some of the vomited stuff was distilled off with H_2SO_4, and the clear distillate gave evidence of the presence of phenol by the following tests: (*a*) Fe_2Cl_6; (*b*) precipitate with bromine water; (*c*) red with Millon's reagent; (*d*) blue with NH_3 and Br (indophenol). Phenol, it was pointed out, was excreted mainly as paired (conjugated) compounds of glycuronic and sulphuric acids and partly as dihydric phenols (hydrochinone and pyrocatechin). The colour changes were due to unknown products arising from oxidation of these substances. The slight reducing power sometimes observed in carboluria was due to the glycuronic acid compounds. Glycuronic acid was a carbohydrate derivative. The excretion of phenol as phenyl-sulphates which were relatively innocuous had two consequences: (*a*) Utility of freely administering sodium sulphate so as to favour formation of phenyl-sulphate; (*b*) diminished precipitate upon adding $BaCl_2$ to the urine, because the SO_4 is locked up in the complex ion, phenyl-sulphuric, whose Ba salt is soluble. The PRESIDENT said most of the senior Fellows present had seen black urine during their student days in people who had been plentifully treated with carbolic acid. He had seen it following treatment with pyrogallic ointment. Dr. TRAVERS SMITH inquired what would be considered a safe intravenous dose of phenol. He remembered some cases of tetanus that had been treated by the President by intravenous injection of phenol, and he was anxious to know in bad cases where the treatment might require to be pressed to what point it might be safely done. The PRESIDENT replied that as well as he remembered the strength of the solution was 1 in 200 c.cm. given twice daily into the tissues, not intravenously. Dr. KIRKPATRICK said he would like to know if, as long as the ordinary sulphates were present in the urine, the patient was unlikely to suffer from carbolic acid poisoning. Dr. BOXWELL spoke of the utility of alcohol in cases of carbolic acid poisoning, and said he had experience of a number of cases treated in this way at the Meath Hospital. Dr. NESBITT corroborated Dr. Travers Smith's testimony as to the utility of phenol in cases of tetanus, administered subcutaneously. Dr. W. G. SMITH, replying, said it would be impossible to inject anything in the way of strong carbolic acid into the veins without injury. Regarding sulphates, if the case was a slight one, and it was found that the urine gave no reaction with chloride of barium, it showed that the sulphate was locked up by the carbolic acid. It would do a patient no harm to gave an extra dose of sodium sulphate. He agreed that alcohol was a valuable remedy, and thought that the best thing to do would be to wash out the stomach with alcohol. Dr. BOXWELL, in a paper on the *Incontinence of urine in nervous diseases*, contended that the sharp distinction between the so-called "active" and "passive" incontinence did not exist either in the forms or under the circumstances usually set forth in medical textbooks. This he thought particularly evident in the behaviour of the bladder in cases of myelitis at different levels in the cord. The statement of the *modus operandi* of this organ, and the theory invented to explain it, were both open to question. The existence of any "bladder-centre" in the cord was extremely doubtful, and as to the conducting tracts controlling such a centre there was nothing whatever known about them. He favoured the view propounded by Müller that the real centre was in the hypogastric plexus. Micturition was a compound process, involving a true peripheral neural reflex for evacuation of the bladder over

which the surgeon had no control, and accessory co-ordinate reflex acts of the abdominal and perineal muscles over which he had control, and which supplemented the act of evacuation, allowing of its consummation in a neat and satisfactory manner. In support of the view that the true centre was in the pelvic plexus, the speaker adduced (1) the acknowledged existence of the peripheral peristaltic reflex—for which no centre in the cord was claimed; (2) that recent embryological research pointed strongly to a common developmental origin for the bladder, rectum, colon, caecum, and lower ileum, and it was therefore reasonable to suppose that they should all have a similar nervous mechanism; (3) that the existence of very large numbers of nerve cells in the pelvic plexus made the existence of such a peripheral reflex possible.

Section of Obstetrics.

At a meeting on March 6th, Dr. M. J. Gibson, President, in the chair, Drs. Madill and Allan, in a paper on the *Use of pituitary extract in labour*, reported the results of 147 cases. As to its effect on the uterus, they found that the contractions resulting from the drug retained their physiological character, and they regarded this as the fundamental principle governing its use in labour cases. They had never observed a tonic contraction. The interval between pains was diminished by about one-half, and the effect of the drug lasted fifty minutes. There was an earlier detachment of the placenta. As for effect on the fetus, they often noticed a drop in the fetal heart following the injection, but the child was born healthy. They reported in detail four cases of fetal death which might be due to the injection of the drug. It was tried unaided in one case to induce premature labour, and in two cases in conjunction with Champetier de Ribes's bag, all being successful. They considered the second stage, with the head well through the brim, as the best time for its administration, and in most of their cases the drug was given at this time. They had good results with it in *post-partum* haemorrhage in combination with ergot. Its use was contraindicated in heart lesions, but probably not in nephritis. It was a valuable adjunct in cases of placenta praevia where version had been performed. They had six instances of *post-partum* atony of the uterus of a slight degree. Professor Smith said his only experience of pituitrin was in gynaecology, and it was of interest to know that it did equally good work in that branch. He was at present using it in cases of infantile uterus and the menorrhagia of young girls. Young rats fed on pituitrin extract grew to great size, and their genital organs were hypertrophied. It was also useful in connexion with intestinal stasis after laparotomy. Pituitary extract had an action on the mammary gland, and he would like to know if any observations had been made of the mammary secretion in these cases. Dr. Sheill said he had had experience of the drug in about twenty-six or twenty-seven cases. He had always given it intramuscularly, and in his experience it took eight and a half minutes to act. As for anaesthetics having no marked result on the injection, he asked if the drug had been used in cases in which scopolamorphine had been given, as he considered the drug less effective after scopolamorphine than in other cases. Dr. Tweedy said he noted that Dr. Madill and Dr. Allan thought many forceps cases had been saved by the giving of pituitrin. He suggested that it would be more instructive if the number of forceps cases were compared for a period when pituitrin was given with a similar period when it was not administered. He recommended the use of pituitrin in cases where curetting failed to stop haemorrhage, and would suggest its use before resorting to larger operations. A case of rupture of the uterus, following quickly upon the administration of pituitrin extract, had been brought under his notice by a doctor in America. Dr. Solomons said it seemed to him a most fortunate matter that most authorities agreed that whilst the drug was useful in cases of active abortion, it was useless as an abortifacient. He was surprised to hear that there were no lacerated cervices or ruptured uteri in any of the cases, as De Lee, in the *Year Book of Obstetrics*, published by the Chicago Year Book Publishers, commented on these results of the drug. It was of the utmost importance, where there was suspicion of contracted pelvis, that pelvimetry should be done before administering pituitrin. He had given pituitary extract with excellent effect in cases of amenorrhoea with chlorosis. Dr. McAllister referred to a paper read by him regarding the control of *post-partum* haemorrhage and shock from that condition by intravenous injections of a very dilute solution of infundibulin. Undoubtedly these preparations increased the uterine contractions, but he did not consider that the contractions preserved their physiological character, there being a tendency for the interval between the pains to become too short. He considered the drug at its best where there was slight obstruction, and pointed out that the general opinion was that it was most useful and safest for the child during the expulsion stage. He did not feel satisfied that the results obtained from pituitrin in the third stage were as satisfactory as from ergotin. He had found that the injection of pituitrin into the uterus was very useful before Caesarean section. Pituitrin markedly increased the excretion of urine. In cases of retention of urine after operation his experience in the Coombe Hospital showed that it was useless. Dr. Jellett had little doubt that if any one studied the paper and deduced facts from it he would be able to get some valuable information. It had been found that the use of pituitary extract in 140 cases had not been followed by any bad results. As to the question of fetal mortality, he had been sceptical about its use for some time, because he thought perhaps it was followed by definite danger to the fetus. However, he considered the results brought forward were strikingly directed to prove the contrary. Although he agreed with Dr. Tweedy in regard to the application of forceps, still the fact remained that in a large number of cases in which forceps were applied the necessity for their application arose out of a delay in the second stage, and if pituitary extract avoided this there should be a lower morbidity. He considered that the use of pituitary extract was contra-indicated where there was any obstruction to the birth of the child, but where there was no undue obstruction and where rapid pains could empty the uterus he thought Drs. Madill and Allan had shown that the drug was useful. With regard to the use of pituitary extract in *ante-partum* haemorrhage he would like to emphasize the fact that delay after the haemorrhage was checked was beneficial to the patient, although it was anything but beneficial to the child. He thought, therefore, that it was unwise to hasten delivery until the woman had recovered somewhat, and that then pituitary extract might be of value when uterine contractions did not come on strongly of themselves. The President said he had seen two cases in which administration of pituitrin during the first stage had been followed by extensive laceration of the lower uterine segment. In a case of placenta praevia it was impossible to turn the child, owing to the effect of the extract. He considered the extract contraindicated in the first stage of labour, unless the contractions were very feeble and the stage prolonged, and the cervix neither diseased nor friable. In the second stage it was excellent when there was uterine inertia; after the third stage it should be combined with intramuscular injection of ergot. He had seen much trouble result from the injudicious use of the extract, and thought it should not be used freely, but with great care, and not at all in cases of obstruction. Dr. Allan, in replying to the remarks, said there was no change noticed in the mammary gland. In the first cases the drug was given intramuscularly, but latterly subcutaneously. It was found that when it was given by the former method the pains came on quicker, but by the latter method the pains were more gradual and at longer intervals. They had no experience of it with scopolamine-morphine. The drug was never given in *post-partum* haemorrhage alone—it was always combined with ergot; neither had it been administered in cases of eclampsia. In five cases the drug had failed to be of any use. In the year previous to the use of the drug there were 106 forceps cases at the Rotunda Hospital, and during the past year when it was given there were only 56 cases. No opportunity was afforded of trying the drug in a case of accidental haemorrhage. Syringes were sterilized by boiling, and afterwards kept in sterilized water. There was no experience in any of the cases of cervical tears. It was agreed that the best results were obtained in the expulsion period. It was not considered that the drug had any advantage over ergot in cases of Caesarean

section, and the latter was always given. They were emphatic in their opinion that the drug should be used with caution, and that the fetal heart should be carefully watched.

LIVERPOOL MEDICAL INSTITUTION.

At a meeting on April 2nd, 1914, Dr. E. W. Hope, President, in the chair, Dr. Courtenay Yorke, speaking of methods of *Anaesthetizing the larynx*, maintained that the plan of making deep injections of novocain along the course of the nerve possessed many special advantages, and illustrated by lantern slides the anatomy of the parts involved. Drs. Bark and Sanderson criticized the method; both had found cocaine sufficient for the great majority of cases. Dr. H. R. Hurter in a note on *Pulmonary thrombosis* recorded three cases, of which one died within three hours of the onset, while the other two eventually recovered after relapses. In his opinion occurrence of this condition was becoming increasingly common, and the use of ether as an anaesthetic was possibly the cause. Professor Ernest Glynn gave an account of 22 cases seen by him. Dr. I. Harris, in a paper on *Physical methods in the treatment of heart disease*, said that physical exercise, carefully graduated and controlled for individual cases, was capable of developing the peripheral vessels to such an extent as to make them assume in part the function of the diseased central organ. He used the Zander system in combination with CO_2 baths and massage. Professor Theodor Schott of Nauheim demonstrated by sphygmographic tracings the effect of natural and artificial CO_2 baths upon the blood pressure. By baths of different concentrations and varying temperatures he could raise or lower the blood pressure. Dr. Bradshaw said he was surprised at the small results obtained. To lower the blood pressure merely a few millimetres of mercury could not be of much advantage if lowering were required, and it was not at present known whether low blood pressure was beneficial or otherwise. Dr. O'Hagan and Dr. Glynn Morris related cases that had benefited by this treatment. Dr. Macalister, speaking of heart disease in children, held that any treatment which toned up the whole body and the general metabolism would produce beneficial effects upon the heart. Drs. Gullan and Johnston having spoken, Dr. Harris, in reply, said it was certainly regrettable that there was no standard upon which to base measurement of the effects produced by this treatment. Certainly blood pressure records and pulse tracings did not assist in prognosis. Professor Schott agreed with Dr. Harris's remarks, and desired to explain, in response to several criticisms, that he had only demonstrated the results of scientific investigations. Such results must be combined with clinical experience in order that the patient should receive the most beneficial treatment.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

At a meeting on April 4th, Dr. Palmer, President, in the chair, the following were among the exhibits: The President: A case of *Wasting of the muscles of the shoulder girdle* of nine months' duration in a man. Fibrillary tremors excluded a myopathy, and suggestions as to the diagnosis were asked for. Syphilis was denied. Dr. Fearnsides advised that a Wassermann test should be applied. Dr. Bernstein: (1) Three cases of *Polycythaemia* with splenic enlargement, in a man, his wife, and their son; (2) a case of *Myxoedema* in a woman whose daughter was attending Dr. Pernet for alopecia areata. The progress of both cases was controlled by the administration of thyroid extract. Dr. Pernet said that the daughter had improved as regards the alopecia under the thyroid extract, but relapsed when this drug was discontinued. Dr. Dobson (for Mr. Armour): (1) A case of *Syphilis of the cervical vertebrae* in a man; (2) a case of *Enlarged liver and spleen* in a boy whose Wassermann reaction was strongly positive. Salvarsan had been given a week previously, and, though the splenic and hepatic enlargement had not altered, the temperature was now normal, and the general condition had greatly improved. Dr. Davis: A case of *Chronic oedema of eyes and nose* with pus in the antrum. Dr. Saunders: A case of *Congenital syphilis* with recurrent periostitis of both tibiae and an ulcerating gumma of the palate. Dr. Pernet: A case of *Double primary chancre of the lips* with typical secondary rash. There was no lesion on the external genitalia. Mr. Bishop Harman: A case of *Embolism of the central artery of the retina* in a man in whom no primary lesion could be found. Mr. Tyrrell Gray and Dr. Nabarro: A patient who had been shown at a previous meeting, when he was suffering from sarcoma in a keloid of the eyebrow. The growth had since received one application of radium and was apparently cured. Sections of the tumour proved it to be a small round-celled sarcoma. Mr. Souttar showed cases of *Nerve injury*: (1) Paralysis of the deltoid from direct injury; (2) injury of the posterior interosseous nerve, with recovery after operation; (3) injury to the posterior cord of the brachial plexus, the result of dislocation; (4) paralysis of the fifth and sixth cervical nerves in a child, the result of anterior poliomyelitis; (5) paralysis of the ulnar nerve after injury, the paralysis remaining at present being probably functional. Dr. Grainger Stewart: A case of paralysis, deemed to be due to hysteria.

HARVEIAN SOCIETY OF LONDON.

At a meeting on April 2nd, Mr. J. Jackson Clarke, President, in the chair, Dr. Claye Shaw, in a paper entitled, *A Plea for the Degenerate*, said that in spite of the conference of eugenists and the new Mental Deficiency Act, there was still something to be said for the very large class of slightly degenerate. Many would agree that in the desire to make a nation of sane and healthy people the eugenists overlooked or underestimated the curative power of Nature, whilst they advanced measures some of which were unnecessary and others intolerable. No one could rightly maintain that grades of intelligence were not a necessity, and that a socialistic Hygeiopolis, where all were equal in mental and bodily development, was either desirable or possible. In the case of the ultra-impaired and degenerate, it was, no doubt, absolutely necessary to condemn their contribution to the perpetuation of the race, but it was doubtfully wise to limit marriage to those who were able to produce a certificate of validity. He pointed out the importance of those with mediocre intelligence to the social system. The man of the moment who arose in times of great stress was not found among pedigree stock, people who had had noble ancestors, but by waiting until the right person arrived—often a mushroom growth, from some dark, neglected, and unsuspected corner. Intelligence and morality were almost regarded as two distinct things, and apparently it was safer to have intelligence than morality. A person who had the former might get off scot-free, but to him of weak intelligence his morality was of little avail, when it suited the purpose of those who had the power of sequestrating him to use it. It was against the abuse of this facility that the address was directed.

NEW LONDON DERMATOLOGICAL SOCIETY.

At a meeting at the Western Skin Hospital, Dr. David Walsh in the chair, Dr. Alfred Eddowes, speaking of the *Treatment of lupus erythematosus*, said that the treatment of this rebellious skin affection was unsatisfactory. As the outcome of a careful study of the pathological changes in this disease he had formed the opinion that when the blood vessels became thickened, and many of the veins completely blocked, there was no longer leucocytosis, except at the spreading margins, but an extensive cell-infiltration leading to complete destruction of the skin glands. He was convinced that a poison was locally produced which required to be relieved surgically as much as if suppuration were taking place. Careful search should be made for all signs of nodules, large or small, and they should be immediately treated by deep punctures at an angle of 45 degrees to the surface of the skin. Such punctures should be deep enough to cut across the base of the nodules just where they rested upon or emerged from the subcutaneous adipose tissue. Like most other affections of the skin the disease was sometimes deep, sometimes superficial, both in acute and chronic cases. Seeing

that it consisted essentially of nodules he recommended this puncturing even in the case of smooth patches if these were oedematous, because the punctures, if properly made, left little or no visible scarring, whereas if the disease were left to run its course unsightly cicatrices would inevitably result. As a local application he now employed a mild solution of camphor and carbolic acid in spirit. The surface of the skin was first wiped over with this solution, a little being painted on afterwards and allowed to dry. For internal administration he had abandoned the sulphate of quinine as he preferred the chloride. Dr. WALSH, who showed a case of the disease, said that although it was not one of typical lupus erythematosus, the result of treatment with a tuberculin emulsion had been so satisfactory that he would make further trials of it.

Reviews.

BLOOD PRESSURE.

IN *Blood Pressure from the Clinical Standpoint*,[1] Dr. FAUGHT has produced a book which serves at least one purpose, and that is to show how wide an interest is being taken all over the world in the problems connected with variations in the blood pressure. The first five chapters contain short references to the physiology of the circulation, a description of various forms of instruments used for recording pressure and the mode of their application, and to certain definitions. Then follows a discussion of the influence of barometric, climatic, and racial features, and the influence of athletics and exercise. Three chapters deal with hypotension and the influence of acute and chronic infections in producing this condition.

The volume, which shows, unfortunately, very inadequate proof reading, as will be seen on pp. 17, 124, 134, and 141, in no way pretends to be an exhaustive study of the fundamental scientific problems which underlie the variations in blood pressure, but is, as its author states, a book written from the clinical point of view. The reader thus knows what to expect, and in Chapters IX, X, and XI he will meet with the old vexed problems which are connected with the subjects of hypertension, presclerosis, arterio-sclerosis, and the association of hypertension with renal disease. The same traditions hang about this volume as are to be found in other books written on the same subject, and the reader who looks for newer ideas which seek to unify the causes of hypertension will be disappointed. The fault lies not so much in the author as in the subject. So long as clinicians accept without question the dogmatic statements which have been made about the influence of gout, alcoholism, and tobacco-smoking in producing hypertension, so long will the subject provoke feelings of irritation in those who have come to believe that the problem of hypertension can only be solved by the recognition of the principle that the disorder is of a biochemical origin, and that no known chemical agent likely to cause it has been satisfactorily established. When this discovery has been made, then there will be an end of the artificial separation of "hypertension" from "true high blood pressure," and we shall see the same causes at work in both. This is no greater speculation than many which may be found in this book.

Perhaps the most instructive part of the volume is that dealing with hypotension, and for this reason—the subject is much more reasonably dealt with; infections are at the root of the disorder, and it is known that toxins of bacteriological origin can be separated, and their influence closely studied. More than in any other work of its kind we have read attention is given, in the section dealing with infections and blood pressure, to the influence of the disordered suprarenals, and though we cannot warmly welcome Sajous's use of the term "hypoadrenia," yet we can recognize the generalization as probably quite true. Effective chapters will also be found on the value of the sphygmomanometer to the general surgeon, to the ophthalmic surgeon (40 per cent. of cases of retinal haemorrhage being found to be associated with renal sclerosis), to the obstetrician, and to the medical examiners for life assurance. If the reader finds the treatment also to be of the traditional kind, especially with regard to the therapeutics of hypertension, the excuse must be admitted that until the true cause has been made out it can but be empiric and symptomatic in scope.

[1] *Blood Pressure from the Clinical Standpoint.* By F. A. Faught, M.D. Philadelphia and London: W. B. Saunders and Co. 1913. (Med. 8vo, pp. 281; 36 figures. 15s. net.)

ENDOSCOPY.

The progress of the development of the technique of the laryngologist and rhinologist has always been in the direction of lighting up regions previously regarded as darker than darkest Africa, of replacing a blind groping in the dark by ocular inspection. The truth of this assertion is fully established by the progress made within recent years in the direct examination of the larynx, the trachea, the bronchi, the oesophagus, and the stomach, by illumination through metal tubes passed into these regions. These methods are known as autolaryngoscopy, tracheo-bronchoscopy, and oesophagoscopy, and, collectively, under the comprehensive term of "endoscopy." The rapid advance in the study and application of endoscopic methods called for a book in English combining the technical and clinical sides of the subject. Mr. HOWARTH'S book on *Direct Laryngoscopy, Bronchoscopy, and Oesophagoscopy*,[2] is a revised and expanded form of Dr. BRÜNINGS'S *Handbuch für die Technik und Methodik der direkten Okularen Methoden*, which was published in 1910. That book dealt exhaustively with the technical side, and was intended to serve as a preliminary to a clinical treatise on the subject. In the English edition the technical part dealing with the theoretical considerations underlying the construction of the instruments has been omitted, and the space thus gained has been utilized to expand the part dealing with the endoscopic method itself in its clinical application. The book consists of eight chapters, dealing successively with endoscopic technique, anaesthesia, direct laryngoscopy, the trachea and bronchial tree, direct tracheo-bronchoscopy, direct examination in children, oesophagoscopy, and bronchoscopic operations and methods of treatment.

The indications for bronchoscopy are manifold, but foremost amongst them is the presence of a foreign body. A very full and systematic account is given of the diagnosis and treatment of foreign bodies. The current remark, however, that there are to-day far more bronchoscopic instruments than cases of foreign bodies in the bronchus only proves how incomplete, even now, is the knowledge and appreciation of the many and varied services that the direct method can achieve. In any case of thoracic disease in which an element of doubt exists valuable information may be gained by bronchoscopy; more particularly in cases in which there is no history of a foreign body having been swallowed and the patient shows symptoms, it may be, of pulmonary tuberculosis without the presence of tubercle bacilli in the sputum, and particularly if there are physical signs at the base of the right lung with signs of pleural effusion. Then, again, bronchoscopy is of service in all cases of bronchiectasis, not only for detecting a foreign body, but also for local treatment.

Whilst many other indications are obvious, bronchoscopy, nevertheless, has its limitations and contraindications, and this remark applies to the endoscopic method generally. The contraindications are given by the author under the several sections. Absolute contraindications for autolaryngoscopy are very rare. Amongst them are mentioned serious dyspnoea, all diseases which would render inadvisable any considerable increase of blood pressure, especially advanced aneurysm of the aorta, heart lesions in which there is failure of compensation, a high degree of arterio-sclerosis, or an apoplectic history; much impairment of the general powers, and threatening haemoptysis are also contraindications. Then, again, for physical reasons, apart from pathological conditions, a certain percentage of cases are not amenable to endoscopic methods unless a *tour de force* be resorted to, when the cases amenable to autoscopy would amount to 100 per cent. The contraindications for tracheo-bronchoscopy are the same, except that there are no absolute contraindications when foreign bodies are lodged in the bronchi.

[2] *Direct Laryngoscopy, Bronchoscopy, and Oesophagoscopy.* By Dr W. Brünings. Translated and edited by W. G. Howarth, M.A., M.B., B.C.Camb., F.R.C.S.Eng. London: Baillière, Tindall, and Cox. 1912. (Med. 8vo, pp. 384; 114 figures. 15s. net.)

Oesophagoscopy also has its limits, but it is sufficient to note that oesophagotomy for foreign bodies is followed by a mortality nearly ten times as great as that following removal by oesophagoscopy.

The development of endoscopy and of oesophagoscopy in particular, illustrates the truth of the adage that it takes twelve years for a scientific principle to be accepted, adopted, and developed. Oesophagoscopy has taken a good deal more than twelve years, for Sir Morell Mackenzie, in his work published in 1884, states that by 1880 he had attempted oesophagoscopy in 50 cases, and had been successful in 37.

Endoscopy has its mortality, and for that reason we have dwelt upon the contraindications. Endoscopy is a method of clinical examination and treatment that cannot be placed in the same category as some modern clinical aids, such as the *x* rays. It calls not only for continual practice and facile fingers, but also for a well-organized staff of assistants and specially trained nurses.

The reader of Dr. Brünings's book will obtain a methodical idea of the subject, so that he can approach even his first attempt at broncho-oesophageal manipulation with the hope of some degree of success, and the English reader will also feel that he owes a debt of gratitude to Mr. Howarth for the great care that has been bestowed upon the laborious work of translation.

SURGERY OF THE OESOPHAGUS.

THE book on the surgery of the oesophagus by Dr. REHN[3] is a comprehensive clinical and experimental study of surgical procedures in thoracic and abdominal oesophageal tumours. A detailed historical sketch of the operations so far advocated, in which their merits and demerits are discussed, is followed by reports of a series of experiments on dogs, undertaken to elucidate such important points as the best method of approaching thoracic oesophageal tumours, and the question of invagination either total or partial, the former having originally been proposed by Levy and subsequently developed by Ach. The author finds that total invagination—that is, invagination of the oesophagus either downwards or upwards—though comparatively easy of performance, invariably leads to a fatal issue owing to haemorrhage into the posterior mediastinum along the track of the invaginated tube. Partial invagination, however—that is, invagination of the mucous and circular muscular coats alone, which is likewise quite easy of performance—is followed by no such untoward result, and, further, interferes far less with the vagus nerve. Experiments with a view to obtaining a continuous artificial oesophagus by layering the invaginated tube below the skin of the chest proved unsatisfactory, as the transposed tube invariably became gangrenous.

The second portion of the book is clinical; a large number of cases of oesophageal tumour are described, some of which were operated on, mostly with unsatisfactory results, the patients dying within a short time after the operation. All the operations are described in very great detail, and the important facts to be learnt from them very thoroughly discussed. An excellent summary follows, giving a good description of the methods of diagnosis and discussing the advantages and disadvantages of the various methods of operation. The author insists on the importance of performing a preliminary laparotomy in cases of tumour just above or below the diaphragm; he further strongly advocates the extrapleural as opposed to the transpleural method of reaching tumours of the thoracic portion, and is in favour of dividing the operation into two stages undertaken at separate times. Immediate end-to-end suture he deprecates, and is opposed to any attempt at using the invaginated oesophagus for obtaining an artificial continuous passage. Finally, some experiments on the cadaver are related, and the oesophagoplastic operations employed for the formation of an artificial connexion between the oesophagus and the stomach are very fully discussed.

The book is well illustrated, and should prove of great interest to the specialist in this field of surgery.

[3] *Oesophagus-Chirurgie.* Eine klinische und experimentelle Studie über chirurgisches Vorgehen bei thorakalen und abdominellen Speiseröhrengeschwülsten. Von Privatdozent Dr. E. Rehn. Jena: G. Fischer. (Crown 4to, pp. 167; 2 plates; 48 figures. Mk. 7.)

PUBLIC HEALTH TEXTBOOKS.

ALTHOUGH the general arrangement of the fifth edition of *Hygiene and Public Health*[4] by Dr. LOUIS PARKES and Professor HENRY KENWOOD is very much the same as that adopted in former editions of this textbook, several chapters have been extended. In that relating to typhoid fever more lengthy reference is made to carrier cases and to the influence of flies in the causation of the disease; the opinion is expressed that flies may possibly convey infection by organisms carried on their feet and by regurgitation from their crops on to the materials on which they are feeding. There is also more information than in former editions regarding antityphoid inoculation, and the results which have followed this practice. The principal arguments for and against the compulsory notification of measles are very fully stated, and the conclusion reached is that it might be useful to bring measles under the Infectious Disease (Notification) Act in rural districts and in small isolated communities, if in such areas every advantage could be taken of the information thus obtained to detect unnotified cases, and if the means of hospital isolation could be provided. In larger communities, especially when notification has not been adopted in neighbouring districts, the measure is not recommended. In the chapter on hospitals the provision of small wards in fever hospitals is advocated, as they appear to be more favourable to the patient's recovery and to reduce the risk of secondary infections. It is pointed out, moreover, that where small wards are provided it is easier to classify patients according to the severity of the attack and the stage in the disease at which they have arrived. It might have been added that return cases are less likely to occur when patients in the early and late stages of an infectious disease are not obliged to occupy the same ward. The minimum cubic space per head of 2,000 feet is advised for an infectious diseases hospital, but no mention is made of the recommendation of the late Dr. Franklin Parsons in his report to the Local Government Board in 1912, that in properly ventilated cubicles and single-bed wards, in which the patient is completely separated from any other, a smaller cubic space than this might be allowed. An illustration of a slop sink for use in hospitals does not show a very good type of this appliance for use in an institution in which infectious cases, and especially cases of typhoid fever, are taken. The fountain spray depicted, if carelessly used, might discharge some of the contents of a bed-pan over the nurse. By far the best type of slop closet is that in which the bed-pan is completely enclosed before it is either emptied or subjected to any cleansing process. Several additions have been made to the excellent series of illustrations which have appeared in previous editions. It is a pity that there is still retained the sectional drawing of a pail privy closet, which depicts a structure that would be extremely difficult to keep in a cleanly condition. On the same page approval seems to be given to the use of house ashes and cinders in a pail closet. As these are sterile, they can have no germicidal action on the excrement in the manner that earth has. These criticisms are made in the friendliest spirit, and with every desire to assist the authors in making still more useful and reliable a textbook which deservedly occupies a very high place in the esteem of public health officials.

The general scheme of a *Handbook on Sanitation*,[5] by Dr. GEORGE M. PRICE of New York, which was first published twelve years ago, is excellent. Nearly one-third of the volume deals with sanitary science, and most of the remainder with sanitary practice. The views expressed by the author are quite in accordance with those which prevail in this country at the present time, and the work might be used as a textbook by British students. To public health administrators it should prove of considerable value on account of the frequent and detailed references to some of the sanitary laws of New York, rendering possible a comparison with similar enactments elsewhere. Not the least interesting chapter is that which deals with

[4] *Hygiene and Public Health.* By L. C. Parkes, M.D., D.P.H.Lond., and H. R. Kenwood, M.B., F.R.S.Edin., D.P.H.Lond. Fifth edition. London: H. K. Lewis. 1913. (Demy 8vo, pp. 748; 92 figures. 12s. 6d. net.)

[5] *Handbook on Sanitation: A Manual of Theoretical and Practical Sanitation.* By G. M. Price, M.D. Third edition. New York: J. Wiley and Sons; London: Chapman and Hall. 1913. (Cr. 8vo, pp. 565; 22 figures. 6s. 6d. net.)

sanitation as a profession, from which it appears that sanitary inspection is very largely specialized in America. There are health, factory, sanitary, building, plumbing, offensive trades, contagious disease, meat, milk, fruit, and tenement house inspectors; and where these have to pass a civil service examination that test is varied in accordance with the special duties to be undertaken. Dr. Price deplores the fact that the sanitary service is not being recruited from the best sources. The reason for this is that many appointments are made solely on political grounds; that those appointed are insufficiently educated and inadequately paid, and that there is no organization among them. He considers that sanitary officers should be selected for fitness only, and after passing a certain educational test, that they should have a permanent tenure of office with a substantial initial salary, increasing with years of service, and should be entitled to a pension at the end of twenty years. He contends that in no position are advancement and increase of salary less to be expected than in municipal positions. When a man works for a private employer he expects a rise in position and influence proportionate to the years of employment, but in municipal positions it is difficult to secure an advancement because every increase in salary raises such a howl that those responsible prefer to let efficient sanitary workers of many years remain at a miserable salary rather than risk harsh criticism from unfriendly opponents.

A very cordial welcome must be given to the contribution that has been made by Professor ROSENAU to the public health literature written by American writers in his *Preventive Medicine and Hygiene*.[6] By far the most valuable portion of the work is the first section, which deals with the prevention of communicable diseases. The author considers that it is almost impossible to prevent or suppress a communicable disease without a knowledge of its mode of transmission; he accordingly groups these diseases in accordance with their modes of transference, a classification which has not hitherto been adopted. In one group are those diseases which are spread through the alvine discharges; in another those spread largely through discharges from the nose and mouth; in another are included insect-borne diseases. Small-pox, rabies, venereal diseases, ophthalmia neonatorum, and tetanus are grouped together as specific diseases, against which special prophylactic measures can be taken. Referring to venereal diseases, Professor Rosenau expresses the opinion that it is not possible to control any communicable disease, especially one that is pandemic, as is syphilis or gonorrhoea, without a knowledge of the cases and deaths. While he considers that public registration of venereal disease may defeat its own end, he thinks registration should be attempted, for though the returns at first might be only partial, yet a gradual improvement might be expected. Every case known and properly cared for would be a focus of infection neutralized. In view of the recent Order of the Local Government Board making ophthalmia neonatorum compulsorily notifiable in England and Wales, it is of interest to learn that this disease is already notifiable in eleven American States. In some the nurse, midwife, or parent is required to notify, in others the medical practitioner in attendance. In six States a prophylactic outfit is furnished to practitioners. The outfit consists of a small bottle containing a 1 per cent. solution of silver nitrate, a sterilized dropper and bulb, and a circular of instructions. On the question of isolating infectious cases generally, the opinion is expressed that in theory this is the most perfect single method to check communicable disease, but that the results in practice have been disappointing. With improved methods of diagnosis and increased knowledge of the methods of spread of disease, isolation will be made increasingly effective, and will always remain one of the chief administrative procedures for the control of communicable diseases. The chapters on foods, air, water, disinfection, schools, and industrial diseases deal with the several subjects in a masterly manner. Chapters on sewage disposal and refuse disposal, written by Mr. George C. Whipple, Professor of Sanitary Engineering, Harvard University, while containing much that is familiar to English readers, include much information as to American methods which is of great value. Dr. Cressy L. Wilbur contributes a chapter on vital statistics, in which he deplores the fact that there is no general registration of births and deaths in the United States as a whole. It is gratifying to learn, however, that progress is being made in the direction of more complete records of vital statistics in that country.

[6] *Preventive Medicine and Hygiene.* By M. J. Rosenau. New York and London: D. Appleton and Co. 1913. (Med. 8vo, pp. 1102; 157 figures. 25s. net.)

A COMPENDIUM OF EVOLUTION.

DR. S. HERBERT, already known as the author of a book on heredity, has added one more to the list of volumes on the *Principles of Evolution*.[7] The term is used in its widest significance; the first chapter deals with evolution in general; then follow, a section of four chapters on the evolution of matter; another and longer one on organic evolution, in which, after the facts of morphology, embryology classification, palaeontology, and geographical distribution have been set forth, the various theories which hold or have held the field are discussed and compared; a third on superorganic evolution—mental, moral, human, social, political, and religious; and two concluding chapters on the formula of evolution and the philosophy of change. It will be seen, therefore, that the point of view is in the highest degree comprehensive, and it is no small praise to add that the treatment seems to us upon the whole worthy of so vast a subject, so far, at least, as the limits of space imposed upon himself by the author permit. The book is well and clearly written, and contains a number of useful illustrations; consequently, those who require a compendium of the existing facts and hypotheses of evolutionary doctrine can safely be recommended to obtain and study it. Considerable impartiality is displayed in the treatment of controversial points; thus, while maintaining the value of natural selection as the only acceptable theory of adaptation, the author points out that it affords no explanation of the origin of new species by progressive and seemingly purposive mutations. On the other hand, "Lamarckism cannot be considered as proven, so long as its basis, the inheritance of acquired characters, has not been established; and theological vitalism, whilst assuming a purposeful end, is far from having proved its thesis." The initiation of "evolutionary lines" must, in short, be attributed to a still "unknown factor in evolution." Dr. Herbert does not regard unrestricted competition as the best method of securing the survival of the socially fittest. Granting that the advance of humanitarian sentiment has restricted the elimination of certain degenerate types, he advocates the substitution of "rational" for natural selection, so that social reform shall be supplemental by deliberate race culture. The value of the book is enhanced by a guide to the literature of the subjects dealt with, and by a glossary and index.

[7] *The First Principles of Evolution.* By S. Herbert, M.D., M.R.C.S., L.R.C.P. London: Adam and Charles Black. 1913. (Post 8vo, pp. 356; 90 illustrations. 7s. 6d. net.)

THE CANCER PROBLEM.

WE recently noticed an article by Mr. C. E. GREEN with reference to the supposed correlation between the use of coal or fuel rich in sulphur and a high rate of cancer mortality; the author has also published a volume—*The Cancer Problem: A Statistical Study*[8]—which is a short monograph upon this and allied problems. His thesis may be summarized in the following way: There is a certain analogy between cancerous growths and certain parasitic diseases of plants due to such organisms as the *Plasmodiophora brassicae*. These latter diseases are encouraged by the use of manures rich in sulphur, and malignant disease in man is frequent (1) in occupations involving the use of sulphur compounds; (2) in districts where fuel rich in sulphur is burnt. Mr. Green also finds an association between a high percentage of cancer deaths and an irregular conformation of the country. He says, speaking of the Scottish counties, "that those where the death-rate was low were comparatively flat, or, at most, had low, swelling, undulating hills, with houses built on their sides, whereas those where the mortality was high were inter-

[8] *The Cancer Problem: A Statistical Study.* By C. E. Green, F.R.S.E. Third edition. Edinburgh and London: Wm. Green and Sons. 1914. (Demy 8vo, pp. 98; illustrated. 5s. net.)

sected with gulleys and valleys, with the houses, as a rule, situated in the hollows."

The appositeness of the apologia printed by Mr. Green by way of preface to his book will restrain any man of good feeling from criticizing the work harshly. We cannot, however, pretend to think that the author has made out even a *prima facie* case in support of his hypothesis. The statistical method he has employed seems to us altogether sophistical. The proportion of cancer deaths to deaths from all causes must largely depend upon the age constitution of the population considered, and an attempt to compare the cancer mortalities of different districts with the help of this proportion must be misleading. Even in the case of districts comparable in respect of age constitution, the reliability of rates as measures of prevalence must depend upon the size of the experience; to draw conclusions from rates calculated from very small absolute numbers is to court disaster. Lastly, whatever view we may take as to the part played by improvements in diagnosis in the increase of the cancer-rate, no one can doubt that the accuracy of the certified causes of death is not the same all over the country, a fact which introduces yet another difficulty in statistical inquiries of this kind. There is no problem within the range of medical statistics beset with more pitfalls than that of cancer mortality, and Mr. Green has not, we think, realized the difficulties which he would have to overcome before his theory is likely to receive much consideration.

EUGENE ARAM.

A RECENT addition to the "Notable Trials Series" is a painstaking attempt to construct the story of *Eugene Aram*[9] so far as that is possible by a study of contemporary records. The author, Mr. ERIC R. WATSON, claims that it has never yet been truly or fully told, and that "interest procured the suppression of some facts, others have been unaccountably overlooked, fable and romance have usurped the place of historical narrative." He points out the obvious mistakes that have crept into such works of reference as the *Dictionary of National Biography*, the *Encyclopaedia Britannica*, and the *American Cyclopaedia*; while the admittedly fictitious representation of the story by Bulwer Lytton has blurred and confused the picture of the real Eugene Aram of history, whose character is more interesting (because true) than the product of the novelist's imagination, however ingeniously contrived to engage our sympathy. It is unfortunate for the author that the available materials for his book are defective, and are vastly inferior to those from which the descriptions of more modern cases have been compiled. Eugene Aram was tried at York on August 3rd, 1759, and few original documents are extant, there being no copy of the indictment, while many of the depositions are missing; there is no report of the speeches for the prosecution or of the summing up of the judge, but Aram's speech in his own defence, which was apparently read from a manuscript and afterwards printed in the accounts of the trial, is given in full. The evidence upon which he was found guilty may be gathered from the depositions of the witnesses examined at the inquest upon the supposed remains of his victim, Daniel Clark. After the confession of Houseman, who indicated the place where the remains would be found, and subsequently turned King's evidence, the most damaging statements against Aram are in the deposition of his own wife, which could not be used against him at the trial, but was probably known to the judge and jury and to the public generally, so that while there may be truth in the criticism that the evidence actually given at the trial was, apart from that of the informer, mainly circumstantial, contemporary public opinion entirely approved of the verdict.

The medico-legal interest of the case is slender, as the practitioners who examined the remains did not attempt to determine such questions as age, sex, or the length of time they had been buried, accepting Houseman's statement that they were those of Daniel Clark. There was a large depressed fracture of the occipital bone, which they attributed to a blow from a blunt instrument such as the mason's pick or hammer that had been traced to the possession of Aram, and here the author points out that *Taylor's Medical Jurisprudence* contains an error of fact as to the position of the fracture which should be corrected in future editions. The author gives a photograph of a portion of the parietal bone which exhibits a fracture made during life and may have been a prolongation of the large fracture upon the back part of the skull deposed to by the surgeons. The skull of Eugene Aram was taken from the gallows by Dr. Hutchinson, a physician of Knaresborough, by whose grandson it was presented to the Museum of the Royal College of Physicians, where it may be seen.

The interest of the present volume is greatly increased by the publication in one of the six appendices of the literary remains of the murderer. Of these the most worthy of attention is the "Essay towards a lexicon upon an entirely new plan," which, in the words of Dr. Richard Garnett, shows that had Aram "enjoyed wealth and leisure he might have advanced the study of comparative philology by fifty years." We may in justice to the unfortunate man believe that, had he lived in happier times, when his undoubted industry and learning might have gained for him a more substantial reward than the usherships of £20 a year at the free school of Lynn, he might have left behind him a reputation for scholarship honourable to his country and to himself. Mr. Watson is justly severe on Aram's faults of character as shown, if by nothing else, by his desertion of his wife and family for fourteen or fifteen years, but the eighteenth century afforded little encouragement to learning, and extreme poverty was too often the lot of men who in those times wooed Fortune by their pens.

[9] *Eugene Aram: His Life and Trial.* By Eric R. Watson, LL.B. Edinburgh and London: William Hodge and Co. 1913. (Demy 8vo, pp. 237. 5s. net.)

NOTES ON BOOKS.

FIRST AID MANUALS.

DURING recent years the civilian ambulance movement has received a decided impetus, not only in this country but also in the Dominions. For this the new regulations of the Board of Trade, the organization and work of the British Red Cross Society, and the recent legislation regarding the compulsory provision of first aid instruction and equipment in mines are each in a measure responsible, for each has provided a stimulus to ambulance and nursing classes throughout the country. There is assuredly no dearth of manuals for the guidance of teachers of such classes and the instruction of pupils in all branches, be they members of voluntary aid detachments, of ambulance or rescue brigades on railways or in mines, or members of the Territorial Force. Among the numerous manuals available, the *Aids to Memory for First Aid Students*,[10] by Dr. L. M. FRANK CHRISTIAN, has now reached its fifth edition. It has undergone careful revision in accordance with recent developments, and the number of illustrations has been increased. Its author has had a wide experience of railway ambulance teaching and examining, in which he is recognized as an expert; and his method of tabulating these aids and providing suitable mnemonics for all contingencies is prompted by a practical experience of what is required by the average layman. The booklet makes no pretence to be more than its name actually implies—an aid to the memory of those who have already obtained some first aid instruction, and the issue of its twentieth thousand is ample testimony to its popularity among those for whom it is specially designed. It is of pocket size, and well illustrated with photographs of practical value. In conjunction with the secretary of the national inter-railway competition held annually by the St. John Ambulance Association, Dr. Christian is also the author of *Problems in First Aid*,[11] a companion volume to the authorized text-book of the St. John Ambulance Association on first aid to the injured. This book on problems is issued to emphasize the practical details of ambulance work, not only with regard to the general rules governing emergency treatment, but as to the correct diagnosis and actual requirements in each individual case. Ambulance pupils are too apt to get up theoretical rules by rote in view of the examination, and without reference to the actual case in

[10] *Aids to Memory for "First Aid" Students.* By L. M. F. Christian, M.B., C.M.Edin. Stockport: Connell and Bailey, Limited. London: The St. John Ambulance Association. (16mo, pp. 48; 19 illustrations. 6d. net.)

[11] *Problems in First Aid.* By L. M. F. Christian and W. R. Edwards, A.C.A. London: The St. John Ambulance Association. (16mo, pp. 175. 6d. net.)

hand. In this book we have a series of problematical cases discussed to enable the student to think out *pros* and *cons* in an intelligent manner. The second part of the book deals with competitions, and should be of great service to arbiters and others who have to set problems as well as to those who take part in them as competitors. At the end of each chapter there is a series of questions on its subject matter which should also be of practical utility.

The *Indian Manual of First Aid*[12] has been prepared by Major R. J. Blackham, R.A.M.C., the honorary secretary of the St. John Ambulance Association in India, in order to provide the Indian branch with its own manual of first aid specially suited to India. It is the official textbook for all first-aid classes in the East, and has already been translated into Urdu, Tamil, Pushtu, and Punjabi languages. It gives in concise and readable form the details of anatomy and physiology requisite for the clear understanding of the principles of emergency treatment. The recognition and treatment of fractures and dislocations, of the different kinds of haemorrhage, of shock and collapse, of wounds and bruises, of burns and scalds, of injuries to the nervous system and the special organs of eye, ear, and nose; the methods of artificial respiration, and of treating cases of poisoning, are all dealt with, as in the home textbooks. It has an advantage over some of the latter in that it hits the happy medium of instruction for first-aid pupils, giving sufficient to make them of service in emergency without attempting to make them amateur surgeons. There are numerous illustrations to elucidate the text, and two excellent tables are provided as insets, one showing the methods of arresting bleeding in various parts of the body, and the other giving the causes of the various kinds of insensibility and the means of recognizing them.

For members of voluntary aid detachments the British Red Cross Society has issued a series of manuals dealing with the different branches of its training. These are the *First Aid Manual*, the *Nursing Manual*, the *Training Manual*, and the *Manual of Hygiene and Sanitation*. The *Nursing Manual*,[13] by Surgeon-Colonel James Cantlie, does not profess to be a systematic work on nursing, but a guide for members of detachments, male and female. There is much, however, that is of value to the amateur nurse in the home, and the details of choice of sick-room, its heating and ventilation, and its due preparation for the reception of an invalid are evidently written more for the benefit of the home nurse than for the attendant in a clearing or a general hospital. The same might be said of other parts of the book, as, for example, the garb of the nurse and the use of leeches. The usual course of instruction in nursing duties is given, and there is an extensive chapter on roller bandaging, and another on the moving of wounded patients indoors. The illustrations are numerous, including a large variety of instruments and appliances used in the sick-room, and the method of application of roller bandages to various parts of the body.

While it is essential that members of Voluntary Aid Detachments should have an elementary knowledge of sanitary matters, it is questionable whether they should be taught all that is contained in the *Hygiene and Sanitation Manual*,[14] written by Lieut.-Colonel Moores for the British Red Cross Society. Its six chapters deal thoroughly with the prevention of disease, water and water supplies, food and nutrition, personal hygiene, household sanitation and field sanitation, but there is much detail in each chapter that might well have been omitted. For lay members of the Red Cross Society a manual fulfils its purpose when it sets forth in plain language all that it is essential for the member to know. When it goes beyond this it is apt to defeat the object in view. For example, we are told (p. 70) that "The germs most frequently found to be the cause of meat poisoning are Gaertner's bacillus and the *Bacillus paratyphosus* B." Again (p. 140): "Carriers.—Any person suffering from diarrhoea, or who has recently had enteric fever or cholera, should be prohibited from following troops in any capacity." These are examples of matters with which the member of a detachment has little or nothing to do. Nor is it necessary for him to know of *Taenia mediocanellata* or *Bothriocephalus latus*, or that certain meats should be condemned (p. 69). The responsibility of such condemnation can never be placed on him. There are thirteen coloured plates of germs, such as typhoid bacilli in urine, anthrax bacilli in spleen, etc., stained by the special stains of a particular firm, which can be of little value to the members of detachments. Similarly, the illustrations of *Trichina spiralis*, of magnified fibres of cotton, linen, silk, and wool, and of the elaborate wash-up sink and lavatory hand-basins (also proprietary) might well have been omitted. We might add that the "Administrative Medical Officer of Division" (p. 2) is a title obsolete for some years; also that every unit may possess a "trained sanitary personnel called the regimental sanitary detachment" on paper, but many medical officers have been unable to find it in the flesh.

For members of the Royal Army Medical Corps, regular or territorial, the *Field Service Notes*[15] are intended as a small reference pocket book, and should supply a felt want. The composition and equipment of all medical units is given in detail with a marginal reference to the source of the information, also the authorized medical details for other combatant units. Then follows the system of evacuation of wounded from front to base with averages of casualties, transport, and time required, and methods of calculation. There are notes on sanitation, supply service in the field, intercommunication and orders, horse management, billeting, map reading and field sketching, and on mobilization. The information has been culled from all sources, and is just the kind of information which the officer wishes to have in this condensed form in his pocket during manœuvres or on service. For examination purposes it will prove a valuable guide. We can recommend this pocket book to all Royal Army Medical Corps officers. *Hints for Regimental Medical Officers of the Territorial Force*[16] also should prove of much service to those for whom it is specially written. The hints are to supplement the initial course of instruction which medical officers have to undergo after appointment, and deal with the duties which fall to him in recruiting, in connexion with sanitation, with training of personnel, and at the annual training at camp. Directions are given as to the correct method of communication with higher authority, the returns to be rendered, and the various army forms and books in use. Indeed, no territorial medical officer should be without this little *vade mecum*, which will well repay perusal and careful study on occasion as required. There is a wealth of varied material which makes it an excellent reference book.

For women's Voluntary Aid Detachments *Notes for Practice Meetings*[17] will prove a most useful book. The set of papers of which it is made up have been compiled especially for the use of lay commandants and instructors when a medical officer or trained nurse is not available. They consist of a series of questions and answers taken from the official manuals of first aid and nursing, and the subjects cover the whole field of instruction. As a condensed aid to the textbooks the notes should be very serviceable for all members of detachments, while for those who have to set questions, either for examinations or competitions, they must also be handy. The book is one of real practical utility, and should be in the possession of every detachment.

[12] *The Indian Manual of First Aid.* By Major R. J. Blackham, D.P.H.Lond., R.A.M.C. Calcutta: Thacker, Spink, and Co. 1913. (16mo, pp. 190. 1s.)

[13] British Red Cross Society Nursing Manuals. No. 2, *Nursing.* By James Cantlie, F.R.C.S. London: Messrs. Cassell and Co., Limited. (No. 2, fcap. 8vo; 89 figures, 4 charts. 1s. net.)

[14] *British Red Cross Society Hygiene and Sanitation Manual.* No. 4. By Lieutenant-Colonel S. G. Moores, R.A.M.C. London: Cassell and Co., Ltd. 1914. (Pott 8vo, pp. 195; 6 plates, 73 figs. 1s. net.)

[15] *Field Service Notes for R.A.M.C.* By Major T. H. Goodwin, R.A.M.C. London: John Bale, Sons, and Danielsson. 1913. (Cr. 8vo, pp. 94. 2s. 6d. net.)

[16] *Hints for Regimental Medical Officers of the Territorial Force.* By Captain M. F. Grant, R.A.M.C. London: Forster, Groom, and Co., Limited. 1913. (2½ by 4; pp. 40. 1s. 6d.)

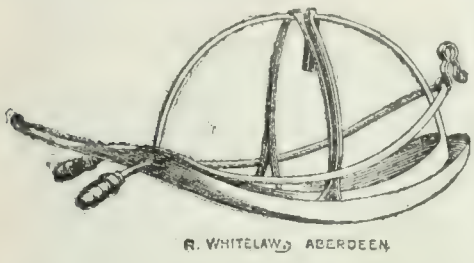
[17] *Women's Voluntary Aid Detachments. Notes for Practice Meetings.* London: Harrison and Sons. 1913. (Cr. 8vo, pp. 88. 1s. net.)

The seventh International Congress of Electrology and Medical Radiology will be held this year at Lyons in July (27th to 31st), under the presidency of Professor Renaut. The meeting will be in connexion with the Exposition Internationale Urbaine, at which there will be a special section of exhibits for electrical and radiological apparatus and installations. The Secretary of the English Propaganda Committee is Dr. Lewis Jones. Among the communications promised are: Professor Doumer (Lille), the action of high-frequency currents on surgical tuberculosis; Professor Nicolai (Berlin), Professor *agrégé* Vaquez, and Dr. Bordet (Paris), clinical electro-cardiopathy; Dr. Arcelin (Lyons), late cutaneous phenomena due to radio-therapy; Professor Albers-Schönberg (Hamburg), the protection of the operator against the *x* rays; Professor Falta (Vienna) and Professor Sommer (Zurich), therapeutic effects of radium emanation. All communications relative to the congress should be addressed to the General Secretary, Professor Cluzet, 282, Avenue de Saxe, Lyons.

MEDICAL AND SURGICAL APPLIANCES.

Anaesthetic Mask.

Dr. J. G. Elder, M.B., Ch.B. (Resident Medical Officer, the Northern Infirmary, Inverness) writes: The mask is of Schimmelbusch's pattern. The frame is rigid, and two metal tubes are carried in, one on each side of the handle. These tubes are conveyed along the hollow base, up the centre arm of the frame, and turned downwards for half an inch in the centre. When in use these tubes are connected by a length of rubber tubing to a cylinder of oxygen.



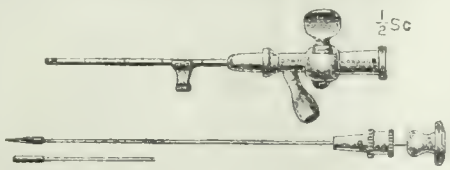
The great advantage of this mask lies in the fact that oxygen can thus be administered instantaneously, when required, without removing the mask from the face. I have used it extensively in the "Omnopon-open ether" method of anaesthesia. I find that by giving a little oxygen in the initial stage of the anaesthesia much of the choking sensation which the patients complain of is eliminated. There being two tubes, the mask can also be used for the administration of nitrous oxide and oxygen at the same time. The mask was made for me by Robert Whitelaw of Aberdeen.

Sanitary Cushions.

We have received from Mr. Leoline Edwards, of 81, St. Margaret's Road, Twickenham, a specimen of some cushions which he is now manufacturing under the name of "Quidos" sanitary cushions. They are of green canvas, filled, we find, with minute morsels of scorched cork. The cushion is very comfortable to sit upon, since, besides preserving its shape, it is elastic, and neither hot nor cold. The manufacturer suggests that such cushions can fairly claim the title "sanitary," because, whenever desired, they can be rendered absolutely germ-free either by soaking in a disinfectant, by baking, or steaming, and this suggestion appears to be well founded. Hence an examination of these cushions may be commended to those in charge of hospitals and sanatoriums, as well as to those who have to sit much on office chairs. There would seem to be no reason why the same idea should not be extended to the manufacture of mattresses.

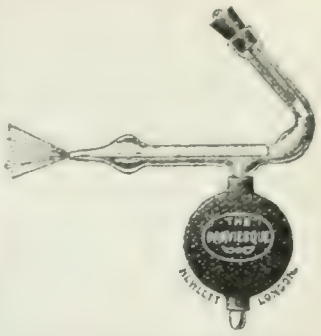
An Artificial Pneumothorax Trocar.

Dr. Clive Rivière (London, W.) writes: The sharp hollow needles so commonly used for the introduction of nitrogen gas into the pleural cavity, though suitable for refills, cannot be used for a first induction of pneumothorax without some danger of wounding the lung. A perfect needle for first operations should become blunt as soon as the skin and deep fascia are pierced, and this seems only possible of attainment on the principle of the trocar and cannula. The instrument here described is, in essentials, a Potain's aspirating trocar made as small and fine as the required stability allows. For use the side branch is connected by tubing to the manometer, the sharp trocar is put in place, and the slide-stop adjusted to 1 cm. or rather less from the point, a distance short of that between skin and pleura. The instrument is then driven in up to the stop, the stop is drawn back, and the trocar pulled out into the stuffing box (which protects against inrush of air); the tap is closed, and the stuffing box (which for security is held by a bayonet catch) and trocar are removed. The blunt cannula alone is then pushed forward till the pleural cavity is reached, and thereby all danger of wounding the lung is avoided. I have now used this instrument many times with success, and consider it the safest for a first injection. To clear the cannula there is a blunt guide, also provided with a stuffing box which is fixed in place before the tap is opened and the guide pushed forward. The complete instrument is supplied by Messrs. Down Bros. at the price of 17s. 6d.



A Small Spray.

Mr. Herbert Tanner, F.R.C.S., writes: The waste of material that frequently takes place with most sprays and the difficulty of directing the liquid to the exact spot caused me to suggest the little spray as illustrated. The smallest quantity of fluid, even a few drops, can be used, and used up completely. The air chamber has a glass tube through it, and the spray can be easily held by one hand and directed accurately. It is manufactured from toughened glass and can be sterilized by boiling. Messrs. C. J. Hewlett and Son, Limited, London, E.C., have made the spray for me, and it is appropriately called the "Parviesque."



THE COMPOSITION OF CERTAIN SECRET REMEDIES.

A Headache, Toothache, and Neuralgia Powder.

John Morgan Jones's Headache, Toothache, and Neuralgia Powder is a preparation which we are informed is in very common use in South Wales; according to the label, it is made in Llanelly. A box priced 1s. 1½d. was found to contain 12 powders.

On a handbill enclosed in the package the powders are described as follows:

> Guaranteed to be the most consistently successful remedy of its kind ever offered to the public, at the same time absolutely harmless and pleasant in flavour and taste. Simply marvellous! is the universal verdict. You cannot overstate the value of these Powders for the immediate Cure of Headache, Toothache, and Neuralgia. They cure when other powders fail. . . . These Powders are of entirely different composition to any previously placed on the market, and they are Guaranteed not to contain Antifebrin or other kindred and dangerous chemicals (which have been known to cause fatal results), but are compounded solely from purely vegetable sources, and they may be administered with perfect safety even to children from two years of age and upwards. Quinsy promptly arrested, however severe.

The dose is given as:

For adults and those over 18 years	...	One powder.
From 12 to 18 years	...	Two-thirds of a powder.
,, 8 to 12 ,,	...	Half a powder.
,, 4 to 8 ,,	...	Quarter of a powder.
,, 2 to 4 ,,	...	One-eighth of a powder.

To be taken in half a wineglassful of cold water, or dry on the tongue: if little or no relief be experienced in from half to one hour (which, however, occurs but seldom), repeat the dose; after a second dose, every two or three hours only; excepting in—

Quinsy—Take one powder every two hours until the course of the disease is arrested, which usually is the case after the third dose.

The powders had an average weight of 28.2 grains, but individual powders varied from 21.1 to 30.7 grains. Analysis showed the composition to be:

Acetyl-salicylic acid	73 per cent.
Sugar	27 ,,

The estimated cost of the ingredients for twelve powders is 1½d.

The last report of the Austrian Central Statistical Commission shows a considerable increase in the number of students of medicine in the universities of Austria. The number registered in the last academic year was 7,330. The increase has been continuous since 1903–4, when the number was 2,509; in the following years it was respectively 2,622, 2,872, 3,715, 4,036, 4,324, 4,888, 5,319, 5,640, 6,439. The increase is out of proportion to the increase in the total number of students in the other faculties. Between 1880 and 1890 there was a notable rise in the number of students of medicine, which culminated in a total of 6,539 in 1890–91. After that there was a period of ebb which lasted several years. It is feared that the flowing tide, which has now risen higher than before, will again have undesirable consequences for the profession.

SOME SOCIAL AND MEDICAL INSTITUTIONS OF HUNGARY.

By Sir THOMAS OLIVER, M.D.,
Newcastle-on-Tyne.

A FEW months ago I paid a visit to Hungary, mainly with the object of seeing what progress had been made, through improved regulations, in combating the evils of lead poisoning among the home potters, upon whose condition I had previously reported to the Hungarian Government.

Industrial Lead Poisoning.

I had audiences of the Home Secretary, Baron Perenyi, and of the Minister of Commerce, Baron Harkanyi. Like his predecessor in office, the Minister of Commerce arranged for me to visit one or more of the large pottery villages, to which I had on previous occasions gone on account of the prevalence of lead poisoning, and to have, in addition, the assistance and companionship of one of the Government officials. Five years ago I was in Czákvár with the late Dr. Chyzer, whose untimely death is still mourned, and at that date plumbism was prevalent among the men, women and children. Dr. Josef Grasser was then, as now, the town medical officer. When M. Izanto and I returned there a few months ago we were met by Dr. Grasser and driven to the communal workroom of the potters of Czákvár, where Count Esterhazy and the Roman Catholic priest, Rev. André Racz, President of the Potters' Union, were waiting to receive us. It was one of my recommendations to the Hungarian Government that communal workrooms should be established by the various municipalities wherein lead glazes might be made, dipping of the ware done, and the use of fritted lead glazes given a trial. At his own expense Count Esterhazy, who takes a keen interest in the welfare of the people, had provided the workshop, with the object of removing thither all the dangerous and objectionable work hitherto carried on in the homes of the people. Within the last five years the number of cases of lead poisoning has been considerably reduced in Czákvár. Part of this may be due, as Dr. Grasser states, to the fact that the glazes are no longer made in the homes of the potters except in a very few instances, partly to the fact that the number of home potters has diminished, that the potters as a class are consuming less alcohol, and that the men work more intermittently, finding outdoor work an agreeable change from turning the potter's wheel. Along with Dr. Grasser I saw several of the lead-poisoned potters whom I had seen five years before. Some of them were still paralysed. I also visited some of the potters in their homes. The houses of the men who bought their glaze at the communal workshop were clean, bright, and tidy. They compared most favourably with those wherein the husband and wife were still making the glaze at home. Dr. Grasser had succeeded in getting several of the potters not to eat or sleep in the room in which the earthenware is dipped in lead glaze. In Czákvár, where effect has been given to some of my recommendations, the cases of lead poisoning, as already stated, have declined. Five years ago there were 49 cases of plumbism, not including children; two years ago there were 14, the year before last 4, and in August last—the date of my visit—only 3 had occurred for the year, not one of them in children.

In matters of social betterment Hungary is in many respects in advance of Great Britain, while in industrial hygiene she is taking hints from Western legislation, and is gradually incorporating ideas of the West with her own, so that in due course she may become a more progressive nation and abler to play her part in the destiny of Eastern Europe.

The People's Hotel.

During my visit, in company with Mr. W. H. Shrubsole, I had the opportunity of becoming acquainted with some of the practical efforts the authorities are making for the social betterment of the people.

In Budapest there is the "People's Hotel," or Népsällo—a building containing 480 beds, in which for 6d. a night a bedroom can be obtained; 8d. a night secures a better room—one in which there is a fixed wash-hand basin, with hot and cold water, and electric light. The bedding is perfectly clean. For an additional 6d. a dinner can be procured of three courses—soup, meat, vegetables potatoes and bread, with pastry or pudding. There are in the basement clean enamelled bath cubicles screened off by curtains, for which a charge of 2d. is made, including the use of soap and towels. There is another series of baths where, for a penny, a man can have a shower bath; also a room where, for a halfpenny, a foot-bath can be obtained. In the building there is a tailor's shop, where the inmates can have their clothes mended at a cheap rate, and a cobbler's shop, where boots can be repaired. Men arriving from the country in dirty clothes can have their clothes brushed and cleaned while they are having a bath.

The dining-room is large and lofty. The meals are served at small tables, as in a well-conducted hotel. The tables are covered with clean tablecloths, upon which is an attractive carafe filled with filtered water. The room is adorned by mural paintings. A large window separates the dining-room from the kitchen. The head cook and her assistants are neatly and appropriately dressed. There is a large reading-room and smoking-room, where chess and dominoes are played. For non-smokers there is also a reading and games room and library. There is, too, a lecture hall, where, on Sunday afternoons, lectures are given on many subjects not of a religious or controversial character.

The "People's Hotel" seemed to me to be largely utilized by men out of work and seeking employment. Many of the inmates were clerks, or they belonged to the better artisan class, and a few university students stay there regularly. A man who hires a room for a week pays 1d. a day less. There is a portion of the building set aside for men who are working at night, so that they can sleep quietly during the day. The Népsällo is maintained by the municipality. It is proposed to erect a similar institution in each of the ten districts of the city.

I also visited in Budapest a cheaper "People's Hotel" for men, women, and children. It is capable of accommodating 180 persons. For a bed in a long ward the charge is 2d. a night. The entrance for women and children is separate from that for the men. A woman on going to work in the early morning can take her child there, leave him in the home all day, and call for him on her way back in the evening. For 2d. a day the child is looked after by a nurse and fed. There is a playground for those children who are able to run about, whilst for infants of tender age there are nurseries with cots. There is also a dining-room where the older children have their meals.

The women inmates pay 2d. a day for their bed in a large, clean, and well-ventilated ward. The bedding is thoroughly clean. The far end of the ward is partitioned off into three rooms, into one of which a mother can take her two or three children. There is a row of fixed wash-hand basins in the female dormitory; soap and towels are provided free.

In one of the men's dormitories which I visited there were 38 beds. The dining-room for the men is bright and attractive. Here concerts are held and free theatrical performances given from time to time. For ½d. a plate of soup can be obtained, for 1½d. meat and bread, and for 4d. a dinner of three courses. If a man who goes to the home has absolutely no money, he can earn in the home not only sufficient to pay his board but a little more. There is in the building a large and well equipped printing room, in which paper-bag making is also carried on. There is another room where wood is chopped for sale. In one or other of these rooms a man can work and earn more than his daily bread. In the basement there is a series of well-equipped bath rooms; the baths are free.

Central Bureau of the Workmen's Insurance.

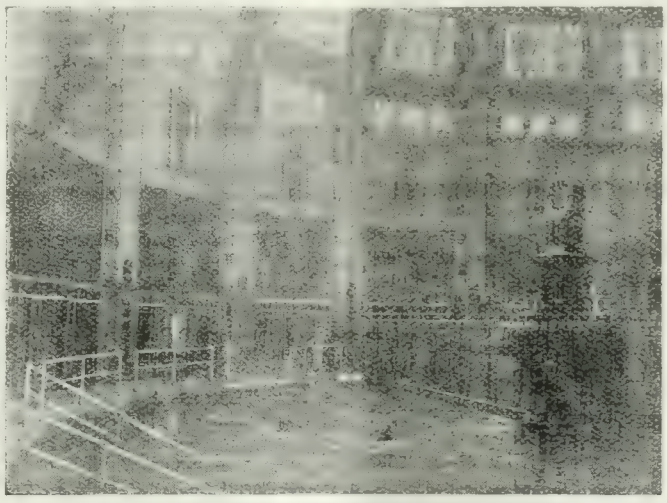
In a previous number of the BRITISH MEDICAL JOURNAL I have described the national insurance scheme for Hungary. During my recent visit to the central bureau the medical officers were busy examining persons sent from various insurance offices of the country. They were all *appeal* cases. In deciding what compensation should be paid to an insured workman, the main consideration is the occupation at the time of the accident rather than the earnings. Each case is settled on its merits in relation to the kind and amount of work the individual is capable of doing after his partial recovery from the injury. If a man or woman is utterly unfit for work—that is to say, so helpless that he cannot, for

example, dress himself, say, from paralysis, or if he is blind in both eyes—he receives full compensation, that is, 100 per cent. of his full earnings. In all other cases full compensation is based upon 60 per cent. of the earnings and not 100 per cent., so that where, for example, a man has lost his right hand and is awarded full compensation, he does not receive 100 per cent., but only 60 per cent. of his earnings. For a broken leg he might receive 60 per cent. of his wages until he can work, or it might be only 30 or 40 per cent. For the loss of a thumb a man will receive 35 per cent. of his earnings, for an index finger 25 per cent., and so on according to the nature and extent of the injury. Recently the scale of compensation has been slightly raised.

Workmen's Hospital.

In connexion with the insurance fund in Hungary there is a workmen's hospital standing in 40 acres of ground, about four miles from Budapest. It consists of a series of detached buildings, one of which is set aside for women; the others are for chest diseases, accidents, diseases of occupation, diseases of the larynx, eye, nervous system, etc. There are 310 beds; 44 are for women. The hospital is only for insured people. Any branch has the right to send in cases free of charge. Patients are admitted through the central bureau. There are 7 resident medical officers and 11 visiting medical officers, of whom 6 are physicians.

The buildings were erected as a speculation for a private hospital, but the expenditure on them was too large. The Government hired the buildings, and has lent them for seventeen years free of charge to the national insurance authority. No money seemed to be lacking to make the wards and interior of the buildings attractive. The operating theatres and clinical laboratories are well equipped. The whole expenses of the hospital are met by the insurance fund.



The large mud bath, with original mud floor, Pöstyén.

Workhouse Treatment.

An effort is being made to remove the inmates of the workhouse at present in the central district of Budapest into the country. The workhouse in the city occupies a valuable site, and the committee has disposed of it for a large sum of money, which has enabled them to buy a prettily wooded estate and a few villas three miles from Budapest. I visited this new workhouse, to which 150 men had been transferred last spring. There is an excellent suite of baths, with hot and cold water. The men must take a bath at least once every three weeks, but the house governor encourages them to take a bath once a week or at any time they may desire to do so. The largest dormitory contained eleven beds, all beautifully clean. Each inmate has his own wardrobe. The men are not shut up in the workhouse, as is the case in our own country. There is nothing of the prison-like atmosphere about the place so noticeable in Great Britain. There are no locked doors or barred entrances which make exit difficult. Perfect freedom and liberty are allowed. The men are all comfortably and neatly clad, but not in workhouse garb. At the time of my visit the inmates could go out at any time between 6 a.m. and 8 p.m. Their meals are placed on the tables, and if the man is not there all that happens is that he misses the meal.

The inmates of the workhouse in Budapest are allowed to go out daily into the city and to earn a few pence by going messages, or by acting as porters, and so on; for this reason some of the men do not altogether appreciate transfer to the country. Others enjoy the quietude, and some gather mushrooms and sell them to the people in the district. The money received is mostly spent in tobacco and beer.

Museum of Social Service.

In one respect Budapest has long been ahead of London. I refer to its Museum of Social Service so well supervised by its able administrator, Mr. M. Izanto. Here in the Tarsadalmi Museum, to give it its proper name, are gathered mechanical appliances for the safeguarding of machinery and the prevention of accidents, models of old and new plant to illustrate how diseases of occupation may be averted; diagrams and specimens concerning tuberculosis and alcoholism, and other exhibits which seek to promote the security of the workers, and to improve their lives socially. Here, too, are given lectures and demonstrations to the working classes by eminent men drawn from the various trades or from the profession of medicine and public health. In order to reach the working classes far removed from Budapest, Mr. Izanto during the last year or two has, with the consent and encouragement of his Government, carried the bulk of the contents of the museum to various towns in Hungary. During last year the exhibition was visited by upwards of 100,000 persons. It is impossible to estimate the good which an exhibition of this kind does, but it must be considerable, and especially in a country like Hungary, which is beginning to pass from the agricultural to the industrial, and in which many of the people who are commencing to flock into the towns are ignorant of the laws of industrial hygiene.

The Baths of Pöstyén.

Pöstyén is reached by express train from Budapest in three hours. For several miles after leaving the Hungarian metropolis the train runs along the north bank of the Danube, through pretty country. The mountain scenery on the other side of the Danube is particularly attractive.

Pöstyén is well worthy of a visit, for its mud baths and hot springs have made it famous in the treatment of all forms of rheumatic affections, and especially of inveterate sciatica. A quarter of a century ago there appeared in the British Medical Journal (May 5th, 1880) a paper by Sir Spencer Wells, in which he drew attention to the composition of the waters of Pöstyén, the curative properties of the mud, and the value of the baths generally in all forms of chronic arthritis, in pelvic exudations, and in haemorrhoids. Weiss has recently shown that both the thermal waters and the mud contain radium.

In 1911 there were 16,000 visitors to Bad Pöstyén. Hotels are good, and the largest, the Thermia Palace, is built on an island in the Waag. The baths are on the same island, and are directly connected with the hotel. Dr. Reichart and his wife, Dr. Melitta Reichart, who are the resident medical officers, both speak English fluently. Dr. Reichart has a well-equipped chemical and bacteriological laboratory, and also an excellent Zander institute. The large mud bath is surmounted by a large glass dome. The bath is capable of receiving a score or more of persons at a time. It is divided into two parts by a high partition. The bottom of the bath is the ordinary mud, through which warm springs keep pouring out water and throwing up hot mud. The temperature of the mud is in places 140° F. The rest rooms in the corridor outside the large mud bath are models of cleanliness. There are several other baths. There are pretty drives in the neighbourhood of Pöstyén, and there is, too, the park, with its daily, afternoon, and evening free concerts, also its theatre and concert rooms, tennis grounds, etc.

As an indication of the benevolence of the proprietors, there is in Pöstyén a working man's sanatorium, founded by the father of Mr. Armin Winter fully twenty years ago. Here working men and women, the subjects of rheumatism

and gout, are received for treatment through the medium of the various friendly societies. Three thousand persons are treated yearly in the sanatorium. Of these, 400 are men from the Hungarian State railways, 400 from the Austrian State railways, 1,000 are miners, workers in the iron and textile industries, and the remainder follow all sorts of trades. The payment for working men varies according to the accommodation provided—from 3s. 4d. to 4s. 2d. a day, inclusive of board and baths.

Along with Dr. Longinotto I spent an afternoon in the sanatorium examining from 20 to 30 working men patients gathered for our inspection by Dr. Edward Weiss. Next to rheumatism, gout, and nervous affections, the largest number of cases seemed to be injuries followed by adhesions, contractures, and stiffness of joints. At Pöstyén it seemed to me that injuries followed by exudation do remarkably well with the bath treatment. Cases of sciatica form 10 per cent. of those coming for treatment. I was particularly struck by the good results obtained in the treatment of this intractable malady. Under mud packing, the use of sun baths and mineral water treatment cases of tuberculous arthritis do well. Urethral arthritis is similarly benefited, psorias and eczema disappear, while pelvic exudations in women are absorbed. The patients are taken from the hotels in the town to the baths in sedan chairs on wheels.

Altogether Pöstyén is a bathing place to which persons in Great Britain suffering from rheumatic affections and neuritis, also gouty affections, might well go. The journey from London is comparatively easy. If the traveller takes the Orient express by Ostend and Vienna, he reaches Budapest, without any change, in less than forty-eight hours, sleeping one night in the train, or he might, if travelling by a different route, alight at Galanta, and thus save two or three hours.

THE GENERAL PRACTITIONER'S INCOME TAX RETURN.

IT is at this time of the year that the income tax form usually makes its annual appearance, and a few notes dealing with this matter will doubtless be of service to our readers.

The preparation of the necessary declarations often involves considerable time and trouble, but if dealt with on a systematic basis and with some grasp of the underlying principles and the intent of the various declarations appearing on the form, the difficulties of the task will be minimized, and the result will probably be of greater service to the practitioner.

The statutory period allowed for the completion of the return is twenty-one days, and while it appears that the officials frequently allow some further latitude, it is desirable that the declaration should be made as early as possible. If this has been done and further forms are received, they should be returned with a statement of the address from which the full declaration has already been made, the space at the foot of the front page of the form being utilized for the purpose.

CALCULATION OF PROFITS.

The amount to be returned is the average amount of the profits for the three years to April 5th, 1914, or to the prior date on which the practitioner usually makes up his accounts. Thus, if the books of the practice are balanced on December 31st, the amount to be returned for 1914–15 will be the average of the profits earned in 1911, 1912, and 1913.

The "profit" in any year is the amount by which the receipts of the practice exceed the expenses which have been incurred in the earning of those receipts.

RECEIPTS.

Until recently the income-tax authorities insisted on their technical right of assessing the fees received from a practitioner's public appointments separately under Schedule E. The inconvenience and hardship arising from this insistence were discussed in our issue of July 2nd, 1910, and it now appears that in general the technicality is waived, and one assessment is made under Schedule D in respect of all the emoluments of the practice, if that mode of assessment is desired by the practitioner. It may accordingly be suggested that the calculation of the profits for the Schedule D declaration be made to include all the receipts of the practice, and the Schedule E form returned with an endorsement stating that all professional income is included in the Schedule D return.

Having decided this point, the practitioner should ascertain the gross receipts of the practice for each of the three years 1911, 1912, and 1913. This may be done in one of two ways—that is, on the basis of "cash receipts only," or on that of "total bookings." The former has the conspicuous advantage that, as no credit is given to the Revenue for outstanding fees, the difficult problem of calculating the value of the "bad and doubtful debts" is avoided. Cases occur from time to time in which the assessors object to this basis of calculation, but it appears to find general acceptance except in the case of new practices. Assuming that the receipts are reckoned on this basis, there remains the question of the expenses to be deducted therefrom.

EXPENSES.

The principle to be borne in mind is that while expenses incurred in the maintenance of the practice are admissible deductions from the gross receipts, any sums expended on the improvement of the equipment, or for private as distinct from professional purposes, cannot be deducted.

The chief items of professional expense may conveniently be enumerated as follows:

1. *Rent.*—The whole of the rent of the surgery, consulting-room, and garage may be reckoned if these premises are distinct from the house, otherwise a reasonable proportion of the rent paid, not exceeding two-thirds. Where the practitioner owns the premises the amount of the Schedule A assessment—usually shown on the collector's demand note or receipt—is substituted for the rent actually paid.

2. *Rates and Taxes.*—These are to be reckoned in the same proportion as the rent except as regards income tax, as to which see below.

3. *Repairing and painting*, as for rates and taxes.

4. *Lighting and heating* should be reckoned in a reasonable proportion, having regard to the requirements of the particular practice.

5. *Wages and Salaries.*—These will be in the main those paid to an assistant, chauffeur, and the staff of servants. The value of the board and lodging provided may be included, but on the other hand a reasonable proportion of the total cost of the maintenance of the staff of servants will have to be excluded as being expenditure of a personal or domestic nature. The number of rooms devoted to professional purposes will furnish a guide in arriving at this proportion.

6. *Travelling Expenses.*—The cost of running a motor car or cars, including petrol, cost of repairs and replacement of parts and tyres, wages and keep of chauffeur (if not already included under the head of wages), licence and accident insurance, are to be reckoned. Where a rebate on petrol duty has been received, that amount should, of course, be deducted from the original cost of the petrol. The cost of replacing a car or carriage may be deducted, but the deduction should not exceed the original cost of the vehicle replaced. Any special expense incurred in visiting patients at a distance should not be forgotten.

7. *Telephone, postage, and stationery* are to be reckoned to the extent to which such and similar incidental expenses are incurred for professional purposes.

8. *Implements and Books.*—The expense of maintaining and keeping up to date the professional equipment are to be reckoned, but not any sums expended in its improvement or extension.

Deductions Not Allowed.

1. *Capital Expenses.*—The cost of the original purchase or equipment of the practice or the premises, or of subsequent improvements—for example, instalments of purchase money, or the cost of a second car where the original car is still retained in use, cannot be deducted.

2. *Interest.*—Interest paid on an ordinary bank overdraft incurred in respect of professional expenses will be allowed, but not yearly interest accruing, for instance, on a loan from a life assurance society or a private individual. The reason for this is that in the case of annual interest the borrower is required by law to deduct income tax

therefrom, and it is necessary that those payments should be excluded from the expenses to ensure the due payment to the Revenue of the tax deducted by the borrower.

3. *Post-graduate Study.*—The expense of this is usually disallowed as being expenditure of a capital nature.

4. *Locumtenent.*—The amount expended in providing a locumtenent during illness is frequently allowed where it can be shown that the locumtenent is exempt or has himself accounted for the tax on the fees. Payment to a locumtenent during holidays appears in most cases to be disallowed as being part of the practitioner's holiday expense.

5. *Income Tax.*

6. *Depreciation.*—The statutory allowance for wear and tear of plant and machinery is so framed as to be inapplicable to an assessment on professional earnings. On the other hand, the net cost of replacing instruments or a car is an allowable expense.

Completion of the Form of Return.

Having calculated the balance of profits for each of the three years the average amount should be inserted, together with any other income which may not have been already taxed, in the space allotted on page 2 of the form and headed "Return for Assessment."

The gradual introduction of different forms of relief to income tax payers has led to the accretion to the original declaration form of several supplementary declarations, and these should be dealt with carefully, as where a claim is not made the officials will not act on presumption, however strong, but will withhold the particular relief in question.

Life Assurance (*page 2*).—The completion of this claim presents little difficulty; production of the receipts as evidence of payment is not usually required except in the case of a new policy.

Abatement and Relief to Earned Income (*page 3*).—These allowances are affected by the amount of the total income of the individual making the claim, and that income must therefore be formally declared. All income, whether already taxed or not, must be stated in this declaration, and the separate income of the wife is for this purpose to be regarded as the income of the husband. Particulars of any deductions from gross income, by way of interest, annuities, etc., must be given in the "space No. 2" on this page. According to Section 19 of the Finance Act of 1907, the claim to the rate of duty applicable to earned income must be lodged before September 30th in the year for which the tax is charged. The completion of page 3 of the return appears to be a sufficient intimation of claim, but as the time limit is rigidly enforced, failure to complete this portion of the form in due time may materially increase the amount of tax ultimately payable.

1. *Relief in Respect of Children* (*page 4*).—This allowance is restricted to cases in which the joint income of husband and wife does not exceed £500, and accordingly must be supported by a declaration of total income. This will, however, have already been made on page 4.

2. *Partnership Declaration.*—This need be completed only by the precedent acting partner of the firm. The particulars fall under two heads: (*a*) As to any portion of the firm's profits payable to non-members—for example, an annuity to a previous proprietor of the practice; and (*b*) as to the shares of the individual members of the firm. Where this declaration is made the precedent acting partner should also return the whole of the firm's profits on page 2 of the form, and the amount so returned should be equal to the sum of the amounts shown in the statement on page 4 of the form. In such cases the other members of the firm are not required to make a "declaration for assessment" (page 2) of their shares of the profits, but should, of course, include those amounts in a statement of total income for the purpose of obtaining the relief to earned income, and complete any of the supplementary declarations which may be appropriate. The phrase "precedent acting partner" may perhaps require some explanation. The "precedent" partner is he whose name appears first in the partnership deed, or, if there be no deed, then in the usual name or style of the firm. Bearing this test of precedence in mind, and excluding from the consideration any member of the firm who is a "sleeping" partner or who is not resident in the United Kingdom (Sec. 100 Income Tax Act of 1842), the identity of the partner whose duty it is to make the full declaration of the firm's profits will probably become fairly clear.

Special Assessment.

If the practitioner desires to withhold his return from the scrutiny of the Local Tax Commissioners he can require it to be dealt with by the Special Commissioners, the body responsible for the administration of the super-tax. To obtain this mode of assessment he should intimate his desire in the space provided in the "General Declaration" on page 2 of the form, and in that case his return should be sent to the Surveyor of Taxes, instead of to the Assessor.

Assistants.

An assistant is entitled to average his salary over a period of three years, but it seems that this right does not extend to the inclusion of salaries of a different nature in the one average—for example, a hospital stipend cannot apparently be averaged with a salary received from a private practitioner. Although the value of the board, etc., received by an assistant is a legitimate deduction in arriving at the liability of the practitioner for whom he is acting, that value need not be returned by the assistant as assessable to income tax, inasmuch as it has been held that such value is not convertible into money, and therefore does not come within the scope of the tax.

Accounts.

In conclusion, we would suggest the advisability of carefully preserving the three statements of receipts and expenses prepared to serve as the basis of the return. Not only will this save time in future years, but in the event of an assessment being made in excess of the amount returned, it will enable the practitioner to lodge a notice of appeal, and file the required accounts in corroboration of his return without further trouble.

PROVERBIAL MEDICINE.

The Weather and Medical Proverbs about Yule and May.

The medical man nowadays who attempts to explain the vicissitudes of the illnesses of his patients by references to the mutations of the weather is not wise. He is hardly less unwise than his professional brother who grasps eagerly at any slight amelioration in symptomatology to commend that new medicine which was begun on the previous day without making sure that the remedial agent was placed in the gastric cavity of the patient, and not in some extra-corporeal receptacle. Even the valetudinarian scarcely dares to blame meteorological states for his exaggerated ache. In this changed mental attitude of the public and the profession, and with this alteration in the etiological importance assigned to meteorological variation, it comes about readily enough that medical proverbs about the weather have lost much of their high standing in the sphere of paroemiology. Even our old favourite "A green Yule makes a fat churchyard" is in danger of being explained away from its nosological significance. Even Ray, with his strong affection for proverbs, and writing long ago, casts doubt upon the accuracy of this (shall we say?) evergreen maxim. Let us look into the matter a little more closely, for we feel as if the very foundations of proverbdom were shaking and the whole edifice tottering. Ray[1] gives two proverbs: "A hot May makes a fat churchyard," and "A green winter makes a fat churchyard." To these we may add Denham's "Black Christmas makes a fat churchyard," and Dean Ramsay's "A green Yule and a white Pays make a fat Kirkyard."[2] These three last-named proverbs all seem to mean that Christmas without frost and snow—what we choose to call an unseasonable winter—is followed by a heavy mortality, which necessarily makes the churchyard fat or rich and fertile (in its own particular way, of course). The reference to a white Pays (Easter) as having the same fertilizing effect upon the graveyard is evidently put in to strengthen the conclusion that the unseasonable season, so to say, is dangerous to health. So, too, with "A hot May," which appears in the older form of "A hot May

[1] Ray, J.: *A Complete Collection of English Proverbs*, 1670.
[2] *Lean's Collectanea*, vol. i, 383, 1902.

makes a fat church-hay." May, when it resembles July, is prejudicial to life. But then, again, there are other proverbs which bear a family resemblance to these. There is the French "Vert Noe, blanques Pâques," and Cheales's "Green Christmas, white Easter." In these a contrast seems to be all that is intended; in other words, if Christmas be unlike Christmas in its weather, then Easter will be unlike Easter—the white will be green and the green will be white; the seasons will be turned topsy-turvy. But let us take the "fat churchyard" proverb as it stands, and hear what Ray (in 1670) says about it: "This proverb was sufficiently confuted anno 1667, in which the winter was very mild, and yet no mortality or epidemical disease ensued the summer or autumn following: we have entertained an opinion that frosty weather is the most healthful, and the hardest winters the best; but I can see no reason for it, for in the hottest countries of the world, as in Brazil, etc., men are longest lived where they know not what frost or snow means, the ordinary age of man being an hundred and ten years; and here in England we found by experience that the last great plague succeeded one of the sharpest frosty winters that hath lately happened." Ray's general conclusion may be right—we are inclined to think it is—but his data about the Brazilian centenarians can hardly be accepted as a reliable part of his argument.

It may be accepted as extremely probable that what little modicum of truth lies embedded in these Yule, Easter, and May proverbs is concerned with the unseasonableness of the weather. One is more likely to suffer ill effects when one is unprepared for the particular type of weather, be it hot or cold, wet or dry, which prevails. A Breton proverb[3] seems to yield support to this method of reading these dark sayings: "Mieux vaut voir un chien enragé, qu'un soleil chaud en Janvier" (Better see a mad dog than a hot sun in January); and certainly "to everything there is a season," and "Yule is good on Yule even" (but not, of course, in the middle of May).

Another group of proverbs has to do with the proper clothing to wear when the weather is changing from one kind to another. The weather in May is regarded as most uncertain, cold day following hot day and hot day cold in such bewildering alternation that the only safe plan (is it safe?) seems to be to remain all the month attired for the cold day. North of the Border they say,[4] with emphasis (and indeed the emphasis is needed there) "cast not a clout till May be out"; but the saying is not peculiarly Scottish, for the Germans have a maxim which goes even further: "Stick to your winter things till the 40th of May," and there is both French and German support for the statement that "in the middle of May comes the tail of winter" ("a la mi-Mai queue d'hivar"). Then there are two Scandinavian proverbs, one of which is "Don't put off your greatcoat in May," and the other, "Who has a log of wood let him keep it for May." There are two Italian sayings also: "May, lovely May, to thee thy roses, to me my furs," and "The gentleman's winter—May." In Germany they aver "Who shears his sheep before Servetus's day (May 13th), loves more his wool than his sheep," and Ray has the same idea in the English rhyme, "Shear your sheep in May, and shear them all away." A still more direct and forcible allusion to the dangers of the inclement, nipping, almost niveous weather of May to the too lightly apparelled is found in lines which, like some others of a proverbial kind, show no readiness to welcome the attentions of the medical man; they are: "If you would the doctor pay, leave your flannels off in May." Alas, the doctor is rarely "welcome as the flowers in May!" A slightly longer and more explanatory aphorism gives the meteorological and climatological reason why denudation of the human body is risky in this month, so dear to the heart of the poet and so dreaded by the hygienist and the weather prophet; this is it:[5]

> The wind at North and East
> Was never good for man nor beast,
> So never think to cast a clout
> Until the month of May be out.

This proverb tempts one to pass to the sayings about the East wind, but there remain some other adages about May which, if one omits now, may be forgotten. There is that curious one which says, "May, come she early or come she late, she'll make the cow to quake," or, as Fergusson puts it (for Scotland), "Come it aire, or come it late, in May will come the cow-quake." But why, we may ask, should this mammiferous and galactogenous kindly creature, whom we have come to regard as happily associated with the three acres which spell comfort and sufficiency, why should she shake in her—hoofs when May, "that mother is of monethes glad,"[6] "is y-comen in"? Lean explains that cow-quake is a cold wind with rain, and Wright's *Dialect Dictionary* substantiates with the definition "cold, easterly winds in May," adding "which often produce the disease of cattle known as the cow-quake." "Cow-quaker" is another term which Wright defines as "a storm which usually comes in May after the cows are turned out." This is all as clear as day, therefore? Alas! no, for here comes Ray with the suggestion that the cow-quake is a grass, and, indeed, John Gerarde[7] tells us that *Phalaris pratensis* or *Gramen tremulum* is called in Cheshire quakers and shakers, and "in some places cow-quakes." It has little pouches, like those of shepherd's purse, "set upon the most small and weak hairy foot-stalks that may be found, whereupon those small pouches do hang, by means of which small hairy strings, the knaps which are the floures do continually tremble and shake, in such sort that it is not possible with the most steadfast hand to hold it from shaking." It is the quaking-grass of our meadows, "waving to every wind," as Anne Pratt[8] describes it, "shaken even by the approaching footstep, tottering or doddering grass." If this be the correct explanation, then all that is meant by the proverb is that whether May be early or late the doddering grass comes with it; but surely the medical rather than the botanical reading of the adage is the correct one, and so there remains imprinted on one's mind the picture of the patient cow standing in the meadows in May quaking in the snell east wind, either because of its peculiarly piercing, bitter, and algid breath, or on account of an internal malady generated by its keen harshness.

Really, it is very necessary to take care of ourselves in the month of May, and here are some other sayings which press home on us the folly of any premature exfoliation of coats or other clothing in the "merrie month." The man in the North Countrie declares "If you bade (bathe) in May, you'll soon lig in clay," and someone else in shorter metre, but with an extended warning, sings:

> Button to chin,
> Till May be in:
> Cast not a clout
> Till May be out,

or, as a variant, "Till April is dead, change not a thread." Yet another announces,

> Who doffs his coat on a winter's day
> Will gladly put it on in May,

and finally, as a matter of prognosis, it is said authoritatively,

> March search, April try,
> May will prove if you live or die.

It may not be clear whether the weather has anything to do with it, but the folks in Scotland—and the same superstition exists in England—will not marry in May; in the South there is the saying, "Marry in Lent, live to repent," and there is warrant for the warning from the ecclesiastical standpoint and great convenience from the point of view of the rhyme, but in the North it is "Marry in May, repent alway," a stronger warning and just as good a rhyme. Why is this? Whatever the reason be, it is a widespread belief, for in Russia they say that marriage in May is unlucky and that good folks do not marry in May; yes,

> The proverbs teach, and common people say,
> It's ill to marry in the month of May.

It is widespread in time as well as in space, too, for Ovid has "Si te proverbia tangunt, Mense malas Maio nubere vulgus ait" (If proverbs influence you, people say that

[3] King, W. F. H.: *Classical and Foreign Quotations*, p. 329, 1889.
[4] Cheviot, A.: *Proverbs of Scotland*, p. 73, 1896.
[5] Robinson's *Whitby Glossary*, quoted in *Lean's Collectanea*, i, 361.
[6] Chaucer: *Troilus and Creseide*, Book II, v. 50.
[7] Gerarde, John: *The Herball*, p. 87, 1633.
[8] Pratt, Anne: *Flowering Plants*, iv, 80, 1905.

May is the month to marry bad wives), or as it has been put in rhyme:

> Let maid or widow that would turn to wife,
> Avoid this season dangerous to life;
> If you regard old saws, mind this they say,
> 'Tis bad to marry in the month of May.

Obviously the reason given by Sheriff Barclay that Scottish prejudice against marriages in May was due to Queen Mary being married to Bothwell in that month will not explain so general a belief. Another Scots proverb gives a hint of the reason—"O' the marriages in May, the bairns die o' a decay," and another one has it that "May birds are aye cheepin'"; in other words, the children of those who are married in May are supposed to be weakly and therefore chirping (cheepin') for lack of nourishment, the unsatisfiable craving of the rachitic. "He has na more sense than a May gosling" may have some connexion with the belief in the delicacy of the children of May marriages; another form of the saw is "as weak as a midsummer gosling." Perhaps, however, the reference is rather to the effect upon the young goslings just beginning to run about of the sudden squalls of rain or sleet (called gosling-blasts) which are common in April or early May. One must not forget, too, that the name "May gosling" is used much in the same way as "April fool," and also that the catkins of the willow are so called in some places. Still, in Cumberland and elsewhere there is "a strong prejudice against goslings hatched in May; they are certain to be as unlucky as kittens born or lads and lassies married in that month."[9] In Cornwall children born in the month of May are called "May chets," and kittens cast in May are destroyed, for "May chets bad luck begets." In many parts of England children born in May are said to be unlucky.

Dr. T. J. M. Forster, in his *Perennial Calendar*, quotes the opinion that May is "a trying month for health," and this receives paroemiological confirmation from the saying which fears that the sick person "will never climb or get over May hill." It may be put in the more hopeful form, "if he can climb over May hill he'll do," but it evidently implies a therapeutic victory if he does. Of course, if this be admitted, then it follows that two such times of strain as marriage and childbirth should not occur in a month so trying to the human constitution. There is, it is true, a proverb which has not yet been referred to, in which the consequences of a May marriage are stated in financial rather than in pathological terms; it is, "who weds in May weds poverty (povertaie)." On the other hand there is a belief in Italy that people who wed in May go mad, and another in Normandy that the infants born of such a May union are fools.[10] Perhaps we have here the reason why another proverb says, "a cat born in May is inclined to melancholy," as is shown (somewhat curiously, one thinks) by her catching snakes and reptiles instead of mice. In the North of England there is a belief that a May cat will suck the breath of a baby in the cradle if it get a chance.

It is now time to ask if there is any reason to believe that these two sets of proverbs, the one dealing with the effect of mild weather at Christmas and the other with that of cold changeable days in May, have any foundation in fact. It must at once be confessed that it is very hard to find any justification for them in vital statistics, for according to the tables[11] the first three months in the year are the most fatal to life, whilst the third quarter has the lowest death-rate unless epidemic diarrhoea has been specially prevalent. Further, and this has a bearing upon the "green Yule" question, mild winters and cool summers both lower the mortality. The cold logic of figures (supposing, of course, that facts underlie the figures) is more powerful than the cold weather of May, and unseasonable days seem to defy rather than to dispose to death.

But is there no truth in the crowd of proverbs which vilify the east wind from the health point of view? Are we (hygienically) to join with Kingsley in singing, "Welcome wild North-easter, shame it is to see ode to every zephyr, ne'er a verse to thee"? or are we to take the advice of the weather-wise ("fool other wise") and conclude that "When the wind is in the east, it's neither good for man nor beast"? Ray has no doubts upon the subject; he writes, "The east wind with us is commonly very sharp, because it comes off the Continent," whereas, we are now told that it comes from somewhere near the North Pole. Perhaps our ancestors comforted themselves with the saying, "No weather is ill if the wind be still"; but even this consolation is denied to dwellers in smoke-consuming cities, where a still day means an irritating yellow fog. But there have been men other than Kingsley who rejoiced in the east wind; one such had, it is true, been forced by the exigencies of medical practice to live for years in some soft, madefied, humid, almost deliquescent health resort on the South Coast; when he got at length a chance of going north he greedily accepted it, and, arriving there, he found to his complete delight that there was an eager air coming in from the east with some fleecy tufts of haar rushing along the sky from seaward like aërial motor cars; he turned his back to the west, walked out facing it, and sucked the gelid blast into the ultimate vesicles of his lungs with gusto, saying all the time to himself, "At length I breathe once more my own, my native air." He was exceptional no doubt; still his case deserves to be recorded, as that of one who, after a prolonged residence in the steamy south, ventured to disagree with proverbic wisdom and to welcome the east wind in so reckless a fashion into his pulmonary tissues. The mention of pulmonary tissues brings us back to the real question which is in immediate need of an answer in these days. Has the weather such an effect upon the human frame as to cause disease, or does it merely in its extreme forms of intense cold, of great heat, of excessive humidity, or of marvellous wind velocity predispose the organs and tissues of the body to the onslaughts of the microbe, the toxin, or the toxic substance, either by weakening inward resistance, by increasing the force of outward attack, or by permitting or compelling a penetration of the frame by the morbific cause?

There can no doubt as to the fashion in modern thought upon this subject. Notwithstanding that "severed limbs again give pain as a very certain sign of rain," that old scars throb and ache before bad weather, that thunder and lightning are preceded in many people by headache and neuralgia, and that the gouty and to a less extent the rheumatic man is a sort of walking barometer with "an almanac in his bones" and can foretell when the wind is going into the east and other meteorological misfortunes—notwithstanding all these things, we have made up our minds that the weather does not matter and that it is all idle chatter, for is it not said that "change of weather is the discourse of fools"? When a maiden nowadays sits in a draught and begins to cough we do not blame the physical phenomenon, but we employ the cuti-reaction or tuberculin test; we send out our hatless infants in open perambulators when the cold winds do blow, and they fear not the snow, neither do they tuck or are suffered to tuck their heads under anything; we bathe in May and do not lie in clay, except for some weird new physico-therapeutical extravagance; we fear not sunstroke, but take sunbaths and dabble in heliotherapy, having developed a strange heliophilia; we do not try to keep our feet dry, but deliberately walk through wet meadows, calling it "kneippism," and forgetting all about bathing our faces in May morning dew; we fear not the lightning but ask for fulguration; we freeze our birthmarks with carbonic snow, and pour floods through our interiors; and we place our consumptives out in rows on the hillsides till the breezes blow their slippers off their feet. In a sentence, we harness all the meteorological phenomena to our therapeutic chariot and drive forward with recklessness, and yet "we don't believe that weather has any effect upon illness," and weather proverbs are silly superstitions. "It's a mad world, my masters!" It is, indeed.

[9] Wright's *English Dialect Dictionary*, iv, p. 62.
[10] *Lean's Collectanea*, 1903, ii, p. 83.
[11] *Green's Encyclopedia of Medicine and Surgery*, vol. x, p. 493.

THE municipality of Saint-Georges-sur-Cher has decided to erect a monument to Bretonneau, of Tours, one of the greatest names in the history of French medicine, who was born there in 1774.

THE United States Senate has voted a sum of £1,114, equivalent to two years' salary, to the widow of Dr. Thomas W. McClintock, of the Public Health Service, who died of cerebro-spinal meningitis contracted while he was making researches into the cause and cure of the disease.

LITERARY NOTES.

THE first number of a new series of a "theoretical and practical review," entitled *Quaderni di psichiatria*, has just been issued at Genoa. Dr. Enrico Morselli, director of the clinic of mental and nervous diseases in the university of that city, is the editor. The new journal will not confine itself to mental disease, but will deal with medico-legal questions and other matters of interest to the medical profession in general.

In the *Australasian Medical Gazette* of December 27th, 1913, it was stated that by the end of the present year the *Gazette* would have ceased to exist as a separate journal. Our contemporary went on to say:

The closing year has been perhaps one of the most momentous in the history of the profession in Australasia. The valuable work of the Federal Committee of the Australian Branches of the British Medical Association has been continued and extended, and at no previous period in the history of the British Medical Association in Australasia has there been so determined an attempt to unite the profession on all matters of common interest. Probably one of the most important, if not *the* most important, event of the year has been the carrying into effect of the long-cherished idea that there should be *one* medical journal representative of the views of the various Branches of the British Medical Association in this great continent. Many attempts have been made for the last twenty years to secure this object, but difficulties of one kind or another have cropped up, and it is only now that these seem to have been overcome. The Federal Committee at one of its earliest meetings decided that it was desirable that there should be *one* medical journal for the whole of Australia, but it was at once faced with the difficulty that two journals were already in existence, each with vested interests, and both doing good work in their several spheres of influence. As the best means for accomplishing the aim of the Federal Committee, it was decided that a company, with limited liability, should be formed, the members of which were to be members of the different branches of the British Medical Association in Australia, and from these members a board of directors numbering seven, consisting of one member for each State, was elected. The object of the company was to acquire the interests of the two journals, and to decide whether it was best to continue one of these and suppress the other, or to establish an entirely new journal with a new name, but which was to absorb both of the existing journals. The latter course was decided upon, and at a meeting of the directors held in Sydney last July it was decided that the new journal was to be called the "Medical Journal of Australia," with which are incorporated the *Australasian Medical Gazette* and the *Australian Medical Journal*. It was also decided to appoint an editor who should devote his whole time to the work of the journal, and also a full-time manager.

In accordance with this decision Dr. H. W. Armit has been appointed editor of the new journal. Dr. Armit is known as a scientific investigator, and has taken a prominent part in the work of the British Medical Association. He was for several years a member of the Representative Body, and has served on several committees. He has long been a valued contributor to the JOURNAL, and he takes with him to his new sphere of labour our warmest wishes for his success.

The April number of *Chambers's Journal* contains an interesting article by Mr. Louis A. Barbé on the plague in Scotland. That country remained free from any visitation of the scourge up to the middle of the fourteenth century. Mr. Barbé is inclined to ascribe this immunity to the temperate habits of the people, as well as to the salubrity of the climate. The first appearance of plague is chronicled by Wyntoun as having occurred in 1349, when

> Of living men
> The third part it destroyèd then.
> After that within Scotland
> A year or more it was wedand (raging).
> Before that time was never seen
> A pestilence in our land so keen.

For a time the spread of the disease from England was checked at the border, and it is said to have been brought into Scotland by raiders. In 1362 there was a new outbreak, which, according to Fordun, raged exceedingly throughout the whole of Scotland. In 1380 there was another visitation, and in 1401 a fourth

> More fearful than memore
> Was had of the three before.

In the fifteenth century there was at least one outbreak, and in the sixteenth century there were several scares, and one outbreak as fatal as that of 1349. This was brought from oversea by a "creare" or cutter which arrived at Easter Wemyss in 1584. In 1585 it has been estimated that some 20,000 persons died in Edinburgh alone, but Mr. Barbé thinks this is an exaggeration. Strict quarantine measures were enforced, and those who had the means of doing so fled from infected places, James VI setting the example. Maister Gilbert Skeyne, Doctour in Medicine, who wrote *Ane Breve Descriptione* of the plague of 1586, describes the selfishness and cruelty engendered by fear:

> Every ane is become sae detestable to other (whilk is to be lamentit), and specially the puir in the sight of the rich, as gif they were not equal with them touching their creation, but rather without saul or spirit, as beasts degenerate frae mankind.

All members of a family in which a case occurred were compelled to remove to a plague camp situated in some outlying part of the burgh, where they were lodged in wretched huts. No one might hold school under pain of banishment, and children of less than 15 years of age were put in the stocks or scourged with rods if found playing "on the gaitt or on the streets or in the kirk." It was made a capital offence for the destitute of any plague-stricken place to go about begging their bread as usual, and the "magistrates, barons, gentlemen, and other honest men" were called upon to provide for their maintenance. If voluntary contributions were insufficient, recourse might be had to special taxation.

The March number of the *Johns Hopkins Hospital Bulletin* contains a short note by Dr. David L. Macht on the late Dr. Julius Preuss, whose name is well known to those interested in the history of ancient Hebrew and Arabic medicine as a deeply learned student of Biblical and Talmudical medicine. Till recently the two most important books on that subject were Wunderbar's work, which appeared in 1860, and that of Professor Ebstein, which was published in 1901–1903. Wunderbar was not a member of the medical profession, while, on the other hand, Ebstein, though a great physician, was not familiar with the Semitic language and literature. It was not till the appearance of Preuss's *Biblisch-Talmudische Medizin* in 1911 that scholars had placed before them a thoroughly scientific exposition of a difficult subject written by a man who was at once an able physician and a thorough Semitic philologist. Preuss had studied medicine at Berlin, where he earned the commendation of Rudolph Virchow, a man by no means given to praise. The famous pathologist said of him that he knew *medicinisch zu denken*—how to think medically. Preuss, whom Dr. Macht quaintly calls the "Boswell of Ancient Hebrew medicine," from his earliest youth studied the Talmud, Midrashim, and other Hebrew and Aramaic texts, jotting down every medical reference he came across. These he compared and compiled and finally "redacted" (if we may use a word which has the authority of Carlyle) into the book which, according to Dr. Macht, will long remain the leading authority on Hebrew medicine.

The late Professor Eliot Norton of Harvard, in a letter to S. G. Ward, gives the following account of the impression produced on his mind by Christian Science:

> Anyhow, I should prefer to see the Roman Catholic Church grow—in spite of its obscurantism and its elevation of itself above the State—than to see this rapid growth of the most vulgar and debasing of modern sects, that of Christian Science, with its Mother Eddy and her fatuous inanities, and the superstitious delusions of its votaries. The Roman Catholic Church has at least dignity, and splendid ceremonial, and noble traditions, and secular sympathies—and Christian Science is ungrammatical, unpoetic, absurd to the last degree, yet possesses the immense power which low ideals dressed up pretentiously have over the multitude of the commonplace, prosaic, superstitious souls. Mother Eddy is the most striking and ugliest figure in New England to-day. She is an illustration of the mediaevalism of which you speak in its least attractive aspect. It is not only a few but the vast mass of the people, even in New England, who are living in the Middle Ages.

It is curious how congenial a soil the quackery which has its root in strange forms of religion finds in the practical Anglo-Saxon mind. To us the most striking thing about Christian Science is that, with all its innate absurdities and the illiteracy of the style in which the gospel is conveyed, it seems to appeal with special force to certain minds of considerable literary cultivation.

British Medical Journal.

SATURDAY, APRIL 18th, 1914.

APPEAL IN CRIMINAL LUNACY.

The decision given last week by the House of Lords in the case of Felstead *v.* the Director of Public Prosecutions is notable in more ways than one. It is one of the rare cases which have found their way to the House of Lords from the Court of Criminal Appeal. Appeal from the latter is only possible when the Attorney-General decides that some point of law has been raised which needs settlement by the highest authority. Felstead had been tried at the Derby Assizes on a charge of wounding with intent to do grievous bodily harm, and the jury returned a verdict of "guilty but insane." An appeal against the verdict on the question of insanity was made to the Court of Criminal Appeal at the end of February; the court held that it had no jurisdiction to entertain the appeal, but thought it a proper question to be submitted to the House of Lords. The appeal to the House of Lords was heard by six law lords, including the Lord Chancellor, Lord Dunedin (formerly Lord Justice General of Scotland), and Lord Atkinson (Ireland). The judgement of the law lords was unanimous, and has finally decided that there can be no appeal in a criminal case on the question of lunacy. This is certainly, to put it at its lowest, convenient, inasmuch as the establishment of an allegation of insanity must always be a matter of individual opinion, seeing that there is no sufficient definition of the term "insane." Were an appeal possible on this point, failure to establish its existence to the satisfaction of a second set of minds would also be possible, and the consequence of such failure might be very serious.

The ground for dismissing the appeal was that the Court of Appeal has power to deal only with appeals of persons convicted on indictment. The question set for decision was whether the accused person who, by a verdict in accordance with the Trial of Lunatics Act, 1883, was found guilty of the act but insane at the time, can appeal against that part of the verdict which found that he was insane at the time of doing the act. The judgement which was read by the Lord Chief Justice was quite explicit, and the essence of it appears to be contained in the statement that the verdict "guilty but insane" meant not that the accused was guilty of the offence charged, but that he was guilty of the act charged as an offence. He was not guilty of the offence because if the act charged is done in a state of insanity there is no *mens rea* and "the state of the mind of the accused is not that which is involved in the use of the term 'feloniously' or 'maliciously.' *Crimen non contrahitur, nisi voluntas nocendi intercedat.*" Thus the verdict "guilty but insane" is not a conviction, and without a conviction the Court of Criminal Appeal has no jurisdiction.

Among other arguments submitted by the appellant's counsel it was contended that, since the law orders, as a consequence of the special verdict, the detention of the accused as a "criminal lunatic," the Legislature intended that the special verdict should operate as a conviction for crime. The judgement of the House of Lords points out that the Act of 1860 applied that term to prisoners who became insane during imprisonment as well as to those found insane at trial. We may add that a subsequent Act of 1884 specifically directs the detention of prisoners becoming insane as "criminal lunatics." In the final paragraph of the judgement it is indicated that if the appellant succeeded in his present contention, and established on the hearing of the appeal that the verdict as to insanity should be set aside, he would be entitled forthwith to be set at liberty, for the remaining part of the verdict would not justify the passing of any sentence on him, as it did not find him guilty of any offence, but only of having done the act charged.

The judgement contains a succinct history of the law's attitude to crime when the plea of insanity in relation to it is raised and established. In the earliest times proof of insanity, at the time when the act charged was committed, did not entitle the accused to an acquittal but to a special verdict carrying with it the right to pardon. But we may note that, according to *The Insane and the Law* (Pitt-Lewis, Percy Smith, and Hawker), insanity originally constituted no defence whatever in law—at least, in cases of murder. Thus it would appear that the foregoing procedure described in the judgement was the first step in the gradual approach to the law as it now exists. Further, it may be noted that in this stage, though a pardon was granted, still there was a conviction of crime. Later on, according to the judgement, a jury, in cases of insanity linked with crime, could either find a general verdict of "not guilty" or a special verdict that the accused committed the act, but that at the time he was *non compos mentis*, and thereupon the court gave a judgement of acquittal. Thus the criminality of the accused's act began to drop out of sight. After a time it was found that it "might be dangerous for persons so acquitted to go at large," and the safe custody of such persons was provided for, not as offenders, but as dangerous owing to their misfortune. In 1800, after Hadfield's case, an Act was passed whereby it became lawful for the court to order the person charged to be kept in strict custody. At the same time it was provided that directions might be given to try the issue of insanity as existing at the time of the commission of the offence charged, or at the time of arraignment, or at the time of trial, or even at the time of a defendant being brought up to be discharged for want of prosecution. Under the statute the finding of the jury was not a conviction for an offence, but an acquittal on account of insanity. The same principle was re-enacted in 1883, with the difference that the jury, being satisfied, must return the special verdict that the accused was guilty of the act charged, but was insane at the time when he did the act. We may add that in this Act reference is made to a person or persons "acquitted on the ground of insanity." This would of itself seem to dispose of all idea of conviction.

The important point is that the constitution of an offence for which a person may be made responsible involves a combination of two elements—first, a criminal act, and, secondly, a responsible condition of mind. If insanity is established, that combination is at once abrogated, and the act, however criminal it may be when committed by the sane, loses its character of criminality as regards the insane person.

It will be seen that the attitude of the law towards insanity associated with criminal acts has, in its

development, shown a progressive benevolence. For the explanation of any sense of harshness which sometimes finds expression we must look to the compensating safeguards, the stern requirements of the law in establishing the condition precedent to extension of that benevolence—namely, the actual proof of contributory insanity. This has been, as we know, a fruitful source of divergence between law and medicine. Happily of late years the two professions seem to be travelling towards each other and towards a satisfactory working conception of responsibility. It would, indeed, be most desirable that actual adjustment of views should be reached. Such a consummation, however, may be found difficult of attainment. Still, according to Lord Reading's history, from very early times there has been at the back of the law's mind a feeling that want of self-order, arising from mental disease, must be accorded full consideration by the courts. This being so, it would seem to be a logical consequence that the jury should have the advantage of guidance from medical authority, the only authority that can help it with special knowledge and experience of the conditions underlying want of self-order, without unnecessary legal restrictions or trammels. It would remain for the Crown counsel to examine critically the bearings of the medical evidence and to urge any views held by the law for the time being, but it should not be for the judge to lay down, *ex cathedrâ*, general and previously formed restrictions, which cannot in the pursuit of absolute justice be applied to all individual cases alike. When a judge of renown practically asked a jury to answer the question, "Could he help it?" a near approach was made to giving full effect to the law's ancient policy of protecting a human being from the unmerited consequences of mental disease.

THE ANTIQUITY OF MAN.

In the April issue of *Bedrock*, Professor Elliot Smith discusses once more the significance of the discovery of the Piltdown skull. The controversy on the subject has, it would appear, proceeded in such wise that the faith of some foreign anthropologists in the importance of the find has been rudely shaken. Professor Schwalbe of Strassburg thinks that the "*Homo-Sapiens* of Piltdown"—the term which, in sarcasm, he applies to Eoanthropus—must be put aside amongst the ancient remains that are not above suspicion. Elliot Smith fully accepts the validity of the find, and as he attributes Schwalbe's incredulity to the disturbing effect of Professor Keith's rather revolutionary views with regard to the antiquity of the modern type of man, his criticism is extended to include them as well as the particular controversy as to the Piltdown skull and jaw. Elliot Smith denies the extreme antiquity that has been assigned to the Galley Hill and Ipswich remains. Keith, however, accepts them as early Pleistocene, and so among the oldest of human remains. These skulls, and their teeth and jaws, are of a modern type; their claim to antiquity is derived from the age of the strata in which they were found. Elliot Smith quotes with approval the statements of Mr. W. H. Sutcliffe that "the Galley Hill skeleton was not seen *in situ* by any scientific observer," and that two witnesses were at variance as to whether it lay in gravel or projected from a matrix of clayey loam and sand. It is argued that those who hold that the Ipswich skeleton was not a burial must assume that it remained uninjured while the glacier which deposited the boulder clay passed over it. In view of the fact that the thousands of animal bones of sizes comparable to human bones found in Pleistocene river deposits in England have yielded but one mountable skeleton, Elliot Smith thinks this very unlikely.

Though the Piltdown cranium is definitely man-like, not only the lower jaw but the brain-cast itself show marked ape-like characters. It has been suggested that the skull and the jaw belonged to two separate skeletons; but this seems to necessitate the assumption that two individuals, each representing two hitherto unknown and ape-like forms of early man died at the same spot, and that the jaw of one and the skull of the other have survived. The doubt whether the skull and the mandible belonged to the same individual would seem to be due to the contrast presented by the well worn canine found at the same place and the impression Professor Keith gained from an *x*-ray picture of the jaw that the lower third molar was not erupted. We can only say that inspection of the original leaves no doubt that the third molar was fully erupted.

An issue of great importance is the size of the brain; its determination depends on the reconstruction of the skull, which in turn depends on the recognition in the recovered fragments of the sagittal suture. Elliot Smith has no doubt in locating this suture in the fragments, while Professor Keith has, or had, his doubts. The result is that while Elliot Smith accepts Dr. Smith Woodward's estimate that the skull had a brain capacity of about 1,170 c.cm., Keith arrives at an estimate of 1,500 c.cm.; 1,170 c.cm. is small for man, though within comparable limits, but large for a simian brain. An estimate of 1,500 c.cm. as the capacity of the skull would place it on terms with modern humanity. It would, it is argued, dissociate the Piltdown skull from the Piltdown jaw and take the brain of modern man back to Pleistocene times. Elliot Smith does not accept Keith's view that brain symmetry is a characteristic of all primitive forms—anthropoid and human primitive races—and that this symmetry is therefore to be expected in an early type of man. Elliot Smith, on the contrary, asserts that all brain casts of palaeolithic man hitherto described are remarkable for the asymmetry of the occipital poles of the brain, and marked asymmetry is, he says, characteristic of the brains of many primitive people. Asymmetry is, he thinks, an integral factor in the acquirement of the characteristically human status. According to Dr. Smith Woodward's reconstruction, however, the asymmetry of the occipital poles of the brain of the Piltdown skull is, to use Keith's expression, ultra-modern, while an attempt to introduce symmetry involves a large increase in the estimate of brain capacity. We confess we do not gather from the paper under discussion the exact nature of Professor Elliot Smith's objection to Professor Keith's statement. One point, however, is clear, that by reconstructing on different lines—Professor Elliot Smith working as if dealing with a hitherto unknown type of being and Professor Keith proceeding exactly as he would if the corresponding parts of a modern skull were before him—these two skilled anthropologists have arrived at conclusions which place the median plane of the skull at points which differ by 3 cm., and give a difference of about 300 c.cm. in the brain capacity.

Whichever estimate be accepted, it is clearly possible that the members of a race or species possessing brains of even 1,170 c.cm. capacity might have the power of communicating with each other by sounds—might, in fact, possess an elementary form of language. But here the Piltdown mandible becomes

an obstacle. It possesses a chin-plate, a flat plate of bone projecting backwards under the position of the genial tubercles of present-day man, and is in most other anatomical details remarkably simian. On these grounds Keith[1] denies the Piltdown individual the power of speech. Elliot Smith, however, holds that the increase of brain must have preceded the jaw changes in the acquirement of the power of speech, and seems to find no difficulty in ascribing to the Piltdown man the power of communicating with his fellows by sound if not by speech. He remarks that parrots (we may add starlings and mina birds) can "speak" in spite of the contrast their tongue and jaw present to those of man. Dr. Smith Woodward has courteously afforded us an opportunity of carefully examining the mandible, and though the simian character of its anatomy produces a strong impression, yet its teeth and pathological details afford weighty evidence of the humanity of its possessor. The first and second permanent molars of the mandible are *in situ*, while the empty socket of the third molar (wisdom tooth) is intact. A canine was found separately. The three teeth are well ground down, and confirm the opinion deduced from the obliterated state of the remnant of the sagittal suture that the individual was mature. Dr. Smith Woodward points out that the molars are ground flat, and this result of grinding is characteristically human. The ground-down molars of simians show, instead of one flat surface, several small cups corresponding to the worn-down cusps, as if the enamel in them were markedly more resistant than the dentine. Dr. Smith Woodward also points out that the canine tooth resembles more closely the human temporary canine than any other known form, and thus conforms to the law that the resemblance between a temporary tooth of a present-day animal and the corresponding permanent tooth of its ancestor is more marked than that between the corresponding permanent teeth. In our examination it was noted that the bone septum between the second and third molars is, perhaps, twice as thick at its free edge as that between the first and second molars, while the empty sockets of the two roots of the third molar have a slight forward inclination, the effect of which must have been to tilt the crown of the third molar somewhat forward and produce a slight degree of impaction. This is a common human condition, and seems to suggest that even at that early period the third molar felt the stress of evolution. We noted also, a point of perhaps more importance, that the bone round both the remaining molars is evenly guttered; instead of ending in an edge closely applied to the tooth the alveolar margin stands up as a ridge separated from the tooth by a gutter perhaps 1 to 2 mm. wide and of similar depth. If this be accepted as due to *ante-mortem* bone destruction, then the possessor of the Piltdown mandible suffered from a generalized pyorrhoea alveolaris of the molar region. The generalized form of pyorrhoea is a typical human disease; among many wild simian skulls examined we have found numerous examples of localized pyorrhoea due to the jamming into isolated spots of coarse vegetable fibre, but no example of generalized pyorrhoea. Only among captive monkeys is the generalized form found, and then only when they have been artificially fed on soft food. Pyorrhoea alveolaris is by many regarded as in the main a consequence of eating soft and sticky foods; and if the guttering of the Piltdown mandible be accepted as *ante mortem*, it may well be that its owner knew how to prepare his food so as to make it softer and more sticky than that of mere wild apes. It may, indeed, on this ground be argued that he knew the use of fire.

Returning to Professor Elliot Smith's argument, Keith denies that Piltdown man, who has low eyebrow ridges, is our ancestor because of the chin plate, and he denies that Neanderthal man, who has no chin-plate, is our ancestor because of his prominent eyebrow-ridges. Elliot Smith contends that to escape from this dilemma, which he regards as unreal, Professor Keith used Mendelian terminology in a misleading way when he wrote: "We must presume . . . that the common ancestor of human races possessed simian eyebrow ridges and a simian chin-plate. From that common ancestry springs one form in which the eyebrow ridges were dominant and persisted, but the chin-plate was recessive and disappeared, the combination found in Neanderthal man. In another form the eyebrow ridges were recessive but the chin-plate was dominant — the combination found in Piltdown man. We may presume, independently of corroborative facts . . . that there was a third form evolved at the same time as the other two, one in which both eyebrow ridges and chin-plate were recessive."

As to the antiquity of the modern type of man, the crux seems to be to settle the period to which the Galley Hill man is to be assigned. If those remains are as old as the stratum in which they were found, modern man is as old as Piltdown, and most other remains must then represent only extinct forms of types of evolution which failed. If it be not, then Piltdown man may be truly Eoanthropus—"dawn-man." Perhaps the generality of medical practitioners may think it scarcely comes within their province to decide, but we remind our readers that the opportunity of making a find of equal importance may occur to any one of us. The medical profession affords the means of dividing the whole kingdom into areas in which every pit and digging can be kept under observation by men trained to scientific accuracy, and who have unique opportunity of getting into touch with all classes of workers.

[1] *Bedrock*, January, 1914.

MARRIED OR SINGLE?

IT was inevitable that the pressure of women to enter professions and callings previously followed only by men should raise many questions in the solution of which no help could be expected from precedent. One of these, which is now being brought prominently before the public, is that of the employment of married women in the public service. In one of its aspects it is exercising the London County Council, having been raised in connexion with the appointments of women to the school medical service. Exception was taken to the condition attached to the appointments requiring the incumbents to resign on marriage; it turned out that there was a general standing order of the Council requiring women to relinquish appointments on marriage, and that this applied from charwomen to doctors. After discussing the matter on two days the Council took refuge in instructing the General Purposes Committee to make a special report upon the subject. Curiously enough, a similar question has been exercising the Russian Holy Synod, and a compromise has been arrived at. According to the *Times* correspondent in St. Petersburg, the School Council of the Synod has decided that married women may be employed as teachers in parish schools, and that spinsters already so employed may be permitted to marry, but, if families become too numerous to permit of proper attention to their duties, married teachers must be dismissed. Meanwhile the London County Council may find some enlightenment in

the fourth report, published this week, of the Royal Commission on the Civil Service, appointed over two years ago, which contains some important references to the matter. One of its recommendations is that the existing rule requiring the termination on marriage of established service in the Civil Service of the State should remain intact. The general recommendations on the subject are that the principle governing the employment of women should be to secure the advantage of the services of women whenever those services will best promote the public interest; that in so far as the character and conditions of the work performed by women approximate to those of the work performed by men, the pay of women should approximate to that of men, but that in so far as the efficiency of men is higher the salaries of men should remain higher. Another recommendation, which has a direct bearing on the appointment of women to medical offices, is that "specially qualified women should be eligible for appointment to particular administrative situations in certain departments, and should be selected by the method used for recruitment of professional officers," that is to say that public announcement should be made of the vacancy, that all applications should be considered by a special departmental committee which should submit the names of the two or three most eligible candidates in order of merit, and that the persons so selected should be scrutinized by the Civil Service Commissioners with respect to age, health, character, knowledge, and ability. The recommendations of the Royal Commission on these points appear to have been unanimous; they are not at present binding on any one, but among the Commissioners were Sir Donald MacAlister, President of the General Medical Council; Mr. A. E. Shipley, Master of Christ College, Cambridge, well known as a biologist, and Miss Haldane, so that their views cannot fail to carry weight. What the London County Council may decide to do we shall not attempt to prophesy, but it would appear that in its case a very large question has been raised by a side wind. The position of medical men and women in the employment of that body seems to be to some extent reversed, for we find the chairman of the Asylums Committee pleading that men should have treatment equal to that given to women, should receive salaries not smaller, and should be allowed to marry if women are allowed to marry. To these dimensions the matter has grown out of the proposal that women doctors appointed to the school medical service should not be required to resign on marriage.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF WALES.

ANOTHER step is about to be taken towards the realization of the proposal to complete the medical school of the University of Wales. As will be seen more fully in a note published elsewhere from our correspondent in South Wales, it has been decided to open as soon as possible the new wing of the King Edward VII Hospital at Cardiff, erected and equipped a few years ago. This will add fifty beds to the existing accommodation, raising the total to 283, thus making it worthy to serve as the University hospital and enabling the medical school of the University to offer a full medical curriculum equal in this respect to any provided elsewhere. Cardiff possesses also a well-appointed Seamen's Hospital, which affords additional opportunities for clinical study, especially of exotic diseases, while close at hand is the Cardiff City Hospital for Mental Diseases, where recently a new pathological research laboratory was added to the existing equipment, already extensive, for the study of mental disorders. On the other side of the work of the medical school it may be noted that a new physiological laboratory is being erected, and that by the munificence of private donors a sum of £90,000 has already been provided for completing the buildings necessary for the medical school of the University of Wales. The authorities of the Welsh Medical School are, we understand, strongly in favour of the adoption of the unit system recommended by the Royal Commission on University Education in London; by the extension of the King Edward VII Hospital, and the organization of other facilities for clinical education in Cardiff, the central part of such a unit is now being provided on an adequate scale. Last February the Chancellor of the Exchequer promised an influential deputation from the University of Wales that the Government would make a substantial contribution towards the scheme, provided that the promise to raise funds in Wales for the extension of the medical school were carried out. Altogether over a quarter of a million sterling has been subscribed locally within the last seven years towards the fund to complete the medical school of the University of Wales, so that the challenge of the Chancellor of the Exchequer appears to have been met. Every one will agree with those patriotic Welshmen who are pushing forward the scheme that if there is to be a medical school in Wales at all it should be thoroughly well organized and equipped, and provided with an annual income ample enough to ensure efficiency in the teaching and in the means for research in every department of medical science, for which a centre such as Cardiff offers unsurpassed opportunities. From what has already been accomplished by the Welsh people themselves towards the establishment of the school on a sound basis, it is safe to conclude that they will continue to do their part in the future, but it is now universally acknowledged that medical education, if it is to be of the right type, cannot be, and should not be asked to be, self-supporting. It is the duty of the State to respond to local efforts by a liberal annual subsidy, and by contributions for extensions as the necessity for them becomes apparent.

THE AUTOPSY OF A RADIOLOGIST.

IN the April number of the *Archives of the Roentgen Ray* there is a detailed account of a *post-mortem* examination of the body of Dr. Emilio Tiraboschi, who was for fourteen years radiologist of the Ospedale Maggiore of Bergamo. It is taken from a report published in *Radiologia Medica* for February by his colleagues, Drs. Cavazzeni and Minelli. Dr. Tiraboschi was in the habit of using a very hard focus tube, and took little care for his own protection. For some years he had suffered from slight radio-dermatitis, with pigmentation on the left hand and left side of the face. He complained of some loss of strength, followed three years ago by a serious nervous breakdown, which kept him from his work for six months; his nutrition continued good, the only change being a gradually increasing pallor and anaemia. He continued his radiological work up to the eve of his death, the only additional symptom being some oozing of blood from the gums. The lesions on the face and hand were slight. The spleen was of small size and somewhat hardened. Both testicles were shrunk to the size of filbert nuts, the parenchyma being soft and of a yellow colour. The cause of death seemed to be a profound essential anaemia. The medulla of the ribs was carefully examined. There was a great scarcity of normoblasts, complete absence of megaloblasts, with a few red globules more or less deformed; megalocytes exceptional, polynuclear leucocytes less than normal; excess of lymphocytes with large nucleus; scarcity of myelocytes, with very rare eosinophile cells. The spleen showed an abundance of globular and pigment cells, evidence of the far-reaching destruction of the circulatory fluids. Most of the Malpighian follicles were destroyed, with considerable invasion of connective tissue. The histological examination of the testicle was of particular interest. It showed pronounced atrophy of the epithelial cells of the seminiferous canaliculi. It was impossible to distinguish the various cellular elements,

and there was little or no evidence of karyokinesis. The basal membrane of the canaliculi was enormously thickened by proliferating connective tissue, which compressed and destroyed the glandular tissue. The whole of the epididymis was also invaded by connective tissue. From this account it will be seen that the local affection was slight and was confined to the left hand and cheek, which were turned towards the tube. Unknown to himself and his colleagues, however, the unfortunate radiographer was being slowly poisoned by the "radio-lymph" of his own tissues. The grave pernicious anaemia to which he succumbed was the direct result of the absorption of the ionization products of the tissues most sensible to the *x* rays—namely, the testicles, the osseous medulla, and the spleen. The dying man worked on to the end unconscious of the gravity of his condition. By the irony of fate, says our contemporary, "a box of Blaud's pills was found by his bedside."

THE FERTILITY OF DISEASED STOCKS.

Considerable interest was excited some years ago by Professor Karl Pearson's statement that not only are families in which an hereditary liability to disease exists rather more prolific than normal stocks, but that the earlier born children of such families are specially liable to manifest the disease. The importance of these results from the eugenic standpoint is obvious, particularly in view of the increasing tendency to limit the size of families, and they have both, especially perhaps the second, been adversely criticized by different writers, among whom are Ploetz, Weinberg, Macaulay, and Gini. In a paper recently read before the Royal Statistical Society,[1] Mr. Major Greenwood, jun., and Mr. G. Udny Yule have reinvestigated the alleged excessive fertility of diseased stocks and the inferiority of the first-born, and arrive at conclusions in substantial agreement with those of Weinberg. They are of opinion that both the mean size of family and the incidence of disease upon earlier born children have been exaggerated by a method of analysing the data, which consisted of family histories obtained through diseased persons. If a process of calculation which they believe to be correct is employed, it is found that the fertility of degenerate stocks is not excessive, and that the enhanced incidence of disease upon earlier born children is reduced to modest dimensions in some cases, and practically disappears in another. The bulk of the paper is of a technical character, and its criticism may safely be left to Professor Karl Pearson and his associates. One passage in the paper does suggest that some published comparisons require explanation, since it would appear that the diagrams in Dr. Goring's recent work on *The English Convict* compare results obtained from criminals by one method of calculation with those derived from families with insane or tuberculous members by another process. Greenwood and Yule have not found any explanation of this divergence, which is certainly puzzling. The whole subject seems to require a fresh investigation.

[1] *Journ. Roy. Statistical Society*, vol. lxxvii, 1914, pp. 179–197.

A MEDIAEVAL CONCEPTION OF LIMB GRAFTING.

Although the successful grafting of living tissues from one body to another is a relatively recent achievement and largely the work of Carrel, Lexer, and Küttner, the idea, if not its execution, is many centuries old. Eduard Melchior has contributed an interesting note to a reproduction, in a recent issue of the *Deutsche medizinische Wochenschrift*, of a painting now in the possession of Louis Forest. This painting, which is an example of Italian art at the end of the sixteenth century, gives a vivid representation of no less formidable an undertaking than the transplantation of a leg from one human being to another. The painting shows two scenes. In the lower a negro, apparently already dead, is shown minus the greater part of his right leg. His trunk is held by an attendant dressed in white, while another attendant is apparently mopping up a pool of blood on the floor. Two elderly men, with flowing beards and in the dress of the upper classes, are gazing at the scene with expressions of mingled pity and disgust. The upper scene presents more cheerful surroundings, although the patient himself looks anything but happy. He is semi-recumbent, supported by cushions and two attendants, while the operator is fixing a black leg on to his right knee. One of the elderly bearded men of the lower scene is represented in the upper scene with both hands held aloft, and with an expression of surprise on his face. A female figure is shown in one corner of the picture holding up a curtain or a pall. There are no instruments or ligatures visible. Forest considers it possible that this painting may have been inspired by the contemporary experiments of Tagliacozzi, the famous surgeon of Bologna. His plastic operation on the nose—commonly known by his name as the Tagliacotian operation—brought him into eminence, but he apparently taught that heteroplastic operations with skin could not be carried out, and his practice seems to have been to raise a flap from the arm and to leave it attached for ten days or a fortnight before attempting to adjust it to the nose. Melchior holds that so cautious an operator cannot possibly be associated with such a fantastic exploit as that depicted by the artist. The correctness of Dr. Melchior's interpretation of the painting was criticized in a subsequent issue of the same journal by Dr. Carl Becker, who holds that the scene represents the saintly physicians Cosmas and Damian performing a miraculous operation. These saints are shown in relief over the entrance to the new polyclinic in Munich, where they represent the art of healing in mediaeval times, in contrast to the classic figures of Esculapius and Hippocrates. The miracle wrought by the saints, and recorded in many paintings, consisted of the amputation of a cancerous limb and its replacement by the limb of a negro already dead. Dr. Becker has in his possession four reproductions showing as many versions of this miracle. In a painting by Lorenzo di Bicci about the year 1418, both saints are shown holding plaster boxes and pincettes. The patient has already got a black leg, and the amputated leg has been placed with the corpse of the negro for burial. The martyrdom of the saints is also shown in this painting. In a painting now in the Academia di belle arti in Florence, Fra Giovanni da Fiesole (1387–1455) has shown the saints busily fitting on the leg to the stump, the amputation having evidently been made above the knee. In the Louvre another painting, by Francisco Pesselino (1422–1457), shows practically the same scene, only here the patient's wife is entering the room with a bowl of soup. A fourth painting of this miracle is in the museum at Antwerp, and is by the elder Francken (1545?–1618). In this case the site of the amputation has been carried down to a point a hand-breadth below the knee. The patient looks ill and wasted, and the diseased amputated limb is shown lying on the ground with the saw used to remove it, and a basin in which blood has been collected. The ulceration of skin and underlying tissues is realistically depicted, and a small band is shown tied round the stump, evidently to arrest haemorrhage. One of the saints is holding the lower limb of a negro, in readiness to clap it on to the stump. The upper part of the painting shows a busy scene which, with but slight alteration, might well represent the out-patient department of a modern hospital.

THE SCIENTIFIC ARGUMENT AGAINST EUTHANASIA.

From time to time the question of putting to death patients suffering from painful diseases which are regarded as incurable is raised in the papers, and persons of the

highest integrity are found to argue that what is euphemistically called "euthanasia" should be made lawful. The duty of carrying out the happy dispatch is always assigned to the doctors. Some people go the length of saying that doctors sometimes take it upon themselves to ease a hopeless sufferer's passage into that land where "beyond these voices there is peace" by the administration of chloroform or by pithing. That, says a sapient scribe, "is the method adopted by doctors who understand themselves to be performing an act of humanity" in killing patients who are lingering in agony. We need not again argue this question, which has often been discussed in the JOURNAL, and which has recently been raised in Germany and also in Italy. We only wish to refer to two points. In the first place the general assumption that death is painful is, as we have pointed out over and over again, a delusion founded on a wrong interpretation of a word. The "agony" of death means the struggle which often, as was shown by a recent correspondence in the *Times*, though painful to those about the dying person's bed, causes no suffering to the patient. Nature mercifully deadens the senses of the dying, so that in the vast majority of cases they,

> craving nought nor fearing,
> Drift on through slumber to a dream and through a dream to death.

Again, there is the argument enshrined in the popular maxim that while there is life there is hope. Sir James Paget was urgent in insisting that the doctor should fight the enemy to the very last. All doctors of large experience have seen cases to all appearance hopeless recover when the chances against this result seemed overwhelming. In the *Journal of the American Medical Association* of February 28th reference is made to a case in point. Some years ago, says our contemporary, a clergyman's wife, suffering from a severe and apparently hopeless malady, in a letter published in the newspapers throughout the United States begged that her doctors should show her "scientific kindness" which would terminate her sufferings and give her a painless death. "She received many replies endorsing her argument that physicians should be permitted to put her and other similarly unfortunate patients out of their misery Apparently, however, the lady is to-day glad that her pleas did not prevail, as she is reported to have been completely restored to health by a surgical operation, and to be perfectly well." We may here recall two other cases pointing the same moral, which were reported by Mr. Edmund Owen in the *St. Louis Medical Review* of March 3rd, 1906. In these circumstances, he says, he might possibly have been inclined to take advantage of the provisions of a bill then before an American State Legislature had it been in his power. One of them was diagnosed as a case of osteo-sarcoma starting from the sacro-iliac synchondrosis. The tumour was as hard as a board. "There was pressure on the bowel, on the upper sacral nerves, on the iliac vessels—on everything." Mr. Owen's colleagues all agreed that the case was past all surgery. The man was therefore sent home to Cornwall to die. Several years later an old student turned up, who reported that the man had been rowing him about off the Cornish coast all the holidays. It appeared that some weeks after the patient was discharged an abscess formed in the loin, and an inch of wire of the gauge of an ordinary steel pen holder came out, and the man got quite well. He had swallowed the piece of metal long before the tumour appeared, and forgotten all about the accident. Another case was that of a lady with what was diagnosed to be cancer of the stomach. When the abdomen was opened "a mass as hard as ever a cancer of the pylorus could be" was seen. An anterior gastro-enterostomy was done, and a gloomy prognosis given to the husband. The patient, however, changed gradually from a great sufferer to a healthy woman, and a year after the operation she was the victor in a tennis tournament. Mr. Owen felt sure that there must have been a mistake in the diagnosis which he with three other reputable and regular practising physicians of the community made after much careful personal examination. Mr. Owen's experience of the fallibility of the most skilled diagnosis could doubtless be paralleled by that of many other physicians and surgeons. Until science can foretell a sufferer's doom with absolute certainty, "euthanasia" must always involve a serious risk of extinguishing without necessity a life that may still hold in it possibilities of usefulness or even happiness.

THE LIGHTING OF PUBLIC VEHICLES.

ONE of the advantages of modern electric traction is the opportunity it has afforded to the travelling public of reading in comparative comfort. Many a case of defective eyesight owes its origin to the painful attempts of suburban dwellers to spell out their evening paper while on the homeward journey in the old horse-drawn tram. A feeble glimmer from an oil lamp at each extremity of the vehicle was the only illumination provided, and in most of the railway carriages of that not distant era a little gas jet was relied upon to cast a dim, if not exactly a religious, light. Electric trams and tube trains have introduced a great improvement, though vehicles not electrically propelled, such as motor buses, are in general still inadequately lighted, and on some railway lines much remains to be desired. The pre-eminence of tram and tube train in this respect is explained by the fact that, unlike vehicles driven by petrol or steam, they are fed from an external supply, so that lamps of a much higher candle power can be employed. On the other hand, an external supply of illumination is not an unmixed advantage, and the light actually generated on the carriage itself, while it may be comparatively feeble, has the advantage of constancy and steadiness. In tram and tube the fluctuations are often very noticeable, the light diminishing decidedly when the vehicles start from a stopping place or ascend an incline. On passing over the points the lights go out altogether, and at junctions where several lines converge the effect may be very trying. Given plentiful light of the requisite steadiness the illuminating problem is half solved, but the distribution of the lamps in the restricted space available is most important, and glare is as great a danger as insufficiency. These and other points were brought out in the course of discussion at a meeting of the Illuminating Engineering Society on April 7th, when a first effort was made to bring together certain recommendations for the future consideration of those responsible for public transport. The opener of the discussion, Mr. Kilburn Scott, suggested that the roof of a public carriage should be painted white—a dead, not a shiny, white—or that the lamps should be provided with suitable reflectors. He recommended also the use of lighter tints to replace the sombre upholstery on British railways. The amount of illumination, he thought, should be equivalent to well over two foot candles on a surface at the reading level—say 30 in. above the floor, and the installation of some system of shading was desirable, instead of the rows of glaring lights directly in the line of vision of those who travel by tram or corridor train. The ideal would be an indirect or semi-indirect system by which reflected rays from the ceiling would strike a newspaper or book at all angles, and the bare source would be screened from the passenger's eyes. The popularity of the station bookstall should not be without its significance for railway directors, and as it only costs, roughly, one-fourth as much to light a railway carriage properly as to heat it, a policy of scientific illumination would not only save the eyesight of the public but might quite possibly add to the dividends of the shareholders.

GONOCOCCAL PERITONITIS IN FEMALE CHILDREN.

We know only too well that an infant may be infected by the gonococcus at birth and become blinded for life, and modern medicine has laid down rules by which efficient precautions may be enforced. Dr. Tridon of Berck-sur-Mer[1] has very properly published a report of two epidemics of vulvo-vaginitis which occurred within two years at the celebrated children's hospital in Berck. Both, it is admitted, were caused by a want of care on the part of the nurses in the handling of basins and towels used for washing children too ill to leave their beds. On the first occasion 8 and in the second 10 children were infected, and 7 sporadic cases were treated within the same space of time. Dr. Tridon observed distinct symptoms of peritoneal infection in no fewer than 6 out of the 25 infected children—a high proportion. In all cases the symptoms began suddenly and were acute, the pains being violent and not clearly localized. Tympanitic distension was constant, and there was, in most instances, vomiting, but the temperature never exceeded 102°. The complication invariably subsided, under appropriate treatment in the hospital, without any alarming general symptoms. Dr. Tridon gives no minute details about treatment, but simply states that all the infected children were kept absolutely at rest, ice being applied to the abdomen, and food withheld as long as was thought safe. Dr. Tridon declares that the children recovered without sequelae, and that he could not detect indications of the too familiar relics of peritonitis in any of the patients after convalescence. These cases were watched by an expert in a special hospital; the etiology was certain and the diagnosis apparently accurate, and it may very well be that gonococcal peritonitis is often overlooked or misinterpreted. The precise significance of complete subsidence of acute symptoms in any given case is uncertain. It may imply adhesions sealing up the Fallopian tubes or uniting coils of intestine, with the result, salutary for a time, of effectually barring the advance of the infection. Unfortunately, such adhesions may many years later produce complications very familiar to the surgeon, or others equally well known to the gynaecologist, yet puzzling to either if the history be defective or if he overlook the possibility of the occurrence of this type of infection before puberty.

[1] *La Gynécologie*, No. 3, 1913, p. 147.

SLEEPING SICKNESS.

Dr. Hearsey, the Principal Medical Officer of the Nyasaland Protectorate, in his *Sleeping Sickness Diary* for December, 1913, states that 19 additional cases of sleeping sickness had been notified during the previous four months—namely, 1 from the Marimba district by Dr. Morgan, 2 from the Upper Shire district by Dr. Sanderson, and the remaining 16 from the proclaimed area of the Dowa district by Dr. Conran; 6 of these were discovered in September, 4 each in October and November, and 5 in December. These cases raise the total number reported to 172. Of this total the year 1913 contributed 64 cases, as compared with 46 cases in 1912 and 38 in 1911. A short history of the new cases is given. Preventive measures have been instituted in the Dowa district, and have, Dr. Hearsey says, been attended with satisfactory results. The importance of avoiding being bitten by tsetse flies is being instilled into the minds of the natives and clearing operations are being carried out. As the latter are dependent upon voluntary labour the results will necessarily vary with the amount of time and energy the different communities give to the work. Dr. Conran reports that a quite perceptible diminution of the number of flies in the immediate neighbourhood of villages has resulted from these clearings. Investigations carried out in the districts to the north and South of the proclaimed Dowa area tend to show that the Marimba district is approximately as heavily infected, no fewer than 11 cases of sleeping sickness having been found in it during an investigation extending over three months. On the other hand, the districts to the south, Dedza, South Nyasa, and Upper Shire, have only furnished 4 cases. Hearsey believes that any conclusions founded on these observed differences between the districts north and south of the proclaimed area must to a large extent be speculative, as the fly areas in all the districts coalesce, and the game as far south as the Upper Shire is infected with *T. rhodesiense*. Todd, in a paper on the prevention of human trypanosomiasis, recently reprinted from the *Transactions of the International Congress of Hygiene and Demography* at Boston, states that no completely efficient method is known by which human trypanosomiasis can be entirely prevented, although there are several factors concerned in its spread through which the extension of the disease can be delayed. He deals with *Trypanosoma gambiense* and its spread by *Glossina palpalis*, his paper having been written before the recent work on *T. rhodesiense* and *G. morsitans*. There is no doubt that much may be done to prevent the former variety, as the case of Uganda at the present day shows. Todd himself believes that the disease has spread largely owing to the advent of the European into Africa, and the consequent opening up of vast tracts of new land. He thinks, however, that the malady may be controlled in many parts of Africa by the energetic application of existing methods of prevention, and that it is not improbable that continued research will result in the discovery of more efficient methods. Wherever it is possible, he thinks, permanent methods of prevention, such as deforestation and education of the natives, should be employed in preference to such temporary expedients as the depopulation of a district. When the trypanosomiasis of Nyasaland and Rhodesia comes to be considered, the difficulties are still greater, for the fly *G. morsitans* has not the limited distribution of *G. palpalis*, and the wild game carrying the parasite in their blood act as a constant source of infection. The suggestion that the wild game should be destroyed as a means of preventing infection of man has raised a storm of criticism, chiefly, it must be noted, amongst the armchair scientists at home, and not amongst those who have first-hand knowledge of the countries concerned. As a matter of fact, wild game and civilization can never go together. Leaving out of account the danger to the human subject and the presence of carnivorous animals, there still remains the danger of diseases spreading from the different wild ungulates to the domestic stock, and still further the financial loss of the former animals eating the grass and other fodder. All the big towns of South Africa are standing examples of the dictum that when civilization comes game goes. Though it may be necessary to destroy wild animals within a wide radius of towns and other inhabited areas, there is no reason why they should be stamped out indiscriminately in other parts. There are many sparsely inhabited tracts of enormous extent in which reserves could be established. Natives could be removed from these areas if necessary, though if cases of human trypanosomiasis are not occurring in them there seems to be no very definite reason why they should not be allowed to stay. This proper limitation of game should be accompanied by schemes for destroying tsetse flies generally. Though there seems little hope of anything being done in this direction at present, yet possibly in the future something may be achieved, and the numbers of these pests reduced. Deforestation and clearing of bush undoubtedly get rid of *Glossina palpalis*.

INTERNATIONAL CONGRESS OF OCCUPATIONAL DISEASES.

In the British Medical Journal of July 26th, 1913 (p. 208), there appeared an announcement of the third International Congress of Occupational Diseases, which is

to be held at Vienna in September (21st to 26th). The programme of discussions was there given; it includes the following subjects: (1) Fatigue—physiology and pathology, especially in relation to professional work; action of such work on the nervous system; nightwork. (2) Work in hot and moist air. (3) Workmen's anthrax. (4) Pneumoconioses. (5) Hurtful effects of electricity in industrial labour. (6) Occupational intoxications, especially aniline, mercury, and lead. (7) Hurtful effects of occupational work on the hearing. (8) Reports. The presidents are Dr. Francis de Haberter, chief of the sanitary administration of Austria, and Dr. A. Schattenfroh, professor of hygiene and director of the Institute of Hygiene in the University of Vienna. A committee has been formed in this country to promote the objects of the Congress. The Home Secretary, Mr. McKenna, is Honorary President; Sir Thomas Oliver, President; and the members are Sir John Collie, Sir Thomas Flitcroft, Professors John Glaister of Glasgow, Sheridan Delépine of Manchester, and Eurich of Sheffield; Drs. H. Langley Browne, Hedley, Pratt, W. Hamilton, F. Shufflebotham, Herbert Jones, C. H. Milburn, T. D. Lister, and Edginton. Dr. T. M. Legge is chairman of an executive committee, of which Dr. W. F. Dearden is honorary secretary. The Home Office will be represented by Dr. Legge, and various medical associations have intimated their intention to send delegates. Papers will be printed in the language in which they are written, with abstracts in German and French, and a report of the general proceedings will be published in these two languages. Those who intend to present communications are requested to send their matter typewritten, together with an abstract. Papers should be sent to the General Secretary, Docent Dr. Ludwig Teleky, Turkenstrasse 23, Vienna IX, on or before May 1st. In connexion with the Congress there will be an exhibition illustrating the origin, symptomatology, and means of preventing occupational disease and the influence of professional work on the organism in general. Membership is not confined to medical men; any person or association interested in the subject can attend or subscribe for the proceedings. The subscription is £1. Those who wish to send papers, attend the meetings (which will be held in the House of Parliament), or take advantage of arrangements for combined travel and accommodation at reduced rates, should communicate at an early date with Dr. Dearden, 168, Trafford Road, Salford, Manchester.

THE Committee of the Cambridge Research Hospital is making a special effort to raise an endowment fund of £10,000, and the executors of the late Sir William Dunn, Bart., after giving special consideration to the needs and work of the hospital, have sent a donation of £2,500.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Ventilation of the House of Commons.—At a further meeting of the Select Committee on the ventilation of the House additional evidence was taken of Mr. Patey, Superintendent Engineer, who stated that the present amount of air supplied through the floor inlets averaged 45 cubic feet per minute per member, taking 370 members as being in the House at the same time. He stated that if the air were admitted below the gallery just above the head level—a proposal which is being considered by the Committee—the amount which could be supplied there at a velocity of 1½ ft. per second would be 26.7 cubic feet per minute. If this were supplemented by air admitted through the bottom of the places in front of the members' seats which are now used for their notes and papers and which are commonly known in the Committee as the "hymn-book places," the amount available would be 38 cubic feet per minute, which he thought would be sufficient. Mr. W. J. Flynn, the Chairman of the Press Gallery, furnished some interesting evidence. He condemned in unsparing terms the present ventilation and accommodation of the Press Gallery, and particularly that in the various rooms reserved for the press in the adjacent part of the building. He described it as little better than a rabbit warren, and prophesied that a good many members would lose their way in it if taken up there. He considered it thoroughly unworthy of the Parliament House of the nation. Sir Francis Fox gave some valuable evidence from the point of view of an expert engineer, and incidentally an interesting description of the method of ventilation adopted in the boring of the Simplon and other great tunnels. He expressed the view that, as the debating chamber was in the middle of a large block of buildings, it was almost impossible to have a system of ventilation which would be thoroughly satisfactory, although he thought the present system might be greatly improved. He thought that the explanation offered by Mr. Patey as to the cause of the insufficient humidity of the air admitted into the chamber under the present conditions was probably correct. He expressed the view also that the steam radiators for warming the air should be replaced by hot-water radiators, as he believed that organic matter in the air was roasted as it came into contact with the pipes, and accounted for some of the unpleasant effects complained of. He expressed a great measure of agreement with the observations and opinions put forward by Dr. Leonard Hill, and the belief that the present system of admitting air in a rapid current through the floor was unsound for the reasons Dr. Hill had advanced, and that it was entirely unlike anything that commonly occurred under natural healthy conditions.

Diseases Caused by Flies.—Mr. Charles Bathurst asked the President of the Local Government Board if his attention had been called to the warning recently addressed to the public by 123 medical officers of health as to the prevalence during the summer months of infantile enteritis and other diseases traceable to the common house-fly, and the increased human mortality consequent thereon; and whether the Board was taking steps to effect the reduction of the number of flies.—Mr. Herbert Samuel said that the answer to the first part of the question was in the affirmative. The Local Government Board was fully alive to the importance of the matter, and had issued six reports on flies as carriers of infection; it had warned local authorities by circular, both in 1911 and 1913, of the dangers of allowing accumulations of refuse which might form breeding grounds for flies to remain in their districts; and had for some time been urging individual local authorities which were not dealing satisfactorily with the refuse of their districts to improve their methods.

Domiciliary Treatment of Tuberculosis.—Mr. Astor asked whether a dependant of an insured person who was treated for tuberculosis by a local authority undertaking treatment of tuberculosis for the whole population with the aid of the Hobhouse Grant from the Treasury, was entitled to the same domiciliary treatment as might be given if sanatorium benefit were extended under Clause 17 of the National Insurance Act to dependants of insured persons.—Mr. Herbert Samuel replied: Dependants are not entitled as of right to domiciliary treatment, even if an Insurance Committee has extended sanatorium benefit to such persons. The matter is within the discretion of the Insurance Committees. Local authorities generally have not so far included domiciliary treatment in their schemes; the view which has been acted on is that the institutional side of these schemes should be fully developed before the question of providing domiciliary treatment is considered.

Imported Cream and Milk.—In reply to Mr. Astor, the President of the Board of Trade (Mr. Burns) said that the

quantity of cream, milk, and butter imported during 1913 was as follows:

	Cwts.
Cream	9,778
Milk, fresh	4,237
Milk, condensed or preserved (including milk powder)	1,314,685
Butter	4,139,028

Mr. Astor asked how many samples of imported cream and milk were examined during each of the last two years; whether any examination was made with a view to detecting the presence of tubercle bacilli; and, if so, in what proportion of the samples were tubercle bacilli found to be present.—The President of the Local Government Board (Mr. Herbert Samuel) said that the figures were as follows:

Number of Samples Examined.

Year.	Milk.	Cream.
1912	17 ...	0
1913	25 ...	51

Examination was made in each case with a view to detecting tubercle bacilli, but none were found.

Milk and the Soya Bean.—Mr. C. Bathurst asked the President of the Local Government Board if he was aware that it was proposed to sell as milk in London and elsewhere a liquid prepared from a species of soya bean, having the appearance and, to some extent, the flavour of cow's milk, but not possessing its nutritive or other qualities; whether the Board had powers and, if so, under what statute, to prevent the sale of such a product under the misleading denomination of milk; and, if so, whether it was proposed to exercise such powers.—Mr. Herbert Samuel said that he was not prepared to express an opinion as to the nutritive qualities of the product. If an article which was not milk were sold under that name it would be open to local authorities to take proceedings under the Sale of Food and Drugs Acts against the vendor.

Milk and Dairies Bill.—In reply to Mr. C. Bathurst, Mr. Herbert Samuel said he hoped to be able to introduce the Milk and Dairies Bill shortly, but that he could not suggest a day for the second reading.

Soldiers' Discharge Certificates.—Mr. F. Hall (Dulwich) asked the Under Secretary of State for War if the discharge certificate of a soldier leaving the army owing to physical disability contracted on service contained a statement to the effect that the man had been found medically unfit for further service; and, if so, whether the form of certificate would be modified so as to prevent it being a hindrance to discharged men seeking civilian employment.—Mr. McKenna said that the regulations with regard to this certificate had recently been altered. The formula now used was, "No longer physically fit for war service," to which, if the disability was not such as to interfere with the soldier's fitness for civil employment, there was added the words, "although fit for employment in civil life."

Indian Medical Service.—Sir J. D. Rees asked what were the results of the last competition for the Indian Medical Service held in London; whether four out of twelve vacancies were gained by gentlemen who were natives of India; whether three more candidates, answering the same description, were found among the eight to whom subsidiary vacancies were allotted; and if so, whether the bearing of these facts upon the simultaneous examination question was under the consideration of the Secretary of State and the Government of India.—Mr. C. Roberts said that thirty-three candidates competed in the last examination for the Indian Medical Service. The minimum number of appointments advertised was twelve, but owing to there being more vacancies twenty candidates were eventually accepted. Of these seven were Indians. The Secretary of State was not aware that these facts had any bearing on the simultaneous examination question.

Opium Convention.—In reply to Sir Charles Nicholson, Sir E. Grey said that Great Britain had not yet ratified the Opium Convention of 1912. A further conference was shortly to be held at the Hague to consider the question of putting the Convention into effect, which was distinct from the question of ratification. His Majesty's Government had as yet no information as to the exact date on which the conference would assemble. It would be represented at the conference by Sir William Collins and Mr. W. G. Max Müller.

Housing Accommodation, Lanarkshire. In reply to Major Hope, who asked whether the order issued for the closing of 150 houses at West Benhar, Lanarkshire, on May 28th was to be enforced on that date, and what provision had been made for the accommodation of the 700 displaced inhabitants, the Secretary for Scotland said that the District Committee of the Middle Ward of Lanarkshire had prepared a scheme to be laid before the county council for the provision of 100 houses, and that, pending such provision being made, the Local Government Board had advised the District Committee to apply to the sheriff to suspend the closing order.

Government Lymph Establishment.—Mr. George Roberts asked the President of the Local Government Board whether he was aware that during the year ended March 31st, 1913, £981 10s. 1d. less than the amount granted in the estimates was expended on account of incidental expenses connected with the Government lymph establishment; whether, in consequence of the prevalence of foot and mouth disease, calves for vaccination could not be obtained during part of the year; if so, whether any inconvenience was experienced through this shortage of calves and saving of public money; and whether, in view of the decreasing number of vaccinations and the comparative freedom from small-pox, he was prepared to modify the estimates under this heading in future.—Mr. Herbert Samuel said that the reply to the first part of the question was in the affirmative. In consequence of the prevalence of foot and mouth disease, calves could not be obtained during a part of the year, but owing to the reserve of lymph kept for emergencies no inconvenience resulted. The estimate under the subhead referred to for the financial year 1913-14 was somewhat reduced, and a further reduction had been made in the estimate for the current year.

Smoke and Crops.—Mr. Stanier asked the President of the Board of Agriculture whether the Leeds University had received the three years' grant from the Board to enable it to complete the report on the investigation into the injury done by smoke nuisance to crops; and if the university had been able to produce enough information to now issue a report.—The President of the Board of Agriculture said that the grant sanctioned in respect of the third year's work had not yet been paid. A report was in course of preparation. The third year's grant would be paid, but he was afraid it would be the last.

Bee Disease.—In reply to Mr. C. Bathurst, the President of the Board of Agriculture said that as the disease was not compulsorily notifiable, the Board had no means of ascertaining the extent of its prevalence during different periods for the purpose of comparison, but there could be no doubt that the number of bees in the country had been much reduced by the disease in recent years.

Epizootic Abortion.—In reply to Mr. Stanier, the President of the Board of Agriculture said that the Board had no reason to suppose that milk given by cows inoculated for the prevention of abortion was thereby rendered in any way unsuitable for human consumption.

Research: Civil Pensions.—Mr. C. Bathurst asked the Home Secretary if, in view of the services to the community of the late Mr. William Hunting, M.R.C.V.S., who died on October 24th, 1913, especially in the scientific research which had rendered possible the stamping out of the disease of glanders, fatal alike to man and horse, the claim of his children (a son and daughter), now without means of subsistence, to Civil List pensions, would be favourably considered.—Mr. McKenna said that, if details were supplied, the case would gladly be considered.

England and Wales.

WALES.

KING EDWARD VII HOSPITAL, CARDIFF.

At the monthly meeting of this hospital, held on April 8th, and presided over by Major-General Lee, the following motion was proposed by Colonel Bruce Vaughan, and unanimously adopted:

> That the remaining fifty beds of the hospital, equipped and ready for use, be opened and placed at the disposal of the waiting patients, with the least possible delay; and that the medical board and nursing committee be authorized to make such arrangements as would fall within their respective spheres of jurisdiction.

This extra accommodation is included in the new wing which was completed and equipped a few years ago, but has remained closed up to the present for the want of funds. This fine addition to the hospital was commenced seven years ago, largely as a result of a noble initial effort on the part of the late Mr. John Cory, which was splendidly supported by the wealthy and working classes of the community. The cost of the new wing, built to meet the pressing needs of the hospital was £44,000. This sum was subscribed in nine months, and donations came from all classes of the community.

A further sum of £97,000 was contributed, being the amount necessary to add to the invested capital for the maintenance of the additional beds.

The accommodation now available raises the number of beds in the hospital to that required by the General Medical Council for the hospital of a complete medical school. It is intended also to establish a small ward for maternity cases, for which there is urgent need. The hospital serves an immense area, including the thickly-populated mining valleys of Glamorgan.

The Welsh metropolis should have its special hospitals, and until these are established the resources of the King Edward Hospital will be taxed to their utmost extent, but the opening of the new wing will in some measure relieve the pressure of the waiting list, which is always considerable. The maintenance of the beds thus thrown open will mean an addition to the hospital annual expenditure of £4,000, and the Board of Management expressed its unshaken confidence that this further sum would be forthcoming. In the past appeals have been frequent, but the response has always been prompt and generous, and altogether a quarter of a million sterling has been subscribed in the last eight years.

At the same meeting the Board of Management re-elected its twelve representatives on the special committee established last year for the purpose of electing members of the honorary staff of the hospital. It will be remembered that previously members of the honorary staff were elected by persons numbering some 400, and comprising life governors and presidents and others; this duty is now delegated to a representative committee of twenty-one. It is but a fitting compliment to its valuable initial work that this committee should be re-elected.

LONDON.

LONDON COUNTY COUNCIL.

Treatment of Tuberculosis.

At its last meeting before Easter the London County Council considered the estimates of income and expenditure for the year 1914–15, the sum involved being over 11 millions sterling. In an explanatory memorandum, Mr. R. C. Norman, Chairman of the Finance Committee, mentioned that important increases of expenditure in the coming year were due to services to be undertaken for the first time, including the administration of the Mental Deficiency Act, the provision of street ambulances, and the treatment of tuberculosis. The last named was by far the most important, and it would be hard to set a limit to the cost which tuberculosis treatment might ultimately involve unless its developments were carefully watched. So far dispensary schemes had been submitted by 18 borough councils, and it was estimated that £5,000 would suffice for the demands on the Council for the year, although that amount did not represent the ultimate annual cost, which might amount, when the arrangements were complete, to from £10,000 to £15,000 a year. This was a relatively small part of the burden. By far the heaviest charge would arise on account of hospital and sanatorium treatment, which was not only more expensive in itself, but was chargeable as to a larger proportion to the Council. It was estimated that, apart from Poor Law cases, 2,500 beds might be required; some of these would be maintained at the cost of the Insurance Committee, and others, no doubt, would continue to be provided at the cost of private funds. Although not yet technically committed to expenditure for residential treatment, the Council had practically assumed a large measure of responsibility, and £20,000 had been included in the provisional estimates, in order that a beginning might be made with the work. This meant an expenditure of £40,000, because the national exchequer bore half the cost. This was only the first stage in what would prove to be a costly journey. The Council must bear in mind that this was a voluntary service, and that the rate of advance was within its control. Mr. Norman quoted from a speech by the Chancellor of the Exchequer to show that Mr. Lloyd George contemplated the exercise of discretion in this matter by local authorities. The County Council was concerned primarily not with the health of the individual, but with the public health. The decline in the death from phthisis in London from 1.65 per 1,000 in 1901 to 1.35 per 1,000 in 1912 was reassuring, and should induce the Council to pause before embarking on any very heavy expenditure, especially of a permanent nature, to secure an end which was being secured under the influence of other forces. The estimates will be considered in detail at subsequent meetings.

School Medical Service: Women Doctors and Marriage.

Discussion was continued on the question raised in an amendment to a report of the Education Committee moved by the Rev. Dr. Scott Lidgett to the effect that certain women doctors to be appointed to the school medical service should be not required to resign their appointments on marriage.[1] Several speeches were made in which the desirability or otherwise of women continuing professional work after marriage was discussed from various points of view. Mr. E. G. Easton, Chairman of the Asylums Committee, said that the Council had in its employment many medical men at the asylums who would be dismissed if they married. He reiterated his statement as to the low salaries paid to assistant medical officers. The debate came to an end when the Chairman of the General Purposes Committee promised that an early report would be issued on the whole question. The amendment was lost by a large majority, and, had the seconder consented, would have been withdrawn to avoid any appearance of committing the Council to a definite opinion at this stage. The appointments, which have already appeared in the JOURNAL (March 28th, p. 735), were then approved.

Conduct of a Coroner's Inquiry.

In reply to a question, the Chairman of the Public Control Committee (Mr. P. C. Simmons) promised that consideration would be given by the Committee to the comments of the judge in the Starchfield trial on the manner in which the evidence before the coroner was alleged to have been taken. At the same time, Mr. Simmons pointed out that, according to a statement in the House of Commons by the Home Secretary, Dr. Wynn Westcott did not admit the accuracy of the statements of the learned judge.

BIRMINGHAM.

BIRMINGHAM MEDICAL INSTITUTE.

THE library of the Birmingham Medical Institute contains 15,187 volumes, including 346 volumes of bound pamphlets. Sixty-four periodicals are supplied to the reading room, and of these 38 are foreign and 26 British; 47 are presented and 17 purchased. There are 27 periodicals bound yearly and added to the library. During the past year 161 volumes have been added, and of these 31 were purchases. The number of volumes issued during the past

[1] BRITISH MEDICAL JOURNAL, April 4th, 1914, p. 785.

year is 565, which is considerably below the average. There are at present 151 members, and in addition 12 regular subscribers, including institutions. The expenditure during the past year was £543, and the income less this amount by £8.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

TREATMENT OF TUBERCULOSIS.

AT the last meeting of the Louth Insurance Committee a resolution was proposed by Dr. Flood urging the amendment of the Insurance Act so as to enable the county councils to act jointly with the boards of guardians in order to provide accommodation in hospitals for advanced cases of tuberculosis. The resolution was the outcome of a statement by the Clerk that the Local Government Board had written declining to sanction the arrangement suggested by the Insurance Commissioners, which was that the tuberculosis officer should be given the assistance of nurses, who would attend to patients in their homes.

At the last meeting of the Gorey Board of Guardians a resolution was passed asking the Insurance Commissioners to consider favourably the allocation of a portion of the funds set aside for tuberculosis treatment to boards of guardians which had made suitable arrangements for combating the disease.

NURSES CONTRACT TYPHOID FEVER.

Dr. P. Stephenson, medical officer, wrote to the Carrick-on-Suir Board of Guardians recently, stating that during the week a trained night nurse at the fever hospital contracted typhoid fever. The nurse for whom she was acting as temporary substitute had been attacked by the disease three months ago. He attributed the disease to the absence of a proper water supply and sanitary arrangements. The guardians decided to procure at once a proper water supply.

PHILANTHROPIC REFORM ASSOCIATION.

The report presented to the eighteenth annual meeting of the Philanthropic Reform Association, held in Dublin last week, stated that the principal matters to which the association had been directing public attention were: (1) The establishment of day industrial schools in Dublin; (2) regulation of street trading by children; (3) better enforcement of school attendances; (4) the establishment of a home for sane epileptics; (5) reform of the Poor Law, and (6) improvement of the housing of the working classes. During the year the association was in negotiation with various persons with a view to the establishment of a day industrial school. There is now a general agreement that such schools are required, and financial assistance can be relied on from the State and the Corporation of Dublin. There are, however, two immediate difficulties that have to be overcome: (1) A competent body has to be discovered to establish and carry on the school, and (2) it is necessary to raise the capital sum required to equip the school and to provide the annual sum necessary to meet any deficit which may result in the working of it. The need for a home for sane epileptics is very great. Applications are constantly being made to the Association for assistance in such cases, and there is no institution in Ireland to which they can be sent. Under the present Poor Law, guardians have not the power to pay for the support of such persons in such homes. A bill drafted by the association to remove this defect has not yet been considered by Parliament. The generous offer of the Countess of Meath to contribute £5,000 towards the establishment of a home remains unfruitful, but in the meantime she has placed in the hands of the association funds by which several persons have been, and are being, maintained in suitable homes in Great Britain. The Secretary referred to the importance and necessity of establishing such an institution in Ireland. Patients had frequently come under notice who, had they been treated in such homes, would have been able later to take their places as useful members of society. At present the association had on its books several cases waiting admission into private homes in England. The report also referred to the necessity of providing meals for very poor children at school.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

A HOME FOR AGED NURSES IN EDINBURGH.

A COMMITTEE formed about two years ago to establish a home for retired nurses in Scotland has now purchased two houses in Chamberlain Road, Edinburgh, for the purpose. After the death of King Edward VII a fund was raised under the auspices of the Nurses' National Pension Fund, and with part of the moneys so collected a home has been opened in London. A grant has been made to the Scottish Committee, which thus came into possession of a sum of £3,000. The proposal is to conduct the home on co-operative principles, and the nurses admitted will be those past active service who have an income of at least £26 per annum. The sum in hand is not sufficient for the purpose, and an appeal will be shortly made.

DUNFERMLINE AND ROSYTH.

Dr. Macgregor, Medical Superintendent of the West Fife Infectious Diseases Joint Hospital, states in a recent report that the completion of the hospital extension scheme had not come too soon, as every bed was occupied, and it had been necessary to refuse fresh cases. The combination covered a wide area, and includes a rapidly extending field of industry, and the demand for houses is very keen. The hut village at Rosyth has a population of over 1,100, and plans have been completed for further extensions, which will increase that number to 1,600. It is under the direct sanitary control of the Admiralty, which, however, has the right of claiming admittance for cases of infectious disease into the fever hospital for the district. The peculiar construction of the village, more especially in regard to its sanitary provisions, is considered to necessitate the prompt removal of all cases of infectious disease to hospital.

Special Correspondence.

PARIS.

Closure of the Pylorus in Gastro-enterostomy.—Treatment of Exophthalmic Goitre.—Syndrome in Gaseous Hypertension of the Stomach.—Adrenalin in Neo-salvarsan Poisoning.—Subdural Serum Injections in General Paralysis.

THE question of occlusion of the pylorus in benign affections of the stomach was discussed recently by Mr. Gosset at the meeting of the Société de Chirurgie. He stated that he had performed the operation of occlusion of the pylorus in 10 cases during the past two years, and the operation of gastro-enterostomy in 109 cases of non-malignant disease of the stomach. On the results obtained he founded a belief that the best after-results in gastro enterostomy are to be expected in cases in which the pylorus is very small. In those in which the pylorus is patent the after-results will be less favourable, and in some of them the operation will produce no amelioration in the symptoms; when this is the case pylorectomy will give favourable results. After simple gastro-enterostomy the greater part of the bismuth meal might be seen to pass through the new opening, but a portion still passed through the pylorus. In seven cases in which he had closed the pylorus he obtained a cure of all the symptoms, and four of these cases were patients who had previously had gastro-enterostomy performed but were still suffering. Mr. Quénu reported a case of his in which the pylorus had been closed according to Mr. Gosset's method, and a cure resulted. Mr. Cuneo said he had noticed that in duodenal ulcer there was little contraction following the ulceration, but that closing the pylorus enabled the ulcer to heal, and thus removed the symptoms. In the case of pyloric ulcer, however, he was not convinced that exclusion of the pylorus was necessary, as he had seen recovery follow simple gastro-enterostomy.

Dr. Gaultier, speaking before the Medical Society of Paris, has recently claimed marked success for the following treatment of exophthalmic goitre: For twenty days

the patient is given quinine in doses of 15 grains, gradually increased to 45 grains, one dose only being given each day and this with the evening meal. By this intensive quinine treatment Dr. Gaultier said he had been able to produce marked diminution in the various symptoms of the disease, and had in no case found any signs of intolerance to the drug, which appears to be remarkably well tolerated in cases of exophthalmic goitre. The beneficial results he ascribed to the marked action of quinine on the sympathetic nervous system when given as stated.

Dr. Conto has reported to the Medical Society of the Hospitals a symptom-complex which he considers to be of diagnostic value in cases of gaseous dilatation of the stomach following nervous aërophagy. Such patients have a habit—sometimes nervous, sometimes due to some nasal or pharyngeal lesion—of swallowing air unconsciously and involuntarily, and this produces a feeling of faintness accompanied by palpitation and fullness in the stomach. The supraclavicular fossa on the left side is fuller than normal. There is a feeling of uneasiness and fullness when the patient leans the head to the right side, and paraesthesia in the region of the carotid triangle, which varies in intensity with the presence of air in the oesophagus. Slight dilatation of the superficial veins on the left side of the thorax exists, and the resonance on the left side of the chest is diminished. The second pulmonic sound is frequently accentuated, and some extra-systoles can often be noticed. Patients suffering from these symptoms can be easily cured by removal of the nasal troubles and by re-education of the breathing by regulated breathing exercises.

M. Milian, in a recent paper before the Medical Society of the Hospitals, claimed that the occurrence of symptoms of poisoning such as flushing, coma, and collapse in patients submitted to neo-salvarsan treatment are due to the "nitrite-like" action of this drug and can be controlled by administering adrenalin simultaneously or previously. In one case after 60 cg. of neo-salvarsan the patient had apoplectic-like seizures followed by syncope. After the drug had been injected in a dose of 75 cg., vomiting, fever, and diarrhoea set in, and 1 mg. of adrenalin was injected. The patient's symptoms of toxaemia then disappeared, and he was able to bear 90 cg. of neo-salvarsan without any unpleasant effect other than slight flushing. In another patient who after 45 cg. exhibited similar symptoms of poisoning, and after 60 cg. fell into a state of coma, 1 mg. of adrenalin again proved effective, and subsequent injections of 45 and 60 cg. of neo-salvarsan produced no unfavourable reaction. In a third case the patient was in a state of coma and suffered also from spastic rigidity of the muscles. In this case also adrenalin was tried, and its use followed by disappearance of the symptoms. On the ground of these cases it was suggested that adrenalin is an effective antidote in poisoning from arsenobenzol.

Drs. Levaditi, Marie, and de Martel reported their new method of preparing serum for subdural injection in general paralysis. The serum is injected beneath the dura mater after having been prepared in the following manner: Rabbits with large chancres are treated with salvarsan injections, and some time after a cure has been produced in the rabbits the spirochaete antigen is re-absorbed and antibodies are formed. The rabbit is then again dosed with salvarsan, the dose being 7 cg. per 1,000 grams of rabbit's weight. In this way the rabbit's serum contains antispirochaete antibodies and salvarsan. The rabbit is then bled and the serum obtained from the blood of the rabbit. This serum has given favourable results in the treatment as above mentioned.

THE Russian Minister of the Interior has confirmed a resolution of the Medical Council as to the desirability of establishing a radiological institute in St. Petersburg. The objects are stated to be research as to the biological, physical, chemical, and therapeutic properties of the *x* rays; the investigation and control of the radio-active properties of mineral waters and ores; the control of *x*-ray apparatus and radio-active preparations; and the control of private radiological institutes. It is estimated that the cost of building and equipping the institute will be approximately £71,075 and that of the yearly upkeep about £5,282.

Correspondence.

THE REWARD OF RESEARCH.

SIR,—I trust our profession will vigorously back up Sir Roland Ross in his very proper demand that the State should render pecuniary justice to those who by unremunerative but successful discoveries aid society, and often save not only needless outlay but add greatly to the assets of empire. Mr. Ure, when Lord Advocate, was fond of saying up and down country that nobody could add an acre to the land originally given us by the Creator. As a saleable and inhabitable commodity, I wonder how many acres Sir Ronald's discoveries have added to the map of the empire? I was in the Far East when Sir Ronald was engaged in his gigantic fight with the pigmy jungle foes of man. Personally too closely engaged in another field of investigation to be of any use in that campaign, I was giving all my spare hours and cash during a period of bad health to the discovery of and classification required in the finger-print method of identification, so often ridiculously ascribed by Englishmen to Bertillon, who never once made any such claim. My experience of officialdom—broken promises included—has been like that of many others. Indeed, our present-day methods are so exactly portrayed by Dickens that the ways of the Barnacle family must date pretty far back. Still, they have less excuse now, when England is piously supposed to have wakened up.

Why should only well-paid warriors, diplomatists, and civil servants be additionally requited for often purely conventional services, while those who painfully penetrate with ultimate success into unknown but fertile regions receive nothing for their expenses, and often not even the barest form of thanks? This defect must surely be due to lack of professional organization. My experience as a panel doctor, after all our society attempted to do, has been disgusting. But think what it would have been if our co-operative efficiency had been much less. Why, we should simply have been trodden in the mire by frugal statesmen and "friendly" societies.

If the dignified stand of the British Medical Association has prevented us being cruelly sweated as surgeons, can it not make it impossible to crush our pioneer scientists who have rendered effective social service? The public may be made to listen and to do justice in this matter if we only feel strongly and roar loudly enough to show that we have some feelings.—I am, etc.,

Hanley, April 13th. HENRY FAULDS.

MEDICINE IN INDIA.

SIR,—Dr. G. A. Heron, writing from Calcutta under the above heading in the BRITISH MEDICAL JOURNAL of March 7th, 1914, makes out that the qualified practitioners now practising the Western system of medicine here are not up to the mark, and that it would be unfair to the people of India to entrust the care of the public health to these practitioners. This I consider preposterous, and very unfair to the local practitioner. Does Dr. Heron seriously think that the health of the millions of the land is really attended to by the small number of Indian Medical Service men? Can Dr. Heron say that the locally qualified medical men were ever put in responsible positions and found wanting?

So far as the Madras Presidency, to which I have the honour to belong, is concerned, I may say that most of the medical graduates of this university can hold their own against any medical man, be he British trained or otherwise.

That their training and professional qualifications cannot be low can be well seen by the fact that even men who fail in the final L.M.S. degree examination—the lowest of the medical degree examinations here—have gone to Great Britain, and within three or six months of their failure got the L.R.C.P. and S. diploma, a registrable qualification.

If the local medical man does not make a name for himself it is because he is not given a chance for doing so. All the places where one can carry on original work or make a name are reserved for the European Indian Medical Service men. I may without fear of contradiction state that the locally qualified medical man does operative

and other work as well as any other when he is given a chance.—I am, etc.,

Madras, March 26th. M. KRISHNASWAMI AIYAR, M.D., C.M.

THE ASSOCIATION'S ADMINISTRATIVE WORK.

SIR,—I write to ask whether anything has yet been heard of the long-promised additional Secretaries of the British Medical Association. In last October we were told that the appointment of at least one was an immediate necessity. The members, with comparatively few dissentients, cheerfully agreed to a raised subscription, with a view to an adequate staff and a determined campaign for a uniform policy.

More than six months have passed, and no additional Secretary has appeared, neither has the much-heralded campaign commenced. I feel I can only be voicing the opinion of many other loyal members when I urge the extreme importance of immediate action. The fact that, as a profession, we are weary of strife and "fed up" with controversy should serve to stimulate our official leaders to greater efforts. It will soon be futile to organize for the next round of the great fight; therefore let us have our organization at once. We who are not on the Council do not know what the Association's policy is, and we want to know at first hand.

If the present offered salary is insufficient to attract a suitable man, then it must be raised till we get one. Rumour suggests that it is contemplated to engage a layman as Organizing Secretary. In my humble opinion it won't do. We must have a man of professional instinct and sympathies, not merely an official. Members will not gather to hear a formal address on their duties from an erstwhile spectator of the fight. We want a man who has fought and (perhaps) suffered. With apologies for the length of this letter, I am, etc.,

Rochester, April 15th. C. W. GREENE.

SIR,—At Brighton last July it was decided to increase the subscription to the Association; in December this increase was ratified, and in January of this year it became effective. I understand there will be a considerable increase of revenue.

One of the main reasons for this extra call on members was the insistence that four organizing secretaries were necessary for the Association. Where are these organizing secretaries? Apparently as far back as October last a Medical Secretary was advertised for, with a view to election in December. This matter was shelved until January, again shelved until some time this month, and it seems more than likely that some further months will pass by ere the advent of the first secretary. Once again the Council slumbereth, once again procrastination is dogging the Association, and we are placidly regarding the approach of the next professional degradation when we have the money and material for a successful defence which our officers will not utilize.

Another serious aspect of the question is the possibility that a proposal will be made to elect a layman (possibly a lawyer) to the post of Assistant or Organizing Secretary. How long is it going to take this gentleman to learn the ins and outs of medical practice before he is in a position to address a professional meeting? Are we going again to commit the blunders of the past and let ourselves be manœuvred by gentlemen who know nothing and care little about the work and worries of the general practitioners?

Surely it must be obvious to all of us that whilst in our new secretaries a legal training may be desirable, at the same time it is essential that they should possess not merely medical qualifications but practical medical experience. In our ranks there must be many sound practical non-party businesslike men who would accept these offices if adequate terms were offered.—I am, etc.,

East Malling, Kent, April 5th. ARTHUR D. PARR-DUDLEY.

SANATORIUM TREATMENT OF LARYNGEAL TUBERCULOSIS.

SIR,—Sir StClair Thomson claims to prove, first, by his "Three Years' Sanatorium Experience of Laryngeal Tuberculosis," that the prognosis of laryngeal tuberculosis is not so unfavourable as laryngologists have hitherto pronounced it to be; and, secondly, that laryngeal tuberculosis is just as common in women as in men. His proof, as he presents it to us, is quite unassailable, because there is no attempt to define what he means by "laryngeal tuberculosis," and it is not stated whether tubercle bacilli were found in all of the cases which yielded satisfactorily either to rest or to galvano-puncture. Another weak point in his argument is that he does not say how long each case was demonstratod to be arrested after treatment was applied, nor does he tell us whether in any of the cases in which the laryngeal tuberculosis was arrested there was also arrest of the disease in the lungs, with cessation of sputum and disappearance of tubercle bacilli from the sputum in cases in which sputum was present. There is thus that serious lack of relativity in his statistical compilations which sadly mars the force of his conclusions. Fortunately these observations have been made at a well-known sanatorium, and there should not be any difficulty in furnishing details upon which his conclusions have been based. It is not satisfactory to argue from mere figures, and all the knowledge that we have with regard to the character of the larynx is that it was "diseased" or "not diseased."

Now Sir StClair Thomson is a skilful and experienced laryngologist, but we have the right to know exactly what was the nature of the lesion in the twenty-eight cases that belong to Group I (Stage I) upon which the diagnosis was based. This is very important, because it may be that either the diseased state of the larynx was not really tuberculous, or an early tuberculosis of the larynx may be as easily arrested as an early lesion of the lung. It is the fashion nowadays, especially at Midhurst, to make the diagnosis of pulmonary tuberculosis depend essentially upon the presence of tubercle bacilli in the sputum. I do not imagine that Sir StClair Thomson has swabbed out the larynx in these cases, and proved the presence of tubercle bacilli in the swabbings. I admit that there are lesions in the larynx, such as oedematous swelling, irregular thickenings, infiltrations on the cord, and ulceration at different sites, which we could admit to be of a tuberculous nature, but Sir StClair Thomson has entirely omitted to describe any of the lesions observed in his cases. Until these lesions are described accurately, the truth of his contentions may certainly be questioned. May I, therefore, ask Sir StClair Thomson to thus describe the lesions in the twenty-eight cases of the first group, on the strength of which he claims to show that "13.7 per cent. of these early cases have laryngeal tuberculosis." This is so important that no trouble should be spared in proving its absolute accuracy. It is well known that laryngeal symptoms may overshadow the pulmonary symptoms in the early stages, but certainly not in "13.7 per cent." of the cases. Laryngeal catarrh, and what is termed pretuberculous laryngitis, are familiar to us, but these conditions usually yield to simple treatment. Are these the conditions which Sir StClair Thomson has included in his figures? If not, it is for him to state the evidence upon which he designates them "laryngeal tuberculosis." They are just the conditions which would improve and clear up with rest and sanatorium treatment. It would not be easy to prove that their real nature was tuberculous. We are in fact, as I stated in the discussion, observing the same objects in the landscape from platforms moving at different rates, and before we can get at the real truth in our observations we must be sure that our descriptions are correct.

Further, the Midhurst Sanatorium prides itself upon this special selection of cases, and it would be utterly misleading and illogical to make generalizations—such as "arrest of laryngeal tuberculosis can be effected in a sanatorium in 20 per cent. of all cases," when only favourable cases have been passed under review.

Again, when there is a marked discrepancy between the observations made in these selected cases in regard to the relative frequency of laryngeal tuberculosis in men and women and the observations recorded at *post-mortem* examinations, we are justified in concluding that the discrepancy is largely the result of the exclusion of the more severe forms of the disease. This very careful selection of cases necessarily leads to a more favourable class of statistics, but in no sense justifies the statement that "these satisfactory results have not, so far as I know, been secured by any methods outside a sanatorium." If

Sir StClair Thomson will read the chapter in my book upon the results obtained in laryngeal tuberculosis by tuberculin treatment, he must admit that treatment of the cases which I have recorded would never have been attempted in a sanatorium.

Sir StClair Thomson claims but a temporary success in 20 per cent. of these specially selected cases. What would the percentage be if there had been no selection? I say deliberately a temporary arrest, because—and this is the weakest point of all in his compilation—none of the cases have been watched, even for three years after treatment, and no doubt many of them have hardly been watched for more than a year. Still, we may thank Sir StClair Thomson for drawing attention to the importance of laryngeal tuberculosis as a complication of pulmonary tuberculosis. If he will but fill up the gaps from the records of Midhurst, especially with regard to the character of the lesions in his compiled cases, we shall be in a better position to measure the value of his labours, and if he will but keep these cases under observation for another two or three years, the value of his work will be enormously enhanced.

On the other hand, if Sir StClair Thomson's figures are right, tuberculin is a marvellous remedy for arresting and preventing the development of laryngeal tuberculosis, because, during a period of fifteen years, I saw but one instance in which laryngeal tuberculosis developed during tuberculin treatment, and in that case the tuberculous ulcer healed completely before the end of treatment; and in a period of more than twenty years I have only had, in all, four instances in which laryngeal tuberculosis developed after treatment with tuberculin had begun. During this period I have treated several hundred cases. No such record has been claimed in laryngeal tuberculosis. —I am, etc.,

W. CAMAC WILKINSON, M.D.Lond., F.R.C.P.

London, W., April 14th.

THE POSITION OF CHLOROFORM.

SIR,—It is a little surprising at this date to see Colonel Lawrie again entering the arena on the question of his special methods of anaesthetizing. Dr. Moriarty observes that as a student, in 1902, he remembers my stigmatizing the method as "antiquated and clumsy"! It is refreshing, after thirteen years, when I have given up anaesthetic work, to be reminded that my teaching was sound.

It recalls to me also the fact that at that time (May, 1901) I contributed a somewhat lengthy article on the safe administration of chloroform to the *Scottish Medical and Surgical Journal*, consisting largely of the nature of destructive criticism of Colonel Lawrie's book and method. As a matter of fact, I regarded, and still regard, both as a public danger. The book appeared at a time when chloroform was much more commonly used both in Edinburgh and Scotland as a whole than at present, when anaesthetic methods are so much more varied and scientific.

Colonel Lawrie states that these methods and those employed in London—indeed, "the whole position of surgical anaesthesia"—are unsatisfactory!

Fortunately he qualifies the statement with the reservation of, "if what he says is true." The readers of the BRITISH MEDICAL JOURNAL are fairly well able to judge as to whether Colonel Lawrie's method is right and the modern anaesthetist is wrong or not.

It is an age of commissions on everything, from housing of the working classes to "hidden" diseases, but I must say I would regard a commission on this question as little necessary as the appointment of a committee of ornithologists to estimate the ambulatory powers of the dodo.—I am, etc.,

Peebles, April 7th. THOMAS D. LUKE.

SIR,—In the BRITISH MEDICAL JOURNAL of April 4th Dr. Gerald Moriarty states that "it was conclusively proved by Gaskell, Leonard Hill, and other physiologists that the technique adopted by the Hyderabad Commission was faulty, and hence its conclusions erroneous." This fallacy was exposed by Sir Lauder Brunton in the BRITISH MEDICAL JOURNAL of May 21st, 1893, in the following terms:

I have now taken up Mr. Hill's accusations of prejudice, ignorance, carelessness, and incompetence one by one, and have shown that all those accusations are absolutely groundless, and that the experiments of the Hyderabad Commission are perfectly trustworthy, and may be accepted as such both by trained physiologists and by every one else.

Dr. Moriarty does not appear to be aware that Dr. Gaskell was paid by the Nizam's Government to complete the research of the Hyderabad Commission on Chloroform. He failed to do this and it was afterwards admitted that it was the technique of his own experiments, and not that adopted by the Hyderabad Commission, which was faulty.

In the second place, Dr. Moriarty refers me to the *post-mortem* room for "the actual optical demonstration of status lymphaticus." All I have to say to this is that when chloroform is given by my method the anaesthesia never ends in the *post-mortem* room, and to repeat that as a factor in chloroform administration the "status lymphaticus" does not exist and is therefore meaningless. A redundance of lymphoid tissue in any part of the body whatsoever has no more to do with the effect of chloroform than the colour of the patient's hair or the shape of his nose.

In the third place, Dr. Moriarty says that he is unacquainted with any teacher or school in London where the student is taught to keep a finger on the pulse while chloroform is given. On this point I beg to enlighten him by referring him to the *Lancet* of December 13th, 1890, in which that eminent teacher of anaesthetics, Dr. Dudley Buxton, describes his way of administering the drug: "My plan is to use Lister's open method, and to keep a finger upon an artery." This teaching is precise enough, though it is only fair to Dr. Buxton to quote the following passage from an article which he wrote eight years later in the *Nineteenth Century* for April, 1898:

It is extremely difficult for those conversant with the use of chloroform to believe that any one should attempt to regulate the dose of chloroform by watching the circulation. If such persons exist, the sooner they and their methods are relegated to the limbo of desuetude the better for all concerned. Personally, I believe such persons are as rare as the dodo or the great auk. In justice, however, to the medical profession, and certainly to that section of it whose particular study lies in the administration of anaesthetics, it must be pointed out that no such baleful doctrine is at present believed in, nor such a deplorable practice pursued.

Finally, Dr. Moriarty asserts that "the southerner is not so good a subject for chloroform anaesthesia as the Scot." It was the Edinburgh principle of watching the breathing alone which made chloroform safe for the Scot in the days of Syme, and which, perfected by the work of the Hyderabad Commission, renders my method of giving choloroform entirely free from risk to southerners and Scots alike. I made this clear in my letter of March 14th, and that I merely employed the description "Edinburgh method" for convenience. I am well aware that Syme's principles, which made Edinburgh famous all the world over, have been abandoned by the Edinburgh school, and am willing to allow that to give chloroform in large quantities on a towel on the London principle—which was latterly taught in Edinburgh from Syme's chair—is "dangerous." But on our principles chloroform is just as safe on a towel as in any form of inhaler, and to disparage Syme's teaching by calling his methods "antiquated and clumsy" is not only disloyal to one's Alma Mater but is in the highest degree unscientific. Syme's plan of giving chloroform was carried out by students in the clinical wards of the Edinburgh Royal Infirmary for twenty-three years without a single death, and the fatalities which detract so much from the value of anaesthesia at the present time will only disappear when the boycott is taken off the work of the Hyderabad Commission, and the safe principles of Syme are reverted to.—I am, etc.,

Hove, April 7th. E. LAWRIE.

AUTOINTOXICATION AND SUBINFECTION.

SIR,—Professor Adami's letter in the JOURNAL of April 4th ought to recall the attention of the profession to what appears in the JOURNAL of January 24th on the subject of intestinal stasis. In this letter he points to the need for careful study of each case before operation, and the value of "team work." In the JOURNAL of January 24th he, however, confesses that he is inclined to ask, "Are we nosing along the right scent? May not we be working along the wrong one?" That surgeons are on the wrong

scent can, I think, be proved from facts they themselves give us. Dr. Gray (p. 191) says: "I think it is a slur on our Creator to look upon every colon as a cesspool, as some would have us." It seems to me to be a slur upon the profession that it can, in any case, become such a cesspool as to poison the system, and give Sir Arbuthnot Lane reason to say that he "can understand a man preferring to live with a drunken woman rather than a toxic one. A drunken woman is occasionally merry, but a toxic one never!"

The true cause of such an effect ought to be known. Surgeons blame bands for causing constipation. Dr. Gray says: "The cause of this so-called chronic constipation is mechanical, and therefore can only be adequately and permanently relieved by mechanical means." Sir Arbuthnot Lane believes these bands are the result of the stasis, while others believe them to be congenital, but all admit that they are met with in some cases where constipation has never occurred. However much any operation may relieve autointoxication from constipation, the aim of the physician ought to be to prevent constipation, and that he will never be able to do until he studies the physiological action of our common foods. I have discovered, by experiment and observation, that some foods cause not only intestinal stasis, but renal stasis as well; and so long as such foods are taken constipation will occur.

Dr. Gray says: "So long as the tone of the bowel is good, so long may the patient be free from constipation. A healthy, active life, attention to diet, and to the regular action of the bowels will help to keep the bowel in good tone. Acute or chronic illness, change from an active to a sedentary occupation, nervous upset, and so on, may influence the tone of the bowel and break down the compensation to such an extent that they are never properly recovered, and intestinal stasis, with its attendant evils, becomes the bane of the patient's life." That is quite true, but until we know more about dietetics constipation will continue to be the opprobrium of the physician.—I am, etc.,

Hawick, April 6th. JOHN HADDON, M.D.

THE CRAZE FOR APPENDICECTOMY.

SIR,—The writings in the JOURNAL prove that the damage which is done to the abdominal wall in removing diseased appendices is necessary; it is also plain that the abdominal wall should not be wounded to remove a normal appendix. The question at issue is one of skill, the ability to diagnose a diseased appendix.

It is to be regretted that surgical interest in the function of this caecal vestige has become less and less as the erroneous deduction of the lymphoid hypothesis has tended to mask the true nature of the appendix; for the study of the vestigial nature of the apical portion of the human caecum throws a flood of light on the diseases of the large bowel in relationship to their causation and treatment.

It is not well recognized that man's digestive tube has been evolved to deal with a combination of carnivorous and herbivorous foods, and that neglect of the latter fact is responsible for the diseases of the large bowel and for dental decay.

Our authorities openly avow that they do not know the function of the ileo-caecal valve, a structure that was evolved when ancestral man was compelled to eat coarse herbage, for the purpose of preventing the regurgitation of caecal content into the ileum, to the hampering of the function of the small gut—namely, that of absorbing ingesta which the stomach had prepared for absorption. The function of man's caecum is to digest coarse vegetation; it reached its highest development when ancestral man ate uncooked herbage. During the digestion of such material much gas is generated and the tension ruptured the external muscular coat in the region of the ileo-caecal valve. In the atrophied caecum of civilized man the ruptured part of the caecum exists as the banded caecum and its unruptured apical part as the vermiform appendix. The peculiarity of the ruptures sustained by the human caecum explains the extreme rareness with which the vermiform appendix appears in the animal kingdom; it occurs only in man, a few anthropoid apes, and the wombats. The changes in the human caecum are all traceable in the primate mammals. They accentuate the fact that appendicitis is primarily due to lack of coarse vegetation in the food of civilized man; they indicate that diseased appendices are often associated with large bowels that are weakened from long disuse. Perhaps the severest criticism that can be made against the surgery of the vermiform appendix is that the scar in the abdominal wall is a sign of man's stupidity in not eating that food for which his digestive tube has been evolved.—I am, etc.,

WALTER STAPLEY, M.D., M.R.C.V.S.

Cambridge, New Zealand.

THE FALLING BIRTH-RATE.

SIR,—I regret that I must again beg leave to correct Mr. Henry Sewill on a point of fact. To prove, seemingly, that France could have reduced her death-rate without reducing her birth-rate, he says that she is a great exporter of food, thereby implying that she exports much more than she imports. The fact is that she is a great importer of food (see the official "Statistical Abstract for the Principal and other Foreign Countries").

Moreover, I have not disputed the fact that France has increased very slowly as compared with Germany. The question between us is the cause of the phenomenon. Mr. Sewill attributes it to the difference of their birth-rates. I attribute it to the difference between the possible rate of progress in a newly-constituted country with great undeveloped natural resources and in an old long-settled community with smaller resources which had already been largely developed.

If the recent sudden rise of the French birth-rate should continue, the effect in merely raising the death-rate will surely draw attention to the importance of the Malthusian and neo-Malthusian doctrine. But even without such a massacre it might be recognized that if a couple can only afford (like the great majority of wage earners) to maintain two children properly, they will more likely add to the deaths than to the population by having more than two. If this were now to become generally and fully appreciated on humanitarian, eugenic, and anti-socialistic grounds, we could reduce our death-rate to 10 or less, as in New Zealand, in two or three years' time, and still be increasing by over 1,000 a day.—I am, etc.,

London, S.W., April 7th. BINNIE DUNLOP, M.B., Ch.B.

"AN EPIDEMIC RESEMBLING WHOOPING-COUGH."

SIR,—With reference to Dr. Norman Carver's letter in the JOURNAL for April 4th, may I add my testimony to that of Dr. Blake-Masson, whose letter appeared in the JOURNAL of April 11th?

I have recently had to deal with a very extensive epidemic of measles, not in most cases of a very virulent type. Over 300 children and a few adults were affected. Nearly every mother, on noticing the ordinary cough, declared that her child had got "whooping-cough." In only one case did I hear the real typical "whoop." Nearly all the others had, indeed, what one might call an "explosive" type of cough—that is, paroxysms with subsequent vomiting, but I hesitate to pronounce a verdict of genuine whooping-cough. There were in most cases coarse râles in the chest, but they were not different or distinctive from the usual sequelae to measles.

Therefore I am inclined to think that my epidemic closely resembles that described by Dr. Carver, except for the fact of measles being a preceding condition in my cases. I had not, unfortunately, the time or opportunity to examine the sputum in any case. The majority of the children were too young to know how to expectorate and their mothers too ignorant to help me.

My conviction is that as there were but few proved cases of genuine whooping-cough in the district, most, if not all of these children had a trouble similar to that described by Dr. Carver—in other words, not a true whooping-cough at all. The question arises: "Is it necessary to "whoop" to have "whooping-cough"?—I am, etc.,

HARRY S. HALL, M.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond.

Abbot's Bromley, Staffs, April 11th.

AN APPEAL.

SIR,—We venture to appeal to the charity of those members of the medical profession who are in a position to render help to the widow and family of the late Surgeon-Lieutenant-Colonel J. O. Will, R.A.M.C.

The deceased leaves an honourable record of work done in many parts of the empire; and among many who personally tendered to him their thanks for valued services were the late General Wauchope in South Africa, and Sir F. M. Hodgson in St. Vincent (after the disastrous eruption in that island). Early in this year Dr. Will, having retired from the army, purchased a practice in the village of Dunton Green, near Sevenoaks. After only seven weeks he fell a victim to pneumonia. The evening before he died his eighth child was born, the mother's mental and bodily suffering being increased by a perilous obstetric complication.

The widow is left with a family of eight to bring up, the eldest being a girl of 16. A yearly allowance to be made by the War Office represents practically her entire income; in the circumstances no great sum can be expected from the sale of the practice, which was a small one. Her only relatives are not in a position to afford substantial aid, and we feel that many medical men would like to do what is in their power to help.

The Rev. E. Mort, Vicar of Dunton Green, has opened a fund; any contributions we may receive as a result of this appeal will be added to the fund and thankfully acknowledged.—We are, etc.,

JAMES E. BLOMFIELD, M.A., M.D.Oxon.
R. J. DICK, M.D.Edin.
GERALD SICHEL, F.R.C.S.Eng.

Sevenoaks, April 8th.

TUBERCULOSIS MEDICAL OFFICERS.

SIR,—It is very necessary that tuberculosis officers should, without any delay, push forward their claim to be included with medical officers of health in the provisions of the parliamentary bill to secure superannuation, security of tenure, etc.

As public health officers we have every right to be included, but unless we strongly present our case we shall be overlooked and left out. Being a comparatively small and new body, we are at a disadvantage in having no proper organization to prefer our claim.

I would suggest that we approach the Society of Medical Officers of Health to ask permission to form a tuberculosis officers' group of their society, similar to that of the school medical officers.—I am, etc.,

A. W. FORTESCUE SAYRES,
Tuberculosis Officer, Devon County.

Plymouth, April 7th.

MEDICAL AID INSTITUTES.

SIR,—Having read with interest the report of the Committee upon Medical Aid Associations, I beg to make the following suggestion: That the methods of these societies, being generally disapproved by the medical profession upon ethical grounds to the extent of a refusal to recognize their medical officers, or to meet them in consultation, the matter should be pressed upon the notice of the General Medical Council. Either we as a profession are right in our attitude of condemnation of the methods of these societies or we are wrong. The exploitation of the services of those who are driven by the devil of necessity to bring financial profit directly, and indirectly by the provision of cheap medical work for dependants, to these societies, cannot surely be justified. The process is one of inverse covering by which a body of laymen practises for gain. If the former is correct the latter is justifiable, and the Council having condemned one cannot logically or reasonably allow the other. Our appeal should be to Caesar, that is, the Council, the only body which has real power to decide questions of medical ethics.

Pious opinions are useless, and, while acknowledging the formative influence on medical opinion of such able reports as that in the SUPPLEMENT of April 4th, I miss in them the *vis a tergo* which is necessary to impel these unprofessional methods into the limbo which has received the once useful and obliging unqualified assistant. The Council has the power. It has already, I believe, expressed its disapproval; all that is needed is the courage of opinion in which, as the representative body of the profession, entrusted with the upholding of medical honour and probity, it should surely not be lacking.

The question is in a nutshell. Either the tenure of these appointments is, as the profession almost unanimously declares, an unprofessional act or not. That is the issue, and it has waited an authoritative decision much too long already.—I am, etc.,

J. B. PIKE.

Loughborough, April 4th.

Medico-Legal.

"GUILTY BUT INSANE."

THE House of Lords on April 7th delivered judgement in an appeal from a decision of the Court of Criminal Appeal (Lord Chief Justice and Justices Bray and Lush) on the question whether an accused person in regard to whom the jury has returned a verdict of "guilty but insane," rendered under the Trial of Lunatics Act, 1883, can appeal under the Criminal Appeal Act, 1907, against that part of the verdict which finds him insane. The appellant, Felstead, was tried at the Derby Assizes on a charge of wounding with intent to do grievous bodily harm, and the jury returned the verdict of "guilty but insane." The law lords by whom the appeal was heard were: The Lord Chancellor, Lord Dunedin, Lord Atkinson, Lord Moulton, Lord Parker of Waddington, and Lord Reading, and the judgement, as delivered by the last named, was reported in the *Times* as follows:

JUDGEMENT.

Lord Reading said that the sole question for decision was whether an accused person who, by a special verdict in accordance with Section 2, Subsection 1, of the Trial of Lunatics Act, 1883, was found guilty of the act, but insane at the time, could appeal to the Court of Criminal Appeal against that part of the verdict which found that he was insane at the time of doing the act. If there was any right of appeal it could only be that conferred by the Criminal Appeal Act, 1907. That Act was passed to establish a Court of Criminal Appeal and to amend the law relating to appeals in criminal cases, and there was no right of appeal to the Court of Criminal Appeal, and no jurisdiction in that court to hear an appeal unless the appellant could bring himself within that statute. By Section 3 of the Criminal Appeal Act, 1907, "A person convicted on indictment may appeal under this Act to the Court of Criminal Appeal," and unless a person was "a person convicted on indictment" there was no right of appeal against the verdict or any part of it; therefore, the question was whether by reason of the special verdict under the Trial of Lunatics Act, 1883, or any part of such verdict, the accused was "a person convicted on indictment."

The History of the Law.

In order fully to understand the effect of such a special verdict it was well to examine the history of the law before the passing of the Trial of Lunatics Act, 1883. In the earliest times proof of insanity when he committed the act charged did not entitle the accused to an acquittal, but to a special verdict carrying with it a right to a pardon. The same course was taken when the accused had killed a man by misadventure or in self-defence (see 1 Rot. Parl. 444, 3 Edw. 2 (1310), and FitzHerbert's Grand Abridgement, Sub. Tit. "Corone," s. 351). At a later period the jury in cases of insanity could either find a general verdict of not guilty, or a special verdict that the accused committed the act but that at the time he was *non compos mentis*, and thereupon the court gave judgement of acquittal (see Hale's Pleas of the Crown, ed. of 1800, vol. i, s. 28, and Sir Michael Foster's Crown Law, 3rd ed., s. 1, p. 279). It was to be observed that in such cases the result of either a general or a special verdict was the acquittal of the accused, and in the words of the preamble of the subsequent statute of 1800 it might be "dangerous to permit persons so acquitted to go at large." In the public interest it became necessary to provide for the safe custody of the insane person notwithstanding the verdict of acquittal. Consequently the statute of 1800, 39 and 40 George 3, c. 94, entitled "An Act for the safe custody of Insane Persons charged with Offences" was passed.

The intention of the Legislature as manifested by that statute was to provide for the safe custody of persons who were found by the jury to be insane—(*a*) at the time of committing the offence, or (*b*) upon arraignment, or (*c*) upon trial, or (*d*) upon being brought before any court to be discharged for want of prosecution. In the last-mentioned case it would be observed upon examination of Section 2 that if even a person brought before the court to be discharged for want of prosecution should appear to be insane, the court was empowered to empanel a jury to try his sanity, and if the jury found him insane the court could order his detention for safe custody during His Majesty's pleasure. Under the statute the finding of the jury that the accused was insane at the time of committing the offence was not a conviction of any offence, but was an acquittal on account of insanity empowering the court to order the safe custody of the accused during His Majesty's pleasure. The alteration in the law made with reference to a person insane at the time of committing the offence charged against him was that although he was acquitted of the crime

he was detained as a lunatic. As Lord Chief Justice Denman said in Rex *v.* Oxford, 9 C. and P. 550, "the statute must mean that the jury are to find that that act has been done by the prisoner which fixes him as a criminal unless he is a lunatic," implying that if he was a lunatic he was not a criminal, and was not convicted of any offence.

The Special Verdict.

The last stage was the Trial of Lunatics Act, 1883, 46 and 47 Vict., c. 38, which was the statute now applicable. It made no substantial difference in the administration of the law except that it enacted that where, upon evidence, the jury were satisfied that the accused did the act charged, but was insane so as not to be responsible according to law for his actions at the time he did the act, they must return a special verdict to that effect. That was not a verdict that the accused was guilty of the offence charged, but that he was guilty of the act charged as an offence. In other words, this verdict meant that upon the facts proved the jury would have found him guilty of the offence had it not been established to their satisfaction that he was at the time not responsible for his actions, and therefore could not have acted with a "felonious" or "malicious" mind, which was an essential element of the crime charged against him.

The indictment of the appellant was for "feloniously" and "maliciously" wounding Lilian Ann Felstead, with intent to do some grievous bodily harm. It was obvious that if he was insane at the time of committing the act he could not have had a *mens rea*, and his state of mind could not then have been that which was involved in the use of the term "feloniously" or "maliciously," for *crimen non contrahitur, nisi voluntas nocendi intercedat*. It was further argued that, as the Trial of Lunatics Act, 1883, provided under Section 2 that where such a special verdict was found the accused should be kept in custody as a criminal lunatic, the Legislature must have intended the special verdict to operate as a conviction of a crime. In his judgement that contention was not well founded. By the use of the term "criminal lunatic" the Legislature meant by a compendious reference to bring into operation the powers given under the statute of 1860 (23 and 24 Vict., c. 75), which provided for detention in certain asylums, and under certain conditions, both of persons found insane and acquitted under the afore-mentioned Act of 1800 and of convicted persons who became insane during confinement in prison.

It was also contended that, as by Section 20 of the Criminal Appeal Act, 1907, writs of error and other modes of bringing a verdict and judgement under review had been abolished, the Legislature must have intended to give a right of appeal to the Court of Criminal Appeal whenever such a special verdict was found. It must, however, be borne in mind that their lordships were deciding the proper interpretation to be placed upon the words of the statute, and could not extend the right of appeal to those who, in their lordships' opinion, were not persons "convicted on indictment." For these reasons he came to the conclusion that the appellant was not a "person convicted on indictment." By the verdict of the jury he had been acquitted of the crime, and the order for his detention for safe custody was consequent upon the finding of insanity, and was not for a fixed period, but during His Majesty's pleasure. The effect of this conclusion was to affirm the decision of the Court of Criminal Appeal that they had no jurisdiction to hear and determine the appeal of the appellant.

After referring to Rex *v.* Machardy ([1911] 2 K.B., 1,144; 28 the *Times* Law Reports, 2), and Rex *v.* Ireland ([1910] 1 K.B., 655; 26 the *Times* Law Reports, 267), his lordship said that the special verdict under the Act of 1883 was, in his opinion, one and indivisible by reason of the statutory provision and took the place of the general verdict of "Not Guilty," and was a verdict of acquittal of the accused.

It was worthy of observation that if the appellant succeeded in his present contention and established, on the hearing of the appeal, that the verdict as to insanity should be set aside, he would be entitled forthwith to be set at liberty, for the remaining part of the verdict could not justify the passing of any sentence upon him, as it did not find him guilty of having committed an offence, but only of having done the act charged. He was of opinion, for the reasons given, that the appeal should be dismissed.

The other noble and learned lords concurred.

AMONGST the entomological papers published in the last issue of the *Tropical Diseases Bulletin* is one on the report on special investigations carried out in the Bacteriological Institute and in the Public Mortuary, Victoria, Hong Kong, during the six months January 1st to June 30th, 1913, which affords further evidence that the predominating mosquito of Hong Kong is *Stegomyia scutelaris*, only one specimen of *S. fasciata* was found. The former appears to be the common mosquito of the houses and backyards of the city of Victoria. *Stegomyia fasciata* is common in the ports of Java, and as there is constant steamship communication between these and Hong Kong, its failure to establish itself in the latter town is interesting. An examination of Canton has yielded somewhat similar results, for 5,000 specimens of mosquitos have been examined without the discovery of any specimens of *Stegomyia fasciata*. Further work upon the subject is clearly indicated.

The Services.

INDIAN MEDICAL SERVICE.

A GOOD service pension of £100 per annum has been conferred on Colonel R. N. Campbell, C.B., C.I.E., M.B.

Public Health AND POOR LAW MEDICAL SERVICES.

SMALL-POX IN GERMANY.

THE President of the Local Government Board, in reply to a question in the House of Commons by Mr. Pointer, has supplied the following table relating to the incidence and mortality of small-pox in Germany:

Year.	German Empire.		Prussia.	
	Cases.	Deaths.	Cases.	Deaths.
1892	?	108	?	91
1893	?	157	?	137
1894	?	88	?	77
1895	?	27	?	24
1896	92	10	70	8
1897	45	5	29	5
1898	129	15	112	12
1899	346	28	314	25
1900	392	49	349	45
1901	375	56	325	49
1902	114	15	88	13
1903	172	20	93	14
1904	189	25	122	17
1905	212	30	77	11
1906	256	47	163	30
1907	345	63	142	25
1908	434	65	390	61
1909	247	26	195	24
1910	236	34	168	24
1911	288	37	230	30
1912	279	?	170	19

REPORTS OF INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Ashington Urban District.—The urban district of Ashington in Northumberland has a population of about 25,000, and the male portion is engaged almost exclusively in the coal-mining industry. For some years typhoid fever has been almost continuously prevalent in the district, and an outbreak which occurred in 1901 was the subject of a special report to the Local Government Board by the late Dr. L. W. Darra Mair, who made certain recommendations with respect to the improvement of the water supplies of the district, and as regards the disposal of the sewage. The population at that time was about half what it is now, but little or no alterations have been made in the conditions reported upon by Dr. Mair. The water supply is obtained for most of the district from disused colliery workings. It is distributed unfiltered to parts of the collieries which are being worked, and after being raised by pumps it is filtered and then distributed to stand-pipes serving eight or ten houses respectively. As a result of local inquiries made by Dr. Reginald Farrar, he has recently reported* to the Local Government Board that the latest outbreaks of the disease cannot be so distinctly traceable to the water supplies as the earlier outbreaks, though it is probable that there was a limited infection of the supplies. The majority of cases have occurred among the colliers, and these have probably drunk of contaminated water in the colliery workings. The system of privy-middens which prevail in Ashington is a much more likely cause of the prevalence of the disease. The grouping of cases in one particular row of houses during 1911–12, as well as in former years, points to this method of excrement disposal as being responsible for many cases. The area of the urban district is only 3,000 acres, and the houses appear to be built in long rows, so that there ought not to be much difficulty in carrying out Dr. Farrar's recommendation to replace the existing unsatisfactory privy-middens by water-closets. After Dr. Mair's visit to the district the District Council erected a small isolation hospital partly of brick and partly of corrugated iron. On the basis of 2,000 cubic feet of air space for each patient, there would be accommodation for fourteen patients in these buildings, but it appears that at one time during 1912 no fewer than fifty-two were being treated at one time, and two children were sometimes placed in one bed. The accommodation for the nurses was almost worse, for on an occasion when seven nurses were employed six of them slept "turn and turn about" in three beds.

* Reports to the Local Government Board on Public Health and Medical Subjects. Dr. Reginald Farrar's Report to the Local Government Board on the Circumstances Associated with the Prevalence of Enteric Fever in the Ashington Urban District, in Northumberland. New series, No. 87. (London: Darling and Son, Limited. Price 4d.)

Universities and Colleges.

UNIVERSITY OF SHEFFIELD.

THE Council, at its meeting on April 6th, made the following among other appointments: Mr. Wilfred Jevons, B.Sc.Lond., to be Junior Lecturer and Demonstrator in Physics, and Mr. A. E. Barnes, M.B., Ch.B.Sheffield, M.B.Lond., M.R.C.P., to be Lecturer in Materia Medica, Pharmacology, and Therapeutics.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.

At the last meeting of the President and Fellows of the Royal College of Physicians, Sir Arthur Chance, F.R.C.S.I., was elected an Honorary Fellow of the College in recognition of his services to the colleges while representative of the sister college on the General Medical Council. Sir Arthur Chance is a past President of the Royal College of Surgeons in Ireland, and surgeon to the Mater Misericordiae Hospital, Dublin.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

FINAL COLLEGE.—C. M. G. Campbell, E. Connell, J. J. Donegan, J. J. Elliott, E. G. Foley, J. M. Gilmor, W. Lumley, L. L. McKeever, J. A. O'Driscoll, P. J. O'Reilly, J. J. Reynolds, R. P. Weldon.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—Muljibhai K. Dalal, J. B. W. Telford, W. C. Carew, R. G. Bell, J. A. A. Duncan.

SECOND COLLEGE.—J. Pearson, A. M. Morris, F. J. D. Cass, J. F. Campbell, C. Y. Samwell, E. Butler, Anna G. Stott, F. E. Gillieren, M. Campbell, W. McElroy, E. M. L. Morgan, Ethel M. Popplewell, F. J. Jack, H. G. F. Maurice.

THIRD COLLEGE.—F. B. Macaskie (with distinction), J. J. Armistead (with distinction), J. L. Hendry, H. A. G. Dykes, Lizzie O'Flynn, C. M. Bradley, L. W. Nott, H. O. Martin.

FINAL.—P. W. Laidler, J. M. McLachlan, R. Dorset, K. V. Swami, L. Lazarus, L. E. L. Coghlan, C. M. G. Elliott, R. Prasad, F. D. Johnson, R. B. F. Frazer, C. Sivasithamparam.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following candidates were approved at the examination held at the end of the forty-fourth session of the school:

*G. G. Jolly, *N. S. Williams, †‡G. M. Millar, †C. J. B. Pasley, A. L. Fitzmaurice, V. StJohn Croley, J. Marmion, I. Ridge-Jones, S. Colver, S. F. Chellappah, B. Haigh, †E. Gibson, Miss E. N. M. Ross, J. H. Castro.

* Passed with distinction. † Colonial Medical Service.
‡ Captain, I.M.S.

Obituary.

THE LATE SIR ARTHUR BRANFOOT.

LIEUTENANT-COLONEL C. DUER, M.B., F.R.C.S., I.M.S., writes: The passing of Surgeon General Sir Arthur Branfoot will cause deep regret to a vast number of people in India and connected with India in every grade of society. He was a most distinguished example of the all-round physician and surgeon, capable of dealing well with almost any problem in the whole domain of medicine, a product of the conditions of service in the Indian Medical Department—conditions which still continue, though, for various reasons, in decreasing extent. I had not the honour and privilege of knowing him personally until after the close of his more active professional life, when he came to Burma as principal medical officer of the troops, though, of course, I knew him well by the reputation he had gained in Madras. It is difficult to give any conception of the feeling of security, relief, and comfort the presence of one with such knowledge, experience, skill, and reputation gave to every member of the medical profession in Rangoon. With no specialists and frequently confronted with the most difficult and grave cases and emergencies, those only who have had to rely much on themselves can appreciate what it was to have the ever-ready and generous help of such a one. While in Rangoon he steadfastly refused all private practice, and seldom, if ever, accepted a fee when asked in consultation. He was the best and truest of friends, to whom one instinctively turned in times of stress and anxiety, feeling sure of his sympathy and understanding. I can give no idea of his increasing kindness and solicitude towards me and mine. To his own illnesses he hardly ever referred. At the close of a long and sympathetic letter, dated February 27th, the last I had from him, he writes: "I managed to contract a catarrh in London, which turned out more serious than I anticipated, and which has left some trouble behind. I hope to get a change down to the seaside next week, and that this may sweep away the dregs." Lady Branfoot and his family will have the heartfelt sympathy of all who knew him.

C. F. BRYAN, M.R.C.S., L.S.A.,

MEDICAL OFFICER, LEICESTER UNION WORKHOUSE.

WE regret to record that Dr. C. F. BRYAN, of Leicester, died very suddenly from heart trouble at his residence on Sunday evening, March 29th. The only son of Frederick Thomas Bryan, born at Knossington, Leicestershire, in 1851, educated at the Collegiate School, Leicester, and Guy's Hospital, London, he commenced practice in Leicester in 1874. He was appointed surgeon to the workhouse in 1880, and surgeon under the Factory Acts in 1889, and held both of these appointments to the time of his death. For some years he was honorary surgeon to the Leicester Volunteers, and it was he who introduced and established ambulance work in the corps. He was president of the Leicester Medical Society from 1892 to 1894, and on the formation of the Leicester Medical Union in 1902 was elected president for the year. He represented Charnwood Ward on the Leicester Town Council for the last sixteen years, devoting his time chiefly to the Sanitary, Asylum, Water, and Markets Committees, of two of which he was vice-chairman. He was a man of independent judgement; although an ardent Liberal his policy was always to place communal interests above party considerations. The first part of the funeral service took place at Christ Church, and was attended, amongst a great number of people, by the Mayor of Leicester, aldermen and councillors, the town clerk, chief constable, borough surveyor, medical officer of health for borough, medical superintendent of Borough Mental Hospital, water engineer; representatives of the guardians, nurses of the workhouse, Union of Medical Practitioners, medical profession of the town, Leicester Bowling Club, Leicester Temperance Building Society, Leicester Liberal Association, Charnwood Ward Liberal Association, Boys' Receiving Homes, etc. The remains were interred in Humberstone Churchyard on April 2nd. He leaves a widow, two sons, and four daughters.

Dr. W. F. DEARDEN (Old Trafford, Manchester) writes: Having been so much associated with the late Dr. C. F. Bryan, of Leicester, in the management of the affairs of the Association of Certifying Factory Surgeons, I feel that I owe a duty to his memory to say how deeply his loss will be felt by those of us who have been actively engaged with him in the conduct of this organization. He served for over ten years as vice-president and member of the Council, and was President in 1908. He possessed a very even temper and was rarely ruffled, whilst he was endowed at the same time with a great fund of energy and business ability. His special knowledge and experience were freely placed at the disposal of his colleagues, and often proved extremely valuable to their deliberations. As a certifying surgeon he did extremely good work in Leicester, and was highly respected both by employers and employees. He took a special interest in industrial conditions affecting the worker, and a very successful Section on Industrial Hygiene, at the Leicester meeting of the British Medical Association, was the result of his untiring efforts as secretary.

THE death was reported last week at Llandilo, Wales, of Brigade-Surgeon EDWARD HOPKINS, Army Medical Department (retired), aged 78. After taking the diploma of L.S.A. in 1857, and that of M.R.C.S. in 1858, he entered the army as Assistant Surgeon on April 22nd, 1858, became Surgeon in 1870, Surgeon Major in 1873, and retired with an honorary step of rank on June 3rd, 1885. He had a fine record of war service, having served in the Indian Mutiny in 1858, in the action of Doadpur, and the capture of Fort Mudjedea (medal); in the Umbeyla campaign on the North-West Frontier of India in 1863, in the night attack of October 22nd, and in the attack on the Eagle's Nest Picquet (medal with clasp); in the Afghan War in 1878–80, when he took part in Lord Roberts's famous march from Kabul to Kandahar, and in the battle of Kandahar on September 1st (medal with clasp, and bronze star); and finally in the Soudan in 1884–85 (medal).

Medical News.

THE annual meeting and dinner of the Metropolitan Police Surgeons' Association will take place at the Trocadero on Wednesday next, April 22nd, at 6 p.m.

THE reconstructed children's hospital in connexion with the Leicester Royal Infirmary will be opened on Wednesday afternoon next, at 3.15, by the Hon. Mrs. G. Murray Smith.

The second international conference on popular and school baths will be held at Brussels this year in August (7th to 10th), under the presidency of M. Beco, governor of Brabant. Dr. Schoofs, of Liége, is general secretary.

THE name of Mr. F. J. Steward, surgeon to Guy's Hospital, is to be added to the list of those who propose to offer themselves as candidates at the forthcoming election to the Council of the Royal College of Surgeons of England.

DR. JOHN ROBERT KEITH, of Great Driffield, East Yorkshire, has been made an Honorary Associate of the Order of St. John of Jerusalem in England, in recognition of many years' service to St. John Ambulance Association.

A MEDICAL parliamentary committee, which includes nearly all the medical members of the Chamber of Deputies, has been formed in Rome. Its object is to watch, and as far as possible direct, the course of legislation on all questions of public health, and to promote reforms in the study of medicine.

A COURSE of six lectures on industrial medicine will be delivered at the Medical School of Guy's Hospital by Dr. Shufflebotham, whose Milroy lectures were recently published in this JOURNAL. The lectures will be given on Fridays at 4 p.m., commencing May 8th.

THE summer term of clinical lectures and demonstrations on Tuesdays and Fridays at the National Hospital for the Paralysed and Epileptic, Queen Square, W.C., will begin on Tuesday, May 5th, at 3.30 p.m., when Dr. Gordon Holmes will deal with differential diagnosis of cerebral tumours.

THE University of Sheffield has arranged a post-graduate course on syphilis, the first lectures of which will be given by Dr. Herbert Henry on Tuesday, April 21st, on the biology of the spirochaetes, and on Friday, April 24th, on the spirochaete of syphilis, with cinematograph illustrations. These lectures will be given at the University at 3 p.m.

THE Friday evening meetings of the Royal Institution will be resumed after Easter on April 24th. On Friday, May 8th, Professor Karl Pearson will give an address on albinism in men and dogs: and on May 15th Professor Keeble will speak on "Plant Animals: A Study in Symbiosis."

THE first congress of German haematologists will be held this year at Hanover in connexion with the meeting of German scientists and medical practitioners. Professor Aschoff, of Freiburg, will preside. All communications relative to the congress should be addressed to Professor Pappenheim, Konstanzerstrasse 51, Berlin.

AN anonymous benefactor has given a sum of £250,000 to the municipality of Berlin for the foundation of an open-air school for boys. In the course of instruction special attention will be given to modern languages and natural science. The boys will lead the simple life and will travel on foot over Germany accompanied by teachers so as to learn all about the country.

ON March 23rd the French Chamber of Deputies passed a bill, which had already received the approval of the Senate, making antityphoid vaccination compulsory in the army. Medical officers, however, are allowed to use their discretion as to the fitness of individual soldiers—for instance, where tuberculosis exists or is reasonably suspected—to undergo the treatment.

WE are informed that copies of the statement on the infectivity of tuberculosis drawn up by the Royal College of Physicians of London, and published in the JOURNAL of April 11th, p. 826, can be obtained on application to the Registrar of the College. The statement has been issued in view of the exaggerated fear of the infectivity of pulmonary tuberculosis entertained by the public, and with a hope of rendering assistance to those who have administrative duties in connexion with the disease.

THE twenty-fourth congress of French-speaking medical psychologists and neurologists will be held at Luxemburg in August (3rd to 7th), under the presidency of Dr. E. Dupré. The questions proposed for discussion are: Post-oneiric psychoses; professional disorders of the mind; and lesions of the thyroid in Basedow's disease. Communications relative to the congress should be addressed to Dr. Lalanne, Medical Superintendent of the Maréville Asylum, near Nancy.

A MEETING of the School Medical Service Group of the Society of Medical Officers of Health was held on March 21st. It was decided that medical officers whose duties include school medical work, and who are members of the society, shall be entitled to become members of the group, and that each member of the group should pay a levy of 2s. 6d. Dr. John Priestley was elected vice-chairman and Dr. Walsh publication secretary of the group, each becoming a member of the executive committee. The question was discussed of approaching those authorities who now pay their whole-time officers less than £300 per annum.

WE have received from Ozonair, Limited (London, S.W.), a copy of a catalogue describing a number of types of apparatus for the commercial production of ozone by subjecting the air of the room to the action of a silent electrical discharge; the concentration generated is stated to be one part of pure ozone in one million parts of air volume. Among the new varieties of apparatus catalogued are a semi-portable ozone generator, specially suitable for tropical and humid climates, and also a fanless apparatus for deodorizing kitchens, lavatories, basements, and other enclosed places of restricted area. The rapid growth of picture palaces with their usually inadequate means of ventilation, and frequently quite fetid atmosphere, suggests an obvious use for this means of purifying the air of interiors.

THE Victoria League Imperial Health Conference will be opened in the Imperial Institute at 3 p.m. on Monday, May 18th, by the Right Hon. Lewis Harcourt, Secretary of State for the Colonies. The Countess of Jersey, President of the League, will welcome the delegates, and an address will be given by Viscount Bryce. The conference will last till May 21st. Delegates have been appointed by the Government of Canada, the Commonwealth of Australia, the Union Government of South Africa, the Leeward Islands, Trinidad and Hong Kong. The British Medical Association of South Africa will be represented by Dr. J. A. Mitchell, and delegates have been appointed by a number of authorities and organizations throughout Great Britain. The subjects proposed for discussion are town planning and garden cities and suburbs, and workmen's houses and model dwellings; the care of child life; and the child as wage earner. On May 21st there will be an open conference and discussion, when Viscount Peel, Chairman of the London County Council, will give an address. An exhibition to be held in connexion with the conference will illustrate the subjects discussed. Popular addresses will be given daily in the Exhibition Hall. Full particulars can be obtained from the Office of the Victoria League, 2, Millbank House, Westminster.

THE fourth report of St. George's Dispensary and School Clinic in Blackfriars Road, S.E., shows an interesting change in the character of a public dispensary. Owing possibly to the working of the Insurance Act, there has been, the medical superintendent (Dr. Haden Guest) states, a marked decline in the number of adults seen, whilst the number of children has increased, particularly in regard to those who enter through the clinic conducted at the instance of the London County Council. The report says: "The work is now almost entirely confined to school children and infants, such adults as are seen being as a rule those who bring children, and because of this have difficulty in themselves sparing further time for treatment." The change has been followed by a reduction in the number of patients seen. Special work has been done in the provision of classes for remedial gymnastics: 94 children have been under treatment for a year, the major portion after operation for the removal of tonsils or adenoids. The children are taught the rudiments of good breathing, at first by individual instruction, and then through the medium of small classes. The results appear to be very good. Similarly good results are obtained in cases of spinal curvature. This sort of work takes time and care, and the authorities are to be commended for providing these special facilities and the medical staff for making such good use of them.

DR. JAMES KERR presided over a meeting of the Child Study Society at the Royal Sanitary Institute, when Dr. Leonard Guthrie lectured on "The Nervous Child." Dr. Guthrie said that a nervous child was not merely one who appeared shy and timid, and who blushed, stammered, and became easily confused. These signs were only part of the neurotic temperament, which was unduly sensitive to stimuli of the sympathetic nervous system. There were two types of neurotic temperament, the unrestrained and the restrained, and both were partly inherent and inherited and partly due to environment. The neurotic child was often an only child or one born many years after his elder brothers and sisters; amongst other causes of

neurasthenia in children might be included any severe illness or sudden emotional shock, educational over-pressure, or a long period of brooding over secret terrors—night fears and the like. There was no evidence in support of the prevalent idea that precocious children were subject to early death. Delicacy and disease might accompany but did not cause precocity, though ill health in early childhood sometimes fostered a love of reading and study, as was the case with Scott and Dickens. Nor did precocity always imply decadence, for many men who afterwards became famous had been precocious children. On the other hand, the precocious child did not always fulfil the promise of his early years. Precocious neurotic children might have transcendent gifts, but yet never achieve anything, their versatility being a cause of failure by tempting them from concentration in any one direction. Taciturnity and a love of solitude were common in nervous children, and might be taken to indicate dullness. The tendency of modern schoolmasters to look askance at the dreamy, solitary boy who preferred his own thoughts to the company of his schoolfellows was to be deprecated. Hypersensitive children were unfitted for the ordinary routine of school life, but their intellectual powers were often high, and might be cultivated on the lines for which most aptitude was shown. In conclusion Dr. Guthrie expressed the opinion that nervousness was more connected with environment than with heredity, and that the neurotic temperament was inseparable from genius.

At a special meeting of the General Council of the Association of Infant Consultations and Schools for Mothers, for the discussion of the question of treatment centres for children under school age, Dr. J. G. Gibbon, who presided, said that these institutions were multiplying; the association would not rest content until in every working-class district in the country as well as in the towns there was at least one consultation centre. There could be no doubt as to the need of better treatment centres for infants; the preventive work which the infant consultations had undertaken was more important than the treatment of sickness. Dr. Ethel Bentham, of the Kensington Baby Clinic, said that the present mortality amongst children was much in excess of what it need be; and there was also a tremendous amount of sickness and suffering, so that many of the children began their school career definitely damaged in hearing and in sight. Bad housing, overcrowding, and insanitary conditions in schools, and the ignorance and neglect of parents, were the responsible factors; and as there was no margin for sickness in a working-class income, the mother often hesitated to send for the doctor until ailments were past the easily curable stage. Infant clinics and schools for mothers, therefore, were necessary; they should be absolutely free, and in every neighbourhood, so as to prevent the spread of infection in trains and buses, and the waste of the mother's time and money; they should be under a public authority in order that the doctors might be suitably paid, and the unfair burden of national charity taken off the shoulders of the medical profession. Sir Arthur Clay, of the Charity Organization Society, said that, whilst admitting the unhappy condition of the poorer classes, he was not at all certain whether the efforts that were being made at the present moment to improve their condition were the best way to obtain that end. It was exceedingly doubtful whether the removal of all responsibility from parents and wage earners would have an entirely beneficial effect. There were innumerable institutions for helping and instructing working-class mothers already in existence; and it might be wiser to adapt the existing machinery to suit their needs rather than to create new. An extension of the schools for mothers might be the solution of the problem; and the question ought to be very carefully considered before it was decided to found a fresh group of charitable institutions. Dr. Eric Pritchard, of the National Association for the Prevention of Infant Mortality and for the Welfare of Infancy, said that infant consultations should be the central feature of schools for mothers, just as the teaching of the mothers was the central feature of the infant consultations. At the present moment the infant consultations were more popular amongst working-class mothers than the out-patient department of the hospitals, because there was less congestion and consequent less waiting; he believed, therefore, that there was room for treatment centres dotted about in convenient parts of the town; young children might be brought there to be treated for minor ailments. A long discussion followed, in which Dr. Herbert Mills and Dr. H. W. Pooler took part, but, in accordance with the decision of the chairman, no resolutions were passed.

Letters, Notes, and Answers.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

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☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

ANSWERS.

K. K.—It is possible that the symptoms complained of are those of erythromelalgia. Weir Mitchell's case got relief as the weather became cool, but the patient was more comfortable when at rest than when moving about. So far nothing has been found to benefit the condition. If possible the patient should be sent to a cold climate, as relief is usually, but not always, obtained.

LETTERS, NOTES, ETC.

Bier's Treatment in Presbyopia.

Dr. E. F. Wills (London, S.E.) writes: The Bier method of treatment as applied to the eye seems to me very useful. May I venture to give the reasons? I heard an American eye specialist say that his father, who had at 40 years of age started using glasses for presbyopia, used a patent remedy—a kind of dry cupping of the eyes—and so successfully that he left off glasses till 60 years of age. My eyes began to be troublesome, aching after reading; I applied a bandage round my neck sufficient to cause the eyes to feel full and congested; the aching got worse for a few minutes, and I felt a throbbing in one eye; this quickly passed off, and it felt comfortable, exactly as a throbbing finger has felt when properly bandaged. By frequently applying pressure on the jugulars I find my sight much improved and glasses unnecessary. I give this for what it is worth, and would be glad of any further light on the subject.

Electric Treatment of Milk.

Dr. R. Stenhouse Williams (University College, Reading) writes: In the British Medical Journal of April 4th there is an account of the meeting at the Liverpool Medical Institution on March 19th, when a paper was read by Professor Beattie on the electric treatment of milk. In the account of the discussion which followed the paper I am described as speaking of this method as "Professor Beattie's method" of sterilizing milk. What I actually did say was "the method with which Professor Beattie experimented." The matter is of some importance, as Professor Beattie lays no claim to the invention of the method adopted.

John Ranby, Sergeant-Surgeon to George II.

Dr. Clippingdale (London, W.) writes: In the "Literary Notes" in the Journal of April 4th, an interesting account is given of a paper by Major H. A. L. Howell, R.A.M.C., in the *Journal of the Royal Army Medical Corps*. In this account Major Howell is represented as having referred to "Sir" John Ranby, Sergeant-Surgeon to George II. I was not aware that Ranby ever received a knighthood. It is not mentioned by his biographer, Mr. D'Arcy Power. His name does not appear in Shaw's *Knights of England*. Upon his tombstone in the graveyard attached to Chelsea Hospital he is described simply as "John Ranby, Esq., Sergeant-Surgeon to His Majesty and to this Hospital."

Sanatorium Experience of Laryngeal Tuberculosis.

In the report of the discussion at the Medical Society published last week, p. 818, the remarks of Dr. J. G. Garson were incorrectly attributed to Mr. H. W. Garson. In the leader (p. 828) Sir Ernest Cassel was misnamed "Edward."

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An Address

ON

THE THERAPEUTIC VALUE OF GASES INTRODUCED INTO THE PLEURAL CAVITY:

NITROGEN DISPLACEMENT (ARTIFICIAL PNEUMOTHORAX) AND OXYGEN REPLACEMENT.

Delivered before the Southampton Medical Society, March 4th, 1914.

By H. MORRISTON DAVIES, M.D., M.C.Cantab., F.R.C.S.Eng.,

ASSISTANT SURGEON, UNIVERSITY COLLEGE HOSPITAL; SURGEON, CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST; CONSULTING SURGEON, PINEWOOD SANATORIUM.

(*With Special Plate.*)

The subject of the therapeutic value of gases introduced into the pleural cavity in the treatment of certain diseases of the lungs and pleura may be divided under two headings: (1) Nitrogen displacement; (2) oxygen replacement, the gas used in each case being indicated by the title.

The former of these two procedures is now passing beyond the first experimental stage, and is gradually gaining the recognition which it deserves. As must necessarily happen when a new method of treatment is introduced, the earlier results are not so satisfactory as those obtained when the lessons taught by experience have been learnt; and as there have been in the past some unfavourable results, and even a series of fatalities, this method has been looked upon with ill favour by many people. Now, however, that we appreciate more fully the type of case which is suitable for this form of treatment, and the means whereby the fatal results can be prevented, nitrogen displacement must, by the very excellence of its results, become more and more extensively used, and many lives which would otherwise have been lost can now be considerably prolonged, and many invalids who would have been unable to return to work can be made fit to resume their occupation.

The other method—oxygen replacement—has been used by me during the last two years as a means of rigidly controlling the intrapleural pressures while removing fluids from the pleural cavity. The results are eminently satisfactory, and I hope that I shall succeed in showing that oxygen replacement should become a routine procedure.

NITROGEN DISPLACEMENT.

Normally there is a potential cavity between the visceral and the parietal pleura, and between these two layers there is a negative pressure equal to about 7 mm. of mercury. This negative pressure is considerably increased by deep inspiration, and decreased by expiration. If the expiration is a very violent one—for example, coughing—the pressure may become positive. The negative pressure prevents the lung from being collapsed by the elastic tissue which it contains.

When nitrogen is run into the pleural cavity the lung slowly collapses, and in the majority of cases will eventually, if sufficient gas is introduced, lie flattened against the mediastinum, the intrapleural pressure changing gradually from negative to positive. If the lung is not extensively diseased it will be almost fully collapsed before the pressure during quiet inspiration is on the positive side of zero; but when the lung has undergone fibrous or pneumonic consolidation, or is filled with masses of caseating tubercle, the intrapleural pressure will give a positive reading some time before the collapse of the lung is complete. A reading taken, however, a few days later will show that the pressure is again a negative one. This is due not so much to the absorption of nitrogen, which is too slow to produce such a change, but to the accommodation probably of the intrathoracic structures, and to the yielding of the resistance in the lung. As the pressure increases and the lung collapses, the movements of that organ during respiration become less and less, till finally the lung is in a condition of complete immobility.

Other changes have necessarily been occurring at the same time. Not only the alveoli, but the bronchi and bronchioles also, have participated in the collapse, forcing out any contained secretions and preventing their re-accumulation. Cavities, when present, are obliterated by the approximation of their walls, and their contents are expelled. It follows naturally from this that if there is a vessel in the cavity which is eroded, the haemorrhage from that vessel will be arrested by the apposition and pressure of the surrounding tissues.

A consideration of these facts makes it at once evident that nitrogen displacement must be considered in the treatment of diseases such as phthisis, bronchiectasis, and putrid bronchitis.

Nitrogen Displacement in the Treatment of Pulmonary Tuberculosis.

1. *The Choice of Case.*

Many people are of opinion that nitrogen displacement should be reserved as the last resort in the treatment of tuberculosis, an opinion formed probably from an erroneous impression that the collapse of the lung is permanent. This is a great misfortune, as it deprives the patients of the treatment while they are in a position to benefit by it, and tends also to bring discredit to the method. No case, so long as it is progressive, can be regarded as too early for treatment by nitrogen displacement. The acute early lesion will respond much more readily than the old fibrotic lung, and the proportion of failures in finding a free pleural cavity will be considerably smaller. The course that I would strongly urge is, that every case of well defined or suspected pulmonary tuberculosis should be radiographed as a routine procedure when first seen. If the case is then suitable for nitrogen displacement, the patient may receive medical treatment for the maximum period of three months. At the end of three months, at latest, the patient must be again radiographed and a comparison made of the plates and the clinical findings with those observed before treatment began. Unless the patient shows very definite evidences of improvement, the nitrogen displacement should be immediately attempted. Should it be suspected at any time during that period of three months that the disease is progressing, a second radiogram must be at once taken, and, if this is confirmative, the displacement should no longer be deferred. A sudden haemoptysis must be regarded, from the point of view of treatment, as evidence that the disease is progressive.

The disease need not necessarily be confined to one lung, although such cases are more satisfactory to treat. Provided that there is sufficient healthy lung tissue on the opposite side (about two-thirds) to carry on the functions of respiration, nitrogen displacement may be produced (Fig. 1). There are three types of cases, however, in which this form of treatment is particularly suitable:

1. In which there is a persistent rise of temperature.
2. In which there is profuse or repeated haemorrhage.
3. In which there is cavity formation in one lung.

Acute miliary tuberculosis when confined to one lung is no contraindication.

I have seen so many cases in which there has been a peribronchial infiltration which could not be detected by clinical examination, that I must once more emphasize the necessity of a radiogram being taken to determine the condition of the less affected side before treatment by displacement is begun. The radiogram has the advantage, in addition, of affording an accurate record for reference; it gives the details of the pathological changes in the deeper as well as in the more superficial parts of the lung, and allows of these changes being studied at leisure; while it not infrequently enables one to suspect the presence of pleural adhesions by showing deformities of the diaphragm.

2. *Technique.*

It is advisable that the patient should be kept in bed a week before the treatment is begun, except, of course, when the displacement is urgently necessary to check a haemorrhage. The reason for this is that it is advantageous to obtain a clear knowledge of the variations in the temperature and the rate of the pulse when at rest, and the amount also of the expectoration.

I make it a routine practice now to give a hypodermic injection of ¼ grain of morphine a quarter of an hour before the first attempt at finding the pleural cavity is made. This I consider necessary, as it may be very difficult to find the potential space between the visceral and parietal pleura and more than one puncture may be necessary. Morphine and the anaesthetization of the track of the needle, which latter is an absolutely essential part of the procedure, are the only sure means of averting the danger of a pleural reflex, which will be discussed later. The most suitable site for puncturing the chest wall is in the fifth, sixth, or seventh intercostal space, in the mid or anterior axillary line, in front of the anterior border of the latissimus dorsi, and below and behind the inferior border of the pectoralis major. If a free pleural cavity cannot be found in this region attempts may be made in the intercostal spaces on the front of the chest as high as the second or behind as high as the fifth. When the radiogram shows that one part of the lung is less implicated by the disease the attempt should be made over that area, if the puncture in the region first mentioned has failed to find the pleural cavity. The area selected should be painted with iodine.

The anaesthetization of the track of the needle is very simple. A Record hypodermic syringe and a needle, preferably 3 cm. long (it must be at least 2.5 cm.) and 10 c.cm. of 2 per cent. sterilized novocain are required. The needle is driven into the substance of the skin at the site of the proposed puncture, and a circular area 1 cm. in diameter is infiltrated with the novocain. The needle is withdrawn, and then driven vertically into the skin through the centre of the infiltrated area, and pushed steadily inwards along the upper border of a rib to the pleura, novocain being all the time forced into the tissues. With practice the passage of the needle through the various layers of fascia and muscle can be recognized. The progress of the needle is momentarily arrested immediately after traversing the internal intercostal muscle and an extra quantity of novocain expelled from the syringe. The needle is then advanced, and if the patient feels the point as it touches the pleura a further quantity of novocain must be injected, so as to ensure the complete anaesthetization of that membrane. The needle is withdrawn and a small puncture made through the skin with a double-edged tenotome. This will do away with the necessity of forcing the needle through the skin and the danger of conveying organisms with the needle from the skin to the pleural cavity.

The needle for introducing the nitrogen is connected with the apparatus, and some gas is run through into a bowl of water to make sure that all is in working order. The needle is put in direct connexion with the water manometer, and then slowly forced through the chest wall until it reaches the pleural cavity. I use a stilette in the needle only when there is some oozing of blood from the skin puncture, but always withdraw this while the point of the needle is still embedded in the intercostal muscles. The moment the point of the needle has reached the pleural cavity the manometer will indicate the presence of a negative pressure equal to about 7 mm. of mercury, and will show oscillations corresponding with expiration and inspiration—the difference in pressure being equal to about 1 mm. of mercury (13.9 mm. of water). A long inspiration will produce a still further negative pressure, while a cough will considerably diminish the negative and may produce a positive pressure. In either case, however, the fluid in the manometer will rapidly return to about its former level. Should the needle have penetrated the visceral pleura and entered the lung, a negative pressure will still be registered by the manometer, but it will be of less degree, and the regular respiratory oscillations will be absent. A long inspiration may increase the negative pressure, and in such a case the fluid in the manometer will not return to its previous level. Occasionally, when the needle is pressing against the surface of the parietal pleura, very slight respiratory variations will be registered by the manometer. On most of the occasions that I have noticed this, the two pleural membranes were adherent.

As soon as the operator is satisfied that the needle is in the correct position, 100 c.cm. of oxygen are allowed slowly to run into the pleural cavity, and if this has been effected easily without producing any marked variation in the pressure, 100 c.cm. of nitrogen are run in. The intrapleural pressure is noted, the needle withdrawn, and the small wound covered with a piece of zinc oxide plaster. This plaster must be removed on the next day, else the scab will remain moist, and will suppurate. The usual effect of the first injection at any rate, and sometimes of the subsequent ones, is to produce a rise of temperature and an increase in the pulse-rate. If only 200 c.cm. of gas have been run in on the first occasion the reaction is rarely serious, the temperature returns to its previous level in two or three days, and two days after this has occurred the second injection of gas can be given. On this occasion 350 c.cm. of nitrogen are run in, and if there is no reaction the subsequent injections can be made at intervals of two days—500 c.cm. of gas being introduced on the third day and 750 c.cm. on the fourth and following days until the lung is completely displaced and so long as the pressure during inspiration does not rise above *plus* 1 (mm. of mercury).

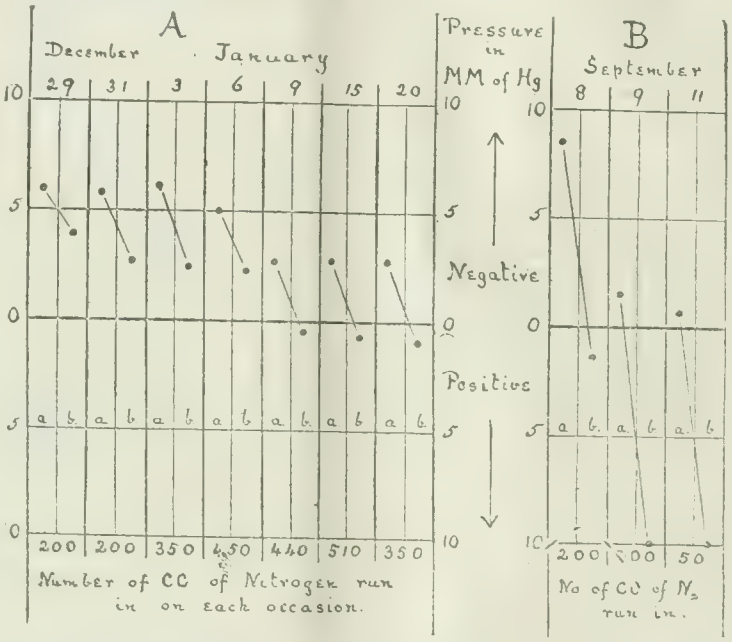


Fig. 5.—Charts showing variations of intrapleural pressures during nitrogen displacement. The record in the column *a* is the pressure before, and the record in column *b* is the pressure after running in the nitrogen, the amount of gas introduced on each occasion being shown below. A, Pressure chart of L. S. (see Fig. 6); B, pressure chart of a patient in whom displacement was impossible on account of extensive adhesions.

The average pleural cavity will contain about 3,500 c.cm. of gas, but it is impossible to know when the lung is completely displaced except by means of the *x* rays. If the lung is not extensively diseased, a pressure varying from *plus* 1 to *plus* 3 (mm. of mercury) will indicate complete collapse, but if the lung is consolidated, or is very fibrous, this pressure may be reached with the lung only free parts or even less displaced, even when no adhesions are present. In such cases it will be found that after an interval of four or five days the intrapleural pressure will be again negative, and a considerable quantity of gas can be run in before the inspiratory pressure crosses the zero. (Fig. 5.)

The presence of adhesions between the pleural membranes, insufficient however to obliterate the cavity, converts the simple procedure above described into a very complicated one. The difficulties which arise in each individual case vary with the character and extent of the adhesions. It is possible for me to describe three variations only: (1) It is occasionally found that no dense adhesions exist, but that the two membranes are

universally, though not firmly, adherent to each other. The finding of the pleural cavity is a matter of great difficulty, and when found the pressure rises rapidly the moment the gas is introduced. When, however, it is equal to about 5 to 8 mm. of mercury, the gas continues to flow without causing any increase of pressure. Complete displacement can usually be effected. (2) In some cases it would appear that adhesions are present but stretch readily, or that owing to adhesions the various parts of the pleural cavity are in imperfect communication with each other. The pressure rises rapidly, but if a pause of five to ten minutes is made whenever the pressure is equal to *plus* 10 (mm. of mercury), the pressure will gradually fall, and with patience a considerable quantity of gas can be introduced on each occasion. It will probably be impossible to obtain complete displacement. (3) In other cases there are extensive and dense adhesions. When about 50 c.cm. of gas only have been introduced, the pressure may have reached as high as *plus* 10 and shows no tendency to drop. This is an indication that it is useless to persevere.

Displacement by nitrogen when required for the arrest of haemorrhage must be much more rapidly produced; 500 c.cm. are run in on the first occasion, and 750 to 1,000 c.cm. on each of the succeeding days. If there is much reaction and the haemorrhage has ceased after the first injection, the interval between the subsequent ones may be prolonged and the amount run in modified.

In all cases the patient should be kept in bed during the whole process of displacement, as if he is allowed to get up before the lung is completely collapsed there may be disturbing variations in temperature.

Brauer advocates the exposure of the pleura through an incision, and the puncture of the pleura only, by the needle. The object of this is to guard against wounding the lung. Compared with the other method, however, it is unnecessarily complicated. I have tried it on one occasion, when I was unable to find the pleural cavity by direct puncture, but it only proved to me that the pleural membranes were adherent.

3. *Complications.*

The two serious complications which have been responsible for almost all the fatal cases referred to at the beginning of this paper are pleural reflex and gas embolism. Pleural reflex or pleural syncope is a condition which may be described as one of acute shock, and the symptoms may appear at the moment when the unanaesthetized pleura is punctured, as a result of the rupture of adhesions, or even from the rapid production of too great a positive pressure. There are certain cases when a higher pressure would enable one by rupturing adhesions to produce a displacement. This is justifiable only when the treatment by displacement is a last resort, and the relations of the patient fully understand the danger of the procedure.

I have punctured the pleura on over 200 occasions, but I have only once seen the phenomenon, and that was in one of my earlier cases before I fully realized the importance of anaesthetizing the parietal pleura. The symptoms were fortunately of a very brief duration, and although I injected gas into that patient on several subsequent occasions, the reflex did not occur. The symptoms observed were sudden marked pallor, complete disappearance of the pulse at the wrist, extremely shallow rapid breathing, and momentary unconsciousness.

Gas embolism is due to the escape of gas into one of the veins of the lung, as a result either of puncture of the vein by the needle, or the tearing of the lung during the rupture of an adhesion and the exposure of an opened vein to the gas at high pressure. The precautions necessary to prevent the occurrence of these two dangerous complications may be repeated; they are: The administration of morphine before the first injection; the anaesthetization of the track of the needle before every injection; the observation of regular oscillations in the manometer before any gas is run in; the introduction of oxygen at the first injection before that of nitrogen; the interruption of the flow of nitrogen whenever the intrapleural tension reaches a positive pressure equal to 10 mm. of mercury.

A pleural effusion develops in about 30 per cent. of all cases treated by nitrogen displacement. It may occur during the displacement, but more frequently during the first few weeks after the displacement is complete. The effusion is rarely excessive and often gives rise to no symptoms. It should always be suspected if during the production of the displacement the manometer reading shows a higher pressure* than was registered at the end of the previous injection. The effusion is a serious complication only when it develops within a week or two of the displacement, as the increase in pressure may then be sufficient to produce respiratory and cardiac embarrassment; at other times it is of no consequence provided it produces no symptoms, as the fluid helps to keep up the displacement of the lung and will eventually be absorbed.

If at the beginning the lung is too rapidly displaced, there may be a severe reaction owing to the excessive autoinoculation. This will be indicated by the temperature rising and remaining high, and may possibly end in an acute dissemination of the tubercle.

Two of my patients, both highly nervous women, have complained of pain in the upper part of the chest a few hours after the final injection of nitrogen required to produce complete displacement. The pain, which appeared to be severe, subsided after two or three hours, and on neither occasion, either by clinical or radiographic examination, could I detect any cause for it. In each case, however, the patient cried and the spasmodic movements of the chest increased the intrapleural pressure and led to an attack of dyspnoea, which passed off as soon as she became less agitated.

The great increase in physical well-being which a patient who has perhaps been confined to bed for a considerable time experiences when the affected lung has been completely displaced must not be allowed to obscure the dangers associated with a secondary myocardial degeneration.

4. *Maintenance of the Displacement.*

My experience is that the nitrogen is absorbed from the pleural cavity much more quickly during the earlier than during the later months of treatment, and it is essential therefore that the first few refills should be done at more frequent intervals than the subsequent ones. During the first six months of the treatment I run in a fresh supply of nitrogen every six weeks, but after that I allow an interval of eight weeks to elapse. There is no necessity for the patient to be confined to bed at these times, but I make him lie down for three or four hours after the injection. Those who are at work are allowed to return to it the next day, and suffer little or no inconvenience from the increase in pressure. The amount of nitrogen required to replace that which has been absorbed varies from 500 to 1,000 c.cm. At the end of a year I allow the lung to re-expand so as to be able to make fresh clinical and radiographical observations, but as a rule it is advisable to maintain the displacement for at least eighteen months. If, during the earlier period of time, the lung is allowed to expand and the two pleural membranes to come in contact with each other, there is considerable risk that they will become adherent.

5. *The Immediate and Later Results.*

The immediate results are the disappearance of the fever, the diminution or even disappearance of the cough and expectoration, the lessening of the pulse-rate, the improvement in the appetite and of the general condition, and the consequent increase in weight. If haemoptysis has been a troublesome symptom that will also cease. (See Figs. 6 and 7.)

A patient who has not been confined to bed before this treatment was begun may be allowed up on the third day after the last injection of nitrogen, and provided his general and physical condition is satisfactory, there is no reason why he should not resume work after three to six weeks' convalescence, during which time bracing air, nutritious food, and a steadily increasing amount of exercise are advisable.

The later results depend naturally, to a great extent, on the amount of lung affected by the disease. While the beneficial influence of the nitrogen displacement is most striking on the side which has been treated, there is no doubt whatever that a tuberculous lesion, when present, of the other lung will be, in certain cases, materially benefited also. It is even possible to forecast with a certain degree of accuracy those cases in which both lungs will

* That is a pressure which is less negative or more positive.

improve under the treatment, one only being displaced. When the tuberculous lesion of the second lung is a true peribronchial infiltration, more or less limited to the region of the hilum, it is probably an infection secondary to the

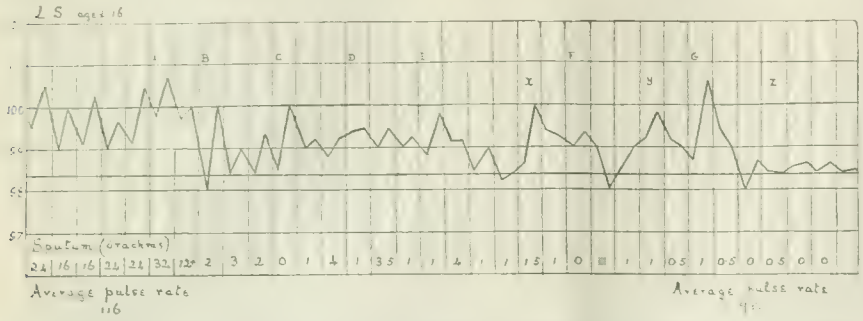


Fig. 6.—Temperature chart showing the effect of nitrogen displacement. Nitrogen was introduced at the points marked A, B, C, D, E, F, and G. After G the displacement was complete. At X and Y the patient was allowed up for radiographic examination. It will be noticed that the rise of temperature which followed on each occasion did not occur when the patient was allowed up at Z and on the following days, when the displacement was complete. Note the diminution in the amount of sputum and in the pulse-rate.

primary lesion in the lung which is displaced, and improvement may be hoped for on both sides, but when the undisplaced lung contains tuberculous foci scattered over or extending through part of one lobe, and specially if

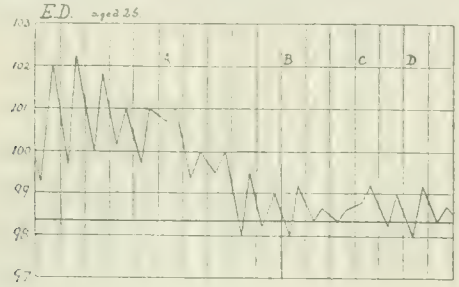


Fig. 7.—Temperature chart showing the influence of nitrogen displacement on the temperature. This patient had had constant fever, ranging from 99° to 103°, during the preceding three months. Nitrogen was introduced at A, B, C, D, etc.

there is considerable fibrosis, no such definite improvement must be expected. In such cases there is no objection, once the tubercle on the one side has been arrested and the lung allowed to re-expand, to displacing the second lung while the former resumes the functions of respiration.

6. *The Value of Other Forms of Treatment in Conjunction with Displacement.*

The patients of whom I have shown you radiograms and charts this evening may be divided broadly into two groups—those whom I have treated at University College Hospital, and those whom I have either in part treated or observed under treatment at the Pinewood Sanatorium. For the opportunity of dealing with the majority of the patients who come in the first group I am indebted to Dr. Halliday Sutherland, Dr. Pitt, and Dr. Harvey, and these patients have all had the tuberculin treatment continued after the displacement of the lung has been effected.

The patients at the Pinewood Sanatorium have been under the care of Dr. Etlinger, who has himself been carrying on the work of nitrogen displacement with most encouraging results. To none of these patients has Dr. Etlinger given tuberculin after the displacement of the lung by nitrogen. I am indebted to him for allowing me to make use of one of his charts.

(*a*) *Nitrogen Displacement in Conjunction with Tuberculin Treatment.*

On this subject I do not consider myself competent to offer either suggestion or criticism, as my experience is much too limited. The early results in the two above-mentioned groups of patients have been equally gratifying. It has been found, moreover, that if a patient is extremely sensitive to tuberculin, he will be much more tolerant after the lung has been displaced.

(*b*) *Nitrogen Displacement in Conjunction with Sanatorium Treatment.*

The term "sanatorium treatment" may at the present day mean much or little, but when "sanatorium treatment" means treatment in a sanatorium with fresh air, good food, exercises, and efficient control, the combination is excellent.

(*c*) *Nitrogen Displacement in Conjunction with Graduated Exercises.*

A question that is often asked is, How can two such different forms of treatment as complete rest to the lung (which can only be obtained by immobilizing that organ by nitrogen displacement) and graduated exercises both be beneficial to patients suffering from pulmonary tuberculosis? There are two answers to this question. The first is, that a patient is never put on graduated exercises so long as the disease is sufficiently active to give rise to any definite fever: whereas the immobilization of the lung by nitrogen displacement is applicable equally to those patients who are febrile and to those who are afebrile. The second answer is the suggestion that the benefit derived from graduated exercises may to a very large extent be due to the improvement in the patient's general condition. Phthisis is a wasting disease, and we know that one of the signs of the progress of the disease is the constant loss of weight, and that, to check this wasting, substances like cod-liver oil are given. Ill health is associated with an interference with metabolism, and this leads to loss of weight. When the active cause of illness is controlled, the metabolism can be stimulated by exercise, but the exercise must be graduated to the capacity of the individual.

I am certain that in cases of pulmonary tuberculosis, once the disease is under control—as it undoubtedly is when nitrogen displacement has been done—the improvement in metabolism by graduated exercises is of the greatest benefit. When a patient, however, has been seriously ill, the ordinary forms of exercise—walking, digging, etc.—do not seem to me to be capable of really efficient graduation from the lowest to the highest scale,* and are not to be compared with the system introduced by Dr. Etlinger at the Pinewood Sanatorium. There the patient, beginning with a little gentle massage, passes on to the most elementary form of Swedish exercise, and proceeds thence through a carefully graduated series of exercises, increasing both in duration and in the energy required for the performance of them.

Partial Displacement.

It occasionally happens that, owing to the presence of adhesions, partial displacement only of the lung is possible. If the lung is reduced to about half its former bulk, this displacement should be maintained, as numerous cases have been recorded in which the partial immobilization has resulted in considerable benefit to the patient.

It must not be thought, because an adherent pleura prevents the introduction of nitrogen, that surgical possibilities in the treatment of pulmonary tuberculosis are at an end. There are several other surgical procedures whereby benefit can be obtained, but they are outside the scope of this paper.

Nitrogen Displacement in the Treatment of Bronchiectasis.

It was at one time hoped that nitrogen displacement might prove to be a satisfactory method of treatment for bronchiectasis, and this hope was encouraged by the amelioration in the condition of the patient immediately after treatment. While, however, the cough and the excessive sputum can be diminished and the fever

* Some exercises are carefully graduated—for example, carrying known weights known distances—but certain groups of muscles only can be brought into use in this form of labour, and the monotony of the performance must be very great.

H. MORRISTON DAVIES: THE THERAPEUTIC VALUE OF GASES INTRODUCED INTO THE PLEURAL CAVITY.

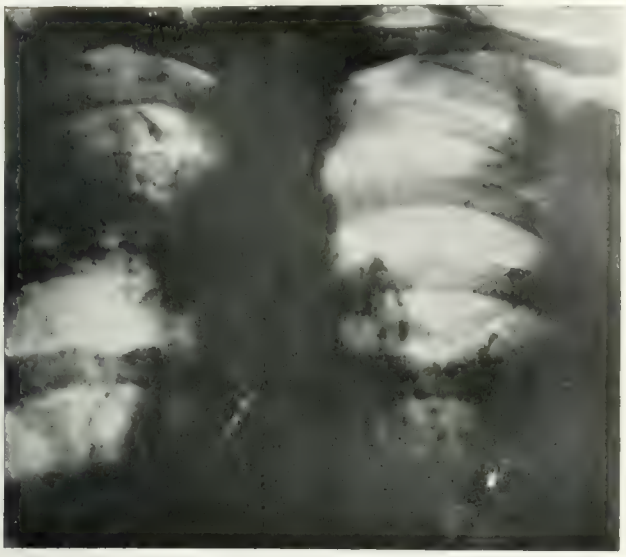


Fig. 1.—A radiogram of a patient with phthisis, showing a cavity in the right upper lobe and disease of the right middle and left lower lobes. A suitable case for treatment by nitrogen displacement on the right side.



Fig. 2.—E. B. Radiogram taken one day after 2,280 c.cm. of fluid had been drawn off by the ordinary methods of aspiration. The patient gives a history of empyema of seven years' duration.



Fig. 3.—E. B. Oxygen replacement. Radiogram taken a month later



Fig. 4.—E. B. Oxygen replacement. Radiogram taken three months later. Note the approximation of the margin of the lung to the chest wall.

and stinking breath abated, these changes are present so long only as the displacement is maintained. It is clear, however, that, although no permanent good can be expected, the temporary diminution of the symptoms is of very great advantage, in that it will enable a patient who is exhausted by constant fever and cough and the continual formation of quantities of offensive sputum to improve considerably in his general health, and enable him to withstand the strain of the more severe operations, such as rib resection or the ligature of a branch of the pulmonary artery.

Nitrogen Displacement in the Treatment of Putrid Bronchitis.

Of the value of this form of treatment there is no practical evidence, but from our knowledge of the controlling influence of the nitrogen displacement on the pulmonary secretions, the fever, cough, etc., we have reasonable grounds to suppose that it might materially benefit a patient suffering from a unilateral putrid bronchitis.

OXYGEN REPLACEMENT.

Aspiration has been for so long a time the established treatment for serous effusions of the pleural cavity that the distress to the patient frequently witnessed towards the end and for some little time after the withdrawal of the fluid has come to be regarded as a more or less unavoidable incident in the procedure. Neither this distress nor the fear of the supervention of acute oedema of the lung is, however, the only objection to aspiration. If in a series of patients radiograms are taken before and after "tapping" a pleural effusion, it is very surprising and also disappointing to find how much fluid yet remains. Two radiograms will serve to illustrate this point. One was taken immediately before and the other twenty hours after the withdrawal of 1,000 c.cm. of fluid from the pleural cavity; yet the difference in the level of the fluid in the two cases is only one interspace. The aspiration in this case had been stopped because of the pain which had developed during the removal of the last 200 c.cm.

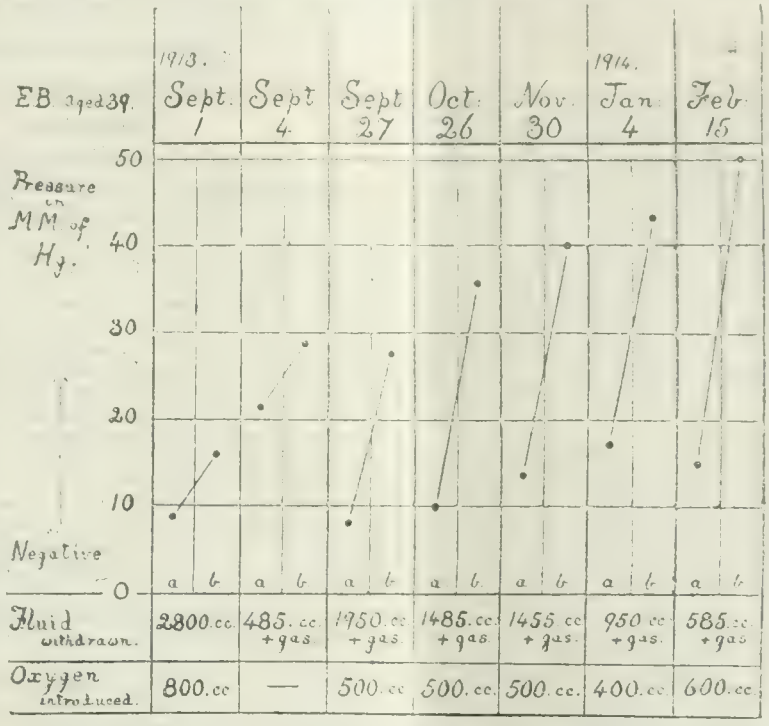


Fig. 8.—Chart showing variations of intrapleural pressure during oxygen replacement (a case of chronic empyema). The record in column *a* is the pressure before, and the record in column *b* is the pressure after withdrawing the fluid and replacing it by oxygen.

The proportion of the fluid which can be withdrawn by the ordinary method of aspiration varies to some extent with the size of the effusion. In a small effusion it is more, in a large effusion it is less, than 50 per cent. From the patient whose radiograms I have just shown you I withdrew by oxygen replacement all the fluid from his pleural cavity two days later. The amount was 1,500 c.cm. In another patient, also a chronic case, I withdrew by the same process 2,800 c.cm. two days after 2,280 c.cm. had been aspirated by the ordinary method.

As is well known, a large effusion causes not only displacement of the lung, but also displacement of the mediastinum and its contents, and there is no doubt that the products of inflammation (for example, thickening of the pleura and adhesions) tend partly, at any rate, to resist the return of these structures to their normal position. In a large effusion, as the fluid is aspirated the intrapleural pressure becomes gradually and increasingly negative. If the lung were capable of complete and immediate expansion no symptoms would be produced until all the fluid had been withdrawn. Experience shows, however, that neither the lung nor the mediastinum is capable of rapid adjustment. The lung cannot expand quickly because of the infiltration and thickening of the visceral pleura; and if there is associated intrapleural disease and the displacement has been of some duration, because of the fibrosis; while the mediastinum is prevented from returning to its former position by the thickening of the pleura and the formation of adhesions. Although at first during the aspiration the change in the intrapleural pressure is slow, there soon comes a time when the intrathoracic organs can no longer compensate for the rapid loss of fluid. The intrapleural pressure now becomes rapidly and increasingly negative, and in response the inflamed or fibrosed tissues and adhesions are stretched in a passive attempt at further compensation. The results are pain, which may be extremely severe, cough, and even fatal oedema of the lungs.

It is obvious that if it is required to remove a pleural effusion some substitute must be found for the fluid, and that substitute must necessarily be one which can be readily absorbed, and cause by its absorption a steady yet not too rapid pull on the intrathoracic organs. The substance which answers all these requirements is oxygen. Oxygen is easily introduced into the pleural cavity. The rate and amount of flow can be under complete control. It is rapidly absorbed. This rapid absorption of oxygen does not, however, mean that if a large quantity has been run in, there will be no gas left in the pleural cavity at the end of a few days. If a radiogram is taken at the end of four days, it will be seen that there is still some gas in the pleural cavity and possibly some slight reaccumulation of fluid, but the space occupied by these will be considerably less than that occupied by the oxygen immediately after the replacement, provided that the lung is not absolutely bound down by dense adhesions. If, further, the intrapleural pressure is taken it will be found to be still markedly negative and an examination of the intrapleural gas will reveal the presence of nitrogen and carbon dioxide only. These gases can be absorbed also but at a slower rate.

It is not my intention to describe in detail the technique of oxygen replacement—that I have already done in the *Lancet* of December 28th, 1912—but I would only remind you that the apparatus for introducing the oxygen is the same as that for introducing nitrogen; that the track of the two needles which are necessary should be anaesthetized by novocain, and that while the needle connected with the Potain's aspirator is entered into the lower part of the pleural cavity, that connected with the oxygen is entered some two or three spaces higher. The fluid is aspirated until the first symptoms of drag on the intrathoracic organs is noticed—discomfort, pain, or cough—when 100 c.cm. of oxygen are run in. The two processes are alternated until all the fluid is removed.

Oxygen replacement is not only of great value as a method of removing pleural effusions and exposing the

lung for radiographic purposes, but I believe it is the only efficient means we possess for the treatment of chronic cases of tuberculous pyopneumothorax. As the radiograms show, it is possible in these cases, by replacing the gas and fluid by oxygen, gradually to draw out the lung without producing any symptoms of distress or discomfort. The process must be repeated on three, four, or even five occasions at intervals of two or three weeks, leaving on each occasion an increasingly high negative pressure. If the lung is completely fixed by adhesions, it cannot be made to re-expand, but it will be found that the tendency for the fluid (at first pus, and then serum) to reaccumulate will rapidly diminish—a state of affairs which is greatly appreciated by the sufferer. One of my patients with a pyopneumothorax, who had been unable to work for five months owing to the discomfort and shortness of breath, occasioned apparently by the pus (which was sterile), has been at work for over a year since I treated him by this method. Although he has only one lung, he says he is inconvenienced by shortness of breath only when he has to climb a long ladder.

Two cases I would like to recount in greater detail.

CASE I.

A man, aged 24, developed, in January, 1913, acute pneumothorax, and was admitted to University College Hospital, under Sir John Rose Bradford, with a hydropneumothorax. The lung was collapsed against the mediastinum and the fluid reached the level of the angle of the scapula. At the beginning and at the end of June I withdrew the fluid by oxygen replacement, withdrawing on the first occasion 3,060 c.cm. and on the second 1,260 c.cm. When I saw the patient again in August there was some fluid but no gas in his chest. The upper part of the lung was expanding. I withdrew on this occasion by oxygen replacement 1,860 c.cm. of fluid, and an *x* ray taken immediately after showed that practically all the fluid had been removed, and that the lung had expanded still further. The patient returned to full work in October, and I was unable to see him until three weeks ago. The skiagram now shows complete expansion of the greater part of the lung, marked thickening of the pleura, and possibly a little fluid at the base.

CASE II.

A man, aged 39, seven years ago had an attack of pneumonia on the right side. After the attack had subsided, he was "tapped," according to his account, and pus was withdrawn from the right pleural cavity. He was again "tapped" on four subsequent occasions during the next two years, pus being obtained each time. When admitted to University College Hospital under the care of Dr. Bolton in August of last year, the right side of his chest was full of fluid. He was wasted, and suffered from breathlessness and general debility, but there was no cyanosis or clubbing of the fingers. He was aspirated on August 30th and 2,280 c.cm. of fluid drawn off. This fluid was thick and yellow, in appearance resembling pus. It was found to consist of masses of epithelial cells, pus cells, and lymphocytes, and contained two lipoids. It was, however, sterile. The following day this radiogram was taken (Fig. 2). On September 1st I removed by oxygen replacement 2,800 c.cm. of a fluid similar in character. The variations in pressure during the replacement are shown in the chart. At the end the needle became blocked by a solid plug, and I was in consequence unable to withdraw more fluid. This plug, I discovered later by radiographic examination, came from a mass of practically solid débris at the base of the cavity. On September 4th I withdrew 485 c.cm. of fluid; the negative pressure at the end was equal to 29 mm. of mercury, which was tolerated without pain. At the end of the month I withdrew a further 1,950 c.cm. of fluid, again by oxygen replacement, the negative pressure at the end being equal to 28 mm. of mercury. The radiogram taken after this showed that the lung was beginning to expand (Fig. 3). On October 6th, by the same method, 1,485 c.cm. of fluid were drawn off, and a negative pressure left in the pleura equal to 36 mm. of mercury. The fluid, which on the previous occasion had been somewhat less opaque, was now much more definitely serous in character, and the proportion of cells was strikingly less. On November 30th, after 1,455 c.cm. of fluid had been aspirated by oxygen replacement, the negative pressure left was equal to 40 mm. of mercury. The fluid had the appearance of an ordinary serous effusion, and the expansion of the lung was considerably increased. On January 4th of this year, after again an interval of five weeks, I could withdraw only 950 c.cm. of fluid; the intrapleural pressure was at the beginning 17, and at the end 42 mm. of mercury. The radiogram (Fig. 4) shows a further increase in the expansion of the lung, and it can be seen, in addition, that the high negative pressure in the pleural cavity is causing some displacement of the mediastinum. That this displacement of the mediastinum is not injurious is shown by the fact that the patient was able to return to work four months ago, and has continued without intermission since then. Further, Dr. Lewis, who has kindly taken electro-cardiographic tracings, tells me that there is no evidence of any impairment in the heart's action. By February 16th less than 600 c.cm. of fluid had reaccumulated, and I again withdrew this by oxygen replacement. On this occasion I obtained a negative pressure as high as 54 mm. of mercury without producing pain, and left him with a pressure of −50. At the end the lung was drawn out to the lateral wall of the chest, and could be felt with the point of the needle. The improvement in the man's general health is most gratifying. He has lost his breathlessness, has put on flesh, and says he now feels perfectly strong and well.

It is very surprising with what comfort the patient tolerates the high negative intrapleural pressure, and suffers apparently no inconvenience from it (Fig. 8). The only precaution that I have taken with him on the last four occasions has been to keep him in bed during the day on which the replacement is done. He gets up the next morning and returns to his home at Cambridge, resuming work the following day.

I believe that there are still other intrapleural conditions which can be treated by this simple process, and I hope in the future to be able to show that it is a satisfactory substitute for the open operation for certain types of acute empyema, especially the post-pneumonic in children.

THE NEED FOR RESEARCH IN ANTE-NATAL PATHOLOGY.*

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OBSTETRICIANS have recently been considering whether more cannot be done to lessen the enormous loss of life which goes on during gestation.

If I am right in my estimate[1] that there are about four times as many abortions as stillbirths (that is, 2.2 stillbirths and 8.8 abortions to 100 live births), it means that in England and Wales about 100,000 fertilized ova die annually before they are born, and that about as many infants die in their nine months of intrauterine life as during the survivors' first year of life. These estimates are much below those given by Priestley,[2] who said "there is one abortion to every three or four full term deliveries, and that from three to six out of every ten women abort at least once during their married life." Can this Section suggest how statistics regarding abortion can be obtained from a large series of average married women, so that the relation of abortions to live births can be definitely known? Even then there would be numerous unrecorded, because unrecognized, very early abortions.

We know very little of the causes of this terrible mortality. I have tabulated them roughly in the address to which I have already referred, but if my colleagues have been as lax as I have been in my past efforts to ascertain the causes of abortions or stillbirths, they will realize how many opportunities have been missed in not having the expelled products of conception systematically and scientifically examined with a view to discover the cause of death. Theoretically at all events, with the methods now at our disposal, we ought to be able to determine the cause of an intrauterine death as correctly as of an extrauterine death. Probably we are all agreed that a few of the abortions and premature births are due to primary uterine contractions, the fetus being normal. Maternal and perhaps paternal malnutrition may be a large etiological factor both as regards early abortions and births of sickly children. I understand that Dr. Darwall Smith has been investigating the subject of malnutrition, and will give us his conclusions. All the other spontaneous premature deliveries are due ultimately to some pathological condition of the fetus and its membranes, or of the maternal or fetal placenta.

DIFFERENCE BETWEEN EMBRYONIC AND FETAL PATHOLOGY.

Ante-natal disease and death must be considered in its early embryonic stages, as well as in its later or fetal stages. Ballantyne[3] points out the great differences between the results of pathological activity in the embryo and in the fetus, and he shows that whilst in the fetus diseases are more or less of the same nature as the maladies of post-natal life, "in the embryo the morbid

* Read at a meeting of the Obstetrical and Gynaecological Section of the Royal Society of Medicine on April 2nd, 1914.

conditions are extraordinarily dissimilar from anything else in the whole field of pathology." He shows that this remarkable difference in the pathology of the embryo and of the fetus depends largely upon the initial and equally important difference between the physiology of the embryo and of the fetus. In the embryo the main function is organogenesis, the formation of tissues and organs, whilst in the fetus the functions of these organs are gradually developed, and these functions, with certain variations, are continued and perfected in the post-natal period of life.

Maternal diseases affecting the embryo during the period of organogenesis cause teratological results, tending mainly to structural anomalies or monstrosities, whilst the same diseases affecting the functionally active fetus would be pathological, causing disordered function, on lines approaching more and more to functional disease in post-natal life. In both stages the life of the embryo or fetus may be lost. In the study of ante-natal pathology we have to find out how paternal and maternal disease, such as syphilis and tubercle, affects the fertilized ovum in its embryonic and in its fetal stages, and it is evident, therefore, that whilst ante-natal pathology should be studied as an important unit with its own characteristic processes, yet it can only be successfully dealt with by pathologists who are familiar with post-natal pathology in all its variations.

The Toxaemias of Pregnancy.

We know very little concerning the intrauterine mortality due to the toxaemias of pregnancy, especially in obscure cases where autotoxaemia is merely causing renal inadequacy with little or no albuminuria, but with a greatly reduced output of urea. These unrecognized cases are not infrequent causes of fetal death in the last week of pregnancy. Research again will prove whether in cases of maternal albuminuria, eclampsia, or acute yellow atrophy of the liver, the fetal organs participate in the pathological changes found in the mother in these diseases. In such serious and often fatal maternal toxic diseases our every effort is concentrated upon the mother, and the pathology of the fetus, which is often dead, is liable to be disregarded.

Careful examination of the organs and tissues of a fetus expelled during the severe types of chorea gravidarum may help us to determine the causation of that complication—as to whether, for instance, it is toxaemic in origin.

General Diseases of the Mother.

As regards some of the more general causes of ante-natal disease and death, I would ask a few questions. Why do cases of small-pox and measles so often cause abortion? Why is scarlatina relatively so rare in pregnancy? Enteric fever is said to cause abortion in about 50 per cent. of women attacked during pregnancy, and it is stated that the typhoid bacillus is often found in the fetus. Is the fetal death in these cases due to fetal infection or to toxaemia?

What is the etiology of pyelonephrosis gravidarum? Does it affect the fetus *in utero*, or is it solely maternal and local?

Women who abort during acute pneumonia almost invariably die. Is the fetus expelled by uterine contractions caused by the echolic action of the deficiently oxygenated blood, or does the fetus die for want of oxygen, or from hyperpyrexia, or from toxaemia, or from infection by the pneumococcus, which has been found in a few cases?

Is the severe diabetes of pregnancy as described by Matthews Duncan,[4] Whitridge Williams,[5] and others, due to an autotoxaemia, affecting especially the pancreas or one of the ductless glands?

What are the sources of maternal autotoxaemia? It is probably mainly placental in origin, but our knowledge of the functions of the placenta is still very imperfect. We know that ferments are produced by the trophoblastic layers of the chorionic epithelium, and that these exert a destructive action upon the surrounding maternal tissues, with a result that toxins and compensatory maternal antitoxins are formed. Whether the autotoxaemias are the result of excess of toxins or of antitoxins is still uncertain.

Abderhalden[6] has demonstrated these ferments after the sixth week of gestation, and Dr. Herbert Williamson[7] considers that their presence provides us with a reliable serum diagnosis of pregnancy. This reaction is not, however, reliable in pregnant women who are syphilitic, for it may then be negative.

Syphilis.

Bacteriology has led to the discovery of the specific germs of so many of the maternal diseases which cause fetal death that our task now is much easier, and this is especially true as regards syphilis since the discovery of *Spirochaeta pallida* by Schaudinn in 1905, of the diagnosis of syphilis by Wassermann's reaction in May, 1906, and of its treatment by salvarsan by Ehrlich in 1909. Then there is the still more recent (1912) discovery by McDonagh, not yet generally adopted, of spores which are the result of the multiple division of the fertilized female cells, and which, after entering a connective tissue cell, develop there into both sexual and asexual organisms. In McDonagh's[8] view the cause of syphilis is the spores, whilst the *Spirochaeta pallida*, which is developed ultimately from the male gametocyte of the sexual organism, is responsible for the symptoms. These views, if proved to be correct, will help to explain many of the difficulties which the discovery of the *Spirochaeta pallida* created, such as the possibility of paternal infection of the ovum; the explanation of Colles's law; the negative Wassermann reaction in some mothers of syphilitic children; the recurrence of syphilitic phenomena after apparent cure, the spirochaete being destroyed, but the spores persisting; and the involvement of the nerve centres, where the spirochaete is not always found.

Evidences of Syphilis in the Stillborn Fetus.

Eden[9] states briefly that these are "a bullous eruption (pemphigus) on palms and soles, gummata in liver and spleen, hyperplasia of the cartilaginous element along the line of junction of the shafts of the long bones and the epiphysis." Elsewhere we are told that the *Spirochaeta pallida* is found in the fetal lungs in 87 per cent., pancreas 80 per cent., skin 66 per cent., suprarenals 64 per cent., spleen 62 per cent., liver 59 per cent., kidneys 54 per cent., but it is easiest to find it in the liver and spleen.

Placental Syphilis.

In my student days we were taught that a syphilitic placenta was small and shrivelled. Now we know that, relatively to the fetus, syphilitic placentae are large and heavy, bearing the proportion of 1 to 3 instead of the normal 1 to 5.5, according to Blacker, who also states that the syphilitic placenta is pale, soft, friable, and mottled with yellow patches, whilst the cord may be oedematous and the liquor amnii excessive.

The villi are enlarged, and the intervillous spaces often obliterated. Periarteritis and endarteritis are present, leading to degeneration of the stroma. Sometimes the syncytial cells proliferate. Blacker says the *Spirochaeta pallida* can be demonstrated readily in the villi, but is rarely found in the maternal decidua.

Weber[10] states, however, that in most cases in which the mother has presented a true Wassermann reaction he has found spirochaetes in the maternal part of the placenta. Trinchese[11] states that spirochaetes can usually be found in the centre of the villi of the placenta if present in the fetal organs, but are found also in the intervillous maternal spaces, and in the epithelium of the villi, showing that they can pass from the maternal to the fetal blood stream and vice versa. If it could be shown that, in those cases in which an apparently healthy mother bears syphilitic children and yet presents a negative Wassermann reaction, spirochaetes are only found in the fetal part of the placenta, it would explain partly what is at present a difficulty.

Infection of Fetus.

Fetal syphilis may be due to direct paternal infection of the ovum at the date of fertilization, or the early fertilized ovum may be infected by the paternal semen whilst it is in the Fallopian tube or in the uterus. More usually the fetus is infected by the mother, either by the infection of the ovum before conception whilst in the Graafian follicle, or in its passage along a syphilitic Fallopian tube, or during its first attachment to a uterus in the mucosa of which *S. pallida* exists; but, as a rule, maternal infection of the fetus is transplacental.

Some observers have thought that syphilis does not affect the uterus, but Dr. Louise McIlroy[12] and Mr. Beckwith Whitehouse[13] have made valuable researches into the question of the possibility of syphilis being one of the causes of chronic metritis and fibrosis uteri, and their papers open up the important point whether *S. pallida* may not after all be found in the uterine tissues, and if so, able to infect a freshly implanted ovum.

Probably the first published approach to a routine examination of stillbirths in this country after the discovery of the *S. pallida* was made by Drs. Herbert Williamson and Eardley Holland,[14] who read a valuable paper in April, 1908, at this Section on "A case of intrauterine death of the fetus occurring in six consecutive pregnancies, with observations upon the importance of the examination of the fetal tissues for the presence of the *Spirochaeta pallida*." In this case neither husband nor wife afforded any history or clinical evidence of syphilitic infection, and in their absence specific treatment was not adopted till her sixth confinement, in September, 1906, when search was made for the *S. pallida* in the macerated fetus by Dr. Eardley Holland, then resident medical officer at Queen Charlotte's Hospital. He found the organism freely distributed in the connective tissue of the liver and spleen, but not in the umbilical cord. The placenta had been destroyed. In May, 1907, the woman was again pregnant, and was put under treatment by mercury and potassium iodide. She was delivered of living twins on November 1st after induction of labour. Unfortunately these were born too prematurely owing to a miscalculation of the date, and both children died, but no evidence of syphilis was found in either. The Wassermann reaction was not then available, or Dr. Williamson might have discovered that the mother or father, or both were infected. Dr. Eardley Holland, as is only fitting as a potential successor to Sir W. Priestley at King's College, is now again examining a series of macerated stillbirths. He tells me that he found *S. pallida* in six out of the first seven and in twelve out of the next eighteen macerated fetuses examined by him. As he and Dr. Ridge are making investigations, not only of the fetus but of every placenta, and into the question of the paternal and maternal infection in every case, we shall look forward to valuable contributions from him, as well as from other members of our Section.

The Effect of Syphilis in causing Abortions and Stillbirth.

Much difference of opinion on the subject exists. Blacker[15] expresses the view held by most observers, that "syphilis is the commonest cause of repeated abortions and miscarriages"; but we only have clinical evidence of this, and some recent pathologists disagree, because the spirochaete is not found in early abortions. Thus Eardley Holland quotes Frantz Weber,[10] who has investigated a series of 300 abortions in which no clinical evidence of maternal syphilis was forthcoming. Weber does not believe that abortions are often due to syphilis. He tried the Wassermann reaction in 67 of these cases, and in 35, where abortion had occurred before the sixteenth week of pregnancy, reaction was uniformly negative, and no spirochaetes were found in the embryo; in 32 cases, between the sixteenth and twenty-eighth week, 12 gave a positive reaction, and in 9 of these spirochaetes were found in the embryo. On the other hand, Weber found spirochaetes in the organs of 84 per cent. of macerated fetuses born in the later months of pregnancy.

Fournier in 1878 pointed out that the coexistence of anomalies of structure, and more especially of malformations and a syphilitic parentage, cannot be regarded as accidental. Among such malformations he mentioned hare-lip, extroversion of the bladder, spina bifida, and imperforate anus, and he considers that some of the dystrophies of the embryo, such as infantilism, craniofacial malformations, and dental anomalies, are peculiar to syphilis, but the whole subject wants working at with the new aids to diagnosis of parental syphilis. Ballantyne[3] considers that, in addition to syphilis, tubercle and alcohol, and perhaps sepsis and the enteric poison, may occasionally produce dystrophic effects. Maternal malnutrition and overwork may be other causes of fetal dystrophies. The Registrar-General draws attention to the exceptionally high fetal mortality arising from "developmental defects" in women who work at industrial trades in the later months of pregnancy.

Such organic results of infection of the early embryo, especially if associated with structural anomalies of the fetal membranes, would often produce early abortions, in which, apart from dystrophic changes in the embryo, there might be no other evidence of disease.

Early abortions are, perhaps, the result of paternal infection of the ovum. Cases have been described by Howard Kelly[16] and Ballantyne[21] where the apparently healthy wife of a syphilitic father has had frequent abortions, but, after antisyphilitic treatment of the father alone, the subsequent pregnancies have gone on to the full term. Leroux[17] believes firmly in paternal syphilis, but thinks it should be divided into two classes: (1) Patent paternal syphilis with latent maternal conceptional syphilis; (2) patent paternal syphilis without maternal syphilis. Paternal syphilis, he says, gives rise to more abortions; maternal syphilis or mixed transmission gives rise to more macerated infants.

Clinical evidence in favour of abortions being caused by syphilis is very strong, abortion often alternating with stillbirths or macerated fetuses, and treatment of the mother with mercury is known to result in the birth of healthy children. Why spirochaetes cannot often be found in such abortions requires explanation.

Maternal syphilis, whether derived direct from the father or by way of the infected ovum, is, of course, more important to the nation, as she is the child-bearer. Hochsinger[18] has been able since 1869 to keep under observation 134 women who showed no signs of syphilis, but had given birth to syphilitic children on 569 occasions: 253 of these children were born dead—that is, 44.4 per cent.—and 316 were born alive. Of those born alive, 263 were syphilitic, and only 53 were healthy. Of the 263 syphilitics, 55 died before the fourth year. These are appalling figures.

Colles's Law.

The vexed question of the significance, the interpretation, and even the truth of Colles's law must be settled, for treatment depends upon it. All that Colles originally stated was that a woman who gives birth to a syphilitic child does not get infected by that child, whilst the child can infect another woman—for example, chancre on nipple. It is still uncertain whether this fact means that the mother is herself infected and so cannot be reinfected, or whether the ovum is paternally infected, and the mother is rendered immune by the nine months' interchange of fetal antibodies during pregnancy. The further fact that the Wassermann reaction is often negative in these mothers during the pregnancy, but may become positive a month or so afterwards, requires careful consideration. The negative Wassermann reaction is not due to the altered blood state in pregnancy, for if a woman is herself infected before or after conception the Wassermann reaction is positive during the pregnancy, whether the clinical evidences are well-marked or very slight.

There are at least four theories which may explain the fact that mothers of syphilitic children are not infected by their children and yet are themselves apparently free from the disease. The first two theories presuppose paternal infection of the ovum.

1. *Founded on McDonagh's Discovery of "Spores."*—These spores, which are very minute and capable of being conveyed in a spermatozoon, are to a great extent indestructible by syncytial ferments or by salvarsan.[8] The spores pass up with the semen along the Fallopian tubes, and find themselves in both the fetal and maternal portions of the early embryo—that is, in the villi and the intervillous spaces. The spores in the villi of the chorion or among the embryonic cells develop into spirochaetes, and may or may not destroy the embryo. If it survive, it becomes a congenital syphilitic, with a positive Wassermann reaction at or soon after birth. The spores in the decidua and the *maternal* portion of the early placenta do not develop into spirochaetes during the pregnancy owing to the presence of syncytial ferments and their resulting toxins, which circulate in the maternal blood, but not in the fetal. The "spores" are not destroyed because their chemical structure, unlike that of the spirochaete, is not seriously affected by the toxins present. This delay in development in the maternal tissues during pregnancy may explain the negative maternal Wassermann reaction

during that period. The development of *S. pallida* goes on shortly after labour and the mother then presents a positive reaction. This is one variety of conceptional syphilis.

2. *The Mother Rendered Immune.*—The ovum is fertilized and infected on the same date. The mother is rendered immune by antibodies formed in the fetus and by cells of the fetal syncytium thrown off into the maternal circulation during pregnancy.

3. *Latent Syphilis.*—The mother has been previously infected, but the disease is latent.

4. *Asymptomatic Syphilis.*—The mother is infected, but clinical evidences are insignificant or absent.

Ante-natal Tuberculosis.

According to most British authorities, ante-natal tuberculosis is almost non-existent—that is to say, they do not believe that a tuberculous father's spermatozoon ever directly infects the ovum at the time of fertilization (Dr. W. C. Wilkinson in a private letter refers to Gaertner's elaborate experiments upon animals as strongly supporting this view). They say, further, that the mother practically never infects the fertilized ovum because the tubercle bacilli very rarely circulate in her blood. Placental tuberculosis also is said to be very rare for the same reason, and even if present, the tubercle is in the intervillous space and does not penetrate through the syncytial cells of the villi themselves. Research is required to decide these points.

On the other hand, I would urge that paternal infection of the ovum is surely not only possible but probable in cases, for instance, where the genito-urinary organs of the male parent are infected, as in some early cases of tuberculosis of the bladder or vesiculae seminales. Whitridge Williams states that experiments upon rabbits and guinea-pigs seem to show that the male parent can thus infect the ovum.

Maternal infection of the fertilized ovum is difficult to prove, for very few children of tuberculous parents have clinical evidence of tubercle at birth. It has, however, been demonstrated that tubercle bacilli are sometimes seen in the interior of ova which are still within the Graafian follicle. Ballantyne[19] gives several instances of fetal tuberculosis in which tubercle bacilli were found, but says that such cases are rare. Cases are also reported in which no tuberculous lesions have been present, yet tubercle bacilli were found, and inoculation of animals with the fetal blood or tissues from these cases has led to the development of tubercle.

It is difficult to explain why tubercle is so rarely found in the fetus. I have already alluded to some explanations. Tuberculosis of the maternal generative organs would not be likely to infect the fertilized ovum, for it would probably cause sterility, so that direct infection of the ovum or attached placenta by contact with tuberculous tissue would not occur. Supposing, too, that tubercle bacilli reached the maternal parts of the placenta, it is quite possible that the syncytial ferments and the toxins locally produced would so affect the bacilli as to prevent them from penetrating into the villi themselves.

Another possible explanation of the rarity of tuberculous lesions in the fetus may be that the infection of the early embryo may, as in syphilis, show itself by malformations and anomalies leading to early or unrecognized abortions. Whether such early abortions are often due to tubercle is a very difficult problem. It is apparently true that tubercle bacilli are not found in the early embryo, but the same is true as regards *S. pallida* in the abortions in syphilitic parents, and yet the spirochaetes abound in the stillborn fetus a few months later. Dr. Jane Walker, in a private letter, says: "Tubercle bacilli do not produce abortion in my experience." Dr. W. C. Wilkinson says much the same, and points out that tuberculous cows rarely abort, but he states that placental tuberculosis, though rare, may cause such lesions in the placenta as to lead to abortion.

V. Hanot[20] has described various dystrophies which may have been due to ante-natal tuberculosis, and had apparently taken the place of a true tuberculous lesion.

There is another interesting point of resemblance in the children of tuberculous and syphilitic parents, in that, according to Dr. Wilkinson and Dr. Eric Pritchard, the children of tuberculous mothers within the first few weeks of life do not react to tuberculin, but a month or so afterwards the tests may be positive. This is difficult to explain except on the ground of acquired immunity during intrauterine life, and reduced immunity afterwards. Whilst the fetus was *in utero* it would be immune to tubercle, owing to its receiving antituberculous toxins from the mother, which she would be developing beyond her own requirements, owing to her improved general health during her pregnancy. After birth the child loses this constant supply of antitoxin and offers less resistance to tubercle bacilli already in its tissues or due to fresh infection, and swollen glands and other evidence of early tubercle would develop. In this connexion I would allude to experiments referred to by Ballantyne, in which tubercle bacilli were introduced into the hen's egg, and it was found that they remained latent, setting up tuberculosis in the chick only after it was hatched out.

If the structural abnormalities of the embryo derived from syphilitic and tuberculous parents respectively were noted, it might be possible to discover some abnormalities which were common to both diseases, and possibly other dystrophies peculiar to or characteristic of each infection.

These remarks tend to show how divergent views are and how little we are sure of as regards ante-natal pathology. I hope, too, that the discussion will stimulate obstetrical pathologists towards research, which will not only be interesting, as all pioneer work is, but will yield results which will soon be apparent in preventing disease and saving ante-natal life.

How to Provide Facilities for Research.

Every general hospital and lying-in hospital in our larger towns should be provided with ante-natal research laboratories. In addition, wherever practicable, laboratories should be formed in every county and county borough under the supervision of the medical officer of health, where abortions and stillborn fetuses could be collected, and either examined there or sent on in sealed jars (labelled and with history appended) to the nearest ante-natal laboratory.

As a preliminary, or perhaps as a permanent, alternative to this extended investigation of abortions and stillbirths, I would suggest that investigation should be carried out in large cities by forming centres of small groups of general hospitals, lying-in hospitals, and Poor Law infirmaries, with the co-operation of old students, so that material for research could thereby be ensured. Funds are, of course, the difficulty, but by concentrating effort in a few centres expense would be minimized. Such a centre must be officered by first an obstetric expert, who is also a pathologist; secondly, a pathological expert, with practical knowledge both of bacteriology and pathological histology; and thirdly, if possible, an expert in physiological and pathological chemistry.

The investigation must not only be pathological, but to increase its usefulness and to round off the knowledge obtained, clinical observation must be added. Thus, if spirochaetes are discovered in a macerated fetus, the case would not be complete unless the history of both parents were inquired into, and the appropriate treatment adopted in view both of the parents' health and that of subsequent children.

In conclusion, I would urge obstetricians to look upon research into ante-natal pathology as only one of the methods which must be advocated in order to deal with statistics, and with the supply of material for research, and for help in the diagnosis, prophylaxis, and treatment of ante-natal diseases, for without such associated methods any large reduction of the ante-natal death-rate is impossible. I allude especially to:

1. *Compulsory registration of stillbirths*, with a medical certificate of the probable cause of death. This certificate should be secret so far as the causes of death are concerned, if desired by the doctor.

2. *Compulsory notification of stillbirths* to the medical officer of health, with a secret certificate of the cause of death. This would make it easy for the parents to be treated if necessary.

3. *Compulsory notification* to the medical officer of health of every abortion of a formed fetus and of every stillbirth within thirty-six hours of birth, or within twelve hours if the mother is not attended by a medical practitioner. The medical officer of health should issue instructions that all products of conception should be sent to his laboratory for examination there or at a city centre.

4. Arrangements by which every poor woman can have medical supervision during pregnancy. Pregnant women who are themselves insured under the National Insurance Act are entitled to a "Pregnancy sickness benefit" if certified to be incapable of work, and also to a "Maternity benefit" after parturition. Such women, therefore, should be encouraged to voluntarily notify their pregnancy to their panel doctor or midwife. If to the latter, the midwife should notify the medical officer of health, and these voluntary notifications would enable the potential mother to be medically supervised by the panel doctor or by the medical officer of health's representative. Medical supervision of pregnant women would be made easy if the administration of maternity benefit and pregnancy sickness benefit were transferred from the approved societies to the local health authorities.

5. As advocated by Dr. Ballantyne in 1891, prematernity wards in large towns, and reserved beds in cottage hospitals in rural districts, should be provided where pregnant women can receive medical treatment.

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PITUITRIN IN LABOUR:

A RECORD OF SIXTY CASES, WITH NOTES ON ITS ADMINISTRATION.

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PITUITRIN, or pituitary infundibular extract, is now becoming generally accepted as a valuable aid to the obstetrician. Its property of inducing strong rhythmical contractions of the uterus, first pointed out by Dale,[1] is so marked that it is surprising that it has not been more generally adopted by the practitioner. In these circumstances, this record of 60 cases may prove a sufficient stimulus to those who have not experienced its merits to induce them to try it in the early future.

It is necessary, however, to observe ordinary caution in its administration, and great care should be taken where there is any obstruction. It is a very valuable aid towards shortening the long and often exhausting first stage of labour, especially in those cases in which the membranes rupture early, and a "dry labour" results.

It has proved in my hands to be a powerful remedy in cases in which shock and collapse have supervened on prolonged chloroform anaesthesia, not infrequently inseparable from a difficult case of contracted pelvis (see Case 6 in the series). In patients of a nervous temperament pituitrin has also a great influence, and the excitement is frequently calmed in an extraordinary manner (see Case 7).

Recovery is almost invariably hastened, and patients who have previously had pituitrin nearly always ask for its repetition. I have never had a case of *post-partum* retention of urine since using this remedy; indeed, in Case 6, in which it might reasonably have been expected, a free and copious emission of urine resulted within one hour of its administration. As a controller of haemorrhage pituitrin ranks very highly in my estimation; in one case (No. 58) it controlled the haemorrhage when a previous injection of ernutin had failed. Some writers have recorded *post-partum* haemorrhage as a sequel of pituitrin administration, when delivery of the child did not take place until an hour or more after its administration. I have observed this on a few occasions, but if a second injection be given this does not as a rule occur. In any case a further dose will almost always control the haemorrhage (see Cases 36, 55, 58). In one case (No. 18) the patient in five previous confinements had had *post-partum* haemorrhage, while on this occasion it was particularly noticeable by its absence.

I have worked out the following technique as the best routine method for the administration of pituitrin. When the os admits one or two fingers, but not before, I inject into the gluteal muscles from 0.75 to 1.0 c.cm. of pituitrin; if the child is not born within fifty minutes give a second injection of from 0.5 to 0.75 c.cm., and repeat if necessary. If *post-partum* haemorrhage supervenes, a further injection will almost always control it. Care should be taken to make sure that the syringe and needle are quite free from alcohol before filling with the pituitrin, as alcohol is said to interfere with its action.

Case 1.—II-para, aged 35. *Post-partum* haemorrhage. Intramuscular injection pituitrin 0.5 c.cm. controlled; after six hours secondary *post-partum* haemorrhage occurred. Intramuscular injection of 1 c.cm. pituitrin given, controlled, and made an excellent convalescence.

Case 2.—I-para, aged 25. On arrival os admitted two fingers. Intramuscular injection pituitrin 0.75 c.cm. Os fully dilated in two hours. A second injection of pituitrin 0.75 c.cm. Child delivered thirty minutes later, stillborn. No haemorrhage. The child's shoulders showed unusual development.

Case 3.—VI-para, aged 40. Os admitted two fingers. Pituitrin 0.75 c.cm. injected. Os fully dilated one hour. A second injection 0.5 c.cm. given. Child delivered ten minutes later. No haemorrhage.

Case 4.—I-para, aged 19. Os size of a shilling. Pituitrin 0.75 c.cm. given. Os fully dilated ninety minutes. Second injection 0.5 c.cm. Child delivered thirty minutes later. No haemorrhage.

Case 5.—III-para, aged 30. Os about half dilated. Primary uterine inertia. Pituitrin 0.75 c.cm. injected. Os fully dilated fifteen minutes later. Delivery followed seven minutes after. No haemorrhage.

Case 6.—I-para, aged 27. Patient had a badly contracted pelvis, and anaesthesia of five hours' duration off and on followed. The patient at the end of it was in a condition of grave collapse, and was very cyanosed, the pulse being almost imperceptible. Pituitrin 1 c.cm. was injected. The pulse rapidly improved. Urine was voided one hour later. She slept for seven hours, after which she sat up in bed, her pulse then being 80. Subsequently recovery was uninterrupted. (This case was seen in consultation with Dr. H. A. Hutt, to whom I am indebted for the details of the convalescence.)

Case 7.—I-para, aged 42. Os admitted two fingers. Pituitrin 1 c.cm. given. After one hour os was about half dilated. A second injection of 0.5 c.cm. was made; the os after sixty-five minutes was fully dilated. A third injection of 0.5 c.cm. was given, delivery following thirty minutes later. ɱx ernutin was injected subsequently as an extra safeguard, but there was no haemorrhage. This patient was of an extremely nervous temperament, but after the pituitrin she was much calmer; and it was as much for this reason as for its other actions that the later injections were given. An excellent recovery followed.

Case 8.—I-para, aged 25. Os about the size of a half-crown. Pituitrin 1 c.cm. injection. Child delivered seventy-five minutes later. No haemorrhage. The patient has exophthalmic goitre. (See also Case 47.)

Case 9.—V-para, aged 32. Os admitted two fingers. Pituitrin 1 c.cm. injected. Delivery followed forty-five minutes later. No haemorrhage.

Case 10.—IV-para, aged 27. Os admitted two fingers. Pituitrin 1 c.cm. Delivery followed in sixty minutes. No haemorrhage.

Case 11.—VI-para, aged 42. Os size of a half-crown. Pituitrin 0.75 c.cm. Delivery followed thirty-five minutes later. No haemorrhage.

Case 12.—I-para, aged 30. A very prolonged chloroform labour. Craniotomy after failure of version. Pituitrin 1 c.cm. given for collapse. Made an excellent recovery.

Case 13.—XII-para, aged 49. Os admitted two fingers. Pituitrin 1 c.cm. Delivery followed in fifteen minutes. The perineum ruptured. At her tenth and eleventh confinements the labours lasted twenty-four hours or more, and the patient was astonished at this speedy termination, more especially as she had already been in labour for seven hours. The long labours were purely the result of weak and inefficient contractions.

Case 14.—III-para, aged 25. Os admitted two fingers. Pituitrin 0.75 c.cm. given. Delivery followed forty-five minutes later. No haemorrhage.

Case 15.—V-para, aged 30. Os about half a crown. Pituitrin 0.75 c.cm. given. Delivery followed in thirty-five minutes. No haemorrhage.

Case 16.—II-para, aged 26. Os about half a crown. Pituitrin 1 c.cm. given. Delivery followed forty-five minutes later. No haemorrhage. About three weeks previous to her confinement the patient thought she was in labour. The os admitted two fingers, and pituitrin 0.75 c.cm. was given, but the pains immediately quietened down and left her.

Case 17.—III-para, aged 23. Os about half a crown. Pituitrin 1 c.cm. given. Delivery followed in fifty minutes. No haemorrhage.

Case 18.—VII-para, aged 35. Os about half a crown. Pituitrin 1 c.cm. given. Delivery followed in thirty-five minutes. No haemorrhage. At five previous confinements this patient had *post-partum* haemorrhage; but with pituitrin it was absent.

Case 19.—VI-para, aged 34. Os about half dilated. Pituitrin 1 c.cm. given. Delivery took place in thirty minutes. No haemorrhage.

Case 20.—VII-para, aged 36. Os about half dilated. Pituitrin 0.75 c.cm. given. Delivery in twenty-five minutes. No haemorrhage.

Case 21.—III-para, aged 21. Os about half a crown. Pituitrin 0.75 c.cm. Os fully dilated seventy minutes. A second injection 0.5 c.cm. given. Delivery followed in ten minutes. No haemorrhage.

Case 22.—I-para, aged 18. Born before arrival. Severe *post-partum* haemorrhage, patient collapsed and almost pulseless. Pituitrin 1 c.cm. injected. Controlled and made excellent recovery. The patient has exophthalmic goitre.

Case 23.—III-para, aged 27. Os about half a crown. Pituitrin 0.75 c.cm. injected. Delivery after forty minutes. No haemorrhage.

Case 24.—V-para, aged 35. Os half dilated. Pituitrin 0.75 c.cm. given. Delivery followed forty-five minutes later. No haemorrhage.

Case 25.—V-para, aged 33. Os half a crown. Pituitrin 0.75 c.cm. given. Delivery followed in thirty-five minutes. No haemorrhage.

Case 26.—III-para, aged 25. Os half dilated. Pituitrin 0.75 c.cm. given. Delivery after thirty minutes. No haemorrhage.

Case 27.—I-para, aged 25. Os admitted two fingers. Pituitrin 0.75 c.cm. given; os fully dilated sixty-five minutes. A second injection of 0.5 c.cm. given. Delivery followed in twenty minutes. No haemorrhage.

Case 28.—III-para, aged 26. Os half a crown. Pituitrin 0.75 c.cm. given. Delivery after forty minutes. No haemorrhage.

Case 29.—III-para, aged 28. Os half dilated. Pituitrin 0.75 c.cm. given. Delivery after fifty minutes. No haemorrhage.

Case 30.—I-para, aged 19. Os admitted two fingers. Pituitrin 1 c.cm. given; os fully dilated in fifty-five minutes. A second injection of 0.75 c.cm. given. Delivery after twenty minutes. No haemorrhage.

Case 31.—IV-para, aged 23. Os half dilated. Pituitrin 0.75 c.cm. given. Delivery followed after thirty minutes. No haemorrhage.

Case 32.—IV-para, aged 27. Os admitted two fingers. Pituitrin 0.75 c.cm. given. Delivery followed in thirty-five minutes. No haemorrhage.

Case 33.—I-para, aged 18. Os admitted two fingers. Pituitrin 1.0 c.cm. injected. Os fully dilated after seventy minutes, a second injection of 0.75 c.cm. given; delivery followed twenty-five minutes later. No haemorrhage.

Case 34.—III-para, aged 27. Os about half a crown. Pituitrin 0.75 c.cm. given; os fully dilated in forty minutes; 0.5 c.cm. injected; delivery followed in twenty minutes. No haemorrhage.

Case 35.—II-para, aged 26 (vide supra Case No. 2.) Os about half a crown. Pituitrin 0.75 c.cm. given; os fully dilated after sixty minutes; a second injection of 0.5 c.cm. given, delivery following fifteen minutes later. No haemorrhage.

Case 36.—XII-para, aged 45. Os half dilated. Pituitrin 0.75 c.cm. given, delivery followed thirty minutes later. Secondary *post-partum* haemorrhage followed after six hours, but this was well controlled by pituitrin 1.0 c.cm., the patient making an excellent recovery.

Case 37.—IV-para, aged 30. Os about half a crown. Pituitrin 0.75 c.cm. given; delivery following in forty-five minutes. No haemorrhage.

Case 38.—I-para, aged 19. Os admitted two fingers. Pituitrin 1.0 c.cm. given. Os fully dilated sixty minutes later. A second injection of 0.75 c.cm. given. Delivery with forceps thirty-five minutes after. No haemorrhage. There was a slight pelvic contraction in this case.

Case 39.—I-para, aged 33. Os about half a crown. Pituitrin 1 c.cm. given. Os fully dilated seventy minutes after; a second injection of 0.75 c.cm. was given, delivery following in thirty minutes. No haemorrhage.

Case 40.—III-para, aged 30. Os half dilated. Pituitrin 0.75 c.cm. given. Delivery followed after thirty-five minutes. No haemorrhage.

Case 41.—III-para, aged 33. Os about half a crown. Pituitrin 1 c.cm. given, delivery following forty minutes later. No haemorrhage.

Case 42.—I-para, aged 33. Os admitted two fingers. Pituitrin 1 c.cm. given. Os fully dilated sixty minutes after; a further injection of 0.75 c.cm. was followed by delivery in thirty minutes. No haemorrhage.

Case 43.—I-para, aged 18. Os about half a crown. Pituitrin 1 c.cm. given. Os fully dilated in fifty-five minutes; a subsequent injection of 0.75 c.cm. resulted in delivery after twenty minutes. No haemorrhage.

Case 44.—II-para, aged 20. Os about half a crown. Pituitrin 1 c.cm. given. Delivery took place forty-five minutes later. No haemorrhage (vide supra Case 4). This patient having had it before, begged for a repetition of the pituitrin.

Case 45.—III-para, aged 27. Os half a crown. Pituitrin 1 c.cm. given. Delivery resulted after thirty-five minutes. No haemorrhage.

Case 46.—VIII-para, aged 33. Os admitted two fingers. Pituitrin 1 c.cm. given. Os fully dilated in forty-five minutes; a second injection of 0.75 c.cm. resulting in delivery after fifteen minutes. No haemorrhage.

Case 47.—II-para, aged 26 (vide supra Case 3). Os about half a crown. Pituitrin 1 c.cm. given. Os fully dilated after fifty minutes; a second dose of 0.75 c.cm. being followed by delivery in twenty minutes. No haemorrhage.

Case 48.—III-para, aged 24. Os about half a crown. Pituitrin 1 c.cm. given. Os dilated in forty-five minutes; a second dose of 0.75 c.cm. resulting in delivery twenty minutes later. No haemorrhage.

Case 49.—I-para, aged 33. Os admitted two fingers. Pituitrin 1 c.cm. given. Os three quarters dilated after 60 minutes; a second injection of 0.75 c.cm. resulting in delivery thirty-five minutes later. No haemorrhage.

Case 50.—V-para, aged 30. Os about half a crown. Pituitrin 1 c.cm. given. Delivery followed forty-five minutes later. No haemorrhage.

Case 51.—I-para, aged 37. Os half a crown. Pituitrin 1 c.cm. injected. Os fully dilated sixty minutes later; a second injection of 0.75 c.cm. resulting in delivery thirty minutes later. No haemorrhage.

Case 52.—I-para, aged 20. Os admitted two fingers. Pituitrin 1 c.cm. given. Os fully dilated after fifty minutes; a second injection of 0.75 c.cm. resulting in delivery twenty minutes after. No haemorrhage.

Case 53.—V-para, aged 35. Os half a crown. Pituitrin 1 c.cm. given. Delivery thirty-five minutes later. No haemorrhage.

Case 54.—XIII-para, aged 44. Os half a crown. Pituitrin 1 c.cm. given. Delivery twenty-five minutes later. No haemorrhage.

Case 55.—VII-para, aged 46. Os half a crown. Pituitrin 1 c.cm. given. Delivery thirty-five minutes later. Some haemorrhage followed, which was well controlled by a second injection of 1 c.cm.

Case 56.—I-para, aged 35 years. Os admitted two fingers. Pituitrin 1 c.cm. given. Os fully dilated seventy minutes after, a second injection of 0.75 c.cm. resulting in delivery thirty-five minutes later. No haemorrhage.

Case 57.—III-para, aged 35. Os admitted two fingers. Pituitrin 1 c.cm. given. Delivery forty-five minutes later. No haemorrhage.

Case 58.—III-para, aged 27. Os half a crown. Pituitrin 1 c.cm. given. Os fully dilated forty-five minutes after, a second injection of 0.75 c.cm. being followed by delivery twenty minutes later. Some secondary haemorrhage followed. Ernutin failed to control this, so a further injection of pituitrin (1 c.cm.) was given. This succeeded in arresting the bleeding.

Case 59.—II-para, aged 23. Os half dilated. Pituitrin 1 c.cm. given. Delivery followed thirty minutes later. No haemorrhage.

Case 60.—II-para, aged 19. Os half dilated. Pituitrin 1 c.cm. given. Delivery resulted twenty minutes later. No haemorrhage.

REFERENCE.

1 *Journal of Physiology*, 1905, p. 24.

TWO CASES OF PREGNANCY IN UTERUS SUBSEPTUS.*

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IRREGULARITIES in the form of the genital organs arise from the mode of their development by the formation of the Müllerian bands, their subsequent hollowing and their progressive union from the lower end proceeding upwards to the level of the attachment of the round ligaments. How frequently malformations occur it is impossible to say, but the question of their influence on the genital functions is of some practical interest. Possibly in most cases the discovery of their presence is a matter of chance, not essentially involved with the processes which have attracted our attention to the individual patient. During the last six months I have discovered three cases of septate uterus. One of these Dr. Valentine and I have already described, and the others—the subjects of this note, both came under my observation in October last.

CASE I.

Mrs. S., aged 30, had a normal delivery at term in 1909. In August, 1913, when three months in her second pregnancy, she had bleeding, but recovered for the time. The bleeding, however, recurred, and persisted without miscarriage till it became necessary to clear the uterus. For this Dr. Laing asked my assistance. The os dilated to the fingers, and I removed the fetus præcereal. During the manipulations I found an aperture on the right wall of the uterus about the level of the internal os. It suggested rupture, but on further investigation I found that it was the orifice of a second uterine [illegible], and in it I

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found a detached foot. The septum ran wedge-shaped to the fundus, which was single.

CASE II.

Mrs. K., aged 27, who had had two pregnancies, five and three years previously, which terminated normally at term, came at the fourth month complaining of bleeding. The os was closed, and the fundus reached half-way to the umbilicus. She was advised to rest. A month later she returned, saying that she felt no life, and that she was not increasing in size. She was asked to come into hospital, but declined. At Dr. Rogers's instance she returned in February, eight months after the beginning of pregnancy. The fundus was lower than formerly, and she was admitted for the treatment of the missed abortion. The os was closed, and was dilated with Hegar dilators to 2 cm. A slight tear was noted at the external os, and on inserting the finger to separate the ovum as far as possible a depression was noted at the left posterior part of the internal os. Again the idea of rupture suggested itself. Labour did not set in, but there was inflammatory infiltration of the right broad ligament, and five days later I decided on the removal of the ovum. This was found lying in the cervix, and was fetid. On palpation of the cavity the opening on the left side was found to lead to a second uterine cavity. The fundus was single, as in the other two cases.

The discovery of a uterine anomaly in association with disturbance of pregnancy in these two cases does not warrant the conclusion that the occurrence was more than a coincidence. In each we have the history of previous normal pregnancy and delivery. The chief disturbances which have been attributed to the malformation in cases where it was supposed to be a factor are:

1. The second cavity has been said to explain cases of menstruation occurring during pregnancy in the other.
2. The formation of decidua in the second cavity may call for its definite expulsion at delivery, and may give an unusual form of haemorrhage, intra-partum or post-partum.
3. The unequal development of the uterine walls may provide a source of irregular contraction during labour or post-partum, causing delay in delivery or post-partum haemorrhage respectively.
4. Rupture of the irregularly developed uterus has been recorded with relative frequency, both at the fundus and at the cervix.[1]

REFERENCE.

[1] Wertheim, *Winckel's Handbuch der Geburtshülfe*; Zalewski, *Arch. f. Gyn.*, 1914, cii, 189.

CARCINOMA OF THE STOMACH: GASTRECTOMY.

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THE patient, Mr. A., was well until November, 1913, when he began to have epigastric pain and vomiting. By the end of January, 1914, the vomiting became constant, and even water was not retained. There was marked anaemia, loss of strength and weight. On January 24th Dr. F. W. E. Kinneir, under whose care the patient was, and at whose request I subsequently operated, asked me to see Mr. A. in consultation with him.

Condition on Examination.

The patient was in bed, looking pale and haggard. No sleep had been obtained on account of pain in the epigastric region. Pulse 112, temperature 99°. The abdomen moved freely. On palpation there was a hard rounded swelling, the size of a Tangerine orange, situated in the epigastric region, a little to the left of the middle line. It was rather tender and did not move on respiration, but was easily moved from one side to the other of the middle line. The liver was not apparently enlarged, and no other swelling was discovered. The blood count showed slight secondary anaemia, but nothing else abnormal was discovered. The vomit was acid in reaction (litmus); free HCl was absent. Microscopic examination showed undigested food, salivary streptococci, sarcinae, yeast, and Oppler-Boas bacilli.

Thinking that the growth was in the pyloric portion of the stomach and that its mobility offered some prospect of its successful removal, I advised exploratory laparotomy. Consent was refused until February 5th, by which time it was obvious that the patient was declining fast.

Operation.

On February 6th an incision was made through the left rectus muscle from the costal margin to the level of the umbilicus. The swelling felt was found to be the left extremity of a large growth involving the whole of the right half of the stomach. The liver was natural. No secondary growths were found, except one in the omentum immediately beneath the growth. The tumour was

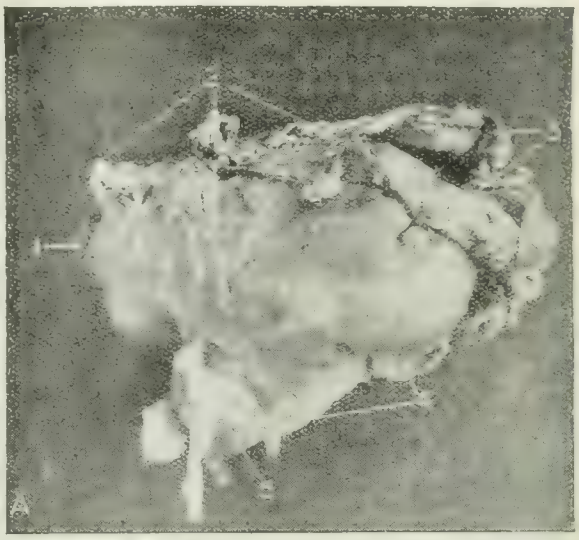


Fig. A.—Specimen as removed. 1, Duodenum. 2, Cut edge of gastro-hepatic omentum. 3, Cut edge of stomach. 4, Cut edge of transverse mesocolon. 5, Secondary growth.

delivered through the incision and gastrectomy commenced.

1. Two clamps were placed on the duodenum immediately beyond the pylorus and two across the stomach above the growth. The last two crossed the stomach from a point on the lesser curvature 2 in. below the cardiac orifice to a point on the greater curvature about a third of the distance from the cardiac orifice to the pylorus.

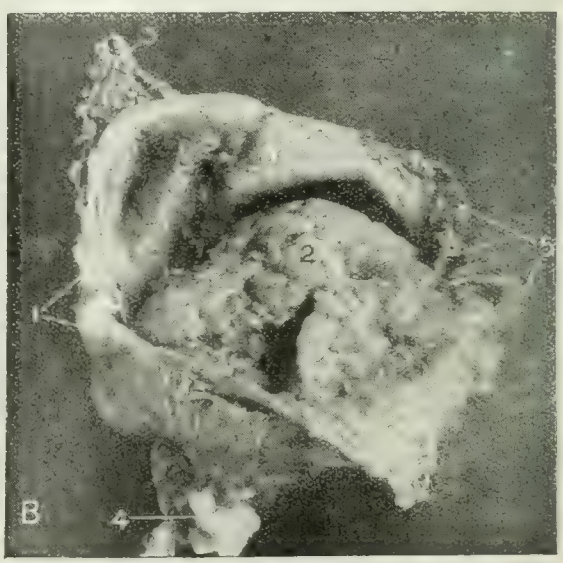


Fig. B.—Specimen laid open. 1, Sphincter of pylorus. 2, The growth. 3, Gastro-hepatic omentum. 4, Secondary growth; 5, Cut edge of stomach.

2. The gastro-hepatic omentum and the transverse mesocolon lying between the first two pairs of clamps were clamped in sections.
3. The stomach, growth, and portions of omentum lying in the quadrilateral outlined by the four sets of clamps were excised. The cut edges of the omentum were then tied in sections.
4. The edges of the upper cut end of the stomach were united with through-and-through catgut sutures from

above downwards until the remaining opening agreed with that of the duodenum.

5. The duodenum was then united to the remaining opening in the stomach with a similar suture. A continuous Lembert suture was then passed along the whole length of the first sutures.

The wound was closed with through-and-through silkworm gut sutures and one layer of catgut sutures to the anterior layer of the rectus sheath. The portion removed gave a good clearance of the growth, except between the secondary deposit and the transverse colon, where the margin was rather narrow. The sutures joining the duodenum and the stomach put these organs on the stretch, and the tension was only partly relieved when they were allowed to fall back to the posterior abdominal wall.

The patient's condition was critical for two days; the pulse rose to 140 and the temperature to 100 F. There was some distension of the abdomen, but urine was passed; the extremities remained warm and there was no vomiting. Ultimately recovery was complete, and on March 20th Dr. Kinneir reported that Mr. A. was walking about, sleeping and eating as usual.

Description of Parts Removed.

The specimen measures 7½ by 5¼ in., and consists of about two thirds of the stomach with half an inch of the duodenum. The cavity of the stomach is filled with a fungating mass of growth springing from a comparatively small area near the greater curvature. The "secondary growth" appears to be a direct extension of the primary growth, which has burst through the stomach wall and invaded the transverse mesocolon. There is an ample margin everywhere, except below the growth in the mesocolon, where the macroscopic growth comes as close as half an inch from the edge of the specimen. On microscopic examination the growth seemed to be a columnar-celled carcinoma undergoing colloid degeneration.

THE ASSOCIATION OF ERYTHEMA NODOSUM AND TUBERCULOSIS.

By J. ODERY SYMES, M.D., D.P.H.,
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MUCH has been written during the past five or six years on the association of erythema nodosum with tuberculosis. I need only mention here the work of Landouzy [1] in France, and articles by Marfan,[2] Sezary,[3] Poucet,[4] Moro,[5] and an epitome of cases in the *American Journal of Medical Sciences* of March, 1912. The evidence brought forward has been partly the result of experimental investigation and partly the fruit of clinical observation, and it is to this last category that my remarks belong.

Reviewing a series of twenty cases of erythema nodosum that have been under my care since the beginning of 1907, I find that in six there were distinct evidences of tuberculosis.

These cases illustrate very well the various relationships that have been described as existing between tuberculosis and erythema nodosum—namely, that the rash may be a simple accompaniment of some chronic tuberculous lesion in lungs, joints, or glands, and is probably of toxic origin; or that erythema nodosum is an actual invasion of the skin by tubercle bacilli; or that it is not infrequently a prodromal symptom of an acute tuberculous septicaemia generally ending in fatal meningitis.

CASE I.

R. C., a girl aged 2½ years, after two or three weeks' malaise developed sore throat, pains in the joints, fever, and erythema nodosum on the legs. This lasted for a week, but three weeks later she had a relapse, with further nodules in the thighs and on the mastoid process and occipital bone. With occasional brief intermissions the pyrexia continued for some months, and the child died in the ninth month of the illness with widely diffused caseous tuberculosis, finally succumbing to tuberculous meningitis.

CASE II.

A schoolgirl, aged 15 years, developed erythema nodosum during a school epidemic of influenza. There was no personal or family history of rheumatism or tuberculosis. The attack was severe, the pyrexia lasting fourteen days. There was sore throat, giant urticaria, phlyctenules in the conjunctivae, and the sites of some of the nodules on the leg were marked some months after by depressed dimples. She was never a robust girl, and after the attack remained in poor condition. Seven months later she developed tuberculous pleurisy with effusion, from which recovery was protracted.

CASE III.

A girl, aged 10 years, who for some time had been losing weight and who was weak, became worse, and was kept home from school for three weeks. At the end of this time she developed pyrexia and erythema nodosum. When examined, early in the attack, she was found to have tuberculous glands in the neck and masses of enlarged glands in the abdomen. She made a good recovery. Both the mother and a brother had suffered from rheumatic fever, but the child had never had rheumatic symptoms.

CASE IV.

A woman, aged 53, who had been ailing for three months, was admitted into the Bristol General Hospital in February, 1908. She was a weakly subject, and was found to be suffering from phthisis at the apex of the right lung. Twenty-three days after admission she developed signs of erythema nodosum, rash, sore throat, and pains in the joints. The evening temperature was 99° F. throughout a stay of nine weeks in the hospital; at the termination of that time she was discharged.

CASE V.

A girl, aged 15 years, who had previously suffered from acute rheumatism, endocarditis, and chorea, was admitted to the Bristol General Hospital in 1912 suffering from pains in the joints, endocarditis, and pericarditis. She had at this time nodules of erythema nodosum.

A few days after admission she died. The severity of the attack was greater than would have been anticipated from the extent of the physical signs. Dr. Carey Coombs has very kindly given me his notes on the *post-mortem* examination, and of the microscopical examination made of the nodule excised from the leg. There were caseous tuberculous mediastinal glands in which tubercle bacilli were demonstrated, endocarditis, and haemorrhagic myocarditis, and pericarditis of such a character as to suggest that the fatal termination may have been brought about, not by a rheumatic but by a tuberculous infection. In the sections of the node there were giant cells of the type seen in tuberculosis.

Microscopical Examination by Dr. Carey Coombs.

Skin.—Corium: Normal.

Connective Tissue.—(*a*) Immediately beneath corium: There are many thrombosed capillaries, also groups of small, probably new capillaries. These are sometimes associated. Around these injured vessels are grouped various inflammatory cells; fibroblasts, chiefly in rings about the vessels, a few lymphocytes, and cells of the "endothelial leucocyte" class. The endothelium of the vessels, whether they are thrombosed or not, is proliferating. The impression left on the mind is that of a subsiding inflammation, presumably this is due to the prominent part played by the fibroblasts.

(*b*) At a greater depth than above: In the fibrous trabeculae, and extending thence into the fat, are tracts of similar but more active and recent inflammatory reactions, masses of cells of the endothelial leucocyte class are mingled with lymphocytes and in many spots imperfectly organized into capillaries. Two notable features are the damaged and irregular state of these new capillaries, and the almost total absence of fibroblasts. There are one or two loose collections of polymorphonuclear leucocytes. Two giant cells of the type seen in tuberculosis were also noted in this area: but without other of the elements of the granuloma, and without demonstrable acid-fast bacilli.

Tracts (*a*) and (*b*) were separated by quite a wide interval of connective tissue.

CASE VI.

A man, aged 51, who had had both testicles removed for tuberculous disease—one sixteen and the other twenty years earlier—was admitted to the Bristol General Hospital, under Mr. Wright, in 1913 for nasal obstruction due to polypi. A fortnight after his discharge he returned, and was again admitted, the nasal cavities being in an unhealthy condition, requiring proper douching. A few days later he developed a sore throat and a collar of erythematous patches round the neck. There was high fever, which continued for a week. Four days later he developed typical erythema nodosum on the legs, also spots on the arms and fingers—a condition which our dermatologist described as erythema multiforme of a nodose type. There were phlyctenules in both eyes. There was no tuberculous or rheumatic family history. The rash gradually faded, and he was discharged looking somewhat anaemic, but otherwise well.

Sufferers from erythema nodosum are very commonly cachectic looking children of the strumous type: and, although I have on several occasions obtained a positive von Pirquet's reaction, I do not think too great importance should be attached to this test. It is worthy of note, however, that Pollack found that 100 per cent. of cases of erythema nodosum gave a positive result; and Moro,

testing by his own method and von Pirquet's, only got four negative reactions in 30 cases of erythema nodosum.

Phlyctenular conjunctivitis and keratitis are of frequent occurrence in erythema nodosum. Lendon, in his work on *Nodal Fever*, says that they were present in 38 per cent. of the cases. This condition of the eye has a close relationship to tuberculosis. In an article on phlyctenulae, in the BRITISH MEDICAL JOURNAL of October 18th, 1913, Butler says: "I have been able to regard a tuberculous etiology as exceedingly probable in 70 per cent. of my cases. Professor Straub of Amsterdam thinks that 100 per cent. is nearer the truth."

Several observers have reported cases in which the hypodermic administration of tuberculin to tuberculous persons has given rise to an attack of erythema nodosum; and others who have excised nodules have noted that the sections show giant cells surrounded by epithelial cells, such as are to be seen in the section so kindly cut for me by Dr. Carey Coombs. In a contribution to *La Presse médicale* (November 19th, 1913) Professor Landouzy reports a case of erythema nodosum from which a nodule was excised. Tubercle bacilli were found in the histological sections, and another portion of the nodule when injected into a guinea-pig gave rise to local and general tuberculosis.

The evidence is too strong to permit our regarding the association of erythema nodosum with tuberculosis as merely accidental. It is far more convincing than the evidence formerly adduced to prove that the disease was of rheumatic origin—a view that is now rapidly disappearing. Personally, I am convinced that we have in erythema nodosum a distinct clinical entity,[6] probably a specific infective fever; but it seems likely that we have included under the same name other erythematous nodular rashes—some which should be classed as rheumatic, some as erythema multiforme, and others as tuberculous, the last-named being evidence of a widespread and not infrequently fatal septicaemia.

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THE EXPERIENCES OF SURGEONS IN SCLERO-CORNEAL TREPHINING.

BY

R. H. ELLIOT, M.D., F.R.C.S.

IN the preface of the first edition of my work on *Sclero-Corneal Trephining in the Operative Treatment of Glaucoma* I wrote:

> I desire to lay my case fully and freely before the medical profession. At that bar we must one and all be tried, and I for one have no doubt that the ultimate verdict, even though it may be delayed, will be the just and right one, be it what it may.

Since those words were written a very extraordinary volume of evidence on this subject has been furnished. Within the short space of four years the operation of sclero-corneal trephining has made such a powerful appeal to the medical profession that it has been tried in every civilized country. Scientific assemblies, from the great International Congress in London downwards, have discussed it in all its bearings; the medical press has been full of reports of and opinions on it; and men of world-wide reputation have published their statistics, and have thereby arrested the attention of the profession. The aim of this article is to collect, even though in a condensed form, some of this valuable testimony. For the most part comment or criticism on my part would be out of place, and the unadorned tale of great workers will carry more weight than any embellishments that I can add to their story. Hence the bulk of the article will take the form of short extracts from the work of such surgeons. I do not fail to recognize that behind all this there lies a force much greater even than the individual opinions of a number of great ophthalmologists—a force comparable to that of a swollen river fed by innumerable rivulets—the force of widespread medical opinion. The number of men in many parts of the world who are quietly and unobtrusively trephining for glaucoma is legion—men who say they have done only a few cases, and who consider their evidence not worth having on account of the individual smallness of their statistics, but who, none the less, write and speak of the wonderful results they have obtained, and of the comfort it has been to them to find an operation so safe, so easy, and so satisfactory for a condition which previously reduced them to hopelessness. Surgeons such as these will not lightly give up the method; they are the backbone of its permanence, and, though it is not possible to place all their valuable evidence on record, it is none the less fully and deeply appreciated.

Wallis[1] collected the statistics from the case sheets of 91 patients, operated on in Moorfields Hospital, and wrote:

> I have excluded all but primary chronic glaucoma patients, and amongst these were not a few for whom the prognosis was very grave—cases that had failed to receive permanent benefit from previous operative methods (other than Elliot's), and absolute glaucomata; also all operations are included, whether performed by the honorary staff, by senior house-surgeons, or by clinical assistants. Of 91 patients suffering from primary chronic glaucoma, upon whom Elliot's operation has been performed, those who have developed repeated *plus* tension within a year of the operation give a case percentage of 9.8. The operation percentage of failures amongst these patients is 15.3 — this larger figure is due to the cases that have failed to be improved by more than one operation in the same eye, and from failure in the two eyes of the same patient when this occurred.

It is obvious that the test of the value of trephining here dealt with is a very severe one, by reason both of the nature of the cases accepted for operation, and of the number and varying experience of the operators.

Stock,[2] of Jena, published the results of 118 trephinings for glaucoma, with eighty-eight good results (74.6 per cent.). Of the poor results fourteen were in operations undertaken for glaucoma absolutum, while the rest had vision not above $\frac{1}{10}$ before operation. This is a striking confirmation of what I have long said—namely, that our failures lie in the group of cases which are late in seeking relief. Vision improved after operation in 39.8 per cent., remained the same in 34.1 per cent., and decreased in 25.6 per cent.; in eight of those which showed a decrease this was due to the maturation of a previously existing cataract, in one it was due to haemorrhage into the vitreous, and in five to iritis.

Meller,[3] of Vienna, has recently published a report based upon 389 Lagrange operations, and 178 sclero-corneal trephinings supported by the microscopical examination of a number of globes removed after failures. He states that "the great advantages of the Elliot operation is that its technique is so much more easy." In not a single case of the 178 was there an injury of the lens. He compares the two operations, dividing his cases into two groups—namely, (1) good results, Lagrange 69 per cent., Elliot 72 per cent.; and (2) bad results, Lagrange 8.4 per cent. and Elliot 2.4 per cent. "Complications, such as lens opacities, severe irido-cyclitis with atrophy of the globe expulsive haemorrhage, etc., not at all infrequent after the Lagrange operation, are scarcely met with after trephining." He finds a tendency after both operations for the iris to block the wound, and is in favour of "a complete iridectomy in the Elliot operation." The percentage of vitreous loss is 3.4 per cent. after the Lagrange and 2.8 per cent. after the Elliot, and he finds that "vitreous prolapse after the Lagrange is a much more serious complication than the escape of a bead of vitreous from a small trephine opening." To show the genesis of relapses, he compares the figures found in the two operations. (1) After total iridectomy, Lagrange 9.3 per cent., Elliot 7.5 per cent. (2) After peripheral iridectomy, Lagrange 11.8 per cent., Elliot 18.7 per cent.; and (3) without iridectomy, Lagrange 20 per cent., Elliot 23 per cent. He therefore inclines to the view that iridectomy is more important than Lagrange or Elliot consider it to be.

With an equally high percentage of excellent results, the Elliot operation has a much smaller percentage of bad results than the Lagrange. Further points in its favour are the considerably easier *technique* and the much smaller number of complications, especially in the severe forms of acute and absolute glaucoma. With the Elliot operation only 15.4 per cent. of the absolute glaucoma cases ended badly, while 38 per cent. of such cases were lost entirely after the Lagrange operation.

As to indications he says:

The situation has been simplified to an extraordinary degree by the introduction of the Elliot operation. It is indicated in all cases of glaucoma, in acute as well as in chronic and simple; in secondary glaucoma, and especially in those cases of increased tension which have developed after the performance of other operations. It can likewise be recommended for hydrophthalmus, for it is attended with less danger than an iridectomy, or even a sclerectomy. The height of the tension has no effect upon the course of the operation or upon the development of complications, and especially not that bad effect which high tension must have in all methods of operating in which the eye is opened by a section.

Axenfeld[4] states that in his own operative material the trephine hole, after a varying period, and often quite quickly, became closed with such thick tissue, approaching to the level of the sclera, that free subconjunctival filtration was out of the question. He, however, modifies this statement by saying that it would be quite wrong to limit the successful cases to those in which a permanently filtering cicatrix, with formation of oedematous area, is found. His own experience—and he states that of many others also—is that numerous cases with closure without apparent filtration are favourably influenced; he suggests that possibly a subconjunctival microscopic filtration is present in these cases. The remark reminds the writer of the many cases which have been presented to him in various clinics as instances of cases in which the old-fashioned iridectomy had cured glaucoma, and in every one of which he has been able to demonstrate to the satisfaction of those present that though to the naked eye no filtration was occurring, yet such filtration could be readily demonstrated by the use of a spud or probe gently pressed upon the conjunctiva in the neighbourhood of the operation wound site. It is suggested that the same phenomenon may serve to explain the apparently anomalous cases cited by Professor Axenfeld.

Guglianetti, of Naples, before the International Congress of Medicine in London, reported 25 cases with favourable results in simple glaucoma, and varying results in other cases.

Pischel,[5] of San Francisco, operated nineteen times on 15 eyes, 3 eyes were operated on twice and 1 thrice. Vision was improved in 6 cases, the same in 3, and worse in 3; 3 eyes were blind before the operation. The tension was relieved in every eye. Field was larger in 7 cases, the same in 2, and smaller in 1; in 5 it could not be taken. He uses a dental engine to rotate his trephine, and warmly recommends it for the purpose. If the 3 blind eyes are excluded, it will be seen that vision was maintained or improved in 9 out of 12—that is, in 75 per cent.

Remmen[6] has reported 20 cases of Elliot's operation, in which the tension was reduced in every case, and in none was vision lost.

Wendell Reber,[7] of Philadelphia, has published the notes of 26 cases in which he operated for glaucoma by sclero-corneal trephining, and thus summarizes his experience:

Twenty-six eyes were operated on by Elliot's method in sixteen subjects. The results are as follows:

In six eyes that were sightless, the seat of absolute glaucoma, and in every way degenerated eyes, the patients were rendered free from pain and an eyeball that was cosmetically satisfactory was preserved to them. This is no small matter, as they were all the very type of eyes that are likely to develop explosive choroidal haemorrhage at the time of operation. Moreover, the teaching in many quarters is that in absolute glaucoma the safe measure is enucleation, an operation from which people instinctively shrink with horror. If trephining will preserve to such patients an eye that will be painless and quiet, it has on this premiss alone proven its title as an acceptable operation.

In five other eyes that were sightless, there was a small degree of vision gained by the operation, such as hand movements at 1 to 3 feet.

In the remaining fifteen eyes the results were good in that the eyes gained considerably in vision and in usefulness. The greatest gain in vision after trephining was from $\frac{6}{60}$ to $\frac{6}{12}$. The least gain was from $\frac{6}{24}$ to $\frac{6}{18}$, but this gain was greater than appears on its face, for it was the patient's remaining eye, the fellow having been already blinded by chronic simple glaucoma. To-day (after one year) this patient's optic nerve excavation remains just what it was one year ago. His field of vision is enlarged and the cicatrix is filtering nicely; we are therefore justified in feeling that the usefulness of this eye will be preserved to him for many years, which is all that can be claimed for any glaucoma condition. . . .

It is therefore our feeling that sclero-corneal trephining (sclerostomy) has come to stay; that it is by all odds the safest operation for glaucoma in the hands of the neophyte; that if this postulate is correct, many more prophylactic operations for glaucoma may be done now than have been done in the past. And if this operation is the safest one in the hands of the operator of small experience, is it not reasonable to push the argument further, and hold that it is therefore the operation of greatest safety under the guidance of the operator of large and long experience? Time only can bring a just and full judgement of this latest method for the surgical control of glaucoma.

Denig,[8] of New York, has himself trephined twenty-one eyes, and has an experience of 15 cases of the same operation in the practice of others. He prefers trephining to other operations in simple, in haemorrhagic, and in secondary glaucoma.

Peter,[9] speaking from an experience of 26 cases of trephining, says:

From the results thus far obtained, the operation promises to be the operation of the future in all forms of glaucoma. My oldest case, and one of the worst of the series, I trephined over eighteen months ago. Relief from pain was prompt, as in all cases, and visual acuity is as good and fields quite as large to-day as they were immediately after operation. . . . We approach a case of glaucoma *in extremis* to-day with much less doubt as to the outcome. . . . The value of the operation as a prophylactic cannot be over-estimated; . . . this is a measure which may save many eyes which otherwise might be doomed to blindness.

El Rasheed,[10] of Assiut, furnishes statistics of 125 eyes operated on by Drs. MacCallan, Oulton, and Sobhy, and by himself; the figures are as follows:

Operations for acute and subacute glaucoma, 17; for chronic glaucoma, 81; for glaucoma absolutum, 24; for secondary glaucoma, 3; vision was improved in 64, remained the same in 29, diminished in 8, and was absent from the commencement in 24. Tension was permanently reduced in 100, was reduced but again rose to above normal in 14, remained above normal throughout in 11; trephining was repeated with improvement in tension in 3. Simple trephining was done in 40; a buttonhole iridectomy was made in 7, and a complete iridectomy in 78. Iris prolapsed and had to be excised in 2 cases; the conjunctival flap required a stitch at the first dressing in 4; the conjunctiva was buttonholed once; vitreous prolapsed 4 times; retinal detachment occurred once; haemorrhage in yellow spot seen once; wound became septic in 2; eyes excised after operation to relieve pain or tension in 2.

(I am indebted to Dr. MacCallan for these figures, which embrace the cases operated on from October 20th, 1911, to February 15th, 1913.)

Zubizarreta,[11] of Buenos Aires, "thinks that Elliot's operation is the most simple and certain method of establishing a filtering scar, and that this is at the moment to be regarded as the operation of choice in cases of chronic glaucoma."

I have heard from a number of British surgeons who have been practising trephining practically since the operation was first described, and who, though, owing to pressure of work, etc., they have not been able to furnish me with exact statistics, have yet assured me that they have definitely adopted the operation in their practice, and that they continue to be well satisfied with their results therefrom. Amongst others may be mentioned Lawson of London, who has been trephining since 1910, and who has used the method on about 100 cases; Gray Clegg of Manchester, another of the pioneers of the method in England, who has over 110 cases on record; and Nimmo Walker of Liverpool, who has trephined more than 30 cases since April, 1910, and who has kindly furnished the following notes of his earliest case:

A case of acute glaucoma in which tension had twice returned after trephining; V. reduced to light perception; rose after trephining to $\frac{6}{9}$, and remained good till patient's death a few months ago from apoplexy (that is, a history of about three and a half years).

Maddox, of Bournemouth, who ranks amongst the first supporters of the operation, writes in a personal communication:

I still regard your operation as admirable in most cases of both chronic and acute glaucoma, except in the absence of tension. In one case of double acute glaucoma, iridectomy was done on the one eye and trephining on the other, and the trephining answered best.

In addition to the names which have already been mentioned, there are many distinguished Continental surgeons

who have performed a number of sclero-corneal trephinings, and have expressed their satisfaction with the method. Among such are: Barraquer, of Barcelona; Coppez, of Brussels; Fuchs, of Vienna; Kuhnt, of Bonn; Sattler, of Leipzig; Schnaudigel, of Frankfurt; Vogt, of Aarau (Switzerland); von Mende, of Mitau (Russia); and Wagenmann, of Heidelberg.

From Canada and America the volume of evidence is overwhelming. There a host of surgeons are freely using the trephine; amongst others the list includes: de Schweinitz, Webster Fox, Friedenwald, Gifford, Jackson, Knapp, Marple, McReynolds, Reeve, Todd, Weeks, and Wyler.

With the view of laying emphasis on the work and opinions of others I have given no statistics of my own cases in this article, although I have an experience of over 1,000 trephinings to speak from. The statistics derived from this mass of figures will, however, be dealt with before long elsewhere.

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ON THE MULTIPLICATION AND INFECTIVITY OF T. CRUZI IN CIMEX LECTULARIUS.

BY

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The experiments described here were undertaken in order to ascertain whether *T. cruzi* is capable of existing and developing in *Cimex lectularius*, and if so, whether the forms found in the bed-bug are capable of infecting laboratory animals when injected into them, or when the bugs feed on the animals. Where not otherwise stated, the bugs used were not laboratory-bred, but were collected from infested houses. In order to exclude as far as practicable the possibility of natural infection with flagellates occurring in the insects examinations were made of the following:

1. A hundred and four unfed adults kept at laboratory temperature.
2. A hundred adults kept at 27° C.
3. Twelve adults fed once on a healthy mouse and thereafter kept at laboratory temperature.
4. (*a*) Twenty larvae taken from collecting jar and kept unfed at laboratory temperature; (*b*) 62 laboratory-bred larvae, once fed on a healthy guinea-pig and examined at intervals, kept at laboratory temperature.

The alimentary canal (stomach, gut, and rectum) was carefully examined for the presence of flagellates, but with a uniformly negative result, and the blood of the animals upon which adults and larvae were fed—mouse and guinea-pig—remained free from flagellates.

First Series of Experiments.

Having excluded natural infection in the bugs as far as was possible with the numbers available, adults were fed on a mouse infected with *T. cruzi*, and showing ten parasites to the field (Leitz obj. 6, oc. No. 4). The bugs were kept at laboratory temperature without being fed, and dissected at intervals. Several inoculations were made, with results as shown in Table I, from which it will be observed that the parasites proved infective on inoculation twenty-one and seventy-two hours after ingestion by *Cimex lectularius*. Crithidial forms with short flagellum were found in the stomach within twenty-four hours of the feed. Many of the inoculated mice died early of acute septicaemic infection. Several animals failed to become infected, although they were inoculated with bug contents containing large numbers of living parasites.

Table I.—*Results of Examination and Inoculation of Intestinal Contents of Bugs fed once on an Infected Animal and then Starved.*

No. of Experiment.	Time since Infecting Feed.	Parasites present in Material Injected (+).	Animal Inoculated.	Result of Inoculation.	Remarks.
1	6 hours	Stomach (+)	—	—	No inoculation done
	21 ,,	Stomach (+)	Mouse	Pos.	—
3	30 ,,	Stomach, gut, rectum, negative	—	—	No inoculation done
4	31 ,,	Stomach (+)	—	—	No inoculation done
5	46 ,,	Stomach (+)	Mouse	Neg.	—
6	72 ,,	Stomach, gut, rectum, negative	,,	Pos.	—
7	72 ,,	Stomach, gut, rectum, negative	—	—	—
8	4 days	Stomach, gut, rectum, negative	—	—	No inoculation done
9	4 ,,	Stomach, gut, rectum, negative	—	—	No inoculation done
10	7 ,,	Stomach (+), gut (+)	Mouse	—	Died in 48 hrs.
11	8 ,,	Stomach, gut, rectum, negative	—	—	No inoculation
12	9 ,,	Stomach, gut, rectum, negative	—	—	No inoculation bug dead
13	10 ,,	Stomach, gut, rectum, negative	Mouse	—	Died next day
14	10 ,,	Gut (+)	,,	Neg.	—
15	11 ,,	Gut (+)	,,	,,	—
16	12 ,,	Gut (+) rect. (+)	,,	—	Died in 5 days
17	13 ,,	Gut (+)	,,	Neg.	—

Second Series of Experiments.

In this series of experiments bugs fed once on an infected animal were subsequently fed upon healthy animals. Laboratory animals were inoculated at intervals either with faeces passed by the bugs or with bug contents. Such inoculations were only made when flagellates were found to be

Table II.—*Results of Examination and Inoculation of Contents of Bugs once fed upon an Infected Animal and subsequently upon Healthy Animals.*

No. of Experiment.	Time since Injecting Feed.	Parasites present in Material Injected (+).	Animal Inoculated.	Result of Inoculation.	Remarks.
1	11 days	Rectum (+), faeces	Mouse	Pos.	
2	11 ,,	Rectum (+), faeces	,,	Neg.	
3	11 ,,	Rectum (+), faeces	,,	,,	
4	20 ,,	Faeces (+)	Guinea-pig	,,	
5	25 ,,	Rectum (+), gut	,,	,,	Bug dead; forms like "blood forms" found.
6	26 ,,	Rectum (+), gut (+), stomach	,,	Pos.	
7	38 ,,	Serum (+)	Mouse	Neg.	
8	38 ,,	Serum (+)	,,	,,	Bug dead; forms like "blood forms" found.
9	38 ,,	Rectum (+), gut	,,	Pos.	
10	38 ,,	Faeces (+)	,,	Neg.	
11	38 ,,	Faeces (+)	,,	,,	Bug dead; forms like "blood forms" found.
12	38 ,,	Rectum (+), gut (+)	,,	Pos.	
13	39 ,,	Rectum (+), gut (+), stomach (+)	,,	Neg.	
14	39 ,,	Rectum (+), gut (+), stomach (+)	,,	Pos.	
15	42 ,,	Rectum (+), gut (+), stomach (+)	,,	Neg.	
16	42 ,,	Rectum (+), gut (+), stomach (+)	,,	,,	
17	43 ,,	Faeces (+)	,,	Pos.	
18	58 ,,	Rectum (+)	,,	Neg.	
19	69 ,,	Gut (+)	,,	,,	
20	69 ,,	Gut (+)	,,	,,	
21	77 ,,	Rectum (+)	Guinea-pig	Pos.	
22	77 ,,	Rectum (+)	,,	Neg.	
23	79 ,,	Rectum (+)	,,	,,	Bug dead.

present on microscopic examination. Table II gives the results of the inoculations. Animals which did not live for a reasonable time for infection to show itself are not considered in the table, the average incubation period in strain mice and guinea-pigs—namely, ten and eleven days—being taken as the criterion.

It will be seen from this table that inoculations into mice were successful eleven, thirty-eight (2), thirty-nine, and forty-three days after the infecting feed. Inoculations into guinea-pigs were successful twenty-six and seventy-seven days after the infecting feed. It will be noted that in three cases where the bug had died before dissection forms closely resembling blood forms were found in the rectum, and in each case the animal inoculated became infected.

Taking the foregoing two series of experiments, we find that of 26 mice inoculated at varying periods from the infecting feed 7 became infected, the incubation period being on an average twenty-two days and the duration thirty-one days. Guinea-pigs, 6 in number, were inoculated, and of these 2 became infected. The period from the infecting feed ranged from twenty to seventy-nine days, and the two which became infected were inoculated twenty-six and seventy-seven days respectively from the date of the infecting feed. The average incubation in these two was twenty-five days and the duration of the disease fifty-eight days. Of a total of 32 animal inoculations, therefore, 9 gave a positive result.

Form of Flagellate Injected.

In most cases there were present in the material used for injection large numbers of parasites, of very varying type, a large bulky crithidial form with a long free flagellum predominating. Frequently long, very slender parasites were encountered, and flagellates which approached the form found in the blood of infected animals. In the faeces of three bugs—all of them dead—parasites resembling "blood forms" were found, and in each case inoculation resulted in infection. Such forms were found twenty-six and thirty-eight days after the infecting feed. It was, however, not possible to decide which form or forms of flagellate caused infection on inoculation, as so many types were present.

Third Series of Experiments.

Experiments were undertaken in order to ascertain whether bugs previously fed on infected animals were capable of transmitting the infection to healthy animals. In the first attempts the bugs were fed on mice, but these animals did not prove suitable for this purpose, as they frequently died before the disease had time to develop. Guinea-pigs were more satisfactory, as the insects could be fed on them at short intervals without producing such ill effects as in the case of mice. The results of these experiments are given in Table III.

It will be observed that of the 28 animals used for transmission experiments, only one, a guinea-pig, became infected. The bugs which caused infection were kept at 27° C. During the experiments the bugs, with the exception of those kept in the cold, passed faeces very frequently upon the shaved skin of the animals used, and in many cases the faeces contained large numbers of parasites of various types. Such faeces produced infection in several animals into which they were inoculated. It is clear, therefore, that, although *Cimex lectularius* is capable of retaining the parasites in an infective condition for long periods, it fails, as a rule, even under the most favourable circumstances as regards feeding, to transmit the infection to healthy animals.

Examination for flagellates was made in the following groups of laboratory-bred larvae of bugs infected with *T. cruzi*:

12 hatched at 27° C. examined without being fed.
143 hatched at 23° C. examined without being fed.
25 hatched at laboratory temperature and fed and examined as in previous group.

All the examinations proved negative. Bugs kept in the cold did not feed well, and did not, as a rule, lay eggs. No evidence of hereditary transmission of the flagellates in bed-bugs was obtained from these experiments.

TABLE III. *Results of Transmission Experiments.*

No. of Experiment.	Time since Infecting Feed in Days.	Animal on which Fed.	Number of Bugs Fed.	Number of Days on which Fed.	Result.
1	2	Mouse	21	1	Neg.
2	4	,,	21	1	,,
3	7	,,	21	1	,,
4	9	,,	20	1	,,
5	10	,,	19	1	,,
6	11	,,	19	1	,,
7	13	,,	19	1	,,
8	16	,,	9	2	,,
9	23	Guinea-pig	9-7	10	,,
10	72	,,	6	5	,,
11	84	,,	6	5	,,
12	114	,,	5	1	,,
13	5	Guinea-pig	13-10	5	Neg.
14	11	,,	25	1	,,
15	16	Mouse	10	2	,,
16	17	Guinea-pig	12	5	,,
17	23	,,	10-4	11	Pos.
18	25	,,	10-5	5	Neg.
19	26	,,	9	2	,,
20	28	Mouse	1	5	,,
21	39	Guinea-pig	9	1	,,
22	42	,,	4-3	4	,,
23	72	,,	3-1	2	,,
24	79	,,	1	2	,,
25	11	Guinea-pig	33	1	Neg.
26	17	,,	12-8	5	,,
27	27	,,	8	5	,,
28	41	,,	8-7	5	,,

In experiments 1 to 12 the bugs were kept at laboratory temperature (average 13.5° C.; max. 20°, min. 5° C.).

In experiments 13 to 24 the bugs were kept at a temperature of 27° C.

In experiments 25 to 28 the bugs were kept in a cold room (average 7.2° C.; max. 15°, min. 2.2° C.).

Conclusions.

1. *T. cruzi* is capable of living and multiplying in *Cimex lectularius* for long periods.

2. The parasites found in the bed-bug are infective on inoculation as early as twenty-one hours and as late as seventy-seven days from the infecting feed.

3. It is not possible to say which of the many different forms occurring in the bug causes infection in the vertebrate host.

4. Transmission of the disease to healthy animals by feeding infected bugs on them is of very rare occurrence. It was only once observed in the course of these experiments.

5. There is no evidence of hereditary transmission of *T. cruzi* in *Cimex lectularius*.

THE sixth congress of the Association of French-speaking Doctors of North America will be held this year at Quebec from August 31st to September 3rd, under the presidency of Professor Arthur Rousseau. The subjects proposed for discussion are: Accidents to workers in the province of Quebec; the feeding of children in Quebec; various forms of nephritis; drinking waters in the province of Quebec; high altitude cures in the province of Quebec; and mineral waters in the province of Quebec. Dr. Triboulet, of Paris, will deliver an address on the hygiene of nurslings and particularly of crèches, and will also give a lecture on some subjects to which he has given special attention. The general secretary is M. A. Vallée, 22, rue Sainte Anne, Quebec.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANTIMONY IN PNEUMONIA.

From time to time I have read with much interest the different suggestions made in the British Medical Journal as to the treatment of pneumonia. May I commend to the trial of your readers the use of antimonial wine in doses of 2½ minims? I have used it now for some years in these cases, and found almost invariably that the crisis has come at the end of the fourth day. Recently, having found the benefit of aconite in 2-minim doses in cutting short colds which are creeping on to the lung, I have used it for the first forty-eight hours in pneumonia, after that going on to the antimonial wine, with the result that the temperature has tended to drop before the fourth day. The only cases that have been somewhat disappointing are those in which the pneumonia has been a complication of influenza. In those the crisis has come at the end of the fourth day, but it has not warded off the other lung taking on inflammatory action. Ringer, in his valuable work, alludes to the use of each of these drugs.

Tiverton. C. E. Liesching.

NASAL DISEASE AS A CAUSE OF SPINAL SCLEROSIS.

A woman, aged 27, first seen in January, 1911, complained of loss of power in feet and legs and occasional loss of control of bladder and rectum. She walked by the help of one or two sticks, with unsteady gait, dragging one leg, and inclined to trip and fall. The patellar reflexes were much exaggerated, ankle clonus was present, and the Babinski sign was extensor. Sensation to pain was much diminished in all parts of the body below the second dorsal vertebra. There appeared to be some transverse myelitis at this spot. The case was afterwards diagnosed as lateral sclerosis by a specialist of experience, and a very bad prognosis given.

The history of the case is as follows: As a child she was very healthy, but when at a boarding school she had an attack of influenza followed by trouble in the nose. She entirely lost the sense of smell, and was supplied with extra pockethandkerchiefs, because of the abundant discharge. Some treatment was adopted, but it was not followed up. The trouble in the legs became very manifest when she was 21 years of age.

When seen in 1911 the nose contained a hard leathery crust, curved upon itself, and when this was removed the mucous membrane underneath was found to be ulcerated. It appeared not unlikely that this condition of chronic atrophic rhinitis was the cause of all her symptoms, and the treatment was therefore directed to the nose. Under the persistent use of douche and spray the nasal condition cleared, and this was accompanied by improved health, greater control over the sphincters, and improved walking. She had also a course of electrical treatment for the spine.

This is now three years ago. The nose still receives regular attention, but nothing is being done for the spine. The sphincters give no trouble. The walking is still improving, and she is able to perform all her ordinary duties without difficulty. To all appearance the cause has been found and kept under control, and the disease checked.

Other cases have been seen in which oral sepsis appeared to be the cause, for the treatment of this condition has been followed by improvement in the spinal symptoms.

Nottingham. Jos. S. Bolton, M.D.

POSTERIOR GASTRO-JEJUNOSTOMY WITH ENTERO-ANASTOMOSIS.

As duodenal ulcer and pyloric obstruction is a common illness nowadays, and as the usual "no loop" operation is so generally done—very often with ultimate results that are not pleasant for the patient—I venture to put forth a plea for the short loop double operation in every case with entero-anastomosis.

I have done this operation—posterior gastro-jejunostomy with entero-anastomosis—at the same time, in all my cases (26) during the last 2½ years, and find that the patients do not return with "miserable" sensations; in fact, they all have kept quite well. It seems to me that by making an entero-anastomosis as a matter of course, Nature's plan is imitated, as the bile and pancreatic fluid join the food stream two inches below the stomach opening. The after-treatment is simplified, there is rarely any vomiting at all, and the patient need not sit up in bed the first week; he can lie in a comfortable recumbent position, thereby avoiding undue strain on the abdominal sutures. The double operation should not take longer than one hour twenty minutes, allowing a few minutes for putting on a fresh pair of gloves.

I have never had a case of peptic ulcer resulting.

G. Gore Gillon, F.R.C.S.Ed.,
Honorary Surgeon, Auckland Hospital, N.Z.

THE ETIOLOGY OF BERI-BERI.

In the British Medical Journal of October 25th, 1913, Messrs. H. Fraser and A. T. Stanton wrote on the etiology of the genuine beri-beri found in the East, and they quite properly pointed out that forms of the polyneuritis found in many other parts of the world may not be identical with this disease. I may mention a few points in connexion with the disease which I have always regarded as beri-beri in Southern Nigeria. I found it occurring most often among the Kroo boy artisans who came down to us by steamer and worked in gangs, and I must confess that their diet was to a large extent polished rice. The symptoms which they exhibited were always those of typical polyneuritis, generally of a dry, non-oedematous form. The disease occurred sporadically and never in epidemics, and there was never more than one, or at most two, boys suffering from it at the same time in the same gang. They had a pseudo-ataxic gait, and I generally recognized a case of what I called "beri-beri" some distance away when I saw him coming out from the Kroo house by his peculiar way of walking. This disease was more or less constant, and I generally saw a good number of cases of it every year. Several of them died in hospital, where they received every care and nourishment; the majority, however, recovered on being invalided to their own country.

Every gang of Kroo boys had its cook, all the boys pooled their rations, and the cook exchanged a certain amount of the rice and biscuit daily for fresh food; the various articles he thus obtained (fish, palm oil, vegetables, etc.) he cooked together in a kind of general stew, and all the boys sat round and fed together. When the boys arrived at the beginning of the year they generally had a half-starved appearance, but when they had been down with us for a few months they got both fat and strong, and yet among every two or three gangs of these swarthy, robust artisans a case of this peculiar polyneuritis was found.

Among the Europeans, in respect of whom the rice theory (or fact) can be excluded, I noticed a fair number of cases of polyneuritis. Symptoms always set in gradually with a sensation of walking on something soft and a loss of sensation, particularly in the lower extremities; there was pain on squeezing the calves of the legs, followed by loss of tendon reflexes, and afterwards all the typical symptoms of a multiple neuritis set in with, as a rule, a certain amount of oedema. I always, when possible, sent such cases home as soon as diagnosed. The only one who died was a patient who refused to go; he succumbed to heart failure with cyanosis rather suddenly in the manner so graphically described by Manson. The previous day he had been working as usual in his office. It is possible that none of these cases may have been true beri-beri as found in the East; if not, then there must be some other form of polyneuritis occurring endemically in certain tropical countries which has not been hitherto described.

In conclusion, I would wish to ask Dr. Casey what diet the Boer prisoners received in St. Helena during the South African war; it would be interesting to know also what were the rations of the inmates of the Richmond Lunatic Asylum when the so-called epidemic of beri-beri occurred in that institution about twenty years ago.

Gallegos, Argentine. E. G. Fenton.

FEBRILE INTESTINAL SCHISTOSOMIASIS AND ITS OCCASIONAL RESEMBLANCE TO FEBRILE APPENDICITIS.

IT is interesting to note how the same problems in tropical medicine crop up in different parts of the world, and often about the same time. As an example, I may quote a recent experience in Caracas. Shortly after my arrival here, I was speaking to Dr. R. Gonzaloz-Rincones, so well known on account of his work on the medical entomology of Venezuela. We were talking about parasitic diseases, and he was telling me that only the intestinal form of schistosomiasis occurs in Venezuela. In this connexion he drew my attention to Captain R. G. Archibald's valuable paper entitled "Intestinal Schistosomiasis in the Sudan," which appeared in your issue of February 7th. He said he was very glad to see this paper, as the febrile condition which it describes is found in cases of the disease in Venezuela. On several occasions it has led to a faulty diagnosis of appendicitis, and useless operations have in consequence been performed on cases which were afterwards proved to be suffering from schistosomum infection. It seems advisable to draw attention to this danger, while it is probable that vaccine treatment on the lines suggested by Captain Archibald will prove as beneficial here as it has done in Khartoum.

ANDREW BALFOUR, C.M.G., M.D.,
Director-in-Chief, Wellcome Bureau
Caracas, Venezuela. of Scientific Resear h.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

LONDON JEWS' SOCIETY'S HOSPITAL, JERUSALEM.

CHRONIC INTUSSUSCEPTION OF THE APPENDIX.

(By C. H. CORBETT, M.B., Ch.B.Edin.)

ON November 5th, 1913, a patient, S. J., aged 4, was admitted giving a history of periodical abdominal pain. The duration of the condition had been two months. There had been no history of constipation, diarrhoea, vomiting or fever. On being put under observation, it was found that the periods of excruciating pain lasted several minutes, with intervals of ten to fifteen minutes.

The persistent position of the patient was a dorsal one, with legs and thighs well flexed. The temperature was subnormal, the organic functions were normal, and there was no sign of a serious abdominal condition. Five days after admission the abdomen was resistant on the right side, in the hypochondriac, lumbar iliac and outer halves of the hypogastric, umbilical, and epigastric areas. Three days later—eight days after admission—peristalsis was observed immediately below the gall bladder region and on deep palpation immediately below the infracostal line in the same vertical plane as the peristalsis and gall bladder a seemingly elastic tumour of the size of an apple was felt. The same day an exploratory incision was made through the right rectus sheath, a small tumour was detected lying on the posterior abdominal wall just below the lower end of the right kidney.

On further examination outside the abdominal cavity, this tumour, the size of a large walnut, was found to lie within the lumen of the ileum and could be propelled into the caecum. The appendix was not present, the site of its origin from the bowel being replaced by a band of adhesion which at first suggested an undeveloped appendix. There was no other sign of inflammation but this band. On opening the ileum a conical tumour the size of a date was revealed. The apex of the cone admitted a probe for about three-quarters of an inch. The adhesion on the outside bowel wall was removed; the tip of the appendix thus revealed was seized; the adhesions between the peritoneal covering of the appendix and those of the ileum and caecum were removed and the intussuscepted appendix reduced and amputated. The intestinal and abdominal walls were now sutured. The patient made an uninterrupted recovery.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BOMBAY BRANCH.

AT a clinical meeting, held in the hall of the Jamsetjee Jijibhoy Hospital, Byculla, on March 19th, Lieutenant-Colonel ASHTON STREET, I.M.S., in the chair, the following were among the exhibits:—Lieutenant-Colonel ASHTON STREET: (*a*) A Hindu lad, aged 10 years, with well-marked elephantiasis of the leg; it had commenced when the patient was 3 years old; (*b*) a specimen of ossifying sarcoma of the lower jaw; it had been removed, together with part of the jaw, from a man who had previously been operated on at various hospitals for cystic swelling of the jaw; (*c*) a leg and foot showing well-marked elephantiasis; it was removed from a patient who in Calcutta had had the deep fascia of the limb dissected out for his trouble as a treatment of the condition. The trouble had, however, recurred, and consequently the limb was amputated at the patient's request. Major T. S. NOVIS, I.M.S.: (*a*) A series of specimens, including an inverted Meckel's diverticulum which had caused intussusception, and various skiagrams of fractures which the exhibitor had treated by wiring or screwing the broken ends; (*b*) two patients who had undergone treatment of this order some time previously, and in both the anatomical and functional results were excellent. Also shown were a series of cases of fracture still under corresponding treatment in the wards of the hospital, the screws or wiring and the deposition of callus being demonstrated by means of the x-ray screen. Dr. F. S. MASTER: A patient, with a specific history, who had been treated in the out-patient department of the Jamsetjee Jijibhoy Hospital for over a year; he had several ulcers, which had been treated by scraping and other means, and some scars typical of syphilis; he had undergone mercurial treatment, and was now an in-patient, receiving salvarsan treatment. Major R. MARKHAM CARTER, I.M.S.: A series of pathological specimens from the Grant College Pathological Laboratory. Major E. F. GORDON TUCKER, I.M.S.: Some cases of locomotor ataxy. Major L. C. EVANS, I.M.S.: A specimen of ovarian pregnancy. The meeting, which was the largest clinical gathering ever held by any medical society in Bombay, concluded with a vote of thanks to its organizer, Dr. D. R. Bardi, the Honorary Secretary of the Branch.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

Ante-natal Pathology.

AT a meeting on April 2nd, Dr. W. S. A. GRIFFITH in the chair, a discussion on the need of research in ante-natal pathology was opened by Dr. AMAND ROUTH, whose paper in full will be found at p. 902 of this issue.

Dr. J. W. BALLANTYNE (Edinburgh), in the course of a contribution read in his absence, said that the problems to be studied included the physiology and pathology of pregnancy as it was seen in the pre-maternity wards of any hospital, the physiology and pathology of the offspring in the germinal, embryonic, and fetal stages of its existence, and the physiology and pathology of the decidua. Without a serious study of ante-natal pathology there could be no marked improvement in race health, and race health was the watchword of the present day; eugenics was attempting to solve it, but eugenics without obstetrics and ante-natal pathology and hygiene would have but small success.

Dr. F. W. MOTT dealt with a number of facts bearing on ante-natal pathology which he had noted during the course of an investigation of the family history of cases of juvenile paralysis carried on by him for many years. His remarks, which were supported by diagrams and charts, included the history of

34 syphilitic women who between them became pregnant 175 times. Of the resulting children, 104 were either born prematurely or died in early infancy; 41 were more or less seriously diseased in some way or other, and 30 were apparently healthy. It was possible, however, that many of the latter had suffered subsequently to the date of the investigation, and it was certain that a considerable percentage of them would have given a positive Wassermann reaction. Four of the mothers had not become infected with syphilis until they had between them become pregnant 15 times, each of these pregnancies resulting in the birth and rearing of a healthy child. After infection the same women became pregnant 22 times, such pregnancies in 13 instances resulting either in abortion, stillbirth, or death of the infant in early infancy; in the remaining 9 cases 5 of the children were seriously diseased, and there was no proof that the other 4 might or might not be healthy. The speaker agreed with Neisser that the mother of a syphilitic child was herself syphilitic, even if she showed no signs of it. He had examined 22 stillborn and prematurely born fetuses received from Shoreditch Infirmary, and the *Spirochaeta pallida* was found in 11 of them.

Dr. Darwell Smith, having described his investigation of the influence of the nutrition of the mother on her delivery, puerperium, and the infant, drew the conclusion that if the mother was in a bad state of nutrition at the time of her labour the percentages of stillborn and prematurely born children and of the post-natal infantile mortality were increased, while the average weight of a full-time child was reduced. On the other hand, a good state of nutrition increased the mother's supply of milk, and also the average weight of the child at birth.

Dr. Leith Murray (Liverpool), after stating that the present occasion seemed one less for the discussion of particular problems than for the enumeration of those which had to be faced in connexion with the subject, confined his remarks mainly to the relation of immunity to pregnancy production. A study of this subject, he thought, would lead to pronounced alteration in the existing appreciation and treatment of the toxic conditions arising in pregnancy; his own work had convinced him that complement fixation and sensitized reactions occurred in pregnancy. The main part of the research to be done on ante-natal pathology was work for experts, more especially in serology and biochemistry.

Dr. Eric Pritchard (London), speaking of tuberculosis, said that this was difficult to demonstrate in newborn infants and must be still more difficult to demonstrate in unborn babies. In one case he had seen a viable child born of a mother who two days later had died of general tuberculosis. Holt of New York had maintained that the so-called bronchopneumonia of new infants was often of tuberculous origin, and the speaker himself believed that in newborn infants latent tuberculosis often existed. For a time such children appeared to be healthy and often of superior nutrition, but later on they developed symptoms of a tuberculous nature.

Dr. Camac Wilkinson contended that the infection of syphilis was similar to that of tuberculosis, and there appeared to him irresistible evidence that tuberculosis could not be conveyed by the paternal element. Infection of the embryo or fetus, though rare, certainly occurred through the mother. Tubercle bacilli, being non-motile, could only be forced into the tissues of the fetus under extraordinary conditions. In rare cases tuberculosis of the placenta had been observed, especially in cattle, and this would account for the rare cases of congenital tuberculosis. He was a convinced advocate of the great value of tuberculin, and had observed on several occasions that during a course of tuberculin women who had been sterile for many years became unexpectedly pregnant, and he held that pregnancy was no contraindication to the tuberculin treatment.

The subject having been further discussed by others present,

Dr. Amand Routh, in his reply, said that the discussion had made it evident that very little was certain as regards ante-natal disease, either in respect of its relative incidence, the source and method of infection, or its prophylaxis and treatment. In regard to syphilis, the very existence of paternal infection was denied by such an authority as Dr. Mott, whose speech and diagrams clearly showed that paternal infection was, at any rate, infrequent; on the other hand, many of his diagrams showed that a mother who presented no clinical evidence of syphilis might yet be delivered of infected children. The speaker did not think that latent syphilis was the explanation of all such cases. When Dr. Mott had collected further pedigrees with Wassermann reactions his figures would be more conclusive. The speaker saw no particular reason why paternal infection and fertilization of the ovum should not be simultaneous, nor did he see why the fertilized ovum, freshly implanted upon the uterine mucosa, could not be easily infected by the male parent's infected semen. It was true that the cases in which tuberculosis could be proved to have infected the embryo or fetus *in utero* were relatively few, but if tubercle did attack the embryo—and this he thought very likely—its effect upon the delicate cellular three-layered blastoderm would be considerable, and could easily cause dystrophic abnormalities which would lead to early and perhaps unrecognizable abortions. Research must decide these points, as well as the curious fact that in syphilis spirochaetes were but rarely found in the early embryo, and were yet found in abundance in the fetus. Possibly the excellent results ascribed by Dr. Wilkinson to the use of tuberculin injections during pregnancy were partly due to the tuberculin being used at a time when the physical condition of the tuberculous mother was undergoing that improvement which almost always attended pregnancy. Dr. Leith Murray's remarks on the placenta as an immunity producer were very subtle, and showed that an experienced expert must undertake research work in this department. Dr. Darwell Smith's conclusions would greatly encourage those who were trying to ameliorate the lot of pregnant women. The discussion, the speaker hoped, would greatly stimulate research.

MANCHESTER MEDICAL SOCIETY.

At a meeting on April 1st, Dr. Archibald Donald in the chair, Dr. Ralph Vincent opened a discussion on the *Bacteriology of milk* in relation to infant feeding and to the treatment of alimentary disease. He grouped the organisms according to the conditions determining their growth in milk. (1) Bacteria producing lactic acid, but not producing gas: This group was represented by the *Streptococcus lacticus* and the *Bacillus lacticus*. The former was the typical organism growing in pure milk at 38° C. At a later stage, when the acidity had become too great for the streptococcus, the *Bacillus lacticus* appeared, for this organism was exceptionally tolerant of acid. (2) Bacteria producing lactic acid, carbon dioxide, and alcohol: This group embraced the whole of the colon organisms, and included the *Bacillus acidi lactici* (Hueppe), *Bacterium acidi lactici* (Esten), *Bacillus lactis aërogenes* (Escherich), and the *Bacillus coli communis*. When pure raw milk was incubated the growth of the organisms belonging to this group was inhibited by the growth of the organisms belonging to the first group. When milk, however, was grossly contaminated by colon organisms these might acquire dominance, and in such cases the curdled milk showed evidence of gas production. (3) Bacteria growing in "pasteurized" milk: The *Bacillus putrificus* and the *Bacillus aërogenes capsulatus* were examples of this group, and their products were of a highly irritant and dangerous character. (4) Bacteria growing in milk after it had been raised to 100° C., owing to the fact that their spores had not been destroyed: These organisms were found in milk that had been boiled or "sterilized" and in condensed milk. The group embraced a large number of organisms, the chief representatives being the *Bacillus subtilis*, the *Bacillus mesentericus*, and the *Bacillus mesentericus vulgatus*. When they developed in the intestine extremely powerful poisons of an alkaloidal character were created, and the absorption of these poisons produced profound coma and death. The contents of the small intestine were normally acid owing to the formation of lactic acid from lactose by the lactic bacteria. Were it not for this acid condition putrefactive processes would occur. In the soil the conditions were reversed, for putrefaction was the essential process by means of which dead organic matter was decomposed and rendered available for the vegetable kingdom. He discussed the methods of bacteriological examination of

intestinal dejecta employed at the Infants Hospital, and drew especial attention to the pathological conditions induced by improper diet. When the infant was deprived of the lactic organisms naturally present in milk, the colon organisms become proteolytic and grave illness resulted. All his observations had gone to show the extreme importance of the milk for infants being given in its raw condition. He believed that the improper feeding with cooked food encouraged the development of tuberculosis, and that the boiling of milk played an important part in the production of diseased conditions in infancy and childhood. The speaker concluded with a lantern demonstration of numerous photomicrographs illustrating the organisms found in various pathological conditions of the alimentary tract. Dr. NATHAN RAW said he did not think it was sufficiently well known that pure milk was sterile, and that the lactic organisms were non-pathogenic. Dr. Vincent's remarks applied to the conditions obtaining at the Infants Hospital, which enjoyed rather exceptional benefits, but in such towns as Liverpool and Manchester it was surely safer to pasteurize the milk before giving it to children. His own observations had brought him to the conclusion that there was a very real danger in such towns of infants contracting tuberculous disease from untreated milk. He would like to ask Dr. Vincent if he did not think that bovine tubercle bacilli were capable of infecting children. Dr. LAPAGE said that he would like to have heard Dr. Vincent's opinion on dried milk. He had come to the conclusion that in slum districts it was safer for the milk to be pasteurized than to be given untreated to infants. Dr. VINCENT, in his reply, said he was astonished to hear Dr. Raw speak of a sterile milk. Neither human milk nor cow's milk was sterile. Collected with the greatest care, both milks, after about eight hours' incubation at blood temperature, normally showed a profuse growth of the *Streptococcus lacticus*. The *Bacillus aërogenes capsulatus* could always be found in cow's milk, provided a sufficient quantity of milk were taken. He did not consider the "pasteurization" recommended by Dr. Raw could be relied upon to destroy tubercle bacilli. He based his statement in regard to cooked milk and tuberculosis simply upon practical experience, not only of himself, but of many others. He could not establish any relationship between the consumption of raw milk and the incidence of tuberculosis. On the contrary, he found that children fed on boiled or condensed milk were much more prone to the disease, especially in its most serious forms. He found it difficult to understand the attitude generally adopted by medical men who favoured the boiling of milk, for they were uniformly silent on the subject of boiling the butter, a concentrated milk product always prepared from raw milk. Practically all the infants attending the out-patient department of the Infants Hospital were fed on raw milk, which the mothers obtained from the ordinary milk shops. The infants did extraordinarily well, and the work there afforded no justification for the advocacy of boiled milk. He was inclined to agree with Dr. Lapage with regard to dried milk. If a child had to be fed on a cooked food, then dried milk was better than boiled milk.

MANCHESTER PATHOLOGICAL SOCIETY.

AT a meeting on April 8th, Dr. A. E. BROWN in the chair, Dr. C. P. LAPAGE, in speaking of the *Clinical pathology of the cerebro-spinal fluid* in meningitis in children, laid great emphasis on the value of performing lumbar puncture early, and of using a specific serum as soon as possible. More than 70 per cent. of his cases of meningitis were tuberculous. He also described the technique of mounting the film which usually forms in this variety of meningitis, and said that if the cerebro-spinal fluid from a case that was obviously one of meningitis remained clear and retained its power of reducing Fehling's solution, the disease was probably tuberculous. Dr. D. E. CORE, in a paper on *Subarachnoid haemorrhage*, said that the naked-eye appearances associated with diffuse haemorrhage varied according as to whether the bleeding began at the base of the brain or upon the lateral convexity. Syphilis was an important agency in the production of the condition mentioned; in none of the cases he had previously observed had there been a history of traumatism. The leading symptoms were profound coma, epileptiform tremors, and finally flaccid paralysis in the limbs which had first been convulsed. Death occurred early as a rule. Dr. PAUL, after recording a case of disseminated softening in the spinal cord in a patient suffering from pancreatic cancer, said these small foci of softening were not commonly found in cords taken from cancer cases, but had been found in other diseases of a toxic nature and in caisson disease. If sufficient time elapsed before death, they caused secondary degeneration; they were characterized by marked swelling of the axis cylinders, absence of inflammatory reaction and neuroglial proliferation, but the vessels showed a high degree of hyaline degeneration. The speaker did not regard these foci as truly myelitic, but rather in the nature of ischaemic softenings. Mr. R. OLLERENSHAW read a paper on *Sacrococcygeal tumours*, with a report of a large teratoma.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT a meeting on April 17th, Dr. A. K. CHALMERS, President, in the chair, Dr. A. B. PETERS, in a paper on the *Elimination of cross infection* in fever hospitals, pointed out that though surgery had long abandoned the view that the air was an appreciable factor in the conveyance of infection to a wound, medicine still regarded it as being the principal medium in the carriage of the common infectious diseases of children. Experimental evidence in some degree supported the latter view, for it had been shown that on speaking or coughing in a still atmosphere, organisms might be conveyed from the mouth in droplets of saliva to a considerable distance. Still, it seemed probable that in a well-ventilated ward a sufficient dose of virus to cause disease was not carried by this means except over a very limited distance. At the Bristol Fever Hospital all patients were kept in bed for a fortnight after admission, and each was provided with a separate piece of soap, towel, face flannel, comb, and throat brush, which were kept in a locker beside the bed. The nurses wore rubber gloves lined with canvas when closely handling a patient, and the gloves were immersed in a solution of perchloride of mercury before the nurse went on to the next patient. All eating utensils were boiled after each meal, and other utensils were cleansed and disinfected after use. By the adoption of these methods there had been successfully prevented the spread of scarlet fever, diphtheria, whooping-cough, rubella, and mumps when accidentally introduced into a ward not intended for their reception. Prior to the adoption of the system about 2.5 per cent. of the patients contracted a second disease while in hospital. During the first year after its adoption the percentage was reduced to 0.9, and after the windows had been kept open the year through in the acute wards no secondary infection occurred at all although chicken-pox was introduced thirteen times in one year. Another result of the adoption of the aseptic and open-air treatment had been a reduction in the period of detention in hospital, which had been brought down to an average of thirty-five days, compared with an average of fifty-five days in former years. Dr. ROBERT MILNE contended that he produced the same results as Dr. Peters at the Barnado Homes by swabbing the throats of the children with carbolic oil, and rubbing them for ten days with eucalyptus oil. Dr. G. S. BUCHANAN said that no doubt the infectivity varied at different times, and this must be taken into account when comparing one experiment with another; moreover, each infectious disease must have its own natural history. It was satisfactory to find that there was a reduction in the number of septic cases when extreme care was taken in regard to secondary cases. Dr. E. H. T. NASH pointed out that Dr. Milne was able to begin the treatment of his cases at a much earlier period than it was possible for a medical officer of health to do. Dr. MEREDITH YOUNG dwelt on the importance of getting cases into hospital early and of preventing overcrowding. Scarlet fever wards should be disinfected at frequent intervals, and be allowed to remain fallow for a time and open to the air and sunlight. Dr. G. BUCHAN did not consider the eucalyptus oil treatment was any treatment at all; and Dr. T. W. N. BARLOW said that in spite of his adoption of it for four years, he had no reduction in the number of secondary cases or of cross infection.

Reviews.

DISEASE IN THE NEW-BORN.

SOME readers of the present day will remember the publication of Max Runge's book, entitled, *Die Krankheiten der ersten Lebenstage*. This was in 1885, nearly thirty years ago therefore, and to many then its subject must have seemed altogether insufficient to make a book. Its boards, indeed, contained some two hundred pages, but the margins were wide, the pages were not overburdened with print, and the number of diseases dealt with was small. Changes have occurred since then, however, and neo-natal medicine, like the sister subject of ante-natal medicine, has enormously widened its bounds. Gradually in these three decades it has come to be recognized that it is of vast importance to study diseases as they appear in and are modified by the earliest periods of life. A literary reflection of this changed viewpoint is to be seen in Dr. VON REUSS'S *Die Krankheiten des Neugeborenen*,[1] with its 560 closely printed pages, each containing about 500 words, with its hundreds of maladies and morbid states of the new-born, and with its numerous illustrations. Neo-natal medicine now stands firm and sure, broad based upon the strong foundations of abundant observations, and a more rational knowledge of the peculiarities of the physiology of the early time in post-natal life with which it deals.

Dr. von Reuss's work begins logically and appropriately with a chapter devoted to neo-natal physiology, in which body weight and measurements, nutritional interchanges and growth, the blood, the circulation and respiration, the temperature, the state of the skin, and the reactions of the nervous and sensory organs are all considered fully and carefully. It is, however, an arresting circumstance that this chapter on physiology should contain a section dealing with icterus neonatorum; in this fact there is evidence that there is still much to be elucidated regarding health and disease in the new-born period of life, for if this condition is a disease then it ought to be placed with the diseases, and if it is a healthy phenomenon it ought not to wear the terminological livery of a disease. Its frequent occurrence ought not to incline us to regard it as normal, and many an experienced practitioner feels anxious about the welfare of the new-born infant who exhibits a degree of jaundice which in an adult would certainly lead to a closer inquiry than the few words which are usually spoken to the child's nurse, and to a more active treatment than the teaspoonful of castor oil which is administered to the infant. The second chapter is concerned with the feeding of the new-born child, with lactation and its anomalies, with artificial feeding, with mixed nursing, and with wet nursing.

The third chapter deals with that opprobrium of pediatrics, the premature infant. It is a very difficult subject to study, as it is a heart-breaking task to attempt to rear a fetus brought into an extrauterine environment before its time; but the two primary considerations should be how to make the life after birth as nearly as possible similar in its environment to that which precedes it, and to supply to the premature infant those chemical substances which it would naturally have received through the placenta but for its untimely expulsion from the womb of its mother. The fourth chapter is a short but interesting dissertation on "constitutional debility," and the fifth is a long and extraordinarily important discussion of the injuries which the child may receive in the act of birth, and on the results, immediate and late, which follow upon them. The caput, the cephalhaematoma, the rupture of the sterno-mastoid muscle, the injury to the facial nerve, the cranial depression, etc., are all considered in detail and with much practical wisdom and many details of treatment.

The remaining 300 pages are given over to a systematic setting forth of the diseases of the individual organs and groups of organs, including not a few strictly ante-natal malformations and even some monstrosities. Four chapters are given to these morbid states, from the sixth to the ninth; the seventh and eighth deal respectively with haemorrhages and haemorrhagic states and with general maladies of uncertain etiology (including Buhl's disease and Winckel's disease), and the ninth has for its subject infectious and septic diseases, including the various fevers, tuberculosis, syphilis, and sepsis. The work, as a whole, constitutes a safe and reliable guide in dealing with the diseases of early life, and a word of praise is called forth by the illustrations and the admirable coloured plates. There is a copious bibliography, notably strong on the Continental side, and the indices are full enough to be worth consulting.

The book forms a part of the *Enzyklopaedie der klinischen Medizin*, which is under the joint editorship of Langstein, von Noorden, von Pirquet, and Schittenhelm.

[1] *Die Krankheiten des Neugeborenen.* Von Dr. A. Ritter von Reuss, Assistent an der Universitäts-Kinderklinik, Leiter der Neugeborenen-Station an der I. Universitäts-Frauenklinik zu Wien. Berlin: J. Springer. 1914. (Sup. roy. 8vo, pp. 564; 90 figs. Mk. 22; bound, Mk. 27.60.)

THE EPIDEMIOLOGY OF POLIOMYELITIS.

THE student of epidemiology who is unacquainted with the French and German languages is even more seriously handicapped than workers in other departments of medicine, but in the particular case of acute anterior poliomyelitis he is not so badly off as usual. In an excellent paper communicated to the Epidemiological Section of the Royal Society of Medicine in 1911,[2] Dr. F. E. Batten provided a concise account of the history and distribution of the disease down to the time of writing. In the following year Dr. R. J. Reece's study of the outbreaks in Devon and Cornwall was published,[3] and Dr. WADE H. FROST, of the United States Public Health Department,[4] has now issued a volume of *Epidemiologic Studies of Acute Anterior Poliomyelitis*, based upon a first-hand inquiry into outbreaks of the disease in Iowa (1910), Cincinnati, Ohio (1911), Buffalo and Batavia, New York (1912).

The results of his inquiry may be said to confirm those of previous investigators. In the first place it seems clear that if the disease is communicable from person to person its contagiousness is of a very different order from that observed in, for instance, scarlet fever. It may be remarked that the kind of statistical evidence upon which a satisfactory judgement can be based is not usually forthcoming. What we really require is not only the number of cases occurring in a community and the number of families and tenements at risk, but also the size of each family group and the complete distribution of cases in sets of one, two, etc. Even when all these data are forthcoming the calculations involved are intricate, owing to differences of opportunity for contact and questions of time sequence, and in practice the data will not be available owing to the impossibility of detecting all the mild cases.

This apparently slight intensity of contagiousness is coupled with a considerable regularity of seasonal incidence, a marked irregularity in lines of geographical dissemination, and a relatively greater incidence upon rural districts. These peculiarities have led some epidemiologists to surmise that poliomyelitis is an insect-borne disease. Dr. Frost points out that there are serious difficulties in the way of accepting this view. Thus the intervention of the commoner insect parasites is rendered improbable by the fact that the disease is uniformly distributed among persons of various social strata. Further, the scattering, as contrasted with grouping together of cases, is a phenomenon not at all characteristic of notoriously insect-borne diseases, such as yellow fever. It should also be noted that any theory of transmission must reckon with the differential incidence of the disease upon children. We do not, however, think that the last mentioned fact is decisive as against the theory of insect transmission, in view of our increasing knowledge of the epidemiology of summer diarrhoea.

Dr. Frost has constantly in mind the question of healthy carriers as a source of infection, but no very distinct epidemiological evidence as to this seems to have been obtained. He writes: "The conclusion that susceptibility to poliomyelitis is comparatively rare and that the incidence of the disease is limited chiefly by a general immunity rather than by a dissemination of the virus, is reached primarily by exclusion, since no other hypothesis

[2] *Proc. Epidem. Sect., Roy. Soc. Med.*, May, 1911.
[3] Ibid., January, 1912.
[4] *Epidemiologic Studies of Acute Anterior Poliomyelitis.* By Wade H. Frost. Treasury Dept., United States Public Health Service, Hygienic Laboratory, Bulletin No. 90. Washington. 1913. (Pp. 258.)

yet advanced satisfactorily explains the epidemiological peculiarities of the disease. The conclusion is, however, greatly strengthened by direct evidence, namely, the demonstration of the virus in the secretions of persons apparently well. Obviously, the fact that these persons, though carrying the virus in their secretions, have developed no clinical evidence of infection is proof of their insusceptibility. Should passive carriers be shown to be actually more numerous than clinically recognizable cases of poliomyelitis, then it will be proven that immunity to this infection is more general than susceptibility."

There can be no doubt that the epidemiology of poliomyelitis raises questions of the greatest importance. Among others may be mentioned the analogy its behaviour presents to that of diphtheria in the middle of the nineteenth century, a consideration which has been noted by Dr. Reece. The suggestion is that both diseases first appeared as epidemics in sparsely populated districts, and that they subsequently acquired a hold upon urban populations. Readers of epidemiological history will be reminded of the development of epidemic plague in this country, which after its reintroduction in the fourteenth century tended to be at least as much a disease of rural districts as of towns, but subsequently mainly confined its manifestations to the latter.

Students of these and kindred problems cannot afford to neglect Dr. Frost's valuable work.

EPIPHORA.

Within recent years the surgical endonasal procedures for the cure of obstruction and disease of the lacrymal efferent passages by means of artificial nasal openings have increased in number. This fact, together with the ever-growing interest in this problem, has induced Professor Ónodi[6] to publish a digest, based upon his own investigations, of the relation between the lacrymal organs and the nasal accessory sinuses, together with a reference to the etiology and treatment of diseases of the lacrymal organs of nasal origin. It is a matter of common knowledge that textbooks on anatomy, ophthalmology, and rhinology give only scanty information concerning the relations of these structures, and only a few treatises touch upon the subject in connexion with recent operations for restoring the normal lacrymal flow by artificial openings into the nose. Professor Ónodi's work therefore fills a gap. The work is divided into two sections. In the first the topographical anatomy is described under the guidance of illustrations representing preparations of adult and infant skulls. In the second section the etiological and clinical knowledge available is discussed, together with the more recent rhinological operative procedures and their indications.

With regard to the topographical anatomy of the efferent lacrymal passages in children, there is hardly any information to be found in the textbooks. The observations made by Professor Ónodi on these organs in infancy are therefore of particular importance. The anatomical relations are governed by the development of the accessory sinuses, and his observations are illustrated by a long series of photographs of sections of the head at various ages, from birth to 6 years. In the clinical section it is interesting to note that it is long since the surgical proceedings we look upon as modern were first suggested and adopted. It is also a long time since the etiological connexion between diseases of the nasal duct and diseases of the nose was first recognized. Woolhouse, in the first half of the eighteenth century, recommended the formation of an artificial passage for the tears, and he carried it into effect. In severe cases Woolhouse extirpated the lacrymal sac, and established a new and permanent channel into the nose. Since Woolhouse, many others have developed the surgical treatment of epiphora. The endonasal operations now performed for the relief of this condition have been practised during the past ten years, and were devised by Dr. A Toti of Florence, Dr. J. M. West of Baltimore, and Professor von Eicken of Giessen. These operations are succinctly described. Toti's operation is indicated when, together with obstruction to the passage of tears, there is great distension of the lacrymal sac. West's endonasal window resection above the inferior turbinal is indicated when there is stenosis of the nasal duct without distension of the lacrymal sac. In this operation stenosis in the lower part of the duct is ignored, while stenosis in the upper part of the duct is removed. V. Eicken's operation—opening the nasal duct through the maxillary antrum—is called for in empyema of the antrum, or in extensive complete occlusion of the nasal duct, when preliminary operations, like removal of hypertrophied turbinals, spurs, deviations of the nasal septum, are necessary, or when there is destruction of the bony wall of the nasal duct.

This brief summary of the nasal surgical methods that have been scientifically conceived and patiently worked out shows the earnestness with which attempts have been made to obtain a lasting cure of a most distressing affection in all those cases in which ophthalmic treatment has failed.

The photographic reproductions contained in forty-five plates of the sections of heads, produced with that masterly effectiveness for which Professor Ónodi is universally acknowledged to be unrivalled, are clear, demonstrative, and convincing. After the plethora of textbooks telling the old, old story about the ear, nose, and throat, it is refreshing to read a monograph which is a definite landmark in the progress of rhinology, and we have no hesitation in stating that Ónodi's book will be found a most reliable guide to the therapeutic procedures with which it is concerned, and that it will receive a cordial welcome not only from rhinologists but also from ophthalmologists and anatomists.

Those who have not the command of more than one language will find themselves under obligations to Dr. Bellin (Paris) and to Dr. Dan McKenzie (London), who have translated the original German text into French and English respectively. The three texts are contained in the one volume, and the descriptive matter of the plates is also given in three languages.

THE CHEMISTRY OF THE RADIO-ELEMENTS.

There can be few efforts in the way of fancy or fable to rival in picturesqueness the findings of modern physical chemistry, especially now that thirty-four radio-elements have opened up new scientific conceptions and revealed what energies vibrate through the tissues of common matter. Mr. Frederick Soddy's monograph, *The Chemistry of the Radio-Elements*,[6] may at first appear too recondite to be fascinating, except for the advanced student. But when the already instructed reader begins to correlate its suggestions for himself, to speculate a little on the whence and whither of the processes of change, and to carry up atomic or molecular architecture beyond the point where known fact gives place to hypothesis, he will be inclined to classify such works, in view of their appeal to the imagination, as romantic literature in the best sense of the term. Three years ago Mr. Soddy published a volume bearing the same title, but the knowledge of radio-active phenomena has developed so much in the meantime that he finds it necessary to issue not a fresh edition but a second part, having at least half the compass of the original treatise. Some tentative views have crystallized into settled judgements, a few more generalizations have become possible, and it has also been made clear that such observations as the chemical non-separability and identity of some radio-elements—radium and mesothorium I, for example—are not to be explained on the ground of insufficiently refined experiment. Not only have new relationships among the radio-elements been discovered, but the various shiftings of their position in the periodic table, like the passage of pawns over a chessboard, have been more definitely established. Moreover, the identity of the end products of the three disintegration series has been partially unravelled. It had long been regarded as practically certain that the ultimate change of the radium series was to lead, but it is now evident that the end products of thorium and actinium also occupy the same place as lead in the periodic table, or, to use Mr. Soddy's word, they are "isotopic" with lead, and in consequence chemically and electro-chemically its equivalents. Mr. Soddy, like Sir

[6] *The Relations of the Lachrymal Organs to the Nose and Nasal Accessory Sinuses.* By Professor Dr. A. Ónodi. English translation by Dr. Dan McKenzie. London: John Bale, Sons, and Danielsson. 1913. (Super roy. 8vo, pp. 72; 45 plates. 8s. 6d. net.)

[6] *The Chemistry of the Radio-Elements. Part II. The Radio-Elements and the Periodic Law.* By Frederick Soddy, F.R.S. Monographs on Inorganic and Physical Chemistry. London: Longmans, Green and Co. 1914. (Demy 8vo, pp. 46; 11 figures. 2s. net.)

William Ramsay, under whom he formerly studied, seems to yield to the spell of the transmutation theory. It is almost the only speculative flight he permits himself. He points out that if the rare metal thallium could be made to expel an alpha particle, or mercury one alpha and one beta particle, the product would be "isotopic" with gold. This is not yet possible, of course, but he does not despair; sufficiently great electric potentials of the order of millions of volts may some day solve the problem of the alchemist.

BIOLOGY.

ONE is tempted to wonder how a sufficient market can be found for the innumerable textbooks of biology which appear in so steady a stream. Most of them cover the same ground and deal with the same types, both animal and vegetable, the only difference in most cases being the method of presentment and the amount of detail entered into. Professor SMALLWOOD'S *Textbook of Biology*[7] is, in some respects, an exception to this statement. Though much of the subject matter is dealt with in other books of a similar nature, the physiological and medical aspects are more fully considered. It is intended primarily as a textbook for medical, technical and general courses, and it is but right, therefore, that these aspects of the subject should be brought into prominence. The earliest chapters are devoted to a study of the frog. Each chapter deals with a separate system, alimentary, nervous, circulatory, etc., and after a brief account of the morphology and histology, the physiology is more or less fully treated; and there is a separate chapter on embryology. Some lower organisms, both plant and animal, are dealt with on similar lines. There are chapters, too, on evolution, variation, and heredity, but the one devoted to "Some biological factors in disease" is of especial interest to the student of medicine. Animal behaviour in relation to mind is a subject now attracting considerable attention and is one not usually discussed in a book of this kind; its inclusion is nevertheless a welcome innovation. The work throughout is, indeed, of a somewhat unusual character, as a textbook planned on a rational and definite conception of the particular aspects of biology a medical student ought to know. Much of the opposition to the retention of biology as a subject in the medical curriculum is due to the fact that a syllabus is too often drawn up without due consideration of its applicability to the future training of the student. The scathing criticisms recently passed by a distinguished physician at the opening of the session of one of the London medical schools upon the results and methods of medical examinations is endorsed by many. Much of the teaching of the preliminary and intermediate subjects in this country fails to interest and arrest the attention of the average medical student because it is overloaded with details of very doubtful utility. Professor Smallwood has realized this to a great extent, and produced a book which is none the less valuable scientifically because it is focussed towards points of practical interest. The book can be recommended to all medical and other students of biology because of its educational value; unfortunately it does not deal with the morphology of types too often included in the various syllabuses, but, on the other hand, it must be *remembered that it is not intended for medical students only*.

MR. HERMANN REINHEIMER is one of the latest recruits to the company of anti-Darwinians. Not that he dissents from the fact of evolution; but he denies the adequacy of natural selection as an explanation of that fact. The title of his book, *Evolution by Co-operation*,[8] affords a clue to his main position, which is akin to that of Drummond, Chambers, and, to some extent, Lamarck. He is of opinion that nutrition is a dominant factor in the evolutionary process, and that, whereas adequate feeding is indispensable to orthogenesis, a *super*-adequacy of force, derived from a nutritional basis, is needed to achieve rise of type. He finds everywhere throughout organic nature evidence of a symbiotic reciprocity, so that healthy organisms and thriving species may be compared to trading individuals and communities, whose claim to survival rests on the production of commodities or the rendering of services indispensable to others. He believes that there is a law relating to nutrition analogous to that stated by Darwin with regard to fertilization, which, in corresponding terms, runs thus: "Nature abhors perpetual in-feeding." By the term "in-feeding" he denominates the indolent appropriation of food manufactured by close relatives, and the correlated shirking of the economic duty of production, or of mutual service in some kind. By the term "cross-feeding," on the other hand, he designates what he conceives to be the norm of healthy nutrition, since he finds in the properly matured products of plant life food material ideally adapted to the requirements of the animal world. His main objection to Darwinism is that it makes the mere fact of survival the criterion of biological success and value, whereby the liver-fluke becomes the peer of the philosopher. But, in the author's view, parasitism is the last stage of a pathological process, of which insectivorism is an early and carnivorism the intermediate manifestation. We have found the book interesting and suggestive, but we cannot accept the author's definition of aristocracy.

[7] *A Textbook of Biology*. By William Martin Smallwood, Ph.D., Professor of Comparative Anatomy in the Liberal Arts College of Syracuse University. London: Baillière, Tindall, and Cox. 1913. (Roy. 8vo, pp. 299; 243 figures, 13 plates. 10s. 6d. net.)

[8] *Evolution by Co-operation: A Study in Bio-Economics*. By Hermann Reinheimer. London: Kegan Paul, Trench, Trubner and Co. 1913. (Cr. 8vo, pp. 213. 3s. 6d. net.)

NOTES ON BOOKS.

THE edition of the *Medical Annual*[9] for the year 1914 was published in the first week of this month, and its anonymous editor has once more to be congratulated on the completion of a very trying task. The series to which the volume belongs has attained well-deserved popularity, and this latest addition, though somewhat thicker, is in its arrangement and general appearance on all-fours with the more recent of its thirty-one predecessors. In the list of contributors a certain number of changes will be noticed, some of these, no doubt, being due to a decreased or increased activity in various departments of medicine having led to there being no occasion to touch on some subjects and to a need for fresh blood in respect of others. The practice of placing certain sections in the hands of American and Continental writers has been maintained; on the present occasion, for instance, Professors Carl von Noorden of Frankfort and Wilhelm Falta of Vienna deal conjointly with the subject of thorium and mesothorium, while Drs. Lawrason Brown and E. N. Packard, both of New York, have taken charge of the article on tuberculin therapy. The volume contains some eighty pages more reading matter than its predecessor, but its editor hopes this increase will not be permanent. Every article, he notes, is carefully studied with a view to rendering it as concise as possible, "but we cannot omit matter which any section of our readers may regard as important." This remark suggests the comment that probably many readers would have been glad of a much fuller account of what is being done in connexion with the *x*-ray treatment of uterine fibroids than any which has yet been furnished by this annual. Indeed, so far nothing has been said about it at all in the highly useful alphabetical list of new treatments which is the characteristic of this reference book and constitutes its greatest attraction to busy practitioners. As usual, the volume is excellently printed, but the title-page and preface and glossary, as well as the lists of contributors, of illustrations, and of principal articles, are still buried among advertisement matter.

The Petrology of the Sedimentary Rocks,[10] by F. H. HATCH, Ph.D., and R. H. RASTALL, M.A., is the second volume of a textbook of petrology. It is divided into two parts: the first deals with various forms of sedimentation—namely, fragmental deposits, chemical deposits, and organic deposits; the second with metamorphism in general cementation and metasomatism, contact metamorphism, regional metamorphism, and weathering. The book is carefully arranged and easy for reference, and brings together a mass of information hitherto only accessible in the *Transactions* and other publications of the geological and kindred societies. The illustrations, mostly magnified sections, are very clear, but it is a pity that the magnification is not marked in all cases, as this omission detracts

[9] *The Medical Annual*. Thirty-second year. 1914. Bristol: John Wright and Sons, Ltd. (Demy 8vo, pp. 800. 8s. 6d. net.)

[10] *The Petrology of the Sedimentary Rocks: A Description of the Sediments and their Metamorphic Derivatives*. By F. H. Hatch, Ph.D., and R. H. Rastall, M.A. With an appendix by T. Crook, A.R.C.Sc.Dubl. Vol. II. London: G. Allen and Co. 1913. (Post 8vo, pp. 438; 60 figures. 7s. 6d. net.)

from the value of the illustrations. The appendix, by Mr. T. Crook, is a most useful and clear description of the systematic examination of loose detrital sediments, and the book is a valuable addition to the literature on the subject, and can be recommended to all those interested in the subject of petrology.

MEDICAL AND SURGICAL APPLIANCES.

Clamp and Cannula for Draining Small Intestine.

Dr. R. D. Mothersole, M.S., F.R.C.S., Surgeon to the Bolton Infirmary, has designed, and Messrs. Mayer and Meltzer have made, a clamp and cannula intended to facilitate the emptying of distended bowel in operations for intestinal obstruction. The cannula has a bore equal to that of a No. 12 catheter, and has a wire loop across one end, which serves as a probe when it is introduced into the bowel, and afterwards prevents the bowel wall from blocking that end of the tube. Before use a piece of rubber tubing is attached to the other end of the cannula, and the blades of the clamp (each of which has a gap in the centre) are sheathed with rubber tubing. The loop of bowel which it is proposed to puncture is raised between the left thumb and forefinger, and its apex, which should contain little but gas, is grasped with a stomach-clamp, so as to isolate about 6 in. of bowel. This is incised, at the part of its circumference furthest from the mesentery, by a stab with a knife having a blade of the proper width; if the wound is too small for the cannula, it may be enlarged when withdrawing the knife. The cannula is introduced by first inserting the loop into the wound and then rotating it through a quarter circle so as to dilate the opening, and the end of the cannula is pushed on into the bowel. The clamp is then applied with its convexity towards the mesentery, so as to grasp the cannula through the wall of the bowel, and also the edge of the latter, thus preventing any leakage. A gauze swab is wrapped round the junction of clamp and cannula, the stomach-clamp is removed, and the bowel contents are allowed to drain into a vessel well away from the field of operation. This drainage can go on while the obstruction is sought for and relieved. "Opinions differ as to how often it is necessary to empty distended bowel when operating for obstruction; but there are cases in which it would be wrong, if it were possible, to cram distended bowels into an abdomen stretched almost to the bursting-point, and my experience convinces me that in all cases in which there is much distension, the safety and comfort of the patient are promoted by a timely evacuation. I believe that the instruments here figured enable this to be done with a minimum of risk and delay. I have used them in one case, volvulus of a coil of adherent ileum, brought on by a fit of coughing a few days after an operation for acute appendicitis, and they answered admirably."



MEDICINAL AND DIETETIC ARTICLES.

Herogen.

We have received from the British Drug Houses, Limited, a sample of a new food, which they are putting forward under the name Herogen. This is stated to be prepared from milk, lean meat, cereals, and eggs: it is in the form of a powder, with a sweet but somewhat meaty taste, and is intended to be prepared for use by the addition of water and milk. Our analysis showed the sample to contain 2.2 per cent. of nitrogen (equivalent to 13.9 per cent. of proteins), 3.6 per cent. of fat, and 7.4 per cent. of ash.

"Milkmaid" Brand Cream.

The method of preserving cream which is usually adopted is by the addition of boric acid, but there are obvious advantages in avoiding all such substances. The "Milkmaid" brand of cream, in closed tins, is stated to be preserved by sterilization alone, and in a sample submitted by the proprietors, the Nestlé and Anglo-Swiss Condensed Milk Company, we have found no trace of any preservatives. The cream was thick and of good flavour: analysis showed it to contain 28 per cent. of fat and about 66 per cent. of water, and it appears to provide a satisfactory means of having cream always available when the fresh material cannot be obtained.

THE INTERNATIONAL SOCIETY OF SURGERY.

The fourth Congress of the International Society of Surgery was formally opened in New York on April 13th. The three congresses previously held by the Society have taken place in Brussels. At the last congress (in 1911) Professor Depage, who had been the secretary of the society since its foundation and to whose organizing ability its success is in a very large measure due, was elected president in succession to the late Dr. Lucas-Championnière.

Military Surgery.

Professor Depage gave an address at the opening of the Congress in which he referred to the value of the contributions made by American surgeons to the surgery of war. He urged that the international understanding which had led to the establishment of Red Cross organizations, excellent as it already was, should be extended and improved. He mentioned incidentally that when during the Balkan war in November, 1912, he arrived at Constantinople with a Belgian ambulance he found the American ambulance already installed and in full working order under the direction of Dr. Ford. The Balkan war, he said, had emphasized the lesson taught by the Manchurian war. The fate of the wounded depended mainly on the aid given in the fighting line, since as long as the engagement lasted the exposed area was inaccessible to ambulance men. Haga as long ago as 1897 recognized that it had ceased to be possible for ambulance men to circulate on the battlefield, owing to the deadly effect of shell fire; consequently, hours must pass before the wounded men received skilled help. For this reason most countries had arranged that every combatant should carry a first dressing upon him. Something might be done by making the first-aid package uniform, but the experience of recent wars proved clearly that the first essential was the sanitary education of the soldier. He must be taught to realize the danger of infection by earth, dust, and water; a disinfected compress was useless if soaked in polluted water. The soldier should also be taught that if wounded in the abdomen it was better to remain motionless, even for hours, rather than to try to walk to a dressing station. The military education of a soldier should in future include instruction in elementary aseptic and antiseptic rules. Field hospitals moving with the troops should be used only for sorting the sick and wounded. During the Balkan war Turkish army doctors and others had amputated and attempted to extract bullets at the front; on the arrival of the wounded at the town hospitals deep-seated suppuration had already occurred in nearly all these cases. Such operations should be performed only in the second-line hospitals, to which experienced surgeons—including civil consultants, who would know when an operation was really unavoidable—should be attached. It was true that wounds produced by the modern rifle were comparatively harmless; he had, for instance, seen cases in which bullets had traversed the arm or leg, sometimes throughout the whole length, or the abdomen, or the chest, or even the back of the brain, without being followed by infection or any serious consequences. On the other hand, the effect of shell fire was horrible, and at a meeting of the Imperial Surgical Society at Constantinople in December, 1912, when the thunder of the guns at Tchataldja was heard daily, the fervent wish was expressed that the use of shells should be abolished on the same grounds as explosive bullets had been forbidden.

Gastric and Duodenal Ulcer.

One of the three chief subjects for discussion was the diagnosis and treatment of ulcers of the stomach and duodenum.

The first report on the subject was presented by Professor F. de Quervain of Basle, who discussed clinical and radiological methods of diagnosis. He pointed out that a large number of facts still remained undetermined. Among the questions to which he particularly directed attention were: (1) The frequency of spasm in superficial ulcer of the lesser curvature and the conditions in which spasm occurred in the absence of ulcer; (2) the influence upon the pylorus of ulcers at some distance from it; (3) the most certain and practical signs enabling a diagnosis

to be made between pyloric spasm and pyloric stenosis at an early date; (4) the diagnostic significance of persistent overfilling of the duodenal bulb and of the so-called duodenal motility of the stomach; (5) the diagnosis between duodenal ulcer encroaching upon the pylorus, true pyloric ulcer, and duodenal ulceration at a lower level; and (6) the radiological signs of adhesions in the neighbourhood of the stomach and duodenum.

MM. HARTMANN and P. LECÈNE (Paris), in a report on the frequency and treatment of duodenal ulcer, said that it certainly occurred more frequently than had been supposed a few years ago; nevertheless, they believed that its frequency had been exaggerated, at any rate as far as France was concerned, since they met with only one duodenal ulcer for eight or ten ulcers of the stomach. They considered that the symptoms described by Moynihan as characteristic of duodenal ulcer were due to pyloric spasm, and that the pyloric vein was an inconstant sign. The base of callous ulcers of the stomach in the lesser curvature frequently afforded evidence of neuritic lesions, and this explained the intractable pain which was one of the principal symptoms of these ulcers. Although they did not consider that cancerous degeneration of the edges of callous ulcers of the stomach was as frequent as some authors had maintained, they agreed with Hayem in considering that this carcinomatous degeneration was observed in about a fifth of all cases of callous ulcer, and that this frequency was high enough to justify treatment of such ulcers by resection. Out of 30 cases in which portions of mucous membrane removed from the stomach at a distance from the ulcer were examined, lesions indicating gastritis—either parenchymatous, or parenchymatous and interstitial—were found in 25. This observation was important, inasmuch as it showed that in patients suffering from ulcer the surgeon had to do with a condition affecting the whole of the gastric mucous membrane, and calling for careful post-operative treatment. With regard to radioscopic diagnosis, they were of opinion that it was of great value in gastric ulcer if care was taken to avoid sources of error which were now recognized. It was possible to obtain great assistance in the diagnosis of penetrating callous ulcer, of stomachs which had been rendered bilocular by ulcer, of pyloric stenosis due to ulcer, and of perigastritis. They considered radioscopy much less valuable in the diagnosis of ulcers of the duodenum. They agreed that the surgical treatment of gastric or duodenal ulcer should not be regarded as opposed to medical treatment; the former was frequently the necessary complement of the latter. The real results, observed after a lapse of time, of medical treatment were far from being as good as was formerly supposed; serious complications, such as haemorrhage, perforation, and stenosis, were indisputably urgent surgical indications, but the authors expressed the opinion that all ulcers (gastric or duodenal), which resisted medical treatment should be referred to the surgeon. Posterior gastro-enterostomy, with a short jejunal loop, performed on the pyloric cavern itself at its lowest point, was, they considered, the operation of choice in all cases of juxta-pyloric ulcers, whether gastric or duodenal. The objection made to this operation (that the opening did not function if the pylorus was pervious) appeared to be unfounded, since the authors had shown both experimentally and clinically, that the gastro-intestinal opening functioned perfectly if care were taken to make it exactly at the pyloric cavern. Indications for closure of the pylorus needed to be more clearly defined; simple blocking of the pylorus appeared to be generally sufficient, and absolute closure should be reserved for a limited number of cases (haemorrhage). In callous pyloric ulcers, when cancerous degeneration was suspected, it was preferable to have recourse to pylorectomy when anatomically possible, closing the two edges and finishing by a gastro-enterostomy. In callous ulcer of the lesser curvature simple gastro-enterostomy had often proved inefficacious, and it was better to remove the ulcerous zone either by a "saddle" excision of the lesser curvature, or by segmentary resection of the stomach with suture end to end of the two gastric edges. The mortality of these gastric resections, which was still rather high, would, they believed, certainly decrease as the indications and technique became more clearly defined.

Dr. W. J. MAYO, of Rochester, began his report by giving a historical summary. He distinguished three periods: The first (prior to 1900), the surgery of obstruction; the second (1900–1906), when the indications for operations were broadened and new methods of diagnosis introduced; and the third (from 1906 to the present time), during which a definite pathology had been established. He discussed the age and sex incidence, and the position, character and number of chronic ulcers of the stomach and duodenum, the naked-eye appearances of ulcers, and the varieties of induration. After touching upon the essential factors in clinical diagnosis, the indications for operation, and the methods of operating, he went on to consider the immediate and late results of operation, recurrences and mortality. He presented tabulated statistics on these subjects.

Professor E. PAYR (Leipzig) dealt with the etiology, the types, and the course of ulcers of the stomach and duodenum, and laid down certain principles with regard to operations. There were, he said, two principal theories as to etiology and pathogeny, (*a*) a gastric or duodenal vascular lesion (thrombosis, embolism, sclerosis); (*b*) nervous origin by vasomotor spasm leading to a localized ischaemia of the mucous membrane. Neither of these theories was sufficient to account for every case, and many points in gastro-duodenal biological chemistry were still unexplained. Mechanical causes helped to determine the localization and form of the ulcers, and bacterio toxic lesions also played a certain part. Two types of duodenal ulcers were to be distinguished according to their position on the anterior or posterior wall. The tendency of the first was to perforation, of the second to haemorrhage. There were very appreciable anatomical and chemical differences between the ulcer of the duodenum and that of the stomach. Malignant transformation of ulcers undoubtedly occurred, and these cancerized ulcers could readily be distinguished from ulcerous cancers. It was often difficult to distinguish these two types from simple callous ulcers, especially when it was a question of cancers rich in fibrous tissue, as occurred in Thomson's fibromatosis. Ulcer and cancer might occur coincidently in the stomach. It was not possible to establish the frequency of cancerous transformation of a gastric ulcer, nor, before operation, to make a confident diagnosis between callous ulcer and gastric cancer. In duodenal ulcer carcinomatous degeneration was rare. Professor Payr then discussed the methods of operation. Callous ulcer of the stomach, he considered, should be resected whenever the general condition of the patient allowed it, and especially when it was a question of small ulcers situated at a distance from the pylorus at the lesser curvature and on the posterior surface. In all other cases posterior gastro-enterostomy was the operation of choice. Excision of gastric ulcers, unless accompanied by gastro-enterostomy, generally gave unsatisfactory results on account of the persistent pylorospasm. Excision or resection of duodenal ulcers should be reserved for exceptional cases (persistent haemorrhage, imminent perforation, suspected cancer). For duodenal ulcer the best operation was gastro-enterostomy combined with unilateral pyloric exclusion after von Eiselsberg's method. If this operation was not feasible the best course was to narrow the pylorus by means of an aponeurotic band or a suspensory ligament. It was necessary to bury the band under a sero-serous continuous suture. The exclusion of the pylorus might be combined with suspension of the stomach. Von Eiselsberg's technique alone gave certain results. If an ulcer in the neighbourhood of the pylorus were resected at the same time as the latter, he advised suturing the stomach after the manner of Billroth II. For ulcers of the lesser curvature and those of the posterior surface, total segmentary resection with axial suture of the stumps gave the best results. For certain cases of ulcers near the pylorus, especially with hyperacidity, he advised after resection a wide implantation of the gastric stump in the first jejunal handle according to Reichel's technique. This method perhaps diminished the risk of peptic ulcer. If the latter occurred resection should be performed. Very wide anastomosis between the stomach and the duodenum according to Finney's method was also, perhaps, a safeguard, but the number of cases was still too small to warrant any definite conclusion. Gastro-enterostomy for simple or callous ulcers necessitated consecutive treatment by atropine and alkalines for at least a year. Gastro-enterostomy

gave excellent results in cicatricial stenosis of the pylorus. In active ulcers, especially those distant from the pylorus, the results were less reliable. Only in 50 to 66 per cent. were they satisfactory. The mortality after resection of ulcers, especially by the total segmentary technique of Riedel, was a minimum (10 per cent. or less). It remained, however, higher than that of gastro-enterostomy, but to this must be added the later deaths from perforation, haemorrhage, etc. The clinical results of resection were good.

(To be continued.)

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases.

Evidence by Sir Victor Horsley.

At the twenty-ninth meeting of the Royal Commission on Venereal Diseases evidence was given by Sir Victor Horsley.

He said that the experience of the last twenty-five or thirty years led to the conclusion that these diseases were decreasing in virulence; it was his impression, however, that they were extremely prevalent. It was not possible to speak statistically of the amount of prevalence, and the position in this respect would not be remedied until confidential registration of deaths had been adopted. This reform had been advocated by the British Medical Association for many years. The Association also put forward some ten years ago the proposal that in every coroner's district there should be an officer appointed whose duty it would be to make such *post-mortem* examinations as might be necessary to determine the exact causes of death. That proposition had relation not merely to ordinary deaths, but above all to the examination of stillborn children; if it had been accepted, the Commission would have been in possession of material relating to antenatal conditions revealing the exact prevalence of syphilis. It was very desirable that this arrangement should be carried out with a view to the discovery of ante-natal conditions, not merely syphilis, but other pathological states. The Notification of Births Act under which stillbirths were notifiable should be compulsorily extended to the whole country.

Sir Victor was of opinion that the education of the public in regard to venereal diseases was enormously important. He thought that children should be instructed in sex matters. If the nature study part of elementary education were extended, and every child taught the groundwork of hygiene, the health of the body, the instruction in sex matters could without injury gradually be brought into the mind of the child. So far as education related to reproduction in man, it should be given individually, and not as class instruction. In secondary schools children should receive full instruction. At the present time instruction was also necessary for adults. The teaching should be given by laymen; if it were in the hands of medical men it would be regarded as part of a medical mystery.

Sir Victor dealt at some length with the difficulty with which medical practitioners were frequently faced in public health matters by reason of the law of libel. It was perfectly obvious, he said, that from the public health point of view a medical practitioner ought to be able to warn somebody who, to his knowledge, was likely to be infected with venereal disease, but under the law as it stood he would render himself liable to a libel action, and would undoubtedly be ruined. A doctor ought to be able to state what he thought was the cause of a particular disease, but the information should only be given to people who had a right to demand it. Sir Victor said that he was in favour of the notification of venereal diseases to the medical officer of health. He thought that a system of notification would not improbably be resented both by doctors and by the public, but the history of notification showed that objections had been very strongly brought forward even in regard to the simplest diseases. The notification of scarlet fever was violently resisted at first, but there was no difficulty about it at the present day. Every argument that he had heard used against the notification of venereal diseases had also been used against the notification of so-called simple diseases. The notification should be confidential, and he had no fear of its confidential character being invaded; for this reason he did not think that a distinction could be drawn between venereal and other diseases on the ground that a moral stigma might be alleged in the case of the one and not in the case of the other.

With regard to the diagnosis and treatment of venereal diseases, Sir Victor said that he was in favour of treatment in special wards of general hospitals, and thought that every health authority should have its own bacteriological laboratory for the diagnosis of disease. He did not think that adequate facilities for diagnosis or treatment would be provided unless they were subsidized by the State.

The following letter from Sir Victor Horsley appeared in the *Times* of April 22nd:

Will you permit me to point out that the necessarily abbreviated summary of my evidence to the Commission does not include reference to the most serious matter which I laid before the Commission—namely, the condition of our national vital statistics?

After giving the proofs that, owing to the present system of registration, our public health statistics are not only exceedingly faulty, but in many cases (such as venereal disease, alcoholism, etc.) also utterly misleading, I proposed a detailed scheme of reform of the Register Office, including the system of confidential certification of death asked for by the British Medical Association ten years ago, but fruitlessly.

Unless the Commission press for these belated reforms we cannot take adequate steps to arrest the terribly prevalent venereal diseases, or, indeed, successfully contend with many evils now attacking the public health.

Evidence by Dr. Florence Willey.

At the thirtieth meeting Dr. Florence Willey, Assistant Physician for Diseases of Women at the Royal Free Hospital, gave evidence. Dr. Willey urged strongly the need for early and effective treatment of both gonorrhoea and syphilis, and said that in order to secure such treatment it was necessary to provide, first, for the early and scientific diagnosis of all suspicious cases, and, secondly, for some means of efficient treatment of such a nature that infected persons would willingly avail themselves of it. It would be necessary, she thought, to provide free of cost facilities for carrying out Wassermann tests and bacteriological examinations, and for the *post-mortem* examination of stillborn children and miscarriages. The results of such *post-mortem* examinations should be notified to the doctor attending the case, in order that he might be enabled to secure efficient treatment for the mother in cases shown to be syphilitic.

Dr. Willey thought that clinics for the treatment of venereal diseases should form part of the work of an institution not wholly devoted to those diseases; they should preferably be part of the work of a general hospital, and should be arranged at hours convenient for the working classes. Evening clinics, she said, were very desirable.

On the question of notification Dr. Willey said that she was strongly of opinion that any scheme of notification by name would defeat the end in view, and she therefore advocated that all material sent for diagnosis should be identified by number only. She further suggested that all patients under treatment should be given definite instructions which would enable them to avoid infecting other people, and that all nurses should be fully instructed in the nursing details of these cases, and in the special precautions necessary in each disease to avoid infecting themselves and other patients. As a preventive measure she thought the instruction of young people in matters of sex hygiene was very desirable.

A BILL has been introduced into the New York State Legislature providing that before a marriage licence shall be issued in the State both parties must put in medical certificates stating that they are not afflicted with any physical or mental disease which is contagious or likely to become hereditary.

MOTOR NOTES FOR MEDICAL MEN.

THE MULTIPLICATION OF ACCESSORIES.

By H. MASSAC BUIST.

THE welcome development of the leading manufacturers in marketing their cars in a complete condition for road service at a fixed price is not without its penalties, even as the seemingly endless enterprise of the accessory maker is not without its drawbacks. The passage of almost every season sees one or two car features, formerly unthought of, being accepted as essentials, without which no machine is henceforth supposed to be complete. One result is that, despite the use of better steels, better manufacturing methods, and better schemes of design, we have not been reducing the weight of middle size and large cars for ten years. The adding of such material as was needed to fashion doors to the front seats as soon as the average car became sufficiently reliable to obviate the necessity to be constantly jumping out on to the road to put something right, was a legitimate and essential development. But we have now reached a period when the completely equipped car in the latter-day sense of the term is vastly too complicated alike for reliability and cost. As a rule, when a manufacturer standardizes the fitting of what is loosely called an accessory, whether it be a wind screen, a signal horn, or a lighting set, he incorporates that device with the scheme of the vehicle so that it ceases to be an accessory and forms part of the complete design. This is a point especially to be noticed, because it has often quite as much to do with the satisfactory working of the given part as has any merit in the design and manufacture of the accessory itself. It is a fairly safe rule to assume that when a maker standardizes any fitment it will answer well, though we must not blind ourselves to the fact that there are historic exceptions, as instance the failure of front-wheel brakes on all the British-made vehicles save Argyll cars, and that despite the fact that the principle of the front-wheel brake can be worked out absolutely right. Defeat has been experienced only because the correct principles have not been exploited.

DIFFERENCE BETWEEN FIRST THOUGHTS AND AFTER-THOUGHTS.

Because so many makers are adding details to the equipment of their cars as standardized this year, the number of private owners who propose to have their vehicles adapted in imitation increases at an alarming rate. In going about the country it is easy to see in what clumsy fashion most of these extras are fitted, with the result that each starts its service under the most unlikely conditions to enable it to work reliably. The owner should always make a note of the remarkable manner in which the addition of a few items of equipment to a car can increase its weight. Except, possibly, when considering a spare wheel, few people think of the weight entailed by adding an accessory. The medical man, whose essential requirements are reliability and value for money, may, therefore, be well advised not to choose a car to which he will feel it necessary to add a number of accessories, but rather to seek the sort that is marketed in the standard condition with those fitments incorporated in the original design, so that they will have the best possible chance of working satisfactorily. Apart from this, knowledge of the accessories trade reveals that, while it will not pay the maker to supply the private car owner with an accessory under a certain price, he is, nevertheless, able to supply his wares in series to car-makers to standardize at a third, and sometimes a quarter, the price per unit that he has to charge the individual. Indeed, many of the best, and therefore most responsible, accessory makers will have no dealings with the individual, but will only supply manufacturers.

A POCKET-SAVING HINT.

If the inquirer will compare the cost of buying any chassis he has in mind and fitting it up according to his original ideas, with the cost of any motor car on the market which in standardized condition most closely approximates to the specification he has drawn up for himself, he will invariably find an enormous saving of initial outlay in acquiring the standardized article, and he will find the details which compose it put together in a manner incomparably more orderly than any succession of fitters of any specialities could contrive between them to place their respective devices on any individual chassis selected to be the victim of them.

At the moment, perhaps, the most widely spread desire of owners of ordinary cars is to have them specially fitted with engine-starting devices. It should therefore be made known that the makers of the systems which have been longest and most widely standardized know from experience that satisfaction cannot be given unless the apparatus is incorporated in the original scheme of the car. Unquestionably, the mechanical starting of the engine is so necessary that it will be the universal method in a few years. But in the meantime there is not sufficient experience behind the business to justify the medical man in adapting such apparatus to his own car. The only method at present open to him that offers reasonable prospects of satisfaction is to purchase some sort of car on which an engine starter is standardized, having been incorporated in the scheme of design. Even so, there are not many cars on the market with engine starters which can be recommended. One reason is that at present the cost of making a satisfactory apparatus is proportionately very great, so that a goodly number of manufacturers are fitting engine starters which they know not to be in the front rank, but which they employ because they can get them at the price they can afford to pay in face of what the public is willing to give for the complete car. It is scarcely telling tales out of school to intimate that at the Motor Shows at Olympia next autumn, it will be by no means a general thing for cars to be standardized with mechanical motor starters.

THREE EXAMPLES OF COMPLETE EQUIPMENT AT A FIXED SUM.

The motto of the medical motorist should be: Keep your car equipment as simple and straightforward as possible. As the medical man, nevertheless, has present need of cars, sometimes of the middle size, sometimes of the small class, each in a condition of completeness for road service in the latter-day sense of the term, I propose on the present occasion to make note of three distinct sizes of cars eminently suitable for doctors' use, each of which illustrates the principle of standardization and the gains that may come to the individual motorist through its being exploited.

The Larger Car.

The first and largest of these is the 16–20 h.p. four-cylinder worm-driven Wolseley car that has the same size engine as the Royal Automobile Club is endeavouring specially to develop through promoting the two-days' race for the Tourist Trophy in the Isle of Man in June. By reason of the taxation being fixed according to the bore measurement, this product of the Vickers' motor manufacturing company comes under the 6-guinea tax, though its volume is only a fraction over 10 per cent. larger than the three-litre size of car, the motor being 20.3 h.p. according to R.A.C. rating.

The medical man will probably classify his impressions of this car into two groups. In the first he will find a machine of considerably more than average accommodation in the middle size of car that looks what it is—a motor carriage of the highest grade, designed with very clean and artistic lines, and having incorporated in the original scheme all the necessary equipment ready for the road. The five-seater flush-sided body has a deep scuttle dash, and encloses all the control levers, the materials, including alike chassis steel and body upholstering, being of the first quality. The waterproof canvas rain hood is of the "one man" type which, in extension, clamps on to the wind-screen and requires the use of no straps stretching forward on to the dumb irons or wings. The two-jointed adjustable wind-screen has a folding and swinging top, the Rudge-Whitworth detachable wire wheels have the latest locking device, and C.A.V. electric dynamo, together with switchboard and accumulator, are embraced in the standard equipment and scheme of design for an inclusive price of £475. As an essay in capital expenditure, therefore, the medical man is able to foresee very clearly his position in considering the acquisition of a car of this size

and quality, which is certainly unsurpassed as regards value for money.

When he comes to try the machine, as I have done annually for some seasons past to keep myself abreast of its gradual evolution, he will discover that the accommodation offered is more than commonly ample and that the proportionately low seats are remarkably well schemed, so that, even in the longest day's run, one does not experience fatigue, because the contours of the back cushioning are contrived to fit the natural shape of the body. In working, luxuriousness of suspension, ready powers of acceleration, light steering, ease on tyres through the worm drive, the refinement of the engine, and the plangent springing; and uncommonly economical petrol consumption are points which stand out clearly in one's mind. Another quite remarkable quality is the handiness with which a vehicle of this size can be manœuvred. I have never seen so large a car that could be turned in so small a compass. The motor is very flexible, serving admirably for town carriage work, in that it will pull the car smoothly at little more than a walking pace and will then accelerate speedily without stuttering or vibrating.

The Doctor's Middle Price and Size.

The next example so prominent in its class as to call for consideration is the 12 h.p. four-cylinder, worm-driven Rover car that comes under the 4-guinea tax, and which is unquestionably the machine of the year in the price class limited at £350 complete. The Rover Company now makes no other car but this, with the result that it is being manufactured by the thousand at works entirely equipped for the production of this one highly specialized model, which many manufacturers at home and abroad are striving strenuously to imitate. From the early days Rover cars have served the medical profession well, but none has been produced of such good materials or under such favourable conditions as this 12 h.p. model which has been three years on the market, and which, by manufacturing it in quantities, it is possible to furnish this year without increase of price, but with longer wheelbase, longer springs, more body length, deeper seats, stouter propeller shaft, larger back-axle worm, "one man" hood, all metal adjustable wind-screen, and better detail equipment, including ventilators in the dash, improved non-rattling bonnet design, detachable petrol tank, clutch stop to enable beginners to change speed quietly, grooved front tyres, a very handy roller on the accelerator pedal, and a complete Rotax-Leitner dynamo, accumulators and electric lighting equipment, including lamps.

In service we find here again those characteristics which are necessarily almost invariably peculiar to the pioneer in each class because they cannot be reproduced by mere process of copying, but are evolved through cumulative experience. The motor has been very slightly improved in minor details, whereby it gives fully 5 per cent. more horse-power, which accounts for the fact that when the car is on the road it is discovered that the extra power necessary to drive the dynamo, also to deal with the weight of the extra equipment, including the longer and stronger frame, and so forth, is available, so that there has been no sacrifice of acceleration qualities. The lines of the car are notable for their simplicity, with the result that the dashboard and other details are very clean, while the manufacturers are further deserving of high praise for having proved beyond a doubt that, when properly designed, a middle-size car of this sort can be quite satisfactory with a three-speed gear-box, especially since it does perfectly all ordinary work on the top gear, including travelling at over forty miles an hour on the flat with full equipment. There is this great gain in the three-speed gear-box with the superposed shafts—namely, that compactness is achieved, therefore great strength and absence of vibration, with the result that it is incomparably more pleasant to have either of the Rover indirect speeds in service than those of the most expensive machines having four-speed gear-boxes, because the Rover sort works so quietly. This car is proportionately light on tyres, is on the right side of twenty miles to the gallon in the matter of fuel consumption, and is commendably free from complication, while being second to none in the completeness of its standard equipment. In addition to all these points, it must be had in mind that it is no experiment, but a proved product.

A Pioneer Type of Light Car.

In the third category we may take an example of a pioneer type of light car in the sense in which that term is currently understood, and as produced complete for the medical man who has not more than £200 to spend. This is the two-seater, four-cylinder, water-cooled, Coventry-built Standard light car that comes under the 3-guinea tax, the engine having a bore measurement of 62 mm. and a piston travel of 90 mm. Here, again, we have the principle of the three-speed gear-box, combined with a form of worm drive; but the standardized lighting equipment is of the acetylene sort, two headlights as well as the side and tail lights being provided. The rainproof hood that goes over the two seats can be manœuvred with one hand. The spare wheel is of the Sankey detachable pressed steel variety. Points about these wheels are the ease with which they can be cleaned and their proportionately great lateral strength, which is so important a factor in the event of side-slipping from any cause.

I have made a study of these cars since they were first placed on the market, more than a year ago, and have never heard an ill account of one. On the contrary, I have particularly in mind a medical man who, as a novice to motoring, did what might ordinarily be considered a risky thing in acquiring one of the earliest examples of these machines. He has nothing but praise for it after more than a year's daily service in his work, and in addition he has taken his wife and two small children on a holiday tour with it. During the last six months a considerable number of these vehicles have been shipped abroad for Colonial service, and reports of them go to show that they are standing up well under such conditions.

From the driver's point of view these cars, which have a smart appearance and no suggestion of cycle-car practice, are very simple to handle. There is really little to do but steer. The little motor is very efficient, giving about 18 maximum horse-power in standardized condition, so that the machine is proportionately fairly powerfully engined, giving a ready acceleration, while the worm-drive itself is smooth. Brevity of the wheelbase is, of course, a point of advantage in acquiring a light car where garage accommodation is strictly limited. The seats avoid a tendency, manifest in certain light cars, whereby the user seems to be so near to the ground that one might be pardoned for assuming that he was on a sledge. In this Standard car, the driver and passenger are accommodated at a reasonable height from the ground, yet without any sacrifice of stability, for another good feature is the proportionately ample breadth of the track.

Those who require a machine for use in places where conventional roads are none too plentiful will appreciate the good clearance this car has in relation to its over-all length. It is very economical of petrol consumption, running some thirty-five miles to the gallon in average service. It is, of course, cheap to maintain in tyres. The construction, though having about it nothing of the experimental, but employing well proved practice throughout, fully justifies the manufacturers in selling it at so moderate a price as £195 complete under a guarantee for a term of years. This example may be considered the pioneer of the light car as produced on conventional lines, and therefore as a contrast to the Stellite light car produced on fresh lines which were discussed in these notes last month. A great point about the Standard light car at this period, when most machines of this class are brought quite freshly before the public, is that it has been on the market for more than a season.

THE *Tropical Diseases Bulletin*, vol. iii, Nos. 2, 3, and 4, contains reviews and abstracts, among other subjects, on amœbiasis, sprue, filariasis, cholera, malaria, kala-azar, sleeping sickness, plague, leprosy, and undulant fever. Reference is also made to papers dealing with the question of the white race and the tropics. Most people who have studied this subject in detail now conclude that there is something, in addition to definite disease, prejudicial to the prolonged stay of white people in the tropics. Sir Havelock Charles's paper on "Neurasthenia and its Bearing on the Decay of Northern Peoples in India," clearly shows that climate undoubtedly has an effect upon white races. Nervous disorders, commonly talked of as neurasthenia, are the chief cause of invaliding from the tropics.

THE PROGRESS OF CREMATION.

CREMATION SOCIETY OF ENGLAND.

THE annual general meeting of the Cremation Society of England was held at the house of the Royal Society of Medicine, 1, Wimpole Street, on April 7th, Sir CHARLES CAMERON, Bart., President, in the chair.

Report of Council and Accounts.

The report of council and the accounts and balance sheet for the year ended December 31st, 1913, which had already been circulated among the members, were taken as read.

President's Address.

Sir CHARLES CAMERON, in moving the adoption of the report, said the total number of cremations carried out in Great Britain during the year 1913 was 1,198, being an increase of 64 over the number for 1912. It was now close on thirty years since the society opened its pioneer crematorium at Woking. For many years it was the one institution of its kind in Great Britain, and the patronage which it secured was but small. As time progressed the movement took practical shape throughout the country; crematoriums were erected in Manchester, Liverpool, Glasgow, and other towns, and now in this island there were thirteen in active operation and others about to be built. The total number of cremations which had taken place in England and Scotland up to the end of 1913 was 12,316, of which 3,245, or more than one-fourth, had been carried out within the last three years, and each of these three years had shown an increase over the one preceding it. The reform which it was the object of the society to promote was therefore making progress, although at a rate which, compared with its progress in other countries, was disappointingly slow. One cause of this slow progress was referred to in the report, where it was stated that the requirements of the Cremation Act of 1902 in respect of death certification seriously handicapped cremation in its competition with earth burial. They did not complain of the enactment of stringent precautions in the case of cremation, but they did protest against these precautions being confined to cremation while nothing was done to remedy the scandalously lax requirements of the Burial Law, which afforded every facility for the concealment of crime, and conduced to the compilation of worthless statistics in the case of the mass of the population whose bodies were consigned to the earth. Reform in that respect they had all along advocated, and the persistent neglect of that reform constituted the handicap of which they complained. To illustrate the nature and extent of the evil he referred to a paper read before the Forensic Medicine Section of the International Congress of Medicine by Dr. J. C. McWalter, of Dublin, which was published in the *Daily Telegraph* of August 12th, 1913. Having called attention to the fact that the whole basis of preventive medicine, which he estimated cost the State £24,000,000 a year, was based upon the death certificates sent in to the department of the Registrar-General, Dr. McWalter gave a number of examples of the unreliability of these certificates. Dr. McWalter said that in his time he had signed considerably over a thousand certificates. He had no special reason for doubting that these persons were really dead, but in not 2 per cent. of these cases did he see the dead body. Not in 10 per cent. did he visit the patients; they had mostly called at his surgery. In all these cases there were not more than ten autopsies, and in most of the cases where an autopsy was performed his diagnosis had proved to be wrong. The President said he was willing to assume that Dr. McWalter's percentages were more or less exceptional, but there could be no doubt that in an enormous number of cases death certificates given by medical practitioners were filled in in the most perfunctory manner—too often on hearsay and without personal knowledge, so that the statistics of disease as compiled from them at the public expense were scientifically valueless. Moreover, many thousands of deaths were each year registered uncertified by any medical practitioner, and the cause of death put down as anything the relatives might think fit to state. As a matter of fact, a medical certificate of death was indispensable only when it was required as a condition for the payment of insurance money or funeral benefits, and the frequency with which one read of frauds perpetrated on friendly societies by means of false certificates still more forcibly demonstrated the futility of the law as to death certification. Dr. McWalter said in the paper referred to:

> We had lately in Dublin an instance in which a doctor gave a certificate, on the strength of which a death was duly registered and the insurance money drawn. The alleged corpse complained at the wake that he did not get his proper share of the proceeds, and the case came into the courts.

Sir Charles Cameron said he had seen reports of dozens of similar cases, where the defrauded society got to know of the fraud and instituted proceedings. Under the Cremation Act the requirements for ensuring accurate disclosure of the fact and the cause of death were most stringent, and the laxity, or rather nullity, of the law's requirements in the case of earth burial constituted the handicap which they desired to get rid of in the interest of the community by levelling up in the case of earth burial—not by levelling down in the case of cremation. Many years ago, when in Parliament, at the instance of the founders of the society, Sir Henry Thompson and Sir Spencer Wells, he secured the appointment of a Select Committee to inquire into and report on the subject of death certification. They had papers laid before them giving particulars of the system prevailing in almost every civilized country, and he did not think he exaggerated when he said that in no country was the system, or rather the lack of system, so glaringly bad as in the United Kingdom. Any person desiring to acquire a grasp of its inadequacy should read the reports of that Committee.* Its leading recommendation was the same as that contained in the report of the council—namely, the appointment of public officers who should independently investigate the cause of death in every case as a preliminary to the disposal of the body. The handicap of which they complained acted as a deterrent to the adoption of cremation, especially in the cases of the poorer mass of the population. Were it done away with, the sentimental considerations in favour of resorting to purification by fire instead of putrefaction in a common grave as a means of disposing of the dead would, he was satisfied, speedily make its weight felt among them, and it was not until its adoption by the masses as well as the classes was secured that the hygienic and economic advantages of cremation would come to be fully realized. In the year 1855 a Royal Commission inquired into the subject of intramural burial. Its report, which made very unsavoury reading, emphasized the dangers to the health of the living to which the practice gave rise, and intramural burial was forbidden and intramural churchyards closed. But the dead they had always with them. In London alone some 70,000 corpses had each year to be disposed of. As the population grew, the boundaries of towns and cities increased, and what was an extramural rural locality half a century ago was to-day a thickly inhabited suburb. And so the evil went on. Not a year passed but they read of the desecration of some old graveyard, and the removal of tons of bones of bygone generations to some common sepulture elsewhere. One of the latest cases of the sort which he noticed was that of a burial ground belonging to the parish of St. Clement Danes near Lincoln's Inn, which was closed about half a century ago, and from which it was stated that what remained of several thousand bodies were being removed for reinterment at Woking.

How strongly the poorer classes were actuated by considerations of sentiment in the matter of disposal of their dead was shown by the fact that the most popular form which their provision for the future took was the insurance of what were known as funeral benefits. In connexion with recent discussions as to the increased cost of living and minimum wage, there were published in some of the newspapers a number of the weekly budgets of the wives of workmen earning £1 per week. In almost every case contributions for funeral benefits figured in the weekly expenditure. These contributions ranged, according to the size of the family, from 4d. to 1s. per week; probably 6d. a week might be taken as a fair average contribution. Now the voluntary allocation of 6d. per week out of an income where every penny counted, in order to escape the degradation of a pauper funeral, seemed to him to argue a very strong feeling on the subject, especially as what

* Reports of Select Committee on Death Certification, 1893.

the insurer got for his outlay, although differing in the pomp and circumstance of the escort of the body to the cemetery, differed very little in the squalor of the resting place therein provided. The late Mr. Voysey said that a realistic model of the section of a burial ground would do more to convince the world of the sanitary and economic advantages of cremation than any amount of verbal argument. As that form of propaganda was not practicable, they must rely on the advance of education and the reform of the burial laws and the uprooting of conventional prejudice for the advancement of the movement.

Mr. H. T. HERRING, who seconded the motion for the adoption of the report, said that as Medical Referee to the London Cremation Company, he had personally examined more than 6,400 sets of certificates relating to the cremations carried out at Woking and Golder's Green since 1885. In about 6 per cent. of that number some further inquiries had to be made. A necropsy had to be made in not more than 1 per cent., and about 1 per cent. had been referred to the coroner—that was to say, between 70 and 80 cases. An inquest had been held on eleven of these, notwithstanding the fact that the "certificate of registry of death" commonly known as the burial certificate, had been issued. These facts, he thought, strongly supported the contention of Sir Charles Cameron and Dr. McWalter. Cremation certificates had recently been filled in with greater care and accuracy than formerly; this was apparently owing to the fact that the rules were better understood. These regulations worked smoothly on the whole, although slight unavoidable delays occasionally occurred. Mr. Herring added that his personal experience led him strongly to endorse the statements of the President that their endeavours should not be to obtain a relaxation of existing cremation rules—they might need modification—but to obtain fresh legislation in regard to death certification. No stronger condemnation of that Act could be quoted than the words of the report of the Committee appointed to inquire into the law relating to coroners:

> The present law of death certification offers every opportunity for premature burial, and every facility for the concealment of crime (Cd. 5004, 1909, p. 20).

On the other hand, he submitted that the cremation regulations as now carried out tended to prevent the concealment of crime, and absolutely prevented the occurrence of such an awful catastrophe as premature burial. He considered it obligatory on all medical referees, in the interest of cremation, in the interest of the living, and in order to obtain the desired legislation in regard to death certification, to see that the intention of the rules and regulations relating to cremation as now framed were strictly and fully carried out.

Council.

The retiring members of council were re-elected. On the motion of Mr. HERRING, seconded by Sir JOHN TWEEDY, Sir Malcolm Morris was unanimously elected a member of the council.

Honorary Members of the Society.

On the motion of the CHAIRMAN the names of twenty-one persons who had rendered distinguished service in the cremation movement abroad were submitted for adoption as honorary members of the society. The following is the list:

Australia.—Hon. Dr. M. L. Creed, President of the Cremation Society of New South Wales; Member of the Commonwealth Parliament.

America.—Dr. Hugo Erichsen, President of the National Convention of Cremation Societies in America and Honorary Secretary of the Michigan Cremation Association.

France.—Mons. G. Barrier, President, Société pour la propagation de l'incinération, France; Member of the Académie de Médecine; Mons. Georges Salamon, General Secretary of the French Society.

Germany.—Geheimer Sanitätsrat Dr. Herzberg, Honorary President, Berlin Cremation Society; Herr H. Marcus, Acting Honorary Director of the Society; Dr. Med. M. Wegscheider, President, German Association of Cremation Societies; Herr M. Pauly, Editor, *Die Flamme;* Dr. Ed. Brackenhoeft, Founder, Hamburg Crematorium; Sanitätsrat Dr. Müller, forced the alteration of law in Prussia by building crematorium at Hagen; Herr Paul Waldstein, Chairman of the Halle Cremation Society; Dr. Med. Muhling, Chairman of the Königsberg Society; Dr K. Wergt, Chairman of the Hanover Society; Major Ludwig Kery, Chairman, Munich Cremation Society; Major Karl Kery, Chairman, Association of Bavarian Cremation Societies; Herr Karl Betz, Member, Würtemberg House of Commons, and founder of the Würtemberg Crematorium; Dr. Karl Heil, President of the Hessian Society, Editor of Bibliography of Cremation literature; Herr Richd. Schneider, of Stettin, formerly Chief Engineer to the firm of Siemens in Dresden, built the first furnace in which Lady Dilke's body was cremated in 1870 and has built over fifty crematoriums in different parts of the world since.

Italy.—Dr. Ludovico Foresti, President of the Bologna Cremation Society.

Switzerland.—Mons. Burkhard Reber, President and Founder of the Geneva Cremation Society.

Belgium.—Mons Georges Tosquinet, Avocat, President of the Belgian Cremation Society.

New Crematoriums.

A bill giving powers to the Norwood Cemetery Company to provide for the carrying out of cremation has passed the House of Lords. We have reason to believe, however, that the Local Government Board will not license any additional crematoriums within the County of London. We are informed that the Streatham Park Cemetery, which lies ontside the radius of that county, has already taken the first steps in the erection of a crematorium.

We learn, too, that the Brighton and Preston Cemetery

CREMATION IN GREAT BRITAIN.

The Appended Table shows the Number of Cremations carried out in Great Britain since the opening of Woking Crematorium in 1885.

	1885-9.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	Total.
Woking	100	54	99	104	101	125	150	137	173	240	240	301	273	275	143	138	95	140	108	119	105	106	114	125	**128**	**3,693**
Manchester ...	...	...	...	3	30	47	58	52	51	62	88	83	96	81	92	98	97	90	98	116	106	114	124	149	**172**	**1,907**
Glasgow	...	...	...	...	...	...	1	10	16	12	16	20	18	20	24	19	35	44	30	28	30	28	39	44	**49**	**483**
Liverpool	...	...	...	...	...	...	...	2	10	27	23	40	40	54	35	40	35	46	34	32	46	37	50	52	**66**	**669**
Hull	...	...	...	...	...	...	...	...	...	...	...	...	17	13	18	20	15	17	29	37	15	21	25	27	**33**	**287**
Darlington ...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	7	4	13	8	6	9	9	12	15	**11**	**98**
Golder's Green ...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	158	220	252	298	290	364	421	415	542	591	**602**	**4,158**
Leicester	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	8	16	12	12	14	19	16	13	14	**11**	**141**
Birmingham ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	19	22	25	33	18	30	38	44	40	**59**	**329**
Leeds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	15	16	24	19	12	17	24	**16**	**159**
Ilford	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	23	18	19	24	22	20	32	**21**	**188**
Bradford	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	14	13	6	13	14	13	9	**15**	**98**
Sheffield	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	6	18	12	18	8	10	12	**15**	**108**
Total	100	54	99	107	131	172	209	201	350	341	367	444	445	451	477	569	604	743	707	795	855	840	1023	1134	**1,198**	**12,316**

* Golder's Green Crematorium in operation.

Company and the Tunbridge Wells Corporation have made inquiries about cremation.

Cremation in South America.

A fully equipped crematorium has been erected in the Western Cemetery at Buenos Aires. Four incinerating chambers have been installed, each capable of reducing a body to ashes in one hour.

LITERARY NOTES.

WE are requested to state that the price of the *Preliminary Report on the Treatment of Pulmonary Tuberculosis with Tuberculin*, by Dr. Noel D. Bardswell, Medical Superintendent of the King Edward VII Sanatorium, Midhurst, the forthcoming issue of which was mentioned in the JOURNAL of April 11th, is 6s., not 5s. as there given.

Wilhelm Engelmann, of Leipzig and Berlin, announces the publication of the *Internationale Zeitschrift für physikalischechemische Biologie*, the nature of which is sufficiently indicated by its title. The editor is Dr. J. Traube of Charlottenburg, with the assistance of Professor H. J. Hamburger of Gröningen, Dr. V. Henri of Paris, and Dr. J. Loeb of the Rockefeller Institute for Medical Research, New York. In the list of collaborators we note the names of Professor W. M. Bayliss of London and Professor Benjamin Moore, of Liverpool. The periodical will appear at irregular intervals, six parts forming a volume. It is hoped that about three volumes will be issued in the course of the year.

Mr. John Murray's list (April, 1914) of forthcoming publications includes a work entitled *Nature and Nurture in Mental Development*, by Dr. F. W. Mott. It is an expansion of the Chadwick Public Trust Lectures, 1913, in which the author dealt with mental hygiene in relation to the unborn characters of the child and its environment. Another book in the list is a *Historical Account of Charing Cross Hospital and Medical School*, by Dr. William Hunter; a sketch of the origin of the other hospitals and schools in London is also given. Another work of medical interest in Mr. Murray's list is *Researches into Induced Cell-Reproduction in Amoebae*, by Dr. J. W. Cropper and Mr. A. H. Drew. The volume is a continuation of the investigations which are being carried out under the auspices of the John Howard McFadden Fund into the cause of cancer and other forms of cell-proliferation.

In *Paris Médical* of April 4th Dr. Cany, of La Bourboule, refers to the use made by the physicians of Salerno of baths and mineral waters. The close vicinity of the baths of Pozzuoli, the famous Balnea Puteolana of the Romans, gave the Salernitan Masters the opportunity of studying their effects. One of the most interesting manuscripts in which the subject is treated is that of Pietro da Eboli, a poet of the twelfth century. The illuminations of this manuscript, which is now among the treasures of the Angelica in Rome, were reproduced in 1901 by Piero Giacosa in an atlas published as an outcome of the Medico-Historical Exposition held at Turin in 1898, where most of the works scattered through the public and private libraries of Italy were collected. Giacosa's work is entitled *Magistri Salernitani nondum editi*, and is described as a *catalogue raisonné* of the exposition just mentioned. The atlas, which is a quarto and contains forty plates, was published by Bocca, of Turin. In a general description of the mineral waters, the virtues of springs produced by Mother Earth are contrasted with those of the "artificial syrups" used in medicine, and those who have no metal in their purse are encouraged to take natural waters which heal for nothing.

Vos igitur quibus est nullius gutta metalli
Quaerite, quae gratis auxiliantur, aquas.

Thirty-five springs were used for therapeutic purposes at that time. The list includes the *Balneum sudatorium*, *B. sulfatara*, *B. foris criptae*, *B. calatura*, *B. subveni hominis*, *B. cantarellus*, *B. de prato*, *B. de arcu*, *B. sol et luna*, *B. de ferris*, and so forth. To each special virtues were attributed. Thus the one called "Subveni hominis" is so called "quia aegrotis hominibus mirabiliter subvenit." The *Balneum de ferris*, which welled up under the gloomy dwelling of the Cumaen Sybil, was yellow, as if iron-stained; it made the hair grow, cured headache, and purified the three ventricles of the brain. The indications and counter-indications of the *Balnea Puteolana* are summed up in a treatise of Giovanni the physician, who says they should be used by persons who will abstain from women, and from overeating and drinking, and who are not worn out by vomiting, purging, and sleeplessness. On these conditions the waters are said to be excellent for indigestion; they relieve fullness, and strengthen weakened bodies; give plumpness to the emaciated, and bring restful sleep. Briefly, they are useful to all—*utilia viris et mulieribus, pueris et senibus*. Pietro da Eboli's verses advertised the waters to such purpose that in 1227 Frederick II, Roman Emperor and King of Sicily, who had fallen sick of a painful disease at Otranto, went to Pozzuoli in great state to complete his cure. So great was the vogue of the wells that the practitioners of Salerno took fright, and we are sorry to say their jealousy seems at least once to have manifested itself in an unseemly fashion. It is recorded that Ser Antonius Solimene, Ser Philippus Capograssus, and Ser Hector de Procida, "famosissimi medici Salernitani," went in a ship from Salerno to Pozzuoli, and with iron instruments effaced the inscriptions setting forth the virtues of the baths. But they were punished for this misdeed, for on the return journey the ship sank, and they were miraculously drowned (*miraculose submersi*)

According to recent statistics the total number of journals issued in Paris is 2,588. Among these medicine heads the list with the amazing number of 206; finance comes next with 195, politics being a bad third with 144. It is a sign of the times that there are twelve journals dealing with occult sciences and ten with feminism.

In *Doctor Johnson and Mrs. Thrale, including Mrs. Thrale's Unpublished Journal of the Welsh Tour made in 1774*, by Mr. A. M. Broadley, there is an account of Sir James Fellowes, a physician who was the lady's most sympathetic friend and frequent correspondent during the last years of her life, which were spent at Bath. To him Mrs. Piozzi made over her autobiography, the annotated copies of her works, especially of her edition of Johnson's letters, and the *Thraliana* or Commonplace Book of anecdotes, and personal memoranda which she began in a notebook, given her by Thrale in September, 1776, and concluded with an entry recording the death of her second husband in March, 1809. To Fellowes, in short, we owe practically four-fifths of what is known about the most attractive period of Mrs. Piozzi's career. James Fellowes, who was the son of William Fellowes, Physician Extraordinary to the Prince of Wales, was a Rugby and Cambridge man who had seen a good deal of the world as an army surgeon. He was knighted by George III in 1809. He was the author of some medical reports. He practised only for a few years after he returned to England, and in 1816 married an heiress and settled down as a country gentleman, J.P. and D.L. for the county of Hants. Mrs. Piozzi was always fond of doctors, and among her closest allies in Bath were Sir George Gibbes, Minchin, Jebb, Thackeray, Harrington, Gray, Scudamore, and the whole of the Bath waters school. Fellowes soon became her most trusted adviser, and was consulted about her money troubles, her grievances against her agent and her daughters, her worries about her house at Bath, the sale of Streatham House and the disposal of the pictures there, and the treatment of her maladies, spiritual and mental, as well as physical. In their letters all the topics of the day are discussed, including the novels of Walter Scott, whom she calls the "Arctic Phoebus." There is a story of Mrs. Siddons sending her maid to ask the lady of the house for the loan of Milton's *Paradise Lost*, and the girl bursting into the room with a demand for *milk and asparagus lost!* To Mrs. Piozzi Fellowes referred all queries as to the source of quotations, and for him she laboriously annotated some of her most familiar favourites—*Wraxall*, *Scaligerana*, Bowdler's *Shakespeare*—and to him she related stories of Goldsmith and Johnson, and how Hogarth played the game of goose with her when she was a small girl. To him she applied whenever she was starving for intellectual food. He was appointed her co-executor and trustee, opened her will, and went through all the papers, and settled all her affairs. He understood her probably better than any of her more famous contemporaries. He died in 1857 at the age of 84.

British Medical Journal.

SATURDAY, APRIL 25TH, 1914.

THE PREVENTION AND TREATMENT OF TUBERCULOSIS IN LONDON.

THE Charity Organization Society has rendered a useful service to all concerned in the prevention and treatment of tuberculosis by its inquiry, set on foot last year, into the arrangements made, or proposed to be made, for the purpose in the various districts of London up to the present time.

The numerous bodies concerned in the work—the Local Government Board, the London County Council, the borough councils, the Insurance Committees, the Metropolitan Asylums Board, the medical officers of health, and the medical profession generally—have not so far adopted any common line of action, but all have made known their views. Agreement is likely to be reached only when these views are considered in relation with one another, bearing in mind the common goal towards which the authorities are striving. The report of the inquiry[1] sets forth in plain terms the present position of the whole question and the negotiations that have led up to it. Public opinion is gradually recognizing the value of the tuberculosis dispensary as the best means hitherto devised by which tuberculous disease may be detected and prevented in the homes of the people. Success in respect of prevention can only follow when the public are sufficiently informed and enlightened to allow their home conditions to be fully investigated and modified, when necessary, by skilled advisers.

Institutional treatment may serve to bring temporary relief to the individual, and his segregation for a time will benefit his family and fellow lodgers. But these benefits will not avail much if the home conditions are allowed to remain as before. It is only through explanations and instructions given by medical practitioners, which in many instances should be reinforced by the tactful advice of trained visitors, that the need for alterations can be instilled into the minds of uneducated occupants who may be unconsciously exposing themselves or their children to constant risk of infection. By "uneducated occupants" we mean those of whatever class who have an inadequate knowledge of the principles of prophylaxis and of the manner in which it should be carried out, especially in cases of pulmonary tuberculosis attended by expectoration.

Many useful lessons have been taught by the experience of some of the voluntary dispensaries, such as that which has been working in Paddington and North Kensington for the last five years. But although much has been done, there still remain many defects to be remedied, when circumstances may permit. It is considered that early diagnosis would be greatly helped by the provision of an adequate number of observation beds, while the more permanent segregation of the advanced case, the true source of infection, is on all hands admitted to be desirable. No legislation has as yet been formulated by which this rational and necessary procedure may be effected. The efforts of the metropolitan borough councils to provide tuberculosis dispensaries on the lines laid down by the Local Government Board and the London County Council, and to come to agreement with the Insurance Commissioners and Local Committees are, it is believed, nearing fruition, and will no doubt be assisted by study of the Charity Organization Society's report. The statistical information alone should enable approximate estimates to be formed as to future requirements. The opinions of experts, such as physicians to a chest hospital, medical officers of health, officers of voluntary dispensaries, lady visitors, and others have been collated, and will be found to agree in most essential points, though they differ a good deal in detail. No definite evidence is forthcoming to prove the greater efficiency of a dispensary controlled by an official body such as a borough council over a similar institution managed entirely by voluntary effort. The conclusion drawn by the society would seem to be in favour of the voluntary system as permitting of the greater elasticity of working necessary in dealing with a disease so variable as tuberculosis. No official rules can be devised to cope with tuberculosis in all its various manifestations and surroundings, and hence discretion must be given to the controlling authority to deal with each problem as it arises.

The association of tuberculosis dispensaries with general or special hospitals has been generally advocated, not only to secure the fullest investigation and the most scientific forms of treatment for each patient, but also in the interest of medical education, both curative and preventive.

Hearty co-operation between hospital staffs, tuberculosis officers, and medical officers of health, aided by a competent staff of trained lady visitors, and all working in sympathy with the local practitioners, should result in the detection, regulation, and ultimately the eradication of the disease within their sphere of influence, and this most desirable consummation will only be arrived at by some such combined effort as has been indicated in the report to which we refer.

[1] The Prevention and Treatment of Tuberculosis in London. Report by the Charity Organization Society, 1913.

THE OCULO-CARDIAC REFLEX.

BY the term "oculo-cardiac reflex" is meant the slowing of the cardiac rhythm which follows almost immediately on firm compression of the eyeball. Wagner von Jauregg observed that in stuporose conditions, when the strongest sensory stimuli failed to rouse the patient, compression of the eyeballs evoked movements of the limbs and roused the patient to answer questions. B. Aschner in 1908[1] found that ocular compression not only evoked circulatory phenomena but in some animals had an effect on the respiration also; thus in the rabbit the reaction was almost entirely on the respiration, whereas in man and the dog it was almost entirely circulatory. When the ocular compression was applied in an animal whose thorax had been laid open, not only was the heart slowed, but its contractions were diminished in force, and this might go on to arrest of the ventricle in diastole. When the respiration was increased in frequency, respiratory arrest in inspiration, or more rarely spasmodic expiratory movements, might be produced. He found that the reflex could be evoked during narcosis, and persisted after abolition of the corneal reflex. The suggestion that the effect was due to temporary hypertension of the cerebro-spinal

[1] *Wiener klin. Woch.*, xxi, 1908, p. 1528.

fluid which stimulated the bulbar centre of the vagus nerve mechanically was disproved by the fact that the reflex was still obtained unimpaired after trephining. In favour of the hypothesis that it was a true trigemino-vagus reflex was the fact that the effect was abolished by section of the trigeminus branches which supply the eyeball, and was not at all modified by section of the olfactory, oculo-motor, trochlear, facial, or the eighth pair of nerves.

Miloslavich[2] found the reflex very often present in persons in good health, and constantly in hypervagotonic patients, in digestive neuroses, and in organic lesions of the alimentary tract. He regarded its absence as a sign of hypersympathicotonus. As the terms "vagotonus" and "sympathicotonus" have not yet been at all widely adopted by British medical writers, it is desirable to attempt to define the sense in which they are used by Continental writers. The vagotonic patient is usually pale, with arterial hypotension and a pulse slower than normal; his pupils are of medium size, and he is usually young when he consults a physician. He may complain of both early and late pains after meals, the former being due to spasm of the gastric cardia, and the latter to pyloric spasm. Gastric hyperacidity is common, the gastric pains are often accompanied by salivation, air-hunger is common, and constipation is the rule, but may be interrupted by attacks of diarrhoea. Very often there are also present nausea, vomiting, pharyngeal anaesthesia, sweatings, palpitation, extrasystoles, dyspnoea, asthmatic attacks, and pseudo-angina. The sympathicotonic patient, on the other hand, shows dilated pupils, slight arterial hypertension, tachycardia, and congestion of the face. The gastric motility is either normal or diminished, digestion is slow, and gastric evacuation sluggish; gastric fermentation frequently occurs, and diarrhoea is common. As a rule the patient is seen at a later age than the vagotonic patient. There is often hypersensibility to abdominal palpation, and its effect is seen in increased mydriasis and redness of the face. The nature of the clinical reactions in these two types of patient is held to be explained by the fact that the vagus is the motor and secreto-motor nerve of the stomach, contracts the pylorus, stimulates the intestinal muscle, and slows and inhibits the heart; whereas the sympathetic sends secreto-motor fibres to the intestine, accelerates the heart, constricts the abdominal blood vessels, and dilates the pupils.

Clinical studies of the oculo-cardiac reflex have recently been made by Loeper and Mougeot,[3] who found that in persons in good health ocular compression slowed the radial pulse by about six to eight beats a minute, but not more. They kept up compression for a period of from half a minute to a minute and a half. The slowing began immediately, and disappeared with discontinuance of ocular compression. The reflex was present in at least 60 per cent. of healthy subjects, also in nervous subjects, those who showed evidence of slight vagotonus, and in pale subjects with respiratory arrhythmia, a sign of functional hyperexcitability of the vagus nerve. They found that the compression caused nausea occasionally, and that usually it lowered the blood pressure, whereas Aschner taught that it usually raised it. The reflex was present in 80 per cent. of the patients examined. Acceleration of the pulse on ocular compression was observed chiefly in women who were emotional or tuberculous, or in persons liable to profuse sweatings or turgid with heat.

These observers believe that the reflex is not carried out solely by the vagus, but sometimes also by the sympathetic. In gastric neuroses they found that 20 per cent. of the patients gave only a minimal slowing of the pulse, but 60 per cent. a slowing of as much as 10 to 16, and even sometimes 20 to 22 pulsations in a minute; of the last-named patients, some had a great desire to vomit, and very marked vertigo. Loeper and Mougeot concluded that the subjects of gastric neuroses fell into one or other of two types—the vagotonic or the sympathicotonic; and that the reaction to ocular compression made it possible to assign a case to one or other category; and that any acceleration or slowing exceeding 10 pulsations per minute was abnormal. They admit that these two clinical types were sometimes combined in a given patient, but even here there was usually a preponderance of the features of one or the other type—vagotonic or sympathicotonic.

Milian and Gautrelet[4] have studied the effect of ocular compression on the radial pulse in exophthalmic goitre. After an extremely short interval a very marked diminution of the frequency and intensity of the radial pulsations was felt. They observed also a marked diminution of the pulse frequency in cases of incomplete exophthalmic goitre, with some enlargement of the thyroid and marked sweating, accompanied by constipation, asthma, and sometimes tachycardia; they found the reflex very marked in some cases of tuberculosis and syphilis, and sometimes in articular rheumatism. Mougeot[5] concluded recently that the oculo-cardiac reflex was normal in cases of the paradoxical tachycardia of arterial hypertension, and still more recently he and Loeper[6] have recorded the fact that in a series of 21 cases of tabes dorsalis the oculo-cardiac reflex was absent in 19, and was greatly diminished in the remainder, the pulse-rate being in these two cases slowed by only two beats in a minute. In more than half the cases there was loss of the pressure-pain sensibility of the eyeballs, but the oculo-cardiac reflex may be lost in tabes, though ocular pressure-pain sensibility is normal, or only slightly impaired. Petzetakis[7] has found that the reflex is positive in cases of bradycardia of nervous origin. He examined 16 cases of bradycardia diagnosed as total by the examination of the venous pulse; the oculo-cardiac reflex was normal in every case except one of icteric slow pulse not influenced by amyl nitrite. He regarded this case as one of myocardial bradycardia. He concluded that the test of ocular compression is of value in the diagnosis between cases of nervous and myocardial bradycardia; it gives a cardiac slowing in the former group, and none in the latter.

Summing up the various observations noted, it appears that the oculo-cardiac reflex is present in fully 60 per cent. of normal persons, giving a cardiac slowing of from six to eight beats in a minute; if to these be added those patients who show nothing graver than a gastric neurosis, we find it present in about 80 per cent. of all persons. The reflex is normal in the paradoxical tachycardia of arterial hypertension and in cases of bradycardia of nervous origin; it is marked in hypervagotonic patients, excessive in exophthalmic goitre and in some cases of tuberculosis, syphilis, and articular rheumatism. It is commonly lost in tabes, especially when the Argyll Robertson pupillary phenomenon is present. The oculo-cardiac phenomenon appears to be a true trigemino-vagus reflex, and possibly in

[2] *Wiener med. Woch.*, lx, 1910, p. 3051.
[3] *Bull. et mém. Soc. Méd. des Hôpitaux de Paris*, xxix, 1913, p. 865.
[4] *Bull. et mém. Soc. Méd. des Hôpitaux de Paris*, xxix, 1913, p. 878.
[5] *Le Progrès médical*, xli, December 20th, 1913.
[6] Ibid., December 27th, 1913, p. 675.
[7] *Compt. rend. Soc. de Biol. de Paris*, lxxv, January 2nd, 1914, p. 677.

exceptional cases ocular compression may give a trigemino-sympathetic response. Finally, the application of the oculo-cardiac reflex appears to be free from danger and for the most part not seriously painful or unpleasant to the patient.

VISIT OF THE CHAIRMAN OF COUNCIL TO AUSTRALASIA.

The Council of the Association, at its meeting on April 22nd, received two letters from honorary secretaries of Branches in Australia, written on the instructions of the councils of those Branches, expressing their sense of the value of Dr. Macdonald's visit to Australasia at the present time when an evolution of an important kind is taking place in the history of the Association there. The one was from Dr. C. Stanton Crouch, honorary secretary of the Victorian Branch, and the other from Dr. A. Graham Butler, honorary secretary of the Queensland Branch. In the note published in the Journal of March 14th a brief account was given of the earliest stage of Dr. Macdonald's mission to Australasia, taking him on his journey as far as Sydney, where his arrival coincided with the meeting of the Federal Committee of the British Medical Association in Australia. At the invitation of the members, Dr. Macdonald attended the meeting of this committee on two days. This halt gave him the opportunity of making acquaintance with medical men representative of the various States of the Commonwealth, and of discussing with them the conditions of practice in their various areas. Regret was expressed that he was unable to prolong his stay so as to attend meetings of members of the Association in various centres in New South Wales, but the Committee assured him that his presence and advice had been of great assistance to them. On February 4th he went on to New Zealand along with other medical men who were going from Australia to the Australasian Medical Congress in Auckland; that port was reached on February 8th, and, as has already been reported, the Congress was opened by the Governor, Lord Liverpool, on the following day. After the President of the Congress, Dr. Challinor Purchas, had read his address, Dr. Macdonald was called upon to propose a vote of thanks to the Governor for opening the Congress. The dinner of the Congress was a great success; it was attended by the Premier of New South Wales, the Minister of Public Health of New Zealand, and other public officials, as well as by two Maori M.P.s, both doctors and men of remarkable ability. At the dinner some admirable speeches were made, and that of the Premier of New South Wales, Mr. Holman, was a statesmanlike utterance, containing sentiments which will be of value to the profession in dealing with medical matters in the future. It should be added that during his visit to Melbourne earlier on his journey, Dr. Macdonald had an interview with the Minister for the Interior of Victoria, on the subject of an Insurance Act, and received an assurance that before any bill was drafted the British Medical Association would be consulted. At the dinner in Auckland Dr. Macdonald responded for the Association in a speech which was enthusiastically applauded. He tells us that the scientific side of the Congress was a distinct success, the papers being original and the criticisms up to date and to the point; he noticed an independence of thought and ease of expression which raised the debates to a very high level. After the Congress a visit was paid to Rotorua, the region of geysers and hot springs. "It was," he says in a private letter, "rather suggestive of living in a roof garden over hell with a very thin roof. It is distinctly weird to see the Maories walking out of their front doors and placing their kettles or pots in a crack in the ground to cook. Geysers are a drug in the market; you can make a miniature one for yourself in places by pushing a stick through the crust. One place is appropriately called 'Hell's Gate.' I went south from this place by the Wanganui River, the scenery of which must be unrivalled. It is an almost continuous gorge, the sides rising in many places almost perpendicularly to a height of 500 feet, clothed all the way with magnificent pines and tree ferns and other beautiful subtropical vegetation. The voyage is exciting, being through a series of reaches of deep still water and rapids, which require very careful handling by the steersman. A little additional excitement is added by the boat occasionally travelling along the bottom in a series of bumps; she is especially built for this purpose. The voyage lasts about 18 hours." Dr. Macdonald afterwards visited Wellington and Christchurch, and he was invited to address large meetings of the profession in both places. Unfortunately, time did not permit him to visit Dunedin, where the New Zealand University has its head quarters. In New South Wales, as our readers are aware, the profession is at this time engaged in a struggle with the clubs, and, we are glad to learn, is winning all along the line. Similar fights are going on in other States, and Dr. Macdonald, we have no doubt, was able to encourage members of the Association to show a united front. Both here and in New Zealand he urged the Branches to employ paid organizers, and we understand that this policy has been adopted in New Zealand where the proportion of effective medical men who are members of the British Medical Association is rather lower than in other parts of Australasia. On the continent of Australia the proportion amounts to over 90 per cent. The most recent letter from Dr. Macdonald shows that he was on his way to Brisbane, and was coming home by way of Hong Kong.

ANTE-NATAL PATHOLOGY.

The subject of ante-natal pathology is one of extreme interest, not only because of its great practical importance but on account of the extreme complexity of the problems that it presents. The papers by Dr. J. W. Ballantyne on the nature of pregnancy and on ante-natal hygiene by Dr. Amand Routh, published in the Journal last February, have been followed by a discussion at a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, at which Dr. Routh renewed his plea for research in ante-natal pathology, and reinforced it by fresh facts and arguments. The general upshot of the whole discussion may be regarded as having been fairly summed up by him when he claimed that it had shown that very little was certain as regards ante-natal disease, either in respect of its relative incidence, the sources and methods of infection, or its prophylaxis and treatment. Dr. J. W. Ballantyne by no means overstated the position when he suggested that what had to be done was to study the physiology and pathology of pregnancy as it affects the mother, the physiology and pathology of the germinal, embryonic and fetal stages of the life of her offspring, and the physiology and pathology of the decidua. On the importance of research work on the subject being undertaken there is no need to dwell, for it seems not unreasonable to believe that the number of children who are conceived and yet die before birth from preventable causes falls little, if at all, short of the number of those who die during the first year of independent life. This field of research has already attracted a certain number of workers and will undoubtedly attract a great many more; it would seem probable that the best method of attacking the various problems concerned may be by combined rather than by individual effort, the aim being to place groups of expert workers in a position to handle a sufficiently large amount of material to eliminate sources of error. Among the causes of ante-natal death discussed at this particular meeting syphilis was accorded the chief place, probably because the discovery of the spirochaete and the Wassermann reaction have made it

possible for statements to be made which are sufficiently definite to revolutionize ideas in this connexion. The relation of tubercle to ante-natal death was also discussed, but in the main the tendency was less to dwell on existing knowledge than to attempt once again to draw the attention of those in a position to advance that knowledge to the urgent need for an investigation which must be both patient and laborious. Dr. Newsholme reminded the meeting that the Local Government Board was so impressed with the importance of the subject that, as was announced a few weeks ago, it had decided to make a grant for an investigation into the causes of stillbirths, and that the inquiry had been undertaken by Drs. Eardley Holland and Bridge. A similarly encouraging statement was forthcoming from Dr. Russell, of Glasgow, who stated that a layman had recently given £3,000 to equip a laboratory in the Glasgow Maternity Hospital; and Dr. Leith Murray, of Liverpool, put forward the suggestion that part of the research fund at the disposition of the Insurance Commissioners might be used for the purpose of assisting workers on the subject of ante-natal pathology.

THE "INDEX CATALOGUE."

WHILST the outstanding subject dealt with in the volume of the *Index Catalogue* which appeared last year (see JOURNAL for March 8th, 1913, p. 520) was *Syphilis*, the one which covers the greatest space in the present volume (the eighteenth)[1] is undoubtedly *Tuberculosis*. The volume contains 1057 double-columned pages, and of these no fewer than 418 are devoted to an enumeration of the books, pamphlets, and articles which have appeared since 1893 dealing with tuberculosis; surely a Dominie Sampson of this century may well exclaim "Prodigious!" and repeat it more than once or twice in the presence of so great a library. The heading "Tuberculosis" in the first series of the *Index Catalogue* only called for fifty-five pages—fifty-five in comparison with 418! When the subheadings are looked at, the contrast becomes still more striking. In 1893 forty-two subheadings were required for the classification of the subject; now, twenty years later, 525 are needed; and yet, when one reads over these headings and gazes at the crowds of articles enumerated under almost every one of them, one is forced to admit that there has been no unnecessary subdividing. Amongst the 470 extra headings are many which mark the graves of hopes of cure which once shone bright and fair; many which show real and great advances towards prevention, the best of all therapeutics; many which are commonplaces now, but which were unknown twenty years ago; and not a few perhaps which are novelties even to a student of tuberculosis. Thus, as the eye follows the long columns of names and titles, it is caught by such headings as "Pulmonary Tuberculosis, Notification and Registration," "Open-air Schools and Vacation Colonies," "Treatment of Pulmonary Tuberculosis—by Altitudes and Winter Resorts, by Arid and Semi-tropical Climates, by Seashore and Sea Voyages, by Diet, by Open Air," and so on. Then we come upon treatment by various medicines and methods—for example, by alcohol, by allyl compounds, by animal extracts, by antiphthisin (Klebs), by antiseptics, by aristol, by arsenic, by artificial hyperaemia, by artificial pneumothorax (Forlanini, 1895), by aspirin, by blood-letting and transfusion, by calcium compounds, by camphor, by cantharides, by carbon dioxide, by cod-liver oil, by cold, by compressed air, by compression of lungs, by creosote, by cryogenin, by dioradin, by electricity, by eucalyptus, by exercise, by fats and oils, by formaldehyde, by garlic, by gases, by gomenol, by griserin, and so on through the whole alphabet, almost every letter having one and many two or more candidates for places among the cures or hoped-for cures of tuberculosis. A curious phenomenon to take note of is the great amount of writing which seems usually to have been needed to discredit finally any one alleged remedy. But this volume of the *Index Catalogue* deals with many other diseases and medical matters in addition to tuberculosis. There are the sixty-two pages given to the enumeration of the books and papers on tumours and cancer is not included; there are the thirty-eight pages given to tetanus and the ten given to tetany, including parathyroid tetany; there are the thirty-five given to therapeutics, for of course this subject is considered under many other headings in other volumes as well as this; there are the ten upon the thymus gland—two sufficed twenty years ago; there are the thirty-five upon matters related to the thyroid gland; and there are the twenty upon *Trypanosoma* and trypanosomiasis. There are little headings, too, upon such subjects as treacle (one article only in twenty years—how has this once honoured remedial agent fallen on evil days?); truffles (five articles and a cross-reference to fungi); tritanopia or violet blindness (three articles); turbidometer (an instrument for estimating the number of bacteria in vaccines); typhlatony (atony of the intestines); and Tumbu fly disease (three papers). So complete a terminological victory has been won by appendicitis that typhlitis has only half a column of references catalogued for it; whilst one of the most novel medical names is *Tsutsugamushi disease*, or inundation fever, and yet it has already more than a column of articles bearing upon it. It is curious to find hundreds of references to new drugs, synthetic and other, which are but of yesterday, and only one to such an important matter as thinking (a hypothesis by an Italian author on the longevity of thinkers). Truly, modern medical literature is a gigantic and in some respects an awe-inspiring phenomenon. The Surgeon-General's Library now contains 182,984 bound volumes and 320,343 pamphlets.

[1] *Index Catalogue of the Library of the Surgeon-General's Office, U.S. Army.* Second Series, vol. xviii, Tetamore-Tzschirner. Washington, 1913. (Imp. 8vo, pp. 1066.)

AN INDICTMENT OF THE PLANE TREE.

THE remark of an old diarist that spring had set in with its usual severity has lost its point this year. But to some people there is always a snake in the grass, and already we have been warned to expect an epidemic of "bronchitic and catarrhal irritation" among adults, and "severe post-nasal catarrh" among children who play in the parks and gardens. While every one has been rejoicing in the beautiful spring, with its wealth of blossoms, Mr. H. D. O'Neill has come forward with a Cassandra-like vaticination of the woes with which we are to atone for this innocent pleasure. In a letter which appears in the *Times* of April 20th he says that the cause of the catarrhal visitations which he predicts is to be found in the "tiny spicules which are being liberated in myriads all over London by the breaking up of the fruit balls of the plane trees." He adds that the number of plane trees in London is increasing rapidly, and he thinks it time the scientific world should treat the matter seriously. As a preventive of the evil to which he has called attention he suggests sterilization of the trees. Even if the malefactions which Mr. O'Neill attributes to the plane tree be admitted, the proposed method of dealing with them scarcely comes within the range of practical politics, if we may apply Mr. Gladstone's phrase to such a matter. The plane tree has been planted pretty extensively in London, as it thrives well in the smoky atmosphere in which other trees do not. When a similar indictment was brought against the plane tree by Lord Walsingham in 1910, the Metropolitan Public Gardens Association got an opinion on the subject from the Director of Kew to the effect that although he thought the spicules might "add one more to the numerous irritants common to the atmosphere in the streets of cities," nothing had been proved to justify condemnation of the plane as a

street tree. It is true that "colds" are unusually prevalent at present, but although some of these may be accounted for by the action of the spicules of the plane tree seeds, there are innumerable other factors. Not the least important of these is dust, which itself is, like the melancholy of Jaques, compounded of many simples, among which are the excrements of horses, dogs, and other animals. Nowadays the trail of stinking vapour left behind by many motors has an irritating effect on the average human nose. Then there is the pollen of different plants which will be flying about during the next few weeks, causing what is conveniently, if not quite accurately, known as "hay fever" in persons whose respiratory mucous membrane is peculiarly liable to irritation by various agents of vegetable nature. The season of hay fever is generally somewhat later, but vegetation this year is very forward, and the first heat of summer, to which the affection has sometimes been attributed, has been almost aggressive in the suddenness of its onset. It was proved by Blackley, by experiments on his own person, that the pollen of grasses and flowers is a potent cause of hay fever. Hence susceptible persons have to take precautions to shut out the irritant from their air passages; sometimes they have to condemn themselves to stay indoors during the time of which the poet speaks when he says, *Nunc formossimus annus*. Some are particularly affected by roses, and there is a case of a bishop who literally "died of a rose in aromatic pain." The antitoxin extracted from pollen by Dunbar is said to be useful, but pollen, if the chief, is probably not the only cause of hay fever. Heberden, who is one of the earliest writers to make special mention of summer cold, while referring to patients who suffered for some weeks every year and to others who were troubled during the whole summer, mentions the case of a man who was never free from it except in the summer. It is a capricious and often intractable ailment, especially when the bronchial tubes are attacked. Like sea-sickness, it too often excites ridicule rather than sympathy, but to those who are susceptible it is a thorn—or, to speak by the card, a spicule—in the flesh which is harder to bear than many more serious ills. But, after all, it is only a comparatively small number of people who are liable, and by the majority of Londoners Mr. O'Neill's dismal prophecy need not be taken very seriously. We do not think that the greatest good of the greatest number calls for the harsh treatment of the plane tree which he urges.

WILKSIANA.

ALL who had the privilege of meeting Sir Samuel Wilks, even in his last years, must have been impressed by the breadth of his outlook on life, his zeal for the dignity of his profession, and the originality of his utterances. Of most men, even after a short acquaintance, it is possible to say that on a given subject they will express such and such an opinion; the specially attractive feature of Wilks's conversation was its unexpectedness. Of him might have been said with perfect truth what Johnson said of Burke, that you could not go by chance with him under a shed to shun a shower without finding that he was an extraordinary man. The new number of the *Guy's Hospital Reports*,[1] contains a fine "In Memoriam" of him by Dr. Hale White, and interesting appreciations are added by Dr. Jessop, who attended him in his last illness, Sir Bryan Donkin, and Sir George Savage. In his retirement Wilks continued to find scope for the intellectual curiosity which had been so active throughout his professional life. He joined the Hampstead Scientific Society, and quickly became its president. He was a regular attendant at its meetings, and it was largely owing to his initiative that the observatory of the society was built. In the last decade of his life he wrote on such various subjects as Keats, the orbit of the moon, vaccination, Fahrenheit's thermometer, the cared elm of Hampstead, death from lightning, and hermaphroditism. He had a personal affection for many authors, and on his bedroom mantelpiece were photographs of Oliver Wendell Holmes, Wordsworth, and Harriet Martineau. Wilks, says Dr. Hale White, was more beloved by the profession than any one he has ever met. He used to call himself the doctors' doctor, for he was always being consulted by doctors about themselves, their wives, or their children. The qualities that inspired such confidence and reverence were his transparent honesty, his contempt of everything that savoured of self-advertisement, and his detestation of all humbug. Wilks's cure for the inevitable anxieties and difficulties of life was work; he corrected proof sheets as he lay in bed completely paraplegic. Sir Bryan Donkin says Wilks was a delightful travelling companion, and a visit to a picture gallery with him was a source of much greater pleasure and profit than similar visits made in the company of specialist connoisseurs. Dr. Jessop says that Wilks's deathbed "might form material for a picture 'The Ruling Passion Strong in Death'—propped up as well as his paralysed and attenuated form could be, three good sized books of reference he had sent for to refer to the appearance of a nutmeg in its original form, his feeble hands copying a drawing in one of the books. It was under these conditions his last hour of sensibility was spent; he became unconscious with his books around him." Sir George Savage relates that a former pupil sent for Wilks to see a congenital idiot, and said he had given the child phosphorus in every form with no benefit. Wilks merely remarked, "But you have not given him a convolution." Sir George Savage goes on to say: "Wilks never did an overpowering practice, and yet it is rather surprising that this was so, for Guy's men were always willing to consult him about themselves. One day a Guy's man went to consult him. He happened to be the third who had consulted Wilks that morning. After carefully considering his case and advising him what to do, talking to himself, he said, "What a large practice I should have if it were not for Guy's men!" His open speaking did not encourage practice. A tale is told of his going to the country to see a very loquacious but hypochondriacal lady. After fully satisfying himself about her, he proceeded to examine the pictures on the walls, till the anxious-minded husband suggested that he had called him down to see his wife, and not his pictures. Again, it is said that, after examining a worn-out young man, he muttered, "Age is relative; a worn-out old man at thirty." He saw one patient who suffered from an occasional fit of nocturnal epilepsy; these were always preceded by a throat aura. It was at the time that Hughlings Jackson was trying to stop fits by ligaturing the limb from which the aura started. Wilks, without explaining, sent the patient to get a throat-spraying apparatus. The patient complained, when he reached home, of having been sent home "with a damned toy." Many of Wilks's friends told him what he ought to do and what he ought not to do, but he said, "It is all very well, but if I followed their advice I should not be Wilks." And it was Wilks as he was whom the profession loved and honoured.

[1] Vol. lxvii, being vol. lii of the third series.

THE ETIOLOGY OF MUMPS.

THE causal agent of infectious parotitis has not yet been determined. According to the observations of Pasteur and Roux the blood in the disease is sterile, and though Laveran and others isolated a micrococcus from cases, they were unable to reproduce the symptoms of the disease by inoculation. Nicolle and Conseil have frequently examined the fluid from the inflamed glands without being able to detect the presence of any micro-organism by the microscope or by the ultra-microscope, but recently they have published a few experiments to

show that the fluid contains an infective agent, presumably a filter-passing virus, capable of bringing about symptoms suggestive of mumps. A small quantity of blood-stained fluid (about $\frac{1}{2}$ c.cm.) was obtained by puncture of the swollen parotid of an infant, and was immediately injected into the parotid of a young Bonnet monkey. No local reaction followed. On the twenty-seventh day afterwards the animal had a high temperature, with rigors and restlessness. The fever, after lasting for seven days, subsided. During this time daily examination of the blood failed to reveal the presence of any parasite. At no time was there any appreciable swelling of the parotid. In a second case, in a child, the inflamed parotid on the fifth day yielded about $\frac{1}{4}$ c.cm., of fluid on puncture. This, on inoculation into the gland of a second monkey, though producing no local reaction, was followed by a fever lasting from the sixteenth to the nineteenth day. In this case there was no swelling of the parotids or of the testicles. More fluid was obtained from three children suffering from mumps; half of it was injected into the parotid of a third Bonnet monkey, and the other half into the second monkey, which had now completely recovered. In the latter no fever or any other abnormal symptom whatever resulted, but in the former a fever started on the twenty-sixth day and lasted four days, unaccompanied by any general symptoms, but with a slight swelling of the parotid injected and a painful impotence of the temporo maxillary joint on the same side. No microscopic or ultra-microscopic parasite was found in the blood, but during the course of the fever the blood count showed a great increase of mononuclear leucocytes (50 per cent.). The injection of a minute quantity of parotid fluid into the gland itself or of relatively larger quantities into the peritoneal cavity of other monkeys did not produce fever or other symptoms. These few experiments seem to suggest that the serous effusion in mumps, when introduced directly into the parotid gland of monkeys, is capable of bringing about a fever lasting for four to seven days with an absence of marked general symptoms, though generally without appreciable swelling of the parotid. Feeble though the experimental infection may be, yet it is none the less specific, seeing that it protects against a subsequent inoculation. As a matter of fact, in children the parotid may not be sensibly swollen in cases occurring during an epidemic of mumps. The long period of incubation of the experimental disease accords well with that of the natural malady, and the mononuclear leucocytosis of the former agrees with that of the latter.

PULMONARY SILICOSIS IN SOUTH AFRICA.

THE *South African Medical Record* for February 14th contains a paper on the industrial diseases of South Africa, read by Dr. Watkins-Pitchford, Director of the South African Institute of Medical Research, Johannesburg, before the Cape of Good Hope (Western) Branch, British Medical Association. He devoted the bulk of his long paper to the subject of pulmonary silicosis, "a disease which, both from its prevalence and its economic importance at the present time, may be justly termed 'the industrial disease of South Africa.'" He stated that "the Transvaal Miners' Phthisis Commission of 1903 was of opinion that probably 21 per cent. of all the underground miners were actually or probably affected with silicosis. A similar commission in 1912, after examining 3,136 underground miners, found that 990, or approximately 32 per cent., were suffering from miners' phthisis in one or other of its stages, and that about two-thirds of the cases were in the stage of early or moderate fibrosis." While admitting that the results of the two commissions could not be compared owing to difference of method, and that the hygienic condition of the mines had improved in the interval, attention was called to the fact that the number of rock drills had trebled between 1903 and 1912. All the deaths of white miners on the Rand in 1912 were not reckoned in the return, for a considerable number went back to their native land when they found themselves stricken, yet (leaving this out of account) the death-rate for the year was 13.8 per 1,000. Still greater fallacy attached to the mortality among native mine "boys," for they were sent home when their health began to fail, which in most cases meant that they left the Transvaal. Dr. Watkins-Pitchford held that the inhalation of very fine particles of silicious matter was the cause of the disease; this dust was formed in the drilling of holes for dynamite charges and more especially by blasting. The prevailing rock of the Witwatersrand is a very hard metamorphosed silicious sandstone (quartzite), and it is in this that the shafts and tunnels of the gold mines are excavated. The gold is found in strata of conglomerate (called "banket") which occur in the sandstone, the conglomerate being composed of quartz pebbles and particles of pyrites embedded in silica. The precious metal is obtained from the pyrites and the matrix in which it and the pebbles are embedded. Some of the shafts are thousands of feet deep, and the extent of the drives or tunnels of a single mine may be reckoned in miles. While the dust from drilling, Dr. Watkins-Pitchford said, could be kept down by water, the dust from blasting was more difficult to deal with; even when all means were employed, for some time after a blast dust floated in the air, so fine that it passed through practically every kind of respirator. The only satisfactory plan was to keep the men out of that part of the mine till all the dust had settled. But pecuniary considerations tempted the men to return and continue working before that took place. The raising of dust by crushing of the auriferous rock could be prevented by the use of automatic sprays and exhaust fans. In the pulverizing of the ore in the stamp mills the abundance of water obviated danger from dust. Summing up this part of the subject, Dr. Watkins-Pitchford said that scrupulous obedience to the spirit of the present mining regulations would result in the total abolition of pulmonary silicosis from the gold fields of the Rand. In discussing the pathology, he said that upon opening the thorax of a person dead from advanced silicosis the lungs did not collapse. This was due chiefly to loss of elasticity in the lungs, but also partly to pleuritic adhesions. The lungs might be unequally affected. It was inadvisable to pronounce tuberculous infection of a lung affected with silicosis unless the tubercle bacillus was found. He did not accept the view that pulmonary silicosis might result rather from the swallowing than the inhalation of silicious dust. With regard to histopathology, he said that the abnormalities in the lung were essentially those of chronic interstitial pneumonia associated with the presence of minute silicious mineral matter, and urged that it was of great importance to employ the polariscope in conjunction with the microscope in looking for silicious particles in microscopic sections. The lung affected with silicosis was in all stages more liable to tuberculous infection than a lung free from fibrosis; he believed that a rigorous exclusion of expectoration of tubercle bacilli from the workings and compounds would result practically in the banishment of tuberculosis among the natives.

FRIEDMANN'S TUBERCLE EMULSION.

A FEW weeks ago (March 21st, p. 683) our Berlin correspondent sent us a note on the unfortunate experience of Professor Vulpius, of Heidelberg, with Friedmann's turtle tuberculin. He now writes to call attention to a recent paper by the well-known bacteriologist, Frau Professor Rabinowitsch-Kempner,[1] who has recently examined large numbers of the tuberculin ampullae supplied by the makers, both microscopically and by cultivation. She reports the presence in them of non-acid-fast bacilli, of

[1] *Deut. med. Woch.*

cocci, and in one case of streptococci. Of a series of ten tubes tested bacteriologically no fewer than six contained impurities. The authoress was, furthermore, unable to confirm Friedmann's assertion that the material was absolutely non-virulent for mammals. Several guinea-pigs manifested suspicious miliary nodules in the liver after inoculation. In the course of her investigations she utilized the turtle bacilli grown from an abscess of one of Friedmann's Rhode Island patients, and another strain from a lupus patient, also treated by him, and now in the Charité Hospital in Berlin. She was much astonished to find that these bacilli, in contradistinction to what has been described for all reptilian bacilli, grew very well at 37° C., and were non-virulent on inoculation into reptiles. Of more than ordinary importance was the undoubted fact that both strains were pathogenic to a certain number of the rabbits and guinea-pigs inoculated, differing in this respect also from all reptilian bacilli hitherto described. In view of these results it is considered that the unfortunate incidents reported from time to time as resulting from the inoculation of Friedmann's tuberculin in man are not surprising. Frau Rabinowitsch reminds us, in conclusion, that mildly virulent or non-virulent strains of bacilli may suddenly, for some unknown reason, assume an increased pathogenicity in the mammalian body, and on these grounds criticizes the prophylactic inoculation by Friedmann some time ago of numbers of Berlin infants and school children. She ends her remarks with the recommendation first made by Vulpius, namely, that the manufacture of Friedmann's remedy should be placed under the control of the State.

MOTOR CONJUNCTIVITIS.

THE conjunctival irritation that so often follows long runs in open motor cars is popularly attributed to dust, and no doubt the mechanical injury inflicted by angular particles of road material and tar dust affords a sufficient explanation in many instances. But the smarting of the eyelids may supervene quite independently of this cause, and then it is ascribed to "cold," because it is worst when facing the wind, especially if the atmosphere be particularly dry. This suggests another factor, and that factor is the rapid evaporation of the lacrymal secretion by the wind. Mere rapid passage through the air determines, to begin with, more or less lacrymation, and if not wiped away the secretion dries, depositing a layer of salt on the margins of the eyelids, and materially increasing the proportion of saline constituents in the conjunctival sacs. Further secretion partially dissolves this salt, and the resulting strong solution acts as an irritant on the mucous membrane, with the production of the characteristic discomfort. This explains why veils, which filter off the particles of dust, afford little protection against this irritant action; the only effectual means of preventing the latter is to wear goggles, for simple spectacles only partially check the evaporation due to the rapid current of air.

ON July 3rd the University of Edinburgh will confer the honorary degree of LL.D. on Dr. W. F. Mott, F.R.S., and Dr. Byrom Bramwell.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Dogs Bill.

SIR FREDERICK BANBURY'S Dogs Bill was read a second time in the House of Commons on Friday, April 17th, by 122 votes to 80. Most of the supporters of the bill turned up between 4.30 and 5 o'clock, and therefore cannot be said to have been much influenced by the course of the debate. One of the oldest members of the House, who spent the afternoon listening to the debate, and who had no special interest in the subject, said that he had never heard a bill more blown to pieces in debate than this one. Indeed, there is not much doubt that the discussion was very one-sided so far as the merits of the case are concerned. The Home Office, on behalf of the Government, as will be seen in the report of Mr. Ellis Griffith's speech, stated that, although it did not oppose the second reading of the bill, it could not go further than to agree that dogs should be placed in the same category as regards experiment as horses and mules, so that a special certificate should be required to state that the particular animal was necessary for the proposed operation or research. He announced also that he should move amendments in Committee to give the bill this effect.

Sir Frederick Banbury, in moving the adoption of the bill, said that it was not an antivivisectionist's measure, but intended simply to exempt dogs from vivisection. He alleged that the dog was in a class by itself amongst animals, and that it was not shown that it was really necessary for scientific inquiry that the dog should be used for experimental purposes. The dog, more than any other animal, was the friend of man, had been specially trained and set apart by man, and it was the duty of the Legislature to give it special privileges in connexion with experimental research. This was the line taken in general by the members who spoke in support of the bill, the only exception being Mr. Chancellor, who is on principle a confirmed opponent of vivisection in all forms and on any account.

Mr. Rawlinson, in an able speech, moved the rejection of the bill, and his motion was supported by Sir Philip Magnus.

Colonel Lockwood, Mr. Cathcart Wason, Mr. Butcher, and Mr. Lynch supported the bill. Sir Henry Craik and Dr. Chapple, in opposing the bill, very carefully covered the ground in support of the case that it was necessary to use dogs for many purposes in connexion with experimental research, and that the use of them had been attended by invaluable results. Mr. T. P. O'Connor, as a layman, also gave very hearty support to the bill, and Mr. Joseph Larmor was speaking in support of it when the closure was moved. Amongst so many able and well-thought-out speeches it is difficult, and perhaps not necessary, to give quotations. The speech of the Under Secretary of State for the Home Department, as announcing the policy of the Government in the matter, may conveniently be quoted for purposes of reference.

Mr. Ellis Griffith said:

We have had a very interesting discussion. Perhaps I may be allowed to say a word or two about the present position of affairs and the existing law. In the course of this discussion some charges have been made that there is cruelty, and perhaps unnecessary cruelty, now going on. As far as the Home Office is concerned we desire to say, and to say most emphatically, that we do not think there is any basis or foundation for that charge. Perhaps the House will allow me to state shortly what are the present safeguards under which these experiments are conducted. In the first place, without anaesthetics you cannot have inoculations beyond a simple inoculation or superficial vivisection. In that there is no cruelty and no unnecessary cruelty. I will leave the question of experiments without anaesthetics. With regard to experiments with anaesthetics, these only take place under three conditions, which are always attached to every licence for any experiment under anaesthetics. First of all, all operative procedures in connexion with the experiments detailed in certificate "B" shall be carried out under anaesthetics of sufficient power to prevent the animal from feeling pain. Secondly, the animals experimented on shall be treated with strict antiseptic precautions, or, if these fail and pain results, the animals shall be immediately killed under anaesthetics. There is a third condition, to which I attach special importance, to which I would draw special attention. It is in three paragraphs, and refers to the anaesthetic condition, the antiseptic condition, and to the pain condition. The three paragraphs are—first, if the animal, after and by reason of any of the said experiments under the said certificate "B," is found to be suffering pain which is either severe or is likely to endure, and if the main result of the experiment has been attained, the animal shall forthwith be painlessly killed. This condition was only formerly

imposed in some cases; it is now imposed in all cases. The second paragraph provides that if an animal, after and by reason of the said experiment, is found to be suffering severe pain which is likely to endure, such animal shall forthwith be painlessly killed, whether the main result of the experiment has been attained or not. That is new and is now universally imposed. The third paragraph provides that if any animal appears to an inspector to be suffering considerable pain, and if the inspector directs such animal to be destroyed, it shall forthwith be painlessly killed.

Colonel Lockwood: That was one of the recommendations of the Royal Commission.

Mr. Ellis Griffith: That is carrying out the recommendation of the Royal Commission, of which the right hon. gentleman (Colonel Lockwood) was a member. This debate is different from any other debate that has taken place on the subject matter of this bill. In 1912 the hon. baronet (Sir F. Banbury) introduced a bill on the very same day, curiously enough, that the report of the Royal Commission was issued. In 1913 a bill was passed, in a manner best known to the hon. baronet himself, without debate or discussion. How it happened I suppose will never be elucidated. It showed that the hon. baronet is as great an expert in opposing legislation of which he disapproves as he is in expediting legislation to which he is favourable. I mention that to make it perfectly clear that this is the first time this House has discussed the subject matter of this bill with the recommendations of the Royal Commission before it. I have heard several extracts read from the report during the course of this afternoon's debate. I was here all the time, with the exception of one short interval, and it seems to me that, with the exception of three lines of it, no one has quoted the really operative clause of the report of the Royal Commission. The hon. and learned gentleman (Mr. Butcher) quoted the first three lines. They are these:

> In view of the variety of practice and divergence of opinion as to the necessity of employing dogs for experimentations and demonstrations, we find some difficulty in deciding upon this important question.

There he left it. Obviously we must go on. That was not very elucidating, because if there had been no difficulty the Royal Commission would not have been appointed.

> Some of us regard the provisions of the existing law as sufficient, some of us would prefer that in the case both of experimentation and demonstration the further special protection given to horses, asses, and mules should be extended to dogs, while some of us would exclude the use of dogs altogether.

Now come the operative words:

> But if any alteration is made in the existing procedure—

The House will note the significance of the word "if"—

> the majority of us would agree that the special enactments now applicable to horses, asses, and mules might be extended to dogs, and also to cats and anthropoid apes.

That is really, as far as we can get it, all that the Royal Commission has done upon this interesting point.

Colonel Lockwood: On the Royal Commission we felt that if any statutory change was necessary it would be impossible to get the recommendations made in that Commission, and it was in our efforts to avoid making a new statute we rather slurred over that point.

Mr. Ellis Griffith: It is rather an unfortunate slurring. It shows that you might as well grapple with the question at once, and it would have been far more satisfactory because Royal Commissions are appointed, not to slur, but to instruct.

Colonel Lockwood: I did not mean slur. I meant that in our efforts to avoid having to get a statute we missed it.

Mr. Ellis Griffith: We all know the difficulty of getting statutes. If that was the right attitude to take, what is our present position? At present experiments on dogs may be performed, as long as the experiments are under anaesthetics, without a certificate to the effect that the experiments would be frustrated if a dog was not available; whereas if the experiment is on horses, mules, or asses such a certificate is necessary, and I supported in the Committee last year the proposal to make an amendment to the effect that dogs should be put in the same position as horses, asses, and mules, so that a special certificate should be required, when the experiments were under anaesthetics, that no other animal would serve for the particular purpose for which the experiment was made. That amendment was carried, and it led ultimately to the defeat of the bill. As far as I am concerned, what I favour is not the total prohibition of all experiments upon dogs, but that if it is thought, and we think, that additional safeguards are necessary, the safeguards I have now indicated should be available for the protection of dogs, so that in future, if the suggestion I have made is accepted, no one will be able to have an experiment upon dogs unless it be found that no other animal is available for the purpose. That is a compromise. I do not want to oppose the second reading, but I wish to say quite frankly that I did my best to hold the balance between the two sides in Committee last year, and if the second reading be passed in Committee I shall be under the necessity of supporting or moving some amendment, so as not altogether to prohibit vivisection upon dogs, but to give that additional safeguard that belongs to the animals mentioned in Section 5 of the Act of 1876. The hon. gentleman (Sir P. Magnus), I think, put his case too high when he said he did not believe in different laws for rich and poor, nor in any differentiation of laws for animals. Of course, the differentiation is already allowed in Section 5. It is our proposal to remove the dog from one classification to another, and although perhaps it will not satisfy the promoters of the bill, it will give some safeguard.

It would appear, therefore, that the supporters of the bill at the present time are not justified in looking for more than that dogs shall be placed in the special category with horses and mules. It must not, however, be supposed that the opponents of the bill can rest on this; and should the bill pass through Committee in an unsatisfactory amended form they will be well advised to spare no effort to canvass members of Parliament on the subject in the meantime, and to secure a good attendance when it comes to the report or third reading stages. The fate of a private bill, however, is by no means decided when it has obtained the second reading. The Dogs Bill will doubtless meet with the same persistent and methodically conducted opposition in Committee as it did last year, and should it get through Committee, it will possibly receive the same treatment on the report stage; and in view of the other engagements of the session, it is hardly likely that the Government will be prepared to give Government time at the later stages of the session to a private member's bill of so contentious a character.

The following protest has been presented by the President of the Royal College of Physicians of London to the Home Secretary:

> We desire to express to you our strong conviction that the Dogs Protection Bill, which is put down for second reading on Friday, 17th inst., would inflict very severe injury, not only on medicine and surgery but also on the study of the diseases of animals. We think that we have some right to ask you to oppose this attack on the advancement of medical science and practice: especially as the Final Report of the Royal Commission on Vivisection does not advise the prohibition of experiments on dogs. We are absolutely certain that such experiments are necessary for the complete study of many problems of physiology, pharmacology, and pathology.

The protest has been signed by more than 350 persons, including the presidents of the Royal Colleges of Physicians or of Surgeons (London, Edinburgh, and Dublin), eminent teachers of medicine, surgery, diseases of women, diseases of children, tropical diseases, physiology, pathology and bacteriology, public health, and veterinary medicine; chairmen of great hospitals; well-known men of science; and physicians and surgeons of the chief general or special hospitals in London, Edinburgh, Manchester, Birmingham, Glasgow, and many other great cities. Among those not members of the medical profession who have signed the protest are Sir E. Ray Lankester, Sir Norman Lockyer, Sir William Ramsay, Sir Henry Roscoe, Professor Raphael Meldola, Edward D. Poulton, Mr. W. H. Perkin, Charles S. Myers, Lord Blyth, Lord Cromer, The Dean of Canterbury, Sir Frederick Pollock, Sir Reginald Talbot, Sir John Edwards-Moss, Lord Fortescue, Sir Hugh Bell, Sir Archibald Buchan-Hepburn, Eden Phillpotts, R. H. Horton Smith, the Warden of New College, Oxford;

Waldorf Astor, Sir W. W. Vincent, Sir Arthur Conan Doyle, Admiral Fremantle, and Admiral Sir William Acland.

Elementary Education (Defective and Epileptic Children) Bill.—It was hoped that the Report stage of this bill would have been passed either on Tuesday or Wednesday, the 14th or 15th of April. A small group of members, however, on the Government side, seemed to be under the impression that at the commencement of the session the House was being asked to consider too many of the so-called minor Government measures. The result of their efforts was that the whole of Tuesday was taken up on the East African Protectorates (Loans) Bill, and nearly the whole of the available time on Wednesday before 8.15 p.m. was devoted to the second reading of the Criminal Justice Administration Bill presented by the Home Office. The result of this was that, although the Report stage of the Elementary Education (Defective and Epileptic Children) Bill was entered upon, no more than a short discussion and a proposal to recommit the bill in respect of Clause 1 was possible. It is expected, however, that time will be found at a fairly early date to complete the stages of this bill in the House of Commons.

Ventilation of the House of Commons.—The Committee held a further sitting on Thursday, April 16th. Most of the time of the sitting was occupied in hearing the evidence of Dr. Thomas Glover-Lyon, Senior Physician of the Victoria Park Hospital, who has been responsible for advising a system of ventilation in the Cambridge Examination Hall and many public buildings. Dr. Glover-Lyon was of opinion that the air suffered in various respects by being brought through long passages and under the floor of the House, and he submitted proposals to the Committee for introducing it through fresh air ducts directly outside the debating chamber and for introducing it into the chamber above the head level on similar lines to that suggested by Dr. Leonard Hill. In the main also he expressed agreement with the general objections brought by Dr. Hill against the admission of air through the floor and in other respects. He was not satisfied that additional humidification was necessary, but stated that it would be quite possible to introduce humidifying apparatus into the scheme he suggested. His evidence interested the Committee very much on the question of the deposition of dust and its displacement from or settlement upon the walls or furniture of rooms. He expressed the opinion that the heating to which the air was subjected through its coming into contact with the metal of the heating apparatus imparted unpleasant qualities to the air which he attributed to some extent to the action of the heated metal. He also expressed the opinion that at the present time there was considerably more air sent into the chamber than was necessary, and said that he thought that half a cubic foot per member per second was quite sufficient as against the one and a half feet ordinarily introduced at the present time. Incidentally also he stated that in his view the cost of working the apparatus which he had suggested would be little more than one-fifth of the cost of the existing system. Mr. W. Bradshaw, the Resident Engineer of the House, also gave evidence before the Committee for a short time.

Death Certificates.—Mr. C. Bathurst asked if attention had been called to the recent speech of Sir Charles Cameron, M.D., formerly M.P. for the College Division of Glasgow, when presiding at the annual meeting of the Cremation Society, in which he protested against the scandalously lax requirements of the burial law, which afforded every facility for the concealment of crime and conduced to the compilation of worthless statistics, and alleged that death certificates given by medical practitioners were filled up in a most perfunctory manner, too often on hearsay and without personal knowledge, and that many thousands of deaths were each year registered which were not certified by any medical practitioner; whether, in the opinion of his advisers, such allegations were well founded; and, if so, whether it was proposed to introduce legislation dealing with this matter.—The President of the Local Government Board said that under a recent Regulation issued by the Registrar-General uncertified deaths were required to be reported to the coroner. The Registrar-General was considering the question of what amendments were desirable in the law relating to the registration of births, deaths, and marriages, but it was not possible at present to make any statement as to legislation on the subject. In reply to a supplementary question, Mr. Herbert Samuel said that he was not prepared to make any sweeping condemnation of the manner in which medical practitioners perform the duties cast upon them, but he had no doubt that there were defects in a considerable number of cases.

Sale of Milk Regulations.—In reply to Mr. C. Bathurst, Mr. Herbert Lewis said that the Sale of Milk Regulations of 1901 provided that where a sample of milk was found to contain less than 8.5 per cent. of milk solids other than milk fat it should be presumed until the contrary was proved that the milk was adulterated by the addition of water. It was open to inspectors of local authorities to avail themselves of this presumption, however rich the milk might be in fat, but in the opinion of the Board of Agriculture the fact that a sample of milk was rich in fat, and other circumstances, should be taken into consideration by the officers of a local authority when deciding the question of instituting proceedings, and the Board believed that this course was usually adopted. There was a division of opinion among experts as to whether a deficiency of non-fatty solids due to a low proportion of milk sugar was an indication that the milk was genuine though abnormal.

Treatment of Diseases in Workhouses.—Mr. Astor asked the President of the Local Government Board if any Poor Law infirmaries gave or had recently given treatment to non-pauper patients; and, if so, whether any charge had been made for such treatment?—Mr. Herbert Samuel said that persons who would not ordinarily be regarded as "paupers" were occasionally admitted to Poor Law infirmaries. Accident cases in particular were often admitted because the need of treatment was urgent, and there was no other hospital at hand. Boards of guardians were empowered to recover, and did recover, the cost of treatment when the person relieved, or those liable for his support, were able to pay.

Public Health Authorities.—In reply to Mr. Astor, Mr. Herbert Samuel said that some local authorities had provided baths and disinfecting chambers for the cleansing and purifying of the bodies and clothing of persons infested with vermin or parasites, but he was unable to state the actual number.

Maternity Wards.—Mr. Herbert Samuel has informed Mr. Astor that 177 Poor Law infirmaries had maternity wards. Maternity cases elsewhere were treated in special wards at the workhouses.

District Medical Officers.—In reply to Mr. Astor, Mr. Herbert Samuel said that the number of district medical officers in England and Wales last year was 3,761.

Diphtheria Antitoxin.—Mr. Astor asked how many public health authorities provided gratuitously antitoxin serum for diphtheria, and how many do not?—Mr. Herbert Samuel replied that a large number of local authorities now provided antitoxin gratuitously, but he could not give the exact number.

Pharmaceutical Society of Ireland (Examinations).—In reply to Mr. Scanlan, the Chief Secretary for Ireland said that no complaints had been received by Government or the Pharmaceutical Society of Ireland as to the severity of the standard enforced at the final examination of the society; but some letters on the subject had recently appeared in the public press. The regulations for the examination were made by the council of the society, and any complaints should be addressed to that body.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Opening of the Summer Session in Edinburgh.

The medical classes in the University and Extra-mural School opened after the spring vacation on Wednesday, April 15th. The authorities, it may be presumed, fixed upon Wednesday the 15th instead of Tuesday the 14th in order to give to students coming from the south an opportunity of travelling north clear of Easter Monday and its dislocation of traffic. If this be so the plan has not worked quite satisfactorily, for a good many undergraduates have simply postponed their coming till Monday the 20th or Tuesday the 21st. Since the summer session closes on Friday, June 26th, the result must be to shorten uncomfortably the number of days available for teaching and to run the lectures very closely into the examinations, for the first and final professionals (second part) begin on Saturday, June 27th, and the second and third professionals are proceeded with on Monday and Tuesday, June 29th and 30th. To increase the congestion of teaching in this session it so happens that an annual Edinburgh holiday falls on Monday, April 20th, and that Monday and Tuesday (Victoria Day), May 18th and 19th, are academic holidays. A simple calculation shows that unless the professors and lecturers meet their classes on Monday, the Edinburgh annual holiday, only forty-nine days are available for courses which must contain fifty lectures. In other years the arrangements have been easier, but on the present occasion it will be no simple matter to crowd the fifty lectures of the summer session and the first days of the four professional examinations into two and a half months, especially as two of the months (April and June) have only thirty days each. Three of the four professional examinations ought, it would seem, to have been postponed till July 1st, so as to have given a little more space in the session.

The Tuberculosis Arrangements in Edinburgh.

The hitch which has occurred in the negotiations between the Edinburgh Town Council and the Committee of Management of the Royal Victoria Hospital (see JOURNAL, April 4th, 1914, p. 786) has not yet been successfully disentangled. The point at issue is that of the hands in which is to be placed the supreme authority after the Royal Victoria Hospital, Dispensary, and Farm Colony shall have been transferred to the Town Council. Sir Alexander Christison, President of the Committee of Management of the Hospital, has now sent to the members of the Public Health Committee of the Town Council a letter which he has received signed by over sixty physicians and surgeons in Edinburgh, with a covering letter from himself in which he states that he believes that the difficulty in the course of recent negotiations has been due to a misunderstanding, and explains that his Committee has been "impelled chiefly by the desire that the several institutions should, under the administration of the Corporation, continue to enjoy the same moulding influence which has given them a unique position, in the opinion of scientific authorities here and elsewhere." The letter from the physicians and surgeons is as follows:

Edinburgh, March 12th, 1914.

Sir Alexander Christison, Bart.,
President of the Committee of Management,
Royal Victoria Hospital.

Dear Sir,—In view of the proposed transference to the city of the Royal Victoria Hospital, Dispensary, and Farm Colony, we wish to express in the strongesst possible way our opinion that, in any plan for transference, the utmost care should be taken that the position of Sir Robert Philip in relation to the several institutions shall be strictly conserved.

Whatever services of a more general sort the city may claim from him, we believe it to be essential that the services he has rendered in the development of these institutions should continue undisturbed by any change of administration. The immediate advantage of this to the city is apparent; and we believe that it is no less important in relation to the further development of the institutions themselves and of medical science and teaching.

The idea of the tuberculosis dispensary had its birth in Edinburgh. Since then the significance of the tuberculosis dispensary has been admitted. The dispensary has been adopted throughout the world. It is only right that the further development of the original dispensary in Edinburgh should be left in the hands of its first director, so long as he is able and willing to guide and control its work.

The Farm Colony for Consumptives is likewise an Edinburgh institution. It has shown its possibilities, and we believe it has a great future. Much depends on wise, experienced handling at the present stage. On that ground we consider that in any transference the original guiding hand should be maintained.

Edinburgh stands on a high plane in respect of the services rendered by the three institutions. It would, in our opinion, be unwise to interrupt their natural development under the inspiration and guidance which have proved singularly successful in the past.

This letter is signed by sixty-three physicians and surgeons, the majority of whom belong to the staffs of the Royal Infirmary, the Royal Hospital for Sick Children, and the University.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Irish Workhouses.

The Chief Secretary for Ireland has furnished information regarding the Irish workhouses in reply to a request in Parliament. Various allowances have to be made in comparing the figures for the different workhouses, the most important probably being their relative size, but even making all allowances, it is quite evident that there is no sort of system in Irish workhouse administration as a whole, and there is unquestionably a large amount of waste and extravagance. The percentage of total cost represented by official salaries varies to an extraordinary degree, from 17.2 in Sligo, with an average daily population of 384, to 53.7 in Killaloe, with an average daily population of 25. The cost of maintenance of the paupers varies in a like manner—from £45 10s. a head per annum in the latter workhouse to £17 4s. in Waterford, with an average daily population of 723. In no fewer than five Ulster unions the cost of official salaries is more than 40 per cent. of the total workhouse expenditure. The cost of salaries in the South Dublin Union—17.7 per cent. of the total expenditure—is one of the smallest in Ireland; but it must be remembered that this union has by far the largest average number of inmates and the largest total expenditure. The average proportion of the cost of salaries to the total expenditure on the workhouses is too high, and the statistics constitute a strong argument in favour of the reforms advocated by the majority report of the Royal Commission and by the Vicercgal Commission.

Women's National Health Association and Sanatoriums.

At the annual general meeting of the Women's National Health Association in Dublin last week, Sir William Thompson referred in general terms to the work of the sanatoriums during the year. The number of applications received had been 1,475. The total number of beds available in the institutions of the association was 363, and in a short time the pavilion for the accommodation of 60 children at Peamount would be completed. It would fill a great want, but already a number of children under 6 were undergoing treatment at Peamount. The number of beds approved was as follows:—Peamount, 217; Rossclare, 51. The Allan Ryan Home, certified for 44 beds, had just been taken over by the Dublin Corporation. Dr. Hanley said that the first patient was admitted to Peamount on October 24th, 1912. The question of sending advanced cases to a sanatorium was a very important one, as, apart from the depressing influence such cases had on patients that were doing well, the open-air treatment was hardly suited to advanced cases. Until proper accommodation was provided for these cases the tuberculosis medical officer, in his endeavour to remove a possible source of infection, might have no alternative but to send such cases to a sanatorium. A resolution was adopted urging that provision should be made by county councils for the care of advanced cases. The work of the Central Care Committee was explained, and it was reported that 776 patients had been dealt with at the various sanatoriums, shelters had been provided in a good many cases; families had been moved to better homes, and many persons were getting nourishment as part of the after-care treatment. It was decided to appoint a deputation to wait on the Local Government Board to urge the desirability of allowing suitable nourishment to be given in domiciliary treatment as prescribed by the medical officer.

ASYLUM MEDICAL SERVICE.

At a recent meeting of the Limerick Lunatic Asylum Committee the Mayor moved that the salary of Dr. E. D. O'Neill, Resident Medical Superintendent, be increased. He said that in Dundrum, co. Dublin, the medical superintendent had a salary of £800 a year for looking after 168 patients, in addition to an assistant and a visiting physician. Dr. O'Neill had 691 patients and received a salary of £700 a year. He had an assistant, but no visiting physician. In Downpatrick the medical superintendent had £950 a year and two assistants to look after 749 patients. Having alluded to Dr. O'Neill's excellent work the Mayor concluded by proposing an increase of £100 a year to his salary. Canon Murphy, P.P., in seconding the proposition, said he would rather like to put the question on general grounds, for he thought it would be a great blessing to the country if the medical service of the asylums was made a national service, with ensured promotion, so as to attract the best medical talent. The resolution was adopted.

VACCINATION.

The question of vaccination is becoming a serious one, not only for Dublin but for the whole of Ireland. Sir Charles Cameron, Medical and Executive Officer of Health for Dublin, in a letter to the newspapers, has expressed his regret that there is an increasing indisposition to carry out the vaccination laws, and has recalled that the Corporation of Dublin, when it was proposed to extend the provision to Ireland as to the conscientious objectors, sent a petition to Parliament protesting against this course.

At a recent meeting of the South Dublin Board of Guardians, a motion instructing the six relieving officers of the union to put the terms of the Vaccination Acts into force, except where the parents or guardian of any child makes a declaration testifying to their conscientious objection to vaccination within three months after the birth of the child, was defeated by 15 votes to 6. Dr. Moore reported recently to the Ardee Guardians that there were 99 defaulters under the Vaccination Act in Ardee, and the clerk declared that vaccination was now a thing of the past, but apparently nothing was done. At the last meeting of the Omagh Guardians it was reported that a large number of the parents in the Union had failed to vaccinate their children, and it was decided to serve notices on all defaulters, calling on them to comply with the law. At a meeting of the Gorey Board of Guardians last week Dr. McKeogh (Camolin) reported that there had not been a single person vaccinated in his district during the half year ended March 31st last. One of the guardians said that this was a glorious success for the antivaccination agitation.

IRISH EMIGRATION STATISTICS.

A White Paper was issued recently relating to the emigration statistics of Ireland for the year 1913.

The total number of emigrants from Ireland during the year 1913 was 31,339—16,727 males and 14,612 females. Of the males 16,452, and of the females 14,515, were natives of Ireland, the total number, 30,967, being equivalent to a rate of 7.1 per 1,000 of the population estimated to the middle of the year 1913, and showing an increase of 1,623 as compared with the year 1912. Emigration returns were first collected for Ireland on May 1st, 1851, and the reports based thereon show that the total number of emigrants, natives of Ireland, who left Irish ports from the above mentioned date to the end of December, 1913, amounts in the aggregate to 4,278,327, the number of males being 2,224,089 and of females 2,054,238. The number of emigrants for the year 1913 is below the average for any of the decennial periods for which records are available. In the ten years, 1903 to 1912, the average was 32,614, in the ten years 1893–1902 the average number of emigrants was 40,284, in the ten years 1883–92 the annual average was 71,364, in the ten years 1873–82 the average was 64,214, in the period 1863–72 it was 86,477, and the average for the ten years 1853–62 was 95,545. Of the 30,967 natives of Ireland who left the country last year, 3,994 were from Leinster, or 3.4 per 1,000 of the population of the province in 1911; 7,807, or 7.5 per 1,000, from Munster; 12,392, or 7.8 per 1,000, from Ulster; and 6,774, or 11.1 per 1,000, from Connaught. The number of emigrants who embarked as steerage passengers for the United States was 19,368, and of these 5,671 had their passages paid for in America.

THE second National (Italian) Congress on School Hygiene will be held this year at Genoa on September 29th, 30th, and October 1st. The following subjects will be discussed: The health record of children; the problem of the mentally defective, and the open-air school.

England and Wales.

LONDON.

THE PUBLIC HEALTH IN 1912.

THE annual report for 1912 of Dr. William Hamer, the county medical officer of health, follows very much the same arrangement as the reports of previous years issued by Sir Shirley Murphy. The first section deals with vital statistics and the second with administration. In the appendix are special reports on a census of homeless persons, on the sanitary staffs of the City Corporation and metropolitan boroughs, and a London life table, 1901–1910.

Population.

The population of the administrative county of London, estimated to the middle of 1912, was 4,519,754. At the census of 1911 the ratio per 1,000 of females to males was 1,127, compared with 1,068 in England and Wales. In the majority of the twenty-eight metropolitan boroughs and in the City of London there was a decrease in the population between 1901 and 1911. The boroughs in which there was an increase were Camberwell, Fulham, Greenwich, Hackney, Hammersmith, Hampstead, Lewisham, Wandsworth, and Woolwich.

Marriages.

The marriage-rate in 1912 was equal to 18.6 of the population. This is higher than in the previous ten years, and only 1 per cent. below the average rate of the previous sixty years. During 1912 among males 3.1 per cent. were married under 21 years of age, and among females 11.3 per cent. It appears that while both in London and in England and Wales the proportion of male and female minors in every 100 marriages has been diminishing for some years there is now some indication of a pause in the decline.

Births.

The birth-rate in 1912 of 24.5 per 1,000 of the population was the lowest recorded in London since the institution of civil registration, and was 4.2 per 1,000 below that recorded in 1902. The legitimate and illegitimate birth-rate given as a proportion of the married and unmarried women respectively between the ages of 15 and 45 years is not given in the report. Dr. Hamer expresses the opinion that this method of correcting crude birth-rates, while it takes into account the age of the wife at marriage does not make similar allowance for the age of the husband, nor does it have regard to variations affecting the reproductive capacities of both parents resulting from changes of the population brought about by emigration or immigration, and possibly in other ways. In the City of London the birth-rate was 9.9 per 1,000, and among the metropolitan boroughs the lowest rate (14.9) was in Hampstead, and the highest (32.3) in Shoreditch. The Notification of Births Act, 1907, has been in force in the whole of London since November 30th, 1909, and in 1912 the excess of registered over notified births was 4,473, a number equal to about 4 per cent. of the registered births.

Deaths.

The death-rate from all causes during 1912, standardized for age and sex distribution, was 13.6 per 1,000. Among the English towns having a population exceeding 200,000 only two had a lower death-rate—namely, Portsmouth (12.7) and Bristol (13.1). Among the boroughs the lowest rate was in Lewisham and Wandsworth (10.2), and the highest in Shoreditch (18.7). The death-rate in the whole of London was 2.0 per 1,000 below the average rate of the preceding ten years, representing a saving of over 10,000 lives.

Infant Mortality.

The rate of infant mortality was 91 per 1,000 births. This is the lowest rate yet recorded in London, the lowest previous rate (103) being that for 1910. Among the boroughs the lowest rates were in Hampstead (62) and Chelsea (68), and the highest in Finsbury (114) and Shoreditch (123). Dr. Hamer has continued the observations first made by Sir Shirley Murphy with regard to the effect of social condition on the death-rate among young children

The standard adopted for determining the "social condition" of a borough is the percentage of all children between the ages of 5 and 14 scheduled in the borough by the Council for education purposes in the years 1905–1907. Of the five groups into which the county is divided the first contains those boroughs in which less than 82 per cent. of the children were scheduled, and the fifth group those in which 97 per cent. or over were scheduled. When the infant mortality in these five groups is compared there is a very marked difference. In the first group, where the social condition may be said to be the highest, the rate in 1912 was only 67 per 1,000, while in the fifth, or lowest, group it was 111 per 1,000.

Principal Epidemic Diseases.

The death-rate from the principal epidemic diseases—small-pox, measles, scarlet fever, diphtheria, whooping-cough, and typhoid fever—was 0.79 per 1,000. Six cases of small-pox were notified, and 4 proved to be true small-pox. One of these terminated fatally. Although measles was not so prevalent in London in 1912 as it was in the previous year, the deaths numbered 1,799, giving a death-rate of 0.40 per 1,000 of the population and of 3.68 per 1,000 of children living at ages 0–5 years. Considerable use was made of the Metropolitan Asylums (Measles) Order of May 30th, 1911, providing that non-pauper cases of measles might be received in the hospitals of the Board on the certificate of a medical officer of health. Though admission was restricted to children of the poorest classes and to urgent cases for whom there was no suitable provision at home, 4,314 cases were admitted during the year. The deaths numbered 414, giving a mortality rate of 9.6 per cent. compared with 13.9 per cent. in 1911. Of the 11,312 cases of scarlet fever notified, 159 proved fatal, giving a case mortality of 1.4 per cent. Every borough had the disease within its area during some part of the year. The lowest case-rate per 1,000 of the population was in Hampstead, where 1.25 per 1,000 of the inhabitants were affected, and the highest case-rate was in Greenwich, where 4.59 per 1,000 were affected. Of the cases certified as scarlet fever, and admitted into the hospitals of the Metropolitan Asylums Board, in 6.4 per cent. the diagnosis was not confirmed. There were notified 7,101 cases of diphtheria, and 452 deaths occurred from the disease, equal to a death-rate per 1,000 of the population of 0.10. Both the incidence and the mortality of diphtheria were lower than in 1911. Dr. Hamer refers to the persistence of the carrier condition in certain individuals, and draws attention to the treatment of these carriers at the Grove Hospital with bouillon cultures of *Staphylococcus pyogenes aureus*. Typhoid fever was much less prevalent in 1912 than in the previous year, the cases notified having been 704 and 1,022 respectively, and the deaths 117 and 144 respectively. Cases occurred in each of the boroughs, as many as 61 in Lambeth and as few as 3 in Stoke Newington.

Phthisis.

The number of cases of phthisis notified during 1912, which was the first year in which a complete system of notification was in force, was 21,873. The deaths numbered 6,069, giving a death-rate of 1.30 per 1,000 of the population. In the boroughs the lowest rate (0.80) was in Hampstead, and the highest (2.15) in Shoreditch. There was found to be a progressive rise in the phthisis mortality in the five groups of boroughs when arranged in order of social condition. In the best group the death-rate was 0.77 per 1,000, and in the worst it was 1.79 per 1,000.

(To be continued.)

THE late Mr. Alexander Samuel Lysaght Newington, of Ticehurst, Sussex, left estate valued at £17,570.

AT a meeting of the committee for the erection of a memorial to Cesare Lombroso, recently held in the Anthropological Institute of Rome, it was announced that sufficient funds have now been collected for the purpose. Subscriptions have been received from nearly all nations in Europe, from America, and from Japan. The monument will be erected at Verona, the birthplace of Lombroso, and will be the work of the distinguished sculptor, Leonardo Bistolfi, who has declined to accept any fee. It is hoped that the monument will be unveiled in 1915 at the time of the International Congress on Pellagra, which is to be held at Verona.

Special Correspondence.

BUDAPEST.

The Census in Hungary.—English Quacks in Hungary.—Death Caused by Dressings Left in the Patient's Abdomen.—International Prize for an Essay on Trachoma.

ACCORDING to the census for the year 1913, which has recently been taken throughout Hungary, 161,000 marriages were contracted, and 8,100 were dissolved during that period, whilst the number of marriages between persons who had previously been married amounted to 41,000. The number of births during the same year amounted to 679,000, of which 64,000 were illegitimate—a fact which gives striking proof of the easy morals of the age and the laxity of the modern marriage bond. The number of deaths which took place in Hungary during 1913 was 425,000, 45 per cent. of these being children under 5 years of age, a percentage which, taking into the consideration the systematic protection of child life at the present day, must be regarded as far too high. Hospital statistics for the year 1913 prove that 414,000 in-patients were treated in the 427 hospitals existing in different parts of Hungary; whilst the total number of persons who received hospital treatment during the same period amounted to 12,333,000, and 44 per cent. of deaths occurred without medical attendance of any kind. These last figures mean that the 5,475 doctors and 2,180 chemists who practise their calling in Hungary have been able to assist only 56 per cent. of the sick who succumbed to their diseases during the past year. As regards the causes of these deaths, 800 were due to tuberculosis and 3,833 were self-inflicted, the latter number showing an increase of nearly 400 over the suicides of the previous year, and being in all probability due to the general financial crisis which has unfortunately prevailed in Hungary during the last two years. The number of deaths from tuberculosis, on the other hand, shows a steady decrease from year to year, thanks to the numerous sanatoriums and other institutions devoted to the extermination of this terrible disease. The population of Hungary, however, has suffered considerably during the past year from the wholesale emigration amongst the working classes. Whilst the average yearly number of emigrants during the four years which elapsed between 1896 and 1900 was only 32,000, it rose between 1901 and 1905 to 110,000, and during the last year to 160,000. During the period between 1896 and 1912, therefore, more than 1,600,000 persons emigrated from the country districts in Hungary, where, particularly during the summer months, many thousands of hands are needed for agricultural work, which is now very well paid, the wages being on an average from 5 to 8 crowns (4s. 2d. to 6s. 8d.) a day. This deplorable leakage amongst the most useful class in the community is the fault of the shipping companies, whose glowing prospectuses tempt many of our most skilful workmen to leave their homes and seek their fortunes in foreign countries.

Some quacks, said to belong to Great Britain, are evidently beginning to find their native land too small a field for the exercise of their talents, for many of them now advertise their nostrums in the Continental press. One "Professor" has recently begun to advertise in Hungarian newspapers both his elixir for preserving and restoring youth, and his power of foretelling the future from the handwriting of his victims; and the popularity of British goods in this country is testified by the fact that when inquiries were made by the police at the post-offices it was discovered that during the last twelve months more than 18,000 crowns (£750) had been sent to the professor from different parts of Hungary. Another quack advertises pills which are warranted to prevent cessation of the menses, and he, too, has received several hundreds of pounds from Hungarian women. Both these advertisements, however, are now in the hands of the police, and the Hungarian post-offices have been forbidden either to forward money orders to these firms or to deliver letters and circulars sent out by them. It is hoped that this expedient will ruin the trade of foreign empirics in this country; but quacks who actually practise in Hungary unfortunately cannot be dealt with so summarily, as paper money can be sent to them in sealed letters, with which, of course, the post-office has no right to tamper.

A case which has since caused something of a sensation in Hungary was admitted into Professor Tauffer's clinic in December last, when the patient, a woman of 50, was operated upon for retroflexion of the uterus. The wound healed satisfactorily, but, as the patient became feverish and complained repeatedly of pain in the stomach, intestines, and elsewhere, she was transferred to the medical clinic, where she died on February 24th. At the *post-mortem* examination four plugs were discovered in the abdominal cavity, the immediate cause of death, however, being endocarditis, cystic degeneration of both kidneys, and stenosis of the pylorus. The matter was investigated by Dr. Tauffer, who found that the responsibility rested not upon the operator, his own assistant, but upon one of the dressers, a young doctor, who stated that he had been on duty the night before the operation, and was consequently too exhausted to look after the dressings as he should have done. Dr. Tauffer reported the case to the Minister of Public Instruction and to the head of police, expelled the dresser from his clinic, and called a meeting, at which he delivered a lecture on the dangers of negligence, which made a deep impression on the minds of his students. The saddest feature of the whole affair, however, is that the offender, who has already been severely punished by expulsion from the clinic, and is now awaiting trial in the law courts, has had the pain of seeing his case discussed at length in the daily papers, even Tauffer's letter of dismissal being published in full. This action on the part of Tauffer has been much criticized by the Faculty, who do not approve of the severity he has manifested in this unfortunate affair.

The prize for the best essay on trachoma has not yet been awarded owing to the lack of competitors; and for this reason the Minister for the Interior has extended the time limit to June 30th, 1914. The prize 1,000 kronen (£41 13s. 4d.) will be awarded to the author of the best essay on the etiology of trachoma. It may be written in Hungarian, French, German, or English; and work which has already appeared in print will be considered eligible, provided it was not published before 1913. The members of the jury will be chosen by the Minister for the Interior: and their decision will be announced during the course of the thirteenth International Ophthalmological Congress, which is to be held at St. Petersburg on August 10th of this year.

PARIS.

Amoebic Dysentery in France.—Bradycardia in a Scarlet Fever Epidemic.—Surgical Diseases of the Colon.

Dr. Landouzy, in a recent communication to the Society of Medicine, described a typical case of amoebic dysentery which occurred some time ago in the Laënnec Hospital of Paris in a sailor whose work had been confined to the canals in the north of France, and had never left the country. It was, he thought, clearly a case contracted from a "dysentery carrier" with whom the sailor had been in contact on one of his voyages. Amoebic dysentery, he suggested, might remain latent for much longer than was generally supposed, and this fact should not be overlooked when inquiring into the history of a case presenting the phenomena of various dysenteries, such as dysenteric stools, enlarged liver, or abscess in the liver. Dysentery was usually imported to France from some of the colonies —Tonkin, Cochin China, or perhaps Tunis or Morocco. Residents in the Colonies frequently came to the various spas for convalescence while the amoebae were still present in their stools, and were therefore capable of disseminating the disease amongst other patients at the watering place. Some control should be established to prevent spread of infection, for fourteen cases had occurred in France in people who have never left the country.

At the Medical Society of the Hospitals, Drs. Monier-Vinard and St. Marc reported some observations made by them during a recent epidemic of scarlet fever in Paris. Usually scarlet fever is accompanied by marked tachycardia, but in this epidemic many cases of bradycardia have been observed, especially in adults. In 278 cases tachycardia was only noted in 7 per cent. of the patients. In the rest bradycardia existed, the pulse-rate averaging only 56 per minute, and in some cases falling as low as 40 and 42. The average duration of this bradycardia was eighteen days, and was accompanied by lowered blood pressure and polyuria. Having experimented with various drugs, the authors came to the conclusion that the bradycardia was nervous in origin and unaccompanied by auriculo-ventricular dissociation. Atropine had little influence upon the rate of the pulse, whereas amyl nitrite produced acceleration. Compression of the eyeball in every case produced even more slowing of the heart-beats, and this reaction was therefore positive. Administration of pilocarpine and adrenalin proved that the slowing of the heart was due to a hypertonicity of the vagus nerve, probably due to toxin of the scarlet fever. The cases with bradycardia appeared to be benign in character, and the prognosis in such cases was good; they were followed by complete recovery.

M. Cunco, discussing the surgical affections of the colon at a recent meeting of the Society of Surgery, said that M. Duval had maintained that the caecum was fixed and bound down in membranous colitis, but he himself regarded it as mobile in such cases. In membranous pericolitis the peritoneal covering was frequently redder and thicker than normal, but such a condition did not justify resection of the bowel. This operation was only to be advised in tuberculous or cancerous infection. Patients suffering from this pericolitis were frequently sent to the surgeon as cases of chronic appendicitis, and, as a matter of fact, appendicectomy frequently relieved the symptoms entirely. In some cases, however, it was necessary to perform a caecoplaxy at the same time as removal of the appendix; this operation was simple, and not complicated by various after-results, as was so often the case in regard to anastomoses. M. Hartmann agreed with these views, and mentioned five cases of ileo-sigmoidostomy in which resection of the bowel became necessary subsequently.

Correspondence.

THE REWARD OF RESEARCH:
How to Apply for it.

Sir,—With regard to the letters on this subject from Professor Simpson, Mr. C. Devereux Marshall, Dr. Faulds, and myself, published in your issues of February 7th, February 21st, March 14th, March 28th, April 4th, and April 18th, I think that the next thing to do is to indicate what exact steps should be taken to obtain a remedy for the present state of affairs, under which the public avoids paying anything whatever for scientific researches which have benefited it. In view of the present position of tropical medicine—to which I have already referred in your columns on February 7th—it has been my duty to consider this point very carefully. The only action which is likely to be effective is action directed towards the House of Commons in the hope that Parliament will awake to an understanding of its obligations to pay for professional work done for the nation. Now there are, of course, many members of Parliament and other publicists who are much interested in science and will certainly help in this matter as soon as they see that there is sufficient ground for such action—which I think cannot be disputed. But this means an endless amount of private correspondence with persons of influence, and also not a little discussion in the press—discussion which is not very pleasant for those who undertake it; and, after all this, the only result will be that certain members of Parliament may probably be ultimately persuaded to bring in a private bill—which is likely to meet the fate so often experienced by such efforts in the past.

There is, however, another course open, namely, that adopted successfully by Edward Jenner in 1802 and 1807—to petition Parliament. I have carefully ascertained the legal position, and am informed by the best parliamentary lawyers that the precedent of Jenner and the procedure adopted by him hold perfectly at the present day. According to Standing Order No. 66 of the House, all monetary petitions must first receive the recommendation of the Crown before being allowed to go before that House. This appears to mean that such petitions must be first passed by the Chancellor of the Exchequer—and something like this seems to have been done in connexion with Jenner's petitions.

I propose, therefore, that medical men whose investigations have been of admitted benefit to the empire, and,

especially, have been in any way utilized without remuneration by Government, should at once proceed to submit petitions as nearly as possible according to the form successfully used by Jenner. I have already taken this course for myself, but hope that others will do the same. Of course, the Chancellor of the Exchequer is not likely to pass such petitions without very careful consideration and probably refusal at first; but when the justice of such claims becomes manifest, he will, I think, give an opportunity to the petitioners of being heard by the House.

This procedure has the advantage of laying definite claims from individuals before the country—claims which, I think, cannot be honourably ignored by Parliament, because they are in effect claims for payment for work done. On the other hand, attempts at private legislation will merely remain in the records as expressions of private opinion as to what should be done in the future, and are not likely to meet with success unless there is a very strong and disagreeable agitation in their favour. So far as I can ascertain, the petition to Parliament is the proper procedure. If the petitions succeed, all forms of unremunerated scientific work and invention will receive a great impetus in this country (at very little cost to the public). If they fail, men of science will at least understand that the British Empire is not prepared to pay them for any services which they may render, however successful those services may be.

The present exploitation of men of science, especially of medical men, has become a gross abuse which is injurious alike to humanity, science, and the good name of the country, and can be ended only by the submission of definite claims for honest payment by the public for benefits received. I hope, therefore, that, as Dr. Faulds suggests, the medical profession will support efforts to obtain the much needed reform referred to.—I am, etc.,

London, W., April 19th. RONALD ROSS.

DOMICILIARY TREATMENT IN PHTHISIS.

SIR,—Undue and unfounded optimism may be more potent for evil than the profoundest pessimism. Dr. Jessel's communication in the BRITISH MEDICAL JOURNAL for April 11th bears traces of such evil. After stating—only too truly—that it is "Unfortunate that in many cases home conditions are such as to hold out scant prospects of success," he goes on to eulogize domiciliary treatment. The aim of such treatment may be to bring a patient's surroundings into accord with sanatorium practice, but that aim is chimerical in practice. Dr. Jessel's experiences must have been singularly fortunate if he thinks the advice in his paper can have the remotest possibility of being uniformly carried out. It is precisely in the class amongst whom separate beds or bedrooms are impossible that tuberculosis is most rife. The poorer the circumstances the later the patient comes under medical observation. The family cannot afford to lose any breadwinner before he or she becomes incompetent to earn. It is advanced cases that are referred for domiciliary treatment. Such cases are the most productive of evil, and in addition are the least likely, or able, to carry out the "Careful attention to detail" which Dr. Jessel says is essential to success.

I have shown elsewhere (*Medical Officer*, February 28th, 1914) the real and great danger of the cruel farce which is played under the cloak of scientific treatment. Personal experience has convinced me of the comparative valuelessness of leaflets, and, again, six weeks' tutorial residence in a sanatorium is a waste of money which could be more profitably expended.

The shifting on to overworked general practitioners of cases which tuberculosis officers do not feel a desire to treat is a method which will not conduce to the success or renown of the antituberculosis campaign. Rigid attention to early cases may mean satisfactory and self-laudatory statistics; but figures obtained in this manner do not speak truthfully. Statistics have yet to be published dealing exclusively with domiciliary cases, and with investigations into the "contact" history of the members of families in which home treatment has been carried out. They would make instructive and heartrending reading. The methods being carried out by the majority of tuberculosis officers are those which are the easiest, and, as is so often the case, will prove in time to be utterly mistaken.—I am, etc.,

Southampton, April 14th. OSCAR HOLDEN, M.D., D.P.H.

THE PRESENT POSITION OF CHLOROFORM.

SIR,—I have no intention of reopening a discussion which has been closed by the increase of accurate knowledge concerning the action of chloroform. Colonel Lawrie, however, has done me the honour of mentioning me as one who teaches that the pulse should be watched when chloroform is given with the view of preventing overdosage. Colonel Lawrie's splendid work and valuable book have no more enthusiastic admirer than myself, and had these been undertaken without the unfortunate influence of the *idée fixe*, they would have helped us more than they have done. He has—I am quite sure, inadvertently—misrepresented me by piecing together words out of their immediate context from a paper of mine published twenty-three years ago. These words occur in a paragraph too long for quotation, and are separated by several lines of qualifying matter which showed their meaning to be somewhat different from that which they appear to have when thus made into a brief sentence divorced from its explanatory context. The paper was written to contest the view that circulatory depression and failure are not sources of peril in chloroform narcosis, and that they may, and do, give signs of oncoming danger before marked respiratory difficulty appears. Also to emphasize the necessity for the chloroformist to keep himself informed of conditions of shock due to surgical trauma such as required him to lessen or withhold the chloroform intake. At no time have I ever taught, nor do I believe has any London anaesthetist taught, that watching the respiration is not of paramount importance.

In the paper quoted I was describing the methods of chloroformization then in vogue—the open method, and the method by Junker's apparatus—both faulty, in that the dosage received and taken by the patient was unknown to the administrator. He could only guess at it by the results seen in his patient, so it was essential in such a case to attempt to estimate any fall of blood pressure. If such fall occurred, the administrator knew that the respiratory centres were being depleted of an adequate supply of blood, and were being deleteriously acted upon by a drug which is not only an anaesthetic, but a protoplasm poison. I quite agree that if the administrator of chloroform attends to the pulse and omits to watch the respiration he commits a grave fault, as so much depends upon the absolute patency of the air passages. My contention is—and I submit all the teachers in the hospital schools of London will bear me out in the statement—that the teaching of students is based upon a knowledge of this fact, so that watching the respiration has come to be the golden rule in the giving of chloroform, although we cannot afford to neglect other guides to estimating the intensity of the action of the strength of chloroform which we are employing.—I am, etc.,

London, W., April 18th. DUDLEY W. BUXTON.

MARRIED OR SINGLE?

SIR,—It is a matter of congratulation that the question of marriage amongst asylum medical officers is being raised.

True, the grievance of the male is nothing like so acute as that of the female members of the staff. Most of the former, who wish to continue in the service, look forward to being superintendents some day. At any rate, they have hope—though it may be of the kind that "maketh the heart sick." A woman knows she has no chance of promotion to a point where marriage is possible. If she be engaged, she may as well give up first as last, however well adapted she may be for the work.

Why it cannot be arranged in each asylum to have a certain number of married officers it is difficult to see. They could have their homes outside, as the married night attendants do in some places. As "one who looked on," I am convinced from observation of my male colleagues in the past that they would have been happier men and better officers had they had homes of their own.

At the same time, I would point out that the complaint that the pay in this branch of the service compares unfavourably with that of the school medical inspectors is hardly justified; £200 to £250, all found, is an average salary. A school medical inspector would have to be a veritable domestic genius to live as comfortably on £150

per annum as one does as an asylum medical officer.—I am, etc.,

April 21st. EX-RESIDENT.

THE FALLING BIRTH-RATE.

SIR,—With all due respect to Dr. Binnie Dunlop, I beg to be allowed to state that had I been aware that he was a protagonist of neo-Malthusianism I should not have entered into this controversy. He has formed opinions which evidently cannot be shaken by any fact or argument I am likely to advance, and I am quite content to let him have the last word.—I am, etc.,

Earlswood Common, April 20th. HENRY SEWILL.

PORTRAITS OF BURNS.

THE correspondence under this heading originated by Professor Keith's anthropological study of some portraits of Shakespeare and Burns (February 28th, p. 461), has diverged from what may be considered the scientific questions involved into a debate concerned with biographical and artistic details. Its continuance on these lines in our columns would be out of place, but it may interest many to read the following extracts from a letter which Mr. Barrington Nash, whose reputation as an authority on art is high, has addressed to us:—

When I asked Professor Keith some few months since kindly to accept the custody of the cranial cast of the poet Burns for the museum of the Royal College of Surgeons of England, I little thought I was again opening the floodgates of contention and controversy of a now long past era.

This particular cast is a very precious relic, having formerly belonged to Thomas Carlyle. There were four originally taken from the mould under the direction of Dr. Blacklock, of Dumfries, of which this is probably one, and the only old cast of the poet's cranium I have ever seen. That lent to the Burns Exhibition in 1896 was a very poor substitute for the original, so I lent this one to the executive.

My attention has lately been directed to the correspondence on the portraiture of the poet Burns appearing in your JOURNAL over the signature of Dr. John W. Findlay. The cranial cast exhibits many highly marked features or peculiarities, and the larger portrait discloses these in absolute agreement.

Dr. Findlay's first argument is that most Scotsmen who have studied the question believe that there never was a portrait of Burns by Raeburn. This opinion does not accord with my experience, which extends over twenty-six years. Hundreds of distinguished Scotsmen have personally expressed the opinion to me that as Raeburn and Burns were together in Edinburgh for a considerable time, and as Raeburn was painting the portraits of those during the period whom the poet frequently met, it seems most probable that the result would be a great desire on the part of the painter to perpetuate the features of the poet. That there is no documentary evidence as yet revealed to prove that the poet did sit for his portrait to the painter does not negative this. Finality is hard to reach in this matter in the absence of all Raeburn's papers.

With regard to Dr. Findlay's second argument respecting the best known portrait, all must acknowledge that the first impressions of the appearance and personality of Burns were received through the numerous reproductions of the portrait painted by Alexander Nasmyth. Alexander Nasmyth was a very worthy and estimable man, but by profession and inclination a landscape painter. I have seen most of Nasmyth's portraits, but his best work in this respect justifies the protests made to Creech by Nasmyth that his powers as a portrait painter were not equal to the task of painting Burns.

Dr. Findlay objects to the statement that the poet had an aquiline nose. In the galleries and rooms of the Institute, Burns Exhibition, 1896, were assembled all the procurable portraits of the poet's relatives, amongst others, that of his mother, Agnes Brown or Burns, his brother William, his sisters Isabella and Annabella, his sons Robert, William Nicol, and James Glencairn; all of these have unquestionably long aquiline noses. The poet's lineage is long and honourable; it goes back to the days of Bruce, as the researches of the late Dr. Chas. Rogers have established. A great friend of mine, whose grandfather knew Burns well, has often heard her grandfather speak of the poet's father, William Burns or Burnes, and that his position then as a small farmer ill-suited his manner and bearing, which was that of a gentleman of very refined appearance. He said he was very like the Duke of Wellington as he knew him in later years, and that he had a long "eagle" nose. Because the hair in the Nasmyth is shown as smooth and orderly, Dr. Findlay concludes the poet arranged it so. If Dr. Findlay will read up the descriptions of Burns's personal appearance when he visited Edinburgh, he will find all agree in stating that the poet's hair was dark and heavy, with a tendency to wave, and that he wore it spread across his forehead, as depicted in both of the Raeburns.

The cranial cast exhibits a great and marked prominence of the eyebrow ridges, also of the frontal sinus. The Nasmyth is negative on these points; the Raeburns indicate these peculiarities. The eye as depicted by Nasmyth is spherical, and I say prominent and most certainly not deep set. Beugo, when engraving the portrait for the first Edinburgh edition, had sittings with the poet—a very unusual circumstance. The conclusion is that Beugo did not like the portrait as a likeness, and had sittings to improve it. In the space allowed him on the small copper-plate the engraver has altered the eyes from spherical to ovoid, and deepened their setting. He has also tried to express the dark swarthy look of the poet lacking in the Nasmyth. Dr. Findlay thinks that the thin firm lips and shut mouth of the Nasmyth are as they should be; but the poet's brother, Gilbert, in a letter to George Thomson of Edinburgh respecting the Nasmyth portrait, states that "his brother Robert's lip showed a separation outwards when not speaking, and that to make the poet mim-mou'd would not do."

That these portraits are portraits painted from the living life I am absolutely certain. My reason for accrediting them to the brush of the great master of Scottish portraiture is the analogy of technique with his portraits of this period—for example, that at Arniston of the Lord President Dundas, painted in 1787. He died December 13th, 1787.

I have no axe to grind and no big drum to beat. Research is very expensive work. I intend putting the gist of the matter into booklet form after reading the letters in their original text and not from quotations. But letters or no letters, the pictures are in evidence—the best proof of what transpired. I leave the matter at that issue for the time.

Medical News.

LIEUTENANT-GENERAL SIR JAMES GRIERSON, K.C.B., C.V.O., C.M.G., will distribute the prizes at the Royal Army Medical College, Grosvenor Road, S.W., on Friday, May 1st, at 4 p.m.

THE first festival dinner of the Lord Mayor Treloar's Cripples' Hospital and College, Alton, will be held in the Merchant Taylors Hall, London, E.C., on Wednesday, May 13th.

THE staff of the Post-graduate College, West London Hospital, have issued invitations to a conversazione, to be held at the hospital on the evening of Wednesday, May 20th.

THE Hunterian Society's Medal, offered annually for the best essay by a general practitioner, has been awarded to Dr. Basil T. Parsons-Smith, who took for his subject, "The Intermittent Pulse."

A SUMMER post-graduate course of lecture demonstrations will be held at the London Homoeopathic Hospital, Great Ormond Street, Bloomsbury, W.C., on Fridays in May and June, at 5 p.m., commencing May 1st.

AT a meeting of the Royal Sanitary Institute, at 5 p.m., on Wednesday next, at 90, Buckingham Palace Road, Dr. E. F. Bashford, Director of the Laboratory of the Imperial Cancer Research Fund, will give a lecture on the bearing of comparative and experimental investigations on the association of cancer with chronic irritation.

THE Italian Parliamentary Committee has unanimously adopted a report by Professor Casciani on the means of developing the thermal stations of Italy. Among these are the institution of special courses and of travelling professorships that will enable lecturers to go about to different universities carrying on a scientific propaganda.

THE Rev. Walter John Barton has been appointed to the Head Mastership of Epsom College, which will become vacant at the end of the summer term, owing to the resignation of the Rev. T. N. H. Smith-Pearse, who has held the office for twenty-five years. At Oxford Mr. Barton took a First Class both in Moderations and in Literae Humaniores, and for the past seven years he has been an assistant master at Winchester College, his old school.

The new quarters of the Tuberculin Dispensary League at 1, Manor Street, Chelsea, will be opened by H.R.H. Princess Christian at noon, on May 9th. The premises, we are informed, have been given by the Charity Commissioners, and are vested in the Earl of Mayo, the Earl of Denbigh, and Mr. J. S. Dugdale, K.C., as trustees. It is intended to give a series of lectures and demonstrations on tuberculosis, and the first of these, on laryngeal tuberculosis, will be delivered by Dr. Camac Wilkinson, on Tuesday, May 12th, at 4 p.m.

THE Rockefeller Institute for Medical Research, New York, has received from Mr. John D. Rockefeller an additional endowment of £200,000 to be devoted to the organization of a department for the study of diseases of animals. The expectation is expressed by the trustees of the institute that the new department, by making possible a thorough study of this branch of pathology by trained experts, will prove a great boon to raisers of cattle, hogs, sheep, and other animals by showing breeders how to check or stamp out many diseases which affect these animals.

THE International Society for the Study of Sex Questions will hold its first congress this year at Berlin on October 31st. November 1st and 2nd. The president is Professor Julius Wolff of Berlin. The work of the congress will be distributed among four sections: Biologico-medical, sociological, legal (including criminal anthropology and psychology), and philosophico-psychologico-paedagogic. The official languages will be German, English, and French. Communications relative to the congress should be addressed to Dr. Max Marcuse, Lutzowstrasse 85, Berlin, W. 35.

A COMMITTEE of the Society of Medical Officers of Health is now considering the best means of organizing the members of the Society who are connected with the School Medical Service. The Committee includes, among others, Drs. Robert Hughes, S. B. Walsh, and Armly Ashkenny, as representatives of school medical officers and assistant school medical officers who are not also medical officers of health. A meeting of members of the School Medical Service in London and the home counties is to be held at the House of the Society of Medical Officers of Health, 1, Upper Montague Street, W.C., on Saturday, May 2nd, at 2 p.m., for the purpose of considering matters connected with the present and future welfare of the School Medical Service. Those who are unable to be present at the meeting are asked to send any suggestions to Dr. S. B. Walsh, The Hampden Club, Phoenix Street, N.W.

THE Brotherhood Movement intends to make a great campaign in November of this year, designed to reach every man in England. As a preliminary it has issued a handbook, particularly addressed to its supporters, on the objects and methods of the movement. The mission seems to be conceived in the right spirit, for its organizers appear to be willing and eager to acknowledge the good service to humanity of the different classes they desire to approach, to hold out the hand of fellowship to them, and to endeavour to assist them in their work. An attempt is to be made to get into touch with all classes—business men, journalists, doctors, lawyers, teachers, and, more difficult still, the nomad classes—gipsies, canal boatmen, and navvies. In the handbook there are special sections on the methods to be used to reach each class. The past services of members of the medical profession as speakers at Brotherhood meetings are dwelt on. The schemes for social study and service are well devised; many of them are closely connected with the health of the people. In the fight against venereal diseases the active co-operation of such a movement as this, with a membership of more than half a million men, should be of the greatest service.

A BILL has been introduced in the United States House of Representatives making it unlawful to manufacture, dispense, sell, or distribute in the District of Columbia or in interstate commerce any tablet containing mercuric chloride (corrosive sublimate) in larger amount than ½ grain in each tablet, or any other poisonous tablet intended for external use, unless such tablet is made in the form or shape of a coffin, each bearing the word "poison" and a skull and crossbones design, and the bottle or other container bearing a red label stating the composition of the tablet and the word "poison" and a skull and crossbones design. It is understood, says the *New York Medical Journal*, that application has been made for a patent on this particular design and that this patent will be assigned, if granted, to the American Pharmaceutical Association, which in turn will permit the privilege of using it to any manufacturer. It is said that the application was made with a view to preventing any one manufacturer from attempting to monopolize the design. The bill further prohibits the introduction from abroad or from one State into another of poisonous tablets for external use, save under similar restrictions.

THE report of the Charity Commissioners for the year 1913 indicates that the aggregate income from all the securities held by the official trustees of charitable funds had amounted to over £934,533. During the same year new endowments of various charities amounted to £890,127; of this sum £307,693 was in respect of trusts established for medical charities. In addition, various wills had contained charitable bequests, unaccompanied by stipulations that the amounts involved should be regarded as trust estates, to the amount of £1,924,086, over one-third of this sum—namely, £775,393—being left to medical charities. The commissioners also state that early in the year it came to their notice that a trust established in the year 1854, for the benefit of women suffering from cancer, had somehow or other ceased to be administered since the year 1865. By a will proved in the first year mentioned a Mrs. Elizabeth Skirrow directed that the income derivable from her residuary estate should be employed for the purpose of making weekly allowances of 5s. each to widows aged 60 and afflicted with cancer, and some five years later the Court of Chancery sanctioned a scheme devised for giving effect to this will. At that time the trust fund consisted of £1,700, but after 1865 no distribution of the income was made, and the amount available was about £4,000. Consequently a petition was being made to the Court of Chancery to allow the sum to be used for the benefit of women suffering from the disease.

THE seventh annual Nursing and Midwifery Conference will be held in the Westminster Yeomanry Hall (Elverton Street, S.W., adjoining the Horticultural Hall) on April 28th, 29th, 30th, and May 1st. The communications are arranged under different heads as follows:—*Political:* The State registration of nurses, by Sir Victor Horsley; the proposed L.C.C. registration of nursing homes, by Miss L. M. Stower; co-operation and affiliation in the training of nurses, by Miss Edmondson. *Patriotic:* The work of St. John Ambulance Brigade, by Lady Perrott; the work of the Red Cross Society, by Mr. James Cantlie; V.A.D. work—criticisms and suggestions from the trained nurses' point of view, by Miss Hilda Stewart. *Midwifery:* The eugenic consideration of venereal diseases, by Dr. Burnett Ham; the infant's first week of life, by Mrs. Lucy Naish; the development of infant consultations, by Miss J. Halford; the moral influence of the mid wife, by Mrs. Barker; inspection from the midwife's point of view, by Miss Hall; conditions of nursing, by Miss Amy Hughes; one day's rest in seven, by Mr. Charles H. Ward; living out, by Miss Lucy Ashby; the need for organization, by Miss Atkey; vocation *versus* profession, by Miss E. Margaret Fox; how to avoid operative midwifery, by Dr. Annie McCall; the effect of the Insurance Act on lying-in hospitals, by Mrs. Granville; the teaching of midwifery by lantern slides, by Dr. J. S. Fairbairn; how to use material for teaching for the district, by Mrs. Macdonald; the humours of midwifery, by Miss Margaret French. *Tuberculosis:* Prevention and management of tuberculosis in early life, by Dr. T. N. Kelynack; the rôle of the nurse in the tuberculosis campaign, by Miss Rundle; the care and control of the tuberculous patient, by Dr. H. Hyslop Thomson. *Mental and Nerve Work:* The progress of mental nursing, by Dr. Armstrong-Jones; the nurse and the care of nervous patients, by Dr. E. L. Ash; the Mental Deficiency Act, by Dr. Langdon-Down. *Fever, etc.:* Asepsis in fever nursing, by Dr. A. Knyvett Gordon. *Miscellaneous:* Nursing in a factory, by Miss Lois Style. There will be a reception by the committee at the rooms of the Royal Society of Medicine (1, Wimpole Street, W.), and Sir George Savage will deliver an address.

AT the meeting of the International Dermatological Congress held in Rome in 1912 it was proposed by Sir Malcolm Morris and Dr. Thibierge of Paris that a new association should be formed. Accordingly, at the International Medical Congress held in London in August, 1913, an International Dermatological Congress was formally constituted. The object of the association, which has its head quarters at Brussels, is the furtherance of the advance of dermatology and syphilography by investigation, discussion, and mutual counsel. A permanent committee, including a representative of each of the principal countries of the world, was appointed. Of this committee Sir Malcolm Morris was elected President and Dr. Dubois-Havenith of Brussels Secretary-General. The other members are: Drs. Gaucher (France), Lesser (Germany), Bertarelli (Italy), Finger (Austria), Nékam (Hungary), Ehlers (Denmark, Norway, and Sweden), von Petersen (Russia), Jadassohn (Switzerland), Azua (Spain), and Fordyce (United States). Each country elects its own committee, and this committee chooses one of its members as delegate to the International Committee. The association will meet in congress every three years. The objects of the Congress are stated to be: (1) To hear and discuss reports, of which the subjects and the reporters are chosen by the International Committee; (2) to hear and discuss communications on other subjects which have been suggested to the International Committee, provided that they have been announced to the secretary-general at least three months before the opening of the Congress and have been accepted by the International Committee; (3) to hear and discuss communications upon any question or questions inserted in the agenda of the Congress by the International Committee in order to elicit the views of the members of the association; (4) to transact the business of the association as defined in the regulations of Congress. Cases and anatomical preparations will be exhibited at the congresses. The official languages of the Congress are English, French, German, and Italian.

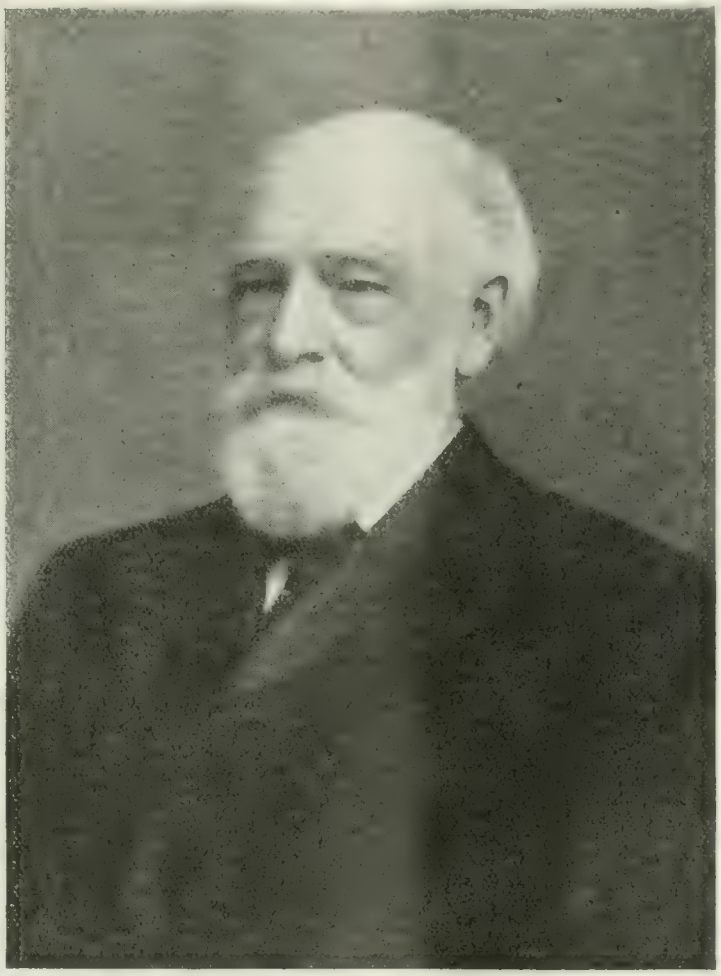
Obituary.

THOMAS DRUSLYN GRIFFITHS, M.D.Lond., D.Sc.Oxon.,

SOME TIME PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION, AND OPHTHALMIC SURGEON TO THE SWANSEA HOSPITAL.

WE regret to record the death, on April 17th, of Dr. T. D. Griffiths, who was President of the British Medical Association when the annual meeting was held at Swansea in 1903. Dr. Griffiths had been in failing health for some time, and a year or two ago went to reside at Bournemouth, where he died. The immediate cause of death was double pneumonia.

Thomas Druslyn Griffiths, who was born at Hên Plâs, Llan-y-bythyr, Cardiganshire, in 1837, the son of David Griffiths, received his early education at the Normal College, Swansea. He was apprenticed to Dr. Michael, then a leading practitioner in Swansea, who subsequently became better known as a barrister and Q.C. Subsequently Dr. Griffiths entered University College, London, where he had a brilliant career, winning many class prizes, including the gold medals in botany and comparative anatomy, medals in anatomy, physiology, and medicine, the Filliter Exhibition in pathology (1862), and the Atkinson Morley Scholarship (1863). He took the degree of M.B.Lond. in 1862, with honours in medicine, surgery, and midwifery. In the same year he obtained the diplomas of M.R.C.S. and L.S.A. In 1872 he proceeded to the degree of M.D.Lond., and in 1904, when President of the British Medical Association, the University of Oxford conferred on him the honorary degree of D.Sc. He was the representative of the University of London on the governing body of the University College of Wales, Aberystwith.



Photograph by] THOMAS DRUSLYN GRIFFITHS. [*J. Russell and Sons, London.*

He settled in Swansea in 1863, and the reputation he took with him as a brilliant student, combined with his energetic temperament and keen and sustained interest in the advances of practical and scientific medicine, quickly won for him a leading place in the profession in that thriving centre of the rapidly expanding industries of South Wales. In 1880 he was appointed ophthalmic surgeon to the Swansea Hospital. He made for himself a really great reputation in South Wales as an abdominal surgeon, and especially as ovariotomist. This was owing, first, to the fact that he thoroughly imbibed the principles of Listerism in its earliest days, and, secondly, that he then set himself to work in his characteristically thorough way to apply it. He was quick to adopt new methods; he was, we believe, the first surgeon to operate for ovarian tumour with Listerian precautions, anticipating Dr. Marion Sims of New York by a few weeks, and was the first surgeon to aspirate for pleurisy in Wales. He published papers in the BRITISH MEDICAL JOURNAL on the pathology and treatment of intestinal wounds (1871), on the causes and pathology of the various acquired malpositions of the uterus (1878), on the treatment of gastric ulcer (1903). He also contributed several papers to the *Transactions of the Pathological Society*, including one on dermoid ovarian tumours (1877). He was endowed with remarkable delicacy of touch which proved invaluable in diagnosis, and was a most unselfish and indefatigable worker in the interests of his patients, much of his success being due to an infinite capacity for taking pains. He became well known all over South Wales, and for many years enjoyed a very large consulting practice. On this account he was compelled to resign his appointment at the Swansea General Hospital in 1885, but continued to be one of the busiest men of the profession. It was his ambition to continue in practice for fifty years, and was within two months of achieving this when his health broke down, and he was compelled to retire, eventually settling in Bournemouth.

When the South Wales and Monmouthshire Branch resolved to invite the British Medical Association to hold its annual meeting in Swansea in 1903, Dr. Griffiths was unanimously nominated to the office of President, and the success of the meeting was in no small part due to his organizing ability and the energy with which he threw himself into the work of preparation. His address as President was on the evolution of antiseptic surgery and its influence on the progress and advancement of bacteriology and therapeutics. Its main thesis was that bacteriology applied, under the inspiration of Pasteur and Lister, had transformed surgery; had profoundly influenced medicine and therapeutics, and had furnished to the science of hygiene a rational basis. The last topic led him to make a strong appeal for the reconstruction of the machinery of public health administration, especially in rural districts. He urged the necessity for larger districts and fixity of tenure, and advocated a graded public health service, so that a young man might enter on his career as medical officer of health to a small community and be promoted to more populous districts. He deprecated over-centralization, holding that public health was so inextricably mixed up with other duties of local authorities that an attempt to place it under a separate central authority must lead to confusion and friction. He urged rather that the President of the Local Government Board should be made a Secretary of State co-equal with the Home Secretary, and some progress towards the achievement of this ideal has since been made. During the whole of his year of office as

President of the British Medical Association and afterwards Dr. Griffiths took a keen interest in the work of the Association, and was a regular attendant at the meetings of the Council. It was characteristic of Dr. Griffiths to throw all his energy into any subject or cause he took up. He was keenly interested in politics, being a staunch Unionist and tariff reformer, and during his long career in Swansea he took a leading part in all public and philanthropic enterprises. It was due to his initiative that the Swansea baths and steam laundry were built, and he was largely instrumental in the inauguration of the Swansea and South Wales Nursing Institute. He was for many years a director and afterwards vice-chairman of the Swansea Gas Light Co., and a director of the Glamorganshire Banking Co.; he was also for some years a director of the Swansea and Mumbles Railway and Pier Co., and was instrumental in the starting of flour mills in Swansea, and remained a director of the company by which they are conducted.

As a young man he was an athlete, being a remarkable swimmer and an excellent horseman—recreations he continued to enjoy till he had reached an age at which most men prefer gentler forms of exercise. In his holidays he was an enthusiastic Alpine climber, and had ascended many of the highest of the Swiss mountains. In short, in all he did he acted up to the injunction of Ecclesiastes—"Whatsoever thy hand findeth to do, do it with thy might"—and he had his reward in the esteem of his profession and of the people of South Wales among whom his life-work was done.

He married in 1866 the youngest daughter of the Rev. J. F. Secretan Gabb, of Balcarres, Charlton Kings, Gloucestershire. By her and by several children he is survived, and every member of the Association will sympathize with them in their bereavement.

The funeral service was held at St. Stephen's Church, Bournemouth, on April 20th, and was attended by a large number of personal friends, and by Drs. Lys and James Davison, representing the British Medical Association and the Dorset and West Hants Branch, and Dr. Johnson Smyth, representing the Bournemouth Division; the interment took place at Bournemouth cemetery.

The Council of the British Medical Association, at its quarterly meeting on April 22nd, unanimously adopted a resolution of condolence with Mrs. Griffiths and the other members of the family.

Dr. FREDERICK T. ROBERTS, Emeritus Professor of Medicine and Clinical Medicine, University College, London, writes:

The death of Dr. Griffiths, of Swansea, has removed one of the most renowned members of the medical profession in Wales, and his loss will be deeply and widely felt. He was my oldest friend, and we were much attached to one another. I regret that, being away in Scotland as an invalid myself, I cannot at this short notice do anything like justice to his remarkable qualities, but I desire to express briefly my warm personal appreciation of his character and professional work.

My acquaintance with "Tom" Griffiths began in 1858, when we both entered as medical students at University College. At the beginning of our second year, in October, 1859, we joined together in rooms, and were intimately associated during the remainder of our student life. He was an agreeable companion, and we spent many happy days together. I do not think that he found study by any means an easy task, either in the way of getting up the various subjects or remembering them; but he was an indefatigable worker, and very methodical, thus laying the foundation for his mode of procedure in his future career as well as enabling him to go through his examinations successfully and with honour. Personally I was much indebted to Dr. Griffiths when a student for his example and influence, as well as for his practical advice. If he thought I was "slacking" for any reason, he did not hesitate to tell me, and to remind me of my duty. My association with him revealed to me his sterling qualities, which became of such importance during his subsequent professional life.

There can be no doubt that Dr. Griffiths entered upon his life-work as a medical practitioner unusually well equipped for the duties devolving upon him, and when he settled in Swansea he was decidedly in advance of his time in Wales. His remarkable success there, and his popularity throughout the Principality, were partly due to this cause, but also in a considerable degree to his devotion to his professional work, his remarkable energy and perseverance, and strict sense of duty. Undoubtedly he had very high ideals, which he carried out to the utmost of his power. He might have been sometimes, in the early part of his career, inclined to be rather overbearing, but was guided by conscientious motives, and it may be truly said that his life was full of honour and glory, and he was highly esteemed and respected by his professional brethren.

Dr. Griffiths's management of the meeting of the British Medical Association in Swansea, as President, was admirable, and he showed qualities which would fit him for other important positions. On that occasion I was again associated with him closely, and he made a deep impression upon me. He has finished an honourable and well-spent life, and his memory will long be cherished by myself and many others with respect and affection.

Dr. H. BATTY SHAW (London) writes: The death of Dr. T. D. Griffiths of Swansea takes from the British Medical Association one of its most enthusiastic supporters and friends, and robs our profession of one of its ablest members. It was my misfortune to have known him well only during the last few years of his life, so that I cannot write of the more active part of his career. But it will interest your readers to know that during the last year or so, when illness compelled him to withdraw from work, his interest in all that pertained to his profession was maintained until the few last sad weeks. Until quite recently his magnificent physique had enabled him to withstand the inroads of his malady, and his buoyancy of spirits enabled him to rise superior to any discomforts that followed in its train. To old friends and to former students of University College it will be pleasant to know that his wife and daughters through many anxious months were able to be with him and help to alleviate his sufferings. Nor could he say enough in praise of the constant attention and help rendered by Dr. Niell MacGillicuddy of Bournemouth. The record of his activities in public and professional affairs is a standing example for our own and future generations. His fellow townsmen and his patients in the Principality must feel they have lost a first-rate man of affairs as well as doctor by the death of "Griffiths of Swansea."

Sir J. T. DILWYN LLEWELLYN, formerly chairman of the Quarter Sessions, Glamorganshire, writes: Dr. Griffiths of Swansea was my contemporary very closely in years, and a lifelong friend, and my confidential friend and adviser as a medical man. I had the highest opinion of his skill and sagacity in his profession; and all who knew him will, I feel sure, be sorry to hear of his death, even though we have been prepared to hear of that at any time for the past few months. I know no one in our part of the kingdom who was more sought after in consultation in critical and difficult cases, and he was in such request that he only retained a few of his most intimate personal friends as his private patients of late years because of the calls on his time. After the meeting of the British Medical Association at Swansea, over which he presided in 1903, many men in Wales of differing shades of opinion held the confident expectation that he would have received the honour of knighthood, and that anticipation was freely discussed at the time, though it was not given. A trait of the medical profession, notable but often unnoticed by the general public, is their kindness to the poor, often given where well earned fees are not obtainable. I know this was especially the case with Griffiths—his attention, care, and skill was often given with a kindness and delicacy worthy of record.

GEORGE WILSON, M.A., M.B.,

TANGIER.

EDINBURGH graduates of 1891 will learn with deep regret of the death of George Wilson. He died at Tangier on April 2nd, of malignant typhus, after an illness of only a week's duration.

George Wilson came of a well-known Berwickshire family, and was educated at Merchiston Castle School, where he was known no less for his athletic than for his

educational attainments. After taking his degree in Arts he studied medicine in the University of Edinburgh, and graduated in the summer of 1891. He spent a year as resident physician in the Edinburgh Royal Infirmary, and then was clinical assistant in the ophthalmic wards under Mr. George Berry, where he displayed those fine practical qualities which enabled him to give the excellent service he did in the mission field. The influence of his uncle, the late Rev. Dr. J. Hood Wilson, and his own natural leanings, determined him to become a medical missionary; and after gaining a sound equipment of clinical knowledge, he was appointed to Tiberias Hospital under Dr. Torrance. Soon he was transferred to the charge of the hospital at Safed, where he worked for many years. During his career as a medical missionary he suffered much from malaria, had typhoid, and sustained a compound fracture of the leg as the result of a kick from a horse; yet, in spite of all, he laboured on with never so much as a complaint at his manifold physical handicaps. Eight years ago he went to Tangier in charge of the hospital of the North African Mission there, and speedily gained the entire confidence of the native and European population.

Wilson was a man of fine character—noble, loyal, and unselfish; and he will long be had in affectionate remembrance for his frank honesty, brightness, and singleness of heart and purpose. He is survived by a widow and daughter, to both of whom much sympathy is extended in this their hour of sadness and loss.

The funeral of Dr. HUGH DEWAR, of Portobello, Edinburgh, whose death in a nursing home under pathetic and tragic circumstances a few days ago caused widespread sympathy, took place from his house in Portobello to Whitburn, Lanarkshire, on Saturday, April 18th. The service in the house was conducted by the Rev. G. T. Jamieson, Portobello (quoad sacra) Parish Church. There were many wreaths, and a large sympathetic crowd watched the departure of the motor-hearse bearing the coffin. The deceased graduated as M.B., C.M. at Edinburgh University in 1896, had a large practice in Portobello, and was much esteemed by the profession and his fellow townsmen. He was unmarried, and much sympathy is felt for his sisters in their bereavement. On February 4th he had attended a primipara, who died a few hours afterwards. Dr. Dewar himself at once reported the death to the authorities, and had he survived to appear in the High Court at the end of this month, expert evidence would have been given as to the nature of the complication, which was, we understand, of a very unusual character.

WE regret to record the death on Easter Sunday of Dr. FREDERICK PRYCE JONES, of Newtown, Montgomeryshire. It was due to an attack of pneumonia of only a few days' duration, and brought to an untimely close a career of much utility. Dr. F. P. Jones had only just entered early middle life, and his professional talents and personal characteristics had won him the esteem of the whole neighbourhood and the affection of very many people. A Newtown man by birth, he received his general education at the Merchant Venturers' School, Bristol, pursuing his professional education in London. As a student of the medical school of Charing Cross Hospital he evinced both ability and industry, and was awarded among other honours the Pereira prize and the silver medal for toxicology and forensic medicine. Becoming M.R.C.S., L.R.C.P. in 1896, he remained on at Charing Cross Hospital for some time, working as assistant in the electro-therapeutic department; he then worked for eighteen months at the General and Eye Hospital at Swansea, filling in turn the offices of house-physician and house-surgeon. Finally, Dr. Jones completed his preparation for practice by acting as an assistant to a medical man in Yorkshire. Some fourteen years ago he returned to Newtown, and little by little built up an excellent practice. At the time of his death he was a senior member of the active staff of the Montgomeryshire Infirmary and deputy coroner for Montgomeryshire. He also held office as public vaccinator, and was for some time in charge of the school medical service in the rural districts of the county. He brought to his work not only knowledge and skill, but conscientiousness and a capacity for feeling real sympathy with his patients. He took much interest in the Red Cross movement, and those whom he trained for first aid examinations habitually afforded good evidence of his powers as a teacher. He was not a member of any local authority, but took a keen interest in the public and social life of the town. A well read man himself, he frequently took part in debates arranged by various local societies, and only a short time ago delivered an interesting lecture on books worth reading. Dr. Jones was never married, but is survived by several brothers and sisters, to whom, as to many unrelated friends, he was very dear.

LIEUTENANT-COLONEL EDALJI PALANJI FRENCHMAN, Madras Medical Service (retired), died at Bombay on March 19th. By race a Parsi, he was born on November 21st, 1855; educated at the Grant Medical College, Bombay; took the L.M.S.Bombay, the L.R.C.S.E. and the L.F.P.S.G. in 1878; and entered the Indian Medical Service as surgeon on March 31st, 1879. He became surgeon-major on March 31st, 1891; lieutenant-colonel on March 31st, 1899; was placed on the selected list on April 7th, 1907; and retired on April 1st, 1910. He received the C.I.E. among the Durbar honours on December 12th, 1911. The Army List assigns him no war service. In May, 1881, he was posted to civil employment in Burma, and spent the rest of his service—nearly thirty years—in that province, where he was for many years civil surgeon of Bassein district. In April, 1902, he was appointed Inspector-General of Prisons in Burma, and in 1909 officiated for six months as Inspector-General of Hospitals in that province. He was the first Indian member of the Indian Medical Service to hold an important administrative post like that of Inspector-General of Gaols; the first to act as Inspector-General of Civil Hospitals; and the first, and so far the only one, to earn a decoration.

Universities and Colleges.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on March 25th under the presidency of the Vice-Chancellor, Dr. Herringham.

Recognition of Teachers.

Dr. Arthur Cyril Hudson has been recognized as a teacher of the University in Ophthalmology at the Royal London Ophthalmic Hospital.

National Dental College.

The National Dental Hospital and College was admitted as a school of the University in the Faculty of Medicine (in dentistry only) until September 30th, 1916.

M.D. Examination in State Medicine.

It was resolved:

That the Regulations for the M.D. Examination in State Medicine be amended by the insertion of the words "not less than" before the words "two days" in the paragraph beginning "A practical examination extending over two days."

Appointment of External Examiner.

Professor Peter Thompson, M.D., has been appointed an External Examiner in Embryology for 1914–15.

Semon Lecture in Laryngology.

Professor Gustav Killian (Berlin), who will deliver the Semon Lecture at the house of the Royal Society of Medicine, 1, Wimpole Street, W., on Thursday, May 28th, at 5 p.m., has selected for his subject, "Suspension Laryngoscopy and its Practical Use." Sir Felix Semon will preside at the lecture, admission to which is free by ticket obtainable from the Academic Registrar of the University.

Lectures in Advanced Medical Subjects.

The following lectures in advanced medical subjects will be delivered during the third terms at the medical schools indicated:

St. Thomas's Hospital Medical School.—Three lectures on carbohydrate metabolism in health and diabetes, by Dr. Hugh MacLean, at 5 p.m. on Tuesdays, May 5th, 12th, and 19th.

University College Medical School.—One lecture on recent observations upon ulcer of the stomach, by Dr. Charles Bolton, at 5 p.m., on Friday, May 22nd.

Lectures in the Physiological Laboratory.

A course of eight lectures on the rate of the blood flow in man in health and disease will be given in the physiological

laboratory of the University by Dr. G. N. Stewart, Professor of Experimental Medicine, Western Reserve University, Cleveland, U.S.A., at 5 p.m. on Tuesdays, May 5th, 12th, 19th, 26th, and June 2nd, 9th, 16th, and 23rd.

Advanced Lectures in Physiology.

The following advanced lectures in physiology will be delivered during the third term:

University College.—Eight lectures on oxidation in the tissues, by C. Lovatt Evans, D.Sc., at 4 p.m. on Fridays, May 8th, 15th, 22nd, 29th, June 5th, 12th, 19th, and 26th (attendance at this course is recognized in connexion with the B.Sc. (Honours) Degree in Physiology).

Guy's Hospital: Physiological Laboratory.—Four lectures on the regulation of the composition and volume of the blood by Dr. J. S. Haldane, F.R.S., at 4 p.m. on Thursdays, May 7th, 14th, 21st, and 28th.

King's College: Physiological Laboratory.—Four lectures on the gaseous exchanges of the body, by Dr. T. G. Brodie, F.R.S., Professor of Physiology in the University of Toronto, at 4.30 p.m. on June 8th, 10th, 15th, and 17th.

The lectures will be illustrated by experiments.

University Studentship in Physiology.

A university studentship in physiology of the value of £50 for one year will be awarded to a student qualified to undertake research in physiology, and will be tenable in a physiological laboratory of the university or of a school of the university. Applications must be received by the Principal by May 31st.

Rogers Prize.

The Rogers Prize of £100 will be awarded for an essay or dissertation on the nature of pyrexia and its relation to micro-organisms. The prize is open to all persons whose names appear on the *Medical Register* of the United Kingdom. The detailed regulations for the prize can be obtained on application to the Principal. Essays or dissertations should be received by the Vice-Chancellor at the University by 4 p.m. on April 30th.

Presentation Day.

The presentation of graduates will take place at the University at 3 p.m. on Wednesday, May 13th. A service for members will be held in Westminster Abbey at 6 p.m., when the sermon will be preached by the Bishop of London. Applications for tickets for the service, which should be accompanied by a stamped addressed envelope, must be secured from Mr. J. D. Whyte, 88, Gower Street, W.C., on or before May 8th.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

BIOLOGY.—A. S. Newton.
CHEMISTRY.—A. S. Newton.
MATERIA MEDICA AND PHARMACY.—G. H. C. Harding, A. E. Pollitt, F. Simpson, F. Smith.
ANATOMY.—E. V. Briscoe, D. V. Halstead, P. Hughes, T. F. Reason, R. D. M. Tims, C. G. G. Winter.
PHYSIOLOGY.—E. V. Briscoe, D. V. Halstead, D. E. Hearn, P. Hughes, H. D. L. Jones, W. J. Walters, C. G. G. Winter.

The Services.

ROYAL ARMY MEDICAL CORPS.

THE King has granted permission to Captain Colin Cassidy, M.B., R.A.M.C., and Captain William E. Marshall, M.B., R.A.M.C., to wear the decoration of the Fourth Class of the Imperial Ottoman Order of the Mejidieh conferred upon them by the Khedive of Egypt in recognition of valuable services rendered.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW MEDICAL WORK.

DR. W. HOLDER, in resigning, after over forty-two years' service, from the position of Medical Officer to No. 7 District of the Sculcoates (Hull) Board of Guardians, at the end of the ensuing June quarter, stated in his letter of resignation: "The duties of the Poor Law district medical officer, unremunerative and nationally unappreciated as they are, are perhaps the most practically charitable and difficult of all medical work, calling for continual self-denial and resource under the difficulties of treating every form of disease without consultants or adequate nursing in most unhygienic surroundings. Yet I leave the duties with personal regret, for I recall with pleasure the many expressions of confidence and gratitude from many of the poor whom I have served."

The resignation was accepted with regret. The Board have under their consideration the question of the appointment of a full-time resident medical officer.

Letters, Notes, and Answers.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.B.CANTAB. would be glad to have particulars as to the inoculation of an ascitic patient with his own ascitic fluid.

H. W. asks for information as to results of injections of ferric citrate for chlorosis.

ANSWERS.

BLACK MILK.

W. J. R. writes: Black discharges from urethra, ear, and umbilicus have from time to time been found to be due to infection by a mould, the *Aspergillus niger*, the spores of which are highly pigmented, and by their presence give a black appearance to the discharge.

The condition is more apt to be met with in tropical countries, where moulds are ubiquitous during the rainy season, but the occurrence of such conditions has been noticed in temperate climates also. It is probable that black secretion from the breasts is due to duct infection by this mould, and the taking of a film would clinch the matter. The organism, if present, would probably develop readily on one of Sabouraud's culture media, and might even be induced to grow in a little sterile milk in a stoppered tube. Treatment will probably prove unsatisfactory, as the mammary ducts are not suitable for antiseptic irrigation. As potassium iodide has proved so useful in cases of sporothrix infection, it might be worth while giving it a trial, but if the mould has not penetrated the epithelial lining of the ducts, the drug will be unable to act upon it.

The more or less constant "muscular rheumatism" that "J. D. M.'s" patient complains of is conceivably a toxic phenomenon due to this infection.

LETTERS, NOTES, ETC.

"SIR" JOHN RANBY.

MAJOR H. A. L. HOWELL, R.A.M.C., writes: May I thank you for the notices you have taken of my historical articles in the *Journal of the Royal Army Medical Corps?* In your notice in the issue of April 4th there are, however, two errors. On page 774, second column, *Sir* John Ranby should read *Mr.* John Ranby. Ranby was never knighted. The mistake is mine and occurred in copying my original manuscript. In the next sentence "Sir John was also" should read "Sir John *Pringle* was also." It was Pringle, not Ranby, who sat in a carriage during the battle of Dettingen.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

THE DIAGNOSIS AND TREATMENT OF CEREBRO-SPINAL SYPHILIS,

*INCLUDING TABES AND GENERAL PARALYSIS.**

BY

PURVES STEWART, M.A., M.D., F.R.C.P.,

PHYSICIAN TO THE WESTMINSTER HOSPITAL AND TO THE WEST-END HOSPITAL FOR NERVOUS DISEASES.

SYPHILIS may attack any organ or tissue of the body, but of the various syphilitic lesions with which we meet, those of the nervous system are the most serious. At one time it was believed that cerebro-spinal troubles occurred only in the later phases of syphilis, but we now know that even within a few weeks of the infection well-marked lesions may occur in the nervous system. I need only recall the familiar headaches of early syphilis, which are probably of meningeal origin. On the other hand, it may be many years after the original infection before the signs of cerebro-spinal syphilis first show themselves, so that the old syphilitic infection has sometimes been forgotten by the patient himself. Lastly, we have to remember that cerebro-spinal syphilis may develop extremely insidiously, and may have produced well-marked anatomical lesions long before any clinical signs or symptoms lead the patient to seek medical advice. This is notably the case, for example, in tabes dorsalis.

Importance of Early Diagnosis.

The importance of early diagnosis of cerebro-spinal syphilis cannot be over-estimated, and the neurologist should be prepared to recognize the disease at its earliest stage. Thus we no longer wait for the knee-jerks to disappear, or for the occurrence of ataxia before making a diagnosis of tabes. Many a tabetic is walking about today, with brisk knee-jerks and without ataxia, but with absence, say, of ankle-jerks, or even of one ankle-jerk, or with loss of the light-reflex in one or both pupils, and in whom, nevertheless, we are able to diagnose the presence of tabes by detecting certain changes in the cerebro-spinal fluid.

Pre-clinical Stage of Cerebro-spinal Syphilis.

It is evident that organic changes, whether they be vascular or meningeal, or whether consisting in a primary degeneration of the nervous structures, must precede the earliest clinical symptom. There is, in fact, what Ravaut has termed a "pre-clinical" stage of cerebro-spinal syphilis, which may last for months or years before the first clinical sign makes its appearance. The ordinary clinical stage of cerebro-spinal syphilis is relatively late. It is during the pre-clinical stage, however, that treatment is likely to be most effective. Fortunately, nowadays we are able to recognize the disease at this pre-clinical stage, mainly by examination of the cerebro-spinal fluid and of the blood.

Blood Reaction Insufficient to Exclude Cerebro-spinal Syphilis.

With regard to the Wassermann reaction (consisting in an abnormal fixation of the blood-serum complement, whereby the normal haemolysis no longer occurs in the presence of red blood corpuscles), it is now recognized that a positive reaction in the blood is present in a large proportion of cases of tabes, general paralysis, and cerebro-spinal syphilitic lesions of various sorts. So long as this reaction remains positive treatment of one kind or another should be persevered with. A negative reaction in the blood, however, does not always justify us in concluding that the disease is cured. Syphilitic lesions in the nervous system may sometimes still remain active and even progressive when the Wassermann reaction in the blood has become negative under antisyphilitic treatment. This is notably the case in the so-called "*neuro-recidive*," which we occasionally meet with some six or eight weeks after full doses of salvarsan, whilst it is not uncommon to meet with tabetic and general paralytic patients in whom the Wassermann reaction in the blood is completely negative. Evidently, therefore, we cannot rely upon blood examination alone to decide whether a patient is suffering from cerebro-spinal syphilis.

* Read before the Medical Society of London, April 27th, 1914.

Wassermann Reaction in Cerebro-spinal Fluid.

Fortunately, however, in the cerebro-spinal fluid we possess means of detecting syphilitic changes in the central nervous system. Owing to the peculiar independence between the circulation of the cerebro-spinal fluid and that of the general blood circulation, the substances which produce the Wassermann reaction may be abundantly present in the cerebro-spinal fluid without necessarily passing into the blood. Our aim in treatment, therefore, should be to render this reaction negative, not only in the blood, but in the cerebro-spinal fluid as well.

Globulin Reaction.

In the examination of the cerebro-spinal fluid there are other reactions besides that of Wassermann which are of great importance. One is the reaction for albumin. In health there is a mere trace of albumin. A marked excess of albumin is found in acute meningitis from any cause and to a lesser degree in tabes, in general paralysis, and in active cerebro-spinal syphilis, the protein present in these syphilitic maladies being a globulin. It has been shown by Ravaut and others that when the Wassermann reaction is positive in the cerebro-spinal fluid the albumin content is high, and that when the globulin reaction is feeble or absent the Wassermann reaction is usually negative.

Pleocytosis of Cerebro-spinal Fluid.

Another point of great practical importance is the cytological examination of the cerebro-spinal fluid and the question of pleocytosis. In health the cerebro-spinal fluid contains very few cells, only a few flat endothelial plates, and perhaps an occasional lymphocyte, the total number of cells per cubic millimetre varying from zero to two or three. Sometimes we find no cells of any sort. But in subacute and chronic affections of the meninges, including those of syphilitic origin, and in cerebro-spinal syphilis generally (so long as it is in an active stage), also in tabes and general paralysis, it is the rule to find a marked excess of lymphocytes, which may number 300, 400, or even more, per cubic millimetre. In acutely advancing processes—for example, in acute "neuro-recidive," or during the "congestive attacks" of general paralysis—we may for a time find a considerable proportion of polymorph leucocytes. In general paralysis we also find "plasma cells"—large mononuclear cells each possessing an excentrically-situated nucleus with a characteristic "clock-face" arrangement of its chromatin granules.

The above-mentioned reactions, of meningeal origin, in the cerebro-spinal fluid are of the highest practical importance in enabling us to estimate the presence of cerebro-spinal syphilis and the degree of its activity. An acutely advancing lesion will show a high cell count with a considerable proportion of polymorph cells, whilst the globulin reaction will be marked and the Wassermann reaction positive. As the pathological process in the meninges subsides and becomes subacute or chronic, the polymorph cells rapidly disappear and are replaced by monomorphs, the plasma cells disappear and the lymphocytes become smaller in size and less numerous, whilst the globulin and Wassermann reactions correspondingly diminish in intensity. In old-standing cases, where the pathological process has long since come to a standstill—for example, in old sclerotic cases following vascular or other lesions—the cerebro-spinal fluid shows only a small excess of lymphocytes, whilst the globulin and Wassermann reactions are also diminished in intensity, and may ultimately disappear. It is worthy of note that the cytological changes disappear more rapidly under treatment than do the globulin and Wassermann reactions.

It is of importance to remember that changes in the cerebro-spinal fluid precede the ordinary clinical signs and symptoms of nervous disease, and that they may be extremely marked when the clinical phenomena are very slight. Thus, for example, I recently saw a schoolmaster, aged 42, who gave a history of two attacks of transient hesitation of speech only a few days previously when reading aloud. On physical examination he showed no abnormal signs in the sensory, motor, or reflex functions. There was, however, a suspicion of tremor in the face and tongue, whilst the pupils were of the Argyll Robertson type. His mental powers were absolutely unimpaired. Nevertheless, the cerebro-spinal fluid contained 419 lymphocytes per cubic millimetre and gave strongly

positive Wassermann and globulin reactions. The Wassermann reaction in the blood was also positive. The diagnosis of early general paralysis was therefore established beyond dispute. It cannot be doubted that the changes in the cerebro-spinal fluid must have been present for some considerable time before his symptoms appeared, and could have been detected had the fluid been examined. So significant is the occurrence of changes of this sort in the cerebro-spinal fluid that their presence alone, apart from any clinical symptom whatever, is an indication for assiduous and energetic treatment without waiting for the appearance of signs of gross focal lesions. The modern neurologist, when dealing with a syphilitic patient, is no longer satisfied with the absence of clinical signs and symptoms indicating gross focal disease in the nervous system, not even when the Wassermann reaction in the blood is negative. To assure himself that the central nervous system has escaped, he examines the cerebro-spinal fluid.

Let us now pass on to those cases of cerebro-spinal syphilis where, following earlier changes in the meninges, gross focal lesions have actually occurred in the nervous system. Most patients by the time they come under observation have already reached this stage. The demonstration by Noguchi of spirochaetes in the brains of general paralytics has broken down the distinction formerly drawn between syphilitic and so-called parasyphilitic diseases, and has thereby given us a clearer outlook upon the whole question of cerebro-spinal syphilis.

Varieties of Syphilitic Lesions in Central Nervous System.

We have to recognize three distinct kinds of lesions. Firstly, we have gummata, arising in non-nervous tissues and compressing or invading the brain or spinal cord, or we may have diffuse gummatous infiltrations in the meninges or around the blood vessels of the brain or cord. Secondly, there is syphilitic endarteritis, which frequently culminates in thrombosis of the affected artery, producing an area of softening in the brain or cord, followed by corresponding sclerosis. Lastly, there is a group of parenchymatous nervous diseases characterized by primary decay and degeneration of various special nerve tracts and nerve cells, diseases which are neither the direct effects of gummatous deposits nor of arterial disease (although lesions of this sort may co-exist), but which result from the direct action of the syphilitic toxin upon the nervous structures. Primary degenerative lesions of this sort may be followed by sclerotic overgrowth of the neuroglia in the affected tracts, independent of any meningeal or vascular lesion. As examples of this primarily degenerative group we may mention certain forms of primary optic atrophy, a considerable part of the lesions in tabes and general paralysis, also Erb's syphilitic paraplegia and certain forms of organic nervous disease occurring in the children of syphilitic parents.

These three varieties of syphilitic lesions differ widely in their respective prospects of cure. Gummata, whether compressing or invading the nervous structures, may often be removed by medicinal means, and if the nerve-structures have only been compressed and have not undergone actual destruction, recovery may be complete. If, however, a gumma leaves behind it a fibrous cicatrix, or if actual degeneration of nerve tracts has occurred within the central nervous system, a certain amount of permanent damage necessarily persists, even after the original syphilitic process has ceased. In the second group, of syphilitic vascular diseases, the lesions in the arterial wall may yield to treatment; but here, also, if thrombosis has already occurred, and an actual area of softening has resulted, the damage which has been done to the structures within the territory of the diseased vessel must necessarily remain. The prognosis, therefore, of syphilitic softenings is relatively bad. Lastly, with regard to the primarily degenerative diseases, such as tabes and general paralysis, these have hitherto tended to pursue an irregularly progressive course, generally uninfluenced, or at the most only slightly alleviated, by the most assiduous antisyphilitic treatment. Sometimes, however, these diseases, after attaining a certain degree of intensity, appear to come to a spontaneous standstill, an arrest which may last for years, although there is always the danger that the disease may subsequently light up again to renewed activity.

I have deemed it advisable to direct attention to the foregoing points in the neuropathology of cerebro-spinal syphilis, because it is essential in the treatment of these various types of disease to have a clear idea of what exactly we are attacking and of how much improvement is anatomically possible, supposing the syphilitic infection be successfully removed. Let us now turn to the problem of therapeutics.

Treatment of Cerebro-spinal Syphilis.

The modern treatment of cerebro-spinal syphilis does not imply that we should discard any of the older remedies which for so many years have been proved of value. The classical method of attacking syphilis is by means of mercury, with or without the addition of iodides. Excellent results have been obtained in the past, chiefly in the meningeal, vascular, and gummatous types of the disease, as every neurologist can testify. More recently the introduction of an arsenical group of drugs, of which the most notable examples are salvarsan and neo-salvarsan, atoxyl and enesol, has added powerful weapons to our therapeutic armoury. Most physicians agree that salvarsan produces its best results when combined with mercurial treatment.

Besides deciding in each particular case which drug or combination of drugs he will employ, the physician has to consider the channel of administration, whether by the mouth, by inunction or fumigation into the skin, or by injections—hypodermic, intramuscular, intravenous, or intrathecal. In making his decision the physician is influenced by various factors, such as the acuteness or chronicity of the symptoms, the amount of personal supervision that is attainable, the advisability from the patient's point of view of rendering the treatment as little conspicuous as possible (this is often a special difficulty with regard to mercurial inunction), and upon the perseverance or otherwise with which the patient is likely to carry out a long course of treatment.

The present-day treatment, by a combination of mercury with salvarsan or neo-salvarsan, which is employed in "ordinary" syphilis, is applicable to cerebro-spinal syphilis as well, bearing in mind certain precautions. Thus, for for example, in cerebro-spinal syphilis, I consider it risky to give salvarsan in the full intravenous dose of 0.6 gram. It is safer to give repeated doses of not more than 0.3 gram. In this way we diminish the chances not only of acute arsenical symptoms, but the series of smaller doses is less likely to be followed by the alarming group of intracranial syphilitic symptoms known as nerve-relapses or "neurorecidive." Further, patients with renal disease or with well-marked cardio-vascular disease are, as a rule, unsuitable for salvarsan medication. The very rapidity with which the drug acts in removing syphilitic deposits may be a source of danger, for example, in the neighbourhood of diseased vessel walls.

Let me quote a few clinical instances of the effect of treatment of the various classes of cerebro-spinal syphilitic disease.

Results of Treatment in Gummatous Deposits.

As illustrating the first group of gummatous lesions I will only mention a couple of examples:

Case I.—*Gumma of Spinal Cord.*

E. G. was a woman of 34 who had been married for twelve years without pregnancies. One and a half years before admission she developed a cutaneous rash, with sore throat and falling out of hair. Two months ago she complained of subjective sensations of numbness in both legs and in the two ulnar fingers of the right hand. Three weeks ago her legs became stiff, and on several occasions she tripped and fell. About the same time she noticed that she had impairment of sensation in both legs. She then developed anaesthetic incontinence of urine and faeces. Within the last week the legs had begun to drag severely and she had become unable to stand or walk.

On physical examination there was profound anaesthesia to touch, pin-pricks and temperature, with loss of joint-sense in the lower limbs and trunk, up to the level of the second ribs in front, also along the ulnar border of the right upper limb from axilla to fingers. There was severe flaccid paraplegia of both lower limbs, the only movements which survived being feeble flexion of the left hip and feeble flexion of the toes in both feet. The knee-jerks and ankle-jerks were absent, also the plantar reflexes. There was retention of urine requiring the catheter. The cerebro-spinal fluid showed a marked excess of lymphocytes, numbering 52.6 per cubic millimetre.

She was admitted to hospital and treated by mercurial inunction. After three weeks' treatment the anaesthesia had diminished considerably in intensity but not in extent. The lower limbs could now move feebly at all joints, bladder control had partially returned, and the lymphocytosis had receded to 16.3 per cubic millimetre. After seven weeks she had regained sensibility to cotton-wool touches, and joint-sense was now everywhere normal. There was still considerable impairment to pin-pricks and to temperature. She was now able to walk, the gait being a combined spastic and ataxic one. The sphincters were normal. The knee-jerks and ankle-jerks were still absent.

In this patient, with all the evidences of severe spinal-cord disease, not only did the clinical phenomena rapidly improve under mercurial treatment, but concurrently the lymphocytosis of the cerebro-spinal fluid subsided also. This case occurred in 1905, before the introduction of the Wassermann reaction.

CASE II.—*Gummatous Meningitis ("Neuro-recidive").*

F. L., a man of 35, acquired syphilis ten months ago. Three months ago he had two intravenous injections of salvarsan—apparently in doses of 0.6 gram—followed by six weeks of hypodermic mercurial injections. Two months ago he developed moderate deafness in both ears. Six weeks ago right-sided headache appeared, and two weeks ago he began to reel in walking and had diminution of vision in the right eye. Two days before I saw him he consulted Mr. Andrew Wylie, who observed his reeling gait, together with a certain degree of bilateral deafness; there was no facial weakness at that time. On the same day he saw Mr. George Thompson, who found intense right-sided optic neuritis with considerable impairment of vision, the left optic disc being normal. By the time I saw him, in addition to the unilateral optic neuritis, there was dilatation of the right pupil with a sluggish reaction to light, also moderate paresis of the right face, upper and lower. Save for a slight bilateral nerve-deafness the cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, and no motor weakness of any kind. The gait was slightly reeling. The knee-jerks and ankle-jerks were increased, but there was no ankle-clonus and the plantar reflexes were flexor in type. Kernig's sign was positive on both sides. The cerebro-spinal fluid showed an enormous pleocytosis, amounting to 459 cells per cubic millimetre, with strongly positive globulin and Wassermann reactions. The blood gave a slightly positive Wassermann reaction.

The patient was at once placed on full doses of mercury with iodide, and six intravenous injections of salvarsan (0.3 gram) were given within ten weeks. Within the first three days the right facial palsy became complete and remained so for a week. It then began rapidly to clear up, and ultimately disappeared. The right-sided optic neuritis was slower in its recovery, but at the end of two months' treatment it had cleared up and vision was also practically normal. After eight weeks' treatment the lymphocytosis of the cerebro-spinal fluid had receded to 38.5 per cubic millimetre, with faint globulin and negative Wassermann reaction, and after twelve weeks the fluid contained only 7.9 lymphocytes per cubic millimetre, with negative globulin and Wassermann reactions. Four months after the commencement of treatment the blood was re-examined for the Wassermann reaction, which proved completely negative; the optic discs and vision were normal, and, save for a very slight widening of the right pupil, which reacted briskly to light, the cranial nerves were otherwise normal.

This patient presented most of the classical symptoms of nerve relapse with intense meningeal reaction, coming on about six weeks after the original salvarsan injections. It is interesting to note how rapidly all his symptoms cleared up under mercury, iodide, and salvarsan.

RESULTS IN SYPHILITIC ARTERIAL DISEASE.

Let me now mention one or two clinical illustrations of the second group of organic nervous lesions—namely, those following syphilitic endarteritis:

CASE III.—*Spastic Paraplegia: Syphilitic Myelomalacia.*

W. H., aged 34, contracted syphilis four and a half years ago, and was energetically treated in a New York hospital by intramuscular injections of mercury, being discharged apparently well. Two months after the original infection, after a premonitory month, during which his legs seemed to be constantly tired, he woke up one morning completely paraplegic and anaesthetic from the waist downwards, with retention of urine requiring catheter. Under treatment, apparently mercurial in character, he steadily improved, and by the time he came to us at Westminster Hospital the anaesthesia had completely disappeared, but there was still severe spastic paraplegia of both lower limbs, especially on the right side, with increased deep reflexes and extensor plantar responses. Micturition was still precipitate. He could only stand when supported on both sides. The cerebro-spinal fluid contained only 5.7 lymphocytes per cubic millimetre, and gave negative Wassermann and globulin reactions.

In this patient the active syphilitic process in the central nervous system had run its course over three years ago, but the results of the original vascular obstruction still persist, and are permanent.

CASE IV.—*Spastic Paraplegia from Syphilitic Myelomalacia: Foerster's Operation.*

W. H., aged 30, was admitted to the West End Hospital in March, 1913. Eleven months ago he acquired syphilis. Three months later he had sudden and complete motor and sensory paralysis from the waist downwards, with retention of urine. Four months after the onset of his symptoms he was treated by salvarsan intravenously in another hospital on three separate occasions, but without improvement. When admitted to the West End hospital he had blunting of sensation, chiefly to heat and cold, from the second lumbar root area downwards, together with severe paraplegia of both lower limbs and intense flexor contracture of the hips and knees, so that, although no individual movement of the limbs was paralysed, he was unable to stand. He also had a sacral bedsore. The deep reflexes were exaggerated, and the plantar reflexes were extensor in type.

This patient, like the previous case, had evidently come to a standstill, and in spite of energetic mercurial and salvarsan treatment, carried out some months after the lesion, no improvement had occurred. Accordingly, after inducing the bedsore to heal, I asked my colleague, Mr. Wilfred Trotter, to divide the posterior roots in the lumbar region, with the object of diminishing the flexor spasm and of enabling the patient to make better use of whatever motor power he still possessed. This was done in June, 1913, the posterior roots on both sides from the first to the fifth lumbar being divided. The result was to produce root-anaesthesia of the lower limbs without affecting their motor power, but with considerable diminution of spasticity, so that the patient became able voluntarily to extend the hips and knees, a feat which was previously impossible. There still persists, however, considerable adductor spasm, and I have asked Mr. Trotter to divide additional posterior roots in the hope of overcoming this and of enabling the patient to get about again.

CASE V.—*Transient Paraplegia following Syphilitic Vascular Disease.*

W. M., aged 23, acquired syphilis six months ago. The condition was only recognized four months ago, when, concurrently with the rash, he developed sudden weakness of the right lower limb, with subjective tingling and with blunting of sensation. Two days later the left lower limb became similarly involved and micturition became delayed. Energetic treatment with mercury and salvarsan was at once begun, and in about ten days all the paraplegic symptoms cleared up. By the time he came under my observation the Wassermann reaction in the blood was negative and the cerebro-spinal fluid contained only 1.7 lymphocytes per cubic millimetre, and gave negative globulin and Wassermann reactions. There was no motor, sensory, or reflex abnormality.

This patient was fortunate in being treated by mercury and salvarsan at the very outset of his spinal symptoms, before actual necrotic softening had time to occur.

Cases like the above might be multiplied indefinitely, from the experience of every neurologist, and it will be agreed that the amount of recovery in a nervous lesion which is associated with syphilitic arterial disease depends on whether the arterial disease can be at once attacked by energetic treatment (for example, by salvarsan and mercury) so as to clear up the endarteritis and to restore the lumen of the artery before it becomes thrombosed, or whether thrombosis has already occurred, so as to produce an area of softening. In the latter case, despite the most energetic antisyphilitic treatment, the necrotic area necessarily remains, and, inasmuch as regeneration of nerve tissue in the central nervous system does not occur, permanent degeneration and sclerosis are the result. Degeneration of this sort is the secondary result of the arterial obstruction. It is not primarily or essentially syphilitic in nature, unlike the group of primarily degenerative or parenchymatous syphilitic diseases, which we shall now proceed to consider.

TREATMENT OF PARENCHYMATOUS NERVOUS SYPHILIS.

The third division of syphilitic nervous diseases includes a class of maladies in which certain groups of nerve elements undergo a primary decay and degeneration, due, not to gummatous infiltrations nor to vascular or meningeal disease (although lesions of this sort may coexist), but to the nerve fibres and cells being attacked directly by the syphilitic toxin. An important point to bear in mind is that this toxin has a selective action on special systems of nerve tracts, so that in one patient we

have the exogenous fibres of the posterior columns picked out, producing tabes dorsalis; in another the lateral columns are selected, as in Erb's syphilitic paralysis; in a third we have primary optic atrophy, whilst in a fourth the nerve cells of the cortex with the interconnecting tangential fibres are picked out, as in dementia paralytica. Sir David Ferrier emphasized these facts very clearly some years ago by proposing the names of spinal tabes, cerebral tabes, and optic tabes. We have also to remember that mixed types of these diseases occur. Thus the symptoms of optic tabes may be superadded to those of tabes dorsalis, whilst tabes dorsalis may also be combined with general paralysis.

Hitherto this class of diseases has been singularly resistant to treatment, and for several reasons. First, the diseased nerve elements within the central nervous system, unlike those in the peripheral nerves, are incapable of regeneration. This is not the occasion to revive the controversy between the central and peripheral schools of nerve regeneration. Both schools agree that within the central nervous system regeneration is impossible, and that primary degeneration of nerve cells or nerve fibres, once it has occurred, is permanent. The most we can hope to achieve by treatment is to arrest the degeneration at the stage to which it has attained, and to make the most of those cells and fibres which survive. Another reason for the resistance to treatment shown by this group of parenchymatous syphilitic nervous diseases consists in the peculiarity of the position of the syphilitic organisms with reference to the blood stream. The spirochaetes are situated in the nerve elements themselves. Now, the circulation in the central nervous system differs from that in any other part of the body, inasmuch as the capillary walls are not in contact with the nerve elements, but are separated by perivascular lymph spaces. Moreover each nerve cell has its pericellular lymph space. These lymph spaces are irrigated by the cerebro-spinal fluid. Thus medicinal substances destined for the central nervous system have to be secreted into the cerebro-spinal fluid before they can reach the nerve cells or the spirochaetes within them. The cerebro-spinal fluid is secreted by glandular ependymal cells covering the choroid plexuses within the brain. These secreting cells have a selective action, permitting some substances to pass from the blood stream into the cerebro-spinal fluid. Thus, if alcohol be administered by the mouth in sufficient quantities, it can subsequently be detected in the cerebro-spinal fluid, whilst urotropin taken by the mouth can be shown to yield formic aldehyde in the fluid. To other substances, again, the choroidal ependyma is impervious, notably to mercurial and arsenical salts, which at the present time are our most important spirochaeticidal drugs. Thus, no matter how assiduously the general circulation be drenched with mercury or salvarsan, the cerebro-spinal fluid does not transmit these drugs nor allow them to reach the nerve elements. Thus, whilst gummata may be removed from the meninges and interstitial tissues, and although syphilitic endarteritis may clear up, those nerve cells and nerve fibres which are being destroyed directly by the syphilitic organism and its toxin, entrenched behind the pericellular and perivascular lymph spaces, continue to decay.

Intrathecal Medication.

In order to reach and to destroy these organisms, our remedies must enter the cerebro-spinal fluid. The credit for directing attention to this important principle and of initiating a new form of treatment belongs firstly to Marinesco[1] of Bukarest in 1911, and to George Robertson of Edinburgh,[2] who in his Morison lectures on general paralysis of the insane in 1913, described the treatment by salvarsanized blood serum administered intrathecally; also to Swift and Ellis[3] of the Rockefeller Institute in New York, who, following Marinesco, applied the same treatment to cases of tabes dorsalis. More recently Ravaut[4] of Paris has introduced the method of administering neo-salvarsan by direct injection into the cerebro-spinal fluid.

The technique is, briefly, as follows: An hour after an intravenous injection of salvarsan 0.3 gram (or of neo-salvarsan 0.45 gram) 60 c.cm. of blood are withdrawn by venepuncture. This blood is allowed to clot, and the separated serum, after being diluted with normal saline solution to form a 40 per cent. mixture, is kept at a temperature of 56° C. for an hour. Next day 30 or 35 c.cm. of this dilated serum are introduced intrathecally by gravity through a long rubber tube and lumbar-puncture needle, previously withdrawing a quantity of cerebro-spinal fluid for control. This procedure is repeated at intervals of seven to fourteen days.

With Ravaut's method bleeding is not necessary. A 6 per cent. solution of neo-salvarsan in distilled water (75 c.cm. containing 0.45 gram of neo-salvarsan) is made up at the patient's bedside. Of this 0.1 to 0.15 c.cm. (that is, from 6 to 9 mg. of salvarsan) is injected into the spinal theca by means of a specially fine syringe and lumbar-puncture needle, after withdrawing a quantity of cerebro-spinal fluid for examination. The remainder of the solution (that is, 0.45 gram of neo-salvarsan *minus* the 6 to 9 mg. previously used) is injected intravenously. In the case of tabetics the patient is kept in the horizontal posture for several hours after the intrathecal injection. In general paralytics the foot of the bed is raised, so as to attain the Trendelenburg posture and thus to favour the diffusion of the injected substance upwards to the cranial cavity.

Within the last six months I have treated by intrathecal administration either of salvarsanized serum or of neo-salvarsan 25 cases of parenchymatous nervous syphilis, including 13 of tabes, and 9 of general paralysis, and I will quote one or two illustrative cases.

Case VI.—*Tabes.*

L. A., aged 63, a patient of Dr. Bruce-Porter, complained of delay and dribbling of urine of about two years' duration, with deficient sensation in that region, so that he could not be sure whether the bladder or rectum was about to be emptied. He also had loss of sexual power for the last year, and within the last four months had developed slight unsteadiness of the legs in walking downstairs. For about two months he had felt shooting pains in the thighs. There was no history of syphilis, but there had been a soft sore twenty years before.

The patient was a man of good physique and remarkable mental energy. The pupils were unequal and the larger one had a sluggish reaction to light, the other reacting briskly. The cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, no ulnar or Achilles analgesia and joint-sense was everywhere normal. Vibration-sense was normal in the upper limbs, but markedly impaired in the pelvis and lower limbs, being absent in the feet. There was no weakness or ataxia of the upper limbs. The lower limbs were powerful, but showed slight unsteadiness with the heel-knee test. The gait was slightly stamping. The supinator-jerks were brisk, the knee-jerks and ankle-jerks were absent. The bulbo-cavernosus reflex was brisk. The cerebro-spinal fluid showed the characteristic lymphocytosis and globulin reaction of tabes. The Wassermann reaction was negative in the blood and positive in the cerebro-spinal fluid.

The patient was placed on a course of treatment by salvarsanized serum. The results in the cerebro-spinal fluid are shown in the following table:

Date.	Blood. Wassermann.	Intravenous Treatment.	Cerebro-spinal Fluid.			Intrathecal Treatment.
			Cells per mm.³	Globulin.	Wassermann.	
Nov. 25 ...		Salvarsan	137	++	+	40% serum.
Dec. 3-4	0	0.3 g.	155	++	+	35 c.cm.
Dec. 11-12	0	0.3 g.	99.7	++	+	35 c.cm.
Dec. 16-17	0	0.3 g.	89.7	+	+	35 c.cm.
Dec. 22-23	0	0.3 g.	37.6	+	+	35 c.cm.
Jan. 1-2	0	0.3 g.	41.9	+	+	35 c.cm.
Jan. 12-13	0	0.3 g.	14.8	+ faint	+	35 c.cm.
Jan. 29-31	0	0.3 g.	6.07	+	+	35 c.cm.

Together with the improvement in the cerebro-spinal fluid the patient's clinical symptoms became arrested. The lightning pains disappeared. Bladder control was completely regained and sexual power also returned. The unsteadiness of the legs disappeared. The knee-jerks and ankle-jerks, however, remain absent.

Case VII.—*Tabes, "Forme Fruste."*

F. W., aged 41, who had acquired syphilis ten years ago, complained of lightning pains in the legs of four years' duration. The pupils were irregular in outline and of Argyll Robertson type; the cranial nerves were otherwise normal, save for progressive deafness of twenty years' duration. There were scars of an old glossitis at the sides of the tongue. There was no cutaneous anaesthesia or analgesia. The ulnar nerves and Achilles tendons were insensitive to pressure. There was no

weakness or ataxia of the upper or lower limbs and the gait was normal. The knee-jerks and ankle-jerks were brisk, and the plantar reflexes flexor in type. The blood gave a positive Wassermann reaction. The cerebro-spinal fluid showed a well-marked lymphocytosis of 69.4 cells per cubic millimetre, with a positive Wassermann reaction.

The following table shows the effect of treatment:

Date.	Blood. Wassermann.	Cerebro-spinal Fluid.			Treatment.	
		Cells per mm^3.	Globulin.	Wassermann.	Intravenous.	Intrathecal.
Nov. 13-14	+	69.4	+ faint	+	Neo-salvarsan 0.45 g.	10% serum. 30 c.cm.
Nov. 20-21		40	+	+	Neo-salvarsan 0.45 g.	30 c.cm.
Nov. 27-28	+	13.4	(?)	+	Neo-salvarsa 0.45 g.	30 c.cm.

After three weeks, owing to business reasons, he left hospital, being free from pains.

CASE VIII.—*Tabes, "Forme Fruste," with Addison's Disease.*

S. H., aged 65, who denied syphilitic infection but admitted old gonorrhoea, complained of shooting pains in the lower limbs of about two and a half years' duration. Two years ago, beyond irregularity of the pupils, which were of the Argyll Robertson type, no abnormal physical signs were made out, the knee-jerks and ankle jerks being still present. The cerebro-spinal fluid was not examined at that time. Two months ago the patient began to have nocturnal enuresis. Mr. Thomson Walker found the bladder to be trabeculated, with 12 oz. of residual urine, and suspected some spinal cord lesion. Accordingly I saw him again. On re-examination the pupils were of Argyll Robertson type as before; the cranial nerves were otherwise normal. There was no cutaneous or deep anaesthesia or analgesia, and no weakness or ataxia of the upper or lower limbs. The supinator-jerks and knee-jerks were normal. The right ankle-jerk was normal; the left ankle-jerk was absent. The bulbo-cavernosus reflex was brisk. The Wassermann reaction in the blood and cerebro-spinal fluid was found by Dr. Bulloch to be strongly positive, and the cerebro-spinal fluid showed an extensive lymphocytosis, amounting to 487 lymphocytes per cubic millimetre. The patient was treated by injections of salvarsanized serum, with the following results:

Date.	Blood. Wassermann	Cerebro-spinal Fluid.			Treatment.	
		Cells per mm^3.	Globulin.	Wassermann.	Intravenous.	Intrathecal.
Oct. 30 ...	+++					Serum 40 %
Nov. 5 ...		487	++	+++		
Nov. 10-11	+++	300	++	+++	Neo-salvarsan 0.45 g.	35 c.cm.
Nov. 17-18	++	150	+	++	Neo-salvarsan 0.45 g.	35 c.cm.
Nov. 26-27	++	47	+	+	Salvarsan 0.3 g.	35 c.cm.
Dec. 5-6	++	35.4	+	+	Salvarsan 0.3 g.	35 c.cm.

Three days after his last injection he developed mild pyrexia, with headache and pains in the limbs. No abnormal physical signs could be detected in any of the organs; the urine was free from albumin. There was no cervical rigidity or other sign of meningitis. There was no diarrhoea or evidence of arsenical poisoning. After a week the temperature became subnormal, and the patient became exhausted and died.

At the autopsy the only abnormality found was severe cystic degeneration of the suprarenal bodies. The spinal cord and membranes were healthy-looking and free from any signs of meningitis. Microscopically, early tabetic changes were found in the posterior columns of the cord.

This case, which, so far as the spinal cord affection was concerned, had pursued a satisfactory course, died of an intercurrent affection apparently unconnected with the treatment. The suprarenal disease was not suspected during life, probably because the patient was of partial Ethiopian extraction.

CASE IX.—*Tabes with Gastric Crises.*

E. S., aged 32, a patient of Dr. Tilbury, had a venereal sore ten years ago, not considered at the time to be syphilitic. He married eight years ago, and his wife has had three healthy children.

Eighteen months ago he developed acute retention of urine for a week, requiring catheterization. A year ago he had his first gastric crisis with violent vomiting and collapse. At that time the pupils were said to be normal, and the knee-jerks were still present. Seven months ago he had another gastric attack, and three months ago he was seen in consultation by another physician who recognized the condition as tabetic. He then had a course of sixty mercurial inunctions. Two weeks ago he had another gastric crisis, together with retention of urine, and followed by cystitis.

On examination he was pale, thin, and haggard. The optic discs, pupils, and cranial nerves were normal. There was no cutaneous anaesthesia or analgesia. The ulnar nerves and Achilles tendons were insensitive on pressure, as also were the testicles. There was no weakness or ataxia of the upper limbs. There was a slight degree of ataxia in the gait. The supinator-jerks, knee-jerks, and ankle-jerks were absent; so also were the plantar reflexes. The bulbo-cavernosus reflex was brisk. The cerebro-spinal fluid contained 33 lymphocytes per cubic millimetre. The Wassermann reaction was faintly positive in the blood and strongly positive in the cerebro-spinal fluid.

The effects of treatment were as follows:

Date.	Blood. Wassermann.	Treatment: Intravenous.	Cerebro-spinal Fluid.			Treatment: Intrathecal.
			Cells.	Globulin.	Wassermann.	
Jan. 29 ...		Salvarsan.	33	+		40 % serum.
Feb. 9-10	+ faint	0.3 g.	21.9	+	++	35 c.cm.
Feb. 16-17	0	0.3 g.	8.7	+ faint	++	35 c.cm.
Feb. 23-24	+ faint	0.3 g.	9.87	+	++	35 c.cm.
Mar. 9-10	+ faint	0.3 g.	5.6	+	++	35 c.cm.
Mar 17-18	0	0.3 g.	4.9	+	++	35 c.cm.
Mar. 24-25	0	0.3 g.	2.4	+	++	35 c.cm.

After the third injection the patient had another gastric crisis, much less severe than formerly, and unaccompanied by

Results Obtained in Eleven Cases of Tabes.

Name and Age.	Observations before Treatment.				Number of Intrathecal Injections.	Observations after Treatment.			
	Blood.	Cerebro-spinal Fluid.				Blood.	Cerebro-spinal Fluid.		
	Wassermann.	Wassermann.	Globulin.	Cells.		Wassermann.	Wassermann.	Globulin.	Cells.
1. L. A., 63	0	+	++	137	7 salvarsanized serum	0	+	+	6.07
2. F. W., 41	+	+	+	69.4	3 " "	+	+	?	13.4
3. S. H., 65	+	++	++	48.7	4 " "	+	+	+	35.4
4. E. S., 32	+	+	+	33	6 " "	0	+	+	2.4
5. G. C., 44	+	++	++	322.6	6 " "	0	+	++	24.1
6. M. W., 56	+ weak	+	+	246.7	5 " "	0	+	+	13.4
7. J. C., 36	+	+	+	97	3 " "	+	+	+	44
8. F. B., 41	+	++	++	66	7 " "	faint	faint	0	16.7
9. Mrs. A. J., 55 ...	+	+	+	243.4	7 " "	+	+	+	37.6
10. T. F., 52	0	++	+	10.1	5 " "	0	++	+	18.3
11. L. L., 44	0	+ faint	+	85.2	5 neo-salvarsan	0	faint	faint	12

bladder trouble. He rapidly got over this, and by the end of his treatment had gained several pounds in weight.

I will not weary you with details of other tabetic patients, but give a short tabular statement of the results observed in 11 cases (see p. 953). In every instance the clinical signs improved, lightning pains and gastric crises subsided, sphincter control was improved, ataxia was frequently diminished, and in one patient the knee-jerks, previously absent, reappeared, though the ankle-jerks still remained absent. In every case save one the lymphocytosis of the cerebro-spinal fluid was markedly reduced. The exception to this rule was in Case x, which started with only a small excess of cells, and finished with a small increase in this number. Nevertheless, his lightning pains disappeared, and his slight ataxia completely cleared up.

Let me now mention a case of primary optic atrophy of syphilitic origin. Some might prefer to classify it as an optic tabes, and to include it in the foregoing list.

CASE X.—*Primary Optic Atrophy (Optic Tabes?).*

R. B., aged 34, was sent to me by Mr. George Thompson, whom he had consulted owing to rapidly failing vision of about three months' duration. Mr. Thompson found optic atrophy in both eyes. The patient, whose previous health had been excellent, denied venereal disease, but his blood showed a positive Wassermann reaction. On physical examination, apart from pallor of the optic discs, no abnormality was detected. The visual acuity in the right eye was $\frac{6}{9}$, in the left $\frac{6}{24}$. The visual fields were concentrically contracted, more in the left eye. The pupils were moderately dilated, reacted sluggishly to light, and briskly on convergence. The cranial nerves were otherwise normal. The sensory and motor functions were normal. The supinator-jerks, knee-jerks, and ankle-jerks were normal. The plantar reflexes were flexor in type; the abdominal reflexes were brisk. The cerebro-spinal fluid showed a large lymphocytosis, amounting to 142 cells per cubic millimetre, and gave positive Wassermann and globulin reactions.

Under treatment the following changes occurred:

Date.	Blood. Wassermann.	Treatment: Intravenous.	Cerebro-spinal Fluid.				Treatment: Intrathecal.
			Cells.	Globulin.	Albumin.	Wassermann.	
Dec. 15-16	+	Salvarsan.	142	+			40 % serum. 30 c.cm.
Jan. 5-6...	+	0.3 g.	72	+	0.05 %	+	30 c.cm.
Jan. 12-13	+	0.3 g.	34	+	0.09 %	+ weak	30 c.cm.
Jan. 19-20	+	0.3 g.	33.4	+ weak	0.05 %	+	30 c.cm.
Jan. 26-27	+	0.3 g.	26.7	+ weak	0.05 %	+	30 c.cm.
Feb. 2-3...	0	0.3 g.	10.7	+	0.09 %	+	30 c.cm.
Feb. 9-10	0	0.3 g.	12	+ weak	0.05 %	+	30 c.cm.

At the conclusion of the course the Wassermann reaction, although still positive in the cerebro-spinal fluid, had become negative in the blood, whilst the lymphocytosis in the fluid had receded to 12 per cubic millimetre. The visual acuity in the right eye remained the same, whilst in the left eye the field, which was originally the size of a pea, had entirely gone. The patient was instructed to continue with daily mercurial inunctions for the next two or three months.

Enesol in Tabetic Lightning Pains.

Before leaving the subject of tabes, I should like to mention the usefulness of enesol (salicyl-arsenate of mercury) in the treatment of tabetic lightning-pains. This drug has the advantage of being suitable for simple hypodermic administration, a fact worth bearing in mind when the intravenous administration of salvarsan (which often relieves lightning pains also) is perhaps unattainable. Enesol in 1-grain doses, dissolved in 30 minims of water, is given hypodermically at intervals of two or three days for twelve or fifteen successive doses. Let me mention an illustrative case.

CASE XI.—*Tabes, "Forme Fruste," Lightning Pains.*

A medical man, aged 50, had suffered for six months from agonizing pains in the arms, occurring paroxysmally, day and night, and intractable to all the ordinary analgesic drugs. On examination the pupils were unequal, irregular in outline, and of Argyll Robertson type; the cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, but the ulnar nerves and Achilles tendons were insensitive to pressure. There was neither weakness nor ataxia of the upper or lower limbs. The radial-jerks, knee-jerks, and ankle-jerks were absent.

The patient had a course of fifteen hypodermic injections of enesol, on alternate days for a month. After the third or fourth injection the pains disappeared, the physical signs remaining as before.

The next case is one of cerebro-spinal syphilis, which may, perhaps, be an instance of early general paralysis.

CASE XII.—*Cerebro-spinal Syphilis (? Early General Paralysis of the Insane).*

R. K., aged 28, who denied venereal disease, complained of pain in the left knee and arm of about four months' duration. Two months ago he slipped on some railway steps and was apparently concussed. The pains in the left limb persisted, and his legs have since become feeble and spastic.

On admission to the West End Hospital he was intelligent, but mentally somewhat slow. The optic discs were normal. The pupils were slightly unequal, but reacted normally. The cranial nerves were otherwise normal. There was considerable tremor of the face and tongue. There was no cutaneous anaesthesia or analgesia. The arms and legs were powerful, but markedly spastic, and showed distinct unsteadiness with the finger-nose and heel-knee tests. The supinator-jerks were present, markedly increased on the left side. The knee-jerks were both brisk. There was bilateral ankle-clonus. The plantar reflexes were both extensor in type. The Wassermann reaction was positive in the blood and cerebro-spinal fluid. The cerebro-spinal fluid showed a lymphocytosis of 343.7 cells per cubic millimetre.

Treatment by salvarsanized serum was carried out as follows:

Date.	Blood. Wassermann.	Treatment: Intravenous.	Cerebro-spinal Fluid.			Treatment: Intrathecal.
			Cells.	Globulin.	Wassermann.	
Oct. 20 ...	+					40% serum.
Oct. 30 ...		Salvarsan 0.3 g.	343.7	+	+	
Nov. 7 ...		Salvarsan 0.3 g.				
Nov. 13-14	+	Neo-salvarsan 0.45 g.	102	+ faint	+	30 c.cm.
Nov. 20-21	+	Neo-salvarsan 0.45 g.	24.6	0	+	30 c.cm.
Nov. 27-28	+	Neo-salvarsan 0.45 g.	9.4	0	+	30 c.cm.
Dec. 4-5	+	Salvarsan 0.3 g.	6.6	0	+	30 c.cm.
Dec. 11 ...	No blood obtained	Neo-salvarsan 0.45 g.				
Dec. 18 ...	+	Neo-salvarsan 0.45 g.	Not sufficient fluid obtained.			
Dec. 24-26	+	Neo-salvarsan 0.45 g.	9.4	0	+	30 c.cm.
Dec. 31 to Jan. 1	+	Neo-salvarsan 0.45 g.	6.6	0	+	30 c.cm.

At the end of the treatment the lymphocytosis had almost disappeared, but the Wassermann reaction was still positive, both in the blood and cerebro-spinal fluid. Mentally he was much more alert. The tongue was still tremulous. The motor and reflex abnormalities remained as before.

GENERAL PARALYSIS.

Lastly, let us come to the subject of general paralysis. This has hitherto been the despair of neuro-therapeutics. Most cases run a progressive course, the mental symptoms demanding asylum treatment, where their duration varies from a few weeks in acute cases to many years in some of the chronic forms or in those where spontaneous and prolonged remissions occur. The average duration, from the time the disease is usually recognized, according to Sir George Savage, is about three years. This, of course, does not include the pre-clinical stage, where changes in the cerebro-spinal fluid can be demonstrated, if looked for. A most important fact in this disease is the occasional occurrence of spontaneous remissions, during which the symptoms cease to advance and the patient may even, for a time, regain mental power. These probably are cases where the brain cells are not destroyed in the first instance by the syphilitic spirochaete, but are poisoned by its toxin, so as to be still capable of recovery.

In the treatment of general paralysis, as in that of any other organic nervous disease, it is hopeless to try to restore nerve cells that are already destroyed. The best we can hope for is to arrest the disease at the stage which it has already reached. If the changes are not yet destructive, but merely of toxic origin, the chances of success are relatively brighter.

Influence of Pyrexia on General Paralysis.

For some time past it has been observed that general paralytics are often benefited as regards their symptoms if they happen to catch some intercurrent acute febrile disease, such as erysipelas or enteric fever. To infect the patient with a serious specific fever of this sort, however, is neither practicable nor judicious. Accordingly, other means have been suggested to induce a harmless temporary febrile reaction.

Treatment by Tuberculin.

For this purpose von Wagner began some years ago to treat cases of general paralysis by repeated hypodermic injections of Koch's tuberculin, beginning with doses of 0.5 to 1 mg., waiting a couple of days, and increasing the dose to 5 or 7 mg., and gradually raising it to 10, 20, or even 30 mg. Sufficient tuberculin was given to induce a temperature of about 102° F. Friedländer[5] has recorded a number of cases thus treated, and with encouraging results. He relates several cases in which not only did the mental symptoms improve but the pupillary reflexes returned, and the knee jerks, previously absent, reappeared. Personally I have not tried this method of treatment, for the reason that tuberculin is a two-edged weapon which, whilst possibly benefiting some symptoms, has a risk of stirring up latent tuberculous lesions elsewhere in the body.

Treatment by Sodium Nucleinate.

Another and perhaps a safer method of inducing artificial pyrexia is by means of large intramuscular injections of sodium nucleinate, as specially studied by Donath[6] of Budapest. A 2 per cent. solution in fresh normal saline solution is made. The initial dose for injection is 50 c.cm. of this solution (that is, 1 gram of the salt) injected deeply into the gluteal or lumbar muscles. This is repeated once a week so long as a sufficient febrile reaction (101.4° F. at least) occurs. If the reaction is insufficient, the dose is increased to 75 c.cm. (0.15 gram), or even 100, 125, or 150 c.cm. After each injection the temperature rises, sometimes to 104° F., and may be accompanied by rigor. As a rule it only reaches 101.4°, attains its maximum in from four to ten hours, and returns to normal in one or two days. Meanwhile, a temporary leucocytosis of the blood occurs—numbering from 10,500 to 25,000 per cubic millimetre—which subsides about the fifth day. In Donath's series of cases the number of weekly injections varied from seven to nine. Out of 15 general paralytics thus treated by him, 3 were able to resume their ordinary work, 6 were improved, 5 were unchanged, and 1 died of apoplexy during the treatment.

I made a number of observations on this method of treatment, and with a moderate amount of encouragement. Let me relate illustrative examples:

CASE XIII.—*Tabo-Paralysis.*

F. D., aged 58, a patient of Dr. Gordon Lane, had syphilis over thirty years ago, and developed shooting pains in the legs five years ago. He had recently become emotional and his memory had been failing. On examination he was hilarious in manner and laughed at trifles. The speech and articulation were normal. There were no facial or lingual tremors. The pupils were contracted, more so on the left side, and were of Argyll Robertson type. The optic discs and cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, but the Achilles tendons were insensitive to pressure. The upper limbs were normal. The gait was slightly ataxic. The knee-jerks and ankle-jerks were absent. The sphincters were frequently uncontrolled. The cerebro-spinal fluid showed a lymphocytosis of over 200 per cubic millimetre and gave a positive globulin reaction.

The patient was placed under treatment by intramuscular injections of sodium nucleinate for nine successive weeks, commencing with 50 c.cm. of a 2 per cent. solution, and ultimately rising to 100 c.cm. After each injection there was a temporary pyrexia of 101° to 102° F., together with a transient leucocytosis in the blood. The normal number of leucocytes in this case was 11,000 per cubic millimetre, but after each injection this rose to between 16,000 and 18,000 per cubic millimetre. After a month's treatment his mental condition became much clearer, he regained his memory, and became able to discuss complicated business affairs without difficulty. Dr. T. B. Hyslop pronounced him fit to make a will at this stage. After the eighth injection of sodium nucleinate the lymphocytosis of the cerebro-spinal fluid had receded to 47.1 per cubic millimetre, and the globulin reaction was now negative.

The mental improvement was maintained for about three months. He then developed acute mental symptoms and had to be certified and sent to an asylum. Two years later he was still alive and physically strong, although mildly demented. The sphincters, however, are under perfect control ever since the third injection of the series.

CASE XIV.—*General Paralysis.*

H. W., an architect's surveyor, aged 47, a patient of Dr. Sedgwick, began to have severe epileptiform fits about eleven months ago, occurring in batches at intervals of three or four months, the last attacks being a week ago. During all of these attacks the limbs of the left side twitched more than on the right side. He had recently become irritable over trifles, and his speech had become slightly hesitating.

On examination he was mentally clear. There was slight tremor of the outstretched tongue. The optic discs, pupils, and cranial nerves were normal. There was no sensory or motor abnormality of the limbs, the knee-jerks and ankle-jerks were normal, and the plantar reflexes were flexor in type. The heart, lungs, abdomen, and urine were normal. The cerebro-spinal fluid contained 76 lymphocytes per cubic millimetre.

He returned home and had eight weekly injections of sodium nucleinate. At the end of that time I saw him again. His epileptiform fits had not recurred. The tremor of the tongue was now absent. The lymphocytosis of the cerebro-spinal fluid had receded to 53.3 per cubic millimetre.

The remission in the mental symptoms lasted three months longer. He then became acutely insane, and had to be certified. He was still alive in an asylum, two years after the injections, when I last heard of him.

CASE XV.—*General Paralysis.*

B. B., aged 27, a patient of Dr. J. G. Emanuel, who had syphilis eight years previously, became forgetful and irritable about twelve months ago. His speech also became slightly confused, so that he would occasionally mix up his words.

On examination, he was mentally quite bright. His articulation was slightly indistinct; there were no facial or lingual tremors. The pupils were slightly unequal, but reacted normally. The optic discs and cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, and no ataxia of upper or lower limbs. The knee-jerks and ankle-jerks were absent. The cerebro-spinal fluid contained 34.4 lymphocytes per cubic millimetre, and gave a positive Wassermann reaction.

The patient returned home and had eight weekly injections of sodium nucleinate under Dr. Emanuel's direction, commencing with 50 c.cm. and gradually increasing to 100 c.cm. After each injection there was a temporary pyrexia of 102° to 105° F., with a transient leucocytosis of from 18,000 to 25,000, the number of leucocytes falling between-times to 10,000.

I saw him again at the conclusion of this course. He felt subjectively better, and his articulation was more distinct. The right knee-jerk, which had previously been absent, was now present. The ankle-jerks were still absent. The lymphocytosis of the cerebro-spinal fluid, however, had gone up to 142 per cubic millimetre, and the Wassermann reaction in the fluid was still positive.

When last I heard of him, fifteen months after the termination of the treatment, he was *in statu quo*. He was married and going daily to business, although his memory was still much impaired.

CASE XVI.—*General Paralysis.*

R. B., aged 46, a patient of Dr. Leunon, who had acquired syphilis sixteen years ago, and who had a transient attack of left hemiplegia twelve years ago, seemed to have recovered completely until six months ago, when he would occasionally repeat himself in speaking and became unusually emphatic in his manner. Four months ago he had a transient attack of aphasia which cleared up in a few days. Six weeks ago he had an attack of unconsciousness with epileptiform convulsions and was comatose for several days. Ever since he had been acutely confused and his articulation was now affected.

On examination the patient was excited, restless and noisy, talking incoherently, but with clear articulation. There were no facial or lingual tremors. The pupils were unequal, but reacted normally. The cranial nerves were otherwise normal. There was no motor weakness or ataxia of the limbs. The supinator-jerks and knee-jerks were brisk. The plantar reflexes could not be tested owing to the patient's resistance. The cerebro-spinal fluid showed an enormous lymphocytosis. (A counting chamber was not available for enumeration.) The globulin reaction was strongly positive.

The patient was put on weekly injections of sodium nucleinate. At first he improved, became calmer and less confused, and was able to play golf. The amount of sodium nucleinate was gradually increased until after eleven weeks he was getting 230 c.cm. at each injection. The patient appeared to be doing well, when he had a fresh attack of coma and convulsions, which proved fatal in a couple of days.

The results of treatment by sodium nucleinate, so far as I have been able to judge, appear to indicate that in a considerable proportion of cases a more or less prolonged remission occurs in the clinical symptoms, sometimes accompanied by a diminution in the intensity of the lymphocytosis of the cerebro-spinal fluid. I do not know of any case, however, whether under my own observation or amongst those recorded by Donath and his collaborators, in which a cure has resulted, in the sense of a permanent

return to normal, not only of the mental and physical symptoms and signs, but also of the cerebro-spinal fluid.

Treatment by Urotropin.

Amongst the drugs which have proved useful as accessories in the treatment of general paralysis urotropin is deserving of mention. Urotropin, when taken by the mouth, is partly eliminated in the cerebro-spinal fluid in the form of formic aldehyde, which is not only antiseptic in its action but appears to have a beneficial action upon the meningeal reactions induced by the syphilitic organism. My attention was first directed to the use of urotropin by Dr. Stoddart, of Bethlem Royal Hospital, and I have prescribed it to general paralytics for years. In one case—that of a medical man aged 44—urotropin has been taken in 10-grain doses three times a day for three years and a quarter. This has been the only treatment employed in his case. The patient's clinical symptoms have not advanced, and his cerebro-spinal fluid, which contained 52.9 lymphocytes per cubic millimetre when I first saw him, rose to 81.8 six months later, and now, after three years, contains 56.3. The long remission in the symptoms in this and other cases may only be a coincidence, but it is worth bearing in mind.

INTRATHECAL TREATMENT BY SALVARSANIZED SERUM OR NEO-SALVARSAN.

Let me now relate some of the results obtained in general paralysis by combined intravenous and intrathecal treatment, either with salvarsanized serum or with neo-salvarsan. The following are illustrative cases:

CASE XVII.—*General Paralysis.*

C. C., a schoolmaster aged 42, a patient of Dr. Fairhall, had a chancre ten or twelve years ago, but had no cerebral symptoms until five days before I saw him. He then had transient momentary hesitation in speech. Five days later this recurred when he was reading the minutes at a committee meeting. He found himself stumbling over an occasional word. The symptoms again passed off in a few minutes.

On examination, the patient was mentally alert and intelligent. His voice was slightly tremulous, and there was some tremor of the lips and tongue. The optic discs were normal. The pupils, which were moderate in size, were of the Argyll Robertson type. The cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia. The Achilles tendons were insensitive to pressure. There was no weakness or ataxia of the upper or lower limbs. The gait was normal. The supinator-jerks, knee-jerks, and ankle-jerks were normal, and the plantar reflexes were flexor in type. The cerebro-spinal fluid showed an enormous lymphocytosis, numbering 419 cells per c.mm., and the Wassermann reaction was positive both in the cerebro-spinal fluid and in the blood.

Treatment by salvarsanized serum was carried out as follows:

Date.	Treatment: Intravenous. Salvarsan.	Blood. Wassermann.	Cerebro-spinal Fluid. Cells.	Globulin.	Albumin.	Wassermann.	Treatment: Intrathecal.
Jan. 16 ...		+	419	+			40 % Serum.
Feb. 9-10	0.3 g.	+	162	+	0.1 %	+	30 c.cm.
Feb. 16-17	0.3 g.	+	50.7	0	0.03 %	+	30 c.cm.
Feb. 24-25	0.3 g.	+	99	+ weak	0.1 %	+	30 c.cm.
Mar. 2-3	0.3 g.	+ weak	29	+	0.1 %	+ weak	30 c.cm.
Mar. 9-10	0.3 g.	+ weak	18	+ weak	0.1 %	+	30 c.cm.
Mar. 16-17	0.3 g.	Fluid mixed with blood.					30 c.cm.

At the end of the treatment the tremor of the lips and tongue had disappeared. He had had no further difficulty with his speech. The pupils had regained a faint reaction to light, although their outline was still slightly irregular.

CASE XVIII.—*General Paralysis.*

H. N., aged 41, was originally seen by me in a private asylum. His mental symptoms had come on with great acuteness a fortnight before, and when I saw him he was full of grandiose obsessions: he had invented enormous aeroplanes each connected with fifty balloons and to be ballasted with acres of the Goodwin Sands; his workmen would require several miles of land roofed in for workshops; he was fond of fishing, and had invented a copper fishing-line with hundreds of fish-hooks through which he was to electrify the fish at various depths. The face and tongue were tremulous; the pupils, however, were equal and brisk in reactions; the cranial nerves, sensory, motor, and reflex functions were all normal. He was placed under treatment by salvarsanized serum, with the following results:

Date.	Blood. Wassermann.	Cerebro-spinal Fluid. Cells per mm.^{3}	Globulin.	Wassermann.	Treatment. Intravenous.	Intrathecal.
Sep. 15 ...	++	94.8	+	++		Serum 40 % 30 c.cm.
Sep. 29-30	++	117.3	+	++	Neo-salvarsan 0.45 g.	30 c.cm.
Oct. 9-10..	++	32.7	+?	++	Neo-salvarsan 0.45 g.	30 c.cm.
Oct. 20-22	+	11.3	0	+	Salvarsan 0.3 g.	30 c.cm.
Oct. 29-30	+ weak	13.4	0	-	Neo-salvarsan 0.45 g.	30 c.cm.
Nov. 5-6..	0	16	0	-	Neo-salvarsan 0.45 g.	30 c.cm.
Nov. 12-13	0	27	0	-	Neo-salvarsan 0.45 g.	30 c.cm.
Nov. 19 ..		22	??	-		
Nov. 24-25	?	36	?	-	Neo-salvarsan 0.45 g.	30 c.cm.
Dec. 2-3 ...		25.4	0	-		
Dec. 9-10	0	15.4	0	+		
1914. Jan. 22 ..		17.1	+ faint			
Feb. 19 ...		62.2	+ faint			
Mar. 13 ...		108.9	+			

For the first fortnight of the above treatment—that is, until October 10th—his mental symptoms persisted as before. He then rapidly improved, and by October 28th he was mentally clear and collected, free from facial or lingual tremors, and has since remained normal in these respects. The Wassermann reaction on the blood soon became negative, and also became less intense in the cerebro-spinal fluid. The lymphocytosis of the cerebro-spinal fluid, however, continued, although more moderate in degree, until January. In February it began to go up again, and accordingly in March, in view of this recurrence of lymphocytosis, and in spite of the fact that the patient showed no mental symptoms, a second course of treatment was commenced as follows:

Date.	Blood. Wassermann.	Cerebro-spinal Fluid. Cells.	Globulin.	Wassermann.	Treatment. Intravenous.	Intrathecal.
Mar. 13		108.9	++			
Mar. 17	0	89.7	+	++	Neo-salvarsan 0.45 g.	Neo-salvarsan 9 mg.
Mar. 30		32.6	+	++	Neo-salvarsan 0.45 g.	Neo-salvarsan 9 mg.
April 8		15.9	+ faint	++	Neo-salvarsan 0.45 g.	Neo-salvarsan 9 mg.
April 20		6.9	+	++	Neo-salvarsan 0.45 g.	Neo-salvarsan 9 mg.

The patient has been back at business since January, and is perfectly normal as regards his mental state.

Since the fourth intrathecal injection of neo-salvarsan he has developed slight paresis of the lower limbs without sensory loss, the knee-jerks and ankle-jerks being brisk and the plantar reflexes having become extensor in type. Micturition has also become delayed.

This case shows the importance of repeated observations on the cerebro-spinal fluid over a long period of time. Had we been content with disappearance of the ordinary clinical symptoms this patient might have been considered normal after a few weeks' treatment.

CASE XIX.—*General Paralysis.*

W. R., aged 48, presented the classical signs and symptoms of general paralysis. Eighteen months ago his disposition altered and he became tactless and erratic. Three months ago he became acutely exalted, had delusions that he was to be married, and invited various ladies to be bridesmaids. His articulation at that time was indistinct and his face tremulous. He was certified and admitted to a private asylum, where I saw him with Dr. Tuke three months after admission. When I examined him he was full of delusions of grandeur, was betting in millions—always winning—was a champion golf and billiard player, and was engaged to a royal princess. There were slight lingual tremors. The pupils were unequal and of Argyll Robertson type. The optic discs and cranial nerves were otherwise normal. There was no cutaneous anaesthesia or analgesia, but the Achilles tendons were insensitive to pressure. There was no weakness or ataxia of the upper or lower limbs. The

Results Observed in Seven Cases of General Paralysis.

Name and Age.	Observations before Treatment.				Number of Intrathecal Injections.	Observations after Treatment.			
	Blood.	Cerebro-spinal Fluid.				Blood.	Cerebro-spinal Fluid.		
	Wassermann.	Wassermann.	Globulin.	Cells.		Wassermann.	Wassermann.	Globulin.	Cells.
1. H. N., 41	++	++	+	117.3	7 salvarsanized serum	0	+	0	15.4
2. W. R., 48	+	++	+	120	6 ,, ,,	+	+	+	15.4
3. P. B., 40	+ faint	+	++	48.1	6 ,, ,,	0	++	+	14.3
4. C. C., 42	+	+	+	419	6 ,, ,,	+ weak	+ weak	+ weak	18
5. C. B., 42	+ faint	+ faint	+ faint	120	6 ,, ,,	0	0	faint	25.4
6. R. S., 39		+	+	39.2	5 neo-salvarsan		+	+	4
7. M. B., 43		++	+	235.8	5 ,,		+	+	8

supinator-jerks and knee-jerks were brisk, the ankle-jerks were absent. The cerebro-spinal fluid contained 120 lymphocytes per cubic millimetre. The Wassermann reaction was positive both in the blood and cerebro-spinal fluid.

He was placed under treatment as follows:

Date.	Blood. Wassermann.	Treatment: Intravenous.	Cerebro-spinal Fluid.				Treatment: Intrathecal.
			Cells.	Globulin.	Albumin.	Wassermann.	
Dec. 18 ...		Salvarsan	120	+		++	40 % serum
Jan. 1–2	+	0.3 g.	98.7	+	0.125 %	+	30 c.cm.
Jan. 8–9	+	0.3 g.	36	+	0.1 %	+	30 c.cm.
Jan. 14–15	+	0.3 g.	34	+	0.11 %	+	30 c.cm.
Jan. 27–28	+	0.3 g.	23.4	+ weak	0.05 %	+	30 c.cm.
Feb. 4–5...	0	0.3 g.	28	+	0.1 %	+	30 c.cm.
Feb. 18–19	+	0.3 g.	15.4	+	0.09 %	+	30 c.cm.

At the end of the treatment, although the lymphocytosis of the cerebro-spinal fluid had receded to 15.4 cells per cubic millimetre, his mental condition was unchanged, and he was as exalted as ever.

At the head of this page is a table showing the results on the cerebro-spinal fluid in a series of cases of general paralysis.

Intracranial Methods.

Other methods besides those of lumbar puncture may also be employed in order to introduce remedies into the cerebro-spinal fluid. Thus in Neisser and Pollack's method of cranial puncture by means of a small drill through an area of frozen scalp, the remedy is injected through the dura directly on to the surface of the brain. This has been used by Marinesco and Minea,[7] by Sicard and Reilly,[8] and others. Or we can reach the basal subarachnoid space through the orbit, as shown by Beriel[9] of Lyons, by penetrating the sphenoidal fissure with a hollow needle. Or remedies may be injected directly into the ventricles of the brain by the well-known callosal puncture (Balkenstich) of Anton and Bramann of Halle. This has been carried out by Förster[10] in Germany and by my colleagues Dr. Harry Campbell and Mr. Ballance at the West End Hospital in London.[11]

It seems to me that, of the various intracranial routes, we should select those which are least likely to cause damage to the brain structures. For this reason cortical applications possess certain advantages over intraventricular injections. Further, when comparing intraspinal with intracranial administration, we have to bear in mind that a long series of treatments is necessary in order to give the patient a chance of improvement, and we must consider whether we are justified in submitting a patient to the risks of repeated cranial operations, unless these can be shown to yield results which are materially better than those obtained by intraspinal injections.

In every one of the cases of general paralysis in the foregoing tables it will be observed that the lymphocytosis of the cerebro-spinal fluid diminished. In three of them the Wassermann reaction disappeared from the blood. In the cerebro-spinal fluid the Wassermann reaction usually became less marked; in only one case did it disappear.

Conclusions.

What deductions are we justified in drawing from the foregoing observations? Before coming to definite conclusions we require numerous and prolonged observations over a large series of cases. One or two observations are not enough to justify a conclusive opinion in any case. The patients should be repeatedly examined, not only during the progress of the treatment, but at intervals for months and years afterwards.

Improvement in the condition of the cerebro-spinal fluid is a useful index of arrest of the disease. But we must remember that, in general paralysis at least, the cell count in the fluid may go down (as in Case XIX) without any corresponding improvement in the mental symptoms. This is readily understood when we bear in mind that, even if the diseased process be arrested, those nerve-cells and nerve-fibres which have been already destroyed, remain destroyed and cannot be regenerated.

It is therefore of importance to select only those cases of general paralysis which are in the early or toxic stage of the disease, before the cortex has become profoundly degenerated. The earlier the disease is recognized, the better are the prospects of improvement. Advanced cases with profound cortical degeneration are totally unsuitable.

The most thorough method of attacking general paralysis would be to administer our remedies concurrently by all three routes—intravenously, intraspinally and intracranially. It may be, in the future, that this combination will be adopted.

It is too early to claim that we yet possess a cure for tabes or general paralysis, but we can already in suitable cases do a good deal towards arresting both diseases. Whether such periods of arrest are permanent, time alone will show.

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AT the next representative meeting of the medical profession in Germany (*Aerztetag*), which will be held in Munich on June 25th to 27th, Professor Lennhoff of Berlin will move a resolution calling upon all German medical practitioners to claim payment for all medical assistance rendered at the request of so-called public welfare (*gemeinnützige*) undertakings. In doubtful cases the decision as to whether payment shall be claimed or not shall be left to the local medical organization. Professor Lennhoff appeals to medical men and medical societies—both those in favour and those disapproving of the motion—to supply him with details of the work connected with certain institutions, in order that he may be in a position to discuss all aspects of the subject in moving the resolution. He includes in his definition of "public welfare" institutions the Red Cross Society, cottage and home hospitals, convalescent homes, institutions for the care of consumptives, inebriates and infants, reformatories, etc.

ON SOME CLINICAL MANIFESTATIONS OF CONGENITAL SYPHILIS.*

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THE appointment of a Royal Commission on Venereal Diseases having recently directed our attention, amongst other matters, to congenital syphilis, and congenital syphilis being unfortunately so prevalent that no practitioner can go very long without encountering it in his work, a consideration of some of its clinical manifestations may be useful at the present time. Some of the cases used as the basis of this paper are taken from the earlier years of my connexion with the Infirmary for Children, and some of them are not typical, but rather of the class into which an element of doubt has entered, but they are none the worse illustrations on that account.

My own experience is confirmatory of the observation that, while no reduction is taking place—rather the reverse—in the number of cases of congenital syphilis seen, the severity of the disease appears to be decreasing. I am sure that there are far fewer of the appalling cases of infants practically rotting away under our eyes than there used to be. Such cases as the following are now almost rare. It occurred five years ago.

A female infant, aged 4 months, had been under treatment in the out-patient department since the age of two months for typical congenital syphilis. She was a first, and I believe an illegitimate, child. The rash had disappeared, and the baby was doing fairly well, though only putting on weight very slowly, when a prolapse of the rectum occurred, which the mother found impossible to keep back. The child lost condition rapidly, and four days later was admitted an in-patient. Half a grain of hyd. c creta had been taken three times a day continuously. Three days after admission there was a sudden recrudescence of the nasal discharge, and an apyrexial bullous dermatitis developed. Mercurial inunction was immediately started, but the rapid spread of the skin lesions left the whole body one almost continuous raw area, looking, except for the underlying copper colour, as if it had been badly burnt all over. The nasal and aural cartilages sloughed, the nails were shed: at the same time emaciation was very rapid, and in four days what was left of the child mercifully died.

I had another case in the out-patient department a few months ago, where in the four days between the first visit and the second a similar tragedy took place. But these are the only two recent cases I can recall which have succumbed in this fulminating way, despite energetic mercurial treatment. When the next one comes, if I have time, I shall treat it with salvarsan, though whether the result will be different is doubtful. The sudden slaughter of so many spirochaetes and the throwing of their endotoxins into the system of an infant whose life already hangs on a thread are too likely to prove additional weights which will effectually snap the slender link.

Cases with bone necrosis also appear to me to be fewer, and though this might be explained by altered hospital arrangements preventing the subjects of them from coming under my view, still Mr. R. W. Murray and other surgeons tell me that it is also their experience. On the other hand, parasyphilitic disease in childhood (juvenile tabes and general paralysis) and also spastic plegias (cerebral syphilis) seem to be on the increase—sequels which may very naturally be expected to follow if the early case mortality be lessened, though there are probably other factors also in their causation. Improved methods of diagnosis, too, are adding to the cases found to be suffering with congenital syphilis, whether that disease be the cause of their symptoms or not. Personally I am awaiting with impatience the perfection of the cuti-reaction test for syphilis, and the placing on the market of Noguchi's reagent "luetin," at present only obtainable by favour. As the result of 134 trials made with it at the Babies Hospital, New York (reported by A. Brown[1]), 3 unsuspected cases gave a skin reaction which was not confirmed by the Wassermann test, and 4 known syphilitics did not respond—all cases of severe infection; this is in line with our experience of the von Pirquet cuti-reaction for tuberculosis. In the remaining 127 the result obtained, whether positive or negative, corresponded with that given by the Wassermann method. In cases of late syphilis, in some of which the Wassermann reaction is obtained from the cerebro-spinal fluid but not from the blood serum, the luetin test is the more reliable. But in early cases I am told by Dr. Frederick Wilson, surgeon to the Lock Department of the Liverpool Royal Infirmary, to whom I am indebted for several valued hints incorporated in this paper, it is less so, and cannot therefore entirely supersede the Wassermann.

The original Wassermann reaction is so complicated and expensive, both in blood, time, and money, that we are unable to make use of it with anything like the frequency that is desirable. Where the necessity is pressing, with the mother's consent, her blood may be examined and the result taken as applying to her offspring. In certain cases this method has an advantage over that of examining the child's blood, for children of syphilitic parentage do not always give the reaction until, or just before, symptoms show themselves.[2] On the other hand, in some cases the newborn baby may give the reaction and yet never develop symptoms, having presumably absorbed reacting substances from the placental circulation without actual infection.[3] In these cases, though the reaction would gradually die out in the child, it would be present in the mother. It has been found that some children of syphilitic origin presenting marasmic symptoms never give a positive Wassermann reaction; here a toxic influence upon the ovum must be held accountable. Such cases are not examples of true congenital syphilis; they are to be looked for when the disease in the parent is long-standing, for the more recent the syphilis in the parent the more obvious are its results upon the offspring. All the textbooks on children's diseases warn the practitioner to suspect inherited syphilis in marasmic babies who do not improve under the influence of rational feeding and hygienic surroundings, but I have seldom, if ever, obtained any beneficial result that I could trace to the exhibition of mercury in this class of case. I have been disappointed so often that I was particularly interested to read a few months ago an abridged paper by Dr. Emmett Holt of New York,[4] in which he states that of 62 infants suffering with malnutrition only 5 gave a positive Wassermann reaction (Noguchi modification), and that these 5 are included in 11, of whom 7 were, upon fuller investigation, considered to show clinical signs of syphilis. Two San Francisco physicians[5] report 8 triple positive Wassermann reactions in 100 marasmic infants without physical signs of syphilis, and although they claim from this that "many so-called cases of marasmus are due to latent lues," to my mind these and Holt's figures confirm the opinion I had formed for some time—that in congenital syphilis of the very young diagnostic signs, when looked for, are generally not wanting, and that if syphilis play any great part in the production of marasmus of otherwise unassignable origin it is by its toxic influence upon the ovum in the manner already indicated.

It is said that not more than 5 per cent., or at the most 10 per cent., of the conceptions of syphilitic mothers survive at the end of the first year of life. The slaughter of the innocents begins in the abortions and miscarriages which occur in the first years after infection of the progenitors. At times a series of miscarriages is followed by the birth of a monstrosity, such as was under my care at the Liverpool Infirmary for Children recently. In this infant, which lived for eleven days (Fig. 1), there was an absence of ossification in the bones of the calvarium, so that any pressure caused the brain to bulge in the opposite direction, and upon the vertex was a meningo-encephalocele as large as a Tangerine orange. There was a widely gaping hare-lip on the right side and complete cleft palate; the left eye was absent or represented externally only by a furrow in the skin, while the right eyelids were missing, and the eye appeared like a little black island in a sea of pink inflamed conjunctiva. The fingers and the toes of the left foot were webbed, while the right foot, nearly severed from the leg by a deep constriction, was a shapeless mass terminating in rudimentary digits.

Some cases like this being undoubtedly syphilitic and other deformities (such as hare-lip and congenital heart disease) having been shown by the Wassermann reaction

* Adapted from papers read before the Manchester Clinical Society and the Liverpool Medical Institution, January 20th and February 5th, 1914.

also to occur in congenital syphilis,[6] there is a little tendency on the part of some to jump to the extreme of declaring that all cases of congenital malformation owe their origin to syphilis, a position which I think is untenable. Hochsinger[7] found congenital heart disease only 7 times in 500 cases of (clinical) congenital syphilis, while Holt[4] says that in 56 consecutive cases of congenital deformities he failed to get a single positive Wassermann.



Fig. 1.

The usual syphilitic rash is not difficult to diagnose, but there are two rashes occurring in babies which are occasionally wrongly diagnosed as syphilitic. The first of these is the eruption known as "pemphigus neonatorum," which is not a true pemphigus, but the result of a streptococcal infection of the skin, and therefore allied to impetigo contagiosa. A bullous syphilide *is* sometimes found in newborn babes, though not very frequently. It is almost always present at birth, and though it may appear elsewhere, always affects the palms and soles, the skin of which rapidly assumes the typical raw ham hue. The pemphigoid eruption arises in all cases after birth: and, though it may affect the hands and feet, only does so incidentally, and as often as not the dorsal surface rather than the palmar. The syphilitic baby is sure to be wasted, and more than likely to die, this rash being symptomatic of a very severe infection: the other may be —very likely is—well nourished, and the lesions rapidly respond to local antiseptic treatment.

The other non-syphilitic rash I have in mind is the disease known as eczema seborrhoicum, which, like pemphigus neonatorum, is probably a skin infection (due to the *Staphylococcus epidermidis albus*). In the frequent form of a scaly, greasy, yellowish eruption upon the scalp and on the face—chiefly in the folds between the nose and lips, and behind the ears—there is little if anything in common between eczema seborrhoicum and a rash of congenital syphilis. But at times we are confronted by a case in which the thighs and abdomen—in fact, the whole of the napkin area—is covered by an extensive eruption from whose surface the scales have been removed by contact with the evacuant discharges and the napkin itself. There is left an inflamed, moist, oozing surface, red rather than yellowish, not perhaps so dusky as, but by no means easily distinguishable from, the more serious disease. Points in the diagnosis are again the state of nutrition of the infant, and the presence, or absence, of lesions on the hands or feet, and other evidence of syphilis: if the case be eczema seborrhoicum circumscribed patches of the rash will within a short time be found beyond the napkin area, and covered with the diagnostic scales.

In the January number of the *British Journal of Children's Diseases* two cases are epitomized from a German paper by Bosányi,[8] in which Raynaud's disease, affecting the right hand and both feet in one and both hands and feet in the other, was a symptom of congenital syphilis, but the association of these two diseases is uncommon. The occurrence, as a sequel, of such extensive gangrene as is seen in Fig. 2 must be very infrequent. This patient, a boy of 8 months, was under the care of Mr. R. W. Murray at the Liverpool Children's Infirmary. He had had previously frequent attacks of oedema of the feet, but otherwise was said to have been well till a fortnight before admission, when the "foot turned black." The gangrene was superficial, involving the skin of the right foot, except that of the sole, and there was a definite line of demarcation. The diagnosis of syphilis was confirmed by a bad attack of laryngitis, while traumatism was excluded, and frostbite, although the case occurred in January, was highly improbable. Under antisyphilitic treatment internally, and antiseptic fomentations locally, the child recovered with the loss of all its toes.

During the first few years after infancy the commonest symptoms are condylomata and laryngitis. The former are easily recognized and as easily cured. The laryngitis is chronic in type, with acute exacerbations, and in the absence of other indications of syphilis its nature is apt to be missed. Thus, as in the case of William M., aged 15 months, the result of treatment would sometimes seem to point to syphilis, although there be no other reason to suspect it. This child had been ill for a fortnight, and under treatment as an out-patient for ten days, with a laryngeal cough and hoarse voice and cry. The only recorded rise of temperature was 104.8 on admission. Steam inhalations and a mixture containing ipecacuanha and ammonium acetate effected little improvement, but upon a change to potassium iodide he made a rapid recovery. Potassium iodide, apart altogether from syphilis, is a very useful drug in early laryngeal and bronchial catarrh, and it is not claimed that in this particular case the result of the treatment is conclusive proof of the syphilitic origin of the laryngitis, but the possibility in such a case is always worth bearing in mind.

In other cases, which are distinctly rare in infancy, but perhaps commoner towards puberty, the laryngitis proceeds to ulceration of the vocal cords. In a case under the care of the late Dr. Carpenter[9] this was associated, in a female child aged 13 months, with interstitial pneumonia—white hepatization—another of the manifestations of syphilis liable to escape diagnosis or to be confounded with the ordinary bronchopneumonia which so often terminates the existence of weakly infants. It generally extends from the apex downwards, and if truly syphilitic is amenable to treatment. It is, however, difficult to be certain in any given case whether the consolidation is syphilitic, and not either tuberculous or due



Fig. 2.

to delayed resolution of a pneumococcal pneumonia in a syphilitic subject. The older the child the more likely is it to be the latter. I read in the BRITISH MEDICAL JOURNAL[10] recently that in Glasgow the health authorities now supply the general practitioner with tubes for the collection of blood and perform Wassermann reactions free for him. When other towns have followed this example we shall have all these obscure cases accurately diagnosed before they reach the hospitals.

An American physician recently reported a case of paroxysmal haemoglobinuria in a girl,[11] whose first attacks began at 2 years. He found a positive Wassermann reaction in this patient, and collected sixteen others occurring in congenital syphilis, as well as a further similar number in acquired syphilis. Congenital syphilis must also be held responsible for a

specific nephritis — interstitial and parenchymatous, either combined or separately. The first case to be recognized clinically and treated successfully was a patient of a Manchester physician, Dr. S. Messenger Bradley, and was recorded in 1871.[12] This is one of the earlier manifestations, and is to be looked for in the first few months, or even weeks, the lesion in fact being sometimes present at birth. Oedema is generally, but not always, a prominent symptom, and probably a greater number of cases without oedema would be found were it not for the difficulty in obtaining specimens of the urine from infants. If the case come to *post-mortem* examination it is important to remember that, as Carpenter pointed out,[13] the naked-eye appearances of the kidneys are frequently normal, and sections must be cut before they can be declared free from disease. In some instances an infantile syphilitic nephritis may have been the starting-point of some of the chronic cases encountered later in life; but it would be difficult, if not impossible, to prove the connexion. Its frequent presence is a factor to be considered in salvarsan therapy.

Dr. Dean[14] classifies the cases in which congenital syphilis is the cause of disease of the nervous system into three groups:

1. Infants born with marked evidence of syphilis. In these cases the brain, together with other organs of the body, is the seat of marked changes. These children as a rule die early.
2. Children who appear to be healthy at birth but develop mental defects at the time of the second dentition or puberty. To this class belong the cases of general paralysis.
3. Those cases of mental deficiency, imbecility, and idiocy in which the Wassermann reaction constitutes the sole evidence of syphilitic origin.

I shall say nothing about the last class, except to note the extraordinary differences in the findings of various observers, which range from 0 per cent. to 100 per cent. of the cases examined. On the whole the inference seems incontestable, especially as a positive reaction is always found in greater percentage in the earlier years, that inherited syphilis plays a much greater part in the production of mental degeneration than was supposed. I think it may also be presumed to have some bearing on the fact, revealed by the statistics of the 1911 census, that the largest increase of insanity is among children under 15 years of age.

I shall only offer one observation, too, on the first class, those born with lesions such as hydrocephalus and gross cerebral deformities, who as a rule die early. It is to remark that whatever is meant by "early," these children do not invariably die in the first few weeks of life. Some of the cases of spastic diplegia which bring chronic grief to the parents, grist to the orthopaedic surgeon's mill, and kudos to nobody, are of ante-natal and syphilitic origin. They are always accompanied by mental defect, often of severe grade, and by epileptic fits.

Dr. Dean's classification does not appear to me quite comprehensive, as it makes no preparation for those—an important and, I think, increasing section—who owing to blood vascular changes develop meningitis, secondary hydrocephalus, and plegias (in other words, "cerebral syphilis") at any time during childhood.

The earliest of these symptoms to present itself is meningitis. This is generally basal and the clinical picture that of posterior basic (or meningococcal) meningitis. As the treatment of the two is very different it is essential that a lumbar puncture should be made early and the cerebro-spinal fluid examined by a competent pathologist. If the meningitis be syphilitic the fluid will be clear, or at any rate less turbid if unmixed with blood than in meningococcal meningitis; it will contain an excess of lymphocytes instead of polymorphonuclears; be sterile instead of giving a culture growth on nasgar; and, though spirochaetes may possibly be found with luck, the characteristic intracellular diplococcus of Weichselbaum will not be seen. A good deal is being written just now about the tests for and presence of globulin in the syphilitic fluid, and the precipitation of colloidal gold[15] (Lange's test). If the fluid does not give the Wassermann reaction the blood may. The immediate prognosis under treatment is better than that of meningococcal meningitis, but blindness, deafness, and mental impairment are likely to be more permanent in the event of recovery. The following is a typical case:

Edith C., aged 3 months, under my care at the Liverpool Children's Hospital from April 8th to June 1st, 1910. The mother gave a history of two stillbirths and one child dead after convulsions. The patient weighed 4 lb. at birth and was breast fed for the first month; afterwards fed on milk and water. Has been vomiting and constipated, and seems ill since a fall last night.

Condition on Admission.—Puny infant. Pulse 104, regular; temperature 99.2°; no rash; chest and abdomen normal. Slight cervical opisthotonos. Fontanelle normal tension. Kernig's sign present. Knee-jerks obtainable and equal. Superficial reflexes normal. Pupils equal and reacting to light.

Slight or even well-marked cervical rigidity is very common in gastro-intestinal troubles in infants, but the next day this symptom was increasing, and the day after, although the vomiting on a suitably adjusted milk diet had decreased, was marked. So I performed lumbar puncture, and removed 40 c.cm. of slightly turbid fluid, and injected 15 c.cm. of Flexner's serum. On examination of the fluid, however, it was found to reduce Fehling, to show lymphocytosis, and gave a negative cultural reaction. At the time this was taken to represent a meningococcal meningitis in the stage of recovery. The symptoms abated after the operation, but the child lost weight. On April 15th the cervical rigidity began to increase again, and a copper-coloured rash made its appearance on the buttocks and thighs, circinate on the latter; while raw fissures were noted about the angle of the mouth. One of the papules on the thigh was scraped, and a *Treponema pallidum* found in the serum which exuded. Lumbar puncture was also done again, but none discovered in the cerebro-spinal fluid, which was similar to the first specimen withdrawn. By April 18th there was more rash, on the nose and face. Up till May 1st the child slowly lost weight, although the meningeal symptoms improved, and between that date and its discharge all symptoms, both of meningitis and of syphilis, disappeared, except that the child was left with nystagmus and apparently blind. I could not see its discs. It was, of course, treated with mercury from the time of the appearance of the syphilitic rash, in increasing doses till the symptoms began to ameliorate.

Apart from this form of basal meningitis, I believe syphilitic pachymeningitis to be less common than in adults with the acquired disease.

Writing of inherited syphilis, W. P. Lucas, of Boston, says:[16]

> That the syphilitic virus often attacks with unusual severity the heart and blood vessels is only lately being fully recognized. The arteries of the arch of Willis are most often attacked of the small arteries. An acute gummatous endarteritis of some of the large arteries in the brain . . . is now positively and not infrequently recognized; obliterative endarteritis of the small blood vessels of the brain . . . is met with.

It is evident that we have here all that is necessary for the production of attacks of hemiplegia, such as are so frequent in acquired syphilis, and when hemiplegia is met with in children, apart from anything that may be gleaned from the previous or family history, the following features will be found to indicate a syphilitic origin:[17]

1. The hemiplegia is often preceded by convulsions at a longer or shorter interval before the attack.
2. It is often recurrent—one or more attacks following the first, after each of which the prognosis of functional recovery decreases.
3. Headache and vomiting may lead up to the paralytic seizure.
4. According to Box, the silent development of acute hemiplegia is very suspicious.

In using these axioms as a guide to diagnosis we must first eliminate other causes of hemiplegia. For instance, convulsions in a non-syphilitic infant may occasionally cause cortical haemorrhage, with subsequent compression hemiplegia. Recurrent attacks may occur from embolism in infective endocarditis, while headache and vomiting are the commonest prodromal symptoms of tuberculous meningitis, in which hemiplegia may develop, especially in association with a tuberculous cerebral tumour. Let me quote two illustrative cases, not of the exceptions, but of the rule:

X., a girl aged 11, seen in consultation with Dr. Kidd in Birkenhead. No definite syphilitic history obtainable, but there had been one miscarriage and several of the dozen brothers and sisters had died with "wasting" in their first year. Five months ago she had vomited, gone into convulsions, and the next day had right hemiplegia with aphasia. From this a good recovery was being made, and speech was being relearnt. The complete use of the lower limb had been obtained, but the upper remained spastic. Fourteen days before I saw her she began to vomit again, complained of headache, and soon developed the typical clinical picture of meningitis. She had optic neuritis; no tubercles in the choroid could be seen. The pathologist's report on the fluid obtained by lumbar puncture read "Alb. +, Fehling very deficient, enormous excess of lymphocytes, no organisms seen." The child was far gone when I saw her, and died a few days later. I regarded the case as one of syphilitic endarteritis with

thrombosis and sclerosis, followed by syphilitic meningitis, but in the absence of a *post-mortem* examination I admit it is at least as likely that the terminal infection was tuberculous.

The second case is under my care in the hospital at the present moment.

Z., a boy aged 6. His mother is under treatment at the Royal Infirmary for tertiary syphilis of the nose. On August 6th, 1913, he dropped his cup and bread from his left hand at breakfast, and within the next few hours weakness was noticed in the left side of his face and dragging of the left leg on walking, while speech was distinctly affected. (Here we have the "silent onset.")

On admission, pulse, temperature, and respiration are normal. Intelligence poor; lies quietly, takes no notice, wets bed, cannot read letters nor answer questions intelligibly, and speech is indistinct. Can stand, but is weak on left leg and drags it after him. Left upper extremity also weak, but degree hard to estimate owing to his lack of intelligence. Left face, including the eyelid, paretic. Tendon reflexes increased on affected side, superficial normal. No wasting. Pupils equal and dilated, react sluggishly. Fundus: Right, normal; left, extensive patch of choroidal atrophy with interspersed pigment; disc = white atrophy. Vision nil.

Under treatment with mercury and iodide he improved rapidly, so that by September 1st, when he was discharged, he was running about the ward, with intelligence normal and no paralysis left, except in the face. On November 10th, in outpatient's department, I noted that there was only the slightest facial weakness left, but on December 31st he was readmitted on account of a recurrence of hemiplegia on the same side, preceded this time by severe headaches. The second attack is accompanied by much spasticity of the extremities—clasp-knife rigidity of the knee, adduction of the thumb, flexion at the hip, knee, wrist, and elbow, etc., but there is no fresh involvement of the face, nor is his mentality again impaired. He has recovered up to a certain point, but splints are now being used to prevent spastic contractures.

With evidence of such extensive and acute cerebral syphilis there is great risk of a catastrophic local reaction were he treated with salvarsan, and so far he has not had it. But I intend to administer either that or neo-salvarsan after a thorough course of mercury and iodide, and hope thereby to stop the disease at its present stage, and before it reaches that illustrated in the following case. I think this patient should be included here as an example of the pathetic termination of cerebral syphilis, though some might say it was juvenile general paralysis.

A boy, aged 11, sent to me by Dr. Sheridan, and admitted to the Liverpool Infirmary for Children on February 7th, 1911. Father admitted syphilis. Mother died with phthisis two years after the boy's birth. The child is said to have been quite well and bright up to 7 years of age. He then had some sort of left hemiplegic attack, without convulsions, upon which progressive weakness ensued. For the last twelve months he has been quite helpless, having lost the power of active movement and control over his bladder and rectum. The power of speech has been lost for about four months, and of late he has been going into "swoons," lasting as long as twelve hours, in which "the face twitches and the eyes roll."

Upon admission, temperature and respiration are normal; pulse accelerated, about 120. Upper central incisors notched. There is general rigidity, and the patient lies huddled up in bed and is unable to sit up. Expression usually vacant. Intelligence grossly impaired. He will sometimes answer "yes" and "no" to simple questions; generally no answer is obtained. When asked his name he tries to say some word, but it is quite unintelligible; there seems to be difficulty in articulation. Faeces and urine passed into the bed. There is convergent strabismus. Pupils unequal, dilated and inactive; but Mr. Shears reported the fundus practically normal and the squint alternating and due to hypermetropia. His neuro-muscular condition may be summed up by saying that he was diplegic, with extreme spasticity and exaggeration of reflexes.

A week after admission the patient had a convulsive seizure during the night, lasting an hour; movements general, but more severe on the left side of the body. This was succeeded by a state of general tremor with clammy skin, frequent pulse and shallow respiration, becoming Cheyne-Stokes before he died towards the close of the third day after the epileptiform attack. No *post-mortem* examination could be obtained.

In his condition, when I first saw the boy, the diagnosis between cerebral syphilis and general paralysis was unimportant, for recovery was impossible; but in the early stages it is momentous. For whereas the former may be more or less amenable to treatment, dementia paralytica is, or used to be considered, parasyphilitic, and is, at any rate as yet, upon the list of incurable and progressively fatal diseases.

Similarly, locomotor ataxy, though much rarer than general paralysis in children, is incurable, though sometimes subject to arrest. Remak,[18] in 1885, first called attention to this disorder, and a fair number of cases is now on record. Many of them are brought to light by the oculist,[19] for optic atrophy is unusually frequent, while the ataxy is not marked. It has occurred at any age between 3 and adult life, but the majority seem to develop the disease at about 15. Enuresis is usually the first symptom. Unlike general paralysis, tabes is more frequent in females—in the proportion of 63 per cent. to 37 per cent.[20]—though, as the known cases are comparatively few, this disproportion may be only coincidence. It is to be noted that locomotor ataxy in children has followed syphilis which has been accidentally acquired, not inherited, with a much greater frequency than is proportionate to the incidence of the two varieties. I have never recognized a case myself.

The discovery of the spirochaete and of the Wassermann and other diagnostic tests has thrown the whole subject of syphilis into the melting-pot, from which new conceptions of the disease are emerging. These are still malleable, and fresh investigations are daily entailing their remodelling. For instance, as was indicated above, it is more than likely that the term "parasyphilitic" may have to be dropped, the discovery of the spirochaete in the cerebral tissues of general paralytics compelling the inference that this disease and those related to it will now fall into place as pure syphilitic infections of the nervous system. Mott[21] suggests the term "parenchymatous syphilis."

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THE CLINICAL IMPORTANCE OF THE CEREBRO-SPINAL FLUID.*

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THE cerebro-spinal fluid, when withdrawn, is clear, colourless, and limpid, with a faintly alkaline reaction, and a specific gravity of 1006 to 1008. It contains a trace of globulin, and a substance which reduces Fehling's solution, probably glucose. It contains no polymorphs, and only an occasional lymphocyte.

NAKED-EYE CHANGES.

The fluid may be turbid instead of clear. Excluding contamination by blood at the time of puncture, turbidity indicates the presence of polymorphs, which are never present in the normal fluid; their presence as a rule indicates acute inflammation of the meninges. Enormous numbers of lymphocytes, on the other hand, may be present without producing any turbidity. This is a point of practical importance, for in tuberculous meningitis, where the cells are mainly mononuclears, the clearness of the fluid might lead to the conclusion that there was no meningitis, but this microscopic examination would at once prove to be erroneous. The fluid may also contain large numbers of micro-organisms, and yet appear perfectly clear. Turbidity, then, is an indication of acute meningitis. A cerebral abscess, unless it involves the meninges or drains into the ventricles, produces no change in the fluid. Thus, if a patient shows signs of acute cerebral trouble accompanied by a high leucocytosis in the blood but a normal cerebro-spinal fluid, the probability is that he is suffering from abscess of the brain.

CYTOLOGY.

The number and nature of the cells present are of great importance. Using Widal's centrifuge method and a

*Abstract of a paper read at the Staffordshire Branch of the British Medical Association.

magnification of 450 diameters, in normal fluid not more than two or three lymphocytes will be seen in each field, and not a single polymorph.

In certain morbid affections of the central nervous system and its meninges there is a great increase in the cell count. In acute inflammatory conditions, such as meningococcal or streptococcal meningitis, polymorphs are present in enormous numbers, producing turbidity as a rule. It must be remembered, however, that a considerable number of polymorphs may be present with a perfectly clear fluid.

The lymphocytes are increased in the more chronic infections of the central nervous system, notably syphilis—including so-called parasyphilis—and tuberculosis. It used to be considered that these were the only conditions which gave a cerebro-spinal lymphocytosis, but it is now recognized that in certain mental diseases an increase in the lymphocytes may occur. I have encountered nine cases of dementia praecox in which a marked lymphocytosis was present, and in one case of pituitary tumour accompanied by marked dementia there were over 1,000 cells per field. I examined this tumour microscopically, and it proved to be of a sarcomatous and not of a syphilitic nature. With such rare exceptions, however, lymphocytosis in the cerebro-spinal fluid indicates tuberculous meningitis, general paralysis, tabes dorsalis, or cerebro-spinal syphilis. It also occurs in the meningitis which sometimes accompanies mumps.

In tuberculous meningitis lymphocytosis is the rule, but in some cases a considerable proportion of the cells present may be polymorphs. Demonstration of tubercle bacilli in the coagulum, which usually forms when the fluid is allowed to stand, will settle the diagnosis.

It is now generally admitted that the earliest, the most easily recognized, and the most certain of all the physical signs of general paralysis and tabes dorsalis is lymphocytosis in the cerebro-spinal fluid. Further, the earlier the case the more marked is the lymphocytosis, so that in those cases which are most difficult to diagnose this sign is the most marked. We all know how puzzling and how worrying a doubtful early case of general paralysis may be. The question of prognosis is so grave and the physical and mental signs often so indeterminate, that any assistance in clearing up the diagnosis is welcome. I have no hesitation in saying that the presence of a lymphocytosis, together with a positive Wassermann reaction in the cerebro-spinal fluid, is worth all the other physical signs put together. Although it is the lymphocytes which are increased polymorphs may also be present, especially after a seizure. They are rarely met with in tabes.

In tertiary syphilis of the central nervous system lymphocytosis usually occurs. This, as a rule, is not nearly so marked as in general paralysis and tabes. Moreover, it tends to disappear under antisyphilitic remedies, which is not the case in the parasyphilitic conditions. Finally, the Wassermann reaction, although present in the blood, is very often absent from the cerebro-spinal fluid in cerebro-spinal syphilis, whereas in general paralysis it is present in about 95 per cent. of cases. In the earlier stages of syphilis, even before the end of the first year, involvement of the central nervous system is by no means uncommon. Indeed, at the recent International Congress, Neisser stated that no one should be passed as cured of syphilis until the cerebro-spinal fluid had been reduced to a fully normal condition.

The fact that eosinophilia occurs in the blood of patients infected with intestinal and other parasites is well known, but hitherto eosinophiles have never been found in the cerebro-spinal fluid. Quite recently, however, two cases of *Cysticercus cellulosae* in the brain were reported, in each of which there was eosinophilia both in the blood and the cerebro-spinal fluid. Cerebro-spinal eosinophilia is probably pathognomonic of this condition, but it is little more than a pathological curiosity.

Protein Content.

In the normal fluid there is no albumin and only a trace of globulin; the protein content, therefore, is extremely low. In general paralysis and tabes dorsalis, and to a lesser extent in cerebral syphilis, it is greatly increased.

A multitude of tests have been devised to show this increase, but I shall only mention one, the ammonium sulphate ring test, which consists in running the cerebro-spinal fluid on to the top of a saturated solution of pure neutral ammonium sulphate. A white ring at the junction of the two fluids indicates that the protein is increased. As regards quantitative estimation, I have found that by using this test, and by diluting the cerebro-spinal fluid till a ring is just obtained, and noting the dilution used, a very good indication of the amount of protein present is obtained.

Bacteriology.

Various micro-organisms have been described as occurring in the cerebro-spinal fluid. Those most often found in acute meningitis are the meningococcus, the pneumococcus, and the streptococcus. In tuberculous meningitis the tubercle bacillus can usually be demonstrated in the cerebro-spinal fluid if special methods be used. Many other organisms have been found, such as the *Bacillus coli*, typhoid bacillus, influenza bacillus, etc., but all these are of rare occurrence. Sometimes a vaccine may be prepared from the infecting organism. A small girl was recently admitted to the Wolverhampton General Hospital under the care of Dr. Codd, to whom I am indebted for permission to publish the notes. The patient was supposed to be suffering from some indefinite form of meningitis, and from the cerebro-spinal fluid, which was perfectly clear, an actively motile bacillus was isolated on two occasions; it was clumped by the patient's serum, even when diluted 120 times. On admission the patient was in a stuporose condition, with severe headache and frequent attacks of vomiting. Widal's test was negative. An autogenous vaccine was prepared and given with most gratifying results, for the child speedily became bright, lost all headache, and ceased to vomit. After six weeks the vaccine was stopped, and the child relapsed into her former state—torpor, headache, and vomiting. The vaccine treatment was resumed, and the symptoms speedily disappeared. The spinal fluid became free from organisms, but there remained some weakness of the right arm and unsteadiness in walking.

Therapeutics.

The operation of lumbar puncture may be performed as a therapeutic measure. In cases of meningitis, whether purulent or tuberculous, great good has sometimes resulted from the withdrawal of large quantities of cerebro-spinal fluid and the injection of such an antiseptic as a 1 per cent. solution of lysol.

Lumbar puncture may take the place of a decompressive operation for lowering the intracranial pressure in cerebral tumour, but in these cases the operation is not unattended by danger. Uraemic coma and convulsions, and cases of puerperal eclampsia, are sometimes relieved by lumbar puncture in a remarkable way, and the coma which follows cerebral haemorrhage is sometimes amenable to the same treatment.

One of the greatest therapeutic uses of an examination of the cerebro-spinal fluid is the determination of the causal organism in meningitis. If the case is proved by the discovery of the meningococcus to be one of cerebro-spinal meningitis, the patient must be isolated, and large doses of Flexner's antimeningococcic serum injected directly into the spinal canal. As the mortality of this disease has been reduced to less than a third by the serum treatment, the great importance of an accurate bacteriological diagnosis is evident.

MENINGITIS IN CHILDREN.*

BY

W. MITCHELL SMITH, M.D.ABERD.,

TEAN, STAFFORDSHIRE.

MENINGITIS is one of the most hopeless diseases with which we have to deal, and it is also one in which an early diagnosis is difficult and which is liable to be confused with other conditions.

Modern diagnosis and treatment of meningitis in children include as to diagnosis lumbar puncture followed by the examination of the fluid obtained from it by cytological and bacteriological methods, and as to treatment the intraspinous injection of a suitable serum.

In the adult the spinal cord terminates at the lower border of the first lumbar vertebra; in children it extends a little further down. The spinal cord is supported in the

* A paper read at a meeting of the Staffordshire Branch.

theca and is separated from it by a layer of fluid which is the cerebro-spinal fluid. Below the termination of the spinal cord the thecal sac extends down into the sacral bone, and this part of the sac is occupied by the lumbar and sacral nerves before they enter the foramina, through which they gain access to the body. It is in the space below the termination of the spinal cord that lumbar puncture should be performed. The fluid which fills this sac is secreted by the cells covering the choroid plexus; it passes from the ventricles of the brain through the foramen of Magendie in the posterior aspect of the floor of the fourth ventricle to the thecal sheath of the spinal cord, whence it passes down the whole length of that sheath. It is obvious that an occlusion of this foramen will prevent the fluid getting from the ventricles into the thecal sac, and in those cases in which this obstruction occurs lumbar puncture will be of no use in relieving the symptoms of intracranial pressure. The lumbar puncture is best done with the patient lying on one side, and the needle should be introduced at a point half way between two spines of the lower lumbar vertebrae, ¾ in. from the middle line, and directed forwards, slightly upwards, and inwards. The needle should be of a fair size and of about 5 in. in length. The ligament connecting the posterior arches of the vertebrae is rather tougher than the overlying tissues, and by the touch it is quite easy to tell when this structure has been reached. Should the bony lamina be touched the needle should be withdrawn two thirds of its length, and then inserted in a slightly different direction. Occasionally, no fluid is obtained, and a stilette should be passed down the needle to remove any blood clot which may be obstructing it. Should the first drops of fluid be bloodstained they should be discarded and no collection made until the fluid is quite clear, or until it is obvious that it contains the same quantity of blood after an interval as it did to commence with. The fluid is received into a sterilized tube. The tube and a tight-fitting cork, to which a weight sufficient to sink it is attached, are boiled for fifteen minutes: the water is then emptied out of the tube and the cork fitted securely in. It should be noticed whether the puncture fluid comes out drop by drop or in a stream, the former being normal, and the latter denoting an increase of pressure. The consistence of the fluid should also be noted; normally it is limpid like water, but may exhibit all degrees of cloudiness, even up to that of pus, the opalescence varying according to the number of cells present in a given quantity.

The important points to determine are: (1) The number of cells present in a cubic millimetre; (2) what variety of cells, if any, are present; (3) the cultural reactions of any organism which may be present. In a few cases it may be advisable to determine the presence of urea, as in the case of convulsions due to uraemia. Puncture to obtain cerebro-spinal fluid may also be performed in the lower cervical region, but, on account of the presence of the spinal cord, it is obviously less desirable than the ordinary puncture in the lumbar region. The operation of lumbar puncture is so simple as to come within the range of every man in general practice. Two points may be accentuated—the needle, the syringe, and the stilette must all be sterilized by boiling in water or salt and water, and the patency of the needle should always be tested before commencing sterilization and again before making the puncture. In many cases it is advisable also to give a little general anaesthetic, for it is well-nigh impossible to make a puncture on a child struggling violently.

Diagnostic Value of Lumbar Puncture.

Most of the conditions simulating meningitis occur in adults, whereas the true forms of meningitis are more commonly found in children. Diabetic and uraemic coma may develop very rapidly and simulate meningitis, as may also the status epilepticus and acute delirious mania. These can be distinguished from meningitis by lumbar puncture and finding that there is no increased number of cells in the fluid. Haemorrhage into the ventricle of the brain or around the medulla and pons will also give rise to symptoms which may cause difficulty of diagnosis. The fluid obtained by lumbar puncture will be tinged with blood and the depth of the tinge will be the same at the beginning and at the end of the flow. In addition cells will be found which contain semi-digested red blood corpuscles. The difficulty of diagnosis is, however, much greater in the condition termed "meningism," which is a result of toxaemia from different causes, and is most frequently associated with acute febrile diseases, such as pneumonia, or in conditions of heat-stroke. In such cases the cerebro-spinal fluid is colourless and quite normal. The structure of the thecal sac is very similar to that of other serous membranes. Acute inflammation produces an influx of ordinary pus cells, namely, polymorphonuclear corpuscles, while chronic inflammation stimulates the lining cells, which reproduce their own species, namely, mononuclear cells. In a subacute case both varieties of cells will be found in varying proportions. This cytology would afford the basis for a classification of meningitis into the acute cases, which produce a polymorphonuclear cytology, and chronic, in which mononuclear cells are found in varying numbers. We can also subdivide cases of meningitis into those in which recovery is possible and those cases in which recovery is very exceptional. The third classification, that suggested by Sir William Osler, is now usually accepted. This I have set out in the following table, in which the features associated with the various forms are given also.

Meningitis in Children.

Meningitis.	Onset.	Initial Symptoms.	Cerebro-spinal Fluid.
Epidemic meningococcal (spotted fever)	Generally sudden	Basal	Polymorphonuclear leucocytes, Weichselbaum's *Diplococcus intracellularis*.
Sporadic meningococcal (posterior basal)	Sudden	Basal	Polymorphonuclear leucocytes, non-Gram stained organisms, *Diplococcus intracellularis*.
Pneumococcal ...	Sudden	Cortical	Polymorphonuclear leucocytes, Fränkel's diplococcus.
Traumatic	History		Blood.
Pyogenic	Sudden	Cortical	Polymorphonuclear leucocytes, staphylococci or streptococci.
Rheumatic	During attack of acute rheumatism or history of rheumatism	Cortical	Polymorphonuclear leucocytes, *Diplococcus rheumaticus*.
Other forms of infection (typhoid, influenza, etc.)	Sudden	Cortical	Polymorphonuclear leucocytes, infecting organism.
Syphilitic	Insidious	Generally basal	Excess of lymphocytes. Wassermann reaction positive.
Tuberculous ...	Generally insidious	Generally cortical	Excess of lymphocytes generally: may be polymorphonuclear leucocytes if acute infection. Tubercle bacilli.
Serous	Sudden	Cortical	Excess of lymphocytes, no organisms. Fluid at increased pressure.
Meningism	Generally insidious	Cortical	Normal fluid generally at increased pressure.

Initial Symptoms: (*a*) When cortex first invaded are intense pain, headache, convulsions, and mental symptoms. (*b*) Where base first invaded are tonic muscular spasm, paralysis, constant vomiting, and optic neuritis.

The onset of meningitis may be extraordinarily acute or, on the other hand, may be slow and insidious, and the symptoms vary according to the site in the central nervous system at which the disease develops. Should the infection be on the cortex of the brain, the illness will be characterized at first by intense pain, headache, convulsions, and mental symptoms; if, on the other hand, the bulb or spinal cord are chiefly infected, tonic muscular spasm, paralysis, constant vomiting, and optic neuritis will be the most marked conditions. When the cortex is the first attacked, the bulb and the spinal cord will be later affected; whereas, when the base is first affected,

the occlusion of the foramen of Magendie will produce obstruction of the outflow of the fluid from the ventricles, and so cause symptoms of pressure in the cortex, passing into coma.

In those forms of meningitis which attack the base and the spinal cord lumbar puncture will not only reveal the cause of the disease at a very much earlier date than where the cortex is involved, but will relieve some of the severer symptoms until such time as the foramen of Magendie becomes obstructed.

In addition to the facts mentioned in the table, there are special features connected with the various types of the disease:

1. *Epidemic meningococcal meningitis* is sometimes called "spotted fever" on account of a peculiar scattered haemorrhagic rash which appears about the third day; it is present only in the fulminating type of the disease. A rash resembling herpes is, however, present in about half the cases, but does not appear till the end of the first week. Deafness is often a prominent symptom, and may be permanent.

2. *Sporadic meningococcal meningitis* generally attacks infants and young children, about 70 per cent. of the cases occurring during the first nine months of life. The child lies on its side with the legs and arms flexed; it screams with pain, and resents any movement of the head and neck; the fontanelle is bulged and tense. The eyes are generally open and staring; the pupils are active to light, but the child takes little notice of objects moved before its eyes, and indeed may become quite blind; this is a very striking feature, and is evidently not due to optic neuritis, as the discs may be apparently normal. It may be permanent, or after it has persisted for weeks the child may make a perfect recovery. Hearing is very acute, and in marked contrast to the deafness of the epidemic type. Tenderness in the region of the spine and pain on movement of the joints is often marked. Retraction of the head, which is an early and very characteristic symptom, occurs also in cases of pneumonia, otitis media, thrombus of the longitudinal sinus, mumps, retropharyngeal abscess, and enlarged cervical glands. Lumbar puncture, however, settles the question. The disease runs a variable course, often proving fatal within the first week. In other cases the child may remain well nourished but semi-conscious for two or three weeks, when it begins to waste, the symptoms become aggravated, the child becomes emaciated, and dies in a state of exhaustion.

Influenzal Meningitis.—The rarity of reported cases is possibly due to the difficulty in isolating the organism, which may easily be overlooked unless cultures on blood agar are made. Batten reported five cases in Great Ormond Street Hospital from 1908 to 1910.

Syphilitic Meningitis.—There are two types of this infection: (1) In infants, the child being apparently normal till about the eighth or ninth month, when it should begin to hold up its head and take notice of its surroundings, but fails to do so. It has little power of movement, arms and legs may become rigid and fits may occur; other symptoms of syphilis may be present. (2) In older children the disease generally manifests itself about the eighth or ninth year, and passes into juvenile general paralysis.

Tuberculous meningitis is essentially a disease of childhood, and is most common from the second to the sixth year of life. Its symptoms are too well known to call for description here.

TREATMENT.

Many forms of treatment for meningitis—surgical, by means of decompression operations, constant drainage by the lumbar puncture tube, washing out the spinal canal with saline or weak antiseptic; and medicinal, by all sorts and conditions of drugs—have been tried but with little success. In epidemic meningococcal meningitis the results of the intraspinous injection of a suitable serum have justified the treatment, and the mortality has been reduced from 70 to about 20 per cent., and, indeed, might be lower were all the cases treated within the first two or three days. A large injection of Flexner's serum—about 20 c.cm. even in a child—is given for two or three days, and repeated later if rapid improvement does not take place. In chronic cases with persistent headache and vomiting the injection of the serum is likely to be attended with satisfactory results.

In the other forms of meningitis intraspinous injection of a serum is worth trying when the case is seen early, but the results so far are by no means satisfactory. Batten reports a case of meningococcal meningitis in which he injected 10 c.cm. on six consecutive days in an infant, with a favourable result. (The bulging of the fontanelle in infants is a useful guide as to the necessity for the operation.)

In the chronic forms of meningitis due to syphilis treatment is now being introduced in which the serum of a patient after treatment with salvarsan is injected into the spinal theca after the withdrawal of an amount of cerebro-spinal fluid equal to that which is to be injected. This is an important point. Repeated lumbar puncture, in the hope of minimizing the evil effect of pressure, is indicated, especially in those cases which run a protracted course. In serous meningitis and meningism lumbar puncture is generally attended with excellent results.

Urotropine is the drug which is most likely to be useful. It appears in the cerebro-spinal fluid, and is said to have an inhibitory effect on the growth of organisms. It may be given in 10-grain doses every four hours, even in young children. Bromide and chloral, trional or morphine may be given as necessary for relieving headache and inducing sleep.

General treatment runs on the ordinary lines—a water bed, the child being moved as little as possible, tepid sponging, and the usual attention to the bowels. Persistent sickness in the chronic cases may be alleviated by washing out the stomach, and, if the vomiting persists, feeding with the nasal tube should be tried. The act of swallowing in some cases seems to cause a tendency to vomit, whereas the nasal tube passed below the pharynx has not this effect. During convalescence, so long as the tongue is clean and the bowels regular, a liberal diet should be given.

PROPHYLAXIS.

We are gradually acquiring some definite knowledge of the method in which organisms which produce meningitis gain their entry into the body. The portal of entry of the organism in the epidemic meningococcal form is almost certainly the nose and tonsils, and these structures, when deranged, also harbour pneumococci. The pyogenic form of meningitis is very frequently associated with suppuration in the middle ear. Syphilis is the subject of a Royal Commission, and other forms of meningitis, due to the typhoid and *coli* forms of organism, are so rare as to be almost negligible. Obviously their prevention depends on sanitary conditions.

This leaves sporadic meningococcal and tuberculous meningitis for consideration. In the former the path by which the infection enters the system is unknown, but in the latter the infection is always secondary to a focus elsewhere in the body. Mr. Harold Stiles, in opening the discussion upon tuberculosis in children, at the International Congress, stated that his two assistants in Edinburgh had investigated a large number of consecutive cases of glandular tuberculosis and tuberculous infection of bones and joints, and had found that 90 per cent. of cases of glandular tuberculosis and 67 per cent. of tuberculosis of bones and joints were due to infection by the bovine type of bacillus. He stated, further, that bovine tubercle was found in 19 per cent. of apparently healthy tonsils which were examined, where no other focus of tuberculosis was discovered in the body. He added that in Scotland tuberculous disease was as common in rural as in urban districts, whereas, owing to the environment of the patient, one would have expected the reverse to be the case. He accounted for this by the fact that in towns the municipal authorities exercise stricter control over the milk supply than is done in country districts, whilst the inhabitants themselves are more alive to the necessity of sterilizing their milk. I think those of us who practise in country districts will agree with both findings, for the control of the milk supply in country districts from a hygienic point of view is practically *nil*, and it is almost impossible to persuade country people that it is necessary to sterilize their milk.

Some time ago I was discussing the subject with a well-to-do dairy farmer in my district, and quoted Mr. Stiles's figures. He would not agree with them at all, and, in support of his view, pointed to his own experience. He had reared all his family, and had not lost one during childhood; they had had as much milk as they could drink, and it had never been sterilized. "But," I said, "it is only four or five years since I excised a tuberculous gland from the neck of one of your boys." He had never thought of that. I do not know what the experience of other men in country practice is, but when I come to think over my own, after this conversation, I was surprised at the comparative frequency of single cases of tuberculous disease in the families of well-to-do farmers, where there is an abundance of fresh air, good food, warm clothes, and unsterilized milk.

Personally I feel sure that neglect of the ordinary precautions of sterilizing milk is due to ignorance more than anything else. The laws of this country in respect to the milk supply are extremely lax, and it is scarcely reasonable to expect that those engaged in a trade which is partially controlled by law will do more than the law demands. There can be little doubt that in young children where milk is the chief article of food, infected milk is responsible for the greater part of the dissemination of tuberculosis.

Under existing conditions, therefore, it is imperative that the milk used in the feeding of infants and young children should be sterilized. Such sterilization can easily be carried out by pasteurization, or more certainly by boiling.

The experience of those authorities who advocate the use of sterilized milk in the feeding of infants proves that the associated risks are negligible and can readily be counteracted. On the other hand, the danger of infection from unsterilized milk is real, and the result of such infection is ineradicable.

In order to introduce this precaution into the countryside, it would be necessary to circularize the inhabitants, and this might well be done by sending out leaflets to the parents on the registration of the birth of a child, indicating the dangers of infection, the results which may happen after such infection, and the ease with which precautions to prevent infection can be adopted. This duty would necessarily fall on the medical officer of health.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ADRENALIN IN ASTHMA.

A Personal Experience.

THE effects of subcutaneous injections of adrenalin have recently been discussed in a number of papers and letters in the JOURNAL and elsewhere. From a considerable personal experience I have come to the conclusion that the dose generally used for asthmatic attacks is much greater than is necessary. The first dose I ever gave myself, about two years ago, was 3 minims of 1 in 1,000 solution of adrenalin chloride. The relief of the asthma was almost instantaneous, but I felt extremely ill for some minutes, my hands shook so much that I could hardly put the syringe away, and my pulse became very rapid. Since that date I have given myself a large number of injections, but never more than 2 minims, and rarely more than one; for slight attacks half a minim has been sufficient. With these small doses the only effect I ever experience is relief of the asthma, and this is invariable. No attack has kept me awake for longer than five minutes, except on one occasion on which I broke the syringe, and was consequently awake all night. My pulse is hardly accelerated, and I do not feel the slightest discomfort. The relief is so rapid that I fall asleep within a minute or two of putting the syringe back into its case. Small doses of this kind have the further advantage that they are unlikely to have any permanent ill effect, such as the production of atheroma. Even if three or four doses are required in twenty-four hours, which is most unusual, the total amount injected is less than is commonly recommended for a single injection.

I may add that, so far as my experience goes, similar small doses have generally proved effective in other patients.

London, W. ARTHUR F. HERTZ, M.D.

PREGNANCY WITH IMPERFORATE HYMEN.

ON March 16th I was called to attend a primipara aged 32, two years married. On examination, my finger passed through a closely constricting orifice about 2½ in. up the vagina before coming in contact with the fetal head. A sort of pouch could be hooked out by the finger, and was found to consist of a toughish membrane with an aperture at its centre. Coitus, I take it, had evidently stretched the hymen into a miniature vagina through the orifice at the top of which my patient had become impregnated. Labour was quite normal in other respects, and no difficulty was found in lacerating the hymen when the fetal head was on perineum. This is the second case precisely similar I have had during the last twelve months. I have seen no others in twenty-five years' midwifery experience.

Birmingham. NORRYS D. BEST, M.R.C.S.

AN UNUSUAL CASE OF ANKYLOSTOMA INFECTION.

THE patient, a middle-aged Englishwoman, was first seen on October 17th, 1913, when she complained of intense itching in various parts of her body; it was most intolerable when on the hands and feet. This itching, which spared no part of the body, was always intense in the afternoon, lasting a few hours, then passing off. She looked white and ill, and had a furred tongue, but no rise of temperature. She complained, not only of want of appetite, but of severe pains in the epigastric region. Her history was that she had been some years in Cairo and had come back from England with her husband, who had leave, arriving on June 11th. On August 29th she felt very ill, having attacks of stomach pain, sickness, and diarrhœa of an intermittent kind. She could not eat and lost several stones in weight. Shortly afterwards, the itching came on daily in bouts which compelled her to scratch and rub the places till, as she said, "she got something out," when the itching stopped. I gave alkalis, bromides, and salicylates without benefit. One day, a week later, she brought a grown-up daughter with her, who described how she had seen on her mother's finger-tips a sharp needle-like object push its way through the skin at the point of itching. I asked them to bring me some if they could. A day later I got three small thread-like objects in spirit much macerated, and under the microscope showing a structure of some sort not recognizable by me. Next day they brought some more of these in a small box. One had been taken from the edge of the upper lip, and under the microscope proved to be a perfect specimen of an embryo of *Ankylostoma duodenale*. Subsequently these appeared in enormous numbers in the mouth, throat, cheek, windpipe, where they caused much cough and retching. They also pushed their way out of the tongue. The treatment was by thymol, followed by the administration of sulphur tabloids for several days. All the drug was thoroughly absorbed. The cure was rapid, and I heard nothing more of my patient subsequently when the itching had stopped, which seemed to indicate that this huge migration of embryos to the periphery had stopped.

As far as I am aware this case is unique. Looss has proved that these embryos will penetrate the skin and find their way to the duodenum. I can find no cases recorded of the converse, and I could not elicit from my patient any determining factors which would have impelled the embryo worms to leave the duodenum and push their way from the arterioles right through the various surfaces of the body. Nor can I advance any theory for my own satisfaction. She was anæmic, with a large increase of white blood corpuscles.

Heliopolis, Cairo, Egypt. JAMES DUNBAR-BRUNTON, M.D.

BELLADONNA POISONING.

AT 9 p.m. on March 15th I was called in to see a gentleman aged about 71. His wife informed me that he had seemed out of sorts all day, was slightly drowsy, had eaten practically nothing, and seemed slightly confused in his ideas. The patient himself told me that he had had some difficulty in passing urine during the day, this being the first time that he had ever been troubled that way.

I found that the bladder extended to 2 in. below the umbilicus. I placed the patient in a hot bath, where I discovered that he was wearing a belladonna plaster over a raw surface which had been caused by a mustard leaf applied for lumbago. Finding his pupils dilated, I told him that the belladonna plaster was probably the cause of the trouble, and asked him to pull it off, which he did. Leaving him in the bath I went downstairs to order a hot-water bottle for his bed. I came upstairs again after about two minutes, to find the patient with a flushed skin sitting naked on the staircase, not knowing his own bedroom, talking incoherently, and quite unable to walk. I carried him into his room, where he collapsed for a few seconds,

but soon recovered. He had a good night, and went about his ordinary duties in the morning, when he remembered nothing of what had happened in and after the bath.

The interest of the case lies in the sudden onset of very acute symptoms in the bath, due, I suggest, to the increased circulation through the skin promoting rapid absorption of poison in a subject already beginning to show signs of a toxic condition.

London, S.W. SIDNEY NATHAN, M.D.Cantab.

TREATMENT OF PRURITUS ANI.

SURGEONS seem to be much at variance in their views of the etiology of this most troublesome disorder. The older school consider that it is always a symptom of deeper disease, such as fistula, polypi, and the like; whereas, particularly among the Americans, it is spoken of as a septic infection curable by an "autogenous" or other vaccine of the particular organism, presumably a streptococcus. Be this as it may, it is certain that very severe pruritus may exist in the absence of any such lesion discoverable by ordinary methods, and, what is more, no ordinary man will submit to operation on the chance of finding a disease not evident to skilled examination. I am fully convinced that there are hundreds of middle-aged men who suffer a good deal, and particularly from loss of sleep, who are treating themselves and rarely consult a doctor.

Whatever view one takes of its pathology, any well-marked case of pruritus ani always exhibits one or more tiny cracks or fissures of the skin round the anus, which may be intensely painful and are always very irritable and difficult to cure. From time to time the trouble is much aggravated by the occurrence of one or more perianal abscesses which cause more or less trouble according to their size and depth. These are not always diagnostic of fistula. Pruritus ani is mainly a disease of cold climates. A dry climate is worse than a moist one, and a rich diet undoubtedly is a predisposing factor. Many a patient will be quite well at (for example) Venice, and suffer a good deal further inland.

Of the older remedies conium ointment, so warmly praised by Sir W. Whitla, has even in double strength and prepared by first-class chemists, proved quite ineffective, and the gall and opium ointment is also useless. The drying up method with boric acid and starch powder so often recommended often produces considerable irritation.

Ordinary antiseptics, such as carbolic acid, mercury perchloride, and formalin in various strengths, and astringents such as zinc sulphate, seem to have no good effect at all and generally irritate considerably. Ointments such as chinosol (1 per cent.) often produce temporary improvement, but sooner or later the effect wears off, and they seem to lose their power. The same is true of sphagnol or resinol ointment.

I wish to call attention to two remedies which are of real and lasting benefit. The first is our old friend tincture of iodine (*B.P.*), which may be used in half or full strength with impunity. It is not at all irritating to mucous membranes, and the slight pain, caused if there are open skin cracks, is quickly over. A patient who had got into a very bad state with numerous skin cracks, wash-leather appearance of the skin, and not infrequent perianal abscesses, and loss of sleep, found that, used thrice weekly, this remedy enabled him to sleep all night, and, in fact, made him quite comfortable. (It should not be used so as to excoriate the skin.) Even better than tincture of iodine is compound tincture of benzoin; mildly styptic and really antiseptic, it may be that its action is largely mechanical, and gives the necessary rest to the affected part. Whatever its nature, its action is little short of marvellous, for within two minutes or so the spirit in the tincture evaporates, and then all temptation to scratch the part is over. It is cleanly, and does not soil the linen as most ointments do, since it dries up very quickly. It may be used twice or thrice daily, and never irritates. Samples vary greatly in colour from a light colour to a dark brown, and also in consistency; but, luckily, they seem to have the same effect, though, perhaps, the darker and thicker Friar's balsam is the most useful.

It is very necessary to use the balsam before a hot bath if the water is very hard, prolonged hot baths in hard water being very injurious in these cases.

It is unnecessary to cauterize or excise small fissures, since I have positive evidence that these can be in many, if not in all, cases cured by tincture of benzoin. Larger fissures are, of course, another matter.

Note on the Etiology of Skin Cracks.—These are found in limestone districts on the feet of natives who use no shoes, and may be of enormous extent, and on the hands of laundrymaids, etc., who use hot water and soda. It seems that the lime in the water combines with the natural grease of the skin to make an insoluble and even brittle substance, which easily cracks, and produces fissures; healing is retarded until hot weather sets in.

Chepstow. J. CROPPER, M.D.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

VICTORIA HOSPITAL, BANGALORE.

EXTROVERSION OF BLADDER TREATED BY EXTRAPERITONEAL TRANSPLANTATION OF URETERS INTO THE RECTUM.

(Reported by T. V. ARUMUGAM, M.B., C.M., Medical Officer in Charge.)

THE patient in the following case of extroversion of the bladder, a boy aged 10 years, was treated by performance of Peters's operation, as below described:

Operation.

On November 28th, 1913, the patient, having been prepared in the usual way, was anaesthetized with chloroform, the sphincter of the rectum was fully dilated with fingers, and a sterilized sponge 2 in. in diameter, with 2 ft. of sterilized tape tied round its middle, was passed into the rectum and pushed up into the sigmoid flexure to prevent the escape of faecal matter during the operation.

A sterilized No. 5 Jaques's catheter, obliquely cut off at its eye, was introduced to a distance of 2 in. into the right ureter and fixed by a fine silk suture to the ureteral papilla. Then the mucous membrane all round the right papilla was released with a pair of blunt-pointed scissors and the ureter exposed to a distance of 2 in. The left ureter was similarly dealt with.

The rectum having been raised by an assistant with his fingers, a pair of long dressing forceps was introduced into the rectum on the fingers and made to press on the point where it was decided to open the rectum from above. A small opening sufficient to admit No. 5 Jaques's catheter was made into the rectum on each side of the middle line. Through these openings the catheters, with the ureters, were drawn out of the rectum, and the papillae made to project a little beyond the sphincter. The mucous membrane between the papillae and a little on their sides having been dissected out, the raw surface was dressed antiseptically, the sponge in the rectum removed, and the patient put to bed.

Progress.

The patient made an uneventful recovery, except that he had a little rise of temperature, varying from 99° to 102° for six days, during which period a small slough on the surface of the bladder, between the openings of the ureters, formed and was cast off.

The catheter from the left ureter was cast off on the fourth day after operation; the catheter from the right on the seventh day after operation.

For a week after the second catheter was cast off the patient was able to retain urine for about one hour during the waking hours.

During the third week after the operation the patient was able to retain urine in his rectum for nearly three hours during the waking hours.

Result.

The patient's capacity for retaining urine in his rectum has been steadily increasing from the third week after the operation, and he is at present (that is, five weeks after operation able to retain urine in his rectum for about four hours during the waking hours, and for nearly four and a half hours during the sleeping hours.

REMARKS.

This is the third case of extroversion of bladder in which the operation of extraperitoneal transplantation of ureters into the rectum has been performed by me at the hospital. The first case was performed on August 20th, 1906, and the second on April 15th, 1907. These cases were published in the JOURNAL dated June 22nd, 1907, p. 1481, and August 17th, 1907, p. 388, respectively, and their results—in one case five years after operation and in the other four years after operation — were reported on February 23rd, 1911.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

AT a meeting on April 27th, Sir DAVID FERRIER, President, in the chair, Dr. PURVES STEWART read a paper on the *Diagnosis and treatment of cerebro-spinal syphilis* and its outcome, which is published in full at p. 949 of this issue. In the discussion which followed, Mr. C. A. BALLANCE said that he thought that in ordinary cases of syphilis the combined method of intramuscular injections of mercury and intravenous injections of salvarsan was the best form of treatment. In 83 so treated of which he had knowledge 80 developed no secondary symptoms. If this procedure were adopted one would not see cerebro-spinal syphilis so often. A simple method of obtaining a rise of temperature was by the injection of Coley's fluid, and possibly this might be of use in cerebro-spinal syphilis if a rise of temperature was desirable. The arachnoid membrane very definitely separated the subdural space from the subarachnoid, as was shown by clinical instances as well as by the work of Key and Retzius. It therefore seemed proper to inject salvarsanized serum or salvarsan into the subarachnoid space and not into the subdural. He did not consider it more dangerous to inject them into the intracranial subarachnoid space than into the spinal. The method he had adopted was to make an opening into the skull immediately in front of the bregma, and pass down a fine cannula 3 in. long through the anterior part of the corpus callosum into the anterior cornu of the lateral ventricle. The guide was the falx; the diameter of the cannula 1 mm. A stylet ran through the cannula, and, projecting slightly beyond it, protected the nervous tissue from serious damage. He had used from 30 to 60 c.cm. of salvarsan solution, preceded and followed by a little normal saline. He could not speak of the beneficial effects of the method, but no complications had occurred in the five cases so treated, and it seemed a satisfactory way of introducing salvarsan and salvarsanized serum. Dr. F. E. BATTEN said he did not think that parenchymatous syphilis was generally uninfluenced by treatment in early cases, and in recent years he had thought antisyphilitic treatment useful in early tabes and general paralysis. He had treated two cases of general paralysis, which had resisted ordinary remedies, by sodium nucleinate without improvement. The Wassermann reaction and cell content of the cerebro-spinal fluid had remained unaltered. He had used undiluted salvarsanized serum in one other which had not been benefited by mercury, but also without good effect. He spoke of the danger of injecting either salvarsan or neo-salvarsan intrathecally. Dr. ROBERT JONES said he had given up mercury in the late stages of general paralysis. Pneumonia frequently occurred in general paralytics, but they were very rarely indeed improved by the resulting rise of temperature, in this way contrasting with the subjects of certain other forms of lunacy. Almost complete recovery might be seen in patients who appeared to have definite parenchymatous degeneration without treatment. The use of a thorium hydroxide cap had been followed by marked improvement, and in two cases by apparent recovery. He had experienced little benefit by the use of neo-salvarsan, and regarded lumbar puncture as a dangerous procedure. There were 60 cases on record in which the operation of piercing the frontal bone had been performed, but it seemed to him a most difficult operation. In 330 cases of general paralysis he had found that the average duration from admission until death was one year and four months. Dr. GORDON LANE, speaking of the treatment by sodium nucleinate, said that it led to a decided improvement and an increase in the red blood corpuscles and a leucocytosis chiefly of the large lymphocytes. Sir DAVID FERRIER said he was a little disappointed in the results of the intrathecal method of treatment. It could not yet be said that any case was on record in which parenchymatous syphilis was cured by it. The only hope lay in the treatment of very early cases. In the one case in which he had seen neo-salvarsan tried the result was disastrous, all the symptoms being intensified. Dr. PURVES STEWART replied.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DERMATOLOGY.

AT a meeting on March 19th Dr. J. J. PRINGLE, the President, brought forward a case of extensive *Carcinoma of the face* occurring in the course of a xerodermia pigmentosa. The patient, a farm labourer aged 20, exhibited a typical and severe example of xerodermia pigmentosa with all its cardinal symptoms. The disease was noticed when he was about 2 years of age, and had been uniformly progressive. Many of the growths had been removed by scraping on at least eleven occasions, and he had received *x*-ray exposures every other day for a period of two months in the year 1912. On admission to the Middlesex Hospital in December, 1913, he presented a huge, dense carcinomatous mass occupying the whole of the left side of the face, extending from the zygoma at its upper part to the angle of the jaw and thence to the left side of the mouth, and involving the upper lip and left side of the nose. It obliterated the left nostril, invaded the upper maxilla, and projected into the buccal cavity. There was also a large carcinomatous ulcer, occupying the right half of the chin. The growth was microscopically proven to be a squamous-celled carcinoma. On December 25th, 1913, an acute septic infection of the whole of this growth occurred, accompanied by high fever, which resulted in disintegration of the growth and the formation of a hideous ulcer, discharging externally and into the mouth. Nevertheless, on December 30th, when the sepsis was at its height, three tubes, containing respectively 90, 40, and 22 mg. of radium bromide, were introduced deeply into the growth and kept there for twenty-one hours. The beneficial effects of this treatment, which were illustrated by photographs, consisted of (1) great reduction in size of the ulcerated area; (2) almost complete subsidence of the induration surrounding the obvious growth; (3) shrinkage of the tumour so that it no longer projected into the mouth, restoration of free movement of the jaws, and removal of the obliteration of the nostrils. Over the whole of the irradiated area the abnormal pigmentation almost completely disappeared. Unfortunately, a deep necrosis involving the outer wall of the antrum of Highmore persisted, but the sinus which resulted was healing up rapidly. The carcinomatous ulcer on the right side of the face, which had been treated in the first instance by 40 mg. of radium bromide in a tube placed on its surface, had not answered satisfactorily to this treatment, but the same amount of radium inserted deeply through its base on February 12th was beginning to produce beneficial results. Sir MALCOLM MORRIS confirmed the observation that radium when inserted deeply into the substance of growth gave better results than when applied on the surface, but if the tube were introduced too deeply there was some danger of haemorrhage. Dr. GEORGE PERNET: A case of *Angioma serpiginosum* in a girl aged 15, which began in the left axilla two years previously and spread down the arm as far as the hand, the lesions consisting of finely reticulated blood vessels, leaving temporary pigmentation. He stated that he had found records of only eight or nine cases of this disease, all being in females. Sir MALCOLM MORRIS referred to a similar case which he had observed. Dr. H. G. ADAMSON thought the condition came into the category of linear or systematized naevi, which might consist of any of the constituent structures of the skin, and might disappear spontaneously. Dr. S. E. DORE remarked that linear naevi were not generally angiomatous. Dr. PARKES WEBER considered the case as allied to angioma reticulatum or livedo annularis. Dr. PERNET, in his reply, said the term "naevus" should be reserved for conditions present at birth, and the PRESIDENT expressed the opinion that the spontaneous appearance and disappearance of a disease in adult life was hardly consistent with his conception of a naevus even in the most extended sense of the word.

At a further meeting on April 16th the following were among the exhibits:—Dr. G. PERNET: A case of *Double primary chancre of the lips* in a man aged 27. The patient was first seen on March 17th, suffering from a roseolar and papulo-squamous eruption of the body, which had been preceded at an interval of five weeks by the sores on the lips. There were no lesions on the genitalia. Neo-salvarsan (0.9 gram) was injected intravenously on March 22nd, and this was followed by some diarrhoea,

abdominal pain, and a toxic erythema on the hands and knees. The PRESIDENT inquired if the toxic eruption was regarded as a "Herxheimer's reaction." In his experience multiple chancres of the lips were not very uncommon. Dr. A. M. H. GRAY asked if the neo-salvarsan was used in concentrated or in dilute solution, his experience being that the concentrated solution was not followed by severe reaction. Dr. A. WHITFIELD regarded Herxheimer's reaction as a specific reaction of syphilitic tissue to salvarsan, but did not consider the case under discussion an example of it. Dr. H. MACCORMAC said he had not observed the Herxheimer reaction so frequently after neo-salvarsan as after the old salvarsan. Dr. PERNET, in his reply, said the Wassermann reaction had not been tested, the manner in which the disease was contracted had not been ascertained, and, as the patient was suffering from a syphilitic throat, it was impossible to say if the fauces were involved in the toxic erythema. He questioned the utility of retaining the term "Herxheimer's reaction," and doubted its specificity. Dr. KNOWSLEY SIBLEY: A woman, aged 35, with *Symmetrical telangiectases of the face*. They also affected the mucous membranes of the mouth and conjunctivae. She believed that she had suffered in the same way some years ago, the lesions disappearing. Sir MALCOLM MORRIS said he had seen spider naevi disappear spontaneously, and Dr. DUDLEY CORBETT had observed the same phenomenon after pregnancy. Dr. WEBER said the spider naevi of very young children might disappear, and also those accompanying jaundice and liver disease in adults. Dr. MACCORMAC mentioned a case of Dr. Pasteur's he had observed, in which a large number of multiple telangiectases occurred in a patient suffering from gastric ulcer and had completely disappeared. Dr. WHITFIELD said a naevus in the Continental sense of the word was a congenital anomaly of the skin, but so-called "spider naevi" often followed the bites of flies and mosquitos, and were minute traumatic aneurysms. Dr. GRAY remarked that stellate naevi were sometimes associated with cirrhosis of the liver, and inquired if Dr. Sibley had investigated the case from this point of view. Dr. J. M. H. MACLEOD remembered a patient in whom typical telangiectatic lesions accompanied gastric ulcer. He looked upon the case under discussion as a congenital spider naevus. Dr. NORMAN MEACHEN: A girl aged 15 with *Erythema of the legs* of two and a half years' duration accompanied by severe pain, which was increased by the dependent position and was unrelieved by salicylates. There was also passive congestion of the hands. Her heart sounds were normal. Dr. WEBER thought the erythema was of the type seen in Bazin's disease. Dr. ADAMSON said the erythema of that condition was of the livedo type, but the present case was diffuse. Dr. WHITFIELD did not think the cyanosis of Bazin's disease was a sufficiently important factor upon which to found a diagnosis in the absence of nodose lesions. The PRESIDENT asked if there was any tuberculous taint in the patient or in her family. His general appreciation of the case agreed with Dr. Whitfield's; he remembered two similar cases which had recovered after puberty.

UNITED SERVICES MEDICAL SOCIETY.

AT a meeting on April 9th, Major JOSIAH OLDFIELD, R.A.M.C.(T.), in a paper on the *Scope of the field ambulance as a training school*, said that the modern tendency in business enterprise was towards single control and single portal training, with subsequent specialization in place of sporadic, varied, and uncorrelated methods. Methods which had secured success by promoting harmony, economy, and capacity for expansion in modern great businesses were worthy of consideration if as perfect an organization as possible were wanted in connexion with the medical administration of the Territorial Force. In order to secure harmonious working and complete understanding by every officer and man of his duties and responsibilities and to provide thorough and standardized training, the field ambulance should be the one training school for the officers and men responsible for the health of the troops. At present the regimental medical officer was inadequately trained and was not required to attend camp at all; in fact, should his battalion be at full strength he was only allowed to go to camp every alternate year, whereas the field ambulance medical officer was required to attend camp once in every three years, and pressure was brought to bear on him to make him attend every second year. The regimental medical officer, but not the field ambulance medical officer, was too isolated. The speaker said he emphasized this point because he thought that camp was the one absolutely essential method of training officers, as well as men, for their duties in peace and war. At present the position of the regimental medical officer was not unmistakably clear in regard to the question of command. The whole problem of command would be solved if it were the duty of the officer commanding the field ambulance to post an officer to each battalion in camp. Such officer would be responsible to his officer commanding for the due discharge of his duties, and the colonel of the regiment would have no responsibility for things he had little time or opportunity for understanding. This officer would mess with his field ambulance and would be an integral part of the unit. By means of this constant interchange of duties every officer would have a knowledge of working of the whole medical machinery with the Territorial Force. Summing up, the speaker said: (1) There should be a standardization of medical officers; (2) that the field ambulance should be the one portal of training and command; (3) that the field ambulance should train and supply all medical and sanitary personnel to every unit in the division; (4) that, where a field ambulance is encamped with a battalion, brigade, or a division, the personnel it provides should remain a part of the field ambulance for administration and messing purposes.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on April 3rd, Dr. T. WARDROP GRIFFITH, President, in the chair, the following were among the exhibits:—Dr. C. W. VINING: (1) A case of partial left-sided *Hemianopia* in a man with a history of convulsive attacks, preceded by aurae of flashing lights. A provisional diagnosis of a tumour involving the right occipital cortex had been made. (2) A case of *Paralysis agitans* in a woman aged 56. The patient had begun to lose the use of the right arm eight months previously; the tremor was noticed in November, 1913, and since then the condition had rapidly developed. Dr. T. WARDROP GRIFFITH: (1) A case of probable *Intracranial tumour* in a boy aged 5. The sixth cranial nerve of the left side was involved and there was right hemiplegia. Optic neuritis was marked in the left eye and commencing in the right. (2) A case of *Progressive muscular atrophy* in a man aged 46. The disease had begun eight months previously with weakness of the right hand. Ulnar deviation was well marked and bulbar signs were present. The reflexes were increased, proving involvement of the upper motor neurons. Treatment by strychnine injections was being carried out. Dr. G. W. WATSON and Mr. ALEXANDER D. SHARP: A woman with *Mitral stenosis and paralysis of the left vocal cord*. The patient came under observation with haemoptysis as a case of suspected phthisis. There was no clinical evidence of phthisis, but undoubted signs of mitral stenosis. There had been complaint of huskiness for some time, and laryngeal examination showed a complete paralysis of the left vocal cord. In addition there was impaired sensation on the left side of the tongue and on the left anterior faucial pillar. The patient had to be careful in the act of swallowing, as she was apt to "choke." Mr. R. LAWFORD KNAGGS: (1) A man with an *Oesophageal fistula* traversing the right pleura. The case had been shown at the last clinical meeting and the passage of swallowed milk through the fistula demonstrated. There was a three years' history of intermitting pleural suppuration. Gastrostomy was performed, and he had been fed by the stomach till recently. Now he was taking solid food, and apparently nothing came through the fistula. (2) A case of *Excision of tuberculous wrist* in a man where trypsin injections had been used with much apparent benefit. Mr. J. F. DOBSON: A case of *Diffuse papilloma of the bladder*, which had been treated by suprapubic cystotomy and subsequent implantation of both ureters into the colon. The patient was perfectly comfortable and able to retain urine for five hours. The suprapubic wound was healed and nothing escaped from the bladder.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on April 16th, Dr. E. W. HOPE, President, in the chair, Dr. PERMEWAN, having recorded a case of *Thrombosis of the lateral sinus* following acute suppurative otitis, described his ligature of the internal jugular vein and clearing out the clot as being the important point in the treatment. A phylacogen had been used with, he thought, beneficial effect. Dr. COLIN CAMPBELL related a somewhat similar case. Mr. HUGH JONES agreed that the clot in such cases should be removed, but preferred in acute conditions to do a small, rather than a large operation, because infective processes, he thought, frequently limited themselves. Dr. ADAIR DIGHTON, having quoted some statistics in favour, Mr. G. C. E. SIMPSON recorded nine cases in which he had operated for femoral hernia by the inguinal route. Among the advantages of this route were access to the neck of the sac, free exposure of the fasciae round the ring, and the excellent closure of the ring obtainable. Four of the cases were strangulated, and in another two of the series there was a hernia of the bladder. Mr. R. W. MURRAY, as an advocate of the saccular theory of hernia, said he did not attach much importance to suture of fasciae, but considered the access to the neck of the sac by this route an advantage. Mr. T. C. LITLER JONES said that the sac did not always disappear if left, for he had found a lipomatous mass some years after operation. Mr. ARMOUR said he always used this route for two main reasons—that the whole sac could be removed, and the top instead of the bottom end of the crural canal could be closed. Dr. R. W. MACKENNA read a paper entitled *Some reflections on the act of death.*

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on April 8th, Dr. WATSON-WILLIAMS, President, in the chair, the following were among the exhibits:—Dr. MICHELL CLARKE: (*a*) A case of *Goitre*, with symptoms of myxoedema, which had been relieved by the administration of thyroid extract. Mr. HEY GROVES advised removal of a portion of the gland to relieve pressure symptoms, and considered that the presence of myxoedema did not contraindicate this, as the gland was not functioning normally. (*b*) A case of acute *Toxic polyneuritis* which simulated an acute ascending spinal palsy in its origin. No cause for it could be ascertained, but the condition was improving. (*c*) A case of *Septic rheumatic endocarditis*, of fifteen months' duration, in a man aged 19. Pyrexia and joint swellings occurred whenever the patient got up from bed. The pyrexia and rheumatism ceased after administration of normal sterile horse serum by the rectum. Dr. J. A. NIXON: (*a*) A case of multiple or "button" *Epitheliomata* of the leg which appeared subsequent to the treatment of an extensive lupus with *x* rays. The case, it was thought, suggested that the frequent administration of small doses of *x* rays was the most likely method to lead to this result. (*b*) A case of *Progressive atrophy of the right hand and forearm* of an adult woman. It was associated with what seemed to be a congenital malformation of both elbow-joints. Mr. HEY GROVES suggested that the atrophy might be due to a nerve lesion the result of the bone malformation. Mr. HEY GROVES: Two patients in whom *Autoplastic bone grafts* had been used with success. In one case a portion of the ulna had been removed and wired on to form a splint for an ununited fracture of that bone, and in the other a peg from the tibia had been used to fix a movable knee joint after an excision. The exhibitor insisted on the necessity of firm mechanical fixation of a graft to obtain union. Mr. A. J. WRIGHT: A case of *Necrosis of the superior maxilla and mandible* in a patient with extensive laryngeal and pulmonary tuberculosis. The condition was progressive, and had not been influenced by the administration of salvarsan, mercury, and iodides. Dr. E. CECIL WILLIAMS read notes on a case of *Acute lymphatic leukaemia* in a child aged 3 years.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting on April 7th, Dr. JANE WALKER, President, in the chair, Dr. CONSTANCE LONG, in a paper on *Psycho-analysis*, dwelt on its value in dealing with otherwise apparently impossible cases of hysteria and obsessional states. The term "complex" formation, due to Jung of Zürich, covered the "expression dissociated" state and the "idea of a foreign body in the unconscious." Nothing that happened to an individual in the way either of education or experience was ever lost. A psychic symptom was an end link of a lengthy chain leading down into the unconscious. A personality was made up of his complexes. In the therapy of re-education, which was so often applied to the neurotic, the aim was the discovery and elimination of morbid complexes and the substitution of healthy ones. Janet's patient, Irene, developed a second state; a dissociation of her personality occurred. The same mechanism ran through every hysteric, though different in degree and kind. Normal persons possessed the same complexes as the hysteric, though differently adjusted to the general stream of consciousness. Libido (or energy) was the dynamic force in the personality. A normal person suffered the force to sweep away obstacles, but in the neurotic the force was insufficient, and would flow back or make a "regression" upon itself. The energy would be applied in the manner of past reactions, because it was under the sway of unconscious complexes. A hysterical symptom was a reaction away from reality. The speaker enlarged upon Freud's views on infantile sexuality. In the neurotic the "father-" or "mother-complex" could have a very serious pathogenic influence. It was to the task of unravelling buried or autonomously acting complexes in the unconscious that psycho-analysis applied itself, and to Freud's genius was due the technique of the analysis of dreams that could explore these fields. Psycho-analysis seemed applicable only to a high type of neurotic. As a method of investigating the human mind, and as a means of education, as, indeed, a working philosophy of life, it had no rival. Dreams were the outcome of unconscious thoughts or conflicts. The unconscious was only capable of speaking in symbolic language. The analyst was blind to the meaning of the dreams until the associations were given and linked together. The method of psycho-analysis did not tend to make the patient morbid; he was already in a pathological state. It involved not only the setting free of energy which was wrongly imprisoned or misapplied, but the rendering it available for the purposes of life. It not only tended to establish independence of the personality, but a reconciliation with life and its most fundamental problems. Dr. HELEN BOYLE contended that psycho-analysis must make patients morbid; there were many things a patient had better not be told. What neurotics chiefly required was a feeling of power. It was better not to disinter their mental bodies. Dr. AGNES SAVILL thought that the suggestions frequently came from the psycho-analyst. Dr. JESSIE MURRAY said that a patient would only accept an interpretation of a dream symbol if correct. The patients looked through themselves to a greater aim in life, and did not thus become self-conscious. The PRESIDENT considered that the patients should learn as much as possible about themselves, as this would facilitate their cure.

WE learn from the *New York Medical Journal* that an experiment in the direction of the Chinese custom of paying the doctor as long as the patient placed under his care remains well is about to be tried in New York. The Life Extension Institute has been formed to guarantee medical supervision to subscribers. For three dollars a year the institute promises an annual letter of advice based on answers to questions set out on a form, together with two annual examinations of the urine. For five dollars, in addition to the annual letter of advice, monthly letters on health, with two analyses of the urine and a thorough physical examination, are offered. Special arrangements may be made for schools, clubs, societies, business organizations, and other bodies. How the plan will work remains to be seen, but the new institute has started with a powerful backing. The names of the medical staff are, according to our contemporary, familiar to the profession as teachers and writers of ability. The laymen are headed by Mr. W. H. Taft, Ex-President of the United States, and among others the list includes the names of Samuel Hopkins Adams, who has done so much to expose the methods of quacks in the United States, President David Starr Jordan, and other men of distinction. It is hoped that the institute will be self-supporting, and it is proposed to devote two-thirds of any profits above a small rate of interest to extending the sphere of work on the same lines.

Reviews.

THE EARLY DIAGNOSIS OF TUBERCLE.

THE combined attack now being made by all civilized communities against the spread of tuberculosis renders it more than ever desirable that all known methods of early diagnosis should be widely studied.[1] Dr. CLIVE RIVIERE, who has given evidence by his previous works that he has himself studied the subject very fully, has done well to put before the profession in compact form the results of his experience and researches. Apart from the recognized methods of ascertaining the presence of gross lesions, a vast number of elaborate and sometimes complicated devices have been from time to time evolved by which the probable presence or absence of tubercle may be surmised, and many of these have hitherto obtained either too much or too little notice. Dr. Riviere has made it his business to assign to each, as far as may be at present possible, its relative value in the scale of diagnostic importance. In the first part of his work he has dealt with tuberculosis in general, and in the second part he has set forth the results of his experience with regard to tuberculosis in children. As physician to a leading chest hospital and also a large children's hospital his opportunities for practical observation on these points have been great.

The application of the stereotyped rules of physical examination of the chest, when repeated in many thousands of cases, generally serves to bring the exceptions into prominence. It is only by the skilled recognition and interpretation of such exceptions that the true significance of physical signs can be gauged.

Early diagnosis of pulmonary tubercle generally depends upon several points of evidence, considered in relation with one another. The process of exclusion may usefully be applied, and hence the coarser signs should first be looked for. Physicians with large experience of chest disease are seldom fully agreed as to the trustworthiness of percussion as indicative of incipient tubercle. Dr. Riviere may be ranked amongst those who lay great stress upon it, recognizing many minor modifications which do not seem to strike less sensitive listeners. The value of auscultation in like manner may be greatly increased by careful attention to the presence or absence of surrounding conditions, which are apt to influence the quality of the normal breath sounds, but which are not always thought of in the course of routine practice.

The various processes that have been devised for the examination of sputum—microscopic, chemical, and bacteriological—are successively discussed, and attention is given to the important question of tuberculin testing, a line of research which has been followed out by the author of this book in a previous work. From the mass of evidence that has been accumulated, a few definite points stand clearly forward, and are no longer matters of dispute amongst experts. But apart from these there are many still unsettled, and it is most desirable that in practice the one set should be clearly separated from the other.

It is a valuable feature of this book that no doubt is left on the mind of the reader as to the relative importance of the indications given by tuberculin. In this section, as elsewhere in the book, no attempt is made to give artificial prominence to methods which have not as yet been proved to be of real value. All methods which have been found to be useful in diagnosis have been passed in review, and we can cordially commend the study of them to the many tuberculosis officers and others who will be expected to become specialists in the diagnosis of early disease under the regulations which are everywhere being made for the establishment of tuberculosis dispensaries.

Dr. Riviere has drawn upon an extended bibliography, and has called many Continental authorities to witness in support of observations for which, we think, he might have found equally strong testimony nearer home. It would seem hardly necessary, for instance, to bring Dr. Schmaus into court to prove that pleuritic adhesions are found in most cases of phthisis. A good many other doctors, since the days of Hippocrates, have noticed the same thing. The sound common sense of the practical physicians within our own borders, as shown in many publications of late years, would probably carry more weight to the mind of the average home reader than the more elaborate, and sometimes fanciful, surmises of Continental observers, for whose authority they have no means of vouching. But in Dr. Riviere's book the wheat and the chaff will be found to have been duly winnowed, albeit there is, perhaps, an unnecessary amount of space allotted to the latter.

[1] *The Early Diagnosis of Tubercle.* By Clive Riviere, M.D., F.R.C.P. Oxford Medical Publications. London: H. Frowde; Hodder and Stoughton. 1914. (Crown 8vo, pp. 270; 51 figures. 6s. net.)

HAEMIC INFECTIONS.

ONE great feature of the work on *Haemocytes and Haemic Infections* by Dr. BURNHAM of Toronto[2] is its wealth of photomicrographs. We do not remember such profusion in any other work dealing with this subject. Although we envy the possession of such rich material, we feel that this book provides one of the greatest arguments we have met with against the use of photomicrographic illustration. It makes the reader think of the time-honoured objection to photography as opposed to portraiture by an artist, because what is wanted is not only a faithful black-and-white picture of the features of the haemocytes, but, in these days of highly technical methods of staining, the tinctorial reaction of the various elements of the blood cells is wanted as well; we need as it were not only to see pictures of the anatomy of the cell or parasite, but something more which will give an idea of the relations and functions of the parts of the cell. Further, although the plates are exquisitely produced, they are frequently so placed in the book as to bear no relation to the adjacent letterpress; nor do we find in the latter any reference to the special points which each plate may be capable of illustrating. When we turn to the letterpress we have no hesitation in saying that its perusal will repay every one interested in the reaction of the blood to diseased processes. As the title of the work implies, the author does not present us with a mere study of leucocythaemias and primary anaemias, but knowingly or not he has, by treating his subject on such broad lines, brought his work into line with the most modern views as to the relation of leucocythaemias and anaemias to the infections and to cases of malignant growth in which the bone marrow is involved. Modern studies show that between the extremes of leucocythaemias on the one hand and the infective leucocytoses on the other, there are numerous cases now on record which show that infections can produce haemic changes and organic infiltrations which are qualitatively and even quantitatively identical with the leucocythaemias—whether myelocytic or lymphocytic. The subdivision of myelocythaemia and lymphocythaemia into subvarieties—myelocytic and myeloblastic and lymphocytic and lymphoblastic in type—is fully justified by recent investigations; the author meets the difficulty so obvious in such a suggestion, in that myeloblasts and lymphoblasts exhibit no marked morphological differences, by the contention that the distinction must be made by an appeal to a chemical differentiation, by what is known as the oxydase reaction. The author states on page 180 that lymphatic leukaemia is not influenced by x rays, but subsequently, quoting Lensir and Hilber, he says that lymphocytes are most susceptible to their influence, and on page 182 he quotes Joachim, who believes that x rays have an eclectic action on the myelocytes; obviously this is a contradiction. Limitation of space prevents us from referring to the numerous interesting points connected with bacteriology and haemic infection, but the reader should not miss the instructive description of a case of Malta fever on page 272, which in its clinical features presented protean characters.

[2] *Haemocytes and Haemic Infections.* A Handbook for Students and Practitioners. By F. W. E. Burnham, M.D., C.M. London: H. K. Lewis. 1913. (Cr. 4to, pp. 462; 226 photomicrographs. 25s.)

LABORATORY DIAGNOSTIC METHODS.

Practical Bacteriology, Microbiology, and Serumtherapy[3] is a translation of the fifth edition of Besson's well-established

[3] *Practical Bacteriology, Microbiology, and Serumtherapy (Medical and Veterinary). A Textbook for Laboratory Use.* By Dr. A. Besson. Translated and adapted from the fifth French edition by H. J. Hutchens, D.S.O., M.A., M.R.C.S., L.R.C.P., D.P.H.Oxon. London: Longmans, Green and Co. 1913. (Roy. 8vo, pp. 922; 416 illustrations. 36s. net.)

book by Professor H. J. HUTCHENS. It is rather surprising that this work has remained so long untranslated into English. The French have an inborn genius for clear, concise, and orderly expression of a subject, and Professor Hutchens has laid us under a debt of gratitude for his translation of a work which, though very popular in France, has been almost unknown in this country. The translation, on the whole, is faithfully rendered, but there occur here and there English constructions which it would be flattery to characterize as pleasing or scholarly. The split infinitive, the misuse of the nominative absolute, the disagreement of numbers, and other errors of syntax are far too common, while such expressions as "an horizontal line," "an herring," and "an human bacillus" will certainly hurt the feelings of the most callous. Still these faults are more than forgiven on account of the general excellence of the book. It is a practical and theoretical medical and veterinary textbook, interesting to the advanced worker and easy of understanding to the beginner. As a book of methods it is especially good, and there is very little in the way of technique which one could acquire in the course of several years in laboratories that is not given here. Further, those methods which have proved themselves of greatest use are specially indicated. There is a separate chapter for each pathogenic micro-organism, divided into sections and subsections, and the fact that the most recent observations on each subject are incorporated makes every chapter practically a complete monograph on the subject. The translator has added paragraphs of his own in many of the sections giving additional information, particularly in connexion with tuberculosis and plague, on which he has had intimate experience. The addition of numerous other paragraphs, though not always called for, serves to produce a work which combines the teaching of both French and English schools. The value of the book will stand the test of the consideration of any isolated chapter. It is well balanced. The illustrations, many of which are in colour, are a conspicuous feature. We could wish this textbook in the hands of every medical student and practitioner. Its price may tend to restrict its popularity.

The valuable volume on the *Faeces of Children and Adults*,[4] by Dr. CAMMIDGE, is based upon Dr. Adolf F. Hecht's *Die Faeces des Saeuglings und des Kindes*, and on Schmidt and Strasburger's *Faeces des Menschen*, but the author has incorporated the result of experience gained during the last fifteen years by the examination of several thousands of specimens. The book, after a short introduction, discusses the examination of the faeces by the naked eye and with the microscope; one chapter is devoted to animal parasites, and another to bacteriological examination, including the methods of investigation and classification of the micro-organisms found in the bowel. The chemical analysis of the faeces is described in two chapters, one dealing with the examination of fresh faeces, their action, presence of bile and its derivatives, of proteins, mucus, amino-acids and their products, carbohydrates, fats, and ferments; and the other with the dried faeces, the estimation of the water content, the total nitrogen, nucleins, fats, carbohydrates, cellulose and inorganic constituents, with a brief account of the calorimetry of the faeces following the results of Lohrisch and Schlossmann. There is also a careful summary of the chemical composition of faecal calculi and other concretions met with in the bowel. These chapters are abundantly illustrated by numerous whole-page plates, and by many small figures in the text, while the descriptions of methods employed are exceedingly clear and easy to follow. The diagnostic value of the special procedures recommended by the author are described, and the peculiarities presented by the faeces in various diseases are discussed, their indications for treatment are pointed out and remedies are briefly reviewed, most stress being naturally laid upon diet, but such means as drugs and vaccines are not overlooked. In an appendix there will be found a number of useful dietaries culled from standard writings. Dr. Cammidge rightly emphasizes the importance of the intimate association of laboratory with clinical work; it is unreasonable to expect that a specimen sent to a pathologist at a distance, without details of the case, can be usefully reported upon. The result may, in fact, be very misleading unless the signs and symptoms presented by the case are also supplied, and where faeces are sent for examination the information should include a description of the diet taken for the previous two or three days.

[4] *The Faeces of Children and Adults.* By P. J. Cammidge, M.D.Lond. Bristol: John Wright and Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1914. (Demy 8vo, pp. 524; 96 figures, 13 plates. 17s. 6d. net.)

When a work has reached its third edition it seems superfluous for a reviewer to do more than give his readers some idea of its value. This applies to Dr. RALPH W. WEBSTER'S book on *Diagnostic Methods*.[5] He is the Director of the Clinical Laboratory at Chicago, and has presumably had a wide and varied experience in the application of laboratory methods to the diagnosis of disease. His book contains sections on the sputum, on the secretions of the mouth, nose, ear, and eye; on the gastric contents and faeces, on parasites, on the urine, on the secretions of the genital organs, on the blood, on transudates and exudates, and on the mammary secretion. Of these, as might be expected, the chapters on the blood and the urine are the fullest and the most important, but in every section the subject is dealt with very thoroughly, and the author includes practically all the methods either in use or which have been recently suggested. He writes clearly, and the text is abundantly illustrated by numerous figures and by thirty-seven coloured plates. On page 63, in describing the Mintz method for the quantitative estimation of hydrochloric acid, there seems to be a slip, as the end reaction would be shown by the disappearance of the red colour and not by its presence. The author speaks of Cammidge's reaction as not being pathognomonic of pancreatic disease, as it occurs in many other conditions, and may not even be present where this organ is involved. He describes an epidemic sore throat which has prevailed in Boston, Chicago, and Baltimore as being due to a streptococcus, which he calls *Streptococcus epidemicus*. In the diagnosis of syphilis he prefers the Noguchi system to that of Wassermann, and gives a table compiled from Boas and Noguchi including some thousands of cases showing the large percentage of failures, so that he affirms that the Wassermann reaction is not a specific reaction, and that it must be distinctly understood that a negative result does not exclude syphilis. No doubt every worker has his personal preferences, but as a laboratory guide Dr. Webster's book is assured of a warm welcome on this side of the Atlantic.

[5] *Diagnostic Methods, Chemical, Bacteriological, and Microscopical.* By Ralph W. Webster, M.D., Ph.D. Third edition. London: Henry Kimpton. Glasgow: Alexander Stenhouse. 1913. (Med. 8vo, pp. 723; 164 figures, 37 plates. 18s. net.)

CANCER OF THE BREAST.

THE monograph of the late Mr. CECIL LEAF on *Cancer of the Breast*,[6] which was finished by his colleague, Mr. ROWNTREE, is an eminently readable book. In short compass it gives a clear exposition of the anatomy of the breast, the causes that predispose to cancer, the methods of diagnosis of the disease, and the operative treatment. The anatomical part is very well done, and the illustrations are lucid and simple. The discussion of the subject of the lymphatics, which is, of course, of prime importance for the rational treatment of cancer, is, as might be expected from an original worker in this field, full, and leaves nothing to be desired either in information or simplicity. Of the 150 pages composing the book, forty are devoted to anatomical considerations. The chapter on the predisposing causes of mammary cancer is, perhaps, the most interesting. Rigidly avoiding all theories as to cancer genesis, the author made a careful analysis of 100 cases under his charge, obtaining particulars of the family history and previous local conditions in each case. He concluded that patients with a family history of consumption are more liable to cancer of the breast than others, and that previous inflammatory diseases or injuries to the organ are very frequent precursors of cancer. The suggestion that there is any one specific cause of cancer is ruled out of account, but it is held that there are certain common predisposing conditions. The chapters on diagnosis and the selection of cases suitable for operation are sound. With regard to treatment, one cannot but

[6] *Cancer of the Breast, Clinically Considered.* By the late C. H. Leaf, M.A., M.B.Cantab., F.R.C.S.Eng. London: Constable and Co., Ltd. 1912. (Med. 8vo, pp. 164; 43 figures. 10s. 6d. net.)

admire the honest presentation of the results, in which the failures are as conspicuously recorded as the successes. It is only by such a method that a proper appreciation of the value of certain measures can be obtained and advance hastened. Those friends of Cecil Leaf will treasure this little memento of a kindly, industrious worker in what was, when he started, a rather gloomy field for the surgeon, but which, ere he left it, was full of promise. To all the book may be recommended.

INDIAN HOME NURSING.

THE St. John Ambulance Association has acquired an extensive and stable position in British India and in the native states. By means of lectures and demonstrations followed by examinations, a knowledge of first aid and home nursing is being widely implanted among both Europeans and natives. Much of the success of the movement is due to the intelligent and indefatigable efforts of Major R. J. Blackham, C.I.E., V.H.S., R.A.M.C., the honorary general secretary of the Indian Branch. He has written an *Indian Manual of First Aid*, and as a companion to that has now prepared a manual of *Indian Home Nursing*.[7] This work is intended to be a textbook for all the Indian ambulance competitions in the future, to be used by lecturers and classes, and employed by persons who, unable to secure the services of skilled nurses, may be called upon to minister to the sick. The information conveyed is full, and is imparted in simple, clear language, capable of being apprehended and applied by those who have not had the advantage of a systematic training in a hospital. It touches all matters connected with the hygiene of the sick-room, the arrangement of the bed and bedding, the handling of the patient, the preparation and administration of food, the observation and recording of symptoms, the disposal of excreta, the administration of medicines, the application of local remedies, bathing, bandaging—in fact, every detail of attention and service tending to promote the comfort and recovery of the patient. Charts and illustrations, thirty-eight in number, assist the comprehension of the text, and the size, arrangement, printing, and indexing render the manual convenient in use and easy of reference.

NEURASTHENIA.

DR. PAUL HARTENBERG'S *Treatment of Neurasthenia*[8] is not exclusively devoted to therapeutics. The four introductory chapters give a fairly complete account of the pathology and symptomatology of the condition. The author considers an exhausted and weakened state of the psycho-motor centres to be the fundamental phenomenon of the disease, pointing out the practical identity of the symptoms of a typical neurasthenia with those of normal fatigue. The difference is that, whereas the fatigue of a healthy individual readily yields to rest, that of a neurasthenic is habitual and refractory. No account is made of the distinction between the cerebral and spinal types of neurasthenia; the former, sometimes termed "psychasthenia," would seem to be the form of the malady mainly in view in this treatise. It is closely allied to melancholia, but differs from it in that the characteristic depression is of a nervous rather than of a moral type. In support of his contention that the weariness complained of by neurasthenics is a central phenomenon Dr. Hartenberg cites numerous observations made with a myotonometer of his own invention, purporting to prove that this weariness is independent of the degree of muscular tonicity. Hypotonus is, the author finds, rather exceptional among neurasthenics, and those who manifest it do so also after recovery.

The author assigns to gastro-intestinal disorders a predominant part in the causation of neurasthenia. He considers emotional distress far more conducive to the disease than mere overwork, and of this one of the most deleterious forms is, in his opinion, that arising from enforced sexual abstention.

In the treatment something more than mere stimulation must be aimed at; there must be provision for an actual and permanent recuperation of the exhausted nerve force. This cannot be effected by drugs or by psychotherapy, useful as both are, but only through economy of effort, emotional tranquillity, and, wherever required or possible, super-alimentation. The practice of complete mental and muscular relaxation for ten minutes several times daily is strongly recommended, and should at first be carried out under direct supervision. Among drugs the author gives the first place to strychnine administered hypodermically and in increasing doses up to the limit of comfortable tolerance. He combats the prevalent notion that strychnine produces phenomena of accumulation. The book is throughout readable, and abounds with practical suggestions.

NOTES ON BOOKS.

THE second edition in English of the handbook of treatment by Professor ORTNER, of Vienna, has been prepared by Dr. FREDERIC H. BARTLETT, of New York, from the fifth German edition. Its scope is indicated by the title, *Treatment of Internal Diseases; for Physicians and Students*.[9] The book is edited by Dr. N. BOWDITCH POTTER, of New York. Clearly great pains have been given to its revision, but we are inclined to think that Drs. Potter and Bartlett would have been better advised to have devoted themselves to the production of an original work of their own; the book does not seem to possess any marked outstanding features which make its transplantation from the country of its origin especially desirable.

The time of preparation for the birth of her first child is often one of great anxiety to a young wife. Much of her fear and distrust of the future, however, might be lessened, if not entirely overcome, by allowing herself to be guided by those qualified to advise and assist her. A book such as Dr. J. BERNARD DAWSON'S *The Young Mother*,[10] therefore, should be of real service to the expectant mother who desires to preserve her own and her baby's health before and after confinement; and in the companion volume, *Babyhood*,[11] Dr. DAWSON has accompanied her through the first year of the infant's life, indicating at one and the same time the dangers in her path and the means to overcome or avoid them. Both volumes should be of great assistance to inexperienced parents of either sex. The author is refreshingly free from fads of any kind, and his books are characterized by practical common sense and a thorough understanding of and sympathy with the young mother's difficulties.

A useful little book on the subject of *Incandescent Electric Lamps*[12] forms one of a series dealing with technical handicrafts. The author, Mr. D. H. OGLEY, concerns himself not only with the details of electric lamp manufacture but with the principles of vision, the distribution of light sources in a building, and the science of shades and reflectors. Although mainly of service to those actually engaged in illuminating engineering, or whose ambitions run in that direction, the book has an interest for a wider public, and the author's remarks on the subject of illumination efficiency in domestic and public interiors, and its frequent sacrifice to artistic effect, are very sound. In order to point the moral it is unnecessary to go further from home than the dining-room of the small modern house, where the only source of light is carefully concealed, save for the table area, by a circular shade of crimson silk.

MRS. ST. CLAIR STOBART is a firm believer in the expediency of women taking a practical share in national defence, and her book on *War and Women*[13] is nothing less than a plea

[7] *Indian Home Nursing*. By Major R. J. Blackham, C.I.E., V.H.S., R.A.M.C., Kaisar-i-Hind Medallist, Barrister-at-Law, Knight of Grace of St. John, etc. Simla: St. John Ambulance Association, Indian Branch. 1913. (4 × 5, pp. 204.)

[8] *Treatment of Neurasthenia*. By Dr. P. Hartenberg. Translated by E. Playfair, M.B., M.R.C.S. Edinburgh, Glasgow, and London: H. Frowde; Hodder and Stoughton. 1914. (Cr. 8vo, pp. 291; 2 figures. 6s. net.)

[9] *Treatment of Internal Diseases; for Physicians and Students*. By Professor Norbert Ortner. Edited with additions by N. Bowditch Potter. Translated by Frederic H. Bartlett, M.D. Second edition in English. Philadelphia and London: J. B. Lippincott Co. 1913. (Roy. 8vo, pp. 652. 21s. net.)

[10] *The Young Mother*. By J. Bernard Dawson, M.D.Lond., F.R.C.S.Eng. London: Ewart, Seymour, and Co., Ltd. 1913. (Pp. 108. 2s. 6d. net.)

[11] *Babyhood*. By J. Bernard Dawson, M.D.Lond., F.R.C.S.Eng. London: Ewart, Seymour, and Co., Ltd. 1913. (Pp. 124. 2s. 6d. net.)

[12] *Incandescent Electric Lamps and their Application*. By Daniel H. Ogley. London: Longmans, Green, and Co. 1914. (Cr. 8vo, pp. 119; 59 illustrations. 2s. 6d. net.)

[13] *War and Women*, from experience in the Balkans and elsewhere. By Mrs. St. Clair Stobart, foundress of the Women's Convoy Corps. With a preface by Viscount Esher, G.C.B. [London: G. Bell and Sons, Ltd. 1913. (Post 8vo, pp. 258; 32 illustrations. 3s. 6d. net.)

for their inclusion as an integral portion of the Territorial service of the country. The foundress of the Women's Convoy Corps, Mrs. Stobart has won her own spurs by her work in succouring the wounded during the Balkan war; and her account of the ten weeks spent with her companions in a makeshift hospital established by the Convoy Corps in the little Bulgarian town of Kirk-Kilisse is a record of a gallant struggle against overwhelming difficulties and of danger and discomfort borne with a patience and courage almost as great as those displayed by the soldier patients themselves. Mrs. Stobart writes very entertainingly; and even those whom she does not succeed in converting to her views will be indebted to her for some pleasant hours spent in the stimulating company of the little band of women who accompanied her to the seat of war. The book contains a preface by Viscount Esher and some excellent photographs.

The trustees of the Carnegie Endowment for International Peace commissioned Dr. C. W. ELIOT in the autumn of 1911 to investigate conditions in the Far East, and to make suggestions as to the best methods of promoting the objects of the endowment. The result is embodied in his report, *Some Roads towards Peace*.[14] He was in China shortly after the establishment of the Provisional Government, and has much to say of the great difficulties of the Chinese leaders at that time. As his observations are contained in a rather businesslike report, and therefore necessarily devoid of local colour, and as also he refrains from quoting the intimate and confidential conversations which he was enabled to have with many eminent persons in the countries visited, his statements and conclusions appear to the reader to have a very dogmatic character. The principal means he recommends to his committee are educational and medical—the establishing of schools, libraries, and hospitals. High praise is given to the hospitals already founded by missionary societies, but the author everywhere found that they were understaffed and in urgent need of more money. However large and well equipped a hospital might be, planted among a teeming population unprovided with other medical and surgical attendance, it would probably be found that similar complaints would arise. The roads towards peace indicated by the author appear to be very long ones judging by the little progress made by Western nations; they are, however, none the less sure. In spite, or perhaps because, of its brevity the report is most thought-provoking.

MEDICINAL AND DIETETIC ARTICLES.

Phylacogens.

MESSRS. PARKE, DAVIS AND COMPANY forwarded to us some time ago some specimens of a class of therapeutic remedies to which the name Phylacogen had been applied, together with literature describing their nature and method of preparation. The principle upon which the use of phylacogens is founded owes its conception to Dr. A. F. Schafer, of Bakersfield, California, who is of the belief that (1) practically all acute and many of the chronic diseases are caused by the metabolic products of bacteria; (2) that the human subject is the host of micro-organisms that are pathologically latent but capable of setting up a disease process under certain conditions; (3) that the growth of infecting micro-organisms can be averted and their effects neutralized by products derived from their development in artificial culture media. The phylacogens are stated to be sterile aqueous solutions of metabolic substances or derivatives generated by bacteria from artificial media. Their method of preparation briefly is: to plant a large number of pathogenic bacteria in equal quantities on artificial media and incubate them for seventy-two hours or longer. The bacteria are then killed and removed by filtering the material through porcelain. This product is the basic or polyvalent phylacogen. The phylacogen for any specific disease is prepared by mixing this polyvalent phylacogen with an equal amount of the filtrate obtained from a pure culture of the specific organism required. In this way five distinct varieties of phylacogen are made up—for mixed infection, erysipelas, gonorrhoea, pneumonia, and rheumatism. These may be administered either subcutaneously or intravenously. Treatment by injections of phylacogen has been employed to some extent in the United States, and the results obtained there are said to be highly satisfactory. So far as we have been able to gather, neither clinicians nor bacteriologists in this country are enthusiastic in their expectations of finding in the phylacogens means of curing hitherto obstinate and incurable diseases.

Malt Extract with Petroleum.

A new preparation of petroleum for internal use, which we have recently examined, is Byno-Chrismol, made by Messrs. Allen and Hanburys, Limited (London). This is a compound of malt extract with liquid paraffin, and our analysis shows it to contain about 50 per cent. by volume of the latter. It is a highly palatable preparation, of the consistence of a stiff malt extract, and the sample submitted did not show any sign of separation after prolonged standing.

Biomalz.

The proved value of extract of malt as a food is no doubt not only due to the proteins and carbohydrates which it contains, but also to the phosphorus compounds present in it. Biomalz is a preparation in which the phosphorus content has been increased by the addition of calcium glycerophosphate, and high nutritive value is claimed for it by the makers. Messrs. Patermann Brothers (London, W.C.). Our examination of samples of this product which have been submitted show it to be an extract of sufficiently thin consistency to pour easily; it is sent out in hermetically sealed tins. The extract has the usual agreeable flavour of malt preparations, but we find the sample examined to be devoid of diastatic power.

Kerol and its Preparations.

We have received from Messrs. Quibell Brothers, Ltd. (Newark), samples of a disinfectant they have named "Kerol" and of some preparations containing it. Kerol is a dark brown liquid with an odour which is far from unpleasant, forming a milky emulsion with water; it is described as an oxygenated compound having a diphenyl nucleus, with a carbolic acid coefficient for *B. typhosus* of 22 to 23 and a very low toxicity. Besides the liquid, which is recommended in various dilutions for domestic, toilet, and sick-room uses, a disinfecting powder is supplied for dustbins, etc. Kerol is also intended for use as a stomachic and intestinal antiseptic, and for this purpose is supplied in capsules containing 3 minims, plain or coated with keratin. Lano-kerol is a combination of kerol with lanoline.

Kola and Calcium Glycerophosphate Granules.

Messrs. A. Wander, Ltd. (London, E.C.), have submitted a sample of one of the granular preparations of which they prepare a series. The sample in question consists of long, thin granules having a sugar basis; they are stated to contain 6½ grains each of calcium glycerophosphate and liquid extract of kola in two dessert-spoonfuls. The preparation would doubtless be acceptable in cases in which a syrup is objected to.

Optochin.

Experiments on animals having indicated that ethylhydrocupreine has a specific action against the pneumococcus, it has been employed in cases of croupous pneumonia and ulcus corneae serpens of pneumococcic origin; the results appear to have been sufficiently good to warrant its further employment in such cases. The salt used is the hydrochloride, and the Vereinigte Chininfabriken Zimmer of Frankfort have placed this on the market under the name "Optochin." A sample which has been submitted to us by the London agents, Messrs. Widenmann, Broicher, and Co., Ltd., shows it to be a white crystalline powder, soluble in water to a neutral solution.

Carnine Lefrancq.

We have received from Messrs. Wilcox, Jozeau, and Co. (London, S.W.), the English agents, a sample of Carnine Lefrancq, which is described as the juice of raw meat, concentrated *in vacuo* without heat and preserved by the addition of sugar and glycerine. It is claimed that by this method of manufacture valuable ferments are retained in an active state. Our examination showed the preparation to be a bright syrup, vanilla-flavoured, and of pleasant taste. Analysis showed 0.9 per cent. of nitrogen, corresponding to 5.7 per cent. of protein.

[14] *Some Roads towards Peace: A Report to the Trustees of the Carnegie Endowment on Observations made in China and Japan in 1912.* By C. W. Eliot. Washington: Carnegie Endowment for International Peace, 1913. (Roy. 8vo, pp. 88.)

THE last issue of the *Tropical Diseases Bulletin* (vol. iii, 1914, No. 6) contains abstracts of many papers upon ankylostomiasis, a subject which has recently attracted much attention in various parts of the world. Now that the commission of the Rockefeller Institute has tackled the subject from a scientific point of view, it is to be hoped that means will be found for diminishing, if not wholly preventing, infections by this parasite. The campaign conducted in the Southern States of the United States is reported to have been so far very successful.

THE MEDICAL SERVICE, R.N.

REMEDIES FOR EXISTING DEFECTS.

THE following memorandum embodies the views of a number of correspondents well qualified to speak on the existing defects in the medical service of the Royal Navy and the disabilities under which its officers labour:

In view of the leader in the BRITISH MEDICAL JOURNAL of February 28th, 1914, on the increasing shortage of medical officers for the navy, and of the invitation in the issue of March 7th, we wish to state that we are in entire agreement with everything you have said, but offer the following supplementary remarks:

On February 20th, 1914, the Director-General of the Medical Department of the Royal Navy, at Edinburgh, in his speech delivered in order to attract candidates for the Naval Medical Service, appealed on patriotic grounds. As the three fighting services have an equal claim on one's patriotic instincts, the cause of shortage in any one of them must be sought for on other grounds than that of lack of patriotism. That the Naval Medical Service compares extremely unfavourably with the Royal Army Medical Corps in all respects it is now our purpose to show—

Royal Naval Medical Service.	*Royal Army Medical Corps.*
1. Accommodation: A small cabin on board ship.	Lodging allowance granted on a liberal scale. A junior captain, R.A.M.C., serving abroad may have approximately the same pay as a fleet surgeon who ranks with a lieutenant-colonel.
2. Passages to wives and children not allowed to officers serving abroad, except to shore establishments, and then only if appointment for three years, and also only one way.	Passages allowed both ways.
3. Absolute subordination to the executive officer.	Equal authority and rank with the combatant officer.
4. Medical officers are not allowed to sit on boards of courts-martial on members of their own branch.	Are allowed to sit.
5. Permission to practise in their spare time rendered impossible by the action of senior executive officer having local control.	No interference. These matters are judged and dealt with by the principal medical officer.
6. Specialism in the navy is practically negligible, and should no longer be postponed.	Specialism is encouraged, paid for, and has existed for many years.
7. Six weeks' leave per annum may be, but very rarely is, granted. Abroad leave is very difficult to obtain, and in hospitals abroad medical officers frequently do day on and day off for three years without any leave. Leave cannot be accumulated.	Three months' leave per annum is granted at home and abroad. Leave may be accumulated, and owing to the sufficiency of medical officers is obtained without difficulty.

The Royal Naval Medical Service is hampered in its work by antiquated service customs and red tape, kept extant by a strong desire on the part of the naval executive branch not to lose even the smallest control over all the non-executive branches.

In the BRITISH MEDICAL JOURNAL of December 6th, 1913, page 159, appears a list of minutes adopted by the Lords Commissioners of the Admiralty, on the recommendation of the Medical Consultative Board. Minute No. 2 states:

> That in future the senior medical officer will preside at boards for survey of invalids.

Hitherto such a board had always been presided over by an executive officer, a state of affairs which, although running smoothly enough, was felt by doctors to be quite unnecessary and also wrong in principle. This "concession" is now circumvented by the executive authorities, in the wording of the signal convening a survey—detailing the medical officers who will constitute such a board, and concluding by "In the presence of," and here follows the name of an executive officer. That a board consisting of commissioned medical officers should require supervision in their work amounts, in our opinion, to an insult to our profession. There is no supervision in reality, but it is there in theory, the executive officer signing all the papers. It would therefore appear that the above is only a means of evading what was intended to be a reform; further, it shows the low value placed by the authorities upon our relative rank.

Among the so-called concessions was one that conceded private practice to naval medical officers "on the same lines as R.A.M.C. officers." This has not been carried out when application has been made, no adequate reason for the refusal being given. One case that has come to our notice was a case in which a naval medical officer contemplated taking up certain work during the time his services could be spared, which was identical in nature with that commonly done by R.A.M.C. officers.

Seniority in the navy carries with it many concrete privileges—for example, in the matter of cabin accommodation, but the medical officer occupies a cabin already set apart and labelled, which is usually inferior in size and situation to those occupied by various junior officers. Again, were relative rank what it ought to be, the medical officer would still suffer, as he is years older for his seniority than other officers, it being usual for a surgeon of four years' seniority to be of the same age as a lieutenant of over eight. Further, as length of service increases, the discrepancy in age becomes more marked between the medical and other branches. It is therefore highly desirable, in order to bring age, when compared with seniority, more into line with the great bulk of naval officers, to promote surgeons to staff surgeons on completion of six years' service, and to fleet surgeons on completion of twelve years' service.

The cabin question is an important one, being the cause of much discontent. At present there is no regulation which entitles a surgeon to a cabin at all, unless he is the senior medical officer of the ship. Cabins are not given to the senior officers in order of seniority; the second in command, being a commander or lieutenant, taking the next best cabin to the captain as a matter of course, while all the other senior officers in the engineering, accountant, and medical branches take their labelled cabins, although in their relative rank they may be years senior, and not infrequently may even hold an actually superior rank to the second in command. Here, again, is brought home to us the low estimate in which relative rank is held.

It is laid down by Article 216 of the King's Regulations, that

> All non-executive officers, whatever their rank, are under the command of the captain, the executive officer, and the officer of the watch, and in all matters outside their own departments they are to be subject to the authority of the senior officer of the military branch present.

This article is wider in its scope than any one who has not lived in the navy can realize, and as such authority frequently devolves on very junior officers, its interpretation is at times very arbitrary, and the cause of much dissatisfaction. It is only because of the usual good feeling and common sense of the average executive officer, combined with the tact shown by most medical officers, that friction does not more frequently occur.

Further, by Article 1301 of the King's Regulations, a medical officer must divulge the exact nature of the disease from which an officer or man is suffering to the captain or whoever his deputy may be. A written statement as a medical man and a commissioned officer that an officer or man is sick should suffice. That a medical officer is not granted the usual professional privilege of secrecy as regards his patient's ailments entails an injury to his self-respect and the loss of his patient's confidence none of our medical brethren will doubt. Few as are the higher posts to which a junior medical officer may aspire, we find that they are not up to the number laid down—namely, instead of nineteen, as laid down, there are only seventeen, and of these thirteen only are on full pay, the remainder merely ornamenting the Navy List.

This compares very badly with the forty-two higher ranks in the Royal Army Medical Corps, all on full pay. The number of senior posts in the navy, namely, nineteen, ought to be doubled, thus allowing more fleet surgeons a chance of promotion, with higher full and retired pay. This increase would prevent many fleet surgeons from retiring while still in their prime and with many years of useful work before them. These officers could be employed as principal medical officers in barracks, dockyards,

hospitals and hospital ships, large training establishments such as Shotley, Whale Island, etc.

We also think it desirable that a roster for shore appointments should be kept and as far as possible adhered to.

In reviewing the conditions of our pay and service we should be compared with our colleagues in the Royal Army Medical Corps and Indian Medical Service, and not with naval officers of the other civilian branches. It is probably owing to this erroneous comparison having been made by the authorities in the past that we are so far behind the army doctor.

Another reform which is called for is the grant of charge pay to all medical officers in charge on a graduated scale. At present it is quite possible to serve for twenty years without benefiting by this emolument.

The medical director-general said in his speech that the sick-berth staff were second to none. We should like to add that, although second to none in quality, they are second to others in quantity and pay. This branch is surprisingly good when the pay offered is taken into consideration, but is very understaffed. It is heart-breaking to be for ever working in hospital short-handed. And this deserving arm of the service must not be forgotten when reforms are brought in.

Further, we agree with you, Sir, that it is a matter for regret that the report of the Durnford Committee was not published. The prevailing opinion among naval medical officers on this point is that it was "suppressed" as undesirable, conceding too much to the medical branch.

The Remedy.

This must be twofold—improved pay and improved conditions. Only thus will the necessary candidates be obtained, and the widespread discontent among those already serving be done away with. We wish to emphasize the fact that our grievances are not solely financial, poorly paid though we are by comparison with our colleagues in the other great services of the Crown.

A substantial increase of pay all round must be granted, to bring us somewhere into line with the R.A.M.C., otherwise it is hopeless to expect to obtain men of their high professional standard. To get good men the market price must be paid. It is useless to nibble with an odd shilling every other year. This of itself never attracted a single candidate. Good men having been obtained, they should be induced to remain in the service by ample opportunities being afforded them of at least remaining as efficient as when they entered; otherwise the prestige of the Naval Medical Service must suffer, and consequently the health of the navy as well.

Something radical must be done now to break the vicious circle that at present cramps all attempts at reform.

This is the vicious circle.

It is impossible to grant study leave to an adequate extent and opportunities for specializing until the numbers are brought up to full complement, but until this is done new candidates will not enter, as the service offers them but a monotonous present and a blank future.

Of equal importance is more freedom in the discharge of duties from the long-standing incubus of executivism. We are drifting from bad to worse, and, what is infinitely more disastrous for us as a part and the prestige of the profession as a whole, is that we shall add in the future to the tail of the Navy List names of men who, to say the least of it, are not the best our great seats of learning in Great Britain can produce.

THE Servian Government has under consideration the establishment of a medical faculty in the University of Belgrade.

THE New York Board of Aldermen has finally passed a bill which provides that any one who publishes an advertisement containing assertions, representations, or statements which are untrue, deceptive, or misleading shall be subject to a fine of not less than £5, or imprisonment for not less than five days or more than six months, or by both fine and imprisonment. In Chicago a similar ordinance, according to the *New York Medical Journal*, has proved most effective in a campaign directed against venereal quack advertisers, and steps are being taken by the Department of Health to make similar use of the new law in New York.

INTERNATIONAL SOCIETY OF SURGERY.

(Continued from page 923.)

GRAFTS AND THE TRANSPLANTATION OF TISSUE.

M. H. MORESTIN (Paris) expressed the opinion that grafts and the transplantation of tissue generally had greatly widened the field of plastic surgery. Cutaneous, epidermic, cartilaginous and fatty grafts were among those that were in everyday use. Skin-grafting by Thiersch's method gave good results, but it was disappointing on the face owing to the permanent white discoloration. The Italian method of cutaneous transplantation in two stages obviated this, and was preferable when the whole thickness of the skin was required; but it must be looked on as only an exceptional method even for rhinoplasty and blepharoplasty. A graft of the whole thickness of the skin was required for cases in which there was considerable loss of substance, such as followed lupus, evulsion of the scalp, and burns. It was usually combined with the other methods. The hairy parts, even the moustache and eyebrow, could be restored by means of grafts from a hairy part. The transplantation of cartilage had rendered possible total rhinoplasty; it was most trustworthy, and the modelling was easy; the graft lived for an indefinite period. In this way it was now possible to effect a restoration even after a serious destruction of tissue, such as gaps in the jaw. Fatty grafts were useful in filling up hollow spaces. The fat disappeared, but was replaced by new tissue. The facility with which it could be used in curing depressions made it a valuable acquisition to aesthetic surgery.

M. E. VILLARD (Lyons) discussed the grafting of blood vessels, and pointed out that an excellent functional result might be obtained, although the microscope revealed profound changes in the graft. For the grafting of fresh tissues he preferred Carrel's method. Portions of arteries transplanted from one vessel to another in the same animal lived in their new surroundings, and retained their histological structure. Homoplastic grafting—that is to say, the insertion of a graft from a subject of the same species—gave good clinical results, but the histological changes observed after a time made it necessary to reserve opinion as to the ultimate fate of the graft. Heteroplastic grafts—that is to say, from an animal of another species—were possible, but it seemed that the graft served only as a guide in the process of restoration. Venous grafts were possible, but more difficult to accomplish than arterial, for the grafted piece of vein hypertrophied and underwent histological changes in the direction of arterial structure. If portions of vessels were to be preserved for future use the best method was to keep them in an aseptic physiological medium at a temperature of 0° C. Portions of vessels so preserved could be grafted with success, but only their elastic framework, which was invaded by cellular elements, was utilized. Vascular grafts could be used in surgery in three circumstances—to repair an injury, in cases in which a tumour adhered to large vessels, and for the cure of aneurysm. It was always wiser to use an autoplastic graft and to choose a vein, as it was easier to obtain a venous than an arterial graft.

Dr. E. ULLMANN (Vienna) said that the hopes raised fifteen years ago in respect to the transplantation of tissues and organs had only partially been realized. The principal obstacle to the success of heteroplasty was anaphylaxis, and of homoplasty the biochemical properties of the individual. Heteroplastic transplantation always gave bad results except in the case of bony tissues, and in that instance the bone itself did not remain, but was replaced by bony tissue derived from the grafted subject. The result of homoplastic transplantation varied, and depended probably upon the greater or less identity of the serum of the two individuals of the same species. If it were possible to render the serum of the two individuals analogous and their cellular protoplasm identical, homoplasty would give results as satisfactory as autoplasty, which so far had alone proved reliable.

Professor E. LEXER (Jena) related the results of his personal work and experience. The value of the various tissues employed for grafting was differently estimated by practitioners and by pathologists. An excellent clinical result might be obtained not only if the graft took preserving its entire structure, but also if it disappeared slowly giving place to tissues of substitution, and sometimes even if it were completely surrounded by adhesions. On the

other hand, the degree of clinical failure varied. The graft might be rapidly expelled by a violent reaction, or disappear in a slow progressive suppuration, or failure might be due to the graft disappearing before the process of substitution had taken place, or scar tissue only might be produced. The chief cause of failure apart from suppuration was the existence of small blood clots, which prevented the nutrition of the transplanted part from becoming normally established. Autoplasty, homoplasty, and heteroplasty presented different conditions for success. Among the conditions necessary for a good implantation were vitality, nutrition, powers of acclimatization, the strength of the transplant for sufficient regeneration, and the condition of the wound on which the implantation was made. It was necessary to observe scrupulous asepsis, to watch against haemorrhage, to handle the grafts carefully, and to avoid lines of suture on their surface. The value of epidermic and cutaneous homoplasty was small, and its results were doubtful; most frequently it was a question probably of cicatricial substitution or healing under a scab.

METHODS OF AMPUTATION.

The third subject selected for discussion was that of methods of amputation. It was introduced by Professor O. WITZEL (Bonn), who, after pointing out that modern surgical methods of treating injuries and of operating for tumours, and modern orthopaedic methods had greatly diminished the number of amputations, said that the two aims should be not to endanger life and to leave the patient with a useful painless stump. With regard to the latter, he recommended a clean section of the nerves high up. Disarticulation or section of the bone through the epiphyses, by avoiding the opening of the medullary canal, tended to prevent neuritis due to the fixation of small nervous filaments to the surface of the bone. Closure of the medullary canal by the methods of Bier, Wilms, Ritter, or Bunge also tended to diminish the risk of this complication. He advised early methodical massage of the tissues and the use of temporary prosthetic appliances. To obtain a good stump for which an apparatus could be satisfactorily adapted it was necessary to bear in mind the unequal retraction of the muscles and tendons: the suturing of neighbouring and opposing muscles aided in maintaining functional equilibrium. Certain groups of tendons, more especially in the forearm, could be converted into rings covered with skin, and by this means the artificial appliances were rendered more "living."

Professor P. VON KUZMIK (Budapest), who dealt with amputations of the hand or finger, said that all the modern methods had given good results, but that surgery in such cases should be as conservative as possible.

Dr. J. F. BINNIE (Kansas City), in dealing with amputations of the leg, said that if a good weight-bearing stump were secured, the more of the leg retained below the knee the more useful would it be. Improvements in amputation of the leg were all in the direction of obtaining better weight-bearing stumps, and the designs of artificial limbs must be adapted to this means. Hirsch and Bunge's subperiosteal treatment of the bony stump in any amputation and osteoplastic amputations under specially favourable circumstances were very valuable means towards obtaining ideal weight-bearing stumps. Free transplantation of a fragment of bone to the end of the divided tibia might replace the more difficult and complicated osteoplastic methods of Bier and others.

M. DURAND (Lyons), in discussing amputations of the foot and leg, commented on the excellent functional results obtained after amputation of any one of the four smaller toes, and said that even in the case of the great toe total disarticulation, if carried out by the subperiosteal method, might give an excellent result. At the present day, amputations of the leg and foot owed their gravity solely to the affection which necessitated the operation and the general condition of the patient. The greater care given to obtaining good stumps, and the great progress achieved in making artificial appliances, had considerably improved the usefulness of stumps after amputation of the foot and of the leg. Owing to these improvements, it was now justifiable to amputate in the middle or lower third of the leg.

Dr. E. RANZI said that in order to obtain the best stump after amputations of the leg the most important point was to avoid an over-production of callus. Bier and Wilms obtained this result by closing the medullary cavity with periosteum or tendon. Bunge sought to obtain the same end by the removal of periosteum and medulla. It was not of so much importance to bring the cicatrix away from the point of contact or to seek to prevent adhesions between the soft tissues and the bony stump. He was in favour of following Bunge's method, which seemed to him to be the simplest, to give the best results even when union was not obtained by first intention, and to be equally applicable in war and in peace. Whatever method was employed, the results would be favourably influenced by early mobilization and massage, and by the application of temporary prosthetic appliances.

ROYAL COMMISSION ON VENEREAL DISEASES.

Blindness.

AT the thirty-first meeting of the Royal Commission on Venereal Diseases evidence was given by Mr. F. Richardson Cross, one of the representatives before the Commission of the Royal College of Surgeons. Mr. Cross dealt principally with the effects of venereal diseases upon the eye. He described the serious results which venereal diseases produce in this connexion, and expressed the opinion that a large proportion of the cases of blindness were due to these diseases. He was not able to give complete statistics on this point, but he gave as an example an examination conducted at a blind school, which showed that blindness was due to ophthalmia neonatorum in 47 cases out of 102. He also referred to the results of an investigation at a French institution which suggested that out of 625 cases of blindness 325 were traceable to venereal disease.

Mr. Cross considered that the importance of venereal diseases was only realized by a very limited number of people, and he thought that the medical profession ought to instruct the public. It should be pointed out that any of these forms of disease were not local things which would pass off, but that the individual might be stamped for life with it, and that it might go down to his or her posterity. It was necessary that the knowledge should be spread very tactfully, but it ought to be done.

Mr. Cross alluded to the importance of early diagnosis and energetic and satisfactory treatment of these diseases, and urged that some assistance should be given by the State. He did not think that the Insurance Act touched this matter at all. The doctor under the Insurance Act could not be expected to make a scientific investigation, and neither he nor the chemist could afford the expense of injections of salvarsan.

Laboratories in which tests can be made for purposes of diagnosis should be subsidized and developed, and grants should also be made to assist treatment by hospitals. He was not in favour of special hospitals for venereal diseases, but thought that persons suffering from them should be treated among the ordinary patients as far as possible. It ought to be made easy for people to get thorough treatment for these diseases, and it would be an advantage if evening clinics could be established to deal with them.

Salvarsan and Neo-salvarsan.

At the thirty-second meeting Dr. C. T. Parsons, Medical Superintendent of the Fulham Poor Law Infirmary, gave evidence.

Dr. Parsons described the treatment he had adopted, which follows the lines of that used at the Rochester Row Hospital. Salvarsan or neo-salvarsan has been used at the Fulham Infirmary since April, 1911. The experience has been that most lesions healed very rapidly under its influence; the results had been most striking in cases of acquired syphilis and had been less successful in the case of congenital syphilis, while only temporary relief of symptoms had been obtained in parasyphilitic conditions. On the whole neo-salvarsan had been found to be better tolerated but less efficacious than salvarsan. No bad results of a serious character had followed the injections.

The only difficulty in carrying out the treatment has been in inducing patients to submit to it, and to remain until it was completed. A few patients refused to have any injection after the first, and some insisted upon taking their discharge directly the lesions had healed.

Dr. Parsons said that one of the greatest needs of the Poor Law Infirmary in connexion with the treatment of venereal diseases was the provision of facilities for bacteriological examinations and the carrying out of the Wassermann test.

REPORTS OF PROGRESS IN THE PREVENTION OF TUBERCULOSIS BY VARIOUS AGENCIES.

THE efforts made by county and borough councils, and by many voluntary agencies, to cope with the spread of tuberculosis are gradually bearing fruit in the shape of annual reports. After only one year's working it is not to be expected that anything approaching finality of system has been reached, and in many instances it is obvious that many modifications will be necessary before a uniform method can be arrived at. A common ground of agreement, however, is manifest in the general adoption of the tuberculosis dispensary as the organizing centre or clearing-house through which every notified case of tuberculosis should be required to pass before being allotted to the appropriate line of treatment for the individual.

Hertfordshire.

The conditions established in the county of Hertford are detailed in a first annual report by Dr. H. Hyslop Thomson. In that county the work is divided into four sections, each provided with a branch dispensary working in association with the Central County Dispensary, and supplemented by eight visiting stations, whereby all parts of the county are rendered comparatively accessible. A county sanatorium is to be opened, but pending its completion patients are received into certain other institutions at 30s. a week. Domiciliary treatment is aided by grants of necessaries, and sometimes by the provision of outdoor shelters and other adjuncts to open-air life by local nursing committees, with financial aid from the Insurance Committee and County Council. An interesting point appears in the statistical statement with regard to the relative frequency of a tuberculous family history as compared with "contact" liability; 47.6 per cent. of the cases showed some family tendency, whereas only 25.4 per cent. could be classed as "contacts."

Plymouth.

The report of the tuberculosis officer for the borough of Plymouth deals more especially with preventive measures, and contains much interesting information as to the relative amount of accommodation that will have to be provided after careful study of the conditions ruling in Plymouth as compared with some other large towns. A wide extension of sanatorium treatment is advocated, and the still more important question of the segregation of advanced and infective cases is met by a proposal to add largely to the existing isolation hospitals. This problem of isolation of the really dangerous patient is too apt to be shirked by public authorities, but it has to be faced. Until all advanced cases are brought under effective control as regards excretions, it would seem folly to spend large sums in trying to cure a disease which is being continually disseminated by patients in all ranks of society. The steady advance of the system of domiciliary visits by accredited visitors, as advocated and practised at Plymouth, would seem to be the most direct way of reaching the really dangerous factor. The sympathetic helper, who is enabled to supply the extra nourishment so often needed, can at the same time supply the spitting-cup and the knowledge required to prevent the spread of infection in the household.

The close inspection of school children to detect possible indications of tuberculous infection is strongly advocated. The work takes time, but by division of the children into batches and the devotion of half a day at stated intervals, the inspection can be satisfactorily carried out.

The estimated cost of working a tuberculosis dispensary varies considerably, and sums ranging from £1,000 to £1,500 have been mentioned as likely to be required, but at the present stage of the movement all such figures must be regarded as conjectural. Even the proportion of tuberculous cases to population does not appear to follow any uniform scale, and is very variously estimated.

Poplar.

In the crowded borough of Poplar, the work, although nominally carried on at a borough dispensary, is entirely dependent upon voluntary contributions. Subject to no very hard and fast rules, the organization is able to work with a free hand and to deal with each case in accordance with its requirements. After a period of work amongst insured and uninsured alike, the Committee decided to confine its investigations to the cases of uninsured only, on the ground that the means provided by the Insurance Committee for the insured were altogether insufficient. There would appear to be plenty of work to be done, as evidenced by the fact that more than 8,000 visits have been made in the course of the year by patients, while the medical officers have investigated 160 homes. Prevention rather than attempts at cure would seem to be the chief aim, and home visitation by trained nurses and others serve to keep the medical officers informed of the household conditions and to spread information in the family circle. Assistance is given by the London Hospital, which undertakes the care of children needing hospital treatment, and by the borough authorities, who undertake the examination of sputum. Tuberculin has been used in many cases, and the report indicates that some lasting results have been achieved.

SCIENCE NOTES.

WE are all aware that an *x*-ray bulb is a very inefficient thing, but a numerical estimate of this inefficiency has not hitherto been forthcoming. Some conclusions on this subject were brought before a meeting of the Roentgen Society on April 7th in a paper by Mr. R. T. Beatty, D.Sc., of Belfast, who has been conducting some investigations upon the amount of energy which is transferred when cathode rays fall upon an anticathode and *x* rays emerge. Dr. Beatty pointed out that the subject was of interest both from the purely scientific and from the practical point of view, because if it were known completely what energy transformations took place when the cathode-ray impact caused the generation of *x* rays some further information might become available as to the structure of the atom, and it would be possible also to construct more efficient *x*-ray bulbs. For cathode rays of slow speeds, the pace of the cathode stream being determined by the voltage of the exciting current, he found that a copper was three times as efficient a radiator as an aluminium anticathode. If, however, the cathode ray were speeded up, a new phenomenon presented itself in the shape of the secondary or fluorescent radiation characteristic of the copper, and at this stage the copper anticathode would be be found to give off a still more powerful stream of radiation as compared with the aluminium. By placing screens of a certain thickness of aluminium in the path of the beam from the copper anticathode, all this extra or fluorescent radiation could be cut off, and in that event the curve representing the radiating power of the copper returned to its former value in relation to the aluminium. Thus when all the fluorescent radiation was sifted out, the relative efficiency of the copper to the aluminium was again as three to one. The fluorescent and characteristic effect due to the copper was superposed, and in no way modified the general radiation. This fluorescent radiation was in bulk produced by the cathode rays directly; a small residue, about one-fifth of the total amount, was produced indirectly. Mr. Beatty described in detail the experiments he had made in order to measure the amount of energy transferred at the cathode-ray impact. He directed the ionization into a long ionization cylinder filled with a gas—methyl-iodide—which absorbed *x* rays very quickly, and by ingenious devices he succeeded in balancing the cathode current against the ionization current. The result proved that, apart from the fluorescent effect, *x* rays varied as the fourth power of the speed of the cathode rays, and it looked as if the fluorescent radiation from copper also varied in the same relation to the cathode rays of accelerated speed—that is, the speed at and above the critical point at which the fluorescent radiation begins. With a platinum anticathode the proportion of cathode rays which appeared in the form of Roentgen radiation was something like 0.5 per cent. of the cathode energy. For every thousand units of energy in the cathode sheaf, five units emerged as *x* rays, and with

only five parts in a thousand utilized in the *x*-ray radiation, the rest must go to produce ions in the metal itself.

LITERARY NOTES.

THE Association of German Medical Men and Scientists has established at its central office, Nürnberg Strasse, 48, Leipzig, a bureau for the collection of information as to meetings of German and Austrian medical and scientific societies. From this bureau particulars as to the place and date of meeting of such societies every year may be procured free of charge.

Among the further volumes in Messrs. Jack's "People's Books" series are the following: *Bacteriology*, by W. E. Carnegie Dickson, M.D.; *Robert Louis Stevenson*, by Rosaline Masson; *Canada*, by Ford Fairford; and *Tolstoy*, by L. Winstanley, M.A.

Mr. Henry Kimpton announces the publication of a work on the *Eye, Nose, Throat, and Ear*, a manual for students and practitioners, by James Forrest, M.B., Ch.B Edin.; and of the seventh edition of *Consumption: A Curable and Preventable Disease*, by Lawrence F. Flick, M.D., Philadelphia.

The first volume of a series of biographies of men who have enlarged the boundaries of medicine and natural science, published under the auspices of the Italian Society for the critical study of the history of medical and natural sciences, has recently appeared. It is a life of Bartolomeo Eustachi, by G. Bilancioni (Istituto Micrografico Italiano, Florence). The author describes the environment in which the great anatomist worked, and the state of scientific knowledge at the time.

Preparations are being made in Belgium for the celebration of the four-hundredth anniversary of the birth of Andreas Vesalius, who was born at Brussels on the last day of the year 1514. Dr. Tricot-Royer, of Antwerp, delivered a lecture on the great reformer of anatomy at the Sorbonne, under the auspices of the Society called Les Amis de l'Université de Paris, on April 2nd. The lecturer said he hoped, with the support of the Belgian Government, to have a monument to the memory of Vesalius erected on the island of Zante, where he was shipwrecked on his way back from the Holy Land, whither he had gone on a pilgrimage. He is said to have died there of starvation and exposure.

At a recent meeting of the Anthropological Society of Washington, Dr. Daniel Folkmar presented some results of the first census of European races in the United States. In that census are given for the first time figures relating to the ethnic composition of the "foreign white stock" of the United States in so far as that is indicated by the mother tongue of immigrants. One of the most interesting facts disclosed in the report is the great numerical preponderance which is still held by the mother tongues of north-western Europe, as a whole, notwithstanding the high rank numerically which has been gained by a few individual mother tongues from eastern and southern Europe — especially the Italian, Polish, and Yiddish. These three now stand third, fourth, and fifth in rank. The English and Celtic mother tongues are by all odds the ones most largely represented in the foreign white stock of the United States. The number, 10,037,420, is considerably greater than that of the German mother tongue, which latter contributes more than one-fourth (27.3 per cent.) of the total foreign white stock of the United States, as reported in 1910. Italian, Polish and Yiddish come next in rank, but none of them numbers as much as one-fourth of the German. To these three mother tongues, intermediate in rank but considerable in numbers, may be added the Swedish, French and Norwegian, all belonging to north-western Europe, except a portion of the French. No other mother tongue than the eight thus far enumerated furnishes as much as 2 per cent. of the total of the foreign white stock of the United States, or numbers as much as 1,000,000. The eight major mother-tongue stocks already named account for 87.5 per cent. of the total foreign white stock. Taking as 100 per cent. the total white population of the United States in 1910, numbering 81,731,957, the so-called "native stock" constitutes 60.5 per cent. and the three great linguistic families of foreign stock from north-western Europe constitute 27.1 per cent., making a total of 87.6 per cent. The elements from southern and eastern Europe constitute, therefore, less than 13 per cent. of the total. Of this the two principal Latin mother tongues—the French and the Italian—contribute less than 5 per cent., and the two principal Slavic mother tongues—the Polish and the Bohemian—and the Hebrew, taken together, contribute also less than 5 per cent., leaving to all the remaining mother tongues another 5 per cent. or less of the total. Of the total foreign white stock of the United States 32,243,382, there are 8,817,271 persons who are of German stock when counted according to mother tongue, but a trifle under 8,500,000 (8,495,142) of German stock when counted by their country of origin, Germany.

In the March number of the *St. Thomas's Hospital Gazette* Dr. John S. Fairbairn gives an interesting account of Smellie and the obstetrics of his time. In the seventeenth century the midwife had practically the sole command of the lying-in room; a surgeon was called in only when extensive mutilations of the child were necessary for delivery. Smellie was born, probably, at Lanark, though the honour has been claimed for Lesmahagow, in 1697. He began to practise there at the age of 23, and nineteen years later he moved to London for the purpose of acquiring greater knowledge. Disappointed with London he went to Paris, to work under Grégoire, who was considered the best teacher of the day. With him, too, Smellie was disappointed. He returned to London and began to practise, as what was then elegantly called a man-midwife, in 1738 or 1739. From his writings it can be gathered that in 1741 he had begun to teach. He used "dummies," which are said by a contemporary writer to have been composed of "real human bones arm'd with fine smooth leather and stuff'd with an agreeable soft substance."

> All the parts seem very natural both to look and touch; the Contents of the Abdomen are beautifully contriv'd, the Intestines look very natural, as likewise the Kidneys and large vessels.
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> The *Uterus Externum* and *Internum* [a man-midwife might surely be supposed to know something of gender] are made to contract and dilate according to the Difficulty intended for the Delivery. The Children for these Machines are likewise excellently Contriv'd, they having all the Motions of the Joints. Their Craniums are so formed as to give way to any force exerted and are so elastik that the Pressure is no sooner taken off than they return to their natural Equalities.

Smellie was not content to demonstrate on "dummies"; he worked out a scheme by which poor women could be attended in their homes gratuitously by him and his pupils, on whom, in addition to the tuition fees, he levied tribute for the support of the patients. Smellie was highly esteemed as a teacher, but he is said to have been coarse in his person and unpleasing in his manners. He was made the subject of the frank criticism of that rude age, especially on the part of the midwives, who looked upon him as a trespasser on their preserves. Douglas speaks of him as "having monstrous hands, fit only to hold horses by the nose whilst they are shod by the farrier," and describes him as "a raw-boned, large-handed man, no more fit for the business than a ploughman is for a dancing master." The women were, as was to be expected, more spiteful. Smellie had suggested that the man-midwife should wear "a commodious dress—namely, a loose washing nightgown, which he may have in readiness when he is going to deliver," with loose sleeves that could easily be rolled up, adding that "where he is obliged to alter his position a sheet ought to be tucked around him or an apron put on." One of the advantages claimed for this covering was that it enabled the man-midwife to conceal about his person instruments which might frighten the patient. These preparations gave Mrs. Nihell, one of the jealous midwives, the opportunity of gracefully referring to "the delicate fist of a great horse godmother of a he midwife, however softened his figure might be by his pocket nightgown being of flowered calicot or his cap of office tied with pink or silver ribbon." Smellie numbered many of the distinguished men of the time among his friends, notably Richard Mead and Tobias Smollett. He left London in 1759 owing to a breakdown in health, and retired to Lanark, where he spent the last four years of his life writing up the records of his cases. He died in 1763 at the age of 66.

British Medical Journal.

SATURDAY, MAY 2ND, 1914.

THE ANNUAL REPORT OF THE COUNCIL.

WE would direct the attention of all those members of the Association who desire to know what the Association is doing for them and for the profession generally to the annual report of the Council, which forms the great bulk of the SUPPLEMENT of this issue. It is a formidable document, as any moderately complete record of the work of the Association must be, and the only consolation we can offer to those who grumble at its length is the assurance that a really full report of the activities of the Council and its committees would be at least twice as long.

The perusal of the report may be particularly commended to those critics who express pessimistic views with regard to the work and the future of the Association. We believe that the critical attitude which some assume is due to a failure to take the trouble necessary to understand the multifarious activities of so large and far-reaching an organization as the Association has now become. Were the pessimists to give a few hours to reading the report, they would perhaps be encouraged to study it fully, and their pessimism would then drop away from them, for it is always those who take little or no part in the work of the Association who seem most disposed to condemn its methods and belittle its achievements. The critic who will take the minimum of trouble, which every member of an organization ought to be willing to take—that is to say, to acquaint himself with what has been and is being done and the policy it is suggested the Association should adopt in dealing with the many difficulties of the future—will be compelled to admit that there need be no fears as to the future of an association which has the will to attempt, and the means of dealing with, the vast amount and variety of work specified in the report. He would have to admit to himself that with such an output of work the Association must have at its disposal a body of devoted, loyal, and public-spirited men, in whose hands the future, in spite of temporary depressions, or even of mistakes, is quite safe. To those who will read the report with sympathy nothing will be more striking than the evidence it gives of the extraordinary self-sacrifice of the busy men drawn from all parts of the kingdom whose labours it briefly records.

The report gives an effective answer, if answer were ever really needed, to those who have said that the Association is now merely an organization for protecting the interests of the practitioners who are on panels. It is true that for the last few years much of the time and money of the Association has been spent and probably for a good many years to come must be spent in this work. Clearly panel practitioners have as much right to the protection of the Association as any other section of the profession, and the urgency and importance of insurance medical problems make it not only desirable but imperative that any Association whose aim it is to maintain the honour and interests of the medical profession should devote a great deal of its energies to these problems. But a mere glance at the contents table of the report will show that the suggestion that the interests of other sections of the profession are being neglected is wholly unfounded. The following are a few headings of paragraphs, mere suggestive samples from bulk which we hope will stimulate the curiosity of readers: Propaganda Work, Welsh Committee, Therapeutic Subcommittee, General Medical Council Cases, State Registration of Nurses, Inspection and Treatment of School Children, Ship Surgeons, Salaries of Women Medical Officers, Assistant Medical Officers of Asylums, Security of Tenure and Superannuation of Medical Officers of Health, Medical Aid Institutes and Hospital Staffs, Future of Indian Medical Service, Setting up of Irish Office and appointment of Irish Medical Secretary, Visit of Chairman of Council to Australasian Medical Congress, Reciprocity with Foreign Countries *re* Registration. There is hardly a medical interest in any part of the world which is not in some way touched on, and it must be remembered that this report does not profess to deal with the immense amount of work which is being done in the name of and for the members of the Association in the self-governing British dominions.

A few points of special interest may be briefly mentioned here, but the report itself should be consulted for further details with regard to them. The visit of the Chairman of Council as the official representative of the Council at the Australasian Medical Congress has been, as was expected, remarkably successful in tightening the bonds of union between the parent Association and its overseas Branches, and there is ample evidence that the visit has given great encouragement and pleasure to those Branches which Dr. Macdonald has been able to visit. The result of the raising of the subscription, though it has led, temporarily as we believe, to the loss of a considerable number of those who flocked into the Association at the time of the Insurance fight, has fully justified the Council in a move which was dictated, not only by financial prudence, but by a feeling that the time had come for consolidating and extending the organization work of the Association. The resulting increase of income will allow of a gradual repayment of debt and the building up again of a liquid reserve, and, in addition, will enable the Council to meet the demand for a larger measure of official help in the work of organization from the Central Office of the Association.

New ground has been broken in Ireland by the setting up of the first of the branch national offices, which the Council in its report in December last on the raising of the subscription declared to be essential to the efficient organization of the profession. The experiment will be watched with great interest, and the new Irish Medical Secretary will have the good wishes of those who know what a difficult task he is undertaking. An additional assistant medical secretary is to be appointed in the Central Office to relieve the congestion in a department which has for years been working under great difficulties, and the Council announces its intention of arranging that each Division in the United Kingdom shall be visited by one of the secretarial staff at least once in every two years, and of placing the services of the staff more freely at the disposal of Divisions and Branches which need help of this kind.

An important new principle is submitted for the consideration of the Association in two of the reports which are appended to the annual report—

namely, those on the treatment of tuberculosis, and on voluntary hospitals and the treatment of cases in receipt of maternity benefit. It is a principle which particularly affects honorary members of hospital staffs, and, if adopted, will place on a businesslike basis the relations of these members of the profession to those patients whose treatment in hospital is now subsidized by various public authorities, and who are therefore not fitting subjects for the charity of the profession. It is hoped that all members of the profession who hold such appointments will not fail to make their opinions known to their Divisions, so that when the question comes before the Representative Body it can be debated with the knowledge that hospital men are either prepared to accept the solution offered by the Council or to suggest some preferable alternative.

It is interesting to note that the Council reports that its relations to the English Insurance Commission are gradually being placed on a satisfactory and businesslike footing, and that the Scottish Commissioners have recognized the Scottish Committee of the Association as the mouthpiece of the profession in Scotland on insurance matters. Such a state of affairs must render the Association more capable of doing useful work in watching and protecting the interests of that large section of the profession which is now engaged in the National Insurance service.

There are only two other points in the report on which we propose to touch; they are important in themselves, and they illustrate the diversified nature of the Association's work. The one is the statement as to the long-drawn-out campaign in favour of security of tenure and superannuation for medical officers of health, a reform for which the Association with the co-operation of the Society of Medical Officers of Health has fought for many years with dogged perseverance and often with little encouragement. From the Council's report it will be seen that recent events in the political world seem to have made the prospects of the campaign far more hopeful, and it is believed that the Government cannot much longer resist the pressure, both political and professional, which is being brought to bear on it. The other is the campaign which has just been opened in favour of drastic reform of the Indian Medical Service. The report on this subject, published in the SUPPLEMENT of February 7th, 1914, and since submitted to the Royal Commission on Public Services in India which is now about to resume its sittings in London, has created a very favourable impression among officers in the service, and it is hoped that this agitation will not only lead to much-needed improvements in the Indian Medical Service but will reflect no less credit on the Association than did its memorable and successful efforts to reform the Army Medical Service.

It is impossible to deal with the multitude of other points of interest in the report. We refer our readers to the document itself, confident that every member of the profession must find something of interest to him. Those who know little of the work of the Association and are therefore most inclined to be critical will probably see reason to revise some of their opinions after reading the report, while those who have worked for the Association will find ample justification for having joined the army of workers to which the profession is indebted for any improvements in its conditions which are achieved. We may move slowly, but we do move.

STATE ENDOWMENT OF MEDICAL RESEARCH.

IN the SUPPLEMENT to the JOURNAL of April 11th were published the regulations made by the National Health Insurance Joint Committee for the administration of the fund allotted for the subvention of research under Section 16 (2) of the Insurance Act. It is clear from these regulations that the Medical Research Committee, the majority of whom are scientific men well known to and respected by the medical profession, will have almost unfettered control of the immediate destinies of the national scheme, and that the functions of the Advisory Council for Medical Research will be similar to those of a Parisian parliament at the holding of a "bed of justice." Various rumours are in circulation as to the policy the Committee will adopt, but, beyond the fact that premises in Hampstead have been acquired, presumably for purposes connected with the scheme of research, no authentic information has been published. It seems, therefore, desirable to submit to the notice of members of the British Medical Association some questions of principle which appear to be of importance, and to analyse them rather more fully than was done on the previous occasions when the subject was discussed. There can be no doubt that the policy about to be adopted, whatever it may be, must profoundly influence, not only medical research, but even clinical practice, and it is necessary that the subject should be fully and dispassionately considered by all members of the profession.

The principle that scientific research should be assisted from State funds is no longer in dispute, and the discussion really turns upon the manner in which such aid should be given. Broadly speaking, two methods can be proposed. The nation can itself create and staff institutes in which scientific researches are to be carried out, or it may confine itself to the subvention of such existing foundations as have shown their capacity to undertake the required work. Instances, of course, occur in which private investigators unconnected with any corporate body desire and should receive help, but such cases are relatively too few to need separate notice in a discussion of principles. We may therefore consider the problem as one of a choice between State institutions and State grants in aid.

The arguments in favour of establishing a national institute of medical research are exceedingly strong. The number of men who can give their whole minds to scientific investigation, free from anxiety as to material circumstances, is very small. The establishment of a State institute would provide situations for a number of investigators, in which they would be relieved of the necessity of supplementing meagre stipends by the performance of hack work, and would be conscious that their official chiefs were men imbued with the principles of scientific method. Such security of tenure and adequacy of remuneration as a State institute could offer are factors of no small importance.

It is true that those rare spirits endowed with a passion for inquiry into the secrets of Nature and an instinctive apprehension of the means by which it may be satisfied cannot be bought, that the services of a Lister or a Darwin are literally beyond price. But science has also need of humbler servants, and these *can* be bought—using the term without the faintest sense of disparagement. There are many men whose abilities greatly exceed the common measure but who are not indifferent to the rewards of social and material success. They are perhaps

included in the definition of Aristotle's magnanimous man, he "who thinks himself worthy of great things being in truth worthy." To such the Bar, the public services, and the clinical branches of the medical profession offer wide fields of activity and some conspicuous rewards to satisfy an honourable ambition. This type of man, a little lower than the highest but decidedly surpassing the average standard of capacity, might be tempted to devote himself to a service of research organized by the State and holding the prospect of an assured competence and an official recognition of merit. Loose talk about the search for truth being its own reward should not be allowed to obscure the cogency of these reflections.

To these advantages must be added the economy of equipment, which even a very large institute must effect, as compared with a dissemination of apparatus and separate laboratory services among a multitude of State-aided but independent colleges or medical schools, and the co-ordination of the various public health sources of information with the epidemiological and statistical department of the State institute.

The advantages possessed by a centralized system of research under the auspices of the State are such that only the demonstration of inherent weaknesses or defects could justify the medical profession in supporting any other policy. In examining the matter from this point of view, it is difficult to avoid being misled by a superficial study of foreign experience. Thus it might plausibly be argued that in Germany the output of the State institutions for medical research, although of great value, is less than that of the universities. The assertion may be true, but the circumstances are very different from those under notice. Not only are the German universities much more directly connected with the State than those of our own country, but the prestige attaching to the occupancy of an academic chair is still much greater in Germany than in England, even if we have lost the national contempt for a mere professor which Matthew Arnold once attributed to us. We are really entitled to say no more than that foreign experience demonstrates no incontestable superiority on the side of the centralized institute compared with the State-aided university as an instrument for the advancement of medical science, and must seek to elucidate the matter in hand by means other than the teaching of Continental experience.

It is profitable to ask whether research in a central institute is likely to be pursued under any restrictions, and if so, what their nature may be. A restriction which will at once suggest itself is that upon teaching. That one very valuable form of instruction would not only be permitted but encouraged is obvious; the heads of departments would naturally receive into their laboratories younger investigators, and the value of such intercourse between an experienced man and a novice cannot be exaggerated. But there would clearly be no scope for the more general teaching which must in part occupy the energies of a university faculty. This limitation will be hailed by many, including some eminent investigators, as a benefit, but we doubt whether most thoughtful men will endorse this view. In his biography of Helmholtz Professor McKendrick wrote: "There can be no doubt that one of the secrets of the marvellous activity in research of Helmholtz was, that there was the most intimate connexion between his function of a professor, whose duty it was to teach, and that of an original investigator. Teaching and investigation went hand in hand. He investigated because he wished to speak of matters at first hand, and thus he did not merely recapitulate the views of others. Again and again he took up a problem so that he might master it himself, and be enabled to make it clear to his pupils. Thus there was not only freshness in his teaching, as he was continually breaking new ground, but he was year by year adding to scientific knowledge. It is, of course, in the highest degree unlikely that the impetuous and masterful intellect of Helmholtz would have acted otherwise under almost any circumstances; but, at the same time, the circumstances in which he was placed favoured its development. He was obliged, year after year, to take a general survey of his science; he was associated with the young, and there is nothing more inspiring for a teacher than to have to satisfy young and ardent minds. Even if these are only the minority of a class, their presence is a subtle inspiration, stimulating to new effort. The example of Helmholtz, therefore, is a strong argument in favour of combining teaching with working; and the results, not only in his case, but in many others, show that, in the advancement of science, it may not be the wisest course to endow research alone, and to relegate the researcher to a kind of monastic solitude. It will, on the whole, be better for him and better for science to prosecute research, because he must communicate to others the fruit of his own labours."

We believe that this passage contains an important truth, that simply from the standpoint of research itself it is well that the investigator should frequently be brought into contact with minds far less capacious and highly trained than his own—less sophisticated even than those of the post-graduate students who intend to devote themselves to research. There is a certain cant of abstruseness and technicality which tends more and more to infect even able minds, and much of the slovenly and semibarbarous language which deforms professional scientific writing may be traced to excessive specialization. If this tendency merely resulted in the debasement of language, although it would be a great evil, the counteraction of it would not concern us more than any other educated men; but it has a directly noxious influence upon the progress of research. In the first place, clear thinking, which is the life-blood of science, can hardly exist independently of a command of linguistic expression which undue reliance upon the mental shorthand of technicality always impairs; in the second, excessive technicality of form leads to the reign of scientific dogmatism. It is easy to see why; the man accustomed to express himself in a special dialect is apt to despise those unfamiliar with it, and either to shun the public, and even fellow-labourers in the field, or to speak *ex cathedrâ* in tones which the nature of the case may not warrant. There is no sovereign remedy for this intermittent fever in which paroxysms of dogma alternate with quiescent periods of technicality, but there is undoubtedly a specific. This is the honourable obligation imposed by the duty of teaching not merely a small band of disciples who have already been fired by the master's enthusiasm and hang upon his words, but a larger number of normally endowed persons whose culture is sufficient to render it impossible to treat them as mere "men in the street," but who are by no means adepts. Such a duty enhances, if it does not create, the desire to be intelligible, and it is a rule subject to few exceptions that active teachers display in their original papers a lucidity which is less commonly found in the writings of pure specialists. It is, of course, true that at present many teachers are

seriously over-burdened with routine duties, but the abuse of a system is no proof of inherent defect.

It must also be admitted that a faculty for research and a power to teach are by no means necessarily combined in the same person. It is doubtful whether any very great teacher has been devoid of ability to enlarge the bounds of knowledge, but it is certain that some great investigators have been poor teachers. We believe, however, that the number of men whose powers of research would be seriously diminished by a moderate participation in the teaching function of a university is very small, and that such exceptions do not invalidate the general rule that a combination of activities is favourable to the development of a capacity for research. We think, therefore, that the restriction upon general teaching implicit in the policy of special research institutes is unfavourable to the exercise of the highest powers of the investigator, *qua* investigator. Some further limitations will be the topic of a subsequent article.

DEATHS AFTER SALVARSAN.

In commenting upon the risks of salvarsan in a recent issue (April 4th, p. 778) an account was given of the death after salvarsan reported by Dr. G. E. Nesbitt to the Royal Academy of Medicine in Ireland, and the opinion was expressed that death in that instance was probably due to an indirect or secondary action of salvarsan in awakening a pre-existing basal meningitis. Reference was also made to a paper by Dr. von Stokar contributed to a discussion on the risks of salvarsan held at Munich in which he expressed the opinion that the great majority of unfortunate sequelae were to be attributed to idiosyncrasy in regard to arsenic, to errors of technique, or to the use of too large a dose at the first injection. To this list some authorities would add the repetition of the dose after too short an interval.

In the note to which reference is made it was mentioned that a case in which death occurred shortly after a second injection of salvarsan was at that time the subject of an inquest before Dr. Waldo, coroner for Southwark. The inquest was adjourned pending the result of chemical analysis. The patient, a young man aged 23, received two intravenous injections of salvarsan—0.6 gram on each occasion—on February 28th and March 10th at St. Mary's Hospital. The first injection was followed by no untoward result, but three days after the second the patient collapsed, and was removed to Guy's Hospital, where he died on the following day (March 14th). When admitted he was unconscious, with jactitation of the arms and dilated pupils. Lumbar puncture was performed five times, and altogether a considerable quantity of fluid was drawn off. The *post-mortem* examination showed petechial haemorrhages beneath the pericardium, haemorrhages beneath the pleura and in the mediastinum, submucous haemorrhages in the oesophagus, blood-stained fluid in the bronchial tubes, and hyperaemia of the brain, but no cerebral haemorrhages, and no meningitis. The heart, liver, lungs, stomach, intestines, and kidneys were normal. Dr. Womack, who made the chemical analysis, found arsenic in the liver, spleen, and kidney, the total quantity being rather less than 1 grain. No doubt the total quantity present in the body was more than this; the stomach contents were lost, and Dr. Womack stated that arsenic is excreted to some extent by the stomach.

The question arose whether the death was properly to be spoken of as due to poisoning by arsenic as such, or whether it was to be attributed to the special action of the organic compound of arsenic—salvarsan. In Dr. Womack's opinion, we gather, death was due to acute arsenical poisoning following the injection of salvarsan in a person presenting unusual idiosyncrasy to the drug. He referred to the case of an American who died in somewhat similar circumstances in London recently after a second injection of salvarsan; and it may be added that an inquest was held recently (April 6th) in Manchester with regard to the death of a man, aged 55, whose death took place two days after an injection—apparently a single injection—had been given at the Royal Infirmary. Dr. Ward, resident medical officer, in giving evidence, stated that he had seen the drug used in about 150 cases, and that this was the first fatality.

Dr. Waldo, while taking care that the Southwark jury should know that salvarsan was a valuable drug in the treatment of syphilis, and that it had been used in a very large number of cases attended by a very small proportion of deaths, criticized the action of the authorities of Guy's Hospital in not reporting the death to him as due to arsenical poisoning, and complained also that the contents of the stomach had not been preserved—a point to which, for reasons stated later, we think he attached too much importance.

The toxic symptoms occasionally produced by salvarsan or neo-salvarsan are commonly quite different from those of ordinary arsenical poisoning—for example, vomiting and diarrhoea may be absent. In those instances in which vomiting has been a marked feature after the administration of these drugs intravenously it was rather a toxic form of vomiting, comparable with uraemic vomiting, than the vomiting of acute gastritic type which occurs when arsenic is taken by the mouth. Arsenic in the form of salvarsan and neo-salvarsan does not cause meningitis when given intravenously, subcutaneously, or intramuscularly, and it will be observed that in the Southwark case meningitis was stated to be absent.

There can be no doubt that these drugs are general poisons, and that their toxic effects may vary with the individual. It would seem that symptoms of meningitic type following intravenous administration are to be attributed to cerebral toxaemia consequent on the presence of the drug in the blood. Salvarsan and neo-salvarsan, if given intravenously, undoubtedly circulate in the blood as such for a time. They are absorbed mainly by the liver and spleen, and gradually excreted from the blood by the urine. We are not aware that it has been established that there is any special excretion of arsenic derived from salvarsan or neo-salvarsan by the stomach. No doubt some arsenic is excreted by the whole of the alimentary canal, probably mainly by the intestine, for it is found in the faeces. No special amount of arsenic—that is to say, no more than traces—has been found in the vomit in these cases. The most probable conclusion seems to be that salvarsan and neo-salvarsan have a special toxic action as such, and may cause symptoms somewhat like those of uraemia—coma, convulsions, and so on. The symptoms of a toxic action on the nervous system are the prominent features, while the symptoms of irritant poisoning, such as occur with inorganic arsenic compounds taken by the mouth, are less prominent and often entirely absent.

FRANK NONSENSE.

THE persistence of those who have become obsessed by the imagined advantages of a whole-time State Medical Service, and the ingenuity with which they seize upon every opportunity of ventilating their views, may be admired, but their methods, which too often consist of reckless assertions to the detriment of the medical profession, can only be held to show the weakness of their cause. For some time they have been befriended by certain newspapers usually reckoned thick and thin supporters of the Government, but they appear now to have found an ally in the *Times* (London), which last Tuesday published a diatribe "from a medical correspondent" with scare headlines 2 in. high — "Failure of the panel." "Demoralization of medical practice," "A premium on inefficiency." The article, which begins by declaring the need for a "frank statement," follows the usual lines adopted by reactionaries; it makes, in italics, a number of assertions pompously called "counts," but no attempt to substantiate them, and winds up with an innuendo on one specific matter calculated to produce a distinctly false impression on the public mind. In one respect we entirely agree with the writer—namely, that the value of medical research is imperfectly recognized in this country, and that the emoluments of research workers are disgracefully inadequate. But this is no argument for reducing the emoluments of members of the profession engaged in carrying out the behests of the State for the treatment of individual insured persons. It is an argument for increasing the pecuniary and other rewards of those whose capabilities and bent of mind are towards research. But by an obscure process of reasoning it is used in the "frank statement" as an argument for a whole-time State Medical Service, and is fortified by the assertion, in italics, that "the panel system is calculated to place very heavy burdens upon the friendly societies, whose funds have suffered beyond all expectations." This is boldly and baldly attributed to a lax supervision by medical men of patients with a tendency to malinger because the medical man "who grants certificates of disability easily tends to acquire the largest practice." It is sought to justify this assertion by the general statement that "it is not in average human nature to be strict with people who have the power to retaliate by crossing the street to the panel of one's opponent." All this is ignorant nonsense. As Dr. Cox, the Medical Secretary of the British Medical Association, at once stated in the press, the reports he receives from all parts of the country show that generally speaking the service is good, and that there are men on the panel in every district who are doing excellent work, just as there are doctors off the panel doing excellent work. He admitted that there was reason to believe that there were some cases in which certain doctors were rendering inefficient service. Machinery, both professional and under specific provisions of the Act, exists for dealing with them, and we have no doubt at all that they will be dealt with effectively, but neither the profession nor insurance authorities can move without adequate evidence and due inquiry. The whole case is made to rest on the alleged pecuniary embarrassments of certain unnamed friendly societies. Nothing is said about the wishes and preferences of the insured persons except that they go across the street if the doctor they first select is not sufficiently pliant—a gross overstatement of the fact, for unless with the consent of the doctor the insured person cannot "go across the street" until the end of the year. That there are malingering workmen or overpliant doctors may be true, but that this aspersion on both parties applies to more than a small minority of each we do not believe, and not a tittle of evidence is produced in support of it. The worst feature of the article is contained in its concluding sentence. After asserting that "no State service could possibly be worse than the present system," the success of "the Colonial Medical Service" is spoken of. What is meant by "the Colonial Medical Service"? Is there such a service in Canada, or in South Africa, or in Australia, or in New Zealand? The writer must know very well that there is no such service. It may be answered that these are Dominions not Colonies; but this would be an equivocation. If the writer really intended the public to understand that the "Colonial Medical Service" to which he referred as a model for the United Kingdom did not exist in any white colony, he should in "a frank statement" have made the point clear. He ought to have said that he was referring to the medical services of the colonies on the West Coast of Africa and in the West Indies—admirable Government services instituted for the care of the health of the large negro populations, though concerned also with treatment, chiefly in hospitals and other institutions. Is this really the last word of "advanced thought"—that the British working classes are to be put on the same footing as negro populations emerging, or only recently emerged, from barbarism?

THE LONDON HOSPITAL AND INDIAN STUDENTS.

THE alleged aspersions cast by students of the London Hospital on Indian medical students in England are still causing trouble in India. We have received from Dr. M. N. Ohdedar an account of a meeting of protest held under his chairmanship at Lucknow on March 6th, at which four resolutions on the subject were passed. The first resolution protested against the attack made by students of the London Hospital on the Indian students; the second requested the Secretary of State that, if Indian students were not allowed to enter the London Hospital, English students of that hospital might be debarred from competing for the Indian Medical Service; the third brings to the notice of the Secretary of State the "improper conduct" of Captain Forbes, I.M.S., in taking an active part in the anti-Asiatic meeting of students of the London Hospital, and requests that that officer may be debarred from serving in civil employ in India. The fourth resolution was to forward copies of the above to the Secretary of State for India, to the Education Member of the Indian Council, to the Director-General, I.M.S., to the Educational Adviser to Indian Students in London, and to the Dean of the London Hospital. Dr. Mohendro Nath Ohdedar, who presided at the Lucknow meeting, is a retired member of the Provincial Medical Service of the United Provinces who rose to be a civil surgeon, and received from Government the title of Rai Bahadur for his services. He has also held a commission in the volunteers—a very rare thing for a native of India—for seventeen years past, as medical officer of the first regiment of the United Provinces Horse. He is a man of weight and reputation, and not likely to take up a grievance without what seemed to him to be a good cause. Who Captain Forbes, I.M.S., may be it is not so easy to discover. For, strange to say, the Indian Army List shows no officer of the name of Forbes in the Indian Medical Service. It would be interesting to know what were the mysterious charges said to have been made by students of London Hospital against their Indian fellow-students. No one in England appears ever to have heard of them until the recent complaints in India, emphasized by the late strike of students of the Lahore Medical School. In the JOURNAL of April 4th reference was made to this strike, and the resolution quoted which was passed at the meeting of London Hospital students—a resolution which seems void of offence. In fact, the whole complaint appears to have originated in error. The *Pioneer Mail* of April 10th states that the Lahore protest was based on an article in an Indian (Lahore) paper, the *Punjabee*, which in turn was copied from another Indian paper, the *Commonweal*, published in Madras. In this paper, the *Pioneer* states, "the original account of the meeting was garbled to such an extent that it can only be described as a malicious misrepresentation of perfectly innocent facts. The persons

alleged to have proposed, seconded, and supported the resolution were not even present. The resolution actually passed bore no resemblance whatever to the resolution quoted by the correspondent of the *Commonweal*. The statement that a resolution was passed by 462 votes to 21, condemning admission of Asiatics to London hospitals and the English medical profession, was totally false." If such a resolution as that just quoted had really been passed, the Indian medical profession would have had grounds for just complaint. As it appears, however, that an inaccurate and misleading account of the proceedings has been published in India, and that it is on this that the protests made have been founded, we hope that no more may be heard of the matter.

MEDICAL EDUCATION IN CHINA.

Dr. Wu Lien Teh, M.A., M.D.Cantab., medical officer to the Chinese Foreign Office, has been in the service of the Chinese Government for the last six years. As a delegate he attended the International Congress of Medicine in London last year and also the International Congress of School Hygiene in Buffalo. He has now presented to the Chinese Board of Education a memorandum on medical education in China. In the opening part of this memorandum he notes incidentally that while Japan sent no fewer than sixty medical men to the congress in London, China was represented thereat by no more than two. He takes the opportunity to point out to his Government the urgent need for recasting the whole system of medical education in China, and for introducing into it the main methods and ideals that direct medical education in Europe and North America. He has had the opportunity of observing the work of native-trained Chinese physicians for the last six years, and finds it at the best antiquated and inefficient. These physicians, he says, are to-day completely ignorant of the true causes of most diseases, especially epidemic diseases, and of the methods by which they may be diagnosed and prevented. They are ignorant of the use of quinine in malaria, the relief of abscesses by the knife, the treatment of cataract by operation, and the prophylaxis of typhus and tuberculosis by preventing infection. They do not vaccinate against small-pox; in Peking one out of every three native born women shows old pock marks. The methods they adopt to cope with pestilences such as plague, cholera, dysentery, typhus, that still claim numerous victims every year, are absurd. A gloomy picture! Reform is imperative, and Dr. Wu Lien Teh outlines the methods by which it should proceed. The present condition of Chinese finances, it is feared, may render it impossible to establish a new and up-to-date medical school with its teaching staff and various equipments. There are two small Governmental medical colleges at Tientsin; there are eight medical missionary colleges and hospitals in China; and there are five other institutions controlled by foreign Governments or corporate bodies; in all these Chinese students can obtain medical training. It is suggested that the Chinese Government should co-operate with these institutions so far as possible, giving monetary grants and officially recognizing their graduates. The next point must be to set a high standard of medical education before the students. At the present time the State in China has fixed no standard either of medical education or of medical curriculum; no doubt it will be necessary to appoint a central medical council to supervise the whole business. A course of study extending over five years is outlined, and follows current European practice. Emphasis is laid upon the importance of bringing all Chinese medical students into line with those of all civilized countries. Up to the present time an insuperable objection to dissection and *post-mortem* examination has been found in the traditional Chinese worship of ancestors; it is hoped that the spread of education and Western ideas will remove this obstacle. Facilities for post-graduate teaching and for foreign study must also be provided. It is suggested that English should be adopted as the official language in the medical schools and their hospitals, which seems a reasonable provision when it is remembered that English—or "English as She is Spoke," to quote the title of a book of dialogues by a Portuguese author that appeared some thirty years ago—is more commonly used in China than any other foreign language. The author closes his memorandum by pointing out that it is only by a thorough reorganization of medical education on modern lines that China can hope to rid herself of the unenviable name of being the most backward nation in medicine and sanitation. Many of the readers of the British Medical Journal must be directly interested in the solution of the problems thus confronting the renascent State of China, and all will join in wishing her success.

"STILLBIRTHS": QUESTIONS OF TERMINOLOGY.

In connexion with the subject of stillbirth registration, a paper was read by Dr. J. W. Ballantyne before the Edinburgh Obstetrical Society on March 11th (see Journal, March 21st, p. 653), but owing to the lateness of the hour the discussion was postponed till the meeting of the society to be held on May 13th, and it was decided that the conclusions arrived at in the paper should be considered by the council of the society. The paper itself has since been published in the *Journal of Obstetrics and Gynaecology of the British Empire*, along with the conclusions, and it is understood that the latter, as revised by the council, will be submitted to the meeting of the society in May, when it is expected that several authorities eminent in public health matters will be present and will take part in the discussion. There are three resolutions: The first is that in view of the existing confusion in the terminology of stillbirths and allied states an attempt to reach uniformity of definition should be made. The second is that an Ante-natal Deaths ("Stillbirths") Registration Act is greatly needed in this country. The third conclusion is that the definitions of dead-birth, live-birth, stillbirth, and abortion should be so constructed as to be in accordance with the physiology of the time of life dealt with. Then follow the definitions, and it is in regard to them that some difference of opinion may conceivably be expected to be shown. "Dead-birth" is defined as the complete expulsion from the maternal birth canals of a child which, during or before birth, has lost the characters of ante-natal life (heart beat, arterial pulsation, movement). "Live-birth" is defined as the complete expulsion from the maternal birth canals of a child which, while it loses pulsation in the cord, adds to the other characters of ante-natal life the special sign of post-natal vitality, namely, pulmonary respiration. "Stillbirth" is defined as the complete expulsion from the maternal birth canals of a child which, whilst continuing to exhibit the sign of ante-natal life (heart beat), fails for a time to assume that of post-natal life (pulmonary respiration), and then either loses even the character of ante-natal life or is successfully resuscitated (transanimated) and assumes that of post-natal existence. "Abortion" or "miscarriage" is defined as the termination of ante-natal life by the expulsion of the uterine contents before the end of the sixth month. A premature birth is expulsion of the uterine contents after the sixth month but before the full term, and it may be a dead-birth, a live-birth, or a stillbirth. The chief matter in which these definitions seriously differ from existing ones is the breaking-away from the popular usage which regards "stillbirth" as a simple synonym of "dead-birth." The two physicians to whom the investigation of the cause of stillbirths has been entrusted by the Local Government Board are Dr. Eardley Holland, obstetric registrar and tutor to King's College Hospital, and Dr. Percy Brewster Ridge, curator of the museum at King's College Hospital, and lecturer on morbid anatomy in the medical school.

MORE FAMOUS ABERDONIANS.

IN an article entitled "Some Famous Aberdonians," which appeared in the BRITISH MEDICAL JOURNAL of February 28th, March 7th, and March 21st, 1914, it was stated that many who deserved mention had been omitted. This was unavoidable when so large a subject had to be compressed into so small a space. But there are a few men of note whose names should have found a place in our list, because they were pioneers in the study of natural science in the North. In his *Studies in the History of the University*,[1] Mr. P. J. Anderson says that neither in King's nor in Marischal College was there in the sixteenth and seventeenth centuries much sign of the new spirit of inquiry which was beginning to revolutionize natural science in the Continental schools. But there were at least two Aberdeen doctors who were in sympathy with the movement to replace the authority of Aristotle by direct appeal to nature. One of these, James Cargill, is believed to have studied botany and anatomy under the celebrated Kaspar Bauhin at Basel, some time between 1589 and 1600. Bauhin and L'Obel, in their writings, mention that they had received from Dr. Cargill seeds and other specimens (including seaweeds) from Aberdeen. L'Obel refers to him as being well skilled in botany and anatomy. By his will, made in 1614, Cargill bequeathed "for the mantenance of four puir scholaris at the college quherein learning shall be thocht by the Councell of Aberdein most to floorische four thousand merkes," besides sums to the Grammar School and to the "Hospittall of new Aberdeine." The genus *Cargillia*, including trees of the family *Ebenaceae* from Eastern Australia, was named after him by Robert Brown. The other Aberdeen doctor who should be mentioned is Duncan Liddell, born in 1561. He was educated at the Grammar School of Aberdeen and at King's College until 1579, when he went to Dantzic. He travelled over a great part of Poland and Germany, pursuing his studies in mathematics and in medicine. He was professor in the Academia Julia at Helmstedt, first of mathematics, afterwards of medicine, from 1591 to 1607. He was the author of a treatise entitled *Ars Medica* and of another, *De Febribus*, published at Hamburg. He died at Aberdeen on December 17th, 1613. In 1612 he had given the lands of Pitmuxton, near Aberdeen, to support six bursars, who might attend either King's or Marischal College; and shortly before his death he endowed a professorship of mathematics in Marischal College, to which he left his library, together with a legacy for the purchase of new books, which at present, says Mr. Anderson, yields a few pounds annually. The bursaries have been, and are, valuable aids to students, and Liddell's library contained books on botany, mathematics, and other sciences, that are treasured in the University Library at the present time. Liddell was perhaps the most remarkable of the wandering scholars of the Renaissance who were trained in the North of Scotland. His memorial brass, dated 1622, is in St. Nicholas Kirk. A third who is entitled to commemoration is Robert Morisone, who was awarded one of the bursaries founded by Liddell, and entered Marischal College in 1635. Mr. Anderson says he joined the Royalists, and was severely wounded in the head near Aberdeen in 1639. On his recovery his desire to study natural science and medicine took him to Paris, where he spent some time in studying botany, zoology, and anatomy under Robin and others. He graduated M.D. at Angers in 1648. In 1650 he was entrusted with the charge of the famous garden of the Duke of Orleans at Blois. There he pursued his investigations in botany, in which he was encouraged by his patron. After the death of the Duke, Morisone was invited to England by Charles II, to whom he had become known in France. He accepted the invitation and was appointed King's Physician and Royal Professor of Botany, with an official salary and residence. In 1669 he was called to the new professorship of botany in Oxford. On November 9th, 1683, he died from the effect of injuries received while crossing a street in London. His works are still highly thought of by botanists.

[1] Aberdeen University Quatercentenary, 1906, p. 149.

RE-EDUCATION OF THE INTESTINE.

FROM the first syllable of recorded time the human intestine has been a source of unnumbered woes to its possessor. For many centuries the history of medicine is largely the history of purgation. The ancient Egyptians cleared out the belly—to use the plain speech of our forefathers—with strong drugs and enemas. In the Middle Ages the attacks on the intestine were so violent that the patient was told to take care to relieve himself in a warm place, and the instructions of Master Platearius as to the choice of material for wiping the outlet smarting from the fiery effects of scammony or other drastic purgatives recall the exhaustive experiments by which Gargantua sought to discover the best and most soothing substance for the purpose. Physicians of the seventeenth and eighteenth centuries looked upon the syringe as their *In hoc signo vinces*. Then came the nineteenth century, with Abernethy and "his eternal blue pill," as Sir Thomas Watson calls it, supplemented by black draught. Nowadays the surgeon has come on to the scene, and we seem to be tending towards a system of dealing with the refractory intestine to which might be applied the term "Thorough," by which Strafford expressed his method of governing Ireland. If this policy prevails, an intestine of the natural length will before long be as rare as an appendix. In the meantime more conciliatory measures still have their advocates. Every drug vendor has a pet pill warranted to do its work *cito, tuto et jucunde*. Gentleness of action is now vaunted in advertisements; they speak of re-educating rather than stimulating the intestine. A correspondent has sent us a copy of an advertisement which he has found in a French ladies' fashion journal, which seems to us a perfect specimen of its kind. We are told that the mucous membrane of the intestine is as sensitive as that of the eye, and that, as the least speck of dust irritates the conjunctiva, so does every purgative irritate the intestinal membrane and set up enteritis. The administration of a purge, it is picturesquely said, is passing sandpaper over the internal surface of the bowel, whereas what is wanted is something that will produce the effect of a gentle, prolonged, and persuasive massage; can we not almost hear Molière's apothecaries pursuing M. de Pourceaugnac with the assurance that their remedy is *benin, benin?* The "creator," as he is called, of the preparation advertised as having all the virtues of the most business-like purgatives without any of their disadvantages, says that it has the special property of "re-educating" the intestine; this, we are told, it does by reviving the contractility of the bowel, neutralizing putrid fermentations, preventing the coagulation of mucus, to say nothing of obviating the formation of the false membranes of entero-colitis. In this way the disturbed intestinal equilibrium is restored and the bowel is cleansed and re-educated. This is all very interesting, and might almost persuade a sufferer from constipation to buy the stuff. But the effect is somewhat discounted by a very realistic picture showing a patient's intestines in a large basin in process of being cleansed in a way that suggests the manipulations of the dissecting-room rather than gentle and persuasive massage. Of course this is intended, like Hamlet's mousetrap play, to be understood "tropically"; but we think that as a sample of the advertiser's art, it is crude and likely to mar the effect of the ingenious letterpress. The picture suggests a method of "re-education" like that which we used to be told in childhood was used to "re-educate" the eye—by taking it out and cleaning it on a plate.

NATIONAL BIRTH-RATE COMMISSION.

THE Council of the British Medical Association has received an invitation from the National Council of Public Morals asking the Association to send a representative or representatives to give evidence before the National Birth-rate Commission of that council on the condition of the birth-rate in various classes of the population. The Council, while not feeling itself in a position to appoint official representatives of the Association, is willing to hear from practitioners who desire to give evidence before the commission, and has authorized the Deputy Chairman of Council to decide as to forwarding to the commission the name of any practitioner so received. Practitioners so desiring to give evidence are requested to forward their names to the Medical Secretary, 429, Strand, London, W.C.

THE IRISH OFFICE OF THE ASSOCIATION.

AT its quarterly meeting last week the Council of the British Medical Association accepted the recommendation of the Irish Committee to establish an Irish Office of the Association, and to appoint an Irish Medical Secretary to act as secretary to the Irish Committee and to carry out its instructions. It was further arranged that an annual grant, not to exceed £1,300 in the first year, should be made to the Irish Committee to meet all the expenses of that Committee, including office expenses and the salary of the secretary. On the recommendation of the Irish Committee the Council appointed Dr. Thomas Hennessy, F.R.C.S., L.R.C.P.I., and D.P.H., at present medical officer to the Clogheen Dispensary District, co. Tipperary, to be Irish Medical Secretary. Dr. Hennessy is well known to the profession in Ireland as an energetic worker for it. In particular, he has taken a very active part in promoting the interests of the medical practitioners engaged in the Irish dispensary service.

THE report of the last meeting of the London Insurance Committee, at which it was decided to submit to the Insurance Commissioners a scheme for the distribution of the accumulated funds with respect to unallotted persons, which it is believed will be of considerable general interest, will be found at p. 990. Much other matter usually appearing in the SUPPLEMENT is unavoidably postponed owing to the pressure caused by the publication of the annual report of the Central Council of the Association.

DR. HERBERT JONES, who has been honorary secretary of the Society of Medical Officers of Health since 1901, has been elected president of the society. He has been engaged in public health work since he left private practice in Shipley, in 1893, to become M.O.H. for the borough of Crewe. In 1897 he became M.O.H. for the Rhondda urban district, and in 1901 accepted the appointment which he now holds—that of M.O.H. for the Herefordshire combined sanitary district. He was president of the West of England and South Wales Branch of the Society of Medical Officers of Health in 1901 and again this year. He has been an active worker for the British Medical Association, and has been a member of its Public Health Committee since 1905. He is this year president of the Worcestershire and Herefordshire Branch of the Association. The medical officers of health have never had a more judicious and whole-hearted advocate and defender of their interests, and he has recently been conspicuous in putting forward their demands for security of tenure, a reform urgently needed in the interests of public health administration.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Milk Legislation.

AN interesting and important discussion took place in the House of Commons on this subject on April 22nd, on the motion of Mr. Astor: "That fresh legislation is needed to control the supply and sale of milk and cream in the United Kingdom, and that the existing laws should be more thoroughly administered." Mr. Astor dealt with the importance of a proper milk supply, both from the point of view of its use as a food and its relation to infant mortality and various diseases. He said that he was convinced that if the public realized the importance of having pure milk, and insisted upon having it, the public could get it, and not only that, but that they could get pure milk at reasonable prices. It was far more difficult to overcome the ignorance and prejudice of the public than the so-called vested interests, although, of course, that difficulty existed. It was contended that milk legislation would probably raise the price of milk, and that it was essential, above all things, to have cheap milk. In his opinion, good milk was cheap milk and bad milk was dear milk. If milk at fourpence a quart gave a child a tuberculous gland, or produced diarrhœa—and a great deal of infantile mortality arose from that cause—then that milk was not cheap milk, and it would not be cheap milk at half the price. Therefore the statement that the first essential was to have pure milk was justified. With regard to the incidence of tuberculosis, especially of the non-pulmonary type, he quoted certain authorities and referred in particular to the work of Mr. Stiles and Dr. Mitchell of Edinburgh, and to Dr. Eastwood and others, as showing the prevalence of the bovine type of bacillus in glands in the neck and other conditions. With regard to the contention that comprehensive and uniform legislation would restrict the supply of milk or increase its price, he said that in New York during the last ten or twelve years, since the introduction of modern methods of classification and grading of milk, certification of cellars, and so forth, the consumption had increased 40 per cent. The remedy was, he said, first of all, uniformity of legislation and administration and improved legislative and administrative machinery, and, secondly, that the milk suppliers and producers should have renewable licences, not that they should be put on a register, and left on the register, whatever they did. Every one who sold milk ought to have a renewable licence, and if he sold milk under a false or inaccurate description, there should be an opportunity of removing his licence. It would be impossible wholly to forbid the sale of tuberculous milk, for it would stop the milk trade. But milk sellers should not be able to sell their milk under any inaccurate description, as was very often done at present. Any legislation or administration must have as its corner-stone the intention of the Local Government Board to classify the milk according to its quality in the same way as at present butter and cream were graded and labelled; that was the whole trend of legislation present and past. Mr. Astor related some interesting records of experiments he had undertaken in connexion with bacterial count of milk. As illustrating the importance of proper cleanliness of the cow's flanks and udder and the hands of the milker, he gave the following example from his own dairy. The bacteria in a sample examined a few days previously numbered 6,000 per c.cm. That showed that the milk had been properly cared for, but next day the milker washed the bucket and sterilized his hands. He gave up the prehistoric bucket and used the better and more modern type of vessel. The experiment was carried out with the same milker, in the same building, and with the same cow. The milk was examined at the Lister Institute, and the result was that the second specimen showed a bacterial count of only 500 bacteria per c.cm. He then related another experiment showing the importance of keeping milk cool. A specimen of milk was found to contain 3,000 bacteria per c.cm. It was divided into three parts and kept for twenty-four hours—one specimen at freezing point, the second at 60° F., and the third at 94° F. The milk kept at freezing point at the

end of the twenty-four hours had fewer bacteria than at the beginning of the experiment; the bacteria count was only 2,400. In the milk kept at 60° F., which started with 3,000, the bacteria count had increased to 450,000, and the milk kept at 94° F., having started at 3,000, finished at 25,000,000. That showed the absolute importance of keeping milk cool—cooling it immediately it was taken from the cow, and keeping it cool in the journey and in the shop. He had also had the milk from the House of Commons examined and described it as "a rare and fruity vintage"; a sample, taken under careful conditions, had been found by Mr. Buckley, of the Lister Institute, to contain 72,000,000 bacteria per centimetre. He suggested that there should be a classification of the milk sold, which should be publicly displayed in each milk-shop of the purest quality A, an intermediate grade B, and other milk generally classified as grade C, so that customers would know what it was that they were buying. He referred to the value of pasteurization and the experiences of it in different countries.

In seconding Mr. Astor's motion, Mr. Hills dealt chiefly with the legislative side of the problem and emphasized the importance of greater powers being entrusted on more uniform lines to the larger authorities. He gave an interesting description of the system of classification referred to by Mr. Astor as it is adopted in New York. He said that it was proposed that there should be a dual system of classification of the shops that sold milk, and an examination of the dairies that supplied milk. The milk was separated into three classes. The first class, or the best milk, which was free from tubercle, comes from a dairy which had got a good scoring card. The scoring card of the city of New York marked the dairy according to the goodness or badness of the equipment and method of that dairy. One hundred marks were given altogether, 40 for equipment and 60 for method. The 40 for equipment were for such matters as air space, ventilation, drainage, flooring, windows, ceiling, and so on, and the marks for method were given for the clean condition of the cows, the washing of the milkers, the straining of the milk, freedom from dirt in the milk house, and so on. The only milk that could be sold as grade A, besides being free from tubercle, must come from a dairy which gained 75 out of 100 on this scoring card. Of those marks it must gain 25 for equipment and 50 for method, so that there was a double test. A licence was issued, but could be withdrawn, and a shop could be visited and specimens examined as often as was wished. This, the best milk, was the milk for children. Milk of B grade was sold either raw or pasteurized; if sold raw it must come from a farm with 68 out of 100 marks on its scoring card, and if pasteurized must come from a farm with 60 out of 100. In both those cases grade B milk was fairly safe milk for grown-up people. C milk was without any guarantee at all. The shops which sold A, B, or C milk must notify outside in the clearest way which class they sold, so that each person going there knew. The milk was sold in special bottles with special coloured labels, and every effort was made to inform the public what class of milk they were buying.

Mr. Randolf Baker, Mr. Alden, Mr. Hume-Williams, Mr. Hope, and other speakers joined in the discussion.

Replying on behalf of the Government, Mr. Herbert Samuel, President of the Local Government Board, referred in the first place to the prevalence of non-pulmonary tuberculosis in children. He said: In the latest year for which I have figures—1911—the number of cases of all kinds of tuberculosis among people of all ages in England and Wales was 53,000, but of these the number of cases of non-pulmonary tuberculosis among children under the age of 15 years was no fewer than 13,000, or one-fourth of the whole. One-fourth of all the cases of tuberculosis in this country are cases of non-pulmonary tuberculosis among children. It seems absurd that when we are engaged in a great national campaign against tuberculosis, and are spending millions to deal with pulmonary tuberculosis, we should almost ignore one-fourth of the whole number of cases—namely, the cases of tuberculosis of a non-pulmonary character among children. As the question was thrown into doubt by the famous declaration of Dr. Koch, the last Government, in 1901, appointed a Royal Commission to examine this very question of the relation of human and bovine tuberculosis. After taking a wealth of evidence, and sitting for no fewer than six years, the Commission, which was a Commission of experts whose authority had been unchallenged, came to this conclusion:

> There can be no doubt but that in a certain number of cases tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority, at least, of these cases, the bacillus is introduced through cows' milk. Cows' milk containing bovine tuberculous bacilli is clearly a cause of bovine tuberculosis and of fatal tuberculosis in man.

They go on to say:

> A considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cows' milk containing tuberculous bacilli.

That was the unanimous decision of the Royal Commission appointed to examine this very question after six years' investigation. There has since then—indeed, last year—been a further report of the Departmental Committee on Tuberculosis, presided over by the hon. member for Plymouth, which contained a large number of experts of the highest authority in this country on the subject, and they reported:

> The Committee, having regard to the findings and report of the Royal Commission on Tuberculosis and to other investigations, are of opinion that the bacillus of bovine tuberculosis is the cause of tuberculosis in man and to a greater extent in children.

They went on to say:

> Tuberculosis in one form or another is widely prevalent among children, and the Committee considered the evidence convincing that children are infected through tuberculous milk as well as from other sources.

I submit that we cannot properly go behind these declarations. We must proceed from that starting point—that the bodies appointed to examine, for our information, this very subject, have come to these very definite and unanimous conclusions. It is also agreed on all hands that the present measures which are taken by the law and the administration of the law to stop these hundreds and thousands of deaths of children, especially from tuberculosis through milk, are quite inadequate. This death-rate continues, and the children are now dying. Week by week and month by month thousands more of them are suffering from hip disease, diseases of the glands, and other causes which we are told on the best authority are the result of taking tuberculous milk, and it is plain that it is the duty of the State to take these matters into account and to act effectively. In connexion with the present Order for compensation in regard to cows found to have tuberculosis of the udder, he said that it has been represented by the agricultural community and recognized by the Board that the present form of Order is not quite adequate to meet the need, and I am able to inform the House that the Board is on the point of issuing an amended Order, which will grant compensation on somewhat more generous terms, and also assist the local authorities with their expenses in the administration of this Order. With regard to the communication of other diseases by dirty or infected milk, he gave the following very striking case from Newcastle: A case was brought to me only recently, which took place last October in the neighbourhood of Newcastle, where one cow was suffering from some gastric disease, and was almost dying, but was, nevertheless, as long as it was alive, milked, and the milk was sent into Newcastle, and it was ascertained in the inquiry that took place that more than 500 persons suffered serious illness from gastro-enteritis solely through taking milk infected by this one cow. The provision of milk of that character is a crime against society, and yet there is no adequate means under the present law of detecting and dealing effectively with such a case. Further, there is dirty milk sold which need not necessarily contain the bacilli of grave diseases, but which is undoubtedly detrimental to health. Dirty milk, it is believed, has a considerable bearing on infantile mortality. I am not sure that mere bacterial count is a conclusive guide as to the danger of milk, and I must say that my faith in that test was gravely shaken when the hon. member (Mr. Astor) told us that we here in the House of Commons drink milk which contains 70,000,000 bacteria per cubic centimetre. If I drink 70,000,000 bacteria in my milk and suffer no bad effects, I am inclined to suspect that it does not matter very much whether

there are 10,000,000, 70,000,000, or 100,000,000, provided they are bacteria of a friendly species. It depends on what your bacteria are. Continuing, Mr. Samuel said: The fact remains that the measures which have so far been taken to deal with the milk supply are totally inadequate to safeguard the public health. Our laws date back to a time before the importance of bacterial contamination was fully realized. We do, indeed, take the utmost pains to guarantee the purity of our water supply, and yet we allow our milk supply to go almost unprotected. He also enumerated the large number of authorities and associations which had pressed upon the Government the need for legislation, and dealt with the question of adulteration and preservatives. With regard to the forthcoming legislation, he said: I have discussed this matter with fifteen deputations and conferences, and I have had the advice and the views of the interests concerned. The bill which I hope to introduce very shortly will be a bill modifying in many particulars every bill previously before the House. The powers proposed to be conferred, and which we believe will be effective to secure the end in view, are very much more restricted and defined than in the previous bills. Secondly, we propose that the matter of making the regulations should not rest with the Local Government Board alone, but that wherever those regulations touch the interests of the farmers, the concurrence—not merely consultation, but the concurrence—of the Board of Agriculture should be required, so that the Department specially charged with safeguarding the interests of agriculture should combine with the Department which is specially charged with the duty of protecting the public health to see that these these regulations are of a reasonable character. I do not propose in my bill to adopt the suggestion thrown out to-night by the hon. member who moved this resolution, that all milk sellers should be licensed. I think it would be going unnecessarily far that they should have their licences forfeited for committing various offences, and that they should be more or less in the position of the licensed liquor trade. They must be registered in order that their premises may be inspected. I think, if any offence has been committed, and the milk is not what it should be, a man should be liable to penalties, the ordinary penalties; but I do not think that you should go so far as to stop a man conducting his business by taking away his licence. In regard to tuberculous milk, I propose to take full powers to trace back the milk to its source and to deal effectively with cows which have recently suffered from tuberculosis or which give tuberculous milk. We want to make more milk accessible to the children of the poor, and we must see that we do nothing to limit the supply. The bill will be prepared in that spirit. It will enable samples of milk to be taken at any stage of the milk's journey from the cow to the consumer, so that the responsible authorities can see at what point it is that it has become contaminated or adulterated. It will specify more clearly the duties of the local authorities, and will insist on the local authorities performing those duties. Very considerable grants-in-aid, which we hope to give by our financial arrangements of this year, ought to assist the local authorities to carry out these and other duties for safeguarding the public health. Finally, we hope to secure by the bill uniformity in the law, instead of the great diversity which now prevails in different districts. It is not easy to devise any machinery which will be effective for the purpose. It is difficult enough to enforce the 3 per cent. standard of solid fats, which is now regarded as a minimum for milk; it would be far harder to enforce a standard of less than 10,000 bacteria per cubic centimetre. However, I do not say that is impossible, and my mind is not by any means hostile to the proposal. But it is a new proposal, and I am not sure how it would be regarded in this House. If I were convinced that it would meet with general agreement I would have no objection at all to the inclusion in the bill of the necessary power to make regulations. But I am most anxious that my bill should be an agreed bill, meeting the reasonable and even the unreasonable objections from any quarter of the House. I think the best course will be for me to introduce the bill without this power, and then if hon. members opposite move in Committee an amendment carrying out their ideas, they will see what the House thinks of their proposal. The experience of the last five years has shown how easy it is to stop the progress of this bill. I hope, therefore, hon. members who have listened to this debate, and realize the importance of the proposals, will lend the bill their aid, and assist in the establishment of a favourable current of opinion in Parliament which will carry this necessary measure safely into port.

Cancer Research.—In reply to Captain Faber, who inquired whether the Prime Minister would apportion a certain sum yearly for cancer research, Mr. Herbert Lewis said that large sums were being expended from voluntary sources, but that the Prime Minister would be ready to consider any representations on the subject which might be made to him.

Dr. Edridge-Green.—Mr. Lynch asked the President of the Board of Trade whether Dr. Edridge-Green ever received any payment for his work as adviser to the Board of Trade in 1889 and as member of the International Code of Signals Committee; if so, how much; whether, if such payment should seem inadequate, he would take into account the fact that Dr. Edridge-Green had been the pioneer investigator in this country on the subject of testing for colour-vision, that his researches were now recognized here and on the Continent as of great value, and that several public Departments, including the Board of Trade, had so far profited by these researches as to place the tests for colour-vision on a more practical footing; and would he even now see that Dr. Edridge-Green obtains some reward. —The Parliamentary Secretary to the Board of Trade (Mr. Robertson) replied that Dr. Edridge-Green had at no time, either in 1889 or subsequently, held an appointment as adviser to the Board of Trade. It was not usual for members of Committees to be paid for their services, and no payment was made to Dr. Edridge-Green. He could hold out no hope that the Board of Trade would make any pecuniary grant to Dr. Edridge-Green.

Vaccination (Post Office).—Mr. Snowden asked the Postmaster-General whether unvaccinated persons were granted annuities on more favourable terms than those who were vaccinated: and, if not, would he explain why this was not done, seeing that his department assumed, on the recommendation of the National Debt Commissioners, that those who were unvaccinated were more liable to contract small-pox and die from it than are the vaccinated. —Mr. Hobhouse replied that annuities were granted on the same terms to vaccinated and unvaccinated persons. An applicant for an annuity was not required to furnish any evidence as regards health.

Mortality of Seamen (British Ships).—In reply to Mr. M'Ghee, the President of the Board of Trade said that the whole question of seamen's mortality was now being investigated by officers of the department in consultation with representatives of the Local Government Board and the General Register Office.

Notification of Infectious Diseases.—Mr. Wing asked the President of the Local Government Board if he would amend the Notification of Infectious Diseases Act, by Order or otherwise, in such manner as to make it compulsory on the part of private medical attendants to inform parents as to the nature of the illness of their children and its infectious character, and advise as to the exclusion of children from school pending the arrival of the medical officer of health; and whether he was aware that this proposal was recommended by several public officers of health?—Mr. Herbert Samuel said he was aware that a suggestion of this kind had been made in the report of a medical officer of health, but he had received no representations on the subject. Legislation would be required to give effect to the suggestion, and he was not at present convinced of the necessity for adopting compulsion in this matter.

South Australia.

[FROM OUR SPECIAL CORRESPONDENT.]

ADELAIDE UNIVERSITY.

THE post of Lecturer on Forensic Medicine has been given to Dr. R. S. Rogers, a distinguished alumnus of this University, in which he holds the degree of M.A., and of the University of Edinburgh, where he graduated in medicine. Dr. Rogers has for some time been the deputy coroner, and is further known as a specialist in Australian orchids. Dr. W. T. Hayward is succeeded by Dr. Swift as Lecturer on Clinical Medicine.

THE ADELAIDE HOSPITAL.

Dr. W. T. Hayward has resigned the Honorary Physicianey at the Adelaide Hospital, and Dr. A. H. Gault, M.D.Lond., has been appointed to the vacancy. Two vacancies for assistant physicians have been filled by the appointments of Dr. C. T. Champion de Crespigny, M.D.Melb., and Dr. W. Ray, late Rhodes Scholar.

ADELAIDE CHILDREN'S HOSPITAL.

Several changes have occurred in the staff of the Children's Hospital. Dr. H. Gilbert, M.B.Melb., F.R.C.S.Eng., has been promoted to be surgeon for in-patients, vice Dr. A. E. Wigg, who has served the hospital in this capacity for thirty years. Dr. Wigg, who is now visiting England, retains his connexion with the Board of Management of the hospital, as also does Dr. R. Brummitt, who has retired after twelve years' service, and has been succeeded by Dr. Harold Rischbieth, M.A., M.D.Cantab., F.R.C.S.Eng. The vacancy in the out-patient department has been filled by the appointment of a former house-surgeon, Dr. A. Campbell Magarey, M.S., Adelaide.

BABY BONUS FUNDS.

The giving of a bonus for a baby has led to the discovery of a new industry. An enterprising individual conceived the idea of taking a room in a back street to which letters could be addressed, frequently, of course, changing his residence. Then he would promptly register the birth of a supposititious infant. Catching a busy doctor unawares, he would say, "Oh, doctor, Mrs. Jones's certificate was a bit informal; if you will just sign this form I will fill it in." The Department is said to be the loser of £150 by this individual's ingenuity.

THE NEW ZEALAND CONGRESS.

We have just returned from a delightful trip to Auckland, the capital of the North Island, where the foreigners were right royally entertained by the "Maoris." Dr. Purchas struck us as being an excellent President, and the address in medicine of Dr. Sinclair Gilles, both from its matter and its delivery, would have arrested attention at a home congress. Nor was Mr. Hamilton Russell's address on surgery, in which he dealt with Lister and Listerism, less striking. One great feature was the genial presence of Dr. Macdonald, Chairman of the Council of the British Medical Association, whose voyage to the antipodes will serve to strengthen the ties with the old country.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

HIGHLANDS AND ISLANDS MEDICAL SERVICE BOARD.

A COMMITTEE of the Highlands and Islands Medical Service Board, consisting of Lady Susan Gilmour, Dr. J. C. M'Vail, Dr. Leslie M'Kenzie, and Dr. J. L. Robertson, with Mr. M'Quibban, the secretary of the Board, held a sitting at Lochmaddy, North Uist, on April 24th. Delegates from all parts of the island were present. The appointment of an additional doctor was stated to be absolutely necessary. As there is no hospital in the island at present, it was strongly urged that an endeavour should be made to provide one in a central place. The question of additional nurses and the club system of medical payments were also discussed. The committee went on to South Uist, and intended also to visit Barra.

PREVENTION OF CRUELTY TO CHILDREN.

Lord Provost Inches presided at the annual meeting of the Scottish National Society for the Prevention of Cruelty to Children on April 23rd in Edinburgh. It was then stated that the inspectors in 1913 had investigated 9,037 complaints, involving the welfare of 28,104 children, as compared with 8,420 complaints, involving the welfare of 25,749 children, in the previous year. The inspectors' supervision visits had reached the total of 53,484, as compared with 47,457 visits in the year 1912. The report stated that whilst cases of wanton cruelty to children in Scotland had been greatly reduced, the number of cases of constructive cruelty in the form of neglect and underfeeding showed a yearly increase. The Master of Polwarth, in moving the re-election of the office-bearers, said that many of the people who were convicted were really kind-hearted, and that such offences against children would not occur were it not for the circumstances in which they lived and the fact that many were almost incurable victims of the drink habit.

TUBERCULOSIS WORK IN DUMFRIESSHIRE.

Plans for carrying on the work of a tuberculosis officer are everywhere of a more or less tentative character, and Dumfriesshire, a rural county, has been one of the first areas in Scotland to elaborate a definite system. Some account of this was supplied at a recent public meeting by Dr. J. C. Thomson, who is in charge of the work. On receipt of a phthisis notification through the medical officer of health he pays a visit to the patient as soon as possible, and satisfies himself as to the nature of the case and its probable course. He then makes a detailed examination of the patient's environment, and takes any step that may seem desirable in respect of them. When he discovers anything which he thinks may be useful for the medical man in charge of the case to know he communicates with him directly. At his next visit he pays attention to all contacts, and again communicates with the medical man in charge of the case as to any points that seem to him of importance or interest. If tuberculin treatment is requisitioned by the doctor in charge of the case and he himself approve its use, he makes weekly visits for the purpose of administering it. But even when this is the case, it is clearly understood that though he is co-operating in the matter of this specific remedy and takes all responsibility in connexion with it, the patient's private medical attendant is in no sense superseded, but remains in full and responsible charge of all other details. The tuberculosis officer makes a record of the dosage and immediate effects of each dose of tuberculin, and places this in the hands of the patient to be submitted to his doctor for his information at his next visit. Though such administration of tuberculin is nominally only a detail of the work of the tuberculosis officer, it becomes in effect a prime factor in determining his movements, since he must visit patients receiving tuberculin not less than once every week at a regular interval. Hence in practice his journeys about the county have to be arranged so as to meet this requirement, the rest of his work being grouped around these cases in any way that may be found convenient. Dr. Thomson supplied some examples of the kind of steps that had to be taken with a view to improving a patient's environment, and added that though it often happened that any advice he gave in this connexion had already been given by the patient's own attendant, its repetition by himself served a useful purpose in driving home a sense of the importance of the measures prescribed. It had been thought desirable that he should undertake the administration of tuberculin himself because it was an expensive remedy to use unless handled in bulk by one who was dealing with a considerable number of like cases.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

IMBECILE CHILDREN.

AT the last meeting of the Richmond District Asylum Joint Committee the minutes of the Visiting Committee contained an important report from the Medical Superintendent relative to the pressing need for a training institution for imbecile children. The report stated that

since the previous meeting applications had been received for the admission of two children, aged 6 and 9½ years respectively. From time to time he had called the attention of the committee to the absence of any provision in Ireland for imbecile children. Though the need for the establishment of an institution where they could be trained was freely admitted, there was a regrettable tardiness in meeting it. A public institution like the Richmond Asylum was obviously not a suitable place. It was undesirable to put children with adult insane, and there were no facilities or equipment for training the mentally afflicted young. It was decided that Dr. Donelan should make a report in detail as to the best means of dealing with this matter, and the probable number of children that would require care. At the last meeting of the Rathdown Board of Guardians a request was read for the admission of a child of weak intellect into the children's ward of the asylum. The Chairman said it was regrettable that there was no place in Ireland for imbecile Roman Catholic children, as at present the only institution for imbecile children was the Stewart Institution in Dublin.

Epidemic Measles.

The Dublin Housing League has called public attention to the fact that the death-rate of Dublin in a recent week was 26, nearly double the average for the ninety-seven principal towns of England and Wales, which was only a fraction over 14. Sir Charles Cameron, in reply, has pointed out that the exceptional high rate of the last few weeks was due to the large number of deaths caused by the present epidemic of measles. He also stated that the death-rate for last year was 20.1, and from the principal infective diseases 2.1, whereas the death-rate from infective diseases was greater in eight other towns in Ireland, among which were Belfast, Waterford, Wexford, and Galway. Not since 1880 had Dublin so high a death-rate as 5.9 due to infective diseases, which was the rate in Newry for last year. He added that whereas the rural death-rate compared favourably with that of England, there was no doubt that the urban rate was decidedly in excess of that in England. Sir Charles Cameron suggests that this is due to the poverty of the inhabitants of the towns. He has sent a circular to the managers of schools in Dublin stating that the deaths from measles are increasing every week, and suggesting that it would be most desirable to keep the schools closed for some time longer. Dr. Boyce, medical officer of health for the Blackrock district (Dublin), advised the urban council at its last meeting to make measles notifiable, as had been done in the neighbouring townships and in the city. This advice was accepted, and notice of motion to make the disease notifiable for a period of six months was given.

England and Wales.

MANCHESTER.

Radium Supply for Manchester District.

After a long delay, the General Committee appointed some months ago in Manchester to deal with the question of obtaining a supply of radium for the use of the city and district has approved a scheme for carrying this into effect, and has issued an appeal for funds. A considerable sum has already been subscribed, partly to a fund which was to be administered by the special committee and partly to a fund afterwards started by the Manchester Royal Infirmary, but the efforts to obtain subscriptions have in a measure been suspended because it was felt necessary to have only one fund, for the idea of anything like competitive funds was regarded by the public as most objectionable. After negotiations between the special committee and all the hospitals likely to be concerned, a joint working basis has been found, and the General Committee has announced that the following hospitals have agreed to the general scheme: The Manchester Royal Infirmary, Salford Royal Hospital, Ancoats Hospital, Northern Hospital, St. Mary's Hospital for Women and Children, the Christie Cancer Hospital, and the Hospital for Diseases of the Skin. The fund is to be raised for the purchase of radium and radio-active materials, and will be the property of and under the control and disposal of a permanent committee to be called "The Manchester and District Radium Committee," which will consist of the Lord Mayor of Manchester, the Mayor of Salford, the Vice-Chancellor the Manchester University, the Chairman of the board of management of the Royal Infirmary, two lay representatives and one medical representative of each of the participating hospitals, one additional lay representative and one additional medical representative of the Royal Infirmary, Sir Ernest Rutherford, Alderman Edward Holt, and Sir Wm. H. Vaudrey, with power to co-opt three additional members. The Committee will purchase radio-active materials, consisting partly of radium, partly of mesothorium, and corresponding in activity to ½ gram or more of metallic radium, or such portion of this amount as the funds at the disposal of the Committee will allow. The materials will be deposited at the Royal Infirmary, to be used for the treatment of patients, and sent out to the other participating hospitals and to medical men in the form of radium emanation tubes and radium or mesothorium applicators. The infirmary and the other participating hospitals will be entitled to the use of such tubes and applicators in rotation of the dates of application, and the infirmary will, so far as it has accommodation, treat infirmary patients and patients sent for treatment by the other hospitals and private patients sent by medical men.

The Committee will appoint a physicist to give his whole time to the work of the radium department, and an expert medical radiologist to advise as to the line of treatment and conduct treatment when necessary. These officers will be appointed annually, subject to the approval of the board of management of the infirmary, but will be eligible for reappointment. Charges for treatment will be according to a scale to be drawn up by the Committee, and payments so received will be applicable to the payment of the salaries of the physicist and medical expert, the balance, if any, to be paid to the Committee. The scale of charges will be such as to secure that the scheme shall be self-supporting. The Committee will have power to admit to a share in the benefits of the scheme other hospitals, bodies, or persons than those specified on such terms and conditions as it may prescribe.

With the statement of the scheme the Lord Mayor issues his appeal for subscriptions, and points out that the sum of at least £25,000 will be needed if good and lasting work is to be done. The appeal is to all the inhabitants of Manchester, Salford, and the surrounding districts, and donations will be received by the Lord Mayor on behalf of the Committee, or may be paid into the Williams Deacon's Bank to the credit of the "Manchester and District Radium Fund." Dr. W. Milligan is acting as honorary secretary of the Committee. Up to the present the donations amount to £4,584, including the original promise of £2,000 by Alderman Holt. Further donations promised are £1,000 from Sir William Mather, £100 from Mr. Edward Hopkinson, and £100 from Mr. Lawrence Pilkington.

LONDON.

London Insurance Committee.

Distribution of the Unallotted Funds

Further discussion took place at a meeting of the London Insurance Committee on April 23rd, as to the principles which should govern the distribution of the funds accumulated in respect of insured persons who had not chosen a doctor before the new regulations of the Commissioners were issued. The full opinion of the late Mr. Danckwerts, K.C. (of which a summary was given in the Supplement of April 4th, p. 210), was before the Committee. Mr. Danckwerts based his opinion that the money could not be distributed to the practitioners on the fact that the medical agreement only required practitioners to treat those who had been accepted by or assigned to them, and that no assignment was made during the period in question.

Mr. Kingsley Wood moved that a copy of the opinion be sent to the Insurance Commissioners with the information that the Committee was unable, in the circumstances, to proceed with the distribution of the money. Throughout this long controversy the medical profession had not thought fit to start any action either against the Insurance

Committee or by way of mandamus against the Insurance Commissioners. He did not believe the Insurance Commissioners would undertake the responsibility of distributing the money; the proper solution of the difficulty was either a judicial decision or an Act of Parliament. It was an open question whether the accumulated funds should be paid to the doctors or whether some portion should be used to make up deficiencies in chemists' accounts, the deficiency in the sanatorium funds, or in some other way for the benefit of the insured person.

Mr. O. E. Warburg, who seconded, said the question was one of interpretation of a contract in view of circumstances not contemplated at the time the contract was entered into. This was a matter which could be decided not by the Committee, but by the courts which had experience in determining complicated contracts.

Mrs. Handel Booth moved an amendment as follows:

> That having considered the opinion of counsel as to the distribution of the moneys in the panel fund for the year ended January 11th, 1914, the Committee considered it their duty to prepare a scheme for the distribution of the said fund, and to submit such scheme to the Insurance Commissioners for approval; and that the Medical Benefit Subcommittee be instructed to prepare and submit such scheme to the next meeting of the Committee.

No one outside the medical profession, she said, made any claim to the money, and, if it had been possible to proceed with allocation, the difficulty would not have arisen.

Mr. F. Coysh (Chairman of the General Purposes Subcommittee), in supporting the amendment, asked the Committee to recall the two meetings with the medical profession held at the County Hall early in the negotiations for a panel service in London. At both meetings there was a clear and definite understanding that there would be an allocation of persons who did not choose their own doctors. A contract in writing was binding, but between honourable men an agreement, even if not in writing, was equally binding. That circumstances, over which no one had any control, had prevented the allocation being made was no reason for going back on the undertaking given.

The Chairman (Mr. J. A. Dawes, M.P.) remarked that the point raised at the conferences mentioned was whether insured persons could be foisted on doctors who did not want them, and whether patients of other doctors could be taken from them, but the question of allocation was not entered into.

Mr. Coysh thought the assignment of insured persons was necessarily presupposed. As to the liability of members of the Committee if the money were distributed, Mr. Coysh asked, To whom would the Committee be liable? Certainly not to the Commissioners or the doctors outside the Act. Nor would it be liable to the insured persons, for Mr. Danckwerts had laid it down that an insured person who had failed to take advantage of the benefits could not claim the return of any money paid by way of premiums. Nor was the Committee liable to the approved societies, which had no *locus standi* in this matter. The interests of the insured person would be best served by getting this question out of the way so that attention could be concentrated on perfecting and completing the medical service.

Mr. P. Rockliff urged that there was no moral claim to the money on the part of the medical profession working the Act. As there had been no assignment there was no liability upon the doctors to treat those who were not assigned. Had the doctors fulfilled their bargain? When the remuneration of the doctors was under discussion between the Chancellor and the British Medical Association the additional 1¾ millions for medical benefit was given on the understanding that there should be an improved service, but in his opinion the Fabian Society's report showed that this had not been given. Mr. Rockliff was proceeding to quote from the report as to alleged cases of improper certification when the Chairman said that if the whole question of the medical service was to be raised London cases must be given. Mr. Rockliff therefore criticized a practice which he said obtained in London of giving a certificate, but at the same time giving an approved society confidential advice to call in a medical referee.

The Chairman objected to the introduction of allegations of this kind into a speech. Definite cases should be brought before the Medical Service Subcommittee.

Mr. Long thought there was no question, from the interviews of the Chancellor with the doctors, that the whole of the money in respect of medical benefit, except that intended for the chemists, was intended to go to the doctors. On that understanding the work had proceeded successfully in spite of occasional lapses. The money in equity belonged to the doctors, and the Commissioners should be asked to help in securing a basis of distribution which should be fair to the practitioners concerned.

Dr. H. H. Mills said that the doctors had not taken action by way of mandamus because it seemed only reasonable that the obvious intention of the Act would be carried out.

Dr. B. A. Richmond said the understanding, supported by the Commissioners and the Chancellor, was that the doctors who went on the panel were accepting the liability to be called upon to treat any and all the insured population of the county. It was not the fault of the profession that the allocation was not made, and why should the practitioners be penalized? Doctors' lists were still incomplete, the wording of the medical card gave people the impression that they had nothing to do until they were ill, and even now he had visits from people who were patients before the Act came into force, and who asked that they might now be placed on his list. One hundred of the original red cards had lately been presented to him. Under the principles of insurance the doctors on the panel had a moral right to the accumulated funds. As to Mr. Rockliff's criticisms, the medical profession was anxious to do everything in its power to improve the service, and no charge would be shirked by the Medical Service Subcommittee. The panel doctors were anxious that improper professional conduct should be stamped out.

Mr. R. W. Moffrey (Vice-Chairman of the Committee) supported the amendment. He agreed that the doctors on the panel had undertaken liability for the whole insured population. Whatever the legal view might be, the Committee would have had to pay out the whole fund had the allocation been made, and it had no right to shelter behind its own lapses.

Other speeches were made in support of the view that the money should be distributed amongst the doctors on the panel, and on a division, in which the names were taken, the amendment in favour of the preparation of a scheme for distribution was passed by 27 votes to 23. The names were again taken on the amendment as a substantive motion, when the figures were: For, 26; against, 22. Sir Shirley Murphy, Mr. E. B. Turner, Dr. Lauriston Shaw, and Dr. Florence Willey voted for the amendment. Dr. H. H. Mills and Dr. B. A. Richmond, as representatives of panel practitioners, did not vote.

Co-ordination of Dispensary and Domiciliary Treatment.

The co-ordination of dispensary and domiciliary treatment of tuberculosis formed the subject of a long report by the Sanatorium Benefit Subcommittee. The Subcommittee stated that, prior to January 15th, 1913, there was naturally an inducement to a medical practitioner to provide domiciliary treatment for tuberculosis rather than to refer cases to a dispensary, but since practitioners on the panel had been required to provide domiciliary treatment under their agreement with the Committee, it was understood that in a large percentage of cases the treatment provided at the dispensaries, for which payment was claimed by the dispensary authorities, was such as could be given by practitioners on the panel, to whom payment had already been made by the Committee. The Subcommittee had consulted the Panel Committee on the general question.

The Panel Committee expressed the opinion that the nature of the services of a practitioner on the panel in respect of domiciliary treatment should be those included in the Local Government Board Order of July, 1912; that the work of the dispensary should be primarily of a consultative character and given in consultation with the insured person's panel doctor. It should consist of the more elaborate methods of diagnosis and such treatment (if any) as might be agreed upon between the practitioner and the consulting officer of the dispensary. All insured persons suffering from tuberculosis, who were not resident in institutions, should be under the general care of their panel doctors, and a small proportion should be under the joint care of the dispensaries and their panel doctors.

The Sanatorium Benefit Subcommittee understood, as regards the last proviso, that in some cases the dispensary authorities appeared to work more or less independently of the panel practitioners, and that a

large number of insured persons attended dispensaries without any recommendation by the panel practitioner or the Insurance Committee, and frequently without the knowledge of the doctor, who was thus prevented, however willing he might be, from giving the treatment he had undertaken. To remedy this state of affairs the Subcommittee proposed that, unless insured persons were referred to the dispensary, either by the panel practitioner or the Insurance Committee, they should not be regarded as patients for whom the Committee would be responsible, and that this understanding should form a condition of grants to the dispensaries. Other conditions should provide—as suggested by the Departmental Committee on Tuberculosis—that medical officers of dispensaries should (1) consult with practitioners on the panel as to treatment and as to diagnosis of cases and examination of applicants, if necessary in their own homes; and (2) consider periodical reports submitted by panel practitioners. Dispensary authorities should be asked to submit details of their proposals for linking up the panel to the dispensary service, and should be asked to consider the appointment of representatives of the panel practitioners on the committees of management of the dispensaries. To arrive at a basis of grants to dispensaries the Subcommittee suggested that until further experience had been gained each application should be considered on the basis of the actual proportion of cases treated at the request of panel practitioners or the Committee. Frequent periodical returns should be submitted to the Committee, and inquiries should be made into cases sent by individual practitioners in boroughs where the proportion was found to be above the average. The Subcommittee submitted a series of resolutions embodying these proposals.

Mr. E. B. Turner asked that "practitioner" should be substituted throughout for "practitioner on the panel," in order that practitioners with whom insured persons made their own arrangements might be recognized.

The Chairman demurred to this, and suggested that the position of practitioners not on the panel would be best covered by the phrase "at the request of the Insurance Committee."

Mr. Turner said he was satisfied as long as it was understood that the practitioner not on the panel was recognized in the scheme for co-ordinating domiciliary and dispensary treatment.

The Committee approved the recommendations.

Sanatorium Benefit Funds.

The Sanatorium Benefit Subcommittee presented the following estimate of income and expenditure for sanatorium benefit in 1914:

Income: From the Insurance Fund on the basis of 7d. for each insured person, £100,000.
From approved societies in respect of members without dependants, £2,000.
Balance of moneys accumulated during the first six months' working of the Act, £30,000.
Total income, £132,000.
Expenditure: *Domiciliary treatment*—payments to practitioners, £40,000; drugs and accessories, £7,620. *Dispensary treatment*—payments to authorities, £5,000. *Institutional treatment*—payment to authorities, £54,650; travelling expenses of patients, £500. *Administrative expenses*—expert medical adviser, £1,560; proportion of establishment charges, £3,500. Total expenditure, £112,780.

In an explanatory memorandum the Subcommittee quoted the Chancellor of the Exchequer as having stated that for the first few years the 6d. allotted for domiciliary treatment would be more than adequate. At present the amount of this payment could not be varied, but it should be noted that the arrangement was made for three years, and before the end of 1915 the whole position would be reconsidered. In another report, dealing with sanatorium provision, the Subcommittee indicated that but for the money accumulated during the first six months' working of the Act, when applications for sanatorium benefit were few, the expenditure for institutional treatment during 1914 would exceed the amount of the estimated income by £10,000.

Complaints against Practitioners.

The Medical Service Subcommittee reported as to a case in which a coroner's jury censured a practitioner on the panel for not having properly examined an insured person upon whom an inquest was held.

It appeared that the man collapsed in the street and died before he could be got to a hospital. The *post-mortem* examination showed the cause of death to be angina pectoris and pulmonary tuberculosis, death having been accelerated by tuberculous disease of the lungs. The deceased had been receiving treatment for dyspepsia and rheumatism. The statement of the practitioner to the Medical Service Subcommittee was that he provided treatment for the insured person in March, 1913, when, after a careful examination, he found the man to be organically sound. In February, 1914, the insured person came to him again complaining of pains in the stomach. There was no marked change in his appearance; he said he had no cough, but suffered from diarrhœa. In March the patient seemed slightly thinner, but from the symptoms described the doctor did not think a further examination necessary; there was nothing which was not accounted for by the complaints previously suffered from. The practitioner then came to the conclusion that the patient was suffering from dyspepsia and rheumatism. No mention was made of night sweats (as to which statements were made at the inquest). At no time did the deceased give any information that would lead the doctor to suspect tuberculosis; he said, in reply to a question, that he had no cough or expectoration. The widow denied that the deceased said he was suffering from diarrhœa, but the Subcommittee was satisfied that her recollection was at fault, as the prescription (which had been produced) clearly indicated that it was given for diarrhœa.

The Subcommittee found no evidence that the deceased ever informed the practitioner that he suffered from night sweats or coughs, or that he described to the practitioner the severe pains—due to angina pectoris—from which he suffered towards the end. The Subcommittee was advised by its medical members that there was no evidence to show that tuberculous disease of the lungs was in any way active at the time of death or that it was an active agent in causing death. The cause of death was undoubtedly angina pectoris, and in addition there was some inflammation of the stomach, possibly due to errors of diet. The Subcommittee was satisfied that the practitioner was correct in stating that the deceased came to consult him in consequence of diarrhœa, and it came to the conclusion that the practitioner exercised proper professional care and that he was not negligent in any way. There was nothing in the symptoms described which would lead the practitioner to suspect that the deceased was suffering from tuberculosis, nor did the Subcommittee think that tuberculosis was the cause of death. The practitioner stated that he was not present at the inquest. Prior to the Subcommittee's inquiry he asked that the fullest possible publicity might be given to the report and that his name might be published.

In reply to a question by Mr. Kingsley Wood as to whether the same witnesses were before the Subcommittee as were before the coroner, and whether they were cross-examined, Mr. Warburg said the Subcommittee was not in the position of revising or reviewing the verdict of the jury. Through a misapprehension the doctor was not present at the inquest; the Subcommittee had the advantage of hearing his explanation, and on the facts it was satisfied that the deceased did not mention his cough. Indeed, when asked, he said he had no cough. That, and the advice of the medical members, swept away the conclusion of the jury that the doctor ought to have suspected tuberculosis.

The Committee passed a resolution that there was no evidence of neglect, and, in accordance with the practitioner's request, it suspended the standing order under which names in case of complaint are withheld from publication. The name of the practitioner was given as that of Dr. D. J. F. Bennett, of Walworth, S.E.

In a case in which a practitioner with a large list was found by the Subcommittee to have been guilty of neglect, the Committee agreed to transfer to another list, without further inquiry, any insured person who applied.

Mr. Rockliff asked how insured persons were to know they could be transferred unless the name of the doctor was disclosed. Would members of the Committee be justified in giving the information to members of an approved society?

Mr. Warburg said the question of the publication of names was an exceedingly difficult one. If the name were published in every instance there might be a stampede from a doctor's list, and the punishment inflicted would be a very heavy one. He thought members of the Committee would be justified in giving the name in special cases, but he did not think the Committee ought officially to empower them to do so.

Dr. H. H. Mills promised to bring the question of publication of names in such cases under the consideration of the Medical Benefit Subcommittee.

Twelve other complaints against practitioners were considered by the Medical Service Subcommittee. Its decisions were as follows: (1) A complaint of neglect was found to have been substantiated, the Subcommittee stating that possibly an error of judgement had been committed by a practitioner in not visiting a patient. The practitioner was required to refund the cost of obtaining treatment elsewhere. (2) No definite action was taken in a complaint of neglect, there being discrepancies in the evidence. It appeared to the Subcommittee to be a case of a slip of memory on the part of the doctor. (3) Owing to an unfortunate combination of circumstances, a deputy did not attend, and it was found that a technical breach of the agreement had been committed. The insured person was transferred and the practitioner required to pay 3s. 6d. (4) It was found that a practitioner did not exercise proper care in diagnosis; rheumatic fever was diagnosed as neurosis. The practitioner was required to pay the cost of obtaining treatment elsewhere. (5) The Subcommittee found that an error of judgement had been committed and a transfer was arranged. (6), (7), (8), and (9) Complaints against practitioners were found to have entirely failed. (10) In this case the secretary of an approved society, on receiving a certificate that an insured person was suffering from orchitis, called in another doctor, who found traces of venereal disease of fairly long standing. The practitioner's explanation was that he found no discharge and was not able at the time to form a definite opinion. He intended to make a further examination when he next saw the patient, with a view to ascertaining whether his condition was due to misconduct. The Subcommittee regarded the explanation as satisfactory. (11) and (12) The explanations of the practitioners with regard to complaints as to certificates were held to be reasonable. In connexion with a complaint against a chemist the attention of a practitioner was drawn to the undesirability of ordering drugs for insured persons by means of formulae known only to particular chemists.

Special Correspondence.

BERLIN.

Friedmann's Tubercle Emulsion.

THE publications by Vulpius and Rabinowitsch of their experiences with Friedmann's tubercle emulsion have been followed by others of a like critical character. The current number of the *Deutsche medizinische Wochenschrift* contains two articles on this important topic, and both of them are unfavourable in their attitude.

The first is from the pen of Professor Brauer, Director of the Hamburger Krankenhaus, and well known to science through his experiments on the production of artificial pneumothorax. He reports on a series of eighteen cases; some injected by Friedmann himself, so that no objection on the score of faulty technique can be raised against them. Not one of the cases treated was favourably influenced, and Brauer is very emphatic in his contradiction of the statement that the preparation is harmless. In some of the cases there was an immediate and violent reaction reminiscent of the old tuberculin days, when high doses were given. In three patients there were febrile exacerbations of the pulmonary condition six to seven weeks after the injections, and one of these actually died of the subsequent haemoptysis. In not a single case could the disappearance of tubercle bacilli from the sputum, subsidence of the temperature curve, or gain in body weight be recorded. No better results followed the administration of the emulsion in cases of surgical tuberculosis, for the cure of which special claims had been put forward by the inventor, and not one of the cases of cervical glandular tuberculosis or bone or joint infection in Brauer's clinic had been in any way influenced for good. Brauer has not contented himself in this article with a criticism of the clinical side of Friedmann's claims; he states that the theoretical propositions on which they are based are also fallacious, or at least unproven, and that Friedmann had therefore no right to give prophylactic injections to children after such had failed to be effective in animals, for it was not possible to be certain that the bacilli, presumably non-virulent at the time of injection, might not at some future time, in response to some external stimulus, assume a virulent character. The infiltrations left by injections were not, as Friedmann maintained, dépôts of antigen, which was gradually absorbed into the circulation; rather were they the results of impurities in the preparation, such as had been demonstrated by Vulpius, Rabinowitsch, and others. The idea of utilizing living tubercle bacilli in the cure of the disease had been first promulgated by Behring, who, as a result of his experiments on cattle and other animals, could not bring himself to inject his preparations into man. Friedmann, therefore, could not even claim priority for his work. Brauer concludes with a severe attack on the followers of Friedmann—for example, Professor Krauss of the Charité—who by their voluntary support had in a large measure given a free advertisement to a preparation which had threatened to become a blot on the escutcheon of German scientific medicine.

The second article is by Drs. Gangele and Schüssler; it deals with a series of thirty-four children, mainly bone and joint cases, treated at their institute. The facts are analysed in some detail; the death of one case they attribute to acceleration of the disease brought about by the injection. In no less than 21 cases out of the 34 an abscess formed at the point of injection, in several cases of enormous size, and by their constitutional effect notably aggravated the poor condition of the small patients. In some instances the abscesses appeared after an interval of several weeks, and all of them, in the opinion of these authors, must be ascribed to contamination of the ampoules during or after preparation. In no case was there any radiographic evidence of improvement.

Dr. Brauer of Danzig had reported a temporary improvement in a few cases of lupus vulgaris treated by him, but after three weeks there was a return to the previous condition, so that he could not state that there was a permanent definite amelioration in a single case six weeks after treatment.

It remains to be stated that in consequence of the many adverse criticisms published on this matter in the last few weeks the Prussian Government has seen fit to order a detailed inquiry by a special commission, which it is expected will recommend that manufacture of the emulsion outside the control of the State shall be prohibited.

PARIS.

Serum Treatment of Diffuse Myelitis.—Paraffin as an Application in Rheumatism and Gout.—A New Symptom-Complex in Intestinal Obstruction.

AT a recent meeting of the Academy of Medicine Dr. Netter reported the results obtained by treating a case of diffuse myelitis with serum. At the beginning of November, 1913, the patient suffered from malaise, and by the 15th of that month exhibited all the typical symptoms of diffuse myelitis. In the ordinary course such a case would probably have ended fatally or at best remained paraplegic, but two days after the myelitis had been diagnosed serum was injected intraspinally for nine consecutive days with beneficial result. The persons from whom the serum was obtained varied in age from 9 to 42, each of them being a person who had previously—some more recently than others—been affected with infantile paralysis. On November 29th the patient was able to stand, and was now in perfect health, having complete nerve control over his faculties and limbs. Drs. Netter and Levaditi in 1910 showed that the serum from old infantile paralysis cases destroyed the virus of poliomyelitis *in vitro*, and expressed a hope that *in vivo* the same would occur. In the case described their expectations would seem to have been realized.

To the same society Dr. Barthe de Sandfort reported the results he had obtained by applying paraffin as a plaster or compress in cases of rheumatism, gout, varicose veins, and sciatica and lumbago. The temperature of the plaster, he said, was easily maintained at 110° F. for twenty-four hours when applied at 122° F., and he claimed that the result was excellent. He had also applied paraffin to wounds, ulcers, and sores at a temperature of 176° F. At this temperature the mixture, when passing from the liquid to solid state, filled the cavity of an ulcer and kept it clean; it healed with less cicatricial tissue than ordinarily, and with less loss of tissue, owing to a controlling effect of paraffin on suppuration.

The value of the symptom-complex of succussion and false ascites in diagnosing cases of chronic intestinal obstruction where the obstruction was partial was discussed by Dr. Mathieu on the same occasion. In such cases a movable dullness, he said, is noticed in the abdomen, and resembles the dullness obtained in ascites; added to it is

succussion in the bowels, which resembles the succussion obtained in the stomach in pyloric obstruction. By x-ray examination in such cases portions of the intestine can be seen to be partially filled with fluid, and neighbouring portions entirely filled with gas only. By this means the exact localization of the obstruction, he asserted, might be ascertained; frequently it was at the lower portion of the ileum. The symptom-complex, he stated, was most easily demonstrated during a spasmodic attack of bowel contraction.

Correspondence.

INSPECTORS OF THE MENTALLY DEFICIENT.

SIR,—In the JOURNAL of February 28th (p. 511) a letter was published from Dr. Dickinson Berry and myself on the salaries of inspectors under the Board of Control (Mental Deficiency Act).

As a result of that letter Dr. Sophie Jackson, who was an accepted candidate for the woman's post of medical inspector under the Board of Control, and whose self-sacrificing stand for the principle of equal pay for equal work in the medical profession is well known, on being interviewed by the Board, made her acceptance of the post conditional on either the salary being made equal to that of the medical man doing the same work, or the work to be done being definitely restricted. The second candidate also made the same stipulations.

A good deal of correspondence between the first and second candidates, the Board of Control, the British Medical Association, and the Registered Medical Women's Association has taken place, and briefly summarized is as follows:

On April 8th the second candidate wrote in thorough concurrence with Dr. Jackson's actions, stating that she would certainly decline to accept the post were it offered to her.

On April 9th Dr. Jackson was informed that the second candidate had had a conversation with one of the Commissioners of the Board of Control, who told her that the work was restricted and that the post would probably be lost to medical women if the stand of equal pay were forced, because the salary had been fixed by the Treasury and was unalterable. At the same time she gave Dr. Jackson to understand that if she (Dr. Jackson) persisted in refusing it, she (the second candidate) would feel justified in accepting it. She also added that she would take no "definite step" till she had communicated with Dr. Jackson. The second candidate eventually accepted the post.

Within the last few days an official letter has been received stating "that the Board have come to no decision, as alleged, that the duties of the woman inspector to be appointed under the Board are to be 'definitely restricted.'"

In these circumstances surely any candidate, who had accepted a post believing certain conditions were attached to it which now she knows are not, should refuse to take it.

I pass by the extraordinary fact that a Commissioner should make statements that are proved to be incorrect, on the strength of which we may assume the candidate accepted the post.

Apologizing for the length of this letter, which I am sure you, Sir, will allow to deal with principles vital to our profession.—I am, etc.,

JANE H. WALKER,
President of the Registered Medical Women's Association.

London, W., April 28th.

CANCER, PUBLIC AUTHORITIES, AND THE PUBLIC.

SIR,—The article under the above title, by Mr. Charles P. Childe, in the BRITISH MEDICAL JOURNAL of March 21st, showing how, under Mr. Childe's guidance, the Portsmouth Town Council has taken steps to instruct the public in the early signs and symptoms of cancer, marks a most important advance. To no one is this advance of greater interest than to the writer, who, for nearly ten years, has advocated an almost identical procedure.

To those interested in the history of the movement for instructing the public in the early signs and symptoms of cancer, the following references may be of service:

Instruction of the Laity in the Early Signs of Cancer.—*Lancet*, December 17th, 1904, p. 1747, and January 7th, 1905, p. 55. The leading article on this subject in the *Lancet* of the same date (p. 59).

A Plea for Instruction of the Laity in the Early Signs of Cancer.—BRITISH MEDICAL JOURNAL, October 7th, 1905, p. 907.

The Early Recognition of Uterine Cancer.—*Lancet*, June 5th, 1909, p. 1636, and the leading article in the *Lancet* of the same date (p. 1616).

—I am, etc.,

Plymouth, April 26th. C. HAMILTON WHITEFORD.

DOMICILIARY TREATMENT IN PHTHISIS.

SIR,—It is unfortunate that until quite recently the home treatment of working-class patients does not appear to have been seriously attempted on a large scale. Writers on this subject are apt in consequence to confuse the past with the present and future. Dr. Holden's communication (p. 942) tell us what is already fully realized. The dangers of which he speaks are, in my opinion, frequently due to preventable and removable causes. They can often be reduced to a minimum by proper care and attention on the part of all concerned. In almost every case I succeed somehow in getting a separate bed and bedroom for the patient.

All cases, perforce, receive home treatment during some period of their illness. Panel doctors have a legal and moral obligation to treat insured consumptives properly, as they are paid a sum of sixpence a head per annum for every insured person on their lists in return for the extra attention that these cases need. As a whole, they are interested in their cases, and they co-operate loyally with me.

Domiciliary treatment depends very largely on the human factor, and not least on the personality of the physician and nurse. Its limitations are obvious; but I believe in its possibilities. It should not, in my opinion, be reserved for advanced cases. These should be removed for isolation.

I have charge of an extensive and densely populated working-class portion of Lancashire, and I unhesitatingly affirm that in a very large number of cases domiciliary treatment as carried out has been of the greatest value, and practically free from danger. The education of the public is important, and I believe that the series of lantern lectures, which I have given this winter to large audiences, will be helpful.

Dr. Holden's alternative proposals will be awaited with interest. Meanwhile, it will be as well to make the best use of present opportunities.—I am, etc.,

Wigan, April 27th. GEORGE JESSEL, M.A., M.B., D.P.H.

THE POSITION OF CHLOROFORM.

SIR,—The acknowledged authority of Dr. Dudley Buxton, following up the Hyderabad inquiry, has now finally established the old Syme dictum that the danger in chloroform administration comes from the respiration, and not the heart. In the palmy days of Edinburgh, when that great surgeon reigned supreme, I had the honour to be his dresser, and afterwards his "supernumerary," and therefore had the opportunity not only of watching his methods, but of helping to maintain the anaesthesia when the house-surgeon was otherwise engaged.

We all remember how rough and ready the process was—an unstinted and unmeasured quantity of Duncan and Flockhart's excellent chloroform was poured, not dribbled, on to a towel which was then laid over the patient's face, and when the inevitable struggling began, I well remember how Syme's little hand was firmly pressed over the mouth and nose so as to ensure a rapid lapse into insensibility, and when stertorous breathing set in the tongue was pulled out by an artery forceps. Syme's teaching, more implied than stated, was that a small dose is more dangerous than a large, and that as shock is not obviated even by the most profound anaesthesia, it is all-important that the recumbent posture should be maintained throughout. He was always proud that he had not known a single death in 6,000 inhalations, and in my humble but possibly imperfect judgement, danger began and chloroform got a bad name when it was dropped with

conscientious caution into some one or other of the complicated machines constructed by the mechanical ingenuity of instrument makers.—I am, etc.,

London, W., April 28th. ROBERT FARQUHARSON, M.D.

SIR,—The discussion on anaesthesia has most assuredly not been closed by the exaggerated view taken by Dr. Dudley Buxton regarding the "increase of accurate knowledge concerning the action of chloroform." The question is one of life and death under anaesthetics, and for the honour of our profession I hope it will only be closed when deaths cease to occur during anaesthesia. It is amusing that Dr. Buxton should suddenly profess to be an "enthusiastic admirer of my splendid work and valuable book," seeing that for the last five-and-twenty years he has assailed the work of the Hyderabad Commission with every possible kind of detraction and misstatement. His letter of April 20th shows that he has also failed entirely to profit by the accurate knowledge which was gained by the Commission's research.

Dr. Buxton accuses me of misrepresenting him, because for the sake of brevity I condensed his description of his plan of giving chloroform. I therefore quote the context, the words I am accused of having "pieced together" being printed in italics:

> *My plan is to use Lister's open method* or Krohne and Sesemann's recent and useful modification of Junker's inhaler. I also make it a rule to test the vigour of respiration by placing my hand over the mouth, to watch the colour of the patient's face and ears, *and to keep a finger upon an artery.* Proceeding in this way, I have sometimes found that the heart flags even when the respiration, judged by the eye and the plan above mentioned, shows no alteration; that not only is there evidence of general feebleness of circulation, which might be attributed to the fall of blood pressure, but that distinct and unmistakable cardiac enfeeblement occurs. Further, this is progressive, and likely, it has appeared to me, in more than one case, to end in cardiac syncope unless prompt and vigorous measures were used.

The words in italics in no way misrepresent Dr. Dudley Buxton. They put forward the one telling fact that an essential feature of his plan of giving chloroform is "to keep a finger upon an artery." That this is, as I have repeatedly insisted, a thoroughly dangerous way of administering chloroform is proved by Dr. Buxton's account of what may follow—"the heart flags"—and in a certain percentage of cases death is rendered imminent. The failure of the heart which may occur under Dr. Dudley Buxton's plan of giving chloroform is a positive sign of maladministration, and it can never occur when the breathing alone is properly attended to.

I pass over Dr. Dudley Buxton's invidious statements about "dosage," and the "unfortunate influence of the '*idée fixe*,'" to consider the second of his reasons for taking the pulse as a guide to the effect of chloroform. In the final paragraph of his letter he asserts that it is essential, when the chloroformist can only guess at the dosage of chloroform by the results seen in his patient, to keep a finger upon an artery in order "to attempt to estimate any fall of blood pressure." The "dosage" of chloroform is a point of absolutely no importance, and in whatever way the drug is given it must always be a matter of guesswork. Further, even if any man living could estimate the fall of blood pressure by watching the pulse, it is totally unnecessary to do so. The fall of the blood pressure is the first effect of chloroform effectively given, and it is a perfectly normal process. It no more depletes the respiratory centres of an adequate blood supply than it does the great toe. Finally, chloroform, when given by inhalation, is not in any sense a "protoplasm poison"; if it is properly administered it is not a poison at all.

In taking leave of this subject for the present, I venture to submit that the question of surgical anaesthesia cannot be settled by controversy. It is not a personal matter, but is one of such enormous importance to our profession and the public that it demands—most urgently—a full and searching examination by the British Medical Association. I plead guilty to being under the influence of the *idée fixe*; it is that deaths under anaesthesia are, practically, all preventable, and I feel sure that they would cease if the inquiry which I suggest were made.—I am, etc.,

Hove, April 27th. E. LAWRIE.

PITUITRIN IN LABOUR.

SIR,—The interesting account in your issue of April 25th, p. 906, by Dr. P. A. Hendley, of his use of pituitrin, needs both qualifying and supplementing. The statements that follow are based on a personal use of this agent in close upon 50 cases of normal labour during the past eighteen months. Without doubt pituitrin is a most valuable help to both patient and doctor in such cases. Labour is considerably shortened, the use of forceps is usually obviated, chloroform can be given without failure of uterine contractions, and stillbirths need not be anticipated. In my cases only one stillbirth has occurred. In this case (a primipara) the child lived up to the time the head was born; the placenta was large and thickly studded with yellow nodules, and the father was under treatment for syphilis. I could attribute the death to some cause connected with syphilis, not to pituitrin. In the majority of cases the children have behaved quite normally on delivery, but in some I have observed a curious rigidity of muscles, including those of respiration, which passed off quickly and without trouble.

Dr. Hendley entirely omits to mention the state of the cervix after delivery in his cases. His practice of giving a considerable dose of pituitrin (0.75 to 1 c.cm.) while the os is small is not justified in the present state of our knowledge. Thus, a multipara with her sixth child had uterine inertia. Owing to the entire absence of expulsive effort for some hours, the head, though normally presenting, had retreated to a little below the pelvic brim. The cervix was intact and patulous, and, believing that two or three forcible pains might finish the first stage, I gave 1 c.cm. of pituitrin. Labour was completed within one minute and a half. My pleasure at this astonishingly quick result was decidedly damped on finding a pretty extensive laceration of the cervix on one side.

The effect, indeed, of pituitrin on the duration of a normal labour can only be guessed, not accurately calculated. My practice now is in a primipara to wait till the end or very nearly the end of the first stage, and with a multipara to test the cervix during a pain to make sure it is not rigid but yielding easily, before giving pituitrin. If these precautions are not observed there is an obvious risk of leaving the woman with a lacerated cervix. Again, in obstructed labour—for example, in moderately contracted pelvis—the principle of forcing the head onward by any such means is radically unsound. This is amply proved by recent statistics of the Rotunda Hospital, Dublin, concerning the effect of the use and non-use of forceps in contracted pelvis.

In less than one minute after a full dose of pituitrin the uterus goes into continuous contraction. After about ten minutes remissions between the contractions become increasingly evident, and in from thirty-five to forty-five minutes the effect of the first dose has passed off. Now if delivery occurs just after the effect of a dose has passed off there is a risk of *post-partum* haemorrhage. The uterine muscle is temporarily exhausted, and the organ gets "lost" under the hand with unpleasant frequency. For the same reason it may be troublesome to deliver the placenta. This particular contingency should therefore be avoided by giving a second dose in time, and not less than 0.5 c.cm.

In conclusion, I agree that pituitary infundibulum has a great future before it in obstetrics, and especially in uterine inertia.—I am, etc.,

EDMUND HUGHES, M.R.C.S., L.R.C.P.

Liverpool, April 27th.

AN EPIDEMIC RESEMBLING WHOOPING-COUGH.

SIR,—I have seen a number of cases of paroxysmal cough occurring in children unaccompanied by a whoop during the past two months. The paroxysms in some cases terminated in vomiting, in others vomiting was absent throughout. Adrenalin internally controlled the paroxysms of coughing. All my cases occurred in children, and they were all marked by an absence of physical signs in the lungs. The illness in cases noted had a definite incubation period, and was infectious. As we know that a genuine attack of pertussis may be passed through without a whoop, I diagnosed the attacks as whooping-cough, and treated them as such. Some of the parents remarked, "It is just like whooping-cough, but they don't whoop."

In two cases ulceration of the fraenum linguae occurred. Until the organism causing this condition has been identified, we can only label cases without a whoop as cases of paroxysmal cough of unknown origin. Whooping-cough is, after all, only a convenient name derived from what is frequently a prominent symptom in the course of the disease.

It appears to me that it would be a step in the right direction if we always adopted a simple nomenclature of conditions, of the cause of which we are ignorant, but such a plan must be generally adopted, otherwise those who acknowledge their limitations would be regarded as hopelessly incompetent by the public, who love a name for a train of symptoms, especially if it be a complicated one. We might in the cases under consideration term the condition "epidemic paroxysmal cough," until we isolate the organism causing whooping-cough, and either identify the two as of the same origin or discover a specific organism for each.—I am, etc.,

Bedford, April 25th. S. J. Ross.

WILKSIANA.

SIR,—The annotation in the JOURNAL of April 25th, p. 933, headed "Wilksiana," will be read with keen interest by many old Guy's men who, like myself, owe so much to our old teacher—philosopher and wise physician.

It recalls to my mind my last meeting with Sir Samuel Wilks, many years ago, at one of his charming informal gatherings on a Sunday evening at his house in Grosvenor Street. I had recently been appointed medical officer to a large public school, and after making some reference to this, he took me by the arm and, leading me aside, fairly floored me by gravely asking, "How, in your school, do you make bad boys good?" While I was meditating how best to make answer to this very difficult Socratic question, he added, his eyes twinkling and his voice sinking till it reached a high-pitched whisper, "Dr. Arnold's method was quite simple—*he sent the bad boys away!*"—I am, etc.,

Marlborough, April 27th. EDWARD PENNY.

MEDICINE IN INDIA.

SIR,—In a letter by Dr. Krishnaswami Aiyar in the BRITISH MEDICAL JOURNAL of April 18th, p. 888, that gentleman states: "That even men who fail in the final L.M.S. degree examination—the lowest of the medical degree examinations here (India)—have gone to Great Britain, and within three or six months of their failure got the L.R.C.P. and S. diploma, a registrable qualification." Knowing that this statement was not correct, I wrote to Mr. D. L. Eadie, Registrar of the School of Medicine of the Royal Colleges, Edinburgh, who has given me the regulations which candidates who have passed in all but the final examination for a recognized L.M.S. require to fulfil before being admitted to the final examination for the triple qualification. Such candidates are required (1) to complete their preliminary educational examination and obtain registration as medical students in this country; (2) to supplement their course for the first professional examination and pass in biology thereof; (3) would obtain exemption from second examination on production of equivalent certificates of curriculum and pass; (4) might obtain exemption in curriculum and examination in materia medica of the third professional examination, but must pass in pathology; (5) must supplement course for final examination and appear in whole subjects thereof.

The designation "L.M.S." is often applied to diplomas issued to sub-assistant surgeons and apothecaries who are entitled to practise medicine and surgery in India under such diplomas on certain conditions. Such diplomas are not accorded recognition in any respect by the Triple Board in Scotland, either as regards curriculum or examination. Several British licensing bodies do recognize such diplomas, but I wish to make it clear that the Triple Board does not.

On the other hand, the L.M. and S. degree, registrable in the Colonial part of the British *Register*, is on quite another footing, as by such registration it entitles the holder to practise in this country on an equal footing with our own registered practitioners.

The L.M. and S. degree in Bombay has now been superseded by the M.B., B.S., but in some of the other universities it can still be obtained.

The curriculum and examinations passed for these degrees are accepted *pro tanto* by the Scottish Board on being properly certified, but no exemption from examination in any subject forming part of the final examination of this Board is ever granted.—I am, etc.,

WILLIAM TEULON TORRANCE, L.R.C.P. and S. Edin.

Birmingham, April 22nd.

IDIOPATHIC ANASARCA.

SIR,—My contemporaries are dying so fast—many of them suddenly—that I fear my turn may come before I can publish another book on "a new theory of disease," which would confirm the statements, explain the facts contained in *A Doctor's Discovery*, and perhaps assist in having dietetics made a compulsory subject of examination for every licence to practise medicine; but in the meantime, knowing that a letter is more likely to be read than a book, I should like to call attention to what a Russian physician discovered very recently and called "idiopathic anasarca." I do not wonder that he called it "idiopathic," which is a mere cloak for ignorance as to its cause, and it is time such ignorance was replaced by knowledge.

Professor Laycock, one of the most acute observers, when I was his resident physician in the university clinical wards of the Royal Infirmary of Edinburgh, taught that the oedema in Bright's disease was a neurosis, and his power of detecting disease by what he called "physiognomic diagnosis" was remarkable; but I do not remember that he said anything about anasarca. I have turned up the article on neuroses in his book, entitled *Medical Observation and Research*, and under the heading of "Cutaneous trophesiae": Vasomotor neuroses of the skin, I find on page 346, under "Nervous oedema," "*a*. Local; *b*. Symmetrical; (*a*) Palpebral (of eyelids)." That is the only reference I can find as to what may have been so-called idiopathic anasarca, but he evidently did not recognize this condition apart from Bright's disease of the kidneys. It would be well, however, if his views as to neuroses were studied at the present day. The only one who seems to have recognized what I have little doubt was idiopathic anasarca is Louis Kuhne in his *New Science of Healing*. He recognized it in the face, and writes of "The Science of Facial Expression," akin to Laycock's "Physiognomic Diagnosis." Kuhne, on page 17, gives portraits of a patient before and after treatment, and they do not look like the same individual, so greatly does such anasarca alter the features. He attributes it to foreign matter in the body, which he removes by attention to diet and increasing the elimination from the skin by bathing.

Whatever may be the cause of idiopathic anasarca, it is greatest in the morning and least at night, and it is most noticeable in the face and hands. It is generally symmetrical in the face, but asymmetrical in the eyelids and hands. Thus it may be seen on the outside of the right eye and the inside of the left eye, on the back of the right hand and not on the left. It is no doubt mistaken for fat, and those subject to it, though they may both look and feel well, are far from well. An injudicious meal or even a sudden change in the atmospheric conditions are apt to upset them, and in some cases may cause sudden death from heart failure or apoplexy. Since my attention has been directed to the action of food I have come to the conclusion that sudden death is a neurosis, the last meal being the exciting cause. A meal, wrong as to quantity or quality, more especially if eaten late in the day, in those having this idiopathic anasarca may cause serious illness or sudden death in six hours from the time it was taken through reflex action from the intestinal tract, so that heart failure and apoplexy are neuroses just as much as flatus, which Professor Laycock recognized as a neurosis. Hoping that our physiologists as well as all physicians will direct their attention to idiopathic anasarca, I am, etc.,

Hawick, April 26th. JOHN HADDON, M.D.

Obituary.

THOMAS FREDERICK PEARSE, M.D., F.R.C.S.,

FORMERLY MEDICAL OFFICER OF HEALTH FOR CALCUTTA.

We regret to have to announce the death, at Torquay, on April 14th, of Dr. T. Frederick Pearse, at one time medical officer of health for Calcutta. He came of a family settled in Devonshire, and was the only son of Mr. F. Bryant Pearse, F.R.C.S. He was born at Haverstock Hill in 1856, and at first attended University College, London. He entered Middlesex Hospital Medical School in 1874 with an entrance scholarship. He was a very successful student, carrying off many prizes; in 1877 he became Broderip scholar, and was house-physician to Dr. William Cayley. He practised in Hampshire, Hertfordshire, and in London from 1879 to 1896, but went to India as Special Health Officer (Plague) for Calcutta; he was subsequently appointed medical officer of health for Calcutta and lecturer on hygiene in the Calcutta Medical School. Owing to failing health he resigned his appointment as medical officer of health to Calcutta in 1913, and on the occasion of his leaving the Corporation presented him and Mrs. Pearse with a testimonial and silver service.

In the course of an appreciation, Dr. HERBERT A. SMITH (Ealing) writes: The late Dr. Pearse was my life-long friend. Every one loved him, and I lived with and saw much of him. Being a keen Volunteer, he had a well-set-up figure and a natural confidence and a charming manner. His mental gifts were of a high order and bordered on genius, because he saw through the soul of things at once; his insight was as subtle as his scientific grasp was marked. Nature showered him with gifts, and his receptive capacity was only surpassed by his memory, but he would only approach Truth by the inductive method. He became a demonstrator of anatomy in his second year. Much of his life was spent in India on the Plague Commission and as health officer of Calcutta. Here he brought to bear gifts of a high order, for he reduced in six years the death-rate of the second city of the empire 6 points per 1,000, and brought about reforms in vital statistics, food purification, and maternity and infant sanitation. He was made a Fellow of the Royal Sanitary Institute for work done in India. A many-sided man, he advanced the cause of cremation ever since 1880 by papers, by research, and later by authority. In 1902 he received the vellum of thanks and in 1907 was enrolled as honorary associate of the Order of St. John of Jerusalem. His work in England and in India was recognized by King Edward, and in 1911 he was made honorary surgeon of the St. John Ambulance Brigade in Calcutta. After the King's visit to India he received the Durbar medal. Dr. Pearse was prolific with his pen; his interests ranged from the science of consciousness to clothing, and from mosquitos and malaria to the Masonic craft. The care of the infant was as dear to him as the vital statistics of the empire, but though versatile he was for ever modest and unassuming. As a Volunteer he served his country since 1877, when he was associated with the 1st City Rifles. In 1893 he was gazetted captain of the 1st Hants Engineers in the militia, where he passed creditably in military topography, having already, in 1885, served as lieutenant. A past-master of the D.G. Lodge of Bengal, he was versed in ancient and modern Masonry, and took high office—so much so as to be affiliated to the London Lodge "cum honore." He was president of the Photographic Society of India for three years. He was a fluent speaker, a gifted lecturer, facile in dialogue or debate, and a keen chess player. Failing health compelled him to resign his appointment as medical officer of health for Calcutta, and he left for England early in April, 1913. For many months he had suffered from heart trouble, which an Indian clime, a strenuous life, and over-zeal in health duties went to accentuate. In the Mediterranean the *City of Paris* fired her cargo, with the result that Dr. Pearse caught a chill and further broke down in health. He was invalided home overland. A long illness with great suffering ensued, during which he was variously attended (while with me) by Dr. Alex. Morison, Dr. J. Mackenzie, Dr. Cockburn, myself, and later by Dr. Paque, of Torquay. But all in vain; the end came on April 14th, 1914. His body was cremated at Golder's Green on April 18th. Dr. Pearse was nursed and tended by his wife, an Irish lady, whose long and loyal devotion partook of heroic self-sacrifice.

We regret to record the death, on April 21st, of JAMES HUNTER, M.D., late of Dreghorn, Ayrshire. Dr. Hunter had been in failing health for some time, and having retired from practice he went to reside in Edinburgh. He was born in 1843 in the parish of Girvan, Ayrshire, received his early education in Girvan and afterwards at Ayr Academy. He entered the University of Glasgow, and took the degree of M.B., C.M.; he held also the diploma of L.R.C.S.Edin. In 1864 he obtained the degree of M.D. with commendation. After acting as assistant to the late Dr. Hamilton, of Dalry, for four years, Dr. Hunter was appointed medical officer for the parish of Dreghorn, and, in addition to the colliery works in the district, had a large private practice. He was a most unselfish and indefatigable worker in the interests of his patients, and was much beloved by all. He was in practice for forty years, and when he retired received a public testimonial. His wife and he spent last winter in the South of England, and his health improved considerably, but, unfortunately, after returning home he contracted a chill which was followed by an attack of broncho-pneumonia, and this terminated fatally. The funeral, which took place on April 25th, was attended by a large number of personal friends. Dr. Hunter lived an honourable and useful life, and will long be remembered by all who knew him.

Medico-Legal.

CONVICTION OF A CANCER CURER.

In a recent case a cancer curer received a sentence of fifteen months' imprisonment with hard labour at the Old Bailey. The case was reported at some length in the *Daily Telegraph* of April 29th. A man, Harry Delvine, aged 59, described as a labourer, pleaded guilty to an indictment for obtaining money by false pretences.

Mr. Travers Humphreys, in opening the case for the prosecution, said that the prisoner was born in India, had served in the army, and had been a county-court bailiff as well as a labourer; he was quite illiterate, but had blossomed out as a cancer expert and issued pamphlets dealing with "the Delvine treatment for the removal of cancers, tumours, etc." For about eighteen months he had been pretending to be able to cure cancer, and had traded on the facility with which money could be obtained from persons suffering from that terrible disease. Sums varying from £5 to £21 were paid by poor patients who were treated at a house in Shepherd's Bush Road, where so-called operations were conducted. The report in the *Times* adds the picturesque detail that the prisoner showed the patient in one case a substance which he said was the cancer he had removed; investigation showed that the substance was a portion of the intestine of a pig. According to the opening statement, some of the patients he said were cured had since died, and there were about a dozen cases all over the country in which similar things had happened.

The Recorder called attention to the fact that the prisoner was practically lying in the dock across two chairs.

Mr. Travers Humphreys said that he was quite well when arrested on February 17th; when bail was refused he appeared to be taken ill, but the prison doctor said he was malingering.

Mr. St. John McDonald, who represented the accused, said that eight persons were present in court who had been cured by the prisoner. In a number of cases, where the growths were probably tumours and not cancers, he had effected cures. Counsel produced a document which he said came from the Duke of Hamilton in March, 1913, enclosing a fee of 100 guineas for removing a cancer. Mr. Humphreys said that the duke's gardener had been treated and reported to be cured, but whether the cure had been effective was another matter. Mr. McDonald said that there was no doubt that the prisoner had effected a number of cures, not cures of cancer, although it might have been imagined they were. A number of persons in Norfolk, who "swore by" the defendant, had subscribed for his defence, and a woman could be called to speak of the removal of a growth weighing 7 lb.

In passing sentence the Recorder said Delvine had committed very gross frauds. He had taken sums of money from unfortunate people who, suffering from the most dreadful disease to which humanity was subject, and having been treated by experienced doctors without success, were willing to grasp any opportunity and hope of being restored to health. It was

impossible to gauge the credulity of mankind, and if there were people foolish enough to believe that a man like prisoner could cure cancer, there was nothing more to be said. Up to this moment, by the admission of the medical profession, cancer was incurable, save in some cases by operation. Delvine must go to prison for fifteen months with hard labour.

Universities and Colleges.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.

Compliment to Sir Arthur Chance.

On April 23rd Sir Arthur Chance was formally admitted to the Honorary Fellowship of the Royal College of Physicians in Ireland. There was a large attendance at the ceremony, which took place in the College Hall. The Registrar, in introducing Sir Arthur Chance, said: "Apart from the assistance which Sir Arthur Chance has given to the Fellows of this College in their purely professional duties, they recognize and appreciate the splendid work that he has done in helping both the Irish Royal Colleges in their efforts to raise the standard of medical education, and to place it on a sure foundation. In this College we feel that we owe much to Sir Arthur Chance for this help, so freely and so loyally given, and we rejoice that in now admitting him to our Honorary Fellowship we can give to him some token of our appreciation."

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

First College.—R. D. Howat, C. G. Macgee, A. P. M'Leod.
Second College.—W. Brown, J. A. S. Campbell, W. O. Donoghue, J. A. Duncan, P. F. Fairley, A. D. Gorman, G. A. Grandsoult, P. Hayes, H. C. Haynes, J. W. Irvine, E. G. Jones, Mary G. Jones, A. Morrison, J. J. Mulvey, J. A. Murray.
Third College.—O. Brunlees, J. Crawford, D. A. Imrie, P. Milnes, G. L. Neil, J. M. Smeaton, F. W. Thompson, W. J. M. White.
Final.—W. MacLeod, E. Dias, J. Soares, J. Corcoran, Gopal Das Madhok, Violet M. Tracey, W. J. V. Curtain, Muljibhai K. Dalal, F. M. Murray, Maud Bennett, L. Galdemar.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have been approved in the subjects indicated:

Surgery (*Both Sections*).—C. Bluett, E. S. Dufty, B. C. Piercy.
Medicine.—†C. Bluett, *W. Brown, *M. Dos Santos, *H. Dudley, *D. M. Hunt, †W. Smith, A. K. S. Wyborn.
Forensic Medicine.—W. Brown, N. W. Rawlings.
Midwifery.—J. C. Gillies, G. Robinson.

The Diploma of the Society has been granted to Messrs. C. Bluett, E. S. Dufty, and J. C. Gillies.

* Section I. † Section II.

Medical News.

The annual dinner of the Royal Sanitary Institute will be held at the Langham Hotel, Portland Place, W., on Wednesday, May 13th.

The jubilee dinner of the Edinburgh University Club of London will be held at the Hotel Cecil, Strand, on Wednesday, May 13th, when Lord Balfour of Burleigh will preside.

Dr. Thomas Lewis will commence his annual course of lectures on the pathology of the heart, at the University College Hospital Medical School, this year on Wednesday next, at 11 a.m. The lectures are free to all medical men.

A general meeting of subscribers to the memorial to the late Admiral of the Fleet Sir Frederick Richards, to which the public is also invited, will be held in the Royal United Service Institution, Whitehall, at noon on Thursday next, when the report and recommendations of the Executive Committee will be laid before the subscribers.

On April 23th Dr. Pottinger Eldred, who has been for eight years Honorary Secretary of the South-West Essex Division of the British Medical Association, was the recipient of a handsome testimonial from his professional brethren resident in the district, consisting of a silver kettle with spirit lamp, and a silver tea-service. The presentation took place, by kind permission of Dr. Harford, the Principal, at Livingstone College, Leyton. Dr. Harford, in making the presentation on behalf of the members (and non-members) referred to the enormous amount of work Dr. Eldred had performed for the Division, and the businesslike way in which he had always done his work, and especially during the trying time when the Insurance Act was before the profession. Dr. Eldred, in replying, said his heart had always been in the work, and that had made it easy, although during his term of office the Division had had its ups and downs; still there had never been any dissensions in the Division, and he relinquished the post with regret, owing to increased practice and other ties.

The London School of Clinical Medicine, Greenwich, has instituted a special course of instruction in venereal diseases. It is intended primarily for medical officers in the Colonial service, but it will also be useful to men in other services, and especially to those practising abroad. The Dreadnought Hospital has about twenty-eight beds set apart for venereal diseases, and the out-patient department offers a large field for the study of such cases. The course will provide qualified practitioners with an unusual—indeed, as far as we know, a unique—opportunity for the personal investigation of venereal diseases under the supervision of teachers of special experience. The course extends over a month, and includes demonstrations of the ear, throat, nose complications of syphilis, on syphilitic and analogous diseases of the skin, on the eye complications of syphilis and gonorrhœa, and the cerebro-spinal and nervous complications of syphilis, ward work (note-taking, dressing, injections, etc.), and laboratory work, including investigations and practice in laboratory methods of diagnosis, the Wassermann and luetin tests, the staining of gonococci, and so forth. Among the teachers are Sir Malcolm Morris, Mr. C. C. Choyce, Dr. Gordon Holmes, Dr. Davies, Dr. MacCormac, and Mr. G. N. Biggs. Full particulars can be obtained on application to the Secretary, Seamen's Hospital, Greenwich.

The Chadwick Public Lectures this year will include three on altitude and health, which will be delivered by Professor F. F. Roget, of the University of Geneva, at the Royal Society of Medicine (1, Wimpole Street, W.). Professor Roget is an enthusiastic climber. Well known on the Continent as an advocate of winter sports, his name has been made familiar to many in this country by his lectures on Swiss military institutions and constitutional law, at the London School of Economics and in several provincial towns. His book, *Ski-runs in the High Alps*, has served as a basis for lectures in some of our leading public schools. The lectures will be delivered on Wednesday, May 6th, and the two following Wednesdays (May 13th and 20th), at 3.15 p.m. The first (when Sir William Collins will occupy the chair) will be on the influence of climate on permanent dwellers at high altitudes and their general life and health conditions. The second (Sir Bertrand Dawson, K.C.V.O., in the chair) will be on summer and winter sport and mountaineering, and the hygienic conditions and effects of temporary residence at a high altitude. The third (Sir J. Crichton-Browne in the chair) will be on the mountain air cure of disease. Among other lectures is one in which the question of the milk supply will be critically dealt with at every stage, from the cowshed to the consumer, by Professor H. R. Kenwood; this will be given at the Royal Sanitary Institute on Wednesday, May 27th, at 8.15 p.m. Dr. Joseph Cates, Medical Officer of Health and School Medical Officer for St. Helens, Lancs., will give a lecture in the Council Chamber, Town Hall, Leeds, on the care of children under school age. Full particulars as to these and other Chadwick Lectures may be obtained from the Secretary, Mrs. Aubrey Richardson, at the offices of the Chadwick Trust, 8, Dartmouth Street, Westminster.

Dr. Thomas Frederic Higgs, of Dudley, has been appointed honorary consulting physician to the infirmary of the Dudley Union on retirement from the post of medical officer to its Workhouse Visiting Committee. Dr. Higgs had been in the service of this committee for over forty years and in that of the board of guardians for over fifty, but the honour paid him would seem to be due less to the length of his services than to the fashion in which he performed his duties. On the occasion of his handing in his last report some half-dozen speeches in his honour were successively delivered in support of a vote conveying to him the board's thanks. Two of the speakers dwelt on the lessons as to their own work as guardians that they had learnt from Dr. Higgs, and all spoke of the wisdom and kindliness of his treatment of the workhouse inmates. A woman guardian said she had always admired his gentleness, patience, and quiet, calm demeanour; and a Catholic priest, after speaking of the difficulty of treating the poor wisely and yet pleasing them, mentioned as a very great compliment to Dr. Higgs a remark respecting him that he had once heard fall from the lips of a very nasty customer when he was leaving the workhouse: it was to the effect that he did not mind going, but he was sorry to leave a gentleman behind him. In the course of his acknowledgement of the vote of thanks, Dr. Higgs mentioned that when he first took up the work some

hundreds of pounds were being spent on beer, whisky, and gin, whereas the sole expenditure on alcohol at the present time was for brandy to the extent of about a pound a year. Another source of satisfaction to him was the successful establishment by the guardians of a training school for nurses.

DR. TH. SIMON, who for many years was associated with the late M. Binet in elaborating tests for measuring the intelligence of children and others, read a paper on April 28th before the Eugenics Education Society on "The Measure of Intelligence." The meeting was held in the rooms of the Royal Society, and Major Leonard Darwin was in the chair. After referring to the difficulty of measuring intelligence, Dr. Simon said that the tests, which numbered sixty-three, were arranged in groups of five for various ages. Each examination lasted twenty minutes. The essential feature was the order in which the tests were applied; they were based upon experiments on the feeble-minded and on a large number of children. On questioning a subject the value of his reply could be estimated exactly by the tests. The objection was sometimes made that the tests measured the result of instruction rather than intelligence, but they really measured intellectual development. As in taking the height of a child a measure both of his personal development and the influence of his environment was obtained, so with these tests both intelligence and influences were measured. But environment would be of no avail to a child unless it had the intelligence to utilize it. Over 5,000 children of the white races had been tested, and the results obtained everywhere were in approximate agreement. From this it was concluded that only very different environments had even a slight influence. The rule followed was to regard those children as feeble-minded who were two years behind the normal age standard. The test made it possible to assign defectives to special classes, and to give a clear definition to the terms "idiocy," "imbecility," and "feeble-mindedness." The tests had shown the large number of feeble-minded among the criminal classes. In commenting on the paper Professor Spearman said that the tests could no more be said to represent the whole intelligence than a flowerpot could be said to represent the whole flora of the earth. The tests, he thought, really measured nervous energy. It had been said that each portion of nerve structure had the whole of the energy of the cell at its disposal. Each test corresponded to a portion of the nerve structure. Variations in this were neutralized, and the common element of nerve energy left.

IT seems rather like tempting Providence to choose the early spring as an occasion for inviting representatives of the press to see what an English health resort has to offer to visitors. Yet this is what the Margate Chamber of Commerce did last week, and it appears that it has adopted much the same course in previous years on the occasion of its annual banquet, and that so far it has never found reason to regret its choice of date. The fact is, that the skill with which the natural resources of the town have been developed, together with a certain quality in the air, lend the town distinct attractions, even when the weather is not at its sunshiny best. What are the components of this quality we find it no more easy to state than did the late Sir James Paget; but its initial effect, at any rate, is to make most people feel that, after all, life is worth living and active exercise enjoyable. From a medical point of view the town will always be notable as the site of the first institution in the nature of a sanatorium in Great Britain. This, the Margate Royal Sea-Bathing Infirmary, was brought into existence by Lettsom not long after his foundation of the Medical Society of London, and since that time the town has built up a very widespread reputation as a resort for the subjects of surgical tuberculosis and persons enfeebled by operation or by acute or other debilitating disorders. One recent writer on health resorts and the climatic treatment of disease seems disposed to reproach the authorities of this town on the ground that it falls short in appearance "of what might be expected of a health resort with its wide fame for the treatment of a very large group of maladies"; but it is precisely on this point that many visitors must feel disposed to congratulate themselves. Central, or old, Margate preserves much the same appearance as it must have had fifty years ago, when Margate first attained favour with trippers—a big village, built along two sides of a valley, ending on the famous sands. Medical Margate is scattered more or less haphazard along the cliffs on one side (Cliftonville) and the shore on the other (Brookend). Speaking of Cliftonville in particular, it is certainly a very great charm to be able to step straight out of a well-appointed hotel or nursing home on to a natural path along which one can wander for miles unchecked, and meantime look down upon a sea and shore which has not been "improved" until it resembles the edge of a pond. The authorities are equally to be congratulated on the fact that instead of spoiling views by erecting immense buildings, as music pavilions and winter gardens, they have provided these by excavating the chalk on which Margate lies to a sufficient depth to hide such buildings. A further good point about the town is that, apart from providing plenty of ordinary amusements and many temptations towards active exercise, a visitor can vary his stay by tramway and motor brake drives, which enable him to explore several other Kentish towns during the course of a morning or afternoon. We gave an account of the water supply of the town when the new supply was brought in some years ago; it is one of a most desirable kind, and the drainage and general sanitation are equally good. The corrected death-rate for last year was 10 per 1,000 on a resident population of 28,000, the infant mortality-rate being also notably low—namely, 77 per 1,000 registered births.

A JOINT meeting of the Charity Organization Society and the Child Study Society was held on Thursday, April 23rd, at the Royal Sanitary Institute, Buckingham Palace Road, Mrs. Burgwin in the chair. The Rev. J. C. Pringle, who read a paper on improving the standard of child upbringing, said the title of his paper ought to have been "Neglected Children," as that was the subject upon which he felt most fully qualified to speak. An enormous number of children, he said, were being brought up at the present moment in reformatories and similar institutions; the necessity for free meals and medical inspection for elementary school children, and the statistics published by the National Society for the Prevention of Cruelty to Children, were all indications of a lamentable amount of child neglect in this country. It should not be forgotten, however, that the children of careless and indifferent parents soon learnt to be self-reliant and independent; whereas if they were brought up as they should be many of them would never acquire these attributes, and a nation of model homes might sigh in vain for the hardy type which formed the backbone of a country. No satisfactory substitute for the parent had yet been found. If, as was sometimes suggested, the parent should only play an insignificant part in the upbringing of his child, all sorts of schemes could be devised for the child's education; but, if the parents were to be the chief factor, it was essential that something should be done to arouse their interest in the matter. The Labour Party's bill at present before the House of Commons proposed that the inspector should have the right to enter a house at any time; but until that became law—and it was open to question whether it was desirable that it should become law—the opportunities for neglect would remain. It was therefore necessary that something should be done to recognize the parent and to restore his prestige. If the parents were allowed to exercise their own selective powers in the choice of a school, and, possibly under happier economic conditions, paid for their children's schooling, they might recover their prestige. The united efforts of workers' agencies and reformatories should be concentrated upon certain limited areas in such a manner that the parents would be forced to mend their ways. It should, for instance, be made so uncomfortable wilfully to neglect children in a certain street that the mothers would gradually give up the habit; in this way the force of imitation would be brought to bear and the convention of neglect would be altered. If criminal prosecutions in cases of child neglect were the right way of dealing with the problem, it was not being dealt with properly in London, where magistrates as a class were said to be extremely unsympathetic in cases brought before them by the officials of the National Society for the Prevention of Cruelty to Children. It had been suggested recently that a bench of unpaid sympathetic justices of the peace might be formed to deal with such cases; but it was doubtful whether it was altogether wise for the National Society for the Prevention of Cruelty to Children to relieve the London County Council of the unpopularity of prosecuting. Unfortunately, even a successful prosecution did little, if any, good as regards the case itself; it was useful only as a deterrent. It would be better if the children could be taken away from the parents altogether, and the latter compelled to contribute towards their support in the Colonies. The bulk of child neglect, however, was too subtle to reach, and evaded all generalizations. Mr. Pringle's paper gave rise to an animated discussion, at the close of which a vote of thanks was proposed by Mrs. Burgwin and carried unanimously.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

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TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. E. P. desires to hear of a home where a patient, aged 15, suffering from anterior poliomyelitis affecting the right leg and the right arm, could be taught a trade and cared for. He is able with a limp to use his leg fairly well, but is unable to dress himself. A small payment could be made.

L. asks for suggestions as to the causation or treatment of following case: An unmarried woman of 27, deficient red blood count (3,500,000), neurotic and faddy. Amenorrhoea 2 years; pulse-rate 60; blood pressure 170. Digestion poor, but no vomiting; heart and lungs normal: spleen not enlarged. The one inexplicable sign is that her temperature is almost always 95° or less. He has never known it over 97°. Her symptoms are want of energy, depression, and always feeling cold. She is a schoolmistress in a healthy country town on the South Coast.

H. D. J. asks for suggestions for the diagnosis and treatment of the following case. A gentleman aged 65 complains of a bitter taste in the mouth, with an increased flow of saliva. Some eight months ago he suffered from carious teeth which produced the ordinary sweet sticky taste of pyorrhoea alveolaris. The best dental advice was obtained, and three teeth extracted. All teeth and gums are now pronounced to be above suspicion. The patient is not neurotic: he had several attacks of gall-stone colic ten years ago. Cultivations of the saliva have revealed nothing; neither alkalis nor belladonna have given relief.

INCOME TAX.

MEMBER asks whether a life policy bonus should be returned for taxation.

*** No. It is merely an anticipation of part of the ultimate capital payment by the insurance company, and as such is not taxable as income. Even if the bonus were regarded as a dividend of profits, such profits would have already been taxed in the hands of the company, but we have not heard of any case in which such a payment has been claimed by the income tax authorities to be in any sense "income."

C. H. has had to increase his bank overdraft and inquires whether the increase should be mentioned on his return.

*** The creation of the overdraft or its increase is a capital transaction. The only way in which the income tax return would be affected is by the deduction as a professional expense of the interest charged on the overdraft. The deduction need not be separately shown on the return, and could, of course, be made only if the increase in the overdraft was caused by the incurring of professional, as distinct from private, expenses.

F. B. has sold his practice on the following terms: The practice to be transferred now, he to receive one-half the profits of the next five years and then a certain sum down. He has been charged income tax on his one-half share at the full rate of tax, and inquires whether the charge is correct.

*** The answer to our correspondent's question turns on the construction of those portions of the Income Tax Acts dealing with annuities and annual payments. If the payment in this case falls within the above class, we fear that full tax is exigible notwithstanding that a part of such payments may fairly be regarded as capital. The decided cases lay down the principle that where the so-called annuity is paid in discharge of a predetermined purchase price, such payments are not liable—at any rate as regards the whole—to income tax. But this is not the case here, and we fear that the absence of the distinguishing feature would be fatal to our correspondent's contention. In a somewhat similar case in which the annual payments consisted of an 8 per cent. charge on gross receipts the High Court ruled that income tax was properly chargeable on the whole of the payments.

ANSWERS.

S. W.—A comprehensive book is *Modern Clinical Medicine: Diseases of the Digestive System*, by F. Billings, M.D.; translation from *Die Deutsche Klinik*, edited by J. L. Salinger, M.D. (London: S. Appleton, 1907; med. 8vo, pp. 840. 25s. net. A good and recent book dealing with the bacteriological, *x*-ray, and other means of diagnosis of diseases of the alimentary system, including liver, gall bladder, and pancreas. is *Diagnostic Methods, Chemical, Bacteriological, and Microscopical: A Textbook for Students and Practitioners*, by R. W. Webster, M.D., Ph.D., third edition, revised and enlarged (London: H. Kimpton, 1913; med. 8vo, pp. 723. 164 figures, 37 plates. 18s. net), but it contains no treatment. We understand that Professor Saundby's *Treatment of the Diseases of the Digestive System* is being reprinted.

BOOMERANG.—(1) Bad breath is probably due to some infection in the mouth or throat, most probably of the teeth or gums. (2) A considerable number of infants are vaccinated when under 4 weeks old. There is no reason why this should not be done in the case of healthy infants. (BRITISH MEDICAL JOURNAL, April 26th, 1913, p. 920.) (3) Fruit juice may be given to infants under 9 months if distinctly called for as an antiscorbutic, but if the infant is breast-fed or receives fresh milk no fruit juice or beef juice is necessary. (4) The statement referred to appears to be founded on the circumstance that a Dutch Malthusian League was founded in 1885, and had among its supporters Mr. Van Houten, Minister of the Interior, and Mr. N. G. Pierson, Minister of Finance, and that the league was registered by the State as a society of public utility in 1895.

COLLAPSE OF ALAE NASI.

SEVERAL correspondents have written in answer to "Afflicted" to recommend a device called the Albar, which they state is useful in counteracting falling in and indrawing of the alae nasi. It can, we are informed, be obtained from any surgical instrument maker.

MOTOR BICYCLE.

IN reply to a correspondent, who asked for advice in the selection of a light motor bicycle for riding at a slow and moderate pace, which can be easily started and prove reliable, two replies have been received. One correspondent recommends a Douglas motor cycle—a type which after ten years' experience he finds most satisfactory. The other correspondent recommends a 2½ h.p. Motosacoche; he uses this in a hilly district, and has never found it fail him.

SURVIVAL OF FETUS AFTER DEATH OF MOTHER.

G. W. E.—The fetus may certainly survive the death of the mother for a certain time—the exact time will of course vary in different cases and in different circumstances. Children have survived *in utero* for as long as half an hour in recorded cases. The chance of a fetus living forty-eight hours must be extremely small. The chances of survival for a short period are, of course, best when the healthy mother dies of an accident, for if the mother is slowly dying from a progressive disease the child is usually also profoundly affected, but it is not even then impossible for it to be resuscitated; such cases have at times been put on record. Naturally, if Caesarean section be contemplated, the sooner it is carried out after the maternal death the better. It should be performed before the entire failure of the placental circulation.

LETTERS, NOTES, ETC.

ELEVEN DAYS' SLEEP.

DR. J. C. MCWALTER (Dublin) writes: Sleepiness is common in ear disease, and a comatose state occurs, as we all know, for days before the fatal issue of cerebral meningitis. A condition called "narcolepsy" is found in certain hysterical states, but one finds few cases recorded of sleep extended over seven days. I am at present attending a child aged 2 years, who has slept for eleven days, never having been awake a full hour during all that time. The only occasions on which it did awake were when the mother aroused it to give nourishment. It took its food fairly well, and at once relapsed into sleep again. Now it is fairly well, except for a little bronchopneumonia, but no special drowsiness. The child contracted measles about two months ago, developed apparently otitis media, and fell into the prolonged sleep. A discharge has since taken place from the ear, which seemed to relieve the drowsiness, and, except for the cough, it is quite bright.

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A Lecture

ON

THE CAUSE AND CURE OF CANCER VIEWED IN THE LIGHT OF RECENT RADIO-BIOLOGICAL RESEARCH.

DELIVERED BEFORE THE MEDICAL FACULTY OF THE UNIVERSITY OF LEEDS.

BY W. S. LAZARUS-BARLOW, M.D., F.R.C.P.,

DIRECTOR OF THE CANCER RESEARCH LABORATORIES, THE MIDDLESEX HOSPITAL; LECTURER ON GENERAL PATHOLOGY IN THE MEDICAL SCHOOL.

[AFTER acknowledging the honour done him by the university in asking him to deliver a special lecture upon a subject of so much importance as cancer, the lecturer continued as below.]

The fact that the comprehensive title of "cancer problems" was specifically given me by the Dean of the Medical Faculty I regarded as an instruction to treat what I wished to say in a broad and bold manner. I felt that clearness of outline was desired, and that a meticulous attention to detail within the limits of an hour's lecture was neither possible nor advantageous, unless the "problems" I was to discuss were of a kind that might not greatly interest my audience. Hence I determined, not without trepidation, to take my courage in both hands, and attempt to address you on the two fundamental problems of cancer—its cause and its cure—in the light of that experimental work with which I am most conversant. In my Croonian Lectures before the Royal College of Physicians (1909)[1] I foreshadowed some such suggestions as I am about to make to-day, but five years' additional work has shown me that whereas some of my data were capable of bearing the interpretation I put upon them others were not. In particular I am now satisfied that the property of affecting a photographic plate in the dark evinced by so many animal (and other) substances (a property specifically termed "skotographic" in view of the uncertainty of its nature) is not evidence of radio-activity but depends in large part, if not altogether, upon the formation of minute traces of ammonia. But though this which was thought possible evidence of radio-activity is now known to be valueless in this direction, other points have been brought to light which link radio-activity and cancer more closely than was thought possible five years ago.

RADIO-BIOLOGICAL RESEARCH AND THE CAUSE OF CANCER.

At the very outset of this my first "cancer problem" I have to beg you to remember that it is generally held that cancer is not a single disease. We are told that we have only to think of the very different histological and clinical pictures presented by a scirrhus of the breast, a periosteal sarcoma, an endosteal or myeloid sarcoma, a rodent cancer, to be aware of this fact. And proceeding logically, we are told that if many diseases be included under the name "cancer" it is legitimate to hold the view that many different causes are responsible for its manifestation. This has been the position taken by the profession until the "causes of cancer" have multiplied to such an extent that at the present day the sole "cause" to which universal assent is given is "chronic irritation."

Now, while I am not in a position to deny that different diseases are included under the one name, but on the contrary, as will be seen later, shall maintain that there is a specificity far greater than has been imagined hitherto, and while I feel that the great group of carcinomata divides itself naturally from the great group of the sarcomata, and both of these from the non-malignant neoplasms, yet I would ask you to remember that the growth of all the different systems which go to make up the animal body is initiated by the coalescence of a single spermatozoon with a single ovum. If one probe deeply enough all varieties of abnormal growth must depend upon local abnormal stimulation of a cell capable of division, and in the case of cancer it may well be that one, or at most few, fundamental factors underlie the whole cumbrous superstructure of chronic irritation. Without removing the etiology of cancer from the subject of unsolved problems, I would suggest that in radiations, and particularly in radium radiations, we have an agency which might well serve as a cause of cancer to the exclusion of all others.

My grounds for making this suggestion are as follows:

1. *Radium is widely distributed throughout nature in such quantities as have been shown capable of inducing accelerated division of cells.*

The richest ore—St. Joachimsthal pitchblende—contains a maximum of about 0.0003 mg. radium element per gram (3×10^{-4} mg.), but this quantity is relatively enormous, the greater number of rocks containing radium in amounts of the order 10^{-9} mg. per gram. Now, one thousand millionth of a milligram is the limit of detectability of radium, but quantities above one five-hundred millionth (2×10^{-9} mg.) of a milligram can be measured, with about 10 per cent. error, by means of the emanation electroscope. Hence, in spite of the apparently ridiculous insignificance of the quantities of which I am about to speak, it is certain that they are approximately correct.

In a research involving the separate counting of half a million ova of *Ascaris megalocephala* Beckton and I[2] found that if radium act on the ova in the resting stage in quantities of the order 5×10^{-7} mg., and for a continuous period of about thirty hours at 0° C., on subsequent incubation at 37° C. cellular division proceeds at an accelerated rate. These effects are brought about by the action of alpha, beta, and gamma rays acting together; they can, however, be induced by beta and gamma rays alone—alpha rays being excluded—if the amount of radium be about one hundred times as great (5×10^{-5} mg.).

This evidence of stimulation by radium does not stand alone. Quite apart from the fact that there is a considerable amount of clinical evidence to show that neoplasms treated with radium, mesothorium, or x radiation may manifest a very definite increase in rate of growth which synchronizes closely with the initiation of treatment with rays, and quite apart from the fact that every histological examination of a neoplasm which has undergone retrogression as the result of radium or x radiation shows a remarkable increase in the number of connective tissue cells, there is very definite evidence of growth stimulation by rays in the vegetable kingdom (Cattley,[3] Molisch,[4] Stoklasa and Zdobnicky[5]). Of a similar kind are my experiments with Dunbar[6] upon the muscle-nerve preparation of the frog, wherein I showed that a muscle nerve exposed to the alpha, beta, and gamma rays of 7 mg. of $RaBr_2$ lives longer and contracts under smaller stimulation than its non-irradiated fellow. Stimulation under x rays is also shown by the experiments of Beckton, Hastings, and Wedd[7] upon silkworms.

If the various experiments and conditions under which stimulation has been observed be compared in respect of the amounts of radiation necessary to evoke an increased rate of growth, it will be seen that, though the amounts are small, yet they actually differ within wide limits. We have here one example of that selectivity in action of rays to which I shall refer more fully later. It will suffice here to recognize that a wide variety of cells has been demonstrated to be capable of enhanced rate of growth under irradiation, provided that the dose of irradiation be suitable for the type of cells under experiment.

2. *Bacteria suspended in a radium-containing fluid collect the radium from that fluid.*

Whether by imbibition, adsorption, or the formation of a chemical (albuminous) compound, bacteria suspended in a solution containing radium acquire a greater radium percentage than the supernatant fluid, and even a greater percentage than the original fluid.

The following figures were obtained in experiments I made[8] with living and dead *Staphylococcus aureus*, and with mixed aërial bacteria, the former at 37° C., the latter at room temperature. The original broth contained

1.74×10^{-5} mg. Ra per c.cm. The values below are referred to the original broth as unity.

Experiment.	Bacterial Deposit.	Supernatant Broth.
1. *S. aureus* at 37° C.	247	0.58
2. *S. aureus* at 37° C.	385	0.061
3. Aërial at room temperature	15	0.9
4. Aërial at room temperature	21	0.6

This observation I consider important in connexion with the fact that cancer frequently occurs in association with inflammation or subsequent to a chronic inflammation. I need only mention the constancy with which carcinoma of the breast is associated with chronic mastitis, carcinoma of the cervix with endocervicitis and cervical erosion, carcinoma of the tongue with superficial glossitis, carcinoma of the vulva with leucoplakia. In the case of sarcoma, an association of the growth with previous inflammation is far more doubtful, but it is usually taught that when a sarcoma occurs in a long bone it is apt to arise at the seat of some previous injury. The fact that an injured bone is a *locus minoris resistentiae* at which bacteria circulating in the blood stream tend to accumulate was shown long ago by Becker,[9] and it is clear that any such *locus minoris resistentiae* will become a focus for the accumulation of radium if bacteria be present and also radium be circulating in the blood stream. Judging from the experiments I have given above, if radium have gained access to the blood stream, it will tend to accumulate at any spot of bacterial activity. The widespread distribution of radium and the frequency of inflammatory phenomena in the animal body (and especially in man) render the local accumulation of radium a contingency by no means remote. If such accumulation occur, *ceteris paribus*, a point must be reached at which it will induce an increased rate of division of certain of the cells in its neighbourhood.

TABLE I.—*Radium Estimations in Various Animal Tissues including Carcinomata.*

Tissue.	Ra ($\times 10^{-9}$ mg.).	Mean ($\times 10^{-9}$ mg.).
	Per 100 grams.	
3 normal livers (human) ...	8.0 (mean)	1.1 per 100 grams.
2 gall bladders (human) ...	0.0	
2 entire mice (normal)	0.0	
4 entire herrings (normal) ...	0.0	
15 herring roes (normal) ...	0.1 (mean)	
1 ox liver (normal)	1.7	
Non-cancerous tissue in—	Per 100 grams.	23.6 per 100 grams.
Carc. hepatis	119.4	
,, hepatis	0.0	
,, hepatis	25.1	
,, hepatis	0.0	
,, coli	5.6	
,, ventriculi	0.0	
,, pancreatis	15.0	
Metastasis in—	Total Ra found.	55.3 per sample.
Carc. mammae	23.7	
,, hepatis	142.2	
,, hepatis	0.0	
Primary growth in—	Total Ra found.	41.6 per sample omitting one case.
Carc. mammae	5.6	
,, mammae	0.0	
,, linguae	113.0	
,, hepatis	474.0	
,, hepatis	0.0	
,, hepatis	3.2	
,, coli	1.0	
,, coli	0.0	
,, ventriculi	0.0	
,, mediastini	0.0	
,, pancreatis	0.0	
,, cerv. uteri	14,900.0*	
,, vesicae fell.	22.3	

* Excluded from mean.

5. *Whereas gall stones unassociated with carcinoma of the gall bladder contain no radium or at most traces but little outside the range of experimental detection, gall stones associated with primary carcinoma of the gall bladder always contain relatively large amounts of radium.*

The observations upon which I base this statement are contained in Table II.

TABLE II.—*Twenty-one Determinations by the Emanation Method of the Radium in Gall Stones.*

Disease in which the Gall Stones were Found.	Quantity of Ra ($\times 10^{-9}$mg.).	Mean ($\times 10^{-9}$mg.).
Carc. gall bladder	225+	389.4
,, ,, ...	123+	
,, ,, ...	15.9	
,, ,, ...	27.4	
,, ,, ...	33.0	
,, ,, ...	1,912.0	
Carc. mammae	18.1	5.7
,, vesicae	0.0	
,, vulvae	0.0	
,, recti	8.0	
,, ventriculi	3.1	
,, hepatis	0.0	
,, pancreatis	10.8	
Non-malignant	3.1	1.1
,, ,, ...	1.0	
,, ,, ...	2.9	
,, ,, ...	0.6	
,, ,, ...	0.0	
,, ,, ...	0.0	
,, ,, ...	0.0	
,, ,, (cholecystitis) ...	1.2	

* The actual experiments are recorded in the *Archives of the Middlesex Hospital*, Eleventh Cancer Report, 1912; the table was published in the *Practitioner*, March, 1914.

3. *The alpha rays of radium cause disappearance of Altmann's granules from normal cells which contain them,*[10] *while Altmann's granules are absent from the essential cells of malignant growths.*[11]

I will not labour this point, but the fact that the granules in question are found in all varieties of normal cell except unstriped muscle, collecting tubules of kidney and squamous epithelium, and are conspicuously absent from malignant cells and cells that have been exposed to the alpha rays of radium is at least suggestive.

4. *The element radium may occur in normal tissues, but if present, is found on an average in much smaller quantity than it is found in carcinomatous tissue (whether primary or secondary) or in the tissues of carcinomatous patients.*

As evidence of this statement I reproduce in Table I my results in a number of radium estimations. It is to be noted that special experiments conducted for the purpose indicated that the incineration and deflagration necessary to bring the animal substances into a form soluble in dilute HCl, whereby the estimations of radium could be carried out, are accountable for a loss of one-half to two-thirds when dealing with 10^{-8} mg. radium in solution (as chloride) distributed through 50 grams of minced ox liver.[13] Hence, in any case in which radium is actually found by means of the emanation method, the amount originally present was at least twice as much as was found.

I lay considerable stress upon these observations. Not only are the mean differences in radium content of the gall stones very marked, but also the very fact that one is here dealing with material that resists disintegration within the body argues that the amount of radium found is the amount which has been present during the existence of the calculus. In the case of carcinomatous tissue radium which may have been present at one period may easily have been lost owing to ulceration of the growth. If no radium be found in a gall stone one may fairly argue that it has never contained radium, but if no radium be found in a new growth the same deduction is not allowable. Further, not only may radium be lost owing to actual ulceration, there is also evidence that insoluble salts of radium (for example, sulphate and silicate) introduced into the tissues become lost to the body. Thus Dominici, Petit, and Jaboin[13] injected 1 mg. of finely divided $RaSO_4$ into the jugular vein of a horse, and demonstrated diminishing quantities of radium in the urine for a period of six months. Similarly, I injected mice subcutaneously with known quantities of radium silicate, and at varying periods after inoculation estimated the amount of Ra in the entire animal.[14] I found Ra in animals dying eleven months later, but could only recover 62 per cent. of the amount injected by the end of the first week, 27 per cent. by the end of the second week, 21 per cent. by the end of the third week, and 14 per cent. by the end of the seventh week. From these considerations one may infer that estimations of radium in gall stones probably give closely accurate information as to the amount of radium they originally contained, but that determinations of radium in carcinomatous tissue probably under-estimate the amount of radium originally present in the cellular tissue.

6. *Exposure to x radiation over long periods is liable to be followed by carcinoma of the exposed parts.*

According to Paul Lazarus[15] about 100 cases of *x*-ray carcinoma have been published, of which 50 were in surgeons and *x*-ray technicians. The malignant growth appeared four to fourteen years from the commencement of action of the rays. There is no doubt that the condition induced is a veritable squamous cell carcinoma, while the occurrence of carcinoma of the hands in persons in middle life is so rare in the absence of work with *x* rays that its frequent occurrence in *x*-ray workers forces us to associate the radiations and the carcinoma directly with one another. Further, as the result of repeated and intense *x* radiation, carcinoma of the skin has been produced in the rat (Clunet[16]). So far as concerns the actual production of carcinoma by means of radium, no case has hitherto been published. In view of the close similarity between the *x* rays and the gamma rays of radium, and of the fact that both types of rays induce a secondary soft beta radiation, on impinging upon any substance capable of affording a secondary radiation, it would appear that the actual production of carcinoma in the laboratory by means of radium is merely a question of time and patience.

I have now stated the facts upon which I base my proposition that radiations—particularly the radiations proceeding continuously from small quantities of radium—initiate the changes which culminate in the production of that which we, as medical men, term "cancer." Without special attention to the point, the extraordinary potency of radium as a force is entirely missed, owing to the minuteness of quantity in which it is normally found. Supposing we consider one hundred millionth of a milligram of the element as being an amount that may frequently be found in a carcinoma or a gall stone associated with carcinoma of the gall bladder. Such an amount appears negligible, but yet that one hundred millionth of a milligram shoots into the tissues in its neighbourhood in the course of twenty-four hours, not far from one hundred thousand alpha particles, beta particles, and gamma rays travelling with initial velocities that vary between 12,000 and 180,000 miles a second. And this takes no account of any secondary radiation that may be produced. It is to my mind inconceivable that such a force should fail to produce changes in any cells upon which it acts, and there is definite evidence that it stimulates cell development. If this be so, and if this minute particle of radium remain indefinitely in its position, the laws of evolution indicate that from formerly normal cells a race of cells must gradually arise in which rapidity of division dominates all other functions. Thus we should arrive at that "interminable growth subserving no physiological end" which characterizes the neoplasms. I see no reason why radiations, and particularly radium radiations, should not constitute the etiological factor of all new growths, whether carcinoma or sarcoma, whether malignant or benign, and I commend the proposition to your consideration.

Radio biological Research and the Cure of Cancer.

I now come to the second of my "cancer problems"—a problem which, to the practising physician or surgeon, far transcends the other in importance, but which to the experimental pathologist assumes no such dominant position.

At the outset let me say that I conceive it to be the duty of the experimental pathologist occasionally to put before the clinician a picture of the goal towards which he should always strive to attain and short of which he should never be content with his results. That such clinical results should not reach the ideal set by the pathologist for many years is in the nature of things. The clinician does not work under laboratory conditions: the pathologist does not always give him all the data of which he is in need in order to obtain the ideal result. As an example of what I mean I may cite antitetanic serum. In the laboratory tetanus as a disease can be combated with the greatest certainty by means of antitetanic serum. In the horse treatment of tetanus by antitetanic serum meets with a large measure of success. In man the course of tetanus is practically uninfluenced by injections of antitetanic serum. The ideal has been set in the laboratory; the clinician has not all the data necessary for treating the disease successfully in man, but who can doubt that in course of time the treatment of tetanus in man will be carried out by means of an improved or modified antitetanic serum with as great a certainty of success as now obtains in the laboratory? This same proposition is eminently true in the case of cancer, where our knowledge is so much less accurate. And yet I wish to hold up an ideal before you, well knowing that at present it cannot be attained, and, unhappily, convinced that ultimate success will only be reached over a road that will be strewn with disasters.

For this reason I shall not stop to discuss the somewhat futile question as to what constitutes a "cure from" cancer or a "cure for" cancer. Rather shall I proceed from the laboratory point of view to try and show you how radio-biological research indicates radium and other radiations as a very special agency wherewith to treat cancer; how certain disadvantages are unavoidable and others avoidable with our present knowledge; how, and in what directions, research should be conducted to turn present failure into future success. But the ideal I shall hold before you is that in radium and other radiations we hold the solution of this second "cancer problem"—the cure of cancer.

I will now lay before you the grounds upon which I found this belief.

1. *In a sufficient dose radium and other radiations are capable of killing every type of cell met with in cancer.*

It is hardly necessary for me to insist upon the injurious effects of considerable doses of radiations upon cells. The experience of radiologists in the matter of *x*-ray burns is clinical evidence of the fact, but in the laboratory evidence has been accumulated from so many sides, by so many authors, and to so considerable an extent, that it is now accepted as beyond dispute. Of course, it is equally accepted that the different rays of radium, for example, have different capabilities in respect of injuring cells. The different contents of energy and the different ranges of the alpha, the beta, and the gamma rays indicate very considerable differences in result according as one or other variety of ray is allowed to act upon the cell. Thus it has been pointed out above that in order to produce stimulation in the case of Ascaris ova, one hundred times as much is necessary when alpha rays are excluded as is necessary when alpha rays are allowed to act. From my present point of view these are details. But I cannot give you a better example of the potency for destruction of radium rays than this which lies within my own experience. The Ascaris ovum is the most resistant

organism to chemical agents of which I know. It lives, divides, proceeds through changes up to the formation of a living and vigorously moving embryo within the egg-case, though actually immersed, during the days necessary for these changes, in pure formalin. Though only just visible with the naked eye, to kill and fix it for microscopic purposes no less than eight minutes' immersion in a mixture of equal parts of glacial acetic acid, chloroform, and absolute alcohol, saturated with corrosive sublimate, is necessary. And yet this same minute living cell is killed by exposure to the alpha, beta, and gamma rays of 7 mg. $RaBr_2$ for ten seconds. For this variety of cell 7 mg. $RaBr_2$ are fifty times as lethal as a mixture of glacial acetic acid, chloroform, and alcohol saturated with corrosive sublimate! Under such circumstances you cannot fail to agree with me that in radium we have an agent capable of killing cancer cells when its rays are applied to the cells in a sufficient dose.

2. *The action of radiations upon cells is selective, or conversely, all varieties of cells are not equally vulnerable to radiations.*

Of this statement clinical experience on the treatment of ringworm by *x* rays is a good example. With the proper dose the cells of the hair follicle are affected to such an extent that the hair itself is shed, but the other epidermal structures are relatively or entirely unaffected. So, too, the sterility of males and of females employed in *x*-ray work is evidence that these rays act after a selective fashion upon testicle and ovary, the diminution in size of the enormous spleen of leucocythaemia under *x* radiation is evidence of a selective action upon the spleen possibly brought about by way of secondary beta radiation from the large amount of iron in the organ. In the laboratory evidence for this selective action is even greater. Hertwig,[17] working with frog's ova, frog's spermatozoa, impregnated ova, tadpoles, has shown so remarkable a selectivity that he is able to produce in the tadpoles, at will, a typical disease, which he terms "radium-disease." Russ[18] has made observations which show that the vulnerability of the cell of Jensen's rat sarcoma is at least twenty-four times as great as the vulnerability of the polymorphonuclear leucocytes. Mottram[19] has shown that Ascaris ova during mitosis are at least seven times as vulnerable as the same cells during the resting stage, and that the nucleus is that part of the cell upon which the radium rays specifically act. Morson[20] has shown that in human cancerous tissue which has been exposed to, say, 100 mg. $RaBr_2$ for twenty-four hours, cancer cells are killed and are undergoing degeneration, connective tissue cells are present in unusually large numbers, and polymorphonuclear leucocytes are scattered throughout the affected tissue.

It is clear that this selective action on the part of the rays is a matter of fundamental importance. In being able to discriminate between the varieties of cells the rays possess a fundamental advantage over the knife, provided that the operator has as great a control over the rays as he has over the knife. Unfortunately, at the present time this is not the case, and much remains to be learned concerning the control of radium action before it will be even approximately true. As an example of this ignorance, I may cite the different behaviour of different types of new growth under radium treatment as carried out at the present time. Broadly speaking, one may say that the cells of a rodent cancer or of a round cell sarcoma are highly amenable to radium treatment, the cells of squamous carcinoma are fairly amenable, the cells of spheroidal carcinoma are somewhat amenable, the cells of columnar carcinoma are little amenable. But who can doubt that the plan of inserting a tube containing a practically uniform quantity of radium (whether as salt or emanation) into all varieties of growth for practically a uniform number of hours is better calculated to demonstrate the selectivity of radium radiations as regards different varieties of malignant cell (being therefore a beautiful laboratory experiment) than to bring about an equally efficient destruction of the malignant cells in the different varieties of growth met with in practice? And yet who can doubt, in view of the potency of radium radiations in killing cells, that the differences noted in the behaviour of growths treated with radium at the present time will be obliterated when we have learnt how to adjust the dosage with radium to the exact exigencies of the case?

3. *There is some evidence that an active immunity is produced as the result of acting upon malignant cells with radium.*

Herein lies the kernel of the whole question of radiotherapy for cancer. If radium rays simply destroy cells upon which they act they are no better than the thermo-cautery, the knife, or any caustic; if the rays destroy cells but act with selectivity, as we have seen is the case, the matter is better though not entirely satisfactory. But if cancer cells under the influence of radium radiations are led to produce an antibody specific to other similar cancer cells in the tissues of the patient under treatment, the "cure of cancer" is brought perceptibly nearer.

The amount of evidence I have to adduce in favour of the production of an active immunity is very small, but in my opinion is cogent. It consists essentially in four different classes of observation.

(*a*) Morson, Wedd, and Russ[21] have shown that when mouse carcinoma cells are acted upon with a sublethal dose of radium rays, inoculation of this irradiated material into a mouse on one side of the body prevents the growth of a graft of untreated cancer cells made on the other side of the body. By graduating the amount of irradiation the degree of immunity was made to follow the line of a mathematical curve.

This experiment conforms to the observation of the Imperial Cancer Research Fund[22] that for the production of immunity in mouse carcinoma living cancer cells are necessary, for in the experiments I have mentioned exposure of the cancer cells to a lethal dose of radium rays completely abolished their power of inducing immunity. And I would further insist that when among the many variables and unknowns of biological experiments any series of results approximates to mathematical accuracy that fact alone lends very great weight to the probability of their inherent accuracy.

(*b*) Morson[23] has recorded the fact that in certain cases in which a malignant neoplasm of the mouth was associated with enlarged cervical glands, treatment of the mass in the mouth with radium was followed by very rapid diminution in size of the mass of glands in the neck. That these cervical glands were at a considerable distance from the spot at which the radium tube was introduced there is no doubt, hence the diminution in size of the glands can hardly have been primarily due to the radium. On the other hand, it was not shown by microscopic examination that the enlarged glands were actually the seat of cancerous metastasis. Nevertheless, the records of the Middlesex Hospital show that 80 per cent. of enlarged glands removed by operation in malignant disease of the mouth are microscopically the seat of cancer, and the masses of glands referred to by Morson were originally so large as to be inoperable. Hence there appears to be a reasonable probability that in these cases the diminution in size of the glands was due to a local destruction and absorption of cancer cells as the result of the action upon them of an antibody formed by the cancer cells of the primary mass under the influence of the radium.

(*c*) Blumenthal[24] succeeded in bringing cancer nodules to disintegration by injecting them with secretion taken from an irradiated primary cancer. This observation is clearly not as definitely evidence of the production of an active immunity as those I have mentioned under (*a*) and (*b*).

(*d*) While it is obvious that much additional work is necessary before the production of an immunity by means of radium can be said to be established on a firm basis, all work that has been done upon the subject of immunity, and particularly on the subject of tissue immunity, converges to indicate that under a modified metabolism the cancer cell will form an antisubstance to itself.

But though there is evidence suggesting that cancer cells may be made to produce an antibody to themselves, it is probable that this antibody will be highly specific. In the case of bacteria, we have already learned the necessity in some cases of autogenous vaccines, and in general are aware of their greater utility in treatment, but in the case of cancer it would appear that this autogenous production of antibody is essential. It has been shown by the Imperial Cancer Research Fund[25] that an animal artificially immunized to one variety of

mouse carcinoma may be as susceptible as a control animal to mouse carcinoma of another strain, and from this one is led to suspect that histological similarity does not imply biological identity. If A. and B. are suffering from squamous cell carcinomata of the tongue histologically indistinguishable, nevertheless A.'s cancer cells will only be acted upon by an antibody autogenously produced in A., B.'s cancer cells will only be acted upon by an antibody autogenously produced in B. While, therefore, it is possible that each patient may be induced to form his own substance for the treatment of his own disease, all pathological observations contraindicate the probability of a passive immunity in cancer. Nothing leads us to anticipate the utility of an "anticancerous serum" similar to "antidiphtheritic serum."

I have already remarked upon the necessity of treating each *variety* of cancer (with radium) in a manner suitable to that specific variety; it now appears that I must go further, and say that when treating with radium each *case* of cancer must be treated in a manner suitable to that specific case. If the surgeon's object be to destroy some of the neoplastic cells outright, to leave enough in a lowered state of vitality to form a sufficiency of antibody to deal with other cancer cells outside the destructive range of the radium, and, lastly, to produce a minimum amount of damage to the non-cancerous tissues, it is clear that he has before him a problem necessitating an exceedingly nice adjustment of quantity of radium, hardness of rays, duration of exposure to age and condition of patient, situation and size of growth, histological type of growth, presence or absence of metastases—to mention the most obvious particulars. It is easy to see that since he is using a very potent but practically unknown agent in a disease of infinite variety, his road must be strewn with disasters. He will find sloughing of the entire tumour, sloughing of non-malignant tissues, septic absorption, complete lack of any reaction to the radium, intense fibrosis frequently with intense pain from pressure on nerves or actual neuritis, temporary improvement with perhaps complete disappearance of the growth, followed later by a disheartening local recurrence or metastasis at some distant spot, haemorrhage, thrombosis of veins, and death only too often. But though they cost human lives, they are merely the disasters of pioneer work if looked at dispassionately; with better knowledge it is certain that many of them will disappear, while the power of radium rays to destroy cancer cells, to act in a selective fashion, to induce the formation of a specific antibody, will remain and be utilized to better advantage.

Practical Considerations.

I have finished what may be termed the academic portion of my address, but you will expect me to place before you any information I may possess tending towards attainment of this ideal I have been setting before you.

(i) *Microscopic examination by a competent morbid histologist should be made of every case subjected to radium treatment.* When inserting radium into a subcutaneous tumour or applying radium to a superficial growth there is no insuperable difficulty in removing a small portion for such microscopic examination. The piece of tissue should be placed forthwith in 2 per cent. formol Müller, changed daily for seven days. By this fixative it is possible to stain for Altmann's granules—a matter, in my opinion, fundamental should a diagnosis between sarcoma and inflammatory tissue become necessary. Beckton [26] has shown that all varieties of cells met with in inflammatory tissue contain Altmann's granules, whereas sarcoma cells (and epithelial malignant cells) are devoid of them. I have had considerable experience of Beckton's method, and am convinced that by its aid diagnosis is possible in cases impossible to diagnose without it. So far as concerns the necessity of invoking the aid of an expert morbid histologist, I can recall at least two cases published as examples of successful treatment of malignant growths by radium in which the photomicrographs of the authors demonstrated non-malignant conditions with the greatest clearness. *Ne sutor ultra crepidam.*

(ii) *The amount of radium in use should be verified periodically by a competent physicist.* I recall a long, published, statistical paper expressing pessimistic views upon the action of radium on malignant growths in which the authors commenced the series of cases with two tubes stated to contain respectively 250 mg. and 150 mg. of radium bromide. Physical examination at a later date showed that the one tube contained 2½ mg., the other no radium whatever. Even short of so appalling a circumstance as that mentioned, emanation may escape from the tube containing the radium salt through a minute crack in the tube itself, or the solder with which it should be hermetically sealed, the crack developing in the course of use. Under such circumstances the *effective* value of the radium tube would be proportionately diminished.

(iii) *It should be recognized that the metabolic processes of every patient after exposure to a considerable dose of radium are profoundly modified at least for a time.* Supposing the cells of the growth have been killed by the rays, a mass of dead, dying, and disorganizing tissue is being absorbed into the body at large during the period over which the irradiated mass is seen to be diminishing in size. Frequently such diminution in size is very rapid. It appears to me quite possible that some of the deaths that have occurred shortly after intense irradiation of a very large tumour may have depended upon the fact that a considerable quantity of highly toxic material was suddenly thrown upon a system already enfeebled by the disease. And this, without consideration of the many changes that have been described as occurring in the body (for example, blood changes) as the result of irradiation. The sense of "well-being" that usually obtains during the first few days after exposure of a growth to a considerable dose of radium is quite compatible with a limited autointoxication.

For the same reason it would appear that surgical operations should not be undertaken after exposure of the patient to radium until sufficient time has been given for a full re-establishment of general health. I have heard of several cases in which surgical removal of a formerly inoperable growth which had been brought within operable limits by radium was followed by death of the patient not wholly explicable on ordinary surgical grounds. The temptation to operate in such cases must be very considerable, but the longer it can be resisted with safety to the patient the better the prospect.

For the same reason, too, repeated doses of irradiation should be given with great care and with sufficient intervals for recovery. This point is recognized by radiologists (cf. Lazarus, *Berl. klin. Woch.*, 1914, Nos. 5 and 6).

(iv) *Treatment with radium should not follow immediately upon operation.* In spite of the fact that *x*-ray treatment following on operation appears to be beneficial in many cases, the very opposite is true with radium treatment. In the case of radium the explanation is not difficult. The powerfully destructive action of the radium rays is brought to play upon normal tissues (already damaged by operation), in the midst of which outlying foci of malignant cells are suspected to be present. Not only are those normal cells damaged whose duty it is to bring about the death and absorption of isolated foci of malignant cells (cf. Handley's lymphatic fibrosis [27]), but also a more or less extensive necrosis of non-malignant (normal) tissue is produced with its attendant autointoxication and necessity for removal.

(v) *If radium treatment of a malignant new growth be decided upon, such treatment should not be preceded by complete removal of the main part of the growth.* To a certain degree this proposition is the converse of the last. It is clear that if a tube of radium be placed in the midst of unremoved growth the danger of injury to surrounding normal tissues is less. But a much more important consideration underlies the advice. If malignant cells be necessary for the production of an autogenous antibody, and if such cells as will form the antibody must be still living (though with a profoundly altered metabolism), the chance of their production by means of the radium will largely depend upon the diameter of the mass of malignant cells through which the radium rays are able to act. Ideally, the most peripheral cells of the primary mass should be so reduced in vitality that they would lead to the production of antibody sufficient to deal with any malignant cells that had been carried from the primary mass to distant parts before irradiation. In practice nothing approaching such an ideal result is likely to obtain if all but a few malignant cells be removed prior to irradiation. Naturally, too, the dose of irradiation —meaning thereby that complex of quantity of radium,

length of exposure, nature and thickness of screen—necessary to produce the ideal result must vary infinitely with the infinite variety of growths presenting themselves for treatment. It is a hard saying, but the surgeon using radium must steer between the Scylla of (*a*) extensive destruction of normal and malignant tissue, with (*b*) no production of autogenous antibody, and the Charybdis of (*c*) insufficiently modified malignant cells, which are injured just enough to become "latent," and to lead to local recurrence at some later date, and of (*d*) malignant cells actually stimulated to an increased rapidity of growth. It is not very probable that every practitioner will be able to carry out radium treatment of malignant disease successfully.

(vi) *Whatever may be the case in the future, for the present radium treatment of malignant disease should be confined to those cases for which modern surgery cannot offer a fair prospect by operation.* In the case of frankly inoperable malignant disease it is unnecessary to urge at the present day that radium should be tried. In spite of disasters, disappointments, recurrences, pain from fibrosis so severe that the last state of the patient is worse than the first, a number of cases remain on record in which the result has been remarkably good. Without doubt the profession holds in radium an agent for the treatment of inoperable cancer such as it has never held before. But if this be true for inoperable cases, should not radium be given a chance in preference to operation for cases in which surgery is notoriously unsatisfactory, though not impossible? Are the prospects of a patient with malignant disease of the tonsil or periosteal sarcoma any worse if he be treated with radium than if he be treated by operation? Does the small procedure entailed by the introduction of a tube of radium into the mass of growth, as against the large procedure of an extensive operation, count for nothing in the well-being of the patient? At the very least, should not the patient under such circumstances be presented with the two alternatives and allowed to make his choice?

But this is the furthest that one can go. At present, where modern surgical operation can offer a fair prospect of satisfactory result, the knife must be recommended in preference to every other agent, and this is as true for recurrences as for the primary disease. It must be remembered, however, that radium has only been known for sixteen years, and has been used in medicine for a far shorter period, whereas the surgeon's skill with the knife is the product of centuries.

My task is finished. With feet sometimes on sure ground, sometimes on less certain ground, I have tried to bring to your eyes visions which eight years' radio-biological work have brought to my own. I see cancer as a protean manifestation of purposeless disorderly cell growth brought into existence by the long-continued action of a cell stimulant, and I see in radium and radiations an agency sufficient to produce cancer. But just as in the case of diphtheria the agent which produces the disease is also the agent whereby the specific cure for the disease is elaborated, so I am prepared to see cancer caused by radium and cancer cured by radium. Probably it matters little whether I foreshadow the true solution of the "cause of cancer" problem, but no man could wish for a greater honour than to have had a share in foreshadowing the true solution of the "cure of cancer" problem. For the sake of humanity it is to be hoped that those who believe in the essential capability of radium to "cure" cancer are right.

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RADIUM IN THE TREATMENT OF MALIGNANT DISEASE.

BY

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THAT radium exercises a profound influence on the human tissues inimicable to the existence of cancer is no longer an open question. It has been demonstrated again and again, and numerous cases are on record of the rapid recession and disappearance of malignant tumours under its influence. It is, unfortunately, also true that much more numerous are the cases in which the beneficial influence is not so apparent, and that in the vast majority of cases treated the patients ultimately succumb to the disease. Nevertheless, sufficiently numerous are the records of complete disappearance of malignant tumours after radium applications to satisfy the most sceptical that the effect is attributable to the radium and not to some of those unknown causes which apparently do, on extremely rare occasions, make a cancer undergo spontaneous cure. The results of radium therapy in malignant disease are such as to justify the hope that, as our knowledge of its action and of the means of modifying and controlling that increases, there will be an ever-increasing proportion of cures.

Radium constantly emits a chemically inert gas known as radium emanation; this rapidly breaks up, giving rise to very short-lived bodies which give off beta and gamma rays, all these bodies, taken together, constitute what is known as "the active deposit," and it is from this that the radiations used in medicine are obtained.

When the radium is sealed in an airtight container the emanation is given off at a steady rate, consequently that container or applicator will always give a certain definite dose in a given time. If the radium is not sealed up but is in solution it is possible to extract all the emanation in a short time. The container of this emanation will then emit therapeutically active rays until all the emanation is used up. The radium solution is now exhausted, and it will take three weeks to recover itself completely. It will have recovered its activity to half value in four days. Inasmuch as the therapeutic rays are produced by the emanation, it cannot be material whether treatment be carried out by the emanation container or by the sealed radium container, provided allowance be made for the progressive fall in value of the former—a fall amounting to 20 per cent. in thirty hours. Dosage is regulated by (1) the quantity of radium, (2) the density per unit area, (3) the length of time of exposure, and (4) the amount of screening interposed between the part treated and the radium.

For external application the container is usually applied close to the skin. With regard to the quantity of radium, it must be remembered that what is called radium is in reality a mixture of a radium salt with other substances, such as barium salts—the proportions usually being 1 of the radium salt in 5 of the mixture. The degree of purity does not matter, as the dose is calculated on the actual amount of radium present in the mixture.

The density per unit area is a fixed quantity for each applicator. But within limits an applicator of a certain density can be made equivalent to one of less density by being placed at a greater distance from the part to be treated. The length of time varies from a few minutes, where the density of the applicator is great and no screens are used, to twelve or even twenty-four hours when heavy screens are used.

Put very generally, an applicator having a density of 1 cg. to 1 sq. cm., screened only by thin rubber and several layers of paper, such as might be used for the treatment of port wine marks and superficial naevi, would give in ten to fifteen minutes a dose which would produce an inflammatory action. The same applicator, if screened with 0.2 mm. of silver and paper, could be applied for perhaps fifty to sixty minutes. When it is intended to act, not on the skin, but through it, on the deep-lying tissues, screens are used of silver or lead 1.5 or 2 mm. thick. With such screens the application may with safety last twelve to eighteen hours.

When rays pass through a metal filter or screen, secondary rays are set up. The penetrating power of these is very

slight, but they are very irritating. To get rid of them a screen of paper or rubber is inserted between the skin and the metal filter. Twenty layers of ordinary black paper or 3 mm. of rubber are sufficient for this purpose.

With radium, as with *x* rays, there is a period after the application during which no reaction shows itself. The effect of a dose is at its greatest about three weeks after it has been given.

The dose may be described in terms of the quantity of radium multiplied by the time, and Dr. Lazarus Barlow, speaking on this subject (Twelfth *Report* from the Cancer Research Laboratories) says: "To produce a given effect either of these factors may vary within wide limits provided that the other factor varies correspondingly in the inverse direction." This statement applies to simple forms of life. Clinically, however, it is of limited application, and the general opinion seems to be that 50 mg. must be regarded as the minimum quantity to be used in the treatment of malignant tumours.

In reporting the following cases I am very conscious of the fact that they are all too recent to permit of their being spoken of as cured in the ordinary sense of the term; and from past experience we know that such as are still under treatment and progressing favourably may, before the growth has disappeared, cease to respond and have to be added to the list of failures. Even so the relief to the patients and the remarkable improvement in the conditions, I think, justify their being reported at this stage. All the cases were regarded as inoperable before treatment with radium was undertaken.*

CASE I.—*Rapidly-growing Soft Carcinoma: Frequent Recurrences after Buried Radium: Eventual Arrest.*

J. S., aged 43, female. In September, 1912, a swelling appeared in the right parotid region. It steadily increased in size till in the middle of November it formed a distinct bulge below and behind the angle of the jaw. The tumour was tense and elastic, and the patient complained of occasional sharp pains in it.

On November 16th, 1912, the tumour was cut into. It was very soft and bloody, and its removal was found to be impossible. A piece was taken and microscopically examined by Dr. Haswell Wilson, who reported it to be a very cellular carcinoma.

On December 1st, 1912, radium screened by 2 mm. of silver was planted in the centre of the tumour for seventy hours. This was followed by applications to the surface. In all the dose was 100 cg. hours. The tumour gradually decreased, until in about three weeks it had practically disappeared. Six weeks after the first dose the tumour began to show signs of growing again, and in January, 1913, a second dose, amounting to 160 cg. hours, was applied to the surface. Again the tumour decreased in size only to reappear after five or six weeks.

On March 11th, 1913, a second piece was taken for examination, and Dr. A. M. Kennedy reported it to be a soft, cellular, actively growing carcinoma, showing small areas of necrosis. Another application was now made, and this was repeated in May, June, and August. In June a third piece was taken. After each dose the tumour disappeared only to show signs of reappearing in six or eight weeks.

On September 27th, 1913, a dose of 340 cg. hours (50 mg. for sixty-eight hours) was planted inside, followed on October 15th, 1913, by a surface application amounting to 480 cg. hours. A month later all sign of disease had gone, and there has been no sign of reappearance at the date of this report. As a precautionary measure two further applications were made to the surface, one in November, 1913, and one in February, 1914. While this case is too recent to allow of any confidence as to the future; the facts remain that since December, 1912, the patient has had no pain, nor has there been any distinct tumour visible.

CASE II.—*Squamous-celled Carcinoma of Skin: Arrest.*

T. R., aged 35, male, was admitted to the Royal Cancer Hospital under the care of Dr. Duncan McCartney, suffering from epithelioma of the upper lip. Nine years previously the patient had been treated with *x* rays, at the Royal Infirmary, for lupus about the nose and lip. After some months' treatment he went to Copenhagen, and was there treated with Finsen light, more or less continuously for five years. After that he returned to this country and remained well for two years. About nine months before admission to the Cancer Hospital a small wart appeared on the upper lip on the right side at the angle of the nose. This gradually spread until it occupied the whole of the upper lip. It was rough on the surface and elevated about ¼ in. above the surrounding parts. At my request Dr. William Campbell removed as much of the tumour as possible on December 3rd, 1913. Extension, however, took place almost immediately, just above the angle of the mouth.

The tumour grew rapidly, and on January 10th, 1914, it was somewhat larger than a half-crown piece. On that day 50 mg. of radium screened with 2 mm. of lead was applied for twenty-four hours (120 cg. hours). Ten days later the tumour had distinctly decreased in size. On February 23rd a second application of 180 cg. was made. The tumour continued to shrink and has been apparently well since.

Dr. H. E. Whittingham reported as follows on a section made on December 3rd: "Sections show irregularly branching clumps of large squamous epithelial cells lying amongst a somewhat scanty fibrous tissue stroma. Cell nests undergoing keratinization are seen; also several prickle cells. Few of the carcinomatous cells contain mitotic figures. Leucocytic infiltration marked at periphery of growth—squamous-celled carcinoma at present not rapidly proliferating. The Wassermann reaction was negative."

CASE III.—*Epithelioma of Skin: Arrest.*

J. McB., male, has suffered from lupus for twenty-five years. He was treated with *x* rays for seven years. He was seen by Dr. Ivy McKenzie in April, 1913, when treatment by tuberculin was begun. This was continued with excellent result till September, when his doctor noticed a fungating growth on the right temple, which he curetted. It returned within ten days, and grew rapidly. The patient was now seen again by Dr. McKenzie, who removed a piece of the tumour, which was examined by Dr. Shaw Dunn, and proved to be epithelioma. The protruding mass was removed by Dr. W. Herbert Brown and the base scraped, and on November 15th, 1913, an application of 50 mg. of radium, screened with 2 mm. of lead, was made to the surface for thirty hours.

On December 13th there were three suspicious-looking spots on the circumference of the scar, and a second radium application was made to them. Healing was complete in a few weeks, and there has been no sign of recurrence up to this date.

CASE IV.—*Rodent Ulcer: Apparently Well.*

J. C., aged 60, had a small rodent ulcer, the result of a burn, on the lower lid of the left eye. It has been present for eight years. It had been treated with carbon dioxide snow, *x* ray, and zinc ions, but always relapsed. From May to November, 1913, six applications of radium were made. On account of the nearness of the eyeball prolonged applications were considered inadvisable, and therefore the doses lasted thirty minutes with apparatus containing 5 mg. very lightly screened. The patient is under the care of Dr. A. J. Ballantyne.

CASE V.—*Carcinoma of Jaw: Arrest: Microscopical Changes.*

Mrs. N. was admitted to Dr. Adams's care in the Royal Infirmary on December 2nd, 1913, complaining of swelling of the left upper jaw and cheek of six months' duration. Dr. Barlow, jun., has kindly furnished the following report from the ward journal:

Patient first noticed a small hard lump over the site of the upper bicuspid tooth, and she consulted her doctor, who removed some of the teeth. The tumour, however, did not improve, but gradually increased in size. On admission the left cheek was very much swollen and the left eye was almost closed. A small hard lump could be felt near the inner canthus of the left eye, and this was adherent to the superior maxilla, which appeared to be much thickened. On elevating the lip a mass about the size of a hazel-nut could be seen occupying the space between the cheek and alveolar margin. It was covered with mucous membrane, and was very hard. The Wassermann reaction was negative. On December 20th, 1913, as much of the tumour as possible was removed, along with a wedge of bone, including a portion of hard palate. It was then seen that the antrum of Highmore had been invaded by the growth, and the mucous membrane was much thickened and irregular. On account of the patient's general condition it was thought inadvisable to remove the whole of the superior maxilla.

On January 17th, 1914, 50 mg. of radium, screened with 1 mm. of silver, was placed in the antrum for twenty-four

* The patients were shown at the meeting of the Glasgow Medico-Chirurgical Society on April 3rd.

hours (120 cg. hours), and this was followed by the same quantity applied on the cheek for twenty-four hours screened with 2 mm. of lead. Great improvement resulted.

On February 20th another application was made as before, twenty-four hours in the antrum and forty-eight hours (240 cg. hours) on the surface. The shrinkage continued.

Sections taken, one before treatment and the other after, show that marked changes have taken place. They are described by Dr. Burton as follows:

(Removed December 11th, 1913.) The section shows the tumour to be a carcinoma of fairly active growth. The epithelial cell masses are supported by a varying amount of fibrous tissue, showing marked chronic inflammatory reaction. There are numerous mitotic figures, and the tumour fragment shows no evidence of degeneration.

(Removed March 21st, 1914.) The section shows the excised fragment to be composed of dense fibrous tissue, covered with a rather irregular and hypertrophic columnar epithelium. In places there are small foci of polymorphic invasion, and the whole tissue shows chronic inflammatory changes. There is no carcinomatous tissue present.

The patient is still under treatment.

CASE VI.—*Cancer of Cervix: Apparent Cure.*

Mrs. B., aged 64, was seen by Dr. Balfour Marshall on September 18th; for three months there had been more or less haemorrhage, leucorrhoea, and an uneasy feeling in the back. Dr Marshall found that the whole posterior lip of the cervix was the site of a carcinoma cauliflower in type. This diagnosis was confirmed by the examination of a piece removed for this purpose. A radical cure by hysterectomy was deemed inadmissible on account of the age and frailty of the patient. On September 24th the whole cauliflower growth was removed and the actual cautery applied, and on October 3rd, 1913, an applicator containing 65 mg. of radium, screened with 2 mm. of silver, was applied for forty-eight hours.

On December 30th a second application was made, and by that time no sign of the tumour was made out and the symptoms had disappeared. A last application was made early in February.

Dr. Marshall saw the patient in the end of March, and reported as follows:

There is no sign of any recurrence of the carcinoma. The uterus is quite movable, and the surface of the remains of the posterior lip of the cervix is quite smooth and soft.

CASE VII.—*Ovariotomy for Adeno-carcinoma: Recurrences: Arrest after Radium.*

Mrs. L., aged 56, first came under Dr. Balfour Marshall's care in the gynaecological wards of the Royal Infirmary in December, 1905, when a large adeno-carcinoma of the left ovary was removed. She remained well till December, 1908, when a subperitoneal abscess formed in the left lower quadrant of the abdominal wall under the transversalis muscle. This was freely opened and drained, but a sinus persisted. In April, 1910, the previous abscess re-formed, and on reopening it was noticed that a considerable quantity of colloid-like material escaped. A sinus persisted and would not heal. In September, 1911, the wound was reopened and more colloid material and several small cysts were removed. These small cysts were somewhat similar in appearance to a papillary serous cyst of the ovary. Microscopically the marked feature was papillary ingrowths, but the lining columnar epithelium was in a single layer and the basement membrane was intact. Although apparently benign, the cysts were clinically malignant. The wound would not heal, but kept filling up with these small cysts. Free excision of the whole affected area failed to effect a cure. Further microscopic examination of excised cysts was made on January 16th, 1913, and the pathologist reported carcinoma of the type found in the large intestine.

Radium applications were made. The first in May, 1913 (150 cg. hours), the second in July, 1913 (250 cg. hours), the third in October (240 cg. hours), and the fourth in December (350 cg. hours). Some improvement followed each dose. The last dose, however, had the greatest effect, and Dr. Balfour Marshall says:

The beneficial result has been very marked, the wound gradually closing without the appearance of any cysts. At the present date, April 2nd, the wound only admits the tip of the thumb; the surrounding healed portion is very dense owing to fibrous tissue, and there is no appearance of any cyst formation. Until radium was applied all surgical treatment over a period of more than three years had failed to prevent the recurrence of the cysts, so that whatever the future may show there is no doubt as to the immediate benefit. The patient is still under treatment.

CASE VIII.—*Carcinoma of Cervix: Curetting: Contraction after Radium: Total Hysterectomy: Death.*

Mrs. B., aged 30. Admitted December 22nd, 1913, to Dr. Balfour Marshall's wards in the Royal Infirmary, suffering from carcinoma of cervix. Dr. James Taylor, in whose care Dr. Marshall placed her, has kindly made the following report:

The cervix was very much enlarged, had a diameter of 2½ in., and filled the whole of the upper part of the vagina. It was hard, tender, ulcerated, friable, and examination caused considerable haemorrhage. The discharge was very foul smelling. The body of the uterus was normal in size and freely movable. The great size of the cervix made it difficult to gauge the condition of the parametrial tissue.

December 24th. The cancerous tissue was curetted away, and the cavity left—which was big enough to contain a Victoria plum—was cauterized and packed with 3 per cent. formalin gauze. On December 31st 50 mg. radium, screened by 2 mm. of silver, were inserted for seventy-two hours (360 cg. hours) into the cavity from which the gauze had been previously removed. The cell containing the radium was carefully packed round with gauze to prevent it coming in contact with the vaginal wall. During these three days, and for some time afterwards, the patient complained a good deal of pain in the perineum, and had to have morphine. This pain may have been due to haemorrhoids. A radical operation was done for them, and the patient sent to a convalescent home.

February 14th. The condition of affairs had entirely changed. The large cavity had contracted down to just a narrow fissure in the upper part of the vagina. The edges of this were hard, but there was no tenderness, no friability, no tendency to bleed, and the little discharge that was present was quite sweet. Some thickening of the parametrial tissue could be made out, but the uterus could be pulled down the vagina to a limited extent. The general condition of the patient was much better.

February 19th. A Wertheim's total hysterectomy was now carried out. At the operation there was great difficulty in dissecting out the ureters, as they were enveloped in a very dense parametrial tissue, and the bladder was very firmly adherent to the front of the uterus and vagina. There was no history of any inflammatory condition after any of her confinements. There was an adhesion between the peritoneum over the front of the rectum and that covering the back of the cervix. This separated easily with the fingers.

After the operation the urinary secretion was scanty, and the patient died on the third day.

The specimen was laid open along the back, and a portion removed for microscopic examination. The shrunken remains of the cervix with the shrivelled upper part of the vagina were seen at the lower part, and microscopic examination showed that the cancer cells had extended right through to the serous surface. There was marked inflammatory reaction throughout the interstitial tissue, with great increase of connective tissue. The tumour cells, which were thus compressed, were vacuolated and granular, and showed all stages of degeneration. These degenerative changes were much more marked towards the cervical canal, that is, in the parts which received the largest dose of radium. At no part did the cells show any active growth. Microscopic examination of the parametrial tissue showed a great increase in fibrous tissue.

The points of interest at the *post-mortem* examination were the condition of the kidneys and of the rectum. The former showed cloudy swelling, passing on to a condition of subacute nephritis, such as occurs when there is backward pressure. Both ureters were dilated, and there was hydronephrosis of the left kidney. The ureters were not compressed in any way as a result of the operation. The surface of the rectum that was adherent showed a partly organized fibrinous covering, but no invasion by cancer.

THE International Society for the Study of Sex Questions will, as has already been announced in the JOURNAL, hold its first congress in Berlin on October 31st, November 1st and 2nd, 1914. Among the communications so far promised are the following: Professor Dr. Broman (Lund): Causes and spread of natural sterility and the part played thereby in the decreasing birth-rate. Professor Hans Gross (Graz): Comparative criminal psychology of the sexes. Professor Ch. Klumker (Frankfort-on-the-Maine) and Pastor Wilhelm Pfeiffer: What is to become of the world's illegitimate children? Professor Mingazzini (Rome): Female criminality and menstruation. Professor W. Mittermaier (Giessen): The attitude of criminal law to sexual crimes in the course of history. Dr. Albert Moll: On the psychology, biology, and sociological place of the old maid. Professor Sellheim: Propagation and readiness to propagate as the task of woman. Professor E. Steinach (Vienna): Susceptibility to influence of the sexual characteristics. Professor S. Steinmetz (Amsterdam): The individual factor in race-blending. Professor Julius Wold (Berlin): Sexual science as a factor in education and civilization. Full information as to the congress can be obtained from Dr. Max Marcuse, Berlin W. 35, Lutzowstr, 85.

INTRAMEDULLARY TUMOUR OF SPINAL CORD: TREATMENT BY LAMINECTOMY AND APPLICATION OF RADIUM.

BY

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THE following case is one of intramedullary tumour of lumbo-sacral region of cord, found irremovable at operation, some weeks later treated by placing a tube containing 50 mg. radium for twenty-two hours in the spinal canal, with the result of steady and progressive improvement in movement and sensation in the previously paralysed lower limbs, until the onset of an acute cystitis with *B. coli* infection wore out the patient's strength and caused her death.

History.

The patient, a single woman aged 26, was by occupation a typist, and had had no previous illness. In May, 1913, she had a curious itching feeling in the right thigh, followed in June by pains in the right hip and thigh causing her to limp. At the end of June pains in the back, in the right lumbar region, of sharp, shooting character came on and were increased by turning the head. In July the pains and superficial tenderness in the right leg were so severe that she bandaged it to prevent rubbing with the clothes. From July 14th she could no longer go to work, and on July 30th took to bed for a month. At this time she could not walk without support. At the end of August the pains "changed over to the left hip and left the right leg numb." After further rest in September she improved, and the pains were less, but from this time she had difficulty and great frequency in micturition, with burning pains in the bladder.

Condition on Admission.

She was sent to Bristol General Hospital by Dr. F. A. Mayes on October 11th, and in addition to bladder troubles complained of "pains like a stitch in the back, stiffness and pains in the legs, and inability to walk through being unable to balance."

She was in a very nervous state, and had symptoms of thyroidism, evidenced by a symmetrical general enlargement of thyroid, which was soft, a rapid pulse (120 to 130), fine tremor of the hands, and a moist skin; these symptoms were present more or less throughout the illness. The thoracic and abdominal organs were normal except for a soft systolic murmur at the base of the heart. There was some difficulty in defaecation, due to the pain in the back.

She could not stand without support, and could only walk a few paces supported on each side. There was no deformity or tenderness of the vertebral column. The muscles of the lower extremities were flabby and flaccid, and somewhat wasted below the knee; there was double foot-drop, with internal rotation of the feet; the abductors of the thighs were weak. When lying down she could lift the left leg off the bed but not the right; she could not move the toes of the right foot; there was distinct hypotony of muscles of lower limbs. With a strong faradic current, to which she was not very sensitive, the muscles of the thighs responded well, those of the left leg and foot fairly, and those of the right leg very feebly or not at all.

Affection of sensation was indefinite at this date—probably there was some loss to pain and temperature over the right leg, and she stated that "she had no feeling of having a right foot." Except in this foot no loss of sense of movement or of position was made out. Tactile sensation (cotton-wool) everywhere normal. Reflexes—knee-jerks, ankle-jerks, plantar and lower abdominal absent, the others present.

For the first month after admission she improved, the pains and irritability of the bladder were much better, and she could walk about a little by pushing a chair in front of her. After this she became worse again, and her condition on November 26th was as follows:

Severe pains in right lumber region of back, in legs, especially at back of knees, and tenderness and pain over sacrum. Frequency of micturition, with burning pain at commencement; she passed water at least twenty times a day, and shortly after this date retention of urine came on, and the catheter had to be passed every three or four hours to keep her in even tolerable comfort. The urine was acid, clear, and contained no sugar or albumin. The catheter was always used with careful antiseptic precautions. The bowels were constipated. She could now stand only if supported on each side, and could not walk. Extension of the legs caused pain, and the legs were drawn up and becoming contracted in that position. Complete double foot-drop. When lying down there was some action of the ilio-psoas, otherwise the right lower extremity was completely paralysed. The left foot and ankle were also completely paralysed, but she could just raise this limb off the bed. There was marked wasting of all muscles of both legs below the knees, and of the right quadriceps extensor.

Electrical Reactions.—To faradism very faint reaction with strong current of the right dorsiflexors of foot and calf muscles, feeble reaction of some muscles of left leg, and of right quadriceps and hamstrings. The left quadriceps extensor acted well. No reaction obtained in glutei. To the constant current the reactions obtained in the same muscles were feeble but everywhere KCC>ACC. For sensation see Fig. 1, to which it should be added that sensation was normal over the perineum, in the vagina and rectum, that there was some indefinite loss to pain (pin-prick) over lower part of back, and that over the left leg cold (ice) was always felt as warm. The reflexes were as stated above. There were no trophic lesions. The cerebro-spinal fluid showed no increase of cells, a great excess of serum globulin, and much yellowish pigment (lutein).

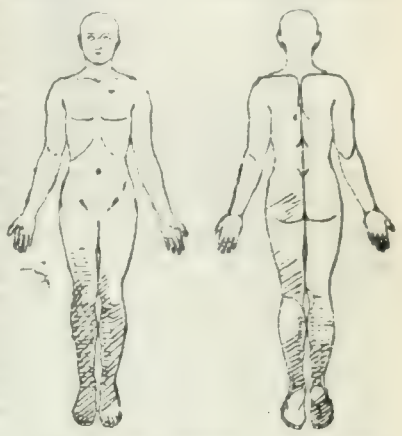


Fig. 1.—November 26th. Light touch, normal. Horizontal broken lines = lost or defective sensation to pin-prick. Oblique continuous lines = lost or defective sensation to heat and cold (ice). Note, over left leg, ice felt as "warm" everywhere.

The patient's condition up to this time showed a steadily progressive deterioration.

It was considered that she was suffering from a tumour in the lumbo-sacral region, that it was probably intramedullary because of the loss of reflexes, absence of spasticity, muscular wasting, and some differentiation in the sensory loss.

Operation.

An operation was accordingly done on December 3rd.

The spines and laminae of the eleventh and twelfth dorsal, first and second lumbar vertebrae, were removed. On opening the dura mater a bluish haemorrhagic patch was seen on the posterior surface of the lumbar enlargement, which was much enlarged and felt indurated. On retracting the cord to the left a large growth, bluish in colour, was seen and felt within the substance of the cord. It was largest at the level of the eleventh dorsal spine, and was probably about 1½ in. in length. As it was obviously impossible to remove it without destroying the cord for a considerable extent, and it was considered that this would also be the result if the cord were incised and the tumour allowed to extrude spontaneously, and the patient had been promised that she should not be left any worse by the operation, the dura was sewn up and the wound closed.

The effect of the operation, probably from relief of pressure, was that the pains were somewhat less; she recovered some power in the left thigh, being able to lift the leg high off the bed, and the bladder was less irritable, the catheter being required only every six hours, there being still retention.

Application of Radium.

As six weeks later her condition was otherwise unchanged, and was a hopeless one from the point of view of ordinary medical or surgical treatment, it was thought that the application of radium to the cord might be tried.

Condition on January 21st: Reflexes same as before. The muscles of each calf and the right quadriceps extensor were much more wasted. There was complete foot-drop, and no power of movement of any muscle below the knee in either leg. The left lower extremity could be raised well off the bed, the right only about an inch: the

left knee could be flexed and extended, and the right knee very slightly so. Fig. 2 shows the sensory disturbance at this time; in addition the sense of position of movement was lost in the whole of the right lower extremity, but was present in the left, except in the great toe.

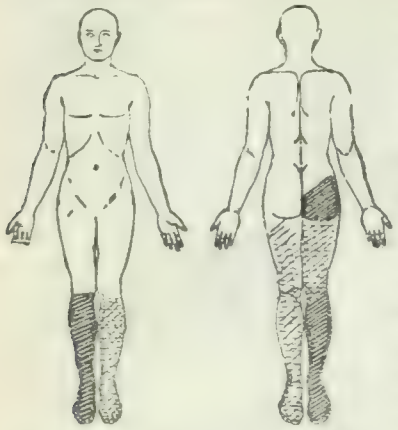


Fig. 2.—January 21st, 1914, before radium. Deeply shaded areas = loss of sensation to pain, light touch, heat, and cold; elsewhere light touch normally felt. Oblique lines = heat and cold not distinguished; both called "warm." Horizontal broken lines = pinprick not felt, or only as touch.

She was unable to stand or walk, and was therefore paraplegic, with considerable loss of sensation and with retention of urine.

On applying to Mr. Hayward Pinch, of the Radium Institute, he kindly supplied 50 mg. of radium in a specially devised tube, so that it could be placed alongside the spinal cord in the spinal canal. On January 28th, 1914, the wound was reopened, and the tube placed alongside the cord over the tumour, outside the dura mater, fixed in this position, and left there for twenty-two hours.

Some days later she began to show slight signs of improvement, and there was great relief of pain. On February 18th, although there was still complete foot-drop, she could move the toes of the left foot, she could draw up either leg, raise it off the bed, could flex and extend the knees, and could also raise both legs off the bed at the same time. She could also sit up in bed and raise herself to a sitting posture without the aid of the arms. The legs were no longer drawn up, but could be kept extended in bed in a natural condition without pain. For the first time for many months the feet felt warm.

Shortly afterwards she was able to sit up in a chair, and by March 3rd she could sit up for some hours, could stand unsupported for a few moments, and was able to take a few steps without support. The double foot-drop which persisted was, however, a great hindrance to movement. The muscles below the knee on the right side were degenerated, and did not react to faradism, and on the left there was a feeble reaction in the tibialis anticus and peronei only. The improvement in sensory disturbances is manifest from Fig. 3. The retention of urine continued, and no urine was evacuated without the catheter, which was always carefully sterilized.

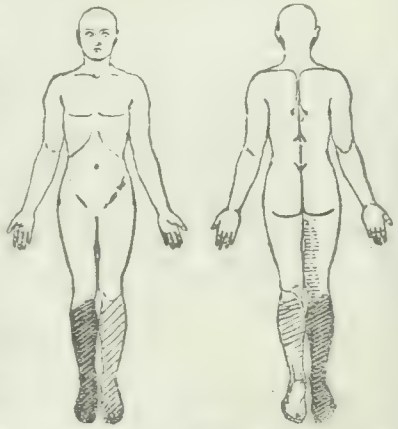


Fig. 3.—February 18th, 1914, twenty days after radium. Tactile sensation (cotton-wool) normal, except over dark shading. Right leg, dark shading = sensation lost to pain, light touch, heat and cold. Right leg, broken horizontal lines = pin felt as touch only. Left leg, oblique lines = heat and cold (ice) not distinguished, both called "warm." Localization good.

Unfortunately at this time the bladder again became more irritable, and she had an attack of acute cystitis, with alkaline, offensive urine containing a quantity of pus. There was also much bladder pain, and, being always a nervous girl, and now weak from her long illness, the pain and loss of sleep upset her altogether. She was constantly crying out for the catheter, and at times was in a greatly excited, semi-delirious state, when it was very difficult to pacify her. The temperature was only slightly raised at first, but about March 18th and afterwards it rose to 102° and 103° every night. The urine was found to contain *B. coli*, and the amount of pus and blood was so great as to suggest the severe cystitis that accompanies a stone or growth in the bladder. An autogenous vaccine was prepared as soon as possible; two doses were given, but without effect. She rapidly lost strength, and died on March 27th, apparently from exhaustion. No *post-mortem* examination was permitted.

Conclusion.

This result was very unfortunate and most disappointing, as it seemed before the onset of the cystitis that the treatment by radium was likely to result in a considerable degree of recovery, possibly nearly complete recovery; and it is for this reason that the case is published, as it seems to show that it would be worth while to try a similar procedure in a case of the same kind.

The progress of recovery after the use of radium can be best compared to that seen in cases of extra-medullary tumour of spinal cord after the removal of the growth, and was proceeding at about the same rate and in the same way and order as in those cases—that is, relief of pain, recovery of sensation in least affected areas, recovery of power in least affected muscles, and in those which had not undergone degeneration. In the muscles below the knees which had been wasted and degenerated for some time, recovery could in any case not be expected for many months, and probably would not be complete. The bladder disturbance was throughout one of the chief difficulties in dealing with the case; it may have been aggravated by the fact that she had worked for a long time in an office where there were no sanitary conveniences, and she would go all day without passing water. In the early part of her illness she often did not pass water for twenty-four hours.

Lastly, a word of reference may be made to the yellowish pigment, lutein, in the cerebro-spinal fluid. In our experience at the Bristol General Hospital this pigment has never been found in the cerebro-spinal fluid except in cases of tumour, and its presence may be taken as a valuable confirmatory sign.

ON THE RESPECTIVE ADVANTAGES AND DISADVANTAGES OF X-RAYS AND RADIUM IN THE TREATMENT OF CANCER.

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The activity of radium is often looked on as something mysterious and apart—as a phenomenon having no parallel elsewhere in nature. The truth is, that a very close similarity exists between the radiations of radium and those given off by an *x*-ray bulb.

Sir William Crookes, by whose name the modern *x*-ray tube is still sometimes called, announced more than thirty years ago that substances may exist in a state where atomic—that is, elemental—distinctions no longer hold; and in speaking of his discoveries he used the prophetic term, *radiant matter*. The best known form of radiant matter is the electron, or particle charged with negative electricity. Normally, electrons are bound up with atoms, but they may be set in linear motion either artificially, as when a current of high potential electricity is passed through a vacuum tube; or spontaneously in certain elements, notably radium. When an electron is either violently accelerated or suddenly stopped, a pulse or wave is produced in the ether, which, when proceeding from a highly exhausted Roentgen bulb, or from a piece of radium, has remarkable powers of penetrating matter. In the case of the former, a stream of electrons from the cathode or negative pole is made to impinge on a platinum target, and the desired ether pulse is produced by their stoppage; but in the case of the radio-active elements, atomic explosions are continually going on, and electrons are shot out with extreme violence. At the moment of emission ether pulses are generated comparable with those proceeding from the target of a Crookes tube.

* Read before the Darlington Division of the British Medical Association.

In these days a Roentgen bulb is practically never allowed to act on the skin except through a sheet of aluminium; similarly, radium is nearly always used in metal tubes of silver or platinum. This greatly simplifies comparisons, as it means that in both cases therapeutic results are looked for only from the ether pulses previously referred to, and not from the electrons themselves. To the waves from a Roentgen bulb the term "*x* rays" has been applied; while certain penetrating waves from a radium tube have been called "*gamma* rays." These terms are convenient, but arbitrary; as physicists are of opinion that the ether pulses in each case are identical in all save penetrative power.

When *x* or gamma rays penetrate into the tissues, a number of them give up their energy to set free electrons within the body. These electrons in turn produce ionic and chemical, and, finally, physiological effects. Within certain limits, the higher the speed of the liberated electrons, the more intense is their effect—*in fact, a comparatively small number of rapidly moving electrons seems able to produce more striking results than slow-moving ones in any quantity.*

The rays from a Roentgen bulb or a radium tube obey the general law of the conservation of energy—they can endow electrons in the tissues only with the energy originally put into their own creation. The energy imparted to an electron expelled from an exploding atom of radium appears to be at least four or five times greater than anything we can produce in a Roentgen bulb.* Thus the gamma ray penetrates four or five times as deeply, and gives rise to electrons moving four or five times as fast as those produced by the hardest *x* rays. Here, then, we have some sort of physical basis for any difference of therapeutic action which may be observed with radiation from the two sources.

Clinical experience has shown us that to get the best results from *x*-ray treatment we must use the most penetrating tubes we can obtain; and in some instances gamma rays have effected a cure where the Roentgen bulb has failed. It would be a mistake to think that this is often seen, but it does occur. Sir Alfred Pearce Gould, speaking at the Brighton Meeting of the British Medical Association, gave it as his opinion that for surface conditions it does not matter much whether *x* rays or radium are used; but I have occasionally seen a rodent ulcer which resisted Roentgen treatment subsequently yield quickly to radium. The idea underlying Sir Alfred Pearce Gould's statement seems to be that the superiority of the radium tube lies solely in the fact that it can be brought into more intimate contact with deep-seated tumours than is possible with a Roentgen bulb; but there is more in the matter than a mere question of accessibility. Gamma rays liberate in the tissues faster electrons than *x* rays, which means that their physiological effects can never be precisely the same.

But while this is so, it would not be correct to assume that rays so penetrating as those of radium are necessarily the best possible for therapeutic purposes. We know that hard *x* rays give, in the majority of cases, results quite as good as those to be obtained from radium, despite the fact that their penetration ratio is only as 1 to 5. It is, indeed, quite reasonable to think that the various rays of *x* type may be arranged in a curve of therapeutic value, this latter rising up to a certain degree of penetration, and then gradually falling again. To quote an analogy, if we apply a continuous current to a muscle, no contraction takes place after the first contact; but if we make and break the current, a gradually increasing tetanizing effect is produced up to a definite point, after which a further increase in the number of interruptions per second causes a falling-off of efficiency.

To return to the question of *x* rays and radium: between 1 and 5 there must exist a whole gamut of frequencies, any one of which may prove to be the therapeutic optimum. Put in another way, the curve ascends regularly from soft, through medium, to hard *x* rays. Between these latter and gamma rays there is a very wide gap; and whether gamma rays should be plotted as on the still ascending portion of the curve, or on its summit, or on its descending portion, we are as yet ignorant.

Writers on radium treatment, when they give any recognition at all to Roentgen therapy in cancer, claim that the former possesses two great advantages over the latter.

First, they assert that the intrinsic therapeutic value of gamma rays is superior to that of *x* rays. This may be to some extent conceded; but the superiority, such as it is, is not due to any mysterious or unbridgeable difference between the two, the gamma ray being, physically considered, merely a very hard type of *x* ray. The limit of penetration in *x* rays has not yet been reached even on existing lines of development; and investigations are at present in progress in America which may give us a much more powerful Roentgen bulb than any hitherto considered possible. Unlike *x* rays, the gamma rays of radium are of fixed penetration. Thus the scientific future of the *x*-ray bulb is more promising than that of the radium tube. In the latter case, therapeutic experiment can proceed only on the lines of varying dosage; whereas in coming years the physicist may be confidently looked to to provide us with *x* rays of almost infinitely varying quality.

Secondly, it is urged on behalf of radium that tubes containing it can be brought into intimate contact with malignant growths—can, in fact, be buried therein by the surgeon. *X* rays, on the other hand, as generally applied, have to pass through the skin and superjacent tissues in order to reach the site of disease. Radium tubes can also be readily introduced into the rectum, vagina, and uterus; the œsophagus, and even the stomach.

Although this is an advantage that will probably always rest with radium so far as very small cavities are concerned, yet it is possible to construct *x*-ray bulbs which can be introduced into the vagina and rectum, and, through appropriate incisions, into the interior of tumours. They are made with only one terminal—the cathode—and need a special form of apparatus to excite them. A long narrow tubular projection is provided for insertion into the natural cavity or artificial opening as the case may be.

The production of a powerful *x* or gamma radiation in the interior of a malignant neoplasm appears at first sight to be a proceeding having everything to recommend it. In a large number of cases, however, the method of tube burial is quite unsuitable; but even where there exists an inoperable tumour of considerable size, the insertion of tubes is by no means all that should be done from a radiotherapeutic point of view.

When a small amount of radium is inserted into the middle of a growth, we have practically a point source of radiation. Rays proceed in all directions, and, according to the law of squares, their intensity falls away in a curve of rapidly increasing steepness, so that at a distance, say, of 4 cm., their value is only one-sixteenth of what it is at 1 cm. Leaving aside the question as to whether gamma rays in weak doses may actually stimulate a malignant growth, it is yet quite obvious that a destruction of tumour cells, proceeding even to necrosis, may take place in the centre of the tumour, while the outlying parts are not even temporarily checked. This disproportionate effect may be to some extent modified by enclosing the radium tube in a celluloid case at least half an inch in diameter, and also by burying several tubes in various parts of the growth. Such methods demand the possession of large quantities of radium, and even then do not secure anything like uniformity of action throughout the growth.

So far I have considered only the effect of gamma rays on the tumour itself. But this is only half the problem. The local spread of a cancerous growth is normally resisted by the surrounding tissues, and it is possible either to raise or lower their defensive powers. The clinical effect of judicious irradiation of a rodent ulcer is interesting to watch. At one and the same time normal epithelium is induced to grow across the raw surface, while outlying ridges and nodules of cancer cells gradually disappear. I laid stress on this dual action in a paper read before the annual meeting of the British Medical Association at Liverpool in 1912; and Dr. E. H. Shaw, writing independently, pointed out upon the same occasion that a microscopic examination of irradiated tissues shows degeneration of malignant cells proceeding coincidently with vigorous defensive reaction on the part of invaded structures.

The efficient treatment of any cancer case by radiotherapeutic means demands that the stimulation of normal adjacent tissues to increased resistance be kept

* Under exceptional experimental conditions the electrons in an *x*-ray tube may more nearly approach the speed of the radium electron (beta ray). But such penetration cannot as yet be obtained in therapeutic work.

in view equally with the destruction of cells actually malignant. Herein lies the weak point of all burying methods. If a single tube be inserted into the centre of the growth, its activity at the circumference is too feeble; whereas if other tubes be buried near the periphery, the effect on the surrounding parts cannot be accurately gauged. The literature of the radium therapy of cancer contains numerous instances, on the one hand, of failure to destroy outlying portions of a neoplasm; and, on the other, of injury and sometimes massive destruction of healthy cells. It may be argued that unless some vital organ is injured such destruction is not a very serious matter, as the wound will ultimately heal, while the outposts of the cancer will certainly be annihilated. The matter is, unfortunately, not so simple as this. For while it is true in general that gamma rays, in common with *x* rays, destroy cancer cells in doses which not only do not hurt, but may even stimulate normal cells, yet there is reason to believe that here and there, in accordance with the biological law of variation, malignant cells occur which are not killed, but only paralysed for the time being. These, recovering after a few days or weeks, and finding only damaged tissues to oppose them, multiply and spread more rapidly than if no treatment had been applied.

With our present knowledge of radium it is impossible to be reasonably certain of doing no harm to normal structures; but sufficient experience has already been accumulated to enable us to give an *x*-ray dosage which shall depress cancer cells, while at the same time aiding the resisting power of the body. So far from seeking to limit *x*-ray dosage to the tumour itself, we should endeavour to bring as wide a surrounding area as possible into the field of irradiation. As there is practically no limit to the quantity of *x* rays which we can produce within a reasonable exposure time, it is possible to suspend the Roentgen bulb at least a foot above the skin. A large area is thus affected, and, so far as spreading is concerned, the loss of activity below the surface is trifling. For practical purposes the beam may be considered as consisting of parallel rays. Such diminution as occurs is due almost entirely to absorption in passing through the tissues. For instance, one half the activity may be gone at a distance of between one and two inches. In most cases, however, this difficulty may be got over by using two or more "ports of entry"—for example, a tumour of the lung may be attacked simultaneously from in front and from behind. In the case of radium, loss by absorption may be disregarded, owing to the extraordinary penetrative powers of the gamma ray; but loss by divergence is so enormous as to outweigh entirely the advantages of relative hardness.

Whatever risks may be involved in the treatment of inoperable cancerous growths by radium tubes are naturally very much increased when we are dealing with pre-operative or prophylactic post-operative raying. In the latter case we are dealing with normal structures in which we fear a few scattered malignant cells may be lurking; and our object is to stimulate the tissues to expel the enemy, rather than to attack him directly. Again, the treatment must include all organs which experience teaches are likely to be invaded, thus rendering a very extensive irradiation necessary. If we are going to irradiate previous to operation we must be careful to do nothing which shall interfere with the quick healing of the wound. The effects of radium on normal tissues are so little under control that its use is quite unjustifiable for either of the above purposes.

It must be admitted frankly that many of the advantages of *x* rays over radium would vanish if the latter could be obtained in bulk. But there appears to be no immediate prospect of any great increase in the world's radium supply, and it behoves medical men to be very careful that patients are not denied the advantages of radio-therapeutic treatment because radium itself is not available. The technique of deep Roentgen therapy has made enormous strides of late years, and many independent observers—for example, Professor Bumm—are of opinion that *x* rays, properly applied, will in most cases give results as good as those of radium itself.

"Cures" of cancer by *x* rays are now seldom reported, while descriptions of the wonderful results of radium treatment are frequent. Experience over a number of years has taught *x*-ray workers to look for temporary improvement as a matter of course. In breast cases, for instance, anything from one to three years' prolongation of life is so usual as to be almost the rule. One is accustomed to seeing recurrent growths disappear in a few weeks, with apparent complete restoration to health. Such results, when produced by radium, are looked on as marvellous, chiefly because they are now seen for the first time by men who had no previous belief in the efficacy of radio-therapeutics in any form. The surgeon can himself obtain and bury a tube of radium, and, if he is lucky, may get a brilliant result. But true progress can come about only by the co-operation of the surgeon and the professional radiologist. I have tried to show that radium therapy is only a part of the great subject of radio- and electro-therapeutics—a subject which is in itself already almost too wide to be compassed by any single mind. Workers who are spending their lives in this study, and finding it every day more complex, are sometimes appalled at the light-hearted manner in which experiments are made and rules laid down by men whose specialities avowedly lie in other directions.

Summary.

In early cases, whether for pre-operative or post-operative irradiation, the Roentgen bulb is to be preferred to the radium tube.

When surgical removal is impossible, a tube of radium should be buried in the centre of the tumour, but *x* rays should be used, in addition, to the surrounding area, and to any organs where a metastasis is likely to occur. This combined treatment may result in some actual necrosis in the immediate neighbourhood of the radium, but so long as this is confined to the interior of the neoplasm, no harm will result.

Finally, radium therapy is the method of choice in cancer of the vagina, uterus, and rectum; but even here *x* rays form a useful adjunct, so far as adjacent parts are concerned. Also, in practice one finds that one has to wait at least three or four weeks to obtain a supply of radium. Nothing less than 50 mg. is of much value, and the market price of this is £800 to £1,000. Consequently, most people have to hire their supplies, and pending their arrival *x* rays should be used vigorously in all cases. Even uterine, rectal, and œsophageal cancer can usually thus be held in check during the unavoidable period of waiting.

There are to-day thousands of cancer patients who believe, and whose friends believe, that they are being left to die because sufficient radium is not available to treat them. This belief adds greatly to their mental distress, and I have endeavoured to show that it is for the most part erroneous.

The Roentgen rays skilfully applied are of service in relieving pain, preventing ulceration, and causing the shrinkage or disappearance of external growths. Active life can be prolonged almost always for months, and sometimes for years. In pelvic cancer the insertion of a radium tube appears to be of greater value; but there is as yet little evidence to show that the results of the new therapy are, on the whole, more lasting than those of the older method.

PAINFUL SHOULDERS AND THEIR TREATMENT BY PHYSICAL MEASURES.

BY

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The subject of painful shoulders is one of abiding interest to those who suffer from them. For more years than I like to think of I suffered on occasions from pain in the left shoulder. This came on after walking a few miles, and more particularly after standing about, but not at games or any active exercise, except walking. It began with a few slight twinges and progressed to severe pain, which increased until I was compelled to sit down, when it was relieved in a few minutes.

I consulted various people about it and had various treatments. At Rotorua, New Zealand, I had massage with the constant current and the Rotorua douche, a combination of the Vichy and Scotch douche, on alternate days, with marked temporary relief. Two years ago I had

it treated with the static wave current and static sparks by Dr. W. B. Snow, of New York. This treatment immediately brought out the fact that there was a definite point of tenderness in the supraspinous fossa about opposite the junction of the spine of the scapula and the acromion process, and I now regard the cause of my trouble as a chronic neuritis of the suprascapular nerve.

I have detailed my own experience because, while the symptoms are unusual, the position of the tender point is very unusual. Indeed, if a patient comes to me now complaining of a painful shoulder I look for a tender point, and always find it in one of four places—namely:

1. At the posterior fold of the axilla over the interval between the two heads of the triceps, through which the circumflex nerve passes to the back of the limb.
2. Over the infraspinatus muscle, due here to neuritis of the suprascapular nerve.
3. Over the supraspinatus, as above mentioned.
4. Over the deltoid muscle.

While nearly all cases that I have treated present these tender points, the causation is undoubtedly not the same in all. There are cases showing marked muscular degeneration and tenderness of peripheral skin areas, with partial or complete loss of function. These are cases of neuritis of the nerve trunk, and are slow of recovery. Others have the same signs combined with joint changes, and are cases of rheumatoid arthritis. In others, again, the prominent symptoms are pain and loss of function, the latter due to the former, without muscular degeneration, though wasting from lack of use may be considerable. In still others pain is the only symptom. The last two varieties are possibly due to neuritis of scattered nerve terminals, possibly due to fibrositis or to the subinfection described by Professor Adami. Finally, chronic inflammation of the subacromial bursa will cause a tender point over the deltoid, with wasting of shoulder muscles indistinguishable from that due to neuritis. The dense shadow of the thickened bursa may be seen on a skiagram, and fluctuation can often be detected. The treatment of these cases is surgical.

In a few cases there are no tender points, and these, for want of knowledge of their true cause, I attribute to neuralgia. I have treated two such cases lately. In both the pain was not confined to the shoulder and arm, but radiated over the chest and neck. In both no tender point could be found even after the most careful searching. In both there was no real improvement. They thought that they were better, but the improvement was not maintained.

During the last twelve months or so I have had under treatment 12 cases, each presenting one or more tender points. All improved, one only very slightly. Nine got completely well. The following notes of some of the more severe or more chronic cases will give an idea of the conditions treated, and the results obtained:

CASE I.—Male, aged 51. Glycosuria fifteen years. Restricted movements both shoulders, and grating (rheumatoid arthritis). Pain in right arm and wrist, and particularly at deltoid insertion and biceps when the forearm was placed behind the back and the hand lifted as to button braces, etc. Cannot play billiards, his only game, because of pain. Tender point over circumflex nerve. He had pyorrhoea very badly; it was treated, and got quite well. His pain was much better, and he had more use of his arm after some twelve treatments. One day he told me he played 400 up at billiards without pain or fatigue. He moved into the country, and discontinued treatment. He did very well at first, and then remained stationary. Whether his improvement was maintained I do not know. His was not a promising case at any time.

CASE II.—Male, aged 71. Had rheumatism in left shoulder two months. Not very bad, but always there and annoying, sometimes quite painful. A tender point over deltoid muscle. Complete relief in three treatments; maintained since (about eleven months).

CASE III.—Male, aged 40. Acute attack of pain in right shoulder when crossing Atlantic. I saw him the day he arrived, and not more than five days after the beginning of the attack. Exquisitely tender spot over circumflex nerve. Wasting of deltoid and infraspinatus already obvious. In ten days he was much better, but not well. He left for Scotland, where his improvement continued.

CASE IV.—Male, aged 43. Rheumatic since age 20. Rather bad rheumatism during last two months. Lumbago. Pain in thigh and now in left shoulder, which he attributes to riding a pulling horse two months ago. Two tender points, one over circumflex and the other over suprascapular. He had twenty treatments altogether. Improvement lasted well. I saw him four months after treatment was stopped, and he said he had been quite free from any recurrence and was feeling very well.

CASE V.—Male, aged 60. Had a very bad attack of neuritis involving musculo-spiral and median nerves, with great pain in the shoulder. When I saw him he was recovering, but still had pain in shoulder and could not flex the index and middle fingers, while the skin over the terminal phalanges was very tender. Tender point in position 1. Pressure on this point caused a tingling down the back of the arm to the wrist. After ten treatments, he could bend the second finger perfectly and the index very much better. Pain much better and sleep better. He had been very sleepless. He could not find time to continue treatment, but wrote me a week or so after he had stopped that improvement continued, especially in the recalcitrant finger.

The other cases all did well with comparatively few treatments. The tender points are sought out with a vacuum tube attached to one pole of the static machine, using a spark gap of 1 in. or thereabouts. The patient will promptly point them out when tested by this method if they are superficial. Deeper points may be sought for by putting a metal plate about 3 in. square connected to one pole of the static machine on the part suspected and using a slowly interrupted spark gap of about ½ in. to begin with, gradually increasing the length to 3 or 4 in. This method takes time, but does not alarm the patient, as the following method may: The insulated platform on which the patient is seated is connected to the negative side of the static machine. The positive side is grounded. Another ground chain is connected to a ball electrode held by a vulcanite handle in the hand of the operator. If the ball electrode be now approached to within 2 in. of the suspected point, a spark will leave the patient at the point. This is very searching and will disclose tender points not found by the vacuum method, but, as the sensation is unpleasant, it cannot be used on every one.

Treatment consists first of exposure to the rays of the 500 candle power lamp for thirty minutes if the condition is very acute, or for about twenty minutes if it is chronic. The lamp I use is a single lamp in a reflector with a carbon filament, as this gives the largest amount of the violet and ultra-violet rays at present obtainable combined with the smallest proportionate amount of heat rays. The skin becomes reddened and pain is relieved, whether owing to counter-irritation or to some other effect I cannot say. I think it probable that the immediate effect is due to counter-irritation, but the ultimate effect is due to absorption of light by the deeper tissues where it is converted into heat, leading to hyperaemia in them and an increased flow of lymph so that plastic exudates are carried away.

Next the patient is seated on the insulated platform of the static machine. The pliable metal electrode before referred to is moulded over the tender point and kept in good contact, otherwise sparking from it to the skin will give rise to pain and irritation. This electrode is connected to the positive side of the machine and the negative grounded. Opening the spark gap very gently a point is reached where at each crossing of the gap by the spark the patient feels a sensation like a gentle tap on a bruise. It is not advisable to increase the strength of the current beyond this point. At each treatment the spark gap can be widened until at last a gap of 5 or 6 in. may be tolerated, the break causing contraction of all the muscles in the neighbourhood of the electrode. When this point is reached or before it the patient has generally lost his pain and regained the complete use of his arm.

If there is any limitation of movement due to pain or stiffness, I usually ask the patient to put the arm in the position which causes the pain, and apply a few static sparks to the painful spot. After a dozen or so of such sparks the patient will generally find that his movements are freer and more comfortable, and, though the sparks are not very pleasant, he will often ask to have them repeated, pointing out suitable places for the application.

Treatment is usually given daily until substantial improvement is shown, then three times a week until it can be discontinued.

The rapid alternation of contraction and relaxation, about 200 times a minute, in using the static wave current doubtless causes increased blood circulation through the part, leading to resolution of exudates and recovery.

A few accessory measures are sometimes adopted. For instance, Case v had the whole arm treated with the vacuum tube current used as described in testing for tender points. This was to exercise the muscles, while the tender finger-tips were treated with the static brush discharge.

THE TREATMENT OF NEURITIS BY ELECTRICAL METHODS.

BY

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It has been my lot to treat, by electrical methods, a great number of cases of neuritis affecting the trigeminal nerve, the branches of the cervical and brachial plexuses, especially the external and internal cutaneous nerves of the arm, the intercostal nerves, and the sciatic nerve. The result in the great majority of cases has proved most gratifying. With rare exceptions, relief of pain has been obtained, and in not a few a complete and permanent cure has been effected. The method I have employed for twelve years has been the use of high-frequency currents. Within the last few years I have employed also ionic medication, recommended by Professor Leduc of Nantes, and introduced into this country by Dr. Lewis Jones of London, using the method either alone or in combination with high-frequency currents.

As almost invariably the patient's general health is depressed, it is well in using high-frequency currents to pass through his body 500 to 800 milliampères of current as he reclines on the condenser couch. No better general tonic can be found. For the relief of the neuritic pain the skin of the affected area may be gently stroked by the hand of the operator as he holds one electrode, while the patient grasps the other. If this form of electrical massage is practised over clothing, the pain is apt to be slightly increased, at least for a time. Occasionally, if the pain is very acute, the use in the first place of the hot-air douche is advisable. Another way of applying high-frequency currents locally is by means of the brush discharge, which is painless, unless careless sparking is allowed.

The method of employing ionization is clearly explained in Dr. Lewis Jones's recent book on *Ionic Medication*. Of the various drugs employed, I have obtained the best results from the application of a 2 per cent. solution of quinine hydrochloride. The electrodes are composed of chains of zinc, and large pads of 16 plies of lint soaked in the solution are placed between the electrodes and the skin of the patient. It is advisable to wash the portion of skin to be treated before applying the pads. The electrode lying on the pad soaked in quinine hydrochloride is connected with the positive pole, as alkaloids like quinine have positively charged ions with an affinity for the negative pole, and are repelled from the positive. This electrode is applied to the affected area, and under the influence of the continuous current the quinine is introduced through the skin into the body. The indifferent electrode, resting on a pad soaked in salt solution, is connected with the negative pole, and may be applied to any convenient spot on the same side of the body. The pads with their electrodes should be bound firmly to the body by bandages.

The use of the ordinary battery is not advised, as the break between each cell or group of cells causes unnecessary pain to the patient. A switchboard, connected with the main supply or with accumulators, is preferable. A milliampèremeter should be in the circuit.

The current must be very slowly turned on. Even 3 milliampères will cause a little discomfort at first, but in a few minutes the resistence of the skin will be overcome, and gradually the current may be increased till 50 to 100 milliampères are registered. The treatment lasts for thirty minutes, then the current is reduced to zero as slowly as it was applied. It should be repeated daily, unless the skin is tender. Redness of the skin in contact with the pads is observed, but is soon removed by the use of a dusting powder.

CASE I.—A medical friend, suffering from neuritis of a month's duration, who had taken many drugs, was induced to place himself in my hands, though he was inclined to look on electrical treatment as a species of "quackery." After treatment he readily admitted that he was not only relieved of the pain, but "absolutely cured," and though four years have elapsed since he was subjected to high-frequency currents, he has not experienced the slightest return.

CASE II.—A second member of our profession who had experienced acute suffering for three weeks from neuritis of the left cervical and brachial plexuses, the pain reaching to the fingers, was cured with high-frequency currents in a month, even though his visits were somewhat irregular. Previously he had tried, without avail, fly and mustard blisters, fomentations, aspirin, sodium salicylate, codeine, and antipyrin. Hypodermic injections of morphine had relieved pain temporarily, but did not cure the neuritis. It is now three years since he was treated. He has lately written to me that he has had repeated minor attacks of his pain lasting for a few days, but nothing like a violent seizure.

CASE III.—A third doctor, no longer young, came to me for treatment on account of neuritis of the right sciatic nerve of four weeks' duration. He required twenty-seven visits. In the end, however, not only was his pain removed by high-frequency currents, but his general condition was greatly improved. Three years afterwards I met him walking briskly uphill, looking several years younger than when he first came to me. He told me that he had had no return of the pain.

CASE IV.—A farmer's wife, suffering from trigeminal neuralgia of the right side for twenty years, was relieved of her pain by high-frequency currents. Six months afterwards, when I last heard of her, there had been no return of any discomfort.

Many similar cases cured by high-frequency currents could be adduced. With regard to ionic medication, I may, perhaps, be allowed to quote my own case.

CASE V.—In November, 1913, I began to suffer pain on the left side of my back, which I considered to be simply lumbago—an easily cured trouble. The renal region was skiagraphed, but no shadow of calculus was detected. Dr. Ernest G. Fortune, who attended me, discovered a painful area to the left of the twelfth dorsal vertebra, and traced the pain along the course of the left twelfth dorsal nerve. Only those who have experienced the pain of neuritis can realize the suffering it causes. The pain came on at different times, though chiefly at night in the form of violent spasms, which seemed to be synchronous with the pulse beat. Very hot baths, liniment fomentations, and rest in bed gave considerable relief, but cure was only effected by quinine ionization.

CASE VI.—A young lady was sent to me in March, 1913, by Dr. Stevenson, of Larkhall, suffering from neuritis of the right shoulder, which had lasted intermittently for a period of eight years. The pain was chiefly felt at night. At first high-frequency currents were employed and later on ionization with sodium salicylate. Complete cure resulted after fifteen visits. There has been no return of the pain, though it is two years since treatment was discontinued.

CASE VII.—Her brother came to me a few weeks ago with neuritis of the branch of the left brachial plexus which supplies the infraspinatus muscle. In this case cure was obtained by quinine ionization after seven visits.

CASE VIII.—A lady, aged 22, with neuritis of three weeks' duration, affecting the external cutaneous nerve of the right arm, was completely and, so far, permanently cured after eleven applications of quinine ionization.

CASE IX.—A married lady was sent to me last autumn by Dr. R. O. Adamson and Dr. Ernest G. Fortune. The pain over the left shoulder was intense, but relief was obtained and cure effected by a combined treatment, in twenty-four visits, by high-frequency currents and quinine ionization.

It would prove fatiguing to the reader to prolong the notes of other similar cases, but from these already referred to it may be realized that by electrical methods relief and cure may be successfully obtained even in cases of extreme neuritis.

INTERLOBAR EMPYEMA.*

BY

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MARKETHILL, CO. ARMAGH.

INTERLOBAR empyema, that is, an accumulation of pus in the fissure between the lobes of the lung, has not received adequate attention in the textbooks. Dr. West, in his excellent treatise on diseases of the lungs, only gives a brief mention to it, and says that it is difficult of diagnosis. Sir William Broadbent said that he had seen several cases in which he formed the opinion that this condition existed, but only two in which the opportunity had been afforded of verifying the diagnosis by operation. He had not met with an example in the *post-mortem* room during his long connexion with a London hospital.

Empyema in the interlobar fissure would probably make its way into the general pleural cavity. If localized it might make its way to the root of the lung, and as the abscess increased the fluid might tend to split the fissure in that direction, and gain access to the primary divisions of the main bronchus and be discharged. This was what took place in the case recorded below.

If the abscess discharges into the pleural cavity as the fluid accumulates, it causes the lung to shrink, first from the removal of the negative pressure and later from the

* Read at a meeting of the Portadown and co. Down Division.

actual pressure of the fluid, till the lung is ultimately flattened around its root against the mediastinum. When this condition exists the pus would not be likely to gain access to a bronchus. If the abscess occurred on the left side it might burst into the pericardium.

My son, who was a medical student, returned from Dublin for his Christmas holidays. He had always been a wiry, healthy boy and was never sick, taking great interest in football and all school games. On December 23rd he had a rigor and his temperature went up to 104°. From this date until January 18th his chart resembled a case of typhoid fever in the third week. He had moist râles in the chest, with a little cough and expectoration. On January 9th the temperature rose suddenly to 105.° He was delirious all night and had great perspiration, with pain in the right lung and increase of expectoration. This, I think, was the start of the abscess. The pain gradually increased, with incessant cough and perspiration so copious that blankets had to be changed frequently.

Dr. Calwell saw him on January 10th, and we agreed to have a vaccine prepared. He received the first injection on January 12th and the second and third on January 15th and 19th without any beneficial result, except that the sputum greatly diminished.

Dr. Calwell saw him again on February 6th, when we explored the chest front and back on the right side, but only got about an ounce of healthy pleuritic fluid at the back. The physical signs were slight impairment of resonance, with imperfect entry of air, which varied from day to day; the way in which the signs skipped from the upper to the lower and from the lower to the upper lobe was remarkable. This, I believe, was due to the contents of the abscess pressing upwards or downwards as the position was changed. Dullness was, however, found behind the scapula, and from this to the axilla, where it became very noticeable.

This was his condition until February 11th, when he experienced a sudden choking and suffocating sensation, and coughed up about 4 oz. of fetid pus, which was almost a pure culture of streptococci. The pain was greatly relieved and he could lie on his right side, which up to this was impossible. The cough and expectoration from this on was almost incessant, and his mouth and throat got into a septic condition, covered with ulcers and very fetid. As he was losing ground rapidly, we decided that his only chance was to have the abscess drained. On February 19th I removed him to a nursing home in Belfast, and, with the assistance of Drs. Calwell, Fielding, and myself, Mr. R. Campbell explored the lung and got pus in the anterior axillary line at the lower border of the lung. A piece of rib was removed and a large drainage tube inserted. When the intercostal space was opened, he immediately coughed out a large quantity of pus and the air was also driven out forcibly through the wound.

The cough and expectoration, which had been almost incessant, now almost ceased, and he experienced great relief, but the cardiac area of dullness was increased, and it now became more evident that there was fluid in the pericardium. This increased rapidly; the pulse became very rapid and weak, and on February 24th it reached 140.

There was evidence of purulent absorption, and Mr. Campbell suggested that he should be given 10 grains of helmitol every four hours; this was continued for about a week and caused a fall in temperature from 103° to 99.5°. Previous to this pericardial trouble he was able to take from five to six pints of Jersey milk in the twenty-four hours; now he could only take a small quantity (about 2 oz.), as it brought on a feeling of distress and suffocation. His condition appeared to be all but hopeless, and he wished to be removed home. This was done on March 12th, and he arrived much exhausted. His heart gradually improved, and at the end of April the pulse had fallen to 98 and was fairly strong.

From April 29th till May 15th he expectorated a large quantity of fetid pus, and subsequently his temperature became normal and remained so. He went on improving steadily; the pulse had fallen to 84. The wound still discharged a little, and Dr. Calwell thought the fetid expectoration on April 29th might have been another pouch which had burst into a large bronchus. I thought it might have been from the pericardium, as the improvement in the pulse was remarkable from April 29th, when the fetid expectoration began, and the heart returned to its normal position and size. He was greatly emaciated, but began to take milk again in good quantities, and from this on improved steadily. After the operation he had a severe attack of neuritis in the right arm, which became more wasted than the left. I think I have never seen anybody so emaciated recover.

The chief points of interest in the case are the peculiar onset, the fact that although the abscess had discharged it continued to make its way to the chest wall, the purulent effusion into the pericardium, and the complication of neuritis. I was greatly perplexed by the course and prolonged duration of the disease; Broadbent said some of his cases took over a year, others six months.

Although the abscess was discharging the patient could not empty the sac completely enough to allow it to contract up so that a sinus formed to the ribs.

Mr. Campbell said that when he made the opening he felt that the pleura was adherent all round the opening, and that the pleural cavity was cut off from any discharge into it.

The pericardial effusion and neuritis were probably the result of absorption and contamination of the blood.

A noteworthy feature was the entire absence of blood from the sputum. The fact of the abscess not forming in the lung substance but in the fissure would account for this.

A remarkable thing was the way the patient could empty the abscess once every day, and I was impressed with its importance. When we gave him an anaesthetic the emptying was brought about by lying on the side of the bed on his chest with his head dependent, when suddenly from 4 to 5 oz. of pus would be expelled through mouth and nose.

VERONAL POISONING: RECOVERY AFTER 100 GRAINS.

By H. R. SOUPER, M.A., M.B., CH.B.ABERD.,

DUMFRIES.

THE publication in the JOURNAL of April 18th of cases of veronal poisoning has led me to believe that the following account of a case may be of interest.

A cook, aged 40, in a house near Dumfries, had been attending the dentist for severe toothache, and had announced her intention of "taking something to dull the pain." On the evening in question she was seen going to bed, unsteady in gait and muttering to herself, with a small bottle full of white tablets. It was supposed that she was under the influence of alcohol. She was afterwards seen in bed that night fully dressed. Next morning she was found snoring in bed, and could not be roused. On account of the wish of the servants to hide her supposed alcoholic condition, her mistress was not informed till after 10 a.m. On going up to see the patient, she found on the washstand an almost empty bottle of 5-grain veronal tablets.

I arrived at 11 a.m., and examined the patient. She was lying undressed in bed, deeply unconscious, and could not be roused by the most vigorous physical stimulation. The corneal and conjunctival reflexes were absent; the pupils, equal and medium, reacted to light. Plantar reflexes and knee-jerks were absent, and all the limbs were flaccid. The breathing was stertorous and slow (16); the pulse rather feeble but regular (65). There was no rise of temperature, and no evidence of incontinence of urine or faeces, or of vomiting.

On the washstand I found a tumbler containing a little water and a few grains of the veronal, which had evidently been crushed up with a hat-pin standing in the tumbler, and drunk in water. It was afterwards learnt from the chemist who had supplied the veronal that there had been twenty-five tablets in the bottle; four yet remained, and the fragments in the tumbler would not, I think, have amounted to 20 grains (though they were not weighed); so that the patient had taken a dose of over 100 grains, presumably after waking from her first sleep and undressing herself.

A hypodermic injection of $\frac{1}{30}$ grain of strychnine sulphate was immediately given, followed by one of $\frac{1}{15}$ grain of apomorphine hydrochloride, which, however, failed to produce emesis. I therefore passed the stomach tube and washed out the stomach with a weak solution of potassium permanganate; only a little mucus returned with the solution. Before the tube was withdrawn a breakfastcupful of strong coffee was introduced. The patient's condition, however, remained unchanged, and arrangements were made to admit her to the Dumfries and Galloway Royal Infirmary. The dose of strychnine was repeated one hour after the first. The patient was conveyed to hospital in a large motor car, then temporarily in use as an ambulance wagon, but an exceedingly rough journey of over four miles failed to arouse her in the slightest degree. After arrival at the hospital, about 1.30 p.m., vigorous flagellation with a wet towel produced slow movements and moans, but no other response. As her pulse by that time was of good condition, treatment in hospital practically consisted in allowing her to "sleep off" the effects of the dose.

That evening she became semiconscious; next day she was still very drowsy but partially conscious, and during the next three days gradually came round. At the end of a week she was discharged. There was not at any time any appearance of a pemphigoid or erythematous condition of the skin. She did not require catheterization.

I afterwards learned that she went home for a fornight's holiday, and then returned to her situation.

The interesting features of this case are, I think, the ease with which the drug was procured, and the uneventful recovery after such a large dose.

I am indebted to Dr. Clarke, Senior Physician to the Dumfries and Galloway Royal Infirmary, under whose care the patient was, for permission to follow up her progress in hospital.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

PERSISTENT ASPHYXIA NEONATORUM: OPENING OF SKULL WITH TEMPORARY IMPROVEMENT

I was recently called to assist some nurses at a confinement case. The head was caught at the outlet. I applied forceps, and delivered the child quite easily. The cord was beating strongly, but the child could not be got to breathe. Artificial respiration according to Sylvester's method was tried without success. I then placed a towel over the child's face and inflated the lungs by the face-to-face method. This succeeded, and was kept up by one of the nurses and myself for fully an hour and a half; whenever it was stopped the child's colour became bad and the pulse weak. As the child was gradually becoming weaker I decided as a last resort to open the skull. An osteoplastic flap was turned down in the right parietal region. Within a minute of my doing so the child for the first time gave a spontaneous gasp. I hoped it was going to come round, but it only gasped three or four times a minute. Artificial respiration was continued for about another hour and then given up. The child was quite pulseless but it continued to breathe at long intervals, and lived for six hours after the opening of the skull. A *post-mortem* examination was unfortunately not obtained. The procedure is mentioned in Jardine's *Clinical Obstetrics*. It certainly seems worthy of a trial as a last resort in persistent cases.

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IODINE IN ERYTHEMA IRIS.

Erythema iris is a self-limited disease, but its unsightly appearance makes one desire to limit it voluntarily. Quinine and sodium salicylate fail more often than they succeed, and external treatment is often only palliative. A severe case of typical appearance which had failed to respond to the usual treatment led me to experiment.

Miss M. O., aged 21, a university student, had her first attack in the early summer of 1911. The spots appeared with a crop of mosquito bites, and were first looked upon as the result of the mosquito poison. There were two or three on the hands. These disappeared in a month, but nine months later, in June of 1912, when run down from study, a second attack occurred, which lasted until August. Some thirty spots appeared in successive crops on her hands and forearms. She also had spots in her mouth. In the spring of 1913 a third attack occurred, which ran a regular course, lasting two months; and in the fall another attack followed, lasting until January.

It was during this last attack that tincture of iodine was used with apparent excellent results. Thinking, however, that the results might be a coincidence, it was decided to await another attack. The opportunity came in March. The spots were treated in all stages from the papular to the vesicular. The spot painted invariably disappeared in the course of two or three days. A ring painted around the spots in the earlier stages caused them to cease growing and dry up.

The attacks in this case occurred when the patient was run down from excessive study. The hands, forearms, and mucous membrane of the mouth were the only parts affected.

Saskatoon. T. W. Walker, M.B.

HELIOTHERAPY.

After reading the interesting page headed "A Place in the Sun," appearing in the Journal of January 24th, p. 210, I thought it worth while to report a similar result obtained here about a year ago. I was acting as locumtenent in a district where a large proportion of the population were Maoris, who are very susceptible to tuberculous diseases; they are very reluctant to submit to hospital treatment, being especially averse to any surgical interference.

The patient was an adolescent native, who, when first seen, showed signs of early phthisis. While under treatment for the mild pulmonary condition he developed tuberculous peritonitis, which progressed rapidly and necessitated his removal to a cottage hospital, where medical measures were adopted for a week or two, but with no improvement, for the abdominal swelling attained a huge size. The lad's relatives would not hear of tapping, laparotomy, or his removal to a city hospital, so he was "taken home to die."

Shortly after this I had occasion to visit the Maori settlement, and, seeing this young man again, I persuaded him to undergo the sun treatment, on the principle that strong light was inimical to tuberculous diseases (abdominal). The abdomen was bared to the sun's rays of summer for several hours each day, and within a few weeks all the ascites had disappeared and the abdominal condition had returned to normal. I saw the patient several times subsequently, and have known him to have ridden long journeys without being unduly fatigued. I am unable to give any further history *re* the lung trouble, as I left the district shortly after this satisfactory result of my experiment in heliotherapy.

Opotiki, New Zealand. G. M. H. Osborne.

THE CLINICAL USES OF COLLOIDAL METALS.

Though the administration of the colloidal metals has been practised for some ten years, the extent of their usefulness appears to be but partly appreciated. In a large number of conditions they have given very satisfactory results, and many different metals have been employed. In this brief note I shall merely indicate the effects of the few preparations with which I am personally familiar, excluding those of colloidal silver.

Colloidal copper was introduced as a cure for cancer, but quickly found its place as a valuable palliative. I have use electrocuprol in a case of inoperable cancer of the cervix uteri, injecting 5 c.cm. daily into the muscles of each buttock on alternate days. After the fourth injection, the pain, which had previously been insufficiently relieved by mxxviii of liquor morphinæ daily, ceased, and ten days later all vaginal discharge stopped. There was no shivering or cyanosis after the injections until the twentieth, when the patient had one mild rigor. Her nutrition and colour greatly improved.

Colloidal selenium has a similar field. The preparation I used was erythroselenium beta, the patient being a woman who had undergone colostomy in February, 1912, for malignant growth of the bowel. When she came under my notice (September, 1913) there was a fungating mass surrounding the faecal fistula. Injections of 5 c.cm. were given subcutaneously on each side of the fistula daily, the first injection consisting of 2 c.cm. in an attempt to avoid reaction. No shivering appeared until after the fourth injection, and after the sixth pain vanished. She developed a ravenous appetite and stated that she preferred these injections to those of morphine, for which she had previously clamoured. The secondary deposit became much cleaner and its surface smooth instead of ulcerated.

Neither the copper nor the selenium appeared to lose its efficacy as time went on, though Loeb has found that copper does not relieve after the sixteenth injection.

Colloidal mercury is advocated for syphilis. I injected 5 c.cm. just outside the margin of a syphilitic ulcer of the leg in one case. Healing took place rapidly: in fact, the rapidity was so extreme that one hesitated to attribute it entirely to the power of the injection.

Colloidal iodine I have given, in capsules containing 2 minims, to six cases of pulmonary tuberculosis. In three advanced cases the condition became worse during the administration, in a fourth I could find no effect whatever. A fifth advanced case seemed to improve; the temperature dropped and remained about 99°, the voice became clearer, and the appetite improved. The sixth patient was very unmistakably improved in every respect.

These observations are admittedly scanty as well as incomplete, but I desire to put them on record that others may have the opportunity of testing them. So far as malignant disease is concerned, I am convinced that colloidal copper or selenium is a very useful aid in the treatment of the most distressing cases.

Isleworth Infirmary, Middlesex. James Rae, M.A., M.D.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

PORTSMOUTH AND SOUTH HANTS EYE AND EAR INFIRMARY.

CARCINOMA OF THE SEPTUM NASI: REMOVAL OF SEPTUM NASI THROUGH OLLIER'S INCISION.

(By C. A. SCOTT RIDOUT, M.S.Lond., F.R.C.S.Eng., Surgeon to the Infirmary; Assistant Surgeon to the Royal Portsmouth Hospital.)

J. C., a gardener aged 56, was sent to me by Dr. Jacob, of Hayling Island, in September, 1913, suffering from nasal obstruction. On examination it was found that he had a whitish-looking swelling situated on the posterior half of the septum nasi on the right side; on this side there was no ulcerated surface visible. On the left side the whole corresponding surface was ulcerated and covered with readily bleeding granulations, and the swelling and ulceration were apparently situated on the perpendicular plate of the ethmoid, and apparently did not reach beyond the vomerine crest inferiorly, but could not be limited superiorly.

There were no enlarged lymphatic glands to be felt in the neck. A Wassermann test of blood was negative. The microscopical report of a small portion of the ulcerated surface showed alveolated masses of large epithelial cells in a scanty stroma associated with proliferation and great irregularity of the epidermal covering. The appearances suggest an origin from the glands. The patient complained of no pain, but said that for three months previous to admission his nose felt as if it were blocked by a cold. He had no bleeding. The general health was good, and he gave no history of injury.

Operation.—The whole of the nasal bones with their integuments were turned down by means of Ollier's incision, and severing their bony attachments to the frontal bone and superior maxillae, the cartilaginous portion of the septum nasi being carefully divided from its antero-superior attachments. The whole of the septum nasi was then excised, a small portion of the lower anterior part of the quadilateral cartilage being left to support the tip of the nose and columella. The resulting specimen showed that the diseased area had been cleared. There was no undue haemorrhage. The nasal bones were replaced and the integuments carefully sutured. The wound healed satisfactorily, with slight suppuration opposite the inner canthus of each eye, and the patient's appearance was well preserved.

Since the operation, except for a little crusting in the nasal chamber, he has felt no discomfort, but recently a few suspicious-looking granulations at the roof of the nasal cavity have been treated by exposure to radium.

I have published this case as these growths of the septum are very rare, the ulcerations of the septum nasi being usually, in my experience, syphilitic, tuberculous, or due to some septic inflammation.

AN institute of hydrology which was established by the University of Toulouse in July, 1913, has just been opened to students. The object of the institute is to supply a scientific knowledge of mineral waters and their therapeutic uses for the purpose of training men who will be able to develop the mineral springs in which the country around Toulouse is especially rich. The Director of the institute is Professor Garrigou, and the teaching staff consists of Professors Aloy, Marie, and Baylac, of the Medical Faculty, Professor Jacob of the Faculty of Science, and Professor Timbal of the Practical School of Law. Excursions will be organized for the study of the hydrology of the neighbourhood of Toulouse and the Pyrenees, the catchment of waters, thermal installations, and so forth. At the end of the course an examination will be held, and successful candidates will obtain a "certificate of hydrological studies."

Reports of Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

ANNUAL CONGRESS.

THE annual congress was held on April 23rd, 24th, and 25th, the proceedings including a clinical meeting. The Chairman was Mr. F. RICHARDSON CROSS, of Clifton, Bristol, who in an opening address described the progress of ophthalmology during the last few decades, and the part played therein by the society. A very large number of ordinary communications ensued, among them being the following:

Mr. W. H. H. JESSOP, in a paper dealing with the *Prognosis in incipient cortical opacities of the lens*, pointed out that many of these never made any progress, and indicated reasons for holding that an immense amount of unnecessary mental suffering was caused by the use of the term "cataract" in connexion with such cases.

Mr. BISHOP HARMAN described a series of observations on *The appearance of pigment in the iris of the child*. They were made on white children, the offspring of a blue-eyed, fair-haired father, and a brown-eyed, dark-haired mother. At birth in all the cases the irides were of the usual dull slatey-blue colour; the iris tissues were obscured as though coated in some smooth, fine textured material. Clearing of the iris stroma was noted from the third to the sixth week of life. Two children developed blue eyes, one blue with the suggestion of violet due to rims of finer, darker stroma at the margins. The other blue became bright and cold in tint owing to a marked thickening of the stroma in the intermediate zone. Two other children developed brown irides. The first sign of brown pigment was noted at the sixth week. The pigment was in broad, irregular patches extending from the basal margin; it looked just as though the iris had been touched with brown ink, which was soaking through to the surface, and towards the pupillary border. The development was earliest in the temporal half of the iris. The patches extended and fused until the whole was brown. The tint became full and pure in one child, in the other there remained at the age of 2 years some suggestion of bluish or greenish tint at the depth of the crypts of the iris. In none of these cases was there any of the fine scattered pigment that is so common a feature of the hazel and slatey-blue irides, and which forms an irregular ring about the pupillary margin. From a few observations it was thought that this surface pigment spread from the pupillary margin at a later date, and from a secondary pigmentation.

Dr. GORDON HOLMES and Mr. R. A. GREEVES recorded a case of *Flat sarcoma of the choroid*, followed by multiple metastases. The first symptom noted was paralysis of the external rectus. Death occurred five and a half years after the commencement of the symptoms.

Lieutenant-Colonel R. H. ELLIOT having read a paper on *Dressings and antiseptic methods in ocular operations*, Professor LANDOLT (Paris) expressed the opinion that boiling cutting instruments spoilt the cutting edge—a point of importance, since a clean cut wound was very much more satisfactory than one not made with a very sharp instrument. He therefore used and recommended dry heat, namely, up to 150° F., keeping the instrument in that for twenty minutes. He believed he had never had a case of infection from instruments. His practice, when applying atropine, was to use a fresh ampulla each time. He objected to an irrigator. Mr. W. H. JESSOP dwelt on the danger of using long india-rubber tubes in connexion with operations; several tubes recently examined bacteriologically at a large hospital were found to be teeming with micro-organisms. Professor STRAUB pointed out that most of the infections at operations arose from the spread of organisms which were already resident in the eye. His practice was to carry out sterilizing and cleansing procedures on the patient for three days before operating.

Dr. THOMSON HENDERSON, describing a method of estimating the *Arterial diastolic pressure in the eye and its clinical significance*, said that, veins being elastic and not rigid tubes, it was impossible for the intraocular pressure to be greater than the venous pressure, for

otherwise the veins at their point of exit would be constricted. The truth of this assumption could be put to clinical proof by any one who was able to use an ophthalmoscope. All that was necessary was to observe the disc by the direct method, and then very lightly touch the lid with the tip of the finger of the disengaged hand. The points of venous exit on the disc would then be seen to become constricted by this light pressure, though it was merely a light touch and nothing more. If instead of producing the collapsing pulse by digital pressure one used a pressure gauge such as Messrs. Weiss had made for him, one was able to obtain an exact index of the height that the arterial diastolic pressure was above the intraocular or, what was the same thing, above the venous exit pressure. The pressure necessary to produce the collapsing pulse was, in adults, between 15 and 26 mm. Hg. That showed that the arterial diastolic pressure was only 15 to 25 mm. Hg above the intraocular or venous exit pressures. In school children the collapsing pulse was elicited by the application of a pressure between 10 and 15 mm. Hg. In brief, the principles of the clinical application of the pressure gauge for the determination of glaucoma were as follows: The diastolic arterial pressure was the same in both eyes, and therefore, if a pressure of 20 mm. Hg produced a collapsing pulse in one eye while a reading of only 12 mm. Hg would produce the same result in the other, the difference of 8 mm. Hg was due to an existing increase of pressure in the second eye. The use of the pressure gauge thus made it possible to register slight differences of pressure in the two eyes in all cases in which the disc was visible.

Dr. C. O. Hawthorne showed a number of perimeter charts taken from cases in which *Homonymous hemianopia* was the principal or only evidence of intracranial disease. In his first group he placed cases of cardio-vascular degeneration with or without renal disease, the hemianopia here being due presumably to arterial obstruction or rupture. In a second group were described cases of homonymous hemianopia occurring in young women free from all evidences of cardio-vascular or renal disease, but the subjects of anaemia or chlorosis, and in these cases it was argued that the hemianopia was probably due to venous or sinus thrombosis within the skull. Rarely a similar condition developed in epilepsy, and here also it might be possible to hold that sustained arterial spasm led to capillary and venous thrombosis, which, occurring in the visual tract posterior to the optic commissure, would be sufficient to account for the homonymous hemianopia.

Mr. Gray Clegg recorded a case in which death followed *Open evisceration of the eye.* The operation was undertaken owing to signs of panophthalmitis occurring in an eye which had been blind ever since an injury some years previously (a splash of hot metal followed by hypopyon and dense leucoma). Death occurred three days after the evisceration. At the *post-mortem* examination, though the base of the brain was found bathed in thick pus, nothing abnormal was found inside the brain, and there was no evidence of any ear disease; the examination showed clearly that the infection had reached the meninges via the right optic nerve. In other respects the organs were those of a well-nourished healthy male. The speaker said that since November, 1909, he had had 33 cases of complete purulent panophthalmitis due to all causes; open evisceration had been adopted in all of them, and in 27 a small hard stump had resulted, but in 6 the recovery was complicated by sloughing of the sclera, which was noted at intervals varying from ten days to three weeks from the time of the operation. The operation for open evisceration for panophthalmitis had hitherto always been considered to be free from the risks incurred on enucleation.

Mr. Mayou, describing certain *Diseases of the eyes of animals*, said that congenital malformations in dogs and cats were of comparatively frequent occurrence. He had seen all forms of persistent pupillary membrane adhesion between the iris and the cornea, pigmentation on the anterior capsule of the lens, anterior polar cataract, and congenital dislocation of the lens. More extensive congenital malformations were also frequently seen. Buphthalmos in dogs was not at all uncommon. The distension of the eye increased throughout the life of the animal, and sometimes the eye reached an enormous size, even three or four times the size of the natural eye of the animal.

Mr. G. Coats recorded a case bearing on *the function of the pigment epithelium of the iris.* After a blow this pigment and the dilator power had disappeared from a sector-shaped area about 6 mm. broad in the temporal half of the iris. The stroma appeared to be almost normal, but on illumination with the ophthalmoscope light was transmitted through its interstices. With the transilluminator the appearance of a coloboma covered with a very delicate veil was simulated. Elsewhere the iris transmitted no light. Under a mydriatic the inner, upper, and lower parts of the iris retracted perfectly, but the outer remained quite flaccid, the edge of the pupil forming a straight vertical line, and remaining in its former position. It had recently been asserted by Rubel that rendering the iris impervious to light was chiefly a function of the iris stroma, the pigment epithelium being relatively of little importance. The present case showed that when the pigment epithelium was absent in a lightly pigmented iris, the stroma presented scarcely any obstacle to the passage of the brilliant light of the transilluminator. The observation confirmed a statement by Fuchs that the depth of pigmentation in the epithelium was very variable, and that its amount was a most important factor in determining the translucency or otherwise of the iris.

Post-operative Complications of Cataract Extraction.

In opening a discussion on this subject, Mr. Treacher Collins called attention to the difference noticed in the healing of extraction wounds after a different form of incision. Some incisions healed much better than others. He greatly favoured the incision which aimed at the cutting of a conjunctival flap. If the wound did not heal readily it was possible for a down growth of epithelium to take place, and this might spread over the whole of the anterior chamber, block the angle of the anterior chamber, and cause a condition of glaucoma. Prolapse of the iris, causing a bulging cystoid scar, sometimes led to a late suppurative condition of the uveal tract, which might occur months or even years after the healing of the wound. Astigmatism after extraction varied enormously in amount, and largely depended on the healing of the wound and the way in which the flap was in apposition. Suppurative inflammation of the cornea was most often caused by the pneumococcus, but the frequency of this had been greatly diminished by aseptic precautions, as sterilization of instruments. Thus, in a series of Moorfield cases published in 1876 the percentage of eyes lost from this cause was 6.2. In another series published in 1894 it was 1.7, and in Mr. Collins's own cases done between 1900 and 1912 it was 1.15 per cent. Instruments were not sterilized at this hospital previous to 1883. He advocated the use of the galvano-cautery in such cases; he had also seen good results follow the use of vaccines, but as other local treatment was always carried out it was difficult to say how much good really resulted from the injections. In some cases posterior synechiae developed in quite quiet eyes, and these he did not look upon as being septic; in like manner keratitis punctata, which was certainly non-septic, could often be found in cases running a normal course if these dots were really looked for. It was quite a fallacy to think that the mere presence of soft lens matter in the anterior chamber was capable of producing iritis, but when it was mixed with aqueous it certainly formed a very good nutrient medium for the growth of organisms, if any were allowed to be present. He had seen several cases of sympathetic ophthalmitis greatly benefit by the use of salvarsan, and valuable information might be derived from a blood count.

Lieutenant-Colonel H. Herbert said that the most serious after-complication was infection, and strongly advocated a very thorough irrigation of the conjunctiva with perchloride of mercury. In India suppuration had become all but unknown after this was carried out in a thorough and systematic manner. The usual strength was 1 in 3,000. It certainly had the drawback that it irritated the conjunctiva, and subsequently led to a further development of micro-organisms than would otherwise have been the case, but by this time the wound had healed; nevertheless, the fact should be taken into consideration if it were contemplated to do a further operation within the first two weeks, such as a very early needling. He was strongly in favour of making a large conjunctival flap with the original incision for the extraction.

Sir ANDERSON CRITCHETT, after describing what he considered to be the best procedure in complicated cases of cataract where the pupil had been drawn up into the wound, or where there was a dense capsular membrane, said no class of case required greater experience. He discouraged the slightest empiricism, advocating eclecticism, and adopting the procedure found suitable to each particular case.

Mr. CARL BROWNING said that out of hundreds of cases examined bacteriologically at Moorfields Hospital before the cataract operation only one case which had been pronounced bacteriologically clean subsequently became infected after operation. Out of 14 unsatisfactory cases during the last four years 3 had been in eyes which had been reported unfit for operation but were nevertheless submitted thereto. All these eyes were lost. Some of the chronic cases of low virulence responded to vaccine treatment; some yielded to salvarsan or neo-salvarsan. The causes of sepsis should be sought further afield than in the eye itself—namely, in the gums, nose, throat, etc. Many of the infections he had found to be endogenous, not arising in the conjunctival or lacrymal sac. The practice of bandaging the eye for twenty-four hours previous to operation, and deciding whether the eye was fit for operation by the comparative absence of pus on the bandage, he considered to be bad from a bacteriological point of view; in several cases examined carefully the organisms present had increased during the time the bandage was in position, and some forms of virulent organisms were present after the bandaging which had not been detected before.

Mr. C. KILLICK, after describing his own results in respect of suppuration, said that he had had to needle for capsular proliferation twenty-eight times in the course of 1,000 cases.

Mr. C. WORTH said he regarded haemorrhage in the anterior chamber five days after the operation as peculiar to the operation with the conjunctival flap; he had not seen it where the incision had been corneal, and it probably occurred after some movement on the part of the patient, not necessarily a blow. This haemorrhage retarded convalescence. He had adopted a conjunctival flap in all cases, and kept the patient quietly in bed for a longer time than for after a corneal incision.

Mr. A. W. ORMOND read notes of two cases in which post-operative complications occurred after removal of the lens. Both were due to endogenous infections.

Mr. J. B. STORY said he had been able to assist some cases of wound infection by the application of the electro-cautery to the edges of the wound and by a subconjunctival injection of cyanide of mercury. In the majority of cases of inflammation after cataract extraction the injection, he thought, was exogenous. It had long been his practice before operation to make careful examination not only of the eye, but also of the nose and mouth. If there were many organisms, operation was deferred, and the patient submitted to a cleansing and fortifying treatment.

Lieutenant-Colonel ELLIOT supported Mr. Collins's remarks about the influence of traumatism on the appearance of post-operative opacities. Where there was a large lens which had to be delivered through a tight wound there was apt to be striated keratitis. For non-inflammatory cataract he used two needles. For inflammatory cataract he used the knife, and if that failed he opened the chamber. He did not cut the capsule but cut the healthy iris.

Professor LANDOLT (Paris) said one of the most dreaded complications was prolapse of the iris. To avoid this he always performed iridectomy with the cataract extraction, excising the iris widely, often in two cuts, so that after the section it retracted by its own elasticity. If part of the iris were entangled in the scar he would cauterize it with the galvano-cautery, afterwards covering with a flap of conjunctiva. He had always been sceptical as to the use of preliminary bandaging, and he proceeded on the assumption that no conjunctival sac was free from pathogenic germs. Moreover, danger of infection persisted so long as the wound remained open. He pictured it as a race between the development of noxious germs and the closure of the wound. He did not agree with the use of strong antiseptics for after-cleansing, though in conjunctivitis he would even use nitrate of silver.

Mr. G. MACKAY (Edinburgh) asked whether some weaker preparation than 1 in 3,000 perchloride would not do. He had given up strong solutions because of the frequency of posterior corneal opacities. His preparation of the patient consisted of regular douching of the conjunctiva with sterile saline or boric lotion. In this connexion argyrol was also useful, if employed two or three times a day.

Professor UHTHOFF (Breslau) also described his methods and experiences in the operation, and was followed by Mr. Thomson Henderson.

Dr. THOMSON HENDERSON said that the point he wished to make was that an adhesion of iris or capsule did not in itself lead to pathological results so long as these structures did not act, so to speak, as a bridge allowing the invading epithelial cells on the one hand, or the connective tissue cells of the subconjunctival tissue on the other, to swarm into the anterior chamber. Chance must here play an important rôle. Complications might also follow needling. Some years ago he had come into possession of an eye which had been needled, and its examination explained matters. He found a new hyaloid had formed as a sort of condensation of the surface of the vitreous structure. This new hyaloid joined up and was cemented with the edges of the old hyaloid and of the posterior lens capsule. This case explained to him the cause of the glaucoma following needling in other cases which he had examined. The vitreous in these cases had, if one might use the expression, got spilt into the anterior chamber, and then by a process of condensation and new hyaloid formation it had attached the iris to the vitreous or formed a similar formation at the angle.

Professor STRAUB said he had seen chronic inflammation commence in the second week after the operation, even when the toilet after the operation had been well and carefully carried out. He also detailed his method for preventing the squeezing of the eye, which sometimes accounted for its loss.

The PRESIDENT said all realized that the essential need was the production of absolute local asepsis, or antisepsis, the most rigorous cleanliness of instruments, patient and person. Most of the cases of sepsis he regarded as exogenous, but there were cases of endogenous infection. Cases such as Mr. Ormond related he considered to be gouty, using that term in its generic sense.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

AT a meeting on April 28th, Dr. SAMUEL WEST, President, in the chair, Dr. E. P. POULTON, in a paper on the presence of *CO_2 in the alveolar air of diabetics*, laid stress on the importance of observing its quantity as a guide to treatment and prognosis in diabetes. The advantage was that doing so supplied a measure of the actual acidosis, or, in other words, of the amount of β-oxybutyric and diacetic acids present in the arterial blood at the moment. He showed charts of the estimations he had made in 9 cases of diabetic coma, and in 6 milder cases of diabetes. The method employed had been that of Fridericia, which was shown to give satisfactory results for clinical purposes. The normal values in healthy individuals for the alveolar CO_2 usually lay between 5 per cent. and 6 per cent., but there was no immedia e danger of coma with values down to 4 per cent. Values between 3 and 4 per cent. indicated danger and the need for combative treatment, and those between 2 per cent. and 2.5 per cent. the rapid onset of coma, probably within twenty-four hours. Dr. PARKES WEBER recorded a case of *Acute aplastic anaemia*. The patient was a young man who developed gingival stomatitis, a phlegmonous induration of the right cheek, considerable pyrexia and anaemia. The latter proved rapidly progressive, in spite of the improvement in the condition of his mouth, and it was fatal within ten weeks. Blood examination showed the almost complete absence of any megaloblastic reaction and of the blood regenerative changes. The main features of the disease were accounted for as those of an anaemia due to blood destruction, almost entirely unaccompanied by conservative blood regenerative changes on the part of the haemopoietic tissue of the bone marrow. Dr. Weber also described a case in which *Multiple acute ulceration of the stomach* had been found

after death. The patient, a woman aged 47 years, had died from pulmonary disease, and at the necropsy the right lung was found to be in a condition of tense oedema, and there was recent pleurisy, with effusion in the right pleura. No symptoms had occurred during life suggesting any gastric affection. At least 100 sharply cut ulcers were counted in the gastric mucous membrane, and there had probably been considerably more. These were arranged chiefly in longitudinal lines along the rugae. They constituted, he thought, a terminal phenomenon. Dr. J. A. BRAXTON HICKS described a case of a *Pedunculated intra-bronchial tumour* (sarcoma) causing bronchiectasis. The patient, a woman aged 33, had suffered from anaemia and haemoptysis from 1900 until 1910. She was then admitted to hospital with pallor, oedema of the legs and clubbed fingers. The sputum was copious and purulent. The right side of her chest was dull, and over it many adventitious sounds were heard, and the vocal resonance was increased. Well-marked amphoric breathing was sometimes heard, and a radiogram showed the presence of bronchiectasis. The base of the right lung was opened and drained, but after temporary improvement she died suddenly from severe haemoptysis. *Post mortem*, the upper part of the right bronchus was found to contain a pedunculated tumour the size of a walnut; the right bronchus was dilated, and the right middle and lower lobes were reduced to four large bronchiectatic cavities. Secondary deposits were present in the liver, and amyloid disease affected the liver, spleen, and kidneys. Microscopically the tumour proved to be a mesothelioma.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting in Manchester, on April 17th, Dr. WILLETT (Liverpool), President, in the chair, the following were among the exhibits: Dr. MACKAY (Southport): A specimen of ruptured tubal pregnancy of about six weeks' duration, obtained *post mortem* from a case in which the symptoms suggested irritant poisoning. Sixteen hours after a meal containing bloater paste, the patient had severe abdominal pain, vomiting, and diarrhoea; she became collapsed, and died five hours later. Dr. FOTHERGILL (Manchester): A specimen of *Perithelioma of the ovary*, about the size of a fetal head, removed from a woman aged 38 years. Dr. OLDFIELD (Leeds): Specimens of *Mesothelioma*—one in the uterus forming a tumour the size of a full-term pregnancy; the second, a pelvic mass consisting of uterus, both ovaries, and a retrocaecal mass; the third in an ovary; and a fourth in a kidney. Dr. FOTHERGILL and Dr. DOUGAL: A specimen of *Aneurysm of the internal iliac artery*. Caesarean section had been performed for contracted pelvis ten months previously, and the aneurysm was first noticed three weeks after this operation. There seemed to be no connexion between the two, and the exhibitors were of opinion that the lesion was present before the patient came under their observation. Dr. WALLS (Manchester): A specimen from a case of *Caesarean section and Werthcim's hysterectomy*. The patient was seven months pregnant, with fairly advanced carcinoma of the cervix; both ovaries were cystic and lined with papillae, one the size of a fetal head, the other of an orange. Dr. OLDFIELD (Leeds) recorded three cases in which an *Ovarian tumour obstructed labour*. One child was delivered by Caesarean section; in the second case abdominal section was performed and the obstructing tumour removed, by which time the child's head was on the perineum, and so was extracted with forceps; in the third case the cord was prolapsed and only feebly pulsating. The child was delivered by craniotomy and the tumour removed at a later date. Dr. CLIFFORD (Manchester) reported a case of *Concealed accidental haemorrhage* in which he performed Caesarean section, followed by supravaginal hysterectomy. The patient was in an exceedingly serious condition, being so anaemic and so collapsed that neither the incision in the abdominal wall nor that in the uterus bled at all. The patient made a good recovery.

UNDER the will of the late Mr. Robert Kelsey Hill of Doncaster, Huddersfield Infirmary, Dewsbury Infirmary, Wakefield Infirmary, and Doncaster Infirmary each receives a sum of £1,000.

Rebielus.

ARTERIO-SCLEROSIS.

THE problems presented by the study of arterio-sclerosis and its associated variations of blood pressure are by no means exhausted by the results of modern research. A few years ago (BRITISH MEDICAL JOURNAL, February 20th, 1909) we welcomed the appearance of an interesting work on the subject by an American physician, and a second edition[1] of his book has been issued, in which he has taken full advantage of the most recent investigations in order to bring his review of present information on the subject up to date. Within the short space of three years Dr. WARFIELD has found it necessary to rewrite some of the chapters in his book on *Arterio-sclerosis*, especially those dealing with the estimation of blood pressure. A great deal of experimental work has been done in the physiological laboratories and the clinical wards to elucidate the varying phenomena of arterial and venous pressure, but thus far it has served to demonstrate the numerous influences that may affect them, rather than to indicate the means by which they may be controlled. The importance of these observations to the physician, and especially to medical examiners for life insurance, becomes ever more manifest, and the author has added a chapter in which the importance of vigilance on their part is emphasized. Some very practical suggestions are appended for the general life-treatment of cases detected at a sufficiently early period. Dr. Warfield's book will be found to have gained both in practical usefulness and in interest by the additions made to the new issue.

CHEYNE AND BURGHARD'S "SURGERY."

THE fifth and final volume of the revised edition of CHEYNE and BURGHARD'S *Manual of Surgical Treatment*[2] contains much that is new. It commences with a chapter on the surgical affections of the pancreas. We note that in the treatment of acute pancreatitis no mention is made of drainage of the bile ducts, which is advised by surgeons of experience—at any rate, when gall stones are present. Of the following chapters on affections of the liver the most important gives an excellent and comprehensive account of gall stones and the associated conditions. The incisions which the authors prefer are either a vertical one through the fibres of the right rectus about an inch to the right of the middle line, or an oblique incision parallel to the costal margin. Affections of the spleen occupy a few pages only; an adequate description is given of splenectomy.

There is nothing that calls for special mention in the chapters on affections of the neck, except the descriptions of some new methods, such as bronchoscopy, nor in Chapters XIV and XV on diseases of the breast. The description of the operation for cancer appears, however, to need some revision. Some of the illustrations are poor, and there is much to be said in favour of commencing the operation by the axillary dissection. Experience has also convinced many surgeons of the uselessness and the disadvantages of preserving the pectoralis minor, as here recommended, nor will all agree that the wound requires dressing daily for three or four days.

The section on affections of the thorax contains an admirable chapter on injuries of the thoracic contents, and also paragraphs on tuberculosis of the ribs and sternum, which are well worth attention. The futility of any treatment other than complete removal of the disease focus is properly emphasized. The description of operations on the thoracic viscera is preceded by an account of the methods of operating under differential pressure.

The final division of the work is that on affections of the genito-urinary organs; it is marked throughout by precise

[1] *Arterio-sclerosis: with a Special Chapter on Blood Pressure.* By Louis M. Warfield, A.B., M.D., Assistant Superintendent of the Milwaukee County Hospital, Wisconsin, etc. With an introduction by W. S. Thayer, M.D., Professor of Clinical Medicine, Johns Hopkins University. Second edition. London: Henry Kimpton. 1912. (Med. 8vo, pp. 220; 28 engravings. 10s. 6d. net.)

[2] *A Manual of Surgical Treatment.* By Sir W. Watson Cheyne, Bart., C.B., D.Sc., LL.D., F.R.C.S., F.R.S., and F. F. Burghard, M.S.Lond., F.R.C.S. New edition, entirely revised and largely rewritten with the assistance of T. P. Legg, M.S.Lond., F.R.C.S., and Arthur Edmunds, M.S.Lond., F.R.C.S. In five volumes. Vol. v. London: Longmans, Green and Co. 1913. (Roy. 8vo, pp. 647; 152 figures. 21s. net.)

instructions for treatment; there is an absence of that desultory discussion on alternatives which is so confusing to the practitioner who goes to a work of this kind for guidance. For example, in the consideration of urethral injuries, the authors write: "We strongly advise that whenever there is evidence of injury to the urethral wall, and *a fortiori* when the symptoms point to the latter being torn partially or completely across, an immediate external urethrotomy should be performed and means taken to suture the rent." Here, as elsewhere, reasons are given for the methods recommended, but there is no beating about the bush and no descriptions of methods which experience has discarded. The chapter on ectopia vesicae is worthy of special notice. There is also a new chapter by Mr. Thompson Walker on cystoscopy and allied methods of examination, which is a valuable addition to this new version.

Those responsible for the new edition deserve the gratitude of the many practitioners who look upon this book as among the most reliable as it certainly is among the most comprehensive manuals of surgical treatment in the English language.

RADIUM THERAPEUTICS.

DR. FINZI'S little book on *Radium Therapeutics*[3] comes at an opportune moment when so much attention is being paid all over the world to the therapeutic virtues, real or imagined, of radium. The introductory chapter briefly sets forth the main facts regarding the physical properties of the metal, its transformation products, and its radiations. Save for the first explanatory diagram, where the paths of the radiations are wrongly drawn, the exposition is accurate and simple, and many who may never have any practical experience of radium will welcome the information here given. The book is specially good as regards the methods of application and administration, most of the devices being the author's own. These ought to prove very helpful to other workers. The account given of the physiological action of radium and its radiations probably sums up the most important observations that have been made by various experimenters, but very conflicting results have been claimed, and it cannot be said that any outstanding authority has published studies on the biological effects of radium. Most work on this point has been done on cancer, but whether the action is direct on the malignant cells, or specific to them, or indirect by cutting off the blood supply, or by stimulating protective ferments, is a matter in which there is no agreement. The therapeutic results obtained in malignant disease are, as might be expected, most fully dealt with, and Dr. Finzi, though enthusiastically in favour of its use, is yet cautious enough not to claim or expect too much for it. The book would be more valuable if one could learn the proportion that the favourable results bear to the unfavourable, and the after-histories of the favourable cases. The use of radium is not restricted to malignant growths. Practically every disease which has proved more or less unamenable to ordinary treatments has come under the care of radium-therapists, and some unexpected triumphs have been obtained.

OPHTHALMOLOGY.

THE English translation of the little book on *Defective Ocular Movements and their Diagnosis*,[4] by the Drs. LANDOLT, will be found valuable by the physician and by the general practitioner who wishes to make himself well acquainted with the diagnosis of those cerebral lesions which affect the movements of the eyes. It is especially useful to the general clinician, because the subject is treated from the standpoint of symptoms rather than of diseases. Thus ophthalmoplegias are described, and an account of the anatomy of the ocular nerves and their centres leads naturally to the lesions which produce the paralyses noted. We cordially recommend the book to this class of readers, and the ophthalmic surgeon will find it useful as a means of refreshing his knowledge of the subject, although we consider that he will find Maddox's book more generally appropriate to his special needs. Maddox's method of deciding which muscle is at fault in diplopia is, we think, easier and more comprehensive than that adopted by Dr. Landolt and his son. We have nothing but praise for the translation. The original has been rendered into clear and correct English, and we have not noticed a trace of the French idiom. The external recti are called the lateral recti, the internal the median recti throughout the book, and these terms are perhaps more accurate than those commonly used by British anatomists. The work is well illustrated, and is printed in good type on light rough paper which is far more comfortable to read by artificial light than glazed paper. The printers have succeeded in obtaining good sharp diagrams in spite of the paper, which is not so suitable for this purpose as glazed paper. We wish that each page had not been headed with the title of the book; it would have been far better to have indicated the subject of each chapter. The first twenty-six pages are devoted to the anatomy and physiology of the ocular movements and the muscles which govern them. Metre angles are explained, and tables are given to convert them into degrees. The difference between the angles, alpha, gamma, and kappa are clearly explained. We welcome this because the angles gamma and kappa are often confused. Paralytic strabismus is treated of in the following pages, and Landolt gives a detailed account of his mural diagram. In examining a patient he does not move the light about, but uses a fixed source of illumination and moves the patient's head—a plan which seems very simple and convenient. Only five pages are devoted to ordinary squint, concomitant strabismus, and they are followed by a short but very useful description of strabismus resulting from lesions of the centres which govern associated movements. We regard the last section of the book—in which the seat and etiology of the oculo-motor affections are discussed—as the most valuable to the clinician. A very clear diagram, after Poirier and Bernheimer, of the ocular motor nuclei enables the reader to grasp the mechanism of ophthalmoplegias.

Ophthalmoscopic Diagnosis[5] is the title of a large book which is really an ophthalmic atlas, containing as it does 86 coloured pictures of the fundus on 48 plates; there are in addition 18 illustrations in the text. It is written by Dr. C. ADAM, of Berlin, and translated into English by Dr. M. L. Foster, of the New Rochdale Hospital, U.S.A. The word "atlas" has, however, intentionally been avoided and the title quoted substituted with the idea of emphasizing the fact that the real purpose of the book is that of a systematic guide to diagnosis; while the illustrations serve to assist this, they are not the primary object of the work. Special attention is given to the eye changes which occur in general diseases. The drawings are made from the inverted or indirect image, as shown by the demonstrating ophthalmoscope, but reduced by about two-thirds; this gives a magnification of about 10 times. Instruction is first of all given in the use of the ophthalmoscope for both direct and indirect examination. The fundus is then considered, first as to its normal appearance, and then the various pathological processes are described and figured. The coloured pictures are well drawn and bring out the special points they are intended to show. The book is written rather from the clinical side, while pathology and treatment are only just mentioned here and there. It by no means treats of all the fundus conditions met with, but the chief are shown, and great attention is given to the condition of the retina and choroid in such diseases as nephritis, etc. The book will form a valuable addition to the already long list of atlases, but differs in many important respects from most of the older ones.

Ophthalmic Semiology and Diagnosis[6] is a book of some 400 pages by Dr. CHARLES H. BEARD of Chicago, and forms

[3] *Radium Therapeutics.* By N. S. Finzi, M.B.Lond., M.R.C.S., L.R.C.P., L.S.A. Oxford Medical Publications. London: H. Frowde; Hodder and Stoughton. 1913. (Demy 8vo, pp. 112; 25 figures. 6s. net.)

[4] *Defective Ocular Movements and their Diagnosis.* By E. and M. Landolt. Translated by A. Roemmele, M.B., Ch.B., and E. W. Brewerton, F.R.C.S. London: H. Frowde; Hodder and Stoughton. 1913. (Demy 8vo, pp. 97; 27 figures. 6s. net.)

[5] *Ophthalmoscopic Diagnosis.* By Dr. C. Adam, of Berlin. Translated by M. L. Foster, M.D. London: W. Heinemann (Rebman, Ltd.). 1914. (Demy 4to, pp. 246; 86 figures on 48 plates and 18 illustrations in the text. 25s. net.)

[6] *Ophthalmic Semiology and Diagnosis.* By C. H. Beard, M.D., Chicago. *An International System of Ophthalmic Practice*, edited by Walter L. Pyle, A.M., M.D.Phil. London: Rebman, Limited, 1912. Med. 8vo, pp. 411; 13 plates, 71 figures. 21s. net.)

one of a series of "*An International System of Ophthalmic Practice*," edited by Dr. Walter L. Pyle, of Philadelphia. It is well got up and well illustrated with both coloured plates and text blocks from drawings by the author. He was moved to write this volume by his conviction that a treatise dealing only with symptoms and diagnosis would be welcome, so that in a single volume could be found much that would otherwise entail considerable research and study. The nearest approach to this idea is to be found in the fourth volume of the French encyclopaedia of ophthalmology. Dr. Beard's book is divided into two parts; in the first, which is subdivided into nine chapters, the external parts of the eye, the iris, anterior chamber, and the lens are dealt with, while in the second part the fundus oculi is discussed. From the point of view of differential diagnosis the book is excellent, but there is not a word about treatment in it. The reader cannot but be struck with the very unfamiliar words and phrases which force themselves on his unaccustomed eyes. It is not very illuminating to be told that "acidity of the tears is worthy of mention," and, "as an acid condition is irritating," "it is as well to try and overcome it." It is not many who, in the absence of directions, would have a clear idea how to make the secreted tears alter their reaction, and the author gives no directions as to how it is to be done. Chapter 14 is headed "Topic Modification of Calibre," and this would scarcely give a surgeon much idea as to what it was about, nor would it be easy to gather what structure in the eye was being modified. In talking about glaucoma we are told that "in the absence of a physiologic excavation the first sprouting, so to speak, of the pression button of vitreous is in the porous opticus." A considerable number of subjects are omitted, such as refraction, colour blindness, and many others, and operations are not mentioned. The book is good as far as it goes, but the unfamiliar language must tell against its sale in this country.

Ophthalmologists owe a debt of gratitude to Mr. MACNAB, who has translated Professor LOHMANN'S work[7] upon the pathology of the visual functions. As far as we are aware, there is no other volume in the English language upon this interesting subject. The character of the book, dealing as it does with ophthalmology, psychology, and optics, makes the translation exceedingly difficult, and we congratulate the translator upon his excellent rendering of the original. English literature is so poor in works of this nature that Mr. Macnab tells us that he has had great difficulty in finding suitable words to express the German terms; in fact, he has occasionally thought it necessary to coin a new one. On page 19 he speaks of the optic nerve as "tracting" up to the central organ. On the same page there is an example of dislocation which might be remedied in a future edition. The author says, "In other directions there is much of interest in the study of those born blind after operation." He does not, we presume, refer to the bad effects of forceps delivery. Lohmann's first chapter treats of the physiology and psychology of vision. Vision can be divided into three phases—a physical, a physiological, and a psychical. The physical phase is concerned in the optical phenomena which results in the projection of the image upon the retina. The physiological phase includes all those vital and chemical processes which change the light stimulus into a nerve stimulus. These two factors will not alone induce sight—they must be supplemented by the psychic phase before percipient vision results. The author traces the development of the dioptric arrangements found in the higher mammals up from the simple methods which obtain lower down in the animal scale. We know very little of the physiology of sight and of the exact significance of the visual purple, and still less of the psychic processes. What Lohmann has to tell us in this direction is suggestive, and represents all that is at present known. The second chapter deals with blindness and with the education of children. We are told how a child learns to see and gradually acquires a sense of perspective. Interesting facts relative to the sight of persons who have obtained vision after operation are well brought out here, but we note no allusion to the question whether such individuals ever at first see objects inverted. We believe that they do not. Chapter IV treats of abnormalities in central and peripheral vision. Methods of sight testing are critically reviewed and the alterations in the visual fields and scotomata are described. Chapter V is devoted to disturbances in light adaptation and of the light sense. Chapters VI and VII deal with the colour sense and its abnormalities, both congenital and acquired. The Young Helmholtz and Hering's theories of colour vision are ably discussed, but we note with regret that the Edridge-Green theory is omitted; in fact, this distinguished worker in the field of colour vision is not even mentioned. The methods of testing for colour-blindness are very ably discussed, and these chapters should be read by the officials of the Board of Trade who are responsible for the methods in use in England. No single test is relied upon, but it is recommended that in every case a lantern should be employed. The statement of Nagel is quoted to the effect that he could distinguish with certainty between a red and white lantern when the two lights were close together and not more than 100 metres distant, but that when they were at the end of a long station, say half a kilometre away, it became a pure guess. Nagel was, as is well known, himself colour blind. He found the distinction of white from green lights were more difficult, even at a shorter range. Those misguided persons who wish to abolish scientific tests for the marine and railway services will find no support in these chapters. Later in the book we find a chapter upon binocular vision and its defects, and upon the methods in use for training the fusion sense. Worth's amblyoscope is highly praised. A chapter is devoted to colour-hearing. Some individuals see colours when they hear certain sounds, musical or otherwise. A piece of music may cause them to perceive masses of colour. Others associate a definite colour with certain objects or individuals, or even with days of the week. The whole question of these peculiar sensations is fully discussed in a most interesting manner. The book approaches the phenomena of sight from an unusual standpoint, and is well worthy of careful study.

[7] *Disturbances of the Visual Functions.* By Professor W. Lohmann. Translated by Angus Macnab, M.B., F.R.C.S.Eng. London: John Bale, Sons, and Danielsson. 1913. (Roy. 8vo, pp. 194; 39 figures. 15s. net.)

MILITARY HYGIENE.

A SHORT textbook of military hygiene,[8] recently published by Dr. JAROSLAV HLADÍK, forms one of the useful series of military-medical publications brought out by Safár of Vienna, and thoroughly maintains the high standard of that series. It is very full, well illustrated, and yet not unduly lengthy, avoiding the encyclopaedic prolixity of the latest authoritative German work on the subject, a fault from which some English textbooks also are not free. The author has clearly remembered the conditions which limit so strictly the extent of the military medical officer's library, and adapted his treatment of the subject to these limitations. The textbook is intended, of course, primarily for the medical officers of the Austrian service; at the same time, the position of the author as a teacher in the Vienna Military Medical College gives his work an authoritative character and makes it valuable to foreign readers who wish to study the conditions of sanitation in the Austrian army.

The arrangement of the subjects, it must be confessed, is somewhat haphazard. Thus we have air, soil, water, and so on taken in the above order; in the latest German textbooks the bodily constitution of man is considered first, and later, the influences which affect its well-being. This is undoubtedly the more scientific arrangement, though that adopted by Dr. Hladík has the sanction of long custom. Again, the military aspect of hygiene is not sufficiently touched on, only fifty pages out of over 500 being allotted to barracks and hospitals, whilst the work of the soldier is merely glanced at. The place of sanitation in war, its possibilities and limitations, are practically ignored. As a general textbook of hygiene, however, the volume deserves all praise, and can be confidently recommended to medical officers in all armies who are able to master the simple and lucid German written by Dr. Hladík. A certain amount of space is devoted to a description of the laboratory examination of water and soil. That of air is omitted, and, in the case of foodstuffs, milk and butter only are touched on. It is a mistake to include practical laboratory details in a book that is obviously

[8] *Kurzes Lehrbuch der Militärhygiene.* Von Dr. med. et. phil. Dr. J. Hladik. Wein und Leipzig: J. Safár. 1914. (Roy. 8vo, pp. 548; 135 figures; 55 tables. Mk. 12; bound, Mk. 13.50.)

unfitted by its general character to lie on a laboratory bench, and if any such details are given the series should be made complete. These few words of criticism apart, the book deserves a very high meed of praise.

NOTES ON BOOKS.

THE *Manual of X-ray Technic*,[1] by Captain CHRISTIE, of the Medical Corps of the United States Army, is adapted to the special needs of the service. The officers of that corps frequently have to change their stations, and it may be necessary for any one of them to familiarize himself in a short time with an *x*-ray equipment. Therefore the book, which can be read through at an hour's sitting, deals only with essentials, and with these in the most summary manner. The examination of the chest, for example, including the value of the *x*-ray method in pulmonary tuberculosis, is dismissed in little more than seven pages. The subject of apparatus is treated rather more fully, and what the author has to say about dark-room procedure and the technique of stereoscopic radiography, upon which latter he is very keen, lacks nothing in detail and explicitness.

In a short monograph Dr. HUGO SCHULZ[2] has dealt with the action of mercury cyanide on the body, particularly in connexion with diphtheria. The use of this drug in diphtheria is not apparently new; but since the introduction of serumtherapy in diphtheria, the inorganic drugs have largely fallen into disuse. Dr. Schulz does not consider this neglect of the older drugs altogether justifiable, and gives an account of the success formerly obtained with compounds of mercury. The preference he shows for mercury cyanide is largely based on his observations made on rabbits with hydrocyanic acid. Comparing the claims of this salt with those of antidiphtherial serum, he claims for the former the advantages that it is potent also for scarlatinal diphtheria and for other mixed infections, whereas the serum is specific only for pure diphtheria.

The sixty years which elapsed between the accession and death of Queen Victoria witnessed many salutary changes in English legislation, not the least important being the greatly improved status of the wage-earning child. The extent of this improvement may be gathered from Mr. FREDERIC KEELING'S very interesting report on *Child Labour in the United Kingdom*,[3] in which he has traced the history of the legal protection of child workers from the middle of the eighteenth century down to our own times. His report, however, does not constitute a detailed survey of all branches of the child labour problem in the United Kingdom. Prepared originally on behalf of the British Section of the International Association for Labour Legislation, it deals only with those children who do not come within the scope of the Factory and Mines Acts, and is primarily "a study of the administration of the law, rather than of the facts which necessitate the adoption of regulations." Formidable as the volume appears, it is nevertheless very interesting and enlightening, and well repays close study. Mr. Keeling has accomplished a most difficult task with complete success, and has skilfully welded an unwieldy mass of heterogeneous facts into a readable and harmonious whole. The book is supplied with voluminous notes and tables, and contains numerous extracts from the principal Acts of Parliament regulating the employment of children in every part of the United Kingdom.

One of the most striking features of a very high degree of civilization has always been a strong desire on the part of a certain number of people to escape from the artificial conditions in which they find themselves compelled to live and return to a more primitive and natural mode of existence. The highly cultivated society of old France welcomed with enthusiasm the return to nature preached by Rousseau; and at the present day the movement which has resulted in garden cities and the simple life is a manifestation of the same longing to discard the shackles of civilization and seek health and regeneration close to Mother Earth. Probably the most whole-hearted attempt to reduce life to its simplest expression, however, was made less than a year ago in America, when Mr. Joseph Knowles entered the woods on the shores of Lake Megantic in Northern Maine without clothing, firearms, or any of the other trappings of civilization, and lived there for a couple of months under the same conditions as his primaeval forefathers. Mr. KNOWLES'S account of his experiences, *Alone in the Wilderness*,[4] makes an extremely interesting book, which gains considerably from the breezy personality and colloquial style of its author. Not the least remarkable feature of a remarkable experiment is the fact that, far from suffering from his voluntary deprivations, the medical examinations made before and after it prove that Mr. Knowles was in better health when he left the forest than when he entered it. The experiment, in fact, proved so successful that Mr. Knowles intends to repeat it at an early date, before carrying out his proposed scheme of founding a "College of Nature," a little colony in the forest where young men may go to learn woodcraft "just as they go to college to learn things scientific." His book is one in which boys of all ages will revel, whilst the photographs, and still more the reproductions of some really beautiful drawings done by the author on birch bark with burnt sticks, should insure it popularity amongst their elders.

The period which immediately succeeded the advent of the "new woman," a generation ago, was one in which the purely domestic side of female education was very much neglected. There was a tendency on the part of highly educated women to consider it beneath their dignity to interest themselves in the details of cooking and housekeeping; and to their less intellectual sisters a knowledge of domestic economy was believed to come more or less by instinct, when the occasion for it arose. Public opinion has changed since then, and a knowledge of cookery is now considered almost as indispensable a part of a girl's education as a smattering of foreign languages. In many schools, both in England and America, cooking and housewifery now occupy a prominent place in the school curriculum; and it is primarily for the use of American teachers and students that Miss HELEN KINNE and Miss ANNA M. COOLEY have compiled *Foods and Household Management*.[5] This book should, however, appeal to a far wider public than that enclosed within the narrow confines of a school or college. The inexperienced housekeeper will find a fund of useful information in the chapters dealing with the practical side of household management, such as the keeping of accounts, the choice and purchase of foodstuffs, etc., whilst busy housewives will welcome the opportunity to vary the family menu by means of the tempting dishes of which the recipes are given. The book is excellent, both in matter and in form, and should be popular on either side of the Atlantic, both to the girl whose career as housekeeper is just beginning and to the woman with years of practical experience behind her. The text is liberally illustrated with photographs and diagrams, and the reader's convenience has been considered in every detail, the size and arrangement of the volume making it convenient for frequent reference by the busiest of cooks.

MEDICAL AND SURGICAL APPLIANCES.

The Leitz Binocular Microscope.

AT the meeting of the International Medical Congress in London last year Messrs. Leitz demonstrated a novel arrangement for affording binocular vision with the microscope which has some inherent advantages not so far realized in other instruments. There have been many attempts to produce a binocular instrument that could be used with high powers of large aperture, but all, with one exception, suffered from the defect of cutting down the aperture of a high power lens. The recent improvements in optical grinding of prisms due in large measure to the widespread use of prismatic binocular field glasses and the invention of the method of semi-silvering have rendered possible the instrument made by Messrs. Leitz.

The one exception to the statement that all previous attempts to produce a binocular arrangement that did not cut down the aperture of a high power lens had failed is the Abbe binocular ocular. This fine instrument, which effected a division of the complete bundle of rays received

[1] *A Manual of X-ray Technic.* By A. C. Christie, Capt. Med. Corps, U.S. Army. Philadelphia and London: J. B. Lippincott Co. 1913. (Demy 8vo, pp. 112; 42 figures. 6s. net.)

[2] *Die Behandlung der Diphtherie mit Cyanquecksilber.* Von Dr. Hugo Schulz. Berlin: Julius Springer. 1914. (Demy 8vo, pp. 80. M. 2.40.)

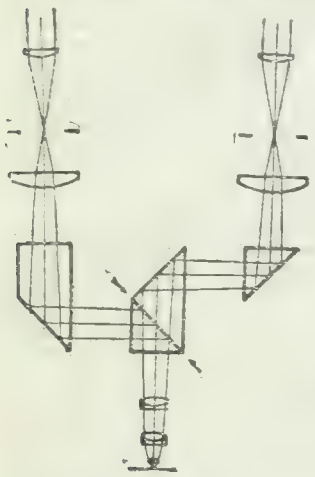
[3] *Child Labour in the United Kingdom.* By F. Keeling, M.A. London: P. S. King and Son. 1914. (Roy. 8vo, pp. 358. 7s. 6d. net.)

[4] *Alone in the Wilderness.* By J. Knowles. London: Longmans, Green, and Co. 1914. (Post 8vo, pp. 295; illustrated. 5s. net.)

[5] *Foods and Household Management: a Textbook of the Household Arts.* By Helen Kinne, Professor of Household Arts Education, and Anna M. Cooley, B.S., Assistant Professor of Household Arts Education, Teachers' College, Columbia University. New York: The Macmillan Company. 1914. (Pp. 401. 5s. net.)

from the objective by semi-reflection at an air space, may be taken as the type of the modern binocular. For some reason it has never come into general use. The early examples suffered from the defect of a double image; this was completely abolished in the later productions of the Zeiss firm, and for use with achromatic objectives this ocular affords results that have never been surpassed. It cannot be used with apochromatic objectives, and is limited in its utility by the inability to change the eyepieces to obtain variation in magnification. It, however, accomplishes a perfect division of the complete bundle of rays received from the objective with very little difference in intensity.

Of the many other previous attempts to produce a binocular instrument it is not necessary to refer further than to remark that they consisted of two main types—the Wenham and the Powell and Lealand. The Wenham bisected the bundle received from the objective by a prism occluding half the back lens sending the rays from one half of the lens to one eyepiece and the rays from the other half to the other eyepiece. The Powell divided the entire beam into two pencils which, as we have said, is the correct principle; it suffered from the defect that the intensity of the two beams was very different.



In the Leitz instrument the division of the entire bundle into two similar halves is accomplished by semi-reflection from a semi-silvered surface. The density of the silver layer can be adjusted so that the intensity of the two beams is identical. The actual arrangement employed is shown in the diagram.

The advantages of a binocular instrument are, of course, entirely subjective. Optically there is and can be no gain either in resolution or any other purely optical property, but the comfort and convenience of a binocular, when prolonged examinations are made, can hardly be exaggerated. Physiologically, too, there is a slight gain to the observer. No pair of retinae are equal either in acuity of vision or in any other respect. In the use of the binocular this difference is compensated. There is also the advantage to be derived in some cases from stereoscopic perception. This has not been provided for in the Leitz instrument; in the Abbe eyepiece it can be produced by cutting off corresponding halves of the Ramsden disc by suitably placed semilunar diaphragms. The writer has in use one of Messrs. Leitz's instruments with a Zeiss 1.5 mm. apochromatic and a pair of compensating oculars × 6. He can speak from experience, and can say that the tool is a good one. The only defect is a slight inequality of illumination in the two fields. This does not become apparent except with dark ground illumination. Probably the makers will eventually succeed in entirely eliminating this defect, which arises from the preponderance of the reflected over the transmitted beam at the semi-silvered surface.

Saline Injections in Cholera.

Messrs. Burroughs, Wellcome and Co. have devised a tabloid medical equipment to facilitate the treatment of cholera by intravenous injections of saline solutions, after the manner advocated by Lieutenant-Colonel Leonard Rogers, I.M.S. Salin solution, made from the "Soloid" products in the case, is sterilized in a 25 oz. flask by heating over the spirit lamp provided; when the desired temperature for injection is indicated by the thermometer, pressure upon the piston of the glass pump (previously sterilized together with the tubing, cannula, and stopper) starts the flow of solution, and the speed can be read in a few seconds by a simple scale controlled by the special pattern regulator. The sphygmometer and the set of glycerine dilutions enable the patient's blood pressure and the specific gravity of the blood to be readily ascertained.

AN institute of medical radiology has been established in connexion with the University of Palermo.

PROFESSOR W. W. KEEN, of Philadelphia, has been elected President of the Fifth International Congress of Surgeons, which is to be held in Paris in 1917.

ONE HUNDRED YEARS AGO.

MEDICAL PARIS IN THE SPRING OF 1814.

DURING the early months of 1814, when Britain was lying bound in the icy fetters of the "Great Frost," and when rigorous conditions were not lacking on the Continent of Europe, the eyes of the world, or of that part of it which took interest in the doings of the great Napoleon, were centred upon Paris. The fighting around that city, boasting herself to be the "Athens of Europe," and even, with a larger purview, "Capital of the Universe," had for weeks ebbed and flowed; but the Allies, with difficulty succeeding in keeping in more or less perfect alliance, gradually began to close in, and after a confused welter of marchings and counter-marchings, advances and retreats, of battles won, lost, or drawn, and of parleyings and negotiatings, Blücher and Schwartzenberg arrived on March 30th, and the Battle of Paris was fought, with the result that on the following day (March 31st) the Emperor Alexander of Russia and the King of Prussia made their entry into the city on the Seine. The Emperor Napoleon was some five and thirty miles away at Fontainebleau, and although in these masterly defensive campaigns of 1814 he had worked wonders, "boy-conscripts" notwithstanding, it was a changed France since the days of the Moscow disaster and the battle of Leipzig; there was no longer the great enthusiasm for the Emperor, and there were not wanting sighs for a Republic once again. Consequently it was in sullen tranquillity that the vast crowd of Parisians watched the long procession of the foreign troops tramp along their streets; "a few shouts saluted the noble presence of the Tsar,"[1] and a small group of aristocrats in the Boulevard des Italiens called out loudly, "*Vivent les Bourbons!*" The Tsar was quite willing that the Bourbons should live (if they would let live), and with Talleyrand, capable of shining "in a crisis or at a congress," to help him, and the Senate in a state of easy pliancy, it was soon *un fait accompli*. Napoleon said to those sent to tell him, "Very good, gentlemen, since it must be so, I abdicate"; he would have taken back his words a few minutes later—threw himself on a sofa, and called out, "Nonsense, let us march to-morrow, we shall beat them"—but his marshals bore him down. The Bourbons were to live again—on the throne of France—for a time! In the meantime it was, as Tacitus[2] said about another crisis, rather a cessation of war than a beginning of peace.

There were medical men living in Paris during these exciting times; in the early months of 1814 they were visiting their patients, going their rounds in the hospitals, operating when occasion arose, debating in their learned societies, and writing articles for their great *Dictionnaire des sciences médicales;* but are they all inarticulate now, and do they speak to us in no manner of way out of the past? Fortunately there are whispers that come even from that confused city, so that we need not be ignorant of what our medical *confrères* did and said, and even of how they felt, as they looked out on the Tsar and the Russians, Austrians, and Prussians tramping along, and the agitation to restore the Bourbons began to gather force. Very interesting some of these whispers are, especially those that come to us in the *Souvenirs*[3] of a young doctor who was working away in the Hôtel-Dieu in that troublous and particularly surgical time, when convoys of wounded were arriving almost daily. Docteur Poumiès de la Siboutie was the name of the young medical man from Périgord, who kept a diary of events in these years, and who a long time afterwards, during a period of enforced inactivity—from an accident to his knee—got out his old journal and wrote his recollections.

He was not a duly qualified practitioner in 1814, but he became one in the following year, when his city was again in the occupation of the Allies; so that it was as a medical student that he witnessed the events of the months marked by the "First Abdication." He and the Revolution saw the light in the same year (1789); by birth he belonged to the *bourgeoisie*, and his native place was Saint Germain-du-Salembre in Périgord. He went to Paris in

[1] *Cambridge Modern History*, vol. ix, p. 555, 1906.
[2] Bellum magis desierat quam pax coeperat. Tacitus, *Hist.*, Book iv, 1.
[3] *Souvenirs d'un médecin de Paris.* Dr. Poumiès de la Siboutie, 1789–1863. Publiés par Mmes. A. Branche et L. Dagoury ses Filles. Paris: Plon. 1910.

1810 to study for the medical profession; it had been settled that he should be a solicitor, but after a year of trying he found he hated the law. His mother had inspired him with a great love for natural history, and this formed one of the attractions of medicine, but he had always thought the life of the doctor an enviable one. Doctors were rare in country districts, their place being taken by the *officiers de santé*, men with a secondary qualification, and not rejoicing in the M.D. The real doctors were highly respected and well paid. So Poumiès de la Siboutie set off for Paris (1810), walking nearly all the way, in much the same fashion as Thomas Carlyle had traversed the hundred miles between Ecclefechan and Edinburgh just a year before (1809), for *bourgeoisie* students had no money to spare for coaches in those days. After some adventures of a mildly exciting kind he arrived at his destination. "Here was I at length in Paris, the city of the young provincial's dreams! The first impression was disappointing. . . . the streets were narrow and muddy, many were unpaved, . . . the population of 600,000 was poorly clad, . . . there were very few sewers." He betook himself to the Military College to see his brother, and thereafter found lodgings in the Rue de la Harpe, right in the centre of the famous student world of the Quartier Latin. He was a needy student; he had to care for each coin, and, like many others who have had to struggle with such difficulties, he distinguished himself above the crowd.

Some incidents and observations made during these early undergraduate years are of interest. A characteristic of the period was the large number of cripples and hunchbacks among the students. Here was the dysgenic effect of war in evidence; the flower of the young men of the nation were marching to Spain, to Austria, and to Russia, and the weak and sickly were entering the professions and were to be the fathers of the future. Poumiès began to study anatomy in November, 1810, and after a bit became engrossed in it; but physiology he worked at with enthusiasm; "everything is grand and marvellous in this science." Dissecting seems to have been carried out very much as it is to-day; four students sat at each table on which was one subject (obtained from the hospitals), and one of their number read directions from an anatomy work whilst the others prepared the portion. There was a man "who brought up the bodies" in these times, too; he laughed and sang cheerily over his work; but one day, as he was returning from the Bicêtre where he had been collecting material, he was struck down with apoplexy; his wife, who was with him, had him placed on the handbarrow, brought him back to the theatre, and insisted upon the autopsy being performed. It is rather a gruesome tale.

Poumiès de la Siboutie saw the last of the indigent students of medicine who were termed the "*majors*." They had no means of subsistence, and were employed as barbers' assistants in hairdressers' shops; and they afterwards set up as barber-surgeons and often did very well. There was only one left in 1810. But space does not permit of further references to this early part of the young Périgord student's training; suffice it to say that he was appointed dresser on the staff of the Hôpital Saint-Louis in 1811, acted as assistant to Dr. Texier, of Versailles, in 1812, and was made hospital house-physician in the same year, went in this capacity to the Hospice de la Salpêtrière, entered the Pitié in January, 1814, and a month later reached the summit of his ambition, the vast hospital known as the Hôtel-Dieu. Before leaving this part of his life, however, it is necessary to rescue for posterity the following tale about Alibert, the skin specialist, who was the chief physician at the Hôpital Saint-Louis:

> Among the patients waiting for him one day after his lecture was a poor devil with elephantiasis, a well marked and very characteristic case. "Superb," said Alibert. "Can it be cured, doctor?" "I'll have you painted," said Alibert. "But, Sir, can I hope to be cured?" "Certainly, certainly, but I must have you painted." "Can I have a bed in your ward." "A bed, you should have ten beds if you wanted them."

Every dermatologist knows about Jean Louis Alibert—a third edition of his *Nouveaux élémens de thérapeutique* appeared in this very year, 1814—but all do not know what Sainte-Beuve[4] has preserved for us, namely, that Rivarol in 1788 gave Alibert first place in his *Petit Almanach de nos Grands Hommes*. Rivarol must have been in a sportive mood when he planned his Little Almanack of Great Men, for in it, as Sainte-Beuve says, "all the ephemeral and imperceptible authors were arranged in alphabetical order, accompanied by an ironical eulogy"; "he made war upon a wasp's nest and with great difficulty afterwards avoided thousands of stings." It may be added that at that time (1788) Alibert was not, of course, known for his works on dermatology, but for a fable inserted in a collection of provincial Muses.

To return to Poumiès de la Siboutie. He was at the Hôpital de la Pitié in January, 1814. This was the large hospital (716 beds) behind the Jardin des Plantes, which dated from 1612 but had recently (1792–1802) been rebuilt. Here the young Poumiès worked under Lerminier, who was medical adviser to Napoleon. Convoys of sick began to arrive from the seat of war, and the hospital was quickly overfilled. Here is the picture: "The beds were partially stripped, only one mattress being left for each; straw was strewn in the corridors, in the halls, even in the church. The sick lay side by side; gaps made by death were filled by the next convoy." Dr. Lerminier was evidently a man of resource. "Now then, my boys," he said to the sick soldiers, "hurry up and get well; every one who wants to go home shall start as soon as he is able. Your people are waiting for you." As Poumiès says: "The words produced a magical effect. Sunken eyes shone again, dying men pulled themselves together, for there was as much home-sickness as typhus among them." Many young lives were thus saved.

It was, however, in the Hôtel-Dieu that Poumiès de la Siboutie was when the fighting reached the gates of Paris. This, the oldest hospital in Paris, stood not then on its present site but on the right of the Place du Parvis-Notre-Dame. It was the goal of the student ambition of the young man from Périgord, being central, convenient for lectures, with first-rate teaching, and with kindly treatment of the patients. "In former times the beds accommodated four or five patients each, and even I have seen two in a bed when the hospital was crowded; now each patient has a bed to himself," he wrote in after-years. Armand Trousseau, who afterwards did so much to make the Hôtel-Dieu famous on the medical side, was only 13 years old, and whilst "le bonhomme" Pelletan, with elegant manners and social tact, was the nominal head of the surgical department, it was Dupuytren, the surgeon born, who was the real head. It was under Dupuytren that Poumiès de la Siboutie worked in these eventful months of 1814; but before passing from Pelletan it may be recalled that it was he along with Lassus who made the *post-mortem* examination upon the body of Louis XVII. and found the cause of death to be neglect or scrophulosis. Pelletan took the heart home with him, but it was stolen by his pupil, Tillos, and not returned till after his death in 1817, when it was entombed in St. Denis.[5]

Dupuytren lives again in the *Recollections* of de la Siboutie:

> He was absorbed by an enormous practice and had little time for reading. He was consequently accused of not keeping himself acquainted with the advances of science. I assert without fear of contradiction that for him this was not necessary. What he did not know he divined or imagined for himself. However serious or unusual the circumstances, his genius never failed him. Students from all parts of the world crowded at his hospital visits and at his clinical lectures. He spoke easily and well; he began in a low tone, but the buzz of the theatre ceased instantly and every one listened attentively; his lectures were full of matter. . . . In manner he was serious and rather stilted; he was not very easy to know and was more admired than loved by his colleagues. It used to be said that his every word, gesture, and movement were studied and that he was not expansive or spontaneous. All this was true, but among intimates he was simply friendly and genial.

A story is then told, which reveals just a trace of self-consciousness in the teller:

> He once took me to assist him at an operation he had to perform at a place a hundred and fifty leagues from Paris. In getting out of the chaise I greased my frockcoat against the wheels. This annoyed me very much, but in the evening, when we had retired to our apartment, Dupuytren took off his coat, turned up his shirt sleeves, and, with a readiness of which I could not have believed him capable, set to work to soap, and scrub, and rinse my unfortunate coat; he worked so effectually

[4] C. A. Sainte-Beuve, *Causeries du Lundi*, vol. viii, p. 55.

[5] Baas's *History of Medicine*, Handerson's translation, p. 1052, 1889.

that next morning nothing could be seen of the stain. "Was not this," Siboutie exclaims, in a burst of enthusiasm, "a fine example of his kindness?"

What Dupuytren was at the Hôtel-Dieu, Boyer was at the Charité (in the Rue des Saints Pères); they were "the two shining lights of their time in surgery." Between them, too, there lay a romantic secret. Dupuytren was engaged to be married to Mdlle. Boyer, afterwards Madame Roux. "The friends of both parties assembled to witness the marriage. . . . They waited, but no bridegroom arrived. For thirty years he bore the blame, and lay under an accusation of want of loyalty. Yet at any moment he could have given a perfect answer to the charge. On the very morning of the ceremony Mdlle. Boyer had written to him confessing that she did not care for him, that she loved another man, and imploring him to prevent the marriage." Let us leave Dupuytren with these two incidents fresh in our minds—the washing of the stain out of Siboutie's coat, and the lifelong shielding of a woman.

Boyer, by the way, had been one of the *majors*, to whom reference has been made already; but he did not long remain one, making such progress in anatomy that he was soon able to take pupils, teaching them often what he had acquired only the day previously; and by sheer hard work he improved himself into one of the most learned men of his time, becoming professor at the Faculté, member of the Institut, and chief surgeon to Napoleon. "Boyer was a Limousin to the end; a man of coarse build, but simple hearted, kindly, and witty. Napoleon thought more of him than of all the members of the Académie Française put together."

Poumiès de la Siboutie was house-physician at the Hôtel-Dieu with Lallemand (1790-1854), afterwards of Montpellier. He was an extraordinary fellow, a year younger than Siboutie. He was a glutton for work. "His original education was *nil*, therefore he determined to acquire one." He succeeded, too, being able in two years to read the classics in the original, and to produce a good translation of the Aphorisms of Hippocrates. He lay flat on the floor with a pipe in his mouth during his hours of study. In medical science he was one of the remarkable men of his day. Other contemporaries at the Hôtel-Dieu were Cloquet, Cruveilhier, Moreau (the accoucheur), and Rayer.

Medical reminiscences crowd de la Siboutie's pages. Space can only be found for one or two more. There was Borie, who during his short term (twenty-four hours) of office as Mayor of Paris, got himself appointed Physician at the Hôtel-Dieu, and took up his post the next day! There was Asselin, the physician, who had for a catchword, "We will see about that." One day a lady was complaining to him of the weather; "We will see about that," he replied. Poumiès went to Asselin and told him of his approaching marriage (to Mdlle. Delpont). "Are you marrying a rich woman?" he asked. "No," was the reply, "At present she has very little." "So much the better for you both! It is the greatest misfortune for a sensitive man to marry a rich woman." When he married, in 1816, Poumiès nevertheless left the Hôtel-Dieu and went to live with his wife's relations in the Hôtel Langeron in the Rue de Grenelle-Saint-Germain (afterwards to be Professor Velpeau's house). It was here in 1814 that a curious incident occurred. Poumiès's future father-in-law was sitting in his room one day during the occupation of Paris by the Allies. To him there unexpectedly entered a Russian General with two aides-de-camp. "Sir, you are the proprietor of this house, the cradle of my family, where I was born. I should be grateful if you would allow me to go over it. I am Général Langeron." "A Russian General, sir?" "Yes, I command a division of the Russian army." M. Delpont rang the bell. "Show this *Russian General* all over the house." And with an icy bow he left the room.

There were trying days during the occupation for all true Parisians. "We were no longer masters in our own hospitals," wrote de la Siboutie bitterly. "It was hard to find ourselves in the power of our enemies. We blushed when first we saw these hideous Cossacks, Tartars, and Kalmucks galloping through our streets, crouching with their long heavy lances on their little horses, and at the sight of our own military posts occupied by men in strange uniforms, our bridges guarded by cannon." This was in April; on May 3rd Louis XVIII (who had been detained by gout in England) made his State entry; de la Siboutie saw the procession. The Duchesse d'Angoulême, he thought, looked cross; she seemed to reject the sympathy her misfortunes excited; "perhaps her feelings were natural on seeing the places where her family had suffered so much." It is more than likely, poor little Marie Thérèse of the Temple days!

This group of recollections of medical Paris in the spring of 1814 may be fitly brought to a close with the following incident. A gallant officer, Guillemeteau by name, died in the ward in the Hôtel-Dieu of which young Poumiès de la Siboutie was in charge, on March 27th; the house-surgeon wrote a letter to his brother, Jérome Guillemeteau, of Angoulême, informing him of the sad occurrence; from him there came back a letter dated April 23rd: "Sir, pray accept my best thanks, etc. May my poor brother be the last victim of that tyrant, who has no equal in history—this devouring ogre, this accursed Corsican," and so on.

Evidently the times were auspicious for the Bourbon restoration. So they were, and yet barely a year later the hundred days began, and soon came the battle of Waterloo, and the time of the Second Restoration. Poumiès de la Siboutie was still in the Hôtel-Dieu then; so many events were crowded into so short a time.

THE MEDICAL SERVICE, R.N.

WE understand that one paragraph in the memorandum published last week suggesting various remedies for existing defects in the Medical Service, R.N., was founded upon a misapprehension. At present Minute No. 2 of the minutes issued by the Lords Commissioners of the Admiralty last November, directing that in future the senior medical officer shall preside at medical surveys of invalids, has not come into force. This decision involves numerous contingent changes in the regulations, which have not yet been completed, and the executive orders to the various commanders-in-chief with regard to this matter have therefore not yet been issued.

THE TROPICAL DISEASES RESEARCH FUND.

THE report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1913[1] has been published, together with a series of appendices which contain much interesting information:

(1) Reports on Anti-malarial measures in the Crown Colonies and Protectorates, etc., in Hong Kong, Mauritius, Straits Settlements, Nyasaland, Southern Nigeria, Uganda, Zanzibar, Northern Rhodesia, Southern Rhodesia, Swaziland, Cayman Islands, Jamaica, and the Leeward Islands. (2) Report of the Professor of Protozoology in the University of London for the year ending June 30th, 1913, by Professor E. A. Minchin and his assistant, Dr. Woodcock. (3) Report for 1913 on the work of the Quick Laboratory, Cambridge. (4) Reports of the London School of Tropical Medicine, namely, of the Helminthologist, Entomologist, and Protozoologist for the half years ending April 30th, 1913, and October 31st, 1913, together with other work done at the school. (5) Reports from the Liverpool School of Tropical Medicine, which embody reports on the work of the school for the six months ending April 30th, together with a statement showing the expenditure of the Government grant for the year ending December 31st, 1912; and a report on the work of the school for the six months ending October 31st, 1913. (6) Reports on work done in Colonial laboratories—British Guiana, Ceylon, Fiji, Hong Kong, Jamaica, Leeward Islands, Malay States, Sierra Leone, Trinidad, and the Windward Islands (St. Lucia).

The reports on antimalarial measures in the Crown Colonies and Protectorates show that active antimalarial work is being carried out in these areas. Owing to the fact that the funds available are not large, progress is not so rapid as it might be were a larger number of workers engaged.

During a visit to Tunis, Professor E. A. Minchin studied the *Toxoplasma gondii* discovered by Nicolle in a small desert rodent, the gondi (*Ctenodactylus gondi*). Dr. Woodcock has carried out research work upon (1) a remarkable parasite of the goat and other ruminants and certain flagellates which develop in goat dung, (2) the possible

[1] London: Wyman and Sons, Limited. Cd. 7261. Price 2s. 4d.; post free 2s. 10d.

transmissive agent or agents of the blood parasites of common British birds. In investigating the question whether any of the blood parasites of the chaffinch were transmitted by bird fleas (*Ceratophyllus gallinae*), particular attention was paid to *Halteridium fringillae*, since it was thought not improbable that this parasite might be transmitted only by some blood-sucker which bites frequently at short intervals. Several experiments carried out last summer were, however, all negative. None of the birds upon which the fleas fed, after different intervals of time since they had fed upon a bird well infected with Halteridium, became infected. The experiments, however, were perhaps scarcely sufficiently exhaustive to show that the flea cannot transmit the parasite, so that more complete experiments will be conducted this summer.

The report by Professor G. H. F. Nuttall on the work of the Quick Laboratory, Cambridge, states that the most interesting results of research carried out there during the year are perhaps those relating to the conditions influencing the transmission of East Coast fever, the reproduction of Canadian "tick paralysis" in a dog in Cambridge by means of a single imported tick, and the observations of parthenogenesis and variability in ticks under experimental conditions. By means of extensive correspondence with scientific workers in all parts of the world Professor Nuttall has been collecting data regarding the distribution of tick-transmitted diseases and ticks, and this, when arranged for publication, should prove of considerable interest.

The reports of the Helminthologist, Entomologist, and Protozoologist of the London School of Tropical Medicine contain much interesting information. A short note by Dr. Leiper gives some details of work carried out by him on the West Coast of Africa for the purpose of ascertaining the carrier of *Filaria loa*. It was found that a rapid and uniform development of *loa* embryos took place in *Chrysops dimidiata* and *Chrysops silacea*.

In the Protozoologist's report interesting research work on a *Leishmania* from South American skin lesions is detailed. Monkeys, dogs, and cats were inoculated with the virus of a case of dermal leishmaniasis, and lesions comparable to those seen in man were produced, but there was a tendency for healing to take place much more rapidly.

A certain number of experiments were also undertaken to test the possibility of producing a general infection by inoculating *Leishmania tropica* from Oriental sore (both South American and Oriental) intravenously, but the results in this direction were inconclusive. The cultural method of diagnosing Leishmaniasis is also referred to, and a case is cited in which the scrapings of a sore examined microscopically were negative, yet cultures made at the same time were positive. The report contains also some remarks on the nomenclature of *Trypanosoma rhodesiense*.

In the reports from the Liverpool School of Tropical Medicine, Professor Stephens and Dr. Fantham describe research work carried out on *Trypanosoma rhodesiense* and *Trypanosoma brucei*. They believe that these two trypanosomes are different, and as regards the relationship of the former (*T. rhodesiense*), *T. ugandae*, and other trypanosomes with posterior nuclei they consider further research is required. Dr. Warrington Yorke, in conjunction with Dr. Blacklock, has conducted experiments on the subject of haemoglobinaemia, and on the relationship of haemoglobin to the bile pigments. This research was carried out with a view to elucidating certain obscure points in connexion with blackwater fever, and forms a continuation of previous communications upon the subject.

Among the reports of work done in the Colonial laboratories is a very interesting note on septicaemia and *Filaria bancrofti*, by Drs. K. S. Wise and E. P. Minett of British Guiana. From Ceylon Dr. Castellani contributes some papers. One of these deals with what he believes to be a new intestinal protozoal parasite producing dysenteric symptoms in man. He has named this "entoplasma." A coloured plate is given of the parasite. Dr. Scott of Jamaica reports on ankylostomiasis, dysentery, and other subjects.

It will thus be seen that the Tropical Diseases Research Fund justifies its position, as the work contained within these pages is of a very high standard, and is a valuable contribution to tropical medicine generally.

SCIENCE NOTES.

In a paper read before the Royal Society on April 30th Dr. J. A. Gunn, Reader in Pharmacology in the University of Oxford, stated that in order to investigate the action of drugs on the isolated human uterus he had taken advantage of the fact that the involuntary contractile tissues (such as the heart, intestine, and uterus) of mammals can be kept exsected in Locke's solution at ordinary room temperature for many hours, while still retaining the power of executing normal rhythmic movements when subsequently placed, under the proper conditions, in oxygenated Locke's solution at body temperature. With this knowledge it was found possible, without difficulty, to perform experiments on certain isolated human tissues, removed in the course of surgical operations, and that these experiments could be made under similar conditions to, and therefore entirely comparable with, experiments made on corresponding tissues of those mammals ordinarily used for investigation. A way was thus open for deciding, in regard to the reaction of human tissues, certain questions which had not hitherto been answered. The method was utilized to determine the response of the isolated human uterus to certain drugs. It was found that the non-pregnant uterus and Fallopian tubes responded to adrenin by contraction, and that therefore sympathetic stimulation—the effect of which on the uterus varies in different animals—was predominantly motor in the case of the human uterus. This, it was pointed out, was of importance in regard to the use of sympathomimetic substances in human labour. Pituitrin stimulated the human uterus, but appeared to have no effect on the Fallopian tube.

Mr. W. Lawrence Bragg read a paper at the last meeting of the Roentgen Society on *X* Rays and Crystals, describing in considerable detail the new method by which it has been possible to measure accurately the wave length of the rays. The *x*-ray spectrometer was, he pointed out, analogous with the diffraction grating by which the wave lengths of light are determined. It had been found that in crystals the atoms were arranged in a regular order, the effect being comparable in two dimensions with that produced when a spectator passed by the side of an orchard in which the trees were planted in geometrical order and saw them arranged in planes of altering direction. By cutting crystals at different angles it was possible to utilize the different planes and thus either to measure the wave lengths of the rays or to determine the atomic architecture of the crystals. Mr. Bragg showed how it had been possible to explain the peculiar forms of such crystals as those of pyrites and zinc blend, and to confirm the views of chemists as to the tetrahedron character of carbon. By using a rhodium anticathode, *x* rays of a homogeneous character were obtained, a discovery that was comparable with that of the monochromatic nature of the sodium flame. The rays produced by the platinum anticathode were non-homogeneous, being similar to white light. Rays were homogeneous if it was found that their ionization effect was altered twice as much by the interposition of two similar screens as it was by the interposition of one. It was easy to steady the waves given out by any substance and by arranging a suitable screen to ensure that only rays of a given wave length were being employed. Professor Porter, F.R.S., the president of the society, said that this new work was important from many points of view. While it was unlikely that the physician would ever himself use the *x*-ray spectrometer, the instrument would enable physicists to determine exactly what rays were produced under varying conditions. Professor Soddy, F.R.S., remarked that it was wonderful how with these new methods the old ideas were borne out in their entirety. This showed what a grip was being obtained on the architecture of the atom. While the power of stimulating radio-activity had not yet been obtained, the work described showed that it was possible with such an ordinary agent as the electricity derived from the mains to stimulate the inner portions of the atom.

SURGEON-GENERAL SIR ARTHUR MUDGE BRANFOOT, K.C.I.E., late President of the Medical Board at the India Office, left unsettled estate of the gross value of £6,693, with net personalty £6,562.

LITERARY NOTES.

Mr. William Wale, Wills Librarian, Guy's Hospital, has compiled a list of books by Guy's men in that collection. Short notes on some of the authors are appended. Under the name of Addison we find a passage from Trousseau in which the great French clinician suggested that the name of the English physician should be given to the disease which he was the first to describe. Under the name of James Blundell, the celebrated obstetrician, there is a somewhat incongruous dedication (by the publisher) of a treatise on midwifery "To Arthur, Duke of Wellington, 'the hero of a hundred fights,' whose transcendent military talents are the boast of the present and will be the wonder of the future," and so forth. One pictures the grim smile with which the great soldier may have read this enthusiastic record of his exploits; if he ever saw it, we are tempted to think that he may have received it in the same spirit as he acknowledged the compliments of some one who conveyed him over a dangerous crossing: "Don't be a d——d fool, sir!" Under the name of Mr. Golding-Bird we find mention of a curious mistake to which he called attention. This was the canonization of Thomas Guy, the founder of the hospital. It occurs in an old register of Deadman's Place Meeting House, where it is recorded that in 1758 "Mrs. Draper is buried from St. Guy's Hospital." Another reference to "St. Guy's" is mentioned in Wilks and Bettany's *History*. Sir Robert Peel, in a letter to Queen Victoria, written in 1845, describes the Rev. F. D. Maurice as "Chaplain to St. Guy's Hospital." Mr. Wale points out that Mr. Golding-Bird, in his *Account of the United Hospitals Club*, states that "Guy's Hospital owes its foundation and endowment to the charity of Sir Thomas Guy, Knight." John Keats finds a place in the list as "Old Guy's most famous son." It is interesting to read that the illustrations of Sir Astley Cooper's great work on hernia were so costly that when every copy had been sold the author was a thousand pounds out of pocket. Mr. Wale's list may be called a *catalogue raisonné* of the scientific luminaries of Guy's Hospital.

The great mysteries of birth and death have always been surrounded by a host of superstitious beliefs and observances, and in remote and isolated communities these old customs often linger long after they have passed elsewhere "Out of the ages of worldly weather. Forgotten by all men altogether." The January number of the *Old-Lore Miscellany of Orkney, Shetland, Caithness, and Sutherland*, Part I, Vol. VII, contains one of an interesting series of articles by Mr. John Firth, in which the author describes some of the customs that within living memory were observed in Orkney at the birth of a child. The chief care of an Orcadian mother and her attendants at such a time seems to have been to preserve the newborn baby from the unwelcome attentions of "peerie-folk" or fairies, who were always on the look-out for a human child to kidnap or bewitch. To frighten them away, therefore, the mother kept beside her in the bed a Bible and a knife, the fairies of Orkney being apparently as much alarmed at the sight of these objects as the "Good People" of the Border were said to be by the homely blue bonnet when it reposed on the bed of a lying-in woman. To "make assurance doubly sure," however, relays of neighbours were called in for several nights to rock the cradle and shield its occupant from the nocturnal attacks of its mischievous enemies. A careful father, moreover, would ensure his child's future prosperity by arranging for its first drink to be taken off silver; and many were the expedients resorted to in poor homes, the most usual being to place a silver coin (frequently borrowed for the occasion) in the horn spoon, which served as the baby's pap-boat. Orcadian children must have been a hardy race, for in those days the first nourishment administered to the newly-born infant was a teaspoonful of toddy, and not infrequently both mother and nurses were anything but sober at the time of his birth. The nursing, therefore, both of mother and child must have been of the most primitive description, and as Mr. Firth justly remarks, "this, combined with the fact that it was but seldom that a doctor or a trained accoucheuse was called, clearly shows that the successful result of such incompetent obstetrics may be pertinently described as 'the survival of the fittest.'" The same number of the *Old-Lore Miscellany* also contains a long extract from the diary kept by Dr. Edward Charlton during his visit to Shetland in the early part of last century, and an interesting account of Barrogill Castle, formerly called the Castle of Mey, and once a residence of the Earls of Caithness.

Charity is said to cover a multitude of sins, and the term "eczema" often serves the same purpose in concealing the frequent mistakes which are still made in the diagnosis and treatment of skin disease. Dr. J. L. Bunch, writing in the April number of *The Child*, remarks that in hospital practice eczema includes "not only cases which rightly come under this heading, but such diseases as scabies, urticaria, lichen planus, psoriasis, congenital syphilis, and even ringworm"; whilst in private practice "eczema" is almost as elastic and comprehensive a term as "leprosy" was in the Middle Ages. It is only fair to remember, however, that many skin diseases are by no means easy to diagnose in their early stages, and also that even the most eminent dermatologists have differed as to the precise nature of eczema itself. Dr. Bunch describes it as "an inflammatory condition of the skin, associated at some stage of its evolution by serous exudation, either on the surface or into the deeper layers of the skin"; but he admits that this definition brings us no nearer to a solution of the problem of its origin and cause. Its treatment, fortunately, is a more simple matter, and Dr. Bunch has given some valuable advice as to the management of this distressing malady in infants and young children. Above all, however, he counsels patience as the best of remedies, for the disease is often obstinate in yielding to treatment, and a bad case requires months of close and unremitting care and attention before a radical cure can be effected. Another, and perhaps one of the most frequent, causes of ill health in childhood arises from enlarged or diseased tonsils and adenoids. The April number of the same periodical contains a short article on this subject by Mr. Charles Allen Adair-Dighton, who protests against the "wholesale massacre" of the tonsils which is so much in fashion at the present day. The same number also contains an interesting study by Professor Peter Sandiford of the relative values of "heredity and education" in forming the character of a child, and an article by Mr. C. K. Odgen on the system of continuation schools for adolescent boys and girls in this country.

In her *Memories and Adventures*, recently published by Mills and Boon, Madame Louise Hériette-Viardot relates a case in which a father killed a daughter at her own urgent request in order to deliver her from unbearable suffering. This was Daniel Manin, the last Doge of Venice, who for a short period delivered his city from the Austrians. He was exiled and came to Paris, where he earned a scanty pittance for himself and his daughter by giving Italian lessons. This daughter, says Madame Hériette-Viardot, who was unspeakably dear to him, suffered from epileptic fits.

> She suffered so terribly that she frequently begged her father to kill her. Her condition grew worse and worse, and Manin heroically resolved to put an end to her misery. He stabbed her with his own hand.

Of course we cannot vouch for the truth of this painful story.

The American Breeders' Association has changed its name to the American Genetic Association. Its official organ, the *American Breeder's Magazine*, will in future be known as the *Journal of Heredity*, and will be "a monthly publication devoted to plant breeding, animal breeding, and eugenics."

Mr. Fisher Unwin will in the course of the present month publish the authorized English edition of Professor Freud's new book, *The Psychopathology of Everyday Life*, in which he applies the principles laid down in his work, *The Interpretation of Dreams*, to the common mental errors of ordinary life, such as the forgetting of names, things said and so forth, lapses of tongue and pen, and involuntary mistakes in bodily action. A. A. Brill, Ph.D., M.D., contributes an introduction.

Professor Lydia Rabinowitsch has succeeded the late Dr. Nietner, Secretary-General of the German Committee of the Campaign against Tuberculosis, in the editorship of the *Zeitschrift für Tuberkulose*. She is said to be the first woman who has been appointed to such a post.

British Medical Journal.

SATURDAY, MAY 9TH, 1914.

THE BUDGET SCHEMES.

THE Budget which the Chancellor of the Exchequer presented on Monday last furnishes striking evidence of the importance which the State is coming to attach to efforts directed to improve the health of the people and to prevent the occurrence and spread of disease. Medical men have had a good deal to do with the Chancellor of the Exchequer during recent years, and, however we may have had to differ from him in times past, none can withhold a tribute to the courage he shows in taking a large view of social needs. The proposals which he has put forward this week are of far-reaching importance, and mark a revolution in method as well as an advance by the State in its recognition of responsibility for the personal care of sick persons.

Whilst much depends upon the details of the working out of the schemes put forward, we are inclined to think that, costly as some of them are, they will excite less controversy than the great issues of two years ago, and that, viewing them as a whole, they will be welcomed by and receive the co-operation of the medical profession.

The first and most striking fact in connexion with the public health services of the country, apart from those associated with education and insurance, is that there will be a Treasury grant in aid of local expenditure in the first full year of £4,750,000. Of this sum, £4,000,000 will go in relief of local rates and to assist in the carrying out the Acts of Parliament the administration of which is entrusted to local authorities. The grant is to be based upon providing 25 per cent. of the net expenditure of the local authorities on public health services, and is associated with conditions which require the local authority to carry out its statutory duties in the matter of housing, a sufficient provision of hospitals, provision for tuberculosis and other matters, as a condition of receiving the grant. The £750,000 represents additional grants, and two of the purposes in view are new. A part of this sum is to give additional assistance for the provision of the necessary institutions for persons suffering from tuberculosis. Another part is provided for making a beginning in the institution of a system of home nursing. The remainder is to be applied to assist in the provision of laboratories for the undertaking of clinical examinations, for diagnosis and kindred purposes. The Chancellor did not say how much of the £750,000 was to be devoted to the provision of the nursing and laboratory services, but from an examination of the present possibilities, we should be inclined to think that a sum of somewhere about £200,000, or perhaps a little more, is likely to be set aside for them.

The next important announcement of special medical interest is in connexion with the educational services, and here the Chancellor said that it was intended to provide State grants to meet half the cost of the provision of meals—the provision, where necessary, to cover holidays as well as school days. Grants towards additional open-air schools, extra assistance to schools for cripples and other special schools are also included in this sum; in addition, an increased grant is to be made for the treatment of tuberculosis in children and for the assistance and development of schools for mothers. The total cost of these additional health grants for children during the first year is estimated at £282,000, but it is obvious from the Chancellor's speech that the cost will be considerably more during the second year.

The next division of the Budget proposals relating to medical matters is that connected with the insurance service. It was announced that it was proposed to create a service of referees and consultants, and it is obviously intended that, apart from what may be described as routine referee work, this service shall embrace the work of a considerable number of medical men of the consultant class. In addition to this, money is to be provided to aid in the establishment of clinics for the use of panel practitioners, which are presumably intended for minor consultation work in regard to cases in which special appliances or other means for diagnosis may be required. Perhaps also the consultants may attend at the clinics at arranged times. The Chancellor did not go into detail on these matters, but, judging from statements which have been made in authoritative quarters during recent months, we imagine that these are the kind of purposes the clinics are intended to fulfil. Provision also was made for the encouragement of the giving of health lectures and the dissemination of information on these matters amongst the people generally. Further, a special grant is to be made to societies where the sickness claims, particularly in connexion with the sickness associated with pregnancy, have been found to have been excessive, apart from any questions of malingering and maladministration. The total sum set aside for these insurance services, as well as to give assistance to certain classes of deposit contributors, amounts to £1,250,000. In this respect as in others the Chancellor did not specify the different amounts which are estimated to be required by the individual services, and he refrained from committing the Government to any details of the administrative machinery. It is evident, however, that, apart from further development of existing services, the Government has decided on the following fresh undertakings, in all of which medical men are directly concerned: namely, in connexion with maternity; in the establishment of a service of referees and consultants; in the establishment of clinics for practitioners; in the general provision for a laboratory service; for the commencement of a nursing service; for the arrangement regarding health lectures and general instruction in hygiene.

All these matters, as well as the suggested development of existing services, demand the close consideration and attention of medical men and of their organizations. We believe that this consideration will be forthcoming in a sympathetic spirit and that the problems will be approached not from any narrow point of view, but as affecting the life and health and the best interests of the whole community. If the medical profession were polled it would probably say that of all the matters touched on the most important from the public point of view was the impetus proposed to be given to the provision of better housing conditions, especially in the poorer industrial districts.

THE RESPONSIBILITY OF THE SUICIDE.

The appropriate treatment of the would-be suicide is a question that cannot be answered by any cut-and-dried formula. It is raised every day in numberless instances and settled in a variety of ways. Being *primâ facie* a crime, suicide must be considered by the law in the light of its relation to other crimes in connexion with which mental defect may have played a part. Recently occasion was taken to print and discuss (April 18th, pp. 892 and 877) the interesting judgement given by the House of Lords in the case of Felstead, who was put on his trial for an assault with intent to do grievous harm. Lord Reading, who delivered the judgement of the House of Lords, was at considerable pains to trace the gradual changes that have taken place in the amount of absolution from crime accorded by the establishment of insanity or in relation to a charge of felony or misdemeanour. It will be worth while to quote again the weighty words of that judgement. He said that special verdict "guilty but insane" "was not a verdict that the accused was guilty of the offence charged, but that he was guilty of the act charged as an offence. In other words, this verdict meant that upon the facts proved the jury would have found him guilty of the offence had it not been established to their satisfaction that he was at the time not responsible for his actions, and therefore could not have acted with a 'felonious' or 'malicious' mind, which was an essential element of the crime charged against him. . . . It was obvious that if he (Felstead) was insane at the time of committing the act he could not have had a *mens rea*, and his state of mind could not then have been that which was involved in the use of the term 'feloniously' or 'maliciously,' for *crimen non contrahitur, nisi voluntas nocendi intercedat.*"

It is obvious that the same principles must apply whether murder be attempted on oneself or on another person. We confine ourselves here to the applicability of the principle, for the return of the special verdict of "guilty but insane" necessarily involves detention during the King's pleasure, which would be highly inconvenient in many—probably the majority—of cases of attempted suicide, who are either sent to an asylum or placed under some responsible care. We have reason to believe that some coroners have agreed to instruct juries in cases of suicide that it is advisable to replace the verdict of "suicide during temporary insanity" by the verdict "that he being insane took his own life." This appears to be in conformity with the judgement quoted above.

But the settlement of the general principle does not, as we pointed out when commenting on the Felstead case, settle the whole question which may arise in an individual instance. The law is benevolent in its practice when once the existence of insanity at the time of committing the act is established, but it is, rightly we think, very careful to insist on full proof of insanity before it gives absolution for the act on that ground. An offence against oneself stands on a somewhat different footing from an offence against others. In the latter the burden of proving insanity is on the shoulders of the offender, in the former the presumption is in his favour; it is rather the duty of others to make sure of the non-existence of insanity. From any point of view, the abolition of the elementary instinct of self-preservation must presuppose some grave interference with those mental functions which man possesses for the purpose of giving full effect to that instinct. It may be presumed that every man who has to give official consideration to the acts of a suicide or a would-be suicide, whether judge, magistrate, or juryman, starts from this foundation, and endeavours to arrive at an honest opinion by balancing against each other the factors that, on the one hand, tend to drive a man to desperation, and, on the other, the resistance, normal or otherwise, that he could at the moment exert for self-protection. On these lines it is not very difficult in most cases to arrive at a reasonably satisfactory opinion as to whether criminal intent or morbid failure of resistance have predominated. For instance, if a ruffian after shooting a policeman, shot himself to escape arrest and certain death at the hands of the law, the calculated and reasoning motive of suicide would establish an unmistakable crime, while if another man shot himself to escape persistent misery due to no other cause than morbid feeling, crime cannot exist, even though the offence could be charged to him. In this way it can be shown that some suicides are criminal, while others must be acquitted of crime, and, as a consequence, some attempts at suicide deserve, while others cannot justly be awarded, punishment.

These reflections have been aroused by a letter written by Dr. C. T. Street, of Haydock Lodge Mental Hospital, to the *Yorkshire Post* to protest against a deliverance of the Recorder of York, as reported in that paper. In sentencing a prisoner to nine months' imprisonment for attempted suicide and stealing two jackets, the Recorder stated that he had usually dealt leniently with the large number of attempted suicides that had come before him, but if he had any more instances of cowardly attempts on the part of the citizens of York to take their own lives, he would be compelled, against his own will, to adopt a very different course in future. We think that probably such a general and inclusive threat must have been intended more as a prophylactic warning than a deliberate intention to treat all such cases on the basis of criminality. It would be easier to judge of the Recorder's actual views if we knew more of the evidence, and what, if any, portion of the sentence was awarded by him for the attempt made on the prisoner's own life. A discussion of the Recorder's implication that attempted suicide is a cowardly act would take us too far. It must suffice to say that among those whose daily work in asylums involves the estimation of the risk of suicide in a large proportion of the inmates, the feeling (we might say the intuition) that a doubtful case lacks the necessary courage—that "he has not got the pluck to harm himself"—constitutes one of the grounds on which the estimate is formed, though, of course, it is not by itself at all a safe ground to go on.

STATE ENDOWMENT OF MEDICAL RESEARCH.

We are all familiar with the defects popularly attributed to a Government department—that tendency to formalism and routine which has so often and so powerfully been satirized. This weakness in its crude form is unlikely to be found in a Government research institute controlled as to its general policy by a strong scientific committee; but there are subtler forms which no committee, however constituted, can hope to avoid. Any great investigator must be a man of well-marked individuality, who will directly or indirectly create a school and establish a tradition. The consequences are not

always good, and the history of science has frequently illustrated the truth that is contained in the aphorism that Frederick the Great lost the battle of Jena. Whatever station he fills, the man of forceful character must alloy the good he creates with some evil, for weak points are more easily reproduced than strong ones. These inevitable defects must be intensified by the partial segregation which distinguishes the workers in an institute for pure research; the opportunities for the hardening of a system of thought are peculiarly great, especially if the institute enjoys the prestige attaching to a State organization. The defect is part and parcel of that dealt with in the article which appeared in our issue of May 2nd. To preserve the Horatian balance, incessant contact with other types of mind, frequent reference of one's system of values to a standard other than one's own, are required. In the absence of such contact with reality, or, to express it better, with other realities, the most powerful intellect can hardly escape the taint of self-sufficiency. Segregation fosters the type of mind which prompted the Johnsonian dictum that an Athenian blockhead is the worst of all blockheads. The word "academic," as popularly employed, conveys the idea we seek to express, and we think that "institutional" might easily connote a more pernicious, because still more limited, *Weltanschauung*.

These defects, we believe, are inherent in the system, be those who carry it out who they may, and it is easy to picture the obstacles they create in the path of free research. Here the very independence of the worker hampers the freedom of his subordinates and his successors, and his position and official prestige intensify the evil.

But we cannot afford, in discussing a question of principle, to overlook the possibility of still more serious dangers. The scientific policy of a State institute cannot always be in strong hands, and the funds upon which it lives are largely provided by the taxpayer. The activities of a national institute for research must come under the notice of Parliament. Unless the responsible authorities are men of strong character—and we have no right to expect that from generation to generation they will invariably be men of strong character—the tendency to take the line of least resistance, to encourage work which can be adequately defended before an audience of laymen, and to discourage inquiries of greater ultimate importance and less immediate promise, will be irresistible. We should not envy the task of a statesman who had to defend in Parliament the grant of equipment and space in a national institute to a Galvani for experiments on the legs of frogs.

So far we have examined the question of policy in its relation to medical research workers themselves and have noted the limitations which are likely to confine their freedom, but there is another not less important aspect of the subject.

Some men, especially professional politicians, seem to regard medical research as the cult of an oracle, the utterances of which must be interpreted to the general public and even to the medical profession at large by a sacerdotal caste. This notion, fostered by the reckless use of the word "expert," is very dangerous. It is not by the practice of some ritual or the unthinking adoption of rules laid down by "authorities" that the science and art of medicine are extended. The results of investigation must not merely be absorbed, they must be assimilated before a real improvement can be achieved. To attain this result, intimate contact between the men of practice and the men of theory is essential. Segregation is, we believe, bad for the investigators, it is disastrous to those who would apply the teaching of research in daily life. This truth has never been expressed better than in the recent report of the Royal Commission on University Education in London. The Commissioners write: "It is only by coming into contact with the junior students that a teacher can direct their minds to his own conception of his subject and train them in his own methods, and hence obtain the double advantage of selecting the best men for research and getting the best work out of them. Again, it is the personal influence of the man doing original work in his subject which inspires belief in it, awakens enthusiasm, gains disciples. His personality is the selective power by which those who are fittest for his special work are voluntarily enlisted in its service, and his individual influence is reproduced and extended by the spirit which actuates his staff. Neither is it the few alone who gain; all honest students gain inestimably from association with teachers who show them something of the working of the thought of independent and original minds. 'Any one,' says Helmholtz, 'who has once come into contact with one or more men of the first rank must have had his whole mental standard altered for the rest of his life.' Lectures have not lost their use, and books can never fully take the place of the living spoken word. Still less can they take the place of the more intimate teaching in laboratory and seminar, which ought not to be beyond the range of the ordinary course of a university education, and in which the student learns not only conclusions and the reasons supporting them, all of which he might get from books, but the actual process of developing thought, the working of a highly trained and original mind."

It should be possible for every one who is destined for the medical profession to be brought into touch with a first-rate investigator during his pupilage that he may reap the advantages so eloquently described by the Commissioners, and any policy which offers inducements to research workers of the highest type to separate themselves from the class of university and college teachers is a serious national danger.

We have striven to present the main issue of policy as clearly as possible, and the conclusions which emerge do not seem doubtful; it remains to apply the results to the present situation.

It will probably be said that, whatever scheme may ultimately be proposed by the Executive Committee, any national institute contemplated therein would not absorb the whole or even half of the funds available, and that much assistance will be given to the existing universities and medical schools. This surmise may be correct, but we need to bear in mind other probabilities. We have to reckon with the tendency to support that which is under immediate supervision, the desire not to starve the State's own child, and the inevitable growth in the latter's demands for nourishment. Once an institute is created, the arguments in favour of devoting to it an increasingly large supply become irresistible. It will be urged that whatever may be said in favour of a well-equipped institute, there is nothing to be said for a badly-found one. Success or failure will be equally good grounds for further expenditure. If the institute's immediate success is great, its extension will be at once demanded; if it does not attain great results at once, it will be said that the equipment is inadequate and further expenditure must be undertaken.

It may be alleged that the existence of a strong State institute will not hamper the activities of the

universities and colleges, but will stimulate them to friendly competition. This argument contains the half-truth which is proverbially dangerous. As has already been said, there are some pre-eminently gifted persons who are entirely indifferent to the prizes of a successful career, and if they are satisfied that the ideal of research combined with teaching is the highest, as we believe it to be, nothing can tempt them to abandon it. But we do not legislate mainly for exceptional characters. Most able men are not and cannot be indifferent to the material and social rewards of the career they embrace. At present the most valuable prize offered to the investigator is a university post. He should not be encouraged to regard any other culmination as equally to be desired. There is sufficient honourable competition between existing colleges and universities, and they have need not of a fresh competitor, but of every penny that the State can devote to the service of research.

The history of European culture has much to tell us concerning the destiny of those who, impatient of the reign of King Log, inaugurated the tyranny of King Stork. The fate of the humanist movement in German universities after the sixteenth century reformation, when electoral princes and grand dukes gave their assistance in the work of rooting out errors, and the subsequent paralysis of intellectual life, tell their own story. We will venture to assert that the attempts of authority to direct and control the free development of knowledge have always been disastrous in the end, and that the will of a papal legate or the fiat of a royal commissioner has time and again sterilized thought for generations. The abler the man clad in authority the more paralysing his influence; the spirit of inquiry cannot brook control, however efficient, or be confined to the performance of an allotted task, however important.

There is in every generation a certain class of men filled with a desire to control and regulate the thoughts and actions of their fellows. In our day they are represented by the "advanced" thinkers whose shibboleth is "co-ordination" attained by a bureaucracy, who dream of State institutions filled with "experts" illuminating the arcana of medicine, and who regard centralization as the one thing needful to realize a medical millennium. Those who have considered the paralysing influence of authority—even the authority of mere tradition unsupported by official power—upon the development of medical knowledge will view such a proposition less enthusiastically, and will doubt whether we are in truth so much wiser than our predecessors that we can succeed where they failed, and can prevent the strangling of free research with the fetters of State control.

The medical profession should therefore scrutinize very closely any proposals which may embrace the establishment of a national institute of medical research. They ought not to regard the subject as of interest merely to a special class. On the contrary, we think we have shown that the policy adopted in this matter must affect ultimately the character of the whole profession. To mention only one aspect: it is easy to see that any drastic reorganization of the conditions under which research in this country is pursued may facilitate a demand for still more sweeping modifications in other departments of medical work. The problem is one in the solution of which a consensus of medical opinion must prove decisive, since the most rancorous opponent cannot believe that the direct pecuniary interests of the profession are involved. The point at issue is clear. It is whether the State shall sanction by its support one of two conflicting ideals—that of medical research as the province of a separate Government service, or that of research undertaken in the schools and in the professional universities, and combined with participation in their other functions. The profession must formulate and clearly express its judgement upon this matter, and must do so before steps have been taken which cannot be retraced.

THE GENERAL PRACTITIONER AND THE PUBLIC.

The recent crisis in the affairs of the profession has had many interesting by-products. One has been the emergence of the general practitioner and his doings into the light of publicity. It has been almost an article of faith with the practitioner that his work concerned only his patients and himself, and that the relationship between them was of an intimately private nature. He was, in fact, engaged in "private practice." The more seriously the practitioner regarded his work the more scrupulously did he shun anything like publicity as being of the nature of an intrusion inimical to the true interests of his patients and his profession. He felt that his proper sphere was the bedside of his patient or his own consulting-room. But of late the veil has been rudely pulled aside, and the fierce light of publicity has been flashed on his doings. His comings and goings, his moral character, his private income, his hours of labour, and the value of his labour have become themes for political platform eloquence and of public conversation. He finds the records of his daily visits and prescriptions, and of the miles he drives or motors or walks added up by statistical officials. He finds his diagnosis of his patients' ailments subjected to the interested scrutiny of professional and non-professional critics. Some temporary feeling of bewilderment may have resulted from these changes, and the problem before the practitioner is how to accommodate himself to the new environment. During the last few years it has been interesting to watch how that environment has been changed by such non-essential factors as the introduction of the telephone and the motor car. But the problem now is one intimately affecting the nature of the work itself and its relation to a host of problems in the solution of which the practitioner finds himself a necessary factor. The daily work will continue, but there is gradually being obtained a new point of view and a larger range of vision. The practitioner is seeing not only the trees but the wood. His position of isolation is annulled. In his daily routine he is coming more into contact not only with his fellow-workers but with forces of thrift, foresight, and mutual helpfulness designed to increase the wellbeing of the people. It was a wise prevision on the part of the Association to insist not only on better conditions for the individual practitioner under the Insurance Act, but also for the representation of the general practitioner on every official body that has to do with its public administration. The Advisory Committees, the Insurance Committees, and their numerous subcommittees must include practitioners in general practice. These bodies all present opportunities for the education of the public in medical affairs and for the education of the practitioner in public business. We may surely hope that the working of the leaven of this contact may be apparent, not only in the nature of any further changes which may be proposed to the profession, but in a mutual understanding of many of the problems of national life, which is only possible when public and professional experience are combined. If this greater publicity and these altered conditions were to lead to a loosening of the personal tie between the patient and his doctor or to any slackening of the daily routine of

dealing with individual cases of suffering and disease the change would be wholly evil. It is by this test of personal contact that all these changes must be judged. The relation is one which can be affected by any Insurance Act or the interposition of any Government or public body only in its non-essentials. Fuller recognition of the work will lead to an added interest in the work itself, and, viewed with a larger outlook, the work will gain in importance from its correlation with other factors. Another result has been that a clearer image has been obtained of the position which, by the slow evolution of the last generation, the general practitioner has come to occupy. Thirty years ago surgeons, medical officers of health, specialists in all branches, and not a few physicians, had individually emerged from the ranks of general practice, and therefore had an intimate knowledge of the everyday experience of the general practitioner; the proportion of consultants and specialists of to-day who have had this experience is probably very much smaller. These altered conditions have hardly been noticed by the general public, and their full bearing has not yet been appreciated completely even by the profession. The physician or surgeon or specialist cannot now speak with the same authority as formerly on the problems which the general practitioner has to face. General practice has, in a certain sense, become a speciality. It is true that its ranks contain a larger number than any other branch of the profession, but the large increase of the number of whole-time appointments and of specialists of every conceivable variety in the last few years and months raises a doubt as to how long this numerical preponderance will obtain. But we are at least assured that there is no danger of the extinction of the general practitioner. The intimate personal relation between the individual patient and his doctor is an essential factor which no changed conditions can completely eliminate. It is on the general practitioner that the eyes of the public and the profession are now turned, and we are confident that the trust will be completely justified.

SPIRITUAL HEALING.

As was stated in the JOURNAL at the time, a conference of representatives of the clergy and of the medical profession was held at the Chapter House, St. Paul's, in October, 1910, to discuss the asserted results and the rapid development of "spiritual" and "faith" healing movements. A special committee was nominated to consider and report upon the best methods of closer co-operation between the two professions. At a second conference, held in the following year, an enlarged committee was appointed to continue investigations into the meaning and scope of "spiritual," "faith," and "mental" healing; to consider how the dangers connected with such treatment by persons not medically qualified "might best be guarded against"; and to promote all legitimate co-operation between the two professions. The Chairman of this standing committee is Dr. Ryle, the Dean of Westminster; the Vice-Chairman, Sir Dyce Duckworth; and the following are the other members: The Rev. W. G. Cameron, Canon C. V. Childe (Honorary Secretary), the Dean of Durham, the Dean of St. Paul's, Prebendary J. S. Northcote, the Bishop of Stepney, the Rev. A. W. Robinson, the Rev. W. M. Sinclair (formerly Archdeacon of London), Sir Clifford Allbutt, Sir R. Douglas Powell, Dr. H. H. Tooth, Dr. Charles Buttar, Mr. McAdam Eccles, Dr. de Havilland Hall, Dr. Theo. B. Hyslop, Dr. H. G. Gordon Mackenzie, Dr. J. A. Ormerod, and Dr. Stanley Bousfield (Honorary Secretary and Treasurer). The Committee has now issued an interim report,[1] and we confine ourselves for the present to indicating its conclusions.

[1] Spiritual Healing. Report of a Clerical and Medical Committee of Inquiry into Spiritual, Faith and Mental Healing. Macmillan and Co. 1914.

The Committee took evidence from persons who had practised or made a study of the treatment of physical disorders by spiritual or mental influences, and such cases of asserted cure by "spiritual" healing as were submitted for investigation were carefully examined. Abstracts of the evidence of the witnesses are given; among them were Drs. Milne Bramwell, Lloyd Tuckey, M. B. Wright, Lord Sandwich, and the Rev. Samuel McComb, D.D., one of the founders of the Emmanuel movement in America. The Committee, after affirming that the Divine power can be limited only by the Divine will, and expressing its belief in the efficacy of prayer, proceeds to declare that the Divine power is exercised in conformity with and through the operation of natural laws. "With the advancing knowledge of these laws increasing benefits are being secured for mankind through human instrumentality. Especially is this the case in regard to the healing of disorders of body and mind." It is considered that "spiritual ministration should be recognized equally with medical ministration as carrying God's blessing to the sick, and as His duly appointed means for the furtherance of their highest interests. Too often it has been forgotten that health, bodily and mental, is capable of being influenced for good by spiritual means." The Committee expresses the opinion that the physical results of what is called "faith" or "spiritual" healing do not prove, on investigation, to be different from those of mental healing or healing by "suggestion." It is recognized that suggestion is more effectively exercised by some persons than by others—a fact which seems to explain the "gifts" of a special character claimed by various "healers." It is held to be undoubtedly due to the striking benefits which sometimes result from suggestion that the belief in such claims has been fostered. While believing that the beneficial effects of religious influences on the sick are produced by a process not essentially different from that derived from non-religious appeals to the mind, the Committee thinks the former may often be the more potent form of suggestion. Although aware that no sharp distinction can be drawn between organic and functional ailments, the conclusion arrived at by the Committee is that "faith" and "spiritual" healing, like all treatment by suggestion, can be expected to be permanently effective only in functional disorders. This point is emphasized in order to warn those who resort to "healers" that they may thereby be postponing until it is too late the medical treatment which might serve to arrest organic disease. It is recognized that spiritual ministrations may contribute greatly to the success of medical treatment. On this account the Committee desires to see an increased importance attached to spiritual ministrations as contributory means to recovery, but the independent treatment of disease by irresponsible and unqualified persons is strongly deprecated. The Committee proposes to devote attention to the establishment of a basis on which some more clearly defined co-operation may be secured between the clergy and the medical profession in the treatment of disease; to continue the inquiry into the evidence for cures said to be effected by means of "spiritual" or "mental" healing of organic or other serious troubles submitted for investigation; to examine into the degree of success resulting from the medical practice of the various methods of treatment by suggestion; to deliver lectures, to publish articles or occasional papers giving information to those who may seek it; to warn the public of the serious dangers incident to the many irregular and often ignorant efforts to heal the sick; and to promote the formation of joint committees of clergy and doctors similar to their own, in various centres, as a means of advancing knowledge and forming a sound public opinion. An appendix contains a note on suggestion, by Sir Douglas Powell, and some details of six cases in which it was possible to obtain medical evidence both before and after treatment.

THE FAMILY OF THE TUBERCULOUS.

The New York Association for Improving the Condition of the Poor has during the past year established a means of dealing with family tuberculosis which is at once novel in conception and radical in its results. The removal of a tuberculous patient to a hospital or sanatorium removes a possible source of further infection from the family circle, but the home conditions under which the disease has developed remain much as before. The association undertakes to remove the patient or patients and the whole family into a "home hospital," consisting of small self-contained flats, where family life can go on as before, but under strict hygienic rules. The actual patient is dealt with as his case may require, but other members of the family are educated in the approved rules of life, danger of infection is minimized, and abundance of good food and fresh air are supplied. All members of the family who are able to go to work and earn money continue to do so and pay at much the same rate as in their own homes for their board and lodging. The premises from which they have come are properly cleansed and disinfected by a public authority. The report of the association for the year 1912-13 contains a very interesting account of the actual working of this scheme, and it need hardly be stated that much real good has resulted, both to the individuals concerned and to the community. The better quantity and quality of the food consumed in such home hospitals and the generally higher rate of living brings the annual expenditure to a higher figure than would be reached in the ordinary home life of the patients, and the difference is made good by the Association. The educational effect of the more cleanly life, especially upon young children, must be very considerable, and should eventually tend to a better hygienic standard in the slums of great cities, if the movement is found to be capable of the extension which it would appear to merit. The report contains a great deal of statistical and practical information, and is well illustrated by photographs of the external and internal arrangements in the hospital itself.

A PAST WORTHY OF GUY'S.

In its issue of May 4th the *Times* reproduced the following advertisement which appeared in its columns a century before: "(Advertisement) Alexander, Emperor of Russia, presented Dr. Thornton with a ring, an emerald of great value, set round with a double row of diamonds; and this physician, we are happy to announce, will commence this evening at five his Botanical Lectures in the Medical Theatre of Guy's Hospital in the Borough." We do not know whether this gift was in recognition of medical services rendered to the imperial person, or of the physician's services to botany. Robert John Thornton was a remarkable man the record of whose life occupies about two and a half pages of the *Dictionary of National Biography*. Born probably in 1768, he entered Trinity College, Cambridge, at the age of 16, being intended for the Church. Preferring medicine as a career, he studied at Guy's Hospital, and in 1793 graduated M.B. at Cambridge. Settling in London in 1797 he acquired a considerable practice, although he offended his professional brethren by his methods. The advertisement which we have quoted may perhaps be taken as throwing some light on those methods. Nevertheless Thornton was appointed lecturer on botany at the united hospitals of Guy's and St. Thomas's. Early in his career he almost ruined himself by the luxurious style in which he published his *New Illustration of the Sexual System of Linnaeus*. This work was issued in imperial folio, and in its preparation Thornton employed Sir William Beechey, Opie, Raeburn, Russel, Reinagle, Harlow, Miss Burney, and others as painters; Bartolozzi, Vendramini, Holl, Ward, and the Landseers as engravers; and Dr. George Shaw, George Dyer, Seward, and Maurice as poets. It may be remembered that in those days tame poets were kept by some business houses to write advertisements. If we may borrow a metaphor from the playhouse, it is not surprising that with so costly a staging Thornton's piece did not pay. In 1804 he exhibited the originals of his plates in New Bond Street; from the descriptive catalogue of these it appears that he had then published a number of other works on botany. In 1811 he obtained an Act of Parliament authorizing him to organize a lottery of his botanical works, and this was advertised as "The Royal Botanical Lottery, under the patronage of the Prince Regent, of twenty thousand tickets at two guineas each and ten thousand prizes of a total value exceeding £77,000." The lottery seems to have been a failure, and Thornton died in poverty in 1837. His name appears in the list of books by Guy's men in the Wills Library, Guy's Hospital, compiled by Mr. William Wale,[1] but there are only three works under his name, whereas the bibliography of his writings given in the *Dictionary of National Biography* extends over more than a page. On the flyleaf of one of the books in the Wills Library, entitled *An Easy Introduction to the Science of Botany*, there is the following manuscript note: "This book contains a singular discussion as to whether it is decent to teach girls botany, seeing that plants have sexual organs and functions." This, it is to be presumed, was written by Dr. Samuel Ashwell, lecturer on midwifery, who presented the book to the Physical Society in 1837. We have gone far since the days of innocency when such a subject would be thought worth discussing. Now the mildest advocates of the teaching of sex matters to children suggest that plants should be used to illustrate the subject. Curiously enough, in our American contemporary *Science* of April 24th, we find Mr. A. E. Verrill protesting against the "obscene names" given by Linnaeus to some genera, and to many species of plants. We agree with him that "it is rather embarrassing, when asked by an educated lady the name of a beautiful sea anemone, to have to say that its name is *Priapus senilis*, or even *Metridium senilis* (*sic*)." Besides these Linnaeus used the names of *Priapus humanus*, *P. equinus*, *P. felinus*, and so forth—not, it must be admitted, edifying names. If, therefore, plants are used for the purpose of imparting sexual knowledge to children, it is to be hoped that a revised terminology is employed.

VISIT OF THE CHAIRMAN OF COUNCIL TO AUSTRALASIA.

Sir James Barr, who is acting as Deputy Chairman of the Council of the British Medical Association during the absence of Dr. J. A. Macdonald, has received a letter from Dr. Sydney Jamieson, President of the New South Wales Branch, in the following terms: "On behalf of the Council and members of the New South Wales Branch of the British Medical Association I desire to convey to you our strong appreciation of the foresight and wisdom of your Council in sending Dr. J. A. Macdonald to attend the Australasian Medical Congress as your representative. The importance of some thoroughly representative member of the British Medical Association coming to Australia on such an occasion cannot be too highly estimated. We venture to hope that this will not be the last time on which such action will be taken. Dr. Macdonald, by his unfailing courtesy, by his infinite tact, by his strong sense of leadership, quickly endeared himself to all he came in contact with, and in consequence the beneficial influences of his visit are sure to be far-reaching. Dr. Macdonald's visit could not have been better timed. His numerous addresses to the members of the various Branches of the British Medical Association in Australasia will long be remembered, as they were of that logical and stimulating character which the profession generally requires at this critical period of its history." Dr. Macdonald, who is on his way home, spent a week early in April in Hong Kong,

[1] Reprinted from *Guy's Hospital Reports*, 1913, vol. lxvii.

where he was entertained at dinner by the Hong Kong and China Branch of the British Medical Association.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

HITHERTO it has been generally understood that systematic canvassing the Fellows for election to the Council of the Royal College of Surgeons of England was not in accordance with the spirit of the election. The idea, as we understand, was that certain names should be presented by publication in the medical papers, and that the Fellows should by ballot show whom they would honour by placing on the Council. The College itself must know, as certainly the profession does, that there has always been a good deal of private recommendation amongst friends, and there seems no reason why one Fellow should not say to another: "Vote for my friend So-and-so; he is a good teacher at our medical school, and quite a proper Fellow to be placed upon the Council." There can be no harm in that, but we are given to understand that this year canvassing has gone much further, and in a direction which does not meet with general approval. Candidates—at least certain of them—have written to Fellows, with some of whom they scarce have a nodding acquaintance, directly asking their support. The matter of acquaintanceship or even of friendship should find no place in the question—the men best suited for the honour being in each case chosen, due recognition being given to something like a proportionate recognition of the provinces and the metropolis and of the medical schools generally.

THE CAMBRIDGE RESEARCH HOSPITAL.

THE investigations which are being carried on at the Cambridge Research Hospital in connexion with rheumatoid arthritis and allied diseases have reached a stage at which it is essential that the hospital should be provided with a properly equipped operating theatre, in order that more advanced research may be undertaken into the cause and treatment of these diseases. As there is no room suitable for the purpose in the present hospital it will be necessary to build, and Mr. Otto Beit has most generously promised the sum of £700 for the erection of an operating theatre, and has further promised the sum of £100 per annum for the next ten years towards the general maintenance of the hospital.

MEDICAL OFFICERS OF HEALTH.

WE understand that the President of the Local Government Board has informed Dr. Addison that he hopes with the Chancellor and Mr. Pease to receive the deputation on the question of security of tenure for medical officers of health at an early date. Whilst wishing not to be oversanguine, we are inclined to think that the response to the demands of the deputation is likely to be of a gratifying character.

SCHOOLS FOR MOTHERS.

A GOOD deal of controversy has arisen in the press during the past week in respect to the financial assistance which the Government proposes to give to schools for mothers. From inquiries we have made, we believe that there have been some misconceptions, and that the reference made to the subject in the Budget statement by the Chancellor does not indicate any alteration in the existing duties and powers of the health authorities with regard to maternity and prematernity questions. Rather they indicate that the grant which the Board of Education has lately been giving to approved schools for mothers shall be supplemented by further sums.

WE are glad to learn that Dr. W. A. Hollis, President of the British Medical Association, is making very satisfactory progress after the operation for appendicitis which he recently underwent. It is hoped that he will be able to leave the nursing home in about a fortnight.

AT the annual dinner of the past and present students of the University of Durham College of Medicine, Newcastle-on-Tyne, held on May 6th, there was a very large and representative gathering, the special occasion being a presentation to Professor Rutherford Morison on his retirement from the active honorary staff of the Newcastle Royal Victoria Infirmary. Mr. A. M. Martin was in the chair, and Mr. W. G. Richardson proposed the toast of the evening, in reply to which Professor Morison gave some very interesting reminiscences of Lord Lister in his Edinburgh days and of his own early experiences of antiseptic surgery. We hope to publish a fuller report in our next issue.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Budget.

IN introducing the Budget in the House of Commons on May 4th the Chancellor of the Exchequer dealt first with the yield of the taxes during last year, which had so far exceeded the estimate that, notwithstanding the increased supplementary expenditure on account of the navy and other services, they had left a surplus of £750,000. After dealing with the individual items and with the expenditure to be anticipated on the services existing at present, he discussed the urgent need for readjustment between local and imperial expenditure, and announced that the Government proposed to introduce legislation which would enable the whole basis of rating to be altered so that local authorities would be enabled to rate separately the values of sites and the values of improvements. He described the necessity from the Government's point of view for the reduction of the rating on improvements, and gave instances to show how the relief which it was proposed should be applied. He stated that it was the intention of the Government to grant relief in greater amount where the improvements represented a high proportion of the total value; also that hardly pressed areas where the expenditure was high and the rateable value low would receive proportionately greater assistance. Among the proposals he made in addition to the readjustment of the basis of rating was a large scheme of rearrangement, under which there would be forthcoming assistance to local rates from the Treasury in the first complete year after the expiration of the present financial year to the extent of more than £11,000,000 a year, or, on the average, a little more than 9d. in the £ of local rates. In addition to the contributions which it was proposed to make in reduction of the rates incurred by local authorities in the discharge of their present duties, he announced that the Government had decided to make use of this general rearrangement to institute the provision of various new services. He announced increased contributions to the police rate, to the expenses of main roads, to the cost of criminal prosecutions, and to the charges involved in the administration of the Mental Deficiency, the Shops, and the Employment of Children Acts. The Government also proposed to bear the whole cost of the expenditure incurred in suppressing cattle disease. The grants to be allotted to the great divisions of the public service were then dealt with, and he described the conditions which the Government proposed to attach to them.

Public Health.

In dealing with public health administration, he said: There is no more important branch of the public service than that which deals with the prevention and cure of disease and the promotion of national fitness and the well-being of the population. Lord Beaconsfield was one of the first statesmen of front rank to realize how essential the vigorous intervention of the State in this scheme was to to the greatness and strength of the country. He realized that a race enfeebled by unhealthy environment is not

fit to bear much longer the burden of a great empire like ours.

We are spending upon the whole of this great service throughout the whole of the United Kingdom £25,000,000 gross and £15,000,000 net; that is to say, £15,000,000 of money are found out of the rates for the whole of the service of public health in the United Kingdom—less than one-fifth of the cost of the army and navy. The national contribution towards public health is something like £200,000 a year, just the cost of a third-class cruiser. The First Lord of the Admiralty assures me that you could not get a third-class cruiser for that sum of money. The Insurance Act has done more than any number of Commissions to locate, to define, and to classify the problems of public health. It has given prominence to one very striking fact—that there is an immense number of men and women who, through that lack of vitality and stamina which comes from unhealthy conditions and surroundings, live lives that are a prolonged struggle against debility and disease. There is no more fertile propagator of the seeds of inefficiency and disease, squalor, and misery. The State is vitally interested in the problem. Preventable disease is the costliest of all extravagances. Much of this is due to low wages, where men and women are not equipped with the necessary means to nurture themselves and their families and to provide decent accommodation. Much may be due to their own faults and weaknesses, but there is a great margin due to other causes with which I am dealing to-day—causes which are entrusted to the supervision, care, and control of the local authorities. Take the unhealthy and overcrowded dwellings which are such a prolific source of depressed vitality in this country. Take the absence of sufficient provision for the cure of disease in its initial stages. Take the absence of any systematic instruction in the principles of health. I have already dwelt upon the great difficulty in regard to the slums. There are 5,000,000 of people in this country living in slum areas, and slum areas by no means cover the whole of the population that dwell in insanitary and unfit houses.

Tuberculosis.

Some municipalities have dealt with the problem of tuberculosis with great public spirit. Notably, that is so in the case of Liverpool and Birmingham, and some county councils, both in England, Scotland, and Wales, have shown the same spirit. I wish I could say the same thing of the municipality that ought to lead the cities of the empire for bettering the conditions of its working people—I mean London. For reasons which I could probe, but do not intend to dwell upon, they have been dilatory, suspicious, obstructive, laggard in the attempt to stamp out tuberculosis. There is some excuse to be found in rates. We propose that in future local authorities shall be pressed to show greater activity and enterprise in grappling with all these evils that are sapping the national health and happiness.

We are on the eve of proposing great changes to deal with the housing problem. The first thing is to put local authorities in a position to enable them to carry out these proposals without being crippled and handicapped by rates. Now the only pressure you can bring to bear upon public authorities to deal with public health is through the obsolete, antiquated, and futile methods of mandamus. You may as well go into action armed with a flint axe as a mandamus. The idea that you could march off a whole municipal corporation that is levying rates of 9s., 10s., or 11s. in the £ because they really cannot face the problem of finding another 2d. or 3d. is a thing that no Local Government Board has ever been able to bring itself up to the point of doing. The Committee has made a recommendation that a grant should be given for the first time in respect of public health, and that that grant should be given, granted or withheld according to the efficiency of the whole service.

The principle on which we will proceed has worked well in relation to the police and in relation to education. I am far from saying that the educational standard of this country everywhere is up to the level of what it ought to be, and I am appalled to think what it would be in many districts had it not been that the grant depended upon some sort of efficiency. The Committee have recommended a fairly substantial grant, but in our judgement it is inadequate. It is no use giving a grant which will not enable you to exercise the necessary hydraulic pressure to lift the weight. A grant which is something under one penny in the pound would not frighten local authorities in many districts to induce them to undertake the big task which we hope will be undertaken in the course of the next few years in the way of improving the health conditions and life of the people. The police grant is now 36 per cent. We propose to raise it to at least one-half. The education grant is now 46 per cent. of the expenditure. We propose to raise it. Main roads now receive 38 per cent. We propose to raise the amount to 50 per cent. We propose that the public health grant we recommend shall be equal to 15 per cent. of the gross expenditure and 25 per cent. of the net expenditure. I do not say that will be the basis of contribution, but it is the basis of computation in the original instance.

We propose to use this contribution as a means of pressing local authorities to deal with more spirit and boldness with all these problems which I have enumerated and which affect the well-being of the community under their care—housing, including the clearing of slums and the provision of better accommodation, the provision of a sufficient number of hospitals and the grappling with greater energy with tuberculosis, the provision of small holdings and allotments. We could not do so unless the grants-in-aid were real and substantial. I have the figures here for the whole of the United Kingdom. The total grant for the United Kingdom will be £4,000,000 for the first full year. It will come to £1,300,000 for the first year. For England and Wales the figure is £3,200,000.

Special Grants for Tuberculosis, Nursing, and Laboratories.

There are certain services which require such immediate action and stimulus that we propose specific and separate grants with respect to them. They are in the region of co-operation between insurance and local government. The first of these was the campaign against tuberculosis. Provision had been made to secure tuberculosis arrangements for dependants of insured persons. It was contemplated that the local authorities should bear half of the deficiency, and that the Government should provide the other half. A good many local authorities had undertaken the work, and there was a considerable sum in the Estimates this year for the Government half of that expenditure. More money would be required. Where the local authorities were not ready to take up the work the grant would be to the Insurance Committee, so that the dependants of the insured persons should not suffer through the slackness of any local authority. There was another branch of the service also in the region of the Insurance Act which had helped to make it clear that any system of doctoring was hopelessly inefficient which was not supplemented by a good system of nursing. The Treasury proposed to grant an annual sum to provide an adequate supply of trained nurses to supplement the work already being done by some voluntary bodies and local authorities.

Another deficiency in health service exposed by the operation of the Insurance Act was that there was no provision for scientific diagnosis of disease, as there was in Germany and the United States of America. It was proposed to make a grant to local authorities to enable them to set up pathological laboratories. The total for these three services for the whole of the United Kingdom would be £750,000.

Education, Provision of Meals.

The general principles laid down by the President of the Board of Education in his speech last year dealing with education had been sanctioned by the Kemp Committee. The Government propose to reconstitute the education grants upon the principles laid down then. The two main principles laid down by the Kemp Committee were that there should be a distinction, first, between rich and poor areas, and, secondly, between the areas that spent much and the areas that spent little on education. In Bournemouth a penny rate raised as much per child as a sixpenny rate in Walsall. In Hove a penny rate raised as much per child as a sevenpenny rate in Dublin. Halifax spent 126s. 2d. on the education of each child, as against 61s. 10d. spent by Preston. Barry spent 156s. 6d., as against 53s. 10d. by Grantham. Surrey spent 103s. 5d., as against 67s. 11d. by Shropshire. The Government

propose to give greater relief to the poorer districts, and to the districts where the expenditure was high. The increased cost to the Exchequer on this ground would be £2,750,000 for England and Wales alone. This year the grant would be confined to the necessitous schools areas, to enable them to tide over their difficulties until the grant began to come into operation.

There were certain specific services that the Government felt ought to receive special encouragement in addition to this grant. They were services dealing with the health of the children. Teachers, inspectors, and members of education authorities had repeatedly urged upon the Government that hundreds of thousands of children attended school daily in a condition of semi starvation, and attempts to teach them and keep them in that condition for hours were not merely a mockery, but torture. The Voluntary Act had met with considerable success, and 260,000 children had received some measure of relief under that Act. But there were still 260,000 necessitous children who received no relief at all, and there were many who received only inadequate relief. Moreover, there was no provision for feeding children on Saturdays and during holidays. The State proposed henceforth that when local authorities undertook this task the Exchequer would contribute half of the expenditure.

Physical Training and Open-air Schools.

Then there were further grants for health work among children in other directions. They had already found money for medical inspection and treatment. They proposed now that there should be a grant for physical training and open-air schools—of which he was told about a fifth of the children stood in urgent need—for dealing with tuberculosis. There would also be an epidemic grant to enable local authorities to close schools when necessary without loss. There were special schools for the deformed, the feeble-minded, and cripples, and it was also proposed to add schools for mothers. Maternity schools, which had sprung up in many parts of the country, were doing most admirable work. Other grants were for technical, secondary, and higher education, to make it more accessible to the masses of the children, and to extend its sphere of influence where children showed any aptitude to take advantage of it. We compared unfavourably with Germany and the United States in this respect, and he considered the fact was a greater menace to our trade than any arrangement of tariffs.

The Government proposed substantial grants for this purpose. They would include a grant for pensions for secondary school teachers in order to attract the best men to that important profession, and there would be a grant for the special training of teachers already in schools in subjects appropriate to rural areas, manual instruction, cookery, physical exercise, and commercial subjects. The total cost for the first year would be £560,000 for England and Wales for these grants, and £282,000 for the grants he had previously mentioned. The total education grant for England and Wales this year would be £515,000. They only proposed to deal this year with necessitous school areas and with the feeding of school children. Next year the grants would come to £3,892,000.

The Insurance Act: Maternity, Referees and Consultants, Practitioner Clinics.

The last item of expenditure was concerned with insurance. Experience of the working of the Insurance Act had shown the direction in which further financial support was needed. He had stated earlier in the session that in spite of the abnormal work of the first year the reserves provided had fully justified the actuarial estimates. He stated that under no conditions would subsidies be given to make up deficiencies due to mismanagement, but that there were cases where well-managed societies attracted an unusual proportion of bad lives, or were limited to classes subject to special sickness or disability. Above all, the working of the Act revealed an appalling amount of sickness amongst married women—a fact which was quite unknown before the Act. He promised that if deficiencies in those cases were due, not to malingering, not to mismanagement, but to circumstances of the kind over which no society had any control, to circumstances which demanded the assistance, protection, and support of the State, it would be the business of the State to recommend to the House some means of dealing with them.

I do not think it would be desirable for me at this stage to go into details. The whole of the burden will not fall upon the State. The societies also must come to the rescue. Before they are finally settled it is desirable that there should be further consultation with the societies especially concerned, and in fact with the whole of the societies. But it is perfectly clear that the Government will have to make a substantial grant in aid of these very abnormal and distressing cases. We have to deal with the deposit contributor. We had anticipated that there would be 900,000 of these, but as a matter of fact there are only 400,000—the rest have all joined societies. The number of those who are deposit contributors because they have no other option is small, and they are a dwindling number. We propose to do something for them. We propose to do something for certain cases of arrears under unemployment. We propose also to establish a system of medical referees, who will be not merely a check on malingering, but will be a class of doctors whom the societies can call in to decide doubtful cases of illness, and will be consultants. They will be expert medical men, who can be called in for an opinion, not where there is a case of malingering, but where there is a serious case of illness, and when the ordinary medical men on the panel wants to get a second opinion. And then we propose to establish clinics at convenient centres to assist the panel doctors to co-operate in difficult cases. We propose, further, to assist in the organization of a system of health lectures, such as they have in Germany—lectures which have done a vast amount of good in spreading information about the principles of health among the insured population. The total of that will be £1,250,000 for the whole of the United Kingdom.

Additional Taxation.

In the final portions of his speech the Chancellor discussed the ways and means of raising the revenue which would be required to meet the cost of the services he had foreshadowed, and to provide the necessary Exchequer contributions. He estimated that the increased cost, particularly of the Naval and Civil Services Votes, on the basis of the existing taxation, would leave during the coming year a deficit of £5,330,000, and that the grants which it was proposed to make to local authorities would require, during the present year, the sum of £4,218,000, which, with a margin of £252,000, required an extra revenue of £9,800,000.

It is not necessary to go into the details of this side of the Chancellor's speech, but it may be said that the whole of the additional revenues are to be provided out of incomes of more than £1,000 a year, and out of the death and settlement duties. He undertook that there should be a rearrangement in respect of the joint incomes of man and wife, and that the abatements allowed for children on incomes below £700 should be raised from 7s. 6d. to 15s. for each child.

Income Tax.

The following two tables, which include the proposals regarding the new supertax, perhaps explain as simply as possible the net effect of the new taxes:

Taxes on Earned Income.

Income plus Supertax.

Income.	Abatement.	Old Scale.	New Scale.
£	£	Pence in £.	Pence in £.
160	160	nil	nil
200	160	1.8	1.8
300	160	4.2	4.2
400	160	5.4	5.4
500	150	6.3	6.3
600	120	7.2	7.2
700	70	8.1	8.1
800	nil	9.0	9.0
1,000	nil	9.0	9.0
1,500	nil	9.0	10.5
2,000	nil	9.0	12.0
2,500	nil	12.0	16.0
3,000	nil	12.0	16.0
4,000	nil	14.0	18.4
5,000	nil	14.0	19.7

Taxes on Unearned Income.

Income plus Supertax.

Income.	Abatement.	Old Scale.	New Scale.
£	£	Pence in £.	Pence in £.
160	160	nil	nil
200	160	2.8	3.2
300	160	6.5	7.4
400	160	8.4	9.6
500	150	9.8	11.2
600	120	11.2	12.8
700	70	12.6	14.4
800	nil	14.0	16.0
1,000	nil	14.0	16.0
1,500	nil	14.0	16.0
2,000	nil	14.0	16.0
2,500	nil	14.0	16.0
3,000	nil	14.0	16.0
4,000	nil	14.0	18.4
5,000	nil	14.0	19.7
6,000	nil	17.0	20.9
7,000	nil	17.4	22.1
8,000	nil	17.7	23.2
10,000	nil	18.2	24.9
100,000	nil	19.8	31.3

Death and Settlement Duties.

The increased scale of charges on the death duties does not operate on estates of less value than £60,000 net, and deductions are to be made where an estate passes more than once within five years on account of death. The increased estate duties are estimated to provide £2,000,000 during the present year and £3,000,000 in the subsequent year. The increased charges in the settlement duties are estimated to furnish £150,000 this year and £900,000 in a complete year.

There are also changes foreshadowed which would provide for the collection of income tax on investments left abroad, and which would yield £500,000.

Estimated Yield.

The estimated yield of all new taxes for 1915–16 is as follows:

Income tax	£5,715,000
Super tax	4,500,000
Foreign investments	500,000
Death duties	2,000,000
Settlement duties	900,000
	£13,615,000

Child Increase.—In reply to Mr. King, the President of the Local Government Board said that assuming that the rate of increase of population from 1901 to 1911 had continued, and that the number of children between the ages of 5 and 14 bore the same proportion to the total population as in the census of 1911, the average annual increase of population in England and Wales respectively between those ages for the years 1911–14 inclusive was:

England (excluding Monmouthshire), 60,100.
Wales (including Monmouthshire), 8,400.
England and Wales, 68,500.

Unvaccinated Children (Morayshire).—In reply to Sir Archibald Williamson, the Secretary for Scotland said that the county council of Morayshire had directed the attention of the Local Government Board for Scotland to figures furnished by the county medical officer of health, which showed that the number of statutory declarations of conscientious objection made in the county (exclusive of burghs) under the Vaccination (Scotland) Act, 1907, had risen from eleven in 1908 to forty-six in 1913. The requirement of the Act was a sworn declaration to the effect that the parent solemnly and sincerely declared that he conscientiously believed that vaccination would be prejudicial to the health of the child. In these circumstances, and as the functions of the justices under the Act were purely ministerial, he did not think that any advantage would accrue from calling the attention of the justices to the matter.

Mental Deficiency Act.—Mr. Wedgwood asked the Home Secretary whether, by the new regulations issued in connexion with the Mental Deficiency Act, local authorities were called on to ascertain not only the names of all defectives subject to be dealt with, but also information as to their mode of living and the care which existed or was needed in each case, and details as to their parentage and the age and mode of life of such parents; and, if so, how this accorded with his assurance that no black list would be prepared.—Mr. McKenna said that the regulations did not go beyond the requirements laid down in the Act (Section 30). The Regulations related only to defectives subject to be dealt with under Section 2 (1) (*b*). The promise that no general list should be kept of defectives other than those subject to be dealt with under Section 2 (1) (*b*) had been strictly kept. On May 6th Mr. Wedgwood moved to annul the regulations, but the discussion was stopped by a count.

Ventilation of the House of Commons.—The Committee on the Ventilation of the House of Commons was occupied during its meeting on April 30th in hearing the evidence of Mr. O. W. Griffith, physicist to the London Hospital. In general, the observations of Mr. Griffith on the tests which he had carried out confirmed the recommendations put forward by Dr. Leonard Hill. At this sitting of the Committee the examination of Dr. Leonard Hill was also concluded. It appears from his experiments that amply sufficient air would be admitted by openings at the face of the floor of the gallery combined with the air coming through the central gangway. Dr. Hill, in fact, is of opinion that sufficient would be obtained by the gallery inlets alone, but he suggested that diverse currents might be found better as relieving monotony.

Colour Vision.—Mr. Lynch asked the President of the Board of Trade whether, when the Committee to consider the question of colour vision was being formed, the Board of Trade asked the Royal Society to place Dr. Edridge-Green on the Committee as representative of the Board of Trade.—Mr. Robertson: As far as the records of the Board of Trade show what took place twenty-four years ago, it appears that the Board nominated Mr. Thomas Gray, the Assistant Secretary of the Marine Department, to represent them on a Committee appointed by the Royal Society to consider the question of colour blindness. On Mr. Gray's death the Board of Trade intimated that they did not desire to nominate an officer of the Department to take his place, but suggested that the Royal Society might consider the desirability of utilizing the services of Dr. Edridge-Green either as a member or as a witness The Royal Society, however, did not appear to have adopted the suggestion.

Elementary Education (Defective and Epileptic Children) Bill.—This bill passed through the Report stage on Tuesday, May 5th. A new clause was introduced by Mr. Pease to the effect that the duly qualified medical practitioner, if directed by the local education authority, shall consult the head teacher of the school or some other specially appointed person before giving his certificate. Another clause relating to the discontinuance of certified schools was added, and another entitling the parent of the child who had been certified as being defective when the child had been discharged as being no longer mentally defective, to obtain the return of the certificates which had been given with respect to the child's mental defect. A few minor amendments were made in the bill, and a great many amendments moved by Mr. Wedgwood and some other opponents of the measure were rejected or withdrawn, and the bill was ordered to be read a third time on May 6th.

Drunkenness (Convictions).—Mr. Charles Duncan called the attention of the Home Secretary to the increase in the number of charges connected with drunkenness in 1912 as compared with previous years, and asked whether he was aware of an increase from 89,937 in 1911 to 92,443 in 1912 in Scotland and an increase from 186,182 in 1911 to 197,936 in 1912 in England and Wales; whether any explanation could be given of this simultaneous increase all over the country during 1912, seeing that there had been a steady decline for a number of years.—Mr. McKenna said that he could not answer for Scotland, but was aware of the figures for England and Wales. The increase in proceedings and convictions for drunkenness in 1912 was a continuation, at practically the same rate, of the increase which the figures for 1911 had shown over those for 1910. The causes of the fluctuations in these figures were extremely difficult to assess. The matter was discussed from year to year in the introduction to the annual volumes of licensing statistics.

England and Wales.

LEEDS.

THE INFIRMARY EXTENSIONS.

IT is natural that the plans for the extension of such an institution as the General Infirmary should call for a large amount of consideration; that the matter should not be hurried, and especially that the difficulties the present generation are having in making additions should lead the board to think of future requirements as well as of those which are most pressing at this time. The building was erected under the supervision of the late Sir Gilbert Scott, and was opened in 1868. Soon there was an addition in the form of a separate block for the accommodation of nurses, a block which soon required to be enlarged. Then in the early Nineties there came the great extension during the chairmanship of Mr. Benson Jowitt, which included the large out-patient departments, and the addition of a new ward pavilion and the *post-mortem* and laboratory departments. The operating-rooms have been remodelled more than once. With the building of a new nurses' home it was thought that the limits of extension had been attained on the present site. As has been recorded here before, the board has made large purchases of land to the north and east, and with the removal of the old property and the formation of the new street, which is now making rapid progress, it is hoped the land will be ready as soon as the plans and specifications are finished. That portion of the plans which deals with the new theatre block, with the extension of the out-patient department and the provision of a new ward pavilion with accommodation for about ninety patients, has now been so far agreed upon that it has been decided to carry it out subject to such alterations as may appear wise after a model has been made of the intended additions. Great difficulties have had to be contended with, but it is believed that a satisfactory decision has been reached. The operating block will be one of the most complete in the country, and its provision will be an incalculable relief to the surgical staff, who have for years had great difficulty, arising from inadequate accommodation, in overtaking the large amount of surgical work required of them. The ward pavilion will in general construction resemble those which already exist. The alterations and extensions in the out-patient department arise in part from the institution of the new ear and throat departments, formerly amalgamated with the ophthalmic department. Plans are also well in hand for the very material enlargement of the nurses' home. The main difficulties encountered have been in providing access to these different departments; they were in large measure dependent on the position of the out-patient department, which was erected in the early Nineties, and which until lately has been regarded as reaching to the extreme eastern frontier of the infirmary site.

UNIVERSITY MEDICAL LECTURES.

A series of special lectures on medical subjects, arranged by the Medical Faculty of the University of Leeds, are being given in the Great Hall of the University at 4 p.m. on Wednesdays. Members of the medical profession are admitted free, and the opportunity thus afforded appears to have been highly appreciated, as over three hundred have sent in their names as desiring to attend. The first lecture, on cancer problems, by Dr. Lazarus-Barlow, on April 22nd, is published in full in this issue of the JOURNAL; the second lecture, on arterio-sclerosis, was delivered by Dr. F. W. Andrewes on April 28th; and the third, on malingering, its detection by physical examination, by Sir John Collie on May 6th. On Wednesday next Dr. T. S. P. Strangeways, Director of the Cambridge Research Hospital, will give a lecture on rheumatoid arthritis and allied conditions. On May 20th Sir Thomas Oliver will lecture on lead poisoning from the industrial and medical point of view; and on May 27th Sir W. Arbuthnot Lane will conclude the series by a lecture on intestinal stasis. Persons other than members of the medical profession interested in the subjects were admitted to Sir John Collie's address, and will be admitted to that to be given by Sir Thomas Oliver.

SUMMER TERM OF THE FACULTY OF MEDICINE.

The summer, or third, term of the Faculty of Medicine began on April 21st. It will terminate on July 4th, which is degree day in all the faculties. The examinations in the Faculty of Medicine begin on Monday, June 22nd.

BIRMINGHAM AND DISTRICT.

SIR ROBERT SIMON.

SIR ROBERT SIMON has resigned the post of honorary physician to the General Hospital, Birmingham, after having served the hospital for thirty-five years. His resignation was received on May 1st, and it was unanimously resolved: "That the Board of Management have received with great regret the resignation of Sir Robert Simon, senior honorary physician, and desire to record their high appreciation of the very able manner in which he has discharged his duties as honorary physician for the past twenty three years, of the great skill and attention he has devoted to the patients under his care, and of the interest he has taken in the welfare of the institution." A subcommittee was appointed to consider what steps should be taken to commemorate Sir Robert Simon's services to the hospital. It was also resolved that at the next meeting of the governors it should be recommended that, in consequence of the eminent services rendered by him, he be appointed honorary consulting physician to the hospital. Sir Robert Simon has therefore had a very long association with an institution to which he has rendered distinguished services. He came to Birmingham after three years' work as honorary physician to the Manchester Southern Hospital for Diseases of Women and Children, and became assistant physician to the General Hospital. He was appointed honorary physician in 1891, and four years later was elected a Fellow of the Royal College of Physicians in London. He was knighted in 1910. He is also physician to the General Dispensary, and consulting physician to the Dental Hospital, the Tewkesbury Hospital, the Nuneaton Hospital, the Lichfield Cottage Hospital, and the Sutton Coldfield Dispensary. He has been professor of therapeutics in the University of Birmingham since 1910, and was formerly professor of medical jurisprudence at the Mason College.

THE INGLEBY LECTURES.

The Ingleby lectures before the University of Birmingham will be delivered this year by Dr. T. Stacey Wilson, Physician to the General Hospital, Birmingham, on Thursdays, May 21st and 28th, at 4 p.m. The subject of the lectures is neurasthenia, its causes and cure.

COLONY FOR FEEBLE-MINDED.

The Staffordshire combination of board of guardians has purchased at a cost of £12,000 a site of 120 acres near Wolverhampton on which to establish a colony for the treatment of feeble-minded and epileptic persons.

LONDON.

THE NURSING SERVICE OF THE METROPOLITAN ASYLUMS BOARD.

THE Metropolitan Asylums Board, on May 2nd, approved, practically without discussion, the proposals of the Hospitals Committee, based on a report by the principal medical officer, Dr. H. E. Cuff, for the variation of the conditions of employment of the nursing staff with a view to making the service more attractive. The proposals were summarized in the issue of the JOURNAL for April 11th, p. 836.

THE PUBLIC HEALTH IN 1912.

The first section of the annual report to the London County Council of Dr. William Hamer was dealt with on pages 939–940 of the BRITISH MEDICAL JOURNAL of April 25th. The second section refers to administration, with which the London County Council is much more concerned, under special powers conferred on it from time to time by Parliament, than are other county councils. It is at times indeed difficult to say exactly which matters are dealt with by the County Council and which by the metropolitan borough councils.

Dairies, Cowsheds, and Milkshops.

Twenty years ago there were nearly 500 cowsheds in London, but in 1912 this number was reduced to 180; in

every borough there is at least one, the largest number (32) being in Stepney. Of registered milkshops there were in 1912 as many as 7,516, of which 638 were in the City of London. Since 1899 the cows in the London cowsheds have been periodically examined by the County Council's veterinary inspector with a view to the detection of cows suffering from tuberculous disease of the udder, and in 1912 there were made six such inspections of nearly 3,000 cows. It was found that 22 cows were suffering from the disease, and these were slaughtered, compensation being paid to the owners. Under the General Powers Act of 1907, the medical officer of health is empowered to take, within and without the county, samples of milk produced or sold or intended for sale within the county. Samples of milk are also taken by the Council's inspectors from churns of milk consigned from the country to the various London railway stations, and these are submitted to the Lister Institute for bacteriological examination. In the case of those samples in respect of which the examination proves that there is evidence of the presence of tubercle bacilli, a clinical examination of the cows at the dairy farm from which the milk has come is made by the Council's veterinary inspector. During 1912 the number of samples taken was 2,991. The milk had been sent from thirty-four English counties and from farms in Wales and Ireland. The number of samples found to be tuberculous was 241, or 8.4 per cent. of the total number taken. In 1911 the percentage was 10.4. Of the samples from Derbyshire farms 14 per cent. were found to be tuberculous. The veterinary inspectors inspected 11,640 cows on 479 farms in 26 English counties, and discovered 63 cows with tuberculous udders. In nearly every instance in which a tuberculous cow or a cow suspected of being tuberculous was found, the farmer undertook to withhold the milk of the suspected animal from London.

Slaughterhouses.

The number of slaughterhouses in London is gradually diminishing, and in 1912 there were 234 licensed, compared with 537 in 1892. The largest number (29) is in Islington, and in Bermondsey and Holborn there is only one, while none are in Westminster. There are also 7 slaughterhouses under the jurisdiction of the City Corporation which are not licensed by the County Council.

Nuisances.

A few years ago there was frequent reference in the report of the medical officer of health to nuisances arising from the storage and removal of manure. The reduction in the number of horse-drawn vehicles has materially reduced nuisance from this cause, though Dr. Hamer points out that with the much smaller amount of manure which now accumulates there is increasing difficulty in getting it removed sufficiently often, and he suggests that the borough councils might more frequently use the powers given them by the Public Health (London) Act, 1891, to secure more speedy removal. The methods of removal of house refuse, which at one time were not creditable to the local authorities, have now very much improved, and throughout London the practice of at least one collection weekly has been adopted, while there is an increasing tendency to the view that a more frequent collection is desirable. In Westminster a system of daily collection is in force throughout a large part of the borough, and in other districts house refuse is collected daily from tenemented blocks of dwellings and in certain specified parts of the borough.

Underground Rooms.

The number of underground rooms dealt with during 1912 was 1,157, and 711 were either closed or their occupation was discontinued. In ten boroughs regulations had been made with respect to underground rooms. The Holborn Council considered regulations drafted by the medical officer of health, Dr. W. A. Bond, but did not proceed further with the matter.

Common Lodging-houses.

In 1895 there were 626 registered common lodging-houses with authorized accommodation for 29,574 lodgers. This number was reduced in 1912 to 351 houses, with accommodation for 27,100 lodgers, thus showing that the tendency is to increase the size of the houses. The largest number of these houses is in Stepney, where there are 53. In Hampstead there are none, and in Lewisham and Stoke Newington one each. Inquiry was made with regard to 252 persons notified as suffering from phthisis, and with addresses at common lodging-houses. The place of birth of 33 per cent. was stated to be outside London, and in 54 instances a previous history of consumption in the patient's family was obtained. Information was also obtained in respect of 246 of the patients as to whether their illness began before or after they had resorted to that mode of living, and in 79 cases the onset of the illness was stated to date from a period prior to that when resort was made to common lodging-houses, while in 29 cases it was practically coincident with entry.

Homeless Persons.

For several years past an enumeration of homeless persons in London has been undertaken during the months of January or February. In 1904 there were found to be about 2,000, and there was year by year a gradual increase in the number until in 1910 there were about 2,800. In the two following years there was a diminution, until in February, 1912, the number enumerated was 1,203. Of these about 1,000 were men, 12 were young persons, and the remainder women. The number of vacant beds in common lodging-houses on the night of the enumeration in 1912 was 5,642 for men and 1,082 for women, so that there would appear to be a sufficiency of accommodation in London for this class of person.

Midwives.

The number of midwives giving addresses in London whose names appear on the roll of midwives was 4,985; of these 2,906 held certificates from the Central Midwives Board, and 247 were in bona fide practice a year prior to the passing of the Midwives Act, 1902. It appears that medical assistance was required by midwives in about 12 per cent. of the cases they attended, in 7.8 per cent. on behalf of the mother, and in 4.2 per cent. on account of the child.

Ophthalmia Neonatorum.

The Council's inspectors investigated 385 cases of inflammation of the eyes of infants. In 298 cases a complete cure was reported, in 4 there was impairment of vision, 20 died while still suffering from the disease, and in 63 instances the result could not be ascertained owing to the removal of the parents, who could not be traced.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Changes in the Medical Curriculum of the University of Edinburgh.

Changes of a somewhat far-reaching character have been made in the arrangement of the classes in the medical curriculum at the University of Edinburgh. It has been known for some time that such changes were pending and that intelligences, official and unofficial, were being exercised in endeavouring to find a perfect scheme with neither crowding nor confusion in it. Several likely plans were brought forward, only to collapse in face of some fatal practical difficulty, but it is to be hoped that that now appearing in the University Prospectus of the Faculty of Medicine will prove successful.

The first modification is in the naming of the anni medici. Formerly the five years began with the session, summer or winter, in which the student began his studies; if he commenced in summer, that summer and the following winter constituted his first year; if he made a beginning in winter, that winter session and the following summer constituted his first annus medicus. Now the first year begins with the winter always; if the student begins in October, his first year includes the two winter terms (before and after Christmas) and the following summer term; if he begins in the summer (April), that summer term is not counted as part of his first year, which runs from the following October on to the end of the next summer term. The first summer term seems to belong to no year, yet it is "strongly recommended by the Faculty of Medicine that study should begin in the summer session," and—a matter of import—the examination in botany and zoology is taken at the end of it. This is the

first change; each year begins with the winter session, consequently, since the fifth year ends with a summer term, the whole curriculum for the student beginning in summer consists of five years and a summer.

The second change is that each year consists of three terms of, roughly, three months each—two in the winter and one in the summer. The value of the division of the winter session into two terms becomes manifest when the later years are considered, in which, for instance, one section of the men of the year attends dermatology before Christmas and another (different) section after it. It is a little confusing at first, but it will probably work out rightly when once set going.

The third change—and it is the most important—is in the order of the classes. Let us suppose that the student has begun in summer; in the summer term at the end of his second year (formerly called his third summer) he must now take pathology (practical) thrice weekly, pathology (morbid anatomy), surgical out-patients, clinical surgery, and practical materia medica; formerly he took practical pathology, practical materia medica, hospital practice and *post-mortem* examinations, and vaccination. He has no examination at the end of this term. Next come the first and second terms (winter) of his third year; in them he takes out medicine (*nota bene*), pathology (morbid anatomy), clinical medicine, materia medica, and pathology (including elementary bacteriology). Formerly he took out at this stage surgery, clinical surgery, materia medica, and pathology, so that a great change is effected here between medicine and clinical medicine and surgery and clinical surgery. At the end of this (third) year (winter) the examination in pathology and materia medica is passed. In the summer term of the third year the student takes out medical out-patients, vaccination, and dispensary practice, whereas formerly he took out ophthalmology, diseases of the skin, clinical medicine, and mental diseases. This brings the undergraduate to the beginning of his fourth year (winter terms), and in these two terms and in the succeeding summer term the arrangements are so novel and so complicated that they must be put in tabular form as they appear in the schedule:

FOURTH YEAR.

Winter (First Term):

Surgery		9-10
Midwifery (including Gynaecology)		10-11
Sec. A, Diseases of Skin Sec. B, Diseases of Eye Sec. C, Diseases of Ear, etc.	11-12. Clinical Surgery,	12 2
Dispensary Practice Infectious Diseases (once weekly)	Afternoon	
Anaesthetics.		
Optional classes (for example, History of Medicine, Physical Methods in the Treatment of Disease, Neurology, Applied Anatomy).		

Winter (Second Term):

Surgery		9-10
Midwifery (including Gynaecology)		10-11
Sec. A, Diseases of Ear, etc. Sec. B, Diseases of Skin Sec. C, Diseases of Eye	11-12. Clinical Surgery,	12-2
Mental Diseases (twice weekly)		3-4
Infectious Diseases (if not previously attended) Dispensary Practice Practical Midwifery	Afternoon	

Summer Term:

Operative Surgery		8-9.45
Public Health		10-11
Sec. A, Diseases of Children Sec. B, Diseases of Ear, etc. Sec. C, Diseases of Skin	11-12. Clinical Medicine,	12-1.30
Forensic Medicine		2-3
Infectious Diseases (if not previously attended)		Afternoon

Compared with the old plan this arrangement is fundamentally different, for in these sessions formerly the student attended medicine, midwifery, clinical medicine, infectious diseases, diseases of the ear, nose, and throat (in winter), and operative surgery, public health, diseases of children, hospital practice, forensic medicine, and dispensary practice (in summer). There has been, therefore, a change in the subjects, and, of greater importance, a splitting up of the men of the year into three sections (A, B, and C) to permit of them all taking the special subjects in rotation and without overcrowding. Sections A, B, and C attend these special classes, which are held thrice weekly, and on the two remaining days they all attend clinical surgery at eleven o'clock. It is very ingenious if somewhat complex. Practical midwifery in the "afternoon" sounds a trifle grotesque, for parturition is not usually accommodating in the matter of hours for attendance, but it may be explained that the part of practical midwifery referred to is the clinical work at the hospital; the actual cases may, and often do, occupy nocturnal hours. The student now passes his professional examination in forensic medicine and public health, and comes to the beginning of his fifth year (winter terms). Here is the schedule:

FIFTH YEAR.

Winter (First Term):

Clinical Gynaecology		10-11
Sec. B, Diseases of Children		11-1
Sec. A, Diseases of Eye, 11-12. Clinical Medicine...		12-1.30
Sec. C, Clinical Medicine or Clinical Surgery Dispensary Practice Practical Midwifery Optional Classes	Afternoon	

Winter (Second Term):

Clinical Gynaecology		10-11
Sec. C, Diseases of Children		11-1
Secs. A and B, Clinical Medicine or Clinical Surgery		12-1.30
Dispensary Practice Practical Midwifery	If not previously attended. Afternoon	

Summer Term:

Clinical Work in Hospital.

Then comes (in this last summer term) the final professional examination in midwifery (including gynaecology), surgery, and medicine, and corresponding clinical examinations. It should be added that examinations are held in the subjects of the first, second, and third professional examinations in March, July, and October, and in the final examination in June and December. An attempt has been made to outline the most important changes, but the whole plan is so packed with novelties that only a strict comparison of the last year's calendar with the present schedule brings them all out. There are, of course, opportunities for criticism in so complicated a scheme, and one or two questions may be asked. What, for instance, has become of *post-mortem* examinations? Probably they appear under the new heading of pathology (morbid anatomy), but it would have been well to have indicated that fact. A temporary inconvenience will be the crowding of the medicine class next winter, when the men of two anni medici will be taking it out, and a corresponding scarcity of students on the benches of the surgery classroom.

The plan will be tested in practice, and it must be accorded the approbation due to a serious attempt to utilize every hour of available time and at the same time to distribute a large number of students in such a fashion as will allow limited numbers to come into close touch with specialities requiring nearness for their adequate presentation. There is a single great foreboding; it touches the unfortunate students who fail at any stage to pass the examination then due to be overcome. For the man who, with clock-work regularity, strikes the hour at each examination, well and good; he will advance promptly and will arrive timeously; but for the men who fail there may be some wandering about in a labyrinth of untaken or untakeable classes.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

FINANCES OF THE DUBLIN HOSPITALS.

THE financial condition of the Dublin voluntary hospitals is at the present moment becoming a serious matter. A large number of them, if not all, have large overdrafts with their banks, and these are increasing year by year. At the annual meeting of the Governors of the Meath Hospital and County Dublin Infirmary, held last week, the report for the year ended March 31st, 1914, stated that the financial year opened with a debit balance of £8,509. The total expenditure was £7,504 and the total ordinary income £6,801, showing a deficiency on the year of £702. The report stated that this serious deficiency of income, compared with expenditure, which unfortunately had recurred year after year for some time, had resulted in the accumulation of the present balance against the hospital of £9,211

The managing committee much regretted this unsatisfactory condition, which had been caused largely by their efforts to meet as far as possible the demands made by the sick poor, who daily and in increasing numbers sought admission and the relief the hospital was capable of affording them. The discoveries made in late years in medicine and surgery, and the consequent necessity of providing new apparatus and appliances, together with the growing cost of various commodities, added to the expenditure, while the ordinary income did not increase in proportion. Sir Horace Plunkett, in moving the adoption of the report, said that he thought the failure of the subscriptions to increase sufficiently to meet the increasing expenditure was due in the first place to the fact that the cost of living was increasing by leaps and bounds, and, secondly, that there was a feeling on the part of some people that the State, through the Insurance Act, was entering more and more into the realm of what was formerly private enterprise. The same tale might be told of several of the other hospitals. In most cases the deficit is not so large, but in two at least it exceeds £5.000. Unless some means can speedily be found of increasing their revenue there will be no alternative but to reduce the amount of work that is being done by these institutions.

Poliomyelitis in Tyrone.

At the Cookstown Rural Council meeting last week it was reported that since the last meeting four deaths from poliomyelitis had occurred in an Arboe family living near the Lough Neagh shores; two of the deaths had taken place in the Union Hospital in Cookstown and two in a house in the Stewartstown Dispensary district. Three other cases were, it was hoped, on the way to recovery. Dr. Burgess of Coagh was in charge of the cases. Dr. Harris, medical officer of Stewartstown district, reported that on receiving intimation of this fresh outbreak of the disease from Dr. Burgess he had informed the Local Government Board, and an inspector had attended and conferred with him and the sanitary subofficer. They had arranged to disinfect all the houses in which the disease had previously been and the church and school. Every precaution was being taken to abate the disease and prevent its spreading. Dr. Harris suggested that all the patients should be removed to the infirmary or workhouse hospital, or in preference that a large isolated house should be secured in which the cases could be treated by a staff of nurses. The council came to the conclusion that for the present the fever hospital was ample to meet the requirements.

Antivaccination Agitation.

Dr. Kinsella, Killenagh, reported last week to the Gorey Board of Guardians that there had been no person vaccinated in his district during the past half-year, and Dr. Murphy, Coolgreany, reported that for the same period there were 335 vaccination defaulters in his district. At a meeting of the Castlerea Board of Guardians Dr. J. A. Coen reported that there were 103 vaccination defaulters in the Ballaghaderreen dispensary district of the Castlerea Union. An order was made that ten of the oldest offenders should be prosecuted. It was reported at the Wexford Board of Guardians that there were 1,000 vaccination defaulters in the Wexford dispensary district, and 86 in the Taghmon district. The clerk said that very few children in the union were being vaccinated.

Dr. Darling, of Lurgan.

At the last meeting of the Poor Law Board of Guardians, held on April 30th, a well-merited tribute was paid to the indefatigable labours of their medical officer, Dr. J. S. Darling, who has spent twenty-four years in the services of the board. Mr. Johnston, in proposing an increase of salary of £50 per annum, made reference to "the skilful operations that he performed in the infirmary, the care and devotion which he gave to the patients, and the interest which he took in the institution generally." The motion was cordially supported by many members and passed unanimously.

Dr. Darling is the Honorary Treasurer of the Ulster Branch of the British Medical Association and the tireless Secretary of the Portadown Division. He has served on many committees of the Association in recent years, and his fellow members will be the first to acknowledge his services. The Poor Law infirmary at Lurgan has been improved out of recognition during his term of office, owing chiefly to his continued efforts in urging the board to bring the institution to high-water mark. The profession in Ulster, and foremost those of his own town and Division, will offer him warm congratulations.

Health of Belfast.

At the meeting of the City Council on May 1st the medical officer reported 197 notifications of scarlatina during the previous month; this shows that the epidemic of this disease, although diminishing, has not yet died out. Although the Public Health Committee appointed extra officers specially told off for the investigation of the disease and the causes of the continuance of the epidemic, no new light has been thrown on the problem.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

Vaccines and Antitoxins.

The Provincial Board of Saskatchewan now supplies antityphoid vaccine free of charge to the various municipalities in the province. The only stipulation made is that it shall be administered by a competent person. In Ontario arrangements have been made by the Provincial Board of Health, whereby local boards of health and druggists may obtain diphtheria antitoxin at a reduced charge. The efforts of the Provincial Board of Health of Ontario to make the various vaccines available at a low price are to be supplemented by the Department of Hygiene of the University of Toronto. The department has undertaken to prepare and distribute diphtheria antitoxin, tetanus antitoxin, antimeningitis serum, and rabies vaccine at a price only slightly above the actual cost. The proceeds of the sale of these substances, after deducting the expenditure incurred in their preparation, will be applied to research in preventive medicine and hygiene.

Congresses.

The annual meeting of the Ontario Medical Association will take place at Toronto on May 26th, 27th, and 28th. The address in surgery will be delivered by Dr. Finney of Baltimore, who has chosen as his subject "The causes of failure in operations for cholelithiasis." The address in medicine will be given by Dr. Libbman of New York, and that in obstetrics by Dr. Watson of Toronto.

The fourteenth annual meeting of the Canadian Association for the Prevention of Tuberculosis will take place at Halifax, Nova Scotia, on July 13th and 14th next.

The sixth congress of Médecins de la langue française de l'Amérique du Nord will be held at Quebec from August 31st to September 3rd next.

The fourth annual congress of the Canadian Public Health Association will be held at the twin cities of Fort William and Port Arthur, September 10th, 11th, and 12th next.

A Health Congress and Exhibition is to be held under the auspices of the Victoria Medical Society in connexion with the Dominion Exhibition which is to take place at Victoria, British Columbia.

Fishermen's Hospital Ship.

A proposal is now under consideration to maintain a hospital ship in the Atlantic waters for the relief of fishermen in case of sickness or accident. There are a large number of Canadians in the American fishing vessels, and the need for such ships is very great; in case of accident, frostbite, or other ills, much suffering might be averted if such a hospital were at hand. It is proposed that a schooner of the 95 ton semi-knockabout type should be fitted up for the purpose and placed in charge of a medical man.

Immigration.

The Government immigration building which has been erected on St. Antoine Street, Montreal, was formally opened on Monday, April 20th, by the Hon. Dr. Roche, Minister of the Interior. The building is large and comfortable and consists of four stories; it contains a hospital, which is situated on the second floor. Immigrants passing through Montreal will be able to obtain accommodation there free of charge, on condition that they

purchase their own food. The building will also be used for the detention of immigrants who are to be deported. Last year the immigrants amounted to 385,000, and of these 1,200 were deported. A four-story quarantine hospital is to be erected by the Dominion Government at Grosse Isle, Quebec.

The Dominion Government has appointed Dr. F. R. Gow to the post of chief medical officer and inspector for immigration at Halifax, Nova Scotia.

India.

Mosquito Nets.

In the annual report of the Sanitary Commissioner with the Government of India for the year 1912, which has recently been issued, the following paragraph occurs:

> The question of malaria prevention was discussed last year, and there is nothing to add. Until the use of mosquito nets by troops is general it is unlikely that we shall obtain any great reduction in malaria prevalence. The Government of India have definitely decided to incur no expense in providing nets for soldiers other than in a few selected places; the provision, therefore, of these protectors for the men depends entirely upon regimental initiative. We are able to record a slow but steady increase of the use of nets by soldiers in barracks. Many are provided regimentally, and a few are private purchases by the men themselves.

We have received from a correspondent in India a note upon the subject, pointing out that the report indicates that:—

> In 1912 there were 6,211 admissions to hospital among the 71,000 British soldiers stationed in India that year, which were caused by the mosquito-borne diseases, malaria and dengue. Twelve lives were sacrificed, and the health of three men was so broken that they were invalided to England; 80,000 days' service were lost by these maladies.
>
> Another fly-borne disease—sandfly fever—accounted for 2,163 admissions, and a stay of 15,000 days in hospital. Moreover, there were also 1,506 admissions, and a loss of 22,000 days' duty recorded under the term of "pyrexia of uncertain origin"; the majority of these cases were illnesses attributed to the mosquito or the sandfly. Preventable fly-borne diseases, therefore, attacked some 9,000 of our 71,000 soldiers quartered in India in the year 1912, and caused a loss of service of approximately 110,000 days.
>
> Looking at the question from the economic side, it is calculated that a British soldier landed in India has cost the public about £200. Hence, the loss entailed by the death of the twelve men from malaria amounted to £2,400. The waste of the 110,000 days' service which were spent in hospitals, the upkeep of which is costly, represents a loss of about £20,000. The abolition of fly-borne diseases in India will effect an annual saving of over £20,000. Now, such a sum would purchase mosquito nets for the whole British army in India, and, as nets may remain serviceable for several years, there seems no valid financial reason why these most important safeguards against disease should not be supplied to each of our troops serving in the tropics.
>
> For an army to be effective it must be healthy. A sick soldier is worse than useless to the fighting machine; he is an expensive encumbrance. In 1912 there were approximately 300 men in our British Indian army who were constantly incapacitated by preventable illness conveyed by flies.
>
> The British soldier when in India gains nothing except a shilling a day pay, and runs the risk of a shattered constitution. It is the duty of the Indian Government to protect him against the avoidable baneful effects of his enforced exile.

Milk in Madras.

The necessity of obtaining a pure milk supply, in the interests of public health and for the prevention of infant mortality, is receiving increasing attention from Government and public bodies in India. A municipality could not conduct a dairy farm with any chance of success, even in a place like Madras, where milch cattle are to be found in plenty and where fodder is more or less available in abundance, while good grazing grounds could possibly be provided for some months in the year. It is considered that all municipalities can do is to assist private enterprise and develop it on healthy lines. An experiment at Benares has resulted in a considerable measure of success. A society was formed through the exertions of a public-spirited gentleman, and is looked after by him under the guidance of the Registrar of Co-operative Credit Societies. The principle on which it was formed was that advances should be made to the members of the society to purchase good milch cows and buffaloes, the animals to be kept in the society's premises or taken there for milking. The milk is sent in locked cans to the society's shops in the city and sold at a uniform price which does not vary during the year. Two difficulties hamper the society—the cost of transport from the society's farm and the competition of milkmen who sell adulterated milk. Motor lorries are to be employed, and the health officer will probably reduce the adulterated supply. If the routine examination of milk were undertaken by the Health Department, and the municipal authorities insisted on milkmen stabling their cows properly, such a society should do well in most Indian towns, and especially in Madras.

Special Correspondence.

BERLIN.

The German Surgical Society: Von Eiselsberg on the Radio-therapy of Malignant Tumours: Kocher on Thyroid Transplantation: Haberer on Operations on the Thymus Gland.—The Etiology of Landry's Paralysis.—The Friedmann Polemic.

At the annual Easter meeting of the Deutsch. Gesellschaft für Chirurgie held here last week, Professor Eiselsberg, of Vienna, reported some interesting results in the treatment of malignant tumours with radium and *x* rays. In the main he agreed with other authorities that prophylactic—that is, post-operative—irradiations were decidedly valuable, but expressed the strong conviction that curative exposures should only be given in cases of inoperable cancer. By far the best results had been obtained in cases of the rodent ulcer (*Basalzellen* carcinoma) type, in which he had to record the cure of seven out of nine patients. Oesophageal stenosis due to carcinoma was usually relieved for a time by radium emanations, but the stenotic symptoms recurred, owing, as he believed, to the effect of a radium burn. This suggested that the technique of the applications required revision and improvement. Not only were the rays non-specific for malignant neoplasms, but the result of their destructive action on normal tissue was occasionally the production of a high degree of febrile reaction and cachexia.

Professor Kocher of Bern reported on the permanent results of thyroid transplantation in cretins, cachexia strumipriva, and cases of myxoedema, amounting in all to a total of 93 persons so treated. In 23 cases the results were good, and 18 cases showed improvement, but could not be tabulated among the cures, as they had to continue the ingestion of thyroid by the mouth even after transplantation. The peritoneum, the marrow of long bones, and the spleen were the sites usually selected for the graft, but the last named had given the best results.

Professor Haberer of Innsbruck read a paper on removal of the thymus gland in cases of Graves's disease and simple goitre. In 8 cases of the former malady and in 7 cases of struma complicated by thymus hypertrophy, and in 1 case by severe myasthenia, he had removed portions of both thyroid and thymus glands. In 2 cases only was thymectomy alone performed. One of these was a patient with the exophthalmic syndrome, in whom a partial thyroidectomy had previously been performed more than once. This patient had so far improved that he had since been able to resume his mountaineering without ill effect. The other patient was the above-mentioned case of severe myasthenia, in whom also the symptoms improved. All the 16 cases had healed perfectly, and were now in excellent condition, after periods varying from a few months to a year and seven months. The exophthalmic cases were clinically cured, but the blood picture had returned to normal in only one of them, and in 3 cases, in spite of the clinical improvement, had actually become aggravated. In conclusion, Professor Haberer advised the combined operation in all cases, both simple and exophthalmic, in which a thymic hyperplasia was demonstrable, and in all cases of simple struma in which it was not apparent to clinical examination.

Some time ago Dr. Leschke, who was then working in the General Hospital at Hamburg, instituted a series of experiments on the nature and infectivity of Landry's paralysis. These experiments he has now brought to a

successful conclusion at the Charité in Berlin. His material was obtained from a typical case of the disease, in which an afebrile ascending flaccid paralysis led in a few days to death from medullary involvement. By special staining methods Dr. Leschke claims to have discovered certain almost ultramicroscopic bodies both in fresh preparations from the spinal cord and in sections. Emulsions of the cord were injected intraspinally and intraperitoneally into rabbits and guinea-pigs, but it was only in monkeys that positive results and consecutive inoculability were proved. The period of incubation varied between seven and twenty-three days, and the minute bodies above described for man were found, *post mortem*, also in the nerve ganglion cells of the ape. Cultivation experiments in ascitic fluid and ascitic bouillon were not successful.

Friedmann has not suffered the recent criticisms of his remedy in silence. He has published (in the *Deut. med. Woch.*) a vigorous criticism of the Rabinowitsch results. It will be remembered that the latter ascribed the frequent abscess formation after inoculation to impurities in the emulsion, but Friedmann maintains that they are due invariably to a specific hypersusceptibility of the patients, and could have been avoided in every case if his precepts had been followed, and an intercurrent intravenous injection given at the proper time. To Rabinowitsch's statement that a distinction must be drawn between a Friedmann culture and a Friedmann emulsion, he retorts that the two are identical, and combats energetically the indictment that his bacilli were pathogenic to mammals. The tubercles found by Rabinowitsch in the organs of an injected guinea-pig[1] were, he maintains, really quite harmless, non-progressive, and non-pathogenic formations, and claims to prove the innocuous nature of the emulsion by the results of his own series of animal experiments. He denies absolutely the possibility of his inoculated non-virulent bacilli assuming pathogenic properties at some future date, and offers in proof the fact that every one of the children of tuberculous families prophylactically inoculated by him two and a half years ago had since developed surprisingly well, and the von Pirquet reaction had remained continuously negative. Frau Rabinowitsch answered these assertions immediately, and called to witness the impurities actually demonstrated by Vulpius and Brauer,[2] and the fact that the patients who had developed abscesses had suffered from their effects for months. She complained also that Friedmann was still concealing his culture methods, and had refrained from publishing in detail the animal experiments which had led up to his inoculations in man. She reiterated her statement that the Friedmann culture and the curative emulsion are not identical, and also that the tubercles she had found in the guinea-pig which had died three months after inoculation were of a true caseating tuberculous nature, and had originated from the point injected. She concludes with the emphatic expression of the hope that the State will immediately interfere to prevent further prophylactic inoculation of the children of tuberculous parents.

Correspondence.

DEATHS AFTER SALVARSAN.

The scientific interest and practical importance of the subject discussed in the article published under this head in the JOURNAL *of May 2nd, p. 982, led us to send a copy of that article, and such other information as was in our possession, to Professor Ehrlich. We are indebted to him for the following interesting letter:*

[TRANSLATION.]

Dear Sir,—I am very much obliged to you for your kind letter and the details which you give with regard to the fatal case which has recently occurred. Since I do not know the exact symptoms of the patient who died in Guy's Hospital, I will not discuss this case, but I would not neglect the opportunity to explain here in a few lines the views at which I have arrived as to the origin of the nervous phenomena after salvarsan injection, and in particular encephalitis haemorrhagica.

The phenomena mentioned are indeed happily rare, but their origin is extraordinarily complex. In my address at the London International Congress I explained in detail that I associate these cerebral symptoms with syphilitic processes (especially the presence of spirochaetes in the meninges, that is, in the capillaries of the brain), and believe that through the dissolution of the spirochaetes and the escape of the endotoxins certain alterations occur, which only find expression after an incubation of several days.

The essential point in haemorrhagic encephalitis is a colossal dilatation of the vessels in the affected part of the brain, which may lead later to oedema of the brain and to perivascular bleeding. The dilatation of the vessels is, in my opinion, in close connexion with the salvarsan injection. I believe that the vascular system, altered by the endotoxin, is not indeed oversensitive to salvarsan as such, for otherwise the condition would appear immediately after the second injection (and the illness occurs especially upon the second injection of salvarsan), whilst it generally shows itself two days later.

This delay indicates that here a derivative of salvarsan has come into action, and I have previously expressed the view that this is an oxidation product, paraminophenylarsenoxide, to the irritative properties of which I have from the first directed attention. The formation of paraminoarsenoxide is favoured by all forces which cause a delay in salvarsan excretion, such as an overdose or presence of kidney disease. Under these conditions larger quantities of salvarsan than usual may remain behind in the organism, and succumb later to oxidation, forming the dangerous oxide.

But from the latest occurrences it seems probable that yet a third factor enters into the matter, which is perhaps the most significant.

The irritated vessels only undergo dilatation of so colossal a character under the influence of the arsenical substance, when the normal regulator of the vascular system, adrenalin, is present in insufficient quantities in the blood, as is the case in Addison's disease, and in hypoplastic processes occurring in the suprarenals (status thymolymphaticus).

Milian (Paris) has done a great service by discovering the significance of adrenalin in a number of salvarsan accidents. He showed that the accidents described by Hoffman and Jaffé and Meirowsky, which developed immediately after the injection of salvarsan, and were characterized by blue-red swelling of the face, lips, and eye borders, by dyspnoea, etc., may be completely avoided if adrenalin be injected before the salvarsan injection. He showed, further, that severe diarrhoea and suppression of urine, threatening life, which occurred after salvarsan injection, were cured by an injection of adrenalin. Supported by these observations Milian has, by means of energetic adrenalin treatment, saved an otherwise hopeless case of encephalitis haemorrhagica, in which on the second salvarsan injection the deepest coma ensued.

A further favourable result has been obtained by Privatdozent Dr. F. Pinkus in Berlin, in a case not quite so severe, and recently Dr. Milian informed me that Professor Fiocco, of Venice, had obtained still another success; in a case dangerously ill after salvarsan the coma disappeared after four injections of adrenalin, but after twenty-four hours it returned, and it was only after further treatment with adrenalin that the patient recovered. This case is, in my opinion, absolutely conclusive, since after the favourable result of the second course of adrenalin injections, it is to be taken as certain that the relapse of the coma was only due to excretion of the adrenalin between the first and second courses of injections of adrenalin.

I draw from these observations the hope that it will be possible, through a vigorous adrenalin treatment, to overcome this scourge of the salvarsan therapy in, it is to be hoped, a very large percentage of the cases.

You will see from the above remarks that I am absolutely against the view that the brain swelling (*Hirnschwellung*) signifies a simple arsenic intoxication, as has in several quarters been supposed. I believe, on the contrary, that we have to do here with a very complex process, consisting of at least three links, the details of which are now known to us, so that we can now avoid it, or, should it appear, combat it successfully in most instances.

[1] BRITISH MEDICAL JOURNAL, pp. 934–5.
[2] BRITISH MEDICAL JOURNAL, p. 993.

The patients specially threatened with encephalitis haemorrhagica are, as is known, those in whom the brain in the early secondary period of syphilis is flooded with spirochaetes. I have, during recent years, over and over again insisted that in these conditions we must not attack the disease with a bludgeon (*mit Hammerschlägen*) in the form of large doses, but must gradually steal in and get rid of the parasites gradually. For this purpose, in such cases—as is done, for instance, by Gennerich—a thorough course of mercury should precede the salvarsan treatment, and the dose chosen for the first injection of salvarsan should not be high. My views on this point are summarized in the book of Meirowsky and Kretzmer, from which I forward an abstract of the part which bears on the present matter.

When all the above-mentioned precautions are followed we may cherish the certain hope that the number of cases of encephalitis will no longer give occasion for hesitation. But should a threatening condition, in spite of all, ensue, the observation of Milian gives us a means whereby even here, through energetic and systematic treatment with adrenalin, it is possible to save the patient. A single injection is, in such conditions, naturally not enough; we must give the adrenalin treatment as strongly as possible and as long as is necessary to obtain the desired result.

It follows from what has been said that the demonstration by chemical examination of arsenic in the organs can offer no explanation at all of the etiology of this form of illness, for it is obvious that a few days after a salvarsan injection arsenic must be present in the organism. Such an examination would be of value only if it were possible to decide in what form arsenic was present in the organism, whether as unchanged salvarsan, or in the form of the poisonous oxide or—which does not seem to me probable—in the form of split-up arsenious acid. But a solution of this problem is, at the moment, not possible.

I shall be very pleased to give you any further information.—I am, etc.,

Frankfurt a/M., May 2nd. P. EHRLICH.

[Extract from Drs. Meirowsky and Kretzmer's *Die Salvarsantherapie der Syphilis*. (The Salvarsan Treatment of Syphilis, with its Practical Results in Skin and Genital Diseases.) Third Year. Wiesbaden: Bergmann. 1914. Pp. 609-10.]

With this increase of the reaction a number of unfavourable influences are frequently associated: first, a decrease in the quantity of urine (*Wasserfehler*); second, traumatic influences (such as long journeys, over-exertion); next, constitutional causes (such as Addison's disease, status thymolymphaticus), diminished excretion of salvarsan in nephritis, conditions causing exhaustion (alcoholism), and a status nervosus due to other affections; fourthly, imperfect preparation of the solution, formation of arsenoxide; and, fifthly, the important part played by the number of spirochaetes present in the focus—the richer in spirochaetes this is, the greater the destruction of spirochaetes. Ehrlich therefore advises that smaller doses should be given for the first injection, especially when nervous disturbances—for example, headache, disturbance of sleep, spinal pain, rheumatic pains, general malaise, alterations in psychic behaviour, giddiness, nausea, vomiting, swimming before the eyes, tinnitus, and other symptoms which point to a more marked participation of the brain—are present. When, after the first injection symptoms arise, the second injection must also be a small one, and the treatment must be carried through with calomel. On the other hand, the treatment should be continued energetically, with increasing doses up to the maximum. Begin low, end high!

To quote Ehrlich's views: He does not ascribe the unpleasant occurrences after the use of salvarsan to a toxic property of the remedy—leaving aside those cases which have died with symptoms of acute yellow atrophy of the liver—but seeks their cause in the patients themselves, in the swamping of the organism, and especially the brain, with spirochaetes, by whose destruction Herxheimer's reaction is produced and leads to alarming symptoms. Ehrlich's words on dosage should be especially laid to heart. He repudiates large doses in the beginning, especially when nervous symptoms are present, and advises that the second injection should also be a small one should the first not be well borne.

THE WORK OF THE ASSOCIATION.

SIR,—Those of us who are interested practically in the work of the Association must appreciate the great debt of gratitude we owe to the members of the Council for their zeal in watching the interests of the profession.

To only two points shall I refer: Arrears of subscription £1,480, an enormous sum, representing 1,184 members, of course. Doubtless there are many men who are chronic offenders in this respect, but the figure I mention brings the matter home to us. Personally, I cannot help thinking that six months is a sufficient length of time to allow any member to be in arrear with his subscription.

The second point refers to membership of the Association: Resignations in 1913, 2,675. This mainly represents, I suppose, the malcontents. Now, I have ascertained the grievances of some of these gentlemen, not only in my own Division but in others. What are these grievances? (1) The Association "let us down" over the Insurance Bill; and (2) the Association has plenty of money and need not have raised the subscription.

1. As I have repeatedly pointed out, the Council was "let down" by us. The Council had a definite plan, and asked us, Do you agree with it? With an overwhelming majority we replied, Yes. Then the Council asked for subscriptions to the Central Defence Fund, as for a fight there must be ammunition. The response was, to say the least, disheartening. However, the Association went on with the campaign, harassed indeed by lack of adequate financial support. Then a pledge was prepared. We signed it, and forthwith broke it. Therefore, we are entirely to blame for any lack of success of our resistance scheme.

2. Men are saying that the Association has plenty of funds. This shows how carelessly the Annual Report of the Council is read. Others prophesy a still more serious fight with the Government in the near future and advise the Association to be prepared for the contest, and yet leave the Association as soon as the subscription is raised. I suppose we shall have a number rejoining at this time who having got all they can out of the Association will forthwith resign; and yet there are members of the profession who assert that we are united.—I am, etc.,

Bedford, May 3rd. S. J. ROSS.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—I have read with interest the objections raised in the Minority Report of the Council in Subappendix II[1] to the proposal that the suggested special fund should be administered by a trade union, and as a small amount of practical knowledge is worth a volume of theory, I believe it will be of service if I give some details showing that in actual working many of the objections which have been raised to a trade union of members of the medical profession are found to be without foundation.

I have the honour to be the chairman of the Union of Medical Practitioners—a trade union formed to protect the interests of the medical practitioners of Leicestershire and Rutland—and although the idea of a trade union for professional men was considered at first in some quarters to be a proposal of a very revolutionary character, yet we now find that within less than eighteen months after its formation no less than 212 are members of the union, being over 98 per cent. of those engaged in general practice in the two counties. This fact should, I think, effectually dispose of the theory expressed in Clause 2 of the Subappendix, as to the antipathy existing against a trade union, particularly when it is remembered that when our union was formed it was an entirely new idea, and the way for its reception had not been paved by the discussion which has since taken place, and which has tended to familiarize the profession with the idea.

Clauses 3 and 4 of the Subappendix do not attempt to suggest that the points raised in such clauses can be better met by a trust, and, taken at their highest estimate, are mere opinions that too much optimism has been expressed regarding the advantages of a trade union for securing cohesion among the profession. These opinions may or may not be found to be correct in practice, but, if a trade union failed to secure cohesion, a trust would be in precisely the same position.

Clause 5 of the Subappendix is also concerned with a theoretical objection to a trade union, which even if proved to be well founded could not be guarded against by a trust. The contention is that each member of the community considers merely his own interest in reference to the medical profession, and that no pressure could be brought to bear on the community who are the employers of the medical "blackleg." A practical knowledge of the working of a union shows that this is a most unfortunate argument to bring forward, as this is the case of all others which most aptly illustrates the advantage of a union. It

[1] BRITISH MEDICAL JOURNAL SUPPLEMENT, May 2nd, page 320.

has been found in practice that the fact that a medical man is or is not working in accordance with the rules of his union acts like a charm upon the working man, whose detestation of the "blackleg" is profound. The sympathy of the working man, who forms so large a part of the community, is one of the strongest arguments (outside the undoubted advantages of security for the funds) which the trade union idea has to offer.

Clause 6 of the Subappendix calls upon us to bear in mind that the main objects of trade unionism have already been obtained by the medical profession without recourse to this extreme. Well and good. How much more might we not have gained had we, in addition, possessed the further powers which registration as a trade union might have given to us?

Clause 7 reiterates many of the arguments of Clause 5, which I have already shown to be fallacious.

In Clause 6 we find set forth the advantages of a trust, and, whilst I agree that the presence of members of the Council of the British Medical Association on the council administering the trust would be most desirable, I have grave doubts as to whether representatives of the British Medical Association, or of the "unions, leagues, associations, and guilds," would quite appreciate the honour of holding seats on a council for the proceedings of which they might be held personally liable, even though they took no active part whatsoever in such proceedings.

Those of us who have urged upon the Association the desirability of protecting its fighting funds through the Trades Disputes Acts are greatly encouraged, not so much by the vote of the Council in favour of trade unionism, epoch-making as that vote is, as by the feebleness of the arguments put forward in the Minority Report in favour of a trust, as compared with those of the Majority Report in favour of a trade union.—I am, etc.,

R. WALLACE HENRY,
Chairman of "The Union of Practitioners" (Leicester).

May 4th.

THE INTRATHECAL TREATMENT OF TABES.

SIR,—In comparing the results obtained by my colleague Dr. Purves Stewart in the treatment of tabes by the intrathecal method, as published in the last issue of the JOURNAL, with those published by me in the JOURNAL of March 14th, I am struck by the fact that, while they agree in certain respects (for example, in the diminution of the pleocytosis and in the improvement of the lightning pains and inco-ordination), they show a striking contrast as regards the Wassermann and globulin reactions. In not one of Dr. Stewart's eleven cases did he succeed in converting a positive Wassermann reaction of the cerebrospinal into a negative reaction, and this in spite of the fact that his patients received on an average five intrathecal injections; whereas in three of the four tabetic cases quoted by me a positive reaction of the fluid was converted into a negative one after a single intrathecal injection, showing conclusively that the spirochaetes within the central nervous system had been severely hit by the remedy employed.

A similar contrast is observable in the two sets of cases as regards the globulin reaction. In the majority of Dr. Stewart's cases this reaction was uninfluenced by the treatment; in none did it disappear. On the other hand, in the three cases just referred to it disappeared after a single intrathecal injection.

I notice that the intravenous injections employed by Dr. Stewart contained either 0.3 gram of salvarsan or 0.45 gram of neo-salvarsan. In the cases quoted by me the latter drug was employed in 0.9 gram doses.—I am, etc.,

HARRY CAMPBELL.

London, W., May 4th.

PITUITRIN IN LABOUR.

SIR,—I notice that Dr. Edmund Hughes, in speaking of the use of pituitrin in labour, states that there is "a risk of *post-partum* haemorrhage." I have used the drug in seven consecutive cases, on each occasion when the os was fully dilated, and on each occasion severe *post-partum* haemorrhage occurred. I might also state that I attend on the average 150 confinements a year, and have, apart from the cases stated, never experienced *post-partum* haemorrhage.—I am, etc.,

W. E. LEVINSON, M.R.C.S., L.R.C.P.

Luton, Beds, May 3rd.

POOR LAW MEDICAL OFFICERS' DEPLETED INCOME.

SIR.—May I be permitted to draw attention to the following paragraph published in this week's issue of the *Poor Law Officers' Journal*:

Medical Officers' Depleted Incomes.

It was reported at the Wrexham Guardians' meeting last week that about £100 was saved to the rates last year in respect of extra medical fees payable to district medical officers. The saving, it was stated, was the outcome of the National Insurance Act, and the amount expended under this head is now practically *nil*. This, of course, means that the medical officers have lost the income from the class of work which in most unions has been regarded as somewhat counter-balancing the unremunerative work in other directions, and which still remains as part of the duty of the medical officers. The income of the medical officers has certainly been affected adversely by the National Insurance Act in many unions, and in this list Wrexham will now have to be included.

Many boards of guardians have considered the propriety of reducing the salaries of district medical officers on the plea of reduction in their duties owing to the National Insurance Act. Some have actually done so, but up to the present no board has taken into consideration the pecuniary losses suffered by the same officers through the working of the said Act. This is a palpable instance of the injustice that is being done to Poor Law medical officers throughout England and Wales. Not long ago Dr. Holder, a Poor Law medical officer of many years' standing of the Sculcoates Union, drew the attention of his board to this loss, and was told that he was amply compensated through the increase in his practice through the panel.—I am, etc.,

MAJOR GREENWOOD,
Honorary Secretary, Poor Law Medical Officers' Association of England and Wales.

London, E.C., May 1st.

INSPECTORS OF THE MENTALLY DEFICIENT.

SIR,—You courteously granted me space for a letter on the above subject in your last issue (p. 994). It is gratifying to know that the second candidate has now sent in her resignation to the Board of Control.—I am, etc.,

JANE WALKER,
President of the Registered Medical Women's Association.

May 4th.

"ENCYCLOPAEDIA MEDICA."

SIR,—My attention has been drawn to a circular which has been sent round by Messrs. Green, of Edinburgh, calling attention to a work which is in process of publication termed the *Encyclopaedia Medica*. To this work a number of writers are said to contribute, and I find amongst them my own name, with the description after it "Master of Rotunda Hospital, and Professor of Midwifery, Dublin." As I, in my present position of Master of the Rotunda or in my former position of Professor of Midwifery, have never had anything to say to the work in question, I think some correction is necessary.

About the year 1898 I was asked to contribute some two or three articles to the *Encyclopaedia Medica*, and I contributed them. Since that time I have never had an opportunity of correcting what I wrote, nor have I been asked to do so for the edition which is in process of preparation. Consequently I consider that I should be doing wrong in not pointing out that any articles which are attributed to me in the forthcoming edition may or may not represent my opinions at the present time, and that I take no responsibility for them whatsoever.—I am, etc.,

HENRY JELLETT.

Dublin, May 5th.

*** We have received a letter from Dr. E. W. S. Martin, Brithdir, Glamorganshire, who informs us that one of the chief attractions which induced him to buy the *Encyclopaedia Medica* was the intention expressed by the publishers to keep it up to date by supplementary volumes, but that only one such volume has been published. Dr. Martin has written to protest to the publishers, who reply that they found that many subscribers objected to pay for further supplements, and that it was impossible to continue that system, especially in view of the fact that the earlier articles were now fourteen years old, and called for entire revision in a way which a supplement could not effect.

Obituary.

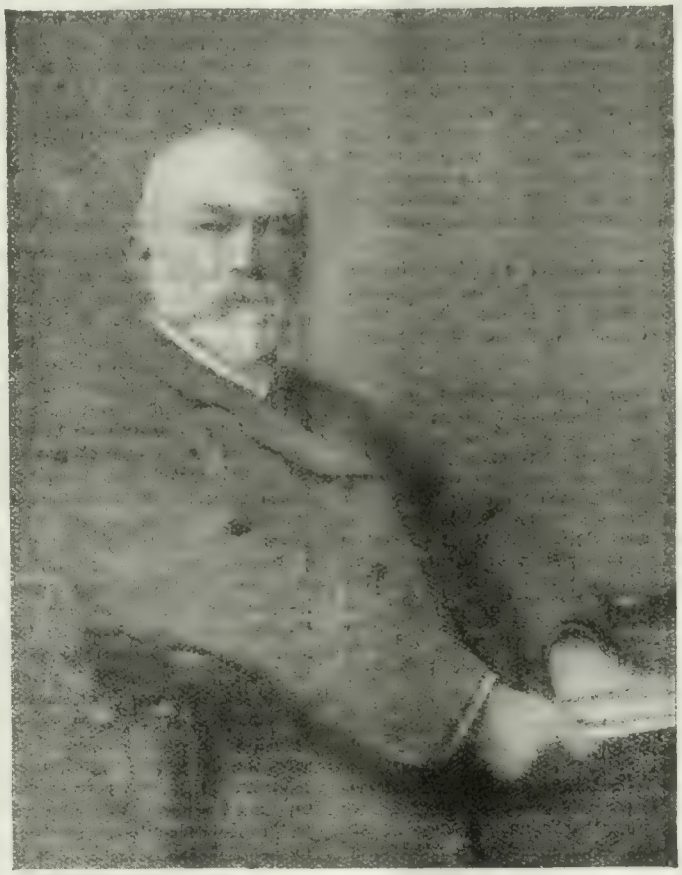
BONNER HARRIS MUMBY, M.D.ABERD., D.P.H.CANTAB.,

MEDICAL SUPERINTENDENT, BOROUGH ASYLUM, PORTSMOUTH; MEMBER OF COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

WE deeply regret to have to record the sudden death of Dr. Mumby of Portsmouth, which took place on April 29th. Dr. Mumby had attended the meeting of the Council of the British Medical Association in the previous week; he was then evidently not in good health and complained of symptoms of angina. On the evening of his death he was returning to Portsmouth from the neighbourhood of Southampton in a motor car with Mr. C. P. Childe and Dr. Atkinson Dove when he suddenly became ill and expired almost at once.

Bonner Harris Mumby was the son of Colonel Charles Mumby of Gosport, and received his medical education at University College, London, and the University of Aberdeen. He took the diplomas of M.R.C.S. and L.S.A. in 1879 and graduated M.B., C.M.Aberd. in the same year; he proceeded to the degree of M.D. in 1881 and in 1885 took the D.P.H.Camb. He began practice at Iver, Buckinghamshire, in 1880, and about two years later settled in Canonbury, N., where he remained until 1884, when he was appointed medical officer of health for Portsmouth. The duties of that office included those of public analyst and the charge of the Infectious Diseases Hospital.

While medical officer of health Dr. Mumby started systematic meteorological observations, and compiled life tables from 1881 to 1890, showing the life expectation of each age, and the effect of the altered conditions of life due to various sanitary improvements that had been carried out.



BONNER HARRIS MUMBY.
(Photograph by Swaine, London and Southsea.)

On the retirement of Dr. Bland from the office of medical superintendent of the Borough Asylum in 1896, Dr. Mumby was appointed in his place, and subsequently added to his duties those of business manager. He introduced many improvements into the asylum; he consistently supported the claims of the staff to considerate treatment, and owing to his efforts their accommodation and dieting were improved and salaries increased. Alderman Payne, late chairman of the Asylum Committee, in speaking of Dr. Mumby's work, said that he feared that its heavy character, and the close manner in which he attended to his duties, had caused the breakdown of health to which his death was due.

Dr. Mumby was for many years an active member of the British Medical Association; he was secretary of the Public Health Section at the annual meeting in Bristol in 1894, and of the Section of Psychology at the annual meeting at Portsmouth in 1899. At the time of his death he was honorary secretary of the Portsmouth Division, an office which he had held for seven years. He had been Representative of the Portsmouth Division from the establishment of the Representative Body until last year, when on his election by the combined Southern and Oxford and Reading Branches to be a member of the Council he resigned the former office. He was president of the Southern Branch in 1906, and at the time of his death was chairman of the Public Health Committee of the Association.

Dr. Mumby inherited from his father an active interest in the volunteer movement, and was for some years a medical officer of the 3rd Volunteer Battalion (now the 6th Battalion) of the Hampshire Regiment, and held the rank of Lieutenant-Colonel, R.A.M.C.(T.F.), 5th Southern General Hospital. He had been a Freemason for many years, and held high rank; he was for two successive years master of his lodge (United Brothers), and had been a provincial grand lodge officer, having held the rank of P.S.G.D.

We are indebted to Dr. HERBERT JONES, President of the Society of Medical Officers of Health, for the following appreciation of Dr. Mumby's public health work:

Dr. B. H. Mumby has been so well known as the Medical Superintendent of the Portsmouth Borough Asylum since the year 1896, that there is some danger of forgetting that he had acquired a prominent position as a public health officer during the previous ten years, as Medical Officer of Health of the Borough. In that time he carried out a large amount of pioneer work, the result of which is shown to-day, and an incident that occurred in the early days of his appointment proved his capability as an administrator. The friends of a patient who was suffering from small-pox refused to allow his removal to hospital; but upon Dr. Mumby threatening to have the house watched day and night, and to prosecute all those leaving it as exposing infectious persons and clothes in the public streets, they speedily gave way. Upon retiring from office as medical officer of health, Dr. Mumby was entertained at dinner by the members of the Drainage and Sanitary Committee of the corporation, and an appreciative resolution was passed by the committee expressive of their admiration of the services he had rendered the town. The resolution was subsequently engrossed on vellum and presented to Dr. Mumby by the town council. When he was elected at the last Representative Meeting of the British Medical Association on the Public Health Committee, that body had no hesitation in selecting him as its chairman, and his constant attendance at the meetings of the Committee, together with the keen interest he took in its work, has shown that the choice was more than justified, for he brought to bear a clear judgement and a knowledge of public health affairs which were of inestimable value to his colleagues. His premature death at a time when he was able and anxious to render service to public health must be regarded as a severe loss to the Association, and, indeed, to all medical officers of health.

To Dr. WARD COUSINS, who was President of the Association when it met in Portsmouth, we are indebted for the

following note: The medical profession at Portsmouth has unhappily lost during the past week a greatly esteemed colleague, and one who always enjoyed the entire confidence of those with whom he associated. Dr. Bonner Mumby was the possessor of a very kind, warm-hearted, and genial manner, which was manifested every day to all thrown in contact with him. His constitution was never very robust, and his health was occasionally disturbed by illness; still his courage and energy never failed him, and recently he appeared to bear the strain of his arduous duties much better than he had done for a considerable period. He held the important post of medical officer of health for the town and neighbourhood during several years, and afterwards was appointed unanimously by the borough county council to the position of medical superintendent of the Portsmouth Mental Hospital. Dr. Bonner Mumby was a devoted member of the British Medical Association, and ably discharged all the secretarial duties of the medico-political department of the Division; he also worked earnestly to promote the interests of the Southern Branch. Some years ago he was elected a Representative, and recently he had a seat on the Central Council of the Association. As an old friend of Dr. Bonner Mumby, it gives me great pleasure to bear testimony that in all the important offices he was chosen to occupy he exhibited marked ability and practical skill, and he never failed to receive the warm esteem of his colleagues, and, now that he has been called away from the work he so much loved, it is quite certain that his invaluable services and useful life will not be forgotten.

Of the esteem in which Dr. Mumby was held by his professional brethren in Portsmouth, further testimony has been borne by Mr. CHARLES P. CHILDE in a letter published in the *Portsmouth Evening News* of May 2nd. Mr. Childe wrote:

> To state that Mumby was popular would give an altogether commonplace and inadequate idea of the position he held amongst us. It is only the truth to say that he was literally loved by all who knew him. His warm-hearted and sympathetic nature, his cheery disposition, his loving interest in all around him, his readiness to undertake at all times his share and more than his share of any work that was doing, his transparently straightforward and human character, lastly the fortitude with which he endured his long and terribly painful illness, and the light-hearted manner in which he apparently brushed it aside, allowing it to interfere with none of his duties, were the admiration of all who knew him, and were qualities which rightly endeared him to all.
>
> Many times during the last few years he has to my knowledge been urged by his professional friends to relinquish some of his work and to take life more easily. Yet we find him to the day of his death not only attending as assiduously as ever to his onerous responsibilities at the asylum, but fulfilling voluntarily in addition the duties of our representative on the Council of the British Medical Association; of the Medico-Political Secretary of the Portsmouth Division, a post entailing an immense amount of work for which the profession owe him a deep debt of gratitude; active in the Territorial movement; and at all times taking a more than ordinary interest in any matter likely to be beneficial to the community in which he lived.
>
> Could he have been induced to sever his connexion with all or even some of these, it is more than probable that we should have had him longer with us, but it was evident that Mumby had, without making any parade of it whatever, resolved to die in harness, living his useful life to the very end, cheerily going his way as if he were the equal of the strongest, without ever a complaint or murmur at the terrible handicap imposed upon him. To those behind the scenes, to those who knew him intimately, it was pathetic, but all the same it was great.
>
> I am sure I am voicing the feeling of the whole profession in the neighbourhood when I say that his loss will leave us sensibly the poorer, that we shall miss him often, that his death will leave a gap which will not soon or easily be filled. Nobody, realizing that he has gone, could help but wish him back; yet nobody, knowing his sufferings, could regret the rest from them which he has found.

Dr. JAMES GREEN, Honorary Secretary and Treasurer of the Southern Branch, to whom we are indebted for many particulars in this obituary notice, writes: I cannot say what I feel myself after a close friendship of thirty years' standing. He was a charming companion, a patient and consistent friend, and one of the best organizers and administrators I have ever known. His minutes of meetings were models of conciseness and lucidity; the only defect was the writing, which one of his critics described as like a sphygmographic tracing. We all took a boyish delight in detecting a mistake in his figures or in his minutes, but we seldom got an opportunity. In committee his efforts were always directed to bring about peace if anything controversial turned up.

Dr. Mumby leaves a widow and several children, with whom much sympathy is felt.

The funeral took place on May 2nd, the first part of the burial service being held at the Portsmouth Borough Asylum Church, after which the remains were conveyed to Woking for cremation. The funeral was attended by the Mayor, members of the Committee of Visitors of the Asylum and of the Town Council, by many officers of the borough, including the medical officer of health, by members of the medical staff of the Borough Asylum and of the Grayling Mental Hospital, Chichester, and by many other members of the medical profession, including representatives of the British Medical Association.

JOHN ABERCROMBIE, M.D., F.R.C.P.,

CONSULTING PHYSICIAN TO CHARING CROSS HOSPITAL.

WE have to record, with great regret, the death of Dr. John Abercrombie, consulting physician to Charing Cross Hospital, to the Foundling Hospital, and at one time assistant physician to the Hospital for Sick Children, Great Ormond Street. Dr. Abercrombie retired from London to reside in Westmorland a few years ago. He had been in failing health for some year or two, and his death was due to cardiac failure.

John Abercrombie was the son of Dr. John Abercrombie for many years one of the leading physicians in Cheltenham. He was sent to school at Eton and Cheltenham College, and afterwards entered Caius College, Cambridge. He was a student at St. Bartholomew's Hospital, a contemporary and friend of the present Poet Laureate, and was house-physician to his uncle, the late Dr. Patrick Black, whose character and clinical acumen he always held in high esteem. He graduated M.D. Cantab. in 1880, and in the following year was appointed assistant physician to Charing Cross Hospital. In 1890 he became full physician to the hospital, and in the following year joint lecturer on medicine; he resigned in 1905, when he was appointed consulting physician. In 1886 he was elected F.R.C.P.Lond., and in 1898 he took the degree of M.D.Durh. (*ad eundem*).

In the Charing Cross Medical School from 1882 to 1901 he lectured on forensic medicine, treating it in no perfunctory fashion. He took great interest in the subject, wrote an excellent *Students' Guide to Medical Jurisprudence*, and, quite recently in conversation, showed astonishing familiarity with the details of the great medico-legal cases of that period. Subsequently he lectured on medicine, winning general approval in this subject, and especially in his clinical lectures. At the bedside he was too quiet in manner and too conscious of the many possibilities of a case which was not absolutely clear to give the forceful and dogmatic teaching which attracts a crowd. But his clinical labours found their reward in the devotion of a small band of students who went round with him regularly, recognizing that his visits gave them the opportunity of coming into real contact with the difficulties of cases and of seeing how a thoughtful man met them. Many a student later on expressed his gratitude for the training thus received. Among his colleagues Abercrombie was regarded as a very sound man. One of the most critical of them said that "if he wanted a second opinion he would as soon have Abercrombie as anybody." For some years Abercrombie acted as Treasurer of the Students' Club, looking after their finances and concerning himself in the management of their social and athletic affairs—matters which his nature would hardly have prompted him to take up save as a duty.

From 1884 to 1893 he was assistant physician to the Hospital for Sick Children, Great Ormond Street.

In 1890 he was appointed physician to the Foundling Hospital; in 1897 he was elected a governor in recognition of his services to the institution, and at the time of his death he was consulting physician.

To many it seemed that he never quite did himself justice; he was a man very easy to know a little, but not easy to know well. Only those who had the opportunity and took the pains to penetrate a crust of reserve fully appreciated the sterling qualities of his character, his hatred of injustice, and his readiness to give his friendship and unselfish aid where he felt they could properly be bestowed. In clinical medicine his chief interest in his earlier years of practice was in the diseases of children, a subject in which remarkable strides were being made. To the advance he himself made contributions of importance. He published a book on *Tetany in Young Children* in 1880, and contributed a paper on diphtheric paralysis to the *Transactions* of the International Congress of Medicine in 1881. He was a member of the Royal Medical and Chirurgical, the Pathological, the Clinical, and Ophthalmological Societies, was for many years a regular attendant at their meetings, and contributed to their *Transactions*. At the College of Physicians he filled the office of Examiner in Medicine for several years, and served on the Council.

During his earlier years in London, Abercrombie gave a good deal of time to medical journalism. He was assistant editor of the *Medical Times and Gazette*, a periodical which had then held for many years a high place among scientific medical journals. It was on a smaller scale than most weekly medical publications, and Abercrombie's power of giving the gist of an essay or discussion in relatively few words was particularly valuable to it. Brevity and directness were a characteristic of all he wrote, and corresponded to a quality of his mind which took him quickly to the heart of a subject. He was widely read, and had a generous appreciation of the work of others; but when, after careful investigation and consideration he had arrived at his own opinion on any clinical or pathological subject, he was difficult to move save by the production of evidence which seemed to him to be really new.

He was a Freemason, founder and Past Master of the Chère Reine Lodge connected with his hospital, and had passed through the chair of various Masonic chapters.

His pursuits were those of a cultured man with a strong artistic and archaeological bent. When the late Mr. Penrose made a journey to Greece to study the orientation of the temples, Abercrombie, then quite a young man, accompanied him and took an exceptionally fine series of photographs. This experience he repeated in Egypt, deepening and fixing his interest in the great works of antiquity. Later, as means increased, he bought with good judgement a small collection of pictures, chiefly early Italian; choice bits of furniture, and many other things of interest from many lands, until it was somewhat difficult to find room for them even in his bachelor house. Among his most treasured possessions was a portrait of Sir Patrick Dun, of whom he was a collateral descendant on the maternal side.

In 1900 he married Miss Evelyn Tobin, daughter of Mr. James Aspinall Tobin, of Eastham House, Cheshire, then "Sister Victoria." What deep happiness this step brought into his life, his friends soon knew and rejoiced in. In 1905 he decided to give up practice, bought Augill Castle at Brough, took thither, with his other treasures, a boy and a girl, and began to lead the life of a country gentleman. Mrs. Abercrombie and he made the Brough people their people. Working together, they did not tire of devising means to help the villagers nor slacken in their efforts to render them successful. And that they did succeed they must have known: it was so evident even to the many friends to whom they offered the generous hospitality of their beautiful house and countryside.

The funeral took place at Brough Church on May 2nd, and among the relatives and friends who attended was Mr. Stanley Boyd, representing the staff of Charing Cross Hospital. At the meeting of the Appleby Bench on the same day a resolution of condolence and sympathy was adopted.

An old friend and colleague writes:

When I first became acquainted with John Abercrombie he had secured, in close succession, his three valuable appointments at Charing Cross Hospital, the Sick Children's Hospital, and the Foundling Hospital. At the same time he was engaged with his professional friends in literary work, writing his textbook on *Medical Jurisprudence*, becoming first editor of the *Dictionary of Practical Medicine*, and contributing anonymously to more than one of the medical journals. But he took only a languid interest in writing, and this kind of work was soon given over to others. Under his own name he produced but little. He shunned publicity, being entirely happy in the wards, at the Foundling, and in his home. Abercrombie was a dilettante in the best sense of the word—musician, collector of pictures, especially of works of sacred art, many of them of great interest and value to the connoisseur. His ideal was high; the honesty of his purpose transparent. *Vive ut vivas* is the motto of his house, and no one was ever more loyal to his motto in every detail. One learnt this in following with him his day's routine. He never thrust himself on one, either by opinion or advice, for he was essentially unobtrusive. But when the moment came, whether in committee or at some social function, for a plan to be made, or a decision to be reached, he spoke and acted with such judgement and fitness as proved his thoughtfulness, and always his fairness. While deeply interested in medicine and a zealous physician and clinical teacher in the wards, Abercrombie was never ambitious of a large practice as a consultant. He would spend months in Greece or Egypt when others would have laboured in Wimpole Street. And so it came about that long before the usual age of retirement, both tastes and circumstances led him and his family, with his books and pictures, to a new home which he had discovered in one of the beautiful dales of Westmorland, a stone's throw from Brough. There his life was idyllic. In the day he would wander over his hundred-odd acres of grass land in a Norfolk coat, corduroy breeches, gaiters, and heavy boots. In the evening, at the head of his hospitable board or describing to his guests his pictures and other treasures of art, he was never seen in other than a velvet suit of the eighteenth century, with ruffles of lace, black silk stockings, shoes and buckles. Yet neither extreme of habit struck one as other than appropriate to the man, the place, and the particular occasion. One of the chief occupations of his life in retirement was quiet activity at Brough, in bringing relief to the poor, and in organizing and subsidizing thrift against the rent day and the holiday season amongst the working men and women of the place—an exercise of the strong disposition in that direction which he inherited from his Aberdonian forbears. His last illness was slow and long, and from the first practically hopeless. He bore it with calmness, patience, and fortitude, nursed day and night by his devoted wife. *Vive ut vivas* had for him and for her more than temporal significance.

Dr. F. W. MOTT, F.R.S., until recently Senior Physician to Charing Cross Hospital, writes:

Dr. John Abercrombie was a distinguished general physician and specialist in children's diseases, a subject upon which he made some important contributions to medical literature early in his career. He was wise and learned in his profession, but owing to a natural reserve he was not a brilliant teacher, yet as a clinician his opinion was always received with great respect by his colleagues, for they knew that it reflected a sound judgement based upon careful and accurate observation obtained during his long and varied hospital experience. In a difficult diagnosis he would carefully weigh the evidence and sum up the various points which either led him to come to a definite conclusion, to suspend his judgement, or to confess his ignorance; and it was this transparent honesty which made his opinion so valuable. His house-physicians, of whom many now occupy distinguished positions, recognized the great value they obtained from their appointment under him; consequently the office was much sought after. Dr. Abercrombie was not a showy, effusive clinical teacher, but students who made a practice of attending the wards when he visited the hospital, and who were bent on acquiring knowledge instead of being crammed with information, learnt much from his teaching. He was respected and beloved by all those who knew him intimately, including the staff and students

at Charing Cross Hospital; he took great interest in the administration of the school and hospital. When occasion arose he was firm in his support of what he knew to be just and right in regard to the filling of appointments or redressing of wrongs. Dr. Abercrombie was a most cultured man, interested in the arts and music, of which he was a good judge and critic. In his beautiful home near Brough, where he spent the latter years of his life, he delighted to entertain his old friends and colleagues; and those who have enjoyed this privilege will always remember him as "Honest John" on account of his high ideals and honourable character. What higher tribute could a man have had?

DR. ALFRED EDGAR WIGG of South Australia died in London on May 1st quite unexpectedly and very suddenly, and we venture to give expression to the deep regret of those who had the pleasure of his acquaintance in this country and of a very large number of friends in Australia. Only some three months have elapsed since Dr. Wigg retired from practice and started on a long visit to Europe. It was not his first visit, for though Australian born he received his professional education as a student of University College Hospital. He took the diplomas of M.R.C.S. and L.R.C.P.Lond., and the degree of M.D.Brux. in 1880; he returned shortly afterwards to South Australia, and living in Norward, near Adelaide, practised both in that locality and in the city itself. His special abilities lay in the direction of pediatrics, and as surgeon to the Children's Hospital in Adelaide he did very excellent work. He became connected with that institution very soon after his return to Australia, and continued to devote much time to its service until quite recently. A quiet-mannered, level-headed man, of marked ability, he habitually won the esteem of those with whom he was brought into contact, and very much more than the esteem of those who were other than mere acquaintances. The general body of the profession in Australia will feel his loss as well as his private friends, for he was a very old member of the South Australian Branch of the British Medical Association, and had rendered it most valuable service as auditor of its accounts, and in other capacities. Had he so willed, he might long ago have been president of the South Australian Branch, but his retiring disposition led him to decline that high office on the occasions that it was offered him. Dr. Wigg, who was in his 58th year at the time of his death, was married, and is survived by his wife and by two daughters, with all of whom much sympathy will be felt. The funeral service, which took place at Golder's Green Crematorium on May 5th, was attended by several medical friends from Adelaide and Sydney, some of whom were his fellow-students at University College Hospital. Dr. William Chisholm was with him at the time of his death.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Degrees.

THE following degrees have been conferred:

M.D.—L. B. C. Trotter.
M.B., B.C.—J. P. H. Davies.

Examinations.

The following candidates have been approved at the examination indicated:

SECOND M.B., PART II *(Pharmacology and General Pathology).*—J. C. Andrews, G. L. Attwater, S. L. Bhatia, A. L. Bodley, G. A. G. Bonser, E. D. Broster, M. Chadwick, G. D. Compston, E. V. de Souza, A. W. R. Don, E. Donaldson, J. R. Harris, A. G. Irving, L. W. Jones, J. B. Leather, F. G. Lescher, W. H. Marshall, C. G. T. Mosse, D. F. A. Neilson, J. H. Parry, C. F. Pedley, F. S. L. Piggott, J. S. Pooley, R. A. W. Procter, W. Raffle, C. M. Ryley, T. S. H. Schäfer, W. G. A. Schüddekopf, C. G. Schurr, H. W. Scott, B. H. Swift, E. P. W. Wedd, H. A. Whyte-Venables, S. M. Wilcox, A. T. Woolward.

D.P.H. *(Both Parts).*—C. H. A. Alderton, *J. H. Baldwin, H. W. Barnes, *E. H. Black, D. S. Brough, *Muriel C. Bywaters, J. Cairns, M. Carrasco, J. M. H. Conway, Lucy D. Cripps, G. da Silva, *H. L. Grabham, W. C. Gunn, J. S. Hall, H. D. Khoe, W. M. McKie, H. McLean, *M. Manson, F. O. N. Mell, J. Morison, J. C. Noronha, J. H. Peek, A. E. Rayner, W. B. Reid, E. H. Shaw, J. J. Sinclair, *E. C. A. Smith, N. W. Steinberg, A. M. Thomson, E. A. Walker.

* Passed with distinction in one or more subjects.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

THE Page-May lectures will be delivered by Mr. Keith Lucas, M.A., Sc.D., F.R.S., on Fridays, at 5 p.m., beginning on May 15th. They will deal with the conduction of the nervous impulse, and are open without fee to all internal students of the university and to such other persons who apply to the Secretary, University College, Gower Street, W.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Thursday, April 30th, Sir Thomas Barlow, Bart., K.C.V.O., the President, in the chair.

Admission of Members.

The following gentlemen, having passed the required examination, were admitted Members of the College:

Richard Robins Armstrong, M.B.Camb., L.R.C.P., George Ernest Beaumont, M.B.Oxf., L.R.C.P., Harold Black, M.B.Queen's Univ., Belfast (Birmingham), Arthur Neville Cox, M.D.Lond. (Brighton), Trevor Braby Heaton, M.B.Oxf., Geoffrey Hoffmann, M.B.Camb., L.R.C.P., William James O'Donovan, M.D.Lond., L.R.C.P., Frederick Paine, L.R.C.P. (Woodford Bridge, Essex), John George Porter Phillips, M.D.Lond., L.R.C.P., Arthur John Scott Pinchin, M.D.Lond., L.R.C.P., Thomas Henry Gostwyck Shore, M.B.Camb., L.R.C.P., Atul Krishna Sinha, M.B.Cal., L.R.C.P., Kenneth Douglas Wilkinson, M.D.Birm. (Birmingham).

Licences Granted.

Licences to practise physic were granted to 105 gentlemen who had passed the necessary examinations.

Election of Fellows.

The following Members were elected Fellows of the College:

Cuthbert Henry Jones Lockyer, M.D.Lond.; William Mitchell Stevens, M.D.Lond. (Cardiff); Arthur Stanley Barnes, M.D. Lond. (Birmingham); James George Taylor, M.D.Camb. (Chester); Dudley William Carmalt-Jones, M.D.Oxf.; Samuel Alexander Kinnier Wilson, M.D.Edin.; Hector Charles Cameron, M.D.Camb.; John Foster Gaskell, M.B.Camb. (Cambridge); Gordon Morgan Holmes, M.D.Dub.; Robert McCarrison, M.D.Roy.Univ.Irel. (Bombay); Frederick Gowland Hopkins, M.B.Lond. (Cambridge); Sir Alfred Henry Keogh, M.D.Queen's Univ.Irel.

Sir William Borg Leishman, M.B.Glasg., F.R.S., was also elected a Fellow under By-law LXXI (*b*), which authorizes the Council to nominate registered medical practitioners who, not being members of the College, have in its opinion distinguished themselves in any branch of the science of practice of medicine.

Communications.

The following communication was received: From the secretary of the Charity Commission informing the college that the commissioners have at present under consideration proposals for a scheme of consolidating the British Lying-in Hospital, Endell Street, and the Home for Mothers and Babies, Woolwich, and constituting a managing committee for the administration of the "Maternity Hospital and School for the Higher Training of Midwives," to the establishment and maintenance of which at Woolwich it is desired that the funds of the consolidated charities should be made applicable. The commissioners inquired whether the college would be prepared to nominate a representative on the managing committee. It was resolved to consent to the proposition.

Public Health
AND
POOR LAW MEDICAL SERVICES.

DROITWICH UNION INADEQUATE SALARIES.

THE difficulty between the Droitwich Board of Guardians and the local medical men with regard to the appointment of a medical officer for the Droitwich district was again brought up at the last meeting of the board, when a letter was read declining to insert an advertisement for the post in the BRITISH MEDICAL JOURNAL. The board decided originally to offer £90 for the post, but a letter was received from Dr. Foulds, on behalf of the local doctors, giving reasons stating why none of them would accept the position. He said the salary, together with the reduced fees for vaccination and midwifery cases, would not bring the total emoluments to more than £110 per year, as compared with £150 (£120 permanent and £30 fees) paid to the late medical officer. Thereupon the board offered £100, but Dr. Foulds had stated that the medical men regard the salary of £100 as inadequate. The Rev. Blackwood Price, in moving to rescind the resolution offering £100, said that it was impossible to go on without a medical officer, and evidently the guardians would not get one from the district or from outside at that salary. In reply to a question by a member, the Chairman, Sir Harry Vernon, said that they had to pay a salary to be approved by the Local Government Board. The resolution was lost by 8 votes to 3. Mr. Evans proposed that the Clerk should put the whole matter before the Local Governmens Board, asking for information and instruction as to what they ought to do. The resolution was carried, and it was decided to ask Dr. Cuthbertson, acting medical officer, to continue his services until June 21st.

GUARDIANS AND DOCTORS.

The Dispute at Burnley.

FOR more than fifteen months there has been a deadlock between the local profession and the guardians of the Burnley Union. In previous issues of the JOURNAL have appeared articles dealing with this dispute, which began in 1912 with the resignation of all the district medical officers of the union. The guardians then divided the whole area into fifteen districts and advertised for candidates. Owing to the opposition of the profession only three applied, and eventually these three were appointed to attempt to carry out all the outdoor medical work of the union. In 1913 the Local Government Board came upon the scene, and an endeavour was made to bring about a compromise by a conference between representatives of the local profession and the guardians, one of the Local Government Board inspectors presiding as chairman. There were several sittings of this conference, and it is possible that success might have been attained if the guardians had been willing to dispense with the services of the three practitioners who had accepted office against the wishes of the local profession. The representatives of the latter refused to budge in this matter, and it proved impossible to come to any satisfactory agreement. The guardians are apparently willing to reappoint all the old officers with a slightly increased salary, taking into consideration the diminution in the work in some instances, through new districts being formed out of the old for the existing medical officers. This is probably a concession on the part of the guardians, compared with what they were originally prepared to do. It is an increase from £365 in 1911 to £505 in 1914 in the total salaries of all the district medical officers in the union. But the pecuniary benefit to the old officers is largely neutralized by the fact that three outsiders are brought in to share with them. It must further be pointed out that even with the above concession the Burnley Union is far from being brought into line with the adjoining Blackburn Union. The latter, with an area of 45,853 acres and a population of 235,834, pays to its district medical officers £760 per annum, and the acreage of the Burnley Union is much larger and its population very little more. Dr. Bird accuses the Burnley Guardians of being "dominated by a spirit of hostility to their district medical officers," and so far as the earlier action of the guardians is concerned, he has abundant evidence to prove his charge. But considering the later phase of the dispute, it must be recognized that the guardians have shown some signs of an honest desire to come to terms. We do not say that their terms are generous or liberal by any means, but it must be admitted that the guardians are in a difficult position when required to dismiss men who had come to them when they were in difficulties. It might be better if the local profession were to waive the point as to the dismissal of the present medical officers, and to insist rather on securing for their nine districts the whole of the £505 now offered by the guardians, leaving it to the latter to provide additional salaries for the men whose services they desire to retain. The Burnley Union would then be paying no more for its outdoor medical work than is now being paid by the Blackburn Union.

The members of the profession in Burnley have shown an admirable union, have fought a strenuous fight, and are to be congratulated on their courage and determination. But though their demands may be just and reasonable, it may be impossible to get them all at the present time. As the difficulty at Burnley is of a serious nature and likely gravely to embarrass the public, it is highly desirable that some compromise should be brought about. Half a victory is better than defeat, and it might be wise to accept for the time any terms which would put the old medical officers at least in a distinctly better position than before the dispute arose.

Medical News.

DR. JAMIESON B. HURRY and Mrs. Hurry have presented a gymnasium to University College, Reading.

THE annual dinner in London of the officers of the Indian Medical Service will be held at the Hotel Cecil on Monday, June 8th. Further information can be obtained from Lieutenant-Colonel J. J. Pratt, I.M.S., 63, Addison Road, W.

THE Duke of Devonshire will take the chair at a meeting of the National Health Society at Grosvenor House on Tuesday, May 19th, at 3 p.m., when Lady Crichton-Browne will present the diplomas, medals, and certificates of the society.

OWING to the death of the Duke of Argyll, the ceremony of opening the Chelsea Tuberculin Dispensary is postponed until Friday, June 5th. H.R.H. Princess Christian of Schleswig-Holstein will perform the opening ceremony at noon. The dispensary will be open for inspection on Saturday, June 6th, from 2 to 6 p.m.

THE annual dinner of the Electro-Therapeutic Section of the Royal Society of Medicine is to be held at the Restaurant Jules, 86, Jermyn Street, on Friday, May 15th. Mr. Thurstan Holland, President, in the chair. Application for tickets should be addressed to Mr. S. Gilbert Scott, 6, Bentinck Street, W.

A COURSE of lectures on tuberculosis from the medical and surgical points of view will be given at the London Hospital Medical College during the summer session, beginning on Monday next. Particulars will be found in our advertisement columns.

THE statute for establishing in the University of Oxford three Dr. Lee's professorships in anatomy, chemistry, and experimental philosophy, in place of readerships, was approved by congregation on May 5th. Some particulars of the scheme were published in the JOURNAL recently.

AMONG those upon whom the honorary degree of LL.D. of the University of Glasgow will shortly be conferred is Sir William B. Leishman, F.R.S., expert on tropical diseases on the Army Medical Advisory Board, and formerly Professor of Pathology in the Royal Army Medical College.

THE annual oration before the Medical Society of London will be delivered by Mr. Robert Jones, of Liverpool, on Monday evening, May 18th. A reception will be held by the President at 8.30 p.m. The oration will be given at 9 p.m., and subsequently the Fothergillian Medal will be presented to Professor J. George Adami, M.D., F.R.S., of Montreal. The evening will conclude with a conversazione.

AT the quarterly general meeting of the Medico-Psychological Association of Great Britain and Ireland, to be held at 11, Chandos Street, W., on Tuesday, May 19th, after the transaction of formal business, Dr. Helen Boyle will read a paper on early nervous and mental cases, with suggestions for improvement in the methods of dealing with them.

A SESSIONAL meeting of the Royal Sanitary Institute will be opened at St. Helens on Friday, May 22nd, when Dr. Joseph Cates, M.O.H. St. Helens, will introduce a discussion on the hygiene of the preparation, storage, and distribution of food. On the following day visits will be paid to the works of the United Alkali Company, to Eccleston Hall Sanatorium, the tuberculosis dispensary and the school clinic, as well as to the water softening works, the public abattoir, and an ice-cream factory.

A COURSE of lectures on medical hydrology will be delivered at the Post-Graduate Medical College and Polyclinic, Chenies Street, London, W.C., next week, by Dr. Fortescue Fox. The first (May 11th) will deal with the principles of hydrotherapy, the second (May 12th) with bathing procedures, the third (May 13th) with medicinal springs and baths and the choice of health resorts, and the fourth (May 14th) with indications for hydrological treatment. The lectures will be given at 5.15 p.m. on each day.

THE annual meeting of the Invalid Children's Aid Association will be held, by kind permission of Lord and Lady Howard de Walden, at Seaford House, 37, Belgrave Square, S.W., on Tuesday, May 19th, at 3 p.m. Field-Marshal Lord Methuen will preside, and the Bishop of London, the President of the Royal College of Physicians, Sir George Alexander, and Miss Beeton will be among the speakers. Tickets can be obtained from the Secretary, 69, Denison House, Vauxhall Bridge Road, Westminster, S.W.

THE Committee of Livingstone College has appointed Dr. Loftus E. Wigram to succeed Dr. Charles F. Harford as Principal of Livingstone College when the latter resigns his post at the end of July. Dr. Wigram, who is the youngest son of the late Prebendary Wigram, formerly honorary secretary of the Church Missionary Society, is a graduate in medicine and arts of the University of Cambridge, and was formerly a medical missionary at Peshawar, on the North-West Frontier of India, under the Church Missionary Society. He has been for five years on the staff of Livingstone College, first as resident tutor and then as vice-principal.

MR. HARCOURT, Secretary of State for the Colonies, will unveil a tablet commemorating the work of Mr. Joseph Chamberlain and Mr. Austen Chamberlain in connexion with the London School of Tropical Medicine, at the Albert Dock Hospital, to which the school is attached, on Tuesday, June 23rd, at 4 p.m. To Mr. Joseph Chamberlain, acting under the inspiration of Sir Patrick Manson, the foundation of the school is due, and Mr. Austen Chamberlain has taken a leading part in the movement for its endowment. The greater part of the fund, which amounts to £73,400, has been placed in investments that will yield a permanent income, while the remainder has been spent on the new buildings. A certain sum has been set aside for the endowment of "tropical beds," that is, beds reserved for the treatment of patients of limited means sent home from the tropics. The school will be in session at the time of the unveiling ceremony, and the occasion will afford an excellent opportunity to those interested to see the work both of the hospital and the school as it goes on from day to day.

THE Historical Medical Museum, which was founded by Mr. H. S. Wellcome last year in connexion with the Seventeenth International Congress of Medicine, will be reopened on May 28th as a permanent institution in London. It will be known in future as the Wellcome Historical Medical Museum, and will be open daily from 10 a.m. to 6 p.m., closing at 1 p.m. on Saturday. The entrance is at 54A, Wigmore Street, Cavendish Square, W. Members of the medical and kindred professions will be admitted on presenting their visiting cards. Since it was closed last October the museum, which is international in character, has been considerably augmented and entirely rearranged. Many objects of interest and importance have been added to the collections, which it is hoped will increase the usefulness of the museum to those interested in the history of medicine.

WE note that a settlement still has to be reached in regard to the questions at issue between the medical profession at Blackpool and the governing body of the Victoria Hospital in that town. This is a matter for deep regret, for it is impossible to believe that the interests of the classes from which the institution draws its patients are not suffering from the failure of the ruling spirits among the governors to rise to the situation that they have created for themselves. Their lack of tact in dealing with the professional members of the staff became early apparent, and from correspondence in local papers it would seem that even from the standpoint of ordinary business men their administration of the affairs of the hospital is open to just criticism. As for medical opinion in the neighbourhood of Blackpool, this is so solid that it seems inevitable that the board of the hospital will eventually have to give way, and this being the case the sooner it does so the better. The public is likely to resent certain disclosures that have recently been made, and the longer the controversy continues the more the hospital must suffer. Apart from co-operation of individual medical men being essential to fulfilment of the institution's aims, the governors, if they went the right way to work, could turn every medical man in the town into an active advocate of its claims on public support. We understand that the Blackpool Corporation has selected to act as mediators to meet members of the profession three ex-mayors of the borough.

THE spring meeting of the South-Eastern Division of the Medico-Psychological Association was held at Chiswick House on April 30th, the President, Dr. James Chambers, in the chair. The meeting elected Drs. Edwyn Beresford, Brander, Steen, and Seymour Tuke to be representatives for 1914–15 on the General Council of the Association. Dr. Tuke read a communication giving interesting records of clinical observations at Chiswick House since the transfer thereto in 1893 of the licence granted in 1846 to the late Dr. Harrington Tuke. He gave a summary of the impressions made on his own mind during this period of twenty-one years after a general review of modern methods of dealing with the insane. He considered the results disappointing. Some seventy years ago a great step in advance was made when Dr. Conolly and others succeeded in convincing the public that insanity was a physical disease. Then came a period of eagerness on the part of pathologists to attain accurate knowledge of the morbid changes produced by the disease. As a result there had been a steadily increasing number of observations made in the *post-mortem* room and with the microscope. He gave several reasons why in his view successful treatment of insanity had not made a greater advance. Foremost among these he placed the increasing selfishness of the age, and the greater frequency with which the word "uncertifiable" was used in reference to cases which undoubtedly had passed the "border-line." There was also an increasing dilatoriness in signing medical certificates, although there might be no doubt as to the case being one that should be "under care and control." The prime object to be aimed at was the welfare of the patient. There might be some risk to the patient and to others in waiting for the results of laboratory examinations. These adjuncts to means of diagnosis had an undoubted value, but the time they required would often be more profitably employed in adopting therapeutic measures of acknowledged value in the early stages of the disease. Good air, favourable surroundings, wisely regulated exercise free from unnecessary control—however well-intentioned—formed the sheet anchor of early treatment, and if not delayed too long might prevent the necessity for the use of drugs in which there was a tendency in these latter times to place too much dependence. A vote of thanks to Dr. Tuke, following a short discussion, in which Sir George Savage, Drs. Sergeant, Turner, Stewart, and others took part, brought the meeting to a conclusion.

Letters, Notes, and Answers.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.O.H. desires information as to the value of Webb's ventilating lamps for removing offensive gases from sewers; he would particularly value the results of personal experience.

A TUBERCULOSIS MEDICAL OFFICER, who is making a card index of notes and references on tuberculosis, asks for hints for a scheme of headings which will be moderately comprehensive, and will render it easy to find any particular entry.

ANSWERS.

DR. W. E. HENDERSON (Kendal), writes: In reply to "L." that the condition may be due to incipient myxoedema, and considers the cautious use of thyroid extract indicated.

L. M. writes in reply to "H. D. J." that the disorder of taste sensation *plus* excessive salivation are important symptoms in chronic pancreatitis, and suggests that the urine should be carefully analysed at different periods during the day, and particularly after a heavy carbohydrate meal for the presence of sugar and also to test the glucose tolerance. A sample of faeces, preferably after a test diet, should be analysed to test efficiency of pancreatic digestion. He thinks that apart from the symptom mentioned it is likely that chronic pancreatitis is present seeing that there is a definite history of gall stone trouble.

F. N. states, in reply to "H. D. J.," that such symptoms might be due to irritation produced by new artificial teeth.

ADRENALIN IN ASTHMA.

DR. E. ARTHUR DANDO, M.R.C.S. (Dudley), writes: I think Dr. Hertz is fortunate in obtaining almost instantaneous relief from his attacks of asthma with such small doses as 2 or 3 minims of a 1 in 1,000 solution of adrenalin chloride injected subcutaneously. Personally, I have always found it necessary to inject a sufficiently large dose to cause acceleration of the pulse before obtaining any prolonged relief; in my own case I do not get any benefit from a lower dose than 5 minims. The treatment of asthma is very unsatisfactory. I should like to know if the asthmatic attacks of Dr. Hertz are followed by bronchitis.

LETTERS, NOTES, ETC.

A DISCLAIMER.

DR. EDWIN L. ASH (London) writes: The reference to the London Nerve Clinic contained in a letter in the early editions of the *Pall Mall Gazette* to-day (May 5th) has been published entirely without my knowledge or consent. On its being brought to my notice I have immediately made suitable protests to the writer of the letter, and endeavoured to prevent its further publication.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

The First George Alexander Gibson Memorial Lecture.

AN APPRECIATION OF THE MAN AND HIS WORK.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

BY JAMES MACKENZIE, M.D., F.R.C.P.LOND.

[*Abstract.*]

I UNDERSTAND that these lectures are, in future years, to be devoted to such subjects as Dr. Gibson was interested in during his life. These interests were so wide and manifold that there are but few subjects in the range of clinical medicine in which he was not interested. In future years, when the work that he has done becomes part of the general knowledge in medicine, and all his individuality has gone—as happens to all workers—the question may be asked, What manner of man was this whom his fellows honoured by raising to him this memorial? It seemed to me, and it met with the approval of your President, that the first lecture might, with propriety, be devoted to an appreciation of Dr. Gibson himself and of some part of his work.

There are many phases of his life of which I have but little knowledge. I cannot speak, except from hearsay, of his great gifts as a teacher in the lecture room and in the hospital wards. But of the fruit of his work as a physician I can speak, for I have been a devoted student of his work almost from the day he began to write.

I will restrict myself to dealing with his work and character as they presented themselves to me, choosing those portions of his work of which I may claim to have some knowledge, and whose value, therefore, I am able to determine. Naturally such a procedure will give but an imperfect picture of the whole subject, but still the fact that it is a sincere and knowledgeable criticism will carry with it some idea of the greatness of the man.

Dr. Gibson was never content to be merely the mouthpiece of tradition. Few men have ever had his grasp of the subjects with which he dealt, in the sense that he approached them from such varied points. He had a fine historical sense, so that he was always interested in the origin of an idea, and it was to him a delight to trace through the centuries the progress and growth of some conception that had influenced medical thought. It was this trait in his writings that made them so valuable to all students of a subject, particularly when, as often happened, he made a running commentary of the value of each contribution. The interest he took in his subject naturally led him to explore fields outside the region of clinical medicine, to detect the sources of knowledge that influenced medicine. Thus it is we find so many auxiliary sciences called upon to contribute their quota of knowledge. Especially did he keep himself acquainted with what was going on in the physiological laboratory, and he was always eager to seize upon the latest observations, and apply them to the interpretation of the manifestations of disease in the human subject.

As a teacher of medicine, and as a physician called upon to study all forms of disease, it was incumbent on him to keep abreast with the advances that were being made all along the line. This of necessity led him to take such a large view, that much of his time was employed in keeping in touch with the progress of medicine in widely separated fields. It is only by the study of his numerous contributions to medicine that we realize how extensive was his knowledge. It is the wide outlook that is the striking feature of his labours.

In his writings and in his addresses Dr. Gibson had a great gift of explaining in simple language the most abstruse problems. His command of language, his literary gifts, and the flashes of humour with which he brightened his discourses, made the dullest subject so interesting that one scarcely realized the profundity of his knowledge. I could illustrate my meaning by many references, but I shall draw my illustrations from a field with which I am somewhat conversant, and one which did much to establish his fame.

THE HEART.

His great work—the work which embraces his most valuable contribution to medicine—was his book on *Diseases of the Heart*. It was published in 1898, and may be taken to represent the knowledge of the subject of which it treats as it was at the end of the nineteenth century; it is a worthy memorial of that period. In many instances textbooks are but the collections of the traditions of the subject with which they deal, and are founded on the beliefs prevalent at the period at which they are written, so that they are sometimes spoken of as being the most debased form of literature. But the textbook of Gibson is the opposite of such a description. It is literature of a very high order. The most difficult subjects are described so clearly that the hasty reader may fail to realize what it is that makes the matter so simple. To achieve this there is necessary not only a power of lucid expression, but there must be a thorough and intimate acquaintance with his subject, and it was his great knowledge of the subject in all its phases that enabled him to depict truthfully and so simply the subject with which he dealt.

When I say that in my opinion this textbook is a model of what a textbook should be, and is one of the best that has ever been written, no doubt I shall be accused of exaggeration. It would not, however, be difficult to make the assertion good. To write on a subject that will interest and instruct people who are themselves conversant with the matter it is necessary to do so out of the fullness of knowledge, and I doubt if any one ever wrote a book with a more intimate acquaintance with his subject. Take, for instance, the extensive bibliography—perhaps the fullest bibliography there is on the subject in the whole world. It may be said that to compile a bibliography is not a difficult matter, and in one sense that is true, for one might merely copy the references from different writers. But a bibliography in the best sense is made by a writer who has read and digested the articles themselves. This Gibson did. In a measure we recognize this in reading the textbook itself, where in concise and simple language the observations and conceptions of the authors cited are given in many cases. But to gain a full idea of Gibson's mastery of his subject we have to turn to the articles he had written on special subjects and published in the journals of the day. In these articles subjects are dealt with in greater detail, and investigated with painstaking thoroughness, and the views of the writers are discussed and analyzed with a thorough and intimate appreciation of their standpoint. From such a critical study of his methods we can appreciate what the bibliography means, and we realize that the descriptions given in the book itself are mere summaries of the extensive investigations he had made.

Another excellent feature in this work is the manner in which he illustrates many important lessons by the citation of cases that had come under his notice, and the admirable way in which he brought to bear upon the subject the most recent and accurate knowledge obtained from other sciences, to explain the phenomena presented to the physician.

I speak warmly of his book, for it has been to me of the greatest service. When I take up the study of any branch bearing on the heart, and I wish to understand what has been done before, to this work I invariably turn for help, and I am never disappointed. Not only do I find the subject summarized, but the source of knowledge is always so accurately given that I have little difficulty in finding the article from which he derived his information.

The Movements of the Heart.

To realize the great strength of Gibson as a clinician it is necessary to consider some of the subjects which he personally investigated, for in this way we shall see how it comes about that his work is of such value, and what are the nature of his contributions to clinical medicine, for, as I have already said, a great many subjects that he dealt with were illumined and advanced by the results of his own study and observations. I select for this purpose subjects which are yet far from being settled and determined because they have a bearing on the researches that are being carried on, and will be pursued for many years, and because it was in being in the forefront of all that was progressive we see Gibson at his best.

One of the most obscure subjects in medicine, even at the present day, is the interpretation of the movements of the human heart, as perceived on examining the precordium. These movements are so puzzling to the eye and to the touch, and are so varied in different individuals, that no comprehensive and accurate description exists. This is due partly to the fact that the degree of exposure of the heart to the surface varies so much, depending partly on the state of the lungs, partly on the size of the heart, and partly on the nature of the enlargement, when there is an increase in the size of the heart. This matter is briefly dealt with by Gibson in his textbook, but to understand how he obtained his information we must go back many years. In 1880 he published an article with a colleague (Dr. Malet) describing an investigation he had conducted on one of those rare cases in which a congenital defect in the sternum was present. In the first article he gives a careful description of the deformity, pointing out the embryological facts that had a bearing on its causation. The defect in the sternum was in the upper third, and the portion of the heart that was thus easily examined was the conus arteriosus. By applying the button of a cardiograph over the exposed region he obtained a series of movements during the cardiac revolution, which he analysed carefully and accurately. The main fact brought out in these tracings was the recession of this portion of the heart from the chest wall during ventricular systole. On account of the fact that the apex of the normal left ventricle pushes against the chest wall during systole, an idea was and is widely prevalent that all the chambers of the heart and all portions of the heart during systole act in the same manner as the apex of the left ventricle. Thus we not infrequently find descriptions of the pulsation of the right ventricle in the epigastrium, in which it is assumed that the pulsation is due to the contractions of the right ventricle, when, as a matter of fact, it is the filling of the ventricle during diastole which causes the pulsation. Many phenomena of this nature are wrongly described, because the fact which Gibson so carefully explained is lost sight of. He shows clearly that the portion of the left ventricle below the aorta, so far from giving an outward thrust during systole, retracted markedly during systole, and distended or pushed out during diastole. In this paper he also described a sound produced by the systole of the auricle, an observation which many years later guided him to detect the contraction of the auricle during the long standstill of the ventricles in cases of complete heart-block.

In a second paper he dealt with another series of observations from the same individual. He obtained a record of the movements of the chambers of the heart with a time marker. He described with great care and precision the duration of the cardiac movements, and recorded the relative time occupied by the systole and diastole of the auricle and ventricle. The value of the article is enhanced by the comparison he makes with the results obtained by physiologists. The subject of the cardiac movements is still obscure, and this article, though written so long ago, is probably the best and most instructive on the movements of the human heart that has ever been written. As one who has attempted to deal with the same matter, I recognize its difficulties—difficulties, indeed, so great, that most people shrink from grappling with them.

Tricuspid Regurgitation.

Another subject with which he dealt has a very important bearing on practical medicine at this day, particularly as its clinical manifestations are widely misunderstood. The notion is prevalent among many clinicians, more particularly on the Continent and in America, that tricuspid regurgitation is a sign of very grave significance, and that it can only occur during the later stages of extreme heart failure. The teaching, however, in these islands, and especially in the Edinburgh school, has been quite different, though not infrequently writers in this country do not realize the real nature of tricuspid regurgitation. The reason for the more accurate appreciation of the condition in this country and in Ireland is due to the fact that our anatomists, our physiologists, and our physicians for more than a hundred years have realized the difference between the valvular mechanism on the right side of the heart and that on the left. Thus, John Hunter drew attention to the imperfection of the tricuspid valves for the closure of the orifice. Wilkinson King, in 1832, approached the subject from a biological aspect, and showed how in certain diving animals this incompetence of the tricuspid valves was specially devised to permit regurgitation to relieve the right heart when the flow of the blood from the right ventricle was hindered by the cessation of breathing. Recognizing the principles involved, he spoke of the "safety-valve function" of the tricuspid valves in the human heart. Dr. Gibson wrote a very instructive article on this subject as the result of a series of careful experiments on the human heart. In these experiments he tested the competence of the different valvular orifices on the right and left side of the heart, using an arrangement by which he could make the valves bear a column of water, and could raise the height of the column until the valves leaked. In this manner he was able to demonstrate the case with which incompetence could occur on the right side compared with the left, and especially that a slight increase of pressure caused incompetence of the tricuspid valve. In describing these experiments he quite recognized a fallacy that was present, in that the dead hearts on which his experiments were conducted had not the vital quality of the living contractile muscle. Nevertheless his observations have been supported by physiological experiments, for it has been found that in the dog's heart a rise of pressure in the right ventricle is often difficult to obtain, because of the ease with which tricuspid regurgitation takes place.

In the original paper dealing with these experiments Gibson entered very fully into the discussion of the symptoms that tricuspid regurgitation would provoke in the human subject, especially dealing with the question of a tricuspid systolic murmur, and the regurgitant waves sent back into the veins of the neck. It is a paper of an original kind, and the first to deal with an important subject from a careful clinical standpoint. The subject was dealt with by him again and again in later years, as in his textbook and some of his addresses.

Tricuspid regurgitation is not a matter of mere academic importance. Had this teaching of Gibson and of those others who had recognized its meaning and clinical significance been fully appreciated, the science of clinical medicine would have been greatly advanced, and the erroneous conception of the mechanism of heart failure, which has fettered and hampered medicine for fifty years, would never have been imposed upon the profession.

I refer, in this statement, to the notion that heart failure sets in by what is called backward pressure. This notion proceeds on the assumption that heart failure starts on account of the left ventricle becomes embarrassed in its work from a variety of causes, and that in consequence of this embarrassment the ventricle dilates, and regurgitation takes place back into the left auricle. As the failure proceeds the lungs are supposed to become engorged, and the right side of the heart is in its turn embarrassed, and the tricuspid valve is supposed to be the last defence from extreme failure of the heart, and as soon as tricuspid regurgitation takes place then matters have become very grave indeed; hence has arisen the notion that tricuspid regurgitation indicated a very serious state of affairs. Now this very prevalent notion of heart failure is essentially armchair in its origin. Its originators had detected certain signs, as congestion of the lungs, dropsy, and engorgement of the liver, but instead of watching cases to see how these symptoms arose, when incidents would have been detected which would have explained them, they were content to theorize, and, as usually happens in theorizing over vital events, where all factors cannot be recognized, the theories led them astray. Regurgitation through the tricuspid valve had to fit into the scheme of this back-pressure theory, and evidence for its presence was found in several ways. One was the perception of waves of blood sent back into the jugular veins, and more than thirty years ago one particular form of jugular pulse, then called the "positive jugular pulse," was set down as the special evidence of tricuspid regurgitation. No doubt tricuspid regurgitation was present in such cases, but had the clinicians recognized that tricuspid regurgitation was an event which could occur in a healthy and normal heart, as insisted upon by Gibson and others, they would have been compelled to search for some other

explanation of this characteristic sign. With the discovery that this form of venous pulse occurred frequently simultaneously with the onset of extreme heart failure and with the change of the rhythm of the heart from the normal to a new and irregular rhythm—which we now recognise as due to auricular fibrillation—a truer conception of the mechanism of heart failure would have been obtained.

To-day the lack of knowledge of this fact that incompetence of the tricuspid valve can easily arise and produce a murmur still hampers the profession. A systolic murmur with its intensity greatest about mid-sternum is frequent in healthy young people, but its significance being misunderstood, large numbers of people are made to undergo treatments of different kinds for a supposed cardiac defect, and in consequence their lives are hampered and restricted, and should they seek posts for which medical inspection is required, they are not infrequently rejected as unfit.

Clinical Application of Physiological Experiments.

If we wish to get an example of Gibson's power for the clear elucidation of confusing matters, we could not do better than read the instructive and succinct account he gives of the development of the heart, and of the malformations that arise from deficiencies in its development. Those of us who have had occasion to inquire into this subject know how difficult it is to grasp the facts. The knowledge of the embryology of the heart is still imperfect, and in consequence the explanations of the various congenital defects are lacking in precision. Probably nowhere can a clearer conception be obtained of this very difficult subject than in Gibson's description. We find every embryological observation of value clearly described, and the knowledge thus acquired applied to the interpretation of those signs that puzzle us so much when we meet them in patients. So far as I know, it is to Dr. Gibson we owe the differentiation of the signs produced by one of the more common forms of congenital malformation—that due to the patent ductus arteriosus. The facts laid under contribution in this succinct account of congenital abnormalities included a series of careful observations he and Dr. Lockhart Gillespie had conducted. This inquiry shows the difference in thickness of the right and left ventricular walls during embryonic life and infancy. It is well known that the thickness of the walls of the two ventricles are nearly equal during fetal life, and these investigations demonstrate the greater increase of the left ventricle after birth.

Probably no one excelled him in this ability to unravel the obscurities which surrounded much of the purely scientific work, and applying the knowledge to the interpretation of clinical phenomena. In mentioning the word "obscurities" in relation to experimental and embryological observations I do not mean to imply that they are obscure to those trained in these branches of science; but I think that few readers who have had no special training in these matters can understand the involved technicalities which are used to describe many of the experiments and observations, while still fewer are able to apply these to the manifestations at the bedside.

Within recent years a great advance has been made in our knowledge of the action of the heart and of its abnormal activities, although its application to clinical medicine is of recent date. The knowledge which has enabled clinicians to recognize and interpret many obscure phenomena has arisen through the recognition and understanding of the true meaning of physiological research. Down to thirty years ago there was a gradual increase of knowledge relating to the causes of the heart-beat; but it is from Gaskell's researches that the conception of the heart-beat really acquired such a clear and definite meaning that the knowledge could be applied to clinical medicine.

Gibson's textbook came out at that time when the ideas first promulgated by Gaskell were beginning to affect the trend of thought in clinical medicine. These experiments taught us the fact that the muscle fibres of the heart possess a number of peculiar functions, and that a contraction of the muscle fibres was the result of the harmonious action of all these individual functions. Engelmann later explored anew these functions, and amongst other things demonstrated how their unequal activity resulted in the production of irregularities in the heart's action. At the time Engelmann was performing these experiments in Utrecht a practitioner in general practice used to spend his spare time watching and following them. Although these experiments were conducted by Engelmann on the frog's heart, it occurred to this practitioner that he had recognized similar irregularities in the hearts of his patients. He began to examine his patients with more care, and obtaining graphic records, was able to demonstrate that the interference with the functions of the heart muscle which Engelmann had demonstrated was also recognizable in the human heart. When Wenckebach published his book upon these irregularities amongst the first of our clinicians to appreciate this work was Gibson. In his Morison Lectures he dealt with this subject, and although readers generally find it complex and difficult to understand, yet Gibson's description makes the whole matter simple and intelligible. With the opening up of this subject brought about by these new ideas a great stimulus to the desire for knowledge took place in other fields. Thus the more minute study of the heart resulted in the very elaborate and detailed investigations of the auriculo-ventricular bundle by Tawara, who described definitely the nature of the connexion by which the stimulus passed between the auricle and the ventricle, and confirmed the earlier observations of Stanley Kent and His. The later researches of Keith and Flack revealed a peculiar node of tissue near the mouth of the superior vena cava, and recent researches show that this is in all probability the starting point of the heart's contraction. Such work would naturally attract Dr. Gibson, and his writings show that he was amongst the first to appreciate it.

The whole history of this matter, and a due appreciation of the somewhat complicated details, are dealt with by him in the annual oration on the cause of the heart-beat before the Medical Society of London, delivered on May 27th, 1907, where he gave a summary of the whole subject, and clearly and dispassionately discussed the views at that time exercising certain scientific circles—whether the action of the heart was caused by neurogenic influences or by myogenic. Although Gibson himself favoured the former of these views, his clear mind recognized the difficulties and complications, and his exposition is free from any bias, and is a reasoned and temperate survey that will well repay study.

His attention as a physician was frequently arrested by the clinical evidences that bore on this matter, and in several fields he was able to add to the stock of knowledge. This was particularly the case with that condition which we now recognize as heart-block, and which he discusses in his textbook under the heading of Stokes-Adam syndrome. In view of his subsequent work on this subject, at first in the Morison Lectures, and later in his very full description with Dr. W. Ritchie of the celebrated case of Sir W. Gairdner, it is interesting to note the remarkable advance that has been made in our knowledge within a few years. In his textbook, referring to the cause of the infrequent heart action and the attacks of syncope which characterize the Stokes-Adam syndrome, he states: "It is futile to peer further at present into the gloom surrounding the subject. Until we know how such a disease as influenza can cause two patients, apparently closely resembling each other, tachycardia on the one hand, and bradycardia on the other, we must be content to leave this matter unsolved." When a writer of such profound knowledge as Gibson made the above statement in 1893, and when a few years later he found it possible to demonstrate clearly what had seemed then an insoluble mystery, the fact gives great encouragement to those engaged in clinical medicine, for when it seems hopeless to unravel some of the mysteries that baffle them they may remember this incident and hope that the solution may be near at hand.

I might illustrate in many ways Gibson's instinct in recognizing good and valuable work before it was generally appreciated or understood. I will, however, limit myself to a reference to one piece of work which deserves to be known by all investigators in cardiac matters. I refer to MacWilliam's work on the rhythm of the mammalian heart. These researches were published in the *Journal of Physiology*, and the author has told me that they received

little or no attention even from those who were engaged in similar work. Of late years, with the perfection of clinical methods, we are able to distinguish a great many peculiar actions of the heart previously unrecognized. Many of these MacWilliam made it easy to recognize by his description of the mode of response of the heart to certain stimuli. In his Morison Lectures and elsewhere Gibson cordially recognised the value of this work, and sought time and again to utilize it in explaining clinical symptoms. In this he anticipated all other clinicians. A few years ago, in considering the cause of sudden death, I felt convinced that MacWilliam's observation that it was due to fibrillation of the ventricles was the only explanation, and I fancied that I was the first clinician to accept this view. Reading this Morison Lecture recently, I find that Gibson in discussing the probable cause of sudden death had already considered and adopted this explanation some years earlier. However casually such a statement seems to have been made, it was invariably the expression of a very full and intimate knowledge of the subject with which he was dealing. If, for instance, we take the brief account of Cheyne-Stokes respiration in his textbook, we find it simple and clear, and are apt to think that it required only a trivial amount of work on his part. Turn, however, to his monograph on this subject, and we will find the subject discussed in a very full and erudite manner, and its historical aspect and the conflicting views and observations of a large number of writers dealt with. Although he attempts no explanation of the phenomenon, yet the manner in which he examines and subjects to criticism the various theories establishes the fact that no explanation up to that time was sufficient. In this he did a great service, for next to demonstrating the true cause of any phenomenon the best thing is to recognise our ignorance, for that makes manifest the need for inquiry.

The Interpretation of Sensations.

Turning from the cardiac field in which he did so much, we find that he was equally on the alert in appreciating and understanding work in other fields. Although some people are inclined to consider that the possibilities of clinical medicine are being exhausted unless new methods are to be discovered, Gibson realized, on the contrary, that there were many fields which had been imperfectly explored by the simple methods of examination in everyday use. This applied, for instance, to our great lack of knowledge of the nature of the individual's sensations. Here is a field that is open to every one, and it is seemingly so simple and self-evident that most people are under the belief that all the information that is possible to be obtained from this source has already been acquired. Yet when we seek to understand the mechanism by which the most common of sensations are produced, we at once realize how little after all we know about the production of symptoms. Now, if it be realized that the first inefficiency of any organ is bound to mar that harmonious action of the whole organism which we call health, it will be understood that the first evidence that something is amiss must in the nature of things be a consciousness by the individual that there is something discordant in his life. A more minute and careful study of the patient's symptoms will indicate the presence of mischief long before any physical sign is revealed. Even the most frequent and the most urgent of all symptoms—pain—remains a great mystery. The factors concerned in its production, the mechanism by which the sensations are perceived, the associated phenomena that arise along with it, are imperfectly known. In the past, indeed, as in the present, our knowledge of the anatomy and physiology of the various organs was, and is, imperfect. Still, in recent years much has been done, and the advance in knowledge has come about through a better understanding of the complicated nervous supply of the viscera, from the researches of one of the greatest physiologists the world has ever seen—W. H. Gaskell. The advance in this branch of clinical medicine was impossible until Gaskell demonstrated, by long and laborious work, the meaning of the great sympathetic system of nerves. Although Gaskell did not concern himself about the application of these discoveries to clinical medicine, yet their significance was not long in being appreciated—first by James Ross. Understanding as we do Gibson's lively interest in all fields of medicine, it is not surprising to find him utilizing the knowledge thus placed at his disposal. Here, again, his power of assimilating complicated details and of summarizing the essentials has been of the greatest service. In his work on *Diseases of the Heart*, and with greater fullness in his Morison Lectures, he gives a clear description of Gaskell's great work, and selects those portions of it which are applicable to clinical medicine. Those who are desirous of understanding the nature of the field for clinical inquiry that has been opened up cannot do better than study his remarks on this subject. Here they will find how, step by step, our knowledge of this subject has been acquired; they will find the researches by physiologists and clinicians carefully summarized. In the last address he delivered he adds the recent interesting and important investigations of Ninian Bruce. In addition, while describing these different researches, he advanced the clinical side by the results of his personal investigations.

Glandular Secretions.

Before closing this very imperfect review of some of the writings of Dr. Gibson, I would refer to the last address he gave—the address on medicine at the Liverpool meeting of the British Medical Association—which dealt mainly with the effects of glandular secretions on the body. I refer to it as illustrating how Gibson kept himself informed of the latest developments of knowledge in widely scattered fields, and the masterly manner in which he applied the laboratory results in his clinical work. This is but a repetition of what I have said in regard to other subjects, but in addition this address has a mournful interest. It was written and delivered when already the sickness which ultimately prevailed had laid its heavy hand upon him, and at a time, too, when his professional duties called for unceasing toil. It shows the brave spirit of the man, though broken in health, devoting himself to the work he loved so well and steadfast in his mission.

Gibson's Influence.

Before concluding my references to the influence that Gibson exerted on the progress of medicine there is another feature, one of a rare kind, to which I must refer, as it throws light upon one side of his character, and accounts for much of the esteem and regard in which he was held by his colleagues, and especially by those who were striving to advance medicine under difficulties. I refer to this element in his nature with the greater insistence, as it illustrates a trait which is rare in men of his position, not so much for its absence as for the fact that few realize its necessity. I have referred to the readiness with which he welcomed any new light thrown upon the problems in clinical medicine. To those workers Gibson invariably extended a warm welcome and a cordial appreciation, and was ever ready and willing to lay the vast stores of his knowledge at the disposal of any sincere inquirer. Perhaps I shall bring this more clearly before you, and illustrate how valuable assistance may be given to the advance of medicine by its teachers, if I cite the occasion of my first acquaintance with Gibson. Those of you whose lives are spent in the peaceful serenity of these academic groves little realize the struggles and difficulties that confront your pupils when they go out into the wilderness. After completing his education, the youthful doctor goes into the world convinced that he is equipped with that knowledge which will enable him to wrestle with disease in whatever stage or form it presents itself. He soon realizes that this is little better than an illusion. The people who consult him complain of things he never heard of, and disease presents itself under totally different aspects from what he had seen in his hospital training. He longs to lay his trouble before his teachers, feeling confident that then his difficulties would be cleared away. It may be that after a time he realizes that these difficulties can only be cleared away by understanding more clearly the nature of the complaints by which he is confronted. He then begins to observe for himself. It may be that he discovers signs and symptoms that have hitherto been overlooked or imperfectly described. He cherishes the fond belief that if he could but meet his teacher and lay his observations before him his trouble would disappear. To this end he

may make a pilgrimage to his old school and seek to lay before his revered teacher the matters that have vexed his soul. Alas! the illusion is soon dispelled—the yawning indifference with which the recital of his experiences is received chills his enthusiasm and shakes his faith in his teacher.

Such, indeed, had been my experience, and when I took courage and sought to publish my early observations I fared no better, my early endeavours being invariably disposed of in the learned editor's waste-paper basket. At last an editor friend, being short of copy, published my observations. No doubt they were not of much value, and my idea of their importance was probably excessive. Nobody seemed to take the slightest notice of them. Still, there were a few facts which were then for the first time described, and observations of late years have confirmed them. Nevertheless, at the time of their publication they were simply ignored, and I thought that no one troubled about them until one day in a bookseller's shop I accidentally met Dr. Gibson. At this first interview he referred to my work, and I admit that I felt flattered that one of the brighter spirits, who was then rising in the horizon of fame as a capable clinician, should have been interested in my work. This gratification was all the more real because he had grasped my meaning and my intentions and discussed them with a fullness of knowledge that showed that his interest was not mere surface courtesy. To me, an obscure general practitioner, this interview with a brilliant teacher gave great encouragement to prosecute the work upon which I was engaged. Through all the years that have passed since then I always knew that I had one capable reader to appeal to. His criticisms were always valuable and by no means always complimentary, for he brought a rare judgement to bear upon the subjects under discussion, and he had a power of expression at once forcible and direct. By such discussions new ideas were developed, which helped both of us to find out the truth. To him, as to his writings, I always turned when I wished to know the history of any matter or when I wanted the most reliable and the most recent views, for as I have said, I know of no one who had read so much and who had digested his reading so well. You can understand how grateful a place he holds in my memory, and how, as a slight return for the great help he ever was to me, I have attempted to show the position in medicine that Dr. Gibson held.

So far I have spoken of Dr. Gibson as the distinguished physician, but he was equally remarkable in other ways. It is scarcely necessary that I should dwell upon the fascinating personality of the man—the manly bearing, gracious manner, and the bright and cheery smile which endeared him to all. Those who were intimate with him knew him as a most delightful companion whose wealth of amusing anecdotes and whose versatility and remarkable facility of expression rendered his company the most fascinating. To us he was ever the lover of truth and hater of humbug. Those who were in trouble or in suffering recognized the sincerity and depth of feeling of this large-hearted man. I frequently come across patients who have been under him, and they all express the deepest devotion and gratitude for the manner in which he dealt with them. This manner was no mere pretence, but was the expression of a man of profound sympathy, as many of his colleagues can testify, for he would spare himself no labour to help a friend in trouble, and his purse was always at the call of distress. I have seen him in many phases, but none impressed me so much as the real manifestations of sympathy he extended to us when the hand of sorrow was heavily laid on my household. This testimony also many others can bear, and we feel the world is poorer, and I feel that Edinburgh is no longer such an attractive place to me, since George Gibson is no longer here.

THE Association of German Scientists and Medical Practitioners will hold its eighty-sixth annual meeting this year at Hanover in September (20th to 26th).

THE Medical Faculty of Turin has decided to erect a memorial to the distinguished physiologist, Angelo Mosso, in the institute in which he taught for many years. The memorial will be unveiled on November 14th, 1914, the fourth anniversary of Mosso's death. Contributions should be sent to Professor Alberto Aggazzotti, Corso Raffaello, n. 30, Torino.

A Clinical Lecture

ON

PHENOMENA ATTRIBUTABLE TO SPASM OF CEREBRAL VESSELS (ANGIOSPASM).

BY

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I PROPOSE to speak to you to-day on some points bearing upon the blood circulation in the brain and of phenomena due to disturbances of that circulation. Owing to the position of the brain within the cranial cavity, local disturbances of the circulation are difficult of proof; they can only be assumed from the clinical phenomena which may be present and from our knowledge of the dependence of local function upon an efficient local blood supply.

The special condition I propose to speak about is spasm-constriction of the arterial channels in localized areas of the brain; the term "cerebral angiospasm" is given to the condition. Although the cerebral vessels cannot be seen, the vessels of the retina can be examined by means of the ophthalmoscope, and it has been clearly established that angiospasm occurs in these vessels. Various observers have noted that a temporary loss of vision of one half of the retinae may be associated with marked diminution in the size of the retinal vessels corresponding to the blind field, and that vision returns with the relaxation of the constricted vessels and the re-establishment of the normal blood supply to the part. From these observations alone it is fair to postulate that corresponding constriction can take place in the arteries in localized areas of the brain.

Migraine.

This can be illustrated from a common and well-known disorder, namely, migraine.

It is a well-established clinical fact that in migraine such disturbance of vision as has just been referred to is by no means uncommon, and that it can be shown to be associated with the change in the retinal vessels referred to. In migraine, however, there are other temporary phenomena which must have their origin in the brain—of these perhaps one of the commonest is partial or complete loss of power of one side of the face, of one limb, or of both limbs on one side. Other temporary phenomena are characterized by disordered sensation or temporary loss of sensibility; the distribution of such phenomena being usually, if not invariably, one-sided, and affecting either side. These phenomena and the explanation which I have given you as to their causation are now pretty generally recognized and accepted.

Loss of Memory.

There is, however, another set of phenomena which I venture to think may be explained on the same hypothesis, namely, the loss of memory of recent actions which ordinarily imply not only active volition but conscious volition; this set of phenomena is illustrated by what frequently occurs in old people. Old people tend from time to time to get restless and sleepless, and noisy or active during the night. In an attack of this kind, an old person will get out of bed, disturb the other inmates of the same room by interference with the bedclothes and by other acts; they will go to the fire and interfere with it; light matches without any apparent object in view; and the following morning have absolutely no recollection of what had happened during the night; they may even state that they have had a good night and slept well. Periods of mental excitement and incoherence come on in the same way, and may be followed by mental coherence during the day; and here also there is no recollection of the restlessness and incoherence of the night. Cases of this kind may show, during the periods referred to, a definite constriction of systemic arteries; and when this occurs it is found that the most suitable remedy for removing the symptoms is the administration of a vaso-dilator. So impressed have I been with this experience that, whenever such cerebral symptoms occur as I have referred to, and if the condition of the arterial pulse even

suggests arterial constriction, the routine practice is to administer a vaso-dilator; and it is quite remarkable the number of patients who respond to this treatment and whose attacks may be thereby arrested. The two drugs which I use mainly are phenacetin and erythrol-tetranitrate. From the character of the phenomena and the effect of treatment, it seems to me reasonable to explain such cases on the lines I have indicated.

I beg you to note, before passing from this point, the importance of the proposition that a person who is awake and able to move about, and is able to do acts which ordinarily imply conscious volition, may have recurring periods during which he is absolutely unconscious of his acts and doings.

The case of Walter S. which follows is, I believe, a striking example of this general proposition. In this particular case there were, apparently, definite epileptic phenomena: yet to designate the phenomena to which I am specially referring as epileptoid does not help much; whilst a similar forgetfulness in the nocturnal disturbances of old people cannot be regarded as epileptoid. The presumption is that the explanation of the phenomena in old people is applicable also to the phenomena in this case.

CASE I.

W. S., aged 45, shale-miner, was admitted on October 30th, 1913, complaining of fits of unconsciousness. This patient had been previously admitted to the hospital on February 14th, 1913, and was discharged on March 14th. At that date he was admitted because of sudden fits of unconsciousness. He stated then that he suddenly became unconscious without any previous warning, and that these attacks had been present for over two months; no twitching or muscular movement of any kind took place during the attacks, and he was not pale or cyanosed during them. They took place at intervals of about a week. While in hospital he had two fits which lasted about one minute, from which he slowly recovered, and was quite conscious in about five minutes. A positive Wassermann reaction was in accordance with the specific history given by the patient.

When admitted on October 30th the patient stated that since January, 1913, he had been subject to attacks of mental abstraction, during which he was unconscious of his actions. The attacks lasted for from two to five minutes, but he neither knows he is having an attack nor has he any warning that an attack is coming on. After an attack he is told of his having done things which he has no recollection of having done; the things he does are often "foolish"—as, for instance, he would empty a full pipe and fill the pipe with brown paper without having any recollection of doing so; in one attack he caught one of his children, and threw the child out of the door. When I questioned him about what he had done to his child he was evidently much perturbed emotionally by the matter being recalled to him, and assured me that he had no recollection whatever of having done such an act. He has one or two attacks weekly, and they are not preceded by any aura.

Circulatory System.—The left border of the heart at the apex was slightly outside the nipple line. There was a systolic murmur at the base of the heart. The pulse was regular in rate and in rhythm. There was a marked difference between the two radial pulses, the right being much more forcible than the left. The vessel pressure was 126 mm. An *x*-ray examination showed an aneurysmal dilatation of the first part of the aorta.

Respiratory System.—The respiratory system showed nothing abnormal.

Nervous System.—The organic and skin reflexes were normal. The plantar reflexes showed normal flexion. The tendon reflexes in the arms were brisk. The knee-jerk was somewhat exaggerated on the right side and somewhat diminished on the left. Both pupils reacted normally to light and to accommodation; there was slight horizontal nystagmus. The other systems presented no abnormal phenomena.

On November 3rd, about 11 p.m., the patient was unconscious and presented a series of clonic contractions of the muscles of the extremities which lasted about two minutes. The patient frothed at the mouth—mucus being blood-stained—but he did not bite his tongue; he slept afterwards.

On November 7th, at 10 p.m., the patient was noticed to be looking queer, and on examination it was found that he was lying on his back, with his eyes wide open and turned upwards; on being spoken to several times he made no response; in a few minutes, however, he recovered and went to sleep. Several attacks occurred during the following days, and on November 12th the patient left hospital against the advice of the house-physician.

Mental Obscuration with Attacks of greater Obscuration and Inability to Work.

The next type of cerebral phenomenon to which I would draw your attention is characterized by a complaint of sleepiness, of entire want of energy, and of marked forgetfulness. Such symptoms are the result of grave disturbance of the circulation in certain brain areas. Such phenomena may, indeed, indicate more than mere anaemia of brain areas, for it is found that when there has been marked impairment of cerebral function, such as is implied in persistent forgetfulness, it commonly indicates destruction by softening of the area implicated. The softening is the result of cutting off of the blood supply to the area affected, and I believe this often begins in local vessel spasm and is succeeded by local thrombosis. When such phenomena are temporary the fact implies temporary diminution in the supply of nutriment to the area involved. The evanescent character of the phenomena, associated as it frequently is with tendency to recurrence, must be regarded as due to variations in the supply of blood to the affected area; while the permanent loss of function implies permanent arrest of blood supply and, as an inevitable consequence, necrosis and softening of the area affected. Even when such softening has occurred, there may be added to the permanent symptoms accessory phenomena which appear and disappear from time to time. Such accessory phenomena may be a feeling of being dazed and of entire inability to attend to business of any kind. Such accessory phenomena may, as has been said, pass off in the course of some days, and may only reappear at intervals of weeks or months. They are also, in my opinion, to be explained by the occurrence of impaired blood supply to regions which may adjoin the softened area, although they may, of course, have a totally separate site. It is on this hypothesis that satisfactory treatment of such cases is carried out. The aim of treatment is to reduce the irritability of the vessel wall which leads to such local spasm. In some cases no doubt such temporary diminution of blood supply as is here pictured may be the result of periods of special heart enfeeblement associated with marked atheroma of cerebral vessels; but in my experience this only accounts for the phenomena in a limited number of cases, the phenomena being more commonly met with in cases in which there is no question whatever of such heart enfeeblement as would lead to insufficient supply of blood. The following case of James B. illustrates these contentions.

CASE II.

J. B., aged 62, an umbrella-maker, was sent by Dr. Calder. He was accompanied by his wife. He complained of being continually sleepy, having no energy, and being very forgetful. This condition had lasted nearly a year, and had been preceded by severe epistaxis. The bowels moved daily. He had been a hearty eater, but had never taken alcohol.

His wife informed us that during the past year he had had three attacks of being dazed and unfit for work; the two first had lasted for ten days, while the one he was at present suffering from began a fortnight previously. She stated that his mind was never quite clear between the attacks. On questioning him he said that he used to read a good deal, but that he had given up reading for the past year. The arterial pressure was 220 mm. Hg, and there was a small amount of albumin in the urine.

My interpretation of the phenomena in this case is as follows: About a year ago this patient had an attack in which he was dazed and unfit for work; the attack lasted for ten days, and was preceded by severe epistaxis. The arterial pressure when he came to hospital was 220 mm., and there was a trace of albumin in the urine. What happened at the time of his attack was that his systemic arteries were experiencing a wave of hypertonic constriction; that a corresponding condition was present in at least part of his brain, producing symptoms referable to mental areas, as indicated by his being dazed and stupid, and that this had lasted long enough to allow of softening to occur in one of those areas. He made a partial recovery as the brain vessel spasm subsided, but the recovery was only partial, as the area of softening remained. He was able to attend in some degree to his business, for he had no motor paralysis, but his memory was impaired and he had lost his former energy. Since that first attack he had had two other attacks in which he became dazed and was quite unable to attempt to go to his place of business. The attack from which he was suffering when we saw him had lasted longer than the two first. These attacks mean, in my judgement, a recurrence of the constriction of brain vessels, and each attack, if it leads to a fresh area of softening, will leave him on a lower mental level than before.

This, to my mind, is not only the picture of what has been happening in this particular brain, but it represents

common occurrences and experiences, and the great advantage of having a correct moving and living picture is that in many cases of the kind the brain angiospasm can be stopped and your patient saved from cerebral softening.

Temporary Losses of Ability to Perform Ordinary Work.

Another set of phenomena is illustrated in the case of a patient, J. W., to whom fuller reference is made later. This patient was 31 years of age, and was a joiner by trade. His mother stated that for nine years he had from time to time suffered from "stupid" attacks, characterized by inability to perform the most ordinary procedures necessary for doing his work as a joiner; he would, for instance, be incapable of taking the simplest measurements necessary to the carrying out of simple pieces of work. A similar mental inability to deal with other matters showed itself. The attacks lasted for two or three days, and gradually wore off, and as they wore off he began again to understand things and to be able to do his work. He also showed that, while he recognized his mother as "mother," he could not understand how it was she was his mother. Notwithstanding this strange obscuration of his mental processes, he was able to go about as usual, and would even go to his workshop with a view of working; but, even when put to the simplest of operations, he could not carry them out. These attacks have come and gone, some of them having been short attacks, others of them having lasted longer. In this case, again, it seems to me difficult to explain the phenomena otherwise than by attributing them to local impairment of nutrition in the areas affected, and that local vessel spasm alone enables us to form a tangible view of the phenomena. Merely to give the phenomena the designation of being epileptoid, again, seems to me to lead us nowhere. The following is the more detailed account of this case:

CASE III.

J. W., aged 31, was sent to me on February 11th, 1914, by Dr. Bowie with a note saying that the patient had an attack about a year and a half ago similar to that from which he was at present recovering.

We found it impossible to get a satisfactory history from the patient himself. His mother, who accompanied him, gave us the following history, namely, that about nine years ago he began to have attacks in which he was stupid in ordinary work; he could not even take ordinary measurements. The attacks lasted for two or three days and gradually wore off, and as they wore off he again began to understand things and to be able to do his work. His father died in July, 1912, and in the following October he took an unusually bad turn and did not go to work until January. His mother informed us that during that time he walked about and saw her, but would say to her that he did not understand she was his mother; he at that time could not be made to understand anything in connexion with any papers that required to be signed bearing upon his father's affairs. He gradually got over that attack and was pretty well during all 1913, but on the Monday before he was sent to see me he went to the joiner's shop in which he worked, but was quite unable to do the simplest of the operations necessary for his work.

Epileptoid Attacks simulating Fainting Attacks.

The following is an example of epileptoid attacks resembling fainting:

CASE IV.

L. S., a young woman, was sent to me by Dr. Deuchars, with a history of continually having fainting attacks, the nature of which was not apparent, and she was sent to me for opinion. Her employer was much interested in her, and was anxious to know if he could do anything for the girl.

The story we got from the patient of her attacks is that in the forenoon she feels sick, loses control of her muscles, and sometimes falls. These attacks come on quite suddenly with a feeling of extreme nausea and pain in the head, in the right temple region. She never vomits. She has on two occasions suffered from concussion as the result of knocking her head upon the floor. The lesser attacks last for about a quarter of an hour, as she has been told. She is so upset by the attacks that she has to rest the whole day thereafter. The attacks are more apt to come on when menstruation is due, but they are not confined to that time. The girl's colour was good, and there was no appearance of anaemia. The heart sounds were closed and distinct. The pressure was 114 mm. The bowels were kept regular by means of a laxative, and there was no albumin in the urine.

You have had lectures on the grave and the minor forms of epilepsy, and I only indicate to you at present that epileptoid phenomena sometimes respond to vaso-dilators, and that there is a vessel theory of epilepsy.

Vertigo due to Brain Angiospasm.

The following two cases illustrate this relationship:

CASE V.

J. W., aged 49, a labourer to an electrical company, recommended by Dr. Hamilton. Admitted January 23rd, 1914, complaining of giddiness of ten weeks' duration. The patient drinks a good deal of beer, and smokes 4 oz. of tobacco weekly. He has a comfortable home, and has a family of eight children alive and well.

History.—Ten weeks ago he began to suffer from giddiness, which came on after stooping and was very severe. In one day he had three attacks of a sensation of coldness and numbness on the left side of the body, including the face, the trunk, and the limbs. He at the same time experienced a feeling of nausea and a salt taste in the mouth. On one occasion he fell. His bowels, which as a rule act well every day without medicine, had been acting sluggishly prior to the onset of the attacks referred to; there was no vomiting, but he said his sight was bad and he had a slight headache; the giddiness was worst four days after the attack of numbness.

After two weeks' illness he was admitted to the Hawick Hospital, where he stayed for five weeks. Since then he has been two weeks at home, when at the request of Dr. Hamilton he was admitted to the Royal Infirmary. His sight had improved a little, but he was still subject to threatenings of attacks similar to those described. He said, however, that he was able to avert them by lying down, when after ten minutes he felt perfectly well again. He had these attacks as a rule once or twice a day, but sometimes missed a day. He stated that the attacks began with a gripping sensation round the left upper arm.

Condition on Admission.

Nervous System.—Intellectual and mental functions satisfactory. He has slight headache in the frontal region and also pain shooting along the vertex. He still suffers from giddiness, which is so marked sometimes that turning in bed to use the spittoon may make him feel as if he would fall out of bed. Voluntary movement is in no way affected. Sensibility to touch, pain, and temperature are normal. Reflexes are normal; there is no inco-ordination and no Rombergism; although the patient says that when first tested for this by his own doctor he was very unsteady.

Special Senses.—The pupils are normal and react to light and accommodation. Vision is good; the patient can read, and the discs, as reported on by Dr. Sim, show a little obscuration of the margins within physiological limits, and the vessels did not appear to be in any way abnormal. The patient was a little deaf on the right side. Dr. Logan Turner, who kindly examined his ear condition, reported that the patient had evidence of old-standing middle-ear disease; that he had a large perforation and some moisture on the right side, and this ear had discharged for many years. Dr. Turner further stated that the tests went to show that the deafness was entirely of the middle-ear type and that the inner ear was not affected.

Circulatory System.—The pulse varied from 68 to 80 or more and was regular in force and type. The arterial pressure was 140 mm. The apex of the heart was in the sixth interspace, 1 in. outside the nipple line; the sounds were pure.

Respiratory System.—There is a history of winter cough for some years. The lungs were normal.

The abdominal organs were normal. The urine was of acid reaction, specific gravity 1025, and showed no abnormal constituents.

He was treated with 10 grains of potassium iodide three times a day. On February 6th the dose was increased to 20 grains three times a day. On February 9th he had greatly improved, the headache and the giddiness having completely disappeared, and he was allowed to get out of bed. He was discharged on February 14th, having showed no recurrence of his symptoms. On February 10th his arterial pressure was 110 mm. and his pulse was between 72 and 80.

The preceding facts suggested that the phenomena might be the result of brain angiospasm. The fact that the vertigo had been preceded by such marked disturbance of sensation on one side of the body from the face downwards, and that this abnormal sensation had appeared and disappeared several times in the course of one day, suggested this view. The action of potassium iodide in counteracting the tendency to vessel spasm seems to me from clinical experience to be definitely established. In this case the effect of the drug on the patient was eminently satisfactory, and my contention with regard to its action is supported by the fact that with the disappearance of the cerebral phenomena the pressure was found to have fallen from 140 mm. to 110 mm.

CASE VI.

Mr. W., aged 67, a solicitor, was sent to me on February 12th, 1914. He complained of attacks of headache, referred to the back of the head, and of giddiness, which might or might not be accompanied with vomiting. These attacks came on if he applied his mind very closely to his work, if his work worried him, or if he became excited in discussion or controversy. The

giddiness might be so pronounced as to compel him to stop work and to go home in a cab. Rest led to disappearance of these symptoms.

The pulse was 60, and the arterial pressure was 110 mm. On lying down the pulse was definitely fuller than when sitting. The vessels were soft. The heart at the apex was in the mammary line; the sounds were fairly good and closed. The abdomen presented no abnormality; to regulate the bowels apenta was taken regularly. The urine presented no abnormal characters.

In this patient the headache and giddiness were primarily cerebral, and were to be regarded as the result of disordered cerebral circulation, due to too close mental application, or to emotional influences. There could be no doubt that there was an imperative call for complete mental rest, away from the patient's ordinary environment. Here, again, on the hypothesis of local cerebral angioplasm being the cause of the phenomena, the danger was not that in one of these attacks cerebral haemorrhage would occur, but that the angiospasm might be so pronounced and of sufficient duration to lead to cerebral softening in the more purely mental areas of the brain.

A Lecture
ON
OXYGEN WANT AND THE MEANS OF ITS RELIEF.

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The important advances made within recent years in the physiology of the respiration have furnished us, amongst other things, with more precise conceptions as to the rôle of the blood gases, the nature and production of oxygen want, the adaptations provided by the body for the relief of this want, and their assistance by art. To the laborious investigations of Haldane and his collaborators in particular we owe in great measure the light which has been shed on this subject, albeit many difficult problems still await solution. Now, oxygen want constitutes in itself a true disease of the respiration; therefore in this lecture it is not proposed to discuss the gross results of prolonged want of oxygen such as are found in the heart, the nervous system, the alimentary system, and the kidneys, but to confine attention to the respiration factors proper.

The Gases of the Blood.

The governing factor in the respiration is the carbon dioxide of the arterial blood. As observed by Haldane, the respiratory centre is probably as sensitive to carbon dioxide as the retina is to rays of light. Its activity is entirely dependent upon it, and should the tension of this gas fall below a certain point apnoea will result. When Head made his observations it was supposed that the vagi not only regulated the rhythm, but to a considerable extent also activated the centre. A vagus apnoea was supposed to result from summation of stimuli. But there appears to be little room for this theory nowadays. The tension or partial pressure of the carbon dioxide in the blood and alveolar air is maintained constant under normal conditions (Haldane and Priestley), the slightest increase exciting the respiratory centre and the excess of gas being given off by the increased breathing. It is now considered that what the centre really responds to is the hydrogen ion concentration. So sensitive is this reaction that a rise of 0.22 per cent. in the alveolar carbon dioxide percentage—that is, of 1.6 mm. in the pressure (the normal pressure being about 40 mm.)—will raise the breathing by 100 per cent. This corresponds to a difference in the hydrogen ion concentration so minute as to be beyond detection. Now, any acid other than carbonic, if added to the blood, increases the hydrogen ions in proportionate amount, and the effect of these, added to the hydrogen ions of the carbonic acid already present, is to excite the centre and cause hyperpnoea. To put this differently, the added acid lowers the threshold of excitation of the centre to carbon dioxide, so that it reacts to a correspondingly lower tension of the gas. This factor is of the greatest importance and constantly comes into play in the physiology and pathology of the respiration. It is due to defective oxidation in the tissues.

Let us recognize that the respiration is essentially carried on in the tissues. The lungs, the circulation, and the kidneys are receiving, transmitting, and adjusting agents. It is the gas exchanges in the tissues which determine those in the lungs. In either case they are not necessarily carried out according to the law of the diffusion of gases. The endothelial lymph cells, the endothelium of the capillaries, and the epithelium of the lungs have secretory and selective functions. Normally they permit diffusion to take place in accordance with the gas laws, but under abnormal or exceptional conditions they exercise their powers of selection and secretion. The experiments of Bohr in 1891, attributing this function to the pulmonary epithelium, has been amply supported by recent research. Strassburg also found that the tension of carbon dioxide may be lower in the lymph spaces than in the venous blood. This secretory action, as in the case of the swim-bladder of fishes, may be largely dependent on the integrity of the pertaining nerves.

In the next place let us briefly consider the all-important matter of the tension or partial pressure of the gases of the blood. It is the tension that matters, not the amount. The amount may vary widely, and yet the pressure remain the same. In the case of the carbon dioxide, this regulation is very intricate and only partially understood. Of the total quantity of the gas taken up by the blood, from 36 to 46 volumes are in chemical combination, and only two and a half volumes are in solution in the plasma and corpuscles. It is only this small amount of the free gas in solution that determines the tension, the large quantity in loose chemical combination forming a store, so that as soon as the gas in solution decreases, an equivalent amount is dissociated to take its place, and vice versa, if the gas in solution rises above normal, the excess is taken into chemical combination, until matters are again adjusted by the breathing. This regulation is carried out chiefly through the serum-globulin. When the tension rises the globulin is displaced from its adsorption combination with the alkali (sodium) by the mass action of the gas, and alkali carbonate or bicarbonate is formed; when the tension falls the globulin again enters into possession. As the carbon dioxide tension rises the alkalinity of the plasma also rises. Very high tension, according to Gürber, causes expulsion of some of the hydrochloric acid from the sodium by mass action, with migration of the acid to the corpuscles. When acids other than carbonic—that is, those due to defective oxidation in the tissues—enter the blood, the carbon dioxide is dissociated to a certain extent and pumped out by the breathing. Such acids, however, except under extreme conditions, are taken up by the blood only to a limited extent, as its potential alkalinity is maintained within certain definite and necessary limits. As acid products of catabolism increase, the organism utilizes ammonia (which otherwise would pass to the liver to form urea) to combine with them. Hence the quantity of ammonia present in the urine is an index of the acidity of the blood. Did the organism not possess this means of defence, acid poisoning would quickly supervene in many conditions. On the other hand, as will shortly be seen, the addition of a certain amount of acid to the blood acts in a compensatory or protective fashion.

The partial pressure of carbon dioxide, as has long been recognized, exerts a very important influence on the absorption and dissociation of oxygen; the higher tension of carbon dioxide in the capillaries facilitating the dissociation of oxygen to the tissues, and the fall in tension in the lungs facilitating the absorption of oxygen. On the other hand, it has consistently been held since the experiments of Bohr in 1890, that the absorption and dissociation of carbon dioxide were uninfluenced by the presence of oxygen, and the ready combination of the former gas with methaemoglobin lent support to this belief. Just lately, however, an important communication has been made by Christiansen, Douglas, and Haldane,[1] in which it is contended that saturation of the haemoglobin with oxygen has a very marked effect in diminishing the absorption and increasing the dissociation of carbon dioxide as compared with blood deprived of oxygen. In the light of this statement, the blood gases reciprocally exert exactly similar effects, in accordance with the needs of the body.

Just as in the case of carbon dioxide, the existing tension of oxygen in the blood depends on the small amount held in solution in the plasma, the large reserve in the corpuscles being drawn upon as required. Under ordinary conditions the haemoglobin is practically saturated with oxygen, and any increase brought about by inhaling pure oxygen or compressed air is mainly in the quantity in solution, and this has the advantage of being readily available for the needs of the tissues. Normally the oxygen tension of the arterial blood, like that of the carbon dioxide, is maintained within very narrow limits, the haemoglobin being enabled to take up all its required oxygen at a considerably lower atmospheric pressure than exists at the ordinary level.

The Voluntary Production of Oxygen Want.

The oxygen of the blood gets used up very quickly under conditions of sudden and severe exertion, or when the breath is held. It was found by Hill[2] that the previous inhalation of oxygen under these circumstances made a great difference. This was due in the case of exertion to the lessened formation of lactic acid in the tissues, while the power of holding the breath longer is susceptible of explanation in the new observation referred to namely, the heightened oxygen tension in the pulmonary blood expelling the carbon dioxide into the alveoli. These observations show certain effects of want of oxygen in the tissues and in the lungs. Again, by making a number of deep voluntary respirations many persons can create a miniature Cheyne Stokes type of breathing, as was shown by Douglas and Haldane.[3] But, if abundance of oxygen be added to the air inhaled, the breathing, after a longer apnoeic pause, begins and proceeds normally. From this much may be learnt. The initial forced breathing pumps the carbon dioxide well out of the blood. If no oxygen be inhaled, the breathing, nevertheless, begins when the alveolar carbon dioxide tension is still comparatively low, and the tension of the gas in the centre much below the stimulating value. The authors explain this by assuming that lactic acid forms in the centre itself, lowering its threshold of excitation to carbon dioxide, as there is no time for lactic acid to be produced in the general circulation. As soon as the breathing begins this acid is oxidized, more carbon dioxide is pumped out, and apnoea again sets in, the cycle continuing until the carbon dioxide in the blood has risen to the critical value. Now, if plenty of oxygen be first given, it prevents the formation of lactic acid in the centre, and with the production of a high alveolar percentage of carbon dioxide the breathing is longer delayed, and then proceeds *regularly*. We herein see the effect of want of oxygen on the respiratory centre. That lactic acid is the unoxidized substance produced in this case is hypothetical, and it is more correct to say that the excitation of the centre is due to the effects of want of oxygen, either direct or indirect, increasing its hydrogen ion concentration.

The Production of Oxygen Want in Disease.

But when there is a general and continuous want of oxygen, the acid products of catabolism which escape oxidation in the tissues are constantly being absorbed into the circulation, and excreted by the kidneys. In this way the respiratory centre is excited in a more or less regular and permanent fashion, and it is only when there is defect of the local circulation in the centre, often due to individual peculiarities, that we encounter Cheyne-Stokes respiration. In the diseases of the lungs and in obstructed conditions of the circulation it is after this manner that want of oxygen causes the hyperpnoea or dyspnoea. Now it is particularly to be noted that in the great majority of such cases coming under observation the carbon dioxide tension is low, and it is only when the breathing is exceptionally obstructed, as for instance in acute asthma or extensive stasis of blood in the lungs from any cause, that we find the hyperpnoea or dyspnoea to result from increased carbon dioxide tension. The reason for this is that the hyperpnoea in the great majority of cases can practically always get rid of the carbon dioxide, even though it cannot, as a rule, supply the requisite oxygen to the tissues. If want of oxygen is made rapidly, the hyperpnoea is excessive, but when it occurs very gradually, the carbon dioxide is pumped out slowly and the patient may be cyanosed from the amount of reduced haemoglobin in his arterial blood, with but little observable hyperpnoea. Different persons react differently, however, as the respiratory centre possesses, as mentioned, individual differences in regard to the circulation. In any case the important point to remember is that the carbon dioxide may be pumped out of the blood without producing a corresponding increase in the absorption of oxygen. During this time the respiratory quotient is raised, but Pembrey and Cook[4] found that after a hyperpnoea had continued for hours, as in cardiac disease, a quotient as low as 0.63 may be obtained—in other words, the carbon dioxide is first pumped out and then kept low by the breathing. A severe and prolonged hyperpnoea while the body is at rest may reduce the carbon dioxide to an extent dangerous to life and must be guarded against.

Nature's Adaptations to Oxygen Want.

But it is the increased pulmonary ventilation, associated with a low carbon dioxide tension, and due to the acidosis, on which the patient's life depends. And here we encounter the remarkable adaptations which constitute Nature's means of relief for want of oxygen. Clinically we often obtain evidence of these, as when patients highly cyanosed manage to get on very comfortably. In some of these cases such evident compensations as hypertrophy of the heart and alterations in the distribution of the blood are found. The adaptations which are evoked by the stimulus of acid products of catabolism consist mainly in—(1) Excitation of the respiratory centre, causing increased pulmonary ventilation; (2) excitation of the heart-rate; (3) increase in the haemoglobin and red corpuscles, with alteration in volume of the blood; (4) energetic oxygen secretion by the pulmonary epithelium; (5) shifting of the dissociation curve of oxyhaemoglobin to the right; and (6), in some cases at least, modification of the alkali regulation of the blood by the kidneys. The common aim of all these factors is to increase the arterial oxygen tension and maintain oxidation in the tissues.

As regards the modification of the alkali content of the blood by the kidneys, this suggestion was made in the Pike's Peak research by Douglas, Haldane, Henderson, and Schneider,[5] in consequence of the fact that the alveolar carbon dioxide tension was as low, or even lower, after the initial lactic acid excess had disappeared from the blood. The persistence of diminished alkalinity of the blood (which was necessary to maintain the oxygen pressure) is referred to a lowering (caused by the catabolic stimulus) of the threshold of alkalinity for the kidneys, corresponding, in fact, to what occurs in the respiratory centre in relation to carbon dioxide. It is evident that the part played by the kidneys in the respiration is of the most vital importance. It is needless to point out that the various products of the digestive activity and the general metabolism in so far as they affect the composition of the blood are regulated by the kidneys, as the great variations in the alkali, acid, and nitrogen content of the urine prove. The blood is normally maintained by the kidneys at a more or less fixed composition and at a fixed potential alkalinity. It has been shown by Schittenhelm and Katzenstein[6] that the ratio of ammonia in normal urine to the total nitrogen remains constant within narrow limits.

Defective Oxidation from Tissue Poisoning.

Now want of oxygen, provided one is breathing a fairly normal atmosphere, must always be due to a defect in the lungs or the circulation. But reference may here be made to a group of cases in which, with dyspnoea, there is not, strictly speaking, want of oxygen, but a condition of defective oxidation in the tissues either of a primary kind or else associated with renal disease. The acidosis in this case doubtless lowers to a greater or less degree the oxygen capacity of the haemoglobin (meionexy), but if, as frequently happens, the alveolar carbon dioxide tension is at the same time very low, the meionexy is not such as to necessitate the amount of hyperpnoea or dyspnoea sometimes found, and which may be in excess of the requirements. The excitement of the respiratory centre may be overdone. This is the more evident when it is considered that in the severe acidosis of diabetic coma, where the ammonia supply fails, and β-hydoxybutyric and aceto-acetic acids utilize as far as possible the alkali of the

blood, it was nevertheless shown by Pembrey[7] and his collaborators that the low tension of carbon dioxide was not due to failure of carrying power on the part of the blood, but to lessened production of the gas in the tissues. In accordance with this is the observation of Abderhalden[8] that in such cases there is diminished tissue oxidation, as various products of the hydrolysis of albumin (amino acids) are found in the urine. This diminished tissue oxidation is therefore due to failure of the oxidizing ferments to utilize the oxygen offered them, a condition the reverse of that found in true oxygen want. One cannot help believing that differences to a corresponding degree are to be found in the acid metabolites themselves. In cases of renal dyspnoea, examination of the blood and urine by Ryffel[9] failed to indicate the acid body. It was not lactic acid, nor was the meionexy connected with the high percentage of urea in the blood. Now this type of dyspnoea may doubtless complicate a dyspnoea from true oxygen want, as that of cardiac disease, but in view of the foregoing considerations it would obviously be incorrect, as lately suggested by Lewis,[10] to place both the cardiac and renal types in a single group.

Some idea may now be gained of the extent and variety of the respiration changes which must necessarily be associated with the various diseases, and of which at present we know little or nothing. Not only each disease, but each separate case possesses its own features, the seat of failure being now here and now there, and the compensations in like manner varying.

Scope of the Investigation.

The cause of the oxygen want being discovered, inquiry is made as to how the machinery for its relief is working. To be sure, severe oxygen want may be caused by a massive pleural effusion or other mechanical condition, artificially removable, to which further reference need not be made. The clinical examination of the various organs is carried out, and the points of obstruction noted. Then comes the investigation of the alveolar air and blood gases, and the various nitrogens, more especially the relation of the ammonia to the total nitrogen of the urine. The investigation may be extended almost indefinitely so far as work on the blood is concerned, but, ordinarily, the oxygen and carbon dioxide content* and the oxygen capacity are sufficient. By means of Barcroft's apparatus all this can be accomplished with 1 c.cm. (or less) of blood. If it be desired to calculate the total respiratory exchange and the volume of air breathed, the "bag" method of Douglas is easy and convenient,[11] care being taken, however, to make due allowance for the dead space. For the general kidney efficiency the phenolsulphonephthalein test of Rowntree and Geraghty may be used. For the blood nitrogens the method of Folin and Denis is accurate, and requires but little blood.

Peabody,[12] working lately on the lines above indicated, in a series of cases of pneumonia obtained some interesting results. He took the gas content of the peripheral venous blood and quantitated the nitrogen and ammonia of the urine. He also investigated the action of the pneumococcus on the blood. The carbon dioxide content was always diminished in the febrile period, except in two cases, and the oxygen content was well within normal limits in the various stages of the disease in by far the largest number of uncomplicated cases. The fluctuations in the carbon dioxide were in inverse proportion to the output of ammonia in the urine and bore no relation to the chlorides. High nitrogen and ammonia excretion were found with low carbon dioxide tension not only during the fever but sometimes also after the crisis. Their relations, however, could be modified by the administration of sodium bicarbonate. Two cases showed, along with cyanosis, a relatively high carbon dioxide and a low oxygen content, due to the block in the lungs: but in a third case these features persisted even when the lungs were clear, due either to failure of the epithelium, slowing of the circulation, or a change in the chemical constitution of the blood. In all cases where the pneumococcus had entered the blood the oxygen content was much diminished, and experiments made *in vitro* proved that the pneumococcus acted, not in utilizing the oxygen, but in changing the constitution of the haemoglobin molecule, rendering its combination with oxygen difficult. *In vitro* there was formation of methaemoglobin. It is obvious that the treatment would vary considerably if guided to some extent by these indications.

The Principles of Treatment.

The experiments of Lorrain Smith[13] proved that long-continued inhalation of oxygen under pressure induces a pneumonia in animals by causing injury to the alveolar epithelium. But when given in physiological doses oxygen acts as a restorative and tonic to the epithelium. In the Pike's Peak investigation stress is laid on the dangers attending fatigue of the epithelial cells, consequent on the long-continued stimulus by metabolites. The authors refer to the high mortality of pneumonia at high altitudes, which they believe might be avoided by treatment with oxygen or by carbon dioxide added to the air. "Such chambers," they remark, might be used in treatment at ordinary levels provided there was "intelligent knowledge of the physiological conditions." This "knowledge" enables us to assist the treatment in a rational and therefore successful manner. We do not give digitalis in every case of heart disease, nor should we give oxygen simply because a patient has hyperpnoea or even cyanosis, as neither symptom may be due to want of oxygen. Now we recognize the direct and indirect methods of oxidizing the blood, the first by inhaling the gas, and the latter by improving the circulation and the ventilating capacity of the lungs. When the disease is acute and attended by a hyperpnoea which is not maintaining the normal oxygen pressure, oxygen by inhalation should be given. With evident cardiac weakness the gas should be alcoholized after the method described by Willcox and Collingwood.[14] Should there be much stasis of blood in the lungs venesection may be indicated in suitable cases, so as to get the oxygen into circulation. Whether the gas be given pure or diluted with air will depend on the severity of the symptoms, and in many cases it may be given for short periods of about five minutes, and repeated at intervals where necessary. But prolonged administration may be needful. The good effects of the inhalation are not limited to increasing the oxygen carried by the blood. There is evidence that it enables the pulmonary epithelium to consume the circulating metabolic products, to some extent at least. In cases with Cheyne-Stokes breathing, or when the carbon dioxide content is very low, the best results may be obtained by adding a measured percentage of carbon dioxide to the oxygen, or to oxygen mixed with air, or to pure air, as the observations of Pembrey have shown. This has the additional advantage of increasing the dissociation of oxygen to the tissues.

The high importance of the kidney in these cases has been mentioned. Hence the far-reaching effects of diet in metabolism and excretion. Otto Folin has shown how by a low nitrogenous diet it is possible to reduce greatly the urea and non-protein nitrogen in the blood. Again, as carbohydrates contain sufficient oxygen to oxidize their hydrogen, a vegetable diet is the most saving of oxygen.

In the large class of cases, more or less chronic, exhibiting oxygen want, the inhalation of oxygen is resorted to only should urgent symptoms supervene. The really effective treatment is that which increases the oxygen in circulation by means devised to improve the circulation in the lungs, their nutrition and ventilating capacity; and which in suitable cases induce a certain degree of Bier's hyperaemia treatment—for example, by rarefied air. The contraindications are a tendency to haemorrhage, advanced arterial degeneration, and hyperpnoea when the patient is at rest. Here, as in the more acute cases, when guided by physiology, we are to some extent at least no longer groping in the dark, and alongside the methods of treatment otherwise sanctioned, indications of a precise and luminous character may be placed and considered.

* Usually this gives a fairly correct idea of the pressure. Clinically, the tension of the carbonic dioxide cannot be made directly, but may be estimated from the alveolar tension, while that of the oxygen is difficult. The carbon monoxide method is available.

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THE RELATION BETWEEN EPILEPSY AND TUBERCULOSIS.

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WHILE investigating the excessive epileptic incidence which obtains in the district served by this asylum, as far as mental alienation is concerned, some facts of general interest were ascertained.

Dividing the district into rural and industrial areas, and estimating the percentage of epileptics on the total number insane of each sex belonging to the different areas and resident in the asylum and workhouses, we arrive at the following figures: Males—rural areas 14.3, industrial 21.8; while for females the corresponding figures are 12.8 and 26.2. In the asylum alone the percentages are: For males—rural areas 13.5, industrial 15.4; females, 12.5 and 21.6 respectively. As the ratio for epileptics to the whole asylum population averages for England and Wales 12.8, it will be at once seen that it is to the industrial districts we owe our high epileptic ratio, and that urbanization tells to a very great extent on the females in this direction. This fact is emphasized by an analysis of 1,174 female admissions during the past ten years (1904–13), which showed a proportion of 8.54 per cent. of epileptics on the total admitted from the rural area and 15.08 from the industrial, the percentage of female epileptics on total female admissions for this period being 12.8. My colleague Dr. Bennett informs me that the male epileptic percentage is 11.4 for that period. As the corresponding figures for England and Wales given by the Lunacy Commissioners for the period 1907–11 are 6.6 and 9.2 for females and males respectively, the above analysis affords further proof that it is to the female sex that our excessive epileptic population is especially due, the male epileptic admission rate for the ten years 1904–13 being 2.2 per cent. above the average, while the female rate is 6.2 above—practically double the average.

From the following table it is apparent that in Wolverhampton at the ages when epilepsy becomes established there is a relatively greater male death-rate than obtains for females, as compared with the county totals:

Proportion of Deaths per 1,000 Living at Subjoined Ages in Staffordshire (Urban and Rural Aggregates) and Wolverhampton.

	0-	5-	10-
Staffordshire:			
Males	49.1	3.4	1.6
Females	40.0	3.5	2.0
Wolverhampton:			
Males	54.8	4.3	2.6
Females	46.3	3.1	1.6

This difference is really greater than appears, as the Wolverhampton figures are included in the averages for Staffordshire, but the fact that more females relatively to males survive in Wolverhampton at the ages when epilepsy develops is significant, also the fact that tuberculosis universally in early childhood is more fatal amongst boys than girls, the total figures for England and Wales being respectively 4.805 and 4,072 under the age of 5. These facts go far to explain our excessive female epileptic ratios, bearing in mind the relation between epilepsy and tuberculosis, to be referred to later.

Coincident with a high epileptic ratio, this asylum also has a high death-rate from tuberculosis—namely, 25.2. The thought occurs: Is it possible that epilepties may be potent agents in raising the tuberculosis mortality of communities they live amongst? The following statistics taken from the Commissioners' report help to support an affirmative answer. Taking the dozen asylums with the highest and lowest epileptic averages, we find that the first-mentioned group has an average epileptic percentage of 18.2, and a corresponding tuberculosis mortality of 17.8, while the dozen having the lowest epileptic percentages show an average epileptic rate of 7.9, and a correspondingly low mortality from tuberculosis—namely, 13.7.

Conversely, taking the dozen asylums showing the highest tuberculosis death-rate, we find this averages at 22.9, and the corresponding epileptic average is 14.0; again, those with the lowest tuberculosis mortality show an average of 10.1 and the corresponding epileptic ratio is 10.9.

When it is recollected that, as already stated, the epileptic average in asylums for England and Wales is 12.5 and the tuberculosis mortality 16.6, the significance of the above figures will be apparent. In this connexion it is also noteworthy that the institution for the feeble-minded at Darenth has an epileptic proportion of 18.7 and a death-rate from phthisis of 24 per cent.

An analysis of 100 deaths amongst epileptics here, taken seriatim, shows that tuberculosis was the cause in 33 cases. A similar analysis of 290 deaths amongst non-epileptic patients gives the figure 24.1. The tuberculosis mortality is therefore nearly 10 per cent. greater among epileptics, and it occurs to one's mind that this tendency to tuberculosis might be universal in this affection and not due to infection contracted here. To help in deciding this I have divided the deaths due to tuberculosis during the ten years under consideration into four periods of two and a half years each.

Table showing the Percentage of Deaths amongst those Admitted in each Period to the Total Admissions in that Period up to the Present Time.

	First Period.	Second Period.	Third Period.	Fourth Period.
Non-epileptics	30.2	24.1	20.3	15.7
Epileptics	28.5	25.0	13.2	36.3

It is apparent that there is a gradual increase in tuberculosis mortality depending on duration of residence amongst the non-epileptics which does not obtain with epileptics.

I have been in the habit for a considerable time of treating certain cases of tuberculosis here with tuberculin, and it occurred to me that it would help matters in this investigation to give diagnostic injections to all the patients in the epileptic ward, and at the same time to correlate the results with physical signs of pulmonary tuberculosis and alteration in weights during the past three months. I had already a series of controls amongst non-epileptics for purposes of contrast. Seventy cases from the epileptic ward were in all examined, ten of whom were non-epileptics. T. 0.001 c.cm. was the injection given; as regards physical signs I relied principally on the alteration in the apical percussion note and the variations in transmission of the tuning-fork note of definite intensity from the supraspinous to the infraclavicular regions, auscultation being for the most part very unreliable in these cases owing to shallow breathing, which is very constant in all forms of insanity. A negative reaction I have considered as a rise of temperature of under 0.8° F., doubtful 0.8°, positive 1° and over. Of the 60 epileptics so investigated, the resultant reactions were negative in 3 cases, doubtful in 7, and positive in 50. The percentage of positive and suspiciously positive reactions to tuberculin amongst epileptics was therefore 95.0. The corresponding figure for the ten non-epileptic patients resident in the epileptic ward was 50.0, and, reviewing my previous diagnostic work here amongst non-epileptic patients, I find that 33.3 per cent. showed similar results.

A very noticeable peculiarity amongst epileptics is the marked depression of temperature after even a comparatively small initial rise and the quick response to the tuberculin in the first place. In 7 cases the temperature dropped to 96° and below (one reaching to 95.4°), in 4 cases to 96.2°, and in 6 to 96.4°, in 15 cases it dropped to between 96.8° and 97.2°, so that in 31 cases, or over 50 per cent., this sudden depression was marked. In all these cases the epileptic seizures were very severe and frequent, and in the 7 cases in which the temperature fell to 96° and below exceptionally so. The thought suggests itself that this peculiarity bears some relation to nervous instability. I have been very much struck by it in epileptics as compared with others.

The frequency of subnormal temperatures amongst epileptics is very marked. Out of the 60 cases under

consideration this condition was present in 35; physical signs were present in 22, doubtfully so in 6, and apparently absent in 7 cases. Of all those showing a positive reaction to tuberculin, physical signs were present in 61.6 per cent., and the number of cases in which the right apex was involved as compared with the left is remarkable; out of the total number showing signs of tuberculous deposit (namely, 38), in 33 the right apex was involved. This is a fact of very great interest when it is recollected that it is mainly on the right side that the tracheo-bronchial glands are implicated in children.

Of those showing a positive reaction, 40 per cent. lost weight during the past three months, while of those giving a reaction of 2° F. and over 63.6 per cent. lost weight, and 81.8 per cent. of these latter showed physical signs of pulmonary tuberculosis. It is therefore evident that, except in the later stages, loss of weight is by no means a valuable criterion of the presence of tuberculosis in epileptics.

Enumerated amongst the epileptics are five past middle age, who developed epilepsy after admission; four of these have undoubted signs of pulmonary tuberculosis, and the fifth had a reaction of over 1.5° and has suspicious signs at one apex.

Considering the results from the above investigation, also the facts ascertained from the Commissioners' report, together with the high mortality of epileptics from tuberculosis, it will at once be evident that there is a close relation between tuberculosis and epilepsy. It has heretofore been considered that epilepsy, by lowering vitality, predisposes to tuberculosis. No doubt in many instances this is so, but I suggest that the great majority of cases of idiopathic epilepsy met with in asylums—in which, as will be readily understood, the epileptic condition is very severe in degree and has begun at a very early age—are directly due to the toxaemia resulting from invasion of the child's system by the tubercle bacillus and its effect on a developing and naturally unstable nervous organization, or it may be to reflex irritation from diseased bronchial glands. Tuberculosis rarely affects children in the same way as adults; the lesion is mainly in the tracheo-bronchial glands. I have been from time to time struck, at *post-mortem* examinations on epileptics, by the size of these glands, especially those on the right side. Recently I made a *post-mortem* examination on an epileptic who had given a positive reaction to a diagnostic tuberculin injection, but who had had no physical signs pointing to pulmonary tuberculosis. She died later, showing all the signs of rapid tuberculosis, and the necropsy disclosed suppurating and caseous bronchial glands and invasion of adjacent bronchi, but the lung tissue itself showed no tuberculous deposit. In Vienna it has been shown that 90 per cent. of the school children under the age of 10 or 11 have been infected with tubercle. Hamburger, of Vienna, among 86 cases of localized tuberculosis, found the primary lesion in the bronchial glands in 85, Still in 81 per cent., and Carr in 80 per cent.[1]

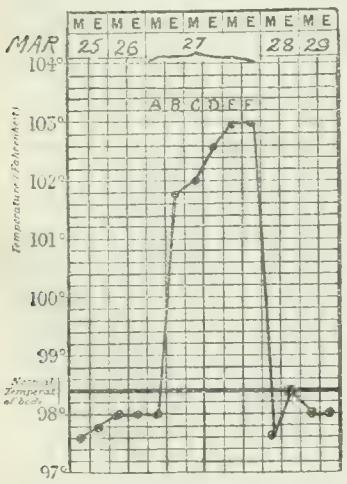


Chart showing marked reactive rise in temperature after a fit, previous to which and afterwards the temperature was subnormal. A, After fit at 9 a.m.; B, 11 a.m.; C, 1 p.m.; D, 3 p.m.; E, 5 p.m.; F, 7 p.m.

We know that in incipient tuberculosis muscular exercise will, by autoinoculation, bring about a reactive rise of temperature due to the flushing of toxins from the tuberculous focus into the blood, and that advantage is taken of this fact in treatment. Bearing this in mind, I have had the temperatures of a number of epileptics taken, and am now constantly having this done, for diagnostic purposes, immediately after a fit and every two hours for ten or twelve hours. I find that the results roughly correspond, but to a lesser degree, to the effects of the diagnostic tuberculin injection—in a few cases a surprising rise of temperature has occurred, and in some a fall, to be explained probably by the degree of toxaemia present. Tuberculosis is undoubtedly very rife amongst children in the poorest parts of thickly populated areas as compared with the rural districts, and it is apparent that the children in these industrial districts cannot get the same care and attention from mothers, who often have other than domestic occupations to attend to. The percentage of occupied to unoccupied married women is—for urban districts, England and Wales 12.9, and for rural 6.2. Now, when a child whose vitality is lowered through lack of care and proper nourishment, to say nothing of fresh air, and who may in addition suffer from unstable nervous heredity, contracts tuberculosis, it may very conceivably be either that a reflex effect is induced or that the toxins thrown into its system from the tuberculous focus have an action, centric or synaptic, on the child's partially developed and ill-regulated nervous organization, resulting in disturbance of the normal balance, and—especially in cases predisposed thereto by inherited nervous instability—the immediate result is an epileptic seizure, which, by bringing about autoinoculation, has the effect of rendering the toxic focus somewhat quiescent for a time. When the effects of this auto-tuberculinization wear off the fit recurs, and after a time the sensitive neurones acquire a habit, or synaptic changes take place from which recovery becomes unlikely. This constant autoinoculation either after a longer or shorter time brings about cure of the tuberculous lesion, the danger of recurrence of the epileptic seizures being in direct ratio to the length of such period, or it keeps the toxin-producing focus in check until debility from exhaustion of one kind or another deteriorates the defensive powers of the system, and rapid tuberculosis results. It will be familiar to every one having experience of epileptics what a low asthenic form the tuberculous process takes in them, and how advanced the lesions are *post mortem*.

The percentage of epileptics in the urban and rural districts here under notice is respectively 24.0 and 13.5, and the Registrar-General's report shows in urban districts a similar preponderance of infantile mortality from tuberculosis, convulsions, and atrophy, debility, and marasmus. Thus for county boroughs all forms of tuberculosis amount to 3.57 and for rural districts 2.27. The corresponding figures for convulsions are 11.50 and 9.42 respectively, and for atrophy, debility, and marasmus 17.41 and 14.84. Just as at a very early age the toxaemia resulting from rickets will cause convulsions, laryngismus stridulus, and carpopedal spasms, so somewhat later epilepsy may become established, as I have endeavoured to describe, by the toxaemia of tuberculosis. If this is so, it is important that all cases of early epilepsy should be tested with tuberculin and the state of their bronchial glands thoroughly investigated by means of the Roentgen rays. At that early age, if taken in time, a course of tuberculin treatment might cure the epilepsy. I have given such a course to one epileptic without apparently any ameliorating effect on the seizures, but this result could scarcely be expected once the nervous system had firmly acquired the epileptic habit.

Summary.

1. That it is to the industrial districts we owe our high epileptic ratio in the County Mental Hospital, Stafford, and that urbanization appears to principally affect the females in this direction in our neighbourhood.

2. That the high death-rate amongst male children in Wolverhampton relatively to female is probably associated with the great excess of female epileptics there.

3. That a high epileptic ratio is constantly associated with a high tuberculosis incidence and vice versa.

4. That the death-rate from tuberculosis amongst the non-epileptic is directly proportional to length of residence, which does not obtain amongst the epileptics.

5. That the number of positive and suspiciously positive reactions to tuberculin amongst epileptics here is 95 per cent.

6. That only 50 per cent. of non-epileptic patients associated intimately with the epileptics show a similar reaction.

7. That associated with a high ratio of epileptics in urban relatively to rural districts is a similarly high infantile and early childhood mortality from tuberculosis, convulsions, and atrophy debility and marasmus, and also a correspondingly high proportion of occupied married women, which it would be well for employers of female labour to bear in mind.

8. That, except in terminal cases of active tuberculosis, loss of weight is not a valuable criterion of the presence of tuberculosis in epileptics.

9. It is contended that epilepsy may be an evidence of tuberculous infection in childhood, probably affecting the bronchial glands initially, and that the convulsions are due either to reflex irritation so set up or to the resulting toxaemia acting on an unstable nervous system, either inherited or acquired. Further, that the constantly recurring seizures not only establish a vicious habit as far as the nervous system is concerned, but also effect tuberculin autoinoculation, thus tending to keep the tuberculous process in check, so that, instead of a fatal termination, epilepsy results.

10. Consequently, the advisability of carefully searching for tuberculous foci in children the moment epileptic fits develop, and also the immediate use of tuberculin in their treatment, should receive consideration.

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STRYCHNINE-TUBERCULIN TREATMENT OF HOSPITAL TUBERCULOUS CASES.

BY

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RECENTLY I called attention to the good results obtainable in the different forms of tuberculosis by the combination of tuberculin and strychnine, the former given weekly, the latter practically daily by intramuscular injection in large single doses.[1] Since then I have given larger doses of strychnine with improved results. I give the strychnine injections to all kinds of tuberculous patients, including cases in which tuberculin injections are contraindicated, with the best results. I give strychnine in acute and chronic cases, in the pyrexial and the apyrexial, in the early stages and in the most advanced, and with invariably good results. It always improves the appetite and general condition. Patients who have a loathing for food soon regain their appetites under its influence. Strychnine will frequently do away with the painful necessity of adopting Debove's gastric lavage and over-alimentation. But the drug must be given by intramuscular or subcutaneous injection, preferably the former. Administered by the mouth it has not the same effects and in large doses will cause tormina and diarrhoea, with possibly disastrous results in advanced cases. These effects are never produced by the injections.

Haemorrhage from the lungs I have found to be no contraindication for the strychnine injections. I have given them in such cases with remarkably good effects when the circulation had been quieted by morphine.

Has strychnine any special action in cases of tuberculosis other than that of a tonic? A bacteriological friend of mine says it probably makes the patient more resistant to the attacks of the bacilli. Personally I incline to the belief that it stimulates the formation of antibodies, especially when combined periodically with tuberculin, and of course it acts as a general tonic and nervine stimulant.

It may be thought that giving these daily intramuscular strychnine injections would be found very trying both to the patient and to the practitioner, but such is not the case. No patient of mine ever objected to them. In fact, the bad cases seemed to look forward to them, as they felt better after "in themselves." There is no strain on the practitioner, and he can give over thirty in an hour if necessary. The site of the puncture—deltoid or gluteal—is dabbed with a swab wet with tincture of iodine by the nurse. The doctor pours 20 to 30 minims of 1 in 400 strychnine hydrochloride solution into the barrel of an all-glass syringe with a fine needle in position; the piston is then adjusted, the instrument turned with the needle upwards, and the air expelled from the barrel along with the surplus solution, and the dose given. The needle is then quickly washed in hot carbolic solution, wiped thoroughly with a sterile swab wet with spirit, and is ready to give the next patient his dose. The following is the solution I invariably use:

℞ Liq. strych. hydrochlorid. (*B.P.*) 100 minims.
Sterile normal saline solution made with camphor water, add to make 400 minims.
Signa: 1 in 400 strychnine solution. Dose, 18 to 25 minims.

In febrile, haemorrhagic, and third-stage cases tuberculin injections are generally considered inadmissible. With this my experience coincides. But tuberculin may yet be used in these cases with good results in the form of Sahli's inoculation method. This is simply a multiple von Pirquet's test done weekly. Personally I make the inoculation over the affected parts. When reaction occurs there is, I take it, a local anaphylaxis with the formation of antibodies which find their way into the circulation, whereas the tuberculin does not. Patients who are having tuberculin injections react powerfully to the inoculations. In a few cases of severe pleuritic pain in chronic phthisical patients, the inoculations quickly relieved the trouble.

In suitable cases, as I have already said, I inject tuberculin once a week or less often. I generally use T.R., human and bovine mixed, but sometimes B.E. or T.O.A. I am a follower of Wright. Rapidly saturating a patient with tuberculin seems to me to be entirely wrong. We are not dealing with an autotoxin in tuberculin, but with a toxin whose only power for good resides in causing mild reaction and the stimulation of the production of antibodies—a process which takes at least a week in developing. To give it oftener than that does no good, in my experience. This is strikingly shown to be the case in the paper by Dr. E. H. T. Rigg, reporting the results of tuberculin treatment at the Brompton Hospital, printed in the JOURNAL. He says:

> The dose was increased every second day at first and afterwards at intervals of four days.

The results as compared with patients not treated with tuberculin were strikingly bad.

Throughout my patients were fairly well fed. Cod-liver oil and creosote were given to all who could take those medicines. Antiseptic inhalations were freely used. I do not say as good results, if not better, are not obtainable by other forms of hospital treatment, but I have not seen such.

The function of the hospital in cases of tuberculosis on the medical side is to treat the febrile stages of the disease and arrest its progress in the shortest possible time. Another function is the segregation and modified isolation of patients whose sputa swarm with tubercle bacilli, and are therefore a real public danger outside.

I give in brief the last twelve cases I treated in hospital.

1. Lascar, aged 25, admitted with small cavity in left apex. Haemoptysis twice. Sick several months on board ship. Night sweats, cough, and anorexia. Had two tuberculin and eight strychnine injections, and left "cured" in three weeks.

2. Finnish seaman, aged 26, admitted with both lungs riddled with cavities and both petrous bones diseased. Cyanosed and apparently moribund. Hyperpyrexia. Case hopeless, but condition ameliorated by injections. Intolerable earache and cough disappeared, and he became contented and cheerful. Sent to workhouse infirmary after a month's treatment.

3. English apprentice, aged 19. Suppurating glands in neck. Reacted violently to second injection of Bandelier and Roepke's tuberculin test. Well in three weeks, but relapsed six months later, when a month's treatment effected another cure.

4. Lascar, aged 26. "Skin and bones only." Crepitus over both apices. Chronic diarrhoea, anorexia, fever. Sputum very scant. Von Pirquet reaction positive. Sick two months. In six weeks had three tuberculin and sixteen strychnine injections. Left feeling quite well, only physical sign remaining feeble respiratory sounds over left apex. Gained 6 lb. last week of stay.

5. Irish stoker, aged 37. On admission, right side wet pleurisy, blood spitting, and night sweats. Von Pirquet's reaction strongly positive; 22 oz. of serum drawn off, and ten days later 40 oz. of sero-pus. Pyrexia quickly subsided. In six weeks had two tuberculin and twenty-eight strychnine injections. Gained 6½ lb., and left feeling quite well.

6. French stoker, aged 30. Admitted for "bronchopneumonia." Ill seventeen days. Profuse sputum; tubercle bacilli $\frac{10 \text{ to } 50}{1}$. Fever, but in a week temperature fell to normal. In a month's treatment had two tuberculin and twenty-

six strychnine injections. Gained 1 lb., and sputum and cough nearly disappeared.

7. Scottish apprentice, aged 19. After admission for trivial injury of wrist developed symptoms of acute general tuberculosis. Pyrexia, râles at left apex, obstinate constipation, abdominal pain and retraction and vomiting; dry cough and night sweats. Von Pirquet's reaction strongly positive, but very slow in developing. Had one tuberculin and ten strychnine injections. When he left felt well, but there was dullness over left apex.

8. English A.B., aged 31. Cavity left apex. Tubercle bacilli in sputum $\frac{0 \text{ to } 5}{1}$. Von Pirquet's reaction feebly positive. Ill some months. In thirty-two days had three tuberculin and twenty-four strychnine injections. Sahli's inoculations over site of trouble seemed to ease cough and sputum. Patient left practically free from cough with scant sputum. No night sweats, and with a good appetite.

9. Greek stoker, aged 34. Ill six months. Both apices affected. Excavation. Anorexia and night sweats. Severe pain over right apex relieved by Sahli's inoculations. Three tuberculin and twenty-five strychnine injections in thirty-one days. Gained 2 lb., lost cough and night sweats. Regained appetite.

10. Swedish carpenter, aged 37. Ill fifteen months (?). Evident fibrosis. Three attacks of pleurisy with effusion. Rapidly losing flesh lately. Intense loathing for food. Severe pleuritic pains (which were relieved by inoculations). Von Pirquet's reaction positive. Fingers and nose congested and clubbed. In thirty-one days had three tuberculin and fifteen strychnine injections, and left with a good appetite, feeling fit, but still occasionally sweated at night. Physical signs *statu quo*.

11. Irish A.B., aged 36. Acute dry tuberculous pleurisy and lung fibrosis. Great anorexia; made what seemed to be a good recovery in forty-six days. Had five tuberculin and thirty-four strychnine injections. Sahli's inoculations relieved chest and shoulder pains. Each scarification developed an erythema bump larger than a five-shilling piece. There was a history of plumbism.

12. Australian seaman, aged 32. Ill over eighteen months. Expelled from workman's home on account of cough keeping the inmates awake at night. Both apices excavated. Five tuberculin, thirty-four strychnine injections, and three inoculations in thirty-eight days. Gained 4 lb., and practically lost cough. Tubercle bacilli fewer in sputum.

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THE CUTANEOUS TUBERCULIN REACTION OF VON PIRQUET.

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THE cutaneous reaction was introduced by von Pirquet, who described the test in the Berliner medizinische Gesellschaft in 1907. It consists of vaccination with Koch's old tuberculin, said to be followed in tuberculous subjects by inflammatory phenomena.

The Tuberculin Employed.

I employed two solutions of tuberculin of different dilutions, making a series of observations with each. The weaker solution consisted of 25 per cent. solution of Koch's old tuberculin, the diluting medium consisting of 0.3 to 0.5 per cent. of carbolic acid in normal saline solution drawn up in fine sealed glass capillary tubes supplied by the Clinical Research Association. The stronger solution consisted of undiluted Koch's old tuberculin, issued in similar form to the previous by Parke, Davis and Co. Small rubber bulbs are supplied to facilitate expression of the fluid.

Application of the Test.

The method which I employed in applying the test may be shortly stated as follows:

The flexor surface of the forearm was cleaned with ether a sterilized large surgical needle was taken and the skin gently scarified in two places about 2 in. apart, sufficiently to remove the surface epithelium, leaving a reddish area, care being taken to avoid too much effusion of blood. Slight presence of blood is an advantage, as it denotes a small lesion which will render absorption more certain. To one area tuberculin was applied, to the other glycerine as a control. No dressings were applied, but instructions were given for the arm to be kept uncovered until the areas had dried. In children the attentions of the nurse are necessary. Sometimes scarification was performed through the tuberculin, at other times the application was made after scarification.

Most methods are the same in essentials but differ in minor details. Von Pirquet makes three scarifications; to two of them he applies tuberculin, and the third is left free, forming the control. He also applies a few fibres of cotton for five minutes to prevent flowing. This, however, can be avoided by a little care on the part of the patient. McNeil rubs in tuberculin by boring into the skin with a blunt-pointed instrument, others employ a special chisel-shaped scarifier.

The Reaction.

Scarification rapidly produces fleshy-looking wheals surrounded by slight hyperaemia; these phenomena are traumatic, and disappear in twenty to thirty minutes. In an hour or so a faint erythematous ring gradually appears round the inoculated area, which slowly increases in intensity and breadth. It occurs in most cases whether they are going to react or not, but is not seen round the control. It, and it only, may be the only sign of activity at the end of fourteen to fifteen hours, when it will either disappear or increase, forming a red zone $\frac{1}{4}$ in. to $\frac{1}{2}$ in. in breadth, varying in different individuals. This zone is the first phenomenon of a positive reaction showing definitely in fifteen to sixteen hours. From fifteen to twenty-four hours we find slight swelling of the area and its surroundings, reaching its maximum in forty-eight or fifty hours, when a reddish or brownish papule presents itself, the brown hue being produced by coagulated serum and pigment in the tuberculin. This may not be the final stage. In some cases the papule edge separates into small discrete papules sometimes surmounted by vesicles; meanwhile the summit of the original papule subsides, so that a ring of elevations surrounds a depression, the whole encircled by an erythematous zone. The edge of the papule may be raised without subdivision. The subsidiary papules appear on the second or third day. In some cases a papule is not produced, but simply a persistent injected area which may subside at the end of the second day. A well-formed papule begins to subside at the end of the third day, and in a week or ten days a scaly, brown, quiescent area remains, which daily decreases until at the end of three to four weeks a small brown pigmented area alone remains. The pigmentation persists for weeks or months, and is due to pigment in the tuberculin, not to pigment derived from the blood, as it is never observed in the control. No reaction was observed in the controls, except an occasional evanescent hyperaemic ring. Von Pirquet observed several reactions in controls, probably due to contamination. The test is painless, unaccompanied by constitutional symptoms or inconvenience. I regard cases as positive which, after twenty-four hours, show even slight elevation or a persistent hyperaemic zone.

Abnormal Reactions.

Sometimes the inoculated area may have an irregular outline sharply delineated; in one case it resembled a "port wine stain," and appeared on the sixth day in a non-tuberculous subject; scattered over it were petechial haemorrhages. In several other cases haemorrhages appeared on the edges of the papules in four to five days. Never have I observed these on the controls; hence they are not due to trauma. One case showed a papule surmounted by a crop of vesicles, which subsided in twelve hours. The only excessive reaction which I have seen occurred in a case clinically free from tuberculosis. In forty-eight hours the test area was converted into a red oedematous swelling, 5 by 8½ cm. in breadth, the centre occupied by the papule; from this area a red lymphatic could be traced to the axilla. Pain was present, but there was no pyrexia or other constitutional symptoms. No enlarged glands were detected. Under treatment by fomentations, all except the papule had disappeared in twelve hours. Pyogenic infection, of course, cannot be absolutely excluded, but susceptibility to tuberculin must also be considered. These abnormal results occurred where a positive reaction was obtained. Four out of six cases showed no evidence of tuberculosis; two of them occurred with the 25 per cent. solution, including the excessive reaction. Atypical reactions may be exhibited by the reaction time, a pronounced latent period, or rapidity of onset. An early reaction may appear as a well-formed papule in a few hours, maintained for two or three days; papulation within twelve to fourteen hours may be regarded as early. Three of my cases exemplified this, one showing a papule in three hours,

maintained for five days, the other two maturing in seven and twelve hours respectively. Conversely delay in reaction may occur. Four of my cases exhibited this; one of these, in sixty hours, formed a papule, preceded by erythema. Another showed no activity until the lapse of ninety hours, when papulation occurred. Neither of these cases was tuberculous. McNeil observed two delayed reactions of ninety and one hundred and twenty hours. Raw has published cases in which there were violent reactions accompanied by marked pyrexia and brawny cellulitis; one of his cases became purulent. Wolff-Eisner and Kronig saw lymphangitis following inoculation. Furunculosis has been noticed by Bandelier and Roepke; ulceration by von Pirquet, Pfaundler, and Oppenheim; phlyctenules and lichen scrofulosorum by Doganoff and Moro. Such phenomena require notice as evidence against the complete safety of the test. According to von Pirquet, a second application may produce a late reaction on the abortive primary site in children clinically free from tuberculosis.

Nature of Test.

The reaction is regarded as specific in the sense of the production of antibodies stimulated by the extra toxin. Daels has examined the papules histologically, demonstrating giant cells of Langhans type surrounded by epithelioid cells produced either by the toxin or bacillary fragments. Is it not, however, possible that these papules were tuberculous, produced by living bacilli, as such have been found in tuberculin preparations?

Results Obtained with the Cutaneous Reaction.

Von Pirquet obtained 88 per cent. of positive reactions in tuberculous adults, and 10 per cent. in non-tuberculous cases; 97 per cent. reactions appeared among tuberculous children; 200 of the cases were confirmed by autopsy. Mills found reactions in 95 per cent. of cases, and failed to get results in non-tuberculous subjects. Among 155 patients McNeil saw 65 reactions, but only 10 out of 20 tuberculous cases gave results. In tuberculosis Bride observed 70 per cent. of reactions, but 20 per cent. of non-tuberculous individuals were positive. In my series of nearly 200 cases, almost half the tuberculous cases reacted, but 36 per cent. of positive results appeared among the non-tuberculous. Feer states that he never saw a failure in scrofula, whereas Impallomeni had no reactions in cases clinically free from the disease. My tuberculous cases may be tabulated as follows:

Disease.	No. of Cases.	Positive.	Negative.
Pulmonary tuberculosis ...	53	24	29
Tuberculous disease of bone	22	13	10
Tuberculous glands	2	2	0
Lupus	1	1	0
? Tuberculous laryngitis ...	4	3	1
Tuberculous empyema ...	1	1	0

Value of Test.

The cutaneous reaction is an ingenious attempt to solve the difficult problem of early recognition of tuberculosis. Like the ocular test it is simple and devoid of discomfort; though not entirely free from untoward results, it is void of those tragic manifestations which condemn the conjunctival reaction. What is its value as a diagnostic aid? The results of observers are greatly at variance, and before an adequate reply can be given some points require consideration. The terms "advanced" and "old-standing" have been employed synonymously, and misleadingly so; advanced lesions frequently react, old-standing ones seldom. Von Pirquet failed to get results in advanced and cachectic cases. McNeil claims good reactions in chronic cases. Mills found persistent reactions in old healed lesions. Old-standing and moribund cases fail, no doubt, owing to toxin saturation and exhaustion of resistive power. I find that the older the patient the less is the probability of a positive result, as shown by the following table:

Tuberculous Cases giving a Positive Reaction with Age-Periods.

4-6 Years.	7-10 Years.	11-15 Years.	16-20 Years.	21-30 Years.	31-40 Years.	41-50 Years.	51-60 Years.	61-70 Years.
7+	11+	7+	5+	7+	2+	4+	0+	1+
0−	2−	0−	4−	13−	9−	7−	8−	3−

The table shows a decrease in positive results as age advances. I suggest that the skin in a young individual is more liable to react than in more mature years, as partly shown in the following table:

Non-Tuberculous Cases with Age-Periods.

4-6 Years.	7-10 Years.	11-15 Years.	16-20 Years.	21-30 Years.	31-40 Years.	41-50 Years.	51-60 Years.
0+	1+	6+	10+	15+	3+	1+	1+
1−	7−	11−	10−	12−	14−	8−	1−

In this table a considerable number between the ages of 11 and 30 react. Above 30 there is a rapid fall. Many tuberculous individuals from a few years of age up to 60 years fail while many cases clinically free respond. That a patient is apparently free from the disease is not proof of its absence, but as obviously tuberculous cases very often give no result, many cases which respond are probably healthy—a deduction which is legitimate. Von Pirquet obtained positive reactions in one-fourth of all children aged 1 to 2 years, one-third in those aged 3 to 4 years, one-half of those between 5 and 6 years, and two-thirds of those aged 11 to 14 years—a gradual increase with advancing years in early life similar to what is shown above.

Hamburger made 848 autopsies on children to ascertain the correspondence between reactions and tuberculous lesions as follows:

Hamburger's Post-mortem Results.

Age.	No. of Individuals with Tuberculous Lesions.
1 to 3 months	4 per cent.
3 to 6 months	18 ,,
6 to 12 months	23 ,,
2nd year	40 ,,
3 to 4 years	60 ,,
Puberty	70 ,,

These valuable statistics agree to some extent with von Pirquet's results. Naegeli goes further, and states that 72 per cent. of all individuals show evidence of tuberculosis. The majority of children clinically tuberculous between 4 and 15 years of age react, but failures are not uncommon. According to von Pirquet, 20 per cent. of children clinically free from tuberculosis give positive results. No results are obtained under six months, but between 10 and 14 years of age 55 per cent. react as compared with my results, where 60 per cent. reacted up to 14 years and 40 per cent. between 11 and 15 years. Calmette only relies on the cutaneous test under 3 years of age, although he admits an error of 4 per cent. among infants. He holds that this test reveals latent and healed cases as contrasted with the conjunctival reaction, for which he claims the demonstration of an active focus. Stern agrees with him. It is unreasonable to suppose that the minor differences of introduction of the tuberculin in the two tests are going to portray such important states. Blümer points out how rare tuberculosis is under 2 years. Radcliffe attended von Pirquet's clinic, and reports that the cutaneous method is relied upon under 2 years of age; also that tuberculin treatment is continued until the test becomes negative. The advantage of this is not evident. If the test fails owing to saturation with toxin it does not signify cure; if it is considered to become negative as a result of cure, this completely destroys the idea that the test reveals latent or healed lesions. Blümel relies upon it up to 2 years of age, but he weakens his position by the assertion of its greater value if negative. Bandelier and Roepke's suggestion that reaction implies a previous infection with tubercle bacilli has nothing to support it. Among my cases, 66 per cent. tuberculous females reacted as compared with 35 per cent. of tuberculous males. Among cases clinically free the ratio was 35 per cent.

females to 30 per cent. males. Thus as many non-tuberculosis women give positive results as tuberculous men.

The female liability to react supports the suggestion of delicacy of skin being a factor which cannot be ignored. I cannot agree with McNeil that a hard skin will explain some late reactions if the scarification was adequate; the abrasion should, of course, be regulated according to the quality of the skin. Bride regards the test as valuable in early pulmonary tuberculosis; the reverse is the attitude adopted by Roepke and Bandelier. Define obtained 50 per cent. of reactions in lupus; marked reactions in tuberculous skin lesions were obtained by Moro, Doganoff, Oppenheim, and Pfaundler. I had only one case of lupus which gave a good result. One would expect a skin already the site of tuberculous disease locally to react readily to inoculation with the same toxin. Kreibich and Bandler refer to severe reactions in skin lesions; they found 22 results out of 26 cases. Two out of my 3 cases of pleural effusion reacted; the failure exhibited definite signs of pulmonary tuberculosis. Impallomeni comments on good results obtained in osseous lesions, especially in cases cured or improving; he had the unique experience of never having seen a reaction in a case clinically free from the disease. Only about half of my osseous lesions responded. Curschmann notes 10 reactions out of 11 patients, the failure being in a cachectic case. Bandelier and Roepke note good results and severe reaction in surgical tuberculosis which my records do not bear out. They issue a warning that cases with tuberculous glands and simple effusion into a joint are apt to be misleading, as a good reaction may be obtained and tuberculous joint trouble as a consequence diagnosed. McNeil places reliance on the test in obscure traumatic joints. Among my series rheumatic cases gave good reactions; 8 out of 13 cases responded. Cases of chorea without exception failed. Among my cases cardiac lesions, plumbism, carcinoma, etc., gave results. Three syphilitic patients failed; these are of interest, as Favre and Nicholas claim as good results in such cases as in tuberculosis. Out of 12 cases of enteric fever 1 reacted. Von Pirquet affirms that enteric complicated with tuberculosis does not react. Any superimposed toxaemia, according to Holt, interferes with the reaction. In tuberculous peritonitis 3 out of my 5 cases failed. McNeil found good response in such lesions, but they proved unsatisfactory in the hands of Bandelier and Roepke, though Bride claims value for it in early diagnosis from enteric. Bandelier, Bride and Roepke report bad results in tuberculous meningitis. There is no doubt that the reaction is most marked in vigorous individuals, irrespective of the intensity of the infection, and no prognostic value can be applied to it. Early and late reactions have no significance, though Wolff-Eisner regards early reactions as indicative of an unfavourable termination, and delayed results as suggestive of healed or latent lesions. Some of my cases were tested with 25 per cent. solutions, but the results were very similar to those obtained with the undiluted tuberculin.

Conclusions.

From the preceding observations I have arrived at the following conclusions:

1. That the cutaneous reaction is of no prognostic or diagnostic value.
2. That results are more frequently obtained in women and children than in men.
3. That the older the individual the less likely is the reaction to be obtained; old-standing lesions, as distinguished from advanced cases, usually fail.
4. That cases of rheumatism give more positive results than tuberculous individuals.
5. That late and early reactions have no clinical significance.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE INTENSIVE METALLIC IODINE TREATMENT FOR CHRONIC ARTHRITIC AFFECTIONS.

Preliminary Note.

IODINE seems to be unique in combining relative harmlessness with a range of beneficent action, the extent of which had not been realized until the intensive method, for which it is well suited, had been successfully resorted to in phthisis and in tuberculosis by Boudreau and by Curle and Reeve, simultaneously with its universal adoption by surgeons as the best local antiseptic. It is to the iodine that the iodides owe their efficacy in pneumonia, in syphilis, in adenopathies, etc. They, too, are capable of intensive administration, as for instance in the special treatment of aortic aneurysm, which I instituted many years ago by long-continued heroic doses of potassium iodide, in association with the suppression of fluids in the dietary. But they lack some of its virtues; and they have toxic tendencies of their own (particularly potassium iodide) which depress the nervous system instead of stimulating it, that stimulation being a leading feature of iodine, and its only obvious effect upon the nervous structures and functions. For that reason, and for dread of their greater hydrating effect upon the mucous membrane, we have systematically shunned them in phthisis. Above all they lack its volatility, which explains so much.

Hitherto iodine had practically not been tried internally. Therefore, in spite of its extensive use as an inhalant, we had missed the greater opportunity of its continuous volatilization all the way down the alimentary tract, which seems to me to be the practical feature in Boudreau's "intensive iodine method" by means of the strong 10 per cent., iodide free, French tincture (the same as our Indian tincture). This I may now venture to identify more closely as the "metallic iodine method," as the iodine is almost entirely precipitated in the glass by the water or other beverages which have to be added to the dose. Whilst perusing the account, published only last January,[1] of his remarkably successful experience of ten years in phthisis and in tuberculosis, I concluded that it might apply at least equally well for my own ailment, as the iodides have been for so long, not shunned as in phthisis, but steadily trusted and prescribed in all arthritic affections—even for rheumatoid arthritis (which is the main objective of this note), although so like phthisis in its record of depression as a cause and a result. Not having been disappointed, I have no diffidence in inviting its wide trial in all of them, above all in the early rheumatoid stage, without needlessly delaying for many sufferers a probable benefit (allowing, of course, for exceptional idiosyncrasies) in the direction of a general or "hormonic" stimulation, whatever the arthritic advantage may ultimately amount to in individual cases.

Of upwards of three years' progress, my symptoms, which had been denied any thorough treatment beyond a long course of large doses of aspirin, or any rest, were those of a severe spastic coxalgia with marked vasomotor and blood pressure depression, and considerable muscular weakness, and eventual atrophy. Last September, at Dax, they had their first instalment of rest and of strenuous as well as effective treatment, under Dr. Delmas, whose diagnosis was early dry arthritis of the hip (although the *x* rays had recently given no structural evidence of it), and slightly too of the opposite shoulder. The winter brought back much of the trouble. Seven weeks ago, on reading Boudreau, I started a thorough course of his treatment, and I have now settled down, after taking more, to a daily total of 100 drops of the tincture, containing 10 grains of iodine, with no other treatment except, quite recently, a large morning dose of aspirin, which now seems to be more active, and to alleviate the symptoms slowest to yield and presumably nervous, those of recurring severe barometric reactions. The most rapid result was an initial and lasting constitutional rebound; and this has been followed by an arrest, as I hope, but at any rate by a steady improvement in all the coxalgic symptoms and in

[1] *Journ. de méd. de Bordeaux*, January 4th, 1914.

the atrophy. I am now able to run upstairs two stairs at a time, and sometimes even to span three stairs at a walk.

My only chronic rheumatoid case at present available for treatment is an old hospital patient of mine treated for ten years, but much crippled in the end. After five weeks of a milder and much more carefully graduated course, she is at last showing a definite though slow improvement, in the markedly increased mobility of her right shoulder, under exclusive iodine. After that history the improvement could only be slow, but it is the more significant.

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DEGENERATIVE CHANGES IN OLD EMPYEMA, WITH NOTES OF A CASE.

ANCIENT collections of pus, it is known, may become encapsulated and comparatively harmless; fluid is absorbed, with inspissation of the débris of the previously active focal inflammation—sometimes a putty-like remainder is left; this may become harder and cretaceous, or it may become osseous in process of time.

In empyema thoracis particularly such changes are liable to follow long-continued suppuration, and in old cases extensive operations, after the manner of Estlander or Schedé, are required, with removal of the pleura, which may be thickened in condensed plates commonly made up of sheets of dense connective tissue, resulting from cicatricial changes in an extensively granulated area. Even the bones overlying become thickened by added increment on their inner sides, as described by Parise and Edington.[1] I have seen such cases, but none with changes so striking as in the following:

A male, aged 60, who had suffered from a chronic chest condition for six years, was seen with a view to operation for empyema, there being physical signs of that condition on the left side—wooden dullness on percussion, bulging of the intercostal spaces, a swinging temperature, a general septic look, and the report of pus obtained with some difficulty on aspiration of the pleural cavity. The left deltoid muscle was atrophied.

On September 20th, 1912, three ribs were resected with considerable difficulty, owing to their thickness, in correspondence with the observations above quoted. A dense calcified sheet was exposed underneath, and this had to be channelled through with care, till a landmark in the interior could be reached. Altogether the pleural wall was thickened by a cuirasse of one inch in section. When the cavity was laid bare a little pus was evacuated, but no lung was seen or felt, having been destroyed or almost completely retracted towards its root.

In the space now seen a veritable grotto was exposed, with nodular stony masses bounding its limits. A periosteal elevator when struck against its walls rang with a clear tinkle, and, most remarkable of all, the parietal pericardium was seen crusted with calcified deposit, which with each beat of the heart gave out a sound as of footsteps crunching on gravel, clearly heard round the operating table.

Reaction after operation was not good, the heart, which had been feeble before, did not respond, and the patient died on the third day.

This case recalls a famous specimen in Edinburgh[2] which appears at examination times. It consists of a rib, apparently removed *post mortem*, with a transverse crack externally, while attached to its internal surface is a large flat plaque of bony material. It would seem to have been a case of old empyema with calcification proceeding to ossification of the pleura.

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[1] Edington, *Glasg. Med. Journ.* May, 1905.
[2] Museum of the Royal College of Surgeons, Edinburgh.

THE Dental Institute of Zurich has been incorporated in the Medical Faculty of the University. This will make it possible for students of dentistry to obtain a doctor's degree in their special province of surgery. It is believed that the other universities of Switzerland will shortly follow suit and offer to dental students the chance of obtaining the title "Dr. med. dent."

Reports

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

WALSALL AND DISTRICT HOSPITAL.

RESPIRATORY PARALYSIS OF SIX HOURS' DURATION.

(Reported by A. T. TODD, M.B.Edin., Assistant House-Surgeon.)

A STURDY, strong-looking boy, aged 9 years, was admitted on March 27th, at 8.30 p.m. He complained of pain in the belly and vomiting. He had been ill for three days, and twice before had suffered from illnesses of the same nature, but of less severity.

On admission the temperature was 101.5° F., pulse 134, respirations 29. The abdominal wall was of board-like rigidity, and did not move with respiration. Pain was present in the lower abdominal hemisphere; tenderness was present all over the abdomen, but was most marked in the right lower abdominal quadrant. He was slightly constipated, and had a short suppressed cough, which caused pain to shoot towards the region of the appendix.

A diagnosis of acute recurrent appendicitis with peritonitis was made, and operation was commenced at 9.30 p.m. The diagnosis was proved to be correct at the operation, and the child was removed to the ward at 10 p.m. Ether was used as the anaesthetic, after a preliminary hypodermic injection of morphinae sulph. gr. $\frac{1}{4}$, atropinae sulph. gr. $\frac{1}{100}$. He was easily anaesthetized, and did not require much ether. During the operation his pulse-rate remained good, and breathing was quite good, but he became a little pale towards the termination.

After he had been in the ward five minutes a message came that he was blue, and breathing badly. I found him deeply cyanosed and cold; the apex beat could not be felt, the radial pulse had disappeared, but a flicker of pulsation was found in the carotids. I immediately instituted artificial respiration, and instructed a nurse to inject strychninae and brandy hypodermically. Though frequent short intermissions were made in the artificial respiration, the child made no effort to breathe naturally for fifty minutes, although the colour, body temperature, and pulse improved. At the end of an hour faint respirations, of Cheyne-Stokes nature, commenced; these rapidly improved until he breathed deeply and well, but after a few minutes cyanosis reappeared, the pulse-rate and pressure receded and the body temperature fell, until after twenty-five minutes the boy was, if anything, in worse case than at first.

About midnight artificial respiration was begun again, and for an hour had practically no effect. The child was cold, although plenty of hot bottles were placed round him, and artificial respiration was performed through blankets; the carotid pulse was just palpable, and he was deeply cyanosed. Liq. strychninae ♏ iv, spt. vini gallici ♏ xvi was administered, this time into the external jugulars, which became prominent upon each artificial expiration. Shortly after this 1 c.cm. pituitrin was injected intramuscularly, and artificial respiration was continued without intermission. At 2 a.m. the colour improved and he became warmer; the palatal and corneal reflexes, which had disappeared, returned, and the pulse wave took on a bounding character. At 2.45 a.m. he began to make slight efforts at natural respiration—feeble single inspirations—and at 3.10 a.m. he began to breathe without help. Respirations were faint at first, and of the Cheyne-Stokes type; but the intermissions soon disappeared. After fifteen minutes cyanosis again appeared; the pulse became so weak and irregular that it was thought advisable to begin artificial respiration for the third time. After twenty minutes of this he began again to breathe without help, but for an hour he required frequent short spells of artificial respiration, the last being at 4 a.m., when he was of good colour, was warm, was breathing deeply, and was beginning to regain consciousness.

It would be difficult to give the exact cause of the respiratory paralysis in this case; in all probability it was due to toxic absorption from the peritoneum, and the

exciting cause was the morphine, which is known to be a direct poison to the respiratory centre. Since the dose given in this case only represents a dose of ¼ gr. for an adult, it is evident that the boy had some idiosyncrasy towards the drug. No further trouble was experienced in the case, except that vomiting was severe and frequent for two days; it yielded to chloretone and intestinal lavage. The child made no complaint of soreness of the chest wall, and there have been no respiratory complications. The case is, I think, of some interest, inasmuch as the respiratory paralysis only disappeared after five hours of artificial respiration.

My thanks are due to Mr. J. G. Cooke for permission to publish this case.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Section of Pathology.

At a meeting on May 5th, Dr. Andrewes in the chair, Mr. S. G. Shattock, in a paper on *Pseudo-tuberculosis hyalina testis*, described under this name a condition simulating a miliary or nodular tuberculosis of the body of the testis. The term "pseudo-tuberculosis" had rightly been discarded in the nomenclature of infective processes; we no longer spoke, for example, of a streptotrichial pseudo-tuberculosis. The lesions were named after the bacterial or animal parasites causing them. Nevertheless, for non-infective lesions the term might still be convenient. Many forms of nodular fibrosis of the lung from dust inhalation were striking simulants of tuberculous disease. In the present case so close was the likeness that the testicle would have certainly been condemned if split through for inspection at an operation prior to a contemplated epididymectomy. The lesion was due to the hyaline degeneration and swelling of the intertubular stroma around groups of seminiferous tubuli of which the walls were similarly thickened, and which were in different stages of obsolescence. In the extreme stage the tubuli were represented by thick-walled hyaline cylinders with the narrowest chink to represent a lumen, the whole of the epithelium having disappeared. As a final change, the lumen itself became obliterated. The nature of these structures was determinable by finding epithelium and spermatozoa in their lumen in the earlier steps of the process. Groups of similarly thickened tubuli occurred in this specimen without any accompanying hyaline swelling of the pertaining stroma. The author had, on examining the testicles of the aged, found similar groups of obsolete thickened tubuli, which might be so extensive as, without any corresponding involvement of the stroma, to produce macroscopic foci and irregular tracts, simulating a tuberculous lesion. The thickening possibly resulted from the local action of the effete products of disintegrating epithelium, and, having a toxic origin, was allied in kind to the hyaline and amyloid thickening of the capillaries in more general diseases. In syphilitic and in leprous orchitis tubuli showing the same change might be encountered; whilst the thickening of the walls of the tubuli in the hypoplasic, undescended organ had long been pointed out. Such hypoplasic testes probably functionated completely, or without proceeding to spermatogenesis, for a brief period, their early obsolescence being followed by disintegration of the tubular epithelium, and, as a further result, by thickening of the walls of the tubes. Dr. H. C. Ross, following up previous work of his own regarding division of lymphocytes in the blood stream, gave a lantern demonstration to illustrate the similarity between certain types of cell division artificially produced by auxetics and certain figures found in the blood in pernicious anaemia. Drs. Murray and Bashford gave a cinematographic display illustrative of the mitotic division of cells in the blood of the newt, in order to show that the phases previously demonstrated by staining methods in fixed films were reproductions of the actual process.

Clinical Section.

At a meeting on May 8th, Mr. Charters J. Symonds, President, in the chair, the following were among the exhibits:—Dr. Clive Riviere: A case of *Spleno-myelogenous leukaemia* in a boy aged 12. Arsenic, *x* rays, and benzol had been used, but the leucocytes had increased from 167,000 to 425,000 per c.mm. Mr. Sidney Boyd: A case in which *Splenectomy* had been performed for splenomegalic cirrhosis with ascites in a woman aged 23. The result of the splenectomy had been to relieve the ascites and avoid repeated paracentesis, which had previously been required. A thick, Gram-negative, non-motile bacillus had been isolated from the spleen by Dr. G. A. Gibson. It was suggested that the spleen was infected, and the cirrhosis of the liver was due to a consequent toxaemia. Dr. A. F. Hertz: Three cases of *Thomsen's disease* in members of the same family. It occurred in two brothers aged 25 and 13, and a sister aged 16. The degree of hypertrophy of the muscles was very marked. Dr. F. Parkes Weber: (1) A case of *Progressive vertebral ankylosis* (spondylose rhizomélique) in a man aged 67. A skiagram showed that the vertebrae were united by a layer of bone at their anterior margins. No history of venereal disease was obtained. (2) A specimen of *Spasmodic stricture of the oesophagus*. A fusiform dilatation of the oesophagus had occurred, which was corroborated *post mortem*, but no growth or hypertrophy of the cardia was present. The patient, a man of 80, had suffered from obstruction of the oesophagus, on and off, since 1904. Mr. Charters J. Symonds: A specimen of *Cancer of the rectum*, treated by excision after application of radium. The specimen was exhibited to show the favourable effects of radium. Mr. T. L. Ellis and Dr. H. D. Rolleston: A case of *Arthritis associated with psoriasis*. The psoriasis first appeared, and one month later the arthritis, two years ago. Both recurred together in November, 1912. The question was raised as to the nature of the association between the two conditions. Dr. James Galloway: Specimen of *Splenomegaly with gastro-intestinal haemorrhages* (case previously shown before the Section on February 13th, 1914). Splenectomy had been performed, and the immediate result appeared to be satisfactory. The external wound became infected. Ascitic fluid escaped in large quantities, and the patient died fifteen days after the operation. The liver was markedly cirrhotic. The splenic vein was large, tortuous, and in parts thrombosed. Dr. J. Alison Glover recorded a case of *Rupture of an aneurysm of the abdominal aorta* in a young woman.

Section of Ophthalmology.

At a meeting on May 6th, Sir Anderson Critchett in the chair, Mr. R. Affleck Greeves, in a paper regarding the *Filtration angle in glaucoma*, described cases in which there was no closure of this angle by a peripheral anterior synechia. They fell into three groups. In the first were those in which an irido-cyclitis was, or had been, present. In the second, the tissues of the pectinate ligament were unaltered, but the spaces were blocked by large, swollen cells, apparently of a phagocytic nature. In the third, the spaces of Fontana were open, but simple retinal detachment was present. In these latter cases the author suggested that the rise of tension and the retinal detachment were both due to an alteration in the composition of the intraocular fluid. In cases of glaucoma secondary to an intraocular growth, an inflammatory element might sometimes be present. Lieutenant-Colonel Herbert, I.M.S., speaking of *The choice of an incision in glaucoma operations*, favoured a limited subconjunctival incision in the transverse vertical plane, a millimetre behind the limbus, the conjunctiva at this point being only loosely attached. A sufficiently near approach to this section could be obtained by puncture and counterpuncture with a very narrow tapering knife. Though sufficiently peripheral superficially to facilitate diffusion of aqueous backward under the conjunctiva, it reached the deep surface of the cornea well in front of the root of the iris. Although making only a limited opening into the anterior chamber, the incision was superficially long, so widening the area of diffusion. Thus the tendency to localized vesicular change from filtration through the conjunctiva was reduced to a minimum. It was this change which had been mainly responsible for the late infections reported after trephining. Permanent filtration through this incision was secured in chronic glaucoma if the wound were kept open for twenty-four hours. One method of doing this was to fix a gilded rod of metal by

sutures, so that it lay in the incision, though upon the conjunctiva, depressing the latter into the scleral groove. The method possessed the great advantage of never emptying the anterior chamber, and during the operation there was only slight leakage. The operation, therefore, seemed to be one of the safest imaginable. Ordinarily, there was no need to interfere with the iris in any way. The details, however, required yet to be more fully worked out. It was necessary (1) to avoid unnecessary displacement of the conjunctiva, which tended to localize filtration, and (2) to provide sufficiently free leakage of aqueous in congestive and absolute glaucomas. Mr. N. BISHOP HARMAN, in a note on *A variable flap operation for chronic glaucoma*, said he had devised the operation in order to allow the surgeon some latitude in grading the effects to be produced. Most of the methods now used were very rigid—the same sort of thing was done for every sort of eye. After an initial scleral section with the keratome, the modified twin scissors devised by the author were used to cut a corneo-scleral flap. The blades of these scissors had been so modified that they cut a U-shaped piece free, except for a narrow stalk of attachment to the cornea. This flap was freely movable; the ordinary tension of the eye lifted it above the general level of the sclera. It was so mobile that it could be twisted over on itself; then it was found to lift the conjunctiva, and form a sort of inclusion tissue keeping open the scleral fistula. If the sclera were unusually tough, the flap could be removed with the touch of a knife. He favoured the operation as securing the desired variation, and the twisting of the flap in particular promised to be very effective. Mr. W. G. LAWS, in a paper on *Herbert's small-flap operation for glaucoma*, said he was inclined to return to the original type of the operation, and make lateral cuts with the knife, for scissors must crush and injure the tissues before dividing them, and in glaucomatous eyes tissues already lowered in vitality were being dealt with. Hence he did not apply antiseptics to the conjunctival sac; he did not even douche it before operating, he simply cleansed the edges of the lids with 1 in 3,000 perchloride. Out of 140 cases, he had had intraocular haemorrhage in only three at the time of the operation. These three he detailed. He would not apply one form of operation in all glaucoma cases indiscriminately. He preferred the open-wedge operation in long-standing glaucoma cases, particularly when the angle of the anterior chamber was shallow. Mr. A. L. WHITEHEAD (Leeds) pointed out that after the glaucoma operation fistulous tracts were set up from the anterior chamber towards the spaces of Fontana, lined with epithelium which was probably derived from that in the anterior chamber. When failure occurred from the operation, it seemed to be due to a fibrous tissue formation, which closed the operation wound, whatever the operator did.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 6th, Dr. JOHN PLAYFAIR presiding, Dr. MELVILLE DUNLOP, in a paper on *Empyema in children*, showed the tendency of a pleural effusion in childhood to be purulent, by his analysis of 59 cases under 3 years, 53 being purulent. In his total of 159 cases at all ages the pneumococcus was the cause in more than half; the tubercle bacillus was found in only 3 per cent. He disliked the term "latent empyema"; it was generally synonymous with bad diagnosis. For empyema was one of the great causes of marasmus in children, and together with tuberculosis and congenital syphilis had to be excluded in such cases of wasting. In its diagnosis the valuable signs were displacement of the heart-beat and great dullness at the lung base with a tympanitic note above; auscultation was often misleading. As to complications, purulent pericarditis was present in 40 per cent. of his fatal cases; he had no cases of suppurative arthritis in his series. The prognosis depended largely on the age; in his cases the mortality was 19 per cent. at all ages, but 36 per cent. under 2 years. In treatment the ideal was early diagnosis and early evacuation. He only used aspiration where the serum was merely turbid, in localized collections of pus, or in very large collections as a preliminary to resection. In the ordinary case it was a waste of time. Of late years he had used a good deal the method of simple incision between the ribs, and had had as good results as by resection of rib. Professor CAIRD said that in some cases the pus was so thick that none could be withdrawn by the exploring syringe; the method advocated by Dr. King of having a few minims of distilled water in the syringe was then useful. Dr. JOHN THOMSON emphasized the greater frequency of empyema in poor children; as to aspiration, he could recall two or three dozen cases in which it alone had succeeded. Mr. D. P. D. WILKIE, in an analysis of 41 cases of *Duodenal ulcer* found *post mortem*, in a total of 490 autopsies, said that in only 6 was the ulcer connected with the cause of death, and in these cases alone was its diagnosis made during life. These figures, therefore, illustrated the occurrence of "silent" duodenal ulcers. In all the cases the ulcer was in the first part of the duodenum. As contrasted with operation experience, the ulcers were frequently multiple, and the site often on the posterior wall. With regard to the etiology of duodenal ulcers, an analysis of these cases did not support the embolic theory, either arterial or retrograde venous emboli. The modern spasmogenic theory of causation, where hypersecretion of gastric juice and pyloric spasm was set up by hypertonus of the vagus, this in its turn being induced by some irritant focus elsewhere, and usually in the appendix and colon, was supported by the analysis of his cases; for in 15 (out of 41) there was some abnormal condition of the colon or appendix. He advanced an hypothesis of his own which seemed to explain two other facts peculiar to duodenal ulcer: the localization to the first smooth part of the duodenum, and the great sex-incidence on men. The first postulate was the dysharmonic condition of the abdominal nervous system already referred to, setting up gastric hypersecretion and pyloric spasm; this exposed the duodenum to contact with highly acid chyme towards the close of gastric digestion. Then the blood supply was peculiar, being derived from the superior duodenal artery in the hepatico-duodenal ligament. Lastly, in men, owing to the higher position of the pylorus in the male as compared with the female stomach, this portion of the gastro-hepatic omentum was exposed to special strain where a lax condition of the abdominal muscles was present. The course of events, therefore, was relative anaemia due to stricture of a branch of the superior duodenal artery, this anaemia exciting local muscular spasm in the duodenum, and the latter in its turn setting up more anaemia of the mucous membrane and preparing it for self-digestion. Professor CAIRD said that, after long experience, he could not confirm the alleged association between burns and duodenal ulcer. Professor RUSSELL, in commenting upon the association of abnormal conditions of the colon with gastric and duodenal ulcer, said that many patients sent into hospital with a diagnosis of "gastric ulcer" were cured of their symptoms by colon lavage alone. The pyloric syndrome was not diagnostic of duodenal ulcer without the presence of bleeding, apparent or occult. Professor ALEXIS THOMSON said that in many men with duodenal ulcer there was no suspicion of intestinal stasis and abnormal colonic conditions. He was sceptical of the explanation of the peculiar sex-incidence. Dr. CHALMERS WATSON included duodenal ulcer in the group of intestinal toxaemia which was responsible for a more diverse type of intestinal disorder than supposed. Mr. DOWDEN cited cases of duodenal ulcer and of symptoms referable to the duodenum cured by removal of a diseased appendix. Mr. STRUTHERS said that in his own experience of perforated duodenal ulcer the patients had not lax abdominal muscles. Dr. COWEN GUTHRIE described some cases which were apparently cured by anticoli serum followed by vaccines.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 1st, Dr. F. S. PALMER, President, in the chair, Dr. F. G. CROOKSHANK, in a paper on the *Pathogeny and treatment of exophthalmic goitre*, described the functions of the thyroid gland in health as having relation to nervous mechanisms, to the work of other endocrinic organs, to processes of metabolism, and to the organization of defence against parasitic infections, and toxaemias of endogenous or microbic origin. Assuming that symptoms of the disease were principally due to a dysthyreosis, he pointed out the clinical antecedence, in

different types of cases, of nervous derangement, of endocrinic irregularities, of metabolic perversities, of infective or toxaemic processes, and suggested that the thyroid hyperplasia in exophthalmic goitre was generally due to definite calls on the energies of the organ in respect of one or other of its various functions. It was important to recognize vicious circles in Graves's disease; they were prone to occur in individuals whose nervous balance was marked by sympatheticotonus, or whose endocrinic system was disturbed by the persistence or enlargement of the thymus. In treatment, prolonged co-operation between physician and surgeon was necessary. Physostigma, given by the mouth, in the form of the tincture, was of value in reducing the tachycardia, and very great improvement sometimes attended the administration of thymus substance. In regard to operative measures, though the physician must not regard thyroidectomy as a *dernier ressort*, the surgeon had no justification for claiming that surgical treatment afforded the only rational method of therapeusis. In the discussion which followed, Dr. Palmer defined Graves's disease as a glandular neurosis characterized by tachycardia, tremor, protrusion of the eyeballs, enlargement of the thyroid, together with various neurasthenic and vaso-motor disturbances the result of hyperthyroidism. The normal thyroid extracted from the system a toxic product, and neutralized it before it was thrown into the general circulation. Primarily the disease affected the vaso-dilators of the head and heart which were situated in the medulla and cervical sympathetic nerve. The medical treatment was far from satisfactory. Rest was the first essential and the avoidance of all excitants. The bromides with belladonna or strophanthus were of service. Lancereaux had claimed brilliant results from quinine and ergot. Thyroid extract, in the speaker's experience, was not only useless but sometimes harmful. He had not seen any good from the administration of thyroidectin, nor from certain serums on the market. Some degree of success had been obtained by the use of galvanism with the negative pole placed over the thyroid and from a mild faradic current. Mr. James Berry insisted that a theory of mere hyperthyroidism did not wholly explain all the facts of the disease, a dysthyreosis being more probable. From a clinical point of view it was well to bear in mind that there existed a large class of cases which were often loosely included under the somewhat misleading term of "exophthalmic" goitre. A common type presented a unilateral thyroid tumour in association with the usually accepted signs of Graves's disease, but without exophthalmos. Such could almost always be cured, not only of the tumour, but also of the tachycardia and nervousness, by a suitable operation, and one with comparatively little risk. The surgical treatment, however, of the classical type of the disease had to be approached with considerable caution. In these cases there was a special tendency to haemorrhage, owing to the condition of the gland tissue, and these patients did not withstand haemorrhage well. The avoidance of haemorrhage was the main point to be aimed at, and he had very little belief in the doctrine that undue handling of the gland forced an excessive amount of thyroid secretion into the circulation. Few diseases more urgently required co-operation of physician and surgeon. Very acute cases in which thyroid intoxication was severe were best treated medically until one of the usual periods of remission set in. Cases with grave visceral complications were not suitable for operation. The most common and serious complication was dilatation of the heart, and surgical intervention should be considered before continuing to treat a progressive case by medical means until irremediable cardiac dilatation had supervened. The operation that was followed by most benefit was undoubtedly removal of a portion of the gland, generally one-half of it, but in many of the more severe cases ligation of one or more superior thyroid arteries was of considerable value, and the degree of reaction that followed afforded the surgeon a fairly accurate means of judging whether he should subsequently proceed to the larger operation. A well executed operation upon a suitable case afforded, in the present state of knowledge, the best means of benefiting or curing the sufferers from this most troublesome and serious disease. Mr. Donald Armour said the surgical treatment of the disease was not emergency surgery, nor should operation be undertaken during periods of exacerbation or excessive activity of the disease, otherwise the mortality would be high. Acute delirium, continuous vomiting and diarrhoea, and profound emaciation were serious symptoms, and operation should not be undertaken until such condition had subsided. He agreed with Mr. Berry's remarks concerning dilatation of the heart. A proper selection of cases should reduce the former high mortality to one of from 1 to 4 per cent. In a majority of a series of some 40 cases he had performed a partial thyroidectomy, always removing at least one-half of the gland, together with the isthmus. The ligation of arteries was a simpler operation and associated with less risk than that of partial thyroidectomy, but the desired results were not as surely or as quickly attained. In certain cases ligation should precede thyroidectomy. In the ligation of the vessels the ligature should be placed close to or should include some of the gland itself at its superior pole. This was done to prevent a reversal of the circulation by the anastomotic branches of the inferior thyroid artery. The greatest care should be taken to prevent two things—namely, the loss of blood and any rough handling or squeezing of the gland tissue. The greatest delicacy of handling was required to avoid the tearing of the extremely thin walls of the thyroidal veins. All vessels should be clamped on both sides at the place where they were divided, as they bled freely from the gland side when cut. It was extremely important to give the patients, after the operation, large quantities of fluid. Mr. H. M. Page, who had given the anaesthetic in most of the cases mentioned by Mr. Armour, said that for the last few years he had given nothing but open ether. A sleeping draught was given at bedtime, and an injection of morphine, scopolamine, and atropine in the morning an hour before operation. Ether was given by the open drop method, every care being taken to prevent frightening the patient. When the patient was unconscious a strap was passed round the table just above the knees and ankles, and the arms were also fixed. This was done as the anaesthesia was kept as light as possible, and slight movements would otherwise occur. The site of operation should also be infiltrated with novocain, but this should be done after consciousness was lost.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

At a meeting on May 1st, Dr. T. Wardrop Griffith, President, in the chair, Mr. R. MacD. Ladell, in a paper dealing with the practical application of *Therapeutic suggestion*, said that it could be used without producing actual hypnosis. Even when hypnosis was aimed at the patient in nine out of ten cases did not actually sleep, and it was a great mistake to let the patient think that sleep was a necessary preliminary to cure. Hysterical subjects were not good subjects, as they were already under the influence of their auto-suggestion. Neurotic cases, drug takers, and alcoholics were suitable. Neurasthenics required other treatment as well, but therapeutic suggestion was of great assistance. It was important that the patient should understand that the treatment differed widely from the popular idea of hypnotism, as set forth in novels and plays. It strengthened the will power, instead of sapping it, and the subject remained his own master all through. The form of suggestion must be adapted to the patient. With some one could be dogmatic; others required reasoned argument. The effect was cumulative and could not be judged by a single sitting. Nothing should be done to any patient which was not done with the object of facilitating his cure. Experiments should only be performed on healthy subjects. The following were among the exhibits:—Dr. M. J. Stewart: A series of microscope preparations illustrating some of the conditions under which local deposits of cholesterin occur in the tissues. They included chronic mastitis with rosette-like groups of giant cells arranged round bunches of the crystals, squamous epitheliomata with advanced cornification, teratomata of the testis, subacute cholecystitis, adeno-carcinoma ovarii papillare, fibro-xantho-sarcoma, and thyroid cyst. The exhibitor pointed out that the most striking feature of the induced reactions was the constant occurrence of large numbers of giant cells of the foreign body type whenever the crystals were deposited in the

midst of living vascular tissue. Dr. G. W. WATSON: A case of *Ulcerative colitis* which had strikingly improved under treatment. The patient was a man aged 40, who had been troubled with severe abdominal pain associated with diarrhœa and the passage of bloody and mucous stools for over a year. Cæcostomy had been performed in Newcastle with absolutely no benefit. When he came under observation three months ago emaciation was extreme, the weight being only about 7 st. He was treated with sterilized kaolin, and from the first week of administration he began to improve. Now he weighed over 12 st. and felt perfectly well.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on April 30th, Dr. R. GORDON, in a paper on *Malingering under the Insurance Act*, compared the sickness and disablement figures of some Sheffield approved societies with those on which the Insurance Act was based. The latter varied from 0.92 weeks per annum at 16 years of age to 6.31 at 65, while in a large Sheffield society for men from 16 to 65, comprising steel workers and labourers, cutlers, grinders and silver workers, 32.92 per cent. were ill, and the average duration of sickness in proportion to the whole number was 6.87 days. The amount paid was 9s. 6.59d., this comparing favourably with the actuarial allowance of 9s. 6½d. Of men from 65 to 70, 41.32 per cent. were ill, an average of 13.26 days, and the amount paid was 11s. 7.18d. Of women, 37.104 per cent. were ill, an average of 10.08 days, and the amount paid was 10s. 7.72d., which is very much more than the actuarial allowance of 6s. 11½d. These figures were also borne out by those of a large industrial insurance society where the men received 8s. 0.009d. and the women 11s. 0.205d.; also by the Manchester Unity, where the actual payments to men were £196,628, and the actuarial estimate was £213,196. In regard to women, the amount paid was £48,303, against an actuarial estimate of £42,292. These figures seemed to show that there was very little malingering among the men, and that if the giving of certificates were more strictly regulated there would be still less. As far as women are concerned, they showed that the actuarial estimate was entirely wrong, and that there was much more sickness than had been estimated. In the discussion which followed, there was a consensus of opinion that there is very little malingering under the present Act.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on April 1st, Dr. SYKES in the chair, Dr. GILMOUR, in a paper on *Mental disease from the general practitioner's standpoint*, said he regretted that the average practitioner took little interest in his mental patients. If he only examined them in the same way as he examined ordinary cases great benefit would accrue, not only to the patient, but also to the doctor. Many cases now sent to the asylum could very well be treated at home, and the patient saved the objectionable stigma of having been an inmate of an asylum. It was entirely wrong to send every patient with mental symptoms straight to the asylum without first investigating the cause of those symptoms. He pleaded strongly for the establishment of "half-way houses" or nursing homes where mental patients could be treated pending a definite decision as to whether they really required asylum treatment. Many cases in which a definite cause for the symptoms could be found (for example, tumours of the breast, acute appendicitis, pyorrhœa, influenza, etc.) recovered permanently and completely. Dr. EURICH agreed in the main with the views expressed, but pointed out the difficulties of carrying out a thorough examination on a wildly maniacal patient.

THE newly built Institute of the History of Medicine will be opened in the University of Vienna at the beginning of the summer semester. Already the institute has a library of three thousand volumes, besides a number of valuable manuscripts relating to the Vienna Medical School. There is also a collection of old surgical instruments and apparatus. A number of relics, such as memorial medals, autographs, diplomas, and so forth, are on view in four glass cases.

Reviews.

GALL STONES.

PROFESSOR CHAUFFARD[1] is one of the most eminent and popular teachers in the Paris Medical School and is widely known as an authority on diseases of the liver, so that his lectures on biliary lithiasis are sure of a warm welcome, not only from those who have the advantage of coming under his personal influence as a teacher, but from the profession wherever French medicine is appreciated, an area which coincides with the civilized world. He has preceded these lectures by the eloquent inaugural address delivered by him on January 13th, 1912, on taking up the duties of the Chair of Clinical Medicine; although it has nothing to do with the main subject of the volume all his readers will be glad to possess it.

While Professor Chauffard accepts Aschoff's doctrines of the non-inflammatory origin of the pure cholesterin stone, he attaches importance in the etiology of gall stones to the occurrence of hypercholesterinæmia, which is present in jaundice, in biliary colic, in all cases of typhoid convalescence, and even after typhoid vaccination, also in pregnancy and the puerperal state. He finds it almost constantly present in his cases of gall stones; thus out of 29 cases it was present in all save 2, and in these 2 there was infection of the gall bladder. In another series of 17 it was present in 15. It has been shown by Biscons and Rouzaud that the Vichy cure lowers the cholesterin content of the blood. With regard to the premonitory symptoms of biliary colic he quotes Moynihan's description, but hesitates to accept it as sufficiently trustworthy to justify operative interference. He draws attention, however, to another symptom—that which he calls prandial diarrhœa, or a sudden urgent desire to defæcate coming on during a meal, especially, he says, during the French second breakfast.

With regard to treatment he condemns all fatty, rich, or spiced dishes—duck, goose, kidneys, sweetbreads, calves' liver, peas, beans, lentils, but allows lean meats, chicken, green vegetables, salads, rice, and sugar. He condemns the use of the corset; he recommends massage, and urges that patients should be regularly weighed. He recognizes the value of sodium cacodylate by hypodermic injection, or the use of sodium salicylate and benzoate by the mouth, and of aspirin and urotropin. He speaks favourably of the administration of olive oil, although it would seem to be inconsistent with his strong condemnation of the use of fats; however, he prescribes doses of 50 to 100 grams (1⅔ oz. to 3⅓ oz.) daily for four or five days in succession, the course to be followed by a dose of castor oil. He also speaks of oleic acid, and devotes a short chapter to surgical interference. It is a pity that the book contains no index and has only a meagre table of contents.

ALBUMINURIA OF ADOLESCENCE.

IN this contribution to the subject of albuminuria Dr. JEHLE[2] expands and amplifies his former argument that what is called orthostatic albuminuria, or the form of albuminuria occurring particularly in young persons which disappears in the horizontal position and recurs in the erect position, is really due to lordosis of the upper part of the lumbar spine, by which the circulation through the kidney is obstructed. In reviewing the history of the subject Dr. Jehle omits to mention Morley Rooke, of Cheltenham, who published the first case of the kind in this JOURNAL (October 19th, 1878), but gave it no name. It was afterwards called "cyclical albuminuria" by Dr. Pavy; this title pleased and has been retained, although founded upon the wrong belief that the albuminuria was periodic or related to the time of day. In the thirty-five years that have elapsed since it was first described the opinion has grown up and hardened that this albuminuria is benign always provided that it is not associated with other symptoms or indications of Bright's disease. Most observers lay stress upon the absence of casts, but a

[1] *Leçons sur la Lithiase Biliare.* Par A. Chauffard. Paris: Masson et Cie. 1914. (Med. 8vo, pp. 244; 20 plates. Fr. 9.)

[2] *Die Albuminurie. Klinische und experimentelle Beitraege zur Frage der orthostatisch-lordotischen und der nephritischen Albuminurie.* Von Dr. Ludwig Jehle. Berlin: Julius Springer. 1914. (Sup. roy. 8vo, pp. 109; 35 figures. M. 4.)

few hyaline casts have been seen from time to time, especially since they have been looked for with the centrifuge; it is doubtful whether more than a few hyaline casts are consistent with the absence of anatomical change in the kidneys, but in hot weather, if the urine is allowed to stand, hyaline casts may become granular from fatty degeneration or infiltration with micro-organisms. In these cases the albumin may be wholly or partially precipitated by glacial acetic acid, but Dr. Jehle does not admit that there is anything characteristic about this kind of albumin as it is met with under other conditions. The albuminuria observed in newly-born infants is, in his opinion, caused by pressure upon the kidney by stretching of the spine during birth. He admits that lordosis, even when extreme as in muscular atrophy, may not cause albuminuria, but he thinks that the presence or absence of lordosis must be established by careful measurement of the spine, and in many cases he observed that the albuminuria disappeared on correcting the spinal defect; it may, he says, be induced in healthy children by bringing about lordosis by placing a cushion under the loins when the body is in the horizontal position. He is able to cause the disappearance of the albuminuria by straightening the spine by means of a plastic jacket, but he contends that as the child grows and the muscular and ligamentous supports of the spinal column become stronger the lordosis disappears and with it the albuminuria; it would not, therefore, appear desirable to treat these cases systematically by making them wear spinal supports, as this would interfere with the natural process by which the spinal column strengthens in the course of time. The effect of lordosis on the functions of the kidney is to diminish the urinary secretion, and conversely, if one of these cases is placed in the recumbent position with the pelvis at the lowest point, and the shoulders and legs raised, polyuria follows in a short time; but no such result occurs where the albuminuria is due to nephritis.

We think Dr. Jehle has made out a case for lordosis as one of the factors in the production of the albuminuria of adolescence, and that his suggestion should be borne in mind in trying to come to a conclusion as to the significance of albuminuria in young people.

THERAPEUTICS OF THE INTESTINE.

THE book on *Chronic Colitis*,[3] by Drs. HERSCHELL and ABRAHAM, deals only with that part of the subject which is often spoken of as "chronic mucous colitis." The authors exclude ulcerative colitis on the ground that it is "a specific infective condition which is the province of the surgeon." They hold that the connexion between chronic catarrh of the colon and constipation has been overlooked, and they quote from a book which they describe as "an authoritative manual" upon diseases of the stomach and intestine, "published as recently as 1906, where not a word is said of the commonest forms of chronic colitis accompanied by constipation." Yet on referring to what we take to be the work in question, as the words quoted are there verbatim, we find this: "It not uncommonly happens that periods of constipation alternate with diarrhoea," and in the present work the authors say (p. 39): "The bowels may be constipated; this may be continuous, or there may be regular alternations of constipation and diarrhoea, or there may be intercurrent attacks of diarrhoea not occurring regularly." Both books, therefore, appear to be in harmony, and there seems little, if any, justification for the complaint that the subject is ignored in the book from which the authors appear to quote. They point out that the presence of mucus is a peculiar feature of this condition. Mucus is normally dissolved in the faeces, but its presence may be demonstrated by precipitation with acetic acid from a watery solution of faeces. In disease it is present in excess, and is precipitated by a ferment which is peculiarly liable to be present when the mucous membrane is inflamed. This ferment, mucinase, is inhibited by bile salts; hence the deficiency of bile is probably one factor in the production of mucous colitis. Among the predisposing causes they reckon any acute infectious illness tending to lower the vitality or to diminish the resistance of the mucous membrane to anaërobic bacteria, chronic constipation, infection, mechanical irritation, the presence of intestinal parasites, an excretion of irritating material through the mucous membrane, by which they mean the presence of intestinal sand, and finally nervous influences. They think that the evil effects of chronic constipation are often aggravated by the abuse of purgatives and enemas. They speak of a condition called "hepatosis" (p. 31), which is not known to us, but perhaps is intended to mean "hepatoptosis." In connexion with the diagnosis of the condition they refer constantly to the use of the sigmoidoscope and to lavage, but nowhere have we found mentioned the far simpler and very valuable method of radioscopic examination of the bowel by the screen or by a skiagraph after the use of a bismuth meal. They also refer to the value of points of cutaneous hyperaesthesia, to the rigidity of the recti muscles, to ptosis of the stomach, bowel and kidneys, and to the *habitus enteroptoticus* of the Germans, to Stiller's *costa decima fluctuans*, to the value of test meals, and Schmidt's method of examining the faeces, and to bacterial examination of the stools. The greater part of the book is taken up with the discussion of treatment. They attach primary importance to the discovery of some source of infection such as oral sepsis, and they lay stress on the part played by deficient hydrochloric acid in the stomach, by abnormal gastric and intestinal fermentations, by ptosis of the stomach and bowel, and by pancreatic defects. They give much space to the question of diet, printing copies of a great number of dietaries recommended by various authorities, which extend over thirty pages, but which they condemn, and then proceed to explain their own, consisting chiefly of liquids and purées. Their other treatment is mainly regulation of the bowels by daily doses of mild laxatives. The prognosis is said to depend upon the stage at which the case has come under treatment, and to a large extent upon the willingness of the patient to co-operate. They think it essential that the patient should be in bed, and highly expedient that he should be in a nursing home under careful supervision.

It is eight years since we noticed the first edition of Dr. RENÉ GAULTIER'S *Précis de coprologie clinique*,[4] which was the first book published in France dealing comprehensively with the whole subject of the clinical investigation of the faeces. It was the result of several years' labour in the wards of Professors Robin and Dieulafoy, and was practically a second edition of a smaller work, *Essai de coprologie clinique*, published two years earlier. Dr. Gaultier has continued his work in the wards and laboratory of Professor Pozzi at the Hôpital Broca, where he has been allowed to continue his courses of instruction in the investigation of the faeces to the students attending that hospital. The second edition is a slight expansion of the first, and the author has taken into account the various criticisms which the first edition evoked, and the progress of knowledge resulting from the labours of many investigators who have during the last eight years devoted much attention to this subject in France as well as in other countries. Dr. Gaultier's readers will find that his book gives a clear and complete view of present knowledge of the subject, including a fair statement of the methods employed by all those who have acquired authority upon it. The text is abundantly illustrated by photomicrographs in black and white and in colours, and there is an excellent index, as well as a full table of contents.

VACCINES.

THE second edition of Dr. SCHORER'S book on *Vaccine and Serum Therapy*,[5] which has now appeared, contains more than double the amount of written matter in the first edition of 1909. The increase in size is due mainly to a more comprehensive survey of the general principles of immunity as applied both to the diagnosis of specific bacterial infections and to the therapeutic measures involving the use of vaccines and serums. The end

[3] *Chronic Colitis: Its Causation, Diagnosis, and Treatment.* By G. Herschell, M.D.Lond., and A. Abraham, M.D.Cantab. London: Longmans, Green, and Co. 1914. (Med. 8vo, pp. 305; 4 figures. 6s. net.)

[4] *Précis de coprologie clinique.* Par le Dr. R. Gaultier. Préface de M. le Professeur A. Robin. Deuxième édition entièrement refondue. Paris: J. B. Baillière et Fils. 1914. (Demy 8vo, pp. 536; 97 figures; 1 plate. Fr.12.)

[5] *Vaccine and Serum Therapy* (including also a study of infections, theories of immunity, specific diagnosis, and chemotherapy). By Edwin Henry Schorer, B.S., M.D. Second, revised edition. London: Henry Kimpton; Glasgow: A. Stenhouse. 1913. (Med. 8vo, pp. 315; 18 figures. 12s. 6d. net.)

which the author always keeps in view in bringing to the notice of the practitioner the therapeutic use of vaccines and serums—namely, to apply the appropriate specific remedy only after accurate diagnosis of the specific etiology—is one that cannot be too strongly commended. The author is by no means an unqualified supporter of the vaccine treatment of bacterial diseases. In several infections, indeed, he devotes less consideration to the vaccine treatment than it deserves. Frequently he reveals himself as over-cautious, and the uncertainty in his mind as to the possible efficacy of a particular vaccine, even after the specific etiology has been established, might unduly prejudice the practitioner against giving it a trial. On the whole, however, this excess of caution is perhaps salutary at the present time; but there is no doubt that the author, who has read widely and has made important contributions to bacteriology and immunity, would have done well to offer a somewhat fuller account of vaccine trials recorded in literature. A reasoned digest of the vast scattered literature on this subject would be of great value. Serum-therapy is very fully dealt with throughout. With regard to the serum treatment of bacillary dysentery, we think that the author is rather unwarrantably pessimistic as to its efficacy in infections due to organisms of the Flexner type. There is good evidence that a serum specific to *B. dysenteriae* of this type has given excellent results in the hands of some workers. The book closes with an appendix on syphilis and malaria.

We can strongly recommend this volume to the medical practitioner for the sound advice that it gives throughout and for the excellent account of immunity principles it contains. It is extremely unfortunate, however, to have to state that the book contains many misprints, and the composition is too often slipshod.

GONORRHOEA IN WOMEN.

Gonorrhoea in Women,[6] by Dr. CHARLES C. NORRIS, is a book that we can most thoroughly recommend to any one who is interested in this subject, whether that interest be from a medical, surgical, sociological, or legislative point of view. It is only in comparatively recent years that this disease has been regarded and attacked at all seriously, and the discovery of the gonococcus by Neisser in 1879 has placed its study upon a scientific basis.

The book is most comprehensive. It opens with an interesting historic review of the subject, and passes on to deal with its bacteriology in a chapter which is of sufficient intrinsic value to justify the appearance of the book, and would form in itself an excellent laboratory manual.

In the chapter on sociology, the close relation of gonorrhoea to abortion and sterility is insisted upon, and its importance in the production of blindness in the newly-born infant is brought out in a series of very carefully compiled statistics.

The means of preventing dissemination of the disease are ably discussed, and the author concludes—and his conclusions will be shared by the majority of medical men interested in this vital subject—that the educational and other methods that are here detailed will be of far greater import in this respect than the municipal supervision of prostitution, which can at best deal with only a small portion of those afflicted with the disease. He would have all cases of gonorrhoea notified in a manner similar to that that holds with other contagious diseases. A full description of a suitable scientific method of examination is given, with excellent criteria as to when a reliable cure has been effected.

The chapter on treatment, which has conservatism for its keynote, is of great value, and the necessity of medical treatment before surgical intervention is undertaken is strongly insisted upon; even when surgery is considered necessary to deal with the pathologic débris, a just regard is strongly advocated for organs whose function is still of value, and a protest made against the ruthless sacrifice of the pelvic organs as a whole. A comparative study of the various methods of treatment provides some very interesting facts, and some space is devoted to the present status of vaccine therapy in this disease. An excellent book is completed by an extensive and carefully compiled bibliography.

THE PSYCHOLOGY OF THE OPERATED.

Time and Thomas Waring: a Study of a Man,[7] by MORLEY ROBERTS, is inscribed to the author's "many friends in the medical profession," and we venture to predict that the book will greatly add to their number. Every doctor who reads it will appreciate the compliment of the dedication.

The book is a strong and original study of an unusual man, which would be striking enough from the literary point of view alone, but seeing that it is specially concerned with that part of Thomas Waring's life which intervenes between one abdominal operation for malignant disease and another, and includes a vivid description of the first, it has a special interest for doctors. There is a good deal of medical and surgical detail in the book, which, however, is always in proportion, always seems essential to the development of the story, and is, moreover (and this is very unusual), accurate. The description of Waring's sensations in recovering from anaesthesia is a vivid and extraordinarily interesting psychological study the like of which we do not remember to have met in fiction. It could only be done from the life, and one cannot help wondering how far the sensations thus described are similar to those of others who have had similar operations but do not possess the writer's descriptive powers. Waring himself steadily grows on the reader. Some of his actions are, from the conventional point of view, decidedly immoral—or rather, perhaps, unmoral—and yet one finds oneself involuntarily sympathizing and agreeing with the line he takes; the author makes it appear inevitable. The gradual development of the effect which the operation and its results have, not only on the actions of the man but on his very personality, is very finely done. Four doctors figure in the story somewhat conspicuously. Their little professional weaknesses are touched occasionally with a very sure but sympathetic finger, but they are real doctors, to be recognized as such by their fellows. While we are anxious to bring out the peculiar appeal of the book to the medical profession, we must avoid giving the impression that it is a mere realistic study of disease which might not appeal to the general lover of literature. It is an unusually striking psychological study with a strong and at times a painful human interest. It moves along with the grave nobility and inevitability of a Greek tragedy, and it kept at least one hardened novel reader more absorbed and left him more moved than any book he has read for years. Mr. Morley Roberts has long been known as a versatile and clever writer. His book, the *Private Life of Henry Maitland*, led many good critics to expect something great in the future, and this book we have no hesitation in calling a masterpiece.

NOTES ON BOOKS.

A SECOND edition of Dr. EYRE'S well known *Bacteriological Technique*[8] has been produced after a lapse of eleven years. The book has been so popular with laboratory workers that it is a matter of surprise that many more editions have not been published. The present edition does not seem to be any greater in size than the original, yet practically every chapter has grown, and there are three new chapters. In the time that has elapsed since the book was first published serological investigations have become most important parts of routine laboratory work, and we naturally turn to this portion of the new edition to see how far it is kept abreast of the times. As a matter of fact, it is here that the book falls short of other recent works. For example, the technique of complement fixation tests is rather imperfectly given. These can, of course, be learnt from special works, but greater detail might be expected in a practical bacteriological textbook. In most other respects the book is excellent,

[6] *Gonorrhoea in Women*. By C. C. Norris, M.D., with an introduction by J. G. Clark, M.D. Illustrated by D. Peters. London: W. B. Saunders and Co. 1913. (Imp. 8vo, pp. 521; 40 figures, 5 plates. 25s. net.)

[7] *Time and Thomas Waring: a Study of a Man*. By Morley Roberts. London: Eveleigh Nash. 1914. (Crown 8vo, pp. 365. 6s. net.)

[8] *The Elements of Bacteriological Technique: a Laboratory Guide for Medical, Dental, and Technical Students*. By J. W. H. Eyre, M.D., M.S., F.R.S.Edin. Second edition rewritten and enlarged. Philadelphia and London: W. B. Saunders Co. 1913. (Med. 8vo, pp. 528; 219 figures. 15s. net.)

and the position it occupies in the favours of students and laboratory workers will not easily be disputed by newer untried rivals.

Teachers of hygiene in schools and colleges have every reason to feel grateful to Dr. MILDRED M. BURGESS, who has provided them with a most useful short textbook with the title *Health*.[9] It covers the whole ground of the ordinary school course in hygiene; and the author has gathered together into one volume matter that is usually scattered throughout several, thus materially lightening the future labours of those who have to prepare lessons and lectures on this subject and those who have to attend them. Miss Burgess has exercised much discretion in the selection of her material, and whilst skilfully avoiding irrelevant and unimportant detail, has presented the essentials in a simple and attractive form. The book is divided into short chapters each of which contains sufficient matter for a single lesson, and is illustrated with diagrams drawn by Miss Eleanor M. Cartwright.

For many, perhaps most, people there is fascination in the story of a crime if there be any mystery about it, particularly a murder. This accounts for the great vogue of the detective story, for some of the true stories are unsatisfying, since not infrequently after the verdict some uncertainty still remains. In *Noted Murder Mysteries*[10] Mr. PHILIP CURTIN has told briefly the story of nine crimes, three of them English, and all more or less famous at the time. The stories are picturesquely told, but the book makes no pretensions to be a serious contribution to criminology.

MEDICINAL AND DIETETIC PREPARATIONS.

Non-alcoholic Beer.

WE have recently examined samples of a "non-alcoholic beer" which appears well qualified to meet the demand for a beverage similar to ordinary beer, but non-intoxicating. The samples in question had the appearance, flavour, and general character of a moderately bitter beer, but analysis showed that only 0.47 per cent. of alcohol was present, or less than 1 per cent. of proof spirit. The Excise authorities regard as non-alcoholic beverages which do not contain more than 2 per cent. of proof spirit; brewed ginger beer or "stone ginger beer" commonly contains an amount approaching this limit, and nearly all "temperance" or "non-alcoholic" beverages contain a small proportion. The beer in question compares very well in this respect, therefore, with other non-alcoholic beverages, while in respect to taste and other characters it will certainly be more acceptable to many people. The samples were derived from a barrel of ordinary beer which had been submitted to a de-alcoholization process, depending, we are informed, on the fact that when large quantities of carbonic acid are driven through beer they carry off with them the volatilizable components of beer, not simultaneously but in regular succession—first the ethers, next the alcohol *plus* a little water vapour, then the water vapour, next the vinegars, and finally the hop oils. On recondensing and running off the alcohol as it accumulates the other components form a fluid of the original quality, except for the fact that it is almost free from alcohol. The process was invented by Mr. Otto Overbeck of Grimsby.

Preserved Natural Milk.

We have received from the Nestlé and Anglo-Swiss Condensed Milk Company, Ltd., a sample of "Milkmaid" Brand sterilized milk. This is supplied in hermetically closed tins; the manufacturers state that it is not concentrated or sweetened, and consists only of natural milk preserved by sterilization; it is intended especially for use in hot countries, and under any conditions when fresh milk is not obtainable. Our analysis of the sample submitted gave the following results: Fat 3.46 per cent., solids not fat 8.87 per cent., ash 0.77 per cent. These are normal figures for cow's milk of good quality; tests for preservatives all gave negative results. Except for the slight cooked taste characteristic of sterilized milk, the sample was indistinguishable from fresh milk. The cream had not separated, and did not cling round the tin when the milk was poured out. We are informed that this is due to a special process of emulsification to which the milk is subjected.

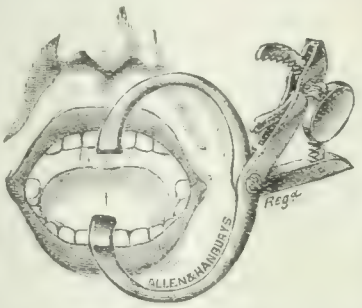
[9] *Health*. By Mildred M. Burgess, M.D.Lond. London: H. K. Lewis. 1914. (Cr. 8vo, pp. 183; 2 plates, 7 diagrams. 1s. 6d. net.)

[10] *Noted Murder Mysteries*. By P. Curtin. London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1914. (Demy 8vo, pp. 321. 7s. 6d. net.)

MEDICAL AND SURGICAL APPLIANCES.

A Mouth Gag.

MR. FREDERICK SYDENHAM (Honorary Surgeon, Ear and Throat Departments, Walsall, Coventry, and Leamington Hospitals) has designed a mouth gag, shown in the accompanying drawing, for the use of ear and throat surgeons and dentists, but suitable also, he considers, for all cases in which a gag is required. The improvements over existing gags, he states, are that the limbs of the cheek portion are long, the joint being set well back—an essential in easy enucleation of the tonsils by Sluder's method. The ratchet method of opening gives great force, with a gradual yet rapid opening of the mouth—a desideratum when operating without an anaesthetic. There is also less danger of breaking or extracting the teeth. There are no projections, as the thumb piece which operates the ratchet is provided with a tumble joint permitting it to lie flat against the cheek. The alveolar projection is at an acute angle, so that it enters the mouth between the incisor teeth at right angles to them, giving the gag a firm hold with less tendency to slip than is usually the case. The gag is made by Messrs. Allen and Hanburys.

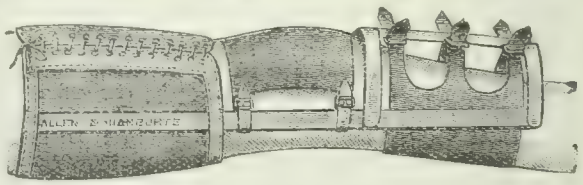


Scleral Trephining.

Mr. G. AUBREY JELLY, F.R.C.S.E. (Bury), writes: I have recently designed and had made for me by Messrs. Arnold Brothers an instrument to facilitate the performance of the above operation. It consists of a slender rod of steel at the end of which are two minute crossed hooks. The instrument is small enough to allow its being threaded through the lumen of the trephining instrument, it is then given a half turn which imbeds the small hooks in the substance of the sclera at the spot selected, its advantage consists in allowing the disc to be drawn towards the cutting edge of the trephine instead of having to press on to the globe, and it prevents the disc from slipping in the anterior chamber.

An Extensor Knee Splint.

Mr. C. MAX PAGE, M.S., F.R.C.S. (London, W.), writes: I have described elsewhere[1] an apparatus for the reduction of flexural deformities at the knee-joint when actual bony ankylosis is not present. After the reduction of such deformities, or in the course of the disease which tends to produce them, a knee-splint with a slight extensor action is required. The illustration here reproduced shows such



an apparatus. I have used it chiefly in some period of the treatment of cases of tuberculous knee. It consists of a leather sheath which is laced on to the thigh, from this two lateral steel struts extend directly downward to a level just above the ankle. These two side steels are united across the front of the leg by two U-shaped arches. The vertices of the arches are united by a metal bridge and over this is buckled an elastic sling which passes behind the leg. In accordance with the tension on the elastic sling the extensor action at the knee-joint can be modified. A soft leather cap passes from the side irons across the front of the knee to take the backward pull. The splint is kept in place by means of a strap attached to a pelvic band or passing over the opposite shoulder. The apparatus can also be applied as an integral part of a hip splint. The thigh piece should fit with accuracy and care must be taken that the knee-cap bears evenly over the patella. The apparatus has been made for me by Messrs. Allen and Hanburys.

[1] *Proc. Roy. Soc. Med.*, January, 1914. Surgical Section, p. 113.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the committee twenty-eight cases were considered, and grants amounting to £270 voted to twenty-three of the applicants. The following is a summary of the cases relieved:

Widow, aged 53, of L.R.P.S.Glasg., who practised at Winchcombe and Bilbao. Since husband's death has tried to earn a living by taking in boarders, but, owing to heavy expenses in connexion with the illness of son, recently deceased, and dearth of boarders, is in arrears with rent. Granted £10.

Widow, aged 54, of L.R.C.P.Edin., who practised at Blackburn. Since husband's death has been able to earn a few shillings weekly by nursing. One daughter learning a trade. Recently suffering from ill health and unable to obtain suitable work. Granted £12 in twelve instalments.

Widow, aged 65, of L.F.P.S.Glasg., who practised at Rothesay and other places, has a small pension from the Elder Fund, and earns a few pounds annually by letting rooms. Suffering recently from chronic rheumatism and sciatica and unable to attend to lodgers. Granted £12 in twelve instalments.

Widow, aged 58, of L.F.P.S.Glasg., who practised at Glasgow. Owing to ill health, and illness of daughter, unable to work. Small allowance from brothers and sister and small pensions from the Elder Fund and the Skinners' Company. Granted £10 in one instalment.

Daughter, aged 48, of M.R.C.S.Eng., who practised at Gillingham, Kent, has recently been working as a general servant, but, in consequence of ill health and overwork, requires a rest. A letter for a convalescent home procured for her, and a sum of £5 granted, to be given at the discretion of a local charity.

Widow, aged 57, of M.D.Durh., who practised at Peckham Rye. Only income the proceeds of the sale of late husband's practice, which is being carried over several years. Paralysed and nearly blind and quite unable to move without help. Granted £12 in twelve instalments.

M.D. of St. Andrews, aged 76, practised at London, Norfolk, and abroad. Obtains very occasionally locum work. Lost small capital in struggle to obtain work and ill health. Granted £18 in twelve instalments.

Widow of M.R.C.S.Eng., aged 62, who practised at Streatham Hill. Since husband's death income only £24 per annum, and, owing to husband's long illness, practice entirely lost and of no financial value. Granted £12 in twelve instalments.

Widow, aged 76, of L.R.C.P.Edin., who practised in Ireland. Has, with the assistance of daughters, tried to run a nursing home in South-west London, but, owing to lack of patients, has got behind with rent. Income, £30 per annum from Epsom College. Relieved once, £10. Granted £10, to be paid through the Guild Visitor.

Daughter, aged 52, of M.R.C.S.Eng., who practised at Newport, Mon. Receives occasional help from friends, is almost blind, and health very bad. Relieved three times, £36. Granted £12 in twelve instalments.

Daughter, aged 70, of M.R.C.S.Eng., who practised at Limehouse. Earns a little by keeping poultry and other general work, and receives a little help from nephew. Health very uncertain. Relieved once, £10. Granted £12 in twelve instalments, and recommended to apply for the old age pension.

Widow, aged 78, of M.D.Glasg., who practised in Ireland and other places. Lives in own house and lets off two flats, which, when occupied, enables her to manage. In consequence of one flat having been empty, became short of money to pay taxes and rates. The case was referred to the Guild. Relieved seven times, £41. Granted £5.

Widow, aged 57, of M.R.C.S.Eng., who practised at Maida Vale. No income, and suffers from chronic rheumatism and weak heart. Relieved ten times, £104. Granted £12 in twelve instalments.

Daughter, aged 60, of M.R.C.S.Eng., who practised at Nevin. Earns a little by letting rooms, and has to keep her sister who is in very delicate health. Relieved eight times, £96. Granted £12 in twelve instalments.

Widow, aged 50, of M.B.Aberdeen, who practised in Warwickshire and New South Wales. Receives a little help from her sister and son, but is suffering from general illness and quite unable to work. Relieved six times, £66. Granted £12 in twelve instalments.

Daughter, aged 67, of M.R.C.S.Eng., who practised at Cranbrook, Kent. Health bad, and quite unable to look after herself. Has an annuity of £16 9s. 8d., and a little help from the Kent Benevolent Society. Relieved seven times, £84. Granted £12 in twelve instalments.

Daughter, aged 63, of L.S.A.Lond., who practised at Kilburn and Regent's Park. Health very bad, and has to keep a sister. Recently lost a friend who paid the rent and assisted otherwise. Relieved five times, £60. Granted £12 in twelve instalments.

Widow, aged 44, of M.B., C.M.Edin., who practised at Ballindalloch. At husband's death was left with four young children, the eldest of which is now 15 years old. Has tried to earn a living by taking in boarders, but owing to the recent illness of self and children has been unable to properly attend to this. Receives £15 per year from the Fleming Fund. Relieved three times, £30. Granted £10 in two instalments.

Widow, aged 44, of L.S.A.Lond., who practised in London. Has been trying to make a living by letting rooms, but has not been successful, and owes rent. Three children, the youngest is only 6 years old. Relieved twice, £12. Voted £3 as a special grant.

M.D. of Aberdeen, aged 61, practised at Walsall and other places. Suffering from lateral sclerosis and paralysis since 1881. Income from various sources £70 per annum. Three children, the youngest 3 years, and the eldest 15 years. Relieved six times, £53. Granted £12 in twelve instalments.

Daughter, aged 68, of M.R.C.S.Eng., who practised in Harley Street, W. Too old to obtain employment. Receives pension from another society of £25, and some help from the Guild. Relieved twice, £24. Granted £12 in twelve instalments.

Widow, aged 69, of M.R.C.S.Eng., who practised in Stratford, E. Has pension of £30 from Epsom College, but health very bad. Relieved four times, £39. Granted £10 in two instalments.

Widow, aged 71, of L.R.C.P.Edin., who practised at Sparkbrook, Birmingham. Only income £16 per annum, and a little help from children. Has tried to augment this by taking in boarders, but owing to age and bad health unable to make this pay, and the rent and taxes are in arrear. Relieved twice, £20. Granted £10.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

Prison Experience.

At the thirty-third meeting of the Royal Commission on Venereal Diseases evidence was given by Sir Herbert Smalley, M.D., one of His Majesty's Commissioners of Prisons.

Sir Herbert stated that it was his first impression, and also that of many of the senior medical officers of prisons, that venereal diseases were not so prevalent in prisons as was the case thirty years and even twenty years ago; and that, apart from the actual number suffering, the cases were now less severe in character than formerly. He was, however, inclined to think that the later stages of syphilis affecting the circulatory and nervous systems and the so-called parasyphilitic affections were more prevalent. Returns which had been obtained for the five months ending last March showed that rather under 2 per cent. of prisoners received into local prisons presented manifest symptoms of either gonorrhœa or syphilis. An analysis of the figures showed that the highest incidence occurred amongst prisoners committed from large towns, manufacturing or mining districts, and it was also observed that cases of venereal disease were disproportionately numerous in prisons receiving prisoners from seaport towns. Sir Herbert described the methods and precautions adopted with regard to cases of venereal diseases in prisons, and stated that the conditions existing seemed to warrant the assertion that the danger of infection from venereal disease in prison was practically *nil*; he had never known a single instance of such a case occurring.

Sir Herbert stated that the results of his recent inquiry indicated that about half of those received into prisons suffering from venereal disease were still in an infectious condition when discharged. This problem might be attacked either by detention, notification, or by the provision of facilities for treatment subsequent to discharge. The first alternative Sir Herbert considered was of doubtful expediency, and he was of opinion that any form of notification other than that which was made applicable to the whole community would be inadvisable; the idea of a prisoner being specially penalized or of his sentence being enhanced on account of venereal disease would, he thought, be strenuously resisted. He was not in favour of venereal disease being made notifiable generally throughout the community. The provision of facilities for treatment seemed to Sir Herbert to offer a more hopeful solution of the difficulty. It was necessary, he thought, that means should be provided throughout the country for treatment of venereal disease free of cost, readily accessible and with attendance permissible in the evening so as not to interfere with the daily work of the patient. As far as possible these centres should be at general hospitals and dispensaries rather than at special hospitals or centres solely for the treatment of venereal diseases. If such centres were organized it would enable a prison doctor to

give a discharged prisoner a ticket the presentation of which at a centre would secure the patient a continuance of treatment. The fact of the patient being recently discharged from prison should be a confidential matter and should be made known at the treatment centre to as few persons as possible.

With regard to convict prisons Sir Herbert stated that the results of some investigations he had made showed that out of 1,755 male convicts in certain prisons 299, or 17 per cent., showed signs of having had syphilis. Of 941 inmates examined at Borstal Institution 153, or 16 per cent., gave evidence of congenital syphilis.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, LONDON.

Centenary Festival Dinner.

A dinner to celebrate the 100th anniversary of the foundation of the Royal Hospital for Diseases of the Chest, City Road, was held at the Savoy Hotel, London, on May 8th, Dr. W. H. White in the chair. After the Chairman had proposed the toast of "The King," Sir Richard Douglas Powell, Bart., K.C.V.O., in proposing the toast of "Prosperity to the Royal Hospital for Diseases of the Chest," heartily congratulated the hospital on having attained its 100th birthday, and on having preserved all through that time its vigour and beneficence. He referred to the vast amount of research and useful work which had been carried out in the hospital, and believed that it was destined to a greater usefulness and to spread its fruits over a greater area. He contrasted the treatment of consumptive patients in the Victorian era with that of to-day, and humorously suggested that if King Charles were living at the present time, and attempted to administer his kingly touch to scrofulous patients, he would be eyed with suspicion by his loyal subjects, who would regard him at least as a contact, and possibly also as a suspect, and submit him to several weeks' close and continuous observation. Sir Richard then described the recent visit he had paid to the hospital, and spoke of the great improvements which had been carried out in the out-patient department, referring to the new equipment and installations. He was specially struck with the new department for the prevention of consumption, which would be of the greatest possible value in obtaining accurate and valuable statistical records of the etiology of tuberculosis. He was particularly interested in the electro-cardiograph and other instruments for scientific investigation of heart diseases, and referred to the philosophical work—in relation to the orifices of the heart and their relation to the circulation—carried on by Dr. Herbert Davies, the father of Dr. Arthur Davies.

Dr. Davies, in reply, gave a short account of the history of the hospital. It was founded in 1814 by His Royal Highness the Duke of Kent, the father of Queen Victoria. It was first situated in Union Street, Bishopsgate, and in 1847 it was removed to Dean Street, Finsbury Square, and in 1849 to its present site. In 1863 it was rebuilt. Its first President was the Duke of Kent, who was followed by the Duke of Sussex. In 1829 one of the physicians, Dr. Babington, invented the glottiscope, which was the forerunner of the laryngoscope. In 1862 Dr. Thomas Davies, grandfather of the present senior physician, introduced the Laënnec stethoscope into England. He also invented the practice of exploratory puncture in the diagnosis of pleural effusions. He referred to the fact that, when Dr. C. T. Fox was appointed a physician of the hospital, he had to pay three hundred guineas for that appointment. On June 10th, 1848, Her Majesty Queen Victoria accepted the office of patron to the hospital, which was henceforth called the Royal Infirmary for Asthma and Consumption. On June 13th, 1867, the title was changed to that of the Royal Hospital for Diseases of the Chest.

Professor Sims Woodhead, in proposing the toast of the "Medical School," referred to the fact that clinical lectures were delivered in the hospital as far back as 1823. One of the earliest supporters of the hospital was Dr. Matthew Bailey, nephew of John and William Hunter, who died of consumption in 1823. It rested with the younger men of the present day to carry on the work which was begun in the City Road Hospital as far back as 1823. It appeared to him that in no place could careful clinical observation and research be carried out better than in the various special hospitals which were now being fitted with medical schools and teachers to carry on that work. It was quite impossible for the medical student to become expert in the various refined and scientific methods, as he required all his time to become acquainted with those things which were essential to passing his examination. This was specially the case in regard to tuberculosis, where personal training in the treatment of tuberculous cases was necessary. The medical officer of health could never take the place of the clinician and careful investigator, and the speaker hoped that, if laboratories were to be founded and developed, these laboratories would be in close connexion with the clinical cases, otherwise there was a danger of public laboratories becoming mere centres for the routine collection of statistics. He hoped that in the development of laboratories—which was bound to ensue—the work would be entrusted to hospitals provided with clinical wards.

Dr. Barty King, Dean of the Medical School, in responding to this toast, mentioned that two years ago it was decided by the hospital staff formally to start a medical school and a school for the training of tuberculosis nurses. At its foundation the medical school met with exceptional difficulties, more especially in connexion with the passage of the Insurance Act. The school, in spite of these difficulties, had met with an immediate and encouraging success. He referred to the necessity for the training of tuberculosis officers for the tuberculosis departments and sanatoriums, for which there was at present no adequate provision. He mentioned also the importance of the establishment of departments for the prevention of consumption in the hospitals, so as to deal with all cases of tuberculosis in connexion with the boroughs to which they were linked up. The general and special hospitals should actively combine in safeguarding their interests in connexion with the new movements, and specially in relation to tuberculosis. He then paid special tribute to the work as carried on at the Brompton Hospital for Diseases of the Chest, and also alluded to the high value placed by German physicians on the chest hospitals in London as essential factors in any campaign against tuberculosis. During the last two years the whole of the out-patient department of the hospital had been rebuilt, and tuberculosis and cardiological departments and pathological laboratories established and equipped. The Council intended to appoint a director of the pathological laboratories in order that, in addition to the ordinary routine work of the hospital, thorough research work in diseases of the chest might also be carried out. The Council had decided to make a special appeal in this their centenary year for £60,000 for the endowment of research and the rebuilding of the hospital.

Sir Alfred Pearce Gould, in proposing "The Guests," referred to the fact that the Royal Hospital for Diseases of the Chest, which was established in 1814, and the Moorfields Eye Hospital, established in 1804, were practically the pioneers of the study of special diseases in this country. The toast was acknowledged by Sir StClair Thomson and Dr. Mitchell Bruce.

Dr. Samuel West proposed the toast of "The Chairman," which was acknowledged by Dr. W. H. White.

The Salford Royal Hospital and the Cancer Pavilion, Manchester, each receive a sum of £500 under the will of the late Miss Elizabeth Catherine Wagstaffe of Cheetham Hill, Manchester. The same testator left £300 to the Clinical Hospital, Manchester.

On April 23rd Governor Glynn of New York placed his veto on a bill passed in the last session of the State Legislature providing for the recognition of Christian Science as a legal method of healing. The Governor (we learn from the *Medical Record*) pointed out that the bill—which permitted "any person who ministers to or treats the sick and suffering by mental or spiritual means without the use of any drug or material remedy" to practise in the State without interference—would "open the gates to all kinds of medical pretenders, who would swarm across our borders and pretend to practise medicine upon our citizens." The veto may therefore be construed as having a wider application than its direct reference to Christian Science. The Governor also refused to sanction a bill giving osteopaths in New York City the right to sign death certificates.

SUPER-TAX AND PROFESSIONAL INCOMES.

AN interesting point arising out of the variations proposed to be made in the super-tax is the effect on men earning a large income for a limited period—a condition applicable to some professional men.

It is now fairly well understood that a rebate of income tax on life assurance premiums up to one-sixth of the income can be claimed, but many professional men may be unaware what effect this allowance has on the yield, from an investment point of view, under an endowment assurance, and but few know that under Part IV, Section 66 (2) (*b*) of the Finance Act, 1910, authority is given for life assurance premiums to be treated as a deduction in calculating the statutory income for the purpose of super-tax. Previously such premiums were dealt with as an allowance after the statutory income had been ascertained. In other words, it is possible to escape super-tax altogether if the total expenditure in life assurance premiums (not exceeding one-sixth of the income) is sufficient to reduce the income to £3,000. Until now this fact has only appealed to the very limited class of persons whose incomes ranged about £5,000. If, however, all those who enjoy £3,001 and upwards are to pay super-tax, the expenditure in life assurance premiums will surely receive the attention it deserves.

The following examples may make the point clear:

1. Without Previous Life Assurance.

	£	£	£	£
Total income	3,050	3,100	3,200	3,300
Amount to be paid in new premiums	50	100	200	300
Reduced income for assessment	3,000	3,000	3,000	3,000
Total tax saved, being ordinary income tax on premium and super-tax on income	15	20	30	39
Net cost of additional assurance	35	80	170	261

2. With Existing Life Assurance.

Statutory income based on previous year	...	£3,100
Amount of premiums on existing assurances, say	£75	
Proposed further expenditure ...	£25 —	£100
Total income, showing no super-tax payable	...	£3,000
Additional expenditure in life premiums as above	£25 0 0	
Saving in super-tax	13 6 0	

If the additional life assurance be taken in the form of endowment assurance, the effect of this saving in tax is very marked. In the ordinary way a fifteen-year endowment assurance taken out in a strong office by a life aged 40 will show, in addition to the life assurance cover, a return of the premiums paid accumulated at about 3 per cent. If the rate of income *plus* super-tax be 2s. in the £ the yield is increased by approximately ¼ per cent., while if super-tax is avoided altogether, as in the second example, and the total amount thus saved is brought into the calculation, the yield would be somewhere about 12 per cent.

The Medical Insurance Agency, 429, Strand, will endeavour to answer inquiries on the subject.

THE French Association of Anatomists will hold its sixteenth annual meeting at Lyons in August (2nd to 5th) under the presidency of Professor Renaut.

THE biennial meeting of the China Medical Missionary Association will be held in Shanghai, on Monday, February 1st, 1915, and four following days. The last meeting held in Peking, when the President of the Chinese Republic officially welcomed the association, was very successful, and it is expected that the meeting now announced will be equally well attended and profitable: it is estimated that at least a fourth of the four or five hundred members will attend coming from every Province of China, and papers of a high order are expected. Papers to be read will be printed as abstracts, and time allowed for discussion; they should be in the hands of the Programme Committee by December 1st, 1914. All business communications as to trade exhibits, and all inquiries should be addressed in the first instance to Dr. A. F. Cole, Ningpo, China.

SCIENCE NOTES.

AT the conclusion of his course of lectures at the Royal Institution on the present state of the evolutionary theory, Professor William Bateson dealt with some of the problems which are now engaging the attention of biologists. Darwin, he said, had first made the conception of evolution possible by attaching importance to the factor of variation, but the critical work since done had undermined the basis on which he rested. The expectations that cytological studies would greatly increase knowledge of the processes of nature had been falsified, and it might now be said that the chromosomes were not the essential or the only factors by which hereditary qualities were transmitted. The essential feature of Mendel's discovery had been that there were definite factors distributed among the germ cells according to a definite plan. Professor Bateson expressed his belief that this was not peculiar to the germ cells, but merely an instance of the patchwork formation that was commonly seen in many plants and in some animals. In such plants as cereals the Mendelian properties came out with amazing numerical regularity. When the regularity was less marked it was probable that segregation took place at a relatively early period. It had been shown that species segregated similarly to varieties. As regarded the evolution of special organs, he said that it was obvious that if a species was very ill adapted it could not survive, and that if it was exceptionally well fitted for the struggle it enjoyed a differential advantage. But when such special organs as the eyes in the peacock's tail were considered, the theory had to be abandoned, because natural selection must necessarily deal with a summing of effects. Progress must be dependent either on the addition or subtraction of factors, and it was hard to see how this could be brought about by natural selection. Selection could only act upon what was present; it could not make a stable species budge. The older idea as to variable forms—that from any one of them any other could be produced—had also to be given up. The evidence from the domestic animals was to the effect that they might have been derived by variation in the past, but what was wanted was an instance of present-day variation. Outside conditions could neither add anything to or take anything from an individual's heredity, except in the case of injury, and even as regards alcohol it was difficult to prove that there was any effect upon the children. Almost every critical writer believed the domestic animals to be polyphiletic, and it was easier to believe that they were derived from a wild form that had disappeared than that they had arisen out of variation. Nearly all the forms of which the origin was known could be proved to have originated by crossing, a process that in some cases had been followed by natural selection, but he could not agree with Lotsz's view that all variation was due to crossing. Nothing was known of variation by the addition of factors. Malformations in man were dominants, but it was by no means clear that their appearance depended on the addition of factors. The theory of inhibiting factors was in some senses perverse, but it was only necessary to invert the reasoning and to say that what might be due to the addition of one factor might also be due to the loss of two inhibiting factors. He disagreed with Lotsz in thinking that definite evidence had been obtained of variation as the result of the loss of a factor, as in the well-known case of the primula. It was also necessary to bear in mind the possibility of errors in division. He had never accepted the view that the Mendelian factors were necessarily indivisible. If a combination of only 100 original factors were assumed, it would be possible, by dropping out certain of them and combining them in different ways, to produce a number of plants and animals far larger than the mind could conceive. He believed that evolution had occurred by the unpacking of the original complex. It was the common belief that the apple was derived from the crab, and that the pips of the apple when sown returned to the crab. Though he had made many inquiries, he had only once heard of an instance of this, and that proved to be a myth. Such changes as that of the crab into the apple appeared only to go in one direction. He summed up by saying that variation was very often a discontinuous process. Races, he thought, had developed from one form, the change occurring generally,

if not always, by the loss of factors. The change must occur in the germinal tissue, but nothing was known as to how it was brought about. There was complete ignorance, too, as to whether the species of Linnaeus were or were not really species.

The exhibits at the conversazione of the Royal Society on Wednesday evening were remarkable rather for variety than novelty. The Polychromide Company showed a series of instantaneous photographs on paper taken in natural colour. The essential feature of the apparatus is a filter or screen that allows the red rays to pass through it on to a plate sensitive to red, and reflects yellow and blue rays on to two other plates sensitive to these colours; the silver salts are converted by a chemical process into coloured double salts, and by superposition of the three prints coloured photographs result. The exhibitors stated that the system would shortly be available for photomicroscopy. Professor Stanley Kent showed a series of microscopical slides illustrating the muscular continuity and nodal tissue of the heart. In addition to the node demonstrated in 1892 to exist between the auricle and ventricle he has now shown the existence of at least one other muscular connexion, which he describes from its position as the right lateral auriculo-ventricular. Professor E. W. MacBride and Mr. H. G. Newth exhibited double tadpoles of the frog and double sea-urchins, and demonstrated the method by which these forms were obtained experimentally. In the case of the frog the fertilized eggs are inverted immediately upon completion of the first cleavage furrow, and are kept inverted until gastrulation. Among the many exhibits shown by the zoological department of the British Museum attention may be drawn particularly to the cast of the huge paddle or forelimb of the hump-back whale recently received by the museum; the paddle had been dissected, and the cast showed the bony structure. Messrs. Chance Brothers exhibited specimens of glass prepared under Sir William Crookes's direction for making spectacles which should cut off the ultra-violet and infra-red rays with the view of reducing glare both generally and, more particularly, for glass-workers. Professor E. B. Poulton showed a family of *Papilio dardanus* bred by Mr. W. A. Lamborn, illustrating several interesting points in Mendelian theory, and throwing considerable light upon mimicry, a point also illustrated in an exhibit of butterflies from Uganda by Mr. C. A. Wiggins, and from South-East Rhodesia by Mr. C. F. M. Swynnerton. The restoration of the Piltdown skull by Mr. W. Pycraft, and the large canine tooth found by Mr. Dawson about a year later near the spot where the mandibular ramus of Eoanthropus was found, were shown along with a cast of the jaw of the Heidelberg man, and of a restoration of the jaw of Eoanthropus. Mr. C. R. Darling exhibited an apparatus for displaying certain surface-tension phenomena which imitate such movements as those of phagocytosis. Two demonstrations were given. The first was by Professor J. P. Hill on "The Percy Sladen Expedition to Brazil in 1913," which was particularly concerned with the investigation of ovulation and uterine changes during pregnancy in marsupials. The second demonstration was by M. P. Schilowsky on the "Application of Gyroscopes to the Three Systems of Locomotion (Land, Sea, and Air)."

THE Austrian Society for the Study of Cancer has received a donation of over £30,000 for the erection of a special hospital for cancerous patients. By a subscription for the same object a sum of over £83,000 has already been raised.

THE report of the After-Care Association for 1913 has just been issued. As we commented recently (BRITISH MEDICAL JOURNAL, March 7th, p. 556) on its objects and work, in reporting its annual meeting at the Royal College of Physicians, we need only add that interesting particulars are given in the report of typical cases assisted in various ways to obtain employment on recovery from mental illness, evidencing much tactful consideration by the officials of the association as to individual needs and peculiarities. Affiliated with the parent society, the head quarters of which are at the Church House, Westminster, are a "Guild of Help" in London and a network of local branches throughout the provinces, very helpful both in dealing with patients in their respective localities and in obtaining subscriptions to the funds.

LITERARY NOTES.

MR. FISHER UNWIN will shortly publish a volume of collected essays by Professor Hugo Munsterberg, of Harvard, the well-known author of *Psychology and Crime*, entitled *Psychology and Social Sanity*. Professor Munsterberg deals, from a psychological standpoint, with a number of the most interesting questions of the day, such as sex education, in regard to which he justifies the old-fashioned reticence; socialism; thought transference; and with various other subjects, such as advertising and investing and popular proverbs.

A work entitled *The Problem of the Nations*, which is described as "a study in the causes, symptoms, and effects of sexual disease, and the education of the individual therein," will shortly be published by Messrs. John Bale, Sons, and Danielsson, Ltd. The author is Mr. A. Corbett-Smith.

THE BRITISH MEDICAL JOURNAL of May 9th (p. 1034) contained a brief account of Dr. Robert John Thornton, who was lecturer on botany at Guy's Hospital in the early years of the nineteenth century. Our attention has since been called to an interesting note on Thornton by Dr. Frederick Taylor which appeared in the *Guy's Hospital Gazette* of January 18th, 1913. He begins by quoting an advertisement from the *Times* of 1812, reprinted in the Educational Supplement of our contemporary. Under the heading "Education a hundred years ago" is the following announcement:

> Botanical Lecture.—Doctor Thornton, Member of the University of Cambridge, and of the Royal London College of Physicians, delivered, on Monday, his introductory lecture on Botany, in the Philomathic Rooms, Burton Street. Much expectation was excited by the novel introduction of magnified flowers in the form of transparencies. They were received by a very elegant and numerous audience with a thunder of applause, repeated in bursts at each exhibition, and thus pleasure and instruction have at last become united.

It is not, says Dr. Taylor, clear for how long Thornton lectured at Guy's. Wilks and Bettany say he gave lectures there about 1804, but the folio frontispiece of his large work is dated 1799, and bears his portrait with the inscription, "Robert John Thornton, Public Lecturer on Medical Botany," and a drawing of Guy's Hospital. He must therefore have been lecturing at a much earlier date than that given by Wilks and Bettany. The only entry bearing upon his studentship at Guy's that Dr. Taylor has been able to find is as follows: "John Thornton, December 18th, 1793," but elsewhere he is stated to have had a three years' course. "Two questions," says Dr. Taylor, "remain: One, Did the world really have to wait till 1812 before any one had succeeded in combining pleasure with instruction? The second, Where were the Philomathic Rooms?" So far he has been unable to find any trace of a lecture-hall having existed in Burton Street, which is a small thoroughfare near St. Pancras Church. "Philomaths" must have indeed been eager in their love of learning to seek for instruction, even combined with pleasure, in the somewhat squalid quarter now known by that name. Perhaps some reader who has made a study of the topography of the London of a hundred years ago will supply the answer to Dr. Taylor's question as to the whereabouts of the Philomathic Rooms where Thornton delighted his very elegant and numerous audience by the display of magnified flowers in the form of transparencies.

Mr. R. E. Francillon in his *Mid-Victorian Memories* (Hodder and Stoughton), speaking of his work on the *Globe* newspaper, which began soon after the Franco-Prussian war, says the editor at that time was Dr. Mortimer Granville. Dr. Granville had not yet, he says, succeeded in raising the paper to the position it reached during his reign and afterwards maintained, but he made one feel that he was not the man to fail, though it would have been exceedingly difficult to state a reason for so hopeful an impression. Mr. Francillon continues:

> He was the most unknowable person that I ever knew (I am conscious of the bull); notwithstanding our daily relations he was as much a mystery at the end of them as at the beginning. All that we of his staff knew, or thought we knew, of his previous history was that he had practised medicine somewhere in the provinces; of his present life, nothing. He seemed to be entirely without associates, and nobody, in

schoolboy language, knew him at home. How he stepped out of the consulting room of a country doctor straight into the editorial chair of a London evening paper was presumably no mystery to the *Globe*'s owners; at any rate, they could not have chosen their man better, as the leaps and bounds by which the paper prospered plainly showed. Yet he could not be classed among the "strong" editors. He was a veritable bundle of excitable nerves. I have seen his big frame literally of a tremble, and his sallow complexion grow yet more sallow, before having to face a meeting of the directors; and his tempers during the daily production of the paper would have sent the members of his staff crazy had they been half as nervous as he. Being who and what we were, we soon learned to take his impatient and sometimes even insulting messages as among the mere ordinary incidents of the morning's work, to be either disregarded or promptly repaid in kind, and then forgotten. Indeed, it was impossible to remember such meteoric flashes in the amiable calm that invariably followed the daily storm. His secret of success is, under such temperamental conditions, hard to conjecture; but he must have possessed that secret, among, I fancy, many others of other kinds. For, after quitting the *Globe*—I no more know why, than why he came there—he returned to his original profession, and acquired a lucrative and fashionable practice, chiefly, I believe, as a specialist in nervous disorders.

Dr. Mortimer Granville, who at one time practised in Bristol, came to London, and after returning to his original profession, gave special attention to gout and neuralgia. He invented an instrument for the treatment of neuralgia by vibration; it was known by the name of *percuteur*, and for a time had a certain vogue. He died in 1900, at the age of 67.

The object of the Harvard University Press, which was formally established little more than a year ago, is to publish the work of some of the leading scholars of the world, and to issue, in addition, some textbooks and volumes recording the results of research carried on at the university. It aims at co-operating with the local booksellers in reaching persons who are particularly interested in its publications by supplying detailed information concerning the scope of its forthcoming books and by providing dealers with special circulars bearing their imprints. The first catalogue of the press, which has just been issued, gives brief descriptions of the books already published. The books in the list cover a wide range of subjects, and vary considerably in scope and method of treatment. Some are of the nature of popular monographs, some are textbooks, and some are comprehensive studies in special fields, but all have a fairly close relationship to the teaching and research carried on in the university, and are thus appropriate for publication by a scholarly press. It is intended to limit the publications of the Harvard University Press to books of this character, and to give special attention to the scholarly quality of the manuscripts submitted for publication. As examples of books that will make a particularly strong appeal to some, the following may be mentioned: J. L. Morse's *Care and Feeding of Children*; F. Madison Allen's *Diabetes*; E. G. Cutler's *Care of the Sick Room*; W. B. Cannon's *Laboratory Course in Physiology*; Clifford H. Moore's *Search for Salvation in the Greek and Roman World*; Dr. Boyd Carpenter's *Spiritual Message of Dante*; and the works of Vitruvius, translated by Morris H. Vaughan.

Beaufort House, Chelsey, which was built by Sir Thomas More in 1520, and demolished in 1740 by Sir Hans Sloane, was occupied during the two hundred and twenty years between these two dates by the first and second Marquesses of Winchester, Lord and Lady Dacre, Lord Burghley, Sir Robert Cecil, the Earl of Lincoln, Sir Arthur Gorges, the Earl of Middlesex, the great Duke of Buckingham, the younger Duke of Buckingham, the Earl of Bristol, and the Duke of Beaufort. After the death of the Duchess of Beaufort it stood empty for twenty years, when it was bought by Sloane, who had already purchased the Manor of Chelsey from Lord Cheyne. Its last occupant was a Quaker named Edmund Howard, who was put in as caretaker shortly before the house was demolished. Howard left some records which are interesting as showing the famous physician "as seen by a contemporary." A part of these is quoted by Mr. Randall Davies in *The Greatest House at Chelsey*, recently published by John Lane. When Howard was put in charge the house had been nearly twenty years in chancery, and was therefore in a very bad state. He says:

> He [Sloane] furnished me like the prophet Elijah with a table, stool, and a candlestick, also a bed, besides which I had very little, and sent me (only) into this old and desolate place to live and lodge alone in such a frightful place, surrounded with high trees, and overgrown with briars and thorns, and high brick walls where had I been ever so much distressed and called aloud no chance of being heard.

There were other terrors, for it was reported that a murder had been committed in the Duke of Beaufort's time, and that the ghost of the murdered man haunted the house, "the truth of which," Howard cautiously says, "I cannot avow, but the bones of a man or woman was found in the premises by some labouring men employed by Sir Hans Sloane to dig gravel for the highways." As is well known, Hans Sloane's great collection became the nucleus of the British Museum. On this Horace Walpole wrote:

> You will scarce guess how I employ my time, chiefly at present in the guardianship of embryos and cockleshells. Sir Hans Sloane is dead, and has made me one of the trustees to his museum which is to be offered for £20,000 to the king, the Parliament, the Royal Academies of Petersburgh, Berlin, Paris, and Madrid. He valued at four score thousand pounds; and so would anybody who loves Hippopotamuses, sharks with one ear, and spiders as big as geese. It is a rent charge to keep the fetuses in spirits! You may believe that those who think money the most valuable of all curiosities, will not be purchasers. The King has excused himself, saying he did not believe that there are £20,000 in the treasury. We are a charming wise set, all philosophers, botanists, antiquarians, and mathematicians, etc.

Sloane was a kind and generous man, but from Howard's candid narrative it may be gathered that there was another side to his character which helps to explain his success in the accumulation of wealth. The Great House was pulled down and the collection was moved into the Manor House at Chelsea under the direction of Howard, who writes:

> This house being very large and capable to contain his library and all his collection of gimcracks, he left his house in Little Russell Street, near Bloomsbury Square, declined his practice in physic, and retired to the said house with all his vast collection, all which, except a few which he used to bring himself in his chariot, passed through my hands. Those he brought himself were chiefly gold and silver medals, diamonds, jewels, and other precious stones; and among these I doubt not but he had many gods of gold and gods of silver, for I one day unpacked a large case full of gods of the ancient Egyptians, Greeks, and Romans, etc. But to give in detail only the sorts of kinds of things would far exceed my intention. Suffice it then to say he had forty volumes in folio—catalogues of his collection—and 42,000 other books in his library, among which was one room full of specimens of dried plants, all which passed through my hands. He used to appoint the rooms in which the books were to be stored up, and I to receive them; they were sent loose in carts and tossed from a cart to a man on a ladder, who tossed them in at a window, up one pair of stairs, to a man who caught them there as men do bricks, and I was employed, as before mentioned, doing nearly all things for him belonging to his estate at Chelsea, except collecting the rent.

Howard says Sloane was a good master to his servants, yet he was too strait with those who were concerned in money matters, and he could be mean in his dealings, so much so, indeed, that Howard left his service, which, he says,

> proved the most disagreeable and noways profitable nor elegant employment, although my master was the philosopher's king, for he was at that time President of the Royal Society and I think also of the College of Physicians; but if I have any judgement in mankind, I think I have been acquainted with many men superior to him both in natural talents and acquired accomplishment. He was, however, easy of access, very affable and free in conversing with all who had any concerns with him, and a good master to his servants for they lived many years with him. He was also a very good landlord and never that I know or heard of did one harsh thing by any of his tenants.

This will recall the old saying that no man is a hero to his valet, which, as Carlyle said, gives the measure of the valet rather than of the master. The indictment, after all, amounts only to this—that Sir Hans Sloane liked receiving money better than parting with it. There are few men outside lunatic asylums of whom the same could not be said.

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REFEREE-CONSULTANTS AND CLINICS.

In a general review of the Budget schemes last week we mentioned the different projects put forward by the Chancellor of the Exchequer in connexion with medical and health matters. It is manifestly desirable that medical men should examine and consider them carefully and without delay, for we believe that any advice and practical suggestions they may have to offer will be welcomed and will receive careful attention. It is proposed, therefore, to discuss the matters raised in detail in this and in forthcoming issues. They were only mentioned in outline in the Chancellor's statement, and, of course, much will depend upon the details of the schemes which are proposed.

One of the schemes of the most immediate and direct interest was that indicated by the grant proposed to be made for the establishment of a service of referees and consultants and practitioners' clinics under the Insurance Act. It is evidently intended not to stop short at a service of referees such as is called for in connexion with questionable claims upon the sick fund. This decision is, we believe, wise, for we cannot escape the conclusion that, after all, a man who is employed in the capacity of a referee only must in the end justify his existence, to a great extent, in the eyes of the societies, not so much by the value of his clinical advice as by the fact that he discovers, in a sufficient number of cases, reasons for believing that the claimant for sick pay is really capable of work, thereby defending the funds of the societies from undue encroachment. This is a useful and necessary service, and will often be as welcome to the medical man attending a case as to the officers of the society. Nevertheless, we cannot but think that it would in the end be very undesirable only to encourage the development of a service of medical men with this as their chief or sole function. What the State should seek to foster is the clinical interest of medical men for the advantage of the sick person in the diagnosis and treatment of their disorders. In the end the medical service of the insured must stand or fall by one test—that is, whether it leads to early and effective treatment of the sick person.

Happily, in this respect, as well as in the more efficient prevention of disease, the interests of the societies' funds, of the medical profession, and of the State generally are at one. The establishment of a service of referees only could not be permanently satisfactory unless it were accompanied by increased facilities for consultation and for improving diagnosis and treatment. It is evident, however, that the work falls roughly into two classes, although they commonly overlap. There is a large number of cases in which special questions of skilled diagnosis and treatment will not arise, but in which the main question is, whether the insured person is so far recovered as to be capable of work; there are others in which consultation and advice will principally be required. There are, moreover, two general departments of consultative work which also may overlap. In a large number of cases all that a medical man wants is a second opinion, and for this he will call in a fellow practitioner of good standing in whom he has confidence, or one who may be described as a general consultant. There is another class of cases, more limited in number, in which the services of a specialist are required. In developing these services the Government will no doubt seek to make arrangements whereby extravagant uses of consultation, whether general or special, would be avoided. Obviously it will have to consider the question of expense, and, apart from that, it is scarcely desirable from the professional point of view that medical men should have access too freely and too easily to a second opinion, as such a course might diminish the sense of responsibility and discourage independent thought. The proposal to establish clinics appears to be designed to promote mutual consultation between medical men on the panel, and incidentally to avoid any excessive resort to the services of specialists. The arrangement of a system of referees and consultants throughout the country will evidently demand careful organization, and cannot be carried out in a hurry; but there are some places, particularly in industrial centres where the claims for sick pay are specially numerous, where the demands of the societies for the services of referees may be expected to be particularly pressing, and it is conceivable that some provisional arrangement may be asked for in these areas.

The personal qualities as well as the professional attainments of the men who are to act as referee-consultants in any permanent scheme are of the highest importance, and we hope that some scheme will be devised whereby appointments may be made apart, as far as is humanly possible, from political or other wire-pulling. Those selected should not only be men in whose professional opinions the general practitioners in the district can have confidence, but those whose character also inspires personal respect. The intention will perhaps be to appoint in each district some one of this type who will be looked upon as the responsible head, and who can also be called upon to advise in matters of organization, allotment of duty, and so forth. Apart from the question of specialists, it is evident that in the larger districts no one man, as a general referee-consultant, would be able to cope with the work, although in some localities there would probably be sufficient work to occupy a part of the time of the men appointed. The geographical distribution of the insured population in many of the insurance areas suggests that we may expect the employment of a number of men on a part-time basis. The Treasury, as we know, always seeks to insist upon knowing the limit of its liability, and it may therefore be expected that it will propose for these officers a system of payment on either a whole-time or a part-time basis rather than one based upon a payment of fees for individual cases. If a system of clinics for practitioners should come to be instituted, they might become convenient centres for the attendance of the referee-consultants at stated times and perhaps for specialists also, and it is evident also that in large towns every effort should be made to enlist the co-operation of the specialists attached to the staffs of the great hospitals. The first public reference to these proposed clinics for practitioners appears to have been made in the speech delivered by Dr. Addison, M.P., at the dinner given to him on February 6th.[1] We directed attention

[1] British Medical Journal, February 14th, p. 379.

to this speech at the time, and although there is nothing at present to show the way in which the Government proposes to develop its scheme, we find that the general idea put forward at that time was that clinics should be places which could be used by groups of practitioners, and at which there would be provided facilities for diagnosis needing special examinations, possibly also *x*-ray apparatus, and that they might be linked up with a laboratory system such as is suggested in another part of the Budget statement. Whatever may be the precise form these clinics take, it is obvious that, if they are properly organized and directed, they may be very useful as an incentive to good work. If the development of the service of referee-consultants linked up with the medical practitioners and specialists in their area proceeds anything like on the lines we have suggested, they would evidently provide for the holders of them a wealth of interesting clinical material and opportunity, and if the conditions attaching to them and to their tenure are of a proper kind, we can well believe that they might prove attractive to many medical men of good standing.

THE VALUE OF THE LUETIN REACTION.

STIMULATED by von Pirquet's discovery of a specific cutaneous reaction for tuberculosis attempts were made by various workers to obtain extracts from syphilitic tissues which might give a similar type of reaction with syphilitic patients. Extracts of syphilitic fetal liver, for example, were applied to the skin of such patients, but the results obtained by these methods were, on the whole, contradictory, and it was found that a similar type of reaction could be produced by using concentrated extracts of normal liver in the place of syphilitic extracts.

A fresh impetus to investigation in this direction was, however, given by the researches of Noguchi, who first demonstrated the possibility of obtaining the *Treponema pallidum* in pure culture. By the employment of such cultures of the causative organism Noguchi was, in 1911, able to produce a substance, to which he gave the name of "luetin," which on inoculation in many cases of syphilis gave remarkable and interesting results. The technique of the preparation of this substance is given in Noguchi's original paper in the *Journal of Experimental Medicine*, but it may not be out of place briefly to recapitulate the salient features of its manufacture. The cultures were made in ascitic fluid and ascitic fluid agar containing sterile placenta, and, after varying periods of growth up to fifty days, the solid media containing innumerable spirochaetes were ground up in a sterile mortar and fluid media added until a liquid emulsion was obtained. The preparation was then heated to 60° C., and 0.5 per cent. carbolic acid subsequently added to ensure sterility. The method of application is simple. A drop of the emulsion is injected into the skin of the arm, while a drop of control emulsion, which has not been inoculated with spirochaetes, is injected into the opposite arm at a corresponding point. This control inoculation does not generally cause any reaction. In Noguchi's hands encouraging results were obtained, and the hope was entertained that a new and powerful weapon had been discovered to help in the accurate diagnosis of syphilitic affections.

Nearly three years have passed since the publication of Noguchi's original paper, and we are now in a position to appraise, to some extent, the merits and demerits of his technique as applied to diagnosis. In normal (non-syphilitic) cases the reaction is fairly constant. After some twenty-four hours a small erythematous area is visible in and around the seat of inoculation; the reaction receding within forty-eight hours without leaving subsequent induration, and with such normal cases constitutional effects are conspicuously absent. The reaction in syphilitic cases is sometimes positive and sometimes negative. The positive reaction varies in intensity, and may be classified as "papular," "pustular," or "torpid." In the papular form the inflammatory process commences in from twenty-four to forty-eight hours, within which time a raised, reddish, indurated papule makes its appearance. The induration increases slowly during the following three or four days, then commences to recede and completely disappears within a week. In the pustular form, which is commonly observed in cases of tertiary syphilis, central softening commences about the third or fourth day, the original papule passing through vesicular and pustular stages. The pustule, on breaking, presents indurated margins, which disappear after a few days. In the torpid form the reaction appears at first to be negative, but after some ten days it lights up and a pustular stage supervenes. As a general rule, constitutional effects following inoculation are slight and a small rise of temperature is the only indication observed. General malaise, loss of appetite, and diarrhoea have, however, been noted in the earlier experimental work with luetin, but with the more recent employment of purer luetin in much smaller doses, only very slight constitutional reactions have been noticed.

In the report of Wolfsohn in the *Journal of the American Medical Association*, June, 1913, an interesting analysis of the use of luetin in a hundred cases of syphilitic affections is given, and in conjunction with the results obtained by other workers in America and on the Continent the following facts appear to be now more or less fully established. The reaction is probably specific, and if positive, syphilis may reasonably be suspected. The reaction is present in the majority of cases of tertiary latent and hereditary syphilis and in parasyphilitic affections, such as tabes dorsalis and general paralysis; it is less constant in secondary untreated cases, and generally absent in primary cases. Treatment with salvarsan in the earlier stages of the disease appears to favour the production of a positive reaction, but intensive antisyphilitic treatment in the later stages of the disease may produce a negative reaction; after an interval during which treatment is suspended, the reaction may become positive. Particular attention is called by writers to the fact that tertiary cases giving a negative Wassermann reaction often react positively to the luetin test and claims have been advanced that in this type of case the luetin reaction will prove to be of great value.

It should be observed that the Wassermann reaction is more constantly present in primary and secondary cases, while the luetin reaction is more in evidence in tertiary and latent cases, so that the two reactions to some extent complement each other. It is, however, in early untreated cases, in which the Wassermann reaction itself is usually absent, that a simple and reliable method of investigation would be of inestimable value. It is here unfortunately that the luetin reaction fails to give reliable information, and is, in fact, of less diagnostic value than the Wassermann reaction. The technique of the former test is, moreover, somewhat complicated, and a

considerable familiarity with the reaction is needed to avoid pitfalls and to reach satisfactory conclusions. In the present state of our knowledge of syphilis the greatest aid to early diagnosis consists in direct examination for spirochaetes by the dark ground illumination method in preparations of irritation serum from suspected syphilitic lesions. The serum is obtained from the deeper layers of the lesion, avoiding surface contamination. The lesions are carefully cleaned with pledgets of cotton-wool soaked in sterile salt solution, and then scraped with a dull curette, thus inducing a ready flow of serum. Such direct examination is by no means difficult, and comes well within the purview of the modern physician, while the Wassermann reaction does not exact any technical knowledge on the part of the practitioner beyond the procuring of blood samples for expert examination. From these considerations it does not appear to be probable that the luetin test will ever supersede either of these alternative methods, though, no doubt, in certain cases of tertiary and latent syphilis the method will prove useful, when employed by skilled hands, in clearing up an obscure diagnosis.

SPIRITUAL HEALING.

WHILE recognizing the earnestness of purpose and the fairness of spirit which the clerical and medical committee on spiritual healing (see summary of its report in the JOURNAL of May 9th) brought to the important work undertaken by it, we do not think the results have so far been commensurate with the labour expended on the investigation. The provisional conclusions substantially agree with those of the Subcommittee on Spiritual Healing appointed by the British Medical Association published in the SUPPLEMENT of July 15th, 1911. Naturally the report of what we may for convenience call the St. Paul's Committee is more theological in tone and in spirit than that of the medical subcommittee, and this from a purely scientific point of view weakens the practical value of the conclusions. Yet as far as it goes the report is in the right direction. It agrees with the medical subcommittee that all forms of spiritual and mental healing are in essence identical, and that in all of them the operative factor is suggestion. There is agreement, also, that spiritual or faith healing is permanently effective only in functional disorders, and that the alleged exceptions are so disputable that they cannot be taken into account. The cases investigated by the Committee form a somewhat motley list, including instances of what was said to be cancer, cirrhosis of the liver, enlargement of the thyroid gland, arthritis, hip disease, Raynaud's disease, angina pectoris, secondary haemorrhage, "swelling of legs," pneumonia, toxaemia, abscess of liver, erysipelas, dysentery, conjunctivitis, dipsomania and other vicious habits, epilepsy, blindness, deafness, "muscular paralysis," neuritis, disseminated sclerosis, tetanus, "brain fever," "paralysis of bowel," asthma, neurasthenia and other nervous conditions. It is significant that in most of these cases the only evidence that could be obtained as to the nature of the disease and the results of the treatment was from the healers themselves or their friends.

Although the Committee particularly sought to investigate cases of "incurable" illness, whether treated by clergymen or laymen, in which recovery took place, in no instance was medical evidence forthcoming to confirm any cure by spiritual or mental healing. This, of course, is just what we should have expected, but it will doubtless be put down by the healers to the jealousy of the doctors. That such jealousy may occasionally exist we are not concerned to deny, but the medical men on the Committee are all well known to have open minds; indeed, if as a body they have any bias at all, we are inclined to think that it would probably be in favour of recognizing the power of psychic influences. But their scientific attitude of mind naturally tends to make them severely critical of alleged facts submitted as illustrating this power. Our own experience has shown us that it is most difficult, and often impossible, to obtain evidence that could stand the test of scientific examination from healers of any kind. Vague descriptions of symptoms without definite significance, and positive assertions of cure when it has been by no means clear that there was anything to cure beyond common functional disorders, are generally all that can be elicited. It may therefore, we think, not unjustly be said that spiritual healing is to a large extent the cure of imaginary diseases by what Tyndall might have called the scientific use of the patient's imagination. In patients whose will power has long been dormant and the nerve impulse has almost forgotten the tracks along which it used to travel, suggestion stirs the sleeping energy into new life. *Possunt quia posse videntur.*

Of psychic influences religious faith is, it may be admitted, the most potent. But it is by no means the only one. Emotions such as fear, love, anger—in fact, almost any kind of mental excitement or shock—have been known in certain cases to cure hysterical paralysis, dumbness from functional aphonia, neuralgia and epilepsy, and some other conditions not so obviously functional. Thus, rheumatism has been cured by a railway accident; gout by an alarm of fire. Muco-membranous colitis which had resisted every kind of treatment has been cured by the patient's house being burnt down. Asthma has been cured by the surprise of a night attack in camp. John Hunter says that agues have been cured by charms and tumours by the stroke of a dead man's hand. According to Cullen, many hysterical women were cured by the excitement of the '45, and Benjamin Rush tells us that during the first American war many infirm and delicate persons were restored by the social upheaval that took place. Badeley, quoted by Hack Tuke in his well known book, *The Influence of the Mind upon the Body in Health and Disease*, said he had known many recoveries from imminent danger by the relief which the mind experienced after making a will. In the same way many devout Catholics will be found to testify to the healing effects of the last sacraments; this is explained by the peace of mind engendered in the believing soul by the certainty of not passing into the undiscovered country

> Unhousel'd, disappointed, unaneled.

Little need be said of the six cases in which the Committee were able to obtain medical evidence as to the course of events before and after treatment. One was a case of malignant tumour of the thyroid. Spiritual healing was not the only treatment used, as radium was applied twice for periods of five days, and each time there was marked reduction in the size of the growth. Nevertheless the patient died of the disease in a few weeks. In another case of enlargement of the thyroid the patient went, with the doctor's leave, for the laying on of hands, and in a few days after the service was well. The doctor considered that the causes of the swelling were of a

temporary character, and that it subsided by a natural process, as frequently occurs. Another case was one of partial paralysis of the muscles of the arm due to neuritis of the brachial plexus which had come on five years before spiritual healing. The patient was "ministered to ten times" for an hour a day, and felt considerably better in respect of his "nerve tone," and he thought there was some increase of power in the hand. Yet three months after this treatment the muscles of the arm were still wasted and partially paralysed. Another case was a typical example of dermatitis artefacta, which was reported to the Committee as "a very rare and incurable disease with partial insanity"! Spiritual treatment was said to have healed the self-inflicted wounds, and caused the disappearance of the other hysterical symptoms. An account of the case will be found in the *Proceedings* of the Royal Society of Medicine, Dermatological Section, October 19th, 1911, p. 10.

It will, we think, be admitted by all unprejudiced persons that the proportion of fact to what, for the sake of courtesy, we will call preconceived notions, in these claims of cure by spiritual healing, is like the halfpennyworth of bread to the intolerable deal of sack in Falstaff's tavern bill. In the cases of cancer, Raynaud's disease, and disseminated sclerosis which were investigated, it did not appear that the course of the actual disease was in any degree checked. The Committee proposes to collect further evidence, and we shall look forward with interest to another report. It asks that the following conditions be complied with: A diagnosis by a medical practitioner before treatment with a short history of the signs and symptoms; an account of the treatment carried out, with dates and other details; a medical examination after treatment, by the same doctor if possible, with a detailed account of the changes that have taken place.

This is all as it should be, but even the wisest among us are too often driven to realize the truth of the Hippocratic aphorism, *Experientia fallax*. It is desirable, no doubt, that in suitable cases, when the patients express a wish for "metaphysical aid," ministers of religion should co-operate with doctors in the treatment of disease. But it is necessary to be clear as to the scope and nature of such co-operation. There are not wanting signs that some clergymen are inclined to magnify their office. Any invasion of the strictly medical province by ministers of religion is likely to be followed by disaster to the patient, and, we may add, by discredit to religion. The place of the clergyman in the sick-room is to minister to the spiritual needs of the sufferer, and even this must be done, to a certain extent at least, under the control of the doctor, for in a critical stage of illness an over-zealous priest might easily do serious injury to the patient. A great help to the proper establishment of the basis of co-operation desired by the Committee would be a wider education for the clergy. Their training at present is too purely theological. They ought to learn the principles of physiology and in a general way the course of disease processes, so as to understand how bodily states react upon the mind and how in its turn the mind reacts upon the body. They should also make themselves acquainted in a general way with the fundamental facts of disease. Possessed of such knowledge, they would be less inclined to look upon natural processes as the result of spiritual influences.

On the other hand, doctors might with great advantage give more attention to psychology and especially to the effects of mental states on the bodily functions. It is undeniable that spiritual or mental healers sometimes succeed where medicine fails. This fact should act as an additional stimulus to investigators and observers to gain knowledge that should make the art of healing more effective. One condition of this is to recognize frankly that the imagination, or whatever it may be called, directed by appropriate suggestion in certain cases works a cure. The moral is that which has so often been urged in the JOURNAL, that the doctor should not ignore facts which in the present state of knowledge he is not in a position to explain. He should learn to control and direct the force or forces connoted by the term "suggestion." So much of the mass of human suffering which it is his mission to relieve is due to disordered function that it is his clear duty, as it certainly is his interest, to give serious attention to anything that offers a hope of cure. If he elects to regard psychotherapy with suspicion he will drive the sufferers whom he cannot cure into the arms of healers who profess to wield occult forces more potent than medical art.

A WHOLE-TIME PROFESSOR OF MEDICINE.

DR. THEODORE CALDWELL JANEWAY has accepted the Professorship of Medicine in the Johns Hopkins Medical School at Baltimore, where he will serve on the whole-time basis with Dr. W. S. Halsted and Dr. John Howland as his colleagues in the chairs of surgery and pediatrics respectively. In this way the reorganization of the main clinical departments of that celebrated school of medical teaching has been completed, and the results of the experiment will be looked forward to with the greatest interest in this country. For has not our own Royal Commission on University Education in London recommended that the clinical teaching in a university medical college should be in the hands of whole-time professors? The Johns Hopkins Medical School opened in 1893 with two novel features. In the first place, it possessed an adequately endowed hospital under full university control. In the second place, the professors of the laboratory subjects—anatomy, physiology, and pathology—were all whole-time men, as were their assistants. But the endowment of the school was not so large as to enable its trustees to extend the same arrangement to the clinical chairs. Last October, however, in response to a request from the trustees of the Johns Hopkins University, the General Education Board founded by Mr. Rockefeller made a gift to the Johns Hopkins Medical School of a million and a half dollars, to be known as the William H. Welch Endowment for Clinical Education and Research, as was recorded in the BRITISH MEDICAL JOURNAL six months ago.[1] The income from this endowment is to be used for the support of full-time teaching and research departments in medicine, surgery, and pediatrics. The professors, their associates, and their assistants thus become salaried university officials; they may see any patients they wish inside the hospital or outside it, but may accept no further fees for any services they may render. The endowment suffices to provide the professors and their helpers with well-equipped laboratories, books, and other necessary facilities for the treatment of disease and for research. Dr. T. C. Janeway is the son of the late Dr. Edward Janeway, a distinguished and well-known physician, who was one of the most influential teachers of medicine in his day. Having received his doctor's degree from the College of Physicians and Surgeons of Columbia in 1895, Dr. T. C. Janeway served as Instructor, and later as Lecturer on Medical Diagnosis in New York University from 1893 to 1906. He was elected Associate in Medicine in 1907, and in 1909 became Professor of the Practice of Medicine at the Columbia

[1] BRITISH MEDICAL JOURNAL, 1913, ii, p. 1242.

College of Physicians and Surgeons, and this post he resigns to take up his work at Baltimore. For many years he has been closely associated with the active progress of medical research in New York. Thus he has been a member of the Board of Scientific Directors of the Rockefeller Institute for Medical Research since 1911; he has acted as secretary and treasurer of the Russell Sage Institute of Pathology since 1907; and since 1908 he has been a member of the editorial board of the *Archives of Internal Medicine*, that valuable periodical in which appears so much of the work of the younger school of American physicians. His own clinical work and researches during the last ten years or more—a long period in the life of a man born in 1872—have dealt largely with problems of the circulatory system, the blood pressure, and sphygmomanometry. His book on *The Clinical Study of the Blood Pressure* must be well known to many clinicians and practitioners in this country. A whole-time clinical professorship appeals to the scientific interest and devotion of a clinician. It must often appeal directly to his pocket also, it is to be feared, by lessening his income and involving him in a serious financial sacrifice. It is not every successful consultant whose circumstances would justify him in resigning a large practice in order to take up a post with a salary fixed, it is said, at £2,000 a year. In the case of Dr. Janeway, however, we believe it to be an open secret that he has for many years restricted his private practice in order to be able to give more time to research. The experiment that is being made at Baltimore in the attempt to realize conditions believed to be ideal for clinical teaching and investigation will be watched, as has been indicated already, with peculiar interest in London. Will it be to the advantage of the medical school that its clinical professors should be cut off from the daily contact with the public and the medical profession that has hitherto been the normal occurrence? Will a new fashion of clinical professor be evolved—a laboratory man, a doctrinaire of academic type? These are questions that only time can answer. The man who is purely a man of science has always been distrusted, perhaps unduly distrusted, by the practical and commonplace inhabitants of this country. But now that our Royal Commission has published its report, *jam proximus ardet Ucalegon*, and the teachers of medicine in London are all interest.

THE BOY SCOUTS ENDOWMENT FUND.

Sir Robert Baden-Powell has made an appeal this week in the press for an endowment fund for the Boy Scouts movement, and we publish in this issue a letter from Sir Lauder Brunton and Sir Anderson Critchett calling the attention of the medical profession to the value of the movement, which has already borne excellent fruit. We are glad to notice that the first list of subscriptions toward the endowment fund contains donations, corporate and personal, to the amount of £64,000; but the Chief Scout asks, in all, for £250,000. It is certain that not many members of the medical profession are able to give large donations, even to purposes so admirable as those of the Boy Scouts Association. As Sir James Paget said, in his presidential address to the International Medical Congress in London, in 1881, "We had better not compete where wealth is the highest evidence of success." But in the next sentence he says: "We can compete with the world in the nobler ambition of being counted among the learned and the good, who strive to make the future better and happier than the past." That is the purpose of the doctor's work. For that reason, he is bound to support, to the best of his power, the man who asks him to help a good work which is, indeed, like the doctor's own work, making the future better and happier than the past. Among all professions, there is none which sees more clearly than ours the peril of national degeneration, and the saving need of national efficiency. We live, all of us, in continuous fear of the effects on boys of unhealthy surroundings, bad habits, cigarette smoking, drink, the love of loafing, and the present craze for picture palaces and football matches. We know how boys born of some weedy or infected stock go under; we are tired of advising and physicking undersized, narrow chested, slovenly boys, who will not see what they are here for, but are content to ape the manners, and look foward to the vices, of men. We are bound, therefore, to uphold and help, so far as we can, any sound national plan for the improvement of the physical efficiency of boys in our great cities. It is a great thing for them to live up to a good standard of bodily fitness. They need to be taught to be attentive to the cleanliness of their skin and their teeth, the proper action of their digestive organs, and the importance of fresh air and of exercise. This lesson, of course, must be given under rule, under discipline. That is the secret of the Boy Scouts movement. They learn to obey orders. Moreover, these Boy Scouts are daily doing a thousand little acts of kindness and of usefulness. There is nothing of "a fugitive or cloistered virtue" about their good works. The boys go where they are wanted, and they do what they are told. It is impossible to imagine a more liberal education. There is no need here to praise the fact that the Boy Scouts are not limited, in their education, to the learning how to be useful, how to serve under orders, how to render first aid, and how to scout; they are taught what is far more important—how to honour all men, love the brotherhood, fear God, and honour the King. A French writer not long ago found every virtue under heaven in the one virtue of loyalty, which, to his thinking, was the spring of all good and the remedy against all evil. And these boys are taught, in the highest, widest, and deepest sense of the word, to be loyal. Twenty years hence, or less than that, we shall have cause to be even more thankful than we are to-day to Sir Robert Baden-Powell. Meanwhile, let us help him all that we can, for he is indeed working hand in hand with us.

THE PATHS OF INFECTION IN POLIOMYELITIS.

It is now generally believed that the virus of poliomyelitis, or infantile paralysis, enters the human body by way of the upper respiratory passages, and in particular through the mucous membrane of the nasopharynx. Once within this membrane, the virus may pass on through the lymphatic channels surrounding the filaments of the olfactory nerve to the leptomeninges; alternatively it may first enter the blood and be conducted to the central nervous system by the general circulation. The experimental work of Flexner and Clark has shown that the former of these two methods is that which actually obtains in the monkey. It has also been proved that if an active poliomyelitic virus is injected into the circulation, far greater quantities are required to produce infection than is the case when the injection is made into the subarachnoid space, brain, or peripheral nerves, and further that the onset of the usual symptoms and paralysis is delayed. Flexner and Amoss[1] have investigated this phenomenon and the delayed infection. Using a highly active virus, of which 0.2 to 0.3 c.cm. proved fatal to monkeys when inoculated intracerebrally, they injected 250.0 c.cm. of it into a superficial vein in the leg of a *Macacus rhesus*. With intracerebral injection the incubation period is about six days; in this case, however, no symptoms appeared until the sixteenth day; the animal succumbed five days later. Examination of its cerebro-spinal fluid showed that none of the virus had reached it forty-eight hours after the intravenous injection, and only small amounts after seventy-two hours; at the end of ninety-six hours the virus had passed more freely, and was still detectable at the onset of paralysis, nineteen

[1] *Journ. Experim. Medicine*, New York, 1914, xix, 411.

days after the intravenous injection had been made. The authors endeavour to account for this striking phenomenon, for it is not at first sight obvious why so massive a dose of virus given intravenously should take so long to bring about the cerebral infection necessary to cause death. They conclude that the delay takes place at the barrier of the choroid plexus. They assume that the brain cannot be directly infected from the blood, but only from the cerebro-spinal fluid; and that the virus in the blood cannot make its way from the blood into the cerebro-spinal fluid without first breaking down the resistance of the choroid plexus, a matter demanding time. They point out that interstitial lesions of the leptomeninges are implicated in the development of the specific lesions of poliomyelitis. Hence, they conclude, the meninges and the cerebro-spinal fluid play a determining part in the pathogenesis of epidemic poliomyelitis.

FREUDISM CRITICIZED.

THE second number of the *Psychoanalytic Review* contains an article by Theodore Schroeder, of New York City, entitled "The Wildisbuch Crucified Saint: a Study in the Erotogenesis of Religion." A vivid description is given of the ravings of a lowly born mystic of erotomaniac tendencies; followed by what is called a "psychological interpretation." The concluding paragraph of this interpretation illustrates so forcibly the muddle-headedness of the extreme Freudian, and the extent to which he allows himself to be obsessed by one idea, that it seems to be worth quoting. Mr. Schroeder says: "All religion, at all times, and everywhere, in its differential essence, is only a sex ecstacy, seldom recognized to be that, and therefore easily and actually misinterpreted as a mysterious and 'transcendental,' or superphysical, undiscriminating witness to the inerrancy of all those varying and often contradictory doctrines and ceremonies believed to be of superphysical value in the promotion of present material, ecstatic or *post-mortem* well-being, and which, in the mind of the believing person, happen to be associated with and conceived as attached to the feeling–testimony. Thus it is that all variety (*sic*) of religionists know because they feel and are firmly convinced in proportion as they are strongly agigated (*sic*)." On second thoughts we ought, perhaps, to apologize for the quotation; as a specimen of English writing the first sentence fairly takes away one's breath. As a "working hypothesis"—this is Mr. Schroeder's description—it is even worse than its English. Without denying for a moment the important influence of the generative activity of nature on many religious systems, surely other influences, such as fear, can hardly be negligible as factors in the origin of religions. Devil worship is just as common as phallic worship; and the savage who can gratify his sexual passions at will must be far more likely to use the unexplained cataclysms of nature as a basis for his religious beliefs. But the extremest followers of Freud—if not Freud himself—insist on trying to distort every observation until it fits in with the hypothesis of "sex in everything." The *Psychoanalytic Review* has the merit, however, of opening its pages to the other side of the question. Professor Knight Dunlap, of the Johns Hopkins University, contributes a criticism under the title, "The Pragmatic Advantage of Freudo-Analysis." The article is based on a case reported by Dr. Morton Prince. A woman suffered from a phobia of steeples or bell-towers. The Freudian, of course, regards the steeple as a phallic symbol, and at once would consider the case as sexual. As Professor Knight Dunlap says: "There is absolutely nothing in the universe which may not readily be made into a sexual symbol," by those who wish to do so. Dr. Prince, however, was not satisfied with this solution; and on a more searching analysis he found that the phobia was only indirectly towards steeples, but directly towards church bells, and resulted from definitely identified circumstances connected with the death of the patient's mother. Probably followers of Freud will deny Professor Dunlap's statement that in most cases the mechanism of successful Freudo-analysis is merely the substitution of a new pathological complex for the undiscovered original complex. Nor are they likely to appreciate the twofold danger: first, that the complex created by the Freudo-analyst may not supplant the original complex; and second, that the analyst may not be able to destroy the complex he has created. But we at least join heartily with Professor Dunlap in his objection to the answer too frequently made to their critics by Freudians: "You do not *know*: we who have studied, *we* know, and we cannot argue with you because you do not know."

THE HEALTH OF MARTIN LUTHER.

Do reformers suffer in their health from the zeal which consumes them, or is it disease that produces the state of mind that makes the reformer? It is, at any rate, a curious fact that nearly all reformers have suffered from some thorn in the flesh which, whether or not it acted as a stimulus of inspiration, has probably made them less tolerant of opposition than they might otherwise have been. Carlyle rejects one of the reputed portraits of John Knox on the ground that it is impossible to believe that the Scottish reformer could have looked out on the world with so "eupeptic" a countenance. Calvin, we know, suffered grievously from urinary trouble, and his body was a veritable pathological museum. Luther, too, though of robust frame and healthy constitution, was a man of many infirmities. His pathological history has been written by Friedrich Küchenmeister[1] and more recently by Professor W. Ebstein.[2] From a summary given in a recent issue of the *Progrès Médical* we take the following facts. Luther was healthy in his youth, but at the time of the Diet of Worms in 1521, when he was 38 years of age, we find him complaining of constipation. This condition became worse, and seems to have reached an acute stage in 1522, while he was staying at the castle of Wartburg under the protection of Frederick of Saxony, with whom he had taken refuge from his enemies. Writing to his friend Melanchthon he says: "The Lord has smitten me with grievous pain in the fundament: my stools are so hard that I have to make painful efforts to such a degree that I pour with sweat; yesterday I went to the closet after four days, and I did not sleep at night." He took pills, but these had only a temporary effect. Besides the difficulty with the bowels Luther had a tendency to melancholy, with attacks of giddiness, faintness, buzzing in the ears, and hallucinations of sight and hearing. There were periods of physical and intellectual prostration, alternating with crises of excitement and eccentricities of temper. These sometimes reached a pitch that made his friends think he was afflicted with epilepsy or possessed by the devil. Most of these symptoms appear to have been the early signs of the uric acid diathesis and rheumatism which became clearly manifest later. Piles followed the constipation, and the bleeding from these gave him a relief that sometimes became such a pleasure that, as he says himself, he went to the closet several times a day to experience the sensation. About the age of 40 he began to put on flesh. For ten years he suffered from stone, with frequent nephritic colic. "I groan," he says, "with the stone, which must be the disease of the Germans, as gout is said to be that of the English." On February 26th, 1537, he had a very severe attack, which lasted eight days, with retention of urine, vomiting, and some swelling of the extremities. From these symptoms Ebstein conjectures that Luther had uraemia. The

[1] *Dr. Martin Luthers Krankengeschichten*, Leipzig, 1881.
[2] *Dr. Martin Luthers Krankheiten und deren Einfluss auf seinen körperlichen und geistigen Zustand*, Stuttgart, 1908.

German reformer was also the victim of other ills, including abscesses in the throat and ear, and the buzzings which he attributed to the devil. Sciatica tortured him so severely that he rolled on the ground in agony. He had attacks of gout, diarrhoea, and dysentery. He died at the age of 62 of heart weakness, as might have been expected in a man with arterio-sclerosis who for many years had overtaxed his strength. There is no record of an autopsy. Ebstein does not think that Luther's state of health had any effect on his moral and intellectual state. It seems difficult to believe, however, that sufferings so diverse and so severe should not have reacted on his temper, and through that on his methods of controversy. This does not in any way touch on his sincerity or on the truth of the doctrines which he taught. It merely means that a prophet racked by pain is likely to enforce his gospel in a strenuous manner and to fulminate against his opponents as animated by the spirit of evil.

THE INDIVIDUALITY OF THE CELL.

THE individuality of the cell was the theme of an interesting address given by Professor Siegmund von Schumacher at the opening of the Institute of Histology and Embryology at Innsbruck.[1] It is known that the sperm of the drone is received by the queen bee in her nuptial flight, and remains active for the rest of her life in the receptaculum seminis. In the cloacal sac of the female salamander the sperm is retained active for two years after copulation. The bat is wed in autumn and becomes pregnant after her winter sleep. Living spermatozoa were found in the excised testicles of guinea-pigs kept at 0° C. eleven days after excision. Living human spermatozoa have been found in the uterus eight and a half days after cohabitation. The leucocytes of the frog showed amoeboid movements after being kept three weeks in a moist chamber. Dog's blood kept ten days on ice was successfully transferred into a dog, and very little albumin or haemoglobin appeared in the urine. The movement of ciliated cells was observed in a tumour eighteen days after its removal from the nose. Pieces of the mucous membrane of the frog's mouth put in the dorsal lymph sac of the same animal showed active cilia after five months. Pieces of human skin kept in ascitic fluid for at least one week have grown on transplantation. The cornea of a hare kept at 0° C. has survived nine to twelve days and been successfully transplanted. The excised heart of a 3 months old child has been made to beat twenty hours after death. In the last few years the survival of tissue cells has been extensively studied, and the question arises as to whether true cultures are obtained. Harrison was the first to study the growth of nerve cells in pieces of the frog embryo; the axis cylinders were placed in clotted frog's lymph. Burrows substituted blood plasma; the plasma method is therefore incorrectly named Carrel's method. Carrel introduced the method of repeatedly alternating the environment of the tissue, first putting it in culture medium and warmth and then in Ringer's solution and cold. By this means he succeeded in keeping pieces of heart muscle pulsating for three months. The cell movement in explanted tissue has been kinematographically studied by Commandon, Levaditi, and Untermitch. The cells use the threads of fibrin as guides in their wanderings. While the cells of explanted tissues live and multiply, it is doubtful how far they show the characteristics of the particular tissue. It is said the new-formed cells take on an indifferent character and never show the characteristic formation of the mother organ. If true cultures of the cells of organs could be obtained the method would lend itself admirably to the study of histogenesis, metabolic processes, age and death phenomena of cells, etc.

[1] *Die Individualität der Zelle.* Von S. von Schumacher. Jena: G. Fischer. 1914. (Roy. 8vo, pp. 12. .60 Mk.)

CHRISTIAN SCIENCE AND INSURANCE.

WE learn from the *Journal of the American Medical Association* of April 25th that there is an accident insurance company in New York which employs a Christian Scientist as what is expressively called an "adjuster." He is said to be a very valuable official by reason of his ability to make people insured in the company look at their accidents from a Christian Science point of view. We can well believe that an "adjuster" who can persuade victims of an accident who want their insurance money that they are not really hurt must be worth a great deal to the company which employs him. Evidently there is an immense field open to Christian Science practitioners if they can convince the world of the truth of their doctrines. Not only insurance offices, but railway, tramway and motor-bus companies, would find the risks of their business vastly diminished if they could find an adequate number of sufficiently persuasive "adjusters." The medical problems of the Workmen's Compensation Act would cease to vex the souls of doctors and to exercise the minds of judges. Again, there is the Insurance Act. There are many different opinions as to that legislative creation, but on one point there is general agreement, and that is its costliness. If the principles of Christian Science were applied to the working of the Act, the country would forthwith be relieved of a vast number of officials, malingering would be abolished, and the darkness of disease, that delusion of the "mortal mind," would be dissipated by the light of the gospel according to Mrs. Eddy. Only one condition need be fulfilled for this glorious dream to be realized. It is delightfully simple. All that has to be done is that a staff of Christian Science "healers" should be appointed to go about telling people who fancy they are sick that there is nothing the matter with them. Organic lesions, fractures, growths, and the thousand natural shocks that flesh is heir to, would then fade away into the nothingness from which they sprang. The very foundation on which insurance rests would crumble away. But the Chancellor of the Exchequer need have no fear about his revenue from insurance stamps, nor are the panel doctors likely to find their occupation gone. The day of deliverance from disease is not yet, and if ever it is conquered by man it may safely be foretold that Christian Science will do nothing to bring about that consummation.

THE LATE M. LUCAS-CHAMPIONNIÈRE.

A COMMITTEE has been formed in France to organize a movement for the erection of a monument to the late M. Just Lucas-Championnière. The Chairman is Professor Guyon; the Vice-Chairman, Professor Laveran; the General Secretary, M. Michon, Surgeon to the Paris Hospitals. M. Lucas-Championnière was the apostle of Lister's teaching in France at a time when the Master had few disciples among his fellow countrymen; he also did much good work in other directions, notably in the treatment of fractures. He often visited this country, where he had many friends, some of whom would doubtless be glad to contribute to do him honour. Subscriptions should be sent to M. George Steinheil, publisher, 2, rue Casimir-Delavigne, Paris.

THE INTERNATIONAL CONGRESS OF MEDICINE IN LONDON.

THE Library of the British Medical Association owes much to the generosity of members, who have on many occasions responded to requests for missing volumes needed to complete series. In this way very many important sets have from time to time been rendered complete, and others very nearly. Thus, the set of the *Transactions* of International Congresses of Medicine has been made complete, from Paris (1867)

to Budapest (1909), with the exception of certain sections of the last-named congress; the Library, however, is now threatened by a serious break in its collection, for the *Transactions* of the International Congress held in London last year are not represented on its shelves. The Librarian will gratefully acknowledge the gift of any volumes members can spare. There were altogether twenty-six sections and subsections, and a complete set of the *Transactions* consists of fifty volumes. The volumes still required to complete the records of the congress at Budapest are Sect. 4, part 2; Sect. 7B, part 1; and Sect. 15, part 2; the gift of any or all of these would be very much valued, as they cannot be purchased through the usual channels.

THE LISTER INSTITUTE.

THE annual general meeting of the Lister Institute of Preventive Medicine was held at the Institute, Chelsea Gardens, on May 13th. Sir John Rose Bradford, who last year succeeded Sir Henry Roscoe in the chairmanship of the governing body, presided. The report pointed out that the Institute had borne a share in several collective inquiries of importance. Dr. Ledingham had continued to supervise the bacteriological examination of material from cases diagnosed as typhoid fever or suspected typhoid, and had drawn up a report—published in the annual report of the medical officer to the Local Government Board—on the work done by him in conjunction with Dr. Theodore Thomson, of the Local Government Board, in making bacteriological examinations of typhoid convalescents at intervals for several months after discharge from the hospitals of the Metropolitan Asylums Board. An extensive inquiry into the bacteriological and chemical purity of dried milk, creams, and foreign pasteurized milks had been undertaken for the Local Government Board by the bacteriological and biochemical departments of the Institute, and over 3,000 samples of milk had been examined for tubercle bacilli for the London County Council and a large number for the health departments of various boroughs. The report also contained a reference to the eighth report of the investigations into plague, carried out under the auspices of the Advisory Committee, consisting of representatives of the Institute, the India Office, and the Royal Society. Inquiries during the year had been proceeding both in India and at the Institute's special isolated laboratories at Elstree. It is added that by arrangement with the Metropolitan Asylums Board the research pathologist of that authority, Dr. Mair, has accommodation at the Institute. The accounts for the year ending December 31st, 1913, show an excess of income over expenditure of £750 at Chelsea, and £4,938 at Elstree. The report contained the following paragraph with reference to a matter which is now exciting a great deal of attention: "In view of the new department of medical research now being established by H.M. Government in accordance with the provision in the National Insurance Act of 1911, the governing body have been considering whether it would not be in the interest of medical science in this country that they should recommend to the members of the Institute to offer, under conditions, to the nation, the organization and resources of the Lister Institute, as the nucleus of the Government scheme. At present, however, the governing body are not in a position to make any more definite statement or recommendation on the subject." Sir Rickman Godlee made some inquiries with regard to the subject raised by this statement. He asked whether it was proposed to hand over the Institute at Chelsea to the Government, and to discontinue the department at Elstree, and the preparation of serums. The Chairman said that the proposal to hand over the Institute to the Government had not gone beyond an interchange of views with the Medical Research Committee presided over by Lord Moulton as to the conditions under which the Institute might be presented to the nation; the conversations included the discussion of financial arrangement, but it was not possible to say more at the moment. In reply to Dr. Sidney Turner, who expressed some apprehension that the character of the work done at the Institute might deteriorate if it passed under the control of a Government committee, the Chairman and Treasurer said that they were not in a position to make any further statement. The governing body also reported that it had during the year received a munificent legacy, amounting with interest to £17,303, bequeathed by the late Lord Lister, and that it had been arranged to utilize this bequest to give practical effect to a scheme the governing body had for some time been desirous of setting up—to make provision for the superannuation of members both of the higher and the subordinate staffs of the Institute on attaining the age of 65 years, or in special cases that of 60 years. It is proposed to allow the bequest to accumulate at compound interest until such time as, some years hence, the pension claims begin to mature. To this fund the governing body will add £700 annually from the general income of the Institute.

"THE FAMILY ENCYCLOPAEDIA OF MEDICINE."

IT will be recalled that the names of several professional men appeared in connexion with this work, and that in the JOURNAL of March 14th, p. 611, a statement from them was printed to the effect that they were not responsible for the plan or scope of the book, or for the manner in which it had been introduced to the public; that their sole connexion with it consisted in having obliged a fellow medical man by agreeing to correct, at his request, made to them individually and privately, certain articles he had in preparation for a book on domestic medicine; that they did not give authority for the use which had been made of their names, and that in no case was there any pecuniary consideration. We are asked now to state as follows: "The author has expressed his regret for this error, which caused the recognized rules of professional conduct to have been broken unwittingly to the great regret of the gentlemen concerned. The author has undertaken that none of the names shall in future appear in connexion with this work, whether in book or part form. The publishers have likewise given their assent to this undertaking. It may be added, in explanation of the fact that the names reappeared in Parts 2 and 3, that these parts were already in print and Part 2 already distributed, and that the publishers did not see their way to reprint them. After fullest consideration of the question, it was decided to seek the removal of the names by negotiation rather than by resorting to legal process."

APPOINTMENT OF AN ASSISTANT MEDICAL SECRETARY.

NOTICE is given by advertisement this week that the Council of the British Medical Association is prepared to receive applications for the appointment of an Assistant Medical Secretary of the Association to work under the instructions of the Medical Secretary, and to perform such duties as may be required. The salary will be at the rate of £600 per annum, and candidates must be registered medical practitioners. Applications must be received by the Medical Secretary not later than Saturday, June 6th, but the successful applicant will not be required to take up his duties until October 1st. It will be observed that the advertisement states that personal canvassing will disqualify a candidate.

LORD LAMINGTON has accepted the office of President of the Research Defence Society, in the room of the late Sir David Gill, F.R.S. Lord Lamington represented

North St. Pancras in the House of Commons from 1886 to 1890, and was Governor of Queensland from 1895 to 1901 and of Bombay from 1903 to 1907.

The summer session of the General Medical Council will begin on Tuesday, May 26th, when the President, Sir Donald MacAlister, K.C.B., will take the chair at 2 p.m.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Budget Debate.

The debate on the Budget proposals was continued in the House of Commons on May 6th and 7th, and concluded by the passage through the Committee stage of the resolutions necessary for the imposition of the new taxes on Monday, May 11th.

The character of the debate, in view of the important proposals foreshadowed in the Budget statement, has possibly been somewhat different from that which those who are not familiar with the procedure of the House may have anticipated. It was not possible to go into the merits or demerits of the particular purposes for which the Government propose to find money through the Budget, so that the questions of housing, insurance, public health, and kindred matters which are raised could not be discussed in detail when the House was in Committee of Ways and Means, which is the stage under which the Budget resolutions have been discussed during the past week. When the House is in Committee on Ways and Means, as the Chairman of Committee pointed out in his ruling on May 6th, it is concerned with the ways of raising money and cannot enter into detail as to how the money will be dealt with after it has been raised. The proposals of the Government under which money is to be devoted to the various purposes indicated will be discussed when the House is in Committee of Supply. In addition, the same matters arise in connexion with any bills that may be necessary to give statutory effect to the Government's proposals. In respect of many of the grants proposed and the conditions attaching thereto it appears that votes in Committee of Supply are sufficient to give authority for the necessary administrative arrangements. When the programme of the Budget became known, there was a strong expression of opinion that an autumn session should be avoided, if possible, and it is evident that the Government intends to cut down those proposals which will require to be submitted in the form of bills during the present session to a minimum. It appears that the new basis for rating and the condition of the grants relating thereto can be effected through the Valuation and Revenue Bill, so that, so far as can be seen at present, the Budget proposals will not necessitate the passage of more than three bills, namely: The Finance Bill, which in any case is necessary to give effect to its financial proposals; the Revenue and Valuation Bill; and a bill dealing with insurance.

During the debate no special questions emerged of a medical or professional interest, and when any members transgressed beyond financial matters they were very careful to keep their eye on the Chair. In consequence, however, of the strong representations to the Government on the question of the taxation of small unearned incomes, a very important concession was announced by the Chancellor during Monday's debate. The result of the new concession is set out in the accompanying table, which should take the place of that published last week in regard to unearned incomes of the amount stated in the table. The income tax charged on unearned incomes of £300 or less is to be at the rate of 1s. in the £, instead of at the previous rate of 1s. 2d. Those between £300 and £500 will be charged at the old 1s. 2d. rate, and those over £500 at the new 1s. 4d. rate. In the table also incomes of £301 and £501 are shown so as to set out the effect of the modified proposals as soon as those limits of incomes are passed.

Amended Scale of Taxes on Unearned Incomes.

Income.	Abatement.	Old Scale.	New Scale.
£	£	Pence in £.	Pence in £.
160	160	nil	nil
200	160	2·8	2·4
300	160	6·5	5·6
301	160	6·5	6·5
400	160	8·4	8·4
500	150	9·8	9·8
501	120	10·6	12·1
600	120	11·2	12·8
700	70	12·6	14·4
800	nil	14·0	16·0

An important modification which should have been mentioned last week is that relating to the abatement allowed on small incomes in respect of children. The abatement from the income tax payable on incomes subject to abatement in respect of children has been doubled, so that, for example, a person with an unearned income of £400 with four children, who at the 1s. 2d. rate with an abatement of £160 without children would be required to pay £14 in income tax, will have the amount reduced to £11 on account of a reduction of 15s. being allowed for each child. The same increased allowance for children, of course, applies to earned incomes of similar amounts.

Infants' Milk.

A bill, entitled "A Bill to Ensure the Supply of Pure Milk to Certain Persons," was read a first time in the House of Commons on Wednesday, May 6th. Mr. Douglas Hall explained the purposes of the bill in the following terms:

This is a bill to ensure the sale of pure milk to certain mothers of infant children at a price they can afford to pay. It is not a pauperizing bill, and it does not interfere with any private traders. It will increase the supply of pure milk from dairy farmers, and will cost the community but a trifling sum, if anything. It is proposed to make use of the local authorities and the medical officers of health as agents for groups of mothers in districts to enable them to obtain milk at a price which they can afford to pay. In the event of there being any jobbery or corruption it is proposed that the Local Government Board shall fix the price of the milk to be thus sold. It is stipulated that it is to be pure milk. This is very difficult to be found. The best definition is that contained in the Sale of Milk Regulations Act, 1901, and we propose that this definition shall be altered in future if there is a statutory definition better describing what pure milk is. The bill provides that the local authority, through their officer of health, shall provide milk to certain mothers in their district belonging to the poorer classes, and the way we have defined poorer classes is mothers who come under the maternity benefit of the National Insurance Act, as being the most readily and easily defined way of getting out of the difficulty, and the Local Government Board will fix the price at which these mothers can obtain the milk. The time during which they can obtain it is a limited period of, say, three months after the birth of the child, and the quantity is limited also, so that the mother could obtain more than she might reasonably expect from this cheap service. Even now in the country districts, as I know from experience, it is extremely difficult for mothers to obtain milk. You would imagine that mothers surrounded by dairy farms would have no difficulty in obtaining milk for their offspring, but in many districts farmers send the whole of their milk for sale in the larger towns, and it is almost impossible to get milk at any price. If this bill passes, the local medical officer could make arrangements with some dairy farmer and make it worth his while to keep back sufficient milk to be sold to these mothers. At present it is not worth while for the farmers to keep back the small quantities required for isolated and intermittent cases which in the ordinary way would be a very precarious means of disposal. If there is a slight loss on the purchase—and we do not believe that there will be any loss—it will be borne by the local authority, because we think that if the medical officer of health is able to get milk to supply to the mothers in the district, he will be able to do so at no loss at all to the community, but at an enormous advantage to the mothers. There is nothing pauperizing or disfranchising in the bill, for it in no way disqualifies anybody from the use of the franchise. I recommend this bill to the House as a short, simple, practical, and inexpensive contribution to the great question of public health and the physical fitness of the nation. I believe the subject was sympathetically mentioned by the representative of the Local Government Board in connexion with the bill of last year.

The Milk and Dairies Bill.

The new Government measure on this subject, entitled "A Bill to make Better Provision with respect to the Sale of Milk and the Regulations of Dairies," was introduced under the ten minutes rule on May 12th, and read a first time.

In introducing the bill the President of the Local Government Board (Mr. Herbert Samuel) said:

The general law of this country in relation to milk has regard chiefly to the prevention of fraud, the checking of deliberate adulteration, and it has, so far, very little regard to the far more important matter of the protection of the health of the people. The Royal Commission on Tuberculosis, after having sat for six years, and taken a wealth of expert evidence, reported unanimously that tuberculosis, especially amongst children, was not infrequently due to the consumption of tuberculous milk, and the recent Departmental Committee on Tuberculosis, presided over by Mr. Astor, reported unanimously in the same sense. There are in England and Wales about 53,000 cases of tuberculosis every year, and no fewer than one-fourth of them are non-pulmonary tuberculosis amongst children, and no inconsiderable portion is undoubtedly due to the consumption of tuberculous milk. Although we take an infinity of care in protection of our water supply, the safeguarding of our milk supply, which is a matter of equal importance, is little regarded by the law. So far as the authority which has to deal with the question of health in relation to milk is concerned, it is on wrong lines. About 100 local authorities, almost all of them urban authorities, have now secured power to protect their population against contaminated milk. The result is a multiplication of inspection in the rural districts which is most distasteful to the agricultural industry. From a particular district the farmers are accustomed to send their milk to half a dozen different towns, and all these different towns are enabled to send their local and other inspectors to the agricultural district each to conduct an independent examination as to the methods in which the milk is produced and distributed, and each of these inspectors imposes upon the farmer a different standard to be observed by him. It has long been recognized that this is a matter which demands legislation. The public health authorities, especially of the towns, are properly eager to safeguard the health of the population under their care, and they are rather unwilling to surrender the powers which have been conferred upon them by local Acts unless they can be assured that a really efficient system of inspection and control will be established in the rural districts. The milk-selling industry is a numerous and highly organized body, and is conducting a trade of inestimable value to the community. They are anxious to see that the purity of the milk supply is secure, but at the same time they are not unnaturally anxious to secure that they shall not in the conduct of their business be unnecessarily harassed by regulations, and especially they are anxious to secure that the members of the milk-selling trade shall not be punished for faults that they themselves have not committed merely because they are the parties most easy to reach. Thirdly, there is the great agricultural industry, which is equally eager to observe any practicable measures for safeguarding the health of the population and for maintaining the reputation of the milk industry, which objects strongly to the present system of multiple inspection, but is rather timid lest it should be exposed to harassing and unpracticable regulations framed by persons who have more regard for urban considerations than knowledge of the agricultural industry. They are especially timid lest their industry may be put to great expense, owing to idealists endeavouring by a stroke of the pen to make all cowsheds on a farm into cattle dairies. Since I have had the honour to have been at the Local Government Board I have been in close and constant communication with the representatives of all those interests, and I find each of them is anxious to see legislation passed and the law put on a more satisfactory footing, and I find at the bottom each of them is very ready to meet the legitimate interest of the other two. I have endeavoured to frame a bill which will meet with the general assent of the various parties concerned. The bill is, as is necessarily the case with a matter of departmental legislation of this kind, of a detailed character. It is not possible for me within the time at my disposal to describe to the House what I am afraid are its somewhat numerous and very detailed clauses. But generally it may be enough, probably, to say that the bill proposes to make regulations in order to prevent the supply of contaminated milk and dirty milk, and that these regulations shall be made by the Local Government Board with the concurrence of the Board of Agriculture, which will be asked to act in this matter in co-operation with the Local Government Board. These regulations will be laid before Parliament, and will not become operative if either House of Parliament passes an address against it. So I am taking every step in order to prevent in every way unreasonable regulations being made by any Government Department at any time. The bill also proposes to provide means for tracing diseased milk—milk liable to communicate disease—back to its source, and stopping the source of supply of such milk. Where there is adulteration the bill enables important procedure to be adopted in order to bring the offence home to the real guilty person, and the bill proposes to abolish the present system of multiple inspection, and to provide single inspection to safeguard against overlapping restrictions. The bill also provides to apply similar regulations to foreign milk imported for consumption. The bill does not deal with the question of finance, but I should like to make it clear in this connexion, first, that the Board of Agriculture proposes to compensate farmers for cows that have to be slaughtered on account of tuberculosis on a more generous scale than hitherto, and, next, that the public health grant which the Chancellor of the Exchequer proposes in the Budget this year will provide for paying half the salaries, not only of the medical officers of health and the sanitary inspectors, but the veterinary surgeons and the milk inspectors, so that half the expenses in enforcing these regulations will be paid out of national funds. I have said enough, I think, to indicate the different purposes and scope of this bill and the spirit in which it is framed. I shall only say I shall most closely consider any amendments or suggestions made from any persons interested in the measure with a view to meeting all reasonable wishes of all parties concerned. For five years bills upon this subject have been before Parliament, and I trust this year Parliament will be willing to deal, I hope with general assent, with a subject which it is admitted on all hands demands the attention of Parliament.

A summary of the provisions of the bill will be given in our next issue.

Ventilation of the House of Commons.—The Select Committee on the Ventilation of the House of Commons held a further meeting on May 7th. The sitting was devoted to hearing the evidence of Mr. A. H. Barker, B.A., B.Sc., Lecturer on Heating and Ventilating Engineering in the University of London. Mr. Barker had previously submitted a memorandum to the Committee giving details of his experiments and proposals, and the time of the Committee was devoted to examining him upon his memorandum and to hearing his explanations of his plans. Mr. Barker's experiments went to show that the system of heating adopted was on wrong lines. He explained to the Committee that in healthy circumstances warmth was derived from radiant heat, whilst in the House the air itself was heated. Moreover, Mr. Barker thought that in rising from the foot to the head level the temperature of the air was raised by five degrees through the heated radiations from the members' bodies. He condemned the present system of introducing air through the floor, and explained his plans whereby radiant heat would be obtained by the floor of the House being warmed. The floor, he said, should be made solid, except for an extraction aperture in the central gangway. He suggested a double plan whereby air would be introduced at the side, giving rise to horizontal currents and a local plan by which members could regulate the air being admitted, either warmed or cold, at their own seats by local flues controlled by themselves. The Committee arranged to discuss these matters again with Mr. Barker at a later date.

Income Tax: Rebate for Children.—Mr. F. Hall (Dulwich) asked what would be the amount of rebate under the proposals contained in the Budget for 1914–15 to a person with an income of £200 who had four children.—Mr. Lloyd George replied that, as he had explained in his financial statement, a person with an income of £200 who had two children would be entirely relieved from income tax. A person with four children under 16 would be similarly relieved if his income fell between the limits of £160 and £240.

Tuberculin Tests.—In reply to Earl Winterton, who asked a question as to the applications of the tuberculin test to pedigree cattle exported from these islands, the President of the Board of Agriculture said that the question of controlling the preparation, supply, and use of tuberculin was at present under consideration.

Provision of Meals for School Children.—Mr. Pease stated on Monday, May 11th, that the amount which it was anticipated would be devoted this year by Exchequer grants towards the provision of meals would be £92,000.

St. Kilda (Nurse).—Mr. J. Hogge asked (1) whether any response had been made by the Local Government Board to a wireless message from St. Kilda asking for assistance in a case of medical urgency; and (2) when the resident nurse was likely to take up her duties in St. Kilda.—Mr. McKinnon Wood replied that the message was transmitted by the recipient to the Local Government Board for Scotland, which stated in reply that the Highlands and Islands Medical Service Board was sending a nurse to St. Kilda by the first available steamer on Monday next, May 18th. In reply to Dr. Addison, who asked whether the nurse was to reside in the island, Mr. McKinnon Wood said that he thought that was the intention.

England and Wales.

NEWCASTLE-UPON-TYNE.

Banquet and Presentation to Professor Rutherford Morison.

Professor Rutherford Morison's retirement from active duty at the Royal Victoria Infirmary was on May 6th made the occasion of entertaining him at a dinner in Tilley's Rooms, when his colleagues and the past and present students of the University of Durham College of Medicine presented him with a silver tray and chiming clock. Mr. Albert M. Martin, Senior Surgeon to the Royal Victoria Infirmary, and Chairman of the Medical Board, was in the chair, and altogether 130 sat down to dinner. This is the third retirement within the last eighteen months of a member of the honorary staff of the institution. It seems but yesterday that we chronicled the retirement of Professor Drummond and Sir Thomas Oliver, both of whom fortunately are, like Professor Morison, still discharging the active duties of their profession.

To Mr. W. G. Richardson fell the honour of proposing the health of "The Guest of the Evening," and of making the presentation. Mr. Richardson's speech gave pleasure to all who heard it. A truer portrait of Mr. Morison could not have been painted. Of all present no one knew the guest of the evening better, for Mr. Richardson had been assistant to Mr. Morison when he was in general practice in Hartlepool. Mr. Richardson's reminiscences of the time spent there with his chief were not less interestingly told than they were highly appreciated. He said that, although Mr. Rutherford Morison held the office of physician to the Hartlepool Infirmary, he, of all his colleagues at that period, performed the largest number of operations. Mr. Rutherford Morison's attitude towards work contained a lesson for all. It was, he used to say, useless to spend time in regrets; what was required of all medical men was that they should examine their patients carefully and come to the best conclusion they could as to the best treatment, and if this had been done regrets were a waste of time. Professor Rutherford Morison had had a successful career as a teacher. He was now imparting information he himself had gathered. The large attendances at the classes on Friday mornings in the infirmary were evidence of the appreciation by the students of these demonstrations. Articles of great professional value had been contributed to the medical press by Professor Morison, and although his book on surgery was small in size, yet within its covers was contained information admitted by critics to be of the highest value. All felt that Mr. Morison's retirement from the infirmary on the age limit was a serious loss. It was, however, fortunate that as he retained the Professorship of Surgery in the College of Medicine students would still have the opportunity of coming under the influence of his teaching.

On rising to acknowledge the toast and thank subscribers for the gifts, Professor Morison was very heartily received. He gave a short account of his clerkship in the wards of the Edinburgh Royal Infirmary under the late Lord Lister. He spoke of the position of antiseptic surgery in the early Seventies and of the contrast presented to the observation of students by cases treated in the same hospital with and without antiseptics. After his graduation at Edinburgh University circumstances, he said, took him to Hartlepool, which he left in 1888 to become assistant surgeon to the Newcastle Royal Infirmary. At that date no beds were allotted to assistant surgeons, nor had they many opportunities of operating. There was only one day in the week (Tuesday) set aside for all operations by the members of the full staff. Each surgeon was in attendance and took his turn according to seniority. At this period, practically speaking, the only abdominal operations were ovariotomies. Nothing was done surgically for appendicitis, ruptured gastric ulcer, and ectopic gestation. Ovariotomy was then even a great event, and yet, notwithstanding all the preliminary preparations of the theatre for such an operation, 50 per cent. of the patients died. It was satisfactory to know that, taking all abdominal operations of varying severity into consideration, the mortality to-day was just over 6 per cent. Not only, Professor Morison continued, had he no beds as an assistant surgeon, but he had few opportunities of operating. Nevertheless he commenced teaching, and established a Friday morning class, which was continued until his active connexion with the infirmary terminated. He had also, he recalled, started the first classes for the instruction of nurses in the infirmary. He claimed for surgery, both from the profession and the public, that recognition which was her due. Amusingly he alluded to the precedence which surgery was taking over medicine. To medicine was still assigned the foremost place in social functions, but there, he thought, the precedence ended.

Dr. G. H. Hume proposed the toast of "The Past and Present Students of the University of Durham College of Medicine," to which Dr. Wm. Martin responded. Dr. Mantle, of Harrogate, gave "The University of Durham," which was acknowledged by Sir George Hare Philipson; while in a few happy sentences the health of the Chairman was proposed by Mr. C. N. Gover and suitably acknowledged.

SHEFFIELD.

Radium Fund.

The Therapeutic Value of Radium.

At a meeting in the Town Hall, presided over by the Lord Mayor of Sheffield, on May 7th, Mr. Sinclair White, the chairman of the committee appointed by the honorary staffs of the Sheffield voluntary hospitals, said that the appeal made two months ago for a fund of £10,000 for the provision of radium had resulted in subscriptions amounting to £8,000. In making the appeal, the Medical Committee had made it clear that it did not ask for money that would otherwise have flowed into the exchequers of the voluntary hospitals, all of which were heavily in debt and had great difficulty in keeping their doors open. The committee had also made it clear that it was not possible to give the assurance which some people seem to think necessary, that radium was a specific cure for cancer. Evidence was accumulating to show that radium was a very valuable method of treating cancer, but while there were an increasing number of cases which apparently had been cured by the application of radium, the time had not yet arrived when it could be said definitely that such promising cases were actually cures. Cancer sometimes lay dormant for years and then broke out afresh, and so until a number of years had elapsed, and these cases of apparent cure had been established as cures, it would be a very unwise thing—indeed, it would be cruel—to tell the public that radium was a specific cure for cancer. All that could definitely be said of radium in regard to cancer at present was that it appeared to have a specific action on the cancer cells. While it was definitely hoped eventually to certify certain cases as cured, it was already proved in a much larger number of cases that radium, without actually producing a cure, did very materially retard the growth and ameliorate the pain and the other horrible accompaniments of malignant disease. Even if the hope that radium would definitely cure cancer had eventually to be abandoned, there would remain a very large volume of evidence proving that radium was of great value in mitigating the suffering of cancerous patients. Were that alone all that it proved capable of doing, it would be a very valuable boon; far more valuable than anything hitherto discovered. Sheffield should take its part in carrying out experiments with a view to determining the extent to which radium was a cure for this disease. Sheffield had a large number of hospital beds, and a university with very efficient workers, and might very well claim to take part in the investigations which were being carried out as to the effects of radium on cancer. To be of value radium must be given in large doses, and it was necessary to have a large sum of money so that a sufficient supply could be purchased. In order to ascertain what steps should be taken to procure radium, and also to study the methods of administering it, visits had been paid to London and Manchester.

On the motion of the Lord Mayor, a committee was appointed consisting of the Lord Mayor, the Master Cutler, the Vice-Chancellor of the University, the Professor of Physics at the University, the three gentlemen who each subscribed £1,000 to the fund—namely, Sir Frank Mappin, Mr. Wilson Mappin, and Mr. Denys Hague—three

medical and three lay representatives of the Royal Infirmary, two medical and two lay representatives of the Royal Hospital, and one medical and one lay representative each from the Jessop Hospital and the Children's Hospital, the committee having power to co-opt three additional members if and when they deem it desirable. Mr. W. H. Barnes, secretary of the Royal Infirmary, was appointed temporary secretary of the committee.

The following motion, moved by Dr. George Wilkinson and seconded by Dr. W. S. Porter, was carried:

> That the Radium Committee employ the money subscribed and all future donations and legacies to the fund, to provide and distribute radium and other substances calculated to benefit patients suffering from the malignant diseases; and further, that while the infirmary and hospitals shall have the primary claims, the committee shall, as far as possible, offer facilities for the loan of radium to other than hospital patients, on terms decided on by the committee; the money received in this way to be devoted to the purposes of the fund.

Mr. Sinclair White said that inquiries had been made as to the price at which radium could be obtained. The prices mentioned at first were from £20 to £24 a milligram, but subsequently a tender had been received from Geneva at £14 a milligram. The authorities of the Radium Institute and Sir Ernest Rutherford, of Manchester, had been consulted, and had advised that the Geneva tender was advantageous, and he concluded by moving that the Lord Mayor, as treasurer of the fund, be empowered to buy 500 mg. at the price mentioned. This would absorb about £7,000, leaving in hand money to buy more radium or provide apparatus and a place for housing it. The motion was carried, and the Lord Mayor, in responding to a vote of thanks, said that all the credit was due to Mr. Sinclair White and the medical men working with him.

WALES.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF WALES.

THE conditions imposed by the anonymous donor of £70,000 to the Medical School of the University of Wales were accepted by the Council of the University College of South Wales and Monmouthshire at its last meeting. Of these conditions the most important is that the grant which the Chancellor of the Exchequer promised would be made by the Treasury shall be adequate for a first-rate medical school, and large enough to be considered a sufficient contribution from the State towards the maintenance, administration, and departmental expenses. In deciding whether the grant is adequate the Council will take the opinion of Sir William Osler, Regius Professor of Medicine at Oxford. Another condition imposed is that the sum of £2,000 promised by the County Council shall be forthcoming, and the third that a public health department shall be included in the school of preventive medicine which is to be formed, and for which buildings are to be erected on a site granted by the college authorities. It is particularly satisfactory to find the last condition made, for there is a very great risk at the present day of the divorce of research in preventive medicine from administration. It is hardly too much to say that in such a centre as Cardiff, the influence of which extends over the greater part of South Wales, the materials for research are supplied in the course of administration, or at least it may be asserted without fear of contradiction that many of the problems which have to be solved by research arise out of difficulties presented by actual occurrences in the life of a community. In some other great centres of industry in this island the work of the public health department is done under the direction of university professors, much to the advantage, not only of those engaged in research, but also of medical students and post-graduates.

LONDON.

LONDON COUNTY COUNCIL.

Medical Aspects of the Education Estimates.

THE London County Council on May 12th considered the education estimates for 1914–15, amounting to a total of £5,184,545, of which more than half was in respect of teachers' salaries. The Education Committee estimated that a decline experienced last year in the number of school meals required for necessitous children would continue. Nevertheless provision must be made for 8,200,000 meals, and an additional 225,000 for children whose parents would reimburse the Council. The total cost would be £70,690, less about £3,000 repaid by parents or Poor Law authorities. The present position of medical treatment arrangements was that 22,480 eye cases, 16,020 ear, nose, and throat cases, and 2,290 ringworm cases were receiving attention at a cost of £11,250. It was not anticipated that any further provision would be required during the year, except possibly for ringworm, and an estimate of £12,000 had been put down. There were at present nineteen centres in London providing dental treatment for some 33,000 children annually at a cost of £8,200. Attention was confined to children of 6, 7, and 8 years of age, as it was considered that this age group was the most suitable for conservative treatment. Experience had shown that approximately 78 per cent. of the children of the ages mentioned required dental treatment. On this basis the total number in London requiring attention would be about 180,000, and assuming that 50 per cent. of these would avail themselves of facilities provided by the Council, arrangements should be made eventually for 90,000 children. It had been found of great advantage to proceed with the provision of dental treatment gradually (on account of the prejudice of parents), but the Education Committee considered that the rate at which the facilities were increased might now be accelerated. The estimate for dental treatment had been increased by nearly £4,000 to £12,000, the intention being to have 60,000 children under treatment by the end of the current financial year. Nursing treatment was provided for 12,980 children at a cost of £3,186. An estimate of £4,000 for the ensuing year would enable provision to be made for ten additional nursing centres. The cleansing of school children cost £8,045; it was expected that 40,000 cleansings would be necessary. The Education Committee noted an increase of £9,755, or 22 per cent., in the item of salaries in the public health department; this was due mainly to the reorganization of the school medical service. The total expenditure upon all forms of medical, nursing, and dental treatment (including administrative expenses) was estimated at £47,665, while in addition medical inspection was estimated to cost £42,445. The maintenance of open air schools would cost £5,240, and of special schools, £193,450, an increase of £11,855 upon the figures for last year. The total was made up as follows: Schools for the blind, £15,470; for the deaf, £23,910; for the mentally defective, £85,650; for the physically defective, £65,385; and for epileptics, £3,035.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

THE TEACHING OF MIDWIFERY IN SCOTLAND.

THE annual meeting of the Edinburgh Royal Maternity and Simpson Memorial Hospital was held on May 6th in the City Chambers. On account of domestic bereavement, Lord Provost Inches was unable to preside, and his place was taken by Mr. J. R. Middleton, the Chairman of the Board of Directors, and a minute of sympathy with the Lord Provost was passed. In moving the adoption of the annual report and accounts, Mr. Middleton stated that whilst this was the sixty-ninth annual report, the institution itself went much further back, having its origin one hundred and twenty years ago, when Dr. Alexander Hamilton, in the interests of the city, first proposed the foundation of a lying-in hospital. It had been in many homes on many sites, including Park Place, St. John Street, Milton House, Minto House, George Watson's Hospital, St. John Street again, and finally, since 1879, in the present building in Lauriston Place. A long list of eminent men had shed lustre on the institution, and their achievements in the realm of science had made the hospital ever their debtor. Any institution had every reason to be proud of its record that had counted among its staff men like Alexander and James Hamilton, father and son; John Moir, the beloved physician, so long a picturesque figure in Edinburgh; Sir James Young

Simpson, whose name the hospital bore; to say nothing of more modern workers who had never suffered the lofty standard of their predecessors to be lowered.

The year 1913 had been one of some anxiety to the hospital staff and the Board, for (as has already been mentioned in the JOURNAL for February 14th, p. 398) through the operation of the Insurance Act the number of patients had fallen 22 per cent. Instead of nearly 2,000 patients as in 1911, and over 1,900 in 1912, there had been only 1,484 in 1913; and the fall had affected the indoor, the outdoor, and the Leith branch work. Mr. Middleton pointed out that without a sufficient number of cases neither doctors nor nurses could be trained, and without doctors and nurses to work the Act it seemed that the Act itself would become, if not inoperative, at least very difficult to administer. Representatives of the four Scottish maternity hospitals had recently met in conference in Edinburgh, and a joint communication from them had been put in the hands of the Scottish Commissioners. It was right freely to acknowledge that the Commissioners in their communications had shown themselves anxious to meet the views of those responsible for the conduct of the hospital as far as they could, and to do what was within their power to make its working under the Act successful. As a result of a searching inquiry into the management during the year, the directors' confidence in its proper and economical administration had been greatly strengthened. The motion was seconded by Sir Joseph Fayrer, and adopted unanimously. Mr. John R. Findlay moved that Candida, Dowager Marchioness of Tweeddale, be elected an extraordinary director, that the retiring directors be re-elected, and that Mrs. Sillar be elected a director in room of Lady Tweeddale, resigned. He also moved the cordial thanks of the meeting to the directors, medical staff, ladies' committee, and lady collectors for their services during the past year. These motions were seconded by the Rev. Dr. W. M. Macgregor, and agreed to. It may be added that in the report it is stated that sixty-five nurses were in training in the hospital and at the Leith branch in 1913, as against seventy in the preceding year, that sixty-eight undergraduates were trained in connexion with the hospital and the associated dispensaries, and that some fifty medical men and women, attending the post-graduate classes in connexion with the University and the Royal Colleges, received clinical instruction in August and September.

BACTERIOLOGICAL EXAMINATIONS IN DUNDEE.

The question of the arrangements which should be made to provide bacteriological examinations to facilitate the diagnosis of certain infectious diseases has been taken up actively in Dundee. The Medical Officer of Health (Dr. Templeman), in a report on the subject, states that so far the Town Council has undertaken only the examination of specimens of sputum for tuberculosis. This, at first, was done by the Dundee Clinical Research Association at the University College at a cost of 2s. 6d. a specimen, the total expenditure of the local authority being about £30 a year. The examinations were now being made at the Municipal Dispensary, so that the local authority was not involved in any expense. It is now proposed that similar assistance should be provided in the diagnosis of venereal diseases. The great advantage of an early diagnosis of syphilis, at a stage when treatment might be successful, and the importance of the recognition of syphilis as a factor in other diseases, were the reasons why medical practitioners asked the local authority to undertake the financial responsibility in the interests of public health. The cost of bacteriological examinations carried out in Glasgow was £2,383; in Edinburgh, £375; in Aberdeen, £185; and in the county of Lanark, £1,143. Dr. Templeman concluded by suggesting that it should be ascertained whether the infirmary directors would co-operate in a general scheme for the carrying out of such examinations in the case of infirmary patients and outside practitioners, and estimated that bacteriological and blood specimens could be examined under such a scheme for the general practitioners in the city for £150 a year.

A deputation from the Dundee Branch of the British Medical Association waited upon the Public Health Committee on May 5th, when Dr. R. C. Buist said that the diseases to which the bacteriological diagnosis asked for particularly referred were diphtheria, enteric fever, and venereal diseases; the examination could only be carried out in a laboratory. Dr. Young said that the facilities sought would be of incalculable value to general practitioners, who at present were dependent on their friends in the pathological laboratory or in the infirmary. In reply to a question, Professor Stalker said that the number of venereal cases in Dundee was not known, but it was very much larger than any one had supposed. The report of the Royal Commission, which he believed would be issued at the end of June, would give details obtained from poor-houses, prisons, and infirmaries. In reply to another question, Dr. Buist said that there was sufficient accommodation at the infirmary to deal with the cases in that institution, and also those sent by medical practitioners.

After the deputation had retired, the committee decided to defer a decision for a month in order that the Council might become fully acquainted with the subject, in view of the proposals made by the Chancellor of the Exchequer, which would have an effect upon the financial side.

PROPOSED MEMORIAL TO DR HUGH DEWAR.

At a meeting in Portobello on April 29th, under the chairmanship of ex-Councillor Nichol, a committee was formed to raise a fund to erect a memorial to the late Dr. Hugh Dewar, whose sad death a few weeks ago was mentioned recently in the JOURNAL. At a meeting held a few days earlier at Musselburgh, Dr. Thomas Crawford said that Dr. Hugh Dewar had fallen a martyr to his profession, the daily risks of which no one except a medical man could fully understand. On the same occasion Mr. Donlevy said that Portobello was much the poorer by Dr. Dewar's untimely death; at all hours of the day and night his patients, rich and poor, had been able to rely upon his devoted help. Subscriptions will be received by Mr. W. H. Brodie, Royal Bank, Portobello.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEDICAL INSPECTION OF SCHOOL CHILDREN.

A PUBLIC meeting was held by the Irish Women's Reform League in the Mansion House, Dublin, last week, to demand medical inspection of school children. The Registrar of the Dental Hospital moved a resolution calling for immediate legislation authorizing medical inspection of Irish school children, and the establishment of school clinics. Dr. Euphan Maxwell dealt with the necessity of having a systematic inspection of the eyes of children in schools. The resolution was adopted, as was also another moved by Dr. Ella Webb, urging upon the Government the need of providing increased maternity benefits, schools for mothers, and baby clinics.

IRISH EMIGRATION.

A public lecture, under the auspices of the National Literary Society of Ireland, was delivered in Dublin last week by Professor C. H. Oldham, on Irish emigration, its nature and effects. He pointed out that the population of Ireland had been continuously shrinking for the last sixty years, though in practically every other country in the world it had been increasing. Dealing with the ten years 1901–11, the birth-rate averaged 23.1 per 1,000, the death-rate 17.3, showing a natural increase of 5.8 per 1,000; yet that natural increase was more than wiped out by the emigration of the same period. The total natural increase was 258,400, but the emigration was 345,159. The birth-rate of Ireland was the lowest of any country in the world except France. In Ireland it was low for two reasons—one was that only 44 per cent. of persons of marriageable age in Ireland were married, and of the women between the ages of 15 and 45 only one in three. The second factor was that the people in Ireland waited longer before marrying than they did in any other country. From Ireland practically all the emigrants went to the United States. The civic population in towns of 2,000 and upwards had increased steadily during the period 1861 to 1911, whilst the rural population had diminished almost by one half during the same period. Taking the grass-lands of Ireland, the percentage was greater than in any other country in the world, and the decline of employment was

largely due to that fact. The grass-lands were so badly managed that the cattle required more acres per head than in any other country. If emigration was to be reduced it could only be by increasing the area under tillage. This might be done by developing the dairy-farming industry, for which winter dairying would be necessary, and the tillage must be, not on the old unscientific lines, which had proved a failure, but in some other ways better adapted to the climate and conditions of Ireland.

NEGLECT OF VACCINATION.

At the last meeting of the Castlerea Board of Guardians a letter was received from the Local Government Board pointing out the number of vaccination defaulters in each of the dispensary districts of the union as follows: Ballaghaderreen, 102; Ballinlough, 75; Castlerea, 62; Frenchpark, 86; Loughglynn, 145; total, 470. An order was made that the oldest offenders in each dispensary district should be prosecuted. The Local Goverment Board has written to the Athlone Poor Law Board calling attention to the number of vaccination defaulters and asking the guardians to enforce the law. One guardian said they would not enforce the law against people who had an objection to vaccination, but should leave it optional whether children were vaccinated or not. The Board made no order. At the last meeting of the North Dublin Union a motion to instruct the six relieving officers to put the terms of the Vaccination Acts in force except where the parents or guardians made a declaration of their conscientious objection to vaccination, and that the relieving officers be recouped the sum of £20 each for loss of emoluments since the non-enforcement of the Acts, was by 19 votes to 9 deferred for a month.

Special Correspondence.

BERLIN.

V. Behring's New Diphtheria Antitoxin.—A Case of Death after Salvarsan.

IT is fully a year since Professor v. Behring first announced the manufacture of a toxin-antitoxin mixture as a powerful prophylactic agent against diphtheria (BRITISH MEDICAL JOURNAL, 1913, i, p. 1175). His contention at the time was that its prophylactic potency was very considerably greater than that possessed by ordinary curative diphtheria antitoxin, and now, at the annual congress for internal medicine he brought forward the results obtained since the injections were systematically commenced a year ago. In a number of the cases injected, and reported upon last year, he continued to estimate the antitoxin content of the serum at regular intervals, and found that although the amount present was a gradually diminishing quantity, more than sufficient still remained to protect the individual against an attack of diphtheria during an epidemic. The interest of these results was enhanced by the discovery that amongst controls, who had never had a single injection of antitoxin, there existed individuals whose blood contained an autogenous antitoxin against the disease, and that in infants the number of the immune amounted, according to blood valuations, to between 60 and 80 per cent. Adults also were found to possess a high content of "natural" antitoxin, but school children, in whom the morbidity from the disease is notoriously high, were estimated by laboratory tests to be singularly deficient in protective substances. During the past year 1,000 cases were injected with the mixture in many clinics and university institutions, and regular estimations of the antitoxin content of the serum, together with control examinations for the Klebs-Loeffler bacillus in each case, were carried out. Besides these over 2,000 cases were injected without this laborious control, and v. Behring now considered that he was justified in claiming that the prophylactic potency of the new product was fully equal to that of vaccine in small-pox prevention. Much emphasis was laid on the undisputed fact that among the large total of 7,000 injections given there had been no unpleasant sequelae—a result which was due to the careful control of every specimen sent out by previous animal inoculation. Every ampoule was duly numbered and noted in series, and corresponded exactly, as fifteen months' reiterated examination had shown, in antitoxic valency with a standard preparation in Behring's possession. The lecturer stated that the reactions after inoculation were by no means constant. Infants as a rule exhibited none whatever, whilst young school children and those with a tuberculous diathesis were prone to react violently, and were, in Behring's opinion, unsuitable subjects for injection. Intracutaneous injections were the best, and two of these at an interval of not less than ten days were amply sufficient in the large majority of cases to ensure a satisfactory protection. At the conclusion of the report Behring expressed the hope that a compulsory inoculation of the individuals of some small State would be instituted in Germany, a procedure which he was convinced would finally establish the value of the remedy as a prophylactic agent. He promised that it would be in the market for the use of the medical profession in July of this year.

The following case is of more than usual interest because of the careful and detailed notes that were made before and after the three injections given (*Deutsch. med. Wochenschrift*, May 7th). The administrator was Dr. Lube; the patient was a woman aged 55, with aortic disease and a history of five abortions. In the absence of a rheumatic history both were assumed to be due to syphilis, although the Wassermann reaction was negative; the patient was therefore admitted, and treated for three weeks with rest in bed and digitalis to promote cardiac compensation. Potassium iodide was also given. On the twenty-first day after admission 0.2 gram of salvarsan was injected without any ill effect. Four days later 0.3 gram, and three days after that 0.3 gram again, so that the total dose administered in the course of seven days was 0.8 gram. On the sixth day after the last injection there was acute abdominal pain, vomiting, and diarrhoea, with fever and melaena on the following day. There were no cerebral symptoms, and the diagnosis of embolism of the mesenteric artery was made, but was not substantiated at an operation which was performed. On the next day jaundice developed, and albumin and cylindrical casts made their appearance in the urine. The patient died very shortly afterwards, within forty-eight hours from the commencement of symptoms. *Post-mortem* examination revealed extensive destruction of the gastric and intestinal mucous membrane, together with parenchymatous degeneration of the liver cells. Lube had no doubt, therefore, that the patient died of a typical arsenical intoxication, and a considerable quantity of arsenic was found in the kidneys, less in the liver, and hardly any in the brain.

Correspondence.

THE BOY SCOUTS.

SIR,—With the dark shadow of the Budget still upon us, and encompassed as we are on all sides by financial difficulties, both at home and abroad, the present moment can hardly be regarded as a favourable one for a raid upon pockets. In spite, however, of these deterrents, we venture to call the attention of our professional brethren to the earnest appeal of the chief scout on behalf of the splendid movement which he initiated a few years back—a movement which has already borne such excellent fruit that it may justly be regarded as one of the strongest pillars of the empire. There is a laudable desire to place the Boy Scouts upon a permanent financial basis, and we trust that all will, as they can afford, respond to Sir R. Baden Powell's appeal.—We are, etc.,

LAUDER BRUNTON,
ANDERSON CRITCHETT.

London, W., May 12th.

*** Further reference to the subject will be found at p. 1086.

THE MEDICAL INSURANCE AGENCY.

SIR,—I would like to draw the attention of members of the medical profession to the advantages of effecting insurances through the medium of the Medical Insurance Agency.

The Agency was started originally with the idea of assisting medical men to arrange their insurances under the Workmen's Compensation Act when that Act came into force in July, 1907. Its scope and usefulness, however, have developed to a large extent, and a great deal of

business, notably life and motor car insurance, is being transacted; the steadily increasing numbers who insure through the Agency shows that its efforts are appreciated.

The object of the Agency is to assist medical men in the choice of an office in which to place their insurances. The business transacted by the Agency is not confined to any particular office, but endeavours are made to place insurances to the best possible advantage of the members.

Those taking advantage of the Agency not only help themselves, but at the same time contribute towards helping deserving medical charities, as, after allowing rebates to insurers and the payment of working expenses, any surplus so remaining is distributed in the above manner.

Since its inauguration the Agency has refunded to insurers something like £3,000, while, in addition, no less a sum than £800 has been distributed to medical charities.

Full information as to all classes of insurance may be had on application to the Medical Insurance Agency, c/o the British Medical Association, 429, Strand, London.—I am, etc.,

G. E. HASLIP,
Chairman of the Committee, Medical Insurance Agency.

London, W.C., May 8th.

THE WORK OF THE ASSOCIATION.

SIR,—The events of the last few days bring to the front the urgent necessity of the reorganization of the profession under the aegis of the Association. As many of us from the first recognized, the Insurance Act has come to stay, and now, incidental to this, still greater changes face us in the near future. Our one chance of safety, then, lies in a wholly united profession. Force, however, is no remedy for the problem of the panel *versus* the non-panel man. The iron has pierced the soul of the latter practitioner. Healing of the wounds must be the remedy, and unity to be lasting must be all-embracing. It must not be of the "order reigns in Warsaw" kind. Though panel organizations inside the Association may on one side be the remedy, as scattered units outside this they never will be, or when the attack comes we will find only wooden guns ready to defend us.

We are thus forcibly brought back to unite under the strong arm of the Association—to rally round the "old firm" once more. And why should it not be possible to speedily unite both sections, and see that no practitioner, however so humble, is injured in his practice? This will mean that we shall bring into being a definite and mutual policy of defence. There are many points of agreement between panel and non-panel practitioners, and those on which the latter disagree—such as more freedom to insured persons to "make their own arrangements," the abolition of the detested "institutions," and the strong representation of the profession on the Insurance Committees—are surely questions capable of at least amicable discussion if not of solution.

To those who are strongly, one might almost say bitterly, opposed to the panel system, a duty certainly devolves of showing what they would put in its place. Apparently the adoption of either the majority or minority report of the Royal Commission on the Poor Law would not have brought about the perfect and exactly just condition of medical service which some seem to desire before they decide to help work any scheme. Then, too, the Public Medical Service scheme of the Association was shown to be financially unsound, hopelessly inadequate and unbusiness-like. Surely no one would welcome the revival of the old club system if such were possible?

But, can one not now almost with certainty predict that the profession will quickly unite to bring the medical work of the Insurance Act under the control of the one great scientific and ethical body which alone can give the nation a truly national insurance medical service? Unity for such a purpose would speedily bring the Association and the Government to the discussion of the conditions requisite to the former in its corporate capacity undertaking to assist in perfecting the panel service. Is the Association to lose its great opportunity now and the general practitioner his one hope of salvation? Surely those who would bring this about would incur a serious responsibility. What good will it do to us to keep remembering the past? The future will certainly grind itself out remorselessly. More than ever now in the face of Mr. Lloyd George's Budget statement, heralding the further extension of insurance and the permanence of his scheme by such proposals as grants to approved societies, to research, by the setting up of consultant referees, the starting of clinics, the inauguration of a system of nursing, etc., can the hopelessness of the policy of those who unchangeably advocate boycotting the panel service be demonstrated. Instead of this it behoves us to examine all the above proposals. For instance, panel practitioners are deeply interested in the appointment of highly qualified medical referees. We know the present system of dual appointments of referees by Insurance Committees and approved societies is most unsatisfactory, and this is especially the case when societies appoint men on the panel to supervise the diagnosis of their neighbouring practitioners. Such a course is fast leading to the establishment of another division in the profession, for along with panel and non-panel we will have superior panel practitioners. In my own experience this is bringing about a most intolerable state of affairs, and it was time to do something to stop it. We should most heartily welcome this provision of referees, provided it does not lead to the more active interference of the approved societies with the doctor's work. We should, too, welcome the establishment of a proper system of nursing for the insured if such a system is not controlled or interfered with by the societies. For every one with experience knows that a good system of home nursing, linked with highly-qualified referees, will go a long way in stopping systematic malingering. In industrial practices, for years past, I have with great advantage, both to my patients and myself, utilized the services of district nurses, and as a panel practitioner now I am daily experiencing the advantages of such help in, for example, massage of lumbo-sacral and other forms of fibrositis, thereby quickly removing such cases from the temptation of depleting their societies' funds. To give one striking and recent example, I had a case of dermatitis, especially affecting the backs of the hands, in a man who had been on sickness benefit for nearly twelve weeks. I asked an excellent district nurse, working close by, to attend daily and paint the hands with a tar lotion, and apply lint and bandages. In a fortnight the patient was free from his skin trouble, and the funds of his society thereby saved. Exactly the same treatment had been prescribed previously without making any headway in his cure. A proper system of nursing will, indeed, result in an enormous saving to the insurance funds.

No doubt the taunts of many with regard to inadequate treatment by panel practitioners has led Mr. Lloyd George to consider provisions for the establishment of clinics. In London at least one would almost hope for better results from linking up the voluntary hospitals, especially in regard to operative treatment, with the panel service. Such a cordial co-operation, together with medical referees and home nursing, would give to the insured population as many advantages in respect of medical and surgical treatment as are now possessed by the upper and lower middle classes. Indeed, never before would so much have been done for the medical treatment of the workers; the old club system suffers in comparison. The better equipment and more hygienic condition of surgeries in industrial areas would give less excuse for the establishment of clinics, which latter step will surely deplete the general hospitals of clinical material, and thereby injuriously affect medical education. I therefore think the money promised for the establishment of clinics would be better spent in providing convalescent homes (the most important of all adjuncts to treatment) and for giving limited facilities for "hydro" treatment, such as sending suitable cases to institutions like the Bath Mineral Water Hospital. Further, some of the money might be utilized in subsidizing Insurance Committees in providing more efficient clerical assistance. If this step became practicable it would be well to require the junior staff of Insurance Committees to pass some test examination like the preliminary examination for the second division of the Civil Service, as one sees communications from such committees the orthography of which, to say the least, is not calculated to inspire respect for an administrative body.

As business men we have a poor reputation, and what could better illustrate the truth of this stigma than the rather pitiable sight of a number of apparently strong panel men airing their views in, and proclaiming as the organ of the panel service, a journal founded to advocate a policy which if carried out might eventually leave about three-fourths of these same men out of employment! This is drifting with a vengeance. But a worse name might be applied to the impracticable policy of a State Medical Service—it is mischievous. For what is this premature indictment of the panel service immediately leading to, only giving to those armed with votes the claim to get back the control of the doctors by the extension of institutions and the employment of whole-time medical officers? And these panel practitioners themselves? Apparently the last thing they think of is the efficiency of the medical service, financially advantageous as it undoubtedly is to so many. They may foolishly "kill the goose that lays the golden eggs!"

Truly, Sir, we want light and leading.—I am, etc.,

M. S. HARFORD,
Member of the Advisory Committee to the Insurance Commissioners.

London, S.W., May 11th.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—In your issue for May 9th Dr. Wallace Henry criticizes the opinions of members of the Council, who favour a trust, as they appeared in Sub-appendix II of the Annual Report. It is unfortunate that he felt obliged to resign from the Committee that had to consider the problem, and thereby deprived his colleagues of the advantage of his assistance.

The advocacy of Dr. Wallace Henry in favour of a trade union has always been too parochial; it is so now. To quote Leicester and to conclude that "that disposes of the question" for all the United Kingdom cannot be accepted for one moment. Leicester is dominated by the working man, and the conduct of the medical profession in that area has as a consequence to be such as will appeal to him. Action suitable for Leicester would spell disaster in Leamington, Bath, or even Brighton—to take three places. Also, the medical profession has to deal with the Civil Service and Parliament and the leaders of the two chief parties in the State. Up to the present the working man has not gained control of these. Members should recollect also that by a two to one majority the Representative Meeting last July decided against trade unionism for the medical profession. I trust that it will do so again.

In paragraph 7 of the Sub-appendix criticized it is stated that it should be recognized that neither by a trust nor by a trade union can cohesion be secured in the medical profession. That statement lies behind all the arguments used in paragraphs 3, 4, 5, and 7 in order to deprecate the formation of a trade union. If one or the other means has to be adopted for the formation of a fund, why take the unusual and novel one?

Dr. Wallace Henry agrees that with regard to the Insurance Act the main objects of a trade union have been obtained by the profession without recourse to that extreme. He asks, however, how much more could have been obtained had we been under a trade union? Keeping in view the persons with whom, and through whom, the profession has had to negotiate, and their social status, I have no hesitation in saying that instead of gaining far more we should have gained far less.

The sole and great attraction that a trade union seems to have for many—beyond the opportunity offered for calling one's colleagues names with impunity—is that "the funds cannot be attached." What is meant by that expression? Nothing more than that no court can give damages for, say, £50, £100, or more to come out of a trade union fund. The idea that by one decision of any court the whole of the funds—say, £100,000, lock, stock, and barrel—would be attached, and at one blow, is a delusion. If any member has been placed under this impression, it is most desirable that he should at once become undeceived. You can protect your funds by a trade union, but you cannot protect the private estates of your officials, nor could the union funds be used to reimburse them the amount of any damages secured against them. They could only be reimbursed by a voluntary levy, and the profession knows what a voluntary levy means. In the case of a trust any damages secured against an official can be reimbursed him from that fund.

The position therefore seems to be this: A trust has no advantage over a trade union nor a trade union over a trust so far as the medical profession is concerned. The honourable conduct of a practitioner is the only reliable quantity. So, if you wish to protect your funds and are willing for your officials to risk having to suffer financially in consequence of your propaganda, have a trade union. If, on the other hand, you are willing to risk smaller or larger amounts in your funds and do not wish your officials to be constantly thinking of their chances of becoming bankrupt because of any action of yours, then have a trust.

Dr. Wallace Henry seems gratified that a majority on the Council, knowing the above stated facts, has recommended the profession to have a trade union. I am not, and I trust that the Representative Body in July next—whose members are, by reason of their election, supposed to be loyal to the Association—while deciding to assist in the few ways legally possible the work of those who prefer to combine under a trade union—which, if a success, would be bound to become a rival body—will instruct the Council to use the Association funds in promoting, encouraging, and organizing a fund under a trust for those of us who prefer it and still wish to see the Association—after being brought up to date in organization—paramount in the medical world for medical-political purposes.—I am, etc.,

E. ROWLAND FOTHERGILL.

Hove, May 11th.

THE POSITION OF CHLOROFORM.

SIR,—Dr. Farquharson's letter in the JOURNAL of May 2nd, p. 994, has brought to my recollection a lecture by Sir Lauder Brunton (published in *The Action of Medicines*), of which I may be allowed to give a *précis*.

Men who have worked practically with chloroform "divide themselves entirely into two camps," (*a*) those who maintain that inhalation should be begun with a very dilute vapour, and gradually increased it in strength; and (*b*) those who say, "Cram it on; there is no danger whatever." Followers of either camp do not seem to come to grief. It is those who waver, employing both methods, who meet with trouble. Sir Lauder then refers to Sir James Simpson's experiments with the sensitive plant (*Mimosa pudica*), which he anaesthetized with chloroform given by each method. When the plant is put at once into a strong chloroform vapour the leaves close as if touched, and fall anaesthetized. With a dilute vapour no immediate result is seen, but, on continuing the application for a time, touching the leaves shows them to be no longer sensitive. "Therefore, we see that strong chloroform vapour acts as an irritant before it produces anaesthesia of the plant; the diluted chloroform vapour does not produce any irritation at all, but simply produces anaesthesia." This is what occurs in animals. Dilute vapour simply anaesthetizes; strong vapour first irritates, causing temporary arrest of breathing, and with the following deep respirations rapid anaesthesia results. (Syme, we learn, made sure of arrested breathing by firmly pressing his hand over the mouth and nose of the patient.) Strong chloroform vapour acts upon the organs of the animal before they have been influenced at all by the anaesthetic. "It would thus appear that there is comparatively little risk in giving chloroform vapour in a concentrated form at first, or in giving it in a very dilute form, but if you give it very dilute to begin with, and then cram it on at intervals, you may get very serious results."

The reasonings of Sir Lauder Brunton (published several years ago) go to prove that the champions of each method have right on their side.—I am, etc.,

VICTOR G. L. FIELDEN.

Belfast, April 2nd.

AN EPIDEMIC RESEMBLING WHOOPING-COUGH.

SIR,—I note with pleasure the letter from Dr. S. J. Ross in the JOURNAL of May 2nd, under the above heading.

It is specially interesting to me because in his series Dr. Ross found no physical signs in the lungs. In nearly all my cases râles were very prominent features; but, as I stated in my letter of April 18th, these children were all recovering—in some cases remotely—from measles.

So my cases may have little actually to do with the main issue. However, the symptoms were uncommonly suggestive, except for the absence of the "whoop"; yet, in the circumstances, I think I was justified in rejecting true pertussis as the diagnosis.

Again, it is of great interest to read that the cases under Dr. Ross exhibited "a definite incubation period." Perhaps Dr. Ross would be kind enough to give approximately the length of this, and also the duration of the whole illness from his observations. None of my cases persisted for the complete, usual, protracted course, but they varied greatly in the period of recovery from "epidemic paroxysmal cough," as Dr. Ross has aptly suggested that the disease should be named.—I am, etc.,

HARRY S. HALL, M.A.Cantab.,
Abbotts Bromley, May 3rd. M.R.C.S.Eng., L.R.C.P.Lond.

PITUITRIN IN LABOUR.

SIR,—In reply to Dr. E. Hughes, I would like to supplement my notes with a few additional details and to take the opportunity of thanking him for his lenient criticism of my paper.

Personally, I encountered no cases of laceration of the cervix in my series, though, doubtless, lack of caution in the selection of suitable cases for the exhibition of pituitrin may result in such an untoward accident.

As regards dosage, my own experience has been that 0.5 c.cm. is too small a dose even for an initial one, and that 0.75 c.cm. is a suitable dose to commence with and a safe one too. The personal factor enters largely into the question of dosage, as some women respond far more readily to the exhibition of this extract than others; so that it is expedient to experiment with each patient individually to find out the dose most suitable to each. It is by averaging out the best results from my series that I have arrived at the figure 0.75 c.cm. as the best and safest preliminary dose. If the uterus does not respond readily to this initial dose, I consider that it is safe to increase the dose to the full 1 c.cm. I have not experienced the falling off of the contractions at the end of thirty or forty minutes mentioned by Dr. Hughes; possibly this may be due to using the larger doses. I must frankly confess that the small dose of 0.5 c.cm. has proved useless in my hands.

The nature of the contractions of the uterus does not seem to me to be "tonic" or "continued," but "regularly rhythmical"; but compared with the average natural contractions, they are more powerful and more frequent. I do not hesitate to use digital dilatation to help the cervix in the interval between the pains, nor instruments at a later stage if I think the patient requires their introduction. In short, I look upon pituitrin as a necessary adjuvant to parturition in normal labours. It is unfair to any medicament to assume that its use must necessarily be solitary—that is, that it must be used alone. I look upon pituitrin as upon other contents of my bag, as "a ready help in time of trouble."

I have had two stillbirths in my series, one I have noted in Case II, where the child's head was born fully fifteen minutes before the shoulders. The child made several convulsive efforts at respiration immediately after delivery of the head. The child was, I think, undoubtedly asphyxiated by pressure on the cord while the body was in the canal. The other case was one in which there were extensive macerations of the skin on the head and trunk, obvious signs of pre-natal death. On five or six occasions I have encountered partial asphyxia of the child, but artificial respiration has always brought the patients round, and they have subsequently progressed satisfactorily enough.

As to contraindications for the administration of pituitrin, I look upon any case in which obstruction is likely as an impossible case for its employment. Under this category I place:

1. Face presentations.
2. Frontal presentations.
3. Transverse presentations, etc.
4. Breech presentations.
5. Pelvic contractions.
6. Malformations (hydrocephalus, etc.).
7. Polypi, especially fibroid.

I think this list is fairly comprehensive.

As to positive indications, any vertex presentations, uterine inertia (primary), placenta praevia, especially where the Champetier de Ribes's bag can be introduced into the cervix, puerperal eclampsia, where its diuretic action should prove of special service, and exophthalmic goitre.

Finally, I am convinced that *careful selection of cases* is necessary. Carefulness, too, in details, both of administration of the preparation and management of the case, are essentials to success in its employment. *Experientia docet.*—I am, etc.,

Littleport, May 3rd. P. ARTHUR HENDLEY, L.S.A.

SIR,—I am sure there are many who, like myself, were surprised to hear of the results attending the use of pituitrin recorded by your correspondent, Dr. Levinson, in the BRITISH MEDICAL JOURNAL of May 9th, p. 1046. In common with many others, I have used it extensively, and, so far, when given in suitable cases and at the right time, I have discovered no drawbacks to its use.

I think Dr. Levinson's communication would have been more interesting if he had given details of his seven consecutive cases of *post-partum* haemorrhage, particularly as regards the nature and source of the haemorrhage, whether it occurred before or after the completion of the third stage, the condition of the uterus, and if an anaesthetic or forceps were used.—I am, etc.,

Southport, May 12th. W. B. SANDERS, M.B., B.S.

STATE REGISTRATION OF NURSES.

SIR,—From the annual report I see the Council is of opinion it should reaffirm its belief in the principle of this bill. Has registration of midwives proved such a benefit to the profession and the public that our Association should meddle with and recommend a scheme for registration of nurses? Leave it to them to fight out. The subject has not been discussed by my Division, and I take it many other Divisions are in the same position. With tuberculosis, school, midwifery, and district nurses playing the part of unqualified practitioners, I think it is time to call a halt to our altruism. The majority of our members, I feel convinced, would resent the introduction of another class of registered opponents.—I am, etc.,

London, S.W., May 8th. JAMES HAMILTON, M.D.

THE LONDON HOSPITAL AND INDIAN MEDICAL STUDENTS.

SIR,—Thank you for your sympathetic leader on the question of medical students in India. My recent tour in India has enabled me to see how, through the length and breadth of India, Indians are greatly agitated over and sympathize with the struggles of their countrymen in South Africa, Canada, etc.

The general feeling amongst Indians is that they are subjected to indignities and treated as outcasts, not only in different parts of the empire, but in Britain itself. They say in effect that unless the British Empire is a sham, England ought to respect the feelings and protect the interests of her dark sons. The Indian students who come here are men of culture and intelligence, of rank, and high capabilities, and it is folly to treat them as pariahs in a land which boasts of democracy and freedom. If the Indian medical students keep aloof from the society of the British, it is not because they dislike them, but because they are of a studious nature, not fond of sports, and find more congenial companionship in the society of their own countrymen. It is unworthy of a great country to make colour a test of intelligence and character.—I am, etc.,

Wells, May 4th. C. MUTHC.

"ENCYCLOPAEDIA MEDICA."

SIR,—I feel that the letter on the above subject by Dr. Henry Jellett, with its editorial addendum, makes it incumbent on me, as the editor of the work in question, to make my own position quite clear, more especially to the authors who kindly contributed to the work.

In 1898 I secured for the publishers the co-operation of a large number of authoritative writers for the *Encyclopaedia Medica*, a work which was then correctly described

as a new and important departure in medical literature. One of the distinctive features of the work was the method in which it was to be kept up to date, this method being fully described and illustrated in the various prospectuses which were issued to the profession, and which formed the basis of agreement between the publishers and the original subscribers.

The first volume appeared in 1899, and the last in 1903. About the year 1905, in the course of conversation with the publishers as to the issue of a supplementary volume which was then recognized as necessary, it appeared to me that the publishers were in favour of a modification of the agreement between them and the subscribers, and as I did not feel in sympathy with the change, and considered that the subscribers might look upon it unfavourably, as Dr. Martin has done, I ceased to be associated with the work.

In the course of the past few years several authors, who contributed to the original work, have commented to me adversely on the form which the new departure had taken, and I could only say that I fully shared their view. In view of the public disclaimer by Dr. Jellett with regard to articles purporting to be written by him in the 1914 edition now advertised, I feel it only right to indicate what my own position in the matter has been.—I am, etc.,

Edinburgh, May 10th. CHALMERS WATSON.

SIR,—Dr. Jellett's letter in your issue of May 9th has been written under a misapprehension, and had he communicated with us direct we could easily have satisfied him on this point.

There has been no new edition of the *Encyclopaedia Medica* since he wrote his articles, and with regard to the proposed new edition the prospectus clearly states that "So far as possible the original authors will revise their contributions," and that a list of some of the authors of articles is enclosed.

I personally wrote the prospectus, and in saying what I did, meant to convey the idea that every author of an article which appeared in the first edition would be asked to revise, or, if necessary, entirely rewrite his contribution, subject, of course, to any slight alterations in the grouping of articles which the editors might think necessary. In any case, this could not have affected the articles which Dr. Jellett kindly contributed, and which he would have been asked completely to revise. Had he found it inconvenient to do this, some other authority would have been asked to write an entirely new article. As one of the contributors to the original edition, however, his name was included in the list referred to.

I can only express my regret that there should have been any ambiguity in the way the matter was put, and in future prospectuses shall see that the point is put quite clearly. The present one, however, is already printed off.

With regard to Dr. Martin's letter about the supplements: In proposing to bring out a new edition altogether, we felt that we were following the wisest course in view of the reception which the first supplement got, and looking to the fact that nothing definite had been said regarding their number or time of publication. Only one or two of the original subscribers have referred to the matter of the supplements at all, and the curious fact is that the strongest letter which we have received was from a subscriber who had actually forgotten that when the supplement was published he sent it back with an almost equally indignant letter.—I am, etc.,

Edinburgh, May 11th. C. E. GREEN.

DEATHS AFTER SALVARSAN.

WITH regard to the word *Hirnschwellung* used by Professor Ehrlich in his letter published last week, as to the translation of which some doubt was felt, Professor Ehrlich has been good enough to inform us that he used the term as identical with encephalitis haemorrhagica. The swelling is conditioned by the oedema which is produced by exudation from the damaged vessels.

In the translation of the extract from Meirowsky and Kretzmer's book on salvarsan appended to Professor Ehrlich's letter, p. 1045, there was an error. The first unfavourable influence mentioned by those authors is the defect in the purity of the water used for making the solution.

The Services.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

THE King has conferred the Territorial Decoration upon the following officers: Lieutenant-Colonel Thomas Stevenson, M.D., attached to the 2nd West Lancashire Field Ambulance; Major David M. Greig, M.D., attached to the 2nd Highland Brigade, Royal Field Artillery; Major Samuel Lodge, attached to the 6th Battalion, Prince of Wales's Own (West Yorkshire Regiment); Major Thomas Forrest, M.B., attached to the 7th Battalion, Cameronians (Scottish Rifles); and Major James D. Farquharson (unposted).

Medical News.

AN International Cremation Congress will be held at Malmo in Sweden on August 31st and September 1st, 1914.

THE summer term of lectures at the Brompton Hospital for Consumption and Diseases of the Chest will commence on Wednesday, May 20th, at 4 p.m., when Dr. Wall will give a demonstration of cases.

THE President of the French Republic has conferred the honour of Chevalier of the Legion of Honour on Dr. Simon Flexner, of the Rockefeller Institute, in recognition of his services to science.

THE annual meeting of the British Medical Temperance Association will be held on Monday, May 25th, at 5.30 p.m. (tea and coffee at 5.15 p.m.), at 124, Harley Street, W. The chair will be taken by the President, Professor G. Sims Woodhead, M.D., F.R.S.

The American Museum of Safety has awarded Surgeon-General Gorgas a gold medal in recognition of his achievement in freeing the Panama Canal zone of the fever and pestilences which had previously made engineering work almost impossible.

AT a meeting of the Royal Statistical Society at the Surveyors' Institution, 12, Great George Street, S.W., on Tuesday next, at 5 p.m., Mr. Walter Hazell will read a paper containing suggestions for recording the life-history and family connexions of every individual.

HERR FRANK, a tailor of Vienna, has given £120,000 for the erection of a children's hospital. As there is already a fully equipped children's hospital in Vienna, the money will be applied to the provision of opportunities of pure air and good food for children discharged from the hospital convalescent.

SURGEON-GENERAL P. H. BENSON will preside at the annual dinner of the Indian Medical Service to be held at the Hotel Cecil on June 8th. Officers desirous of attending are requested to notify Lieutenant-Colonel J. J. Pratt, 63, Addison Road, Kensington, W., joint honorary secretary.

THE Board of Control has appointed Mr. Robert Welsh Branthwaite, M.D., Mr. Albert Edward Evans, M.B., and Mr. Samuel Ernest Gill, M.D., to be inspectors under the Board, the second named to fill the post of Welsh-speaking inspector.

THE International Urological Society will hold its third congress at Berlin in June (1st to 5th), under the presidency of Professor J. Israel. The subjects proposed for discussion are anaesthesia in urology, nephrectomy in disease of both kidneys, bacteriuria, and cancer of the prostate.

ALL the sections of the Royal Society of Medicine holding meetings next week will precede their ordinary business by elections of officers. The Section of Psychiatry will hold a special meeting for this purpose on Tuesday, at 5.30 p.m., and the Section of Anaesthetics at the same hour on Friday.

A DEPARTMENTAL Committee has been appointed by the President of the Local Government Board "to consider the present state of the law with regard to the pollution of the air by smoke and other noxious vapours, and its administration, and to advise what steps are desirable and practicable with a view to diminishing the evils still arising from such pollution."

THE annual general meeting of the Asylum Workers' Association will be held on Wednesday next at the house of the Medical Society, Chandos Street, W., when the chair will be taken at 3 p.m. by Sir John Jardine, K.C.I.E., M.P. The annual report will be submitted and medals for long and meritorious nursing service presented.

THE National Conference on Infant Mortality will be held at Liverpool on July 2nd and 3rd. Mr. Herbert Samuel, President of the Local Government Board, will

give the inaugural address. Among the subjects proposed for discussion are milk sterilization, ante-natal hygiene, the teaching of infant hygiene to the elder girls in elementary schools, the scope and functions of schools for mothers, and the special responsibilities of sanitary authorities in regard to infant welfare. A large number of local authorities and voluntary associations for infant welfare have already appointed delegates.

On May 9th, at the Royal Academy of Music, the amateur orchestra organized by Dr. and Mrs. Dundas Grant, which numbers upwards of ninety members, twenty of whom are doctors, conveyed their thanks to their hostess, and presented to their conductor a floral tribute and a Japanese dwarf tree as a symbol of their appreciation. There are orchestras in Paris, Bordeaux, and Vienna wholly composed of members of the medical profession. All give occasional performances of high artistic merit.

It has been decided to hold the meeting of the Section of Surgery of the Royal Society of Medicine on Tuesday, June 9th, in Liverpool. The morning will be occupied in a visit, conducted by Mr. Robert Jones, to the Children's Hospital at Heswall, and in attending operations at the Royal Infirmary. In the afternoon there will be a demonstration at the Medical Institution of surgical cases, radiograms, and pathological specimens, followed by a series of short papers. Members are invited to luncheon and dinner at the Adelphi Hotel, and those proposing to be present are requested to notify the local secretary, Mr. R. C. Kelly.

The *Morning Post* for April 25th publishes an interesting letter, signed "Junior," dealing with the present position of clinical research. The writer eloquently describes the disadvantages which confront the clinical research worker, and makes certain suggestions for reform. While we are in thorough sympathy with "Junior's" desire to multiply the existing facilities for research, his suggested means seem to us open to criticism. He writes: "If research is to have its chance, wards must be set apart for research at teaching hospitals or the research work must be conducted in distinct institutes." For reasons given at length in our columns recently, we hold that the segregation of research workers is an entirely vicious system, and we believe that all the evils which "Junior" deplores could be removed while retaining a close connexion between research work and ordinary teaching.

The forty-sixth banquet of the French Hospital in London took place on May 9th at the Hotel Cecil. The French Ambassador was unfortunately unable to preside, and the chair was taken by M. de Fleurian, Councillor to the Embassy. There were present representatives from all the other embassies, also the Lord Mayor and the two sheriffs. The medical and surgical staff were fully represented. There were about 250 present, and subscriptions amounting to the large sum of £4,500 were announced. The French Hospital contains 75 beds, and there are 60 beds at the Convalescent Home at Brighton. Thirty of these, however, are for aged pensioners: the remaining 30 are for convalescents. The hospital in London is for all French-speaking people, but there are to be found in the wards patients of almost every nationality. Last year a very well-appointed new operating theatre was opened. This year a pathological laboratory has been added, so that the hospital is now up to date in every particular.

The bill to amend and extend the Truck Acts introduced into Parliament last session proposed to enact that an employer shall not make any deduction from the wages of a workman or require any payment *inter alia* of "any subscription or payment to any hospital, or any other society, club, or benefit society, or for medical attendance." The British Hospitals Association, anticipating that the bill will be reintroduced during the present year, has presented a petition to the House of Commons against it. The petitioners represent that the system of allowing employers to deduct from their employees' wages small weekly contributions towards local hospitals, provident dispensaries, and other institutions for the relief of sickness, injuries, and infirmity, has been approved by the employees, and has worked satisfactorily. The total contributions from this source amount to large sums, and form an important item of the income of many institutions, so that the prohibition proposed in the bill would be a serious loss to the institutions as well as a discouragement of thrift.

The President of the Local Government Board has appointed a Departmental Committee to consider the present condition of the blind in the United Kingdom, and the means available for their industrial or professional training and their assistance, and to make recommendations. The members of the committee are: The Right Hon. W. Hayes Fisher, M.P., chairman; Mr. A. A. Allen, M.P.; Mr. H. W. T. Bowyear, Secretary to the Charity Commissioners: Mr. W. R. Davies, C.B., an Assistant Secretary of the Board of Education; Sir A. H. Downes, M.D., Senior Medical Inspector for Poor Law, Local Government Board; Mr. H. B. Grimsdale, M.B., F.R.C.S., Ophthalmic Surgeon to St. George's Hospital; Mr. R. S. Meiklejohn, C.B., Principal Clerk in the Treasury; Sir T. J. Stafford, C.B., F.R.C.S., Medical Commissioner of the Local Government Board in Ireland: Mr. T. Stoddart, Superintendent of the Royal Glasgow Asylum for the Blind; Mr. G. J. Wardle, M.P.; Mrs. Alice Westlake; and Mr. H. J. Wilson, Secretary to Gardner's Trust for the Blind, with Mr. R. B. Cross, of the Local Government Board, as secretary.

At a meeting of the Eugenics Education Society, on May 7th, Dr. J. Cowper read a paper upon "Eugenics as the Basis of Hope," in the course of which he said that the science of eugenics could have no definite and lasting effects until the principles of heredity were more generally known. It had to be recognized that natural selection had practically ceased to operate, and for this reason the eugenic ideal had to serve as a guide to man. The ideal of the eugenists was a general improvement of type in place of a general falling away. Their aim was not to produce a superman excelling in some one direction, but a generally satisfactory type. While people appreciated the value of physical qualities, they did not realize that they had to be correlated with mental qualities. The less efficient were often fairly well developed physically, but lacked those mental qualities necessary to enable them to make use of them in a satisfactory manner. It was sometimes said that eugenics would never gain ground so long as it was believed that the free choice of the individual in the matter of marriage was threatened. He declared emphatically that eugenists had no wish to interfere with personal liberty. It was agreed by all that the ideal marriage was a marriage based upon affection, but affection should be based upon ideals, and the duty of the eugenist was to teach the public what these ideals should be. Once such ideals were generally accepted the race might be safely left to work out its own salvation. Major Darwin, who proposed a vote of thanks to the speaker, said that he agreed with Dr. Cowper in thinking that it was the development of the mental rather than the physical qualities of the race which now demanded attention. Hitherto their efforts for the most part had been directed towards physical improvement, but personally he felt more anxiety concerning the mental equipment of the nation.

A joint meeting of the Child Study Society and the Parents' National Education Union was held at the Royal Sanitary Institute on May 7th to discuss the question of education before school age. Miss Ellen A. Parish, who opened the debate, said that the child's education should be consistent throughout, and that from the first whatever the child learnt to do he should learn to do in the right way, so that when he left the nursery for the school it would only be the instrument, not the method, of education that was changed. The busiest mother could teach her child to be obedient, truthful, and unselfish. To neglect to teach children discipline was to deny them part of their birthright: if a child was once taught to obey he would be able to acquire by himself the difficult but necessary habit of self-control. Moreover, the formation of habits was the duty of the mother, not of the teacher. Dr. W. F. Sheppard, who said that he spoke from the point of view of the parent, expressed the opinion that the one thing of supreme importance in early childhood was the physical health. The mother had neither the time nor could she be expected to deal with her child from an educational standpoint, for she was not only a mother but a wife, and had other and equally important duties to claim her attention. The influences brought to bear upon children in the home were mainly influences of repression; they had to learn to accommodate themselves to their environment. It was not known how far the influence of a child's early education was permanent; and he had come to the conclusion that the less done towards the development of the intellectual powers in early childhood the better it was for the child. The checking or stimulation of his activity might prove definitely harmful even though at the time it might appear necessary or advisable, for the vital energy which was thus turned back upon itself might possibly do serious injury. The child's general health and activity might be taken as the safest and most reliable guide for his education during the years which preceded the commencement of his school career.

Obituary.

PERCY WARNER, M.R.C.S., L.R.C.P.,

WOODFORD, ESSEX.

It would be a loss to the roll of Medicine if he whose name heads this notice were to pass away without some honourable mention, some words of well-merited appreciation. For Warner was no ordinary man. During thirty odd years of professional activity he was ever and always a worthy son of his old school; imbued with its spirit; devoted to the personality and memory of Samuel Wilks; living his life under such ideals, yet transforming them by his own breezy affectionate nature; and thus planting his own memory deeply and tenderly in the hearts of those to whom he ministered, and of many a friend.

Warner was not originally intended for the study of medicine. Coming of good old Hampshire stock—Fareham was his home—he was educated at a naval school at Southsea, for the Navy, but when the time was ripe, there being some difficulty about a nomination, he was entered on the rolls of H.M.S. *Worcester*, then lately given over by H.M. Government for the training of cadets for the Merchant Service. Here, at the end of his course, in addition to other prizes, he came out first of his year, in 1868 with the Queen's gold medal—a distinction that in his case procured for him the appointment of third officer in his first ship, instead of, as was usual, being taken on as an apprentice. It was while on board the *Worcester* that he became acquainted, if not friendly with, the future Admiral Togo, who was about that time also a cadet on board, and it was one of the disappointments of one of Warner's later illnesses that he was prevented from attending a public dinner given in London in the admiral's honour, and shaking hands with his old comrade now become so very distinguished a man.

Three interesting years young Warner served in a sailing vessel—the *Lothair*—one of the fast clippers that then plied between China and Japan and London and New York, with the first season's teas, and on one occasion he nearly suffered shipwreck. He afterwards passed the Board of Trade examination for second mate, and entered the service of the Peninsular and Oriental Steamship Company, where he rose from fourth to second officer, becoming familiar with the trade of Bombay, Calcutta, Ceylon, and the Straits. It is probable that the sea did not quite satisfactorily absorb the power that lay within him, and that he found it in some respects uncongenial. Leaving that service, therefore, in 1877, he decided to devote himself to medicine, and joined the medical school of Guy's Hospital in the summer of that year. His new pursuits were obviously to his taste, for entering in a year that was remarkable for the number of those who have since distinguished themselves, he was one of the first men of his time. Always hardworking, always reflective; always pre-eminently reliable, he was one in whom teacher and patient alike confided. He obtained the Treasurer's gold medal for medicine at the end of his course as well as other prizes, one being the Physical Society's first prize for an essay upon chronic rheumatic arthritis. Leaving the hospital in 1882, Warner settled at Woodford—practising at first for some years in partnership with Dr. Turtle—and from that time onward he and Woodford became ever more and more intimately linked together, so that it became difficult to conceive of the one without the other. In this, too, he was substantially aided by a very happy marriage with one who was in full sympathy with all his aims, and whose ever-growing influence was of the greatest help and support to him throughout his life. Into the intimacies of this home life we may not enter; but let this suffice, that in saying good-bye to two of his old friends within what proved to be an hour or two of his death on April 1st he said, "They tell me I have reached my last lap; well, I have had a happy life," and there was nought of the visionary in this.

In his relations with his patients it may be said that something of the sailor still surrounded him. Even in appearance he seemed to bear something of the ruggedness of the weather-beating sea, and he had the frankness, the warm-heartedness, and breeziness of manner that made him the friend and beloved of all. One who knew him long in all aspects writes of him: "He seemed to carry with him the message, 'Be of good cheer.' There was always a blithe aspect in his salutation; he was tender and true, genial and strong."

Yes! He was possessed of that ineffable attribute, *Strength*. Hard it may be to define, but knowledge, judgement, sympathy, courage, decision, determination, all in one, irradiating the man, and bringing repose and confidence to the sick and the anxious.

His views of life and of the many problems concerned therewith confronting all who study medicine, were always well informed and well considered. One never found him rushed by the latest fad; he waited till the cream had risen to the top before proceeding to skim it. He was probably more inclined to be the physician than the surgeon; nevertheless he was surgeon to the Woodford Hospital, and he was not averse to operating when occasion demanded it, and often did so there and in private with notable success.

Such an one was he to his patients, but he was more than that. He was a man of letters with whom it was a delight to talk, and from whom one was always learning. His odd moments were given up to literature, and there was generally the half-opened book somewhere in his carriage, into which he was dipping between his visits. He was steeped in the English classics, and he founded a literary society at Woodford, of which he was the president for many years. There are many who remember with delight his interesting papers on Scott, and Wordsworth, Burns, Hogg, Keats, Crabbe, Carlyle, and Oliver Wendell Holmes. It had, indeed, been suggested, and it was hoped by many, that some of these might have been published in some intervals of leisure to come; that, alas! the future did not bestow upon him.

He was thus a valuable ferment in the lives of others. He was, besides, an active man in his parish. He was keenly interested also in starting and working the Woodford Hospital, at the opening of which he was present in 1899, when he had only just convalesced from a severe illness. He had been President of the Walthamstow Branch of the British Medical Association, and during his tenure gave an interesting address on his past experience, entitled "After Twenty Years."

As regards holidays he was fond of a day's shooting, and occasionally got one in the season. In the last year or two of his life he had acquired a small cottage at Quendon, in which he took great pleasure, and seemed to derive fresh energy and inspiration from the rest, the garden, and the country air and scenes. But he did not until latterly allow himself many days off, except a not too long vacation, when he would roam with his wife and family, sometimes in the land of Scott, and again in that of Carlyle or of Burns, or in some other historic neighbourhood, perhaps abroad, but in addition to the scenery and change, always investigating the history of the locality, as it might illumine the writings of the great men of the past, and add interest to his own studies and reflections. Wherever he went he made friends of the best among the educated and cultured, as well as among the lowly and unlearned, and it has been said by one who knew him well that few Scots had such an intimate and friendly acquaintance with, or such an appreciation of Scotland, or of Scottish life, as had Percy Warner.

As to the defects of his character, well! we do not know them, nor does Woodford, where he laboured for a generation. No doubt there were some angles and depressions in the contour of his vitality—the world would be but a big birdcage without them—but what is certain is that during a long disappointing and wearying illness he was never irritable, never murmured, and that he died with those words almost upon his lips, "I have had a happy life." Dear friend, be sure of this: To memory you are dear, though lost to sight! Of you it may be truthfully said that your influence upon your environment was so intimate, now that it is withdrawn, there will be something wanting in Woodford for all those who have been in any way associated with you until they rejoin you in the Great Unknown. And in this light we may judge you to have been peculiarly happy in your death.

During his last illness he had beguiled his hours by writing some *Thoughts on the French Revolution*. He was ever an admirer of Carlyle. These he had submitted to the judgement of a friend. To his surprise and evident pleasure his manuscript was returned to him printed and

bound—very beautifully so—with the following apologia as a preface, signed by a number of his "grateful friends." No apology is needed for reproducing it here, for I can imagine no more touching and beautiful tribute to his abiding worth.

This book of yours needs no defence, and none is offered here for its public appearance, but we hope you will pardon the liberty your friends have taken in sending your literary offspring into the world without your protection and guidance, even without your consent. But being a healthy child and already assured of a warm welcome among those who count your friendship one of their most precious possessions in life, he will do his work among them.

If he returns to you somewhat changed in form and feature, he is still your own, and the bearer of their loving messages to you, who through so many years have been their guide, philosopher, and revered friend.

You have been a tower of strength to them in days when human nature lay weak and unadorned beneath your practised eye, when

To stop change, avert decay,
Fix life fast, banish death,

was the work you gave *yourself* to do.

You taught them in happier days that

. . . life is—to wake, not sleep,
Rise and not rest, but press
From earth's level where blindly creep,
Things perfected more or less
To heaven's heights far and steep.

And now they bid you fight on with the courage of one who "Never doubted clouds would break," and after all these weary months they pray that God may give you back to them and to your own.

What an heirloom to leave behind him!
But it could not be. It had been and was with him:

No time for rest, till glows the Western sky,
While the long shadows o'er our pathway lie,
And a glad sound comes with the setting sun—
Servants, well done.

The funeral was at All Saints', Woodford, and Chigwell Row, and seldom if ever within living memory has Woodford witnessed such a company of sad and sympathizing mourners.

JOHN HALLIDAY SCOTT, M.D.Edin., F.R.S.Edin.,

PROFESSOR OF ANATOMY AND DEAN OF THE MEDICAL FACULTY, UNIVERSITY OF OTAGO, NEW ZEALAND.

The news of the death of Professor Scott, which occurred on February 25th, will be received with deep regret by the many students who have passed through his hands since 1877 and by his old friends and fellow-students in Edinburgh. The son of a Writer to the Signet, he was born in Edinburgh in 1851. He had a distinguished career as a student at the university, where he was taught by Professor Turner, and served under him as Demonstrator of Anatomy.



The chief work of his life and that by which he will long be remembered in New Zealand was in connexion with the New Zealand Medical School. Appointed to the Joint Chair of Anatomy and Physiology in 1877, the conduct of the school fell almost at once into his hands, and he remained the predominant partner in all its business until the end of his life. It needed some courage to begin such work in a small and remote colony, and in the face of a good deal of opposition both within and outside the medical profession. The wisdom of the founder of the school has, however, been justified by its success. To-day more than 25 per cent. of the medical men in the Dominion owe the greater part of their training to the local school, and the proportion is continually increasing. Most of the students go home for post-graduate work, and it is creditable to the school, and especially to its anatomical and physiological teaching, that a very large number of these students have passed the Fellowship examination of the London or Edinburgh College of Surgeons. In all the work of the New Zealand school Dr. Scott's influence was a most important factor both with students and teachers. Many difficulties had to be surmounted in the course of the development of the school, and Dr. Scott could always be depended upon for counsels of moderation and common sense.

Besides his purely professional interests, Dr. Scott was an artist of repute and a keen student of anthropology. His collection of Polynesian and other national osteological specimens, bequeathed to the university, will be of great value to future investigators.

In character he was quiet and reserved, but warm-hearted and loyal and steadfast in his friendships.

Dr. Scott, who had been a widower for some years, left a family of three sons, two of whom are medical practitioners in New Zealand, and two daughters

THOMAS THOMPSON, L.R.C.P., L.R.C.S.Edin.,

HANDSWORTH, BIRMINGHAM.

We regret to announce the death of Mr. Thomas Thompson, late of Heathfield Road, Handsworth, which occurred at a nursing home on May 6th. Until the end of last year Mr. Thompson was closely associated with the military medical service of Birmingham, and when, in December last, he retired from the command of the North Midland Mounted Brigade Field Ambulance with the rank of lieutenant-colonel, he was granted permission to retain his rank and wear the uniform. He joined the 1st Volunteer Battalion of the South Staffordshire Regiment as surgeon-lieutenant in January, 1900, and when Major (now Lieutenant-Colonel) Griffiths was transferred to the command of the Stafford Brigade Bearer Company at Wolverhampton, Mr. Thompson took charge of the Bearer Section at Handsworth and was promoted surgeon-captain in 1903. On the formation of the Territorial Force Captain Thompson was requested by the Director-General of Army Medical Services to raise in Handsworth the North Midland Mounted Brigade Field Ambulance, and was given the rank of major. Only a few weeks elapsed before the unit attained full strength, and the commanding officer had the satisfaction of taking a full complement of all ranks to their first Territorial camp, which was held at Towyn. Major Thompson attained the rank of lieutenant-colonel in April, 1910, and he was also the possessor of the Coronation Medal. Mr. Thompson received his medical education at Queen's College, Belfast, and became L.R.C.P., L.R.C.S.Edin. and L.F.P.S.Glasg. in 1895.

Stirlingshire loses, by the death of Henry Scott Cribbes, one of the few remaining old school of country practitioners. His kindly, sturdy personality will be greatly missed in the district, where his skill and warm-hearted interest in his patients endeared him to those who knew his kindness of heart and wide sympathies. He received his medical education in Edinburgh, and took the diplomas of L.R.C.P. and S. in 1866. He settled in Bothkennar parish, where he laboured till his death. He was a man of many sorrows, which he bore with fortitude. An infant child was drowned in his stable yard. His second son was found dead in bed, and his eldest son, Dr. W. L. Cribbes, who was associated with his father and was extremely popular in their extensive practice, died

from the effects of an accident. The death of this son was the severest blow of all to Dr. Cribbes, and he never seemed to get over it. It cast a cloud over his life from which he was unable to emerge. He was a staunch Conservative in politics. He was buried in Larbert churchyard in the presence of a large concourse of his friends.

SURGEON-MAJOR JAMES REID, Bengal Medical Service (retired), died in a nursing home at Glasgow on April 25th, 1914. He was born on July 26th, 1844, and educated at Glasgow University, where he qualified as M.B. and C.M. in 1868. He entered the Indian Medical Service as assistant surgeon on April 1st, 1870; became surgeon on July 1st, 1873; and surgeon-major on April 1st, 1882, retiring on April 7th, 1894. The Army List does not credit him with any war service. After serving for some years as senior medical officer of the Andaman Islands, he was, in April, 1884, appointed medical storekeeper in Calcutta, a post which he held till he retired. In September, 1900, he succeeded the late Lieutenant-Colonel C. J. H. Warden as Examiner of Medical Stores to the India Office, and held that appointment for eleven years, resigning it in September, 1911.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Ernst Börner, extraordinary professor of obstetrics in the University of Graz; Dr. Joseph Decatur Bryant, professor of the principles and practice of surgery and operative and clinical surgery in united University and Bellevue Hospital Medical College, New York, President of the New York Academy of Medicine in 1895, and of the American Medical Association 1907–8, author of a well-known treatise on operative surgery, and senior editor of *Bryant and Buck's American System of Surgery*, aged 69; Dr. Dubuisson, member of the French Chamber of Deputies for the Finistère; Dr. Egbert Le Fèvre, Dean of the New York University and Bellevue Hospital Medical College, professor of therapeutics and clinical medicine since the union of the Colleges, and author of a work entitled *Physical Diagnosis*, aged 56; Dr. Kambouroglou, physician to the hospitals of Constantinople; and Dr. Langlais, Mayor of Pontivy, and formerly a member of the French Chamber of Deputies, aged 67.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—E. G. Fearnsides.
M.B., B.C.—M. J. Petty, R. Sherman.
M.B.—R. S. Marshead.

UNIVERSITY OF EDINBURGH.

General Council.

THE statutory meeting of the General Council of the University of Edinburgh was held on May 6th in the University, Principal Sir William Turner presiding. The Finance Committee reported a small decrease in the total number of matriculated students, the falling off in art students having continued. There were 1,319 students of medicine for 1913–14 as against 1,326 for 1911–12. With regard to the working of the Carnegie Trust for the Universities of Scotland, reference was made to the gratifying reports received upon the results of the Research Scheme during its second quinquennial period, and other matters dealt with in the JOURNAL for September 6th, 1913 (pp. 598–600), were touched upon. It was resolved, on the motion of Mr. J. B. Clarke, M.A., seconded by Principal Laurie, to accept the invitation of the Aberdeen General Council to take part in a conference of representatives of the four general councils on the question of the propriety of the Carnegie Trust paying part fees to all applicants irrespective of their necessities. Principal Laurie thought that if the funds were short it would be better for the Carnegie Trust to pay the whole of the fees of the really deserving students than to pay half the fees of a larger number. It was decided, however, that the representatives to the conference should not have power to commit the Council to any definite line of action. The other matters discussed had no special medical bearing.

Letters, Notes, and Answers.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

AN EXPATRIATED MEMBER writes: Can any member recommend a phrase-book giving conversation on medical subjects in French and English? There are two or three such manuals of medical conversation in German and English. Also can any member recommend a similar manual in Italian and English, or, failing this, a dictionary of English and Italian medical terms?

W. H. H. (Bradford) asks for suggestions as to the treatment and prognosis of the following case; the patient refuses operation: Male, 63. Two years' history of "indigestion," flatulence, and distension, with considerable free intervals; no biliary colic; no calculi passed; six weeks ago sudden onset of jaundice after a long walk; very little pain; no tenderness; no palpable tumour; gall bladder not dilated; no bile in stools; some wasting. Podophyllin, salines, calomel, and bismuth salicylate have been tried.

DAMP HOUSES.

OMEGA.—It is obviously impossible to say in precise terms exactly what degree of dampness in a house may be looked upon as prejudicial to health, as so many factors have to be taken into consideration, such as the aspect of the house and the amount of air space which surrounds it. Evidences of dampness include the falling off of paper from the inside walls, mouldy conditions, the rusting of steel articles, and the readings of a wet and dry bulb thermometer.

INCOME TAX.

N. S. T. has recently been appointed medical officer of health and public vaccinator, and inquires as to the nature of the disadvantages attaching to the separate assessment of fees from such appointments.

*** The disadvantages are, briefly, the complication caused by the preparation of separate statements of receipt and expenditure for each appointment and separate payment of the tax—not infrequently to different collectors; the danger that if the declaration of total income is not made for each return some of the assessments may be made at the higher rate of duty, involving a certain amount of correspondence at least before the matter is adjusted; and the risk that sooner or later one or more of the separate assessments may be overlooked when the general return or assessment is made, and thus give rise to a double charge on the fees. The authorities are entitled in strictness to assess these fees separately, but there appears to be a disposition to admit the reasonableness of the other method of assessment. We should advise our correspondent to endeavour to ascertain from the clerk or from the surveyor of taxes the amount of the corresponding fees for the three previous years, and to base his return for Schedule D on the full average receipts of the practice *plus* the previous year's fees. As regards the form received by him for Schedule E, he should then return it with an intimation to the effect that his Schedule D return includes the average fees from the appointments held by him.

H. D. G. has been employed until recently as an assistant on the terms that his principal should pay him £122 per annum and defray the cost (£78) of his board and lodging. He inquires whether his income tax return should have been £122 or £200, and whether in his return for the current year he may deduct the cost of a motor car which he has purchased on entering into partnership with another practitioner.

*** 1. *Board and Lodging.*—In the leading case of Tennant and Smith the House of Lords laid down the broad principle that

only money or things capable of being turned into money are taxable. Unless, therefore, the £78 passed through our correspondent's hands in cash, it should not be returned for assessment, the value of board and lodging being clearly not convertible into money.

2. *Motor Car.*—It appears that "H. D. G." has not previously purchased a car. Accordingly, the expense must be regarded as being of a capital nature, and as such cannot be deducted for income tax purposes.

ANSWERS.

Christian Science.

L. A. J.—The following works may serve our correspondent's purpose: S. Paget, *Faith and Works of Christian Science* (Macmillan); Frank Podmore, *Mesmerism and Christian Science* (Methuen); Carta Sturge, *Truth and Error of Christian Science* (John Murray). But to gain a true notion of the nature of the cult, Mrs. Eddy's *Science and Health* should if possible be read. A very interesting and illuminating work on Christian Science is Georgine Milmine's *Life of Mary Baker Eddy and the History of Christian Science* (Hodder and Stoughton).

Treatment of Corns by Ionization.

In reply to an inquiry on behalf of a correspondent, Dr. H. Lewis Jones has been good enough to supply us with the following note on the treatment of corns by ionization: For soft corns between the toes and for the flat warty corns of the sole of the foot zinc ionization is usually successful. It is well to soak the corns beforehand for some hours with a solution of zinc sulphate of a strength of 4 grains to the ounce. This is easily done by using a compress of cotton wool wet with the solution and left in contact with the corn. For ionization the positive pole and a current of 3 to 5 milliampères should be used for a quarter of an hour. This can be repeated after two or three days. Hard corns are more difficult to treat. They must be rubbed down with pumice stone and well imbibed with the zinc sulphate solution before ionization. They are largely due to friction or pressure from a badly fitting boot and tend to return when treatment is suspended.

LETTERS, NOTES, ETC.

The Treatment of Pruritus Ani.

Dr. Francis Hernaman-Johnson (Darlington) writes: Dr. J. Cropper discusses (May 2nd, p. 956) the treatment of this condition at some length. He does not, however, mention the use of *x* rays. A few applications—generally not more than five or six—will cure any case which does not depend upon some gross surgical condition, such as polypus or haemorrhoids; and the majority of cases are not so caused. The presence of cracks, fissures, and even small abscesses, is, fortunately, no bar to success, and the cure is permanent provided that the parts be kept scrupulously clean and the bowels are properly regulated. Harsh purgation, however, must be avoided, as it tends to irritate the anal margin. The diet, also, should receive attention. The risk of producing sterility is negligible, but in obstinate cases which require more than half a dozen exposures, it is as well to protect the scrotum from the action of the rays.

Dr. James B. Simpson (Golspie) writes: In Dr. Cropper's article on the treatment of pruritus ani (British Medical Journal, May 2nd, 1914) one of the "older remedies" which is not mentioned is an ointment composed of calomel 1 drachm, simple ointment 1 ounce. I have seen many cases of obstinate pruritus ani in which various ointments and lotions had been tried without success, which were quickly relieved by the use of this formula.

Chronic Intestinal Stasis.

Mr. W. Stapley, M.D., M.R.C.V.S., D.V.Sc. (Cambridge, N.Z.), writes: Adami's criticism of Arbuthnot Lane opens many side issues beyond the fact that he failed to establish his own position and to wholly upset Lane. To hurl the impeachment of insanity against those opposed to fixed academic thought constitutes a flank attack which is very destructive, very unfair, and very common. If academic authority cannot maintain its position by frontal attack it should be silent. As it is necessary to protest against the voice of the university being heard in the language of politicians, so is it equally necessary to stay the hand of meddlesome surgery that runs against biological facts.

In the lengthy writings about the large bowel, too little has been heard of its function; and the habits of civilized man have been ignored. Rolling a common ball over the belly, as Adami suggests, is a less effectual manner of treating constipation than joining the ileum to the sigmoid. As a therapeutic agent it is as obsolete as it is as a weapon of destruction. The large bowel of man was evolved to digest coarse vegetation. As man left the land and went into the cities, he changed his food habits. By ceasing to eat uncooked coarse vegetation he threw the colon out of function, and left it as Lane describes—a sink. To stimulate it to normal function the colon requires a daily supply of salad—undressed and well washed. The lubricant of the caecum and colon is coarse vegetation and water, not paraffin.

Adami repeats the error that the function of the ileo-caecal valve is to hold ingesta in the ileum. If such were its function the ileum would be sacculated. The atrophic state of the ileo-caecal valve of man is demonstrated by the faecal vomit. No fully functionating ileo-caecal valve offers any hindrance to ingesta passing from the small bowel into the large, nor does it permit the caecal contents regaining the ileum. Adami's criticism is too one-sided. He ignores the lessons of comparative anatomy.

London's Health Resorts.

Ozone writes: Does London make use of the health resorts that it possesses to the greatest advantage of its inhabitants? It is recognized that the running of the Thames steamboats in spring and summer months affords opportunities to many of recuperating their vitality in a pleasant manner. If these boats are not at present in use in sufficient number, or are lacking in any qualities that would make them more popular, would it not be a good investment on the part of the public body concerned to subsidize to some extent the company or companies that are undertaking the matter, in order that such may be in a position to remedy deficiencies?

Would it not have been both possible and advisable either to have constructed tramcars with removable top shelters, or to have provided a greater supply of those without them, it being likely, owing to the benefits to be derived from a drive in the open air, that the latter are more healthful for at any rate about eight months in the year? Would it not be more restful to those who make long or frequent journeys in tramcars to be seated on cushioned seats? Are the parks and open spaces made as attractive as they might be in inducing people to seek open air exercise, and are not the following points of importance concerning them? (1) Are there sufficient seats in some resorts—as, for instance, Hampstead Heath and Wimbledon Common—where those who do not wish to be continually on the move may rest with advantage to themselves? (2) Cannot shelters be erected in different directions to which persons may retire in the case of a sudden downpour, or for protection from the wind? (3) Is it more beneficial to the community to keep considerable areas of turf—I don't refer to Hyde Park and the adjoining enclosures—free from children and others who are inclined to engage in various games and exercises? In regard to the latter point, West Ham Park affords, I think, a good illustration of how to make use of an open air space in a populous district; and Durdham Downs, Bristol, of the manner in which a suburban resort may be effectively utilized.

Flower Pressing for Neurasthenic Patients.

Dr. Claud F. Fothergill (Chorley Wood, Herts) writes: We always find it difficult to know what to suggest as an interesting hobby to certain of our neurasthenic patients. Collecting, pressing, and mounting flowers seems to be quite an ideal hobby, and I have arranged with Messrs. Gamage, High Holborn, to supply a wire meshwork press, by which flowers can be permanently dried so as to retain their colours in a most lifelike manner in from eight hours to a couple of days according to the succulency of the flowers, if the press is placed as near as possible in front of a fire, or suspended out of doors in a powerful sun against a wall. The old method of pressing flowers in blotting paper between boards was so tedious and produced such poor results that few cared to follow it. By this method the process is so rapid that the colouring pigment is fixed instead of it being allowed slowly to decay as by the old method. The hobby is very valuable, as it encourages the patient to take outdoor exercise whilst collecting flowers, and it gives him something very interesting to do pressing them either out of doors, which can easily be accomplished, or indoors, and it will help to kill many dull hours indoors in the evenings as he mounts them on cards or in an album. Thinking over this subject I have been surprised to find how few of my neurasthenic resident patients have had real interest in natural history, and it has helped me to believe more strongly than before that the cultivation of interest in natural history in children is a powerful prophylactic against neurasthenia. I need hardly add that plenty of other people besides neurasthenics, and practically all children interested in collecting flowers, will find these presses of considerable value to them in obtaining satisfactory results. May I add that the method was discovered by my father and myself several years ago whilst collecting flowers in Switzerland?

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An Address

ON

THE OBJECTIONS TO THE INCOMPLETE OPERATION FOR CANCER OF THE BREAST.

DELIVERED BEFORE THE WORCESTERSHIRE AND HEREFORDSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY C. B. LOCKWOOD, F.R.C.S.,
CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

I PROPOSE to draw attention to a matter of importance. Although so much has been said and written against inadequate operations for cancer of the breast, nevertheless they are still being done, and perhaps more often than is supposed. The ultimate results of these inadequate, incomplete operations are so forbidding that it is difficult to understand why they are being performed, especially as a much better and more scientific operation is available, and one which gives infinitely better results.

To-day a surgical operation is essentially the best remedy for cancer of the breast. Most of us have seen carcinoma disappear under the influence of *x* rays, and perhaps some may have seen it disappear under the influence of the rays of radium. But it is to be recollected that both of these kinds of rays are limited in their action. They can only act upon the cancer cells in the place where they impinge and penetrate, and do not affect cancer cells which are beyond their limited range of action and are in regions into which they do not go.

An ideal remedy for the cure of cancer of unknown dispersion would be one which we could introduce into the circulation and which would act from the centre to the periphery. Many attempts have been made, and are being made, to find a remedy of this description, and not, perhaps, entirely without some result.

Now it will be agreed that when an operation is done for cancer, it ought to be done with the clear and distinct intention of removing every particle of the cancer. The operation for cancer of the breast which is best calculated to take away every particle of growth is usually referred to as the "complete" operation, or sometimes as the "radical" operation.

The complete operation consists in the removal of the nipple and areola, together with an area of skin over the tumour, the whole of the mammary gland, both pectoral muscles, together with their fasciae, the costo-coracoid membrane, the fasciae over the anterior part of the serratus anterior, the upper part of the obliquus externus abdominis, the subscapularis, the teres major, and part of the latissimus dorsi, all the axillary fat, and all the lymph vessels and lymph glands therein; these come away in one piece with all the rest. Supplementary proceedings may be required, and it may be advisable to carry the dissection over the sternum or down the abdomen, or to ascend into the posterior triangle of the neck. These supplementary proceedings are usually required when the growth is of some duration, having been overlooked or neglected.

The inefficacious and uncommendable incomplete operation usually consists of an elliptical incision, including the nipple and areola, and a varying quantity of skin, the mammary gland, but not always in its entirety; the pectoral fascia, and the fat and lymph glands from the axilla, up to the pectoralis minor. This operation is rightly called the incomplete operation, because it almost invariably leaves growth in the axillary lymph glands and lymph vessels, not infrequently in the pectoralis major, in the skin, or in the fasciae of the chest and abdomen.

It is hardly necessary to say that this operation does not fulfil the conditions; it is not calculated to remove the whole of the cancer, and is therefore almost inevitably followed by a recurrence. I qualify the word "inevitable" and say "almost," because there are circumstances, which will be pointed out, in which it might occasionally cure the disease. The most that can be said for this inadequate and unscientific operation is that it is easy to do, and for a time may seem to give satisfactory results. The word "recurrence" will be used rather frequently. By recurrence I do not mean that the cancer springs up again after every scrap of it has been taken away, but that it has gone on growing from the cancer which had been left behind. In this sense the word "recurrence" ought not in many instances to be applied to a cancer which after an operation appears in the opposite breast. When that occurs the growth is not always from cancer cells which have crossed the sternum.

Cancer cells which have travelled from one mammary gland to the other would presumably cause a cancer similar in type to the one from which they came, but very often these bilateral carcinomata are of dissimilar type. Also, there is often evidence of the existence of a predisposing cause in the form of a chronic mastitis. After operations for cancer of one breast the chances of a cancerous tumour growing in the other are rather high—at least one in twenty.

The inutility of the incomplete operation becomes manifest if we compare the steps of it with those of the complete operation, and consider the anatomical and pathological basis upon which the complete operation rests. The extent of that operation is determined by what is known about the passage of the cancer cells into the lymph system, the direction in which they spread within and without the breast. It is almost certain that as soon as a cancer has begun it sheds its cells into the lymph system. The breast is not favourable for observing this, but the tongue sometimes is. A woman had had a small ulcer on the side of the tongue for about three months. Although the growth was small and of short duration, cancer was found in the submaxillary lymph glands.

So that we assume that even the youngest cancer of the breast has shed its cells into the lymph system, and plan the operation so as to provide for that contingency. Unfortunately when once the cancer cells have entered the lymph system, there is no way of telling how far they may have reached nor in what direction they may have gone.

It is, however, safe to assume that they may have spread into the axillary lymph vessels and glands and, by way of the short circuit lymph vessels, into those about the upper end of the axillary vein beneath the pectoral muscles and costo-coracoid membrane.

The complete operation is devised to deal effectually with invasions of these lymph vessels and lymph glands which are not dealt with at all in the incomplete operation.

Keeping in mind, then, the way in which the cancer spreads into the lymph system, it is clear that an operation for cancer of the breast must remove the nipple and areola, so as to take away the whole of the subareolar plexus, which is the point of convergence of the lymph vessels of the lobes and lobules. The skin, too, soon becomes infected from the cancerous growth, because mammary lymph vessels reach it by passing along those little strands of connective tissue which pass from the mammary gland to the skin. So it is necessary, therefore, to remove a considerable area of skin over the growth. The incomplete operation in a measure fulfils these conditions. It removes the nipple and the areola and an area of skin, and it is intended to remove the whole of the mammary gland. I say "intended," because, with the very limited incisions I have seen made for these incomplete operations, it seems almost impracticable to remove such an extensive, irregular, and far-reaching structure.

After an incomplete operation it was seen, when the operation for recurrence was done, that a part of the mammary gland had not been removed. I suspected that some of the mammary gland had been left in two other incomplete operations, which had been done for duct carcinoma. The consequences of leaving part of the mammary gland are difficult to gauge. If that which has been left is chronically inflamed, there is always a chance of its becoming cancerous, just as a chronically inflamed tongue becomes cancerous; also the mammary gland may contain more than one carcinoma. In one case the left mammary gland had in it three separate foci of cancer, each surrounded by some fibrous tissue. In a case of malignant duct papilloma the growths were multiple, and although the duct carcinomata were small, the neighbouring axillary lymph glands had growth in them.

Recurrences after incomplete operations, as I shall show presently, are almost the rule, but local recurrences in the skin or in the scar are perhaps not so frequent as those in the axilla. I am quite certain that the local recurrences which I have seen after incomplete operations have been much worse than the local recurrences after complete operations. One of these cases of recurrence after an incomplete operation illustrates a point of much importance.

A surgeon performed an incomplete operation because the patient was suffering from what is sometimes called a duct carcinoma. This surgeon, I know, looked upon duct carcinoma as being a rather mild form of carcinoma—a most dangerous delusion, because duct carcinoma is just as malignant as any other form. The histology of the carcinoma ought to have no bearing upon the extent of the operation. The histological structure is often dissimilar in different parts of the same tumour. Some very good results have followed operations for spheroidal-celled and colloid carcinomata. Some think it a favourable sign if the growth contains much fibrous stroma and few cancer cells. But I have watched cases of this kind and some of them have ended very badly. The structure of a cancer has, I believe, a very small bearing upon the ultimate result. That depends far more upon the direction and upon the distance to which cancer cells have gone into the lymph system and into the venous system, and, of course, upon the range of the operation.

The incomplete operation removes the pectoral fascia but it does not take away the pectoralis major or the pectoralis minor. A cancer which is adherent to the pectoral fascia has certainly grown both into the pectoral fascia and into the pectoral muscle. But Stiles's method of examination often reveals unexpected strands of growth running back from the tumour to the pectoral fascia and onwards to the muscle. Histologists have, by using other methods, confirmed this observation; so that the removal of the pectoral muscle and pectoral fascia is a pathological necessity, and presently it will be seen that it is also an anatomical necessity.

Thrice after incomplete operations I have seen the growth recur in the great pectoral muscle. After the incomplete operation about 15 per cent. of the patients have recurrent growth in the great pectoral muscle, and this is quite sufficient to justify the removal of the muscle. I have never seen or heard of a recurrence in whatever remains of the great pectoral muscle after a complete operation.

In some cases there is some impairment of the utility of the arm after the complete operation, but I have been astonished to see, in the majority of cases, how very slight that impairment is. One who had had the left pectoral muscle removed in a complete operation plays golf quite well. The other day a patient who had had a complete operation done on the left side had been playing tennis, and, in the opinion of her friends, as well as before the operation. When the utility of the arm is interfered with too much skin has been taken away, or the skin has not been adjusted at the axilla so that the arm can be lifted from the side.

There is also a further anatomical reason for the removal of the pectoralis major and also of the pectoralis minor. The axillary lymph system is the main road by which the growth spreads from the mammary gland. Its progress is quick, and it may soon arrive in the lymph glands beneath the costo-coracoid membrane. The incomplete operation does not reach above the pectoralis minor, and therefore does not take away those high lymph glands. But the lymph vessels and glands beneath the costo-coracoid membrane may be infected through short-circuiting lymph vessels which run upwards from the mammary gland and pass between the two heads of the pectoralis major, or occasionally between the pectoralis major and the deltoid. By this short circuit the cancer cells pass at once to the highest lymph glands, where they remain undisturbed by the incomplete operation. It is obvious that no operation is complete which does not remove the uppermost lymph vessels and glands, and this cannot be done without the removal of the pectoralis major and minor, and of the costo-coracoid membrane.

It is probable that cancer cells often travel by the short circuit into the highest glands. Sometimes during the operation one sees that although there is little carcinoma in the lower axillary lymph glands, nevertheless there is much in those high up. This was found in a case of malignant cyst papilloma. A single lymph gland with growth in it was dissected from beneath the upper end of the axillary vein. I am informed that eighteen months after the patient died of cancer. The prognosis is not favourable when the growth has reached so high. These carcinomatous glands beneath the costo-coracoid membrane cannot be detected by clinical methods. It is safer to assume the possibility of their presence and make a thorough dissection, and that can only be made by removing the pectoralis major and minor and the costo-coracoid membrane.

The descriptions of the axillary lymph vessels and lymph glands in anatomical treatises are elaborate beyond the needs of surgery. In general the veins, which stand out so well during the operation, are a sufficient guide to the lymph vessels and to the lymph glands along their course. In performing the complete operation the smaller veins are taken away, and the great axillary vein cleanly dissected. This, together with the removal of the fasciae, ensures the total ablation of the lymph vessels and lymph glands and offers an additional safeguard against recurrence. Cancer cells pass along the veins as well as along the lymph vessels, hence the appearance of growths in the bones far from the original tumour.

It is not safe to suppose that the axillary lymph vessels and glands are only situated below the axillary vein, or below and in front of the axillary vein. Some may be situated behind and some above it.

Those lymph vessels and glands above the axillary vein are to be especially reckoned with, for they may be a deadly pitfall. After the complete operation recurrences do not take place in any small remains of the pectoral muscles, nor in the axilla. The commonest place for recurrence is in the lymph glands in the posterior triangle of the neck, and more especially in those in its outer angle beneath the trapezius. Now those lymph vessels and lymph glands are in direct communication with and a continuation upwards of those situated above the axillary vein.

Needless to say, the lymph vessels and lymph glands above the axillary vein must be dissected out as well as the others, and this necessitates the thorough cleaning of that great vein from beginning to end. But this dissection is impossible without the removal of the pectoral muscles, including the clavicular head of the pectoralis major.

In the incomplete operation no attempt whatever is made to take away any of the lymph vessels and lymph glands about the upper end of the axillary vein—neither those below, nor in front, nor behind, nor those which run above it. Nevertheless, as I have pointed out, owing to the short circuits of the lymph systems these lymph vessels and lymph glands about the upper end of the axillary vein are especially liable to become cancerous.

The dissection of the axilla in the incomplete operation is most unsatisfactory. A crude attempt is made to clear out enlarged glands from its lower part, but this attempt does not reach higher than the pectoralis minor. The possibility of the presence of cancer in the lymph vessels amidst the axillary fat, and in microscopic islets of lymphoid tissue, and in those lymph vessels which run upon the fasciae, is ignored. For these to be taken away it is necessary to dissect the fascial coverings from off the muscles which bound the axilla, and from off the side of the chest.

I have notes of 25 cases of recurrence after incomplete operations done by myself and other surgeons. Nobody will be surprised to hear, after what I have said, that 19 out of the 25 were in the axilla. In addition many of the patients had other growths in the skin, in the skin and scar, in the posterior triangle of the neck, and elsewhere. The recurrences in the pectoralis major are a black mark against the incomplete operation, but these in the axilla are enough to condemn it altogether.

Perhaps it may be thought that the mortality of the incomplete operation is less than that of the complete. When, some years ago, I performed the incomplete operation the mortality was rather high, probably about 5 per cent., but some of the operations were only done to get rid of ulcerated growths.

I have done 137 complete operations and no patient has yet died. Although the shock for the first twenty-four hours may have been considerable, yet those women recovered in the most remarkable way.

Now there is, as I have said, only one condition under which an incomplete operation might cure the cancer, namely, when the carcinoma is confined to the mammary gland, and has not yet infected the lymph vessels or lymph glands. I have notes of 7 cases in which the cancer was in the substance of the mammary gland and had not infected the lymph system. All of these patients had the complete operation performed, and are alive and well after the lapse of

Over 12 years	2
Over 10 years	1
Over 7 years	2
Over 6 years	1
Over 5 years	1

Eight cancers in seven patients, because one patient is well more than seven years after the complete operation on the left side and more than five years after the complete operation on the right.

More of these satisfactory cases will be forthcoming when the fallacies of clinical diagnosis are recognized, and when tumours of the breast are submitted to an immediate histological examination. The longest period of life that I know of after an incomplete operation done by myself has been seven years, and I doubt whether any that I ever did has escaped recurrence.

A Report of the Work

CARRIED OUT AT

THE RADIUM INSTITUTE, LONDON, IN 1913.

BY

A. E. HAYWARD PINCH, F.R.C.S.,

MEDICAL SUPERINTENDENT.

(Published with the authority of the Committee.)

THIS report deals with the cases which have presented themselves at the Radium Institute from January 1st, 1913, to December 31st, 1913, inclusive.

The experiences of the past year tend on the whole to confirm the conclusions set forth in the report of the first seventeen months' work, published in the BRITISH MEDICAL JOURNAL of January 25th, 1913, p. 149; but some few additional facts have been noticed, which serve to increase our knowledge in respect of the prognosis and treatment of various diseases.

TABLE I.—*Summary of Cases.*

Examined, but not treated	112
Recently treated, and results not yet noted ...	176
Received prophylactic irradiation only	30
Apparently cured...	56
Cured	18
Improved...	341
Not improved	152
Abandoned treatment	50
Dead	37
	972

EPITHELIOMA.

The results obtained in the treatment of epitheliomata affecting glabrous surfaces call for no fresh comment, and in suitable instances removal of the growth by radium may be confidently anticipated.

Epitheliomata of the buccal, lingual, and pharyngeal mucous membranes still prove both refractory and disappointing in their response to radium, but a new method of treatment has recently been devised, which in instances of cancer of the tongue has given distinctly encouraging results; it consists in the burying within the carcinomatous nodule of a very small but intensely powerful radium emanation tube possessing an initial activity equivalent to that of 80 to 100 mg. of radium bromide enveloped in a screen of 1 mm. of silver or 0.3 mm. of platinum, and giving an exposure of twenty-four hours' duration. A fairly severe reaction follows, and in some cases the nodule ceases to grow and becomes replaced by dense fibrous tissue.

Several cases of epithelioma of the oesophagus have been under treatment, but unfortunately the majority of these have been in so advanced a stage as to preclude all hope of success. In those instances, however, in which complete occlusion had not occurred, and it was possible to introduce radium actually into the lumen of the growth, distinct, though temporary, benefit has resulted, and that this effect is not merely mechanical, due to the dilatation of the stricture by the apparatus, is evidenced by the fact that the improvement in the power of swallowing has persisted for six or even nine months after the termination of the treatment.

CARCINOMA.

Carcinoma of the Uterus.

Uterine cancer still continues to yield most gratifying results, and the effects of radium treatment in inoperable cases are far in advance of those obtained by any other known medical or surgical methods. The local manifestations of the disease are benefited in the most striking fashion, and the complete disappearance of fungating growth, arrest of haemorrhage and discharge, healing of ulceration and relief from pain are phenomena of almost daily occurrence. In favourable cases, moreover, the treatment appears to exert a distinctly retarding influence on the dissemination of deposits, and thus to arrest the progress of the disease. It is not possible, however, to speak of "cure" even in these latter instances.

Great care must be exercised in the treatment of recurrences which make their appearance within six months of the performance of a Wertheim's operation. The functions of the trophic nerves of the pelvis seem often to be seriously impaired by the extensive and elaborate dissection which is associated with this method of hysterectomy, and for this reason the amount of radium used should be small, not exceeding 50 mg., the screening not less than 1.5 mg. of lead, and the total exposure not longer than twenty hours spread over four or five days. Unless these precautions be observed a severe and extensive destructive reaction may follow the application of radium.

In all cases in which radium has been applied within the vagina the patient should be instructed to douche freely night and morning for at least six weeks after the termination of the treatment, as unless this be done an adhesive vaginitis not infrequently occurs. In some extremely susceptible subjects a transient proctitis has been noted to follow upon intravaginal treatment.

The screening employed in cases of carcinoma of the uterus is either 1 mm. of silver or 2 mm. of lead, but the thinner screening should only be adopted when the cervical canal is patulous and the tube can be introduced into its cavity.

Carcinoma of the Breast.

The number of patients with this disease applying for treatment far exceeds that of any other malignant condition.

The policy of declining to treat operable cases is still rigidly adhered to—unless the patients have absolutely refused to submit to operation—and radium is used as a last resource.

Many patients exhibit a great susceptibility to radium: the primary growth becomes smaller, infected glands and subcutaneous nodules lessen or perhaps even disappear. Little or no effect appears to be exerted in the prevention of metastatic deposits, though the treatment does not, at any rate, hasten their dissemination. Some cases in which pleurisy, dependent upon carcinomatous invasion of the pleura, has been present have shown remarkable improvement, and the application of powerful apparatus screened with 2 mm. of lead over the affected pleura, after a preliminary paracentesis, has effectually prevented the further formation of pleuritic effusion.

A few patients have been under treatment at intervals of three or four months since the opening of the institute in September, 1911, and it has been noted that a stage in their treatment is reached sooner or later at which the response to radium fails, and the benefit derived becomes negligible.

Small isolated recurrent nodules, inoperable by reason of their attachment to the sternum, clavicle, ribs, or rib cartilages, are best treated by burying a small powerful emanation tube screened with 1 mm. of silver in them for a period of twenty-four hours.

Carcinoma of Thyroid.

Encouraging results have been obtained in the few instances that have come under notice, the progress of the disease has been arrested, and a decrease in the size of the

TABLE II.—CLASSIFICATION OF CASES.

Disease.	Examined but not Treated.	Results not yet Noted.	Prophylactic Treatment Only.	Apparently Cured.	Cured.	Improved.	Not Improved.	Abandoned Treatment.	Dead.	Total.
CARCINOMA, squamous-celled—										
Glabrous skin	1	—	1	2	—	4	4	1	—	13
Buccal, oral, lingual, and pharyngeal mucous membranes	6	10	6			9	15	3	4	53
Oesophagus	5	—	—	—	—	4	4	1	—	14
Larynx	1	2	—			1			—	4
Vagina and vulva	—	—	1	1		3	1	1	1	8
Uterus	—	2	2	—		27	8	1	2	42
Penis	—	—	—	—	—		1	—	—	1
Bladder	—	—	—	3	—	3	—	1	2	9
CARCINOMA, spheroidal-celled—										
Breast	11	22	11	2	0	40	19	11	12	128
Liver and gall bladder	—	—	—	—		1			—	1
Thyroid	—	—	—	—	—	3	—	—	1	4
Paget's disease	—	—	—	1	—	—	—	—	—	1
CARCINOMA, columnar-celled—										
Large intestine	1	4	2	—	—	—	—	1	1	9
Rectum	9	9	1	—	—	23	16	—	6	64
Stomach	—	—	—	—	—	1	1	1	—	3
Ovary	—	2	—	—	—	—	1	—	2	5
Prostate	1	—	—	—	—	4	—	—	—	5
Kidney and suprarenal gland	—	1	—	—	—	—	—	1	—	2
Parotid	—	—	—	—	—	—	1	—	—	1
RODENT ULCER	4	21	2	40	—	34	7	3	—	111
SARCOMATA—										
Spindle-celled	1	—	1	1	—	8	4	1	1	17
Round-celled	1	—	—	—	—	1	—	—	1	3
Melanotic	—	—	1	—	—	—	1	—	—	2
Myelosarcoma	1	—	—	—	—	1	—	—	—	2
Lymphosarcoma	—	1	—	—	—	2	—	—	—	3
Endothelioma	—	2	2	—	—	2	2	1	1	10
Lymphadenoma	—	—	—	—	—	4	2	1	—	7
Malignant glands	1	1	—	—	—	4	2	3	2	13
Parotid tumour	—	—	—	—	—	—	1	—	—	1
Abdominal tumour	—	—	—	—	—	—	1	—	1	2
Mediastinal tumour	—	1	—	—	—	4	—	1	—	6
Villous tumour of bladder	—	—	—	—	—	2	1	—	—	3
Polypi of vagina	—	—	—		1	—	—	—	—	1
Adenoma of thyroid	1	2	—	—	—	—	—	—	—	3
Fibromata	3	—	—	—	1	3	2	1	—	10
Fibroid disease of uterus	—	1	—	—	—	6	—	—	—	7
Leucoplakia	2	—	—	1	—	2	—	—	—	5
NAEVI—										
Capillary	—	4	—	—	1	19	1	—	—	25
Cavernous	1	1	—	—	4	8	4			14
Moles, warts, and papillomata	1	2	—	—	8	6	1	—		18
TUBERCULOSIS—										
Glands	—	—	—	1	—	2	—			3
Skin	1	—	—	—	—	5	—	—	—	6
Conjunctiva	1	—	—	—	—	—	—	—	—	1
Spring catarrh		—		1	—	1	—	—	—	2
Chronic inflammations	1	1	—		2	3	—	—		7
Chronic ulcerations	1	—		—	1	6	1	—	—	9
SKIN DISEASES—										
Keloid and vicious cicatrices	2	2	—	2	—	10	1	—	—	17
Lupus erythematosus	—	—	—	—	—	6	—	—	—	6
Psoriasis	—	1	—		—	4	2	—	—	7
Pruritus	—	2	—	—	2	2	2	—	—	8
Chronic eczema	—	—		—	—	3	1	—		4
Lichenification of skin	—	—	—	—	—	1	—		—	1
Mycosis fungoides	—	—	—	—	—	1	—	—		1
Roentgen-ray dermatitis	—	—				—	1	—	—	1
Telangiectasis	—	—			—	1	—	—	—	1
Hypertrichosis	—	—	—	—	—	—	1	—	—	1
GENERAL DISEASES—										
Arterio-sclerosis	3	1	—	—	—	2	1	1	—	8
Exophthalmic goitre	1	1	—	—	—	4	—	—	—	6
Myelogenous leukaemia	—	—	—	—	—	1	—	—	—	1
Myasthenia gravis	—	—	—	—	—	—	1	—	—	1
Neurasthenia	1	—	—	—	—	2	—	3	—	6
Neuritis	6	5	—	—	—	5	3	—	—	19
Neuralgias	—	2	—	1	—	2	1	—	—	6
Gout	—	2	—	—	—	3	—	2	—	7
Rheumatism	3	2	—	—	—	1	—	3	—	9
Arthritis deformans	41	69	—	—	—	47	39	8	—	204
Totals	112	176	30	56	18	341	152	50	37	972

existing growth has been obtained, the general discomfort and dysphagia when present being greatly relieved. The line of treatment employed has been the use of numerous powerful applicators screened with 2 mm. of lead and so disposed over the surface of the growth as to obtain the maximal cross fire irradiation. Burying of emanation tubes within the growth has not yet been adopted owing to the great tendency of these growths to fungate if any breach be made in the investing skin.

Paget's Disease.

The superficial lesion in this condition is usually speedily cured by one hour's exposure to a half strength plate unscreened, but the underlying induration and affection of glands, if present, require prolonged treatment with heavily screened applicators if any real benefit is to be obtained; in cases in which the patient is willing to submit to operation this procedure should always be adopted.

Carcinoma of Rectum.

This disease displays much variation in its response to radium therapy, and numerous factors have to be considered in prognosis. Speaking generally, the soft annular and vascular type of growth is much more favourably affected than the flat, hard, non-annular plaque with much subjacent induration. In the treatment of this latter class of growth the action of the gamma rays (which it is impossible to prevent) on the healthy rectal mucous membrane opposite the plaque produces a proctitis, which though generally transient, sometimes proves both persistent and severe, and adds greatly to the patient's discomfort. In the treatment of the former type, if the radium tube be of proper dimensions and introduced accurately within the lumen of the growth, little or no healthy mucous membrane is affected by the gamma rays, and no proctitis occurs.

Growths situate in the upper half of the rectum

appear to be more amenable to treatment than those in the lower, though this may be due to the fact that tenesmus is always more constant and severe when the growth is near the sphincters.

The performance of colostomy before radium treatment is often advisable, as the constant passage of faeces over a surface that is reacting to radium frequently causes much pain. Idiosyncrasy is sometimes responsible for curious results. Some patients are extremely susceptible to the action of radium, and proctitis appears quickly, is very severe, and persists for a long time. With others the reaction sometimes takes six or eight weeks to develop, proceeds exceedingly slowly, and does not disappear for two or three months.

The routine method of treatment consists of a thirty-hour exposure—five days of six hours each, with a tube containing 100 mg. of radium bromide, screened with 2 mm. of lead and 3 mm. of rubber, and applied in actual contact with the growth, the series of exposure being repeated at the end of six weeks. If the patient prove extremely susceptible smaller doses are given at shorter intervals. In the most favourable cases the carcinomatous material shrinks and becomes replaced by dense fibrous tissue. In instances where the original growth has been of the annular type a fibrous stricture will result, which will need frequent and regular dilatation.

Carcinoma of Prostate.

The number of cases of this condition which have been treated up to the present is not very large, but benefit has been noted in all of them. Haematuria, when existent, has been either diminished or abolished, pain has been greatly lessened, and the size of the growth decreased. Various methods of treatment have had to be adopted according to the nature of the case. When catheterization can be well tolerated, a 50 mg. tube of radium bromide in a "window" screen of 1 mm. of silver and 1 mm. of lead is introduced per urethram, and maintained in actual contact with the growth for a period of two hours a day on five successive days, and its action is supplemented by another tube of 100 mg. in a screen of 2 mm. of lead, introduced into the rectum for six hours a day on five successive days.

When catheterization is not practicable or advisable, the action of the rectal tube is reinforced by a powerful flat applicator screened with 2 mm. of lead, and placed either on the perineum or over the pubes.

Carcinoma of Bladder.

Nine cases of this disease have been treated, and in six instances the results have been most gratifying. The haematuria, cystitis, and all subjective symptoms have disappeared, and cystoscopic examination has shown that the size of the growth has been greatly lessened, and any ulcerated surface has become covered with healthy epithelium.

The treatment has consisted of the introduction of a 50 mg. tube of radium bromide in a "window" screen of 1 mm. of silver and 1 mm. of lead inserted per urethram, and maintained by means of a pliable silver wire in such a position that the window side of the apparatus is in actual contact with the growth. If the lesion be on the base of the bladder, a second tube screened with 2 mm. of lead is placed in the vagina in female, or in the rectum in male patients; but if on the anterior bladder wall, a flat applicator, similarly screened, is fixed over the pubic region. The usual length of exposure is ten hours intravesically in five days of two hours each, and thirty hours with the vaginal, rectal, or pubic applicators spaced over the same number of days.

RODENT ULCER.

But little has been added to our knowledge of the treatment of this condition, but when dealing with the question of prognosis it appears justifiable to divide rodent ulcers into two definite clinical types:

1. The hypertrophic nodular type, with slight superficial ulceration of a scaly character. This class responds extremely well to radium, and yields most satisfactory results.

2. The excavating type, with undermined and overhanging edges and a gelatinous base. This not infrequently proves very intractable and repair is most difficult to effect.

Whenever the size and situation of the ulcer permit, it is best to give one powerful unscreened exposure, a full-strength plate being applied in actual contact with the ulcer for one, two, or three hours, according to circumstances. One such treatment usually suffices to produce an apparent cure. Exposures of short duration repeated at frequent intervals are not nearly so effectual, and instances have been met with in which the adoption of this procedure appears to have been responsible for the development of an epithelioma on the site of the original ulcer.

Rodent ulcers attacking cartilage, bone or mucous membranes are very refractory, though an exception should be made with regard to the orbital mucosa, which is generally very amenable to the action of radium.

SARCOMATA.

Speaking in general terms, these growths, if taken in their early stages, and before dissemination has occurred, do very well under radium treatment. The burying within the growth of tubes of radium salts or radium emanation should be resorted to whenever practicable, and the action of these tubes may be much helped by the external application of radium plates heavily screened.

It is important to use a large quantity of radium, and to give a heavy dosage. Small doses should be avoided, as they exert a distinctly irritating effect and stimulate the growth of the tumour. The best results are obtained in sarcomata of the tonsil and post-nasal space, and the results in many such cases are amazing, the growths completely disappearing within six weeks of the treatment.

Lymphosarcomata also give excellent results.

Melanotic sarcomata are not influenced by radium, and in the few cases that have been treated no benefit has been observed.

LYMPHADENOMA.

When the disease is localized and confined to one or more small superficial areas the disappearance of the enlarged glands is frequently brought about by the use of radium, and the progress of the disease is thus arrested. When, however, the condition is generalized, the employment of numerous large and powerful applicators becomes necessary, and this heavy dosage is almost always followed by severe systemic disturbance, with high temperature and general malaise. After the reaction has subsided considerable improvement is often apparent, but this is only temporary in character, and the condition sooner or later returns with increased severity.

MEDIASTINAL TUMOURS.

In almost every instance that has come under observation the rate of growth has been very markedly checked by the use of radium, and in one or two cases a definite decrease in the size of the tumour, as seen by *x*-ray screening, has undoubtedly occurred.

If the condition be accompanied by an accumulation of fluid in the pleura, and paracentesis be performed, radium appears to exert a very remarkable action in lessening the tendency to the production of further effusion.

In these cases the use of a very large quantity of radium (400 to 500 mg.) is indicated. The applicators should be screened with 2 mm. of lead, and disposed in such fashion over the chest wall as to procure the maximum "cross fire" irradiation.

Treatment must be very persistent, a total exposure of not less than thirty hours should be given, and the series repeated at the end of four weeks. This heavy dosage is almost invariably followed in two or three days by a feeling of great fatigue and exhaustion, but this condition passes off completely in about a week's time.

FIBROID DISEASE OF THE UTERUS.

Radium exerts a most beneficial action upon the distressing symptoms menorrhagia and metrorrhagia, which are the almost invariable concomitants of this condition, though it seldom produces any very great diminution in the size of the uterus. As the cervical canal is rarely sufficiently patulous to admit a screened radium tube without previous dilatation, and patients are often averse from this, the treatment may be carried out by the

introduction of a tube containing 100 mg. of radium, screened with 2 mm. of lead, into the posterior fornix, and applying a plate of from 80 to 100 mg. similarly screened over the fundus uteri.

The total exposure should be between thirty and sixty hours, spread over from five to ten days, and the series should be repeated after six or eight weeks. The first effect noted is the checking of the metrorrhagia, and this is followed by a progressive decrease of the menorrhagia until the flow becomes normal, or sometimes ceases altogether.

Leucoplakia.

Leucoplakic patches on the tongue, cheek, or vulva, are speedily removed by radium, but they tend to recur sooner or later. Half-strength plates screened with $\frac{1}{10}$ mm. of lead should be used, and exposures varying from one to three hours' duration, according to the thickness of the lesion should be given. A slight superficial reaction takes place and the patches disappear.

Naevi.

Flat Superficial Naevi, Capillary Naevi, "Port Wine Stains."

Before expressing an opinion as to the possibility of radium treatment effecting an improvement in any particular instance, it is advisable to subject the lesion to diascopy. If blanching is readily effected by gentle pressure, the result of the treatment will probably be satisfactory; but if it be found impossible to produce blanching except by great pressure, it is unlikely that radium can do much for the condition.

Infinite patience is necessary in the treatment of superficial naevi, and the utmost caution must be observed. The effect of each exposure should be most carefully studied, as too frequent treatments or excessive dosage may result in the production of troublesome telangiectases. It is best to use quarter or half strength applicators screened with $\frac{1}{10}$ mm. of aluminium, and to start with short exposures of from fifteen to twenty minutes' duration, gradually increasing the length of the same until a satisfactory reaction has been obtained. So soon as the lesion has assumed a salmon-pink colour, the screening should be altered to $\frac{1}{10}$ or $\frac{2}{10}$ mm. of lead, and the length of exposure increased to one, one and a half, or two hours.

Cavernous Naevi.

These do excellently under radium, especially when of such shape that "cross fire" radiation is possible. Half strength applicators screened with $\frac{1}{10}$ mm. of lead should be employed, and the exposure should be from one to three hours' duration, spread over three successive days. Little or no surface reaction is produced by this method of treatment, and the naevus shrinks gradually and steadily. If, on palpation, the presence of a pulsating vessel is appreciable, the case is not likely to prove completely successful unless the vessel be first ligated.

Warts and Papillomata.

Warts and papillomata yield readily to short exposures of from twenty minutes to one hour's duration with half strength apparatus unscreened. The reaction is but slight and the resultant scar scarcely noticeable.

Tuberculosis.

Tuberculosis of Glands.—In cases in which surgical measures have been declined for cosmetic reasons, radium often proves of considerable value, either when used alone or as an adjunct to vaccine treatment. Heavily screened exposures of thirty or more hours' duration should be resorted to and an effort made to secure "cross fire" irradiation where practicable. If the glands be caseating, radium treatment is of very little use.

Lupus Vulgaris.—As a routine treatment for this disease Finsen light is greatly to be preferred to radium, but where it fails to effect a cure or improvement radium sometimes proves of great use. Unscreened exposures of one or two hours' duration must be given and a destructive reaction produced. The resultant scar is usually firm, smooth, supple, and inconspicuous.

Spring Catarrh.

In this condition the employment of radium is strongly to be advocated, as it will often cure the most intractable cases. Personal idiosyncrasy is, however, a very important consideration, and it is essential to proceed with great caution, giving short unscreened exposures at intervals of a fortnight, and carefully noting the reaction. If the dosage be accurately adjusted, the granulations on the orbital conjunctiva gradually disappear, there is no marked inflammation, and no resultant scarring of the mucous membrane. A special form of applicator should be used which can readily be introduced into the conjunctival fornices. It should be of full strength, and the first exposure should not exceed fifteen minutes' duration. No screening is employed. If the effect be not satisfactory the length of the exposure may be increased to twenty, twenty-five, or thirty minutes until the desired result is obtained.

Skin Diseases.

Keloid.

This condition continues to give most excellent results when treated with radium; and a great improvement, if not complete cure, can be safely predicted. In tender and painful keloids the anaesthetic effect of radium is generally very marked, and appears very early in the treatment.

Screening with 1 mm. of silver is almost always employed, and an exposure of from eighteen to thirty hours spread over from three to five days, according to the size and thickness of the lesion, is given. This brings about a gradual absorption of the keloidal tissue unaccompanied by any surface irritation.

Lupus Erythematosus.—This very intractable and puzzling disease often responds favourably to radium, even after all routine methods have failed. Short exposures with half or quarter strength apparatus lightly screened and repeated at intervals of four weeks give the best results.

Psoriasis and Chronic Eczema.—Both of these conditions generally yield readily to short unscreened exposures of from two to five minutes' duration, given on three successive days, the series of exposures being repeated at intervals of a fortnight. The patches quickly disappear after a slight superficial reaction, and in eczematous cases there is but little tendency to recurrence. With psoriasis, however, the disease almost invariably reappears after a time, though with some patients the interval that elapses may be of many months' duration.

Lichenification of the skin, with its attendant intolerable itching, is quickly relieved and often completely cured by one exposure of ten or fifteen minutes' duration to a half-strength applicator screened with $\frac{1}{10}$ mm. of aluminium. Some very obstinate cases which have hitherto defied all the usual methods of treatment have responded most favourably to this procedure, the lesions have disappeared and have not recurred.

Pruritus.—The analgesic effect of radium is often of the greatest use in this disease, and short unscreened exposures frequently produce a degree of relief which is unattainable by any other measures. This is especially noticeable if the pruritus occur in association with a definite lesion such as leucoplakia or hyperkeratosis. If the dosage be carefully considered and the treatment repeated at fortnightly intervals until the skin is restored to its normal condition, complete and permanent cure may result. If, however, the condition be a neurosis, the prognosis is not so hopeful, and the benefit derived, if any, is not likely to be of very long duration.

Exophthalmic Goitre.

Few patients suffering from this disease have as yet been treated at the institute, but the results obtained are sufficient to justify a trial of radium when other treatments have failed to produce any result. Prolonged exposures of thirty or more hours' duration in all should be given, with heavily screened apparatus containing 200 or 300 mg. of radium, the apparatus being so disposed as to cover as much as possible of the gland surface.

Three or four weeks usually elapse before any effect is appreciable, but from that time on a gradual diminution in the size of the gland, with slowing of the heart's action, lessening of tremor and of the degree of proptosis, may be looked for.

The series of exposures should be repeated at intervals of three or four months.

ARTHRITIS DEFORMANS.

The daily administration of 250 c.cm. of radium emanation solution of a strength of not less than 1 millicurie per litre to patients suffering from this obstinate and painful and crippling disease is sometimes attended by very remarkable results. It is difficult to predict with certainty the degree of improvement likely to occur in any particular instance, but the cases which appear to derive most benefit are those in which the disease is of relatively short duration, and the changes are periarticular in type and multiarticular in distribution. The age of the patient also exerts some influence, those under 40 responding more quickly to the action of the emanation. Cases with a definite gouty history sometimes experience an acute exacerbation of all their symptoms within the first week or ten days of their treatment, but this disturbance is quite transient, and is usually followed by a distinct change for the better.

Little or no improvement can be looked for in instances where cartilaginous or osseous changes are predominant, and the radium emanation solution is powerless to bring about the absorption of osteophytic growths or the loosening of fibrous or bony ankylosis.

When limitation of movement is due to periarticular fibrous thickening, considerable increase of mobility often follows on the taking of the radium water and enables patients to perform actions, such as feeding themselves, brushing their hair, shaving, etc., which they may have been powerless to do for some months or even years.

Other favourable effects of the treatment are the lessening or disappearance of the muscular and articular pains, the grating of the joints on movement is not so marked, the muscles regain much of their lost tone, and the patient's general health is much improved. This is especially noticeable when the patients are suffering from anaemia, the haemoglobin index being rapidly increased.

Much research work has yet to be undertaken to enable an accurate opinion to be formed of the manner in which radium emanation solution produces these results, as its action appears to be a multiple and highly complex one, but the reinforcing of the body ferments, the increase of tissue oxidation, and the dissolving of uric acid are undoubtedly factors which contribute to its success.

I desire to express my indebtedness to my assistants, Dr. J. E. A. Lynham and Dr. A. Burrows, for the valuable help they have given in the compilation of this report.

The opinions recorded are the result of our joint observations, as treatment has in many instances been planned and carried out entirely by them.

APPENDIX.

REPORT OF THE CHEMICO-PHYSICAL LABORATORY.

By W. L. S. ALTON,
Fellow of the Institute of Chemistry, Director.

SINCE the publication of the last report, the laboratory staff has been almost wholly engaged in attending to an ever-increasing demand for emanation applicators and for radio-active water.

Emanation Applicators.

These applicators have a very great advantage over applicators containing fixed radium salts, inasmuch as it is possible to concentrate the activity per unit area to a very high degree.

Since the emanation in equilibrium with 1 gram of metallic radium only occupies a volume of 0.59 c.mm., it is easy to see what advantages can be obtained by the saving of space compared with the relatively bulky radium salt. For example, the tubes containing 100 mg. of radium bromide used in the Institute measure 40 mm. long and 2.2 mm. in diameter, while it is quite easy to make an emanation tube equal in activity to them, but measuring only 6 mm. long and 1.3 mm. in diameter.

Improvements in the construction of the apparatus used have resulted in the production of these emanation tubes of very small calibre, the latest achievement being the charging of iridium-pointed platinum needles (3 cm. long, 2 mm. diameter, and 0.3 mm. thickness) with emanation in capillary glass tubes for insertion into malignant tissue. These needles, the suggestion of the medical staff of the Institute, appear to be easy to use, and if certain principles are observed are not difficult to fill with emanation.

The larger emanation tubes have been standardized in dimensions—that is to say, they have been constructed to fit certain standard screens; these screens are of the following dimensions:

An "A" screen is 2 centimetres long,
A "B" " 3 " "
A "C" " 4 " "
All of them with an internal diameter of 2 millimetres.

These screens vary both as to material (lead or silver) and as to thickness of wall, thus giving considerable latitude in the treatment of special cases.

With the improvement of the apparatus the rate of production of these tubes has enormously increased; two tubes are frequently made at the same time from one piece of capillary tubing, and are separated by means of a mouth-blow pipe, a constriction being made in the middle of the tube before the introduction of the gas.

It has been urged against the use of emanation tubes that their initial activity, which is often considerable, is rapidly lost; and that their residual activity, which is small in amount, but of long duration, cannot be made use of.

The answer to the first point is, that a treatment rarely exceeds twenty-four hours, and that an emanation tube can so be made that its average strength during that period shall be the strength required (the loss during twenty-four hours being only 16 per cent.).

As regards the second point, when emanation applicators are returned after use to the laboratory they frequently possess considerable residual activity. As a rule the individual tubes are no longer sufficiently powerful to be of any therapeutic value, but an apparatus has been devised whereby the tubes are crushed and the emanation extracted, several tubes of low activity being utilized to make a tube of high activity.

The stock of radium salts available for emanation production has been subdivided for the sake of safety into units, each of about 200 mg. of radium bromide. Each unit has been attached to its own pump, and has been mounted separately on the walls of the iron safes in the basement. All the pumps and glass work have been made by the laboratory staff, considerable time having been spent in their construction.

During the year 241 emanation tubes and applicators have been made (as compared with 44 in 1912), and the activity of these applicators was equal to that of over 19 grams of radium bromide. These applicators were sent by post as required to various places in the British Isles.

Radio-active Water.

The output of radio-active water has also been largely increased during the year, over 3,600 litres being made in 1913 as compared with 400 litres in 1912. New apparatus has been constructed which permits of 150 bottles being dispatched daily by post to patients as directed by their medical attendants. The strength of the water remains the same as for last year, that is to say, approximately 1 millicurie per litre.*

The emanation used for the production of this large volume of water is equal in activity to about 6.5 grams of radium bromide.

Radium Applicators.

During the year there has been a considerable demand by medical men and by other institutes for the preparation of radium applicators similar to those used in the Institute. Applicators have been prepared for several of the London hospitals as well as for institutes in Germany and Denmark. The number of these amounts to 55 (as compared with 4 made in 1912).

In addition 15 specimens of radio-active material were received from various sources for analysis, a branch of the laboratory work which shows signs of increasing since the acquisition of an International standard.

* 1 millicurie of emanation is equivalent to 2,670,000 maché units.

A CASE OF MULTILOCULAR CYSTIC DISEASE (CYSTADENOMA) OF THE PANCREAS.

[WITH SPECIAL PLATE.]

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THE first part of this remarkable case was published thirteen years ago in this JOURNAL (1901, vol. ii, p. 1160). The patient was completely lost sight of until July 19th, 1910, when quite by chance I was called in to attend her at her own home. The attendance lasted until her death on March 30th, 1911.

I am much indebted to Mr. George Heaton for his kindness in allowing me to make use of the notes which I made upon this case when acting as his house-surgeon; and to Dr. Mackey and Mr. B. J. Ward for their assistance in cutting the sections. My thanks are also due to Professor Leith for granting me permission to photograph the tumour, which is preserved in the pathological museum of the Birmingham University (Spec. 200), and for the photo-micrographs which were taken by him in the pathological laboratory of the university:

I. D., aged 27, single, was admitted to the General Hospital, Birmingham, on October 20th, 1900, with an abdominal tumour situated above and to the left side of the umbilicus, but below the stomach. The patient had noticed the lump for five or six months only; her attention was drawn to it by a little pain she had experienced on exertion during this time. As a child she was never active as other children, owing to pain in the back, which any extra exercise invariably brought on.

Since leaving school she had been a nursemaid, and later and up to the time of her admission worked at a pen factory. Upon admission her general health was good, and with the exception of a little habitual constipation the digestive organs were performing their functions normally. The stools were normal. The urine, with the exception of a faint haze of albumin, was always normal and free from sugar.

The bladder and ureteral orifices were found to be normal on cystoscopic examination, and urine was seen to spurt normally from both orifices. The abdominal tumour was globular, freely movable, and gave the examining hand the impression that it was a tense cyst. It did not move with the respiratory movements. The spleen could be mapped out and was found to be in its normal position and to be unconnected with the tumour. Examined bimanually from the left loin to the abdominal wall, the tumour could be felt projecting backwards into the loin. It could be felt to fill the abdominal cavity between the two hands and *ballottement* could be obtained. A provisional diagnosis of hydronephrosis was made after several consultations.

On November 8th, 1900, Mr. Heaton operated by first exposing the left kidney through the usual lumbar incision. With the exception of a few small cysts on the surface of the kidney, such as are seen in cases of chronic interstitial nephritis, the kidney, its pelvis, and the upper end of the ureter were normal. The tumour, however, could now be felt to be in front of the kidney and quite distinct from it and to pass to the right across the abdomen; the kidney was replaced and the lumbar wound sutured. Mr. Heaton then opened the abdomen in the left linea semilunaris over the most prominent part of the tumour, the great omentum was pressed forward by the tumour, which projected between the stomach and the transverse colon. A large cyst first came into view. It was approached through the great omentum and tapped. One and a half pints of dark reddish-brown fluid were withdrawn. It was intended to stitch the edges of the opened cyst to the abdominal wound, but, on further examination, the tumour was found to be much more extensive and to be composed of a multitude of smaller cysts congregated to form a large lobulated tumour extending to the right. It shelled out quite easily until the duodenum was reached. The pancreas was therefore ligated at its neck; the head, although very cystic, was left behind for various reasons.

After the operation the patient was rather collapsed—but, with the exception of a delay in convalescence caused by a portion of the abdominal wound bursting open ten days after the operation, which necessitated the patient being again anaesthetized for the wound to be resutured—recovery was uninterrupted. After the operation digestion remained good, and food was well assimilated. The urine remained free from sugar. On January 5th, 1901, she was sent to a convalescent home.

The tumour (Figs. 1 and 2) removed consisted of the whole of the body and tail of the pancreas, and measured 10 in. by 7 in. It consisted in the main of a large number of cysts varying in size, separated from one another by septa of fibrous tissue and a varying amount of apparently normal pancreatic tissue. The cysts were larger at the tail end than at the head end of the organ. The large cyst, which gave rise to most of the physical signs, was at the extreme tail end. It occupied the whole thickness of the tumour in this situation. The fluid from this large cyst contained altered blood and a large quantity of albumin. It had no amylolytic or proteolytic properties. It was alkaline in reaction. The fluid contained in the smaller cysts was colourless and watery.

From January, 1901, until June 6th, 1910, this patient was able to work continuously at her trade as overlooker in a large steel pen factory in Birmingham. During that time she had needed practically no medical attendance.

In July, 1910, when she again came under my care, she was almost completely confined to bed. She complained chiefly of gradual loss of power in her hands and arms, with numbness and tingling of the fingers. It was on account of these symptoms that she had been compelled to leave her work, as she was unable to pick up the pen nibs. The muscles of the body generally, and especially of the hands and arms, were much wasted. She had a large tumour in the abdomen situated immediately above and extending to the right of the umbilicus. The tumour was recognized as the head and a portion of the neck of the pancreas in a state of cystic degeneration. It formed a prominent mass and displaced the intestines downwards and into the left iliac region of the abdomen. The tumour, according to the patient, had been getting gradually larger for the last two or three years, but much more rapidly during the last two or three months. It was painless, well defined, and slightly movable. A large cyst could be recognized to the left of the tumour, and numerous small tense cysts studded all over the rest of it.

The skin of the chest, abdomen, and thighs was curiously pigmented in irregular patches of a dark brown colour, producing a piebald appearance. Except that every two or three weeks she had what she called "bilious attacks," the digestive functions were good. These attacks were "bouts" of uncontrollable vomiting; they were unaccompanied by pain or jaundice, and tended to recur more frequently towards the last. The urine, frequently tested, invariably contained a faint haze of albumin, a few granular and hyaline casts, but never any blood or sugar (Fehling and phenyl-hydrazine tests were used for sugar). The Cammidge reaction was positive throughout this part of her illness.

The course of her illness was, at first, one of rapidly advancing peripheral neuritis, with rapid wasting of the muscles, most marked in the upper extremities. One month later she had very little sensation in her arms or legs. The deep and superficial reflexes were abolished. Soon after this rigidity followed by contractures commenced in her hands. The fingers became flexed at the interphalangeal joints, and over-extended at the metacarpo-phalangeal joints. The wrist joints also became over-extended.

DESCRIPTION OF SPECIAL PLATE.

Fig. 1.—The body and tail of the pancreas removed by operation, front view.

Fig. 2.—The same, viewed from behind, showing, A, the large cyst and some of the smaller ones laid open.

Fig. 3.—The head and neck of the pancreas, anterior view. A, Duodenum; B, gall bladder; C, large cyst at the neck end.

Fig. 4.—The same, posterior view. A, Duodenum; B, gall bladder; C, the large cyst which represents the stump of the neck; D, the superior mesenteric artery and vein.

Fig. 5.—The right kidney bisected, showing hypernephroma. Note the cystic appearance of the tumour; the probe passes from the pelvis of the kidney into the ureter.

Fig. 6.—Photomicrograph of pancreatic tumour, showing the proliferation of cysts to form larger multilocular ones.

Fig. 7.—Section of pancreatic tumour showing a portion of a large cyst with its epithelial lining. The section also gives some idea of the great thickness of fibrous tissue which surrounds the larger cysts. In the centre of the field is a portion of zymogenous tissue undergoing atrophy, followed by hyperplasia of the fibrous tissue between its lobules. Note that there is no sign of inflammation. The pancreatic tissue in the lower part of the field is normal.

Fig. 8.—Section of same, high power, showing the large columnar cells which line the glandular tubules in commencing cyst formation.

ERNEST C. HADLEY: MULTILOCULAR CYSTIC DISEASE (CYSTADENOMA) OF THE PANCREAS.

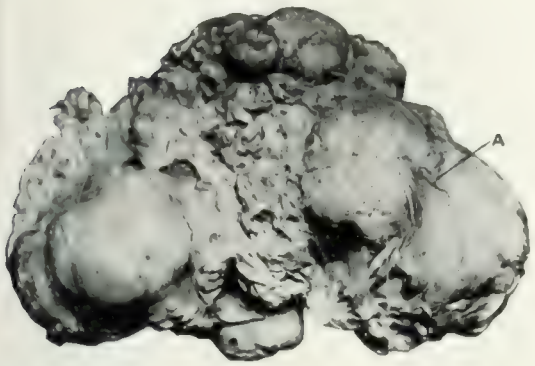


Fig. 1.

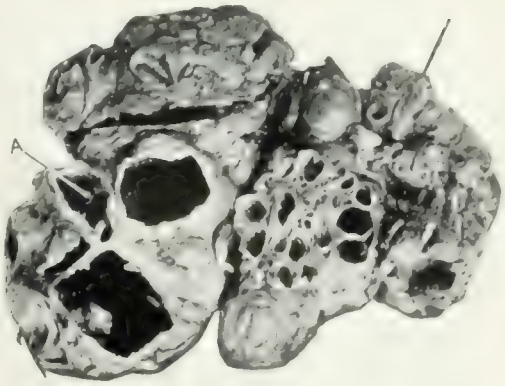


Fig. 2.



Fig. 3.

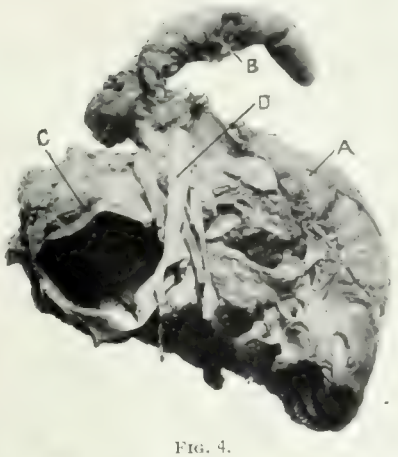


Fig. 4.

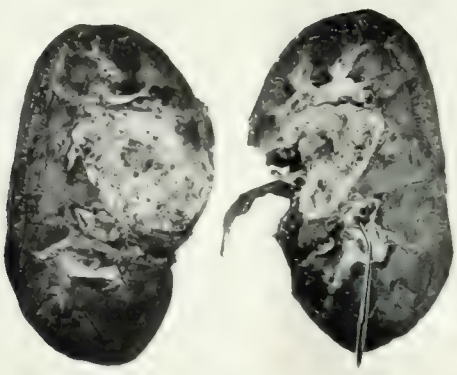


Fig. 5.

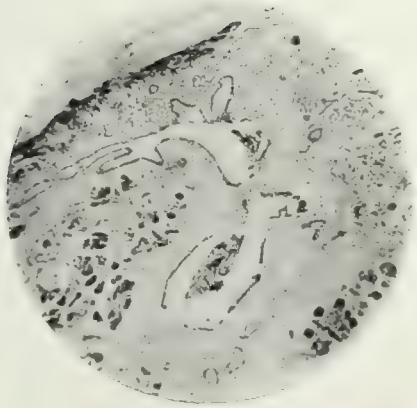


Fig. 6.

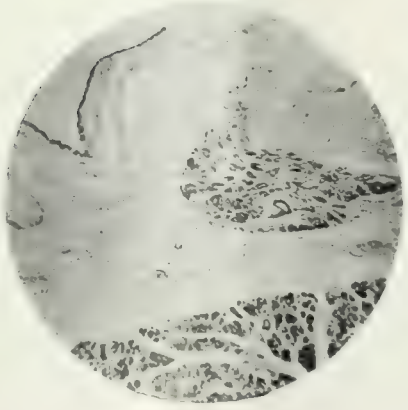


Fig. 7.

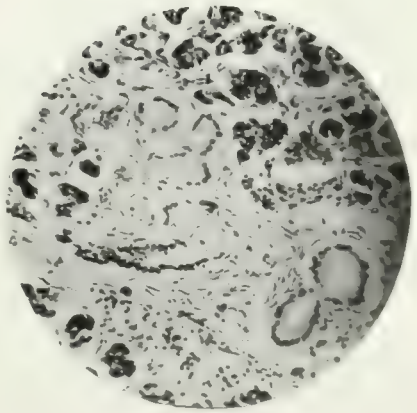


Fig. 8.

Towards the end of November, 1910, her condition resembled an advanced case of progressive muscular atrophy with contractures. The right leg was flexed at the hip and knee joints, and could not be voluntarily or forcibly straightened; any attempt to do so caused intense pain. A month later the left leg also became contracted; the knee and hip joints became flexed. There was no period of relaxation from these contractures. A bedsore formed over the sacrum in spite of diligent and careful nursing.

In the beginning of 1911 the muscular wasting had become extreme. Both legs were immovably contracted, and both hands clawed (*main en griffe*). There was still a little voluntary movement possible in the arms, but complete loss of co-ordination. She had been quite unable to feed herself or move herself in bed for some time. There was never any jaundice. Sahli's sign was present. The bowels only moved with aperients, and later, as all drugs were vomited, only after enemata.

During the last two months of life mucous casts were passed in the stools, which were otherwise normal. Liquid food appeared to be well digested; at all events, no undigested fat or other material were seen in the dejecta. During the last few weeks of her illness there was incontinence of urine and faeces.

At the time of her death, on March 30th, 1911, no musculature could be felt; she had literally wasted to a skeleton. There was only partial relaxation of the contractures at death. Her mental condition remained clear until the end.

Post Mortem.

The abdominal organs were found to be healthy, with the exceptions noted.

The liver was undergoing fatty degeneration; the gall bladder was healthy and empty; the cystic duct was patent. The common bile duct was patent. Its lumen throughout its whole length was large and its walls somewhat thickened. It opened along with the atrophied remains of the duct of Wirsung into the ampulla of Vater. The diameter of the common bile duct at the ampulla was nearly $\frac{1}{4}$ in., whereas that of the duct of Wirsung was scarcely $\frac{1}{8}$ in. A probe could be passed along the duct of Wirsung from the duodenum for $1\frac{1}{2}$ in. only into the pancreas; the continuation of the duct then became too fine to admit of anything being passed along it. No trace of a duct of Santorini could be found.

The suprarenal capsules were normal in size and healthy; no microscopical changes could be found in them.

Kidneys.—The urine removed from the bladder reduced Fehling's solution to the yellow oxide of copper. The left kidney, with the exception of six or seven small vesicles projecting from the surface, as seen at the time of the operation in 1900, was healthy. Several small cysts such as are seen in cases of chronic interstitial nephritis projected from the surface of the right kidney. A tumour projected from its posterior surface in the form of a large circular plaque $2\frac{1}{2}$ in. in diameter. It was situated nearer to the hilum than to the outer border of the kidney.

The tumour was completely covered by the capsule of the kidney. Upon bisection of the kidney (Fig. 5) the tumour was seen to be localized, and to be surrounded by a well-defined capsule, which separated it from the kidney substance. It had, as it were, formed a bed for itself by thinning the middle portion of the kidney, leaving the poles unharmed. The tumour was yellowish, and unlike kidney tissue in consistence; minute spaces looking like small cysts could be seen throughout the section. Microscopically the tumour had all the features of a hypernephroma. There were no signs of malignancy.

The pancreas was removed *en masse* with the duodenum and gall bladder attached (Figs. 3 and 4). The specimen measured 8 in. in length by 6 in. in breadth at its widest part. The greatest circumference of the head was 11 in. The stump of the neck—all, in fact, to the left of the groove containing the superior mesenteric artery and vein (Fig. 4, D)—was converted into a large unilocular cyst. It had smooth walls and did not communicate with any of the other cysts. It contained 15 oz. of reddish-brown opaque fluid with slight amylolytic, but no proteolytic properties. It contained much albumin and old extravasated blood. The head of the organ, that is, all to the right of and in front of the groove containing the mesenteric vessels, was converted into a multitude of small cysts separated from one another by septa of fibrous tissue and some pancreatic tissue. The largest of these cysts varied from the size of a walnut to that of a hazel nut. They were multilocular, each being composed of an aggregation of smaller cysts separated by perforated septa. They contained an opalescent greenish coloured fluid. Most of the cysts, however, were no larger than a pea or bean; they were unilocular and contained a clear watery alkaline albuminous fluid. No communication could be found either between the individual cysts or between them and the ducts of the pancreas. The head of the pancreas encircled the duodenum for about half its circumference, but did not compress it. There was every evidence of degeneration having advanced from the tail towards the head end; the cysts were larger towards the tail end, and the least altered pancreatic tissue was found between the head of the pancreas and the duodenum.

Microscopically there was an abundance of normal zymogenous pancreatic tissue situated between the cysts. There was no increase, as a rule, of fibrous tissue between its lobules or any sign of inflammation. In parts of the section some of the acini seemed to be opening up. A feature of the sections was the absence of the groups of cells known as the "islets of Langerhans." The fibrous tissue distribution followed and surrounded the ducts and vessels and formed a dense wall to the cysts of the neoplasm (Fig. 7). In the commencing cysts the epithelium was high and columnar of goblet form (Fig. 8). It much resembled the epithelium which lines the cysts of ovarian cyst adenomata.

In the larger cysts the lining cells were lower though still columnar. New groups of glandular tissue in the form of tubular canals could be seen in some parts of the sections adjacent to or in some cases projecting into already formed cysts (Fig. 6). Nothing to indicate malignancy could be seen in any of the sections.

REMARKS.

This case is, I believe, the only recorded case of massive multilocular cystic disease of the pancreas occurring in the British Isles. A few only are recorded in foreign journals. The special interest of the case lies in the speculation which naturally arises as to the pathology of the pancreatic tumour. It has undoubtedly a striking resemblance to the more common cystadenomata of the ovary, and was in all probability a benign multilocular proliferating cystadenoma of the pancreas.

Cases of this condition are recorded by Bozeman and Garrigues,[1] Riedel,[2] Paltauf and Selzer,[3] Kühnast,[4] Martin,[5] Gussenbauer,[6] Thiroloix and du Pasquier,[7] Cibert and Poncet,[8] Fitz,[9] Dunning,[10] Körte and Munzer,[11] Ransohoff,[12] and Vankreef.[13] Cumston[14] says that he has only been able to find records of fifteen instances of cystadenoma of the pancreas. Hartmann[15] records a similar case, which was probably a cystic epithelioma; and Pye-Smith[16] one which was described as a case of congenital cystic disease of the pancreas.

The formation of cysts could be traced microscopically in this case from a glandular neoformation, the cells of which were arranged in columns enclosing a lumen. By the enlargement of this lumen, probably by the pouring out of a secretion from the large columnar cells of goblet form, a cyst was formed. New cysts were formed by the proliferation of certain of the cells in the walls of this cyst to form fresh glandular spaces. By the bursting of these last formed cysts or others adjacent into the original one, a multilocular cyst would be formed. This is well shown in the photomicrograph (Fig. 6).

The subsequent growth of the cysts may have been mainly due to secretion and desquamation from their lining membrane, or in the case of the two large ones described to extravasation of blood into them.

The origin of the cells of the neoplasm must be purely speculative. It must suffice merely to suggest their origin from:

1. Certain primordial cells amongst (*a*) the cells lining the small ducts; (*b*) the specialized zymogenous cells of the islets of Langerhans, or the ordinary zymogenous cells, which are, according to Dale,[17] Goodall and Earle,[18] and Vincent,[19] interchangeable under certain conditions.

2. Inclusion of fetal remains—for example, the Wolffian body (see Allbutt and Rolleston[25] and Dunning's case[10]).

3. Adrenal rests[22 23 9] originally or by metastasis from the hypernephroma which was present. A hypernephroma is itself a distinctly rare tumour. Its presence may have been a pure coincidence. Doran,[20] Grafenberg,[21] Guthrie and d'Este Emery,[22] and Monsarrat[23] record cases of metastasis from hypernephromata. Lubarsch[24] found metastasis 20 times out of 29 cases in various organs, including the pancreas.

The microscopical findings do not accord with the suggestion that the cysts arose as retention cysts, caused by obstruction to the outflow from the small ducts, as (*a*) by a pathological secretion from the zymogenous cells, analogous to the ascribed cause of congenital cystic disease of the kidney, or (*b*) by chronic interstitial pancreatitis (see Robson and Moynihan[26]). For it should be noted that in interstitial pancreatitis the islets of Langerhans usually escape atrophy, at all events until a very late stage (Robson[27]), and there was no inflammatory process.

A feature of the case was the complete transformation of the pancreas into cysts. It would have been quite impossible to have enucleated the tumour or any part of it from the pancreas, as appears to have been done in some of the recorded cases (Dunning's case[10]).

Briefly, from a clinical point of view, the case was of interest because it showed the effect upon the economy of gradual loss of function of the pancreas in an otherwise healthy person, the outstanding features of the terminal part of the illness being the gradual wasting[26] of the body, especially of the muscles, unto death and the warding off of glycosuria until the end. The urine removed from the bladder after death contained sugar. It had always been free from it during life.

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A Lecture
ON
ACUTE OBSTRUCTION OF THE SMALL INTESTINE.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC

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FEW serious abdominal conditions present more difficulties in diagnosis and treatment than obstruction of the small gut. Yet diagnosis must be early and treatment prompt if the conduct of the case is to lead to a successful issue. In the beginning signs and symptoms may be inconclusive; there is only a probability of obstruction being present. To wait until this probability becomes a certainty will, in many instances, cost the victim his life. If the possibility of intestinal obstruction were more obtrusive in the practitioner's mind when confronted with the complaint of abdominal pain, early diagnosis would be arrived at more often. But he can scarcely give the disease a greater prominence in his mentality because of the rarity of the condition in comparison with the multitude of other diseases with which he has to cope. In a hospital where the number of acute abdominal cases admitted is large, where such cases concentrate from an extensive surrounding district and from the practice of many men, the numbers do not reach a high figure. At St. Mary's Hospital, during the last three and a half years, in the practice of all the surgeons, 190 cases have been admitted. If strangulated external hernias of all kinds are excluded the number falls to 83. These figures exclude all cases in which the large intestine was obstructed, a fairly numerous class. The mortality in all cases of acute obstruction when they receive proper surgical treatment is given by Treves[1] as 50 per cent. The more recent statistics of Elsberg[2] give 30 to 40 per cent. as the correct mortality. In the herewith collected cases it was 19 per cent., but if the cases of external hernia are not considered, it rises to 24 per cent.

THE CAUSES OF OBSTRUCTION.

The following table shows the conditions leading to obstruction which were met with, the number of cases in which gut was found gangrenous, and the mortality in the several classes:

	No. of Cases.	Gangrenous Gut.	Deaths.
Inguinal hernia	50	6	5
Femoral hernia	46	11	7
Umbilical hernia	7	1	3
Ventral hernia	3	1	1
Obturator hernia	1	0	0
Intussusception	35	4	6
Adhesions not elongated into bands	22	4*	5
Bands	14	1	2
Meckel's diverticulum ...	3	0	0
Gall stones	1	0	1
Volvulus	1	1	1
Stricture	1	0	1
Hole in mesentery	1	0	0
Pressure by an abscess ...	1	0	1
Mesenteric thrombosis ...	2	2	2
Cause undetermined... ...	2	0	2
Total	190	31	37

* Actual gangrene was not present in these four cases, but the gut was so damaged that resection was deemed necessary.

External Hernia.

Under this heading few remarks need be made except to call attention to the fact that a femoral hernia, if not cured by operation, is more likely to become strangulated than an inguinal hernia. In spite of the much greater relative frequency of inguinal hernia, the number of strangulated cases dealt with is only slightly greater than the number of strangulated femoral hernias. This is because of the unyielding character of the margin of the crural ring. In inguinal hernias obstruction is most often caused by fibrosis round the internal ring at the upper extremity of the canal.

The number of cases of strangulated umbilical hernia is not large, but only those cases which had small intestine in the sac are included. The omentum is the first structure to enter into the sac of an umbilical hernia, then this drags in the transverse colon. Usually only after this has happened does small gut enter the sac.

Of the 3 ventral hernias 2 occurred through old laparotomy scars; the other one was in the middle line below the umbilicus. No operation had been performed, but there was some divarication of the recti muscles. The aperture leading into the abdomen was small and had hard margins. A loop of small intestine was strangulated to the point of gangrene.

Adhesions.

Next to external hernia and intussusception as a frequent cause of obstruction of the small gut, comes local peritonitis leading to the formation of adhesions. In the table the cases of obstruction due to adhesions which had not elongated to form bands are placed separately. Where definite bands were present, the cases have been grouped with cases of obstruction due to bands of other origin than

the elongation of adhesions. It is right to make this distinction, because adhesions not elongated into bands cause simple obstruction of the lumen of the gut (obturation), whereas bands usually cause, in addition, interference with the blood supply (strangulation).

Obstruction of the small intestine due to adhesions occurs most often in the lower part of the ileum, and the adhesions are situated in the pelvis or right iliac regions. In the pelvis they result from operations upon, or disease of, the female internal genital organs. Appendicitis is a frequent cause of adhesions in the right iliac fossa, but other forms of local peritonitis also occur here, notably peritonitis around glands in the lower part of the mesentery. Tuberculous peritonitis is another well-known cause. Of the 22 cases, 8 were due to appendicitis and followed appendicectomy, 3 followed hysterectomy, 1 followed an operation for extrauterine gestation, 1 was due to adhesions around an inflamed ovarian cyst, 1 to tuberculous peritonitis, and 1 was found where a length of gut in a post-operative ventral hernia had become coiled up and matted into an impassable mass, and had subsequently become reduced into the abdomen, no fixation to the sac having occurred. There were 7 cases of obstruction of the small intestine in the right lower abdomen, where the origin of the adhesions was not determined at operation. When obstruction followed an operation, the interval elapsing before obstructive symptoms came on varied very much. Thus, in the 8 cases of appendicectomy, for example, the longest interval was two years and the shortest seven days.

The ways in which adhesions produce obstruction are said to be by (*a*) the formation of a perimural stricture, (*b*) fixation of the walls of the gut, or (*c*) kinking. The exact mechanism of obstruction when the latter two conditions are present is not always clear. A length of gut may be coiled up and its component parts fused into a formless mass. Peristalsis of the affected segment may be so interfered with in such a case that the contractions of the gut above are not sufficiently powerful to force the contents through the intricacies of the canal in the coiled-up portion, even though there be no actual mechanical block. The ventral hernia above mentioned was such a case. Afferent and efferent sections of small intestine were attached to a rounded structure about the size of an orange, the architecture of which could not be determined by external inspection. (See Fig. 1.) Even after excision it was most difficult to trace the lumen of the gut through all its windings.



Fig. 1.—A length of gut matted into a fused mass, the result of inflammation in the sac of a ventral hernia.

Adhesions over a limited area are said by Treves to interfere with normal intestinal movement, just as peristalsis is abolished in a strangulated partial enterocele. The cases do not seem to be strictly comparable; in the latter condition of sudden traumatism inhibition is probably reflex, even as such stoppage of movements occurs after any manipulation of the bowel, as the researches of Cannon and Murphy[2] demonstrated. Obstruction due to adhesions over a limited area should, more probably, be relegated to the third class—obstruction by kinking. This last class is very interesting, especially when it is remembered that very acute bending must be present to hinder the fluid contents of the ileum in their onward passage. Most surgeons must have opened the abdomen for obstruction, and found an adherent loop, which certainly was not occluded, and yet the freeing of this loop resulted in the disappearance of all the symptoms and a prompt recovery. Figs. 2 and 3 are an attempt to explain this. Fig. 2 represents a caecum and neighbouring ileum after an appendicectomy, and shows also that the terminal loop of ileum has become fixed by local peritonitis. Under normal circumstances, in the absence of adhesions, if for any reason the proximal limb of this loop should become unusually quickly filled with fluid or gas, this distension in itself would lead to a straightening out of the bend, just as the kinked finger of a rubber glove will straighten itself if the mouth of the glove be blown



Fig. 2.—Lowest coil of ileum fixed by adhesions after appendicular inflammation.

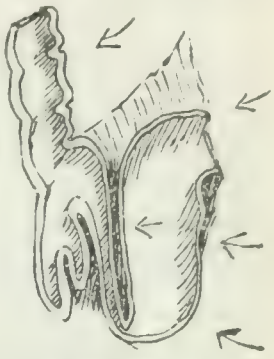


Fig. 3.—Obstruction owing to inability of coil to straighten itself.

into. But if, as depicted, the limbs of the loop be fixed and the distension take place rather rapidly, the septum between the two limbs will be pushed over, closing the lumen of the distal limb and acting as a valve, as seen in Fig. 3. This condition of affairs might be perpetuated if the intra-abdominal pressure were increased so that surrounding coils of gut from all sides were thrust against the loop in question. Such pressure would become greater from accumulation of gas the longer the obstruction remained. Under such circumstances merely opening the abdomen and allowing some coils to escape from the wound might be sufficient to allow the patency of the distal limb to be restored. When the surgeon arrives at it there is no longer obstruction, yet he very rightly frees the coil. Quite limited adhesions at the lower end of the ileum, where the gut is more or less fixed, are sufficient to bring this mechanism into play.

Bands.

When bands give rise to obstructive symptoms, in the vast majority of cases a loop of small intestine is strangulated under a short band attached at each end.

In 7 such cases the method of formation of the band was not determined more definitely than that it was a stretched adhesion the result of a local peritonitis. One case occurred four years after a partial excision of the colon. In 2 cases omentum formed the band; in the one its free extremity was attached to a tuberculous mesenteric gland; in the other the omentum passed completely round the loop of small gut employed to effect an ileo-sigmoidostomy, and its free extremity had become adherent to the abdominal scar. In 2 cases the band connected gut to a tuberculous gland in the mesentery. In 3 cases the origin of the band was a previous appendicitis.

Other bands may be produced when the appendix vermiformis, a Fallopian tube, an appendix epiploica, or a persistent Meckel's diverticulum becomes adherent at its free extremity. The first three causes were not met with in this series, but in 3 cases Meckel's diverticulum was the cause of the obstruction. It is stated by Nothnagel[1] that when a Meckel's diverticulum is simply adherent to the umbilicus it is never a cause of obstruction, but in one of these cases such a condition of affairs was present, and Halstead[3] has found this to be so in 15 out of 69 cases of obstruction due to a persistent diverticulum. In another patient the tip of the process was adherent to a lower mesenteric gland, and under the short loop thus formed a coil was strangulated. In the third case a chronic obstruction ended acutely, and at operation it was found that the diverticulum was surrounded by adhesions, whilst there was a stricture of the gut at the origin of the process.

Gall Stones.

A gall stone caused an obstruction in one case; it was 1 in. in diameter, and lodged in the upper part of the ileum. It had ulcerated from the gall bladder into the duodenum, but the adhesions between these two viscera had broken down, leading to leakage peritonitis, which caused the patient's death.

Stricture.

A fibrous stricture occurred just above the ileo-caecal valve in one case. It was due to cicatrization of a tuberculous ulcer.

Volvulus.

The one case of volvulus occurred in a patient who, two weeks before, had had an abdominal operation for the release of a partial enterocele. *Post mortem* the twisted coil, whose two limbs had become approximated by a cicatrizing process in the mesentery, was found in the pelvis.

Mesenteric Thrombosis.

There were two cases of thrombosis of tributaries of the superior mesenteric vein. In only one was a *post-mortem* examination made, but no cause for the thrombosis was found. There were adherent *ante-mortem* clots in the portal vein itself.

Mesenteric Aperture.

One case occurred where the bowel was strangulated by passing through a congenital hole in the mesentery.

Appendix Abscess.

Pressure by an appendicular abscess was found to be causing obstruction in one case.

Clinical Features of Acute Intestinal Obstruction.

The symptoms are: (1) Pain, (2) shock, (3) vomiting, (4) constipation, and finally (5) collapse.

The first symptom is always pain. It begins suddenly, and is very acute; it is constant, but paroxysmal exacerbations occur. This is very characteristic. In obstruction of the small intestine it is referred to the umbilicus, unless the obstruction is very high up, as when a gall stone ulcerates into the duodenum, or very low down, the terminal portion of the ileum having become adherent to the parietal peritoneum. In such cases the pain may be referred to the site of the lesion. The pain is made worse by food or by enemata, both of which stimulate peristalsis. Towards the end, in the state of collapse, the pain abates, and may disappear. Shock, occurring at the onset, is not always present. It is dependent upon the suddenness of the blockage, the tightness of the constriction, and the length of gut affected. The absence of shock in some cases is to be borne in mind.

Treves remarks that "vomiting in obstruction is characterized by its early onset, persistence, and its copiousness." This in the main is true, but every surgeon must be able to recall cases in which there has been a single act of vomiting, or perhaps two, only, during the first twenty-four hours, although there has been complete obstruction. Too much reliance must not be placed upon vomiting as a prominent symptom. If the condition is allowed to go on until the vomit becomes faeculent, the prospect of recovery is much lessened. When there is profuse vomiting, thirst may be a very prominent and distressing symptom.

As a rule constipation is absolute. In spite of the fact that at the onset the colon may contain much faecal matter, it is reflexly paralysed by the injury to the small gut. But in some cases the bowel below the blockage is emptied soon after the onset. Barnard's plan of giving two turpentine enemata within half an hour of one another, in order to decide whether obstruction is present or not, is excellent. The first one empties the bowel below the obstruction; the second flows away clear—indeed, it cannot enter the lumen of the tonically contracted bowel below the block.

The collapse which comes on towards the end is due to toxaemia combined with excessive loss of fluid by vomiting.

The physical signs of obstruction are (1) constitutional and (2) abdominal.

The pulse is unchanged at first. Only when peritonitis comes on and collapse sets in does it become rapid and weak. The temperature remains low. Even the onset of peritonitis does not usually raise it. The urine is partly or completely suppressed. Indicanuria occurs in obstruction of the small gut; it is usually absent when the colon is affected. The terminal stage of collapse is characterized by cyanosis, pinched features, sunken eyes, extreme muscular debility, and weak voice.

With regard to the state of the abdomen, it may be said that, with some reservations, it is not rigid, not tender, not distended, and there is no visible peristalsis. The flaccidity of the abdominal wall is striking; the onset of rigidity indicates the development of peritonitis. The presence of tenderness has the same significance. During the early and most favourable stage for operative treatment distension is absent, but later meteorism occurs. It is markedly increased with the onset of peritonitis. If acute obstruction supervenes on a chronic condition distension is present from the beginning.

It is usually stated that in primarily acute obstruction visible peristalsis is always absent, that only coils of small intestine hypertrophied as the result of chronic obstruction can, by their powerful contractions, render themselves visible through the abdominal wall. But peristalsis in acute obstruction may be visible through the thin abdominal wall of a child or through the lax abdominal wall of a multiparous woman. In such cases within twenty-four hours distended coils of small gut may stand out. When the peristaltic waves cannot be seen they can sometimes be felt. A coil of gut hardening under the fingers whilst palpation is being performed is a very valuable sign, and accompanied by a paroxysm of pain is absolutely diagnostic of obstruction. Not infrequently, through the stretched abdominal wall of a multiparous woman, coils of intestine can be seen to stand out, and also to contract when there is no obstruction present. These normal peristaltic movements are apt to be misleading, but doubt as to their nature will disappear if it be remembered that they are unaccompanied by pain and that they are slower and less tumultuous than the violent contractions in obstruction.

Occasionally, in occlusion due to some cause other than intussusception, there is a tumour felt in the abdomen. In a case where there was a loop of gut strangulated under an adherent Meckel's diverticulum, a distinct tumour (the distended loop) was felt in the right iliac fossa, so that the case was sent in with the diagnosis of appendix abscess. In another case an ill-defined resistance, subresonant on percussion, was found to be a collection of collapsed coils below the obstruction. Rectal examination will exclude a carcinoma recti, and perhaps reveal an intussusception.

Diagnosis in Relation to Prognosis.

Every hour's delay before instituting treatment renders the prospect of recovery for the patient less likely, even though the appropriate surgical measures be taken. There is a point in the course of the disease beyond which all known surgical measures are powerless to avert the fatal issue. At present, while the actual cause of death in acute obstruction is still undetermined, there is no way of telling when this stage has been reached. It is therefore important to make the diagnosis early and to proceed to treatment forthwith. As shown above, in early stages many of the signs attributive to an acute abdomen (rigidity, tenderness, distension) are wanting. A conclusion must be arrived at without them. The characteristic pain and the repeated vomiting (which may, however, fail), together with the result of two test enemata, suffice for the diagnosis. Always is it to be borne in mind that the pulse-rate and temperature are not disturbed. If gut becomes gangrenous the prognosis is much worse (53 per cent. mortality in this series, as compared with 19 per cent. taking all cases together). Gangrene may set in very early; in 4 cases it was present within twenty-four hours, and in 5 others within forty-eight hours.

If, in addition to the diagnosis of obstruction, it can be settled where the obstruction is situated, surgical manipulations may be much expedited with a bettering of the prognosis. The examination of the hernial apertures and the rectum should never be omitted or valuable information will be lost, and the same may be said of the urine. The onset of uraemia may strangely simulate obstruction.

The Influence of Experimental Observations upon the Surgical Treatment.

The problem of the treatment of acute obstruction does not resolve itself merely into the development of an efficient technique for the restoration of the continuity of the lumen of the bowel. Many cases will die in spite of this procedure being executed in an expeditious and

skilful manner. Indeed, some surgeons (Elsberg), maintain that it is not the most essential step in operative treatment, and, in fact, is frequently an unnecessary one.

Of the three alleged causes of death in acute obstruction—namely, (1) reflex nervous influences, (2) secondary peritonitis, (3) acute autointoxication—the first two have been shown not to be the real causes in the majority of cases. It is true that, if a case is allowed to pursue an uninterrupted course, organisms may eventually traverse the intestinal wall even without there being any gangrene present, and set up peritonitis, but this is unusual. Most cases die without any peritoneal infection having occurred. Absorption of the toxic material found in the lumen of the gut is to be regarded as the most potent element leading to dissolution. Murphy and Vincent's[6] experiments support this view, and show how the rate of absorption and so the prognosis depend upon the anatomical conditions present. In simple obstruction absorption is much slower than where there is interference with venous return, in which case the lymphatics absorb abundantly, and, moreover, the lining intestinal epithelium is so damaged that it cannot perform its selective absorptive action. In simple obstruction Hartwell and Hoguet[7] attribute great importance to the excessive loss of fluid by vomiting, and have been able in dogs to greatly prolong life by saline injections. As a preliminary to surgical treatment it is a good plan to infuse saline subcutaneously, and the administration should be continued during the operation. It may be advisable to wash out the stomach.

Finding the Site of Obstruction.

Subject to certain reservations made as the result of experimentation, the affected segment of gut should be reached and the obstructing agent removed with the least possible delay. This presents some difficulties when the actual site of the obstruction has not been determined before operation. A median subumbilical incision is made. Many surgeons—for example, Alexander Miles[8]—recommend that this incision should be only large enough to admit two fingers, and the greatest care be taken not to allow the intestines to escape from the wound; that exploration should be made with the two fingers in the abdomen only; that if large lengths of small bowel have to be examined, this viscus should be brought out of the wound a loop at a time, and the examined loop replaced as the next loop is removed. This advice can be followed, with the best results to the patient, by none but the most expert and experienced surgeons; the dexterity necessary for its performance can be acquired but slowly, because no surgeon operates upon a very large number of such cases within any one year. It is much better at once to make a large incision, a procedure recommended by Legg and Edmunds.[9] It will be impossible to prevent distended coils escaping from the wound without using harmful force and manipulations. They are to be allowed to escape. The experiments of Cannon and Murphy[3] in this connexion are important. They show that local post-operative paralysis is largely due to manipulation of the intestines, and is more marked the rougher such handling is. What is more interesting still, they show that cooling of the intestinal coils, exposure to air, and prolonged ether anaesthesia have no appreciable paralysing effect. To secure gentleness of manipulation is far more essential than to prevent prolapse of the gut, or even to save considerable time over the operation. The escaped coils should be covered with towels wrung out of warm saline solution. If the surgeon accepts Yandell Henderson's theory of acapnial shock,[10] these towels should be made of rubber tissue enclosed in a double layer of cloth. The caecum should be sought first: its collapsed condition settles that the obstruction is in the small bowel. All the hernial apertures are then to be explored from the interior of the abdomen. If the obstruction is not discovered by these means, one of two procedures may be followed:

(*a*) The collapsed gut below the obstruction may be sought for, and this gut traced up to the obstruction. It is, however, not always easy to find collapsed gut; the contracted coils frequently get thrust deep down into the pelvis. They should be sought for here.

(*b*) What appears to be the most dilated coil may be traced downwards to the obstruction. In the supine position the most dilated coils rise into contact with the anterior abdominal wall, and so are the first ones to be encountered when the peritoneum is opened. The coil immediately above an obstruction is more dilated than coils higher up. It is easy to determine which way to trace a selected coil of gut, if any twisting of the mesentery is undone, and it is remembered that the right surface of the mesentery is also its upper surface, and that the mesentery runs from above downwards and to the right.

Treatment of Injured Gut.

The obstruction having been found and removed, a decision must be possibly arrived at as to the viability or non-viability of a strangulated coil. Two points must be very strongly emphasized. First, if there exists the smallest doubt as to viability, a resection is imperative; and, secondly, if a resection is performed, the patient stands a greater chance of recovery if a large section of gut be removed than if only a small segment be taken away. It is better to resect gut that is badly damaged but viable, than to return it to the abdomen. Murphy and Vincent's experiments show that in gut which is strangulated and in the inflamed damaged gut immediately above an obstruction, the absorptive mechanism of the intestinal mucosa is deranged. Such gut, after the obstruction has been removed, may absorb a fatal dose of toxin from its lumen. Life may be saved by removing a sufficient length of such damaged but still viable gut.

The Value of Enterotomy combined with Evacuation of the Intestinal Contents in the Relief of the Obstruction.

The toxic material in the gut is not absorbed by uninjured intestinal mucous membrane, as the researches of Whipple, Stone, and Bernheim[11] and of Wilkie[12] have shown. The flooding of the gut below the obstruction with toxic fluid from above, when the obstruction has been relieved, is not fraught with danger, and if the gut is not too seriously damaged, it is probably not wise to empty it by enterotomy. If practised it should be done as Moynihan[13] recommends. It is to be remembered, however, that such emptying involves a great deal of manipulation of the bowel—in itself an event to be avoided as far as possible. Emptying of the distended gut may be absolutely necessary to enable closure of the abdomen to be carried out.

Hence, enterotomy and evacuation of the gut is to be recommended (1) if the intestines are so distended that it is impossible to replace them in the abdomen unless their inflation be diminished; (2) if, whether or no a resection has been done, it is believed, from the damaged appearance of the gut above the obstruction, that the mechanism by which a normal mucous membrane is prevented from absorbing toxins has been interfered with.

The Value of Enterostomy as an Adjuvant when the Obstruction has been Relieved.

Enterostomy above the site of obstruction, after the block has been removed, has been strongly recommended and has been said to reduce the mortality. The present series (7 cases with 4 deaths) does not bear this out, but the number is too small to generalize from. In such cases it is a common experience to find that, after the primary gush of intestinal contents, nothing escapes from the opening for twenty-four to forty-eight hours. The enterostomy has not led to evacuation of toxic material when it is most needed, because peristalsis has been in abeyance. As soon as the patient's condition improves and intestinal movements recommence, the contents escape from the ostium, but they would do equally little harm if they were passed into the healthy bowel below the obstruction. It would appear that if enterostomy is to be done it should be performed at some distance above the obstruction, to prevent the toxic intestinal contents coming into contact with the injured mucous membrane of the gut lower down. Also it would not appear logical to make a small lateral opening in the gut, leaving the normal channel almost unencroached upon. The diversion of the toxic stream should be complete, or the object for which the enterostomy is done will be frustrated. Nutrition may be seriously interfered with by such an operation, and the patient escape his obstruction only to be faced by starvation. It would seem to be very rarely indicated.

Enterostomy as the Sole Surgical Procedure.

Enterostomy without search for the obstruction is only performed by most surgeons in the very desperate cases, but it has been strongly advocated by Elsberg[2] as a normal procedure under a large number of circumstances. His argument is this:

Gangrene occurs in 15 per cent. of all cases of acute obstruction. If cases of intussusception and volvulus, which are usually diagnosable before the abdomen is opened, are excluded, gangrene only occurs in 5 per cent. The performance of enterostomy evacuates the gut above the obstruction. The removal of the distension may allow strangulated coils to recede from their incarcerated position, or may relieve strangulation from kinking. The operation can be performed rapidly, under local anaesthesia if necessary, and with very little shock. At a second operation the obstruction can be removed and the enterostomy opening closed.

The arguments against adopting this line of action are obvious. Statistics in this series give 6 per cent. of gangrene in such cases, and this agrees with those cited by Elsberg. But there is a fallacy here. In all these cases the obstruction was removed; if this had not been done it is fair to conclude that other cases, where strangulation was present, would have gone on to gangrene. If the enterostomy made be situated high up the small gut, then the patient will suffer from loss of nutrition, which, following the toxaemic condition the result of obstruction, brings him into a very unfavourable state for his second operation. This second operation has to be performed in the presence of infection and often through a septic wound.

Results of Operative Treatment.

Inguinal Hernia.—Resection was done in 6 cases with 2 deaths, one of which occurred on the fourteenth day after operation, from pneumonia, in a patient aged 75. Enterostomy was combined with resection in one of the fatal cases. The other three deaths occurred from paralytic ileus (enterostomy proving unavailing), from collapse, and from the inhalation of the septic vomit.

Femoral Hernia.—Resection was done in 8 cases with 4 deaths. In two cases an enterostomy only was performed and both died. In one case the perforated gut was freely opened but left *in situ*, whilst a lateral anastomosis was done from above between the afferent and efferent limbs of the strangulated loop. This patient also died.

Umbilical Hernia.—Resection of both large and small gut was done in one case with fatal result; two other cases died although no gangrene was present.

Ventral Hernia.—There was one resection, with death on the third day.

Intussusception.—Resection was performed 4 times with 3 deaths. The patient who recovered was 4 months of age. One of the resections was done in a case which recurred twenty-four hours after operation. Recurrence happened in one other case on the fourth day. It was successfully operated upon. Two other cases died although gangrene was not present and the intussusception was reduced. Appendicectomy was found necessary, in addition to reduction, in two cases, one of which was a fatal case.

Adhesions.—Resection was performed in 5 cases with no deaths. In one it was combined with enterostomy. An ileo-transverse colostomy was done in two cases of obstruction after appendicectomy with no deaths. Enterostomy alone was done 5 times with 3 deaths. In two other cases the obstruction was relieved, but death followed.

Bands.—Resection was only performed once; the patient recovered. Enterostomy alone was performed once, and the patient died.

Meckel's Diverticulum.—There were no deaths. Resection was performed once, but only for the closure of an enterostomy which was made twenty-four hours after the relief of the obstruction.

Gall-stone Impaction.—This patient died from leakage peritonitis from the adhesions between the gall bladder and the duodenum breaking down. The gall stone was removed by enterotomy.

Volvulus.—This case died without operation.

Stricture.—Enterostomy above the stricture only was performed. This patient died.

Mesenteric Thrombosis.—Resection was done in these two cases, but the patients died.

Obstruction of Unknown Origin.—In two cases the cause of the obstruction was not determined; enterostomy was done in both. They both died, but no *post-mortem* examination was made.

I have to thank the members of the surgical staff of St. Mary's Hospital for their courtesy in allowing me to add the records of their cases to those of my own.

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PITUITRIN IN POST-OPERATIVE INTESTINAL STASIS.

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In the two following cases pituitrin was a valuable auxiliary to other measures for supporting vital power and overcoming intestinal torpor, especially as the cases were dealt with in a hillside cottage with no other nursing than that of a neighbour and the visits of an excellent district nurse.

Case I.

The first case was that of a girl, aged 9, whose appendix was removed a week after the subsidence of an acute attack. Eight days after the operation the wound was reopened to ascertain the nature of a painful swelling in the right iliac fossa attended with abdominal distension and vomiting suggestive of obstruction. A deep abscess was found and drained. The distension increased and persistent vomiting of dark green fluid came on. Calomel given by the mouth was rejected, and turpentine enemata failed to bring away any flatus. On the night after the draining of the abscess the patient was actively delirious, picking at the bedclothes and stripping the paper from the wall at the head of the bed; the distension was increasing, the vomiting of green liquid was incessant, and she had a shabby pulse of 130; Parke, Davis's pituitrin 0.50 c.cm. was injected subcutaneously. An hour later the pulse had fallen to 115, was fuller and steadier and flatus began to be expelled per rectum. An asafoetida enema then caused the expulsion of much flatus. After this the dangerous symptoms subsided and the patient made a good recovery.

Case II.

A woman, aged 43, was seen on April 1st, 1914, when she had the typical signs of acute appendicitis. Immediate operation was advised, but as there was no other woman in the cottage it was impossible to do anything that day. The next day the abdomen was markedly distended, and the acute tenderness in the right iliac fossa had given place to general abdominal tenderness. On opening the abdomen the same day serо-purulent fluid free in the abdomen and an acutely inflamed appendix, adherent to the side of the pelvis, but with no other limiting adhesions, were found. Near the end of the appendix was a perforation from which thick odourless pus was trickling into the abdomen. The appendix having been removed, a stout tube was passed down to the stump, and another into Douglas's pouch. The morning after the operation there was much serous discharge on the dressings and in the tube going to the appendix stump, but from the tube in Douglas's pouch thick grumous pus was sucked. No flatus had passed, and the bowels had not acted, though 5 grains of calomel had been given five hours after the operation. Three grains of calomel immediately, to be followed by a grain every hour till the bowels moved, were ordered. Next day the distension was worse, and green liquid was vomited, though nothing was being taken by the mouth. The bowels had not moved, and neither turpentine, asafoetida, nor claret enemata brought away either faeces or flatus. One c.cm. of Parke, Davis's pituitrin and $\frac{1}{30}$ grain of strychnine were given on the second morning after the operation. Within an hour some flatus was expelled per rectum. At night $\frac{1}{30}$ grain of strychnine and 1 c.cm. of pituitrin were given. In half an hour a free expulsion of flatus took place, followed soon afterwards by a copious liquid motion. The after-progress of the case was uneventful and satisfactory.

The Royal County Hospital for Children, Heswall; the Children's Convalescent Home, West Kirby; the Liverpool Convalescent Institution, Woolton; and the St. Paul's Eye Hospital are among a large number of charitable undertakings each of which receives a bequest of £1,000 under the will of the late Mr. Septimus Brocklehurst of Sefton Park.

ILEO-COLIC INTUSSUSCEPTION IN A CHILD OF FOUR MONTHS: RESECTION: LATERAL ANASTOMOSIS.

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It is generally acknowledged that recovery after resection of an irreducible intussusception in infancy is rare. Below the age of 1 year successful cases may be considered almost as surgical curiosities. It is probable that the one described below is the youngest on record.

A discussion on intussusception, introduced by Mr. C. P. Childe in an able paper at the Children's Section of the Royal Society of Medicine in 1910, brought to light much interesting information on this point. Childe himself had resected on three occasions without success; Greig on three with a like result. At the Edinburgh Hospital for Children, out of 59 cases of intussusception, 15 were resected without a recovery. Similarly there was no successful case in children at the Glasgow Royal Infirmary in a large series of cases. Clubbe reported recovery in a child aged 11 months; Frank in one of 9 months.

Clogg[1] described 16 cases of acute intussusception in children; there were two resections, both ending fatally. In the discussion following the paper Douglas Drew mentioned two cases of recovery after resection at the Queen's Hospital—one at the age of 4 years and another under 2 years. Waterhouse (1907) resected with success in a child of 10 months at Charing Cross Hospital. Fairbank saved a child aged 7 months by resecting under spinal anaesthesia (1910). Quite recently[2] E. G. Gauntlett reported a case in which he resected successfully by Barker's method in a child of 10 months.

History.

The patient, James P., aged 4 months, was taken ill late on Sunday night, December 21st, 1913. He had a severe screaming attack and appeared to suffer from acute pain in the abdomen. The mother stated that until this date he had been free from any ailment and was a very healthy, well-nourished baby. Vomiting of greenish-yellow material occurred soon after the onset of pain. On the morning of December 22nd blood was noticed in the motion; later in the day the child was taken to a doctor and given a soothing mixture. In the evening it seemed better and vomiting ceased, but it would not take the breast and the bowels were not opened. On December 23rd vomiting recommenced and the general condition became much worse. On the afternoon of the 24th he was brought to the Queen's Hospital and admitted.

Condition on Admission.

The condition when seen by me at 4.30 p.m. was as follows: Well-nourished child; face pale, eyes sunken; temperature 100°, pulse 140. There was vomiting of foul-smelling, brownish material. He made no sound and lay quite passively on his back. Abdominal examination revealed a tumour in the left iliac region. On making a rectal examination the anus was found without muscular tone, and through the anterior rectal wall a soft mass could be felt. The finger on withdrawal was stained with watery sanguineous mucus. The child seemed too ill to resent rectal examination.

Operation.

Anaesthesia by open ether, administered by Mr. S. P. Rowlands. A longitudinal incision about 2½ in. in length was made just to the right of the umbilicus, and the abdominal cavity opened. Turbid serous fluid escaped. The intussusception was felt in the left iliac fossa. A portion was reduced intra-abdominally and the remaining mass brought outside. With considerable difficulty the intussusception was further reduced, mainly by expression from below, and the caecum and appendix appeared, making it clear that the invagination had commenced as the ileo-colic variety. All attempts at further reduction failed; the serous coat of the large bowel began to split in many places so that resection had to be decided upon. Two intestinal clamps were placed on the ileum above, and two on the colon below the invaginated bowel, and the intestine divided between. As rapidly as possible the mesentery was clamped with artery forceps and the intussusception removed; vessels were ligatured; the ends of the ileum and colon were tied off, and the stumps buried by purse-string sutures.

The small intestine at this stage was so distended that the serous coat ruptured in two places, and it was deemed advisable to tap the bowel to give relief to the pent-up contents. This was done through one of the peritoneal rents, and a considerable quantity of gas and fluid faeces escaped. The opening in the bowel was closed by two layers of sutures. Next intestinal clamps were applied to large and small intestine, and a lateral anastomosis performed in the usual manner. Finally, after washing the bowel with saline, the abdominal wound was closed with interrupted fishing-gut sutures through all layers.



A, Appendix; B, red intussuscepted into ileum; C, caecum.

After-History.

There was considerable shock for twenty-four hours after the operation, but the child rallied under the energetic treatment of the house-surgeon, Mr. A. M. Aspinall. Subcutaneous saline was given, and pituitary extract every two hours. Profuse watery evacuations occurred about six hours after the operation, and there was considerable vomiting for a day. Convalescence was uneventful except that a small abscess developed in the left breast at the site of the subcutaneous saline injection. The child was discharged on January 15th, 1914.

Description of Parts Removed.

Examination of the parts removed (see figure) showed clearly that the intussusception was of the ileo-colic variety. Even after removal it was found impossible to unravel the intussusception.

Apparently the large bowel was removed as far as the middle of the transverse colon. On incising the intussuscipiens, the intussusceptum (ileum) was found very oedematous and of a deep purplish colour. There were no enlarged glands in the mesentery.

According to the textbooks the ileo-colic variety of intussusception is very rare, 8 per cent. of all cases being the common figure quoted. There would appear to be considerable doubt as to whether this statement is correct. Clogg in his series of 16 cases had 4—that is, 25 per cent. Out of 10 cases I have operated upon in the last three years at the Queen's Hospital, all of which were successful, 4 were of the ileo-colic type—that is, 40 per cent.

A very noticeable feature in these ileo-colic intussusceptions is the watery nature of the rectal discharge, and it is possible that the diagnosis of the type of intussusception is often indicated in this manner. The discharge in the ileo-caecal variety, where the large bowel is mainly oedematous and congested, is usually markedly mucoid.

About three weeks after being discharged from hospital the child was brought to the out-patient department, and seen by Dr. E. Bellingham Smith, who found it suffering

from whooping-cough and bronchopneumonia. In spite of treatment death occurred a few days later from this chest trouble.

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FURTHER EXPERIENCES IN THE TREATMENT OF IMPERFECTLY DESCENDED TESTICLES.

BY

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SOME months ago I was asked by a colleague how I treated cases of imperfectly descended testicles now, and appreciated clearly how impossible it was to give an answer sufficiently concise to be clear enough to satisfy the hearer. Going home I communed with the records of such cases which I had done in the last ten years—that is, since I published a full account of my opinions and practice on the subject. In the number of the BRITISH MEDICAL JOURNAL of June 4th, 1904, I published a paper on "The value of the imperfectly descended testicle, the advisability and value of the operations performed for its relief." Since then a period of ten years has elapsed, bringing much experience, which must of necessity have modified the conclusions arrived at in 1904. The advance of time has increased my interest in the subject, whilst the further experience has added to knowledge of the pathology of the condition and the results of treatment.

The imperfect descent of the testicle is in almost all cases a congenital malformation or deformity, due to some condition (or conditions) which, by depriving the gland of its full power of development, has arrested it in the course of its descent. The congenital malformation under consideration is practically always associated with arrested development of the tunica vaginalis, leaving a hernial sac (potential at least). In the associated deformity the tunica vaginalis remains in communication with the peritoneal cavity, a condition disposing to the development of a hernia, a total congenital hernial sac.

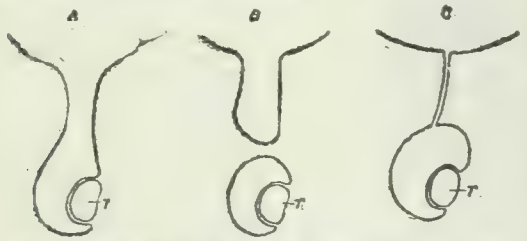


Fig. 1.—A, Congenital hernial sac. B, Acquired hernial sac. C, Infantile hydrocele. T, Testicle.

Upon being confronted with a patient with imperfect descent of the testicle it is often impossible to decide whether the condition of imperfect descent is temporary or permanent—that is to say, whether the testicle is merely belated in its descent or not. Various persons arrive at the same stage of development at very various times. So long as no hernia is present there need be no hurry in determining the answer to this question. Neither need there be any hurry if the malformation is unilateral.

This expectant attitude is terminated either by:

(1) The recognition of a hernia accompanying the imperfect descent; or
(2) The recognition that the imperfect descent is not mere tardiness.

Either of these two occurrences terminates the period of waiting, and indicates the need for active treatment by operation. As these factors are only two in number it is well to consider how and why they indicate the termination of the period of inactivity and initiate that of activity.

Hernia.

The presence of hernia in association with an imperfectly descended testicle indicates the fact that operation is necessary for its cure. Indeed, there is no other treatment for the hernia; a truss would press on the testicle or its vessels. Moreover, the non-separation of the tunica vaginalis and peritoneum prevent the testicle from descending, even if it were capable of doing so. The hernial sac holds the gland up. Hence the cure of the accompanying hernial sac, by nature or art, will aid the testicular anomaly to be cured. In separating the sac from the cord great care must be exercised to avoid injury to the vessels, for such an injury is known to militate very greatly against the testicle subsequently having any physiological value.

The Persistence of the Deformity.

When the testicle has been imperfectly descended for sufficient time—say, until the patient is 7 years old—to show that the condition is a permanency and no temporary anomaly of a gland belated in its descent, it is necessary to operate. Such a proceeding may, in the main, be done in one of three ways:

1. The accompanying hernial sac may be divided and stripped of the cord, allowing the testicle to descend into the scrotum. Any but the mildest scrotal fixation is merely a prelude to failure, anatomical or physiological. Such an operation is called an orchidoplasty or an orchidopexy.

2. The gland may be removed, as advocated by many. This line of treatment is specially indicated when the imperfect descent is unilateral. It is satisfactory in its after-results. The operation is an orchidectomy.

3. Especially when the condition is bilateral, the gland may be returned to the abdomen intraperitoneally. Any internal secretion which the gland may have is retained and will aid the patient to develop sexual characters, such as hair on face, male voice, male body, energy of mind and body. Such an operation is an orchidocoelioplasty.

Which of the three operations shall be performed must to a great extent be decided by the surgeon at the operation. The great principle is, that should the testicle be unable to furnish an external secretion of its own power, no amount of surgical art can make it do so. Clinical experience has shown how very prone surgical art, in some form of orchidopexy, is to be followed by atrophy or fibrosis, the gland losing any power it might have possessed of developing any secretion, external or internal, which before the operation it might have been capable of doing. Hence it may be laid down that orchidopexies, except in unusual instances, rob the patient of something. Sufficient years have gone by for many workers and many patients to have proved this. As yet, surgeons have no great or extended experience of orchidoplasty. But some—myself amongst them—can witness that it is sometimes followed by growth and descent of the gland; most often the descent is not as great as is normal, and very occasionally I have seen atrophy. But I can say that the more experienced a surgeon is with these cases the less likely he is to do an orchidoplasty in an unsuitable case, and to incur a failure. Still, as surgeons can only work with the material supplied them, it is impossible to attain perfect success always. Imperfect success may be the greatest success that the provided material allows. In such doubtful cases an orchidocoelioplasty is best. The results of this last operation are difficult to estimate. Though it has been done for about fifteen years, there is nothing much to be said, except:

(*a*) It has been urged on theoretical grounds that the returned testicles are prone to become malignant. This is not so.

(*b*) It has been urged that in the intra-abdominal position such common diseases as gonorrhoeal orchitis endanger life. This is not so.

(*c*) Apparently the intra-abdominal position abolishes any external secretion, but preserves and encourages the internal secretion. A very important point, as it is in the internal secretion that practically the whole value of the imperfectly descended testicle lies.

It is the operation more frequently done in these cases than any other. In my own work for the last ten years the percentage has been:

Orchidopexy ...	...	... about 10 per cent.
Orchidocoelioplasty	...	... about 50 per cent.
Orchidoplasty ...	...	... 40 per cent.

The infrequency of the performance of the operation of orchidopexy is the result of an extended experience of the results of that operation, not only when done by myself, but also when done by others. These may be very shortly

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

ROYAL SOUTH HANTS HOSPITAL, SOUTHAMPTON.
PNEUMOTOMY FOR FOREIGN BODY.

(By NOEL BRAHAM, F.R.C.S.Edin., late Resident Medical Officer.)

A. W., a male child, aged 6½ years, was admitted on November 20th, 1913, with a history of having swallowed a pin. A screen examination revealed the pin lying head downwards in the lower lobe of the left lung. I decided to localize the pin accurately and then attempt to remove it.

Under the screen the shadow of the pin was very clear, and, with the child quite supine, the tip of a metal pointer was laid on the anterior chest wall at the spot where the shadow of the pin was projected. A mark was then made on the skin at this site. The pointer was then passed along the posterior chest wall until the shadow of its point corresponded with the shadow of the pin, and here a second mark was made. The child was then turned slightly on his side, and again marks were made anteriorly and posteriorly corresponding to the shadow of the pin. A lead tape was then bent around the left side of the thorax, and on it were marked the situations of the anterior and posterior skin markings. The lead tape was then placed on a sheet of paper and an accurate tracing of the outline of the chest wall obtained. By joining the anterior and posterior primary and secondary marks a point of intersection was obtained, which was roughly the situation of the pin. This was found to be about 2 in. from the mid-axillary line and about 3½ in. from the nipple line, lying behind the pericardium on a level with the eighth dorsal vertebra.

In deciding on operation I was guided by the following considerations: (1) The mortality associated with expectant treatment of foreign bodies in bronchi, the usual result being a lung abscess with 80 per cent. mortality if untreated, and about 20 per cent. mortality after operation. (2) The fact that the pin was head downwards. I had previously seen a case in which a pin had been inhaled and was lying head upwards in the bronchus, and the patient had coughed it out whilst I was getting the bronchoscope ready. (3) The foreign body had been in its present situation practically without symptoms for forty-eight hours, so that the chance of voluntary expulsion seemed very small.

I was extremely doubtful whether Brüning's forceps could be manipulated to any satisfactory purpose in the finer divisions of the left bronchus in a child of 6½ years; that bronchus being about a quarter less in size and forming about double the angle with the median plane that the right bronchus makes, I decided against tracheobronchoscopy. I thought it advisable to allow an artificial pneumothorax to occur, as by that means I should not damage so much lung tissue, and the haemorrhage would not be so severe as in uniting the parietal and visceral pleura. Lastly I decided to operate as much as possible under the *x* rays.

Two minims of liquor strychninae were given hypodermically, and then chloroform and ether (2 and 3) was administered on a Schimmelbusch mask and occasional inhalations of oxygen were given. I made a curved incision, commencing on the same level as, but about 1 in. to the left of, the left nipple, downwards and backwards for 3½ in., to about the line of the posterior axillary fold. This flap was dissected up and then the periosteum was detached from the fifth and sixth ribs, and portions about ¾ in. in length were removed from each. The pleural cavity was opened very gradually; pneumothorax was rapidly produced. Oxygen was given freely from this period onwards. As soon as the lung had quite collapsed I opened the pleura freely. The *x* rays were switched on and the operation completed under the fluorescent screen. With my finger in the pleural cavity I was able to manipulate the portion of the lung containing the pin until it was close to the opening in the chest wall. The lung was grasped with Porter's forceps over the pin, and on removing my finger a second pair could be inserted. With these the portion of lung containing the pin was gently drawn through the opening in the chest wall and the pin easily taken out. The *x* rays were stopped and ordinary lights switched on, and it was seen that there was no haemorrhage from the lung substance. The forceps were removed and the portion of lung returned. The opening in the pleural cavity was closed, and finally the musculo-cutaneous flap replaced. I did not aspirate the pleural cavity immediately, and this I believe to have been a mistake, as air had been whistling in and out from the time of opening the pleura, and a rather crowded *x*-ray room in partial darkness for some period is not the best situation for rigid asepsis; consequently some infection of the pleural exudate occurred. It was not of a very virulent character, and the sero-purulent fluid was allowed to escape through a small opening in the wound. Forced expiration was attained by means of a trumpet, which required an effort to produce sound, and gradually the lung expanded.

Dr. Norman Aldridge kindly *x*-rayed the case on January 30th, 1914, and reported that there was a little decreased radiability at the base of the left lung, but that the lung had expanded perfectly. I have recently seen the child, and clinically the left lung seems normal and healthy, and he seems perfectly well.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

AT a meeting on May 11th, Sir DAVID FERRIER, the President, in the chair, Dr. DE HAVILLAND HALL opened a discussion on a case of *Ascites and its treatment*. The patient was a lady aged 34 who had suffered from enlargement of the liver and ascites, and whose cardiac dullness had increased. There had been no albuminuria, nor had any valvular murmurs been detected. She had been seen in consultation by Dr. Hale White, Sir Richard Douglas Powell, and Sir William Osler. Dr. Hale White had considered that the ascites had been caused by disease of the liver, Sir R. Douglas Powell that the heart was chiefly responsible. In spite of medicinal treatment the ascites increased, and the patient was tapped with Southey's tubes. A month later Mr. Spencer performed omentopexy, but after six weeks paracentesis was again required. Nine months later femoral drainage was carried out, and two months after this the lower pole of the spleen was scarified, an area of parietal peritoneum the size of the palm was dissected off, and the left kidney decapsulated. Subsequently drainage had been employed after Mr. Sampson Handley's method. Repeated tappings, forty-nine in all, were necessary, however, and finally the patient took a fatal dose of medonal. *Post mortem*, the pericardium was completely obliterated by old adhesions and extensively calcified. The myocardium showed fatty degeneration, and the peritoneum was thickened, especially on the liver and spleen. The liver weighed 72 oz., and showed everywhere most advanced passive congestion. The case emphasized the fact that the symptoms of adherent pericardium might be almost entirely of hepatic origin, and give rise to the erroneous diagnosis of cirrhosis of the liver. Dr. Hall discussed the medicinal treatment of ascites, and described the various operative methods which had been employed for it. Sir DOUGLAS POWELL said that in this case the difficulty was of central origin in a failure of heart power from intrinsic disease of that organ. One could not expect so much benefit from anastomoses effected by omentopexy or adhesions as would arise in cases where the difficulty was due to obstruction in the capillary terminals of the portal vessels. Dr. HALE WHITE pointed out that little was known of the causes of oedema in heart disease and of so-called alcoholic cirrhosis of the liver. Alcohol could only be considered a contributing cause of the latter: cirrhosis was commoner in London than in either Glasgow or Aberdeen. Mohammedans were affected by it; it was a part of the disease known as "progressive lenticular degeneration," which occurred in children. He suggested that the case was one of polyserositis and cirrhosis. Mr. WALTER G. SPENCER said that he regarded the Talma-Morison operation as a physiological anastomosis, but there were mechanical difficulties in the operations devised

by Dr. Essex Wynter and by Mr. Sampson Handley. An additional advantage of the Talma-Morison operation was the opportunity which it afforded of exploring the abdomen, a procedure which might throw an important light on the nature of cases of ascites. Dr. MORLEY FLETCHER favoured the diagnosis of polyserositis, but thought that the degree of cirrhosis was greater than one would expect. Dr. B. H. SPILSBURY said that the *post-mortem* examination revealed a very unusual degree of replacement fibrosis consequent upon passive congestion of the liver.

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

AT a meeting on May 12th, Mr. MAKINS, President, in the chair, Mr. LENTHAL CHEATLE, in a paper on *The relation of ducts and acini to mammary cysts*, said that the cause of the latter lay in the ducts, since both cysts and ducts were lined by columnar epithelium which did not extend into the acini; after a central haemorrhage into a cystic breast the blood could be traced into the normal ducts, acini, and cysts, and the cysts opened into undilated acini. Single cysts did not exist, smaller cysts could always be demonstrated by the microscope. Cysts developed to accommodate the proliferated epithelium. Obstruction to ducts might induce cystic formation, but would be unlikely to cause intracystic growths. There were two types of duct cancer—the intracystic papillomatous and the intracystic laciform. He used this term because the proliferated epithelium resembled lace work. Both forms were usually present. Large sections, and possibly serial sections, had to be made to discover the origin of alveolar cancer. Each type showed simple cystic conditions. The question arose as to whether cysts became malignant or whether the cysts were originally malignant. The lymphatic glands when affected showed the intracystic laciform type. He had nothing by which either to prove or disprove a relationship between the acini and cysts or between the acini and cancer. In 250 cases of cancer of the breast 45 per cent. were of duct origin, and of the remaining 55 per cent. some might have been of duct origin; no definite relation could be traced between them and acini. Mr. SAMPSON HANDLEY agreed that cysts were due to distension of the ducts, and thought that duct carcinoma was commoner than usually supposed. Some cancers were multifocal, and some arose in the ducts and acini; some extended along the ducts and appeared of that origin. The laciform appearance seemed to him due to the fusion of the apices of the intracystic growths. Mr. RAYMOND JOHNSON thought that the ducts were more implicated than the acini, but that there was no subsequent development of carcinoma. If the intracystic growths were of the nature of a duct carcinoma there must be a very widespread development of malignant disease, but clinically, after removal of a cystic breast, there was but little tendency for carcinoma to develop. Mr. MAKINS said that he dealt more severely with breasts possessing ill-formed nipples; he believed the cysts were produced by obstruction. He had seen duct and alveolar carcinoma coexistent. Mr. CHEATLE, in reply, said that duct carcinoma was quiescent as long as it was bounded by thick walls, but as soon as it extended to the pectoralis major it underwent rapid growth.

SECTION OF LARYNGOLOGY.

AT a meeting on May 1st the following were among the exhibits:—Dr. MILLIGAN: (1) Some *x*-ray bismuth photographs of three patients with *Pharyngeal pouches*. An external operation had been performed on all of them. One died of septic pneumonia, which was probably due to food ingestion. Dr. HILL said he favoured Halstead's operation in these cases; the unopened sac was dissected out and turned upwards into the upper angle of the external wound; at a second operation after the formation of adhesions the sac was removed. He considered, for diagnostic purposes, the photographic method better than oesophagoscopy. (2) Some specimens of inoperable thyroid gland and fungating *Oesophageal carcinomata* which had been treated by radium applied by emanation tubes. It was essential to exclude the alpha and beta rays and utilize the gamma rays by suitable filters. Irradiation of healthy tissues was dangerous. Sir FELIX SEMON related an instance of radium causing sloughing with fatal mediastinitis. Mr. HARMER said he had found that external insertions of 150 mg. of radium for eighteen hours resulted in a wound which did not heal. Dr. HILL laid great stress on the filtration; he had employed 150 mg. with a screen of 2 mm. of platinum covered with rubber for eighteen hours without injurious effect. Mr. SOMERVILLE HASTINGS in 18 cases had found sloughing in only one case, this being one in which septic teeth were present. He placed the radium in a Symonds funnel and inserted it by means of an oesophagoscope. Dr. E. A. PETERS: A case, previously shown in a state of *Left unilateral abductor paralysis*. Since then the case had progressed to complete paralysis, with the cord in a cadaveric position. Dr. DONELAN: Two cases of *Papilloma of the vocal cords*, in which he had found it easier to employ the indirect instead of the direct method. Sir STCLAIR THOMSON said that both Killian and von Eicken preferred the indirect method where this was possible. Indeed, by the old principle of *cito, tuto, et jucunde* the indirect method came first. Sir FELIX SEMON remarked that it was the need for good technique in the application of the indirect method that had led to the constitution of laryngology as a speciality; hence he regretted disuse of the method by the younger men. Dr. WILLIAM HILL urged the simplicity of direct laryngoscopy, and mentioned the tolerance of chronic tuberculous patients to its use; suspension laryngoscopy would still further diminish the field of the indirect method. Mr. WAGGETT upheld indirect laryngoscopy. The PRESIDENT concluded that where a general anaesthetic had to be employed the direct method was preferable; in other cases the indirect. The advance from the days of Hartmann's direct spatula to the present duck-billed tubes was remarkable. Dr. JOBSON HORNE: (1) A case of *Laryngeal neoplasm* which Messrs. Fox and O'Malley considered to be attached to the anterior commissure; (2) A case of marked *Congenital webbing of the palate*. Dr. L. H. PEGLER: A case in which an *Oedomatous fibroma* depended from the left vocal cord. Mr. C. I. GRAHAM: A case of *Chondro-sarcoma of the pharynx*. Mr. DE SANTI: A case of *Lupus* affecting the nose, ear and tongue, and pharynx. The Wassermann reaction on one occasion was only partially positive. Giant cells, but no tubercle bacilli, were recognized in a microscopical preparation. Mr. POTTER: A specimen of *Perithelioma of the pharynx* which he had enucleated with a capsule by an incision through the mucous membrane.

SUBSECTION OF PROCTOLOGY.

AT a meeting on May 13th, Mr. SWINFORD EDWARDS, President, in the chair. Mr. P. FURNIVALL showed three cases of multiple polypi of the rectum and large gut. In the first they occurred one month after removal of a simple polypus, in the second they were associated with a malignant ulcer, in the third they extended up the sigmoid. Microscopically they were described as papillary and tubular columnar carcinoma. In two of the cases he had performed a Kraske's operation, and in the other he had resected the colon. He also showed a case of *Chronic anal ulcer* which after many years became malignant. Mr. SWINFORD EDWARDS said he thought the best treatment at first was local removal, but on recurrence colectomy or an abdomino-perineal operation. Mr. ERNEST MILES recorded two recent cases of total excision for *Procidentia recti*; he had removed the rectum to the recto-sigmoid junction which he sutured to the skin margin and placed four tubes around it into the peritoneal cavity. The patients developed a new anal canal with good control and without protrusion. Mr. SWINFORD EDWARDS said he had obtained fixation by injecting quinine into the tissues, combined with linear cauterization. Mr. D. DREW showed four cases of abdomino-perineal excision of the rectum for cancer. He thought that abdomino-perineal excisions were frequently the only reliable operation for this condition. In two of these cases seven years had elapsed since the operation. He did not think it of importance to close the pelvic floors in these operations; a sacro-perineal hernia had developed in one case in which such an attempt had been made. Mr. R. W. VICK showed a case of *Diverticulitis* removed by Mr. McAdam Eccles from a male, aged 74. An elongated movable lump was felt in the left iliac fossa, and speedy recovery occurred

after its excision. Some four inches of the pelvic colon showed excessive fibrosis of the submucous tissue with narrowing at one part, and diverticula were present above; there was no evidence of malignant disease. Mr. J. E. H. ROBERTS showed a specimen of *Multiple diverticula* from a woman, aged 48. The whole of the large intestine was affected, and two were present in the lower end of the ileum. One had perforated; a malignant growth was present seven inches from the anus. Mr. BLAKEWAY showed a corresponding specimen, removed *post mortem*; the iliac and pelvic colon, and also the caecum and appendix were involved. A saccule at the tip of the appendix had perforated, and led to a retrocaecal abscess. Mr. NORBURY recorded a case in which a diverticulum had partially perforated, and Mr. IVOR BACH one in which the perforation of a diverticulum had given rise to an acute general peritonitis. Mr. WATSON, Mr. MILES, and Mr. MUMMERY thought that the diverticula were due to chronic constipation or to some form of obstruction. Mr. ECCLES regarded many of these cases as being congenital in origin. Dr. HERTZ read some notes on the occurrence of polypi in four members of one family, and Mr. LOCKHART MUMMERY the notes of a case of *Haematoma of the broad ligament*, which had simulated sarcoma of the rectum.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on April 23rd, Dr. E. W. HOPE, President, in the chair, Drs. K. GROSSMANN, R. STOPFORD TAYLOR, and R. W. MCKENNA showed a case of *Epithelioma of the eyelid* which had been treated by radium. After the tumour had grown painlessly for twelve months, radium was applied for 500 hours in all—at first for seven hours daily, and then for four hours daily. In the end the tumour disappeared and the appearance of the eye became almost normal. The preauricular gland, which was enlarged when treatment was commenced, gradually diminished. Dr. JOHN CAMPBELL recorded the occurrence of *Osteitis deformans* in a father and four children. There was no history and no evidence of syphilis. The conditions in the father were demonstrated at the meeting; his attitude and deformities were characteristic—pain was not severe, but diarrhoea, weakness, and emaciation were progressive features. Palpitation and dyspnoea distressed him. There were no blood changes, and the Wassermann reaction was negative. Dr. MURRAY BLIGH, in a review of *Infant feeding* from Roman to Victorian times, showed that from the middle of the sixteenth century to the middle of the nineteenth century the professional wet nurse was the only alternative to maternal suckling. The advent of the bottle and artificial foods dated from the beginning of the nineteenth century. The effect of artificial feeding on family life seemed to have been only comparable with that of poverty and syphilis. He deplored the waste of energy shown by brilliant investigators who devoted their time solely to the preparation of artificial foods and the sterilization of milk, rather than to the much more important problem of increasing the power of the women of to-day to suckle their own infants. The PRESIDENT drew attention to the fact that the infant of to-day was cared for on all sides and in all ways to a remarkable extent. He emphasized the value of the Notification of Births Act in dealing with the infants, and stated that it was the duty of all sanitarians to get the mother to do her duty. Professor J. M. BEATTIE pointed out that the electric sterilization of milk was to prevent certain diseases due to the consumption of unsterilized milk, and that no one was a more ardent believer in maternal suckling than himself. Dr. N. P. MARSH regretted that the wet nurse had fallen into disrepute. In order of merit he placed sterilization of milk first, and scalding of milk second. He upheld the value of percentage feeding, and regretted the costliness of this method.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

AT a meeting on May 1st, Dr. J. B. COLEMAN, President, in the chair, Professor E. J. MCWEENEY, in a paper on the *Wassermann reaction*, said that he had invariably carried out the original technique with the exception that he used a non-specific antigen and adopted the quantities and general procedure laid down by McIntosh and Fildes in their valuable textbook on syphilis. The number of cases he had tested so far was 240, and 182 of them were available for statistics. From the Lock Hospital he had examined 54, of which 47 were undoubtedly syphilitic. The percentage of cases in which the reaction gave results in accordance with the clinical aspect was 91.3. Of the 7 non-syphilitic cases, all reacted negatively to the test. From the Mater Hospital 46 cases were available, of which 37, or nearly 85 per cent., gave reactions in accordance with the clinical aspect. From the Richmond Asylum he had tested the serum of 35 cases, of which 26 were definitely diagnosticated as general paralysis, 5 were looked upon as certainly not of that nature, and 4 were regarded as suspicious or doubtful. Of the 26 clinically certain cases, 19, or 74 per cent., gave a strongly positive reaction, 4 were negative, and 3 doubtful, to the test. For reasons mentioned, two of the latter ought to be regarded as positive, raising the number of accordant positive results to 81 per cent. All the cases (5) in which general paralysis was clinically excluded, gave a negative result. The speaker had also examined a number of cerebro-spinal fluids, and found a positive Wassermann reaction in nearly all the cases diagnosed as general paralysis of the insane. With regard to the globulin content of these fluids he had found the Nonne-Apelt, "Phase I," test the most satisfactory, provided a time limit of three minutes was observed, and the fluid was mixed with ammonium sulphate, not superposed, as recommended by Ross and Jones. With the Noguchi (butyric acid) method he had obtained too many positive results. Out of 49 cases sent in from various hospitals and private practitioners, there were only 4 in which the result of the Wassermann test was not reconcileable with the clinical aspect. He also drew attention to the great prevalence of syphilis amongst imbecile children and gynaecological out-patients, as shown by the Wassermann test in the hands of members of the Glasgow school, and stated that one of the objects of his paper was to point out the necessity for systematic investigation on similar lines amongst the same classes in Ireland. In reply to remarks, he added that he did not wish to take up the position of denying that simplified methods, such as Bert's and Flemming's, had no value, but he leaned to the view that the original technique should be stuck to whenever possible. Using a Flemming technique which was shown to him by Dr. Thomson, of Belfast, and which involved the testing of serum of a known syphilitic and a normal serum against three or four different strengths of antigen, it seemed to him that it was as complicated as the original method. He would feel anxious about giving a diagnosis on the result of any simplified method. He considered it doubtful whether one would be justified in acting therapeutically on a positive result obtained by the Flemming method if the original gave a negative, and suggested that the subject was one that ought to be further investigated. He agreed that it was advisable that a lumbar puncture should be done more frequently. He agreed with the remarks of Dr. Dawson that the examination of mental or nervous patients in Ireland would not reveal any high amount of syphilis, but he would, nevertheless, like to have this placed beyond doubt. There could be little doubt that a great deal of the insanity was of a functional kind, but it would be interesting to see if this insanity had any of its basis in syphilis. The statement that tertiary bone lesions gave a negative Wassermann reaction agreed with his experience.

ULSTER MEDICAL SOCIETY.

AT a laboratory meeting on May 14th, Mr. MITCHELL, President, in the chair, Sir JOHN BYERS showed among other exhibits a uterus which had been injected by the Spalteholz method. This rendered the tissues translucent by transmitted light and the blood vessels opaque. Dr. J. M. GIBSON described some experimental work on the subject of heart-block, and illustrated his remarks by records and electro-cardiograms taken by Dr. MacIlwaine. It was found that heart-block could be induced in a frog by perfusing the heart with a 1 in 10,000 solution of yohimbin, but painting the ventricle with the drug did not have this effect. On the other hand, when heart-block had been induced use of adrenalin solution caused it to disappear. Professor MILROY demonstrated an instrument devised for the purpose of determining the hydrogen ion concentration

of the blood, gastric juice, and other body fluids, and explained the difference between this method and ordinary acidity determination. The result of testing for free hydrochloric acid by Günzburg's method tallied very closely with those of the hydrogen ion concentration. Dr. J. A. MILROY described some recent applications of colorimetry to urine analyses, and Mr. R. J. JOHNSTONE, F.R.C.S.Eng., showed some gynaecological specimens, including a tuberculous pyosalpinx and an adeno-sarcoma of the uterus.

THE HARVEIAN SOCIETY.

AT a meeting on April 28th, Mr. J. JACKSON CLARKE, President, in the chair, Mr. ERNEST CLARKE, in a paper on *Errors in diagnosis and treatment in ophthalmic practice*, said that in regard to epiphora, mistakes were frequently made by omitting to examine the position of the lower puncta. The slight ectropion which often appeared after middle life caused the punctum to look up, and made it incapable of "sucking up" the tears. The specific for this was to slit up the canaliculus, put in a nail-head style, and make a gutter in the ocular lip for it to lie in. He recommended West's operation for lacrymal obstruction in bad cases of chronic dacryocystitis. Cases of early iritis, cyclitis, and small corneal abrasions were often overlooked. As for etiology, alimentary toxaemia might alone set up iritis. Eyestrain was generally due to a small amount of astigmatism, and might be the cause of almost any functional nerve trouble. The examination should always be made with the aid of a cycloplegic. It was a most dangerous and useless placebo to order + 0.50 sph. for children to use for school work. If astigmatism were present glasses should be worn always. Myopia, except in very high degrees, should be corrected fully. Invisible bifocal glasses were useful for cases of presbyopia complicated by other errors. From an examination of over 3,000 patients after correction of their refractive error, he estimated that the average accommodation was from 1 to 1½ dioptres higher than had been stated by Donders fifty years ago. The speaker concluded by emphasizing the importance of intestinal stasis as a cause of presbyopia.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting on May 5th, Dr. JANE WALKER, President, in the chair, a deputation was received from the Women's Co-operative Guild, representing 31,500 married women working in their own homes. The following points were brought forward: (*a*) The development of maternity care work, particularly ante-natal work; (*b*) the co-ordination of existing maternity care work under the public health authority. A subcommittee was appointed to formulate a working scheme for the establishment of maternity centres throughout the country. Dr. ALICE CORTHORN, in a paper on a *State Medical Service*, claimed that its establishment, besides co-ordinating the various bodies now extant (Poor Law, Asylums Board, health service, school service, schools for mothers, etc.), would tend to decrease the amount of sickness in the land, and to do away with the long years of privation suffered by many young general practitioners. Patients would be better off under a State Medical Service, especially the huge middle class. The scheme must be evolved gradually. The PRESIDENT considered that a State Medical Service was the only democratic basis on which the medical profession could be worked. Dr. FLORENCE WILLEY did not see how a State Medical Service would be an improvement on the present panel system, which appeared to be drawing together the general practitioners, the health service, the hospitals, etc. Dr. CONSTANCE LONG thought there was nothing so good for the formation of character as a good hard struggle when young. Rich people were often killed by a multiplicity of consultants, and the poor suffered from long hours of waiting at hospitals. The middle class really had the best opportunities for medical care.

THE Government crematorium at Panama was used for the first time on February 6th, 1914, when two bodies were burnt. It has been in continuous operation since that time. In the course of four weeks preceding March 20th, 378 bodies were cremated, a large proportion of which were disinterred for the purpose.

Reviews.

THE ARCHIVES OF NEUROLOGY.

THE sixth volume of the *Archives of Neurology and Psychiatry*[1] will be received by neurologists throughout the world with the welcome which hailed the appearance of its predecessors. It is a record of pioneer work big with promise of important results, but to this, more perhaps than to any other department of medical research, is applicable the Hippocratic maxim, "Art is long." Already, however, the far-seeing policy of the London County Council is abundantly justified by its fruits.

Syphilis in the Causation of Mental and Nervous Diseases.

The main lines of research of which the results are embodied in the present volume are the influence of syphilis as a factor in the production of certain forms of nervous and mental disease and the part played by heredity in the causation of insanity. In discussing the former of these questions, Dr. MOTT reviews the evidence that goes to show that without syphilis there would be no general paralysis. The proof of that doctrine has been greatly strengthened by the introduction of the Wassermann test. Plaut has shown that in virtually every case of general paralysis not only the blood but the cerebro-spinal fluid gives a positive reaction on the application of the test; and this has been confirmed by J. P. Candler and Mann, who state that of 191 cases in which the cerebro-spinal fluid was examined, and the diagnosis had been confirmed by subsequent death and autopsy, in 97.9 per cent. an accurate diagnosis had been made. Many other important conclusions have been arrived at by the examination of 1,134 samples of serum and 583 of cerebro-spinal fluid. Noguchi and Moore supplied the final proof by direct observation, when they found the *Spirochaeta pallida* in 12 of 70 brains of general paralytics. In the Claybury Laboratory Dr. Mott has been able to demonstrate the existence of the specific organism in 66 per cent. of a large series of cases of general paralysis.

In a paper on the nature of the condition termed "parasyphilis," Dr. Mott deals exhaustively with the pathology of tabes dorsalis, tabes optica, tabo-paralysis, and paralytic dementia. It is now recognized that these degenerative conditions of the nervous system are due to the action of the specific organism of syphilis on the central nervous system. It is remarkable that in the cases in which grave nervous disease has shown itself later, the primary and secondary symptoms of syphilitic infection have generally been very slight. During the sixteen years he has been pathologist to the London County Asylums, which have a population now numbering 20,000, Dr. Mott has not seen during life or after death a primary sore or a secondary eruption. The treacherous mildness of the symptoms in the early stages led Salamon to say, at the medical congress held at Vienna in 1908, that he would prefer that every syphilitic person should exhibit a skin syphilide within two or three years of infection, because then he would feel assured that neither tabes nor paralysis would develop later.

In explanation of the disproportion between the early manifestations of the disease and the gravity of the remote effects of the virus on the nervous system several hypotheses are suggested. One is that the patients may have a natural or acquired immunity or partial immunity owing to widespread racial syphilization having eliminated in time all those who had the disease in a virulent form; or they may possess an immunity due to parental syphilis. Another is that the infecting organism may have been modified by passage through individuals who are partially immune or who have been treated with mercury. A third is that there may be several forms of spirochaete as there are several forms of trypanosomes, and, as in the case of *Trypanosoma gambiense*, one form may have acquired a habit of entering the cerebro-spinal fluid and central nervous system as a safe retreat.

A large number of children and young adults apparently in good health are the subjects of latent syphilis, and are

[1] *Archives of Neurology and Psychiatry from the Pathological Laboratory of the London County Asylums, Claybury, Essex.* Edited by F. W. Mott, F.R.S., M.D., F.R.C.P., Director of the Laboratory and Pathologist to the London County Asylums. Vol. vi. 1914. London: P. S. King and Son. (Sup. roy. 8vo, pp. 490. 10s. 6d. net.)

therefore immune. This immunity is sometimes lost in later life without treatment. There may in such cases be an acquired or inherited hypersensibility of the cells of the body, generally causing them to react to the virus by the production of antibodies. The specific organism may become modified in its form and habits, so that there is a tendency for it to become latent in the tissues. Possibly it may take on an intracellular granular form. As in most protozoal diseases the organism may disappear from the blood under the influence of treatment or by the action of the natural defences of the body. Should these defences be weakened by traumatic injury or disease, alcoholism, or other causes, the organism may become active. There are facts enough to show that certain individuals may transmit a virus which is especially likely to cause general paralysis or tabes in persons infected by them. Dr. Mott quotes several cases. One is that of a woman who was at different periods the mistress of five men, all of whom got syphilis from her and all died of general paralysis. These cases, as Dr. Mott says, suggest the possibility of the existence of a specific spirochaete with neurotoxic action. There are other contributory factors which are summed up in Krafft-Ebing's formula that general paralysis is a result of "syphilization and civilization." In countries where no alcohol is consumed the disease is not found. Dr. Mott's investigations of 3,118 cases of insane relatives who have been admitted to the London County Asylums does not support the conclusion that either hereditary predisposition or the neuropathic temperament plays any considerable part in the production of general paralysis. Of the patients who died during the last five years in all the London County Asylums 21.3 per cent. were general paralytics, and among 158 of these who were related the death-rate was 21.1 per cent. The fact that congenital syphilis may in about 2 per cent. of the cases of general paralysis cause the same pathological conditions to arise at puberty or early adolescence before intemperance or other exciting causes come into play, seems to Dr. Mott conclusive that syphilis is the essential cause. It is estimated that from 3 to 5 per cent. of persons who have acquired syphilis subsequently become the victims of tabes or general paralysis.

Whereas tabes and general paralysis are met with equally often in all grades of society in males, they occur with decreasing frequency in females as we ascend the social scale. The cause is obviously exposure to infection and poverty. In the total female admissions as compared with the total male, there is one female to seven males. This is probably considerably under the mark, as there is a considerable number of better-class males who every year develop general paralysis and do not come into the London County Asylums. Dr. Mott's statistics show a larger incidence of general paralysis and insanity in the richer West End parishes north of the Thames than the poorer East End.

Fifteen per cent. of the male patients admitted to the London County Asylums are general paralytics. As these patients when they are attacked are in the prime of life, able in body and mind and of civic worth, we agree with Dr. Mott that it is the duty of the State to do its utmost to prevent the disease which blights so many lives and makes the sufferers a burden to the community. Now that the cause is definitely known it has become possible to remove. This means that much of the insanity that now exists is preventable. This being the case, Dr. Mott is justified in asking whether a part of the £600,000 spent last year by the Asylums Committee of the London County Council alone in the maintenance of lunatics would not with advantage be devoted in the future to the prevention of syphilis, which is so widespread and potent a cause of insanity.

The prevention of syphilis would have far-reaching effects on the health of the people, for the ravages of the spirochaete extend over a large part of the field of pathology. In addition to the diseases grouped under the head of parasyphilis it is a factor in the production of imbecility, idiocy, arterial degeneration, blindness, and deafness. It also lessens the power of resistance to other infections, notably tubercle. Further, syphilis in the parent, particularly in the mother, is a frequent cause of miscarriage, abortion, stillbirth, and death in early infancy from marasmus, hydrocephalus, convulsions, and meningitis. Hence its prevention would greatly increase the birth-rate of healthy children. Intravenous injection of salvarsan as soon as the primary infection is disclosed by demonstration of the spirochaete and before it has become generalized in the body seems to Dr. Mott to warrant the hope that by this early treatment, followed by mercurial injections, not only may the spread of infection be in great measure averted, but the late manifestations of the disease in the nervous system will be greatly diminished. In salvarsan, therefore, there lies at least a possibility of razing general paralysis from the catalogue of human ills. Dr. Mott also contributes a collection of statistics regarding the disease in the London County Asylums. A paper by Dr. J. P. Candler and Mr. S. A. Mann embodies the results of an important research on the Wassermann reaction in the diagnosis of mental diseases.

The Neuropathic Inheritance.

The study of the neuropathic inheritance begun five years ago is already bearing fruit. In an address delivered by him at the opening of the Henry Phipps Psychiatrical Clinic, Johns Hopkins University, on April 16th, 1913, Dr. Mott points out some of the difficulties that meet the investigator in this field of research. He says:

> In searching for the neuropathic tendency there are many possibilities of missing the inborn factor of a neurosis or psychosis, though a careful inquiry be made, even when aided by intelligent co-operation of the friends. It is necessary to inquire into the family life and conduct of the members of a stock to find the neuropathic taint. How often may it be observed that an apparently sound stock may in reality be unsound. Successful men in the eyes of the world may be really degenerates; not infrequently so-called self-made men form the first step in the process of degeneration. The selfishness and meanness, or the cunning, avarice, and moral guile by which they have succeeded in amassing a fortune for their children to spend selfishly is the first evidence of degeneracy; but whereas the parents, to gratify their selfish desires, succeeded by work and abstemiousness, the children, possessing the same selfish instinct with no need to work and supplied with abundant wealth, acquire vicious habits and criminal propensities, and not infrequently terminate their careers in the madhouse or prison. At the same time I do not wish to lay too much stress upon inborn criminality. Imitation and suggestion play a large part, for an inborn virtue under evil surroundings may lead to the worst forms of vice. When pedigrees are constructed showing in successive generations numbers of criminals, paupers and lunatics, are we quite sure that there has not been a continuance in successive generations of those social conditions that lead to crime and pauperism, and the exciting causes of the insanity? I have often found in the collection of pedigrees the association of insanity and suicide in a stock preceded by, or associated with, the existence of individuals possessing the melancholic, suspicious, brooding, self-centred hypochondriacal temperament; and it is not uncommon for the suicide of one or more members of the stock in successive generations to occur. Associated with these temperamental evidences of degeneracy of a stock may be chronic alcoholism, dipsomania, hysteria, hypochondriasis, exophthalmic goitre, neurasthenia, psychasthenia, migraine, *petit mal*, or neurosis of an epileptic character, often unrecognized because not manifesting fits of the major form of the disease.

Dr. Hill Wilson White gives the results of an investigation of twenty-five pedigrees of insane persons; among 1,832 individuals there were 78 lunatics, or 40.37 per 1,000. The proportion of the insane was much higher in the maternal as compared with the paternal stocks. In regard to this it is noted that all the twenty-five pedigrees were of female patients. Dr. J. C. Wootton records the results of a similar investigation of the family histories of patients in Cane Hill Asylum. Although the pedigrees (seven) are too few in number to justify any definite conclusions, a study of these and other family histories obtained by him seems to suggest the following inferences:

> (1) When an insane taint manifests itself in a family it appears to be confined to one or more members, leaving the remainder and their offspring (should they make a healthy marriage) free from taint. (2) The affected members have but scanty progeny, owing to their being affected by insanity early in life and thereby prevented from propagating; or, should they marry, their fertility appears to be limited to a great extent. (3) A latent tendency in a member of a tainted stock apparently can be revived by the marriage of that member into a stock devitalized by marked alcoholism, tuberculosis, syphilis, or other racial poisons. (4) Epilepsy does not appear to conform so well with the foregoing remarks regarding insanity, for an epileptic taint may become manifest in any member of a stock, even of unaffected lines, and may proceed for many more generations than is the case with insanity.

The Cerebral Convolutions and Heredity.

Wishing to ascertain if the convolutional pattern of the brain was inherited like the physiognomy, Dr. Mott instituted a card system for relatives with the object of obtaining the brains of persons nearly related who die in the London County asylums. The cards on which the related cases are recorded now number more than three thousand. The brains of these persons when they die are preserved when possible, and in this way a large collection is being accumulated. In a paper on the hereditary resemblance in the fissures of the cerebral hemispheres Dr. Edgar Schuster, who previously described three Chinese brains now in the museum of the Royal College of Surgeons, in the present volume of the *Archives of Neurology* gives the results of an elaborate examination of the brains of a mother and daughter and two brothers. He has ascertained that more than 15 per cent. of the inmates of the London County Asylums are connected with some other inmates past or present by ties of relationship. It will, however, Dr. Schuster says, be many years before sufficient data are available for statistical study. He reviews the work previously done on this subject, and gives the results of his own examinations in great detail, which it is impossible to summarize. They are illustrated by drawings and tables of the brains examined. Dr. Schuster also contributes a description of the convolutional patterns of the brain of a Malay. These researches, though still far too few to form sufficiently firm ground for a general conclusion, may lead to very important results.

Calcification of Cerebral Neoplasms.

Dr. Lewis H. Weed contributes a note on calcification in cerebral neoplasms based on a study of 55 unselected cases. Tuberculoma and syphiloma were excluded. It was found that calcium deposits could be identified with certainty in 22, that is to say, 40 per cent. of the cases.

Insanity in the Involution Period.

In a thesis on the etiology, pathology, and clinical aspects of some cases of insanity occurring in the involutional period of life, Dr. M. B. Baines submits an analysis of 104 consecutive cases of male patients in whom the first attack of insanity occurred between the ages of 50 and 60 years. In 51 of these cases there was a family history either of insanity, epilepsy, alcohol, or suicide; in the majority of the remaining 53 no trustworthy information on these points, either negative or positive, could be obtained. In 50 per cent. of the cases there had been excess of alcohol at some period of the patient's life. An injury may be regarded as a contributory factor in the causation of an attack of insanity. In 21 per cent. of the cases an antecedent attack of syphilis was either definitely known to have occurred or was practically certain. Judging, says Dr. Baines, from the almost invariable presence of arterio-sclerosis and from the frequency with which syphilitic patches of nodular arterio-sclerosis were found after death, the percentage of patients who had at some time or other contracted the disease is probably much higher than that given. Some one or other of the following morbid changes in the brain and cord were frequently found:

Thickening of the cerebral and spinal arteries. Thickening of the meninges. Excess of fluid in the serous spaces in and around the brain and cord. General wasting of the convolutions. Granular ventricles. Naked eye and microscopic haemorrhages in the brain substance and meninges. Naked eye and microscopic softenings in the brain. Degeneration of the ganglion cells and tracts of the brain. Proliferation of the glia elements. Presence of fatty degeneration products in the ganglion cells, glia cells, and in and around the arterioles and capillaries of the brain.

Cortical Lamination.

Dr. A. B. Droogleever Fortuyn contributes an elaborate paper on cortical lamination of the hemispheres of some rodents. It is impossible to attempt to summarize an investigation of so detailed a kind here; it need only be said that it serves to show the wide range of the researches made at Claybury and the persevering labour with which they are pursued.

Head Injuries.

In an appendix there is a paper on the relation of head injury to nervous and mental disease which formed the subject of Dr. Mott's address in opening a discussion on this subject at the annual meeting of the British Medical Association held at Birmingham in 1911,[2] and a paper entitled "Is Insanity on the Increase?" reprinted from the *Sociological Review* (vol. vi, No. 1). The appendix also contains a number of papers by Dr. Mott and other workers in the Claybury Laboratory which have appeared in the *Proceedings* of the Royal Society of Medicine.

THE TUBERCULIN TREATMENT OF PULMONARY TUBERCULOSIS.

Dr. Bardswell's preliminary report on the *Treatment of Pulmonary Tuberculosis with Tuberculin*,[3] as illustrated by his experience at King Edward's Sanatorium, is a document of much importance. In the opening sections the routine methods of clinical observation in use at the sanatorium, the methods and objects of tuberculin treatment, and the principles of dosage are succinctly described; the remainder of the book is devoted to an analysis of the results observed, illustrated by numerous temperature charts and clinical histories. Certain results emerge which are worthy of careful consideration. In the first place it seems clear that the occurrence of febrile reactions during a course of tuberculin treatment is a source of danger. Numerous clinical histories are cited in evidence, and the following conclusion is amply justified:

It is not denied that a number of examples may be brought forward to show that reactions to 100.4° F., or even higher, *may* do no harm. Our own records prove this, but it is not to the point. So long as there is no evidence to prove that they are of any benefit, and a great deal of evidence to show that at any time they may do much harm, there can be no room even for discussion as to what is the correct practice.

In the second place, the value of tuberculin in the treatment of favourable cases must still be regarded as dubious; some of the statistics, particularly those tabulated on p. 84, lend support to the belief that the administration of tuberculin influences the course of the disease favourably, but Dr. Bardswell adduces certain reasons for not accepting the figures at their face value, and his plea for a suspension of judgement is strongly supported by Professor Karl Pearson in a prefatory note. Professor Pearson directs special attention to the fact that the absence or presence of tubercle bacilli in the sputum as a test of condition can only be satisfactory if it does not merely refer to the last examination, but allows due weight to each examination of the sputum during the period under observation and treatment.

Dr. Bardswell's provisional conclusions may be summarized as follows: (1) Tuberculin as at present used is not a remedial agent which can be depended on to revolutionize either our sanatorium results or our conception of the outlook for the average consumptive. (2) The cases which may be expected to respond at least not unfavourably to tuberculin are those with a good outlook which have reacted well to general hygienic measures, and show evidence of constitutional vigour and recuperative power. (3) In a considerable number of cases tuberculin, so far as can be judged from immediate clinical results, has no obvious influence on the lesions. (4) Tuberculin cannot be looked on as a means whereby an unfavourable case can be converted into a favourable one, or as likely to turn the scale in the patient's favour when his progress is doubtful, and certainly not when it is definitely retrogressive. (5) Tuberculin is not suitable for routine administration, and its indiscriminate and careless use on a large scale can only end in harm.

These findings are not likely to be well received by all the enthusiasts for tuberculin treatment, but they should be weighed by those who have open minds on the subject. On pp. 92–131 Dr. Bardswell gives the records of several patients treated with tuberculin in private practice, at dispensaries, and elsewhere. We regret to notice that at least four of these patients went through a tuberculin course on written instructions and without the personal supervision of a medical man. In one instance, that of a man employed in India, excuse is possible, while in one or two other cases it may be conceived that the course

[2] See British Medical Journal, September 30th, 1911, p. 733.

[3] *Preliminary Report on the Treatment of Pulmonary Tuberculosis with Tuberculin.* By N. D. Bardswell, M.D.; with a prefatory note by Professor K. Pearson, F.R.S. London: H. K. Lewis. 1914. (Demy 8vo, pp. 153. 6s. net.)

adopted was without professional sanction. For our own part, we can only say that any medical man who directly or indirectly sanctions the employment of a dangerous drug, the reactions to which may demand the most skilled supervision, by a lay patient incurs a very serious responsibility.

LOCAL ANAESTHESIA.

LOCAL anaesthesia has not yet attained in this country the measure of popularity accorded to it in France and Germany. In America surgeons have followed hard on the lead of Continental surgeons. It is a little difficult to account for our disinclination unless it be the fear of the poisonous effects of cocaine. Dr. HERTZLER, in *Surgical Operations with Local Anaesthesia*,[1] has written a very satisfactory monograph embodying his own experience and describing his own methods for the benefit chiefly of the general practitioner. The book discusses the general principles, technique, and drugs employed, and then goes on to details of the use of the method in particular operations. The qualities, good and bad, of cocaine, novocain, stovaine, *et hoc genus omne*, are fully discussed without any addition to our knowledge. The author, however, strikes a new trail in exhibiting a marked preference for quinine as the most suitable all-round agent. A solution of the hydrochloride of quinine and urea (1 per cent.) is his choice. It is, he says, absolutely safe, it is efficient, and it is cheap. It is most useful in regions where post-operative pain is considerable and prolonged, as the analgesic effect may last for many hours. Anaesthesia is slower of induction, but as a large area may take over five minutes to infiltrate, by the time it is completed anaesthesia has arrived. Quinine causes hyperaemia at first, but this is followed by haemostasis; on the other hand cocaine-adrenalin gives a bloodless field, but after operation there is likelihood of haemorrhage. The author prefers cocaine preparations for small limited areas, as about the face.

A large variety of operations suitable for local anaesthesia is described, the range extending from removal of sebaceous cysts to gastro-enterostomy and to radical cure of umbilical hernia. The method of nerve blocking and perineural injections, both as a primary step and as an occurrence in the course of an operation, is also detailed. Practitioners and surgeons will find many interesting things in this monograph.

The book is beautifully printed, with a telling kind of rubric in red ink very helpful, at any rate, to a reviewer. The proof reader must have been somnolent when he reached page 128, for the eighth line has been deposed a distance of five lines, and there is a misspelling in the middle of it.

MEDICAL AND SURGICAL APPLIANCES.

Posterior Rhinoscope.

MR. WILLIAM LLOYD, F.R.C.S. (London), writes: This instrument consists of a tubular spatula, at the end of which is a mirror which can be bent to any angle necessary for examination. It is intended for use with a Bruning's handle which it is made to fit. It is used as follows: The ends of a piece of rubber cord or tubing of small diameter, about 18 in. long, are passed, one through each nostril and brought out through the mouth; they are then passed through the loop and the soft palate is thereby drawn forward (in the same manner as the tongue is in examination of the larynx) and so held in position. Sufficient anaesthesia is produced by spraying the floor of the nose with a 3 per cent. solution of cocaine and the application of a 5 to 10 per cent. solution to the soft palate. If a general anaesthetic is used, it is advisable to inject morphine ¼ gr. an hour before the operation. The examination of the post-nasal area is considerably simplified by the use of this instrument. It gives an excellent view of the parts, so that the passing of instruments into the Eustachian tubes, operations on the sphenoidal sinus, and, in fact, almost any operation in the post-nasal area is no longer in the nature of a step in the dark, if this method is applied. It will in many cases obviate the necessity for splitting the soft palate in operations on this area. The instrument is made by Messrs. Mayer and Meltzer.



[1] *Surgical Operations with Local Anaesthesia.* By Arthur E. Hertzler, M.D., Surgeon to the Halstead Hospital, Halstead Kan., and to the Swedish Hospital, Kansas City, Mo. New York: Surgery Publishing Company. (Demy 8vo, pp. 205; 104 illustrations. Price 12s.)

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

At the thirty-fourth meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. Frances Ivens, Honorary Medical Officer for Diseases of Women at the Liverpool Stanley Hospital, Honorary Surgeon to the Samaritan Hospital, and Honorary Medical Officer to the Liverpool Maternity and Rescue Homes.

Frequency of Gonorrhoea in Women.

Dr. Ivens said that her experience in Liverpool led her to the conclusion that gonorrhoea in women was extremely widespread in that town. Investigations she had made in the years 1907 to 1909 respecting the incidence of gonorrhoea in gynaecological hospital practice showed that of 1,052 consecutive out-patients, 149, or 14 per cent., suffered from gonorrhoea, and of these 47, or 30 per cent., were sterile; of 159 in-patients 39 had gonorrhoea, or one in four, and of these 13, or 33 per cent., were sterile.

The disease was difficult to cure completely, and relapses were frequent. Reinfection was also very common, and was the cause of much disappointment after prolonged treatment. This raised the important question whether, in the case of a married woman, the patient should be informed of the true nature of the disease from which she was suffering. At the present time it was the custom in the medical profession to conceal the nature of the disease from the wife in order to avoid causing mental worry in addition to physical illness. Dr. Ivens said that the question was difficult, but she doubted whether the present attitude in this matter was correct. It was manifestly unfair that a woman should be subjected to repeated reinfection without her consent, and, if unaware of the nature of the disease, she was unlikely to submit to efficient treatment. If any change were to be made by the medical profession in this matter it must be made by the profession as a whole.

At the thirty-fifth meeting evidence was given by Dr. Andrewes, Pathologist at St. Bartholomew's Hospital, and Miss Gregory, Honorary Secretary of the Home for Mothers and Babies, Woolwich.

Arterial Disease.

Dr. Andrewes's evidence dealt mainly with the subject of the results of syphilis in the production of arterial disease. There were, he said, several diseases of the blood vessels and the heart commonly fatal in their result, and by no means rare, which were not obviously syphilitic in nature, and did not figure as results of syphilis in death returns, but which were now recognized as late results of syphilis.

The main object of his evidence was to draw attention to the commonness and gravity of these indirect and late results of syphilis.

Education of Midwives.

Miss Gregory said that she was anxious to impress upon the Commission the necessity for every pupil midwife receiving a short course of lectures on venereal diseases and clinical instruction at a Lock Hospital. At the present time she thought midwives were absolutely ignorant in these matters. It would be impossible to include such a course of lectures in the present syllabus, and she would not advocate it unless the whole training were lengthened; at present the period allotted by the Central Midwives Board for training was the wholly inadequate one of three months.

DR. G. E. HERMAN, formerly consulting obstetric physician to the London Hospital, left estate valued at £7,212.

THE LAW OF SICKNESS INSURANCE IN HOLLAND.

By Dr. J. P. van der Brugh,
Rotterdam.

Introduction.

In the majority of European countries the practice of medicine is passing through a critical stage. The growing social movement on all sides compels one to realize that the medical care of the industrial classes is a matter of great social interest, and one that must therefore be furthered and extended as much as possible.

The endeavour to enable every sufferer of the lower classes to assure himself of securing skilled and more extended medical assistance has the warmest approval of every one of us, for we all know from experience that in the existing unfavourable financial conditions under which these people live much is left to be desired.

But the manner in which Legislatures are seeking to attain the end has in every country compelled the doctors to take action in self-defence. The curious phenomenon has appeared that legislators have failed more or less completely to take into account the justifiable desires of the doctors by whom the law must be carried out, and without whose assistance it must be inoperative. The Legislatures have roughly interfered with the fine, subtle, but honourable and necessary relations of medical practice. They have paid insufficient attention to the basis of our profession—to the confidence of the patient on the one side, and the devotion and independent position of the doctor on the other. Legislators have gone to work on lines that are too material, and, even so, have not succeeded, for the material interests of the doctors have been badly neglected everywhere. It is as though the legislator—who so carefully looks after the importance and independence of the judges—had not been able to see that a skilful, well-to-do, and independent medical body is a great national interest.

From this comes the conflict which legislation has aroused.

However much the circumstances may differ, the bases of our profession are the same everywhere. We think, therefore, that the readers of this Journal, who only a short time ago were obliged to defend their financial interests against the legislator, will be interested to learn the development of conditions elsewhere. We intend to give a synopsis of the new Dutch Sickness Insurance Law and its consequences for medical practice.

The position of the law at the present moment is peculiar. It passed both chambers of the Dutch Legislature and received the Royal assent in the spring of last year; the text, however, did not contain a clause fixing the date at which it was to come into force, and at the general election in June the Government was defeated. The new Ministry contemplates certain alterations, which have not as yet been formulated. It is understood, however, that they are concerned chiefly with compulsory insurance, casual labourers, and other similar details, and that the medical part of the law will be brought into force substantially unaltered. Before discussing the law, however, it seems desirable to give a short account of the way in which medical attendance on the lower classes has hitherto been provided for through the voluntary action of the medical profession and the public.

The Present Conditions.

In municipalities where only one doctor is established—that is, in the country and in small villages—the doctor has had, as a rule, his own sick club. The members of this club, who belong to the industrial or lower classes, pay weekly from 1½d. to 2d. a head, or from 3d. to 4d. a family (husband and wife, and children up to the age of about 12 years).

In places where there is no chemist, the doctor keeps his own dispensary and provides medicines as well as medical attendance. Confinement fees are a separate item. For serious operations and specialists' treatment, patients are directed to a neighbouring town, where they can receive attention in a polyclinic or hospital, gratis or for a moderate fee, which is often paid by the municipality or out of the Poor Law funds of the place where the patient resides. The more well-to-do people are not admitted into the club, but are treated as private patients, while for the treatment of the poor the doctor receives a fixed annual sum from the Poor Law funds.

In the larger towns the system is controlled by sick clubs, institutions which assure to the industrial classes professional attendance and medicines. In the majority of cases these clubs are at the same time burial clubs—that is, they assure a payment at death to meet funeral expenses, but as such this assurance is entirely apart from the sick club.

The weekly contribution, which is collected from the members by the club officials—messengers—is generally about 2½d. per adult and 4½d. per family. For this sum the club provides professional attendance and medicines and specialists' treatment in polyclinics. As a rule no hospital treatment is provided and only partial assistance at confinements. Only those members who have paid an extra contribution for some months receive a few shillings with which they are enabled to defray the expenses of the midwife. If in difficult cases the assistance of a doctor be necessary, he is provided at the expense of the club.

The position such an institution occupies in relation to the doctors depends upon how its committee is composed. The best clubs are those which are run and governed by their own doctors and dispensers with two or three representatives drawn from the members themselves. They put the so-called free but limited choice of doctor into practice, that is to say, every well known doctor of good reputation may join, and each member may choose whichever doctor he wishes.

Some clubs are the property of philanthropic societies; on their committees the medical profession is at least represented.

Many others are conducted by private individuals, who regard the club as a legitimate means of trading and run it as such. It must here be noted that a sick club of itself does not make a big profit for the management, whereas on the other hand the burial club does. The sick club, then, principally serves to promote the interests of the burial club by adding new members, and such an institution often takes the name of "Life Insurance Society." Further there are factory clubs, with which one doctor who treats the workers is generally connected, while the employer has a considerable influence and often assists by money payments and in other ways.

We will only mention the sick clubs of the railway societies incidentally, but must devote a few words to the co-operative societies. They form one class of the societies, which trade on a co-operative basis; for example, they run a baker's shop or a boot shop, and are, as a rule, exclusively managed by workmen. Next to the sick clubs, managed by private individuals, they are the worst and most dangerous to the doctors.

All the last mentioned clubs engage a greater or smaller number of doctors to attend to their members. The doctors are excluded from the committees, and in other directions too, their influence on the management is in no wise permitted.

The Law of Sickness.

All workmen—in the legal sense of the word—that is, all persons who have a permanent position and whose wages do not exceed a stipulated amount, are to be insured for payment in case of sickness.

This insurance may take place: (1) At the sick-pay office of the Labour Council, which consists of employers for the one half and workmen for the other with a president appointed by the Crown. For this purpose about eighty sick-pay offices will be established in the country in the name of the State. (2) At a recognized private pay office. The Labour Council may cause the establishment of sick clubs (for providing medical attendance), but may not itself own or administer a sick club. This restriction, however, does not apply to the recognized private pay offices in so far that institutions which obtain Royal assent, as required by the law, may also establish sick clubs.

These private pay offices are recognized by the Labour Council, provided that they have a sufficient number of members, that the regulations are fixed, and at least the majority of the committee is chosen by the members, and that they are the property of an institution sanctioned by the Crown.

The recognized private pay offices may thus be the property of a working body, of a workmen's society acting

on certain political lines, of a religious sect, or of any other body or institution sanctioned by the Crown.

The sickness law is designed to ensure that the insured persons shall be provided, as far as possible, with medical attendance, including medicines and dressings, by means of sick clubs, which the State sanctions for the purpose. An accepted sick club must be the property of an institution sanctioned by the Crown. A workmen's society, organization or institution, which possesses a recognized private pay office, may be the owner of an accepted sick club.

In addition the following requirements must be fulfilled:

(*a*) The regulations must define the state of members or the insured persons by an income limit.
(*b*) The accounts must be approved by the general meeting.
(*c*) The medical attendance must be in accordance with the requirements laid down in the general rules of the State, and, where possible, at least two doctors and two chemists must be attached to the club.
(*d*) The regulations must limit the number of members entered to the name of one and the same doctor.
(*e*) The contributions of members must be fixed by the general meeting, which must consist of the members or their representatives and the doctors and chemists who are attached to the club.
(*f*) One or more members chosen by the members or by the general meeting must be on the committee, as well as one or more doctors and one or more chemists (the income of the club must be exclusively devoted to medical attendance and business connected therewith, the management of the club, etc.).
(*g*) A reserve fund must be formed.

In order that the existing clubs shall fulfil these requirements and reorganize themselves into accepted sick clubs, the law enacts:

1. That a member shall receive sick pay when under professional treatment.
2. That professional attendance provided by a non-accepted sick club shall not be regarded as professional attendance. The law also offers a few other advantages to the accepted sick clubs, in order to encourage new members to join.

The Doctors' Point of View concerning the Sick Clubs.

The basis of medical practice is the confidence of the patient in his doctor on the one side and skill and humane devotion on the other. This principle applies to private practice, and should also apply to sick clubs. The only difference between the two kinds of practice—that is to say, between the way in which a better-class patient and a lower-class patient obtains medical treatment—lies in the fact that the lower-class patient pays less, and, through the administrative intervention of a sick club, subscribes for professional treatment by means of a premium paid weekly.

It goes without saying that a private patient has the right to choose the doctor in whom he places the greatest confidence, for in days of sickness and danger he leaves the responsibility of his physical well-being in the hands of this doctor.

It is not less clear that the patient who is a sick club member has an equally indisputable claim to this natural right. The importance of his physical well-being is by no means less than that of the well-to-do patient, and the fact that he pays his doctor in another manner and with less money is of no moment.

For the doctors themselves the application of the free choice of doctor in sick clubs is of the greatest importance. If the clubs engage only comparatively few doctors the excluded remainder will have no opportunity of obtaining practice—that is, of supporting themselves. For the ordinary course of things—especially in towns—is that a doctor begins with club practice and only gradually obtains private practice. And as time advances it will be found that more and more doctors must derive their means of livelihood either exclusively or chiefly from club practice.

For some considerable time medical practitioners have demanded that the free choice of doctor in sick clubs ought to be obligatory. By this is understood that (1) every member of a sick club (or his family) has the right to make a free choice among the doctors connected with the club; he may change his doctor a few times a year. (2) Any medical practitioner of good name and reputation has the right to connect himself with the club; he may accept or refuse a member or family of a sick club as patient or patients, but, once accepted, he may not refuse professional services except in certain circumstances.

The problem as to the restrictions concerning the monetary state of would-be members is closely related to this demand. The aim of a sick club is to supply medical assistance to the lower classes for a moderate outlay. If, then, the middle classes be accepted as members the aim is overreached and abuse is encouraged. There must therefore be a limit. Persons whose incomes exceed a certain figure must not be members of a sick club.

It is realized that the problem is of importance to doctors. At present not more than about 10 per cent. of the Dutch population are attended as private patients, and this percentage will decrease if the sick clubs are made open to all. Not only in the economical sense would the medical faculty be badly affected, but there would be the additional result that nearly all doctors would have to resort exclusively to sick club practice, and if in that case the free choice of doctor were not granted, a great number of doctors would be left without any means of livelihood. In Germany there have been instances in which a sick club committee has disposed of a position as club doctor to the lowest tenderer.

The Dutch medical practitioners demand the insertion of a dividing line as to the monetary status of members in the statutes of a sick club, and that the task of a sick club shall be exclusively that of supplying the lower classes with medical attendance.

It has already been said that most sick clubs are at the same time burial clubs, but this does not matter so much, as these institutions are separate, and as a rule have only the same committee. But if the sick club only forms a subdivision of a commercial undertaking, it is highly risky. We will take as an example a co-operative society which sells bread, groceries, shoes, etc. He who becomes a member of such a society must at the same time join the sick club which is connected therewith. It has only a small number of doctors, because such an institution never permits the free choice of doctor. Workmen and people from the lower classes who have been in some sick club up to the present time leave their doctor in order to join this society. Why? Because they have more faith in the few doctors of the co-operative club? Not at all; but because they wish to take advantage of the bread, grocery, etc. Such a sick club is absolutely at war with the basis of the medical profession.

The doctors of these clubs obtain additional patients at the cost of their excluded colleagues; they obtain them not because of their own capabilities or merit, but because of the advantages offered in respect of bread and grocery by the store of which they are an appendage. From a medical point of view this is a wrong manner of proceeding. Such a club obtains doctors by offering them a minimum fixed salary of a few hundred pounds. That doctors, and above all young doctors, agree to this is comprehensible, but stupid. For it is not a practice of their own which they obtain; it is that of the society. They are entirely dependent on the committee, and should they be dismissed they lose their entire means of subsistence, as their patients are bound to the club. They undermine the basis of medical practice, are badly paid for the great amount of work which they must do, are wholly subject to the committee which in reality—and we could give some striking examples of this—tyrannizes over them.

The Dutch medical practitioners are therefore justified in demanding that a sick club shall confine itself exclusively to the medical care of the lower classes. In some instances a committee, consisting of one or of a few persons, has established a sick club for its own purposes and has developed it as a commercial enterprise. As it is difficult to increase the income of the club by raising the members' contributions, efforts are made to cut down the salaries of doctors and chemists, so that the amount to the directors' credit shall be increased. If a doctor makes himself troublesome—if he lays claim, on the ground of his notes, to a greater sum than is, by mistake, paid to him—he is punished by not entering any new members on

his books. Owing to such abuses as this, the medical profession demands that a club committee should not be paid. Money must, of course, be paid for the administration, but the administrator must be a salaried official of the club under the control of the committee. And, finally, the doctors claim that the moneys of the club be exclusively employed in defraying the cost of medical assistance and administration. The necessity for this need not be enlarged upon here.

The most important conditions which, from the medical practitioner's point of view, a sick club should fulfil are that there shall be free choice of doctor; an income limit; limitation of the club to giving medical attendance and drugs; that members of the committee shall not have a financial interest, and that the manner in which the moneys are expended be determined by the statutes. But all this will not avail if the statutes are themselves passed or amended by a general meeting in which members of the club have too great a majority.

The question, then, is how the doctors can uphold their independent position, prevent themselves from becoming entirely dependent on the club committees, and prevent the latter from abusing their power.

In order to attain these ends the doctors desire to have an equal influence in the general meeting and on the committee. They want the power to protect their rightful interests. It is the demand for this power that has caused the strife between the doctors and the sick clubs; yes, even with political parties.

The Dangers of the Sickness Law for the Medical Profession.

If the requirements of the doctors are compared with the conditions the law lays down for the accepted sick clubs which are to administer medical attendance to the lower classes, it is found that, in respect of the free choice of doctor, the law provides "that, whenever possible, two medical practitioners at the least must be attached to the club" ("whenever possible" means if there are more doctors than one established in the place).

Thus we see that the law leaves the matter in an uncertain state. A sick club which is willing to adopt the free choice of doctor in the way the doctors desire may be recognized, but another sick club may likewise obtain recognition even though it limits the free choice of doctor as far as possible—that is to say, excludes all other doctors and appoints only so many as will fulfil the requirement of the law, which fixes the maximum number of club members entered to the name of one doctor.

With regard to the income limit for members, the provision is "that the regulations shall contain a limit for the monetary state of members."

In the proposed bill income limits have been fixed for every municipality in the State.

The doctors were unanimous in agreeing that these limits were too high; they showed that under them private practice would be confined to 10 per cent. of the inhabitants in towns, here and there even to 3 per cent., and in the country to only a few families. The Government has discarded these figures, and any accepted sick club may now fix an income limit according to its own discretion.

With regard to the independence of the club, the bill prescribes that the administration shall be carried on by the representatives of the members with doctors and chemists, and that the moneys shall be exclusively employed for medical attendance. This is a satisfactory feature.

With regard to the point that members of the committee shall have no financial interest, the bill is entirely satisfactory, and the memorandum says expressly that a sick club whose committee aims at profit will not be accepted.

With regard to the influence of doctors in the general meeting and on the committee, it is provided "that the general meeting shall consist of members or their representatives, and of doctors and chemists connected with the club; and that one or more members, as well as one or more medical practitioners, and one or more chemists, shall be on the committee."

The question of power is not solved by the law. On the one hand, it would allow the possibility of the members forming the majority in the general meeting and on the committee, and, on the other, that the doctors and chemists should have the upper hand.

The dangers that threaten the medical profession are due to the fact that the law does not solve the most important questions causing friction; on just these very points too much play is left, and, when establishing sick clubs, the members will take advantage of this.

Without any doubt sick clubs will be established and carried on according to their own ideas:

1. By trade unions (of workpeople).
2. By workpeople and other societies acting on certain political lines or in sympathy with certain religious sects.
3. By co-operative (working) societies.

It is not to be expected that these sick clubs will give the doctors—whom they look on as their paid servants—a place in the club, which the doctors consider necessary for self-preservation. These clubs will no doubt be obliged to admit the doctors and chemists, appointed by them, to the general meeting, and even allow them the right to vote, but these votes will certainly be in the minority, because the number of members' representatives who may attend the meeting is not prescribed by the law.

What this means will be clearly understood from the fact that the meeting has power to modify the statutes wherein, among other things, the minimum salary of the doctors is fixed.

Moreover, whenever the doctors will not or cannot dance to the piping of the members they will always run the risk of being dismissed—in other words, of losing their means of existence, as they would also fill a very subordinate place on the committee. For the law allows the club to have only one doctor on the committee, and use will undoubtedly be made of this fact.

This will apply not only to the large and small towns but also to a very great extent to villages with a large percentage of working inhabitants.

The village doctor, hitherto master of his own club, will be the subordinate salaried servant of his lower-class patients not less than his town colleagues, since the aforementioned institutions also reach the villages, and he will certainly be forced, even setting aside any possible political or religious influences, to accept the position of doctor in the local section of the great recognized working people's sick club.

If he does not take up this position the password will be "Let us get somebody else"—and this somebody else will be easy to obtain if the organization of the Dutch medical practitioners does not maintain its unity and does not take strong steps. For many club doctors will—as a consequence of their patients going over to these accepted sick clubs—be seriously injured financially, and in consequence may be forced to accept these positions, which, while they involve excessive work, will scarcely bring them a sufficient income to keep their families.

Since the law says that whenever possible an accepted sick club must have at least two permanent medical practitioners, these clubs will seek to engage the smallest number of permanent doctors, and to exclude all other club doctors. They will give these permanent doctors, as a deceptive allurement, the maximum number of members that the law permits, in order to have them all the more in their power, and the doctors will then be entirely dependent on the clubs in respect of their financial position.

The experience in Germany and Austria has conclusively proved that this state of affairs is by no means imaginary. While the doctors were blind to the danger in these countries, the workers' organization, after the insurance laws were passed, made itself owner of the sick clubs, engaged permanent doctors and conferred these positions on those doctors whose demands were lowest.

This, it may be expected, will happen also in Holland. The law does lay down the minimum fee of a doctor per member or per visit, but this minimum can and will be fixed as low as possible because the workmen have the power in their hands and a low minimum means much to them—less expenditure and, in consequence, lower contributions.

All this applies not only to the club doctors but in an equal degree to the specialists. In order to put the cost of specialists' treatment as low as possible the accepted sick clubs in the large towns will combine and with the exclusion of all the remaining specialists in different

branches engage a permanent one at a fixed salary. This is of consequence to the majority of specialists in the Netherlands, since it will exclude them from the treatment of a large proportion of the population.

In conclusion, yet another danger affecting all medical practitioners is looming in the near future. As soon as the above-named institutions establish sick clubs the workers on the committee as well as in the general meeting will have the power in their hands, and it will be they who will fix the income limit for members. It is clear enough that they will increase this limit to the same as that fixed by the sick-pay offices, which the doctors are unanimous in considering too high. Once the law is in force the income limit for members of the sick club may be still further increased; the fatal consequences of this have already been pointed out.

A danger not less great than that from the side of the workmen's organizations threatens medical practitioners from the side of the large and small manufacturers. The employers are greatly affected by the carrying out of this social law, because half of the premiums of the sick-pay offices must be paid by them. Undoubtedly they would like to keep the power in their hands in order to see exactly that the total amount paid out for sickness was made as low as possible. As the law deprives them of this power in the private sick-pay offices since the committee must consist of a majority of workmen, they will try to effect it in another manner—namely, by engaging one or two permanent doctors for their factory, who, in addition to the medical treatment of the working members, will be charged with the supervision of the workers' capability for work and his right to seek pay.

This action, which is in flagrant conflict with the development of the principle of free choice of doctors, means that the doctors—in places where these bodies are established—will find a large part of the working population taken away from their practice. The doctors who accept such positions will be entirely dependent on the employers. Some cases of this nature have, indeed, already occurred.

Thus there is the proletariat on the one side and the industrial employers on the other; between these two bodies the Dutch medical faculty will be crushed. And the independent position of the doctor, which is so necessary in order that he may cheerfully fulfil his difficult office in a proper manner, will be irretrievably doomed.

The Conflict.

Even those who have only a limited acquaintance with the consequences which the insurance laws have had for the doctors in Germany, Austria, and England have no doubt that the Dutch sickness law will cause a tedious and embittered strife between the doctors on the one hand and the sick clubs, whether or not backed up by the Government, on the other hand.

The strife is working havoc at the time of writing in Germany, where the medical faculty failed fully to appreciate the danger to the medical profession of the insurance law when it was first introduced. There the Leipzig Society, which has the social interests of the doctors at heart, openly declares war with all sick clubs. In the Netherlands the first signs have already been observed. The mobilization has already begun. Emulating the sick clubs, the doctors have united, and a political party stands ready to take in the booty. To-morrow, or the day after, the first shot will be fired.

The doctors in Holland will not strive for higher fees above everything else. True the financial question is a matter of very great moment. The fact that the salaries of club doctors are just as low as they were fifty years ago, while the wages of the lower classes and with that the standard of living have at least doubled in the interval, shows that the payment of better salaries may be called a fair and pressing demand, and one which must soon be granted. The demands as to salary—to speak in trade society terms—are, however, not put in the foreground. The very first place is given to the claim that medical practitioners shall be guaranteed a proper position in the sick clubs. They want their sick club practice to be and remain their practice, and not that of the club; they do not want to put their means of existence in the hands of a committee or general meeting in which working people rule; they want to retain their independent position, and not to be dependent on a group of workpeople. In other words, they demand at least just as much influence on the committee and in the general meeting of the sick club as the members. This is the first great aim of the profession.

To these aspirations the leaders of trade unions, who want to establish sick clubs, and the social democratic party are opposed. By their interference also the conflict will be partly carried over into the political field and the issue confused.

In the first place, the conflict has nothing to do with the better medical care of the lower classes or with the rights and obligations of the medical faculty, but with the power in the sick clubs—a matter in which this political party sees an opportunity of advantage.

The social democratic argument is more or less as follows: The workers (they prefer to indicate the whole of the lower classes by this name) pay the contributions; they are the persons most interested in the sick clubs, hence these institutions are really their clubs. If they establish new clubs under the regulations of the new law, then they exclusively must have the whip hand in these "their own" clubs, and have a majority on the committee and in the general meeting. It is for them to make the regulations, within the limits of the law, according to their own wishes; for them to engage many or few doctors as it suits them; for them to determine the place the doctor shall hold in the club; and for them to prescribe to these salaried servants what they are to do and not to do, and to adjudge their rights and obligations and salaries as they, the workers, shall lay down.

This argument is wrong and unfair.

We will take an example. It is contended that since the workers pay the contributions by which the cost of medical attendance is to be defrayed they should, in consequence, have the right to lay down the salaries of the doctors. On similar reasoning it might be maintained that the public, because it furnished the money, has the right to demand of a baker that he deliver his bread for a prearranged price.

The vision of the social democrats is so obscure that they are unable to see the great difference between a worker in a factory and a doctor in a sick club. The social democratic party, which has taken the lead in the conflict, has in one of its congresses declared itself in favour of the free choice of doctor. The medical profession hopes that the party will put this decision into practice, but does not set its hopes very high.

The experience gained in respect of the establishment of the existing sick clubs, where social democrats hold the reins, has taught the profession that they do not put the free choice of doctor into practice, and the party has not made any attempt in Parliament to embody the obligatory free choice of doctor in the law. They advise the doctors to form a strong trade union, and to fight for higher salaries and for a board of arbitration—a piece of advice which shows signs of short-sightedness, for it simply amounts to recommending that the ideal of the factory worker should apply to the sick-club doctor. But for the unsuspecting young doctor and for the interested outsider it has a specious attraction when democrats say, We who have always kept the question of remuneration to the front before all other questions invite you to do the same, and offer to establish an impartial board of arbitration between you and ourselves.

Concerning the question of salary, experience affords a test. In Amsterdam the medical practitioners have during the last few years made attempts to effect an increment in the really low salaries. The majority of the clubs recognized the fairness of these efforts and were consequently disposed to raise the contributions, but these efforts were twice wrecked by the unwillingness of one of the clubs. Now this very club is run by social democrats, and this fact speaks volumes. The cry—Demand a higher salary, and we democrats, who always premise and propagate this demand, will be at your disposal as much as possible—sounds splendid, but is not fulfilled when the time arrives.

The board of arbitration, it is suggested, should consist of three persons—one appointed by the clubs, one by the medical practitioners, and one an impartial person to be

appointed by both acting together. Against such a proposal there are two strong objections. The first is that it is almost impossible to ensure the impartiality of this third man. Even laymen of high standing can scarcely realize the causes which move members of the medical profession. In conversation with outsiders concerning medical matters this phenomenon is patent to every doctor. The layman can never put himself in the place of the doctor, but he does not forget that one day he himself will be a patient. In this connexion is it not remarkable that in the discussion of laws as to disease in parliaments a voice is rarely raised in the interests of the medical practitioners, while every one regards them as indispensable, of the highest use, and in general as honourable burgesses? In case of friction the impartial person will scarcely ever be on the side of the medico.

The second objection is no less important; for the club doctors a board of arbitation is impracticable. The cause of this lies in the peculiarity of the club committees. We will again call experience to our aid. Let us take the case of a medical man connected with a badly exploited club who comes into collision with the committee touching a financial matter. He proves irrefutably that he receives too small a salary, and after much trouble and unpleasantness obtains compensation for loss suffered. But he notices that during the weeks or months immediately ensuing very many fewer new patients are entered to his name than usual, and through this he suffers a loss which is badly felt. The result will be that in future he resigns himself to suffering the injustice.

The same happens to those medical practitioners who do their best to make better class club members retire from the clubs; they all complain that they pay for their interference in the number of club members assigned to them. This is done quite simply. The board of directors gives the messengers, who enrol members and visit the people in their homes, the hint to recommend a more accommodating doctor.

The injured doctor can never absolutely prove this method of business; for management and messengers are dependent on each other; the doctor does not know how many members he ought to have treated, but he notices the result easily enough. In these circumstances, what would a board of arbitration be worth to the medical man? If he is in the wrong he will be adjudged to be in the wrong, and suffer the loss which he deserves. And if he is in the right and this is admitted, then he may in no less a degree experience disadvantages.

These and other abuses, which in all sick clubs may be and in the inferior clubs are perpetrated, are possible owing to the fact that the committee has everything to say and the doctors nothing.

It is worthy of note that the social democrats who are expecting full salvation from the board of arbitration emphatically demand that the everyday management shall be carried on exclusively by the club members, and hope that this will be supported by the Minister.

The medical profession fights tooth and nail against being forced into this humiliating and dependent position. It demands a proper share in the everyday management, at least a share equal to that of the members, that its interests, too, should be protected in a suitable manner, to the end that boards of administration and messengers, who are very often abusers of authority, shall be in the position in which they ought to be—functionaries of the club; so that they, in case of abusing their power, may, through the influence of the doctors, be dismissed or otherwise punished. The presence on the committee of a few medical men who could always be overruled is for this purpose absolutely insufficient. We are again brought to the problem of power, the most important point of difference. Is it possible to eliminate this? Possibly, for legislators are resourceful. But as long as the medical practitioners receive no guarantee that they shall possess adequate influence to further and extend the medical care of the working classes, that their position shall not be dependent upon discretion, that their salary shall not be determined exclusively by the club members, that the limit for the wealthier classes shall not be unreasonably raised, that the free choice of doctor shall be applied, and that the perpetration of abuse to their disadvantage shall not be possible—so long they will demand, in justice, the right to exercise at least an equal amount of power in the general meetings and on the club committees as the club members.

Writing in a medical journal I have deemed it unnecessary to point out the fact that a learned, independent, but also prosperous and honourable medical body is a national interest, and in the first place very necessary for the lower classes. The more the club medical practitioner is pulled down the less care and devotion may be expected of him. From the doctor's point of view it is always premised that the conflict must lead to the lowering of the standard of medical care of the lower classes.

Those who oppose the doctors had reproached them with this. They run down the motives of the doctors, asserting that, though they are given an ethical veil, the sole object is financial advantage. This line of argument is either ignorant or unjust. Those who use either do not or will not recognize that a doctor acts often to his own disadvantage and in the interest of the patient by directing him to a specialist or a hospital. Is not—speaking roughly—an epidemic advantageous for the medical faculty, and do they not rank among the first of those who try to avoid this calamity? Are they not the strongest advocates of vaccination; nay, even of compulsory inoculation? Do they not always give their help to societies for the combating of consumption, to the establishing or maintenance of hospitals for people suffering from eye diseases, for those addicted to drinking, venereal diseases, sucklings, *e tutti quanti*?

The opposers do not consider the exalted ethical standard of our profession, and mock at that which they do not understand. They regard it only from their materialistic standpoint, and do not comprehend that if it were carried out in a purely materialistic manner it would be a calamity instead of a blessing.

The Dutch Society of Physicians.

In the Netherlands there are about 3,000 medical practitioners. About 200 of these fill official positions as professors, officers of health, or in the army and navy, etc. Of the remainder about 300 are specialists and 2,500 family doctors. Practically all (about 2,800) are Fellows of the Dutch Society of Physicians.

It has sixty local branches, each of which has its own governing body. A general meeting is held annually, while the everyday control rests with the head committee.

Founded in 1849 with the object of exercising influence on the then pending medical laws, the association principally occupied itself later with scientific problems. During the last ten years it has devoted the whole of its attention to the succeeding projects of the sickness insurance law. And now that this law has come into existence it is exerting all its strength to prevent the dangers above described. The measures which it has in part prepared, and in part already taken, cannot, for reasons easily to be understood, be set forth here *in extenso*, but they relate principally to the following points:

1. In every one of its sixty branches it establishes sick clubs, which are its property, and are instituted in accordance with the conditions described above.

2. All its members pay 2 per cent. of their income from clubs into a reserve fund for mutual support in the fight against undesirable sick clubs.

3. Its members may not, in connexion with the sick clubs, carry on any practice whose constitution is not approved by the head committee.

Whether the association will win the fight or not depends upon the question as to whether its members are of the same inclination.

It is already evident that the majority of Dutch medical practitioners can be relied upon. A few weeks ago some conferences were held between the new Ministry and a deputation from the association. What the result will be cannot for the present be certainly foreseen.

UNDER the name of Pan-American Medical and Surgical Association, a new medical society was recently founded in New Orleans. Its object is the development of a high standard of professional efficiency, the encouragement of medical and surgical research, and the association of medical men throughout the country in the discussion of professional topics. The President is Dr. Stephen W. Stafford.

MOTOR NOTES FOR MEDICAL MEN.

LESSONS OF THE LIGHT CAR TRIALS.

By H. Massac Buist.

The wet and windy weather experienced during most of the time the Royal Automobile Club's 1,010 miles six days light car trials were in progress in Yorkshire at the beginning of this month was a circumstance particularly suitable to testing and proving the degree to which these vehicles are practical machines in the manner in which they are being produced to-day. Having been through these trials, as well as the small car trials at Hereford in 1904, which are the only sort at all comparable with this year's effort, I was able to appreciate that not only has the distance of the daily runs been 50 per cent. greater throughout the week, but the hills and the descents have besides been at least three times as severe on the cars as the conditions provided at Hereford. In the attempt to compare results, therefore, we must have in mind that the factor of price is about the only thing that can be considered as common to the two cases, for the speeds have been greater, the routes more difficult and often heavy by reason of the wet, and the total amount of climbing, also braking work in the descents, has been very much more than in the case of the small car trials, as they were called ten years ago.

Success under Comparatively Severe Conditions.

The competition this month, of course, represents the initial one of its kind in Britain. As 80 per cent. of the competing vehicles were made at home, it is remarkable to observe that no fewer than nine of the thirty-two starters have been granted gold medals by the Royal Automobile Club for having made non-stop runs throughout the period of the test, while two-thirds of the total number of starters completed the whole stage, several of those that failed to score non-stops throughout having no worse mark against them than changing sparking plugs that had become foul, as, for example, one of the two Hillman machines, which stopped for a total of one and three-quarters minutes during the whole week for a sparking plug to be changed, and thereby lost a gold medal.

It is particularly important to bring out the point that the results of these trials should be read in detail, in that so slight a thing can spoil one competitor's non-stop run, whereas other competitors might lose a total running into hours' delay in the course of the week's tour and still be able to finish in time. In point of fact no competitor did spend a lengthy time over any repairs in the course of the whole week's tour, while the club's rigid rule that the machines had to run in the daily stages to average between 17 and 19 miles an hour, including the hill climbs, resulted in the cars collectively running more absolutely up to time than I have ever known in the case of any reliability trials for large machines. It was necessary to go over the routes to appreciate the stiffness of the climbs, the heavy nature of many of the surfaces, the strength of the driving wind and rain, and the other conditions, to realize that this average meant that the cars could not be spared from start to finish. Though the arrangements in connexion with the timed hill climbs were admirable, in that the competitors were never halted, but ran straight through as though touring in the ordinary way, nevertheless, in the touring nearly every day there was such an amount of hill climbing work that the low gears were constantly in service, while the tortuous and slippery nature of many of the descents required them to be negotiated in very cautious fashion.

Two Ways of Making the Tours.

The club is unable to return the speeds on the timed hills in terms of miles an hour. But those who witnessed the climbs cannot have failed to come away with the impression that there was a vast difference in the strains to which the various machines were submitted in the course of the tour. This can in some measure be appreciated by studying the intervals of time between the performances of the various cars on the hills. Some of them—like the Swift, which achieved the remarkable record of sending through the only team of three cars that finished without a single mark against any one of the machines—climbed the hills comparatively slowly, but always without any hesitation and with the full load. On the other hand, there were machines—such as, notably, the Singer and the A.C.—that climbed the hills at a racing pace, revealing a turn of speed that was quite astonishing, and which represented submitting the mechanism to very severe strains. Two points stand out in connexion with the hill climbing. The first is that, as the trial was worked from a fixed centre, Harrogate, whence the routes were mapped out in radial fashion, there was no necessity for those engaged in the tests to take their luggage with them every day. Therefore each car carried merely its driver and the club's official observer, the weight of the two men being brought to a minimum, so that an average was struck.

Some Cars Geared too High for Hill-climbing.

Nevertheless, though in this single particular the machines were running somewhat lighter than the ordinary owner might find necessary, certain of the cars failed to climb several of the hills with two men aboard and had to shed the passenger, particularly on the two ascents of Sutton Bank and Brownstay Ridge. This is to be accounted for, not because there were insufficient numbers of gears—the trials in general proved quite conclusively that three forward speeds is quite enough for these light cars, even in hilly districts—but because they were geared far too high for work in the average conditions which light cars are needed to fulfil in this country. The little Peugeot—one of the lightest cars, as well as that with the smallest engine in the trials—was notably unequal to taking all the hills without shedding its passenger. I noticed that on the steepest part of Sutton Bank on the opening day it shed not only its passenger, but also its driver, who walked beside it while it kept going. No machine that calls on those who use it to walk in the very circumstances in which the saving of human energy is most appreciated can nowadays be called really practical for the medical man. One of the chief results of these trials, therefore, will be to cause manufacturers to pay less attention to making striking performances on the flat and more to rendering their vehicles practical touring machines and suitable for the daily needs of medical men and others resident in hilly districts. In the past many manufacturers have not taken their machines over a sufficiently wide variety of routes when testing the initial examples of each type, for factories are rarely in the near neighbourhood of hills, while the desire to make use of speed competitions as a means of drawing attention to the given make has added another temptation to shirk the real business of gearing light cars for touring work.

The Best Average Class.

Even so, the majority of the vehicles engaged proved equal to taking the hills, as instance notably the Morgan-Adler in the dearest class, which did not show up conspicuously on them in point of making rapid ascents, but which appeared always to have an ample margin in reserve. The best average class was undoubtedly that for machines costing between 175 and 200 guineas, as instance not only the very fine performance of the two Singers that finished and of the third of that make that fell out through the breaking of a valve spring (no spare being carried, else it would have been possible to remedy the trouble in a quarter of an hour or less), but also the two Hillman cars, the A.C., and the Standard, the last-named running as though by clockwork from start to finish of the trial. In the cheapest class of all, the notable performance of the two-cylinder Swift team has already been referred to, and merits additional attention by reason of the remarkable consistency of behaviour of each of the three vehicles in the team. This was the finest example of standardization in manufacturing and in obtaining uniform powers of performance furnished by the trials. At the summit of Brownstay Ridge I saw the little Swifts coming up steadily, each slightly boiling, but no one to a greater extent than its companions. Throughout the trials, in fact, they did everything alike. Further, in face of the very difficult conditions under which that climb was made, of its great length, of the wind being a following one, of the wet and heavy nature of the roads, and of the slippery

take-off, it is not remarkable that they boiled in a manner so slight as to be of no account, but that they did not seriously overheat.

The Question of Overheating on the Hills.

In point of fact, among the cars in general comparatively very few did overheat. Yet it would have been scarcely surprising if 50 per cent. of them had developed trouble of that sort. About 20 per cent. showed comparatively defective cooling and lost water. But in the case of those machines that came through with non-stop runs, it was remarkable that none of the conditions they encountered appeared to affect their conduct adversely in any way, the gold medals being secured by the three gear-driven Swifts and one of the friction-driven, two-cylinder G.W.K. machines in the class for cars costing not more than 150 guineas in the condition in which they competed in the trial; by two Singers, one Hillman, and the Standard in the class costing between 175 and 200 guineas complete; and by the Salmon in the class costing between 150 and 175 guineas, it being noteworthy that none of the machines costing over 200 guineas succeeded in making a non-stop run. Apart from the three Swift cars, the Standard, and the Salmon—each of which makes were represented by one example only—alone provided instances of firms all of whose products were successful.

Loose Joints and Connexions Cause Failures.

A considerable amount of looseness of joints and connexions appeared to be occasioned by travelling over the rough road surfaces, and this was a frequent cause of loss of marks through involuntary stoppages. It is interesting to observe that all the machines had gear-boxes either separated from or incorporated with the back axle, save three, of which the two G.W.K. cars, that were driven by friction disc contact, caused no trouble at all, whereas on three days the friction drive of the Pilot car had to be adjusted, and that machine failed to climb Sutton Bank on the Saturday without dropping its passenger. Choked jets, punctured carburetter floats, the opening of radiator drain taps with resultant loss of water, looseness of the clutch couplings, over-heating of the engine, sooting-up of the plugs, broken valve springs, choked oil pipes, two cases of gear trouble and one of internal shorting in the magneto, constitute the story of the causes of either temporary or final failure experienced in the course of the trials; there were besides two sister machines the leather couplings of both of which failed at an early stage on the first morning's run, putting the cars out of the competition right away. In some cases it would seem that foul plugs were caused from defectiveness of design.

The Material Submitted to Trial.

The thirty-two starters represented twenty-two different makes of light cars, half a dozen of which makes had two-cylinder motors, and the remaining sixteen four-cylinder engines. The volume ranged between 855 c.cm. in the case of the four-cylinder Baby Peugeot, to 1,357 c.cm. in the case of the Hillman. Of the cars equipped with gear-boxes, only one had four forward speeds, the rest having three, of which one had a final drive by chain to the road wheels. Twelve employed a bevel gear live axle, and half a dozen a worm-driven back axle.

Undoubtedly, in too many cases looseness of connexions and parts proved a weak point of these cars when driven over country roads of this sort for the distance in question, it being observable that certain other examples of light cars not officially engaged in the trials ran through them without developing looseness of any part. Under this head two points fall to be observed. The first is that, while not representing the easiest touring conditions possible to discover in these islands, nevertheless from start to finish there were no freak road surfaces or hills in the routes selected, which were such as the average user has a right to expect his vehicle to carry him over without trouble. Indeed, throughout the week we encountered locally light car owners touring all about these parts as a matter of course on their daily vocations. The other point is that the medical man acquiring any one of the light cars which went through this 1,000 miles run without falter would, nevertheless, be foolish to treat it with that comparative neglect which necessarily results from a condition of competition in which the organizing body endeavours to obtain full information as to precisely how much attention each vehicle engaged requires in the course of journeying through the trials.

Putting a Premium on Hardihood.

Thus, though I have never known vehicles finish in finer fettle than those that came right through the trials, nevertheless there were examples here and there of machines that were very squeaky, and which had been in that condition for two days and more. When starting in the morning, too, one could discover from the struggles which some of the drivers had to get these miniature engines going that a little attention—which in a test of this sort would cause loss of marks because it is precisely these points which trials of this sort aim at bringing out—would have obviated all the stiffness. These tests, in fact, are the natural antidote to the motor salesman's statements of how machines merely need to have petrol and oil poured into their reservoirs and can then be driven indefinitely. The stitch in time principle of glancing over the car each morning and spending two or three minutes doing any little job that seems needed is what any of the competitors would have acted on had they not known that such attentions would have been recorded against them. Therefore their sole endeavour was each man to get his car through in comparatively neglected condition, though it is noteworthy that certain of the vehicles went through the tour none the worse for that treatment, the trial conditions therefore rightly putting a premium on hardihood. Thus next year it may be taken for granted that in the test in the Highlands in Scotland, that has already been planned for light cars, there will be at least a couple of score, if not over 100 starters, and it will be surprising if any of the makes that have been represented in Yorkshire this month fail on account of developing looseness of joints and connexions, such as has been comparatively a frequent cause of failure in the recent trials, and such as marks a car as unsuitable for doctors' use.

Tyres Much More Reliable.

Quite the most remarkable feature of the trials has been the immunity of machines from tyre troubles. As has been indicated already, the surfaces were by no means favourable, and, of course, cars that made the most prominent showing were not spared in the least when climbing the hills. The conditions allowed each competitor a total of half an hour during the thousand odd miles tour for paying attention to tyres, the returns being set out on a separate sheet each day. Less than half a dozen of the thirty-two starters gave any attention to tyres, few of them spent more than a dozen minutes on the business, and only one had occasion to exceed the half-hour allowed, and that by a margin of fourteen minutes only. This is particularly interesting in face of the fact that one of the troubles of light cars has undoubtedly been, and is supposed still to consist of insufficient adhesion of the driven rear wheels, with the result that comparative extravagance of tyre wear should be occasioned by the grinding away of the rubber and fabric due to slip. It was notable, therefore, that on Brownstay Ridge, which was the second most difficult hill climbed, and probably equal to the worst by reason of the weather conditions obtaining at the time, a large and powerful six-cylinder car used by the officials proved more difficult to keep going on those treacherous surfaces than did the little machines, which time and again in the course of the hill climbs in wet weather went over stretches of greasy surface and runnels across the route without any apparent difficulty. It would appear, therefore, that on the average the makers represented in the test have been giving more attention to the question of weight distribution than they have so far been accorded credit for.

Weight, Engine Size, and Powers of Performance.

As to the weights of the cars in the order in which they ran, the competition fixed the limit at 1,500 lb., which is certainly a sufficiently generous allowance for the light car if we are going to evolve a new style of vehicle under that name. In the dearest class all four machines that started were close up to that limit, whereas in the class for machines costing not more than 150 guineas complete as run in the trials, with the single exception of the Pilot, the cars scaled only a few pounds more than 1,000 apiece,

one of them, the Warne, being only 908 lb. The Singer cars in the 175 to 200 guineas class ran at about 1,250 lb. weight each, the Hillmans averaged 1,463 lb. each, the Standard 1,424 lb., and the A.C. 1,244 lb., the Charronette being 1,204 lb. There is thus a considerable difference between the weights generally estimated for light cars and their actual running weights. We may take it, however, that the quest for efficiency will soon result in a considerable average reduction in the weight of the light cars marketed.

As to engine volume, the rules allowed this to be anything up to 1,400 c.cm., advantage of which was taken only by machines of the most expensive class. These were either up to or very near the limit, though this was not the class that came out most conspicuously on the hills. In the class costing less than 200 guineas, the Hillman vehicles had a volume of 1,357 c.cm., the A.C. 1,327 c.cm., the Singer 1,096 c.cm., and the Standard 1,088 c.cm. These volumes and the car weights have to be considered in conjunction with the hill-climbing performances to arrive at an estimate of relative merit, a remark which also applies to the important question of fuel consumption.

Extremes of Fuel Consumption.

Here the figures are particularly interesting, though returns have been made only in the case of the machines which completed the last day's stage, when the sufficiently formidable climb up Sutton Bank had to be made while snow was falling on the summit. The Gordon car in the cheapest class did 53.98 miles to the gallon, and made third fastest time on the hill in its class; while the G.W.K., which made the fastest time in that class, did 36.17 miles to the gallon. The fastest time up Sutton Bank, irrespective of class, was made by the Singer driven by Rollason, which did a petrol consumption of 35.74 miles to the gallon. That is quite a remarkable performance when it is had in mind that this vehicle developed the speed of a racer, and of course the Claudel-Hobson carburetter was not readjusted. It would be an easy thing to do a fast hill-climb, then adjust your carburetter and do an economical petrol consumption. Again, it is comparatively easy to climb hills in leisurely fashion and do an economical consumption.

Altogether the petrol consumption returns come somewhat in the nature of a surprise, for whereas the traditional 40 miles to the gallon is exceeded by an astonishing margin in the single case of the Gordon car, and is easily confirmed by the three Swift machines, which did respectively 43.36, 40.82, and 38.78 miles to the gallon, the other cars were all distinctly below that figure which popular imagination seems to have seized on as the standard of consumption by which light car performances are to be judged. Thus in the cheapest class the friction driven Pilot's performance worked out at 25.49 miles to the gallon, the Arden's at 31.03 miles; while in the second class, costing not more than 175 guineas, the Alldays did 27.16 miles, the Salmon 29.39 miles, the A.C. 34.03 miles, and the Baby Peugeot 34.07 miles to the gallon. In the dearest class, costing over 200 guineas, the La Ponette did 22.98 and the Morgan-Adler 34.03 miles to the gallon. Lastly, in the class for cars costing between 175 and 200 guineas, the Hillmans did respectively 26.85 and 26.84 miles to the gallon, the Singers 35.74 and 34.80 miles to the gallon, the Standard 31.41, the A.C. 30.23, and the Charronette 27.56 miles to the gallon.

Some General Conclusions.

Those are all the figures returned. It will be seen that the average reveals the light car to consume considerably more fuel than is generally supposed when driven up hill and down dale across country. In one or two cases the consumptions are as heavy as those of ordinary medium size cars weighing a ton or more apiece, and in other examples where the consumption is proportionately high no equivalent hill climbing ability was revealed. It would seem, therefore, that while the average of reliability revealed in this first important light car trial is exceedingly satisfactory in face of the comparatively early phase of this movement, nevertheless several of the vehicles are built heavier than the ordinary idea of a light car, and too many of them are unduly extravagant of fuel.

Not the least satisfactory feature of the trials was that a quarter of an hour was allowed during the week for adjusting brakes for wear. Use was made of these conditions in fewer than half a dozen cases, and in none of them was the time used up. The manner of making returns under this head was somewhat confusing, in that in some cases the time was multiplied by five, owing to the figure being carried forward column by column every day, so that it appeared as though adjustments were carried out each day to the extent specified, and not once or twice only.

Ten Years' Advance.

In considering the results of the trials in general as indicating development in motor manufacturing, one may recall that £200 represented approximately the limit of the vehicles engaged in the small car trials at Hereford in 1904, and for all practical purposes 200 guineas is the limit of price of machines that made any notable showing in the light car trials at Harrogate this month. At Hereford, ten years ago, the most consistent performers were one-cylinder machines of about 6 actual horse-power, capable of travelling more or less coarsely along the level at from 22 to 26 miles an hour, and of ascending hills of any appreciable gradient at a good walking pace, in which connexion there were certain walking-pace hill climbers in evidence at Harrogate this year. But for the most part the recent trials have shown that three times the power is being provided for the money; that not less than two cylinders, and mostly four, are being used, with consequent great gain of refinement: and that the speed powers alike on the level and on the hills have been enormously increased, which incidentally puts the whole mechanism of the vehicle under test to vastly severer strains, including, notably, vibrations sustained by the steering connexions, and so forth.

We must still consider that in the main the machines under review represent merely the beginnings of the latter-day movement for the production of light cars. They show that the industry has started on sound lines, and is capable of things that are really great in proportion to the age of the movement, for these have not been easy trials, but really practical ones. The speed powers of the machines are in many cases out and away beyond what any one had imagined practicable; the economy of running does not appear to be greater or less than well-informed professional estimates made before the trials; and the net result is to prove that there are on the market to-day light cars quite suitable for the needs of the medical man, provided he will look after his machine and always pursue the policy of effecting that stitch in time which saves nine.

AUSTRALASIAN MEDICAL CONGRESS.

(Continued from page 772.)

Section of Obstetrics and Gynaecology.

In his presidential address Sir David Hardie, after some introductory observations on the word "gynaecology," which should, he considered, be understood to include all specially female disorders, and not only pelvic disease, dwelt on the recent changes of practice in the treatment of retro-displacements. Twenty years ago and less, pessaries were numerous; to-day they were conspicuous by their rarity, but to-morrow it would probably be thought that they had their use in certain cases. For retro-deviation in early pregnancy postural treatment was preferable to pessaries, but if retrodisplacement existed before pregnancy it was advisable to apply a "Hodge" during the puerperium, before the heavy fundus had fallen back. The postural treatment, where the patient was placed alternately in the right and then in the left semi-prone posture, was rational but hard to carry out in practice, and ought to be supplanted after the third week by the application of a pessary. As retroposition began about a fortnight after delivery, a routine examination of the pelvis was desirable then rather than later. Speaking of the subject of gonorrhoea, Sir D. Hardie said that the prevalence of tubal gonococcal infection was sufficient proof that the treatment of gonorrhoea was highly unsatisfactory, nor could it be otherwise until begun at an early stage and vigorously carried out. In view of obvious difficulties, supplementary treatment by autogenous vaccine should be specially applicable for women. Medical treatment would no doubt replace surgical at no distant

time, if the *x* rays and radium were really so efficacious as Döderlein made out, and if the discoveries of chemists and physiologists on the relation of the ovary to other endocrinous glands be brought well to bear on therapeutics. In obstetrics, apart from lying-in hospitals, where the mortality was once much higher than in private practice, asepsis had given somewhat disappointing results. Complicated precautions were hard to enforce away from public institutions, the ratio of mortality was reversed, and the results in private were not very different from those in pre-Listerian days. Rubber gloves had been discarded by some obstetricians. The substitution of abdominal palpation for vaginal examination by the modern teachers was open to criticism. While holding to the opinion that infective organisms should be excluded from the vagina during labour, it was not wise to assert that this could be done only by the avoidance of vaginal examination. The ensuring of cleanliness in the private lying-in room, the selection of nurses, and other factors about which the resident medical officer at a lying-in hospital had not to trouble himself at all, as he knew that their efficiency had already been assured, were matters which harassed the private doctor throughout every labour he attended. Increased remuneration was absolutely necessary. Better far for patients to pay an extra 5 guineas to the accoucheur than 50 later on to the gynaecologist. The President concluded with a consideration of eclampsia, abortion, and puerperal infection in detail, and last of all noted how douching once served as a cloak to cover ignorance and a multitude of sins. Where antiseptics were properly employed, douchings were but fragile reeds, and were not necessarily required even after forceps delivery, version, or manual removal of the placenta, nor need they be given if the operator were confident that his hands and instruments and the maternal parts were obstetrically clean.

The Control of Venereal Diseases.

In the campaign against venereal diseases Australasia has taken a prominent part. At the Australasian Medical Congress held in Melbourne in 1908, a special committee was appointed to report on the prevalence of syphilis, and on the measures which might be adopted to diminish its prevalence. Since then a considerable amount of information has been obtained from various sources, and a committee was appointed which now presented a memorandum and recommendations. These were adopted and copies directed to be sent to the Government of the Commonwealth of Australia, to the Governments of the several States of Australia, and to the Government of New Zealand.

The recommendations of the committee were as follows:

1. That syphilis be declared a notifiable disease. That notification be encouraged, and discretionary but not compulsory; and that the chief medical officer of health be the only person to whom the notification be made.
2. That provision be made through the hospital boards to establish laboratories in the four centres where not already existent for the diagnosis of syphilis.
3. That free treatment in the public hospitals and dispensaries be provided for syphilitics.
4. That steps be taken to educate the mercantile marine as to the dangers of syphilis, and that provision be made for preventive treatment on the intercolonial service.
5. That legislation be enacted against the treatment of syphilitics by unqualified persons.

Appended to the report was a memorandum drawn up by the Australian delegates after consultation with the New Zealand Special Committee on Syphilis. This memorandum, after drawing attention to the damage done to mankind by venereal diseases, stated that there was good reason to believe that the prevalence of these diseases in Australian cities was much the same as in Berlin, Paris, London, and New York, where the number of persons infected with syphilis among the population had been estimated at 12 to 15 per cent., and of those infected with gonorrhoea at a much higher figure. That syphilis was very prevalent, at any rate in Melbourne, was shown by the results of Sir H. B. Allen's series of 100 consecutive autopsies, in which the evidence of syphilis was certain in 32 and doubtful in 30. This evidence had been supported subsequently by the results of the Wassermann reaction. It was stated that the average incidence of syphilis in hospital patients of all classes seemed to be about 14 per cent. Among the measures recommended to be taken to reduce the prevalence of venereal diseases were the education of adults and adolescents in the nature, causes, consequences, and mode of prevention of these diseases; the adoption of legislation providing for the detention of persons suffering from venereal disease till they had been rendered innocuous by treatment—this is already done in the case of the Prisoners' Detention Act of New South Wales, 1908; and the punishment of any one who wilfully communicates these diseases.

Resolutions and Recommendations.

At the final meeting of the Congress a permanent Commission on Venereal Diseases was appointed to guide arrangements for the production of reports, and to act as an advisory body to the executive of the Congress. The Commission nominated consisted of the following members:

New South Wales: Dr. P. Fiaschi, Dr. Molesworth, Dr. Worrall.
New Zealand: Dr. W. E. Collins, Professor Colquhoun, Dr. Hardie Neil, Dr. Challinor Purchas.
Queensland: Dr. Espie Dods, Dr. J. Lockhart Gibson, Dr. Turner.
South Australia: Dr. Martin, Dr. Newlands, Dr. Poulton.
South Sea Islands: Dr. Lynch.
Tasmania: Hon. G. Butler, Dr. Hogg, Dr. Sprott.
Victoria: Sir H. B. Allen, Dr. W. J. Barrett, C.M.G., Dr. Robertson.
Western Australia: Dr. Atkinson, Dr. Ramsay, Dr. Pope Seed.

Dr. Collins, who had been chairman of the Special Committee on Syphilis, was appointed chairman of this Commission, and Dr. Hardie Neil convener.

A number of resolutions and recommendations from committees and sections also came up for consideration.

Small-pox.—Dr. Sinclair Gillies brought up a report of the combined Sections of Medicine, Public Health, and Pathology upon the recent small-pox epidemic. The recommendations of the report were unanimously adopted; they were that the epidemic which recently visited Australia and New Zealand was undoubtedly small-pox, and that the various Governments of Australia and New Zealand should be urged to enforce universal vaccination and revaccination as the only practical method of stamping out the disease.

Contract Practice.—The following resolution, in accordance with the report of the Contract Practice Committee, was moved by Dr. W. C. W. McDowell (Auckland), seconded by Dr. Clarence Read (Sydney), and agreed to:

> That this tenth session of the Australasian Medical Congress reaffirms the income limit clause as defined by the eighth and ninth sessions of Congress. The clause referred to reads as follows: That no medical man should pass for admission into any friendly society, lodge, club, or association for professional attendance at contract rates of remuneration any person whose income from all sources, together with that of his wife (if any), exceeds £4 per week, that is, £208 per annum. Further, no medical man should attend professionally at contract rates any member of the above mentioned organizations whose income from all sources, together with that of his wife (if any), exceeds the sum of £6 per week, that is, £312 per annum.

The Feeble-minded.—A report from the combined Sections of Diseases of Children, Psychological Medicine, and the Subsection of Medical School Inspection, brought up by Dr. Beattie (Auckland), contained the following general recommendations as to the directions which legislation to provide for the feeble-minded should take:

> That this meeting of the combined Sections of Psychological Medicine, Public Health, and Diseases of Children respectfully urge Congress to recommend to the State Governments of Australia and the Government of the Dominion of New Zealand, that they take into consideration, with a view to legislation at the earliest possible moment, the final recommendations of the report of the Congress Committee on the Care of the Feeble-minded—namely, "Finally, your committee is of opinion that the following is in general terms the direction which legislation to provide for the feeble-minded should take: (1) Day schools in large centres to train all children reasonably suspected of mental defect. These will eliminate children wrongly classed as such, and qualify them for further education through the ordinary channels. The identification of the rest they would confirm. (2) Residential schools for children of the same doubtful class from scattered districts and for children definitely judged to be mentally defective. Classes of the type found most successful in other lands will be here available for the purpose of completing the children's training—both manual and scholastic so far as the latter is found to be

desirable and useful. In this class may also be mentioned the small paying schools. It will be necessary to provide for the mentally defective children of the more well-to-do parents, when the latter are unable to provide satisfactory care and control at home. These institutions could be worked either separately or in conjunction with the non-paying schools. (3) In connexion with the residential schools to some extent, and probably also by preference in separate country localities, residential colonies with separation of the sexes for the permanent care of the feeble-minded on attaining adult age when not of so low a grade as to call for confinement in such institutions as idiot asylums. The detention of mental defectives in these colonies will, of course, presuppose adequate legal safeguards to avoid any possibility of error; this could be further provided against by periodical inspection. Moral defectives might be dealt with to a large extent by these institutions or might require some special provision. Such colonies exist in England and America, but are handicapped by the want of legal power to detain. This should certainly be granted, as otherwise the worst cases from the point of view of the community would have to be allowed to roam at large. The consensus of opinion of all who have seen the colonies in operation is that the feeble-minded are far happier as well as safer in them than when left to the mercy of ignorant parents or a world which has too much to do to make allowances for them, or prevent their misconduct or disaster. The expense of instituting the colonies would undoubtedly be large, yet truly economical when the present expenditure on misdealing with the feeble-minded in gaols and charitable institutions is weighed in the balance. By such means alone can the State hope to prevent the feeble-minded forming the large proportion they do of our habitual criminals, drunkards, prostitutes, and wastrels, and thus alone with propriety can they be prevented from propagating their undesirable type in the make-up of future generations.

The recommendations were adopted, and the Committee on the Care and Control of the Feeble-minded reappointed, with the addition of the name of Dr. Truby King.

Medical Inspection of School Children.—Considerable discussion took place upon the recommendations sent up by the Section of Public Health and State Medicine with reference to the medical inspection of school children. The Section recommended that the system should be extended to school children not attending State schools. It was objected that the proposal went too far in the direction of the nationalization of medicine, and would lead to interference with a certain number of private schools which had already their own medical officers. Finally, in view of the importance of the question and the short time at disposal, it was resolved to postpone the further consideration of the matter.

Eugenics.—A resolution, brought up by Dr. TRUBY KING, of a meeting he had addressed on the subject of eugenics, proposing to appoint a committee to wait on the Minister for Education with regard to the education of girls, to deprecate excessive mental effort and competition, was opposed by several members, including several women doctors, and finally an amendment deferring further consideration was put and carried.

Future Congresses.—The next Congress will be held at Brisbane, and the Hon. W. F. Taylor, M.D., M.L.C., of Brisbane, was elected President. A discussion took place with regard to future congresses, and it was finally resolved by a large majority "that all future congresses be congresses of the British Medical Association."

Votes of Thanks.—Votes of thanks were passed to the President of the Congress and Mrs. Purchas, to the officers of the Congress, to the President of the New Zealand Branch of the British Medical Association, and to the Mayor of Auckland, the Ministers for Public Health and Customs, New Zealand, the Ministers for Railways in New Zealand and Australia, and various other persons and officials who had contributed to the smooth working of the business of the Congress.

LITERARY NOTES.

WE learn from the *Boston Medical and Surgical Journal* that on April 23rd the All Round Dickens Club of Boston celebrated its twentieth anniversary by dedicating a free bed in the new Children's Hospital to the memory of Charles Dickens.

It is not always easy to deal with the plague of flies, which are now known to be not only a nuisance but a source of danger. What a pity it is that we cannot get rid of them by the simple process of excommunication! This is what St. Bernard is said to have done in 1121. He went one day to the Abbey of Foigny situated in the Laon district. As the monks were preparing for the ceremony of dedication of a new oratory, an incredible number of flies—doubtless inspired by the devil or possibly evil spirits in animal form—burst into the place, and by their buzzing and tickling of the bald pates of the holy men threatened to spoil the rites. St. Bernard, seeing they could not be got rid of by ordinary means, pronounced sentence of excommunication upon them. In the morning they were found lying dead in great heaps, which had to be shovelled away. The curse on the flies of Foigny passed into a proverb.

Messrs. J. and A. Churchill announce a new book, entitled *Operative Surgery: The Head and Neck, the Thorax and the Abdomen*, by Professor Edward H. Taylor, of the University of Dublin. The illustrations, which number 300, are from original drawings, many being printed in colours. Messrs. Churchill also announce new editions of Dr. Frederick Taylor's *Practice of Medicine* (10th edition); Dr. Tanner Hewlett's *Manual of Bacteriology* (5th edition); *The Apsley Cookery Book*, by Mrs. John J. Webster and Mrs. H. Llewelyn; and *Elementary Practical Chemistry* (Part 2), by F. Clowes and J. Bernard Coleman.

The *Aberdeen Weekly Journal* of April 4th calls attention to an Aberdeen professor who is entitled to be entered on the roll of fame though his name seems to have lapsed into oblivion even among his own countrymen. He was discovered by Professor Hume Brown, who, in an article on the intellectual influences of Scotland on the Continent, published in the *Scottish Historical Review* for January, resuscitates the memory of a man who exercised a great influence on German thought. This was Alexander Gerard, a professor in the University of Aberdeen [Professor of Philosophy at Marischal College, 1752–60; Professor of Divinity, 1760–1771; Professor of Divinity, King's College, 1771–95], and the two books that brought him his fame were his *Essay on Taste* and his *Essay on Genius*. The *Essay on Genius* a recent German writer has described as "an epoch-making performance" on its subject, and he supports his statement by tracing the obligations of Kant to Gerard in his conceptions of the nature of genius and taste. Kant himself freely acknowledged the obligation. "Gerard," he said, "is the best writer on the subject."

In the *Centre Médical* of Gannat, quoted in the *Journal de médecine et de chirurgie pratiques* of March 25th, Dr. Félix Brémond, of Hyères, recalls that blood was largely used for therapeutic purposes in past days. Among the old Romans the blood of gladiators was held in high repute as a cure for epilepsy. It is interesting to note that Celsus spoke with horror of the remedy though apparently believing in its efficacy. In the third book of his *De Re Medica* he says that "Some persons have been freed from this disease in drinking hot blood taken from a gladiator who had just been slain, or at any rate have made bearable by that frightful remedy a still more frightful disease." For many centuries afterwards blood continued to be used as a cure for various ailments, but chiefly for epilepsy. In the Middle Ages menstrual blood was very highly esteemed, especially that of the first period. Paracelsus, who called it by the odd name of the "maid's zenith," declared that he knew no better local remedy for gout. Conrad Schneider (sponsor of the Schneiderian membrane), in his great treatise *De Catarrhis*, says the menstrual blood is accounted noble by Dioscorides, Serapion, Pliny, and Alexander of Tralles. A cloth stained with blood from a maiden's first menstruation was held to be a sure preservative against gout. Ettmüller recommended that it should be applied mixed with crow's fat; this was also used as an application to abscesses and carbuncles. But the best way of using it was on linen impregnated with the blood and steeped in vinegar and rose water. Menstrual blood was also believed to be a cure for hydrophobia. It has in our own day been applied to a chalazion, the swelling ceasing with the setting up of inflammation. Dr. Brémond says that in some places the blood of a woman who has just been confined, used with the afterbirth as an ointment, is believed to cure itch at one application.

British Medical Journal.

SATURDAY, MAY 23RD, 1914.

THE BUDGET SCHEMES: LABORATORIES.

THE proposal of the Chancellor of the Exchequer that money should be set aside for the provision of increased laboratory facilities in aid of diagnosis and treatment has already been referred to, and we have urged that it should be the subject of careful inquiry by the medical profession. It will be well, however, to consider the subject more fully.

The first thing to be noted about the Government's proposal is that the money to be set aside for the provision of laboratories is coupled with that connected with nursing and tuberculosis, which it is apparently intended shall be administered by the Local Government Board as supplementary to the public health grants. It may be assumed, therefore, that it is not proposed that in the first place the arrangements shall be made through the Insurance Committees, who, for the present at any rate, are not concerned with the administration of medical benefit to any others than insured persons. From a later sentence in the Budget speech it would appear as if Insurance Committees may be empowered in various matters to administer special funds if the local authority should fail to do so, and the provision of laboratory facilities in connexion with the medical service of the insured may be one of these matters.

We hope in any case that it is not intended to work a scheme of this kind through the smaller urban and rural sanitary authorities. Such an arrangement would probably result in hopeless confusion in the central administrative offices, and could not be expected to lead to the establishment of a satisfactory service.

Laboratories are required for public health and for clinical purposes, and these purposes overlap to some extent. Arrangements for the examination of specimens of water, milk, samples taken under the Food and Drugs Act, and for kindred purposes, have been made to a greater or less degree by nearly all the public health authorities. Some of them also have made arrangements for the examination of swabs and other material connected with the chief infectious fevers under their public health duties: but the more clinical work of laboratories—such as that connected with the preparation of vaccines, the carrying out of Wassermann and other tests, blood counts, the examination of pleural effusions, cerebro-spinal and other fluids, the chemical and bacteriological examination of different excreta, test meals, and so forth, and the examination of sections of morbid tissues—have hitherto been undertaken almost exclusively by the laboratories connected with hospitals and medical schools and colleges or in special institutions of which practitioners are able to make use. If full advantage is to be taken of laboratories in aiding the diagnosis and treatment of sickness, it is evident that full use should be made of them as clinical laboratories and that their scope should extend much beyond that of infectious diseases. With the improvement of postal and other services for sending material, it would evidently be wise in the first place to avoid an unnecessary multiplication of laboratories, but they should be reasonably convenient of access to practitioners generally.

In the report of the Medical Officer of the Local Government Board (1912–13) there is an appendix on the pathological work of public authorities and hospitals. A perusal of it shows clearly enough that, except in a few favoured places, there is a serious deficiency of laboratory facilities throughout the country. A few county councils have laboratories of their own for public health work, some have made arrangements with the laboratories attached to universities or with others privately conducted, but only twenty-two of the sixty-one administrative counties outside London have made arrangements under which more than one specimen per 1,000 of the population was examined. In more than half the counties the provision was practically *nil*. In the boroughs the provision was somewhat more ample, although in many of them little or nothing was done. The number of specimens examined under the different authorities presents the most extraordinary differences, varying from 60 per 1,000 in Croydon to less than 1 per 1,000 in many boroughs. Even in places quite near together the differences are remarkable. In Halifax the proportion of specimens examined per 1,000 was 0.81, whilst in Leeds it was 30.2. Some London boroughs appear to have made arrangements of a fairly complete kind for general public health purposes, whereas some others have done nothing. In many large industrial areas there is at the present time no provision, except at the doctor's own expense or through the agencies of the different hospitals, whereby proper laboratory examination of specimens of materials can be made, and the conclusion of the report on this point is fully justified: "When practitioners are thus left to their own resources, the conditions of medical practice among the great mass of the population do not enable them to obtain bacteriological aids to diagnosis except in isolated instances. There is no reasonable doubt that, as a result of the failure to use these means of diagnosis, a considerable mass of disease remains undetected, or detected only after delay, and preventive measures are rendered relatively ineffective."

If means can be devised whereby medical men in industrial practice can readily obtain reliable reports on specimens without cost to themselves, they would be encouraged to make greater use of whatever assistance laboratories can provide, with resulting benefit both to their patients and to their own work. The Government has evidently decided to supply State aid to meet this want, and we welcome the decision. The question is, What is the best way of setting about it? One large properly directed laboratory can meet the needs of a very considerable population, and the line of least resistance obviously is to ascertain to what extent the laboratories connected with existing universities, colleges, and other approved institutions could be used. A laboratory is of no use unless it is properly staffed, and one of the first difficulties encountered will probably be due to the discovery that the supply of properly trained and trustworthy men to undertake all the work needed is short of the requirements. One of the regulations dealing with the distribution of the public health grants, we should expect, will be that it is to be the duty of the county or county borough authorities, as soon as may be, to make arrangements for the provision of proper laboratory facilities for those who require

them in their area. These arrangements need not, it seems to us, interfere with those at present made by private practitioners for patients who can afford to make private arrangements. It will, we believe, be found desirable to group certain county or county boroughs together for laboratory purposes, and we hope that, as far as possible, they will be associated with the laboratories connected with existing medical teaching institutions. It is in them that we have our recruiting ground for the training of pathologists, and an essential feature of the scheme must be to encourage the production of suitable and competent experts. A good many complaints of the costliness of various pathological examinations have been heard; but, if the arrangements are made on properly comprehensive lines, the cost of a general laboratory scheme should not be excessive, and we should deplore any attempts to make it so. The cost of maintaining and running a well equipped laboratory is not great, but if a sufficient number of competent and reliable workers is to be attracted, it will be necessary to pay considerably more in the way of salaries than the pittances which some of them receive at present. We believe that it would be possible to do this and to maintain the laboratories on proper lines, with advantage both to medical practice and to existing institutions, without increasing the charge for these purposes which appears to be anticipated as likely to be required in the first full year under the Budget proposals. Where arrangements cannot be made with existing institutions or where there are none available, county authorities will doubtless be disposed to set up laboratories of their own, but we are inclined to think that the extent to which this need be done will not be very considerable, at any rate for some time to come, although much, of course, must depend upon the general character of the scheme and the reception it meets.

THE PATHOLOGY OF INSANITY.

ELSEWHERE in this issue will be found an account of the new volume of the *Archives of Neurology and Psychiatry*, in which are embodied the results of investigations carried out in the Pathological Laboratory of the London County Asylums at Claybury since the issue of the fifth volume in 1911. An attempt has been made in that review to group the main subjects of research and to throw the salient points into clearer perspective than is possible in a large book containing such a wealth and variety of matter. This very abundance is likely to produce on the ordinary reader a somewhat bewildering effect, so that he cannot, if we may be allowed to use a hackneyed but useful phrase, see the forest for the trees.

In the preface Dr. Mott makes the interesting announcement that when the next number of the *Archives* appears the Maudsley Hospital and the Pathological Department, its staff and equipments at Denmark Hill, will be in active operation. We understand that but for the troubles in the building trade the institution would have been well on the way to completion by midsummer. It is hoped, however, that it will be finished early next year. The long deferred hope, therefore, of seeing a hospital for mental diseases that shall be wholly free from the social taint which the name of a lunatic asylum necessarily carries with it is at last about to be fulfilled.

It may not be out of place to recall that in December, 1907, Dr. Henry Maudsley put before Mr. H. P. Harris, then Chairman of the London County Council, a scheme for the establishment of a fully equipped hospital for mental diseases in London. Towards the cost of carrying that scheme into effect Dr. Maudsley offered to contribute a sum of £30,000. In a letter to Mr. Harris dated February 14th, 1908, Dr. Maudsley said that, as a physician who had been engaged in the study and treatment of mental diseases for more than half a century, he had been deeply impressed with the necessity of a hospital whose main object should be the early treatment of cases of acute mental disorder, with the view so far as possible of obviating the necessity of sending them to the county asylums; the promotion of exact scientific research into the causes and pathology of insanity, with the hope that much may yet be done for its prevention and successful treatment; and the provision of an educational institution which should offer to medical students the opportunities of getting good clinical instruction in a class of diseases of which under existing conditions it is not easy for them to obtain a competent knowledge. This is, we think, all the more necessary since it is to the general practitioner that we must look for the recognition of danger signals when the cloud on the mind is as yet no bigger than a man's hand. The general practitioner is the first line of defence of society against the spread of insanity. We need not again labour the point which has been so often insisted upon—that if the problem of mental disorder which so closely concerns the welfare of the community is to be solved, it is by means of institutions which may serve as outposts between the mass of threatening disease to be dealt with and the lunatic asylum. Such an institution the new hospital, which is most appropriately called by the name of the man who has done so much towards its establishment, is intended to be. Cases of acute insanity, and those in the incipient stage, will there be promptly dealt with as other diseases are treated at ordinary hospitals. It is most important that there should be no misconception in the public mind as to the purpose which the new hospital is intended to serve. This is to cure cases when they are still in the curable stage and to enable persons suffering from temporary mental disorder to escape the brand inevitably placed on them by a lunacy certificate. It is, therefore, hoped that such persons, conscious as they generally are of some loss of mental balance, will apply voluntarily for treatment; and it is highly desirable that the hospital should not be looked upon as a half-way house to the asylum. There is every reason to hope that by means of the mental hospital a large proportion of cases now doomed to drift into hopeless insanity may be saved and restored to useful life.

The transference of the Claybury laboratory to London cannot fail to have the happiest results. Though excellently equipped for the purpose it was intended to serve, its remote situation necessarily hampered the work of research. Such a laboratory to fulfil its potentialities of usefulness should be in a central position and organically connected with a teaching hospital. That so much valuable work has been done at Claybury in spite of the disadvantages of its situation is an eloquent testimony to the energy of Dr. Mott and the helpers and students whom his reputation has gathered round him. An illustrated description of the laboratory appeared in the BRITISH MEDICAL JOURNAL of February 18th, 1899. Professor Virchow said that nothing he had seen during his visit to this country in the autumn of 1898 impressed him more than what he saw at Claybury. Professor

E. Meyer[1] spoke in the highest terms of its equipment and the work done there, but expressed regret that it was so far from London. With the satisfaction felt at the removal of the laboratory to a more convenient situation is mingled a feeling of regret that soon its place, so famous among neurologists and psychiatrists throughout the world, will know it no more. But this natural sentiment is quickly dissipated by the thought of the larger opportunities that will be afforded by the new laboratory at Denmark Hill. There will be better accommodation for research, and teaching will be possible on a larger scale than was possible at Claybury. We are now within sight of the promised land of a London school of neuro-psychiatry in which the vast material to be found in the largest city of the world will be put to full use in the advancement of knowledge of diseases of the nervous system. This will go far to wipe away the reproach that we, with all the resources at our command, are still so far behind Germany and the United States in the scientific study and treatment of mental diseases.

In order, however, that the Maudsley Hospital shall adequately discharge its educational function, it will be necessary, as suggested by its initiator in his original proposal, that it should become a recognized school of the University of London. As Dr. Maudsley pointed out, the establishment of such a hospital in vital touch with the general hospitals and with the University would do much to break down the unfortunate isolation of the study and treatment of insanity from general medical knowledge and research. In Germany psychiatry has been kept in touch with general medicine by the establishment of clinics in connexion with universities. Every university has a psychiatric clinic with pathological, chemical, and psychological laboratories. Special mention may be made of those of Berlin, Munich, Breslau, Greifswald, and Giessen. There is a consensus of opinion among psychiatric specialists that the mental hospital should be associated with a university or medical school. In the final report (1913) of the Royal Commission on University Education in London (p. 122), as to clinical instruction in special hospitals the opinion is expressed that the University ought to appoint a professor of mental diseases, and that there is a great opportunity of developing a department of psychiatry and mental diseases, not only for students but for graduates and for research. A statement submitted to the Commissioners by the London County Council is quoted in which it is said: "In addition to the advantage which it is expected will ensue to the patients who are treated there, it is hoped that the hospital will prove of great value in the dissemination of knowledge of mental diseases and in the provision of systematic instruction in methods of treatment. The proposal includes the provision of a department for pathological research, which it is suggested would be accomplished most economically by the removal of the staff and equipment of the Claybury Laboratory to the new institution. It is hoped that this institution, when in being, will be in close touch with the London University and the Medical Schools." The Commissioners think the suggestion most valuable, and that the University should endeavour to organize and develop in connexion with the new hospital at Denmark Hill a clinic of mental diseases. We hope, therefore, that nothing will now be allowed to stand in the way of the realization of the proposal, which has been made possible by the munificence of Dr. Maudsley[1] one of the University's most distinguished sons.

[1] *Archiv für Psychiatrie und Nervenkrankheiten.* Bd. 39, Heft iii. 1905.

THE RADIUM TREATMENT OF CANCER.

When a malignant tumour, either by reason of its extent or on account of its inaccessible situation, is beyond the scope of surgery, the contemplation of the inevitable end and of the distressing conditions by which it is often attended causes the profession and the public alike to welcome any means that promise to delay or defeat "the blind Fury with the abhorrèd shears." And, as in the long run it is a characteristic of mankind to remember the strokes of good fortune and to let disappointments pass out of memory, so here one fortunate result may cause many failures to be forgotten. The sceptic —and the sceptic has his uses—looking back over various means that have been extolled from time to time for the treatment of inoperable cancer, will call to mind their vogue for longer or shorter periods, their apparent successes, and their final inglorious oblivion. Now that radium is in the ascendant, our sceptic will be apt to regard it with all the more coldness as the enthusiasm of its advocates increases. In every large centre of population in the civilized world radium is being either used or demanded for the treatment of diseases hitherto reckoned incurable. The hands of charitable institutions are being forced by the appeals for more available radium. The pressure may perhaps to some extent be relieved in this country by the policy pursued by the authorities of the London Radium Institute, which during last year supplied to the medical profession tubes and applicators equivalent to over 19 grams of radium bromide, while in the production of radium water the equivalent of 6 grams of radium bromide has been used. The profession, therefore, has had the use of 25 grams of radium, and the Institute's supply is not diminished. The plan of supplying emanation applicators was originated by the Institute, and there seems some reason to believe that this system will be the basis of the radium supply in the future. The purchase by each hospital of a few milligrams of radium is wasteful, and the experience of the Institute is even held to show that the emanation is more useful than the salt.

To attempt to stand between the enthusiast and the sceptic is to play a difficult and thankless part, but if ultimate good is to come and premature condemnation is to be prevented, it is necessary to scrutinize carefully the facts that are brought before us. "Cure" is not an expression that should be used until the lapse of sufficient time has enabled us to judge of the permanence of the results, and, as Mr. Sinclair White was careful to point out when commending the establishment of a radium institute to the public of Sheffield, practically all the reported cases of beneficial effects have been very recent, and the time has not yet come when it can be said that even the most promising cases are actual cures. The subsequent history of all cases ought to be scrupulously recorded, even though some proclaimed as successes have eventually to be acknowledged to have ended in failure. Radium in some cases causes a diminution or seeming disappearance of the cancerous growth with its attendant distress. That is all that can at present be said with certainty, but, as Mr. White also said, since radium is of this great value in mitigating the suffering of cancerous patients, it is a boon more valuable than anything hitherto discovered.

That radium in many cases—perhaps in the great majority—produces no beneficial effect whatever is to be recognized, and that it may even on occasion accentuate the malignancy of a tumour is unfortunately true. The apparent, or actual, disappearance of a primary growth may not mean a decisive victory. Whether metastatic deposits disappear with the primary growth is a point on which conflicting views are held, but the weight of opinion is against such an occurrence, and the theories put forward to account for it rest on a very slender basis; it is, indeed, believed by some that recurrences and metastatic deposits sometimes progress at an increased rate after the application of radium has been followed by the seeming disappearance of the original growth. Two cases, seemingly identical, may respond in absolutely diverse ways to radium. We may, however, reasonably hope that as more is learnt of the action of radium on cells and as the technique is improved good results will more commonly and uniformly be obtained. Moreover, even those who take the least sanguine view of the frequency with which improvement occurs under treatment by radium and of the duration of such ameliorations recognize that even temporary relief of distressing symptoms in inoperable cancer is a success for which to be thankful and not a failure to be despised. Out of occasional and partial successes knowledge of how to obtain frequent complete successes may grow through wise observation and careful analysis of the conditions in which failure or success occurs.

To several other recent communications on radium there is added in this issue the second report of the Radium Institute of London; it should be read in conjunction with the more detailed first report, published in the BRITISH MEDICAL JOURNAL of January 25th, 1913. Mr. Hayward Pinch, the Medical Superintendent, has very wisely left vacant the column headed "cured" in the list of cancer cases, and good results seem generally to be grouped under "improved." It is, of course, a rather comprehensive term, and is not very informative as to the degree of amelioration obtained. It would have been of much practical interest had it been found possible to include in the second report particulars of the subsequent history of cases returned as improved or apparently cured in the first report of the Institute: and in passing we may observe that the number of cases of cancer of the uterus given in the table as having been improved seems hardly to warrant the statement that the good effects are "phenomena of almost daily occurrence."

An account of the histological changes occurring in tumours as the result of radium applications would have been a welcome addition to our knowledge. As things stand we do not know what happens in the process of diminution of tumours. The suggestions that ferments are stimulated to destroy the cancer cells and that there is a process of auto-immunization are pure hypotheses, unsupported by trustworthy investigations. That radium has selective action on cancer cells has not been established, although the striking clinical phenomena observed in some cases have been held to justify this opinion. Many other problems wait solution, and we may hope that by the extension of the London Radium Institute and by the establishment of similar institutes in other centres, accommodation will be found for research departments which may deal with these questions, and be the means of adding to the small body of investigators who, in this country, are attacking the problems of cancer.

JUBILEE OF THE EDINBURGH UNIVERSITY CLUB OF LONDON.

THE annual dinner of the Edinburgh University Club of London, at the Hotel Cecil, on May 13th, marked the fiftieth anniversary of the foundation of this club. It was therefore a jubilee dinner, and perhaps on this account was even more largely attended than usual. The chair was taken by Lord Balfour of Burleigh, who, in proposing a toast to the club, mentioned that its membership roll now included over 600 names, their bearers being spread all over the world. Among those present he was glad to see one original member—namely, Sir Dyce Duckworth; and two other old, if not original, members—namely, Dr. Robert Farquharson—for some years honorary secretary of the club—and Surgeon-General Don. Certain members in past times had to be thanked, he believed, for helping to consolidate the question of parliamentary representation of universities, and he hoped that the desire to abolish that representation, which was said to be cherished in certain quarters, would prove sterile. Little need had the universities of the three countries to feel shame in respect of the men they had sent to the British House of Commons. Of the original twelve rules of the club one alone had never, and would never be, changed. It laid down as the object of the club the promotion of the interests of the University of Edinburgh and the maintenance of good-fellowship among its graduates. That rule had been steadily observed, and amongst other things the club had spent something like £3,000 in founding prizes at the university; it was now proposed to celebrate the club's jubilee by subscribing £500 towards the Lister Memorial Institute in Edinburgh. In acknowledging the toast Sir Dyce Duckworth mentioned that the club had been called into existence at a meeting held in 1864 at the house of Dr. Edward Sieveking in Manchester Square. Most of its members belonged to the medical profession, and the mental habit of medical men was to see what was wrong, then to see what could be done, and then endeavour to do it; but the club was never a political club, and he hoped it would always live in a higher ether than that of politics. The toast to "The Guests," proposed by Sir Robert Blair, was acknowledged by Principal and Vice-Chancellor Sir William Turner, who, after speaking of the proposed Lister Memorial Institute at Edinburgh and of the man in whose honour it was to be built, said that it was hoped to make the memorial thoroughly representative of the philosophic study of medicine, based on the application of science to practice. In the past ten years the students of the university had increased from 2,880 to 3,352 and the number of graduates from 8,883 to 12,288. More important still, as showing that the university was bent on making its teaching more complete and cover a wider ground, was the increase in the number of teachers during the same period. In 1903 there were 112, in 1913 there were 222. The toast to "The Chairman" was proposed by Dr. George Ogilvie, who, after paying warm testimony to his varied abilities, said that what Lord Balfour of Burleigh had achieved was only to be expected of a man so fortunate as to be born in the ancient kingdom of Fife. If one engaged a Fife caddie he would be found more learned than a university professor, more musical than a Pachmann, possessed of more critical acumen than a Bernard Shaw, and with a thirst for knowledge that would surprise even Wee McGregor. Continuing in this strain, Dr. Ogilvie illustrated his theme by a number of Fife anecdotes, one of which related to an "auld wivie" who had a word to say on most things, from babies to burials. "Husbands aye mind me o' teeth. They are terrible difficult to get; when ye get them they are naething but a vexation; but when they are gone they leave a maist awfu' blank ahint them." Lord Balfour having suitably replied, the formal proceedings of the evening then terminated.

RADIO-ACTIVE WATERS AND SPA DEVELOPMENT.

THE discovery of a radio-active principle in its waters is now the signal for a spa to bestir itself, add to its bathing facilities, and erect an emanatorium as part of its establishment. The latest spa to announce developments of this description is Bad Gastein in Austria, where thermal waters are known to have issued from the granite mountains for many hundreds of years. Here as elsewhere a disposition is shown to accept the existence of radio-activity as an explanation of the past efficacy of the waters and as a stimulus to fresh enterprise. In a circular issued by the bath authority it is mentioned that the water is of practically constant value, and that Curie, Laborde, and others have placed it first for radio-activity among the thermal springs of the world. This latter claim, however, is hardly borne out by another Continental estimate we have seen (by Dr. Saubermann of Berlin), in which Bad Gastein is placed third from the point of view of radio-activity, the first being Joachimsthal in Bohemia, and the second the Silesian baths at Landeck in Prussia. The average activity of the water measured at the Grabenbaecker spring at Gastein is given by Saubermann as 155 Maché units per litre, and that of Landeck as 204 Maché units. The figures for Joachimsthal are: 600 units per litre at the bath tap, and, of course, still stronger at the actual source within the mines. Baden-Baden in the Black Forest, which comes fourth in the list, boasts an activity of from 80 to 120 Maché units. The design of the new buildings at Bad Gastein, which include an emanatorium and better provision for the vapour and other baths, is stated to be of such a nature as to add to the comfort of visitors, and to the efficiency of treatment along the lines of modern balneotherapeutic requirements. Care is taken to advertise the fact that no blatant note is struck by the new erections, the design being in harmony with the picturesqueness of the narrow valley of the Gasteiner Ache, and the execution in accordance with the conservative traditions of Salzburg art. Recent investigations, it is stated, have shown that the territory of the kingdom of Saxony is unusually rich in waters of high radio-activity and that the natural conditions for the therapeutic utilization of that agent exist in different parts of the country. Of the English spas, both Bath and Buxton possess radio-activity, and in the strength of their waters they compare not unfavourably with some of the best known radio-active springs on the Continent. Unfortunately the absence of a uniform standard makes an exact comparison difficult, but figures showing the amount of radium emanation in equilibrium in both the Bath and Buxton waters have been published.[1]

EXPERIMENTS ON ANIMALS.

DR. WARRINGTON YORKE, Professor of Parasitology in the University of Liverpool and Director of the Runcorn Research Laboratories of the Liverpool School of Tropical Medicine, has had to defend himself against a charge of cruelty to an ass made against him in the local police court, and subsequently in the Divisional Court of Appeal, by an inspector of the Royal Society for the Prevention of Cruelty to Animals. It appears that Professor Yorke and Dr. Blacklock had been experimenting with antimony trioxide with a view to testing its therapeutic value in the treatment of experimental trypanosomiasis. The donkey had received an intramuscular injection in the gluteal region on June 20th, the object of the experiment being to ascertain the maximum dose of the drug. The injection was followed by necrosis of muscle; the ass was kept in a field used exclusively for animals the subjects of experiments by the staff of the Tropical School. On June 30th the animal became paralysed in its hind legs, and lay down in the field. On July 5th, when the experiment was completed, the animal was destroyed painlessly by a Greener gun. Two days previously a police constable had demanded that it should be destroyed there and then, but Professor Yorke pointed out that it was an experimental animal, that he was licensed by the Home Office, and would not kill the animal until the result of the experiment was ascertained. On the same day an inspector of the Royal Society for the Prevention of Cruelty to Animals called at the laboratory and demanded to see the animal, a demand which was refused, Professor Yorke explaining that if he believed any irregularity was occurring his proper course was to communicate with the Home Office or with Sir James Russell, one of its inspectors. The justices before whom the case was first heard were of opinion that the animal had not suffered unnecessary pain and dismissed the information. The society appealed, and the court affirmed the decision of the justices, expressing the opinion that there was no question of law for the court to decide; it had no power to interfere with the justices' finding of fact. The counsel for the respondent, who had not been called upon to argue, said, after the delivery of judgement, that though the society did not approach the Home Office, the respondent had laid all the facts before the authorities, who had expressed themselves satisfied. In this connexion the nature of the precautions taken by the Home Office to ensure that licensees do not abuse the powers granted to them may be recalled. In the first place, those in this country who desire to perform experiments upon living animals must be licensed by the Home Office, and must hold special certificates for each class of experiment. The places in which the experiments are made are supervised by the Home Office inspectors, who visit the laboratories at short intervals without previous notice; the licensees are required to make exact returns of all the experiments performed by them under their licence and certificates at the end of each year, and also to furnish to the Home Office immediately upon publication of each paper a copy with a written explanation of the nature of the experiments described. In spite of these regulations any licensee, as this case shows, is liable to be called upon to defend himself against a charge of cruelty made by the police, an inspector of the Royal Society for the Prevention of Cruelty to Animals, or, indeed, any other person, in the police court, and the case may eventually be carried to the High Court. The Home Office affords no protection to those who are engaged in research against attack of this sort, and the expense involved, not to mention the odium which may be incurred by the publication of *ex parte* versions of what untrained persons may believe themselves to have observed, must weigh seriously with those who propose to engage in biological research in this country.

THE AFTER-HISTORY OF THE AVERAGE CONSUMPTIVE.

THE Department of Health of the City of New York has reported recently on the subsequent history of patients discharged from tuberculosis sanatoriums. An investigation carried on by the Council of Jewish Women, with very great precision and determination, has served to demonstrate once more the hopelessness of arriving at anything like positive evidence as to the after-conditions of a large number of poverty-stricken sufferers. Of a total of nearly 1,000 persons about whom inquiries were made, only a little more than half were traced. The condition of every patient had been duly recorded on leaving the sanatorium, and the progress of those who could be found was reported regularly. The collected figures showed that after five years there were about 20 per cent. in whom the disease could be reported as arrested, but of the majority it was impossible to tell whether they had or had not received material benefit from their stay in the sanatorium. The

[1] BRITISH MEDICAL JOURNAL, March 16th, 1912.

different effects of indoor and outdoor occupations were very well marked, and pointed strongly in favour of the latter. The change from the one to the other, after the first convalescence, was advised, and in many instances adopted. A great deal of home visitation was undertaken, and the general account given as to the observance of hygienic rules was encouraging, but the deficiency of light and fresh air was everywhere manifest. The proportion of patients earning enough to be self-supporting did not exceed 36 per cent. Relapse into former errors of life was found to be common. The educational value of the sanatorium treatment was apt to melt away very quickly if no means were available to keep it up, and for the same dire reason the insufficient diet soon rendered the half-starved tissues a prey to the ever-present bacilli. The Council makes a strong appeal in favour of a universal system of home investigation before the patient enters the sanatorium rather than when he leaves it, in order that during his stay some effort may be made to render his dwelling-place less liable to reinfect him on his return to it. Co-operation between the curative and the preventive agencies is eminently desirable, and the public need for it is becoming daily more obvious. The numerous schemes at present under consideration by boards and councils throughout the country, all of them working to the same end, would gain a double value if a system could be adopted whereby the consumptive discharged from any public institution could be followed up in whatever part of the kingdom he might elect to make his home.

VACCINE THERAPY WITH LIVING BACTERIA.

WHILE the efficacy of the preventive inoculations for small-pox and rabies is undoubted, opinions differ greatly at the present time as to the curative value of tuberculin and of other forms of vaccine treatment. Vaccines made from laboratory stock strains do not appear to yield satisfactory results, and the majority of those who advocate vaccine therapy prefer to use an autogenous vaccine—that is to say, a vaccine made from the bacteria infecting the patient to be treated. But even this method does not yield uniformly good results, and, from a common-sense point of view, it would appear that if a bacterium is capable of exercising a curative action in the infected host, it should be altered as little as possible in the preparation of the vaccine. Modern researches on variation and mutation reveal an uncomfortable habit in bacteria of acquiring fresh characters when brought into new environments, and it is not strange to learn that if removed from the host, planted in some artificial medium, such as broth or agar-agar, grown in a rapid succession of generations for a period of two or three days and then emulsified, the property of acting on the tissues for the production of definite antibodies may differ from that of the original stock. Professor Besredka[1] advocates the sensitization of bacteria for vaccine therapy by bringing them into contact with the serum of the patient before injection. Experience has shown that living sensitized viruses are practically harmless to the infected host. In a series of 48 cases of enteric fever there was only one death, and the proportion of relapses was diminished to about one-half. The serum of the patients treated by sensitized vaccines was shown to possess distinct bactericidal properties in considerable dilution (up to 1 in 20,000), while it was very weak in patients not so treated (about 1 in 100). The agglutinating power was not affected, while other antibodies appeared in the serum at an earlier stage and were more plentiful than in ordinary cases. Broughton-Alcock introduced this method of using sensitized living vaccines in streptococcal, staphylococcal, and gonococcal infections, and obtained good results. Gordon also obtained excellent results at St. Bartholomew's Hospital. The sensitized living virus produces less agglutinin than ordinary living virus or than killed virus. The bactericidal power of the serum is markedly raised in response to sensitized virus, less so with killed virus, and least with ordinary living virus. Lastly, the other antibodies appear earlier after injections of living sensitized virus, but disappear more rapidly than when the ordinary virus is used. These results suggest that vaccines prepared in a manner which approximates to the conditions obtaining in the infected organisms are more likely to cause a curative response than ordinary vaccines, and that they should be regarded as a distinct advance in vaccine therapy.

[1] *Berl. klin. Woch.*, January 19th, 1914.

A COCAINOMANIAC MONKEY.

THE monkey, being an essentially imitative animal, naturally adopts the vices of his more highly developed kinsman, *Homo sapiens*. Thus apes have been exhibited who smoke and drink champagne. It would seem also that they may acquire the drug habit from the example of their superior relative. At a recent meeting of the Société Clinique de Médecine Mentale[1] Dr. Marcel Briand, one of the medical officers of the Saint Anne Asylum in Paris, presented a macacus monkey which had become a cocainomaniac. Toby, as he is called, belongs to a lady who, herself a morphinomaniac, was often visited by a friend who was in the habit of snuffing cocaine before the monkey. Some months ago she gave him as a plaything a box which had contained cocaine. The ape smelt it and put it away with indifference. Since that day, however, whenever his mistress goes near him he feels in her pockets for a little round cardboard box of chestnut colour with a red border which he can pick out from several others. When he finds it, he opens it and plunges his nose in it with obvious delight, for it contains cocaine. He has often broken his chain to get at a drawer where he knows there is a supply of the drug; he even opens handbags in which he knows he will find a cocaine box. His mistress sought admission to the asylum for the cure of her drug habit, and she took her monkey with her. He was treated at the same time and the result was more successful than it usually is in the human patient. Sodium bicarbonate, which to an ape must look very like cocaine, was presented to him, and he rubbed his nose with it; then, with a grimace of displeasure, he tried to rub it off. After this first deception, if a box containing any powder of the same colour as cocaine were given him, he would open the lid and throw it away at once. It was clear that only cocaine had any charm for Toby. The intoxication which it caused began with a stage of excitement in which, unlike his ordinary self, he became quarrelsome and tried to bite those about him; after a further dose of the drug he became thirsty and tore out the hair from various parts of his body. Dr. Briand does not think that this was caused by the disorder of cutaneous sensibility which makes human slaves of the cocaine habit fancy that there are insects under their skin, but he gives no reason for this belief beyond the fact that Toby, who is kept very clean, has not the habit of scratching himself. His theory is that, beginning in mere imitation, the act became habitual in the ape, owing to the pleasure caused by the intoxication. Is not this the history of tobacco smoking in man? The difference in respect of drug taking is in favour of the ape, for, when he had had enough, he knew when to stop and would not be tempted further. In the matter of alcohol, for instance, man too often does not know when he has had enough. We think De Quincey's explanation holds good for all cases of alcoholic excess but those in which a man, like the negro of the story, deliberately "drinks for drunkie." He says that wine—and we suppose the same may be said of whisky—gives the drinker a sense of exhilaration and mental power that goes on increasing to a certain pitch, after which his faculties become gradually

[1] *Semaine médicale*, April 1st.

dulled. It is the attempt to counteract this downward tendency and to regain the glow and exaltation of the first stage that leads a man to drink till the poison steals away his brains.

DESCENDANTS OF PETER CHAMBERLEN.

An advertisement appeared in the *Times* several times lately, to the effect that "Any descendants of Doctor Peter Chamberlen, Royal Physician, of London (died 1683), would oblige by communicating with C., Field House, Minchinhampton, Glos." The name of Chamberlen is well known in connexion with the use of the midwifery forceps. The invention of the instrument, which was long kept a secret in the family—there were three Peters, two Hughs, to say nothing of a William, a Paul, and a John—belongs, according to Dr. J. H. Aveling,[1] to Peter Chamberlen the elder, a surgeon, son of William Chamberlen, a Huguenot, probably also a surgeon, who had to leave France on account of his religion. The Peter Chamberlen whose descendants are advertised for was the son of Peter, a younger brother of the elder Peter, and was born in London in 1601, educated at Cambridge and afterwards at Heidelberg and at Padua. At Padua he took the degree of medicine in 1619; he was incorporated M.D. at Oxford in 1620 and at Cambridge in 1621. His reputation as a practitioner extended to Russia, and the Czar begged Charles I to allow Chamberlen to enter his service, but the request was refused, perhaps because in the meantime Charles had appointed the doctor physician-extraordinary to himself. Chamberlen attempted to get the College of Physicians to recognize a corporation of midwives of which he should be governor, but a petition against the project was presented by "divers ancient midwives," in which it was stated that his scheme was "to bring about a project of his to have the sole licensing of them or approving of all such as shall hereafter be licensed out of an opinion of himself, and his own ability in the art of midwifery, implying a necessity of using him and no other in those cases and in all other occasions that shall happen to women with child." The opposition to his project moved Chamberlen to reply in a pamphlet entitled *A Voice Rhama: or the Crie of Women and Children*, in which he complains bitterly that he was accused of charging exorbitant fees. Disappointed in his attempt to improve the condition of midwives, he in 1649 obtained from Parliament a monopoly for the erection of baths and bath stoves, but the grant was opposed by the College of Physicians on the ground that "publike bathes" were "hurtfull to the Common-wealth." As a result of the controversy that arose out of this incident, Chamberlen was dismissed from the Fellowship of the College for repeated acts of contumacy. He next appeared as "England's Samaritan" with a scheme for "Powring oyle and wine into the wounds of the Nation. By making present Provision for the Souldier and the Poor by reconciling all Parties. By paying all Arreares to the Parliament Army. All Publique Debts and all the late Kings, Queenes, and Princes Debts due before this session" (1649). Peter Chamberlen should be with us at this hour; in his own day his ambitious finance does not seem to have been appreciated. During the whole of the Commonwealth he was involved in religious disputes in which he betrayed the spirit of a fanatic. At the Restoration he was appointed Physician in Ordinary to Charles II. In 1666 we find him patenting inventions for the propulsion of ships and carriages by wind; these, too, came to nothing. He next invented a method of phonetic writing. It is no wonder that a man of so restless a spirit should have been looked upon as eccentric; he replied vigorously to reports that he was mad, lost, and a Jew. Though his vindication of himself from the last of these accusations rather suggests Mr. Crummles's famous denial that he was a Prussian, Chamberlen seems to have been in earnest. He died in 1683 at Woodham Mortimer Hall, near Maldon in Essex, and was buried in the churchyard there, his tomb bearing the following inscription: "Here lyes ye body of Doctor Peter Chamberlen, who was born on the 8th of May, 1601, and dyed on the 22nd of December, 1683, being aged 82 years 7 months and 14 days. He had two wives, and by ye first Jane Middleton, had 11 sons and 2 daughters, and amongst them 45 grandchildren and 8 great-grandchildren (whereof were living at his death 3 sons viz. Hugh, Paul, and John and his 2 daughters and 20 grandchildren and 6 great-grandchildren). By ye second, Ann Harrison, had 3 sons and 2 daughters, whereof only Hope was living at his death, who hath erected this monument in memory of his father." The Jane Middleton here mentioned as Chamberlen's first wife was the eldest daughter of Sir Hugh Myddelton, the projector of the New River. Surely such a progeny has not vanished from the earth without leaving any descendant.

[1] *The Chamberlens and the Midwifery Forceps.* London: J. and A. Churchill. 1882.

"THEY MANAGE THESE THINGS BETTER IN FRANCE."

It is not easy to keep in mind even the names of all the wonderful cures announced to the public in the advertising columns of daily, evening, and weekly newspapers, but probably many will remember the frequent appearance some years ago of voluminous advertisements by one Dr. Macaura, said to be an American, who claimed to be able to cure rheumatism, paralysis, and other afflictions for the treatment of which he had invented a vibrator, called pulsocon. "*Truth*" *Cautionary List* for 1913 states that he brought an action for libel against that paper, but discontinued it and paid the costs. It would appear that he transferred his energies to France, for, according to a Reuter's telegram from Paris, an American named Macaura, who has been conducting institutes both in England and on the Continent for the cure of rheumatism and other disease by means of a vibratory treatment, was, on May 14th, sentenced to three years' imprisonment and a fine of £120. Macaura, the correspondent states, was with others tried on charges of illegally practising medicine and of swindling in connexion with the sale of his vibratory apparatus. Nine of the others, who assisted Macaura in Paris or in the provinces, received sentences of imprisonment varying from two to twelve months and were fined sums varying between £4 and £20. Three received the benefit of the first offenders Act. The tenth prisoner was acquitted. The medical societies which were concerned in the case as interveners were awarded damages varying from £80 to £120. The court set aside the charge of illegally practising medicine and convicted the accused on the second charge of swindling. Macaura at one time, we believe, had his head quarters at Manchester. We commend the action of the French courts to the attention of the Home Secretary in this country.

PRESERVATION OF THE COLOUR OF SPECIMENS.

In a pathological museum to-day we see less and fewer of the once predominant spirit preparations, dead white, tallowy looking objects in bottles, with tissues bleached and rendered as though homogeneous by the action of alcohol. The loss of the natural colour is of little importance in dissections of anatomical "regions" where the vessels can be filled with coloured injected material, but uniform discoloration greatly lowers the value of pathological specimens. The Kaiserling method preserves the original colour, but without doubt it may be improved upon. Professor Sheridan Delépine has taken an active part in seeking for the best medium for the permanent

preservation of the colour of diseased organs and tumours. Visitors to the Museum of the International Congress last summer will remember Professor Delépine's collection of photographs of specimens prepared by this method, illustrating some of the types of tuberculous lesions observed in man, cattle, swine, horses, and birds. They were taken from specimens prepared by his method, of which he has given a full description in a recent article.[1] He finds that tissues are best fixed and hardened in a 4 to 8 solution of formaldehyde, the specimen being then transferred to alcohol and later on to a saturated watery solution of arsenious acid mixed with glycerine. Specimens can be preserved in jars holding this fluid, but Dr. Delépine finds it preferable to transfer them to arsenious acid glycerine jelly, which allows of the specimens being mounted under glass plates, and has a beneficial effect on the preservation of colour. Even when half-bleached by spirit, specimens may be made to regain at least differential colouring when fresh sections are treated after this method, which after comparative experiments has proved superior to Kaiserling's. Dr. Delépine's preparations have stood the test of time. The earliest date from 1887, and it is found that no marked shrinkage of the tissues or reduction in bulk of the mounting mediums occurs. For permanent mounting of preparations, the fixing agents which Dr. Delépine finds best are a 2 per cent. watery solution of potassium bichromate and a 4 to 8 per cent. watery solution of formaldehyde. If the chrome salt be not entirely removed by long washing after hardening, a green discoloration is gradually developed, but this defect is avoided when very thin slices of organs are prepared and treated, and Dr. Delépine has kept sections for twenty-five years which show no such discoloration; but formalin is better for whole organs or sections which for any reason are unavoidably thick. By a special process Dr. Delépine has attained great success in mounting sections, or parts of organs, not over $\frac{1}{2}$ in. in thickness, in arsenious acid glycerine jelly between two glass plates. The great recommendation of his methods is that they have stood the test of time. They may be adopted with confidence by all curators and pathologists who wish to make specimens serve both for educational purposes and as accurate scientific records.

[1] *Journ. of Path. and Bact.*, vol. xviii, 1914.

HISTORICAL MEDICAL MUSEUM.

As already announced in the BRITISH MEDICAL JOURNAL, the Historical Medical Museum, founded by Mr. Henry S. Wellcome, and now housed at 54A, Wigmore Street, W., is to be a permanent institution. It is to be opened as such on Thursday, May 28th, without any ceremony. An account of the formal opening in connexion with the International Congress of Medicine held last year in London appeared in the JOURNAL of June 28th, 1913. It excited great interest among members of the Congress, and was visited by large numbers of persons while it remained open throughout the autumn. The collection has since been considerably enlarged, and shows in a concrete fashion the evolution of the healing art from witch medicine and primaeval surgery to the dawn of the Listerian era. Among the most interesting additions are a case of chemical reagents and apparatus used by Lister for experiments in his own house. There is a model of Liebig's laboratory, besides a number of relics associated with men who have cut new paths through the tangled forest of unknown truth. The collection of ancient Greek surgical instruments recently found near the site of Kolophon in Ionia, and probably dating from the first or second century of the Christian era, is on view for a time before it is taken to its intended destination in the Johns Hopkins University. Models of the instruments, which with two exceptions are of bronze, are being made; so beautiful and artistic is the workmanship, however, that we understand the imitation taxes the skill of the modern artificer. The whole museum has been rearranged and its component parts conveniently classified by Mr. C. J. S. Thompson, the curator; this makes it easier for the visitor to find what he wants and to study any particular department in which he may be specially interested. The illustrations and preparations showing the life-history of insect and other parasites which convey various tropical diseases and the manner in which they act within the human body, which was so striking and instructive a feature of the museum last year, has been removed to the Bureau of Medical Research founded by Mr. Wellcome, and now established in Henrietta Street, Cavendish Square. The museum will be open daily from 10 a.m. to 6 p.m., except on Saturdays, when it will close at 1 p.m. Members of the medical and kindred professions will be admitted on presentation of their visiting cards. Tickets of admission may also be obtained by others interested in the subject on application to the curator with an introduction from a registered medical practitioner. Ladies will be admitted only if accompanied by a registered medical practitioner.

SLEEPING SICKNESS.

THE report of the Interdepartmental Committee on Sleeping Sickness was issued on May 20th. The general effect of the conclusions of the Committee is to emphasize the need for further knowledge of the disease, its causes and remedies to be obtained by experiment and research. It deprecates hasty and imperfectly considered action of a drastic character, such as an attempt to effect a general destruction of wild animals, but recommends that until direct means of checking the fly have been discovered, its food supply and the chances of infection should be lessened in the vicinity of centres of population and trade routes by the removal of wild animals, and that for this purpose freedom should be granted both to settlers and natives to hunt and destroy the animals within prescribed areas and subject to prescribed conditions.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IN a paragraph published last week it was mentioned that the library of the British Medical Association did not possess the *Transactions* of the International Congress of Medicine in London last year, the publication of which has, we understand, now been completed. The appeal then made to members to supply the deficiency has already met with response, for the general volume, and the two parts (Section XIII, 1 and 2) containing the proceedings of the Section of Dermatology have been received from a member resident in London. Gratitude for this gift takes the usual form of a lively expectation of favours to come from other members who were members of other Sections. By way of encouraging these unknown others it may be added that a member who gives the volumes to the Library of the Association does not irrevocably cut himself off from the opportunity of consulting them in time of need. Any volume in the file can be consulted in the Library, which is on the first floor of the house of the Association, 429, Strand, or borrowed on application to the Librarian.

THE South African Civil Surgeons' dinner (now held triennially) will take place on Wednesday, July 8th, at the Criterion Restaurant at 7.45 p.m. Dr. Howard Tooth will take the chair. Tickets, price 10s. 6d., should be paid for at the dinner. It is hoped that those who wish to attend will communicate as soon as possible with Dr. F. E. Fremantle, County Medical Office, Hertford; or Mr. C. Gordon Watson, 82, Harley Street, W.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Proceedings of the House.—The Budget debates occupied almost the whole of the time of the House during the week ending May 15th, and the remainder of the time available before rising for the Whitsuntide recess is being devoted to the necessary financial resolutions and the third readings of the Welsh Disestablishment and Home Rule Bills. It is not anticipated that the Amending Insurance Bill will be introduced until some little time after Whitsuntide. It will be noticed, as reported in the answers to questions, that provision is to be made this year for securing the grant of a million pounds towards housing schemes in Ireland.

Housing Schemes (Ireland).—Mr. O'Shaughnessy asked the Chief Secretary when the £1,000,000 promised by the Government for the housing of the working classes in Ireland would be available; whether a number of schemes for the building of cottages passed by the Local Government Board for two years or more were at a standstill for want of funds, although the houses were badly needed to replace the hovels at present existing; and whether, having regard to these facts, he would without further delay introduce a bill dealing with this matter without waiting for the passage of the Irish Land Bill into law.—Mr. Birrell replied as follows: No schemes approved by the Local Government Board have been held up for want of money, but there are a number of schemes which have not yet been inquired into, owing to funds not being available. As stated, in the event of no agreement being arrived at as regards the Land Bill, I shall endeavour to introduce a one clause bill securing a sum of £1,000,000 to complete outstanding schemes for the erection of labourers' cottages in Ireland, but I am not at present in a position to make any further statement.

State Grants to Hospitals.—Mr. Goulding asked whether, in addition to the proposals outlined by the Chancellor of the Exchequer in his speech in introducing the Budget, he would consider the possibility of placing adequate institutional treatment at the disposal of insured persons as part of their medical benefit.—Mr. W. Benn said the Chancellor would be glad to consider the suggestion, but added that the provision of grants in aid of the voluntary hospitals would necessarily raise the question of State control.

Local Government Grants for London.—In reply to Mr. Harry Lawson, Mr. Herbert Samuel said: So far as can be computed on such data as are at present available, the proposals of the Budget will result in additional grants to the local authorities in the county of London, in the first year of full operation, of approximately £1,500,000. In this estimate about £500,000 is on account of elementary education, and £250,000 under the head of public health. I am not in a position to give any separate figure for roads until the provisional classification of roads has been completed. In respect of the present financial year it is intended that the additional relief shall be approximately one-third of that which would accrue in a complete year.

Ventilation of the House of Commons.—The Committee on the Ventilation of the House of Commons had a further sitting on May 14th. The Committee continued hearing the very interesting evidence of Mr. A. H. Barker. It was chiefly concerned with questions of moisture, the effects of warming air, the direction and velocity of the air currents in the House, and generally with his examination on the subject of his memorandum, which we noted last week. At the conclusion of the meeting it was arranged that Mr. Barker should submit suggestions for the improvement of the ventilation in other parts of the House on the lines of his scheme.

Contagious Diseases of Man and Domestic Animals.—Mr. C. Bathurst asked the Chancellor of the Exchequer whether, in connexion with the proposed Government subsidy for the institution of pathological laboratories, he would consider the need of research work in connexion with contagious diseases, such as anthrax, tuberculosis, glanders, cow-pox, and foot-and-mouth disease, which were common to human beings and domestic animals, and apply a portion of the proposed grant towards the conduct of such research and the greater co-operation of the medical and veterinary professions in the interests of human health.—Mr. Lloyd George said the grants proposed were in respect of laboratories to be used primarily for purposes of expert diagnosis and not of research, but he understood that certain of the subjects mentioned were engaging the attention of the Medical Research Committee.

Committee on the Condition of the Blind.—Mr. Ginnell asked why the committee to inquire into the condition of the blind in the United Kingdom contained no Irish member, and whether Irish evidence would be taken, and what were the terms of reference.—Mr. Herbert Samuel said, in reply, that the committee included, as a representative of Ireland, Sir Thomas Stafford, the Medical Commissioner of the Irish Local Government Board. The terms of reference were "to consider the present condition of the blind in the United Kingdom, and the means available for (*a*) their industrial or professional training, and (*b*) their assistance; and to make recommendations."

Public Service (Remuneration).—Mr. Dawes asked the Prime Minister whether, having regard to the pressure brought to bear on members of the House of Commons in connexion with claims by persons in the public service for increased remuneration, he would consider the desirability of setting up a permanent tribunal, independent of the House of Commons, by which all matters connected with the terms and conditions of employment in the public service would be considered at regular intervals and decided by such tribunal.—The Prime Minister said that the Government would consider the suggestion, but, in view of the fact that the House of Commons was ultimately responsible for all public charges, he doubted whether the establishment and working of such a tribunal would be found practicable.

The Midwives (Scotland) Bill.

The passage through the House of Lords of the Midwives (Scotland) Bill is regarded in Scotland as a sign that it or a similar measure will also pass through the Commons this session and become the law of the land. So far the bill which Lord Balfour of Burleigh has successfully guided through the House of Lords appears to meet the wishes of obstetric specialists in Scotland to a remarkable degree, and it is to be hoped that if any of the bodies which are to be represented upon the proposed Central Midwives Board of Scotland feel that their representation on the Board is less than it ought to be, or that that of other bodies such as the Scottish Committee of the British Medical Association is greater, they will take into account how largely midwifery is the concern of the general practitioner, and how desirable it is that the measure should receive no criticism which will delay and possibly destroy its chances of passing, save on points of vital importance. The bill has many things in common with the English Act, but there are matters in which it has obviously profited by the discovery of defects which the working of the Act in England has laid bare. Provision for existing midwives is made as follows:

Any woman who within two years from the date of this Act coming into operation, claims to be certified under this Act, shall be so certified provided she holds a certificate in midwifery from the Royal Maternity Hospital of Edinburgh, the Royal Maternity Hospital, Glasgow, the Maternity Hospital, Aberdeen, the Maternity Hospital, Dundee, the Obstetrical Society of London, the Royal College of Physicians of Ireland, the Coombe Lying-in Hospital, and Guinness's Dispensary, the Rotunda Hospital for the Relief of Poor Lying-in Women of Dublin, the National Maternity Hospital, Dublin, the Central Midwives Board for England, or such other certificate as may be approved by the Central Midwives Board of Scotland; or produces evidence satisfactory to that Board, that at the

passing of this Act she had been for at least one year in bona fide practice as a midwife, and that she bears a good character.

The following clause is designed to do away with some slight hardship which may have been inflicted under the English Act:

The period of two years may be extended by the Board in special cases where any woman is able to satisfy them that she had reasonable excuse for having failed to make her claim within the prescribed time.

The proposed constitution of the Central Midwives Board of Scotland is as follows:

It shall consist of three persons to be appointed by the Lord President of the Council, two of whom shall be certified midwives practising in Scotland, and shall be first appointed when, in the opinion of the said Lord President, midwives so qualified are available in number to warrant such appointment; and four persons to be appointed, one by the Association of County Councils for Scotland, one by the Convention of the Royal Burghs of Scotland, one by the Queen Victoria Jubilee Institute for Nurses (Scottish Branch), and one by the Society of Medical Officers of Health of Scotland; and five registered medical practitioners to be appointed, one by the University Courts of the Universities of Edinburgh and St. Andrews conjointly, one by the University Courts of the Universities of Glasgow and Aberdeen conjointly, one by the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow conjointly, and two by the Scottish Committee of the British Medical Association.

The Board is to elect a chairman from its own number, and the meetings of the Board are to be held in the City of Edinburgh. The regulations regarding the calling in of medical assistance in emergencies are worthy of note, and are an advance upon previous legislation.

In case of an emergency as defined in the rules framed under Section 5 (1) (*e*) of this Act, a midwife shall call in to her assistance a registered medical practitioner, and the local supervising authority shall pay to such medical practitioner a sufficient fee, with due allowance for mileage, according to a scale to be fixed by the Local Government Board for Scotland, and such fee shall cover one subsequent visit. It shall be a condition of the payment of such fee that the medical practitioner so called in shall state in his claim to the local supervising authority the nature of the emergency. The midwife shall report forthwith to the local supervising authority each case of emergency in which she has called in a registered medical practitioner to her assistance, stating the nature of the emergency and the name of the medical practitioner. The local supervising authority shall have the power to recover the fee from the husband or guardian of the patient as an alimentary debt, unless it be shown to their satisfaction that such husband or guardian is unable by reason of poverty or ill health to pay such fee.

The bill, if it become an Act, would come into operation on January 1st, 1915; and it is intituled "An Act to secure the better training of midwives in Scotland, and to regulate their practice."

The Budget, 1914–15.

GRANTS, SPECIAL GRANTS, AND INSURANCE GRANTS.

A study of the speech in which the Chancellor of the Exchequer introduced the Budget and of the White Paper (Financial Statement, 1914–15, Effect of Proposed Changes, No. 212) appears to justify the statement that the votes of the House of Commons for the purposes specified for this financial year (1914–15) and succeeding years are as follows:

	Totals.	
	1915–16.	This Year.
Grants in Relief of Rates	£4,000,000 (England and Wales. £3,200,000)	£1,300,000
For Housing.		
,, Small holdings.		
,, Tuberculosis.		
,, Hospitals.		
Special Grants in Aid...	£750,000	£250,000
For Tuberculosis (arrangements for dependants and others.		
,, Clinical (pathological) laboratories.		
,, Nursing	(£250,000)	(£50,000)
Insurance	£1,250,000	£1,000,000
For Medical Referee-Consultants.		
,, Clinics.		
,, Health lectures.		
,, Society deficiencies (women especially).		
,, Deposit contributors.		

Grants in Relief of Rates.

The Public Health Grant of four millions in relief of rates is based upon paying 25 per cent. of the net expenditure in connexion with housing, sanitation, milk, and other public health duties. The mention in this connexion of hospital provision in the Budget statement does not appear to foreshadow any definite scheme at present.

Special Grants in Aid.

The sum of £250,000 is taken this year for the purposes indicated, and the amount will be increased next year to £750,000.

Tuberculosis.—The grant to be made for tuberculosis is apparently intended to supplement the Hobhouse grant in connexion with schemes drawn up to provide treatment for all tuberculous persons in the different areas. The extra grant is no doubt intended to help in speeding up the provision of dispensaries, homes for advanced cases, and sanatoriums, and there is no indication of any departure from the existing plan of action. In this connexion the model scheme for the treatment of tuberculosis, issued by the Insurance Act Committee of the Association in the SUPPLEMENT of April 4th, p. 204, should be considered.

Nursing.—It is obvious that any scheme to provide domiciliary nursing for insured persons will require very full consideration, and in view of the existing supply of nurses it does not seem probable that any such general organization can be set on foot at once, but the sum of £50,000 is to be allotted to the purpose this year, and £250,000 next year. It is therefore very desirable that careful consideration should be given without delay to the proper lines upon which a beginning should be made.

Laboratories.—The proposed provision of laboratories for the purpose of extending laboratory aids in diagnosis and treatment to the people generally throughout the country raises questions of immediate and pressing importance. It is to be anticipated that steps will be taken in these matters at an early date.

Insurance.

Under the head of insurance there is a vote this year of £1,000,000, and in subsequent years of £1,250,000.

Society Deficiencies.—It may be anticipated that a considerable part of it will be appropriated, to quote the words of the Chancellor of the Exchequer on May 4th, to meet "cases where well-managed societies attracted an unusual proportion of bad lives, or were limited to classes subject to special sickness and disability, and, above all, the working of the Act revealed an appalling amount of sickness among married women, especially under certain conditions—a fact which was quite unknown before the Act."

Deposit Contributors.—The number of deposit contributors, who are such because they have no option, is stated to be small and to be dwindling, but it is proposed "to do something for certain cases of arrears of unemployment."

Health Lectures.—Another item under this head is health lectures, but this we may for the present put aside, and in any case the total expenditure on this will probably be a relatively minor consideration.

Medical Referee-Consultants: Clinics.—There remains, therefore, the financial provision for medical referee-consultants and for local clinics. We referred at some length to these matters in a leading article published in the JOURNAL of May 16th, p. 1082.

If these considerations are accepted—and we believe them to be correct—it will appear that matters to which the Association and the profession generally should at once give the most careful and detailed attention, with a view to examining and defining the lines upon which, in their opinion, a sound policy should proceed, are the establishment or subvention of clinical (pathological) laboratories, the conditions of service of medical referee-consultants and the proper method of establishing and carrying on local clinics where it appears to be contemplated that consultations shall take place between the medical men upon the panel, between them and referee-consultants, and in certain cases with specialists. Other matters of great importance arise, but are not, perhaps, equally pressing.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

Hospitals.

New regulations governing the hospitals in the province of Saskatchewan require that the plans and specifications for all hospital buildings must be submitted to the Commissioner of Public Health. Each hospital must contain a morgue and, if it contains seventy-five beds, must have a resident medical officer. Provision must be made for non-paying patients and for maternity cases, each to the extent of one-tenth of the total capacity, and there must be at least two qualified nurses in each hospital. If the hospital is in receipt of a Government grant, an advisory board must be formed which shall consist of three registered practitioners resident in the city whose duty it shall be to make recommendations to the Provincial Health Commissioner. Similar regulations are now in force in the province of Alberta also.

For some time past the General Hospital at Brandon, Manitoba, has been badly in need of more room for patients. It is now being enlarged by the addition of a maternity home. The mission building and the nurses' home are also being enlarged.

It is proposed to establish a Jewish hospital in Toronto. A site has been acquired and the building on the property is to be used as a temporary hospital until the association by which the scheme is being promoted has matured its plans.

Montreal is to have another hospital. It will be built by the Sisters of Providence at Maisonneuve, to the east of Montreal, and the amount expended upon it is not to be less than 200,000 dols. The Montreal City Council has made an annual grant of 5,000 dols. for five years towards the hospital.

A report on hospitals in the province of Ontario has just been issued by Dr. Bruce Smith. According to this report there are now in the province 89 public hospitals, 57 private hospitals, 37 refuges, 8 sanatoriums for consumptives, 33 orphanages, 3 homes for incurables, and 31 county houses of refuge. During the year ending September 30th, 68,738 patients received hospital treatment and 4,058 deaths and 4,210 births occurred. The amount expended on hospitals during the year was 3,155,340 dollars, and of this sum 232,276 dollars was granted by the provincial Government.

A new general hospital is to be built at St. John, New Brunswick. A sanatorium for advanced cases of tuberculosis is also to be established there.

An isolation hospital is to be built at Quebec. The plans provide for a building of three stories, which will cost about 90,000 dollars.

British Columbia.

The staff of the Vancouver health department is to be reorganized. It is suggested by Dr. Underhill, the medical officer of health, that the department in future should be directed by a Commission composed of an equal number of medical and non medical men, who shall be elected for a period of three years. He suggests also that, in addition to the medical officer of health, a sanitary engineer should be appointed.

The following members have been elected to the Council of the British Columbia College of Physicians and Surgeons for a period of three years: Dr. P. A. McLennan and Dr. A. P. Proctor, Vancouver; Dr. O. M. Jones and Dr. H. M. Robertson, Victoria and Vancouver Island; Dr. J. S. Birris, of Kamloops, Upper Kootenays; Dr. S. Bonnell, Lower Kootenays; and Dr. R. E. Walker, New Westminster.

Alberta Medical School.

A medical school has been established in connexion with the University of Alberta at Edmonton. It is proposed to give a five-year course, and this year a premedical year has been conducted. There have been twenty-five students in attendance. Suitable buildings are in course of erection and further appointments are to be made to the staff. Arrangements are being made to give two years' work in the next session. The examinations for licence to practise medicine in the province of Alberta are now conducted under the direction of the Senate of the University.

International Association of Medical Museums.

The American Section of the International Association of Medical Museums met at Toronto on April 9th, Professor R. M. Pearce, of Philadelphia, was in the chair, and about fifty members were present. Some interesting papers were read, the subjects considered being museum research work and methods of teaching and technique. A gift to the International Association of 5,000 dols. from the late Lord Strathcona was announced. The address of the International President, Professor Aschoff, of Freiburg, was read by the Secretary, Dr. Maude E. Abbott, of McGill University, Montreal. In his address, Professor Aschoff advocated an increased membership in the association and a closer connexion between the national sections and the pathological and anatomical sections.

Meetings of Societies.

The fourteenth annual meeting of the American Association of Pathologists and Bacteriologists took place at Toronto, April 10th and 11th last, under the presidency of Professor J. J. MacKenzie of Toronto. About one hundred members of the association attended the meetings, which were held in the new Toronto General Hospital. The tendency of pathological research was apparent in the topics chosen for discussion, many of them being of an experimental and biochemical nature. A meeting of the American Society for Cancer Research also took place at the Toronto General Hospital on April 9th.

The Canadian Medical Association.

The forty-seventh annual meeting of the Canadian Medical Association will take place at St. John, New Brunswick, July 7th, 8th, 9th, and 10th. From the preliminary programme we see that the address in medicine will be delivered by Dr. Thomas McCrae, professor of medicine, Jefferson Medical College, Philadelphia; the address in surgery will be given by Dr. J. Rutherford Morison, F.R.C.S., professor of surgery, University of Durham; and the address in obstetrics will be given by Dr. Robert Jardine, professor of midwifery, St. Mungo's College, Glasgow. Arrangements have been made with the railway companies whereby those attending the meeting may obtain reduced rates; and, if they wish to do so, these rates will enable them also to attend the annual meeting of the Canadian Association for the Prevention of Tuberculosis, which takes place in Halifax on the Monday and Tuesday following the St. John meeting.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Mental Deficiency and Lunacy (Scotland) Act, 1913.

On May 15th the Mental Deficiency and Lunacy (Scotland) Act of 1913 came into force. One of the first of its effects will be felt by school boards, for whilst these bodies have already certain powers in the matter of providing for defective children, the exercise of which is permissive, they will in future be bound to see that no mentally defective children between the ages of 5 and 16 years, who are defectives within the meaning of the new Act, fail to receive suitable attention. Another effect will be that the General Board of Lunacy established in 1857 ceases to exist, and that there comes in its place the General Board of Control for Scotland, which is composed of the present members of the Board of Lunacy, with the addition of one medical commissioner and of two deputy commissioners. The constitution of the Board is as follows:

Chairman: Sir Thomas Mason.
Medical Commissioners: Dr. John Macpherson, Dr. Hamilton Marr, and Dr. Carswell.
Legal Commissioners: Mr. John Cowan, W.S., and Sheriff John Wilson, K.C.
Secretary: Mr. A. D. Wood, J.P.

The Act only modifies the lunacy laws to a slight extent, but it adds to the persons who come under the control of the Board, the following classes of defectives: Idiots, imbeciles, feeble-minded persons, and moral imbeciles, the last-named class comprising persons who

from an early age display some permanent mental defect, coupled with some strong vicious or criminal propensities, on which punishment has had little or no deterrent effect. Part of the working of the Act falls upon the school boards; but in the event of a defective child being found to be ineducable or incapable by reason of mental defect of receiving further benefit from instruction in special schools or classes, or of receiving such instruction without detriment to the interests of the other children, the child is to be handed over by the school board to the parish council, and the parish council is to deal with the child by sending it to a certified institution or having it boarded out; but this action can only be taken with the consent of the parent or guardian. If the school board and parish council fail to carry out their duties, then the Board of Control has power to present a petition to the sheriff. The district boards of lunacy become district boards of control, and if such a board contains no women members, it must co-opt not more than two women to be members. Section 28 of the Act gives power to the Secretary of State to grant authority to establish and maintain institutions for defectives of dangerous and violent propensities, and arrangements are being made in the first instance to establish such an institution at Perth Prison. It is obvious, therefore, that the new Act will have no small effect upon the mental health of the defectives of Scotland; and it may indirectly do something to clear up the etiology of some of the mental states which are at present regarded as hereditary, but which there is some reason to suspect are more often the result of ante-natal syphilitic infection.

Antivaccination Danger in East Lothian.

In his annual report to the Local Government Board for Scotland, Dr. G. G. Buchanan states that the total number of births in East Lothian for the year 1913 was 524, giving a birth-rate of 23.2 as against 23.9 per 1,000 in the previous year. There were 38 objections by parents to the vaccination of their children, and although this number was considerably smaller than that in the year before (when it was 58), and although it represented only 7.3 per cent. of the total births as against 10.4 per cent., still the fact that the great majority of the objections came from the parishes of Prestonpans and Tranent, the most densely populated part of the county, meant that there would be real danger if an outbreak of small-pox began in these towns. It was probable, however, that the appearance of a single case of variola would lead to the rapid disappearance of the conscientious objections; and, as the authorities knew exactly where the unvaccinated children were, it would be comparatively easy to get into touch with them.

Public Health Estimates in Edinburgh.

In presenting his estimates for the year from May, 1914, to May, 1915, to the Edinburgh Town Council on May 5th, the treasurer (Mr. Lorne MacLeod) stated that, in the Public Health Committee's estimates, provision was made for the expenditure to be incurred in dealing with phthisis. The details of the Edinburgh scheme were not complete, as the negotiations for the transfer to the Corporation of the Victoria Hospital and relative institutions had not yet been concluded. The Public Health Committee anticipated, however, that on the average it would have to provide sanatorium treatment next year for 250 patients, including insured persons, the dependants of insured persons, pauper patients, and others, and had framed the estimates accordingly. The cost of this sanatorium service and of the dispensary and domiciliary treatment would in the coming year reach approximately the large figure of £24,000. Towards this expense the Burgh Insurance Committee would contribute, in respect of insured persons, about £4,000, and the balance of £20,000 had to be met in equal shares by the corporation out of the burgh rates and by the Treasury. If the Victoria Hospital, the Dispensary, and the Farm Colony at Lasswade were transferred to the Corporation, as was most likely under present negotiations, these figures would not improbably be increased. The whole scheme, when in full operation, might be expected to entail an expenditure of not less than £30,000 per annum. Another fact in the estimates was the disappearance of the charge for lunacy from the Town Council accounts; under the Mental Deficiency Act, passed last year, the responsibility of raising the money was now a charge upon the parish rates. The result to the ratepayer was the same, but the spending body had now the responsibility of assessing for its own obligations.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Medical School Inspection in Belfast.

On May 14th a deputation from the Belfast Juvenile Advisory Committee asked the Public Health Committee of the City Council to take into consideration the subject of the medical inspection of children, with the object of ascertaining what powers the committee possessed, and also to take steps to secure whatever extension of powers was necessary to enable it to deal with this important question. Dr. Marion Andrews, who spoke on behalf of the deputation, explained in detail the system of inspection in England, and described the voluntary efforts at present being made by the Juvenile Advisory Committee. The chairman said that the committee was in full sympathy with the objects of the deputation but regretted it had no powers to deal with the subject. The medical officer of health was instructed to report upon the whole question at an early date.

Tuberculosis Isolation Hospitals and Sanatoriums.

The Londonderry County Council last week had under consideration a letter from the Local Government Board concerning the urgent necessity of providing for advanced cases of tuberculosis so as to prevent the spread of infection. It was suggested that a number of union fever hospitals might be transferred to district councils where these were the sanitary authority, and the same district isolation hospital substituted for union fever hospital. A resolution was unanimously adopted expressing the desire of the council to have one of the hospitals in the county set free for this purpose.

The Gorey Guardians have agreed to transfer to the County Tuberculosis Committee the west wing of the fever hospital for conversion into a "district isolation hospital" for the treatment of consumptive patients under the Insurance Act. This will be the first Poor Law building in Ireland to be applied to such a purpose.

At a special meeting of the Sligo County Council held last week, at which Sir Acheson McCullagh, of the Local Government Board, was present, it was unanimously resolved to purchase Cloonamahon Home, with ten acres of land attached, about two and a half miles from Collooney, at a cost of £1,400, for a county sanatorium under the Insurance Act.

England and Wales.

LONDON.

A New Hospital.

The first annual report of the South London Hospital for Women, which was presented and adopted at a meeting of subscribers on May 6th, states that it came nominally into existence in 1912, and opened an outpatient department in two houses at Newington Causeway in April, 1913. The foundation stone of the future hospital was laid in July by Princess Louise on a site acquired at South Side, Clapham Common, but no further building operations have at present been undertaken. The hospital it is proposed to erect will be a general hospital for women and children, but boys up to the age of six years will be eligible for admission. All diseases will be treated, with the exception of acute infectious fevers. Beds will be set aside for the treatment and investigation of cancer, and there will also be special facilities for such diseases as require open-air treatment. There will be four general wards, several private wards of one, two, and four beds each, and an isolation department, giving a total accommodation of about seventy beds. Patients in the general wards who can afford it will be expected to contribute towards the expense of their

treatment, and for treatment in the private wards an inclusive charge of from one to three guineas will be made. During the nine months that the out-patient department was at work 1,619 patients were seen and the number of attendances was 5.113. The cost of this out-patient department was (in addition to rent, rates, and taxes, amounting to £85, and to £618 expended on adapting and equipping the houses used) £919, so the cost of each out-patient attendance was approximately 3s. 7d.; the site on Clapham Common cost £4,864, this, together with some small connected items, brought the total expenditure for the year up to £6.572. Against this expenditure the total sums received so far in the way of annual subscriptions, patients' payments, and donations towards the building fund amounted to about £7,250. Hence the balance in hand at the beginning of the present year towards the building of the future hospital and maintaining the existing out-patient department would appear to have been well under £800. The report does not contain any information as to how economy of labour, etc., is to be secured when seventy beds are scattered over four general wards and several small wards of one, two, and four beds each. It also does not state why it was thought desirable to open an out-patient department at a time when even the site of the parent institution still had to be acquired, and in such circumstances that the cost of each out-patient attendance has been approximately seven times as great as that of a like attendance at, say, the New Hospital for Women in Euston Road. Nothing is said, too, as to why it should be thought necessary to start a new hospital in South London at all; and the amount of financial support that the institution has so far received would not appear to indicate any very profound belief in the necessity of its creation on the part of the general public. This is very comprehensible in view of the already completed removal of King's College Hospital to South London, of the existence on that side of the water of several small hospitals, and the prospective establishment there of the Westminster Hospital, if not of St. George's also. Indeed, strong doubts may be felt as to whether the promoters of the scheme are justified in proceeding with it; at all events, they ought not to do so until they have a really large sum in hand, not only for the purpose of building but also of maintenance. To build the hospital will hardly cost less than £40.000, and to maintain it approximately £7,000 will have to be raised each year. At the present time, when all London hospitals—indeed, all hospitals throughout the country—are encountering increasing difficulty in keeping all their wards open, nothing but the very strongest necessity can justify adding to the number of annual claimants on the public purse.

The Teaching of Sex Hygiene.

In view of the interest lately manifested in the subject of instruction in sex hygiene in public elementary schools the London Education Committee proposes to publish a summary of evidence given before one of its subcommittees which for more than a year has had this question under consideration. The subcommittee heard the opinions of a number of head teachers and members of the school medical staff, and arrived at the conclusion that in no circumstances should sex hygiene be introduced into the class teaching in elementary schools. The subcommittee emphasized the need for individual instruction in matters of this kind, because the knowledge children already possessed depended very largely upon the type of home from which they were drawn. Where, as unfortunately was too commonly the case, the parents and children lived in one room, in which all the events of life and death took place, the knowledge of the children must be very different from that of children brought up in better circumstances. Moreover, differences of temperament might render a method of treatment of the subject which would be beneficial in one case harmful in another. The subcommittee felt that speaking of these subjects in class must tend to break down the children's natural modesty and reserve. Children naturally felt that if their teacher talked about a matter they could talk about it too; and one of the medical witnesses gave evidence of the undesirable conversations which took place in a school where definite class teaching was given. The subcommittee came to the conclusion that most could be done by teachers keeping in close touch with parents in order that some restraint might be exercised over the conduct of children out of school. Parents should be approached individually rather than by holding parents' meetings. Much good could be done also, by teachers in talking to children privately. Medical inspection might be instrumental in discovering the existence of vicious habits, and the co-operation of the school doctor in this respect might often be of great value. Dependence should be placed mainly on the influence of the teacher, and especially the head teacher, exerted individually, and in order that teachers might be as fully equipped as possible for dealing with this important phase of school life, consideration had been given to the question of instruction of teachers in training. Students at training colleges should receive some advice as to the best way of dealing with the serious problems that arose even in the case of young children, and should be shown how to watch for the appearance of undesirable habits. In the case of adolescent children some guidance on the question of sex hygiene was needed, and the subcommittee thought the subject could be dealt with at evening institutes; in the higher classes of secondary schools some reference to the matter might be made in connexion with lessons now given on human hygiene and physiology. During the inquiry the attention of the subcommittee was called to the evils which appeared to arise owing to the lack of adequate supervision of open spaces, and the attention of the Parks Committee had been called to the matter.

The Social Welfare Association.

The Lord Mayor, who presided at the annual meeting of the Social Welfare Association for London at the Mansion House, on May 18th, said that the Association was the outcome of a letter sent to the press in 1910 by the then Lord Mayor, calling attention to the need for co-operation between the numerous philanthropic societies whose efforts were in danger of overlapping. The object of the association was to secure co-operation on systematic lines between official departments of the State, municipal authorities, and voluntary agencies and charitable societies of London. The adoption of the report of the association for the year ending March 31st, 1914, was moved by the President of the Local Government Board, who said that he had been present at the inaugural meeting of the association four years ago, and its subsequent development had surpassed the fondest hopes of its supporters. Its success proved the truth of the principle upon which it had been based, that of co-operation between Government departments and philanthropic societies for purposes of social reform. A great change had come over Government departments during recent years, and the State was far more sympathetic than formerly in its attitude towards the question of social reform. The association, Mr. Herbert Samuel said, had succeeded in bringing together every form of philanthropic organization which dealt with the problem of the homeless poor. A special committee had been formed under its auspices in 1912 for this purpose, and since that date there had been a remarkable decrease in the number of vagrants who spent the night in the streets of London. The association had also formed a health committee with the object of co-ordinating the work of all agencies, whether official or voluntary, concerned with the public health, and had brought into touch with one another as many as sixty-four societies connected with the welfare of the children of this country. Mr. W. Hayes Fisher, M.P., who seconded the adoption of the report, said that he had never known a society which had accomplished so much during the short space of four years as the Social Welfare Association. The amalgamation of philanthropic bodies might sometimes be desirable, and was always very difficult; but what was really needed was hearty co-operation between all the numerous forms of philanthropy. Lord George Hamilton, in supporting the resolution, said that there was a tendency, particularly in Mr. Herbert Samuel's department, whenever a new movement was begun, to set up a new organization with a new set of officials. If this went on there would be the same difficulty in the future between the public organizations as there had been with the charitable organizations. Mr. F. Huth Jackson, who moved the adoption of the balance sheet, said that the work had been much more successful than its promoters had dared to hope; but they wanted more money. Out of the £1,700 which formed their

income £1,300 came from ten subscribers. They asked for £3,000 a year from the charitable public for the next few years. The resolution was supported by the Earl of Lichfield, and carried unanimously.

BRISTOL.

School Medical Service.

At a meeting of the City Council on May 12th the Education Committee recommended an alteration in the school medical service. At present the staff consists of a part-time medical officer, four part-time assistant medical officers, two school nurses, three part-time medical officers for industrial and special schools, and a nurse attached to those schools. The Committee would have been content to continue with this staff, but a new regulation of the Board of Education requires all children to be examined or inspected at intermediate ages. Hitherto a child had been inspected when it first joined a school and on its leaving, but another inspection was now required at about 8 years of age. Last year 14,000 children were inspected, and it was obvious that the present staff would be unable to cope with the additional work. About two years ago the Board issued a regulation that where the service was satisfactory and adequate, a grant would be paid of half the expenditure, in other cases a lower rate would be paid or withheld altogether. The Committee in addition thought that with an extra staff it would be possible to increase the material good done for the children, for up to the present there was not much treatment, for the work mainly consisted of investigations into health and the building up of statistics. The Committee had made arrangements for the treatment of defective eyesight with the physicians of the Eye Dispensary, and had also undertaken to treat ringworm, but it was found that if a child could get out of school for that disease, it lasted a long time. Owing to the absence of children from school the Committee lost annually £450 a year. At the deaf and industrial schools the inmates were treated for minor ailments and for teeth affections.

It was now proposed to appoint a whole-time medical officer at a salary of £500 a year, who would supervise the part-time officers, whose services would also be secured, and two additional nurses. With this staff it was proposed to treat minor ailments at clinics. If a medical officer found a child suffering from a "weeping ear," it would be reported to the parent that the child was to be brought to the clinic by the parent at a stated time, when the medical officer would be present to give instructions as to treatment by the nurses. The question of affections of the teeth and the employment of qualified dentists was also receiving attention. It was proposed to place these clinics in each quarter of the city, and the Committee hoped the parents would be induced to help in the matter. The expenditure on medical service, including clerical work, was now £2,185, and towards that expenditure £562 was received from the Board of Education, leaving a net cost to the rates of £1,623. The cost of the proposed service was £2,985, and if an increased grant of 50 per cent. could be obtained, which would mean £1,337, the balance out of the rates would be only £25 more than at present.

In the discussion that took place on this proposal, emphasis was laid on the increased cleanliness of the schools in consequence of the medical inspection, and of the absence of hostility on the part of parents to the visits of the nurses. The proposal was carried.

Transport of Meat.

At the same meeting a resolution was proposed by Dr. Baron to call attention to the insanitary and unsightly methods of transporting meat for human consumption to the wholesale and retail dépôts, and to move that the Watch Committee frame a by-law to ensure, as far as possible, the protection of meat from dirt and contamination during handling and transport in the city. This was agreed to.

LEEDS.

Retirement of Mr. Edmund Robinson.

The retirement of Mr. Edmund Robinson marks the close of a long period of professional activity. Mr. Robinson went to Leeds in the year 1863 as a pupil of the late Mr Wheelhouse, and became a student of the Leeds School of Medicine. The school buildings were then situated at the bottom of East Parade; since then the school has changed its position twice, for the buildings subsequently erected in Park Street, and deemed sufficient for an indefinite number of years, have now for twenty years been devoted to other purposes, the present buildings having been opened by King George in 1894 when he was Duke of York. For twelve months Mr. Robinson was an assistant—or house-surgeon, as he would now be termed—at the old infirmary, for it must be remembered that the present infirmary was not opened till the year 1868. He was then associated for some years with Mr. Wheelhouse in his practice, and when Mr. Wheelhouse removed to Hillary Place, his house in Park Square was taken by Mr. Robinson, and there he had been in practice till the date of his recent retirement. Mr. Robinson's practice was very large and varied, and he added to the large number of patients who went to him owing to his connexion with Mr. Wheelhouse a still greater number of well-to-do class people in Leeds and the surrounding district. He was connected with the Leeds School of Medicine when it was an independent institution, when it was a part of the Yorkshire College, and when this was incorporated as one of the colleges of the Victoria University. He was first demonstrator of anatomy and subsequently lecturer in anatomy, and always took a great interest in the work and welfare of the medical students. Another important position which was held by Mr. Robinson—the work in connexion with which he carried out with conspicuous zeal—was that of medical officer to the Post Office. This post he held for some thirty-five years, and he was, it is believed, the first person in England to call attention to what is now known as telegraphists' cramp and to give a good description of the condition. He attended the Leeds Parish Church for many years, and filled the position of churchwarden for eleven years. Those who know Mr. Robinson well—and they are very many—will know that, though much of what is here written may appear ancient history, the hope which they all have that he may live long to enjoy his well-merited repose is one which may confidently be entertained. It is the intention of Mr. and Mrs. Robinson to settle somewhere in the south after spending a few months abroad.

BIRMINGHAM.

A Health Week for the City.

A large and representative meeting held in the Council House, Birmingham, has decided to hold a health week in the city, to be observed from Sunday, November 15th, to Saturday, November 21st, this year. A similar week was held last year, and it aroused a great deal of enthusiasm and interest. Health lectures were given in different parts of the city, and there was a good exhibition illustrating the lectures. The object of the health week is to draw the attention of the general public to the subject of health in its personal and public aspects, and to stir up, as far as possible, the whole city to a fuller recognition of the fact that many diseases are preventable, and that private citizens can accomplish much and can control an enormous amount of sickness. There is a considerable amount of medical testimony to the good that the health week accomplished in Birmingham last year. The programme for this year has not been completed, but it has been decided that the celebration will be more effectual if it be a citizens' movement and not officially organized from the Council House by the Health Committee, which, however, will lend all the help and support it can. An influential committee has been formed to draw up plans. It is hoped that great things may result from these health weeks, for by them the citizens should be educated to help the health authorities intelligently in combating preventable diseases.

LIVERPOOL.

The Hospitals.

For the past few months a ward for tropical diseases has been under construction at the Royal Infirmary. It will be conducted in connexion with the Liverpool School of Tropical Medicine, and will considerably increase the

facilities for the teaching of tropical medicine. The number of cases of tropical diseases which reach the city is large.

A memorial has been extensively signed by medical men protesting against the retention of the abattoir in the centre of the city and in the immediate neighbourhood of the Royal Infirmary and University. This question, which has been under consideration for many years, is again to come before the city council at an early date.

Mr. Thelwall Thomas, who recently suffered from a severe attack of appendicitis, has recently resumed duty at the Infirmary.

Miss Ivens, who has for some years held the post of gynaecological surgeon to the Stanley Hospital, has now been appointed to a similar position at the Samaritan Hospital for Women also.

Owing to the resignation of Mr. R. W. Murray of the appointment of surgeon at the Northern Hospital, a rearrangement of the staff will be made, and two assistant surgeons will be appointed.

Special Correspondence.

BERLIN.

The Friedmann Controversy.—Venereal Statistics.

THE centre of interest at the discussions of the Berliner medizinische Gesellschaft is still Friedmann's tubercle emulsion. At the last meeting Professor Karewski, out-patient surgeon at the Jewish Hospital, reported some further results, which were most unfavourable. He had been using the injection with the greatest care and strictly according to the inventor's directions since November of last year; his material included a total of 54 proven cases of joint and bone tuberculosis mainly, together with a few of lupus, tuberculous epididymitis, and cystitis. Of all these cases the only improvement noted was in a case of closed infection of the wrist-joint; and, although none of the patients had died, many of them had become seriously ill, and several of the glandular infections had broken down after the injections. Karewski could not confirm the statements of Friedmann to the effect that the residual infiltrations were deposits of antigen, but believed with Rabinowitsch and other investigators that they were mainly the result of impurities introduced at the time of manufacture. He had found streptococci in several samples, and had to report high temperatures, vomiting, and great prostration after the injections, with in many cases definite loss of weight. One of his patients had developed pyaemia, and not a single one had volunteered a statement of subjective improvement in general health.

The official statistics of the State Registrars of large German towns have recently been combined with those furnished by the German Society for the Prevention of Venereal Disease for the purpose of determining as accurately as possible the prevalence of venereal diseases in Germany during the month November 20th to December 20th, 1913. The results, as far as Berlin is concerned, were announced by Professor Blaschko at the last meeting of the Berliner dermatologische Gesellschaft. The total number of patients under treatment in clinics and in the care of such medical men as replied to the inquiry in Berlin was stated to be 20,000. To these must be added unreported cases, and such as were in the hands of quacks, or under no treatment whatever, an addition which Blaschko estimated would increase the net total to 40,000. The recorded fresh infections for the month were 7,552—that is, according to Blaschko, really about 15,000—which works out for the year to the enormous figure of 180,000. Excluding recurrences coming up for further treatment, 18,000 were accounted fresh syphilitic cases and 82,000 new infections with gonorrhoea. The figures for tabes and paralysis were equally striking. There were inscribed 1,874 cases for the month, of which 167 were new. This warranted an estimate of a total of 2,000 fresh cases annually, in which the male as compared with the female incidence was estimated at 1,450 to 550. Blaschko concluded his report by recommending an early repetition of the census, under legal compulsion on the medical man to notify such cases as were known to be venereal in origin.

Correspondence.

THE WORK OF THE ASSOCIATION.

SIR,—I am sure that many besides myself will have read with pleasure and appreciation the letter on the work of the Association by Dr. M. S. Harford in the JOURNAL of May 16th, and will support as I do most heartily his appeal to all sections of the profession to rally round the "old firm." At the beginning of 1913 many, perhaps the majority of doctors members of the Association, took service under the National Insurance Act with regrets and misgivings and in soreness of spirit; but having done so, true to their professional instinct, they set to work to do their best in the new circumstances in which they, albeit unwillingly, found themselves. Obviously this was but their bounden duty, yet the fact that they did and are doing their best to make the medical benefit administration of the Act a success seems to be the head and front of their offending in the opinion of those who are still irreconcilable to the panel system, and show their disapproval of their panel colleagues by resignation of membership of the only organized body which can claim to represent the medical profession. There is room for all opinions in the Association, and in the work that lies before it the opinions of all thinking doctors will be valuable, for as Dr. Harford points out, there are many difficult problems to be tackled in the near future, if the perils of a State Medical Service and of an extension of the "institute" system are to be avoided. I am quite certain that nobody in the profession or the Association really desires an extension of medical aid institutions, and yet we find the Council of the Association, to whom we should and desire to look for guidance, recommending "that the policy of the Association be that such insured persons as may wish to make their own arrangements with medical practitioners not on the panel may do so without the necessity of such practitioners entering into any written contract and with no consequential loss of benefits to insured persons." If the Acts and Regulations were so amended that this policy were possible, it would mean that the panel system, which, after all, is the child of the Association, would be wrecked, the Insurance Committees, on which doctors are adequately represented and at whose meetings they receive attentive hearing, would lose all control of medical benefit administration, and a direct inducement would be held out to medical aid institutions to extend their operations so as to sweep in as many members' capitation fees as possible without any conditions as to the quality of medical service they should provide or the salaries they should pay the medical men on their staffs. The recommendation is so shortsighted and so contrary to other declared policy of the Association that one can only regard it as a midsummer madness which must not be taken too seriously; even the most virulent opponents of the panel system would hardly wish to see the whole profession dragged in the mire merely to gratify their personal resentment. Panel doctors, equally with non-panel, have the honour of the profession at heart, and many are giving up much time to the service of the profession as a whole, but the number who do thus take active part in administration, whether of Divisions of the Association or Panel or Local Medical Committees, is but a small fraction of the whole, and, speaking broadly, the same men will be active in both spheres. These men feel that the burden of committee meetings is becoming almost more than they can bear, and yet every other week there is a new committee formed to deal with some matter of medical politics. A member who is fairly keen may easily average one committee meeting a week throughout the year, and, in addition, has probably a good deal of correspondence arising out of the business of these, so that practically the whole of his leisure from his practice is given up to the service of his fellows in this way.

I know that medical politics are in a bad tangle at present, and that with patience some order will be evolved out of the present chaos, but the Council of the Association might well take into consideration how best to lighten the labours of those who take an active part in the work of the Association and of the Statutory Committees under the Acts. At present we are almost overwhelmed with correspondence, reports, regulations, and documents of

every kind, and are in danger of losing the wood altogether in the multitude of trees. The extensions of medical benefit foreshadowed by the Chancellor of the Exchequer recently will add more still to the labours of these committees in directions which every member of the profession, panel or non-panel, is bound to admit are praiseworthy and in accordance with the best medical tradition. Let us therefore cease from squabbling and washing dirty linen in public, and rather join hands and help, for to-day we are alive together, and the future of the noblest of professions is in the hands of all of us.—I am, etc.,

A. E. HODDER,

Vice-Chairman, Mid-Staffordshire Division, British Medical Association; Honorary Secretary, Local Medical and Panel Committees for County of Stafford.

Stafford, May 18th.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—May I be allowed a short space in which to offer a few observations upon Dr. Rowland Fothergill's letter in your issue of May 16th criticizing my letter on the above subject?

Dr. Fothergill's letter consists principally of theories; but there is one important fact upon which he is astray, and upon which he bases much of his objection to my contentions. He complains that I am "too parochial," and that I quoted Leicester, a "place dominated by the working man." Now, if Dr. Fothergill will again refer to my letter, he will find that he is quite incorrect. I did not quote Leicester. However, even if the practical knowledge I have gained by the working of a medical trade union had been gained entirely from a place "dominated by the working man," it must be remembered that it is especially in such centres of great industrial activity that difficulties and grave questions are likely to arise.

The troubles which the profession is seeking chiefly to guard against, whether by means of a trade union or a trust, are not likely to affect so much the peaceful serenity of such places as "Leamington and Bath," or even the gay holiday spirit of Brighton. But even if this theory of mine is wrong, I will ask Dr. Fothergill to try and realize that my letter referred to the splendid results obtained by a trade union operating not only in the town of Leicester but throughout Leicestershire and Rutland—a large area not only industrial but including every class of the community. If Leicester can be truly described as "dominated by the working man," with no less truth might Leicestershire and Rutland be described as dominated by the hunting aristocracy.

Dr. Fothergill next proceeds to remind us of the social status of the persons with whom we have to negotiate, and that the working man has not yet gained control of "the Civil Service and Parliament and the leaders of the two chief parties of the State." I agree that, nominally, he has not; but if he has not in effect secured this, then I quite fail to understand how the Trade Disputes Act of 1906 ever reached the statute book.

But quite apart from this Dr. Fothergill himself needs reminding that to-day there is a new power altogether with which the profession has to negotiate—namely, the Insurance Committees, which are very largely controlled by the working man. It is with these committees undoubtedly that serious questions are likely to arise in the future.

Then Dr. Fothergill turns his attention to expounding the law, and makes the bold and unqualified statement that it is a delusion to suppose that the whole of the funds of a trust, "lock, stock, and barrel," could be attached, and that at one blow. The only delusion is in the mind of Dr. Fothergill. He toys with the idea of £50 or £100 damages. Why not £20,000? Now, for once, I will be as dogmatic as Dr. Fothergill; I state without fear of contradiction that it is entirely a question in each case of the extent of the funds, and the amount of the damages awarded. If the amount of the funds of the trust be £20,000, and damages are awarded to the extent of £20,000 (a figure by no means unprecedented), the whole of the funds will disappear at one blow. Is this a risk worth taking, when the means of preventing such a catastrophe are at our disposal?

Next I find the equally emphatic statement, that you cannot protect the private estates of the officials of a union, but that you can protect the private estates of the trustees of a trust fund. Now I am not a judge, and am therefore unable to proclaim with Dr. Fothergill's emphasis the state of the law, but I suggest that as far as at present ascertained, pending further elucidation in the courts, a trade union official may perhaps be liable, if he takes an active part in the proceedings which result in a legal wrong, but if the Trade Disputes Act means anything at all it means that a union official is not liable, merely because he is an official, whereas the trustee of a trust fund, having "restraint of trade" as one of its objects, will be personally liable as a person taking part in an unlawful combination merely by reason of his trusteeship, even if he has offered strenuous opposition to the course proposed and taken. This I believe correctly represents the legal position as far as it can be defined to-day, and I suggest to Dr. Fothergill that he should obtain a fully considered legal opinion, before contradicting the same, or else offer himself up as a sacrifice as the first trustee of the fund.

Finally, one can only express one's sympathy with Dr. Fothergill in his manifest agitation at the vote of the Council, as shown by the very involved conclusion to his letter, with its numerous dashes, symbolic doubtless of what was left unsaid.—I am, etc.,

Leicester, May 18th. R. WALLACE HENRY.

SIR,—In your issue of May 16th is a letter from Dr. Fothergill which contains some extraordinary statements concerning the liability of trust funds. As the matter is one of supreme importance to the profession, I trust that you will be able to give publicity to this letter also.

Before one can deal with any question as to the position of trust funds, one has to be clear in one's own mind, as to the exact legal position of the trust. There are three possible alternatives, and the proposed fund must be raised and administered by one of these bodies.

A Trade Union de Facto but not de Jure.—This means a trade union which has not registered itself as such, but whose constitution is such as to bring it within the meaning of the definition of a trade union, as defined in the Trade Union Acts. In the first place, it must be borne in mind that a trade union does not become one simply by the process of registration. Any combination which has for its objects the regulation of the relations existing between workmen and masters, or between workmen and workmen, or the imposition of any restrictive conditions upon any trade, business, or occupation, is *per se* a trade union, whether such combination be registered or not. If this definition be good in law, it is difficult to understand how the proposed trust of Dr. Fothergill can escape being a trade union, however much he dislikes it. This point was brought out at the Representative Meeting in December last, when Mr. Hempson stated to the meeting that he would, if the occasion arose, use all his legal ingenuity to prove that the proposed trust was a trade union.

An Unlawful Combination.—If the proposed trust deed be so drafted to avoid the pitfalls and difficulties alluded to above, then it appears that the trust is an unlawful combination. It must have some legal status, and if it be neither a registered nor an unregistered trade union, then it falls into the third category, and would occupy the position held by trade unions anterior to the passage of the Act that gave them a legal status. If this is correct, then the proposed trust becomes unlawful, and the parties to it commit a misdemeanour, and are offenders against the State, and any one would have right of private action against them in the event of their committing any tort. Moreover, the trust would be unable to invoke the aid of the law in the event of its funds being misapplied. In short, it would be subject to all the pains and penalties of the law without any protection.

A Registered Trade Union.—This clears away all the difficulties with regard to the fund itself, which secures immunity from damages for all torts committed by or on behalf of the trade union pursuant to Section 4 of the Trade Disputes Act of 1906. The trustees and officials of the union would also appear to have some measure of protection under Section 3 of the same Act. This section deserves quoting at length:

> An act done by a person in contemplation or furtherance of a trade dispute shall not be actionable on the ground only that it induces some other person to break a contract of employment

or that it is an interference with the trade, business, or employment of some other person, or with the right of some other person to dispose of his capital or labour as he wills.

The act done by the person in order to render the person immune must be done in contemplation or furtherance of a trade dispute. This is not the place to weary the lay mind with quotations from leading cases, but let it suffice to say that the House of Lords has laid down that "there must be something fairly definite at issue in order to turn a mere quarrel into a trade dispute."

In order, therefore, to render the trade union official liable for damages it must be shown that he was actuated by malice, and that the acts complained of were not done in furtherance of a trade dispute of a bona fide nature. The issue of malice was raised in the case of Dallimore *v.* Williams, of which so much was heard at the Brighton meeting last year. Since that date the Court of Appeal has unanimously reversed the decision of the inferior court, and given a verdict in favour of the trade union official, so that he seems to stand upon firmer ground than last year.

Having made a very sketchy attempt to define the position of the trust or the trade union, as the case be, let me consider the argument raised by Dr. Fothergill concerning the attachment of the trust funds. He thinks that the whole of the fund would not be wiped out at one blow. Possibly that is correct, although if it is an unlawful combination it might be held to be contrary to public policy and the whole confiscated. However, if the whole would not be taken by one action the result would be the same, because the plaintiff would obtain an injunction, which would be made perpetual, restraining the defendants from continuing in the perpetration of the particular wrong complained of. This could be dodged by naming a fresh set of trustees, and a fresh action would lie with the same result, and in the end the effect would be an inability to use the funds for the purposes for which they had been raised.

One further argument he adduces in favour of the trust —namely, that it would be within the power of the trust funds to recoup their trustees for any losses that they might sustain. I thought that this bogey had been comfortably laid to rest long ago. In the first place, if any such bargain were entered into between the trust and the trustees under a covenant of indemnity, it would appear to be a corrupt and illegal bargain and as such unenforceable. Moreover, there would arise the question of the maintenance of an action in which the members of the trust had no common interest—an offence against common law. —I am, etc.,

PERCY C. RAIMENT,
General Secretary, National Medical Guild.

London, W.C., May 17th.

SIR,—In Dr. E. Rowland Fothergill's letter of last week he states that the Representatives voted by a 2 to 1 majority at the Representative Meeting last July against trade unionism for the medical profession. True, but I question whether this majority represented the opinions of the members present. Many were bound, as I was, to vote according to the instructions given us by our Divisions.

I think our instructions would have been different if the members of the Divisions had heard the powerful arguments brought forward by Dr. Wallace Henry in his convincing and much applauded speech on that occasion.— I am, etc.,

THE REPRESENTATIVE OF THE SOUTHAMPTON DIVISION.

Bitterne, Hants, May 17th.

THE MEDICAL INSURANCE AGENCY.

SIR,—I am glad to see Dr. Haslip's letter in your issue of May 16th, and, as a member of the committee of the Medical Insurance Agency, I should like to say that I fully endorse everything it contains. There are two forms of insurance which should, I think, receive the early and earnest consideration of every member of the profession. The first of these is simple life assurance, which should be effected as soon as possible after qualifying, thus obviating the risk of having to pay a higher premium in later years owing to impaired health or other causes. The second is endowment insurance, which is particularly applicable when the education of children has to be provided for out of professional savings.

First, let me say a word as to simple life assurance. The assertion is often made that there is no need for a bachelor to insure his life, but it seems to me that the sooner this fallacy is dispelled the better. In the first place, the regular payment even of a small annual premium encourages thrift. Secondly, the views held by most people as to the advantages and disadvantages of matrimony are notoriously liable to modification as time passes. And, thirdly, even if the idea of marriage be finally abandoned, the life assurance which has been effected will always be a valuable asset, seeing that the surrender value of the policy may at any time be realized either to meet an unexpected financial strain, or to purchase an annuity on retirement from practice. The second form of insurance is one which it is generally advisable to effect as soon as the returns from practice are sufficient. It should ever be borne in mind by the practitioner with a young family that the high-water mark in educational expenditure often coincides with the low-water mark of practice. Failing health, advancing years, inexorable competition—these are the contingencies that a careful man should do his utmost to insure against. I know of nothing more distressing than for a man who has had and still has modest ambitions for his children suddenly to find himself in middle age unable to carry out his plans and perhaps his promises. However pressed a young married man may be, it is certainly his duty carefully to consider the best and most economical way of insuring his life. As Dr. Haslip has stated, all medical men who insure through the Medical Insurance Agency are able to effect a material saving in commissions, whether the insurance relate to life, accident, burglary, motor car, or employer's liability. But there is an additional inducement which I feel sure will appeal to all your readers. It is that the medical man who thus insures not only benefits himself but many charities closely connected with his own profession. As Dr. Haslip has stated, our committee is able (thanks to the support the agency has already received and to the energy of our agent and secretary) to disburse from our profits considerable sums each year to such charities.—I am, etc.,

FREDERIC HEWITT.

London, W., May 18th.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—The great importance of the decision of the House of Lords in the case of Felstead is my excuse for pointing out that you have misinterpreted the judgement of Lord Reading. There has been no change, gradual or sudden, in the amount of absolution from crime accorded by insanity. The establishment of insanity in a person charged with crime has always had, and still has, the effect of arresting the proceedings against him, at whatever stage they may be. If after arrest and before he is charged, he is not charged; if after being charged and before committal, he is not committed; if after committal and before arraignment, he is not arraigned; if after arraignment he appears to be insane, he is not tried for the offence with which he is charged until a jury has found that he is fit to plead; if after pleading he is found by the jury to be insane, he is not sentenced. The only change that has been made in the law is that down to the year 1800 a prisoner acquitted on the ground of insanity left the court a free man. In that year the court was empowered to order him to be detained during His Majesty's pleasure. The effect of the judgement of the House of Lords in Felstead's case is to declare that the change made in 1883 in the form of the verdict, from "Not guilty on the ground of insanity" to "Guilty but insane," is merely a verbal change, and does not alter the effect of the verdict. It is some satisfaction to me that I took exception to the change at the time it was made.

I deny also that there is any presumption in law that a suicide is insane. The presumption of law is that suicide, like homicide, is criminal. It is open to the perpetrator of the act to rebut the presumption if he can, and one of the ways in which he can do this is by showing that he was insane at the time of the act. In either suicide or homicide he may be found guilty of the act charged, but not guilty of the crime. The suicide is usually presumed by the coroner's jury to have been insane, but a presump-

tion by a coroner's jury is not the same as a presumption in law. The presumption of the coroner's jury is a survival from the time when a verdict of *felo de se* carried with it the consequences that the felon was buried at midnight, without religious rites, at the junction of four cross roads, with a stake driven through his body, and that his goods were forfeit to the Crown. To save the property as well as the feelings of the suicide's family, it became the custom of juries to find that the act was committed during temporary insanity, and therefore was divested of its felonious quality.

There is no presumption in law that a suicide is insane; neither is there any such presumption in common sense. There are circumstances easily imaginable, there are situations which often occur, in which suicide is the natural, sensible, and proper course for a wise man to take; and to say, as the Recorder of York is reported to have said, that suicide is necessarily cowardly, is absurd. The ancient Romans were as little cowardly, and were as distinguished by sound common sense as any race that ever existed, and so are the modern Japanese, and both of these nations have recognized suicide as a proper resource in appropriate circumstances. Any one who has not forgotten his *Monte Christo* knows that, in a nation much nearer to us, suicide has been regarded in certain circumstances as a duty.

At present it is assumed that the only way to divest suicide of its criminal quality is by finding that the act was the outcome of insanity, a finding that is often in manifest and flagrant defiance of the facts. This is a way of divesting homicide also of its criminal quality, but it is not the only way. There is in law a well-recognized plea of justifiable homicide. It is only inveterate prejudice that prevents us from recognizing a corresponding verdict of justifiable suicide. To put a case that is well known to have occurred, should not this be the verdict upon a woman who commits suicide to save herself from outrage by a horde of savages? Must we find that she was guilty of *felo de se*, or, in the alternative, was insane? And is not the suicide of a man who kills himself to avoid horrible and inevitable torture and mutilation justifiable suicide?

I am far from contending that it is always justifiable to seek by death escape from embarrassment. There are cases in which this is cowardice; but to say that suicide is always and of necessity cowardly shows ignorance of life, and ignorance of human nature. It is a commonplace that death is to be preferred to dishonour, but how if it is impossible to escape dishonour except by voluntary death? Another commonplace is that there are fates worse than death; if, then, we are confronted with such a fate, are we not allowed, are we not bound, to choose the less of two evils?

It is always assumed that suicide is forbidden by the Christian religion, and no doubt it is forbidden by all Christian churches, but in this, as in so many other things, the churches have read into the teaching of Christ what is not to be found there. Many a Christian saint has deliberately sought martyrdom, and between seeking martyrdom and committing suicide the difference is a difference of casuistry rather than of fact. I am no apologist for indiscriminate suicide, and do not advocate that when we wake up to-morrow morning we should be, like the Assyrians, all dead men, but I think it is time to look facts in the face and to free ourselves from mediaeval superstitions.—I am, etc.,

May 9th. CHARLES A. MERCIER.

STRYCHNINE-TUBERCULIN TREATMENT OF HOSPITAL TUBERCULOUS CASES.

SIR,—The writer of the article in the JOURNAL of May 16th (p. 1065) under the above heading states that he has obtained good results in the different forms of tuberculosis by using a combination of strychnine and tuberculin. In addition, "cod-liver oil and creosote were given to all who could take those medicines. Antiseptic inhalations were freely used." Dr. Whelan apparently considers that any good results obtained were due to the strychnine-tuberculin treatment; others would doubtless say that the creosote was the beneficial agent; and others, again, the inhalations. Furthermore, it is noteworthy that Dr. Whelan does not mention whether his patients were kept in bed or were allowed to walk about. Rest in bed—at least in pyrexial cases—is the first essential in treatment. Any one who has had even a limited experience of phthisis pulmonalis knows that all pyrexial cases, excepting, perhaps, the very advanced or dying, will improve if kept absolutely quiet in bed. Cough and sputum decrease, the appetite increase, and night sweats cease. Fresh air and good feeding assist, but the temperature falls because the lungs are "at rest" as far as is possible. Strychnine and tuberculin do not require to be administered to produce improvement.

The results of treatment in Dr. Whelan's twelve cases are in my opinion neither flattering nor conclusive. Case x may be cited as an example. This patient was evidently a fairly advanced case. I do not affirm that any known method of treatment would certainly have helped him, but his condition on discharge does not in my opinion warrant him being put forward as a good result. The fact that he had night sweats about the time of discharge indicates that he ought to have been strictly confined to bed. Dr. Prest, of the Ayrshire Sanatorium, has on numerous occasions drawn attention to the fact that this is the only rational and effective treatment for the night sweats of phthisis. The confinement in bed rests the lungs, thus preventing excessive auto-inoculation, of which night sweats are merely a symptom.

Again, the result obtained in Case 1 makes a large demand on one's credulity. A case of this type cannot, and is never likely to, be cured by strychnine and tuberculin, or by any other remedy in three weeks. Even granted that strychnine produces antibodies, which is extremely unlikely, these antibodies cannot "cure an excavated lung" in three or even in many more weeks. The majority of the cases reported were treated for from three to six weeks, a period which is unlikely to produce any lasting benefit except on very early cases of phthisis. A medical report in each of these twelve patients, one year after their discharge from hospital, would be interesting and instructive. Only after the lapse of such time is one justified in drawing conclusions regarding the effect of any particular treatment in cases of phthisis pulmonalis.

I desire to suggest to Dr. Whelan that in his next twelve cases of phthisis he should omit strychnine-tuberculin treatment altogether, and keep his patients in bed as long as there is any fever, as shown by a rectal temperature. This, before a patient rises in the morning, is normally 97.7° or 97.8°; at the same time, visitors should be prohibited, and fresh air and a nourishing diet provided. I have no hesitation in saying that the results of such treatment will compare very favourably with those reported as produced by the strychnine-tuberculin combination.—I am, etc.,

Glenafton, May 18th. WILLIAM A. MUIR, M.D., D.P.H.

HEART-BLOCK IN PNEUMONIA.

SIR,—In the JOURNAL of April 18th Dr. R. R. M. Porter published an interesting case of heart-block complicating pneumonia. A somewhat similar case, but differing in one or two features, was published by me in the *Lancet* of October 12th, 1912. The heart-block in my case was not noted until about a week after the crisis, although careful observations of the pulse had been taken; it was never a complete block, and polygraph tracings taken when the pulse rate was 50, which was the slowest observed, showed that only every third auricular impulse failed to reach the ventricles. For three weeks the condition was present, and was followed by complete recovery. At no time after the crisis did the patient experience discomfort, and no signs of organic heart disease were detected. During the illness no drug of the digitalis series had been administered.

Since noting this case I have suspected the presence of partial heart-block three times in cases of diphtheria and once in a case of enteric, but in the absence of polygraph records could only infer the condition. Other observers have shown that the conductive function of the heart muscle is occasionally affected in these two diseases.

It is possible that many of the slight irregularities of the pulse-rate which occur during and follow after acute illness are due to depression of cardiac conductivity.—I am, etc.,

A. L. DYKES, M.D.Edin., D.P.H.Lond.

Oldham, April 30th.

ADMINISTRATION OF UROTROPIN IN CARBONIC ACID WATER.

Sir,—In the Epitome of the British Medical Journal of May 2nd, Sachs (No. 250, "Urotropin in Dermatology") is reported to have said that urotropin should never be given in soda water, but in plain water.

I am at a loss to account for this advice, for it has been my experience in the administration during the last year, in which I have given some 5,000 grains of the drug for a variety of infections in skin cases, pneumonia, acute infections of the respiratory tract, such as acute bronchitis, laryngitis, rhinitis, etc., and in infections of the genito-urinary tract, etc., that the drug is more easily dissolved (in tablet form), and that patients take it without any knowledge of its presence, in some good carbonated water such as Apollinaris or Perrier, and not only is it more agreeable to take in this way, but in my experience the activity of the drug has been increased and the large quantity of the diluent seems to help very greatly in flushing out the kidneys.

I can see no good reason, from a chemical standpoint, why the drug should not be given in this way, and I have written to the manufacturers of the urotropin that I have employed (Messrs. Burroughs, Wellcome and Co.) asking if they know of any reason why the drug should not be dissolved in a carbonated water. They replied that there was no good reason, but that there might be a difference in the meaning of the word "soda water" as employed on the Continent and its English use.

In my experience I have seen no bad results attend the use of the drug even in doses considerably above that advised; but I have seen some very remarkable and beneficial results apparently follow the use of this drug, and I believe that the severity of several cases of pneumonia under my care has been greatly ameliorated.

In such common complaints as "colds" and the infection following the breathing of street dust in windy weather, I have found most striking results follow the administration of 20 grains of urotropin dissolved in a large bottle of a natural carbonated mineral water, repeated three times a day if necessary.—I am, etc.,

Toronto, Canada. Gordon G. Copeland, B.A., M.B.

LUTEIN IN THE CEREBRO-SPINAL FLUID.

Sir,—In the interesting description of the case of intramedullary tumour of the spinal cord by Dr. Michell Clarke and Mr. Lansdown in the Journal of May 9th the authors state that in their experience the yellowish pigment, lutein, is only found in the cerebro-spinal fluid in cases of spinal cord tumour. A few weeks ago I had the opportunity of observing a typical case of acute meningitis, in the course of which this pigment appeared in the cerebro-spinal fluid. At first the fluid was slightly turbid, and contained very large numbers of polymorphs. About 20 c.cm. of spinal fluid were removed every day, under which treatment the patient made steady progress. On the tenth day the fluid was found to be of a bright yellow colour, and remained so for four or five days. It contained no red blood corpuscles. No clinical symptoms accompanied this sudden change in the spinal fluid. The patient made a complete recovery.—I am, etc.,

William Boyd.

Pathological and Bacteriological Department,
General Hospital, Wolverhampton, May 13th.

"ENCYCLOPAEDIA MEDICA."

Sir,—Mr. C. E. Green, in answer to my letter which appeared in your issue of May 9th, writes to say that "if I had communicated with him direct he could easily have satisfied me on this point"—that is, the correction of articles by the original writers. I desire to say that some years ago, when Mr. Green advertised the appearance of what I understood was a new edition of the *Encyclopaedia*, I wrote to him direct, and asked how my articles came to be published without due correction. I quote from memory, but I am as certain as it is possible to be of anything that his answer was that it was impossible to arrange that all contributors should correct their articles, and that my article was being, or had been, corrected by Dr. J. W. Ballantyne. I have never seen the corrected edition, but I have a distinct recollection of having seen reviews of it in medical journals.

It was because of this incident that I wrote to you the other day.—I am, etc.,

Dublin, May 16th. Henry Jellett.

Universities and Colleges.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A comitia was held on Thursday, May 14th, Sir Thomas Barlow, Bart., K.C.V.O., the President, being in the chair.

Admission of Fellows.

The following members who had been elected to the Fellowship at the last meeting were admitted Fellows:

Cuthbert Henry Jones Lockyer, M.D.Lond. (London); William Mitchell Stevens, M.D.Lond. (Cardiff); Arthur Stanley Barnes, M.D.Lond. (Birmingham); James George Taylor, M.D.Camb. (Chester); Dudley William Carmalt-Jones, M.D.Oxon. (London); Samuel Alexander Kinnier Wilson, M.D.Edin. (London); Hector Charles Cameron, M.D.Camb. (London); John Foster Gaskell, M.B.Camb. (Cambridge); Gordon Morgan Holmes, M.D.Dub. (London); Frederick Gowland Hopkins, M.B.Lond. (Cambridge); Sir Alfred Henry Keogh, M.D., R.U.I. (London); Sir William Boog Leishman, M.B.Glasg., F.R.S., Royal Army Medical College (elected under By-law LXXI (*b*)).

Diplomas in Tropical Medicine.

Diplomas in Tropical Medicine and Hygiene were granted in conjunction with the Royal College of Surgeons of England to the following candidates:

Vivian St. John Croley, L.R.C.P. and S.Edin., L.F.P. and S.Glasg. (Edinburgh and London School of Tropical Medicine); Gordon Gray Jolly, (Captain I.M.S.), M.B., Ch.B.Edin. (Edinburgh and London School of Tropical Medicine); Maharaj Krishna Kapur, L.M. and S. Punjab (Lahore Medical College); Andrew Murphy (Major I.M.S.), M.B., Ch.B., R.U.I. (Cork and London School of Tropical Medicine).

Gift to the College.

A sketch of the late Sir Samuel Wilks was presented to the College by Dr. F. J. D. Drewitt. The thanks of the College were returned to the donor.

Opium Convention.

A communication from the Interdepartmental Committee which is considering legislation consequent on the provisions of the International Opium Convention (1912) asking the opinion of the College concerning certain limitations to the sale of opium, morphine, heroine, cocaine, etc., was referred to the Censors Board.

Anatomical Nomenclature.

On the motion of Dr. Norman Moore, seconded by Dr. Frederick Taylor, it was resolved that a committee should be formed to report upon the alterations proposed to be made in anatomical nomenclature, the nomination of the members of the committee being left to the President.

Research in Mental Disease.

The following report from the committee appointed to consider a letter from the Board of Control concerning grants to aid scientific research in the subject of mental disease was adopted as follows:

> The committee is of opinion that these grants should be paid to a few thoroughly trained observers, and that these persons and the nature of their investigations should be selected and approved by a small competent advisory committee appointed by the Board of Control.
>
> The committee is strongly of opinion that no grant should be allocated to municipal bodies or county councils for the purpose of subsidising or of maintaining pathological laboratories, or of paying assistants to do routine work.
>
> The committee recommends that the grants should be devoted to the study of such fundamental problems concerning insanity and mental deficiency as require scientific investigation from the clinical, pathological, biological, and sociological aspects.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary Council was held on May 14th, Sir Rickman J. Godlee, President, in the chair.

Grant of Diplomas.

Diplomas of Membership were granted to 104 candidates found qualified at the recent examinations; and diplomas of the licence in Dental Surgery to 41 candidates. Diplomas in Tropical Medicine and Hygiene were granted jointly with the Royal College of Physicians to 4 candidates (see report of meeting of Royal College of Physicians above).

Examinations in Dental Surgery.

A report from the examiners in Dental Surgery was received and the following resolutions were adopted:

1. That the First Professional Examination be held three times a year, commencing in the third or fourth week of January, April, and September.

2. That the Second Professional Examination be held three times a year in February, towards the end of May or early in June, and in November.
3. That the word "three" be substituted for "six" in Clause 6, Section III, of the Regulations relating to the Licence in Dental Surgery.

Court of Examiners.

Mr. C. A. Ballance was re-elected a member of the Court of Examiners.

Fellowship.

Surgeon-General May, C.B., R.N., was admitted a Fellow of the College.

Donations.

The Council accepted with thanks a pencil sketch of Thomas Wormald, President of the College in 1865, presented by his sister, Mrs. Leighton, together with a plate of drawings by Sir Charles Bell from a very early case in which vaccination was performed.

Resignation from the Council.

The resignation of Mr. R. Clement Lucas from the Council was accepted with regret. The vacancy will be filled up at the annual meeting of Fellows in July.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following candidates have been admitted to the Fellowship:

R. N. Bhatia, S. G. Billington, O. H. Blacklay, E. H. Cameron, H. G. Chouler, W. A. Dunn, G. K. Gifford, D. P. Hanington, Ah Chit Jap, I. Macdonald, W. MacLaren, F. W. Melvin, R. C. J. Meyer, W. C. B. Meyer, T. W. Myles, W. H. Robbins, T. R. Sandeman, W. B. Sommers, A. L. Weakley.

Prizes.

The Bathgate Medal and Prize in Materia Medica has been awarded to Mr. Lewis Windermere Nott; and the Ivison Macadam Memorial Prize in Chemistry to Mr. Andrew Inglis Meek.

CONJOINT BOARD OF ENGLAND.

AT a meeting of Comitia of the Royal College of Physicians on April 30th, and of the Council of the Royal College of Surgeons on May 14th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred by each College on the following 106 candidates:

F. D. Annesley, D. C. G. Ballingall, Irene Bastow, S. S. Beare, H. A. Bell, Sadashiv V. Bhat, H. C. Billings, S. G. Billington, A. R. Bourgault-Ducondray, E. C. Bradford, J. E. K. Brown, W. Burt, G. M. Campbell, S. Caplan, F. L. Cassidi, A. Chance, H. G. Chaplin, F. H. Cleveland, G. Cock, G. R. E. Colquhoun, E. W. Connolly, G. M. Cowper, T. H. Cresswell, C. Dean, A. W. Dennis, Ismail F. Diay, Mary A. Doherty, E. Donaldson, R. Ellis, G. C. Fairchild, S. A. Forbes, Sourendra M. Ghosh, F. B. Gilhespy, C. L. Gimblett, C. H. M. Gimlette, S. S. Greaves, J. H. Hadaway, Moustafa Hammouda, Mohammed Z. Hanafy, T. W. Hancock, A. G. P. Hardwick, A. D. Haydon, J. Higgins, N. Hodgson, J. D. Jones, J. H. Jordan, Mildred A. Jukes, Rustam M. Kharegat, H. D. Lane, F. W. Lawson, D. L. Lewis, H. A. Lucas, C. V. N. Lyne, A. G. Maitland-Jones, E. G. Martin, O. D. B. Mawson, Tottakat K. Menon, V. M. Métivier, H. F. Mullan, F. A. M. Nelson, H. Parker, G. R. Pennant, Mahamarakelegey G. Perera, F. S. L. Piggott, A. F. Potter, Edna M. Powell, Ibrahim I. A. Rahman, J. B. Randall, P. J. F. L. Rathier du Vergé, J. R. Rees, G. B. Richardson, J. W. Richardson, C. A. Robinson, A. N. Rushworth, Ahmed Sabri, A. E. Saunderson, P. Savage, C. J. Scholtz, A. Seddon, G. P. Selby, B. Zainulabedin Shah, Mohammad Sharuf, J. E. Sharp, H. Sharpe, L. W. Shelley, G. H. Smith, L. M. Smith, T. V. Somerville, E. B. Sunderland, W. E. Taylor, T. H. Thomas, A. W. Uloth, Sadanala B. Venugopal, V. C. W. Vickers, R. A. R. Wallace, F. C. Watson, G. W. Watson, L. G. White, H. P. Whitworth, H. L. Widdowson, S. M. Wilcox, S. A. Wilkinson, R. Williams, A. Wills, A. G. Winter, K. J. Yeo.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

DIPLOMA IN PUBLIC HEALTH.—D. Duff, J. S. Evers, M. J. Mulligan, J. C. O'Farrell, M. P. L. O'Neill, K. B. Dastur-Rabadina, W. N. Rishworth.

The Services.

THE INDIAN MEDICAL SERVICE.

SIR MALCOLM MORRIS, who recently spent some months in India as a member of the Royal Commission on Venereal Diseases, published in the *Times* on May 15th a striking article founded on his own observations, in which he discussed the critical stage which has now been reached in the history of the Indian Medical Service, and made an appeal for further endowments and support for what he truly described as "an imperial asset." He mentioned many of the most important researches carried out by officers of the Indian Medical Service. He is, indeed, fully justified in speaking strongly of the value of their work in this direction, which has steadily grown in volume since the pioneer investigations made over forty years ago by Assistant Surgeon (now Colonel) D. D. Cunningham, I.M.S., in conjunction with the late Surgeon-Major Timothy Lewis, of the Army Medical Department, then also a young assistant surgeon. In the early Seventies these two officers alone were employed by Government upon research work, while much about the same time the late Brigade Surgeon Henry Vandyke Carter was carrying out his investigations into the causation of mycetoma, leprosy, elephantiasis, and relapsing fever, during the scanty leisure available to an officer performing the important duties of professor both of anatomy and physiology in the Grant Medical College, Bombay. Carter, on his retirement, gave Rs. 10,000 to that college towards the endowment of a separate Chair of Physiology. Sir Malcolm Morris recalls how in 1896 Leonard Rogers was told off to investigate the epidemic of kala-azar, and how two years later a similar arrangement was made in favour of Ronald Ross. He refers to the investigation of undulant fever and snake poison by Lamb and to the work of Glen Liston in the identification of mosquitos and the demonstration of the part played by the rat-flea in plague. In 1899 came the appointment of Rogers to be whole-time professor of pathology at Calcutta, and during the next few years more Indian Medical Service officers were told off for special research duties, thus preparing the formation in 1906 of a separate bacteriological department. At that time the Indian Plague Commission was already at work, and in 1911 the Indian Research Fund was started. The establishment of two schools of tropical medicine in India, one in Calcutta and the other in Bombay, has been sanctioned. The Bombay school is a development of the Parel Laboratory, and at Parel, where a new hospital is to be built, there is ample space for expansion. (There seems to be some hitch about the Calcutta School, the Government apparently not being prepared to find a sufficient number of whole-time lecturers and workers to staff a school worthy of this vast subject.) But undoubtedly the Government of India is awakening to a recognition of its duties with respect to the encouragement of research. The medical schools now have professors of pathology who, like their colleagues in Europe and America, are engaged in research as well as in teaching; though the primary duty of the staffs of the Pasteur institutes is the treatment of those bitten by rabid animals, much research work is done also, and most of the officers of the bacteriological department are employed on research work only, and give their whole time thereto. Altogether, we believe between twenty and thirty officers are now employed in research or special inquiries into the etiology of disease.

Sir Malcolm Morris concludes his article by an appeal for increased facilities and opportunities for research, which is the necessary condition of further advance in the prevention of disease: "It is much to be desired," he writes, "that many may be found to embrace the opportunity that now presents itself of sustaining the hands of men who have devoted themselves to the work of the Indian Medical Service, undeterred by trying climatic-conditions or by the knowledge that neither in emoluments nor in fame can it promise them the rewards that are to be won at home."

Lord Sydenham, who was Governor of Bombay from 1907 to 1913, in a letter published in the same newspaper on the following day, endorsed Sir Malcolm Morris's opinion and appeal, saying that "research work of a high order—work which is already bearing rich fruit, and will in the future go far to mitigate the scourges which afflict the Indian people—is being steadily carried on." He recalls how, over six years ago, in addressing the students at Grant College, Bombay, he had said that there could be no better country for the study of tropical diseases than India, and no better place in India than Bombay. Wealthy Indians, he reminds us, have contributed most generously to objects of this kind. It would, he says, be a graceful act if rich friends of humanity at home would help Bombay, for no better outlet for beneficence could be found "in the interests of the Indian people and of the progress of medical science." He recalls how at Ahmedabad in February, 1912, he had said that it was to the trained brains of the Indian medical profession that we must mainly look for the necessary work, and concludes his letter by the following sentence: "The Indian Medical Service has made a fine beginning, and has laid down the best lines of progress. It richly deserves the high praise which Sir Malcolm Morris bestows, and I earnestly hope that the clouds which darken its horizon will be dispelled now that public attention has been drawn by a great authority to 'the splendid work it is doing.'"

In a subsequent issue of the same paper Sir Ronald Ross took up the thesis which he stated in the BRITISH MEDICAL JOURNAL of February 21st, p. 456. The complaint that the rewards of scientific discovery are few and inadequate is true not of India alone, but of this country also. The pioneer paves the way, fortunate if he does not leave his

bones to mark his path; Governments enter into the fruit of his labours, and reap where he has sown; this is not as it should be, but in its application to India it may help, as Sir Ronald Ross suggests, to explain the dearth of candidates for the Indian Medical Service.

ROYAL NAVY MEDICAL CLUB.

THE annual dinner of the Royal Navy Medical Club was held at Princes Restaurant, Piccadilly, on May 15th, when Surgeon-General Christopher Pearson, K.H.P., presided. The guests of the club included Admiral H.S.H. Prince Louis A. of Battenberg, Vice-Admiral Sir John R. Jellicoe, Sir W. Watson Cheyne, Sir Dyce Duckworth, and Sir John Tweedy. The following members were present:

Surgeon-Generals.—A. W. May, C.B. (Director-General Medical Department), Sir J. Porter, K.C.B. (ret.) (late Director-General Medical Department), Ch. Pearson, K.H.P. (ret.), A. J. J. Johnston, J. J. Dennis, W. H. Norman, J. L. Barrington (ret.), W. M. Craig, C.B.

Inspector-General.—B. Ninnis, C.V.O. (ret.).

Deputy Surgeon-Generals.—G. Welch (Deputy Director-General Medical Department), P. B. Handyside, H. W. G. Doyne, G. A. Dreaper, C. J. Mansfield, M.V.O., V. G. Thorpe.

Deputy Inspector-General.—F. A. Jeans (ret.).

Fleet Surgeons.—P. W. Bassett-Smith, C.B., A. F. Harper, H. B. Beatty, J. Moore, D. J. P. McNabb, C. Strickland, G. T. Broatch, J. D. Hughes, G. A. Waters, J. Shand, W. A. Whitelegge, E. H. Hodnet de Courtmacsherry, R. Hill, C.V.O., F. W. Parker, R. C. Munday, A. Gaskell, E. J. Finch, M. L. B. Rodd, C. L. W. Bunton, P. H. Boyden, E. T. P. Eames, M. P. Jones, W. S. H. Sequeira, W. L. Martin, D. W. Hewitt, F. H. Nimmo, E. Sutton, G. E. Kennedy (ret.), F. D. Lumley (ret.), J. W. O. Underhill (ret.), J. E. Coad.

Staff Surgeons.—R. W. G. Stewart, P. D. Ramsay, L. Warren, E. Cox, J. H. Rooney, H. B. Shewell, A. F. Fleming, A. K. Smith Shand, J. S. Dudding, B. Pick, A. D. Cowburn, R.N.V.R.

Surgeons.—A. G. Malcolm, G. M. Levick, G. F. Syms, K. H. Hole, T. R. Lloyd Jones, H. C. Devas, H. F. Briggs, A. T. Rivers, G. A. Jackson, J. Barrett, M. P. Fitzgerald, H. W. Nicholls, Campbell Ross, F. L. Smith, E. D. Macnamara (ret.), W. N. Pickles, R.N.V.R., W. F. Fedden, R.N.V.R., P. D. Pickles, R.N.V.R.

Medico-Legal.

ACTION UNDER THE APOTHECARIES' ACT AGAINST A HERBALIST.

AT the Worcester County Court, on May 13th, the Society of Apothecaries recovered a penalty of £20 against Charles Burden, herbalist, of Bridge Street, Worcester, for a breach of the Apothecaries' Act, 1815, in that he had acted and practised as an apothecary or medical practitioner in attending and medically treating Mrs. Daniels, of Worcester, whose death in February last was the subject of an inquest conducted by the Worcester city coroner. It appeared from the evidence that Mrs. Daniels had died of Bright's disease, and that she had been visited by the defendant and supplied by him with medicines for some months previous to her death, the defendant having informed Miss Daniels, the daughter of deceased, that he believed she had an internal abscess and that the medicine he was giving her was bringing the poison out.

In the report published in the *Worcester Daily Times* it is stated that the defendant is honorary secretary of the National Association of Medical Herbalists in Great Britain, Limited, and that counsel who appeared for him said that he had been recognized by the Worcester Insurance Committee as a person with whom insured persons could make their own arrangements.

The Deputy Judge, in the course of his judgement, said, as to the definition of an apothecary, he felt bound to accept that given by Mr. Justice Cresswell in the case of Apothecaries Company *v.* Lotinga—namely, that an apothecary was a person who professed to judge internal disease by its symptoms, and applied himself to cure it by medicine. The second question was, Did the defendant act and practise as an apothecary? On that the evidence was all one way. The evidence of Miss Daniels that the defendant treated her mother, felt her pulse, and supplied her with medicine was entirely borne out by defendant. Judgement with costs was accordingly given for the society, and a stay of execution granted for twenty-one days, money to be paid into court within fourteen days.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A MEETING of the council of this association was held on May 14th at 34, Copthall Avenue, E.C., when Dr. D. B. Balding, J.P., was in the chair.

The Honorary Secretary reported that he had approached the Local Government Board with reference to the Bermondsey scheme of abolishing district medical officers and doing all the outdoor medical work from the infirmary by means of assistant infirmary medical officers, some of whom would be resident at the infirmary and some located outside in certain parts of the district. He had urged that if the scheme received the sanction of the upper Board, the assistant medical officers who replaced the old district medical officers should have the same security of tenure that was granted to the latter by the Medical Appointments Order of 1857.

The council, while recognizing that the proposal involved a new departure, considered that it was justifiable, remembering that the Poor Law Medical Officers' Association had always insisted that as far as possible the conditions of the Medical Appointments Order should be carried out, and therefore protested against these conditions being subverted by calling district medical officers by other names.

Poor Law Institutions' Order, 1903.—The honorary secretary and Dr. Thackray Parsons reported the receipt of communications from indoor Poor Law medical officers complaining that guardians had refused further remuneration for the extra work caused by the Poor Law Institutions' Order, 1903. It was known that in some cases salaries had been increased, and it was reported that the following letter had been addressed to the President of the Local Government Board:

Sir,

I am directed by my council to approach your Honourable Board with regard to the extra work thrown upon indoor Poor Law medical officers by the recent Poor Law Institutions' Order, 1913, now in force.

Many letters reach us from workhouse medical officers complaining of the refusal of boards of guardians to pay extra remuneration for the extra work, and in some cases it has already resulted in the resignation of such officers.

No doubt it will be difficult for boards of guardians to replace these officers without paying a larger salary, but my council consider it a great hardship that Poor Law medical officers who have held their offices for many years should be forced to vindicate their rights by such resignation, with the consequent loss of superannuation, which they have been compelled to contribute since 1896.

My council would respectfully ask your Honourable Board whether some means cannot be found whereby boards of guardians might be induced to consider with equity the claims of indoor Poor Law medical officers for additions to their salaries, in consequence of the increased demands on them necessitated by the requirements of the recent Order.

As many of the workhouse medical officers are part-time officers, it cannot be regarded as just to call upon them to expend a much larger share of their time in their Poor Law duties and to refuse to pay more than the present salaries.—I am, yours truly,

MAJOR GREENWOOD,
Honorary Secretary,
Poor Law Medical Officers' Association of England and Wales.

Another case considered by the council was that of Dr. Clarke, of Weobley Union, who, owing to the extra work caused by the order and his failure to obtain extra remuneration, had felt compelled to resign his appointment as workhouse medical officer. The guardians had thereupon given him notice to determine his office as district medical officer, although the two appointments were quite independent as the Local Government Board had subsequently informed the guardians. The matter was still under consideration.

Insurance Act.—A communication was read from a country member complaining that the guardians were seeking to reduce his salary and that of his partner, both being district medical officers of the same union, on the ground that their work had had been diminished by the Insurance Act. The writer had been advised to represent to the guardians that it was being proved in nearly all parts of the country that the work of district medical officers had not been sensibly diminished by the Insurance Act, and that in many unions the guardians were making a considerable profit by the diminution and practical extinction in some cases of the extra fees payable to district medical officers. In the Droitwich Union the guardians had assigned the same reasons for reducing the salary of one of the district medical officerships that had become vacant. Members of the profession in the locality had steadily refused to apply for the post unless the original salary was maintained, but to this the guardians had not agreed, and were now advertising. The Council resolved to assist the profession in Droitwich in any way possible, and expressed its strong approval of the attitude of the profession in Droitwich.

Annual Meeting.—The arrangements for the annual meeting in Burnley were considered, and the hope was expressed that in the dispute in the Burnley Union a settlement would be arrived at honourable to both parties before the annual meeting of the Poor-Law Medical Officers' Asssociation in that town.

The draft annual report for submission to the general meeting was considered, and will shortly be issued to members.

GUARDIANS AND DOCTORS.

The Dispute at Burnley.

IN a paragraph under this heading, published in the JOURNAL of May 9th, p. 1051, a suggestion was made that the most recent offer of the guardians might afford room for a compromise. We regret that this should have been seized upon by interested persons as an expression of the official policy of the British Medical Association. It was no more than a current journalistic comment by a contributor on certain extracts from the Burnley newspapers which had reached us shortly before. It is clear, from the way in which the Burnley profession have received the latest proposals of the guardians, that the compromise is not acceptable to them. Throughout the whole of the dispute the Burnley Division of the Association has acted in close co-operation with the central authorities of the British Medical Association, and in continuing to refuse a scheme which fails to

recognize the reasonable claims made on behalf of the old Poor Law medical officers the Division will have all the support the Association can give it. We hope that this statement will remove any impression which may exist in any quarter that the Association is urging the local profession to accept the latest terms of the guardians. A letter expressing the same points has been sent to the local newspapers.

An examination of the final scheme as approved by the board of guardians and published in the Burnley papers last week, in the light of further information now available to us, gives grounds for the conclusion that in the rearrangement of the districts, which involves the retention of those members of the profession in the neighbourhood of Burnley who have been acting recently for the guardians, there is evidence of discrimination against the general body of the profession in Burnley who protested against the old arrangements and maintain their protest against those now proposed. In two instances the areas assigned to old medical officers at a salary less than that paid in 1912 contain many lodging houses and many of the poorest houses in the town, while the better parts of the old areas are taken away. In another instance the proposal would leave the doctor with a poor part of his old district at half his original salary. The changes, in fact, both in respect of salary and the amount of work to be anticipated, would seem to be all in favour of the three medical men who have given their services to the guardians during the recent dispute. The net result apparently is that of the total increase in the salaries offered the net increase in the case of the nine old medical officers amounts to £10 amongst them, the remainder of the increase going to those medical men who have not acted with their professional brethren. The position of these medical men is not enviable, and the course of action they have seen fit to follow will hardly enhance their reputation with the medical men practising in the districts in which they reside.

Obituary.

HENRY O'NEILL, M.D., M.Ch., J.P.,

CONSULTING SURGEON, ROYAL VICTORIA HOSPITAL, BELFAST.

THE announcement of the death of Dr. Henry O'Neill was received in Belfast and throughout Ulster with very great regret. Dr. O'Neill had not been quite in his usual vigorous health during the last year or two, but his indomitable spirit drove him on to work which would have put a strain on a much younger man. He suffered from an attack of pneumonia and heart weakness last Christmas, and although he rallied and was able for a short time to resume his duties, he was forced again to become an invalid, and was confined to bed till his death, which took place at his residence, Benburb, Knock, Belfast, on May 16th.

Dr. O'Neill was one of the most striking personalities of the city. He was born at Crossnacreevy, Castlereagh, co. Down, and was a lineal descendant of the O'Neill family of Dungannon. He became an apprentice to the well-known chemists, Messrs. Wheeler and Whitaker, Belfast, and soon entered the old Queen's College, Belfast, and Queen's University of Ireland, where he obtained the degrees of M.D. and M.Ch. in 1877, and in the same year he was appointed House-Surgeon in the old Belfast Royal Hospital and Assistant Surgeon to the Samaritan Hospital; in 1879 he was appointed Assistant Surgeon to the Royal Hospital, and entered upon his duties as teacher; in 1882 he was appointed full Surgeon, and in 1884 he undertook the duties of Pathologist. In 1891–2 he was President of the Ulster Medical Society, and in 1893 President of the North of Ireland Branch of the British Medical Association; in 1886 he founded and was first President of the Belfast Medical Students' Association, and in 1884 he attended the Sanitary Congress in London as special health correspondent of one of the local papers; in 1892 he founded the Belfast Health Society and published the *Belfast Health Journal*. In 1893 he was elected a councillor of the city as representative for St. George's Ward, and he continued to represent that ward without a break until his death; it is of pathetic interest that he practically completed his twenty-one years of service on the city council, and a few weeks ago was offered the aldermanship of the same ward in the vacancy due to the death of Sir James Henderson. In 1900 he resigned his post of Visiting Surgeon to the Royal Victoria Hospital and became Consulting Surgeon

He presented reports to the Corporation on the meat supply, the milk supply, and the housing of the working classes. He was then attending law terms, and was called to the Irish Bar in 1902 and to the English Bar in 1909; he had an extensive practice in workmen's compensation cases; he won the famous heat-wave case, and the decision was confirmed on appeal to the House of Lords. In 1903 he was elected Chairman of the Markets Committee, and retained that position to his death. He was instrumental in obtaining the erection of a modern and well-equipped mortuary, and, while High Sheriff in 1905, in renovating the Belfast County Courthouse; the old public mortuary was a scandal and disgrace, a regular death-trap; and the increased accommodation in the courthouse was much appreciated by all doing business within its precincts; he was also instrumental in obtaining the new building by-laws regarding the laying of sewers and several other matters of public hygiene. In 1905 he erected the O'Neill Memorial School in memory of his late brother Mr. James O'Neill, from whom he had received much of his early elementary education. He was twice mentioned for parliamentary honours. Finally, in September, 1913, when symptoms of cardiac trouble were appearing with increasing frequency, even while in the chair at meetings of the Market Committee, he attended the opening of the new public abattoir by the late Lord Mayor, for which he had worked for many years, and for which he was chiefly responsible; it was his last and perhaps his greatest work.

Such a record of work shows the man; no sooner had he reached one goal and gained a prize, when most men would have considered they were entering on their life-work, than he tossed it aside and looked out for some new object; he had openings, and had already climbed sometimes the first few, sometimes the higher, rungs of the ladder as a surgeon, as a gynaecologist, as a pathologist, when he abandoned his advantages and turned to public health. His true bent was to this field, and it was his life-work, but even here he blunted the wedge of his force by turning aside to law and then to the Workmen's Compensation Act. However, for twenty-five years he insisted, in season and out of season, on the necessity, on the right of every individual, to a pure food supply, a pure milk supply, and to good housing accommodation.

Dr. O'Neill was a voluminous writer, chiefly on sanitary and professional matters; he was a ready and, at times, eloquent speaker, and while surgeon at the Royal Hospital a clear, emphatic, and definite teacher. He was at his best when sore pressed by opponents and apparently hemmed in on all sides without chance of escape; his smiling face would show that he was not disconcerted, and at the psychological moment he would, by a string of statistics, by apt and humorous ridicule, and by a worthy appeal to all the higher feelings of the audience, turn the tables and escape from the net that had been drawn around him. Although he had many opponents in his varied career, he had few, if any, enemies, but hosts of friends. It is a difficult, if not a hopeless and useless task, to estimate the "what might have been"; but it is surely not an exaggeration to say that if Dr. O'Neill had had more of the judicial and quiet painstaking faculty, had chosen wisely and well one of the departments of human activity, and had concentrated all his indefatigable energy into his undertaking, he would, with his great physical strength, his rapid and subtle mind, his shrewdness and faculty of reading character, his general capacity, have made himself a power not merely in the town of his adoption, but in the nation itself.

Dr. O'Neill leaves a widow and three children and with them and with his brother, Dr. Charles O'Neill, of Belfast, great sympathy is felt.

GEORGE LYON, M.D., M.R.C.P., F.R.C.S.EDIN.,

WOOD GREEN, N.

THE sudden death of Dr. George Lyon, of Wood Green, London, N., on April 20th, must have come as a great shock to a wide circle of friends and admirers. From his undergraduate days his record of academic successes attracted the notice of his teachers, and on graduating in Edinburgh in 1899 with first class honours he was universally recognized as one of the most brilliant men of his decade. As a house-physician and clinical tutor in the Royal Infirmary, Edinburgh, and later as an assistant in the pathological department of the university under Professor Greenfield, his work was full of promise, and a distinguished career was confidently anticipated for him.

Some research work on inflammatory changes in the kidney submitted for his M.D. degree was awarded a gold medal, and was admitted by pathologists to be a most important contribution to the subject. When he decided to leave pathology for general practice his friends could not but regret the loss to science of one who was so eminently fitted for a high professional position. Still, his early work in pathology was no doubt one of the reasons for his striking success as a clinician. Some seven years ago he started practice in Wood Green, and rapidly built up a large general practice. He had all the qualifications which make for success, for in addition to his high professional attainments, his unselfish devotion to duty and his kindliness of character endeared him to his patients, while his presence in itself inspired confidence in all.

His death was unexpected. Early this year he developed tuberculosis of the cervical glands, and underwent an operation; unfortunately, pulmonary tuberculosis supervened, and he died suddenly with, apparently, cerebral complications.

THE LATE DR. MUMBY.—At the meeting of the Council of the Southern Branch of the British Medical Association, on May 13th, the following resolution was, on the motion of the President, adopted in silence, the members standing, and directed to be forwarded to Mrs. Mumby and family: "The members of the Council of the Southern Branch of the British Medical Association beg to express their deepest sympathy with Mrs. B. H. Mumby and her family on the untimely death of the late Dr. Mumby, who was so well known and so highly respected by every member of the Branch."

IT is only a few months since Dr. PETER BAILLIE went out as a medical missionary under the United Free Church of Scotland to take up his work at Jalna, in the Hyderabad State, and just on the eve of the opening of the General Assembly of that Church comes the sad news of his death. He was only 26 years of age, and after being educated at George Watson's College, Edinburgh, he proceeded to the university of that city, where after a distinguished career he graduated M.B., Ch.B. in 1912. From the short telegram received announcing his death it appears he and his friend, Professor James H. Diack, M.A., B.Sc.Aberd., who was recently appointed also by the United Free Church to the Wilson College, Bombay, were both drowned whilst bathing at Mahabaleshwan, in Western India, on May 16th. Dr. Baillie's parents reside in Edinburgh.

BY the death of Dr. JOHN RENWICK GILL, on April 28th, the town of Langholm and surrounding district have suffered a grievous loss. For thirty-four years Dr. Gill gave himself unsparingly for the benefit of the community in which he lived, and while he gained the love and confidence of the many he had the respect of all. Discreet, tactful, and conscientious, full of sympathy and patience, he gave of his best to rich and poor alike, and the latter will miss him for many kindnesses considerately and unobtrusively rendered. To know Gill was to like him, and his quiet courteous manner, leavened with a considerable fund of dry humour, had a charm all its own. Widely read, he might have shone in other fields, but his retiring disposition made him more a man of deeds than words. His work was his hobby, and he never allowed personal considerations to interfere with his duty of ministering to the sick. He practically died in harness. He was accorded a public funeral, and was laid to rest amid the regret of a community who cannot yet fully realize the magnitude of their loss. Dr. Gill, who was born at Leadhills, on the borders of Dumfriesshire and Lanarkshire, received his medical education at Edinburgh. He took the diplomas of L.R.C.P. and S.Edin. in 1877, and the degrees of M.B., C.M.Edin. in 1879. Before settling in Langholm in 1880 he acted as assistant in Longtown and Kelso. He was parochial medical officer of Langholm and Westerkirk, visiting physician to the Eskdale Infectious Diseases Hospital, and the Hope Hospital, Langholm, and certifying factory surgeon. He was a member of the British Medical Association.

DR. JOHN MCGIBBON, whose death occurred on May 12th at Crieff, where he was born in 1829, and whose burial in his native town took place on May 15th, was one of the best known of the Edinburgh doctors for nearly half a century. He had been living in retirement at Crieff for some years, but to many of his former patients and friends in the profession it seems but as yesterday since he was going out and in among them from his home in Queen Street. He was at the time of his death one of the oldest Fellows of the Royal College of Surgeons of Edinburgh. In his early professional life he was intimately associated with the Sideys, Dr. Charles and Dr. James; but his friendship and intimacy with Dr. Thomas Keith was, perhaps, the most outstanding experience in his medical career. For a period of some ten years he assisted Dr. Keith at his abdominal operations, then the talk of the whole medical world, acting sometimes with Dr. James Sidey, and at other times as principal assistant. He was keenly interested in the Volunteer movement, and held the appointment of surgeon to the 4th V.B. Royal Scots, from which he retired with the rank of Lieutenant-Colonel about 1895. He was in his 86th year; he was predeceased by his wife some years ago. He leaves, to represent him in the medical profession, his son, Dr. John McGibbon, of Edinburgh, and his nephew, Dr. John McGibbon, of Liverpool.

COLONEL WILLIAM ALFRED CORKERY, Bombay Medical Service (retired), died at Eastbourne on May 10th. He was born at Bombay on June 7th, 1855, the son of Conductor Martin Corkery, of the Ordnance Department. After taking the diplomas of L.R.C.S.Edin., and L.F.P.S. Glas. in 1881, he entered the Indian Medical Service as surgeon on April 2nd, 1881. He became Surgeon-Major on April 2nd, 1893, and Lieutenant-Colonel on April 2nd, 1901, was placed on the selected list from July 14th, 1906, and promoted to Colonel on January 1st, 1909. After serving as Principal Medical Officer of the Karachi Brigade, and of the Lahore Division successively, he took leave at the end of 1911, and retired from August 26th, 1912. He served in Burma during the campaigns in that newly annexed province from 1885 to 1887, and received the medal with a clasp.

Medical News.

IT is proposed to commemorate the jubilee of Dr. Metchnikoff by presenting to him at the Pasteur Institute in Paris next New Year's Day a volume of essays by eminent men of science.

THE Gresham Professor of Physic, Dr. F. M. Sandwith, will give four lectures on the history of nursing at Gresham College, Basinghall Street, E.C., on June 2nd, 3rd, 4th, and 5th, at 6 p.m. on each day.

SIR JOHN COLLIE has been adopted by the Devonport Liberal Association to contest the constituency as the second Liberal candidate with Mr. Samuel Lithgow at the next general election.

SIR FREDERICK BANBURY, Bart., M.P., will preside at the annual festival dinner in aid of the funds of the Metropolitan Hospital, to be held on July 3rd at the Whitehall Rooms, Hotel Métropole.

DR. T. GERALD GARRY of Cairo has been appointed consulting English physician to the Pöstyín Thermal Springs and Mud Baths, and by permission of the Hungarian Government will practise there during the summer months.

THE Bolingbroke Lecture of the South-West London Medical Society will be delivered at the Bolingbroke Hospital on Wednesday, June 10th, at 9 p.m., by Dr. W. Hale White. He is taking as his subject "Prognosis." All medical men are welcome.

SIR WILLIAM COLLINS, K.C.V.O., M.D., will act as chairman of a committee appointed by the President of the Board of Trade to inquire into the working of the Railway Employment (Prevention of Accidents) Act, 1900, and to report what amendments, if any, are necessary.

AN association of specialists has been formed at Lyons for the study of questions affecting their interests which local medical syndicates do not, it is considered, take sufficiently into account. The president is Dr. Tellier. The association includes representatives of dermatology, electrotherapy and radiotherapy, kinesitherapy, ophthalmology, oto-rhino-laryngology, stomatology, and urology.

EMERITUS PROFESSOR JOHN CLELAND, M.D., F.R.S., will take the chair at the dinner of the Glasgow University Club, London, which will be held at the Trocadero Restaurant on Wednesday, May 27th. Further information can be obtained from Dr. Alexander Macphail, 2, Harley Place, London, W.

THE Lettsomian lectures on dysentery will be delivered before the Medical Society of London by Dr. F. M. Sandwith on Tuesday, June 9th, Thursday, June 11th, and Thursday, June 18th, at 9 p.m. on each evening. The first lecture will deal with the history of the disease, the second with amœbic dysentery, and the third with bacillary dysentery. The second and third lectures will be illustrated by pictures and pathological specimens mostly borrowed from the London School of Tropical Medicine.

SIR THOMAS OLIVER will begin a course of six lectures on industrial hygiene at the Royal Institute of Public Health, Russell Square, London, W.C., on Wednesday, May 27th. The first lecture will deal with factory legislation; the second, on May 28th, with injurious occupations; the third, on June 10th, with coal mining; the fourth, on June 11th, with gold mining and diseases of the lungs; the fifth, on July 8th, with ankylostomiasis, and the sixth, on July 9th, with lucifer match making and the silvering of mirrors. The lectures will be delivered on each day at 4 p.m.

DR. W. PERCY BLUMER, of Sunderland, who has resigned the appointment of honorary surgeon at the Sunderland Royal Infirmary, has been presented with two framed photographs of himself (one to remain in one of the rooms of the institution) and a cheque with which to purchase a chair, of his own selection, in recognition of his valuable services to the infirmary, and to mark his departure from Sunderland to take up a practice in London. The Mayor (Alderman Richardson) presided, and Mr. J. F. Burnicle made the presentation. Dr. Blumer was appointed junior house-surgeon in 1877, and a year later he was made senior. In 1893 he was appointed honorary surgeon, and he has remained in that position for twenty years.

THE remarkably successful results of antityphoid vaccination in the United States army during the year 1911 are reported by Major F. F. Russell, of the Medical Corps, in an article which appears in the *Journal of the American Medical Association* of May 2nd. Tables are given which show that the number of cases in the United States proper has fallen from 3.53 per 1,000 six years ago to 0.03 in 1913; the death-rate has fallen from 02.8 in 1909 to 0. One case occurred among 31,038 men serving abroad, and only three altogether in the whole army. No harmful effects whatever have been observed. A decrease in the tuberculosis ratio has also occurred since the use of antityphoid vaccination.

ON Thursday, June 25th, Sir H. Morris, Bart., will preside at a dinner given to Mr. William Lang, on his retirement after 33 years of active duty on the honorary staff of the Middlesex Hospital. The dinner will be held at Pagani's Restaurant, Great Portland Street, W., and Mr. Lang will be entertained by his former house-surgeons, clinical assistants, and colleagues on the honorary staff, to whom a circular has been sent. At the same time, any old Middlesex student who would wish to be present and to do honour to Mr. Lang on this occasion will be heartily welcome, and is requested to communicate with Mr. Arnold Lawson, 12, Harley Street, who will be pleased to answer any inquiries.

THE annual oration of the Medical Society of London was delivered by Mr. Robert Jones on Monday evening; it dealt with the surgical aspects of poliomyelitis, and at its conclusion a vote of thanks, moved by Mr. C. A. Ballance, and seconded by Mr. A. H. Tubby, was carried by acclamation. We hope to publish the oration in full next week. On the same evening the Fothergillian medal of the society was presented to Professor J. G. Adami, of Montreal, by Sir David Ferrier. In making the presentation he related the history of the medal, and paid a high tribute to the services which Professor Adami had rendered to medicine in the domain of pathology. Professor Adami, in reply, thanked the president and the fellows of the society for the great honour they had done him, and through him the profession in the Dominion of Canada. Subsequently the customary annual conversazione was held. A very large number of fellows and guests were present.

NOTWITHSTANDING repeated efforts on the part of the local cremation society and the promised support of the Government, New South Wales is still without a crematorium, and, according to the *Australasian Medical Gazette*, is likely to remain so for a long time to come. At a recent meeting of protest the secretary read a statement to the effect that the sum of £5,000 had been placed on the estimates for the purpose in August, 1912, but after the return from Europe of Mr. McGowen, then Premier, that sum had been taken off. The matter was again brought before the House in August, 1913, when a petition, to which 14,000 signatures were attached, was presented. The request for the erection of a crematory in the neighbourhood of Sydney was supported, but the society was informed that the Cabinet had decided that "no further amount should be placed on the Estimates." It was proposed that a private crematorium should be erected, and the motion was carried.

WE learn from the *Medical Record* that by an agreement between the Cornell Medical College and General Memorial Hospital, New York, made possible by the generosity of several philanthropists, there will shortly be established in New York a hospital for the treatment of cases of cancer, which will be the largest of its kind in the world. The General Memorial Hospital buildings will be used, and ninety beds will thus at once be provided. The laboratories will be fitted with the latest appliances, such as *x*-ray apparatus, and large amounts of radium will be available by the generosity of Dr. James Douglas, who has made over to the hospital his half interest in the radium output of the mines in Colorado owned by him and Dr. Howard A. Kelly. The hospital will be under the direction of Dr. William M. Polk, Dean of Medical College Faculty, and Dr. James Ewing, Professor of Pathology.

A MEETING in aid of the Victoria Home for Invalid Children at Margate was held at Bridgewater House on May 19th. The Duchess of Newcastle, who presided, said that the home was founded some twenty years ago by Queen Mary, with accommodation for 52 cases. In 1913 there had been 160 applications, and during the present year there had already been no fewer than 85 requests for admission. The Earl of Erroll said that as Vice-Chairman of the East London Hospital for Children he had had experience of the benefits derived by the children of the poor from such institutions as the Victoria Home. The children brought to the East London Hospital were often suffering more from want of nourishment than from specific organic disease, and what they most needed when they left the hospital was plenty of fresh air, wholesome food, and careful nursing, all of which they received at Margate. The home received assistance from the King Edward Fund, which was evidence that it had proved itself worthy of public support. Other speakers included Lord Greville, the Bishop of Zanzibar, and Lady Tree, and the meeting concluded with a vote of thanks, proposed by Sir George Arthur.

AN antisyphilitic dispensary, called after Professor Ehrlich, was opened at Liége in June, 1912, by private initiative, largely helped by public funds. Besides the treatment of poor patients suffering from venereal disease, it is especially intended for prophylactic purposes and the watching of cases. Attached to the dispensary is a department of bacteriological diagnosis served by the provincial institute of bacteriology, and a clinical department. The dispensary is open four times a week, at hours convenient for the poorer classes, and from June 6th, 1912, to December 31st, 1913, 933 persons applied for treatment, most of whom brought a letter of introduction from a private practitioner. Of that number 411 were treated by the new sterilizing agents, 1,500 injections having been administered. The organization is completed by a service of visitors, whose business it is to follow up patients who do not return for treatment; in this way the dispensary is kept in touch with patients. The president is M. Kleyer, burgomaster of Liége; Dr. Gravis, the rector of the university, is vice-president. Professor Troisfontaines and several other physicians and deputies are members of the committee. A full account of the dispensary and its working is given by Dr. E. Malvoz in the *Revue d'hygiène* of April 20th.

THE reports submitted at the annual meeting of the Governors and General Council of King Edward's Hospital Fund for London on April 30th showed that the receipts during the year 1913 were £187,704, the amount distributed being the same as in the previous year—namely, £157,500. The latest statistical report on the expenditure of London hospitals showed that the cost of working them had increased by some £22,000, but, in so far as this increase was due to rise in prices and the continued introduction of more costly methods of diagnosis and treatment, it did not nullify the efforts towards economy which had previously resulted in savings estimated at £47,000 a year. Two of the five throat, ear, and nose hospitals—namely, the Hospital for Diseases of the Throat, and the London Throat Hospital—had agreed to amalgamate, the site of the joint building being that already occupied by the former institution in Golden Square and an adjoining plot

of land. Consequently the Distribution Committee recommend that a payment of £10,000 out of the sums set aside in previous years with a view to assisting any scheme of amalgamation on which the throat hospitals might agree should now be made, and an annual maintenance grant of £300 be promised for five years, subject to the usual annual inspection. It appears that the investments of the fund now exceed in amount £2,000,000, despite the fact that since its foundation it has distributed over a million and three-quarters. The average cost of administration has been £1 6s. 3d. per cent. of the amounts annually collected.

The International Congress of Neurology, Psychiatry, and Psychology will be held at Bern in September (7th to 12th). The official languages are French, English, Italian, and German. The subjects to be discussed in the section of neurology are regeneration in the nervous system; reflex paths in the medulla and bulb; development and growth of the brain; tabes and general paralysis since the discovery of the spirochaete (to be introduced by Professor Ehrlich); Ehrlich's salts in the nervous and mental disturbances caused by syphilis; aphasia and agnosia; organization and tract of channels of hearing; pathology of the vestibular apparatus; internal secretions and the nervous system; radiculitis; multiplicity of forms of disseminated sclerosis; the problem of the membrane in neurology. In the section of psychiatry the following questions will be discussed: Periodicity in psychopathology; classification in psycho-pathology; the present state of the question of dementia praecox; pathogeny and treatment of the phobias; the part played by emotion in the genesis of psychopathies; somatic phenomena in psychic states; pathogeny and termination of psychoses caused by fear; senile mental disorders; the part played by defensive ferments in pathology. In the section of psychology the following subjects will be discussed: Psychological heredity (to be introduced by Dr. Mott); the education of juvenile delinquents; psychology in the school; the biological bases of psychology; tests of intelligence; unconsciousness, consciousness, and attention; psychology of dreams. All communications relative to the Congress should be addressed to the general secretary, M. L. Schnyder, 31, rue Monbijou, Bern.

Professor F. F. Roget, who occupies the Chair of English Literature in the University of Geneva and is the first foreigner to lecture under the auspices of the Chadwick Trust, delivered the first of a course of three Chadwick lectures on "Altitude and Health" at the Royal Society of Medicine on May 6th. He dealt with the subject from the standpoint of persons dwelling at high altitudes, and said that cold might be regarded as a sanitary agent provided it was accompanied by light and sunshine. This dry invigorating cold was the ideal preventive of tuberculosis, and it had been proved that cases of tuberculosis were not endemic above the fog area in Switzerland, as they were in the moist tablelands below. Phthisis was more frequent in the North of France, where the climate was damp and foggy, than in the drier, warmer atmosphere of the South. On the other hand, there was a distinct tendency towards overcrowding for the sake of warmth in subtemperate zones, which destroyed much of the good effect which would otherwise be produced by the high altitude and the keen pure air. It was temperature rather than barometric pressure which determined the absence of tuberculosis, but increased altitude brought about health-giving modifications in the blood. The exact altitude suitable for each individual, however, was a matter of individual temperament. Professor Roget described the life of the pastoral community of Avers and that of the monks at the Hospice of St. Bernard, the former being the village that lay highest in Europe, and the latter a sedentary community of men living at the still higher altitude of 2,432 metres for purposes totally unconnected alike with the need of earning a livelihood and the pursuit of health. It appeared, said Professor Roget, that those who came to these places suffering from anaemia and nerves did rather better than those who came with strong constitutions, the sedentary life appearing to affect the latter adversely. Statistics, however, showed that the expectation of life was no lower in the case of those living at these high altitudes than in the case of those living at a more ordinary height. M. Carlin, the Swiss Minister, who, at the conclusion of the lecture, thanked Sir William Collins (who was in the chair) and the trustees for having given Switzerland the distinction of furnishing the first international lecturer, said that, seeing that a Swiss had been selected for the work, it was natural that it should be one who came from Geneva, for the relations between Geneva and Great Britain had long been cordial.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* British Medical Journal *alone unless the contrary be stated.*

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Young Practitioner would be grateful for suggestions for the treatment of a severe case of pemphigus, especially affecting the mouth and tongue, and occasionally the eye, in a woman aged 30, who has been suffering for three years. She is otherwise quite healthy.

G. S. C. wishes to hear of a home, situated near the London and South-Western Railway main line, where a widow aged over 70 could be received and cared for during the remainder of her life. The left arm and leg are partially paralysed, and she suffers from angina pectoris. A few shillings weekly could be paid.

Motoring and Nervous Disease.

Motorist, having read that motoring is a cause of paralysis agitans and other diseases of the nervous system, wishes to know if this statement expresses the experiences of the profession.

ANSWERS.

English-Italian Medical Terms.

Sir Frederick Treves writes: In answer to the inquiry of "An Expatriated Member" there is not, to my knowledge, any manual of medical conversation in Italian and English. Many phrase books deal with such conversation, but in so very scanty a manner as to be of little value. The best of these books is *Nutt's English-Italian Conversation Dictionary*, where, under the heading "doctor," a list of diseases and a series of useful phrases will be found. There is no English-Italian dictionary of medical terms. Melzi's *Nuovo Dizionario Inglese-Italiano*, published in 1912, gives as many medical terms as will be found in any work of its kind. One of the Hoepli manuals, *Il Medico pratico*, by Muzio, will be found useful to any one who knows a little Italian and who wishes to acquire a knowledge of medical terms. The Italian-English edition of Edoardo Webber's *Dizionario Tecnico* does not include medical terms.

LETTERS, NOTES, ETC.

Large Children.

Mr. G. Marshall (Markethill, co. Armagh) writes: I attended Mrs. A. in her fourth pregnancy. She gave birth to a son weighing 14 lb. 12 oz., folded in a bath towel. Mother and child are doing well. The labour was natural except for a little difficulty in extracting the shoulders, which were very large. Her previous baby weighed 14 lb., and was a girl.

Iodine in Lupus.

Dr. S. K. Chaudhuri (Lovett Hospital, Ramnagar, Benares State) writes: I notice that there is an interesting method in the Journal of March 21st of treating ringworm described by Dr. Foley. It will be worth while trying his method in a case of lupus vulgaris and watching the result of the experiment. The effect of iodine on lupus is borne out in the short note of Captain Kennedy in the Journal of March 28th, to quote only a recent observation; besides, the use of iodine paste and iodoform (Whitla's *Dictionary of Treatment*, fifth edition, p. 582) has been recommended and made with more or less success. The action of ethyl iodide formed by chemical reaction with ethyl chloride on the skin, unbroken or raw, is likely to be stronger and quicker than mere applications of tincture of iodine.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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ON

INFANTILE PARALYSIS

(ACUTE ANTERIOR POLIOMYELITIS),

Its Early Treatment and the Surgical Means for the Alleviation of Deformities.

Being the Annual Oration to the Medical Society of London.

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WHEN your Council graciously invited me to deliver the oration before this distinguished society I fear I had not the courage to refuse. The honour was such that for a time I did not realize my grave responsibility, and now I deplore the consciousness that I do not possess those gifts of erudition and imagination which have charmed while they enlightened you in the past. Despite the wide field you have allowed me, the choice of subject has not been easy. Devoted as my life has been to the more practical and clinical aspect of surgery, my horizon is, for this very reason, less comprehensive. I must therefore crave your kind indulgence while I deal in a simple and plain fashion with such principles as I have found helpful to me in dealing with infantile spinal paralysis. The subject is so vast and the technicalities so manifold and intricate, that I intend to dwell merely on those procedures which I have tested through the years, and which have served me best, and to refer you to the work of others who labour in different ways in other fields. One must possess a buoyant spirit and boundless enthusiasm to treat these affections with advantage, and one must have fixed principles of wide application. If these principles are fundamental, we must give them our whole-hearted allegiance, and not merely pay them a transient homage. We can then afford to await results, and not take heed of difficulties or yield to the counsels of despair. Like a mariner who meets an adverse wind, we must not lack confidence, but exercise every art we know to land safely where we would.

There are few subjects which have aroused so much interest during recent years as that of infantile paralysis. This is due to its greater prevalence, its proved infectiveness, and the great advance in the method of attack which modern surgery has introduced. Unfortunately, very little has been done in this country, as compared with America and Germany, by way of the collective investigation of etiological factors.

THE FUNDAMENTAL IMPORTANCE OF EARLY TREATMENT.

The early treatment of poliomyelitis falls of necessity into the hands of the medical man in attendance. It is on rare occasions only that the surgeon sees a case during the first few days, and then only when the onset of paralysis is accompanied by pain. Such cases are by no means rare, the pain being most marked in the spine and limbs. Rigid fixation of spine and limbs gives more relief than any other procedure I know. Indeed, I should make it a general rule that in every case, whether pain be present or not, the head and spinal column should be kept at rest in accordance with the general principles which guide us in the treatment of an inflamed area. The surgeon is often asked when treatment should be started. The answer is, "At once," and during the acute and early convalescent stages the surgical treatment may be summed up in the word "rest," if this term be allowed to include the prevention of postural errors—such as tend to give an initial bias towards deformity.

Active treatment should commence only when the tender stage has passed. If a possibility exists that during the tender stage active myelitis is present, there can be, in my opinion, no sound reason for the use of massage or electricity. This tender stage may last from three to eight weeks—in exceptional cases longer. We all know how difficult it may be to allay the parental apprehension during this period of surgical inactivity, but I have never found trouble when the reasons for the delay were made clear.

Our treatment should consist in placing the paralysed muscles in a position of relaxation, in the use of very gentle massage and in active movements, so conducted that no strain of the relaxed muscles be allowed. For instance, if the flexors of the ankle are being kept relaxed, the foot should in no case be allowed into the position of equinus during massage, and any active movements should consist of flexion beyond, but never below the right angle. Of this fact I have had many definite experiences. Some degree of voluntary muscular action should be encouraged as soon as possible, but at first there should be no movement of the joint, for the muscle is not strong enough to act against resistance. Thus, in a case in which the lower limb is fixed, with the knee extended in order to rest the quadriceps extensor, the first clinical sign of recovery will be a voluntary twitch of the muscle. The child's attention should be directed to this and he should be taught to practise it. The masseuse can soon lay a finger on the upper edge of the patella, and so give a little added resistance. To allow the child to flex the knee at this stage would be to court disaster.

The character of the massage is very important and much harm may result if it be too vigorous. In this early stage it should consist of light vibratory effleurage applied as if to the skin, particularly over the area supplied by the same segments of the spinal cord as supply the impaired muscles. Rough kneading at any stage of the disease will damage fragile muscle fibre and diminish muscle tone.

Another question we are early called upon to decide is the possibility of recovery of weakened or paralysed muscle. This is often a very difficult question. It has always been the teaching that a muscle which exhibits the reaction of degeneration is outside the pale of hope, but years ago I drew attention to several instances where recovery took place in muscles where this reaction was carefully noted on the chart. This observation has been borne out and emphasized by many observers abroad. We may be certain that if a muscle reacts to faradism it will recover, but in actual practice the converse does not always hold. This may be due to the real difficulty that exists, sometimes even under anaesthesia, in making reliable observations in small children. The result is that in most active clinics complete electrical observations are rare. This would be a serious omission were no other means available to obtain trustworthy evidence sufficiently accurate to be a practical guide. We can, however, secure, with a little patience and gentle approach, much valuable information from the conscious effort of the child. A muscular response may be elicited by even so slight a stimulation as a gentle scratch by the head of a pin, a gentle pinch, or by tickling the sole. No information can be gained from a child under the influence of fear, and if the child be too young to understand what is desired of it, it will probably be too young to justify any operative procedure. In such instances doubtful muscles should be treated as if recovery were to be expected.

It is often asked at what stage should we give up all hope of the recovery of a paralysed muscle. This depends largely upon treatment, and upon an accurate knowledge as to whether the paralysed group is suffering from the effect of overstretching, or whether there has been a destruction of the dominating cells. I shall deal more fully later with the functionally disabled muscle of which H. O. Thomas wrote forty years ago. If under appropriate treatment a muscle makes no improvement in twelve months we may assume that its function is lost.

Danger of the Overstretching of Disabled Muscles.

Before we discuss the general principles which should influence us in the operative treatment of poliomyelitis, it is necessary to enter more fully upon the question of the overstretched or functionally disabled muscle as contrasted with the muscle truly paralysed by permanent organic change in the spinal cells. I make no apology for this, for I regard the success or failure of mechanical treatment, of tendon transplantation, of neuroplasty, and even of arthrodesis, as depending largely upon the recognition of the facts revealed by the behaviour of muscles under strain.

I would ask your attention to the impairment of muscles themselves, of the nerves supplying them and of the nerve cells in the spinal cord, and for an illustrative and simple example of the three conditions I would refer you to the deformity we call "drop-wrist."

Some years ago I saw a patient who had divided the tendons on the front of his wrist. The surgeon carefully

sutured them, and to make sure of secure union he bandaged the fingers and wrist in a flexed position. He kept them in this position for some weeks. The wound in the wrist and the divided tendons had healed, but the patient had no power of extension. As this disability persisted, I was consulted, and reversed the position of the hand. The muscles, which had been stretched by flexion, and which had undergone an adaptive lengthening, if I may use the phrase, now shortened by being relaxed, and soon resumed their function.

I have elsewhere alluded to experiments on friends, where, after twenty-four hours of moderate stretching applied to groups of muscles, a functional paralysis has resulted, rapidly recovered from when the muscles were relaxed. Similarly, if careful inquiries be made in a definite proportion of cases of drunkard's palsy, you may eliminate as a causal factor pressure upon the musculo-spiral nerve.

Next, I would refer to blocking of nerves by minor lesions, such as a temporary pressure upon the external popliteal nerve, or an effusion of blood within a nerve sheath, as sometimes occurs in Erb's birth palsy, and in the trauma of the brachial plexus. In consequence of the blocking of the nerve path, muscles are paralysed, the paralysed muscles lengthen and again a dropped foot or a dropped wrist occurs, from which the patient will not necessarily recover when the nerve block is removed, unless the overstretched muscles are given the opportunity of shortening. For example, a man of 40 consulted me for paralysis following fracture of the humerus. His doctor explained that he lost power in his musculo-spiral nerve at the time of the accident two and a half years previously, and his extensors had been useless ever since. It was suggested that I should explore the nerve, which had not been completely severed, and then free it from callus or whatever pressure it was subjected to. The patient was quite unable to extend his wrist. The wrist and fingers were placed in full extension and the muscles massaged. In ten weeks the restoration of balance between the rival muscular groups was attained.

Then there are the lesions of nerve cells in the spinal cord, such as are due to lead, or the toxins of micro-organisms, as in poliomyelitis. In these cases the nerve cell is not the only tissue which is impaired. Although a large measure of recovery in paralysed muscles may take place, others may remain functionaliy disabled in spite of massage and electrical treatment, and yet this disablement may be due, not to destruction of the motor nerve cell, but to atrophic changes in the muscle as a result of disuse and stretching. Clinical experience has shown me that very often in cases of dropped wrist due to infantile paralysis, recovery will take place many years after the original lesion if the muscles are kept continuously relaxed by dorsiflexion. In cases of long duration the hand is sometimes kept dorsiflexed for over twelve months without being once allowed to flex. The lessons I have learnt from watching the clinical progress of these cases have led me to believe that we are not justified in considering cases of infantile paralysis as merely an injury of the spinal nerve cell by a toxin, and that recovery depends simply upon whether the nerve cell survives or succumbs to the poison. We must rather consider the whole nerve muscle apparatus. The lesion to the nerve cells may have been transitory, but in the meantime the muscle has been relaxed and overstretched by gravity, by habitual posture, or by overaction of opposing muscles. The muscle has wasted from disuse, and become incapable of responding to such feeble impulses as come to it from an impaired nerve cell, consequently, the normal afferent impulses do not pass up to the nerve cell, because the muscular action which originates them is absent, and the whole reflex apparatus, by which the spinal nerve cell and muscle react on each other to their mutual benefit, is put out of gear. Experiments have proved that excision of muscles leads to chromatolysis in the corresponding spinal nerve cells. Our ideas of the changes which take place in the process of degeneration and regeneration in a divided nerve trunk have been much enlarged in recent years. Are we not warranted in assuming that, though in many cases the original disease has not killed the motor cell in the spinal cord, recovery of muscular action does not take place spontaneously because the whole apparatus—nerve cell, nerve trunk, and muscle—are in a state of disuse atrophy, and continue to remain so, because the muscle, from its mechanical disadvantage, cannot perform its function of contracting, which is an essential part in the circle of reflex and trophic influences?

Not only has all this a very important bearing upon the early treatment of the affection, but it is also the keynote to the fate of a newly transplanted tendon. If efficient treatment be begun at the onset of the disease, care taken that the knees and hips are not kept continuously flexed, that the weight of the bedclothes does not keep the toes pointed, but that the feet are held at right angles, that the biceps, brachialis anticus, and deltoid are not continuously stretched by the arms hanging to the side, then much of the residual paralysis may be averted, for as the first severity of the spinal lesion passes off isolated groups will not be left at a mechanical disadvantage.

The factors that tend to the undue straining of muscles following a paralysis are:

Posture generally influenced by gravity.
Inefficiently opposed muscular action.
Deflection of body weight.

The deformities become fixed when more powerful opponent tendons become structurally shortened.

In the shoulder, where the deltoid is so often affected, the arm should be kept abducted from the first. This can be accomplished by any method devised to fix the hand behind the head. In paralysis of the brachialis anticus and biceps, the elbow, by the aid of a sling, should be kept acutely flexed. In paralysis of the extensors of wrist and fingers, as I have already indicated, the wrist should be kept acutely dorsiflexed. In paralysis of the peronei the foot should be kept everted; it should be kept inverted when the tibials are involved, with the toe pointed when the calf muscles are implicated; and at right angles when the flexors of the ankle and the extensors of the toes are at fault; and so with other groups of muscles. The splints applied should be such as to maintain relaxation while massage is conducted, and should be so constructed that they can be held in position without the necessity of putting pressure by hand or bandage over muscular tissue. This is a practical point of considerable importance in view of the necessity there is to guard the paralytic muscle against lessened blood supply. If electricity be desired the constant current can be used, but its advantages cannot be compared with those of posture, massage, and exercise.

It will be realized by this that under no circumstances should even momentary stretching of the relaxed muscle be permitted, as the success of treatment depends upon undisturbed continuous relaxation. It may be asked, When should this treatment be discontinued, and what are the tests of recovery? We will take the wrist, elbow, and knee as example.

In the wrist, as soon as the hand, which is being kept dorsiflexed, can be voluntarily moved into still further dorsiflexion, the angle of the splint may be reduced by a few degrees, and if the power of dorsiflexion does not diminish from week to week as the angle is being slowly reduced, recovery can be assured. This relaxation should only be allowed during the daytime; in bed the original angle should be maintained.

A similar test should be applied to the elbow, which is slung at an acute angle. As soon as the patient can voluntarily diminish the angle, the sling may be slowly dropped, the closest observation being maintained upon the character and strength of the muscular contraction. I will relate one of many similar cases which come to my mind, in order to impress this phase of treatment upon you. A small child of 4 years, paralysed at the age of 2, was brought to me with paralysis of all the muscles of the upper arm, but he retained some power in the flexors and extensors of the fingers. There was not the slightest effort made to use the elbow. I explained to the medical man, perhaps too briefly, the principles upon which I trusted when I slung the child's elbow at an acute angle. Some two months later I received a very enthusiastic letter from the doctor. He told me that the brachialis anticus and the biceps were both working well, and that he had removed the sling and sent the boy to the country. I expressed my fears, and in a few days a letter, penned in a minor key, spoke of disaster. The muscles, submitted to too much strain, had been vanquished in the struggle. The elbow was then again acutely flexed, and from time to time lowered under supervision, when recovery took place.

In the knee, where the quadriceps is involved, the test is conducted on similar lines. The knee is kept extended on a splint, and when recovery begins to take place the patella is seen to move. Later, when the movement of the patella is stronger, the test is carried further; the splint is temporarily removed and the patient's heel made to rest upon the table. If the patient can lift his leg ever so slightly from the table, the knee remaining extended, further graduated liberty of action may be allowed.

In the early stages of treatment the only operative procedures which I judge to be expedient are those necessary to allow postural relaxation of the over-stretched muscle. These will consist mainly of tenotomies, more particularly in connexion with the Achilles tendon, and divisions of bands of fascia, very often supplemented by the removal of a skin area, in order to obviate the disloyalty and carelessness of parents, who do not see the importance of keeping a foot constantly and for a prolonged period in the over-corrected position. Results are necessarily variable and disappointing under such conditions. To guard against this possibility I remove an oval area of skin sufficiently large to ensure that when the wound is sutured the foot is held in an over-corrected position. In talipes equinus skin is removed from the front of the ankle in sufficient quantity to retain the feet at right angles. In equino-varus the skin is removed from the outer side and front of the ankle, and so the nature of the operation differs from group to group.

It is of great importance to provide, as early as one can, for some degree of normal functional exercise of the whole limb. This is best attained in the lower limbs by allowing the patient to walk. It is during this stage in particular that we have to guard against those deformities which result from erroneously deflected body weight. The splints should be light and so designed that the alignment of the limbs and the distribution of weight upon the joints be accurate. My experience is that the surgeon usually sees his patient for the first time long after the initial stages are passed. He is then asked to deal with actual and functional paralysis, with superadded deformity of varying degree. It may be laid down as an axiom that no operation, such as arthrodesis or tendon transplantation, should be discussed until all deformities have been corrected and retained in correction for at least a fortnight.

The Correction of Certain Deformities.

This is hardly the occasion to detail the methods employed for the correction of the several deformities which are presented to us. A few general remarks, however, are necessary if my address is to be of practical use. Contracted knees and hips should be overcome slowly. It is highly injudicious to exercise much force; indeed, force in the form of redressment, apart from its dangers, is very inefficient. It is much easier to straighten the fixed limbs of arthritis by force than those of poliomyelitis. Division of tendons, fasciae, and even ligaments may be freely performed. A tendon, however, which may at some future date be required for transplantation should be spared from tenotomy and be gradually stretched instead, for adhesions are very apt to form over old scar tissue. A common deformity which is so often the despair of the surgeon is that in which he finds both limbs contracted at the hips and knees, and where the spine is lordosed, the pelvis oblique, the knees in genu valgum, and the feet in equino-varus. My mode of attack in such a case would consist in the division of the tensor fasciae femoris, and of any other tight structures in that neighbourhood, moulding the feet into a valgoid position, dividing the Achilles tendons, and then laying the patient on a splint or frame of the Thomas type, adding a simple extension to correct the pelvic obliquity, and with a bandage to the outside bars of the splint to overcome the knock-knees slowly. The procedure is simple and invariably effective. The lordosis will usually be overcome in three or four weeks with barely any discomfort. We must employ gravity as our ally by so placing the limbs that time is not wasted. Even here common sense and practical experience must be of use. For instance, after division of the tensor fasciae the limbs must be kept slightly hyper-extended and rotated inwards, otherwise no strain is applied to tight structures. Where deformities are extreme, lordosis, no matter how pronounced, should be absolutely corrected if we are to attain the best functional result. Sufficient attention is not given to this very important point.

Many authors warn us to be careful of evils which may follow division of the Achilles tendon. The substitution of a calcaneus deformity for an equinus would be serious. This is a real danger in spastic cerebral paralysis, and subcutaneous tenotomy in such a condition should never be performed. In my own experience—and I have divided the tendo Achillis and immediately corrected the deformity many thousands of times—non-union has resulted in three instances only. Despite this good fortune, in adults with extreme deformity I generally employ one of the many methods of subcutaneous plastic division. The lengthening so much feared is the result of faulty after-treatment; the uniting tendon is allowed to stretch before it is sufficiently strong to bear the body weight. Another common mistake is to place a small pad over the site of puncture, so permanently separating one end of the tendon from the other. In a limb with three inches of shortening it is tempting to leave the tendon shortened and let the patient walk on tiptoe, but it is a temptation to be resisted, for we must always think of the muscle group which is being stretched with its possible potentialities of recovery. If recovery does not take place, the resources of surgery are not ended, and means must be taken to give further stability to the joint.

Let us recognize, therefore, as a fundamental principle that every fixed deformity should be corrected before any operations are performed for securing improved muscular function. These deformities may be overcome by manipulation, tenotomies, fixations, and extensions, and more rarely by ostectomies and the removal of bone. These preliminaries, however, are inevitable, and allow of no exception. I emphasize this because I have frequently seen failure in tendon transplantations due solely to their neglect.

TENDON TRANSPLANTATION.

In briefly discussing the question of tendon transplantation I shall make no attempt to enter into the details of various operations, but will be content to point out what in my experience are the indications for its performance, the elements that make for success, and the causes of failure.

The object of a transplantation is to improve or restore muscular balance. It is not justified unless it improves function. There is little satisfaction to a patient if the transplanted muscle merely responds to faradism, or even makes a feeble movement by an effort of the will. It must be, or give the promise of becoming, a substitute for the muscle it supplants. It can only be judged by its usefulness. It may be applied to restore the balance between opposing groups of muscles by helping a redistribution of power, or its attachment may be slightly transposed to prevent deformity. Or it may be applied, as it often is, as an accessory to arthrodesis or in conjunction with the use of silk ligaments. Now, if we were to be guided entirely by the charts that have been worked out as to the relative strengths of muscles, and if we were to abide by them each time we desired to transplant a tendon, we should probably be discouraged at the very threshold.

The tibialis anticus would be too strong to supplant the peronei, and the peronei too weak to act as a substitute for the tibial group. Although it is useful to possess the knowledge that the calf muscles are as strong as all the other muscles of the foot put together, we need not infer from this fact that in pes calcaneus no tendon transplantation need be tried. Healthy muscles can be developed to an extraordinary degree. Some years ago I was called upon to operate upon a boy whose peroneus longus slipped over the malleolus. This had happened for two years, and I was amazed at the great size of the muscle. On inquiry I found that the dislocation, which was voluntary, was always accompanied by an audible snap, and the youngster collected pennies by displaying his gift, and had thus greatly over-developed the muscle. Transplanted muscles by special exercise become similarly developed. The equalization of forces, therefore, is not essential, for nature has a large margin of adaptability, but for obvious reasons an effort should be made to get all the help possible when we have to secure substitutes for a powerful tendon.

Clearly the most important factor in commanding success is a sound judgement on the part of the operator. He

should definitely realize what he wants to do and the means at his disposal. He should not be content merely to know the action of the muscle he is transplanting, but he should judge also of the disability he creates at the part from which the tendon is removed. There is no sense in substituting one deformity for another. Transplantations are most successful when the paralysis is limited and when re-enforcement can be introduced from the close vicinity. The operator is the best judge of the value and strength of tendons. This can best be done by noting the active movements. Many a muscle which responds to faradism is not fit for transplantation. I have no sympathy at all with those surgeons who make large incisions to investigate the colour of the muscle fibre before they transplant. No operation should be done until evidence of sufficiently strong active movement in the muscle to be used has been obtained. Experience clearly indicates that we are justified in sacrificing abduction and adduction of the foot for plantar flexion and dorsiflexion, and that we can at any time sacrifice the mobility of the toes whenever the tendons are likely to be of use elsewhere. Paralysis of the calf muscles is the worst of all disabilities. I have long ago discarded complicated varieties of transplantation, the subdivision of muscles, and the many forms of fixation into tendons, and I rely more and more upon simple and direct methods.

For a varus deformity I transplant the tibialis anticus; for a valgus the peroneus longus and the extensor proprius hallucis. For a partial paralysis of the calf muscles I shorten the tendo Achillis, pleat the posterior part of the capsule, fix the peroneus longus and flexor hallucis firmly into the insertion of the tendo Achillis, and remove an area of skin at the back of the ankle. Where the calf muscle is completely paralysed, after correction of cavus, I transplant the peronei and flexor hallucis, with any other available muscle from the sole, into the tendo Achillis. If all the muscles are paralysed, or almost all, my own two stage operation or that of Whitman, which involves the removal of the astragalus and a readjustment of body weight upon the ankle, is sound and effective. In paralysis of the quadriceps I transplant one or more of the hamstrings, and these practically complete my list of transplantations except for rare conditions. I rarely utilize tendons in the upper limb, although occasionally I find it necessary in the spastic type such as infantile hemiplegia.

There has been much discussion as to the method of implantation. I am in no manner of doubt as to the great advantage of transplanting into bone. Lange and Vulpius respectively advocate grafting into periosteum and tendon, but, when it is possible, a graft into bone gives far greater security. There may be a sound reason on rare occasions for employing silk tendons, but I am quite satisfied that, wherever it is possible, the tendon should be directly implanted into bone.

Technique.

I can best indicate the technique I employ by describing the operation of transforming the peroneus longus into an inverter of the foot. The tourniquet is applied above the knee, and only removed when the wound is dressed and bandaged. This obviates bleeding, a source of danger to the security of the graft. An incision of about an inch in length is made on the outer side of the foot and the tendon is divided where it turns round the cuboid. A small incision is next made over the muscle, well above the external malleolus, and a smooth dissector is passed underneath the tendon, and it is pulled through the opening and wrapped in a sterile swab. A small incision is then made over or near the scaphoid, and a curved forceps is passed from this to the upper wound, preferably through fat, and moved about to make a free tunnel. The tip of the tendon is now held by the forceps and guided through the tunnel to its new insertion. Care must be taken that in its transit it runs as nearly as possible parallel to the tibialis anticus, and that there is no angle in any part of its course. The attachment may be made in one of two ways. A hole may be drilled through the scaphoid, or internal cuneiform, and the tendon passed through it. This is the method of choice. In a case in which the tendon is short, a groove may be made in the bone, and the tendon may be made to lie in it while the end is fixed in ligamentous tissue below. The wounds are then closed and the foot is bandaged in inversion. No silk is used around the tendon, which is secured by chromicized gut. The important part of the technique is, first and foremost, never to handle the tendon with forceps anywhere excepting quite at its periphery, to pass it through fat, to secure the transplanted end in firm unyielding tissue, and to see that the alignment makes for a direct pull. Experiments have conclusively shown that wherever a tendon is roughly handled adhesions form; for this reason it is well to compress the tendon with forceps at the point of its attachment, namely, at the end, but nowhere else. The causes of failure are largely due to errors of judgement and to faulty technique. This is suggested by the progressive improvement in our results. In many of my early cases the point of attachment yielded under the influence of strain; in others adhesions formed. This was due to want of delicacy in the handling of the tendon, to the character of the structure through which it was made to pass, and to want of directness in the pull. The tunnel through which the tendon is directed should be roomy, the track through which it passes should, where possible, be in one plane, it should not pierce different layers, it should never abruptly turn a corner, nor perforate an interosseous membrane. The transplanted tendon should not be called upon to correct deformity, nor follow the convex aspect of a bone. It should not be allowed to travel immediately below the line of incision for fear of adhesions, nor be affixed to yielding structures. When its sheath can be preserved it is of advantage, but this cannot always be. Total transplantation is always preferable to partial, and when choice exists it is well to fix upon a muscle for transplantation whose function is similar to that which is paralysed. There is another point upon which I lay great stress, and that is an appreciation of the appropriate tension on the transplant. Under excessive tension muscle atrophies, while if the tendon is left too slack restoration of its function will be long delayed.

After-Treatment.

After the tendon is transplanted and before education begins, a somewhat prolonged period of fixation is needed, all strain on the graft being prevented. Three months or more may be needed by the calf muscles; in the case of the everters and inverters of the ankle, from four to six weeks; the extensors of the knee require considerably longer. Light celluloid or leather splints of a removable kind may then hold the joint in position for an indefinite period, to prevent the harmful exercise of body weight during walking. The splints should be removed two or three times a day during the whole of this period for the practice of massage and active exercises under resistance. In other words, every care should be taken to strengthen the transplanted tendon for its new responsibilities.

Seven or eight years ago Hoffa, Lange, Vulpius, and I were invited to give our experiences of tendon transplantation at the French Congress of Surgeons in Paris. We differed from each other in our respective procedures, but we all spoke in favour of the operation. Our colleagues in France were not so enthusiastic, and Kirmisson especially drew attention to the fact that, although immediate improvement occurred, it was generally followed by loss of function in the transplanted muscle. This has been referred to by many writers, and must be within the experience of us all. Why should a muscle which is working at first fail later? With hardly an exception it is because we do not recognize in practice the principles in regard to muscle stretching which I have discussed at such length in an earlier part of this address. Either the muscle has not been developed sufficiently to defend itself against an opponent, or during walking body weight has been allowed to bear injuriously upon it. These are both fundamental errors which are happily avoidable, and can, even when they have happened, be remedied by recourse to relaxation and massage.

I rarely operate upon children under 5, for three reasons: First, because of the technical difficulty in handling and fixing minute tendons; secondly, because we should be sure that sufficient time has elapsed to give the muscles a chance of recovery without operation; and, thirdly, because it is most important that the child should be sufficiently intelligent to give us help.

A fascinating problem to study is that of physiology or psychology as it affects the transplanted muscle. It is very difficult to understand how an inverter can be trained

to evert the ankle and how it can be made to exercise its new function by an effort of volition. Vulpius suggestively refers us to the work of Galen, Duchenne, and Sherrington on the function of opponent groups, and draws attention to the well-known fact, which we have all observed, that, when we ask a paralytic, whose extensors are lost, to attempt extension of the toes, he uses the flexors instead.

This does not happen in a later stage. Both clinical and physiological investigations clearly prove that when a muscle or muscle group is stimulated to contract the opponent muscle or group is inhibited. It has been argued, therefore, that a hamstring, transplanted into the patella to reinforce the quadriceps extensor, will not contract simultaneously with the latter muscle. According to this view, which is supported by Murk Jansen, of Leyden, the only real benefit of this transplantation is that it makes the knee-joint steadier, and when the hamstrings contract in flexion the transplanted hamstring also contracts and prevents their uncontrolled action. Even if this were the whole truth of the case, the operation would be beneficial from the practical point of view. But it is not the whole truth; generally the transplanted tendon can be seen and felt to become tense simultaneously with the quadriceps extensor. In the present state of our knowledge, I venture to suggest that this dissociation of the action of the transplanted muscle from its own natural group, and its association with a new strange group, is comparatively easily attained in children under careful muscle training. Certainly in adolescents a long and uncertain struggle between the opponent groups is often observed, suggesting that the older the patient the more difficult is education. In my opinion this indicates the necessity for more careful consideration of our methods of muscle training rather than a hasty condemnation of the operative procedure.

Operations to Produce Increased Stability of Joints.

Associated with the transplantation of tendons we have to consider measures which add to the stability of joints as distinct from their mobility; these consist of artificial ligaments, tendon-fixation and arthrodesis.

Silk Tendons.

As an outcome of the use of silk tendons by Lange, several experienced surgeons are using silk ligaments, in order to give stability to the joints and to guard newly transplanted tendons from strain.

It is interesting to inquire what becomes of these silken tendons and ligaments. Anger and Gluck many years ago experimented upon the fate of silk strands used to fortify and bridge separated structures, and they concluded from experiments on animals that in some instances the silk was displaced by connective tissue, and in other instances the silk formed a trellis-work along which connective tissue grew. Lange, who has had a very large experience, tells us that artificial silk tendons, with use, will develop from the size of a knitting-needle to the thickness of a little finger. His microscopical examinations revealed the fact that the tissue immediately adjacent to the silk had all the characteristics of true tendon. My personal experience (by no means extensive) has not been fortunate. I have operated upon six cases only. Each case healed uneventfully, but later in two instances the silk began to cause irritation at the points of insertion and had to be removed. There was no attempt at the formation of connective tissue in either case, although the strands had remained quite aseptic. In a third case many weeks after operation a suspicious reddening appeared over the knot, which had not been sufficiently hidden, and again the silk had to be removed. In two of the remaining cases the union was stretched and in only one instance has the foot remained in a desirable position. All this may be due to faulty technique, but I am interested to note that Rich of Tacoma has had to remove the silk in eighteen out of forty cases in which it was used, although only in two cases was there any primary infection.

Against these experiences I must refer to the successes reported by Lange, Tubby, Plummer, Ryerson, Allison, and others. In an interesting summary favourable to the use of artificial ligaments, Bradford and Soutter, in order to prove the strength and permanency of the ligament, state "that in a child of 8, the paralysed muscles largely recovered their function, and that in a man of 23 years, one year after the operation, not only was a foot-drop prevented, but some restoration of function furnished." This only affords additional confirmation of the advantage of preventing strain upon so-called paralysed muscles. We should keep a very open mind upon this question. The fixation of artificial ligaments into bone is so simple and offers so many inducements that if we can feel assured by further experience that the silk will not give rise to trouble the method will have an assured position. For instance, in foot-drop with complete paralysis of the anterior muscles, if the silk will not merely remain but will also develop in thickness and strength, a distinct gain will be conferred. Even when the paralysis is not complete it may prove, as in the cases reported by Bradford and Soutter, an effective means for protecting the overstretched muscles.

Utilization of Tendons as Ligaments.

At present the operation of utilizing the tendons as ligaments has a greater fascination for me. Tilanus first suggested it, and it is capable of very general application. It involves sacrificing the tendon, so that it becomes obligatory to make quite sure that the paralysis is permanent and complete. If the tibials are paralysed, for instance, an incision is made above the ankle and the tendon of the tibialis anticus is pulled upon until the eversion of the foot is corrected. It is then securely fixed under the necessary tension into the periosteum or bone. The tendon may be divided, but often this is quite unnecessary. The deformities of equinus and varus are overcome by similar procedures. This operation seems to me to be more physiological than the introduction of silken cords, for we are using a homogeneous tissue which will not act as a foreign body.

Flail Joints.

In the present stage of our knowledge operations such as I have described are insufficient when we have to deal with a flail joint, over which there is no muscular control, if it has to support body weight. With further and improved methods of using tendon fixations and artificial ligaments, both within and without the joint, we may in time be able to make such joints capable of bearing the strain of walking; at present, however, this is not so. Tendon transplantation unassisted is of very little use at the ankle where several of the muscular groups are totally paralysed. Lange speaks optimistically of producing useful function at the ankle-joint if only three muscles are left to him. In such circumstances he would use two for dorsiflexion and the third as a substitute for the Achilles tendon. I am sorry to say that with so limited a choice I should feel hopeless of success. There is no single muscle which can undertake the duties of the tendo Achillis. When we have a flail ankle to deal with, the only operative success at present is arthrodesis.

Over twenty years ago I advocated the bony fixation of flail joints in the position of greater advantage. At that period the operation had only on rare occasions been performed. I fear that my enthusiasm carried others as well as myself into a somewhat too confident generalization as to its merits and indications. There was then no choice of methods. It antedated plastic work. There is nothing I regret more than that in those days I argued in favour of arthrodesis of the knee in childhood. It is an operation which a more mature experience teaches me should never be performed upon a child. In the adult it gives an admirably firm limb, and under certain conditions it may prove the best thing to be done. There are many who are very grateful to be spared the use of troublesome apparatus. There are others who have come to me whose knees were stiffened in childhood, who beg for a restoration of motion. A surgeon can have no experience more bitter. No knee-joint should be fixed until the patient is old enough to appreciate fully the arguments in favour of and against the operation. In the child it often results in a pseudo-arthrosis; sometimes it develops into a bony flexion, and it is very apt to throw harmful strain upon the hip, the muscles of which so often participate in the paralysis. Even in the adult, if the facts are clearly driven home to the patient, his choice will fall often upon some form of cheap and light support whereby he may be less awkward than if his limb were stiff.

I am prepared to admit that certain people with a blue

dangling limb, who retain some power in the psoas muscle, may find ankylosis of knee and ankle combined a real boon.

Arthrodesis of the ankle-joint is quite another matter, and is often of very considerable advantage. It should be usually associated with fixation at the mid-tarsal joint, but should never be performed upon a child under eight; it is better to delay even longer. Vulpius disagrees with me upon this point, but his arguments do not appear in the least convincing. The delay renders ankylosis much more certain, and with ordinary care the deformities and contractures he speaks of will not occur. The deformity which sometimes occurs after this operation is obstinate varus, and is due to faulty technique. Before the operation, if there be any cavus deformity, the sole should be flattened and all tight structures severed. After its completion the bare surfaces of the astragalus should be closely hugged by the malleoli, while the foot should be fixed with flattened sole in a position of slight abduction. This position should be maintained for at least four months. The hip and wrist should never be ankylosed, nor do I see any advantage in operating upon the elbow.

The shoulder requires bony fixation when the deltoid only is paralysed and the scapular muscles are active. The humerus should then be abducted, drawn forward, and slightly rotated inwards, when it will respond at a useful angle to movements conveyed through the scapula.

We must remember that, at the best, arthrodesis is a mutilating operation, and should be the last resort. If a mistake is made it cannot be remedied, and mistakes, unfortunately, are frequently made. Some time ago I saw a boy of 10 whose knee had been arthrodesed because of paralysis of the quadriceps extensor. The paralysis had lasted three years before the operation was performed. As an arthrodesis the result had been a failure because the knees moved, but the profoundly interesting fact is that the quadriceps, so long rested, had recovered, and the knee could be easily and strongly extended. It was a valuable object lesson to all who saw it.

Nerve Crossing.

I have discussed the various methods by which we are able to give immense relief to these crippled children. We can generally avoid deformity, we can always correct it. We can often rectify lost function and make flail limbs firm. Such results are very important, but it would be depressing to feel that we are destined always to travel on these lines—building up by complex mechanism, steel splints without, silk splints within, muscles fixed to new attachments, and joints ruthlessly destroyed. Our thoughts naturally turn to more conservative methods by way of the nervous system. Whether nerve crossing is ultimately to lead to great triumph, or to bitter disappointment, we cannot yet answer without being biassed either by hope or despair.

The many successful cases of nerve suture in man which followed that of Saunders in 1835 has placed this operation upon a sure foundation, and primary suture is to-day a daily routine. Similarly, secondary suture has outlived its experimental stage, and under favourable conditions we can predict success. From this it does not seem a wide step to nerve crossing, and yet it is a momentous one. Perhaps the earliest success was reported by Sick and Sanger, who grafted a portion of the median nerve into the radial. In our own country, in 1895, Ballance met with gratifying success when he united the facial to the spinal accessory. The physiological theory of the neurones was adverse to the experiment, but, as sometimes occurs, the findings of the more exact sciences are modified by the findings of surgical empiricism. The work of Ballance and Stewart was founded on the belief that regeneration occurs in two ways—by a downward growth of axis cylinders from the proximal or central segment, and by essential processes of regeneration in the distal end in the form of a new growth of neurilemma cells, which become part of the new axis cylinder.

I believe the present position of the neurologist is once more the old one—that the axis cylinder grows down from the proximal end, but the neurilemma cells play an important part in its nutrition and assist its downward growth.

Should the distal segment not be sutured or bridged, the impulses to and from the central nervous system cannot travel, and these new parts therefore never become developed, but merely exist as embryonic nerve structures. As Osgood has suggested:

> In the problem which presents itself in cases of paralysis following acute poliomyelitis we find different conditions existing from those obtaining in traumatic or experimental division of nerves, and questions demanding answer at once arise. How essential, if true, is this process of regeneration in the distal or peripheral segment to future conductivity and restoration of full function. Are the nerve trunks, which run to the paralysed muscles, themselves affected by the disease we are considering, and, if so, does regeneration occur in the trunks as the infectious process subsides? If it does not, must we consider this degenerated old nerve trunk as simply a scaffolding or bridge, and suppose that the new axis cylinders of motion, growing from any healthy proximal or central trunk into which the diseased nerve may be grafted, must travel along such a path before we may expect any return of motor power?

These are certainly interesting questions when we compare the almost brilliant results of experiments on animals and the excellent results obtained after primary and secondary suture in man with the hitherto distinctly disappointing results obtained in infantile paralysis. There is no evidence that the virus of poliomyelitis attacks the peripheral nerves. In comparing results of operations on cases of paralysis with those of nerve crossing, after experimental section we must remember that in the former we are dealing with nerve trunks which have for a long time been in a state of disuse.

Every now and again a partially successful case is reported. Spitzy, who has been one of the most assiduous workers in this field, has obtained encouraging results. Partially successful cases have been reported in our country by Tubby and by Sherren, and we have now in literature records of over fifty cases. Warrington and Murray, in a very able and useful communication, report five failures after most carefully conducted operations. The authors suggest that a cause of failure may be the fact that the apparently healthy nerve trunks which conduct energy to the paralysed muscle are less virile, and can draw from fewer motor cells than before the disease; while they may just have enough to supply their own trunk, they have none to spare for another.

Quite recently a new impetus has been given to this subject by the investigations of Stoffel, who, by an elaborate system of dissection, has worked out the topography of the cross section of nerves. He seems to have proved conclusively by very laborious dissections that the nerve branch to each muscle is continued for a considerable distance up the nerve trunk as a separate and distinct nerve bundle. He maintains it to be fairly constant and definite in position, and by a study of the nerve any bundle desired at an operation may be secured. Nerve graftings should be materially helped by this discovery, as healthy nerve tracts which go to supply muscles of minor importance can be drafted for implantation into paralysed nerves. Without this knowledge motor fibres might easily be attached to sensory ones. This is contrary to the previous findings of Bruandet, whose experiments led him to conclude that the motor fibres in a peripheral nerve have no compact distribution, but are diffused and mixed up with all other fibres. If Stoffel's conclusions are correct, our technique will be much simplified. It is obvious that if the surgeon attempts to cure a paralysis of the extensor group of muscles in the leg by splitting off a strip of the internal popliteal nerve and planting it into the external popliteal, there is no reason why the graft should not unite; modern surgery can secure that. Further, as we have seen, our modern knowledge of the regeneration of nerves gives us every assurance that the graft ought to perform its function in conducting nerve impulses, provided the portion split off is a bundle of motor fibres, and provided it is planted into the proper bundle of motor fibres in the other nerve and not into a portion of it which contains only sensory fibres. This is the practical anatomical difficulty which hitherto has remained insurmountable.

When we turn next to the successful cases which have been reported, some are probably cases in which the surgeon has really succeeded in grafting motor fibres into motor fibres. When, however, we look up the details of after-treatment, in several instances we find that part of the treatment consists in fixing the limb in a position in which the paralysed muscles were relaxed, so that they might more readily respond to any impulses sent down

through the regenerated nerve. Here, in my opinion, lies the fallacy, for some of these cases might have recovered, if fixed in this position for a sufficient period, without transplantation. In support of this, Wittek of Gratz, knowing my views upon this subject, sent me a report of one of his cases. It was sent on from the neurological department with a report that the reaction of degeneration was present in muscles supplied by the external popliteal nerve. Relying on this report, he performed muscle transplantation, and the result was successful. A year later the patient came back with an extreme valgus, the internal malleolus touching the floor. On examination the muscles previously pronounced to be hopelessly paralysed were now acting strongly, while the previously strong groups were paralysed from over-stretching. There was nothing for it but to reverse his former operation and put his transplanted muscle back where he found it. His remark was, "What a brilliant result to record if I had only done nerve transplantation!" Many of us have had similar experiences in cases where we have been hasty in transplanting muscles.

Although the results of neuroplasty in poliomyelitis leave much to be desired, there is no occasion to abandon hope. We may learn in time the lessons taught by failure, and, what is infinitely more important, take courage from success. A failure depresses, but a success is eloquent of possibilities, and that is just the encouragement we want. Failure should merely set us thinking, and, however critical our mind, it should always remain an open one.

FURTHER INVESTIGATIONS OF THE TYPE OF TUBERCLE BACILLI OCCURRING IN THE SPUTUM OF PHTHISICAL PERSONS.

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This research is a continuation of the work on the subject which I carried out for the Royal Commission on Tuberculosis.[1]

In my sputum investigations for the Commission I obtained and tested cultures from the sputum of 29 persons suffering from pulmonary tuberculosis. The cultures isolated from 27 of these 29 patients were pure cultures of human tubercle bacilli, while those from the remaining 2 were pure cultures of bovine tubercle bacilli. The experiments with the sputum of the latter two patients were repeated—in one case thrice, in the other once—and it was shown conclusively that tubercle bacilli of standard bovine type only were being expectorated with the sputum of these two patients. These two cases are the first, and are so far the only ones recorded, in which pulmonary tuberculosis in human beings can be definitely referred to bovine tubercle bacilli.

The only other cases of pulmonary tuberculosis investigated in England, in which sputum was the "original" material, are 2 by Cobbett[2] (for the Royal Commission) and 23 by Bulloch.[3] From these cases tubercle bacilli of the human type alone were isolated.

Thus, out of 54 phthisical patients in England, 2 were discovered to be discharging with the sputum none but the bovine type of tubercle bacillus, and 52 none but the human type of bacillus.

This proportion of cases expectorating bovine tubercle bacilli is remarkably high when regarded in the light of results obtained in similar researches in other countries. The last paper on the subject of which I am aware is by Lindemann.[4] This author gives a list of all the sputum investigations carried out down to the year 1912. The total number of cases investigated in countries other than England was 736. In 733 of these cases the sputum was demonstrated to contain only the human tubercle bacillus; in 2 cases there was experimental evidence that the cultures isolated were mixtures of human and bovine tubercle bacilli, while in the remaining one it was not certain whether the bovine tubercle bacilli, which were undoubtedly present in the sputum, were present alone or in company with human tubercle bacilli.

Further investigations of the type of tubercle bacilli occurring in the sputum of consumptives in England were obviously needed to ascertain whether or not bovine tubercle bacilli are so frequently the cause of consumption in this country as the above cited English figures would suggest. The opportunity of renewing my investigations of the subject was afforded me by my appointment to one of the scholarships of the Grocers' Company. My further inquiry began in August, 1911, and has been pursued intermittently up to the present time, as my work on other varieties of human tuberculosis permitted.

So far the type of tubercle bacillus has been determined in the sputum of 148 additional persons suffering from pulmonary tuberculosis. The sputum samples from 105 of these persons were obtained from the Brompton Hospital for Consumption by kind permission of Dr. Perkins. For the remaining 43 cases I am indebted to Sir Robert Philip, who kindly allowed me to collect samples from the Victoria Hospital for Consumption, Edinburgh.

The object of the inquiry has been not only to discover cases of pulmonary tuberculosis which were expectorating bovine tubercle bacilli with the sputum, but also, and especially, to study the clinical course of such cases, and, if they ended fatally and a necropsy was obtained, to make careful investigation of the distribution, character, and bacteriology of the tuberculous lesions.

The latter investigation is of especial importance, since nothing is at present known in regard to the anatomical pathological picture of tuberculous disease in a person who has during life been coughing up bovine tubercle bacilli. The five persons referred to above, in whose sputum bovine tubercle bacilli were demonstrated, all died, but no *post-mortem* examination was made of any of them.

Another important matter of which there is as yet no actual evidence is the transmission of bovine tubercle bacilli from man to man. Examination and observation of the relatives and intimates of a person who is expectorating bovine tubercle bacilli should show whether or not this transmission readily occurs.

Bacteriological Investigation.

The sputum used for investigation was that which was coughed up in the early morning. Special precautions were taken to avoid contamination of the sputum with food that might contain tubercle bacilli of bovine origin. During the twenty-four hours previous to collecting the sample the patient was not allowed any butter, nor any milk which had not been boiled. The samples were sent to me in sterile jars, in batches of from nine to fifteen. An attempt was made in each case to obtain a culture direct from the sputum by means of antiformin. When the direct cultures were unsuccessful, or appeared likely to fail, cultures were made from guinea-pigs whenever these had been available.

Every sputum was not inoculated into the guinea-pig. When no guinea-pig had been employed and direct cultures proved negative, a fresh sample of sputum was sent for. In a few instances it was not possible to obtain a fresh sample, the patients having left hospital much improved, and not expectorating. In a few other instances direct cultures and guinea-pig inoculations were both negative. The sputum in these cases had not shown any tubercle bacilli on careful microscopical examination.

All the strains isolated have been tested as to their cultural characters on serum, and on one or more of the differential glycerin media (serum, agar, potato or broth), the medium most frequently employed being glycerin potato. The virulence of the tubercle bacilli present in a majority of the sputum specimens has been tested on the rabbit. In one case calves and goats were used as well.

Methods of Cultivating Tubercle Bacilli direct from Sputum by means of Antiformin.

After trial of various proportions of sputum, antiformin, and diluent (physiological salt solution) the method employed for some little time has been as follows: 1 c.cm. of thick muco-purulent sputum was pipetted into a sterile centrifuge tube (when the sputum was mucoid or contained much saliva, 2 or 3 c.cm. were taken). To this salt solution to make about 9.5 c.cm., and then 0.5 c.cm. antiformin were added; the sputum was then stirred up, and after five, ten, or fifteen minutes, according to the speed with

which the sputum dissolved, the mixture was centrifuged.* The deposit was washed with salt solution, recentrifuged, and then sown upon four tubes of the egg medium.

This washing was later on found to be unnecessary, the amount of unreduced antiformin lingering in the deposit being insufficient, apparently, to interfere with the growth of the tubercle bacilli. A further simplification of the technique of cultivating tubercle bacilli from sputum was suggested by the following observation. It happened in some of the above experiments that the sputum was not completely dissolved when the antiformin-sputum mixture was centrifuged; that, instead of a granular deposit, a deposit of transparent mucinous sputum was obtained. This was nevertheless used to sow cultures, and was found to give a higher proportion of successful results than the granular deposit.

The success which attended the use of such incompletely dissolved sputum suggested the possibility of cultivating tubercle bacilli directly from a mixture of sputum and dilute antiformin after they had been in contact in a test tube for a sufficient length of time to kill all contaminating organisms. Some preliminary experiments have shown that it is possible to obtain cultures in this way.

Equal parts—0.25 c.cm. is sufficient—of a 10 per cent. dilution of antiformin and muco-purulent sputum were pipetted into a small test tube and thoroughly mixed. After the lapse of from five to thirty minutes tubes of the egg medium were sown each with a loopful or two of the transparent brownish mucinous mixture, and were incubated in the usual way. By means of this simple method I have obtained pure cultures of tubercle bacilli from nine different sputa.

Treatment for five minutes with 5 per cent. antiformin was not always successful in destroying contaminating organisms, though these succumbed to longer exposure. In one experiment it was shown that a mixture, which after five minutes' treatment grew contaminating organisms, was sterile of these organisms after treatment for half an hour, the tubes then sown producing eventually numerous colonies of tubercle bacilli. On the other hand, in two other experiments 2 per cent. antiformin acting for five minutes was found sufficient to kill all organisms other than tubercle bacilli. My experience of the method is as yet limited, but the number of positive results obtained prove it to be a practicable method and a great simplification over the somewhat tedious centrifuging process.

The simple method should, perhaps, be restricted to sputa in which the tubercle bacilli are numerous. When tubercle bacilli can be demonstrated microscopically in small numbers only or not at all, the centrifuging method by which the tubercle bacilli present are concentrated into small bulk is more likely to succeed.

Further experiments are being made to determine the most suitable percentages of sputum and antiformin in the mixture, and the shortest period of exposure necessary for given percentages of antiformin to destroy organisms other than tubercle bacilli usually present in sputum.

The presence of free antiformin in material used for sowing cultures has been proved by control experiments to be not detrimental to the growth of tubercle bacilli. In each of two experiments 10 per cent. antiformin was added to an emulsion made from a guinea-pig's tuberculous gland (the tubercle bacilli in one experiment were of the human type, in the other they were of the bovine type) and culture tubes were sown immediately with the mixture. There was not apparently any difference in the number of colonies produced by the mixture and by untreated emulsion diluted to the same extent.

The antiformin mixtures in the above two experiments were further used after varying periods up to twenty-four hours to sow cultures. There was, as time progressed, gradual diminution in the number of tubercle bacilli capable of giving rise to colonies, but there were a few tubercle bacilli still alive at the end of twenty-four hours.

In the cultural experiments with centrifuged deposits of sputum after treatment with 5 per cent. antiformin there has been great variation in the number of colonies produced from different sputa, though all were rich in tubercle bacilli and all received practically identical treatment. Sometimes the surfaces of all the egg tubes sown were thickly beset with colonies; sometimes the colonies were sparsely distributed; on many occasions only a single colony has grown upon one of the four egg tubes sown.

I have not been able to decide to what this variation is due. There are four suppositions which occur to me as possible explanations: (1) That tubercle bacilli lose vitality in sputum which is kept. (2) That many of the tubercle bacilli in some sputa are dead when expectorated. (3) That owing to differences in physical quality of sputum antiformin may be more destructive to tubercle bacilli in some sputa than in others. (4) That some strains of tubercle bacilli are less resistant to antiformin than others.

There seems no doubt that the numbers of tubercle bacilli which are capable of giving rise to colonies after antiformin treatment undergo diminution in some sputum samples when they are kept. In several instances I have repeated an experiment with a particular sputum, in some after an interval of twenty-four hours, in others after an interval of three days, using precisely the same technique as in the first experiment. In a large proportion of cases the number of colonies produced was markedly less in the second experiment than in the first; often the second series of cultures remained sterile. The diminution in number of colonies was more marked in the series in which the interval was three days than in the one in which the interval was only twenty-four hours.

As all my sputum specimens were several hours old (the Edinburgh ones being at least thirty-six hours old) when first dealt with, my failures to grow tubercle bacilli direct may have been due to changes which go on in sputum subsequent to expectoration and which cause the death of the tubercle bacilli or possibly diminish their capacity to resist the action of antiformin.

How far the production of a small number of colonies, or no colonies at all, from sputa rich in tubercle bacilli is explainable on any of the other three hypotheses it is impossible for me to say. These are questions which can be decided only by investigators who are in a position to use perfectly fresh sputum and to make repeated observations on the sputum of the same patient.

General Results of the Inquiry.

The number of strains of tubercle bacilli which have been obtained in culture from the sputum of 148 persons suffering from pulmonary tuberculosis is 186. From 115 of the sputum samples (115 individual patients) the cultures were isolated direct by means of antiformin. From 63 sputum specimens (63 patients); of which 30 had yielded cultures direct, cultures were obtained through the guinea-pig.

The cultures derived from 147 of the patients were eugonic, while those (9 strains) obtained from several samples of sputum from the remaining patient were dysgonic.

I will first summarize briefly the results of the experiments with the eugonic strains, and then give a detailed account of the experiments performed in connexion with the case which yielded dysgonic cultures.

The Cases which Yielded Eugonic Cultures.

The 147 patients in this group varied in age from 10 to 49 years; 6 were under 15 years of age; 27 were over 30 years old; the rest were from 15 to 30 years of age. About three-fifths of the patients were males, and two-fifths females. The 177 strains isolated from the sputa of these 147 patients produced on all the test media employed the luxuriant growths which are characteristic of the human type of tubercle bacillus.

The virulence of the tubercle bacilli present in 80 of these sputa has been tested on the rabbit, in 27 instances by the subcutaneous inoculation of sputum, in 51 instances by the subcutaneous or intravenous inoculation of culture, and in 2 instances both by the subcutaneous and intravenous inoculation of culture.

Of 27 rabbits inoculated subcutaneously with sputum from 27 patients, 2 died in 55 and 58 days, and showed a local caseous abscess (in one the nearest glands were also affected) and slight tuberculosis of the lungs. The rest of the rabbits were killed after periods varying from 84 to 104 days. In 2 of these 25 rabbits a local lesion only was

* To enable the centrifuging to be accomplished without exposing the fluid to the air the wool plug is made with a muslin sheath, the margins of which can be turned down over the lip of the tube and secured there with a rubber band.

found; in one there was a local lesion and slight tuberculosis of the nearest glands. All the rest showed a local caseous abscess and tuberculosis of the lungs, the disease in the latter organs being slight in 22 rabbits, and moderately severe in 2 rabbits; the nearest glands were affected in 6, and the kidneys in 5 of these 21 rabbits.

Of 43 rabbits inoculated subcutaneously with 10 to 50 mg. of culture from 43 patients, 3 died in 41 to 53 days, and showed a local caseous abscess and slight tuberculosis of the lungs, the nearest glands of one of the rabbits also being tuberculous. The remaining 40 rabbits were killed (a few died, but not of tuberculosis) in periods varying from 86 to 160 days. One of these showed a local lesion only. All the rest showed, besides a local caseous abscess, some amount of dissemination; the lungs were tuberculous in each of the 39 rabbits, slightly in 33, and moderately severely in 6; the kidneys were slightly tuberculous in 11 rabbits; the nearest glands were tuberculous in 25, normal in 14 rabbits; in one rabbit there was tuberculosis of the mamma. Rabbits to the number of 15 were inoculated intravenously with culture from 12 patients, the dose for each rabbit being 0.01 mg. The pathogenic effects produced by these cultures exhibited the range of variation which is usual after the intravenous inoculation of human tubercle bacilli.

There was no indication from the pathogenic effects produced in any of the 85 rabbits, whether inoculated with sputum or with culture, of the presence in any of the sputa of tubercle bacilli of higher virulence than typical human tubercle bacilli.

With regard to the eugonic cultures from the remaining 67 cases, I decided not to test these on rabbits. The cultures were quite clearly "human" in their cultural characteristics, and all that remains unknown in respect to them is whether any of them contained a slight admixture of bovine tubercle bacilli.

The Case which Yielded Dysgonic Cultures.

On account of the possibility of contamination of sputum with bovine tubercle bacilli ingested with food, a single demonstration of this type of tubercle bacillus in the sputum of a consumptive person is not sufficient to prove that the pulmonary disease in the patient is produced by bovine tubercle bacilli.

There must be repeated demonstration of the bovine tubercle bacilli in the sputum, collected with rigid precautions to avoid accidental contamination.

In the present case, as soon as it was recognized that the cultures isolated from the first sputum specimen were dysgonic, a request was made for a fresh sample. Subsequently three more samples were obtained, and altogether five samples of sputum from this case have been investigated within a period of about four and a half months. The results of the experiments in connexion with each sample are given in detail below.

Calves and goats as well as rabbits have been used in this case for the virulence tests for the purpose of adducing decisive evidence as to the nature of the tubercle bacilli discharged by the patient.

Clinical History.

The patient was a girl, aged 16 years 7 months, a diestamper by occupation. She was admitted to the Royal Victoria Hospital for Consumption, Edinburgh, on May 24th, 1913, and had been ill about eight weeks. She was a breast-fed child and had had no serious illnesses during childhood. She was in the habit of drinking unboiled milk until very shortly before admission. On admission she was anxious-looking and pale, and complained of "bloodlessness." There were slight cough, slight expectoration (half a drachm per diem), haemoptysis and pain in the chest. The appetite was good; teeth fair, some molars missing. The glands in the neck were palpable, but were not enlarged to such an extent as to be noticeable by the patient. Her height was 5 ft.; weight 5 st. 7½ lb.; temperature 102.7° F.

Physical Signs.

On the right side of the sternum there was a protrusion of the chest wall extending from the second interspace down to the fifth costal cartilage and laterally from the edge of the sternum to the junction of rib and cartilage. There was dullness at both apices, most marked on the right side posteriorly, and slight dullness over the right lower lobe; a few crepitations were heard posteriorly on the right side and over the left lower lobe; over the right apex vocal resonance was increased, and there was whispered pectoriloquy in front and cavernous breathing behind; the wall of the chest over the left lower lobe was hyper-resonant.

Tubercle bacilli in moderate numbers were found in the sputum on May 26th, June 18th, and July 9th, 1913.

For the clinical notes of the case I am indebted to Dr. Power, formerly resident medical officer, Royal Victoria Hospital, Edinburgh.

Bacteriological Investigation of Sputum: First Investigation.

The first sample of sputum was received on June 19th, 1913. The sputum was thin, purulent, and contained numerous tubercle bacilli, mostly short and well stained, a few only being of medium length and slightly beaded. On the day of receipt cultures were sown with the centrifuged deposit of 1 c.cm. of the sputum after treatment for ten minutes with 5 per cent. antiformin. On the day following a small quantity of the sputum was inoculated intraperitoneally into a guinea-pig. The guinea-pig was killed thirty days after inoculation and cultures were sown from its tuberculous spleen and sternal glands.

The direct cultures were positive, scattered filmy transparent colonies becoming visible in the third week. The tuberculous tissues of the guinea-pig produced on plain egg extremely numerous minute transparent colonies, while on one tube of glycerin egg no colonies and on another only scattered colonies were obtained. On glycerin media (potato, agar, broth, and serum) both the direct strain and a strain from the guinea-pig were dysgonic and identical in cultural characteristics with tubercle bacilli of bovine type.

The virulence of the virus has been tested on (shorthorn) calves and rabbits. Seven rabbits were inoculated with the direct strain and two with the guinea-pig strain.

Calves.

A bull calf weighing 50.5 kilos was inoculated subcutaneously on August 26th, 1913, with 50 mg. of the direct strain of culture (Rabbits 687 to 691 were inoculated at the same time, see below). The calf developed a large local lesion and adjacent gland, and was ill for a little while and then recovered. The animal was killed 252 days after inoculation. Weight at death 115 kilos.

Necropsy.—Caseous and softened local lesion and caseous and calcareous prescapular gland, each being the size of a hen's egg. Spleen contained moderate number caseous gritty encapsuled nodules; liver and lungs showed sparsely scattered minute tubercles. Thoracic, portal, and coeliac glands contained moderate number retrogressive calcareous or caseous and softened nodules. Many other lymphatic glands contained from 1 to 4 caseous gritty nodules; there was no *Perlsucht* disease.

The slight disease produced in this calf is probably attributable to high individual resistance, since all other animals inoculated with the same culture developed typical acute disease.

On October 13th, 1913, the calf experiment was repeated. A bull calf weighing 44.5 kilos was inoculated subcutaneously with 50 mg. of the direct culture. The animal developed a very large local lesion and enlargement of adjacent glands, became ill in the fourth week, and was killed when very ill on November 29th, 1913, forty-seven days after inoculation. The necropsy showed a large caseo-necrotic local lesion, large caseous prescapular and cervical glands, and severe general miliary tuberculosis of all the organs and glands identical in every respect with the general tuberculosis produced after similar interval of time by tubercle bacilli of bovine origin.

Rabbits.

The experiments on rabbits are tabulated.

No. of Rabbit.	Dose in mg.	Method of Inoculation.	Duration of Life.	Result.
652	0.1	Intravenous	D. 18 days	General miliary tuberculosis.
653	12.0	Subcutaneous	D. 33 ,,	General miliary tuberculosis.
687	0.1	Intravenous	D. 24 ,,	General miliary tuberculosis.
688	0.01	,,	D. 17 ,,	General miliary tuberculosis.
689	10.0	Subcutaneous	D. 19 ,,	Caseous lesion; nearest glands caseous; early general miliary tuberculosis; death in each case premature.
690	10.0	,,	D. 26 ,,	
691	20.0	,,	D. 19 ,,	
785	10.0	,,	D. 62 ,,	General tuberculosis.
786	10.0	,,	D. 44 ,,	General tuberculosis.

Second Investigation.

The second specimen of sputum was received on August 21st, 1913. The sputum was mucoid, and did not amount to more than about 1 c.cm.; 2 c.cm. salt solution were added, and the sputum was emulsified by shaking; 1 c.cm of this diluted sputum was drawn into a syringe and made up to 8 c.cm. This dilute emulsion of sputum was used to inoculate four rabbits, two receiving each 1 c.cm. intravenously and two receiving each 2 c.cm. subcutaneously, and two guinea-pigs (dose 1 c.cm. each intraperitoneally). A smear preparation of the first dilution of sputum showed numerous tubercle bacilli, mainly

short and uniformly stained. The two rabbits inoculated intravenously died of general miliary tuberculosis in twenty-four and thirty-two days respectively. The two rabbits inoculated subcutaneously died of general tuberculosis in fifty-nine and sixty-four days respectively. In all four rabbits the disease was identical with that which is produced by bovine tubercle bacilli.

One of the guinea-pigs died in thirty days, the other was killed after thirty-seven days; both showed severe general tuberculosis. Direct cultures remained sterile. Cultures were raised from each of the two guinea-pigs, and both strains were found to be identical in cultural characteristics with those isolated from the first sputum specimen.

The virulence of one guinea-pig strain was tested on a goat and two rabbits. An adult nanny-goat, weight 36 kilos, was subcutaneously inoculated on October 18th, 1913, with 10 mg. of culture. The goat died forty days after inoculation. The *post-mortem* examination showed, besides a local ulcer and caseous prescapular gland, severe miliary tuberculosis of the lungs and slight miliary tuberculosis of the abdominal organs, and some abdominal lymphatic glands. The two rabbits were inoculated subcutaneously each with 10 mg. They died in thirty and thirty-three days respectively of general miliary tuberculosis identical with that set up by typical bovine tubercle bacilli.

Third Investigation.

The third specimen of sputum was received on September 26th, 1913. The sputum was muco-purulent, and microscopically showed numerous blue-stained organisms and only a moderate number of short tubercle bacilli; 2 c.cm. of the sputum were vigorously shaken with 18 c.cm. salt solution, a homogeneous, slightly milky emulsion being produced. With this emulsion the following inoculations were made, the doses being expressed in terms of sputum:

	Dose.	Method of Inoculation.	Duration of Life.	Result.
Rabbit 749 ...	0.02 c.cm.	Intravenous	D. 42 days	General miliary tuberculosis.
Rabbit 750 ...	0.04 c.cm.	"	D. 35 "	General miliary tuberculosis.
Rabbit 751 ...	0.02 c.cm.	Subcutaneous	D. 103 "	General tuberculosis identical with that set up by bacilli of bovine tuberculosis.
Rabbit 752 ...	0.02 c.cm.	"	D. 54 "	
Guinea-pig 1,091	0.02 c.cm.	Intraperitoneal	K. 35 "	General tuberculosis of moderate severity.
Guinea-pig 1,092	0.04 c.cm.	"	K. 18 "	

Calf 49, weight 49.5 kilos. was inoculated intravenously with 0.5 c.cm. sputum and died thirty-seven days after inoculation. The necropsy showed the lungs extensively consolidated and closely beset with caseous miliary tubercles, the thoracic glands much enlarged with the cortices advanced in caseation, the spleen beset with tubercles, slight miliary tuberculosis of organs and of the lymphatic glands. Tubercle bacilli were numerous in smear preparations.

Goat 34. A young animal, about 7 or 8 months old, weight 14 kilos, was inoculated subcutaneously with 0.25 c.cm. sputum. The animal died forty-three days after inoculation, and showed *post mortem* a small caseous local lesion, caseation of the prescapular gland, the lungs consolidated and closely beset with miliary caseous tubercles, the thoracic glands enlarged and irregularly caseated, slight miliary tuberculosis of spleen, kidneys, and some lymphatic glands. Cultures were obtained from each of the two guinea-pigs inoculated with sputum. Both strains were identical in cultural characters with those from the first two sputum specimens. The strain from guinea-pig 1,092 was inoculated subcutaneously into three rabbits, each receiving 10 mg. of culture. Two of the rabbits died prematurely. The third was killed when ill thirty-two days after inoculation, and showed general tuberculosis.

Fourth Investigation.

The sputum for this investigation was received on October 25th, 1913. Owing to an error in my instructions the specimen was collected without the usual precautions being observed. On this account neither the sputum nor the culture obtained from it were used for animal experiment. A smear preparation of the sputum showed moderately numerous tubercle bacilli, mostly short, and occurring here and there in small clumps. Cultures were obtained direct from the sputum, and these were identical in cultural characteristics with those derived from the first three specimens. There was no sign of the presence of human tubercle bacilli.

Fifth Investigation.

The last specimen of sputum was received on November 3rd, 1913. The sputum was muco-purulent and microscopically contained moderately numerous tubercle bacilli, all short and frequently occurring in groups. Cultures were obtained direct by means of 5 per cent. antiformin; moderately numerous filmy transparent colonies appeared on all the tubes.

Small quantities of the sputum were inoculated into a rabbit subcutaneously and into a guinea-pig intraperitoneally. The rabbit died of general tuberculosis, typically "bovine," in sixty-five days. The guinea-pig died of general tuberculosis in eighteen days and cultures were isolated from its lesions.

The direct strain and the guinea-pig strains were all dysgonic and identical in cultural characters with those obtained from the first four specimens.

The direct strain was inoculated into two rabbits subcutaneously, the dose in each case being 10 mg. of culture. They died of general miliary tuberculosis in thirty and thirty-two days respectively.

Subsequent History.

On January 11th, 1914, a request was made for another specimen, but I was informed that there had been no sputum for a fortnight, and that the girl was considerably improved in health. She was discharged towards the end of January.

[While this report was in the printer's hands I learnt that the girl had died suddenly at her home and that, unhappily, no *post-mortem* examination was made.]

The results of the experiments recorded above prove conclusively that the tubercle bacilli which this girl was expectorating during the period of 137 days covered by the investigation were wholly dysgonic and were identical in cultural characters and virulence with typical bovine tubercle bacilli.

There can be little doubt but that the bovine tubercle bacilli came from the lungs of the girl. She presented the clinical signs of pulmonary tuberculosis and there was no sign of tuberculosis in any other part of the respiratory tract or in the pharynx.

Had the case been one of pulmonary tuberculosis due to the human tubercle bacillus, in which the sputa had become secondarily contaminated by bovine tubercle bacilli, the cultures isolated would have exhibited the cultural characters of the human tubercle bacillus, and the presence of bovine tubercle bacilli would have been demonstrated only by animal experiment, as in Kossel's case (see below).

But though tubercle bacilli were numerous in the sputum there was no evidence culturally of the presence of human tubercle bacilli in any of the nine strains isolated in the five investigations. Each of the strains was undoubtedly a pure culture of bovine tubercle bacilli.

The discovery of this third case of pulmonary tuberculosis, in which the bovine type of tubercle bacillus exclusively was being expectorated in the sputum, is the direct outcome of the researches of Fraser and Mitchell.

These observers reported that infections with bovine tubercle bacilli were very prevalent among the child population of Edinburgh and district, about 60 per cent. of cases of bone and joint tuberculosis (Fraser) and 90 per cent. of cases of cervical gland tuberculosis (Mitchell) being ascribed to infection with bovine tubercle bacilli.

This reported prevalence of bovine infections in Edinburgh children led me to extend my sputum investigations to Edinburgh. For it seemed to me probable that my quest of bovine tubercle bacilli in sputum would be more quickly successful among a community where bovine tubercle bacilli had frequent opportunity of entering the human body than among one where such opportunity was more restricted.

This expectation was realized, but the number of cases investigated is as yet too small to show whether bovine tubercle bacilli are more frequently associated with phthisis pulmonalis in Edinburgh than in London.

The present position is that bovine tubercle bacilli have been demonstrated in one out of 43 Edinburgh cases and in two out of 159 London cases.

The investigation of the tubercle bacillus occurring in the sputum of phthisical persons in Edinburgh is being continued.

I am indebted to Professor G. Sims Woodhead for the facilities he has given me for carrying out the bacteriological investigations at the Field Laboratories of the University of Cambridge. The cost of the animals used in the research has been defrayed by the Grocers' Company.

Summary of Sputum Investigations in this Country and Abroad.

It will be of interest and value for comparative purposes to append a summary of the results of the sputum investigations in this country and other countries, and to give also a brief account of the five previously recorded cases where bovine tubercle bacilli were demonstrated in the sputum.

The following table is a continuation in condensed form of the table compiled by Lindemann (*loc. cit.*). This table was begun by Dieterlen[5] and continued first by

Moellers[6] and then by Lindemann. I have condensed it by adding together the cases, 88 in number, investigated by the first fifteen authors (for whose names see Dieterlen's and Lindemann's papers).

Name of Investigator.	No. of Cases.	Classification of Cultures.		
		Human.	Bovine.	Mixed.
Various authors	88*	87	—	1†
Dieterlen	50	50	—	—
Kitasato	152	152	—	—
Park and Krumwiede	296	296	—	—
Moellers	51	51	—	—
Janeso and Elfer	5	5	—	—
Commission Final Report ...	29	27	2	—
Kossel	46	45	—	1
Bulloch	23	23	—	—
Weber and Dieterlen	9	9	—	—
Lindemann	41	40	—	1
Own recent cases (London) ...	105	105	—	—
,, ,, (Edinburgh)	43	42	1	—
	938	932	3	3

* One incompletely investigated case of Mohler and Washburn excluded.
† The de Jong-Stuurman case.

The 88 cases of "various authors" include 2 from the British Commission's Second Interim Report, which were omitted from the Final Report because in one case only bovine animals and monkeys and no rabbits had been tested with the culture in unmeasured dose, and in the other no special precautions had been observed in the collection of the sputum.

I have included them because in the first of the two cases the experiments on bovine animals and monkeys appear to me to show quite clearly that the culture obtained from the sputum was a pure culture of human tubercle bacilli and because in the second the neglect of precautions had not led to the contamination of the sputum with bovine tubercle bacilli.

In the appendix to the Final Report there is another case which was omitted by the Commissioners from their Report because no precautions had been observed in the collection of the sputum. As the culture from this sputum was eugonic and showed no evidence of the presence of bovine tubercle bacilli, I have included this case also in the table. This is the reason why the number given in the table opposite "Commission Final Report" is 29 instead of the generally quoted official figure 28.

Brief Account of the Five Cases in which Bovine Tubercle Bacilli were Demonstrated.

The de Jong-Stuurman Case.

The patient was a peasant woman, aged 27. A glycerin serum culture from the sputum produced fatal general tuberculosis in three calves (the subcutaneous method of inoculation was employed for one calf, the intravenous and intrapulmonary for the others). No rabbits were tested. The culture is stated to have grown luxuriantly. Only one sample of sputum was investigated.

The data in this case are insufficient for definite conclusions. The results of the experiments on calves are evidence that bovine tubercle bacilli were present in the culture, but the fact that the culture grew luxuriantly points strongly to the presence in it of human tubercle bacilli also.

Kossel's Case.[7]

The patient was a female letter carrier, aged 27 years. Sputum for investigation was collected twice—once on May 30th, 1910, and again on June 4th, 1910. From the first sample of sputum a culture of human type was isolated through the guinea-pig and a culture of bovine type was obtained through the rabbit. From the second sample of sputum a pure culture of human tubercle bacilli was isolated direct; a mixed culture was obtained from a guinea-pig which had been inoculated with the sputum, and a bovine culture was isolated from a rabbit which had been inoculated with a particle of the spleen of the guinea-pig.

The evidence is conclusive that the sputum of this woman contained bovine as well as human tubercle bacilli.

Lindemann's Case.

The patient was a musician, male, aged 20 years. Three samples of sputum were investigated. A culture isolated from each sample through the guinea-pig grew on broth like the human tubercle bacillus. Each of the cultures produced in rabbits slight tuberculosis typical of infections with human tubercle bacilli, except that one rabbit in each series showed a tubercle or two in the kidneys.

As in Lindemann's experience renal lesions were rarities in rabbits inoculated with human tubercle bacilli, he isolated through the guinea-pig a culture from the kidney tubercles of one of the rabbits (second sputum), and attempted, but failed, to secure a culture from the kidney tubercles of another (first sputum). The rabbit culture obtained was dysgonic and highly virulent for calves and rabbits. A virulent culture was also derived from a guinea-pig which had been inoculated with the second sputum sample. Primary serum cultures from the spleen of this guinea-pig had been preserved and were used when they were eleven months old to inoculate guinea-pigs for the purpose of recovering the culture. The culture was secured, but not until after two passages through the guinea-pig.

Though no experimental evidence of the presence of bovine tubercle bacilli in sputum samples A and C is adduced, Lindemann thinks that the occurrence of tubercles in the kidneys of rabbits inoculated with cultures of these sputa is best explained on the assumption that small numbers of bovine tubercle bacilli were present in these samples also.

But small renal lesions, such as occurred in Lindemann's rabbits, are not sufficient evidence of the presence of bovine tubercle bacilli in material inoculated.

In my experience small tubercles in the kidneys are by no means rare in rabbits subcutaneously (or intravenously) inoculated with pure cultures of human tubercle bacilli. Lindemann's case should be regarded, therefore, as representing, at most, a single finding of bovine tubercle bacilli in sputum.

British Commission's First Case.[8]

The patient was a butcher's assistant, aged 21 years. He had had pneumonia and pleurisy ten months before admission to hospital and had suffered from cough ever since. When admitted there was consolidation of upper part of left lower lobe. Four specimens of his sputum were investigated. All contained numerous short tubercle bacilli. Cultures from the first sample, isolated through the guinea-pig, exhibited the cultural characters and the high virulence for the calf, rabbit, and guinea-pig of a typical bovine tubercle bacillus.

The other three samples were collected at intervals of 76, 117, and 118 days respectively after the first. Cultures were obtained from each sample through the guinea-pig, and from the last two direct by means of antiformin. All the strains were identical in cultural characters with those first isolated and proved highly virulent for rabbits, the direct culture from the third specimen producing rapidly fatal tuberculosis in two calves inoculated subcutaneously.

British Commission's Second Case.[8]

The patient was a bricklayer, aged 31 years. He suffered from pneumonia when 20 years old and from pleurisy four months before admission. When admitted there were signs of consolidation of both upper lobes. Two specimens of sputum were investigated; the second specimen was collected 118 days after the first. Both samples contained a moderate number of tubercle bacilli. The cultures isolated from the two specimens through the guinea-pig and from one specimen directly were very dysgonic and exhibited for calves, rabbits, and guinea-pigs the high virulence of typical bovine tubercle bacilli.

References.

[1] Final Report, Part II, Appendix, vol. i. [2] Second Interim Report, Part II, Appendix, vol. ii. [3] Horace Dobell Lecture, Royal College of Physicians, London, 1911. [4] *Tuberkulose-Arbeiten a. d. Kais. Gesundh.*, Heft 10, 1910. [5] Ibid., Heft 12, 1912. [6] *Veröffentlichungen der R. Koch. Stiftung zur Bekämpfung der Tuberkulose*, Heft 1, 1911. [7] *Deut. med. Woch.*, 1911, No. 43. [8] Final Report, Part II, Appendix, vol. i, pp. 8–10 and 149–152.

FOUR conventions of nurses will hold their triennial sessions in San Francisco during the Panama-Pacific International Exposition. The four organizations of nurses which will visit the exposition are, according to the *New York Medical Journal*, the International Association of Nurses, representing fifteen foreign nations, including England, Ireland, Germany, France, Belgium, Italy, and others, with Australia, China, and Cuba, of which Dr. Helen Parker Griswell is president; the American Nurses' Association, with 22,000 members, of which Miss Genevieve Cook, of San Francisco, is president; the National League of Nurse Education, numbering 12,000 members, chiefly educators and superintendents of training institutes; the Organization of Public Health Nurses, with an equal number of members, whose labours have to do particularly with public health, tuberculosis, settlement work, social service, and the like. These are distinct from the Red Cross, which also will hold a congress at about the same time. The California State Nurses' Association will act the part of hostesses to the foreign contingent. The attendance from European countries will, it is said, be very large. In addition to the congresses, these organizations are uniting in the preparation of a comprehensive exhibit of modern hospital appliances, besides an historical exhibit, a model mortuary, and demonstration wards. These exhibits, with the demonstration hospital, will be maintained during the ten months of the exposition.

ALTERATIONS IN THE BLOOD OCCURRING IN HAY FEVER.

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For many years I have been the victim of hay fever; gradual in onset, the symptoms have increased in severity year by year, the only remission occurring when much rain has fallen during the summer months—for example, in 1912, a distinctly wet summer. The symptoms usually start towards the end of May and continue throughout the whole of June and generally through the greater part of July, gradually clearing up.

Last summer, soon after the symptoms set in on May 28th, I determined to try the effect of a vaccine, but, before doing so, I thought I would examine my blood. As the findings were so peculiar and had not been recorded in the accounts of this condition, I considered it more important to study the blood picture day by day (which I did at 10 a.m., with one exception, noted in Table I) than to attempt in any way to alter it by any method of treatment. I therefore endured the full effects of an aggravated attack—aggravated, since the summer of 1913 was particularly bright and dry. The greater part of the results obtained have been charted in the following tables.

It will be seen that throughout the attack the haemoglobin content varied from 65 to 80 per cent., the colour index from 0.4 to 0.8, and the red blood count showed an almost consistent polycythaemia, while the leucocyte count showed an equally marked leucopenia. The polycythaemia is unassociated with either an enlarged spleen or cyanosis.

The differential leucocyte count showed a diminution of polymorphs, a marked increase of large mononuclears and transitionals, a definite increase of eosinophiles, and the presence of occasional mast cells. The variation in rouleaux formation was not great. No correlation to the symptoms could be adduced in the case of the blood platelets, the presence of phantom cells was noted throughout, and particularly noticeable were the large numbers, sometimes amounting to 5 per cent. of the total count, of "dead" leucocytes—that is, leucocytes whose nuclei had undergone complete degeneration and whose protoplasm had become unrecognizable. By the study of forms intermediate between healthy leucocytes and "dead" leucocytes it was possible to determine that by far the largest proportion were derived from large mononuclears and transitionals. In addition it was also noted that, throughout the attack, many of the leucocytes, more especially the large mononuclears and transitionals, exhibited well-marked vacuoles both in protoplasm and nucleus. It was also noticed that the red blood corpuscles showed decided variations in relative size, macrocytes and microcytes being always commonly found while distortions in shape were by no means uncommon, almost amounting to a definite poikilocytosis. The fusion of several red blood corpuscles into the form of a rosette was noted from time to time. Polychromatosis was noted on June 16th and 24th. No nucleated reds were seen at any time. The size and staining properties of the blood platelets varied considerably, sometimes they were uniformly small, at other times there would be many large forms scattered about, while sometimes they would be stained deeply, at other times quite lightly.

In making the differential counts it was found essential to count both at the periphery of the smear and also at

TABLE I.

Date.	Weather.	Symptoms.	Haemoglobin.	Colour Index.	Red Blood Corpuscles (Thousands).	Leucocytes (Hundreds).	Polymorphs.	Large Mononuclears.	Lymphocytes.	Eosinophiles.	Mast Cells.	Rouleaux Formation.	Blood Platelets.	Phantom Cells.	Dead Leucocytes.
1913.			%				%								
June 5 ...	H D R	H	70	0.5	6984	72	61.3	13	17.3	7.3	1.0	Fair	In great excess	Few	++
,, 6 ...	C D R	H C A	70	0.4	8184	42*	64.25	6	20.0	9.5	0.25	Fair	In excess	Few	++
,, 7 ...	C D R	H S	60	0.5	5112	56	62.0	12	19.2	5.6	1.0	Good	In slight excess	Few	+
,, 9 ...	C D	Nil	70	0.5	6296	48	62.25	8.5	24.0	4.75	0.5	Good	In excess	Many	++
,, 10 ...	C R	H	70	0.5	6288	36	63.0	7.75	21.5	6.0	1.0	Good	In great excess	Many	++
,, 11 ...	C B	H	70	0.5	6016	46	63.35	8.6	22.0	4.8	0.8	V.g.	In excess	Few	++
,, 13 ...	C D B S	H S	60	0.5	5768	54	57.2	9.8	24.2	7.4	0.8	Good	In excess	Few	++
,, 14 ...	C S	H S C	65	0.4	6840	62	54.4	12.0	27.8	5.6	0.2	V.g.	In excess	Few	++
,, 16 ...	H B	H S C	70	0.5	6712	70	57.6	13.2	22.4	5.8	1.0	V.g.	In great excess	Many	++
,, 17 ...	H B	H S C	70	0.6	5856	50	54.1	15.0	18.5	11.0	1.3	V.g.	In great excess	Many	++
,, 18 ...	C D	‡	75	0.8	4568	40	68.3	10.0	16.0	5.3	0.3	V.g.	In excess	Few	++
,, 19 ...	C B	H S C	70	0.6	5912	30‖	64.4	12.6	14.8	7.2	1.0	V.g.	In excess	Few	++
,, 20 ...	C D	H S C	65	0.5	6344	38	63.1	13.3	15.3	7.5	0.6	V.g.	In excess	Few	++
,, 21 ...	C D	S C	65	0.6	5632	50	63.5	15.3	13.3	7.3	0.3	V.g.	In slight excess	Few	++
,, 22 a.m.	H B	H S C	—	—	—	—	61.8	7.5	20.3	9.6	0.5	V.g.	In slight excess	Many	++
,, 22 p.m.	H B	H S C A	—	—	—	—	60.8	9.3	23.3	5.6	0.8	V.g.	In slight excess	Many	++
,, 23 ...	C D S	H S C	75	0.7	5112	42	51.2	12.4	23.5	9.1	0.4	V.g.	In slight excess	Many	++
,, 24 ...	C D S	H S C	65	0.4	7306	82	59.4	11.4	23.6	5.2	0.4	V.g.	In excess	Many	5.5%
,, 25 ...	C D	H S C	75	0.7	5424	62	51.3	13.5	26.3	8.0	0.8	V.g.	In excess	Many	++
,, 26 ...	C B	H S C	75	0.5	6760	64	60.0	12.0	21.5	5.8	0.6	V.g.	In excess	Very many	++
,, 27 ...	H B	H S C	75	0.4	7360	64	55.2	11.4	24.5	8.1	0.5	V.g.	In slight excess	Very many	++
,, 28 ...	H B	H S C A°	80	0.7	5688	52	61.6	10.5	22.6	4.8	0.3	V.g.	Very few	Many	++
,, 29 ...	H B	H S C A°	—	—	—	—	52.0	8.8	30.4	8.2	0.6	V.g.	Few	Many	++
,, 30 ...	H B	H S C A°	75	—	6256	40	64.0	11.0	18.5	6.5	0	V.g.	Few	Many	+++

In "Weather" H = hot, D = dull, R = rain, C = cold, B = bright, S = showery.
In "Symptoms" H = headache, C = coryza, A = asthma, S = sneezing.
* Three estimations. ‡ From 5.40 a.m. to 6.10 a.m. typical attack of asthma; during rest of day no symptoms. ‖ Two estimations.
° From 3 a.m. to 5 a.m. typical attack of asthma.

TABLE II.

Date.	Weather.	Symptoms.	Haemoglobin.	Colour Index.	Red Blood Corpuscles (Thousands).	Leucocytes (Hurd).	Lymphocytes.	Large Mononuclears.	Eosinophiles.	Mast Cells.	Rouleaux Formation.	Blood Platelets.	Phantom Cells.	Dead Leucocytes.
1913.			%											
July 1	H B	H C S	75	0.6	5,600	76	67.4	9.8	17.2	5.4	0.2	Poor	In excess	Many	
„ 2	H B	H C S A	80	0.6	6,528	56	56.4	15.2	19.4	9.0	0	V.g.	In slight excess	Few	+
„ 3	H B	H C S A	—	—	—	—	41.8	13.3	37.0	7.1	0.6	V.g.	In excess	Many	
„ 4	H D	H C S A	75	0.6	6,008	60	66.0	10.6	16.0	6.0	1.4	V.g.	In slight excess	Many	
„ 5	C D	H C A	85	0.7	5,656	91	64.2	15.2	12.2	7.8	0.6	V.g.	In excess	Very few	
„ 7	C D	H A	80	0.7	5,760	61	64.2	11.8	15.8	8.0	0.2	V.g.	Not in excess	Many	+
„ 8	C D	A	80	0.7	5,821	64	64.8	10.0	13.6	11.0	0.6	V.g.	Not in excess	Many	+
„ 9	C B	C A	80	0.7	5,608	76	55.0	13.5	17.8	13.3	0.3	V.g.	In excess	Many	+
„ 10	C D	A	80	0.6	5,808	66	55.1	11.0	19.1	13.8	0.8	V.g.	In excess	Many	+
„ 11	C D	C A	80	0.6	5,920	60	55.4	9.4	20.6	13.2	1.4	V.g.	In great excess	Many	++
„ 12	H D	H C A	80	0.7	5,664	58	54.2	17.2	14.6	13.8	0.2	V.g.	In great excess	Many	++
„ 13	H D	H C S A	—	—	—	—	48.2	17.0	19.7	13.7	1.2	V.g.	In slight excess	Many	
„ 14	C D-B	H C S A	80	0.6	6,528	56	58.6	13.6	17.8	9.2	0.8	V.g.	In great excess	Many	++
„ 15	H B	H C S A	80	0.7	5,192	58	65.8	7.6	17.3	8.5	0.6	V.g.	In excess	Many	+
„ 16	H B	H C S A	80	0.6	6,328	66	56.8	13.6	25.6	3.8	0.1	V.g.	Very few	Very many	++
„ 17	C D	Nil	—	—	—	—	59.6	8.2	22.6	9.0	0.6	V.g.	In excess	Few	++
„ 18	C D	Nil	—	—	—	—	68.0	6.6	14.3	11.0	0	V.g.	In excess	Few	++
„ 19	C D	Nil	—	—	—	—	65.0	16.7	12.0	6.2	0	V.g.	Few	Few	++
„ 20	H B	Nil	—	—	—	—	65.4	10.8	17.0	6.6	0.2	V.g.	Few	Few	+
„ 21	H B	C	—	—	—	—	62.0	13.7	18.4	5.3	0.4	V.g.	Few	Few	
„ 23	H B	C	—	—	—	—	61.6	21.2	12.0	5.2	0	V.g.	Almost absent	Few	
„ 24	H B	Nil	—	—	—	—	45.6	29.2	12.6	12.6	0	V.g.	Few	Very few	++
„ 25	H B	Nil	—	—	—	—	66.2	9.8	18.0	7.0	0	V.g.	In excess	Few	++
„ 26	H B	A	—	—	—	—	54.8	14.6	21.6	8.8	0.2	V.g.	In excess	Few	++

TABLE III.

	Date.	Polymorphs.	Large Mononuclears.	Lymphocytes.	Eosinophiles.	Mast Cells.	Rouleaux Formation.	Blood Platelets.	Phantom Cells.	Dead Leucocytes.	Notes.
	1913.	%									
A.	June 29	53.2	13.4	24.2	8.0	1.2	V.g.	In excess	Many	++	Female, aged 65; first attack, 1885; yearly since; headache; coryza; sneezing; asthma; taken on bright hot day.
B.	July 1	62.0	13.2	18.8	6.0	0	V.g.	Very few	Many	+	Female, aged 30; first attack, 1902; as above; asthma rarely.
C.	„ 2	56 8	16.8	18.0	8.0	0.4	V.g.	In slight excess	Few	+	Male, aged 27; first attack, 1900; as above; asthma rarely.
D.	„ 2	49.2	14.2	21.6	14.6	0.4	V.g.	Not in excess	Few	+++	Female, aged 42; first attack, 1911; as above; asthma especially bad.
E.	„ 2	67.0	12.9	16.6	4.0	0.4	V.g.	In slight excess	None	++	Female, aged 26; first attack, 1907; as above; but no asthma.
F.	„ 3	61.0	13.2	20.2	4.6	1.0	V.g.	Not in excess	None	++	Male, aged 37; first attack many years ago; as above; asthma very rarely.
G.	„ 5	65.8	16.4	13.8	5.8	0.2	V.g.	Not in excess	Many	+	Male, aged 22; a sufferer from chronic asthma of six years' duration, with no seasonal variation.

some little distance therefrom, as the lymphocytes were frequently present away from the periphery.

It is hardly necessary to remark that the symptoms were increased whenever the day was hot, bright and dry, and diminished whenever there was rain, while exposure to pollen was always followed by increased severity. It was also found that sleeping in a draught induced attacks of asthma.

A reference to Tables I and II will demonstrate the marked increase of eosinophilia associated with symptoms of asthma, further reference to the occurrence of eosinophilia in hay fever and its relation to asthma will form the basis of a future paper. As the changes in my blood were considered to result from hay fever I obtained smears, during the most distressing period, from six persons suffering from this condition; the results are charted in Table III. It will be seen that each case supports the conclusion that in hay fever a definite blood picture is produced. At the same time a further reference to a case of asthma with no seasonal variation, in the same table, will demonstrate the close relationship existing.

The cessation of symptoms in my case not being followed, as I had expected, by a return to what might be considered a normal blood picture (see Table IV), I decided to make periodic examinations up to the next hay fever season. The results are charted in Table IV. It will be at once seen that the haemoglobin rises to 100 per cent.; that the colour index rises to between 0.8 and 1; that the polycythaemia has tended to diminish, though only slightly; that a slight leucopenia persists; and that, so far as the differential leucocyte count is concerned, little alteration is noted, with the exception of a sensibly diminished eosinophile count. The number of "dead" leucocytes has also appreciably decreased, and the variations in size of the red blood corpuscles is not nearly so marked. On the whole it may be said that the blood during the interval between the attacks has become distinctly healthier,

though it does not conform with the recognized standard of a normal blood. Similar and confirmatory results will be seen in Table IIIA.

On the vexed question of what does or does not constitute an eosinophilia it is difficult to speak with certainty, but my own experience leads me to say that 4 per cent. is abnormal, and should strictly be considered to mark the beginning of an eosinophilia.

The complement content of the blood serum has not appreciably altered during the whole period of examination, except on those occasions when it was deliberately increased by experimental inoculation.

Conclusions.

1. That hay fever is definitely associated with an alteration in the blood picture.

2. That the alteration in the blood picture chiefly consists in a decrease of the haemoglobin content, a polycythaemia, an increase in large mononuclears and eosinophiles, together with the presence of vacuolated and degenerated leucocytes, and a degree of leucopenia.

3. That increased eosinophilia coincides with symptoms of asthma.

4. That an altered, but modified, blood picture persists during the interval between the seasonal attacks.

TABLE IIIA.—*Cases A, B, and D, taken prior to Seasonal Attack.*

	Date.	Polymorphs.	Large Mononuclears.	Lymphocytes.	Eosinophiles.	Mast Cells.	Rouleaux Formation.	Blood Platelets.	Phantom Cells.	Dead Leucocytes.	Notes.
	1914.	%									
A.	May 13	61.2	17.8	17.6	2.6	0.8	Good	Not in excess	None	Very few	Free from symptoms, including asthma.
B.	„ 13	62.0	20.8	14.4	2.4	0.4	Poor	Not in excess	None	Almost none	Free from symptoms, including asthma.
D.	„ 13	45.2	14.2	25.8	14.6	0.2	Fair	Not in excess	None	+	Free from symptoms, including asthma.

TABLE IV.

Date.	Haemoglobin.	Colour Index.	Red Blood Corpuscles (Thousands).	Leucocytes (Hundreds).	Polymorphs.	Large Mononuclears.	Lymphocytes.	Eosinophiles.	Mast Cells.	Rouleaux Formation.	Blood Platelets.	Phantom Cells.	Dead Leucocytes.
1913.	%				%								
Sept. 3 ...	90	0.6	6,504	60	54.3	15.0	22.4	8.0	0.3	Fair	Not in excess	Few	+
„ 11 ...	90	0.8	5,560	56	68.1	8.8	15.5	7.1	0.3	Fair	Not in excess	Many	Few.
„ 18 ...	95	0.9	6,080	90	64.4	10.4	15.8	9.0	0.4	V.g.	In excess	Many	++
„ 23 ...	95	0.7	6,696	60	57.0	18.0	16.4	8.4	0.2	V.g.	Not in excess	Many	+
Oct. 1 ...	100	0.7	6,448	52	63.8	12.6	14.2	9.2	0.2	V.g.	In excess	Many	Few.
„ 9 ...	100	0.8	5,888	52	58.8	16.0	21.4	3.6	0.2	V.g.	Not in excess	Many	Very few.
„ 16 ...	100	0.8	6,096	44	69.6	13.4	13.0	4.0	0	V.g.	In great excess	Many	Almost none.
„ 24 ...	100	0.8	5,992	42	66.0	16.6	15.2	1.8	0.4	V.g.	In slight excess	None	None.
„ 30 ...	100	0.8	6,240	62	61.0	14.0	20.9	3.8	0.3	Good	Not in excess	Few	Very few.
Nov. 6 ...	100	0.8	6,248	50	70.2	8.4	15.8	5.0	0.6	V.g.	Not in excess	Few	Few.
„ 13 ...	100	1.0	4,784	60	52.6	20.2	21.0	5.8	0.4	V.g.	Not in excess	Many	Very few.
„ 20 ...	100	0.9	5,192	58	63.0	15.2	15.2	6.0	0.6	V.g.	In excess	Many	+
„ 27 ...	100	0.7	6,560	64	62.4	15.4	16.8	4.8	0.6	V.g.	Not in excess	Many	+
Dec. 4 ...	100	0.9	5,296	62	64.0	11.6	18.6	5.4	0.4	Fair	Not in excess	Many	Few.
„ 12 ...	100	0.9	5,576	50	66.4	12.0	17.8	2.8	1.0	Fair	Not in excess	Very few	Few.
„ 19 ...	100	0.9	5,344	62	55.6	12.4	23.2	7.8	1.0	Fair	In excess	Very few	Very few.
1914.													
Jan. 15 ...	100	1.0	4,984	52	67.4	15.0	14.6	2.8	0.2	V.g.	In great excess	Few	Very few.
„ 22 ...	100	0.9	5,376	70	57.6	17.8	19.3	4.8	0.3	V.g.	Not in excess	Very few	Few.
„ 29 ...	100	1.0	4,848	86	68.6	13.2	13.0	5.0	0.2	V.g.	In slight excess	Few	None.
Feb. 5 ...	100	0.8	5,864	48	65.6	13.8	13.8	5.6	1.2	V.g.	Not in excess	Few	None.
„ 19 ...	100	0.8	5,824	64	53.8	16.0	25.2	4.8	0.2	V.g.	In slight excess	Few	None.
„ 26 ...	100	0.8	5,792	50	62.2	13.8	18.0	5.4	0.6	V.g.	In slight excess	Many	None.
Mar. 5 ...	100	0.9	5,520	50	63.4	12.2	20.8	3.0	0.6	V.g.	In slight excess	Few	Very few.
„ 20 ...	100	0.8	6,016	58	61.4	13.8	22.0	2.0	0.8	V.g.	Not in excess	Many	Very few.
„ 31 ...	100	1.0	4,976	38	60.8	19.8	16.4	2.0	1.0	V.g.	In excess	Many	+
Apr. 7 ...	100	0.9	5,200	42	64.6	15.2	17.2	2.8	0.2	V.g.	Not in excess	Many	None.
„ 16 ...	100	0.9	5,536	56	53.8	19.4	22.6	3.2	1.0	V.g.	Not in excess	Many	Very few.
„ 23 ...	100	0.7	6,712	56	69.2	12.0	15.0	3.2	0.6	V.g.	In very great excess	Many	Almost none.
„ 30 ...	100	0.9	5,344	58	63.0	13.8	19.6	2.5	0.9	V.g.	In excess	Few	None.
May 7 ...	100	0.9	5,344	68	64.0	13.2	18.6	3.6	0.6	V.g.	In slight excess	Few	+
Normal standard	95-110	1.0	About 5,000	50-80*	70.0	8.0	20.0	1 or more	1 or less	V.g.	Vary.	None.	None.

* Not more than 100.

REMARKABLE VARIATIONS IN THE LEUCOCYTES IN CERTAIN DISEASES.

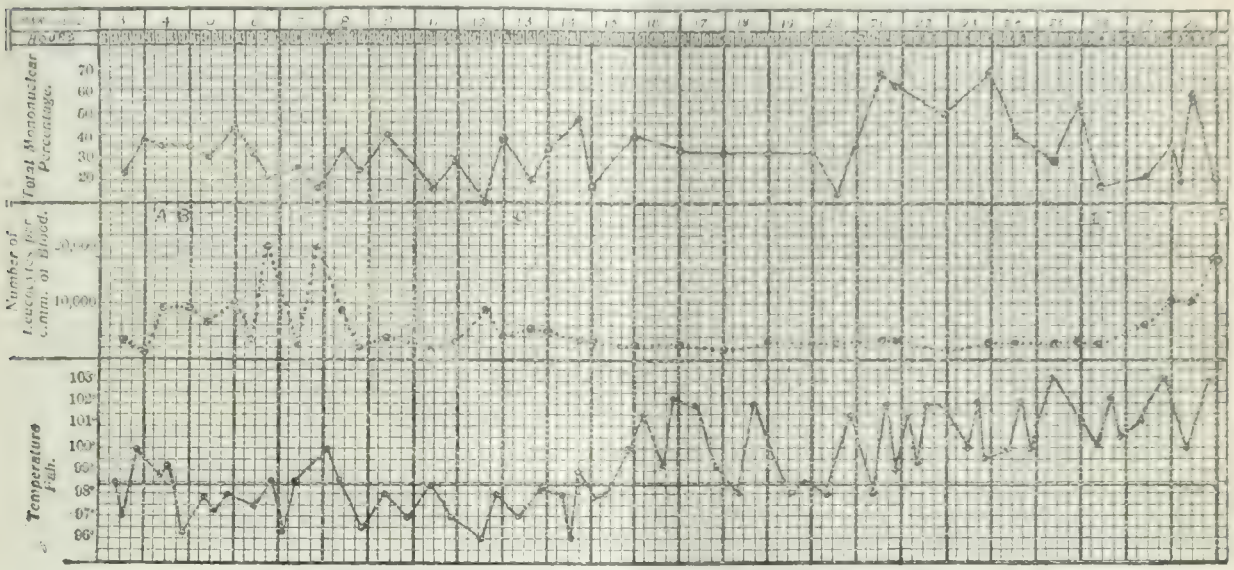
By DAVID THOMSON, M.B., CH.B.EDIN., D.P.H.CANTAB.,
GROCERS' RESEARCH SCHOLAR.

In the BRITISH MEDICAL JOURNAL, December 16th, 1911, I published a paper with charts, showing a remarkable daily variation in the number and variety of leucocytes in malarial fever, Hodgkin's disease, and in a case of carcinoma of the stomach.

These variations were revealed by making blood counts (total and differential) several times daily on successive days. This is a laborious and exacting undertaking, but of the true leucocyte picture in such cases. These researches were carried out by means of a pipette devised for the purpose of counting the number of parasites per cubic millimetre in malaria and sleeping sickness. This pipette is very useful for making frequent leucocyte observations, since the specimens can be kept and counted at some convenient time, and as the specimen is stained a differential count can also be made simultaneously.

The Leucocytes in Hodgkin's Disease.

It is frequently stated in textbooks that the leucocyte picture is normal in Hodgkin's disease. Some observers, however, maintain that there are certain rare cases of Hodgkin's disease which show a blood picture approaching that of lymphatic leukaemia. So far I have examined the

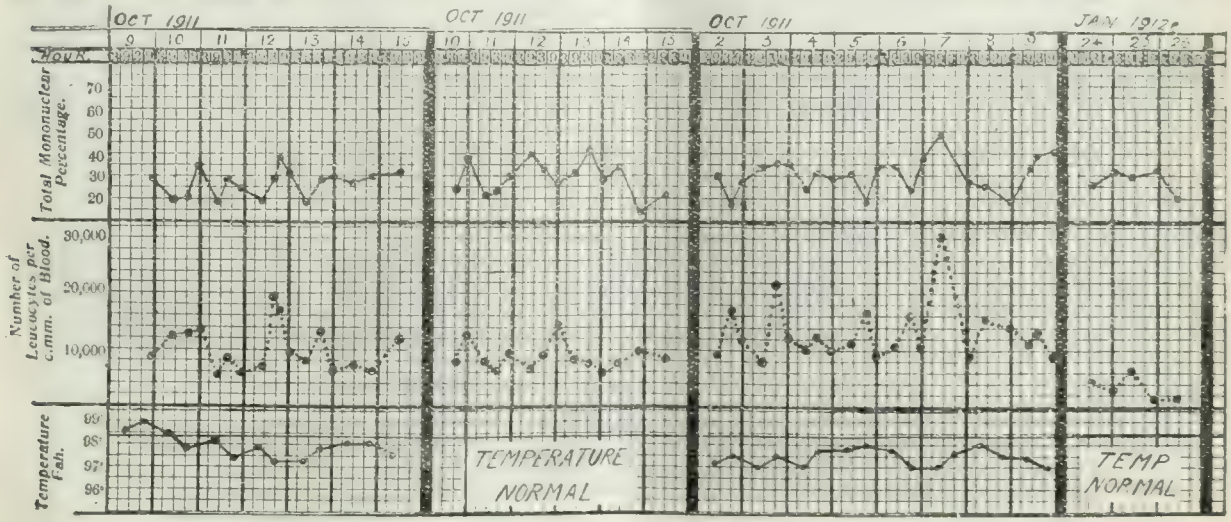


Case E. B., aged 8 (Hodgkin). A, Haemoglobin, 20 per cent.: B, red cells, 1,000,000; C, ulcer in cheek; D, ulcer perforated through cheek; E, death.

I am convinced, from the results obtained, that it should be done in several cases of all known diseases in order to advance our knowledge of the various leucocyte pictures, and for the sake of discovering new facts about the behaviour of leucocytes in general.

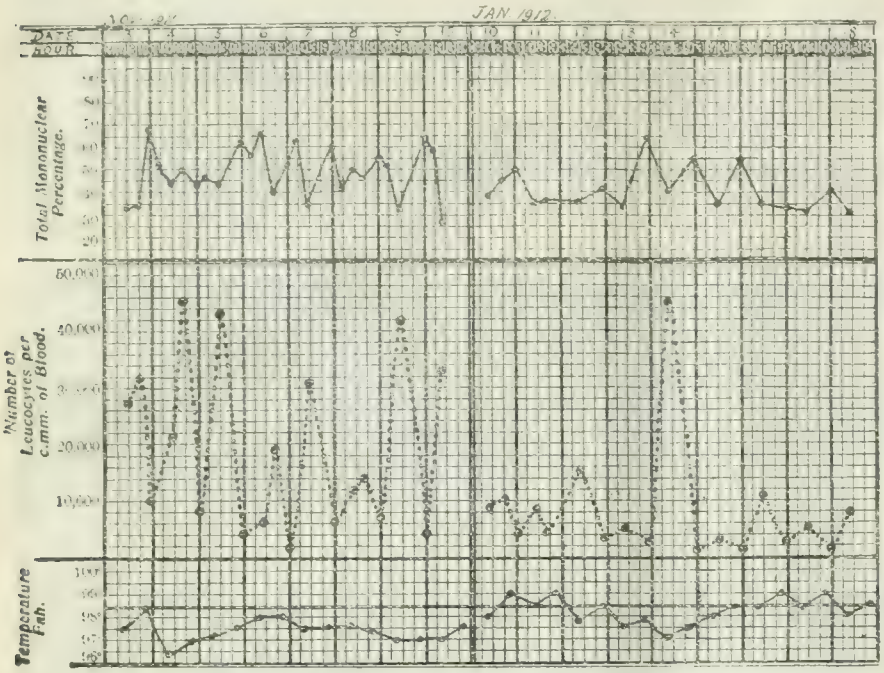
It would appear that isolated blood counts made at long intervals are almost useless; they do not give an accurate representation of the true behaviour of the leucocytes. The leucocytes vary periodically in certain maladies from 2,000 per cubic millimetre to numbers as high as 50,000 to 80,000 per cubic millimetre; it seems obvious, therefore, that isolated counts must give a very fallacious idea

blood with great care in three cases, all of which were diagnosed as Hodgkin's disease by competent physicians (although unfortunately a *post-mortem* examination could not be obtained in any of them). In each case the leucocyte picture showed great abnormality. The charts of the first two cases have already been published (Thomson, 1911 [2]). The chart of the third case, E. B. (Hodgkin), accompanies this article. It differs markedly from the two former cases, in that there is no regular daily variation in the number of leucocytes, and during a considerable period of time the blood showed a marked and constant leucopenia. The patient had very great anaemia; haemoglobin 20 per



Case T. T., aged 19 (osteo-sarcoma). J. W., aged 60 (cancer of caecum). B. R., aged 53 (lympho-sarcoma). Pernicious anaemia.

cent. red cells 1,000,000 per cubic millimetre. Nucleated red cells were very abundant, and there was marked poikilocytosis, also numerous microcytes and basic red cells. The spleen was very large. There was an excess



Case D. D., aged 47 (carcinoma of stomach ?).

of very large mononuclear leucocytes, and a few cosinophilic myelocytes were present. It is possible that in this case there was no leucocytic reaction on account of the acuteness of the disease and the feebleness of the patient, just as in very grave cases of pneumonia one may find very little or no leucocytosis.

The Leucocytes in Malignant Disease.

It is generally believed that in malignant disease one is liable to find a leucocytosis. In 1911 I published the leucocyte chart of a case of undoubted carcinoma of the stomach. This case showed a regular and very marked daily variation in the number of leucocytes. There was no fever and apparently no septic focus since the total mononuclear percentage was high. The leucocytes varied in numbers from 5,000 to 30,000 and even 60,000 per cubic millimetre. I am now able to give further charts of a case of sarcoma of the ileum, a case of lympho-sarcoma and a case of carcinoma of the caecum. In these there is no regular or very marked variation in the leucocytes, showing that the phenomenon is by no means regular in occurrence in all cases of malignant disease.

The case D. D. (carcinoma of stomach) shows the phenomenon, but, unfortunately, the value of this chart is diminished because the diagnosis of carcinoma was doubtful. The patient was cachectic, very anaemic, haemoglobin 50 per cent., and had vomited blood. He also had malaena at times.

Myositis Ossificans.

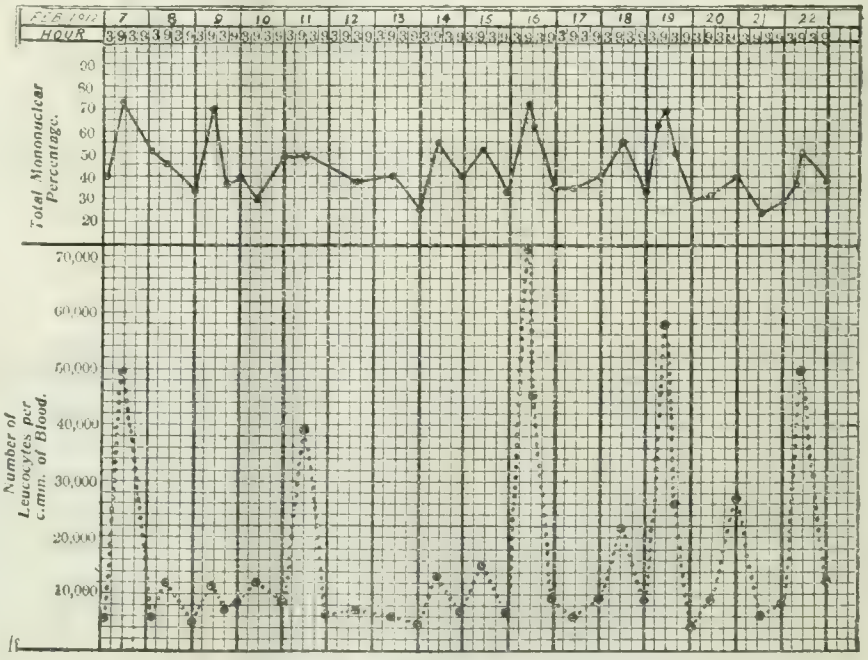
This is a very rare disease, and it is doubtful if the leucocytes have ever been carefully observed in the few cases recorded. From the accompanying chart it will be seen that very remarkable leucocytic variations took place, but the phenomenon was somewhat irregular. The number and percentage of leucocytes remained more or less normal for intervals of several days, but occasionally an astonishing leucocytosis occurred, as great as 50,000 or even 70,000 per cubic millimetre, and each rise was characterized by an increase in the percentage of the mononucleated variety, amounting to 70 per cent. or more. These rises are very remarkable, but I am not disposed to believe that they are characteristic of the disease. This patient had ankylosis of his jaw, the ossification having attacked, among others, the muscles about the mandible. An operation had been performed to relieve this condition and a chronic sinus developed which communicated with the mouth. This sinus discharged a small amount of pus which was found to be constantly swarming with spirochaetes (apparently *Spirochaeta vincenti*). It seems to me probable that these remarkable leucocyte rises (chiefly lymphocytes) may have been due to this spirochaete infested sinus.

Pernicious Anaemia.

So far I have not yet made any extensive observations on the leucocytes in pernicious anaemia, but in three cases observed for two or three days there was a constant leucopenia.

Splenic Anaemia.

I have recently examined the blood several times daily



Case F. S., aged 28 (myositis ossificans).

for three to four days in six cases of splenic enlargement. In none of these cases was there any definite variation in the number of leucocytes. The first two were cases of splenic anaemia of infants. These showed a more or less constant leucocytosis amounting to 20,000 to 25,000 per cubic millimetre, with increase of lymphocytes.

The third case was one of true splenic anaemia (Banti's disease) in an adult. The blood of this case showed a

constant leucopenia. The fourth, fifth, and sixth cases were apparently splenomegalies of Gaucher's type in adult females. The leucocytes in these did not vary, but tended to be increased in number amounting to about 15,000 per cubic millimetre.

Conclusions.

I would like to urge the advisability of further research in this manner. It would be very gratifying to have careful and accurate leucocyte charts made from several daily observations over considerable periods of time, of say ten or more cases of every known disease. If this were done our knowledge regarding the pathology of the blood would be greatly increased. Some splendid work has been done with regard to the leucocyte reactions induced in the blood by organisms (Andrewes, 1910[1]), but the important facts brought to light in his researches were obtained only after very frequent and laborious observations. In carrying out a detailed research of this kind it would be advisable to choose cases of disease uncomplicated by sepsis and other concomitant conditions, and the diagnosis should be as certain as possible. I do not feel that I am entitled to draw any conclusions from the few cases which I have recorded. Further cases must be studied in a similar manner before any definite opinions can be formed. It seems to me, however, that periodic variations, in which the mononuclear leucocytes play an important part, suggest the possibility of some protozoal infection. These variations are entirely different from the leucocyte picture in sepsis, where the leucocytes remain more or less constantly high, accompanied by a high percentage of the polymorphonuclear type. In such cases there is also, as a rule, a septic temperature.

I wish to thank Dr. Macalister, Dr. Lloyd Roberts, Mr. Jones, and Mr. Newbolt, in whose clinics at the Royal Southern Hospital, Liverpool, the above cases were obtained.

References.

[1] F. W. Andrewes: The Croonian Lectures on the Behaviour of the Leucocytes in Infection and Immunity. *Lancet*, June 25th, July 2nd, 9th, and 16th, 1910.

[2] D. Thomson: A Remarkable Daily Variation in Leucocytes in Several Diseases: Malarial Fever, Hodgkin's Disease, Cancer. BRITISH MEDICAL JOURNAL, December 16th, 1911, with 3 charts.

The Semon Lecture
ON
SUSPENSION LARYNGOSCOPY AND ITS PRACTICAL USE.

DELIVERED BEFORE THE UNIVERSITY OF LONDON.

BY GUSTAV KILLIAN,

PROFESSOR OF LARYNGOLOGY AND RHINOLOGY IN THE UNIVERSITY OF BERLIN.

(Translation of abstract furnished by the author.)

SUSPENSION laryngoscopy is a modified direct laryngoscopy. It serves to facilitate laryngeal operations. It was discovered by experiments with direct laryngoscopy on the dead body, and is made use of now in the living.

Description of Method.

Patients who are to be examined by suspension laryngoscopy must be suitably prepared for the examination. Local anaesthesia with cocaine is usually insufficient. It is better to inject 0.01 to 0.02 gram morphine half an hour before. If the examination is likely to last a long time, it is better to produce partial anaesthesia by scopolamine-morphine. The scopolamine solution must be freshly prepared. *Two* hours before the examination the patient receives 3 decimilligrams of scopolamine and 1 centigram of morphine. *One* hour before, the same amount of both substances is injected. In addition, it is necessary, before the commencement of the examination, to paint the larynx with cocaine.

The tongue spatula used in suspension laryngoscopy has the form of a groove of V-shaped cross section, and is provided at the sides with two movable wings. Spatulas of other forms may also be used, if they are flat and heart-shaped in front. The spatula is introduced either over the epiglottis or up to the base of the tongue. In the last case, the epiglottis must be raised with a second spatula.



It is best to advance the grooved spatula over the epiglottis as far as the vocal cords. The patient lies in a horizontal position, the head projecting free over the edge of the operation table; the spatula is introduced, and held by the long arched handle, which is hook-shaped at the end, and by means of the latter is hung, in a special direction, on a gallows. *The head of the patient, therefore, hangs from the tongue spatula.* In order that the tongue spatula shall not slip out, the point of suspension must be vertically over the apex of the tongue spatula. For this reason the spatula handle has a movable joint. The hook end can be inclined towards the tongue spatula by means of a screw. In order that the spatula shall not slide out, and that the mouth shall be held open sufficiently widely, a mouth gag is necessary, which by means of a screw can be made narrower or wider.

For illumination a reflector or a head electric lamp is used. In demonstrations a Mignon lamp is used, which is fixed to the instrument itself.

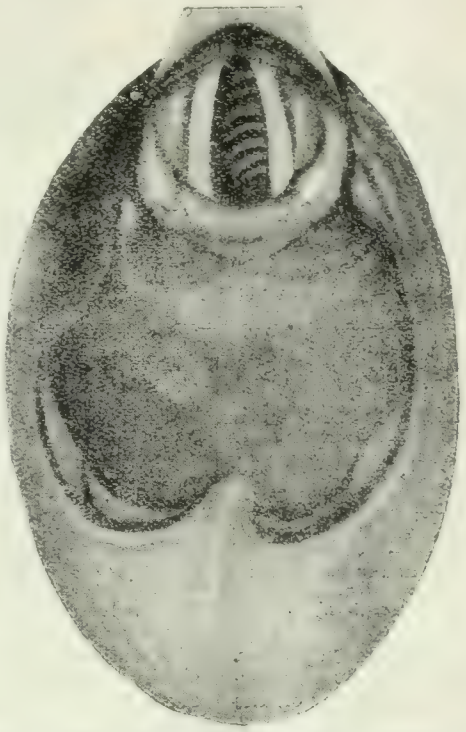
An operator who is used to the direct method, will learn suspension laryngoscopy very easily. The essential points are to introduce the tongue spatula under good illumination, with the mouth widely opened, up to the epiglottis, and then over this, deep into the inner part of the larynx, to insert the mouth gag correctly, to suspend the hook on the gallows, and then, by turning the wing screw of the hook, to bring into view the finer parts of the interior of the larynx.

When the front portions of the larynx, especially the anterior commissure of the vocal cords, are not sufficiently in view, the cricoid arch should be pressed upon from outside. This pressure may also be produced by means of a special mechanism with the so-called counter-presser, which is fastened to the hook, and by means of a plate presses on the cricoid. This counter-presser has the form of an arch, and can be shortened or lengthened.

When suspension laryngoscopy is successful, one sees the whole mouth and throat, and at the end of this the

interior of the larynx. Both hands of the operator are free. He can therefore undertake very easily complicated manipulations in the throat and larynx.

For these methods of examination, as well as for the other direct methods, I have constructed a special operation table, which can be so conveniently arranged that the operator can see into the throat of the patient whether he is sitting or standing.



Application of Suspension Laryngoscopy.

The new procedure is of special service in demonstrations. It is very easy for students to make themselves well acquainted with the details of the interior of the throat and larynx, and to note any pathological changes. Polypi of the vocal cords, papillomata, carcinomata, tuberculosis, paralysis of the recurrent laryngeal nerve, and similar conditions can very easily be demonstrated. Preparation for operation can also be performed more easily.

In children suspension laryngoscopy succeeds well. It is, however, necessary to give the child ether or chloroform. Scopolamine should not be given to children under 15 years old. We use suspension laryngoscopy in children for diagnostic and operative purposes, to discover the cause of disturbances of the voice and of dyspnoea and to remove these. Of acute processes, the examination reveals the presence of catarrh, subglottic swelling, false membrane formation in the subglottic space. Chronic laryngitis, nodule formation on the vocal cords, papillomata, tuberculosis, and syphilis can be observed. A special chapter concerns foreign bodies in the larynx.

Suspension laryngoscopy has rendered specially good service in recurring multiple papillomata of the larynx. The growths can be, after repeated sittings, radically removed in a natural way. For the prevention of recurrence it is recommended nowadays, that a capsule of mesothorium should be introduced into the larynx after the operation, and left there at least half an hour.

Foreign bodies in the child's larynx can easily be seen and removed with suitable forceps.

Suspension laryngoscopy has also proved very suitable for guidance in direct tracheoscopy and bronchoscopy in children. When the interior of the larynx is well seen, one can also very easily and cautiously introduce tubes into the air passages and into the bronchi. Should it be necessary to introduce such a tube repeatedly, there is no difficulty in so doing. By means of suspension laryngoscopy I have been successful in extracting a metal case and a nail out of the bronchi.

In adults we use suspension laryngoscopy for the scraping out of the larynx in tuberculosis. With the sharp spoon all tuberculous granulations can be removed at one sitting. With the double curette, the infiltration can be taken away. Also, it is possible, when necessary, to employ the galvano-cautery deeply. The treatment of even advanced cases of laryngeal tuberculosis is by the new methods materially shortened. The patients can very soon, after removal of the grossest changes, be sent to the sanatorium for further treatment. Should oedema occur after the interference, this is easily cured by Albrecht's hot-air bath.

Laryngeal polypi, papillomata, and small carcinomata in favourable situations can be removed easily with this new method. The mesothorium treatment is especially adapted for the treatment of laryngeal carcinomata in patients who refuse operation. The mesothorium capsule is grasped with forceps and introduced into the larynx. The instrument is fixed on to the suspension hook. In scopolamine partial anaesthesia the patient bears this procedure comfortably for from one hour to one hour and a half.

The examination of the hypopharynx and of the entrance of the oesophagus is facilitated by suspension laryngoscopy. This method indicates a significant step forward in intralaryngeal technique.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

PTOMAINE POISONING IN THE PUERPERIUM.

A young woman, aged 21, was confined on February 24th, 1914. The baby, which was her first and healthy in every way, was delivered by natural efforts, and the placenta and membranes came away complete.

She remained quite well, with normal pulse and temperature, until the morning of March 3rd, exactly one week after the confinement, when she complained of feeling unwell, the lochia, which had been normal, suddenly ceased; the temperature rose to 103° and pulse to 100. Her face was flushed and seemed slightly swollen, and the tongue was furred. The bowels did not act after an aperient, although previous to this they had moved regularly. There was no history of her having eaten anything out of the ordinary. She had had fish for dinner the previous day, and this, I was assured, was quite sound.

Thinking that the condition was of uterine origin, I examined her, but could find nothing abnormal in the vagina or uterus. However, I gave her a thorough uterine antiseptic douching.

She did not seem any better after this, and the temperature rose to 104.8 and the pulse to 110: the face assumed a curious puffy appearance, which steadily increased until her eyes were almost completely closed by the oedema of the lids: the rest of her face became enormously swollen, so much so that she was quite unrecognizable. The urine was free from albumin or any other abnormality. She had no cough, and there was nothing abnormal in the chest.

There was no vomiting, and the bowels remained obstinately constipated, even after large and repeated doses of aperients. Finally, following a high soap and water enema, a copious and most offensive motion, consisting chiefly of undigested fish, came away. She felt much better after this, and the temperature and pulse commenced to fall. After further injections the facial oedema began to subside, the lochia became normal again, and she completely recovered.

There is no doubt that the origin of the trouble lay in the fish which she had eaten for dinner on the day previous to the commencement of symptoms, and I subsequently heard that several other persons in the neighbourhood had been similarly affected after eating fish from the same shop, and on the same day.

The case is of interest from the fact that, occurring at such a time, the symptoms were liable to be mistaken for those of uterine trouble. Although resembling the latter to some extent, they were not typical of ptomaine poisoning in that there were at no time signs of gastro-intestinal irritation, such as vomiting, diarrhoea, etc. Also, the symptoms did not appear until eighteen hours after the tainted food was eaten. On the other hand, I have never

seen a case of septicaemia, sapremia or pyaemia of uterine origin in which there was present the extreme facial oedema which occurred in this patient.

Bradford. H. SUTHERLAND METCALFE, M.D.

"COMPARATIVE" RISE OF THE URINARY TEMPERATURE IN INFLAMMATORY DISEASES OF THE URINARY TRACT.

NORMALLY the urinary temperature is about 0.4° F. below the rectal and about 0.4° F. above the oral (three minutes' exposure); by "comparative" rise I mean as compared with the normal difference between these temperatures. Thus, if the urinary temperature equals or exceeds the rectal, there is a "comparative" rise—for example, urinary 98° and rectal 97.6° equals a rise of 0.8°.

Three months ago I was suddenly attacked by severe pain in the right side of the abdomen, with tenderness, rigidity, and vomiting, simulating appendicitis (no urinary symptoms). Two months later a similar attack occurred, which was accompanied by the usual symptoms of renal calculus. Subsequently a stone was passed. I lately noticed that, whereas my rectal temperature had always exceeded the urinary by 0.4°, now the conditions were reversed, the urinary exceeding the rectal by 0.4°, giving a "comparative" rise of 0.8. A fortnight after passing the stone these temperatures resumed their normal relations.

Had I been aware of this diagnostic sign a correct diagnosis could have been made at the first attack. Normally, on waking in the morning, the urinary temperature is about 96.8° and the rectal about 97.2°. It must be pointed out that a mere rise of urinary temperature without comparison with the rectal or oral (the former is to be preferred) is useless, as, of course, it rises in all "general fever."

It is essential that the bulb of the thermometer be placed close to the meatus and about 7 oz. of urine voided, so that the best time to take the temperature is on waking; for rectal temperature the thermometer is best inserted about 1½ in. and left *in situ* two minutes.

It is well known that local inflammations give a "comparative rise"—for example, ischio-rectal abscess gave a rectal temperature 2° above the oral, and alveolar abscess caused the oral to be equal to the rectal. It seems only logical that the same should happen in urinary inflammation.

Unfortunately, my health prevents me making further observations, but I may put forward the following "speculative propositions":

1. That a "comparative rise" of the urinary temperature is present in inflammation of the urinary tract.
2. That this observation (if subsequently confirmed) should prove of diagnostic value in these diseases, with obscure symptoms.
3. That the temperature of urine catheterized from the ureter might indicate the diseased organ when cystoscopy failed.

DOUGLAS A. WOOD, M.B., Ch.B.,
(late A.M.O., Pinewood Sanatorium, Wokingham.)

Sittingbourne.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS.

RUPTURED SPLEEN: SPLENECTOMY.

(By J. LIVINGSTON, F.R.C.S.Edin.)

W. H. L., a labourer, aged 27 years, was run over by a one-ton motor omnibus at 5 p.m. on November 5th, 1913, the rear wheel passing over the abdomen. He was dismounting from the front seat while the machine was running at slow speed, when he slipped and fell under the wheel. He was unable to rise, and was lifted up and carried home, a distance of 100 yards or so.

When I saw him at 6 p.m. he was lying on a couch, breathing shortly, like a patient with pleurisy; his pulse was over 100. The abdomen was rigid all over. There was a superficial skin graze 2 in. by 1 in. over the right anterior superior iliac spine; this was the only injury to be seen.

He was removed to the North Lonsdale Hospital, where I saw him again at 8 p.m. His condition was as before. Pulse 92; temperature 96.2°; respirations 28. There was no fracture of ribs. Urine was passed voluntarily, and was normal. I decided to keep him under observation.

The following day there was no apparent change. He had passed a restless night, owing to abdominal pain. A consultation with several colleagues resulted in the verdict being against ruptured viscus and in favour of injury to the abdominal wall. A small olive-oil enema brought away a normal motion, and flatus passed subsequently. At 3 p.m., as the temperature and pulse were rising, I decided to explore the abdomen.

Operation.

With the assistance of Dr. J. A. Reed, I opened the abdomen in the middle line below the umbilicus. A large quantity of blood was found in the peritoneal cavity; on searching for the source of haemorrhage a piece of spleen was found attached to the anterior surface of the omentum. The opening was quickly enlarged upwards and to the left. The left hand was introduced upwards towards the diaphragm behind the spleen. The spleen was gently brought forward, and while I was endeavouring to secure the splenic vessels between two fingers, the whole organ came away; apparently the attachment of the vessels had been partially torn through. Fierce haemorrhage immediately followed. I pressed the ulnar border of my hand back towards the aorta, and so controlled the haemorrhage. On clearing away the blood the splenic vessels could be seen pulsating in front of my hand. These were quickly secured, a tube was introduced to the splenic bed from a stab wound in the flank, and another was inserted supra-pubically. The tubes were removed forty-eight hours later. Saline solution was poured into the peritoneum, and the wound was sewn up with through-and-through silkworm sutures.

After-History.

He suffered considerably from shock and sickness, and was given saline by the rectum, and 10-minim doses of liquor strychninae every four hours. Two days after operation, as the nausea prevented his taking any nourishment by the mouth, he was given ʒss of cane sugar every four hours per rectum. This appeared to revive and stimulate him; in any case, he did very well afterwards, and his pulse came down below 100. There was no suppuration, yet the temperature for ten days swung between 96° and 101° F.

Ten days after operation, owing to a misunderstanding, all the stitches were removed without my knowledge. The patient had a fit of coughing and the wound gave way.

At 6 p.m. I was telephoned for, and found the abdominal contents visible from end to end of the gaping wound. Dr. Rutherford and I quickly closed the abdomen again. Forty-eight hours later he collapsed and appeared to be dying. Pituitrin was injected and general restoratives applied. He responded to treatment, and once more resumed his journey towards convalescence. This time there was some superficial suppuration. He left the hospital on January 5th, and has gone on well since.

Dr. Gough, of the Yorkshire Pathological Laboratory, mounted the specimen, which he described as follows:

Spleen.

The specimen is normal in size and appearance, except for the trauma. It shows the following injuries:

1. The anterior basal angle is completely detached. The detached portion includes about 2 in. of the anterior border up to a deep notch and 1½ in. of the inferior border.
2. A fissure runs from the upper end of the hilum on to the renal surface, then up to the superior angle.
3. A second fissure runs on the outer surface about ¼ in. from the anterior border.

Dr. R. A. J. Harper kindly examined the blood five days

after operation and again a week after discharge. He reported as follows:

Blood Examination (fifth day after operation).

Red blood corpuscles	3,456,000
Whites	4,000
Haemoglobin	85 per cent.

Films showed no unusual proportion amongst the various types of leucocytes. A few normoblasts were present.

January 25th, 1914.

Red blood corpuscles	3,348,000
Whites	9,600
Haemoglobin	90 per cent.

Films showed no abnormality.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

GLASGOW AND WEST OF SCOTLAND BRANCH.

At the annual meeting of the Branch on May 12th a clinical demonstration was given in the dispensary of the Western Infirmary. The medical and surgical staff contributed as follows:

Professor Stockman:

1. A man, aged 47, with double cervical rib, much more developed on the left side than on the right. The left arm became very much more easily tired than the right, and the left subclavian artery was much lower than is normally the case.

2. Two boys, with swelling of the tibial tuberosity (Schlatter's disease). Though alleged to have followed injury in both cases, the histories were very doubtful.

3. A painter, aged 65, with lead palsy, showing the usual drop-wrist in both arms, along with paralysis of the deltoids, supra- and infra-spinati, and the lower half of the trapezii.

4. A girl, aged 19, with chronic swelling of the parotid glands of two years' duration. It varied a good deal in degree, and was accompanied by slight dryness of the mouth.

Dr. J. Crawford Renton:

1. A man whose Gasserian ganglion was removed three years ago for epileptiform neuralgia. The inferior division of the fifth nerve was evulsed at first, and that freed him from pain for two years. He had then a return of symptoms, and the complete operation was done, with the result that he had been free from pain for three years.

2. A boy whose spleen was removed four years ago. He appeared quite well, and his blood, which at first showed a great increase of lymphocytes, was now nearly normal.

3. A case of osteomyelitis of the tibia, in which the diaphysis of the bone had been removed six years ago. He had now a good serviceable leg, and was able to go about his work.

4. A case of Still's disease, where spastic paralysis existed for four years, and was relieved by operation. This child walked about with the apparatus on, and a sufficient amount of abduction was demonstrated.

5 and 6. Two cases of ruptured gastric ulcer, which had completely recovered through operation.

Dr. T. Kennedy Dalziel:

1. A young woman whose larynx and pharynx had been excised for carcinoma.

2. A man in whom he had excised the rectum and lower sigmoid (Miles's operation).

3. A patient from whom he had removed a psammoma of the brain; the tumour, which was of the size of an egg, was also shown.

Mr. J. H. Nicoll

Showed cases and specimens illustrative of biliary surgery.

Dr. D. Macartney:

1. Two cases of traumatic musculo-spiral paralysis treated by operation with good recoveries.

2. Wound of right thigh implicating the femoral artery and vein, both of which were ligatured: recovery.

3. Enlargement (adenoma) of left breast in a girl aged 17.

4. Gall stones, numbering 801, removed from gall bladder.

5. Skiagram of fracture of femur—plated.

Mr. G. H. Edington:

1. Distributed a leaflet with a series of skiagrams illustrating numerous fractures, and the same with suturing and fixing apparatus during treatment and again after their removal. The short explanatory text accompanying made this an interesting memento of the meeting.

2. Described an operation for removal of the appendix.

Dr. Alex. MacLennan

Showed a series of stereoscopic slides illustrative of anal conditions.

Dr. R. Barclay Ness:

1. A case of tabes dorsalis with motor symptoms. All the usual symptoms developed in a year. In addition there was paresis of the external rectus of the right eye and ptosis of the left eye. The Wassermann reaction was positive, but there was no definite history of syphilis.

2. A case showing spinal miosis, Argyll Robertson pupil, and positive Wassermann reaction, treated by a series of injections of neo-salvarsan. After the series the cerebro-spinal fluid showed a negative Wassermann reaction.

3. A case of juvenile tabes (aged 28 years). Symptoms developed four and a half years ago. All the usual symptoms were present, and in addition arthropathy of the left hip and right knee—Charcot's joints. There was also synechiae of the iris, choroiditis, and linear scars at the angles of the mouth; Wassermann reaction positive. The patient was, no doubt, a congenital syphilitic.

Dr. Walker Downie:

1. A man, aged 22, who was operated upon for sarcoma of the ethmoid eight years ago. This case had shown externally some distension of the bridge of the nose.

2. A man with leucoplakia of the tongue and buccal mucosa of sixteen years' duration. There was no evidence of malignancy.

Dr. Samuel Cameron:

1. Two cases of chorion-epithelioma cured by operation. The first of these developed after a quite normal labour.

2. Cases of complete uterine prolapse treated by vaginal fixation of uterus.

3. Cases in which abdominal operations had been performed through transverse suprapubic incisions.

Dr. J. G. Tomkinson:

1. Cases of tuberculosis verrucosa and lupus vulgaris under treatment by a modified *x*-ray method.

2. Naevi—vascular, verrucose, and pigmented—treated with solid CO_2 and electrolysis.

3. Erythema induratum scrofulosorum treated with *x* rays; early pityriasis rubra pilaris.

4. A series of cases of alopecia areata.

Dr. J. Wyllie Nicol:

Cases of lupus vulgaris, urticaria pigmentosa, etc.

Dr. Thomas Barr:

1. The radical tympano-mastoid operation.

2. Schwartze's mastoid operation.

3. The subcortical mastoid operation.

4. Bezold's mastoid abscess.

5. Septic thrombosis of the lateral sinus with pulmonary infections and large metastatic abscesses in back; sinus obliterated and internal jugular vein ligatured.

Dr. Alex. H. Edwards:

Orthopaedic cases.

Dr. Henry Whitehouse

Showed a boy on whom he had performed the radical mastoid operation with a very successful issue.

STAFFORDSHIRE BRANCH.

At a general meeting at Wolverhampton on April 30th, Mr. W. F. Cholmeley, President, in the chair, the proceedings included the reading and discussion of several papers and the demonstration of a series of cases and specimens.

Papers.

Dr. Edge, in a paper regarding *Inversion of the uterus*, recorded four cases of puerperal inversion, three being

chronic and one acute. Of the former, one was reduced by manipulation, one by Aveling's repositor, and the other, since it proved irreducible, was treated by vaginal hysterectomy. The acute case was first seen three days after labour, when the patient had a pulse of 160, a temperature of 104°, and presented evidence of sepsis. The inversion was reduced under anaesthesia, and the patient made a slow recovery after a long attack of pyaemia, including mammary abscesses and white leg. Vaccines and polyvalent serum were used. The opinion was expressed that inversion of the uterus immediately after delivery was a much commoner accident than statistics on the subject would suggest. Mr. G. F. HAYCRAFT, speaking of *Metallic foreign bodies in the eyeball*, pointed out that their recognition was of great importance, since, if they were removed, vision might be saved, while it was almost certain to be lost if they were left behind. Their presence might be recognized simply by naked-eye inspection, the foreign body either protruding from the globe or lying in the anterior chamber, and at others by ophthalmoscopic examination, by skiagraphy, or by use of a magnet. At Wolverhampton Infirmary the speaker and his colleagues used a small electrical hand magnet, its nozzle being introduced either through the original wound, or, if necessary, through an incision made for the purpose. After the removal of any foreign body from the interior of the eye, it was highly important to free the iris from the corneal wound, for otherwise iritis would almost certainly result, and sympathetic ophthalmia might follow. If iris prolapse were large, or could not be replaced, it should be excised, Gifford having shown that salicylates were useful in dealing with sympathetic ophthalmia, it was the practice at the infirmary to employ them as a prophylactic. The faith of the older surgeons in the value of mercury in these cases was perhaps upborne by the fact that in sympathetic ophthalmia differential blood counts gave results resembling those obtaining in subjects of syphilis and other protozoal diseases—that is to say, an increase of large mononuclears. In a series of 15 cases of metallic foreign bodies in the eye of which the author had kept notes, the eye was saved in rather more than 50 per cent. of the cases, though three of the patients only retained light perception. Five others, however, retained useful vision, namely, one $\frac{6}{6}$; two $\frac{6}{9}$; two $\frac{6}{12}$. As for the other cases, in two the magnet failed to extract the foreign body, and pain and inflammation necessitated enucleation. Enucleation was also performed in four cases in which the foreign body had been removed, one on account of panophthalmitis, and three owing to prolonged inflammation. One patient with irido-cyclitis refused enucleation and sympathetic ophthalmia subsequently developed.

Cases and Specimens.

The following were among the exhibits:—DR. MALET (for DR. BOYD): A case of *Meningitis*, in which from 20 c.cm. to 30 c.cm. of cerebro-spinal fluid were withdrawn every day. As clinical improvement set in the fluid became clearer and the polymorphs were replaced by lymphocytes. On the tenth day the fluid suddenly became bright yellow, but the patient showed no signs of relapse. The yellow colour faded in the course of a week. There were no red corpuscles in it. Even when the patient had apparently completely recovered there were still numerous lymphocytes in the cerebro-spinal fluid, though polymorphs had disappeared. Mr. CHOLMELEY: A boy who had been subjected to an operation on account of symptoms pointing to "acute abdomen." A lump felt in the left iliac fossa was found to contain a gangrenous appendix, and in the course of the operation it was found that the viscera were completely transposed. Dr. CODD: (1) A series of skiagrams illustrating oesophageal stricture, oesophageal pouching, cancer of the stomach, and hour-glass stomach; (2) a child, aged 11, which had recovered from an attack of *Meningococcic meningitis*. The first symptoms—anorexia and pain in the dorsal region—occurred on February 14th, and the following day the child began to suffer from paroxysmal headache; later on it developed retraction of the head. There was no history of ear or throat trouble. On admission to hospital on February 16th the child was conscious and answered questions intelligently. The head was retracted and the neck stiff. It would not lie on its back, but would lie on either side drawing its heels up. Kernig's sign was present and well marked, and the knee-jerks were slightly increased. No Stellwag's sign or other ocular phenomena were present. The temperature varied from 101 to 103°. On lumbar puncture being performed the cerebro-spinal fluid was found to be under pressure and turbid. It was examined by Dr. Boyd, who found it crowded with polymorphs, many of them containing Weichselbaum's diplococci. Intrathecal injections of the meningococcal serum were made, and at the end of the tenth day after admission the temperature began to subside from time to time, and on the twenty-third day became normal. Meantime the other symptoms were also subsiding. On the twelfth and fourteenth days two doses of an autogenous vaccine were given, but as they did not suit the child so well, use of the serum was resumed. These intrathecal injections caused great pain and sleeplessness for twenty-four hours, so some of the later doses were given subcutaneously. Thus given they caused no subsequent pain, and appeared to be equally efficacious. During the progress of the case the polymorphs in the cerebro-spinal fluid were gradually replaced by lymphocytes and the diplococci disappeared. The Kernig sign, the stiffness of the neck, and all other symptoms also disappeared, and on the fiftieth day the child got up. The exhibitor was not prepared to assert that the cure must necessarily be regarded as due to the use of the meningococcal serum, but pointed out that the symptoms certainly disappeared much more rapidly than usually did those of an average case of the same degree of severity.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DISEASES OF CHILDREN.

At a meeting on April 24th, DR. LEONARD GUTHRIE, President, in the chair, the following were among the exhibits:—Mr. MORTIMER WOOLF: A case of *Arthritis* in a boy, aged 8, who three years previously had been under treatment for fibroid lung of tuberculous origin. The present trouble started with pain in the left shoulder, followed by limitation of movement and muscular wasting. An *x*-ray examination showed caries of the head of the humerus. Dr. LEONARD GUTHRIE: A case of *Pneumonia followed by encephalitis*. Mr. PHILIP TURNER: (1) A case of *Cubitus varus* occurring after fracture of the humerus. It had been treated by osteotomy above the condyles. The operation was successful in removing the deformity, and there was also a great improvement of function. (2) A case of *Syphilitic cirrhosis of the liver* with ascites which had been treated by a Talma-Morison operation. Though the operation was followed by a considerable collection of fluid in the peritoneal cavity calling for tapping, this had not re-collected, and the abdomen was now considerably smaller. The general condition had also improved. Dr. E. A. COCKAYNE: A case of *Mongolian blue spots*. The patient was aged 11 months, and the parents were both Jews. The spots when first seen at the age of 9 weeks were of a clear slaty-blue colour unaltered by pressure. Mr. A. H. TODD: A case of *Complete double hare-lip* without any cleft of the palate. Congenital bilateral mucous fossae were also present in the lower lip. Dr. H. D. ROLLESTON and Mr. J. MACBEAN ROSS: A case of *Lymphatic leukaemia* successfully treated with benzol. Dr. G. A. SUTHERLAND, in a paper on *Auricular flutter in acute rheumatic carditis*, pointed out that while the importance of the endocardial, pericardial, and myocardial changes in rheumatic infection were generally recognized, there was another factor to be considered in some cases—namely, the development of an abnormal rhythm of the heart. The onset of an abnormal rhythm did not necessarily mean that the heart was irregular in its action as tested by the ordinary methods. As a matter of fact, one of the striking features of acute carditis was the regularity of the action, however rapid the rate, as tested by the pulse or the apex beat. These beats were dependent on the action of the ventricles, and in the majority of cases an abnormal rhythm was developed in the auricles. He had recently met with two cases in which there was apparently an abnormal rhythm of the auricles, and which was recognized only on taking a venous tracing in the

neck. A heart already weakened by disease might find itself hopelessly crippled by the supervention of some such rhythm or auricular flutter, and the signs of cardiac failure might be rapidly induced or gravely aggravated. While an exact diagnosis of auricular flutter could be made only by means of the electro-cardiograph, the polygraph gave very suggestive tracings. As practical points for further investigation he suggested that attention be paid to the following possible indications of this form of disordered rhythm: (1) Attacks of cardiac asthma (great dyspnoea) occurring suddenly and without accompanying variations in the cardiac condition; (2) a triple, or galloping, or cantering rhythm heard on auscultation; (3) pericarditis without effusion and with great respiratory distress; (4) the presence of the pulsus alternans.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 20th, Mr. C. W. CATHCART in the chair, the following were among the exhibits:—Dr. DAWSON TURNER: A case of *Recurrent carcinoma*, which had a large projecting swelling on the sternum, but disappeared after 5,510 mg.-hours of radium treatment. Mr. JOHN FRASER: A case in which left *Facial paralysis* in a child aged 5 years, caused by tuberculous mastoid disease, had been treated by junction of the peripheral facial with the central spinal accessory nerve. The operation was followed by partial and increasing recovery. Mr. ALEXIS THOMSON: A case in which sarcoma of the humerus in a boy had been treated by resection and implantation of bone from the fibula. The upper arm was growing, and there had been no recurrence since the second operation in 1910. Dr. R. A. FLEMING: A case of *Glycosuria without polyuria* in a young woman. The urine gave a peculiar reaction to Fehling's solution; a scarlet-red solution formed and then gave a black precipitate. It was due to production of a colloidal solution of cuprous oxide, with further reduction to colloidal copper. Mr. D. P. D. WILKIE: A case in which severe gastric crises in tabes had been treated by resection of seven posterior roots (fifth to eleventh) on each side. Since the operation the crises had not occurred. Dr. W. T. RITCHIE and Mr. J. M. GRAHAM: A case of pernicious anaemia in a woman aged 51; relapses had occurred after arsenic, but since she had been transfused directly with blood from her own daughter, numerous nucleated red cells had appeared, and the blood condition had steadily improved. Mr. J. W. DOWDEN: A woman, aged 50, in whom *Implantation of bone-grafts* from the crest of the ileum into ununited fracture of neck of femur had given good results. Dr. CHARLES MCNEIL: Three cases of malnutrition in childhood in which benefit had followed treatment by emulsion of liquid paraffin—namely, a girl aged 1 year and 3 months with chronic diarrhoea and marked wasting; a boy aged 4 years, with recurrent bilious attacks; and a boy aged 10½ years, who had nocturnal enuresis and malnutrition. Mr. C. W. CATHCART: A lad who had a fracture of the spine in the lumbar region; complete paraplegia followed, but he had since recovered walking power without any operation. Dr. BOYD: A case of *Diabetes with acidosis*, in which the glycosuria had practically disappeared after the oatmeal cure.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 1st, Mr. A. ERNEST MAYLARD, President, in the chair, Dr. GEORGE A. ALLAN demonstrated a case of complete *Heart-block* in a man aged 39, who for the past ten months had been subject at frequent intervals to fainting fits, with loss of consciousness. These fits were associated with the inception of a very slow ventricular rhythm, varying from 20 to 40 per minute, and dependent on complete heart-block. No other manifestations of the Stokes-Adams syndrome, such as general convulsions, were present. The Wassermann and luetin tests were positive, and gummata were present on the iris. Polygraph tracings showed complete dissociation of auricular and ventricular contractions, the former numbering 75 to 96, and the latter 22 to 27 per minute. Drs. T. K. MONRO, G. H. EDINGTON, and J. SHAW DUNN described a case of malignant *Ganglioneuroma of the suprarenal capsule* in a boy aged 3½ years, and gave a microscopic and lantern demonstration. *Post-mortem* examination showed a tumour the size of a large orange in the left suprarenal body, with metatastic deposits in the retroperitoneal, mesenteric, mediastinal, cervical and inguinal glands, and in the bone of the skull and the ribs. Part of the tumour was firm and pale, and was composed of mature nervous tissue—ganglion cells and fibres; part was soft and obviously malignant, and was composed of smaller cells and fibrillae corresponding to the embryonic nerve cells and fibrillae which form the sympathetic nervous system in normal development. Drs. T. K. MONRO and G. HASWELL WILSON reported on a case of *Malignant tumour of the neck*, which involved the spine and the cervical and brachial plexuses. The general exhibits included the following:—Mr. G. H. EDINGTON: A youth, aged 16, on whom he had operated on October 16th, 1913, for *Laceration of the right kidney*, sustained through a fall on board ship. On laparotomy by transverse incision being performed the right kidney was found in two completely separated parts and removed. The left kidney appeared normal. Recovery was excellent. Mr. G. H. EDINGTON and Dr. J. SHAW DUNN: A partially *Pyonephrotic kidney*, with double ureter and pelvis, obtained from a married woman aged 33. She had a history of pain in the right side with bilious vomiting occurring at intervals for the past six years. Latterly there had been swelling in the right flank, which disappeared coincidently with free flow of muddy urine. The urine contained pus, and the patient sweated at night and had lost flesh. Nephrectomy was performed through a transverse incision through the anterior abdominal wall; the other kidney appeared normal, and the patient made a good recovery. Mr. HENRY RUTHERFURD: (1) A colon with ulceration and perforation of the root of a volvulus of sigmoid, occurring after an operation for its reduction. The patient, a man aged 65, was bedridden and paralysed. (2) The parts concerned in a fracture of the femur by direct violence; gangrene resulted from pressure by the lower fragment on the femoral artery and vein at the lower end of Hunter's canal. The vessels were not torn, but had been hooked round to the outer side of the femur by displacement of the lower fragment.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

AT a meeting on May 12th, Dr. JAMES CHAMBERS, President, in the chair, Dr. HELEN BOYLE, in a paper regarding *Methods of dealing with early nervous and mental cases*, said that in the abstract these were logically inseparable, and in practice still less separable. Dr. Mott had recently declared locomotor ataxy to be pathologically the same disease as general paralysis of the insane—a fact which would have been recognized much earlier but for the label "nervous" being attached to locomotor ataxy, and the label "mental" to cases of general paralysis of the insane. She deprecated keeping the teaching of neurology and psychiatry separate from one another, and the absence of wards for early nervous and mental cases, and consequent lack of teaching regarding those cases for students and nurses in the great general hospitals which possessed medical schools. All specialists on the nervous system should be conversant with brain as well as nervous conditions. There were many cases of mental disease wrongly labelled nervous and sent to undergo Weir Mitchell treatment, under which the unoccupied mind, with nothing to distract it, fed upon itself. Moreover, the separation of neurology from psychiatry confused the public mind. To use a paradox, insanity began before the person was insane; defective mental health often existed long before the individual became certifiable. Some acute cases cleared up under appropriate treatment, and were no more fit for an asylum than were the temporary insanities of typhoid fever or pneumonia. The cases which it was really important for students to see were not those of delirium tremens, but the early uncertifiable cases, the early obsessional and early melancholic, the hypochondriacal; these cases could never be taught by books. No practitioner could escape these early nervous and mental cases, and the welding of the two specialities would do

away with much of the fear of detention on the part of patients suspecting a mental breakdown.

Sir GEORGE SAVAGE emphasized the importance of a general knowledge of medicine on the part of psychiatrists. The psychiatrist and the neurologist should work together. The public thought the one idea of alienists was to send people to asylums, and forgot how many people they kept out of asylums by affording them appropriate early treatment.

Dr. PERCY SMITH said there were serious administrative difficulties in the way of providing beds for early mental cases in general hospitals, but at St. Thomas's and some other general hospitals there was an out-patient department for such cases. These departments did good work, but there were some cases which from the first required asylum treatment.

Dr. JAMES STEWART supported Dr. Helen Boyle's plea for a closer association between the neurologist and the alienist.

Dr. BEDFORD PIERCE pointed out that there was very little real knowledge as to the causes of these early cases of mental disorder, and equally little as to what was best to be done for them. Recently, for the purposes of a debate, he had sought the views of a number of physicians and busy practitioners, and the inquiry revealed a remarkable difference of opinion.

Dr. NOEL SARGEANT thought that too much sentiment was sometimes imported into the question, and that talk of "shame" in regard to certification was especially to be deprecated. Certification was a safeguard both for the general public and for the patient himself, and gave him the best chance for recovery.

Dr. HYSLOP said that in border-line cases there had always been, and probably there always would be, a difficulty. There was also the risk of illegality in institutions not under the regulations of the Lunacy Act.

Dr. HAYES NEWINGTON said that a large section of the public thought that insanity was cured by scientific observation and the use of serums, but the prime and most important step towards cure was to take the patient out of the surroundings in which the defect occurred; indeed, there seemed reason to believe that this one step was responsible for some patients getting well. There were many difficulties in connexion with placing patients under suitable care, and of these the bulk of the public had no conception.

Dr. CORNER said there was need for early treatment of cases on lines for which the existing law did not provide.

Dr. FOTHERGILL emphasized the importance of taking harassed and run-down people away from their mischievous surroundings as the first step towards cure. In the first instance, at any rate, they should be sent to hospital instead of to an asylum. The fear of certification was calculated to drive a threatening case over the border-line into actual insanity.

Dr. STREET considered there was too much sentimentality in regard to certification. It was difficult to give many cases proper treatment without certification.

Dr. WOLSELEY LEWIS said it was true that some patients who were sent to asylums would be better treated outside those institutions, and to facilitate this a system of notification as opposed to certification might be devised. The medical student's curriculum was already so crowded that it would be unwise to attempt to include definite teaching of insanity in it, especially as that subject could not be learnt from books.

Dr. WILLIAM DAWSON agreed that the effects of certification on patients had been exaggerated. In his experience the effect was not adverse. The relatives were much more upset by certification than were the patients themselves. Ordinary hospital nurses were unsuited for mental cases. With regard to the unification of the specialities of neurology and psychiatry, it was much easier for the psychiatrist to become a neurologist than vice versa, for psychiatry could not be learnt from books; there was only one road to knowledge of mental diseases, and that was active residence in an asylum and constant association with mental cases.

Dr. MAURICE CRAIG said the lack of hospital accommodation for acute mental cases among the poorer classes was regrettable. The need for it was manifested by the great number of applications for admission to the "Lady Chichester" Hospital, of which Dr. Boyle was in charge. In speaking of the question of certification a great deal was made of the "liberty of the subject," but the lawyers were really greater opponents of that in this matter than the alienists.

Dr. FRANCIS DIXON agreed with Dr. Craig, and thought some provision should be made for asylums taking in voluntary boarders.

Dr. HAYNES thought the present English law bore hardly upon mental patients.

The PRESIDENT thought that if so-called early mental and nervous cases could be treated in general hospitals, far-reaching benefits would accrue.

Dr. HELEN BOYLE replied, pointing out that the class of case to which her paper related was not the certifiable class; members of this were already excellently treated. Her plea was on behalf of the early mental and nervous case, which, from lack of proper provision, often became incurable.

At a spring meeting of the Northern and Midland Division of this association on April 30th at Menston Asylum, Dr. EDGERLEY, who presided, dealt with *The alleged increase of insanity*, on the basis of the experience of that asylum, which draws its patients from manufacturing areas and agricultural districts forming the northern part of the West Riding of Yorkshire. Before it was said that there was an increase in insanity, the meaning of that phrase ought to be defined. It might signify an increase in the total number resident in asylums, an increase in the annual number of admissions, or an increase in the annual number of first admissions; the last would appear to be the really important aspect of the question. The question whether people were becoming more liable to insanity had also to be considered. The total increase in the asylum population depended on the relation of the output to the intake. Where a reduction could not be seen until the intake was reduced, the output increased. Four great causes of insanity were being grappled with actively—poverty, ill health, excessive indulgence in alcohol, and preventable contagious diseases. It was possible to exaggerate the influence of hereditary predisposition. His general conclusion was "that in this part of the West Riding of Yorkshire, whatever bald statistics may appear to show, insanity was not in the real sense increasing; indeed, there was every reason to hope and expect that it would decrease." In the discussion which followed, in which many of the members took part, the main points raised were as to whether epilepsy was decreasing, whether decreased infantile mortality meant decrease of insanity, or whether children were being saved to become insane later on. One member maintained that the tendency was for insanity to increase on account of the reduction of births affecting middle-class families more especially. Dr. PIERCE, in a paper on the *Treatment of incipient insanity*, said it had to be considered in relation both to those able to pay and to those unable to pay. Some new kind of institution would, he thought, be required. Clinics attached to hospitals would be advisable, and co-operation of hospitals, boards of guardians, and other like bodies would be necessary. Institutions would have to be equipped with up-to-date methods of treatment, and suitable means of employment and recreation would have to be found for the patients. To carry all this out would be difficult, since the capital expenditure would be a serious item, and then possibly the public would decline the necessary support, but certainly something should be done in the way of erecting suitable sanatoriums for the treatment of incipient cases.

[CORRECTION.—The title of the paper read by Mr. G. Lenthal Cheatle before the Section of Surgery of the Royal Society of Medicine should have been "The relation between ducts and acini to cysts in cancer of the breast," and not as printed last week on p. 1124.]

AN international conference on ship hygiene is to be held in Paris in June. It is intended to draft a scheme for the improvement of the hygienic conditions in ships of war, trading vessels, and fishing craft.

THE Chelsea Hospital for Women has received from the trustees of Smith's (Kensington Estate) Charity a donation of £500 towards its rebuilding fund and £100 towards the funds of its convalescent home at St. Leonards-on-Sea.

Reviews.

LISTER'S LIFE AND WORK.

DR. WRENCH has written a volume in a more or less popular style on the life and work of Lord Lister.[1] The founder of modern surgery had the good fortune to be born of a family in easy circumstances, and to be the son of a father who gave a great amount of work to the improvement of the microscope which his illustrious son was to use to such good purpose. Brought up in a scientific atmosphere, Lister had the further good fortune to come under the influence of Thomas Graham, Sharpey, and later of Syme. The details of his career have so often been told in the BRITISH MEDICAL JOURNAL that they need not be repeated here. Dr. Wrench follows Lister in his early gropings in the dark after truth that was long elusive, but was finally brought, by long efforts, continued with tireless patience, into the light of day. His work was carried out in the face of apathy and active opposition. This is the common fate of pioneers in every field of discovery. For the complete story of the difficulties which the initiator of antiseptic surgery had to meet with the reader must go to Dr. Wrench's book. Among the men who could not see that Lister's work was ushering in the dawn of a new era in surgery were Sir James Simpson, Sir James Paget—who afterwards nobly recanted his error—Sir William Savory, and his own colleagues at Edinburgh, Hughes Bennett and James Spence. London surgeons were almost unanimous in resisting the innovation. Even when Lister came to London in 1877 to show the practical value of his system on the largest stage in the world, he found some believers among the younger surgeons, but very few among the seniors. For a time, Dr. Wrench tells us, the patients who came under his care gave no adequate opportunity for a demonstration of the advantages of the antiseptic system. After a month Lister's opportunity came. A man was admitted with a broken patella, and he wired the fragments. Dr. Wrench tells us that a distinguished London surgeon, hearing of this operation, said to his students: "When this poor fellow dies, some one ought to proceed against that man for malpraxis." But the "poor fellow," thus prematurely doomed, recovered with a sound limb, to shame the unbelievers. John Wood, who was supposed to have resented Lister's appointment to a chair to which he himself had looked forward, showed his largeness of mind, for he was so impressed by the result of an amputation of the thigh for cancer that he invited Lister to teach him his method. Soon the surgeons of King's were converted, and the light quickly spread. We may be allowed to express a feeling of pride, which is surely legitimate, in the remembrance that the BRITISH MEDICAL JOURNAL, which had always supported Lister, congratulated him on the fact that his return to the city of his birth and education "had been so speedily followed by a signal triumph of that great principle in surgery, which had been accepted almost everywhere else almost before it was even listened to in London."

We think, however, that Dr. Wrench's enthusiasm for the "Master of those who know" carries him too far when he denounces the "unfaithful followers" of Lister who without abandoning his principles, which are eternal, have developed the antiseptic into the aseptic method. Perhaps some surgeons have adopted certain extravagances of ritual which add to the costliness of hospitals without providing any notable increase of security for the patient. It is well known that Lister himself deplored these complications. This was perhaps natural. Such a passage as the following (p. 319) shows to what a degree of obscurantism hero worship may bring even a man of high intelligence and of wide scientific knowledge:

> There is a distinct danger in this unfaithfulness of lesser men towards Lister's consummate genius. To see with Lister's clarity and to interpret experience with his penetration requires Lister's quality. Set a lesser man out upon the same path and by no means can he succeed to the same perfection. A nobler and proper attitude for him is, therefore, to show a faithful adherence to the directions of a man of far greater gifts. A freedom permitted to him and to those like to him, a freedom allowing him to improve and modify the completeness of genius, is bound to terminate in a medley of confusion.

There is no greater hindrance to progress than the tendency of ardent disciples *jurare in verba magistri*.

Dr. Wrench's book is a human document as well as a record of a revolution in the healing art, and as such it is distinctly good. But it would have been much better if the author had resisted the temptation to fine writing. We think it likely that another edition will be called for, and he might then take the opportunity of trimming the luxuriance of his style. He might also with advantage correct various small errors, such as "Lucas-Championnière, Semmelweiss (both several times repeated), Sir Prescott Hewitt, and *πτῆμα ἐς ἀεί* (instead of *κτῆμα*, p. 356). When he speaks (p. 208) of the truth of the researches of Cagniard-Latour and Schwann having been "popularly obliterated by the combined weight of *Leibnitz* and Helmholtz" he was doubtless thinking of Liebig.

[1] *Lord Lister: His Life and Work.* By G. T. Wrench, M.D.Lond. London: T. Fisher Unwin. 1913. (Med. 8vo, pp. 384. 15s. net.)

SURGERY.

WE have pleasure in again pointing out the merits of *A Synopsis of Surgery*,[2] by Mr. ERNEST W. HEY GROVES, the fourth edition of which has been issued. We are, on the whole, inclined to look with some disfavour on works of this kind, so far as they are apt to be used improperly by the student who hopes for short cuts to surgical knowledge. And it is possible that Mr. Hey Groves's experience as a teacher disposes him to take the same view, for this book is a real synopsis, from which little is to be learnt unless the subject has been systematically read previously. It is quite the best book of its class known to us. It is complete, in that no subject in modern surgery is omitted, and yet it is not too skeletal for the man who requires his memory freshened in details. The pathological and bacteriological sections have been revised and partially rewritten by Dr. George Scott Williamson, because, as Mr. Hey Groves naïvely puts it, "This is a department in which the student is expected to know so much more than the surgeon" that it should be taken in hand by one in closer touch with the subject than the surgeon. To keep the book quite up to date recent theories on shock, intratracheal and other methods of anaesthesia, have been introduced. The new edition does not make a larger volume than the last, and we hope that the author will not be tempted to let his book grow more bulky.

The well-known work of Professor FÉLIX LEJARS on urgent surgery (*Chirurgie d'Urgence*)[3] has now reached its seventh edition. The standard of excellence has been fully maintained, no radical changes have been made, but the work has been completely revised and brought up to date by the addition of new chapters and illustrations. Articles have been added on acute dilatation of the stomach, operative interference in acute pancreatitis, obstruction of the mesenteric vessels, sigmoiditis and fractures of the pelvis; of these the most notable are those on acute dilatation of the stomach and pancreatitis. Plating of fractures has received scant attention, and bronchoscopy and oesophagoscopy are excluded, though foreign bodies in these situations require urgent surgery. Minute directions are given for the performance of urgent operations, and the descriptions of cases are extraordinarily realistic. As a book of reference to practitioners it will be invaluable. We again congratulate Professor Félix Lejars on the production of an exceedingly good book.

This volume of notes on *The Elements of Bandaging Fractures and Dislocations*,[4] by Mr. WILLIAM RANKIN, is a particularly compact, lucid, and convenient book. It is essentially practical and deals simply with all the fractures and dislocations commonly met with. Only one method of treatment is described for each lesion, and in that, as well as in the aptness and clearness of the illustrations, all

[2] *A Synopsis of Surgery.* By E. W. Hey Groves, M.S., M.D., B.Sc. Lond., F.R.C.S.Eng. Fourth edition, revised and illustrated. Bristol: J. Wright and Sons, Ltd.; London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd.; Toronto: The Macmillan Co. of Canada, Ltd. 1914. (Cr 8vo, pp. 699; 12 figures. 9s. 6d. net.)

[3] *Traité de Chirurgie d'Urgence.* Par Professor F. Lejars. Septième édition, revue et augmentée. Paris: Masson et Cie. 1915. (Sup. roy. 8vo, pp. 1175; 1,086 figures; 20 plates. Fr 35.)

[4] *The Elements of Bandaging and the Treatment of Fractures and Dislocations.* By W. Rankin, M.A., M.B., Ch.B., Dispensary Surgeon, Western Infirmary, Glasgow. London: H. Frowde; Hodder and Stoughton. 1913. (Cr. 8vo, pp. 126; 68 figures. 5s. net.)

of which are original, the author scores effectively. We are glad to observe his strong advocacy of anæsthesia in the diagnosis and treatment of fractures and dislocations. The subject of this book has been dealt with already by very many authors; indeed, it would appear as if in every medical school a book on minor surgery, which usually includes bandaging and fractures, is a necessary product. Mr. Rankin's book will compare most favourably with any other of its kind, and we heartily commend it to the notice of students, practitioners, and teachers.

A STATISTICAL STUDY OF PNEUMONIA ON THE RAND.

THE first memoir issued by the new South African Institute for Medical Research is a valuable study of the etiology, manifestations, and prevention of pneumonia amongst natives on the Rand,[5] by Mr. G. D. MAYNARD, F.R.C.S.E., who has already won a high reputation in the field of medical statistics.

Mr. Maynard has employed the most reliable methods of statistical analysis, and has reached several results of much importance. He shows that both the attack-rate and the death-rate from pneumonia amongst natives recruited from tropical areas are influenced by the country of origin; on the other hand the case mortality does not seem to vary with this factor. It appears that the highest attack-rates are found in those gangs which, judged by the number of detentions and rejections, have the poorest physique.

In the second section, the interesting point is made that second attacks (the definition of which is discussed) are most common immediately after the termination of the first, and then become progressively rarer, and that the rate of such attacks among the population previously affected is higher than the primary attack-rate among the whole population. The case mortality of these second attacks is probably lower than that of first attacks.

In the third section the author investigates, with the help of an extremely ingenious method, the problem as to how far pneumonia may be considered an infectious disease. The result is that, although the distributions of "runs" of cases is not inconsistent with some degree of infectiousness, the latter is of a wholly different order from that found in zymotics. This conclusion is not surprising, but the method of investigation is of much interest and might be applicable to other diseases.

The remainder of the work is devoted to the study of prophylactic inoculation, the statistics of which are considered in detail. Mr. Maynard concludes that inoculation with a pneumococcal vaccine, when employed immediately on the arrival of the natives, appears to reduce the incidence of pneumonia during a limited period, but that the effect does not last beyond about four months. He does not find any evidence that prophylactic inoculation diminishes the case mortality of pneumonia, or that experimental treatment with pneumococcus vaccine was efficacious.

Mr. Maynard has earned the thanks of all interested in this subject, and his memoir is worthy of attentive perusal. The treatment is necessarily rather technical, but the difficulties are diminished by the author's clearness in exposition. The bibliography might have been extended with advantage, and in particular Hirsch's classical discussion of the geographical distribution of pneumonia would probably have suggested some lines of inquiry.

SANITATION IN INDIA.

DR. J. A. TURNER, Health Officer of Bombay, has recorded his experience in that city in a large work on *Sanitation in India*.[6] The subject might be considered from three aspects: First, that of the Presidency towns and a few other great cities, which set before themselves a European standard, and at least try to work up thereto; second, that of the smaller towns, the *sadr* stations, or chief towns of administrative districts, corresponding roughly to county towns in England, which lag far behind the first; third, that of the villages and rural areas, in which sanitation can hardly be said to exist. This work, naturally, deals chiefly with the first class.

As the author points out (Chapter XIV), the work of a health officer in India differs widely from that of the same official in England. Here the chief duty of the health officer is the investigation and control of the spread of infectious disease. In India his duties include the supervision of a large subordinate staff, and the control of a great body of menial labourers, as well as the registration of births and deaths, and numerous other miscellaneous tasks. Such duties leave no time for specialization or for research. Only a few of the largest towns have whole-time health officers. In the ordinary station all this work, so far as it is done at all, falls on the civil surgeon as a side task, supplementary to his regular work. One of the most desirable and most useful of the sanitary reforms now in progress in India is the appointment of whole-time health officers, graded and paid according to the importance of their posts, to all large towns.

Indian medical officers will agree with the author that the disposal of sewage is the most important as well as the most difficult of sanitary problems in India. The filthy shaft privies in use in Calcutta, Bombay, and many other towns, which the authorities are now trying, without much success, to abolish, are probably the worst form of privy in existence. The author recommends the ordinary watercloset. But this demands a regular system both of water supply and drainage—systems which only large towns possess. Septic tanks are suitable for large institutions, such as factories and barracks, but have not been found very successful for general public latrines. The trenching system in general use in the smaller towns works excellently in gaols, where all, both those who use the latrines and those who trench the excreta, are under the strictest discipline, but has been found sadly wanting elsewhere, creating a nuisance nearly as great as that which it removes. For water supply the author prefers a constant to an intermittent supply, as less wasteful.

As regards plague, the disheartening conclusion reached is that the result of all our labours is practically *nil*. Evacuation is the least unpopular measure. The effect of inoculation is only temporary, and the people decline to accept this prophylactic. As a disinfectant, both for plague and for general use, crude fuel oil or *pesterine* is recommended.

The work is profusely illustrated, and contains various sanitary regulations of different cities—London, Calcutta, Bombay, Madras, Colombo, etc. It is heavy to hold, weighing 4½ lb.; however, it will probably be used chiefly as a work of reference. On p. 444 Colonel R. H. Firth is mentioned as an officer of the Indian Medical Service; this is a slip, he is in the Royal Army Medical Corps.

NOTES ON BOOKS.

IT seems to be a general rule with much of our modern verse that the more obscure the meaning the more successful the poem; but few poets show as much consideration for their readers as Mr. BERWEN BREETH, who has thoughtfully placed a glossary at the end of his volume of poems, *Those Early Years*.[7] This, however, must not be taken as a sign that Mr. Breeth indulges in the ambiguity which often makes latter-day verse such difficult reading. On the contrary, apart from a few unusual words and phrases, his verse is perfectly simple and straightforward, and the spirit which has inspired it appears to be equally sane and wholesome. His book contains only four poems, and of these the best is undoubtedly that which gives its name to the collection, and whose subject has called forth a depth of feeling and a beauty of expression which is not so apparent in the companion pieces. The title poem shows that the author possesses a sense of style and an appreciation of the poetry of words which would stand him in good stead if the success of the present volume tempts him to try his wings again in further and more ambitious flights.

The author of *Diagnostic Symptoms in Nervous Diseases*[8] has designed his little book to save his students at

[5] *An Inquiry into the Etiology, Manifestations, and Prevention of Pneumonia amongst Natives on the Rand Recruited from Tropical Areas.* By G. D. Maynard, F.R.C.S.E. The South African Institute for Medical Research, Memoir No. 1. Johannesburg: The South African Institute for Medical Research. 1913. (Sup. roy. 8vo, pp. 101; 11 charts; 2 maps. 5s.)

[6] *Sanitation in India.* By J. A. Turner, M.D., D.P.H. Bombay: The Times of India. 1914. (Demy 8vo, pp. 1022; illustrated.)

[7] *Those Early Years, and Other Poems.* By Berwen Breeth. Edinburgh: E. and S. Livingstone. 1913. (Cr. 8vo, pp. 92.)

[8] *Diagnostic Symptoms in Nervous Diseases.* By E. Livingston Hunt, M.D. Philadelphia and London: W. B. Saunders Co. 1914. (Demy 8vo, pp. 229; 54 figures. 6s. 6d. nets.)

Columbia University the "laborious search involved in consulting the larger textbooks" when they wish to find out the salient points and leading symptoms of the principal nervous diseases. He gives lists of the various diseases in which the several symptoms occur—the ten causes of spastic gait, for example, the fifteen superficial reflexes, the twelve disorders in which incontinence occurs. The book appeals to the memory of its readers but not to their intelligence, for physiological or pathological explanations of the occurrence or failure of the symptoms discussed are rarely offered. The phraseology is often odd; thus the author writes that "afferent impulses . . . are conducted along distinct classes of nerve-fibers. These three classes are named deep, intermediate, and superficial sensibility" (p. 136). Many of the illustrations are excellent, as is the general get-up of the volume. It may be recommended to those who like books that may be read, marked, and learned, but do not lend themselves to inward digestion.

The third volume of M. GUILLEMINOT'S *Nouveaux Horizons de la Science*[9] is concerned with the chemistry and morphology of living matter. It is a masterly exposition of the findings of research with regard to the numerous problems arising out of this wide subject. The object is to determine to what extent the phenomena of life are explicable by the laws of thermo-chemistry and of energy in general. The author concludes, as the result of his close and arduous examination of the chemical mutations and physico-chemical phenomena exhibited by living matter, that there is nothing in them which cannot be so explained. And in regard to morphology no serious difficulties, in his opinion, arise so long as it is merely a question of accounting for the conformation of organic molecules and rudimentary cellular forms. The case is otherwise once we are confronted by the organic unity of a living being with its complex provisions for the division of labour, its specialized tissues, plasmas, and organs, all co-operating for the welfare of the individual and the progress of the species. Here a teleological factor asserts its claim to recognition, and the idea of a directive orientation, independent of any special expenditure of energy, yet somehow governing the vital process, is suggested to the author's mind. In a future volume or volumes he proposes to subject the functional activities and the evolution of living beings to a close examination in order to determine more precisely wherein their case differs from that of inorganic matter. It will be seen that the work to which this volume contributes, although packed with information, is something other and more than a mere epitome of ascertained facts. It is an essay in inductive philosophy.

Practical Nursing,[10] by the late ISLA STEWART and Dr. H. E. CUFF, has attained the dignity of a fourth edition and in process of doing so has become a standard textbook in the nursing world. The latest issue embodies much new matter, but by the use of smaller type it has been found possible to keep the book to its original size. In a work of this character the greatest difficulty lies in the task of selection, and on the whole this has been well done, nothing essential having been omitted. The description of different diseases is, as a rule, adequate without being overloaded with detail, although in the section on heart disease the accounts of acute and chronic cases are somewhat intermingled. The various nursing operations are given in full detail, the reasons for each step being explained, and so the work of the nurse made more interesting and intelligent. That part dealing with infectious disease is particularly full, and the chapter on diphtheria is excellent. The book might be made more useful by a greater number of illustrations; many of the procedures described would be much more easily comprehended if the instruments or apparatus were figured.

[9] *Les Nouveaux Horizons de la Science.* Par H. Guilleminot. Tome troisième: *La Matière Vivante.* Paris: G. Steinheil. 1914. (Post 8vo, pp. 429; 56 figures. Fr. 6.)

[10] *Practical Nursing.* By the late Isla Stewart and H. E. Cuff, M.D., F.R.C.S., assisted by W. T. Gordon Pugh, M.D., B.S. Fourth edition, thoroughly revised and enlarged. Edinburgh and London: W. Blackwood and Sons. 1913. (Cr. 8vo, pp. 552; 15 figures. 5s. net.

A BILL providing for the creation of a degree of doctor in dental surgery is to be introduced into the French Legislature. The proposal will probably meet with opposition from the medical profession, on the ground that the new title is superfluous, as it is held that the doctorate in medicine covers stomatology, as well as all other branches of the art of healing.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

A CRITICAL REVIEW OF THEIR RELATIONS.

I.

SOME months ago an article was published[1] which, by a series of tables and graphs, demonstrated conclusively that the membership of the British Medical Association was increasing at least *pari passu* with the growth of the medical profession as a whole. That was satisfactory, but it would be still more satisfactory if it could be shown that the membership roll of the Association included practically all the names to be found in the *Medical Register*. There is no essential reason why this should not one day be the case, and in the hope of hastening the arrival of that day we now commence the publication of a series of articles, on which will be based the general conclusion that it is the duty of every medical man residing either in the British Isles or in any British dominion, dependence, or protectorate to join the Association forthwith.

To support such a conclusion it will be necessary to show that answers favourable to it can be given to each of the following questions: Is an association of any kind necessary for the promotion of the interests of medicine as a scientific profession and as a source of livelihood? If the answer is "Yes," is there any class of medical man which can afford to stand aside from the rest in this matter? If combination between medical men is necessary, would not the needs best be met by a number of associations each representative of some branch of the profession? If an association representative of the whole profession is necessary, is there any organization which should be preferred to the British Medical Association in this connexion? Does the constitution of the British Medical Association fit it to represent the medical profession as a whole? What has the British Medical Association done for the medical profession in the past? Does this justify a belief that benefit will accrue from continuance of its existence and a still further increase in its activities and resources?

This may appear a very lengthy programme, but fortunately most of the questions can be answered with comparative brevity.

I. *Is an association of any kind necessary for the protection of the interests of medicine as a scientific profession and as a source of livelihood?*

Seeing that the interests of medicine are intimately bound up with those of the public at large, the right answer would be in the negative if the governing power of the country were invariably in the hands solely of real statesmen. But this is not, and never has been, the case. Even in the days of the dawn of medicine, as also in mediaeval times, medical men found it desirable to band themselves together for the promotion and protection of their common interests. If this was the case when the organization of society was comparatively simple, it is still more necessary when each year the social mechanism grows increasingly complex. In an age when practically every occupation is organized with a view to securing advantages for those who follow it, those engaged in any occupation not so protected would inevitably find that advantage was taken of them by the rest. Even a highly enlightened and independent-minded Government could not thoroughly protect any occupation whose members were unable to supplement its efforts by those of an organization of their own. Besides this, it is never easy to make laymen thoroughly recognize the needs and aims of scientific medicine, or, indeed, of any profession, and the keenness of medical men over their work has induced in all classes of society a tendency to regard their claims to remuneration as much less strong than those of other workers. Hence the right answer to this question is certainly in the affirmative.

II. *Is there any class of medical man which can afford to stand aside from the rest in this matter?*

At one time doubt might possibly have been felt as to the right answer, but this is no longer the case. In view

[1] BRITISH MEDICAL JOURNAL, March 14th, 1914, p. 600.

of the activities of antivivisectionists, even laboratory workers have long required the support and protection that can be afforded them only by association, and the effect of recent legislation, while extending the scope of their work, tends to bring them more and more into contact with both well-informed and ill-informed public authorities. Furthermore, one particular piece of legislation—namely, that which authorizes the institution of research and other like work in connexion with the operation of the National Insurance Act—seems likely to prove exceedingly wide-reaching in its effect on laboratory workers of all types.

As for consultants, the public has of late years shown itself very ready to question the wisdom of their actions in particular cases, and judicial authorities, who would never think of overhauling the charges of a barrister, show no hesitation in interfering with those of consultants when questions of their amount are brought before them. Apart, too, from the fact that the general public draws little distinction between medical men of one class and those of another, consultants cannot remain entirely untouched by anything that affects the general mass of the profession. Moreover, those who hold hospital appointments seem likely before long to be directly affected by the operation of the National Insurance Act among other recent legislative measures.

In the case of members of the Naval and Military Medical Services and of the Colonial Medical Services, history shows that they constantly stand in need of support by a powerful independent body, and even when the career of such a man as an asylum medical officer, or a ship surgeon, or a school or tuberculosis medical officer has been made as attractive as it should be, work will still be necessary to retain the advantages gained. In like case are public health officers, for even when their position has been consolidated by lifelong tenure of office and pensions being secured for them difficulties must continue to arise in respect of the treatment and remuneration accorded them by local authorities. As for the bulk of the profession, which lives by giving medical attendance to private individuals or groups of persons and by doing part-time work for public authorities of different kinds, the need of its being supported by an association has not for many years been even called in question.

What is true of classes is equally true of individuals, even of those whose practices are exceptionally constituted. Some of these lead professionally lives so isolated that they are apt almost to forget that they are members of a great body. Others, deeming themselves immune, are apt to shrug their shoulders when they read of the troubles of their colleagues. But both classes make a very serious mistake. Apart from the fact that lack of *esprit de corps* is in itself a very unenviable peculiarity, no medical man who notes the signs of the times can reasonably feel quite happy unless he has taken steps to secure that some one is holding at least a watching brief on his behalf. In this present age of social unrest no medical man, whatever his work, should deem it certain that the conditions in which he does that work will remain unchanged, or that he will never feel the need of the support of his fellows; this should make him feel the more strongly the obligation now to give them his own.

III. *If combination between medical men is necessary, would not the needs best be met by a number of associations each representative of some branch of the profession?*

There is considerable attraction in the idea of specialized associations, but when the history of such as exist, or have existed, is studied, it will be found that the scope of their utility is very limited. Some of them have done useful work by promoting scientific study of the branches of medicine that they represent, and have succeeded in keeping up a progressive spirit among their workers, but when it comes to promoting the general welfare of their members and guarding their professional and financial interests all alike have proved relatively impotent. In fact, when they have attained any degree of success whatever in the latter direction it seems to have been due to the fact that their affairs have been managed for the time being by officers of exceptional ability and energy.

To bring men together to discuss the scientific aspects of their professional work or ways in which their position can be improved is not always an easy task, but it is relatively simple when compared with the difficulty of securing that effect shall be given to resolutions that may be passed. This requires machinery such as no comparatively small association can create for itself; that is to say, machinery equivalent in point of elaboration and capacity for output of work to that which secures the welfare of great commercial undertakings. It must provide for keeping the association in closest touch with the demands of the moment and of the future, and render the chance co-operation of some individual of exceptional energy and ability a matter of minor importance by bringing to bear on every subject under consideration the combined acumen of as many men having personal knowledge thereof as may seem at the moment to be necessary. In addition to economizing the time of those men and giving effect to their views through an executive body, it must provide them with able assistance in the shape of an unfailing supply of trained servants paid to devote themselves continuously to the work during the intervals that such experts do not meet. Furthermore, the machinery must provide for the collection of funds sufficiently large to warrant expenditure in consulting lawyers and other lay specialists when occasion demands, or in taking steps of any kind which may help to create amongst the general public or sections thereof, such as members of Parliament, views favourable to the attainment by the association of the object it may be seeking to attain.

Apart from their incapacity to provide the necessary machinery, specialist associations are further handicapped by the fact that when dealing with laymen they cannot take up an independent position; they have to admit that though what they want may be good for the profession as a whole and also, in the long run, for the public at large, they are agitating in the first instance, at any rate, solely in the interests of a comparatively small section of a special class.

On the whole, therefore, the right answer to this question is a decided negative. It may even be added that the multiplication of specialist associations is to be deprecated, since they tend to obscure the fact that fundamentally the basic interests of all classes of the medical profession are identical, and to accentuate differences of view between various sections of its members. Moreover, they dissipate energy and money which would do much more effective work if co-operating as part of the machinery of one great association. This is a point of importance, because the total amount of money which medical men are in a position to expend on objects such as the promotion of scientific medicine and the protection of those who pursue it is comparatively small. So, too, is the number of men of administrative ability who can afford to devote time to the furtherance of general professional interests.

In reaching the foregoing conclusions consideration of the history of medical corporations such as the Royal Colleges has not been omitted, for in effect they are specialized associations for the promotion of the interests of various sections of the profession.

IV. *If an association representative of the whole profession is necessary, is there any organization which should be preferred to the British Medical Association in this connexion?*

The answer must be "No" if only for the simple reason that no other organization which represents every single section of medical workers exists, and that if one were brought into existence it would in effect be merely the British Medical Association under another name. A conceivable exception to this statement is the General Medical Council, but apart from the fact that it lacks a good deal in the quality of representativeness, it is a statutory body whose function is less to promote the interests of the medical profession than to govern the medical profession in the interests of the general public.

V. *Does the constitution of the British Medical Association fit it to represent the medical profession as a whole?*

The answer must be "Yes," because its constitution is precisely what its members at any given time choose to make it, and to its roll are admissible all registrable medical men whatever their work. In the past its con-

stitution has undergone several modifications, and in the future it will doubtless undergo several more. At the present moment it is a curiously perfect example of the application of the democratic principle; while no one outside the Association can in any degree modify either its constitution or the character of its machinery, or its aims or its fashion of pursuing them, the power of any member to effect any or all of these things is limited solely by his personal ability in the matter of winning support for his views by either spoken or written advocacy. The effect of this malleability may be illustrated perhaps by some examples.

There are members, for instance, who hold that the machinery of the Association does not give sufficient weight to the views of the man who may be described as the silent voter—the man, that is, who is content as a rule to leave to others the discussion and settlement of questions relating to the general welfare of the profession. There is nothing in the constitution to prevent such members getting the machinery of the Association altered to meet their views. All they have to do is to convince a majority of their fellows that those views are sound.

There are, again, those who, dissenting from the proverb, *vox populi vox Dei*, consider that the Association, in common with all other democratic bodies, is dangerously liable to have its actions influenced by mere waves of feeling. There is nothing in the constitution of the Association to prevent them bringing about the creation of the necessary safeguards, if they consider those which exist to be insufficient.

Others, again, are disposed to think that the Association in dealing with outside bodies is handicapped by the necessity of the whole of its members having to be consulted before action of any kind is taken. There is nothing in the constitution of the Association to prevent members imbued with this belief persuading their fellows to confine the necessity for consultation to matters of principle, and to place all questions of detail and execution in the hands of quite a small executive. It is merely a question of proving on which side the balance of advantage lies.

Any number of similar illustrations might be supplied of the fact that the Association is fitted by its constitution to represent the views of the profession as a whole and to an unlimited extent.

(*To be continued.*)

SLEEPING SICKNESS.

THE report of the Interdepartmental Committee on Sleeping Sickness issued on May 20th, 1914, and briefly mentioned in our issue of last week, is a somewhat bulky document consisting of 139 paragraphs with a memorandum, the whole covering 26 pages. The Committee were asked to report upon the following points:

1. Upon the present knowledge available on the questions of the parts played by wild animals and tsetse flies in Africa in the maintenance and spread of trypanosome infections of man and stock.
2. Whether it is necessary and feasible to carry out an experiment of game destruction in a localized area in order to gain further knowledge on these questions, and if so, to decide the locality, probable cost, and other details of such an experiment, and to provide a scheme for its conduct.
3. Whether it is advisable to attempt the extermination of wild animals, either generally or locally, with a view of checking the trypanosome diseases of man and stock.
4. Whether any other measures should be taken in order to obtain means of controlling these diseases.

For the purpose of elucidating some of these points questions were circulated to persons who the Committee thought would be able to afford assistance, and in most instances oral evidence was taken from the same persons. This evidence is to be published separately. The Committee bases its present report and recommendations chiefly upon this information.

A comparison is first drawn between the trypansomiasis of Uganda and Nyasaland. This subject has been so fully discussed lately that it is not necessary to enter into it again here. Sir David Bruce, as is generally known, has come to the conclusion that wild game constitutes the main, if not the only, reservoir from which the tsetse draws the infection, and Kinghorn and Yorke also believe this to be the case. Taute, on the other hand, from experiments carried out by himself, does not agree with these conclusions.

The Committee believe that the subject must be considered under three heads:

(*a*) Uganda sleeping sickness—the human trypanosomiasis caused by *Trypanosoma gambiense* and transmitted by *Glossina palpalis*.

(*b*) Nyasaland sleeping sickness—the human trypanosomiasis caused by *Trypanosoma rhodesiense* and transmitted by *G. morsitans*.

(*c*) Trypanosomiasis of stock transmitted by several species of *Glossina*.

As regards sleeping sickness in Uganda, the Committee considers that it is doubtful how much importance should be attached to the antelope as reservoirs of *T. gambiense*. Observations, the Committee believes, show that *G. palpalis* is not at all dependent upon these animals, or even on mammals, for food, but can subsist entirely on the blood of reptiles and birds, in which mammalian trypanosomes do not live. Moreover, the removal of the population has led to an increase in the numbers and a change in the habits of the game, which now feeds at times of day when it was not formerly seen, and has thus become more accessible to the fly. The visits of infected natives to the fly area might alone account for the continued infectivity of the flies. The Committee thinks it probable that the part game plays is small in comparison with infected man, and, to a lesser extent, his domestic animals.

As regards sleeping sickness in Nyasaland and Rhodesia, Taute's work in German East Africa is referred to. However suggestive the result of his experiments of trying to inoculate himself with a trypanosome indistinguishable morphologically from *T. rhodesiense* may be, the Committee does not conclude, as Taute himself does, that in Rhodesia and Nyasaland the game trypanosomes are in all circumstances non-infective to man. It is considered possible that only a variant of the original strain may have acquired the property of infecting man. Moreover, individual animals of species known to be susceptible to a given trypanosome sometimes fail to become infected when they are inoculated with that trypanosome.

For the present the Committee considers the identity of *T. rhodesiense* with the trypanosome found in game, of which posterior nuclear forms occur, in the same districts to be unproven.

It is interesting to note that two members of the Committee—Dr. W. A. Chapple, M.P., and Mr. Duncan Millar, K.C., M.P.—do not agree with the general conclusion on the question whether game acts as a reservoir for the human virus. In their opinion the weight of evidence supports the view that wild animals also form one of the reservoirs of the trypanosomes pathogenic to man. They lay special stress on the work of Sir David Bruce and Kinghorn and Yorke. They point out that the former is entitled to speak with special authority on such a subject, and they regard his conclusion as substantially well founded. They accept the view that the presence of game and fly in all areas inhabited by whites and natives carries with it the danger of infection to man, and the opinion that this affords an important additional ground for emphasizing the preventive aspect of the problem, to which, in their opinion, sufficient prominence is not given in the report. They draw special attention to the evidence of Sir David Bruce, Sir Alfred Sharpe, Dr. Yorke, Mr. Garden, Drs. Hodges, Shircore, and May, and think it is necessary to give special prominence to it, as the recommendation of the Committee on this matter does not in their view go far enough. While recommending that steps should be taken to give effect to the proposals advocated by these observers, they are opposed to any scheme for the general destruction of game outside prescribed areas. Such a proposal, in their opinion, is neither desirable or practicable.

Much interesting information is given by the Committee as to the trypanosomiasis of stock. Tsetse and other biting flies are suitably discussed, and the part wild game plays as a reservoir is considered in detail. Much of this is, of course, elementary, and will be well known to the ordinary tropical reader.

The suggested experiment of game destruction in a localized area is discussed. As in the other branches of its inquiry, the Committee found considerable differences of opinion to exist among various authorities on the need

and the practicability of such an experiment. A somewhat long account is given of what is aimed at in such an experiment and of what may be said in its favour or disfavour. Clearing as a means of reducing the number of tsetse flies is then dealt with, and finally the treatment of the human disease is discussed.

The Committee's general conclusions, in which all the members concur, subject, in the case of Dr. Chapple and Mr. Duncan Millar, to the observations in their memorandum, are as follows:

GENERAL CONCLUSIONS.

(*a*) It will be seen from the foregoing observations that, in the opinion of your Committee, there are various ways in which by experiment and research further knowledge might be attained, whereby both the incidence and spread of sleeping sickness might be combated with some prospect of success.

(*b*) Knowledge of the disease, its cause, and its remedies, is still in the making, and hasty and imperfectly considered action of a drastic character such as the attempt to effect a general destruction of wild animals is not justified by the evidence before your Committee. On the other hand, your Committee recommend that until direct means of checking the fly have been discovered, the food supply of the fly and the chances of infection should be lessened in the vicinity of centres of population and trade routes by the removal of wild animals, and that for this purpose freedom be granted both to settlers and natives to hunt and destroy the animals within prescribed areas and subject to prescribed conditions.

(*c*) So far as regards the disease in Uganda, the measures already taken have effectually checked the epidemic and removed the mass of the population from the danger of further infection. While, no doubt, it is desirable that the land lying near Victoria Nyanza should be rendered again available for the use of that population, this is not a question of immediate urgency and may well await the acquisition of further knowledge.

(*d*) With regard to the Nyasaland and Rhodesian form of the disease, its incidence on the population is slight, and it is not increasing. The evidence points to its being an old disease—endemic and not extensive, and though it is unsafe to prophesy, there is no apparent reason to anticipate its appearance in an epidemic form. Having regard to the importance of the question whether man forms a reservoir of the human trypanosome, your Committee would lay emphasis on the desirability of further experiments as suggested in paragraphs 41 and 42 above. (See also Appendix D.)

(*e*) It must be recognized that the evidence all points to the conclusion that if tsetse fly could be eliminated or removed from contact with human settlement, sleeping sickness would practically disappear, infection conveyed by other biting flies being a negligible factor in the spread of the disease.

(*f*) For this reason your Committee attach great importance to a proper and sufficient equipment of entomological research into the bionomics of the incriminated tsetse flies. This form of research has, in their view, been insufficiently pursued up to the present time. The workers have been zealous, but few in numbers, and the work consequently limited to only a very small portion of the fly belts and areas from which the danger arises.

(*g*) Different views are taken as to the prospect of dealing with the fly, but it was, as your Committee think truly, said by more than one of the witnesses that in this form of research there is a large element of chance—that accident may at any time lay bare a secret which may lead to the solution of the problem—and that the multiplication of workers is the multiplication of those chances.

(*h*) Your Committee think, therefore, that, within reason, there should be devoted to this form of inquiry a considerable portion of such funds as may be available in British possessions, and that endeavours should be made to obtain the co-operation in this work of foreign powers in their African possessions, the results of the work being from time to time tabulated and collected.

(*i*) Research will, no doubt, be continued as to the nature of the different trypanosomes and the part they play in the infection of man or of domestic stock.

(*j*) The proposed experiment of removal of wild animals from a selected area may produce valuable results, both as regards knowledge of the habits of the fly and as to the extent to which the infectivity of the fly, and subsequently the infection of man or stock, is derived from the wild animals.

(*k*) As has been pointed out, the result of this experiment cannot be confidently anticipated. There are possible fallacies and uncertainties involved from the very nature of the problem, and in dealing with natural conditions there is always the possibility of unknown factors vitiating or defeating action based on the apparent results of any such experiment.

(*l*) Nevertheless your Committee think that there is sufficient to justify an expectation of useful results, and they recommend that if a suitable locality can be found where an experiment can be carried out at a reasonable cost it should be undertaken. They are, however, of the opinion that the carrying out of the other measures recommended should not be delayed pending the results of the experiment, which cannot be expected to emerge for two or three years.

(*m*) It is perhaps needless for your Committee to say that they hope that medical research as to treatment of the disease and the production of immunity will be continued.

(*n*) The above recommendations relate mainly to the acquisition of knowledge on which further action may be based. As regards immediate action, your Committee strongly recommend that measures of clearing should be undertaken where they are practicable, and would tend to check the spread of the disease and render life in settlements and travel by road safe for men and stock. This question has been fully dealt with already, and it is only necessary to say here that your Committee attach much importance to this matter.

(*o*) Your Committee would point out that the action in various directions which they have suggested is for the general benefit of every part of Africa in which tsetse fly exists, and is or may be the cause of sleeping sickness, so that so far as the cost would fall on local funds they should not fall only on that possession which may be selected for any particular experiment as being that in which the knowledge sought is most likely to be attained. It is even possible that foreign Governments might be willing to share in the cost, but this is hardly a matter on which it is fitting that your Committee should make any substantive recommendation. Nor is the question of a contribution from public funds one for them to deal with, though it is, they think, doubtful whether local funds would be sufficient to bear the costs of the various inquiries and experiments which they think desirable.

(*p*) It has been observed above that the knowledge of trypanosomiasis and entomological problems connected therewith is very incomplete. Your Committee thought it would be useful, therefore, that certain questions which require further investigation should be summarized in a convenient form, and Dr. Bagshawe and Mr. Austen kindly consented to draw up a statement indicating some lines of inquiry which may help in the elucidation of the general problem. Their statement is printed separately as Appendix D. to this report.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

Evidence was given at the thirty-sixth meeting of the Royal Commission on Venereal Diseases by Sir Clifford Allbutt, Regius Professor of Medicine in the University of Cambridge.

Arterial Disease.

Sir Clifford Allbutt, whose evidence related mainly to arterial disease, stated that syphilis was by far the gravest of the infectious diseases of the arteries, and that it was particularly grave in its tendency to cause aneurysms, of which probably 95 per cent. were syphilitic. He thought it probable that if infection with syphilis were dealt with at an early stage and by the most modern methods of treatment the occurrence of these syphilitic diseases of the arteries might be avoided. In cases in which syphilitic disease of the aorta did occur it was of enormous importance

that it should be dealt with at the earliest possible moment and with the greatest and promptest vigour.

Evidence of Rescue Workers: Notification.

At the thirty-seventh meeting evidence was given by Mrs. Wethered and Miss Amy Hughes, representing a large and representative meeting of ladies interested in rescue work which was held some time ago under the presidency of Her Royal Highness Princess Christian. At this meeting the following resolution was passed:

> That this meeting, consisting of rescue workers, matrons of hospitals and workhouses, district nurses, lady guardians, and others, advocates a system of confidential notification (by doctors) to a specially appointed sanitary authority as the only means of altering the law of libel, and so ensuring proper precautions being taken against danger to the community, and especially to innocent persons.

Mrs. Wethered submitted to the Commission particulars of a number of cases which had occurred in her experience illustrating the necessity of telling the truth with regard to this matter, and of recognizing the infectious nature of these diseases.

IMPERIAL HEALTH CONFERENCE.

THE Imperial Health Conference organized by the Victoria League for the promotion of knowledge of house and town planning and the care of child life throughout the empire was opened at the Imperial Institute on May 18th by Mr. Lewis Harcourt, Secretary of State for the Colonies. Lady JERSEY, who presided, said the conference was representative of all parts of the empire.

Mr. HARCOURT, in opening the conference, said that to him it represented a voluntary rally of the best minds of the British Empire in the service of humanity. It was a common focus of their aspirations, knowledge, and experience. Their goal must be the best, but there were many converging avenues of approach. The great difficulty which confronted the work of housing reform in this country was the congestion of population in the heart of the towns, and it was impossible to clear out the slums in the centres of cities without opening up the whole problem of the disposition of urban population. Referring to the problem of child welfare throughout the empire, he said that the prolongation of adult and the preservation of child life was to many of them more than a science; it was not far removed from a religion.

Opening of Exhibition.

The exhibition held in connexion with the conference was then opened by the Marquis of SALISBURY, who said the whole movement was one of imperial importance. This country was paying the penalty of commercial and industrial success, which had aggregated populations in large urban centres under conditions leading to physical and even mental sterility. If race suicide was to be avoided, urban conditions must be provided under which the people could live healthily—in other words, the town-planning movement must be promoted.

Housing and Town Planning.

The question of housing and town planning was discussed at the morning and afternoon sessions on May 19th. Mr. HERBERT SAMUEL, who delivered an address, said the death-rate of this country had been reduced by one-third during the past twenty years. This was one of the most remarkable achievements in social effort that any country could boast. As was already known, the Government proposed to ask Parliament to vote an annual sum of £4,000,000 for distribution amongst the local authorities as a public health grant. If Parliament agreed to grant this money it would do so only on condition that it was efficiently spent. The housing evil could never be cured by providing and letting houses at uneconomic rents. In his opinion the rural housing question could not be settled unless the dwellers were paid a wage which would enable them to pay an economic rent. Moreover, town planning should not be left to the mercy of negligent or unenlightened local councils; it should be made obligatory. No local authority should be allowed to neglect to avail itself of the powers which the Legislature gave it in the matter of town planning and the housing of the people. Among the other speakers were Mr. CHARLES BATHURST, M.P., Mr. RAYMOND UNWIN, the Hon. THOMAS MACKENZIE, High Commissioner for New Zealand, and the Agent-General for Western Australia, Sir NEWTON MOORE.

Care of Child Life.

Principal W. H. HADOW, who presided over the morning and afternoon sessions on May 20th, when the subject of discussion was the care of child life, said that all children of suitable age should be taught frankly and openly the great facts of their origin. At the same time he agreed with the London County Council that such subjects could not be taught in elementary schools. Sir WILLIAM ANSON, in the course of a speech on the care of the child during school life, said that if a child went to school hungry or cold or over-tired, it was not in a fit condition to get the best results from its teaching. The home, therefore, was at the root of the question; and school meals and medical inspection were of little use if the child went home from school to unwholesome, degrading, and injurious surroundings. The home, far more than the school, was what made the child; and every attack on the problem of the school child must begin at the home. He did not believe that the remedy of raising the school age, so often put forward, could be accepted without grave reservation. The subject was also dealt with by Lord CHELMSFORD; and papers on infancy and health were contributed by Dr. DAVID FORSYTH, Bishop FRODSHAM, and Dr. TRUBY KING, of New Zealand.

Child Wage-earners.

At the closing session of the conference on May 21st the question of child wage-earners was discussed. Lord ROBERT CECIL, who presided, said that while much could be done by the direct interference of the State in the matter of the health of the child, he was doubtful whether the true lines of advance were not being neglected. Legislation must not be driven to a point beyond the assent of the parent and of the general public opinion of the day. The first necessity was to secure the co-operation and assistance of the parent, for without this advances in regulating child labour could not be carried very far. Lord PEEL, Sir EDWARD COOK, and Mr. NORMAN CHAMBERLAIN also spoke, and the conference closed with a vote of thanks to the Imperial Institute and the University of London.

LITERARY NOTES.

MESSRS. LONGMANS will publish in a few days a little book by Mrs. Mandell Creighton, entitled *The Social Disease and How to Fight It.* It is intended as a reply to Miss Christabel Pankhurst's *The Great Scourge and How to End It*, which was reviewed in the BRITISH MEDICAL JOURNAL of April 4th (p. 768). Mrs. Creighton's book contains a brief account of the venereal diseases, and discusses the causes which have led to the present awakening to a sense of their seriousness, and of the danger they are to the nation.

Dr. Parkes Weber recently read before the Section of the History of Medicine of the Royal Society of Medicine an interesting paper on art and epigram regarding science and medicine in relation to death, which has been reprinted from the *Proceedings* (vol. vii. 1914), together with an addition on epigram and art in relation to the excessive fear of death. He refers to the "Dutch anatomies" of the sixteenth and seventeenth centuries, which help to illustrate the life-work of anatomists, physiologists, pathologists, and anthropologists. Then there are many medals (Gall, Blumenbach, Karl Vogt, and others) with skulls or skeletons on them. Dr. Parkes Weber points out that no medals have as yet been designed referring to death from the standpoint of the doctrine of the immortality of germ-plasm (August Weismann, etc.). Some coins of Selinus in Sicily (*circa* 466-415 B.C.), commemorating the freeing of that place from what was probably malaria, by drainage of neighbouring marsh lands, illustrate a public-spirited attitude towards preventable death from endemic infectious disease in the fifth century before the Christian era. Acute epidemic diseases, such as plague, cholera, typhoid fever, typhus, have often been represented emblematically as demons in works of art. Certain medals relate to the sanitary disposal of corpses by cremation and to the prohibition of burials within cities and towns or inside churches. Methods of preventing or curing disease are represented on medals; those referring

to vaccination are particularly numerous, and there is one recording the discovery of Ehrlich and Hata. He refers to a number of engravings which may be described as illustrating the words of Shakespeare in *Cymbeline*: "By medicine life may be prolonged, yet death will seize the doctor too." We will add a Spanish epigram to the collection. Death says:

> Aunque se cura y se peina
> Por huir de mi pasion,
> El gran doctor de la Reina
> Ha de entrar en mi prision.

[Although he takes care and trouble to escape me, the great doctor of the queen has to become my captive.] This is from a poem by Fr. Francisco de Avila, published in 1508. Dr. Parkes Weber surveys the whole field of disease and its treatment as emblematically or satirically portrayed in art, and his essay is particularly valuable owing to the great wealth of references, which enables any one interested in the subject to pursue the research if he should have the good fortune to strike a new lead in this department of antiquarian mining.

In the May number of *Aesculape* Dr. Jean Avalon gives particulars as to some women condemned to death during the Revolution who pleaded for respite on the ground that they were with child. The reader may be reminded that during the Reign of Terror nearly 400 women were guillotined in Paris alone. Many of these were young girls. The Archbishop's palace was transformed into an infirmary for prisoners, which they only left for the scaffold. There were four doctors. One, Théry, visited all the patients in twenty-five minutes; his treatment was as simple as that of Sangrado, for his only prescription was *tisane*. He was succeeded by Enguehard, who appropriately was a pitiless bleeder. Another, Naury, applied himself zealously to the evacuation of what Rabelais calls the "pecuniary impostume." It is pleasant to hear that there was one of these men, Bayard, who not only did all he could to soften the lot of the prisoners, but tried to snatch them from the hands of the executioner. To that sinister infirmary were sent the condemned women who pleaded pregnancy. If on examination they were found to be really with child, a respite was granted till after delivery, when they were sent to the scaffold. Is it surprising that some women pretended to be pregnant in the hope of getting a further lease of life? or that others did their best to play the part of Renan's Abbesse de Jouarre with the help of an improvised lover? The Princess Lubomirska induced the Abbé de la Trémouille to consent to create within her a life that should save her for a time from death. An assignation was made in the bathroom, but the guardian of the place proved to be incorruptible. The whole story was at once told to Fouquier-Tinville, and the next day the obliging Abbé was sent to the guillotine, where he was soon followed by the unfortunate lady whom he had tried to save. Other women went through the preliminary rites, often with unknown men whom they paid for their services, but without securing the desired result. It is a terrible story of shame and despair. After a time the tribunal ceased to pay any attention to medical certificates, and sent to the scaffold women actually certified to be pregnant. Meanwhile, Fouquier-Tinville and his satellites prosecuted a butcher who was said to have killed a cow with calf for conspiracy to exterminate the species!

The *Anais Scientificos da Faculdade de Medicina do Porto* is the title of a new periodical of which the first number has lately been received. It contains an interesting article by Professor Maximiano Lemos on Portuguese physicians at the University of Salamanca in the sixteenth century. Among them was the famous Jewish physician, Joan Rodrigues de Castelo Branco, better known as Amatus Lusitanus, who speaks of Salamanca as the most celebrated university of Spain. Another Jewish doctor was Luis Nuñes, who, after holding chairs at Lisbon and Salamanca, was driven by the fear of persecution to take refuge at Amsterdam. Thence he was summoned to Paris to attend Catherine de' Medici. Garcia Lopes, who was a student and afterwards a professor at Salamanca, practised for some time in Lisbon and was consulted by Dom Sebastian as to the expediency of transferring the royal residence to Santarem. He too had to flee to Holland. In a little work on the talents and perfections necessary to make a good doctor, Jeronimo de Mendonca speaks of the great privileges enjoyed by the profession in Spain and of the large salaries paid to the professors of medicine at Salamanca and other universities. Another Portuguese doctor of the sixteenth century speaks of Salamanca as a sacred museum, not only of the liberal arts but of medicine. Rodrigo de Castro, a Jew, who is honoured in Portugal as the founder of gynaecology, was also a student at Salamanca. In the early part of the seventeenth century Zacutus Lusitanus studied at the "illustrious Academy of Salamanca," and speaks of his teachers as "praeceptores in Apollinea facultate nulli secundos." There were scoffers at medicine among the learned in Spain even in those days. Hernan Nuñes, professor of Greek at Alcalà, the foremost humanist in the Peninsula when Cardinal Ximenes held sway in Spain, was noted for his dislike of doctors and their art. It is related that on one occasion, when there was illness in his family, a physician was called in without his knowledge. The doctor, after visiting his patient, was leaving the house when he met the master at the door. Nuñes said to the physician ironically, *Salutem ex inimicis nostris*, to which the doctor replied by opening his hand and showing the fee just received, at the same time continuing the verse, *Et manu eorum qui oderunt nos*. In Amatus's day there were two chairs of medicine at Salamanca. Professor Lemos thinks it possible that one of these was occupied by Fernando Alvarez Abarca; the incumbent of the other was Lourenco Alderete. Abarca was physician to Ferdinand and Isabella, and afterwards to the ill-fated Joan the Mad. Of him Amatus relates that having been called to see a patient, he proceeded to the house with his disciples, and gave a favourable prognosis. Returning in the evening he was told that the patient was dead. The body was already set out for burial, clothed in the Franciscan habit and surrounded by praying friars. Abarca had it uncovered, and, feeling that the pulse was still beating, had the body replaced in bed. The supposed dead man recovered and lived many years. The friars, it is added, retired, not at all pleased at the loss of the money which they expected to get. The family roundly charged them with having hastened on the preparations in order to secure payment, but the Jewish physician, with gentle irony, put the mistake down to their having spent many nights and days by the patient's bedside without food. The other professor, Alderete, is described as "a man by the consent of all Spain admirable in the treatment of disease." He was held in the greatest respect by his students, who accompanied him on his visits to his patients. In a further note something will be said of the curriculum and academic customs at Salamanca in the sixteenth century.

Nearly everything in the animal, vegetable, or mineral kingdoms plays a part in medical folklore. Naturally megaliths, which were objects of worship, are credited with healing powers of one kind or another. One of the most curious superstitions connected with them is the treatment of whooping-cough by dust or particles rubbed off these ancient monuments. It has lately been referred to by Dr. Marcel Baudoin, who, as quoted in the *Nord Médical* of May 10th, says it is difficult to say how far back in the world's history the belief goes, but he thinks it evidently dates from a later period than that of polished stone. The megaliths could scarcely have been looked upon as possessing miraculous properties by those who set them up. We do not find this argument convincing in face of the fact that men who, with their own hands, have fashioned idols or statues of saints or amulets, must often have believed that the divinity or healing power was infused into the images or charms after they were made. Dr. Baudoin, however, thinks it likely that it was the people of the metal age who, finding monuments traditionally believed to be representations of deities, straightway endowed them with miraculous properties. In seeking a cure for whooping-cough a pilgrimage was made to the stone from which a cure was expected. The pilgrims took with them a hammer or a hard stone, with which small fragments were chipped off, usually from the same points, and, together with the dust, carried away. The chips were placed in little pouches and hung round sick children's necks; the dust boiled in water was given as a *tisane*. Sometimes the little patient was rubbed against the megalith.

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THE EARLY TREATMENT OF INFANTILE PARALYSIS.

FOR all our increasing knowledge about acute anterior poliomyelitis or infantile paralysis, its etiology, pathology, and epidemiology, it must be confessed that our treatment of the disease during its acute stages makes but little advance. Flexner and his pupils in America and a number of workers in Germany have identified and cultivated the virus of the disorder, while elaborate studies made in many lands have brought to light a quantity of interesting and important facts with regard to the ways in which the infection is caught and spread. Its prophylaxis can be compassed nowadays better than was formerly the case. The patients can be isolated; their infectious nasal, buccal, and pharyngeal secretions can be appropriately dealt with, and the many healthy carriers of the disease can be rendered less harmful to others by the local use of antiseptics, such as urotropin or hexamethylene tetramine. But once the infection has been caught these antiseptics are comparatively powerless, and when it has reached the central nervous system the virus is almost inaccessible to drugs. It is true that a minute fraction of the doses of urotropin which a patient receives may reach his cerebro-spinal fluid, and so may tend to inhibit the growth of the virus of infantile paralysis in the nervous system. So far as it goes this is, no doubt, an excellent thing; unfortunately, however, there is no good reason for believing that urotropin, the best antiseptic for the purpose at present known, possesses any great practical value in treating the complaint in its acute stages and cutting short its progress. This powerlessness in the face of an acute infectious disorder so dangerous and crippling as infantile paralysis is one of the reproaches of modern medicine.

A gloomy picture! But its gloom is somewhat lightened by a number of considerations very clearly set out by Mr. Robert Jones in the Annual Oration to the Medical Society of London, printed elsewhere in this issue. The matter is one of great practical importance, particularly at the present day when outbreaks of the disease seem to have grown more frequent, and at this season of the year when the warmer weather is coming, and with the increased likelihood that small epidemics of infantile paralysis will occur in Great Britain and Ireland. Mr. Robert Jones does good service by laying down the lines on which medical treatment should be given to cases of poliomyelitis in their earliest stages, and by emphasizing the fundamental importance of beginning that treatment at the earliest moment possible. Treatment at this stage habitually falls into the hands of the medical man in attendance and not into those of the surgeon; and Mr. Jones would make it a general rule that in every case the head and spinal column should be kept at rest from the very beginning of the attack. If the child has much pain in the spine and limbs, as not rarely happens, fixation of the spine and limbs gives more relief than any other procedure. In any case, to keep the spinal cord and head at rest, so far as possible, in acute poliomyelitis, is only to act in accordance with the general principles regulating the treatment of inflamed organs or areas in other parts of the body. It is important that this rest, continued through the acute and early convalescent stages, should be continued so as to prevent the adoption of faulty positions by the affected limbs, in order that the deformities that are likely to follow the paralysis may be minimized. Until the tender stage of the disease has passed away—a matter of from three to eight weeks or even more—no active treatment should be undertaken; it is argued that active myelitis may be present throughout the tender stage, so that treatment by massage or electricity would be premature.

Having drawn attention to the importance of complete rest during the early stages of infantile paralysis, Mr. Robert Jones proceeds to point out the necessity for great care when active treatment is at last begun. It is not the nervous part only of the neuro-muscular apparatus that is damaged in infantile paralysis. Everybody knows that the motor nerve cells in the anterior horns of the spinal cord are injured in this disease; but it is not so generally realized that the affected muscles may suffer doubly—first, in their nerve supply; and, secondly, by being themselves overstretched while thus disabled. Hence it is of great importance that from the first they should not be stretched, and to avoid this attention must be given to the position of the limb; and, again, that when massage and active movements are prescribed care should be taken to avoid the possibility of straining or overstretching the injured muscles. The massage must be very gentle at first, the movements must be carefully limited, and the limb must be put up in apparatus so as to keep the paretic muscles in a position of relaxation until they have improved in tone. The success of treatment depends upon the maintenance of this muscular relaxation continuously until there is evidence that the damaged muscles have begun to recover. When this occurs, the position of relaxation may be gradually discontinued.

Mr. Jones gives a very clear and careful account of the various methods of treatment he has found effective in infantile paralysis, and he emphasizes and explains his points with a number of illustrative cases and illuminating comments upon them. We shall not attempt to follow him into the discussion of the operative measures that may be taken to remedy paralyses and deformities which remain after rest, in its special application to particular groups of muscles, and judicious massage have accomplished all that is possible by these means. They call for the exercise of the highest surgical judgement and skill, and incidentally raise problems which neurologists have not yet fully solved. Rather is it our desire to invite attention to the earlier passages of his oration, which bring into prominence the scientific principles upon which the treatment of poliomyelitis must depend, and throw a new light upon its darkest chapter—the treatment indicated at the outset of the disease, what may be called the prophylactic treatment of deformity. These passages will be most valuable to the general practitioner of medicine.

BUDGET SCHEMES: NURSING.

THE Budget proposal with respect to nursing falls into the same class in the estimates as that relating to laboratories. It provides a special grant, supplementary to the general grant for public health services, which is to be administered by the local authorities, with the approval of the Local Government Board. This decision has probably been dictated by considerations similar to those which led to the provision of the Hobhouse grant, by which the treatment of tuberculosis under the county councils is extended to all persons suffering from tuberculosis without distinction on the ground of insurance. It is obviously unscientific to treat one consumptive member of a family and not another, and it is equally undesirable that a nurse should attend in a home and limit her services to those members of the household who happen to be insured. There is a further and very important consideration—namely, that the Treasury money found for these purposes, which will presumably be supplemented by some measure of rate assistance, cannot fairly be limited to one section of the community and administered by a nominated body, such as the Insurance Committee.

These considerations doubtless led to the grant in aid of a nursing service occupying the place it does, but we hope at the same time that Insurance Committees will not be deprived of their right to use their share of the funds in any cases where a local authority makes no attempt to do so. In a general way, members of the industrial class, when they are sick in their own homes, cannot count on obtaining the assistance which an experienced nurse could afford under the direction of the medical man in charge. Where their condition is grave they are commonly treated in a hospital, and in other cases any assistance they receive in the way of nursing is usually that afforded by some friend or neighbour without special skill or training. In saying this, however, we are not unmindful of the enormous amount of work which is done by the Queen Victoria Nurses, by the Ranyard Nurses, and by the numberless nursing associations, small and large, throughout the country. In a good many cases it may fairly be urged that the homes of many working people are not suitable places for the nursing of very sick persons, and that they cannot obtain in them the needed quiet and rest under suitable conditions; in other words, the needs of many of them would be better met by proper institutional provision. This is, no doubt, true enough, and it only accentuates in another way the need for improved housing for the industrial classes. Putting aside, however, that section of the population which lives in overcrowded or insanitary tenement dwellings, there are large numbers of working people with clean and well-kept homes who would be glad enough to have the assistance of a nurse during their sickness if it were within their means, and, however much they value the local hospitals, they often prefer, if possible, to be attended to in their own homes when they are ill. Medical men, too, in busy industrial practices would often give a good deal if they had at their command the services of an intelligent nurse, who, with great advantage to themselves and to their patients, could save them an infinity of trouble in many minor and domestic details. We have no doubt, therefore, that if the nursing service is arranged on proper lines it will be welcomed both by medical men and their patients. It should certainly, however, be made clear, we think, from the very start that the services of the nurses under proper limitations should be at the direction of the medical men and should be called for by them, and that the nurses should be grouped together into some form of association or organization which will provide the necessary discipline. It would not do to create a sort of service of unqualified practitioners under nobody's control, who would be at liberty to pay visits on their own initiative or at the direction of some well-meaning but inexperienced person.

The establishment, however, of a nursing service on any comprehensive or national lines is a great undertaking, and can only be carried through by careful organization and preparation over a considerable period. It will be some time before we know with any definiteness how many sufficiently trained and experienced nurses are available for the work. A medical man in general practice responsible for, say, 2,500 persons, would probably have enough work to keep one nurse well employed. A provision of nurses on this basis would require 16,000 for Great Britain alone. We believe that in some district nursing associations one nurse per 10,000 of the population is estimated to be a fair provision. Whilst this may be sufficient to deal with many of the most necessitous cases, it is obviously totally insufficient to meet the needs of a nursing service such as any experienced man could call either comprehensive or satisfactory. An addition to the present provision of, say, 5,000 nurses, allowing a cost of £100 a year a nurse, represents an annual expenditure of half a million pounds, besides travelling and other expenses. According to the statements made in the House of Commons, the grant for next year is to be £250,000, so that, allowing for the contributions which the Treasury will require from local authorities out of the rates, it would seem to be the intention of the Government to undertake the work in a thorough manner. We feel considerable doubt as to whether it will be possible usefully to expend so large a sum in the first full year of the work, for the reason that we greatly question whether there is a sufficient number of properly trained nurses available. We have looked up the reports of some of the chief nursing associations, and have examined such figures as are available, and everything points to the fact that, as soon as a survey is made of the extent of the present available supply, a serious shortage of properly qualified nurses will be revealed. We know already that in some of the sanatoriums one of the chief difficulties in connexion with the staff has been that of obtaining nurses, and the establishment of a service under which nurses were properly paid in doing home nursing will at once tend to deplete the number of those available for institutional work, and obviously the country cannot afford to have its hospitals under-staffed in the matter of nurses. We may with fair confidence predict, therefore, that another early result of State enterprise in this direction, following upon the revelation of an insufficient supply, will be a substantial increase in the salaries of nurses. Many of our voluntary institutions have hitherto lacked sufficient funds, but, however real the causes may have been, no one can regard the miserable pittances which nurses have often hitherto received as either a creditable or proper payment for the services rendered. Another early result also of the establishment of a nursing scheme will be a demand which cannot be resisted for a proper standard of qualification and for registration, and we may be fairly sure that the Treasury will require some sufficient assurance that those who are employed are competent and suitable to do the work. At the present time there is

no general test or standard to which it can easily refer.

Reflections of this kind—and many more of the same sort could be made—are sufficient to indicate that these proposals of the Government raise issues of great importance for nurses and medical institutions alike. They also at the same time indicate fairly clearly what we may expect will be the line of procedure most likely to be followed at the commencement. We should expect that the different authorities will be asked to ascertain to what extent the nurses at present available in their areas are sufficient to meet their needs, and they will probably aim at developing the work in the first place by contributions to the various nursing organizations and associations where they exist. Other matters will probably not be dealt with until it has been shown how much can be done through existing machinery. Under a comprehensive scheme, however, we should look to the development of some organization or association in each county which will ultimately be responsible throughout the whole area.

SLEEPING SICKNESS.

The report of the Interdepartmental Committee on Sleeping Sickness, an account of which appears elsewhere in this issue of the Journal, is interesting as it condenses recent knowledge on the subject into a reasonable compass, and shows amongst other things that there is a considerable diversity of opinion on many of the points at issue. The crux of the situation is easy to state though difficult to answer. It is this: Does wild game act as a reservoir of human trypanosomiasis, or does it not? No one who knows anything about the subject will deny that it does so for the trypanosomiasis of domestic stock. Sir David Bruce and his fellow workers, as well as Drs. Kinghorn and Yorke, after laborious and painstaking studies, are convinced that the wild game is the real source of the human disease as seen in Rhodesia and Nyasaland. Their results would probably have been accepted without demur had not Taute in German East Africa inoculated himself with a trypanosome of the *T. brucei* type with no bad effects. This experiment has been criticized by the Committee as by others. It cannot really be said to prove anything more than that Taute himself was insusceptible to the strain of trypanosome with which he experimented.

It is well known that both *T. gambiense* and *T. rhodesiense* can be inoculated into various animals, and that the strain can be kept going in laboratories by constant passage through rats and guinea-pigs. Again, in the report it is stated that Bruce has experimentally shown that if a susceptible animal be inoculated with *T. brucei* derived from an antelope, and another susceptible animal be inoculated with *T. rhodesiense* derived from a man, the same type of disease is produced, a type differing from that produced as the result of inoculation with *T. gambiense*. Human beings have been accidentally inoculated when working with infected animals in laboratories. In one instance the strain was labelled *T. brucei*, though now it is sought to show that the parasite could not have been that species. With those facts before us—the ease of transference of the parasites from man to animals and from animals to man—it is not stretching the imagination much to believe that Sir David Bruce and the other workers mentioned above are right in their contention. To the ordinary mind it certainly seems quite feasible and reasonable; whether, however, this conclusion be or be not accepted, the indisputable fact remains that domestic stock is decimated by trypanosome diseases acquired by tsetse flies from wild game. Again, apart altogether from the questions raised in connexion with sleeping sickness, it would appear that the preservation of wild game and the rearing of stock are incompatible for several reasons—the principal one being the destruction of crops and grass by the game. If stock raising is to increase, then the game must go or be driven back.

Unfortunately many who have taken part in the discussion of proposals for the destruction of game have never actually studied the conditions prevailing in the districts concerned. Had they done so, they would probably have realized that to talk of exterminating the fauna of a whole continent would be absurd. This, however, is not what is meant, and is not what is required. What should be done is the destruction and driving back of game from cultivated lands and from the neighbourhood of human habitation, and this policy could be carried out fairly easily without much expense. In the old days in Uganda there was a law which forbade the shooting of game within some miles of the different stations. This was exactly the converse of the true policy, which is to stamp out or drive away antelopes and other mammals from the inhabited and stock-raising areas, but to leave them alone in the wilder and uninhabited parts. There is nothing new or wonderful in this; it is an everyday occurrence, well exemplified in the history of the towns that have grown up during recent years in South Africa and elsewhere. As civilization advances, wild animals of any size, unless rigidly protected, soon die out.

It is not quite clear whether the experiment suggested by the Committee, of game destruction in a localized area, is worth the expense it would involve. It is by no means certain that it would prove anything definitely one way or the other. Much has lately been learnt from Uganda as regards the value of clearing forest and bush in the reduction of tsetse flies (*G. palpalis*), and as regards infection by *T. gambiense*. Since the value of this plan is unquestionable it ought to be extended.

There is nothing startling in the conclusions reached by the Committee; in fact, they are of an extremely cautious character throughout. There is an undoubted tendency to sit on the fence or to wait and see, and so noticeable is this that two of the Committee—Dr. W. A. Chapple, M.P., and Mr. Duncan Millar, K.C., M.P.—have appended to the report a memorandum of their own on the subject. They say: "Having regard to the havoc wrought amongst domestic stock by trypanosomiasis and to the obstacle thereby placed in the way of settlement, and of the opening up of trade routes in all regions where game and fly are found, we think that, on this score alone, there is urgent need for immediate preventive operations being carried out. Accepting, as we also do, the view that the presence of game and fly in all areas inhabited by whites and natives carries with it the danger of infection to man, we are of opinion that this affords an important additional ground for emphasizing the preventive aspect of the problem, to which, in our opinion, sufficient prominence is not given in the report." The same two members also believe that the weight of evidence brought before the Committee supports the view that game forms one of the reservoirs of the trypanosomes pathogenic to man, and they accept Sir David Bruce's conclusions as substantially well founded. Many will agree with

this latter statement. Why send out an expert—especially of the standing of Sir David Bruce—at all, if his conclusions are not to be accepted and acted upon? After all, he has done the work on the spot, knows the local conditions, and is without doubt the best man to judge of what is required. Further similar results have been obtained by Kinghorn and Yorke, also competent observers, so what more is necessary? It would certainly have conduced to full understanding of the question in all its bearings had all the members of the Committee actually gone to Nyasaland, seen the conditions on the spot, and published their report from there. More research work is suggested; but it is as well to remember that this has been going on since 1902. It would be advantageous—at least, that is the opinion of some—to act more on the results of the various Commissions who have worked on these subjects, and for the powers at home to be not too conservative.

MUNICIPAL TUBERCULOSIS DISPENSARIES AND GENERAL AND SPECIAL HOSPITALS.

THE desirability of smooth co-operation between the various agencies for the suppression of tuberculosis is universally admitted, and the recommendations to that end put forward by the Local Government Board and other authorities are gradually being adopted with a view to securing it. The advantages which must accrue to municipal tuberculosis dispensaries by intimate association with established hospitals are obvious, but many interests have to be considered, and the various authorities concerned have hitherto advanced but slowly. A beginning has been made, and a report on the first year's working has been issued, by the authorities of the Borough of Lambeth, working in association with St. Thomas's Hospital. A central dispensary at Brixton with a branch dispensary at St. Thomas's, separate and distinct from the hospital out-patient department, has been provided by the borough council and placed under the care of two whole-time suitably qualified tuberculosis officers. The branch located at the hospital provides for patients in the northern districts of the borough, and is under the control of the hospital authorities, by whom the tuberculosis officer is appointed. The services of the consulting staff and the use of beds in the hospital for observation or treatment may be requisitioned as required. The whole scheme is placed under the supervision of the medical officer of health of the borough, who has executive control over both dispensaries, except in so far as clinical duties are concerned. The report makes no mention of financial arrangements, nor does it indicate the lines upon which such dual control is harmonized. The two dispensaries are worked upon similar plans, and patients are interchangeable between the two, the hospital facilities being available for both. The tuberculosis officers have arranged their report on the work done during the greater part of the year 1913 on an original plan, which may serve as a precedent for others, and is certainly deserving of imitation. The main functions of the dispensary as a receiving house and centre of diagnosis, as a centre for observation and curative treatment, as also for the examination of contacts and for the provision of after-care and educational facilities, are separately considered, and much useful information has already been obtained for future guidance. The unsatisfactory method of classifying patients according to the supposed stage of the disease has given place to the more practical test of fitness or unfitness for work. Thus arranged, it is possible to see at once to what extent the unfit have been rendered fit, which is the ultimate practical aim of the curative aspect of the scheme. The facilities for special diagnosis and treatment afforded by the hospital have been used to the greatest extent, but, as no information is afforded upon the point, it must be assumed that patients, whether insured or uninsured, are accepted by the hospital authorities on the same footing as the ordinary beneficiaries of the charity. Exact information as to any financial arrangement that may have been made between the borough council and the hospital would be of interest to the authorities of similar institutions who may be waiting for a lead in this direction. Under the scheme put forward by the Public Health Committee of the London County Council, which was accepted by that body at its meeting on May 26th (p. 1206), it is proposed that material assistance shall be given to various institutions undertaking to provide residential accommodation for patients recommended for such treatment by the tuberculosis dispensary officers. It is further desired that the whole system of co-operation between hospitals, Poor Law infirmaries, sanatoriums, and homes shall be linked up in such a way as to secure smooth working. The decision to aid existing institutions rather than to add to their number is a wise one, and the further determination that such aid will be most profitably employed in providing for tuberculous children will be universally applauded. The scheme of the Council involves the establishment of an honorary advisory board on which all interests would be represented, and the employment of a certain number of paid medical referees by whom the allocation of doubtful cases will have to be determined. It is estimated that 550 beds can be made available at the present time in hospitals, sanatoriums, and homes, but it is at once obvious that a far larger number will be required to meet the existing demand. The estimated cost of in-patient treatment in hospitals has been fixed at 30s. a week for adults and 20s. for children, and the totals will be apportioned between the Government, the County Council, and the local municipalities. The extent to which the appropriation of beds in hospitals supported by the charitable public can be carried will have to be determined by the governing bodies of each, but there need be no limit to the extension of existing institutions in the directions indicated by the report of the Public Health Committee, if only the means be forthcoming to extend them.

OLD AND NEW LARYNGOSCOPY.

DURING his visit to London this week Professor Gustav Killian, of Berlin, has led the strenuous life. On Wednesday, May 27th, he gave a demonstration on suspension laryngoscopy, of which we hope to give an account in the next issue of the JOURNAL; on Thursday he delivered the annual Semon Lecture of the University of London, an abstract of which is published elsewhere with illustrations, and in the evening he was entertained at the annual banquet of the combined Sections of Laryngology and Otology under the chairmanship of Dr. D. R. Paterson, of Cardiff. Outside the comparatively small group of specialists who devote themselves to rhino-laryngology, the great benefits which Professor Killian has conferred on mankind by his long, patient, and successful researches are scarcely appreciated. To take only one instance, the percentage of deaths in cases of impaction of foreign bodies in the air and food passages has as a result of his work declined from something over 60 to nearly zero. In one way it may perhaps be said that the work of our distinguished visitor has been almost too successful. His methods of direct endoscopy have in the last five or six years been adopted and practised by the rising generation of throat surgeons with such enthusiasm that there seems to be some danger of the "indirect method" discovered by Manuel Garcia, the jubilee of which was celebrated so recently as 1905, falling into virtual oblivion. This very point unexpectedly arose in a debate at the meeting of the Section of Laryngology held on May 1st, a report of which was published in the JOURNAL of May 23rd (p. 1124). Two cases of laryngeal tumour were shown by Dr. Donelan in which attempts at removal by the

direct, or Killian, method had failed, whereas operation by the indirect method had proved easily and completely successful. In the discussion on these cases Sir StClair Thomson contended that by the old or indirect method a laryngeal growth could be removed more quickly and as completely as through a Killian tube. He held that on the old principle of cure, *citò, tuto et jucunde*, the indirect method should be preferred wherever it was practicable. He further pointed out that those young laryngologists who showed a tendency to neglect the older method were going beyond the practice of their master, for Professor Killian himself and his chief disciple, von Eicken, never employed the endoscopic instruments they had themselves perfected when it seemed likely that the old method of laryngoscopy would be of greater service. Sir Felix Semon lent the weight of his great experience in support of the indirect method, the neglect of which by the younger men was, he said, to be regretted. This view was also upheld by Mr. E. B. Waggett, Dr. Dan Mackenzie, and Dr. Jobson Horne, who deplored the possibility of the delicate manipulation of indirect laryngoscopy becoming a lost art. Killian's new technique is the only one available for the examination and treatment of the oesophagus, the trachea, the bronchi and their secondary divisions. For the larynx the specialist has at present a choice of two methods. The new direct method is the most suitable for infants and children, and for adults when a general anaesthetic is required. For laryngeal growths, for cauterization and topical applications, and for certain local conditions, the older or indirect method is, in the opinion of experienced laryngologists, in skilled hands, the better way. But the hands must be skilled; the older representatives of the speciality are fortunate in that they were trained to the greatest delicacy of manipulation by having to employ the laryngeal mirror, while, for the last ten years or more, they have also had practice in the Killian methods of endoscopy. The younger men having chiefly experience of the direct method naturally have recourse to it more readily; and they are apt to neglect the gentler aid of indirect laryngoscopy. Sir Morell Mackenzie acquired his extraordinary deftness by practising for hours at a time with a laryngeal mirror sloped over a dice box, from the depths of which he lifted little pellets of paper with forceps. It may be asked if in the stress and strain of modern conditions of practice the present generation has sufficient time or patience to submit itself to so laborious a training. The answer to this question may be somewhat doubtful, particularly as, owing to the large number of practitioners who now devote their attention to the throat, there are not enough laryngeal growths to afford all aspirants the opportunity of becoming adepts in their removal. But topical applications, cauterization, and so forth are still commonly required. We therefore think the young laryngologist would be well advised not to allow himself to be carried away by the enthusiasm justly aroused by the new methods we owe to Professor Killian so far as to throw aside as obsolete the delicate methods which that pioneer himself has not even proposed to abandon.

IODINE AND THE EXCISE

ABOUT two years ago Mr. Reginald Alcock, in an article on the use of iodine as a dressing for surgical wounds, published in this JOURNAL, mentioned that for the purpose of the solution "industrial methylated spirit" compared favourably with the rectified spirit, on account of its lower cost and its freedom from those additions of mineralized naphtha which are made to the rectified spirit for the purpose of rendering it unfit for illegitimate consumption. The regulations governing the use of industrial spirit are those prescribed by the Commissioners of Inland Revenue, under the authority of the Spirits Acts of 1880, the Customs and Inland Revenue Act of 1890, and the Revenue Act of 1906. These regulations authorize the receipt of that spirit for use in certain specified arts or manufactures, among which are included the "manufacture of embrocations, liniments, and lotions," "surgical dressings" and "capsules and other medicinal appliances," also "for educational and scientific purposes in colleges and schools," for "hospitals, asylums, and infirmaries," and "for disinfectants." In all cases in which this spirit is to be used application must be made for permission to receive it, and this is granted only upon certain conditions, referring in the main to inspection of the stores of spirit and to the rendering of periodical returns as to the quantities consumed, and to the restriction of the preparation of the finished article to specified places. It may be admitted that a careful oversight as to the use of a cheap and powerful spirit, capable of internal consumption, is an unfortunate necessity, and the regulations would appear at first sight to provide in an effective, though somewhat cumbrous, manner for that necessity without interfering to any very serious extent with the proper use of the spirit by a competent and responsible person; and yet we find that objection is taken by the Excise authorities to the use of industrial methylated spirit in the manner indicated in the article in question. It might, perhaps, be thought that this is a case in which the zeal of a local official has outrun the discretion of his departmental superiors; but we find on inquiry that the Commissioners of Customs and Excise are prepared to support the objection. The Secretary to the Commissioners has informed us that "it is a contravention of Section 130 of the Spirits Act, 1880, to use methylated spirit in the preparation of any article capable of being used internally as a medicine, and the employment of the spirit for making embrocations, liniments, and lotions, is subject always to this general restriction. Articles of the nature of those described are essentially similar to tincture of iodine and therefore cannot legally be made with methylated spirit." It seems abundantly clear that the only purpose intended to be served by so elaborate a system of regulations is to prevent the use of a cheap and strong spirit as a means of intoxication; indeed, the section referred to in the secretary's letter when quoted more fully reads, "capable of being used wholly or partially as a beverage, or internally as a medicine," thus plainly indicating the principle underlying the regulations. From a legal point of view the position taken up by the Commissioners of Customs and Excise may be correct, but on grounds of equity and common sense we have no hesitation in affirming that a system of regulation which prohibits the use of a cheap spirit for the preparation of an antiseptic fluid of well recognized value in the sterilization of the skin both before and after operation and in the treatment of certain classes of wounds, and authorizes it in the manufacture of felt hats, stands self-condemned as an absurdity.

AMERICAN MEDICAL SERVICE IN THE CIVIL WAR.

AN interesting address on the medical department of the army during the American Civil War, delivered by the late Dr. Weir Mitchell before the Physicians' Club of Chicago on February 25th, 1913, was published in the *Journal of the American Medical Association* of May 9th. When the war broke out the department consisted of thirty surgeons and eighty-three assistants. Of these twenty-four resigned to take part with the South and three were dismissed for disloyalty; thirteen were Southerners by birth but remained true to the Union. Soon after the beginning of the war the Surgeon-General had to retire on account of age, and Dr. William A. Hammond, then an assistant surgeon, was promoted to take his place. Hammond saw and took advantage of a great opportunity; he created the Army Medical Museum, and he

advised the foundation of the Army Medical School. He was, however, impulsive and self-confident, and coming into conflict with Stanton, the Secretary for War, he was court-martialled, and, according to Mitchell, unjustly removed from the army after service of unequalled value. Before the end of his military career, however, Hammond had reorganized the service and brought hospitals into being; by the work he did he left his successor an easy task. In 1861 the army already had 2,109 regimental surgeons, 3,652 assistant surgeons, and in the hospitals scattered through the country 5,500 acting assistant surgeons. Mitchell says that although in novels, and sometimes in histories, one reads of bayonet charges, he himself never saw a bayonet wound, and of 25,000 wounds treated after Grant's battles only 14 in all were caused by the bayonet; there were probably as many men severely kicked by mules. For a time there was much bad surgery, and the competent officers were overworked; 28 per cent. of amputations resulted in death; of the trephined 61 of every 100 died. Mitchell's memories of hospital nurses during the war are mixed. When the troops were in the neighbourhood of great towns they had many volunteer nurses. Some were terribly earnest, utterly ignorant, and quite incapable of discipline; others, if more efficient, were not punctual, and came and went as they pleased. The best nurses were the Roman Catholic Sisters, but unfortunately there were too few of them. Mitchell observed that good-looking, well-bred, low-voiced women exercised a great control over the soldiers. Some interesting personal experiences were given, and he made special mention of his studies of nerve lesions, which were among his earliest contributions to medical science. The work of the military surgeons of the civil war had not, he said, received due recognition. "The great leaders in war have been promoted and universally honoured. Countless statues commemorate in Washington and elsewhere the popular heroes. Statues of generals are in every town, some of them memorials of men it were wiser to forget, some whom history will judge severely. Every village has its statue to the private soldier. There is not a State or national monument to a surgeon." Not long ago Dr. Weir Mitchell had induced the Gettysburg Commission to mark with a bronze shield the site of every corps hospital, with the names of the surgeons who served in each. This was, he said, absolutely the first national recognition by the United States of the medical officer in the war.

"DOCTOR" OR "PHYSICIAN"?

THE question of the use of the title "Doctor" has for practical purposes been happily settled for their licentiates and members by the London Colleges. It is natural that practitioners should be anxious to be allowed *de jure* to use a title which indicates their profession, and which is, *de facto*, given them by people in general. It is curious, therefore, to find that there is at least one case on record in which a man thought it worth while to go to law to get relief from what he regarded as the grievance of being called a doctor. The story is told in Boswell's *Life of Johnson*. On January 19th, 1775, Boswell wrote to Johnson asking his advice on a legal case, as he not infrequently did. He enclosed a petition from Dr. Memis, a physician of Aberdeen, setting forth that in a translation of the charter of the Royal Infirmary of that city from Latin into English, the same phrase in the original was in one place rendered "physician," and in another when applied to the complainant "Doctor of Medicine." The translation was made under the authority of the managers of the infirmary, and Dr. Memis complained of the rendering before the translation was printed. No alteration was made, however, and Dr. Memis brought an action for damages on account of an alleged injury "as if the designation given to him was an inferiour one, tending to make it be supposed that he is not a physician and consequently to hurt his practice." Boswell's father, Lord Auchinleck, who tried the case, dismissed the action as groundless. Dr. Memis then appealed to the whole court, thus realizing Dandy Dinmont's ambition of going before the Fifteen. Johnson, replying on February 7th, 1775, says, "I consulted this morning the President of the London College of Physicians Dr. Lawrence, who says that with us *Doctor of Physick* (we do not say *Doctor of Medicine*) is the highest title that a practiser of physick can have; that *Doctor* implies not only *Physician*, but teacher of physick; that every *Doctor* is legally a *Physician;* but no man, not a *Doctor* can *practise physick* but by *licence* particularly granted. The Doctorate is a licence of itself. It seems to us a very slender case of prosecution." In this, we think, most readers will agree with Lawrence and Johnson. On May 6th, 1775, Boswell dined with his illustrious friend at the Mitre, and Johnson dictated an opinion on the case, in which he developed the views he had already expressed. Towards the end of 1776 we find Johnson asking what the issue of the case had been. Boswell answered on February 14th, 1777: "Dr. Memis's case was determined against him with 40*l.* costs. The Lord President and two other of the Judges dissented from the majority upon this ground: that although there may have been no intention to injure him by calling him a *Doctor of Medicine*, instead of *Physician*, yet as he remonstrated against the designation before the charter was printed off, and represented that it was disagreeable, and even hurtful to him, it was ill-natured to refuse to alter it, and let him have the designation to which he was certainly entitled." Boswell, who appeared as counsel for the managers, adds: "My own opinion is that our court has judged wrong. The defendants were *in mala fide* to persist in naming him (Memis) in a way that he disliked." He illustrates his view by what seems to us a singularly inept analogy, when he goes on to say: "You remember poor Goldsmith, when he grew important, and wished to appear *Doctor Major* could not bear your calling him *Goldy*. Would it not have been wrong to have named him so in your 'Preface to Shakespeare' or in any serious permanent writing of any sort?" The wonder is that Memis should have lost his case when he had against him an advocate who argued in this style. We suspect, however, that Boswell, who was jealous of Goldsmith, could not resist a kick at "poor Goldy," even when he was dead.

HAEMOPHILIA AND CHILDBIRTH.

ACCORDING to Grandidier the great majority of "bleeders" are males; out of two hundred families subject to haemophilia he found that there were 609 men and only 48 women distinctly subject to the infirmity in question. The most important feature in this relative immunity is the probability of fatal catamenial or puerperal flooding. Eleven years ago the advocates of atmocausis recommended what they termed "uterine castration by superheated steam" in haemophilia, ligature of the Fallopian tubes, removal of the ovaries, or any other surgical operation being contraindicated on account of the perils of haemorrhage. But although Von Guérard, Gummert, and others claimed success after atmocausis in cases in which the girls were really haemophilic, ordinary menorrhagia at puberty has been too often ascribed to haemophilia after it has been cured or checked by atmocausis. Clinical evidence tends to show that physiological haemorrhages from the genital tract of bleeders are not by any means severe, like epistaxis or bleeding from abrasions. Dr. Czyborra of Königsberg has published[1]

[1] Ueber Hämophilie bei Frauen. *Monatsschrift f. Geburtsh. u. Gynäk.*, April, 1913, p. 487.

a memoir on two women, one of whom underwent trachelorrhaphy and the other perineorrhaphy. Both subjects were Jewesses from the Baltic provinces of the Czar's empire. The first patient was 32 years of age. She came to hospital on account of the discomfort caused by a ruptured cervix, and said nothing about bleeders in her family, although she admitted that she was colour-blind. Emmet's operation was performed, and within a few days bleeding set in and recurred frequently; deep sutures passed by curved needles, adrenalin, solutions of copper sulphate, and saline transfusions checked the haemorrhage, but the thermo-cautery had to be applied to the tissues of the cervix; sloughs developed in consequence, and the granulations which sprouted when they came away bled on the slightest touch. The patient ultimately recovered. The catamenia had never been excessive; she had never aborted; all her three labours had been unaccompanied by flooding, and two of the children were reared. The first labour had been severe; craniotomy on the dead child and manual separation of the placenta were practised, yet the patient declared that she lost very little blood on that occasion. When the bleeding set in after the operation Dr. Czyborra made inquiries, and the result was the discovery of a very clear family history of haemophilia with Daltonism complicated with hemeralopia in some relatives. Two of the patient's sisters and her own daughter, 5 years of age, were bleeders, and one of her brother's nine children bled very severely from the mouth and nose after a chastisement when 7 years old. Lastly, the patient herself stated that when a young girl she suffered badly from epistaxis, bleeding from the gums, and melaena. It is remarkable that in this and in the second case the bleeders were all females. The other patient, who suffered great discomfort due to procidentia and unrepaired rupture of the perineum, was 35 years old. The show of blood at each menstrual period was trifling, the patient was twice delivered spontaneously and had never aborted; after the first labour, which, like the second, was unaccompanied by haemorrhages, the perineum was imperfectly repaired by operation, and there was much oozing when the sutures were removed. The operations of perineorrhaphy and anterior colporrhaphy were performed, and were followed by severe attacks of bleeding; the thermo-cautery was not necessary, though all the other means for attaining haemostasis used for the first patient were employed. The history of the mother of this patient was remarkable. She was delivered spontaneously five times without severe flooding. Yet between her first and second labour, when she was 21 years old, she bled severely for two days after the extraction of two teeth, and the gum over the site of the teeth often bled even afterwards. Epistaxis and bleeding from the gums occurred during violent exertion and proved hard to check. The patient herself, it transpired, had bled badly from a cut finger when 6 years old, and after extraction of a tooth when 17, and one of her sisters was a bleeder. That sister had given birth to a female child without any flooding, though very subject to bleeding from the gums and nose; the child bled badly from the nose and gums when cutting its first teeth. Another sister's child bled very freely from the foot after a mere prick from a thorn. The patient herself had two female children, one subject to epistaxis, whilst the other was quite healthy. Dr. Czyborra found no evidence of tuberculosis, rachitis, or syphilis, either in his patients or their offspring. The relation of haemophilia to obstetrics raises a serious question, yet, according to the Königsberg obstetrician's experience in two marked cases, flooding is not inevitable in women who are bleeders. Both cases were exceptional in so far as the infirmity was confined, it appeared, to the female members of the family.

THE LAST STAGE OF THE OPIUM CONVENTION.

We understand that the third International Opium Conference is summoned to assemble at the Hague on June 15th. The only question for consideration indicated in the summons is to inquire into the possibility of putting the convention of 1912 into force. It will be recollected that the original convention was drawn up and signed by twelve Powers only. All other Powers in Europe and America were then invited to co-operate. Forty-three out of forty-six Powers concerned have now, we understand, signed the convention, and some seven or eight have already ratified it. Great Britain has hitherto refrained from ratification, but it is believed that all obstacles to her doing so have now been removed. The Powers wholly or partly abstaining from this international movement are Turkey, Servia, and Greece; as these Powers all produce the opium poppy it may be necessary to concert measures to meet the situation thus arising. The coming into force of the convention, as we read its provisions, would follow automatically upon ratification by all the signatory Powers. It would therefore appear likely that the approaching conference may either secure such universal ratification forthwith or agree upon some date as from which force shall be given to the convention notwithstanding the failure to ratify on the part of certain Powers. Great Britain will be again represented by Sir William Collins, K.C.V.O., and Mr. W. G. Max-Müller, C.B., M.V.O.

INFANT IMMUNITY.

Last January M. Chambrelent related to a meeting of the Obstetrical Society of Bordeaux the case of a lady who at term suffered from an attack of mumps.[1] Her two children, aged respectively 7 and 9 years, were at the time free from that malady, and there were no cases in the neighbourhood. Three days later labour pains set in, the evening temperature being 100°, but on the next day the patient was delivered spontaneously of a perfectly healthy child, weighing 7 lb., which she suckled. On the third day of the puerperium a severe rigor occurred, the temperature rising to 102°. The swelling of the glands and dysphagia increased, but there was no evidence of ovarian infection or pelvic exudation. Two days later the temperature fell to normal, and the puerperium was afterwards uncomplicated. The child never showed any sign of parotitis, nor of ovarian inflammation, yet at the end of a fortnight after the first symptoms appeared in the mother, the two other children suffered from mumps, though they had been carefully isolated from their mother and infant sister. M. Chambrelent and Mousson believed that the infant's immunity was due to an antitoxin in its mother's milk, and in the discussion it was stated that three patients in the Bordeaux Maternity had recently suffered from parotitis in the puerperium. They were isolated and recovered; the infants were not infected.

AN ASSOCIATION OF BRITISH SURGEONS.

At a meeting of some fifty surgeons practising in the teaching centres of the three kingdoms held at the Royal College of Surgeons of England on May 26th, at the invitation of Sir Rickman Godlee, it was resolved to form an Association of British Surgeons. The details of organization were referred to a committee, but it is proposed that the number of members shall be limited, and that they shall consist for the most part of surgeons on the staffs of hospitals connected with a medical school. The intention is to hold at least one meeting (probably lasting two or three days) every year, a different centre being chosen each year. The association will be the homologue of the Association of British Physicians, founded a few years ago through the efforts of Sir William Osler, which has done much good work in an unosten-

[1] *Bulletin de la Soc. d'Obstét., etc., de Paris, de Bordeaux, etc.*, 1914, p. 120.

tations way; a similar career of usefulness may be prophesied for the new venture, which is starting under the best auspices. Neither association is intended in any way to trench on the fields of activity of any other medical organizations.

THE MEDICAL RESEARCH COMMITTEE.

The proceedings of the Medical Research Committee appointed last June by the Chancellor of the Exchequer "for the purpose of dealing with the money made available for research under the proviso of Subsection (2) of Section 16 of the National Insurance Act, 1911," have hitherto been conducted behind a veil which has only permitted certain fleeting shadows to reach the public eye. The Committee has to dispose annually of a sum estimated at £57,000. The plan propounded by the Chancellor of the Exchequer requires that before giving his final assent to the scheme of the Medical Research Committee for any year he shall receive criticisms and suggestions in regard to it from the Advisory Council for Medical Research, a much larger body, containing representatives of the three kingdoms and of various public departments. It has become known that the Medical Research Committee, whose chairman is Lord Moulton, has purchased the building of the Mount Vernon Hospital for Consumption at Hampstead, which might be a suitable place for the establishment of a research hospital on the lines of the institution which has been doing such admirable work in Cambridge. It is known also that negotiations are proceeding with the governing body of the Lister Institute, which, if carried through, will result in the institute being handed over to the Medical Research Committee as a nucleus of the Government's scheme. Meanwhile no public announcement has been made as to the views of the Advisory Council. Many rumours have been afloat as to appointments made, or about to be made, by the Medical Research Committee, and a slight rent has been made in the veil by the *Cambridge University Review*, which announces that Dr. W. Morley Fletcher, fellow, lecturer, and tutor of Trinity College, Cambridge, and formerly senior demonstrator of physiology in that university, is about to leave Cambridge in order to take up a position under the Medical Research Committee. It is commonly reported that it is contemplated to establish three departments with responsible heads in the proposed central institute, and that some nine appointments altogether have provisionally been made. We venture to suggest that it might be well that the Chairman of the Medical Research Committee should take into his confidence the Advisory Council, of which body also he is chairman.

PREVENTION OF ACCIDENTS TO RAILWAY EMPLOYEES.

THE Departmental Committee appointed by the Board of Trade to inquire into the working of the Act passed in 1900 to prevent accidents to railway servants held its first meeting on May 26th and decided to take evidence in public. This Committee is the outcome of a debate on the Address at the beginning of the present parliamentary session, when it was alleged that there had recently been serious increases both in the non-fatal and the fatal accidents to railway servants, and that the Act passed fourteen years ago as the result of the inquiries of Lord James's Royal Commission had either been inadequately utilized by the Board of Trade or else needed considerable amendment. The question of safety on railways was specifically excluded from the reference to the Royal Commission now sitting under Lord Loreburn, on the question of railways and the State, and although an expert committee of the Board of Trade has been for some years engaged in considering various appliances which have been suggested with a view to the prevention of accidents, it is now deemed desirable to review the whole working of the Act of 1900, and to consider what amendments, if any, may now be deemed desirable. Sir William Collins, K.C.V.O., M.D., is the Chairman of the Committee. Sir Robert Turnbull, M.V.O., and Mr. Oliver Bury, may be regarded as representatives of the railway companies, and Mr. G. N. Barnes, M.P., and Mr. W. Hudson, M.P., as representatives of the railway employees. The other members are Mr. Marwood, C.B., an official of the Board of Trade, and Sir Alfred Ewing, K.C.B., the well-known engineer. Mr. S. G. Spencer, of the Board of Trade, is acting as Secretary, and the Committee holds its meetings at Winchester House St. James's Square.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Mental Deficiency Act.

Salaries of Women Medical Inspectors.

MR. SNOWDEN asked the Home Secretary if he was aware that the Board of Control for the administration of the Mental Deficiency Act recently advertised for male and female inspectors who must be registered medical persons, and that the salaries offered were £400 for men and £350 for women: and, if so, would he explain why this difference of payment was made, seeing that the Board stated that there was no difference in the importance of the work of the men and women inspectors; if the first woman candidate offered the post refused it on account of this difference in salary; if the second candidate accepted it and then withdrew for the same reason; if the post was still unfilled: and if it had hitherto been the practice of Government Departments to pay medical officers the same salaries, whether men or women; and, if so, why this practice had been departed from in this case.—Mr. McKenna said the salaries offered were £400 rising to £600, and £350 rising to £550. They were fixed by the Treasury at the rates at which it was believed suitable candidates could be obtained. At that time the report of the Royal Commission on the Civil Service had not been published, but the proposed salaries appeared to comply with the recommendation of the Commission that, when the conditions of employment were approximately the same, the rates of pay should approximate to equality. The first two candidates to whom the post of female inspector was offered declined it on the ground of difference of salary, not because they thought it too small. The post had not yet been filled, but the matter was not at present urgent. There was no rule or practice requiring the salaries of men and women medical officers in the Government service to be the same.

Mr. Snowden: Is it not a fact that in practice the remuneration of women medical officers is the same as men medical officers?—Mr. McKenna: I am informed not, but I will inquire further into the point.

Mr. Snowden: Are we to infer from the reply just given that the Treasury consider the services of women will not be equal in value to the services of the men, and is that the reason there is this difference in salary? The Report of the Royal Commission to which the right hon. gentleman refers recommended equal pay for equal work.—Mr. McKenna: The Treasury rule was stated by me. Rates were fixed by the Treasury at which it was believed suitable candidates could be obtained. That, I believe, is the practice of the Treasury. With regard to the second point, the work is approximately the same and the rates are approximately the same, but it cannot be said that the work is identical.

Mr. Snowden: Seeing it is impossible to get women doctors at these rates of pay, will they now offer the women the same salary as the men?—Mr. McKenna: I am not sure what appointments have been made.

Mr. MacCallum Scott: Is my right hon. friend aware that a great many distinguished women economists are opposed to the doctrine of equal pay for equal work, and think that it would result disastrously to the interests of women?—Mr. McKenna: I agree with what my hon. friend says. For my own part, I should be ready to give

equal pay for equal work, but I am not convinced the work is equal.

Experiments on Animals.—Mr. Chancellor asked the Home Secretary whether, as stated in the King's Bench Divisional Court on Monday last, the Home Office had expressed entire satisfaction with the conduct of Dr. Yorke in exposing for several days in an open field a donkey covered with sores, due to experiments made upon it in the laboratory, and only destroying it after complaint had been made to the police in consequence of the swarm of flies observed from the other side of the hedge to be flying about and settling upon the animal; and what steps he proposed to take to prevent other animals being subjected to similar treatment.—Mr. McKenna replied: The statement reported to have been made in court that the Home Office had expressed itself as entirely satisfied with Dr. Yorke's conduct is incorrect. I expressed no such view. Careful inquiry was made by me at the time; I saw no ground for differing from the conclusion of the justices, who found that the allegations as to the condition of the animal, which are repeated in the question, were not substantiated, and that the animal was not, in fact, caused unnecessary pain; but I formed the opinion that Dr. Yorke should himself have visited the animal from time to time, and should have satisfied himself by personal inspection that it was being properly cared for, and I have so informed him.

Miners' Diseases.—Mr. Wedgwood asked the Home Secretary whether his attention had been called to the Milroy lectures, delivered by Dr. Shufflebotham before the Royal College of Physicians of London, dealing with miners' diseases; and whether the Home Office contemplated adding miners' itch to those industrial diseases covered by the Workmen's Compensation Act.—Mr. McKenna replied as follows: I have seen a report of these lectures, but have otherwise no information in regard to this ailment. It is not mentioned in the Report of the Committee on Compensation for Industrial Diseases, and no representations have been made to me on the subject. If, as I gather from the report of the lectures, the ailment cannot be regarded as specific to the employment in the sense indicated by the Committee in its report, I could not add it to the schedule in the Workmen's Compensation Act; but any cases of disablement caused by this ailment will be covered by the National Insurance Act.—In reply to a further question by Mr. Wedgwood, the Home Secretary said that the researches made in recent years appeared to point strongly to the conclusion that working in insufficient light was the main, if not the sole, cause of miners' nystagmus, and this point was kept in view when it was decided to impose photometric tests for all types of safety lamp approved under the Coal Mines Act, 1911. As a result of these tests and of the increasing use of electric lamps, the illumination below ground was improving, and it was hoped that as this improvement continued it would have a substantial effect in reducing the number of cases of nystagmus. Miners' nystagmus was one of the diseases scheduled under the Workmen's Compensation Act.

Births and Emigration.—In reply to Mr. Croft, Mr. Herbert Samuel supplied the following table relating to the ratio of emigrations to births in the United Kingdom:

Years.	Number of Births in the United Kingdom. (1)	Excess Outward over Inward of Passengers of British Nationality to Non-European Countries. (2)	Percentage of column 2 to column 1. (3)
1900	1,159,922	71,188	6.14
1901	1,162,975	72,016	6.19
1902-6 (Average)	1,174,815	141,395	12.08
1907	1,143,624	235,092	20.47
1908	1,173,784	91,156	7.77
1909	1,145,900	139,693	12.19
1910	1,122,984	233,709	20.81
1911	1,104,707	261,809	23.70
1912	1,095,488	268,485	24.49
1913	1,102,261	241,997	21.95

Appointment of Committee on Preserved Cream.—Colonel Ivor Philipps asked the President of the Local Government Board whether his attention had been called to the risk and loss to which respectable and honest retail traders were at present exposed owing to the uncertainty as to the law regarding the sale of preserved cream; and whether he proposed to take immediate steps to relieve traders from the constant danger to which the present law exposed them.—Mr. Herbert Samuel said in reply that the evidence at present available as to the effect upon health of the addition of small quantities of preservatives to cream was to some extent contradictory. He had decided, therefore, to nominate a small expert committee to investigate afresh this question, which was one of great and pressing importance to the trade concerned. Pending the completion of this investigation, which should not be prolonged, he would venture to express the opinion that it was inadvisable that local authorities should institute proceedings, except in cases in which the amount of boric acid in the cream exceeded the amount declared on the label, or where the amount so declared was clearly excessive.

Committee on the Condition of the Blind.—Sir John Spear asked the President of the Local Government Board if he would consider the desirability of placing a direct representative of blind employees on the Departmental Committee appointed to inquire into the condition of the blind.—Mr. Herbert Samuel said that the organizing secretary of the National League of the Blind had accepted an invitation to become a member of the Committee. (It has since been announced that Mr. C. Arthur Pearson, honorary treasurer of the National Institute for the Blind, and Mr. C. H. Warrilow, one of the editors of the *Braille Magazine*, have been added to the Committee.)

The Midwives (Scotland) Bill.—Mr. Barnes asked the Prime Minister if, in view of the passing through all its stages, by the House of Lords, of a bill for the training and registration of midwives in Scotland, and in view of the need of such a bill becoming law, he would favourably consider the question of giving facilities either for the bill in question or for that standing in the name of Mr. G. N. Barnes (Glasgow, Blackfriars).—The Prime Minister said that the Government was favourably disposed to the principles of the bill, and would consider whether facilities could be given for its progress.

Sierra Leone Nursing Home.—In reply to Mr. MacCallum Scott, the Colonial Secretary said that he had decided, with respect to the nursing home in Sierra Leone, that the native medical practitioner to whose case the Manchester Chamber of Commerce specially referred should continue to be allowed the same facilities for attending his patients in the nursing home that he had hitherto enjoyed, subject to the privilege being liable to be withdrawn at any time for good cause shown.

Milk and Dairies Bill (England and Wales).

The Milk and Dairies Bill, introduced by the President of the Local Government Board, applies to England and Wales only, and is to come into effect on January 1st, 1915, or on some later date, as may be appointed by the Local Government Board, provided such date be not later than October 1st, 1915.

Clause 1 makes it an offence to sell, or offer for sale, or to use in the manufacture of products for human consumption, the milk of a cow which to the knowledge of the seller has given tuberculous milk or which is suffering from emaciation due to tuberculosis, or from tuberculosis of the udder, or from acute inflammation of the udder, or from any disease liable to infect or contaminate the milk.

Clause 2 deals with the purposes for which Milk and Dairies Orders may be made by the Local Government Board, and under this clause a wide and general extension is made of the present powers possessed by the Board. The powers enumerated relate to the registration of dairies with local authorities; the inspection of dairies and persons employed in or about them; the prevention of the sale for human consumption of infected

contaminated, or dirty milk, or the milk of a diseased cow, with the prohibition of the addition of colouring matters and other substance to milk, with the regulations relating to the cooling and conveyance of milk, and the labelling and marking of receptacles in which it is carried. It may be anticipated that an attempt will be made in Committee to amend this clause so that the registration of dairies should be subject to an annual certification. In addition also, on this clause the question will arise as to the certification of the quality of milk, as suggested by Mr. Astor and others. We believe that amendments relating to this subject are being actively supported by Mr. Astor and many members of the Opposition, and by Dr. Addison and others on the Government side. Clause 2 also provides that contravention or non-compliance with any Milk and Dairies Order shall be an offence under the Act, that the Orders shall be made by the Local Government Board with the approval of the Board of Agriculture, and that they shall be laid before each House of Parliament as soon as may be, and be subject to the usual provisions of an Address to the Crown.

Clause 3 gives very important powers to the medical officer of health for a county or county borough in respect of tuberculous milk. It gives him powers in connexion with the stopping of the supply of milk from a dairy in which, in his opinion, tuberculosis is caused, or is likely to be caused, by the consumption of milk supplied from it. A good deal of controversy may be expected to arise over this clause, as a medical officer may be confronted with considerable difficulties in showing that tuberculosis is caused, or is likely to be caused, by any particular milk supply, and the case seems to be covered to some extent by the provision dealing generally with the sale of tuberculous milk and the penalties imposed under Clause 14. In connexion with this clause the First Schedule attached to the Act sets out the procedure to be adopted for the stopping of the supply of milk under this section. The Local Government Board also is empowered to direct that the council of a non-county borough within the county may exercise the powers provided under this section.

Clause 4 provides that where a medical officer of health has reason to suspect that tuberculosis is caused, or is likely to be caused, by the consumption of milk, he shall have power to search out and ascertain the source or sources of supply, and should the source of supply be from a borough outside his own, the medical officer of health of the other borough is required to carry out the necessary inspections and investigations, and provisions are made whereby the veterinary or bacteriological reports should be placed at the disposal of the different authorities concerned.

Clause 5 relates to the taking of samples of milk and to the notice and procedure connected therewith, and the Sale of Food and Drugs Act is amended to cover the clause of the present bill in connexion with the taking of samples of milk and proceedings in connexion with them.

Clause 7 empowers a local authority, and enacts that it shall be required at the order of the Local Government Board either alone or in combination with some other authority, to appoint or employ properly qualified veterinary inspectors.

Clause 8 empowers the Local Government Board to make regulations in connexion with the supply of imported milk.

Clause 9 empowers the sanitary authority of any district, with the approval of the Local Government Board, to maintain dépôts for the sale of milk specially prepared for consumption by infants, and to provide the necessary laboratories and plant.

Clause 10 deals with the power of the Local Government Board in connexion with defaulting local authorities, and especially provides that where the local authority is a district council, any or all of the powers of the council under this Act or under the Milk and Dairies Orders may be transferred by the Local Government Board to the county council.

Clause 11 deals with obstructions placed in the way of veterinary inspectors or medical officers of health.

Clause 12 relates to the holding of local inquiries, the appointment of special committees, and other matters. It particularly provides that any inspection of cattle should be carried out by a properly qualified veterinary surgeon.

Clause 13 relates to the defraying of expenses under the Act, and Clause 14 to proceedings in connexion with offences and prescribes penalties. It also provides that where the occupier of a dairy shows that a fault has arisen through the action of some other person without his knowledge or consent, such other person may be proceeded against.

Clause 15 sets out the definitions under the Act, and Section 4 of this clause may be expected to give rise to considerable discussion. It provides that the expression "local authority" shall include sanitary authorities and county councils, and that the Local Government Board may decide which of the powers and duties under this Act are to be performed by sanitary authorities and which by county councils. An important point brought forward by many members who have supported milk reform is that the local authority should only be the council of the county or county borough, and we may expect amendments to be moved which will require this to be the case, allowing for the delegation of duties by such councils to sanitary authorities within their area with the approval of the Local Government Board. Under such a proposal the acting council would be the council of the county or borough council, except in cases in which the powers were delegated, rather than as in the bill—the sanitary authority, except where otherwise directed by the Local Government Board.

Clause 16 relates to the extension of the bill to London, and Clause 17 to the date of its coming into operation and the limitation of the bill to England and Wales. The Third Schedule provides for the necessary repeals of the sections of the Acts which are altered by the bill.

Milk and Dairies (Scotland) Bill.

This bill is intended to come into operation on January 1st, 1915. The second clause deals with the definitions, and under the third clause local authorities may, and when required shall, appoint a properly qualified veterinary inspector, and the clause deals with the duties and qualifications of such inspectors.

Clause 4 provides for the inspection of dairies, and an important provision in this clause (different from that in the English bill) provides that it shall be the duty of the veterinary inspector from time and time, and once at least in every year, to inspect the cattle in every dairy in the district, and to report to the local authority the result of every such inspection.

Clause 5 gives powers relating to the granting of certificates of registration of dairies and dairymen.

Under Clause 6 it is the duty of the local authority to make by-laws for the inspection of cattle, and also in connexion with dairies, dairymen, and so forth.

Under Clause 8, power is given to apply by summary petition to a sheriff in connexion with cases where a local authority fails to carry out its duties under the Act, and under Clause 9 the local authority may appeal to the Board in connexion with complaints it may make that duties are being neglected under the Act by some other authority.

Clause 10 sets out the purposes for which the Local Government Board should make regulations.

Under Clause 11, it is an offence to sell, or to keep for sale, or consign the milk from any tuberculous cow or a cow having any disease likely to contaminate milk. Under Clause 12, the notification of disease amongst others employed about dairies is provided, and Clause 14 prevents their assisting in connexion with dairies and in the handling of milk.

Clause 15 relates to the interchange of notifications and information between the medical officers of different authorities, and under this clause powers of the medical officer of health and of the local authorities in connexion with the stoppage of milk supplies and other matters under the bill are set out.

Under Clause 16, dairymen may be required to produce lists of their customers.

Clauses 17 and 18 relate to the power to enter and inspect dairies, and to take samples of milk and so forth. The remaining clauses relate chiefly to questions of machinery.

Under Clause 25, also, power is provided that local authorities shall maintain dépôts for the sale of milk for infants.

England and Wales.

LONDON.

Treatment of Tuberculosis.

Scheme for Uninsured Persons.

The Public Health Committee on May 26th presented to the London County Council a complete scheme for the treatment of tuberculosis, which it has had in preparation since February, 1913. In the meantime, as we have noted from time to time in the Journal, the relations between the County Council, the Metropolitan Asylums Board (as the infectious diseases authority in London), and the London Insurance Committee have been defined, and a beginning has been made with the organization of dispensary treatment, several local schemes having been approved. (See British Medical Journal, February 15th, 1913, p. 363, and May 10th, 1913, p. 1022.)

In outlining its scheme, the Public Health Committee stated that it was anxious to encourage the provision of a complete network of dispensaries, as it had been much impressed with the potential value of these institutions as a means of discovering contact cases at an early stage and as a necessary first unit in any complete scheme. The Committee had tried also to make full use of the many agencies already available, and so to frame its scheme as to secure the co-operation of the great London hospitals. The principle was laid down that the Council's efforts would be most usefully directed to linking up all the various existing agencies and others to be created: it should use its funds to encourage the provision of fresh accommodation and to keep open institutions which might otherwise be closed, for the Committee had come to the conclusion that adequate provision could be made through existing authorities, and that the Council itself need not own or manage institutions. Expenditure in treatment would be most profitably incurred in providing residential accommodation for tuberculous children.

Domiciliary treatment the Committee dismissed in a few words with an allusion to the provision made under the Insurance Act and the statement that "domiciliary treatment of uninsured persons is provided by private practitioners, district medical officers, and voluntary institutions, and, in so far as it may be incidental to dispensary treatment, by the medical officer of the dispensary." Apparently financial assistance in uninsured domiciliary cases is not contemplated. Dispensary treatment (the Committee continued) would be provided by the borough councils, the County Council paying half the cost in the case of uninsured persons, subject to a condition, amongst others, that the dispensary would be linked up with a hospital. (The whole of these conditions were set out in the British Medical Journal of November 22nd, 1913, p. 1403.) Arrangements would be made by the County Council for the provision of residential accommodation for (1) observation, (2) hospital, (3) sanatorium, and (4) chronic or advanced cases.

An Honorary Tuberculosis Advisory Board.

For the purpose of selecting patients (uninsured) for residential treatment, there should be established an honorary advisory board, consisting of:

(*a*) One representative appointed by each of the teaching and other general hospitals and children's hospitals which are acting in any capacity under the scheme.
(*b*) Two representatives appointed by each of the three special chest hospitals.
(*c*) The medical superintendent appointed by each of the sanatoriums with which arrangements have been made by the Council.
(*d*) Two representatives of the tuberculosis dispensaries.
(*e*) The medical officer and deputy medical officer of health appointed by the County Council.

The Board would be empowered, with the consent of the Council, to co-opt persons possessing special medical or surgical knowledge; the representatives appointed by the teaching and general hospitals should be physicians and assistant physicians actively engaged in hospital practice. The honorary advisory board would be asked to prepare a memorandum, to be circulated to the medical officers and institutions dealing with the cases, as to the types of cases suitable for the various forms of institutional treatment. The board should advise as to forms for medical reports, and generally as to all matters upon which uniformity was desirable, or upon which the Council might desire to have its opinion. The advisory board should appoint from its own body, or, if thought desirable, from outside, a rota of two or more physicians to act as medical referees, and to examine all cases referred to them by the medical officer of the county in accordance with conditions to be prepared by the advisory board and approved by the Council. These physicians would attend as required at a limited number of convenient centres for the purposes of examining cases, advising the county medical officer, and recommending as to the action to be taken. Each physician while on the rota would be paid an honorarium of 1 guinea for each case. Representatives on the advisory board of sanatoriums, dispensaries, and the County Council would not be eligible to serve on the rota.

The Committee anticipated that the advisory board would be of great assistance in advising the Council generally on all matters necessary to secure smooth working and useful co-operation amongst the different institutions taking part in the scheme. Although this proposal was new to the Council, the Committee had had the advantage of conferring upon it with representatives of the principal London hospitals, and a resolution was passed by a large majority in which the representatives expressed general approval of the proposals and their intention to advise their several hospitals to appoint members on the advisory board.

Organization of Treatment.

The dispensary medical officer should be instructed to classify the cases clinically as suitable for home treatment, consultative reference to hospitals, in-patient hospital treatment or sanatorium treatment, and to forward to the medical officer of health for the borough a report on each case. The local medical officer of health would then classify the cases as to home conditions in three classes – (*a*) satisfactory, (*b*) unsatisfactory, (*c*) removal urgently necessary. In cases recommended for in-patient hospital treatment or sanatorium treatment, the papers would be forwarded to the county medical officer and he would refer to the rota all cases in which the advice of the referees was required. The judgement of the medical referees would not be subject to clinical review by the Council. Children suffering from tuberculosis would be grouped under the following classes: Those suffering from (1) bone and joint tuberculosis, (2) pulmonary tuberculosis, (3) tuberculosis of the skin, glands, and other organs, and (4) suspects—that is, cases noted by bacteriological methods to be tuberculous or found on medical examination to be predisposed to the disease and presenting signs pointing to the possibility of the disease in an incipient form. About 1,500 children of the first class were in attendance at schools for the physically defective and the remainder might be classed as in-patients or out-patients at London hospitals. Some pulmonary cases could be dealt with in open-air day schools; those cases which needed residential treatment might be met by making arrangements for the children to sleep at night at open-air schools. The glandular cases presented little difficulty: a small number would require a stay in the country; the others could be dealt with in open-air schools and tuberculosis dispensaries, and the school medical work should be co-ordinated. In the course of medical inspection all cases of tuberculosis not notified to the local medical officers of health should be notified to the county medical officer. Arrangements must also be made for after-care and the preservation of records.

In regard to general provision of residential accommodation, the Public Health Committee considered that as most of those for whom the Insurance Committee made provision were males, the Council would find that most of the adults for whom it would be responsible would be women. It was more difficult in the case of adults than of school children to frame a reliable estimate of numbers, but probably by April, 1915, 160 beds would be required for adults in hospitals, and 240 beds in sanatoriums, with an initial provision for children of 150 beds in residential institutions. So far as hospital beds were concerned, there was accommodation at reasonable prices almost sufficient for the needs of the immediate future, but this was not the case with sanatorium beds, either for adults or children. The Council should encourage existing institutions to increase their accommodation. Subject in some cases to adjustment of questions still under discussion, beds could be obtained at the Brompton, City of London (Victoria Park), King's College, Metropolitan, Royal Chest (City Road), Royal Free, St. Bartholomew's, St. Mary's,

University College, and Westminster Hospitals, and the Fairlight (Hastings), Frimley, Whitmead (Surrey), and Maltings Farm (Suffolk) Sanatoriums. The authorities of King's College Hospital were prepared to place at the Council's disposal when ready a new ward containing twenty-four beds, the cost to the Council being £1,800 a year. This offer the Committee proposed to accept. The sanatorium accommodation available was considerably below the Council's requirements, but it was hoped that a number of additional beds would be obtained from institutions which at present asked more than 30s. a week for a bed. Even then, many more beds would be needed, and the Metropolitan Asylums Board had been asked on what terms it could provide 150 beds, which would be a suitable initial provision. There were in Poor Law institutions about 2,300 advanced or chronic cases of tuberculosis. If the Council provided for these cases, one-half of the cost would be borne by the Exchequer instead of by the rates as at present. On grounds of convenience the Committee had asked the Metropolitan Asylums Board to deal with these cases on its behalf, and perhaps to take over some of the infirmaries. The Committee had fixed 20s. as a proper weekly charge in respect of residential accommodation for tuberculous children. Arrangements were pending with the East Anglian Sanatorium, Nayland, for 50 beds and the Victoria Home, Margate, for 5 beds, and the Metropolitan Asylums Board had been asked to provide accommodation. The East Anglian Sanatorium would provide 50 additional beds and offered to supply 50 beds in tents until permanent structures were ready. Negotiations were proceeding with the authorities of the Alexandra Hospital for the erection of a children's convalescent home near London. As explained above, the greater part of the accommodation required for children would be supplied by the children's hospitals and the physically defective schools.

In regard to after-care the scheme provided that the local medical officer and the private practitioner should be notified of the discharge of an adult patient from a sanatorium. In all cases in which a patient, or the person legally responsible for a patient, was in receipt of an income of £160 a year or over, and the circumstances appeared to justify the demand, a charge should be made for treatment received. As a condition of receiving residential treatment a patient would be required to give an undertaking to remain under medical supervision on his discharge. On the question of cost the Committee gave the following estimate:

	Cost for 1914-15.	Cost for 1915-16.
	£	£
Hospital beds (160)	8,928	12,480
Sanatorium beds (240)	13,439	18,720
Children's beds (150)	5,454	7,680
Travelling and incidental expenses, including fees of medical referees	1,100	1,400
	28,921	40,280
	(say) 29,000	(say) 40,000
Government contribution	14,250	20,000
Fees of medical referees, payable by borough councils	500	
Net estimated expenditure ...	14,250	20,000

Discussion.

After a short debate the Council approved the scheme. Mr. O. E. Warburg, Chairman of the Committee, emphasized the point that the intention to make the dispensary the essential unit of the machinery was in accord with the report of the Departmental Committee on Tuberculosis. Whenever a patient attended a dispensary, a visit would afterwards be paid to his home to see the conditions under which he was living. In the second unit of the scheme—residential accommodation—it was intended to make full use of the knowledge already possessed by the great hospitals, but the attempt was made to provide machinery by which the various agencies might be linked up. The extent of residential accommodation now proposed was not intended as an indication of the amount of provision that would be required ultimately or permanently; it was only an initial provision.

Mr. J. A. Dawes, M.P., Chairman of the London Insurance Committee, said that the one great blot on the scheme was that it dealt with uninsured persons only. Other counties and large boroughs had taken a broad view and had undertaken the treatment of the whole tuberculous population, the Insurance Committees handing over their patients and available funds to the county councils. Only thus could a comprehensive and entirely satisfactory scheme be prepared for London. It was unfortunate that for dispensary purposes there were twenty-nine ring-fence areas—the boroughs—in some of which there were municipal dispensaries, and in others dispensaries provided by voluntary effort, whilst in some the borough council had refused to deal with the matter at all. In ten or twelve boroughs nothing had been done beyond the passing of pious resolutions. The present scheme was a very great step towards providing residential accommodation, but he was afraid the Committee had seriously underestimated the number of beds required in hospitals and sanatoriums. The Insurance Committee had about 700 persons in institutions; the insured persons were one-third of the population, and, although the incidence of tuberculosis might not be in the same proportion, to provide only one-third the number of beds that the Insurance Committee found necessary would not be sufficient.

THE MENTAL DEFICIENCY ACT, 1913.

One of the duties imposed upon the local authority by the Mental Deficiency Act is that of ascertaining what persons within its area are mentally defective and subject to be dealt with under the Act. The London County Council, with a view to carrying out its duty in this respect, is issuing a circular to various societies, public bodies, institutions, etc., in the County of London, and has asked us to bring under the notice of the members of the medical profession in London the procedure for the notification of such cases.

It may be pointed out that there is no obligation laid upon the profession to notify any case of mental defect, and, of course, members of the profession will be careful to do nothing which conflicts with their obligation to respect the confidence of their patients.

There are, however, cases in which it may be the duty of a medical man who is cognizant of the facts in regard to a defective subject to be dealt with under the Act to report them to the local authority, and a form has been prepared which can be obtained from the Clerk of the Asylums and Mental Deficiency Committee, 6, Waterloo Place, S.W., for this purpose.

The circumstances likely to come under the notice of a medical practitioner and to call for his intervention are those in which the defective is neglected, abandoned, or without visible means of support, or cruelly treated, or when he is an habitual drunkard within the meaning of the Inebriates Act.

It should be noted that the County Council has no duties as respects defective children between the ages of 7 and 16 except those of whom the Council has received notification from the local education authority which is responsible for dealing with children of this age.

The Council may, if it thinks fit—

(*a*) Maintain in a suitable institution, or

(*b*) Contribute towards the expenses of maintenance in an institution or under guardianship,

of defectives who are not subject to be dealt with for one of the special reasons set out in the Act. Applications for action to be taken by the Council may be addressed to the Clerk of the Asylums and Mental Deficiency Committee.

MANCHESTER AND SALFORD.

MANCHESTER UNIVERSITY.

AT a meeting of the Court of the Manchester University held on May 20th, the question of the appointment of Vice-Chancellor came up for discussion. Since the retirement of Sir Alfred Hopkinson, the duties of the post have been carried on by Professor Weiss, who holds the chair of Botany, and a high tribute was paid by Sir F. Forbes Adam, Chairman of the Council, to the able and zealous way in which he had discharged the duties. The council reported that a conference between representatives of the Council and the Senate had been held, and the opinion of both bodies was that Professor Weiss should be asked to accept the appointment of Vice-Chancellor for a further

year as from September, 1914. Professor Weiss had indicated his willingness to accept the position on condition, first, that suitable arrangements should be made for the conduct of the department of botany in such a manner as will not be burdensome to the staff of the department, and, second, that some arrangement be made for the devolution of part of the Vice-Chancellor's duties during the next session. The council had agreed to make such arrangements, and would immediately take into consideration the steps that will be necessary after the conclusion of Professor Weiss's term of office in September, 1915, when it is expected that the council will be prepared to recommend a permanent appointment. The court unanimously approved the recommendation of the council.

The Vice-Chancellor made a short statement concerning the condition of the university. He said there was but little to report except in a general way to assure the court that the progress had been satisfactory and continuous. The addition to the library had been completed, and would be of real service. He also alluded to the loss sustained by the university through the death of Miss Gaskell, who took an intense interest in its welfare, and had contributed liberally to the equipment of the library. Besides leaving a legacy of £1,000 to the university she had given a number of interesting relics of the late Mrs. Gaskell, consisting of manuscripts and other things which were much valued by the court. He reminded the court that the British Association would hold its annual meeting in Manchester in 1915, and it was hoped that by the co-operation of the city and the university the meeting would be a record one, as was that in 1887, when the Association last met in Manchester. The court then approved of the conferment of a number of honorary degrees. The council reported that it did not consider it was advisable to take any action at present as to representation of the university in Parliament either singly or in conjunction with any other university.

The court further approved of the creation of a faculty of education which will have power to confer the degree of "master of education," and the new faculty will take over the duties of the committee which managed the Students' Training College.

It was also decided to institute a diploma in geography, but with regard to the suggested diploma in ophthalmology the council reported that the senate had forwarded a resolution of the Faculty of Medicine recommending that the consideration of establishing a diploma in ophthalmology should be postponed *sine die*.

The late Dr. T. H. Pinder.

A considerable number of letters have appeared in the public press advocating the raising of a memorial to the late Dr. T. H. Pinder, who was for many years honorary surgeon to the Manchester Ear Hospital; and the *City News* now announces that it has been asked to open a fund. Any subscriptions sent will be duly acknowledged, and the editor will then communicate with the subscribers as to what form the memorial shall take.

Infectious Disease in Salford.

Several months ago a serious epidemic of scarlet fever occurred in Manchester, and it now appears that it is the turn of Salford. During the past fortnight no fewer than 144 cases of scarlet fever and 20 cases of diphtheria have been notified as well as a number of cases of enteric fever. The Chairman of the Health Committee has stated that the borough had never experienced such a period as it was now going through. The isolation hospital was so full that a new pavilion had had to be opened. Fortunately most of the cases were of a mild type, and only two deaths from scarlet fever and two from diphtheria had been reported. Thus so far the general death-rate is hardly affected, and the medical officer of health reports that the death-rate is very low, being only 14.9 per 1,000 as compared with 18.9 in the previous two weeks.

BIRMINGHAM.

General Hospital, Birmingham.

Dr. A. Stanley Barnes, F.R.C.P., senior assistant physician, has been elected honorary physician to the General Hospital in place of Sir Robert M. Simon, M.D., resigned. Dr. Stanley Barnes was appointed assistant physician to the hospital in June, 1906. He is honorary curator of the Pathological Museum of the University, a member of the British Medical Association, and a Fellow of the Royal Society of Medicine. He formerly held the posts of demonstrator in physiology at Mason's College, resident medical officer at the National Hospital for the Paralysed and Epileptic, London, and pathologist at the Queen's Hospital, Birmingham.

Birmingham Medical Benevolent Society.

The annual meeting of this society was held at the Medical Institute on May 21st, under the Chairmanship of Dr. E. N. Nason of Nuneaton. The work of granting relief to members of the society or to their widows and orphan children has been carried on as usual in a quiet and unostentatious manner. There is no doubt that the help so given has been urgently needed and gratefully received in every case. The annuitants are known only to the directors, and their names are not announced to the members of the society. The annuitants during 1913 numbered twenty-five, and they received in grants and donations, varying from £38 to £18, a total of £650. The society's invested funds, together with the balance at the bank, amounted at the end of the year to £16,374. The total number of benefit members was 382. The directors referred with deep regret to the loss the society had sustained through the deaths of Sir Thomas Chavasse, Mr. G. C. Cooper, Mr. Henry Eales, Lord Ilkeston, Mr. Jordan Lloyd, and Dr. J. H. H. Manley. Mr. W. Flewitt was elected President, Dr. Thomas Nelson President-elect, Dr. Russell and Dr. Hollinshead Vice-Presidents. Mr. F. Marsh and Mr. W. F. Haslam were re-elected Treasurers, Dr. J. E. H. Sawyer Honorary Secretary, and Dr. Smallwood Savage Honorary Auditor. Four new directors were appointed: Dr. Christopher Martin, Dr. E. N. Nason, Dr. C. E. Purslow, and Dr. A. S. Underhill.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Edinburgh Medical Charities in Assembly Time.

It is customary that the various medical charities of Edinburgh should be brought prominently before the public during the ten days at the end of May, when His Majesty's representative (the Lord High Commissioner) is in residence at Holyrood Palace, and the Assemblies of the Church of Scotland, the United Free Church, and the Free Church are in session. This year has been no exception to the rule; the Lord High Commissioner (Lord Glenconner) and Her Grace Lady Glenconner have visited a large number of the hospitals and other medical charities which abound in the city. Thus, on May 20th His Grace visited the Royal Infirmary, and was received by Sir Joseph Fayrer, Bart., the superintendent, and by a number of the members of the board and of the medical and surgical staffs. Lord Glenconner visited two surgical wards, presented the prizes to the successful nurses in the Nurses' Home, and inspected the clinical research laboratory, the dispensary, the central instrument room, the medical electricity department, and the radium department. It will be remembered that last year His Grace presented £1,000 to the infirmary for the purchase of radium. On May 21st Lord and Lady Glenconner visited the Deaconess Hospital and the Royal Blind Asylum Workshops, on May 22nd the Royal Hospital for Sick Children, and the Royal Victoria Hospital on the 26th. Lady Glenconner also paid visits to the Hospital for Diseases of Women in Archibald Place (on May 20th), to the Children's Shelter in the High Street (on May 21st), and to the Royal Maternity Hospital (on May 23rd). On May 20th His Grace held a levee at Holyrood Palace, at which various public bodies, including the Senatus Academicus of the University of Edinburgh, the Royal College of Physicians, and the Royal Royal College of Surgeons were received.

The Gifford Lectures on Personality.

During the past few weeks Professor Henri Bergson, of Paris, has been delivering in Edinburgh the 1914 series of Gifford lectures, eleven in number. The last one of the

set was given on May 22nd in the presence of a large and distinguished audience; indeed, the attendance at every one of the lectures has been most encouraging, the Natural History Classroom, in which Professor Bergson has spoken, having accommodated a gathering of between six and seven hundred persons of both sexes on each occasion. At the closing lecture on May 22nd Principal Sir William Turner presided, and among those on the platform were Lady Glenconner, the Chaplain to the Lord High Commissioner, the Rev. Stewart Wallace, and Miss Fardin. The lectures have dealt with the subject of the problem of personality, and Professor Bergson, in summing up, said that what characterized the person was in his view the continuity of movement of its inner life. This continuity was met with only in man. It established between man and animals a radical difference, which was not a mere difference of degree, but a difference of nature. For it would be very difficult to find a special psychical function, possessed by man and not possessed by the higher animals. It might be said that all the faculties of man were met with in the animal, or at least in certain animals; it had not been demonstrated that no animal species possessed speech; and it was an error to have considered abstraction and generalization to be the exclusive privilege of man. But, so far as could be judged from the external manifestations, the animal never attained continuity on any point or in the exercise of any of its faculties. In the animal the psychical impetus had no sooner begun than it was immediately checked. The inner life of the animal was continually ending and making fresh starts. The error of most evolutionist doctrines had been to regard the inner life as having been gradually made up of disconnected elements. It seemed, on the contrary, as if the continuity of inner life had been sought after from the beginning of evolution; and each stage of the psychological evolution had corresponded to an effort, more and more intense, though always baffled, to acquire that continuity. That was equivalent to saying that evolution had tended towards constituting distinct personalities, and that, from this point of view, the series of the species which were prior to man might be regarded as a gigantic telegraph wire over which had been sent the message of which the separate words constituted what were called human personalities. Each of these personalities was a creative force; and there was every appearance that the part of each person was to create, just as if a great artist had produced as his works other artists. The evolution of the species in each separate world, and also perhaps the evolution of these worlds themselves, would represent in that case the necessary mechanism of that production. It need hardly be added that in many, if not in all, the eleven lectures given with much spirit and clarity by Professor Bergson matters of medical and particularly of psychological interest and importance were never far below the surface, whilst in some they came definitely to the top. The audience were heartily at one with Sir William Turner when he moved in well chosen and emphatic language a vote of thanks to Professor Bergson, and when he spoke of the lecturer's personal charm and attractiveness. The Principal closed with the words: "They had now to say farewell for the present. He would not use the professor's own language for this purpose and say *Au revoir;* he thought he could get something that came nearer the heart if he used the vernacular, and said, 'Will ye no' come back again?'"

Scottish Local Government Report for 1913.

Mental Deficiency and Lunacy.

The nineteenth annual report of the Local Government Board for Scotland, 1913, points out that the Mental Deficiency Act, which came into force on May 15th of the present year, places new and highly important duties on parish councils. It makes them responsible for the care of all feeble-minded persons above the age of 16, and of all non-educable, feeble-minded persons under that age. This Act has considerably modified the incidence of local taxation. Formerly the county areas for which the District Boards of Lunacy acted were assessed for the provision, upkeep, and management of lunatic asylums, while the parishes were assessed for the cost of maintaining individual lunatics. In future, only half the cost of maintenance is to be borne by the parishes; the other half will be raised by the District Boards of Control (which take the place of the District Lunacy Boards) with the assessment for provision, etc., of asylums previously raised by them. This will materially relieve the pressure of local rates in some of the Highland and insular parishes, and to some extent will simplify the problem of assessment in those districts.

Highlands and Islands.

With regard to medical relief in the Highlands the report states:

We have for many years been conscious of the inadequacy of medical attendance in the Highlands and Islands, and accordingly we welcomed the report of the Departmental Committee on this subject.

The conclusions of this Committee coincide with the views which we have formed as to the difficulty of securing sufficient medical relief in the remote and sparsely-peopled parts of the country. As a rule, the Poor Law Medical Service is the only medical service available in the Highlands and Islands for the entire community; and many districts that would, on account of their magnitude, require two or more medical men, cannot afford to employ more than one. Accordingly, we were gratified that the Committee recommended a substantial Government grant in aid of the districts in question. The Act passed last session places the duty of administering the grant upon a Commission representative of the several Boards interested in the work. We propose as occasion arises to place before the Commission any matters affecting medical relief in the Highlands and Islands that come under our observation.

Housing.

The clearance of slum areas may be effected by local authorities by way of improvement schemes under Part I of the principal Act, but since the passing of the Act of 1909 only one scheme has received confirmation. Another is under consideration, and a third is being considered by the local authority. The chief reason for this municipal inactivity is said to be the rehousing obligation that rests upon a local authority seeking to demolish the houses that constitute slums; 2,334 houses have been made fit for human habitation at the cost of owners during the period from December 3rd, 1909, to May 15th, 1913, and the number repaired during each period shows a progressive increase. There is a general scarcity of working-classs houses throughout Scotland. The chief reasons for that are the rising costs of building material, the withdrawal of private capital from this field of enterprise, and the reluctance of local authorities to exercise their powers to meet the demand. The Board has made special efforts to encourage and persuade local authorities, and is gratified at the general response to its policy. Several schemes have been sanctioned, and a number of local authorities are giving the matter serious consideration.

Tuberculosis.

At the end of 1913 the Board had approved 96 sanatoriums, hospitals, and other institutions, containing 1,611 beds reserved for the treatment of pulmonary tuberculosis, and a number, not specified, for other forms of tuberculosis, and 13 tuberculosis dispensaries. It is estimated that there exists at present for treatment of all forms of tuberculosis 1 bed per 2,600 of the population, and it is anticipated that when the schemes of the local authorities are in operation 3,390 beds or thereby may be available, or 1 bed per 1,400 of the population.

The report states that a new order providing for the compulsory notification of all forms of tuberculosis in Scotland is under consideration. The Board continues to urge town councils that have adopted Sections 83 to 92 of the Burgh Police (Scotland) Act, 1903, to take steps to put into operation the powers contained therein for preventing the introduction and spread of tuberculosis in burghs through the vehicle of milk, and an increasing number of town councils are making arrangements to put these powers in force.

Enteric Fever—A "Carrier" Case.

The medical officer of health of a locality in the Highlands had under observation a woman whom he had for a long time suspected of being a typhoid "carrier." Material for bacteriological examination was furnished to the superintendent of the laboratory of the Royal College of Physicians, who found the typhoid bacillus present. The medical officer of health reported as follows:

1. At intervals over a period of fourteen years, at least 9 cases of typhoid fever were traced to one private byre. The hygienic

conditions were excellent; everything was in perfect order, and drains had been overhauled more than once, but the disease recurred until, on the advice of the medical officer of health, the owner ceased keeping cows. The suspected woman often milked these cows, and the owner has stated that she was always the milker when a case occurred.

2. At intervals over twenty years, 6 cases at least occurred in this woman's house—namely, her daughter, who died of the disease, and five lodgers.

3. Within the last two years the medical officer of health was aware of 6 additional cases with which this woman had some close relationship either as a visitor or as a fellow-worker.

4. In a small narrow court in which the woman resided, typhoid fever seemed endemic while she was there.

5. A case of typhoid fever was notified to the medical officer of health in February, 1913. On investigation, it was found that the patient had lodged with this woman for a fortnight before she took ill. This was not the house in which the suspect previously lived.

6. Some years ago a fishworker who slept one night in this woman's house developed typhoid fever at home in the country.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Expenditure in Medical Research.

Sir John Byers, speaking at the annual meeting of the Hospital for Nervous Diseases, Belfast, drew attention to the growing expenditure on medical research, and the success that had followed. The Rockefeller Institute in New York was a case in point: the heavy mortality of cerebro-spinal fever in Belfast was reduced from 70 to 30 per cent. by the use of the serum discovered and made in the Rockefeller Institute. The authorities of the local hospitals and of the university should see that funds were provided for such research in Belfast. Such advanced and highly technical work could not be done without the expenditure of money. If Belfast was to keep pace with what was being accomplished in other places and not to depend upon second hand information, the citizens must realize that in the future the scientific diagnosis and treatment of disease would be much more costly than in the past. Sir John then quoted from the Haldane Report as to the estimate of expenditure for a hospital of 200 beds with a yearly entry of 20 to 100 students, as in Germany and in the Johns Hopkins Hospital; the outlay for the cost of the investigation of disease and the teaching and training of the doctors of the future would be £8,000 to £12,000 a year, apart altogether from the expense of the maintenance of the patients and the upkeep of the hospital. He appealed to the wealthy for donations for research work in the investigation of disease as met with in hospitals; finally he quoted from Mr. Balfour's recent speech on the great development of medical science: "He could not doubt that they were on the verge of great developments. He believed that generations hence who looked back upon the preceding years would say that no branch of human research had a more splendid history, more immediately productive of human happiness, or of the removal of pain and disease, than medical science."

The Antivaccination Campaign in Belfast.

A strong letter has been addressed on behalf of the Ulster Medical Society and the Belfast Division of the British Medical Association to the Belfast Board of Guardians on the question of the necessity of vaccination and revaccination. The following resolution had been unanimously adopted at a combined meeting of the councils of the two medical bodies, and was enclosed to the guardians:

> That, as we are convinced that the practice of vaccination and revaccination is the best means of protecting a community against the ravages of small-pox, we regard it as the duty of every medical man, for the safeguarding of the public health, to promote this practice as far as lies in his power.

The statistics of the last outbreak in Belfast (1904–5) were again quoted, showing 178 cases and 9 deaths; 146 had been vaccinated, and 2 died; 32 had not been vaccinated, and 7 died; there was not a single case of small-pox in a revaccinated person. The doctors, nurses, and attendants of the Belfast Fever Hospital enjoyed complete immunity; it is compulsory for them to be revaccinated. Of the public health staff of Belfast during six considerable outbreaks, not one of the revaccinated officials who had been engaged in the control and stamping out of the disease took the disease; 3 of the officials avoided revaccination, and all caught the disease; and one who had not been vaccinated as an infant died. The letter finally asked the guardians to consider whether, in the face of these facts, it was in the interest of the community that any section of the population should be allowed to grow up unvaccinated through the carelessness or indifference of those responsible for them, especially in a seaport like Belfast exposed to the constant risk of the importation of sporadic cases.

The Notification of Measles.

In his report at the annual meeting of the Dublin House of Recovery and Fever Hospital, Cork Street, Dr. John Marshall Day, medical superintendent, spoke on the subject of the notification of measles. He had alluded in last year's report to the scourge that measles was to the poor of the city, and to the high death-rate which nearly always accompanied it. At the end of last year it had practically ceased, and few cases were admitted until March this year, when it again assumed epidemic proportions; in that month 84 cases were admitted, 16 of whom died, 9 being hopeless on admission, a death-rate of over 18 per cent. Unfortunately, since measles ceased to be a notifiable disease, the medical officer of health might not be aware of the epidemic nature of the outbreak until he got the Registrar-General's return of deaths, and valuable time might thus be lost. It was debatable whether the notification of early cases would not be of great assistance to the medical officer of health, but he believed that it would. Hospital accommodation for bad cases and for those which, owing to poverty or other causes, could not be nursed at home, was essential and should not entail great expense, as the cases were not long in hospital. Sir John William Moore said that it was startling to find that in the last twenty-four weeks 470 cases of measles had been admitted to the Dublin hospitals. The deaths from that disease in hospital numbered 70, or 15 per cent., which showed how virulent was the outbreak. If notification had been in force it would have been known in November last that an epidemic of measles was threatening, and he ventured to say that it was absolutely necessary in the case of any disease that the sanitary authority should be in full possession of the facts from day to day. He therefore regretted that the Dublin Corporation was giving up notification of measles.

Sir Charles Cameron, Medical Superintendent Officer of Health, has since written a public letter stating that the vast majority of medical officers of health and sanitary authorities believed that the notification of measles was practically useless. For many years it was notifiable in Dublin, but in 1904, with the consent of the Local Government Board, it was given up, owing largely to the results of an inquiry as to its adoption in English towns, which showed that it was in force in three towns only, and not in eighty-five: sixty-eight never had adopted it, and seventeen had tried it for several years, and finding it useless had dropped it. In only one of the Dublin townships (Pembroke) was notification of measles in force. In the last week of last December a case of measles was notified in it, in the following week there were 13 notifications, and up to the present 379 cases had been notified. As the population of the city was about ten times that of Pembroke, these cases would be equivalent to 3,790 in Dublin. It must be remembered that the vast majority of the cases occurred among the children of the poorer classes, the greater proportion of whom lived in the city. It was quite clear, therefore, that Dublin had suffered less than Pembroke from measles, having regard to its population and the very large proportion that belonged to the poorest classes. In Rathmines, Blackrock, and Kingstown there were fewer deaths from measles, notwithstanding the absence of notification. The deaths from measles since the last week in December numbered 315 in Dublin, 16 in Pembroke, 5 in Rathmines, and 3 in Blackrock; there were none in Kingstown. Before notification was given up in Dublin there were severer epidemics of measles than the present. In 1892, 432 deaths were due to measles; in 1897, 388 deaths; and in 1899, 568 deaths. Sir Charles Cameron concluded by stating that the epidemic was declining.

THE DUBLIN DEATH-RATE AND THE TENEMENT SYSTEM.

Two facts are undisputed—first, Dublin has, of cities in the United Kingdom, the greatest number of single and double-room tenements in proportion to its population, and the greatest overcrowding of these tenements; and, secondly, the highest death-rate. Much must be eliminated from the Registrar-General's returns before it is possible to obtain the real death-rate of the slum areas. The Dublin registration area includes such places as the southern suburbs, where probably one of the lowest death-rates in the United Kingdom prevails. The Dublin death-rate would be much higher if the city alone were segregated. Next to Dublin in its high percentage of tenements is Finsbury, where, in 1906, Dr. Newman made an official return, showing that the average deaths in one- and two-roomed tenements were about 33 per 1,000 annually, while its three-roomed dwellings show a death-rate of 14.8. In view of what the Departmental Commissioners said about the sanitation and cleanliness of the Dublin tenements, it is not too much to assume that the death-rate in the Dublin slums is at least equal to that in Finsbury. Forty-two per cent. (130,000) of the inhabitants of Dublin live in tenements of one and two rooms, and, applying the Finsbury average of 33 per 1,000, it would appear that 4,200 of these slum dwellers die every year. If the rate were reduced to the Finsbury average of 14.8 for three-room dwellings, nearly 2,500 lives would be saved annually. Many of these 130,000 people live in dwellings which are registered by the Corporation as being "unfit for human habitation."

DERRY WATER SCHEME.

It has long been recognized that the water supply of Derry is quite inadequate. Some time ago the Corporation applied to the Local Government Board for a provisional order sanctioning a provisional scheme to secure an auxiliary water supply. The Board refused to grant the order, giving as its reason that the scheme was not comprehensive, and that the Corporation should at once proceed with a full scheme for obtaining a sufficient and pure supply. The Chamber of Commerce passed a unanimous resolution requesting the Local Government Board to reconsider its decision, pointing out that any shortage in the water supply would be disastrous to the trade of the city, and urged upon the Corporation "the necessity of proceeding without avoidable delay with a larger scheme for a full and satisfactory water supply." The Local Government Board has written to say that it has now decided with some misgivings to grant the desired provisional order.

MEDICAL BENEVOLENT FUND OF IRELAND.

The annual meeting of the Belfast and County Antrim Branch of the Medical Benevolent Fund of Ireland was held in the Medical Institution, Belfast, on May 22nd. The High Sheriff of Belfast (Mr. John Tyrrell) occupied the chair. The honorary secretary (Dr. Victor G. L. Fielden) read the annual report, which showed that the subscriptions amounted to £144 17s. 10d., of which a net contribution of £139 13s. had been made to the funds of the society. The report again drew attention to the apathy unhappily existing amongst a proportion of the medical practitioners in the district. Grants to the widows of five medical men had been made of sums from £10 to £25 during the year. A hearty vote of thanks was passed to the chairman, and the office-bearers were elected as follows:—President, Professor Symington; Committee: Sir William Whitla, Sir Alex. Dempsey, Sir Otto Jaffé, Dr. R. J. Purdon, Dr. M. F. Cahill, Mr. A. B. Mitchell, Dr. Gardner Robb, Dr. Charles Dundee (Ballycarry), Dr. T. R. Greenfield (Holywood), Dr. J. L. Rentoul (Lisburn), Dr. Ross Thomson (Ballymoney), and Dr. Victor Fielden, honorary secretary and treasurer.

THE Hunterian Society has been granted the use of the Hall of the Company of Barbers in Monkwell Street, E.C. Before the surgeons cut themselves adrift from the barbers and founded a college of their own in 1745, the Barber-Surgeons' Hall was what might be called the official centre of anatomical and surgical teaching in London. The old demonstration table is still in existence, and will be used for the exhibition of anatomical specimens. The ceiling of the Hall was designed by Inigo Jones. Vandyck's portrait of that architect and Holbein's well-known picture of Henry VIII granting a charter to the company hang upon the walls.

Correspondence.

THE WORK OF THE ASSOCIATION.

SIR,—I sincerely hope that the letter of Dr. Harford in your issue of May 16th will receive careful perusal at the hands of your readers, and the points he makes considered in all their bearings, with a view to restoring to our Association that continuity and breadth of policy which has not been apparent since the establishment of the Insurance Act.

The first point I would advert to is the fact that the Act has come to stay, and that up to the present no one has been able to propose a system that can compete with the Panel. The obvious conclusion I would therefore draw is that the Panel should be made as efficient as possible, in the interests not only of the public but also of the profession; and the question I should like to ask is whether our Association in its corporate capacity is showing any signs of desiring to develop and protect the panel system, which Dr. Harford suggests is the best system in the circumstances.

The second point is the fact that there are somewhat disquieting signs in the air—to wit, the formation of numerous panel associations independent of the local Divisions, and the support which is being accorded to a weekly publication other than our own JOURNAL. Now, what is the conclusion to be drawn from these facts? I venture the opinion that they point to a suspicion among a large body of practitioners that the Association is not going to represent or to champion their interests in the future, and that some steps must be taken with a view to another rendezvous and leadership in the case of such an eventuality.

If the Association desires to represent the profession, it would appear to me that due consideration must be paid to the wishes and interests of all branches of the profession, whether they are members of the Association or not. This has not exactly been the case in the past. By neglecting the views of the outside men the Association suffered something very like defeat in 1912, and to save its face was obliged hastily to release the pledges. As Dr. Harford says, no body is better equipped to represent us than our great Association, and I join with him in an earnest appeal for unity and the repression of ancient animosities. But to do this we must all give and take, and, above all things, no one section must strive to make use of the powers of the Association to further a purely sectional interest.

Finally, I have fears that a disruption is pending, and my object in writing is to persuade our leaders to so reconsider the political situation and to enunciate such a policy as will prevent such a catastrophe.—I am, etc.,

W. COODE ADAMS,
President, Hampstead Insurance Society.

London, N.W., May 26th.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—A discussion on this most important subject conducted through the JOURNAL should prove of undoubted advantage to the members who are asked to make up their minds by July next. But if the statements of a correspondent are deliberately misquoted and space taken up in criticizing composition the probable result will be that the discussion will be reduced to personalities, when you will feel obliged to step in and stop it.

Dr. Wallace Henry, in order to disparage the objections I raise to a trade union for the special fund, thinks well to criticize my use of the hyphen, and also twice to misquote what I actually wrote.

Whether Leicester or Leicester and neighbourhood be referred to as being sufficient evidence on which "to dispose of" the objection there undoubtedly is in the profession to trade unionism seems to me immaterial. In either case it is parochial.

Dr. Wallace Henry quotes me as having written "that it is a delusion to suppose that the whole of the funds of a trust . . . *could* be attached." I wrote no such statement. What I did write was "that it is a delusion to suppose that the whole of the funds of a trust . . . *would* be attached." He and I agree "that the punishment is made to fit the crime." Many members up to the present have

been led to suppose that by the use of the term "attachment of funds" it is meant that were an adverse verdict given *all* the funds would go whether great or small. I have been given to understand that that is not necessarily so. Therefore I termed any such interpretation a delusion.

The second misquotation is still worse. Dr. Wallace Henry writes that in my letter he *finds* the equally emphatic statement "that you can protect the private estates of the trustees of a trust fund." I wrote no such thing, nor can he find any such sentence in my letter. What I did write was, "in the case of a trust, any damages secured against an official can be reimbursed him from that fund"—an entirely different matter.

He waxes sarcastic over my legal knowledge. It is due to the members to explain what Dr. Wallace Henry already knew, that being a member of the Committee that investigated the problem and drafted the report for the Council, I had the advantage of hearing legal replies given to numerous questions.

"The splendid results" stated to have been obtained by a medical trade union operating in Leicester and neighbourhood would prove of value if published. The chief objects of a trade union would seem to be: (1) Effective collective bargaining; (2) maintenance of a standard rate; and (3) the provision of strike, lock-out, and out-of-work funds. Could information on all these points be given? It is rumoured that the standard rate of pay for medical services amongst the uninsured members of the industrial classes in Leicester and neighbourhood is so low and based so largely on charity that it is only a new name for old club practice rates. If this is so, it hardly required a trade union organization in order to obtain it. But Dr. Wallace Henry will, no doubt, report fully.

If Dr. Raiment's definition in the third paragraph of his letter is adopted, then it would seem that the British Medical Association is an unregistered trade union. The Solicitor to the Association must deal with his points.

In conclusion, may I put two questions, the answers to which favour the formation of a trust rather than the novel procedure of a trade union? These are: Is it not a fact that over and over and over again the British Medical Association, during the past twelve years, has done innumerable things "in restraint of trade"? Is it not also a fact that never once up to now have there been any steps taken to obtain "attachment of funds"? If the replies are in the affirmative, cannot we consider that the "attachment of funds" risk is very slight and almost negligible?

I should like to have such faith in the solidarity of the profession that it would require the attachment of all its funds in order to beat it. Past experience has rather tended to show that an increased bait of £ s. d. is quite sufficient without an appeal to any law court for such a purpose. If you cannot trust the honour of your colleagues, you have no other means by which to prevent your enemies being those of your own household.—I am, etc.,

Hove, May 23rd. E. ROWLAND FOTHERGILL.

REPORT OF THE RADIUM INSTITUTE, LONDON.

SIR,—We notice in the report of the Radium Institute which appears in your issue of the 23rd inst. a reference to the use of capillary glass tubes for the application of radium emanation. The report says: "The latest achievement being the charging of iridium-pointed platinum needles (3 cm. long, 2 mm. diameter, and 0.3 mm. thickness) with emanation in capillary glass tubes for insertion into malignant tissue. These needles, the suggestion of the medical staff of the institute, appear to be easy to use, and if certain principles are observed are not difficult to fill with emanation."

This system in all its details was worked out by us some months ago, and was published by one of us first in the *Medical Press and Circular* of March 11th, 1914, and subsequently, with certain theoretical considerations and further practical details, in the *Proceedings* of the Royal Dublin Society of May 8th, the latter paper being communicated to the society on March 24th.

The chief value and object of the new method of applying radiation is the subdivision of the charge which becomes practicable by its means, permitting uniform "illumination" or cross-fire in a remarkable degree and under conditions of application less trying to the patient than the existing methods when burying the charge is resorted to. The economy attending the subdivision of the charge is also not unimportant, as with the small local charges employed (about 3 millicuries) any addition to the screening effect of the containing needle is unnecessary.

We may add that trials of this mode of application of the emanation of radium have so far given encouraging results.—We are, etc.,

J. JOLY.
Dublin, May 25th. WALTER C. STEVENSON.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—When Dr. Mercier pleads that just as in the case of homicide there are three legal verdicts—murder, justifiable homicide, and homicide whilst the perpetrator is insane—so there ought to be three possible verdicts in the case of self-murder—*felo de se*, justifiable suicide, and suicide whilst insane—no very great objection, beyond its impracticability, can be taken to his view. In the case of homicide the attendant circumstances are generally clear, but in suicide it is not easy, in the absence of the chief actor, to form an opinion on the circumstances that actuated the criminal, much less to apportion condonation. In practice it would be putting too severe a strain on the intellect of a coroner's jury. Dr. Mercier is not, however, content with a legal justification of suicide: as a modern Stoic (or Cynic, perhaps) he wishes it to be regarded as often morally right. "There are situations which often occur," he says, "in which suicide is the natural, sensible, and proper course for a wise man to take," and he takes the Recorder of York to task for expressing the view generally held that suicide is always cowardly. The general idea is as old as the hills and was not invented by the early Christian church. Aristotle said that "to seek death as a refuge from any painful thing is not the act of a brave man, but that of a coward," and the phrase "any painful thing" seems to include all possible circumstances on which an ethical justification of the act might rest. It may be that the ancient Romans were conspicuous for their bravery in battle and for their common sense, but Rome was so pervaded by the philosophy of the Stoics who considered it to be the prerogative of the sage, as Kant puts it, to walk with undisturbed soul out of life as out of a smoky room, that it would not have been surprising if self-destruction was common amongst them. But, as a matter of fact, was suicide common amongst them? It is hardly flattering to the boys of the bulldog breed for Dr. Mercier to cite the Japanese as a model. It is surely more than a mediaeval prejudice that impels us to regard as brave men those who face contingent evils, such as extreme physical pain or, what is worse, disgrace, determined to fight on as long as duty demands, which is just as long as life lasts. We can all call to mind instances of soldiers fighting on with inevitable torture and mutilation by their enemies before their eyes, and we all regard their deaths as noble. It has been left to the laureate of the banjo to advise, in his inimitably vulgar fashion, what is, by comparison, cowardice:

> When you're wounded and left on Afghanistan's plains,
> And the women come out to cut up what remains,
> Jest roll to your rifle and blow out your brains,
> An' go to your Gawd like a soldier.

Under such circumstances we might certainly justify suicide, but why should we admire it? Dr. Mercier professes to see no great distinction between the suicide and the martyr who, rather than renounce his creed, prefers death at the stake; but the former seeks to escape painful things, whereas the latter bears them. If it were as Dr. Mercier argues, then by committing suicide to forestall the more horrible death to be inflicted by others the martyr would be just as much entitled to his immortal crown. That is to say, he might avoid the penalty to be paid for sticking to his duty by shirking another, and scarcely less imperative, duty; in which case he would be a sorry martyr.—I am, etc.,

London, S.W., May 26th. ARCHIBALD LEITCH.

STRYCHNINE-TUBERCULIN TREATMENT OF HOSPITAL TUBERCULOUS CASES.

SIR,—In answer to Dr. William A. Muir's criticism on my short paper bearing the above title in the JOURNAL of May 16th, I have little to say but that I had previously treated in thirty years very many cases in the usual method by rest in bed, good diet, inhalations, various drugs, and so forth, with the ordinary results, which were not nearly as good as by the added method. I think when Dr. Muir has seen the treatment tried and has had more general experience, he will be in a position to express an opinion, but hardly before.

Hospital cases of phthisis mean pulmonary tuberculous patients who have been taken acutely ill and require rest in bed for a time owing to fever, haemorrhage, pleurisy, and other causes. Their stay in a general hospital is limited, and the great desideratum is to get the maximum of improvement in the time allowed. Of various methods tried I found the strychnine-tuberculin treatment gave the best results by a long way.—I am, etc.,

Plymouth, May 24th. J. H. WHELAN.

OPERATOR'S MASK.

SIR,—Operators who wear spectacles will find that condensation on the glasses is prevented by the simple device we have used for some years back in the Royal Victoria Hospital, Dublin, namely, the insertion of a flexible wire—lead does admirably—along the lower border of the slit cut in the mask for the eyes of the surgeon. By moulding the flexible wire on the nose and cheek the expired air is excluded from contact with the glasses.—I am, etc.,

Dublin, May 26th. JOHN B. STORY.

CENTIGRADE AND FAHRENHEIT SCALES.

SIR,—It is the custom of various firms, for advertisement or otherwise, to publish clinical temperature charts with a Centigrade scale at the right hand side. In many of these the scales are badly made and misleading, some of them being as much as half a degree Fahrenheit in error. The makers of the charts seem to have failed to grasp the fact that the Centigrade degrees all come exactly on the usual rulings of a Fahrenheit chart, thus:

35° C. = 95° F., is the lowest marking usually given on chart or thermometer.
36° C. = 96.8° F.
37° C. = 98.6° F., may be taken as normal temperature.
38° C. = 100.4° F., a good point at which to send a patient to bed as a routine treatment.
39° C. = 102.2° F.
40° C. = 104° F., an easy fact to remember.
41° C. = 105.8 F.

The present inaccurate method has the effect of obscuring all the above facts, which should be familiar to every medical man. All that is necessary is that the Centigrade degrees should be printed opposite to their proper lines, and short bars should be placed to the right of the chart to indicate the tenths of the Centigrade degrees.

A still greater advance would be to have the main rulings of the chart according to the Centigrade scale and the exact Fahrenheit readings relegated to the right hand margin.

One small advantage of the Centigrade over the Fahrenheit scale that I have not seen noticed is that no confusion can arise as to whether the expression "point," much in use among nurses, means one-fifth or one-tenth of a degree, because there would be room on the thermometers and charts to mark the tenths of the Centigrade degrees instead of only the fifths of a degree, as in the present Fahrenheit scale.

Is it not time that the medical schools adopted the Centigrade scale in the wards, so that the next generation of medical men may use it, and so bring British practice into line with the Continental?—I am, etc.,

H. B. BILLUPS, B.M.Oxon., etc.

Sandown, Isle of Wight, May 2nd.

THE SOUTH LONDON HOSPITAL FOR WOMEN.

SIR,—May I, as chairman of the Board of Management of the South London Hospital for Women, correct one or two of the statements in the paragraph headed "A New Hospital" in your issue of May 23rd?

The report presented to the governors of the hospital three weeks ago was the *second* and not the first annual report, as stated in your JOURNAL. It gives information relating to the year 1913 only. The first annual report and the appeal issued with it, both of which I enclose, contain the announcement of the anonymous donation of £35,000 to the building fund, and also the reasons which led the promoters of the hospital to decide on separate sites for the in-patient and out-patient departments and to build a hospital containing a large proportion of private wards. It is stated in your JOURNAL that the out-patient department was opened when "even the site of the present institution had still to be acquired." This is a mistake. Not only had the site of the hospital on Clapham Common been bought, but a sum amounting to over £36,000 towards the cost of the building and equipment had already been promised at that time—that is, April 2nd of last year. Inasmuch as the building fund is in the hands of trustees, who are entirely responsible for its expenditure, and not in the hands of the Board of Management, the account does not appear amongst those presented by the board for the year 1913. The total receipts to date for all purposes connected with the hospital amount to a little over £46,000.

That the cost of maintenance of the out-patient department appears high is partly explained by the fact that several of the items do not belong properly to this department, but would be included in the general hospital expenditure were the complete hospital in existence. Thus a proportion of the expenditure necessarily included in the accounts has nothing to do with the out-patient department.

I should like to say that the promoters of the hospital are firmly persuaded of the need for its existence. The New Hospital for Women is not nearly large enough to treat all the patients who seek admission, and something had to be done for all those women who were crowded out. Hospital accommodation in South London was relatively scanty when it was decided to start the second women's hospital there, and it was also natural to choose a site at the opposite pole of London from the New Hospital for Women in Euston Road. The rapidly increasing numbers of out-patients at Newington Causeway—sometimes as many as 80 in an afternoon—proclaim the need in South London for a hospital officered by medical women.

We hope that the building, which began in earnest a few weeks ago, will be completed before another year is passed.—I am, etc.,

London, S.E., May 26th. EDITH CASTLEREAGH.

CHRONIC COLITIS.

SIR,—May I be permitted to indicate to your reviewer of *Chronic Colitis* that valuable as such a critique is to the writers of an admittedly elementary and possibly incomplete work, their difficulties are somewhat increased by the enumeration of sins of omission and commission which have actually not occurred?

First of all, I cannot accept the compliment, implied rather than expressed, that we have originated a new idea in "holding that the connexion between chronic catarrh of the colon and constipation has been overlooked." The relation between constipation and the early stages of chronic colitis may have been too lightly regarded, but their causal relationship has been, as your reviewer is of course well aware, very completely considered by the Continental writers to whose views on the subject we refer in more than one place.

Your reviewer complains that, although we repeatedly refer to the sigmoidoscope and to lavage for diagnostic purposes, nowhere has he "found mentioned the far simpler and very valuable method of radioscopic examination of the bowel by screen or by a skiagraph after the use of a bismuth meal." I beg his pardon, but that is his fault. He will find the reference in question at pp. 74, 75. He remarks that we have printed "copies of a great

number of dietaries recommended by various authorities which extend over 30 pages," but which we condemn. These dietaries, as a matter of fact, extend over less than half that number of pages, and, with the exception of the Von Noorden régime (which we have found unsatisfactory) of absolute milk diet and vegetarianism (which hardly come into the category), they are printed in full without a word of comment, in common justice to our predecessors, who were pioneers in the dietetic treatment of intestinal disorders; and so far from condemning them and then proceeding "to explain our own," it is transparently evident that we have selected what we have found to be the best features of each.

Finally, may I be permitted a squeal that he defines our "other treatment is mainly regulation of the bowels by daily doses of mild laxatives." This is his summary dismissal of a consideration of treatment which includes medication of the intestine, internally by aqueous solutions, oils, and gases, externally by massage, electricity, and applications of heat; vaccine therapy; exercise and general hygienic measures. True, there is no mention of psychotherapy with its machinery of persuasion, suggestion, re-education, hypnosis, etc. It may be this omission which has led to your reviewer's summary dismissal of all our treatment other than the employment of mild laxatives, since I have heard one exponent claim that this line of treatment may not only supplement, but entirely supersede all others in chronic intestinal disorders.—I am, etc.,

London, May 18th. ADOLPHE ABRAHAMS.

*** It is perhaps inevitable that author and reviewer should look at a book from different points of view. The reviewer can do no more than attempt to convey the general character of the book and the impression that it makes upon him. With regard to dietaries quoted, there was a blunder in the review owing apparently to an error in transcription. It should have been stated that the dietaries quoted extended to about fifteen pages, and the authors' own to thirty. The statement that the quoted dietaries were condemned was considered to be justified by the following passages in the book:

> In appending a résumé of the various régimes which have been suggested in the past and which are adopted at the present day we do so for the sake of completeness and not with the idea of even suggesting their use by any reader of this book. . . . They are principally of value from an educational and academic point of view as showing us how the authorities attempted to apply to actual practice the theories, mostly erroneous, which they held as to the nature of the disease.

"ENCYCLOPAEDIA MEDICA."

SIR,—The prospectus of the first edition of the *Encyclopaedia Medica* distinctly stated that an original feature of the publication would be the issue of supplementary volumes bringing the work up to date.

The fact that an expensive work of this kind becomes out of date in a few years deters many from purchasing, and there can be no doubt that the promise in the prospectus induced many to subscribe who would not otherwise have done so. Now Mr. Green writes:

> In proposing to bring out a new edition altogether, we felt that we were following the wisest course in view of the reception which the first supplement got, *and looking to the fact that nothing definite had been said regarding their number or time of publication.* (Italics not in the original.)

I think that most people will agree that this excuse is singularly weak. It is only fair to note that the publishers have offered to supply the new edition to the original subscribers at a special reduced rate.

Personally, I must acknowledge the very great service the *Encyclopaedia* has been to me. Many of its articles seem to me to be admirably done, and just what the general practitioner wanted. Its great defect was the extraordinary number of printer's errors, more by far than I have ever observed in a scientific work.—I am, etc.,

Thornhill, Dumfriesshire, May 16th. MUNGO BRYSON, M.B.

SIR,—With reference to Dr. Jellett's letter I can only reiterate what I said before, that he writes under an entire misapprehension. I am quite prepared to prove this to him, not "speaking from memory," but from our correspondence in 1911.

Dr. Chalmers Watson states that he ceased his connexion with the work over the question of supplements. He was not invited to continue his connexion with the work through a most regrettable disagreement over another matter altogether, which could not to my mind have any interest for your readers.—I am, etc.,

Edinburgh, May 26th. C. E. GREEN.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—W. L. Murphy, C. H. S. Taylor.
M.B., B.C.—G. Moore.
M.B.—A. G. G. Thompson.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.

A MEETING of the University Court was held on May 18th, when Sir William Turner was in the chair.

Grants for Research.—Grants recommended by the Senatus from the Earl of Moray Endowment for the Promotion of Original Research were approved.

Additional Examiners.—The following additional examiners were appointed: Professors C. S. Sherrington and A. H. E. Love, University of Oxford, and Professor P. T. Herring, University of St. Andrews (D.Sc. Theses); Dr. Byrom Bramwell, Edinburgh (Medicine in its Bearings on Public Health); Dr. R. A. Fleming, Edinburgh (Practice of Medicine).

Munro Lecturer.—Sir Charles H. Read, F.S.A., Keeper of British and Mediaeval Antiquities and Ethnography in the British Museum, was appointed Munro Lecturer for 1915.

Royal Dick Veterinary College.—Professor Rankine was reappointed and Professor Hudson Beare appointed the Court's representatives on the Board of Management of the Royal (Dick) Veterinary College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following candidates have been approved at the examination indicated:

FIRST FELLOWSHIP.—A. W. Adams, L. M. Banerji, C. H. Barber, J. H. Barclay, L. J. Cameron, N. B. Capon, J. B. Christian, R. H. Fleming, T. G. Fleming, A. Galletly, J. Gilmour, G. T. Gimlette, A. O. Gray, D. Green, F. K. Hayman, T. A. Hindmarsh, G. P. B. Huddy, E. H. Lake, Mary F. Lucas, F. B. McCarter, R. H. Maingot, C. B. Marshall, F. B. Martin, V. R. Mirajkar, J. K. Muir, C. Noon, A. Radford, G. J. Randell, N. M. Rankin, L. C. Rivett, H. B. G. Russell, H. R. Sheppard, A. W. S. Skirving, N. A. Sprott, J. Swan, S. W. F. Underhill, C. P. G. Wakeley, W. T. Warwick, W. E. Wilson, A. M. Zamora.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—‡W. Bailey Thomson, *A. R. Jennings, ‡W. Smith.
MEDICINE.—*W. Bailey Thomson, ‡M. P. Dos Santos, ‡G. Mes.
FORENSIC MEDICINE.—W. Bailey Thomson, L. Baumgarten, G. Mes, H. Morrison, B. C. Piercy.
MIDWIFERY.—W. Andrew, W. Brown, R. J. Hearn.

The diploma of the society has been granted to Messrs. B. C. Piercy and W. Smith.

* Section I. ‡ Both sections. † Section II.

THE usual monthly meeting of the Executive Committee of the Medical Sickness and Accident Society took place at 429, Strand, W.C., on May 15th, Dr. F. J. Allan in the chair. The accounts presented showed satisfactory progress, both in the matter of new claims and new proposals, the claims being considerably less and the new proposals considerably more than the corresponding period of last year. It was reported that the new tables had been duly registered and that proposals were already coming in under them. The tables for the combined sickness and endowment assurance in particular promised to become popular, as they are at low rates and the funds of the society, which now amount to £260,000, provided good security. It was reported that the number of members increasing their sickness benefits during the first five months of this year was nearly equal to that of the whole of last year. This is the more satisfactory as these proposals all come from members whose history is known to the committee. The high rates at present paid to locumtenents no doubt accounts for these increases to a large extent, and emphasizes the necessity of some insurance to cover this charge. Prospectus and all information can be obtained on application to the Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, W.C.

Obituary.

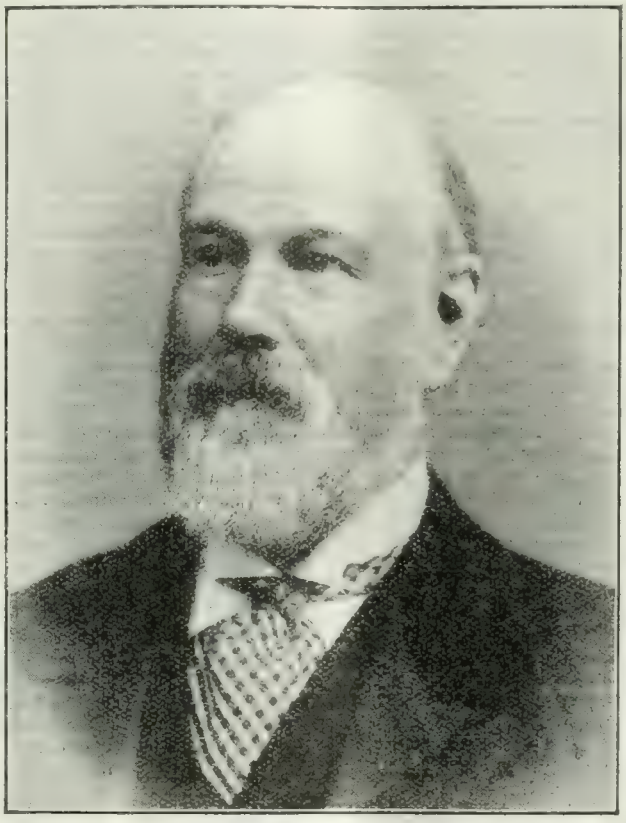
PHILIP HENRY PYE-SMITH, M.D., F.R.C.P., F.R.S.,

CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

We regret to have to record the death, on May 23rd, of Dr. P. H. Pye-Smith, who throughout the greater part of his career was identified with Guy's Hospital and its Medical School. Dr. Pye-Smith, who was in his 75th year, had been in failing health for some years, but his death was unexpected.

Philip Henry Pye-Smith was the son of Mr. Ebenezer Pye-Smith, F.R.C.S., who had a large practice in Hackney, and the grandson of the Rev. John Pye-Smith, D.D., F.R.S., a well-known Nonconformist divine. He was educated at Mill Hill School and then went to University College, taking the degree of B.A.Lond., with honours in classics, in 1858. He pursued his medical course at Guy's Hospital, entering in 1859.

In 1861, at the first examination for the degree of M.B. in the University of London, he took the exhibition and gold medal in physiology, histology, and comparative anatomy, and honours in anatomy, organic chemistry, and materia medica. In 1861–2 he was dresser to Mr. Bryant and Mr. Birkett, and physician's reporter to Dr. (afterwards Sir William) Gull. When he graduated M.B. in 1863 he took the gold medals in medicine and in surgery, first-class honours in obstetric medicine, and honours in forensic medicine. In the following year he graduated M.D., taking the first place and receiving the gold medal of the university.



PHILIP HENRY PYE-SMITH.
(*Photograph by Jerrard, Regent Street, W.*)

He then spent some time abroad at the medical schools in Vienna and Berlin, forming what proved to be lasting friendships with Professor Virchow and others. At this time the assistant lecturers on comparative anatomy at Guy's were Drs. Pavy and Moxon, and in October, 1865, he succeeded them as the teacher of comparative anatomy and zoology. These subjects interested him greatly, and he held the post until the year 1875; during this time he reorganized the museum of comparative anatomy and compiled the catalogue. He was eminently suited for this work, and he included in the catalogue many observations on the classification of animals which were of great value to the students. His work brought him into contact with zoologists, and he formed friendships with the late Professor Huxley and other eminent naturalists. It is said that at this time Professor Huxley once referred to him as the best educated young man in London. In 1866 the demonstrators of anatomy were Dr. Moxon, Mr. Bankart, and Dr. Hilton Fagge, and on the appointment of Dr. Moxon as assistant physician Dr. Pye-Smith succeeded him as demonstrator of anatomy, an appointment he held for four years.

In 1870 he was appointed medical registrar and in the following year assistant physician. Microscopes were not in use in medical schools in those days, and shortly before this, at the suggestion of Dr. Moxon, Mr. Howse had started a class in histology. Then Dr. Pye-Smith took up the teaching of practical physiology in the school; the course consisted chiefly of histological work; the sections were cut by hand, the tissue being held between two pieces of carrot, and although great manual dexterity was attained by a few, the sections were very clumsy compared with the mechanically-cut sections which were available a few years later.

In 1873 he was appointed lecturer on physiology jointly with Dr. Pavy, and became sole lecturer on the subject in 1877. He held the appointment for seven years. The preparation of his lectures was characterized by great care; elaborate tables were written up on the board, and a very excellent summary of the current views on physiology was put before his students. He had the qualities which are essential for a good lecturer—he spoke deliberately, delivered himself in excellent English, and illustrated his lectures with numerous well-drawn diagrams. At that time the instruction did not include much practical work, and experiments with recording instruments, which were then being brought into use by Professor Michael Foster at Cambridge, were infrequent.

In 1877 he was appointed to the department of skin diseases, which post he held for several years, taking a deep interest in the work. His demonstrations became very popular, for the subject was one which especially lent itself to his dogmatic and precise teaching. A long series of students followed his methods with the greatest advantage. He did much to advance the subject by his insistence on the correct use of terminology. He emphasized the importance of applying one set of terms to the lesions and another set to the etiology of the diseases, and he did much to modify and improve the chaotic nomenclature which was current at that time. His small book, *Introduction to Skin Diseases*, marked a distinct advance towards the elucidation of the whole subject. A large portion of his private practice was always connected with this speciality. At this time he lived at Finsbury Square, and was an active member of the Hunterian Society. He contributed frequently to the Society's *Proceedings*, and he was also a frequent contributor to the Pathological Society, whose *Transactions* he enriched by some forty papers, dealing with every variety of subject. He then moved to Harley Street, and a few years later to Brook Street. He became physician to the hospital in 1883 on the death of Dr. Hilton Fagge, whose decease was the first of the closely approximated losses that Guy's Hospital suffered through the death of brilliant members of its medical staff—namely, Drs. Moxon, Fagge, Carrington, and Wooldridge. Dr. Pye-Smith edited and completed, with the assistance of Drs. Wilks and Carrington, Fagge's great work on the *Principles and Practice of Medicine*, which had been left unfinished. He himself contributed the articles on cutaneous disease.

He had always been greatly attracted to the history of medicine, and in the second and succeeding editions of the work he added to each chapter short historical disquisitions and notes on the derivation of medical terms, thus enhancing the value of the book. There were four editions of the work, the last being published in 1901. This editing entailed a large amount of work, and he also introduced considerable statistical information drawn from the records of Guy's Hospital concerning those

diseases the data of which had not been completed by Dr. Fagge.

In 1884 he succeeded Dr. Moxon as Lecturer on Medicine, and held the post until he retired under the age rule in 1899. He had then been senior physician since Dr. Pavy's retirement in 1890, and on his own retirement he was appointed consulting physician to the hospital.

He became a Fellow of the Royal College of Physicians of London in 1870, was an examiner for eight years between 1875 and 1888, and he was a member of the council from 1888 to 1890, and a censor from 1894 to 1899. He delivered the Lumleian lectures on "The Etiology of Disease" in 1892, and a most scholarly Harveian oration on "Pathology as the Basis of Rational Medicine" in 1893. He was a representative of the Royal College of Physicians on the Senate of the University of London from 1902 to 1908, and was vice-chancellor from 1903 to 1905. These were the culminating events in a long connexion with the university; he was an active Member of Convocation during the important debates which preceded the earlier reform of the university, and was a member of the old standing Committee of Convocation. He represented the University of London on the General Medical Council for two periods from 1899 to 1909.

He was an acknowledged authority upon life assurance, having been medical adviser to the Alliance and to the Legal and General Life Assurance offices for over thirty years.

In 1878 he was Vice-President of the Section of Physiology at the annual meeting of the British Medical Association at Bath, in 1891 President of the Section of Medicine at the annual meeting at Bournemouth, and he gave the address in Medicine on "Medicine as a Science, and Medicine as an Art," at the annual meeting at Ipswich in 1900.

As will be seen from this summary account, Dr. Pye-Smith accomplished much public work during his long and active career. He received many well-deserved honours from public bodies: he was elected a Fellow of the Royal Society in June, 1886; he received honorary degrees from the Universities of Dublin, Paris, and Berlin, and was an Honorary Fellow of the College of Physicians of Philadelphia and of the Royal Academy of Medicine in Ireland. With Sir Herbert Maxwell he represented the British Government at the International Congress on the Prevention of Tuberculosis in Berlin in 1899.

Throughout life he was a man of many interests, always keeping in touch with fellow workers in the subjects of zoology, physiology, medicine, and medical education. He was extremely methodical and orderly in his habits. He devoted much of his life to the interests of his hospital, invariably attending punctually and devoting a considerable amount of time to his duties. His lectures in medicine, carefully prepared as they were, and illustrated by many tables, proved of great value to his audience. He was an accomplished scholar, with a well-stored mind and an accurate memory. His library was his great hobby, and he delighted to regale himself with old and favourite authors. He was very proud of his books, and he dearly loved to bring out for the admiration of his friends some old volume finely bound and tooled. He was insistent on the superior beauties of the old, and had the greatest contempt and severity for anything that savoured of frivolity or inaccuracy. He considered the time devoted to reading the daily newspapers as worse than wasted.

His interest in the history of medical knowledge led him to urge his students to make themselves familiar with the lives and works of men great in the annals of medicine. In the wards he devoted much time to the teaching of a systematic and thorough examination of the patients, and dwelt upon the bearing and the significance of the various signs. He used to lay great stress on the typical physical signs and symptoms of the various diseases, and all those who worked with him were thoroughly well trained in the foundations of their profession. In treatment he advised the use of simple prescriptions, and was not in the habit of employing many drugs. He did not fail, however, to impress upon his students the utility of the really valuable preparations, and when he thought it was indicated he was always willing to push the use of any particular drug to its maximum.

He was addicted to oracular statements, such as, "Psoriasis is as unlikely to be found on the flexure of a joint as bears are to be found in Africa, while eczema may often leave its proper territory just as marsupials may occur in Virginia." "It is a venial error to overlook a murmur, but a grave one to imagine one when it does not exist." "The loudness of a bruit is unimportant, its rhythm and distribution are all-important." "Gout is almost always podagra, sometimes chiragra, seldom gonagra, and scarcely ever omagra." "In a doubtful case of dermatitis think firstly of its being caused by an irritant, intentionally or accidentally; secondly, by a drug; thirdly, by a parasite; and, lastly, by syphilis." "Persevere in treatment and push remedies." "As you practise your auscultation on your own chest, and recall your anatomy on your own joints, so from your own accidents and illnesses you will learn to sympathize with pain, to bear with impatience, and to put yourself into your patient's place."

When delivering a complimentary address, or making an after-dinner speech, he was pre-eminent. He had a happy knack of saying just the right thing in the happiest way, often with a touch of humour, and couched in the most elegant English, while an appropriate simile or quotation gave an indication of his wide culture. Being of a generous and unselfish disposition, the acts of kindness done by him to others were many; these were frequently unknown, because any suggestion of self-seeking, aggressiveness, or advertisement was abhorrent to him. His was a long, useful, and beneficent life, but it was clouded over towards the latter years by ill health, which practically more or less confined him to the house, and incapacitated him from taking any active part in affairs. He was tenderly cared for by his devoted wife, to whom and to his son the sympathies of all will go out in their loss.

A memorial service was held on Wednesday, May 27th, at St. George's, Hanover Square, and was conducted by Canon Sandys, of Oxford, and the Rev. W. W. Jackson. Besides the family mourners, those present included Sir John Bradford (representing the Royal Society), Dr. Herringham (University of London), Sir Francis Champneys (Royal Society of Medicine), Mr. Stephen Paget (Research Defence Society), Sir James Fowler, Sir Dyce Duckworth, Dr. H. Tooth, Dr. T. Dyke Acland, Dr. N. Moore, Dr. J. A. Ormerod, and Dr. W. H. White (who also represented Guy's Hospital), representing the Royal College of Physicians; Lady Bradford, Lady Duckworth, Lady Barlow, Lady Perry, Sir Alfred and Lady Fripp, Sir James Reid, Sir Bryan Donkin, the Master of the Rolls, Sir William Osler, Sir William Church, Mr. Guy Elliston (British Medical Association), the Rev. F. Lenwood (London Missionary Society), Dr. Little (General Medical Council), and Mr. James McGowan (representing the Governors of Mill Hill School). The burial took place later at Abney Park, Stoke Newington.

SIR FRANCIS LAKING, Bart., G.C.V.O., K.C.B.

Sir Francis Laking died at his residence in Cleveland Row, St. James's, London, on May 21st.

Francis Henry Laking was born on January 9th, 1847, and received his medical education at St. George's Hospital. He took the diploma of L.R.C.P. in 1868, and that of L.S.A. as well as the degree of M.D.Heidelberg in 1869. He was house-physician at St. George's Hospital in 1870, medical registrar from 1871 to 1874, and was at one time assistant physician to the Victoria Hospital for Children, Chelsea. Soon after leaving St. George's he entered into partnership with the late Mr. Du Pasquier, Apothecary to the Royal Household, and his connexion with the Court in various capacities of ever increasing distinction continued until his death. He became Surgeon-Apothecary-in-Ordinary to Queen Victoria, Apothecary-in-Ordinary to the Royal Household, and to the households of the Prince of Wales, the Duke of Edinburgh, and the Duke of Connaught. He was afterwards appointed Physician-in-Ordinary, an office which he retained under King Edward VII and King George. He received the honour of knighthood in 1893, and a baronetcy in 1902; he was made G.C.V.O. in 1903, and K.C.B. in 1910. In addition he held foreign orders from the crowns of Denmark, Turkey, Italy, Portugal, Sweden, Norway, and Greece, and was also a commander of the Legion of

Honour. He was twice married, first to the daughter of Mr. Joseph Mansell, in 1875; this lady died in 1905. He married again the daughter of the late Mr. James Hackworth, of Dunedin, by whom he is survived. His son, Mr. Guy Francis Laking, M.V.O., Keeper of the King's Armoury, succeeds to the baronetcy.

Sir Francis Laking enjoyed for many years a large and leading practice in London, but we will refrain from attempting to estimate the position he attained, because we are able to publish the following tribute to his memory by Sir Frederick Treves:

Although the name of Sir Francis Laking will be familiar to every member of his profession in this country, there are comparatively few medical men who knew him personally. In disposition he was shy and retiring. He was rarely seen at the meetings of any of the societies; he avoided large gatherings, and had an almost acute dislike of public dinners.

His reputation, it is needless to say, was based upon his long and honourable association with the Royal Family as medical attendant. I have often heard it said by those who knew little of Sir Francis that he must have been an accomplished courtier. In the sense in which that word is usually employed he was no courtier. The esteem and affection with which he was regarded by those he served depended upon higher qualities than make the reputation of a courtier. His unbroken success as a Court physician rested upon a sure knowledge of his work, upon consummate tact and sound judgement, but, above all, upon an absolute and unswerving devotion to his illustrious patients, inspired by a kindness of heart and a genuine sympathy which were never surpassed in any medical man with whom I have had acquaintance.

Sir Francis Laking's gentle disposition, his simplicity of character, his intensely affectionate nature, and his almost feminine sensibility endeared him greatly to his friends. During my long and very intimate association with Sir Francis I have never heard him utter an unkind word of a single individual. There were many occasions when he might well have displayed resentment, but he always had some excuse to make for those who served him ill. He was generous to a fault, as free from vindictiveness as a child, eager to believe the best of all men, and in his many and complex undertakings absolutely without guile. His loyalty to his patients, as well as to his colleagues, was so unwavering as to be heroic. His discretion was a sterling virtue, while no man ever kept a secret with firmer faith. His sense of duty was paramount, and nothing would turn him from the course that he believed to be right.

Being a singularly keen observer, there were few things that escaped his notice, while I have met no shrewder judge of the characters of men. Although he was profoundly interested in all that was new in medicine, he insisted that in some details of practice the older fashion should be followed. With this in view, he developed to the highest point of perfection the almost forgotten art of prescribing. He devoted infinite pains to his prescriptions, writing them always in the orthodox form and heading them with the date in full in Latin. He claimed that no medicine need be nasty, and went some way to make evident his conviction.

He was a most charming companion, being possessed of a lively humour and a vivid interest in a very miscellaneous variety of subjects. He had almost a passion for whatever was curious, especially in science, in botany, and in natural history. As a regular attendant at the lectures of the Royal Institution he never left a discourse without adding to his store of odd things or memorable sayings. He had a remarkable knowledge of geology and particularly of mineralogy. His series of specimens—collected by himself—to illustrate his views as to the formation of flints in chalk show extraordinary acumen and considerable study. On occasions when he was sorely tried and worried—and such occasions were not rare—nothing would restore him more effectually than the production of a piece of ore a little out of the common. His knowledge of trees and plants was wide, and afforded him great enjoyment during his periods of duty at Balmoral. At one time, when he was the tenant of Blount's Farm near Henley, he became quite an authority on gardening. The sea did not interest him, and his stay on the royal yacht would be largely occupied in testing the latest curiosities in optical instruments. These were almost as numerous as his clocks, of which he kept no less than twelve going in his consulting-room alone.

As an astute connoisseur of old silver he will be known to many, while more than once he has brightened a tedious professional conversation by suddenly bringing a silver milk-jug, or some such piece of plate, out of his pocket. His acquaintances will recall with admiration his collection of seals and his display of punch ladles, as well as the infinite variety of strange objects he could produce out of any number of drawers, when he was in a mood to show his treasures. His many hobbies kept his leisure fully occupied, and provided him with an excuse for the fact that he never took, nor even pretended to take, any exercise. Indeed I have never known a man take less, and yet, until quite recent years, his general health was excellent, while the amount of fatigue he could endure was astonishing.

In appearance and bearing he represented a fine realization of the esteemed physician; his immaculate dress, his kindly face, his quiet voice and the old world dignity of his manner, all helped to form a conception of a type that could not well be improved upon.

Above all he was a lovable man who inspired in those with whom he was closely associated that affection which he bestowed in such generous measure upon all who could call him friend.

FREDERICK TREVES.

The funeral took place on May 25th. The house in which Sir Francis Laking died was almost opposite the old archway leading to St. James's Chapel, and the coffin was carried from the house to the chapel on men's shoulders; it was covered with a silk mantle of the Grand Cross of the Royal Victorian Order, and on a velvet cushion were Sir Francis's many orders and decorations. The procession was headed by the full choir of the Chapels Royal, then followed the family, and next the representatives of the Royal family. A chant was sung by the choir as the procession moved over to the Palace. The little chapel, a most picturesque old Tudor room, was decorated in every part with flowers; there was no trace of black, and every candle in the chapel was lit. The chief members of the household from Buckingham Palace and Marlborough House were present, including the Master of the Household, Lord Howe, Sir Charles Cust, Colonel Streatfeild, Sir George Holford, Lord Knollys, Hon. Charlotte Knollys, and Lord and Lady Stamfordham.

Many members of the medical profession attended, including Sir James Reid, Sir R. Douglas Powell, Physicians in Ordinary; Sir Thomas Barlow, Sir Bertrand Dawson, and Sir A. R. Manby, Physicians Extraordinary; Sir Robert Burnet, Physician to the Household; Sir R. Havelock Charles, Sergeant Surgeon; Sir Frederic Hewitt, Anaesthetist to the King; Dr. A. J. Rice-Oxley, Physician in Ordinary to H.R.H. Princess Henry of Battenberg; Sir Malcolm Morris, Dr. P. H. Hartley, Dr. J. Dundas Grant, Dr. E. J. Spitta, Dr. R. S. Trevor, and Sir James Crichton-Browne (representing the Royal Institution). At the King's special wish Sir Frederick Treves, Sergeant Surgeon, attended the service in the chapel and also the actual interment, which took place at Highgate and was otherwise attended only by relatives and personal friends.

ROBERT MUSGRAVE CRAVEN, L.R.C.P.EDIN., M.R.C.S., D.P.H.CAMB.,

M.O.H. WESTMORLAND COMBINED DISTRICT.

THE announcement of the death, at his mother's home in Southport, on May 17th, of Dr. Robert Musgrave Craven, of Kendal, will be received with feelings of deep regret not only by the members of the medical profession in Westmorland, but by medical officers of health all over the country. He was born at Rothwell, near Leeds, in 1851, and was the son of Mr. Robert Craven, F.R.C.S., who afterwards practised for many years in Southport. He received his medical education at University College, London, and obtained the diplomas of M.R.C.S. and L.R.C.P.Edin. in 1873. After serving for a time as resident surgeon in the Worksop Dispensary, he settled in general practice in Southport, and became one of the honorary medical officers of the Southport Convalescent Home. He was always interested in public health

questions, and in 1886 obtained the diploma in Public Health at the University of Cambridge. In 1889 he was appointed to succeed Mr. C. E. Paget as medical officer of health of the Westmorland combined sanitary district, which includes the whole of the county except the urban district of Kirkby Lonsdale. He carried out many reforms in his district, and his administration was very complete and efficient. In order that he might be able to give more time to his purely professional work, he employed at his own cost a clerk to undertake the clerical duties of his office, and in many other ways was a most conscientious and painstaking official. He was an ardent advocate of the teaching of hygiene in schools, and was one of the first to insist that school teachers should be instructed in that subject. Although in his public health work he was a progressive reformer, and made himself acquainted with modern methods of procedure, he was, in the early days of motoring, an uncompromising opponent of this means of travelling, and caused a mild sensation by carrying a red flag in his carriage, which he waved aloft when he met a motor, insisting that the motorist should pull up while he passed by. When the *à la suite* sanitary service was formed in 1909, he was one of the few medical officers of health to receive a commission as Major in the corps. For many years he was a director of the Birkdale and Southport Tramways Company and of the Southport and Cheshire Lines Railway, a position he retained until his death. His knowledge of railway and postal affairs has been described as encyclopaedic. He has left a widow, one son and two daughters.

His death was due to apoplexy.

A brother medical officer of health who knew him well writes:

Dr. Craven was one of the most efficient medical officers in the country. He never would call a spade anything but a spade, and this characteristic, while sometimes raising ill-will in the small-minded, endeared him to his councils, fellow-officers, and friends. His cheerful manner and obvious sincerity enabled him to deal firmly with the owners of insanitary property, and yet leave in their minds no sense of injury, and he thus obtained great results with little friction. He seldom attended medical and public gatherings of late years, and so was little known to the younger members of his branch of the profession, who were sometimes surprised to find the high esteem in which his opinion, always severely practical, was held by their colleagues who had the pleasure and honour of his acquaintance. It was known to all the latter that he would have occupied a high position if merit were the only or even the principal consideration that made for success in the public health service. A strong argument in favour of the reform of public health administration and the establishment of a Ministry of Public Health is afforded by the fact that Dr. Craven should at the time of his death, after a quarter of a century of strenuous work, be found occupying a provincial position instead of one to which his talents, knowledge of administration, and energy alike entitled him.

By the death of Dr. RICHARD U. WALLACE at his residence at Upper Clapton, on May 24th, North-East London loses one of its oldest and most respected medical men. He was over 80 years of age, and had resided and practised in the neighbourhood for some fifty years. He received his medical education at Guy's Hospital, and took the diplomas of M.R.C.S. and L.S.A. in 1855; he took the degree of M.B.Lond. in 1858, winning the gold medal in materia medica as well as honours in anatomy and chemistry. After acting as house-surgeon to Guy's Hospital he succeeded his father in Hackney Road, when that thoroughfare was in a good class residential neighbourhood. About thirty years ago he removed to Amhurst Road, and some years later went to live at Cravenhurst, Stamford Hill. He enjoyed a large and important practice, gaining the confidence of his patients, who included the principal residents. He married Miss Teale, a Hertfordshire lady, who proved a loving and devoted wife and worthy helpmate. Their only son, Dr. R. Teale Wallace, died last autumn of profuse pulmonary haemorrhage, and his father never recovered from the shock; he was seized in the autumn with cerebral haemorrhage and never spoke again. He was attended in his long illness by his old friend and neighbour, Dr. J. W. Hunt, who watched him with filial care and tenderness. Dr. Wallace was a lover of truth and hated shams and humbug. He was a Conservative and a churchman, but took no part in local work, although many years ago he was churchwarden of St. Mary's, Haggerston. He was buried on May 23rd at St. James's Churchyard, Stanstead Abbot, Herts.

The Services.

THE INDIAN MEDICAL SERVICE.

IN the last issue of the JOURNAL we published an abstract of an article by Sir Malcolm Morris in the *Times* and of some correspondence to which it had given origin. We have received the following letter on the subject:

National Liberal Club,
Whitehall Place, S.W., May 25th.

Sir,—A brief visit to India has hitherto been held insufficient to obtain enough knowledge to speak with authority on matters relating to that country. But the correspondence in the *Times* on the Indian Medical Service, reprinted in your columns, indicates a change in that teaching. The writers seem to doubt the real need for a thorough reform of the medical service of India. The names of the few competent officers are given, and it is apparently contended that the record of their work is a proof of the high quality of the work of the whole service.

If reserving the higher grades of the civil medical department for military doctors is the ideal system, which has already produced abundant good results and is capable of producing still greater good, may I ask, Why is that system not copied by other countries in the world nor even adopted in the native states of India? That a Government resolution appointing an individual officer as a physician, a surgeon, and an obstetrician in succession as vacancies occur in Government hospitals does not carry conviction to the public mind that he possesses the special knowledge required to fill those posts is shown by the little private practice these officers have.

The result from the political point of view cannot be better described than in the words which the Honourable Mr. Gokhale uttered at the meeting of the Viceroy's Council: "My lord, it is difficult to describe in adequate terms the mischief that is done to the best interests of the country and British rule by the appointment of third or fourth-rate Englishmen to chairs in Government Colleges. These men are unable to command that respect from their students which they think to be due to their position and then they make up for it by clothing themselves with race-pride, which naturally irritates the young men under them. The result often is that young students leave college with a feeling of bitterness against Englishmen, and this feeling they carry with them into later life. On the other hand, the influence which a first-class Englishman, who knows how to combine sympathy with authority, exercises on his pupils, shapes their thoughts and feelings and aspirations throughout life, and they continue to look to him for light and guidance even when their immediate connexion with him has come to an end."

I am, yours faithfully,
V. P. GONSALVES.

THE fourteenth Congress of French-speaking practitioners of medicine will be held at Brussels on September 30th and October 1st, 2nd, 3rd, and 4th. The congress, which is under the patronage of the King and Queen of the Belgians, will be presided over by Professor Stiénon of Brussels. The following is the official programme of questions to be discussed: Syphilis of the cardio-vascular apparatus; lipoids in pathology: the therapeutic value of artificial pneumothorax; vaccine therapy in general, and especially in typhoid fever and cancer. The membership is not confined to French-speaking countries; it includes representatives of Germany, Great Britain, Austria-Hungary, Denmark, Egypt, Greece, Italy, Holland, Roumania, Russia, Sweden, Switzerland, Turkey, Canada, and the United States. Applications for tickets of membership should be made to the Honorary Treasurer, Dr. Godart-Danhieux, 9A, rue Montoyer, Brussels. Those who wish to present communications should intimate their intention as soon as possible to the General Secretary of the Organizing Committee, Professor René Verhoogen.

Medical News.

SIR CLIFFORD ALLBUTT, K.C.B., will distribute the prizes to the students of St. Thomas's Hospital on Tuesday, June 30th.

THE library and offices of the Royal Society of Medicine will be closed for the Whitsuntide holidays from Saturday, May 30th, to Tuesday, June 2nd, both days inclusive.

AT the recent examination for sanitary inspectors under the Public Health (London) Act, 1891, held by the Sanitary Inspectors' Examination Board, twenty-six candidates, of whom thirteen were women, passed.

THE new pathological laboratory at the Royal Mineral Water Hospital, Bath, will be opened at 4 p.m. on Thursday next by Sir William Osler. The work proposed to be done in the new laboratory is the investigation of rheumatoid arthritis.

A PROVINCIAL meeting of the Section for the Study of Disease in Children of the Royal Society of Medicine will be held at Bournemouth on June 6th. There will be a demonstration of clinical cases at the Royal Victoria Hospital at 3 p.m., and at 5 p.m. a discussion on status lymphaticus will be opened by Dr. Hugh Thursfield.

WE are informed that at a joint meeting of the chairmen of the various committees of the King Edward VII Hospital, Cardiff, held this week, it was decided to accept the resignation of the three house-surgeons at present in residence. Differences had arisen owing to a recent increase in the salary of the house-physician without similar recognition of the house-surgeons. The house-physician is now paid £40 per annum more than the house-surgeons.

THREE former students at King's College Hospital, who are at present holding important public posts, will be entertained at a dinner at the Waldorf Hotel, Kingsway, on June 16th, when Viscount Hambleden, chairman of the Committee of Management, will preside. The three old students are: Surgeon-General Arthur W. May, C.B., Director-General, Navy Medical Department; Surgeon-General Sir Arthur T. Sloggett, C.B., C.M.G., Director-General, Army Medical Service; and Sir Herbert Smalley, Medical Inspector, H.M. Prisons. Tickets for the dinner (7s. 6d. exclusive of wine) may be obtained from Dr. Silk, 16, Nottingham Place, London, W. The new King's College Hospital at Denmark Hill will be opened for inspection on the same afternoon.

FELLOWS of the Council of the Royal College of Surgeons of England should bear in mind that the usual announcement has been issued by the Secretary, declaring that the election of five Fellows into the Council of the College will be held on Thursday, July 2nd, at 3 p.m. The five vacancies are occasioned by the retirement in rotation of Sir Henry Morris, Bart., Mr. Richardson Cross, and Mr. C. A. Ballance, M.V.O., and by the resignation of Mr. Clement Lucas (on account, we regret to say, of ill health), and Mr. Jonathan Hutchinson. Candidates are required to send in to the Secretary the forms of the usual notice duly filled up, not later than Friday, June 5th. There will be, as is already well known, several candidates. Mr. J. B. Lawford seeks, we understand, to represent ophthalmic surgery in place of Mr. Richardson Cross, and Mr. Thorburn, we are informed, will present himself as representing Manchester. Mr. T. H. Kellock, M.B.Cantab., F.R.C.S., Surgeon to the Middlesex Hospital and to the Hospital for Sick Children, Great Ormond Street, will also seek election.

WHILE attention is again being directed to the perils of London street traffic and discussion centres around some new authority for its control and regulation, it is good to know that by September next one avoidable cause of unnecessary suffering to those injured in streets and public places will have been largely removed. The London County Council ambulance service will then, it is anticipated, be inaugurated. Nine motor ambulances will then be at work promptly removing the victims of street accidents to hospital or to their homes, and the delay, uncertainty, and inefficiency of the old haphazard wheel-litter system will be, none too soon, superseded. Tenders have been accepted by the Council for eight motor ambulances with wheels having detachable rims from Sir W. G. Armstrong, Whitworth and Co., for £544 each, and one from Dennis Brothers for £560. We of course recognize the tentative character of the scheme at length adopted under the Metropolitan Ambulances Act passed in 1909, but the advantages of the new system will speedily lead to its extension over the whole area of the county of London.

MR. C. S. LUDLOW, Ph.D., Anatomist to the Army Medical Museum, has presented to the Surgeon-General of the United States Army a report on disease-bearing mosquitos of North and Central America, the West Indies, and the Philippine Islands. Though interesting in many ways the account is somewhat sketchy, and is, perhaps, hardly full enough for modern requirements. As regards classification, the author follows Mr. Theobald, and gives his table of the division of the Culicidae, the nomenclature adopted by that author also being maintained. Such an arrangement certainly conduces to clearness. It is not quite evident why the author has omitted *Stethomyia nimba* from his list, especially as he includes *S. pallida*, a species named by himself, though like the former it has not been definitely proved to be a malarial carrier. Again, under *Culex fatigans* (pp. 68–70), no mention is made of the fact that it is the chief filarial carrier of the West Indies and many other districts: it is not even stated that it carries *T. bancrofti* at all. The description of *S. fasciata* is also meagre, and this, owing to the extreme importance of the species, is unfortunate. Many of the statements made in the chapters on collecting, dissection, and staining are not the author's own, but are taken from the works of others. Acknowledgement is made, but this tends to lessen the value of the work as a whole.

LEAMINGTON SPA was *en fête* last Saturday, the occasion being the hundredth anniversary of the opening of its Pump Rooms. Though it is the year 1814 that the town regards as the date of its first municipal bid for therapeutic fame, it was already at that time in possession of several long-established bath-houses, and had for many years been well known in the Midlands as a health resort. Indeed, an account of its springs was included by Strect in his treatise on mineral waters in 1740. Still it was no doubt not until 1814 that Leamington was definitely launched as a spa, and not until the early thirties that it became fashionable. At one time and another many medical men of distinction have helped to build up its repute, but the man commonly regarded as the "father" of the spa was Henry Jephson, a foundation member of the British Medical Association. He became popular as a physician while quite a young man, and until his career was suddenly cut short by blindness at the age of 50, he was one of the most successful practitioners in England. He died as recently as 1878, and our obituary notice, which was written by a man who was well acquainted with the facts, credited him with having made for years in succession a professional income exceeding £20,000. In his work he exemplified his belief in the saying that "a man digs his grave with his teeth," and he used Leamington waters freely. The latter belong to the sulphated alkaline class, but some of the springs have recently been shown to contain lithium and an excessively rare constituent of natural mineral waters, namely, titanic acid. The British Medical Association held its annual meeting at this spa in 1865, and has been indebted to it for hospitality on several later occasions. The guests of the town last week included the Balneological and Climatological Section of the Royal Society of Medicine.

IN his second Chadwick public lecture on altitude and health delivered at the Royal Society of Medicine, Professor F. F. Roget said that experiments on animals showed the adaptability of animal life to altitude and the quickening of vitality caused by an ascent into higher regions. But to visit a high altitude was not the same thing, and had not the same effect as constantly living at such an altitude. At a high altitude, after a residence of some weeks, a notable increase occurred in the number of red corpuscles. The transition from an ordinary altitude to a higher one acted as a spur to the whole organic system, but the ascent to very high altitudes imposed such a strain upon the system that the chemical result was frequently to induce lactic intoxication, anaemia of the brain, and irregularities in innervation. Winter sports obviated the confinement which was the main characteristic of winter life for most people in this country, but Professor Roget laid great stress upon the evils which attended the overcrowding of many Alpine resorts. He complained that people destroyed the good effects of pure air, keen frost, and perpetual sunshine by converging upon a few fashionable spots and packing themselves together in unwholesome luxury, in open defiance of every consideration of health, often bringing with them the germs of disease, which they sowed broadcast amongst their neighbours. In his third lecture Professor Roget discussed the part played by mountain air in the cure of disease. Light, he said, was the most characteristic feature of altitude, more characteristic than cold or pure air. The ancients of

the Mediterranean basin were genuine sun-worshippers as far as the health of their bodies was concerned, and set aside open spaces within their houses where they could indulge in what were now called sun-baths. Unfortunately knowledge of the physiological effects of sunlight was still very scanty. There seemed reason to believe, however, that in some forms of surgical tuberculosis sunshine might obviate the necessity for operation. Professor Roget then described the beneficial effects of heliotherapeutic treatment upon tuberculous children, his remarks being illustrated by photographs on the epidiascope of patients undergoing treatment in various Alpine resorts.

THE hospital for cripples at Alton has only been some five years in existence, but it is already proposed to enlarge it. The reasons for doing so were indicated by Mr John Morgan, Dr. Gauvain, and others at a festival dinner on May 13th. The results obtained at the institution have been so excellent that it should be possible to spread its benefits over a larger number of children. The number of beds—222—is already considerable, but since no child is discharged until it is certain that no further treatment is likely to be of any benefit, the number of cases with which the institution can deal in any given year is comparatively small. It does not seem likely that there will be any material difficulty in securing the amount required, for Sir William Treloar, to whose enterprise the place owes its birth, is a very able exponent of its claims, and the basic idea of this particular hospital is one which strongly appeals to very many people. One of them is Mr. Arthur Balfour, who took the chair at the festival dinner, and besides pleading very warmly the cause of the Lord Mayor Treloar Cripples Hospital and College, had some thoughtful observations to make on the value of hospitals in general. It was, he thought, threefold. Primarily it was their patients that benefited, but the general public benefited not less, since the hospitals acted as training schools for private medical practitioners and others. Their third great function was to serve as centres of clinical research, and their value in the latter connexion could not be over-emphasized by those who desired to foster social progress.

THE annual meeting of the Asylum Workers' Association was held under the presidency of Sir John Jardine, K.C.I.E., M.P., at the house of the Medical Society of London, on May 20th. Amongst those present were the Right Hon. Robert Farquharson, M.D., Mr. Duncan Millar, M.P., Dr. Hubert Bond (Commissioner in Lunacy), Drs. Fletcher Beach, David Bower, J. Francis Dixon, J. F. Powell, W. J. Seward, and many asylum matrons, officers, attendants, and nurses. The report, presented by the honorary secretary (Dr. G. E. Shuttleworth), showed a membership of 3,772, a diminution of 538 since last year, but the credit balance at the end of 1913 was satisfactory, amounting to £123 6s. 11d. The adoption of the report was moved by Sir John Jardine, who expressed regret at the loss of members, in view of the objects remaining to be accomplished by the association, which in the past had secured for asylum workers the benefit of assured pensions, and now sought to obtain by an amending bill improved conditions of superannuation. He referred to the continued activity of the Central Executive Committee in projects for the amelioration of the status of asylum nurses and attendants, not only from the material, but from the moral and educational aspects. Dr. Hubert Bond, in seconding, emphasized the value of training in asylum work, and the usefulness of an association which was a bond of union between all engaged in the responsible task of caring for the insane, from the highest to the lowest. He thought that the present falling off in numbers, which he hoped was only temporary, was in large measure due to the ignorance of newcomers of what the association had accomplished in the past for the benefit of the service; such an association seemed indispensable in the interests alike of the insane and of those to whose care they were committed. Mr. Morgan bore personal testimony to the interest asylum doctors took in the training and increased comfort of their staffs. The report was unanimously adopted, and Mr. Duncan Millar then moved the re-election of Sir John Jardine as president for the ensuing year, referring to his valuable services in Parliament in the interests of asylum workers, and to the actual benefits obtained for Scottish tradesmen attendants. Dr. Finegan, representing the Irish division, seconded the motion, which was carried enthusiastically. The election of vice-presidents, central executive committee, and executive officers followed, and alterations in the rules were sanctioned, making eligible for membership those engaged in the care of the mentally deficient, as well as of the insane.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

F. G. W. writes: In giving arsenic and iron hypodermically, how often is an ordinary dose thus administered?

NEURALGIA.

E. S. G. asks for advice in the treatment of a man suffering from neuralgia of the lower jaw. The ordinary remedies have failed, and the patient fears an operation may cause paralysis of his face.

INCOME TAX.

I. T., who provides his assistant with board and lodging, in addition to paying him a salary, inquires whether the cost of the former can be deducted in making his income-tax return.

*** The tax is to be computed on the full amount "of the balance of the profits of the profession," and there can be, we believe, no doubt, that the cost of the board and lodging of an assistant is a legitimate deduction for the purpose of arriving at this "balance." In estimating the value of the "lodging," however, our correspondent should bear in mind that a portion of the total rent of the premises has in all probability already been deducted by him as being paid for the consulting room, etc.

F. J. W. inquires whether annual instalments paid by an incoming partner should be returned for assessment.

*** Where the purchase price of the incoming partner's share has been fixed, the fact that the payment is being made by instalments does not affect the capital nature of the transaction. Consequently the amounts should not be returned for assessment—and on the other hand they cannot be treated as deductible expenses by the partner by whom the payments are made.

ANSWERS.

DR. D. C. LLOYD OWEN (Birmingham) writes: In answer to "An Expatriated Member," *The Physician's Interpreter in Four Languages*, by M. von. V. (Philadelphia: F. A. Davis) is exceedingly good. It is specially arranged for diagnosis.

LETTERS, NOTES, ETC.

A NOTE OF WARNING.

FROM a communication we have received we are led to suggest that should any medical man receive a visit from a person described as dusky in complexion, and aged about 65, it would be well to verify his story before advancing any money.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

THE PROPHYLACTIC USE OF SENSITIZED BACTERIAL VACCINES IN PUERPERAL SEPSIS.

By SYDNEY T. CHAMPTALOUP, M.B., Ch.B., B.Sc.(P.H.)Ed.,

PROFESSOR OF PUBLIC HEALTH AND BACTERIOLOGY, OTAGO UNIVERSITY, NEW ZEALAND; BACTERIOLOGIST, NEW ZEALAND GOVERNMENT HEALTH DEPARTMENT.

ARNOLD LEA[1] mentions three main factors which must be observed to secure a further diminution in puerperal infection and mortality. These are:

1. Complete disinfection on the part of those attending the lying-in woman.
2. The efficient disinfection of the external parts during labour, and the maintenance of cleanliness during the first ten days after delivery.
3. The limitation of examination, and the avoidance of operative interference as far as possible.

Several cases of puerperal sepsis which have recently been brought to my notice, and in which all these precautions were faithfully observed, have led me to investigate the subject with a view to prophylactic treatment.

Bacteria of Female Genital Canal during Normal Pregnancy.

A great deal of research has been devoted to the study of the bacterial flora of the female genital canal during pregnancy, and many contradictory reports have been published. It is well known that the vulva and vagina, and even the urethra, may contain a very varied flora during normal pregnancy, but in the main, research has been devoted to the detection of organisms which may be capable of producing infection. It is obvious that if such are present, there are considerable possibilities for infection of the uterus during or shortly after labour. The pyogenic organisms usually found singly or in combination are various streptococci, staphylococci, and the *Bacillus coli*, and these are accompanied by a varying number of saprophytic bacteria.

The streptococcal group is probably one around which the most divergent opinions arise, and while some workers report the presence of streptococci in 10 to 30 per cent. of cases, others, including Kronig[2] and Whitridge Williams,[3] assert that if sufficient precautions are taken, no pyogenic organisms, excepting occasionally the gonococcus, will be found in the vagina during pregnancy. Kronig[2] has, however, in a later paper, demonstrated the presence of streptococci in 20 per cent. of cases.

It is, I think, now generally accepted that the divergent results hitherto obtained were due to the methods employed, and that by the use of suitable culture media, streptococci can be detected in the vagina in a considerable proportion of pregnant women. A study of several of our recent cases supports this view, for it seems impossible otherwise to explain the streptococcal infection from which they suffered.

The lower part of the cervical canal may contain organisms, but these do not appear to be able to penetrate the protective zone of the cervical secretion during pregnancy. The cavity of the uterus is sterile during normal pregnancy.

We thus see that even in a normal pregnancy there lie serious possibilities in the lower genital canal, and it is these possibilities, and the accidents which happen from time to time, that have led me to bring forward the following suggestions.

Bacteriology of the Genital Tract during Normal Puerperium.

The lochial discharge was formerly believed to be sterile in the early days of the puerperium. According to Lea[1] organisms frequently ascend into the uterine cavity after the first forty-eight hours, and from the fourth to the ninth day are present in considerable numbers. The organisms are mainly the saprophytic bacteria of the vagina, but very frequently organisms indistinguishable from those causing wound infection are also present, and these include streptococci. Lea further states that with the technique usually employed it is impossible to avoid contact with the secretion in the lower part of the cervical canal, and that the cavity of the uterus itself is sterile in a greater proportion of cases than would appear from the published reports.

Sidebotham and Lea[1] investigated fifty-eight cases, and found pyogenic organisms in the early days after delivery in the uterus in 80 per cent. of cases, but of these 90 per cent. were uninfluenced by the organisms. These results have been questioned by Western,[4] who quotes from a paper by Foulerton and Bonney,[5] who, with the technique they employed, found that the uterus was sterile in 100 per cent. of normal puerperia; but they examined only twelve cases. Western points out that the technique employed by Lea and Sidebotham is open to objection, while that of Foulerton and Bonney (described later) is more likely to give accurate results.

Bacteriology of the Uterus in Puerperal Sepsis.

Here we are in a difficulty as to what is to be termed a case of puerperal septicaemia. If we take the term to mean an infection of the blood stream, then it would be necessary to take blood cultures before notifying a case correctly. The standard suggested by the British Medical Association Committee appointed in 1905 to consider puerperal morbidity, includes all cases in which the temperature reaches 100° F. on any two of the bi-daily readings, from one to eight days after delivery, but several obstetricians with whom I have discussed the question consider this standard too low.

While there are differences of opinion as to the bacterial content of the normal uterus after delivery, most are agreed as to the bacteriology of the uterus in puerperal infection. We have seen that in normal conditions the vagina may contain streptococci and other pyogenic organisms, and the risk of one or more of these gaining access to the recently evacuated uterus is not inconsiderable.

Of the accredited organisms of puerperal infection the streptococcus is present in by far the greatest number of cases. Other organisms commonly though less frequently present, either alone or in combination, are staphylococci, gonococci, *B. coli*, and diphtheroid bacilli.

Since we began using sensitized streptococcal vaccines in these cases, early in 1913, we have investigated fourteen cases. In twelve of these streptococci were found in intrauterine swabs or blood cultures, in two cases associated with the *Staphylococcus aureus*, in one with the *B. coli*. In two cases only was the streptococcus not found, thus making a percentage of 85.7 of cases in which streptococci were isolated either from the blood or from intrauterine cultures.

The findings in our small series of cases agree with others, thus—Schottmüller[6] found streptococci, *B. coli*, and *Staphylococcus aureus* in that order; Jordan[7] found streptococci and *B. coli* most frequently. Foulerton and Bonney[5] investigated forty cases of severe puerperal infection, and found streptococci or Gram-positive diplococci in 77.5 per cent.; and Western[4] in forty-three cases found streptococci in 80 per cent. of cases.

Laboratory Diagnosis and Technique employed in Our Cases.

After trying various devices for taking intrauterine cultures, we prefer the method described by Foulerton and Bonney, and quoted by Western.[4] In New Zealand only a few cases come into hospital, and frequently the swab has to be taken by a practitioner in a remote country district. It is because it is applicable to the needs of the general practitioner that we find Foulerton and Bonney's method so advantageous.

The Swab.

The swab as we use it consists of a glass tube of about 4 mm. internal diameter, which is slightly bent about 5 in. from the "uterine end." In this tube is placed a wire swab with the handle end projecting for 6 in. A mark is made on the wire handle, when the swab end is just within the "uterine end" of the glass tube, and another 2 in. further away, so that the practitioner knows just how much of the swab end is projecting beyond the glass tube when in the uterus. The uterine end of the glass tube is lightly plugged with cotton-wool, to which a string is attached. The whole swab is placed in a wide

*Read before the Section of Public Health and State Medicine, Australasian Medical Congress, Tenth Session, held at Auckland, February, 1914.

bore test tube plugged with cotton-wool and sterilized in the autoclave, so as not to char the cotton-wool plug, or the string attached to it. After sterilization the glass tube is momentarily removed from the test tube, and its uterine end just dipped in sterile molten paraffin, which, when cool, forms an impervious cap.

The instructions issued with the swab outfit leave the question of preliminary douching of the vagina open, unless it can be carried out under hospital conditions. The uterus should be drawn down with forceps and the os exposed to view. After cleaning the os with sterile gauze, the swab is passed till the end reaches the fundus. It is then withdrawn an inch and traction applied to the string, which pulls away the paraffined cotton-wool cap. The swab is carefully pushed out of the glass tube by means of its projecting outer end, and the interior of the uterus well swabbed.

The swab is then drawn well into the glass tube, and the whole apparatus replaced in the sterile test tube in which it is sent out. If in town the swab outfit is carried vertically to the laboratory, and if in the country it is sent to town by "express delivery," so that we get it shortly after the arrival of the train.

The extra trouble involved in taking the intrauterine swab in this way is well repaid by the ease with which the laboratory investigation is carried out as compared with swabs as we previously received them, contaminated by vaginal bacteria. Where vaccine therapy is indicated the saving of time is invaluable, for it has been our good fortune to secure practically pure cultures by this means, not only in the series of cases which are here recorded, but in all cases which have been investigated since adopting this method some years ago.

Blood Cultures.

It has been possible to take blood cultures only from those cases to which we could gain access, such as hospital and town patients; of the 7 cases in which this was possible, 4 gave positive results. No. 11 is interesting in that a streptococcus and *B. coli* were recovered in intrauterine cultures, and the same organisms were present in the blood. This was a severe case admitted into hospital late in the disease, with several rigors daily.

Necessity for Earlier Laboratory Investigation.

One of the duties of a Public Health Department, if it intends to deal with puerperal sepsis, is to impress on practitioners the necessity for earlier laboratory investigation. Along with this must be adequate provision for diagnosis and for supply of the necessary vaccines or serums. Too often the laboratory and the vaccine are left as a last resort, and the vaccine used when it is almost impossible for good results to attend its administration. Every worker can testify to the gratifying results from the application of laboratory treatment as an adjunct to routine treatment when applied within the first two or three days of a septic case.

Serum Therapy and Commercial Imported Serums.

We have seldom seen any benefit arise from the use of commercial polyvalent antistreptococcal serum in puerperal sepsis, or, in fact, in streptococcal infections generally. Were freshly prepared serums available one might not be so pessimistic, but a serum as imported to New Zealand is from six months to a year old; it has passed through the heat of the tropics, and has been stored in warehouses without any special precautions before we receive it. For this and other reasons we have practically abandoned its use in streptococcal infections.

Our experience, and I believe it is the experience of many others, with freshly prepared antistreptococcal serum is not encouraging. One case in particular—of streptococcal endocarditis, with repeated positive blood cultures—responded but poorly to an auto-serum which we prepared from a horse, but gave excellent results with a vaccine sensitized by the same serum.

The Therapeutic Use of Vaccines, Sensitized by the Patient's Serum, in Puerperal Sepsis.

The treatment of puerperal sepsis by ordinary bacterial vaccines has been the subject of several excellent papers, and I intend to confine my remarks to the use of sensitized vaccines in this condition. The indiscriminate use of vaccines for all and sundry conditions cannot be too strongly condemned, and our practice is to weigh each case on its merits, after consultation with the practitioner in attendance. The advantages of the sensitized vaccine over the ordinary vaccine have been emphasized quite recently in papers by Broughton-Alcock[8] and Gordon.[9] Hitherto the treatment of cases of septicaemia by vaccines has been attended by some risk, and by not altogether satisfactory results, although Western claims to have reduced the mortality of notified cases of puerperal sepsis from 60 per cent. to 30 per cent. by the use of ordinary vaccines. By substituting the sensitized vaccine a safer and more rapid immunization is secured. Not only is the reaction to injection almost if not quite eliminated, but the response to treatment more rapid, provided, of course, that sensitization is complete.

Besredka and his pupils now use living sensitized vaccines, but Gordon[9] is more cautious, and kills his cultures, a practice which we have deemed it wise not to depart from. The preparation of the sensitized vaccine is more tedious than is the case with the ordinary vaccine, and it deteriorates more rapidly, so that where stock sensitized vaccines are used, they must be made up at frequent intervals and kept in as high a concentration as possible.

Preparation of the Vaccine.

Where a supply of fresh polyvalent antiserum is always available, stock vaccines can be sensitized and kept ready for use, or an autogenous vaccine may be sensitized. In New Zealand it takes several months, with our limited supply of clinical material, to collect sufficient strains of streptococci from which to prepare a satisfactory polyvalent serum. We first sensitized our streptococcal vaccines with an antistreptococcic serum prepared from a horse for a case of endocarditis, but as this was prepared from the patient's own streptococcus (an anaërobic variety) with only twelve other strains, the serum did not always sensitize satisfactorily. We confined our attention to streptococcal infections in the first place, but have recently extended the method to include other infections, using the patient's serum for sensitization.

Method.—The bacterial emulsion is heated to 56° C. for ten minutes in the water-bath, and then 5 c.cm. mixed with 1.5 to 2 c.cm. of patient's serum, as soon as possible after the necessary blood (4 c.cm.) is withdrawn. The mixture is placed in the incubator at 37° C. for twelve hours, and then kept on ice for twelve hours, before being washed and standardized to 2,000 million organisms per c.cm. This emulsion is kept in the ice-chest, and diluted to suitable doses shortly before use.

This method was adopted with the streptococcal cases in our series with fairly satisfactory results. The principal objection lies in the fact that we have seldom found sensitization complete, while some cases seem to form very little antibody in response to infection. Although the sensitization is not usually complete, we have found that a case of streptococcal puerperal septicaemia of moderate severity can be given an initial dose of 100 million auto-vaccine, and this dose doubled in forty-eight hours, and this again in another forty-eight hours, without more than a slight reaction, and with beneficial results to the patient. We have not been able to exceed an average dose of 500 million streptococci without reaction in this class of case, although in other conditions doses of 2,000 million can be borne with comfort.

Allen[10] mentions the possibility of sensitizing vaccines with the patient's serum, and briefly refers to several cases he has treated. It is a method to which an extended trial might well be given by those with sufficient clinical material at their disposal. We should prefer a good polyvalent antiserum where this is procurable, but, failing this, the substitute offers considerable advantages over ordinary vaccines. We have used it in a number of infections due to *B. coli*, and in pyorrhoea and chronic bronchitis, with encouraging results. One long-standing case of the latter, which failed to respond to ordinary vaccines, cleared up completely, and has remained well for six months, with an auto-sensitized vaccine.

All the cases in which this method has been exhibited agreed in the absence of reaction until large doses were reached.

Prophylactic Use of Sensitized Streptococcal Vaccines in Midwifery Practice.

We were first led to try the effect of streptococcal vaccines with the patient's own serum in a small outbreak of five cases of puerperal sepsis in a nursing home. The first case of the series was a carefully conducted and easy confinement in a well-to-do multipara. As far as can be

No.	Infecting Organism.	Blood Culture.	Intrauterine Swab.	Specific Treatment commenced after Delivery.	Rigors.	Results and Remarks.
1	Gonococcus (diphtheroid bacillus)	Negative		Six weeks	0	Auto-vaccine. Recovery, relapse. Vaccine repeated. Recovery.
2	*Staphylococcus aureus* and diphtheroid bacillus	Not examined	+	Third day	+	Temperature gradually fell from receipt of vaccine. Recovery.
3	Streptococcus (actively haemolytic)	Not examined	+	Two weeks	+	Temporary improvement with auto-sensitized vaccine. Pelvic abscess developed. Death.
4	Streptococcus (haemolytic); *Staphylococcus aureus*	Not examined	+	Sixth day	+ +	Cure completed with auto-sensitized streptococcus vaccine and auto-staphylococcus. Recovery.
5	Streptococcus (haemolytic); same as 4	Negative	+	Twelfth day	+ +	Rigors frequent. Marked reaction to auto-sensitized vaccine. Vaccine stopped. Slow recovery.
6	Streptococcus (haemolytic); same as 4 and 5	Negative	+	Twelfth day	+	Marked reaction auto-sensitized vaccine. Improvement with stock sensitized vaccine. Recovery.
7	Streptococcus; (haemolytic); same as 4, 5, and 6	Not examined	+	First day	+ Six hours after delivery	Sensitized vaccine from No. 4 used. Immediate improvement. Recovery.
8	Streptococcus (haemolytic); same as 4, 5, 6, and 7	Not examined	+	First day	+	Sensitized vaccine from No. 4. Immediate improvement. Recovery.
9 and 10	Streptococcus (haemolytic)	+	+	Two weeks	+ +	Both hospital cases. Admitted severely ill, with frequent rigors. Auto-sensitized vaccines without reaction to big doses, but temporary improvement only. Both cases died.
	Streptococcus (haemolytic)	+	+	Ten days	+ +	
11	Streptococcus (slightly haemolytic); *B. coli*	+ Both present	+ Both present	Eight days	+ + +	Tear into rectum. No sphincter control. Temperature 104–106°, and three or more rigors daily on admission to hospital. Double auto-sensitized vaccine. Rigors fell to one daily, and temperature lowered. This good effect lasted several days. Relapse. Death.
12	Streptococcus (not haemolytic); *Staphylococcus aureus*	+ *Staphylococcus aureus* only	+ Both organisms	Three days	+	Stock sensitized vaccines followed by auto-sensitized streptococcus and auto-staphylococcus. Attack cut short. Recovery.
13	Streptococcus (slight haemolysis)	Negative	+	Three weeks	+	Phlebitis both lower limbs. Auto-sensitized vaccine. Recovery.
14	Streptococcus (haemolytic)	Not done	+	After three months, abortion seven days	+	Auto-sensitized vaccine prepared. Temperature lower after intrauterine douches. Pneumonia threatened. Recovered spontaneously. Vaccine not required.

Streptococcal incidence, 85.7 per cent. + = positive. + + or + + + = rigors daily or several rigors daily.

ascertained, no vaginal examination was necessary or made. On the sixth day the temperature rose to 104° to 105° F., and this continued for several days, accompanied by severe rigors. Blood cultures taken at the highest point of the temperature were negative, but an intrauterine swab showed numerous streptococci and a few colonies of *Staphylococcus aureus*.

A stock sensitized streptococcal vaccine was given until an autogenous vaccine was sensitized against the patient's serum. Doses of 100, 200, and 400 million of this latter were given at forty-eight hour intervals, and the temperature dropped to 99° to 101° F. A further dose of 500 million auto-vaccine caused a rise of temperature to 105°, and the patient lost the ground she had gained. Smaller doses of the vaccine (300 million) were then combined with doses of 100 and 250 million of an autogenous vaccine of the *Staphylococcus aureus* isolated, when the temperature fell to normal, and the patient made a good recovery.

Four other cases that were in the home awaiting confinement contracted the infection, although extra precautions were taken. Two of these cases reacted sharply to doses of 200 million of vaccines sensitized against their own serum, but a stock sensitized streptococcal vaccine was well borne. Both cases ran a protracted course, but eventually recovered.

The remaining two cases due at this time were confined with every care, but the auto-sensitized vaccine prepared for the previous patients was held in readiness. Both cases developed temperatures of 103° to 104° soon after confinement, and the vaccine was immediately given (100 million). The effect in both cases was most marked: the temperature dropped within six hours, and remained at normal, while further doses of 200 and 400 million were given as a precaution. The practitioner was so struck with the immediate improvement in these two cases that all the cases in the home were given prophylactic doses, and no further infection occurred.

Uterine swabs in all five cases gave apparently the same streptococcus, resembling the *Streptococcus pyogenes*, with the exception that lactose was not fermented.

The marked improvement in these two latter cases and the cessation of further cases in the home suggested the value of prophylactic treatment, and it is for this reason that I have brought the matter forward. I realize that the indiscriminate use of vaccines in maternity practice would not be advisable, but I suggest that in certain circumstances this course would not only be beneficial but a duty.

My suggestions are as follows:

1. In view of the fact that the Health Department already issues antityphoid vaccine to hospitals and the profession, through one of its laboratories, and that diphtheria antitoxin is supplied by certain hospital boards free for indigent patients, the department should extend the scope of this branch of preventive medicine, and issue sensitized streptococcal vaccines for prophylactic use in maternity practice. The vaccines could be prepared at one of the department's laboratories, and distributed by the district health officers to the hospital boards in their districts.

2. In view of the fact that 80 per cent. of cases of puerperal sepsis are due to streptococci, it would be well to use a stock sensitized polyvalent streptococcal vaccine as a prophylactic, in the face of an epidemic of puerperal infection, such as is sometimes witnessed in an institution, or in private practice where the house surroundings are not of the best, or where the practitioner has already recently attended a case which has gone septic.

3. That doses of 100, 250, and 500 million of this vaccine be given the expectant mother at forty-eight hour

intervals, ten to fourteen days before the expected date of confinement.

The sensitized vaccine is preferable to the ordinary vaccine because of the absence of reaction and the more rapid immunization.

Appended is a table showing particulars of the cases in this series treated to date. The inclusion of Cases 9, 10, 11, which were all severely ill on admission to hospital, has lowered the recovery-rate in the small series of cases available during the last year.

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TREATMENT OF A UTERINE ABSCESS BY SENSITIZED BACILLI PROTEI.

BY

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THE following case is of interest pathologically since a localized uterine abscess due to the *Bacillus proteus* is comparatively rare, and therapeutically on account of the excellent results which followed use of the double method of applying autogenous bacilli in treatment.

The patient was a married woman aged 55 who complained of a long-continued vaginal discharge of pus. Three years previously she had undergone subtotal hysterectomy for fibroma, an umbilical hernia being replaced at the same time. For six months subsequent to this operation the patient had trouble with her bladder, and then became subject to a vaginal discharge. This was found to be due to escape of pus from the cervix, and though active measures, such as dilatation of the cervix and its washing out and drainage, were long carried out in a hospital, the discharge never ceased.

On November 12th, 1913, the patient presented herself for treatment in Dr. Darier's service at the St. Louis Hospital, and on examination the vagina was found to be full of yellowish, thick, tenacious pus, without marked smell; it was seen to be exuding from the cervix, and a probe passed into the latter led into an abscess cavity a little under 1½ in. in diameter. Some pus withdrawn from this cavity was submitted after microscopic examination to culture, and colonies of pure *B. proteus* resulted.

It was decided to treat the case by the double method described by me at the International Congress in London, 1913, and in order not to obscure the results, to prescribe nothing except prolonged daily vaginal douches. The first part of the treatment consisted in giving, at intervals of three or four days, seven injections of a culture of the bacilli derived from the pus; the doses gradually increased in amount, the first being equal to 100 million bacilli, and the last to 2,000 million. The bacilli were heated to 60° C. for an hour before administration. A very slight local and general reaction followed each injection.

On the eighth day after the last injection of these dead bacilli 20 c.cm. of blood was taken from the patient and used for the preparation of an autogenous vaccine consisting of living bacilli, sensitized by contact with the serum of the patient's blood, which was rich in amboceptor and specific agglutinating properties. At this date a vaginal examination was again made, and the abscess found to be still secreting, though in lessened quantity, pus containing the *B. proteus* in pure culture.

On the tenth day after the last injection of dead bacilli injection of the sensitized autogenous vaccine was commenced, one injection being given weekly for four weeks, and the dose increased from 400 million at the beginning to 1,000 million at the end. Again very slight reactions followed the injections. At the same time the abscess cavity was washed out with a dilute antiseptic solution.

By the time the fourth injection had been given the discharge of pus had entirely ceased, but to render the cure more secure four further injections were subsequently given. At the date of writing six months have elapsed since the treatment was completed, and the surgeon who originally transferred the case to Dr. Darier's service as being intractable to surgical treatment has admitted it to be cured.

The result in this case falls into line with many other successful cases that I have seen since I first introduced this "double method" of using dead and then living and sensitized micro-organisms in treatment. It is based on the principle of sensitization devised by Professor Besredka, and is most convenient in practice.

EXCISION OF THE BLADDER FOR MALIGNANT DISEASE.

WITH RECORDS OF A CASE OF COMPLETE EXCISION AND SOME CASES OF PARTIAL EXCISION.

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IN operating for the removal of tumours of the bladder, resection of the portion of the bladder wall which is infiltrated by a malignant growth, or complete removal of the bladder, is the only treatment (other than palliative measures) which can be adopted with advantage. Whenever, therefore, a surgeon makes a suprapubic examination of the bladder in cases in which a growth is seen with the cystoscope, or suspected to be present from the symptoms, he must be prepared to excise the portion of the bladder wall on which it is growing if it is infiltrating the wall. The following cases may, therefore, prove of interest to the general surgeon. I will first record them, and then make some remarks on the operative procedure.

CASE I.—*Complete Excision of the Bladder for Extensive Epithelioma.*

I was asked to see H. J. P., aged 59, early in November, 1913, in one of the medical wards of the General Hospital, where he had been for several weeks. He had been passing urine every hour night and day with much difficulty, and with pain either at the end of the penis or above the pubes. There had been a deposit of pus and blood in his urine, and usually an evening rise of temperature to 100°. He said that the first trouble he had with micturition was two years before I saw him, when he had had to have a catheter passed for retention, and that he had had retention several times since, and on one occasion since admission. The history pointed to enlarged prostate with cystitis. A No. 10 soft, bulbous-ended catheter passed easily, and withdrew one ounce. On rectal examination he seemed to have an enormous prostate. I could not reach behind it, but it felt smooth and not very hard. I decided to remove it, after the bladder had been washed out for a short time.

Exploratory Operation.

On March 14th, I opened the bladder above the pubes, and found almost the entire wall infiltrated by an ulcerating growth. Only a narrow strip of healthy bladder wall remained on the left lateral wall and the left side of the base. The cavity of the bladder was much reduced in size by the growth, which was of considerable thickness. It was evident that it was the malignant infiltration of its wall at the base which I had mistaken for an enlarged prostate. Clearly the only radical operation that could be done was complete excision. A large drainage tube was left in the bladder. The risk of complete excision was explained to the patient, and the need for a preliminary operation to establish urinary fistulae, and he wished that the excision should be undertaken.

Ureterostomy.

The bladder was kept empty by means of Cathcart's apparatus and washed out daily, and pyrexia ceased. On March 28th I brought both ureters out on the loin and fixed them to the skin. I made the usual loin incision to reach the kidney, and divided the ureters as low down as I could; I tied the distal ends with catgut and brought the proximal ends out on to the loin. Into the divided end of each ureter I passed a No. 1 bulbous-ended catheter, and tied the end of the ureter on to the

catheter as the colon is tied on to a Paul's tube. The end of the ureter, with the catheter tied in it, was then sewn to the angle of the skin wound and the wound closed by deep catgut and skin stitches. On the right side I found the kidney hydronephrotic and the ureter greatly dilated. On the left side both kidney and ureter were normal. There was no shock after the bilateral operations. The urine was conveyed from each ureter by a rubber tube, fixed on the end of the catheter tied in the ureter, to a bottle for some days after the operation, so that no leakage of urine occurred into the dressing. The wounds healed satisfactorily.

For some time after the ureterostomy there was only occasionally secretion of a little watery urine from the right kidney, but after a time it was discharged freely. The left kidney secreted healthy urine in considerable quantity from the time of the operation. The condition of the bladder remained very foul in spite of washing out and the introduction of boroglyceride, but he had very little pyrexia, took his food well, and seemed comfortable.

Excision of the Bladder

On April 15th I operated for removal of the bladder. The bladder was packed with iodoform gauze through the suprapubic drainage tube opening, and pure carbolic acid was applied to the granulations around the opening. The skin of the abdomen was then cleaned, and lint soaked in 1 in 20 carbolic applied to it while the perineal part of the operation was performed. The patient was placed in the lithotomy position and a curved incision made with its centre at the central part of the perineum. This incision was deepened until I could get my finger between the prostate and the rectum, and I separated them. He was then placed in the Trendelenburg position, and an incision was made around the opening in the bladder through the skin and surrounding rectus muscle, and the separated skin edges were then sewn together, so as to cover over the bladder opening and exclude the cavity of the septic bladder from the area of the operation. The abdomen was then opened by carrying the incision upwards in the middle line to 1 in. above the umbilicus. No enlarged glands were discovered nor any secondary growth elsewhere in the abdomen.

The bladder, infiltrated by growth, formed a large hard mass which was almost fixed to the pelvic wall in front and at the sides, but just the slightest amount of movement could be obtained. A large boss of growth protruded from the posterior wall of the bladder, and the peritoneum covering it was puckered. The pelvic colon passing down behind the bladder was so distended that it was a good deal in the way, but there did not seem to be any mechanical obstruction. All the small intestines were, of course, packed away in the upper abdomen. The bladder seemed so fixed to the symphysis that I first tried separation there, and as I succeeded, I proceeded to divide the peritoneum covering the posterior surface about half an inch from its reflection on the bladder, and left it on its posterior surface. A section of the bladder wall after its removal showed that this was essential, as the growth had extended to it, though it had not involved its abdominal surface. I then tied off many strands of tissue passing between the bladder and the pelvic wall, just as is done in separating the rectum in the abdomino-pelvic operation of excision, but there was very little room to work in, the infiltrated bladder was so close to the pelvic wall. I was able to drag down the lower portions of the ureters, after separating the tissue along their course with my finger, but it was not easy. Probably adhesion had formed at the divided upper end. I divided the urethra by extra long scissors slightly curved on the flat. After all the other connexions of the bladder had been divided it was still tethered by a very thick strand of tissue passing on each side of the rectum to the lateral wall of the pelvis. These were clamped with curved forceps and divided.

The whole area from which the bladder had been excised was packed with iodoform gauze before the patient was lowered from the Trendelenburg position: the temporary abdominal packing was removed and the intestines thus allowed to return to the pelvis. The gap in the peritoneum was much too large to close by sutures, but when the upper three-quarters of the abdominal incision had been closed the gap was considerably reduced in size, so that the distended pelvic colon almost covered the whole of it. Through the gap the mass of the iodoform gauze packing came in contact with the pelvic colon and a small area of small intestine. A drainage tube was placed in the perineal wound. There was not much haemorrhage during the operation as all strands of tissue passing to the bladder were clamped before division; his pulse was 120 and fairly strong at the end.

Description of Parts Removed.

Examination of the excised bladder showed that only a strip of the wall about an inch wide on the left side was free from growth. All the rest of the bladder wall was occupied by firm white growth, which in some parts was an inch thick. Microscopic sections showed the growth to be epithelioma. The surface was very sloughy. Two enlarged glands were removed with the bladder from the pelvic wall, but these on microscopic examination did not show any growth.

After-History.

No serious symptoms followed the operation. The gauze packing was removed on the fifth day and a drainage tube put in. Suppuration occurred in the space from which the gauze was removed, and discharge continued both from the suprapubic and perineal drainage tubes. He was confined to bed for five weeks after the operation, but kept free from any marked degree of pyrexia. Rubber bags with pneumatic rings were made to collect the urine from the opening of each ureter, and the urine was conveyed from these by rubber tubes to a rubber receptacle suspended on him beneath his clothing. With this apparatus in use he insisted on returning home on June 9th, but there was still a purulent discharge from the perineal opening, through a drainage tube which passed right through from the suprapubic sinus to the perineal one. I did not see him again until December 1st. There was then still a purulent discharge from behind the pubes, but there was no sign of recurrence of growth on examination in the hypogastrium or by the rectum. His condition seemed fairly good, and he was tolerably comfortable. He came into the hospital for a few days and had a new belt made to keep the bags with pneumatic rings against the openings of the ureters, and to support the scars. A few days after he returned home melaena came on, and although a medical practitioner was called in, it could not be checked, and very quickly proved fatal.

CASE II.—*Resection of Part of the Bladder through the Peritoneal Cavity for Epithelioma.*

J. S., aged 50, was sent to me in April, 1912, by Dr. Cotton, with a history that for two months he had had pain at the end of the penis with micturition and the passage of "spots" of blood with the urine. At first these symptoms occurred every few days only, but by the time I saw him they accompanied each act of micturition. The urine came clear at first, and then at the end of micturition some blood dropped away. Only on two occasions had the urine been coloured by blood throughout the whole act of micturition—once on March 5th and once on the day I saw him (April 5th). He passed urine about every three-quarters of an hour by day, and three or four times at night. I saw the urine he had passed before he came to see me that morning, and it contained a considerable quantity of blood, but urine passed before me did not contain any. No pus or crystals were present with the blood in the earlier specimen. He had no difficulty in passing urine, but had pain at the end of the penis as he finished.

Condition on Admission.

He was admitted to the General Hospital on April 17th. Up to the time of admission he continued to pass a little blood at the end of micturition, but a specimen I examined after admission was quite clear and free from blood. He passed at times little fragments of white tissue, about the size of pin heads. These, when examined with a magnifying glass, did not look like portions of papilloma, but when stained and examined under the microscope were seen to contain epithelial cells. On the 19th I endeavoured to get a view of the bladder with the cystoscope. It gave him so much pain that I made another attempt under spinal anaesthesia, but the fluid injected into the bladder was so tinted with blood that I could not get a satisfactory view. A rectal examination showed the prostate to be slightly enlarged, but there was no evidence of infiltration at the base of the bladder. The symptoms and the passage of minute fragments of tissue suggested the presence of vesical growth.

Operation.

On April 23rd I opened the bladder by suprapubic incision, and found a growth the size of a five-shilling piece attached to the junction of the posterior surface and the base just behind the trigone. It was not villous,

but firm with an ulcerated surface, and it evidently involved some depth of the bladder wall. In order to define its exact relation to the ureters, I passed ureteral catheters into each, and I then found that I could excise the portion of the bladder wall on which the tumour was growing with a small margin of healthy bladder wall without injuring them. As it was impossible to tell whether the peritoneum was involved by the growth, or, if not actually involved, was too close to it to be left, I decided to open the peritoneal cavity and remove the whole thickness of the bladder wall. I therefore placed the patient in the Trendelenburg position, and the intestines lying in the pelvis were packed up into the upper abdomen, so as to well expose the peritoneal aspect of the bladder. I then carried the suprapubic incision into the bladder vertically down the posterior aspect, until I was an inch from the growth, and then carried it through the bladder wall round the growth and at the same distance from it, except below it, and there I was unable to allow quite an inch margin of healthy tissue, because of the proximity of the ureters, as shown by means of the ureteral catheters lying in them. During the division of the wall numerous vessels had to be clamped, but in dealing with a growth in the position which this one occupied in the bladder, there was no difficulty in dealing with the haemorrhage. At this stage of the operation the urine was draining away from the kidneys through the ureteral catheters, and none was entering the bladder. A large circular gap was of course left in the posterior wall of the bladder, after the excision of the growth, and this I closed by bringing the edges together with No. 1 40-day catgut, the stitches taking up the whole thickness of the bladder wall. The ureteral catheters were then brought out through the urethra, and the bladder packed with iodoform gauze, which was brought out through the suprapubic opening. A row of sutures were then put in to close as much of the peritoneum as could be brought together from the abdominal aspect; only a gap at the base could not be thus united. After the removal of the temporary abdominal packing some iodoform gauze was packed against the abdominal aspect of the bladder, and the end brought out of the elsewhere sutured abdominal incision. Of course, several changes of gloves and re-sterilization of instruments were required during the operation. His pulse was only 80 at the end, and of good strength.

Description of Growth.

The growth was an epithelioma deeply invading the muscular tissue, but not extending to the peritoneum.

After-History.

The gauze packing was removed from the peritoneal cavity and the bladder on the following day, and a drainage tube was inserted into the peritoneal cavity, so as to lie just against the sutured bladder wall. The urine drained away by the ureteral catheters, which were retained for six days after the operation, and then the urine was drawn away from the bladder through the suprapubic opening by Cathcart's apparatus. No serious symptoms followed the operation. Sixteen days after the operation the suprapubic drainage tube was removed, and he began to pass a little urine through the urethra, and ten days later all the urine was coming that way. The suprapubic wound had healed enough for him to go to the convalescent home early in June, and by the 10th it had closed. I saw him on July 10th. He was then able to hold his urine for an hour and a half, he had no pain with micturition, his urine was clear, and the scar sound.

Dr. Cotton tells me that now (1914), two years after operation, he is quite well and in active work, and has had no recurrence of his former symptoms.

CASE III.—*Partial Excision of Bladder for Malignant Growth.*

G. H., aged 56, was admitted into my ward at the General Hospital on August 14th, 1909, with a history that two months before admission he had passed a small clot at the end of micturition, and continued to pass them until six days before admission, when he began to pass blood-stained urine, and he had continued to do so up to the time of admission. He had also had pain in the suprapubic region, extending to the root of the penis, after micturition at times, but the first symptom was the passing of a small piece of clot two months before admission. He had no difficulty in micturition. I saw him pass urine containing a good deal of bright red blood, which was present throughout the whole act. On standing there was a deposit of pus, as well as blood. On August 17th I tried to pass the cystoscope, but even after attempting to dilate the urethra with Lister's sound, I could not pass the instrument through the anterior urethra, though a No. 8 catheter passed easily. The prostate felt normal, but on pressing down above the pubes a swelling could be made out in what would be the position of an enlarged (so-called) middle prostatic lobe.

Operation.

On August 20th I opened the bladder by the usual suprapubic incision and found a hard round tumour the size of a small hen's egg, with the appearance of old blood clot, growing from the bladder wall just above the urethra. Close to it, on each side, was a firm nodule of growth ½ in. in diameter. There were also two papillomata on the bladder wall, one on the left of the large tumour and the other at the base posterior to the trigone. The one at the base, which was about 1 in. by ½ in. in size, I dissected away with the mucous membrane on which it was growing; the one just to the left of the larger growth I removed on the portion of bladder removed with the larger growth, together with the two minute nodules of growth. In order to resect the bladder wall I carried the incision already made downwards, behind the pubes to half an inch of the growth, and then carried it at this distance from the growth around it. This was a very difficult proceeding in this position; the neck of the bladder was so fixed by the attachment of the urethra under the pubes that it was impossible to get a good view of the parts, so that I had to be guided by touch more than sight, which was, of course, unsatisfactory. The haemorrhage was exceedingly free, and it was most difficult to catch the vessels, so that I had to rely a good deal on sponge pressure. I did not injure either ureter, but cut very near one. The excised portion of bladder contained the roof, but not the floor of the prostatic urethra, and therefore a small part of the prostate. In order to get better access to the region of the bladder growth, in addition to the vertical incision between the recti, I carried an extension of it transversely outwards through the left rectus. I found it impossible to reconstruct the bladder. The attempt to bring the wall together puckered up the base so much as to dangerously interfere with the ureters. I therefore packed the space behind the pubes with iodoform gauze, and put a large drainage tube into the bladder.

He lost so much blood owing to the difficulty in dealing with the bleeding vessels in the bladder wall just behind the pubes that it was necessary to resort to saline infusion at the end of the operation, and several pints were also given by the rectum during the night after the operation.

Description of Growth.

The growth was 1½ by 1¼ in., and was firm and white. The surface after removal presented the same appearance of old clot as it did when in the bladder. Microscopic sections showed it to be a glandular carcinoma, not an epithelioma.

After-History.

He had no serious symptoms after the operation. Cathcart's apparatus was begun the day after the operation, and the gauze packing was removed on the fifth day. I was not myself able to see him again until January, 1910, as I was unable to attend the hospital during that time; but the edges of the suprapubic opening were pared and brought together by the house-surgeon after the removal of the drainage tube. Urine, however, continued to leak from the opening almost up to the time I saw him in January, 1910. There was then no leakage, and he passed his urine without pain or difficulty, almost every hour, but the urine was not quite clear. A hernia had formed through the lower end of the rectus, where it had been transversely divided. In March he had some pain with micturition and pus in his urine, and was readmitted and his bladder washed out. His condition improved, and he was discharged at the end of the month, and when seen again early in April he was free from pain with micturition, but still had a little pus in his urine.

He came to see me again in November, and said he had had recurrence of pain with micturition at times since April, and lately had passed some blood with his urine. He was readmitted for examination, but I found I could not pass a cystoscope into his bladder. His condition again improved with washing out the bladder, but only for a time. He declined any further operation, and I have unfortunately not been able to communicate with him since that time.

CASE IV.—*Partial Resection of the Bladder for Malignant Growth.*

H. J., aged 65, came under my care in the General Hospital in October, 1904, with a history of three months' haematuria. Blood had been present in his urine almost daily and often several times a day. There was also pain at the end of the penis with micturition, and later on it was felt also in the perineum. The haematuria prevented any attempt at cystoscopic examination.

Operation.

On October 12th I opened the bladder by suprapubic incision and found a growth the size of a small orange projecting from the posterior wall near the base. Its attachment to the base was of much smaller extent than its greater diameter, but it could hardly be called pedunculated. It was soft, very friable, and mixed with clot. By making traction on the tumour it could be drawn out through the suprapubic incision into the bladder, inverting the posterior wall, on which it was growing, with it. There seemed to be no induration of the bladder wall at its base, and I was hopeful that I could dissect it off the wall; but, in attempting this, I found it infiltrated the wall, and that I must resect a portion of the wall with it. I was able to do this without opening the peritoneal cavity. The growth was so near the base that some loose fatty tissue lay on the outer aspect of the bladder wall where I resected it. A gap was left in the bladder wall almost the size of an egg-cup, the edges of which were united with catgut so as to completely close it, and the suprapubic wound was also united around a large drainage tube, and after the operation the urine was drawn off by Cathcart's apparatus. The growth was infiltrating the muscle wall, but I have unfortunately no report of its microscopical character.

After-History.

The operation did not cause any marked shock, and he had no serious symptoms after it, and was discharged on November 13th. Almost all the urine was then coming by the urethra, and he had no pain with micturition or haematuria, but in January he had a return of the haematuria, and I found there was recurrence of the growth, but I have no further record of him.

For some cases of very extensive malignant disease of the bladder, such as in Case I, in which complete cystectomy was performed, this operation is the only thing that can be done for the patient. Statistics[1] show that the risk is very great, and the tendency to recurrence of the disease also considerable, so that the experience of the operation up to the present time is not encouraging, but this has been so when extensive operations have first been undertaken for malignant disease elsewhere, and yet after further experience the operative results have much improved. Probably the mortality of complete cystectomy will be reduced if a preliminary operation is performed to establish a bilateral urinary fistula. If a partial resection of bladder wall can be carried out for the removal of a malignant tumour growing on it, and a fairly wide margin of healthy tissue can be removed with the growth, I do not think the organ should be completely removed—though I know that some surgeons have recommended that this should be done—but it seems to be a question whether, if the growth involves both ureters, it would not be better to perform complete cystectomy than partial resection with implantation of the cut ends of both ureters into the bladder wall, though, no doubt, implantation of the cut end of one ureter should be undertaken after partial resection of the wall. But, from the experience which I have had with Case III, I feel sure that if the growth is situated in the region of the trigone or above, but close to, the urethra, it would be better to do a complete cystectomy, for it is most difficult to get sufficiently good access to this part of the bladder either to be certain where to cut so as to be well free of the growth, or to deal with the haemorrhage from the cut wall. The reason of this is that this part of the wall is so tethered under the pubes by the attachment of the urethra.

Last year Mr. Russell Howard described[3] a method of excising a cancerous prostate from a suprapubic incision by dividing the urethra and then dragging the prostatic region of the bladder into a region of good access before removing it. Probably in this way malignant growths in the bladder wall in the region of the urethra could also be removed and complete cystectomy avoided. If I performed this operation I should be inclined to make a preliminary separation of the prostate and rectum through a perineal incision, so as to get the rectum well out of the way before dividing the urethra behind the pubes. In my own case the operation of complete cystectomy was particularly difficult, because the growth was so extensive that the bladder had become very much bound down to the surrounding tissues, but in a case of less extensive growth the operation should not present any serious difficulty. Even with such an extensive growth, rendering the operation exceptionally difficult, there was no serious haemorrhage or shock.

The question how to deal with the ureters requires very careful consideration in the male. In the female it is obviously best to implant them in the vagina, and this can be done with advantage as a preliminary operation to the cystectomy. Implantation into the colon seemed to me to involve too great risk of ascending infection.

In operating in my case I followed the suggestion made by Dr. Francis Watson of Boston some few years ago,[2] and made a urinary fistula on the skin of the loin on each side as a preliminary operation, but I did not adopt quite the same method as Dr. Watson, who ties the upper end of the ureter and establishes a fistulous track between the kidney itself and the loin. Such a track, lined by scar tissue, would, it seems to me, be liable to contract, although many patients have passed urine through such for a considerable number of years. I therefore divided the ureter as low down as I could, and brought the upper end out on to the loin and fixed it to the skin there. I do not see that there is greater liability of infection spreading to the kidney than along a track lined by scar tissue. It was certainly an advantage to draw off all the urine from the ureter, as we do the intestinal contents with a Paul's tube in colotomy, and thus secure a dry wound for at any rate some days, but in order to make a tight, non-leaking junction of the catheter and the ureter, it seemed necessary to tie the end of the ureter on the catheter, and thus to cause a small slough at the end of the ureter, and this may be a source of ascending infection to the kidney. I think it would be an advantage, in operating by the method which I employed in order to establish a urinary fistula, to wrap the lower end of the divided ureter in Cargile membrane, so as to prevent the adhesion of the end of the ureter to the surrounding tissues, which makes it difficult to drag down what is left of the ureter when performing the cystectomy. If we simply tied and divided the ureter close down to the bladder and left the tube between this point and its higher ligature and division, it seems possible that trouble might arise from secretion from the mucous membrane in the occluded portion of the ureter.

In performing complete cystectomy I think it is a great advantage to make a separation between the prostate and the rectum from the perineum before undertaking the abdominal part of the operation, for in division of the urethra behind the pubes where the parts are not within easy reach, it is a satisfaction to know that you cannot, by cutting too deeply, wound the rectum. An extra long pair of scissors, slightly curved on the flat, are a great assistance in making the division of the urethra, and it would be well to clamp it on the vesical side before making the division, so as to prevent leakage from the bladder when it is cut across, for though urine will not be entering the bladder from the kidneys because of the preliminary diversion of it on to the loin, yet with an ulcerating growth in the bladder any fluid escaping from the cut urethra would be septic. Even if the bladder is opened by suprapubic incision to examine the condition of the growth, as is likely to be the case, by packing the bladder with gauze and sewing it up and taking the precaution to clamp the urethra before division, the excision of the bladder can be undertaken with an aseptic wound. Precautions must of course be taken as to the change of gloves, and re-sterilizing of instruments between the closure of the suprapubic opening and the later stages of excision of the bladder.

If the growth does not involve the posterior wall of the bladder it would be well to peel off the peritoneum, and do the excision as an extraperitoneal operation, and this would, of course, diminish the risk, but the peritoneum corresponding to the area of a growth on the posterior wall (indeed, somewhat larger than the area) should be removed with it, for it would not be wise to leave any part of the thickness of the bladder wall on which a malignant

tumour was growing. If the bladder is packed with gauze and sewn up, the risk of infecting the peritoneal cavity is less than in partial resection when we have also to remove the peritoneum covering the posterior wall, for then we have to work with an open bladder. But in either case, if the small intestines are allowed to gravitate to the upper abdomen in the Trendelenburg position, and the pelvis is well packed with gauze so as to form a secure barrier on the abdominal aspect of the bladder, the risk of peritoneal infection cannot be very great, especially if the urine is flowing directly out of the ureters through ureteral catheters during the operation in the case of partial resection. I think the peritoneum should as far as possible be united in either complete or partial cystectomy from the abdominal aspect, in partial cystectomy as a separate layer after the rest of the bladder wall has been sewn together from the vesical aspect. I believe it is wise also to drain the peritoneal cavity by a split drainage tube with a wick laid against the sutured peritoneum and brought out of the abdominal wound at a separate gap higher up than the vesical drainage opening in the elsewhere closed incision, in cases in which such a peritoneal drainage tube is employed after partial resection of the posterior wall. If Cathcart's apparatus is employed all the urine from the bladder will be drained away from the wound, and there will be no risk of urine gravitating into the peritoneal cavity through the drainage tube. Indeed, if for any reason Cathcart's apparatus failed to work, if the patient were kept in the Fowler position after the operation, there would be little risk of this. But the safest plan seems to be direct drainage from the ureters out through the urethra, so that no urine collects in the bladder for a few days after the operation.

REFERENCES.

[1] Watson, *Annals of Surgery*, 1905, vol. xlii. [2] Ibid. [3] *Lancet*, 1913, ii, p. 1690.

A CASE OF ECTOPIA VESICAE IN WHICH THE URETERS WERE GRAFTED SUCCESSFULLY INTO THE RECTUM.

BY THOMAS YOUNG SIMPSON, M.D., M.S., F.R.C.S.,
PLYMOUTH.

THE subject of this report was a girl, aged 8 years, who was sent to me by her medical attendant to ascertain if anything could be done to improve her condition.

I found that she had ectopia vesicae, and was in a pitiable condition. Urine was continually spurting in drops from the two ureteric openings, calcareous concretions had formed on the pubic hairs, she was unable to walk except for a short distance, and had to be wheeled about. Her clothing adhered to the protruding posterior bladder wall, causing pain and discomfort by rubbing on it and the concretions; slight haemorrhage also occurred at times. There was a urinous odour about her, and she was unable to attend school; she was fretful and irritable; the posterior bladder wall bulged like a large ventral hernia, and contained coils of intestine; the pubic symphysis was absent.

I decided to transplant the ureters into the rectum, and on October 7th, 1912, under a general anaesthetic, I dissected up the posterior bladder wall from the peritoneum above and triangular ligament below. A catheter was inserted into each ureter, which was cleared for about 2 in.; the redundant portion of the bladder was removed except just around the ureters. I next divided some fibrous tissue in the position of the hymen admitting the finger into the vagina, and then divided the triangular ligament, permitting the lower end of the ureters to be turned back into the vagina in close proximity to the anterior rectal wall. With a finger in the rectum an opening was made through the posterior vaginal and anterior rectal walls, and through this the catheters and ureters were placed; the free edges of the recto-vaginal incision were sutured to the sides of the ureters, the triangular ligament, perineum, and abdominal wounds were respectively drawn together with catgut. Urine was collected in a receptacle for seven days from the two catheters which protruded from the anus; they were then withdrawn, and the patient made an uninterrupted recovery.

She is now able to run about, attend school, and retain her urine in the rectum for several hours at a time.

ON A DIRECT INTRAGASTRIC METHOD OF TREATING CERTAIN ULCERS OF THE STOMACH

BY REMOVAL "PAR MORCELLEMENT" OF UNHEALTHY TISSUES, AND MOBILIZING HEALTHY GASTRIC MUCOUS MEMBRANE.

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IN May, 1910, whilst operating upon a case of gastric ulcer in a young woman aged 25, I was confronted by conditions for the treatment of which, in my opinion, there did not exist any sound or recognized method of surgical procedure.

The conditions which did not lend themselves to the ordinary treatment by excision or gastro-enterostomy were the following:

1. The anterior wall of the stomach, pylorus, and duodenum appeared normal.

2. The peritoneum of the posterior wall of the stomach had participated in an inflammatory attack or attacks, which had terminated in the complete obliteration of the lesser peritoneal sac.

3. After performing the usual exploratory anterior gastrotomy, I found a solitary chronic ulcer of the size of half a crown situated about the middle of the posterior wall of the fundus ventriculi. The unhealthy base of the ulcer was firmly fixed, probably to the pancreas, and it also transmitted the pulsation of the aorta.

The operation I performed was as follows:

1. Scraping radially from the centre of ulcer by Volckmann's spoon all the detachable unhealthy tissues as far as the under surface of the mucous membrane forming its edge.

2. Thermo-cauterization of the exposed fresh base of the ulcer in order to stop haemorrhage completely and to sterilize.

3. Mobilization of the mucous membrane all round the edge of the ulcer by means of a long blunt-pointed scissors curved on the flat and with a delicate end, much after the fashion of Charles Mayo in dissections of the neck.

4. Removal *par morcellement* by means of Arbuthnot Lane's bone-nibbling forceps of all the unhealthy mucous membrane now forming the mobile edge of the ulcer. I waited until oozing completely stopped.

5. The edges of the healthy mucous membrane were brought together by means of suitable sutures—continuous or interrupted.

6. The gastrotomy wound was closed by separate continuous suture for the mucous, muscular, and serous layers.

7. The abdominal wall was then closed. The first patient upon whom I carried out the above method of treatment has been under my personal supervision ever since, and the result is a complete success.

I have performed similar operations since upon cases such as ulcer of the lesser curvature at the junction of the vertical and horizontal portions of the stomach with equally good results.

In one other case of gastric or peptic ulcer developing symptoms after the performance of a posterior no-loop gastro enterostomy, I carried out successfully the direct intragastric treatment by operation through the jejunal loop of the old anastomosis. The performance of this operation was simplified by the circumstance that I had made a large opening between the stomach and jejunum as advocated by Moynihan.

I have not, so far, performed a similar operation for ulcers in the pyloric portion of the stomach, nor for duodenal ulcers. The much-folded mucous membrane of the stomach lends itself to the mobilizing of its affected area, and it seems to me to be quite unnecessary to excise the whole thickness of the stomach— a more risky undertaking than to carry out the method recorded in this paper.

The natural process of repair in cases of damage to the mucous membrane of the stomach is really very remarkable. We have only to reflect upon the successes following the different kinds of suturing adopted by skilful surgeons, which, if applied to the skin, would lead to some risk, and certainly to ugly scars. An example of the extreme limit of Nature's energy for repair of gastric mucous membrane appeared in a paper published in the BRITISH MEDICAL JOURNAL of July 13th, 1907, by myself, in which I recorded two cases of perforative peritonitis in patients *in extremis*, upon whom nothing was done except to mop out stomach contents from the general peritoneal cavity and drainage of the abdomen.

Excision of a gastric ulcer is very risky in cases in which the serous membrane has been previously damaged through extension of inflammation from within the stomach.

I believe that this method of treatment will replace that of excision of the middle portions of the stomach which is now so frequently employed, because gastro-enterostomy has proved to be a disappointing operation in ulcers of this area; it is less risky and easier of performance.

The method described above appears to me to be new, for I had the privilege, when on a visit to my friend Sir Berkeley Moynihan last year, to obtain the views of himself and Dr. William Mayo, two of the greatest living authorities on the subject of surgical procedures in gastric surgery.

CHOLECYSTOTOMY IN LIEU OF CHOLECYSTOSTOMY IN CERTAIN CASES OF CHOLELITHIASIS.

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THE employment of cholecystostomy, and more recently cholecystectomy, in the treatment of gall stones has, I venture to think, somewhat overshadowed the simpler operation of cholecystotomy. There are not a few cases in which this operation might with greater advantage be adopted.

Each of the three operations has its own peculiar sphere of application. When the gall bladder itself is so affected that it is functionally useless, and when its retention might prove a source of subsequent trouble, there can be no doubt regarding the advisability of total extirpation. Equally, when drainage of the bile for a time may prove of advantage in secondary pancreatic involvements, the gall bladder should be retained and utilized as a temporary fistula by the performance of cholecystostomy. This same operation is also advisable when there is reason to believe, from their number and small size, that some of the stones may have escaped removal at the first attempt to extract them. Experience teaches in many of these cases that small stones are liable to be retained in the hepatic duct, and only after a few days find their way again into the gall bladder and escape through the temporarily constructed fistula.

There are, however, cases occasionally encountered in which, from the absence of symptoms suggestive of common duct or pancreatic complications, and from the size and shape of the stones, cholecystotomy might quite properly be performed.

The advantages of cholecystotomy lie in the short time the operation takes to perform and the restoration of the gall bladder to its normal condition both anatomically and physiologically. The indications for the performance of cholecystotomy in any particular case may be briefly summed up as follows:

1. *Prior to Operation.*—The symptoms are those of repeated attacks of biliary colic, the pain being located mostly in the gall bladder region with possibly referred manifestations in the back and shoulder; gastric disturbances may be present, such as flatulence, pain, or a sense of heaviness after food, sickness or vomiting, anorexia. Usually there is neither fever nor jaundice; some tenderness may exist on pressure over the gall bladder. The more certain indications, however, are those which are revealed at the operation.

2. *At the Operation.*—The gall bladder is not tensely distended, and when tapped contains practically normal bile with loose floating stones. The stones are comparatively large, too large for transit through the natural passages. There is absence of inflammatory adhesions, so that the gall bladder is quite free but for its hepatic attachment. In some instances a "flexible gall-stone probe" can be passed through the cystic duct into the hepatic; whether this can be accomplished or not, the permeability of the duct is an essential to the operation; this, however, is sufficiently proved by the comparative flaccidity of the gall bladder prior to its being opened.

As regards the operation, after the removal of the stones, the opening in the gall bladder is surrounded by a purse-string suture, the stitch embracing in its passage about two-thirds of the thickness of the visceral parietes. When this suture is tightened and tied it invaginates the opening and renders impossible any escape of bile. The gall bladder is dropped into the peritoneal cavity, and the parietal wound completely closed.

Within the last six months 15 operations have been performed for gall stones; 7 were colectomies, 5 cholecystostomies, and 3 cholecystotomies—that is to say, 20 per cent. of the cases were considered suitable for the simpler operation of cholecystotomy.

THE URINARY DIASTASE TEST AND LOEWI'S REACTION IN PANCREATIC LESIONS.

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CASES of pancreatic disease are admittedly difficult of diagnosis. In the more acute forms the clinical signs and symptoms often simulate those of other abdominal emergencies, and in the chronic affections the symptoms are common to other diseases, and may be wrongly interpreted. Among the more recent laboratory tests which have been introduced for the diagnosis of pancreatic disease, the quantitative estimation of diastase in the urine and Loewi's mydriasis reaction are easily and promptly carried out, and the question of their value in diagnosis can only be solved by trial in a number of cases.

The urinary diastase test does not appear hitherto to have received sufficient attention. In a paper on amylolytic ferments in the urine,[1] Dudley Corbett, following Wohlgemuth's work, describes fully the technique for making this estimation. He finds that the amount of starch-reducing ferment passed in the twenty-four hours is fairly constant, the *d* value or index being 10 to 20 units, each unit representing 1 c.cm. of 0.1 per cent. starch solution converted into dextrine in half an hour by 1 c.cm. of urine. The values found in the urine are not affected by ordinary changes of diet in adults, by the reaction of the urine, the presence of bacteria or other abnormal constituents except blood, the ferment being also present in normal blood serum; in fact, provided the kidneys are healthy, the index value of any given twenty-four hours' specimen of normal urine keeps so closely within certain limits, that for clinical purposes no greater accuracy is required. In a variety of cases of disease examined by him, high readings were found in all cases of undoubted pancreatic disease, and also in certain acute infective conditions without pronounced renal damage, and in some forms of eclampsia.

Loewi's test is now well known: a few drops of adrenalin chloride solution of $\frac{1}{1000}$ strength are instilled into the eye, previously examined to ascertain that the cornea is intact; if dilatation of the pupil takes place within an hour the test is positive. In cases of pancreatic inefficiency, and occasionally in Graves's disease, the test is positive. Beyond the fact that in these cases there is increased susceptibility of the sympathetic to stimulation by the adrenalin, there is no known explanation of the reaction.

The two following cases are worth recording, inasmuch as the laboratory tests just mentioned were very helpful in arriving at a diagnosis.

[1] Communication made at the meeting of the Association of Physicians of Great Britain and Ireland, held in Cambridge, March 20th, 21st, 1914.

CASE I.—*Pancreatic Cyst.*

A labourer, aged 47, was admitted into Addenbrooke's Hospital on December 24th, 1913, with severe haemorrhage from the stomach and bowels; he was very collapsed, and was unable to keep anything down. On examining his abdomen there was no general distension, but a swelling was present in the epigastrium of the shape and size of a dilated stomach. The swelling was tender, and waves of peristalsis could be seen passing over it from left to right; after vomiting, the swelling diminished considerably in size. The pulse was very feeble and the temperature was subnormal. The urine was acid, and contained a distinct trace of albumin, but did not reduce Fehling's solution.

The history of the case was that in the previous September, four months before admission to the hospital, he had received a severe kick in the abdomen from a horse; he vomited soon after, and was obliged to keep his bed for a week. After this he suffered from indigestion and got much thinner, but was able to do light work. Three weeks before he came to the hospital he had suffered from constant sickness, the vomit containing much blood.

From the history and clinical symptoms the supposition was that he had received a kick on a full stomach, and that subsequent to the injury ulceration of the stomach or duodenum had taken place. He was placed on saline injections in the hope that he might recover sufficiently to undergo an exploratory laparotomy. The haematemesis and melaena, however, continued; he could retain nothing in the stomach except a little whey, and he had constant diarrhoea of thin, greenish fluid. It was noted that, after vomiting, the whole of the swelling in the epigastrium did not disappear, but a tender soft mass, dull to percussion, was left.

The diagnosis was revised, and in view of the possibility of a pancreatic lesion a twenty-four hours' specimen of the urine was sent to Mr. S. W. Cole at the physiological laboratory, to be examined for diastase. It was found to give a high diastase index of 50 units; also a trace of sugar was found by Benedict's method. Loewi's reaction was also tried, and marked dilatation of the pupil was produced in a short time by two drops of 1 in 1,000 adrenalin solution. Taking into account the clinical conditions associated with these tests, the diagnosis of a pancreatic lesion was rendered highly probable. The patient, unfortunately, never rallied sufficiently for an operation to be performed, and he died soon afterwards.

The *post-mortem* examination showed, on opening the abdomen, a distended stomach, and immediately behind and closely adherent to it was another sac with thick walls containing fluid. There were abundant submucous haemorrhages at the cardiac end of the stomach, and a few patches of fat necrosis in the mesentery. The sac, which was a pancreatic cyst, was closely adherent to the posterior wall of the stomach, and of about the same size; it contained over a quart of thin fluid rich in ferment, which gave a diastase index of 6,600 units. On the posterior wall of the sac, at either end, were the remains of a thin layer of pancreatic tissue. The other organs were healthy.

The pancreatic duct towards the duodenum was compressed between the stomach and the distended cyst, but the greater part of it was incorporated in the cyst wall and could not be identified.

CASE II.—*Probable Pancreatic Infection.*

A woman, aged 55, was admitted into Addenbrooke's Hospital on September 20th, 1913. The history was not very reliable, but she had had jaundice on several occasions during the last two or three years; she had had no attacks of pain, but some indigestion and loss of flesh. Her teeth and gums were foul, and there was some pyorrhoea. The skin was yellowish, and there was a tendency to pigmentation. The liver dullness was as high as the fourth rib in the nipple line, but could not be distinctly felt below the costal margin and the gall bladder was not palpable. There was no ascites. The urine contained some bile, a trace of albumin, no sugar; the stools were normal in colour.

During the next two months she lost considerably in weight, the jaundice was intermittent in intensity, the stools sometimes light in colour, at other times normal, and the urine nearly free from bile; she had no attacks of pain. There was an intermittent pyrexia of moderate degree. Early in November the urine began to contain small quantities (about 1 to 2 per cent.) of glucose, no diacetic acid or acetone; for the next few weeks there was a condition of intermittent jaundice and intermittent glycosuria, the urine on a few occasions being free from either. On two occasions a twenty-four hours' specimen of the urine examined for diastase gave an index of 40 to 45. Loewi's adrenalin test was positive in less than half an hour. The stools contained much fat, and a Cammidge reaction was negative on one occasion.

The differential diagnosis lay between malignant disease of the pancreas and chronic pancreatitis due either to a gall stone or to infection of the ducts from oral sepsis, the latter being the more probable. The patient declined any operation, and was treated with urotropin and pancreatin. The amount of sugar in the urine steadily increased up to 6 and 7 per cent. in spite of a diabetic diet. However she gained 6 lb. in weight, the temperature became normal and steady, and she went home feeling considerably better.

In both these cases the urinary diastase index was distinctly high, though not so high as in some recorded cases of pancreatic disease, but taken in conjunction with the positive Loewi's test and the clinical history, pointed strongly to the diganosis of a pancreatic lesion. There may be more causes than one of an increase in the diastase ferment in the urine, but it is probably due to some degree of obstruction in the course of the pancreatic ducts which causes reabsorption into the blood stream. This may take place in pancreatitis, cysts, or growths of the pancreas; but each case must be judged by due consideration of all the surrounding circumstances, and with our present knowledge it would not be safe to place too much reliance on a single test.

REFERENCE.

[1] *Quarterly Journal of Medicine*, April, 1913, p. 351.

ACIDOSIS TERMINATING CHRONIC MYOCARDIAL DISEASE.

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THE two cases recorded here displayed certain features in common which can scarcely be explained away as an example of mere coincidence. Both patients were elderly men with chronic myocardial degeneration, and in both the last phase was characterized by symptoms suggestive of acid intoxication.

CASE I.

A dairyman, aged 62, was admitted to the Bristol General Hospital on August 4th, 1913, to Dr. Parker's beds, when I was in temporary charge. He had been ill five weeks with dyspnoea and swelling of the legs, the onset of which is attributed to getting wet through at work. Four weeks before admission the dyspnoea became so bad that he had to give up work, and at the same time the other symptoms became troublesome. He had felt a little pain over the left hypochondrium. The dyspnoea was very severe at the time of admission, and came on in paroxysms, during which he sweated profusely. In his previous history there was nothing of importance.

On admission he was found to be cyanosed and very dyspnoeic. The heart was dilated to the left and feeble in action, and a gallop rhythm was heard at the apex. The chest was emphysematous in shape, and some expiratory rhonchi were heard. The belly contained free fluid, and the legs were very oedematous. The blood pressure was 120 mm. Hg (systolic); the pulse beat at 80–100 per minute regularly, and very feebly. The pupils were equal and contracted: the knee-jerks were not obtainable. The breathing was definitely of the Cheyne-Stokes type, most violent respiratory excursions alternating with periods of complete apnoea.

Three days after admission the characteristic ethereal smell of acetone was noted in his breath, and he complained of thirst, asking continually for hot water. The urine contained neither sugar nor albumin; but two days later it gave a faint positive reaction with the ferric chloride test for β-hydroxy acids, and a day after this a trace of acetone was found also. At times he was delirious; his tongue became dry and furred, and the sweet smell persisted. The conjunctivae became yellow, the legs became more oedematous, and the general condition passed from bad to worse, till he died on August 15th. The bowels were opened daily without medicine while he was in hospital, and the average daily output of urine was over 30 oz. The percentage of urea was not ascertained. Of the various drugs given none made any difference; large doses of alkalis by the mouth had no effect.

CASE II.

A warehouseman, aged 60, came to my out-patient department on November 13th, 1913. He was so ill that he was admitted at once to the wards. His replies to questions were vague, and he could not even remember the word "warehouseman" when asked about his occupation. His history, gathered mainly from relatives, showed that for three or four weeks he had been short of breath and oedematous. A cough had been noticed during the same period. Cyanosis had been present for a week. He had been in hospital for lead poisoning over a dozen years previously, and also for cardiac symptoms in 1907. There was no history of rheumatism or syphilis, but his friends said he had been a heavy drinker.

He was cyanosed about the nose and ears and fingers; he gasped for breath, but was not orthopnoeic, and his respiratory movements showed a rhythmicity or grouping qualifying them for the title of Cheyne-Stokes breathing, except that the apnoeic pauses were rarely complete. The pulse was 110 and regular, except for periods of alternating extra-systoles; the systolic pressure was 175 mm. Hg. The ventricular impulse was feeble and diffused, the only visible cardiac pulsation being in the epigastrium. There was occasionally a *bruit de galop*, and the first sound, which was feeble, was followed by a systolic murmur at all areas. At the bases of the lungs crepitant râles were heard. The legs and abdomen were anasarcous, and the peritoneum contained some fluid. Two days after admission a very distinct acetone smell was noticed in the breath; the

urine contained no sugar or albumin, and only the merest trace of acetone and diacetic acid. The smell in the breath grew stronger, and at the same time both dyspnoea and dropsy increased; the pulse became irregular, and a polygraph tracing showed this to be "total," associated with disappearance of the auriculo-systolic wave from the jugular curve. Mental obscuration became pronounced, and the urine, which did not total more than 16 oz. in the twenty-four hours, had to be withdrawn by catheter. Some excitement began to manifest itself, and this subsequently developed into an active delirium, the patient getting out of bed and demanding his clothes, and so on; the pupils were small. There was never any vomiting, but from the fourth day after admission an incessant foul diarrhoea began to develop, reaching its maximum on November 22nd, when no less than twenty-three actions were recorded. This may have been started by the alkaline treatment, which was begun on the day before the diarrhoea first appeared; but when alkalis were stopped the diarrhoea continued, and was checked partially and for a time only by the administration of bismuth, opium, and catechu. Treatment with full doses of alkali (5ss each of the citrate and bicarbonate of soda every four hours) had no definite effect, and digitalis (mxv of the tincture every four hours) did not alter the pulse, except to produce an irregular bigeminy of the usual digitalis type. He complained of great thirst and took plenty of milk. The temperature curve fell steadily from normal on November 19th to 96° F. on the 26th, rising again to normal abruptly on the day of death (the 27th). On November 26th the urine contained no acetone or diacetic acid, but lactic acid was present—at least, the Uffelmann test was positive. The ammonia coefficient, kindly estimated for me by Dr. W. J. H. Pinniger, was 8.4 per cent., within the normal limit.

Post-mortem examination discovered a heart weighing 18 oz.; the muscle showed some subendocardial striation but was not flabby, and the only valvular change was a slight pearly thickening of the margins of the mitral cusps. The kidneys were congested but the capsules stripped. The liver was "nutmeg" and the pancreas firm.

Microscopic examination disclosed the following changes:—Kidney: Most of the convoluted tubules were lined by ragged cells with indistinct nuclei and cloudy cytoplasm. Apart from their share in the general hyperaemia, which was intense, the glomeruli were normal. The connective tissue of the kidney was not increased. The arteries showed hypertrophy. Liver: There were marked "nutmeg" changes but nothing else, no cirrhosis or diffuse necrosis. Pancreas: The main artery showed great hypertrophy of the media. In one lobule there was extensive fibrosis, the rest being normal apart from passive hyperaemia. The heart will be examined later, as the patient exhibited auricular fibrillation.

The first case, then, was one of cardio-sclerosis, if the clinical data may be relied upon. The symptoms which suggest the existence of an acidosis are the powerful smell of acetone in the breath—so strong that it was remarked upon by several persons independently; the incessant thirst; the type of dyspnoea, which in its sighing, rhythmic character and its disproportionate intensity recalled the air-hunger of diabetic acidosis; and the nervous symptoms, of which delirium and pupillary contraction were the chief.

In the second case a similar train of symptoms marked the last phase. There was the same strong smell of acetone, the same kind of breathlessness, and a similar set of nervous phenomena. To this may be added the extraordinarily severe diarrhoea; that this was toxic is suggested by its intensity, its intractability, and its independence of colic or other abdominal symptoms. It may have been the outcome of an effort on the part of the body to rid itself of poisonous substances.

To these toxic phenomena the term "acidosis" has been applied, because of their resemblance in essentials to diabetic and other acid intoxications. The sweetish breath, the air-hunger, and the cerebral aberrations all seem to set down the phenomena seen in this pair of cases among the acidoses. Two important divergences remain to be noted—the almost complete absence of acetone and the β-hydroxy acids from the urine, and the failure of alkalinization as a therapeutic measure.

None of the commonly recognized causes of intoxication were operative in these two cases; in neither man was there any trace of glycosuria or any hint at a pre-existing diabetes. Both patients were feeding adequately, neither was there any vomiting nor other cause of starvation, apart from the diarrhoea which supervened in the second case after the symptoms of acidosis had been observed. No drug had been administered in either case, such as might have given rise to acid intoxication. It seems, therefore, that these two cases represent an acidosis differing in origin and nature from those types which have been hitherto recognized.

Any comments on its possible origin and nature must of necessity be speculative to a large extent; but there are certain available facts which afford hints as to a possible solution of the problem. Lewis, working with Ryffel, Wolff, Cotton, and Barcroft, has recently published an account of extremely thorough researches into the cause of the paroxysmal dyspnoea which occurs in cardio-renal patients without adequate mechanical cause; their first paper[1] being written mainly from the laboratory, and the second[2] from the bedside, point of view. Eight of their patients were suffering from Cheyne-Stokes breathing, and were found by special methods to exhibit an acidosis of undetermined nature; three others exhibited chemical evidences of acidosis, but without the characteristic change of respiration. In a majority of these patients cerebral disturbances were noted, several complained of thirst, and in one case a sour odour was noted in the room. It seems possible, therefore, that the acidosis which these writers discovered to be the cause of paroxysmal dyspnoea in their cases of cardio-renal disease made itself manifest in other ways than by producing dyspnoea only; and that the train of similar symptoms described in relation to my two cases may represent, indeed, just what it appeared to represent when observed at the bedside—namely, an acid intoxication.

The nature of the acid is so far undetermined. In my two patients it is pretty certain that the β-hydroxy acids were not responsible; for, though acetone was perceptible in the breath it was scarcely so in the urine, and in neither patient were the kidneys in such a bad way that one could assume an acid retention so severe as to dam back β-hydroxy acids into the blood in lethal quantity while admitting almost none to the urine. Lewis and his collaborators did not find any evidence of excess of β-hydroxy acids. As for the α-hydroxy acids, taking lactic acid as a type, they conclude that this was not directly and solely responsible, since they were unable to find an adequate excess of this acid in the blood of their patients. They are inclined to blame the kidneys for the acidosis which they describe; though they say, on the other hand, that, apart from the extreme cases, the results of urea estimation did not indicate failure of excretory power. It seems possible that the hepatic lesions of chronic cardiac disease might constitute a factor in the causation of this intoxication.

Summary.

Two cases of chronic myocardial disease are described in which the terminal phase was marked by clinical evidences of acid intoxication (acetone smell in the breath, "air-hunger" dyspnoea, thirst, and cerebral symptoms).

This acidosis was apparently not of the type associated with diabetes and other well-known disorders, in that the β-hydroxy acids were not present in excess in the urine.

Neither alkalis nor oxygen inhalations had any effect on the course of this intoxication.

REFERENCES.

[1] *Heart*, 1913, vol. v, pt. 1, p. 45. [2] BRITISH MEDICAL JOURNAL, 1913, vol. ii, p. 1417.

A SUPPURATING HYDATID OF THE CRURA OF THE DIAPHRAGM.

BY JAMES OLIVER, M.D., F.R.S.EDIN.

A. C., a single woman aged 23, sent to me by Drs. Townley and Kimbell, of Brynrhös, Crickhowell, was admitted into the Hospital for Women on September 23rd last. Her sole complaint was that the abdomen had gradually been enlarging since about Christmas, 1912. She had experienced little or no discomfort, and she would not have consulted her doctors when she did had it not been for her mistress, who advised her to do so.

Physical Signs.—As the patient lay on her back the anterior abdominal wall was pushed markedly forward by a swelling which extended from the pubes to 2 inches above the umbilicus. The lower abdomen was slightly more prominent on the right than the left side. The tumour could be pushed slightly up and away from the pubes, and pressing the tumour then in the left iliac region caused pain, but in its natural position the tumour was not

painful to the touch. An indistinct feeling of fluctuation could be elicited. *Per vaginam*, the cervix uteri was near the right pelvic wall. The body of the uterus was felt in front on the right side; it was not enlarged. Neither the right nor the left ovary was felt, and no portion of the abdominal tumour could be felt in the pelvis.

Diagnosis.—From the clinical history and physical signs I came to the conclusion that the tumour was ovarian and was probably a dermoid.

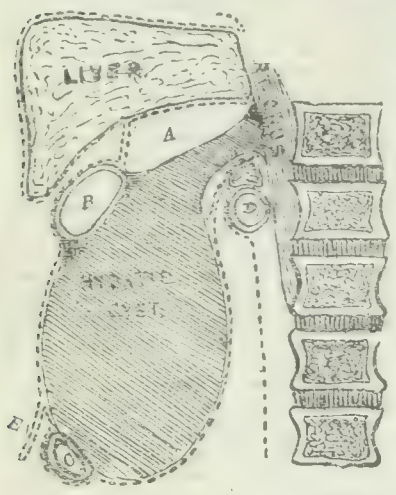


Fig. 1.—A, Lesser sac; B, stomach; C, colon; D, duodenum; E, lappet of omentum.

Operation.

With the idea of removing the tumour intact because of its probable dermoid nature I made a long central incision, but this eventually had to be extended almost to the ensiform cartilage. On opening the abdominal cavity the tumour was found to be concealed by stomach omentum and transverse colon. On passing my hand into the pelvis I discovered that the uterus and ovaries were normal, and that the tumour had not originated in the pelvis. The lower part of the tumour was coursed from side to side by a free lappet of omentum about an inch and a half in width and this lappet partially covered the transverse colon. On raising the lappet I found the transverse colon was so incorporated with the tumour that the muscular coat of the colon was spread out digitately on the tumour. I incised the thinned omental covering of the tumour from below upwards—in a vertical central direction—and freed the tumour as far as possible by enucleation from its omental capsule. I then found that the stomach was so intimately incorporated with the hydatid cyst that the muscular fibres of that viscus were also spread out digitately on the tumour. The transverse colon with the lappet of omentum was stripped from the hydatid and thereafter the stomach was similarly dealt with. The cyst was then found to have a neck about 2½ in. wide and 3 in. long springing from the region of the crura of the diaphragm. The neck had to be dissected out and the fibrous and muscular tissue incorporated with it was ligatured piecemeal and cut, and thus the neck was freed. It was the anterior wall of the stomach which was incorporated with the cyst, and when the two were separated the anterior surface of the stomach was almost completely deprived of its peritoneal covering and the muscular coat was ragged and bulged here and there somewhat irregularly. Fortunately I was able to reclothe the anterior surface of the stomach with a peritoneal flap of attenuated omentum which had been stripped from the right half of the tumour. In like manner I was able to reclothe partially the bared transverse colon by a flap of peritoneum from the left half of the tumour, and in this process the colon was drawn close up to the greater curvature of the stomach.

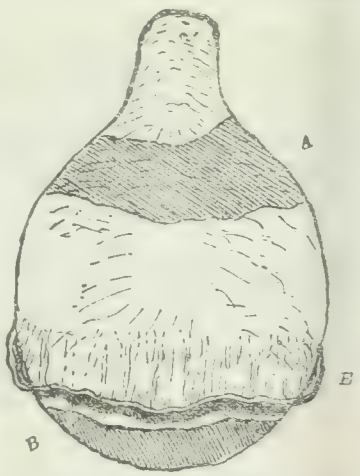


Fig. 2.—A, Seat of attachment of stomach; B, seat of attachment of transverse colon; E, lappet of omentum.

The tumour contained purulent fluid and daughter cysts, and the parent sac was so loose that it escaped with the fluid when the tumour was cut into. There was nothing about the clinical history to indicate when suppuration of the hydatid took place, and the patient's temperature, both when she was admitted into the hospital and when she was seen by Drs. Townley and Kimbell, was normal.

Sections of the cyst wall showed it to be composed of fibrous tissue arranged chiefly in regular layers with muscular tissue in places. The inner layer of the cyst was constituted of small round cells.

The patient suffered greatly from shock, but convalesced without an untoward symptom.

DYSPAREUNIA AND ITS SURGICAL TREATMENT.

By JAMES PHILLIPS, F.R.C.S.E.,
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I had been in practice a number of years before it occurred to me that dyspareunia was other than a quite infrequent and unimportant symptom. Two facts help to explain how this opinion is likely to be held by a junior practitioner. The first is the insignificant space given to the subject in gynaecological textbooks. Less than one page out of the more than 1,700 in Kelly and Noble's *System* is devoted to it, and in some quite considerable textbooks "Dyspareunia" is not even mentioned in the index. The second fact is, that pain on coitus is not a symptom which the average woman finds it easy to confess to, as is evidenced by the fact that in quite a number of the cases which I propose to describe presently the symptoms first complained of have been other than dyspareunia even when that was practically the only condition which was making life miserable.

Experience has forced upon me the knowledge (1) that quite a number of women suffer more or less severe pain during coitus; (2) that this condition underlies many a case of otherwise unaccountable neurosis; and (3) that it nearly always depends on some pathological lesion which, if properly diagnosed and treated, can generally be cured.

The number of lesions capable of producing dyspareunia is legion; my intention is to describe a few typical cases, each of which illustrates some practical point either in diagnosis or in treatment.

(*a*) The cause may be at the vaginal entrance.

CASE I.—*Unruptured Hymen.*

A woman aged 28 years, who had been married three years, was brought to me by her mother. She was languid, slept badly, had a capricious appetite, was morose and irritable. These symptoms began to be noticed some months after her marriage. I carefully overhauled her, but found no evidence of organic disease. She had some slight menstrual irregularity, and on vaginal examination I found that the hymen with difficulty permitted the passage of one finger. I did what a greater experience has convinced me to be a mistake—I asked for an interview with the husband. I have found that in many cases the husband is kept in ignorance of the true facts, and even where (as in this case) the husband knows the facts, he commonly has a notion that it is impossible to candidly discuss his sexual relations. As Stevenson has it in his article on Whitman, the Philistines have been too strong to allow the sanctity of fatherhood to be set beside the sanctity of motherhood, and among men "one of the most serious and interesting parts of life" is commonly "looked upon as ridiculous or shameful." I was given to understand that there was no difficulty with coitus. Fortunately the patient herself, after a little time, took her courage in both hands, and let me know that proper coitus had never taken place. Under ether the vaginal orifice and the vagina itself were freely stretched. Three months later the patient was pregnant, and her nervous symptoms had almost entirely disappeared.

CASE II.—*Hymenal Fissure.*

A young woman was taken ill during her honeymoon abroad and was told that she had kidney disease. (I believe that she had a mild attack of that far from uncommon honeymoon disease, an infection of the urinary tract due to colon bacilli being rubbed into the urethra.) When she got home I was asked to see her, nominally because of this urinary trouble, but I found that her real complaint was an agonizing dyspareunia. On examination I found one or two tiny but very sensitive hymenal

excoriations. No coitus was permitted for a week, during which time a daily sitz bath and boracic vaginal douches were given and the vulva was freely smeared with lanoline. When marital relations were resumed the patient was instructed to place a ½-gr. cocaine suppository in the mouth of the vagina a quarter of an hour before the act. As usual, vaginismus delayed convalescence, but in a few weeks the dyspareunia completely disappeared and the patient became pregnant.

Very rarely sensitive hymenal tags remain and require removal, but if dyspareunia persists in such cases after excoriations have healed it usually is because of vaginismus, and the latter condition demands treatment. The cause of dyspareunia may be an acquired stenosis of the vaginal orifice.

CASE III.—*Kraurosis Vulvae.*

The husband of a lady, aged 46, found on his return from a six months' tour abroad that coitus, previously normal, was not possible. On examining his wife I found the skin and mucous covering of the nymphae thickened, inelastic, and quite white in colour. On introducing a finger into the vagina the margins of its orifice felt as if a tense cord had been purse-stringed round the vaginal entrance. It was a marked example of kraurosis vulvae in which the subcutaneous elastic tissue becomes absorbed, and the dyspareunia was produced by the attempt to distend the vaginal orifice. The patient was instructed always to bathe herself after passing urine, to keep the parts constantly lubricated with lanoline, and to use a cocaine suppository before attempting coitus. In a week or two intercourse became possible, although it was necessary to use care at the beginning of the act.

(*b*) The cause may be in the vagina.

CASE IV.—*Vaginismus.*

A lady, aged 25, was sent to me to have her appendix removed. On making a pelvic examination, I found that she had vaginismus—that is, when I attempted to introduce a finger into the vagina the parts were involuntarily drawn away and the thighs extended and pressed tightly together. The patient had been married two years. A few weeks after marriage she had consulted a doctor definitely about the fact that coitus was impossible. She was told that her ovaries were wrong and was advised to use a douche. She was no better, and several times during the next year she sought various advice—at least once from a consulting gynaecologist. The impression she got from these consultations was that the condition was due to the fact that she was neurotic and that nothing could be done for her. By this time she undoubtedly was neurotic, and she was for three months in a nursing home on Weir Mitchell treatment. She and her husband had concluded that it would never be possible for them to have normal marital relations, and it was only my accidental discovery of the vaginismus when she came to see me about having her appendix removed that led to her consulting me on the matter. Before removing the appendix, I examined her under chloroform, and found uterus and ovaries apparently normal. The vagina was narrow and its walls less elastic than normal, but they gradually yielded to digital dilatation, which was persisted in until the vagina admitted the "accoucheur's hand." When the patient had recovered from the appendicectomy I had considerable difficulty in persuading her to attempt marital intercourse owing to the pain and misery which had heretofore accompanied all attempts at coitus. However, at length the patient was induced to make the attempt. She was told to introduce first a large glycerine suppository (the so-called glycerine pessary), and then a ½ gr. cocaine suppository into the vagina. Fifteen minutes later coitus was attempted and found to be painless. Soon the cocaine was discarded, but lubrication with glycerine was found desirable for some months. Nine months after the operation the patient wrote to say that she was pregnant, and that she was happier and less nervy than she had been since before her marriage.

Dyspareunia associated with vaginismus is, in my experience, by far the most difficult condition to relieve, and I have never been able to cure a case in which it has persisted for several years. This is due to the fact that any attempt at coitus becomes so distressing that the very thought of it produces an unreasoning and overpowering dread and loathing. But if the patient seeks relief in the early days of her marriage and proper treatment is adopted and after-treatment persistently followed up, in most cases the result would be as satisfactory as in the case cited. The treatment includes: (1) Cure of any obvious pathological condition. (2) Forcible and very thorough stretching of the genital passage under full anaesthesia. I know of a number of cases in which gradual instrumental dilatation without anaesthesia has been perseveringly attempted, but they have every one been miserable failures. (3) Lubricating and anaesthetizing the vagina by glycerine and cocaine prior to coitus.

CASE V.—*Short Vagina.*

One of the few patients who have come to me specifically complaining of dyspareunia was a recently married, undersized girl aged 19, who suffered pain "inside" whenever coitus was attempted. I found the vagina unusually short and that she had pain when upward pressure was made on the somewhat long and conical uterine cervix. I operated, splitting the cervix up to the vaginal vault and fixing the two halves apart with sutures, so that they were flattened out against the vaginal roof. Less than eleven months later the patient was delivered of a full-time child.

(*c*) The cause may be above the vagina.

Many abnormal conditions of the uterus are associated with dyspareunia. Adhesions, displacements, fibroids, or inflammatory conditions which fix the uterus and help it to prolapse are liable to be associated with this symptom. Many gynaecologists teach that an uncomplicated retroflexion of the uterus which is not fixed by adhesions never produces symptoms. That many patients having this condition do not have symptoms I admit; there was some degree of prolapse along with retroflexion in the case I am about to relate, but, in my opinion, the symptoms were essentially due to the retro-displacement.

CASE VI.—*Retroflexed Uterus.*

A woman, aged 26, had had a child three years before I saw her. Coitus, previously normal, had ever since been painful, and the patient had gradually got into a highly neurotic state. Careful examination revealed nothing abnormal save a markedly retroflexed fundus uteri which was intensely tender on vaginal examination. I performed ventrifixation, and the patient made a good recovery. A series of misfortunes combined to prolong the patient's neurotic state; her child had a serious illness, her husband injured himself at his work, and the patient herself fell downstairs and bruised herself badly. I saw her, however, nine months after the operation. The dyspareunia was cured, she was three and a half months pregnant, and, although still nervous, she was much better than she had been.

As in retroflexion, so in prolapse of the ovary, I believe that most of the cases giving rise to symptoms are those accompanied by some uterine prolapse.

CASE VII.—*Prolapsed Ovary.*

A woman, aged 25, came complaining of bearing-down pain and leucorrhoea. The symptoms dated from an instrumental labour eighteen months previously. The vagina was slack, the cervix broad and eroded, the uterus lay rather low, and the right ovary was somewhat enlarged and very tender. On inquiring I found that coitus was so painful as to be impossible. I curetted the uterus, opened the abdomen, and removed the ovary (which was cystic but not adherent), and fixed up the uterus. Six years later her husband was killed at his work, but before that she had presented him with four children, and she was again pregnant at the time of the accident.

The following case illustrates the place which adhesions occupy in the causation of dyspareunia:

CASE VIII.—*Ovarian Cyst.*

A woman, aged 31, who had had three children, made a somewhat slow recovery from her last confinement three years ago, and had had abdominal pain which latterly had made her unfit for her household duties. Her doctor found an abdominal tumour and sent her to me. I removed a right ovarian cyst as big as a fetal head which was adherent to uterus, bowel, and abdominal wall. She came to report herself at the infirmary two months later, and in a burst of gratitude told me that her life had been completely altered by the operation. Dyspareunia (of which she had made no previous mention either to her doctor or to me) had been constant since her last confinement, when presumably the ovarian cyst became adherent. The idea of marital relations had become a nightmare to her, but the operation had made normal coitus possible.

The part played by dyspareunia in the production of neurotic symptoms is shown in the following case:

CASE IX.—*Ovario-Salpingitis.*

I was called early one morning to see Mrs. B., aged 35, a childless woman who had been married several years. She was in a condition of acute hysteria, made none the better by the brandy with which a kind neighbour had been plying her. The only symptom I could elicit was abdominal pain, and vaginal examination revealed a tender fixed mass on either side of the uterus. I gave her a sedative and learnt later that she was the subject of severe dyspareunia, and that the hysterical attack I had found her in had followed on a violent attempt at coitus made by her husband when he was far from sober. I removed a double pyosalpinx, and since then painless coitus has been possible.

Some of the worst cases of dyspareunia result from injuries sustained during labour. Here is a typical case:

CASE X.—*Parturition Trauma.*

Mrs. B. was married at 18; a child was born a year later. Instruments were used, and she made a slow recovery. She had persistent backache, leucorrhoea, dysmenorrhoea, pain on

defaecation, and dyspareunia. From being a bright girl she became peevish and despondent, she slept badly, her appetite failed, and she lost nearly 2 st. in weight. When she was sent to me I found the left side of the cervix split up to the vaginal roof, and a tense tender scar stretching from there across the left vaginal fornix. About this scar were fixed the uterus and the left appendages, and the whole mass was intensely tender. I operated on her, repairing the torn cervix, dividing the vaginal scar freely, and stitching the transverse incision across in the vertical direction, then opening the abdomen, freeing adhesions, removing the left appendages, and fixing the uterus to the anterior abdominal wall. She recovered well, and soon went to a convalescent home. Some weeks later her doctor again sent her to see me. She was still sleeping badly, and very easily got tired and worried. I found the pelvic organs in a very satisfactory condition, and was able to assure her that she ought soon to get rid of her neuroses. A course of nux vomica and bromide, continued for some weeks, helped towards this goal. Six months after her operation I again saw her, and hardly recognized her. She was fatter, brighter, and younger looking, was able to do her work with pleasure, and the pelvic symptoms had all gone.

Compare this with the case of a woman aged 44, on whom I did an operation for cystocele some months ago. Her one child was born seventeen years ago. The posterior vaginal wall and the perineum were torn, and a tense scar formed, which remained so tender that she was never able again to have intercourse with her husband. The falling birth-rate is not wholly due to the wilful practice of Malthusian methods. Efficient gynaecological treatment would enable not a few erstwhile sterile women to add their quota to the population.

These are a few of the many cases I have met with since I came to realize the frequency and importance of dyspareunia. I have to thank the physician whose clinical clerk I was some twenty years ago for impressing it upon me, with many an apt illustration, that in a considerable proportion of those banes of a practitioner's life—the "neurotic women"—careful search will discover a definite underlying pathological lesion. Dyspareunia is one among the multitude of these underlying conditions.

It does not require much imagination to understand how the prolonged mental and physical distress produced by this symptom, aggravated in many cases by the knowledge that the husband's affections are being thereby alienated, is likely to produce a morbid mentality. Says George Eliot in *Middlemarch*: "It is in the acts called trivialities that the seeds of joy are for ever wasted, until men and women look round with haggard faces . . . and say that earth bears no harvest of sweetness."

When the practitioner has realized that dyspareunia is no trivial condition, but one which may cast a deep cloud over a woman's whole married life, he will be much more likely to discover the cases in which it exists, and by adequate treatment to lift the cloud and earn the patient's undying gratitude.

THE IDENTITY OF T. RHODESIENSE WITH THE TRYPANOSOME OF THE SAME APPEARANCE FOUND IN GAME.

BY

WARRINGTON YORKE AND B. BLACKLOCK.

(From the Runcorn Research Laboratory of the Liverpool School of Tropical Medicine.)

AT the beginning of 1912 Kinghorn and Yorke[1] published a paper announcing that a considerable proportion (16 per cent.) of the game in the Luangwa Valley of North-Eastern Rhodesia harboured the trypanosome which causes sleeping sickness in man. This discovery has since been confirmed by the Royal Society Commission,[2] who found that a similar percentage of the game in the proclaimed area of Nyasaland was infected with the human trypanosome. The German workers, notably Kleine and Eckard,[3] Taute,[4] and Fischer,[5] although they agree that one of the trypanosomes found in game is very closely related to *T. rhodesiense*, both as regards its morphology and pathogenicity, hold that the parasites are not identical.

Owing to its practical importance the question has given rise to much discussion; those who are opposed to interference with the African fauna welcome the theory that the parasite found in the game is not the same as the human trypanosome. Much of the discussion is based on hypothesis and not on scientific observation, and is hence of little value. The case of those who deny the identity of the two parasites has been stated recently by Kleine[6] in a paper entitled "The Alleged Identity of *T. brucei* and *T. rhodesiense*." It is this paper that has called forth the present article, in which we propose first to review the evidence on which Kinghorn and Yorke concluded that the trypanosomes are identical; secondly, to examine the arguments advanced by Kleine and others who maintain that the parasites are different; and finally to consider certain additional facts which in our opinion support the view originally expressed by Kinghorn and Yorke.

The evidence of identity adduced by these workers was derived from studies of the morphology, pathogenicity, and the development of the two parasites in the tsetse fly. *T. rhodesiense*, the cause of sleeping sickness in South Central Africa belongs to the polymorphic group of trypanosomes—that is, it possesses long free flagellar forms, short aflagellar forms, and intermediate varieties. In this respect it resembles *T. gambiense*. Its claim to be considered a good species depends on the fact that in a certain proportion of the short forms the nucleus is situated at the posterior extremity,[7] and this character has up to the present sufficed to distinguish it from *T. gambiense*. Recently, however, it has been shown that certain other species, such as *T. pecaudi*,[8] *T. brucei* of Uganda (*T. ugandae*),[9] and *T. equi*,[10] hitherto considered to be parasites peculiar to animals, also exhibit this phenomenon. All these belong to the polymorphic group of trypanosomes, and are morphologically indistinguishable from each other and from *T. rhodesiense*. Almost all authorities now agree that *T. pecaudi* and *T. ugandae* (*T. brucei* of Uganda) are synonymous. This trypanosome appears to be widely distributed throughout tropical Africa in game and domestic stock, and is most probably the parasite found in game by Kinghorn and Yorke in Rhodesia. We wish to emphasize here that the names applied to the trypanosome found in man, and to that found in game, are merely of secondary importance. The fact that the parasite infecting human beings happens to have been called *T. rhodesiense*, whilst a similar flagellate existing in animals has been designated *T. pecaudi*, *T. brucei*, or *T. ugandae*, does not of itself exclude the possibility of their being identical. The real point at issue is whether or not the trypanosome infecting man is the same as that found in game and domestic stock.

As already mentioned, Kinghorn and Yorke, as the result of an exhaustive examination of the human and game trypanosomes, found that they were morphologically identical. The virulence of the two strains was examined in a large number of laboratory animals, and the trypanosomes proved to be alike. Finally the life-cycle of the parasites in the tsetse was examined. In laboratory-bred *G. morsitans*, whether fed on sleeping sickness patients or on animals infected with the game strain, the development of the trypanosomes was similar. The parasites multiplied in the intestine, and after a latent period, the length of which varied inversely with the temperature to which the flies were exposed, the salivary glands became invaded and the flies infective.* These observations have been confirmed by the Royal Society Commission and others, and are now generally accepted.

Kleine, Taute, Fischer, and others, while agreeing that the human and game trypanosomes are indistinguishable when judged by the methods of examination mentioned above, for various reasons deny that they are identical. In the first place they state that Kinghorn and Yorke failed to observe the presence of the widely spread *T. brucei* in a heavily infected *morsitans* area. Such a statement as this is, of course, of no value as criticism. It is in itself an assumption that *T. brucei* is a parasite capable of being distinguished from *T. rhodesiense*.

Again, on epidemiological grounds, Kleine[6] asserts that the parasites are undoubtedly different, because in certain *morsitans* areas the animal trypanosome (*T. ugandae* vel *T. brucei* of Uganda vel *T. pecaudi*) is found in game and stock and in tsetse fly without cases of human trypanosomiasis occurring. Moreover, numerous Europeans have hunted in such areas and have not contracted sleeping

* We must draw attention to the observation of Bouet and Roubaud[11] on the development of *T. pecaudi* in *Glossina*. These authors found that *T. pecaudi* instead of invading the salivary glands completes its life-cycle in the proboscis. If this observation is confirmed, then *T. pecaudi* cannot be held to be identical with *T. rhodesiense* nor with *T. ugandae*.

sickness. In many districts of German East Africa cattle and dogs die at once from infection with this parasite whilst human trypanosomiasis is unknown. We cannot pass over such arguments as these without pointing out that it is by no means easy to make certain that any district is absolutely free from human trypanosomiasis. As a matter of fact sporadic cases of sleeping sickness have been found in widely separated areas throughout South Central Africa. Kleine considers that this state of affairs—the absence of sleeping sickness in such districts—cannot be due to immunity acquired as the result of a slight infection in youth. He examined some 1,500 children in German East Africa without finding any instances of infection. He goes on to argue that the assumption that the majority of human beings is resistant or only occasionally susceptible is not permissible. There is no analogy for this in other trypanosomal infections. If animals become infected with what is for them usually a non-infective trypanosome the infection invariably quickly dies out. Men die of *T. rhodesiense*.

As regards the former hypothesis, we agree with Kleine that there is no evidence to suggest that the native population enjoys an acquired immunity resulting from a mild attack of the disease during childhood. Analysis of the cases (about 300) of sleeping sickness recorded in Nyasaland and Rhodesia shows that children do not form an unduly large proportion, and, moreover, that they exhibit no tendency to recover. Again, such a hypothesis would not explain the fact that European hunters and others have travelled widely in *G. morsitans* regions with impunity. We are of opinion, however, that the second hypothesis—namely, that the majority of human beings is resistant and only occasionally susceptible—cannot be dismissed without very careful consideration. The statement that there is no analogy in the case of other trypanosome infections is not correct. It is a well-recognized fact that *T. vivax* does not, as a rule, infect small laboratory animals, such as dogs, rabbits, guinea-pigs, rats, and mice; these animals are immune. The immunity they enjoy is not acquired but natural; yet we have recently succeeded in showing that this immunity in the case of rabbits is by no means complete, and can in some cases readily be broken down.[12] A certain percentage of rabbits inoculated became infected with *T. vivax*, and of these about half died of an acute infection in from five to twenty days. Another striking instance of such natural immunity is that exhibited by certain species of animal to the small aflagellar trypanosomes so commonly found in game and domestic stock in tropical Africa. In fact, so resistant were the small laboratory animals to some strains of this parasite that the name "*T. nanum*" was given to such strains in contradistinction to the term "*T. congolense*," which was applied to those strains found capable of infecting some or all of these animals. Recent work[13] has, however, shown that such a distinction is not justifiable. The small aflagellar trypanosome of domestic stock and game in Africa is at the time of its isolation from naturally infected animals of uncertain pathogenicity. Some strains are at once virulent, whilst others may only become so after many passages through laboratory animals. Kleine's statement that accumulated experimental evidence does not justify the view that the pathogenicity of a trypanosome strain can be permanently changed appears to be hardly in accordance with facts. In addition to the instance of *T. congolense* already cited, the permanent increase of virulence observed in certain strains of *T. gambiense* which have been maintained in European laboratories has been emphasized by numerous workers.

It has been held that the only way in which definite and conclusive proof of the identity of the two strains of trypanosome can be obtained is by inoculation of human beings with the game strain. Kleine, referring to experiments of this kind recorded by Todd and Taute, sees in their results evidence that the game and human strains are different. Kleine is, however, under a misapprehension when he writes that Todd inoculated himself with *T. brucei*. The observation recorded by Todd[11] is to the effect that a European (Dr. Ascenso) and two natives were injected with blood from a cow suffering from trypanosomiasis, with negative result. It is important to note that the species of trypanosome with which the cow was infected is not mentioned: as *T. vivax* and *T. congolense* are more commonly found in cattle than the polymorphic trypanosome, the probability is that it was with one of these species that the experiment was performed. In Taute's experiment,[4] however, the information given is quite definite. Taute fed upon himself, with negative result, laboratory-bred *Glossina morsitans*, which had been rendered infective with the *rhodesiense*-like game trypanosome. He also subsequently inoculated himself with 2 c.cm. of the blood of a dog naturally infected with the same trypanosome. Here again the result was negative. These experiments were carried out at Lubimbinu in Portuguese Nyasaland. Lubimbinu itself is fly free, but is surrounded by a large wooded fly belt in which *G. morsitans* is present in enormous numbers. The population is stated to be free from trypanosomiasis, but quite the reverse is the case with domestic stock. Cattle and sheep were not found, goats were rare, and dogs were very seldom seen and died rapidly. Very great importance has been attached to this experiment by those who hold the view that the game and human trypanosome are different. That such work is of the utmost value there is no doubt, but we cannot admit that the inference which has been drawn as a result of it is justifiable. All Taute proved is that a single healthy human individual was able to resist infection. The experiment simply confirms us in our belief in the relative immunity of man to infection with *T. rhodesiense*. It is exactly this natural resistance of man, which Kleine dismisses as a non-permissible assumption, that appears to us to afford the only satisfactory explanation of the comparative scarcity of cases of human infection with *T. rhodesiense*. The hypothesis of a relative immunity of the human race to *T. rhodesiense* is not improbable. Man exhibits a marked degree of resistance to infection with the genus *Trypanosoma* as a whole. No case of human infection with any of the common trypanosomes of domestic stock, such as *T. vivax* or *T. congolense*, has been recorded.

The fact that in Northern Rhodesia—and this applies also to other countries in South Central Africa—the disease is scattered sporadically in widely separated areas suggests that there must be some endemic reservoir of the disease apart from human beings. It is hardly conceivable that widely separated cases of sleeping sickness should have been infected one from another in the absence of considerable foci of human infection. If men were readily susceptible to infection only a single case would be required in a heavily infested *morsitans* district to cause an epidemic. Up to the present, however, an epidemic of sleeping sickness due to *T. rhodesiense* is unknown. Instead of considerable foci, which one would expect if infected man were the reservoir from which *G. morsitans* derived its infection, we have isolated cases scattered apparently haphazard over enormous tracts of country. It appears to us that the most probable explanation of these facts is that the virus exists endemically in game and fly all over the country—allowance, of course, being made for altitude and other circumstances that may influence the infectibility of *G. morsitans*—and that here and there scattered throughout the country an individual, the natural immunity of whom is for some unknown reason insufficient, becomes infected.

Moreover, it is quite clear that a very large proportion of game must be infected with *T. rhodesiense*. In the Rovuma district of German East Africa, Week[15] inoculated antelope with blood from a human being infected with *T. rhodesiense*. The antelope became infected, and its blood was infective for monkeys and dogs five weeks later. The buck itself exhibited no signs of disease. This experiment shows that antelope can harbour the human trypanosome in their blood for some time—how long is not yet known—without exhibiting symptoms. As at the end of five weeks the blood was infective for monkeys and dogs, there is no reason to doubt that it would also infect *G. morsitans*. Nor is there any ground for doubting that if antelope can be infected directly from the human being they could also be infected from the tsetse fly. This being the case it follows that antelope must be infected with *T. rhodesiense* one from the other by *G. morsitans*, precisely in the same way as they are with the common trypanosomes of domestic stock, *T. vivax* and *T. congolense*.

In view of the fact that antelope can harbour

T. rhodesiense in their blood, it is incredible that they do not constitute in nature a reservoir of the virus. The fact that a large proportion of the antelope do actually harbour a trypanosome indistinguishable from *T. rhodesiense* is very suggestive. To assume that the game is infected with two different trypanosomes, alike in every respect with the single exception that one variety is fatal to man whilst the other is innocuous, would be, in our opinion, excessive theorizing.

Summary.

In favour, then, of game being the reservoir of human trypanosomiasis in South Central Africa we have the following facts:

1. Human beings and game are known to be infected with trypanosomes identical as regards morphology, pathogenicity in laboratory animals, and their development in *G. morsitans*.

2. The human trypanosome can be successfully inoculated into game.

3. The peculiar sporadic occurrence of the disease in human beings suggests that they were infected from a widely spread reservoir of the infection (the game) rather than from one another.

In conclusion, we submit that the hypothesis that man enjoys marked natural immunity and is in consequence to a great extent resistant to infection with this parasite affords a satisfactory explanation of the distribution of the disease, of its comparative rarity, and of the fact that Taute's attempt to infect himself failed.

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ELECTRARGOL IN SMALL-POX AND PLAGUE.

BY

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I am now able to carry out the promise in my letter of August 22nd last, published in the Journal for October 11th, p. 906, to send more definite figures concerning the results obtained by the treatment of small-pox with electrargol.

We had altogether 1,914 cases and 196 deaths, giving a mortality of 10.24 per cent. for the whole epidemic. Of these, 1,309 were treated in one central small-pox hospital and 124 of them died, giving a hospital mortality-rate of 9.46 per cent.

The majority of cases were of a mild type and only required segregation and recovered practically without treatment, but we had 259 cases of the confluent and haemorrhagic types, and of them we lost 99. I have divided these types from one another, and in the following table will be seen the difference between the death-rate among those treated with electrargol and those who were not. At the beginning and before we were certain of the value of the treatment patients were allowed to choose whether they would accept the treatment or not, and I think I am right in saying that it was owing to this unfortunate fact that our death-rate was so high. Later on, when we had established the value of the treatment, it was made compulsory, and every patient who was suffering from the severer forms of the disease had to submit to injection. As I said in my letter of August 22nd, the injections were all intravenous, and we afterwards increased the dose—in one case going up to 50 c.cm. every twenty-four hours for three days—the patient, an apparently hopeless case, delirious, with a confluent rash and passing bloody stools and urine, recovered.

Table I.

Nature of Case.	Treatment.	Number	Cured.	Died.	Mortality.
Confluent ...	Simple	94	29	65	69.1%
	With electrargol	136	115	21	11.4%
Haemorrhagic .	Simple	9	1	8	88.8%
	With electrargol	20	15	5	25.0%

The figures show that patients treated with electrargol had a much better chance of recovery than those who were not. Cases were not picked out for treatment, but they were taken as they came, and I can confidently recommend this mode of treatment to any one who may find himself in charge of a small-pox lazaret during a severe epidemic with many confluent and haemorrhagic cases to look after.

The drug is absolutely stable and reliable and may be kept in stock for an unlimited time. The mode of administration is simple and can be carried out by a well-trained hospital attendant. It consists of the injection into a vein of the required amount of the drug with the usual precautions, and if its use in 259 cases of small-pox and 48 of plague without accident means anything, it is perfectly safe.

With regard to its use in plague, I have had only a very limited number of cases to treat this year, the whole plague season giving 313 cases and 261 deaths, with a mortality of 83.4 per cent. nearly. Only 48 of these cases came under treatment at the lazaret, and we managed to save 19 of them, reducing the mortality to 60.4 per cent.

The following table shows very well that early treatment is the main thing, as out of 20 cases treated within forty-eight hours of the commencement of the disease only 5 died, whereas of the 21 treated for the first time on the third and fourth days 18 died.

Table II.

Day of Disease.	No. of Cases.	Cured.	Died.	Death-rate.
1st	10	8	2	25.00%
2nd	10	7	3	42.85%
3rd	10	1	9	90.00%
4th	11	2	9	81.06%
5th	5	0	5	—
6th	2	1	1	—

So far, I am sorry to say that we have found treatment of any kind hopeless in cases of abubonic or pneumonic plague, all these patients having died, no matter what treatment they received.

These types were very common during this epidemic, and we had nine abubonic and one pneumonic case in our lazaret. If we deduct these cases from the total we have 38 cases and 19 deaths left, reducing our mortality to 50 per cent. for the simple bubonic type. This result suggests the necessity for continuing the experiment when an opportunity occurs, and if we are unfortunate enough to have an epidemic in the next plague season I mean to continue it here. If any one in charge of a plague lazaret wishes to do the same let me advise him to begin his treatment as soon after his diagnosis is made as possible, to give his injections intravenously every twenty-four hours, not to be afraid of large doses, and always to carry on his treatment to the end of the fifth day, no matter what the temperature and the pulse are doing. In plague we have gone as far as 60 c.cm. without any ill results in cases of multiple bubo.

Further information will be found in my reports on plague and small-pox, and in my Annual Medical Report for 1913.

The foundation stone of the new hospital and nurses' home for the Chelsea Hospital for Women will be laid by Earl and Countess Cadogan on Tuesday next at 3.30 p.m.

General Lyautey has forbidden the sale of absinthe in Morocco, where the use of that beverage has caused an immense amount of evil. On the other hand, one of the last acts of the late Chamber of Deputies was to reject a proposal to increase the tax on absinthe. The French colonies are thus better protected from this particular poison than France itself.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

EPIDURAL INJECTIONS.

In a paper in the *British Journal of Children's Diseases*, 1905, I described the results obtained in a long series of cases of enuresis, either diurnal or nocturnal, or both, and in patients at all ages. The little operation has been adversely criticized, most frequently, I believe, on account of the often considerable difficulty in making the injections. The membrane covering in the hiatus between the last sacral spinal prominence and its two last lateral posterior tubercles above, and the coccyx below, is in a considerable percentage of cases little more than a chink, but in only one case have I ever eventually failed to find it. If the needle as it perforates the skin, subcutaneous tissue, and membrane be held and pushed in a too horizontal or upward position, it misses the opening and simply lies in the subcutaneous tissues over the posterior surface of the bone. The fluid is then expressed with difficulty, and shows itself as a lump after the fashion of an ordinary hypodermic injection. Such an injection is useless. The needle should at first be held in a nearly vertical position, and pushed on in this position until the resistance of the membrane is overcome; the handle of the syringe should then be depressed, and the needle sent along in an upward direction. It passes upwards to the hilt with the greatest ease. If the needle should, however, touch bone it means that the handle has not been sufficiently depressed, and has impinged upon the posterior surface of the prominent part of the body of the third sacral vertebra. The needle must be withdrawn for from one-half to one inch, and its position corrected.

The best method of finding the opening in the sacral canal is to run the index finger down the spinal tubercles until it drops into a depression; the posterior lateral tubercles are then felt immediately bounding the opening on either side. The centre of a line drawn between the two lateral tubercles is the exact anatomical point for insertion. If the needle be inserted a little lower than this it does not much matter, but insertion above the transverse line will probably at once cause difficulties.

The dural cone, the termination of the dural tube, corresponds to the level of the second sacral vertebra. The space in the sacral canal below the cone is filled with loose cellular tissue, vessels, etc., which same loose tissue extends from the sacrum right up between the dura and the bones of the vertebrae as far as the occiput. It is also important to remember that the space below the cone contains the spreading out of the terminals of the cord—the cauda equina.

After having given the injection I order the foot of the bed to be raised about 12 inches, and the patient is allowed to remain quiet for fully an hour. Highly sensitive cases are kept in bed for twenty-four hours. In my experience, in children under 7 or 8 years of age it is frequently impossible to carry out the manipulations without the administration of an anaesthetic. Simple saline solution carefully sterilized is used for the injection, and 5 c.cm. is sufficient for the first dose. Three to four doses at about weekly intervals are usually required, and the amount is gradually increased to 10 c.cm., 15 c.cm., or 20 to 30 c.cm. Occasionally as many as six or seven injections are given. The skin is sterilized with iodine, and the needle, syringe, etc., are carefully boiled. Once I broke a needle during an involuntary struggle, but it was easily extracted. I believe this accident is very rare. As far as I know, there are no contraindications to the operation.

Two other points about the manipulation are that the sacrum must be bulged out to the uttermost by placing the patient on the side with the thighs fully flexed upon the abdomen and the head curled down into the chest. The second point is that the cleft of the buttocks does not correspond to the line of the hiatus. The opening is 2 or 3 mm. above the cleft.

I have not had much experience in treating other forms of nervous disease by this method, but I am sure that, at all events for the treatment of enuresis, as soon as the necessary manipulative skill has been obtained, it is far and away the quickest method of curing this pitiable complaint. My experience now extends over many years and in dealing with several scores of cases.

As to the *rationale* of the method we can form our own conclusions. There is the epidural pressure effect upon the cerebro-spinal fluid, the possible direct pressure effects upon the filaments of the cauda equina, and the reflex tonic effects upon the lumbar centre. Cases have been recorded where the effect of the injection has been to produce an actual retention of urine, necessitating the use of the catheter.

W. T. FREEMAN, M.D.,
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ACUTE LYMPHATIC LEUKAEMIA.

ON March 24th an anaemic man, aged 32, sent for me, as he had pain and a swelling about the second molar in the lower jaw, apparently an abscess at its root. I had seen him at my own house about ten days earlier. He then complained of night sweats and a slight cough, slight breathlessness, and feeling out of sorts for some two months or so. He had the idea that he might be phthisical, but I could find no sign of trouble in his lungs; he was, however, very anaemic, and I prescribed iron and arsenic, and told him to come again in a week's time.

On March 24th the temperature was 102°, and there was a considerable swelling, apparently periostitis, round the tooth, and a curious black sloughing condition of the gum on the inner side of the jaw. He informed me that he had used iodine and permanganate, which, I thought, might account for the peculiar colour, which resembled cancrum oris, but without the characteristic fetor. The tooth was removed on my advice, and energetic use of hydrogen peroxide begun.

Next day little or no improvement had taken place, and some slight bleeding and great pain still persisted.

On March 26th the temperature reached 104°, but then gradually fell, and was normal on March 29th, but there was no improvement in the local condition; on March 30th the temperature was 100°.

Enlargement of the spleen and ulceration (sloughing) of gums in two other places were discovered. Pain, sweating at nights, and increasing weakness were noticed. The anaemia was considerable, and numerous petechiae were present on the hard and soft palate and on the abdomen and limbs. He slept little, but took food well, and had no haemorrhage of any kind externally. The temperature remained high and irregular, the pulse was 130. The urine contained a trace of albumin, but no sugar.

On April 4th I examined his blood and found 2 million red cells only, with 35 per cent. haemoglobin. The white cells were 88,000, but practically all were lymphocytes. After prolonged search only two polymorphonuclear cells, a few large mononuclears, and one or two doubtful eosinophiles were found. Nucleated reds or poikilocytosis were not noticed.

Some slight enlargement of the lymphatic glands, which were very slightly tender, was observed, together with the enlargement of the spleen mentioned above. During the next three days the breathing become much more rapid, and there was considerable precordial pain. Evidence of pleurisy was found in the region of the heart and axilla, and some rusty sputum began to make its appearance; 25 c.cm. of antistreptococcus serum given on April 5th had little or no apparent effect, and the patient died rather suddenly on April 7th of exhaustion, the respirations having previously reached 50.

The case is of interest from the absence of haemorrhage from the gums, stomach, bladder, or other organs, and the limited sloughing of the gums was the only striking sign, with the exception of the anaemia and fever. An attempt was made after death to obtain a culture from the blood, drawn with aseptic precautions from the veins, but it proved sterile.

Blackheath, S.E. R. E. SCHOLEFIELD, M.A., M.B.Oxon.

THE professional association of French medical journalists held its statutory general meeting on May 2nd, under the presidency of Professor Doumer of Lille. The meeting passed a resolution, proposed by the general secretary, that a circular should be sent to the political press of the provinces and to foreign scientific journals, informing them that they could find among the members of the association competent correspondents who could, if it were desired, keep them in touch with the medical movement in France.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

DAVID LEWIS NORTHERN HOSPITAL, LIVERPOOL.

A CASE OF ACETANILIDE POISONING.

(By HUGH S. PEMBERTON, M.B., Ch.B.Liverpool.)

A WOMAN aged 29 was admitted suffering from intense cyanosis of the face, neck, and hands, frequent shallow respirations, and extreme cardiac feebleness and irregularity. In a few hours the cyanosis and dyspnoea deepened, and consciousness was apparently lost. The temperature was 96.6° F., the pulse 84, and the respirations varied between 35 and 40. The conjunctival and abdominal reflexes were obtained, and the knee-jerks were slightly increased. The patient gradually sank into a comatose condition, with periods of irregular dyspnoea almost of a Cheyne-Stokes character. Oxygen, hot coffee per rectum, digitalin, strychnine, and strophanthin were given; in twelve hours the condition began rapidly to clear up, the cyanosis disappeared, and the patient became more fully conscious.

During the next twelve hours the patient vomited continually. The urine was scanty and dark brown in colour. The oliguria and symptoms of gastro-enteritis lasted five to six days, but the urine appeared normal within twenty-four hours. No other signs of acute toxic nephritis developed.

Among the patient's belongings a considerable quantity of a flaky white crystalline powder was discovered, which bore a general resemblance to the drugs of the antipyretic group. On warming with alcoholic potash and chloroform it gave the phenyl isocyanide reaction; this reaction was negative in several specimens of vomit and urine. A spectroscopic examination of the urine showed the characteristic band of methaemoglobin between C and D.

Reports of Societies.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on May 13th, Sir HALLIDAY CROOM, President, in the chair, a discussion was held on Dr. J. W. BALLANTYNE'S paper on *Still-births registration*. At the outset Dr. Ballantyne said that his paper was really a consideration of terminology, but the terms discussed had a practical bearing and not merely an academic interest. The difficulty lay in the terms "still-birth" and "dead-birth," and with their equivalents in foreign languages. In their use there was great confusion. The great problem standing in the way of definition was that in many cases one had to wait before being sure that any given birth was going to be a live-birth or not. His explanation of the confusion was (1) a lack of adequate recognition of the physiology of ante-natal life and of the changes which occur or may occur at birth, and (2) the habit which the public, with the connivance of the profession, and the profession itself in some places, had got into of regarding still-birth as a synonym of dead-birth. As Parliament was soon to bring in legislation dealing with "still-births" and their registration, it seemed well to discuss the terminology before the words "still-birth," "dead-birth," "live-birth," etc., were finally crystallized along erroneous lines. The definitions he had drawn up had been unanimously adopted by the council of the society. Dr. LESLIE MACKENZIE (Local Government Board) felt that three things hung together—the notification of births, the proper regulation of midwives, and the whole question of infant mortality. When the notification of births became universal, it would mark an advance. The Local Government Board had practically decided, where the Act was not adopted, to have it done by themselves. He thought that along these lines the providing of proper training of midwives in connexion with the Midwives Act would be good. It should include definite and special teaching on such aspects of the pathology of still-births as were desirable. He had some doubt as to whether the distinctions which Dr. Ballantyne had made, though scientifically necessary, were of practical value. In spite of the risk of confusion, he thought that a vast amount of useful information could be got, even though some considered still-birth one thing, live-birth another thing, and dead-birth another thing, while others did not differentiate sufficiently between them. He thought that even a limited amount of statistics in the hands of good men, such as the local authorities of Glasgow and Edinburgh, would be of great value. If the Registrar-General had to distinguish five forms of tuberculosis and two or three forms of pneumonia, it was not asking very much for medical men to make these distinctions as regards births. Dr. J. C. DUNLOP (Registrar-General's Department) agreed with Dr. Ballantyne as regards the general lines he had laid down. He considered, however, that notification, not registration, was the best method of acquiring and co-ordinating the information, because registration was not an administrative machinery for the production of vital statistics. These were a by-product. Registration was done by men with no medical knowledge, and there was no medical supervision by this machine until it was too late to make any inquiries which might be necessary under these circumstances. In regard to notification there was, however, complete medical supervision. The registration of these cases, moreover, did not fit in with the established system in Scotland. There were three registrations—marriages, deaths, births. The birth register only dealt with children who lived, in order that they might have, when they grew up, their civil rights established. If one introduced other registers for miscarriages, dead-births, and still-births, he feared the ordinary system of registration would be upset. He would suggest three considerations why the medical officer should be directly notified: (1) The information was secret; (2) the information was passed on to a man with the technical knowledge necessary to appreciate it, and (3) it in no way complicated the present system. Professor LITTLEJOHN thought that the chief function of statistics was not purely civil; registration had been influential in the direction of preventive medicine. He thought that Dr. Ballantyne's definitions might be simplified. They wanted to know, firstly, of the existence of abortions and dead-born children. Let there be a general notification of dead-born children, whether they had died some weeks before or during birth. This admittedly did not give all the information they wanted. But how were they to discover in ordinary cases whether a child died of syphilis, from the cord being round its neck, or from other birth causes? Secondly, they wanted a record of live-born children. He doubted if "still-birth" was a useful definition. Many causes might give rise to it. If it became alive by the skill of doctor or midwife it should be called live-born. Dr. BERRY HART thought that one could not limit the utility of registration to its civil value. It would give information regarding the causes of fetal death, syphilis, rickets, etc. He agreed that it was doubtful if the introduction of "still-birth" would be of any value. If a child lived only a few minutes it should be classed as dead-born; if it was still-born and lived for days it was a live-born child. As to abortions, he thought the statistics would be worthless. Dr. KEPPIE PATERSON thought that "still-births notification" would cover the case better. In maternity hospitals and in dispensary practice the information sent to the medical officer of health would be valuable; not so as regards private practice generally. Many dead-births were syphilitic in origin, but the majority of those giving evidence before the Commission on Venereal Diseases were against compulsory notification. If the doctor were compelled to notify an abortion or dead-birth as syphilitic, there would be trouble. The husband would deny it and would refuse a Wassermann test. And if the cause of dead-births was not to be put in, where was the value of the statistics? Dr. A. H. FREELAND BARBOUR thought two classes of cases had to be distinguished: those in which the child died *in utero* and was expelled subsequently, at what time it did not matter, and those in which the child died during the process of labour. Dr. JAMES RITCHIE advocated the compulsory notification of births after twenty-eight weeks' gestation. Dr. HAIG FERGUSON thought that the idea of "still-birth" was so firmly

established in the popular belief that for practical purposes it would be well to retain it. Dr. BALLANTYNE, in reply, thought that notification might be the better method, but it would require serious consideration. He agreed it would be well if one could simplify the classification to include only dead-birth and live-birth, but there was a danger of losing scientific precision if one simplified too much.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DERMATOLOGY.

AT a meeting on May 21st, the President, DR. J. J. PRINGLE, in the chair, the PRESIDENT showed a man, aged 64, who had suffered from mycosis fungoides since 1896. The first symptoms consisted of mycotic tumours on the face, which were removed surgically about 1900. Subsequently the disease became generalized over the trunk and limbs, but had been controlled in a remarkable manner by very free administration of *x* rays and latterly by prolonged exposures to a strong arc lamp. Despite the unusually long duration of the disease, his general health was practically unimpaired. DR. S. E. DORE: A man, aged 63, who presented a patchy erythematous and somewhat infiltrated eruption over the trunk and limbs of two and a half years' duration. The lesions were in many instances crescentic and showed central involution and raised, pad-like periphery; this suggested that they were probably early mycotic manifestations despite the absence of itching. DR. J. H. SEQUEIRA, in a paper on *Mycosis fungoides*, discussed its etiology, on the basis of 13 cases seen by himself and 61 case-histories obtained from literature. Of these 74 cases, 46 of the patients were males and 28 females. The extremes of age at which the disease came under observation were 15 and 75 years, the three youngest patients being females, respectively 15, 16, and 17 years old. Traumatism was the apparent determining cause in two of the recorded cases, but in most instances the patient had enjoyed good health up to the onset of the malady. Mycosis fungoides had been variously believed to be a granuloma, a form of sarcoma, cutaneous lymphadenoma, and lymphosarcoma, but was really a malady *sui generis*. In diagnosis blood examinations were of no assistance, but sometimes the diagnosis could be established in the pre-tumour stage on (*a*) clinical grounds or (*b*) the histology of the lesions. Infiltration and the tumours could be removed, suffering relieved, and life prolonged by *x*-ray treatment, but no real cure could be obtained. Death in some cases might be due to metastases in vital organs, but diarrhœa and general exhaustion were the usual causes. Sir MALCOLM MORRIS recorded two cases which had been recently under his care. The first patient, a man aged 52, was in an advanced stage of the disease, and, in spite of marked temporary improvement under *x*-ray treatment, one of the lesions in the frontal region persisted and eventually caused his death in April last. The second patient, a woman aged 28, was still under treatment, and the disease had been checked and a large number of the lesions had disappeared as the result of repeated doses of *x* rays. MR. J. E. R. MCDONAGH discussed the characters of lymphocytes in tumours of mycosis fungoides, illustrating his remarks by an epidiascopic demonstration; he concluded that mycosis fungoides was not a disease *sui generis*, but merely one of a series of affections of the lymphatic system; also that its diagnosis in an early stage could not be made by mere microscopic examination of excised portions of tissue. DR. DOUGLAS HEATH (Birmingham) said he thought that the multiformity of the cells in all stages of mycosis fungoides distinguished it fairly well histologically from other granulomata and from the sarcomata. He also recorded a fatal case of multiple sarcomata of the skin, in which the lesions resembled the "d'emblée" variety of mycosis fungoides. DR. LANCASHIRE (Manchester) recalled a series of 6 cases which had come for treatment to the Manchester and Salford Hospital for Skin Disease some years ago. They all came during a period of three or four years, and since then the speaker had seen only one case—a private one—in the early pre-mycotic stage. The hospital cases were in various stages, mostly advanced, and some with large tumours. All these cases had been preceded by "dry eczema" plaques, and all had had marked itching; all had died, but some were alleviated for a few years by *x*-ray treatment. DR. J. A. NIXON (Bristol) mentioned the case of a young married woman, aged 26, whose disease began with an eruption resembling tinea versicolor, and after six months tumours appeared upon erythrodermic areas. These tumours suppurated freely from multiple small crater-like openings. The usual temporary improvement followed the application of *x* rays. Autogenous vaccines were tried without the slightest improvement. Eventually, after two years, the patient became covered from head to foot with huge fungating tumours, and died suddenly from exhaustion. The case presented no resemblance either to lymphadenoma or leukæmia. The blood only showed some leucocytosis, which might have been accounted for by the suppurative process present. DR. GORDON WARD thought there were very close analogies between mycosis, leukæmia, and Hodgkin's disease. All might present anomalous skin lesions of a nodular nature; all were chronic, reacted well to *x* rays at first, but recurred later, and at times showed enlargement of glands and spleen. He would like to hear more of the histology of glands in mycosis fungoides. Were the changes spread throughout the gland as in leukæmia, or localized as in a secondary malignant focus? Were there any clinical characteristics of mycosis glands? Finally, was it not possible that some of the deaths from mycosis were really referable to the very massive doses of *x* rays given?

SECTION OF LARYNGOLOGY.

AT a meeting on May 27th, DR. D. R. PATERSON, President, in the chair, Professor GUSTAV KILLIAN gave a demonstration of *Suspension laryngoscopy* on the living subject. In the first place he demonstrated the instruments and the component parts of the apparatus required for suspension laryngoscopy, namely, the tongue spatula, the suspension hook, the mouth gag, the counter-pressor, the gallows, the operating table, and other instruments to protect the patient from haemorrhage following an operation and the operator from expectoration, especially in tuberculous cases. The tongue spatula in its most recently developed form is gutter-shaped and fitted with movable wings to prevent the tongue bulging too much at the sides. Another form is a tongue spatula which carries a second one, narrower and longer, for raising the epiglottis out of the field of vision. The suspension hook is attached to the tongue spatula. To prevent the slipping out of the tongue spatula the point of suspension is made to fall perpendicularly over the end of the tongue spatula or even in front of it. A mouth gag is absolutely necessary, as the mouth of the patient must be held continuously open and as widely as possible. The gag has the form of a bow, which is fitted to the lower part of the spatula hook, and can be screwed up and down. The counter-pressor is used to exert pressure on the cricoid region of the larynx, and thereby to bring the anterior commissure of the vocal cords into view. The gallows is the part of the apparatus upon which is suspended the spatula hook, and it is screwed to the operating table. The operating table is constructed to permit the top of the table being made higher or lower. This is done by the operator himself by means of a crank manipulation. One patient sent for examination was a man with a growth in the anterior part of the larynx. The patient having been placed under the influence of morphine and scopolamine, Professor Killian thoroughly cocainized the larynx. The patient then assumed the recumbent position on the operating table with the head well over the edge and the occiput resting on the adjustable support provided for the purpose, so that the help of an assistant to hold the head is no longer necessary. The various parts of the apparatus were then adjusted and the interior of the mouth, pharynx, and larynx was illuminated. The suspension method showed the larynx in general very much as one sees it in the direct method. An essential difference is that a complete view is obtained over the whole larynx, pharynx, and mouth cavity. The immediate neighbourhood of the larynx projects more plainly, the pyriform sinuses gape, whilst the arytenoid regions, and even at times the beginning of the cricoid plate, come forward from the vertebral column. The whole topography of the pharynx and larynx can be taken in simultaneously at a glance. In the discussion which followed the examination of this and other cases several members spoke of

the limitations of both direct and suspension laryngoscopy. The opinion generally expressed was that the direct method was being practised too indiscriminately, to the neglect of the old indirect method, and that for the removal of laryngeal growths, and more particularly for those situated in the anterior commissure, the indirect method was preferable, and that the instruments *par excellence* for removing such growths were the laryngeal forceps invented and introduced upwards of a quarter of a century ago by Sir Morell Mackenzie. At the same time it was generally agreed that suspension laryngoscopy was a method calculated to render excellent service under definite conditions and to enlarge still further the limits of diagnostic and therapeutic knowledge. Professor KILLIAN agreed that all patients were not suitable for suspension laryngoscopy. Suspension laryngoscopy was demonstrated by Professor Killian for the first time at the International Laryngological Congress in Berlin in 1911 and last year at the International Medical Congress held in London.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.

AT a meeting on May 13th, Dr. MARTINEAU in the chair, the following were among the proceedings: Dr. WALKER WOOD (1) recorded a case of double acute frontal *Sinusitis due to the diphtheria bacillus;* 4,000 units of anti-diphtheritic serum were given, and followed in three days by 2,000 units and removal of the anterior end of both middle turbinals; subsequent irrigation of the cavities led to complete subsidence of the acute symptoms; (2) showed a malleus and incus removed with a mass of cholesteatoma from the auditory meatus of a patient, aged 24, who had made no complaint of any discharge. The specimen was found while carrying out a routine examination. There had been aural discharge in childhood, but none for the last ten years. Mr. CHARLES HEATH remarked that while necrosis of ossicles was so rare that he had never found a dead ossicle in an ear, destruction of these bones by caries was extremely common. Mr. Heath (1) described a case of deafness accompanied by nasal obstruction due to an abscess in a mass of adenoids; there was a free flow of pus through both nostrils during their removal, and rapid and complete recovery afterwards; (2) showed a patient who had had *Acute otitis media* accompanied by vertigo due to swelling of the tympanic mucous membrane. There had been profuse discharge from, and pain in, the ear, both caused by retention of secretion in the mastoid antrum. The conservative mastoid operation was performed, and the hearing completely restored. In reply to questions, the exhibitor said that during the conservative mastoid operation he left at least one-eighth of an inch of the hinder part of the bony meatus to protect the ossicles and the drum-head. As to what conditions justified an operation, the full answer would take too long, but he would point out that the presence of unmistakable evidence of tympanic changes justified operation, because there was always more disease found at operation than could be previously recognized. Dr. FREDERICK SPICER showed a laryngeal case for diagnosis. In discussing it, Dr. JONES said he did not think it altogether hysterical—he had known a case of aphonia for eighteen months with a curious croaking voice.

DR. THEOBALD SMITH, professor of comparative pathology at Harvard, has been appointed director of the new department of animal pathology in the Rockefeller Institute for Medical Research in New York. Dr. Theobald Smith's name is well known to all workers in the fields of pathology and bacteriology.

THE twelfth International Congress of Ophthalmology is to be held at St. Petersburg in August, under the presidency of Professor Bellarminoff. The proceedings will commence at 10 a.m. on Monday, August 10th, and conclude on Saturday, August 15th. The organizing secretaries for the United Kingdom are Mr. W. H. Jessop, 73, Harley Street; Dr. George Mackay, of Edinburgh; and Mr. J. B. Story, of Dublin. Mr. Jessop is in charge of the arrangements in view for facilitating attendance at the congress of British oculists, and he would be glad to hear as early as possible from those who have it in mind to visit St. Petersburg on this occasion.

Reviews.

VITAMINES.

DR. CASIMIR FUNK is the author of an interesting volume in German on vitamines.[1] He has followed up and extended the pioneer work done by Eykman, Gryns, Fraser and Stanton, and the Japanese researcher Takaki on the causation of beri-beri, and attempted to isolate in a pure state those active principles which exist in natural foodstuffs, to the lack of which not only beri-beri but scurvy, rickets, sprue and pellagra are attributed. To these principles he has given the general name "vitamine." There are vitamines necessary for the maintenance of nutrition, and others necessary for growth. To these last he is now especially devoting his attention, in the hope of throwing light on the causation of cancer. The production of beri-beri by a diet consisting of polished rice is a signal proof of man's folly in meddling with natural foods by milling processes. Rice is polished to make it look nice, but it is essential that the rice-eating peoples shall eat the red unpolished rice, and in the matter of cooking they must boil it in a little water, and eat the rice with all the water in it. If this water is thrown away beri-beri may result. "Cured" rice is not much better than polished rice. An addition of fruit, or potatoes to a polished rice diet will prevent beri beri, but the most sensible plan suggested for diminishing the prevalence of this terrible disease is to tax heavily all polished rice in the rice-eating countries. If the poor people of this country lived on white bread and water to the same extent as the rice-eating coolies live on rice, there would occur no less extensive disease among them from lack of vitamines. The observations of Hopkins, and of Hill and Flack, show that a diet of wholemeal bread and water suffices to keep pigeons, mice, and rats in health, but that these animals cannot exist for more than a few weeks on white bread and water. The introduction of the potato to Europe is said to have put an end to the epidemics of scurvy, and this may be attributed to the fact that it brought an adequate supply of vitamines into the winter diet of the poor. A study of the literature concerning raw and boiled milk leads Dr. Funk to the conclusion that it is scarcely to be doubted that milk contains anti-scorbutic and anti-beri-beri substances. These are sensitive to heat, but the amount of destruction by boiling depends on the reaction and the duration of boiling. The amount of vitamines in milk is influenced also by the food of the cows. The food given to cows in winter may be poor in vitamines, and their milk may then contain almost none. Should the supply of vitamines be diminished by sterilization, it may easily be replaced by the addition of vitamine-containing substances.

Pellagra is attributed by Funk to the polishing of maize to remove the hard cuticle. The aleurone layer is removed during the process, and the maize impoverished in fat and vitamines. In an epidemic in Rhodesia recorded by Nightingale the substitution of unpolished maize in the diet had an almost magical effect.

Much yet remains to be done in this important field, and the reader will find in Dr. Funk's book an excellent summary of past researches and stimulating suggestions of new lines of investigation. The discovery of these subtle food properties has revolutionized our views on diet, and demands the attention not only of medical men, but politicians, who must consider the necessity of instituting some control of modern methods of milling and sterilizing food and of feeding, so that the health of the community does not suffer from want of them. The conclusion to be drawn is that every diet should be of natural food, fresh, and prepared in no other way than by cooking, and that the water in which food is cooked should be taken as soup or broth in the excellent French fashion.

In the last number of the *Journal of Physiology*, Dr. Funk publishes further evidence of the curative power of the vitamine he has separated from rice polishings. This vitamine added to polished rice suffices to keep pigeons in health while under observation for prolonged periods.

[1] *Die Vitamine, ihre Bedeutung für die Physiologie und Pathologie mit besonderer Berücksichtigung der Avitaminosen (Beri-beri, Skorbut, Pellagra, Rachitis).* Von C. Funk. Wiesbaden: J. F. Bergmann. 1914. (Sup. roy. 8vo, pp. 193; 2 plates; 38 figures. M. 8.60.)

ORGANOTHERAPY.

THE reader familiar with German will find a diffuse account of assertions made and facts recorded concerning the metabolic glands and internal secretions in a textbook of organotherapy edited by WAGNER VON JAUREGG and GUSTAV BAYER.[2] In the first chapters Dr. Holfer deals with the historical side of the subject, while Professor Alfred Kohn gives an account of the morphological principles, illustrating this with thirty-five figures. Professor Jauregg then treats of the thyroid and Professor Penèles of the parathyroids. The section on the thymus is by Dr. Carl Basch, that on the hypophysis by Dr. L. Borchardt, and that on the pancreas by Dr. R. Ehrmann. The suprarenal bodies and chromaffin system are fully considered by Dr. G. Bayer, and the sexual glands by Dr. A. Foges. Finally, Dr. Bayer deals with the organotherapeutic researches carried out with organs which do not come under the class of endocrine glands. At the end of each section is given a list of the pharmacological preparations which have been placed on the market. The production of such preparations seems to be overdone. Dried liver, spleen and kidney tablets or powder, powdered bronchial glands, dried brain and spinal cord powder, muscle juice are all in the list. Surely the patient can eat his devilled kidney, his liver and bacon, or sheep's brains, in the ordinary way. He does not want ordinary culinary dishes put into tablet form or take his meat as a powder with a spoonful of jam. On page 154 we find it stated that the ingestion of thyroid gland accelerates the formation of callus in cases of fracture. On page 174 a deficiency of bone growth and callus formation is shown after removal of the thymus in young animals. Photographs are given showing an astounding difference between dogs of the same litter two months after removal of the thymus. The testicles also are of very small size in young rabbits after removal of this organ. From a child aged 9 weeks the thymus was removed owing to a stenosis of the trachea; it suffered severely from rickets, and only learnt to walk when 4½ years old. On page 217 we read of the results of removal of a tumour of the hypophysis in a case of acromegaly. After eight days there was an astonishing reduction in the size of the hands and feet, and the patient recovered completely. Out of 16 cases of tumour of the hypophysis operated on by Eiselsberg there were six in which acromegaly existed, and was in part very favourably affected; twelve survived the operation. On page 303 is given a table showing the sensitivity of the biological tests for adrenalin; 1 part in 800 million when circulated through the blood vessels of the frog will constrict them; 0.00001 mg. introduced into the carotid of a dog affects the nasal blood vessels. The case of a young man is noted (page 319) who died suddenly after a strenuous bicycle ride. The autopsy, carried out by Schmorl, yielded nothing which could explain his death, except the one fact that the adrenal glands did not yield the usual colour reactions. He had apparently exhausted his supply of adrenalin. It is stated that in pregnant women the two outer layers of the cortex of the suprarenal show active signs of cell division. The inner or reticular layer shows cells coming closely in contact with capillaries, and these form pigment which is secreted into the blood. The pharmacological list of preparations made by different firms from the suprarenal gland number 37, each with its trade name. The research work of physiologists is not always put to the best uses.

DIETETIC TREATMENT OF DISEASE.

THE little work on the dietetic treatment of internal diseases by Professor GROBER[3] contains the material which he has been accustomed for some years to embody in lectures to his class of students of medicine in the University of Jena. As such a course should, it follows recognized practice and gives a clear and succinct account of that which students ought to learn but too frequently in British medical schools do not get from their teachers. It is true that we have improved somewhat during the last forty years from the days when, except perhaps in the case of diabetes, no physician gave any instruction in the wards about diet, such details being left to the ward sister. Professor Grober complains that even now it is too often supposed that dietetic treatment is required only in metabolic diseases, and urges that it is an essential part of the curative measures to be employed side by side with physical and pharmaceutical means in the treatment of all internal diseases. He points out the desirability of medical practitioners acquiring some knowledge of cookery as being quite as likely to be useful to them as a knowledge of dispensing. He deprecates the use of fixed printed diet tables, as each case must be individualized. In fixing a scale of nourishment based on heat units it is usual to allow 35 heat units for each kilogram of body weight, but in the case of fat people this would be too high, while in those who are emaciated it might be too low. Therefore it is desirable to adopt a standard ratio of weight to height, according to Quetelet's scale, which gives a kilogram for each centimetre of height over 100. Unfortunately we are not in the habit of measuring our patients in metres and centimetres, and it is not so easy to convert feet and inches on the spur of the moment, but it is quite worth while constructing a scale for heights from 5 to 6 ft. from the decimal scale and keeping this at hand for reference.

The several lectures deal with general debility, pyrexia, diseases of the stomach and bowels, chronic constipation, diseases of the liver and pancreas, obesity, diabetes, gout, heart diseases, and renal diseases. As the reader is rightly left to construct his own dietary for his cases, he ought to have been provided with tables of the chemical composition and calorific value of the ordinary articles of diet with which he has to deal, or a reference to some publication in which they may be found, as without these he may find it difficult to know how to proceed. As already stated, Professor Grober's teaching is sound, but he follows the usual German practice of making up the number of heat units by what seem to us to be excessive quantities of fat.

A HISTORY OF MEDICINE.

DR. GARRISON says that the object he had in view in writing his *Introduction to the History of Medicine*[4] was to furnish the medical student or the busy practitioner with an outline of the history of medicine, and to place him in possession of a large number of important facts which may be of use in his professional work or which it may be desirable for him to know as part of his medical culture. He has aimed at lucidity and conciseness of statement rather than at a lengthy exposition of the results of original investigations. He surveys the whole history of the evolution of the healing art from primitive superstitions to the present day, connecting it with the general history of mankind in a manner that shows it in its true perspective in the development of civilization. His position in the Surgeon-General's Library at Washington has given him exceptional advantages in writing his history, and he has used his opportunities to good purpose.

Lister said the life of a scientific man was wholly in his work, and he therefore deprecated details given to show the man in his habit as he lived. We are glad that Dr. Garrison does not share this view. He has enlivened his pages with biographies of the men of greatest importance in the history of medicine, and with interesting details of professional life at the corresponding periods. The first chapter, which deals with the identity of forms of ancient and primitive medicine, shows how old and universal are many of what may be called the rites of medicine. Thus the Indian knew the importance of keeping the bowels open and the skin and kidneys freely acting; the warm spring and sweat oven were his substitutes for a Turkish bath. Emesis or catharsis, followed by a vapour bath and a cold plunge, with a dose of willow bark decoction or salicin, was the North American Indian's treatment for intermittent and remittent fevers, while for rheumatism he used a vapour bath and cimicifuga. Massage was practised from time immemorial by the Indians, Japanese, Malays, and East Indians; hypnotism

[2] *Lehrbuch Organotherapie.* Von Wagner von Jauregg und G. Bayer. Leipzig: G. Thieme. 1914. (Sup. roy. 8vo, pp. 527; 82 figures. M.14.)

[3] *Diaetetische Behandlung innerer Krankheiten.* Von Dr. J. Grober. Jena: Gustav Fischer. 1914. (Med. 8vo, pp. 157. M. 3.50.)

[4] *An Introduction to the History of Medicine, with Medical Chronology, Bibliographic Data, and Test Questions.* By F. H. Garrison, A.B., M.D. Philadelphia and London: W. B. Saunders Co. 1914. (Med. 8vo, pp. 765: illustrated. 25s. net.)

was well known to the Hindus. Inoculation against small-pox was employed by the Hindus, Persians, and Chinese; it is still in use among the North and Central African tribes and races. The ancient Hindus performed almost every major operation except ligation of the arteries. Ovariotomy, according to Garrison, has been done by Indian and Australian natives, and Felkin witnessed a native Caesarean section in Uganda in 1878.

"Drowsy syrups" of the most varied kind have been used from very ancient times by different peoples. Opium, Indian hemp, henbane, hemlock, were known to the Orientals and the Greeks, and mandragora to the Egyptians, Babylonians, and Hebrews. Some of these things were recommended for surgical anaesthesia in the thirteenth and fourteenth centuries, by Hugo di Lucca and his son Theodoric. Primitive man knew the artificial paradises to be found in narcotics and intoxicants like alcohol, opium, hashish, or mescal; to him, too, we owe tea, coffee, cocoa, and tobacco. It is curious how many of the remedies used in medicine have been introduced from outside the pale of the profession. In illustration of this Garrison quotes the following passage from Oliver Wendell Holmes:

> It (medicine) learned from a monk how to use antimony, from a Jesuit how to cure agues, from a soldier how to treat gout, from a sailor how to keep off scurvy, from a postmaster how to sound the Eustachian tube, from a dairy-maid how to prevent small-pox, and from an old market woman how to catch the itch insect. It borrowed acupuncture and the moxa from the Japanese heathen, and was taught the use of lobelia by the American savage.

This list might be largely extended, and it may be added that many of the remedies most in use until quite recently were due to some accidental discovery of their properties.

In the chapters devoted to Egyptian, Sumerian, and Oriental medicine, the little that is known is clearly and accurately summed up. Of Greek medicine a good account is given; a useful feature in these chapters is a list of the most important editions of Hippocrates, Celsus, and Galen. Rather less than four pages are devoted to Byzantine medicine, and the Mohammedan and Jewish periods are described in about nine. The author has, however, within this compass contrived to say nearly everthing essential, and the absence of long-winded descriptions of nebulous doctrines adds very much to the readableness of the book. The deplorable effects of the divorce of medicine from surgery in the Middle Ages are clearly shown. Brief accounts of the leading writers on medicine are given, and there is an interesting history of hospitals and sick nursing.

Dr. Garrison illustrates his text with all kinds of side-lights. He reproduces miniature paintings which illuminate certain manuscript codices of the Salernitan masters, compiled and edited by Piero Giacosa in 1901. A description is given of pictures painted in the fifteenth century, showing scenes in the lying-in chamber. The period of the Renascence and the Reformation is dealt with very fully. Notwithstanding the great upheaval in men's minds caused by the unsealing of the treasures of Greek science, medical practice during that time was bound up with superstition, herb doctoring, and quackery. The discovery of the circulation of the blood in the seventeenth century ushered in the dawn of a scientific age.

The history of the progress of physiology is made more interesting, more human it may be said, by being told biographically—that is, in association with the lives of the pioneers in scientific research. Portraits of many of these give a living interest to the narrative. The same method is adopted with regard to clinical medicine, surgery, and other branches of the healing art. The history of the medical schools of Leyden, Paris, and Montpellier, with the teachers who made the places famous, is also touched upon, and we are made to understand the difficulties under which medicine had to be studied at that time. A history of pharmacopoeias, with a note on the proprietary preparations of the seventeenth century, is of special interest. Glimpses are given of the charges of apothecaries and the fees of physicians. Quackery, which follows the advance of rational medicine like a shadow, finds a place in the account of the development of medical science up to the present day.

Dr. Garrison's book is the most readable, and in some respects the most valuable, of medical histories. The record of progress is enlivened throughout by touches of human interest. The author is never dull; his book though heavy to hold is light to read. We congratulate him on having produced a fascinating volume which, while full of solid learning, can, unlike most histories of medicine, be read from end to end without a yawn.

"THE POST-GRADUATE SOCIETY."

An organization called the Post-Graduate Society has recently advertised in the medical press, and also extensively by post, a series of typewritten lecture to be supplied to subscribers. The society offers a course of confidential lectures on medical tactics, and another on therapeutics, and apparently supplies every month one lecture on each subject for six months. The fee for the whole course is stated to be six guineas. The lectures on tactics contain a fund of worldly wisdom and advice on the art of gaining patients by carrying out certain rules which are explicitly laid down. The practitioner, for instance, is instructed to recognize that at an interview with a patient he must make sixteen distinct impressions on him, among which are that the doctor is pleased to have the privilege of seeing him, and takes a hopeful view of his case. Many rules are laid down concerning the examination of a patient, some of a negative character. The practitioner is advised never to show a patient a book or to tell him that he is prescribing a new drug. The routine examination of all the different systems of the body—alimentary, vascular, etc.—is to be gone through in every case. There are paragraphs devoted to advice concerning the doctor's clothing and boots, the furniture of his consulting-room, the appearance of his front garden and of his motor car. A "cocksure" manner is advised under all circumstances, and the practitioner is told that patients do not make allowances for any forgetfulness or want of tact. The patient has to be appealed to through his reason, his emotion, and his aesthetic faculties, and various rules are given for producing satisfaction in his mind, a satisfied patient being a strong "advertisement" for the doctor. The author has no scruple in advising the doctor to use every legitimate means of impressing the patient with his niceness and cleverness, and speaks highly of the "moral effect" of a sphygmograph. There is one curious piece of advice on abdominal palpation which hardly seems to conform to the rest, which is above all things practical. In obscure cases it is advised that the patient be examined in a hot bath and that sometimes it is necessary to raise the temperature of the bath to 120° F. before complete relaxation occurs. The practitioner should have been warned that the water will feel very hot to him. The lectures on therapeutics cover a wide field, from the preparation of a mist. placebo conc.—which is "much relished by old chronics"—to the choice of a spa for the treatment of various conditions, including insomnia. Prescriptions are given for all manner of skin diseases, indigestion, asthma, and the more common diseases which the practitioner is called on to treat. The composition of proprietary foods, children's dietaries, the extraction of teeth, massage, Nauheim treatment, are among the matters mentioned, and the list will give an idea of the subjects covered. Various books, preparations, and appliances are recommended to the practitioner, and he is told where they can be obtained. Most of the therapeutic information is available in the ordinary textbooks; it is supplied with a running commentary of "tips" regarding the suitability of the agent for the treatment of a particular case and for obtaining the necessary impression on the patient. Little exception need be taken to the elements advised to increase the business side of the doctor's practice. The prospectus appeals to the practitioner who has missed failure but has only obtained moderate success, and promises to show him how his success might be made much greater. Few such men will read the lectures without remembering times when to have recalled such precepts of worldly wisdom as are inculcated might have saved a situation which ended unfortunately from a business point of view. How far the perusal of such a course could alter the practitioner's manner and bearing and impressiveness is a matter of some doubt. The conscious effort required to conform to a definite standard would in most cases lead to artificiality, against which vice the practitioner is specially warned. And the standard seems to be that of a shopkeeper who wishes to please and retain his customers and enlarge his circle.

HYSTERIA AND ITS TREATMENT.

DR. P. SOLLIER has been writing on the subject of hysteria since the year 1887, and his latest views as to its causation and treatment are stated briefly in a work[5] that has appeared recently. He begins by setting out and criticizing the various psychological theories of hysteria commonly held in France, and proceeds at some length to develop his own. He believes that hysteria is the expression of a torpor, inhibition, or sort of sleep, of one part or another of the cerebral cortex, thus advancing a physiological rather than a psychological explanation of the condition. He holds that all the various viscera and organs have their own special areas of representation in the cortex, very much as the muscular system is represented in the sensori-motor area of the cortex. In hysteria there is a physical functional disturbance, more or less complete, of longer or shorter duration, of greater or less extent, in the action of these various centres; they enter into a condition of sleep, but whether this sleep is identical with or only analogous to normal slumber Dr. Sollier leaves undetermined. Hysteria is therefore to be regarded as a special mode of action of the brain rather than as a disease.

As for treatment, he points out that the less a hysterical patient likes any line of treatment the more good it is likely to do if firmly applied. Isolation from the family is indispensable; the duration of the treatment cannot be foretold, but is sure to be long; drugs and surgical interference are never called for in pure hysteria, though examinations under chloroform may often be indicated; the return of the patient to the normal circumstances of life is often a matter of no little difficulty. Forced or resisted muscular movements are often most useful in the treatment; the patient should be under the care of a competent medical man, and should be told the truth and nothing but the truth, though not, perhaps, the whole truth. Dr. Sollier holds (we think wrongly) that hypnotism is no more than a modality of the hysterical state; it is not to be used in the treatment of any but severe cases of hysteria, and, in general, Dr. Sollier does not approve of its employment. The book is excellent, well written, moderate in statement, and full of detail. It may be very warmly recommended to all who are interested in the subject of hysteria and its treatment.

CHEMISTRY.

IN *Chemistry and its Borderland*[6] Mr. A. W. STEWART has been very successful in providing the general reader with an intelligible account of some of the latest results attained by scientific work in the field of chemistry and the domains bordering upon it. The discovery of argon, neon, and the other inert gases, and the revolutionary results of work on radium and its congeners, are matters which readily appeal to any intelligent reader, and are favourite subjects for popular treatment; in addition to these, Mr. Stewart has interesting chapters on the work of the spectroscope, the spatial relations of atoms within molecules, on colloids and the ultra-microscope, and on immuno-chemistry, the last dealing specially with Ehrlich's side-chain theory of the action of antitoxins; many other matters are dealt with more briefly. The book, however, is more than a popular account of certain scientific work; the immense value of the results obtained in the development of industry and commerce and the improvement of the health and wealth of mankind, is insisted on in such a way as to lead up to the later chapters, which deal with the methods of chemical research and with the existing organization for the encouragement and promotion of original work; the author gives an outline of the changes he considers necessary for the better utilization of the ability available for such work. Although insisting on the immense commercial value of research work to the community, he does not suggest that any large pecuniary rewards should be held out as inducements to original workers, but is only desirous of removing some of the difficulties and discouragements which now often compel those capable of good research work to turn aside to other more remunerative employment. The matter in which he considers an improvement most urgently required is in providing a modest living, by scholarships and research fellowships, for those having a bent for original investigation, during the time they are winning their spurs at such work. The usefulness of such scholarships at present provided by the Commissioners for the 1851 Exhibition and the Carnegie Trust for the Scottish universities, most of them being of the value of £100 to £150 per annum, is clearly shown, and a strong case is made out for increasing the amount of public money expended in such ways and in extending the number of moderately paid university positions, the holders of which could devote a large part of their time and energies to research. The outlines of a scheme for the better development of research are given in an appendix, together with the existing regulations of the Carnegie Trust and the 1851 Commissioners. It is to be hoped that the book will find a large number of readers, and it may be expected to do its share in helping to bring about a state of public opinion which will permit the spending of more public money than at present on scientific work of this kind.

The English translation of HOLLEMAN'S *Textbook of Organic Chemistry*[7] has an assured position in this country, which is not likely to be impaired so long as it is brought up to date by frequent revision and extension. In the fourth edition, now published, about an eighth of the matter is new; additional space has been allotted to the applications of physical methods, such as refraction, viscosity, etc., while the section on tautomerism has been rewritten and the chapters on benzene derivatives rearranged. There is a short introductory section on laboratory methods and classification, and the remainder of the work is divided into two parts, devoted respectively to aliphatic and cyclic compounds. The more advanced chapters of the former include a short account of the proteins, with the synthesis of polypeptides by Emil Fischer, while the second part contains a chapter on the alkaloids, about a dozen of the principal ones being discussed individually in a brief manner.

HOLLEMAN'S *Laboratory Manual of Organic Chemistry*[8] is described as an appendix to the author's textbook referred to in the preceding paragraph. It consists of short working directions for a series of laboratory operations, following the same arrangement as the textbook, and proceeding from quite simple experiments to much more elaborate ones; about 300 operations are included, comprising the preparation of many of the chief organic bodies, and the carrying out of a variety of tests. The new edition has been revised in a corresponding manner to the new edition of the textbook, and the paragraphs have numbers referring to the latter. The book is an excellent laboratory companion for the student.

UROLOGY.

THE *Practice of Urology*,[9] by CHARLES H. CHETWOOD of New York, is the best book we have met with on the subject by an American author. We can confidently recommend it as a practical and up-to-date treatise on the complicated subject of urology. The author states in his preface that "the characteristic features embodied in this volume, which give to it modern status, are the present local treatment of gonorrhoea, the application of serum diagnosis and serum therapy, advancement in cystoscopic and functional renal diagnosis, various features in surgical technique, and the latest on salvarsan therapy." He has had the advantage of the assistance of Dr. Faxton E. Gardiner in the preparation of the chapters on embryology and anatomy, which are admirable features of the book, and we fancy the influence of this helper is seen in

[5] *L'Hystérie et son traitement.* Par le Dr. P. Sollier. Deuxième édition, revue. Paris: F. Alcan. 1914. (Cr. 8vo, pp. 308. Fr. 4.)

[6] *Chemistry and its Borderland.* By A. W. Stewart, D.Sc. London: Longmans, Green, and Co. 1914. (Post 8vo, pp. 323; 3 plates; 11 figures. 6s. net.)

[7] *A Textbook of Organic Chemistry.* By A. F. Holleman, Ph.D., F.R.A Amst. Edited by A. Jamieson Walker, Ph.D.Heidel., B.A., assisted by E. Owen Mott, Ph.D.Heidel., with the co-operation of the author. Fourth English edition, partly rewritten. London: Chapman and Hall. New York: J. Wiley and Sons, Inc. 1914. (Med. 8vo, pp. 639; 79 figures. 10s. 6d. net.)

[8] *A Laboratory Manual of Organic Chemistry for Beginners.* By A. F. Holleman, Ph.D., F.R.A.Amst. Edited by A. Jamieson Walker, Ph.D.Heidel., B.A., with the co-operation of the author. Second edition, partly rewritten. London: Chapman and Hall, Ltd. 1913. Crown 8vo, pp. 83. 4s. 6d. net.)

[9] *The Practice of Urology: A Surgical Treatise on Genito-Urinary Diseases, including Syphilis.* By Charles H. Chetwood, M.D., LL.D. London: Baillière, Tindall, and Cox. 1913. (Roy. 8vo, pp. 829. 21s. net.)

other parts of the book, notably in the chapter on hydronephrosis, which is the best of the chapters that deal with the kidney.

There is little that is original, and the author has drawn largely on the wealth of German and French urological literature. He appears to have little acquaintance with modern English practice. For instance, if he were to use the aëro-urethroscope invented by Hurry Fenwick and perfected by Wyndham Powell, he would not describe ulcerations and erosions of the urethra. These ulcerations are never seen with the aëro-urethroscope, which, being passed down under air distension, under control of the eye, does no damage to the urethral mucosa.

The chapters on gonorrhœa are a little disappointing, as they are very prolix on theory and not sufficiently clear on details of treatment, and it is not of practical assistance to discuss prostatitis in a separate chapter under the heading of diseases of the prostate, when it is part and parcel of most cases of gonorrhœa. We are glad to read a book which is an earnest advocate of local treatment from the very onset of acute gonorrhœa, but we are surprised to read that the author has obtained better results with injections than with Janet's irrigations.

The chapter on serum and vaccine therapy is excellent in theory, but here again it is disappointing in practice, as none of the author's own detailed results in this line of treatment are given, and we should be surprised to learn that they are as roseate as the remarks on theory would lead us to believe.

A good feature of the book is the excellence of the illustrations; those illustrating operative surgery are very clear and useful, and Plate III, a coloured plate of conditions seen by the cystoscope, is a masterpiece.

NOTES ON BOOKS.

The first volume of the *British Journal of Surgery*[10] presents a very handsome appearance owing to its ample page, well-spaced type, and numerous illustrations. It comprises the first four numbers of the periodical and contains some 750 pages. The papers are for the most part of a technical sort, and will appeal mainly to operating surgeons, but each number in the volume has as a frontispiece a portrait followed by a brief biography of an eminent surgeon of the past. Those in this volume are Lord Lister, John Hunter, Sir Astley Cooper, and John Abernethy. Moreover, there are accounts of visits to certain surgical clinics at home and abroad, and some notes — anonymous, as we observe — on "instructive mistakes," which will be read with interest by every practitioner.

A useful little work on *Health Preservation in West Africa*[11] has been composed by Dr. J. C. Ryan, and Sir Ronald Ross has written an introduction to it, in which he describes the remarkable improvement in the health of Europeans which has taken place on the West Coast in the last ten years. He believes that Dr. Ryan's book is full of wise hints and of information useful to everyone, and in this we heartily agree. All the tropical diseases usually met with in Africa are dealt with. Due importance is given to sanitation, and in addition the subjects of dietary, exercises and treatment find a place. If the laity will only peruse its pages they will gain information which will save them from much trouble and sickness.

[10] *The British Journal of Surgery.* Bristol: John Wright and Sons, Ltd.; London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1914. (30s. net.)

[11] *Health Preservation in West Africa.* By J. C. Ryan, L.R.C.P.I., L.M., L.R.C.S.I., L.M., with Introduction by Sir R. Ross, K.C.B., F.R.S. London: John Bale, Sons, and Danielsson, Ltd. 1914. (Cr. 8vo, pp. 108; 1 illustration. 5s. net.)

The tenth Italian Congress of Midwives will be held at Venice on June 14th and two following days. The Sanitary Chamber of Venice has consented to form the Executive Committee of the Congress, with Professor Guicciardi as chairman.

The Italian Medico-Parliamentary Committee at a recent meeting discussed the conditions of service of health officers, the hygienic duties of naval and military medical officers, and the modifications that should be made in the law regarding hospital appointments. A draft scheme was submitted for a conference of the directors and medical staffs of hospitals to study various questions relating to hospital administration which it is proposed to hold in Rome.

DENTAL SEPSIS.

By J. G. Turner, F.R.C.S.

Strictly speaking, dental sepsis means foulness of the teeth (Gr. σήπο = make putrid); but the meaning of sepsis has been enlarged to indicate, in a loose, indeterminate fashion, the presence in noxious amounts of any germs and their products other than a few well-recognized varieties—the so-called specific germs—such as *B. tuberculosis, B. diphtheriæ. Treponema pallidum*, etc. It may be premised, however, that the word is not ill-chosen, since a foul smell is present in most cases of dental sepsis.

The term "dental sepsis" is here proposed because it indicates the dependence of the septic condition on the presence of teeth. Just as well as the term "oral sepsis," it can be made inclusive both of results and causes—of pyorrhœa alveolaris, dental caries and abscess, and tartar, which are found in varying proportions in a septic mouth, as well as of the germs, with or without decomposing food and débris, which constitute the original state of sepsis.

Nowadays no one will be found to dispute the existence of dental sepsis; but while on the one hand many regard its recognition as almost revolutionizing the practice of medicine, and as having a large influence on surgery, others are inclined to think that too much is made of it. If we put the former view in its extreme form, we may say "every mouth is septic, and wherever there is sepsis there is infection, actual or potential." The latter view we may similarly epitomize thus: "There are germs in every mouth, but only seldom in such amount as to be injurious; moreover, the individual may be 'salted' by his mouth-germs."

Definition of Terms.

Consideration of the following facts may help to a reasonable attitude towards dental sepsis. To begin with, the conditions of dental sepsis and the terms used in describing them need consideration.

Septic Organisms in the Normal Mouth.

The simplest condition of dental sepsis is that in which the oral tissues are healthy and the teeth sound and free from deposits of tartar, but in which germs of various sorts are to be found harboured among the teeth, and, to a lesser extent, free in the oral fluids.

This is the normal mouth; it is healthy, but it is a potential source of danger.

Pathological Consequences of Sepsis.

The deviations from this normal condition are to be traced on the one hand to the deposition and stagnation of germs, food, and other foreign matter, including lime salts of the saliva forming tartar, on and among the teeth, and, on the other, to the many forms of tissue reaction exhibited by soft tissues and bone to injury (used in its widest physiological sense).

Starting from this condition of normal sepsis—a condition which is universal among animals living in a germ-laden environment—a point is soon reached at which the microscope is no longer needed to demonstrate the presence of bacteria; they are present in tangible masses as a greasy white deposit sticking to the necks of the teeth. The mouth is now definitely septic, and the inflamed state of the edges of the gums shows that they, at least, resent the presence of this deposit.

Solid Stagnation.

Leaving dental caries aside for the moment, the earliest abnormal state to which a distinct name may be given is that in which, although the gums are clinically or to the naked eye healthy, yet from under the gum-edge there may be squeezed up a pultaceous mass shown by the microscope to be almost entirely composed of germs. This may be called the stage of solid stagnation.

Often this pultaceous mass has a fetid smell, and we have the earliest stage of putrid stagnation, depending in this case probably on decomposition of mucus, dead epithelium and leucocytes, and comparable to the mucus plugs found in the tonsil.

Putrid Stagnation.

Putrid stagnation may next be noted, since it is a condition which may occur without visible tissue changes,

though generally it is associated with the tissue changes included under the term "pyorrhoea alveolaris."

Apart from the condition just mentioned, it is due to the decomposition of food débris among and around the teeth, and in the cavities of carious teeth.

Marginal Gingivitis.

The earliest clinical sign shown by the tissues (other than teeth) is a chronic or subacute gingivitis. The edge of the gum is blue or red, and swollen; the interdental pad of gum protrudes instead of receding slightly between the teeth. The condition may be general or localized to the gum around one or two teeth.

In a short time another clinical sign is to be found. The sharp line of demarcation which normally exists at the junction between the mucous membrane of the cheek or lip, which has so copious a blood supply, and the tightly bound down, pink muco-periosteum (or gum) disappears on account of inflammatory engorgement of the latter. This line is well called by American dentists the health line. The gingivitis may develop into a persistent purulent form, the pus coming from the toothward surface of the gum. A generalized purulent marginal gingivitis of this type is not common, but in all cases of persistent marginal gingivitis small amounts of pus can be demonstrated by the use of a fine steel probe. In this condition there is no deepening of the periodontal sulcus except by swelling of the gum edge.

Oedematous and true inflammatory overgrowth may next lead to local or general hypertrophy of the gum margin.

"Pyorrhoea Alveolaris."

From the stage of marginal gingivitis we pass to destruction of gum and formation of pockets. This is the stage which is spoken of as "pyorrhoea alveolaris." The term means "flow of pus from the alveolus," and is applicable strictly only to those cases in which pus can be seen, clinically, to exude from the sockets. It is but one stage in a generally chronic destructive disease of the alveolus—a stage, moreover, which is not necessarily present at any period of the disease. In so far as it tends to rivet the mind on one sign of disease and to make that sign the one index of danger it is a term which should be discarded, since it is abundantly evident that even in its absence danger may and does exist. If, however, it be kept to its original use, or if it be agreed to include under the name "pyorrhoea alveolaris" the whole range of inflammatory tissue reaction to septic infection gaining access through the periodontal sulcus, then in one of these senses the term may be useful.

The tissue reaction is generally subacute or chronic, but sometimes acute or even fulminant.

The acute reactions take the form of abscess or even rapid spreading necrosis, when the disease is generally reported as acute septic necrosis of the jaw. The acute abscess often appears in connexion with a tooth which has a living pulp and in a mouth showing little obvious pocketing, destruction, or even swelling of the gum; indeed, the mouth may look surprisingly healthy. Sometimes it is impossible to trace the breach of tissue by which infection has reached the part of the tooth socket at which the abscess has formed, and tissue infection by a living organism seems the only explanation.

It is important to have a clear conception of the normal gum, pale pink in colour, thin edged, closely applied to the neck of the tooth, with slightly receding interdental pads filling in the interdental spaces. The subacute and chronic reactions are the more common. They show themselves in chronic hyperaemia of the gum; in local and general oedematous swelling of the gum; in local or general hypertrophy of the gum; in local or general destruction of the gum—disappearance of the interdental gum pads and denudation of the teeth; in local bony overgrowth forming bosses over the roots of the teeth, which later may fuse together into shelves or ledges, running almost round the mouth, mostly on the outer side; in sclerosing osteitis; in general bone hypertrophy leading to great thickening of the alveolus; or to general osteosclerosis with, in the mandible, enlargement of the body of the bone; in chronic osteo-porosis and destruction of bone, leading to the formation of pockets and eventually to loss of the teeth; in pus formation, which may be plentiful and clinically demonstrable or at no time more than microscopic. The caries may be purulent or dry. The dry form may change to, in fact generally ends in, the purulent; the purulent may be arrested so far as to become dry.

Pain is not a frequent symptom—or at least not such as to bring the patient to the dentist—but its existence may often be elicited on inquiry, especially in the subacute cases, where the gums are congested, and in these cases, as happens when other mucous membranes of the head are engorged, there is often pain on stooping or running. There may be pain due to irritation of the exposed roots of the teeth, though these are generally protected from outside influences by a layer of tartar or putrifying débris.

The engorged gums bleed readily, leaving no trace of breach of surface. There is often excessive secretion of saliva and mucus and accumulation of muco-pus in the mouth or pharynx during the night. The accumulation of decomposing food and débris among the teeth and in the pockets leads to a foul taste in those who do not become habituated to their condition, and to foul breath.

The teeth may become loose, a condition which may be due to two factors—(1) loss of attachment, and (2) replacement of surrounding bone by granulation tissue. Or they may be firm, though but little attachment is left, as in the slow dry form of disease, or more firmly implanted than normal owing to sclerosing osteitis.

The whole process culminates in a general septic stomatitis, chronic or subacute, with swelling of lips and tongue, sore, oedematous mucous membranes, puckering and fissuring of the tongue and cheeks, thickening and heaping up of epithelium, or atrophy of the mucous membranes and thinning of the epithelium.

Caries of teeth results from the stagnation of germs and carbohydrate food. It is itself dependent on dental sepsis, and in turn adds to it. The cavities in decayed teeth form reservoirs for germs and decomposing food. They are nearly always foul smelling. Later, decomposing tooth pulps and the discharges of chronic dental abscesses add to the general sepsis. Dead roots are seldom other than septic. Once the dentinal tubules are infected they are extremely difficult to sterilize. Clinically, on extraction granulation masses will be found adherent to most dead roots.

The normal anatomy of roots renders sterilization difficult. They are often curved, and a sharp bend of the apical portion is common. The root canal is seldom a simple round canal running from pulp chamber to apex. It may be dumb-bell-shaped, or it may take the form of a more ribbon running down the root. Near the apex it may split into several minute canals, or turn off sharply to end on the side of the root.

In effect it is difficult, often impossible, to track out and sterilize a root canal once septic. It is equally difficult, if not impossible, to sterilize the surrounding dentine, owing to the difficulty of penetrating the dentinal tubules. It is not, then, surprising to find that most dead roots on extraction show signs, in the form of adherent granulations and absorption, of their presence having been resented by the surrounding tissues.

Nor is it surprising to find that the cementum, the only living part of the so-called dead root, has undergone exostosis, that is, inflammatory hypertrophy. These chronic changes are to be found frequently in roots implanted in apparently healthy alveolar tissues.

Tartar.

Tartar occurs in two forms—a bulky light-coloured deposit found on the exposed parts of the teeth, and a thin dark deposit found under the gum edge. It invariably contains large numbers of bacteria, and the more bulky deposits entangle organic débris under their edges, and smell correspondingly putrid. Tartar is thus always septic, and the tissues in contact with it are always in a state of chronic inflammation or ulceration.

Artefact Stagnation.

The last factor in dental sepsis is the artefact factor. Rough fillings, fillings with overlapping edges, ill-fitting gold caps, with edges thrust up under the gum, ill-fitting crowns and bridges, all offer artefact stagnation areas, and are of necessity septic. Tooth-plates, as generally worn, are a fertile source of artefact sepsis. They have a faint sour smell, sometimes an actually putrid smell, and to

their surface adheres a thin layer of white greasy material consisting of germs and food débris. That the tissues resent their presence is shown by the state of the mucous membranes. Often the shape of a plate is accurately outlined by an area of inflamed mucous membrane, and the edges of the gum round the teeth against which the plate lies are practically always in a state of chronic inflammation. Where, also, these unclean plates lie against the natural teeth, caries is a frequent consequence, since the deposit on the plates contains the elements—germs and carbohydrates—needed for its onset. Thus is started a further round of dental sepsis.

DENTAL SEPSIS.

Of the existence of some degree of sepsis in every human mouth there can be no doubt. That it is a possible source of danger is equally indisputable, since various germs of well-known pathogenic powers are always present. The questions which the practical man wishes to see answered are:

I. At what point does dental sepsis become a danger?
II. How is its presence to be recognized?
III. How is it to be prevented, and at what stage does it require treatment?

I. THE DANGER POINT IN DENTAL SEPSIS.

To find an answer to Question I, attention may first be directed to the teeth. Dental caries is a product of the stagnation of carbohydrates and germs of known and unknown pathogenic powers. In the strictest sense it is a result of dental sepsis. Moreover, it is so insidious in its onset that many people cavil at the statement "clean teeth cannot decay." The minutest stagnation area is sufficient for its commencement. Viewed in this light, the smallest amount of dental sepsis is a danger.

The alveolar tissues may next be considered. What amount of dental sepsis can they tolerate without showing resentment—that is, without showing clinical signs of inflammation? Bearing in mind the description of healthy gums given above, it would seem that they early resent the presence of even small amounts of dental sepsis. An absolutely healthy gum margin, even in early childhood, is a rare thing. Marginal gingivitis is to be found in almost every child around temporary and permanent teeth alike, and it is the first stage in the chain of pathological events leading to "pyorrhoea alveolaris," and all the varied manifestations of inflammatory reaction to injury enumerated above. From this point of view, also, a very small amount of dental sepsis becomes a danger.

There is another and extremely significant way in which the local tissues show their resentment of dental sepsis. The roots of septic teeth, both living and dead (that is, with live pulps or with dead pulps), become surrounded and absorbed by a bed of granulations, while at the same time they undergo inflammatory exostosis. The tissues, in fact, regard them as injurious foreign bodies. Absorption of septic permanent teeth is a very common event, and teeth of young adults are frequently in a state of well-advanced absorption.

Of 492 permanent teeth extracted at the Royal Dental Hospital of London, 301 showed to the naked eye either absorption or exostosis of the roots; and of 595 roots, 507 showed similar conditions. Absorption and exostosis were not limited to the root apices, but frequently affected the whole root or only a part of the root near the neck, pointing to the periodontal sulcus as the source of infection.

So far as local results are concerned, even small amounts of dental sepsis must be regarded as dangerous. But what of general effects? Can these small amounts by any possibility produce serious general effects? The answer is to be found in the law of attack and resistance. Among the constant or occasional inhabitants of the mouth, forming part of the general sepsis, are to be found *Streptococcus longus*, *Diplococcus pneumoniae*, *Staphylococcus albus* and *aureus*, and so long as resistance is good no harm ensues. But if resistance be lowered, as by prolonged exposure to cold, fatigue, undue fasting, it may not require more than a few pathogenic germs to bring about serious infection. Here, then, a small amount of dental sepsis becomes a dangerous condition.

Passing to the more pronounced conditions, what special dangers do they possess? Think first of the decomposing food hidden in carious teeth and in pockets among and around the teeth. With every act of deglutition some of the products of decomposition are swallowed. The injury caused by this factor of dental sepsis is sometimes diagnosed as ptomaine poisoning. It may not, indeed, be true ptomaine poisoning, and *B. botulinus* may be absent, but the practical fact remains that putrid decomposition of food held up among the teeth is an extremely common condition. Its very frequency may breed contempt, but it cannot be more dangerous to swallow decomposing food from a plate than from among the teeth.

Think next of the condition of the tissues surrounding the septic teeth. Under the edges of tartar the tissues are in a state of acute catarrh or of actual ulceration; the track of a chronic dental abscess is practically an open ulcer of the bone; at the bottom of each "pyorrhoea" pocket is a patch, small it may be, of carious bone; the toothward surface of the gum flap of each pocket is in a state of chronic ulceration, demonstrable to the naked eye when these gum flaps are excised. I have examined a large number of these gum flaps after excision, and have always found them in a state of ulceration; the so-called normal pockets have not yet come under my observation.

The catarrhal, and much more the ulcerated, surfaces must afford a means of entry for injurious substances; the very condition of the tissues shows that they are fighting something they resent: germs and toxins—a term which may be used in a sense looser than the strictly bacteriological.

The possible extent of this absorbent surface may be roughly estimated by measuring the necks of the teeth and the depth of the periodontal sulcus. Normally this should be rather a potential than an actual sulcus; but when, as a result of persistent sepsis, the gum edge has become swollen, it may be allowed an average depth of $\frac{1}{8}$ in. This is before any deepening has occurred by destruction of tissue. Twelve molars may be allowed an average circumference of $1\frac{1}{2}$ in., twenty other teeth an average circumference of 1 in. We thus get a possible secreting and absorbent surface of $5\frac{1}{4}$ sq. in.—or, to be on the safe side, let us say 4 sq. in.—before the advent of pockets. With the advent of pockets any single tooth may account for an open ulcer of $\frac{1}{2}$ to 1 sq. in., and, as before stated, septic teeth are often held in place by a mere bed of granulation tissue, telling its own tale of infection. On the one hand, this enormous ulcer drains into the mouth, and, on the other, any failure of drainage means absorption into the general circulation. Can there be any doubt of danger? The condition is common, very common, but to deny its danger or its possibilities is to deny the validity of all modern pathology. The injuriousness of swallowing pus may be doubted, but it is unnecessary to lay stress on that factor alone. There are germs and putrid decomposing food to be swallowed and there are germs and toxins to be absorbed.

A reference to comparative pathology shows that the same train of events occurs in the lower animals. Dr. Plimmer, working independently in the prosectorium of the London Zoological Society, incriminates the "solid stagnation," described above, occurring under the edges of apparently healthy gums, as the source of infection in monkeys and allied animals dying of enteritis, and observations I have made, and specimens I have collected, by the kindness of the authorities, of animals dying in the Gardens show that dental sepsis in captive lower animals is productive of the same evils as in man.

When does Dental Sepsis become a Danger?

The answer to this question may be summarized as follows:

Every mouth may be a carrier of, for example, the *Diplococcus pneumoniae*, and may thus be a potential danger to the possessor or an actual danger to others.

Solid stagnation, cervical deposits of greasy material, putrid stagnation, tartar, dental caries, are tangible signs of danger. Clinical inflammatory signs, from the most acute to the most chronic, show that local resistance is breaking down and that general infection may follow.

Ulceration, pockets, loosening of the teeth, beads of pus, are gross signs of danger. Waiting for them is like waiting for enlarged glands or fixation to make the diagnosis

of epithelioma of the tongue—the diagnosis then is but a fool's diagnosis.

The dry form of alveolar destruction, the form which gives rise to an appearance of premature old age of the jaws, in which destruction of bone and shrinking of gum go on at an equal rate, is far less dangerous than the purulent form, in which the gum remains to form a pocket round the tooth. In this dry form drainage may be good till the bone between the roots of the molars is attacked, when drainage fails, and the condition becomes purulent. In other cases the dry variety gives rise to fibrous thickening of the gums and chronic enlargement of the alveolar bone, neither tissue at first undergoing absorption. This form also degenerates into the purulent, but earlier than that just mentioned. Putrid stagnation and pocketing among the teeth are likely to be discovered early in its course.

II. The Recognition of Dental Sepsis.

The second question, How is the presence of dental sepsis to be recognized? is best answered by describing a routine examination of the mouth. This examination must be very minute. The impression made at first sight may be, and often is, utterly wrong. Clinically, the gums may look healthy, yet pockets may be found—ulcerated and foul. The periodontal sulcus may be of normal depth, but its contents putrid. The point of discharge of a chronic dental abscess may at the moment be invisible.

Half an hour is often well expended in looking through an apparently normal mouth.

Note, first, whether the breath be foul; with the mouth open most people breathe through the mouth, and, willy-nilly, the observation is soon made. Sometimes it may be noted that there is no fetor when the patient breathes through the nose. Tonsils may also be a cause of foul breath, but in most instances the mouth is at fault. To incriminate the stomach the patient must be supposed capable of continuous and unconscious eructation. Note whether the oral secretions are in excess, viscid and ropy, or frothy. Take out any tooth-plates present, and note their condition. They should be absolutely free of smell or deposit.

As before noted, most tooth-plates have a sour or even foul smell, and are coated with a greasy adherent deposit of germs and food. Look especially in any receding part and on the insides of bands for this adherent greasy deposit. Note the condition of the mucous membrane underlying the plates and of the teeth touched by them. The mucous membrane, especially the gum edges, are often in a state of chronic or acute catarrh and the teeth decayed. Note the condition of the gums and the presence or absence of the health line mentioned above. Any inflammatory deviation from the normal is an indication of local reaction to injury. The gums may be firm and pale, but thickened by chronic fibrosis, and the alveolar bone enlarged or even bossy. The gums may be receding in one part of the mouth, hypertrophic or simply swollen in another, normal in yet another part. In young people marginal gingivitis is the condition generally met with.

Note the presence of obvious tartar.

As far as possible, press the gum over each tooth, both on the vestibular side (outside), and on the lingual side, in such a way as to squeeze any underlying deposit or pus out at the gum edge. Except along the vestibular surfaces of the front teeth, this is not an easy thing to do.

With a fine steel probe, probe gently round the whole circumference of each tooth for the presence of pockets, and note their depth and width, and whether bare bone is present at the bottom (this is rare). Note especially whether the pockets extend among the roots of the molars or upper bicuspids; both upper bicuspids may have two roots, but this is more frequent with the first. Note also the presence of subgingival tartar—it is to be found before pocketing, and as pocketing occurs it extends along the denuded root. Generally it is hard, dark, and very adherent, and slowly formed. Sometimes it is softer and light coloured, and is rapidly deposited under the edge of a slightly everted gum. Its presence is an indication of stagnation, and so of possible or actual sepsis. Pockets will often be found in unsuspected places—so-called normal pockets.

Wrap a wisp of cotton-wool round the end of a fine steel probe, and with it mop out the whole of every peri-odontal sulcus and every pocket. In doing this the presence of visible pus is often revealed where none was shown on squeezing; for this reason the gums should be closely watched while the examination is carried on.

As each wisp of cotton-wool is brought out, note what is on it and smell it. The shallowest periodontal sulcus may contain pus and putrid stagnant material. If there seems to be no smell, rub the wisp between the dry finger and thumb and smell again; the broad warm surface often makes a putrid smell evident. This appeal to the nose sounds repugnant, but it is the only way available of recognizing putrid stagnation. In making this examination have several probes and antiseptic solution at hand.

Note whether the roots of the teeth are denuded and whether the denudation passes between the roots of the molars or upper bicuspids.

Note whether any teeth are tender on pressure by pressing or tapping each one in turn.

Inquire for a history of occasional pain and tenderness of all the teeth, for, like any other chronic condition due to infection, the periodontal inflammation of dental sepsis is subject to exacerbations and remissions.

Note how loose or firm each tooth is; a tooth, apparently well held by the gum, may yet be implanted in a bed of granulation tissue. Pressure on such a tooth sometimes suggests that it is seated in an air cushion. Loosening of the teeth is a sure sign that the tissues regard them as undesirable.

Examine the teeth for caries, and in probing remember that the denuded necks of teeth are often very tender.

Examine carefully all repair work—fillings, crowns, caps, bridges of all sorts. The surface of every filling should be smooth, and the cervical edge (that nearest the gum) demonstrably flush with the rest of the tooth. Towards the neck the contour of the surfaces of the tooth becomes concave, and to give a good finish to a filling becomes a matter of extreme difficulty. On the vestibular and lingual sides the edges of fillings may be examined with a fine steel probe; if it catches under the edge the filling overlaps, and must be condemned as affording an artefact stagnation area. Between the teeth the fillings may be examined by passing a strand of silk between the teeth lightly in contact with the surface to be examined, and, when as far down or up as it can be taken, pressing it firmly against the surface and drawing it vertically out again. If the silk have passed below the edge of the filling it will catch against any overlapping edge, but it must be remembered that fillings may reach so far beneath the gum that neither probe nor silk can reach the edge. In this case they are *ipso facto* condemned, since the chances of making a good edge in such a place are practically none. The same system of examination applies to crowns, caps, and bridges. They must be examined for overlapping joints and edges, and again any cap or bridge support thrust up under the gum is *ipso facto* condemned; it is impossible that it should be otherwise than septic. The cleansability of the "body" of bridges must be examined. Bridges that rest on the intervening gum and bridges with concave surfaces are from their shape uncleansable. Unfortunately, the prettiest bridges—those with porcelain face teeth—are most often fitted to the gum, and so most probably septic.

As already mentioned, dead roots—crowned roots are always dead roots, but capped teeth may or may not be "dead" before capping—are always open to the suspicion of internal sepsis. Examine "dead" teeth by giving them a tap sideways; tenderness is often elicited in this way when there is none on delivery of a vertical tap. If a "dead" tooth have been filled immediately after a living pulp has been killed and taken out, the reasonable probability is that it is aseptic; if, however, before filling a course of treatment has been necessary to cure a septic state of the root canals, it must always remain suspect.

Note the presence or absence of "roots"—they cannot be other than septic, a persistent blood congestion of the overlying gum may proclaim it, but apparently healthy gum may cover roots in a lesser state of sepsis. Examine for the openings of dental abscesses. They may be obvious in the form of discharging nipples, almost invisible as a minute pin-point opening surrounded by a small reddened area of mucous membrane, or a bead of white pus may be just on the point of breaking the surface. A white,

fibrous nodule or a puckered scar may mark the site of an old abscess.

Inquire for the history of absent teeth, and if there be uncertainty as to extraction in its entirety or as to its retention, a good *x*-ray picture may be of great help. The sinus leading to a septic buried root, or even to a retained wisdom tooth, may be extremely difficult of discovery.

Remember that children, even as young as 3 years, may suffer from pronounced dental sepsis. Dental sepsis is as prevalent among children as among adults.

(To be continued.)

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

Mortality, Notification, Medical Education, Lectures to the Public.

At the thirty-eighth meeting of the Royal Commission on Venereal Diseases evidence was given by Sir William Osler, Regius Professor of Medicine in the University of Oxford.

Sir William stated that the official statistics of deaths published by the Registrar-General were totally inadequate to represent the actual incidence of venereal diseases; for instance, in 1910 the deaths from syphilis in England and Wales were given at 1,649, but this was a very unsatisfactory and incomplete estimate. It was necessary to take into consideration and add a very large number of deaths appearing under other descriptions. If regard were had to these, he thought that it would be safe to say that of the killing diseases syphilis came third or fourth. Gonorrhoea he regarded as one of the great disabling diseases, causing an enormous amount of ill health and playing a very large part in the production of blindness. Sir William laid stress on the importance of early treatment of these diseases, and was of opinion that every general hospital should provide in respect of them out-patients' accommodation and proper accommodation in the wards. It was part of the work of the governors of hospitals to provide for these diseases, and they ought not to be left out; in the past they had been too much neglected by the charitable public.

Sir William was in favour of compulsory notification of venereal diseases; he thought there was a possibility that this would result in some concealment, but that this risk might now be taken.

On the question of the education of medical students Sir William was strongly opposed to venereal diseases being dealt with as a special subject added to the curriculum, with special lectures, and an additional set of separate examination questions. He considered that if this education could be given in out-patient clinics and in the wards, and by general teachers it was as much as could be expected of the student, looking at the short space of time at his disposal, and the great congestion of the curriculum.

Sir William thought that it would have an immense effect if the public were instructed by means of lectures regarding venereal diseases. Lectures of this kind, he thought, should not be given by a layman, but by a well-trained medical man who should be provided with proper diagrams and slides. It would be a very useful thing if the lecture could be widely given to the senior forms of the big public schools, in the universities and at large institutions employing many persons. He was not in favour of teaching sex physiology or hygiene to young children.

Skin Affections: Treatment: Notification.

At the thirty-ninth meeting Dr. J. H. Sequeira, Physician to the Skin Department of the London Hospital, gave evidence. He stated that the statistics of adult cases treated in the London Hospital skin clinic during 1913 showed that 13 per cent., both in the case of men and women, were suffering from obvious syphilis of the skin and mucous membranes. In the case of the women the proportion in the primary and secondary stages was smaller than in the case of the men, and this he attributed to the fact that a larger number of women were unaware that they were affected with the disease. He gave a number of instances of innocent syphilis, and said that in his hospital experience he found that a larger number of women were infected during their married life. With regard to the use of salvarsan and neo-salvarsan he was confident, as a result of his experience of a large number of cases, that these remedies provided a most powerful means of influencing the disease. He was, however, of the opinion that it was necessary to combine salvarsan and neo salvarsan treatment with the use of mercury. By prompt treatment the risk of the spread of infection could be enormously diminished.

Dr. Sequeira was not in favour of compulsory notification of syphilis, as he thought it would result in many people seeking advice from quacks. On the other hand, he thought there were conditions in which a medical man should be armed with some power to prevent the spread of infection. It should be held to be the duty of a medical man to do all in his power to prevent the spread of infection, and he should be held to be immune from any penalties in the exercise of his duty.

Dr. Sequeira insisted strongly on the need for increasing the accommodation available in general hospitals. There should, he said, be no hindrance whatever to any patient receiving treatment, and the fact of his or her suffering from the disease should be the sole indication for admission.

THE CULTIVATION OF TISSUES IN VITRO.

A MICROSCOPIC and lantern demonstration on the cultivation of human and other tissues *in vitro* was given by Dr. David Thomson (Grocers' Research Scholar) before the Royal Society of Medicine on May 11th. The research was carried out in the Marcus Beck Laboratory in that institution under the directorship of Sir Ronald Ross, and as the work represented the first-fruits of this new laboratory, the author made a brief reference to the memory of Marcus Beck, and expressed his thanks to the President, Sir Francis Champneys, to the Council, and to Mr. MacAlister, the secretary of the society, for the facilities which they had given him.

The tissues were cultivated according to the technique employed by Carrel at the Rockefeller Institute. The tissue of embryonic chicks obtained from hatching eggs was largely employed, and also human tissue obtained from operations performed by Sir John Bland-Sutton at the Middlesex Hospital.

It was found that when a small portion of embryonic chick tissue was implanted in a medium composed of the blood plasma of a fowl one part and extract of chick embryo one part, the new growth radiated out from the original tissue on every side, without any tendency to produce a definite shape or structure. The original cells were for the most part round cells, but the new cells produced in this medium were as a rule elongated and tended to branch, so that the new tissue differed markedly from the appearance of the original material.

It was noticed, however, that in spite of this common characteristic the types of growth produced from various species of tissue differed from each other. Connective tissue produced a radiating outgrowth of long, thin, branching cells, whereas the new growth from epithelial tissue was more of the nature of a solid extension of flat cells which did not elongate or branch so much as in the case of connective tissue. Brain tissue produced long axis cylinders, and the tissue of spleen and bone marrow produced large numbers of amoeboid leucocytes of various kinds, and also red blood cells. The tendency to elongation and branching of the cells of the new growth appeared to be due to the solid, or jelly-like consistence of the medium. In a liquid medium composed of white of egg or a mixture of serum and plasma, the cells of the new growth remained round like those of the original tissue.

Growth *en masse* of definite shape or somatic growth *in vitro* was also obtained by placing a very young chick embryo—twenty-four hours old—in the plasma medium. It was found that this embryo increased in size while retaining its definite shape. If the toe of a young embryonic chick were placed in this medium it increased

markedly in size while it retained its original shape. At the part, however, where the toe had been cut off (injured) the usual radiating uncontrolled growth was produced, but no such uncontrolled growth occurred from the uninjured surface of the tissue mass.

With regard to the cultivation of human normal and tumour tissue, it was found that successful growth could be obtained in a medium composed of blood plasma of a fowl one part and extract of chick embryo one part. This was an interesting fact, since it showed that human tissue could grow in material obtained entirely from a bird. Small portions of two human tumours were successfully grown in this medium, namely:

(*a*) *Intracystic Papilloma of the Ovary.*—This was a very soft friable tumour (not truly malignant) composed almost entirely of epithelial cells, and the new growth consisted of buds of pure epithelium.

(*b*) *Carcinomatous Lymphatic Gland.*—This tumour was somewhat tough, due to the presence of a considerable amount of connective tissue stroma, and the new growth which occurred comprised both these tissues. The connective tissue cells grew first after forty-four hours' incubation, and buds of epithelial cancer cells appeared after about three days' incubation; the growth continued in the same medium for fourteen days, after which it ceased to show further increase. The new growing tumour cells were in all cases much larger than the cells of the original tissue from which they sprang. They also contained numerous highly refractile granules, and were markedly amœboid, and tended to throw out long protoplasmic processes into the medium. The growing tissue tended to liquefy this medium, more especially the solid outgrowth of epithelial cells. Human connective tissue would appear to grow more readily than specialized epithelial tissue.

Human and other mammalian tissue grew much more slowly *in vitro* than embryonic chick tissue. The former showed little or no growth till about the end of the third day, whereas the latter showed a copious growth after twenty-four hours. The tissues in all cases were incubated at 37.5° C.

In the experiments on the cultivation of human tumour tissue *in vitro*, Dr. John Gordon Thomson (Beit Memorial Fellow) was associated with Dr. David Thomson.

After the demonstration a micro-cinematographic film was exhibited by Dr. H. D. McCulloch, who had kindly obtained it on loan from Dr. Comandon, Pathé Frères, Paris. It showed growth *in vitro* taking place from the cardiac and splenic tissue of an embryonic chick.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the committee thirty-five cases were considered, and grants amounting to £310 voted to thirty of the applicants. The following is a summary of the cases relieved:

Widow, aged 52, of L.R.C.P. and S.Edin., who practised at Walsall and Bethnal Green. Ill health and unable to do much work, only earnings about 5s. per week by nursing. One son, unable to help. Granted £12 in twelve instalments.

Wife, aged 48, of M.R.C.S.Eng. Deserted by her husband. One daughter, who with her mother earn a few shillings each week by teaching children. The mother's health very bad. Granted £12 in twelve instalments.

Daughter, aged 57, of M.R.C.S.Eng., who practised in London. Until a few years ago was able to earn her living as housekeeper, but, owing to the death of employer and ill health following overwork, is unable to obtain employment. Granted £12 in twelve instalments.

L.R.C.P. and S.Edin., aged 58, who practised at Leith, suffering from locomotor ataxy and quite unable to work. His wife has a small annuity. Voted £18 in twelve instalments.

Widow, aged 68, of F.R.C.S.Eng., who practised at Putney. Has tried to live by letting off portion of house she rents. Is now suffering from arthritis deformans and quite helpless. Recommended for an annuity. Voted £12 in twelve instalments.

Widow, aged 64, of M.D.Aberd., who practised at Fulham until early this year. Only income £16 per annum. Four children, unable to assist. Voted £12 in twelve instalments.

Widow, aged 49, of L.R.C.P. and S.Edin., who practised in Jamaica. Only certain income 30s. per month from another society and friends. Three children, unable to assist. Relieved six times, £72. Voted £12 in twelve instalments.

Daughter, aged 62, of L.F.P.S.Glasg., who practised at Widnes. Income £40 per annum from two charities. Suffering from laryngitis. Relieved four times, £20. Voted £5.

Daughter, aged 59, of F.R.C.P.Edin., who practised at Cheadle. Failing health and unable to obtain suitable employment. Allowed £25 per annum by a friend, and earns about £6 10s. a year by own efforts. Relieved nine times, £74. Voted £12 in twelve instalments.

Widow, aged 73, of M.R.C.S.Eng., who practised in the Old Kent Road, S.E. Suffering from rheumatoid arthritis. Only income an old age pension. Relieved four times, £40. Voted £12 in twelve instalments.

Widow, aged 43, of L.R.C.P. and S.Edin., who practised in South Wales. Has endeavoured to earn a living for herself and two daughters by nursing, but work has been very uncertain of late. Referred to the Guild. Relieved eight times, £60. Granted £5.

Widow, aged 68, of M.R.C.S.Eng., who practised at Heathfield. Two children, both married, but unable to help. Applicant helpless with rheumatism. Only income £20 per annum. Relieved six times, £63. Granted £12 in twelve instalments.

Widow, aged 51, of L.R.C.P. and S.Edin., who practised at Newquay. Has recently fractured her leg and otherwise been very ill. Two sons who are sailors only able to help slightly. Relieved twelve times, £113. Granted £12 in twelve instalments.

Daughter, aged 75, of M.R.C.S.Eng., who practised at Hackney Road, N.E. Lost all her private income by the failure of her trustee; only income £52 per annum from friends and relations. Relieved twice, £24. Voted £12 in twelve instalments.

Widow, aged 62, of M.D.Aberd., who served in the I.M.S. Suffers from acute rheumatism. Only income about £28 per annum. Relieved once, £12. Granted £12 in twelve instalments.

Daughters, aged 64 and 67, of F.R.C.S.Eng., who practised at Stokenchurch. Both have very indifferent health, and quite unable to work. Only joint income about £56 per annum. Relieved twice, £20. Granted £18 in twelve instalments.

Daughter, aged 61, of M.D.Lond., who practised at Goxhill. Suffering from locomotor ataxy. Only income £7 per annum. Relieved five times, £62. Granted £18 in twelve instalments.

Widow, aged 80, of L.R.C.P. and S.Edin., who practised at Skirlaugh. Only income the old age pension. Only son unable to help. Relieved twice, £24. Granted £18 in twelve instalments.

Daughter, aged 86, of M.D., who practised at Manningtree. Receives £13 per annum from another charity. Cause of distress the failure of an annuity of £100. Relieved once, £12. Granted £12 in twelve instalments.

Daughter, aged 59, of L.F.P.S.Glasg., who practised at Mauchline. Health very indifferent. Only income £12 per annum from another charity. Relieved seven times, £80. Granted £10 in two instalments.

Widow, aged 67, of M.R.C.S.Eng., who practised in England and Jamaica. Three children, none able to help. Health very bad. Only income £26 per annum from friends in Jamaica. Relieved ten times, £65. Granted £10 in two instalments.

Daughter, aged 66, of M.R.C.S.Eng., who practised in India and Bishop's Teignton. Earned her own living until six years ago, when she was obliged to give up in consequence of ill health. Relieved once, £12. Granted £12 in twelve instalments.

Daughter, aged 65, of M.D.Aberd., practised at London, Ramsgate, and Worthing. Earned her living for forty years as a teacher of music, but in consequence of ill health and age unable to continue. Receives an annuity of £21 from another charity. Relieved seven times, £70. Granted £12 in twelve instalments.

Daughters, aged 42 and 50, of L.R.C.S. and L.M.Dub., who practised at Sydenham and Plumstead. Elder sister suffering from migraine, the younger one an epileptic. Joint income only £45. The recent death of the mother, who had an annuity of £50, the immediate cause of distress. The cases referred to the Guild for report. Relieved seven times, £75. Granted £5.

Wife, aged 46, of M.R.C.S.Eng., who practised in Westminster and other places. Deserted by husband. One daughter who earns a little. Applicant, who is lame, has earned a little by teaching English and needlework, but insufficient to support herself. Has an opportunity of purchasing a small teaching connexion. Relieved four times, £48. Granted £10 in two instalments, the first amount to be utilized in purchasing the teaching connexion.

Widow, aged 53, of M.R.C.S.Eng., who practised at Stockton-on-Tees. Has two children, who only help slightly. Earns a little by needlework, but eyesight very bad and getting worse. Relieved ten times, £88. Granted £9 in twelve instalments.

In two other cases emergency grants of £2 to each were made, and the cases referred to the Guild for report.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

THE Emil Chr. Hansen prize for the best work on medical microbiology has been awarded to Dr. J. Bordet, Professor of Bacteriology in the Medical Faculty of the University of Brussels. Some particulars of the prize, which has now been awarded for the first time, were given in the BRITISH MEDICAL JOURNAL of January 31st, 1914, p. 281.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

A CRITICAL REVIEW OF THEIR RELATIONS.

(Continued from page 1192.)

II.

THE PAST AND PRESENT.

In the first article of this series, published last week (p. 1190), five preliminary questions were considered to which it was feasible to return comparatively brief answers. It is not possible to answer with equal brevity the sixth question, which is as follows:

What has the British Medical Association done for the Medical Profession in the past?

To supply a complete answer to this question it would be necessary to review in detail the whole of the doings of the British Medical Association since the date of its foundation in 1832. Such a review would occupy a large volume, but there are other ways in which the question could be answered, as, for example, by summing up the whole of its doings in one brief assertion, by describing in some detail the work that it has done in certain specific directions, or by describing a considerable number of its doings each in a few words. No one of these three methods, however, would by itself supply both an adequate and satisfactory answer; indeed, either of the last two if standing alone might create an erroneous impression by failing to bring the work of the Association into true focus. Hence it is proposed to employ all three.

The first answer may be couched as follows: The Association has played a very important part in bringing about the improvement which is represented by the difference between the position of the medical profession in 1832 and as it is at the present day. It has done this by serving as a bond of union between all those actively desirous of trying to improve medicine as a scientific profession and to protect it as a means of livelihood, and by providing such persons with the mechanism necessary for giving practical effect to their aspirations.

One of the two specific purposes for which the British Medical Association was founded was the maintenance of the honour and interests of the medical profession, and no one who takes the trouble to scan the earlier records of the Association can fail to note that almost as soon as it was founded it recognized that only by bringing about certain reforms could either of the objects of its existence —so far as these were not identical—be fulfilled. Correspondingly it will be noted that among the reforms which it saw to be necessary were just those improvements which at various subsequent dates did actually come about. Hence it would *a priori* be reasonable to assume that between this fact and the reforms effected there must have been a direct causative connexion. Furthermore, this deduction would become conclusive unless it could be shown that any one of the three following hypotheses was well founded—namely, that the reforms in question occurred spontaneously, or that the Association never in fact endeavoured to bring about the improvements which it saw to be necessary, or that all its efforts towards this end proved futile.

None of these hypotheses, however, could be sustained. As for the first of them, changes so great and numerous as those which have taken place since 1832 never occur spontaneously. They may be helped by the general advance of civilization, but in themselves they are invariably the outcome of long and steady work.

As for the second, the whole history of the British Medical Association testifies to the fact that it strenuously and incessantly strove to fulfil the objects for which it had been brought into existence. The latter fact will be shown more in detail in subsequent articles, but in the meantime, by way of direct proof of the effectiveness of the Association's work, reference may be made to a speech delivered by the late Marquess of Ripon.

Speaking at the dinner of the Association at the annual meeting at Leeds in 1889, Lord Ripon said that as a public official he had frequently been brought into touch with the British Medical Association, and once, indeed, had suffered at its hands. This was when, as Lord President of the Council, he had endeavoured to deal with the constitution of the General Medical Council and introduced a bill for the purpose. His bill, however, did not contain a provision greatly desired by the British Medical Association, and that body consequently secured its defeat. This action of the Association had left him stranded, but he no longer regretted the fact, for the Association by defeating his bill had since got a better one.

Apart from the truth of the assertion that is under examination, there is also its weight to be considered. To some this may not be obvious, so it is worth while to supply a means of estimating the greatness of the improvement that has taken place. To do this all that is necessary is to show what was the position of affairs in 1832.

1. In 1832 the profession of medicine—as the term is now understood—was inchoate. There were a certain number of physicians, a large number of surgeons, and a great many men commonly entitled apothecaries, but the extent to which all these regarded themselves as professional brethren was small, and from an official point of view they belonged to entirely distinct species; to become, for instance, a member of the College of Physicians, and thus secure a limited right to practise medicine, it was necessary to abandon all connexion with the College of Surgeons, and vice versa. The term "limited right" is used, because it was in fact only within the confines of certain localities that medical men, whatever their work, had any legal status at all. Outside those limits the whole of the country was little better than a Tom Tiddler's ground, in which even a president of a college of physicians, or of a college of surgeons, or a dean of a medical faculty, possessed exactly as much and exactly as little right to practise as the nearest blacksmith or chemist. There was no reciprocity between the colleges and other institutions, with the result that whatever the status of a man might be, say, in Dublin or Edinburgh, he was liable to be regarded as a mere pretender so soon as he moved to London, and vice versa. Even a licensed apothecary was scarcely in better case, since the sole right he possessed was that of recovering his charges for supplying drugs in a court of law. Even at the present day qualified men are but ill protected against quackery, but in the conditions above described they obviously had no real protection at all.

2. Socially the status of medical men as a class at the time in question was extremely dubious; in effect, each man had to depend entirely on his own personal qualities, and any social recognition he received was not in virtue of his belonging to the medical profession. Many factors accounted for this position of affairs. No small proportion of all medical men depended for their livelihood on the keeping of open shops, and the fact that it was common to commence apprenticeship at the age of 15 or 16 led to very many medical men having no pretensions whatever to be regarded as persons of general culture. In any case, the truth of the initial statement of this paragraph will be fully recognized by any student of pre- and early Victorian literature, including one at least of the novels of Thackeray, Captain Marryat, and Albert Smith. Indeed, even as late as the fifties, though a few Fellows of the College of Physicians were admitted to St. Paul's on the occasion of the funeral of the Iron Duke in 1852, no other members of the medical profession were accorded the like privilege.

3. Scientifically medical men had to do their work in conditions far less mentally stimulating than those obtaining at the present day; if not content to adhere slavishly to the more or less purely empirical doctrines they had learned from their schools or from the men to whom they had been apprenticed, they had to guide themselves mainly by the light of their own clinical experience. Opportunities for scientific study were scarce, laboratories did not exist, books were costly, and medical magazines were limited in their circulation and unambitious in their scope. There were no cottage hospitals, and though there were hospitals in the large towns, those who had the privilege of working in them had only the very roughest kind of nursing assistance.

4. If a medical man after a time found clinical work uncongenial, no alternative was open to him, for none of the twentieth century opportunities for doing paid work which, though in essence medical, is not clinical, then existed; nor, practically speaking, were there any "services" whatever.

5. Club practice seems to have been hardly less rampant than it has been in recent decades, and there were no part-time public appointments by which a man could secure stability in regard to a portion of his income. Even men willing to do Poor Law work were only appointed from year to year, and not only were they absolutely in the power of the guardians, but they had to regard the relieving officer as their master and were paid no regular salaries.

6. A few medical societies existed, but opportunities for professional intercourse were not common, and there was none of the *camaraderie* that now prevails, for owing to some of the circumstances already mentioned there were very marked differences in grade among medical men. Apart from the humble position admittedly occupied by many of those who practised as apothecaries, any man whose work lay outside the narrow areas ruled by the colleges and universities was treated as almost necessarily an inferior kind of person. But this latter fact let no one deplore, for to it was in some degree due the birth of the British Medical Association. That body, it will be remembered, was originally known as the Provincial Medical and Surgical Association.

7. Apart from being unprotected against the open competition of unqualified persons, there was also no protection from unfair competition by qualified men. It was common for even "eminent" persons to advertize themselves quite openly, besides associating themselves in the treatment of a case with quacks and sharing in the profits of proprietary remedies.

8. Though the colleges and universities could exercise a certain amount of control over their own members, and the former did so with varying zeal, there was no body empowered to exercise discipline over all men claiming to be qualified practitioners. Indeed, there was no means of determining whether a given individual possessed a qualification of some sort or whether he did not.

9. A college or university could in some degree protect the interests of those who belonged to it so far as those interests were identical with its own, and so long as such member remained within the limits of the town in which they were situated. But once outside them they could do nothing. Even the Society of Apothecaries of London, whose powers after 1815 extended over all England and Wales, could merely interfere with persons who kept apothecaries' shops, and called themselves apothecaries without its authorization. It could not interfere with any one else who openly practised medicine and surgery, nor yet with chemists and druggists.

10. There was no body of any kind whose work it was to consider the possibilities of improving the position of medical men or to take steps in this direction by making representations to Government and other public authorities.

The foregoing ten paragraphs form a picture of the position of the medical profession as it was in 1832, which has been drawn from many sides, and is by no means overcoloured. For the sake of brevity they have been succinctly worded, but even a cursory perusal of them will suffice to convince most people that since 1832 the condition of matters has greatly improved.

In other words, the first answer to the question, What has the British Medical Association done for the medical profession in the past? has been shown not only to be true, but to represent a service of importance.

The second answer to the question, What has the British Medical Association done for the medical profession in the past? will consist in an account of sundry pieces of work that it has done in certain special connexions, and the first of these concerns the organization of medicine as a definite profession.

THE RIGHT TO PRACTISE.

Probably few people would be prepared to maintain that the existing control of the practice of medicine in this country is all that it should be; many are exceedingly dissatisfied therewith; and most admit that, at any rate, certain changes are eminently desirable.

On the other hand, no one can deny that the present position of matters is infinitely better than the conditions which existed when the British Medical Association was founded in 1832. A vast improvement has occurred, which many factors have combined to bring about. One of them was certainly the birth of the British Medical Association and the work it has done to evolve order out of the chaos of conflicting interests and authorities, and to weld the profession into a coherent whole recognized by the State.

Studiously modest as is the claim put forward in this last sentence, complete proof of its justice could not be afforded without adducing a full record of all that the Association has done in this connexion, and collating therewith a similarly detailed history of nearly all the medical legislation achieved or attempted since 1832.

The mere enumeration of all the steps taken by the Association, the memorials it drew up, the bills it drafted, the negotiations it carried on with corporate bodies and with succeeding Governments, would involve the bringing together of a mass of details which, though they possess considerable historical interest, would make rather wearisome reading at the present day. It is proposed, therefore, to confine attention to a few outstanding facts and dates; few as these are they will suffice to ensure the acceptance by any unbiassed person of the claim made on behalf of the Association.

The milestones marking the two stages on the road of medical reform so far completed are the Medical Act of 1858 and the Medical Act of 1886, by which it was amended. These are the two principal Acts, and neither of them sprang fully fledged into being, or was the concept of any single individual or association. Both were more or less of the nature of compromises, and the passage of each was preceded by years of spade work, by years of pressure on vested interests, and by persistent endeavours to create interest in the subject not only in the medical profession itself, but among members of Parliament and the general public. The more closely the history of the Medical Act of 1858 is studied the more clearly is it seen that the impetus which brought on to the Statute Book this first charter of the medical profession as one body for the whole of the United Kingdom came from the British Medical Association. Indeed, the Act as eventually passed was based upon a bill drafted by the Association after much discussion and many negotiations. This first Medical Act established a register of duly qualified medical practitioners, and committed to the General Medical Council the duty of establishing the *Medical Register* and keeping it correctly. It also gave to the Council the power to require the licensing bodies to furnish to the Council such information as it might demand as to the courses of study and examination to be gone through in order to obtain their respective qualifications; this power the Council has used from time to time with considerable effect in determining the subjects and length of the curriculum. The functions of the Council were in fact defined by its full title, "the General Council of Medical Education and Registration of the United Kingdom." To it was also committed the duty of preparing a national pharmacopoeia. The first meeting of the Council was held on November 23rd, 1858; it consisted of 17 representatives of the universities and licensing bodies, and 5 persons nominated by the Crown, of whom Sir Charles Hastings, the founder and at that time the Chairman of Council of the Association, was one.

In taking up medical reform and unification as the first great social problem to which it would devote itself, the Association was inspired by a true understanding of the most urgent need of the profession if it were to win for itself its proper place in the social organism. Though after a time the Association received valuable help through the growth of a national opinion with regard to public health legislation and administration, and from the need, which every reform in this direction made increasingly urgent, of some criterion of what constituted a qualified medical practitioner which the State and local authorities could apply, yet at first and for nearly a generation the Association had to rely almost entirely upon its own efforts. It was no doubt moved at the beginning to appreciate the necessity of medical reform by the fact that practitioners in the provinces, by whom the Association was founded, and who mainly influenced its policy during its early years, suffered from the condition of affairs then existing more than the medical men who were working within the areas over which the Royal Colleges exercised some sort of shadowy jurisdiction. By the time this primary impetus ceased to operate the

members of the Association had learnt to realize to the full that it is the duty of the Association to labour for the promotion of the honour and interests of the whole profession in any and every direction; in fact, zeal for reform had become—as it still remains—one of its natural instincts.

The need for reform of the conditions of practice was urged at the very first anniversary gathering of the Association, and in the fifth year of its existence it appointed a special committee to take the matter in hand. Thereafter for half a century or more the subject came up at practically every annual meeting, and received constant attention from those in direct charge of its affairs. Only once—in the Seventies—was there a short pause, and even this was merely in the nature of masterly inactivity, for negotiations which the Association had been helping to bring about between certain directly interested parties had reached a stage when the wisest step seemed to be for the Association quietly to await the progress of the movement it had been successful in setting on foot.

The first action taken by the Association was to present a memorial to Parliament setting forth the reforms required and praying for legislation to give them effect. It was presented in 1839 and was the first of a long series. Those that followed pressed the Association's views, both officially and privately, on the various bodies which at one stage and another were concerned. Most of the Branches of the Association as they came into existence—and notably the Metropolitan Counties and South-Eastern Branches—co-operated in the work more or less actively; that is to say, they did not confine themselves merely to approving what was being done at head quarters, but presented petitions of their own, and in various ways endeavoured to attract attention to the subject of medical reform and its importance both to the medical profession and to the public.

As the result of the general labours of the British Medical Association and others concerned, bricks began to accumulate less slowly than before, once the ground floor of the general edifice of reform had been laid; but, as was inevitable in view of the many interests which had to be conciliated or set aside, progress was at no time rapid, and even at the present date much still remains to be done. This ground floor first began to come into view about 1852, when matters had got so far that the Association thought it worth while to draft a bill giving formal expression to its views. Five years (1857) later a bill promoted by it actually passed its second reading in the House of Commons; it was well supported, and was, indeed, only withdrawn because the Government of the day promised to introduce in the next session a measure of its own designed to meet the same needs.

The next annual meeting was marked by the passage of votes of thanks to the Committee and others concerned, as also to various lay persons. In great measure the Government had fulfilled its promise, and the Medical Act of 1858 had already practically passed both Houses of Parliament. The proceedings at this meeting are not difficult to picture, and the rejoicing is easy to understand. The Act passed by no means met all the demands that had been made, but it put the medical profession into a very much better position than formerly, and seemed to make further reforms comparatively easy.

After 1858 questions of reform were for many years more in the air than ever; after several minor Government inquiries had been held, the British Medical Association in 1881 succeeded in bringing about the appointment of a Royal Commission, which in its report emphatically upheld nearly all the contentions laid before it by the Association. The report, for instance, favoured a one-portal system, a reduction in the membership on the General Medical Council, a large direct representation of the medical profession on that body, and the imposition on the Public Prosecutor of the duty of seeing that action was duly taken against all persons who offended against the Medical Acts. In the following year the Government of the day, which maintained in the matter close relation with the Central Council of the British Medical Association, introduced a bill representative of the views of this Royal Commission. This duly passed the House of Lords, and, though it was thrown out in the House of Commons, thanks to the opposition of the universities and colleges, whose powers would have been considerably reduced by its clauses, it laid a foundation for the Act of 1886.

The Medical Act of 1886, the second milestone on the road of medical reform, was in the nature of a compromise between the views of the British Medical Association and those of the licensing bodies. It did not make any real advance towards the one-portal system, although it authorized the holding of joint examinations by two or more medical corporations in the same part of the United Kingdom for a diploma or diplomas conferring the right of registration under the Medical Acts. It defined, and in some degree extended, the power of the General Medical Council to secure that the qualifying examinations shall be such as shall be sufficient to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery, and authorized the Council in the discharge of this duty to appoint inspectors of examinations. It also defined the privileges of a registered medical practitioner to be that he is "entitled to practise medicine, surgery, and midwifery in the United Kingdom, and (subject to any local law) in any other part of Her Majesty's Dominions, and to recover in due course of law in respect of such practice any expenses, charges in respect of medicaments or other appliances, or any fees to which he may be entitled." The Act also introduced the principle of direct representation of the profession on the General Medical Council, by directing that there should be added to the Council three persons elected by the registered medical practitioners resident in England and Wales, one by those resident in Scotland, and one by those resident in Ireland. Further, it gave the General Medical Council authority in future to represent to the Privy Council that it was expedient to confer on the registered medical practitioners resident in any part of the United Kingdom the right of returning an additional member of the Council, a power which it has recently exercised in respect of England and Wales.

The passage of this Act was regarded by the Association with so much satisfaction that Dr. Edward Waters of Chester, who had been the Chairman of the Medical Reform Committee for many years, was awarded the gold medal of the Association as an acknowledgement of his labours.

We have taken these two Acts as milestones, but it must be understood that they were merely the tangible legislative results of a number of conceptions so large that it is impossible even to mention them. Taking as an illustration the sixteen years ending 1886, it is found that as many as twenty-five bills were not only drafted by various bodies, including the British Medical Association, but received more or less consideration from the Houses of Parliament.

If an attempt be made to enumerate the specific legislative reforms for which the Association first and last has fought, it will be seen that the most important are as follows:

1. To enable a man who had obtained a diploma or degree from any recognized authority to claim unchallenged the position of a duly qualified practitioner in whatever part of the United Kingdom he might choose to work.

2. To establish a single portal of entry to the medical profession.

3. To ensure that no one should be allowed to obtain a diploma unless his general education fitted him to enter a learned profession.

4. To prevent any licensing body from endeavouring to attract candidates by making the standard of professional education and of examinations unduly low.

5. To secure statutory recognition of the medical profession as a whole, as also some measure of protection for those who belong to it, by enactments penalizing the practice of medicine by unqualified persons.

6. To place the control of the medical profession in the hands of a body or council constituted on a representative basis, such body to determine the conditions on which those wishing to practise medicine shall be admitted to a register of all persons whom the council considers to have proved their fitness for the work, as also the circumstances in which the names of such persons shall be erased from that list.

The first four items in this list have been won with the exception of the one-portal system, though a short step in

that direction was taken by the Acts which rendered possible the establishment of the Conjoint Boards of England, Scotland, and Ireland; the fifth point—statutory recognition—has been won, but the law with regard to the control of irregular practice is still in a most unsatisfactory state. The establishment of the General Medical Council and the *Medical Register* by the Act of 1858 went a long way towards attaining the sixth point and afforded a basis for further action. Not until many years later did the British Medical Association succeed in securing direct representation for the rank and file of the profession. For this reform the Association had to fight not only against a huge array of opponents, including the General Medical Council itself, but without any allies whatever. Nevertheless, it has succeeded in improving matters very materially, for while on the General Medical Council, as originally constituted, there was not a single direct representative of the bulk of the profession, the latter now has a right of electing six such representatives.

In this connexion is to be noted the action of the British Medical Association in regard to a principle which the General Medical Council long since adopted to guide it in the exercise of its disciplinary powers. The Act of 1858 not only empowered the General Medical Council to erase from the *Register* the name of any person who had been removed from being a member of a licensing body, but also to erase the name of any practitioner it found after due inquiry by itself to have been guilty of infamous conduct in any professional respect. Actuated by the view that its position in such matters was of a quasi-judicial nature, the Council has not, in exercising the power last mentioned, thought fit itself to initiate proceedings. This had the effect of throwing upon private individuals the onus of acting as complainants when charges of professional misconduct against registered practitioners were in question, and naturally most medical men felt a very strong objection to taking this course. The principle still obtains, but a few years ago the British Medical Association obtained the sanction of the General Medical Council to its appearing as complainant in such cases, and it now regards fulfilment of this sometimes laborious, and always expensive, duty as part of its ordinary work.

As for the future, it is not to be supposed that because most of this article is written in the past tense medical reform is no longer among the aims of the Association. On the contrary, it is a subject which still receives very earnest attention from its Medico-Political Committee. A new amending Medical Act has been drafted, and as the pressure of other urgent business relaxes, will again come up for discussion. It aims at a much more complete realization of the objects summarized in the foregoing paragraphs than has yet been achieved.

(*To be continued.*)

THE MEDICAL STATISTICS OF THE FRENCH ARMY.

It is impossible adequately to review in a short article the most elaborate report recently received on the Medical Statistics of the French Army during 1911. It consists of two parts, the first dealing chiefly with the incidence of diseases in corps and branches of the army, and the second with the diseases themselves.

The statistics set forth relate only to the home (Intérieur) and the African (Algérie-Tunisie) troops, and do not include the strictly tropical regions garrisoned from France, such as Cochin China, Madagascar, etc. As the statistics are given much on the same lines as those for our own army, they admit of pretty close comparison, if the tropical returns be excluded.

There are, however, points of difference: our sick soldiers are nearly all treated in purely military hospitals; the French are also admitted into civil infirmaries, but the returns are consolidated.

Those treated *à la chambre*, equivalent to our barrack treatment, are accounted separately. Accompanying the voluminous report is a short appendix, by which its study is much facilitated, since it affords ratios per 1,000 of strength. Our own ratios for 1912 may be compared with the French for 1911.

	Admissions.	Deaths.
1912 British Home	346.4 ...	2.34
1911 French Intérieur ...	726.0 ...	2.99
1912 British (India and Colonies)	505.2 ...	4.30
1911 French (Algérie et Tunisie)	785.0 ...	5.50

Officers and accidental deaths and suicides are not included in French mortality returns. The French army in Algérie-Tunisie numbers 59,588, against our 70,000 men in India.

The numbers treated *à la chambre* are about 1,600 per 1,000, but as the duration of treatment is only about two days, the trifling nature of the ailments and the wise restriction on the unnecessary swelling of hospital returns are clearly shown.

During 1911, the most healthy of the corps were those at Lille, Amiens, Rouen, Limoges; the least healthy, Rennes, Nancy, Tours, Bordeaux, and Toulouse. In Africa, Aïn Sefra in Algiers, and Gabe in Tunis were very unhealthy.

If regard be had to the different branches of the service it is found that the cavalry were less healthy than the line, owing perhaps to insanitary conditions in the stables; while of the infantry the Zouaves were the most unhealthy.

Sickness in the home army was greatest in January, February, and March, and least in June, July, and August; in Algérie-Tunisie the periods were reversed, showing the influence of temperature.

In the home army chest affections, rheumatism, influenza, and skin diseases were more prevalent in winter, and typhoid fever in late summer and autumn; in Africa malarial fevers prevailed in autumn.

The prevailing diseases in the home army were bronchitis, morbi-cutis, rheumatism, gonorrhoea, influenza; in Africa morbi-cutis, bronchitis, and malarial diseases in autumn. The morbi-cutis resolves itself largely into scabies, which seems to afflict the French soldier far more than our own.

Influenza seems a more important disease than with us; it culminated in serious outbreaks in 1890-95 and 1900, but it is now yearly declining; it is curious that it has prevailed more on the Atlantic coasts than the eastern provinces of France.

Venereal diseases are less prevalent now than in bygone years, but still are too common, especially in Algeria.

The causes for the retirement (*retraite*) or discharge (*réforme*) of ineffective soldiers are set forth at length. Tuberculous diseases have a bad pre-eminence, likewise rheumatism and bronchial, heart and mental affections. The ratio discharged in 1911 was 35.20 per 1,000.

The report is altogether a marvel of ingenuity and painstaking labour, from which much interesting and valuable vital statistics may be obtained.

THOUGH hysterectomy for fibromyoma is now a relatively safe operation, the loss of the uterus is no trifling matter, and a report read by M. Jayle (*Revue de gynéc. et de chir. abdom.*, December, 1913, p. 608) before the Congress of the Association Française de Chirurgie last October is interesting. It records a bold piece of conservative surgery, and the operator is to be praised in that he waited seven years before publishing it, so as to be able to give a full after-history. In 1906 he operated on a woman aged 32, and enucleated a large fibroid; it was difficult to set free below, and he applied large curved forceps to the parts and cut them through; then he found that he had removed with the tumour a complete segment of the uterine canal measuring about 1 inch in length. The sound could be passed through the cavity; it was seen that anteriorly only the mucous membrane had been excised; the anterior muscular wall remained almost intact, though, as the incision had been very oblique, a wide area of the posterior wall had been cut away. M. Jayle sutured the mucosa above the wound to that below the wound, closed in the muscular wall, and sewed a plait of peritoneum all round the repaired zone of uterine tissue. Fourteen days after the operation the periods appeared. Seven years later the patient was in good health, the catamenia were quite regular, and the uterine sound passed for 2 inches; in short, there was no evidence of stenosis, and no fibroid growth had been left behind. An operation of this type is undoubtedly good surgery, though, like myomectomy, it involves danger of haemorrhage, as the vessels, greatly enlarged and devious in their course, are not readily secured like the main trunk of the uterine arteries in a hysterectomy.

Nova et Vetera.

DUNDEE DOCTORS' FEES IN 1808.

Amongst some old papers I recently found a pamphlet (16 pages) entitled *Rules adopted by the Physicians and Surgeons in Dundee for the regulation of their Fees.* These rules were printed by R. S. Rintoul, Dundee, in 1809, and were "unanimously adopted by the physicians and surgeons of dundee, after ample discussion and mature deliberation." They were subscribed on October 3rd, 1808, by four Doctors of Medicine and by five "Surgeons."

The first of the signatories at once attracts attention, for few would expect to find a baronet amongst them. This was Sir Alexander Douglas, the seventh and last holder of the baronetcy of Glenbervie in Kincardineshire, dating from 1625. It is recorded in the *Dictionary of National Biography* that he was born in 1738, studied medicine at Leyden in 1759, and graduated M.D. of St. Andrews in 1760. He succeeded to the baronetcy in 1770, became a Fellow of the Edinburgh College of Physicians and a Licentiate of the London College of Physicians in 1796, and was Physician to the King's Forces in Scotland. His father was Sir Robert Douglas, author of the *Peerage* of Scotland, published in 1764. In Debrett's *Peerage* of 1822, Sir Alexander Douglas, Bart., M.D., was on the roll of the Baronets of Scotland, and in the same year his name was in the list of Licentiates of the London College of Physicians, but he died on November 28th, 1812, in Dundee.[1] The Keeper of the Register of Burials in that town has kindly informed me that Sir Alexander was buried in the Howff burying ground on December 4th, 1812, that he was described on his tombstone as "a physician in Dundee," and that he practised there in the Sea Wynd, Nethergate. Munk[2] says: "Whether he really practised physic I know not," but there seems to be no doubt that he did. Medical men in this country are derived from many grades of society, but the training of the heir to an hereditary title as a medical man is unusual. In this case Sir Robert Douglas inherited from his half brother in 1764, so that when his son, Alexander, began the study of medicine he was not in the direct line of succession. Dr. Clippingdale, in an article on Medical Baronets, 1654–1911 (British Medical Journal, 1912) mentions ten medical men who inherited baronetcies, but he gives the name of Sir Alexander Douglas twice, referring, I believe, to the same man. One other, through the death of an elder brother, became heir to a baronetcy when his medical education was nearly complete, so he also was not the heir when his profession was adopted. Of the seven remaining at least six were fully qualified before their fathers became baronets.

In a prefatory note to the Rules it is asserted that "want of information concerning what may be considered the reasonable compensation of medical aid is a subject of very general complaint," and the impossibility of framing "rules comprehensive of every case" is pointed out. The note continues:

> A division is formed into three classes,—higher, middle, and lower,—with considerable latitude, for obvious reasons, in the charges applicable to each. The difference between the fees stated for the higher and lower classes is very considerable, and must be so, according to the constitution and existing habits of society.
>
> The respective sums stated are to be considered in general as nearly the average for each class; hence, any intermediate sum may be taken as applicable to individuals in any of the classes. Thus, it is not intended by these rules to confine the liberality of the more opulent to the highest charge in the first class, nor to preclude the humanity of the practitioner from gratis attendance upon the more indigent in the third class.
>
> The value of property, in a great measure, determines the fees of law;—not so of medicine, where, of course, there must be less precision and a gradation proportionate to apparent wealth. Still, however, that difficulty and embarrassment hitherto arising from arbitrary payment will henceforth be in a great measure obviated.

[1] Munk's College of Physicians. I am indebted to Mr. Hewitt, Librarian to the Royal Society of Medicine, for finding this record, and that in the *Dictionary of National Biography.*

The Rules are set out in tabular form, in full detail under various headings, and the following is a summary. The three fees always mentioned refer to the higher, middle, and lower divisions of "apparent wealth."

Visits in Town.—10s. 6d., 5s., 2s. 6d. For attendance by the week in acute diseases the fees were respectively from £3 3s. to £2 2s., from £2 2s. to £1 1s., and from 10s. 6d. to 5s. The fee in chronic diseases to be less than in acute, in proportion to the length of time, and other circumstances.

Visits to the Country.—At a distance not exceeding four miles, as to Lochee, Broughty Ferry, and Invergowrie, and across the river (about a mile) to Fife, £1 1s., 15s., and 10s. 6d. Beyond these 5s., 3s., and 2s. 6d. per mile. These charges were exclusive of chaise-hire and boat-freight. An additional charge to be made in visits by express. Transient calls by desire to be charged as for visits in town. From 10s. 6d. to 5s. to be charged for every hour after the first that the practitioner is detained, either from the urgency of the case, or from the desire of the patient or friends. The above charges to be doubled during the ordinary hours of rest, and the fee for staying the night to be from £3 3s. to £1 1s.

Consultations.—At the house or shop £1 1s., 10s. 6d., and gratis. By letter 10s. 6d. to £1 1s. and upwards, according to the difficulty and importance of the case. Statement of cases for consultation £3 3s. to £2 2s., £2 2s. to £1 1s., and gratis. Granting certificates of health £1 1s., 10s. 6d., and 5s.

Surgery.—Capital operations—such as amputation, trepanning, lithotomy, hernia, extirpation of cancerous mammae, aneurysm, £31 to £21, £10 10s. and £5 5s. Lesser operations—as harelip, tapping, hydrocele, aneurysm of the smaller arteries and the like, £5 5s., £3 3s., and £1 1s. N.B.—Dressings to be exclusive of the operations. Reducing dislocation of the hip-joint, £6 6s., £3 3s., and £2 2s. Reducing dislocations of the inferior jaw, shoulder, elbow, wrist, knee, or ankle, £3 3s., £2 2s., and £1 1s. Fractures, same as dislocations, exclusively of medicines, dressings, and attendance. Examination in cases of accident, where no operation is necessary, and dressing wounds, 10s. 6d., 5s., and 2s. 6d. Dressing ulcers at the patient's house, as after extensive wounds, operations, gangrene, or the like, £2 2s., £1 11s. 6d., and £1 1s.; at the shop, 10s. 6d., 7s. 6d., and 5s. Inoculations, £1 1s., 10s. 6d., 5s. Insertion of setons and issues, 10s. 6d., 5s., 2s. 6d. Cupping and scarifying, introducing the catheter, opening the temporal artery, and such like, £1 1s., 10s. 6d., 5s. Extraction of teeth, £1 1s., 10s. 6d., and 2s. 6d. Blood-letting in the arm, neck, or foot, 10s. 6d., 5s., 2s. 6d.

Midwifery.—Delivery from £10 10s. to £5 5s.; from £5 5s. to £2 2s. and £1 1s. Assistance after delivery, £2 2s., £1 1s., and 10s. 6d. Assistance after delivery during the night, £3 3s., £2 2s., and £1 1s. Consultation with a midwife, £2 2s., £1 1s., and 10s. 6d. Attendance with a midwife to be charged as for delivery.

Engagements by the Year.—To be regulated by the parties, as from £21 to £3 3s.

Apprentice Fee.—£30, £21, and £15 15s. Term of apprenticeship three years and upwards.

There is no mention anywhere of fees for assistance at operations, which was the duty of the apprentices.

These Rules are very comprehensive, and I think with a few changes, such as the omission of the introduction of setons and some mention of operations and methods of treatment not known in 1808, they might be a useful guide in many provincial towns. But if the great difference in the value of money then and now is considered, these fees seem to me on the whole higher than those now paid in corresponding places. It will be noticed that the ordinary visiting fees—10s. 6d., 5s., and 2s. 6d.—were not increased for an examination after an accident if no operation was required, for dressing a wound, for inserting a seton or issue, or for blood-letting. The fees for extracting teeth show an unusual ratio in favour of the lower class, but it is, I think, doubtful if even 2s. 6d. was ever the recognized fee to that class for pulling a tooth. Unless my memory is at fault, I have good authority for the statement that forty or fifty years later in Dundee the younger medical men, at any rate, and the apprentices would pull teeth for 1s. each.

The fees for assisting after delivery during the night show a difference in favour of the higher class, who were charged £3 3s. by night and £2 2s. by day, whereas in the other two classes the fee was doubled by night, according to the rule mentioned three times elsewhere, regarding "the usual hours of rest."

The repeated reference to "the shop" shows that all the medical men dispensed their own medicines either from the house or from a shop. The meaning of the additional charge for visits "by express" following close upon the statement that the fees for visits to the country are exclusive of the chaise-hire and boat-freight is not easily explained. Another curious point is the provision for "engagements by the year," which so far as I know has never been customary in this country until club

practice, and more recently panel methods, were introduced. The variation of the apprentice fee indicates that the profession was to be recruited from families of a wide range of "apparent wealth."

It would be interesting to know to what extent these rules were acted upon, but concerning that I have no knowledge.

JOHN D. MALCOLM, Senior Surgeon to the Samaritan Free Hospital.

LITERARY NOTES.

AN illustrated book of travel and exploration by Dr. Felix Oswald, called *Alone in the Sleeping-Sickness Country*, is in preparation at the Broadway House. The immediate object of Dr. Oswald's journey to the Victoria Nyanza was, says the Literary Supplement of the *Times*, to pursue a geological investigation, on behalf of the British Museum, of some miocene deposits originally discovered in 1911 on the east coast of the lake. The scientific results have been communicated elsewhere. In the present book the author describes the habits and characteristics of the Kavirondo negroes as seen when he lived alone with them at close quarters.

The seventh centenary of Roger Bacon's birth is, as has already been announced in the JOURNAL, to be celebrated at Oxford in July. Sir John Sandys's paper on "Roger Bacon," which will be published immediately by the Oxford University Press, from the proceedings of the British Academy, is therefore specially opportune in its appearance. In addition to a brief outline of Roger Bacon's life the author gives some account of his principal works.

Florence Nightingale to Her Nurses is the title of a new work to be published shortly by Macmillan and Co. The book, which will appear under the editorship of Mrs. Rosalind Nash, will no doubt attract the attention of nurses generally, but it should prove especially valuable to all who are responsible for the training of probationers, for it contains a selection from Miss Nightingale's annual addresses to young nurses at St. Thomas's Hospital.

In a paragraph entitled "Doctor" or "Physician"? which appeared in the JOURNAL of May 30th, p. 1201, mention was made of a curious action brought against the managers of the Royal Infirmary of Aberdeen by Dr. Memis for styling him "doctor of medicine" instead of "physician." Reference was made to the argument dictated by Johnson to Boswell, who had applied to the "Great Cham of Literature" for help. Some readers may, perhaps, like to read the full text dictated by Johnson. We reproduce it from the edition of the famous biography published in the *Temple Classics* (J. M. Dent and Co., 1897) where it appears at p. 232 of the third volume:

> There are but two reasons for which a physician can decline the title of Doctor of Medicine, because he supposes himself disgraced by the doctorship, or supposes the doctorship disgraced by himself. To be disgraced by a title which he shares in common with every illustrious name of his profession, with Boerhaave, with Arbuthnot, and with Cullen, can surely diminish no man's reputation. It is, I suppose, to the doctorate, from which he shrinks, that he owes his right of practising physick. A Doctor of Medicine is a physician under the protection of the laws, and by the stamp of authority. The physician who is not a Doctor usurps a profession, and is authorized only by himself to decide upon health and sickness, and life and death. That this gentleman is a Doctor, his diploma makes evident; a diploma not obtruded upon him, but obtained by solicitation, and for which fees are paid. With what countenance any man can refuse the title which he has either begged or bought is not easily discovered.
>
> All verbal injury must comprise in it either some false position, or some unnecessary declaration of defamatory truth. That in calling him Doctor, a false appellation was given him, he himself will not pretend, who at the same time that he complains of the title would be offended if we supposed him to be not a Doctor. If the title of Doctor be a defamatory truth, it is time to dissolve our colleges; for why should the publick give salaries to men whose approbation is reproach? It may likewise deserve the notice of the publick to consider what help can be given to the professors of physick, who all share with this unhappy gentleman the ignominious appellation, and of whom the very boys in the street are not afraid to say, *There goes the Doctor.*
>
> What is implied by the term "Doctor" is well known. It distinguishes him to whom it is granted, as a man who has attained such knowledge of his profession as qualifies him to instruct others. A Doctor of Laws is a man who can form lawyers in his precepts. A Doctor of Medicine is a man who can teach the art of curing diseases. This is an old axiom which no man has yet thought fit to deny, *Nil dat quod non habet*. Upon this principle to be Doctor implies skill, for *Nemo docet quod non didicit*. In England, whoever practises physic, not being a Doctor, must practise by a licence: but the doctorate conveys a licence in itself.
>
> By what accident it happened that he and the other physicians were mentioned in different terms, where the terms themselves were equivalent, or where in effect that which was applied to him was the most honourable, perhaps they who wrote the paper cannot now remember. Had they expected a lawsuit to have been the consequence of such petty variation, I hope they would have avoided it. But, probably, as they meant no ill, they suspected no danger, and, therefore, consulted only what appeared to them propriety or convenience.

There is a point which Johnson seems to have missed. Dr. Memis protested against the difference of title applied to him and his colleagues, but no notice was taken of his objection by the managers. Now a man may be a doctor of medicine without holding the office of physician to a hospital, and Dr. Memis may have had reason to think that there was some intention of implying that he was not even as his colleagues.

In an article entitled "Robert Burns and 'Sum Practysis of Medecyne,'" reprinted from the *Glasgow Medical Journal* for January, 1914, Dr. J. W. Findlay quotes some of the Scottish poet's references to things medical which, he says, are almost without exception sportive. He does not profess to know where Burns picked up his medical lore, but he is inclined to think he must have found some inspiration in Robert Henryson's *Sum Practysis of Medicine*. Henryson (1425–149?) attacks the doctor, or rather the "Pottingary," in general. The satire is rather of the primitive kind, and the language is so mossgrown with age that it is not easy to decipher the meaning. One passage will suffice as a specimen of the rest; the interpretation of the words is that supplied by Dr. Findlay:

> Becaus I ken your cunnyng (knowledge, skill) in to cure
> Is clowtit (cluttered) and clampit (clumsily patched) and nocht weill cleird (cleared, scoured),
> My prettik (practice, experience) in pottingary (pharmacy) ye trow (believe) be als pure (poor),
> And lyk (like) to your lawitnes (ignorance) I schrew (curse) thame that leid (lied);
> Is nowdir (neither) fevir (fever) nor fell (disease of cattle characterized by a hide-bound condition) that our (over) the feild fure (went).
> Seiknes (sickness) nor sairnes (soreness) in tyme gif I send
> But I can lib (geld, perhaps relieve) thame and leiche (cure) thame fra lame (lameness) and lessure (injury),
> With sawis (salves) thame sound mak, on your saule beid (beads, rosary):
> That ye be sicker (sure) of this sedull (schedule) I send yow,
> With the suthfast (true) seggis (sayings),
> That glean all egeis (ages),
> With Dia (medicine) and dreggis (dregs),
> Of malis (bodily disease) to mend yow.

It is interesting to note the word "leiche" in the twelfth line; it is the same word as the old English "leech," which was used both as a noun and a verb. It belongs to the same family as the Danish "laege" and the Swedish "läkare," from the verb läka, to heal.

The contents of the June number of the *British Review* are varied and interesting. Alejandro Alvarez writes on international politics in North and South America; Paul Parsy (in French) on the significance of the elections in France; Mr. Arnold White on the coming class war. Among interesting articles is one entitled "Things as seen by a foreman bricklayer." There is a good deal of verse by various writers, a North-Country dialect play by the Rev. H. D. Rawnsley, impressions of the Royal Academy, and *obiter dicta* on things in general by the editor Mr. Richard Johnson Walker.

Messrs. P. Blakiston's Son and Co., Philadelphia, announce that they will shortly publish a work on occupational diseases. It will appear under the joint editorship of Dr. George M. Kober, of Washington, and Dr. Wm. C. Hanson, of Boston, Mass. Among the contributors are Sir Thomas Oliver, Dr. Legge, of the Home Office, Dr. Teleky (Vienna), Professor Devoto (Milan), Professor Edsall (Harvard), and others who can speak with authority.

British Medical Journal.

SATURDAY, JUNE 6TH, 1914.

SENSITIZED VACCINES.

An article by Dr. Sydney T. Champtaloup, Bacteriologist to the New Zealand Government Health Department, giving the result of his experiences with the curative and prophylactic use of sensitized bacterial vaccines, published in this issue, will be read with interest. It describes a small outbreak of puerperal sepsis which occurred at a nursing home, and the special measures adopted to cope with it. Streptococci and *Staphylococcus aureus* were isolated from an intrauterine swab taken from the first patient who contracted sepsis. A stock sensitized vaccine was given, and as soon as possible an autogenous streptococcal vaccine was sensitized against the patient's own serum. As no permanent improvement followed this procedure, smaller doses of the vaccine were used in combination with an autogenous vaccine of the staphylococcus already isolated. The patient made a good and rapid recovery. Similar satisfactory results were obtained in two other septic cases in the nursing home, and as a precaution the remainder of the patients were given prophylactic doses of sensitized vaccine. No further cases of puerperal sepsis occurred.

In considering the suggestions of the author with regard to prophylactic treatment based on these lines, it will be of advantage briefly to recall the main facts with regard to sensitized vaccines, including the original method and its numerous modifications.

So long ago as 1902 a note on this subject was presented by Besredka to the Académie des Sciences dealing with the results of his preliminary investigations with sensitized vaccines in relation to plague, cholera, and typhoid infections. The results of these early experiments were very favourable, and the new technique was credited with many advantages over existing methods. The procedure at present most usually adopted in the preparation of these vaccines is similar to the method originally employed and is briefly as follows: Pure cultures of the indicated organism are allowed to remain in contact with homologous immune serum for a sufficient time to permit of the adsorption by the bacterial cells of the specific antibodies present in the serum. When this has taken place the bacteria are centrifuged down and the supernatant fluid is removed and replaced by normal salt solution. The deposited bacteria are then shaken up and the process is repeated until the last trace of serum is removed from the bacterial bodies. Besredka and his pupils recommend the use of living sensitized vaccines, but other workers prefer to kill the bacteria after sensitization by the addition of 1 per cent. phenol to the terminal washing.

The claims advanced in support of the superiority of this method of preparing vaccines over other procedures are numerous, and Besredka has gathered together many facts in favour of his contentions. In the first place it is well known that ordinary vaccines are very often toxic, and that their administration is not infrequently attended with very unpleasant local and constitutional symptoms. Workers with sensitized vaccines, however, claim that these toxic effects are practically abolished by the new technique, and that either killed or living organisms may be used with perfect safety. Though it does not appear probable that any actual neutralization of endotoxin takes place during the process of sensitization, yet the bulk, at any rate, of the experimental work on this subject would indicate that the action of the bacterial toxin is in some way modified with regard to the infected animal.

In discussing statements as to the toxicity of ordinary "whole vaccines" it must be remembered that the question of vaccine therapy is still in its infancy, and the older methods are doubtless capable of great improvement and extension. Recently, for example, it has been found that while the "derived vaccine" or endotoxin obtained from the bodies of plague bacilli when subjected to autolysis loses its toxicity, yet its immunizing properties are not affected. The employment of such a vaccine, moreover, greatly facilitates standardization and accuracy of dosage. It may well be that the use of such atoxic derived vaccines will in the near future open up new and fruitful fields of inquiry, and may throw unexpected light on many of the dark and complex problems of immunity.

The claim is also advanced that by the use of sensitized vaccines the immunity reaction is accelerated, and is acquired without any diminution of specific resistance, while with ordinary vaccines, although the occurrence of a negative phase can to some extent be guarded against by accurate and skilful dosage, the danger is nevertheless always present.

In addition to these advantages, it is stated that the immunity acquired is of a more permanent character than that obtained with ordinary vaccines.

With regard to the mechanism of the immunity conferred by sensitized vaccines, the generally accepted view is that during sensitization the bodies of the bacteria become covered over with specific agglutinin and opsonin, that the bacteria thus sensitized are readily taken up by the polymorphonuclear leucocytes, that bacteriolysis occurs in the interior of the phagocytes and endotoxin is liberated, and that antibody production is stimulated by the endotoxin thus set free in the interior of the leucocytes. The essential factor in the process appears to be the shortening of the preliminary work of the phagocytes.

The original experiments of Besredka have been extended by many workers since the year 1910, when the study of sensitized vaccines again commenced to attract attention, and a very wide area of research has been covered by Besredka and his pupils. A few examples will suffice. Calmette and Guérin have obtained good results by using living sensitized tubercle bacilli in the vaccination of cattle against tuberculosis, and testify to the superiority of this method as compared with the original procedure of von Behring, in which living unsensitized bacilli were employed. Meyer has reported encouraging results in cases of human tuberculosis, especially in local tuberculous affections, such as fistulae and abscesses, and tuberculous conditions of bones and articulations. Levy and Aoki, working with experimental pneumococcal infection in rabbits, found that the use of sensitized vaccines produced a more rapid and satisfactory immunity than that obtained by the employment of an ordinary killed vaccine, and they have even adduced evidence to show that such vaccines have a curative as well as a protective action. Bridré and Boquet, experimenting on Algerian sheep with a sensitized virus, obtained an immunity, *rapide, solide et durable*, against infection with sheep-rot.

The procedure has also been extended to such widely different diseases as rabies, dysentery, and diphtheria with varying success.

A great deal of work with sensitized vaccines has been accomplished in relation to streptococcal infections, and in this connexion the work of Broughton-Alcock and M. H. Gordon is of particular interest. Their publications bear testimony to the good results they have obtained by the use of sensitized vaccines.

With regard to the question of using living vaccines, Besredka is of opinion that in some infections (typhoid fever, for example) the living vaccine is infinitely superior to the killed vaccine. Many other workers habitually use living sensitized vaccines, but taking into consideration the fact that our knowledge of the factors which influence the variation of bacterial virulence is still very rudimentary, the indiscriminate use of living vaccines in treatment would seem most undesirable.

The question of the best antiserum for sensitization of the bacilli, again, appears to be largely a matter of individual opinion. Some workers use polyvalent antiserum, others autogenous serum, and so on. The sensitized vaccines employed are derived either from stock vaccines or are prepared from the causal organism isolated from the patient; and here again there does not seem to be any uniformity of opinion as to the best procedure to be adopted. The question of dosage is a matter which has to be left very much to the discretion of the physician: the intensive method of Fornet and Müller, in which increasing doses of vaccine are given for three days in succession, is strongly recommended by those who have experience of it. A case of uterine abscess due to the *Bacillus proteus*, and treated by the double method of Broughton-Alcock, is recorded by him in this issue. In this method killed vaccines derived from the causal organism are first given at intervals of three or four days, and are followed up by an autogenous living vaccine sensitized with the patient's own blood serum. This method, which was described by the author at the International Congress in London last year, has given most successful results in Dr. Broughton-Alcock's hands.

The time is not yet ripe for a definitive pronouncement on the value of Besredka's method of vaccination. A great deal more experimental work on these lines will be necessary before the claims advanced can be deemed to be fully substantiated and the best methods of application established. Pending more detailed information on this interesting and important subject, it may be doubted whether public health departments and hospital boards would at this stage of our knowledge be justified in expending the funds necessary for keeping up the manufacture and distribution of sensitized vaccines. If the methods advocated stand the test of more extended application and prove to be of incontestable value in treatment and in prophylaxis, the suggestions embodied in the latter portion of Dr. Champtaloup's interesting communication will no doubt receive the serious consideration of public bodies interested in these matters.

A PROBLEM OF DENTAL LEGISLATION.

For some years the British Dental Association has been aware that a serious and difficult problem had to be faced—namely, the phenomenal growth of the numbers of unqualified persons practising as dentists. The respondent in one of the cases before the General Medical Council last week raised the fact as a plea in extenuation.

The *Dentists Register* contains 5,275 names; of these, 3,615 hold qualifications, whilst the remainder are the survivors of those who were registered as being in practice prior to 1878. As a result of the institution of dental qualification by the Royal Colleges and by certain of the universities, and of the passing of the Dentists Act, an increasing body of unquestionably competent practitioners has arisen; but these, although probably numerous enough to provide dental service to the better-to-do classes, are not, perhaps, numerous enough to meet the needs of the whole population. Whilst in 1878 there were, including a good many whose claims to have been in practice were of the slightest, only 5,289 dentists, it is variously estimated that there are now from 15,000 to 30,000 unregistered irregular practitioners in addition to the 5,275 registered practitioners. These estimates are of the nature of guesses, as no returns are available, but it is beyond doubt that the numbers are very large. Thus, the object of the Dentists Act—that the public should receive treatment at the hands of qualified persons—is to a large extent defeated.

The Dentists Act follows the lines of the Medical Acts, and does not prohibit practice by unqualified persons, but merely the use of titles; the idea that it was somewhat stronger than the Medical Acts has been dispelled by a decision of the House of Lords, which placed the narrowest possible interpretation upon its words. In medicine the larger issues and risks involved have had the effect of keeping down to moderate limits the incursions of the unqualified, but these considerations are less operative in the case of dentistry, and it is clear that nothing short of a prohibition of unqualified practice, such as exists in many other countries and in many of our colonies, would have the desired effect.

Two articles discussing this question have appeared recently in the *Nineteenth Century*—one by Mr. Underwood, an experienced teacher and examiner; the other, from the standpoint of the unqualified, by Mr. Fisher. Both agree that the present position is unsatisfactory, but naturally they differ as to the form which the remedy should take. If it were in any circumstances possible to induce the Legislature to prohibit unqualified practice, it is clear that some concession in the way of recognition would have to be made to the existing body of irregular practitioners who, whatever may be thought as to the spirit of the law, have not transgressed its letter. Hence the choice lies between letting things remain as they are, or acknowledging the unregistered in some form or other. The latter course, involving a heavy sacrifice on the part of existing qualified practitioners, is nevertheless advocated by many of them, Mr. Underwood amongst the number. Remembering the influx of doubtfully genuine applicants upon the *Register* in 1878, Mr. Underwood suggested that the passing of a simple practical examination should be a condition precedent to admission upon a register of those now in practice, but Mr. Fisher rejects this suggestion, claiming that they should be registered purely in virtue of having been in practice for five years; he admits, however, that there should be two lists, that is, two grades of dentists.

With the recriminative and somewhat vituperative portions of his article we need not concern ourselves. But he tells us that the present body of the unqualified would be glad to close the door against further indiscriminate additions to their number, and claims to speak with authority. He does not, however, give the numbers of the body (believed to be small) which he immediately represents, and it is difficult to see

how he or any one can speak with authority for an unorganized mass. We give his suggestions, however, for what they are worth. Rejecting the idea of any examination test—which, by the way, does not indicate much confidence in the amount of knowledge possessed by those on whose behalf he professes to speak—he claims registration for all of them in a separate list, and the institution for the future of a simple practical examination, thereby creating two grades of recognized dentists with a difference of titles. He would substitute as a controlling authority a Dental Council for the General Medical Council, and would place upon it representatives of the licensing bodies, of the licentiates, and of the lower grade of dentists. In support of this contention he alleges that the present curriculum and examinations for dental licences are too severe, too lengthy, and too expensive for the practitioner whose work lies amongst the poorer classes. It is true that although the numbers qualifying are increasing and rather more than make up the losses by death, the total number on the *Dentists Register* remains nearly the same as in 1878; the qualified have not increased so fast as was desired and expected. This may be partly due to the curriculum having been lengthened and the stringency of examinations from time to time increased, just as has happened in medicine, and partly, as was pointed out in the report of the University of London Commission, to the unchecked influx of the unqualified. With regard to the suggestion that the grounding in the principles of medicine and surgery required of the licentiate is superfluous, it may be remarked that those who have not received it are not in a position to judge of its value, and that the opinion is not shared by those who have gone through this training.

The probable extension of benefits under the Insurance Act so as to include dental services renders the position more acute. The recent regulations issued by the Insurance Commissioners, which define the conditions under which the funds available for medical benefit may be diverted to the payment of herbalists or other unqualified persons, do not afford much promise that the rendering of dental service will be restricted by them to registered dentists.

It must not be forgotten that there are certain risks in bringing a measure before Parliament; there is always a chance that the privileges at present enjoyed by the registered dentist might be curtailed, or that the irregular practitioners might gain some recognition without any effective prohibition of unqualified practice for the future being secured. Hence it would appear to be unwise to approach Parliament at all unless Government support could be secured for the measure. And supposing that a satisfactory measure could be secured on the lines indicated, the beneficial effect will not by any means be immediate; indeed, it might almost be said that it will not greatly affect the existing generation. Thirty-six years have elapsed since the Dentists Act was passed, and there still remain upon the *Register* 1,639 persons registered in virtue of having been in practice prior to 1878 out of an original number of about 5,000. There is no reason to suppose that the many thousands who would obtain admission to a new list would disappear with any greater rapidity. Hence for many years the public would be largely receiving the same services at the same hands as now, and the registered practitioner would be faced with the same unfair competition as at present.

The position is exceedingly difficult and calls for the most careful consideration not only by the registered dentists, but also by the several licensing bodies the value of whose diplomas may be seriously affected. Indeed the whole question of medical qualification is to some extent involved, though indirectly; the attitude of various committees and commissions which have sat and reported of late years has not shown great regard for qualification. The demonstration that the mere prohibition of the use of certain titles is of itself an inadequate and inefficient provision is complete, and this demonstration may possibly prove useful. On the other hand, the passage of any measure recognizing in large numbers those who have availed themselves of the weakness of the law may prove a dangerous precedent. And whatever distinction may be made upon a register and in an Act between the two grades suggested, the lower grade must determine the standard of "qualification."

INSANITY AND THE CRIMINAL LAW.

We need make no excuse for returning to this very important subject, though we commented on it so recently as April 18th and May 2nd. The establishment of the Court of Appeal has brought to public notice several cases, which in the old days would have been left to be adjusted by the Home Secretary under the ample powers given to him by the law to secure full justice to those persons of unsound mind who might, under the strict administration of the law, be deprived of protection from the consequences of their acts. Undoubtedly, justice has been substantially secured hitherto, but the right of appeal, as now conceded, must be considered to be a gain in so far that if on appeal a verdict of "Guilty but insane" is given, all charges of criminality are wiped out from the record—an important consideration in the event of ultimate recovery from the mental affection. On the other hand, the extension of clemency, on the advice of the Home Secretary, after an unfavourable verdict is given, can do nothing to remove the black mark which will remain for ever against the convict.

The case of the Portuguese Coelho, decided in the Court of Criminal Appeal recently, tests the relation of insanity to the law from a point of view exactly converse to that taken in Felstead's case. This new appeal, Rex *v.* Coelho, like that of Felstead, disclosed evidence which left no room for denial of the facts, but at the trial Felstead was found guilty but insane, while Coelho was declared to be guilty but not insane, the issue of insanity having been directly raised at the assizes. The Court of Appeal would not listen to Felstead, because, as he had been acquitted by the verdict itself of crime, he had not the necessary qualification of having been convicted of crime. On the other hand, Coelho, having been convicted, had a right to appeal on any ground open to a criminal.

Coelho's appeal was on two grounds. First, it was urged by his counsel that on the evidence given at the trial and on some fresh facts which had come to light since the trial, he was entitled to a verdict of guilty but insane. The Court of Appeal did not find itself justified in reversing the finding of the jury in the Court below, but pointedly said that it by no means intended to lay down that it would not interfere with such a verdict or would refuse to substitute, in a suitable case, a special verdict under the Trials of Lunatics Act, 1883. Such an announcement is not only reassuring in itself, but clears up any doubt that might have been left by a careless reading of its decision in Felstead's case. In effect it had announced that it will not entertain, for reasons

already stated, an appeal against a verdict involving insanity, but it will readily do so in a case where a finding of sanity is the subject of that appeal.

The second ground of appeal is interesting and important, since it brings up the Macnaghten case. This case led to an "Opinion" (sometimes erroneously called a "judgement") being given by the judges on a series of hypothetical questions designed to elicit their views as to the then existing state of the law in relation to pleas of insanity in criminal cases. On this "Opinion" the great majority of directions by judges in such cases are still given. Medical instinct has but little sympathy with that "Opinion," since its precise terms entirely exclude all consideration of the influence of that *force majeure* which a scientific study and understanding of the problems connected with the insane brain has shown incontestably to exist in some cases and to be able, when present, to beat down all the normal effects of even a competent knowledge of right and wrong. If the Opinion is to be acted on it would appear to be essential, on medical and indeed on all grounds, that it should be followed out to its very last letter. Coelho's counsel alleged that it had not been complied with fully. It is worth while to quote the exact words of the Opinion which relate to this. In answer to the question as to what is the proper way of directing the jury, the judges said, among other things, "or, if he did know it (the nature and quality of the act) that he did not know that he was doing what was wrong . . . and the usual course, therefore, has been to leave the question to the jury, whether the party accused had a sufficient degree of reason to know that he was doing an act that he knew to be wrong; and this course we think is correct, accompanied by such observations and explanations as the circumstances of each particular case may require."

In the end the court dismissed Coelho's appeal on this question as well as on that of the actual insanity, but it gave a very broad hint to the Home Secretary that he might well look into the case, which was difficult. It is somewhat curious that the Lord Chief Justice, in giving judgement, used again, as reported, the loose phraseology objected to by the appellant, but no doubt he had satisfied himself that proper explanations had been given in the court below.

The pith of the appeal on the ground of misdirection was that it is not safe or right, according to the opinion of the judges, to leave the question of knowledge of right and wrong to a jury in such a way as to leave it possible for the jurymen to believe that they had to pronounce a verdict on a general knowledge of right and wrong, but, rather, that the question should be precisely confined to knowledge of the right or wrong of the particular act. It very often happens that a jury asks for further directions from the judge, and we may assume that in serious cases a jury would be very glad to rid itself of as much moral responsibility as possible by relying on the exact terms of the Opinion. To endeavour to prove a general want of knowledge would be a hopeless task, as it would entail proving an unlimited negative. Any such attempt could be defeated by showing that the defendant had a satisfactory morality in some directions. The judges actually mentioned in their opinion the possibility of a jury being misled by the want of clear direction by the judge to confine this knowledge to the act of crime charged. They said, however, that such a possibility of mistake could rarely, if ever, arise. Can any one certainly know what are the innermost thoughts of a juryman or say what may be the last factor to weigh down the scales?

It is not so necessary to emphasize this point, perhaps, in relation to medical evidence, for experts would be careful to make it plain that the evidence given by them had reference solely to knowledge of right and wrong at the time of committing the act charged. We may expect, however, that as the public conscience quickens—as, indeed, it will be quickened by the bringing home to its door of the newly recognized moral imbecile—as to the protection from the consequences of crime that should be accorded to the insane, more cases will arise calling for evidence from those who have less experience in such matters. To such we venture to suggest the necessity of standing firm on the principle of confining attention and evidence to the time of committal of the crime.

Coelho's case suggests lines on which an illustrative example of the evils of loose readings of the Opinion might be built up. Let it be assumed that a man thought his life to be in danger from his wife, and that the means whereby she sought to injure him was a pistol instead of poison, and let us assume further that it was proved to the satisfaction of the jury that when he shot her he was under the belief that by so doing he was taking steps to save his own life. How would the matter stand then if his defence rested on general consciousness of right? It might be admitted that he was insane, but yet his insanity would apparently not come within the terms of the "Opinion," and therefore he would have no protection at law. Obviously he would know the nature and quality of the act of shooting his wife, and could not be asserted to lack a knowledge of right and wrong. If, however, this knowledge be tied down to the act itself, his position is amply covered by the "Opinion," which, in answer to another question, contains the following: "For example, if under the influence of his delusion he supposes another man to be in the act of attempting to take away his life, and he kills that man, as he supposes in self-defence, he would be exempt from punishment." In other words, he, acting under a delusion, could not be said to know that he was doing wrong.

The final result in the case of Coelho is that the Home Secretary has commuted his sentence to penal servitude for life. The grounds on which he has thus acted are not given. The case seems to have raised some international questions and sympathies, to which we may add the fact that in Portugal there is no death penalty for the offence committed by Coelho. Altogether the case bristles with doubts and difficulties, which are happily put on one side by the Home Secretary's action.

PROGRESS OF UROLOGY.

THE yearly abstract of urological literature, edited by Professors Kollmann and Jacoby,[1] has always maintained a high standard, and the recent publication of that for 1912 affords an opportunity for reviewing the progress of urology. The year 1912 gave birth to no new urological discovery of epoch-making importance, but much good work was done in testing the older doctrines, refining them, and separating those which are false from those which are true.

An interesting fact in the physiological field established by Ginsberg and Cow is that water does not act as a diuretic if given intravenously or subcutaneously, but will only do so if given by the

[1] *Urologischer Jahresbericht.* Redigiert von Professors Dr. A. Kollmann und Dr. S. Jacoby. Leipzig: Dr. W. Klinkhardt. 1913. (Roy. 8vo, pp. 505. Mk. 21; bound, Mk. 23.)

mouth. In regard to diagnosis of the functional value of the kidneys, most authors agree that the various methods now in use do in actual practice yield results far better than those obtained in the past, and this means that no surgeon can afford to dispense with them if he intends to operate on the kidneys and prostate. It is wise to make use of several tests and co-ordinate the results obtained, rather than to trust to one alone, and the conclusions are, of course, far more reliable when the tests are applied to urines which have been drawn off simultaneously by ureteric catheters. The indigo carmine test still holds its ground, but the phenolsulphonepthalein test of Rowntree, Geraghty, and Young makes headway, and may possibly supplant it. These authors find that the drug is excreted chiefly by the kidney tubules, and that it appears in and disappears from the urine more quickly than any other substance. They hold the test to be absolutely reliable and apply it not only in surgical diseases of the kidney, but for diagnosis and prognosis in cases of enlarged prostate and medical nephritis and in the differential diagnosis of uraemia. Albrecht criticizes the test, stating that he has tried it in a number of normal persons, and finds that the results vary outside Rowntree's limits and that the colorimetric method is inexact.

Decapsulation and nephrotomy are strongly advocated for cases of acute nephritis, eclampsia, and angio-neurotic renal haemorrhages, but it appears to be more or less agreed that it does not cure chronic nephritis, though it may relieve the symptoms. It is a pity that this method does not receive more attention among English physicians, especially in acute uraemic conditions.

For chronic pyelonephritis renal lavage is becoming more widely applied and with increasingly favourable results, whereas the vaccine treatment is found disappointing as regards cure, though useful at times in relieving symptoms. Pyeloradiography is being universally adopted, though it needs constant practice and great care in the technical details.

The cure of unilateral tuberculosis of the kidney by nephrectomy is now firmly established by the published results of several thousand cases; the percentage of complete cures is as high as 75. The mortality of the operation in the hands of cystoscopic experts is less than 3 per cent. Improvement may still be looked for in the technique of the operation. Attention is being paid, notably by Rowsing, to the possibility of removing the infected kidney even when cystoscopy is rendered impossible by the irritable state of the bladder, and some authors are bringing forward cases to prove that much may be done even in certain cases of bilateral infection by wise removal of the worse kidney. Foreign authors are using tuberculin more and more after nephrectomy, a line of treatment in which English surgeons have led the way. The chief advance in technique is in the wider recognition of Mayo's incision and the Edebohls position. A free discussion of the indications for pyelolithotomy and nephrolithotomy has led to a fair measure of agreement between the opposing camps on this difficult question.

The suprapubic operation for prostatectomy has grown in favour, with a corresponding decrease in the number of those who at one time favoured the perineal method; and it appears doubtful, indeed, whether the perineal method will survive much longer. Much attention has been paid to the morbid anatomy of senile enlargement of the prostate, and the general opinion seems to be that the disease is a true adenomatous formation, and that only the diseased portion of the prostate is removed; this means that total prostatectomy is never in reality performed. Certain French authors are emphatic in their opinions that the adenomata arise in suburethral glands which lie within the internal vesical sphincter, and do not arise from the true prostate at all.

As to urethritis, the editors of the yearbook grimly remark that the papers are *non multum sed multa*, and add nothing to our knowledge of the complaint. It appears that vaccine treatment continues to disappoint those who are able to test the results obtained by adequate and proper examination, though it finds favour with some enthusiasts who do not appear to have applied scientific tests to the cases they publish as cures.

ADRENALIN IN THE TREATMENT OF ACCIDENTS DUE TO SALVARSAN INJECTIONS.

IN a recent issue of this JOURNAL (May 9th, p. 1044) was printed a letter from Professor Ehrlich, in which he set forth his views about the way in which death may occur after salvarsan injections. In that letter he refers in terms of warm approbation to the use of adrenalin advocated by Milian, and expresses the hope that by a vigorous adrenalin treatment it will be possible to prevent these occasional dangerous manifestations in salvarsan therapy, or, at any rate, in a very large percentage of the cases to treat them satisfactorily when they do occur. Milian[1] holds that salvarsan is the least toxic of all known arsenical compounds, and, indeed, denies that it has any toxic character at all; even after fatal doses of it have been administered no toxic lesions can be found in the human body. No cellular lesions have yet been demonstrated in the nervous system or other organs of men or animals killed by overdoses of salvarsan. Milian maintains that it is quite otherwise with atoxyl, for example, which he considers a highly poisonous compound of arsenic; he lays great emphasis on the fact that no true case of deafness or blindness due to the action of salvarsan has yet been published, the lesion, when it does occur, being really due to the syphilis and not to the salvarsan. To illustrate this point he quotes the case of a patient who received four injections of salvarsan (0.45, 0.60, 0.75, and 0.90 gram), and six weeks after the last of them developed blindness of the left eye, with acute optic neuritis. Believing that this neuritis was due to the syphilis and not to the salvarsan treatment, he at once gave the patient three further injections of salvarsan (0.60, 0.75, and 0.90 gram) with the result that the neuritis subsided and the sight returned within twenty days. Milian argues that salvarsan is a nocuous but not a toxic drug, and that its harmfulness resides in its very powerful action as a vaso-dilator. Comparing its action to that of amyl nitrite, he ascribes the catastrophes that occasionally follow its use to what he calls a *crise nitritoïde*, the effects of an acute vaso-dilatation, whether in the central nervous system or elsewhere. He states that salvarsan may be or has been administered in three forms: (1) The original acid salt, the dichlorhydrate of dioxydiamidoarsenobenzol, which is a very violent vaso-dilator, and must be injected both slowly and in a highly dilute state if accidents are to be avoided; (2) the alkaline sodium salt, a much less powerful vaso-dilator; and (3) the neutral product neo-salvarsan. He estimates roughly that some unpleasant result, some sort of a *crise nitritoïde*, is produced in perhaps 80 per cent. of the cases in which (1) is injected, in 10 per cent. with (2), and in only 5 per cent. with (3). Some patients are very sensitive to salvarsan injections, as he remarks, and he calls them "cetasophils"; he gives a

[1] *Bull. Soc. franç. de Dermat. et Syph.*, Paris, 1913, xxiv, 436. Also L'Adrénaline dans la pratique du "606," *J. méd. franç.*, Paris, 1913, vii, 518.

long list of the unpleasant symptoms that may result from injections of salvarsan, all of them due, he holds, to vaso-dilatation, and therefore all of them to be combated with adrenalin. Among these are the following: flushing and congestion of the face, swelling of the lips and ears, lacrymation, headache, syncope, irregular fever, urticaria, anorexia, vomiting, diarrhœa, colic, rigors, sweating; and, when the acute attack is over, fatigue, exhaustion, pains all over. The treatment and the prophylaxis for all these troubles recommended by Milian are quite simple. If there is any reason to suppose that the patient is going to take the salvarsan badly, he should receive, fifteen minutes before the salvarsan is given, a preliminary subcutaneous injection of $\frac{1}{2}$ mg. of adrenalin and an intramuscular injection of $1\frac{1}{2}$ mg. If unpleasant symptoms arise after the salvarsan injection, they can be cut short in a few minutes by the subcutaneous injection of the same dose of adrenalin. It is important that adrenalin of a trustworthy brand should be employed, and that it should be given and repeated from time to time as long as may prove necessary. No harm results from such use of adrenalin; the patient may become pale after its injection (Milian calls this a "leuco-reaction,") but the pallor is not associated with any discomfort, although the patient may exhibit a transient characteristic coarse "adrenal tremor" of the hands. He administers the larger part of the dose by intramuscular injection in order to delay the absorption and elimination of the drug as long as possible. These intramuscular injections often prove painful for a day or two, and so the salvarsan may be combined with $\frac{1}{2}$ or 1 cg. of stovaine. Alternatively "ectasophil" patients may be given adrenalin by the mouth, in the form of two pills containing each $\frac{1}{4}$ mg. of dry adrenalin, three times a day for three or four days after the administration of salvarsan. Milian also states that if a patient complains of a taste of ether, salt, or garlic, while the salvarsan is being injected, this is an indication that he is likely to be an "ectasophil" and to require treatment with adrenalin.

MILK DIPHTHERIA OUTBREAK.

SINCE Sir (then Mr.) William Power first demonstrated in 1878 that it was possible for diphtheria to be milk-borne, many milk-borne epidemics of the disease have been investigated. The latest is that which occurred in South London at the end of 1913. The districts involved were the metropolitan boroughs of Lambeth, Camberwell, and Lewisham; the county borough of Croydon, and the urban districts of Penge and Beckenham, having a total population of nearly a million persons. Early in the outbreak it became evident not only that it was due to milk, but to the supply from a particular dairy. Altogether there were 119 cases living in 94 houses. There was only one death. The dairy in question was situated in the borough of Lambeth, and the medical officer of health, Dr. Joseph Priestley, has issued a very complete report giving the results of his investigations into the outbreak. He found that two men employed as regular distributors of the milk were actual "carriers," and that two other distributors were probably carriers. These men were withdrawn from their employment as distributors. Inquiries were then made as to the condition of the dairy farm from which the milk was obtained, and Dr. Child, the Medical Officer of Health of the West Sussex Northern Combined Sanitary District, reported that at one of the farms in the Horsham Rural District a milker had been discovered suffering from what was called "milker's finger." By this time the Local Government Board had been informed of the outbreak, and Dr. Hugh A. Macewen was instructed by the Board to inquire into the circumstances of the outbreak. When he visited the Horsham farm he found that the condition of the finger of the milker referred to had become so serious that it was decided to have it amputated, and that the operation had been performed about Christmas time. Dr. Child, believing that there might be some connexion between the epidemic of diphtheria and the milk at this farm, caused to be made a bacteriological examination of the amputated finger, with the result that virulent diphtheria bacilli were isolated, which on inoculation into a guinea-pig killed the experimental animal in forty-eight hours. Four other men were employed as milkers at the farm, and one of them was found to have sores on the thumb and first finger, from which a clear fluid was by pressure obtained. This fluid was sent away for bacteriological examination. A virulent diphtheria bacillus was obtained, which on inoculation into a guinea-pig killed it in forty-eight hours. This man asserted that he had nothing wrong with his hands before he began work as a milker. A second man had a large sore on the back of his hand, besides other small sores on his fingers. These sores were quite dry, so that no specimen could be obtained from them. The other two men had no sores. The throats of all the milkers, as well as of the farmer, his wife, and daughter, were swabbed, but the results of examination for the diphtheria bacillus were negative. Upon inspecting the cows it was found that five of them had irregular-shaped sores on the udders and teats. It is to be regretted that on the day of examination the healing process was practically complete and the removal of the sores left a dry surface, so that it was impossible to take samples with a view to the discovery of the causative micro-organism. Dr. A. R. Littlejohn, M.R.C.V.S., who has recently been added to the medical staff of the Local Government Board, assisted Dr. Macewen in his investigation, and considered that the sores on the teats resembled cow-pox. On this assumption, as Dr. Macewen points out, the diphtheria infection of the teats may have been superadded to sores caused by another disease of the cow, and that the sores on the teats were not essentially a local manifestation of diphtheria. When it was discovered that the hands of one of the milkers was infected, those with sores were given other work to do on the farm. It should here be noted that as early as December 12th, and as soon as Dr. Priestley suspected that the outbreak was milk-borne, all the milk from the dairy was, at his suggestion, pasteurized. An interesting feature of this outbreak is the fact that the milk may have been infected either by the distributors, who were discovered by Dr. Priestley to be carriers, or from the milkers at the dairy farm who had diphtheritic sores on their hands, or there may have been a combination of the two.

EMANUEL SWEDENBORG.

THERE are, we believe, at least two claimants to the possession of the head of Oliver Cromwell. The body of the Protector was, as is well known, exhumed at the Restoration and decapitated, the head being set up on Westminster Hall. The story goes that it was blown down in a storm and picked up by a soldier, from whose hands it is said to have passed into the keeping of some other person. We have no wish to revive the controversy on the subject which raged in the newspapers some years ago. It may be mentioned that a similar dispute in France as to the skull of Richelieu was settled by bringing the two relics together, when it was found that the collectors had each a part of a skull; these parts when fitted together formed a complete cranium. There is also a mystery about the skull of Emanuel Swedenborg; the subject was discussed by Mr. W. Rutherford in the *Journal of Anatomy and Physiology* for October, 1913. In 1908 the Swedish Government sent the battleship *Frygia* to England to convey the bones of Swedenborg which had been lying for a hundred and thirty-six years in the vault of an obscure Swedish church in Princes Square, St. George's-in-the-East. They were buried in the Bjelka Chapel at the Cathedral of Upsala. The books of the church in St. George's-in-the-East show that the skull was taken from the old coffin in 1817, and it is recorded in the same books that it was replaced in 1819. Here, as Mr. Rutherford

says, begins the mystery. Half a century ago a phrenologist and collector of curios who lived in Wellclose Square, close to the church, exhibited to his friends a skull which he declared to be that of Swedenborg. Before he died he made over his collection to a friend, who, however, was not aware that this skull was among the others. It is only recently that the letters "E. S'borg" were found scratched on one of the skulls. The discoverer contends that this is the true skull of the famous Swedish mystic, which was, to use Sir Thomas Browne's phrase, "knav'd out of his grave" in 1817, the one replaced two years later not being authentic. It was this spurious relic, he holds, that was buried at Upsala. This skull has been examined by Swedish anatomists, it has been made the subject of a monograph by a professor, and a bust has been modelled from it. But it is still doubtful which is the skull that held the brain of Swedenborg. There are few so remarkable in the vast Golgotha of the Royal College of Surgeons of England, and according to Mr. Rutherford the forehead has a certain similarity to that of the portraits of Swedenborg; other evidences, too, point to the probability that its discoverer is right. At the same time, it is pointed out that the Swedish men of science had to deal with the bones put before them, and there was nothing that could have led them to suspect that the relic had been tampered with in England. Professor Alexander Macalister appends a note to the effect that the question of the authenticity of the skull should be settled without difficulty if there be any data available as to the shape of Swedenborg's head. Photographs of the English skull reproduced in the paper show that it is a well-marked example of the not uncommon anomaly of scaphocephalus, due to interparietal synostosis. The condition, says Professor Macalister, is obtrusively noticeable during life, and could not escape observation in the case of a living man of mark. From a considerable body of literature sent him, he has not gathered that any one in Swedenborg's lifetime recognized the peculiarity in the shape of his head. There is, he adds, absolutely no evidence that this cranial deformity is associated with any specific type of mental or moral development. The reader who wishes to study Swedenborg's mentality should read an interesting study of him contributed by Dr. Hubert J. Norman to the *Journal of Mental Science* for April, 1913. A hereditary neuropathic strain was very marked in the Swedish mystic in his youth, but in his manhood he did much work of a high order in various departments of science. Important discoveries in the physiology of the brain are claimed for him. It was not till 1744, when Swedenborg reached the age of 56, that he had an acute attack of mania in London. Afterwards he seemed to the ordinary observer to have recovered his mental balance, but he was a changed man. He gave up his scientific work and devoted himself to the study of the Scriptures. As the result of this, he wrote many volumes of exegesis, mostly of portentous length, and for the general reader at least stale, flat, and unprofitable. For twenty-seven years he continued to record his visions and to promulgate his system of religion. He died in London in 1772 at the age of 84, and apparently retained his faith in his divinely appointed mission up to the last. When the scientific work of his earlier days is separated from his record of visions and delusions, Dr. Norman believes that Swedenborg will take a high place not only among the thinkers of the eighteenth century, but among the learned men of all time.

GASTRIC AND DUODENAL ULCERS.

An analysis of 37 cases of ulcer of the stomach or duodenum in the wards of Professor Knud Faber, of Copenhagen, has been made by Kemp. In all these cases the diagnosis was confirmed either by an operation or by *post-mortem* examination. In 9 cases the ulcer occupied the pylorus itself, in 6 the pars pylorica of the stomach, and in 18 the duodenum in the immediate neighbourhood of the pylorus. In 4 cases only were the ulcers in some other part of the stomach, so that those in the neighbourhood of the pylorus formed nearly 90 per cent. of the whole. This large proportion is explained by the fact that it is chiefly when ulcers occur in this situation that they give rise to symptoms leading to medical advice being sought. Of the ulcers near the pylorus, 18 were duodenal and 15 gastric. Moynihan has given as signs of duodenal ulcer delayed pain after eating and periodical crises, but Kemp found that in his series these symptoms occurred nearly equally in both groups, and in about half the cases only. The other cases showed symptoms which varied from complete latency, with peritonitis following perforation as the first symptom, up to the classical picture. The seat of the pain was on the right in half the cases of pyloric ulcer, and only twice out of the 15 gastric ulcers. Haematemesis occurred in 16 out of the 33 cases, and melaena and haematemesis were about as frequent in the duodenal ulcers as in the gastric ulcers, no support being found for the view that melaena without haematemesis is a special feature of duodenal ulcer. The conclusion drawn is that the history does not permit any marked distinction to be made between ulcers occupying one or the other side of the pylorus, and at least one-half of the entire group of cases showed identical symptoms, so that they were all classified as "chronic ulcers in the neighbourhood of the pylorus." Both hypersecretion and hyperacidity, it is stated, occurred with special frequency in connexion with ulcers in the neighbourhood of the pylorus. With respect to motility, in 90 per cent. emptying of the stomach was delayed, and to about the same extent there was such a degree of stasis as is manifested by the retention in the stomach of small particles of food twelve hours after a test meal. It was found possible by regular examination of the motility of the stomach to recognize the occurrence of intermittent pyloric spasm. This occurred in 17 patients, in 10 of those with duodenal ulcers, and in 7 with gastric ulcers; the spasm showed itself in some cases by severe pain in the epigastrium or by vomiting, but was frequently unaccompanied by such violent symptoms; the patient merely complained of weight at the pit of the stomach or of discomfort, but a considerable amount of food taken the evening before could be withdrawn by the stomach tube. Such spasm was often accompanied by marked increase of hypersecretion, and its occurrence could be recognized by a history of such attacks of vomiting as those just described. While slight stasis and occult haemorrhage—recognized by the careful examination of the stools and impairment of motility—were symptoms common to all ulcers, periodical recurrence of symptoms, pain coming on some time after food, vomiting large quantities of acid contents some time after eating, hypersecretion either during digestion or continuously, and spasm of the pylorus were especially associated with ulcers in the neighbourhood of the pylorus. It was in these cases that the operation of gastro-enterostomy was highly to be recommended. Complaints are no doubt made from time to time that the results of gastro-enterostomy are not so satisfactory as might be desired, and even that the patient is left worse off than before the operation. These troubles are chiefly of two kinds, intermittent or continued diarrhoea (which is sometimes extremely obstinate), and pain or discomfort after food. It did not appear from this inquiry that these conditions were due to any failure of the operation to facilitate the rapid evacuation of the stomach; they were more likely to be due to the excessive rapidity with which the food passed into the small intestine and accumulated there. This could be made out very well by radioscopy after a bismuth meal, and any suspicion of narrowing of the artificial opening set at rest. The overdistension and irritation of the bowel by imperfectly digested and perhaps insufficiently masticated food is held to be sufficient to account for the symptoms. In the treatment of these symptoms this must be borne in mind and the patient warned to masticate

the food very thoroughly, or even for a time to make use of no food that has not been pounded or reduced to a pulp; large meals should be avoided. A sedative mixture containing bismuth and sodium bicarbonate, with a few drops of tincture of opium, may be prescribed to be taken before the commencement of each meal, and if the discomfort is severe it may be desirable to recommend the patient to lie down for thirty or forty minutes after taking food.

THE OFFSPRING OF MARRIAGES BETWEEN COUSINS.

DR. JOSEPH SCOTT, of Teheran, has been led by a communication from Dr. E. N. M. Ross with reference to the apparent advantage of cousin marriages in the case of the Persian tribe of Bakhtiaris, published in the JOURNAL of March 21st (p. 692), to forward to us some very interesting comments. Dr. Scott remarks in the first place that the marriage of first cousins having been commended by Mahomet is common among all Mussulmans, and that other Persian tribes, for instance the Kashgais, observe the custom more strictly than the Bakhtiaris. He states that, so far as the Bakhtiaris are concerned, the children of the chiefs which result from cousin marriages are not in his experience mentally and physically superior to those born by other wives. Dr. Scott adds that "the marriage of first cousins is common among the Kajar tribe (ruling dynasty), and he would be a bold person who upheld the children as physically and mentally superior to the children of other wives." Dr. Scott also comments on the physical inferiority of Jews in Persia who are given to intermarriage, and suggests that the physical superiority of the tribesmen as compared with people of the towns may be connected with their simple fare and habits. Dr. Scott himself has been at some pains to investigate the alleged superiority of children of first cousins sprung from pure stocks in Persia, and has failed to obtain any satisfactory evidence of it. On the contrary, the more intelligent Persians are coming to regard the practice with disfavour, and several native physicians have related examples of its ill effects. Dr. Scott states that the Bahais—a very intelligent tribe—do not favour such marriages, as they consider the children inferior physically and mentally. In the capital, where the people are better educated, more intelligent, and enjoy greater religious freedom, the feeling is against such marriages, and the custom is losing favour.

UTERINE FIBROIDS AND QUACKERY.

THE results of surgical interference with uterine fibromata have so enormously improved in the past ten years that the tendency to defer such treatment until it becomes absolutely imperative is much less common than formerly. Nevertheless, since many fibroids if they do not remain actually dormant are unassociated with haemorrhage or marked pressure symptoms, it is not surprising that we still hear of quackery in relation to the management of the malady in question. Dr. Le Lorier has recently exposed[1] the practices of at least one French charlatan, which may yet be imported into the United Kingdom. A lady before deciding to undergo operation was advised to use a powder, which Dr. Le Lorier found to be alum. Great rags of tissue were discharged after injections, and she felt sure that they represented the tumour coming away bit by bit. In reality they were extensive exfoliations of the vaginal mucosa, with the rugae well marked. Dr. Le Lorier reports an even more remarkable experience. He was consulted by a lady who was clearly suffering from an ovarian cyst. It was increasing rapidly, and he advised operation. The patient, however, put herself under a chemist, who prescribed injections with a white powder—alum. She came back after a few months, and triumphantly exhibited a big bottle full of ragged tissue, declaring that she had passed over so much more, and that the tumour was coming away beautifully. The tissue was exfoliated vaginal mucous membrane. The small amount of discomfort apparently caused by the vaginal injections of very strong solutions of alum and zinc is remarkable. Two casts consisting of the epithelium of the vaginal mucosa are preserved in the museum of the Royal College of Surgeons of England. More than fifty similar casts had come away from the same person within one year after the repeated application of a quack remedy.

[1] *Bulletins de la Soc. d'Obstét. et de Gynéc. de Paris*, April, 1913, page 518.

THE WELFARE OF THE INEBRIATE.

DR. HOGG, in the thirtieth annual report of the Dalrymple Home for Inebriates, recommends the admission of patients under the Inebriates Act rather than as private or voluntary patients. A private patient can leave the home at any time, whereas those under the Act can be detained for the full period they have signed for. No inebriate is a competent judge of his own case. Unless checked he returns to home and business before self-control is established. If he can safely be discharged before the expiration of the term for which he signed, he can be permitted to live elsewhere so long as he abstains from alcohol, or he can obtain his liberty if urgent private affairs need his attention. To be admitted under the Act the patient must sign a request for admission for any period up to two years, in the presence of a stipendiary, or privately before a justice of the peace; and two persons of either sex, whether relatives or not, must sign a statutory declaration before a justice of the peace or commissioner of oaths. Blank documents for the purpose can be obtained from the superintendent of the home. With regard to the treatment of inebriety, Dr. Hogg finds that "no single rule-of-thumb method can be successful." Each case must be studied individually. To cultivate self-control, and make the patient realize that cure is largely in his own hands, with total abstinence as an essential part of it, are most important. Some persons deride inebriate homes. Let us not forget that too often they are the last resource of despairing relatives and tottering inebriates. To instil self-control into alienated brains and moral power into shattered nervous systems may be impossible, yet Dr. Hogg reports that of 1,117 patients whose history is known, 41 per cent. are doing well. The wonder is not that the results are not better but that they are not worse. If only 20 per cent. gained benefit it would be a great and good work, for, as has been well said, one of the most potent causes of drunkenness is drunkenness.

THE GLASGOW UNIVERSITY CLUB, LONDON.

THE summer dinner of the Glasgow University Club of London took place on May 27th and was well attended. The chair was taken by Emeritus Professor John Cleland, and the manner in which he was greeted every time that he rose to speak left no doubt as to the warmth of the affection felt for him by old Glasgow students. In proposing a toast to the University he mentioned that though Glasgow was not his own alma mater, his connexion with it had been probably longer and closer than that of any one else present. He had performed the duties of Professor of Anatomy for thirty years, and previous to that had been a demonstrator; his recollections of Glasgow, therefore, dated back to a time long before the formation of the Glasgow University Club of London. The prosperity of the university had greatly and rapidly increased in the last few years, and it was now entitled to claim that its medical school was fully on a par with that of any university in the kingdom. Another toast was in honour of Mr. Craig Henderson, who has recently retired from the

office of honorary secretary of the club, after seven years' service in that capacity. It was proposed by Sir Henry Craik, M.P., who said that he had known Mr. Craig Henderson in many capacities and in many spheres, and was able to forecast for him a future of which the university would be proud. Among other distinctions he had been President of the Union at Glasgow University and President of the Union at Cambridge University. In acknowledging the toast Mr. Craig Henderson said that at Glasgow one of his teachers had been the late Lord Kelvin, and after graduating at Cambridge he returned to Glasgow to act as Lord Kelvin's secretary and assistant. Lord Kelvin's character was one of remarkable sweetness, and it was impossible to know him well without acquiring for him a deep affection. Possibly the condition in which he did his work during the last twenty-five years of his life was not known to many of those present. He did his work subject to the torture of almost continual facial neuralgia, yet commonly allowed no direct evidence of this fact to appear. When walking with him, however, a sudden grip of the hand would sometimes reveal the onset of a spasm. Glasgow students had been greatly favoured by fortune in the matter of the personality of their teachers. The evening ended in a toast to the Chairman, which was proposed by Professor Mackay, and drunk with Highland honours.

THE NORWEGIAN MEDICAL ASSOCIATION.

The *Transactions*[1] of the fifteenth general meeting of the Norwegian Medical Association have lately been published as a supplement to No. 6 (1914) of this society's journal. A perusal of the *Transactions* shows how numerous and varied are the subjects dealt with by this society. The society has appointed special committees to deal with cancer, tuberculosis, and alcoholism; it is responsible for the medical ethics of its members; it undertakes the safeguarding of medical interests in Norway; it acts as a medical agency for the transfer of practices and the supply of locumtenents, and it fosters medical science. In a word, its aims and actions are largely similar to the British Medical Association. It is impossible to give even a brief summary of the transactions of a society active in so many directions, but the subject of a State Medical Service deserves special attention, as its realization may not be far distant. Already in one district, where the socialists are in majority, the experiment of paying a medical officer a fixed salary to attend every patient in his district has been made. As socialism is widespread in Norway, and its advocates hold the reins of local government in many places, there is every prospect of the experiment being repeated in other districts. It was therefore felt by the executive of the medical society that the subject should be thoroughly threshed out at its annual meeting. A paper was read by Dr. B. Jensen and Dr. R. Hansson, the society's general secretary, on the arguments for and against a State Medical Service. In their opinion the medical profession stands to lose much by the loss of independence and the stimulus to individual effort existing under present conditions. In the discussion that followed much was said on both sides, and the voting showed that the majority of the members present preferred not to commit themselves to a definite policy. As the organization of the society is very thorough, its discipline very good, and its membership includes practically every medical man in Norway, it can doubtless afford to mark time without being rushed by its would-be socialist taskmasters. In the meantime, further experience is being gained of the working of socialist principles as applied to medical practice in the small district mentioned in Norway. It is conceivable that before long even those responsible for the experiment may have lost some of their enthusiasm for it.

[1] *Forhandlinger paa det 15de Almindelige Norske Lægemøte*, 1913.

ANNUAL MEETING, ABERDEEN.

In the advertisement pages of the Journal this week (pp. 9–11) will be found a list of hotels and lodgings which will be available in Aberdeen for members attending the annual meeting, and also a form to be filled up by those who intend to be present. It will facilitate the work of those members of the Association who are responsible for making the arrangements in Aberdeen if this form is filled up and returned at an early date. The local executive is prepared to make arrangements for those who would like to accept private hospitality, and particularly desires early information on this point. Railway facilities similar to those offered in previous years will be available this year—that is to say, return tickets, valid from July 22nd to August 3rd, will be issued at a single fare and a third on the presentation of a voucher, which will be supplied to members who intend to go to Aberdeen by the Financial Secretary and Business Manager, British Medical Association, 429, Strand, London, W.C., on receipt of the notification form. A separate voucher is required for each passenger. During the meeting reduced fares, with a minimum of 1s., will be granted to places within a radius of fifty miles from Aberdeen. Members who propose travelling to and from Aberdeen daily should use the first half of the ticket on the first journey and the return half on the last journey, the reduced fares for the intermediate journeys being granted on production at the time of booking of the card of membership. Members travelling from the south may like to be reminded that they can make the journey from London by sea. The boats of the Aberdeen Steam Navigation Company, which are lighted by electricity and in every way well appointed, sail from Aberdeen Wharf, Limehouse, E., every Wednesday and Saturday. The return fares, available for six months, are first cabin 45s., second cabin 25s.; private cabins can be obtained for an extra fee. A boat will leave on Wednesday, July 22nd, at 11 a.m., and on Saturday, July 25th, at 1 p.m. Further particulars will be published or can be obtained on application to the company at Aberdeen Wharf, Limehouse, or the City Passenger Agency, 25, Cannon Street, E.C.

The Morison Lectures before the Royal College of Physicians of Edinburgh will be given by Professor C. S. Sherrington on Monday and Wednesday, June 22nd and 24th, at 5 o'clock on each day; the subject of the lectures is "The limb as an organ of sense and of reflex action compared."

The Duchess of Bedford writes from Cairnsmore, Palnure, Kirkcudbrightshire, to say that, having bought a motor ambulance for her cottage hospital, she will be very glad to give the horse ambulance, which has hitherto been used, to any cottage hospital which would care to have it. The ambulance has seen a good deal of service but is still fit for many years' work.

The Carnegie Gold Medal has been awarded to Dr. Piero Foianini, who saved a woman's life by sucking the blood from a wound in the Ospedale Visconti Venosta at Grosio in the Milanese.

We learn from the *Boston Medical and Surgical Journal* of May 14th that Health Commissioner Goldwater has published in the department's *Weekly Bulletin* a report of an investigation of the cases of tuberculosis treated in New York by the Friedmann remedy. Of the total of 77 patients, 19 could not be found, while 11 were reported to have removed from the city permanently, so that nothing could be learnt of their condition. The department was therefore able to obtain reports on but 47 of the 77 cases. The reports are summarized as follows: At home, 5; in hospitals (indicating failure to cure), 22; attending clinics (showing need of further treatment), 7; attended by private practitioner, 1; died, 12. The report concludes with the words: "Comment is unnecessary; the figures tell their own story."

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

TUBERCULOSIS ARRANGEMENTS IN EDINBURGH.

AFTER many months of negotiations the Town Council and the Trustees and Committee of Management of the Royal Victoria Hospital for Consumption have reached an agreement acceptable to both parties; and on May 26th Mr. Young, the convener of the Public Health Committee, was able to report to the Town Council that the Royal Victoria Hospital, the Dispensary, and the Farm Colony could be taken over on satisfactory terms, and to congratulate Edinburgh on being the first of all municipalities to possess complete facilities for dealing with consumption. The negotiations have been reported from time to time,[1] and although there were several difficulties in the way of transferring the three institutions with which Sir Robert Philip's name has been so honourably linked these were all early surmounted, save that which had to do with the question of the supreme control over the institutions after their transference to the town. It was the sixth clause of the agreement which was in need of adjustment, and of most careful phrasing if a satisfactory and permanent arrangement was to be reached. The three medical men most immediately concerned were Sir Robert Philip, Dr. Maxwell Williamson, the Medical Officer of Health for the City of Edinburgh, and Dr. John Guy, the acting tuberculosis officer; and whilst it was of the first importance that Sir Robert Philip's great experience and knowledge should continue to be available for the welfare of the three institutions in their new relationship to the city, it was considered essential that these institutions should be clearly under the complete control of the Town Council as represented by the medical officer of health and the acting tuberculosis officer. How this somewhat intricate arrangement has now been carried out may be learnt from Clause 6 as it has been finally adjusted.

In respect of Sir Robert William Philip's close association with the establishment and conduct of these institutions during twenty-five years, and also in respect that he has already been appointed by the Corporation and Insurance Committee respectively to act as consultant and expert adviser, under the agreement entered into between the second parties and the Burgh of Edinburgh Insurance Committee (which agreement is referred to for its terms), he shall, to such extent as he may find convenient and subject to the instructions and administrative control of the second parties, act as consulting tuberculosis officer in relation to the tuberculosis dispensary and as consulting physician at the Royal Victoria Hospital and the Farm Colony, so long as he holds his said appointment as consultant under said agreement. The medical officer of health being the chief administrative officer in carrying out the whole scheme for the prevention and treatment of tuberculous disease in the city, the duties of Sir Robert William Philip under this clause may be described generally as follows, namely:

1. He shall regularly visit the Royal Victoria Hospital, the Farm Colony, and the Dispensary, and satisfy himself that the purposes of these institutions are being fulfilled, and shall report periodically to the Public Health Committee regarding the work.
2. He shall direct the medical care and treatment of the patients in the Royal Victoria Hospital and those resident at the Farm Colony.
3. The work at the Dispensary shall be carried on by the acting tuberculosis officer (Dr. Guy or his successor) in conference with and with the advice of Sir Robert William Philip as consultant and expert adviser.
4. As consulting tuberculosis officer Sir Robert William Philip shall at all times be available for consultation in matters concerning diagnosis and treatment to the Public Health Committee, medical officer of health, or the acting tuberculosis officer, and also to the medical practitioners of the city in charge of tuberculous cases under the domiciliary provisions of the Insurance Act.

It is matter for congratulation that so intricate and so complex a piece of public health administration, involving questions of some delicacy in respect of professional status and civic authority, should have in the end been carried through with satisfaction to both parties to the agreement. Having now marshalled its forces in orderly ranks and under chosen officers, the city may look forward hopefully to the issue of its campaign against tuberculosis.

[1] BRITISH MEDICAL JOURNAL, March 8th, April 12th and 19th, May 3rd and 24th, June 28th, July 5th, 12th, and 26th, August 2nd and 9th, September 20th, October 4th and 11th, and December 27th, 1913; January 3rd, February 28th, March 7th, April 4th and 25th, and May 23rd, 1914.

THE GLASGOW ROYAL INFIRMARY.

The reconstruction of the Royal Infirmary is now nearing completion. The cost has considerably exceeded the original estimates, and the managers have appealed to the Corporation of Glasgow for further assistance. The history of the undertaking is narrated from the original suggestion in 1897 to reconstruct the old front block as a Diamond Jubilee memorial of Queen Victoria's reign. At that time £77,000 was subscribed, but it was found that the whole of the old buildings were in urgent need of reconstruction. Fresh appeals to the public were issued and met with a generous response, so that the entire reconstruction was undertaken. Certain additional expenditure, notably the provision of adequate teaching accommodation, which was not included in the original estimates, have added considerably to the expense, and now the managers are faced with a deficit of £50,000. In all, by public subscriptions, bank interest, and the withdrawal of £150,000 from the general funds of the institution they have raised nearly half a million sterling, but the total cost is expected to reach about £550,000. The managers do not see their way to meet the deficiency by further depleting the general funds of the hospital, and accordingly appeal for further public support.

VISITING PHYSICIANS AND SURGEONS TO GLASGOW PARISH DISTRICT HOSPITALS.

The great parochial hospitals in Glasgow have hitherto been run by a whole-time medical staff, but recently the parish council considered the question of appointing a visiting staff in the hope that thereby the treatment of the patients would benefit and the status of the institutions be improved. The proposal is that a visiting physician be appointed to each of the two hospitals and a visiting surgeon to undertake the surgical work at both hospitals. Despite the fact that the parish council insist on those appointed undertaking to visit in the forenoon, thereby practically excluding those on the teaching staff of the general hospitals, we understand that a large number of applications have been intimated.

AWARD OF THE PARKIN PRIZE.

The triennial Parkin Prize of £100, in the gift of the Royal College of Physicians of Edinburgh, has been awarded to Dr. Johnston-Lavis. The subject set was: "On the effects of volcanic action in the production of epidemic diseases in the animal and in the vegetable creation, and in the production of hurricanes and abnormal atmospherical vicissitudes." Dr. Johnston-Lavis, who is a busy practitioner and frequent contributor to medical publications, has been an equally prolific writer on vulcanology. For some years he held the professorship of vulcanology in the Royal University of Naples, and was offered the directorship of the Vesuvian Observatory. The Parkin Prize essay will, we are informed, be published by Bale, Sons, and Danielsson, Ltd.

THE HOULDSWORTH HOMOEOPATHIC HOSPITAL, GLASGOW.

The first homoeopathic hospital in Scotland was formally opened last week in Glasgow. In the past five years a dispensary for the homoeopathic treatment of the poor has existed in Glasgow, but the increasing number of patients seeking advice caused an appeal for funds to be made. Of the £8,000 collected, £7,000 was given by the Misses Houldsworth of Ayr in memory of their brothers. With this sum the committee has purchased and equipped premises at 5, Lyndoch Crescent, which are intended mainly for the treatment of the poor, but accommodation has been provided for a limited number of indoor patients unable to meet the ordinary charges of a nursing home.

NOTIFICATION OF TUBERCULOSIS.

New regulations with regard to the notification of tuberculosis in Scotland will come into force on July 1st. They follow closely the form and requirements of the Order issued in June, 1912, the main difference being that the new regulations require notification of cases of non-pulmonary as well as of pulmonary tuberculosis. Article VI of the regulations provides that notification must be made on the strength of evidence other than that derived solely from tuberculin tests. Cases should not be notified that merely react to tuberculin whilst showing no other evidence of tuberculosis, such as

affections of the glands, bones, joints, skin, or other organs, or tubercle bacilli in sputum, urine, or other discharges.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Flies and Disease.

The Medical Superintendent Officer of Health for Dublin has written to the lay press, saying that no fact in connexion with the spread of disease is better established than that flies are carriers of infection and cause much disease. The destruction of flies has been carried out in America on a large scale, private associations and municipal authorities combining for the purpose, and is carried out also in some English and Continental towns. He hopes, therefore, that every householder will help to get rid of these pests; and recommends that as accumulations of manure form their breeding places, there should be a daily cleaning of stables.

Outbreak of Poliomyelitis.

At the last meeting of the Omagh District Council, Dr. Campbell reported that poliomyelitis had broken out among children at Beltony, near Newtownstewart. The clerk said that the disease had previously broken out in the Cookstown Union.

No Application for Dispensary Appointment.

At the last meeting of the Oughterard Board of Guardians, there being no candidate for the position of medical officer of the Lettermore district, the Guardians deleted the following words from the advertisement: "Other qualifications being equal, a preference will be given to a candidate having a knowledge of the Irish language," and "Personal attendance of the candidates necessary." The guardians also gave directions to the clerk to state that there were no local candidates, and to advertise in the English and Scottish press.

Reception at the College of Surgeons.

On Friday evening, May 29th, the President of the Royal College of Surgeons in Ireland, Dr. Purefoy, and his sister Miss Purefoy, gave a reception in the College Hall, to meet Their Excellencies the Lord Lieutenant and the Countess of Aberdeen. The reception was largely attended both by members of the medical profession and the public, and a pleasant evening was spent in the buildings of the college, which were tastefully decorated for the occasion, and in listening to an excellent programme of music, both instrumental and vocal.

England and Wales.

MANCHESTER AND SALFORD.

Radium Supply for Manchester District.

The appeal to the public of Manchester and district for the sum of £25,000 to purchase a supply of radium has apparently not met with the full response expected, and the Lord Mayor, as chairman, and Dr. Milligan, as honorary secretary of the committee, have issued a further urgent appeal. They state that up to the present the money received is barely £8,000, and as seven hospitals have united in the joint effort, the donations are wholly inadequate to purchase such a supply as is required if effective work is to be carried on. Something like 4,000 circulars calling attention to the scheme have been sent out to persons thought to be likely to subscribe, but the disappointing response has forced the committee to state that unless more money is forthcoming the scheme will either have to be abandoned or its working postponed. It had been arranged that any supply of radium obtained should be worked from the Manchester Infirmary as a common centre, and the committee point out the advantages of that arrangement, as "emanations" could then be drawn off at frequent intervals and distributed as required. In dealing with the point that it may be considered that too little is known of the results of radium treatment to justify a large expenditure, the committee observes that at any rate it is admitted to be more valuable in the treatment of inoperable cancer than any remedy hitherto known, and adds that it had hoped that sufficient financial support would have been given to enable them to do something to advance the knowledge of radium treatment. The Board of Guardians of the Manchester Township at their last meeting decided to apply to the Local Government Board for permission to give £100 to the fund and to pay such fees as might be agreed on for any person chargeable to the guardians who might receive radium treatment.

Manchester Royal Infirmary.

At a meeting of the Board of Management of the Manchester Royal Infirmary on May 26th it was announced that the fund for the building and equipment of the Central Branch in the city now amounted to £19,822, the total amount required being £25,000. The sum of £302 received since the last meeting included a donation of £100 from Sir George Agnew, M.P. The Chairman of the Board, Sir William Cobbett, stated that recently an unusual number of letters had been received from patients who had been treated at the infirmary expressing their thanks and their appreciation of the splendid work which is being done by the infirmary, not only for Manchester residents, but for patients coming from a distance.

Ancoats Hospital.

The Committee of Management of the Ancoats Hospital has been much gratified by the fact that Queen Alexandra has graciously consented to become patroness of the hospital. It is now nearly twenty-six years since the late Duke of Clarence laid the foundation stone of the wing of the hospital, which by special permission was called the Albert Victor pavilion, and Queen Alexandra has doubtless been largely influenced by consideration of the association of the duke with the hospital. The work of the hospital has increased enormously during the last few years, especially since the removal of the infirmary to Oxford Street, and the committee intends shortly to make an appeal to the public for funds to enable them to build an additional ward and accommodation for the extra staff that this will involve. The fund has been started already by a donation of £500 from Sir F. Cawley, M.P.

The Red Cross Society.

The annual inspection of the Fallowfield and Burnage Voluntary Aid Detachments of the East Lancashire Branch of the British Red Cross Society took place in the grounds of Oak Mount, Fallowfield, the residence of Sir Edward Donner, who kindly allowed part of the residence to be used as a hospital; an operating theatre was set up in the grounds. It was supposed that a number of wounded soldiers had been detrained at Fallowfield Station and were to be taken to Oak Mount for treatment. Colonel Coates, Honorary Colonel of the East Lancashire Division, R.A.M.C. of the Territorials, in announcing that Lady Donner had offered a challenge shield for competition, spoke very highly of the work of the detachments, and Lady Donner presented Captain R. H. Bridges with a kit-bag in recognition of his voluntary work in giving lectures on military hygiene.

Hope Hospital.

Some time ago the Salford Board of Guardians advertised for applications to be sent in for two posts as resident medical officers at the Union Infirmary at Hope, but at the meeting of the board last week the clerk stated that not a single application had been received. This put the board in considerable difficulty, and the clerk had to be authorized to obtain temporary medical assistance during the continuance of the vacancies. It was recommended by the Infirmary Committee that the salaries offered should be raised to £200 for the senior and £150 for the junior post, with the usual emoluments attached to the offices.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

HOSPITAL PRACTICE FOR NON-SERVICE MEN.

THE following press *communiqué* has been issued: Government have for some time had under consideration the desirability of providing opportunities for hospital practice for medical men who are not in the service of Government. In other Presidency towns private liberality has done much more than in Calcutta in the way of providing private hospitals which are not staffed and supported by Government, and the absence in Calcutta of such hospitals has been a great drawback to private medical practitioners. In consultation with the Governors of Mayo and Sambhu Nath Pandit Hospitals Government have now arranged for the appointment at each of these hospitals of an honorary staff of one physician and one surgeon for in-patients, with a definite number of beds allotted to each, and one honorary physician and one honorary surgeon for out-patients, and the cost of the necessary alterations in the buildings and the necessary addition to the paid staff will be borne by Government. These appointments, which last for two years, are open to fully qualified private practitioners and are made by the governors of the hospitals subject to the approval of the Inspector-General of Civil Hospitals, and the rules for the appointments can be ascertained on application to the superintendents of the hospitals. Advertisements have been issued by the governors inviting applications for these appointments, and the scheme will be put into immediate operation.

PLAGUE.

The ravages of plague in Karachi have been very severe, and the old town is to a large extent deserted, the inhabitants having migrated into camps. The zoological gardens have been closed for some weeks, and several of the animals are reported to have died of plague. One of the most painful incidents of the outbreak has been the sudden death of Nurse Hilda Blake, of the Civil Hospital, while nursing Indian plague patients in the Municipal Infectious Diseases Hospital.

Several dead rats, which on examination at Parel Laboratory were found to be plague-infected, have recently been found in certain business houses in the Fort at Bombay. Two hamals employed by the firm of Ralli Brothers were taken ill and both died of plague in the Arthur Hospital within a few hours. The clerks and sepoys of the firm are being offered money gifts to induce them to submit to inoculation. Of 1,940 rats caught by municipal rat-catchers on one day recently, 151 were found to be infected.

THE KING EDWARD SANATORIUM, LOTNI BHOWALI, NAINI TAL.

The King Edward VII Memorial Sanatorium at Lotni Bhowali, Naini Tal, was opened in the middle of 1912, with accommodation for 18 patients. By additions made during 1913 accommodation is now provided for 47 patients. Both Europeans and Indians are admitted. In the report for 1913 details are given of 116 cases, being the total number diagnosed as pulmonary tuberculosis and discharged since the foundation of the institution. A comparison of the statistics from different sanatoriums is usually unsatisfactory. But it is obvious that this sanatorium gets more than its fair share of acute and advanced chronic cases. The number admitted with a temperature of 101° and over was 40, or 34.48 per cent. According to Turban's classification the 116 cases are arranged as follows: Stage I, 33, or 28.44 per cent.; Stage II, 24, or 20.68 per cent.; Stage III, 59, or 50.86 per cent. Taking these facts into consideration the results reported seem highly satisfactory, namely, disease arrested, 30 (25.8 per cent.); much improved, 27 (23.25 per cent.); improved, 17 (14.65 per cent.); stationary, 24 (20.6 per cent.); worse, 10 (8.6 per cent.); dead, 8 (6.9 per cent.). By arrest of the disease is meant absence of tubercle bacilli from the sputum, no signs of active disease and capability for prolonged exertion. The ordinary sanatorium treatment by rest and graduated exercise is followed. Tuberculin is, however, given to all deemed suitable, even if febrile. The average stay of patients has been 97 days. As already mentioned, a large number of cases were febrile when admitted; in 81 per cent. the temperature was 99° and over, which compares with 24.4 per cent. in a large English sanatorium. This may be largely due to the arduous nature of the journey, for the sanatorium is situated at a height of 6,000 ft., and is fifteen miles over the hills from the nearest railway station. The situation also renders it less suitable for acute and advanced cases, and such cases would, as the Superintendent, Major Cochrane, M.B., F.R.C.S., says in his report, be better provided for at a place at a lower level, and easier of access. There is little doubt that as the public and the practitioner come to see the value of the institution the percentage of suitable cases will rise as it has in England.

CALCUTTA DRAINAGE PROBLEMS.

It is understood that the Technical Committee appointed by the Government of Bengal, at the instance of the Calcutta Corporation, to consider the question of the disposal of the sewage and drainage of the city, in the event of the canalization of the Bidyadhari river in connexion with the Tolly's Nullah Canal project, have prepared a preliminary report. This will show that if the sewage and storm water are carried some miles further east, to Kulti, the cost will be some £1,093,333. If the sewage only is diverted to the Hooghly river in the neighbourhood of Akra, at the bottom of Garden Reach, and the storm water discharged into a canalized Bidyadhari or over lowlands in that neighbourhood, the cost will be £560,000.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

WORKMEN'S COMPENSATION IN ONTARIO.

IN 1910 the Ontario Legislature appointed Sir W. R. Meredith a Commissioner to inquire into the laws of other countries concerning workmen's compensation in case of accident. He visited England, Germany, and the United States, and a bill embodying the result of his observations is now before the Legislature. It is based largely on the German law, and the Act, if passed, will be administered by a Commission, whose decision shall be final. In the proposed bill scant justice has been done to the interests of the medical profession, and no provision is made for the payment of medical services save that Section 35 would provide as follows: "Where a workman leaves no dependants, such sum as the Board may deem reasonable for expenses of his medical attendance and his burial shall be paid to the persons to whom such expenses are due." The list of possible dependants is of such latitude, however, that the physician or surgeon stands little chance of direct payment by the board. Two years ago a committee was appointed by the Academy of Medicine of Toronto to present its views to the Commissioner, but an application for an interview was not granted. The subject has been carefully considered by the College of Physicians and Surgeons of Ontario and by the Academy of Medicine, and certain amendments to the proposed bill have been suggested by both these bodies. Nothing has been done to meet the wishes of the profession, and it has been intimated that nothing will be done during the present session of the Legislature. It is possible, of course, that if the Act proves workable as it now stands, no change will be made in its provisions.

NEW HOSPITAL AT VICTORIA, BRITISH COLUMBIA.

The construction of the new Royal Jubilee Hospital at Victoria, British Columbia, has been commenced. It is estimated that the buildings will cost at least $400,000, and provision has been made for 200 beds. The principal buildings of the new hospital will be the administration block and certain wards. The plans have been so arranged that, when it is necessary to enlarge the hospital, it will be possible to add one or more wings to the buildings now under construction.

RECEPTION HOSPITALS FOR THE INSANE.

The practice of sending insane persons to the common gaol, until arrangements for their reception at an asylum could be made, is condemned, and a bill has now been

introduced in the Legislature of the province of Ontario to provide for the establishment of reception hospitals for the insane in cities in which the population numbers 100,000 or more. The plans and site of such hospitals must be approved by the Government, and the hospitals themselves will be under the control of the Provincial Secretary. When they are established and equipped the greater part of the cost of maintenance will be borne by the province, and "the income derived from moneys received from the municipalities for the maintenance of such hospitals will form a fund to be known as the 'Reception hospitals for the insane fund.'" A reception hospital has been provided at Toronto in the eastern wing of the old General Hospital.

MEDICAL SCHOOLS IN CANADA.

The medical school of Queen's University at Kingston, Ontario, has now adopted the five-year medical course. A modified five-year course has been given for some years. The change in the curriculum will make it necessary to appoint a professor of biochemistry, an assistant professor of physiology, and an assistant professor of bacteriology and hygiene. These appointments will be made in the near future.

A medical course is now given by the University of Alberta at Edmonton, which makes the eighth medical school in Canada. The first year's work at Edmonton is now drawing to a close, and during the summer the university buildings are to be extended and laboratories are to be equipped for the work of the second year in medicine. It is the intention ultimately to give a five-year course, but for the present only the work of the first three years will be undertaken.

PUBLIC HEALTH ADMINISTRATION.

The name of the Montreal Health Department has been changed to the Municipal Board of Hygiene and Statistics, and the scope of its activities has been enlarged. Sanitary inspection and garbage collection are now both under the direction of the board, and this arrangement, it is hoped, will ensure more efficient work in both departments. The analysis of milk in future will be done at the municipal laboratories instead of by the inspectors, and these laboratories will also undertake the water examination. Dr. S. Boucher, the medical officer of health and director of the board, has asked for an annual grant of 1,500 dols. for work on the prevention of tuberculosis, and for an equal sum to be expended on the prevention of the heavy infant mortality for which Montreal has been unfortunately conspicuous.

An effort is being made to prevent the formation of slum districts in Winnipeg, and with this in view it is proposed to amend the health and building by-laws. The civic Health Committee has decided to employ two nurses to attend to poor patients afflicted with tuberculosis, instead of continuing the grant made to the Anti-tuberculosis Society. The death-rate from tuberculosis has been appreciably reduced during the past few years. In 1907 it was 150 per 100,000 population; it is now 96 per 100,000. An exhibit is to be sent from Winnipeg to the Imperial Health Conference, which takes place in London from May 18th to 21st next.

ANTITYPHOID VACCINATION.

In the Canadian Pacific Railway camps in the province of Alberta, antityphoid vaccination has been extensively carried out of late, under the direction of Dr. H. G. Mackid. The results have been most encouraging, for in 1911, among 5,500 men who were inoculated 2 only contracted typhoid, while of 4,500 who had not been treated 220 fell ill with the disease. In 1913, 8,400 men were vaccinated, and only one case of typhoid occurred amongst them; moreover, it is probable that the man was ill at the time of vaccination. During the same year, among 2,000 men who were not inoculated, 76 cases of typhoid occurred. In order to encourage typhoid prophylactic measures in the province of British Columbia, the provincial board of health recently issued a circular to remind practitioners and qualified nurses that they could receive the vaccine on application free of charge.

Special Correspondence.

VIENNA.

Some Suggestions for Reducing the Number of Medical Students in the Austrian Universities.

THE constant increase in the number of students who now flock to Vienna for the purpose of studying medicine has begun to cause serious alarm, not only to those who are in any way responsible for their instruction, but to the whole medical profession. For the last two or three years the strain upon the teaching staff of the Viennese hospitals and scientific institutions has been steadily growing greater, and the accommodation in these establishments has been taxed to the utmost; for, although the chemical, anatomical, and clinical institutes have been enlarged several times and finally rebuilt, they are still far too small to meet the requirements of the students who wish to work in them. The difficulties of the situation have become so great that the Medical Council of Vienna has recently appointed a committee to investigate the matter.

The following figures give a rough outline of the problem before the committee. The increase in the number of medical students in this country began some ten years ago, and has continued at such a rate that the number of doctors who are in practice at the present moment in Austria is more than double the number required to meet the needs of the population. In the year 1900 the number of students of medicine in Vienna amounted to 1,470; in 1905 this number had reached 2,180, and by 1910 it had risen to 3,150, whilst during the winter session of 1913–14 there were as many as 630 first-year students alone. During the past year, moreover, the number of candidates for the M.D. degree, who numbered 117 ten years ago, amounted to 300. When it is remembered that out of 12,000 practitioners, excluding military doctors, the annual leakage through death or retirement only amounts to 300 or 400, it will be seen that this rapid increase in the number of students must inevitably result during the next ten years in an enormous increase in the number of medical men who intend to practise in this country.

The total number of doctors who graduated in 1913 was 598, but by the year 1919 these figures will have risen to at least 1,300, even if the present number of students remains stationary. A large surplus of doctors, therefore, seems unavoidable, in spite of the fact that in several parts of the country the proportion of doctors to the general population is at the present moment only 1 in 4,000 or 1 in 6,000. The average percentage for the whole country is 1 in 2,500. Various suggestions have been put forward by the committee for the reduction of these alarming figures, one being that a warning should be conveyed to head masters of schools and colleges, and inserted in newspapers and public lectures, in order to prevent young men from entering an already overcrowded profession. It is also thought advisable that the University of Vienna, which is the chief sufferer, should have the power in future to refuse all students who come from countries possessing medical faculties of their own. It has likewise been suggested that students wishing to enter the medical faculty of an Austrian university should spend a year in studying botany, zoology, chemistry, physics, and biology, at the end of which period an examination on these subjects would be held, and only the successful candidates permitted to begin the medical course. In this way only picked men would be eligible for the medical profession. It has also been proposed to raise the present low scale of fees until they equal those of the German universities; but perhaps the most feasible plan would be to restrict the number of medical students at the different universities, men from the districts outside Lower Austria being admitted only to fill any vacancies that might occur. By this means the overcrowding might be considerably lessened in Vienna; but it is doubtful whether the other universities would benefit by such restrictions, whilst there would always be the danger of losing just those men who would derive most profit from a university education. In any case the problem still awaits solution. It should be clearly understood, however, that none of the foregoing remarks apply to post-graduate students, for foreign doctors may always rely upon a warm welcome when they come to study in Austria.

Correspondence.

THE OBJECTIONS TO THE INCOMPLETE OPERATION FOR CANCER OF THE BREAST.

SIR,—Every surgeon will agree with the views so clearly and forcibly expressed by Mr. Lockwood in his instructive address on the above subject, which appeared in the BRITISH MEDICAL JOURNAL on May 23rd.

I was much interested to find in it a reference to a point upon which I had previously been unable to find any information, namely, the effect of removal of the pectoralis major upon the swing in golf; for I have recently performed the complete operation upon a lady—a keen golfer—whose only fear in submitting to it was that it might subsequently interfere with her game. Mr. Lockwood mentions the case of a patient who, after undergoing the complete operation, "plays golf quite well."

If Mr. Lockwood has followed out the after-history in his series of 137 cases of the complete operation, it would be extremely instructive to be informed of the results of this treatment in the hands of so thorough and skilful a surgeon.

I have recently seen a lady upon whom I performed the complete operation about three years ago. Though the axillary glands were extensively involved, there has been no recurrence of the cancer in the axilla, neighbourhood of the scar, or chest wall, or in the supraclavicular glands—the commonest situation for recurrence, as Mr. Lockwood points out—but she presented well-marked evidence of secondary deposits in the post-sternal glands.

In connexion with the unsatisfactory result which usually attends the incomplete operation, I may mention that I have still under observation a lady, from whom I removed both breasts by this method eighteen years ago. The diagnosis of early carcinoma had been made before the operation by the late Sir James Paget and Mr. Harrison Cripps, and it was subsequently confirmed by Professor Sheridan Delépine, who made a microscopic examination of the parts after their removal. He stated in his report that the condition "is distinctly carcinomatous" and "gives unmistakable evidence of rapid growth." The axillary glands were not affected. The result in this instance bears out what Mr. Lockwood states, namely, that it is only when performed at the very onset of cancer that the incomplete operation can possibly prove successful. At the conclusion of his address he says that the longest period of life that he knows of after an incomplete operation done by himself has been seven years, and he doubts whether any that he ever did has escaped recurrence. The long period of freedom from recurrence—eighteen years—which has elapsed in the case of my patient is, therefore, quite exceptional.—I am, etc.,

F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Consulting Surgeon to the Manchester Royal Infirmary.

Manchester, May 28th.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—The controlling influence of morality is so characteristic a habit of life with some people that they are able to resist the very greatest irony of fate human flesh can encounter. But moral power of self-control in its loftiest sense is not a common attribute of mankind. This type of mentality may be inherited or associated on certain lines of education and environment distinctly philosophical, enabling the subject to overcome even the severest mental and physical pain. As regards methods and customs of different countries—for instance, "the happy dispatch" of Japan—is this not a mediaeval or ancient practice which will pass away like other fashions as the country settles down to Western civilization? We all understand that if a person is mentally normal he has no desire to take his life, for self-preservation is the first law of Nature. Yet disgrace and disappointment may suddenly come upon him; his nerve fails, and he truly becomes a coward, running to the rear, just as a soldier might. Perhaps, if he is sure of his fate, which may be the extreme penalty of the law, he justifiably destroys himself. Can one expect such a person to do otherwise when in the very depths of despair and knowledge of what will be his ending? But this is a criminal's suicide, of which little more need be said. It is a side path, and not the only one. Still, as a profession of the highest educated class of men, it becomes us to discourage self-destruction as a despicable act of cowardice which we cannot support or admire, either on religious or moral grounds. Over and over again young people in momentary aberration attempt or do actually take their lives, when, if time was given for reflexion, these silly unhinged folk would stay the hand of self-destruction. The strenuous life of to-day is not without its defective manners, and a selfish attitude of sloth and luxury may mean self-destruction on the increase. The weekly obituary notices in our JOURNAL record frequently the noble lives of our professional brethren foreseeing their own deaths with fortitude and bravery. We are admirers of their good example, suffering without demur to the end. And is it not a fact that there are fewer suicides among medical men than any other class of society?—I am, etc.,

JOHN FREDK. BRISCOE.

Alton, May 31st.

SIR,—I am glad to see that some remarks of Dr. Mercier on the responsibility of the suicide in the BRITISH MEDICAL JOURNAL of May 23rd have met with adverse criticism from Dr. Archibald Leitch. One would feel very sorry that Dr. Mercier's view of what in certain contingencies is "natural, sensible, and proper" should go forth as the considered opinion of medical authority.

To an unhappy person facing "circumstances easily imaginable," menaced without and within—dire forebodings whispering temptation to give up the struggle—what effect would such a dictum as that of Dr. Mercier be likely to have if applied?

Surely, men should rather be encouraged to bear patiently and hopefully pain, suffering, and adversity rather than shirk the post of duty.

Dr. Mercier asks . . . "how if it is impossible to escape dishonour except by voluntary death?" Is there, then, to use a military metaphor, no grievous dishonour in a soldier relieving himself from further sentry duty by self-murder—in spite of the fact that far more may depend than he knows upon his being "faithful unto death?" The death, if so at issue, would be from attack without; but not a self-inflicted betrayal of a cause which should be dearer to him than his own release.

I should like earnestly to commend Dr. James Walsh's remarks on suicide in his *Psychotherapy*, and what G. K. Chesterton has written in *Orthodoxy*.

I have heard, in quite another connexion, a professor of psychology at one of our English universities say that he thought confession was too little used amongst Protestants. I agree. In such circumstances as we are considering, if a man sorely tried by despairing suggestions would simply "open his grief" in the safe ear of a priest as a matter of spiritual consultation, methinks he would be availing himself of a very high form of psychotherapy and often derive much benefit from the ventilation. I am not now speaking of further possibilities in respect of absolution, if it be desired, and its concomitants.

> Speme . . . da molte stelle vien questa luce.
> [Hope . . . from many stars cometh this light.]

as Dante has it.

I may, perhaps, mention that, personally, I am a member of the Church of England.—I am, etc.,

M.R.C.S.Eng., L.R.C.P.Edin.

June 2nd.

AN EPIDEMIC RESEMBLING WHOOPING-COUGH.

SIR,—In reply to Dr. Hall's courteous letter, I shall amplify my notes published on May 2nd, p. 995.

With regard to the incubation period I know that from a few cases it is impossible to draw a certain conclusion. We have to consider the susceptibility of the individual, and also allow that each of these children may have been exposed to some outside infection at different dates, but at any rate the cases are suggestive.

On May 8th, J. F., aged 7 years, was taken ill. On May 16th, her brother, aged 10, was taken ill with the same symptoms.

On May 8th, P. N., aged 5 years, was taken ill, and on May 15th her brother, aged 8 years, developed the same symptoms.

On April 26th, J. E. S., aged 7, was taken ill, and on May 4th, J. F., who was staying in the same house, developed similar symptoms.

I have seen 3 cases in which râles were present over both lungs; and apart from paroxysms of coughing, one might have diagnosed them as cases of ordinary bronchitis.

On May 12th, a child, aged 10 years, was brought to me with the following history: Seven weeks earlier she had been very feverish for three days, and vomited twice. Then she developed paroxysmal attacks of coughing, but neither whooped nor was she sick. She had whooping-cough three years ago, which was accompanied by much bronchitis. This time she had never "wheezed," so that her mother thought it must be something different. I examined her chest, back and front, and could not hear a single adventitious sound. She had a paroxysm while I was examining her, which was very like pertussis without "the whoop."

Another case came under my notice on April 24th:

A little girl, aged 6 years, was subject to attacks of bronchitis. Her present attack began on April 3rd, and her mother noticed a difference in its onset as compared with her previous attacks of bronchitis. For the first three days she was more feverish than usual, was delirous, and vomited several times; the paroxysmal attacks of coughing appeared afterwards. In this case signs of general bronchitis were present.

With regard to the duration of these attacks my experience agrees with that of Dr. Hall. It varies greatly, from fourteen days to five weeks. Patients in whom the attacks are marked by an absence of pulmonary signs recover far more quickly than those associated with signs of bronchitis. —I am, etc.,

Bedford, May 16th. S. J. ROSS.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—Dr. Fothergill's letter in your issue of May 30th needs but a brief reply.

1. There is a wide difference between what he is pleased to call the "parochialism" of a town, in which the vast majority of the population belong to one class, and the "parochialism" of two counties, comprising all classes of the community.

2. Dr. Fothergill agrees with me "that the punishment is made to fit the crime," consequently he admits, firstly, that all the funds could be attached, and secondly, that if the damage done through the agency of the trust were great enough, all the funds would be attached.

3. I still find in the words, "in the case of a trust any damages secured against an official can be reimbursed him from that fund," that which I stated I found in his letter—namely, "that you can protect the private estate of the trustees of a trust fund." The trustee's estate is surely protected, if any loss which he may sustain is made up to him. As, however, I pointed out in my last letter, it is not competent for a trust concerned with restraint of trade to indemnify its trustees in this manner.

4. Dr. Fothergill asks for a statement of the splendid results obtained in this area, under three heads:

(*a*) *Effective Collective Bargaining.*—Apart from a few private clubs, and the Medical Aid Institution at Loughborough, all contract work in the area has been arranged for by means of collective bargaining, and all agreements with the friendly societies have been made by the Committee of the Public Medical Service run by the Union.

(*b*) *Maintenance of a Standard Rate.*—The rates laid down by the Committee of the Union, which were "deemed equivalent" to those laid down by the Representative Meeting, have been maintained throughout the area, except in one small district in which for economic reasons a special rate of payment was permitted.

(*c*) *Provision of "Strike, Lock-out, and Out-of-Work Funds."*—None have yet been required, but a reserve fund is being built up.

5. The fact that the Association has acted outside its powers in the past without any steps having been taken to obtain an attachment of its funds is no proof that in the more strenuous times in front of us such a thing may not occur, and a weapon be forged to attack us in a vital part. The action taken against the Association recently *re* the Warning Notice has been an unpleasant reminder of the grave risks which it is at present running.—I am, etc.,

Leicester, May 30th. R. WALLACE HENRY.

ROYAL MEDICAL BENEVOLENT FUND.

SIR,—I have been reading the annual report for 1914 of Epsom College, and I there find what seems to me an extremely serious reflection on the trustees of the Royal Medical Benevolent Fund. Briefly the fund is charged with obtaining by legal process a legacy of £500, which, on the evidence now adduced, and which evidence must have been known to the trustees of the fund, was plainly intended for Epsom College. The evidence as to the intention of the testatrix would have made the matter clear, but it was objected to as inadmissible by counsel on behalf of the Royal Medical Benevolent Fund, and consequently did not come under the purview of the judge. Mr. Justice Joyce said: "If either of you people know, either by inadmissible evidence or otherwise, that the legacy was intended for the other you ought not to contest." Notwithstanding this advice the so-called "inadmissible evidence" was not disclosed.

It appears to me from the evidence now presented—which, however, may be considered *ex parte*—that the testatrix, Miss H. T. Glenny, intended to leave the £500 to the Royal Medical Benevolent College, which is now known as Epsom College, and that through a clerical inaccuracy in her will the Epsom College has been deprived of this money, and the British (now Royal) Medical Benevolent Fund has benefited to a similar extent—less the very unnecessary legal expenses incurred.

Unless a satisfactory answer can be given by the trustees of the Royal Medical Benevolent Fund I must withdraw my subscription and encourage others to do the same until the personnel of the trustees is completely changed or the £500 transferred to the rightful owners. Of course I might have sought a personal explanation from the trustees, but the charge has been spread broadcast by the Council of Epsom College, and I do not suppose that Sir William Church would attach his name to anything which he is not prepared to defend; therefore a public explanation is demanded, and it should be forthcoming without any unnecessary delay.—I am, etc.,

Liverpool, June 2nd. JAMES BARR.

"ENCYCLOPAEDIA MEDICA."

SIR,—I have nothing to add to, or subtract from, the statement of fact regarding the above made in my former letter. Further reference to the matter would be unnecessary but for the fact that the issue is one of some importance to medical authors, and readers at the present time.

Dr. Jellett has issued a disclaimer against articles purporting to be written by him in the 1914 edition of the work, these articles not having been seen or corrected by him since he wrote them twelve or fourteen years ago. I personally am in the same position as Dr. Jellett in regard to articles promised in the 1914 prospectus, which were written about fourteen years ago, and I have so far not heard from the publishers in regard to them, and other authors, I know, are similarly situated. Their apprehensions with regard to the use of their contributions in the new *Encyclopaedia* are therefore not unnatural.

I was interested to learn from Mr. Green's letter in your issue of May 16th that it was his intention to have these articles brought up to date or rewritten by the authorities referred to in his recent circular. If this were not done we would be confronted by an entirely new departure in medical literature, namely, articles appearing in 1914 purporting to be written by Dr. Jellett and others at that time, without any indication whatever being given to the reader that the articles in question represent the views of the respective authors twelve or fourteen years ago—a condition of affairs which is hardly fair either to the authors or to the reader.—I am, etc.,

Edinburgh, May 31st. CHALMERS WATSON.

THE BOARD OF TRADE SIGHT TESTS.

SIR,—Two questions have been asked in Parliament concerning me which are given on pages 988 and 1038 of the BRITISH MEDICAL JOURNAL. The answers given are calculated to mislead. In 1889 the Board of Trade asked me to advise them as to a test for colour blindness, and on the understanding that I was not to charge for my work promised that a paid appointment should be made as soon as they were able. The lantern which is now the official test of the navy was constructed for the Board of Trade, and the fact is so stated in the preface of my book published in 1891. Mr. Thomas Gray was never a member of

the Royal Society Committee, as stated; he told me when the committee was about to be formed that the Royal Society had approached the Board of Trade, and that the Board had asked that I should be placed on the committee as their representative. I have never blamed the Board of Trade of that time for not giving me the promised appointment; I do not see how they could take the advice of a young man just qualified against that of a special committee of the Royal Society. The responsibility rests entirely on the Royal Society, and I must confess that I am surprised that the Royal Society, after having found that the decision of its committee was quite wrong, has not made some amends.—I am, etc.,

London, N.W., May 30th. F. W. EDRIDGE-GREEN.

AMERICAN MEDICAL SERVICE IN THE CIVIL WAR.

SIR,—In your interesting annotation "American Medical Service in the American Civil War" (p. 1200) you quote Dr. Weir Mitchell as having stated, in his address before the Physicians' Club of Chicago, that "There is not a State or national monument to a surgeon." This is strictly accurate if it infers that no statue was raised at the expense of a Commonwealth Parliament, or of the Federal Congress; but it may interest your readers to know that the people of the Commonwealth of Virginia raised a splendid monument to the late Medical Director of the Stonewall Jackson Army Corps of the C.S.A., Dr. Hunter McGuire, of which I send you a photograph. The monument is situated in the grounds and close to the White House of the Confederacy, Richmond, which is now used as a Confederate museum. Dr. McGuire was a descendant of the McGuires of Fermanagh, Ulster, and it was on his initiative, and at his request, as may be seen in the pages of the *Confederate States Medical Journal*, that medical officers taken prisoners during the war were immediately exchanged.

The Commonwealth of Georgia has notified her intention to place a statue of C. W. Long in the Hall of Statuary of the White House, Washington, as the discoverer of ether anaesthesia, and as a Confederate surgeon, who throughout the Civil War had charge of the Confederate Hospital at Athens, Georgia, being requested during the closing scenes of the war to remain in charge by the Federal authorities, and thanked by them for his humanity and skill. A beautiful medallion portrait of C. W. Long occupies a prominent place in front of the Jefferson Medical School of the University of Pennsylvania, erected by the almoners of the school, in which Long is represented administering ether as an anaesthetic to his friend Mr. Venable. I enclose you a portrait of the medallion. C. W. Long was also an Ulster man, his grandfather having sailed from Derry at the close of the eighteenth century.—I am, etc.,

Dublin, June 1st. GEORGE FOY.

THE SURGEON OF THE "EMPRESS OF IRELAND."

SIR,—It must have been with general feelings of pride that many ex-ship surgeons read to-day of the gallant behaviour of Dr. James F. Grant, surgeon of the ill-fated *Empress of Ireland*. Dr. Grant is a young man at the beginning of a career which we know he will adorn through the splendid devotion to duty he has already displayed, and I think many of us old ship surgeons would like to show our appreciation of his heroism in tangible fashion. I shall be happy to head the list for a suitable testimonial subscribed by ship surgeons and ex-ship surgeons in this country, and with the greater pleasure that Dr. Grant hails from the Big Dominion.—I am, etc.,

A. WHITE ROBERTSON, L.R.C.P.,
London, W., June 1st. Ex-Ship Surgeon P. and O.S.N.Coy.

THE last monthly *Bulletin* of the Office International d'Hygiène Publique contains an article on the sanitary campaign in Brazil, founded upon an official report made by Dr. Theophilo Torres, Vice-President of the National Academy of Medicine. It contains a sketch of the sanitary legislation and administration of the Republic, with particulars of the methods adopted in dealing with yellow fever, plague, small-pox, malaria, and tuberculosis.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW INSTITUTIONS ORDER, 1913.

THE Council of the Poor Law Medical Officers' Association of England and Wales has issued the following report, dated May, 1914, on the Poor Law Institutions Order, 1913:

The Council has carefully considered the Poor Law Institutions Order, 1913. The Order inaugurates many valuable changes, among which may be mentioned the exclusion of children from the mixed workhouse, and the better classification of the inmates of Poor Law institutions. The Council cannot approve of some of the new medical recommendations, as they appear to it to be retrograde.

Much additional work is thrown upon indoor Poor Law medical officers, and that, too, without any increase in their salaries—a matter upon which the Order says nothing. The following are the chief items of increase in the medical officer's work:

The clerical work is enormously increased. In large unions it will certainly be necessary to appoint a clerk, or an additional medical officer, if the work is to be carried out efficiently. In smaller unions, where the medical officer may be able to do the work, he will have to give a much longer time to his duties, and it is only equitable that he should receive a fair recompense. The repeated examination of healthy children will add much to the medical officer's routine work. These examinations are quite unnecessary. What is required is to put the children's ward entirely under the control of the medical officer; to arrange that the children themselves are supervised by trained nurses; that they are weighed and measured periodically, and examined by the medical officer as often as he thinks desirable.

The chief point where in the opinion of the Council this Order is retrograde is an old grievance, and deals with control. The necessity of medical control in Poor Law institutions for the sick has always been insisted upon by the Poor Law Medical Officers' Association. But in this Order the medical officer, as regards subordination to the workhouse master, is in a worse position than in the past. By this Order it is laid down clearly and plainly that the master is to control, subject only to the directions of the guardians, the institution, and the officers and medical officers are necessarily included in that category. The subordination of the medical officer to the master is emphasized by the fact that his duties are placed after those of the master and not before, as in the General Consolidated Order of July, 1847. The old Order, making it the duty of the master to take care that all sick and insane inmates and infants are duly visited by the medical officer, is continued. This is a duty the master is not competent to perform, and the Council thinks it is much to be regretted that the opportunity was not taken to omit it entirely. The position of the medical officer should be that of a chief official directly responsible to the House Committee and the guardians, who are quite as capable of judging whether he is or is not performing his work properly as they are in the case of the master. The medical officer is the only officer specifically referred to in this way, and an invidious distinction of this kind is one that should never have been made.

The Council is quite unable to approve of any system that places the control of the sick wards in the hands of a non-medical officer. To subordinate the medical and nursing staff to such an official is, in its opinion, radically wrong and should not be permitted. It would be far better for the sick wards in workhouses to be separated from the rest of the institution and put under the control of the medical officer, to whom the superintendent nurse must be responsible. The workhouse master should act as steward under the medical officer, but should be entirely relieved from all other administrative duties and responsibilities in the sick wards. The Council receives many complaints from workhouse medical officers that workhouse masters use the powers given to them in a manner detrimental to the interests of the sick, and that the subordinate position of the medical officer often renders it impossible for him to obtain that prompt obedience to his orders which is essential.

The Council is of opinion that, unless both the status and the remuneration of the workhouse medical officer are improved, the existing difficulty of obtaining such officers will be very considerably increased. Some of the provisions of the Order are obviously wrong, when the workhouse has a resident medical officer. For instance, Article 29 (3) implies that an inmate of a sick ward should give notice of his intention to discharge himself to the master; and Article 63 (2) requires the midwife to give notice to the master when she requires the attendance of a medical practitioner. In both cases the application ought to be made direct to the resident medical officer. Again, Article 58 (8) makes it the duty of the master to send out notices with regard to the sickness of an inmate, without any consultation with the medical officer. It is clearly impossible for the master to decide what cases are dangerously ill, and the section needs amendment, to the effect that notices in

these cases should be sent out only on receipt of a requisition from the medical officer.

Further, the master in cases of urgency, where the medical officer is unable to examine an inmate immediately on his admission, may direct that he or she be placed in a ward appropriate for the case. This is a dangerous responsibility for a lay officer to exercise. It would be better to have the receiving ward so arranged that the inmate could be properly supervised and isolated until examined by the medical officer.

The Council is also of opinion that the omission from the Order of two reforms, which might have been introduced, is greatly to be regretted, especially in view of certain abuses in the past. All drugs and appliances for the sick poor should be provided by the guardians, yet in this latest Order the guardians are still permitted to contract with their medical officers to supply them. Again, a male guardian should not have the right to inspect the female wards, or the quarters of the female staff, unless accompanied by a female guardian or superintendent nurse. It is a matter of regret that the opportunity was not taken to re-enact the old Order, rescinded some years ago, making it compulsory upon the clerk to the guardians to forward the half-yearly reports of the medical officer on the state of the workhouse to the Local Government Board. Difficulties, too, are likely to arise on account of the compulsion put upon all officers to produce books, documents, or accounts whenever required by the clerk. The medical officer often has in his possession documents of a private character concerning inmates which the ordinary rules of professional ethics forbid him to divulge except upon the request of the board of guardians or one of the statutory committees.

No doubt much of the criticism of the Council has special reference to institutions with resident medical officers. In the numerous instances where, owing to circumstances, the workhouse medical officer is not resident, some of the criticism might require modification.

The Council has also considered the Poor Law Institutions (Nursing) Order, 1913. There is little to be said adverse to the provisions therein laid down. It is of opinion they will lead to improvement in the nursing arrangements of some Poor Law institutions.

Obituary.

HARRY CHESTNUT, L.R.C.P. AND S.EDIN., L.F.P.S.GLAS.,

TRALEE.

THE tragic death of Dr. Harry Chestnut, of Tralee, has aroused feelings of deep regret and sympathy not only in Kerry, but throughout the province of Munster. He had been attending several members of a family suffering from septic sore throats, apparently due to the existence of defective drains in their house. The mother of the family was one of those affected, and had a high temperature. He received an urgent message to attend her, and, on his arrival, he found that she was bleeding profusely as a result of an incomplete abortion. Knowing that she was suffering from her throat, and having received no intimation of the abortion, he was quite unprepared with gloves, and at once proceeded to evacuate the uterus with his bare hand, in the hope of saving her life. In doing so he himself got a septic infection of the left forefinger. Realizing the serious nature of his condition, he consulted one of his colleagues in Tralee, and soon after journeyed to Cork, where he entered the South Infirmary. Here he was attended with all possible care and skill by Drs. T. Gelston Atkins, O'Sullivan, and Horace Townsend, assisted by the resident staff, but, in spite of their efforts, the infection became general. For three weeks he made a gallant fight against the ravages of the *Streptococcus erysipelatosus*. In spite of all that could be done, the disease continued its gradual advance, and he died on May 21st, in the 45th year of his age.

Dr. Chestnut was a native of Tralee, being the fourth son of the Rev. William Chestnut, minister of the Tralee Presbyterian Congregation. He studied in Cork, Galway, and Edinburgh, and qualified in 1891. Settling down to practice in his native town, he soon earned the confidence and esteem of the entire community. He was most conscientious in the discharge of his duties, and spared no pains to keep himself abreast of the times in his professional work. As a result, his services were sought far and wide over Kerry, and in the adjacent counties of Cork and Limerick. While for many years he led a very busy life, he never allowed anything to interfere with his attendance on the poor and needy. The poorest inhabitants of Tralee were as certain of his help as the richest, and many a story is to-day being told through Kerry of his kindness, his self-sacrifice, and his generosity.

The funeral took place on May 23rd. It was the largest ever seen in the district. Thousands of all creeds and classes joined in the procession. He was borne to his last resting-place by numerous relays of men, whom he had at some time helped or befriended, and who eagerly sought the honour of being allowed to bear him to the tomb.

Dr. Chestnut was unmarried. He had been a devoted son to the aged mother who died only a few years ago, and a loving brother to his sisters. His life was one of self-sacrifice. The great concourse of mourners at his funeral, and their expressions of grief, proved how well the community realized that he had been "faithful unto death."

JAMES SMITH, M.D.EDIN.,

EDINBURGH.

DR. JAMES SMITH, who died at his house in Brunton Place, Abbeyhill, Edinburgh, on May 29th, had been in poor health for some months; asthma, which had for long troubled him not a little, was attended by pulmonary complications which proved fatal, although about a fortnight before his death he was able to see patients in his consulting-room. James Smith was a native of Edinburgh, and studied at the university there, taking the degrees of M.B. and C.M. in 1888, and that of M.D. in 1894. He was for several years a member of the Edinburgh School Board, as well as a J.P. for the City of Edinburgh. He also held a number of appointments, being honorary physician to the Murieston Farm Home for Boys, and formerly surgeon to the High Constables of Edinburgh. He was a Fellow of the Edinburgh Obstetrical Society. Dr. Smith's mind had a strong philosophical and literary bent, and what he had to say on subjects in which medicine and psychology came into touch was always worth listening to. He took up a strong attitude of opposition to the National Insurance Act in the form in which it left the Legislature, and he was consistent in his opposition, adhering with firmness to his principles throughout. He leaves a widow, two daughters, and four sons, the eldest of whom is a medical student in his fourth year at the university. The funeral to Piershill Cemetery took place on May 1st, and was attended by a large number of Dr. Smith's professional friends as well as by many others, to whom his ready help and constant attention had endeared him.

BRIGADE SURGEON WILLIAM JOHN BUSTEED, Madras Medical Service (retired), died at Upper Norwood on April 27th. He was born on January 15th, 1833, took the diploma of L.R.C.S.Edin. in 1857, and entered the Indian Medical Service as assistant surgeon on July 23rd, 1858, becoming surgeon on July 23rd, 1870, surgeon-major on July 1st, 1873, and retiring with a step of honorary rank on November 9th, 1882. His first service was in Pegu, but after two years there he had to take sick leave. In 1863 he was appointed civil surgeon of Mangalore, and in 1864 was transferred to Chingleput. On May 6th, 1867, he was posted as medical officer of the 25th Madras Infantry, and afterwards served successively with the 29th, the 28th, the 1st, and the 13th Madras Infantry regiments. The Army List assigns him no war service.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Professor Giovanni Antonelli, one of the deans of the medical faculty of Naples, and director of the Institute of Human Anatomy, aged 80; Dr. Domenico Biondi, professor of surgery in the University of Siena, and director of the surgical clinic; Dr. Decloux, physician to the Paris hospitals, and a valued contributor to the new edition of Cornil and Ranvier's well-known work, aged 44; Dr. F. Delius, for many years director of the German Hospital at Buenos Aires, aged 50; Dr. Stanislas Droba, physician to the General Hospital, Cracow, and lecturer in the university, of glanders contracted from a patient under his care; Dr. Charles Pickering Putnam, for some years lecturer on pediatrics at Harvard, and in 1898 president of the American Pediatric Society, a leader in charitable and social work in Boston for more than a generation, aged 69; Surgeon-General Augustin Weisbach, of Graz, a distinguished anthropologist and author of numerous writings on the skull, aged 77; and Dr. O. J.

Wideman, lecturer on neurology in the University of Stockholm, and well known by his researches on poliomyelitis.

Universities and Colleges.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

THIRD M.B. (*Both Groups*).—*H. J. Hoyte, *F. Margherita Mackenzie, *J. B. Randall, F. C. Alton, T. I. Bennett, G. A. Bird, J. Bostock, M. J. Cronin, H. W. Davies, R. Ellis, H. W. Evans, E. A. M. J. Goldie, F. A. Grange, P. S. B. Langton, O. C. Link, R. J. McN. Love, W. E. Milligan, C. L. Pattison, R. A. Preston, M. Radford, C. G. Richardson, A. M. M. Roberts, Helen L. Robertson, W. H. P. Saunders, C. J. H. Sharp, G. W. Shore, W. Simpson, J. S. Sloper, S. Smith, H. J. D. Smythe, W. E. Tanner, V. D. C. Wakeford, A. H. White, A. Wills, O. R. L. Wilson, C. Witts, B. Woodhouse.

THIRD M.B. (*Group I*).—B. W. Armstrong, W. C. P. Barrett, R. M. Beath, A. D. d'Avray, Una Griffin, Mary E. Harding, Mildred A. Jukes, J. G. Owen, C. Sherris, G. A. Walker, T. B. Welch. (*Group II*).—W. R. Blore, W. Burt, N. StJ. G. D. Buxton, J. A. W. Ebden, G. D. Eccles, T. P. Lewis, T. B. Paul, Edna M. Powell, A. L. H. Rackham, P. Smith, T. R. Snelling, Grace Stapleton, J. A. Tsoi-A-Sue, E. H. Walker, A. G. Winter.

* Honours.

Medico-Legal.

FLIES AND INTENSIVE CULTURE.

THE case Bland *v.* Yates in the Chancery Division last week raised the question of an occupier's remedy for the annoyance of a large number of flies stated to have been bred in manure heaps formed by a gardener in the process of intensive culture. The defence was that proper and legitimate use of the land was being made for the purpose of market-gardening. The evidence given by experts and others was not concordant as to the number or the variety of the flies which reached the plaintiffs' house.

Mr. Justice Warrington gave judgement for the plaintiffs without calling upon counsel appearing for them. He said, according to the report in the *Times*, that in the course of his business the defendant used large quantities of manure, and in laying out his French garden he had chosen as the place for stacking manure a point which was immediately adjoining the plaintiffs' garden. The plaintiffs claimed that they suffered great inconvenience from what amounted at law to a nuisance both from smell and from the flies which in the ordinary course of nature bred in heaps of manure. The question which he had to answer was whether the defendant by his operations seriously interfered with the comfort physically of the plaintiffs and their family in the occupation of their house according to notions prevalent among reasonable English men and women. For the purpose of answering that question he was not to look at the operations in the abstract and by themselves, but in connexion with all the circumstances of the locality, and in particular with reference to the nature of the trades usually carried on there before the beginning of the defendant's operations. But if after taking those circumstances into consideration he found a serious and not merely a slight additional interference with the plaintiffs' comfort, then it was the duty of the court to interfere.

Intensive cultivation of plants required the use of large quantities of manure. The manure used by the defendant was long straw horse manure. The defendant collected the manure on the ground, and at the end of December or the beginning of January he prepared his beds. The defendant chose for the place for stacking manure a place immediately adjoining the plaintiffs' garden; he chose that for his own convenience, and apparently because the land on the other side was more suitable for cultivation. The plaintiffs went into semi-occupation of the Clock House in September, 1910, and his lordship found as a fact that during such occupation they suffered to an unusual and abnormal extent from flies both in the house and in the garden. In the spring of 1911 the plaintiffs put wire blinds to each of the windows which they were in the habit of opening, and his lordship could not imagine why they should so inconvenience themselves and put themselves to such expense unless what they experienced in the previous September was sufficiently serious to cause interference with comfort.

The plaintiffs said that during the warm period of the years 1911, 1912, 1913 they had suffered serious inconvenience from the abnormal number of flies in their garden, and also, when the wind was in a certain quarter, from the smell arising from the manure heap. His lordship found as a fact that the plaintiffs had suffered serious inconvenience and interference with their comfort as occupiers of the house and garden according to notions prevalent among reasonable English men and women. Was that caused by the operation of the defendant, and, if so, did it amount to a nuisance at law, taking into account the usage of the neighbourhood? It did not want much to convince one that a smell might come from a manure heap. Then with regard to the flies: the house-fly and the lesser large collection remaining during the whole of [illegible] months of the favourite nesting places of the fly wi[illegible] distance of the plaintiffs' building, and the plaintiffs found an abnormal number of flies, what conclusion could one arrive at except that the breeding place had had its natural result, and provided the flies? His lordship found that the flies came from the heap of manure which the defendant collected during the summer months.

Then with regard to the surrounding circumstances and the occupations of the district, could he come to the conclusion that there was a nuisance? The district was one of market gardens, and persons who lived in such districts must expect to have to put up with the attributes of such businesses. But what the defendant seemed to be doing was very much more than what one was obliged to expect would be done by market gardeners. What the defendant did required for that district an unusual and excessive collection of manure. That was enough, and he must find that the inconvenience was caused by the defendant's operations. His lordship felt very reluctant to have to interfere with what was a profitable and good industry, but he must grant an injunction restraining the defendant from depositing, stacking, and handling manure on his land so as to be a nuisance to the plaintiffs. The defendant must pay the costs of the action.

MURDER AND THE PLEA OF INSANITY.

THE appeal of A. O. Coelho against conviction, at the Liverpool Assizes before Mr. Justice Bray, for the murder of his wife was heard in the Court of Criminal Appeal on May 11th before the Lord Chief Justice and Justices Coleridge and Sankey. The appellant was convicted of the murder of his wife on a British ship, and the defence was that he was insane at the time. It was contended by counsel for the appellant (Mr. Rigby Swift, K.C.) that the unqualified verdict of guilty found at the Liverpool Assizes could not be sustained having regard to the evidence, and that there had been misdirection by the judge. The judge had left it to the jury to say whether the appellant through disease of the mind was not conscious of the nature and quality of his act, or, if he were, whether he was conscious of the difference between right and wrong, but he did not explain this as it was suggested in Macnaghten's case that the judge should explain it. It was contended that the question ought to have been left whether he knew at the time that it was wrong to kill his wife.

The Lord Chief Justice, in giving judgement, said that the court by no means intended to lay down that it would not interfere with such a verdict as was found in this case, and substitute for it a special verdict under the Trials of Lunatics Act, 1883, but upon an examination of the evidence it could not come to that conclusion, as a court of law dealing with the verdict upon what they thought was a proper direction, that the verdict was wrong. The only alternative to quashing the conviction of murder would be to substitute a special verdict, with the consequence that the appellant would be detained during His Majesty's pleasure. The facts were ample to prove that murder was committed. The direction to the jury was correct in substance; it was told that a man must be presumed to be sane and possessed of sufficient reason to be conscious of his crime unless he established the contrary, and proved that he was suffering from such a disease of the mind as to be unconscious of the nature and quality of his act, or, if conscious, not to be conscious of the difference between right and wrong. The effect of the evidence for the defence was that the appellant had suffered from syphilis, loss of memory, persistent insomnia, and want of concentration, which could be summed up by saying that he was suffering from syphilitic neurasthenia. There was evidence that after the crime he was under the delusion that his wife had tried to poison him, that he was not fully conscious of the difference between right and wrong, and had delusions which interfered with his mental activity. The court had come to the conclusion that the appeal could not succeed, but only with hesitation as it was a difficult case, and it was to be borne in mind that there were powers vested in the Home Secretary not available to the court.

Since this decision was given the Home Secretary has announced that the death sentence on Coelho has been commuted to penal servitude for life.

Medical News.

SIR BERTRAND DAWSON, K.C.V.O., Physician Extraordinary to His Majesty, has been appointed Physician-in-Ordinary in the room of the late Sir Francis Laking, and Dr. Frederick Stanley Hewitt has been appointed Surgeon Apothecary to H.M. Household, vice Sir Francis Laking.

SIR GEORGE REID, the High Commissioner in London for the Commonwealth of Australia, will distribute the prizes to the successful students at Guy's Hospital Medical School on Thursday, July 9th.

ON May 24th the foundation stone of the new scientific university of Genoa was laid in the presence of the King and Queen of Italy and the Dukes of the Abruzzi and of Genoa, and of a large attendance among whom were Ministers of State and representatives of the Senate and

the Chamber of Deputies. Speeches were delivered by the Syndic of Genoa, Professor Maragliano, Rector of the University, and others. The clinical institutes are to be built on an area of 20,000 square metres; there will be eight separate buildings united by a magnificent portico. It is estimated that the new university will cost about £360,000.

A VERY successful congress, attended by over 800 members, met on the French Riviera during the last days of April. Its object was mainly to promote an interchange of views between pure scientists and medical men on the action of solar rays at various altitudes on disease, an idea already carried out in electro-therapeutics with excellent results. Under the patronage of the Prince of Monaco, the presidents elected were Professor d'Arsonval and Professor Albert Robin, both of Paris. The papers read dealt with: (1) The means of measuring and controlling solar radiations and their biological effect at sea level and at higher altitudes; (2) the effect of treatment by exposure to the sun's rays on surgical and medical diseases respectively. The congress met at Cannes, which proved a good centre from which to visit the numerous establishments for heliotherapy scattered between Hyères and Mentone. Other excursions made it evident that within a radius of twenty miles the Riviera had a series of climates rising from sea level to 9,000 feet—from sea-bathing in winter to the snowline and winter sports. The next meeting is to be held in Italy in 1916 under the presidency of Professor Maragliano.

ON March 31st Sir Rickman Godlee and Mr. Bilton Pollard, who have recently retired from the active staff of University College Hospital, were entertained at a farewell dinner by their colleagues. Twenty-five were present, and the chair was occupied by Professor Thane. Sir John Rose Bradford and Dr. Herbert Spencer proposed the toasts of the evening, and presented each of the distinguished guests with a salver on which were inscribed the autographs of the staff. On May 14th, Sir Rickman Godlee and Mr. Bilton Pollard were entertained at dinner at Oddenino's by their former house surgeons. Dr. Scharlieb, C.M.G., was in the chair, and some forty were present. Among them were Dr. Batty Shaw, Dr. Charles Bolton, Mr. F. J. Cleminson, Dr. E. Mapother, Mr. H. T. Mant, Dr. E. M. Cowell, Mr. T. C. Graves, Dr. H. E. Dyson, Mr. Julian Taylor, Dr. D. M. Hughes, Messrs. E. K., L. A., and P. S. Martin, and Mr. R. Lister Horton. Mr. Philip Heath proposed the health of Sir Rickman Godlee, and Dr. Otto May that of Mr. Pollard. The toasts were suitably acknowledged, both speakers expressing the pleasure they had found in their work at the hospital and their regret at the severance of old ties. Dr. Scharlieb presented Sir Rickman Godlee with a pair of silver fruit stands, and Mr. Pollard with a silver rose-bowl. In each case the gifts bore suitable inscriptions.

WE regret to say that Mr. William Pearson, the accomplished Prosector of the Museum of the Royal College of Surgeons of England, has been compelled, on account of ill health, to resign his appointment which he has held for fifty-eight years. Born in 1840, he first obtained a situation in the Museum—where his father and grandfather had been employed before him—at Michaelmas, 1856, when Sir Richard Owen had just resigned the Curatorship. He worked under four succeeding curators—Mr. Quekett, Sir William Flower, K.C.B., Professor C. Stewart, and Dr. Arthur Keith—and ever to their entire satisfaction. His name is written in the splendid series of dissections of human anatomy and the numerous preparations illustrating the anatomy and physiology of man and animals which adorn the Museum of the College. From his sixteenth year till a few weeks ago he continued unceasingly his work as a practical anatomist. His portrait, painted by Mr. Onslow Ford, R.A., was exhibited a few years since in the Royal Academy, and is preserved in the College. The services rendered to the museum of the College by the Pearson family date back to the time when Edward Pearson was engaged as museum porter by Mr. Clift, the first conservator in 1804. He died in 1857 after fifty-three years' service, aged 80. His son, Thomas Pearson, was engaged as assistant in the museum in 1837, and was pensioned in 1880 after forty-three years' service, he dying in 1882. Mr. William Pearson (Thomas Pearson's son) was engaged, as above explained, in the autumn of 1856. For nearly nine years the grandfather, father, and son worked together in the active service of the museum. As Mr. William Pearson resigned in May, 1914, the Pearsons have ably served the College for 110 years. Those old enough to remember the College forty years since may still distinguish from this veteran family a Jonathan Pearson, an able dissector, but no relative. Almost at the same time the articulator to the museum—a man of consummate skill in his art, just as Mr. W. Pearson remains one amongst the ablest dissectors living—bore the name of James Flower, though no relation of the conservator, Sir William Flower, K.C.B. The museum has been well served by intelligent hands, as well as by learned heads, and among the former the palm may, we think, be awarded to the hands of Mr. William Pearson.

AT the recent elections in France there were 170 members of the medical profession in a total of 2,902 candidates: 43 doctors were elected to the Chamber of Deputies. The new members are: Drs. Navarre, Paris, 13th arrondissement; Poirier de Narçay, Paris, 14th arrondissement; Vaillant, Paris, 20th arrondissement; Doizy, Mézières—Ardennes; Sireyjol, Nontron—Dordogne; Delorn Sorbé, Pau; Pacaud, Sables-d'Olonne—Vendée; Boussenot, La Réunion; Peyroux, Rouen; Vidalin, Tulle—Corrèze; Mourier, Alais—Gard; Pezet, Montpellier; Merlin, Roanne—Loire; Legros, Blois; Delpierre, Clermont—Oise; Augagneur, Lyons; Schmidt, Saint-Dié—Vosges; Defos, Moulins—Allier; Baudon, La Palisse—Allier; Favre, Saintes—Charente Inférieure; Queille, Ussel—Corrèze; Lancien, Chateaulin—Finistère; Dumont, Issoudun—Indre; Thiéry, Commercy—Meuse; Defontaine, Avesnes—Nord; Sibuet, Albertville—Savoie; Pottevin, Castelsarrazin—Tarn et Garonne; Thivrier, Montluçon—Allier; Jean Durand, Castelnaudary—Aude; Lachaud, Brive—Corrèze; Baudet, Dinan—Côtes du Nord; Clément Clament, Bergerac—Dordogne; Cazauvieilh, Bordeaux; Chapuis, Lons-le-Saulnier—Jura; Gilbert Laurent, Roanne, —Loire; Pécharde, Epernay—Marne; Delelis-Fanien, Béthune—Pas-de-Calais; Victor Morel, Montreuil-sur-Mer—Pas-de-Calais; Dubief and Symian, Macon—Saone-et-Loire; Lorimy, Coulommiers—Seine-et-Marne; Ganault, Laon; Amand Périer, Fontenay-le-Comte—Vendée; Théveny, Arcis-sur-Aube; Even, Lannion—Côtes-du-Nord; Guiraud, Lavaur—Tarn; Paulin Dupuy, Moissac—Tarn et Garonne; Chassaing, Ambert—Puy-de-Dôme; and Constans, Montauban—Tarn et Garonne.

MR. PINCHING AND DR. FIRTH, who retired recently from the active staff of the Gravesend Hospital—Mr. Pinching after thirty-six years and Dr. Firth after thirty-one years' service — have been appointed consulting surgeons, and at the May meeting of the committee of management were presented by the President, Vice-Presidents, committee of management, and medical staff of the hospital with silver inkstands bearing suitable inscriptions. The President, the Earl of Darnley, who made the presentation, said that he thought the paragraph of thanks contained in the yearly reports of hospitals did not sufficiently acknowledge the work gratuitously done by the honorary staff. The public did not realize the skill and attention so generously given to the suffering poor. In another capacity he had heard hard things said about doctors in connexion with their work among the poorer classes, but it was his firm belief that no class of the community gave so much voluntary help in their private practice and by their services to hospitals. The presentation was intended as a recognition of the inestimable gratuitous services rendered to the hospital by Mr. Pinching and Dr. Firth. The committee of management appreciated most highly their valuable help in matters of administration, and it was intended to commemorate their services to the hospital by calling two of the wards after their names. Dr. Firth, in acknowledging the presentation, expressed his regret that Mr. Pinching was unavoidably absent, and his thankfulness that time had dealt leniently with them, so that both he and his colleague retained energies and spirit unimpaired. At the same time they recognized that the rule with regard to a retiring age made some time ago was a wise one. He referred to the numerous changes and great developments the hospital had undergone, and said that Gravesend owed thanks not only to the medical staff but also to the Committee of Management, because by its wide views and skilful management it had kept the hospital up to date and abreast with modern science. Portraits of both Mr. Pinching and Dr. Firth have been hung in the board-room.

FRANCES BRADLEY gives in the *Journal of the American Medical Association* of January 24th an account of the work of the Federal Children's Bureau, which she described at the recent Conservation Exposition at Knoxville, Tennessee. As a part of the Child Welfare Exhibit a children's health conference was held with the object of determining the methods likely to favour the development

of the rising hope of the nation into healthy citizens. All parents were invited to bring their children, but no prizes were given, the natural incentive of parenthood and desire of the welfare of the child being relied on. The results justified the method. The examinations were open to all classes and conditions and to all ages under fifteen. Husbands were as much interested as wives, and the parents were shown how they succeeded or failed to do their best for their offspring. Faulty nutrition was shown to be the cause of most of the ills of the children brought in, and an expert gave practical demonstrations on the care and preparation of milk, the feeding of infants and school children, and the wholesome preparation of the foods commonly used. The bottle-fed baby was found to be a city product, but the breast-fed country child also gets a taste of everything the mother eats "to keep it from having colic." The conference seemed to establish certain facts, which are given in conclusion, as follows: "(1) The medical profession is alive and quite able to care for the children of the country without resorting to hysterical or spectacular methods. (2) It does not need the financial backing of advertising concerns to point the way to its duty; this work may be kept free of commercial entanglement, and on the usual high plane of professional activities. (3) The medical profession stands ready to give of its knowledge and efforts to the uplifting of mankind, and the little child shall not call in vain." The hope is expressed that the work of raising the standard of public health may be left in the hands of the Government and of the medical profession to work together in this most important phase of conservation.

EVEN when the greatest care is taken about dressings and sutures, the abdominal wound made for the removal of tumours and other morbid structures may yield after the removal of the sutures, the intestines escaping. Experience has shown that the mortality after this alarming post-operative complication is remarkably small, especially if the bowel be carefully washed with sterilized saline solution, yet there is often considerable soiling of the extruded parts, and also marked shock. Hence Morestin, Souligoux, Témoin, and Rouville have advocated direct application of ether. Delmas recently had an unpleasant experience (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, 1914, p. 237). He removed diseased appendages, which were very adherent, and inserted a rubber drainage tube in the lower angle of the wound, withdrawing it on the fourth day. On the eighth, as the sutures were being removed, the patient coughed, the wound yielded up to the umbilicus, and a great mass of intestine protruded. Under an anaesthetic it was reduced, but it had come in contact with foul linen. Delmas packed a compress into the peritoneal cavity and poured into it quite a litre and a half of ether. Suitable treatment for the profound shock proved effectual, but the patient's husband a few hours afterwards insisted on taking his wife away to die at home. However, as Dr. Delmas observes, this worthy man informed him three months later that his wife had completely recovered. She could eat and sleep well, but the dressings remained. Her family doctor did not like to touch them, and had simply let ether soak into it from time to time. Delmas found that the paricta wound had closed almost completely, dense cicatricial tissue having developed. There remained at the lower angle a gap which barely admitted the little finger. With considerable difficulty the packing was extracted entire, and the wound closed. Delmas considers that this packing process, with free application of ether, is safer than deliberate suturing of the ruptured wound when shock is marked and the protruded organs badly soiled. This remarkable after-history, he said, showed what the peritoneum would tolerate; of course, had the patient been allowed to remain in hospital, the sutures would have been reapplied within a few days.

THE seminomata form a very interesting group of tumours of the testis and ovary which is hardly known by that name outside France; they have usually been mistaken for round-celled sarcomas; they have sometimes been described as epitheliomata, and Masson showed specimens of as many as five ovarian and two testicular seminomas at a meeting of the Anatomical Society of Paris in 1912. He finds that ovarian seminomas have a structure absolutely identical with that of the testis, and that they cannot be distinguished histologically from testicular seminomas. The ovarian seminomas form massive tumours, of yellowish-white or rose-white colour, and more or less hard according to the abundance of their connective tissue stroma. The nuclei of their cells are rounded or oval, clear, and contain one or two large acidophile nucleoli. The cytoplasm is clear, and is formed by a stroma of extreme delicacy, soaked with glycogen; its fixation is very difficult, so that often it appears to be non-existent in pieces fixed in simple formol. An excellent example of an ovarian seminoma in a girl, aged 14 years, was reported to the same society a month later by Desmarest and Masson. An abdominal tumour had existed for six months and had grown very greatly for a few weeks. An enormous, uniformly hard, but painless tumour filled the abdomen. Median laparotomy was performed, but she died from shock forty-eight hours later. Bonnel reported to the same society in 1912 a case of seminoma in which the element of trauma appeared to be definitely connected with its evolution. He has described (December, 1913) in the *Bulletin* of the same society the case of a testicular seminoma in a man of 32, a case of "seminiferous epithelioma (seminoma)." At the age of 17 the man was successfully operated on for ectopic testis; the organ remained small and atrophic, but at the age of about 30 the testis increased gradually in size, and at the end of two years attained the weight of 265 grams. Castration was performed; the tumour on longitudinal section showed a homogeneous structure, but there were numerous necrobiotic islets the size of a pea. It showed microscopically large polyhedral cells, resembling spermatogonia, with a large round nucleus, nucleoli, and karyokinetic figures. The cytoplasm was relatively scanty, fragile, and often absent, in spite of immediate fixation in Bouin's fluid. Nowhere were there any normal seminiferous tubules present, but the excretory ducts of the epididymis with their cylindrical ciliated cells could be distinguished.

THE health officer, Dr. Stanley, in submitting his annual report on the health of Shanghai for 1912, states that the year was not a healthy one. There was a considerable increase in the incidence of acute diarrhoea, typhoid, and scarlet fever. But the augmented death-rate was, in the case of the foreign population, due to some extent to increased mortality among children from general causes, such as bronchitis, the incidence being chiefly among Japanese. Choleraic diarrhoea affected the community seriously; not only were the number of cases, both among foreign and Chinese, exceptionally high, but the port was declared infected with cholera by the Japanese authorities. The death-rate among the foreign population was 21 per 1,000, and among the native 19.3 per 1,000. There were 20 cases of small-pox among the foreign population, with 3 deaths, and among the Chinese there were 124 deaths. Vaccination is done free for all Chinese and indigent foreigners applying at the district health offices; 6,108 vaccinations were performed during the year. There were 35 deaths from tuberculosis among the foreign and 1,096 among the native population; this high death-rate from this disease is attributed to overcrowding, against which there is at present no legislation. Since plague-infected rats were found in the colony in 1908 a complete plague survey has been maintained. During 1912, of 14,988 found dead and brought to the laboratory for examination, 95 were plague-infected, compared with 138 during the previous year. During the year nearly 150,000 rats were trapped and burnt. There were 18 human cases of plague during the year. The incidence of beri-beri has diminished. No fewer than 23,322 specimens sent for pathological diagnosis were examined at the public health laboratory during the year, and numerous samples of milk, water, foods, and liquors were examined also. Glycerinated calf lymph had been widely distributed in the Far East; 10,993 tubes were sent out from the laboratory during the year—the equivalent of 54,965 persons protected against small-pox. Plague, typhoid, and other bacterial vaccines also were sent out from the laboratory. The municipal hospital system has been concentrated in the vicinity of the isolation hospital and nursing home so as to facilitate supervision by the health officer in charge, and to co-ordinate this part of the work of the health department; 1,249 cases were treated in the isolation hospital with 115 deaths. A large number of cases were treated in the police hospital, sanatorium, and gaol hospital. A large sanitary staff is employed, and pays special attention to the disposal of house refuse, mosquito reduction, and the screening against house-flies. As the preventable diseases specially prevalent in Shanghai are mostly caused by infected food, food inspection has been considered of paramount importance. The foreign food supply is under complete sanitary supervision, and this is gradually being applied to the Chinese, premises being licensed as soon as the necessary conditions have been met.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

F. J. asks for advice in treatment of a man who recently had erysipelas, recovered, and went to work in a dockyard; each time he returns to work he arrives home with an acute erythema of the face. Lead lotion and ichthyol ointment and also internal remedies have been tried. He will not agree to serum treatment.

THE FLY NUISANCE.

D. H. wishes to hear of a method of freeing a sitting-room from house-flies apart from the use of sticky fly-papers.

NITRATES IN URINE.

J. B. S. asks: Where can I find a discussion of the clinical significance of nitrates in the urine? Books on urine analysis do not deal with the subject.

THREADWORMS.

C. H. J. wishes to hear of an effective treatment for threadworms in a child aged 7 years; during the last three years the threadworms have been made to disappear for three or four months at a time, but reappear again, though the utmost care is taken against the possibility of reinfection. Diet, injections, suppositories, parolein, etc., have all been persevered with, but with only temporary relief.

NOTES.

VOLITANTES writes: I have had under my care for some weeks a young man who had a "breakdown" some six months ago through hard reading. He was ordered by his doctor to take complete rest from all book work and to go to the country for three months, with the result that when he consulted me he was quite strong and fit for more work; but he found it impossible to do more than about half-an-hour's easy reading owing to intractable muscae volitantes. I should feel very thankful for any suggestions as to treatment. He is short-sighted with slight astigmatism, but wears proper glasses.

ANSWERS.

ADMINISTRATION OF ARSENIC AND IRON HYPODERMICALLY.

DR. REGINALD NITCH-SMITH (London, W.) writes: In reply to "F. G. W.," I have on a previous occasion written to the medical press on this subject. I have used iron and arsenic (hypodermically) for years. It is the best, and in my opinion the only way, to cure anaemia. The injections are given intramuscularly, preferably into the gluteal muscles—under antiseptic precautions. If the case is "in a hurry" twenty-one injections may be given in as many days. If there is no hurry, I give twenty-one injections on alternate days. A digestive mixture is useful at this time, as it enables the anaemic dyspeptic to take food during the treatment. Milk, plain or peptonized, is useful during the treatment—two or three pints daily.

DR. HUBERT M. PINTO-LEITE (London, N.W.) writes: In answer to "F. G. W.," an ordinary dose of iron and arsenic can be administered hypodermically once in twenty-four hours. Some information as to the preparation and dosage of such drugs is to be found on p. 151 of Martindale and Westcott's *Extra Pharmacopoica*, fourteenth edition. I have found the *sérum névrosthénique* and the *sérum ferrugineux*, made by Fraisse of Paris, very useful. The latter serum gives a slight local reaction after hypodermic injection, probably due to the iron salt of arsenic. This reaction quickly passes off without suppuration. The former serum gives no local reaction, and is of the same composition as the latter but for the absence of the iron salt. I give twelve daily injections as a course.

WEBB'S SEWER LAMPS.

DR. J. C. MCWALTER (Dublin) writes in reply to "M.O.H." (May 9th, p. 1052): I think highly of them. Not only do they consume noxious microbes, but they prevent the accumulation of the treacherous and fatal sulphuretted hydrogen. We had a couple of fatalities from this in Dublin lately, which might have been obviated by the timely use of Webb's lamps.

LETTERS, NOTES, ETC.

SHIP SURGEONS: THE PILGRIM SEASON.

A SHIP SURGEON writes: Surgeons go to sea for many reasons. This warning is only intended for those younger men who take a voyage East just to see things—a holiday before settling down. The older men know all about it. The young man usually signs on one or other of the large cargo boats; it is only for one voyage. The passenger lines usually require a somewhat expensive outfit, which in his case would be money thrown away, and also a contract for two or three years' service. On the cargo boat he finds little or no uniform required; and he expects a holiday, with very little work, a nice skipper, and pleasant fellow officers. He usually gets them. Also he hopes for some insight into tropical diseases, by favour of the hospital staffs of Penang, Singapore, and Japan: and last, but not least, the sight of other peoples, other lands. Much of this he may get; but he may, and most probably will, get, unexpectedly, the charge of perhaps 1,000 coolies, or as many pilgrims, and not a red cent. extra for his disagreeable duties and the general discomfort that he then has to experience himself and the rest of the ship's company.

I will not enter here into details, as I am preparing a more elaborate account, dealing with the inadequate space, and bad ventilation, and hygienic conditions under which these people are carried, but will give my own experiences of last year. Outward bound, we took up 800 Chinese deck passengers from Singapore to Hong Kong during the north west mousoon. Homeward bound, I was taken off my ship at Singapore, and she proceeded home without a surgeon. I was transferred to another ship of the same company to act as second surgeon to a man much junior to myself, because this ship was taking 1,350 pilgrims to Jeddah. Instead therefore of going home in nice company, to keep my appointments as expected, I get a month delayed, with the company of 1,350 pilgrims, under conditions that the Board of Trade could not sanction, July in the Indian Ocean and the south-west monsoon, with sixteen days in the Red Sea, including seven days' quarantine in Kamaran. "Experience," say you: "one must take the rough with the smooth." All very well, try it. The pilgrim season has just commenced.

TREATMENT OF PNEUMONIA.

DR. A. J. MANASSEH (Friends' Mission Hospital, Brumana, Beyrout, Syria) writes: Ever since reading the article on treatment of lobar pneumonia which appeared in the BRITISH MEDICAL JOURNAL, November 19th, 1910, p. 1611, I have used the two drugs, potassium iodide and creosote, as recommended by Dr. Arthur Mathieson for all cases of lobar pneumonia under my care.

I have before me a list of 74 cases of lobar pneumonia which occurred consecutively in a small district of about 2,000 inhabitants from January 3rd to May 5th, 1914. The mortality was *nil* among the 70 cases treated with these two drugs, who took the mixture regularly. The other four who succumbed to the disease had for various reasons not used the above-mentioned drugs. I do not remember in my seventeen years of practice to have seen so large a number of cases of pneumonia, but I was glad to have such a reliable remedy. The cold north-east wind was prevalent here during this epidemic. Out of the 74 cases 28 were female and 46 male. Their ages varied from 5 months to 80 years. The strong and robust as well the weak were attacked, with or without exposure to fatigue. In five homes two had it at the same time, the rest were isolated cases in two or three villages. In 20 cases the left lung was the seat of the mischief, in 22 the right, and in the rest the two lungs were more or less affected, oftener the base than the middle or upper lobe. The sputum was blood-stained in about 50 cases. Pleurisy and pleuritic pains were complained of by about two-thirds of the patients. In 7 cases improvement took place suddenly about the seventh or eighth day of the illness, but in the greater proportion the temperature, pulse, and respiration fell gradually in the course of two or three days, becoming nearly normal about the thirteenth day.

The mixture (creosote and potassium iodide) as recommended by Dr. A. Mathieson, was used in 70 cases. To a few I gave calcium lactate or glycerophosphate. Dry cupping and occasional applications of turpentine liniment were ordered to the majority. When asked for by the patients or their friends, leeches were applied to relieve the pleuritic pains with good results. In two or three cases I ordered quinine in small doses, with alkaline mixture; this I thought helped to bring down the temperature. Among these 70 cases several had very bad symptoms, such as violent delirium or failing pulse. One or two had led intemperate lives, and yet the mixture saved them. I feel much indebted to Dr. Mathieson for his valuable recommendation for the treatment of such a specific infectious disease.

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Presidential Addresses

TO THE

BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

NORTH OF ENGLAND BRANCH.

THE INFLUENCE AND RESPONSIBILITIES OF THE MEDICAL PROFESSION IN SOCIAL LEGISLATION AND ADMINISTRATION.

By A. C. FARQUHARSON, M.D., B.Sc., D.P.H.,

President of the Branch; Councillor for the County of Durham; Member of Durham County Insurance Committee.

GENTLEMEN,—Permit me to offer you my sincere thanks for the honour you have conferred upon me in electing me to the office of President of the North of England Branch of the British Medical Association. I am deeply sensible of the honour, and my feelings of appreciation are enhanced because of two thoughts which are present in my mind. In the first place I am conscious of a certain measure of professional unworthiness to step into and take a place in the distinguished line of members of our profession who have held this office in past years; and my second thought is one of uneasiness that I am occupying a position which could, with more appropriateness, have been given to some other member of the Branch whose length and quality of service far exceeds any which it may have been my privilege to render. The fact of your choice, however, has caused me to reflect upon the possible reasons which may have influenced you in making it, and I have come to the conclusion, quite impersonally, that it is your desire in electing me to this honourable office to express your approval of the efforts and activities which I have, by the votes and support of my colleagues, been permitted to display in that sphere of medico-political activity in which our Association has for some years now been engaged. This activity probably reached its maximum at the time when proposals relative to a system of national health insurance were being debated both outside and inside the Legislature, and as that time coincided with my period of service as a member of the Central Council, I was able to see what great opportunities were presented to the Association to shape, and to some extent to determine, the quality and character of proposed legislation.

I wish, however, to regard my election to the office of President less as the expression of your agreement with, or appreciation of, the efforts which I made or the attitude which I maintained in regard to the national health proposals and more as your recognition of the importance to the profession of this kind of activity, this kind of effort. It is effort which carries with it no scientific distinction or professional eminence. The element of individuality is of little importance; it is merely an incident in the united collective effort, and probably the only attribute which it possesses worthy of note is that it has for its final purpose the ultimate benefit of every individual member of our profession. My efforts, both as a Representative and a member of Central Council, created for myself a considerable degree of unpopularity, if not animosity, and you will perhaps permit me this one personal reference, and it is that the painful memories of that interesting period are completely obscured by thoughts of the consistent support which has been shown me by my Division, my constituency, and now to-day by the Branch of which I am a member. Assuming, then, that the honour which you have conferred upon me may be regarded as the expression of your view of the importance to the profession of this form of professional activity, I feel that I may logically and consistently address a few remarks to you upon what I regard to have been some of the main influences and factors which have, in my opinion, led by a sort of evolutionary process to the growth and development of this medico-political organism of ours. I will suggest that those influences and factors, operating over some length of time, yet owe their very origin to an inspiration derived from the studies, the investigations, the experiments, the interrogations of the mysteries of Nature with which the science and practice of medicine has concerned itself in the past and is concerning itself in the present. I will suggest that from those inspirations much, if not all, of a certain type of social and legislative effort has sprung—an effort which appears to have for its object the physical salvation of the nation. I will suggest that our medico-political movement has emerged from the complexities of sociological activities as a sort of intellectual by-product endowed with the ability to estimate and measure the relationship of those activities to the scientific and material interests of our profession. I will suggest that from considerations of the growth and development of those factors we may not only measure our present medico-political difficulties and problems, but we may also find indications of the necessity for continued preparedness and readiness for even greater co-operative and co-ordinated effort in the future. Suggestions may also emerge as to the desirability of extending our individual efforts in directions the material value of which to the profession itself I do not think are quite sufficiently recognized. I am inclined at the outset, in developing this line of thought, to seek a parallel for my view in the ordinary biological phenomena of adaptation. The rule of interaction or struggle between organism and environment which we recognize in Nature may be seen to be in operation if we regard the profession of medicine as an organic unity and those factors and influences to which I refer as constituting elements in the environment of that unity. Probably the chief stimulative element of this environment is a kind of legislation which has come to be regarded as necessary and essential in dealing with what are termed "social problems"—problems which undoubtedly touch the well-being of a community at many points.

In reviewing our recent efforts to secure proper professional status and remuneration under the new conditions and changed relationships set up by the National Insurance Act it follows, if my biological parallel holds good, that those efforts are not to be regarded as merely exceptional, isolated displays of energy on the part of an organism which, non-existent prior to the display, may be expected to pass out of existence when the occasion passed. To some the appearance of the Act may have created the impression that the medico-political combination of our Association was an entirely new-born force. This impression needs modifying, for at the time the bill was introduced the medico-political forces of the Association had long left the stage of inertia behind and had reached a vigorous stage of development, the result of years of almost continuous conflict with major and minor authorities to secure and safeguard the rights and privileges due to members of our profession. Let me remark here, as a sort of parenthesis, that the state of development in which we found the forces of the Association at the time I speak of provides a magnificent tribute to the ability and foresight of those leaders of our Association who, despite the defects and drawbacks of our constitution, gave to the Association a medico-political preparedness which we have since recognized to have been absolutely necessary in order to retain our continued independent professional existence. There were no convulsive efforts, no violent changes, simply a process of adaptation. Strong periods of growth and development are incidental to the structures and functions of all living things, and in 1911 and 1912 we found the British Medical Association passing through just such a period.

Permit me to take this biological parallel one step further. In an environment which is undergoing wide and rapid change the measure of an organism's adaptability is also the measure of its chances of survival. The applicability of this statement in relation to our profession rests with the future, but any inimical import which it may appear to suggest will be met by the continuance of that development of associational strength to which I have referred. At least, that is my hope. Now, I have suggested that our medico-political organism has come into existence, and has developed in strength because of the reaction upon that organism of the operation-in-law of a certain type of legislation. The law not infrequently takes on a shape which the profession resents, since the effect of it is regarded to be in conflict with the best interests of the profession. This environmental stimulus

is naturally followed by self-preservative efforts of the organism, but this contemplates only a limited view of what we may more truly regard as the full and complete relationship of our medico-political movements to both the interests of the profession and the community. Self-preservation, although a biological factor of supreme importance, is not of necessity something that can only be obtained by the destruction of common interests, and the functions of our medico-political organism are essentially those which seek to adapt, to reconcile, to adjust the differences of conflicting and antagonistic interests in such a way that the common good (the ultimate measure of an "all round" benefit) shall be secured.

The medico-political movement, then, is our chief help in the process of adaptation; it is our main driving force in the contest for survival, and it is also that agency which continues to foster and encourage on the part of our profession the attitude which is expected of us in regard to all matters concerning the public good, the common weal. Now if we look for a moment at the nature of the legislation to which I have referred we will see that it has for its intention and object the solution of problems of disease, of mental and physical disparities, of unhealthy surroundings, and many other problems which vitally affect the life and health of man from the cradle to the grave. The discoveries of medical science, the application of new methods, the "secrets laid bare" of disease and diseased conditions, the results achieved over a great domain of scientific activity, all yield a harvest rich in inspiration, rich in useful purpose for the statesman who comprehends their true sociological meaning. The scientist inspires and the statesman acts. The result is legislation which is usually regarded, no matter how it may conflict with our professional interests, as an indication of advancing civilization. The identity of effort of scientist and statesman is like Christian's key—a key of promise to unlock the dungeons of disease, dirt, and misery in which thousands dwell. "Groping between what Sir Thomas Browne calls 'the night of our fore-being' and the unknown future—the dark before and after, he at last came to himself, and with the help of this key unlocked the mysteries of nature, and found a way to physical salvation."[1]

In considering the changes in social conditions of the masses of this country during the past ten years only, one is forced to the conclusion that the mainspring of all those changes is the associate relationship of the functions of scientist and statesman.

It may be suggested by those who restrict their views of the profession of medicine in such a way as to regard it solely as an individual matter, that this is purely a fanciful relationship. This view, I think, fails to realize either the importance or the rapidity of changes which are occurring almost daily in our environment. It may have been true for centuries, and to a partial extent it is true to-day, but it is all for the good that the purely individualistic element is being eliminated. In the preface to Allbutt's *System of Medicine* we read:

> During two millenniums of time and over broad domains of the world's history the story of medicine has been but a melancholy study. . . . We read the history of medicine rather for the honour of our ancestors than for our own instruction.

The cynic who remarked that he had failed to discover, in reading the history of medicine, that it was either a science or an art, and concluded that it must be a dodge, would find his view upheld by such paragraphs as I have quoted; but those criticisms lose all force and truth when one considers impartially the tendencies and directions of medical and social effort during the past fifty years. The steadily increasing tendency or characteristic of this period has been to regard the health of the individual as a matter of sufficient importance to be of concern to the community.

From the many complex problems which have arisen from this alteration in the point of view of the importance of individual health in its collective aspect, the great sciences of hygiene, preventive medicine and sanitary science have developed. In the same work which I have already quoted (p. 36) Osler refers to the beneficent effects of the growth of modern sanitary science as being comparable to "the greatest victory in history." At all events, it marks a great advance in the history of the civilization of a people when we reach the stage where questions arising from the laws of health and the control of disease become proper to the functions of government. The individual aspect of medical work still looms large in the horizon of most of our lives, but I think and hope that we have left the conditions of the "two millenniums" a long way behind, and that our outlook now has widened and broadened in a way which was undreamt of in the centuries that have gone. The doctor is now a recognized factor of importance in circumstances which have an economic value as well as an ethical quality in the view of the State. Hundreds of years ago the State had no message, no command for the doctors of the day; now it says to us, "Your functions are not to be limited merely to alleviating individual sickness and to curing individual ailments; you are, further, to be faithful, diligent, and active in preventing disease, and do all such lawful things as will by your knowledge and energy prevent and save the community from even the possibility of an attack of disease of any kind." This is a command which can have but one interpretation, and it is that the State recognizes that the profession of medicine is a necessity to its well-being. The truism, "A nation's health is a nation's wealth," may account in some degree for this attitude of recognition, but I do not think entirely. The questions of the numbers and health of a community are questions at the root of the existence of a State in almost as great a degree as the question of the State's ability to guard itself in war. We know from history that the army, the navy, and various other services have become necessary to what we might call the biological existence of the State, and now it is the turn of the profession of medicine to be measured and valued in the same way. And this measure will be an indication of the profession's usefulness for collective rather than for individual good. The one-time national question of defence in war is now the equally national one of defence from disease. It may be interesting to notice that some of the earliest inquiries and investigations which may have led to this attitude of the State in regard to disease in the community are to be found in inquiries into the health of the army.

It almost appears as if from questions affecting the fighting value of a soldier's health have been evolved the questions of the economic and ethical value of every unit of the nation. The early statistical reports upon the health of the army by Tulloch, Marshall, and Balfour directed attention to the importance of this matter essentially in its relation to the capacity or lack of capacity of soldiers for service. One associates as a pioneer in early investigations of this nature the name of Dr. Wm. Farr, who originated the method of accurately recording births and deaths. It is surprising how great movements may grow from very small beginnings, but of Farr it has been written that "we owe a nation's gratitude to him to whose sagacity the chief fruits of the inquiry are due." As time went on new observations and new discoveries were followed by legislation which sought to utilize for the common good the fruits of those discoveries, but gaps of time have existed between the two circumstances, and only some six or seven Prime Ministers have come and gone since the economic importance of health was first recognized by Ministers of the State. Apropos of the point to which I refer, it may be of interest to read the following paragraphs, which I take from Parkes's *Practical Hygiene*, published in 1887:

> Another action of the Government in our day was scarcely less important. It is impossible to overrate the value of the Government inquiry into the health of towns and of the country generally which was commenced forty years ago by Edwin Chadwick, Southwood Smith, Neil Arnott, Sutherland, Guy, Toynbee, and others, and has, in fact, been continued ever since by the official successors of these pioneers—the former medical officer to the Privy Council, Mr. Simon; the late Dr. Seaton, and the present medical officer of the Local Government Board, Dr. Buchanan. Consequent on this movement came the appointment of medical officers of health to the different towns and parishes. The reports published by many of these gentlemen have greatly advanced the subject, and have done much to diffuse a knowledge of hygiene among the people, and at the same time to extend and render precise our knowledge of the conditions of national health. When the effect of all these researches and measures develops itself, it will be seen that great wars and political earthquakes are really nothing in comparison with these silent social changes.

Written a good many years ago, these words addressed by a medical man to medical men appear now to have

been almost prophetic, and I think we may regard it as a source of justifiable pride to realize that the medical factor, the professional influence existent at the very commencement of these great changes, has continued to exist down to the present, and is still, let us hope, a factor fertile as ever for good. If the purpose of this address were solely historical, I could occupy your time in going through a list of statutes, from the Public Health Act, 1875, down to the Mental Deficiency Act, 1913, and furnishing you with proofs of the relationship—a relationship, in my view, of cause and effect—existing between scientific and legislative effort. However, that is not the purpose of this address, and we will pass on.

Now, in reviewing as medical men this great field of human achievement, and recognizing the complexity of influences which exist, we note that side by side with this "growth of achievement" there has appeared in our own immediate field this medico-political movement. Now, what are the uses of this movement? In my view they are twofold. One is a use, a beneficial use, to unity of the profession; the second is a use, a beneficial use, to the community. Let us look at the significance of these uses. In regard to the first, the chief significance lies in the fact that much of the legislation I am referring to so alters and changes the economic conditions of our profession that a combined self-preservative movement has become essential, in order to secure that adaptation to altered conditions which is essential to survival. The medico-political movement is thus essentially an adaptive movement.

It recognizes that the operation of many statutes results in the limitation and restriction of the sphere of work of the average general practitioner.

It recognizes that, in virtue of obligations which the State appears more and more willing and desirous to undertake with regard to the health of the people, this tendency to limit the scope of the general practitioner is more likely to increase than diminish in the future.

It realizes that workers in the industry of medical science acquire no patent or prescriptive rights in the results of their investigations or discoveries, but, on the contrary, that these are yielded up often without thought of reward or consideration for the common benefit. It perceives—may I say with contentment?—the readiness of the legislative and administrative authorities to utilize professional effort gratuitously rendered.

It recognizes all these conditions and their importance. It seeks to adjust the conflict which inevitably arises when individual interest clashes with common or collective interest, but its supreme importance, its greatest ethical significance, in my view, lies in its power to compel intramural observation of the principle that our individual professional benefit must at all times be subordinated to and be measured by our conceptions of loyalty and regard for our corporate professional benefit.

Now all these circumstances, all these complex interests, are recognized by our medico-political movement as manifesting not only a period of change and conflict, but also of progress; and if that progress is to continue along the line which it has travelled during the last half-century, we may find that new adits are being driven into our spheres of professional usefulness before we have fully realized the possibilities or the importance of our present period of transition. The advancement of scientific knowledge; the awakening consciousness of the public to the laws of health and disease; the cry of the people for better conditions of life; the willingness of the Legislature to undertake obligations in response to the cry; the power and enterprise of the State and its administrators to carry through and fulfil those obligations, are all seeds of a growth which, in their growing, are powerful to advance or to retard the interests and influence of our profession. The altered conditions, the altered relationships, the altered outlook—all have their meaning, but I think the circumstance of greatest meaning to us is that the profession of medicine is now recognized alike by State and community as having a corporate capacity, a corporate duty, a corporate relationship to the State. The conception that our sphere of effort has a purely individual aspect has disappeared, and we are now regarded as the keepers of the Public Health. This is a great development, and establishes an entirely new order of things.

The profession's acquiescence in this new order of things marks also its acceptance of new duties and responsibilities. We are bound both legally and morally to discharge those obligations which we undertake, and the manner and quality of our performance is pregnant with great results, not only to our profession but also to the community. We must see to it that our individual conduct in this matter is of that quality which gives with one hand strength to our profession and with the other value to the community. The individual practitioner and his actions have thus a double corporate relationship, and if our medico-political movement is to reach its best and fullest development, it must devote its efforts to increasing and strengthening those relationships. The test of much of what I am saying rests with time and the working of those social measures which I am considering; but I am desirous to-day of putting before you some facts relative to our duties under the National Insurance Act which I think will interest you and also illustrate the significance of the second beneficial use of our medico-political movement. You know that for the successful working of the sanatorium benefits of the National Insurance Act it is essential to notify to the authorities the existence of cases of tuberculosis which the doctor meets with in the discharge of his professional duties.

The first step absolutely necessary to the successful carrying out of the co-ordinated scheme which this Act has inaugurated for the stamping out of tuberculosis is that of notification. This has been made compulsory by Local Government Order, and thus our moral duty under the National Insurance Act to notify is made our legal duty by Departmental Order. Now I think that the county of Durham will compare favourably with any county in England in the matter of both spirit and method in the administration of social measures. By agreement, for example, the Durham County Council is only legally bound to provide 120 beds for the sanatorium treatment of tuberculosis in the county, but it is providing 400 beds. This administrative authority conceives its moral duty in this matter to be far greater and more generous than its legal duty, and can we as a profession contemplate an authority who thus estimates its duty to the community having an opportunity of accusing the medical profession, or a section of it, of stultifying and annulling to a considerable extent its efforts to stamp out tuberculosis? This opportunity does arise if we fail not in our moral but in our legal bounden duty to notify. I should say, generally speaking, that the discharge of duty by the profession in the county of Durham under their agreement with Insurance Committees is as good as, if not better than, any other county in England, but there is still room for a little improvement in this matter of notification at least. And let it be early notification, not notification within a short period of death, which naturally raises many critical and antagonistic feelings towards us. In one largely populated insurance area in this Branch there were 132 deaths in the year 1913–14 from phthisis. In the same period 103 notifications were made, but 43 were notified within a week of the death of the patients. The publication of figures like these cannot fail to create injurious criticism, and I will give you some figures for the first quarter of this year in regard to Durham County.

During the first quarter of this year in the administrative county of Durham, with a population of about 930,000 persons, there were 747 notifications of tuberculous disease, and included in those figures there are 7 cases which were received from eleven rural and urban sanitary districts representing a combined total population of 104,691 persons. The conditions of life throughout the county are practically uniform, and these figures are therefore capable of interpretation in the manner I propose to use them.

If 7 be the number which represents the true total of tuberculous cases from 104,691 persons, then, since this number is derived from about one-ninth of the population of the county, the figures for the whole population of the county should be approximately 63, but it was 747.

On the other hand, if we assume that 747 represent more nearly the true number of tuberculous cases for the whole population, then, proportionately, the figure 7 should be 83; or, in other words, the suspicion arises that 76 cases with tubercle bacilli have not been notified during those three months. Upon this estimate of non-notified cases the administrative authorities of the county of

Durham have, therefore, to contemplate a handicap to their efforts, in dealing with tuberculosis, to the extent of over 300 cases per annum. This provides an illustration of the important relationship of the doctor's individual action to the well-being of the community, but it also has an importance in its relationship to the profession itself, since it creates the impression that for the domiciliary treatment of tuberculosis the profession as a whole is vastly overpaid. Steps to reduce payment will naturally follow, and figures such as I put before you appear in the eyes of many as quite sufficient justification for the step. For example, if one-ninth of the total population of the county yields seven cases of tuberculosis the question easily follows: How much money are the doctors getting for treating those cases? And the answer is found by asking what sum of money is derived from the "sanatorium sixpences" of one-ninth of the insured population. Remembering the fact that some of the seven cases would receive institutional treatment, we have the following result—namely, that the domiciliary treatment of the non-institutional cases in a total of seven costs for three months a sum of £225. Figures like those certainly suggest error somewhere, and this is too readily ascribed to our profession. Apart, however, from the effect of failure to notify upon the efforts of a county council to stamp out tuberculosis or upon the remuneration of doctors for its treatment, it also disturbs the equities of the whole situation in a manner which many of us may not very easily realize.

1. It throws the cost of drugs, etc., which are a charge on the sanatorium fund, upon the ordinary drug fund.
2. It results in lessening by so much the amount of drug suspense fund which may reach the doctors.
3. It prevents the Insurance Committees from receiving early notice of tuberculosis.
4. It penalizes the approved societies by keeping from the patient those sanatorium benefits which reduce the period of charge on their sick funds.
5. It is unfair to the patient, since it conceals from him the true nature of his condition.
6. It tends to the persistence and further propagation of the disease in the immediate surroundings of the patient.
7. It deprives the community of the economic benefit or gain which accrues from the early resumption of work of the patient.
8. It forms the basis of incorrect comparisons as to the relative cost of domiciliary and institutional treatment.

The last-mentioned consequence of failure to notify is of some importance because comparisons go to show that, per patient, the cost of domiciliary treatment is approximately equal to the cost of institutional treatment, and with a fact like this before them, county councils are prone to prefer institutional treatment and to ignore the utility of domiciliary treatment. The direction in which this preference leads authorities is one, in my opinion, which ends in the practical exclusion of the general practitioner from the treatment of tuberculosis, and in the danger of the whole question involved in the treatment and prevention of tuberculosis being relegated to the officers of the health departments of local authorities. The complete control of this matter of great national importance should not be left to the personnel of official health departments, and the general practitioner should, in my opinion, jealously guard his position under the National Insurance Act, for it is in danger of being taken from him. This danger does not arise so much from probable statutory changes, but from the mere force of existing circumstances and from the general direction of events over which the practitioner certainly has some little control. Force of circumstances is making the sanatorium part of the National Insurance Act more and more a public health measure. County councils and councils of county boroughs are generally taking up their burdens under the Act, and their already established public health departments are naturally set to work. In many cases this work is not confined to dealing with tuberculous insured persons, but also extends to non-insured persons, and it follows that the logical finish to this development will be that we will reach a time when practically the whole tuberculous population of this country will be compelled to look for treatment to medical officers of health departments. I regret to contemplate even the possibility of this, if for no other reason than it restricts and limits the sphere of influence of the general practitioner, and with this restriction there would naturally follow a discontinuance of the "sanatorium sixpence."

The tests which are at present being applied to our profession are intended to determine our shortcomings not only under the provisions for sanatorium but also for sickness benefit. We are threatened on the one side with exclusion from the tuberculosis scheme and on the other we are to be given, it is said, a choice between what is called a "State service"—whatever that may mean—and a system of inspector or refereeship, which you may describe as you please. We hear much of the financial ruin of approved societies and of its alleged cause; we hear of the hardship of sick people to obtain this or that under the Act; we hear on all hands of some difficulty or error, and with singular avidity the public find a cause for it all in the doctor. Some of us may have insufficiently realized how important a factor the doctor is, and in how many directions this importance makes itself felt, but I have no doubt that by the application of that one and only test of error or truth—namely, time—the doctor will prove worthy of his importance, and be the principal factor in establishing the position, by the efficacy of its working, of the National Insurance Act as one of the greatest social measures of any time. I do not think that we ought to contemplate only the effects and results, however beneficial they may appear to be, which accrue or may accrue from the mere observance of our legal obligations. The bounden duty strictly and legally fulfilled gives no doubt a discharge of responsibility at which many of us may prefer to stop, but I think that in view of the new relations which now prevail between the profession and the public, it is the duty of some at least of those of us who have the opportunity, to display a sense of responsibility and duty far outside this restricted professional sphere. The corporate existence of our profession seems to call for this, and it should be the purpose of our medico-political movement to encourage and foster it. The antecedent importance of our profession as an inspiring agency for statesmen is in my view equalled if not excelled by the important part which medical men can play in the administration of these social measures, and in strengthening the spirit of altruism which those legislative efforts at social well-being reveal.

For example—and referring again to circumstances around the tuberculosis scheme—in the county of Durham there are 19 district committees under the Act, and there are between 60 and 70 practitioners members of these committees. Associated with the work of those district committees are four assistant tuberculosis medical officers. These district committees are given the opportunity of doing excellent work, and I am convinced that the merit of their work will be more and more increased by the share and interest which the medical members take in it. County councils, county Insurance Committees, councils of local authorities, boards of guardians, etc., are all in my view unilateral, lop-sided if you like, bodies without their quota of medical members, and I hope the time is not far off when one of the duties of our medico-political organism may be to secure and encourage a medico-professional membership of every one of those bodies. I would even go so far as to suggest the advisability of a medico-political fund to help, when required, in payment of election expenses or out-of-pocket expenses of members who adhered to the constitution which would naturally govern the movement and, of course, the fund for payment. I suggest this as much in the interests of the community as in those of the profession. I think that to leave politics to the lawyer politician and administration to the average lay person, worthy persons though they may be, is something akin to entrusting your best friend in sickness to an unqualified person.

The great problems which are unfolding themselves and which are ripe for solution are of such a nature and of so great a national importance that I think nothing but lasting credit will accrue to the profession if it shares in an ever-increasing degree in the work of solution. A new atmosphere of public opinion in regard to the profession can be created, and conversely the profession will come into touch with problems which have a wider meaning than pulse or temperature.

There are other points upon which I should like to say something, and which illustrate the importance of the relationship which has now been established between public opinion, public needs, and our professional and

extra-professional activities, but this address is already sufficiently long: Questions of certification; of keeping of records; of reports; of associate action with approved societies in regard to suspected malingering; of co-ordination of professional work; of the establishing of clinical centres and small observation hospitals; of the encouragement of scientific work and laboratory investigations, and, above all, of the establishment of county schemes of nursing of the sick upon a national basis. These are all questions of two-edged import, and in those bodies which possess the power to unduly sharpen or to blunt the edges great good may result from the presence among the councillors of members of our profession whom we may reasonably regard as at least holding a watching brief in the interests of the profession.

From activity within the sphere of our own profession to an activity within a sphere which engages in the solution of questions of national and local importance appears to me to be a normal evolutionary step, and it is one which members of our profession should be more and more prepared to undertake. The inspiration of the scientist, together with the legislative effort of the statesman, but map the road the nation travels. It is for us to aid in the construction of the road; it is for us to test and strengthen its "macadam," and it is for us to make it easy of gradient and smooth of path for those who travel it. And in all this, not "harnessed like yoked oxen to some difficult task" (Bergson), but cheerfully giving our best efforts in the interests of humanity in the true spirit of Terence's words—"Homo sum, humani nihil a me alienum puto" (Nothing which relates to humanity is alien to me).

REFERENCE.
[1] Osler, *Man's Redemption of Man*, p. 15.

EAST AFRICA AND UGANDA BRANCH.

OBSTETRIC MEDICINE IN UGANDA.

By A. R. COOK, M.D.,
President of the Branch; Senior Physician to the Mengo Hospital, Uganda.

GENTLEMEN,—Before commencing this paper I must thank you heartily for the honour you have bestowed upon me in electing me as the first President of the newly constituted Branch of our great parent Association, an honour which is all the more welcome because I know it is for no personal reason, but rather an expression of your kindly interest in the work of this hospital which my colleagues and myself delight to serve. And let me add that the very inauguration of this the latest Branch of the British Medical Association is in itself a sign of the times. When Speke and Stanley first made known to an astonished world the great lake regions of Central Africa, at a point of time so little removed from our own day that it is within the memory of middle-aged men, who could have foreseen that this little kingdom of Uganda would become one of the brightest and most valuable assets of the British Crown in the whole of the vast district known as Central Africa? Politically, commercially, and from a missionary standpoint, not to say geographically also, it may be looked upon as the hub of the continent of Africa. What so fitting, then, as that our premier Medical Association should have a Branch in this remote but important spot? Placed as it is upon the intersection of the great trunk roads from north to south and east to west, it must inevitably have an important say in all matters of continental hygiene and epidemiology. No greater tribute could be paid to the present medical advisers of the Government in Uganda than the extraordinarily successful way in which the scourge of sleeping sickness, which burst like some devouring flood upon us a few years ago, has been all but abolished, or at any rate so lessened as to have lost its menace, and this entirely through the wise administrative measures suggested by the principal medical officer of this protectorate and his colleagues, so many of whom we rejoice to see with us to-day.

Considering its small size, Uganda has bulked largely in the eyes of the medical public. I need not remind you that the cause of sleeping sickness was discovered here, and Colonel Sir David Bruce added fresh laurels to his name by the discovery at Entebbe of its association with *Glossina palpalis*. We have had commission after commission sent out by the Royal Society and the Colonial Office to elucidate the nature of this, and to grapple with the problems of how to check the ravages of syphilis. Dr. Wiggins, the Acting Principal Medical Officer, and Captain Keane, R.A.M.C., have drafted, and succeeded in getting passed into law, a set of rules for notification and control of this fell disease; we wish Captain Keane and his colleagues every success during the coming year in their venereal hospital at Mulago. Again, we remember how the cause of African tick fever was independently discovered in Uganda; and so I might go on. We have had so much recently, however, on diseases involving microscopical research, bacteriology, and chemotropism, that I have selected a simple clinical subject for my paper—namely, obstetrical practice in Uganda. It deals with problems with which every one of us may be confronted suddenly and in which proper treatment is of incalculable importance.

The Church Missionary Society, under whose auspices this hospital is run, early perceived the importance of medical work as an integral part of its mission, and an Edinburgh graduate, Dr. John Smith, sailed as a member of the first party in 1876. He, alas! perished of dysentery at the south end of the lake on the very threshold of his work. The next doctor was another Scotsman, Dr. Felkin, who joined the society for a year in 1879. The party to which he belonged was assisted in its passage to this then little known country by General Gordon, who was in charge at Khartoum. He is joint author of a most illuminating book on Uganda, though it has long been out of print. Dr. Gaskoin Wright came in 1891, till invalided home from blackwater fever in 1893. Dr. Rattray came for a brief visit in 1895, but it was not till the following year that arrangements could be made for definite hospital work to be started. In that year my wife and myself arrived, and the advent of my brother in 1899 ensured the continuity of the work. From the commencement we have kept careful notes and statistics of all cases, and it is from these that the following paper has been compiled.

The first hospital was opened in May, 1897, and, though we soon gained the confidence of the people, largely, no doubt, owing to the labours of our predecessors, yet it was long before they brought their midwifery cases to us. This was due partly to the act of confinement being so mixed up with their religious customs that it was looked upon as more requiring a witch doctor than a medical practitioner. For this reason we had to attend all our early cases at their own homes, either in flea-ridden rooms or—a very much preferable place—in the banana plantations beneath the stars. The early cases were therefore few and far between, and usually of such a nature that surgery could not be expected to do much for them—for example, cases of labour obstructed for several days, etc. My first case was one in which there had been a stillborn child two days before; the woman was walking about with retained placenta, and the vagina plugged with a huge piece of banana stem. The third was a case of contracted pelvis; the woman had been two days in labour, and had previously borne twelve children, not one of whom had survived birth. Forceps delivered a living child, but it only survived a short time; three years later the woman became pregnant again, and, taking her into the hospital, we succeeded in delivering a living child. The numbers for the first eight years show how gradual was the process of allaying their fears and removing their ignorance. In these years we saw respectively 6, 8, 37, 44, 94, 107, 117. It was not till 1906 that we topped the 200 line, and we have not yet reached 300 in one year.

Women confined at home were usually delivered in a kneeling position, the child being received in a bark-cloth. The cord was cut with a sharp strip of reed, and no ligature was placed round it. The long distances women in labour would travel in later years to reach the hospital to be delivered there is almost incredible. One such case residing twenty miles away when labour pains set in started off cheerfully for the hospital, reaching it in triumph five minutes before delivery. Very often, owing to the stimulus produced by walking, the confinement takes place *en route*, and the woman steps aside into the nearest banana plantation, and after all is over wends her way on to the hospital, either carrying her newborn infant herself or getting some compassionate friend to do so.

Our first lying-in ward was a very primitive structure, and at the time of the Nubian rebellion, when the wards

were overrun with wounded people, the same chamber had to do duty as an operating room, an obstetric ward, and a *post-mortem* room. When I add that the walls were of reed and the windows shutterless, you will understand that the cases did almost invariably well. At that time the railway to Uganda had made only slight progress, all goods had to be carried up on men's heads, and the journey from the coast was a three months' march, instead of a three days' pleasure trip as it is now by rail and steamer. Cement floors and corrugated iron roofs were not to be thought of, nor iron bedsteads. It was not until the rails reached the east side of the lake in 1901, and steamers were placed upon it, that such luxuries could be obtained.

This paper is based upon the statistics of 2,232 cases, of which only 80 were European. The first point that emerged was unexpected. *A priori* it was imagined that the average native confinement would turn out to be easy. The head of a Bantu infant was known to be small, the women are well formed, and many of them graceful in carriage. Experience soon showed that often labour was very far from easy, and careful pelvic measurements showed that this was due to contracted pelves. Rickets is practically unknown in the country, so that we are driven to look farther afield for the cause. I believe myself it is due to the almost universal custom of making even little children carry heavy pitchers of water or bundles of plantains on their heads. That component of the weight transmitted through the vertebral column, which acts parallel to the pelvic brim, would tend to force in the sacrum between the two iliac bones, and thus to diminish the antero-posterior diameter of the pelvis. Perhaps correlated with this is an unusual number of unreduced occipito-posterior presentations. I may note in passing that the proportion of pelvic contractions found in the Baganda is entirely borne out by negro statistics in America. Thus Whitridge Williams, in his book on obstetrics, says (p. 16):

> My own experience in Baltimore has shown that contracted pelves occur several times more frequently among black than white women (21 per cent. to 7 per cent.).

And again (p. 583):

> One reason for the marked frequency of contracted pelves in Baltimore is probably due to the fact that more than half our patients are coloured, 941 in the entire series being white and 1182, black women. In the former we found 6.9 and in the latter 18.82 per cent. of contracted pelves.

In presenting the following statistics I am only giving the essence of thousands of observations, for except to an enthusiast figures are apt to be tedious. Against each percentage I have put, as far as possible, the corresponding English figures.

Presentations.

Variety.	No. of Cases Noted.	Percentage of Total Cases.	English Figures.
L.O.A.	676	44 of V.	60.9 % of V.
R.O.A.	671	44 of V.	22.3 % of V.
R.O.P.	110	7.1 of V.	14.2 % of V.
L.O.P.	42	2.7 of V.	2.6 % of V.
Unclassified V.	43	—	—
		Percentage of Total Presentations.	Percentage of Total Presentations.
Total Vertex ...	1542	93.2	96.9
Breech	81	4.3	3.33
Brow	3	0.4	0.06
Face	6	0.8	0.4
Shoulder ...	22	1.3	0.28

The chief point to notice here is that the L.O.A. and R.O.A. positions are approximately equal, and that in a large number of cases the percentage of V. to total presentations, and of L.O.P. positions is remarkably close to the English figures. The few unclassified V. cases are those attended by the native nurses in training before one of us could get to the case. It is, I think, a matter of pardonable pride in the training of the very raw native material that comes to us for training that this item has largely been eliminated in the last few years. Some native girls show a remarkable aptitude for midwifery work. Footlings and arm are included under breech and shoulder respectively. The larger percentage of these is no doubt connected with the increased proportion of contracted pelves.

Twins have occurred once in every forty pregnancies, and this is interesting, as multiple pregnancy appears to be commonest among the most fertile races. According to Galabin, in Ireland the proportion is about 1 in 60; in England only about 1 in 110. The highest rate was met with in Dublin, 1 in 57; the lowest in Naples, 1 in 158. We have only had one case of triplets, and one monster of the anencephalic variety.

Miscarriages and abortions form only a small proportion of our in-patients, but that is only because they come to us either with retained placenta, or when a woman is very anxious to have a child and symptoms of miscarriage have already set in. Owing to the almost universal infection of syphilis miscarriages among out-patients are appallingly frequent.

Sex of Infant.—Male, 51.5 per cent.; female, 48.5 per cent. This, according to the *Encyclopaedia Britannica* (article, Population), is exactly what occurs in all Western nations, the proportion being rectified in later years, when, owing to the higher mortality in boys than girls, the female sex comes to predominate.

With regard to *parity* the returns are not so numerous as one could wish, for it has not always been noted, but the proportions are as follows: Primipara 33 per cent., 2-para 20.6 per cent., 3-para 15.5 per cent., 4-para 10.3 per cent., 5-para 7.6 per cent., 6-para 5.5 per cent.. 7-para 2.8 per cent., 8-para 1.8 per cent., 9-para 0.9 per cent. We have noted eight 10-para, seven 11-para, three 12-para, two 13-para, one 16-para, and one 17-para. These figures do not represent anything like the true fertility of the Baganda, for the obvious reason that the more children a woman bears safely the less likely she would be to come to the hospital for treatment.

Obstetric Operations.

Forceps	329 times (14.5 %)
Perineorrhaphy	205 (9 %)
Digital removal of retained placenta... (A significant fact when one remembers the prevalence of syphilis.)	88 (4 %)
Curettage	19 cases
Internal version	26 ,,
Craniotomy	11 ,,
Cephalotripsy	5 ,,
Decapitation...	4 ,,
Caesarean section and Porro... ...	6 ,,
Embryotomy	1 case

Measurements of Fetal Skull and of Maternal Pelvis.

(The average of a large number of observations are given; as before, the English measurements follow for comparison.)

		English.
Fetal skull:		
Suboccipito-bregmatic	3.55 in. ...	3.8
Occipito-frontal	4.5 ,, ...	4.6
Maximum vertico-mental ...	5.3 ,, ...	5.0
Biparietal	3.5 ,, ...	3.7
Bitemporal	2.8 ,, ...	3.4
Pelvic measurements:		
Anterior interspinous	8.66 in. ...	10.0
Maximum intercristal	9.7 ,, ...	10.75
External conjugate	7.0 ,, ...	7.5
Internal conjugate	3.56 ,, ...	4.25
Diagonal conjugate	4.4 ,, ...	4.9

The definition of contracted pelvis is a somewhat disputed point, but most authorities accept Litzmann's classification, who considered as contracted all pelves having a conjugata vera of 10 cm. (4 in.) or 9.5 cm., or less, according as they were generally contracted or flat respectively. The matter is not quite so simple as this, however, for the varying size of the head in different races must be considered. A glance at the average measurements of the fetal skull given in the table will show that there is ample room in the Muganda pelvis for a head to pass in a well-flexed position, whereas it would suggest that in an unreduced occipito-posterior position there might be grave difficulty, and this is what experience has actually shown.

The external pelvic measurements are small, and here it is again interesting to quote Williams:

> In coloured women, had we estimated the frequency of contracted pelves from external measurements alone, our would have shown a frequency of about 75 per cent., whereas

internal pelvimetry showed that in reality it was only 18.8 per cent.

But after all, from a practical point of view, we do not need academic discussions on minutiæ of measurements, and looking at our figures we find that forceps had to be used in 14.5 per cent. of all cases. This does not take into account, of course, the smaller degrees of contraction the natural forces were able to overcome.

Average length of child ...	...	18½ in. (English 20.5 in.)
Average weight of child...	...	6.8 lb. (English 7 lb.)

Complications Affecting Pregnancy.

The one maternal disease the influence of which dwarfs all others in this respect is syphilis. Turning to our out-patient register, we find that no less than 43 per cent. admit the existence of this disease in one or both parents, and those figures may be a little under the truth. Owing to the almost universal prevalence of the disease in Uganda, many of these are cases of syphilis insontium. The result is an enormous number of miscarriages, a still more appalling morbidity both of the mother and the new-born infant, and a very serious check to the natural increase of the population. I will quote from my brother's report of the hospital for last year. He says:

It has been calculated that 70 per cent. of the children in Uganda either die from premature birth or are stillborn, or die in the first week after birth. In England the corresponding infant mortality is 14 per cent.—that is, in Uganda nearly 5 children die to 1 that survives; in England 6 children survive to 1 that dies. Out of 30,000 successive cases attending Mengo Dispensary and 10,000 attending in Toro, the percentage of sufferers from venereal diseases, was the same in each country, namely, 22 per cent.

No facts could more clearly show the far-reaching influence for good of the recent legislation initiated by the medical advisers of the Government.

Ankylostomiasis is a most serious complication when the sufferer only presents herself after labour has set in. Nearly all the cases die, whereas if they come during pregnancy there is a fair chance of saving them.

Tick fever generally produces miscarriage owing to the high temperature obtaining during the attacks, but we have had several deaths from this complication when it happened to occur during delivery. Another serious danger is the administration of native drugs. My brother, Dr. J. H. Cook, has taken great interest in these. To quote again from his report, he says:

Another great evil in the country is the administration of potent native drugs to parturient women. Not unnaturally the women of the country, in their hour of need, seek their own native remedies, drugs which accelerate labour. But they do not realize that such drugs are very dangerous. They contain potent alkaloids, and the natives take them in unmeasured doses, and take them at the wrong time. Their friends administer them, and they often clamour for them themselves. Many a case of easy labour has been rendered difficult by these drugs, and not a few, alas! have terminated fatally for the child, or for the mother, or both, simply owing to the taking of these special native drugs. In the space of two or three months in Mengo Hospital last year five mothers lost their lives in this way. Again and again has an autopsy revealed the same sad fact—killed by their own drugs, administered by their relatives often in enormous doses. . . . The difficulty is that these drugs are not given as poisons with felonious intent, but are often demanded by the patient, or administered by her nearest or dearest relatives as the correct and orthodox thing to do. . . . The matter was reported to the Government, and most courteously and promptly taken up by the Principal Medical Officer. Specimens of these native drugs, collected from native chiefs by Dr. J. H. Cook, have been forwarded to Entebbe and sent by the Government to the Imperial Institute for analysis, and proved to contain potent alkaloids, though further physiological tests are still in progress. Lectures have been delivered before the native parliaments in Mengo and Toro, illustrated by black-board diagrams, books, microscopic specimens, and illustrative cases, to try and awaken the native chiefs, at all events, to the seriousness of the evil.

Ruptured uterus from obstructed labour outside the hospital is met with from time to time, but unless this grave complication has only just been sustained, the prognosis is very gloomy.

English Confinements.

During the early years of our stay here, Uganda was no place for a prospective English mother. The country was too unsettled, the comforts obtainable too few. The first English confinement was in 1901, and turned out to be a breech with extended legs. The infant had to be extracted with a blunt hook, but is now a cheerful young schoolboy. We have attended only some eighty cases, but they have included all the ordinary complications. The only peculiarity that we have noticed as compared with labour in a temperate climate is that the commencement of the labour by premature rupture of the membranes is very common here. Much has been said upon the supposed danger of giving quinine during pregnancy. Our favourite dose of this drug in pregnancy where malaria is rife is 5 grains daily. When fever is actually present as a complication, 5 grains of quinine hydrobromate twice a day by the mouth, or in more serious cases hypodermically, are quite safe if guarded by the simultaneous administration of suitable doses of potassium bromide and opium. Time will unfortunately not permit me to deal with individual cases, or I could tell of the interest excited in the native mind by our first Cæsarean section, fortunately a successful one, both mother and child surviving. I could speak, too, of the interest of incubating premature infants in the Hearson's incubator intended only for bacteria; we have reared them when only weighing 2 lb., and one child, at any rate, who was apparently only six months. The result to the country of so many women passing through the maternity wards yearly has been excellent from an educational point of view, as they all receive simple instruction as to how to manage their children just at a time when so many hapless children succumb for want of a little simple knowledge.

I will conclude with a very warm expression of gratitude to our energetic secretary, Dr. Strathairn. It has long been a commonplace in Kampala that if anything needs to be done well it must be entrusted to him, and I tremble to think what his engagements are in this festive week, yet he has cheerfully undertaken all that is making this first meeting of ours as a corporate body a success. As a profession "united we stand, divided we fall," and the numbers attending this meeting augur well for future ones.

A PLEA FOR SURGICAL WORK IN THE COTTAGE BY THE COUNTRY PRACTITIONER.

BY J. EUSTACE WEBB, M.B., C.M.ABERD.,
LOOE, CORNWALL.

TWENTY years' experience in general practice, in a country seaside town and agricultural district, very much isolated from a big centre, has, with an ever-increasing force, impressed me with the need of encouraging the man who takes up general practice in the country to do his own surgical work on the spot, no matter how lowly the dwelling from which the appeal comes. If the custom of the country practitioner is otherwise, the sensitive and conscientious worker must experience the bitterest disappointment when he recollects some lost opportunity to relieve human suffering and to prolong human life. To-day this appeal seems to be the more necessary, for the experience of the working of the National Insurance Act has shown that no pecuniary incentive is given to a man to do the higher class work connected with our healing art. We want to infuse into men the spirit of unshrinking self-denying work, and I ask what higher destiny can be allotted to any of us than the destiny which imposes on us the necessity of well-balanced intellectual and physical work as found in the life of a good general practitioner?

To act continuously on the dictates of reason with a strong unbending will is true heroism, and impediments are made opportunities by the man of resolute will; not only are the intellectual faculties rendered brighter and more keen by every struggle, but every obstacle overcome signalizes the fresh acquirement of power. The class of surgery I am pleading for, as the right to be commanded by the working classes, brooks no delay. Never for one moment of the workaday life must the practitioner lose sight of the intrinsic value of each human being—man, woman, or child—who applies for his assistance. Success in life as a country practitioner depends upon patient, uniform, and unflinching effort to serve those entrusted to his care, and medicine and surgery has never been really advanced by any other means. His aim is to prolong life and avert the tendency to premature death, and the

dignity of his art is commensurate with the dignity of the being who is the object of his care. There are essentials necessary to carry out the work beyond a high sense of duty and the conviction; and these are nowadays to be obtained in almost every district, and, as the State has taken over the responsibility of the treatment of such a large proportion of the population, it should be its care to see that every area is able to command them. They are (1) the reciprocal co-operation of a second medical man, and (2) the assistance of a skilful nurse. The able and skilful services of Dr. Alfred Adams and Miss Clarke, Queen's nurse, have in this district been ever ready to command in these surgical emergencies.

It is not within the scope of this theme to detail the surgical procedure to be followed; it is to try to establish confidence in those who may find themselves face to face with surgical emergencies in country practice that the cases and experiences here given of samples of work done in this district in the last few years are now related. It is not wished to give an impression that no disappointments or failures have been encountered. Those cases that are indelibly impressed on the mind are the few that, owing to inability to make an early diagnosis, have been subjected to delay—a fatal error.

Goitre.

A summons came in the middle of the night to see a middle-aged woman who had returned that day from a large provincial hospital as nothing could be done for her. She was reported to be dying. She was found near to death's door from asphyxiation due to the weight of a huge goitre pressing on the trachea. A free incision was made in the middle line, the constricting band divided. The swelling could then be felt to be elastic. A free incision was made into each side of swelling; the swellings emptied. An uninterrupted recovery resulted. She has since joined her children in Canada, where she has resided for some years.

Intussusception.

One evening, in the month of December, a message came to see a baby living about five miles away in a cottage attached to a farmhouse. The child, a female, 3 months old, was suffering from symptoms of intussusception. A return journey was made and the necessary assistance procured. The driver of the hired conveyance lost his way in a snowstorm, which resulted in the operator falling into a ditch. The child was operated upon in a kitchen of the poorest description by candle light and was left to the mother's care. The case made an uninterrupted recovery, and the child has grown into a strong, healthy girl.

Strangulated Hernia.

In the middle of the night, in the depth of winter, a message came through the coastguard to visit an old patient, a female of 80 years of age, suffering from a strangulated inguinal hernia, and living in a neighbouring seaport village about five miles away. She lived in a two-roomed house. The room in which she was operated on was 10 ft. by 12 ft. by 9 ft., and occupied by three adults; she made an uninterrupted recovery, and four years afterwards is in good health.

One midsummer day an old parish male pensioner was seen. He was 77 years of age, and had been in feeble health for some years. He was found with a strangulated inguinal hernia and was vomiting. He had lived for years in a single room, and his bedding and surroundings were of the poorest description. He was immediately operated upon and made a perfect recovery, and I saw him the other day, some three years after, crawling along the street past my house in the bitterest weather.

Intestinal Obstruction.

One afternoon in September a telegraphic message came to see a woman suffering from intestinal obstruction. The woman, aged 42 years, lives in an overcrowded two-roomed cottage in the same village as the above case; the bedroom in which the operation was performed for herniated small bowel through omentum, was very dirty and infested with flies. She made an uneventful recovery, and has been at work ever since.

Gall Stone.

One October evening a message came to see a fisherman 62 years of age. He was found suffering from profound jaundice, with intense pain and incessant vomiting. After some hours of anxious watching, as no improvement took place, he was operated upon. The gall bladder was very small and was difficult to find. A very small calculus, about the size of a wax vesta head, was found. The patient made an uninterrupted recovery, and has remained well for some two years.

Suppuration of Gall Bladder.

A telegraphic message was sent late one evening to visit a woman living seven miles away. The message came as a surprise, for rumour had reached us that she had obtained entrance into a large provincial hospital. On this occasion she was found in a very exhausted condition. She had taken fright in the hospital and run away, and travelled some twenty odd miles by foot and cart to her home. She was suffering very severe pain in the right side of the abdomen, over a hard tumour. Some five years previously she had been operated upon for an acute abdomen, when an abscess was found in the right iliac region and drained, and from which a permanent fistula had resulted. She lived in a two-roomed cottage, the bedroom being nothing more than a comfortless attic without a fireplace, with the rickety stairs leading thereto opening close to the bed. She was operated upon and a gall stone about the size of a walnut removed. She made an uneventful recovery.

Tracheotomy.

One winter's night, at 2 a.m., a call came to see a boy, aged 3 years. He was found suffering from diphtheria, with laryngeal obstruction—breathing with great difficulty and cyanosed. He was operated on by candle light, the operator administering the anaesthetic, the services of the district nurse alone being obtainable. He made a good recovery.

Amputation of the Thigh.

Late one evening a message came to see a lad who, it was reported, had met with an accident in a quarry. He lived seven and a half miles away in a tiny cottage on the moors. He was found with a crushed and torn left lower leg, the knee-joint a pulp, and the bones pulverized and in places protruding through the skin. The limb was there and then amputated above the knee by candle light, and the assistance of the groom. The boy made a very good recovery, and is now earning his living as a tailor.

Appendicitis.

When returning home late one evening from a country insurance meeting, a request came to see a fisherman, who was known to have had a history of appendix inflammation. It was now evident that the patient was very ill with toxaemic poisoning and peritonitis. He was immediately operated upon. A foul abscess was opened in the right iliac fossa. The case made a slow recovery; the discharge continued for a long time, but the wound eventually healed. When he was considered to be about well he again developed signs of acute appendicitis. He was immediately operated upon, and a very large and swollen appendix removed. A further operation had to be done some six weeks later, as the wound did not heal. He eventually made a good recovery, and has been at work for some months.

Ectopic Gestation.

While on a round one morning a note was delivered requesting me to see a married woman for whom "something must be done immediately." An extrauterine fetation was thought to be the probable cause of the serious condition in which the patient was found, in answer to an emergency call to Dr. Adams. An immediate operation revealed an abdomen filled with blood, and a fetus (about six weeks old) in its membranes developing in the left Fallopian tube, close to the fimbriated extremity, and from which the haemorrhage was proceeding. When placed back in bed life seemed to be all but extinct, but she made a rapid and uneventful recovery. The house was a tiny two-roomed cottage, and poor in every way.

THE PLACE OF X RAYS IN THE TREATMENT OF CANCER.*

By FRANK FOWLER, M.D.,

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THE results of *x*-ray treatment, up to the last year or two, have been impaired by the mistaken notion of the physicists that a cell is only affected by a ray which it is able to absorb, and that the more penetrating ray, which passes through it, had no effect on the cell. The fallacy of this theory was demonstrated by the radium therapists, who showed that the gamma rays of radium, which are far more penetrating than any *x* rays yet produced, have very marked effect on any cancer cells which they are able to reach in sufficient quantity; in fact, the results of treatment by radium of suitable cases are better than those produced by *x*-ray treatment, and it is now believed that this superiority is due to the greater penetrating power of the gamma ray.

Radiologists have consequently tried the effect of using *x* rays from a tube as hard as possible, in order to produce more penetrating rays, cutting off the softer rays by means of suitable filters; the results are proving far more satisfactory than when medium hard rays were used.

The reason why *x* rays have maintained their place in the treatment of cancer is not merely on account of the difficulty of obtaining sufficient radium; but they have certain advantages of their own—chiefly the possibility of giving a fairly uniform dose over considerable area and depth, whereas the radiation from a tube of radium is only effective within comparatively short distances.

* Read at the Southampton Medical Society.

The question whether *x* rays or radium should be preferred in the treatment of a case of cancer may be decided, broadly, on the size of the area which it is necessary to treat and its accessibility to either agent. Thus, in carcinoma of the mouth, œsophagus, rectum, or cervix, radium can be applied directly to the growth, and should be preferred for the treatment of the primary growth, although *x* rays may be necessary to supplement the radium in the treatment of the lymphatics draining the part.

On the other hand, if the primary tumour is large—for instance, scirrhus of the breast as large as an orange—it would not be possible to treat it homogeneously by radium; even if the tube be inserted into the growth, the part immediately surrounding the tube gets an overdose and will slough, while the periphery does not get enough radiation to arrest growth; such a tumour may be *x* rayed from three or four different directions, so that all parts, including the deep, receive an effective dose, and the tumour does, in fact, frequently diminish in size.

I do not recommend *x*-ray treatment of any operable primary tumour, with the possible exception of an atrophic scirrhus of the breast which has been present for ten years or upwards; in all other cases the patient should have the benefit of the proved advantages of surgery.

The effect of radiation on the cancer cells is not only direct; an effect is produced by the reaction of the body, consequently it is useless to expect improvement in a patient who is already cachectic. We are familiar with the theory of immunity to infectious diseases, but we are less apt to recognize that the different degrees of malignancy of tumours, histologically identical, are due to the varying resistance of each individual.

The treatment of cancer cells, whether in a primary or secondary growth, or in lymphatic glands, produces an increase in the resistance of the body to cancer, but it acts by multiplication and not by addition, and cannot have any effect in cases of zero resistance.

The rays affect certain tissues and cells more than others, lymphoid tissue and the endothelium of blood vessels are particularly susceptible to it, and all cells that are undergoing rapid reproduction are more affected than other cells where reproduction is normal. A rapidly growing carcinoma, rich in blood vessels, and spreading by the lymphatics is thus attacked in three ways: (1) The rate of reproduction of epithelial cells is checked; (2) the endothelium of the blood vessels proliferates until the lumen is almost obliterated; and (3) the channels for metastasis are blocked.

The result of *x*-ray treatment of enlarged glands is very satisfactory; if commenced before they are larger than hazel nuts they almost invariably disappear, where the general condition of the patient is good. In a case I recently began to treat, the whole side of the neck was infiltrated and many glands were palpable. I do not expect to get complete resolution, but only to retard the growth and prevent fungation of the mass, and to give considerable relief to pain. The patient tells me that she has had no morphine since commencing the treatment. She had a scirrhus of the breast removed in India, and has had a secondary operation for recurrence in the glands of the neck; it is significant that she received prophylactic *x*-ray treatment to the breast area alone.

I believe the operation for secondarily infected glands in the neck after removal of the breast is very seldom satisfactory, and I consider that *x*-ray treatment offers a better chance to the patient; indeed, the whole question of surgery of the cervical glands needs to be revised. The results of the treatment of glands, not only malignant disease but also in tubercle and Hodgkin's disease, seem to be undoubtedly better than excision. I seldom see tuberculous glands before they have been operated on, and if the recurrence will disappear—as it generally does—it seems reasonable to suppose that the patient might have been spared the disfigurement that excision produces.

Secondary cutaneous nodules often disappear after *x*-ray treatment. I have an impression that these are becoming more rare.

Prophylaxis.

When the effect of radiation on macroscopic tumours became recognized, the idea naturally suggested itself that it would be better to attack the cells while the mass was still microscopic, or to treat the area purely for prophylaxis.

During the last four or five years we have been making the experiment, at Bournemouth, on as large a scale as possible; we treat every case of cancer of the breast, lip, or tongue, that is operated on at the hospital, and endeavour to get the patient to continue attendance for two years—the amount of work is considerable, but we have shown that it can be done, and we believe that a few more years' experience will prove that it ought to be done in every hospital. From the summary of the work of the *x*-ray department of St. Thomas's Hospital, recently published,[1] we gather that we have treated twice as many patients in Bournemouth at our 100-bed hospital as have been treated in this great London hospital. I am an old St. Thomas's student, and I know that the work in the *x*-ray department is admirably done, but evidently the surgeons do not send their cases. We at Bournemouth owe a great deal to our surgeons for their co-operation, and to our Hospital Committee for their acquiescence in the expense the experiment involves.

Every case is treated not only at the site of the original growth, but all the lymphatic areas draining the part are also treated, and from as many directions as possible; thus the breast cases receive pastille doses of filtered rays on the scar, the axilla, the supraclavicular area and the scapula, each area receives at least six doses in the first course of treatment, the intervals between each dose being three weeks (or fourteen days if there is any reason to suspect that early recurrence is likely); a second and third course is given later. Our difficulty is that we do not yet know what is the minimum dose necessary for prophylaxis, or how long treatment must be continued; further experience will determine these points.

I will not weary you with any figures, but will give my general impressions of the results of our four years' work so far as can be seen at present, fully recognizing that a much longer period must elapse before reliability can be attained.

1. Secondary infection of the mediastinum was a frequent cause of death in our earlier cases of breast scirrhus, but since the method of raying the chest from four directions has been adopted, the mediastinum receives sufficient radiation to make any recurrence here rare. I may say that the most frequent cause of death now seems to be secondary infection of the liver or of the bones, not infrequently those of the pelvis.

2. Local recurrence in the neighbourhood of the scar very seldom occurs. We are confident that we used to see far more recurrence in cases within four years after operation. I have mentioned that secondary cutaneous nodules appear to be less frequent.

3. The time is too short to attach too great importance to apparent diminished frequency of recurrences, but I can quote one result that is a definite success for *x*-ray treatment, and in itself justifies the trouble and expense of treatment. It is this: I do not know of a single case which we have treated that has an ulcer as large as half a crown. This includes not only cases sent for prophylaxis, but inoperable primary growths, some of which were ulcerating when we began treatment and have healed since, and also cases in which there were large masses of malignant glands; none of these show any tendency to fungate.

A great deal of the popular dread of cancer is based on the ulceration in advanced cases, in fact, the very name was taken from the fungating mass that was expected. We do not claim to cure cancer, but we claim this—the patient can be protected from the pain, sepsis, and stench of an open sore, and it is undoubtedly our duty to spare no pains to prevent such a serious condition.

Surgeons have developed the technique of operations for cancer in order to remove the disease as widely as possible, as well as all accessible lymphatics, and I agree that the results of operations so performed have given the patient a better chance of non-recurrence than the older method of simple excision of the growth, but it is always necessary to be ready to modify technique to meet advances in other forms of therapy, and I believe that it should be very seriously considered whether it may be now possible to leave the prophylaxis of glandular enlargement to the radiologist. For instance, in operations for cancer of the breast I find that many surgeons agree that it is not advisable to divide the clavicle for the purpose of removing enlarged cervical glands. I do not think it is possible to clear away these glands as completely as can

be done from the axilla, and the danger of partial removal is well known; even the clearance of the axilla has disadvantages in the longer time necessary for the operation, but chiefly from the danger of oedema of the arm supervening later, even when the modern incision is made along the anterior border of the axilla. Bearing in mind the possibilities of other forms of therapy, I think the time has now come when the surgeon should consider in each case whether he should attempt to remove all lymphatics within his reach or whether he may preferably leave the prophylaxis, or even treatment, of enlarged glands to the radiologist. At our request one of our surgeons has had the courage to leave the axilla alone in several cases in which he has operated for scirrhus of the breast, and so far he has not had cause to regret his boldness. The cases were sent to the *x*-ray department for prophylactic treatment as soon as they were out of bed.

Conclusions.

1. All cases of carcinoma of the breast, lip, or tongue should receive efficient *x*-ray treatment for prophylaxis immediately after operation.
2. In the treatment of secondarily infected glands *x* rays are preferable to excision.
3. Efficient treatment is able to prevent local recurrence; mediastinal infection is rare, and ulceration should not occur.

REFERENCE.

[1] *Proceedings of the Royal Society of Medicine.*

A SMALL OUTBREAK OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

BY

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With a Note on the Bacteriology by P. J. VEALE, M.B.

DURING 1913 and the early part of the present year cases of epidemic cerebro-spinal meningitis have been occurring at intervals in Bristol. In all 33 cases were notified up to February 28th, 1914; of these, 3 which came under our personal observation are known to be due to the pneumococcus and not to the meningococcus. Owing to the difficulty of diagnosis in certain cases, it is probable that the total number of cases was greater than those actually notified. Nearly all the patients came from the poorer parts of Bristol. In January to February, 1913, two cases occurred in each of two districts nearly two miles apart, Stapleton Road and Bedminster; two cases occurred in the same street. In April five occurred close together in another poor district near Stapleton Road, and two further cases occurred in this district in July, 1913, and February, 1914 respectively. From December 5th to February 28th there was an outbreak of 12 cases in Bedminster—a district about two miles distant from the others, and of three more in the Stapleton Road district. The contiguity of the individual cases in the groups is interesting, yet although the patient was often one of a family of children, there is, so far as was ascertained, no instance of a second case from the same house. Besides these cases 6 others occurred in outlying parts of the city, in healthy districts on high ground; their distribution is curious as they occurred in pairs, the houses being within about 200 yards of each other. Two cases occurred in each of three districts widely separated from each other and the other parts of the city previously or subsequently affected; the interval between the two cases in each district was one, two, and six months respectively. In two of these instances the families were certainly not acquainted with each other. The contiguity of cases in groups in adjacent streets, and yet the absence of spread in families in the same house is certainly remarkable. Most of the patients were young children; moreover, in more than one case the child was at school, and no other case occurred in that school; one patient was 45 years of age, two just over 30, and of the remainder twenty were 10 years of age or under.

Turning now to the 20 cases under our own immediate observation, the disease was of the ordinary acute type rather than either of the malignant or mild type; four days was the shortest duration of illness. In several cases there was a prodromal illness consisting of cold or sore throat preceding by an interval of ten to fourteen days the attack of cerebro-spinal fever. In one case there was a history of a fall on the head at about the same interval.

As to the early symptoms, in several the illness began with fever, intense headache, vomiting, and speedy delirium. In other cases the signs were more general, with pains in the limbs, and drowsiness or slight wandering at night, the condition then closely simulating influenza, or, in two instances, enteric fever. In all there was fever from the first, and in nearly all a rigor either at onset or within the first three days, most often not repeated. In most cases the symptoms were very indefinite. There were no symptoms or grouping of symptoms which conferred any peculiar character upon this epidemic. The first pathognomonic sign was generally slight deviation of the head and neck to one or other side, less often some retraction. When the disease was well established the chief points in these cases as compared with the accepted descriptions of the disease were the pain in back of head and neck with muscular rigidity; absence of any marked degree of retraction of head; absence of complete paralysis of any muscles, though there was great muscular weakness; marked retraction of abdomen with absence of abdominal reflexes; rigidity of leg muscles, and Kernig's sign constantly present; knee-jerks present, no clonus; plantar reflexes indefinite, not obtained or flexor, very rarely of extensor type; optic neuritis in 3 cases only; absence of affection of cranial nerves; pupils dilated and equal; external strabismus in 2 cases; urinary incontinence present after the first few days. The rapid and profound emaciation was one of the most striking features in all cases. Delirium, generally mild and muttering, occasionally more violent, was also constant, and the continual restlessness was a characteristic sign. There was rarely difficulty of swallowing until the last stage, and vomiting soon ceased to be urgent after admission to hospital. Purpuric spots or patches sparsely scattered were seen in a few patients, herpes in six, so that skin rashes were infrequent. One case was a typical example of posterior basic form, and recovered after a long illness of several months' duration.

The cerebro-spinal fluid in these cases varied from being merely turbid to an appearance like pus. In most cases, but not all, it escaped under considerable pressure. Frequently rapid accumulation of fluid was found when a second lumbar puncture was done on the following day; in one case 50 c.cm. of cerebro-spinal fluid escaped at the second puncture, made thirty-six hours after the first. In all cases the fluid contained albumin, and a reducing body (sugar). The cellular exudate consisted almost entirely of polymorphonuclears in proportion of 90 to 98 per cent., but in one case which recovered the cell count on the fourth day of the disease showed polymorphs 32.5 per cent., lymphocytes 67.5 per cent. Meningococci were mostly very abundant, both intracellular and free in the fluid. In some of the cases a leptothrix bacillus was also present; the bacteriology of this organism is dealt with in Mr. Veale's note. The cultural characteristics of the organisms present were determined in every case.

In one instance no organisms were found in the cerebro-spinal fluid from the first puncture made two days before death, but a fair number of meningococci were seen in the fluid obtained on the following day. In three typical cases, all fatal, no organisms could be found in film preparations, nor could they be cultivated from the cerebro-spinal fluid, which was purulent or semi-purulent, with a high percentage of polymorphs. In the posterior basic case no organisms were found at any time on repeated examination of the cerebro-spinal fluid.

In the younger patients it was found necessary on three or four occasions to give an anaesthetic for the lumbar puncture on account of active delirium and restlessness. This was done without any unfavourable symptoms resulting. Seven cases out of the 20 under our care besides the posterior basic case recovered; of these, one was left absolutely deaf, one blind in one eye, and one mentally defective.

The treatment consisted in frequent lumbar puncture and the intraspinal injection, after running off some of the cerebro-spinal fluid, of antimeningococcal serum (Lister Institute). After the injection the pelvis was raised, so that the patient lay on an inclined plane, with the head lowermost. In one patient (Case IV), desperately ill on admission, the serum was also injected intradurally through a small trephine opening in the temporal region of the skull, and this was also done in another case, in whom three full intraspinal doses had had little effect, and in whom the symptoms indicated that the brain was chiefly affected. Both these patients died. The full dose of the serum was given, except in the case of very young children, when half-doses were used. The interval of administration varied from twelve to forty-eight hours, according to the condition of each case. The total quantities of serum given in six cases of recovery were 105, 75, 61, 60, 20, and 20 c.cm. respectively.

In the seven cases of recovery, in one improvement in all symptoms followed the second injection, and in two days from this his state had entirely changed for the better; in another there was marked improvement after two doses, then a relapse, and finally steady and rapid progress after a third dose. In the fatal cases the serum seemed to give temporary relief to symptoms or to produce no effect; in several there was a rise of temperature of 2 to 4° after injection, but where the temperature was so irregular as in these cases it was difficult to say that it was a direct effect of the serum. A number of the cases had also urotropin, gr. v, every hour or two hours.

All the cases of recovery were seen and treated within ten days, three much earlier, of the commencement of the illness. Others, however, treated equally early, died, but no cases recovered which came under treatment late, and the serum seemed to have little or no effect on them. All recent work points to the necessity of early treatment if the serum is to be successful, and this leads us to speak of the difficulty of early diagnosis in this group of cases. In a few the symptoms were characteristic of meningitis from the first, but in several they were not so. The disease which it most closely resembled in the early stage was influenza, with its abrupt onset, accompanying fever, and severe pains in head, back, and limbs. Less commonly when there is drowsiness at the onset with disturbance of the bowels enteric fever may for some days be suspected. The diagnosis is especially difficult in infants. In one case with bronchopneumonia there were no clinical symptoms of meningitis for at least ten days. In the cases in this outbreak the symptoms and course were entirely unlike those of tuberculous meningitis, and there was therefore little risk of confusing the two. In many cases the diagnosis cannot be made without lumbar puncture, or, at any rate, until too late to be of any use. Nowadays, it should not be necessary to say that in any case where meningitis is suspected the simple and safe procedure of lumbar puncture should be done at once. The determination of the nature of the meningitis rests almost entirely on the findings in the cerebro-spinal fluid—for instance, the cases of pneumococcic meningitis given below could not otherwise be distinguished clinically from those of cerebro-spinal fever.

More remarkable than the difficulty of early diagnosis is the fact that sometimes the diagnosis cannot be made from clinical symptoms alone, even towards the end of the illness. In 3 cases of infants of about 12 months there was a history of two to three weeks' illness—in 2 of bronchopneumonia—and the children were admitted pallid, without optic neuritis, muscular rigidity, head retraction, or loss of deep reflexes, and lay in a dull, listless state, with dilated, equal pupils and swallowing with difficulty. No other signs were present, except those of a resolving patch of pneumonia in one of them, and had it not been for the prevalence of epidemic cases meningitis would not have been suspected. A lumbar puncture, however, showed the presence of semi-purulent cerebro-spinal fluid containing the meningococcus, and death occurred a day or two later.

A note is appended on a leptothrix bacillus found in association with the meningococcus in 4 cases by Mr. P. J. Veale; its significance consists in its possible symbiotic relationship to the latter, to which it may have acted as an adjuvant. There were no distinctive clinical features in these cases.

It has been already mentioned that in one case no organisms were found in the cerebro-spinal fluid removed at the first lumbar puncture, whilst they were found on a second puncture the next day. Heiman and Feldstein[1] especially note this point, and state that the presence of clear fluid does not necessarily exclude the presence of a meningococcic infection. If such a result were found in a suspected case of the disease, the lumbar puncture should be repeated shortly. It has been mentioned that in 3 cases the organism was absent on more than one examination.

Note on a Leptothrix Bacillus isolated from Cases of Cerebro-spinal Meningitis.

This organism was observed in smears from the cerebro-spinal fluid of four cases of cerebro-spinal meningitis, in association with *Micrococcus meningitidis*, in which it appeared as a fine Gram-negative leptothrix bacillus.

Cultivation in the first instance was undertaken on blood agar plates, from which, after six days' incubation, it was recovered in pure culture and subcultured on to ordinary agar. Growth on agar is very slow, requiring six days for the colonies to appear, and the organism grows better at room temperature than at 37° C., producing an opaque, raised, dry, crimpled growth along the inoculation track, and here and there individual colonies rise above the general surface of the smear; in the presence of moisture the growth is hard, smooth, and white, with no wrinkling; on removal with a platinum loop the colonies are soft and gelatinous, and can be broken with difficulty. Individual colonies have a sharply cut margin, the edge raised, with a tumulate centre and a depression between it and the edge.

In broth the organism produces a fine flocculent deposit, no pellicle is found, and the supernatant medium remains clear; the growth occurs in gelatine along the track without liquefaction.

In a hanging drop the organism appears as a non-motile filamentous rod with an occasional bright point at one end, due probably to the organism being bent, and therefore being viewed in part of its length.

On staining the organism is Gram-negative, and with blue it stains well and uniformly; no beading or spores. It is not acid-fast.

Inoculation on sugar-broth media produced no reaction, neither acid nor gas being produced in glucose, laevulose, lactose, maltose, saccharose, raffinose, arabinose, inulin, salicin, glycerine, mannit, dulcit, sorbit, erythrit. Indol production was negative.

The serum of one of the patients did not clump this organism in dilutions of 1 to 20 or higher.

The organism above described differs from a similar organism isolated by McDonald in association with *Micrococcus meningitidis*[2] which was motile and produced slight acid in milk and glucose, and from a leptothrix bacillus, isolated from the blood, urine, and cerebro-spinal fluid by Mr. Scott Williamson from a case of Dr. Michell Clarke's,[3] resembling enteric fever, but which gave moist, flat, discrete, even colonies on agar, and produced acid in milk, glucose, laevulose, galactose, maltose, glycerine, and mannit broths.

The clinical histories of a few cases presenting special features may be of interest.

CASE I.—*Cerebro-spinal Meningitis; Prodromal Sore Throat; Death on Fourth Day of Onset of Meningitis.*

Arthur X., aged 13, schoolboy. No previous illness, and no ear discharge. On March 19th he was laid up with a slight cold and sore throat. On the 27th he returned to school feeling much better, but still with a slight cold. On the 28th he had a severe headache and vomited. On the 29th the headache was worse, and he was light-headed and restless. On the 30th he tried to get out of the window to go home and vomited several times.

He was admitted to hospital on April 1st, and when seen was lying curled up on his left side, conscious but delirious, and plucking at bedclothes; head retracted, muscles of neck rigid; abdomen retracted, the legs rigid; there was opisthotonos, and twitchings of left arm and leg occurred from time to time: Kernig's sign positive; superficial reflexes absent; knee-jerks present; pupils dilated, acted to light; no optic neuritis, no squint. There were purpuric spots on shoulders, buttocks, and ankles, and large haemorrhagic extravasations on dorsum of right hand and on right ankle. Pulse 140, very feeble; tongue dry and brown; constipation; incontinence of urine; cerebro-spinal fluid was semi-purulent, milky, and not under pressure. There was an abundant exudation of polymorphonuclears,

with meningococci in enormous numbers in the cells and free in the fluid.

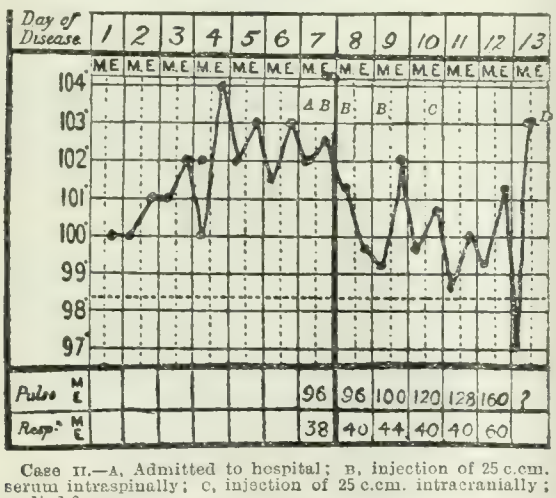
The temperature was 104° on admission, and went up to 107° at 2 a.m. the same night, when he died.

There were other cases at the school.

Post-mortem Examination.—Leave to examine the head only. There was well-marked hyperaemia over the whole surface of the brain, with diffuse pus formation over the anterior surface of the pons, medulla, upper part of spinal cord, interpeduncular space, and inferior surface of cerebellum.

CASE II.—*Prodromal Attack of "Influenza": Resemblance of Early Symptoms to Enteric Fever; Treatment by Intraspinal and Intradural Injection of Serum.*

Arthur Y., aged 34, blacksmith, always strong and healthy. At the end of April, 1913, he was laid up for a fortnight with what appeared to be influenza, and recovered. On May 24th he complained of headache and was feverish; during the following week the headache and fever continued; he was drowsy, took no notice of surroundings, vomited several times; obstinate constipation, profound anorexia, with somewhat rapid emaciation. His condition clinically suggested enteric fever. On May 29th there was incontinence of urine, spasm of the neck muscles came on, and his head was turned to the left; passive movement of the neck or limbs then caused great pain; muscular twitchings were noticed. On admission, May 30th, he was emaciated, with sordes on lips and teeth; drowsy and semi-conscious, but answered when addressed; he lay on his back with extended limbs; there were slight twitchings of muscles of face, arms, and hands, with plucking at the bedclothes. The head was rigidly fixed to left, and somewhat retracted; passive movement of it was very painful. Temperature 102° F.; pulse 100 regular; respiration, 38; constipation, incontinence of urine. The chest was normal; the abdomen retracted and hollow; liver and spleen not enlarged; urine normal. There was no rash on the skin; no deafness, the ears normal. Pupils dilated, right larger than left; both acted well. No nystagmus, squint, or optic neuritis. Limbs much wasted, all movements very feeble, but no actual paralysis. Knee-jerks brisk; ankle-jerks exaggerated, slight ankle clonus; abdominal reflexes absent, plantar reflexes flexor. Kernig's sign was well marked. On lumbar puncture the cerebro-spinal fluid escaped under great pressure; it was turbid, due to polymorphonuclear exudate, and contained abundant meningococci, both free and intracellular; 25 c.cm. of antimeningococcic serum injected intraspinally. On May 31st and June 1st further doses of 25 c.cm. each were injected after withdrawal of cerebro-spinal fluid. On the latter day he was somewhat better, the temperature fell, and the spasm of the neck muscles relaxed.



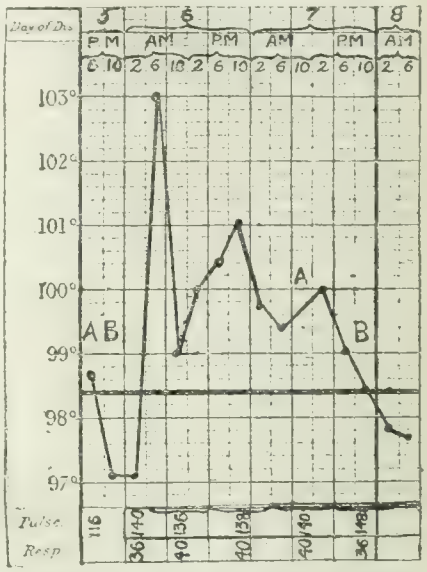
CASE II.—A, Admitted to hospital; B, injection of 25 c.cm. serum intraspinally; C, injection of 25 c.cm. intracranially; D, died 6 a.m.

On June 2nd he was much worse—marked retraction of head, very drowsy, and swallowed with great difficulty. The urine now contained albumin; the pulse was 100 and feeble. On the evening of this day he was almost unconscious, with irregular breathing of Cheyne-Stokes type. His expression was, however, intelligent. Six-hourly enemata containing dextrose, somatose, and brandy were given. As the symptoms pointed to the brain as now the chief localization of the disease, 25 c.cm. antimeningococcic serum were injected intradurally through a small trephine opening in the temporal region of the skull. This seemed to cause little disturbance, and had no effect on his general condition. Feeds were given by a nasal tube on June 3rd, as rectal enemata were not retained. On the 4th he was comatose, with a failing pulse, and he died early on the 5th. Leave for a *post-mortem* examination was refused.

CASE III.—*Acute Onset and Course; Meningococci and Leptothrix Bacillus in Cerebro-spinal Fluid; Intraspinal and Intradural Injection of Serum: Death on Eighth Day.*

Sidney W., aged 10 years. Has had usual diseases of childhood. No discharge from ears. He went to bed well on night of January 17th, 1914; had a restless night and got up very early, but was noticed to be unwell and sent back to bed. He was quiet, but complained of pains in the limbs during the day and in the evening became feverish and delirious. During the 19th he was delirious and often shrieked out with pains in head. No rigors; twitchings of arms and legs. Some dark purple spots were noticed at the elbows and on the back. From this time until the 22nd he remained drowsy, with intervals of delirium, and frequently cried out. The temperature varied between 100° and 102° F., except on evening of 20th, when it rose to 105°. There was profound anorexia, but no vomiting; the bowels were constipated; no incontinence. There was great and rapid emaciation.

On admission, January 21st, fifth day of disease, he was drowsy but not delirious, very restless, lay on his side with limbs drawn up; if moved, he cried out with pain in back of neck. Face pale, mouth and lips dry, tongue foul with blackish fur; pulse 136, compressible; respirations 30. Slight retraction of head and rigidity of neck muscles. The limbs were not paralysed, but all movements very weak. Speech normal. Over knee-joints and ankle-joints were patches of purpuric spots and lines. Urinary incontinence. The thoracic organs were normal; the abdomen very hollow and retracted; the spleen not enlarged.



CASE III.—A, Injection of 20 c.cm. serum intraspinally; B, injection of 20 c.cm. serum intracranially.

Reflexes: Abdominal absent, plantar flexor; knee-jerks present. Kernig's sign well marked. Pupils equal, reacted well; optic discs reddened slightly, but no distinct neuritis. Trace of albumin in urine. On lumbar puncture cerebro-spinal fluid was semi-purulent, escaped under great pressure, and contained the meningococcus together with a short rod-shaped organism, which was Gram-positive. A differential cell count gave polymorphs 98.5 per cent. On the same evening 20 c.cm. of antimeningococcic serum were injected into the spinal canal, and a small trephine opening was made in the temporal region of the cranium, and a further 20 c.cm. injected under the dura mater. The temperature rose to 102° at 6 a.m., but fell to 99° by 10 o'clock. On January 22nd he was very delirious and dusky; the other signs were unaltered. A further 20 c.cm. serum was injected intraspinally, the cerebro-spinal fluid, which was semi-purulent and not now under pressure, being allowed to drop away first.

On January 23rd he had a rigor. He was extremely weak and very drowsy. Urotropin gr. v was ordered every hour, and 20 c.cm. serum were again injected under the dura mater through the trephine opening. He died at 7 a.m. on January 24th. No *post-mortem* examination was allowed.

CASE IV.—*Recovery, with Total Deafness, after Six Weeks' Illness; Lymphocytosis in Cerebro-spinal Fluid.*

Dennis R., aged 4½. Family and previous history good. On November 29th and December 1st he fell down, on the first occasion striking the front and on the second the back of his head. On December 6th he was strange in manner and delirious, and his temperature was said to have been 103° F. He complained of headache, and was delirious at intervals until December 8th, when he was admitted. From the 5th to 8th there was no action of the bowels, and he took no food. He did not recognize his parents. There was no discharge from the ears.

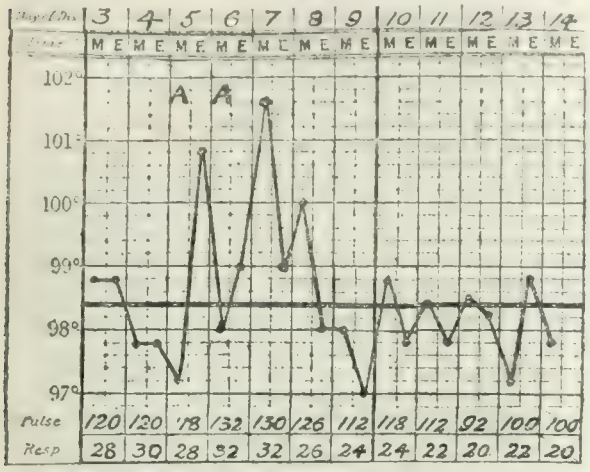
On admission, December 9th, face flushed, head slightly retracted, with rigidity of muscles of neck. The boy was emaciated and extremely restless; there were numerous small sores covered with scabs on back of head and limbs. Thoracic and abdominal organs normal except for soft systolic murmur at base of heart. No squint. No paralysis. The limbs were somewhat rigid and tremulous on movement. Kernig's sign present. Pupils equal, dilated, acted briskly. No optic neuritis. Abdominal reflexes absent, plantar present, and flexor; knee-jerks not obtained. There was some tenderness over the vertebral spines and of the muscles.

On lumbar puncture the cerebro-spinal fluid escaped under considerable pressure; it was turbid, contained albumin, and reduced Fehling's solution; differential count of cells gave polymorphs 32.5 per cent., lymphocytes 67.5 per cent. The meningococcus was present.

On December 10th, 10 c.cm. of antimeningococcic serum were

injected into the spinal canal, temperature rising shortly after to 100.8°; the following day the temperature had fallen to normal, and a further 10 c.cm. was injected, the temperature rising to 101.5°.

Two days later he was better and began to talk and took food. He pointed to the occipital region as the seat of pain. Kernig's



Case IV.—A, Injection of 10 c.cm. serum.

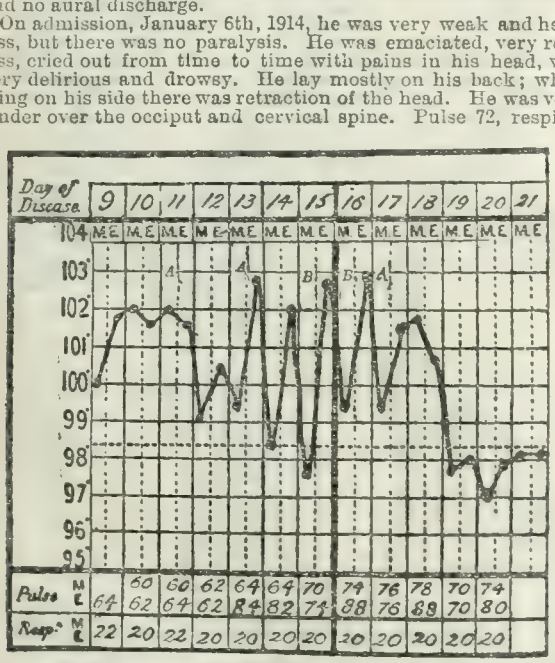
sign was less marked, there was now a double extensor plantar response. Obstinate constipation continued.

On the 20th the knee-jerks were obtained, and the plantar reflexes were again flexor. On December 25th it was first noted that he was stone deaf. The subsequent progress was uneventful, and he walked out of the hospital well, except that he was absolutely deaf, on January 14th.

CASE V.—*Sudden Onset; Meningococci associated with Leptothrix Bacillus in Cerebro-spinal Fluid; Slow Pulse throughout Illness; Attacks of Tachycardia during Convalescence; Complete Recovery.*

William F., aged 19. Previous history good, except that he suffered from occasional tonsillitis. Whilst in good health he was taken ill suddenly on December 29th, 1913, with slight shiverings and repeated vomiting, pains and stiffness in the back and limbs, pains in the head and fever. During the following six days the pains in head and limbs continued, there was general loss of power, but no actual paralysis; he was extremely restless, often very delirious, vomited occasionally, took little food, and emaciated rapidly. There was no deafness and no aural discharge.

On admission, January 6th, 1914, he was very weak and helpless, but there was no paralysis. He was emaciated, very restless, cried out from time to time with pains in his head, was very delirious and drowsy. He lay mostly on his back; when lying on his side there was retraction of the head. He was very tender over the occiput and cervical spine. Pulse 72, respira-



Case V.—A, Injection of 25 c.cm. serum; B, rigor.

tions 20, shallow, irregular; temperature 102° F.; tongue dry and brown. Obstinate constipation. No urinary incontinence. Except for a soft systolic murmur over heart, thoracic and abdominal organs normal. The spleen was not enlarged. Urine contained no albumin or sugar. No purpuric spots on skin.

Pupils small, equal, reacted well, no squint. The optic discs were reddened, and there was a small haemorrhage below the right disc. Abdomen retracted and hollow; abdominal reflexes absent, and plantar extensor. Knee-jerks not obtained. There was rigidity of leg muscles, and Kernig's sign was well marked. The cerebro-spinal fluid, under great pressure, was very turbid and semi-purulent. The cellular exudate consisted almost entirely of polymorphonuclears, there were numbers of meningococci, intracellular and free in the fluid, and also a short bacillus.

Twenty-five cubic centimetres of antimeningococcic serum were injected intraspinally on January 8th and again on 10th; on the latter day 50 c.cm. of turbid cerebro-spinal fluid escaped under pressure before the injection of serum was made. On January 11th he was quieter and less delirious, the abdominal reflexes were present, and the plantar flexor.

On January 12th and 13th he was noisy, crying out with pain, and had a rigor on each day. Urotropin gr.v was given every two hours, and on the 14th a third intraspinal injection of 25 c.cm. serum. On January 16th the temperature fell to normal and remained so; from this day he made slow progress towards convalescence, which was interrupted by several attacks of tachycardia, and was discharged well on February 10th, the cerebro-spinal fluid being normal. The pulse-rate in this case was never above 80, and generally between 60 and 74 during the first period of the illness.

CASE VI.—*Bronchopneumonia with no Clinical Signs of Meningitis for Two Weeks; Absence of Meningococcus in Cerebro-spinal Fluid at First Puncture.*

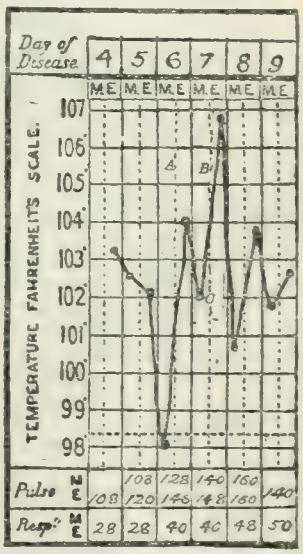
M. L., aged 2 years. No previous illness. Slight discharge from left ear of six weeks' duration.

On February 6th was feverish with bronchitis: following this a patch of bronchopneumonia appeared at the base of the left lung and developed into patchy consolidation of lower lobe, and she was very ill with ordinary signs of bronchopneumonia until the 14th. She vomited frequently, and there was considerable difficulty in feeding her. During the whole course of illness no retraction of head, convulsions, pains or rigidity of neck, rash, difficulty in swallowing, or paralysis appeared.

On admission, February 28th, the child was almost unconscious and practically moribund; pupils much dilated, equal, and reacting to light; pulse 120, temperature 99.2°, respirations 42; typical Cheyne Stokes breathing with retraction of lower ribs in inspiration. Abdomen not hollow or retracted; no rigidity of neck or limbs, and Kernig's sign absent. Over the lower lobe of the left lung behind there was loss of resonance, with scattered râles, and bronchial breath sounds. Knee-jerks were present; plantar reflexes indefinite. No optic neuritis.

On lumbar puncture the cerebro-spinal fluid was slightly turbid, containing a few cells and albumin, but no organisms were found. As the child was no better the next day, and in spite of the negative finding, cerebro-spinal fever was suspected. Puncture was repeated, and 10 c.cm. antimeningococcic serum run in after withdrawing the fluid, which had the same appearance as before. In this second specimen meningococci were found in plenty, and a cell count gave polymorphs 90 per cent., lymphocytes and endothelial cells 10 per cent. The temperature rose to 104.2° that night, and the child died early on February 25th.

During the same period three cases of primary acute pneumococcic meningitis came under observation. This is an unusual number, as, apart from cases in which the meninges are secondarily involved in pneumococcic infections of other organs, pneumococcic meningitis is uncommon. The occurrence of such cases has been noted in the course of other epidemics. The organisms were identified by their cultural as well as by their staining characteristics. Two of the cases were treated with doses of antipneumococcic serum intraspinally.



Case VII.—A, Injection of 7 c.cm. serum intraspinally; B, injection of 5 c.cm. serum; C, rigor.

CASE VII.—*Pneumococcic Meningitis.*

Nellie H., aged 21, single, post office clerk. She had always enjoyed good health and had never suffered from sore throat, deafness, discharge from the ears, nor from cough.

On July 18th, 1913, whilst in her usual health, she was suddenly seized with severe and general headache, followed by a rigor. She went to bed, slept well, and next morning on rising her neck felt stiff, and she vomited. She went to work, but returned home at 11 a.m., suffering from diarrhoea and constant vomiting. The same evening, and during the next forty-eight hours, she was frequently vomiting, and at intervals

screaming with pains in head and neck. Any movement, even swallowing, increased the pain.

She was admitted late on July 21st, and when seen next day she lay on her right side with legs drawn up and head retracted; the neck muscles were rigid; she was conscious but drowsy, quite intelligent, occasionally screaming out with pain. There was no paralysis, but she did not attempt to move herself. Temperature 103°, respirations 28, pulse 108, feeble. Bowels constipated since initial diarrhoea. Throat healthy, ears normal, no herpes, no purpuric spots. Teeth very carious, tongue foul. Lungs healthy; a systolic murmur at cardiac apex. Abdomen not retracted; no ascites; liver and spleen normal. The urine contained albumin. No muscular tenderness or wasting; Kernig's sign not present. Knee-jerks absent: abdominal reflexes present; plantar, left extensor, right flexor. Oppenheim's reflex well marked. Pupils small, equal, reacted well. No squint. No nystagmus. Optic discs normal. On lumbar puncture 20 c.cm. of cerebro-spinal fluid dripped out slowly; it contained albumin, a moderate number of cells, chiefly polymorphonuclears, and abundant pneumococci in pure culture. Urotropin gr. iij was given every hour.

On July 23rd she had not vomited since admission; she was delirious, and talked incessantly when awake. On July 24th there was incontinence of urine, the pulse was more feeble, and her general condition worse. She was more drowsy. At 11 p.m., under an anaesthetic, 7 c.cm. antipneumococcic serum was injected into the spinal canal, and on the 24th another 5 c.cm.; the latter dose was followed by a prolonged rigor some hours later, and the temperature rose to 106.8°, falling rapidly to 103° on sponging with cold water. On the 25th she was drowsy and delirious, pulse 160, running; breathing laboured, and pupils dilated. She had emaciated very rapidly since admission.

She became comatose, and died early on July 26th.

CASE VIII.—*Pneumococcic Meningitis.*

A second case of pneumococcic meningitis was admitted in a moribund state on September 19th, 1913, and was of the fulminating form. The patient was a girl, aged 10, who had never had pneumonia or any serious illness, was not deaf, nor had any discharge from the ears. After suffering from headache for the previous two days, she was taken suddenly ill with high fever, intense headache, and delirium, about 8 p.m., and was brought up to the hospital about 11 p.m. unconscious, with a temperature of 105.5°, a very rapid, feeble pulse, and died a few hours later. On lumbar puncture the cerebro-spinal fluid gave an abundant cellular exudate of polymorphs and lymphocytes, the former being in the proportion of 70 per cent., together with numerous pneumococci.

CASE IX.—*Pneumococcic Meningitis.*

The third case of pneumococcal infection was in a man of 32 years; he was given 90 c.cm. antipneumococcic serum by intraspinal injection, and recovered after a long convalescence.

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A METHOD OF ANAESTHETIZING THE LARYNX.

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HONORARY LARYNGOLOGIST TO THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

ANAESTHESIA of the larynx is a necessary preliminary in many laryngological procedures, especially in the removal of tumours and in the use of the actual cautery. In the majority of cases the application of cocaine, with brush and syringe, in 10 or 20 per cent. solutions, suffices to render the larynx insensitive. There are, however, not a few patients in whom for various reasons cocaine will not produce the requisite anaesthesia. An inflamed or infiltrated mucous membrane does not respond to cocaine as does a normal healthy one, and it is not surprising, therefore, to find that in tuberculous and other inflammatory states of the laryux anasthesia by the instillation of cocaine is frequently inadequate. Moreover, if it be desired to make a deep puncture with the actual cautery the superficial anaesthesia produced by cocaine is often insufficient. And again there are larynges, not necessarily inflamed, but so irritable that they cannot with cocaine be brought to that complete insensibility which is so essential for exact manipulation. Not infrequently I have, over a period of half an hour or more, applied as much as 10 to 15 grains of cocaine to the larynx without obtaining full anaesthesia, and finally have had to desist from fear of serious toxic symptoms. It is of course understood that in such cases the palate, fauces, pharynx, and base of the tongue were anaesthetized at the outset, while most of the patients had received an injection of morphine and atropine.

For some years the practice has been in vogue of relieving the pain in tuberculous laryngitis by injections of alcohol around the internal laryngeal nerves. Considerable success has attended this procedure, the pain becoming abated for a time, varying from several days to several months. It occurred to me that, as the sensory nerves of the larynx were so accessible, it might be a useful device, in very inflamed and irritable conditions, to inject a solution of novocain around these nerves, and thereby induce anaesthesia of the larynx. This idea, I have recently ascertained, is not original. It was proposed by Frey as long ago as 1906, but so far as I am aware it has not yet become adopted by laryngologists. For the past two years, at the Liverpool Consumption Hospital, I have been practising this method in suitable cases. In all I have so treated 55 patients, and while it is true that success was not invariable in the earlier cases, with the improvement of the technique my results have become uniformly satisfactory. A preliminary injection of morphine and atropine is advisable, and it is of course necessary to apply cocaine to the palate, fauces, pharynx, base of the tongue, and epiglottis (the last-named structure is supplied by the glosso-pharyngeal nerve, as well as by the internal laryngeal). In cases in which the palate was extremely sensitive I have occasionally, with great advantage, injected novocain in the neighbourhood of the posterior palatine foramina, and several times I have been obliged similarly to anaesthetize the epiglottis and base of the tongue, puncturing just above the hyoid. The 55 cases referred to included 9 with new growths of the larynx, 2 with singers' nodes, and 1 with lupus. The remainder of the patients suffered from tuberculous laryngitis requiring the use of the actual cautery.

If, after injection of novocain around the nerves, the larynx is still sensitive, the technique has been at fault. As a rule, in such cases, the conductivity of the nerves is interfered with, but not completely blocked, as shown by the fact that a small application of cocaine will now



FIG. 1.—A, Internal laryngeal nerve; B, point where needle strikes the great cornu of the hyoid bone; C, small cornu of hyoid bone; D, bare area of the thyro-hyoid membrane; E indicates line followed by the needle during injection.

quickly induce full anaesthesia. The branches of the internal laryngeal which are most likely to escape the novocain are those which supply the arytenoid cartilage and upper part of the epiglottis respectively. I wish particularly to emphasize the fact that novocain injection, even when not fully adequate, is always a valuable adjunct to cocaine, considerably reducing the amount of

that drug required. I can affirm most definitely that with the combination of novocain injection and cocaine instillation I have never met with a larynx which could not be rendered absolutely insensitive.

Several methods have been described for reaching the laryngeal nerves with the hypodermic needle. I have not found these satisfactory, and their unreliability is apparent,

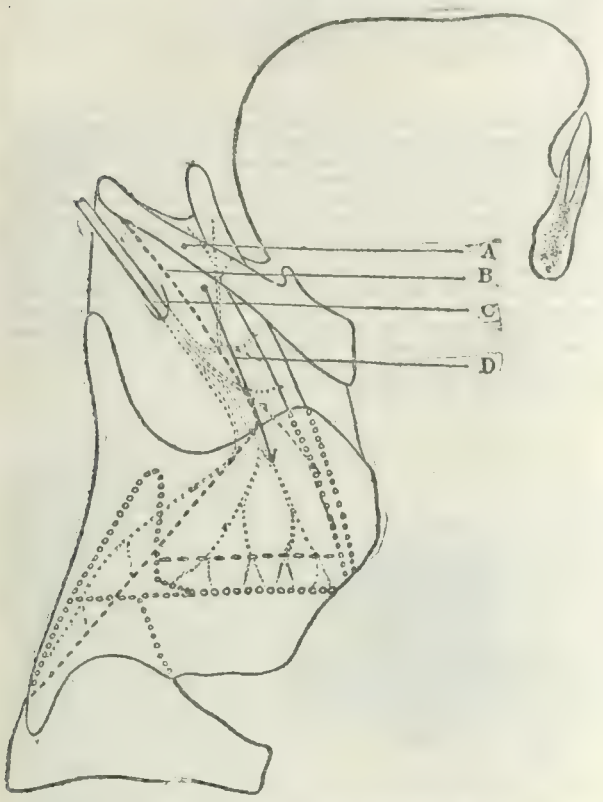


Fig. 2.—A, Point where needle strikes the great cornu of the hyoid bone; B, line indicating anterior limit of the sinus pyriformis; C, internal laryngeal nerve; D, line followed by the needle (represented rather far forward).

I think, from the great variability in the results obtained with alcoholic injections by different clinicians. With the object of improving the technique I have made *post-mortem* dissections on ten bodies, and have examined a large number of anatomical specimens. From the information thus obtained I am able to propose a new and, I believe, much more efficient technique.

All previous methods of injecting the internal laryngeal nerve have aimed at reaching the nerve as it lies on the thyro-hyoid membrane just before piercing that structure. For anatomical reasons such an attempt is likely to prove very uncertain, for in this position the nerve is deeply placed beneath the sterno-mastoid, while it is only separated from the pharynx by the thyro-hyoid membrane and mucous membrane. The needle being thrust in at right angles to the surface the chance of just striking the plane of the nerve, neither going too deeply nor yet too superficially, is small; while the necessity for directing the needle so far backwards places the great vessels in danger.

In the method which I have devised the needle is directed along the course of the nerve from the point where it pierces the thyro-hyoid membrane to a point half an inch or so below the upper border of the thyroid cartilage. The solution is injected during the progress of the needle, and in this way one inch or more of the nerve, in a position easily accessible, is brought under the effect of the novocain. The first desideratum, however, in this technique is to get the point of the needle into the plane of the nerve. With this in view the needle is entered so as to strike the great cornu of the hyoid (a landmark easily felt) one inch behind the lesser cornu. The point is now slightly depressed, so that it hitches against the lower border of the great cornu. The needle is now in relation to the uncovered area of the thyro-hyoid membrane (Fig. 1), and in a position from which to commence the downward and forward movement along the nerve.

The progress of the needle beneath the thyroid cartilage must have regard to the sinus pyriformis. The anterior limit of the pharynx is variable, and dependent on the size of the thyroid cartilage. I have found that, as a rule, in the male the sinus pyriformis, at the upper border of the thyroid, is one inch to one inch and a quarter, and in the female three-quarters of an inch to one inch, from the middle line of the neck. To be quite sure that the needle is engaging the tissues of the larynx, and not entering the pharynx, it is necessary to keep just within these measurements. There is very little likelihood of the needle entering the pharynx in the earlier part of its course, as it is proceeding in a plane parallel with the thyro-hyoid membrane. It only begins to pierce the tissues deeply when it sinks beneath the upper border of the thyroid, and hence the importance, in this latter position, of keeping in front of the sinus pyriformis. In Fig. 2 I have represented the anterior limit of the pharynx by a thick dotted line, while the course of the needle is indicated by an arrow. The diagram illustrates how the branch to the arytenoid may escape, and it will be seen how an earlier origin of the twig to the epiglottis and pharyngeo-epiglottic fold will sometimes place the latter branch also beyond the reach of the novocain. Fig. 3 shows the relation of the internal laryngeal nerve to the sinus pyriformis. It will be seen that for nearly one inch the nerve is only separated from the cavity of the pharynx by mucous membrane.

I do not, when injecting, attempt to elicit pain in the ear, said to indicate contact with the nerve. In my experience, such pain is difficult to elicit, most unpleasant to the patient, and not reliable as a guide to the nerve.

During the injection the patient lies in the recumbent position, with the neck well extended, so as to open up the thyro-hyoid interval. A strong sharply-pointed needle, two inches and a half long, is employed, and the fluid used is a 5 per cent. aqueous solution of novocain, to which a small quantity of adrenalin is added; 20 to 30 m. of this solution are injected into both sides. Weaker solutions of novocain may be used in certain cases, but the stronger solution is quicker and more sure in action. I have never known toxic symptoms ensue with the use of novocain, and the injection method is for this reason specially useful in patients possessing an idiosyncrasy towards cocaine. On several occasions I have tried urea and quinine hydrochloride, but the results were disappointing.

In the 55 cases injected in the manner described, I have never encountered either haemorrhage or inflammatory reaction. The large vessels, if pressed back with the

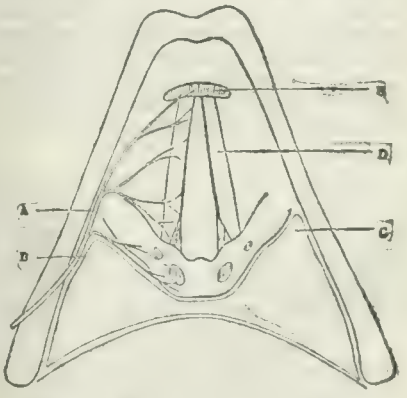


Fig. 3.—A, Internal laryngeal nerve; B, mucous membrane of the pharynx; C, sinus pyriformis; D, vocal cords; E, epiglottis.

thumb, are quite out of danger, and, with aseptic precautions, the risk of infection is insignificant.

Summary.

Anaesthesia of the larynx by novocain injections around the internal laryngeal nerves is of value: (*a*) When cocaine will not induce complete anaesthesia, as in inflammatory and highly irritable conditions of the larynx; (*b*) when deep anaesthesia is required, as when using the actual cautery; (*c*) when the patient is unduly sensitive to the toxic properties of cocaine.

GUMMA OF THE LARYNX NECESSITATING TRACHEOTOMY

(NEGATIVE WASSERMANN REACTION).

By W. J. HARRISON, M.B., B.S.,
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The following case of gumma of the larynx presents several interesting points, and so seems worthy of being recorded.

In the first place, although there was no doubt that the case was one of syphilis, yet the Wassermann reaction was negative. The serum from this case was used in one or two subsequent examinations, and so had any error occurred in the first examination, one would have expected it to show itself subsequently. Instead, it always behaved as a normal serum.

A second point of interest is that a gumma of the larynx is rarely seen, is generally of much smaller size, and in consequence the symptoms in these cases do not become urgent.

A third point is the rapid increase in size in the short space of twelve hours. In the morning the patient was examined in the sitting position, whilst at night she was in a semi-recumbent position, and the dyspnoea was more urgent. Still the examination was carried out as carefully as possible, a clear view of the larynx was obtained, and every endeavour was made to see the left cord. At the time it was feared that the increased size might indicate that breaking down processes had commenced, although against this was the fact that little or no congestion of the mucous membrane was present.

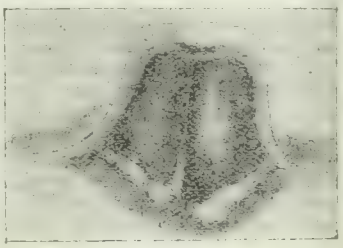


Fig 1.—11 a.m.

The very large doses of iodide which the patient took without the slightest inconvenience is a further point of interest. Had tracheotomy not been done one would have hesitated about pushing the drug so vigorously, lest oedema of the already irritated larynx should occur and render an operation unavoidable. Large doses of iodine are, as a rule, very much better tolerated than is generally supposed, provided that they are not used for too long a period. In the present case the large doses were given in order to get the patient rapidly under the influence of the drug, as had so large a gumma broken down convalescence would have been much prolonged, and marked deformity and impairment of function of the larynx would have resulted even had the cartilage escaped. The patient was constantly watched for any signs of iodism, but none appeared.

Mrs. X., aged 40, was sent to me on the morning of August 28th, 1913, on account of some difficulty of breathing and intermittent attacks of dyspnoea, which had first appeared a month before and had been getting more frequent and more severe. She had been very nervous for some years, and for the past six weeks had been undergoing a modified rest cure at home. On the night of August 27th she had a severe attack of dyspnoea, which had not passed off when she came to me.

Condition when First Seen.

The breathing was rapid, the face pale, the eyes widely open with an anxious expression, and the alae nasi were dilated. Expiration was quiet, but inspiration was difficult and accompanied by a loud crowing sound. The voice was reduced to a whisper.

On the right side the arytenoid cartilage was displaced backwards by a large smooth swelling, which completely hid the vocal cord and protruded beyond the middle line. The tumour appeared to obliterate the ventricle completely, and distended the ventricular band. The mucous membrane was normal in colour or only very slightly reddened. The left cord could be partially seen throughout its entire length, and by manipulating the mirror so that a better view could be obtained it was seen to be slightly congested. A very narrow chink between it and the swelling represented the breathing space, except for the opening at the posterior end caused by the displacement of the right arytenoid. On gently touching the swelling with a probe it felt fairly firm.

On the front of the right tibia was a small node somewhat tender to pressure, and which, she said, was sometimes painful, especially when lying in bed. Over each ligamentum patellae was a small punched-out sore, surrounded by a dusky area. On the right thigh was a sore about the size of a shilling, which communicated with a smaller one, a small bridge of skin being left between the two, and both were covered by a hard, thick crust. There was a definite history of rash, sore throat, and falling out of hair some four years previously. All the children (seven) were said to be healthy, and only one miscarriage had occurred seven years previously.

Blood was taken for the Wassermann test, and potassium iodide and mercury perchloride prescribed. Arrangements were made for her reception into a nursing home, to which, however, she did not go till 4 o'clock.

Tracheotomy.

As she had not been out of doors for several weeks and was brought to me in an open motor car, it was thought that possibly some of the dyspnoea might be due to this and to her excitable state, so she was put to bed and kept as quiet as possible for a few hours. At first the breathing became slightly easier, but later, in spite of a dose of potassium bromide, the respirations became rapid (36) and pulse 120, and the inspiratory crowing very noisy; there was marked retraction of the lower intercostal spaces, dilatation of the alae nasi, and some cyanosis, so that tracheotomy, for which preparation had been made, had become imperative. On examining the larynx before operation only the posterior third of the left cord could be seen clearly, and only occasionally could a glimpse of a portion of the rest of the cord be caught. The accompanying sketches give some idea of the appearance of the parts.

After-History.

Immediately after operation the respirations dropped to 25 and the pulse to 96. On the third day the swelling was still large, but from then onwards it rapidly diminished, and on the sixteenth day the tube was removed. This might have been done sooner, but at the time it was thought safer to keep a small tube in for a few days. The patient was of a talkative disposition and difficult to control in this respect, and it was feared that the gumma might again increase in size if she began to use her larynx too soon.

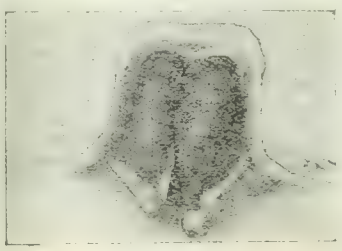


Fig. 2.—11 p.m.

Owing to circumstances in the laboratory the Wassermann test could not be carried out for several days, and the iodide was pushed till by the fourth day the patient was taking 100 grains a day in 25-grain doses. The Wassermann reaction was negative, and although the case was clinically undoubtedly syphilis, for various reasons it was decided not to use salvarsan, and this could be more safely omitted as she was reacting so well to potassium iodide. The periosteal node was getting smaller, the sores were healing well, and in every way the patient was improving.

On the twentieth day she went home with the larynx almost normal in appearance and the voice weak but clear. Six weeks later the voice was still somewhat weak but the larynx was normal in every respect.

A RARE FORM OF LICHEN RUBER PLANUS.

BY

C. H. CATTLE, M.D., F.R.C.P.Lond.,
PHYSICIAN TO THE NOTTINGHAM GENERAL HOSPITAL.

The cases of skin disease described in the Epitome of the Journal of May 9th (No. 266) so closely resemble a case lately under my care that I think the following notes worth reporting:

The patient was a married woman, aged 32, and healthy except for the skin affection. There was nothing important in the previous history except the tendency of the rash to relapse. At one time the mouth was so badly affected with the "silver grey patches" described by Malcolm Morris[1] that an opinion was expressed that the disease was syphilitic. A careful consideration of all the facts convinced me it was not syphilis. The one thing that made me doubt my diagnosis of lichen planus was the same author's statement:[2] "In the adult there are never any vesicles or pustules mingled with the papules." Having now seen the report of Polland's cases in the Epitome, I no longer doubt the correctness of the original diagnosis. Brooke and MacLeod state, "A bullous eruption has appeared in a few cases."[3]

When first seen by me, on August 9th, 1913, the condition of the skin closely corresponded with Malcolm Morris's description. All four limbs were thickly covered with intensely irritable, hard, dusky red papules. There was free desquamation. On the abdomen and back there were also groups of papules, the skin being thickened, and discoloured with deep sepia-brown pigmentation. In places the pigment had been absorbed, leaving white atrophic-looking areas with abrupt margin. The mouth was still affected with small aphthous spots.

She was admitted to hospital on August 13th, and kept entirely in bed. Liq. arsenicalis mvi was given thrice a day, but no improvement followed, perhaps because the arsenic was not sufficiently pushed. The temperature at first was 99.2°, and gradually increased to 101° on August 28th. On September 16th it became normal, but rose again after this. On August 31st she was given 3jss doses of liq. hydrarg. perchlor. with potassium iodide gr. v. The limbs of one side were wrapped in an ointment of zinc, mercuric nitrate, and coal tar, and those of the other in an ointment of mercury perchloride, carbolic acid, and zinc.

On September 25th the patient complained of increased irritability of the feet, and on their dorsal surfaces a few discrete and scattered bullae, the size of a haricot bean, were noticed. She thought they were caused by rubbing the feet one on the other. The bullae rapidly covered the whole surface of both feet, reaching a little way above the ankle, and became confluent, so that the whole epidermis of both feet appeared undermined with fluid. The dose of iodide was small, but it was omitted on account of the occasional occurrence of vesicular eruptions under its use. The liq. hydrarg. was increased to 5ij doses. While the feet were at their worst the rash on the rest of the body gradually disappeared, and along with it the itching, leaving the skin smooth but discoloured (brownish-red).

The feet remained sore and painful some weeks. They became covered with thick crusts, from under which turbid serum exuded. They were treated with the first of the above-mentioned ointments and zinc-boric dusting powder. During this phase of the illness the temperature rose again to 100°, and on October 11th and 15th there were sharp, sudden rises to 103.6° and 103° respectively, indicating absorption from the raw surfaces. There was no ulceration of the dermis. On October 12th quinine was given in place of the mercury.

The crusts on the feet gradually dried and separated, leaving a smooth reddish surface of new epidermis. The patient was allowed to get up on November 9th, on account of her urgent wish to go home, although the feet were not considered soundly healed. She left hospital on November 15th with the result "cured" on her bed-paper. Unfortunately, I heard from her doctor in the country a few months later that the rash had reappeared, an occurrence quite in harmony with the known tendency of the disease to relapse.

It might be argued that in this case the disease was syphilitic because improvement occurred under the use of mercury, but this treatment has also been used successfully for lichen planus by recognized authorities on that disease—for example, Unna, quoted by Morris. The rash in this case was so persistent that we discussed the advisability of injecting salvarsan as a more efficient method of giving arsenic. This treatment is also suggested by Polland,[1] but his cases responded fairly well to arsenic internally. My case resembles Polland's in the fact that the bullous lesions mainly occurred on the lower part of the legs.

REFERENCES.
[1] *Diseases of the Skin*, 1899 edition, p. 170. [2] Ibid. [3] Allbutt's *System*, vol. ix, p. 416. [4] BRITISH MEDICAL JOURNAL, Epitome, May 9th, 1914.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE TRANSFER OF THE INTRACELLULAR PARASITES OF RABBIT SYPHILIS TO MONKEYS.

IN a letter published in the BRITISH MEDICAL JOURNAL of February 7th last, p. 341, a natural disease called "rabbit syphilis" was described with the finding of a spirochaete in the lesions which resembles *Spirochaeta pallida;* and intracellular parasites were also described in this rabbit syphilis resembling those found in human syphilis.

The transfer of the rabbit intracellular parasites to monkeys has now been accomplished. In January last Dr. Penfold, of the Lister Institute, inoculated two Rhesus monkeys with an extract of the spleen of a naturally infected syphilitic rabbit. At first penile vaccination was performed, but this failed to infect. Then inoculation into the testicle was tried. No visible local lesions occurred, but in April both monkeys began to lose their hair. On May 18th one monkey sickened as of a septicaemia, and died. *Post mortem*, no local lesions could be discovered, but the heart's blood was found to be teeming with intracellular parasites, some showing the developmental spirochaete forms as well as the free amoeboid bodies similar to those already pictured in the BRITISH MEDICAL JOURNAL of December 14th, 1912, as occurring in human syphilis.

No free spirochaetes were seen in the blood, but the intracellular and extracellular developmental forms were very numerous; and their cycle of development appeared to be the same as that first found in *Lymphocytozoon cobayae*, the similar intracellular parasite of guinea-pigs which develops into spirochaetes.[1]

The transfer of these parasites to monkeys would appear to fill the last gap in the train of evidence in favour of their being the causative agent of rabbit syphilis, and seems to show conclusively that these intracellular parasites are developmental forms of the spirochaetes; for by it Koch's postulates are fulfilled, and proof is thus gained that intracellular parasites which develop into spirochaetes are the cause of this disease, which resembles both clinically and pathologically human syphilis.

E. HALFORD ROSS.
The John Howard McFadden Researches.
Lister Institute, Chelsea, June 5th.

HYDATID DISEASE OF THE LUNG SPONTANEOUSLY CURED.

CASES of spontaneous cure of hydatid disease of the lung are sufficiently rare to merit record. The following case first came under my observation in June, 1913. The patient was a married woman aged 26. She had never lived abroad, and until the onset of her illness had enjoyed good health. Her first symptom was a sudden attack of haemoptysis which was not profuse. Cough and some pain in the chest persisted for a week, and then passed off. She had no further symptoms for a month, when she again coughed up blood and with it a quantity of membrane. When examined a few hours afterwards she looked somewhat anaemic but otherwise normal; there was slight dyspnoea, but no fever. Examination of the chest revealed a small area of dullness in the first left intercostal space close to the sternum; it extended to the left for 2 in. There was a dilated vein running up to this region from the left breast. There were no râles, but the breath sounds over the dull area were high pitched and bronchial in character, and pectoriloquy was well marked.

The expectoration contained no tubercle bacilli, but the membrane showed a characteristic laminated structure, and there were numerous hooklets. A differential count of the leucocytes showed 5 per cent. of eosinophiles.

After bringing up the membrane all symptoms rapidly subsided, and in a few days she was apparently well.

I saw her again nearly a year after the first onset of symptoms, and she was perfectly well; the dullness and bronchial breath sounds were no longer present, and there were no abnormal signs in any part of the chest. A skiagram of the whole chest showed nothing abnormal. Examination of the liver and other organs revealed nothing.

It is clear that the condition was a small cyst which ruptured into the left bronchus and was expelled. The symptoms at the time of rupture were extremely mild, there was no suppuration, and down to the present time there has been no evidence of recurrence.

A. G. YATES, M.A., M.D., M.R.C.P.,
Physician to the Royal Infirmary, Sheffield.

A CASE OF CONSERVATIVE OPERATION FOR CEREBRAL ABSCESS OF OTITIC ORIGIN.

A CHILD, aged 6, was admitted to hospital with a history of otorrhoea of indefinite duration. The mastoid region bulged; temperature and pulse were subnormal; the rectus externus oculi was paralysed on the affected side, and, on lumbar puncture, the cerebro-spinal fluid, although quite clear, came out under considerable pressure.

Destruction of the contents of the middle ear was found to be much less advanced than was to be expected from the history. The perforation was limited to the postero-

[1] *Proc. Roy. Soc.*, B, vol. lxxxv, p. 67.

inferior quadrant of the membrane; and malleus, incus, and attic appeared normal. From this it was inferred that the intracranial suppuration, which the clinical findings strongly suggested, had originated in the antral walls rather than the tegmen tympani.

On removing the outer antral wall, pus flowed freely from a fistula over the sigmoid sinus. The bony wall of this was removed over its whole extent; the bone was also chiselled away over ½ in. of the horizontal part of the lateral sinus; as the sinus appeared to be healthy it was not touched, but in view of the coma on admission, and especially of the internal strabismus, a further collection of pus was suspected in the tempero-sphenoidal lobe. The tegmen antri was therefore removed, and another smaller collection of pus evacuated from a point, upwards and forwards, 1 in. deep in the temporo-sphenoidal lobe.

Recovery was uninterrupted; two weeks later the child heard a whisper at 3 ft., and conversational voice at 8 ft. Two weeks after this these distances had increased to 5 and 15 ft. respectively. The squint disappeared, and the otorrhœa is steadily diminishing.

This case is of interest in that orthodox modern aural surgery indicates a complete radical mastoid operation as a usual preliminary to exploring for pus in the temporo-sphenoidal lobe. In the grave existing circumstances, the posterior osseous meatal wall and the ossicles have usually to be sacrificed to obtain a good exposure; it is not often safe to assume that there is no caries or fistula of the tympanic roof or labyrinth; therefore a Stacke operation is done. And, in event of recovery, hearing is of secondary importance. But in this case the whole of the antral walls, except a small part of the inner wall, were removed as part of a simple Schwartze operation; the bridge and middle ear were not touched, and the exposure was evidently adequate for draining extradural pus posteriorly, and a cerebral abscess in front. Moreover, from the hearing tests one month after operation, it is fair to assume that the hearing will be better than if the radical procedure had been adopted.

London, W. HAROLD L. WHALE, M.D., F.R.C.S.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

TIVERTON HOSPITAL.

FEMORAL HERNIA IN A BOY.

(By M. ALLEN, L.R.C.P. and S.Edin.)

As cases of femoral hernia in boys before puberty are extremely rare, notes of the following case may be of interest:

H. H., a boy aged 12, was seen in the out-patient department. According to the mother's statement, a swelling about the size of an egg had appeared in the right groin about a year previously. It remained the same size, neither increasing nor decreasing, and giving the boy no pain or discomfort. The patient was admitted and an operation performed. After dissecting through a mass of fat a sac was found, which on being opened contained a mass of omentum. This was ligatured and cut off, a radical cure being performed in the usual way.

AT its meeting on June 2nd Sir William Osler was elected a foreign associate by the Académie de Médecine of Paris.

THE Emperor William Society has founded an institute of industrial physiology which will be a part of the Physiological Institute of Berlin. The new institute will conduct researches on the effects of physical and intellectual work in man and study the relations of such work to age, sex, race, and so forth. Researches will also be made on the influence of external conditions such as climate, temperature, ventilation, dwelling and food, on such work. Special investigations will be made as to the diet of the working classes in relation to their particular kind of work.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

DORSET AND WEST HANTS BRANCH.

AT a meeting of the Branch in Dorchester on May 20th, Dr. H. H. DU BOULAY, President, in the chair, the proceedings included the reading and discussion of papers and demonstration of a series of pathological specimens.

Papers. — The PRESIDENT having read a paper on ophthalmic cases as seen in general practice, Mr. W. BURROUGH COSENS dealt with the treatment of gall stones. When these were giving rise to marked or persistent trouble and surgical interference was indicated he usually advocated cholecystectomy as the operation of selection. When the gall bladder contained a large number of small stones a similar condition was often present in the hepatic and common ducts, and if overlooked and the smallest stone left behind, the ligature on the cystic duct was liable to give way later. For this reason he kept a drainage tube in the peritoneal sulcus covering the cystic duct often for ten days. Cases submitting themselves for operation rarely had a healthy bladder, and he treated them on the same surgical principles as he did a diseased appendix. The formation of gall stones commenced, he believed, at a much earlier period of life than the usual age at operation suggested, and they were in some cases the cause of the indigestion so common in young adults. In illustration and support of his views he recorded seven cases, six of them having been subjected to operation by him within the previous two months. All the patients were married women or widows. (1) A., aged 50; ten years' history of biliary colic; cholecystectomy; one stone size of large walnut; drainage four days; well in three weeks. (2) B., aged 45; acute abdomen; diagnosis appendicitis; biliary colic four years ago; operation, general condition of fat necrosis; no gall stone; bulbous appendix removed; good recovery. (3) C., aged 42; tumour in right hypochondrium; cholecystectomy, bladder adherent to caecum; fifty stones; drainage fourteen days; patient convalescing. (4) D., aged 65; pain over right lobe of liver two years; cholecystectomy; 200 stones; small stones felt in hepatic duct; drainage; condition of patient required hasty completion of operation; on twelfth day slight rigor, free discharge of bile, and four small calculi; discharge ceased in three days; recovery. (5) E., aged 65; cholecystotomy three days after ovariotomy; seventy stones and muco-purulent material; drainage ten days; patient convalescing. (6) F., aged 45; acute abdomen; cholecystectomy, perforating ulcer in fundus of bladder, large quantity of brown fluid in abdominal cavity; eighty stones in bladder; drainage seven days; doing well. (7) G., aged 52; large number of octagonal stones passed per rectum during twenty years; operation declined. In the discussion which followed, Mr. UNWIN, Mr. RAMSAY, and Mr. BELBEN advocated cholecystotomy as generally the most suitable operation. In reply Mr. COSENS said he doubted if in the majority of cases the gall bladder resumed its normal function after cholecystotomy. The ease with which small nodules of growth might be overlooked was also a point in favour of the radical operation. The American surgeons like the Mayos, and in this country Bland-Sutton, more frequently removed the gall bladder than drained it.

Exhibits.—Drs. MACDONAND and PERDRAU demonstrated the following specimens and also histological sections of many of them: (1) Brain showing sclerosis of whole convolutions, and kidneys showing miliary gummata, from a congenital epileptic. (2) Brain showing old softening of right island of Reil, from an epileptic. (3) Brain showing congenital hydrocephalus and numerous small haemorrhages, from a patient aged 31. (4) Heart with large aneurysm of left ventricle. (5) Thyroid and skin from a case of chronic Graves's disease associated with scleroderma; sections were shown to demonstrate lesions of the corpora dentata of cerebellum. (6) A cholecystocele with calculus in cystic duct. (7) Sphenoid bone completely infiltrated by a carcinoma of the right antrum. (8) Abdominal aorta showing most extensive arterio-sclerosis, the thoracic

portion being uninvolved. (9) Blood film from a case of pernicious anaemia to show increase in number of lobes of the nuclei of the polymorphonuclear leucocytes. Mr. BELBEN showed a specimen of a uterus and right adnexa removed by operation from a single woman aged 40. Two fibroids were attached to the lower part of the uterus. They had grown under the peritoneum of Douglas's pouch. The right ovary was replaced by a unilocular cyst the size of a cocoanut, into which haemorrhage had occurred, and the contents of which had subsequently leaked into the peritoneal cavity.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

AT a meeting on May 22nd, Dr. M. J. GIBSON, President, in the chair, Dr. JELLETT recorded an instance of *Hysterectomy for concealed haemorrhage* in the sixth pregnancy of a woman aged 25. The previous history was one abortion, one premature, and three full term, all with normal labours. On the day of admission she had some haemorrhage, and was plugged by a doctor in Dublin before being sent into hospital. When admitted she looked fairly well, with a pulse of 104. The plugs were removed, and, as there was no subsequent haemorrhage, the patient was left alone. After three hours a little blood came from the vagina, and the patient was emphatic that the uterus had got much larger. It was then nearly up to the ensiform cartilage. She was an extremely anaemic woman, and appeared not to be able to stand any loss of blood. Examination showed the membranes presenting through the cervix, and as the conclusion had been formed that the patient could not afford further loss of blood and was suffering from concealed accidental haemorrhage the abdomen was opened and the uterus removed. Everything went on satisfactorily afterwards. Examination of the specimen showed that the diagnosis of concealed accidental haemorrhage was right. Sir WILLIAM SMYLY agreed with a remark that had been made that uterine haemorrhage could always be stopped by removing that organ, and thought it was perfectly right to do so if the haemorrhage could not be stopped in any other way. Dr. SHEILL said the operative treatment was undoubtedly correct, though the phenomenon in the specimen suggested that plugging might also have been satisfactory. The PRESIDENT, after mentioning his experience in five like cases, said that in every case a certain amount of blood had escaped externally, the uterus had increased in size, was hard and tender, and the patients' condition could not be accounted for by the amount of blood lost externally, nor by any other acute abdominal attack. The haemorrhage in these cases could not be controlled either *ante partum* or *post partum*, except by hysterectomy. When such a rapidly over-distended uterus was emptied, *post-partum* haemorrhage led to the death of the patient. Dr. SHEILL showed a specimen of *Tuberculous tubes* removed from a patient who was married five years, had no pregnancy, and enjoyed fair health. She developed symptoms of endometritis, and curettage had been carried out by a doctor in England with no good result. There were no special points of interest in the operation, except that it was fraught with difficulty due to old adhesions. The two specimens shown were removed, one consisting of the right tube and ovary, and the other of the right tube only. He spared the second ovary, with the intention of suturing it to the cornu of the uterus, but it was found adherent to the back of the uterus, and he was obliged to leave it. Dr. GIBBON FITZGIBBON considered it better to clear out the uterus in order to avoid the risk of leaving tuberculous infection in the uterus. He was reluctant to try conservative operations in tuberculous disease of the tubes where it was so extensive as in the specimen shown. Sir WILLIAM SMYLY said he agreed with Dr. Sheill in leaving the ovary. Pelvic tuberculosis, he believed, had never been proved to be primary. It was looked upon by the best pathologists to be always secondary, and at the meeting of the German Gynaecological Association in Munich it was positively stated by the reporters that such a thing as a primary pelvic tuberculosis had never been met with—that is, if a thorough examination of the patient's body was made one would be bound to find tuberculosis in some other part. Dr. JELLETT agreed with Dr. Sheill as regards saving the ovaries, but at the same time he considered pelvic tuberculosis was most dangerous. If subjected to operation there was a good prospect of cure, but otherwise serious results were to be expected. When operating in the early stage of tuberculous tubes he thought the uterus should be left unless it was affected also, and as the ovaries were very rarely affected, they should also be left. Dr. SOLOMONS said that in some cases part of the tube was healthy and might be preserved. The only reason he could see for removing all the organs was the eugenic one. Dr. ROWLETTE said they were not in a position to judge what proportion of cases of tuberculosis of the genital organs became dangerous, and from the results of *post-mortem* examination the question seemed to be similar to that of tuberculosis of the lungs. It might be concluded regarding pelvic tuberculosis as with pulmonary that a very considerable proportion of cases got better without treatment of cases, but it was true that the disease, in a certain number of cases, became dangerous to life. As for treatment, it was not the custom to try to eradicate the disease by the knife in other parts of the body, and he did not see why this should be attempted in the pelvis. It was almost certain that when tuberculosis was found in one part of the body it was also present in another. He could not agree that in a case of pelvic tuberculosis one would be justified in clearing out all the pelvic organs, and even if it were necessary to remove the uterus it would scarcely be necessary to remove the ovaries, as it was rarely found that any traces of tuberculosis existed upon the surface of the ovary. The PRESIDENT said that pelvic tuberculosis was a disease which generally tended to become cured. Examination of a considerable number of tubes which he had removed showed that the great majority were inactive. In cases of tuberculosis of the endometrium he had advised sanatorium treatment with good results. If he were called upon to treat a patient with tuberculous tubes, and decided on operation, he would not remove more than the tubes, if possible. Dr. SHEILL, replying, said as regards tuberculous tubes it was not known whether the disease was primary or secondary, and an opinion, therefore, could not be formed as to whether it was desirable to remove other parts or not. The patient from whom the specimen was removed was troubled with pain in the region of the appendix. In addition to the operation of laparotomy being apparently a cure in cases of abdominal organs, there was another reason which influenced him in deciding to operate—namely, the patient suffered from clammy sweats, which indicated active disease. Since operation these symptoms had disappeared.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on June 3rd, Dr. JOHN PLAYFAIR presiding, a paper on the *Genito-mesenteric fold of peritoneum, Jackson's membrane, and intestinal flexures* was read by Mr. DOUGLAS G. REID, Cambridge. He said that a peritoneal adhesion might be anatomical or pathological. The former were readily produced in the fetus by the contact without movement of two normal peritoneal surfaces. The genito-mesenteric fold, passing from the mesentery to the right Fallopian tube and ovary, occurred in 55 per cent. of fetuses, 70 per cent. of new-born children, and 33 per cent. of adults. Lymph vessels ran in the fold, and thus a lymph connexion was established between the bowel (ileum and appendix) and these uterine appendages, which might convey infection in either direction. Pressure on the genito-mesenteric fold by the pelvic colon could displace it, and bring about "anatomical" adhesions, in which the ileum, appendix, caecum, and pelvic mesocolon might be involved. In the same way *Jackson's membrane* often was due to the same condition of anatomical adhesion of appendices epiploicae on the ascending colon to the parietal peritoneum, or to union of the great omentum with the parietal peritoneum. A similar sheet of adhesion might cover the descending colon. Of the *intestinal flexures* that occurred a proportion

originated in fetal life, and were due to anatomical adhesions between parts of the bowel and the genito-mesenteric fold, transverse mesocolon, mesentery, abdominal wall, etc. In this way many permanent flexures in the terminal ileum, appendix, transverse and descending colon were produced. Various other peritoneal folds and fossae were often to be interpreted in the same way. Caecal torsion in fetal life explained abnormal positions of the appendix. An epidiascope demonstration of dissections and figures accompanied the communication. Mr. C. W. CATHCART said that he had long suspected that many abnormal peritoneal folds and bands were not pathological but developmental. These adhesions, however numerous, did not produce intestinal obstruction unless peristaltic power were also deficient. Mr. D. P. D. WILKIE described different types of membrane in the region of the appendix and caecum, including the folds associated with caecal ptosis. Dr. CHALMERS WATSON was sceptical about these peritoneal adhesions being exclusively anatomical. Mr. SCOT SKIRVING asked how the genito-mesenteric fold was less frequent in adults if its origin was always congenital. Mr. BEESLY said these adhesions and folds were more frequent in living people (at surgical operations) than in anatomical dissecting specimens. Remnants of the gastro-colic omentum might explain some examples of Jackson's membrane and of the double-barrelled colon. Mr. REID replied. Dr. H. TORRANCE THOMSON and Mr. J. W. STRUTHERS, in a note on the *Intratracheal insufflation of ether*, analysed an experience of about 100 cases. In all these anaesthesia had been induced in the ordinary way, and had only been maintained by this new method. Deep anaesthesia was produced before introduction of the catheter, which for the adult was of size 24 (French). The concentration of vapour was kept low at first. The pressure of the gas pumped in varied between 10 and 30 mm. of mercury. The anaesthesia secured was light, the patient being usually of a rosy colour, and retaining gentle respiratory movement. The apparatus used for most of the cases was Kelly's. The cases were of all kinds, and were not selected in any way. Shock was lessened; there was no case of pneumonia, and very seldom bronchitis, and the after-sickness seemed to be less. The method proved specially useful in operations on the tongue, mouth, throat and jaws; and in gynaecological operations on stout patients in the Trendelenburg position. It failed in several very alcoholic subjects, but in such cases the preliminary use of scopolamine might help. Mr. HODSDON'S experience of the method in fifty cases had been very satisfactory; it was particularly useful in a case of goitre. Professor CAIRD said the method had merit in certain cases, and especially in operations on the brain where failure of respiration might occur, but he doubted its general applicability. The introduction of a tube into the trachea was an unnatural procedure, and might well leave injury there or in the lung. Mr. SCOT SKIRVING commended the method. In one case of excision of the upper jaw, and in another of large abdominal hernia in an alcoholic man with very rigid recti muscles it had been of great assistance. Dr. J. STUART ROSS had found the introduction of the tube facilitated by painting the pharynx with a solution of novocain. It was probable that the present method of blowing the air over a surface of ether would give place to some more exact way of producing definite mixtures of air and ether. Nurses seemed to be agreed as to the better after-effects. Mr. J. W. STRUTHERS in his reply described the method as yielding a "chloroform anaesthesia" with ether. He had tried to observe the after-effects with this as compared with other methods, and his conclusion was that these were neither better nor worse than with other methods. He agreed that the method was not one for universal use, but in the selected cases mentioned it was safe, and had special advantages.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 19th, 1914, Dr. SYKES in the chair, Dr. EURICH, speaking of *Lead poisoning*, said he had recently come across an unusually large number of atypical cases. None had been found in the city of Bradford, but many in the outlying districts—Clayton, Wibsey, Low Moor, Idle, Yeadon, Esholt, Shipley, and Queensbury—where the water supply was not the same as in the centre of the city. In most of the cases there was no lead line, and abdominal pain was present. A boy aged 11 years showed paraplegia and anaemia; a laundry girl had unilateral wrist drop; a man aged 40 had anaemia and a sudden attack of paraplegia followed by coma, optic neuritis, and as frequently occurred basophil granules in many of the red cells of his blood. Two cases had been mistaken for appendicitis. The speaker advised an inquiry into the water supply, since in all cases he had found lead in the drinking water. Inquiry, he thought, should be made into the relation between this disease and rickets, and into all cases of optic neuritis, appendicitis, and abortion. He himself was conducting experiments along these lines, and would place them before the society at a later meeting. In the discussion which followed, Dr. BUCHAN suggested that the pressure in the high-level pipes might have some influence on the solution of lead. Among the exhibits at the meeting was an instance of a foreign body embedded in the roots of the tongue. It was shown by Dr. JASON WOOD.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT the provincial meeting in Glasgow on May 30th, Dr. A. K. CHALMERS, President, in the chair, Professor MATTHEW HAY, in a paper on *Public health research*, expressed a belief that the annual grant of £60,000 which was to be made by Government for the encouragement and assistance of medical research would not be exclusively devoted to investigation of tuberculosis. Probably an endeavour would be made to assist all kinds of research whether in curative or preventive medicine, and whether in laboratories or through inquiries and investigation which health officers, and the numerous officers allied with the public health service, now carried out. Too much should not be expected in the first year or two of a new scheme, and the machinery for administration and investigation had naturally commanded the first consideration, but it was hoped that within a very short time the machinery would be in active operation. One of the first matters to be considered would be whether an effort should be made to have the work done in existing laboratories connected with teaching institutions or hospitals, or whether it was to be mainly or exclusively carried on in laboratories specially provided for the purpose. It was essential that laboratories wherever situated should have thoroughly skilled heads, with adequate assistance and a sufficiency of accommodation and equipment. The staff and equipment should be able not only to undertake the whole of the routine requirements of the public health service, but it should be sufficiently ample to allow of some of the time of the chief and skilled and fully qualified assistants being devoted to research bearing on the practical problem of health administration. One other kind of investigation—namely, that relating to statistics—it was desirable to see more fully and exactly employed in connexion with public health administration than it had been in the past, for all health officers were obliged to be something of statisticians. It was very difficult for any one to deal statistically with medical data without a reasonably full knowledge of the data and of their possible correlatives. Such knowledge had usually been acquired only by men of medical or of hygiene training and experience. The Medical Research Committee had resolved to establish a statistical department, the services of which might possibly be available to give advice and assistance to health officers. Among other subjects calling for extended investigation and observation were the vehicles and channels of infection, for the views as to aërial infection had been revolutionized within the past thirty years. At one time almost every zymotic was thought to be possible of conveyance through the atmosphere, and sanitary measures were framed accordingly. Now some medical officers of health ventured to treat almost all kinds of cases together in a common ward separated from each other only by a bit of tape. The investigation of the rôle of the insect still remained

charged with potentialities. The question of the influence of the human soil or the susceptibility of the individual, and along with it heredity in the onset of disease, was only beginning to be scientifically investigated. Sir SHIRLEY MURPHY said that Professor Hay had rendered a great public service in calling attention to the need for more exact knowledge. Public health officers served the public, and the public looked for results. In the past there had been too great an inclination to associate the declining death-rate with the efforts of public-health officers, and the natural factor had not been taken into account. There were, moreover, other factors, such as personal susceptibility and heredity, which could not be overlooked. Dr. HELEN MACMURCHY urged the importance of more definite scientific investigation into the cause of infantile mortality. Dr. T. F. DEWAR, Dr. J. R. CURRIE, Dr. WILLIAM GEMMELL, and the PRESIDENT also took part in the discussion.

Reviews.

PSYCHIATRY.

PROFESSOR DERCUM, the well-known American neurologist, realizing the urgent needs of the medical student and the practising physician, presents a valuable clinical manual of mental diseases[1] based upon his annual course of lectures at the Jefferson College, Philadelphia. He writes in a clear, direct, and practical manner, following out his principle that insanity must as far as possible be approached from the standpoint of practical medicine; and he emphasizes the importance of recognizing the earliest signs of mental disorder by the family physician and practitioner.

In classification, we note that Professor Dercum considers delirium, confusion, and stupor as closely related clinical forms constituting a group of mental affections separate and distinct from other mental disorders. Delirium is the result of the action of microbial and other toxins upon the cortex, while in confusion and stupor there is the added factor of exhaustion. This group is characterized by the presence of hallucinations, illusions, unsystematized delusions, incoherence, and confusion.

The symptom group of melancholia-mania differs radically from the previous group. "In melancholia," he says, "the patient passes through a phase of emotional depression; in mania, through a phase of emotional exaltation; and in circular insanity through both of these phases one after the other." The author follows Kraepelin in considering this group collectively under the term "manic-depressive insanity," the tendency is to recovery from individual attacks but there is a liability to periodic recurrence.

Another group of mental diseases is recognized by Dercum as essentially degenerative in their nature. "Among the younger patients this gives rise to the various forms of juvenile insanity, among the older to various forms of delusional insanity." He follows Kraepelin in grouping the former under the general term of "dementia praecox" and the latter under the term "paranoia." We suggest that the terms "insanity of adolescence" and "systematized delusional insanity" may convey more meaning. He classes these forms into a natural group, to which he gives the general term "the heboid-paranoid group." Melancholia-mania and the heboid-paranoid group are essentially neuropathic in nature.

The next group is the psychasthenia of Janet, but the author objects to this term on etymological grounds, asserting that the expression "soul weakness" can hardly be regarded as illuminating, and he substitutes the very awkward term "neuropathic neurasthenia."

The last group in the author's classification includes all the dementias.

The relation which these various five fundamental groups have to internal medicine—namely, to the various infectious diseases, to the intoxications, to the disorders of metabolism, to the various disorders of function and disease of the viscera, to the disorders and diseases of the nervous system, and lastly, to the physiological emergencies incidental to the sexual life of the female—pregnancy, parturition, lactation, and the climacterium—are fully considered.

We frankly confess we do not like such terms as "heboid-paranoid," and we find no comfort for our ignorance of the pathogenesis of mental disease by the coining of such terms. Perhaps, however, the author in the present imperfect state of our knowledge is wise to omit theories regarding the pathology of insanity which are not supported by facts and observations. The book doubtless was in the press prior to the publication of Noguchi and Moore's paper on spirochaetes in paralytic brains, and in future editions we expect to find the term "parasyphilis" replaced by "parenchymatous syphilis."

We cannot but feel that students and practitioners would derive great help and their interest would be increased if textbooks gave a larger number of word pictures of cases exemplifying the principal types of insanity. Dr. Dercum does not in our judgement rely upon this method so much as he might, having regard to his large experience; still he relates some remarkably interesting cases—for example, two twins who early in life suffered from similar delusions and led almost identical eccentric lives. Of the value of such teaching we may recall what Lessing said concerning Shakespeare's "word pictures" of insanity: "He alone (of the dramatists) has portrayed the mental diseases, melancholy, delirium, lunacy, with such inexpressible and definite truth that the physician may enrich his observations from them in the same manner as from real cases."

The work contains a cursory consideration of the "psychologic interpretation of the symptoms," from which it may be inferred the author is not a Freudian, for he criticizes Freud's doctrines and treatment by psycho-analysis, although he admits "There is in all probability a germ of truth in the theory of the origin of the phobias and kindred phenomena." The author's remarks on this much disputed question may perhaps be quoted with advantage:

> By means of a method termed psycho-analysis, the hidden origin of various phobias and other obscure mental states is supposed to be unravelled, painful and long repressed memories are given free vent and the patient cured. Unfortunately Freud and his followers have been obsessed by the single factor of sex. In their eyes every symptom, every phobia, delusion, impulse, or obsession has its origin in the repressed memory of some sexual experience, some sexual trauma received in childhood; every dream has a sexual origin, has a sexual content and a sexual significance, and, according to Freud, dreams thus constitute a powerful factor in the production of mental symptoms.

The author states that the theory of the reduction of the field of consciousness is as applicable to the explanation of hysteria and hypnosis as to dementia praecox, and yet these affections differ widely. This difference the Freudian theory of repressed impulses fails to explain.

In the chapter on treatment Dercum says that "insanity when once established offers in a large number of cases so little prospect of improvement or recovery that prevention becomes of prime importance." He rightly emphasizes the overwhelming importance of alcohol and syphilis in the production of the neuropathic inheritance, and it is interesting to note that he considers that these poisons act not only by damaging the blood vessels, the heart and the nervous system and viscera generally, "but that they directly influence the ductless glands, the pituitary, the thyroid, the testes and ovaries," upon the integrity of which depends the harmonious and full development of the organism. Alcohol and syphilis work together, and the combination is a most potent cause of impairment of the organism, "an impairment which we have reason to believe persists through generations."

The therapeutic measures and the nursing and care of the insane are dealt with in a practical and suggestive manner, and we observe that Professor Dercum approves of the procedure of Pfisterer of giving morphine (grain $\frac{1}{6}$ to grain $\frac{1}{4}$) together with scopolamine (grain $\frac{1}{100}$) hypodermically before administering the warm bath to struggling restless cases requiring this treatment.

We can hardly speak of this work as a learned and comprehensive treatise on mental diseases; its chief merit, and that is considerable, lies in the fact that it reflects the

[1] *A Clinical Manual of Mental Diseases.* By Francis X. Dercum, Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Philadelphia and London: W. B. Saunders Company. 1913. (Med. 8vo, pp. 425. 13s. net.)

wisdom, knowledge, and experience of an able physician who has had a large experience in nervous and mental diseases.

MENINGOCOCCAL MENINGITIS.[2]

An excellent account of the way in which meningococcal meningitis is diagnosed and treated in the children's wards of the Mount Sinai Hospital in New York has been written by HEIMAN and FELDSTEIN. It begins with a summary of the history, bacteriology, and epidemiology of this very fatal disease, which has been prevalent in New York on and off for the last five-and-twenty years. Its occasional epidemics occur in the most crowded quarters of large towns and in overcrowded barracks, and their mode of spread indicates that the disease is but mildly contagious; in general hospitals it is practically not contagious at all, a fact explained by the general absence of meningococcus carriers in such institutions. The symptomatology, diagnosis, and complications are discussed very thoroughly, and the last sixty pages of the book are given to treatment. At the time when venesection was a panacea, it was, of course, tried in meningococcal meningitis, and, equally of course, without any success. Then followed a period when drugs of every sort were employed, but all were failures. Repeated hot baths, repeated lumbar punctures, permanent drainage of the spinal theca, the intraspinal injection of antiseptic solutions and of diphtheria antitoxin were all successively tried, and all proved valueless in turn when used on the large scale. It was not until the specific serum therapy of meningococcal meningitis was introduced in 1906 by Kolle and Wassermann, by Jochmann, and by Flexner, that any curative treatment for the disease could be said to exist. Given by subcutaneous injection antimeningococcal serum is a failure, and it was not until the importance of administering it by intrathecal injection was emphasized by Flexner that the utility of such serums became apparent. They are prepared in several different ways; in all the animal is immunized by injections of dead cultures of the coccus at first, later by injections of the living cultures. The serums contain immune substances that inhibit the growth of the meningococcus and also produce its disintegration directly; in addition they contain bacteriotropins or opsonins that stimulate phagocytosis, and anti-endotoxins that neutralize the poisons produced by the coccus. It is upon these three properties that the curative powers of antimeningococcal serum depend; the serum also contains antibodies that bind complement, agglutinins, and precipitins, none of which are supposed to be of therapeutic importance. In practice the serum is administered as follows: Lumbar puncture is first performed, and cerebro-spinal fluid is allowed to escape until its pressure has fallen to about normal—that is to say, to from 30 to 50 mm. of water. Then the warmed serum is allowed to run in slowly by gravity, the time thus occupied being rarely less than ten minutes. Afterwards the patient is kept in bed for several hours, with his head low and the foot of the bed raised 10 in.; this process aids the passage of the serum into the cranial cavity and the ventricles of the brain. The authors advise that artificial respiration should be performed on all the patients for a short time after the injection has been given. As for the dosage, it is rarely advisable to inject a volume of serum greater than that of the cerebro-spinal fluid withdrawn. In infancy 10 or 15 c.cm. are usually injected, in adults 30 or 40 c.cm. As a rule three or four full doses are given at intervals of twenty-four hours, and more may be needed later and at longer intervals; the state of the cerebro-spinal fluid is the guide here, and the treatment should be continued until the fluid is clear, lymphocytic, and free from meningococci. Statistics are quoted showing that this mode of treatment reduces the high mortality (60 to 80 per cent.) to a half or even a quarter. It is, of course, suitable for sporadic as well as for epidemic cases of the disease. The book is well written and printed; it gives a clear and brief account of the whole subject, and may be warmly recommended to the attention of all medical practitioners who have to deal with meningococcal meningitis.

[2] *Meningococcus Meningitis.* By H. Heiman, M.D., and S. Feldstein, M.D. With an Introduction by H. Koplik, M.D. Philadelphia and London: J. B. Lippincott Co. 1913. (Med. 8vo, pp. 325; 4 plates; 31 figures; 4 charts. 12s. 6d. net.)

THE BLOOD CELLS.

WE have read Dr. GRUNER'S *Biology of the Blood Cells*[3] through from cover to cover, and amongst the various impressions gained by carrying out this pleasant but arduous duty, one stands out in greatest prominence, and that is that the volume has no rival written in the English language; indeed, we doubt whether a similar volume exists in any language. The reader must not expect the time-honoured type of book dealing with clinical descriptions of blood diseases and the blood pictures associated with them, for Dr. Gruner has set himself a task of far greater magnitude. He has cut himself adrift from any idea of placing before the reader the most recent blood maps as shown in familiar and unfamiliar clinical states, and instead asks him to join in a minute study of the histological elements of those parts of the body which have to do with blood-cell genesis. He takes it for granted that the reader has long ago become dissatisfied with the attempts that have been made in the past to study the complicated changes met with in disease by a mere reference to blood pictures, blood counts and haemoglobin estimations. Indeed, we are not sure that the reader, after the perusal of the volume, will not find that Dr. Gruner has almost given a death blow to such studies, and that we are in future more likely to get at the estimate of blood diseases by trephining the bones of the body to secure pieces of the marrow for minute histo-chemical examination, or to remove portions of the splenic, lymphatic, or other haemopoietic tissue for a similar purpose.

It is quite impossible to do justice to this book by any piecemeal analysis, for a review of such a kind would imply endless cavilling over points which Dr. Gruner has put before the reader with all the finality of a master of his subject. All that can be done is to point out that Dr. Gruner has put before the reader what is known of the origin, the development, the metamorphoses, and the progressions of the cells which appear in the blood stream or which give rise to such cells. In the carrying out of this plan he has made excursions into the intricate by-paths of histology, microchemistry, and comparative anatomy, which are closed to all but experts, and has in a most lucid manner illuminated these excursions by means of his encyclopaedia knowledge and high literary gifts; something like fourteen pages are occupied by the bibliography, and over thirty pages by a glossary; to the latter we would specially call attention, for it really is the talisman which makes the volume intelligible to the reader, and renders possible the proper appreciation of what appears in *Folia Haemotologica* and other current publications dealing with diseases of the blood.

One final word is necessary, and that is that another impression that the reader will experience is that Dr. Gruner has followed too faithfully the generalizations of Professor Pappenheim, to whose work he frequently refers with the enthusiasm of a devoted follower, even to the use of most complicated diagrams, and annoyingly frequent footnotes. However, the reader has only to practise ordinary industry to find within the pages of this volume the very real first-hand information which Dr. Gruner has contributed to the elucidation of the many vexed problems connected with his subject. As an example reference may be made to the subject of "round-celled infiltration," a phenomenon familiar to every histologist, owing to the frequency of its occurrence. But to how few of us has such a phenomenon conveyed any meaning! Here will be found a masterly consideration of the subject, and suggestions which throw a flood of light upon its significance. If we are not greatly mistaken the histological descriptions given by Dr. Gruner of the spleen and lymphatic glands are the best and fullest in our language. To descend to details in this way is to belie our earlier remarks on the inefficacy of such a procedure to show the value of this volume. For years to come Dr. Gruner's book will be a source of information and suggestiveness without a rival, and a vade-mecum for every student of blood diseases and their true interpretation.

[3] *The Biology of the Blood Cells. With Glossary of Haematological Terms for the Use of Practitioners of Medicine.* By O. C. Gruner, M.D.Lond. Bristol: J. Wright and Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent and Co. 1913. (Roy. 8vo, pp. 404; 75 figures. 21s. net.)

ACUTE TUBERCULOSIS.

ACUTE tuberculosis, and especially the acute form as it attacks the lungs, presents many interesting problems for study. The widespread occurrence of the chronic condition and the comparative rarity of the acute infection of the lungs and the body generally calls for explanation, and a good account of the whole subject has recently been prepared for English readers in the form of a translation of Professor CORNET'S monograph,[4] of which a second German edition was published in 1913. The translator, Dr. F. S. TINKER, has followed the author's text with fidelity, but has not in all cases succeeded in unravelling complications due to overuse of parenthesis. The exact significance of many such sentences would have been better conveyed by a less faithful but more simple arrangement.

Professor Cornet defines the disease as due to a sudden flooding of the vascular system with a large quantity of tubercle bacilli. The point of entry into the blood stream is usually through a vein, and the greater relative frequency of the disease in the lungs is simply due to the fact that they form the first filter through which such infected blood must pass. By far the larger number of the bacilli are arrested in the passage.

Opinions have differed as to the manner in which bacilli are enabled to pass in large quantities through a vessel wall. By some it has been regarded as essentially due to a large tuberculous focus bursting into a vessel from without, but Dr. Cornet inclines to the view that the commoner cause may be traced to the presence of minute tuberculous foci in the vessel walls themselves, and he is of opinion that such minute vascular lesions would be found in considerable quantities if they could be systematically searched for. He does not believe that any increase of bacilli takes place in the blood stream itself. A very large and simultaneous infection must take place in order to produce the acute disease, and no definite relation can be traced between the common chronic infection producing cases of consumption and the rapidly fatal miliary tuberculosis in which all the tuberculous deposits appear to be of the same age. The degree of severity of the fever does not depend upon the amount of local disease nor upon the size of the focus from which it may be assumed to have arisen. The activity or vitality of the infecting bacilli may vary considerably, and this variation is reflected in the amount of general illness produced, often indicating a profound poisoning where local signs are by no means extensive. Apart from the presence of actual disease in vessel walls, there are many sources of infection to be recognized, and amongst these the latent tubercle in bronchial and other glands may be placed first. In many cases, also, the possibility of a mixed infection must be borne in mind, whereby the symptoms may be complicated to some extent, but as a general rule the severity of the illness bears a direct proportion to the size of the dose of the poison that has found its way into the blood stream. It follows that the disease is most marked in the most vascular tissues, and this is held to explain the common occurrence of tubercles in the choroid in cases in which they may ultimately be found to be sparsely scattered in less vascular parts.

The whole subject, in all its bearings, is fully discussed, and the volume will be found to present many considerations that do not appear in textbooks. A full bibliography of nearly 400 references is appended.

CHRONIC PHOSPHORUS POISONING.

DR. VALLARDI in his monograph on chronic phosphorus poisoning[5] starts with an interesting account of the various trades (chiefly, of course, match making) in which phosphorus is used. He then discusses pretty fully necrosis of the jaws, the chief local manifestation of phosphorus poisoning, gives full details of five cases of "phossy" jaw and statistical tables, with brief abstracts of 48 cases of necrosis of the jaw, collected from various sources in Italy alone. The next section is devoted to manifestations of phosphorism other than necrosis—for example, blood changes, etc. In addition to the clinical material and observations the author has experimented on animals and tried to reproduce, as far as possible, in them the conditions which give rise to chronic phosphorus poisoning in man. He failed, however, to produce in animals anything approaching "phossy" jaw such as we see it in man. But when they were chronically poisoned with phosphorus by way either of the respiratory or the gastric system, separately or conjointly, definite changes were observed in the blood, in the glands (especially the liver), and in the processes of tissue metabolism—changes which, though not specific, yet on the whole gave a symptom complex which was characteristic. Radiographs and photographs of men and women affected with chronic phosphorism are given. An adequate bibliography is appended, and the index is sufficiently full for practical purposes, so that on the whole the book can be confidently recommended both to those specially interested in the subject and for the general reader of Italian. If it is true, as the author calculates, that an average worker at a match factory passes through his, or more often her, hands from 150,000 to 175,000 matches a day, it is perhaps rather surprising that phosphorus poisoning should not be more common than it is. The greater number of women affected is due more to the greater number of female workers employed than to a special susceptibility on their part. A curious fact mentioned by most writers on the subject is the appearance of symptoms of phosphorism months or even years after the subject has ceased to come in contact with the fumes of phosphorus. Dental caries does not seem to be necessary, for symptoms have been noted where no dental disease could be detected.

THE HISTORY OF ST. GEORGE'S HOSPITAL.

THE first part of Mr. G. C. PEACHEY'S *History of St. George's Hospital*[6] was reviewed in the BRITISH MEDICAL JOURNAL of July 16th, 1910, and the second in our issue of July 27th, 1912. In Parts III and IV the story of the hospital from year to year is told in detail. Mr. Peachey is not a picturesque historian; he has the cult of the document, and this makes the work somewhat heavy reading for all but those to whom nothing concerning the hospital to which they are attached by some personal or sentimental link can seem trivial. Among the early supporters were numerous royal personages, nearly the whole bench of bishops, and many members of the aristocracy. One of these, it is interesting to note, was Lord Chesterfield, whom we should scarcely have expected to find among the philanthropists. Of the prominent persons who contributed we may mention Sir Robert Walpole, David Garrick, Beau Nash, Sir Hans Sloane, Dr. Richard Mead, Dr. John Arbuthnot, and Sir John Pringle.

The hospital was opened on January 1st, 1733-34 with 30 beds; when the building was completed in 1745 there were over 250. From the first there was an out-patient department. In July, 1735, some eighteen months after the hospital was opened, it was proposed that a portion of the building should be set apart for poor pregnant women; and it was decided that when the new wing was completed the scheme should be carried out. Rules for this lying-in department were drawn up. In these we note that it was provided that, in addition to a head midwife and four nurse apprentices, one or more men-midwives should be appointed to have the superintendence of the ward and that "their business be to examine and receive patients in that ward and to lay [that is, deliver] women as occasion shall require." It was enjoined that special care should be taken that the women received for lying-in be used "with all imaginable tenderness and decency," and never made the subject of experiments. The scheme fell through, but as Mr. Peachey says, the proposed regulations are of importance as being the first of which we have cognizance and as those to which the governors of the Middlesex Hospital looked for guidance in 1747 when they established a lying-in department—the first in England outside the workhouse infirmaries. It may be recalled, however, that one now known as the Rotunda had been opened in Dublin by Bartholomew

[4] *Acute General Miliary Tuberculosis.* By Professor Dr. G. Cornet. Translated by F. S. Tinker, B.A., M.B., B.C., M.R.C.S., L.R.C.P. London: John Bale, Sons, and Danielsson, Ltd. 1914. (Med. 8vo, pp. 115. 6s. net.)

[5] *Fosforismo Cronico.* Del Dr. C. Vallardi. Milano: A. Vallardi. 1914. (Med. 8vo, pp. 238; 11 plates.)

[6] *The History of St. George's Hospital.* By George C. Peachey. Parts III and IV. London: Printed for the author by Bemrose and Sons, Ltd. 1913. (5s. net.)

Mosse two years before. Unlike the St. George's authorities, the governors of the Middlesex Hospital would not allow a woman to act as midwife; the women were attended by a physician man-midwife, a surgeon man-midwife, and a physician man-midwife extraordinary. Mr. Peachey reconstructs from contemporary prints a hospital ward of the first half of the eighteenth century. Medical and surgical cases lay side by side without any distinction but that of sex.

> The wooden four-post tester bedsteads, about fifteen in each ward, were provided with curtains to keep out the draught, and had mattresses of straw or flock covered with ticking. The bedding consisted of long-cloth sheets, blankets, pillow bier, and coverlid. Under each bed was a box to contain the patient's foul linen.

There was, as at Guy's and the other London hospitals, an official bug catcher. Operations were at first performed in the wards; it was not till 1754 that an operating theatre was provided. In April, 1737, the deadhouse was still used for the cold bath; the hot bath was in a separate building, and was prepared for the use of patients on three evenings a week.

During the first twelve months the number of patients admitted was 840. Consumption heads the list of diseases and remittent fever comes next; there is no mention of cancer unless it be included among the cases of "cachexia," of which there were nine. There were also nine cases of lues venerea, and a considerable number of cases of syphilis were treated among the out-patients. As early as 1734 mention of a salivating ward is made in the minutes. What salivation meant in those days may be gathered from Grainger, who, in his *Essay on West Indian Diseases*, says:

> When the disease is on the decline, in order to secure the habit from any latent taint, the best plan is to maintain a gentle salivation for six weeks or two months; but the quantity of spit should never exceed a quarter in the twenty-four hours.

This was for yaws, but there is no reason to believe that the treatment for syphilis was milder. Well may Mr. Peachey ask, if this was a gentle salivation, what could have been the extent of a mild one?

These instalments of Mr. Peachey's work, which is evidently a labour of love, throw many sidelights on the state of medical knowledge and on hospital administration in the eighteenth century. His book is a mine in which the future historian of the medical profession in London will find a large amount of information.

HAIR DYES.

If there is one branch of applied science which has hitherto remained a closed book, both to the general practitioner and the dermatologist, it is that concerned with the artificial tinting of hair. The main reason for this is to be sought in the fact that the practice and knowledge of the processes employed is mainly possessed by a class of persons of the beauty specialist type, many of whom derive considerable profits from their trade, and all of whom, both manufacturers (who are, we believe, almost exclusively French) and operators guard their secrets with a most jealous commercial care.

The little book by Dr. ROUSSEAU on the hair dyes of the para-phenylene-diamine type[7] is designed to enlighten the medical public and stimulate the interest of the Legislature to frame regulations against an unrestricted sale of the products used for dyeing hair. It is written on highly scientific and practical lines, and fulfils its purpose in a manner deserving of very cordial congratulation.

The author introduces his subject by explaining that there are three distinct methods of dyeing the hair: (1) Rapid or "instantaneous" (that is, twenty to forty minutes) by the para-phenylene-diamine group; (2) progressive (several sittings required), with metallic salts of bismuth, copper, lead, silver, etc.; and (3) a simple colouring process with henna pastes and solutions. The results usually obtained with the last two are much inferior to those obtainable in skilful hands with members of the first group. They are uncertain, often unequal in colour values, tedious in application, and neither permanent to any degree nor natural in effect. It is not surprising, therefore, that both hairdressers and their sitters are tempted to forget the risk of occasional idiosyncrasy to the aniline preparations, which are so rapid in action and so much nearer to Nature in their effects, and cases are not uncommonly met with in which personal vanity is so strong a factor that a known hypersusceptibility is deliberately ignored both by the sitter and the well-paid operator.

The author treats his subject in nine chapters, which include a discussion of the chemical nature of the diamines and phenols employed, the theory of mordants illustrated by microscopic sections of dyed hair, a study of pathological effects both human and animal, and a test, first suggested by Sabouraud, by means of which it becomes a simple matter to discover hypersusceptibility in an individual case. The whole subject is dealt with in a most masterly way, and the book can be confidently recommended to any practitioner with a knowledge of French and a desire for information on this subject.

[7] *Les teintures capillaires à la p. phénylène diamine. De leur interdiction aux idiosyncrasiques.* Par le Dr. E. Rousseau. Paris: A. Legrand. 1914. (Pott 4to, pp. 96; 3 figures. Fr. 3.)

NOTES ON BOOKS.

THE sixth edition of the *Principles and Practice of Gynecology*,[8] by Professor E. C. DUDLEY, M.D., of Chicago, has been thoroughly revised, and the book still deserves the praise which was given to it in the review of the fourth edition, when it was stated that as a textbook of surgical gynaecology there was none better in the English language. The feature of the book which lies probably at the root of its popularity is that the author deals with the subjects in physiological and pathological sequence—that is to say, he deals with infections and inflammations together, with tumours together, and so on. In this way the unity of the reproductive system from both points of view is kept constantly in mind. The illustrations have always been a strong part of the book and their number has been increased. They include several series, as, for instance, a set illustrating by diagrammatic drawings the operation of supravaginal hysterectomy.

In *The Origin and Development of the Lymphatic System*[9] Professor FLORENCE SABIN gives a full and interesting account of the growth of knowledge regarding this branch of anatomy, leading up to the conclusion that the lymphatics have arisen by outgrowth from the venous system. Much of the book is naturally concerned with the controversy as to whether the system arises independently of the venous system or not. The author adduces a considerable amount of weighty evidence for the affirmative side, and in so doing combats the view of Huntingdon and MacClure. The book in plan and substance is alike excellent, while it is written with a wealth of knowledge and an amount of confidence which go far to convince the reader of the soundness of the author's case.

Mr. JOHN ROLAND'S novel, *The Good Shepherd*,[10] contains some fresh and vivid sketches of village life in the Austrian Tyrol. Mr. Roland's peasant is of a very different type from the stock peasant of fiction. The inhabitants of Thiersee have been drawn from life and live again for us in these pages, wherein the author describes a simple, kindly, hard-working people with the insight born of understanding and compassion, and in so doing has, almost unconsciously, revealed the cramping effect of the narrow village life upon a slow-witted, yet passionate, race. Incidentally he has also provided his readers with a very interesting psychological study in this story of a young American doctor who buries himself in a Tyrolese valley, and in tending the ills of others finds balm for his own wounds. But it is for the pictures of village life that the book will be read, and these should appeal with special force to all who have fallen under the spell of the beautiful land which Mr. Roland has described with such intimate knowledge and skill.

[8] *The Principles and Practice of Gynecology.* By E. C. Dudley, A.M., M.D. Sixth revised edition. London: H. Kimpton. Glasgow: A. Stenhouse. 1913. (Roy. 8vo, pp. 795; 24 plates; 439 figures. 25s. net.)

[9] The Johns Hopkins Hospital Reports Monographs, New Series, No. V. *The Origin and Development of the Lymphatic System.* By Professor F. R. Sabin. Baltimore: The Johns Hopkins Press. 1913. (Imp. 8vo, pp. 94; 19 figures.)

[10] *The Good Shepherd.* By John Roland. Edinburgh and London: William Blackwood and Sons. 1914. (Cr. 8vo, pp. 367. 6s. net.)

THE popularity of St. Moritz as a winter resort may have caused it to be forgotten that it claims also to be recognized as a mineral water station. The new Stahlbad has been enlarged and natural carbonic acid iron baths are available, as well as a dietetic institute under medical direction.

DENTAL SEPSIS.

By J. G. TURNER, F.R.C.S.

(Continued from page 1249.)

III. PROPHYLAXIS.

THE answer to the third question is best sought for by an inquiry as to causation, and every tooth-bearing animal may be studied with advantage. The mouth is obviously fouled from without. The infant's mouth is as early infected as any other of its outward openings, but, in general, the capacity for injury depends on stagnation. The germs then have time to establish themselves. If sticky food be added they are provided with unlimited culture media. Such haphazard conditions may not suit all germs, but in fact do suit many, and experience tells us that the net result is unfavourable to human happiness.

FOOD.

What food, then, is sticky? Above all, fine-ground flour.

Our inquiry may run on these broad lines: What is the relation of dental sepsis to the occurrence of micro-organisms in the mouth and to the eating of fine-ground flour? Shortly, we may ask the relation of dental sepsis to germ-carbohydate stagnation.

I have examined fish, and have never yet found any evidence of dental sepsis among them. I made films of scrapings from the mouth of a large number of deep-sea fish very shortly after capture, and could demonstrate no micro-organisms. There was also not even a shred of seaweed in their mouths. In the absence of all stagnation there was no dental sepsis. In the large collection of skulls of wild carnivora (tigers, etc.) at the South Kensington Museum I found no *post-mortem* evidence of dental sepsis other than abscess following fractured tooth, except in the case of an old hyena from Somaliland, presented by Dr. Drake-Brockman. The sepsis in this case probably followed some gross injury to the gum by coarse food. Among domesticated carnivora (dogs) evidences of dental sepsis, especially foul teeth, and alveolar disease are common. Bread, cake, and biscuits are part of the daily food of the domestic dog.

Examination of skulls of wild monkeys at the South Kensington Museum showed 0.53 per cent. of teeth carious, and 5.31 per cent. of skulls containing carious teeth. The total of skulls was 433, containing 12,249 teeth; 58 teeth had been lost *ante mortem*. The skulls of 72 monkeys which had died at the London Zoological Society's Gardens gave 16.66 per cent. containing carious teeth, and 2.001 per cent. of teeth carious. I do not know much of the feeding habits of wild monkeys, but it seems probable that nuts or plantains may be responsible for the occurrence of dental caries. Domesticated monkeys are largely fed on bread. Pyorrhoea alveolaris occurs among wild monkeys, but only in its localized form. The bone is found destroyed between two teeth, the rest of the mouth being sound. In this pocket coarse spikes of vegetable origin are found, and the conclusion is irresistible that the disease was the result of gross trauma while eating.

The skulls of captive monkeys, on the other hand, show widespread alveolar changes comparable to what is found in human beings. Among wild monkeys, again, tartar occurs in small amounts, but among the captive monkeys in very considerable quantity.

In skulls of wild grass-eating animals I have seen no *post-mortem* evidence of dental sepsis. Films from the mouths of domesticated cattle show large numbers of bacteria, but, except mycotic infections, I know of no resulting disease condition. This mycotic infection is of the same nature as the localized pyorrhoea alveolaris of wild monkeys. To this category belongs also the alveolar disease of the domestic horse; in these animals spikes of chaffed hay get speared into the gum in mastication, causing localized but not generalized disease.

Among humankind we of to-day are the most notable consumers of sticky carbohydrates, and in the matter of dental sepsis we hold an unenviable pre-eminence. Practically 100 per cent. of the population of Great Britain suffer from dental caries. Practically 100 per cent. are affected by marginal gingivitis or its later developments. Extensive deposit of tartar is to be found in almost every mouth. The number of teeth lost *ante mortem* is beyond counting. Before the introduction of fine milling things were not so bad. Of 19 skulls from a cemetery disused since 1840, carious teeth were present in 7 and 5 showed *post-mortem* signs of pyorrhoea alveolaris. Of 288 teeth present, 15 showed caries and 28 teeth had been lost *ante mortem*.

Of 40 skulls from a cemetery disused since 1830 carious teeth were present in 14 and 14 showed *post-mortem* signs of pyorrhoea alveolaris (7 of these are queried—that is, were very slight); of 567 teeth, 55 were carious; excluding old skulls, 17 teeth had been lost *ante mortem*; 17 skulls showed deposits of cervical tartar. In many of the skulls the evidences of pyorrhoea were limited to the molars, even to only one or two of them. Of 791 teeth found in maxillas and mandibles representing 90 skulls believed to be remains of the plague of London and now in the possession of University College, 19.5 per cent. were carious, and 35.5 per cent. of skulls contained carious teeth; 439 teeth had been lost *ante mortem*. Most of the jaws showed some signs of alveolar destruction (pyorrhoea alveolaris) but only few well marked cases were found. Cervical tartar was also present in most.

Of 75 crania from the collection in the crypt of Rothwell Church, dating back at least 300 years, 16 contained carious teeth; 31 out of 440 teeth present were carious (7.04 per cent.), and 30 teeth had been lost *ante mortem*; 25 skulls showed evidence of pyorrhoea alveolaris. This was found among the molars only, and was bad in only 2 cases. Cervical tartar was present in 35 skulls.

The cereal food of all these groups was, as compared with ours of to-day, coarsely ground, and the local results of dental sepsis—decay of teeth and peripheral alveolar caries (pyorrhoea alveolaris)—are correspondingly less. The tartar present is mostly limited to a small ring at the neck, and probably represents the accumulation of a lifetime.

Of 435 teeth which had fallen from the sockets of ancient Egyptian skulls of the twenty-fifth to thirtieth dynasties, 16.78 per cent. were carious. Many of the cavities were very small, and would probably not have been found but for the minute examination permitted by their having fallen out. Only one tooth, a molar, showed evidence of pyorrhoea alveolaris. Professor Karl Pearson's assistants kindly charted 104 maxillas of these dynasties: 42 of these contained carious teeth; 738 teeth were present, with a percentage of 9.75 carious; 133 teeth had been lost *ante mortem*. The cereal food of these people was coarsely stone-ground.

Thus in three important points of dental sepsis the coarser cereal feeders compare favourably with the fine-ground feeders. There is one point, however, in which they compare less favourably—namely, in the occurrence of dental abscess. Dental abscess was common as a result of exposure and death of the pulp consequent on excessive grinding down of the teeth. This was commonest in the case of the first permanent molars, and accounts largely for the teeth lost *ante mortem*.

The relation between dental sepsis and sticky vegetable food is well shown by the state of many of the jaws of the Polynesian skulls preserved in the museum of the Royal College of Surgeons. In many of the islands cocoanut is a staple food, and is often so prepared as to make a very sticky food. The jaws above alluded to show extensive cervical caries, and also alveolar destruction (pyorrhoea alveolaris) especially among the molars. In several of the skulls this condition is accompanied by temporo-mandibular arthritis.

THE PREVENTION OF DENTAL SEPSIS.

The causation of dental sepsis in man may be summarized thus: Germs are present in every human mouth. If they are allowed to stagnate they will multiply and produce evil results in the absence of any other factor. In this respect we may compare the solid stagnation mentioned above and the evidences of pyorrhoea alveolaris in the comparatively clean-eating early English skulls. If another factor—sticky, starchy food (fine-ground flour in particular)—be added, dental caries, pyorrhoea alveolaris, and food decomposition follow, increasing in extent with the stickiness of the food. The deposition of tartar is dependent on stagnation, and is found to some extent in most adult human skulls, but is less extensive where coarser cereals were used, and increases with the use of sticky bread-food.

In the light of these considerations, prevention of dental sepsis may be hoped for (1) by reverting to the use of

coarse-ground flour; (2) by accepting the present flour,* but insisting on actual cleansing of the teeth at least once daily—that is, by prevention of stagnation. What passes for cleansing is but an excessive rubbing of the larger, but less important, part of the visible surfaces of the ten anterior teeth. The necks and the abutting surfaces and the hindmost teeth are not touched, and it is exactly in these danger areas that pyorrhoea alveolaris, and the greater part of dental caries, arises.

Sepsis in the mouth depends entirely on the presence of teeth, and if these be kept properly clean dental sepsis and its sequellae are impossible.

Method of Cleansing the Teeth.

Cleansing of teeth is difficult. Some, indeed, deny its utility. They claim to have discovered a method of feeding which banishes dental caries. Were this claim a proven fact, there still remain alveolar infections and decomposition of stagnant débris, and examination of the "uncleansed" mouth shows that these processes are in full swing. If only for the comfort of one's neighbour the teeth should be cleansed.

Unfortunately, the shapes and arrangement of the teeth are such as to make stagnation of sticky material inevitable unless artificial means be adopted for its prevention, and the problem is to make the best use of the artificial means of cleansing at our disposal. These are toothbrush, washes, powders, and pastes, and silk (or other) thread.

The Toothbrush.

The brush should be small. The large sizes are an absurdity—there is no room in the mouth to use them.

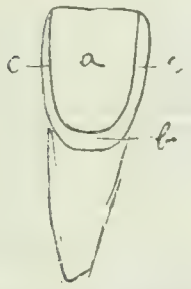


Fig. 1.—Diagram of an upper central incisor, to show the large central easily-cleansed area of its labial (front) surface *a*, and the small, less easily cleansed, and therefore neglected areas, *b* and *c*, *c*. By referring to the diagrams of vertical and transverse sections it will be seen that these are receding areas.

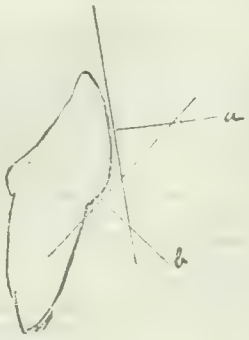


Fig. 2.—Vertical section of same. *a*, Large, easily cleaned area; *b*, small receding cervical area, the "danger zone." The tangents show the inclination of the two areas to each other, and the normals show the direction the bristles should take in brushing.

Vigorous movement can be imparted to a small brush. The parts of the teeth accessible to the brush are the vestibular (outer), coronal (eating), and lingual (inner) surfaces. For cleansing purposes the outer and inner surfaces must be thought of as having four distinct areas. First, the large, easily-cleansed central portion (*a*); second, the small receding cervical portion (*b*); third and fourth, the two lateral parts (*c*, *c*) where the outer (or inner) surface becomes continuous with the sides of the tooth. These, again, are receding areas. The large area "*a*" of the outer surfaces can be cleansed easily by brushing in a horizontal direction with the bristles normal to its surface, but the mistake is usually made of brushing only the more anterior teeth. The back teeth are missed because the curve of the dental arch is not realized, and the brush is actually directed away from them, or because the brush is too thick to pass between them and the ascending ramus. To remedy this latter point we want brushes with shorter bristles. To overcome the former the handle of the brush should be carried outwards, stretching the corner of the mouth, while the brush itself is kept pressed against the teeth Sometimes it is possible by thus drawing aside the angle of the mouth to get to the back of the last tooth standing.

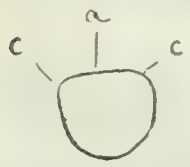


Fig. 3.—Transverse section of same towards the neck. *a*, Large easily cleaned area; *c*, *c*, small lateral receding areas becoming continuous with the interstitial surfaces.

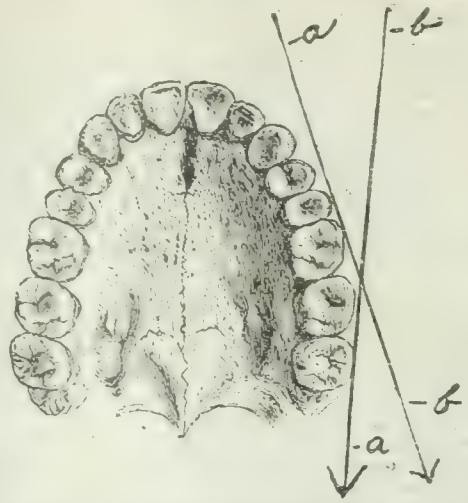


Fig. 4.—Showing how the brush misses the outside of the upper molars on account of the horse-shoe shape of the normal dental arch. The arrow *a* shows the wrong direction of the brush, *b* the right direction when the angle of the mouth is drawn aside. (Reproduced, by kind permission of Messrs. J. and A. Churchill, from Tomes's *Dental Anatomy*.)

To clean the cervical area (*b*) the brush is to be used again in a horizontal direction, but is to be tilted till the necks of the upper teeth are brushed only by the upper edge of the brush, and those of the lower only by the lower edge. In these positions the bristles are at right angles to the small cervical area (as shown by the tangent and normal in Fig. 2) and more or less parallel to the gum, which is thus protected from injury.

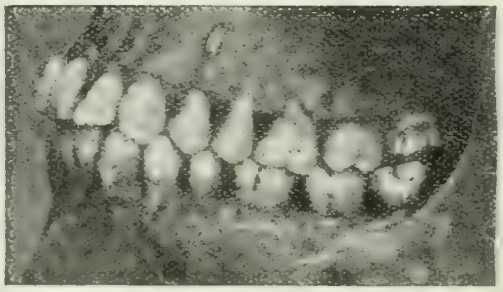


Fig. 5.—Showing that the last upper molar is often at a higher level than the others, and hence escapes the brush. As each of the two more anterior molars erupts, it occupies a similar position and so for some time runs a similar risk. The figure also shows how little room there is between the ascending ramus and the last molars, making the introduction of a long-bristled brush impossible.



Fig. 6.—End-on view of the brush tilted to clean the necks of the upper teeth.

To reach the lateral receding parts the teeth should be closed as for nibbling, or biting a thread, and the brush

* Stale bread made of fine flour eats much cleaner than new bread.

used in a vertical direction though still held with its long axis horizontal. If the brush is ridged transversely, the longer bristles will have an opportunity of getting between the teeth.

In brushing the coronal surfaces it is again the back teeth which are apt to be missed, especially when, as



Fig. 7.—A front view of the brush tilted to clean the necks of the lower teeth.

often happens, the last upper molar has not come down into horizontal alignment.

The inner surfaces of the teeth are obviously less accessible to cleaning, but no inconsiderable use may be made of the brush, and the larger and better formed the dental arch the better chance will there be of cleansing.

The brush again is to be held with its long axis as near as may be horizontal, and its bristles as near as possible at right angles to the tooth surfaces; it will generally be



Fig. 8.—The uncovered triangular part is the only part used when cleaning the inner sides of the teeth.

found impracticable to tilt the brush and so reach the necks of the teeth, but the tongue is by no means a despicable agent of cleanliness in this direction. Only an elongated triangular part of the end of the brush can be effective, but this can be moved to and fro horizontally in a very effective manner. In dealing with the front teeth the brush may be held firmly pressed against the teeth, while the head is vigorously nodded from side to side. The inner sides of the cheek teeth are dealt with by using



Fig. 9.—Showing the method of introducing the brush to clean the inner surfaces of the upper front teeth. Only a small triangular portion of the brush is in use. The bristles are as near as possible at right angles to the surfaces to be cleaned.

the same triangular part, moving the brush to and fro in the horizontal direction. On the inner sides of the teeth very little vertical movement can be effected, and the parts marked *c c* in the diagram must be cleaned by means of silk.

By careful attention it is possible to cultivate a special sense of the position of the bristles in relation to the gum edge.

The brush should be small, ridged transversely, and the bristles short and stiff rather than long and soft. A little observation will show that, though the back of the brush move freely, the ends of long soft bristles remain stationary; they merely bend to and fro in their length.

After use the brush should be well washed in a stream of cold water (under the tap) and dried, or, as Elander recommends, washed and left to soak for some hours in a weak solution of solveol, and then again washed in water and dried. Solveol is cheap, and does not injure the bristles.

Tooth Washes, Powders, and Pastes.

If the toothbrush be not properly used, the particular wash, powder, or paste matters not one iota.

Teeth are covered by a layer of mucus, to which, wherever stagnation is possible, germs and food débris are added. Mere washing the mouth with antiseptic solutions is of as much use as water to clean a duck's back, and the laboratory proof of their efficacy is beside the mark. Unless the mucus and débris be rubbed away, antiseptics cannot reach their objective, and when this is done there is not much left for antiseptics to achieve. Myself, I advise an acid tooth-wash to dissolve or assist in breaking up the mucus coat, and a tooth-powder occasionally, and to those who can afford it I recommend to finish their meals with an acid fruit while yet hungry.

Use of Silk Thread.

The use of silk thread is decried by many because of the fear of injuring the gums. Properly used there is no injury. It is our only means of cleaning between the teeth, and with our present food interstitial trouble (caries, tartar, gingivitis, and its sequelae) is bound to supervene in the absence of interstitial cleaning.

The silk should be waxed to allow of its slipping easily between closely set teeth, and it may be dipped in an antiseptic solution in the hope of carrying some up with it. Unwaxed thread will carry more, but unwaxed thread will not slip up between closely set teeth.

To explain the use of silk, the terms mesial and distal must be used. Imagine the teeth of either jaw spread out into a straight row, each preserving its relative position to its neighbour. Between the two central incisors draw a vertical line. Then the side of each tooth nearer this line is its mesial surface, that further away is its distal surface. The mesial and distal surface of each tooth has to be cleaned. These surfaces are not simple flat surfaces, but recede at the gum edge, where the diameter of the neck is less than that of the crown, and are rounded off



Fig. 10.—Showing the right method of carrying the thread well under the edge of the gum and round the tooth, and of making pressure against the surface to be cleaned.

where they become continuous with the areas marked *c c* in the first diagram.

In using the silk keep the thread always in contact with the surface to be cleaned and with that alone. Pass it gently up (or down) lightly in contact with that surface, as far under the gum as it will go and encircling as much of the tooth as possible, so as to include the areas marked *c c*. Press firmly against the surface to be cleaned, and still keeping up the pressure and encircling the tooth, draw the thread

back. If the thread be passed up gently, kept always in contact with the one tooth surface, and only the vertical movement used, no injury will be done to the gum. Injury is done (1) by passing the thread up roughly (if the teeth are closely pressed together short sideways sawing movements can be used to pass the thread, so that there is little momentum when it clears the tight area); (2) by sawing to and fro sideways when the silk is up (or down) (this is a movement of little value in cleaning); (3) by not keeping against one tooth only (the thread is either passed

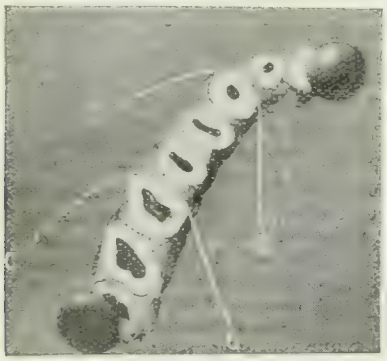


Fig. 11.—Shows the thread "as far under the edge of the gum as it will go, and as far round the tooth as it will go." If an attempt be made to clean the neighbouring tooth by carrying the thread from the position shown directly to the neighbouring tooth, the interdental gum-pad will be injured. (The teeth have been ground level with the alveolar bone.)

up against, say, the mesial surface of one tooth till it is under the gum, and then carried across to the distal surface of its neighbour, nipping the gum on its way, or it is carried up diagonally, touching an edge of the mesial surface of one tooth and an edge of the distal surface of its neighbour, in which case the gum receives the impact of the thread, and is also nipped if the thread be approximated to either tooth). These three points, together with the loss of sense of direction noted below, explain both the failure to clean by use of silk thread and the injury which causes its condemnation.

In using the silk the ends must be firmly held. This may be done with the second, third, and fourth fingers.

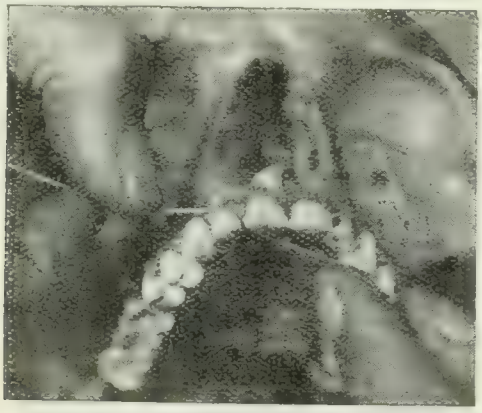


Fig. 12.—Showing a wrong method of using the silk. The thread is touching a distal angle of one tooth and a mesial angle of the next, and the interdental gum-pad is injured.

If a reel of silk be used, the reel may be held by these three fingers against the palm of one hand, and the free end of the thread twisted round the same fingers of the other hand till it cannot slip. Two hitches will suffice for this. The advantage of using a simple reel of silk is that a fresh inch can be unwound for each tooth. The thumb and forefinger are free to manipulate the silk. There should be only enough silk between the two hands to allow of a free piece of 1 in. or less between the two thumbs (or forefingers when these are in the correct position of use), the idea being that both the inner and outer sides of the tooth to be cleaned can be felt by the manipulating fingers (or thumbs) and the actual position of the thread thus ascertained. Holding the silk tense between the two hands, stretch the two fingers (or thumbs) to their full length, and place them against the thread so that it lies along the middle line of their tips and leaves a free inch or less between them. Keep the unoccupied fingers or thumbs clear of the thread; at first the natural tendency is to try to hold the thread between the forefinger and thumb of each hand, but there is no room in the mouth for both fingers and thumbs, nor can the thread be held firmly in this way.

The thumbs are used for cleaning the upper teeth, the



Fig. 13.—Showing two wrong positions: (1) where the thread is touching a distal angle of one tooth and a mesial angle of its neighbour; (2) where, owing to a loss of sense of direction, the thread on either side of a molar is carried upwards into the palate and vestibule instead of backwards round the tooth.

fingers for the lower. Beginning now at the distal surface of the last upper molar, pass one thumb back into the mouth inside the cheek, but outside the teeth, and the other inside the teeth, keeping the free inch of silk tense in the transverse direction; the sense of direction is readily lost, and most people have changed to the antero-posterior by the time the thumbs are in the mouth. With the thumbs (or thumbnails) feel the sides of the tooth to be cleaned, and so guide the thread up behind the tooth as far as it can go, keeping it lightly against the surface to be cleaned, press the silk firmly against the tooth by drawing both hands forward (in the mesial direction) and so pressing draw the silk down. In a similar way find the mesial surface of the last tooth and adjust the thread, but now the hands must make pressure backwards (in the distal direction); and again the sense of direction is often at fault, and most people begin by making pressure upwards (see Fig. 13). When the front teeth are reached,



Fig. 14.—To hold the silk fast, hitch the free end round the little finger, and bring the other part up and over the second finger, grasp the reel with the same three fingers of the other hand.

it is obvious that the direction of the free piece of silk must be antero-posterior, but the idea remains the same: with one thumb inside the teeth and the other outside, press mesially to clean a distal surface and distally to clean a mesial surface, embrace as much of the tooth as possible, and keep only to the surface to be cleaned.

The description is necessarily lengthy, and the learning undoubtedly difficult, but once learnt the process occupies but a minute or two, and the benefits are well worth the initial trouble.

I advocate teaching children the use of silk as soon as they get any permanent teeth. Inflammation of the interstitial gum pad and interstitial decay of the teeth are to

be found in almost every child, and only such means as above described can reach the seat of injury.

Where there is room a small-nozzled syringe may be used, but at best only the gross débris will be disturbed; the sticky layers on the teeth and the less roomy pockets (a syringe can only be useful when destruction of tissue has occurred) will be untouched. Under these conditions steel probes of varying fineness will be found more useful. A wisp of cotton-wool is rolled round the end, dipped in an acid tooth-wash, and with it the sides of the teeth inaccessible to the toothbrush can be vigorously rubbed. To make effective use of the probe the patient must learn the varying shapes of the teeth and appreciate their curves and complexities. As the roots become more exposed, the difficulties of cleaning are increased.

Some recommend the use of pledgets of cotton-wool held between the beaks of dental tweezers for the treatment of the marginal gingivitis of children. Tweezer beaks and pledgets seem to me too coarse to reach the small danger area—they bridge it over—and one can sometimes see that the effort to clean between the teeth has only resulted in forcing in more débris.

General Directions.

Teeth should be cleaned the last thing at night, and nothing eaten thereafter till the next day. They should

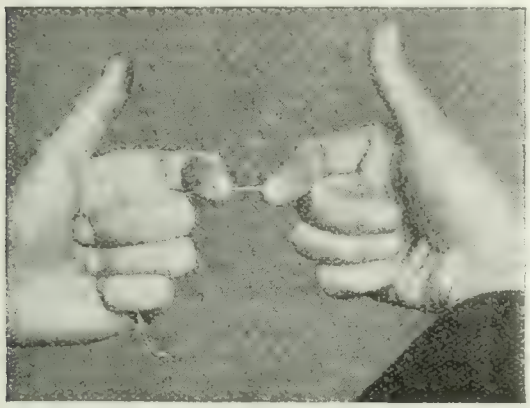


Fig. 15.—Showing how to manipulate the silk thread with the forefingers. The free end is now held by the fingers grasped against the palm.

be examined in a mirror before and after cleaning to make sure of the effectiveness of the process. A little experience will show that the large area marked *a* in the first diagram is the part which gets most of the rubbing and that the receding parts *b*, *c c*, are practically left untouched. Under these conditions cleaning the teeth a dozen times a day is of no use whatever in the prevention of sepsis; the part cleaned is exactly the part of least import in this respect.

The necks of the teeth, and the parts marked *c c* in the diagram, should be scratched with a fine steel probe or the edge of a penknife, and the amount of whitish greasy deposit scraped off noted before and after cleaning. Its presence after cleaning is a certain index that the brush and silk have not reached their goal.

A shaving mirror, with a strong electric light let into the lower part, greatly facilitates examination of one's own teeth; indeed, without a good light such examination is impossible.

Thorough cleansing once daily will suffice to keep the mouth in that state of minimal infection which, perforce, we must call healthy. Gingivitis is prevented because the germs are not allowed to stagnate long enough to multiply and infect; caries is prevented since time is not allowed for the weak acids of carbohydrate decomposition to begin their attack on the enamel; tartar is prevented because the first deposited layer is soft and easily rubbed away. If, in spite of all, trouble arise, it will always be found to be in some inaccessible—or, at least, unsearched—spot. That there are such inaccessible spots is true—a partly erupted wisdom tooth is an obvious example—but by far the major portion of dental sepsis is within our control, and some day a septic mouth may be held as disgraceful as a dirty face. Its only excuse lies in the idea of "salting," an idea to which clinical observation lends no vestige of support—the whole story is one of failing resistance.

For cleaning artificial teeth I know of no soap equal to that supplied by Lacoste et Cie, 70A, Basinghall Street. The brush supplied for use with this soap, though big and ugly, is specially chosen as best adapted to its work by reason of its length and curve and the length of the bristles.

TREATMENT.

The treatment of dental sepsis, when present, may be summed up shortly: Clean and render cleansable. The mouth must be left in such a state that the patient himself can clean it. Every filling must be flush with the surrounding tooth and smooth, all tartar must be removed, every pocket must be destroyed till the denuded root can be thoroughly cleaned. Mere arrest of the flow of pus and removal of tartar and putrid matter cannot be accounted as cure. Reaccumulation is only a matter of time, and suppuration will follow again. The details of treatment and the importance to be attached to the degree of sepsis necessarily vary with the patient. It may be noted first that infection is microscopic, and it may be asked why, in the mouth only, it must become macroscopic and tangible before deserving recognition. Resistance is an unknown and varying quantity, and can only be measured by, ofttimes sad, experience. Prevention is often a thankless task, since there is no knowing what has been prevented, but we know enough of the results of dental sepsis to make it clear that its earliest sign calls for action. The smallest degree must

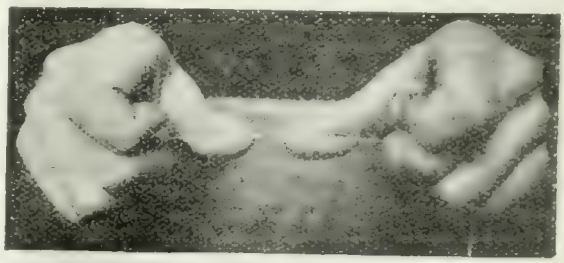


Fig. 16.—Showing how to manipulate the silk thread with the thumbs.

be treated: if left alone, the patient will lose teeth or health, or both. The treatment of the severer degrees must be decided by the condition of the patient. The presence or absence of teeth decides the presence or absence of sepsis. When the patient's health is at stake, the teeth must go. An eye for an eye and a tooth for a tooth may pass, but an eye for a tooth, a joint for a tooth, a life for a tooth—! If the teeth are but suspected in these cases they should be dealt with. Unfortunately, of all operations the medical profession appears most to dread extraction of teeth. A man who will assert that the patient is too ill to bear extraction of teeth will at the same time urge exploratory laparotomy. Two things seem to be at the back of this attitude—a failure to grasp the extent and danger of dental sepsis, and an exaggerated dread of the edentulous state. The extent of dental sepsis is a demonstrable fact, and its danger the logical deduction from modern pathology—a deduction which is daily upheld when put to the test. Daily experience also shows that the edentulous state has practically no pathogenic properties. Especially in hospital practice this is a very important point. If those who are incredulous will inquire, I am sure they will soon discover for themselves a surprising number of healthy and contented edentulous persons. When in severer cases the patient's general condition is yet sound, local measures designed to render every tooth easily cleansable may be adopted, and the patient should be warned that he had better be without teeth he cannot clean.

Cases may be considered "severer" when the teeth are loose or springy in their sockets, when the pockets are deep, when there is visible pus, when there is inflammatory swelling or hypertrophy of the gum or bone, and when there is pyorrhoea abscess.

Very loose teeth, teeth denuded to a root-apex, teeth between whose roots pocketing has extended are beyond treatment. Teeth springy in their sockets seldom recover, and teeth that have been affected with pyorrhoea abscess seldom remain healthy for long, since at the time of the abscess the root is generally denuded to its apex.

Vaccines.

My experience of the vaccine treatment of "pyorrhoea alveolaris" is not such as to lead me to recommend it. We must remember first that the tissue changes ranked under this name are but one part of dental sepsis. If one could be sure of permanently immunizing the tissues of the whole body against all the infecting germs, we should yet have to deal with decomposition of stagnant débris. No amount of vaccines can prevent reaccumulation or decomposition of débris. Unfortunately, my experience is that vaccines confer at best but a transient immunity against the organisms of dental sepsis. I have had to extract teeth for acute pyorrhoea abscess immediately after a prolonged course of vaccine treatment. Time is beginning to show us the value of the vaccine treatment of this condition, and the verdict seems to me unfavourable. Within a short period I have had to deal radically with two cases which had undergone vaccine treatment; both the local and general symptoms demanded it. As a broad rule of practice, when complete extirpation of the teeth is contemplated, I always consider the question of first preparing a vaccine, in case it be needed later for the treatment of secondary conditions, such as joint infections; otherwise I am content to treat without vaccines. The use of vaccines is recommended by some as a preliminary to extensive extraction. Neither in private nor hospital practice have I found this necessary, and it seems to me unwise to prolong the patient's risks of infection during the time required for vaccine treatment.

The Clinical Significance of Dental Sepsis.

It will be seen that I am of those who regard the recognition of dental sepsis as revolutionary in the practice of medicine and surgery. I claim that my faith is grounded on demonstrable fact.

I spend a large part of my spare time in examining skulls and noting the evidences of dental sepsis. At the same time I ascertain as minutely as possible the feeding habits of the subjects, and my deduction is that the major part of dental sepsis is the result of eating soft, sticky, starchy, and sugary food, the word "sticky" being the most important. Of the minor part some is due to stagnation and multiplication of germs with little or no food stagnation, some to gross injury in eating, and some to the results of excessive grinding (too coarse meal).

Walker and Sellards have undertaken (*Philippine Journal of Science*, Section B, Tropical Medicine, vol. viii, No. 4) a very interesting study of the relationship of different species of amoebae to tropical dysentery. They made 60 feeding experiments with different species of amoeba and entamoeba which have been implicated in the production of this disease. The experiments differ from others previously carried out in that the number of comparative tests made of different species was large; that the experiments were carefully controlled, the species of amoeba fed to the individual being recovered; and that the experiments were carried out on men. It was found that cultivable amoebae—amoebae from water, stools of healthy persons, and other non-parasitic sources—were incapable of living parasitically in the intestinal track of man. On the other hand, *Entamoeba coli* can and does live in the intestine, but it is non-pathogenic, and plays no part in the production of dysentery. It cannot be cultivated outside the body on Musgrave and Clegg's medium. Of 18 men who took *Entamoeba histolytica* as an experiment, 4, or 22.2 per cent., up to the time this paper was written, had developed entamoebic dysentery, the incubation period in these cases being twenty, ninety-five, eighty-seven, and fifty-seven days. The patients infected were those who had ingested the entamoeba from normal stools of carriers. The authors conclude that *E. histolytica* and *E. tetragena* are the same, that they are the essential cause of entamoebic dysentery, and that they are proper parasites, and cannot be cultivated outside the body. In Nature it would appear as if the infection was spread from man to man chiefly or solely by the carriers—that is, persons harbouring resisting or encysted stages of the parasite in their stools.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

A CRITICAL REVIEW OF THEIR RELATIONS.

(Continued from page 1253.)

III.

POOR LAW MEDICAL OFFICERS.

Of the innumerable battles that the British Medical Association has fought on behalf either of the medical profession as a whole, or of sections, or of individual members thereof, the very first was for the protection of Poor Law medical officers. It was a war, however, rather than a battle, for, not content with its early successes, the Association expended energy in this direction for many years in succession. It continued to do so even after it had brought into existence the affiliated but independent body specially devoted to the interests of Poor Law medical officers. Indeed, when need be, it continues to wage war through its local Divisions, its central organization, and its JOURNAL at the present time.

So large a proportion of all medical men engage in Poor Law practice at one time or another of their careers as to lend this particular struggle a special interest of its own. Apart from this, many of its incidents and the general trend of events are so typical of the general character of all the campaigns conducted by the Association as to make it worth while to devote rather more space to their description than will be possible when speaking of what the Association has done for other branches of medical work. Were it worth while to recount the various incidents in detail, the fashion of the drafting of some of the reports which were issued at various times, and some of the accounts of the meetings that took place, would be found to have a curiously twentieth century flavour about them. In fact, the existing records of one particular debate offer the fullest support for those who like to apply to medical mankind the old French proverb, *Plus ça change, plus c'est la même chose.*

Just about the time that the Association first came into existence a new Poor Law Act had been passed. Practically it put any medical man who undertook to do work for the poor in his neighbourhood absolutely at the mercy of boards of guardians and of certain Government officers known as Poor Law Commissioners, and to the hardships and various evils that arose from this position of affairs the Council of the Association drew attention at the third annual meeting of the Association in 1835. In addition to describing the position of matters this report stated that the Association had already addressed the Poor Law Commissioners on the subject, but had obtained none but evasive replies; and finally, after it had been indicated verbally that the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries all took up a *non possumus* attitude in the matter, the meeting adopted a recommendation that a special committee should be appointed to investigate matters in detail, in order that the Government might again be attacked by the Council with a direct mandate from the Association at its back.

This committee duly reported in the following year, and at the General Meeting of the Association in 1837 it was decided to submit the report to Parliament, together with a memorial, praying that effect might be given to the suggestions contained. Copies were also ordered to be sent to the two colleges and the Society of Apothecaries, again inviting their co-operation, and letters, including copies of the report, were sent to medical men resident in every part of the kingdom, with the idea of securing as much publicity as possible and of securing the influence of members of Parliament by personal interviews.

The report was a very able document, which considered in detail the general principles that should underlie the provision of medical attendance on the less wealthy classes, and took a view of the work of a Poor Law medical officer which if true to-day was even truer still at the date that it was written:

> The office of parish surgeon should combine the highest qualifications of the medical body, it being clear that no professional responsibility whatever, public or private, equal it in variety and extent. It embraces and presents, in daily profusion, cases in medicine,

surgery, and midwifery, requiring as profound knowledge and diligent care as any public institution affords for each of these branches singly. It should unite, therefore, an acute perception of the incipient stages of disease with well-directed efforts for its prevention, accompanied by the most diligent and scientific treatment.

The gist of the memorial based on this report was a prayer asking that a system should be introduced which would really safeguard the interests of the poor by securing that medical men were properly paid for their work and appointed in a fashion not derogatory to them as professional men, and that a medical man should be included among the Poor Law Commissioners.

As for the evils that the memorial aimed at ending, the more striking of them were as follows: Instead of being appointed to attend to the poor for a term of years or for as long as they were ready to do the work, medical men were engaged from year to year, and each year had to submit a tender stating the rate at which they would attend to any case of which they were asked to take charge. The guardians were the sole judges of when a poor person required medical attention and when he did not, and often medical men were obliged to undertake the treatment of a case for as little as 2s. 6d., no more than this being paid even if the illness lasted for months and constant attention and medicine were required throughout the whole of that time. If the medical men in any particular area asked more than the guardians thought fit to give, the Poor Law Commissioners got the medical schools to send down newly qualified men, promising to obtain for them private practice. There was no limit to the possible size of an area, and in some areas, too, contracts for all the medical work within them were made with one particular man, he being allowed to do it through deputies in any fashion he pleased. The Commissioners were also trying to establish medical clubs.

At the annual meeting in 1838 the Council was able to report that the agitation had met with considerable success, for a select committee of inquiry into Poor Law relief had been appointed by the House of Commons, and evidence had been given before it on the Association's behalf by two delegates. The Poor Law Committee was reappointed by the Association from year to year, and in 1838 a bill embodying many of the recommendations made was introduced into the House of Commons, but eventually had to be withdrawn; negotiations with members of Parliament and the Government were, however, still continued, and in 1840 the precise form of some amendments to a bill already drafted by the Government was determined. Eventually some of them were accepted by the Government, and a bill which considerably improved the position of affairs was passed.

At the meeting of 1842 the Poor Law Committee was the subject of congratulations on the success of its efforts, and the Council reported that, being not yet satisfied, it was again memorializing the Government as to defects in the administration of medical relief and as to the endeavours which were being made in certain quarters to introduce a system of medical clubs. The net result was that in 1844 another Committee of the House of Commons was appointed to investigate the administration of Poor Law relief, and before this body evidence was again given by delegates of the Association. It included recommendations to the effect that Poor Law medical officers should not be forced to supply medicines unless they so desired, but should be able to order them from a central dispensary; that medical relief should be treated as an entirely separate part of Poor Law administration, and that the fact that a man was in receipt of it should not render him a pauper in the eyes of the law.

Some two years later the Association found its position in connexion with Poor Law matters sufficiently strong to intervene on behalf of two medical men who were being treated with especial unfairness. Its efforts were successful, and in 1846 it brought about a meeting representative of all medical men engaged in Poor Law practice, whether members of the Association or otherwise; and, after laying before it a statement of the existing position of affairs, urged upon it the formation of a body specifically representative of the interests of Poor Law medical officers. This suggestion was adopted, the resulting body, which is now the Poor Law Medical Officers' Association of England and Wales, first bearing the title of the Poor Law Medical Officers' Convention. Meantime the Association had secured interviews with the President of the Poor Law Commission, and presented a series of resolutions in favour of Poor Law medical officers receiving fixed salaries, holding their appointments permanently, receiving extra payment for surgical and midwifery cases, and being under the authority of a general medical superintendent of all Poor Law work. It also secured interviews with the Home Secretary on the same subject, and on this occasion was able to persuade the President of the Royal College of Surgeons and the Master and Wardens of the Society of Apothecaries to accompany it on its mission. A few months later the Government included in a general Consolidation Order some regulations which in effect granted no inconsiderable proportion of the claims which had been made. After this date, and especially in view of its successful establishment of the Poor Law Medical Officers' Association, it would not have been remarkable if the British Medical Association had proved content merely to hold a watching brief. But this was not possible; there were still reforms to be effected, and despite the fact that the junior association was headed by so active-minded and able a man as the late Dr. Joseph Rogers, it was by no means able to stand on its own legs, being handicapped by a circumstance which is always a stumbling-block in the way of associations founded in the interests of relatively small classes of men. They can never exert as much influence as those which, since they represent many interests, will be credited by the public with independence of thought when they advocate the claims of any particular section of their members.

For this reason the British Medical Association maintained its Poor Law Committee, and this body, though operating on much the same lines as before, did its work during the remainder of its existence hand in hand with the Poor Law Medical Officers' Association itself. The co-operation between them seems to have been very close, and some indication of the extent to which the Poor Law Medical Officers' Association realized the value of the assistance that it had received from the parent body is supplied by the following excerpt from a circular issued by the Poor Law Medical Officers' Association of England and Wales to all Poor Law medical officers in 1871:

> A considerable number of Poor Law medical officers already belong to the British Medical Association; and it is suggested that the interest of the Poor Law medical service might be further advanced by all Poor Law medical officers joining the British Medical Association, and enlisting its social, political, and professional influence, by bringing questions of Poor Law administration before the several county branches at their numerous periodical meetings for discussion, and forwarding reports for insertion in the JOURNAL.

Incidentally it is also worth noting that the British Medical Association seems always to have taken a broad-minded view of Poor Law medical work; even in the very earliest debates on the subject there is evidence of a desire not merely to secure better payment for Poor Law medical officers, but also to safeguard the interests of Poor Law patients by bringing about conditions favourable to their effective treatment. A conspicuous outcome of that spirit was the campaign in regard to Poor Law infirmaries undertaken by the Association and its JOURNAL in the Seventies in alliance with the Dr. Rogers who has already been mentioned. To that campaign and its continuance under the able leadership of Dr. Anstie and Mr. Ernest Hart is in a considerable degree due the fact that many Poor Law infirmaries at the present date have nothing to fear from comparison with the ordinary run of voluntary hospitals.

For the rest, it must suffice to state that little by little the completion of the transformation of the Poor Law Medical Service from its original condition to that which prevails at present was brought about, one advance of special importance taking place in 1870, when the British Medical Association secured the insertion in the Superannuation Act of a clause which made the granting of pensions to Poor Law medical officers permissible. It was not until several years later that Poor Law medical officers in England and Wales became entitled to pensions as a matter of right, and meantime a good deal of

pressure had to be exercised from time to time on behalf of individual officers who had *a priori* claims.

Towards the middle of the Seventies the Poor Law Medical Service seems to have been working with sufficient smoothness to make the continuous existence of a special Poor Law Committee no longer necessary, and such a committee was afterwards only appointed on special occasions, as, for instance, in 1875, when it was necessary to attack the question of parish surgeons in Scotland being charged with the cost of medicines and subjected to other hardships. At other times the safeguarding of the interests of the service was entrusted to a body known as the "Parliamentary Bills Committee," whose primary duty it was to acquaint itself with all measures submitted to the House of Commons likely to affect in any wise the interests of medical men, and to secure the insertion in them of any amendments that seemed desirable. It took very useful action in this direction in 1897, when the claims of Poor Law medical officers to superannuation seemed likely to be imperilled, and between 1893 and 1900 was very active in the cause of dispensary surgeons in Ireland and their medical colleagues in Scotland.

During the last ten years or so care of the interests of those belonging to the Poor Law Medical Service has been part of the duty of the Public Health Committee of the Association. No definite crusade, however, in their interests has proved necessary, and consequently the main work of the Association in this connexion for several years past has consisted in supporting members of the medical profession in different areas, both individually and otherwise, when contests with boards of guardians have become necessary. It has carried on this work and is still doing so in three ways: By the issue of warning notices whenever any Division of the Association has been anxious not to have its hands weakened by medical men from other areas offering their services to boards of guardians on terms or conditions inferior to those which the Division considers ought to be accepted; by bringing pressure to bear on the Local Government Boards of the three kingdoms through members of Parliament and delegations; and by appropriate use of the Association's own Journal—that organ commenting on local incidents when occasion offers in such terms as to attract attention in the areas to which they relate, and foster and win support for local medical men from the general public.

It is superfluous to exemplify this work, for efforts of all three kinds have been so common during recent years that it is almost impossible that any medical man should be unaware of them. They are not always successful in the first instance, but they are almost always successful in the long run, and taking them as a whole the balance of success is so great that it would be difficult to contest the utility of this part of the Association's work. At all events, the Association of Poor Law Medical Officers of England and Wales, which is in a good position to judge, seems to have no doubt upon the point, since it continues to seek the co-operation of the British Medical Association in this and other directions not less than formerly; nor does it seem likely to cease to follow this course so long as its members are under the control of men of such great experience in official matters as are the members of its present Council, especially its honorary secretary.

A remark of the same kind might be made with equal truth in regard to the Irish Medical Association and the Scottish Poor Law Medical Officers' Association, for the work of the British Medical Association on behalf of Poor Law medical officers in these two countries, though it began at a later date, has, as is generally indicated in the foregoing paragraphs, been not less active than that which it has performed on behalf of Poor Law medical officers in England and Wales. In regard to Ireland in particular, apart from other measures, the Association commenced in 1892 an elaborate and expensive investigation into the whole question of Poor Law relief in that country, and the report which it subsequently published did a great deal towards clarifying the whole situation and concentrating attention on the outstanding defects. It repeated this course in 1903–4, and the resulting report, which appeared in the first instance in the pages of the British Medical Journal, was subsequently republished as a pamphlet. In this form it attracted so much attention among the general public that a second edition proved necessary, and since its appearance the conditions in which dispensary medical officers in Ireland do their work have been to some extent improved. Nevertheless, much still remains to be achieved, and the chances of its being done may be regarded as having been materially improved by the Irish Committee of the Association having recently been provided with the assistance of a paid secretary resident in Ireland itself.

(*To be continued.*)

THE TREATMENT OF SCHOOL CHILDREN IN ITS RELATION TO FUTURE DEVELOPMENTS OF THE NATIONAL INSURANCE SCHEME.

The annual meeting of the Association of Education Committees was opened at the Hotel Cecil, London, on Thursday morning, June 11th. The association comprises representatives of almost all the urban education authorities outside London, and is probably the most important body in the country concerned with educational administration.

Dr. H. B. Brackenbury, of Stroud Green, was elected President of the Association for 1914–15, and is the first member of the medical profession to occupy this position, all his predecessors having been members of Parliament.

In opening the proceedings Dr. Brackenbury gave an address in which, after discussing some questions of educational finance, he passed on to the consideration of the treatment of school children, and its relation to the Insurance Acts. He said:

When education was municipalized by the Act of 1902 we at once found that whatever disadvantages might result from the abolition of *ad hoc* authorities there was gain in the more direct intercourse between our education, library, and public health committees, and in the fact that there was a council which could direct common action between them. Now that insurance committees and statutory committees for the mentally defective are added to the machinery, the complications of local administration are largely increased, and the possibilities of co-operation and the need of well-thought-out adjustments are greater than ever. Nationally, as locally, the situation is the same. We have new State departments set up and existing departments extending their activities in new directions, all commanding large sums of money intended to be spent for the public good, and there is a very real and imminent danger of an overlapping or reduplication of work and of waste of money and of zeal.

The Board of Education is now supervising, and the education committees of the country are now doing, much work which is not primarily or principally educational in character. We should all admit that it is desirable that much of this work should continue to be done under the auspices of the education authorities, but I am not sure that we all realize how closely much of it is connected with work of an exactly similar kind now being done by other committees or bodies, and how seriously wrong we may go in our arrangements for the extension of this work, and how hopeless may be the consequent muddle, if we do not get at once a clear conception of the respective spheres in which we ought to operate. I refer, of course, mainly to all that part of our work which is at least as much in the interest of national health as of national education. Schools for mothers, open-air schools, and schools for the mentally defective; the feeding, the cleansing, the medical inspection, and the medical treatment of school children, are among the recognized agencies. All these come, some partially, some wholly, within the statutory duties or powers of education authorities. They are all of them vastly important; most of them are very costly. There is not one of them but must undergo great development during the next few years, and in every case wrong or imperfectly considered action on our part in the immediate future may bring us into a regrettable conflict with other officials or committees, or bodies vitally interested in these matters, and may result in adding to our already heavy responsibilities others which might more fittingly be undertaken by other organizations.

Medical Treatment of School Children.

When a child is born it at once comes under the notice of the sanitary authority with a view to securing its proper feeding and hygienic surroundings. A little later the guardians take notice of it with a view to its

vaccination. From about 1 year of age till 3 years or, in many places, 5 years of age no statutory authority is interested in it, unless it gets some notifiable infectious disease, when the sanitary authority again intervenes. From the time the child becomes of school age its health is a matter of concern to the education authority, and this continues until the child leaves school at 13, 14, or possibly 15 years of age. But if during these years it contracts a notifiable infectious disease, the public health authority again takes charge of it, or if it is found to have a certain degree of mental deficiency it is handed over to another statutory authority established for that purpose. After leaving school, until 16 years of age, its individual health is again without supervision by any public body, but from 16 years of age, in most cases, its medical treatment is undertaken in accordance with arrangements made with an Insurance Committee established under the National Insurance Acts. We are becoming accustomed to the confusion that may be caused by the ill-defined boundaries between the work of the education authority and the public health authority, but we have scarcely realized as yet the difference that may be made to some aspects of this problem by the advent of national insurance. As the Chancellor of the Exchequer said in his Budget speech, "the Insurance Act has done more than any number of Commissions to locate, define, and classify the problems of public health."

The relation of the vast machinery which has grown up all over the country for the State aided treatment of disease to the problem of the medical treatment of school children should be a prominent consideration in any steps that education authorities may take for the establishment or extension of such treatment. Only about one-half of the education authorities in England and Wales have in operation schemes for the treatment of school children, and many even of these schemes are of a partial and quite simple character. Even where school clinics have been established, it is only in some of them that the treatment is carried out by whole-time medical officials of the education authority; in many others the work is done by local medical practitioners. In only a small number of places, therefore, is the medical treatment carried out by means essentially different from those which might result from an extension of the system established under the Insurance Act. Again, the treatment undertaken by the education authority has hitherto been of what may be called a domiciliary character—that is, it has not extended beyond such methods of treatment as can be carried out during the child's attendance at a school clinic or supervised in its own home. The treatmentless intervals in the child's life should, if possible, be abolished; it is desirable that the machinery through which, and even the persons from whom, the child obtains treatment should be, if possible, the same throughout life, and not compulsorily changed at certain ages; and the extension of treatment to more acute illnesses or more serious disorders cannot long be avoided. Is, then, the medical treatment of school children by the education authority to be made everywhere compulsory? Are the education authorities to be made responsible for, and to bear the expense of, the treatment of children either below or just above the elementary school age? Are education authorities to be asked to provide the treatment in any or all of those more severe forms of illness which are at present largely provided for by means of public charities? These are questions which will have to be answered almost at once, and the serious import of which, both to educational work and to the education rate, there is no difficulty in perceiving.

The administration of the Insurance Acts is at present very imperfect, and great improvements could be made, no doubt, in the efficiency of the medical services given thereunder, though these services are even now on the whole quite good. It is evident that development of this work must at no distant date come in two directions. First, provision is to be made by which pathological laboratories and other expensive means of medical investigation may be placed at the disposal of medical practitioners; and by some means in connexion with these Acts public expenditure must provide for medical and surgical treatment which insured persons cannot at present claim. Secondly, treatment for one disease—tuberculosis—is already in many places being extended to the dependants of insured persons. These dependants include nearly the whole of the children attending our public elementary schools. Under the Act of 1911 as it stands, prosperous approved societies have the power of extending the benefit of medical treatment to these dependants of insured persons. It is probable that in the not very remote future, when the present services have been made more complete, medical benefit will be extended everywhere by the State to these dependants.

It seems to me to follow from these considerations that it is by an extension downwards of an improved and completed system on the lines of that now established everywhere under the Insurance Acts that the medical treatment of school children will most properly and efficiently be provided for. Medical inspection and the discovery of the cases which are in need of treatment can never be carried out conveniently and efficiently by the education authority, but it would be rash at the present time for education authorities to make themselves responsible for schemes of treatment which may ultimately entail the expenditure of very large sums of money unless they do so with the distinct intention that these schemes shall continue only until arrangements for this treatment are made in some other way, and unless they are established on lines which will not prove inconsistent with those which the State has already laid down for the treatment of these same children when they have outgrown their childhood. I cannot refrain from adding also, as a medical practitioner of many years' standing, that the treatment is likely to be more acceptable and more efficient if given by a qualified person of varied experience rather than by a State official to whom the patient is bound to submit.

I might probably have illustrated my point equally well from the present uncertainty and future inevitable confusion in administration concerned with the mentally defective. I might point to the fact that there are authorities which in constituting a statutory committee for this purpose have carefully avoided placing upon it any members of the education committee for their area, and have dodged the obligation of co-opting additional members who are familiar with the problems with which they have to deal. There is the utmost need for the co-operation of the new statutory committees of the counties and county boroughs with their education committees, with the minor education authorities in the counties, with the Poor Law guardians, and with a large number of experienced and zealous persons engaged in helping the mentally defective through voluntary societies, institutions, and homes. Yet for want of a little thought, of some knowledge of what has actually to be accomplished, of clear definition of the spheres of those different organizations working to the same end and dealing with the same people, there is muddle and waste and a real danger of labour and expense being put upon education committees which would more properly be incurred by others, or, conversely, of duties being performed by others which could be more efficiently and conveniently be undertaken by the education authority.

The Association of Education Committees may render most important service to those committees and to the whole community by carefully considering and advising upon the best ways of carrying out these new duties, and of so controlling developments as to lead to co-operation instead of conflict among the various agencies or bodies concerned.

In conclusion Dr. Brackenbury said:

We meet to-day in a more hopeful mind as to educational finance than we have met previously. We have received promises and undertakings which, though not giving complete satisfaction to all our demands, are largely the result of the work of this association. When we meet next year, at the conclusion of my tenure of the office to which you have been good enough to call me to-day, I hope that we shall be in actual possession of what we are now confidently anticipating, and that you will feel that much other useful work has been accomplished on behalf of education, and of those other administrative matters associated with our committees in which we are all so interested and concerned.

EGYPT AND THE SUDAN.

MANY features of interest appear in the reports of Viscount Kitchener on the finances, administration, and conditions of Egypt and the Sudan in 1913.

EGYPT.

Public Health.

Lord Kitchener states that undoubtedly within the last few years much has been done to improve the sanitary condition of the country. Better houses have been built and sanitary ezbas have been constructed, and a model village on sanitary lines is now being erected at Chalma. The people have, moreover, to some extent overcome their dislike of sanitary measures. The notification of disease is now general, and concealment is the exception and not the rule as formerly. They come willingly for medical

help, and increased facilities are afforded them to obtain first aid, especially in cases of infantile diseases. The people no longer object to be isolated for infectious diseases.

It is stated as a very striking fact that a few years ago it was a matter of the greatest difficulty to account for and medically examine pilgrims who returned to their homes from the Hedjaz. This examination now proceeds quite smoothly, and instead of being run to earth with difficulty in their villages they come of their own accord to be examined.

Important changes have taken place in the Public Health Department during the year. Sir David Semple is Director-General, and a reorganization of the whole department is now being taken in hand.

The Lunacy Section, which includes two large asylums and a complete staff, has been made into a separate department, and the Veterinary Section, including its staff, has been handed over to the Minister of Agriculture. It is stated that these changes will give the Public Health Department a freer hand and more time to deal with problems appertaining to the health of the people. The hygienic laboratories have been extended, and in addition to dealing with routine questions of public health, have been fitted up for purposes of scientific research.

The Ophthalmic Division has been strengthened by the addition of two inspecting surgeons, so that, in addition to the director, there is now a staff of four inspecting surgeons and thirty hospital surgeons.

In connexion with these changes Lord Kitchener states:

> They will enable the Public Health Department to take up the investigation of the more prevalent diseases, such as ankylostomiasis and bilharziosis, which are so widely disseminated through the Delta, and cripple so large a percentage of the population, thus seriously affecting the economic condition of an agricultural country like Egypt. The ova of bilharziosis have been recently discovered in the tissues of mummies of the 20th Dynasty, and it is therefore high time that serious steps should be taken to prevent the continuity of infection that has been going on so long in this country. Pellagra, infectious eye diseases generally, such as acute ophthalmia and trachoma, typhus fever and other kindred diseases, and the causes of the abnormally high rate of infantile mortality, will all be subjected to a most careful examination.

Sanitary reform has accomplished much in recent years, but seems to have been confined to towns and health resorts, the results have been so encouraging that it is proposed to extend them in a modified manner to the villages, where sanitation is wofully defective; until this condition of affairs is remedied, nothing much can be done in the way of dealing with the more important infectious disease of the country. The houses in these villages are overcrowded congeries of mud walls, badly built and badly ventilated. There is generally a lack of conservancy arrangements, and man and domestic animals live in close relations. The water supply is from canals which are open to all sorts of contamination, and as the subsoil is near the surface, pools abound everywhere, and a condition of things exists which is suitable to the development of ankylostomiasis and bilharziosis. Lord Kitchener says:

> It is easy to chronicle the insanitary condition of the villages of Egypt, but it is not such an easy task to point out practical remedies. I think, however, that the existing conditions indicate that improvement may be obtained in the following directions: (1) Education of the people in the elements of hygiene and the causes of the diseases common in their villages and how to avoid them. An elementary primer on the subject should be used as a textbook in all the village schools. (2) The organization of a system of village sanitary inspection, consisting of about one inspector for ten villages, who would report to the Markaz doctor all that happened in regard to health questions and sanitary matters in the villages under his control. (3) The improvement of the villages themselves would then proceed on lines of proper conservancy, the filling up of "birkas," the erection of decent, ventilated houses, and the arrangement of a purer water supply.

An important scheme for dealing with ankylostomiasis and bilharziosis has been instituted. A travelling hospital has been organized with successful results. Thus the natural conditions under which the infection takes place will come under observation, and the conditions of soil favourable for the hatching of the ova and the life of the larvae will be examined. Attention will also be given to ascertaining whether, in heavily infected villages, there are not main foci of infection which can be attacked and destroyed.

The high rate of infantile mortality is mainly due to two factors—the complete want of knowledge of their trade on the part of Egyptian midwives, and the lamentable ignorance and carelessness of the mothers, who in many cases have the crudest notions of cleanliness, or how their children should be fed, clothed, or attended when ill. The public health authorities hope that by steady progress in dealing with public health problems and a gradual increase in education, especially of the women, an improvement will take place. Maternity schools and children's dispensaries have been established in the provincial towns. In the schools the midwives receive a course of training under an English matron, and in the dispensaries the children are treated and their mothers instructed by an English nurse in the principles of cleanliness, clothing, proper diet, and the treatment of the common diseases of childhood.

Plague is well under control, and appears to be yielding to the steady campaign which has been waged against it since its appearance in 1889. In 1913 there were only 654 cases, as compared with 884 in 1912, and the number of deaths was 304, as compared with 441.

Hospitals.

Hospital accommodation in Egypt has been slightly increased, and a satisfactory feature is that a large number of patients now come voluntarily into the hospitals. This is chiefly due to the fact that the Egyptian medical officers who staff the hospitals are better educated and more efficient in their work than in years gone by. There are twenty-two general hospitals managed by the Department of Public Health. During 1913 in-patients numbered 42,794, an increase of 2,334 on that of the previous year; there were 207,882 out-patients, an increase of 15,655 on that of 1912. The number of public dispensaries managed by the Public Health Department is forty-five. In these dispensaries the poor are treated gratuitously, and first aid is given. There are eleven ophthalmic hospitals now at work in various parts of the country. During 1913, 25,000 patients were cured out of a much larger number examined and treated; 30,000 operations were performed, of which the greater majority were young people.

Lunacy.

The number of beds in the two asylums at Abbassia and Khanka has now risen to 1,550; 870 certified lunatics were sent to the asylums in 1913, and 460 were temporarily treated in local hospitals without certification.

Sanitation in Towns.

The question of sanitation in the larger towns of Egypt has of recent years been considered more seriously by the local municipal bodies, who have in many cases attempted to solve the various problems, with more or less satisfactory results. The introduction of public latrines is gradually overcoming what was until lately a standing menace to the health of town communities. A filtered water supply has been provided in the majority of the mudiria towns, while in others the intakes for drinking water from the canals or the Nile have been protected as far as possible from pollution by assigning definite points for drawing water and for mooring boats. The macadamizing of streets has done much to simplify cleaning and scavenging, while the provision of public refuse receptacles has minimized the accumulation of rubbish on private premises and public thoroughfares.

"Sanitary Barbers."

The ordinary barber of Egypt, Lord Kitchener states, bears a certain resemblance, in as far as his profession goes, to the barber-surgeon of ancient times in England. He is authorized by law, after having passed an examination, to perform vaccination, circumcision, to cup and to apply leeches, to apply simple dressings, and is forbidden by the same law to order or prescribe medicines. In each village one of these barbers is appointed by the Public Health Department as its representative. Barbers so appointed are called "sanitary barbers," and their special duties are the following: To see that every child is vaccinated within three months of birth unless ill, to examine and certify causes of deaths, to report deaths involving suspicion of infectious disease, cases of suspicious illnesses or outbreaks of infectious diseases, and to give general information to the district medical officer on sanitary matters. During 1913 the number of men who passed

the examination was 253. The total number up to the end of 1913 was 389. Most of these men have been supplied with chests containing first-aid equipment and a few simple remedies for administration to villagers, with printed instructions as to their use.

Hygienic Institute.

The institute in the past year was mainly occupied with the diagnosis of infectious and epidemic diseases, and, in the chemical branch, with analytical work concerning food, water, drugs, and medicines. The nature of dysentery in Egypt has been the subject of an inquiry which is likely to modify somewhat the views generally held as regards the cause of Egyptian dysentery.

In order to establish a proper milk control standards for the composition of buffalo milk have been worked out, and similar standards are being made for cow's milk.

School of Medicine.

Fifty students joined the school in 1913, and ten the School of Pharmacy; the total number of both categories in attendance at the end of the year was 258.

SUDAN.

During the year the Sudan was free from serious epidemics. Malaria was much less prevalent, owing partly to the scanty rainfall and partly to the greater attention paid to antimalarial measures.

Sleeping sickness is still prevalent in the Yei River district, and it is now found over a larger area than formerly, both in Mongalla and western Bahr-el-Ghazal. It is also reported to be prevalent in the Congo to the west and south-west of Tembura, where it is feared that the disease may appear shortly.

The general health of the population is, with few exceptions, satisfactory, though infantile mortality is still excessive.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

Experience in Belgium.

At the fortieth meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. Dubois Havenith, of Brussels, who was Secretary to the International Congresses of 1899 and 1902 dealing with venereal diseases.

Dr. Dubois-Havenith reviewed the principal preventive measures for dealing with ordinary infectious diseases—namely, notification, isolation, disinfection, and general sanitary measures aiming at combating all unhealthy conditions. Of these, he said, disinfection, by which he meant the getting rid of contagious lesions and the sterilizing of contaminated objects, was in the case of syphilis essential. In effect, disinfection in the case of syphilis consisted in treatment. Dr. Dubois-Havenith laid stress on the need for early diagnosis, free and readily accessible treatment, and surveillance of the treatment for such time as might be necessary. For the purpose of early diagnosis it was necessary to make adequate provision of laboratories in which bacteriological and other tests could be carried out.

The discovery of the existence of the disease should be followed immediately by treatment, and it was necessary to arrange for clinics which would be open after the ordinary hours of labour.

In order that patients, who were often negligent or ill-instructed, should not abandon their treatment it was desirable to introduce some measure of control or surveillance. Such a system was already in operation at the dispensary founded by Professor Malvoz at Liége, where arrangements had been made, with the consent of the patients, for keeping in touch with them, for the purpose of giving advice, for submitting them to the investigations necessary to determine the permanence of the cure, for warning them against contracting marriage too early, and so on. It had been found in practice that the scheme worked well and that patients were willing to fall in with the arrangements.

Dr. Dubois Havenith thought that it was very important that the public should be enlightened upon the gravity of syphilis both from the individual and public point of view, but it was equally important that it should be realized that syphilis was a curable disease, that as a rule it was avoidable, and that if properly treated it ceased to be contagious.

HEALTH OF NATIVE TROOPS IN INDIA.

WHEN publishing, earlier this year (February 7th, pp. 316–17), some account of the results which have followed the application of modern sanitary principles to the army in India, we were not able to give detailed information with regard to native troops comparable to the statement relating to British troops. We have now obtained information on this point which will be read with interest. The first table shows that the improvements in the health of native troops in India during recent years has been very noteworthy.

INDIAN TROOPS.

Ratio per 1,000 of Strength.

Years.	Admissions.	Deaths.	Invalids.	Constantly Sick.
1889–98 ...	917.0	12.70	Not available	33 0
1899–1908 ...	689.3	9.33	10.05	25.4
1909–12 ...	551.1	4.84	5.46	20 5
1912	517.5	4.42	4.61	20.1

The second table covers a longer period of years, and allows of direct comparison of the effects of the improved conditions afforded by modern methods on the health of both British and Indian troops. It will be seen that the death-rates in the two forces in the period 1875–9 were very nearly identical, and that in 1912 the death-rate in both was less than a fourth of what it was in the earlier period. It will be observed that the ratio of constantly sick in 1875–9 was in the Indian troops about one-third lower than among the European troops; the rates in 1912 stood in much the same relation. It is clear, therefore, that the application of modern methods of sanitation has had similar effect in both branches of the service.

EUROPEAN AND INDIAN TROOPS COMPARED.

Rates per Thousand of Strength.

Years.	European Troops.		Indian Troops.	
	Constantly Sick.	Deaths.	Constantly Sick.	Deaths.
1875–79	62.40	20.37	44.04	19.93
1880–84	67.54	16.30	41.04	19.60
1885–89	74 85	15.11	33.06	12.90
1890–94	85.63	15.09	34.66	13.48
1895–99	87.68	17.14	30.10	11.34
1900–4	64.58	13.03	27.20	10.87
1905–9	47.21	8.93	22.31	6.78
1910	31.9	4.66	21.1	4.89
1911	28.8	4.89	19.8	4.48
1912	28.9	4.62	20.1	4.42

The decline in the rate of the constantly sick must have very materially increased the efficiency of the Indian army as a fighting force, while the decline in the death-rate marks a great economy in human life, and the decline in both a very large saving in actual expenditure.

It is to be observed that these good results among Indian troops have been obtained in spite of the fact that the regimental hospital system is still in force for native troops, and that this system is condemned as not conducive to the highest efficiency.

The Indian Medical Service may well be proud of the way in which the results of its preventive and curative work stand out when tested by the cold light of official statistics.

THE NEW SCHOOL OF PHYSIOLOGY, CAMBRIDGE.

THE new buildings of the School of Physiology presented to the University of Cambridge by the Drapers' Company of the City of London were opened by His Royal Highness Prince Arthur of Connaught on June 9th.

OPENING CEREMONY.

The ceremony took place in the Senate House. The Chancellor, Lord RAYLEIGH, F.R.S., presided, and introduced Colonel BENSON, Master of the Worshipful Company of Drapers, who said that that company spent a large part of its funds for the advancement of education, especially in its highest forms, and was very careful that they were judiciously allocated, as was the case in this instance. He then handed the key to the Chancellor, and the VICE-CHANCELLOR read an illuminated scroll in which the thanks of the University were recorded.

Prince ARTHUR, who was then called upon by the CHANCELLOR, after referring to the connexion which had long existed between the Royal Family and the University, congratulated the Drapers' Company on the great generosity it had shown in a worthy cause, and the other benefactors who had contributed to the equipment of the building.

Professor LANGLEY, speaking on behalf of the School of Physiology, said that the number of students had increased to nearly 300, and the collected papers of research made an annual volume of 400 or 500 pages. The new laboratories, for spaciousness, lighting, and architecture, would, he thought, compare with any building of the kind in any university. It was not thought in their earlier days that Continental students would come to England for the purposes of research, but now there was a free exchange, and the physiological laboratory had visitors from nearly every great centre of physiology in the world. The staff of the laboratory during recent years had been carrying on the work of teaching and research under ever-increasing difficulties owing to lack of space. Contrasting the early period of physiology with the present, Professor Langley commented upon the meagre equipment which used to suffice, and remarked that now the work required delicate and costly apparatus. He dwelt also on the remarkable change which had come over the relation between pure science and physiology in recent years. A body of investigators had arisen who were keenly noting all the results of pure science in order to apply them to practical advantage.



School of Physiology: View from the North-West.

The thanks of the University were conveyed to Prince Arthur by Lord MOULTON OF BANK.

HONORARY DEGREES.

The Public Orator, Sir JOHN SANDYS, delivered the following speeches in presenting to the Chancellor the several distinguished recipients of honorary degrees.

Hon. LL.D.

H.R.H. PRINCE ARTHUR OF CONNAUGHT, K.G., K.T., G.C.V.O.

Gratias, quae Principi feliciter ad nos advecto patria in lingua feliciter redditae sunt, etiam Academico in sermone eidem libenter reddimus. Salutamus Victoriae Reginae et Principis Alberti, Cancellarii nostri, nepotem acceptissimum, Ducis Arthuri filium unicum, Principem patriae devotissimum, Principem in luce publica plurima cum laude versatum. Regis nostri in nomine olim ad extremam Orientis oram honoris causa plus quam semel missus est; Regia artium in Academia nuper pictoribus nonnullis consilia sobria, consilia sana, commendavit; nostram denique ad litterarum et scientiarum Academiam hodie allatus, aedificium novum physiologiae studiis dedicatum auspiciis optimis mox inaugurabit. Physiologiae inter leges memoratu dignum est Horatianum illud:—"fortes creantur fortibus et bonis." Iuvat igitur Ducis fortissimi et optimi, abhinc annos undecim Doctoris nostri nominati, heredem dignissimum laurea eadem hodie coronare.

The Right Hon. Viscount ESHER, G.C.V.O., G.C.B., M.A., Trinity College.

Sequitur deinceps iudicis summi, alumni nostri, filius, vir et inter Etonenses et in Collegio nostro maximo educatus, deinde regni totius senatoribus suffragio electis per quinquennium additus, Ducis Devoniae Cancellarii nostri filio, postea Cancellario nostro, fere eodem tempore adiutor acerrimus. Nuper etiam Academiam nostram magnopere adiuvit, et aliorum in nos liberalitatem generosissimam excitavit. Viri huius ductu prospero, aureus ille donorum rivus Academiae nostrae in silvas defluxit; eiusdem auxilio, etiam in clivo quodam saluberrimo salutis templum illud nuper aedificatum est, ubi hereditatis (ut aiunt) leges professor noster novus investigabit, cuius cathedra alumni nostri magni nomine in perpetuum ornabitur, Arthuri Balfour. Ergo, in colle nobis propinquo, a professore nostro, etiam in aliis rerum naturae provinciis, Horatianum illud verum esse comprobabitur:

"est in iuvencis, est in equis patrum
virtus, neque imbellem feroces
progenerant aquilae columbam."

The Right Hon. Baron MOULTON OF BANK, M.A., F.R.S., Honorary Fellow of St. John's, and late Fellow of Christ's.

Adsurgit proximus Collegii Divi Ioannis alumnus, vir abhinc annos quadraginta sex in studiis mathematicis locum omnium summum adeptus, qui, Christi in Collegio socius electus, etiam iuris in provincia honorum publicorum ad culmina summa pervenit. Olim in legibus ad scientiam machinalem pertinentibus inclaruit; nuper etiam medicinae de scientia illo die praeclare meritus est, quo experimenta quaedam generis humani saluti necessaria esse luculenter comprobavit. Ergo non modo Archimedis sed etiam Aesculapi alumnis iure optimo erit acceptissimus. Ceterum haec omnia, peritis non ignota, hodie neque (ut Tullius ait) ad vivum resecanda, neque (ut mathematici dicunt) ad infinitum producenda. Inter omnes constat iudicem tam conspicuum iuris doctorem hodie merito creari.

Colonel STARLING MEUX BENSON, Master of the Drapers' Company.

Inter societates illas Londinienses, quae divitiarum amplitudine et liberalitatis laude excellunt, una est quae propterea nostrum omnium animis identidem obversatur, quod non modo agri culturae studium inter nos magnopere adiuvit, sed etiam, munificentia hodie imprimis memorabili, aedificium novum physiologiae studiis dedicatum nobis donavit. Ut in societatem illam munificam animum nostrum gratum aliquatenus indicemus, societatis totius magistrum titulo nostro libenter decoramus, virum qui, olim inter milites spectandus, linteonum (ut aiunt) in societate liberalissima, pacis in artibus iam dudum floruit. Hodie saltem "cedant arma togae," dum militum tribunum, etiam pacis in artibus praeclarum, purpura nostra honoris causa vestimus.

Hon. Sc.D.

Sir WILLIAM OSLER, Bart., M.D., F.R.S., Regius Professor of Medicine, Oxford.

Caritatis vinculo triplici nobiscum est coniunctus medicus illustris, vir inter fratres nostros Canadenses et inter consobrinos nostros transmarinos medicinam praeclare professus, et inter sororis nostrae venerabilis, sororis nostrae Oxoniensis silvas, professoris medicinae regio munere ornatus. Peritis nota sunt ea, quae, aut solus aut cum aliis consociatus, in magna voluminum serie de medicina disputavit. Pluribus loquuntur ea quae de animo aequo, de consiliis ad vitae finem perfectum spectantibus conscripsit. Nobis autem idcirco potissimum dilectus est, quod medicinae, litterarum renascentium in saeculo, studiis devotissimus, inter nosmet ipsos egregie

laudavit virum et de Oxoniensibus et de Cantabrigiensibus praeclare meritum, regiae medicorum societatis conditorem illum, Thomam Linacre.

Sir DAVID FERRIER, M.D., F.R.S., Emeritus Professor of Neuropathology, King's College, London.

Progreditur deinceps vir inter Aberdonenses, Edinenses, Heidelbergenses olim educatus, inter Londinienses denique et "neuropathologiam" (ut aiunt) et artem medendi praeclare professus. Viri huius et collegarum eius peregre docentium experimentis didicimus, cerebri duplicis corticem non totum corporis totius motus moderari, sed partem aliam ad aliam corporis partem pertinere; cerebri in parte una videndi sensum, in alia sensum audiendi collocari. Tali autem ex scientia morborum varietates quaedam melius inter sese dignoscuntur, vitaeque humanae dolores multum minuuntur. Abhinc annos quattuor et triginta inter doctores nostros honoris causa libenter numeravimus generis humani amicum illum, Iosephum Lister: hodie vero, saeculo in novo, etiam alium generis humani amicum titulo nostro non minus libenter decoramus.

Sir EDWARD SCHÄFER, F.R.S., Professor of Physiology, Edinburgh.

Urbis Edinensis, Athenarum illarum Caledonicarum, Academia ad nos misit physiologiae professorem illustrem, cuius opera, ad histologiae et physiologiae scientiam pertinentia, physiologiae et medicinae studiosis iam dudum cognita sunt. Omnibus autem nota sunt experimenta illa, per quae homines in fluctibus submersi, respiratus artificiosi auxilio, ad vitam revocantur. Olim rex ipse Olympi Aesculapio propterea invidisse dicitur, quod, Hippolyto ad vitam revocato, iura Plutonis imminuisset. Nunc autem omnibus penitus persuasum est, nihil quod hominum saluti prosit, summo Patri posse displicere. Non immerito igitur illos in honore habemus, quorum auxilio mortis imperium inter terminos artiores contractum vidimus.

ERNEST HENRY STARLING, M.D., F.R.S., Professor of Physiology, University College, London.

Agmen nostrum claudit hodie Universitatis Londiniensis in Collegio quodam illustri professor insignis. Physiologis notum est sanguinis nostri partem quandam e venis quibusdam subtilissimis per corporis telas propinquas textu tenuissimas exsudare, et corpori alimenta quaedam nova ministrare. Viri huius praesertim experimentis sudoris illius ratio universa explicata est, qui etiam vitam corporis iam mortui in corde et pulmonibus conservatam, et partium superstitum motus, investigare potuit. Talium virorum ingenio, vocabulo quodam a lingua Graeca derivato, quod *hormone* dicitur, res quaedam chemica patefacta est, quae, ex alia corporis parte intima, parti alii stimulos addit, hinc illuc velut nuntia quaedam transmissa. Etiam physiologiae in studio quicquid novi aliunde ad nos advectum est, etiam nobis novos stimulos addit. Ergo etiam hunc virum, rerum exterarum nuntium ad nos advectum, decoramus, qui tot collegas suos non modo industriae et laboris sed etiam gloriae et honoris stimulis concitavit.

Demonstrations.

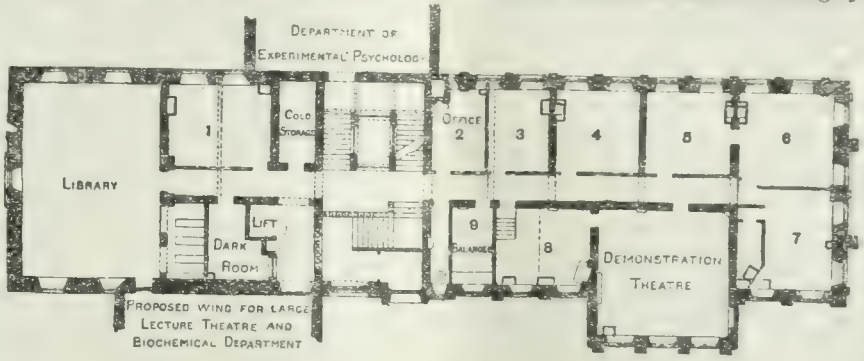
After luncheon, at which the Vice-Chancellor and the Fellows of King's College entertained his Royal Highness, the recipients of honorary degrees, the Court of Assistants of the Drapers' Company, and a number of other guests, including ladies, a visit was paid to the new building, where a series of demonstrations were given; in the adjoining Psychological Laboratory Dr. Myers, the Director, showed a number of interesting experiments.

DESCRIPTION OF THE NEW BUILDING.

The general appearance of the new building is shown in the illustration on p. 1312. The generosity of the Drapers' Company is recorded by a sculptured tablet bearing a suitable inscription in bronze. The grant made by the company for the building and towards equipment has amounted to £23,500; the cost of the fittings, about £4,000, has been met partly from the gift of the Drapers' Company and partly from the benefactions received by the University for the complete housing of the three departments of physiology, biochemistry, and experimental psychology. The new building stands between the last-named department and that of geology upon a site, formerly part of the grounds of Downing, given by the University.

The first experimental laboratory known to have been equipped in Cambridge was the fifteenth century Audit Chamber of King's Hall, which Richard Bentley, the Master of Trinity, converted soon after 1702 into what he called an "elegant Chymical laboratory" for Francis Vigani, the first University Professor of Chemistry. This room, now the Bursary of Trinity College, may also be regarded as the first physiological laboratory, for it is known that Stephen Hales, Fellow of Corpus Christi College, who first measured the blood pressure and made many important observations in animal and plant physiology, began his experiments early in the eighteenth century in this "elaboratory of Trinity College."

But though many graduates of the ancient faculty of medicine in the University have left names illustrious in the history of physiology, like those of Harvey and of Glisson, their chief work was not done in Cambridge, and it was not until Michael Foster was brought by Trinity College to Cambridge in 1870 that any attempt was made to establish a physiological laboratory. From a very small beginning the rooms at his disposal were gradually increased, until in 1911 a large extension with a lecture theatre to seat 280 students was opened. When in 1903 Sir Michael Foster resigned the professorship of physiology, to which he had been appointed twenty years earlier, his successor Dr. Langley had to recognize that the classes had outgrown the building, that the rooms for practical instruction were seriously overcrowded, and that those for research work were too few and not well adapted structurally to modern requirements. Subsequently the rapid growth of biochemistry added to the congestion, and in 1910 the University gratefully accepted the offer of the Worshipful Company of Drapers to erect a new physiological laboratory. Sir Thomas Jackson, Bart., R.A., the architect, arranged the plans so that the physiology building might be connected on the south side with the laboratory of experimental psychology, and on the north with a wing which it is hoped presently to erect to contain a large lecture theatre and a laboratory for biochemistry.



FIRST FLOOR

1, 2, 3, 4, 5, and 6, private research rooms; 7, photographic room; 8, lecturer's room.

The new building, as will be seen from the illustration, is of five stories.

On the *ground floor*, which is some five feet below ground level, are the battery and switch-board rooms; the workshop for the making of small pieces of apparatus and for running repairs; the aquarium containing tanks, some containing sea-water continuously aërated and passed through filters by a series of pumps operated by compressed air; the compressed-air plant from which pipes are distributed to the research rooms throughout the building, for the aëration of the sea-water tanks, for the artificial respiration of animals, for the pumping of fluids which must not be brought into contact with metal pumps, and for the drying of the inside surfaces of glass apparatus. This floor also contains research rooms for electro-physiology, this part of the building having been chosen in order that these rooms may be at the greatest possible distance from those which contain running machinery, in order that the capillary electrometer may not be affected by vibration. The thermo-electric research rooms are also on this floor.

On the *first floor* are the library and book-store, the demonstration theatre with a lecturer's room adjoining in which experiments can be prepared, six private research rooms, a balance-room, a dark-room, and a cold-storage room. The theatre will accommodate a class of about eighty, and an adjoining photographic room contains a

cinematograph, by which moving pictures can be projected upon a screen in the theatre.

The *second floor* contains a room in which is installed x-ray apparatus, to be used partly to demonstrate the use of the method for clinical purposes and partly for physiological research, especially on the digestive system. On this floor also are a students' research room, two rooms for the study of the special senses, and another containing an ultra-microscope for observations on colloids. Three rooms are fitted up for the study of respiration and a photographic room, a common room for the teaching staff, a professor's room, a large room for neurological research, and two private research rooms are also provided on this floor.

On the *third floor* is a large room for elementary classes in histology: the upper part of this room rises into the fourth floor, where it is surrounded by a gallery, so that altogether 150 students can work simultaneously. On the other side is the experimental and histological room for advanced classes, and between the two is a preparation room.

The *fourth floor* at the west end gives on to the gallery of the histology room; it contains also a small demonstration theatre, and at the east end an experimental room for elementary classes providing space for 46 students.

THE NEW PATHOLOGICAL LABORATORY AT THE ROYAL MINERAL WATER HOSPITAL, BATH.

Opening Ceremony.

There are few provincial hospitals better known than the Royal Mineral Water Hospital, because the area from which its patients are drawn is only limited by the ocean around the British Isles. For 172 years its wards have been freely open to sufferers from arthritic diseases, but the efforts of the staff have been considerably embarrassed in recent years by the lack of modern laboratory appliances. Now, as the result of their efforts, an up-to-date department has been provided for these important necessities of the modern hospital. A well-lighted room, some 28 feet square, in a detached building in the garden, has been transformed and fitted up with all the usual apparatus for biochemical and bacteriological examinations, with a view to make researches into the nature of the various forms of chronic arthritis and other allied conditions.

Laboratory researches were begun in 1908, chiefly at the expense of the medical staff, in an underground and otherwise unsuitable room, but the good work that was done there in the past was a stimulus which has culminated in the new department. A museum is included and a library is being formed. Towards the cost of this latter, Sir William Osler has contributed £10, and as the hospital is a national one, it is hoped that generous benefactors in other parts of the United Kingdom will contribute books, reprints, and specimens pertaining to the work carried on.

On June 4th, in the presence of the Mayor of Bath (Dr. Preston King) and a large number of medical men and other visitors, the laboratory was formally opened by Professor Sir William Osler.

The President of the hospital, the Rev. C. E. B. Barnwell, who was in the chair, after welcoming Sir William Osler, gave a sketch of the history of the Royal Mineral Water Hospital. The fame of Bath had brought to it not only fashionable people, but from an early date a contingent of poor persons, so that the "Bath beggars" became notorious. Eventually Dr. Oliver, Beau Nash, and Mr. Henry Hoare, banker, and others determined to erect a hospital, and as an Act for the suppression of playhouses had been passed they were able to purchase the Bath Theatre for a song. Ralph Allen gave money and also the stone free of charge, and Mr. Wood, a well-known architect, gave his drawings and plans without fee. The fortunes of the hospital fluctuated, but its fame increased, and the demands for admission to it increased. It was decided to build another hospital, and the managers were fortunate enough to acquire the rectory garden for an exercise ground, and finally the rectory house. Recently the Mayor, Dr. Preston King, had recognized the need of building suitable accommodation for the nurses, and again the management was so fortunate as to be able to secure a convenient house for the purpose opposite th hospital.

Address by Sir William Osler.

Sir William Osler said that change was the order of the day. There was only one thing that did not change, and that was man himself. He had not changed for countless generations. He was the same helpful, helpless, feeble, strong, active, weak creature which they all were and all knew themselves to be. Probably as far as his diseases were concerned there was little change during the historical period, and the doctors had not changed.

Practical Uses of Modern Laboratories.

There was one thing, however, with regard to disease that had changed, and that was the method, the way of looking at things, and of investigating. That was an absolutely radical change, and it was as representative of that change that that laboratory was being opened that day.

Typhoid Fever.

In the last generation typhoid fever was well treated, well nursed, and was then sent out of the hospital, and the doctors and hospital governors were well pleased if the case recovered—and nothing else was done. Now what happened when a case came into a hospital to day? There were at least four agencies at work. In the first place, in the hospital much greater care was taken with the diagnosis, and elaborate laboratory methods were used in cases of doubt, methods which required expert knowledge, great skill, and represented long, weary, and laborious research into the nature of the disease. To-day a case of typhoid fever was treated certainly with fewer drugs, probably was better nursed, and was not allowed to leave the hospital until it was shown to be safe from the standpoint of the community, that the convalescent was no longer a distributing centre of typhoid germs. To determine this elaborate methods must be carried out in well-equipped laboratories by well-trained men. In the second place, the case was reported to the local health authority, and the conditions under which a case of typhoid fever arose were carefully investigated, to determine whether it was an isolated or sporadic case, or one connected with an epidemic. Again, no well-conducted general hospital was complete that looked at the case only from the medical standpoint. It had to look at the patient from the wider humanistic standpoint, the standpoint of social service. In a well-organized hospital the social service department visited the family where the case occurred, and saw that those organizations were put into operation which looked after these people and took care that the conditions in the house were so ordered that another case did not arise. The social service department was one which was likely to grow and increase, and was an enormous addition to the usefulness of the hospital in the community. The fourth point was the development which had recently taken place in laboratory methods. If a case occurred in a large household, or where there were a large number of people, such as a common lodging-house, to-day, the medical officer of health would inoculate all persons who had been exposed to the disease, and under such conditions it had been shown unquestionably that inoculation against typhoid fever was not only safe, but imperative where large bodies of persons were exposed to the disease. The reports of the United States army were remarkably interesting in that connexion. The troops were stationed in districts where typhoid fever was endemic periodically, and since inoculation the incidence of the disease had progressively fallen, until last year there were only one or two cases of typhoid fever in the entire camps of the United States army. These changes had all been in the recent generation.

Arthritis.

A generation ago cases went into the hospital and were labelled rheumatoid arthritis. To-day they were studied with a view to differentiating them into various groups with the possibility of determining their cause. First it was ascertained whether the cause were septic disorders of the teeth or tonsils, and that could only be done by using laboratory methods. In another group of cases the cause might be poison, some trouble in the gastric intestinal canal, and to ascertain this an elaborate, difficult.

and costly investigation was necessary, and one which would have to be carried out in such a hospital as that on a very large scale, so that there would be plenty of use for the new laboratory. It was to be hoped that in a few years, by investigations carried on on these lines, it would be possible to obtain a clear and well-defined knowledge of the causes of gout—a disease which was so common, so prevalent, and was not only distressing to the individual, but such a waste of human life and such a waste of energy.

The Staff and Organization of a Clinical Laboratory.

In establishing a laboratory the men were all-important. The subject was becoming so complicated that it was not possible for any one man to control a clinical laboratory thoroughly. There must be a man for both departments, the one for the bacteriological and more clinical side and the other for the chemical side. One difficulty was that in the development of that laboratory side of medical life, which was going to increase enormously in the next few years, a group of young men must not be turned into blind alleys. It was not right to take the ablest young men and put them in the laboratory work and not make proper careers for them. No doubt with the increase in laboratory work there would be increased opportunity for careers for a certain number of men. There should be in a laboratory two groups of men: the men who wished to make laboratory work their career, and the group who intended to become surgeons and physicians or take up special departments. There could be no better training for the latter than to devote one, two, three, or four years to work as an assistant in such a laboratory. It was a great help to a man both in medicine and surgery and would be a great help through all his life if he spent his waiting years in obtaining experience in laboratory methods. The work of a laboratory was primarily for service in the interest of the patient; it should be specifically for the benefit of the sick in the hospital for the purposes of diagnosis and treatment. But in the larger laboratories, where there was a large collection of cases, such as in Bath, in the interests of the public who supported that hospital such a laboratory should be a centre of research. The doctors always studied the individual with a view to his immediate and definite benefit. That was their primary object, but there was an ulterior object, a larger aspect—the prevention of disease, which was quite as important as the care of the individual. There was great opportunity in Bath of solving one of the serious problems of humanity. He had not the slightest doubt that the cause of arthritis would be found out. There were two needs which were very important. The first was a good museum, so that a person who was interested in arthritis might see every possible illustration of the different types of arthritis. The second need was for a well-equipped and up-to-date library, and as a great believer in books as tools he would like to give a contribution of £10 towards the library. Another need was a new *x*-ray department. It was a necessity. Bath now had a great opportunity. The laboratory was an excellent one, and its success would depend upon whether they had the courage and the money to get the right sort of men to manage it. The hospital had an active, energetic staff, and the citizens and others must come forward with the money to equip and run the laboratory.

The Budget Proposals.

Sir William then referred to the Budget proposals with regard to the question of providing extensive laboratory equipment throughout the country. It was a scheme which he doubted not would be most serviceable, and he hoped that when it was put in order the laboratories would be linked up with such institutions as the general hospitals. Unquestionably a very large part of the work which would be done could be done in the laboratories of the general hospitals. No doubt specific public health work would be done by public health laboratories, but all the specific clinical work was best done in the laboratories of the general hospitals. It was to be hoped that in this new scheme these laboratories would be linked up, and some scheme arranged by which all the specific clinical work was done for the practitioners of the neighbourhood in the hospital laboratories. In conclusion, he said that Bath had a medical history which was perhaps unique for a city of its size; probably more distinguished physicians came out of Bath than out of any city of its size. Caleb Hillier Parry was an ideal physician, a devoted student of his profession, a public-spirited physician, devoted to the widest interests of science, and a devoted student of books, and he was glad his library was preserved in the Royal United Hospital.

VOTES OF THANKS.

The MAYOR (Dr. PRESTON KING), in moving a vote of thanks to Sir William Osler, said that the opening of the laboratory marked a definite step forward in the history of the hospital and an epoch in the history of the city. For its prosperity Bath depended upon the waters, and, in order to maintain that reputation, must treat patients with the waters properly and scientifically, and, in order to do that, an understanding of the diseases which came to Bath was necessary. The recent discovery that the Bath waters were radio-active afforded an explanation of their potency in the past, and, in addition to pathological researches, he suggested that careful investigation should be made as to the action of the radio-active waters of the city of Bath in connexion with the cure of these diseases.

Dr. LLEWELLYN, who seconded the motion, said that he hoped the work done in the laboratory would dissipate much of the obscurity which shrouded arthritic diseases.

Dr. MICHELL CLARKE, professor of medicine in the University of Bristol, who supported the motion, said that there could be no doubt as to the importance of the part such a laboratory as that which had just been opened would play in the future. There must be a close association between the men in the laboratory and the men in the wards, and the laboratory would need a man who would give his whole time to the work which was engrossing and likely to increase.

The resolution was very heartily carried, and Sir WILLIAM OSLER made a suitable response. A vote of thanks to the President, moved by Lord ALEXANDER THYNNE, brought the proceedings to a close.

LITERARY NOTES.

MESSRS. CASSELL AND COMPANY announce for early publication the fifth edition of Sir Patrick Manson's *Tropical Diseases*, revised and enlarged.

Messrs. J. and A. Churchill will publish at an early date the following new works and new editions: *The Anatomy of the Human Skeleton*, by J. E. S. Frazer, Lecturer on Anatomy, St. Mary's Hospital Medical School; the book is intended for use with the skeleton and dissected parts, and the author has drawn a large number of figures, many in colours, with the object of enabling the student to follow the descriptions on the actual specimens. *A Manual of Dental Anatomy, Human and Comparative*, by Charles S. Tomes, F.R.S., F.R.C.S., seventh edition, edited by H. W. Marett Tims, M.D., and A. Hopewell-Smith, L.R.C.P., M.R.C.S., L.D.S.Eng.; the text has been completely revised, and many new illustrations have been added. *The Story of Plant Life in the British Isles*, vol. ii, by A. R. Horwood, F.L.S.

So many are the documents through which the regulations of medical and sanatorium benefits under the National Health Insurance Acts are scattered that those concerned are at a loss to know where to find any particular piece of information for which they may be looking. Charts Limited has provided a handbook, *Medical and Sanatorium Regulations, etc.*, which collects all these documents into a single volume, classifying them according to subjects, and so enabling reference to be made to any point with the greatest ease and rapidity. The editor is Mr. J. H. Lloyd and the publishers Sir Isaac Pitman and Sons, Ltd., who will issue the book immediately. The same firm will also publish a little ninepenny book entitled *Domestic Servants and the Insurance Acts*, in which servants and their employers will find a brief statement of the information they require.

M. Constantine N. Sathas, the eminent Greek mediaeval scholar who died recently, was originally a medical student, but gave up medicine to devote himself to the study of the mediaeval history of his native country, which he pursued for fifty years. Besides writing a history of *Greece under Turkish Rule* and a history of modern Greek literature, he issued a *Mediaeval Library* of unedited chronicles and similar works in seven volumes, the *Chronicles of Galaxidi*, the little town at the entrance of the Bay of Itea, which played so important a part in the War of Independence.

British Medical Journal.

SATURDAY, JUNE 13TH, 1914.

MORAL IMBECILITY AND THE MENTAL DEFICIENCY ACT.

A CASE heard recently before Judge Rentoul at the Central Criminal Court is of importance and interest owing to the fact that the Mental Deficiency Act, which came into force on April 1st, was invoked to deal, on the ground of "moral imbecility," with an accused person otherwise than by penal measures. Owing probably to the novelty of the procedure, it has been rather freely reported in the general press, and the details need not be repeated. Its special interest to medical men is that the defence claimed that the prisoner was a "moral imbecile," and a person suitable to be dealt with under the Mental Deficiency Act, 1913. This view was accepted by the judge, who directed the jury to return a formal verdict of "guilty" on the facts, and then made an order directing the prisoner to be placed "under guardianship" in accordance with the provisions of the Act. He nominated a medical man as "guardian," and also directed that the necessary charges should be paid out of the prisoner's estate. Similar cases may be expected to arise from time to time, and are likely to prove a source of anxiety and difficulty to medical practitioners; it will therefore be useful to consider the practical application of the measure in this case as a guide to action in similar circumstances.

A "moral imbecile" is defined by the Act as a person who from an early age displays some permanent mental defect coupled with strong vicious or criminal propensities on which punishment has had little or no deterrent effect. According to the report in the *Times* it would appear that imprisonment had been tried without any result for previous offences in this case, and that moral obliquity suggestive of underlying abnormal mental conditions had been observed since the age of 17 years. A striking feature was the fact that the accused had distinguished himself above the ordinary on the intellectual side, being a Bachelor of Science of the University of London and winner of the Whitworth Scholarship.

The existence of the condition of moral imbecility has long been familiar to those whose work brings them much in touch with mental defectives, but hitherto there has been no explicit legal recognition of the condition.

The course taken by the judge in this case would seem to be in accordance with Section 8 (1) *b* and 8 (2) in regard to the accused, and with Section 13 in regard to his property and the payments to be made for his maintenance. It was open to the judge to postpone passing sentence and to direct that a petition be presented in the usual way, or in lieu of passing sentence to make an order such as that which, if a petition had been duly presented, it would have been competent for a judicial authority to make. He chose the second of these two courses. The order so made has the same effect as if it had been made in the ordinary way on petition.

Further, it was open to the judge to act either on evidence given during the trial or to call for further medical or other evidence. Apparently he was satisfied with the evidence before the court in this case.

One or two points touching the practical working of the Act arise for consideration. In the first place it was stated in court that no institution has been provided under the Act for such a case. That is probably true, and is likely to remain so. The State Institutions provided for by the Act are for defectives of dangerous or violent propensities and the accused in the case could not be placed in this class. The local authorities have not yet had time to provide institutions even for the more usual types of defective, and it is hardly likely that for the present they will, either separately or in conjunction, provide an institution really appropriate to such a small and special category. Fortunately the Act provides the alternative method of "guardianship." The guardian appointed takes the patient to reside with him and may exercise over him such powers as he would have had if he were the father and the defective were under the age of 14. He may also, it may be added, forbid any one to supply the defective with intoxicants.

During the progress of the hearing it was asked what it would have been possible for the court to do had there been no means available in this case. The reply given as reported seems to suggest that the Act made no provision for such a contingency: but it is just such a difficulty that the Act has been designed to meet. Section 30 (*d*) imposes upon the local authority the duty of making provision for the guardianship of defectives within their area who are found guilty of any criminal offence (2 (1) *b* ii). The defective, or the person liable to maintain him, may be required to contribute such sum towards the expenses of maintenance as seems reasonable: but where no such help is available the responsibility for maintenance falls on the local authority, and money is to be contributed by Parliament to an amount equal to half the expenditure of the local authority to assist it in the discharge of this duty. It will be seen, then, that a court of law need not be deterred from finding "moral imbecility" by the financial position of the person concerned.

The question naturally suggests itself, how long the detention ordered in such a case would last, and on referring to the Act it appears that the order is subject to the same limitations and safeguards in the interests of the individual as in any other case, regardless of the interests of society. Accordingly the order automatically expires at the end of one year from its date, unless continued in the manner provided for. The order may be continued if the Board of Control, after considering reports and certificates, etc., consider that its continuance is required "in the interests of the defective." But supposing the order should lapse by accident, what would happen? It seems unlikely that during the period of guardianship the defective would have brought himself again in contact with the law, or that he could again be dealt with by the court for the original offence. The matter would come up for consideration, and if it appeared that the defect had been modified by the treatment received the person might be released from restraint.

Looking at the matter broadly, it would seem that this Act, by including among defectives the moral imbecile, has made an inroad on the principles at present in force in regard to responsibility or liability to punishment for crime. These principles are to be found in the opinion of the judges given to the House of Lords in the Macnaghten case, to which we have recently had occasion to refer in another connexion.

The opinion stated that to establish a defence on the ground of insanity it must be clearly proved that at the time of committing the act the person accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act; or, if he did know it, that he did not know he was doing what was wrong. This principle may not have been very strictly applied, but it still stands as the statement of the law on the subject. It can hardly be contended that in this case the individual did not know the nature and quality of his act, and that it was wrong both legally and morally.

The grounds on which the law in such cases as this relieves the offender from the full consequences of his conduct, and provides for a different treatment containing a curative element, are, as Dr. Mercier has pointed out in his *Criminal Responsibility*, that it is futile and unreasonable to inflict punishment of the ordinary kind where the evidence shows that punishment in the past has been ineffectual, seeing that the almost certain prospect of punishment does not deter the accused from repeating his offences, and that he takes no adequate steps to conceal his acts or to escape punishment for them, and further that his past shows his mind to be differently constituted from that of normal individuals in that he has an innate craving to behave in an antisocial way, which he is unable to control. In such circumstances it is reasonable that some external control should be imposed, and this, though not intended as a punishment but as a safeguard to society, will, by seriously restricting the individual's liberty, carry with it a sense of retribution in most cases.

We now have the principle conceded that inability to exercise self-control is in certain circumstances to be accepted as a ground for exculpating an offender; if this be so in the case of the mentally defective, it cannot be long before it is recognized that the same principle is applicable to the insane, as was proposed many years ago by Sir James Fitzjames Stephen. If these grounds of defence are carefully considered, it will be seen that every case must be judged on its merits in the light of the evidence, and that they are equally applicable whatever the social status of the accused.

HYGIENE AND SANITATION IN INDIA.

AN important memorandum (resolution of May 23rd, 1914) on hygiene and sanitation in India, containing an historical account of efforts made in the past, a description of what is now being done, and a forecast of intentions for the future, has been addressed to local governments by the Government of India. It is issued by the Department of Education, a new department formed in 1910, under the direction of a member of the Governor-General's Council (Sir Harcourt Butler), to take over from the Home Department education, sanitation, and some other branches of the administration.

After giving particulars of the improvement that has taken place in the health of the Indian, as well as the British, troops in India, the memorandum points out that in the case of the civil population sanitary reform must conform to three cardinal principles: first, it must rest on a knowledge of the people, their conditions of life, their prejudices, social customs and habits, their surroundings and financial means, and must secure their co-operation; secondly, it must recognize the diversity of local conditions in a country which includes numerous communities, castes, and creeds, and which exhibits almost every variety of climate, temperature, humidity, and level of subsoil water, from the deltas of Bengal, with their steamy atmosphere and dense lush vegetation, to the burnt brown hills of the north-west frontier; and, thirdly, its introduction must be preceded by preliminary local surveys, inquiry, and experiment.

In an article published a few months ago[1] some account was given of the organization for the scientific investigation of epidemic and endemic diseases in India, and of the effect which the application of modern sanitary principles had had on the health of the British troops in India; elsewhere in this issue we are able to publish corresponding statistics showing that the improvement among the native troops has been not less conspicuous.

The general policy of the Government is, while decentralizing the civil administration of sanitation, to keep the control of research under itself. To this end the Indian Research Fund Association was constituted in 1911, with the member in charge of the Education Department of the Government of India as president. Of the work of this association we have already given accounts from time to time, as also of the work of the Plague Research Commission which the memorandum epitomizes. The staff of the superior sanitary organization in India is now numerically considerable; it consists of the Sanitary Commissioner with the Government of India, of the thirteen members of the bacteriological department, of the fifteen persons appointed or about to be appointed for the prosecution of research work and direct investigation in the field, and of the sanitary commissioners and deputy commissioners, the health officers and sanitary engineers of the several local governments. The central bacteriological staff is divided between the Central Research Institute, the Bombay Bacteriological Laboratory, the King Institute of Preventive Medicine, Madras, and the Pasteur Institutes at Kasauli and Coonoor. Each of these institutions has a director and at least one assistant; the Central Research Institute has three assistants, and the Bombay Bacteriological Laboratory two. All the members of this department are more or less completely engaged in research, and the same is true to a large extent of the field workers.

The memorandum passes in review the work—research and administrative—that is being done with respect to malaria, cholera, and small-pox, and contains the significant statement that the mortality from tuberculosis in some large Indian cities exceeds that of certain European cities. One officer, Dr. Lankester, has already been appointed to investigate the causes underlying the prevalence of the disease, to organize the diffusion of information, and to advise regarding measures for the prevention of infection, and other officers will probably be appointed with the same commission.

Another matter to which attention is being given is the high infant mortality, about one-fifth of the children born dying within the first year of life. The hope is expressed that the instruction of mothers and midwives will engage the attention of all medical women practising in India. In Bombay lectures to midwives have been started, and in some of the larger cities—notably Calcutta, Bombay, and Madras—health visitors have been appointed by the municipalities. It is proposed to appoint special registrars of births and deaths, and that as far as possible they should be persons possessing medical qualifications. The local governments are advised to undertake sanitary surveys on broad lines with a view to

[1] February 7th, p. 314; see also p. 310.

ascertaining the sanitary needs of all the more important towns and localities in which sickness or mortality is above normal, and of suggesting schemes of conservancy, water supply, and drainage where needed. The central government has undertaken a sanitary survey of the chief places of pilgrimage throughout India, and the important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Mussulmans is undergoing close scrutiny. It is hoped gradually to put into force schemes for town-planning and for the relief of congested areas.

With regard to rural areas, local governments have been notified that they are at liberty to expend a portion of the Imperial grants for urban sanitation on rural sanitation, provided practical schemes are forthcoming. The importance of educating the people themselves in such districts to appreciate the value of sanitary measures is recognized to be "the most potent and penetrating instrument of sanitation among a population which still views it for the most part with hostility or unconcern." To this end certain suggestions are made; one is that travelling dispensaries might be used to spread a knowledge of simple facts regarding the more common diseases, and that the sub-assistant surgeons in charge should be given a special training in hygiene. The improvement of village water supplies is held to be important, but is admitted to be difficult. Mention is made of the disinfection of wells with permanganate of potash and of the use of tube wells. In several provinces, notably Madras, village unions or circles have been formed, and their committees entrusted with small grants for the improvement of the sanitation of the village site, and it is suggested that this system might be extended. It is also advised that the system in force in some districts of encouraging village midwives by small grants of money and rewards to attend at the head quarters hospital for a short and simple course of training might be more generally applied. Finally, the opinion is expressed that many more appointments of district sanitary officers are required, and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well-qualified whole-time district health officers to control and organize all sanitary arrangements and experiments in the district

THE PROBLEM OF SWINE FEVER.

An extension of the field of veterinary research has been advocated by Sir Clifford Allbutt and others of authority not only on the ground of the intrinsic importance of the subject, but also because in this way additional knowledge of problems of human disease will be gleaned. Swine fever, which has caused and is still causing serious loss and inconvenience, has in particular been mentioned as a suitable object of university research, and the report of Mr. Major Greenwood, jun., to the Council of the National Pig Breeders' Association on the present state of knowledge of swine fever[1] will be of interest to a wider public than its title might suggest.

Mr. Greenwood succinctly reviews the pathological and bacteriological data which we owe mainly to the researches of Dorset and his colleagues in America and those of Uhlenhuth and his co-workers in Germany, and calls attention to the revolutionary changes which pathological opinion has undergone in the last ten years.

As might be expected in a report from the head of the statistical department of the Lister Institute, special attention is devoted to the statistical aspect of the subject. It might have been anticipated that an epizootic would lend itself to statistical treatment more readily than an epidemic, but Mr. Greenwood shows that, at least in the present case, this is not so. Practically all discussions as to the prevalence of swine fever have been based upon the recorded numbers of outbreaks in each year, and Mr. Greenwood advances very cogent reasons for thinking that such comparisons are of doubtful value. It would appear that an "outbreak" may mean the occurrence of swine fever on a farm with a small number of pigs or the presence of disease in a large herd of perhaps hundreds of animals. Obviously if this is so—and Mr. Greenwood states that he has found no evidence to the contrary in the official publications—mere comparisons of numbers of "outbreaks" may be entirely misleading. Thus, in the case of epidemic diseases, if we were merely told that scarlet fever had been notified in ten dwelling-houses in one year and in only five in the next, we could hardly draw reliable conclusions as to the significance of the change, since one of the five houses might have been a large boarding school. Mr. Greenwood devotes a good deal of space to the discussion of the effects possibly associated with differences in the average size of herd upon the prevalence and gravity of an epizootic, and his remarks are applicable to epidemics. He points out that the result depends upon the infectivity of the disease, aggregations in larger groups being calculated to increase the gravity of the problem if the disease be highly infectious. The medical reader will recall numerous discussions respecting the influence of compulsory elementary education upon the epidemic prevalence of zymotics, especially the work of Sir Shirley Murphy. Mr. Greenwood shows that the average number of pigs on infected premises in relation to outbreaks has risen in the ten years ending in 1912, and points out that this is consistent with, although not a proof of the correctness of, the current belief that the average size of herds has increased. He points out that a far more exact census of the pig population is required before satisfactory inferences as to the epizoology of swine fever can be drawn. In the concluding section of the report the statistics of the serum-therapy of swine fever are discussed, and it is shown that although a strong *prima facie* case in favour of inoculation has been made out, a good deal more work on the subject is necessary. The report is of much interest as showing how complex an ostensibly simple problem may be, and some of the suggestions contained in it will be of value in other directions.

As is well known, research in connexion with such highly contagious diseases of animals as swine fever has been practically confined in this country to the professional officers of the Board of Agriculture for various reasons, the soundness of which we are not in a position to assess. The consequence has been that the Board has been subjected to a good deal of criticism, in much of which zeal has tended to outrun knowledge. Mr. Greenwood has wisely refrained from joining the band of writers who harry the Board of Agriculture in season and out of season, and his conclusions will perhaps "be unsatisfactory both to the supporters and the opponents of inoculation." We think, however, that the report, objective though it

[1] Report to the Council of the National Pig Breeders' Association on the Present State of Knowledge of Swine Fever, with Special Reference to the Available Statistics. By Major Greenwood, jun., M.R.C.S., L.R.C.P., F.S.S. Pp. 69. Derby, 1914. Published by the National Pig Breeders' Association. Price 6d.

may be, will be found to furnish a strong argument to those who, like Sir Clifford Allbutt, advocate the participation of the universities in veterinary research. It is clear that the present state is unsatisfactory, and it is not less clear that the co-operation of non-official workers is desirable. It cannot be fair to the officials of the Board of Agriculture to leave the whole burden of research upon their shoulders, however unselfishly willing to bear it they may be, and the kinship between many of the problems of epizoology and those of epidemiology is too strong to be any longer disregarded.

OBSTETRICS IN UGANDA.

IN the beginning of 1884 Dr. R. W. Felkin read before the Edinburgh Obstetrical Society a paper on labour in Central Africa,[1] largely founded on his experiences in Uganda, then a little known and even less considered part of the world; now, thirty years later, there exists an East Africa and Uganda Branch of the British Medical Association, and its first president, Dr. A. R. Cook, has taken as the theme of his presidential address at its annual meeting the subject of obstetric medicine in Uganda.[2] Dr. Felkin described midwifery as practised by the natives themselves, and gave details of some wonderfully advanced obstetric surgery done by the men of Uganda. Dr. Cook tells of midwifery as practised by British doctors there, giving his own statistics, and enumerating the operations performed. Dr. Felkin had the greatest difficulty in gaining permission to see labour cases. To Dr. Cook the native women come now to the number of more than two hundred a year to be aided by him in their confinements; but this is only in recent times, and at first he had to be content with an annual list of six or eight obstetric engagements. Nothing could speak more eloquently of the change which has come to Uganda in these thirty years, and to the medical missionaries working under the Church Missionary Society (such as Dr. Felkin and Dr. Cook) no little share of the credit in bringing about the change is due.

In one respect Dr. Felkin and Dr. Cook are in complete agreement: both discovered that contracted pelves were far from uncommon among the Bantu people. Thirty years have done much to disabuse the medical mind of a belief in the invariably easy labours of the native and savage races of Africa, but even yet there is some scepticism regarding dystocia among primitive peoples. Dr. Cook's statistics of 329 forceps cases in a total of 2,232 labours clearly show that all confinements are not easy matters in Uganda; and when to these forceps cases are added 11 craniotomies, 5 cephalotripsies, 4 decapitations, 6 Caesarean sections, and an embryotomy, it is obvious that obstetrics has its strenuous side in Africa as at home. Dr. Cook is able to furnish average measurements not only of the fetal head, but also of the maternal pelvis, and these show that, whilst the baby's head in Uganda is somewhat smaller than in this country, the mother's pelvis is very distinctly so both in its external and internal diameters. The pelvic contraction is not due to rickets, which is a rare disease in Uganda, but probably to the almost universal custom of making even young children carry heavy burdens on their heads; the sacrum is thus pressed downwards and forwards, and the brim narrowed antero-posteriorly.

A curious and unexpected result of the analysis of the statistics is the proportionate frequency of the four vertex positions of labour in Uganda. Out of each hundred cases of vertex presentation 44 were L.O.A., 44 were R.O.A., 7.1 were R.O.P., 2.7 were L.O.P., and the remainder (2.2 per cent.) were unclassified. In ordinary practice in this country the proportions, quoted by Dr. Cook, are 60.9, 22.3, 14.2, and 2.6. What the cause of this remarkable difference may be is by no means clear, and Dr. Cook leaves it dark. Another matter of some interest which emerges from Dr. Cook's figures is the evidence they afford of what may be called the obstetric aspect of the prevalence of syphilis, which in recent years has been so much to be deplored in Uganda. There is a general consensus of opinion that the sudden extension of this disease was due to the emancipation of the Baganda women, as was shown in Colonel Lambkin's report published in 1908; immorality and promiscuous intercourse followed on the removal of the strict confinement and surveillance under which these women had lived, and syphilis spread rapidly. Now, with rules for notification and control, the malady is being checked; but its influence upon pregnancy has been only too certain, and the number of miscarriages has been appalling. Further, Dr. Cook's brother (Dr. J. H. Cook) states that it has been calculated that 70 per cent. of the children in Uganda either die from premature birth or are stillborn, or die in the first week after birth; in other words, nearly three children die to each one that survives. Dr. Cook touches upon several other interesting obstetric matters; but enough has been said to show that neither in the ease of her confinements nor in the immunity of her pregnancies from venereal infection is the Baganda woman at present in advance of her European sisters.

THE PURCHASE OF RADIUM.

THE radium in commerce is usually the bromide salt, and it is commonly mixed with a large proportion of barium bromide, the two elements being found closely associated in the uranium ores from which radium is obtained. There is a great similarity in the chemical reactions of the salts of barium and radium, and they can only be separated by a process of fractional crystallization in which advantage is taken of the relatively lower solubility of the radium salt; even after repeated fractionization, however, a considerable amount of barium is still present. In the case of radium and barium chlorides the final crystallizations are carried out by means of the strongest (most concentrated) hydrochloric acid that can be obtained by distillation. By this procedure the radium chloride, being less soluble than the barium chloride, accumulates in the less soluble fractions. The fractionization of the mixed bromides of radium and barium is similar to that of the chlorides, but more rapid, and less regular. This is probably the reason—or one reason—why, as we gather from some remarks made by Sir Frederick Treves recently before the Medical Society of London, the Committee of the Radium Institute in London is now purchasing only the radium chloride, containing 76 per cent. of the pure element of radium, and not the bromide, which is supposed to contain about 53 per cent. A contract for purchase should specify a degree of purity, and in the case of the bromide salt the proportion of radium bromide should be at least 50 per cent. In that case the purchase price should be based on the quantity of pure radium bromide ($RaBr_2 2H_2O$) present, and the contract should provide that the amount of pure radium element contained should be certified by the National Physical Laboratory at Teddington. The price to be quoted is for

[1] *Trans. Edin. Obstet. Soc.*, ix, pp. 28–36, 1884.
[2] Vide p. 1281 of this issue.

pure radium bromide corresponding to, or equivalent to, the amount of radium element contained in the preparation according to the certificate of the National Physical Laboratory. The purchaser would be well advised to specify the date, or if the whole parcel cannot be supplied at one time, the dates of delivery. Delivery should be made to the National Physical Laboratory, and the vendor should be under a substantial penalty in case of failure to fulfil the contract to time. As the vendor will probably require the deposit of caution money to a substantial amount when the contract is signed, the buyer would be justified in requiring a deposit by the vendor to meet any default in the date of delivery. The price to be paid should include freight and insurance to the National Physical Laboratory, which will undertake, when the measurement is completed, to send the material to the buyer accompanied by the original certificate and to send copies to the vendors. The buyer should contract to pay after the certificate of the National Physical Laboratory is completed. Further, the buyer should take care to specify that the radium salt shall be practically free from, that is to say that it shall not contain more than 0.3 per cent. of, mesothorium or other short-lived radio-active substance except the products of radium itself. The radium standard for this country is in the custody of the National Physical Laboratory, and that laboratory has agreed with the Physikalisch-Technische Reichsanstalt, Charlottenburg (Berlin), to express the activity of preparations in terms of metallic radium and not in terms of bromide and chloride. The British standard consists of 20 mg. of pure radium chloride, the cost of which was generously defrayed by Dr. Beilby, F.R.S. The international standard prepared by Madame Curie and deposited in Paris, and that prepared by Professor Hönigschmidt, which is in the custody of the Academy of Sciences i Vienna, were carefully compared by the international committee on radiology and electricity two years ago, and were found to agree within the limits of accuracy of measurement, and Sir Ernest Rutherford has pointed out that the fact that independent measurements agreed so closely is a striking testimony to the accuracy of the method. The fee for the certificate of standardization by the National Physical Laboratory will probably, as a rule, be paid by the buyer. Just now there is a great demand for radium, and the price for immediate delivery ranges from £16 per milligram upwards, according to the degree of concentration. Contracts for delivery in the early months of 1915 have been entered into at a price as low as £13 10s. per milligram, and there is a widely prevalent belief that there may be a great fall in the price during the next two years. It is interesting to note that for some time after its discovery radium could be procured at less than one-tenth of its present price. The demand for radium to be used for medical purposes has hitherto absorbed the output, and has led to rates being quoted which are excessive and altogether artificial. The large profits obtained have, however, stimulated search for uranium ores in various countries, notably in America, and, as there are unlimited quantities of low grade uranium rocks available, it would appear to be merely a question of time before radium will be placed on the market at a price bearing a reasonable ratio to the cost of its production.

FERRO-ALLOYS AND THEIR DANGERS.

THE disastrous effects which arose during the transport of ferro-silicon six years ago, when four persons died on board a Swedish ship, have not been forgotten. It was shown in that particular instance that poisonous gases were given off by the cargo and that the vapours had penetrated to the sleeping quarters of the men. In the report, just published, to the Local Government Board,[1] Dr. Monckton Copeman draws attention to recent investigations upon ferro-alloys, and particularly ferro-chrome. In the annual report of the Medical Officer to the Local Government Board, 1909, the peculiarities of ferro-silicon were demonstrated. One of these was the proneness of the compound to undergo disintegration in the presence of water, with a liberation of phosphoretted hydrogen. The use of ferro-chrome in modern steel industry has drawn attention to the possibility of certain dangers. From ferro-chrome a gas smelling like acetylene is evolved. On exposure to air and moisture the material rapidly disintegrates. A paper impregnated with silver nitrate readily becomes blackened on exposure to the fumes. It has been shown by this and other tests that phosphoretted hydrogen is evolved in considerable quantity. Just as ferro-silicon was found to undergo disintegration and to evolve a poisonous gas, owing to the aluminium it contained, so in the case of ferro-chrome the aluminium present is the cause of the acetylene-like gas given off. Two kinds of ferro-chrome are on the market—a low and a high carbon compound. That which contains the higher percentage of silicon is used for armour plating. All ferro-alloys which tend to disintegrate rapidly are a source of danger on account of phosphoretted hydrogen evolved. To the group of compounds of which ferro-silicon and ferro-chrome are examples ferro-manganese must be added, since it readily disintegrates in the presence of water. In dealing with the manufacture of ferro-chrome, Mr. Bennett, Inspector of Factories, one of the contributors to the report now issued, explains how carbon and silicon increase the hardness and brittleness of the metal, and how, as a constituent of steel, chromium confers hardness. Pearlitic steels are hard, they exhibit a high resistance to rupture, and they also possess high relative elasticity. Dr. Wilson Hake, who has contributed to the report a note on the chemical side of the questions raised, points out that, as in ferro-silicon, the phosphoretted hydrogen is derived from the calcium phosphide present, so in ferro-chrome aluminium phosphide is the source of the poisonous gas. Apart from the risks to health caused by inhalation of phosphoretted hydrogen, transport of all ferro-alloys, including electro-manganese, is attended by a risk of even graver significance. Hydrogen gas may be generated during transport of the ore, and this is the first stage in the formation of a compound dangerous from another point of view, since when it is mixed with air a highly explosive mixture is produced.

SCHOOL AND PRIVATE EDUCATION.

IN an address on school education and the influence of the study of Nature, delivered on Founders' Day, July, 1913, at Epsom College, and now reprinted,[2] Sir Henry Morris discourses on education in a manner at once interesting and instructive. He begins by condemning what he rightly calls the pernicious system so much in favour with many at the present day which encourages the learning, not of one or two subjects at a time, but of many badly. This, in our opinion, is the direct outcome of the multiplicity of examinations which our unhappy offspring has to undergo, and to the breaking up of knowledge into "groups." History is subdivided into "periods," geography into "countries"; the sciences are taught in a like fragmentary way. It has been estimated that in some universities a degree in arts can be got in one of more than 600 different ways. Gladstone used to say that in his time it was quite easy to go through Eton without learning anything at all, but what one did learn remained a possession throughout life.

[1] Local Government Board: Reports and Papers on the Nature, Uses, and Manufacture of Ferro-chrome and other Ferro-alloys. By S. Monckton Copeman, M.D., F.R.S., Samuel R. Bennett, M.A., and H. Wilson Hake, Ph.D. Messrs. Wyman and Sons, Fetter Lane, E.C. 1914. (4d.)

[2] London: John Bale, Sons, and Danielsson, Ltd., 1914.

Nowadays the memory of the schoolboy is too often overburdened with multifarious and undigested knowledge, which is quickly forgotten. Sir Henry Morris discusses the question whether it is better for a boy to be sent to a large school or to be educated in private. His decision is naturally in favour of the former course, but he produces an imposing list of great men—Demosthenes, the younger Pitt, Charles Bell, Benjamin Brodie, John Stuart Mill, John Hunter, and Thomas Henry Huxley—who, as far as ordinary education goes, were self-taught. Darwin was at Shrewsbury, but he spoke of his school education as a blank. These, however, were men of extraordinary gifts, whose intellectual growth would probably have been stunted or distorted by any routine system of education. On the other hand, we agree with John Henry Newman, who is quoted by Sir Henry Morris. The view of the Cardinal was that an institution which brought boys and youths together and kept them in close touch with each other was better than one which merely gave degrees to any one who came up to a certain standard of knowledge in a number of subjects. Boys, and more especially young men, educate each other by the shock of mind with mind. What Huxley called the divine curiosity to know is fostered by the study of Nature, and a taste for the observation of the wonders that lie around us in field, wood, and stream was strongly manifested in Hunter, Darwin, and Huxley. Sir Henry Morris refers to the system of education described by Rabelais. It is remarkable that a man who lived in the sixteenth century, when languages and scholastic philosophy and theology were generally thought to provide the full equipment of an educated man, would have the pupil trained in a knowledge of Nature, and develop his body by physical exercises. Rousseau in his *Emile*, which seemed a new revelation to most of his contemporaries, had been anticipated in all that was sound in his system not only by Rabelais, but by Montaigne and Locke. Sir Henry Morris, while admitting that there are boys whose nature makes them ill suited for public school life and discipline—Shelley and Francis Thompson are conspicuous examples—holds that for the great majority no other education is so beneficial. As he says, "self-educated and privately educated youths are apt to be self-centred, too absorbed in their own way of looking at things, unwilling to enter into the views and thoughts of others, full of self-esteem, and yet withal to be lacking in a due sense of self-reliance." A public school education such as that so successfully provided by Epsom College tends to cure shyness and above all to engender the sense of discipline and a readiness to co-operate with and to give and take in intercourse with their fellows. There can be no better foundation for a manhood which is to be devoted to public or professional life.

MEMORIAL TO DR. ELIZABETH BLACKWELL.

On June 7th, the last day of the Hastings Pageant, a commemorative tablet to Dr. Elizabeth Blackwell was unveiled in Exmouth Place, where she lived, by Mrs. Millicent Garrett Fawcett, who said she had been reading in the newspapers of the past week of the great doings in Hastings and the number of great men whom they had been commemorating. She thought that of all the saints, heroes, and sages whom they had commemorated none deserved it more than Dr. Elizabeth Blackwell, that great woman who had her residence among them for the last thirty years of her life. She had great qualities; she was a great pioneer and road maker. Before her time the medical profession was absolutely closed to women. The last statement is not altogether correct. Not to mention the Roman *medicae*, and the *mulieres Salernitanae*, in the sixteenth century Alessandra Gigliani taught anatomy at Bologna, where several other ladies at various times lectured on medical subjects. The celebrated Laura Bassi took the degree of Doctor of Medicine at Bologna in 1731. In the middle of the eighteenth century Anna Mazzolini was professor of anatomy at Milan, Maria Petraccini lectured on the same subject at Ferrara in 1788, and her daughter, Zaffira Feretti, studied surgery at Bologna. Anna Maria delle Donne, who died in 1842, was a practitioner of considerable repute, and taught midwifery at Bologna. In France women practised not only midwifery, but the art of healing generally, from a very early period. Louis IX was accompanied in one of his crusades by a female doctor. In the early part of the fourteenth century Philip the Fair issued an edict forbidding any surgeon, male or female (*aucun chirurgien ou aucune chirurgienne*), to practise in Paris unless he or she had been carefully examined and approved by the sworn master surgeons; throughout the decree, which bears date November, 1311, the male and female practitioners are treated as being on the same footing. Both in the eighteenth and in the early part of the nineteenth century there were female doctors in Germany. Frau Dorothea Christina Erxleben, the daughter of a medical practitioner of Quedlinburg, took the degree of Doctor of Medicine in the University of Halle on June 12th, 1754, after a two hours' examination conducted in Latin. Another woman, Frau von Siebold, received the degree of doctor from the University of Giessen, in recognition of her distinguished merit. Her daughter Charlotte studied at Göttingen in 1811 and 1812, and graduated at Giessen in 1817. As late as in 1847 Frau Therese Frei graduated at the same university. The degree granted to these three ladies was that of Doctor of Obstetric Medicine. In the Irish Guild of Barber Surgeons, founded in 1446, women are recognized as sharing in all the privileges of the foundation. There is mention of at least one "gentlewoman surgeon" in England in a document of the seventeenth century. But Elizabeth Blackwell was the true pioneer of the modern movement; the story of her fight for admission to the medical profession is told by herself in a book entitled *Pioneer Work in Opening the Medical Profession to Women* (Longmans, Green and Co., London, 1895). She was born at Bristol in 1821. Her parents emigrated to America with a numerous progeny in 1832. A few years later the family lost its breadwinner, and Miss Blackwell found herself faced with the necessity of working for a livelihood. After a trial of teaching she turned her thoughts to medicine. She laid siege to the medical schools of Philadelphia and New York, and after many repulses succeeded in effecting an entrance into the medical department of Geneva, a small university town in the western part of the State of New York. This was in October, 1847, and in January, 1849, she took the degree of M.D. In this country Mrs. Garrett Anderson was the first in modern times who forced the barriers which excluded women from the practice of medicine. She was admitted a Licentiate of the Society of Apothecaries in 1865, and graduated M.D. in Paris in 1870.

INFLUENZA AT ST. KILDA.

THE *Glasgow Herald* of June 6th publishes a telegram received by Messrs. John McCallum and Co., Glasgow, from Mr. Blair, purser of their *Hebrides*, who states that immediately after its last visit the islanders suffered an epidemic of influenza. Its severity may be inferred from the fact that had the steamer called a few days earlier there would have been no little difficulty in mustering a sufficient crew to bring a boat off. On one Sunday no service was held in the island church. St. Kilda lies some 250 miles out from Greenock, and bears 40 miles W.N.W. from the Isle of Monach, the westernmost island of the Sound of Harris. The "cold" which attacks the natives after the visit of a stranger is mentioned by Kenneth Macaulay, great-uncle of Lord Macaulay, who

wrote a history of St. Kilda (London, 1764). He says: "Another very remarkable disease that attacks this place occasionally is a very severe cold, sometimes attended with viscous bloody matter, every time the Harris people come among them, or strangers from any other quarter." A theory set forth in a letter from "a lady of Norfolk" to Dr. Burney, quoted by Boswell in his *Life* of Johnson, and attributed to "the late Reverend Mr. Christian of Docking," is that the situation of St. Kilda renders a north-east wind indispensably necessary before a stranger can land, and it is the wind, not the stranger, that causes the epidemic cold. In an account of a visit to St. Kilda, which appeared in the BRITISH MEDICAL JOURNAL of June 1st, 1912, it is stated that Mr. McLean, who was then the minister, while admitting the fact of the periodical cold, scoffed at its connexion with the landing of strangers as a superstition. But it is firmly believed in by the islanders, who do not welcome visitors, and are careful to keep their faces averted when speaking to them. This is probably a wholesome instinct of self-preservation, for it is easy to understand from the teachings of bacteriology what havoc is likely to be wrought by imported microbes in a population generally free from infectious disease.

CHINESE GIBES AT MEDICINE MEN.

MEN of all sorts—and all nations—take a pride to gird at the doctor. Even in China the doctor does not escape the shafts of the "sarkasticist," as one of Barrie's Thrums characters, Tammas Haggart, calls himself. The popular saying that the medical practitioner's doorstep is haunted by the ghosts of those whom his physic has sent to join their ancestors, is well known. Dr. Guillemet, in an article quoted in the *Presse médicale*, gives other illustrations of the Celestial's somewhat grim humour about medicine men. Thus a soldier wounded by an arrow applied to a surgeon, who examined the wound and pronounced the case quite simple. He cut off the end of the arrow sticking out of the soldier's body and then demanded his fee. To the patient's question what was to be done about the part of the weapon which was left inside, the surgeon, shaking his head, said that was a matter for a physician; his province was the outside of the body. Another story is told about a doctor who advertised that he could cure crooked spine. "Were their backs bent like a bow," he announced, "that is nothing. If they ask me to treat them, they will be cured at a sitting, and I guarantee that their spines will be as straight as the stem of a pencil." A hunchback came to the doctor, who at once got two planks. One of these he placed on the ground, and asked the patient to lie down on it; the other was put on the top of him. The doctor then tied the two planks with cords, and disregarding the yells of the patient pulled them tight together. In this way the back was soon straightened out, but by the time the operation was completed the life was squeezed out of the man. When remonstrated with by the relatives, the doctor coolly said: "Why reproach me? My speciality is to cure hunchback. Whether the patient dies or not is no affair of mine." After all, the doctor did what he undertook to do, and if the patient unfortunately died of the operation, that is an accident which sometimes happens in other countries after procedures carried out with the most perfect technique.

THE INTERNATIONAL DENTAL CONGRESS, LONDON, 1914.

THE preliminary programme of the sixth International Dental Congress in London next August, the first of the kind ever held in this country, has been issued, and can be obtained from the Honorary Secretaries, 19, Hanover Square, W. The president is Mr. J. Howard Mummery, M.R.C.S., L.D.S., and among the delegates already appointed are representatives of the Australian Commonwealth Government, of New South Wales, New Zealand, Tasmania, and Queensland, and of Denmark, Greece, the Netherlands, Sweden, Japan, and Uruguay. The congress will be opened on August 4th, at 10 a.m., at the Central Hall, Westminster, and in the afternoon addresses will be delivered by Dr. M. Roy (France), Professor Walkhoff (Germany), Mr. W. Guy (Great Britain and Ireland), and Dr. E. C. Kirk (United States of America). The head quarters of the congress will be at the University of London and Imperial College of Science and Technology, and its business will be transacted there in ten sections, including sections of Anaesthesia (General and Local), of Oral Hygiene, Public Instruction and Public Dental Services, and of Dental Education. An international museum will be open during the congress under the direction of a committee, of which Mr. F. N. Doubleday (19, Hanover Square, W.) is the secretary. There will also be an exhibition of dental appliances. During the congress a number of demonstrations will be given by British and foreign members. Among the entertainments already arranged are receptions by the Lord Mayor and Corporation of London at the Guildhall, on August 4th; by the President and Council of the Royal College of Surgeons of England on August 5th; and by the British Dental Association, at the Natural History Museum, on August 7th. The congress banquet will take place on August 6th at the Anglo-American Exhibition.

CONTESTED ELECTIONS.

IN any contested election which excites particular interest it is a common practice to issue fly-sheets commending individual candidates or groups of candidates, and to append to such commendations a list of their principal supporters. We have been asked to draw the attention of members to the necessity for avoiding error in issuing such fly-sheets. Difficulty has arisen owing to the fact that some circulars and notices in relation to a pending election to the Council of the British Medical Association have been printed and headed in such a manner that members might be led to suppose that they were issued from the central office.

TENURE OF OFFICE OF MEDICAL OFFICERS OF HEALTH.

THE deputation arranged by the British Medical Association and the Society of Medical Officers of Health to press for security of tenure for medical officers of health and for superannuation, which was to have taken place on March 31st but was postponed owing to the indisposition of Mr. Lloyd George, was received by the President of the Local Government Board (Mr. Herbert Samuel), the Chancellor of the Exchequer, and the President of the Board of Trade (Mr. John Burns), in the Chancellor's room in the House of Commons on Thursday, June 11th, at 4 p.m. The deputation was introduced by Dr. Addison and Sir Philip Magnus. A report will be published in our next issue. A small deputation, which stated the case for the Sanitary Inspectors, was received by agreement at the same time.

THE LATE DR. COURTENAY MILWARD.

THE number of vacancies at the approaching election for foundation scholars at Epsom College is, we are informed, only three, and members who have not yet disposed of their votes may be glad to be reminded that the son of a man who worked so unselfishly for the profession as the late Dr. Courtenay Milward is among the candidates. Dr. Milward, who was an old Oxford and Guy's student, died at the age of 41, before he had had the opportunity of making any adequate provision for his family. He left a widow and three boys; the education of the first has been in part provided for, and the present applicant is the second son. At the Representative Meeting at Brighton last year Dr. Lord, of Gillingham, who had been associated with Dr. Milward in his work for the profession on central

committees of the Association, made an appeal for a fund then being raised for the benefit of the widow. The appeal was strongly endorsed by the Chairman of Council and Dr. Crawford Treasure, the Representative of the Cardiff Division. The fund for the benefit of Mrs. Milward, which reached a sum of £1,294, was closed last April. Many Divisions of the Association and many members individually contributed to this amount, but the yield is of course very inadequate to the education of a family. Communications may be addressed to Mrs. Milward, 5, Glossop Terrace, Cardiff, or Dr. Courtenay Lord (155, High Street, Gillingham) would, we have no doubt, respond to any inquiries.

WE regret to notice the announcement of the death after a long illness of Dr. George Dean, who was Professor of Pathology in the University of Aberdeen, an office to which he was only appointed in 1908.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

THE House of Commons reassembled after the Whitsuntide recess on Tuesday. The chief business was the National Insurance Act, 1911 (Part II, Amendment), Bill. The bill is wholly concerned with unemployment insurance. The President of the Board of Trade, by whom it was introduced, said it made no material change in the structure of the bill; it involved no substantial change of policy, and practically imposed no additional charge on the public funds. The bill was read a second time and committed to a Standing Committee.

Milk and Dairies Bills.

On Tuesday, June 9th, the Milk and Dairies Bills for England and Scotland received their second readings.

A useful and interesting discussion took place on the Milk and Dairies Bill (England). Mr. C. Bathurst generally welcomed the bill and congratulated the President of the Local Government Board on the way in which he had met the agricultural interests, and hoped that he would receive the support of members representing agricultural constituencies. He spoke in favour of the adoption of a scheme of graded and certified milk, and added that the Central Chamber of Agriculture and other important organizations supported the second reading of the bill.

Dr. Addison commended the bill as opening up the possibility of obtaining uniform and rational methods for dealing with milk supplies throughout the country as a whole, and welcomed particularly the provisions directed to secure the cleanliness of our milk supplies. He pointed out the absurdity of the present position, under which a man could be prosecuted for putting a little clean water in milk, whilst at the same time it could be sold containing cow dung, hairs, and all manner of filth, with impunity. He expressed the opinion that many of the evils from which the public suffered were due not only to the lack of a rational and uniform administration, but to the fact that the Milk and Dairies Orders were administered by so many small authorities. This meant the employment of inspectors and others with divided interest and with insufficient training and experience. He contended that the bill should be amended so as to make the larger county and county borough authorities responsible in the first place, with power to delegate certain of their duties to the smaller authorities, with the consent of the Local Government Board, instead of the work being done, as proposed in the bill, by the smaller authorities, with discretion to the Local Government Board to require transference to the larger ones. He expressed the hope, and it was gratifying to notice that it met with general approval, that the medical and veterinary officers employed by the larger authorities should be given proper security of tenure.

Mr. H. W. Forster, whilst generally welcoming the bill, expressed the fear that it might lead to material restrictions in the supply of milk and the consequent increase in its price, and rather tend to encourage the importation of more foreign milk.

Mr. Astor supported the view put forward by Mr. Forster, and said that unless the bill were amended it would tend to restrict the supply of milk, and he pressed for modifications in the clauses dealing with the supply and prohibition of the supply of tuberculous and dirty milk. In particular, he contended for the grading of milk, for the provision of certificates, and for the annual licensing of milk vendors.

Mr. Glyn-Jones, in supporting the bill, criticized the machinery of appeal as set out in the bill and the schedules, and pressed for amendments dealing with these matters. Mr. Barnston welcomed the bill, and particularly those provisions which would enable what he described as the "appeal to the cow" to be made, whereby, instead of condemning a whole dairy, samples from individual cows might be taken. Mr. J. W. Hills and other Unionist members also supported the bill.

In reply to the criticisms on the bill, Mr. Herbert Samuel said that the second schedule was based upon the procedure at present successfully adopted in Manchester, and he supported its retention in the bill. He sympathized with the contention that the larger local authorities should do work of this kind, but contended that in view of the existing circumstances it was not practical to transfer the administration in any general way from the district to the county authorities. He stated that it was proposed in the Finance Bill that half the salaries of public health officers appointed for the purposes of the bill, including veterinary officers, would be paid for out of Treasury funds. He also promised to introduce later on a bill codifying and bringing up to date all the existing milk legislation, if this bill were passed into law. He expressed his general sympathy with the principle of certification, and said that he should be glad to leave it to the Committee to decide.

Sir Frederick Banbury objected to the proposal for the establishment of milk dépôts, but otherwise generally supported the bill.

After the conclusion of the discussion on the English bill, the Milk and Dairies Bill (Scotland) secured a second reading after a short debate. Both bills were referred to the Standing Committee.

The Dogs Bill.—It is announced that this bill will be considered by Standing Committee A, to which in the usual way a certain number of members will be specially added for the purposes of the bill. The Standing Committees up to the present have been occupied with other bills, some of which, like the Plumage Bill, have occupied more time than was anticipated, and this accounts for the long delay which has taken place between the second reading of the Dogs Bill and its consideration by the Committee.

Vaccination.—Mr. George Roberts asked the President of the Local Government Board whether, in consideration of the simultaneous decline of small-pox and vaccination in the United Kingdom, he was now prepared to give effect to the unanimous recommendation contained in paragraph 440 of the Royal Commission on Vaccination, that the age for the performance of the operation could be advantageously extended to one year from the date of birth.—Mr. Herbert Samuel said that the Royal Commission recommended an extension of the age conditionally on security being obtained that, whenever a case of small-pox occurred, children in the district within the range of the present compulsory law should be vaccinated, but stated that this provision would no doubt involve some practical difficulties. The change would require legislation, and, as at present advised, he was not prepared to introduce a bill on this subject.

Forcible Feeding.—Mr. Wedgwood asked on how many occasions, and in what prisons, the prison doctor had refused to feed forcibly a suffrage prisoner?—Mr. Ellis Griffith replied that there had been no such refusal by a prison doctor.

Sleeping Sickness.—In reply to Sir J. D. Rees, the Secretary of State for the Colonies said that he was consulting the Governors of Colonies and Protectorates in tropical Africa with regard to the recommendations of the Committee on Sleeping Sickness. He was not in a position to make a statement at present.

England and Wales.

LIVERPOOL.

Medical Treatment of School Children.

Hitherto the education authority has confined its activities as regards treatment of school children to cases of ringworm, defects in refraction, and dental caries. It is now proposed to deal with cases of tonsillar and adenoid disease. This work has hitherto been done by the local practitioners or the public hospitals, and it is hoped that an arrangement will be reached between the education authority and the profession whereby the work may be carried out at the school clinics by practitioners willing to undertake it. An arrangement on these lines would be in accordance with the principles laid down by the British Medical Association.

Prevention of Venereal Diseases.

In November last the Liverpool Medical Institution appointed a committee to consider the best means of combating venereal diseases. This committee decided that much could be done by an educational campaign to impress upon the public the seriousness and far-reaching effects of these disorders. Under the presidency of the Lord Mayor and of the Lady Mayoress respectively, two private meetings were held at the Town Hall recently, one for gentlemen and the other for ladies, with the result that a strong committee of co-opted members was formed to give effect to the recommendations of the Medical Committee.

On May 27th a number of employers of labour, social workers, and others interested were invited to hear an address inaugurating the campaign. Dr. E. W. Hope, Medical Officer of Health, and President of the Institution, occupied the chair, and was supported on the platform by the Lord Mayor, the Rector of Liverpool, Mrs. Egerton Stewart Brown, Miss E. M. Rathbone, Councillor C. Sydney Jones, Mr. H. V. Weisse, and the honorary secretaries of the movement, Professor R. J. M. Buchanan, Mr. Francis Salisbury, and Miss Elizabeth MacAdam.

The Chairman, in opening the proceedings, stated that at all times communicable diseases had received more attention than other forms of sickness; but venereal diseases presented not only a series of communicable ailments, but in addition a disease which was essentially hereditary and communicable, and led to the shortening of days and the impairment of usefulness. In connexion with the Royal Commission distinguished and experienced sanitarians, no matter from what class of practice the witness was drawn, told the same story of the influences of these formidable diseases.

Dr. Macalister, chairman of the committee, then delivered the inaugural address. After quoting statistics, and pointing out how the responsibility of communicating and contracting these diseases rested entirely with the individual, thereby differing from other protozoal disorders which were carried through the medium of an intermediary, he proceeded to deal with the methods which might be adopted to combat them. He said that the Medical Committee was of opinion that the time was not ripe for methods involving notification. The policy to be adopted must be to awake the public conscience and create in the people themselves a sentiment which would cause them to demand protection and efficient sanitary laws later on. He considered that notification would then become accepted as a matter of course just as it had been in cases of tuberculosis and the other infectious diseases, notwithstanding all the active opposition and objections which were raised when it was first suggested for them. It would be necessary, he felt sure, to include in an educational campaign the instruction of young adults and adolescents. He believed that this education would have wholesome effects upon the morality of the people—that it would start fresh considerations for the public safety, and for the protection of child life and health, and would place eugenics on a sounder basis than any other scheme which could be devised. Having spoken of the reforms necessary for striking at the root of the evil, by dealing with prostitution, and with all the causes which lead up to it, he asked his hearers, on behalf of the medical profession of the city, to devote themselves to the work which they had undertaken.

The Lord Mayor, in proposing a vote of thanks to the Council of the Liverpool Medical Institution, referred to the urgent necessity for dealing with the matter, and expressed his view that the educational campaign was likely to be of the greatest value, because he believed that a vast number of the victims of these diseases were suffering because of their own or of other people's ignorance. Councillor C. Sydney Jones, in seconding the resolution, said that employers of labour owed a debt of gratitude to those who were undertaking the work, and that the medical profession and those who had taken up the campaign would find "down town" the greatest amount of support and sympathy in their work. The resolutions were supported by Mrs. Egerton Stewart Brown and Mr. H. V. Weisse.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Medical Education of Women in Edinburgh.

For several years following upon the loss of Minto House as a place of teaching, the number of women students coming forward in Edinburgh was smaller than in the years between, say, 1897 and 1907, but now there are signs that the supply is again increasing. The classes of the first session in the Edinburgh School of Medicine for Women in Surgeons' Hall contain twenty-five or twenty-six students this summer, a number for one Annus medicus which was rarely surpassed, even in the most prosperous days of the Medical College for Women, which had its head quarters in Minto House. The opening of the new dissecting room in October last (vide the Journal for October 25th, 1913, p. 1109) may account in some measure for the increase; probably also the demand for women doctors in connexion with school medical appointments and the like may be one of the factors at work.

The Child Study Association in Edinburgh.

Last week a conference under the auspices of the Child Study Association met in Edinburgh, and Dr. John Macpherson, President of the Edinburgh branch, welcomed the delegates. On June 4th Sir James Crichton-Browne gave an inaugural address in which the scientific and the popular elements were happily blended, and in which the sensational element was not entirely absent, as was indicated by the newspaper heading, "Electrification of babies," which appeared the following morning. Sir James paid a compliment to the city in which he was speaking when he stated that child study in its widest sense had always been the staple industry of Edinburgh. The period of youth was that of brain growth, and brain growth was a gradually diminishing quantity as life went on. The convolutional eruption in the fetus was prodigious, in the baby luxuriant, in the child moderate, and in the adolescent imperceptible. It was the same with psychological development. Educability proper was, like brain growth, a constantly diminishing quantity as life went on, and full advantage should be taken of the plastic epochs when capacity was being invoked and when the foundations of character were being laid down. Sir James then touched upon the application of electricity to child culture. Vegetative life seemed to respond to this stimulant; chickens, too, seemed to benefit from electrical currents, growing more quickly, resisting death more successfully, and even losing their characteristic chicken-hearted timidity; and now from Sweden came the news that children in an electrified schoolroom grew faster and were more capable of shining in examinations than those taught in an ordinary apartment. It was necessary, however, to be cautious, and he entered a protest against any electrical pranks with boys and girls in the present state of our knowledge. He was able also to correct certain of the statements which had been made, having had conversations with Professor Arrhenius on the subject. Intensive cultivation in the case of human beings was, in his view, always to be deprecated. Nurseries and schoolrooms should be left unwired, but not unflooded with light. There must be no child forcing by whimsical

methods; mental precocity had a lamentable record. He thought there was some postponement of mental evolution now going on and that there was some evidence that boys and girls of a century ago matured a little earlier than they did to-day. Sir James Crichton-Browne was obviously hinting at the ante-natal factor in child life when he said that the better health of the mothers, who were better cared for and instructed, secured, he thought, improved nourishment in the early stages of growth of their offspring. Among the papers read before the Conference was a plea by Dr. Macpherson for the wider recognition of the instincts in education, another by Mr. James Drever, M.A., B.Sc., on psychology and experimental pedagogy, and another by Mr. Cyril Burt, M.A., on mental tests, including the Binet.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

Mass Meeting of Doctors in Dublin.

A mass meeting of the members of the Irish medical profession was held in Dublin on June 2nd, in connexion with insurance administration. A full account of this meeting is printed in the Supplement.

Report of the Irish Medical Committee.

The Irish Medical Committee has sent to all the members of the profession in Ireland a statement dated March 24th, 1914, of the position of the negotiations that have taken place in regard to certification. At the end of last August Surgeon McArdle intimated that the Commissioners were willing to open up negotiations, and a deputation of five was appointed to act along with Surgeon McArdle; this number was subsequently increased by four. At the end of October Surgeon McArdle submitted a basis of negotiations, which was the result of an interview he had had with the Chairman of the Insurance Commissioners, and it was afterwards decided that this basis of negotiations must stand. In the middle of December the deputation met the Commissioners and laid before them two schemes. The Chairman stated that it was necessary in any scheme, whether pooling or panel, that provision should be made for a second opinion, and that payment for this must be provided out of the capitation rate of 2s. 6d. A week later the deputation again met the Commissioners, and suggested a scheme for a second opinion, providing that in country areas every medical man practising in the area should be available to give a second opinion, and that a guarantee should be given by the Commissioners that no preferential treatment should be accorded to any medical man. The deputation pressed the point that in rural areas, with a population of under 10,000, the full rate of 2s. 6d., less 1d. for administrative expenses, should be given for each insured person, and that the cost of the second opinion should be borne by the county boroughs and urban districts with a population of over 10,000. The Chairman feared that this would not be workable, and that each insurance area would have to bear its own cost of administration and of the second opinion. Subsequently the Insurance Commission wrote stating that the truce which the Commissioners had asked for had not been observed, and that further negotiations must cease, unless the Irish Medical Committee called a truce. On January 8th a truce was recommended in view of the hope of a speedy settlement; and the Insurance Commissioners were asked to use their statutory powers and influence with the friendly societies, to induce them also to call a truce in reference to the doctors who had refused to work for the societies with which they had previously been connected.

At a meeting held early in February a letter from the Commissioners was read, stating that the Chairman had little hope of being able to draft a scheme acceptable to both the medical profession and the approved societies, as the latter strongly favoured "whole-time certifiers." At this meeting it was decided to try and arrange for a deputation to be received by the Chancellor of the Exchequer, and Dr. Addison was approached through Surgeon McArdle. Early in March a small deputation was interviewed in London by Dr. Addison, who was satisfied of the reasonableness of the demands of the profession, and promised to use his influence with the Chancellor of the Exchequer to receive a deputation. It was proposed that a conference under the presidency of the Chancellor should be held, and Dr. Addison subsequently informed the Committee that arrangements were being made to secure it if possible before Easter. Drs. Hennessy and Rowlette, accompanied by the Medical Secretary of the Committee, were deputed to attend this proposed conference, and were given plenary powers to make the best arrangements possible in the interests of the profession, but that on no condition would the appointment of whole- or part-time certifiers be agreed to. The Committee decided that the existing arrangements for certification in panel areas may be continued to June 30th in accordance with the request of the Insurance Commissioners, and the Committee repeated the offer of last December—namely, that the members of the profession were willing to carry out the duties of certification gratuitously for a limited period, say up to June 30th if necessary, in the hope of a satisfactory settlement of the question, this offer being, of course, conditional on the present system of certification by medical advisers being abolished.

We are informed that Mr. Masterman, Chairman of the Joint Committee of Insurance Commissioners, has consented to receive a deputation at an early date.

Irish Medical Association.

The annual general meeting of the Irish Medical Association was held on June 3rd at the Royal College of Surgeons, St. Stephen's Green, Dublin. Dr. J. B. Story, the outgoing President, occupied the chair at the outset of the proceedings. There was a good attendance. In the annual report reference was made to the Insurance Act in its application to Ireland. The question was still, the report stated, engaging the attention of the Council and the profession generally. Unfortunately some members of the profession were found willing to accept the appointments of medical advisers, in opposition to the wishes of their local professional brethren. The Council had felt it incumbent on it to hold two special meetings to consider the conduct of nine members of the Irish Medical Association in this respect, and they had ceased to be members. In some cases dispensary medical officers accepted the appointment of medical adviser outside their own dispensary district, and a deputation from the association pointed out to the Local Government Board that when one of these men left his district for the purpose of certifying no doctor would act as his locumtenent. The financial statement of the year showed a balance to the credit of the association of £451 16s. 5d. The following officers were elected:

President: Dr. F. W. Kidd (Dublin). *Vice-Presidents:* Ulster, Dr. Leonard Kidd (Enniskillen); Munster, Dr. James Keating (co. Cork); Leinster, Dr. J. B. Story (Dublin); Connaught, Dr. E. C. MacDowell (Sligo).

Dr. Kidd then gave his presidential address, in which he said that as there was a kind of temporary truce with regard to the certification question, he would not discuss it; but as regarded the general working of the Act there was very widespread dissatisfaction, and its adoption had done very much to lower the status of the profession in many places, and to substitute a form of medical relief compared with which contract practice in England might well be regarded as high-class practice.

In the evening the seventy-fifth annual dinner was held in the College of Surgeons, when Dr. F. W. Kidd occupied the chair. The dinner was well attended, and during the progress of it a programme of music was contributed by an instrumental quartette, and afterwards the company was entertained by a programme of vocal music.

Royal Medical Benevolent Fund.

The annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held in the Royal College of Surgeons, Dublin, on June 3rd. Dr. F. Conway Dwyer, President-elect of the College, occupied the chair. The seventy-second annual report was read by Dr. J. Magee Finny, honorary secretary. The number of applicants during the past year had been very large, and the amount given in grants greater than the average. The total number of applications received during the year was 100. The total amount of grants recommended since the last distribution was £1,354 10s. The income of the society

for the year was £2.171 18s. 11d., a very small increase on the previous year. The expenses only came to £104 19s. 3d., or less than 5 per cent. of the income, an evidence of the care taken in the management of the society's funds. The President of the Irish Medical Association mentioned with special pleasure that a number of hospitals had last year forwarded a list of subscriptions from the students attending them.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

Medical Inspection of School Children in New South Wales.

According to the first annual report of Dr. Willis, Chief Medical Inspector of the Education Department in New South Wales, the medical inspection of school children has yielded some remarkable results. He states that 4,163 cases of physical defects among children in the metropolitan area, 3,710 in large country towns, and 2,770 in small towns were discovered. This large number is probably to be explained by the fact that this was the first inspection; probably, too, the examination was specially thorough, thus revealing some defects which a more superficial examination would have passed over. The more serious aspect of the matter, however, is that when the defects were notified only 46 per cent. of the metropolitan children and a little over 20 per cent. of the country children were ascertained to have been given treatment. At present this is the parents' responsibility, but to prevent all possible excuse for this neglect it is proposed to send a "travelling hospital" round the country to provide the necessary means for the treatment of these special defects in cases in which the parents are not able to afford treatment at the hands of private practitioners. It is, however, recognized that grave abuses may be set up by this system, and practitioners in the country are on the alert.

Medical Graduates of the Sydney University.

At the annual examinations for the degrees of M.B., Ch.M. in the University of Sydney, held recently, out of nearly 100 students who sat for the examination nearly 70 passed. At the deferred examination, which will be held in August next, in all probability another 20 will pass, so that the profession in New South Wales will have increased by home production alone by nearly 9 per cent. A few years ago the number of medical men arriving in this State from abroad was double the number of the graduates in medicine from the Sydney University, but the proportion has gradually diminished, and now the number of local graduates exceeds that of arrivals from other States and other countries. Making allowance for these additions, and the losses by death and removal to other States and countries, it is fair to assume that the profession in this State will be increased by about 10 per cent. The question is frequently asked, What is to become of all these young doctors? The annual rate of increase of the population, basing the figures on the census for March 31st, 1901, was only 1.83; at the census taken on April 2nd, 1911, the rate of increase was 1.96. It is therefore reasonable to assume that during this present year the rate of increase will be about 2 per cent., so that while the doctors are increasing at the rate of 10 per cent., the population is only increasing at the rate of 2 per cent. That such a rate of increase must lead to overcrowding sooner or later seems obvious, but the fact that it is difficult to get a good locumtenent, and also difficult to get suitable applicants for hospital and other appointments in the country seems to show that at present there is not a superfluity of good medical men in the State. But this is not likely to remain so for long. It is well that practitioners in Great Britain should realize the number of graduates in medicine that are being turned out every year, not only in this State but also in Victoria and South Australia, and that the openings for practice are relatively few.

Government Subsidies to Hospitals.

It has been the practice in this State for the Government to subsidize the public hospital on the £ for £ basis. In some places the committees have been enabled to put away a certain amount each year, and to use the interest upon these surpluses for the maintenance of the hospital. By these means and sometimes by the addition of legacies the hospital committees have been enabled to secure a nest egg to provide for any future emergency, such as repairs or additions to buildings, etc. It might have been supposed that this spirit of care and economy would meet with commendation from the Government. But it is not so, and the policy of the present Labour-Socialist Government is to withhold the subsidy from hospitals which have any surplus, and to compel them to spend all their savings on the up-keep of the hospital before any subsidy will be paid. Apparently the system on which subsidies are paid is wrong, for in the case of a hospital in a wealthy district a large amount may be subscribed by the residents in the district, while in a poor one the amount subscribed may be not nearly sufficient for the hospital maintenance. In the one case, the least necessitous, the subsidy would be large; in the other, where the money was most needed, the subsidy would fall short of requirements. Hospital committees object most strongly to the attempt to make them use for current expenditure certain legacies which have been bequeathed to capital account, and which, therefore, under the terms of the will can not be used for any other purpose. The inevitable result of such a policy must be to prevent any person bequeathing money to a hospital, and this will be to the detriment of the State as well as of the individual hospitals.

Conference between Medical Men and Pharmacists.

In February last a conference was held in Sydney at which representatives of the pharmacists of all the States of Australia met the Federal Committee of the British Medical Association in Australia. It was not considered advisable to publish any official report of the proceedings. The topic of National Insurance being one that is regarded as of the greatest importance to both pharmacists and doctors, was among the subjects dealt with, and the experience of the operations of the National Insurance Act in England was taken as a guide to indicate in what way any legislation might affect the work of the doctor and the pharmacist. If some system of National Insurance is brought in to cover the whole of Australia difficulties may arise which have not been encountered in England, for the conditions of this country are very different, and the scattered population and long distance between chemists' shops may necessitate a larger amount of dispensing being done by physicians than would be necessary in countries where large towns are closer together and where the population is sufficiently dense to enable the chemist to get a fair living. There will, however, be no clashing between the doctor who, by force of circumstances, is compelled to do his own dispensing, and the chemist whose business is too far away for the doctor to have his medicines dispensed from this source. The pharmacists sought to induce members of the medical profession to adopt scientific instead of popular names in their prescriptions and to refrain from ordering proprietary articles as much as possible. As there has often been a certain feeling of estrangement and antagonism between doctors and pharmacists the discussions at this conference came as a pleasant surprise to many members of the medical profession who had hitherto been inclined to regard the pharmacist as a poacher on medical preserves.

The Small-pox Epidemic.

Since the commencement of the outbreak of small-pox in this State in July, 1913, the State health authorities have dealt with 1,144 cases of the disease. Of these 74 occurred during 1914—40 in the metropolitan area and 34 in the country. At the Inter-State conference of chief medical officers held in Melbourne last November, it was agreed that the quarantine at Sydney should be removed under certain conditions, one of which was that the existing policy of isolating contacts as well as patients should be continued. In April, however, when the quarantining of the Orient mail steamer *Orsova* took place, the Federal quarantine authorities insisted on all contacts being taken away from the North Head quarantine station. They number under twenty. The Federal quarantine authorities have since allowed no contacts to be taken there, consequently there is now no place where contacts can be housed and kept under observation.

It has therefore become necessary on the part of the State health authorities to inform the other States that New South Wales could no longer continue to carry out the part of the agreement relating to the isolation of contacts. Dr. Paton, Director of Public Health, states that short of isolation of contacts everything possible was being done to safeguard the other States. Inter-State passengers by land or sea are required to enter into an undertaking that within a certain time after their arrival in another State they will, in the event of any sickness, report the fact to the health authorities where they may be. In this connexion the railway authorities and shipping companies are affording the State health authorities every assistance.

India.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

PROPOSED SCHOOL OF TROPICAL MEDICINE AT BOMBAY.

IN 1912 the Government sanctioned expenditure during the year of 2 lakhs of rupees on improving and renovating the Old Government House at Parel to fit it for the purpose of a school of tropical medicine, and last year a lakh and a half was voted for the same purpose, but it remains to find funds for maintaining an adequate skilled staff for research and teaching. For this purpose it is estimated that 70,000 rupees a year will be required in addition to the present expenditure on the laboratory. It is also proposed to erect in the grounds of Old Government House a hospital as a memorial to King Edward, and to place fifty of the beds in it at the disposal of the staff of the Parel Laboratory for the purposes of the school of tropical medicine. The director of the laboratory prepared a complete scheme about two years ago, but it still awaits completion.

PLAGUE.

Plague is again present in Bombay in a serious epidemic form. The mortality from the disease jumped up in one week from 268 to 376, which is over a hundred higher than the average number for the corresponding weeks in the preceding five years. The total number of deaths registered in the week was 1,013, showing an increase of 113 on the previous week's figures, and giving the highest death-rate—namely, 53.78—which has been recorded for several years. In Karachi, which has lately suffered severely from plague, the disease shows signs of abating, the figures for the week ending May 2nd being 62 cases and 53 deaths against 75 and 71 respectively for the previous week. In other places in the Bombay Presidency there are no appreciable differences.

TRAVANCORE MEDICAL MISSION.

The Travancore Medical Mission of the London Missionary Society, founded in 1836, is one of the oldest in India, and one of the largest in the world. Last year 108,545 new patients were treated, and 8,243 surgical operations performed. This extensive work is only possible through the system which the missionaries have followed for many years of giving much of their time and attention to the thorough training of Indian assistants, who on completing their studies and after gaining the necessary experience are placed in charge of branch dispensaries or hospitals.

HEALTH AND MORTALITY IN ASSAM MINES.

A recent report shows that the health of the employees in all mines in Assam is good. No children were allowed to work underground. In the Assam Railways and Trading Company's mines ten persons lost their lives as a result of accidents—seven by falls of coal, two in connexion with the haulage of coal underground, and one on a tramway on the surface. There were no accidents in other mines. The mortality from accidents was 5.4 per 1,000 in respect of the underground workers and 1.2 in respect to labourers working above ground. The death-rate for the total labour force was 4.1 per 1,000, as compared with 4.4 and 6.9 during the years 1912 and 1911 respectively. The mortality-rate of labourers working underground from accidents per ton of coal raised was one for every 30,047 tons as against one for every 32,713 tons in 1912 and 22,634 tons in 1911.

NEW HOSPITAL AT MAHABLESWAR.

The Government of Bombay has just issued a statement to the effect that the need of reconstructing the Mahableswar Civil Hospital on a site which would admit of its being divided into suitable blocks, and would give space for future extensions in the shape of paying wards and nurses' quarters has for long been apparent. The principal obstacle to the formulation of a definite scheme was the difficulty of obtaining a suitable site. This has now been removed by the generosity and public spirit of Mr. Natortam Morajee Gokuldas, who has offered a site for a new civil hospital. The property is extensive, conveniently situated with reference to the bazaar and residential areas, and occupies a high-lying and healthy position. Its owner has also promised that, on the completion of the projected hospital buildings, he will make a cash donation of Rs.5,000 towards the cost of construction of a wing for women and children. The amount which will be required to defray the total cost of the hospital buildings will be made up partly from subscriptions previously collected and partly by Government.

Correspondence.

A MISTAKEN CASE OF ANKYLOSTOMA INFECTION.

SIR,—Under the heading "An unusual case of ankylostoma infection," there appeared in the BRITISH MEDICAL JOURNAL of May 2nd, 1914, an interesting note by Dr. James Dunbar-Brunton, of Heliopolis, Cairo, Egypt. I have been asked from various sides whether the singular observations related in that note might be brought into line with the actual biology of the *Ankylostoma duodenale*, or whether there might not be some mistake in their interpretation. Supposing that similar doubts may have arisen in other readers of the article, and finding some words of comment indeed desirable, I have decided to write the following short note for publication.

To state my conviction at once, I do not believe that the case was one of *Ankylostoma* infection at all. One thing, at any rate, is certain, and that is that the published account supplies no evidence to that effect, but does supply some evidence to the contrary. In the first place, there is no mention of a stool examination having been made, although this alone would have established the diagnosis beyond doubt, and would have created a safe starting-point for the interpretation of the other symptoms. A stool examination would have appeared all the more necessary as, in the second place, nationality and previous history of the patient, so far as recorded, made it improbable from the beginning that the cause of her suffering was ankylostomiasis.

In order to understand this one must remember that any *Ankylostoma* infection is brought about by mature *Ankylostoma* larvae, and that these only occur in moist soil which has previously been contaminated with faecal matter containing *Ankylostoma* eggs. If particles of such soil, still moist, adhere to food materials which are consumed, or if they become mixed with water which is drunk, any larvae contained in them will be conveyed to the stomach, and may thus lead to an oral infection; and if similar soil comes into contact with the human skin and remains so, without drying up, for some time, any larvae it harbours will try to make their way into the skin, and may thus bring about a dermal infection. If these conditions are duly kept in mind, it is not easy to imagine how the usual mode of life of the better class European should afford him an opportunity for taking up the parasite—even in Egypt, where ankylostomiasis is rife among the native population of the country, but is exceedingly rare among both native and European townspeople, owing, indeed, to the fact that the conditions for infection are as a rule not fulfilled in towns. On the whole, therefore, it is both unproved and improbable that the patient had ankylostomiasis at all.

There remain the itching and the emigration of the "*Ankylostoma* embryos." It is quite possible that the latter symptom was the cause of the former; but it is practically impossible to admit that the so-called "embryos" were those of *Ankylostoma*. I may here first mention in passing that what the author terms "embryos"

must be the mature larvae, because these alone migrate, while the "embryos" properly speaking are enclosed in their egg-shells, and cannot, therefore, move about. Now the mature larva of the true *Ankylostoma duodenale* never exceeds—and in fact only exceptionally reaches—0.7 mm. in length by 0.024 mm. in diameter. It is thus just discernible to the naked eye when floating freely in clean water; with the aid of a finely-pointed needle and some patience it is also possible to pick one up under a dissecting microscope; but without a magnifying glass it remains quite invisible even to the expert when in, or on, an opaque medium. The "*Ankylostoma* embryos" of the case under discussion, on the contrary, according to the article, were not only noticed, spontaneously and presumably without a magnifying glass, by the patient and her daughter, but were even collected by them, presumably without particular instruments, and brought to the doctor "in a small box." Whatever they may have been, these facts preclude the possibility of their having been *Ankylostoma* larvae.

Nor would there be any conceivable reason why genuine *Ankylostoma* larvae should emigrate in masses from their human host by the skin. We usually do not give animals credit for "reason," though there is a very decided sense in most of their doings. The *Ankylostoma* larvae, in particular, after having found a suitable host, invariably endeavour to get to his intestine, because in this alone they can grow to sexual maturity and propagate their race; a re-emigration, in whatever way it might be undertaken, on the part of the larvae would be equivalent to self-destruction, and thus has no comprehensible reason. I have not personally seen the "embryos," but, notwithstanding, on the strength of the points just mentioned, have no hesitation in declaring the author's statement that in one of the "embryos" brought to him in the small box he "recognized a perfect specimen of an embryo of *Ankylostoma duodenale*" to be the result of an error in identification.

What the "embryos" may have been in reality is impossible to guess from the published account of the case. Supposing that the patient was trustworthy in all her statements, the size of the parasites, sufficiently large to attract the attention even of lay people, and, above all, their apparently normal and regular emigration from the skin, would make one suspect some sort of fly (or flea?) larvae; in the absence of every descriptive detail, however, even this remains a mere suggestion. With *Ankylostoma duodenale* the case, so far as recorded, has certainly nothing to do.—I am, etc.,

Dr. A. Looss,
Cairo, June 3rd. School of Medicine.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—As my letter on this subject has elicited only one argument to the contrary, and that a trifling and inconclusive argument, we may take it that the general opinion of the medical profession agrees with my own, that suicide is often a sane act, and is in certain circumstances a justifiable act.

The only argument that has been adduced against my view is that of Dr. Leitch, who tells us that the third alternative verdict of justifiable suicide would be impracticable, on the ground that it would be putting too severe a strain on the intellect of a coroner's jury. But in the case of homicide the same jury frequently distinguishes between at least four and sometimes five alternatives—murder, manslaughter, justifiable homicide, and misadventure, to which may be added homicide during insanity, though in the case of homicide the coroner's jury does not usually trouble itself about the sanity or insanity of the perpetrator. Dr. Leitch says that in homicide the attendant circumstances are generally clear. If by this he means that it is usually easy to determine between the alternatives he cannot have paid much attention to the course of trials; and in many cases in which a coroner's jury brings in a verdict of temporary insanity the sanity of the suicide is transparently clear—certainly as clear as the precise degree of guilt that attaches to some cases of homicide.

Most of Dr. Leitch's remaining remarks are beside the question. I did not say that the notion that cowardice attaches to suicide was invented by the early Christian Church; and as to Aristotle's dictum, my experience of his writings leads me to the *prima facie* presumption that anything he says is most likely to be wrong, and should not be accepted without corroboration. I did not say that suicide was common among the ancient Romans; I said they recognized it as a proper resource in appropriate circumstances. To say that duty (always) demands that we should fight as long as life lasts is to beg the question at issue.

Dr. Leitch asks why we should admire suicide, as if I had said we should. I said no such thing; but if I had said that it is in certain circumstances admirable, I could have adduced in proof the unstinted admiration that is accorded by the whole world to Captain Oates; and did Dr. Leitch never hear of him

> who gave an enemy
> His plank, then plunged aside to die?

Suppose a fraudulent trustee on the brink of discovery, which will disgrace his family and bring down the grey hairs of his parents in sorrow to the grave; suppose that by his immediate death, and by no other means, he could restore their property to the orphans he has defrauded; would not suicide be his plain duty? Suppose that if he lives he will be brought before an inexorable judge and condemned to death by the Chinese method of a thousand cuts, or to read such letters as that of Dr. Briscoe (BRITISH MEDICAL JOURNAL, June 6th) until a merciful death releases him from his sufferings, would not the alternative of painless suicide be justifiable?

Finally, I did not, as Dr. Leitch says I did, profess to see no great distinction between the suicide and the martyr who, rather than renounce his creed, prefers death at the stake. I said that between committing suicide and deliberately seeking martyrdom the difference is one of casuistry rather than of fact. The case of Hadfield is in point. Hadfield wished to die, but shrank from taking his own life: he therefore committed in public, before many people, an act the penalty for which was death, and committed it in order that he might be suicided. Hadfield, therefore, did draw the distinction which I say is a distinction more of casuistry than of fact; but then Hadfield was a lunatic.—I am, etc.,

Parkstone, Dorset, June 6th. CHARLES A. MERCIER.

OLD AND NEW LARYNGOSCOPY.

SIR,—In an editorial which appeared in your issue of May 30th, p. 1199, under the above title, dealing with the direct *versus* the indirect removal of laryngeal growths, I am credited with having "deplored the possibility of the delicate manipulation of indirect laryngoscopy becoming a lost art." The article refers to a debate on the subject which took place at a meeting of the Laryngological Section of the Royal Society of Medicine on May 1st.

May I point out, first of all, that I was not present at the debate on that occasion, and, secondly, that your article misinterprets my views?

At a more recent meeting, on May 27th, when the topic was again brought forward, and when I did happen to be present, I listened with wonder to the forebodings of the gloomy fate that awaits those who operate upon the larynx by the direct method. As a matter of fact, there were two parties in the meeting: the one, Olympian, vociferant, and minatory; the other, a nameless band, scattered, deprecant, and inarticulate.

Mr. Pickwick has told us what to do when there are two crowds. "Shout with the largest," he said. "But if the largest crowd is silent, Mr. Pickwick?" "Then be silent yourself," I can hear the sage reply. For once, however, prudence deserted her fondest worshipper, and I, siding with the silent crowd, did not keep silence.

The fact is—I am equally rash to confess it now—I can as a rule remove laryngeal growths more rapidly and more accurately by the new direct method than by the old indirect method. And, indeed, as your article quite correctly points out, the newer method has been adopted by the rising generation of laryngologists not only with enthusiasm but also with success. Thus, a change—a regrettable change, perhaps, in some respects—is stealing over the scene. "Operating by machinery," as it has been scornfully dubbed, and butter-making by machinery are alike deplorable changes from one point of view. What though the butter and the tumour both arrive promptly and in mass? Gone is the rosy-fingered dairymaid, with the splashing music of her churn. And gone is the old-fashioned laryngologist

groping passionately round a corner after an elusive papilloma. *Eheu! fugaces*, that poetry must give way to prose.

But, *pace* your annotation, "the delicate manipulation of indirect laryngoscopy" is not likely to become a lost art. The rising generation still continues to practise it, and this we hope to be able to do for many years yet to come, in spite of the divine displeasure we have incurred in preferring to operate under direct visual control.

As a matter of fact, however, polemics apart, to set the two methods in opposition to one another is just a little absurd. Nowadays the tedious and prolonged training of the operator and preparation of the patient for a laryngeal operation by the indirect method are no longer necessary. Local anaesthesia brings to the laryngologist an easy mastery of both methods of manipulation.

As to which method he may use habitually or most frequently, that, I imagine, will largely depend upon the individual, and is really a matter of very little importance. —I am, etc.,

London, W., June 5th. DAN MCKENZIE.

*** We regret the error. But we may explain that it was not intended to credit our correspondent with having deplored the possibility of indirect laryngoscopy becoming a lost art. On the whole we think the error may be regarded as a *felix culpa*, since it has given Dr. Dan McKenzie the opportunity of so clearly defining his position in regard to the question under discussion.

THE OBJECTIONS TO THE INCOMPLETE OPERATION FOR CANCER OF THE BREAST.

SIR,—Reading in the BRITISH MEDICAL JOURNAL of June 6th, p. 1269, Mr. Southam's letter on operation for cancer of the breast, I thought the following might be of interest to your readers.

Years ago I saw with the late Dr. Faulkner, of Escrick, a lady with several enlarged glands in the left axilla: these I removed, and had them examined by the Clinical Research Association. They were pronounced to be scirrhus; the breast itself was quite healthy. Ten years and three months afterwards she came to me with a lump in the breast on the same side; I removed the breast, and the tumour was found to be scirrhus.

As this so entirely reverses the usual course of things, I thought it worth recording—I am, etc.,

York, June 6th. W. H. JALLAND.

REPORT OF THE RADIUM INSTITUTE, LONDON.

SIR,—My attention has been drawn to a letter signed by Professor Joly and Dr. Walter C. Stevenson which was published in your issue of May 30th, p. 1212. I do not appreciate the purport of the letter, but inasmuch as the dates of certain publications are mentioned by the writers, I gather that priority of the use of radium emanation in the form mentioned is suggested. I therefore venture to bring to your notice the following dates which should make clear the present position:

January 25th, 1913. The BRITISH MEDICAL JOURNAL. The publication of the report of the Radium Institute for 1912, in which cases are mentioned of patients treated by the embedding of capillary emanation tubes, and which also contains an account of the method of making the emanation tubes.

October 11th, 1913. An illustration in the *Illustrated London News* depicting the apparatus in use in the Institute, and which was the subject of an announcement to the London press by Sir Frederick Treves on October 2nd.

February, 1914. The visit to the Institute by Professor Joly and Dr. Stevenson, when they were shown the apparatus used for the construction of emanation capillary apparatus, and the various screens used.

March 9th. A lecture by the medical superintendent, Mr. A. Hayward Pinch, before the Medical Society of London, when the platinum needles were shown and their use fully discussed.

In conclusion, I would like to add that I first saw radium emanation purified and reduced to a minute volume by Sir William Ramsay and Professor Soddy in 1903; and, further, that the use of radium emanation as a therapeutic agent has been continuously urged by Sir William ever since the foundation of the Radium Institute.—I am, etc.,

W. LESTER S. ALTON,
Director of the Chemico-Physical Laboratories.

London, W., June 5th.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—Those who have been led by Dr. Wallace Henry to disapprove the formation of a trust fund and to support his proposal of one or more trade union funds must have been grievously disappointed on reading in your issue of June 6th how little his union has been able to accomplish. "The splendid results," as he terms them, as regards collective bargaining and the maintenance of a standard-rate find Leicester and neighbourhood with a flourishing medical aid institution served by a medical practitioner; a few private medical clubs run by medical practitioners: and medical attendance given by the profession to all under 16 years at 1d. a week, and to all over 16 years at 2½d. a week (non-workers at 1½d. a week). As a provision for strike, lock-out, and out-of-work pay, there is no reserve fund worth mentioning. Dozens of other areas with no wish for a trade union are as well off; many vastly better.

It is impossible entirely to separate the question of a special fund from the whole question of trade unionism for the medical profession. Whilst keeping in mind the success or otherwise of the British Medical Association in the following circumstances it would be useful to ask the advocates of trade unionism to state concisely what more could be done by a medical trade union. If more can be done, if it has more "power," then we are faced with the question, Shall the British Medical Association be superseded by a trade union? All will acknowledge that it would be quite impossible to run two bodies side by side for medico-political purposes, both of which would have influence in the profession and on the laity, and would prove financially sound. It is, therefore, up to those who advocate replacing the Association by a medical trade union to reply to the following queries:

1. How is it proposed, by means of a trade union, to interfere successfully with the practice of a medical member so as to render it incumbent on him to obey the decisions of his union if he declines to do so?
2. Collective bargaining is one of the fundamental necessities in any trade union. How is it proposed to compel a medical member or members to refrain from making their own bargain with a public or private authority if determined to do so; for example, medical aid institution?
3. The maintenance of a standard rate is vital to the success of any trade union. How is it proposed to compel a medical member or members to refrain from selling their services at a lower rate than the standard adopted if determined to do so; for example, private clubs?
4. A trade union would be impotent and a misnomer if not provided with strike, lock-out, and out-of-work funds. How is it proposed to compel a medical member or members to pay their levies when they know that such levy cannot be enforced in a court of law if they decline to pay?
5. A member of a trade union can resign at any time, even after a levy notice has been received. How is it proposed to prevent such resignations being sent in wholesale directly a levy is made, seeing that no court of law can enforce a fine incurred by so doing?
6. If a medical member were turned out of a trade union, how can he be prevented from securing public sympathy, and thereby greatly increasing his practice and money earned?
7. A trade union cannot carry on a newspaper or periodical as a trading venture or for profit—for example, BRITISH MEDICAL JOURNAL. How is it proposed to provide the funds for a journal for the members?
8. In trade unions it has been found that the workmen begin to leave off paying their subscriptions directly after a crisis, until the effective membership is often reduced by 75 per cent. How is it proposed to avoid this in a medical trade union?
9. How is it proposed to compel so large a majority of the members of the profession in every district to join a trade union that the action of any minority can be considered a negligible quantity?

Keeping in view what seem the obvious replies to the above questions, one would ask how then will the profession find itself in a stronger position if it takes advantage of trade unionism than it is at present under the British Medical Association?

Two interesting facts with regard to trade unionism for

members of the industrial class should be known. The advocates of trade unionism now urge that these organizations should be put on the same plane as registered companies, with a memorandum and articles of association. Also, that each union should demand direct representation on all committees and bodies that have to do with the trade in which the members of that union are directly interested. These benefits have long since been obtained for the medical profession by the British Medical Association. It makes one ask seriously the question, Are not the advocates of trade unionism for the medical profession after all reactionary rather than progressive in their ideas?

It is thought that the real aim of those favouring a medical trade union with the control of a special fund is toward trampling under foot the liberties and rights alike of individual medical practitioners and of the community, and thus to bring about a state of syndicalism. Is it so?

The Representative Meeting in Aberdeen next month will be asked to decide whether it wants a trade union or whether it prefers the British Medical Association to continue its medico-political work with the aid of a central special fund. Two facts should be recognized—namely, that the Association is now debarred by the recent amendment in its memorandum from co-operating with a trade union, and also that one cannot expect that the medical profession will be willing to finance two bodies. The situation should be thoroughly appreciated before the Representative is instructed how to vote. A local trust fund or a local trade union fund (at the option of the local profession) with one central trust fund promoted, encouraged, and organized by the Association, may be a possibility, and, if so, is worth consideration. To such a fund contributions could be made from the local funds as also by those practitioners who object to their local fund being under a trade union. Members cannot expect to be able to run successfully both kinds of funds in the same area whether it be large or small.

It will be found that those who have assisted to build up the British Medical Association—and these include the silent members—have no intention whatever of letting it commit *felo de se* to oblige those restless members who, mistaking the causes that have brought about the present situation, are assisting or advocating the formation of rival guilds, trade unions, or federations.—I am, etc.,

Hove, June 6th. E. ROWLAND FOTHERGILL.

ACIDOSIS FROM FOOD.

SIR,—I have read with interest Dr. C. Coombs's two cases of acidosis, in the JOURNAL of June 6th, p. 1230. Both cases were probably hopeless when he first saw them. If the conclusion at which I have arrived—that our food is the chief cause of disease—be correct, in such cases it would be well to try a fast, from water as well as food. Those who have tried a fast, even for twenty-four hours, have found improvement in diabetes, and there can be no doubt that fasting does good in most diseases. Both patients "were feeding adequately," and in one there was diarrhoea which, no doubt, was an effect of nature to save the patient through elimination. In such cases fasting might, with careful notes of its effect, help to prove the danger of food of any kind, and the benefit of rest to the digestive system, for there can be doubt that rest to weakened digestive organs is as necessary as to a broken limb.—I am, etc.,

Denholm, Hawick, June 6th. JOHN HADDON, M.D.

THE ASSOCIATION AND THE PROFESSION.

SIR,—As an old member of the British Medical Association, I congratulate you generally upon the excellent review of the work accomplished by the Association which is now appearing in your columns, and which should bring in new members. I must ask, however, to be allowed to correct one statement which appears on page 1250 of last week's JOURNAL, in respect to the action of the Association concerning penal cases brought before the General Medical Council. It is there stated that—

> The General Medical Council has not thought fit itself to initiate proceedings. This had the effect of throwing upon private individuals the onus of acting as complainants. . . . The principle still obtains, but a few years ago the British Medical Association obtained the sanction of the General Medical Council to its appearing as complainant in such cases. . . .

You have evidently forgotten that as far back as 1892 the Medical Defence Union acted as complainants, and appeared as such in penal cases before the Council, thus relieving the private individual from the onus. Hardly a session has passed without this procedure being adopted from the date named. Later a similar course was adopted by the London and Counties Medical Protection Society, and it is only within a few years that the British Medical Association followed suit. The pioneer work of acting as complainant in a corporate capacity was done by the Medical Defence Union, and the carrying out of similar work by the British Medical Association was rendered easy and simple, as the procedure had been fully established by the Union twenty-two years ago.—I am, etc.,

London, W.C., June 8th. A. G. BATEMAN.

*** The excellent work done by the Medical Defence Union and by the London and Counties Medical Protection Society in this direction is well known to the profession and fully recognized by us. It was not said that the British Medical Association was the first or the only body to take such proceedings, but we are ready to admit that the paragraph might have conveyed that impression.

LONDON PANEL COMMITTEE AND THE SUPPLY OF LOCUMTENENTS.

SIR,—Our attention has been drawn to the report in the BRITISH MEDICAL JOURNAL SUPPLEMENT of May 30th of a meeting of the London Panel Committee which was held on May 26th.

That Committee passed a resolution undertaking to supply "deputies" to panel practitioners, and we learn with no slight astonishment that the proposal was stated to have met "with the approval of the medical and transfer agencies."

As we have never been approached on the matter, we take this opportunity of informing the profession that we strongly object to this unauthorized assertion; and the more so as we know the above Committee further discussed the question of undertaking the transfer of practices.

Whilst reserving our opinion as to its statutory powers to transact such business, we are reluctant to believe that medical men can be in sympathy with this movement.

We rely, sir, upon your giving this disclaimer the same publicity as that accorded to the above report.—We are, etc.,

J. FIELD HALL
(Field Hall, Ltd).
HERBERT NEEDES
(J. C. Needes).
PEACOCK AND HADLEY.
J. A. REASIDE
(The Medical Agency).
A. W. STOREY
(General Manager of the Scholastic, Clerical and Medical Association, Limited).
PERCIVAL TURNER.

London, W.C., June 9th.

PROFESSIONAL CONFIDENCES AND THE LAW.

SIR,—It appears to follow from the recent decision of the General Medical Council: (1) That if a patient ask a doctor to procure abortion, he is bound to hand her over to the police; (2) that if a patient submits to examination after exacting a pledge of secrecy from her doctor, the doctor is liable to be struck off the *Register* if he hesitates to disclose facts ascertained by such examination.—I am, etc.,

J. C. McWALTER, M.D., LL.B.,
Barrister-at-Law.

Dublin, June 6th.

"ENCYCLOPAEDIA MEDICA."

SIR,—Absence from home prevented me from answering Mr. Green's letter (BRITISH MEDICAL JOURNAL, May 30th, p. 1214) before this. Mr. Green has sent me copies of our correspondence in 1911, from which it appears that my original article was not corrected by any one else, but had a note appended to it by way of bringing it up to date. I therefore was apparently incorrect in my recollection of our correspondence. This, however, has nothing to say to

the fact that I. as Master of the Rotunda Hospital, have not contributed, and have not been asked to contribute, to the forthcoming edition of the *Encyclopaedia*.—I am, etc.,

HENRY JELLETT, M.D.,
Dublin, June 8th. Master, Rotunda Hospital, Dublin.

ROYAL MEDICAL BENEVOLENT FUND.

SIR,—In Sir James Barr's letter there is one fact and many misstatements.

The fact is, that there has been a dispute between the Royal Medical Benevolent Fund and Epsom College about a legacy. The dispute arose as to the interpretation of a clause in Miss Glenny's will, and might have been settled in a simple and inexpensive way by a friendly application to the court, as was proposed more than once by the Fund and its advisers. The decision thus obtained would have been final and binding on all parties. The Estate, however, took the matter into its own hands, decided the disputed question in favour of the College, and informed the Fund that it intended to pay the legacy to the College, to take an indemnity from the College, and leave the Fund to take action against the College if it thought right to do so. The solicitors to the Fund stated that this was a very improper course for the executors to pursue, and advised an immediate application to the court. The rest followed as a matter of course.

Sir James Barr states that his letter is based upon the report of the College for 1914. This report has not yet been before the Council of the College, and will not be considered by it until its meeting on June 26th, when it might possibly even be modified.

For the most part it contains a recital of the facts, but unfortunately it conveys also an insinuation which has been translated in somewhat blunt language by Sir James Barr into a charge "of obtaining by legal process a legacy of £500 which, on the evidence now adduced, and which evidence must have been known to the Trustees of the Fund, was plainly intended for Epsom College."

In the first place, Sir James Barr is wrong as to the persons to whom he attributes the responsibilities for the course pursued by the Fund. The action of the Fund was determined, not by the trustees, not by any individual, but with the knowledge and approval and direction of the Committee, guided throughout by the advice of their lawyers.

The Committee of the Fund consists of men of as high standing and reputation as the Council of the College, and some individuals are actually members of both bodies. To accuse such a body of conspiring to obtain by sharp practice and legal quibbling a legacy to which they knew they had no title is so unworthy and absurd as to require no further comment. Both bodies acted, without doubt, with perfect good faith and under legal advice.

The facts of the case are as follows: Miss Glenny, the testatrix, was a subscriber to Epsom College for many years, and did not subscribe to the Fund. This may have been a reason, as the judge himself said, why having supported the College liberally during her lifetime, she may have wished to benefit the sister charity, the Fund, after her death.

In 1902 she made a will, in which she left £500 to the *British* Medical Benevolent Fund, describing the Fund by what at that time was its correct title. If this will had been operative at the time of her death, the legacy would have been paid to the Fund without question, in spite of her having been an old subscriber to the College.

In 1905 she made another will, in which she left a legacy of the same amount to the *Royal* Medical Benevolent Fund, and this was repeated in a third will drawn up in 1907. "Royal" is now the title of the Fund, but was not in 1905 or 1907. The will of 1907 is that which was operative at the time of Miss Glenny's death in 1912.

The question then arose: Did Miss Glenny mean, when the title was thus changed, to rescind the former legacy to the British Medical Benevolent Fund and leave it to some other body, and if she did so intend, was that other body the College?

This question was clearly one for the Court to determine. It ought to have been settled simply and inexpensively by a friendly application to the Court, as had been more than once suggested by the Fund and its advisers.

This was not the course adopted by the Estate. The question then came in due course before the Court, was fully argued, and, after mature consideration by the judge, decided in favour of the Fund. The legal points of the case are fully set forth in the accompanying letter from Messrs. Beale and Co., the solicitors of the Fund.

A great deal is made in the report of the so-called "inadmissible evidence" which, it is suggested, would have sufficed to reverse the decision of the judge, and which the Fund prevented coming before the court knowing it to be fatal to its case. The question as to the evidence was a general one and argued on general lines. Was an "opinion," however strongly expressed, "evidence"? The judge decided that it was not. So far from the Fund desiring to keep this out of court, it would have been greatly to the advantage of the Fund's case if it had been admitted. For the Fund had a complete answer to it which would have been very damaging to the claim of the College. Still it is upon this so-called "inadmissible evidence" that Sir James Barr calls upon the Fund under threats and penalties to refund the legacy to the College and to pay all the legal expenses incurred. To do this after the decision of the judge would be to set aside the judgement of the court, and in this respect, at any rate, would implicate the trustees, who would, if they consented to such action, render themselves personally liable.

On the question of expense Sir James Barr's mind may be relieved. The costs of the action did not fall upon the College. When application was made for the costs to be paid out of the legacy, the judge refused it, and directed that the costs were to be paid by the Estate, thus showing that the action was not one between the College and Fund, but between the College and Fund as rival claimants and the Estate.

This full statement of facts ought to satisfy Sir James Barr and any candid person. It is at any rate a complete answer to the charge of sharp practice and legal trickery.—We are, etc.,

JOHN TWEEDY.
President.
SAMUEL WEST,
London, W., June 10th. Treasurer.

16, Great George Street,
Westminster, S.W.,
10th June, 1914.

ROYAL MEDICAL BENEVOLENT FUND.

SIR,—Our clients, the Royal Medical Benevolent Fund, have called our attention to the letter from Sir James Barr under the above heading in your issue of the 6th instant.

In this letter Sir James refers to "what seems to him an extremely serious reflection on the trustees" in the annual report of Epsom College for the year 1914, and calls on the trustees to make a public explanation.

The Royal Medical Benevolent Fund has throughout this dispute acted on our advice, and perhaps a simple "public explanation" will be for us to state the facts.

The first intimation of the legacy came from Mr. Crosse, one of the executors of Miss Glenny's will, who called on Dr. West, the treasurer of the Fund, and informed him that, under Miss Glenny's will, a legacy of £500 was left to "the Royal Medical Benevolent Fund," and that Epsom College had claimed the legacy, and, as the executors had to be careful not to make a mistake or pay the money to the wrong party, he would be glad to know if the Royal Medical Benevolent Fund would claim the legacy.

Mr. Crosse, who also acted as solicitor to the executors, was informed that it certainly appeared that the Royal Medical Benevolent Fund had a claim, and further, that, if there was a genuine doubt as to the proper legatee, the Royal Medical Benevolent Fund would expect to have no difficulty in settling the matter by friendly arrangement.

We were then consulted by the Royal Medical Benevolent Fund, and advised them that they would not be properly fulfilling their duty if they allowed a legacy left to them by name to be paid to another institution. We called upon Mr. Crosse, and informed him that our clients were quite prepared to settle the matter in a friendly way with Epsom College if there was any real doubt, and alternatively suggested to him that the question could be determined expeditiously and inexpensively by the executors of the will bringing the wording of the will before the High Court for an interpretation. We also informed him that, in acting for other benevolent funds, we had found this course convenient.

Some days later, we received a letter from Mr. Crosse's firm stating that the legacy would be paid to Epsom College within a week from that date. Accordingly, having taken the advice of counsel, the Royal Medical Benevolent Fund issued a summons against Miss Glenny's executors claiming the legacy.

The case occupied the Court for a considerable time, and Mr. Justice Joyce delivered judgement on December 16th, 1913, awarding the legacy to the Royal Medical Benevolent Fund,

and ordering the executors of Miss Glenny's will to pay the costs involved.

The judgement is too long to quote in full, but it finishes with these words:

"It is incredible to me that if and when the question of what the correct designation was was raised they should have described the College as the Royal Medical Benevolent Fund. The solicitor who made the will and codicil, and from whom counsel endeavoured to elicit that the testatrix was in the habit on occasions of referring to Epsom College as the Royal Medical Benevolent Fund, or something of that kind, says that Epsom College was never mentioned. Upon the whole, I think that the charity of which the words 'Medical Benevolent Fund' has always been part of the title was referred to and intended rather than the College."

Sir James Barr's complaint against the Trustees of the Fund is as follows:

"Briefly the Fund is charged with obtaining by legal process a legacy of £500 which on the evidence now adduced and which evidence must have been known to the Trustees of the Fund was plainly intended for Epsom College."

The only evidence now, or at any time, adduced that the legacy was intended for Epsom College was that Miss Glenny had in her lifetime subscribed to Epsom College, and that, in Mr. Crosse's personal opinion, she intended to benefit Epsom College. This evidence was certainly before the Fund from the start. It was also before the Court when the case was heard.

On the other hand, it was proved in evidence that in a prior will, made in 1902, Miss Glenny had left a legacy of £500 to the British Medical Benevolent Fund, the name being altered to the Royal Medical Benevolent Fund in a will made in 1905, and it remained the Royal Medical Benevolent Fund in the last will made in 1907.

It is clear that the fact that Miss Glenny subscribed to Epsom College could not conclusively settle the question, and when there is a genuine doubt on cases of this sort the law of the land provides that it shall be determined by a judgement of a judge, and not by the opinion of an individual, however strongly and honestly it may be held.

Again, Sir James Barr says, "through a clerical inaccuracy in her will, the Epsom College has been deprived of this money, and the British, now the Royal, Medical Benevolent Fund has benefited to a similar extent, less the very unnecessary legal expenses incurred." The Judge of the High Court decided that there was no clerical inaccuracy, but that it was the intention of the deceased that the Royal Medical Benevolent Fund should receive the money, and that Fund has received it in full. The executors of Miss Glenny's will have borne the legal expenses of the Royal Medical Benevolent Fund and Epsom College, as well as their own. But it is true that these expenses amounted to an unnecessarily large sum, owing to the executors declining to adopt the usual method of determining disputed questions of this sort arising on wills.

The only remaining point to answer is the suggestion in the report of Epsom College that information was withheld from the Court which ought to have been before it when the case was being heard.

It is true that a discussion arose during the case as to whether the opinion of the solicitor who drew the will was admissible evidence as to the intention of the deceased or not, and it is also true that, after reference to the authorities, the judge ruled that the evidence was not admissible. The doubt as to the admissibility of evidence of this nature was raised in the first instance by counsel appearing for Epsom College; the discussion was based solely on ordinary legal principles of general application.

The judge had clearly before him in the evidence the facts:

(*a*) That Miss Glenny had for the last years of her life been a subscriber to the funds of Epsom College, and

(*b*) That Mr. Crosse had proposed to pay the legacy to Epsom College, thinking that they were entitled to it.

The references to the contents of Mr. Crosse's proof, contained in the report of Epsom College, show that his proposed evidence amounted to nothing more than a strong reiteration of his personal opinion that Epsom College was entitled to the legacy, and that there was nothing material in it which was not produced to the Court.

We venture to submit that throughout this matter the Royal Medical Benevolent Fund have done nothing more nor less than to fulfil their duty by securing the payment to their Fund of moneys to which it was entitled, acting throughout under professional advice.

We ought perhaps to add that if Sir James Barr, or any person nominated by him, cares to call at our office, we have the authority of our clients to produce to him the correspondence in the case, the affidavits filed in the action, the note of the judgement, and any other papers in the case he may care to see.

We are, Sir, yours truly,
BEALE AND CO.

The Editor,
British Medical Journal,
429, Strand, W.C.

THE new Institute of Ship Hygiene and Tropical Diseases at Hamburg was formally opened on May 23th by Dr. Solf, State Secretary in the Imperial Colonial Office. The director is Professor Nocht.

Public Health AND POOR LAW MEDICAL SERVICES.

THE ASH OF SILICOTIC LUNGS.

THE South African Institute of Medical Research has published in a pamphlet a paper on this subject by John McCrae, Ph.D., F.I.C., Government Analyst, Transvaal. The paper is supplementary to Dr. Watkins-Pitchford's investigations on pulmonary silicosis in South Africa. For the purposes of the investigation six right lungs from the cadavers of miners who had suffered from pulmonary silicosis were taken, and one right lung which presented normal appearances from the cadaver of a male Zulu, aged 30, who had never worked underground. The lungs were plunged into boiling water, boiled for some time, minced and well dried in a steam oven, and the weight of the dry matter ascertained. To obviate the risk of error from unequal distribution of foreign mineral matter the whole lung was ashed.

The following table gives the results obtained, and in addition the amount of silica, calculated from the subsequent analysis. The weights are given in grams.

TABLE I.

Case.	Normal.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
Wet weight	649	907	1,928	1,672	1,335	1,497	1,598
Dry weight	76	200	336	232	215	208.5	233 5
Ash	3.77	9.078	21.706	12.70	20.00	13.55	15.20
Silica	0.55	2.79	6.38	5.19	9.60	6.21	6.57
Ash per cent. of dry matter	4.96	4.54	6.46	5.47	9.30	6.49	6.51
Silica per cent. of ash...	14.7	30.7	29.4	40 8	48.0	45.8	43.2
Silica per cent. of dry matter	0.73	1.39	1.90	2.23	4.47	2.98	2.81

"The material described as 'silica' is mainly silica, but may contain small amounts of very refractory silicates."

Table II gives the result of ordinary mineral analysis, with the percentages of the constituents (silica, ferric oxide, alumina, etc.), and Table III gives the percentages with silica eliminated. The most striking fact brought out by Table III is the marked increase of phosphoric oxide, not improbably associated with the extensive formation of connective tissue. A sketch is given showing larger particles of silica isolated from silicotic lung.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

AN examination for candidates for the Royal Naval Medical Service will be held at the Examination Hall, Queen Square, Bloomsbury, W.C., on September 28th and the following days, when the number of appointments to be offered for competition is twenty-five. Full regulations and forms for entry can be obtained on application to the Medical Director-General, Admiralty, S.W.

INDIAN MEDICAL SERVICE.

Annual Dinner in London.

THE annual dinner of the Indian Medical Service in London was held at the Hotel Cecil, on June 8th, Surgeon-General P. H. Benson was in the chair, and the guests were: General Sir Edmund Barrow, G.C.B., Military Secretary, India Office; Sir James Digges La Touche, K.C.S.I., Member of the India Office Council; Sir Thomas Barlow, Bart., K.C.V.O., President of the Royal College of Physicians of London; Sir Rickman John Godlee, Bart., K.C.V.O., President of the Royal College of Surgeons of England; Sir Francis H. Champneys, Bart., President of the Royal Society of Medicine; Mr. Austin Low; the Editor, *The Lancet*; the Editor, BRITISH MEDICAL JOURNAL. The officers present were:

Surgeon-Generals.—Sir R. Havelock Charles, G.C.V.O., J. Cleghorn, C.S.I., A. M. Crofts, C.I.E., J. P. Greany, G. W. R. Hay.

Colonels.—C. W. Carr-Calthrop, D. ffrench-Mullen, W. G. H. Henderson, H. Hendley, D. E. Hughes, M. D. Moriarty, R. D. Murray, A. Porter, P. A. Weir.

Lieutenant-Colonels.—A. Alcock, C.I.E., W. Alpin, J. Anderson, A. E. Berry, R. Bird, C.I.E., C.V.O., W. H. Burke, W. H. Cadge, D. G. Crawford, R. H. Elliot, P. J. Freyer, G. H. D. Gimlette, C.I.E., H. Greany, P. de H. Haig, J. G. Hulbert, G. B. Irvine, E. R. Johnson, J. N. MacLeod, C.I.E., D. P. Macdonald, R. K. Mitter, T. R. Mulroney, A. H. Nott, S. E. Prall, K. Prasad, J. J. Pratt, B. J. Singh, W. H. Thornhill, D. Warliker, H. P. Woolbert, H. G. L. Wortabet, F. W. Wright.

Majors.—S. H. Lee Abbott, C. R. Bakhle, F. L. Blenkinsop, F. D. S. Fayrer, J. K. Fleming, W. F. Harvey, E. C. Hepper, S. P. James, G. King, R. W. Knox, W. H. Leonard, W. T. McCowen, W. R. J. Scroggie, M. H. Thornley, J. M. Walker, C. G. Webster.

Captains.—A. C. Anderson, C. H. Barber, D. P. Goil, A. F. Hamilton, L. Hirsch, J. L. Lunham, A. C. Munro, R. D. MacGregor, J. O'Leary, M. F. Reany, H. Ross, T. C. Rutherford, W. D. H. Stevenson, M. F. White.

An examination for not less than thirteen commissions in the Indian Medical Service will be held in London on July 27th and the five following days. Forms of application can be obtained from the Military Secretary, India Office, S.W.

TERRITORIAL FORCE.

THE King has conferred the Territorial Decoration upon Major Lewis T. F. Bryett, First London (City of London) Sanitary Company; Lieutenant-Colonel Alexander B. Lyon, M.B., First City of London Clearing Hospital; Major Andrew R. Wilson, M.B., attached to the Fourth Battalion, the Cheshire Regiment; and Major William Doig, M.D., and Captain William T. Barrie, M.B., attached to the Fourth (The Border) Battalion, the King's Own Scottish Borderers.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Lectures in connexion with the Diploma in Psychological Medicine.

DURING the Michaelmas term Dr. Myers will give a course of lectures in the psychological laboratory on general and experimental psychology, considered especially in relation to medicine. These lectures are intended for medical students and for candidates for Part I of the diploma in psychological medicine. They will be given on Mondays, Wednesdays, and Fridays at 9 a.m., beginning on Friday, October 16th. In connexion with them a practical class will be held at times to be arranged. Those who wish to attend this course are particularly requested to inform Dr. Myers of their intention before August 1st.

Instruction in the physiology of the central nervous system, suitable for the above-named candidates, is provided in the course of lectures given by Dr. Anderson in the physiological laboratory on Tuesdays, Thursdays, and Saturdays at 9 a.m. (beginning on Thursday, October 15th), with practical work on Mondays, Wednesdays, and Fridays at 10 a.m.

The following degrees have been conferred:

D.Sc.—W. M. Fletcher, H. C. Haslam.
M.D.—F. O. Arnold, A. H. Gosse, F. C. Trapnell, E. G. Wheat.
M.B.—C. W. Archer, H. I. S. Shields, G. Sparrow, M. H. Watney.
B.C.—G. Sparrow, M. H. Watney.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on May 20th under the presidency of the Vice-Chancellor, Dr. W. P. Herringham.

Emeritus Professors at University College.

The title of Emeritus Professor of Clinical Surgery at University College was conferred upon Sir Rickman J. Godlee, Bart., K.C.V.O., LL.D., P.R.C.S., and Mr. Bilton Pollard, M.B., B.S., F.R.C.S.

Presentation Day.

The presentation of graduates to the Vice-Chancellor took place on May 13th. On this occasion the Principal read a report on the year 1913–14, from which it appeared that the total admissions to the University had fallen from 4,047 in 1912–13 to 3,852 in 1913–14. The total number of candidates for all examinations had declined from 12,455 to 11,920. This decline in the number of examinees was most marked in the case of matriculation; it was found entirely among the entries from the provinces, those from London having increased, and was probably to be attributed to the growing success of the younger universities.

After the presentation Sir Philip Magnus, M.P. for the University, delivered a short address, in the course of which he referred to the effect of the Royal Commission appointed in 1909 in checking the development of the University, and preventing it from appealing for funds for the endowment of professorships and the enlargement and better equipment of laboratories, and generally for developing the real work of a great university. He found that while most of the bodies concerned had spoken most favourably of the Commissioners' report in general terms, all appeared to object to certain recommendations affecting themselves. Thus he found that the Faculty of Medicine in its report of March last dissented very strongly from some of the recommendations, and said with regard to the method of teaching adopted in the medical schools of London that "It is the subject of envy on the Continent and in America, and the proposal to override this system by another, of which the superiority is not proved, is one that the Faculty of Medicine cannot accept." Having regard to these opposing currents of thought, he expressed the opinion that during the lifetime of the present Parliament there was very little chance of any bill for the reform of the University of London being placed on the statute book. If, therefore, the labours of the Commission and the Departmental Committee were not to be lost, it was desirable that the University should itself effect such changes in its constitution and government as might be found expedient. To this end he suggested that a committee of the Senate should be appointed to consider the recommendations of the Commission with a view to deciding which of them could be adopted, with or without legislation, to widen the avenues of approach from the secondary schools to the colleges of the University, to create greater facilities for research and the advancement of learning, and to secure that the examinations for the degrees remain open to students, wherever and however they might have studied, without distinction of class, or sex, or creed.

Physiological Laboratory.

The report of the Physiological Laboratory Committee for the year 1913 stated that during the year, in addition to the customary meetings of the physiological and other societies, the Physiology Section of the International Medical Congress had its head quarters in the laboratory. Demonstrations were given by Professor Waller of his electrocardiographic installation, and of his chloroform balance for human and animal anaesthesia. The report contained references to the various courses of lectures given and researches carried out during the year.

Brown Animal Sanatory Institution.

The annual report of the superintendent of the Brown Animal Sanatory Institution showed that during the year the total number of examinations of animals made was 7,036, and the total number of animals brought to the institution was 6,022, of which 565 were in-patients at the hospital. The animals under treatment included 3,956 dogs, 1,355 cats, and 535 horses, the commonest diseases being distemper, mange, and scabies in dogs, and lameness in horses. Of the 565 in-patients 520 were cured or relieved, 17 died, and 28 were destroyed as incurable. It was estimated that 400 animals were sent away to veterinary surgeons, treatment being refused on the grounds that the owners could afford to pay the proper fees.

The five lectures required under the will of the late Mr. Brown were delivered in the theatre of the Royal College of Surgeons during December by the superintendent, Mr. F. W. Twort, the subjects elected being "The cultivation of animal and vegetable micro-organisms." The report contained a list of investigations which had been carried out by different workers.

Professoriate Committee.

The Vice-Chancellor (Dr. W. P. Herringham) has been elected Chairman of the Professoriate Committee for the remainder of the year 1913–14.

Appointment of Representatives.

Professor R. T. Hewlett and Professor W. J. R. Simpson, C.M.G., have been appointed the representatives of the University at the sixth annual conference of the National Association for the Prevention of Consumption at Leeds in July next. In addition to Sir William Collins, the Right Hon. Lord Reay will represent the University at the 300th anniversary of the foundation of the University of Groningen in June.

Dr. Herbert G. G. Cook has been reappointed to be the Chancellor's representative on the Court of Governors of the University College of South Wales and Monmouthshire.

Advanced Lectures in Physiology.

A lecture on the cortex cerebri was given in the Physiological Laboratory of the University by Dr. Eugene Dupuy (Paris) on June 8th.

A lecture on some problems in cardiac physiology will be given by Mr. A. F. Stanley Kent (Henry Overton Wills Professor of Physiology in the University of Bristol) in the Physiological Laboratory on Thursday, June 18th, at 5 p.m. The lecture, to which admission is free without ticket, is addressed to advanced students of the University and others interested in the subject.

The course of lectures by Professor Brodie on the gaseous exchanges of the body will be delivered at King's College on June 8th, 11th, 15th, and 18th, at 4.30 p.m., instead of on the dates previously announced.

UNIVERSITY COLLEGE, LONDON.

MR. A. G. R. FOULERTON, late Director of the Bacteriological and Clinical Pathology Laboratories at the Middlesex Hospital, has been appointed to a lectureship in the Public Health Department of University College, University of London.

UNIVERSITY OF GLASGOW.

Commemoration Day.

TUESDAY, June 23rd, will be observed in the University of Glasgow as Commemoration Day. A meeting will be held in the Bute Hall at 10.30 a.m., when, after Divine Service, an oration will be delivered by Sir Hector C. Cameron, M.D., on "Lord Lister." After this the honorary degrees will be conferred. A dinner will take place in the evening in the university building at which the honorary graduates will be entertained as guests. The dinner is open to graduates and friends of the university, including ladies. Applications for tickets must be addressed to the Secretary of the University Court, and seats will be balloted for. Tickets will be issued to applicants in the order of application.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.
ELECTION TO THE COUNCIL.

No fewer than fourteen candidates have declared their intention to present themselves for election on Thursday, July 2nd, and there will be five vacancies.

Mr. Ballance, M.V.O. (Fellow, 1882), of St. Thomas's Hospital, will seek re-election; he was elected in 1910 as a substitute for Mr. G. A. Wright. The remaining candidates, in order of seniority as Fellows, are: Mr. Stanley Boyd (Fellow, 1881), of Charing Cross Hospital; Mr. J. B. Lawford (Fellow, 1885), Ophthalmic Surgeon to St. Thomas's Hospital; Mr. William Thorburn (Fellow, 1886), Senior Surgeon, Manchester Royal Infirmary; Mr. T. H. Openshaw (Fellow, 1886), London Hospital; Mr. Walter Spencer (Fellow, 1887), Westminster Hospital; Mr. Raymond Johnson (Fellow, 1888), University College Hospital; Mr. F. F. Burghard (Fellow, 1889), King's College Hospital; Mr. T. H. Kellock (Fellow, 1891), Middlesex Hospital; Mr. W. McAdam Eccles (Fellow, 1892), St. Bartholomew's Hospital; Mr. P. M. Yearsley (Fellow, 1893), Royal Ear Hospital; Mr. C. Ryall (Fellow, 1896), Cancer Hospital; Mr. H. S. Pendlebury (Fellow, 1897), St. George's Hospital; and Mr. F. J. Steward (Fellow, 1898), Guy's Hospital.

The candidature of most of the surgeons above named is already known to the Fellows. Only one—Mr. Thorburn—represents a provincial school, whilst three are specialists. At present no specialist holds a seat on the Council.

Medico-Legal.

MINERS' NYSTAGMUS AND VOMITING.

AN important case under the Workmen's Compensation Act was heard by His Honour Judge Ruegg, K.C., at the Hanley (Staffordshire) County Court on May 21st. It was a claim by the dependants of one Cannon against the Shelton Iron, Steel, and Coal Company, Ltd., for compensation in respect of his death, which it was alleged was caused by miners' nystagmus, a disease scheduled under Section 8 of the Act.

It appeared that in August, 1913, deceased was certified by the certifying surgeon for the district to be disabled by miners' nystagmus, and compensation at the rate of 18s. 2d. a week was paid up to the time of the death on February 16th, 1914. According to the evidence of the widow, deceased had taken little exercise since his disablement, and had frequently complained of giddiness and pains in the head. On the day preceding his death he had taken no food except a basin of broth at supper-time; he lay in bed till midday on February 16th, and about 4.45 p.m. went into the yard to the watercloset. On his return to the house about ten minutes afterwards he complained of pains in the head, sat down in a chair, and then rolled on to the sofa. He tried to vomit, and appeared to become very ill. Dr. Read was sent for, but the man died as the doctor arrived at about 5.30 p.m.

Counsel for the claimants said that his case was that the attempted vomiting was a symptom of nystagmus, and that this acting on a weak heart caused the death.

The medical evidence of Dr. Thomas and Dr. R. Moody was to the effect that death was caused by the attempt to vomit being too great a strain upon the heart muscles, which *post-mortem* examination showed to be flabby. It was admitted that the man had commencing pneumonia, and that the necropsy revealed old pleuritic adhesions. They did not think the pneumonia had advanced sufficiently to render the heart muscles flabby, and contended that these muscles had become weak through want of exercise owing to nystagmus, that the attempt to vomit was a symptom of nystagmus, and in this way they connected the death with the industrial disease from which the man was suffering. Dr. Moody stated that though somewhat rare, attempted vomiting was a symptom of miners' nystagmus, and he mentioned that two such cases had come under his own observation.

Two coal-miners suffering from miners' nystagmus were called for the applicant, and stated that since the onset of the disease they had constantly attempted to vomit in the mornings.

Dr. R. H. Read and Dr. T. L. Llewellyn, for the respondents, said that the *post-mortem* examination showed that the general body muscles were practically normal, indicating that the heart muscles had not failed on account of lack of exercise, as they would be the last muscles to be affected from this cause. They considered that the heart had been affected by the old pleurisy. Pneumonia even in its earliest stages would affect the heart, and in the present case there would be a greater strain on the heart as the man was not lying up. They were also of the opinion that the attempt to vomit was induced by failure of the heart and had nothing to do with the nystagmus. Dr. Llewellyn said that in over 1,000 cases of miners' nystagmus which he had examined and noted there had never been any complaint of nausea or a desire to vomit, and in his opinion these were not symptoms of nystagmus.

In giving judgement His Honour said that the claim made was an attempt to put a new liability upon employers. Miners' nystagmus had never been suggested or assumed to be a disease having a fatal termination. This man was suffering from nystagmus, and he died of heart failure, and an attempt had been made to connect the death with the nystagmus. It was said in the first place that the man had an enfeebled heart, and that seemed to be shown by the *post-mortem* examination, while the muscles of the body were fairly well developed. He was asked to say that, as the man did not go out very much, the whole of the muscles of the body got into a flabby condition. Assuming he was satisfied on that point, he should have the very gravest doubt as to whether the employer was responsible. In the case of a man who, having met with an illness which did not necessarily keep him indoors, chose to confine himself to the house, and in that way get the muscles of the body into an unhealthy and flabby condition, to hold that the employer was liable in such circumstances would be imposing a liability upon the employer which should not be put upon him. He did not think the heart muscles were flabby by disuse, because all the doctors agreed that the last muscles to show symptoms of flabbiness, if caused by want of exercise, would be the heart muscles. He was not satisfied that the condition of the heart was attributable in any way to the nystagmus. It was said that what really killed Cannon was the strain caused by attempting to vomit or retch. He was not satisfied that that was so. But supposing the retching was the last strain, what was that retching caused by? He was far from satisfied it was caused by nystagmus. It was not a common symptom of nystagmus. The utmost the evidence went to was that it was a possible symptom. This man had suffered for six months, and this unusual symptom, if it was a symptom, had not manifested itself, and there was no evidence he had had an attack of retching until a few hours before his death. It was admitted that then he had contracted another disease—namely, pneumonia. His Honour was satisfied the condition of the heart was not due to nystagmus. He was asked to say that that unusual manifestation was caused by a disease the man had suffered from for six months, and had never manifested itself in that way before, and that it had nothing whatever to do with what the doctors attributed to pneumonia. He could only say that the case was not proved, and there must be an award for the respondents.

Obituary.

DR. RICHARD BURNS MACPHERSON, of Cambuslang, Lanarkshire, died on June 2nd, after a prolonged illness. He was a distinguished student of Glasgow University, and was the first Rainy bursar and Arnott scholar in 1875–6. He graduated M.B., C.M. with honours, taking the Brunton Memorial Medal as the most distinguished graduate of the year. He took the degree of M.D. in 1885. He served with the Turkish army through the Russo-Turkish war of 1877–8, and received the thanks of the Turkish Government and the Imperial Order of the Medjidieh. He was in practice in Cambuslang for thirty-five years, and was medical officer of health and parochial medical officer for the parish. He is survived by a widow and grown-up family.

DR. RICHARD ISTANCE, a well-known and much-respected practitioner, passed away on May 22nd, after a short illness, at his residence, Pontymister, Monmouthshire. Dr. Istance was one of the oldest practitioners in the county, and had been continuously in active practice in the neighbourhood since 1859, when he took the diploma of M.R.C.S.Eng. He became L.S.A. in 1864. For many years he was medical officer and public vaccinator for Risca District of Newport Union; certifying factory surgeon, medical officer of health, Risca U.D.C.; and medical officer, P.O. He also enjoyed a large private practice for many years, but latterly he had relinquished much of his former work. He was fellow-student at University College Hospital, where he was educated, with the late Dr. Druslyn Griffiths, of Swansea, and Dr. Frederick Roberts, the three coming from the same town, Carmarthen. Dr. Istance was much beloved and greatly respected by all who knew him, and the large public funeral at Risca Cemetery bore testimony to this.

IN the obituary notice of Brigade Surgeon William John Busteed published in the JOURNAL of June 6th, p. 1272, it was inadvertently stated that he was born in 1833; he was born in 1836, and his age was thus 78 when he died. It ought also to have been stated that he held the degree of M.D.

THE third annual congress of the Association of Italian Hygienists will be held at Naples in October. Among the subjects proposed for discussion are the social factors in the genesis of tuberculosis; town sewerage, with special reference to the South of Italy; and Italian emigration from the hygienic point of view.

Medical News.

THE annual conversazione for ladies at the Royal Society will be held on Tuesday evening next.

AMONG the Vice-Presidents nominated by the President of the Royal Institution (the Duke of Northumberland) are Dr. Donald Hood and Sir James Crichton-Browne, treasurer.

AT the Royal Anthropological Institute (50, Great Russell Street, W.C.) on Tuesday next, at 8.15, Professors C. G. Seligmann and F. G. Parsons will give an epidiascope demonstration of the Cheddar man—a skeleton of the late palæolithic age.

PAST and present members of the West African Medical Staff are to meet at dinner at the Grand Hotel, Charing Cross, next Monday, June 15th. Further information can be obtained from Dr. J. P. Fagan, late P.M.O., Northern Nigeria, 27, Scarsdale Villas, Kensington, W.

DR. W. DYNE STEEL, V.D., of Abergavenny, who has recently retired with the rank of Colonel from the command of the Third Battalion of the Monmouthshire Regiment (Territorial Force), has been appointed Deputy Lieutenant for the county of Monmouth.

THE Sydney Ringer Memorial Lecture at University College Hospital Medical School will be delivered on Monday next at 5 p.m. by Dr. T. R. Elliott, F.R.S., assistant physician to the hospital; the subject is the adrenal glands. The lecture is open to all fully qualified practitioners and to medical students.

THE Central Committee for the State Registration of Nurses has arranged a reunion at the Connaught Rooms, Great Queen Street, London, W.C., on Friday, June 26th. A reception will be held at 8 p.m., and at 8.30 Lord Ampthill, Chairman of the Central Committee, will give an address; subsequently there will be a dance.

A DINNER of the Brussels Medical Graduates' Association will be held, under the presidency of Dr. Howard Humphris, at the Garden Club, Anglo-American Exhibition, Great White City, Shepherd's Bush, on Wednesday, June 17th, at 7.30. All graduates of the University of Brussels will be welcome, and members are invited to bring ladies. Tickets, price 7s. 6d. (not including wines), may be obtained from the honorary secretary, Dr. Arthur Haydon, 29, Broadhurst Gardens, Hampstead, N.W.

THE Irish Medical Schools' and Graduates' Association has just spent a week-end at Harrogate. They were received by the Mayor of Harrogate and the Medical Society at the Royal Baths. A dinner was held in the evening at the Majestic Hotel, where the party stayed; Dr. Macnaughton Jones was in the chair, in the unavoidable absence of the president, Sir Richard Havelock Charles, G.C.V.O. The honorary secretary (Dr. Shepherd Boyd) and Dr. W. J. Corbett (honorary secretary, London) are to be congratulated on the success of the meeting.

THE dinner of the Royal Sanitary Institute brought together a large gathering of distinguished architects, engineers, and medical men interested in the well-being of the institute, and many references were made to the valuable work that it has done and is still doing in assisting the progress of legislation concerning public health, housing, sanitation, and the general welfare of the people. One of the speakers, Professor Griffiths, F.R.S., Principal of the University College of South Wales, after dwelling on the educational effect of the institute's work, stated that the projected new school of medicine in Wales was to include a large school of preventive medicine. The chair was taken by Lord Plymouth, president of the institute, and the medical men present included the Presidents of the Royal College of Physicians and the Royal College of Surgeons, the medical officer to the Local Government Board (Dr. Newsholme), and Sir Shirley Murphy, late medical officer of health to the administrative county of London.

THE June afternoon meeting of the Eugenics Education Society was held at the Grafton Galleries, Grafton Street, on June 4th, when Dr. C. W. Saleeby read a paper on "The National Birth-Rate Commission," which he said had been sitting for more than six months, and had examined many witnesses, though much work remained to be done. One striking feature of the evidence was the large proportion of opinion to fact. The Fabian Society, however, had obtained some valuable particulars which, so far as they went, seemed to prove that the present fall in the birth-rate was due to voluntary sterility. There was no evidence of a failure in fertility such as many had expected; nor was there any evidence that what was known as racial decay had followed the voluntary limitation of families. The term "birth-rate" really stood for the survival rate from an unknown number of conceptions. Ante-natal malnutrition and bad heredity were responsible for an immense destruction of life before birth, but a large proportion of what eugenists erroneously called bad heredity was really ante-natal infection through syphilis. Eugenics would have to adjust itself to these facts, or cease to be eugenics according to Galton. To obtain a key to the conception-rate it would be necessary to make the notification of stillbirths compulsory all over the country. It was high time also that steps were taken to prevent the sale of lead under the name of diachylon, which was never used medicinally or for any other purpose than that of procuring abortion. Finally, the management of maternity benefits, which was now in the hands of officials whose outlook was bounded by the narrow interests of their own societies, should be entrusted to public health officials, who would be capable of appreciating the importance of maternal and infantile, that is to say racial, health.

AT the annual meeting of the delegates of the Hearts of Oak Benefit Society in London on June 2nd, the president stated that the adult membership had risen from 304,599 when the Insurance Act was passed to 612,936 on March 31st last. The number who had become members of the society for private or independent benefits was 161,270, and those insured for State purposes only was 170,153. On the other hand, it had been anticipated that 75 per cent. of the original membership would take advantage of Section 72 of the Insurance Act, and so release reserves estimated at £1,250,000. As a matter of fact, however, only 32 per cent. had merged their State membership with their original contributions, and the amount of reserves released for additional benefits would be comparatively small, and would probably be exhausted by the liability of the society in the payment of the first three days of sick pay, and its liability for the first six months of the Insurance Act before the sick benefit became payable. The president saw no warrant for the alarmist rumours which had given rise to the setting up by the Commissioners of the Committee of Inquiry into sickness experience of approved societies, the Hearts of Oak had refused to give evidence, and his own opinion was that the real pressure would only be felt when disablement benefit began to operate.

AT the Conference of the International Abolitionist Federation, to be held at Portsmouth from June 15th to 18th, constructive policy will be discussed under two heads: (1) The progressive reduction of public immorality and (2) the progressive reduction of venereal disease. The occasion is notable as almost the first attempt in this country to correlate these two problems and to discuss both in an assembly composed of administrators, medical men, and social reformers. The Bishop of Winchester will preside at the meeting of welcome. On June 16th M. Yves Guyot, former French Minister of Commerce, will deliver an address on the history and objects of the federation. In the afternoon the responsibility of law-makers will be discussed. Mr. Bronson Reynolds, Chairman of Committee of the American Federation of Social Hygiene, will read a paper on legislation in the United States; and M. de Meuron, Chairman of the Administrative Committee of the Abolitionist Federation, Geneva, will present a communication on the action of the law on morality. The responsibility of local authorities will be dealt with in papers on the duties and responsibilities of local authorities by Councillor W. C. Dawson, J.P., Chairman of the Education Committee, Hull; and on local policy in Germany (including some account of women police) by Frau K. Scheven, of Dresden, President of the German Branch of the federation. On Wednesday the conference will have before it the question of the progressive reduction on venereal disease. In the morning the responsibility of the State will be dealt with by Dr. Santoliquido, former Director-General of Health for Italy, in a paper on the action of public authorities in the prevention of venereal disease; and Dr. Svend Lomholt (Copenhagen) will contribute a paper on the Danish system by free treatment, notification, etc. A communication on combating venereal disease in the British army, compiled by Dr. E. F. Skinner from papers by Lieutenant-Colonel Gibbard and Major Harrison, will be presented. Dr. E. Rist of Paris, Dr. C. W. Saleeby, Dr. Douglas White, Dr. Helen Wilson, and Dr. A. Nash will take part in the discussion. On Thursday evening there will be a special meeting to discuss some causes of prostitution. The discussion will be opened by Sir Victor Horsley. For tickets and all information relative to the conference, application should be made to the Secretary of the British Branch, Miss F. M. McNeill, M.A., 19, Tothill Street, London, S.W.; or to the Local Secretary, Miss K. Bone, 12, Western Parade, Southsea.

Letters, Notes, and Answers.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

X. Y. Z. desires to hear of a school where a girl, aged 4 years, would be educated and cared for. The charge made would not be the first consideration.

SCARLATINA AND MIDWIFERY.

GENERAL PRACTITIONER wishes to know what disinfection, when giving attendance to scarlatina, is necessary before attending midwifery cases.

ULCERATIVE STOMATITIS.

MEDICO asks for suggestions as to the cause and treatment of the following symptoms in an adult male: Small ulcers appear from time to time on the mucous membrane of the mouth, usually of the lower lip. At first small, they gradually extend at the periphery, becoming deep and extremely painful. Two or three appear at a time, and run a course of ten or twelve days before finally healing. Antiseptic mouth-washes have been tried without any apparent effect; the teeth are sound; the patient suffers from dilated stomach and flatulence, and in consequence carbohydrate diet has to be avoided.

INCOME TAX.

INCOME TAX inquires whether a "present of money from one medical man to another in recognition of professional attendance should be entered as part of the income of the receiver."

*** The judicial decisions dealing with the liability to the income tax on presents of money appear to be restricted to a group of cases connected with voluntary payments made to clergymen by members of their congregations. The House of Lords held such payments to be liable if they were made in respect of the office filled or services rendered by the recipient. The liability in that case existed under Schedule E, but presumably the general principle would apply *mutatis mutandis* to Schedule D. Accordingly it would appear that money received "in recognition of professional services" is liable to taxation in the hands of the recipient.

SUDDEN DEATH IN A BOY.

DR. M. SOMASUNDRUM, L.M and S. (Beruwala, Ceylon) writes: A healthy-looking boy aged about 14 was said to have fallen from a table on to the ground, and to have been unconscious for some time. Nobody was close by, and the boy is said to have informed his parents about it after regaining consciousness. This was at about 8 am. He took his breakfast and then his dinner at about 8 p.m. as usual. Soon after dinner he is said to have become restless and then delirious, and before any medical assistance could be got expired at about 11 p.m. At the *post-mortem* examination which was held by me subsequently, no injuries either external or internal could be found. A very much enlarged persistent thymus was found almost overlapping the pericardium. It was bilobed, and each lobe was about 3 in. in length. Lymphatic glands were not enlarged. The lungs, liver, and kidneys were slightly congested. Was death in this case due to "status lymphaticus"? If not, how is the period of tranquillity from the time he regained consciousness till he became delirious to be accounted for?

GIANT URTICARIA.

PUZZLED would like advice on the following case: Male, aged 44, has had intermittent attacks of giant urticaria for the past eighteen months. At first they occurred regularly at intervals of fourteen days, but latterly have been more irregular, the intervals varying from a day or two to two months. The "bumps" are sometimes enormous (as big as a large soup plate), and appear on the thigh, back, arm, etc. When they come on the face the amount of oedema is very great and the features are quite unrecognizable. An attack produces profound malaise, coated tongue, and severe depression. The temperature is always normal or subnormal, and severe backache usually precedes and follows an attack. The patient has no occupation and leads a healthy life. He is slightly gouty and of a neurotic temperament. The motions and urine have been bacteriologically examined but nothing has been found. Slight pyorrhoea alveolaris which existed has been treated locally and with a vaccine (autogenous). The condition improved for some time, but has lately reappeared very slightly. As to treatment, intestinal antiseptics, such as calomel, lactic acid bacillus, kerol, and benzol have been tried, also a course of Plombières treatment, but with no real benefit.

ANSWERS.

THE FLY NUISANCE.

SEVERAL correspondents have written, in reply to "D. H.," to recommend formalin for getting rid of flies in a sitting-room. One correspondent advises that the window should be open only at the top and wool soaked in a solution of formaldehyde placed on the ledges. Another correspondent advises the placing of formalin in a saucer, and Mr. T. F. M. Smart the addition of oil of eucalyptus. He also recommends the keeping of eucalyptus plants in the sitting-room; they can, he says, be obtained from most nurserymen, but if sown now in a light sandy soil and placed in a frame or under a hand-glass the seedlings may be potted off separately in two or three weeks. If placed in the open in July and August, the plants come on rapidly, and may be brought into the house in the autumn. This seems to be advice which might be remembered for another year. Formaldehyde in saucers does not seem to be uniformly successful, and even the addition of sugar has failed to attract the pests. Possibly some reader may have information as to the strength of the formaldehyde that should be used, or as to other means of repelling flies from a sitting-room.

LETTERS, NOTES, ETC.

THE TREATMENT OF PRURITUS ANI.

DR. JOHN CROPPER (Chepstow) writes: With reference to pruritus ani, I have not tried *x* rays. Calomel in ointment might cure one or two cases, but I am convinced that tr. iodi and tr. benzoini co. are far more potent remedies. A great point is to use these alternately, or rather to use the tr. benzoini co., reverting to the tr. iodi from time to time as found necessary. Few people will bother about *x* rays if they can get relief with simpler remedies.

FRESH AIR AND PNEUMONIA.

DR. A. STEVENSON (Sunderland) writes: I read with much interest Dr. A. J. Manasseh's letter *re* the treatment of pneumonia by potassium iodide and creosote, as recommended by Dr. A. Mathieson. One thing I notice Dr. Manasseh does not mention, and that is fresh air. Fresh air and plenty of it is one of the most essential parts of the treatment of this disease.

DR. JOHN BAIN (South Shields) writes with reference to the same letter: A few months ago letters appeared in the JOURNAL advocating the treatment of pneumonia by quinine and calomel, with which drugs the writers claimed to have achieved results equally as good as those which Dr. Manasseh has obtained from creosote and potassium iodide. Valuable as these methods of treatment have proved themselves to be, there is, in my opinion, a supplementary method of treating the disease which I look on as most valuable and without which I regard all other methods as incomplete. I refer to the continuous use of fresh air from the beginning of an attack of pneumonia until convalescence is fully established. Keeping the sick-room window wide open day and night has, in my experience, a wonderful effect in shortening the duration of an ordinary attack of lobar pneumonia. In many cases, particularly in young adults, the disease clears up by the end of the third or fourth day, and so rapidly does resolution take place that one is sometimes inclined to doubt the accuracy of one's own diagnosis. So often, however, have I seen this rapid subsidence in young people that I now look on it as nothing uncommon should my patient get an exceptionally early crisis when being treated with an abundance of fresh air. I firmly believe that wide-open windows are as necessary during the continuance of acute pneumonia as they are for the successful treatment of phthisis, and, while not advocating fresh air as the only treatment in these diseases, I maintain that its persistent use is a powerful weapon in the hands of the physician and one which should be freely used.

"PUTTING THE FEET UP."

DR. J. REID (London, W.C.) writes: I saw a lady in a railway carriage with the soles of her feet against the opposite seat cushions, and wondered how she would look if any one wiped their feet upon her beautiful dress. She might have sat where the feet had been, touched her dress, and then her mouth or eyes, etc. The soles may have had ascarides' eggs, taeniae, or many parasitic germs attached to them. The danger of sputum has been much advertised, but contagion in real life is much more frequently from coarse contact and inoculation little dreamt of.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

ON THE MURMURS IN DILATED HEARTS AND THEIR EXPLANATIONS.

By SAMUEL WEST, M.D.,

CONSULTING PHYSICIAN, ST. BARTHOLOMEW'S HOSPITAL, ETC.

DILATATION of the heart is a common condition, easily recognized by physical signs.

Murmurs are frequently associated with dilatation and are due to it, for they come and go with it. They may be therefore very properly described as "dilatation murmurs." How they are produced is a problem upon which opinions differ, and it is to some points connected with this problem that I propose to address myself.

I. It may simplify the question if we consider first the conditions under which murmurs occur in dilated vessels, arteries, and veins.

Murmurs are "audible eddies." The most marked murmurs are often said to be due to a "jet," but the jet only causes violent eddies. It is very extraordinary that the blood circulates through the normal vessels and heart without producing murmurs. Eddies represent loss of power. The absence of murmurs shows the wonderful physiological adjustment of the vessels to the blood which passes through them, so that, in spite of all the twists and turns the blood has to make, no eddies are produced.

It is no wonder that alterations in the vessels should cause eddies and murmurs. The wonder is that they are not more common.

The conditions under which eddies form fall into two groups according as the blood is passing: (A) Into or out of a dilatation of the vessel, or (B) through a constriction in it. For the eddies to be audible they must be sufficiently forcible, so that they will depend upon the force of the circulation. This explains why these murmurs vary in intensity at different times, why they come and go, and sometimes even disappear.

A. (*a*) Of the forms in which dilatation is the prominent change the simplest is that known as *mimic aneurysm*. The name was, I believe, invented by Paget, although the condition was certainly known to Laënnec. I wrote on the subject many years ago, but, though the condition is by no means uncommon, it seems to have fallen out of recent literature and to be hardly referred to now. The name "mimic aneurysm" is an excellent one. It describes exactly what it is—namely, a fusiform dilatation of a part of a large artery which, however, is not permanent but transient. The subclavian is the common artery to be affected. Then under the clavicle a distinct pulsating swelling is found, over which the veins may be distended and a systolic murmur heard. It is a transient condition. It comes and goes, lasting only, it may be, a few minutes, and with it goes the murmur too. I have seen the same condition also in the carotid at the root of the neck. In its most familiar form it is known as "the pulsating aorta," or what Laënnec described as abdominal pulsation. In these cases not only is the pulsation marked but a swelling may be obvious sufficient to suggest an actual aneurysm. Indeed, it is not rare in hospital practice to have such cases sent in with that diagnosis. The pulsation and the signs come and go.



Fig. 1.

In these cases of simple dilatation murmurs are not always present; this depends partly upon the abruptness of the dilatation and partly upon the force of the circulation, but as an attack of abdominal pulsation is usually associated with palpitation, the action of the heart being rapid and forcible, the murmur is generally well marked so long as the attack lasts.

Cases of abdominal pulsation are certainly rarer in the wards than they used to be. I can hardly suppose that the condition is actually less common, but I presume that it is more generally recognized, and being regarded as a neurosis does not excite sufficient interest for the case to be admitted into the hospital.

(*b*) A true fusiform aneurysm presents exactly the same condition, except that the dilatation is permanent. Over it a systolic murmur is common.

(*c*) With *saccular aneurysms* murmurs are common though not constant. In other words every saccular aneurysm is not so placed that the circulation causes eddies in it sufficient to produce a murmur. The reason of this may be either (1) that the sac lies at the side of the vessel, and out of the direct current of blood, so that the blood passes over its mouth rather than into the sac; or, (2) that the sac itself is not distensile enough to allow sufficient blood to enter for the eddies to form; this may be due to rigid walls or to the cavity being filled with clot, but even large thin-walled aneurysms may present no murmur, just as sometimes they may not even pulsate.



Fig. 2.

B. The second group of conditions which may cause the eddies necessary for the murmur is that in which the vessel is constricted, the blood having then to pass through a constriction, and having thus a dilatation, relative or absolute, both above and below, conditions the most favourable of all for the eddies required.

(*a*) This constriction may be produced by *external pressure*—by the stethoscope, for instance, or by a tumour or bony prominence pressing on the vessel.

(*b*) An allied condition is that which occurs at the root of the neck, where the external jugular vein passes through the fibrous membrane, closing the thorax in the supraclavicular fossa. If this vein dilate, the fibrous ring through which it passes being rigid, a relative constriction is produced and a murmur ensues. This is the explanation usually given of the venous murmur audible above the clavicle in chlorosis. Indeed, it is in chlorosis especially that the conditions requisite for the production of these murmurs can be best demonstrated. Thus the murmur can easily be produced or exaggerated by pressure and made to vary with the force or rate of the circulation, being loudest in the erect position, on inspiration, and during diastole.



Fig. 3.

(*c*) Constriction of a vessel is, however, more commonly produced by *disease of its walls*. In this case the lumen is narrowed, and eddies are the necessary result.

II. Similar conditions in the heart will be capable of producing murmurs. If it be difficult to explain the absence of murmurs in healthy vessels, it is still more difficult in the case of the heart, where the blood has to pass through so many orifices and to turn so many corners.

Where there is organic disease, especially of the orifices, the occurrence of murmurs is easy to comprehend; but it is with the murmurs which occur where there is no gross structural lesion that I have to deal—that is, those in which there is only one abnormal condition present, namely, dilatation.

In the dilated heart the normal relation between the orifices and the cavities is changed so that the blood no longer passes in the usual uniform stream, but is driven here and there through the dilated cavities and so produces the requisite eddies.

Dilatation murmurs in the heart fall into two groups, according as they occur at the base of the heart or over the body of it, and may be described as (*A*) *basic* or (*B*) *ventricular* respectively. Whether basic or ventricular they may be present on the right or left sides, in the aortic and pulmonary areas in the one case, and over the right or left ventricles or auricles in the other.

Wherever they occur they are almost invariably systolic in time and soft or blowing in character, while the heart sounds, though they may be somewhat modified, are almost without exception present and distinct.

(*A*) *The basic murmurs* are often called "haemic" and referred to some altered condition of the blood, but what this altered condition is, except that there is anaemia in some form, is not explained. Moreover, these murmurs vary from time to time while the blood condition remains unchanged. Anaemia of any kind causing, as it must, defective nutrition and, therefore, weakness of the cardiac muscle, will lead to dilatation, and this is easy of demonstration. If "haemic" is a bad term, so is

"functional," which merely means absence of gross structural lesion.

(*a*) Murmurs of this kind *at the left base* are usually called *pulmonary* and are assumed to be produced in the pulmonary artery. If so they may be due to the eddies produced by the blood as it passes through the normal orifices into a dilated artery above or more probably out of the dilated right ventricle below. It is also possible that they are sometimes due to a dilated left auricle pressing on the pulmonary artery from without.

(*b*) Of the basic murmurs *at the right base—that is, in the aortic area*—I only wish to refer to one group, which is not as well recognized as it deserves to be.

A perfectly healthy man, for example, may present himself for examination for life insurance. Everything may be normal, except that over the aortic area a very distinct blowing systolic murmur may be audible. A short rest may lead to its disappearance, and it may not be present at all on another day. It seems to be due to the nervous excitement of the examination and to the fear that something may be found wrong. Men are often more nervous on examination for life insurance than when they consult the doctor for reasons of ill-health. At any rate, these murmurs are transient, and last, it may be, for a few minutes only. I have no doubt that many applicants for insurance have been rejected or rated up because the true condition has not been recognized, and the diagnosis has been made of organic disease of the aortic valves.

Though the recognition of this group of murmurs is therefore of great practical importance, their explanation is not simple. I believe these, too, are murmurs of dilatation, on account of their transient character; but whether the dilatation is in the aorta itself at its root or in the left ventricle I do not know; at any rate, I have not seen any evidence of dilatation of the ventricle, though the action of the heart is often hurried and palpitating as the result of the nervous excitement, so that I think it very likely that the condition is the same as that of the mimic aneurysms referred to, and that the murmur is due to a transient dilatation of the root of the aortic arch.

(*B*) It is to the ventricular group of the dilatation murmurs that I wish more especially to address myself. These may also be on the right or left side respectively. These murmurs are almost always systolic in time, soft and blowing in character, limited to the precordial area, and rarely propagated as organic valvular murmurs are.

They are commonly stated to be due to regurgitation through the auriculo-ventricular orifices. This explanation I believe to be wrong, as I shall endeavour to show.

The muscle-bundles run round the heart in figure-of-eight fashion, and lap round the auriculo-ventricular rings. The effect of this, according to Ludwig and Hasse's experiments, is that when the heart contracts the auriculo-ventricular rings are also constricted, so that the orifices are narrowed. This would appear to be a special provision for doubly ensuring competency of the valves during health, and it might be that it would be sufficient to prevent incompetency, even when the valves were to some extent diseased.

Ludwig and Hasse, however, went further, and drew the conclusion that even in health this contraction was essential, and that without it even perfectly healthy valves were not competent to close the orifices; in other words, that muscular weakness even in slight degree would render the valves incompetent, and thus allow regurgitation. This is an astounding conclusion to arrive at. *A priori* it is in the highest degree improbable, for all the important organs of the body have a large margin over what is the minimum required for health. Thus two-thirds of the liver, kidneys, and lungs can be destroyed before life becomes impossible, and small defects are almost unnoticeable. Can it be that the heart alone has so little to spare that muscular weakness, of only slight degree and of a temporary nature, can lead at once to such a serious defect as valvular incompetency? Ludwig and Hasse's experiment consisted in plunging the freshly excised heart into a saturated solution of potassium bichromate. This caused extreme contraction of the heart muscle, and of the auriculo-ventricular orifices also. It was a violent experiment, but it showed that contraction of the heart muscle narrowed the auriculo-ventricular orifices; it could not, however, prove that without this contraction healthy valves would be incompetent.

Post-mortem observation is against such a conclusion, for in relaxed condition of the heart *post mortem* the valves are generally competent at least to hold water, even when the orifices can be shown by measurement to be stretched a good deal beyond their normal size.

But the theory that these dilatation murmurs are due to regurgitation through the valvular orifices must stand the test of clinical observation before it can be accepted.

Of course this theory cannot apply to the basic group of dilatation murmurs at all, though it actually has been extended also to them. It can apply only to the ventricular group. The obvious test is to compare these dilatation murmurs with the regurgitant murmurs of organic disease. If they agree the theory is established; if they do not agree the theory must fall.

I. *The Ventricular Dilatation Murmurs of the Left Side.*

(*a*) The characters of the murmurs of mitral regurgitation resulting from organic disease are well known. These murmurs are systolic in time, audible at the apex and outside it, transmitted to the axilla and to the angle of the scapula, where they may be heard louder than elsewhere. The heart sounds are greatly altered. Sometimes it may be these murmurs are not so definitely propagated. They may vary in many particulars, and may at times even be absent. These variations may depend upon varying conditions in the force of the circulation or heart's action, but as the general rule the regurgitant murmurs are propagated as stated.

The left ventricle dilatation murmurs, however, differ. They are systolic in time, as a rule softer and more blowing in character. They are definitely limited to the precordium, heard more widely over it, and are not propagated to the axilla and back, while the heart sounds are little if at all changed.

If there are, then, these differences, the same explanation can hardly fit both, and it follows that the murmurs of dilatation cannot be due to regurgitation.

But there is another important fact to be borne in mind—namely, that it sometimes happens, though rarely, that when the dilatation of the heart is extreme the murmurs are propagated as they would and ought to be if they were regurgitant. If, then, in some rare cases we have evidence that the dilatation murmur is regurgitant, while in the majority of cases the evidence is to the contrary, there must be for this majority some other explanation found. If not regurgitant they can only be intraventricular, that is, produced by eddies set up in the dilated ventricle.

In actual organic disease of the valves of the left side dilatation often increases the difficulties of exact diagnosis. So much so that it is often impossible to be certain of the exact condition until the dilatation has more or less passed off, when the diagnosis, which at the time was difficult or impossible, becomes easy and simple.

(*b*) The apex murmurs associated with aortic regurgitation are instructive. The murmur of aortic regurgitation is characteristic enough even when transmitted to the apex, so long as the ventricle is hypertrophied only and not dilated; but so soon as dilatation occurs and becomes marked, new apex murmurs of an entirely different kind develop, which often raise the question whether there is mitral incompetency as well as aortic regurgitation. There is then audible at the apex, and over an area within it, a general churning, which is more or less continuous throughout the whole heart cycle—that is, during diastole as well as systolic. It is so peculiar and characteristic that on putting the ear to the apex the diagnosis of aortic regurgitation is at once suggested, and as a rule no part of this churning is transmitted as regurgitant mitral murmurs are. These murmurs vary a good deal in different cases. One of them has been described as Flint's murmur, though known and recognized long before it became connected with Flint's name. Flint's murmur has been described as the murmur of mitral stenosis without mitral disease, but it is not in the least like the true presystolic murmur, nor is it really presystolic in time. It is nothing more than a special form of the



Fig. 4.

general churning I have described, and like it is endoventricular and due to dilatation.

(c) As with aortic regurgitation the dilatation of the ventricle often raises the question of mitral disease, so with mitral regurgitation murmurs are sometimes heard at the base which raise the question of aortic regurgitation. In a case of undoubted mitral regurgitation there may be heard in the left third intercostal space, about an inch or so from the sternum, a double or continuous murmur. Although many aortic regurgitant murmurs are heard best, and sometimes only, in the left third intercostal space near the sternum, this murmur is continuous and double and not diastolic only, so that careful auscultation will soon show that aortic regurgitation alone will not explain it. Occurring as it does further from the sternum and over a larger area, there is nothing left for it but the left auricle, and it must be, I consider, a dilatation murmur produced in the dilated left auricle or appendix.

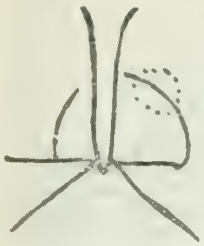


Fig 5.

II. *The Ventricular Dilatation Murmurs of the Right Side.*

These are much more easy to deal with than those of the left side, for they are more superficial and the dilatation of the right side of the heart is more easily demonstrated.

Tricuspid regurgitation due to organic disease, though a very rare condition, yields very characteristic physical signs. The systolic murmur is well marked, and is propagated in a definite direction from the lower part of the sternum transversely outwards to the right, where the auricle can be shown clearly by percussion to be greatly dilated.

Tricuspid regurgitation is a very favourite diagnosis with some clinicians, but then on theoretical grounds and not on physical signs. The right side of the heart is greatly dilated as shown by percussion; there is epigastric pulsation; distension, and pulsation of the jugular veins. These physical signs are considered sufficient for the diagnosis even without any murmur whatever, but they may all be present without regurgitation. Murmurs over a dilated right heart are by no means common, yet dilatation is an everyday phenomenon.

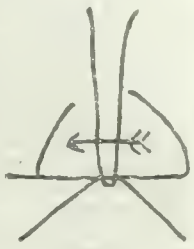


Fig. 6.

I do not know that I have ever seen the characteristic murmurs of tricuspid regurgitation without organic disease, and have in many cases confirmed the diagnosis by *post-mortem* examination. When murmurs over a dilated right heart do occur they are soft and blowing, heard over the ventricle especially and not over the auricle, and are not propagated as those of organic disease are across the sternum towards the right side. Therefore I maintain that on the right side, as on the left, they are not due to regurgitation through the auriculo-ventricular orifices, but are produced within the dilated chamber.

The considerations I have brought forward thus justify the conclusion I desire to establish—namely, that these ventricular-dilatation murmurs are not regurgitant, but are due to eddies set up within the dilated cavities; in other words, that they are not valvular but intraventricular. They are, of course, connected with defective muscular action, but only so far as this leads to dilatation. Varying degrees of dilatation associated with variations in the force of muscular contractions are adequate to explain all the phenomena met with.

THE Harben lectures of the Royal Institute of Public Health will be delivered on July 1st, 3rd, and 6th, by Dr. L. Vaillard, President of the Health Committee of the French army. The first lecture will deal with caries, the second with tetanus, and the third with house-flies. The lectures will be delivered at the Institute, 37, Russell Square, W.C., at 5 p.m. on each day, and are open to the public.

COMMON ERRORS IN DIAGNOSIS AND TREATMENT OF CARDIAC DISEASES.*

BY

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IT is obviously impossible for me, in the short time at my disposal, to deal with all the common errors in the diagnosis and treatment of cardiac diseases. I shall only deal with those which are most common and of the greatest practical importance.

The Rheumatic Infection in Childhood.

I think we cannot do better than commence with the rheumatic infection of the heart in childhood—a subject of the utmost importance, for by far the larger number of cases of heart disease under 30 years of age, and a considerable proportion of those of later life, are a direct result of this infection.

Notwithstanding the fact that this subject has received a great deal of attention, it is still not sufficiently realized that it is very easy to overlook a rheumatic infection in children, and even when we are especially on the look-out for it it is not infrequently very difficult to come to a definite conclusion as to whether the heart is affected or not. This is very unfortunate, because the future welfare of the patient in large measure depends upon the medical attendant adopting sufficiently prolonged, careful, and adequate treatment during the stage of infection.

Now, in my view, the reason why the practitioner so frequently overlooks infection of the heart by the rheumatic poison is that the clinical picture of acute and subacute rheumatism was originally exclusively drawn from the disease as it appears in adult life, and the result is that many practitioners do not realize that rheumatism as it appears in childhood presents many and important points of difference. It is important to recognize the following facts: In adult life arthritis is the chief manifestation of the rheumatic infection, and is looked upon as constituting a typical attack, while cardiac involvement is regarded as a complication. In children, on the other hand, arthritis is usually slight, and may be even entirely absent, while affections of other organs and parts are more frequent, and constitute a more prominent part in the disease. Thus endocarditis, myocarditis, and pericarditis are much more frequent, and should not be looked upon as "complications"; they are just as much part of the disease as is affection of the joints. Subcutaneous nodules, certain exudative erythemata, and purpura rheumatica are also more frequent manifestations of the rheumatic infection; chorea is common in connexion with the rheumatism of childhood; and tonsillitis is perhaps more common in connexion with the rheumatic state in youth than in adult life.

Endocarditis, myocarditis, or pericarditis may accompany the slightest affection of the joints. There is often a little pain, stiffness, and tenderness, with no perceptible swelling; acid perspirations are usually very slight, and the pyrexia is in most instances moderate. Sometimes the affection is confined to the tendons of the fascia in the neighbourhood of the joint, as, for example, the tendons of the hamstring muscles under the knee, causing the child to walk on the tips of the toes, with the knees bent. This may be mistaken for incipient talipes equinus or paresis. On the other hand, we should be careful to exclude infantile scurvy, acute anterior poliomyelitis in its early stages, syphilitic disease of the ends of the long bones, and other affections of the joints in children. Involvement of the heart may also be associated with subcutaneous nodules, certain exudative erythemata, chorea, or merely with an indeterminate febrile attack. Indeed, carditis may occur alone, that is, it may be the only manifestation of rheumatism at the time.

While endocarditis may occur acutely in children as it does in adults, it often occurs in a subacute and insidious form, and therefore its existence is frequently not known or suspected until the heart is examined because of some other rheumatic manifestation. There is frequently an

* The substance of a lecture given at the Medical Graduates' College and Polyclinic, February, 1914.

absence of subjective symptoms, and even when present they are often very insidious. Therefore, the diagnosis rests largely upon physical signs. Now, if these be facts, it is clear that when a child complains of pain in the joints, muscles, or tendinous structures, or of what are called "growing" pains; or has subcutaneous nodules on the tendons or round the joints, or subperiosteal nodules on the bones; or exhibits an erythematous eruption; or whose behaviour suggests chorea; or if he suffers from malaise and unexplained pyrexia; or complains of pain in the chest, or shortness of breath; or presents marked pallor; he should at once be put to bed, and a systematic and most careful examination of the heart should be performed daily in every case. If there is any doubt about the heart being involved or not, the patient should be kept in bed until all doubt is over. When there is no doubt that the heart is affected by rheumatism, absolute rest in bed is essential. A common error is that the rest is not sufficiently prolonged. In the majority of cases a period of three months is essential, and in some cases even a longer period is necessary.

Afterwards, the amount of exertion should be most carefully graduated, and if at any stage exertion is accompanied or followed by undue breathlessness, palpitation, sense of fatigue, precordial pain or distress, or maintained increased frequency of the pulse, the patient is doing too much, and the amount of exertion should be reduced.

Physical Signs.

Let us now consider cardiac affections in general; and we will deal first with physical signs.

With regard to the pulse: The pulse of mitral stenosis and of aortic stenosis are important from the view of diagnosis. In mitral stenosis the pulse is small, the upstroke being short and soon attaining its maximum, the pulse wave is long, and dicrotism is absent; the maximum pressure is usually rather below the normal, but the minimum pressure is usually rather high, so that the pulse is full between the beats. In aortic stenosis, frequently the pulse is of small amplitude, the impression conveyed to the finger is that the rise is gradual and slow, the percussion wave is oblique, the summit is gradual, and the pulse is full between the beats. A common error still, notwithstanding the fact that much has been written and spoken with regard to the subject in recent years, is to misunderstand the significance of the irregularity of the pulse.

Cardiac Irregularity.

In an address entitled, "Recent advances in the diagnosis, prognosis, and treatment of heart disease," which I had the honour of giving in Toronto, and which was published in the British Medical Journal of March 8th, 1913, I pointed out that formerly there was great confusion in regard to the significance of cardiac irregularity—that it was known that cardiac irregularity might signify serious impairment or disease of the heart on the one hand, or, on the other hand, it might be of little or no importance. And yet, notwithstanding the advance in recent years, many practitioners still do not understand that it is now possible to classify the vast majority of cases of irregularity into types, and that it is known what each type signifies.

In my address I explained that all cases of cardiac irregularity, apart from comparatively rare exceptions, fall into one of five groups. They are: (1) What are called sinus irregularities; (2) irregularity due to what is called extra-systole; (3) irregularity due to depressed conductivity; (4) irregularity due to the pulsus alternans; and (5) the irregularity associated with auricular fibrillation.* There are a few points with regard to this subject which I should like to repeat. First, the importance of auricular fibrillation—importance with regard to the diagnosis, prognosis, and treatment of cardiac affections—should be recognized. Auricular fibrillation is a specific clinical condition, which accounts for approximately 50 per cent. of all cases of persistent irregularities of the heart, and is found in at least 60 per cent. of all cases of serious cardiac failure with dropsy. It may be present in any organic disease of the heart (mitral, aortic, and myocardial); while on the other hand any organic disease may be present without the existence of fibrillation. When the condition has once set in, in the great majority of cases it persists for the remainder of life, and it produces a marked effect on the heart's efficiency. The condition may be diagnosed with absolute certainty by means of the polygraph or electrocardiograph. But, also, we may be reasonably certain of its existence from the presence of complete irregularity of the pulse. I will speak of the importance of auricular fibrillation from the point of view of treatment when I deal with the subject of digitalis. What I want to impress upon you is that although auricular fibrillation is a condition of the utmost practical importance, and although its nature and diagnosis have been made abundantly clear, many clinicians still fail to grasp its significance.

A few words about an "intermittent" pulse or "dropped beats." The expression is often used, and yet how rarely is any attempt made to explain what it signifies! Now, the commonest cause of an intermittent pulse is an extra-systole which fails to reach the wrist, and the next most common cause is partial heart-block. These two causes account for the vast majority of cases of intermission of the pulse. A differential diagnosis can readily be made by means of the polygraph. But in the great majority of cases there is a much easier method than this, all that is necessary being careful auscultation. In the case of an extra-systole which is not palpable at the wrist, heart sounds are heard during the pause, because the ventricle has contracted; but in the case of partial heart-block no heart sounds are heard during the pause, because the ventricle has failed to contract. It is important to distinguish between an intermission of the pulse due to an extra-systole which fails to reach the wrist and that which is due to partial heart-block, because apparently there is no evidence for supposing that extra-systoles are indicative of an impaired heart or add to the gravity of an already diseased heart, whereas partial heart-block occurring during the course of infective diseases is a sign, and may be the only sign, of myocardial damage. The only other points which I would reiterate with regard to cardiac irregularity are that sinus irregularity is of no practical importance, and pulsus alternans is of grave omen.

Errors frequently occur with regard to the apex-beat. It is sometimes forgotten that displacement of it may be due to extrinsic causes, such as adherent pleura, chronic interstitial pneumonia or fibroid tuberculosis on the one hand, or pleural effusion or pneumothorax on the other hand. A diagnosis of hypertrophy should not be made merely from a displacement of the apex-beat. Neither should it be made from an increase in area of pulsation, for here again the cause may be extrinsic to the heart. It should always be remembered that the only pathognomonic sign, as far as the apex-beat is concerned, of hypertrophy of the left ventricle is increased force of the beat.

A not uncommon error is to suppose that indrawing of the area of the apex-beat during cardiac systole is necessarily indicative of adherent pericardium.

With regard to percussion, I should like to refer to two points only: First, it is of great importance to accurately percuss the left border of the heart in cases in which the apex-beat is faint or absent. I have seen several cases in which a dilated heart associated with cardio-sclerosis was missed because of an omission to do this. Secondly, it should not be forgotten that an increase in the area of cardiac impairment may be caused by morbid conditions in the lungs or pleura, as well as by disease of the heart or pericardium.

Cardiac Murmurs.

With regard to murmurs, a not uncommon error is to suppose that a murmur necessarily means an impaired or diseased heart. Let me remind you of three points: (1) On severe muscular exertion a natural function of the tricuspid valve is to provide for a certain amount of regurgitation, and thus a tricuspid systolic bruit may appear under physiological conditions; (2) it should never be forgotten that murmurs may be haemic in origin; and (3) in every case of suspected valvular disease we should exclude cardio-pulmonary murmurs. A cardio-pulmonary murmur is a murmur which is due to some condition of the lung, the pleura, or the mediastinum, and not to any morbid state of the heart. In cardio-pulmonary

* During the last few years a condition called "auricular flutter" has attracted attention, the term having been first used clinically by Jolly and Ritchie. The condition is probably not an uncommon one, and it may give rise to irregularity of the pulse.

murmurs the point of maximum intensity and the direction of selective propagation do not coincide with those of organic bruits; the murmurs are not exactly synchronous with systole or diastole, they are more distinct during expiration, and disappear when the breath is held after deep inspiration, and they often disappear when the patient lies down. The last point makes it incumbent that in every case of suspected valvular disease the patient should be examined both in the standing and recumbent positions.

A common mistake is to diagnose aortic stenosis from the mere presence of a systolic bruit with its area of maximum intensity in the aortic area. This is not justifiable; other evidence is required, for an aortic systolic bruit may be due to other causes besides aortic stenosis—such as a mere roughening of the aortic cusps or orifice, fusiform dilatation of the aorta just above the valve, aneurysmal dilatation of the ascending aorta, anaemia, or pressure upon the aorta by a mediastinal tumour. Other physical signs of aortic stenosis are the characteristic pulse (already referred to), evidence of hypertrophy of the left ventricle, a gradual slow and sustained rise of the apex-beat, an aortic systolic thrill, and a diminished or absent second sound. The direction of the selective propagation of the murmur is upwards along the vessels in the neck. The presence of a thrill alone is almost sufficient to make the diagnosis of aortic stenosis.

A systolic murmur due to aortic stenosis may have its point of maximum intensity in the pulmonary area, and when this is the case the condition may be mistaken for pulmonary stenosis or patent ductus arteriosus.

With regard to aortic incompetence, may I remind you that not infrequently the point of maximum intensity of the murmur is in the pulmonary area, and then the condition may be mistaken for pulmonary incompetency? The essential points which should be remembered in the differential diagnosis are that in pulmonary incompetence the pulse is not collapsing in character, there is an absence of greatly exaggerated pulsation of the arteries and of capillary pulsation, there is evidence of hypertrophy of the right but not of the left ventricle, and the murmur is very rarely propagated so far down as the apex of the heart, and is never audible over the carotid artery.

Not very infrequently I have seen a diagnosis of mitral stenosis made in cases of aortic incompetence when the point of maximum intensity of the diastolic bruit—especially when the bruit is only audible towards the latter part of the long pause—is as low as or lower than half-way down the sternum and on the left side of the middle line, and of course especially when it is near the apex-beat. But the differential diagnosis is easy. In mitral stenosis the pulse is quite different from that of aortic incompetence; there is an absence of greatly exaggerated pulsation of the arteries and of capillary pulsation, there is evidence of hypertrophy of the right and not of the left ventricle, the murmur is harsher than in the case of aortic incompetence, the first sound is short, sharp, and clear, and the area of the thrill and murmur is usually small.

Mitral stenosis is often unrecognized because the area over which the murmur is audible is almost always very limited, and in some cases there is from time to time a complete absence of a thrill and murmur. In the latter case we are justified in inferring that in all probability mitral stenosis is present from the character of the pulse, the first sound—short, sharp, and clear, like a sudden snap—the evidence of hypertrophy of the right ventricle, and the accentuation or reduplication of the second sound. I have not infrequently seen a mere reduplication of the first sound mistaken for mitral stenosis.

A systolic bruit audible over the apex of the heart is often interpreted as indicative of organic disease of the mitral valve when it is due merely to relative mitral incompetence or the presence of a haemic or cardio-pulmonary murmur. In order to say that a mitral systolic murmur is indicative of organic disease of the valve we must satisfy ourselves that certain other physical signs are present. There are three main distinguishing features between a systolic murmur due to organic disease of the mitral valve and a bruit due to other causes—namely, (1) the position and character of the apex-beat, (2) the area of propagation of the murmur, and (3) the existence or absence of accentuation of the pulmonary second sound. In the case of a mitral systolic murmur due to organic valvular disease there is evidence of hypertrophy of the left ventricle, and the apex-beat is more forcible than normal. The area of propagation of the murmur is significant. If it is propagated towards the angle of the scapula beyond the mid-axillary line we may be practically certain that it denotes the existence of organic disease. A definite accentuation of the pulmonary second sound, provided there is no condition of the lungs to account for it, is in favour of the view that we are dealing with organic disease of the mitral valve.

SYMPTOMS.

The symptoms of cardiac diseases do not receive the attention which they deserve. In this connexion it should be remembered that, while the seat of cardiac failure is in the myocardium, the custom has been to consider valvular lesions too much as specific affections in themselves, the relation which they bear to the myocardium being largely lost sight of. Diseases of the valves not only act as a source of embarrassment to the cardiac muscle, but, as a rule, along with the valvular defects there are coincident changes in the cardiac musculature, the aorta, or coronary arteries. In any case of valvular disease, a question which should invariably be asked is whether the lesion which has invaded the valve has also affected the myocardium or large vessels. Indeed, it is necessary to remember that myocardial disease may occur independently of a valvular affection.

Another question which should invariably be asked in regard to cardiac diseases is whether the lesion (valvular, myocardial, or arterial) is stationary or progressive; and, if the latter, at what rate.

Two Facts of Importance.

Now, with regard to these two important questions, Mackenzie has pointed out that, while the results of physical examination—such as evidence of the size of the heart—are important, the most important question of all is the efficiency of the working power of the heart, and that the best method of testing this is to see how the heart responds to effort; in other words, is the patient able to undergo physical exertion without distress? Careful and detailed inquiries should be made in regard to this. In making such inquiry it is essential to remember two facts—namely, (1) the natural standard of the heart's strength varies in each individual; and (2) symptoms of cardiac distress on exertion may be due to some temporary or extrinsic cause, such as deficient tone from lack of physical exercise, temporary physical or mental overstrain, and anaemia. With regard to the first, one healthy individual can normally perform only a moderate amount of exertion without experiencing symptoms of cardiac distress, while a second can do more, and a third can do still more. The point of our inquiry should be to ascertain whether the normal standard of a particular individual has decreased, and, if so, in what degree. To sum up: Provided temporary and extrinsic causes can be excluded, the fact and degree of a departure from the normal standard of an individual may be taken as fairly indicative of the presence and degree of myocardial impairment or disease; and, further, provided there is no other cause to account for it, and the patient has had the advantage of an adequate amount of rest, increasing severity of the symptoms is indicative of a progressive lesion.

Some symptoms are of much greater importance than others. Lack of time prevents me from dealing with them at all fully. The most common symptoms are undue breathlessness or fatigue, palpitation, precordial distress or pain, and a sense of tightness across the chest, on or after exertion.

Breathlessness on exertion is one of the most important symptoms. It should be remembered, however, that dyspnoea on exertion is a symptom common to many affections besides heart disease. Also, not infrequently errors with regard to the differential diagnosis of what is often termed "cardiac asthma" and bronchial asthma may arise. Palpitation is not a reliable sign of heart failure. It may occur, for example, in neurotic people, and is often reflex in origin. While pain in the precordium is a frequent symptom of cardiac failure, it often occurs in functional heart affections, and is frequently absent in

organic disease. The most characteristic feature of pain due to heart disease is that it is brought on by exertion; though it may not come on until some hours after the exertion which has induced it. I have seen more than one case of angina pectoris in which the pain has been strictly limited to the epigastrium. There may be tenderness with the pain; and a sense of constriction or oppression of the chest may occur with or independently of it.

May I remind you that the most common cause of haemoptysis in pulmonary tuberculosis is mitral stenosis? With regard to cerebral symptoms, which are numerous and are due to a diminished supply of blood to the brain, all I should like to say is that they may be present in cerebral anaemia, apart from heart disease. For example, syncope is far more frequently indicative of some temporary and functional derangement than of organic heart disease; it may be due also to reflex disturbances.

To illustrate the great importance of symptoms in cardiac affections I cannot do better than briefly mention one case. A few years ago a carman, aged 37, was admitted to the Mount Vernon Hospital complaining of pain in the epigastrium and left arm, on exertion. There was no history of rheumatism, chorea, or scarlet fever. The patient denied having had venereal disease, but a positive Wassermann reaction was obtained. For rather more than three months he had been subject to attacks of pain in the upper part of the epigastrium and left arm on exertion, the pain in the arm being of a dull aching character, and accompanied by feelings of numbness and uselessness of the limb. There was no sensation of constriction or of impending death. Ultimately the attacks were induced by such slight forms of exertion as washing himself or lacing his boots; and later, tenderness in the epigastrium was observed. The patient was a well-built, muscular man, and on examination of the cardio-vascular system absolutely nothing abnormal was discovered. The systolic blood pressure was 118 mm., there was no evidence of thickening of the vessel wall or of enlargement of the heart, no bruit, and no accentuation of the aortic second sound. A polygraphic tracing revealed nothing abnormal. I had no doubt whatever that the patient was suffering from angina pectoris. He died in an attack, and *post-mortem* examination revealed extensive syphilitic aortitis (the cusps of the valves having escaped), and gummatous changes in the myocardium.

It is important to recognize the symptoms which may be present in extra-systoles. The patient may complain of a sensation of gripping of the throat or fluttering in the chest; or he may be conscious of the long pause following the premature beat, and complain that the "heart stops"; or the contraction of the heart following the pause may be accompanied by the consciousness of a thud in the region of the precordium, and this may be followed by a feeling of exhaustion. A common error is to attach a serious significance to these symptoms; whereas, as has been pointed out, there is no evidence so far for supposing that extra-systoles are indicative of an impaired heart or add to the gravity of an already diseased heart. Patients with auricular fibrillation may complain of fluttering in the chest, or of irregular action of the heart.

ERRORS OF TREATMENT.

There is only time for me to touch upon a few common errors in the treatment of cardiac diseases.

The first is an error mainly on the part of the public. One of the most unfortunate things we have to face is the fact that such a large proportion of patients with cardiac affections endeavour to live beyond the limits of the heart's power. A constant strain is thus thrown upon the organ, for it is well known that, after cardiac systole, the power of contraction is for a short period abolished, and that when the pause following contraction is prolonged the succeeding contraction is more powerful; in other words, the power of the heart is increased by a period of rest. It is of supreme importance that this should be avoided, and that the patient should acquire the habit of each day living within the limits of the heart's strength. One is constantly asked what amount of bodily exertion should a patient with a cardiac affection be allowed to undergo. I should like to enunciate a cardinal principle which, in my opinion, is of inestimable service. It is that any exertion which the patient indulges in should not be attended or followed by undue breathlessness, palpitation or fatigue, a sense of tightness across the chest, or precordial pain or distress. On the other hand, exertion short of producing these is usually not harmful. Another error of treatment, in my opinion, is on the part of those who believe that certain waters of Nauheim, on account of their ingredients, possess a specific therapeutic value in cardiac affections. I do not for a moment deny that many patients undoubtedly derive great benefit from a stay at Nauheim. But in my judgement this is not due to any specific value of the waters, but rather to the change of air, the rest, the regular mode of life and exercise, the careful dieting, and other factors. I have not the least doubt that, given the same conditions of life, similarly good results may be obtained anywhere.

Administration of Digitalis.

Let us now consider the subject of the administration of the digitalis series of drugs. In spite of careful investigations and of what has been written on this subject, I am afraid there are still many who do not understand and appreciate the importance of recent advances. The extraordinary difference in the results of the administration of digitalis and its allies in persons suffering from identically the same lessons, and complaining of precisely the same symptoms, was formerly a cause of great perplexity to the clinician. It was thought by some that the drug was capricious in its action or uncertain in its strength on the one hand, or that some particular preparations are active while others are inert, and for this reason special preparations have been prepared and advertised as being more uniformly certain in their action. It has been clearly proved that both these opinions are wrong. The profession as a whole still do not realize that the question of the extraordinary differences in the results of the administration of digitalis has been practically solved. Put briefly, the response to digitalis differs according to the condition of the heart and character of the rhythm; those cases of cardiac failure which show wonderfully good results are, in the vast majority of instances, cases of auricular fibrillation.

Digitalis should not be administered in a mere rule-of-thumb fashion in cases of cardiac failure. First, it is possible to do harm in cases of diminished conduction. Secondly, if auricular fibrillation is present (whether there is mitral disease, aortic disease, or disease of the myocardium), as long as there is a rapid pulse, digitalis is in the vast majority of cases a therapeutic agency of wonderful potency. The administration of the drug is followed by a rapid fall in the pulse-rate and a concomitant improvement in the general symptoms. Certainly two exceptions are (1) cases of cardio-sclerosis in which the degeneration is so widespread that little healthy muscle remains; and (2) cases in which there is pyrexia. A very common error is to give the drug in too small doses. As a rule improvement can be started after a time by small doses of 5 minims of the tincture three times a day, but they always require a much longer period to do so than larger doses; and sometimes small doses produce no effect in cases which respond well to a full dose of the drug. It is advisable to begin with a drachm of the tincture per day, or in urgent cases with even 1½ or 2 drachms per day, and to continue until there is nausea or vomiting, diarrhoea, headache, an unduly slow pulse, or what is called "coupling of the beats." Coupling of the beats is a danger signal. When a reaction is obtained the drug should be stopped until these symptoms have passed away. As a rule the patient relapses. The indication, then, is to find out what dose suits him best—that is, the dose sufficient to control the heart without producing toxic symptoms. Having discovered this dose, in the great majority of cases it will be necessary for the patient to continue taking the drug for the remainder of his life, for the reason that in the vast majority of cases auricular fibrillation persists for the rest of the patient's life. One of the most common errors in cardiac therapeutics is to stop the administration of digitalis in cases of cardiac failure with auricular fibrillation and a rapid pulse as soon as the patient has improved.

When auricular fibrillation is not accompanied by a rapid

pulse, no marked result should be expected to follow the administration of the drug.

What may be expected from the administration of digitalis in cases of cardiac failure unaccompanied by auricular fibrillation? Well, in exceptional cases auricular fibrillation develops during the administration of the drug, and then these cases respond in the same manner as do most of the other cases of auricular fibrillation. Apart from these exceptional cases, as a rule, though not in all cases, the beneficial results will be only moderate or slight, or none at all. And a very important point in this connexion is that, unlike cases of auricular fibrillation, the improvement can usually be maintained without continuing the drug.

Strophanthus and squills should be regarded as substitutes for digitalis. They may be tried when a patient is found to be peculiarly intolerant to digitalis. With regard to the so-called alleged active principles of digitalis, it is asserted by those most competent to judge that there is no pharmacological or clinical evidence that they are either pure substances or that different samples of them are uniform in their potency; and that there is no reason to believe that they are more reliable than, and possibly they are not so reliable as, different samples of the tincture of digitalis.

And, lastly, among the common beliefs which are held by the profession at large is the belief that the internal administration of digitalis increases the blood pressure in man by constricting the peripheral vessels. In two papers which I read at the annual meetings of the British Medical Association in 1912 and 1913, I showed from investigations that, judged by the methods in use for observing the blood pressure clinically, this is not true; and therefore there is no risk in employing the drug in cases of degeneration of the walls of the blood vessels or of supernormal blood pressure.

The subject of heart disease demands serious attention. In the BRITISH MEDICAL JOURNAL of February 7th, p. 335, reference was made to a paper by Dr. Karl Grassmann, in which it was pointed out that the death-rate from diseases of the circulatory system is high in all countries, and that heart disease causes a large amount of invalidity in all sections of the population. The subject is well worthy of your study, and I trust that the remarks which I have made during the limited time at my disposal will be of service to you in your private practice.

ON TINCTURE OF DIGITALIS (B.P.): *ITS ACTIVITY AND STABILITY.*

BY

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I.
INTRODUCTION.

THE subjoined observations deal primarily with the physiological activity, assayed on frogs, of a series of tinctures of digitalis, prepared according to the *British Pharmacopoeia* from leaves grown in the years 1911–1913 inclusive.

These tinctures, examined within a few days of manufacture, and repeatedly during the following months, showed marked variation not only in their initial activity but also in their stability. Many of them were in the first instance sent by the manufacturers to the Society of Apothecaries for physiological assay, and these were supplemented by samples purchased from wholesale firms of good repute. In comparison with the above there were also examined a small number of tinctures purchased from dispensing chemists and a few non-officinal solutions, including some prepared from so-called pure principles.

The mode of assay was based on the method practised by Houghton in 1895, and published three years later[1]—namely, that of injecting measured doses into a series of frogs and noting the smallest dose, in proportion to body-weight, which arrested the ventricle in systole. In the majority of initial assays only a single series of frogs was employed. Repetition of each assay would have determined the "minimal lethal" dose with smaller error, but careful manipulation was found to yield such concordant results, and the variations found at the outset were so marked, that this appeared unnecessary, since it was of greater interest to test broadly the variability and stability of the whole series than to follow minutely the changes in a limited number of samples. The accuracy of the work was, however, controlled by occasional re-assays, after a few days' interval, on a fresh batch of frogs. The frogs employed (*R. temporaria*) were almost exclusively males, between 20 and 30 grams in weight. Within these limits the ratio of body-weight to body-surface is so nearly constant that no attempt was made to ascertain whether weight or surface is the better basis of dosage. Weight was chosen on account of its readier determination.

The activity of the tinctures is expressed in terms of the Dixon-Haynes standard[2]—that is, in terms of a tincture with a minimal lethal dose of 0.75 c.cm. per 100 grams body-weight. The number expressing activity is obtained from this by dividing 0.75 by the minimal lethal dose found in each case, and the latter (minimal lethal dose) is calculated as lying midway between the smallest dose that proved fatal, by arresting the ventricle in systole, and the largest that failed to kill. The alcohol of the tinctures was removed by distillation, *in vacuo*, at 40° C. In each initial assay the doses tested were six in number, ranging between 0.3 c.cm. and 1.0 (or 1.2) c.cm. per 100 grams body-weight. In early re-assays three doses were given—(1) the smallest dose that proved fatal at the preceding assay, (2) one larger, and (3) one smaller than the first. In re-assays of stale tinctures several series of frogs were at times necessary. The difference between consecutive doses was, at most, 0.2 c.cm. (per 100 grams), and no assay was taken as completed until at least one animal showed systolic arrest of the ventricle and unless the largest non-fatal dose was completely absorbed. Verification of absorption is a precaution of cardinal importance. A more detailed account of these procedures will be published elsewhere.

II.
INITIAL ACTIVITY OF THE TINCTURES.

Fifty-five tinctures were examined within a few days of manufacture, and are grouped according to their activity in Table I.

TABLE I.—*Classification of Tinctures according to Initial Activity.*

$$\text{Activity} = \frac{\text{Standard M.L.D.}}{\text{Observed M.L.D.}} = \frac{0.75}{x}$$

Group:	I.	II.	III.	IV.	V.
M.L.D. (c.cm. per 100 gm.)	1.3–1.0	0.9–0.75	0.7–0.6	0.55–0.45	0.4–0.3
Activity	0.6–0.75	0.8–1.0	1.1–1.25	1.4–1.7	1.9–2.5
Number of tinctures	2	9	12	18	14
Percentage	4	16	22	33	25

The distribution of the tinctures among the above groups in the three years taken separately was strikingly different. This matter is, however, of pharmaceutical rather than of clinical interest, and will be dealt with in detail in another publication.

A similar examination of twenty-three British tinctures, by Dr. Alexander Goodall,[3] published in 1912, showed equally great variation. Classified as above, they were as follows:

In Group I ... ... 5 (22 per cent.)
,, Group II ... ... 12 (52 per cent.)
,, Group III ... ... 1 (4 per cent.)
,, Group IV ... ... 3 (13 per cent.)
,, Group V ... ... 2 (9 per cent.)

Within the same range, therefore, there was a much higher percentage of weak, and a much lower percentage of the very strong, samples than was found in the present work.

Taken broadly, the tinctures of Groups II and III may all be regarded as "standard" and make up (in Table I) between one-third and one-half of the total. Only 3 to 4 per cent. were much below standard. More than one-half of the total number (Groups IV and V) was very much above standard.

Five samples, obtained from dispensing chemists, were assayed in comparison with these. Three of them were approximately standard (Group II), and reacted consistently on repetition of the test. The remaining two were very weak (Group I) and reacted in every way like stale samples (*vide infra*).

Variability in tincture of digitalis is an old story. From it arose the practice of physiological assay, as far back as 1895. Since the adoption of physiological assay in this country, some nine years later, several accounts of variation have appeared. Barger and Shaw,[1] in a set of weak samples, found a range of activity from 100 to 150. Dixon and Haynes,[2] in mixed commercial samples, not all of recent manufacture, described variations from 100 to 280. Their samples were also very weak. Variations also appeared in a series tested by Miss Sowton,[14] by perfusion through the mammalian heart. Goodall's results (loc. cit.) have already been quoted in detail. Gordon Sharpe and Lancaster[6] found cases of pronounced weakness. Later, Gordon Sharpe and Branson[5] described higher and more uniform activity. Elsewhere[4] Gordon Sharpe characterizes some samples as no more toxic—that is, active—than tap-water. Wide variation has also been recorded by Martindale.[12]

The variation seems attributable to the leaf rather than to the process of manufacture. Climate, soil, weather, etc., cannot be without influence on the metabolism of the plant; and autolytic changes, in gathered leaves, are well known.

Professor Cushny, to whom the development of physiological assay is largely due, has found of late only small variations in different samples obtained from the same source. He finds, however, in common with others, that samples from different sources show wide variations.

It is a reasonable supposition that the increasing cultivation of digitalis, which during recent years has led to higher average activity of the leaf, will, in conjunction with more uniform drying and storing, tend gradually towards greater uniformity in the strength of its products.

III.

Stability of the Tinctures.

The tinctures were stored in a dark cupboard, on a low shelf, in a room of which the temperature varied during the year from 13° to 23° C.

The temperature in the cupboard would presumably be lower and less variable than in the body of the room. These conditions are probably better than those in a retail pharmacy, though not so favourable as those in a wholesale store. Most of the bottles were corked, and the samples in these proved, on the whole, no more unstable than those in stoppered bottles.

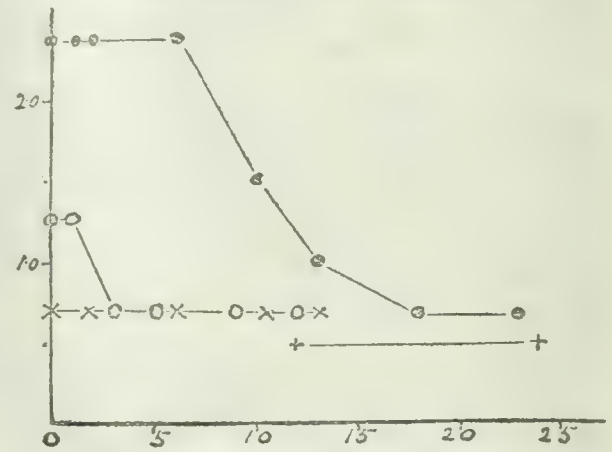
It is obvious that quality of storage is of importance for all unstable preparations. And quality of storage is not without influence on the activity of these tinctures. Comparison of a few samples, fresh from the cellars of the Society of Apothecaries, with samples of the same preparations kept at the university, has consistently shown the former to be the better. But the difference has not been great, and good storage, though it retards, does not prevent deterioration (*cf.* Houghton, *infra*).

The most stable tincture was one of those initially in Group I. Fourteen months after manufacture it showed no definite signs of deterioration (*vide* Fig., Curve III). In this it was unique. Of the remaining tinctures, tested twelve months after manufacture, more than four-fifths had lost a large fraction of their initial activity.

Table II, a monthly digest of the activity of those samples which were initially up to (or above) standard, shows that deterioration may be found even during the first month. The first column of the table (signifying little or no change), at the third month, contains only one-half of those tinctures whose activity was then known. At the sixth month the corresponding proportion is one-fourth. But such figures must not be interpreted too literally, for not all the tinctures were examined each month, and the variations in stability were great. In all cases it may be said that weak tinctures (whether weak *ab initio* or by deterioration) change slowly. Tinctures, not weak in the first instance, after a variable period of inappreciable change, deteriorate more or less rapidly until they reach a stage of comparatively constant weakness, in the neighbourhood of one-half standard. These points are illustrated by the results of repeated tests on four tinctures shown in the accompanying chart.

TABLE II.—*Showing, Month by Month, the Number of Tinctures known to have Undergone Specified Deterioration. (Tinctures Initially Below Standard not Included.)*

Age in Months.	Deterioration in Terms of Initial Activity.				Age in Months.	Deterioration in Terms of Initial Activity.			
	0–10%	20–30%	40–50%	60–70%		0–10%	20–30%	40–50%	60–70%
1	20	4	—	—	7	1	4	6	5
2	17	9	1	—	8	1	4	6	5
3	14	10	3	—	9	1	4	7	6
4	13	8	3	—	10	1	3	8	10
5	9	8	4	—	11	—	1	8	11
6	6	8	5	5	12	—	5	13	13



Ordinates = activity of tinctures. Abscissae = age of tinctures in months. The upper curve (circular black discs) shows (1) a prolonged period of unchanging activity, (2) deterioration, (3) sustained weakness. The second curve (circles) shows earlier deterioration, followed by prolonged constant weakness. The third curve (recumbent crosses), confluent with the second, shows sustained weakness throughout. The fourth curve (erect crosses) shows sustained weakness, during the second year, of a tincture not tested until one year after manufacture.

The following tables give three-monthly statements of activity in terms of the standard. Tables III and IV deal individually with different groups; conjointly, with all the samples not below standard.

TABLE III.—*Showing Deterioration of the Tinctures initially in Groups II and III.*

Age in Months.	No. of Tinctures Examined.	No. of Tinctures in Group I.	No. of Tinctures in Groups II and III.
0	21	0	21
3	14	1	13
6	9	3	6
9	7	4	3
12	9	9	—

TABLE IV.—*Showing Deterioration of the Tinctures initially in Groups IV and V.*

Age in Months.	No. of Tinctures Examined.	No. of Tinctures in Group I.	No. of Tinctures in Groups II and III.	No. of Tinctures in Groups IV and V.
0	32	0	0	32
3	22	—	9	13
6	25	1	17	7
9	19	3	16	—
12	25	13	12	—

From these it appears that, six months after manufacture, approximately two-thirds of the first set (Groups II and III) and nearly all of the second (Groups IV and V) are still of standard or higher activity; and that, at twelve months, all examined of the first set, and about one-half of those (examined) of the second set, are much below standard.

The assay of stale tinctures is more troublesome and less precise than that of recently prepared samples. Stale tinctures appear to react less rapidly than fresh ones. Certainly, the effect of the injections is later in onset, and less closely proportional to dose. As many as four (or more) series of frogs are not infrequently necessary to give consistent results.

The total toxicity of a tincture does not diminish *pari passu* with its cardiac activity. There has, indeed, appeared to arise in some old samples an increased toxicity to the central nervous system. A fresh tincture rarely displays a dead frog with a beating ventricle—that is, a frog killed other than by ventricular arrest. With old tinctures the phenomenon is more frequent. Hence, unless the frog be examined soon after abolition of the corneal reflex, there is a danger of classing as primarily cardiac a death due to failure of the nervous system. For the heart of a frog, under digitalis, will cease beating more nearly in systole than in diastole, by whatever means the frog is killed. The error of observation is, therefore, in the direction of overrating the cardiac activity of an old tincture, and deterioration tends to be underrated. This consideration is of importance, as the deterioration described above is earlier in onset or greater in degree than that recorded by some other observers.

Dixon and Haynes[2] found no loss of activity in standard samples in six months.

Houghton,[9] on the other hand, finds deterioration to be recognizable "from month to month, even though the preparations are stored with exceeding care." But the degree of his deterioration is small. A low standard (1.5 c.cm. per 100 grams) and good storage may account for this (*cf. supra*).

Martin[11] (standard=0.75 c.cm. per 100 grams) describes "no appreciable loss" in nine months, but finds "practically inert" preparations after two years. He, however, does not make it clear whether his method would show, for example, a 20 to 30 per cent. loss or a 20 to 30 per cent. residue of activity.

Goodall[3] (standard=0.83 c.cm. per 100 grams) found three samples (out of twenty-three) "unchanged" in one year. Later (one and a half to three years) he found a loss of activity ranging from 33 per cent. or less to 66 per cent. or more. This deterioration is comparable in degree with, though later in onset than, that found in the present inquiry. It is unfortunate that so small a proportion of the total number was tested at the end of the first year.

Gordon Sharpe and Branson[5] (standard=0.75 c.cm. per 100 grams) found seven out of nine samples up to standard, and the remaining two doubtful, after twenty months' storage. Eight months later only one of the nine was standard. The percentage deterioration was not tested. A tincture may lose 60 per cent. of its initial activity or more, and yet be of standard activity.

Deterioration has also been found by Hale,[7] who describes lose of activity amounting to less than 20 per cent. per annum. But his most active tincture (minimum lethal dose = 1.6 c.cm. per 100 grams) was initially less than half standard.

Summary of Results as to Deterioration.

The results of the present work in this direction may be summed up as follows:

1. Weak tinctures show little or no change in a year or more. Active tinctures deteriorate much more rapidly.

2. Of those initially within 25 per cent. of standard, all were more than 25 per cent. below standard after a year's storage.

3. Of those initially more than 25 per cent. above standard only one-half were within 25 per cent. of standard after one year's storage, and these had lost 20–70 per cent. of their original activity.

4. In a few samples deterioration was recognizable one month after manufacture.

Table V records duplicate assays of a series of tinctures after a year's storage, and serves to check the consistency of the foregoing results. One set of bottles was stored in the university laboratory, and the previous history of each was known at the time of assay. The second set was stored in a pharmaceutical laboratory, and was assayed without knowledge of the individual samples. Two (or more) series of frogs were employed for each individual sample.

TABLE V.—*Showing Consistency in Re-assay of Two Sets of the Same Series of Tinctures after a Year's Storage.*

No.	Initial Activity.	Activity after a Year's Storage.		No.	Initial Activity.	Activity after a Year's Storage.	
		At the University.	In a Pharmaceutical Laboratory.			At the University.	In a Pharmaceutical Laboratory.
I	1.7	0.7	0.8	VIII	1.1	0.6	0.6
II	1.4	0.8	0.7	IX	0.9	0.5	0.6
III	1.4	0.8	0.7	X	2.0	1.1	1.1
IV	1.7	0.7	0.7	XI	1.7	0.7	0.8
V	2.1	1.0	0.9	XII	1.4	0.8	0.7
VI	1.1	0.65	0.7	XIII	1.5	0.8	1.25
VII	0.9	0.7	0.7				

The only noteworthy discrepancy is shown in No. XIII. This may be due, in part, to difference in storage, in part to the inconsistency met with in stale samples. The effect is, at most, to make it uncertain in which of the two standard groups the sample should be placed.

Of interest also was the repeated assay of a tincture, reputed to be twelve years old, of which the initial activity was not known. At the first test it showed clearly an activity in excess of standard (1.2), and six months later appeared to be unaltered. After another five months it was slightly below standard (0.9), a second supply proving however, to be rather higher (1.1). A third supply, a month later, failed to yield a definite minimum lethal dose, though tested with three series of frogs. It seems possible that repeated admission of air to the bottles had accelerated the deterioration, previously arrested by prolonged non-disturbance. This factor may have contributed to the discrepancy between the two samples of No. XIII (Table V).

IV.

NON-OFFICINAL PREPARATIONS.

The following were examined:

Fluid Extracts of Digitalis, U.S.P., and other Concentrated Alcoholic Preparations.

These were eight times as concentrated as the *B.P.* tincture. When diluted to correspond with the tincture, they appeared as follows:

A sample of *U.S.P.* extract, some months old, was three-fourths standard. After one year's further storage it became one-half standard. A second sample of the same class (*U.S.P.*), four months old, was between 1.25 and 1.5 times standard, and did not deteriorate during the succeeding six months. A similar preparation at the time of manufacture was 1.7 times standard. Seven months later it was 1.2 times standard, and eleven months after manufacture it was slightly below standard, but still in Group II. Both in initial activity and in stability it agreed with a *B.P.* tincture prepared from the same batch of leaves.

Such preparations are economical. In them the yield of the leaf is apparently as great as in the tincture (Martindale, loc. cit.), and the cost of the alcohol one-eighth as much. In stability they resemble the *B.P.* tincture.

"Non-alcoholic" Preparations.

A "non-alcoholic" tincture proved to possess less than one-half of the standard activity. A concentrated "non-alcoholic" solution, when appropriately diluted, was no more active. The age of these preparations was not known. A glycerine extract, at the time of manufacture, was one-fifth standard, when diluted in accordance with its concentration. A year later it had deteriorated about 25 per cent. A fourth sample, freshly prepared from a concentrated alcoholic extract, was above standard

(Group III) when manufactured. Its keeping qualities, after removal of the alcohol, have not been tested.

There is no obvious *raison d'être* for preparations of this type, even when the freshly-prepared officinal infusion is not available, since large doses of digitalis can be given, in the concentrated extracts mentioned above, with a negligible amount of alcohol.

A Tincture Prepared from Green (Undried) Leaf.

This preparation, allowing for its concentration, was 4.5 times standard when manufactured. After lapse of a year it was still over 1.6 times standard. Although more active, it was not more stable than most officinal tinctures.

Crystalline Digitaline (French). Digitoxin (German).

Four samples of a French commercial solution, all from the same manufacturer, have been subjected to examination. The reputed dose of these, 18 minims per diem, is rather less than that of the *B.P.* tincture. These solutions are said to be physiologically tested. Two of the samples (of recent manufacture) were of high activity—1.25 to 1.5 times that of a standard tincture. The third sample (over one year old) and the fourth (three years old) were about 0.8 standard. In activity these samples were, on the whole, well up to standard, and in stability proved superior to the *B.P.* tincture. Supplement of the physiological tests by precise physiological standardization* would render such preparations of still greater value.

The stability of the crystalline substance was further tested on solutions in 60 per cent. alcohol, prepared in the laboratory. Two samples of crystalline French digitaline, from different sources, showed little deterioration in sixteen months, and a sample of German digitoxin proved equally stable.

Soluble Constituents of Digitalis Leaf.

Comparison was made of three solutions from the same manufacturer. These are issued in ideal form, namely, in sealed glass "ampoules," containing 1 c.cm. of "sterile" solution, which is said to correspond, in activity, to an equal volume of the officinal tincture. The activity of this solution on the frog is about one-half that of the standard tincture. For administration by the mouth it is, therefore, not economical, except where it proves to be qualitatively superior—for example, in tolerability—to the pharmacopoeial preparation.

It offers, however, the advantage that it can be given by intravenous injection. Observations on the cat[15] have shown that, administered in this way, it can be relied on to produce characteristic digitalis effects. Experiments by Moore[18] on the rabbit—an animal relatively insensitive to digitalis—point in the same direction.

In the matter of stability, it has resembled a weak tincture, showing little or no change in six months, and a loss of not more than 30 per cent. in a year and a quarter. This may be due to good bottling (sealed ampoule) rather than to intrinsic stability of the solution.

Comparison of the above solutions of "pure principles" with the *British Pharmacopoeia* tincture is of some importance. It is beside the mark to dilate on the chemical impurity of the "principles" in question. It seems fair to presume that they are all mixtures, in which either the less soluble or the more soluble glucosides are the predominant constituents. In either case solutions are obtainable which in stability are superior to the average tincture. How far, in clinical work, such solutions can replace the officinal preparation cannot be shown by laboratory experiment. A fresh tincture differs from them, in that it contains the soluble and insoluble glucosides in more nearly equal proportions, and may, on this account, have a value not possessed by any solution of a so-called "pure" product.

V.

Criticism of Results.

It must be emphasized that the assays under consideration are not merely measurements of general toxicity. Properly carried out, and controlled by prompt *post-mortem* examinations, they are measurements of the cardiac activity of the preparations. For it is on the heart itself that the effect of the injections is seen. Moreover, they are measurements made via the normal body fluids of the animal. This is of importance, for the body fluids, by their well known reaction with the saponins and by their ability to dissolve the less soluble therapeutic glucosides, materially influence the action of a tincture. For these reasons lymph sac injections are preferable to saline perfusions of the isolated heart as quantitative gauges of digitalis activity. Further, their consistency, *inter se*, is incomparably greater.

It may be admitted that such injections tend to exaggerate, though less than perfusions, the activity of drugs which have to be given by the mouth. For they determine total activity (that is, activity of less stable as well as that of more stable constituents), and the nett activity of such mixtures as the *British Pharmacopoeia* tincture (that is, activity of absorbed constituents) is not a constant fraction of the total. Hence in the present work Houghton's method has not been utilized to its full capacity. What has been attempted is a classification in groups so broad as to possess unquestionable significance.

From what has been stated above, it follows that clinical effects are rarely, if ever, closely proportional to the assay value of the tinctures. Some digitalis glucoside is passed, unchanged, in the faeces; and some is lost by hydrolysis, in the alimentary canal. Presumably some is similarly hydrolyzed in the medicine bottle. Hence there is a tendency towards equalization of the effects of unequally active tinctures. Minute adjustment of clinical dosage to total physiological activity is therefore impracticable, and the implication that so complex a mixture as tincture of digitalis will yield to the heart substantially "*x*" tonic units per cubic centimetre swallowed is largely illusory. But, broadly treated, physiological assay may fairly be termed indispensable. For the variations found are so great that approximately equal effects cannot reasonably be expected from equal doses of different samples.

The solutions of the so-called pure principles are less complex than the officinal tincture, and detailed standardization might profitably be carried out. It does not follow that the simpler solutions would, in every case, be as valuable as the more complex, but they would offer, if properly standardized, a degree of uniformity that is otherwise unobtainable. For this reason, as well as on account of its great stability, a standardized solution of crystalline French digitaline (or of digitoxin) would be a valuable addition to the *British Pharmacopoeia*.

No observations have been made in the course of the present inquiry on the keeping qualities of the digitalis leaf. Other workers (Gordon Sharpe and Lancaster[6]) have stated that when properly dried and properly stored it retains considerable activity for several years. And longer storage than one year is unnecessary. If this be granted, the foregoing results suggest that digitalis treatment could be materially assisted, at all events in hospital practice, by the following procedure:

1. Annual purchase of (cultivated) leaf.
2. Physiological assay of the leaf by means of a freshly prepared tincture. This assay would appear to hold good for the leaf for one year, and should ensure uniform activity in all freshly prepared tinctures, infusions, and pills from the same leaf during that year.
3. Manufacture of fresh tincture at least twice (preferably thrice) a year.
4. Assay of each tincture three months after manufacture.

Where these safeguards are possible the need for the "pure" preparations is reduced to a minimum. In private practice uniformity is less certainly assured. But physiologically assayed leaf and tincture are readily obtainable, and if purchased from wholesale stores in small quantities (that is, at sufficiently frequent intervals) should afford some security for uniformity. In such cases the solutions and pills of French digitaline (German digitoxin) and of the soluble digitalis glucosides offer assistance when the local supply of galenicals proves uncertain.

Summary.

To sum up, not a single sample of tincture of digitalis could fairly be termed inert. Very few of the (fresh) samples were initially weak, but most of them became weak within a year. Interpretation of this deterioration

* By standardization is meant adjustment of the concentration of the solution to yield a minimum lethal dose of the same value in all samples. Such adjustment of officinal preparations is obviously precluded, and, even if admissible, would in the case of tincture of digitalis be heavily discounted by deterioration.

is necessarily somewhat speculative. There is, however, evidence, particularly in the recent work of Kraft,[10] that one of the most active water-soluble glucosides is strikingly unstable. And the present inquiry has shown that alcoholic solutions of the less soluble active glucosides are more stable than the official tincture. It appears from these considerations that the deterioration of a tincture may chiefly be due to loss of its water-soluble glucosides. If this is correct, a fresh tincture is equivalent to a (moderately) stale sample *plus* a quantum of fresh infusion, and the supplementing of a weak tincture by a fresh infusion might prove more serviceable than heavy dosage with the tincture alone. It may be anticipated that the former course would yield earlier digitalis effects with less risk of cumulation.

My thanks are due to the Science Committee of the British Medical Association for a grant towards the expenses of this research.

Conclusions.

1. Few tinctures of digitalis are, initially, below standard.
2. Tinctures, not below standard, vary 200–300 per cent. in initial activity.
3. All such tinctures, after a variable period of constant activity, undergo deterioration, which may commence within a month of manufacture, and may amount, in a year, to 70 per cent., or more, of their initial activity.
4. Concentrated alcoholic extracts of digitalis leaf compare favourably with, and behave as, the *British Pharmacopoeia* tincture.
5. Solutions of crystalline French digitaline (German digitoxin) are more stable than the above.
6. Commercial "non-alcoholic" tinctures, and allied preparations, are not trustworthy.

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A CASE OF ACUTE RHEUMATIC HEART-BLOCK.

BY

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The chief interest in this case lies in the number of electro-cardiographic and polygraphic records taken before, during, and after the occurrence of acute partial heart-block in a rheumatic child.

S. P., a boy aged 12, had occasional sore throats up to the age of 10 years, when he was admitted to the London Hospital with pericarditis and acute rheumatism. In the following year, 1913, he was again admitted for a much milder attack of acute rheumatism. On discharge he was transferred to the Cardiac Department under Dr. James Mackenzie. He complained frequently of precordial pain as an out-patient, and two months later, February 16th, 1914, he was again admitted as the precordial pain had become more severe. He then had rheumatic nodules and mitral and aortic regurgitation; on deep inspiration the sternum was held down and there was slight sinking of the epigastrium suggesting pericardial adhesions. On the fifth day after admission he developed tonsillitis which lasted five days. Following this attack he had slight irregular pyrexia for nearly four weeks. During the later part of this period he developed the heart-block (see Chart).

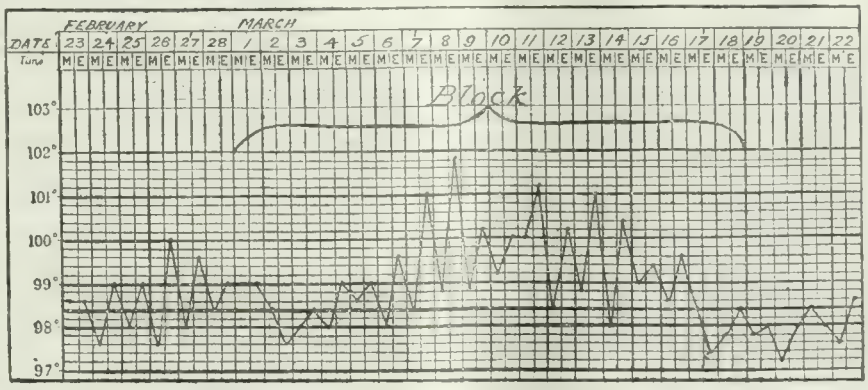
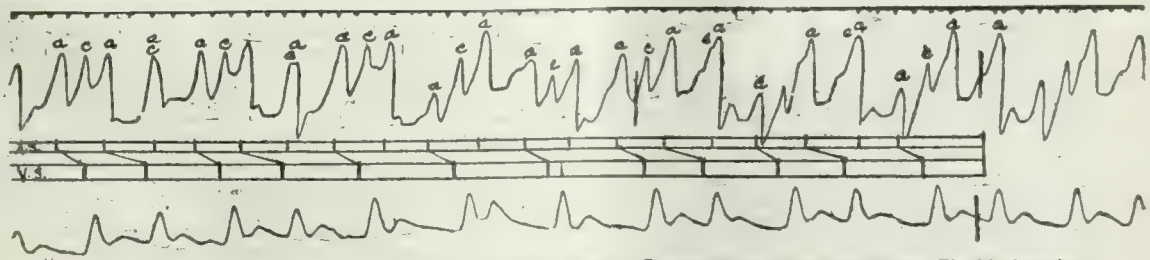


Chart showing the pyrexia accompanying the heart-block.

For a fortnight after admission his *a–c* interval, the measure of the time taken for an impulse to pass from auricle to ventricle, was normal—that is less than ⅕ second, as shown by daily polygraphic tracings. On the electrocardiogram the *P–R* interval, the electrocardiographic equivalent, approximately, of the polygraphic *a–c* interval, was also less than ⅕ second. The *a–c* interval then increased beyond ⅕ second and remained prolonged for ten days before dropped beats resulted. The dropped beats only occurred on two days, though the degree of block on these days reached the ratio (auricle to ventricle) of 2 to 1 (see tracing). On the day before the dropped beats commenced the pulse-rate was 106, on the two days during which dropped beats occurred it was 75 and 74, and on the following day it was again 104. These pulse-rates were counted on the polygraphic tracings taken at approximately the same hour each day. The drop in the rate was due to the falling out of ventricular contractions. Electrocardiograms at this time showed a prolonged *P–R* interval, and a block varying in ratio of auricle to ventricle as 3 to 2 or as 2 to 1. For another week the *a–c* interval remained increased beyond ⅕ second, during which time the *P–R* interval was also well over ⅕ second; it then returned to normal and, except on one day, remained normal for the remaining three weeks of his stay in hospital. The block had lasted for eighteen days. When examined ten days after discharge the *a–c* interval was still normal.



Polygraphic tracing showing an irregularity of the pulse caused by "dropped beats" in heart block. The block varies between 3 to 2 and 2 to 1.

It is interesting to note that except for pyrexia there were no symptoms referable to the block, and without

Date.	Temperature.	Pulse.	Respiration.	*a-c* Interval.
	°F.			
Feb. 23 ...	98.6	84	20	—
,, 24 ...	99	88	22	Less than $\frac{1}{5}$ sec.
,, 25 ...	99	88	24	—
,, 26 ...	100	86	22	—
,, 27 ...	99.6	82	20	Less than $\frac{1}{5}$ sec.
,, 28 ...	99	84	24	—
Mar. 1 ...	99	80	26	Over $\frac{1}{5}$ sec.
,, 2 ...	97.6	94	22	,, ,,
,, 3 ...	98.4	88	24	—
,, 4 ...	99	92	24	Over $\frac{1}{5}$ sec.
,, 5 ...	99	92	28	,, ,,
,, 6 ...	99.6	100	26	,, ,,
,, 7 ...	101	96	24	,, ,,
,, 8 ...	101.8	106	26	—
,, 9 ...	100.2	106	32	—
,, 10* ...	100	75*	30	Over $\frac{1}{5}$ sec.
,, 11* ...	101.2	74*	32	,, ,,
,, 12 ...	100.2	104	34	,, ,,
,, 13 ...	101	110	28	,, ,,
,, 14 ...	100.4	100	32	,, ,,
,, 15 ...	99.4	106	32	,, ,,
,, 16 ...	99.6	102	32	,, ,,
,, 17 ...	97.4	102	34	,, ,,
,, 18 ...	98.4	98	34	,, ,,
,, 19 ...	98	92	32	Less than $\frac{1}{5}$ sec.
,, 20 ...	98	94	22	,, ,,
,, 21 ...	98	108	26	$\frac{1}{5}$ sec.
,, 22 ...	98.6	100	24	Less than $\frac{1}{5}$ sec.

Heart-block.

* Dropped beats.

polygraphic records myocardial involvement could not have been diagnosed until the dropped beats occurred. The irregularity of the pulse caused by failure of ventricular response to auricular contraction in heart-block can be distinguished, as it was in this case, from premature contractions (extra-systoles) by the fact that the weak heart sounds of premature contractions are absent in the long pauses. Polygraphic confirmation of this interpretation was obtained, and this is always advisable on account of the difference in the importance of the two conditions as regards prognosis and treatment.

Though the case was one of rheumatic heart-block, it developed apart from an attack of acute articular rheumatism. The evidence of rheumatic infection was the presence of numerous rheumatic nodules, and incidentally the attack of tonsillitis.

By analogy with similar cases, acute and chronic, which have been examined histologically, it is assumed that the pathology in this case is a round-celled infiltration in the bundle of His caused by the rheumatic infection.

The case emphasizes the damage which may be done to the heart of a rheumatic child apart from a definite attack of acute rheumatism. It is only by graphic records that a positive diagnosis of acute myocarditis can at present be made. Acute myocarditis may be present without involvement of the auriculo-ventricular bundle, when the diagnosis can only be inferred rather than proved.

MR. WILLIAM BRUCE CLARKE, formerly senior surgeon at St. Bartholomew's Hospital, left estate of the gross value of £16,596, of which £9,261 is net personalty.

THE council of the county borough of St. Helens have confirmed a resolution of the Health Committee that midwives should be instructed to notify to the medical officer of health forthwith on being engaged to attend a woman in her confinement, in order that advice may be given to expectant mothers and suitable arrangements made in certain cases for their assistance.

THE INFLUENCE OF THE TOTAL FUEL-VALUE OF A DIETARY UPON THE QUANTITY OF VITAMINE REQUIRED TO PREVENT BERI-BERI.

BY

W. L. BRADDON, M.B., AND E. A. COOPER, D.Sc. F.R.C.S.

(From the Lister Institute.)

(*Preliminary Communication.*)

IT is now taken as settled that beri-beri is essentially privatory in origin, resulting from the deficiency in the food supply of a substance the precise nature of which has not yet been ascertained.

If this simple explanation were complete, it would follow that the more thorough the withdrawal of the active substance, the speedier would be the onset of the disease and the more severe its effects. Several investigators, however (Maurer,[5] 1907; Cooper,[3] 1913; Caspari and Moszkowski,[2] 1913, and Funk,[4] 1914), have shown that the onset of polyneuritis in birds can be hastened by increasing the ration of polished rice. From this it appears that when the food ration is increased by the addition of carbohydrate material, for example, polished rice, with a very low content of antineuritic substance, although the daily allowance of the essential substance is slightly increased, the development of polyneuritis is actually accelerated.

Analogous observations have been made in the course of the epidemiological studies of human beri-beri. Thus it has been found by nearly all observers[1] that in epidemics of beri-beri the well nourished are the first to succumb, and are actually more liable to the disease than the underfed. Similarly, under natural conditions men, owing to their larger energy output, partake of polished rice more freely than women, and are more liable to beri-beri. In institutions, however, where men and women have the same fixed ration they are equally susceptible to the disease. Again, in prisons and asylums, in which the dietary has been varied from time to time, every increase in the polished rice component of the diet, the ration of other foodstuffs remaining constant, has been followed by increased beri-beri.

From these observations Braddon drew the conclusion that in rice-eating communities the extent and severity of beri-beri vary directly with the quantity absolute or relative of polished rice consumed.

Admitting, then, that in the production of beri-beri a deficiency in the diet of a certain substance is an essential factor, it is evidently of practical importance to ascertain the part played by the substance in metabolism, and, if possible, to determine the quantitative relations which the intake of active material must bear to that of the other components of the dietary, in order that the requirements of the organism can be covered.

With this object in view a study has been made of the effect upon the onset of polyneuritis in birds of increasing the carbohydrate ration of the dietary, and the main experimental results are briefly summarized in this preliminary communication, and will be shortly published *in extenso* in the *Journal of Hygiene*. The observations were made at Seremban, Federated Malay States, during the years 1909–11, and at the Lister Institute during 1913–14.

It is now a well-established observation that chickens fed on $\frac{1}{10}$ their body-weight of polished rice develop polyneuritis in twenty to seventy days, whereas those fed on the same daily ration of unpolished rice (padi), "cured" or parboiled rice, and "fresh" rice (partly polished) remain free from the disease. Braddon found, however, that birds when fed on $\frac{1}{10}$ their body-weight of parboiled rice, which has been soaked for twenty-four hours in water and then strained off, develop polyneuritis just as when fed on ordinary polished rice, and epidemics of beri-beri have been traced to the practice of soaking unpolished rice prior to cooking, and discarding the water.

The effect of adding carbohydrate to a diet which itself was adequate to maintain birds in health was first studied, and experiments made on forty birds showed that, while chickens fed on $\frac{1}{10}$ their body-weight of padi remained free

from polyneuritis for at least sixty to a hundred days, when this ration was supplemented by $\frac{1}{8}$ the body-weight of washed parboiled rice or by $\frac{1}{10}$ the body-weight of polished rice the birds contracted the disease in twenty to thirty days.

Experiments were next carried out with the object of ascertaining more precisely what effect increasing the carbohydrate component of a dietary had upon the *rate* of onset of polyneuritis. In these experiments altogether thirty birds (chickens and pigeons) were employed.

It was found that:

1. Whereas pigeons fed on $\frac{1}{25}$ their body-weight of polished rice and $\frac{1}{200}$ of dry yeast daily developed polyneuritis in from thirty-nine to ninety-five days, when the ration of rice was increased to $\frac{1}{10}$ the body-weight the birds fell ill in twenty-two to forty-six days.

2. While pigeons fed on $\frac{1}{25}$ their body-weight of polished rice and $\frac{1}{250}$ of yeast developed polyneuritis in from thirty-two to forty-four days, they became affected with the disease in from fifteen to twenty-two days when the polished rice ration was increased to $\frac{1}{10}$ the body-weight.

3. Whereas chickens fed on $\frac{1}{40}$ their body-weight of polished rice and $\frac{1}{200}$ of yeast did not fall ill with polyneuritis until from sixty-five to one hundred days had elapsed, when this dietary was supplemented by $\frac{1}{40}$ the body-weight of sago the birds contracted the disease in from thirteen to thirty days.

By doubling the carbohydrate ration of the dietary the rate of onset of polyneuritis was thus actually increased as much as from two- to four-fold.

The results so far obtained demonstrated that the amount of antineuritic substance required by the organism increases with the quantity of carbohydrate ingested.

There are at least two possible explanations of this phenomenon. First, the view already advanced by Funk (1914) that the active substance participates in some way in carbohydrate metabolism, and thus the more metabolic work the organism is called upon to undertake the greater its demand in respect of this essential substance. Secondly, that when large rations of starch are ingested the absorption of the antineuritic material is interfered with owing to the presence in the alimentary canal of excess of undigested carbohydrate.

Experiments were therefore next carried out to ascertain which of these was the true interpretation, and it was found that even when daily rations of polished rice as great as $\frac{1}{10}$ the body-weight were fed to chickens together with varying amounts of yeast, 93 to 98 per cent. of the starch was digested and absorbed, and the excreta were free from the antineuritic substance. It was also observed that *in vitro* starch did not absorb the substance from aqueous solution. Furthermore, pigeons fed exclusively on glucose, which is rapidly absorbed, developed polyneuritis. These observations exclude the physical factor, and show that the antineuritic substance is utilized in some way during carbohydrate metabolism.

Whatever be the mechanism involved, it is clear that for the maintenance of health the intake of active substance must be adjusted in relation to the ration of carbohydrate supplied, and it is when this necessary balance is not maintained in the dietary that beri-beri results.

The precise relation which must subsist between the supply of antineuritic substance and the amount of carbohydrate ingested has not yet been ascertained, nor has the corresponding relation for each of the other normal components of a dietary (protein and fat) been determined. Funk (1914), however, has made some experiments which indicate that protein and carbohydrate can be interchanged in a dietary without materially affecting the rate of onset of polyneuritis, whereas if these food materials be replaced by fat the disease develops less readily.

The fact that attention must be paid not merely to the absolute amount of antineuritic foodstuff incorporated in the dietary but also to the proportion which this bears to its total calorific value is of great practical importance in framing a dietary for the prevention of beri-beri.

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A CASE OF HYPOTHYROIDISM IN A MALE.

BY

IVO GEIKIE COBB, M.D., M.R.C.S.Eng.,

ASSISTANT TO OUT-PATIENT PHYSICIAN, MIDDLESEX HOSPITAL; LATE RESIDENT HOUSE-SURGEON, GREAT YARMOUTH HOSPITAL.

THE following case of hypothyroidism presents interesting features, as it exhibits many of the less well-known signs which have been attributed to a diminished secretion of the thyroid gland:

H. L., a man aged 28, who had previously always been in good health, consulted me on April 20th on account of a fainting attack on the previous day. He had been playing golf, when he suddenly felt very faint, and had to lie down on the links to prevent himself losing consciousness. This had occurred on the Sunday morning; he had played three rounds of golf on the Saturday, had felt perfectly well on that day and when he had commenced to play after breakfast on the Sunday. When the fainting attack commenced there was an immediate desire to go to stool, and he passed a watery motion. He felt better in the course of the next few minutes and resumed play, but had to abandon his game after another four holes, as the fainting again supervened. He then motored back to town, and I saw him on the following morning. He complained of abnormal sensations in the region of the heart, which he described as similar to cramp and associated with a great deal of apprehensive fear and some gastric discomfort.

He was a well-nourished man, with dark hair, prematurely grey over the temples, with a large amount of adipose tissue, especially over the shoulders, supraclavicular region, and abdomen. The pulse was 48 in the radial artery, and was thin, but regular. The blood pressure was 110. The area of cardiac dullness was increased to the right of the sternum, but the apex-beat was in the normal situation and no murmurs were audible over the various valves. There were no abnormal signs in the chest or abdomen, and the reflexes were normal.

The urine, except that the specific gravity was somewhat high, had no abnormal characters.

I advised complete rest for the next few days, a low diet, advised the patient to remain in bed, and ordered a purge.

Two days later the patient had a further attack of fainting, but did not lose consciousness. This came on while in bed, and I saw him before the attack had passed. The pulse-rate was then 44. This was temporarily remedied by the administration of ether, and with the increase in the rate of the heart's action the syncopal symptoms passed away. He was removed to a nursing home the following day. On admission the pulse was 48, the temperature 97°, and the blood pressure 110. I ordered a saline powder each morning on waking, consisting of magnesium sulphate and sodium sulphate āā gr. 40, sodium hyposulphite gr. 10, in a tumblerful of hot water, and dry diet, consisting of easily digested food, with all the necessary fluids between meals, and followed by a digestive mixture. This régime was followed for about a week, but no improvement was ascertainable either in the pulse-rate or in the subjective cardiac sensations complained of by the patient. The temperature remained subnormal, and the pulse varied between 44 and 52.

My attention was directed to the thyroid by the pads of fat especially noticeable over the supraclavicular region, and by the dryness and rough condition of the skin. It was not possible to detect the gland by palpation, neither did it become obvious on swallowing. Of further signs indicative of thyroid deficiency mention may be made of the weight of the patient (about 14 st.), his height being 5 ft. 11 in.; this weight was mainly due to excess of fat, which was typically myxoedematous in distribution. There were well-marked patches of psoriasis on the left upper arm and the right tibial region. The temperature, as has already been stated, was markedly subnormal and the heart's action slow. The hair, with the exception of the premature grayness over the temples, was normal, and there was no lack of lustre and no falling out. The nails were normal, and the teeth in good condition. The outer third of each eyebrow, however, exhibited the sign, upon which L. Levi and H. de Rothschild lay emphasis—namely, a paucity of hair as compared with the inner and middle of the eyebrow. A Wassermann reaction, made after the patient had been in the home a few days was negative.

The clinical picture just described led me to believe that the thyroid was the determining factor in the present condition, and I therefore prescribed 1 grain of the dried thyroid extract to be taken in the form of a cachet four times daily. He began to take it on the Saturday week after admission to the home, and no noticeable effect was ascertainable until the following Monday, when the pulse rose to 60, and the temperature became normal at one of the four-hourly readings. From this time onwards both the pulse and temperature steadily rose, until when the patient had been taking thyroid extract for three weeks the temperature was normal. During the first week of thyroid administration the pulse rose from 50 to 65 (approximately), the second week to 75, and the third week to about 85. The patient was now allowed to get up and to indulge in increasing amounts of exercise, which he was able to undertake without any fatigue, and without any return of the subjective cardiac sensations which had previously been

present. He then left the home and went to the country, where he has remained, leading an ordinary life, and able to undertake any exercise.

The interesting features of this case are the past history, the age of the patient, and the presence of many insignificant signs which have from time to time been stated to be observable in hypothyroidism.

It was ascertained that the patient had first noticed, six months previously, that he was rapidly putting on flesh and was not feeling so "fit" as formerly. About this time he was subjected to a considerable amount of business worry, which, coinciding with his engagement and forthcoming marriage, seems clearly to constitute the predisposing cause of the hypothyroidism. The exciting cause would seem to be over-exertion on the golf course, associated with some slight gastric disturbance brought about by injudicious diet.

While thyroid deficiency is seen at all ages and in both sexes, it is not very commonly observed in young men of this age.

The signs observed in this case presented a typical picture of what has been referred to as "submyxoedema," and many small factors, insignificant in themselves, helped to form the clinical picture. Of these the temperature and pulse were the most marked, while the presence of the rough skin, the patches of psoriasis, and the premature greyness were all compatible with what is seen in thyroid deficiency.

The diagnosis was confirmed by the extreme rapidity with which the symptoms improved, and the signs disappeared as soon as this deficiency in the normal thyroid secretion was remedied by the administration of thyroid extract.

CEREBRAL CYST WITHOUT LOCALIZING SYMPTOMS.

By ARTHUR TURNBULL, M.B., Ch.B.Glasg.

B. G., aged 5, was admitted to the Western Infirmary on January 18th, 1910, as an urgent case. She had been healthy up to September, 1909. At the end of that month she had scarlet fever and was transferred to one of the fever hospitals. Both ears began to run about two and a half weeks after admission to the hospital. The running continued, especially from the right side. Some three and a half weeks after admission an abscess developed at the back of the right ear, and this was lanced. An attack of diphtheria then supervened. She was dismissed as convalescent on January 14th. Her mother had noticed that "her manner was rather peculiar," but had paid no great attention to this as the general condition appeared good.

On January 15th, 1910, she complained of pain in the neck and in the stomach, pressed her brow on the pillow, and appeared to feel pain in the forehead. She awoke crying the next morning and did not appear to be quite *compos mentis*. Vomiting began on the evening of January 15th, 1910, and continued till January 18th; it bore no relation to food, and drugs had no effect on it. She appeared to be losing strength. The face was alternately flushed and pale. Her mother stated that her arms and legs had never been paralysed, but were weak owing to lying in bed. She kept rolling her eyes wildly from side to side; there was no squint, nystagmus, or facial paresis, but much pain all over the head, especially at the back. The bowels were constipated. The family history was good.

Condition on Admission.

The child was puny and thin, and very pale. Occasionally rapid flushings of the face could be noticed. The temperature was 102° F., the pulse 132, and the respirations 36. She was in a condition resembling coma, alternately restless and soporose, and dropping off after turns of excitement into a condition resembling sleep. During the attacks of excitement she was very restless, throwing her arms about and struggling against any movement of the head. She seemed to feel the cold very acutely, the teeth chattered, and she drew the blankets up round her. She sometimes pressed her hands to her forehead, as if in pain. There was no strabismus. The pupils were equal and very dilated, and reacted equally to light. The movements of the eyes were very irregular, preventing proper ophthalmoscopic examination. There was slight paresis of the left side of the face. There was absolutely no evidence of unilateral intracranial pressure. Both tympanic membranes had been destroyed. Traces of discharge were seen on the right side and granulation tissue in the tympanic cavity; on the left side there was copious exudation of foul pus. At a later examination there was an exceedingly foul discharge from both ears. Behind the left ear the old incision wound was discharging foul-smelling pus.

Operation.

On the day of admission Sir William Macewen operated on both sides of the head.

On the left side the old Wilde's incision was reopened and enlarged, and a large scale of necrotic bone removed. On the right side a radical mastoid operation was performed. On reaching the middle ear copious purulent material issued from the cavity, and on further excavation in an upward direction it was found that the destructive process had affected the tegmen tympani, and large quantities of serous and very foul fluid containing numerous small white particles began to issue from the upper limit of the tympanic cavity. The quantity of exuding fluid was such as to indicate origin from the cerebrum. Exploring higher and more posteriorly a large cyst was discovered in the tempore-sphenoidal lobe. The walls were thickened, but after probing with dressing forceps and searcher and perforating some intracystic partitions large quantities of foul serum escaped, interspersed with many pieces of broken-down brain tissue. The amount of fluid and material discharged was sufficient to indicate a cavity the size of a small Tangerine orange, and therefore one which had encroached upon the descending horn of the lateral ventricle. A portion of broken-down brain tissue composing the cyst wall was removed. Iodoform-boracic crystals were introduced into the cavity exposed, and one piece of iodoform gauze inserted, while ear packing steeped in carbolic oil was used for the external auditory canal.

During most of the operation a right external squint was evident, and the pupils were very variable.

During the night after operation several convulsive seizures took place, and the next morning coma supervened, the flushing of the face being extreme; death occurred twelve hours after operation.

A *post-mortem* examination was, unfortunately, not obtained; but the importance of the case does not depend on whether the infection was pyogenic or secondary to a tuberculous process. The important point is that a patient with a large unilateral brain cyst may manifest absolutely no localizing symptoms, both when life was apparently not threatened (the child not even being thought ill) and on the symptoms becoming urgent shortly before death. This is, of course, already well known, but it seems desirable to emphasize it.

NOTES OF A CASE OF CONTRACTION OF THE UPPER AND LOWER LIMBS AFTER STILL'S DISEASE.

By J. CRAWFORD RENTON, M.D.,
Surgeon and Lecturer on Clinical Surgery, Western Infirmary, Glasgow.

M. L., aged 7, was placed under my care by Professor Stockman, with the history of an attack of Still's disease when aged 3 years.

Her condition on October 19th, 1912, is well shown in Fig. 1. She was quite unable to walk; she lay with her legs and thighs drawn up, and could not extend them. There was contraction of both the adductor and hamstring muscles, the knee-joints and ankles were swollen, and creaked on moving. The flexors of both hands were contracted. When the child was placed on the floor she could not move her legs. When the weight of her body was supported she was unable to use either leg owing to the contractions.

On October 28th, 1912, the adductor tendons at their origin were dissected out according to the method of Mr. Robert Jones of Liverpool. The hamstring tendons on the right side were divided freely subcutaneously, and on the left side portions were dissected out. The limbs

could then be abducted and straightened to a considerable extent; the child was then placed on an abduction splint. Massage of both arms and legs was systematically carried out, and this produced great improvement in the movement of the hands and strengthened the muscles of the lower limbs.



Fig. 1.

On November 26th, 1912, the tendo Achillis was divided in both legs, and movements were continued several times under chloroform.

As on February 15th, 1913, the improvement was satisfactory and she could adduct and abduct her limbs, flex and extend the knee-joints and move both ankles, she was fitted with Thomas's caliper knee-splints, fastened to the heels of the boots. Daily exercise in walking was ordered, and in a month the child was able to walk alone with the help of a stick. Fig. 2 shows the patient with splints applied.

She gradually improved until she could walk without the splints, as shown in Fig. 3; and on May 24th, 1913, she



Fig. 2.



Fig. 3.

was dismissed quite able to walk, but was advised to wear the splints for some months.

Dr. D. S. Smith, of Lesmahagow, has taken great interest in the child, and wrote on July 20th, 1913: "She is getting on fairly well, is able to walk a good distance with the aid of a stick, and we are continuing massage and passive movements."

On October 29th, 1913, she was brought to see me, and I was pleased to find that she could walk either with or without a stick, and with or without the splints. She could flex and extend both her knee-joints and lifts both her legs very well. The hands had greatly improved, but there was still a tendency to increased flexion.

This case illustrates well the importance of operating on such cases, and confirms the value of Mr. Jones's recommendations.

D

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A NOTE ON THE PRESCRIBING OF THYROID SUBSTANCE.

FROM time to time I have met with unexpected results following the administration of thyroid substance, and have attributed these results either to tolerance or idiosyncrasy on the part of the patient. On investigation, however, I find that the explanation may be different.

In the first place, while there is but one pharmacopoeial preparation of thyroid, the "thyroideum siccum," there are numerous other preparations on the market, and many of these are labelled as the equivalent of so much fresh gland. In the absence of explicit instructions it is thus possible for the physician to prescribe a dose of thyroid substance which he intends to be fresh thyroid, while the chemist interprets his prescription as meaning "thyroideum siccum." The reverse may as easily occur.

In the second place the *Pharmacopoeia* gives no statement of the relationship which thyroideum siccum is to bear to the fresh gland. Now the *British Pharmaceutical Codex* and different trade labels inform us that the proportion of dry to fresh gland is 1 to 5, and we may assume that the possessors of the trade labels manufacture accordingly.

On the other hand the proportion is given by Martin[1] as 3.7, and by Guyer[2] as 3.6. The latter figures closely correspond, and are based on careful observation. I have not been able to find any authority for the 1 to 5 factor. It is obvious that the manufacturer who makes three and a half tablets from a given weight of fresh gland is supplying us with a more potent drug than one who makes five tablets from the same amount of the fresh substance, and different chemists may thus supply thyroid of varying potency in dispensing the same prescription.

In view of the evidence offered by the authors quoted it is difficult to resist the conclusion that the 1 to 5 standard has been reached by using fresh glands which have been indifferently trimmed and cleaned from fat, and we may note in passing that the profits accruing from the sale of 1 to 5 products will be greater than those obtained for the produce of clean thyroids.

Some firms standardize their thyroid products in terms of iodine. This may be a good test, but until it is proved that the therapeutic activity of fresh thyroid corresponds to its iodine content it is unwise to rely upon it.

In conclusion I wish to emphasize the importance of making it clear whether we mean fresh or dry thyroid in our prescriptions, and in the case of dry thyroid it is well to have some knowledge of its relation to the fresh substance.

ALEXANDER GOODALL, M.D., F.R.C.P.Edin.,
Assistant Physician to the Royal Infirmary, Edinburgh.

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VANILLA AS A SKIN IRRITANT.

THAT *Primula obconica* and *Rhus toxicodendron* cause a very annoying form of dermatitis is well known, but less generally known is the fact that vanilla essence may in certain individuals cause equally troublesome symptoms.

A perfectly healthy patient of mine, of an inquiring turn of mind, liking the smell of vanilla, added about ½ oz. of the essence to about 5 oz. of a hair lotion consisting of quinine, spirit of lavender, and rectified spirit (which he was in the habit of using). About twenty-four hours after its application intense itching of the scalp occurred, which gradually extended over the forehead, behind the ears, and down the neck. It did not at first strike him that vanilla was to blame, and for a day he kept rubbing it in in the hope of "cooling," the part as he expressed it. The result was that his eyes were opened metaphorically to the cause although practically they were almost closed by the swelling which followed. Not content with this experience he performed a control experiment on the front of the forearm, because, as he said, it was difficult to believe that vanilla, which he had

frequently swallowed in the form of a flavouring agent with nothing but agreeable results, could irritate the skin to such an extent without causing disastrous results to the more delicate mucous membranes. Twenty-four hours afterwards the same intolerable itching occurred on the forearm with an eruption which, from his description, seems to have been of a close papular nature with no reddening of the skin. This soon faded, only to return every five or six hours, as did the eruption on the scalp and face. This state of affairs continued for ten days in spite of constant washing with hot water and soap and other domestic remedies. He said he was compelled to seek advice as the itching remained intolerable at night and prevented sleep.

When I saw him there were many excoriations on the scalp and face, and more on the arms, due to the scratching, and a papular eruption over the affected parts. There was still some oedema, but it evidently was much less than it had been, and he seemed to be getting well.

The condition was probably due to some alkaloid in the vanilla, and knowing that mercury iodide precipitates most of the alkaloids, I prescribed a lotion of rectified spirit and mercury iodide, 1 in 2,000. This seemed to give relief, and the itching disappeared in two or three days.

The interesting points are: (1) The long time—fourteen days—the symptoms lasted, in spite of the washing; (2) the intervals of freedom from irritation—about six hours—when it is remembered that the poison was purely irritant and not due to micro-organisms; (3) the fact, as the patient points out, that the vanilla could be taken by the mouth without producing any irritation when the skin was so susceptible. I am presuming that the irritation was not due to the action of micro-organisms owing to the fact that the vanilla had been suspended in strong spirit for over a year; and there is no evidence that the irritation was merely of a mechanical nature.

Montrose. WM. LEGGETT, B.A., M.D.

RECORDS OF APPENDICITIS IN THE MEDICAL SICKNESS SOCIETY.

As one of the Committee of the Medical Sickness Society the increasing number of claims from appendicitis could not fail to strike me, and I felt that it might be of interest to tabulate its experience as far as possible.

The society has certain advantages in this matter over those who have to trust to records compiled from hospital and private cases, notably that as the members are paid when incapacitated by sickness or accident it is able to follow the after-history of its cases, as a rule till the age of 65, after which it has no further information as to the health of its members, as sickness benefit then ceases.

The members all belong to the medical and dental professions, and must undergo a medical examination before admission, but once admitted they have the right to remain on till 65 so long as the rules are complied with and the premiums are duly paid.

During the twelve years 1902-13 the members have increased from 2,054 to 3,097, the average yearly membership having been 2,557. The number of claims for appendicitis during the period has been 103, and in at least 68, perhaps more, operations have been performed. This gives an average annual incidence of 0.3 per cent. The number of deaths has been 3, two occurring directly and one two years after an operation for appendicitis from some abdominal trouble, probably indirectly due to the original complaint.

The yearly incidence has varied largely, as shown by the accompanying table, the number of cases submitted to operation varying from none in 1904 to 16 in 1912.

	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Operation cases ...	1	3	—	8	10	3	4	5	4	9	16	5
Non-operation cases	—	3	3	5	3	3	3	2	5	7	2	—
Subsidiary attacks	3	1	—	3	2	2	2	—	—	1	5	—

The age of entry of the 103 has varied between 22 and 49, the average being 30-31, while the age of attack has varied from 25 to 58, the average being 39-40, which is, on the average, some nine years after joining. In the histories given at the time of joining there was no record of any previous attacks of appendicitis, except in two cases; in one slight attacks had been noted, the last (in which the applicant had been laid up for a week) having occurred nine years before; in the other there had been four attacks, all progressively lighter, the last having occurred five years previously.

The average duration of each attack was almost exactly nine weeks, the society having paid out sickness benefit during the twelve years for some 929 weeks, or about 77 weeks annually, which covers as nearly as possible to 0.21 days of sickness per annum for the whole membership.

The average annual number of days of sickness of those who had appendicitis was, before that illness, 5.64; after getting over it, 5.45. I do not wish to place undue weight on these figures, but it is somewhat unexpected that the older years of life after the disease should not have a much higher incidence of sickness than the younger years before it.

One case presented some interesting features. This member joined when 28, and between 37 and 44 had twelve attacks of Ménière's disease, incapacitating him in all for nearly 44 weeks. The longest interval between the attacks was 19 months, the last having been for 12 weeks, a couple of months before being laid up with appendicitis, for which he was operated on, and since then—a period of four years—he has had no further aural attacks. Another joined at 29, and had an aural attack at 37 and another at 43, amounting to 12 weeks in all; he was operated on at 49 for appendicitis, but died 20 months later, not having had any further aural attacks. It would be interesting to know if any similar cases have been observed.

In conclusion I must thank Mr. Sutton, the secretary, and the office staff for the valuable assistance they gave me in extracting the foregoing details.

London, W. F. C. MARTLEY, M.D., F.R.C.P.I.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

C.M.S. HOSPITAL, NINGPO, CHINA.

CONGENITAL ATRESIA OF RECTUM: RECOVERY AFTER FOUR OPERATIONS.

(By ARTHUR F. COLE, L.R.C.P., M.R.C.S.)

A CHINESE male infant aged 5 days was admitted, with enormous distension of abdomen and the history that no motions had been passed since birth; it was crying without intermission and with considerable power; on examination only a small post-anal dimple and the remains of an incision made by a Chinese surgeon were seen.

The abdomen showed suppurating sores caused by moxa burns in the middle line above the umbilicus, and similar sores had been produced in the anterior auricular regions to counterbalance the absence of an anus. The family consists of three girls and this the only boy.

Seeing that a Chinese surgeon had already incised posteriorly and failed to find the blind end of the rectum, and that the abdominal distension was more marked than usual, it was decided not to waste time in groping for the gut, which might not exist.

First Operation (Age 5 Days).

Left inguinal colostomy was done; the small gut was flaccid and empty, and the large intestine much thinned out by gaseous distension. A piece of gauze was passed through the mesentery of the large bowel and its peritoneum united to the parietal peritoneum; the contents of the bowel were then milked through a small incision; the gaseous distension disappeared somewhat slowly; the semi-fluid contents, of a dark-green colour, came away with reluctance; an agar culture was made at the time from this fluid; two rubber drainage tubes were inserted into the lumen of the intestine and sterile gauze dressings applied. The child improved in every way, ceased to cry, took the maternal milk, and passed motions by the artificial anus.

Second Operation (Age 9 Days).

The child being anaesthetized (chloroform was given on each of the four occasions), about ½ oz. of barium sulphate was mixed with rice pap and syringed into the upper and lower segments of the large bowel, through the colostomy wound; a copper coin was then held at the position where the anus should have been; the infant was then *x* rayed, and the dense shadow of the barium sulphate emulsion was seen to end nearly 2 in. from the coin. The relatives were thus able to grasp the pathological fact which was made so clear on the fluorescent screen.

Third Operation (Age 11 Days).

From the colostomy wound thionin blue stain was injected into the lower segment of the large bowel, in the hope that the mucosa would stain and thus assist the surgeon in finding the blind end of the bowel when delving in the perineum; a thick probe was also passed downwards, and it was with its help, and not that of the stain, that perineal dissection in the middle line discovered the blind end of the rectum; the margins of the incised rectum were then drawn down and stitched with catgut to the skin. A drainage tube was put into the new anus, the colostomy wound being left untouched.

Fourth Operation (Age 18 Days).

As the child was getting thinner, though taking milk well, and passing motions per anum and colostomy wound, it was decided to close the latter, which had a tendency to prolapse. The extruded portion of gut was dissected free from the abdominal wall, and after the abdominal cavity had been protected by gauze, the prolapsed bowel was excised and two clean cut ends joined by circular enterorrhaphy and a small gap in the mesentery united. The abdominal wall was then closed with two rows of silkworm gut, a finer variety of the same having been used for the intestinal suturing.

Except for the fact that the skin suture cut through within two days, there were no disquieting symptoms, and the wound was healed in nine days. The infant now began to put on flesh, and seemed none the worse for the five days' intestinal obstruction and four subsequent operations under chloroform; he was taken home by the mother just a month from admission to the hospital.

REMARKS.

1. The resisting power of Chinese patients is probably not confined to adult life; this infant tolerated four operations in fourteen days, and recovered.

2. Even though the surgeon deliberately (for the reasons given) chose to relieve the obstruction of the bowels by the abdominal route, it would have been better (as it turned out) to have hunted for the blind end of the rectum through the usual median subcoccygeal incision; undeterred by success in this case, he intends in similar cases in the future to avoid colostomy as long as possible.

3. It was felt that an unusual opportunity was given of ascertaining the bacteriological condition of the imperforate and presumably uncontaminated large bowel of a newborn infant during life. Notwithstanding the analogy of the guinea-pig and the common fowl, where the corresponding bowel is sterile at birth, and also so long as it is fed on sterile food, a profuse bacterial growth was obtained.

4. The use of *x* rays after an injection of barium sulphate into the large bowel demonstrated the exact deficit of intestinal tubing, and rendered the formation of an anus in the normal position a matter of comparative certainty.

5. Notwithstanding the statement that meconium can usually be seen within the imperforate rectum as of a bluish tint, and so the position of the bowel recognized, yet thionin had no such action in this case. An explanation offered is that colostomy having relieved the obstruction, no abnormal thinning of the intestinal walls was present.

6. In the series of cases operated upon in this hospital during the last nine years for congenital atresia of the rectum, numbering 10 in all, every one has been male. It has been stated by parents that they would not trouble to seek help in the case of girl infants.

7. The organism gave the cultural appearance on agar of *Bacillus coli communis* type, and resembled it morphologically; it also fermented lactose, and produced acid and gas on MacConkey's bile salt medium.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

ASSAM BRANCH.

AT a meeting at Cinnamara on April 26th, Dr. MCCOMBIE, the President, introduced a discussion on *Dysentery and emetine*, and illustrated his remarks by some tables setting forth the results of different methods of treatment. The balance of opinion among the members present favoured the view that dysentery in Assam tea gardens was mostly bacillary, and that emetine had not given any better results than the older lines of treatment. The discussion ended in a resolution that the Branch should draw up printed forms and issue them to all medical men in Assam, with a request that they would record on them details of all dysentery cases seen by them, since further information was required about this disease on tea gardens. Dr. CAMERON, in a paper on *The general symptoms of blackwater fever*, contrasted this disease with haemoglobinuria. In the discussion that ensued the principal point debated was what part a chill might play as the exciting cause of blackwater fever. Dr. Cameron mentioned that in the localities where the disease occurred in India there was a likelihood of exposure to cold winds. Dr. MURRAY pointed out that this observation did not apply in West Africa. In connexion with a record of a case of the disease by Dr. WEST, which was read in his absence, some vermiform material vomited by the patient was shown. Captain JAMES, I.M.S., having given a demonstration relating to ankylostomiasis, the PRESIDENT recorded two cases of *Pernicious anaemia* which had followed attacks of sprue. In both of them stomatitis occurred early and proved persistent. Although one of these cases had been diagnosed as sprue by a specialist in England, it was considered by the meeting that neither was a true instance of this disease. The suprarenal glands of one of the cases were shown, and to the naked eye it appeared that all glandular substance had been replaced by cysts. Consequently it was suggested that suprarenal extract would be worth a trial in cases of pernicious anaemia.

BATH AND BRISTOL BRANCH.

AT the annual meeting of the Branch on May 27th Mr. R. G. P. LANSDOWN, in a Presidential address, gave a preliminary account of an original investigation being carried out in association with Dr. Scott Williamson into the etiology of appendicitis, gastric ulcer, and allied conditions. The work done established, he believed, the hypothesis that these diverse conditions were primarily due to the enlargement of the submucous lymphoid tissues, as the result of the entry of some noxious agent. This hypothesis was based on a histological study of the mucous membrane in health and disease. There was an anatomical similarity in the distribution of the lymphoid tissue in those regions of the intestinal tract in which ulceration most commonly occurred in association, and pathological study had demonstrated the presence of lesions almost exclusively confined to the lymphoid tissue in these regions in both acute and subacute varieties. Sepsis and ulceration were to be regarded as sequelae of the damage done to the overlying mucous membrane by the hyperplasia in the lymphoid nodules. A review of the clinical varieties and peculiarities of these conditions lent support in every detail to such a hypothesis. The address was illustrated by a number of lantern slides and photomicrographs.

BOMBAY BRANCH.

AT a meeting in the University Library on May 14th, Lieutenant-Colonel ASHTON STREET, I.M.S., in the chair, the following were among the exhibits: The PRESIDENT (for Dr. R. J. SLADEN): A case of *Myositis ossificans*. Dr. SATHAYE (for Dr. DESHMUKH): A series of surgical specimens, including a *Caecum removed for tuberculosis*. Dr. NORONHA (for Lieutenant-Colonel CHILDE): A case which presented many of the phenomena of achondroplasia, but was thought to be an extreme case of *Rickets*. Major T. J. NORRIS: A case of *Sarcoma of bones of the forearm* seen by him in the out-patient department of

Jamsetjee Jeejeebhoy Hospital. The patient had been treated elsewhere by salvarsan, but a skiagram left no doubt that the growth was sarcomatous. Dr. F. S. MASTER: Two cases of *Dehli boil* from the out-patient department of the same hospital. Dr. R. Row suggested that they should be submitted to vaccine treatment. Professor Y. G. NADGIR: A series of sections of the brain and the ear, which he had specially prepared for his anatomical department. Dr. A. K. CONTRACTOR: A series of skiagrams.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DERMATOLOGY.

Mycosis Fungoides.

AT a meeting on June 4th, Dr. J. J. PRINGLE, President, in the chair, Dr. JAMES GALLOWAY, in resuming the discussion on mycosis fungoides, said he favoured the view that the disease was *sui generis*. From the clinical standpoint the leukaemias presented certain analogies. In Hodgkin's disease there were also two prominent cutaneous features—namely, a generalized dermatosis and pruritus, with subsequent thickening and lichenification, and even tumour formation. In all three diseases there was probably some unknown infective element, the evidence of which was strongest in the case of mycosis fungoides. He regarded the latter as a so-called granuloma rather than as a neoplasm, and this was borne out by its clinical characters. He did not think that histological examination by itself in the early stages of the disease could be relied upon to establish the diagnosis. Every one must recognize the value of *x* rays, as also in Hodgkin's disease and the leukaemias. In all, however, there was danger from over-dosage of *x* rays, which might produce febrile reaction and intense poisoning. An even more important danger was the gradual production of an aplastic condition, in which leucopenia was established.

Dr. J. H. STOWERS said that mycosis fungoides was two and a half times more frequent in males than in females. He had never seen the disease in more than one member of a family, nor had he any information to give concerning the reported longevity of the parents. He considered that there was no satisfactory evidence to prove a relationship between mycosis fungoides and the dermatoses of Hodgkin's disease and leukaemia. The prodromal eruptions constituted part of the disease proper; syphilis did not appear of any etiological significance. The hypothesis that this disease belonged to the class of sarcomata did not account for the spontaneous diminution or disappearance of the new growths, and the bulk of evidence pointed to a marked histological distinction between the two affections. As the disease was neither contagious nor hereditary, he thought it possible that future investigations would prove it to be due to the presence of a micro-organism, directly or through the influence of toxins. A diagnosis could almost certainly be made on clinical grounds. Death had been brought about by septicaemia and exhaustion with or without intercurrent diarrhoea in the three cases he had been able to follow to the end. The *x*-ray treatment had proved most valuable for the relief of symptoms and the prolongation of life, but he had never seen a case in which its adoption had led to complete recovery.

Dr. P. S. ABRAHAM still preferred the name "granuloma fungoides." Of the nine cases which he had seen eight were males. He had never been able to recognize any characteristic microscopic appearances. He thought that a protozoon or low form of animal organism was the most likely causative agent.

Dr. A. WHITFIELD regarded "mycosis fungoides" as a disease *sui generis* having no relationship to pityriasis rosea or the parapsoriases. He believed that a diagnosis could almost always be made on clinical *plus* histological grounds. In mycosis fungoides there were four well-marked stages—namely, of development, growth, cytolysis, and sepsis—but these merged into one another. In the earliest stage the epithelium was not directly affected, but had a characteristic lace-like appearance. He had seen one case which he unhesitatingly diagnosed as mycosis fungoides, in which treatment by *x* rays had been apparently a completely curative measure. The patient was a man, aged 68, who had received no treatment since 1909, and whose health was now perfect.

Dr. G. PERNET had observed 13 cases, 8 of which were males and 5 females, one male and one female presenting *tumeurs d'emblée*. He had seen one case accompanied by recurrent attacks of lymphangitis, which caused an elephantiasic condition. He considered the disease a distinct entity, possibly due to an ultra-microscopical parasite. As characteristic of premycotic conditions, he had observed that the borders of affected areas were concave and not convex. He recognized no relationship of the disease to syphilis. With regard to treatment, he advocated repeated *x* raying except in cases which were fungating, and had experienced no benefit from the injection of radium emanations or of salvarsan.

Dr. GRAHAM LITTLE considered that mycosis fungoides, *à tumeurs d'emblée*, and the lymphodermia perniciosa of Kaposi ought to be clearly differentiated from true mycosis of the Alibert-Bazin type. His microscopical preparations showed, in cases of true mycosis, marked acanthosis, and infiltration of the papillary layer, the disease being confined to the superficial parts of the skin, even the elastic tissue remaining almost intact. He suggested the possibility of a toxic product which predisposed the system to the manifestation of changes regarded as premycotic.

Dr. PARKES WEBER remarked upon the clinical and pathological diagnosis of mycosis fungoides from the leukaemias. In the latter there was always permeation of all lymphatic glands and many of the viscera with cells of the lymphocyte and of the myelocyte series, this being especially obvious in the liver.

Dr. H. MACCORMAC said that the histology of mycosis fungoides was not sufficiently characteristic to permit of diagnosis apart from clinical evidence. The most typical feature was the accumulation of cells of indefinite type in the upper dermic layers. In one case giant cells as definite as those of tuberculosis were present in sections from a typical erythematous so-called premycotic patch. The presence in the cells of mycosis fungoides of Altmann's granules established a firm distinction between them and the cells of sarcoma and carcinomata.

Dr. MACLEOD agreed with Dr. Graham Little in differentiating lymphodermia perniciosa and cases of *tumeurs d'emblée* from true mycosis fungoides. He considered that mycosis fungoides was an infective granuloma, due to some unknown specific virus. He had examined a large number of sections in all stages of the disease, and believed that the type of cellular infiltration which occurred was constant throughout, except that in the later stages there was a tendency of the cells to disintegrate and show crenation and fragmentation. He regarded the epidermic changes as secondary, but he thought that the type of cellular infiltration and its distribution were of such a character as to be of diagnostic value. He believed that the infiltration most nearly approached that of a granuloma, and regarded the histological architecture as sufficiently characteristic in a well-marked case to distinguish mycosis fungoides, even in the premycotic stage.

Dr. S. E. DORE referred to the effects of *x* rays on the tumours of mycosis fungoides. The granuloma literally liquefied and melted away without leaving any scar, and on the scalp there might be regrowth of hair over the affected areas. It was important to remember the marked tendency to disintegration of the tumours, and it was notable that the early lesions were less easily affected by the rays than the later ones. Although the benefit of *x*-ray treatment was so marked upon the local manifestations of the disease, it apparently failed to influence the cause of the disease itself, since fresh lesions continued to appear in cases under treatment.

Dr. TRAVERS SMITH remarked upon a case of mycosis fungoides *d'emblée*, in a young man aged 26, whose skin became very bronzed, a symptom which had been observed in Hodgkin's disease.

The PRESIDENT said he had seen eighteen examples of mycosis fungoides, ten in private and eight in hospital practice, the male and female sexes being equally affected. In only one was there a history of antecedent syphilis. In two of the female cases the disease began at 15 and 17 years of age, the others at an average of 45 years. Three of the cases were examples of the type of *tumeurs d'emblée*. Examination of the blood had failed to reveal

any characteristic of constant abnormality. The cases of leukaemic prurigo he had seen were easily distinguishable clinically. Lymphodermia perniciosa was probably a distinct disease. He thought that an experienced observer could usually diagnose the disease, even in a comparatively early stage. The lesions were indeterminate, not corresponding exactly with other recognized types of skin disease. One elementary lesion appeared to be fairly characteristic—namely, a persistent erythematous crescentic or discoid densely infiltrated patch. The occurrence of intense itching was always suspicious. He could see no difficulty in differentiating mycosis fungoides from the parapsoriases, and he did not think that their present knowledge justified them in considering it as one of a series of lymphatic affections. His three fatal cases had died from bronchitis, empyema, and pneumonia, and he hesitated to accept as instances of mycosis fungoides cases reported to have presented metastatic growths in the viscera after death. Although some of his cases had been subjected to very prolonged *x*-ray treatment, nothing but benefit had accrued from it.

Dr. SEQUEIRA, in reply, said that the crux of the whole discussion lay in the question as to the possibility of recognizing on clinical and histological grounds the early manifestations of the disease. Personally, he held it to be *sui generis*, and he thought it could be differentiated without difficulty in most instances from the dermatoses of leukaemia and Hodgkin's disease. He was particularly interested in Dr. Whitfield's case, which was apparently cured by the *x* rays—an occurrence paralleled once in his own experience.

SECTION OF MEDICINE.

AT a meeting on May 26th, the President, Dr. SAMUEL WEST, read a paper on *Murmurs in dilated hearts and their explanations*, which will be found in full elsewhere in this issue. In the discussion which followed, Dr. A. F. VOELCKER spoke of the frequency of apical systolic murmurs in children suffering from any acute illness. He regarded them as due to dilatation of the right ventricle. Dr. ALEXANDER MORISON took the view that the murmurs referred to as ventricular were due to actual regurgitation. Dr. BEZLY THORNE said that such murmurs should not be made light of, though there was great probability of their disappearance under treatment. Dr. PARKES WEBER referred to a condition known as "pulsating tinnitus." Dr. J. MICHELL CLARKE recorded the pathological changes in a case of leukaemia from prolonged use of *x* rays. It was that of a middle-aged woman who had at first benefited considerably by this treatment, but afterwards failed to react and died. *Post mortem* the liver was found to be of an enormous size. The spleen, which had been very large, was found to have receded to its normal size, was extremely hard and tough, and on section glistening like hard wax. It must have been rendered useless by the degree of contraction and fibrosis which had occurred in it. The liver appeared to take the place of the spleen as a repository to intercept and retain the enormous number of myeloid cells formed in the marrow.

EDINBURGH OBSTETRICAL SOCIETY.

AT a meeting on June 10th, Sir HALLIDAY CROOM, President, in the chair, Dr. A. C. MCMASTER showed specimens of *Hydatid mole* in which the uterine enlargement either corresponded to or was smaller than that in a normal pregnancy of the same age. He maintained that errors in diagnosis were apt to arise because of the usual belief that a hydatid mole was always associated with excessive expansion of the uterus. It might be so, but it was usually not the case. Dr. FORDYCE, in a paper on *Pregnancy in a malformed uterus*, recorded a case operated upon at four and a half months for pregnancy in a septate uterus. There was difficulty in diagnosis, the possibilities being tubal pregnancy and gestation in a malformed uterus. The swelling was recognizable in the right iliac region, and bimanually was felt to press low down into the vaginal fornix, the uterus being displaced to the left side. The uterus was removed by supravaginal hysterectomy, some difficulty being met with on the right side, owing to the opening up of the broad ligament. On cutting through the cervix at the internal os it was found to have a double canal. The vagina and vaginal portion of the cervix were simple, therefore the condition was uterus subseptus. Dr. BERRY HART, in a paper on *Atypical male and female sex-ensemble (hermaphroditism and pseudohermaphroditism)*, said that he held the sex gland to be the only criterion of sex. What one studied really was the sex-ensemble, the "altogether" of effective sex. In the normal female the sex-ensemble was made up of (1) ovary, tubes, uterus, vagina, and external genitals (the potent portion); (2) the opposite sex duct elements, epoöphoron and paroöphoron (the non-potent portion); (3) the secondary sexual characters as to hair distribution, mammae, pelvis, bones, larynx, and psycho-sexual powers. The normal male-ensemble had (1) descended testes, vas deferens, and phallus (potent organs); (2) opposite sex duct elements, hydatid testis (Müllerian), and prostatic utricle (hymeneal)—non-potent portion; (3) secondary sexual traits as above. In both cases the potent organs were at a maximum and the non-potent at a minimum, with the secondary sex traits congruent. This was an ultimate probability result, and any increase in the minimum gave a diminished maximum and a non-congruence of the secondary characters. The essence of atypical male and female sex-ensemble was thus a ratio disturbance in the duct elements of the sex-ensemble and secondary traits. The classification proposed was (1) atypical female sex-ensemble, and (2) atypical male sex-ensemble. There could be no glandular hermaphroditism, as no ovo-testis had as yet been demonstrated. It was theoretically possible. Transverse and lateral hermaphroditism were non-existent if one took the sex-gland and not the duct elements as the criterion of sex. Dr. Hart showed a case of atypical female sex-ensemble in a six weeks child. Such cases were externally like hypospadic males, and a prostate, uterus, tubes, ovaries, and vagina were present, the last opening into the prostatic sinus by a slit, like the vasa deferentia in the male. The secondary characters varied. In all it was significant that the suprarenals were large. Atypical male sex-ensemble was much commoner than the preceding abnormality (as 10 to 1.) In such the testes might be in the split scrotum. Dr. Hart referred to a case of Tuffier where this was so in (somatically) an attractive woman, who proposed marriage with a man. In conclusion, the mechanism of the disturbed ratio conditions and questions of diagnosis, prognosis, and treatment were considered. Dr. BALLANTYNE said that Dr. Hart's classification was a great advance on the previous classification of "hermaphroditism and pseudo-hermaphroditism," for how could there be a "pseudo" condition of a thing that did not exist? Dr. FORDYCE thought the term "pseudo-hermaphroditism" was still convenient and logical. Dr. YOUNG recorded a case of the second type in Dr. Hart's classification. It was a man who had been brought up as a woman and had actually been married to a man. When the true state of affairs was recognized the marriage was annulled, and some time later he married a woman.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting in Leeds on May 15th, Dr. WILLETT, President, in the chair, the following were among the exhibits:—Dr. HELLIER: A *Grape-like sarcoma of the cervix uteri* removed from a 2-para aged 34 years. Two years previously a coloured offensive vaginal discharge had commenced and she passed a mass of tissue the size of a bullock's kidney. A short time afterwards the discharge recommenced, and a year ago she passed a small mass looking like a "bunch of grapes." When first seen, two months ago, she had a necrotic polypoid mass the size of a fetal head projecting from the vulva. This was "grape-like" on the surface and sprang from the posterior lip of the cervix by a narrow pedicle. It was removed and vaginal hysterectomy performed. Mr. GOUGH and Dr. C. STEWART: Specimens from a case of *Adenomyoma uteri* in a married woman aged 39. The uterus contained a cervical fibroid and two adenomyomatous nodules in the posterior wall near the fundus. The left Fallopian tube contained an adenomyoma exactly simulating a small uterine cavity. The non-adherent sigmoid colon contained an adenomyoma in its muscular coat. Supravaginal hysterectomy and sigmoidectomy with end-to-end union were performed. Recovery was rapid and uninter-

ruptcd. Dr. CROFT: A specimen of a dead *Echinococcus cyst* removed from the pelvis of a married woman aged 40. Dr. FLETCHER SHAW (Manchester): A uterus removed for *Accidental haemorrhage with free blood in the peritoneal cavity* from a 13-para aged 40 years. There was a large amount of haemorrhage before admission to hospital, but the patient was naturally delivered. After delivery there was a persistent trickle of blood in spite of hot intra-uterine douching, pituitary extract, etc. Four hours after delivery the patient was collapsed and pulseless, so hysterectomy was rapidly performed. Both broad ligaments were distended with large haematoma, that on the right side extending on to the pelvic wall, and there was a large collection of free blood in the peritoneal cavity from several small abrasions on the posterior wall of the uterus. The patient made a good recovery for four days when diarrhoea commenced, which could not be controlled by any treatment, and the patient died on the seventh day. There was a large amount of albuminuria at the time of the operation, but this cleared up by the fifth day. Dr. HELLIER described a case of *Superficial atresia of the vulva* in a woman aged 22. She menstruated normally, but for two years had noticed that it took a long time to micturate, much more marked during the last three months. The labia were adherent except for one small opening which just admitted a probe, through which the patient micturated and menstruated. The labia were separated with a scalpel, and the raw edges sutured. She made a good recovery.

SCOTTISH OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

AT a meeting at Glasgow on June 6th, Dr. WALKER DOWNIE, President, in the chair, the following were among the exhibits:—The PRESIDENT: (1) A girl with *Lupus of the fauces, pharynx, and larynx*, in which improvement had followed the local use of chromic acid coupled with administration of iron iodide. (2) A man, aged 57, who had had *Leucoplakia of the tongue* and buccal mucous membrane for over sixteen years without any malignant change occurring. Dr. KERR LOVE mentioned a case in which he had watched leucoplakia of the tongue for a longer period, but malignant disease eventually occurred. (3) A man whom he exhibited a year ago with *Carcinoma of the ethmoid*. The disease had very slowly progressed, but the patient himself had kept in very fair health. Dr. THOMAS BARR: A young man whose auricle had been almost completely torn off in an accident, with the result that it became permanently displaced forwards, and the meatus occluded. Two years later a thin fetid fluid began to escape from a minute opening behind the auricle, and after five years, during which he had had attacks of pain, vertigo, and vomiting, it was thought desirable to perform a radical mastoid operation. Dr. J. GALBRAITH CONNAL: (1) A case in which acute middle-ear suppuration had been followed by a *Bezold's mastoiditis*, from which a pure culture of streptococcus was obtained. (2) A patient, a coal-miner, whose tympanic membranes were of a dark blue colour. Dr. KERR LOVE remarked that it was an interesting speculation how far dust might be a direct factor in the causation of adhesive processes in the middle ear. (3) A man who, when boxing, received a blow on the larynx causing swelling of the inside of the larynx on the left side. The cord was more or less fixed, and there was severe hoarseness. The condition was gradually passing off. The thyroid cartilage was not fractured. Dr. H. WHITEHOUSE: A woman of 39, with *Epithelioma of the hypopharynx*. Dr. LINDSAY HOWIE: A man with a *Thyreoglossal cyst*, the size of a pigeon's egg, which had been present since childhood. Dr. BROWN KELLY: (1) A man with *Endothelioma of the maxillary antrum*, and (2) a man suffering from *Tuberculosis of the nasal mucous membrane*, chiefly in the region of the posterior part of the septum and of the middle meatus. Drs. BROWN KELLY and Dr. J. F. SMITH: Some cases of *Ozaena* treated by vaccine of Perez's bacillus. Though relapses had occurred the vaccine seems to have a specific action, and to be of more value than any of the multitudinous methods which have been used in the treatment of this affection. Dr. JAMES ADAM: A case of *Malignant disease of the hypopharynx* and ostium of the gullet in which apparent cure had taken place under radium. Dr. LOGAN TURNER, who had seen the patient before the radium treatment was commenced, was inclined to doubt the diagnosis. One well-known pathologist had described it as definitely malignant, but another declared that he could not so describe the portion submitted to him. There was now no trace of growth to be seen. Dr. KERR LOVE reported two cases of *Sudden non-syphilitic deafness* in young children, and emphasized the importance of beginning the teaching of lip-reading to such children while they still had some speech power themselves. Dr. W. S. SYME: (1) A patient in whom no recurrence had taken place after an operation nine months ago for *Primary malignant disease* (endothelioma) of the mastoid. Pain was the chief symptom; there was no aural discharge. (2) A patient on whom *Killian's frontal sinus operation* had been carried out. At the operation a very large and diseased fronto-ethmoidal cell was found, extending much further outwards than the floor of the sinus, a condition which, as Dr. LOGAN TURNER remarked, made it impossible that intracranial treatment could have been successful. A fortnight after operation tenderness with some oedema showed itself over the left side of the forehead well beyond the limit of the sinus, and the temperature rose to 102.8° with oscillations, and the patient complained of shivering. It was feared that osteomyelitis of the frontal bone was developing. In two days, however, the condition subsided, and the patient made an uninterrupted recovery. (3) He also reported a case of malignant disease of the ethmoid and antrum, with no recurrence after five years. Mr. T. K. DALZIEL showed a patient on whom he had operated for *Tuberculous glands* in the anterior mediastinum, causing severe pressure on the trachea and bronchi. The sternum was removed, a small portion of the upper part only being left to maintain the shoulder girdle. The base of the heart and the large vessels were exposed, and a large tuberculous abscess found beneath the arch of the aorta. Tuberculous material to the amount of about half a pint was removed, to the great relief of the patient, who appeared before to be *in extremis*. The speaker said he had operated on two similar cases with satisfactory results.

Reviews.

CARDIAC DISORDERS.

THE *Diseases of the Heart*,[1] by Dr. JOHN COWAN, is, as the author states in his preface, "an attempt to review the whole subject in the light of recent advances, and to present to the practitioner the results which have been attained, and their bearing upon the practical work of diagnosis, prognosis, and treatment, based in the main upon the author's personal experience." In view of the vast amount of work that has been done of late in this branch of medicine, the project is ambitious; but taking the book as a whole, it would be difficult to find a better balanced or saner presentment of the subject. The first chapter is devoted to the pathology and microscopic anatomy of the myocardium; it is followed by chapters dealing with the pathology, symptoms, and treatment of diseases, the arteries, including one by Dr. Arthur J. Ballantyne on ocular manifestations in arterio-sclerosis. Dr. Cowan insists on the importance of distinguishing between two main groups of arterial disease: (1) The diffuse form, arterio-sclerosis, and (2) focal lesions, classifying under the latter head infective lesions, atheroma, mesarteritis, endarteritis obliterans and medial calcification. Numerous blood-pressure charts are given, and frequent reference is made to the value of the information furnished by observation of the blood pressure, as well as to what is, perhaps, equally important, its limitations. Treatment is fully dealt with, and the sound, practical, as well as scientific, physician is apparent in every line. A discussion of the myogenic theory and the interpretation of polygraphic curves is followed by a chapter from the pen of Dr. W. T. Ritchie on the electro-cardiograph. This, though

[1] *Diseases of the Heart*. By J. Cowan, D.Sc., M.D., F.R.F.P.S. With chapters on the Electro-cardiograph by W. T. Ritchie, M.D., F.R.C.P., and the Ocular Manifestations in Arterio-sclerosis by A. J. Ballantyne, M.D., F.R.F.P.S. London: E. Arnold. 1914. (Demy 8vo, pp. 448; 199 figures. 15s. net.)

excellent as far as it goes, is too short and sketchy to be of much value to any one who has no previous acquaintance with the subject. As this method of investigation is becoming increasingly important, it seems a pity that more space was not devoted to it. While the various arrhythmias—such as extra-systoles, coupled rhythm, auricular fibrillation, and the like—are adequately described with illustrative cases, one cannot help feeling that, had a discussion of appropriate electro-cardiograms been incorporated in each section instead of only in the case of auricular flutter, the understanding of these conditions would have been simplified. A chapter is devoted to the description of certain cases which the author considers to have been due to the stimulus for contraction arising in the vicinity of the *a-v* node, and which he hence classifies as due to nodal rhythm. They are quite unlike the cases originally described by Mackenzie under the same name which are now generally considered to have been examples of auricular fibrillation. The main point upon which Dr. Cowan relies for his diagnosis is, that in jugular tracings the *a-v* interval measures 0.10 second or less. "In all six cases the *a-v* node was involved in an acute inflammatory reaction." The tracings given are not absolutely convincing. The later half of the book consists of an account of endocarditis, the various valvular lesions, pericarditis and adherent pericardium; the signs, symptoms, diagnosis, and treatment are dealt with in a thoroughly practical and readable manner. In the description of aortic regurgitation it is stated that the diastolic murmur "may be audible all over the chest, and even on auscultation, over a large artery like the femoral artery in Hunter's canal. As a rule, this murmur of Duroziez is absent, but it never occurs in absence of aortic reflux"; it is a little difficult to understand what is meant by this statement, for what is usually known as Duroziez's murmur is not the diastolic murmur produced at the aortic orifice, and audible in the chest and possibly in the large arteries, but a double murmur produced in the artery at the site of pressure when the artery is narrowed by pressing on it with the stethoscope, and this murmur can be heard by a skilled observer in the great majority of cases of aortic regurgitation. In the chapter on pericarditis the obliteration of the area of dullness known as Rotch's notch is not alluded to as a sign. The consistent use of the word "spit," instead of "expectoration," makes some sentences sound rather curious to Southern ears. The book is well printed and the illustrations are good.

Dr. THOMAS LEWIS'S little book, *Clinical Electro-cardiography*,[2] is an excellent summary of the present state of knowledge of the subject. The figures are admirable, and the descriptions of the various curves and what they signify leave little to be desired. He states in his preface that the book is intended as a supplement to his little work *Clinical Disorders of the Heart Beat*, but it is really an independent treatise which can readily be followed by any one unacquainted with the other book. In the very brief historical note with which the first chapter opens the demonstration in 1856 by Kölliker and Müller of the generation of electric currents in the contracting heart is alluded to, but no mention is made of Waller's work, which was certainly a landmark in the subject. The normal electro-cardiogram is first described, and thereafter certain rhythmic but anomalous forms are discussed, including those variations which are thought to indicate right and left ventricular hypertrophy. There then follow descriptions of the electrical signs of heart-block, premature contractions, paroxysmal tachycardic auricular flutter and auricular fibrillation. Two chapters are devoted to sinus disturbances and the less marked electrical phenomena of certain valvular lesions. A perusal of the book will convince most readers that the author is justified in his claim that "there are certain abnormal types of heart action upon which other methods are almost, if not quite, silent; knowledge of these conditions is the almost exclusive possession of electro-cardiography."

It is not easy to see why the book on *Arterio-sclerosis*[3] by an American physician, Dr. BISHOP, was included in the series of "Oxford Medical Publications." The author's connexion with Oxford seems vague, and it is rather unusual to find that in a work of 379 pages of text no fewer than about 148 are within quotation marks. The author considers that arterio-sclerosis is really a disease of the cells of the whole body, but the circulatory system pervading every part of the body more than any other, is the one that shows the most conspicuous results of the damage that really begins in the ultimate cells. He believes that arterio-sclerosis arises when the cells of the body become sensitive to particular proteins, and that these proteins create irritation—something in the nature of a mild anaphalaxis. We should try and find what the particular protein poison is in any case and withdraw it from the dietary; but as this usually cannot be done, a "few protein diet" is recommended. This consists of a dietary from which all meat food, eggs, fish, and stock soups are removed, the protein required being supplied in the form of cheese. Thirty-four pages are devoted to reprinting extracts from a *Bulletin* of the United States Department of Agriculture on the merits and methods of cooking American cheese. There are several unsatisfactory polygraphic tracings which perhaps it would have been wiser to omit.

[2] *Clinical Electro-cardiography.* By Thomas Lewis, M.D., D.Sc., F.R.C.P. London: Shaw and Sons. 1913. (Demy 8vo, pp. 128. 5s. net.)

[3] *Arterio-sclerosis; a Consideration of the Prolongation of Life and Efficiency after Forty.* By L. F. Bishop, A.M., M.D. (Oxford Medical Publications.) London: H. Frowde; Hodder and Stoughton. 1914. (Demy 8vo, pp. 393; 25 figures. 10s. 6d. net.)

ACUTE ABDOMINAL DISEASES.

WE must begin with an expression of regret that this notice of *Acute Abdominal Diseases*[4] by Mr. JOSEPH E. ADAMS and Dr. MAURICE A. CASSIDY has been unduly delayed, for it is a very excellent work which will be most useful to the profession. It is the result of the collaboration of a physician and a surgeon, and its great merit probably is traceable to that fact. The origin of the book dates to the time when the authors were respectively resident assistant surgeon and resident assistant physician in St. Thomas's Hospital, and it contains the results of their experiences of the very many cases of acute abdominal disease with which they had to deal. Most books deal with one point of view, the surgeon's of late years markedly predominating. This book endeavours to "discuss, compare, and contrast all the various acute diseases and injuries to which the abdomen and its contents are liable." For convenience of narration the authors preserve the account of each disease separately. As an example of this treatment intestinal obstruction may be quoted. It is regarded as an acute abdominal disease, and fourteen varieties of obstruction are discussed in detail. This plan necessarily results in repetition, but this is not a serious fault, as the desire is to show how different conditions give rise to the same congeries of symptoms, and how an accurate diagnosis may depend so much on close sifting and winnowing of the facts and fancies of the patient. The authors urge (and we think rightly) the great importance of careful inquiry into the history of acute abdominal cases. Accuracy of diagnosis in very many cases depends on this careful inquiry. Exploratory operation should not, so frequently as we fear it does, constitute one of the means of diagnosis.

Readers will find in this work many opinions more or less contrary to general teaching. One example may suffice. In discussing haemorrhage from peptic ulcers the authors express the belief that the prognosis of gastric or duodenal haemorrhage is more serious than is usually taught. Textbooks mostly tell us that bleeding from a gastric ulcer never kills. But in St. Thomas's Hospital, in the years 1909 and 1910, no fewer than 17 cases died from haemorrhage. Much depends on the age of the patient: over the age of 30 it is a "dangerous and often fatal complication."

We observe that the authors favour operating in acute abdominal cases in patients' own homes, unless they belong frankly to the hospital class. There is no reason why any room in a cottage or flat of moderate size should not be very quickly converted into a suitable operating room, and even extensive operations may be quite successfully performed if surgical cleanliness is observed, and if

[4] *Acute Abdominal Diseases, including Abdominal Injuries and the Complications of External Hernia.* By J. E. Adams, M.B., M.S.Lond., F.R.C.S.Eng.; and M. A. Cassidy, M.A., M.D., B.C.Cantab., F.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1913. (Med. 8vo, pp. 581; 38 illustrations. 12s. 6d. net.)

reasonably good light, space, and assistance are available. Patients suffering from acute abdominal conditions bear very badly the turmoil and excitement and jolting entailed by removal from their own homes to nursing homes.

There are some details in the work which the authors might reasonably expand. The occurrence of femoral thrombosis is rather summarily dealt with; we should have liked to read more about its frequency, its localization on the left side, its presence as a sign of a minimal infection. Then the chapter on acute dilatation of the stomach is indefinite, but this may be due to the imperfect state of knowledge of the affection; the very large number of causes given suggests that much more information is needed. The only other omission we have been able to find is that of any reference to the pain in the shoulder so frequently complained of in perforated duodenal and gastric ulcer—a valuable localizing sign.

The style of writing is facile and pleasant, the object of the authors being clearness and conciseness consistent with sufficient detail. We note that the word "surely" occurs frequently in emphasizing points and enforcing argument. A prominent publicist recently said that "surely" was no argument. Wherever it has occurred in the text we have observed that the force of the sentence is as great when it is omitted. This book is a piece of excellent, painstaking, successful work, and will be welcomed by surgeons and practitioners alike as a reasonably complete account of the subject.

VENEREAL DISEASES.

THE main title of Dr. GOUGEROT's book—"The Treatment of Syphilis"[5]—gives an inadequate idea of its contents. The subsidiary title—"The indispensable in syphilography"—is more descriptive, for the book is a compendium of modern syphilology, and includes besides a detailed description of all forms of treatment, chapters on microbiology and serum diagnosis, on the systematology and differential diagnosis of all the various lesions produced by syphilis, also on the medico-legal and sociological problems which are the outcome of syphilitic infection. The book is based on a series of lectures delivered by the author at the St. Louis Hospital, Paris, and is consequently somewhat dogmatic in tone, but its teaching is essentially sound and practical, and all the subjects are dealt with in a clear and masterly manner. A good deal of attention is paid to the question of professional secrecy. As regards treatment, Gougerot—a disciple of Gaucher but not a biassed one—is by no means in favour of salvarsan, although he gives detailed descriptions of the various modes of administration of this drug. He remarks that "the fundamental treatment of syphilis is, and will always remain, mercurial treatment, associated or not with potassium iodide and arsenical preparations. . . . The new preparations of Ehrlich, 606 and 914, should only be employed in special cases, and even then they should be associated with mercury." This restriction is also applied to Mouneyrat's new preparations, galyl and ludyl. Gougerot gives an excellent summing-up of the case for salvarsan, and points out that rapid disappearance of the lesions of syphilis by no means signifies cure of the disease. He attributes most of the accidents and deaths after salvarsan to arsenical poisoning. Of the various methods of mercurial treatment, Gougerot prefers soluble injections (biniodide, bromide, salicyl-arsenate) in ordinary cases, intravenous injections of cyanide in urgent cases, and calomel injections in rebellious cases. He draws attention to the importance of sulphur as an adjunct to mercurial treatment, and to the beneficial effects of iodides in all stages of syphilis. As regards the duration of treatment, he thinks four years should be the minimum period, and that if relapse occurs the period should be begun again. He advises four years' mercurial treatment after apparently successful abortive treatment by any means, salvarsan or other, and that when salvarsan is given it should be both preceded and followed by mercurial treatment. He regards salvarsan, neo-salvarsan, galyl and ludyl as accessory drugs to be used only in certain conditions, such as cases resistant to mercury and iodides or constantly recurring during their administration, malignant syphilis, and early chancres with a view to abortion of the disease. If Dr. Gougerot is not an enthusiast as regards arsenical treatment, he is a firm believer in the value of the Wassermann reaction, of which, by the way, he gives the clearest description in the fewest words we have ever read. However, there appear to be discrepancies in some of his statements: for instance, on p. 455, he states that the reaction serves to regulate treatment in latent syphilis, both by anticipating relapses and by avoiding unnecessary treatment, but on p. 163 he says that treatment should be continued for four years even if the reaction is negative, and on p. 209 that relapses may occur with a negative reaction. As regards the technique of the reaction, he states that by means of Desmoulière's antigen of liver extract and cholesterin a positive reaction is obtained in 100 per cent. of cases of secondary syphilis and primary syphilis after the twenty-fifth day. Gougerot is anything but optimistic as regards the future of the syphilitic, and holds that both cure of the disease and re-infection are doubtful. He recommends two clinical and one serological examination every year for the rest of life! Concerning the marriage of syphilitics, he requires a period of four to five years since the chancre and a period of two years without symptoms in the case of a man; in the case of a woman periods of eight and four years respectively before giving permission to marry. The book is one of the best expositions of modern syphilology in any language, and certainly contains more information for its size than any other book we have seen. The illustrations, taken from the well-known models at the Saint Louis Hospital, are excellent, and the publisher is to be congratulated on producing such a book at the low price of 4 francs.

Dr. BALLENGER, on the other hand, is an ardent advocate of salvarsan, though hardly a convincing one. In the second edition of his book on *Genito-urinary Diseases and Syphilis*,[6] he remarks that "the danger (of salvarsan) is insignificant both as regards the mortality, neuro-recurrences, or injury to the various viscera or nervous system." However, the danger of a drug that has caused 300 or 400 deaths in the course of about three years can scarcely be regarded as insignificant, and it is premature to assert that there is no injury to the viscera or nervous system. Again, Dr. Ballenger refers to the "harmful effects of mercury," and states that these can be removed by salvarsan; yet, he also says, "if it is deemed necessary the good produced by salvarsan or neo-salvarsan may be supplemented by mercurial treatment." These statements are hardly consistent; if mercury produces harmful effects, why recommend it? As a matter of fact, harmful effects are nowadays seldom produced by mercurial treatment, and we fail to understand how they can be removed by salvarsan. Otherwise the treatment recommended in Dr. Ballenger's book is sound and practical, especially as regards gonorrhoea, regarding which he draws attention to the dangers of excessive as well as of insufficient treatment. He claims that in the early stage gonorrhoea can frequently be aborted by daily injections of a 5 per cent. solution of argyrol, which is retained for six hours by sealing the meatus with collodion. This method is not likely to succeed in cases not seen till after forty-eight hours after the commencement of discharge. He regards vaccines and "phylacogens" as useful adjuncts to other treatment, and prefers a mixed vaccine prepared from gonococci, *Bacillus coli*, streptococci, and staphylococci, with a view to combat secondary infections. Complement fixation is described and recommended as a test for the cure of gonorrhoea. In the treatment of gonorrhoeal pyosalpinx conservative methods are advised. Other subjects dealt with include urethral stricture, diseases of the prostate, bladder, testicles, kidneys, and their treatment. The author is of opinion that prostatic hypertrophy is produced by chronic inflammation set up by attenuated micro-organisms—gonococcus, *Bacillus coli*, staphylococci, etc.—and therefore recommends prophylactic treatment by means of mixed vaccines. A good description of the Wassermann reaction is contributed by Dr. J. E. PAULLIN. On the whole, Dr. Ballenger's book is to be recommended

[5] *Le traitement de la syphilis en clientèle: "L'indispensable en syphiliographie."* By Professor H. Gougerot. Paris: A. Maloine. 1914. (Cr. 8vo, pp. 499; 90 figures. Fr. 4; bound, Fr. 5.50.)

[6] *Genito-urinary Diseases and Syphilis.* By E. G. Ballenger, M.D., assisted by O. F. Elder, M.D. *The Wassermann Reaction*, by J. E. Paullin, M.D. Second Edition, revised. London: Butterworth and Co. 1914. (Med. 8vo, pp. 553; 109 figures. 16s. net.)

as giving useful advice in the treatment of most of the diseases and conditions discussed. Unfortunately there are many typographical errors, and in the copy received sixteen pages are entirely missing, being replaced by the repetition of other pages.

A useful guide to the treatment of gonorrhoea in the male is furnished by Dr. P. ASCH.[7] In his opinion the variations in the incubation period of gonorrhoea are much greater than is usually taught; in fact, he puts the limits at twelve hours at the one extreme and eight weeks at the other. He thinks that abortive treatment by strong solutions of silver nitrate or protargol not only often fail, but may produce much irritation of the mucous membrane, and even stricture. On the other hand, he is in favour of trying abortive treatment by means of irrigation and injection of argyrol, limited to the most anterior part of the urethra. For the ordinary treatment of gonorrhoea Asch prefers irrigation by Janet's method, using potassium permanganate at first, and argyrol or albargin later. The balsams and other internal remedies, he considers, have much more action when the posterior urethra and bladder are affected than in anterior urethritis. In very acute cases of prostatitis and epididymitis colloidal silver (electrargol) is recommended, by intramuscular injection in the former and by direct injection in the latter. As regards vaccine treatment, Asch recommends small doses of 3 to 5 million, gradually increased to 10 or 25 million. He finds this treatment useful in gonorrhoeal arthritis and acute epididymitis, less useful in acute prostatitis, and quite useless in urethritis. In the diagnosis and treatment of chronic urethritis he considers the urethroscope of prime importance. As a test for the cure of gonorrhoea, he prefers a provocative vaccine injection of 50 to 100 million, followed by urethroscopic examination, to the older methods of silver nitrate injection, etc. Detailed descriptions of urethroscopic treatment and dilatation by Kollmann's and Oberländer's instruments are given, but there is no mention of ionic medication or treatment by heated sounds. Perhaps the author does not regard these as sufficiently established forms of treatment. We can recommend the book to all those who have to treat gonorrhoea.

NOTES ON BOOKS.

THE interesting features of Dr. MURPHY'S *Clinics*[8] are still evident in No. 1 of the third volume. There are fourteen items and six of them deal with bone and joint operations. Many of the cases referred to have already been reported and the illustrations already published. These were shown in connexion with the clinics held during the Clinical Congress of Surgeons in November, 1913. The value of the present reports is that the histories are continued and in some cases completed. So that, while there is little that is new or striking in this issue, it is useful and merits careful study. We are more and more struck with the graphic style of the demonstrator, in which it appears as if he talked all the time the operation proceeded; no revision or dressing of the language is attempted. It is to this habit that we owe some rather extraordinary English, such as is found in this sentence from p. 11: "I have not compounded that fracture—I have not contacted anything, except the drill and the nail, with the line of fracture." An interesting photograph of the clinic on November 12th, 1913, forms a frontispiece. In this number also will be found "talks" on surgical subjects by Sir Rickman Godlee, H. J. Paterson, George W. Crile, and George E. Brewer, visitors to the Mercy Hospital for the Clinical Congress of Surgeons.

The introduction of the systematic teaching of personal hygiene into schools creates the necessity for textbooks to serve as a guide to the teacher and a reference to the children. The *First Book of Health*[9] is one of the responses to this new demand, and it comes from Texas. The authors state that in adapting the book to present conditions in Texas they have received help from the State Medical Association and the Dental Association. The book is essentially a children's book; it is simply, clearly written, and it is interesting. No medical or physiological terminology appears in its pages, except, of course, that terribly heavy word "abdomen" which appears to be a necessity nowadays. But why in the midst of all the short familiar English names for the rest of the parts of the body "abdomen" should be interjected passes understanding. Can it sound more decent than "belly," or does it mean anything different? No doubt some day a shrinking public will demand the expurgation of the vulgar "belly" from the Bible, Shakespeare, Milton, and such like giant works. The book is well illustrated, and the artist has shown considerable skill and not a little humour in his work. The figure of a man, in a smoking jacket, dosing over his paper in a comfortable cane chair, being attacked by myriads of little black devils, "germs that remind one of the mean dwarfs of our fairy stories," is enough to give any sensitive child a new form of nightmare, whilst a pencil point with germs thereon that might be cheese mites; and the picture of a child coughing, with the inscription, "In coughing, or even in talking, germs of disease may leap out of the mouth in drops of saliva," are calculated to complete the horror. Food, drink, teeth, clothing, endemic fevers, mosquitos, hookworm, Malta fever, vaccination, work and play, sleep, eyes, ears, alcohol, and tobacco, are all dealt with. But we find no mention of personal parasites. May be the flea, the bug, and the louse have not yet migrated to Texas. Happy land!

The new volume of the *St. Bartholomew's Hospital Reports*[10] is edited by Mr. MCADAM ECCLES, with whom are associated no fewer than five other colleagues. Nineteen pages at the beginning are devoted to interesting obituaries of the veteran Alfred Willett, and the Lycidas of the staff, as he is justly reckoned, Raymond Broadley Etherington-Smith. The statistical tables are of their usual excellence; indeed, increasing experience and the examples of Continental and American reports of similar character tend to increase the reliability of such tables year by year. The same may be said of the annual appendix, by Drs. Andrewes and Woodwark, to the catalogue of the museum. There are but seven original papers; three of the contributors have recently held the appointment of house-physician, and all the remaining five are on the staff. A joint production of Mr. Elmslie, orthopaedic surgeon, and Dr. Garnett Twigg on pes cavus as an initial sign of nervous disease is entirely based on work in the orthopaedic department. Dr. Twigg's observations tend to show that pes cavus is a deformity of neuro-muscular origin, and that progressive muscular atrophy of the peroneal type is a form of disease which produces it. The deformity and the disease which causes it are of such slow progress that observations over a very long period will be required to elucidate the problem; such is Mr. Elmslie's opinion on Dr. Twigg's analysis of twenty-two cases. Dr. Haldan Davis, chief assistant in the skin department, contributes some experiences with neo-salvarsan; it was first employed in that department in September, 1912, and Dr. Davis analyses the results of one year's work. All the doses, amounting to a little under one hundred, were intravenous, and the subjects were nearly all out-patients. Weintraud's syringe is now always employed in preference to Schreiber's, which was used at first. There have been no regrettable incidents, and, judged from a clinical standpoint, the results, Dr. Davis states, have been very good. Dr. Sladden's article on tests for pancreatic disease is of considerable importance. Dr. Thursfield speaks favourably of splenectomy in selected cases of congenital acholuric jaundice. Mr. D'Arcy Power's address on ulcerative colitis and its surgical treatment by appendicostomy, read at Düsseldorf last autumn, is published in this volume. He holds that the operation should be undertaken during the comparatively long period during which the ulceration is limited. Mr. Moreton, demonstrator of anatomy, furnishes a report of an important case in which Mr. Waring successfully ligatured the internal carotid artery for post-orbital arterio-venous aneurysm. Dr. T. H. G. Shore contributes a note on the blood in myelocytic leukaemia in relation to the prognosis of the disease, based on six cases in Drs. Herringham and Drysdale's wards.

[7] *Die moderne Therapie der Gonorrhöe beim Manne. Ein Leitfaden für Studierende und Ärzte.* Von Prof. Dr. P. Asch. Bonn: A. Marcus and E. Webers. 1914. (Med. 8vo, pp. 84; 25 figures. Mk. 2.60; bound, Mk. 3.20.)

[8] *The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago.* Vol. iii, No. 1. Philadelphia and London: W. B. Saunders Co. 1914. (Med. 8vo, pp. 190; 91 figures. Per year of 6 numbers, paper 35s. net, cloth 50s. net.)

[9] *First Book of Health.* A textbook of personal hygiene for pupils in the lower grades. By C. Hartman, B.A., M.D., and L. B. Bibb, B.A., M.D. New York: World Book Company. 1913. (Cr. 8vo, pp. 155; 122 illustrations. 35 cents.)

[10] *Saint Bartholomew's Hospital Reports.* Vol. xlix. London: Smith, Elder and Co. 1914. (Med. 8vo, pp. 222; 5 illustrations.)

NORTH MANCHURIAN PLAGUE PREVENTION SERVICE.

THE first series of reports of the North Manchurian Plague Prevention Service have recently been published by the Cambridge University Press in a volume of 187 pages.[1]

I. *The North Manchurian Plague Prevention Service.*

A memorandum on this service sets forth, among other matters, the objects of the service, which are stated to be: (1) To devise means to prevent the recurrence of plague in North Manchuria, and to stamp it out on appearance; (2) to give effect to the recommendations of the Mukden Plague Conference, 1911, by making researches into the origin and cause of pneumonic plague and its relation to marmots and other animals; and (3) to introduce general sanitary measures in the regions mentioned, and, wherever possible, to treat and study local diseases.

II. *Summary of Annual General Report.*

The chief points noted in this summary are: (*a*) The establishment of the central office for the transaction of the administrative work of the service in the Customs Buildings, Harbin; (*b*) the opening of the Harbin Isolation Hospital for treatment of patients on December 16th, 1912; (*c*) the completion and opening of the Lahasusa and Sansing Hospitals; and (*d*) the progress towards completion of the Taheiho Hospital.

III. *Investigations into the Relationship of the Tarbagan (Mongolian marmot) to Plague.*

Tarbagans (*Arctomys bobax*) were collected for examination at Manchouli and other suspected stations, but no plague infected animals were discovered. The tarbagan is a member of the group of simple-toothed rodents which includes squirrels, rats, and mice. The average length of the adult varies from 15 to 18 inches, while the weight varies from 9 to 12 pounds. In the tarbagan regions these animals are very numerous, and the characteristic mounds or "bootans" in the neighbourhood of their burrows are everywhere present. There are two seasons for tarbagan hunting—spring and autumn. The spring fur is the lighter and more valuable. This species of marmot has a very wide distribution in the Old World, extending from South Poland and Galicia to Northern Mongolia, North-West Manchuria, and Kamtchatka, and as far south as the Himalayas. A smaller species—*Spermophilus citellus*—is found in abundance in South Manchuria. The tarbagans collected were examined for parasites, which were found to be of two kinds: (*a*) A pectinated flea—*Ceratophyllus silantievi*, and a blood-sucking tick belonging to the genus *Rhipicephalus*. The fleas were found to bite man fairly readily, but no after-swelling or irritation was noted. The general belief among the delegates of the International Plague Conference at Mukden in 1911 was that there was a close connexion between the epidemic of plague in Manchuria and the tarbagan, but the conclusions of this report are that, though the tarbagan occasionally suffers from plague, its direct relationship to human plague may be considered negligible. It is observed that, though millions of skins are exported annually to Europe, no case of plague infection in human beings during the transit of the skins has been reported. Moreover, the tarbagan, unlike the rat, does not come into close contact with man. For many years plague has been endemic in Siberia, and was present in the Russian Ural district long before it appeared at Manchouli at the commencement of the great Manchurian epidemic.

It is not considered necessary or advisable to prohibit the trapping of tarbagans, but it is suggested in the report that the industry should be subjected to proper supervision and control, both to prevent extermination of the animals and to carry out inspection of the skins and disinfection (if necessary). Recommendations are also made suggesting the supervision of the overcrowded and squalid lodging-houses inhabited by the tarbagan hunters.

In criticizing these conclusions, which appear to be based on rather slender evidence, it must be borne in mind that the inquiry was conducted at a time when plague had ceased to be endemic in Manchuria, and that no conclusive facts are adduced to show that widespread infection with tarbagan disease did not exist at the time of the great Manchurian epidemic.

IV. *The Histology of Pneumonic Plague.*

No attempt is made to generalize as to the types of lesions met with in pneumonic plague, the material available consisting of fragments of heart muscle and liver, and pieces of lung, bronchial glands, spleen, and kidney from two or three cases; the examination of this scanty material does not appear to have thrown any new light on the pathology of pneumonic plague infection.

The histological examination of the heart, liver, kidney, and spleen appears to afford evidence of an extremely acute septicaemic condition, but the lung lesions were far less marked than expected, although the presence of lobular pneumonia was clearly indicated. Acute bronchitis accompanied by collapse of lung tissue and catarrhal pneumonia was in evidence, and many of the alveoli were emphysematous or distended with a coagulated albuminous fluid. No fibrinous coagulum, such as is met with in lobar pneumonia of pneumococcal origin, was, however, observed. No evidence of the fibrinous pleuropneumonia described by other authors was present in the specimens examined, and the authors suggest that the latter condition may indicate the presence of a primary pneumonia induced by massive infection, while the catarrhal pneumonia with bronchitis followed by oedema may be the result of a secondary pneumonia from septicaemic infection.

V. *Relapsing Fever.*

An outbreak of relapsing fever among the coal-miners occurred at Tongshan in the early months of 1913. Examination of the blood of several patients revealed the presence of *Spirochaeta recurrentis*, and intravenous injections of neo-salvarsan (one tube of dosage No. 5—that is, 0.75 gram for two patients) were given with markedly beneficial results; the temperature fell to normal and spirochaetes disappeared from the peripheral blood with great rapidity. A French arsenical preparation—arrhenal—was also tried but did not appear to influence the course of the disease to any extent.

Suggestions are made for improving the unhealthy surroundings of the mining population, and the erection of free public baths and the installation of a steam-pressure sterilizer for disinfecting vermin-infected clothing are included in the recommendations.

VI. *Investigations at Hailar, Manchouli, and Mukden.*

These investigations were carried out with the view of ascertaining whether the tarbagan flea (*Ceratophyllus silantievi*) was capable of carrying plague infection from an infected to a healthy tarbagan. In all twelve tarbagans were examined, having an average flea-count of 2½ fleas per animal. It was, however, found impossible to keep the fleas alive when removed from the host. An unidentified species of *Ceratophyllus* was found on eight *Spermophilus citellus* examined, giving a count of 4½ fleas per animal. It is proposed to continue the research this year and to devise a method for keeping the fleas alive for further investigation.

VII to XVI. *Administration.*

The remainder of the reports are concerned principally with administrative details, and include the quarterly reports and reports of the Harbin Hospital. No. VII describes the isolation camps of the North China railways, and No. X is devoted to a description of the Harbin Hospital. An interesting account of the Fish Skin Tartars, a fast disappearing race, is given in Report XIV.

[1] *North Manchurian Plague Prevention Service Reports (1911-1913).* Edited by Wu Lien-Teh (G. L. Tuck), M.A., M.D., B.C. London: Cambridge University Press. 1914. (Sup. roy. 8vo, pp. 187; 23 illustrations.)

ON the suggestion of the medical officer of health, a general campaign for the destruction of the house-fly has been approved by the St. Helens Town Council. The attention of the public and of dealers in articles of food will be drawn to the dangers arising from the prevalence of flies. An attempt will be made to check the breeding of flies in collections of horse manure and similar accumulations, and disinfection of middens and manure pits will be carried out. Fly papers will be provided free of cost to those persons who are unable to pay. The mayor (Sir David Gamble, Bart.) has offered a weekly prize to the school showing the best results in fly destruction.

MOTOR CARS FOR MEDICAL MEN.

By H. MASSAC BUIST.

LESSONS OF THE TOURIST TROPHY RACE.

WHILE watching the very careful practice and the actual race of two days for the Royal Automobile Club's Tourist Trophy in the Isle of Man last week, I think perhaps the most vivid impression made on my mind as to the utility of the business was conveyed by the performance of the standard D.F.P. machine, which is not a racing car; it is a fraction under two-thirds the maximum engine size allowed, and was handicapped by having axles taken off a larger standard model, so that it should conform with regulations as to track width; it was driven by Mr. Walter Bentley, who had never been in a road race before. It was one of only half a dozen machines that finished among the twenty-two starters on the 600 miles race, which it accomplished, nevertheless, at the mean speed of 48.38 miles an hour. When it is borne in mind that the last tourist trophy race was won at only fifty and a fraction miles an hour by a racing machine of nearly three times the engine volume, it will be realized that we are now arriving at the period when the small motor can be relied on not only to give the medical man regular service, but also to perform in such a manner that, though using a small engine, he is nevertheless not compelled to crawl about the country. In the course of his preparations Mr. Bentley, who had not the advantage of a factory behind him to build racing engines, tried on his own initiative to fit racing style pistons. But they broke, and therefore the standard sort, which in this case are proportionately light, were employed when making the performance to which I have referred. It was further notable for the fact that there was only one pause when driving from the dépôt to the starting line to replenish supplies at the outset of the second day's racing, so that no machine in the whole series engaged revealed such absolutely reliable running as this little touring car, the mean speed of which came within nine miles an hour of that of the winner.

FURTHER PROGRESS OF THE SMALL ENGINE.

This performance confirms my contention of a year ago that the Tourist Trophy Race, as well as this year's race in France for the *Coupe de l'Auto*, should have been for machines of 2,000 c.cm. (122 cub. in.) engine volume, because for years past very considerable attention has been given to the 3,000 c.cm. (183 cub. in.) engine size to the great improvement of what may be called the 12–16 h.p. size of car. Between these two sizes there is a sufficiently wide difference to represent a distinct class of car and public to be catered for. Hitherto nothing has been done to encourage the production of the 2,000 c.cm. four-cylinder car as a special type. Yet the whole demand is for this style of engine for a class of vehicle between a 21–25 cwt. motor car and the light car not exceeding 12½ cwt. or so. As it is, the *Coupe de l'Auto* regulations this year are for machines of 2,500 c.cm., the announcement being deliberately made that this step is a gradual come down to a 2,000 c.cm. race for 1915. Such a move is illogical, because if a race is to be of any use it should encourage the production of a fresh style of vehicle, which would mean that the offer is developing 2,500 c.cm. engines for one year only, and that all that work must be set aside the next year. Moreover, commercially, a 2,500 c.cm. engine is neither, fish, flesh, nor fowl. Such a car would probably only spoil the market for 3,000 c.cm. engine vehicles. The fact seems to be that those who organize motor competitions are not sufficiently in touch either with the demands of the public or with what it is possible for the motor engineer to accomplish, with the result that they have not had enough faith this year to realize what can be done by the 2,000 c.cm. engines. Mr. Bentley's performance in Manxland last week on the D.F.P., however, may be said to have educated those concerned in the course of the very first day's running, so that it may be taken for granted that next year we shall employ our races to encourage a new and distinct size of motor car proper (not a light car as such) by having a tourist trophy efficiency and reliability trial for 2,000 c.cm. engines. The country doctor needs cars of this size.

POINTS ABOUT MOTORS AND CHASSIS.

Let us now consider those machines which were built up to the Royal Automobile Club's engine volume of 3,310 c.cm. (201.90 cub. in.). Few of these engines were developing less than 70 h.p.; some were capable of developing over 90 h.p. Yet what are they in size? Only 10 per cent. larger than the £4 4s. tax 12–16 h.p. standard Sunbeam car, and 40 per cent. smaller than the 16–20 h.p. standard Sunbeam car. Nevertheless they were far too speedy for the full power to be used all round the course. It is a fact that the winner's speed up the most difficult climb of the circuit, from Ramsey to the Bungalow, was only two and a half miles an hour less than the mean speed at which the Sunbeam won the whole race. If we put it in another way, we find that if we were to take the average middle-sized touring car with four-seater body, rated by the maker at not more than 20 maximum h.p., and its complement of passengers, it would be possible to travel a greater distance round the course on the top gear than the drivers did in the race. This was because they could not use their full power for more than very brief spells—a minute at most—on the more level ways. Consequently it was purely a race of brakes and acceleration. That was why so much of the driving was done on the indirect speeds or lower gears. Where the ordinary tourist would pass easily round a fluent curve on the top speed, the racing driver would have to apply the brakes violently on approaching the curve, which at his speed would become a sharp turning. Just before negotiating it he would slip in the third speed so as to accelerate again as quickly as possible on getting round the bend. It is here that the chief value of the race for the medical man comes in, as a test of chassis strains and stability. True, gears are not as troublesome as they were wont to be, but even now the mechanism can be submitted to very severe strain when changing at 20 or fewer miles an hour. Imagine, then, the strain of changing speed with the engine turning at 3,000 or more revolutions a minute, and developing its maximum power, which is let in with a jerk, for the clutches had to be fierce, because the sheer brute force of the drive is often employed to steady a car when it has started skidding and bouncing after taking a corner. Gears have to be made much easier of manipulation, and vastly more durable, and a car frame has to be made so stiff that there shall be a minimum of distortion under the extraordinary variety of strains to which it is submitted.

THE QUESTION OF BRAKES.

The brakes are of such wide diameter as to look like small wheels. Perhaps the most valuable lesson of this race will be to cause European manufacturers to standardize brakes of much larger diameter and more ample contact area. Europe has lagged behind the best class of American motor car production very appreciably in the matter of amplitude of brake area, probably because we have not had to use the majority of our cars in regions like the Rocky Mountains, where the most intelligent automobile engineers of the United States have learnt this part of their business. But the Isle of Man race has taught alike those engaged in it and those members of the industry who shunned the ordeal, not only the necessity for larger brakes, but also the refinement and proportional saving of wear that can be gained for the touring car by using them. The way to get a quiet brake and one that does all the work at present done by the ordinary touring type with a vastly greater amount of ease and less wear is to build it large, so that a much lighter contact achieves the same result, and in much more refined fashion, therefore, to the saving of tyres. In addition, of course, in emergency you can use your larger and much more powerful brake until the contact is quite as fierce as is possible to achieve with the ordinary touring type to-day; in other words, by the employment of these larger brakes you have also a much larger margin of safety.

As for engines, the race has gone to a racing type not yet adaptable to touring car service by reason of its inherent inaccessibility, and the damage to the car that would result if a valve broke. But inasmuch as the Sunbeam Company proved in 1912 and again last year what it could do with the ordinary poppet valve type of engine when submitted to the ordeal of racing, this latest success with the overhead form of poppet valve is a

remarkable revelation alike of versatility and correctness of design, and of accuracy of workmanship, for I saw the machines being produced at the factory at Wolverhampton early this year in the same shops and with the same tools employed for manufacturing the standard cars of the make.

The Development of the Light Car Movement.

While the chief lessons of the Tourist Trophy Race for the medical man are the facts that the 12–20 h.p. size of car has now been demonstrated capable of greater feats of reliability, endurance, and efficiency than was possible to accomplish by machines of five times the volume only three or four years ago, and that for the reasons set forth the motor competition organizing bodies have no option but to encourage the development of a size of motor of only two-thirds the volume, yet if we study what is going on behind the scenes in the matter of light car production at the moment, there is revealed something of very material interest to the medical man. One firm, which I am not at liberty to name at the moment, but which has achieved most remarkable successes in light car trials this year with two-cylinder machines, has a four-cylinder model ready to put on the market next year. I have seen three specimens touring about. From the exterior very few people guessed there were more than the ordinary two cylinders under the bonnet, though nearly everybody expressed amazement at the way they climbed the hills. This is the advantage which comes from the engine that develops its power more smoothly by reason of the greater number of cylinders, and which has more power, though from the manufacturing point of view it will not be necessary to charge many pounds extra for the product. This and other activities in other directions go to indicate that any time from next autumn onwards it will come to be generally recognized that light cars, as distinct from cycle cars, will be nearly all four-cylinder, water-cooled machines, no matter what their price.

Four-cylinders and Hardier Motors.

The competition regulations, too, whereby makers are now allowed by Royal Automobile Club rules to construct their light car engines up to 1,400 c.cm. is proving very useful to the industry. Already not a few constructors are finding that their light cars with engines of about 1,100 c.cm. are giving a certain amount of trouble in the hands more particularly of the more sporting section of the public. This is not because they lack efficiency, but for the very reason that they possess it. We must have in mind that a great number of motor cyclists are taking to using light cars, and the pursuit of their old sport has led them to hunt their engines tremendously, which they can afford to do when they have a belt form of drive that can hide a multitude of sins by slipping. But when these folk start hunting four-cylinder engines fitted to machines with gear-boxes and live axles, and revel in the high efficiency they manifest, they forget to give those little motors any relief. The medical man can afford to smile at this sort of thing, because the trouble such abuse occasions is in the end all to his gain, in that as fast as the public learns to destroy the product, so quickly must the manufacturer learn to make it one degree hardier so as to be ahead of the user. The great problem of the moment, therefore, is for the light car engine builder to make a motor which the user of too sporting a turn of mind cannot hunt to destruction. He finds the solution of the problem in the regulation whereby he may build for competition purposes up to 1,400 c.cm. This gives him the opportunity of supplying a notch or two more power in relation to chassis weight, which will please the public purchasing in 1915, and at the same time he can afford actually to lower the efficiency of the engine by reason of its appreciably increased size, so that even should it be hunted it will not be submitted to proportionately the same strain as the proportionately more efficient and smaller 1,100 c.cm. motors. Of course, one of the penalties of merit in motor construction is that the more efficient the product is made the nearer necessarily must it be working to the point at which breakdown must occur. Happily, improvements in steels and in design year by year enable that point to be moved further and further away, as is proved by the fact that toy scale motors are now giving better service than cumbrous ones only a few years ago.

The Developed De Dion Doctor's Model.

It is only a few years since the one-cylinder De Dion cars, with their characteristically shrill note when the engine was accelerated to about 1,800 revolutions a minute, were doing yeoman service in providing the medical man with reliable, low-powered, long-wearing and comparatively cheap cars. Such is the progress of motor construction, however, that to-day for practically the same price the firm markets a four-cylinder, water-cooled nominal 8–10-h.p. machine, which is sold as a chassis with tyres, pump, jack, and tool kit, for £221, and which can be provided with various types of coachwork according to requirements, working out at a total price of £275 upwards. I have been driving one of these cars for about 400 miles, over hilly country, with a four-seater body, and was not accompanied by any one who knew anything at all about the machine. The aim was to let trouble occur if it was likely to do so, and in any case to find out for one's self precisely what amount of attention the vehicle needed. We went at a good average speed, for the work was mainly made up of two journeys, each of 160 miles, both of which were non-stop, save for the fact that we called a halt for fuel. The petrol consumption worked out at approximately 30 miles to the gallon—up hill and down dale—and in the long runs the car was not allowed to crawl and a good deal of the roadway was of the cross-country sort.

The method of control is not that which generally obtains. On the contrary, it is almost directly the opposite, for instead of having a means of accelerating, the foot-brake pedal is used to decelerate. This means that the throttle lever is set at the maximum required, and practically the car is driven on the foot-brake all the time. This, combined with the absence of a gate form of quadrant for the change-speed lever to work in—there is, instead, a straight-through quadrant—was a little strange at first, but it is interesting to note that we had not gone one hundred miles before all the movements were made as automatically as though one had never driven any other type of car. If it is possible for one to change one's habits in so brief a time, the conclusion appears to be that for one coming fresh to motoring, and not knowing any other system of control, this must be a very easy one. It is rendered the simpler by reason of the disc form of clutch used, with which it is practically impossible to make a really bad engagement.

A Machine needing a Minimum of Attention.

The great point about the car's conduct in use is its sturdiness. Throughout my trial of it nothing came loose, despite the fact that it was rattled over some really indifferent roads. It must also be very light on tyres, as well as fuel. In the matter of oiling, there is nothing to look after save in the morning to lift out, by a single turn of the hand, a tell-tale measure like a sort of skewer. This ordinarily projects into the base-chamber. At the bottom end there is marked an oil gauge. It is as well on first lifting this out to wipe it clean, then plunge it back before taking the reading. There ought to be between 1 and 1½ litres in the base-chamber for splash lubrication, so all that has to be done is to pour in however much lubricant the tell-tale may show to be necessary. Further, this chassis is not replete with a great number of greasers for the springs and so forth. Though I did not turn a greaser of any sort during the whole of my use of the car, it did not appear to need anything either during my work with it or on handing it over at the finish. In small car construction this absence of parts that need constant lubrication by manual attention, and the absence of the development of looseness, are points of the utmost value.

As for the powers of performance of the machine, apart from the economical aspect, its qualities of acceleration are the first feature that will appeal to the medical man. It can slow up in traffic until it comes almost to a standstill, then, without slipping the clutch or causing the engine to pre-ignite, the raising of the brake pedal is sufficient to give it as much throttle as has been set, and the car will accelerate again. In the open country it will bowl along merrily by the hour at thirty miles an hour. It can, of course, be accelerated beyond that, though that may be taken as its best speed on clear country roads, and it works economically at that rate of travel.

Little Need to Change Gear.

The car is quite distinctive when it comes to hill climbing. I know of no make of machine which provides more surprises in the way of revealing its ability to keep on the direct drive on an up-gradient. At the points where, in the ordinary way with the average car of any good make, it would be necessary to drop into a lower gear, with the De Dion it would be quite wrong to do so, because for this machine that is really too early a stage to make such a change. The consequence is that for the first day the driver is encountering nothing but surprises at the number of hills he surmounts on the through drive without change of speed at all. That is a matter of some moment to the medical man. It means that he saves himself fatigue in driving. A small car that calls for a great deal of gear changing is a very tiring machine to handle, the amount of effort scarcely being realized until the end of the day. Besides, the more often gear is changed the more often are tyres and chassis jarred, because, be the driver never so careful when on an upgrade, he must be fairly prompt about the business, or he will bring the car practically to a standstill. The most memorable feature of the De Dion is its habit of losing engine revolutions on a hill climb to a certain pitch, beyond which most gradients seem powerless to bring it, and it will take the full throttle at these slow revolutions without any pre-ignition or developing pronounced vibration.

In fine, this pioneer firm has produced in the four-cylinder 8 to 10-h.p. model a car preserving all the characteristics and hardiness which have made its repute world-wide since pioneer days, with the desirable latter-day features in the form of four cylinders cast on the block principle and giving the necessary flexibility and power in very small compass, so that though the chassis is a handy size, it affords more than the ordinary proportion of space for the accommodation of coachwork.

THE TEACHING OF PATHOLOGY.

An Edinburgh Plan.

The recent appointments of Dr. Lorrain Smith as Professor of Pathology, of Dr. James Ritchie as Professor of Bacteriology, and of Dr. Theodore Shennan as University Lecturer on Morbid Anatomy, have made it possible to introduce novelties in the modes of teaching pathology in the University of Edinburgh. Our correspondent has been favoured by a demonstration and explanation by Professor Lorrain Smith of the changes which have been wrought in the portion of the subject which is specially under his care.

To understand the *rationale* of the new method it is necessary to remember that in Edinburgh pathology is, as it were, one of the middle subjects in the medical curriculum, lying, along with materia medica, between physics, botany, zoology, chemistry, anatomy and physiology on the one hand, and medicine, surgery, midwifery, the specialities legal medicine and public health on the other hand. Hitherto it has been customary to teach pathology rather on the plan of the former than of the latter group of subjects. Different morbid processes have been described in order as they affect various organs and tissues, or the separate systems have been taken up and the pathological changes peculiar to them set forth and illustrated. The methods of teaching, both in the practical class and in the theoretical lectures, have evidently been dominated by memories of chemistry, anatomy, histology, and physiology; and the result has been that, when the student has come to try to apply his knowledge of pathology to medicine and surgery and the other final subjects, he has had to rearrange much of his mental equipment, looking at pathology from a new viewpoint, and suffering in some measure from the confusion associated with such a change. Especially at the bedside he has found his acquaintance with pathology and morbid anatomy singularly unhelpful. Much time has thus been lost before the student's store of accumulated knowledge of pathology has been made available and useful for the understanding of the cases which have come to him in the hospital and dispensary.

Professor Lorrain Smith now teaches pathology with his eye, so to say, upon the clinical case of the future—upon the hospital patient of the immediate future and upon the private patient of the student's more distant future. He draws the clinical method back to the study of pathology and morbid anatomy, and deals not with isolated organs and tissues, not with incidents in great dramas of disease, but with individual cases as examples of the relationship existing between the morbid anatomy of one organ and that of another, and of all the others, with clinico-pathological ensembles, with whole dramas from the first stirring of the elements of the plot to the fall of the curtain upon death or recovery. If death be the result, every lesion can be shown, its age-relationship to every other lesion can with some degree of accuracy be settled, and unexpected side-effects, sequelae, and complications demonstrated and explained. He teaches the student to look at the "altogether" of the case from its pathological aspect, and then he makes him correlate the pathological findings with the clinical history and development of the symptomatology as revealed in the patient's record. It is pathology with fresh interest put into it; the dead organs live again in order to tell how they died and what killed them. It is theoretically admirable, it may be said, but is it practicable? Will it work? Professor Lorrain Smith believes it is practicable and says it has worked, and he is able to furnish proof.

Here, for instance, are a series of specimen jars, each containing one or more organs or parts of organs; in them are all the parts which are of pathological importance in the setting forth and understanding of a chronic case of heart disease. All the organs involved are here, and they are all together; it is the *ensemble* of a case of mitral stenosis from the beginning in endocarditis to the termination long afterwards in death; it is the journey to the grave with the lesions in the organs taking the place of the inscriptions on the milestones; it is rather gruesome, it is realistic, it is almost horrible, but, above all, it is interesting, and it is the interested student who learns and who learns both surely and quickly. In the first jar is the portion of the heart showing the constricted mitral, in the same jar is the thrombosed left auricle; in it, too, are emboli in various organs and old and recent infarcts; in the lowest part of the vessel is the heel of the patient with a patch of necrosis on it—a most significant incident in the drama. In another jar are preparations showing thrombi in the iliac and femoral vessels, and in the muscles of the leg; in another are infarctions in the lungs, and in yet another are various parts of the brain showing recent infarctions there. All the organs show chronic venous congestion. Another set of jars contain the pathological stages of a case of malignant disease of the stomach and its extensions; another set shows tuberculosis in its ensemble, with amyloid complications, in a case of phthisis. The very arrangement and order in which the organs are grouped in the jars is an easily remembered lesson in causation and progress, in etiology and prognosis.

It may be asked, however, how the student or the class of students is brought into the teaching scheme. The answer is satisfactory. The clinical history of the case from which the specimens have come is first stated briefly, and in more or less simple language such as the patient himself would employ; in this way the student is not overburdened with medical details, and need not even be acquainted with the special terminology of the subject. A perfectly fair criticism may be advanced here; it may be said that the student taking out pathology has as yet very little knowledge of medicine, and can hardly profit fully from the clinical history. This is true, but it is an objection which already has less force in Edinburgh than it had a year ago, for now (see the JOURNAL for May 9th, p. 1041) medicine, pathology, and morbid anatomy are taught in the same Annus medicus (the third), and by the time the student has got well into the study of pathology he already knows a good deal of medicine.

Having mastered the elementary facts of the clinical history, the student is next led to the specimens, and is supplied with the notes of the *post-mortem* examination. Each organ is described, and the changes in it explained, and he verifies the statements on the organs and tissues. He is then taught to summarize the clinical and pathological facts, he is shown how the morbid anatomy supplies the clue to the understanding of the clinical incidents

and symptoms, to the distribution of the lesions, to the cause of death, and to many other important matters which vary to some extent with each case and each disease. He is like a geologist reconstructing the history of past ages from the study of the rocks in their strata: but he has a much easier task than the geologist, for he has some certain knowledge of the past. When the student is ready for examination, he will be given the summary of the clinical history and the mounted specimens, and will be asked to write his summary and draw his conclusions for himself. Our correspondent saw some of these "examination papers," and was much impressed by the evidence they supplied of the real understanding of the case which was evidently in the student's mind when he wrote; it was real knowledge that he possessed, not words crammed in without meaning and unintelligibly forced out again.

Many questions arise. For instance, it may be asked whether the system can be applied to systematic lectures as well as in the practical pathology class. Professor Lorrain Smith thinks it can. Of course, every now and again a digression will require to be made. For instance, fatty degeneration in an organ or the waxy change in a tissue will lead to a description of these morbid alterations and their meaning, but the lecturer will always return to his main theme, and sometimes he will postpone the full account of a lesion till another case-ensemble is being dealt with. Another question may be put: The system may work very well with the brilliant student, and even with the second-class honours man, but how will it serve the duffer? If we exclude the duffer who tries to pass through medicine by memorizing the statements contained in textbooks or in lecture notes, the answer is that it will serve him better than the present system when in the future he becomes a medical practitioner. He will be less a duffer in practice because he has been taught his pathology on the clinical or case-ensemble plan. If it be possible to arouse his interest in any way it will be done in this way, and an interested duffer is perceptibly shedding his dufferism. The question of expense is somewhat serious, for to procure, prepare, and mount the specimens, and to get them in sufficient numbers to include all the commoner groups of morbid processes, must involve a considerable outlay. Time also is required, and expense and time are serious matters for the young lecturer trying to fight his way to success and its outward sign—a large class of students. On the whole, however, one feels that there is much to be said for the new method and for the case-ensemble plan of teaching pathology; it links pathology on to medicine and surgery, with which it should have the closest connexion; it brings the element of human interest into an otherwise somewhat featureless chronicle of changes found in dead bodies; and it promises that in his future life the student will remember more of his pathology and put it to better practical purpose than he has in the past. Obviously also the method can be applied to the special pathology of other subjects. Thus, one can imagine a useful teaching series of preparations for obstetrics, one of which would be a jar containing a hydatid mole, a uterus affected with the chorion-epithelioma, and the various organs with metastatic growths in them which have sprung from the parent tumour in the womb, whilst another might be a set of organs from eclampsia, including a kidney with pregnancy nephritis, a placenta with infarcts, and a fetus with lesions similar to those in the mother's body.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

The Insurance Act.

At the forty-first meeting of the Royal Commission on Venereal Diseases evidence was given by Dr. J. Smith Whitaker, Medical Member and Deputy Chairman of the National Health Insurance Commission (England) and a member of the National Health Insurance Joint Committee.

Dr. Whitaker explained the working of the panel system and said that an insured person suffering from venereal disease was entitled as part of his medical benefit to receive medical attendance and treatment and to be supplied with necessary medicines and appliances, exactly in the same way and to the same extent as for other diseases. As a matter of fact a large number of cases of venereal disease were being treated by panel doctors. It might be said generally that the position of the insured, as regards the adequacy of the treatment which they received when suffering from these diseases, did not differ substantially from that of the ordinary population when under the care of general practitioners, and in cases requiring treatment by specialists both sections of the population stood exactly on the same footing. In certain cases a person might under the Insurance Act be allowed to make his own arrangements for treatment, and this would cover the case of treatment by an unregistered practitioner. The number of insurance committees who had permitted arrangements of this kind was however very small indeed, and it was not likely to become common.

It was possible for an approved society to provide by its rules for the withholding of sickness benefit in cases in which the sickness was caused by the insured person's own misconduct, and this applied to many cases of persons suffering from venereal diseases. It was the usual practice, and had been for many years, for societies to class venereal diseases as a disease caused by misconduct.

The Insurance Commission had no special information regarding the extent to which doctors might need facilities for laboratory methods as an aid to diagnosis, but if facilities were afforded, practitioners attending the insured could be required to take all steps in their power and within their competence, with a view to obtaining the benefit of such assistance in the treatment of their insured patients.

It was very important that provision made for the treatment of particular diseases or particular groups of persons should be looked at not only from the point of view of those diseases or those persons, but from the broad point of view of the relation of that part of the administration to the whole body of treatment by medical practitioners of all kind throughout the country. Any scheme of administration that might be devised, for example, for dealing with venereal diseases, should be so framed that it would develop the abilities of men already in practice, the general practitioners, and make them more efficient for their general functions as the first line of defence of the country. It was quite conceivable that simplicity of administration might tend to a system that would to a great extent ignore the general practitioners; he wished to suggest that, apart from the merits of the question of the actual treatment of venereal diseases, that would be prejudicial to the general public interest.

THE International Congress of Anatomy will hold its next meeting at Amsterdam in August, 1915.

AN International Congress of School Hygiene will be held at Brussels in 1915, under the presidency of M. Corman, Director-General of the Ministry of Public Instruction, and Dr. Demoor, Rector of the University of Brussels.

CONSIDERABLE interest was excited among medico-statisticians by the publication in 1909 of a paper by Mr. G. D. Maynard in which evidence was adduced that the death-rates of cancer and diabetes were closely correlated; the possibility that Mr. Maynard's results could be attributed to errors of analytical method was dispelled by a subsequent investigation by Professor Karl Pearson, and it remained to be seen whether Mr. Maynard's findings would be confirmed when other data were similarly handled. In a recent paper by Mr. Major Greenwood and Mrs. Frances Wood, of the Lister Institute Statistical Department (*Journal of Hygiene*, xiv, 1914, 83–118), the matter is elaborately considered. Maynard's work was chiefly confined to American statistics; Greenwood and Mrs. Wood have extended the inquiry to Swiss, English, and Italian data. Possible sources of error are enumerated, and the authors lay stress upon the complexity introduced by the racial heterogeneity of the American States and cities. In the case of European data they are unable to confirm Maynard's results, and conclude that the association observed by him is not a phenomenon of general significance. The paper will be of interest to those who attempt to draw conclusions from mortality statistics.

ROGER BACON.

ALTHOUGH the date of the birth of Roger Bacon is uncertain, it is known that he flourished in the thirteenth century, in which he was one of the leaders of scientific thought. It is conjectured that he was born in 1214, and it is on that assumption that the present year was chosen for the formal celebration of his seven hundredth anniversary, which took place at Oxford on June 10th. Strictly speaking, however, June 10th, was the eve of his death, which occurred on the feast of St. Barnabas, June 11th, 1294. The principal part of the commemoration ceremony was the unveiling of a statue by Mr. Hope Pinker in the University Museum in the presence of a number of distinguished men of science and letters representing not only Great Britain, but France, Italy, and America. The statue, as will be seen from the photograph here reproduced, represents Bacon in his habit as a Franciscan friar, standing by a desk and holding in his hands an astrolabe.



(From a photograph by Gillman and Co., Oxford.)

The statue was unveiled by Sir Archibald Geikie, ex-President of the Royal Society, who said Roger Bacon was one of the great forerunners in the development of experimental science which four centuries later arose into quickened activity under the inspiration of his illustrious namesake, Francis Bacon. Lord Curzon of Kedleston, Chancellor of the University, said the erection of the statue was the reparation of a long neglect. Roger Bacon was one of the most universal geniuses this country and this race had ever produced. An address was presented by Father David Fleming in the name of the General and the whole order of St. Francis. The proceedings ended with an address by Mr. A. D. Godley, the Public Orator, who hailed the return of Bacon to Oxford, where he might see around him the fruits of his works.

The interesting ceremony at Oxford was not so much a commemoration or a resuscitation as a revelation. Friar Bacon, for seven centuries a legendary character, has now at last taken his place in the history of science. His work was dimly recognized by a handful of his contemporaries. Of his life hardly anything is known. The date of his birth is arrived at by the hypothesis that he was 13 years of age when he began to study sciences and languages: in 1267 he said that he had then spent forty years in their study. He is said to have been born at Ilchester in Somerset, and to have belonged to a wealthy family which ruined itself in the cause of the King in the great struggle between Henry III and the barons, 1258-65. At Oxford he came under the influence of Edmund Rich, afterwards Archbishop of Canterbury, the first scholar in Western Europe to lecture on the book of Aristotle's Organon known as the *Sophistical Refutations*. A more powerful influence was that of Robert Grossetête, afterwards Bishop of Lincoln, who had been appointed lecturer to the Franciscans shortly after their establishment at Oxford in 1224. It was he probably who influenced Roger to learn Greek, and Sir John Sandys, who on May 27th read a most interesting and informative paper on Bacon,[1] thinks it was probably also at Grossetête's suggestion that Roger entered the Franciscan Order. Before taking that step Bacon had already written many things for the instruction of youth, on plants, on physics, metaphysics, and other subjects.

It is curious that within a few years of the foundation of a mendicant order which was intended purely to preach the Gospel to the people, and to give active service to the poor, Bacon, who was to give his life to learning, should have become a disciple of the "little poor man" of Assisi. It may have been a sudden conversion or a desire for shelter from what was then a world of violence and disorder. It should be remembered, however, that very soon the English Franciscans became the most learned body in Europe, and that doubtless was a great attraction to Roger.

In 1234 he went to Paris, where he remained till 1250, there increasing the great reputation as a student and a teacher which he had already gained at Oxford. In Paris he obtained the degree of D.D. and the appellation of "Doctor Mirabilis." He was to spend two further considerable periods of time in Paris under supervision, as he had become suspect to the authorities owing to his devotion to learning and the plain speaking to which that led him, as was the fate of Rabelais three centuries later. The first of these exiles, which was imposed upon him by St. Bonaventure, the "Seraphic Doctor," extended from 1257 to 1267; the second lasted fourteen years. Bacon was released in 1292, and returned to Oxford, where he died, probably in 1294. Unlike Rabelais he remained among his brethren to the end, and he was buried in the Church of the Franciscans long since swept away. Sir John Sandys says that a tower traditionally known as "Friar Bacon's Study" stood on the old *Grand Pont* or Folly Bridge on the south side of Oxford till 1779.

Roger Bacon, in a much larger sense than his more famous namesake, took all knowledge for his province. Mathematics, geography, astronomy and astrology, physics, optics, chemistry and alchemy, and experimental science, besides languages, philosophy, and theology, all came within his intellectual purview. While he was interested in each one of the sciences separately, he grasped the idea that they were closely connected with each other and mutually interdependent as parts of the same whole. In his own words:

> All the sciences are connected and foster one another with mutual aids like parts of the same whole every one of which accomplishes its own work not for itself alone, but for the others also.

It has been said by R. Adamson (quoted by Sandys) that Roger Bacon came very near—nearer certainly than any preceding and than any succeeding writer until quite recent times—to a satisfactory theory of a scientific method. Unlike some of his Arabian predecessors, he always had in mind the application of mathematical truths to practical ends. He gave much attention to the means of prolonging human life and to natural philosophy generally. He gave ten years to the study of optics, foresaw the telescope, and had a clear conception of the simple microscope. He seems to have almost foreseen other more modern discoveries when he says:

> There are many dense bodies which altogether interfere with the visual and other senses of man, so that rays cannot pass

[1] Roger Bacon. Reprinted from the *Proceedings* of the British Academy, vol. vi. Oxford: University Press.

with such energy as to produce an effect on human sense, and yet nevertheless rays really do pass without our being aware of it.

We must always be on our guard, however, not to read too definite meanings into the vague adumbrations of truths believed to be new often found in old writers. Bacon has sometimes been credited with the invention of gunpowder, but, although he refers to an explosive mixture producing a noise like thunder and flashes like lightning, and adds that "from saltpetre and other ingredients we are able to make a fire that shall burn at any distance we please," he does not seem to have known the power of gunpowder to propel projectiles. His reputation as a magician probably arose from a misapprehension of these and other inventions, the possibility of which he saw, though there is no evidence that he was ever able to give practical shape to his ideas. The following passage from a popular work of the sixteenth century, entitled *The Famous Historie of Fryer Bacon*, is quoted by Sir John Sandys:

> First, by the figurations of art, there may be made instruments of navigation without men to rowe in them, as great ships to brooke the sea, only with one man to steere them, and they shall sayle far more swiftly than if they were full of men: also chariots that shall move with an unspeakable force, without any living creature to stirre them. Likewise, an instrument may be made to fly withall, if one sit in the midst of the instrument, and doe turne an engine, by which the wings, being artificially composed, may beat the ayre after the manner of a flying bird. . . . But phisicall figurations are farre more strange: for by that may be framed perspects and looking-glasses, that one thing shall appeare to be many, as one man shall appeare to be a whole army, and one sunne or moone shall seem divers. Also perspects may be so framed, that things farre off shall seem most nigh unto us.

Bacon says there was a dispute between the English and Parisian naturalists on a question of capital importance, namely, the generation of humours by the elements and that of inanimate things, and of vegetables, animals and men by humours. On this, according to Bacon, were founded natural philosophy, medicine, and alchemy.

M. François Picavet, Professor of the History of Philosophy and the Middle Ages, who represented the University of Paris at the commemoration on June 10th, devotes an elaborate article to Roger Bacon in the *Revue des Deux Mondes* of June 1st. From this we learn that in France at least, to which Bacon so largely belonged by education, he was appreciated by some distinguished men. At the beginning of the seventeenth century Gabriel Naudé, in an apology for the great men accused of magic, mentioned him as the most eminent of chemists, astronomers, and mathematicians of his time. D'Alembert, who could only have known the *Opus Maius* published in an incomplete form by Samuel Jebb in 1733, and who must have been driven by the sheer force of evidence to do justice to a friar, placed Bacon in the number of the "superior geniuses who can raise themselves above their century and draw their knowledge from their own sagacity and the study of Nature." We may add that Humboldt saw in him "the most astonishing phenomenon of the Middle Ages." Professor Picavet himself describes Bacon as one of the renovators of the experimental methods and one of those who sought to prolong human life by means drawn from observation and experience, a forerunner of Kepler in optics and of modern physicists in the propagation of force. He was besides the most learned man of his time and anticipated the chief ideas of the Renaissance.

There was a large element of mysticism in Roger Bacon, as there could hardly fail to be, considering the age in which he lived and the influences by which he was surrounded, but in natural science he always comes back to experiment, and he rejects the authority of Aristotle and others blindly followed by most teachers of his day. The teacher from whom he learnt most, he says, was Peter the Picard, probably identified as Petrus Peregrinus de Maricourt, author of a treatise on the magnet, one MS. of which is dated 1269. Peter had already been working for three years at the construction of a burning glass, which he had at last completed after much difficulty and expense. He also devised, probably with the co-operation of Bacon, the plan of a spherical astrolabe representing the movements of the heavenly bodies, comets, and the waves of the sea. Bacon calls him the "master of experiment," because he always trusted to experiment as well as to observation and mathematics to discover the secrets of nature. First he observed to see if the affirmations of books agreed with reality; then he made experiments. Speaking of Peter's studies in medicine, Bacon says that if a physician seeks first in books the means of prolonging life and health, if he proposes to prolong human life, he observes certain animals—eagles, stags, and crows—with a conviction that everything is given to brutes for the instruction of men, and strives to discover from them the natural secrets which explain the long duration of their lives. Peter also looked to speculative alchemy and to operative and practical alchemy for the production of an elixir that would make the men of his day live as long as certain animals and the men of the patriarchal age. We are not told whether he succeeded in wresting that secret from nature, but Bacon says his work was directed to increase the power of man and make his life more easy, better, and longer. He even examined the charms of old women and sorcerers, the impostures and artifices of jugglers, to see if there was anything to be learnt from them by separating what was magical or diabolical from what was the work of nature and natural powers. Bacon himself sought knowledge of husbandmen and other unlearned folk who were in direct contact with nature. For a knowledge of geography he consulted the authors and men of his time who had travelled by land and sea. He questioned Brother William, sent in 1253 among the Tartars, and many others who have explored the East and the South. It seems to have been a passage in one of Bacon's writings that turned the thoughts of Columbus to the voyage of exploration which led to the discovery of a new world.

We have seen that Bacon always went direct to the source for first-hand knowledge wherever it was obtainable. He adopted the same method in regard to languages. Roger knew Greek and Hebrew, as is shown by the corrections he proposes in the text of the Old Testament. Towards the end of his life he insisted on a correction of the Latin Vulgate by the Greek. He was severe on many of his contemporaries because they used translations of the ancients instead of the originals. He constantly insists on going to the source, and not trusting to translations. He urges the necessity of getting authentic texts wherever they are to be found. Further, he insists on a complete knowledge of the tongues in which these books were written. This was to be obtained by intercourse with men who spoke them. Roger himself had a special aptitude for learning foreign languages. In a passage of his compendium of 1272 he says:

> To get pure wisdom one must draw it at its source, Hebrew, Greek or Arabic. Those who do not see it in the languages in which it has been originally set forth have never been able to contemplate its dignity in its form, figure, and beauty. Oh how agreeable is the taste of wisdom to those who have drunk fully of it from its primitive source. Those who have no experience of this no more feel its charm than a man paralysed in his sense of taste can perceive the savour of food or one deaf from his birth the pleasure of harmony.

How far Roger himself attained this knowledge we have no means of knowing, but he was often in contact with men who spoke Greek, Hebrew, and Arabic, and he had begun the study of languages early, and continued it long.

In the matter of biblical exegesis he traced out the plan adopted by the wisest of the moderns. He argued that the Greek and Hebrew texts should be examined and that no reliance should be placed on copies mutilated or falsified, wittingly or otherwise, which might be furnished by the Greeks and the Hebrews. One should try to make them as correct as possible, and to collate with them the old copies of the Latin versions in which there are the fewest gaps or blunders. This is just what is being done at the present day by the newly-elected English Cardinal Gasquet and his fellow-workers on the Vulgate Commission. The numerous corrections proposed by Roger in the Old Testament, which are for the most part accepted to-day by the best authorities, shows that such a work directed by him would have made useless much of the work now credited to the Renaissance and to modern times. This would have led to a comparative history of religions which he sketches out and to comparative philology. He had the conception of a general or universal grammar; he looked upon grammar as being the same in

substance in all languages, the differences being accidental. By this means he would trace out the origin of languages.

It has to be remembered that nearly all that is known of Bacon's teaching is contained in three works very hurriedly prepared in self-defence for the Pope. This probably accounts for the summariness of his statements; he had to compress his ideas within the smallest possible compass. His keen sense of the futility of the scholastic quibbling which passed for learning in his day, and of the evils of the use of bad translations of Aristotle and other ancient writers at second or third hand through Arabic and Latin, may also be held to account for the extreme frankness with which he speaks of the most renowned teachers of his time, including Alexander Hales, Albert the Great, and St. Thomas Aquinas. One gathers from his books that he was of somewhat impetuous temper, and did not suffer fools gladly. But then, his patience was sorely tried in many ways. He was for many years forbidden to write, and this doubtless is the reason that we have his conceptions only in more or less fragmentary form. What we have is sufficient to show the power and scope of his mind. *Ex pede Herculem.*

It will be seen that Roger Bacon had the largest ideas. The whole of his long life was given to the acquirement of knowledge and to the strenuous pursuit of truth. His *Compendium Studii Theologici* was written when he was nearly eighty years of age. His learning and his philosophy were not systems of dead words, but living, and always applied to practical uses. How far he actually realized his own ideals we have no means of knowing, but it is unquestionable that he was a man of the most eager desire for knowledge, of the most tireless industry, and of the widest learning. It is clear that, like Chaucer's "Clerk of Oxenforde"—

> For all that he might of his friendes hente
> On books and on learning he it spente.

It is wonderful that a man sworn to poverty, with few patrons to finance him, living in an atmosphere either hostile or indifferent, should have been able to do so much. But he often complains of the want of money. For the study and experiments which he felt to be necessary he says much money was needed besides the assistance of lords, kings, and especially of the sovereign Pontiff. This he asked for, but does not seem to have obtained. It is by no means certain that the summaries of his studies ever actually reached the hands of Clement IV, who had asked for them. Bacon collected all the books he could get hold of—a most difficult and costly enterprise in the thirteenth century—and he made experiments in optics and other branches of science necessarily with the most scanty and imperfect apparatus. What such a man could have accomplished with the resources of modern scientific research can only be faintly conjectured. But what Roger Bacon actually knew or discovered matters little to us nowadays. His achievement is the method which he sought to impress on his generation—namely, to look at nature through their own eyes, not through the blurred spectacles of inaccurate translations and authorities who mistook subtlety of reasoning on metaphysical ideas for the advancement of knowledge.

Much of his work has never yet seen the light. But as we stated in the BRITISH MEDICAL JOURNAL of January 24th, 1914, this further tribute is now about to be paid to his memory. An editorial committee, consisting of Messrs. J. P. Gilson of the British Museum, F. Madan of the Bodleian Library, Oxford, Professor A. G. Little, with M. François Picavet as a foreign corresponding member, was appointed some time ago to take the necessary steps for the issue of an edition of Roger Bacon's works, critically revised and arranged as far as possible in proper chronological order, as soon as the necessary funds have been collected. M. Picavet stated in the *Revue Philosophique* for January that the first volume, containing Bacon's unpublished treatise and his commentary on the *Secret and Secrets* of the pseudo-Aristotle is in the press. The second will probably contain medical treatises, and will be edited by Dr. Withington and Professor Little. Among the contents will be the famous treatise *De Retardandis senectutis accidentibus et de sensibus conservandis*, which it will be interesting to compare with Descartes's observations on the means of prolonging human life in his *Discours de la Méthode.* Other volumes will contain the whole of the *Opus Tertium* (fragments of which were published in 1859, 1909, and 1912), the *Quaestiones* on the physics and metaphysics of Aristotle and the *De Plantis*, the *Communia Mathematicae*, and perhaps the *Computus Naturalium.* Following these will come critical editions of the *Opus Majus* and the *Opus Minus* (of which only fragments exist), the *De Naturis Metallorum*, and the *Tractatus Trium Verborum.* The manuscripts scattered about in different countries will be carefully collated by competent scholars. To carry this scheme to fulfilment it will be necessary, says M. Picavet, to found a society bearing the name of Roger Bacon; he expresses the hope that the establishment of such a society may be one of the outcomes of the Oxford celebration.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

A CRITICAL REVIEW OF THEIR RELATIONS.

(Continued from page 1306.)

IV.

STATE MEDICINE AND THE PUBLIC HEALTH SERVICES.

WHEN the essential bases of the science of State medicine are distinguished from public health administration and all its executive and legal machinery, it will be found that they consist in accurate knowledge of the natural history of disease and of the effect on health of environment and occupation, coupled with similar knowledge of (*a*) the degree to which the size, and age, and sex distribution of the population of any given locality are being changed by birth on the one hand and by deaths on the other; (*b*) of the diseases chiefly prevailing among it habitually or temporarily; and (*c*) of any physical or other circumstances in a locality which may affect favourably or otherwise the natural resistance towards disease processes initially possessed by its inhabitants.

This statement may seem a mere truism; its interest lies in the fact that it very closely describes the kind of knowledge that the Association set to work to obtain as soon as it came into existence. In fact, the desire for that knowledge was one of the many factors which led to the Association being founded. However, to perceive the full interest of this circumstance, as also its bearing upon subsequent events, it is necessary to keep in mind the history of State medicine; so before going any further it may be well to trace this in outline.

In 1832 the statement which we have described as a truism was no truism at all, for at that date the science of State medicine was still entirely larval, and practically speaking there was no general recognition of the need of any kind of public health service whatever. Comparatively few towns were paved, fewer still were sewered, the vast majority of the population depended upon shallow wells for their water supply, and except for such data as might be derived from parish records no information was available as to the occurrence of births and deaths. As for legal enactments, port authorities had power to impose quarantine on incoming ships, and towards the end of the year 1831, when cholera was raging in Europe, the Privy Council had hurriedly called into existence a number of local health boards—or rather, had provided machinery for creating them in the event of any locality being threatened with cholera. But except for these facts State medicine in 1832 was, from a legislative and most other points of view, entirely virgin soil.

The first sod may be regarded as having been turned in the last year of the reign of William IV; the second in 1840; the third in 1846; and the fourth in 1848. The first of these dates brought into existence official registration of births, deaths, and marriages; the second saw the passage of the first Vaccination Act; the third the passage of a private Act which led in the following year to the appointment by the City of Liverpool of the first medical officer of health ever employed in this country; the fourth saw the establishment of the General Board of Health.

This Board, which may be regarded as the forerunner of the present Local Government Board, did its work under the Privy Council, and was at first formed solely of laymen, but in 1850 a medical member was added, and three years

later it was provided with a medical officer. The medical man appointed was John Simon; he was destined to reign for twenty-four years, and, fortunately for all concerned, proved himself a man of exceptional ability and width of outlook. The establishment of this Board was authorized by the first Public Health Act, the passage of which in 1848 may be regarded as completing the first stage in the evolution of the public health service.

The next outstanding date is 1855, when, in virtue of the Metropolitan Management Act, every metropolitan borough had to provide itself with a medical officer of health. The year 1856 is also of interest, for it saw the delivery—by Dr. Greenhow at St. Thomas's Hospital—of the first course of lectures on public health ever given in a medical school. Then came in 1858 the second Public Health Act, which greatly widened the acknowledged scope of State medicine, and finally—so far as the second stage is concerned—the Public Health Act of 1875. It is true that this latter Act was in many respects merely a consolidating measure, but since, together with corresponding Acts relating to London, Ireland, and Scotland, it forms the backbone of public health administration at the present time, its passage certainly marked the completion of a stage.

The later outstanding dates are 1889, which saw the introduction of the principle of notification of disease; 1894, when passage of the Local Government Act greatly extended the powers of local sanitary authorities; 1907, which witnessed the adoption of the principle of notification of births and of medical inspection of schools; and 1909, when the Town Planning Act made the appointment of a medical officer of health obligatory on every county council. The latest date of interest is 1911, when the passage of the National Insurance Act led indirectly to the appointment of tuberculosis officers.

This chronological record might, of course, be greatly amplified, but it is not worth while to do so, because from many points of view—and at any rate that from which this article is written—the circumstance of chief interest in the history of the evolution of State medicine and the public health services is one which has yet to be stated. This is, that the movement which ended in the establishment of this science and the formation of those services started almost by accident.

It is true that in the late Thirties and the early Forties matters were tending in the direction of sanitary reform, but what immediately gave rise to the passage of the first Public Health Act in 1848 was some evidence which happened to be given before a commission appointed for quite a different purpose—namely, the reform of Poor Law administration; with that commission, as has already been shown in our article on the Poor Law Medical Service, the British Medical Association was very closely concerned.

Other facts of interest are these: When the Association started its fight on behalf of Poor Law medical officers it had a fairly definite scheme in view, and its aims were still more definite when it set to work to endeavour to place the control of the medical profession on a proper footing. So prescient, indeed, was the Association in regard to this point that it included even in its earliest programme of medical reforms almost all those which were subsequently effected, and some which still remain to be achieved. These two tasks the Association undertook in fulfilment of its duty of promoting and upholding the interests and honour of the medical profession, while the motive underlying its early work in the field of State medicine was of a totally different character.

The Association was not aiming at bringing into existence a public health service; in fact, in common with the rest of the world at the time, it failed to recognize that any such service was necessary. It simply saw that knowledge on certain points was lacking, and believed that the character of its organization would enable it to obtain that knowledge. It was in this spirit that the founders of the Association included in their introductory prospectus a proposal that the Association should endeavour to collect information of the kind described in the opening paragraph of this article, and it was in the same spirit that they included in all the earlier volumes of *Transactions* one or more articles closely resembling in their general character the reports of many modern medical officers of health. It was also in this spirit that the Association in 1833 pressed upon the notice of Government the desirability of exact knowledge being obtainable as to the occurrence of births and deaths, and in the same year appointed a committee to study all questions connected with the prevention of small-pox by vaccination and other allied processes. The same considerations also apply to the collective investigation of the epidemiology of influenza and the distribution of phthisis undertaken by the Association in these same early years.

But although these early labours were in the nature of pure research work, they seem undoubtedly to have had influence on the subsequent trend of matters. For instance, the Vaccination Committee collected information of such interest that it was thought worth while to bring it to the notice of Government and make it the basis of a petition that free vaccination by properly qualified persons should be placed at the disposition of all classes of the community. This was in 1839, and in the following year the Government, which had already in 1836 arranged for the provision of the statistical data claimed by the Association as likely to be useful, passed the first Vaccination Act. This step accomplished, the Association took steps to disseminate information as to the utility of vaccination among the public at large and began to agitate with a view to this means of escaping attack of small-pox being made compulsory.

The subsequent work of the Association in the field of State Medicine was more on all-fours with its work on behalf of reform of the Poor Law Medical Service and the legislative organization of medicine as a profession. But this difference always remained—namely, the Association, though it had very definite views on certain points, had no general scheme which it was endeavouring to get brought into operation. There was also similarity in its procedure during this second stage, the steps taken being of the same general kind as those which have been described in detail in earlier articles. In other words, the Association appointed a committee to take charge of all questions relating to public health, and report its doings at annual meetings; tendered evidence before any commission of inquiry held; lodged petitions with Government in support of any views that it favoured from time to time; and when actual legislation was in progress organized opposition or support of any clauses in a bill which seemed to it desirable or otherwise. In fact, after 1847, when the State Medicine Committee was first appointed, questions of public health became one of the standing preoccupations of the Association; in 1856 and subsequently a special section was devoted to it at annual meetings, and from early in the Seventies onwards a certain number of pages in the BRITISH MEDICAL JOURNAL began to be set aside weekly for communications on this subject.

The committee in question, despite the fact that its labours were subsequently shared by the Parliamentary Bills Committee, never lacked work, for proposals of a public health character were constantly being brought before the Houses of Parliament. This seems to have been partly due to the fact that from the early Fifties onwards the general public took a good deal of interest in these matters, and that it was not until the late Sixties that definite and more or less generally accepted ideas as to what should be the scope of the work of a medical officer of health and the fashion of its organization began to crystallize out.

All this helped to render the most constant activity necessary on the part of the Association, the net result being that it would be exceedingly tedious to deal with its various actions in detail. Moreover, there would be little advantage in doing so, since from time to time it had to vary its policy more or less materially. This was inevitable, for not only had the Association to feel its way in totally new territory, but it was constantly being faced by novel proposals from others, and in its task of protecting the interests of the medical profession it had to deal with a frequently altering condition of affairs.

Nevertheless, mention may be made of a few of the questions to which the Association seems to have attached more particular importance. It was very anxious, for instance, to get the terms of reference to the Royal Sanitary Commission, which was appointed in 1869 and sat for some three years, extended to include

Scotland and Ireland. It failed in this, but it succeeded later on in getting a medical member included in the Local Government Board of Scotland.

It succeeded in its early advocacy of compulsory vaccination, and later on, besides exacting for vaccination officers a better scale of fees and other advantages, succeeded in stalling off or materially modifying several bills which would have had the effect of practically putting an end to compulsory vaccination altogether.

It succeeded in getting metropolitan medical officers of health made whole-time officers and irremovable from their posts without the sanction of the Local Government Board.

It helped to obtain for local authorities the right to receive an Exchequer grant in respect of one-half of any salary they might decide to pay their medical officers of health, subject to the proviso that each individual appointment must be approved by the Local Government Board, and in this way did much towards improving the position of medical officers of health throughout the whole country, whether whole-time or part-time.

It approved the general principle of notification of disease, and helped to secure payment for notification, not only for private practitioners but also for medical officers of health, in regard to cases seen by them privately.

It advocated in 1873 the institution of a special diploma in State Medicine, and in the Nineties promoted and financed a prolonged investigation into the health of 100,000 school children, thus laying the foundation of official medical inspection of schools.

A further question to which the Association has attached great importance, and in respect of which it has not yet said its last word, is that of lapsing appointments. Except in Scotland, London, Ireland, and in a few districts in England and Wales, it was, until quite recently the general custom to elect a medical officer of health only for a year, and the medical man appointed had no guarantee whatever that at the end of the year he would be re-elected. This custom has been persistently condemned by the Association and its JOURNAL, and the arguments put forward against it were so convincing that at length the Local Government Board found it impossible to resist them any longer, and under a General Order dated December 13th, 1910, it directed that a medical officer of health must receive three months' notice of the termination of his appointment, and that the expiration of such notice must coincide with the anniversary of the date on which he first took up office.

A note of some of the dangers that in the earlier stages the Association had to ward off is also, perhaps, worth noting. At one time it seemed not improbable that public health work would be added to the duties of Poor Law medical officers without any addition to their pay; at another the Association had to grapple with a proposal which would have had the effect of establishing all over the country, and free to engage in private practice if they pleased, a number of young men with no special knowledge of public health work, and none whatever of clinical medicine.

In regard to the School Medical Service, it has up to the present succeeded in preventing the Board of Education getting this service officered entirely by whole-time men; has made it practically impossible for any local authority to pay a whole-time assistant school medical officer less than £250 a year, any part-time officer less than a rate of £50 per annum for one half-day per school year, or any senior school medical officer who is not also medical officer of health less than £500; and has retained for general practitioners the main portion of the work of such school clinics as hitherto have been established.

It is at present using efforts towards securing that the tuberculosis campaign shall not unduly interfere with the interests of private practitioners, and that tuberculosis officers shall be properly remunerated.

As for the future, there are three very important objects which the Association has not yet succeeded in achieving, despite the fact that it has been endeavouring to do so for many years. These are: (1) Such an alteration of the law as will place every local sanitary authority throughout the country completely in the hands of the Local Government Board in the matter of its power to dismiss from its service its medical officer of health; (2) the institution of a system of superannuation for these officers; (3) the payment to them of a net salary, that is to say, payment for their services of a sum the true amount of which does not depend on how much they find it necessary to expend on travelling and office expenses.

Progress in these directions is certainly being made, as will be noticed in a report, which appears on page 457 of the SUPPLEMENT for this week, of a deputation to Ministers, and meantime the pressure which the Association, through its Divisions and its central organization, and its JOURNAL, can bring to bear on local authorities certainly makes the latter more chary of treating their professional employees with injustice or discourtesy.

Taking a general glance round before concluding this article, it seems not impossible that there may be members of the profession who, taking a narrow view of the duties of the profession as an integral factor in the community, will not thank the British Medical Association for what it has done in the cause of State medicine. But there is always this to be remembered. It was quite inevitable that State medicine and public health administration should come into existence, and it is a great thing that there should have been a body representative of the whole profession ready to guide its development in the right direction. The Association and the profession have a right to be proud of the fact that regard for the immediate financial effects of preventive legislation on the profession as a whole has never been allowed to stand in the way of the interests of the community at large. Besides this, it is undeniable that the existence of a public health service greatly extends the number of openings for a satisfactory career offered by the profession of medicine to those who enter it, and it can scarcely be doubted that the facts revealed by the pursuit of State medicine have added considerably to the scientific interest of general medicine.

Still less doubt can there be that those who have specialized in this particular department of medicine have the strongest reason for being grateful for what the Association has done and is endeavouring to do in this connexion, and lest this statement should seem too strong we conclude our reference to the whole subject by quoting a passage from a leading article published by our contemporary, the *Medical Officer*,[1] a few months ago.

> Quite apart from the advocacy of the BRITISH MEDICAL JOURNAL of the aspirations of medical officers of health, such as superannuation, or security of tenure, the machinery of the Association has been working continuously for many years in the production of parliamentary bills having for their object the betterment of the conditions of the public health service. Any one who knows anything about such matters is aware that such machinery is extremely costly. The drafting of a bill means consultations with solicitors, the briefing of counsel, heavy printing expenditure, the securing of members of Parliament to introduce the bill, and an infinite amount of lobbying so long as the bill remains before the House. All this has been carried out by the British Medical Association at very considerable expense on behalf of medical officers of health, and it does seem to us to be the grossest ingratitude for a single member of the public health service to withdraw from the Association at this juncture, and still worse to assert that the Association has never done anything for the service. It may be said that the Association, in spite of its efforts and in spite of its expenditure, has not been successful all along the line. That may be true, but it has been successful to a considerable distance. The medical officers of health of county councils have obtained security of tenure, and all medical officers of health have got rid of lapsed appointments. Both of these achievements are largely due to the persistent efforts of the British Medical Association.

(To be continued.)

[1] *Medical Officer*, January 17th, 1914, p. 21.

AMONG the Fellows of the Royal Sanitary Institute newly elected are Lieutenant-Colonel W. W. O. Beveridge, D.Sc., M.B., R.A.M.C., Dr. Alexander J. Douglas (Winnipeg, Canada), Dr. Jozef Polak (Warsaw), Surgeon-General Sir Lionel D. Spencer, K.C.B., M.D., I.M.S. (ret.), and Dr. Frederick Underhill (Vancouver, B.C.).

THE USE OF PHOSPHORUS IN CANCER.

THE two notes which follow contain suggestions for the treatment of cancer by internal remedies. In each the action of phosphorus has been utilized, and with the same object, namely, that of inducing fatty degeneration of the growth.

Dr. Gnezda's compound dates back to 1908. Its composition and mode of preparation were described in the German patent form, which is accessible at the English Patent Office, Chancery Lane; the remedy was protected by the patent from 1906 to 1910. The use of phosphorus and arsenic in combination may be worthy of consideration. As the cells of the neoplasm are more vulnerable than those of the rest of the body, the action of a remedy of this class might, theoretically, be so regulated as to affect the nutrition of a new growth without causing serious damage to the normal tissues.

The suggestion to use such a combination might be worth pursuing, since it might conceivably prove a useful adjuvant to the radiotherapy of malignant disease.

On the Medicinal Treatment of Carcinosis by an Organic Preparation of Phosphorus and Arsenic.

By Dr. JULIUS GNEZDA,
Agram (Croatia).

Any theory of a medicinal treatment of carcinosis must make a distinction between influencing the neoplasm itself and influencing the general state of the patient; it must, moreover, consider what pathologico-anatomical changes of the neoplasm can, and which should, be brought about. *In vitro* every caustic, organic bases of acids, as well as fluid alcohols, will act on the tumour tissue; *in vivo* any preparation to be used must possess a specific or relatively specific affinity for the tissue of the tumour, and must not exercise any toxic action on the patient.

A chemical preparation may bring about the disappearance of a carcinoma, for example, of the anterior rectal wall invading the posterior wall of the vagina. (A case has been observed in which the patient acquired in consequence a recto-vaginal fistula.) This comparatively indifferent perforation would become very dangerous in the case of carcinoma of the stomach; any liquefaction of the tumour by chemical means might result in perforation of the wall and fatal peritonitis. Similarly, if a carcinoma of the lung were rendered fluid, the disintegrated material might cause pneumonia.

The possibility of bringing about fatty or horny degenerations, calcification, and even liquefaction would be very valuable for small metastases, and might have to be reckoned with in operative cases. On the other hand, liquefaction of a cerebral carcinoma might produce fatal compression. The liquefaction of a carcinoma of the vertebral column, again, would be practically identical with a fracture.

It is clear that if a carcinomatous patient can be kept *in statu quo*, even without destroying the carcinomatous tumour, death from the disease need not ensue. It is an old experience of gynaecologists that carcinomatous women may thrive so long as the carcinomata do not ulcerate nor produce symptoms by pressure.

If then we could succeed only in hindering further formations of carcinoma, or in arresting the growth of that already existing, or diminishing it even to a small extent, a clinical advantage would be obtained.

Paracelsus, the French and Swedish schools of the eighteenth century, and in more recent times Armand Gautier and O. Lassar, not to mention many others, have tried arsenic in different forms. The remedy, I maintain, should be administered as an arsenical albumin. As in the periodic system of the elements, arsenic and phosphorus stand in the same vertical column, and are closely analogous and capable of substitution in their organic compounds (arsonium and phosphonium bases, arsines and phosphines); as, further, phosphorus produces fatty degeneration, I combine arsenic and phosphorus as agents for the treatment of carcinoma. For the reason stated above, by the combination of these elements we might expect the formation of a complex acid rest in the albumin-molecule, by the formation of which the preparation would be rendered as little toxic as the cyanogen groups in potassium ferrocyanide. My preparation is an albumin which contains arsenic and phosphorus (6.3 mg. of arsenic and about 6 mg. of phosphorus in 1 gram.) In what special form the arsenic and phosphorus are present in the albumin cannot be stated. This albumin, which contains organically bound arsenic and phosphorus (arsonophosphoralbumin), I call for the sake of brevity "arphoaline." It is a brownish powder, without taste, insoluble in water or weak acids, soluble in alkalis when warmed. It is important to remark that it is not caustic.

It can be used locally, or given internally by the mouth or as an injection. In the dry state, applied to ulcerating carcinomata, it produces cessation of bleeding and decrease of secretion and of fetor. An open carcinoma, after being cleaned with dry gauze, is copiously powdered with arphoaline, then covered with dry gauze and dressed. If the surface discharges much, change of the dressing is necessary in the first few days. The local application produces a fatty degeneration of the epithelial cells (demonstrable by Sudan staining), and partial necrosis of the connective stroma; in the vicinity a new formation of connective tissue is induced, a replacement of the carcinoma by connective tissue taking place.

The internal administration may be commenced with 0.25 gram given one hour after a meal. If the patient has a full strong pulse, a good appetite, or sufficient strength of will to take plenty of food though he has no appetite, then it is advantageous to take at once as the second doses a gram after luncheon and dinner; by giving such large doses I have produced lessening of pain in a case of pyloric carcinoma (it became objectively softer) after three days; and also after three days a commencing softening in a case of branchiogenic carcinoma of the neck. If it be given for a month the pulse becomes accelerated and irregular; while on the contrary, in cases of Graves's disease or malignant struma, the tachycardia decreases. The patient should take plenty of fruit juices or light wines on account of their cardiotonic action. The patient is urged to take plenty of food because of the absorption, by the retrograde lymph or blood stream, of material from the degenerating or necrotizing carcinoma. In conditions of diarrhoea, opium or cinnamon oil, morphine, and bismuth preparations must not be used. Constipation is to be combated with enemas of tepid water or senna leaves; calomel or castor oil are contra-indicated. Large doses produce fever (102° F. and more), especially in the case of large carcinomata of the lymph glands. Carcinomatous patients, as is well known, seldom get fever; if this appears it seems to indicate a process of cure (resorption of the carcinoma).

CASE.

Miss A. S. T., 81 years old; at the beginning of February, 1910, the patient was operated upon in Paris for a carcinoma of the left cheek.* In the middle of March, 1910, the patient was under me with an open recurrence 3 cm. in length. I applied arphoaline locally four times, and the patient took 0.25 gram twice daily by the mouth for one month. By the middle of April the carcinoma was completely cicatrized. The patient kept well during the treatment. She had no recurrence locally nor could any metastases be detected after the lapse of two years. She is (April, 1914) still alive, and without recurrence.

In conclusion, observations in man indicate that necrosis of a carcinoma may be effected by the internal administration of arsenic and phosphorus; and that patients with certain forms of carcinoma may be cured. But the necrosis of a local carcinoma is not sufficient: the patient must be treated as a whole. There exists no "remedy" for tuberculosis; but the totality of the preparations and methods has in the last twenty years lessened its mortality to an important degree. The same should prove true of malignant disease.

A Case of Oesophageal Cancer Treated by a Degenerative Process.

By Dr. A. PEREZ ORTIZ,
Torrelavega, Santander, Spain.
(*Translation.*)

The case was that of a patient named Pedro G. of Viernoles (Province of Santander) aged 76, who had complained for some months that he could not swallow solid food, but only liquids. He was not neurotic, nor had he swallowed any corrosive fluid. He had wasted considerably and felt very weak. He vomited small quantities of liquids which he had swallowed before, together with a large amount of phlegm. I tried to introduce a flexible bougie, but found it impossible to pass it beyond the site of obstruction. The same thing happened when semi-rigid bougies were used. The obstruction was hard, cirrhotic, and above it there was an infundibulum, into which a large part of the liquids which he took during the day found their way. These were often vomited, together with small particles of tissue, which, on microscopic examination, were found to be carcinomatous. In view of

*Microscopical preparations from this case were shown in the Section of Pathological Anatomy during the International Medical Congress in London in August, 1913.

these facts I made without hesitation the diagnosis of carcinoma of the œsophagus. With this diagnosis several colleagues who saw the patient agreed.

I tried various palliative procedures recommended by science, among them lavage of the œsophagus, and seeing that the patient lost ground every day I determined to put in practice a procedure devised by myself which I call degenerative, and which has for its object, as the name indicates, the artificial production of fatty or adipose degeneration of the tumour and the conversion of it in this way from a hard lump, such as it was, to a soft one. I began by bringing about compression of the œsophageal vessels; for this purpose I introduced into the œsophagus rigid bougies of gradually increasing size, which reached to the site of the obstruction: at the same time I gave injections and capsules of phosphorated oil combined with an albuminoid and fat diet.

This treatment was continued for two months and at the end of that time the tumour which before was hard (cirrhotic) had been converted into a soft lump and the rigid and semi-rigid bougies began to pass, allowing him to be fed; generally the tumour extracted with the end of the bougie when examined microscopically showed fatty degeneration.

As may be noted, the result has been satisfactory and the patient has considerably increased in weight.

LITERARY NOTES.

On June 10th, on the occasion of the commemoration of Roger Bacon, the MSS. of his works were exhibited in the Picture Gallery at the Bodleian Library. This collection is the best in the world. Among the most important may be mentioned the whole of the *Opus Maius*, the whole of the *Opus Tertium*, and fragments of the *Opus Minus*. There are also several MSS. of a popular character, notably the treatise on the arrest of old age, entitled, *De Retardandis Senectutis Accidentibus*. The exhibition was arranged in four divisions. One case was devoted to the *Opus Maius*, the *Opus Minus*, and *Opus Tertium*; another to chemical and medical works; a third to printed editions and translations; and a fourth to modern printed texts, including *Roger Bacon Essays* (contributed by various writers on the occasion of the commemoration of the seventh centenary of his birth, collected and edited by A. G. Little). In the fourth case was an old drawing of Bacon's study on Folly Bridge.

Messrs. Kegan Paul have in the press a new critical biography of Bruno, by Dr. William Boulting. The work embodies the fruits of many years' study. It will appear under the title of *Giordano Bruno, his Life, Thought, and Martyrdom*.

Messrs. W. B. Saunders Company announce a new work on anoci-association by Professor Crile and Dr. W. E. Lower, Assistant Professor of Genito-Urinary Surgery, Western Reserve University. The authors first discuss shock—its kinetic theory, its histological and clinical pathology, and its treatment. Then follow chapters on the principles of anoci-association, the technique of its application in the administration of the anaesthetic, in abdominal operations, in gynaecological operations, in genito-urinary work, in operations for cancer, for exophthaimic goitre, on the brain, and on the extremities.

Messrs. William Hodge and Company will shortly publish *The Trial of Mary Blandy*, a new volume of their series of Notable English Trials. Mary Blandy was convicted at Oxford Assizes in 1752 for the murder of her father at Henley by poisoning him with arsenic, her defence being that she gave him the drug believing it to be a love philtre, with a view of making him "kind" to her lover, Captain Cranstoun, and withdrawing his opposition to their marriage. The trial is edited by Mr. William Roughead, who, in his introduction, gives from contemporary sources a full account of the whole circumstances, which afford a graphic view of the eighteenth century life and manners. The official report of the trial is given verbatim, and the appendices contain much new and unpublished material.

Some years ago the *Aberdeen Free Press* published a copy of an indenture binding an apprentice to an apothecary practising in that city. It begins by setting forth that

> At Aberdeen the twenty-eighth day of May, One thousand seven hundred and eight years, It is condescended and finally agreed upon Betwixt John Stewart, Apothecary, Burgess in Aberdeen, On the one part, and Master James Mowatt, laull son to the deceast John Mowat, sometime in Glentone, with the special advice and consent of Alexander Orem, Bailzie in Abd., his cautioner, and the sd Alexr Orem for himself and takeing burden upon him for the sd Master James Mowatt, and they both with on advice and consent on the other part in manner following. THAT IS TO SAY, the sd Master James Mowat with consent forsd binds and conduces himselfe apprentise and servant to the sd John Stewart to be learned, teached, and instructed by him in his trade of chyrurgie and pharmacie and arts thereto belonging, and that for the hail space and years of two years compleit and the third year in the option of the sd Master James Mowat and Alexr Orem, his cautioner, from and after his entry thereto which is hereby declared to be and begin at the date of their presents. DUREING the which space the sd Master James Mowat binds and oblidges him to be a leall, true, dutifull, faithfull, and obedient servant to the sd John Stewart, his master, foresee his skaith and forewarn him thereof timeouslie and to stop and imped the samen to the uttermost of his power, and shall not reveal his master's secrets committed to him, but keep the samen close and to wait and attend upon his sd master's service night and day, work day and holy day, as he shall have occasion, and noways to absent himself therefrom without liberty asked and obtained of his sd master, and if he shall happen to do on the contrairy, he binds the oblidges himself to pay to the sd John Stewart, his master, the soum of Six shilling eight pennies Scots money for ilk day's absence, otherwise to serve two days for ilk such absented day after the expireing of the forsaid years of apprenticeship in the option of his said master. And in caise he shall happen to commit fornication or adultery (as God forbid) within the sd years of apprenticeship then and in that caice to begin and serve over again the hail years of apprenticeship above written as but even then presently entred otherwise to loss and omitt all profite and benefite he may expect by thir indentures, and to abstain from all curseing and swearing, diceing, carding, idle and prophane company keeping and all such odious faults and vices.

On these conditions, together with the payment of a "prentice fee," the master undertakes to teach James Mowat—

> the hail head points and practices of the trade of chyrurgerie and pharmacie and hail art thereunto belonging so as the sd John Stewart can do himself and the sd prentice is able to conceive and learn and shal neither hold nor conceal any part or point thereof from him directly or indirectly any manner of way whatsomever.

James Mowatt was a graduate in arts of Marischal College of 1708, the year in which the indenture of his apprenticeship is dated.

M. L. Manche, whose book *La Responsabilité médicale au point de vue pénal* is analysed in the *Progrès médical* of March 28th, shows that in the most ancient times the doctor was held accountable for mistakes in practice. Among the Assyrians special invocation had to be made to the gods that he might escape the vengeance of the patient's family. In Egypt, where medicine was held in the bonds of the strictest conservatism, a doctor who was shown to have departed in his treatment from the fixed rules of his art was liable to be condemned to give his life in exchange for the one he was held to have sacrificed. In Greece a doctor might be severely punished for malpraxis; it is recorded that Alexander the Great had the physician of his friend Hephestion crucified for having left his patient to go to the theatre. This, however, looks more like a vindictive exercise of arbitrary power than an act of retributive justice. In Rome actions for damages could be brought against doctors, but in the time of Pliny the law had become a dead letter. Among the Ostrogoths the simple law, No cure no pay, was in force. M. Manche quotes cases showing that in France in the sixteenth, seventeenth, and eighteenth centuries surgeons were fined for wounding an artery in bleeding a patient. In 1768 a surgeon was condemned by the Paris parliament to pay £600 damages to a young man whose arm had to be amputated as a result of the wrong treatment of a fracture; moreover, he was forbidden to practise his profession.

In this week's *Punch* there is a picture of a woman who says she is glad to have a man in the carriage with her, as twice before when she had gone through a tunnel she had fits. In her *Memories and Adventures* Madame Louise Héritte-Viardot gives an amusing account of a certain countess who "never travelled without a doctor; she was so nervous in railway tunnels that she had herself chloroformed. Once, when she could not find a doctor to accompany her, she went from Nice to Paris in a coal barge."

British Medical Journal.

SATURDAY, JUNE 20TH, 1914.

TENURE OF OFFICE OF MEDICAL OFFICERS OF HEALTH.

VERY soon after the general appointment of medical officers of health and inspectors of nuisances, it became apparent that the conditions under which they served rendered it extremely difficult for them to carry out their duties efficiently. The fact that they were elected by, and were dependent for continuance in office upon, local authorities, many of the members of which were owners of property, or who would otherwise have interests which might conflict with the views of these officers, placed almost insurmountable obstacles in the way of the full discharge of their duty to the public. Moreover, for many years health officers were elected for limited periods, and might fail to secure re-election at the termination of any such period. In 1910 this very obvious disability was removed, but the officers are still liable to be dismissed at three months' notice at the caprice of the electing authority. While it may be expedient that this power of dismissal should be possessed by a local authority, in respect of most officials, it is apparent that public health officials, who, if they carry out their duties conscientiously, must inevitably sometimes be in disagreement with the authorities, should have protection against dismissal due solely to such disagreement. The remedy is to be found in some form of appeal to an impartial central authority in a position to decide whether the dismissal of the official could be justified or not.

The necessity for this remedy has been impressed upon successive Governments during many years past, but hitherto without avail. As long ago as 1881, to go no further back, a deputation from the British Medical Association urged upon Mr. Dodson, who was then President of the Local Government Board, the urgent need of removing the serious disabilities under which medical officers of health held office. In 1886 the Society of Medical Officers of Health made similar representations to Mr. Joseph Chamberlain, then President of the Board. Again, in 1895, the question was discussed with Lord Ilkeston (then Sir Walter Foster), Parliamentary Secretary to the Board, who admitted that the Board considered public health appointments made for short periods and with precarious tenure to be injurious to the public health. In 1905 the British Medical Association and the Society of Medical Officers of Health again approached the Local Government Board, and the President, Mr. Gerald Balfour, admitted the justice of the demands put forward. Very soon after Mr. John Burns became President of the Board he was interviewed on the subject, and seemed to be impressed by the facts laid before him. In spite of the efforts of those attending these deputations no satisfactory progress was made in securing better conditions of appointment for public health officers. The British Medical Association and the Society of Medical Officers of Health, in conference with some members of the House of Commons who were supporters of the reform, accordingly decided again to approach the present Government, and a deputation was arranged to the Chancellor of the Exchequer, the President of the Local Government Board, and the President of the Board of Education. An account of the proceedings at this deputation, which took place on June 11th, will be found at page 457 of the SUPPLEMENT.

It is evident that the Ministers were very much impressed by the facts put before them. Indeed Mr. Lloyd George said that he had never heard a case which was more irresistible, and that it had only to be stated to carry conviction to every fair and impartial mind. He intimated that grants were about to be made by the Treasury towards the payment of the salaries of certain officers connected with the public health service, and that in connexion with these grants the Government would require from local authorities certain reforms such as greater security for these officers. Mr. Herbert Samuel went so far as to say that the country could not expect really efficient administration of the health laws unless public health officers were protected from the injustice which might penalize them as the result of conscientious work. The question, he said, would straightway be taken in hand, and he expressed the opinion that it might be possible to effect a great deal without legislation. It was apparent, however, that the permanent officials of the Local Government Board still cling to the opinion that it is undesirable to give to medical officers of health who are in private practice the same security which they are willing to bestow upon whole-time officers. They maintain that such security would make it difficult to form combinations of sanitary areas in order to obtain the services of a specially qualified whole-time official. They do not seem to realize that it would be quite possible to give security of tenure to a part-time officer for only so long a period as his district remained intact, and that provision could quite easily be made for his retirement in the event of any alteration being made in the district by combination with others. Such a provision already applies to Poor Law medical officers.

The deputation also brought under the notice of Ministers the need for securing to medical officers of health the advantages of superannuation, and Sir Philip Magnus referred to the bill having that object in view introduced by him on behalf of the British Medical Association in the last session of Parliament, which had the support of Dr. Addison and members on both sides of the House. On this question the Chancellor of the Exchequer said he agreed in principle that it was very important that there should be a superannuation scheme for medical officers of health, because for one reason it was the only way of getting rid without hardship of men who were past their work. Moreover, from the medical officer's point of view, the existence of a superannuation scheme added to his sense of security and independence, and encouraged him to do his work better. Mr. Herbert Samuel, like his predecessor in office, maintained that the bill introduced by Sir Philip Magnus was not actuarially sound, and that the benefits proposed could not be provided by the contributions which the bill suggested. It may here be pointed out that the financial provisions of the bill are precisely the same as those which received the approval of the Legislature in the Poor Law Officers' Superannuation Act, 1896; in the Asylums Officers' Superannuation Act, 1909; and in several local Acts of quite recent date. It appears, therefore, to be a

little late in the day to refuse to medical officers of health that which has been accorded to Poor Law officers, asylums officers, and, indeed, in several localities to medical officers of health themselves. It will hardly be contended that provision should be made in a bill of superannuation for the payment of contributions on a sufficiently high scale entirely to cover the accruing benefits. There must be some provision from public funds. Superannuation is essentially deferred pay. If no contribution towards the scheme were made from public funds, and the fund were, so to say, self-supporting, there would be no need for legislation, since the whole matter might be carried through by an insurance company.

We should be doing an injustice to Mr. Samuel if we allowed it to be inferred that he is opposed to the principle of superannuation of public officers; but apparently he could not see any sufficient reason for giving superannuation to public health officers and not to other officers of local authorities, such as town clerks, surveyors, engineers, etc. He stated that a few weeks hence he was to receive a deputation from the National Association of Local Government officers on the question of a complete scheme of superannuation. That he would do his best to secure some form of superannuation for local government officers may be gathered from his remark that he could not see that it could be right for Parliament to make legislative provision to secure that pensions should be received by the imperial civil service and by some classes of public officials, and yet pay no attention to the claims of other officers of the local civil service.

The third matter which was urged by the deputation, though it does not affect every medical officer of health, is of very great importance to those in rural and small urban districts. Most of these officers receive a salary out of which they have to pay all the expenses connected with their duties. In large areas where long distances have to be travelled, this arrangement makes a serious inroad on their stipends. Recent Acts of Parliament and orders and regulations of public departments have added to the duties of health officers, and at the same time have materially increased their expenses. This increase really amounts to a decrease in their salaries, the result being, as Sir Philip Magnus cogently expressed it, that although it generally happened the more work a man had to do the better he was paid, yet in the case of these medical officers of health this principle was reversed—the more work they did the less they were paid. To this question Mr. Samuel does not seem to have given much attention, but we believe we are right in saying that it has not been lost sight of by the permanent officials of the Local Government Board. Nearly a year ago, as the result of representations made to the Board by a few medical officers of health and of a question addressed to him by Sir Philip Magnus, Mr. Burns caused a communication to be sent to a large number of medical officers of health asking for information with respect to the expenses of their offices which they had to defray out of their salaries, and within the last few days the Board has asked for a return from local authorities of the average annual amount of the travelling expenses of medical officers of health and other public health officials during the past three years, and of the average annual amount of such officers' clerical expenses during a similar period. With all this information available it is difficult to believe that the Board will be disposed to resist the demands of the medical officers of health concerned for a net salary and the removal of the anomalous position so well described by Sir Philip Magnus.

It only remains to add that the efforts which have been made during many years past by the British Medical Association, by the Society of Medical Officers of Health, and by many non-medical organizations, with a view to securing that the administration of the public health laws shall be conducted upon sound lines and to removing one of its most serious defects, appear at last to be within measurable distance of bearing fruit. Never before have such definite pronouncements been made as those which fell from the lips of the Chancellor of the Exchequer and his colleagues on June 11th last.

QUANTITY OF A DIET IN RELATION TO QUANTITY OF VITAMINE.

THE conclusion that beri-beri resulted from the continuous and too exclusive consumption of polished rice was first reached by Eykman in 1896. His experiments were almost lost sight of by our countrymen, but his conclusion was borne out by the vast amount of epidemiological evidence collected during ten years by Braddon, and published by him in 1907. Braddon's work brought out the further important point that the Tamils consuming parboiled rice—that is, rice which had been steamed prior to milling, and which as a result of this operation does not part with much of the subpericarpal layers of the grain when subsequently polished—were free from the disease. Later he showed that a diet of parboiled rice induced beri-beri if it was soaked in water and the water discarded before cooking.

The epidemiological data are summarized by Braddon in his paper read at the International Medical Congress in London last year, and it is now established that beri-beri is of privatory origin, resulting from the deficiency in the diet of a substance which is present in the aleurone layer of rice, and soluble in water; its exact nature is at present unknown, as it is very unstable, but from the researches of Funk it appears to be a comparatively simple nitrogenous substance.

A peculiarity of beri-beri is that, unlike many other diseases, it tends to occur more extensively amongst the well-nourished than amongst the underfed. Similarly, in prisons and asylums it has been observed that an increase in the polished rice component of the dietary, the ration of other foodstuffs being maintained constant, has been accompanied by increased prevalence of beri-beri. From this Braddon concluded that the extent and severity of the disease vary directly with the amount of rice consumed. Analogous observations have been made by a number of observers in the course of the experimental work on the development of polyneuritis in birds.

It is thus of practical importance to determine the relation which must subsist between the intake of protective substance and that of the other normal components of the dietary, in order that the requirements of the organism may be covered. With this object in view, a further study has been made by Braddon and Cooper of the effect of increasing the carbohydrate ration upon the rate of onset of polyneuritis in birds, and the results are summarized in the preliminary communication which appears on p. 1348 of this number.

It has been found that diets consisting of unpolished rice (padi) or polished rice and yeast, which do not occasion polyneuritis in birds, have an inadequate vitamine content when these diets are

supplemented by an additional ration of carbohydrate material—for example, soaked parboiled rice, polished rice, or sago. By doubling the carbohydrate ration, the rate of development of the disease was increased from two- to four-fold. In these experiments the bulk of the starch and vitamine fed was shown to be digested and absorbed.

These observations demonstrate that the antineuritic substance is expended in some way in carbohydrate metabolism, so that the larger the amount of carbohydrate consumed the greater the demand of the organism in respect of the essential substance. As is pointed out by the authors, in framing a dietary to obviate beri-beri it is of importance to consider not only the absolute amount of protective foodstuff included in the diet, but also the proportion which this bears to its calorific value. It is advisable to maintain the amount of antineuritic foodstuff as high as possible and to avoid large rations of food materials deficient in vitamine.

BUDGET SCHEMES: CHILDREN AND EDUCATION.

AMONG the Budget proposals with regard to children and education there are, in addition to those for augmented grants promised to the ordinary public elementary school and to those in necessitous areas, two other important matters which possess particular interest for the medical profession. In the first place, increased assistance is to be given to university training, to secondary schools, and to continuation classes generally. In the second place, considerable further extension of State assistance and activity is indicated in connexion with the health of children, especially in the earlier years. The Exchequer grants in aid of schemes for the medical treatment of school children will show automatic increases in accordance with the scheme at present in operation, but State assistance for the provision of meals as well as the grants to nursery schools, schools for mothers, and such-like organizations, is now promised, and this seems to indicate the beginning of an organized movement in the State, by which it will extend its operations in connexion with the health of the child into the years below the present school age. Hitherto, of course, young children, in respect of their surroundings and in connexion with infectious fevers, have, like other members of the community, come under the care and charge of the health authorities. What is now foreshadowed is something of a much more personal and direct character than anything hitherto undertaken by those authorities.

There has been a good deal of controversy in the public press as to what authority should administer the Exchequer grants in connexion with schools for mothers. Certain of these communications appear to bear the marks of having been inspired in some degree from the Government departments concerned, and we may fairly take them as indications that the administrative questions involved are not yet settled at head quarters. It is right and proper that these important questions should be well discussed and thoroughly understood; but we must confess to a feeling of serious misgiving when it appears that decisions on questions of policy are to be prejudiced by public discussions inspired or suggested by members of the permanent Civil Service in different Government departments.

For the ordinary citizen it is not a question of great importance whether the Board of Education or the Local Government Board should administer these grants. What is of importance is that the work should be well done and on the right lines. The sick child presents a clinical problem to the medical man who is called upon to deal with its sickness, but that problem is, as we know only too well, often bound up with questions affecting its diet and the conditions of its home life. Often enough also the ill health of children is due to ignorance of the simplest facts of healthy infant and child life, and the educational and health problems are inextricably interwoven. We have developed during the last few years in this country an elaborate system of school medical service. This system is growing rapidly, and one of the results of the inspections is to show that large numbers of children enter the schools at the age of 5 having already acquired various preventable physical disabilities. It is quite natural, therefore, indeed it is inevitable, that any rational system for dealing with child health shall be so expanded that its influence and operations shall be felt in the years which precede entrance to school. So far as the problems involved are of a clinical nature, it is very important that the services of general medical practitioners should be enlisted in any well-thought-out and efficient scheme. At the same time it is obvious that, so far as they relate to environment, the co-operation of the medical officer of health and his staff is equally desirable.

Some of the extremer exponents of "cut and dried" systems appear to be desirous of placing the whole of maternity and child health, even on its clinical side, under the medical officers of health. We are quite certain that an attempt to do anything of the kind would evoke widespread resentment, not only on the part of medical practitioners generally, but on the part of the people themselves. The difficulties with which medical officers of health have to deal are in the main environmental, and what is really necessary is that there should be a healthy and rational co-operation between these services and those which are constructed for dealing with clinical problems and have experience in such work. There are also material and important differences between the problems connected with maternity and pregnancy, and those dealing with the health and up-bringing of the young and growing child. These very important distinctions seem to have been quite lost sight of by some of those who have entered with so much spirit into this controversy. We are inclined to think that it would be to the public advantage if some of our Government departments were to manifest less of the spirit of "grab" and more of a desire to promote a rational and useful co-operation for the purpose of getting things done efficiently.

The increased grants towards university and higher education happily raise no such difficulties as those indicated in the foregoing paragraphs. The sympathetic reception recently given to the deputation in favour of a Government grant towards the establishment in Cardiff of an efficient and complete medical school for Wales is an encouraging sign of the times.

So far as we can learn, there appears to be a genuine desire that the grants in aid of medical education shall be made on such lines that, whilst they will operate in promoting efficiency in our medical schools and lead to better remuneration for those who give their whole time to such work, they will not involve unnecessary interference with the independence and with the healthy rivalry of our schools of medicine.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

THE facts brought out by the articles so far printed in the critical review of the relation of the British Medical Association to the profession will, we believe, come as something of a surprise even to those who have long taken a living interest in the work of the Association. The Association has done so much for the profession in so many directions and for so many years, that its readiness to take up any good cause has come to be considered a matter of course, and much of what it has accomplished is forgotten by its older members and unknown to its younger. It is a coincidence that the series of articles which began in our issue of May 30th (p. 1190) should have reached the consideration of the part which the Association has played in the development of the Public Health Medical Service in the same week as are reported speeches by Ministers which, it may be hoped and expected, will result in a reform urgently necessary if that service is to do the work which the State is now demanding of it. The circumstances are rather typical; the present advanced position in respect to the particular matters which the representative deputation, reported in the issue of the SUPPLEMENT for this week, brought to notice is not due to the efforts of the British Medical Association alone. Following its customary policy, it has lent to a society, representing members of the profession more especially concerned, the weight of its influence as a body representing the profession as a whole. Similarly last week it was shown (p. 1306) how the Association, after labouring for many years in the cause of Poor Law reform, has been content, after certain main principles were established, to leave many matters of detail to a special association to whose assistance it is ever ready to come should these main principles be imperilled. An earlier article of the series—that in which the history of medical legislation during the last sixty years was considered (p. 1250)—was almost wholly concerned with the action of the British Medical Association itself, for the Association found little help in other medical organizations; too often, indeed, it encountered active opposition. Though the present state of British law as to the practice of medicine is far from satisfactory, yet the contrast between past and present shows how much has been accomplished by the British Medical Association, and will be an encouragement to its members to redouble their efforts. In their success all members of the profession have shared and will share.

ANNUAL MEETING, ABERDEEN.

MEMBERS of the British Medical Association attending the Annual Meeting in Aberdeen are assured of a very hearty welcome from the citizens, and at a recent meeting of the General Committee, consisting of influential citizens, the intention was freely expressed of offering private hospitality. Any members, therefore, who find difficulty in obtaining accommodation in hotels or lodgings in Aberdeen, or would prefer private hospitality, should communicate as early as possible with Dr. Thomas Fraser, honorary secretary of the local Executive Committee, 29, King Street, Aberdeen, or with Dr. F. Philip, honorary secretary Hotel and Lodgings Committee, at the same address. It is hardly necessary to add that the Executive Committee hopes that notification to this effect will be made as early as possible. The list of hotels and lodgings available in Aberdeen is reprinted, with some corrections and additions, in the advertisement pages for this week (8 and 9). Among the excursions arranged for Wednesday, July 29th, and Saturday, August 1st, are many of exceptional interest to places in the north-east of Scotland and in the Highlands, which will appeal to the lover of natural beauty. In addition the President-elect, Sir Alexander Ogston, is making arrangements to facilitate visits to places of archaeological interest by members who are interested in such matters, and those who have any acquaintance with the subject are aware that the districts within reach of Aberdeen contain many places and objects of historic and prehistoric importance, such as the Druidical circles of Kingcausie, and at Aquhorties, the underground houses at Kildrummy, the prehistoric fort on the Mither Tap of Bennachie, the vitrified forts at Tap of Noth and at Finavon, and the sculptured stones at Aberlemno.

SIR ALEXANDER OGSTON.

ARRANGEMENTS have been made to invite Sir Alexander Ogston, K.C.V.O., President-elect of the British Medical Association, to a luncheon by his former dressers and house-surgeons on Thursday, July 30th, at the Grand Hotel, Aberdeen. A representative committee has been formed, of which Dr. W. Sinclair, of the Royal Infirmary, Aberdeen, and Dr. James W. Cook, 26, Manchester Road, Bury, Lancashire, are the honorary secretaries. Dr. Cook invites any one eligible and desirous of taking part to apply to him as early as possible for further particulars.

ROYAL SOCIETY CONVERSAZIONE.

THE Annual Ladies' Conversazione of the Royal Society took place last Tuesday at Burlington House. The number of exhibits shown was little more than half that at the conversazione last month, but the interest in them was perhaps greater than usual, as many were seen for the first time. From the medical standpoint perhaps the most interesting was the latest pattern of M. Fournier d'Albe's "optophone." As he announced two or three weeks ago at one of the ordinary meetings of the society, this instrument has been advanced a stage further. When he first showed it, two years or more ago, he could do little more than detect differences between light and darkness by the alterations in the electrical resistance of selenium. Recently he so improved it that very large letters could be recognized by sounds produced in the telephone, and on Tuesday night he demonstrated that in its new form each letter of ordinary sized type gave its own characteristic sound in the telephone, his claim being that it would be no more difficult for a blind man to learn this telephone alphabet than for an ordinary man to learn to read Morse. The principle of the instrument is that light from a Nernst filament is allowed to pass through a revolving disc with a large number of holes; a narrow line of light composed of several closely-spaced dots of light falls on the letters, and is reflected from the letters on to the selenium; the shape of the letters is analysed by the light and expressed first in terms of varying electrical resistance in the selenium, then of varying electrical current, and, finally, of varying sound in the telephone. A demonstration was given of the latest development of x rays in the Coolidge x-ray tube. Dr. Coolidge gets a far more penetrating and better-controlled radiation by very greatly pushing the vacuum in the tube. The specimen exhibited showed the mechanism by which this is possible; the inventor, taking advantage of the well-known principle that heated bodies give off electrons, has used a glowing tungsten filament as his cathode and has made the electrons from this carry the current instead of relying on the residual gases left in the tube. Dr. J. S. Owens showed an apparatus for standardizing the degree of pollution of the air by smoke. The air is aspirated in known volume through a disc of filter paper, and the discoloration produced can be compared with a standard and expressed in terms of a standard scale, the time required for an observation being only about ten minutes. Dr. Smith Woodward showed an ichthyosaurus with skin from the upper lias of Würtemberg, prepared by Mr. Bernard Hauff. It brought out clearly the close resemblance between the outer shape of the extinct sea reptile and the modern porpoise; but while the specimen is

of very considerable intrinsic interest, the attention it attracted was, perhaps, more particularly directed to the amazingly clever technique that has made the preparation of the specimen possible. Another remarkable exhibit was shown by Mr. Charles Dawson, who only the week before the conversazione secured a further specimen from Piltdown. It consists of an elephant bone that has unquestionably been shaped so as to give it a cutting edge, and the suggestion is that the implement is contemporary with the Piltdown skull. Miss F. M. Durham exhibited a fertile canary hybrid, the first definite instance of union between a canary and a finch giving fertile offspring. The hybrids were bred from a canary hen and a Venezuelan siskin, and the male has already proved fertile, though the female has not yet been tested. Reference may also be made to the exhibition by Professor W. M. Flinders Petrie of the jewellery from the tomb of Princess Sat-hathor-ant at Lahun, Egypt; by Mr. C. Tate Regan of a deep-sea angler fish with another three times its own length inside it; by Lieut.-Colonel G. O. Squier of "wired-wireless" telegraphy on telephone wires; and by the John Innes Horticultural Institute of some plant-breeding phenomena.

MORAL INSANITY.

We have received from a medical correspondent an inquiry which raises a point of considerable interest in connexion with the management of a certain type of what are commonly called border-line cases. Our correspondent is interested in a young mechanic, aged 30, who he states is suffering from disseminated sclerosis; his mind has become affected, and about a year ago, in consequence of his having worried little girls, he was admitted to an asylum, where he remained for eleven months; after his discharge he secured work, but took to alcohol, again committed a technical assault on a young child, and was sentenced to two months' imprisonment. Our correspondent wants to know what can be done on the man's discharge from prison; his family cannot afford to pay for his maintenance, but he is strong, and able to work. This man appears to be "morally insane"; that is, to be a case of "moral insanity," and presumably to be uncertifiable under either the Lunacy Act or the Mental Deficiency Act. The alcoholic element does not seem to be sufficiently pronounced to bring him under the Inebriates Act. In these circumstances only two courses appear to be open. The first is that a court of law should impose an indeterminate sentence, to be leniently administered as a form of treatment or protection, giving full play to the man's industrial powers. But a court may be reluctant to pass such a sentence, and in any case it would involve waiting until a further offence had been committed. The second alternative is that he should become a voluntary boarder at some registered hospital for the insane, where again his services could be used and set against his maintenance, but where he would be protected from himself. Action in this direction could be taken under Section 231 of the Lunacy Act, 1890, which, to quote from *Archbold's Lunacy* (fourth edition, p. 313), permits arrangements to be made for the reception in mental hospitals "of persons, not insane, who, being conscious of a want of power of self-control, or of the addiction to intemperate habits, or fearing an attack or a recurrence of a mental malady, and being in all respects free agents, are desirous of residing as voluntary borders in such hospitals." Unfortunately no provision exists for the reception of voluntary boarders in county asylums; the difficulties in the way of this alternative are twofold—getting the patient's consent, and finding a hospital willing to admit him.

THE HALL OF THE BARBER-SURGEONS.

It has already been mentioned in the British Medical Journal that the Hunterian Society is to have the use of the hall of the Company of Barber-Surgeons, Monkwell Street, E.C. This historic hall recalls the memory of the association of surgeons with barbers, which was not dissolved till 1745. The first mention of the hall, according to Sidney Young, the historian of the barber-surgeons,[1] is in 1381. In the Harleian MS. 541 there is a list of companies' halls in the City in the time of Richard II. From this it appears that the Barbers' Hall was then situated in the parish of St. Olave, Silver Street; the entry is "Barbar hall ye p'yssh of Seynt Olave in Sylver-strete." In 1490 the company had the freehold of their hall in Monkwell Street, as appears from a declaration made by one Bryan Sandford on March 8th of that year, which was produced to the Committee of the House of Commons in 1745. In 1636 the company, in view of "the want of a publique Theater for Anatomycall exercises and Sceletons and a lesser roome for private dissections," determined to erect a building for the purpose. It was also decided that "the mottoe vizt. *Speciosum hoc theatrum anatomicum erectum fuit Michaele Andrews Chirurgo Regio ac comunioni Barbitonsorum et Chirurgorum pro tempore praefecto, guardianis vero Joanne Warde Nicolas Heath et Wilhelmo Huckle anno ab exhibito in carne Messiae supra millesimum sexcentesimum trigesimo sexto* shal be engraven in the voyde stone worke over the greate doore into the Theater." The theatre contained the skeleton of an ostrich put up by Dr. Hobbs in 1682 with a "busto" of King Charles I. There were also "two humane skins on wood frames of a man and a woman in imitation of Adam and Eve" put up in 1645, the figure of a man flayed and several skeletons. In the final picture of Hogarth's Rake's Progress these skeletons are shown in niches in the wall. In 1636 the Company began the erection of the Livery Hall and Court Room, the work being carried out from the designs and under the superintendence of Inigo Jones. The Livery Hall was, however, burnt in the Great Fire of London, and the rebuilding of it cost the Company £4,292. To the Barber-Surgeons were taken the bodies of criminals executed at Tyburn. There were four "public anatomies" in the year, besides a number of "private anatomies," determined probably by the number of subjects. But the gallows-tree in those days bore an abundance of fruit. The old demonstration table has, we believe, been preserved, and will be used for the exhibition of anatomical specimens. Lectures were also delivered by surgeons of the company. In 1645 a lectureship was founded by Edward Arris, who took as much pains to keep his benefaction anonymous as most men do to have their good deeds trumpeted abroad. In 1649 Sir Charles Scarborough was appointed "Reader of the Anatomicall Lectures at the publique dissections," and among the treasures of the Company is a fine portrait of Scarborough with Alderman Arris engaged in a dissection. In 1698 it was ordered that there be an anatomy lecture called after Gale, and Clopton Havers was appointed lecturer. Among famous members of the Barber-Surgeons' Company may be mentioned Thomas Vicary, author of *The Anatomie of the bodie of Man;* William Clowes, author of works described by Dr. Norman Moore as "the best surgical writings of the Elizabethan age"; John Gerard, author of the famous *Herball or General Historie of Plantes;* Charles Bernard, Serjeant-Surgeon to Queen Anne; William Cheselden, of whom Payne says that he will always be regarded as "one of the greatest of British surgeons"; and Sir Caesar Hawkins, Serjeant-Surgeon to George III, who is said to have made £1.000 a year by venesection alone. The hall contains Holbein's famous picture, usually said to represent the granting of the charter by Henry VIII in 1512. Sidney Young shows, however, that it is the union of the Barbers' Company with the Guild of Surgeons by Act of Parliament in 1540 that is depicted. Regarding this picture there is a delightfully characteristic entry in Pepys's *Diary:* "And at noon comes by appointment Harris to dine with me; and after dinner he and I to Chyrurgeons Hall, where

[1] *The Annals of the Barber-Surgeons of London, compiled from their Records and other Sources.* By Sidney Young. London: Blades, East, and Blades. 1890.

they are building it new, very fine; and there to see their theatre, which stood all the fire, and which was our business, their great picture of Holben's, thinking to have bought it by the help of Mr. Pierce for a little money; I did think to give £200 for it, it being said to be worth £1,000; but it is so spoiled that I have no mind to it, and is not a pleasant, though a good picture." Among the other pictures on the walls are portraits of Sir Thomas More and his family, by Holbein, and one of Inigo Jones, by Vandyck. Queen Elizabeth, James I, and Charles II, with a number of personages of lesser degree, also look down on the spectator.

THE PREVENTION OF VENEREAL DISEASES.

THE International Abolitionist Federation opened on Monday the conference at Portsmouth in which it is seeking to contribute towards the formation of a constructive policy in regard to the reduction of public immorality and of venereal disease. At the reception meeting on that day the Bishop of Winchester, who presided, after paying a tribute to the work done by the late Professor Stuart and the founder of the federation (Josephine Butler), claimed that the defeat of State regulation was the victory of the principle that moral evil must be met and healed by moral forces and not by material means. To take wise action it was necessary to bring together more adequate and searching knowledge on every part of the subject and to co-ordinate the sources, moral and physical, which God had given us for remedy. Such a book as Mrs. Creighton's *Social Evil and How to Fight It* was, he said, an example of how knowledge could be firmly, clearly, and delicately used. Popular knowledge, however, must be supplemented by expert knowledge—exact, careful, professional. "Wherever you can heal man or woman," he concluded, "we say to our scientific and medical men, Do your charitable work. Whatever you can devise to restrain within closer limits the cruel poisons which spread through human life from this gross and wicked source, do it, and a blessing upon you! Only two things we will ask of our men of science and of the great healing profession. The first is (I suppose it is almost an insult to say this) that they do not use the resources of knowledge and remedy to make vice more easy and indulgence more safe. The second is that they bring in personally their own contribution, the most valuable that we can have, to the moral battle; make men and women aware of the judgement of God, silently written in the grim detail of fact, and that they challenge our youth in the name of clean, wholesome, noble manhood and womanhood to help in making the new morality, which may, please God, in a not far-off day wipe the nightmare of prostitution from off the earth." The welcome to Portsmouth was given by Mr. C. P. Childe, F.R.C.S., a councillor of the borough, who spoke of the good results that had followed wherever the regulation system had been swept away and replaced by more scientific and humane methods. On Tuesday morning a number of reports were read from the different branches of the Federation in France, Germany, Holland, Sweden, and other countries. Two reports from South Africa showed that in the Transvaal an admirable system of gratuitous and voluntary treatment is working with great success. In the Cape Province, on the other hand, where the C.D. Act is still in force, disease is so rife that the administrator recently proposed to compel every servant and nursemaid to be inspected and registered. The opposition to this proposal, especially by organizations of women of every class and colour, had been so strong that the proposal was dropped in a very short time. The subject discussed in the afternoon was the responsibility of law makers. An interesting report was read by Mr. J. Bronson Reynolds, of New York, on legislation in the United States. He showed that fourteen cities had recently had official commissions of inquiry into the social evil, and each had reported against every kind of segregation or regulation of prostitution, although many of the members were of a contrary opinion at the beginning. He strongly advocated the appointment of women police officers (as did also Councillor Dawson, of Hull, in the evening), not as substitutes for ordinary policemen but to supplement their work, especially in cases concerned with sexual offenders and young girls. There was a lively discussion as to how far law and morality could influence each other. Of the Wednesday session, when Dr. Santoliquido of Rome, Dr. Lombold of Copenhagen, and Dr. Rist of Paris, were to read papers, we hope to give an account next week.

MISCHIEVOUS GOSSIP.

WITHIN the last year or two we have had to record several cases in which medical men have been compelled to vindicate themselves by legal process against injurious charges set about by gossiping tongues. It is a never absent danger, especially in country districts where everybody is concerned in everybody else's business. A story gets about, nobody knows exactly how; it is spread by village gossip, and each succeeding gossiper tells it more confidently and with more precise details, until the victim is surrounded by an atmosphere of watchful suspicion which he may in time perceive but cannot explain. Trivial incidents are magnified until, as in the case reported elsewhere in this issue, a limp due to a sprained ankle is assumed to be the uncertain gait of intoxication, and a momentary forgetfulness to acknowledge a salute is given a like interpretation. It is usually very difficult to trace these rumours to their origins; and even if this be accomplished and a person who has prominently associated himself with the rumour be brought to book and caused to withdraw and apologise, it appears that he may quite forget the withdrawal and apology while remembering and recalling the accusation. There is no profession the members of which suffer so much in reputation from a charge of inebriety as the medical, unless, indeed, it be the clerical. It might be thought that clergymen for this reason, and because of the Christian injunction to the exercise of the virtue of charity, would be particularly careful not to give currency to injurious rumours, but apparently this is not always the case, for in the last two cases that have come to our notice it was a clergyman who, by fathering flying rumours, gave them substance and currency they might not otherwise have obtained. Persons who so act are disposed to get into a state of mind in which they believe that they are inspired by a sense of duty; but a man's first duty in such matters is, we submit, to be sure of his facts. This duty seems not infrequently to be neglected. The victim is in a particularly difficult position in meeting a general charge of intemperance because he has to prove a negative. He can only rebut the charge by calling witnesses who can say that they never saw him under the influence of alcohol, but only those who know how continuously and intimately the country doctor is under the observation of his patients or prospective patients can fully appreciate the really high value of such evidence, and those who in a court of law have to decide his fate may not have this knowledge. Dr. Griffith-Williams has been through a severe ordeal, but we may reasonably hope that he has heard the last of the allegation which has been current to his disadvantage during the last five years or more, for it seems hardly possible that even the most unreliable memory could forget a trial before a court of assize, ending in a finding by the jury that the plaintiff had not been proved unfit to carry out his duties, as the defendant had alleged to be the case.

"ILLEGAL LAUGHTER."

A paragraph under this heading in the *Daily Mail* of June 13th will go a long way towards converting some of us to Mr. Sidney Webb's views in favour of the abolition of workhouses. It seems that at Camberwell it is illegal to talk or to laugh during meals in what the old man in the *House with the Seven Gables* called his "country seat," and an unfortunate inmate was haled before the magistrate because in the face of this absurd restriction he declined to work. Mr. Biron, whose thorough knowledge of Dickens was shown in his recent admirable speech at the Boz Club dinner, dismissed the case without making the observations which must have occurred to his mind in connexion with Oliver Twist. But there is a serious physiological side to this little affair, which should not be overlooked. Boards of guardians, who make and administer the rules of these dreary asylums for our waifs and strays, know, or ought to know, that cheerful conversation and an occasional laugh are the best aids to digestion, and that to compel these poor folk to a Trappist-like silence may do their health serious damage. Some years ago a sensible coroner made severe comments on the refusal of a teetotal set of governors to give the poor old men in the workhouse under their control the harmless consolation of a glass of beer on Christmas Day to wash down their seasonable dinner. One of the venerable guests who had partaken not wisely but too well of the unwonted delicacies died immediately after, and the coroner stated that in his opinion a little timely stimulant would have enabled his stomach to cope with the unusually heavy meal. This, coming from a medical man, created a good deal of interest at the time. May we hope that the publicity now given to a similarly mistaken instance of the administrative folly of certain Bumbles will lead to a removal of restrictions which are in defiance of common sense and sound dietetic teaching? It is silly regulations such as this which have implanted in the minds of the working classes their deep-rooted hostility to the "House."

THE ELECTRICAL TREATMENT OF MILK.

We have received an extremely interesting report by Professor Beattie, the city bacteriologist of Liverpool, on the electrical treatment of milk, with details of the experimental inquiry and apparatus. Dr. Beattie has been engaged for the last two years or more in perfecting the method and in preparing plant for the treatment of milk by electricity. The difficulties met with both in the experimental or laboratory stage, and later when a plant was erected in the Earle Road dépôt, are recounted. The conclusion is that this electrical method of treating milk will destroy disease-producing bacteria present. The milk is not rendered absolutely sterile, but there is a reduction in the total number of bacteria by 99.93 per cent., which certainly compares favourably with the results of treatment by heat. The chemical constitution of the milk, as indicated by the report of the city analyst, is unimpaired and the taste is unaltered. In several cases milk known to contain tubercle bacilli after treatment with electricity was inoculated into animals without the production of tuberculous lesions. Full information is not given as to the comparative expense of the method. While it is too early as yet to determine how widely Dr. Beattie's method can be adopted in actual practice, it may safely be asserted that no method of sterilization or partial sterilization, however inexpensive and adaptable, can relieve the State of the necessity of exercising administrative control over the purity of the milk supply. Even the striking success of Dr. Beattie in eliminating active tubercle bacilli from infected milk can hardly render marketable the milk of tuberculous animals, while in the case of other bacteria which injure the infant, not by direct infection through the bowel wall but by the accumulation of the injurious products of their activity in the milk, sterilization *per se* has a more restricted value. The report, which is of the first importance and interest, not only reflects credit upon Dr. Beattie and his fellow-workers, but testifies to the enlightened interest which the city of Liverpool shows in this pressing problem of our contaminated milk supply. A pendant to this report is a paper which Dr. Beattie has reprinted from the proceedings of the English-speaking Conference on Infant Mortality, on the administrative control of the milk supply, with special reference to tuberculosis. He regards the attempt to enforce "sterilization" of all milk given to infants as impracticable. "We are an unscientific people," he says, "and object to compulsion in anything." He might have added that it is frankly impossible to render milk sterile by any treatment in the home, and that to compel by law the ineffective treatment of contaminated milk is not likely to give good results. Dr. Beattie rightly advocates efficient State inspection of all dairy farms by trained veterinary surgeons, and the routine examination of the milk by experienced bacteriologists, with the use of the inoculation method in doubtful cases. To overcome the great drawback of this latter method—the tedious wait of four or five weeks before certainty can be obtained—the suggestion is made that isolation farms should be established, in which the suspected animal could be isolated and cared for by the local authority. If the animal prove not to be tuberculous the dairyman should be paid the value of the milk supply which he has lost during the weeks of isolation. The paper, interesting as it is, is too short to allow all the points raised to be discussed fully. Its author admits that the scheme as outlined would involve considerable expenditure, but declares that its adoption "would mean the eradication of tuberculosis from our cattle and the saving of at least 20 to 25 per cent. of our children."

INTERNATIONAL CONFERENCE ON THE BLIND.

An Exhibition of the Arts and Industries of the Blind will be opened on June 18th for a week at the Church House, Great Smith Street, Westminster, and will be the largest of its kind ever held. It will include an immense variety of articles made by blind men, women, and children in schools, workshops, homes, and other institutions in England and Wales, Scotland, Ireland, the Overseas Dominions, and abroad, and at their own homes. There will also be shown machines and apparatus which can be used by or for the blind, or for the benefit of those threatened with blindness, and a collection of objects, books, and pictures illustrating the history, education, and training of the blind or connected with blindness, or with notable blind men and women. One of the exhibits will be a complete "myope class," according to the model established in London for the education of the short-sighted. The exhibition will be open from 11 a.m. to 9 p.m. on Thursday, June 18th, to Wednesday, June 24th (both days inclusive, Sunday excepted), admission 1s.; after 6 o'clock and on Saturday 6d. Hundreds of blind workers and societies for the blind are co-operating, and a special feature will be the exhibit of the London County Council. The following trades will be shown in actual exercise by blind workers from many centres in the great hall: Basket making, brush making, mat making, rug making, weaving, machine knitting, boot repairing, poultry farming, chair caning, typewriting, pianoforte tuning and repairing, mattress making, and carpentry.

CAMP SANITATION.

It is now very generally recognized that in every campaign the number of deaths from disease and the number of soldiers invalided from ordinary sickness is far greater than that due to wounds on the battlefield. It has also at length been recognized that a very large amount of this

disease is preventable, and is due largely to insanitary conditions associated with camp life. It is of the utmost importance, therefore, that the rank and file as well as the officers of an army should be made aware of the means by which these preventable diseases can be prevented. There has recently been brought to our notice an excellent memorandum drawn up by the divisional sanitary officer of one of the divisions of the Territorial Force. It is there pointed out that health is athletic fitness, and that its acquirement requires severe self-discipline, avoiding excesses of every kind, and keeping a true balance in every part of life. How this fitness may be attained is recorded in the memorandum, the keynote of which is the securing of cleanliness in its widest sense—the cleanliness of food and drink, in storage and at other times, in cooking and in preparation. The importance of obtaining water supplies from sources which are above suspicion is emphasized, and the danger of resorting to filters except under medical supervision is pointed out. Other means referred to in a very practical manner are the disposal of refuse, latrines, the general disposition of camps, and the clothing of the troops. Altogether this memorandum is one which ought to do a great deal in the way of securing the health of all whom it concerns.

THE PROTECTION OF MEDICAL RESEARCH BY PATENT.

IN the course of work done by the John Howard McFadden Research Fund an occasion arose, as has already been reported, in which there was a prospect of some of the results of the medical researches being utilized commercially. In order to prevent on a future occasion the possibility of such exploitation being carried out in an improper manner, Mr. McFadden approached the Government in the matter, his wish being that any research conducted under his auspices should be applied gratis for the public benefit. In order to give effect to this wish, the Home Secretary suggested that specifications of the researches should be lodged at the Patent Office. The submission of some of these patents, however, being as they were more connected with the discovery of scientific principles than with immediate practical processes, proved to be an unusual proceeding and involved certain difficulties connected with the patent laws. Ultimately, in April last, Mr. Temple Franks, C.B., the Comptroller-General of the Patent Office, gave the staff of the Research Fund a special hearing and decided as follows: Should a research worker make a discovery by means of a novel method or process, the Patent Office is prepared to receive a provisional specification of the method and the results obtained with it. A complete specification must also be lodged within the prescribed period. Should the specifications be accepted, the patentee may then either proceed with the patent in the usual way, or he may omit to pay the sealing fee, when the invention will be published, and that publication can be cited against any subsequent specifications that may be lodged by other persons in connexion with the process. The latter course would have the effect of preventing commercial monopoly of the process as described in the original specifications. But it must be clearly understood that, in order to comply with the patent laws, the specifications must describe the method, or discovery connected with it, to be associated with a manufacturing process. That is to say, it is not sufficient to describe a new scientific principle or law of nature only, but it is necessary also to describe a novel process for the manufacture of slides or specimens or preparations, etc., although such processes may also involve the discovery of new principles. This decision by the Patent Office may be of use to medical research workers, and should help to prevent plagiarism or pilfering of the work done.

WE are glad to be able to state that Dr. Edwin Rayner, Treasurer of the Association, who underwent an operation for appendicitis last week, has since made satisfactory progress.

AT the annual meeting of the West Somerset Branch of the British Medical Association to be held at Taunton on Friday next, June 26th, Dr. J. A. Macdonald, Chairman of the Central Council of the Association, will give a short address relating his recent experiences in Australasia.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Amending Insurance and other Bills.—No definite statement has yet been made as to the character or date of the introduction of any amending insurance bill with respect to medical matters. Indeed, it is still open to question whether any such bill will be introduced at all. It would appear that expenditure upon most of the services projected in the Budget can be authorized in Committee of Supply, whilst under the existing Insurance Act Insurance Committees have power to spend money on consultants, clinics, nursing, and such like services. Legislation may be necessary to give effect to any changes that may be proposed with respect to grants on account of deposit contributors and on account of arrears, but from what we can learn no decision has yet been arrived at on these points. When the Revenue Bill is published it will probably be found that it will have covered in provisional form the greater number of the projects outlined in the Budget. The Rating Bill is required, but in consequence of the pressure on parliamentary time and the fact that the valuations will not be complete and available until next year, it appears to be the intention of the Government to postpone it until next session.

Budget Grants.

Public Health Services.

Major Hope asked what would be the approximate amount of the grant to local authorities in England and Wales on account of public health services during a full year under the Budget proposals; and how much these authorities would lose by the discontinuance of the present Government subventions.

Mr. Herbert Samuel said that the approximate amount of the public health and general purposes grant to local authorities in England and Wales in a full year would be £3,200,000. This grant would go to county councils and sanitary authorities. The only existing grant specifically in aid of public health services was the grant in aid of the cost of sanitary officers, amounting to about £180,000 a year. In addition, urban and rural district councils received about £386,000 in grants under the Agricultural Rates Act, 1896. These grants would be discontinued.

Nursing Grant.

Mr. C. Bathurst asked the Chancellor of the Exchequer whether the proposed nursing grant promised in his Budget statement would be administered by the Local Insurance Committees or by any other, and, if so, what, authority. Mr. Lloyd George having answered that he could at present add nothing to the reply on May 13th, Mr. Bathurst asked whether this question was not beginning to exercise the local authorities very considerably, and how soon a decision in the matter would be announced.—Mr. Lloyd George said he was very glad that the matter was exercising the minds of the local authorities, as it was desirable to get the views of the local authorities before a final decision was reached. There were two or three alternative methods. Mr. Bathurst asked what steps it was proposed to take at an early date to find out the views of the local authorities, and Mr. Lloyd George replied that the President of the Local Government Board was taking very active steps to find out the position in the counties. Mr. Pringle asked whether the Local Insurance Committees in Scotland had passed a resolution asking that the duties should be given to them, and Mr. Lloyd George said that that was one of

the three alternative methods of dealing with the matter. These were questions of machinery, and the Government must listen to the views of the local authorities and consider them before finally determining what to do.

Tuberculosis, Laboratories, and Nurses.

Mr. Worthington Evans asked the Chancellor of the Exchequer under which head in Schedule 11 of the Finance Bill was included £750,000 proposed to be granted for expenses incurred in connexion with tuberculosis, laboratories, and nurses.—Mr. Lloyd George replied: These grants are not scheduled to the Finance Bill, but will be provided for by a vote to be submitted to Parliament in due course.

University Education.

Mr. Stuart Wortley asked whether any and what part of the money to be found for improved education under the financial scheme of this year's Budget would be devoted to further assisting university education in the great manufacturing cities where universities had been founded?—Mr. Pease replied that it was intended to utilize part of any additional money available in the year 1915–16 for substantially assisting university education. He was not yet in a position to give any details.

Dogs Bill.—Arising out of the debate on the second reading of the Dogs Bill, when Mr. Chancellor challenged Dr. Chapple to debate with some medical opponent the technical questions involved, a meeting took place in Committee Room No. 10 on Monday, June 15th, to which members of the House were invited. The subject of the debate was the general question regarding the value to science and humanity of the results achieved by experiments on living animals. Dr. Hadwen stated the case from the antivivisectionist's point of view, and Dr. Chapple opposed him. About thirty members of Parliament attended besides visitors, and in conversation afterwards with some of the members, who were generally sympathetic to the antivivisectionist's point of view, one gathered the impression that the antivivisectionist's case had been accompanied by a number of sweeping general statements not altogether supported by the evidence that was brought forward. There seemed also to be a fairly unanimous impression that Dr. Chapple had done very well and that, on the whole, the antivivisectionist's cause had been somewhat damaged and had lost some sympathy in the House in the course of the debate. No day has yet been set aside for the first meeting of the Committee on the Dogs Bill.

Dental Treatment.—In reply to Sir Harry Verney, Mr. J. A. Pease said that so far as the Board of Education was aware, whole-time school dentists had been appointed in seven county areas, and part-time dentists in seven other county areas. As a rule it was not found possible in county areas to deal completely with the children in the 6–8 age group in the early stages of the operation of a scheme, still less with all the children in the public elementary schools. Further information would be found in the chapter on dental disease and dental treatment in the annual report for 1912 of the chief medical officer of the Board of Education.

Tuberculosis (Domiciliary Treatment).—Mr. Astor asked the President of the Local Government Board under what statute or statutes local authorities had power to give domiciliary treatment, including the provision of milk, eggs, meat, bread, etc., when required, to uninsured persons suffering from tuberculosis.—Mr. Herbert Samuel replied that under Section 3 of the Public Health (Prevention and Treatment of Disease) Act, 1913, it was lawful for a local authority to make any such arrangements as might be sanctioned by the Local Government Board for the treatment of tuberculosis.

New Tuberculosis Order.—In reply to Mr. C. Bathurst, the President of the Board of Agriculture said that a new Tuberculosis Order would be issued very shortly, providing that compensation for cattle should be payable at the rate of three-quarters of the market value in cases of non-advanced tuberculosis and one-quarter of the market value in cases of advanced tuberculosis, with a minimum of 30s. in each case.

Export of Radium.—Mr. Harry Lawson asked the Secretary for Foreign Affairs whether any steps had been taken or were proposed to be taken by foreign Governments to limit or control the export of radium, with the object of reserving the home supplies in the first instance for the satisfaction of the home demand for radium for use in the treatment of disease.—Sir E. Grey said that he understood that the Austrian Government in 1912 acquired the mines in the Joachimstal, from which the greater part of the world's supply of radium was said to be derived. In 1908 State control was established in Saxony over the search for and exploitation of minerals and water containing radium. He had no information as regards the steps taken by these or any other Governments to limit or control the export of radium, but would make inquiries as to any regulations at present in force or in contemplation.

Seamen's Mortality.—Major Archer-Shee asked the President of the Board of Trade whether, as regards the investigation at his direction into the whole question of seamen's mortality, he would seek the views of the medical officers of health at the different large seaports in the United Kingdom; and whether he would make inquiries as to the exact amount of inspection and supervision of sanitation on shipboard and proper accommodation for officers and crews exercised at the different seaports by officials of the Board of Trade. Mr. Burns said that he did not wish to prejudge the course of this investigation, but would see that the points raised were borne in mind.

Street Accidents in London.—Mr. Kellaway asked how many persons were killed during May in the Metropolitan Police area and the City of London by motor omnibuses, taxi-cabs, tramcars, and other motor vehicles, respectively; and what was the total number of persons killed by horse-drawn vehicles.—Mr. McKenna said there was no record in the City of London of any person having been killed during the month by any vehicle. In the Metropolitan Police area nine persons were killed by motor omnibuses, three by taxi-cabs, twenty-one by other motor vehicles, and eight by horse-drawn vehicles. No fatality was caused by a tramcar.

Opium Sales.—In reply to various questions by Mr. Theodore Taylor, Mr. C. Roberts supplied the following tables:

	1912.		1913.
	Certificated.	Uncertificated.	Uncertificated.
	Rs.	Rs.	Rs.
January	4,364	2,850	1,835
February	4,253	2,500	2,346
March	5,239	1,900	3,050
April	5,301	1,920	3,011
May	5,554	2,124	2,991
June	3,878	1,850	2,486
July	4,641	1,695	2,111
August	5,595	1,848	2,295
September ...	5,442	1,825	2,669
October	8,247	1,832	1,798
November	—	1,650	1,765
December	—	1,581	1,530

	Bengal Opium.		Malwa Opium.	
	For China.	For Other Countries.	For China.	For Other Countries.
	Chests.	Chests.	Chests.	Chests.
1912	6,700	13,140	13,433	*Nil*
1913	*Nil*	9,000	*Nil*	*Nil*

Mr. Roberts added that the Indian Government held stocks of Bengal opium as follows:

March 31st, 1912	... ...	20,708 chests
,, 1913	... ...	16,817 ,,
,, 1914	... ...	14,817 ,,

The only Malwa opium in the hands of the Indian Government would be the unused balance of the 12,000 chests purchased by them as a special measure, for Excise use in India, during the year 1914. He was unable to give the exact figure.

England and Wales.

MANCHESTER AND DISTRICT.

Hope Hospital.

The Salford Board of Guardians has not yet entirely overcome the difficulty in regard to the staffing of the Union Infirmary at Hope. As stated in the SUPPLEMENT of June 6th, it had then received no applications in answer to its advertisement for two resident medical officers, and found it necessary to advertise again and to offer increased salaries. It has now had two applications, but the medical superintendent said that one of them was unsuitable. The other was from Dr. M. W. Paterson of the Central Branch of the Manchester Royal Infirmary, who in his application asked that he should be allowed a considerable amount of leave in order that he might pursue his studies and take the examination for the D.P.H. At a meeting of the guardians last week, the chairman of the Infirmary Visiting Committee said that Dr. Paterson's stipulations were somewhat serious from the guardians' standpoint, as special arrangements would have to be made while he was absent, but it appeared that, owing to the operations of the Insurance Act, there was a difficulty in getting doctors on any conditions, and as Dr. Paterson's recommendations were first rate and he was evidently fitted for the post, it would be well to appoint him and grant him the opportunities for study for which he stipulated. He was accordingly appointed as senior resident medical assistant.

The late Dr. T. H. Pinder.

Under the will of the late Dr. T. H. Pinder, the Manchester Ear Hospital will receive a legacy of £500, and it has been suggested that the memorial which is being raised to his memory, and towards which subscriptions are being received by the *Manchester City News*, might take the form of a marble tablet placed in the hospital where he was honorary surgeon so many years, but until it is seen what amount of money is subscribed no decision will be taken. Dr. Pinder directed in his will that none of his patients at the time of his death should be pressed for payment of any accounts owing to him, and that no accounts should be sent out to any of his patients after his death. The gross value of his estate is set down at £25,076.

Small-pox Outbreak at Rochdale.

It has often been suspected that raw cotton was the means in not a few cases of conveying small-pox into this country, and the outbreak that occurred at Stockport in 1909 was traced with a fair amount of probability to cotton. A similar outbreak occurred at Milnrow, near Rochdale, several weeks ago. The first ten cases that occurred were all among the workpeople at one spinning mill at Milnrow. Nine of the infected persons were employed in the department where the bales of cotton are broken up and prepared for spinning, and where it is practically impossible to avoid inhalation of the dust from the bales. As soon as the first cases were discovered all the forty workers in the department were quarantined. Later a case was discovered among the workers in the spinning department at the same mill and the quarantine had to be extended, and the whole of the mill was thoroughly disinfected. Several others of the workpeople later developed the disease, and both at Milnrow and Rochdale some cases occurred among persons not working at the mill, which can reasonably be set down as contacts. It appears that the cotton suspected in this outbreak had not come from the ordinary source of supply in America, but had been imported from Mexico, and was first put through the mill between two and three weeks before the first cases were discovered. The outbreak is especially serious in view of the very large number of persons, especially children, who are unvaccinated, as Rochdale seems to have been almost a stronghold of anti-vaccinators even before the Act of 1907 extended the facilities for avoiding vaccination. The statistics show that about half the children born in Rochdale in 1908 went unvaccinated. The proportion has increased since then, until in 1911 only about 34 per cent. were vaccinated, and over 60 per cent. of the parents pleaded conscientious objection. This fact has caused considerable anxiety to the medical officers. No fresh cases have occurred within the last few days at Rochdale, but on June 15th a case was reported from Oldham which it is possible may have originated from contact with cases at Milnrow.

NEWCASTLE-UPON-TYNE.

Durham Medical Graduates' Association.

The annual dinner was held on June 10th at Tilley's Restaurant, Blackett Street, Newcastle-upon-Tyne, and was well attended. The sustained interest of old members was shown by the fact that to support the new President, Dr. William Martin, no fewer than six past presidents were present—Sir George Hare Philipson (1880–1885), Dr. Beatley (1900), Dr. Arnison (1902), Mr. H. Brunton Angus (1908), Dr. Beattie (1910), and Dr. Bolam (1912). The principal guests of the Association were: Sir George Hare Philipson, President of the College of Medicine, and Pro-Vice-Chancellor of the University of Durham; the Rev. S. R. P. Moulsdale, Principal of St. Chad's Hall in the University of Durham; Mr. Herbert Shaw, Sheriff of Newcastle-upon-Tyne; Mr. H. E. Ferens, President of the Central Durham Graduates' Association; and Dr. Dunn, President of Armstrong College Graduates' Association.

After the loyal toast had been duly honoured, the Sheriff, in an apt and interesting speech, submitted the toast of "The University of Durham," which was acknowledged with characteristic urbanity by Sir George Hare Philipson. Mr. Angus proposed the toast of "The Guests" in felicitous terms, and Dr. Dunn replied; Principal Moulsdale, in a speech containing a vigorous appreciation of its work, proposed the toast of "The University of Durham Medical Graduates' Association," which was appropriately acknowledged by the President.

The dinner was in all ways a great success; the music and songs were excellent, the speeches were full of life and interest and not too long, and there was that general atmosphere of easy good fellowship natural at such gatherings.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Lister Ward at Glasgow.

Sir David McVail, one of the managers of the Royal Infirmary, informed the Glasgow University Court on June 11th that the Board of Managers had decided to remove the Lister Ward and had agreed to transfer the material of the ward and of the Lister operating theatre for re-erection in the grounds of the University. Considering the situation of the ward in the Royal Infirmary, it would be detrimental to the new buildings at present nearing completion if it was allowed to remain, and its re-erection at Gilmour Hill will be a great asset to the university.

Post-Graduate Classes in Edinburgh.

In less than a month the first series of post-graduate classes in connexion with the University and Royal Colleges of Edinburgh will have commenced. It will be remembered[1] that there are to be two July courses this summer instead of one. There will be first the course on diseases and defects of infants (limited to twenty-five members) which will run along lines similar to those it followed in the past two years, and fourteen lecturers in the Royal Infirmary, Royal Hospital for Sick Children, the University, and the City Hospital of Edinburgh will take part in the teaching, along with Dr. R. D. Clarkson, who is the medical officer to the Scottish National Institute for the Education of Imbecile Children at Larbert. The new course is that on obstetrics and gynaecology (limited to ten); it will extend from July 20th to August 1st; it is open (as all the post-graduate teaching is) to women, and it will be taught by ten lecturers. In addition to the daily obstetric clinics at the Royal Maternity Hospital by Dr. Ballantyne, to the daily gynaecological clinics at the Royal Infirmary by Drs. Brewis, Barbour, and Haig Ferguson (Dr. Brewis taking the first week and Drs.

[1] BRITISH MEDICAL JOURNAL, February 21st, p. 439.

Barbour and Ferguson the second); and to the daily demonstrations of various obstetric and gynaecological subjects—labour, ectopic gestation, eclampsia, deformed pelves, abortion, etc.—by Dr. Berry Hart, there will be three lectures by Sir Halliday Croom in the first week on haemorrhage in pregnancy and labour and one demonstration of the biological test of pregnancy (Aberhalden's dialysation process) by Dr. James Ritchie, professor of bacteriology in the university. Dr. Haultain will operate on the two Saturdays between 10 and 12.30 at the Deaconess Hospital. The other hours of the day are occupied by the teaching of practical gynaecological pathology by Drs. Barbour, R. W. Johnstone, and James Young; and arrangements will be made whereby the post-graduates will be given opportunities for seeing the work at the Royal Maternity Hospital during the night. From the number of entries which have already been made the success of both these courses seems to be fully assured. In this connexion it may be announced that the internal medicine course which meets in August is one-third full, and that the surgical course, which forms part of the September teaching, is nearly two-thirds full. Information regarding any of the courses can be had from Dr. J. D. Comrie, the honorary secretary, at the University New Buildings.

Highlands and Islands Board.

On June 12th the members of the Highlands and Islands Medical Service Board met representatives of the public bodies in Orkney. Sir John Dewar, the Chairman, said that the Board was guided by three general principles. The first was that every man and woman should have a chance of medical service at a fee which they could reasonably be expected to pay. The second was that the scheme was not intended to relieve present ratepayers of any charge upon the rates. The third general principle was that the grants were intended to supplement local effort—that was to say, anything done by way of extending the medical and nursing services should be supplemented to some extent locally. The Board had been impressed by the apparent prosperity of the mainland district, and found that there were twenty-one doctors for a population of 25,000; in one part of the Hebrides there was one doctor for over 7,000 people. The board would devote its attention to providing a better service in these isolated and not easily accessible districts, and believed that much good could be done by the supply of nurses. With regard to hospitals the board was glad to know that a local body had made most generous proposals for Orkney, and was of opinion that a first class, well equipped hospital was infinitely better than a number of second-class hospitals, with the addition of motor ambulances. In the islands there were many cases in which a small hospital might be useful. During the course of a general discussion the convener of the county advocated motor boats for the conveyance of doctors to the outlying districts as required, and said the extension of the telegraphic system or other means of signalling was absolutely necessary.

The "Scrapie" Disease of Sheep.

Some nine months ago reference was made in the Journal (vide September 20th, 1913, p. 765, and November 1st, 1913, p. 1179) to the ovine malady known from one of its prominent symptoms as "scrapie"; and now it has to be recorded that Dr. J. P. McGowan, Assistant Superintendent of the Royal College of Physicians' Laboratory, Edinburgh, has written a work entitled *Investigation into Scrapie* (published by Messrs. W. Blackwood and Sons), in which, after setting forth the interesting early history of the disease in England and on the Continent, he states that the cause is the presence in the muscles of the sheep of a protozoan parasite, *Sarcocystis tenella*. When present in small numbers, as is apparently the case in many sheep, the *sarcocystis* has no evil effects, but when it invades the tissues in crowds, itching and impaired movement, the two leading symptoms of "scrapie," appear. A badly infected sheep is incurable, but much is to be hoped from preventive treatment. Dr. McGowan holds that if the stocks of sheep are maintained by keeping the ewe lambs of the older ages of ewes for breeding purposes the risks of the disease appearing are minimized, and if the stock is changed the malady will disappear. The latter system, of course, is very expensive. It is not contagious in the ordinary sense of the word, and the rams have practically nothing to do with its dissemination. The investigation was made possible by funds supplied by the Board of Agriculture for Scotland.

The late Dr. Hugh Dewar, Portobello.

The committee formed recently in Portobello for the purpose of gathering subscriptions for a proposed memorial to the late Dr. Dewar has received about £160. Ex-Councillor Nichol and Mr. Brodie, the honorary treasurer of the fund, have indicated informally to members of the Parks Committee of the Town Council that the desire is to erect a fountain in Portobello, probably in the Brighton Park.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

The Health of Dublin.

Sir Charles Cameron has stated that the measles epidemic, which has existed in Dublin for the past three months, is now showing signs of decline. It has been responsible for some 300 deaths since March. There is practically no typhus or typhoid fever in the city at present, and the general public health is good. Some 59 out of every 100 of the Dublin inhabitants live in tenements, and the death-rate of such residents is 26 per 1,000, whilst for the remainder of the population it is only 15 per 1,000.

An Antiquated Water Supply.

Dr. Stephenson, medical officer of health, has informed the Carrick-on-Suir Board of Guardians that the old inmates of the workhouse, all of whom are completely worn out, are being slowly killed by having to turn all day long the pump that supplies the water for use in the house. Recently one man had almost died from exhaustion and haemorrhage as the result of work at the pump. The guardians appointed a committee to go into the question of obtaining the town water supply.

Doctor's Action against Guardians.

At the Dundalk Quarter Sessions last week the judge gave his decision in the case in which Dr. Lavery, medical officer of the Dundalk Workhouse, sued the Dundalk Board of Guardians for fees for attendance on a soldier, treated in the fever hospital. Charges over and above the "average cost" had been made by the defendants; his Honour stated that he had come to the conclusion that the money received was for Dr. Lavery, and he gave a decree for £4 7s.

Sir Patrick Dun's Hospital.

Last week an *al fresco* fête was held in the grounds of Lord Iveagh, St. Stephen's Green, Dublin, in celebration of the bicentenary of Sir Patrick Dun's Hospital. The fête was formally opened by the Lord-Lieutenant on June 11th. Sir Charles Ball, in introducing His Excellency, said that Sir Patrick Dun was born two hundred years ago that year. When he died he left his estates in county Waterford, subject to the life interest of Lady Dun, to found a professorship of medicine in the College of Physicians and also to establish and maintain a library there. The property adjoined the Bonmahon copper mines, and when they were opened it increased considerably in value, so that it was found that there was more money than was required for these two objects. In 1800 the Irish Parliament passed the College of Physicians Act, which set apart definite sums for the professorship and the library, and ordered that the balance should go to the founding of a hospital in honour of Sir Patrick Dun. Money towards the building was also voted by the Dublin Corporation and the College of Physicians. The hospital was completed one hundred years ago. After some time the copper mines decreased in value, as did also the properties adjoining them. That meant a considerable reduction in the income of the hospital. The property had since been sold to the tenants under the Land Acts, with the result that the hospital would only get £500 a year from this source in the future. Sir Patrick Dun's Hospital was now very considerably in debt, having an overdraft at the bank of some £5,000, and this fête had been got up by friends of the hospital to try and clear off some of this heavy debt. The fête proved to be a great success; fortunately the weather was all that could be wished, and it is expected that a very considerable sum has been realized.

Canada.

ONTARIO MEDICAL ASSOCIATION.

THE thirty-fourth annual meeting of the Ontario Medical Association took place in Toronto, May 26th, 27th, and 28th. The meetings, which were almost entirely clinical, were well attended, about three hundred members being present in Toronto. An able address was delivered by the president, Dr. C. F. McGillivray of Whitby, in which he touched on matters of interest to the association; the most important, perhaps, was the relation of the Provincial to the National Association. The Canadian Medical Association is attempting to model its constitution on the lines of the British Medical Association and the American Medical Association. As matters now stand, no meeting takes place of the medical association of the province in which the annual meeting of the Canadian Medical Association is held. This condition has affected Ontario more than the other provinces, since the place of meeting of the Canadian Medical Association has frequently happened to lie in that province. This has caused a feeling of dissatisfaction, and notice was given of a motion of separation, which, however, was subsequently withdrawn by its proposer. Dr. McGillivray was not in accord with this proposal; the Ontario Medical Association was the first to affiliate with the Canadian Medical Association, all the provinces, with the exception of Quebec, had followed that example, and it would be much to be regretted were Ontario the first to break away. He urged the formation of city and county associations which should be affiliated with the provincial association, which in its turn at present is affiliated with the Canadian Medical Association. The matter was referred to a committee of nine members, who will report to the next annual meeting, and by that time it is hoped that most of the difficulties will have been adjusted.

Reference was also made by Dr. McGillivray to the Workmen's Compensation Bill and its failure to provide for medical assistance. This question was taken up later, and a committee was appointed to lay before the Government proposals for incorporation in the Act next session. Another important question brought forward by Dr. McGillivray was that of medical education. He referred to the statement of Sir James Whitney, made at the opening of the Toronto General Hospital a year ago, that a Royal Commission would be appointed to consider this vexed question. The President emphasized the necessity of establishing a high standard, to which all the "pathies"—osteopaths, chiropractors, faith healers, and others of their kind—should conform. He suggested that the Commission should declare clearly what is meant by the practice of medicine, what primary education is required before entering upon the study of medicine, and what technical education is required after the study of medicine has been begun.

Clinics were held at the various hospitals; a large number of interesting cases were shown, and Dr. Julian Loudon demonstrated the electro-cardiograph at the Toronto General Hospital, the first one to be installed in a Canadian hospital.

The President of the Association for the forthcoming year is Dr. D. Gibb Wishart, of Toronto. Next year the annual meeting will take place at Peterborough.

TORONTO ACADEMY OF MEDICINE.

The report presented to the seventh annual meeting of the Toronto Academy of Medicine on May 5th set out that eleven stated meetings of the academy had been held during the session, and addresses were given by Sir Rickman J. Godlee, Bart., of London; Dr. C. F. Hoover, of Cleveland; Mr. Herbert J. Paterson, of London; Dr. Oskar Klotz, of Pittsburg; Colonel G. Carleton Jones, of Ottawa; Sir William Leishman, of London; Dr. Robert Abbe, of New York; and Dr. E. Hertoghe, of Antwerp. Thirty-four additional meetings were arranged by the Chairman and Secretaries of Sections, and the year had been most successful. Dr. H. B. Anderson was elected President for the year 1914–15, to succeed Dr. H. J. Hamilton. Special committees were appointed to consider such questions as the Workmen's Compensation Act, the medical inspection of schools, and the control of infant mortality. A permanent committee was appointed to deal with matters of public interest. An auditorium for the use of the academy is now in course of erection. It is the gift of Mrs. J. W. F. Ross, as a memorial to her late husband, who was one of the founders of the academy.

HAMILTON HEALTH ASSOCIATION.

The annual meeting of the Hamilton Health Association took place on May 28th. During the past year the association, instead of limiting its efforts to incipient cases only, has treated all tuberculous cases in so far as the accommodation at its disposal permitted. It has been aided in this work by a civic grant of 100,000 dols. for the erection of an infirmary and the Southern Home building on the sanatorium property. The preventorium, which was designed originally for 22 children, is being enlarged to double its capacity. During the year 53 children were under treatment and 33 were discharged. The total number of patients treated by the association was 192; 120 of these were discharged and 5 have died; the remainder are still under treatment.

Special Correspondence

BERLIN.

Prussian Tuberculosis Statistics.

ACCORDING to the official statistical reports, the mortality from tuberculosis in Prussia is still on the decline. In 1913 there were 56,538 deaths, as compared with 59,911 in 1912 and 61,219 in 1912—a reduction of not less than 5.4 per cent. The effects of scientific hygiene and prophylaxis are still more apparent when these figures are compared with those for 1876, when preventive measures were first instituted. In that year 79,770 persons died of the disease, and it may therefore be reckoned that some 23,000 lives are annually preserved to the nation. In 1876, 31 per 100,000 of the population died of tuberculous infections, and nowadays only 13.6 in every 100,000 succumb to the many varieties of the disease. This reduction applies to the pulmonary cases mainly; the deaths from tuberculosis of other organs and of bones show an apparent increase, which may be explained by the improvement in modern methods of diagnosis and the greater care taken to ascertain the exact causes of death at *post-mortem* examinations.

Salvarsan and the Law Courts.

A most important and interesting legal action for libel has just come to an end in Frankfort. Professor Ehrlich himself was in the witness-box and energetically defended his remedy against the insinuations in articles published in a newspaper, the *Freigeist*, which were considered libellous by the prosecution. The gist of these was briefly as follows: It was alleged against the plaintiffs, who included the mayor and corporation of the city, the governors of the State Hospital, and the medical staff (which includes the well-known dermatologists, Professors Herxheimer and Altmann), that they had experimented on prostitutes with dangerous doses of salvarsan, and that the public was being deliberately misled, whilst the doctors themselves were accepting bribes from the commercial despots at the salvarsan factory at Höchst. It need scarcely be stated that all these scandalous accusations were disproved. Professor Herxheimer stated that the drug had been in constant use in Frankfort since 1910, and that it was now being given in combination with mercury, because it had been found that relapses occurred less frequently with the combined administration. The salvarsan courses in that time had reached the large total of 11,300, and included at least 40,000 to 50,000 single injections. The results had been eminently satisfactory. The popular interest naturally centred in Ehrlich's replies to the president of the court. He did not deny that deaths had resulted directly from injections of the drug, but he maintained that such cases and cases of paralysis were due to faulty administration, or to ignorance of contraindications. He had personal knowledge of three such cases. Professor Altmann said that only four deaths had occurred among the prostitute patients in the Frankfort hospital since 1910. Two of these had had no salvarsan at all, another died of syphilitic disease of the liver, and the fourth, a full month after the

conclusion of a combined mercury and salvarsan course, as a result of a severe secondary anaemia. The examination by counsel of the prostitute witnesses led to regrettable scenes in court, and the behaviour and attitude of the defendant were such as to raise a doubt of his sanity. On the opinion of several alienists that he was responsible for his actions, and that the articles had been written in the hope of attaining notoriety from the high position of those he attacked, he was sentenced to a year's imprisonment.

The Abortive Treatment of Syphilis.

Almost at the moment when Ehrlich was giving his evidence in Frankfort, Professor Hoffmann of Bonn published an article in the *Deutsche medizinische Wochenschrift* on the success of the combined use of salvarsan and mercury as an abortive treatment for syphilis. His results lead him to state that in the majority of primary cases of the disease an abortive cure might be confidently expected, especially since it was now possible to diagnose the disease by the microscope at its very incipience. His practice was to give 0.4 gram (0.3 gram in weakly individuals) of old salvarsan (606) in 200 c.cm. of 0.5 per cent. saline, concurrently with an energetic course of mercury (36 to 40 inunctions, or 15 injections of 0.1 gram mercury salicylate). The duration of treatment was controlled by the Wassermann reaction, which was tested at every injection of salvarsan. The average requirements for a permanent result in the ordinary primary case were 4 to 6 salvarsan injections, rarely 7 to 8, and as a general rule two more salvarsan injections were given after the Wassermann reaction had been negative. Of sixteen private patients consistently controlled for from one to three and a half years all had remained free from symptoms, and in all the Wassermann reaction was now negative both in the blood and cerebro-spinal fluid. Such results were exceedingly striking, and had been achieved in the past, before the introduction of salvarsan, with mercury alone, only in isolated cases. The writer had never seen infection of either wife or child since he had been giving the "combined" cure, and his efforts to find spirochaetes by dark ground illumination, and infect rabbits from the excised site of the primary sore at the end of treatment, had all proved fruitless.

The Friedmann Emulsion.

The lengthy discussions on Friedmann's tubercle emulsion in the Berlin Medical Society have at length been concluded. Only one of the many speakers argued in favour of the preparation; he claimed to have seen a few good results in cases of surgical tuberculosis. Among the last to give their experiences were Professor Max Wolff of the university policlinic for pulmonary tuberculosis, and Professor Krauss. The former said that he had treated 60 cases of lung infection according to Friedmann's directions without discovering the slightest alteration or improvement in the physical signs. At the best, these remained *in statu quo*, a result which could be achieved equally well by other therapeutic measures. In only two cases did the tubercle bacilli disappear from the sputum, and in every case there was a distinct deterioration in the general condition. Krauss's paper, which was read in his absence, was to the effect that he had seen no notable improvement in surgical cases, and had never been able to stave off the necessity for surgical procedures. Relatively, the best results were reached in cases of peripheral adenitis; in 50 cases of pulmonary disease only subjective improvement and decrease in the number of tubercle bacilli in the sputum had occurred. According to his experience the injections were not dangerous, but he was not yet in a position to express a definite opinion as to their utility. Neither Friedmann himself nor any of the devoted following which had so warmly supported him in the early days of his fame, spoke at any of the three great debates on this most vital subject, and the general impression in Berlin is that the claims made for the emulsion have received their *coup de grâce* at the hands of the society.

THE tenth congress of medical Esperantists will be held this year in Paris in August (2nd to 10th). For particulars application should be made to the Office Central Espérantiste, 51, rue de Clichy, Paris.

Correspondence.

THE PROPHYLACTIC USE OF VACCINES AGAINST PUERPERAL INFECTION.

SIR,—We have read with great interest Dr. Champtaloup's article in the BRITISH MEDICAL JOURNAL of June 6th on the employment of bacterial vaccines in the prophylaxis and treatment of a small epidemic of puerperal infection. His suggestion that vaccine treatment should come into general use in prophylaxis against puerperal sepsis raises a question of considerable importance—that is, the question of the value of the treatment he advocates.

We have been engaged for some two years in working on this subject in connexion with the London Hospital maternity charity, and we hope shortly to publish the results of our work. In the meantime, we should like to offer some criticism on Dr. Champtaloup's suggestions.

First, we are convinced from our experience that the injection of a few sporadic cases, on the assumption that infection is likely to occur, has too large an element of chance to permit conclusions of any great significance being drawn therefrom. The value of prophylactic inoculation can be established only by the investigation of a series of consecutive cases, and, owing to the relatively low morbidity and mortality, the numbers so observed must be large.

Secondly, with regard to the indications for prophylactic measures which Dr. Champtaloup mentions, we certainly think with him that there is a definite need in densely populated town slums where puerperal infection is still not uncommon. We cannot agree, however, that a practitioner already attending a septic case should feel content to protect by a prophylactic injection another labour case for which he is engaged. Only in very exceptional circumstances should any other confinement be attended by him.

The question as to the frequency of autogenous infection—that is, infection other than that introduced into the genital tract by the accoucheur—is still a matter for debate. For our present purpose, however, it has only a theoretical interest, since it is now universally accepted that, whether autogenous or heterogenous, the streptococcus is almost invariably the infecting organism. Thus far, at any rate, we have a clear basis for specific immunizations in the prophylaxis of puerperal infection.—We are etc.,

S. GORDON LUKER.
T. H. C. BENIANS.

The London Hospital, E., June 15th.

INFLUENZA AT ST. KILDA.

SIR,—In the JOURNAL of June 13th, p. 1321, there is a note dealing with influenza in the island of St. Kilda, and the means by which the infection is introduced.

In June of last year I was landed on the island from H.M.S. *Active* to take medical charge of the inhabitants, who, it had been reported, were suffering from a severe epidemic illness. This illness I found was influenza, and of a total population of 79 all but 6 were affected, and were in various stages of the disease.

The history of the outbreak of the epidemic is interesting, and leaves little doubt as to the method of introduction of the infection. On June 12th a steamer had visited the island—the second of the visits made by steamers from the mainland during the summer months. Many of the inhabitants went on board and passengers (tourists) landed from the steamer for a few hours and mixed freely with the villagers. The steamer left about noon, and late in the evening of the same day symptoms occurred in a few of the inhabitants. On the following day large numbers were attacked, and the number increased daily until four days later, when, with the exception of six, the entire population, men, women, and children—were prostrated. During the previous winter months—before the arrival of the steamer, the health of the islanders was excellent, and, with the exception of occasional slight colds in isolated instances, had been so for years.

With regard to the statement of "a lady of Norfolk," which you quote, as to the part played by the north-east wind in the epidemic colds said to occur in this island, the wind at the time of the outbreak of illness last year was westerly,

and had been from that quarter for some weeks previously. I could get very little information to confirm the statement that there is an outbreak of "colds" after the visits of strangers to the island, and the present generation of islanders do not appear to support the idea very strongly.

Small-pox, in 1724, is the only epidemic, other than that to which I have referred, which has been experienced in the island, and in the event of the introduction of any virulent form of infection to this "virgin ground" the results might well be appalling.—I am, etc.,

R. W. B. HALL,
Staff Surgeon, Royal Navy.

H.M.S. *Lowestoft*,
First Light Cruiser Squadron.

INFANTILE PARALYSIS AND ITS TREATMENT.

SIR,—In the oration to the Medical Society of London on "Infantile paralysis and its treatment," which was published in the BRITISH MEDICAL JOURNAL of May 30th, I made a statement which might lead to misapprehension regarding the origin of the operation of spino-facial anastomosis.

In mentioning this operation under the heading of "nerve crossing" it was stated that in 1895 Ballance met with gratifying success when he united the facial to the spinal accessory, thus leaving the impression that this was the first occasion on which this operation had been performed. The same operation, however, had been carried out by Drobnik in 1879, and, although Ballance operated upon his case in 1895, it was not published by him until 1903, when it was grouped with several others.

The first reported case was published by Faure of Paris in 1898, and the second—which was the first published in this country—was that of Kennedy of Glasgow in 1900. This case was of importance from being the first in which independent volitional movements of the face resulted from the operation.

This correction I think it right to make in order to preserve historical accuracy regarding the subject.—I am, etc.,

ROBERT JONES.

Liverpool, June 11th.

PUBLIC HEALTH RESEARCH.

SIR,—In your brief report of my somewhat lengthy address on Public Health Research to the Society of Medical Officers of Health at their annual provincial meeting, your reporter has fallen into an error, which, as it relates to the supposed policy of the Medical Research Committee under the National Insurance Act, I must ask you to be good enough to allow me at once to correct. I explicitly avoided anticipating any of its proposals beyond making a general statement as to the broad view which the committee was disposed to take of the scope of medical research and of the methods or inquiries by which such research was to be pursued. I said nothing as to its proposed relations with new laboratories or with existing laboratories. My address was not on the work of the committee, but on public health research, and especially on the manner and spirit in which it should be carried out. The reference to laboratories appearing in your report was in connexion, not with the work of the Research Committee, but with the recent proposal by the Chancellor to devote a considerable sum to the provision of increased laboratory facilities for carrying out the numerous examinations now required for clinical and public health purposes. I expressed certain views regarding such laboratory services, which I had previously submitted at some length in a memorandum to the Astor Committee.—I am, etc.,

MATTHEW HAY.

Aberdeen, June 13th.

MODEL SCHEME FOR THE TREATMENT OF TUBERCULOSIS.

SIR,—In the model scheme for the treatment of tuberculosis there are two additions which might be made with advantage in my opinion. (1) Paragraph II, Section A (ii) will probably not be faithfully followed by many borough councils, and therefore, I think, an income limit of, say, £160 should also be a condition of treatment. (2) There is no mention of a management committee of a dispensary. In London that will consist of representatives of the hospital, the L.C.C., and the borough council, etc. I think we should insist that the practitioner, panel or non-panel, should also be represented—a management committee could scarcely be efficient without.—I am, etc.,

C. E. EVANS.

London, N.E., June 17th.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—It seems more than a pity that the commendable efforts of Messrs. Wallace Henry and Fothergill—both able exponents of their respective policies—should have failed to give rise to a desire on the part of the average member of the Association to enter into a discussion of such great moment. The maintenance of such a correspondence involves an enormous amount of time and careful thought, and such efforts are worthy of a better fate. It behoves us, therefore, to learn a lesson in time from this apathy, for that is what it is. This apathy on a question of the very greatest moment will be reflected in the Divisions when meetings are held at which Representatives will be instructed to vote which of these methods is to be adopted to safeguard our non-existent fighting fund. Let us therefore profit by past experience. Let us boldly face the fact that the voice of the Divisions will not be the voice of the Association.

Fortunately this is a question to be settled purely by the members of the Association, and we have a machinery for obtaining the opinion of the men who cannot attend their Division meetings. I mean the Referendum. I make bold to say that the failure or refusal to make use of the Referendum on such a momentous question will be a crime against the Association. Going round amongst the members, one finds the most acute difference of opinion on this great question. There are many who feel so strongly that they affirm that if a trade union is formed in connexion with the Association they will resign forthwith and persuade their friends to do the same. On the other hand, there is a rapidly growing section of the members which thinks that such a step constitutes our only hope. Finally, there are not wanting members of the profession who would join the Association as soon as it countenanced trade unionism. I earnestly hope that if my suggestion should be blessed by the powers that be, the plea of causing further delay may not be allowed to prevail. We have delayed so long that a few more weeks cannot signify. We are further off having a fund to-day than we were twelve months ago, owing to the way in which the fund enthusiasts were put under extinguishers prior to and at the Special Representative Meeting in 1913.

The Referendum and the sincere hope and belief that whatever the result the minority will loyally fall in with the expressed wishes of the majority can save us from committing another crowning blunder.

In conclusion, may I ask if it is really worth while risking any injury to the Association by squabbling about how we shall deal with a fund which we certainly have not got and which we probably shall never have.—I am, etc.,

C. COURTENAY LORD.

Gillingham, Kent, June 14th.

SIR,—I should like to emphasize one question asked by Dr. Fothergill in his letter to the JOURNAL of June 13th.

Are not the advocates of trade unionism for the medical profession, after all, reactionary, rather than progressive, in their ideas?

For the sake of the Association, I hope that the Representative Meeting will negative the change, as I am confident that if the position be carried by the trade unionist factions there are many members who would resign and leave the trade unionists to work out their own salvation.—I am, etc.

S. J. ROSS.

Bedford, June 15th.

ROYAL MEDICAL BENEVOLENT FUND.

SIR,—We have carefully read the letter of the President and Treasurer of the Royal Medical Benevolent Fund and also that of Messrs. Beale and Co. in your issue of last week.

It is true that Mr. Justice Joyce decided that Miss Glenny's legacy must be paid to the Royal Medical Benevolent Fund and not to Epsom College. He so decided because he was of opinion, as a matter of construction, that the words of description used in the will more aptly applied to the Fund than to the College. He ruled as inadmissible evidence which Mr. Crosse, who prepared the will, was ready to give as to the intention of the testatrix, but in so ruling he did not lessen the force of an observation he made in the course of the hearing to the

following effect: "If either of you people know, either by inadmissible evidence or otherwise, that this legacy was intended for the other you ought not to contest it."

Sir John Tweedy and Dr. West were furnished with a copy of Mr. Crosse's proof, which in our view makes it clear that Miss Glenny intended the legacy for Epsom College. Mr. Crosse was prepared to prove, not as matter of "opinion" but as fact:

1. That in 1902 Miss Glenny told him she was leaving legacies to those charities to which she and her family had subscribed.

2. That in 1904 she informed him that the description "British Medical Benevolent Fund" used in her will was wrong, and that she wanted to leave the legacy to the institution to which she, her sister, her mother and father had subscribed for many years.

3. That in 1905, by a codicil, she revoked the legacy to the British Medical Benevolent Fund and "in lieu thereof" bequeathed the same amount to the Royal Medical Benevolent Fund.

If this evidence by Mr. Crosse had been admitted there can, we believe, be no doubt that the legacy would have been adjudged to the College for the following reasons:

Because the testatrix and her family had subscribed for years to the College and had never subscribed to the Fund.

Because the revocation of the legacy to the British Medical Benevolent Fund, which, both in 1902 and 1905 was the correct title of what is now the Royal Medical Benevolent Fund, and the giving the same amount "in lieu thereof" to the Royal Medical Benevolent Fund establish that Miss Glenny did not intend to benefit the British Medical Benevolent Fund (which did not become "Royal" until July, 1912, whereas the date of the execution of the will in dispute was May, 1907), but did intend to benefit some other institution.

Because that other institution was clearly Epsom College, which throughout a large part of the period during which Miss Glenny's family subscribed to it was known as the Royal Medical Benevolent College.

Having regard to the before-mentioned facts we do not think any impartial and competent person could fail to come to the conclusion that the Royal Medical Benevolent Fund has received £500 which it was the giver's wish should benefit Epsom College.—We are, etc.,

HENRY MORRIS,
Treasurer.
W. S. CHURCH,
Chairman of the Council.

London, W., July 15th.

LONDON PANEL COMMITTEE AND THE SUPPLY OF LOCUMTENENTS.

SIR,—With reference to the letter of protest on the above subject from the London medical agents, kindly allow me to point out that when the resolution in question came before the meeting of the London Panel Committee on May 25th (which was open to the press) I proposed a direct negative to it on the grounds that (1) it was encroaching on the legitimate rights of the agents, and (2) by creating a monopoly it might be unfair to the non-panel practitioners. Beyond getting a seconder my proposal did not receive a single vote. I am of opinion that the letter of the medical agents is entitled to the entire sympathy of the profession.

I would like to take this opportunity to inform my colleagues in the City of London who elected me last year at the meeting at the Guildhall as their non-panel representative on the London Panel Committee, that under the new scheme for the forthcoming election of the London Panel Committee, non-panel practitioners are not eligible for election. I automatically cease to be their representative after next month.—I am, etc.,

London, E.C., June 13th. J. J. SCANLAN.

SIR,—The statement in your report of the committee meeting, to which the medical agents object, does not appear in the subcommittee's report which introduced the proposal. Nor is there any recollection at the office of such remark having been made when the item was passed by the meeting without debate. Personally I think we should be well advised not to proceed with this matter.—I am, etc.,

J. T. RICHARDS,
Chairman of the Committee.

London, S.W., June 15th.

CONSULTANTS AND SALARIED PUBLIC APPOINTMENTS.

SIR,—May I ask through your columns for an expression of opinion from those of your readers who are interested as to the advisability or otherwise of the acceptance of paid appointments as consultants in connexion with school clinics or in connexion with the Insurance Act by men in consulting practice, medical, surgical, or special? It is not at all improbable that in the near future such appointments will be under consideration by the respective authorities; in fact, it is the general opinion, as far as I can gather, that such appointments will be made. This question has arisen in an acute form in my neighbourhood, where a little time ago a specialist in consulting practice took such a post. He has been severely criticized for doing so and is faced with the statement that there is no other consulting specialist in England who is receiving a salary under similar conditions, and that by taking the appointment he has offended gravely by breaking what is considered to be an inviolable rule, and that his action has considerably lowered the dignity of the local consultants.

Obloquy and ridicule are nasty things to deal with, and it is to discover, if possible, whether or no such treatment is well deserved that I write this letter.

If the public authorities in carrying out their work seek the aid of consultants, it is quite time that the latter should know how they will stand in relation to their professional brethren if they take such appointments. I am quite sure that there are large numbers of consultants, especially juniors, both in London and in the provinces, who would hail with delight an addition to their annual income of anything from £500 to £1,000, especially if they considered it honourably earned.—I am, etc.,

June 17th. INCOG.

PROFESSIONAL CONFIDENCES AND THE LAW.

SIR,—If Dr. McWalter will consider the position he has outlined from the point of view of the lady, he will see (1) that, should he hand his patient over to the police before any felony has been committed, and, indeed, without any reasonable or probable cause for believing that a felony will be committed, the lady will have a good cause of action for false imprisonment and probably malicious prosecution; (2) should he disclose the facts he will no doubt be sued for damages under the Slander of Women Act.

Is it not high time that public money should go to the suppression of public crimes which hit the taxpayer, and not to these moral offences, which are serious enough, but can hurt each one only the consciences of one man and one woman? It seems to me that to arrest people who steal letters from letter-boxes or shop-boys' bicycles, or serve drunken husbands with liquor so that they go home and batter to pieces their pregnant wives, or the keepers of night clubs, or the retailers of veronal, would be a far better task for the police than to ferret out the sporadic cases of abortion and abominable crime, indecency, and other sexual offences. One wife-beater can destroy quite as many embryos, and maim, starve, and kill quite as many children as any two abortionists, and the tied house and the liquor laws are the main causes of cruelty and brutality to women and children. Why not attack them first?—I am, etc.,

GEORGE JONES, M.A., M.B.,
Barrister-at-law.

London, S.E., June 13th.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—I have read with some surprise the remarks of Dr. Mercier in his letter of June 13th on the above subject. He has descended to personalities in trying to give point to his argument. Therefore I feel he creates an atmosphere in which reasonable discussion is impossible.—I am, etc.,

Alton, Hants, June 14th. JOHN FREDERICK BRISCOE.

THE OLD AND NEW LARYNGOSCOPY.

SIR,—As one who practises both methods, permit me to add to Dr. Dan McKenzie's remarks on this subject in your issue of June 13th, that the "direct" examination is much more unpleasant to the patient than the use of the laryngoscopic mirror. Young laryngologists will find it greatly to their advantage to make it a routine practice from the

commencement to use the laryngoscopic mirror invariably in the *left* hand; they will thus train this hand to direct the light with such steadiness and accuracy that they will be able to operate in the larynx by the "indirect" method under the guidance of the eye with a very powerful source of illumination.—I am, etc.,

London, W., June 17th. DUNDAS GRANT.

Medico-Legal.

AN UNSUBSTANTIATED ALLEGATION.

AT the Norwich Assizes, before Mr. Justice Bailhache, on June 5th, Dr. Griffith-Williams, of Mattishall, East Dereham, Norfolk, a district medical officer of the Forehoe Union, brought an action for libel against the Rev. J. E. P. Bartlett, rector of Barnham Broom, who had been chairman of the board of guardians from 1894 down to April last. It appeared from the opening statement of plaintiff's counsel, Mr. Hume Williams, K.C. (instructed by Messrs. Hempsons for the Medical Defence Union), that the allegations were that Dr. Griffith-Williams was in the habit of being drunk while carrying out his professional duties, and was an unfit person to occupy the public offices he held. The allegations were not in respect of Poor Law patients, but private patients. In March, 1909, on the occasion of the annual reappointment of medical officers, the defendant, who was in the chair, opposed the reappointment of the plaintiff, alleging that he was addicted to drink. The chairman was not supported by the board, and Dr. Griffith-Williams was reappointed, but Dr. Griffith-Williams thought it right to place the matter in the hands of the Medical Defence Union, and Messrs. Hempsons, solicitors to the Union, communicated with Mr. Bartlett, with the result that at a meeting of the board of guardians in May of that year he said that he had been wrong in his allegation, and asked Dr. Griffith-Williams to accept his withdrawal of the remarks he had made on the previous occasion. The allegations were, however, revived in connexion with the present action at law, which arose out of the course taken by the defendant, who, as chairman of the Forehoe board of guardians, on March 17th, 1913, unsuccessfully opposed the reappointment of Dr. Griffith-Williams and alleged that he was not fit to do his work by reason of intemperance. On July 21st, 1913, the defendant, who was then still chairman, moved to ask for a Local Government Board inquiry, but the board declined to credit the statements made against Dr. Griffith-Williams, and ultimately the defendant resigned his position as chairman of the board. Mr. H. F. Dickens, K.C., counsel for the defendant, said that the defendant greatly regretted that he had felt compelled to move in the matter, but he was actuated by a sense of duty. In his evidence the defendant said that he had heard allegations of drunkenness against Dr. Griffith-Williams, but he denied that he had alleged this as the cause why he should not be reappointed. He believed that he had seen Dr. Griffith-Williams drunk in 1909, and told the board of guardians so. He afterwards withdrew and apologized, but had forgotten that he had apologized for it when he resuscitated the allegation in 1913. He admitted, in cross-examination, that all the cases alleged against the doctor had been collected by a private inquiry agent since the proposed application to the Local Government Board. The only allegation which rested on his own observations was that which arose out of the incident in 1909, and he had afterwards withdrawn the allegation and apologized for making it. The incident upon which the allegation was founded was that the doctor when driving down a narrow lane did not return his greeting.

Evidence was given by women patients and by a nurse to the effect that they believed Dr. Griffith-Williams had been intoxicated on certain occasions when attending patients, and this was confirmed by a chauffeur who had been discharged from Dr. Griffith-Williams's service.

The plaintiff, who was called, absolutely denied that there was any truth in the suggestion that he had attended patients when in a condition of intoxication, as alleged. Dr. A. Griffith-Williams, plaintiff's son, denied that his father was ever intoxicated. This was confirmed by Mrs. Griffith-Williams, and similar evidence was given by the rectors of Barnham Parva and Weston Longville, by Nurse Ford (who had been working for Dr. Griffith-Williams exclusively since 1905), and by other residents in the neighbourhood. Three members of the board of guardians were called, who said that after knowing Dr. Griffith-Williams for many years, and after making full inquiries, they had supported his reappointment. Dr. Burton-Fanning and Mr. H. A. Ballance, of Norwich, who had both examined the plaintiff, stated that they could not discover any trace of alcoholism.

The judge, after commenting upon the evidence, left the following questions to the jury: (1) Was the plaintiff from time to time in an unfit condition to see his patients by reason of drink? (2) If not, did the defendant honestly believe the plaintiff was in such a condition? (3) Did the defendant make a statement as to the doctor's condition in fulfilment of his duty as chairman or from some improper motive?

The jury answered the questions as follows: (1) Not proved unfit to carry out his duties. (2) Yes. (3) He made the statement in his position as chairman, without any improper motive.

The jury awarded no damages.

ACTION AGAINST A SCHOOL MEDICAL OFFICER.

DR. J. MIDDLETON MARTIN, medical officer of health for Gloucestershire, was sued in the Gloucester County Court on June 9th, for cutting off a portion of a schoolgirl's hair; £6 general damages were claimed. From the evidence it appeared that in September last cards were sent by the Gloucestershire Education Committee to the parents of the plaintiff informing them that their child's hair was verminous. They were subsequently warned that unless the condition of the child's head improved other proceedings would be taken. The father contended that the child's head was not verminous, and obtained a medical certificate from Dr. Hadwen to this effect. He subsequently told Dr. Martin that he would not allow his daughter to be examined any more, and that he would not send her to school. A further warning was sent by the County Education Committee, and the parent was asked to send the child to school on March 18th for an examination. She did not attend, and Dr. Martin, as school medical officer, and the school nurse called at the house to verify the nurse's report in view of the medical certificate which had been obtained, and, after a friendly conversation with the father, he saw the child at home and cut off a few hairs from her head upon which, he stated, there were actually nits. It was contended that a school medical officer had no right to make an inspection of any child outside school premises. The jury awarded a farthing damages.

AN EYE "DOCTOR" WARNED.

ON June 11th, at the London Sessions, before Mr. Robert Wallace, K.C., John Highwater pleaded guilty to having obtained £1 1s. from an Egyptian medical student at Charing Cross Hospital named Butrus Chobrial. The case had been heard in the first place at the Bow Street Court, when Lily Gringer, described as a nurse, was jointly accused. At the sessions no evidence was offered against Gringer, who was acquitted and discharged. According to the report in the *Morning Advertiser*, Mr. Travers Humphreys, for the Director of Public Prosecutions, said the prosecution had been instituted in the interest of the public with a view to putting a stop to what was clearly a fraudulent attempt to obtain money by false pretences. The prisoner carried on business in Gray's Inn Road, where he sold toilet specialities and also an instrument called an "eye masseur," for which he charged a guinea. He did not carry on that business in his own name, but it was run by a limited company called the "Highwater Laboratory and Manufacturing Company (Limited)," of which the prisoner was the only person who had any substantial holding, and on the banking account of which he was the only person entitled to draw. The prisoner claimed that he had been successful in doing what the medical profession of this and other countries had failed to do—that was to successfully treat diseases of the eyes without seeing the sufferer, and solely by means of correspondence. It was alleged that the prisoner introduced into his business an element of fraud by advertising that it was carried on by "Dr. C. G. Percival." His advertisements read, "Weak sight cured in one month. Wonderful results. Famous specialist's treatment. Ten days' free trial." The advertisement went on to say that sufferers of weak sight would read it with absorbing interest, and in reply to an application a diagnostic chart was sent asking for answers to a set of printed questions. There was also sent a booklet entitled, "The naked eye truth," and it was suggested that every case was considered by an accomplished specialist, who gave an unbiassed opinion. As a matter of fact, said counsel, there was no medical man connected with the business. The only other persons beside the prisoner were a typist and a nurse.

Mr. Curtis Bennett, for the prisoner, said that there was no sort of attack on the efficacy of the "eye masseur," and hundreds of people of all classes had sent testimonials, speaking in the highest possible terms of the instrument. In cases where people had derived no benefit the money had always been returned on application.

Mr. Wallace, K.C., said the only false representation alleged was that the prisoner had a qualified medical man behind him. He had no right to say that, and with a strong warning as to his future conduct he would be bound over. If he offended again he would be sentenced to nine months' imprisonment for this offence.

This case was brought to the notice of the British Medical Association some time ago, owing chiefly to the fact that Highwater had alleged that the business was carried on by Dr. C. G. Percival; the resemblance to the name of the well-known ophthalmic surgeon, Mr. A. S. Percival, of Newcastle-on-Tyne, will at once attract the attention of medical readers. The case illustrates the weakness of the law with regard to the pretensions of unqualified persons; the allegation held to be proved was that the accused had made the false representation that he had a qualified medical man behind him.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The following degrees have been conferred:

M.D.—A. J. Cooke, C. B. Goulden.
M.B.—A. N. Hodges, J. N. Newmarch, J. M. Postlethwaite, F. S. Smith.
B.C.—A. N. Hodges, G. A. Lilly, J. M. Postlethwaite, A. V. Stocks.

UNIVERSITY OF SHEFFIELD.

Compulsory Latin.

At a meeting of the court of the Sheffield University last week certain ordinances were adopted. One of these will replace materia medica as a subject for examination by pharmacology, and permit this subject to be taken after the physiological course. The other will have the effect of rendering Latin no longer a compulsory subject for medical students. The Vice-Chancellor (Mr. H. A. L. Fisher) said that as an old classic he did not view the proposed change with enthusiasm, but the Medical Faculty was only following the example of the University of London. The proposal was seconded by Dr. Arthur Hall, but opposed by Mr. A. J. Arnold, principal of the Sheffield Pupil Teachers' Centre. Mr. R. J. Pye-Smith, while agreeing that all school boys should learn some Latin, defended the change, on the ground that it was in consonance with the general rule in schools nowadays which had a classical and a modern side. Dr. Hall said that the desire for the alteration was due to the experience the university had had for some years. Students who had passed the matriculation examination exceedingly well were debarred from entering the medical profession because they had not matriculated in Latin. The resolution was carried with only one dissentient.

Clinical Tutor.—The Council has appointed Mr. E. F. Skinner, M.A., M.B., B.C., M.R.C.P., to the post of Tutor in Clinical Medicine.

UNIVERSITY OF GLASGOW.

Regulations for Medical Examinations.

At the Glasgow University Court on June 11th a proposal from the Senate to hold a Second Professional Examination for degrees in medicine at the close of the summer session in 1915 was approved. On the supplementary regulations for the conduct of the professional examinations in medicine being submitted, Sir David McVail took exception to one of them, which debarred a candidate who had failed in one subject to sit again for the same subject and possibly gain distinction. The regulation, he said, would stamp a man as perpetually inferior. Professor Muir said that the view which the medical faculty took was that the conferring of honours depended upon the work which a candidate did in his ordinary course as a medical student. There was a certain amount to be said at first sight for Sir David McVail's view, but if it were carried out there would be complications. It was not a case of stamping a man as being inferior, it was simply a case of saying that a man who did badly in a subject could not possibly receive a mark of distinction. That, he thought, was only fair. Eventually the regulation was approved.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An Ordinary Council was held on June 11th, Sir Rickman J. Godlee, President, in the chair.

Results of Examinations.

Diplomas of Fellowship were granted to the following thirty-eight candidates:

H. V. Prynne, Major R.A.M.C., W. H. Leonard, Captain I.M.S., D. M. Hughes, H. E. Batten, M. W. B. Oliver, M. Donaldson, G. Maxted, G. E. Neligan, H. G. Alexander, W. W. Wagstaffe, V. Glendining, H. K. Griffith, J. C. Jefferson, A. Shafeek, J. W. Tonks, G. A. Ewart, T. C. Graves, J. H. Pendered, W. A. Curry, F. McLoughnane, R. F. O'Sullivan, M. J. Petty, J. M. Redding, V. Gabriel, H. Gardiner, G. T. Mullally, F. Cook, A. R. Wallace, A. R. Bearn, J. F. Fairley, J. A. C. Forsyth, T. S. S. Holmes, R. W. Knox, Major I.M.S., W. A. Lincoln, W. A. H. McKerrow, E. W. Smerdon, J. C. Storey, and G. H. Wickens.

Diplomas of the Licence in Dental Surgery were granted seven candidates found qualified for the licence.

Election of Examiners.

The following appointments were made:

Board of Examiners in Anatomy and Physiology for the Fellowship.—*Anatomy:* Robert William Reid, Gordon Taylor, William Wright, Wm. Hy. Clayton Greene. *Physiology:* Herbert Willoughby Lyle, John Sydney Edkins, Arthur Rendle Short, George Alfred Buckmaster.

Conjoint Examining Board.—First Examination—*Elementary Biology:* Walter G. Ridewood, George P. Mudge. Second Examination—*Anatomy:* John Ernest Sullivan Fraser, Andrew Melville Paterson, John Cameron. *Physiology:* Charles Frederick Myers-Ward, Herbert Eldon Roaf. Third Examination—*Midwifery:* William Blair Bell, George Drummond Robertson, Henry Russell Andrews, Charles Hubert Roberts.

Examination for Diploma in Public Health.—Part I: Richard Tanner Hewlett. Part II: Sir Shirley Forster Murphy.

Diploma in Tropical Medicine.—*Bacteriology:* John William Henry Eyre. *Diseases of Tropics:* Charles Wilberforce Daniels.

Maternity Hospital, Woolwich.

The Council agreed to appoint a representative on the Managing Committee of the "Maternity Hospital and School for the Higher Training of Midwives" which it is proposed to establish at Woolwich under a scheme of the Charity Commissioners.

General Medical Council.

The thanks of the Council were given to Sir Henry Morris for his services as Representative of the College on the General Medical Council.

Retirement of Mr. William Pearson.

Owing to ill health, Mr. William Pearson, for many years the Prosector of the College, retired from his post. The Museum Committee was instructed to report upon the arrangements to be made in connexion with his retirement.

Election of Council.

The President reported that a meeting of the Fellows would be held at the College on Thursday, July 2nd next, for the election of five Fellows into the Council of the College in the vacancies occasioned by the retirement in rotation of Sir Henry Morris, Bart., Mr. F. R. Cross, and Mr. C. A. Ballance, M.V.O., (of whom Sir Henry Morris and Mr. Cross did not offer themselves for re-election), and by the resignation of Mr. R. Clement Lucas and Mr. Jonathan Hutchinson.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The annual election for the President, Vice-President, Secretary, and Council was held on Monday, June 8th, and the following officers were elected for the ensuing year:—*President:* Mr. F. Conway Dwyer. *Vice-President:* Mr. William Taylor. *Secretary:* Sir Charles A. Cameron. *Council:* William Stoker, Sir Charles A. Cameron, Sir Lambert H. Ormsby, Richard D. Purefoy, Henry Gregg Sherlock, Sir Charles B. Ball, John B. Story, Sir Thomas Myles, Sir John Lentaigne, Sir Arthur Chance, F. T. Porter Newell, Shepherd M'C. Boyd, Sir Robert H. Woods, Richard Lane Joynt, R. Bolton McCausland, Thomas E. Gordon, R. Charles B. Maunsell, Trevor N. Smith, William Ireland Wheeler. Mr. F. Conway Dwyer, the newly-elected President, was a pupil at the Mater Misericordiae Hospital. He then entered Trinity College, Dublin, and graduated as Senior Moderator and gold medallist. He also gained a medical scholarship. In 1898 he became a Fellow of the College of Surgeons, and has acted on the Council for some years. He was elected Professor of Surgery in the Medical School of the College in succession to the late Sir William Stokes, a position which he still holds. Early in his career he was elected Surgeon to Jervis Street Hospital; he then became Surgeon to the Meath Hospital and County Dublin Infirmary, and on the resignation of the late Sir Thornley Stoker he joined the staff of the Richmond Hospital.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

D.P.H. (*Both Parts*).—D. Duff, J. S. Evers, M. J. Mulligan, J. C. O'Farrell, P. L. O'Neill, Major I.M.S., K. B. Dastur-Rabadina, W. N. Rishworth.

Public Health

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

The annual general meeting of this association will take place at Burnley on Thursday, July 2nd. The Worshipful the Mayor (Alderman James Sellers-Key, Esq.) will receive the association at the Town Hall at 2 p.m., and has invited those attending the meeting to afternoon tea with him at 5 p.m.

The chair will be taken by Surgeon-General Evatt, C.B., President of the Association.

After the ordinary business of the meeting papers will be read on Recent legislation affecting the duties of Poor Law medical officers by Mr. C. E. Bygrave, Clerk to the Blackburn Guardians, and On the future of the Poor Law and Poor Law medical service by Dr. Major Greenwood.

The annual dinner will take place at the Bull Hotel, Burnley, in the evening at 7.30 p.m., the President being in the chair. Single tickets 6s. 6d., not including wine; double tickets (admitting lady) 12s. 6d. All Poor Law officers and friends interested in Poor Law matters are invited to be present. Those wishing to attend the dinner are requested to communicate with Dr. Agnew, Lyndhurst, Padiham, Lancashire.

DROITWICH UNION: SETTLEMENT OF THE DIFFICULTY.

The difficulty between the Droitwich Board of Guardians and the local medical practitioners with regard to the medical officership of the Droitwich district, which has continued for several months, has been settled and the post has now been filled. The salary paid to the late Dr. Cuthbertson was £120 a year. On his death some months ago the board, contending that the work had decreased, decided to offer £90. The local doctors informed the guardians that they could not accept the salary. The board then rescinded the resolution offering £90 and offered £100, but this was refused. Then this resolution was rescinded, and it was finally decided to offer the old salary. Dr. O. Cuthbertson, the son of the former medical officer, who has been doing the work temporarily, was the only applicant, and was unanimously appointed, subject to the approval of the Local Government Board.

Obituary.

GEORGE DEAN,

REGIUS PROFESSOR OF PATHOLOGY, UNIVERSITY OF ABERDEEN.

By the death of Professor Dean, which occurred on May 30th, not only the University of Aberdeen but the whole world of pathological science has been placed in mourning. He had been an invalid for more than a year, and he died in his 51st year, a victim, at least partly, to overwork.

He was the son of a railway contractor, and was born in the Chapel of Garioch. After receiving his preliminary education at Walker's Academy he entered Aberdeen University in 1881, and graduated M.A. in 1885 with honours in natural science, in which he gained a prize. Proceeding to the study of medicine he had a distinguished career, graduating M.B., C.M. with honours in 1889. After graduation he spent nearly a year in further study at Vienna and Berlin. At Vienna he gave special attention to morbid anatomy, spending much time in the *post-mortem* room. At Berlin he worked in the Hygienic Institute, then under the direction of Robert Koch, and in the Pathological Institute under Virchow.



GEORGE DEAN.
(Photograph by Elliott and Fry, Ltd., London.)

In 1891 he was appointed assistant to the Professor of Pathology at Aberdeen and assistant pathologist to the Royal Infirmary. He was also pathologist to the Royal Hospital for Sick Children. In 1897 he was appointed bacteriologist in charge of the serum department of the Lister Institute. While he held that post a new department was built, in the planning and organization of which he took a considerable part. About this time the Institute established a department for the preparation of plague serum and Haffkine's prophylactic fluid. Dr. Dean was invited to make the necessary arrangements and was sent as a delegate of the Lister Institute to visit the laboratories in Paris, Lille, and Bern, to study the methods of immunization against plague. During this period he was an additional examiner in pathology at Aberdeen University, and discharged the duties of an examiner at the Royal College of Veterinary Surgeons also. In 1906 he was appointed chief bacteriologist to the Lister Institute, and became a lecturer on bacteriology in the University of London. He made a number of researches on diphtheria, tetanus, tuberculosis, plague, typhoid, and on various questions connected with immunity. In 1908 he was appointed Professor of Pathology in the University of Aberdeen in succession to Professor D. J. Hamilton. As a teacher Professor Dean was remarkable for the lucidity of his expositions. As a man he had a quiet and engaging personality, and was very popular with his students and with his fellow workers in the scientific world.

Before the beginning of the sermon in the Aberdeen University Chapel on May 31st, Principal George Adam Smith referred to Professor Dean as follows:

I have the mournful duty to intimate the death yesterday evening, after his long illness, of Professor George Dean—a beloved colleague and dear friend, whom we greatly valued as a teacher, and of whose distinguished labours in research and the high position they had won for him in his science we were all proud. The loss of him, after so brief a tenure of his office, will be lamented by the whole University, and by all his fellow-workers in the subjects which he has so ably and so faithfully served. But this morning, I am sure, the feeling that prevails with us is one of warm sympathy for his wife and children, his brother and sister, and all the relatives who mourn his early departure; and that our prayers for them will rise from very full hearts.

At the forenoon service in Queen's Cross United Free Church the Rev. Dr. Martin Lewis, speaking of Professor Dean, said:

He was an eminent leader in his own line of scientific study, widely known even outside his own country. He was one of that faithful band of investigators who deserve all honour and gratitude because they are labouring to protect our race against the germs of disease which are the deadly enemies of human life, and, like many of his comrades, he himself suffered in his gallant warfare. His character was honest, genial, modest, and it won the warm affection of his kindred, intimate friends, and fellow-workers.

Professor Dean was a frequent contributor to the leading medical periodicals of Europe, and he wrote on many subjects. His article on diphtheria immunity in the *Bacteriology of Diphtheria*, edited by Nuttall and Graham-Smith, is the best summary in the English language of what is known on this subject. As an authority on typhoid fever Dr. Dean was appointed a member of the War Office Committee on anti-typhoid inoculation.

We are indebted to Dr JOHN MARNOCH, Regius Professor of Surgery in the University of Aberdeen, for the following tribute to Professor Dean's memory: Aberdeen University has sustained a great loss by the death of Professor George Dean. It was there that he first devoted himself to pathology under the late Professor Hamilton, whose energy and inspiring influence as a teacher is well known. It was at the Lister Institute, however, that Dean made his mark as a pathologist. His work on immunity, typhoid, diphtheria, and tubercle brought him a reputation second to none. Much might be written about the quality of his research work, but the most outstanding feature of it all is its accuracy. He would never publish unless he were sure of his ground. Every statement was verified. Nor would he rush into print unless he felt assured that what he had to say was of value. His constant attitude towards his subject was one of inquiry and research, qualities with which he inspired his assistants. To those of us who had the privilege of Dean's friendship his loss is acute. To get him at his best was to meet him of an evening, and discuss over a pipe or cigar some pathological problem connected with one's work. It was then that the great qualities of mind and heart of the man were revealed. His wide reading, logical mind, and sound judgement made his opinion of inestimable value, and one never came away from him without realizing that he had shed light on some difficulty and helped materially towards its solution. Personally he was one of the most amiable and modest of men. No one would have summed him up better than Professor Ehrlich, who, in eulogizing his work as a bacteriologist, said, "Er ist ein ruhiger zurückhaltender Mann."

JOHN SIDDON CROOK, M.R.C.S., L.R.C.P.,

TARRING, NEAR WORTHING.

We are indebted to Dr. H. H. Sturge, of Maida Vale, for the following notice of the life of Dr. J. S. Crook, who died at his residence at Tarring, near Worthing, on June 8th:

In John Siddon Crook indefatigable industry and a strong will were added to his natural gifts. He was born fifty-eight years ago, the son of the late Dr. J. Crook, of Northfleet. In his childhood Dr. Crook suffered from spinal disease, and for a long period had to lie on his back till the bones were consolidated. Thus he was handicapped in life, because, in addition to having to wear a support, the back often caused pain, though few knew this. Notwithstanding these disadvantages, his career at Guy's Hospital, which he entered in 1875, was distinguished. In the list of those who attained honours at the examination of students at the end of their first year his name was fourth, and in the honours list at the end of the second year his place was second, and he was awarded an exhibition of £10. In anatomy he once obtained the highest marks of all who competed. After holding the appointment of obstetric resident, Dr. Crook was appointed house-surgeon, and showed the same capacity in that as in previous appointments.



JOHN SIDDON CROOK.
(Photograph by Goodman and Schmidt, Margate.)

After a sea voyage to South America he settled in the family practice at Northfleet, till his health gave way when aged 40. He then removed to Tarring, where, with the pure air from sea and downs, health was restored; and he soon acquired an extensive practice, and the confidence and esteem of the people. He took part in public life, and, until Tarring was incorporated with Worthing, was periodically elected to the District Council at the head of the poll. About that time Roentgen had discovered the *x* rays, and Crook was keenly interested in the matter, and soon mastered the subject; he purchased a plant, and for several years was honorary radiographer to the Worthing Hospital. He was deft with his hands, and in his own general practice performed such operations as enucleation of the eyeball. He was an accomplished obstetrician. During the last two years he went through great anxiety, as his wife's health gradually gave way. At the end of last year the back pain again began to be severe, and ground was never regained, though in February a rest was taken.

From before Christmas to the time he saw his last patient, eighteen days before his death, he went about his work himself in pain. He gave money freely to those he considered in need, and himself provided tents and milk for his poor tuberculous patients. And so it was a large congregation, composed of all grades of the community, which assembled on June 12th in Tarring Church, and after gathered round the grave. Nine of his colleagues from Worthing and Hove were present, for, as one of them said, "Crook was popular with us all." Dr. Wiggins, his doctor as well as friend, was also present.

Personally, I am indebted to my friend for most valuable advice and sympathy all through the years since 1875. Without such help life to me would have been harder. Though far from ostentatious in it, he was influenced by firm religious belief, and was formerly churchwarden at Tarring. My friend in his life exhibited the qualities which distinguish the leaders of our race—industry, endurance, and sympathy and courage, combined with capacity.

Medical News.

Sir George Kenrick has given £18,000 to endow a chair of physics in the University of Birmingham.

The Royal Dental Hospital, Leicester Square, has received a legacy of £200 from the executors of the late Mr. H. S. White.

The annual sports of the United Hospitals' Athletic Club will be held at Stamford Bridge Grounds on Thursday, June 25th, at 2 p.m.

At the Grand Hotel, Leicester, on the afternoon of Wednesday, July 8th, the Union of Medical Practitioners will make a presentation to Dr. R. Wallace Henry and Mrs. Henry.

The annual general meeting of the Research Defence Society will be held at the house of the Royal Society of Medicine, 1, Wimpole Street, W., on Tuesday, June 30th. Tea and coffee will be provided at 4.30 p.m. At 5 o'clock the President, Lord Lamington, will give an address, and the annual report will be submitted for adoption. After the business of the meeting there will be a demonstration with the cinematograph.

Dr. and Mrs. A. C. Jordan are giving two concerts in aid of the *Empress of Ireland's* sufferers at 8.30 on the evenings of Friday and Saturday, June 19th and 20th, at 13, Upper Wimpole Street. The programmes comprise instrumental and vocal chamber music, in the performance of which Dr. and Mrs. Jordan will be assisted by Mr. Charles Copland (songs), Mr. Edward Isaacs (pianoforte), Mr. Carl Fuchs and Miss Adelina Leon (violoncello). The price of seats is 10s. 6d. for Friday's concert, 5s. for Saturday's.

A meeting of the School Medical Service Group of the Society of Medical Officers of Health will be held at the society's offices, 1, Upper Montague Street, Russell Square, W.C., on Saturday, June 27th, at 2.30 p.m. Members of the group and Fellows of the society whose duties include school medical work are invited to attend. The main subject for discussion will be the consideration of the instructions to be given by the group to the three co-opted representatives to the Special Committee appointed by the Council of the society to report on the relationship of officers of the school medical service to the Society of Medical Officers of Health.

The Countess of Mayo presided over an At Home held on June 11th at the Tuberculin Dispensary which has been recently established in Manor Street, Chelsea. The buildings, which were thrown open for the visitors' inspection, were formerly used by the charitable institution known as the Chelsea, Brompton, and Belgrave Provident Dispensary, from whose trustees they have now been taken by the Tuberculin Dispensary League at a rental of £500 a year. The dispensary has been fitted up with every regard for the patients' comfort and the requirements of the treatment, and all that is now needed for its establishment on a sound financial basis is the provision of an annual sum of £500, for which an appeal was made by the Mayor of Chelsea.

At the statutory general meeting of the University of London Club, held at the University on June 10th, Lord Rosebery, Chancellor of the University, was elected President of the club, and among the vice-presidents appointed were Sir Thomas Barlow, Sir John Rose Bradford, Sir Rickman Godlee, Sir Alfred Pearce Gould, and Dr. W. P. Herringham. The committee reported that 910 original members (709 men and 201 women), including 135 members of the medical profession, had been elected. The town members numbered 554, and the country 356. Mr. T. Ll. Humberstone has been appointed the first secretary of the club, and it is hoped that the club-house at 19 and 21, Gower Street, will be open in July or shortly afterwards.

The seventy-third annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be opened at the Norfolk County Asylum, Thorpe, Norwich, under the presidency of Dr. D. G. Thomson, on the

morning of July 14th. In the afternoon Dr. Thomson will deliver his presidential address, and a paper will be read by Dr. A. W. Daniel on chronic poisoning by scopolamine hydrobromide or hyoscine; the annual dinner will take place in the evening. The association will meet the following morning in the Guildhall, Norwich, when papers on the detection of a dysentery carrier, by Drs. H. Salter Gettings and Ethel Waldron, and on intrathecal treatment of general paralysis, by Mr. E. Mapother, F.R.C.S., and Dr. T. Beaton. During the meeting reports from the committees on the Mental Deficiency Act and on the status of medical officers and psychiatry will be discussed.

THE North-East London Post-graduate College will hold a special holiday post-graduate course at the Prince of Wales's General Hospital, Tottenham, N., from August 4th to August 15th next. It is anticipated that a number of American medical men visiting London for the Clinical Congress of Surgeons will attend. The syllabus shows that the course will include the practical demonstration of modern clinical and laboratory methods, the exhibition of carefully selected groups of clinical cases in general medicine and surgery and in the various special departments, a series of clinical lectures on subjects closely connected with medical and surgical practice, laboratory practice in clinical pathology and bacteriology, and clinical demonstrations in various special hospitals. The fee for the whole course will be 5 guineas, or 3 guineas for either week. Further information is contained in the booklet of the course which may be obtained from the Dean.

THE Duchess of Albany opened a new nurses' home, out-patient department, and research laboratory at the Infants' Hospital, Vincent Square, S.W., on June 12th. This hospital, founded in 1907 for the study of malnutrition in infants, provides accommodation for fifty suffering from this condition. The new research laboratory occupies the whole of the lower ground floor; on the ground floor is the out-patients' department, and the upper floors are used as a nurses' home. The whole cost of the new building, about £12,000, has been defrayed by Mr. Robert Mond, who also maintains the laboratory at his own expense. For the cost of maintenance, which exceeds £3,000 a year, the committee is dependent upon voluntary contributions. A vote of thanks to Her Royal Highness, moved by the Mayor of Westminster and seconded by Dr. Ralph Vincent, senior physician to the hospital, was carried unanimously.

WE regret to have to note that the affairs of the Victoria Hospital, Blackpool, are still in the highly unsatisfactory condition that they were when we last drew attention to them a few weeks ago; the fact is all the more regrettable because, so far as the hospital is concerned, no question of principle is any longer at issue, while the converse is the case on the side of the local medical profession. When the corporation appointed a committee to intervene in the matter we had strong hopes that there would quickly be a return to the normal. As the committee is representative of the town, it is representative of those who support the hospital, and it seems to us that the proper step for it now to take is to insist upon the managers giving way in regard to the sole point which now remains at issue. This point is merely one of personalities so far as the hospital is concerned, but from the point of view of the local medical profession it has become one of principle. Furthermore the local medical profession has conclusively proved how much importance it attaches to it by declining to allow its representatives to meet this mediating body any more until the point has been granted. We remember few occasions on which the medical men in any town have shown so united a front and such cool determination, and, this being the case, we feel assured that it would be wise for the subscribers to the Victoria Hospital to require the governing body to give way. Active co-operation between the lay administration of a hospital and the medical men in its neighbourhood is essential in the case of every hospital which desires to obtain the best results.

READERS of Dr. Hurry's article on vicious circles in disease must have felt that when in possession of an idea he works it out with the utmost zeal, enthusiasm, and, be it admitted, fancy, all tempered by a respect for actualities and an accurate knowledge of the technical details of the subject in hand. The many admirers of these medical writings will rejoice to find him breaking new ground, especially such a fascinating one as a landmark in the history of music in England, nay, in the whole world. It is not too much to describe as such the canon, *Summer is ikumen in*, wonderful not merely for the time from which it dates—1240—but for any time. It has been the admiration of historians of music in all lands, and those who have music as such in their soul, and the smallest academic and historical interest in its technical development, will delight in the study of this charming and graceful volume. The original manuscript is among the treasures of the Chapter House of Reading, saved from the ruins of its famous abbey, and a facsimile of it forms the frontispiece to the book. In the few short chapters will be found an extraordinary amount of condensed knowledge of mediaeval language, music, and history centred round the Abbey of Reading, of which Dr. Hurry has been an industrious student. There is also a touch of natural history in connexion with the cuckoo, about whose song various opinions have been expressed. None of them seems to agree with the writer of this note, who has an impression that the interval is a minor third. He has, however, to admit that he is a "town bird" and may be mistaken. He has, however, enjoyed reading every line of this work, and looks forward longingly to the first excuse for a visit to Reading to see the canon reproduced in marble in the Chapter House, and perhaps the MSS. as well. He guarantees that other readers will entertain the same aspiration.

ON June 10th a presentation was made to the Master and Governors of the ancient Charity of Charterhouse in London of a life-size painting in oils by Mr. J. Dick Peddie, the well-known portrait painter, of the late Mr. A. Chune Fletcher, who was for many years medical officer to the institution. The Master, the Rev. G. Davies, together with Sir H. Seymour King and other governors and officials, received the subscribers to the memorial portrait in the Hall of the Charterhouse; the attendance was large and representative. The portrait was presented on behalf of the subscribers by the Hon. Charles Napier Lawrence, who in a few well chosen words spoke of the valuable work accomplished by Mr. Fletcher, and of the friendships which he had gained during his tenure of office by his courtesy, his skill, and his goodwill to all men, and deplored the loss to the Charterhouse by his death last year. The Reverend Master, in unveiling the portrait and accepting the gift, commented on the excellence of the painting as a speaking likeness, and expressed the estimation in which Mr. Fletcher's services as medical officer and part administrator to the Charterhouse had been held by all those brought in contact with him. Sir H. Seymour King also spoke of the valuable assistance given to the Charterhouse in so many ways by its late medical officer, and of his power of organization and administration. The numerous subscribers were entertained at tea, and they were afterwards personally conducted through the historical buildings by the Rev. Mr. Davies, and permitted even to view the Master's residence with all its treasures of antiquity, an act of courtesy which added greatly to the interest and pleasure of all who enjoyed the rare opportunity of inspection not afforded to the general public.

THE foundation stone of the new buildings of the Chelsea Hospital for Women was laid on June 9th by Earl Cadogan, the donor of the new site in Arthur Street, Chelsea, whilst the foundation stone of the new nurses' home in connexion with the hospital was laid by Countess Cadogan during the course of the same afternoon. The plan of the new buildings includes not only the main hospital and nurses' home, but also a pathological block containing a mortuary, *post-mortem* room, museum, and pathological laboratory. The hospital itself will contain 76 beds, and the nurses' home will provide accommodation for 31 nurses and 7 sisters. Viscount Castlereagh, in asking Lord Cadogan to lay the foundation stone, said that in presenting a site for the new buildings Lord Cadogan had shown himself a true friend of the cause they all had at heart. The hospital was deeply indebted also to Mr. T. Dyer Edwards, and had to express thanks to the Lunz bequest for the promise of £10,000. Earl Cadogan said that he well remembered the time when the hospital was originally founded, had watched its career ever since with the greatest possible interest, and would do all he could to promote its welfare. Lord Cadogan then laid the stone, and a procession was formed to another part of the site, where Lady Cadogan laid the foundation stone of the new nurses' home. Mrs. Hugh Fenton, who invited Lady Cadogan to perform the ceremony, said the Ladies' Committee had felt that their first duty was to provide the nursing staff with a suitable home; the next requirement was a well equipped out-patient department; and for both these purposes sufficient funds were available, but money was needed to build the rest of the hospital on a corresponding scale. The foundation stone was then laid by Lady Cadogan, and the ceremony concluded with a benediction pronounced by Archdeacon Bevan, the Rector of Chelsea.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. F. G. BUSHNELL (Plymouth), who is collecting information on the present state of the administrative control of disease, asks for data or references to central and local public health government and administration or to be put into communication with any one who has given attention to it.

PAIN FOLLOWING ZOSTER.

F.R.C.S. asks for suggestions for the relief or prevention of pain following herpes zoster; he has tried many general and local sedatives without permanent benefit. The pain is usually easier after a good dinner at which a fair allowance of wine is taken. He also asks what spa at home or abroad is most likely to do good. The patient is aged 60, of good general health, but gouty.

OSTEO-ARTHRITIS.

G. asks for advice in the treatment of a woman aged 50 suffering from osteo-arthritis of one knee-joint, attended by severe pain on getting up after sitting for even a short time.

INCOME TAX.

REVOD asks whether any allowance can be claimed for the cost of a new motor car purchased by instalments, for the cost of a motor cycle bought for the use of his assistant in place of a push bicycle, and for expenses incurred in enlarging the surgery.

*** (1) As nothing has been deducted for depreciation of the car sold, our correspondent is entitled to deduct the amount of the instalments as ordinary professional expenses in arriving at the annual profits falling within the average period, subject, however, to the restriction that the amount so deducted must not exceed the net cost of the car displaced. (2) If the push bicycle was purchased by "Revod," so much of the purchase of the motor cycle as would be equivalent to the net cost of the discarded bicycle can be deducted, the excess is an outlay of further capital and cannot be made the subject of deduction. (3) The cost of the enlargement of the surgery cannot be deducted.

ANSWERS.

URETHRAL DISCHARGE.

VERAX asks for an opinion concerning a slight urethral discharge which appeared after an injection of some silver salt about a week after irregular sexual connexion. In the absence of any bacteriological examination of the secretion it is impossible to give an opinion as to whether the discharge was due to gonorrhœa or to chemical irritation. However, as the symptoms are said to have been slight, and to have disappeared in a few days, in all probability the case was one of simple urethritis set up by the injection of some strong solution of silver. In the event of the discharge recurring, we should advise "Verax" to have it examined for gonococci.

THREADWORMS.

DR. A. STEVENSON (Sunderland) writes: In answer to "C. H. J.," a brisk purgative—calomel or scammony—followed by tincture of steel in full doses should free the patient from threadworms. This treatment should be combined with salt and water enemata, but tincture of steel internally is of the greatest importance.

DR. JOHN BAIN (South Shields) writes: In reply to "C. H. J.," I would suggest that he put his patient on a course of pills containing 2 grains of extract of quassia. These pills should be coated with kaolin or some material which will prevent them from dissolving till they are some distance down the small intestine. With this drug I have had very good results, in fact far better than I have ever obtained by any other method of treatment.

THE FLY NUISANCE.

DR. S. J. ROSS (Bedford) writes that the strength of formalin solution required for trapping flies is 1 part of formalin to 9 parts of water. The solution requires renewal every forty-eight hours.

DR. JOHN STEVENS (Edinburgh) writes: With reference to the correspondence of "D. H." and others on this subject, one of the best means to keep an apartment clear of flies is citronella oil, evaporated in small quantities when required and smeared on the woodwork of the windows. Applied to the exposed parts of the skin it is also a good preventive of the unwelcome attentions of flies and midges. I have been told that a bouquet of sweet peas is an agreeable means of keeping flies out of a room, but cannot say from personal experience. We have now, however, learnt to regard the ubiquitous fly not merely as a nuisance but, from its habits and breeding places, as a carrier of disease. While proposals to exterminate the pest are not likely to achieve success short of the millennium, much, if not all, that is necessary might be accomplished by practical methods of keeping flies out of houses and protecting foodstuffs (for example, by a gauze or muslin covering) from their ravages, whether in shops (butchers, bakers, grocers, etc.) or in one's own larder. Few things are more nauseous than, in a tea-room or restaurant, to see the food of which one is about to partake infested with these pests. Were the public to refuse to patronize such places under these conditions, probably the purveyors would find means to make matters more tolerable.

GIANT URTICARIA.

DR. LEONARD J. KIDD (London) writes, in reply to "Puzzled": Two or three doses of calcium sulphide gr. ⅓ often abort urticarial attacks; it is best given as powder, triturated for at least half an hour with sacch. lactis gr. j and albi gr. v; oil of cinnamon disguises the taste of eructation; it often acts as a mild laxative. The patient is hypothyroidic—hypothermia, gout, backache. Waller has often cured urticaria by thyroid extract (*American Medicine*, April, 1914); give very small doses; plenty of water to drink; alcohol in moderation unless the patient "boozes." Gout is always to some extent asthenic, therefore avoid under-feeding and over-exercise. If thyroid extract, taken during intervals between attacks, fails to cure completely, add testicular extract; the testis is very rich in sulphur.

H. T. P. writes: From painful personal experience I recommend: (1) The free use of ichthyol soap or of an ointment of ichthyol and lanoline as long as the swelling and itching continue. (2) The internal use of lactate of lime in 15-grain doses, with one or two minims of tincture of capsicum in chloroform water. The object of this is to increase the coagulability of the blood. The lime should be continued for some months, but intermittently, stopping it for a week or so occasionally, but resuming it at once on the slightest return of the symptoms. Apart from the pain and discomfort caused by this form of urticaria, it is not without danger, as I have been informed it at times attacks the mucous membranes and causes death by suffocation. A dose of apenta in a tumbler of hot water early in the morning is also very helpful, and wards off intestinal troubles, and, I believe, often prevents appendicitis.

LETTERS, NOTES, ETC.

BARBADOS.

A RETIRED NAVAL MEDICAL OFFICER, who has spent the last two winters in the West Indies, writing in May from the Hotel Balmoral, Hastings, Barbados, where he has been since December, 1913, strongly recommends the island of Barbados as a health resort, he himself having greatly benefited by the climate. There is, he says, always a pleasant breeze blowing day and night, the temperature varying between 74° and 84° F., there are few mosquitos (no *Anopheles*), good sea bathing, excellent food, and a splendid water supply.

TREATMENT OF PRURITUS ANI.

DR. J. CROPPER (Chepstow) writes: The following extracts are from a medical man who was literally in despair of any relief from severe pruritus ani. He tells me he had consulted the leading men in two large towns where the highest advice is obtainable. These of course shall be nameless. "Having used tr. iodi and tr. benzoin co., I am quite free from irritation in the day, and have nothing to speak of at night. I also sleep well at night . . . five hours right off. The relief is amazing. . . I am enjoying life again. With many thanks for your prompt and marvellous help. . . ." This testimony is worth having, because I have never even seen the patient, who lives 200 miles away, and the question of any fee or reward is out of the question from a professional brother.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.

The Sidney Ringer Memorial Lecture

ON

THE ADRENAL GLANDS.

DELIVERED AT UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL, JUNE, 1914,

BY T. R. ELLIOTT, M.D., F.R.S.,

ASSISTANT PHYSICIAN TO THE HOSPITAL.

TWENTY years hence the man to whom is given the honour which falls to me to-day of delivering the lecture which has been so generously founded to commemorate the work done by Dr. Sidney Ringer during his long and fruitful years of service to our medical school, may find occasion to review the facts of that great physician's life. Our teachers of the past are soon forgotten, for the full current of life which eddies swiftly and incessantly around all in hospital, teachers and students alike, gives little chance to pause and reflect on bygone history.

To-day such a review is hardly needed, for Ringer's name is still familiar in our ears. The men who worked with him or were trained by him are now the strength of our hospital staff, and from them we hear echoes of his teaching or reminiscent praise of his clinical skill. For Ringer had that forceful character which impressed itself on the manners as well as on the memories of those around him. Consciously or unconsciously they would imitate him, and not a few of the traditions of our school, of which we in this generation are proud, had their birth in the mind of Sidney Ringer.

Much of his strength, like that of Oliver Cromwell, was due to his faith. He believed in the healing powers of his art with a sincerity and vigour that fail to inspire the outlook of physicians in these later days. Hence came the need for the utmost nicety of diagnostic skill—and all of his generation bear witness to the singular refinement of his powers of clinical reasoning. Hence, too, his unresting endeavours to win certain knowledge of the action of therapeutic drugs, by observations on man, and by experiments on animals. Medicine to him was not an affair of pathological diagnosis, to be followed by a word of encouragement to the sufferer and by a demonstration to the onlookers. Life, he thought, might be aided in its struggle against the ravages of disease, if happy chance or reasoned wisdom could but find the therapeutic means. Along both paths Ringer sought to achieve this end. On the first every lead was tried; the slenderest fancy was tested; but his sure judgement instantly turned back when the hoped for help proved but a wandering marsh-light. For this scientific workers have termed him an empiricist: justly, and yet with no reproach. The empiricist of the hospital wards was the Euclid of the pharmacological laboratory. Slowly and surely he reasoned out the elementary propositions of the action of simple salts on living cells, and Ringer's solution is applied by modern analysts to these problems in more than the simply material sense.

For twenty years such questions attracted Ringer, in his few hours of leisure, to the laboratories of University College, and there it chanced one afternoon in 1893, almost at the close of this long period of devotion to research, that he saw the first experiment that gave to physiology her main ideas upon the functions of the adrenal glands.

The story of this discovery has already been told by Sir Edward Schäfer. A former student of our hospital, Dr. George Oliver, had devised apparatus to measure the calibre of the peripheral arteries in man, and he had observed that when drachm doses of a glycerine extract of the adrenal glands were given by the mouth to his son they made him sick, and his radial artery became constricted. A superficial thinker would have passed this by, and satisfied himself with an explanation on the accepted lines of knowledge from the toxic action which the extract of the glands was already known to possess. Oliver would not do so. Half an explanation is often worse than none, for it may lead to a contented neglect of the new truth that lies hidden beyond. He sought the test of a laboratory experiment. With a little demur at the waste of time in humouring the fancies of a clinician, Schäfer consented to inject some of the extract into a cat, and he and Ringer, with Oliver, then saw that abrupt and amazing rise of blood pressure which occurs as the heart and arteries are stimulated to intense constriction by the active principle. Ringer seems to have taken no deep interest in the matter. Schäfer and Oliver analysed the chief reactions produced in the body by these injections, and subsequent work in the intervening twenty years has discovered what these reactions mean. Physiology is now possessed of half of the secret of these glands, and the knowledge has enlarged her view of the nature of nervous activity in a manner that is bound to be fruitful in discoveries of the near future.

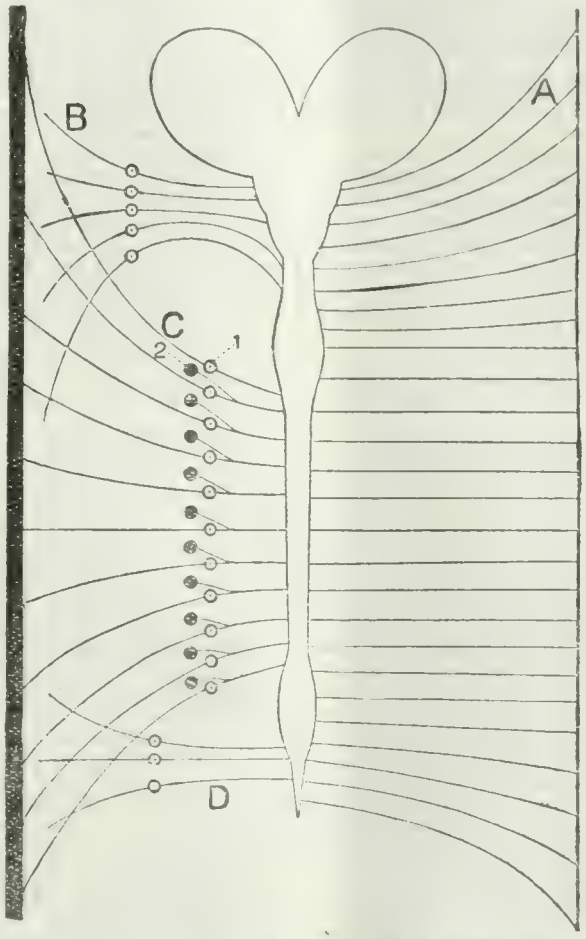


Diagram of the nerves efferent from the central nervous system in the mammal. A, The non-ganglionated ordinary motor nerves to striped muscle, which are distributed segmentally. On the left side these are omitted for simplicity, and only the autonomic or ganglionated visceral nerves to plain muscle are indicated. Of these, B is the cranio-cervical outflow in the vagus, etc.; C, the thoracico-lumbar or sympathetic proper; D, the sacral outflow, or pelvic visceral nerve to the bladder and colon. All these subdivisions contain both motor and inhibitory nerves. C1 is the sympathetic ganglion cell; C2 the paraganglion cell secreting adrenalin, the chief mass of these being concentrated to form the medulla of the adrenal gland, though a few, even in adult life, may be found elsewhere in relation to the various sympathetic ganglia. The black rectangle innervated by the nerves from the cells C1 represents the mass of plain muscle which is also stimulated by adrenalin—that is, by the secretion of the cells C2. Afferent sensory nerves and their posterior root ganglia are all omitted from the diagram. Their course from the viscera is not clearly known.

The distribution of the efferent nerves, which the central nervous system supplies to the viscera and blood vessels of our bodies, was first clearly described by Dr. W. H. Gaskell, a man whom we are proud to remember was once a student with Ringer at our hospital. Following up his brilliant generalizations the English school of physiologists has analysed in great detail the intricate networks of these nerves, and Professor Langley's account of the autonomic nervous system is now accepted the wide world over. These nerves to plain or unstriped muscle issue from the central nervous system in three main groups[1]—the vagal, the sympathetic, and the pelvic, which histologically cannot be distinguished from one another. The test of adrenalin laid bare a fundamental difference. Adrenalin was found to stimulate all plain muscle or gland cells that were united with the nerves arising

in the thoracico-lumbar tract of the spinal cord between the roots of supply to the fore and hind limbs of the body. From no other contractile tissue did it call forth any response. And the reaction of the muscle or gland cell, when excited by this substance, was of precisely the same character as that which it showed in response to excitation of the visceral nerve supplying it. The wall of the stomach was inhibited, its pyloric sphincter contracted, by adrenalin, precisely as by the stimulation of the splanchnic nerves. So, too, with the bowel and its ileo-colic sphincter, with the body of the bladder (in the cat) and its sphincter. From this peculiar reaction it became evident that the thoracico-lumbar set of visceral nerves belong to an entirely different group from the vagal and the pelvic. They form the so-called sympathetic set, an order that in its present function and equally in its past developmental history differs profoundly from the rest.

Next arose the question as to why and how this glandular extract is so intimately related to the activities of a special part of the nervous system.

The adrenal gland is a twofold structure. Its centre is composed of masses of delicate semi-fluid cells, which are richly supplied with sympathetic nerves, and lie enmeshed among thin-walled veins. These contain adrenalin. Intermingled here and there with them, and growing out over the surface of the adrenalin cells so as to form a complete envelope to the medulla, are the cells of the cortex. Their innervation is scanty; they yield no adrenalin or known active principle to extraction, but they are generally laden with a rich store of a peculiar fatty substance.

It will be convenient to review separately what is at present known with regard to the function of each of these masses of glandular cells.

In the first place, it has been proved beyond all doubt that the medullary cells excrete adrenalin directly into the venous blood stream, and that they do this in part automatically, but chiefly in response to a call made through nervous impulses descending by the splanchnic nerves. The experiments of Dreyer and of Tscheboksaroff first showed this, and fuller methods of analysis in the last two years have demonstrated the fact completely. I may quote the following experiment which reveals neatly what occurs in the body. The superior cervical ganglion was excised from a cat's neck. This causes the pupil on that side to become smaller from paralysis of the sympathetic nerve, but the iris in a few days acquires an enhanced sensitiveness to adrenalin so that it dilates much more readily than the muscle of the contralateral pupil when small quantities of adrenalin are injected into the circulation. A week later the right and left splanchnic nerves were each divided and prepared for electrical stimulation. On one side the adrenal gland was excised. Stimulation of the splanchnic nerve on the side where the gland remained had then this result: The blood pressure rose in the usual steep curve for 8 to 10 seconds. Suddenly the rise was checked, and was replaced by a smoothly hollowed fall; at the very moment of this turn in the curve the denervated eye as suddenly reacted. Its prolapsed nictitating membrane flashed back, and the iris became dilated to the narrowest rim of yellow around the great black globe. The response of the eye and the secondary fall, not rise, of the blood pressure curve were due to adrenalin that had been excreted from the gland and, after the delay of passage through the lung vessels, had ultimately been distributed through the outflow from the aorta. Stimulation of the other splanchnic nerve, from which the adrenal gland had been removed, caused the blood pressure to rise to the same extent, but there was no secondary fall and no response at a distance in the eye.

I found in cats that in addition to the effect of this transitory stimulus it was easy to recognize a more prolonged excitation through the splanchnic nerves, which in a few hours would discharge the adrenalin until the cells were almost entirely exhausted. This was shown by cutting the nerves on one side, submitting the animal to conditions that were likely to induce exhaustion, and then measuring the amount of adrenalin left in each gland. Prolonged fright emptied the cells. So too did the vasomotor irritation caused by laceration and haemorrhage in the brain. The mere condition of anaesthesia induced by ether or chloroform for three or four hours led to a rapid exhaustion. But in every case the loss depended upon excitant nervous impulses, so that the load of adrenalin suffered no loss if the nerves were first divided.

From this it follows that the central nervous system has at its disposal two methods for excitation of the mass of plain muscle that is supplied by the sympathetic nerves. The first is that which has been known for a long time, by the directly applied stimulus of the nervous impulse, which can be accurately restricted to one particular spot and delicately adjusted in its strength. The second is that of which physiology has but recently become aware, by the discharge of adrenalin into the blood stream, whence this powerful stimulus diffuses into every quarter of the body so as to be capable of exciting in one great massed effect all the plain muscle of the sympathetic system.

Morphological workers have proved that these adrenalin cells are related by a common parentage to the ganglion cells of the sympathetic nerves, and I have shown by observations on the result of degenerative section of their nerves that they probably receive their innervation directly from preganglionic fibres. All the secreting glands of which the innervation is known are connected to the spinal cord by nerves of the ordinary visceral type—that is, with the interposition of a ganglion cell on the outward path. Here there does not appear to be such a relay, for the adrenalin cell is not of the peripheral tissue type. It ranks in the higher level of the ganglion cells, lies closer to the spinal cord, and is itself almost a member of the nervous hierarchy. The ganglion cell and the adrenalin cell are as brother and sister to one another, born from the same stock, living for the same end in life, which the one attains by growing out into direct contact with the moving mass of muscle, while the other stays quietly where it was born and exercises its influence from a distance.

Of all the diverse muscles united with the sympathetic nerves the most important and the bulkiest are those of the heart and blood vessels. Vasomotor nerves probably form much the largest fraction of the sympathetic group, and they are the oldest. Gaskell, junior, has traced them down below the vertebrates, and shown how the nerves and the adrenalin cells appear side by side in the worms that have developed a definite circulatory system. Adrenalin cells are present wherever there are blood vessels, even though these be of a very rudimentary type, and, indeed, in some examples they seem to usurp entirely the prerogative of the sympathetic nerves, for the latter cannot be found. Morphology therefore tells the same tale as physiological analysis. The adrenalin cells and the sympathetic nerves belong to a common system, whose first duty is that of sustaining the activities of the circulatory muscles. As the animal develops its muscular efficiency, learns a hundred new functions, and with a constant body temperature becomes independent of its environment, the sympathetic system becomes more and more complex and is split up into manifold possibilities of delicate adjustment. All these are but refinements of means for the one great end—to enable the animal to move more swiftly, to catch its prey, and to fight. Fighting power rises with the rise of blood pressure, reserves of sugar to feed the muscles are hurried up from the liver on the call of the circulating adrenalin, the daily routine of digestion is checked by intestinal inhibition, and the various segments of the bowel are cut off from one another by the closure of the sphincters. Cannon has reiterated this view and, further, shown very neatly how the clotting of blood by adrenalin, which had been observed by myself and others, is a further elaboration to check leakage in any chance wound of the body during action.

By that curious antithesis of the emotions upon which Charles Darwin laid stress, the machinery employed to prepare for fight may, with the cowardice of civilization, be set as powerfully in motion only to express fright. And in this the adrenalin is equally, or perhaps even more, exhausted.

Gazing back over the history and widely over the present functions of the sympathetic musculature, such is the general impression that we receive of the activities displayed by the sympathetic nerves and the adrenalin cells. But another question arises to seize our attention. Why two systems of control, and what is their relation to each other in the fully developed mammal? Removal of each separately will supply some facts upon which an answer may be attempted to these questions. Taking the

nerves first, removal of the thoracico-lumbar extent of the spinal cord interferes with the control of the animal's circulation, but it can still maintain its life. I have removed from a cat the bulk of the peripheral sympathetic ganglia connected with the heart and blood vessels of the viscera. It lived and its blood pressure was tolerably high. Therefore the nerves adjust the pressure and control the direction of the circulation, but upon them does not rest the maintenance of that muscular tone which upholds the pulse of life.

Removal of the adrenal glands, that is of cortex as well as of medulla, brings death. I have succeeded in keeping cats alive for a week or more after this extirpation, and their final condition on the last day before death was always the same. Artificial heat was used to preserve the normal temperature of the body. The muscles of the trunk could be actively used and with good co-ordination. The pelvic nerves were competent for micturition. The vagus could check the heart. But the blood pressure was fallen desperately low, to 20 or 30 mm. of mercury, and no stimulus, whether it were nicotine acting on the ganglion cells or pituitary extract on the muscle, could raise it from this dying level—with the single exception of adrenalin, which temporarily restored it to the normal height. The musculature of the circulation was irresponsive to stimuli, whether nervous or direct, and it was flabby and toneless. Hence the death. But the cervical sympathetic could still dilate the pupil, and other sympathetic nerves had not lost their power. So it is with man in the cold enfeeblement of Addison's disease. In the last day of life his pilomotor muscles will react in a prompt "goose skin" reflex, even though the blood pressure be so low that the pulse is imperceptible at the wrist.

The theory which I at first held to explain these facts was that the nervous stimulus consists in a liberation of adrenalin itself from the ending of the nerve on the muscle. We have seen how the ganglion cell and the adrenalin cell are both derived from what is almost a common cell with power to transmit a nervous impulse or to excrete adrenalin. It is very conceivable that as the nervous cell developed its peculiar outgrowths for the purpose of transmitting and localizing the nervous impulse, it might lose its power of producing adrenalin and come to depend altogether on what could be picked up from the circulating blood and stored in its nerve endings. Removal of the glands would cut off this source of supply, and paralysis of the nerves would result sooner or later in that territory where the nerves had been functionally most active and had consumed their stores.

It is always a pleasure, and therefore a temptation, to accept a theory which harmonizes all the facts into a simple, close-fitting plan. But the evidence at present does not justify us in welcoming this simplification. The paralysis of the splanchnic nerves does not appear until the nerves have lost their tone; and the atonic muscles then fail to react to such stimuli as pituitary extract, which is supposed to affect plain muscle directly. Moreover, removal of the vasomotor nerves does not cause that fatal fall of blood pressure which inevitably succeeds to the removal of the glands. It is therefore unwise to go beyond the bare statement that removal of the cortex and medulla of the adrenal glands causes death because the tone of the circulatory muscles is entirely dependent on the secretion of their cells. That does not rob the relationship of its peculiar interest. Here is a group of nerves which lose their power when the energy of their system runs low. The energy is supplied from the secretion of a separate mass of quasi-glandular cells. Whether it is stored in muscle or nerve is a question of secondary interest.

A comparison has been made which illustrates this view to some extent. Music and the quick clear change from note to note cannot be called from a violin string that is slack. The string must be toned, raised to its proper pitch, for the fingers and bow to play upon it. The muscular tone of the blood vessels is given by the adrenal secretion, and the nervous impulse alters it this way or that in harmony with the body's needs.

Naturally one longs to find examples of a similar mechanism in other parts of the body, to apply this equation of interaction to the problems of nervous activity in the greater departments of the nervous system. The striped skeletal muscles form a homogeneous group which is continually under a tonic influence. This tone is for the most part derived from direct nervous impulses, but the diseased state of myasthenia gravis proves that the tone is not altogether supplied from the central nervous system. Myasthenia might in the skeletal muscles correspond to the state of Addison's disease in the blood vessels. But this is only a surmise. I have tried in vain to discover an active substance in the muscle plates of striped muscle. And Professor Herring was also disappointed when he examined for this purpose the electrical organs of the skate, which are exaggerated motor plates. The ganglia of other visceral nerves, the auriculo-ventricular bundle of His, the spinal cord itself—all have been extracted and nothing as yet found. But it is hard to forego the belief that such discoveries lie in the lap of the future. Nervous energy may need for its awakening something more material than the subtle interplay of impulses in nervous tissue. That wearisome ailment, neurasthenia, might be curable by some extractive of comparatively simple chemical nature, and those who suffer from it, together with those who must try to alleviate their woes, be both freed from a depressing bondage to uselessness.

From what I have tried to relate it will appear that physiology has a tolerably full knowledge of the nature of the medullary cells of the adrenal glands. Pathology merely confirms this. In many diseases the adrenalin load of the glands is diminished, but not often to what might be looked upon as a really serious state of depletion. The weight of a single normal gland in man is 4 grams, and its adrenalin load is 4 mg. This falls to 1 mg. in many fatal fevers. The greatest exhaustion that I have seen to occur rapidly was not in fevers but in cases in which, with acute cardiac failure and perfect consciousness of his dangerous state, the patient was, so to speak, fighting for life, struggling to keep up his heart. In these the adrenalin load was less than 0.5 mg. I could find no justification for the belief that the adrenalin cells are hypertrophied or more active in diseases associated with persistent increase of blood pressure.

Of the functions of the cortex more might be said than about the medulla, for the usual reason that little is known, and consequently every statement has to be guarded by reservations and contradictions. The cortex in the higher animals forms at least 90 per cent. of the bulk of the gland. Its cells in health are loaded with a doubly refractive fat composed of cholesterin esters and lecithin, and this lipoid is just as distinctive of the analogous cells which accompany the adrenalin cells even in animals below the vertebrates. Here, once more, we are dealing with an archaic tissue that has been preserved and, indeed, enlarged in higher animals for the sake of its peculiar properties.

The microscope shows that the chief activity of the cortical cells is directed towards the formation of this special fatty substance. It is particularly abundant in the glands of man, and some quite definite knowledge with regard to it has been accumulated by several pathologists who have studied the adrenals in death from various diseases.

In the first place, it is clear that the cortical lipoid bears no immediate relationship to the ordinary fats of the body. Inanition from cancer of the alimentary canal, or the beggarly emaciation of anorexia nervosa, strip all the fat from the body, and yet the cortex has its customary load.

On the other hand, the cortical fat vanishes in a couple of days' acute fever, by which the depôts of body fat are hardly touched. All septic fevers reduce the cortical fat rapidly. The most obvious example of this is in acute pneumonia, where the gland becomes fatless, oedematous, and swollen to twice its natural size. Slow febrile processes, such as that of chronic tuberculosis, cause much less exhaustion. But the removal of the lipoid is not determined simply by a physical change in relation to the rise of temperature. In one case which I examined there had for four days been hyperpyrexia rising intermittently to 109°. The cause of the pyrexia was not septic; it was due to cerebellar disease, with internal hydrocephalus and direct derangement of the thermotaxic nervous centres. And in this the cortical lipoid was not very much exhausted. Moreover, in several examples of prolonged haemorrhage in chronic gastric ulcer, which recurred with a fatal issue, the lipoid was exhausted, though there had been no fever.

It is certain that these changes in the fat load of the cortical cells do not follow those in the adrenalin load of the

medulla. There is no parallelism between the two. The great exhaustion of adrenalin, which has been described in cases of acute cardiac failure with emotional distress, occurred in glands with a full load of cortical fat. Fevers in man reduce the fat to a greater degree than they do the adrenalin. In the experiments which I made to demonstrate the exhaustion of adrenalin in cats, I failed to produce any very manifest alteration in the lipoid. Such as did appear was not in any way influenced by section of the splanchnic nerves, so that it seemed to lie outside immediate nervous control; and, indeed, the cortical fat was seen to have an identical distribution in two glands, of which the one was full, while the other was empty of adrenalin.

These, then, are the chief causes of loss of the lipoid. Its increase is also manifest in some diseased states. Single large adenomata, masses of cortical cells that are packed with lipoid, may occur in any individual and irrespective of any particular illness. But in kidney disease of the arterio-sclerotic form, where the atheromatous change is widely spread through the vessels of the body, the cortex does tend to proliferate in numerous small adenomata, or even to show a general massive hypertrophy. The relation is not to all forms of kidney disease, for I have seen cases of pure interstitial toxic nephritis which were watched in their condition of high blood pressure for a year or more, until at the end they succumbed to a slow uraemia, and yet with these the adrenal glands were not in the least enlarged. In the arterio-sclerotic forms with atheroma, though the cortex may be nearly doubled in bulk, there is no evidence of any increase in the size of the medulla.

These pathological facts, therefore, make it reasonable to regard the cortex in respect of its fat-holding function as a tissue altogether apart from the medulla and the sympathetic nervous system. Some recent work done in St. Petersburgh and by Professor Chauffard's school in Paris has illuminated this possible point of view. The Russian pathologists fed rabbits with cholesterin until their blood was laden with excess and atheromatous changes appeared in the intima of the aorta. This was a genuine atheroma, a deposit from the superabundance of cholesterin in the blood, just like the arthritic deposits of sodium urate in the uricaemia of gout. It developed in a few weeks, and simultaneously the cortex of the animal's adrenals was found to be enlarged by an enormous increase in the store of lipoid. I have repeated these experiments and confirmed the results at any rate in respect of the increase of size of the adrenal cortex. In Paris routine determinations were made of the percentage of cholesterin in human blood. It was found to be low in acute fevers, and especially in pneumonia, precisely where I found exhaustion of the cortical lipoid. It was high in arterio-sclerosis and atheroma. The analyses published by Grigaut[3] show that these changes correspond directly with the amount of cholesterin contained in the adrenals. From this it follows that the fat load of the cortical cells varies directly with the percentage of cholesterin bodies circulating in the blood, and through them the cortex may be concerned in the general nutrition of the body by facilitating the use in metabolism of the ordinary or of the more specialized fats. This theory may be adapted to contain within its scope all the facts that are known about the cortical cells. But these facts are still so few and ill-defined, that they cannot very well be used for a critical consideration of the theory. It will suffice to name the remainder of them in this connexion.

The cortical cells seem to be essential for the maintenance of life. If one gland is removed from a cat, compensatory hypertrophy takes place in the tissues that are left. When, six months later, the second gland is excised, it may be much hypertrophied. In that case the cat will die in a few days after its removal. The hypertrophy is chiefly of the cortex. But the gland may be but slightly enlarged, and then the animal will live longer, for this means that the loss has stirred to growth the accessory masses which lie along the vein that connects the kidney with the testicles or ovary. These masses are almost entirely cortical, and in one of my cats, though their total bulk was only one-third of the weight of one gland, they enabled the animal to live for two months in fair health until it was deliberately killed. I have not examined the cholesterin content of the blood of cats when dying after the loss of the glands. Certainly they lose weight and body fat very quickly, but that loss can be attributed to their disinclination to take food. It is not a conspicuous feature of Addison's disease.

The cortical cells are also of importance in the development of man's body during its early periods of life, especially in respect of his brain and sexual attributes. Man is unequalled among the animals in the enormous growth of his cerebral hemispheres during fetal life. Equally distinctive of the human fetus is a great ante-natal hypertrophy of the adrenal cortex. Deformed children are from time to time born without cerebral hemispheres, and in them the adrenals are invariably as small as in the brainless animals. One may suppose that the cortical cells help to supply the fatty bodies that are needed for the architecture of the brain.

As certain as this relationship of brain to gland, and still more mysterious, is that of gland to sex. Maleness appears early, and with exaggerated emphasis, in children whose adrenals are the seat of proliferative tumours. A girl with such a tumour may even lose the physiological features of her sex, and acquire the hairiness and muscular development of a man. So far as I am aware, no pathologist into whose hands such tumours have come has examined their cells for fatty secretion, and doubt remains as to whether this sexual precocity should be ascribed to the lipoid or to some other substance. It is most improbable that the fat should be concerned solely with the activation of the sex glands, when that fat is found to be exhausted with such rapidity in septic fevers. Yet, on the other hand, it may well be imagined that a fatty material, which is supposed to be of vital importance in general nutrition, might in virtue of this quality nourish the body to more rapid growth of its sexual attributes—much as the so-called "royal" food used by bees will determine the sexual development of their queen.

The adrenal cortex is derived from a tissue which was the closest neighbour of the sex glands in their old abdominal position. Tiny islets of this tissue lie scattered along the path from the kidney to the descended sex gland, and it is from these vestiges that the accessory glands develop in compensatory hypertrophy. They definitely belong to the adrenal gland group. Embedded in the sex gland itself, either as the interstitial cells of the testis or as the lutein cells of the ovary, are fat-holding cells very similar to those of the adrenal cortex. These also seem to belong to the same group, but placed as direct nurses of the generative cells. If that is their nature, then it must be granted that they have acquired functions somewhat different from those of the adrenal cortex. I have not seen any example of their hypertrophy after removal of the adrenals; nor, conversely, is the adrenal either larger or less in cats that have undergone castration or ovariotomy. Despite these slight difficulties, the morphological evidence is, to my mind, sufficiently weighty to determine the balance in favour of the view that the cortex primarily controls nutritive material in regard of growth and reproduction. Secondarily, and now perhaps in the chief degree, it has become associated with cells which are really modified from the special department of the nervous system that governs the circulation. It is not known in which way this association acts. Cortex may feed medulla with some necessary precursor of adrenalin, or provide some adjuvant vaso-constrictor substance, as Abel's recent observations suggest. Or, on the other hand, it may be that the medullary cells are placed near to the cortical cells in order that they may directly stimulate the latter to the performance of their peculiar duties. All that is still uncertain, and all that will surely be determined by future work.

It is necessary to realize very clearly this deep morphological distinction between the cortex and the tiny medulla. Only the latter is of nervous origin, and directly concerned with the functions of a part of the nervous system. Physiology may discover within the nervous system some substance with properties like those of adrenalin to reinforce and maintain the powers of other departments than the sympathetic. But there is not the faintest reason to believe that such substances are prepared in the other ductless glands; that the thyroid, for example, is specially concerned with the activities of the vagal set of nerves. These other ductless glands are not derived from the nervous system, as is the medulla of the adrenal. The thyroid, the adrenal cortex, and the glandular part of the pituitary body belong, as Gaskell has urged, to an old

segmental series of glands which were once related to the genital and excretory apparatus of each segment, and still retain, though greatly modified in each successive gland, the fundamental property of influencing growth and reproduction. How the tissues are affected by the secretion of the thyroid is an enigma. But the fact is certain. For the adrenal cortex even so much as that cannot be said. There is only the conjecture that this fatty substance is essential to a man's strength and manhood. The aboriginal natives of Australia threw boomerangs in curves that long puzzled the wits of the mathematicians of Europe. Their practical instinct seems also to have taught them what the medicine men of civilized life are now slowly reasoning out. To the Australian or "black fellow doctors" the fat above the kidney was magic. If by incantations it could be removed from an enemy as he slept, the victim would surely lose his strength and die.[3] We know as much, that there is no warm-blooded life without these glands. Since the first experiment that Ringer watched twenty years ago we have learnt how they sustain the pulse of life, and we look to the future with a great surmise of what will come from an extension of this knowledge. But the chief gift is long delayed. Adrenalin is a more convenient haemostatic than the old-fashioned cobwebs. Apart from that, therapeutics have gained nothing from all this new knowledge, and Ringer's comparative indifference to its birth was a prognosis that, to our regret, has been justified so far as his lifetime extended.

REFERENCES.
[1] See diagram, reproduced by permission from *Brain*, vol. xxxv. p. 313, 1913. [2] Grigaut, *Le cycle de la cholestérinémie*, Paris, 1913. [3] Howitt, *Native Tribes of South-East Australia*, p. 367, London, 1904.

An Address
ON
SOME CLINICAL ASPECTS OF THE BODY TEMPERATURE IN CHILDHOOD.

DELIVERED BEFORE THE SOUTH-WEST ESSEX DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

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THE vagaries of the body temperature in childhood are frequently perplexing and difficult to understand. In early life the temperature is very variable and uncertain; it may show marked oscillations from slight or trivial causes or rise to a considerable height for no apparent reason. On the other hand, a child may be seriously ill, perhaps with bronchitis or empyema, and the temperature chart will record but little variation from the normal. The heat-regulating centres in childhood, as is the nervous system generally, are in an unstable condition, and may be influenced by emotional or slight physical causes, or they may fail to respond in the way we should naturally expect to a stimulus sufficient to cause a definite amount of fever in the adult. Undue stress, therefore, must not be placed upon the temperature of children. A transitory rise, even though it may be to 102° or 103°, need not necessarily give rise to alarm, although, of course, we should at all times seek for some underlying cause, and especially if the elevation happens to be repeated. In this connexion it is as well to bear in mind that in infants, when once the heat centre has been disturbed, some time may elapse before it regains its equilibrium, and that slight variations in the temperature may persist for a while after the exciting cause has been removed. On the other hand, a temperature which adheres more or less closely to the normal must not lead us to make light of any other physical signs which the child presents.

The most accurate method of taking a child's temperature, and especially that of an infant, is by the rectum. If for any reason this is undesirable, the thermometer may be placed in one groin and the legs held in a crossed position. Axillary temperatures are unreliable in young children, owing to the difficulty in keeping the child still and retaining the instrument in position, and the same is even more applicable to mouth temperatures, to say nothing of the danger of the instrument being broken when used in this way. Indeed, the mouth should never be used for taking a child's temperature, as even in the case of older children it is often difficult to make them keep the lips closed and breathe through the nose for a sufficiently long time. The presence of adenoids, moreover, may render such a proceeding impossible.

At birth the temperature of a healthy full-term child is normal or a little above. During the first few hours it falls 1°, 2°, or perhaps 3°, as the result of washing and the change to cooler surroundings. In a short time, however, it rises again to normal, and persists with little variation between 98.4° and 99°, though rectal readings may be a little higher still. As a rule, the evening temperature of a healthy child differs but little from that of the morning, but even in health a difference of 2° or 3° may occasionally be found. In premature infants the temperature is usually several degrees below the normal, owing to their feeble powers of heat production and the absence of subcutaneous fat, which allows a rapid radiation of heat from their bodies. For such children artificial heat is a necessity. The child's temperature should be maintained by oiling the skin and wrapping the body in cotton-wool without any clothing except a diaper. The child should then be rolled in blankets and surrounded by hot-water bottles. At the same time the child must not be rendered unduly hot, and its temperature should be taken every four hours. The room should be well heated and kept free from draughts. Washing such children is inadvisable, except in the region of the buttocks after the passage of excreta, but the skin may be cleansed by an application of olive oil every two or three days. When possible, premature children are best kept in an incubator. This consists of a chamber, at the bottom of which is a heating apparatus, generally a water-tank, which is heated by means of a gas flame. Above this is the air-chamber, in the middle of which the bed is fixed. Fresh air enters by an opening below the bed, and is warmed by passing over the hot-water tank. It then circulates upwards, and passes over the bed to an exit in the top. The temperature of the incubator should be kept at about 85° in the case of very young and feeble infants. Care must be taken that the temperature is maintained at a uniform height, and for this purpose the apparatus should always be fitted with a thermometer. Efficient ventilation of the chamber is another important consideration, and an adequate circulation of air may be secured by keeping the room temperature at a moderate level, and not higher than 60°. The proper ventilation of an incubator is always a difficult matter, and for this reason a frequent watch must be kept upon the patient, and a cylinder of oxygen should be at hand for use in the event of the child becoming cyanosed. When in the incubator the infant, as a general rule, need be only lightly clothed, but the amount of protection required will depend upon individual peculiarities. The intake of a sufficient quantity of food further helps to maintain the body temperature of the patient. Weakly infants, who take badly, consequently require, as a rule, a greater amount of artificial heat. Stimulants also are sometimes necessary if the child's powers are very feeble; 10 to 15 minims of brandy, well diluted in 1½ to 2 drachms of water, may be given every three or four hours.

SUBNORMAL TEMPERATURE.

Chart 1 is that of a premature infant, reputed to have been born after only six months and five days' gestation. The temperature at first was almost uniformly between 94° and 95°, but after a few days in the incubator it rose to from 95° to 96.5°, with occasional excursions to normal. A fortnight later the temperature was mainly between 96° and 98°. The child held its own fairly well for a time, but, as not infrequently occurs in such cases, it died suddenly from no apparent cause. The rectal temperature of such infants is usually 1.5° to 5° below the normal, but if it remains constantly below that range, and sometimes it falls as low as 90°, the outlook is very grave. In cases of disease, as, for instance, epidemic gastro-enteritis, a temperature between 93° and 95° is, as a rule, unfavour-

able, and should give rise to the same anxiety as when the temperature is high. In such cases a low temperature usually means an enfeebled power of resistance, and a high one a severe degree of toxaemia. The Charts 2 and 3 are those of two infants who died from zymotic diarrhoea. In the first you will see that the temperature was mainly about 96°, whereas in the other there were numerous excursions up to 104°.

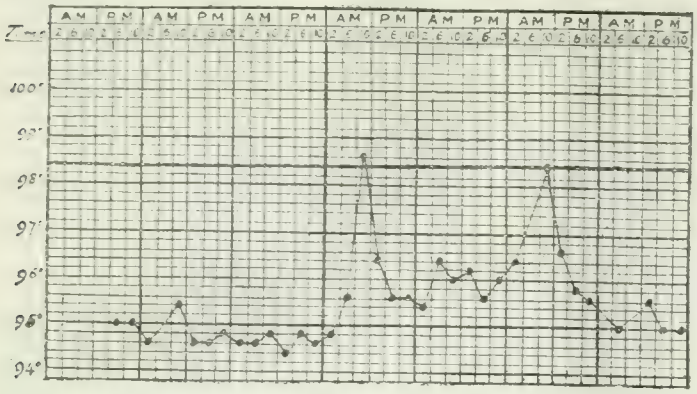


Chart 1.—Subnormal temperature in a premature infant.

Another cause of subnormal temperature in infants is congenital atelectasis. In severe cases the child presents the usual signs of asphyxia, but when the atelectasis is slight the condition is apt to be overlooked. Occasionally one lung may be less expanded than the other, causing the movements of the two sides of the chest to be unequal, but, generally speaking, the respirations are shallow and often irregular; a long pause may be followed by a gasping inspiration, and then the superficial breathing is resumed. On auscultation crepitant râles or patches of tubular breathing on deep inspiration may be heard. Such children are pale and apathetic; they are feeble and "take" badly, and, as I have said, the temperature is subnormal. If the signs persist, and the lungs do not become fully expanded, an insidious form of bronchopneumonia is apt to develop and frequently proves fatal. This may arise and proceed to a fatal issue without any elevation of temperature. These cases must be kept in a warm room, and artificial heat in the form of hot-water bottles is frequently necessary. During cold weather, therefore, an adequate supply of fresh air is a matter of difficulty, but the lack of proper ventilation may in some measure be made up by inhalations of oxygen.

A subnormal temperature is also found in cretins and in cases of hypothyroidism. In the latter the thyroid insufficiency is not so marked as in cretins. They are dull, heavy, backward children, and are below the normal in size and weight. In this class of case the temperature is generally subnormal, and the patient, as is the case in myxoedema in adults, usually complains of abnormally feeling the cold. Under treatment with thyroid the general symptoms improve, and the temperature assumes a normal level. At the same time, young cretins require to be warmly clad and protected from chills, as, owing to their poor vitality, they are liable to succumb to bronchitis or pneumonia. I here show you a chart of a cretin (Chart 4) at the commencement of treatment, and you will observe that the temperature curve is uniformly below the normal line.

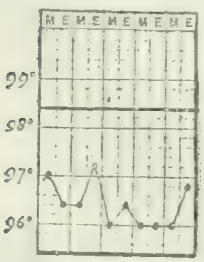


Chart 2.—Subnormal temperature in a fatal case of acute gastro-enteritis.

Pyrexia.

I now turn to the subject of high temperatures in children, but I shall not discuss the temperatures of the infectious fevers; they are generally well known. I shall confine myself rather to the differences between the temperature of children and that of adults in certain acute diseases, and to various causes which give rise to fever in children, and which are liable to be overlooked.

In the first place, the temperature of a child may rise from no pathological cause. The thermogenetic centre, as I have already remarked, is in a very unstable and excitable state during early life, and the inhibitory centres have but little control over it. The regulation of heat is, therefore, easily influenced by emotional and other causes. Thus it is not uncommon to find a child's temperature raised as the result of excitement, such as that of a tea-party, and quite independently of anything that the child may have eaten; or certain atmospheric conditions, like the advent of thunder, may upset the thermal equilibrium, and I have not infrequently found that the temperatures of several children in a ward have risen simultaneously from no other apparent cause. The rise of temperature in these cases is merely temporary, and is unaccompanied by any other abnormal signs.

A high temperature in a child should always call for an investigation as to its possible cause. More often than not the pyrexia is due to some morbid process, and it is only after the exclusion of such that a febrile attack, however transient, should be regarded lightly. In childhood fever is the commonest and often the first sign of illness, so that it is not uncommon to find a raised temperature, it may be for two or three days, before a diagnosis of the cause can be definitely made. The temperature often rises from comparatively trivial causes, and it is especially liable to do so in nervous children and those who come of a neurotic stock. Malnutrition and unhygienic surroundings, further, have a marked influence in causing elevation of temperature, and more especially if they are associated with symptoms of nervous irritability in the patient.

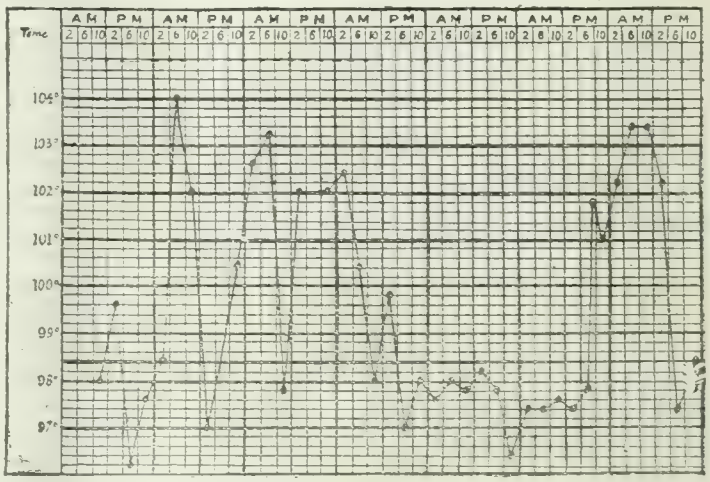


Chart 3.—High temperature in a fatal case of acute gastro-enteritis.

The exciting pathological causes of fever in childhood I will divide into four main groups:

1. *Intestinal Toxaemia.*

(*a*) *Of Bacterial Origin.*—This is caused by the ingestion of contaminated food and the subsequent multiplication of the bacteria in the alimentary tract, with the result that acute gastro-enteritis is set up.

(*b*) *Due to Improper Food.*—Thus, in the case of infants, there may be an excess of one or other of the normal constituents of the milk. The proteins, fat, or carbohydrates may be present in a higher proportion than the child can assimilate. Or, again, the infant may be given a dietary

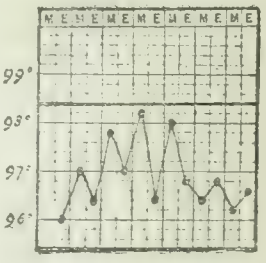


Chart 4.—Subnormal temperature in a cretin, aged 11½, at the commencement of treatment.

comprising foodstuffs which are unsuitable for its age and beyond its powers of digestion. In this way acute intestinal indigestion arises. In children who are a little older there is a variety of intestinal dyspepsia called "carbohydrate fever," which is caused by excessive consumption of carbohydrate. In addition to the rise of temperature, the child suffers from general malaise, headache, and loss of appetite. The attacks are often recurrent and yield to a mercurial purge, and the limitation of carbohydrate foods. In other instances defective starch or fat metabolism is met with, and more rarely there is an inability to assimilate proteins. Other digestive idiosyncrasies comprise certain fruits or vegetables, eggs, and even milk, which the assimilative powers of some children are unable to cope with. In infants under the age of 2 years intestinal toxaemia, either acute or chronic, is much the commonest cause of fever, and it is especially liable to occur in children who are artificially fed. The height to which the temperature may rise depends to a large extent upon the age and nutrition of the patient. Broadly speaking, the younger and worse nourished the child is the higher will be the fever, and in bad cases the temperature may run up to 104° or 105°. In early infancy, therefore, any marked rise of temperature which admits of no other immediate explanation, should be attributed to intestinal toxaemia. The bowels should be freely opened and all food withheld for a time. If this is done the temperature usually falls in the course of a day or two. A subsequent rise of temperature may indicate that the fever is due to some other cause, or that the toxaemic condition is severe.

2. *General Toxaemia (Bacterial).*

This is the most frequent cause of fever in children above the age of 2 years, and it becomes more and more frequent as the child gets older. Rheumatism, pneumonia, influenza, or one or other of the infectious fevers are usually ushered in by a rise of temperature, whatever the subsequent course of the temperature may be. Tonsillitis, whether of rheumatic origin or not, is one of the commonest causes of pyrexia in children, and is often unsuspected. A remittent or intermittent temperature is not infrequently due to tuberculosis, and when such a temperature persists tubercle should always be thought of, especially if there has been some previous affection of the lung. In infants tuberculosis is chiefly of the miliary variety, and is very liable to supervene upon bronchitis or bronchopneumonia, but in children over 4 years of age the condition is frequently concealed in the early stages, and the first manifestation may be merely a slight irregular fever, wherever the disease is localized.

The body temperature in certain of the specific diseases differs considerably in children from that found in adults. Thus in acute rheumatism it is unusual even in the initial stage to find the same degree of pyrexia in children as in later life. In childhood rheumatism is an insidious disease; the involvement of the joints is not as a rule severe, and the fever is not high, though the toxaemia, as evidenced by subsequent affection of the heart, is frequently profound. Here is the chart of a case of acute rheumatism in a boy aged 7 years (Chart 5). The initial temperature was from 100 to 101°, and this quickly subsided under the influence of salicylate.

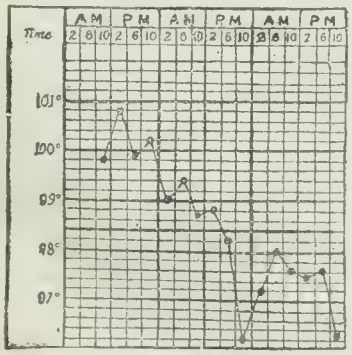


Chart 5.—Acute rheumatism in a boy aged 7.

The temperature of pneumonia, again, shows great variations in early life. The disease is a common cause of obscure fever in infancy, and the occurrence of continued pyrexia always calls for a careful examination of the lungs. The detection of lobar pneumonia is sometimes difficult, as the physical signs may not become evident until the third or fourth day; indeed, in some cases the actual evidence of consolidation is equivocal, although it is practically certain that the child is suffering from pneumonia. The general appearance and cyanosis of the patient, together with respiratory distress at the time of the fever, and the rapid amelioration at the crisis, are all characteristic of the disease, and yet there may be no definite dullness on percussion, or anything more than a little harsh breathing to be heard on auscultation of the lungs.

This is a chart of such a case as I have referred to

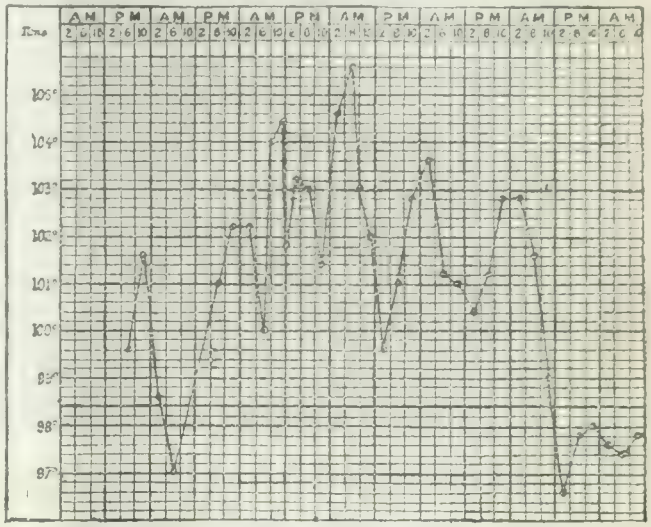


Chart 6.—Lobar pneumonia without definite physical signs in a boy aged 2.

(Chart 6). You will notice that the patient, who was aged 2 years, had a very high temperature, reaching on one occasion 105.6°, and that on the seventh day a crisis occurred. Almost immediately after the crisis both the pulse and respiration rates fell. The respirations, which had been 70 twelve hours before the crisis, were 24 eight hours after its occurrence, while the pulse-rate fell during the same time from 162 to 84, though it subsequently increased to just over 100, which is about normal for the patient's age. The occurrence of a slow pulse for a time is not infrequent after the crisis in lobar pneumonia, and this, I am convinced, was what the child was suffering from, though the only physical sign which could be detected in the chest was some impairment of the note at the right base.

In lobar pneumonia the typical continued pyrexia with a crisis about the seventh day is at times met with in childhood, but more frequently, perhaps, the temperature tends to run an intermittent course, as shown in Chart 7, which is that of a case of apical pneumonia in an infant aged 2 years. This chart also illustrates the fact that in some cases the fever is considerably prolonged, and the crisis does not occur until the end of the second week, or later. In this instance there was a pseudo-crisis on the seventeenth day, but the temperature did not finally reach normal until the nineteenth. Chart 8, also of an apical pneumonia, is an example of continued pyrexia, but here again the crisis was late, and did not occur until the twelfth day. Cases of abortive pneumonia, likewise, are not uncommon. Here is a chart which shows the crisis on the fourth day (Chart 9). Those cases in which the fever is prolonged generally afford evidence that the lesion is spreading from one portion of the lung to another, or that the other lung has become involved. There are, however, very puzzling cases, of which I have come across a certain number, which show periodical rises of temperature for many weeks. On the affected side of the chest some impairment of the percussion note with weak or harsh breathing, and perhaps a few crepitations, persists, and one naturally suspects that an empyema may be present. After repeated exploration of the chest in such cases, however, I have never been able to find any pus, and after a variable time the temperature ceases to rise again, and the

patient makes a good recovery. This is the chart of a case of basal pneumonia in a child aged 2 years and 4 months (Chart 10). You will notice that there was an initial continued fever with a crisis during the second week. Subsequently, at intervals of two or three days, the temperature rose again for short periods, reaching at times 104°. In the fifth week there was high fever for six days; this subsided by crisis, and the temperature did not rise again. No physical signs could be found in the chest to account for these periods of pyrexia, and no empyema was present. The child eventually recovered. These are probably cases of indolent pneumonia, but until paracentesis is performed it is impossible to exclude the presence of pus.

This naturally leads me to say something about empyema itself. In a typical instance, when this condition follows an attack of pneumonia, the temperature begins to rise again within two or three days of the crisis, the physical signs of a pleural effusion develop, and the diagnosis is easy. When, however, empyema is a complication of pneumonia, the temperature frequently affords no indication of its presence. It is necessary to rely on the physical signs alone, and they are often misleading. Again, if a purulent effusion has been present for some time, there may cease to be a febrile reaction, and the temperature chart may be perfectly normal, as the one I now show you (Chart 11). In this case the patient had evidently had pneumonia some weeks previously. From this she had never really recovered, and the history suggested that an empyema had been present all the time. You must remember, therefore, that a normal temperature does not necessarily put a suppurative effusion out of court.

Bronchopneumonia and bronchitis likewise give rise to temperatures which vary considerably. In the former the temperature is as a rule somewhat lower than in lobar pneumonia, and it frequently takes on a remittent or intermittent character. In other instances there is scarcely a rise above the normal. Here are charts of three cases, all of which presented definite signs of bronchopneumonia, and you will observe that the temperature curves are very different. In Chart 12 the temperature was high, and not unlike that of lobar pneumonia; there were, however, some definite remissions, especially towards the end of the fever. Chart 13 is an instance of intermittent pyrexia, the temperature on the whole being much lower than in the last, while in Chart 14 after the first evening there was scarcely any rise of temperature at all. In this class of case it must further be noted that the fever is at times by no means commensurate with the physical signs in the chest. I here produce charts of two cases of bronchitis in infants (Charts 15 and 16). The one with the high temperature, reaching 103° and 104°, had scarcely any physical signs, whereas in the other,

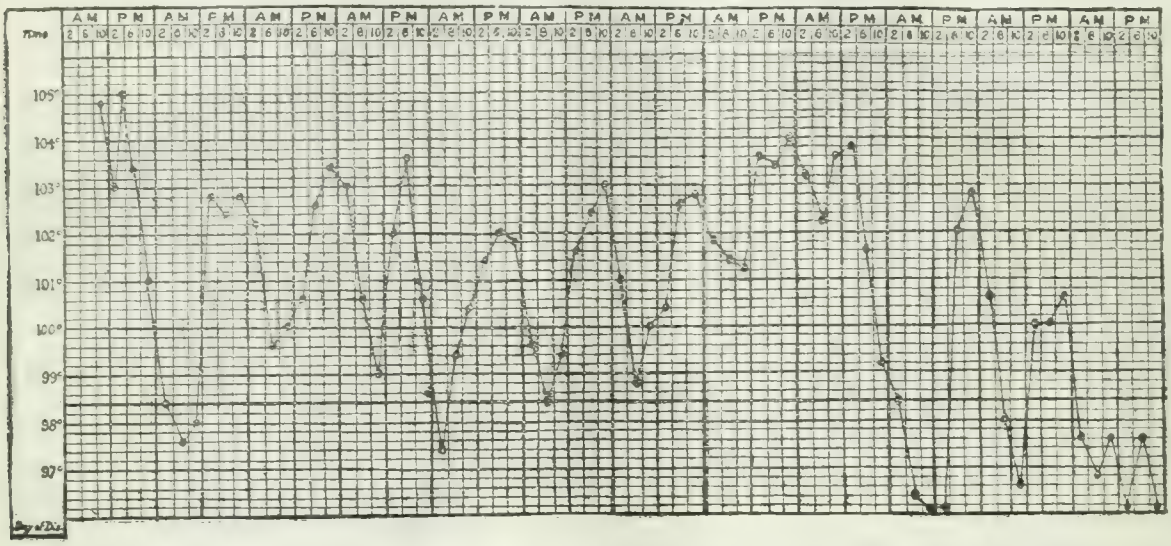


Chart 7.—Right apical pneumonia in a girl, aged 2, admitted on the eighth day of the disease; intermittent temperature; crisis on the nineteenth day.

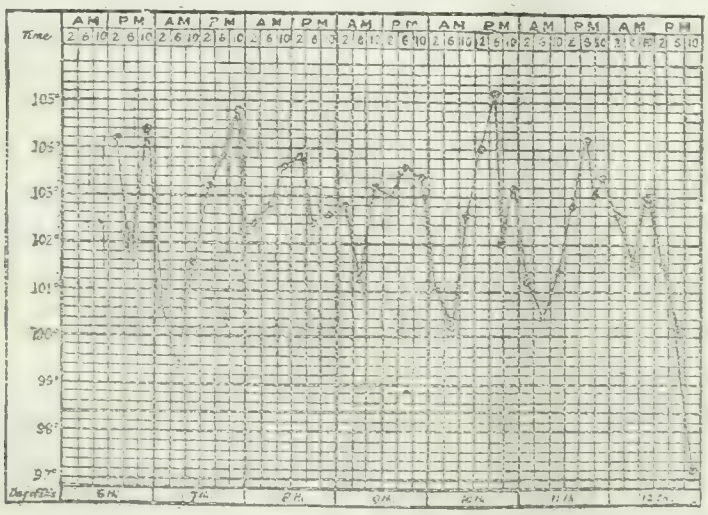


Chart 8.—Right apical pneumonia in a boy, aged 3½, admitted on the sixth day of the disease; continued pyrexia; crisis on the twelfth day.

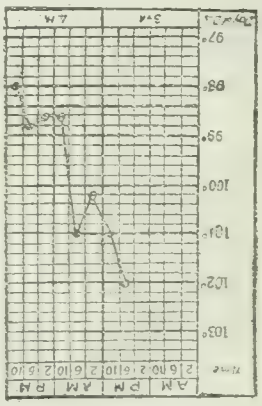


Chart 9.—Abortive lobar pneumonia in a boy, aged 4, admitted on the third day of the disease; crisis on the following day.

which does not show a rise above 100°, except on admission, the chest was full of râles and other moist sounds.

3. *Autointoxication (Non-bacterial).*

Under this heading I include uraemia, acidosis, and unconscious, and for a time after consciousness had returned she was quite blind. It was one of those interesting but rare cases in which temporary amaurosis is associated with severe convulsions. A certain degree of fever also occurs at times in cases of tetany. In delicate and

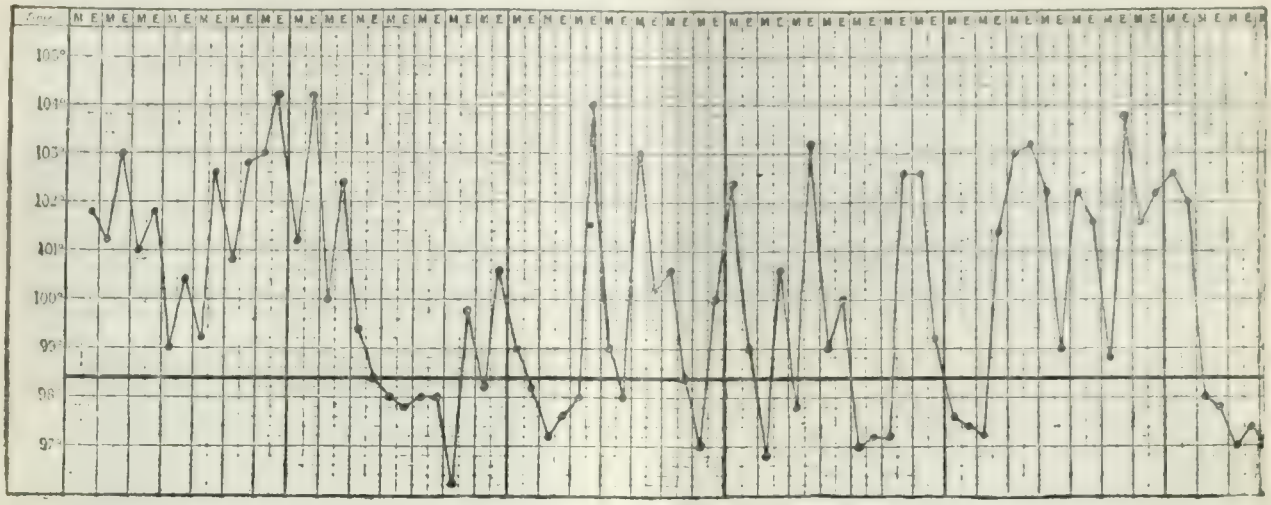


Chart 10.—Basal pneumonia in a girl aged 2½; repeated elevations of temperature during six weeks; no empyema; recovery.

other intoxications. In uraemia it is not uncommon to find the symptoms accompanied by a rise of temperature, and in acidosis there is usually some fever. Acidosis, or acetonaemia as it is sometimes called, gives rise to the cyclical vomiting of children, and is associated with an acid intoxication by bodies of the acetone group (β-oxybutyric acid, diacetic acid, and acetone). It is also found in diabetic coma and in delayed chloroform poisoning.

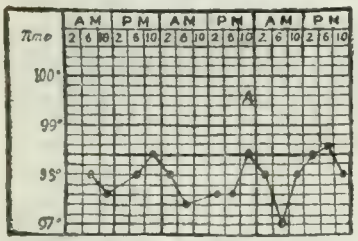


Chart 11.—Normal temperature in a case of empyema of long duration in a girl. A, Operation.

4. *Obscure Causation.*

Lastly, there are certain obscure causes, some of them not uncommon, which give rise to pyrexia. Several of these belong, strictly speaking, to the first two groups, but I have preferred to classify them together, as they are liable to be overlooked.

Muscular activity is always accompanied by the production of heat, and in infancy and early childhood may be the cause of slight elevations of temperature. This is most noticeable in cases of convulsions, when the temperature at the end of an attack may be higher than before. Here is a chart showing a rise of temperature for more than two days as the result of convulsions. (Chart 17.) The child was admitted in a state of general convulsions, and for twenty-four hours passed from one fit into another. The temperature rose to 100.2° F., but did not regain the normal level until forty-eight hours after the convulsions had ceased. For several days the child was

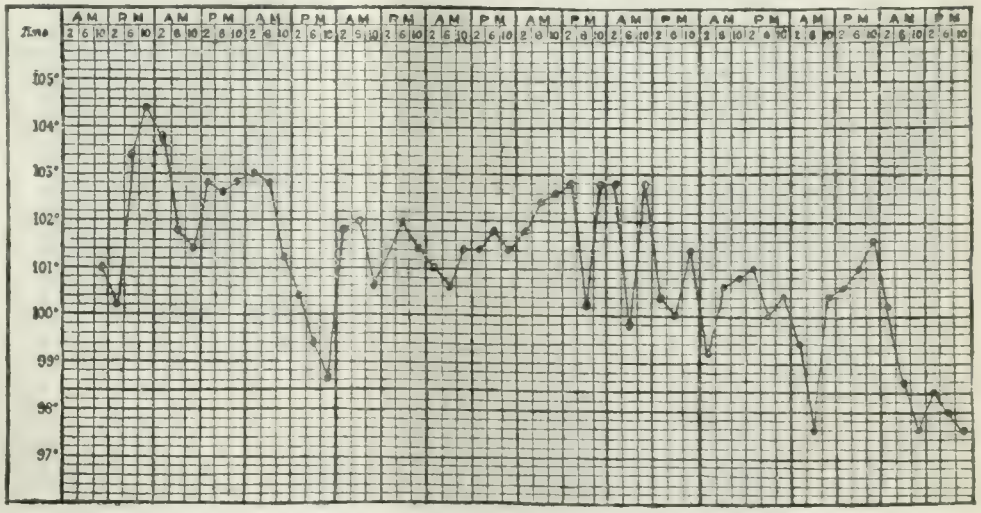


Chart 12.—Bronchopneumonia in a boy aged 2½; high temperature with remissions.

nervous children, again, it is not uncommon to find the temperature raised during the later part of the day as the result of fatigue from over-exertion. In such cases the temperature may reach 100° F. or 101° F., and subside after a few hours.

Mechanical or *reflex irritation* likewise may give rise to fever, the commonest being the cutting of a tooth and the presence of intestinal worms, especially in nervous and ill-nourished children. Parasites frequently cause sudden pyrexia, which may be transient or persist for several days. They often produce no subjective symptoms, but if there is any complaint of abdominal discomfort or anal irritation, their presence should always be suspected. Constipation and undigested food or foreign bodies in the alimentary canal are also liable to cause slight elevations of temperature.

Inanition fever was described by Holt. Th temperature rises usually from the second to the fourth day of life, apparently owing to the fact that the infant gets very little milk from the mother's breast. Coincident with the fever, the child presents a loss of weight and considerable prostration and restlessness. The skin is dry and hot, the pulse weak, and the child sucks vigorously anything within its reach. In these cases the temperature may rise to 104° or higher, but if the child is artificially fed, or even given plenty of water to drink, it

rapidly falls, and often does not rise again. As soon as the normal level is reached the child begins to put on weight, and the general symptoms quickly subside. A similar pyrexia is occasionally met with in older infants when the mother's secretion fails, or if fluid food and water are withheld on account of some gastric disturbance. As in

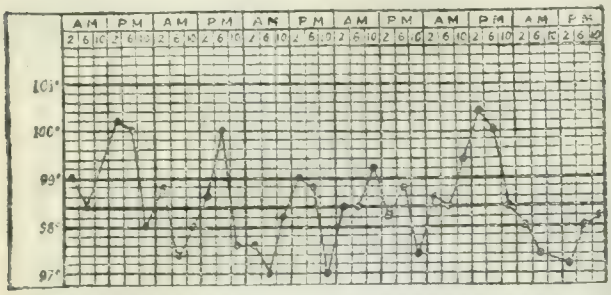


Chart 13.—Bronchopneumonia in a girl; intermittent temperature.

the newborn, the condition promptly reacts to the same line of treatment.

Heat Stroke.—In young children considerable rises of temperature to 105° or 106°, or even higher, may be the result of heat stroke or exposure to excessive heat, or they may be produced by the application of artificial warmth used to augment a deficient body temperature. In the latter case the pyrexia quickly subsides as soon as the hot-water bottles are removed. For this reason it is important that the temperature of delicate and feeble children should be taken frequently, a point which I have previously insisted upon when speaking of incubators. In hot weather, cases of diarrhoea with high temperature may be caused by the sun's heat apart from contamination of the food.

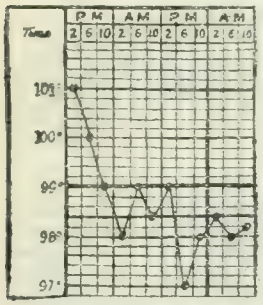


Chart 14.—Bronchopneumonia in a boy aged 2½; low temperature.

Sepsis.—Another cause of pyrexia in early infancy usually gains an entrance through the umbilical cord. During the second week of life continuous fever, which is not due to some intestinal disturbance, is usually caused by umbilical infection. It is naturally an occurrence of considerable gravity, and demands immediate treatment.

Otitis media, in children who are a little older, is a common but frequently unsuspected cause of fever, and it is all the more liable to be overlooked as not infrequently it is unaccompanied by pain. In all cases of unexplained fever in early childhood, therefore, an examination of the ears should never be omitted. When the condition is associated with earache the child usually shows evidence of pain and gives some indication that the ear is at fault. The temperature in these cases is extremely variable; it may rise to 104° at one time of the day, and at another not be above normal. As a general rule the temperature falls, and the symptoms, if any, are relieved after perforation of the tympanum and escape of the pent-up pus. The *throat*, also, is often the source of obscure pyrexia, and should always be examined. Tonsillitis has already been referred to as a cause of fever which must not be forgotten, and retropharyngeal abscess is a condition which is especially liable to escape detection unless a careful search is made.

Pyelitis or pyelo-cystitis is a somewhat rare, though by no means unimportant, cause of pyrexia in infancy and early childhood. The temperature in this disease is irregular, and at times high. Its origin is very frequently overlooked, as there are few or no signs pointing to the urinary tract, and the constitutional symptoms are often not severe, although occasionally there may be repeated chills. An examination of the urine, however, reveals a considerable amount of pus, together with vesical epithelium and casts. In acute cases blood and renal epithelium may be present as well. The colon bacillus is frequently present in pure culture. The urine is usually acid, and the treatment consists for the most part in the administration of alkaline diuretics and antiseptics. A milder form of *B. coli* infection, resulting in bacilluria, may also be the cause of rises of temperature at night. Here are the charts of a case of pyelitis in a girl, aged 5 years (the patient is usually a female), who had rises of temperature at intervals for over five weeks (Chart 18). If you look at the records of the urine you will find that the febrile attacks corresponded with the reappearance of pus or albumin. The child seemed to be perfectly well in herself the whole time, and the renal condition eventually subsided with treatment.

In a single lecture it is impossible to describe in detail all the causes which give rise to fever in children. I have said nothing about the acute specific fevers and many other infections, such as poliomyelitis. I have not touched upon the rises of temperature in purpura haemorrhagica, nor upon the periodical exacerbations which occur in the various forms of anaemia. I have contented myself with pointing out some of the chief peculiarities of the body temperature in children and certain causes of fever which are liable to be overlooked, and I will conclude this

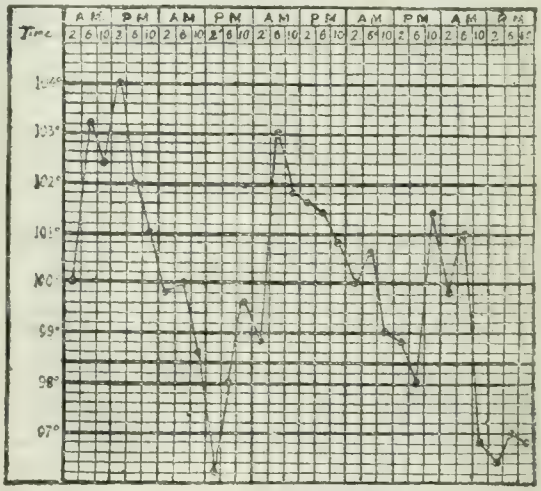


Chart 15.—Acute bronchitis in a child aged 1; high temperature; very few physical signs.

part of my subject with one or two general observations. The first is this: Speaking generally the temperature is higher in children than in adults from a corresponding cause. There are exceptions, however, as I have pointed out, such as acute rheumatism and some instances of bronchitis and pneumonia. The second point upon which I wish to lay stress is that children may have a high temperature and yet not have the appearance of being

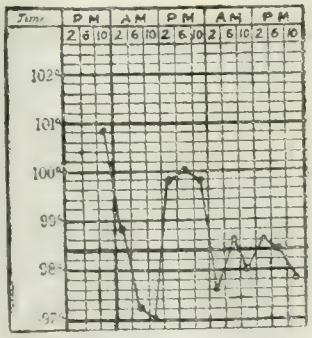


Chart 16.—Acute bronchitis in a girl aged 4; low temperature; copious physical signs.

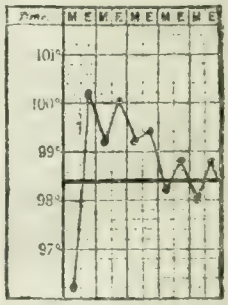
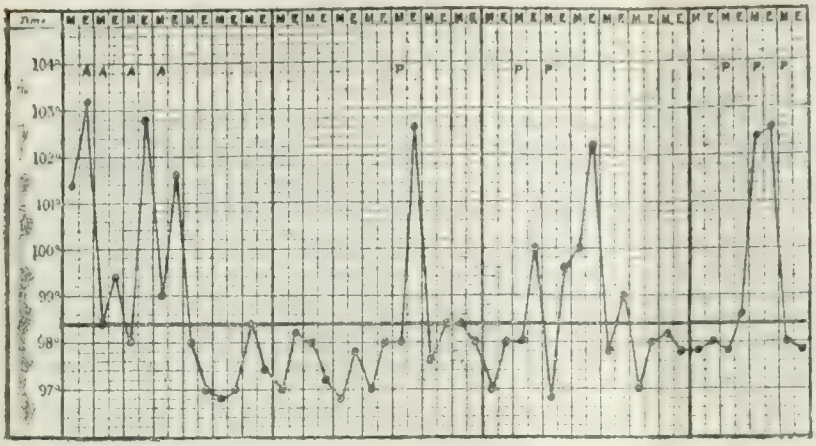


Chart 17.—Elevation of temperature due to convulsions in a girl aged 4.

very ill. As an example of this I will again cite pneumonia. It is of common occurrence to see an infant sitting up in bed and playing with its toys (it is often very difficult to make the child lie down) with a high temperature and consolidation of the whole of one or more lobes of the lung, a condition which in the adult would give rise to extreme prostration. Further, I would remind you that it is easy to be deceived as to a child's temperature by mere tactile sensation. At times the skin is hot, and the child is obviously feverish, but frequently the body gives

no marked sensation of heat, and yet the temperature, when taken by the thermometer, is higher than one expected. Whenever, therefore, a child seems in the least out of sorts, the temperature should be taken as a routine measure.


Date
M E M E M E

THE VICIOUS CIRCLES OF NEURASTHENIA.

BY

JAMIESON B. HURRY, M.A., M.D.,

READING.

NEURASTHENIA is more often than any other disorder complicated by vicious circles. The result is a chronic self-perpetuating condition, distressing to the sufferer, harassing to the relatives, and baffling to the physician.

If a disorder is to be followed by speedy recovery, its reactions—for example, cough, diarrhoea, pyrexia, etc.—must relieve the primary condition. Such disorders may be described as self-terminating.

In neurasthenia, on the other hand, the reactions perpetuate the primary condition. Such reactions may be psychical, and take the form of nosophobia, melancholy, anorexia, insomnia *inter alios;* or the reactions may be somatic, and take the form of cardiac disorder, dyspepsia, ovarian neuralgia, asthenopia. All such reactions perpetuate the primary neurasthenia. Campbell Smith well sums up the process when he says:

> In no complaint does it happen more often than in neurasthenia that the patient gets into a vicious circle, the fundamental disorder producing symptoms which maintain and aggravate the disease.[1]

In the language of pathology we may say that the chronic exhaustion of the neurons which characterizes neurasthenia gives birth to secondary disorders which perpetuate the exhaustion of the neurons.

The study of vicious circles is indispensable to the practitioner of medicine. At every corner does he meet with this complication, which is accountable for many of the tangled processes of disease. Mathieu and Roux thus emphasize the importance of circles in neurotic dyspepsia:

> There is in these cases an interlocking system of vicious circles with which the physician must be familiar if he wishes to understand the mechanism of the diseased organism, and if he wishes his treatment to be logical and useful.[2]

And the same is true of all departments of practice. In fact, a large part of the *ars medendi* is concerned in dealing with this complication.

In support of these propositions I may call as witnesses some independent authorities who have referred to psychical and somatic circles. Space only allows reference to a few typical examples.

PSYCHICAL CIRCLES (FIG. 1).

Phobias.—Disorder of the ideational life is a striking feature of neurasthenia. This often leads to the genesis of anxieties and phobias, which prolong the state of exhaustion of the neurons. Thus Dubois writes:

> In neurasthenia one must take into account the real fatigue of the nervous centres, which, on the one hand, results directly from morbid states of mind, and, on the other, furnishes new food for auto-suggestions. Here we have the eternal vicious circle in which the neuroses travel. Their real ills give birth to their fears and their phobias, and, on the other hand, their mental representations of a pessimistic nature create new disorders.[3]

Binswanger also well describes this circle:

> The execution of any physical or mental task which on previous occasions had brought on attacks of severe exhaustion and other symptoms associated with it may reawaken an imaginary phobia of a similar attack of exhaustion either at the commencement or during the execution of the task. Such a phobia may then excite a series of abnormal sensations which in their turn provide fresh food for the phobias and intensify their influence on the emotional condition. This vicious circle may even culminate in a dread of death—that is, in the imaginary cessation of all vital functions.[4]

Mental Depression.—Mental depression is another common symptom of neurasthenia and aggravates the condition. Thus Müller writes:

> The mental depression reacts on nutrition, sleep, and the other vital functions, and thus creates a grievous vicious circle, which aggravates the primary disorder.[5]

Anorexia Nervosa.—A complex circle may be established when the perverted ideation leads to loss of appetite, refusal of food, and consequent emaciation. In severe cases the victim, usually a woman, becomes a bedridden, helpless invalid—a burden to herself and her family. By degrees the malnutrition reduces the body to little more than a skeleton, and a fatal *exitus* often closes the scene. Schofield thus describes the circle:

> A vicious circle is often kept up in these cases, which it is absolutely essential to break. They begin, it may be, with loss of appetite from some slight cause. This . . . leads to disordered thoughts, and the idea of disease is started. This, again, makes the appetite still more capricious; the thoughts therefore get still worse, and so the body starves the brain and the brain starves the body.[6]

Insomnia.—Insomnia is another psychogenous symptom of neurasthenia which often greatly impedes recovery; the associated cerebral hyperaemia prevents the neurons obtaining the rest on which their recuperation so greatly depends. Sawyer thus describes the circle:

> Any cause which directly prevents a repose duly deep of a sufficient number of those brain cells which are the organs of conscious thought will render sleep impossible. Relative cerebral hyperaemia is an inseparable consequence of such activity, and such relative cerebral hyperaemia becomes a concurrent but subordinate cause of insomnia. Here there is progression through a vicious circle of two terms, in which the impulse of the morbid movement springs from the cerebral cells.[7]

These four examples will serve as illustrations of psychical circles. It need hardly be added that several circles frequently coexist; their effect will then be cumulative, and lessen the prospects of recovery.

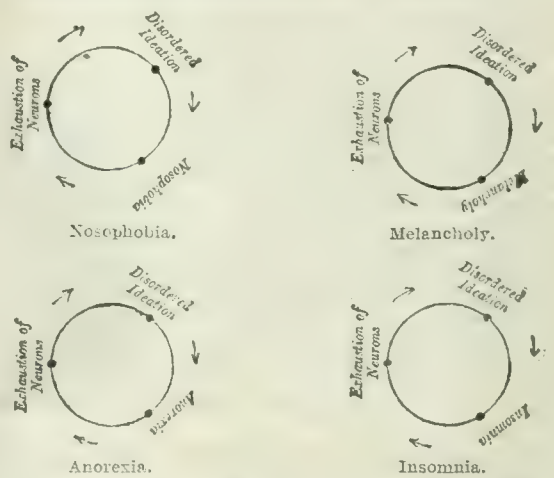


FIG. 1.—CIRCLES ASSOCIATED WITH PSYCHICAL DISORDERS.

SOMATIC CIRCLES (FIG. 2).

Such a multiplicity of these are met with in neurasthenia that a few typical examples must suffice.

Cardiac Disorder.—Neurasthenic persons are frequently obsessed with the fear of heart disease, and the consequent worry intensifies the neurasthenia. The sequence of events is somewhat as follows: The fear of organic heart disease leads to auto-suggested sensations in the cardiac region, followed by disturbance of the cardiac action, such as tachycardia, occasional extra-systoles with palpitation, and an intermittent pulse. The associated sensations then arouse distress and terror, which in their turn further disturb the cardiac activity. Such attacks are especially common at night, and may be caused by nightmare, and the operation of this circle may reduce the neurasthenic person to a condition of utter prostration, or even lead to fatal syncope. André-Thomas thus describes the condition:

> Not only may neurasthenia give rise to cardiac disorders and anxieties, but cardiac anxieties may also give rise to neurasthenia. . . . Emotions, kept alive by fear, aggravate the symptoms or create fresh ones. Thus the patient becomes involved in a vicious circle, which will persist until he can be convinced that there is nothing amiss with his heart.[8]

Dyspepsia.—Probably the digestive system is more often affected by vicious circles than any other system, owing to the peculiarly intimate relation between the central nervous system and the viscera. Drummond thus refers to this liability:

> The subject of neurasthenia fails to digest his food, and suffers in consequence, a vicious circle being established.[9]

Bain also writes:

> Digestive disorders are very common, and, while primarily due to the nervous exhaustion, the state of the stomach reacts

on the patient's condition, and makes the neurasthenia worse, so that a vicious circle is established.[10]

Did space permit, it would be easy to show how pyorrhœa, atonic dyspepsia, gastrectasis, colitis, visceroptosis, diarrhœa, vomiting may also form circles in neurasthenia. We must content ourselves with one quotation from Strümpell dealing with the circle in constipation:

Habitual constipation is frequently associated with general neurasthenia. The nature of this association is probably not the same in every case. Often neurasthenia and constipation seem to be co-ordinate symptoms; sometimes existing constipation has an unfavourable effect upon the psychical condition of patients, rendering them feeble, fretful, out of sorts, and nervous. As a rule, however, neurasthenia is the primary disease, and then the irregularity of the bowels appears as a result of abnormal nervous influences or secondary conditions. Often the two states act in a vicious circle, each sustaining and aggravating the other.[11]

Masturbation.—This vicious habit is often associated with a vicious circle, as Oppenheim points out:

In many cases we have a vicious circle; the tendency to masturbation is in itself a symptom of neuropathic diathesis, and the masturbation again gives rise to a crowd of nervous disorders.[12]

Impotence.—Impotence is a common complication of neurasthenia, and arises from mistrust of self or from an

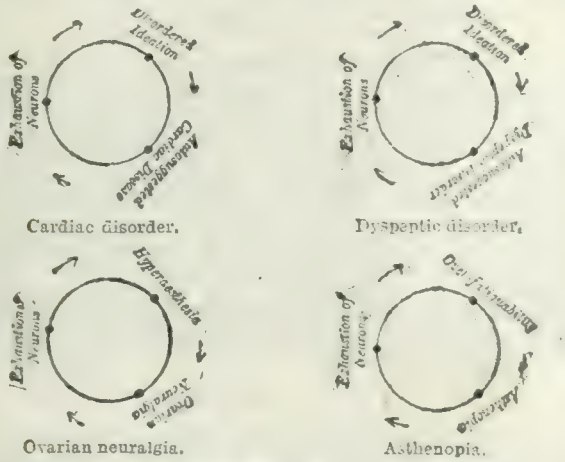


FIG. 2.—CIRCLES ASSOCIATED WITH SOMATIC DISORDERS.

exaggerated fear of the effects of early masturbation, or from the remembrance of previous failures. The mere thought that coitus will be impossible or unsatisfactory is enough to make it so. Failure paves the way for future failure.

All forms of psychical impotence react on the *moral*, and give rise to psychical disturbance which is associated with phobias and obsessions, and ends in neurasthenia. This in its turn aggravates the functional disorders, so that the sufferer becomes involved in a vicious circle.[13]

Uterine Disease.—Faure and Siredey thus refer to the circle so often established by disease of the sexual organs in women:

Women suffering from some disease of the sexual organs frequently show signs of physical and moral depression which is closely allied to neurasthenia. Worn out by their sufferings, often anæmic through loss of blood or through prolonged confinement to the house, either in bed or on the sofa, these unfortunate women grow thin and feeble, and give way more to discouragement. They are now entrapped in a vicious circle, from which escape is difficult. Their neurasthenia induces dyspeptic disorders, and their malnutrition tends to aggravate their neurasthenia.[14]

Pain.—In a neuropathic person almost any painful disorder is liable to increase the neurosis. Herman thus describes the reciprocal relation between pain and neurasthenia:

The great causes of neurasthenia are conditions which (*a*) cause continuous pain and (*b*) prevent sleep. The two things often form a vicious circle. A small local cause disturbs sleep, and want of sleep makes the nervous system oversensitive. In proportion as the neurasthenic symptoms have coincided in time with the development of local pain, so surely may we conclude that the removal of the local pain and the procuring of sound sleep will cure the neurasthenia.[15]

THE BREAKING OF THE CIRCLE.

The treatment of neurasthenia resolves itself into breaking the vicious circles that complicate the disorder. Hence the importance of the physician being familiar in detail with the various factors which perpetuate the morbid gyrations. Prepare your plan of campaign. Seek the *locus minoris resistentiæ*, and direct your broadside so as to effect a breach at the weakest spot. In functional disorders the treatment of symptoms may in itself be of great importance. As Tuckey says, although with a tinge of exaggeration:

In neurasthenia and other functional diseases if we remove all the symptoms we cure the disease. Neurasthenia is at least half psychical in its causation and maintenance, and therefore demands psychical means for its cure. Many of the components of the vicious circle formed act directly as factors in keeping up the condition—for instance, the insomnia, the constipation, the atonic dyspepsia, the disturbance of the genital functions. These are in detail and collectively acted upon by suggestion to an extraordinary extent.[16]

The statement is somewhat exaggerated since even the total removal of symptoms must leave untouched the primary nervous condition which gave birth to the morbid correlations, and this will need attention if the improvement is to be permanent.

There are three main lines of treatment by which we may attack the pathological sequences of neurasthenia: (*a*) psychotherapy, (*b*) systematic treatment, (*c*) local treatment.

(*a*) *Psychotherapy.*

Psychical disorders will create and psychical treatment will often break a vicious circle.

As indicated above, there are numerous circles in which disordered ideation gives birth to subjective symptoms, which are magnified by auto-suggestions and in turn aggravate the disordered ideation. In such cases auto-suggestions must be met by counter-suggestions. If the ideas connected with symptoms can be driven out of consciousness, the circle will often be broken and the patient cured. Herein lies the value of the dominating personality of a trusted physician who can inspire the patient with implicit confidence that the nervous disorder is purely functional and is certainly curable. When this has been accomplished a long stride towards recovery has been taken. Phobias and auto-suggestions vanish, self-confidence and the *joie de vivre* return. The physician who has the deepest insight into mental processes, who can read the secret thoughts and emotions of his patient, and who has the force of character that compels assent, will most often be victorious. It is to such cases that Strümpell refers when he says:

It is true of all neurasthenic conditions that they are cured not by physic, but by the physician.[17]

(*b*) *Constitutional Treatment.*

Although psychotherapy may bring instant relief the primary disorder is as a rule not permanently cured. The chronic exhaustion of the neurons remains, with an abiding tendency to relapse on provocation. Carefully devised constitutional treatment is here called for, therapeutic measures being carefully adapted to each case. Rest, work, isolation, supernutrition, change of air and environment, may each and all prove efficient in suitable cases.

Perhaps the most brilliant success in breaking circles is to be found in the Weir Mitchell treatment of those troublesome forms of anorexia and emaciation which were the despair of earlier physicians. Mathieu and Roux thus describe the circle that complicates such cases:

These weak and emaciated patients with no appetite, bad digestion, and taking inadequate food are involved in a vicious circle, for their weakness due to the long-continued insufficiency of food aggravates their neurosis as well as their dyspepsia, and this leads to further restriction in their daily supply of food. Rest and better alimentation are the only way of curing them.[18]

The genius of Weir Mitchell enabled him to analyse this circle into its constituent factors and to devise his well-known method of treatment. By his régime of isolation, rest, massage, electricity, and supernutrition, the gyration is arrested—confirmed, querulous invalids being transformed into fine specimens of womanhood.

(c) Local Treatment.

There remain some circles which neither psychotherapy nor constitutional treatment will break. To such the words of Sir Clifford Allbutt apply:

> In neurasthenics a local ill, acting and reacting thus, establishes a short circuit and a vicious circle; and the local ill must be at once readjusted.[19]

Here the physician, while ever bearing in mind the dangers of local treatment, that is, the danger of increasing auto-suggestibility, must be prepared to use every weapon in his armamentarium. Hygienic measures, drugs, surgical appliances and operative interference may all be useful in breaking the circle, so that the perverted forces of Nature can resume their normal course. The improved local condition reacts beneficially on the general neurosis; each factor aids the other. In the words of André-Thomas:

> The local improvement encourages the sufferer and thus acts beneficially on his general health. His *morale* improves and this in turn exercises a favourable reaction on the local disorder. The vicious circle is broken.[20]

CONCLUSION.

It is strange that so little attention has hitherto been directed to this self-perpetuating factor in disease. Primary reactions are the commonplaces of our textbooks. But the reciprocal influence of those reactions on the original disorder is scarcely thought worthy of consideration. And yet this factor is of immeasurable significance in the evolution, progress and termination of disease. There is much need for a textbook of therapeutics based on the principle that the *ars medica* mainly consists in "breaking the circle," and intended to guide the practitioner in his attack on the *locus minoris resistentiae*.

Meanwhile, the philosophic physician who studies the operations of the circle will find his horizon widened and his range of vision extended. His further prospect will assist him in steering his patient safely to the desired haven. True, he will discover that the famous Hippocratic dictum—

νούσων φύσεις ἰητροί *

proves a delusion so far as neurasthenia is concerned. But he can triumphantly reply—

τεχνῇ κρατοῦμεν ὧν φύσει νικώμεθα †

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* Nature is the healer of diseases.
† Art triumphs where Nature fails.

INTERNAL SECRETIONS AND DENTAL CARIES:

WITH SPECIAL REFERENCE TO THYROID INSUFFICIENCY.

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THE glands whose secretions may possibly influence the resistance of the tissues to caries are the thyroid, the pituitary, and the thymus, and in each case it is deficiency which may be responsible for an increased susceptibility. It is possible that each of these glands pours into the blood stream certain substances which influence lime salt metabolism and utilization, and which might be called "osteogenetic" or "dentogenetic" hormones.

Thyroid Insufficiency.

Of recent years attention has been drawn by Dr. Leonard Williams[1] and others to the fact that calcium utilization in the body is intimately associated with the metabolism of the thyroid gland. It is supposed that the internal secretion of the thyroid acts as a lime salt fixative in the body, and that when it is absent or deficient the formative organs or tissues are unable to utilize, or to hold, the salts present in the blood, and so the bones and teeth do not calcify to the normal extent.

From clinical evidence I am inclined to think that there is an association between that condition seen in children which is now diagnosed as thyroid insufficiency and the presence of dental caries. This, however, is an exceedingly difficult matter to decide definitely, as there are so many concomitant circumstances relating to habits and food which require to be considered and eliminated. Some writers on the subject would obviously go too far in attributing health or disease of the teeth almost entirely to the effect of the thyroid gland. H. E. Waller,[2] for instance, claims that by giving thyroid extract to a child who had very carious deciduous teeth, the condition of the first permanent molar and central incisior teeth was affected, and when they erupted they appeared "to be all that could be desired." Such an argument is, of course, by itself fallacious, but in addition it is necessary to point out that at the age when the thyroid extract was given (6 years) the crowns of the first permanent molars and central incisors were already completely formed. This case would rather go to show that in spite of thyroid deficiency teeth can be well formed.

Effect of Thyroidectomy.

In order to obtain some precise data as to the possible effect on the teeth produced by loss of the internal secretion of the thyroid, thyroidectomy has been performed by the writer on a number of young rabbits. The result of this operation in rodents is admittedly various, some authorities stating that the animals survive, others that the effect is rapidly fatal. My experience supports the latter view; I only succeeded in getting one rabbit to live. The others (four) died within a week. The animal which survived was kept for twelve months and then killed; it throve well and was apparently perfectly healthy; on *post-mortem* examination no trace of thyroid gland was present.

Alimentary Absorption.

In order to ascertain to what extent any deficiency of development might be due to deficient digestion or absorption in the intestines, the amounts of undigested starch and of calcium in the faeces were estimated on several occasions and compared with that of normal animals. It was found that the amount of calcium in the faeces of a thyroidectomized rabbit was slightly in excess of that in the controls, but that starch was much better digested than normally.

The average figures were as follows:

	Calcium Excreted in Faeces. Per cent.	Amount of Starch Undigested. Per cent.
Thyroidectomized animal	... 1.168	..... 18.018
Control	... 0.634	..... 21.83

The amount of starch undigested in the faeces is decidedly low. I have not previously observed it in normal rabbits to be below 20 per cent. under any circumstances. This increased utilization of starch probably accounts for the animals' general fat condition. The loss of calcium is considerably in excess of the normal, and it might be supposed that this would have a prejudicial effect upon the calcium content of the bones and teeth.

Composition of the Teeth after Thyroidectomy.

The teeth were to the naked eye well formed and normal, the only difference being that they were extremely white and quite devoid of that yellow staining and fine black deposit* which is almost universally present in rodents'

* This particular form of black stain or deposit is not due to accidental staining by tobacco or foods, but is "biochemical" in origin, being produced either by chromogenic bacteria or from haemoglobin. It is most commonly seen in the cervical region of teeth in children who are immune, or nearly so, and is not improbably allied to the dark coloration which almost invariably accompanies a spontaneous arrest of caries.

and other animals' teeth (and also in many cases on human teeth immune to caries).

The specific gravity of the teeth was estimated by the pycnometer method and compared with that of similar teeth in controls. (I find it is necessary to use similar teeth, since there is quite an appreciable difference between the incisor and molar teeth of the same animals, due most probably to the different proportionate amounts of enamel present in the two kinds of teeth.) In this case the molar teeth were used. The control teeth gave a specific gravity of 2.49, whilst those of the thyroidectomized animal gave a slightly lower figure, 2.46. This difference is not apparently great, but I have previously shown that the enamel of human teeth, demonstrably different in several physical properties, differs only to a similar degree in density.[3]

Analysis of Teeth.

Corresponding with the statement just made, the teeth of the thyroidectomized animal showed on analysis slightly less ash than the controls—namely, 79.16 per cent. and 80 per cent. respectively; that is, the teeth after thyroidectomy contained 0.84 per cent. more organic matter than normal. The calcium in the teeth was estimated, and showed that the ash of the thyroidectomized animal's teeth contained 2.1 per cent. less calcium than that from the controls' teeth.

Effect on Salivary Secretion.

It might be thought on *a priori* grounds that the thyroid and the salivary glands would have something in common. Developmentally they both arise as diverticula from the mouth or oropharynx, and at first the thyroid has also a duct, the thyroglossal, which opens into the mouth (at the foramen caecum), and both may be associated with the utilization of lime salts. It has also been found that in monkeys after thyroidectomy the salivary glands swell up and contain an excess of mucin, but whether this effect is temporary or permanent I am unable to say. The saliva was therefore on seven different occasions obtained from the thyroidectomized and control rabbits by aspiration from the mouth for five minutes after the subcutaneous injection of pilocarpine (1 mg. per kilo).

The following are the results:

	Average Alkalinity of Saliva per c.cm.	Alkalinity Index.*
Thyroidectomy rabbit...	... 0.65	0.336
Controls	... 0.85	0.399

* Total amount of alkalinity per minute.

It is seen, therefore, that apparently thyroidectomy has somewhat reduced the output of alkaline salts from the salivary glands, and also that this is not made up for by any increase in quantity of saliva, as seen by the diminution in the "index." The amount of saliva obtainable per minute, however, was more variable in the thyroidectomized rabbit than in the controls, and was frequently slightly in excess of them. It cannot be claimed, however, that the effect is very considerable either on amount or alkalinity. Of some interest, however, is the calcium secretion of the salivary glands, since it is the metabolism of calcium which the thyroid presumably more directly affects.

Saliva was obtained in a manner similar to that described and estimated volumetrically for calcium. I found that the saliva of the thyroidectomized rabbit contained slightly less calcium than the control, namely:

	Control.	After Thyroidectomy.
Calcium percentage in saliva	... 0.0220	... 0.0206

That the salivary glands do, however, tend to show a correlated variation with the thyroid gland is supported by the fact that *post mortem* the submaxillary salivary glands were found to be much below the normal in proportion to the weight of the animal; thus the average weight of submaxillary salivary glands in normal full-grown rabbits I have found to be 0.3473 gram per kilo of body weight, whereas in the thyroidectomized rabbit it was only 0.2268 per kilo. The above results may be tabulated as follows:

	Control Animals.	Thyroidectomized
	Per cent.	
Specific gravity of teeth ...	2.49	2.46
Composition of teeth:		
Mineral matter... ...	0.80	79.16
Organic matter... ...	0.20	20.84
Calcium in ash... ...	40.00	37.21
Calcium in dried teeth ...	32.00	29.90
Excretion by faeces:		
Calcium	0.634	1.168
Starch	21.83	18.013
Salivary secretion:		
Alkalinity per c.cm. ...	0.85	0.65
Alkalinity per minute*	0.399	0.336
Calcium	0.0220	0.0206
Weight of salivary glands per kilo of body weight ...	0.3473	0.2263

* In terms of $\frac{N}{50}$ NaOH to methyl orange. For reasons for thus expressing alkalinity, see author's *Prevention of Caries.*

It is doubtful whether a definite conclusion can be drawn from the above investigation, seeing that only one animal was used. Also, of course, the animal showed no signs of myxoedema. It is nevertheless to be observed that the variations in the thyroidectomized animal, although slight, are all in one direction—namely, in that which would lower the resistance of the teeth to disease. This coincides with clinical observations. The result, therefore, goes to support the theory that thyroid insufficiency may favour the occurrence of caries of the teeth.

The Pituitary Gland.

As is well known, the secretion of this gland has an influence upon the morphology of the jaws, excess of secretion leading to increased growth and deposit of bone (= increased local fixation of lime salts), whilst probably a decrease leads to the condition called progeria, in which the jaws remain infantile in character and growth, and local utilization of lime salts is defective. Professor Arthur Keith[4] has suggested that the internal secretion of the pituitary acts as a "sensitizer" between the nerve fibrils and the functioning cells. That is to say, it enables the neurotrophic influence to more readily exert a stimulating effect upon osteoblasts. But why should it be limited to osteoblasts? It is quite possible that ameloblasts may also be similarly affected, and, although I have no evidence for such a suggestion, it is worth inquiry whether pituitary deficiency may not be a contributing cause to the imperfectly "finished" enamel prisms which the writer has shown[5] to be commonly present on the surface of teeth susceptible to caries.[5a]

The Thymus Gland.

This gland, which in human beings is normally only a temporary organ, disappearing after infancy, has also been suggested[6] as playing a part in the etiology of caries. Basch has found that in puppies osseous development is retarded by excision, but I am unable to say whether any effect was observed upon the teeth. If it does play a part it could only be in connexion with the deciduous teeth.

Conclusion.

There is some reason to think that deficiencies of secretions of the thyroid, and perhaps the pituitary and thymus glands, are concerned in the lowering of the resistance of the tissues to dental caries. It is necessary, however, to be careful in generalizing. Because thyroid insufficiency may be a causative factor in certain patients, it does not follow *ipso facto* that it is always a cause of caries. There are very many other factors, physiological and pathological, which must also always be taken into consideration.

REFERENCES.

[1] *Medical Review*, May, 1910; and H. E. Waller, *Thyroid Therapy*, 1913. [2] Op. cit., p. 4. [3] *Prevention of Dental Caries and Oral Sepsis*, second edition, 1914. [4] *Dental Record*, December 1st, 1913, p. 774. [5] Op. cit. [6] Professor W. J. Gies, *Journ. Allied Societies*, December, 1913.

[5a] This imperfect finish (never seen either in "native" or European sclerotic teeth) consists in minute depressions at the ends of the prisms. This defect increases the adherence of foreign matter, and exposes a larger and more vulnerable surface to the action of fermentation acids.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACIDOSIS AND HEPATIC DISORDER.

I was greatly interested to read in the issue of the JOURNAL of June 6th, p. 1230, Dr. Coombs's account of two cases of acidosis occurring in men about 60 years of age, both with a fatal termination. The article brought to my recollection a similar case, also a man about 60 years old, which came under my notice a short time ago, and also proved fatal. The signs and symptoms differed somewhat from those described by Dr. Coombs as having been present in his cases. They were dyspnoea, pain over the epigastrium, headache, vomiting, intense thirst, and pallor verging on actual cyanosis. Diarrhoea was present only for a short period in the last stage. There was no oedema of the limbs and no abdominal enlargement. Acetone and diacetic acid were present in the urine, but the odour of the former in the breath was only very faint. It occurred to me at the time that the seat of the trouble lay in the liver as the clinical evidence seemed to point to a definite interference with the normal metabolic processes generally associated with that organ. The result of this "breakdown" was the imperfect oxidation of the fats and the appearance of fatty acids and their derivatives in the blood and urine. The prime cause of the whole condition remained obscure.

In a second case, that of a girl aged about 7 years, the opinion which I had formed as to the part played by the liver in the former case was rather strengthened. On the day previous to my seeing her she had demolished on her own account a whole beetroot recently cooked by her mother for the family. She was brought to me complaining of sore throat, headache, intense thirst, and pain over the upper part of the abdomen. Her face was pale, and her tongue and skin dry, though the body temperature was only slightly raised; her breath smelt strongly of acetone. She vomited at frequent intervals small quantities of green bile-stained fluid, and moderate pressure over the epigastrium caused her to cry out with pain. The urine was of a deep pink colour, and the stools were similarly tinged, this extraordinary coloration being, of course, due to the beetroot. Both urine and faeces smelt strongly of acetone and the former reacted readily to the distinctive tests for that substance, and also to those for diacetic acid. The saliva and vomited fluid also reacted to the tests for acetone—the former distinctly, the latter only slightly. Vomiting continued for almost forty-eight hours, and the child's condition became very grave. The pallor increased, the pupils became dilated, and the respirations quicker and more difficult. Throughout the whole of this period she was very drowsy, though by no means comatose, and she continued literally to pour out acetone from her body until the surrounding air became saturated with it. No food was given her by mouth for three days. Nutrient salines containing glucose, sodium bicarbonate, and normal saline were given 4 oz. at a time during this period, and she was allowed to drink a 3 per cent. solution of sodium bicarbonate *ad lib.* She rapidly got well, the acetone disappeared from the urine, and by the end of a week she had returned to her normal condition. The *prima causa* in this case was undoubtedly the beetroot, but what particular element in the composition of that vegetable and the nature of the changes brought about by it in the tissues I cannot tell.

Croydon. J. JOHNSTONE JERVIS, M.D.

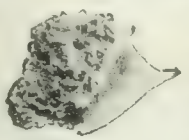
FOREIGN BODY IN THE LUNG.

THE following case presents some unusual and unexpected features:

A married woman, aged 75, came under my notice with the following history: Between December 27th, 1909, and January 1st, 1910, she was in bed suffering from acute pleurisy. One day, while partaking of ox-tail soup, she choked over a small piece of bone. She told her then medical attendant, adding that the bone was still there, but her statement does not seem to have been accepted. The usual routine treatment for bronchial catarrh was commenced, but the condition persisted, there being a widespread distribution over both lungs, of rhonchi and sibilant râles, without any definite localization. The secretion was profuse, and of the usual bronchial nature. As matters failed to improve, she was seen by another medical man, who diagnosed chronic bronchitis. Change of air did not alleviate the symptoms, the most troublesome being the profuse expectoration.

During the first week of January pus appeared periodically in the sputum, but after a fortnight entirely ceased. The condition lasted on till the time I saw her first in October, 1910. At that date the profuse secretion, a sense of extreme oppression behind the sternum, and a troublesome cough were her chief symptoms. The circumstance of the bone swallowing was not mentioned to me. She had never had a rise of temperature, except when she complained first of swallowing the bone, and at that time the feverishness was attributed to the pleurisy.

The condition dragged on without any fresh development till the beginning of May, 1913, when she became afflicted with occasional rigors, sleeplessness, and a most troublesome cough, which became aggravated on her assuming a recumbent position. She seemed also to have contracted a head cold, which was epidemic at that time. On May 14th she was seized at 1 a.m. with a fierce paroxysm of coughing, during which she felt something "give way" in her chest. She got out of bed and coughed into a bowl, thinking that blood was coming, but it turned out to be pus, and at the same time felt a sharp pain, and a hard body at the back of the throat. She managed to extract the foreign body, which proved to be the swallowed bone. The pus had practically no odour, but was unfortunately emptied out before a sample could be taken for bacteriological purposes. Since then the condition has almost entirely cleared up, excepting some bronchial sounds on both sides, heard chiefly at the back. No clubbing of the hands was ever present, and I found no indication of bronchiectasis.



The sputum, since examined, has indicated nothing definite. The question arises whether the bone had produced a pulmonary abscess, or had passed into the deeper layers of the bronchus, causing it to become sacculated, an abscess cavity ultimately forming. It may be asked whether a pulmonary abscess would have remained quiescent for so long a time without constitutional disturbance and fever. I have referred to the literature on the subject, but have met with no case quite parallel. The photograph shows exactly the shape and nature of the broken ox-tail bone, but is almost twice as large as the specimen.

Leven, Fife. D. M. MACDONALD, M.O.H.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DERMATOLOGY.

AT a meeting on June 18th, Dr. J. J. PRINGLE, President, in the chair, Dr. I. J. DAVIES gave an account of *Carbon monoxide erythema* which occurred in 9 cases after an exposure of twenty hours as a result of a colliery accident in October of last year. The lesions chiefly involved the buttocks and covered parts of the body, and consisted principally of acute erythema accompanied by oedema. They were regarded as being angioneurotic in character. Five of the cases had peripheral neuritis. Dr. E. GRAHAM LITTLE showed a case of *Pellagra* with multiple peripheral neuritis and skin symptoms in a boy, aged 14, from Sussex. In the latter part of 1912 he was bitten on the chest when bathing. The lesion apparently suppurated and was cauterized by the local practitioner. This was followed by vomiting, intestinal pain, diarrhoea, and wasting. In August, 1913, he had a pleuritic effusion, and was tapped, the diagnosis being made of tuberculous pleurisy possibly complicated by Addison's disease. Last Easter he was "caught by the sun" and developed acute erythematous swelling and subsequent pigmentation and desquamation of the back of the hands, neck, nose, and forehead. No arsenic was given until May. There was no maize in the dietary. Lumbar puncture provided no cytological evidence, and there were neither mental symptoms nor

spinal tenderness. The PRESIDENT said he was under the impression that peripheral neuritis had been observed in some of the American reported cases. Dr. J. H. SEQUEIRA said he had recently had a man at the London Hospital who was melancholic and suffered from diarrhœa and wasting, and had an eruption suggestive of pellagra. Dr. G. PERNET said he had seen cases of pellagra in Rome, and thought Dr. Little was justified in his diagnosis. Dr. J. M. H. MACLEOD said that all cases of pellagra exhibited an increased susceptibility to sunburn, as had been noticed in the present case. Dr. A. WHITFIELD said that Dr. Sambon's description led him to think that the pellagrous erythema did not disappear so quickly as in the case shown. Dr. GRAHAM LITTLE showed a mouse affected with *Favus*; it was found in the bedroom of a patient suffering from that disease whom he had shown at a previous meeting. Dr. PERNET showed a child, aged 2, with the same disease. Its mother was also affected, and had been so since childhood. Dr. H. G. ADAMSON said that six years ago he had shown a case of favus in a baby and in a mouse with cultures from both. The PRESIDENT remarked that cases of English origin were not very rare, and Dr. SEQUEIRA said that Sir Jonathan Hutchinson's well-known case of favus of the tongue came from Cornwall. Dr. J. L. BUNCH exhibited a patient, aged 51, with *Paget's disease of the nipple*. It was of twelve months' duration, and had been treated by two massive doses of *x* rays, as the patient refused to have the breast removed. The PRESIDENT suggested treatment with massive doses of radium inserted deeply through the base of the growth. Dr. SEQUEIRA said he always advised early and complete removal, as the condition was a duct carcinoma. Dr. J. H. STOWERS had seen a disastrous case resulting from radium treatment, and urged removal of the whole breast. He showed a drawing of a patient seen by Paget who had developed a scirrhus on the other breast. Dr. HALDIN DAVIS said his experience was not such as to lead him to recommend radium treatment. Dr. J. A. NIXON thought these should not be regarded as dermatological cases, but should be advised to undergo immediate excision. Radium and *x* rays were delusive because they caused a superficial improvement. Dr. H. MACCORMAC said that two distinct types of carcinoma caused the condition known as Paget's disease—namely, spheroidal and columnar, and the treatment depended on which of these was present.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

AT a meeting on June 11th, Dr. W. S. A. GRIFFITH, President, in the chair, Dr. MACNAUGHTON-JONES showed a twin female monster, exhibiting thoracopagus approaching to prozygosis in which the thoracic centres were united by the visceral laminæ. The twins faced each other, and were united above the umbilicus and equally developed. The umbilical cord was single. The union extended unusually far forwards, involving not only the thoracic wall, but also the neck, lower jaw, and lower lip, being an example of emprosthozygosis thoracodidymus (Gurlt). Mr. ALBAN DORAN, in discussing the specimen, said that Schwalbe classed these very rare monsters under the type of prosopothoracopagus. Three others had been reported by Barkow, Daude, and Otto. The speaker considered this type of monster a true connecting link between the chest-united thoracopagus and the head-united prozygosis, or cephalothoracopagus twin monsters. Mr. GORDON LUKER showed a lithopaedion removed from a 4-para, aged 33, when six and a half months pregnant. The ectopic gestation apparently dated back twelve years, and represented the patient's first pregnancy. Pain and a lump in the right iliac region had been noted by the patient in each succeeding pregnancy. The specimen was ovoid in shape, about 6 cm. by 4.5 cm., covered by an elastic bony shell about 0.2 cm. thick. Professor DAVID WATERSTON gave an epidiascope demonstration relating to a decidual cast containing an embryo which was nearly 3 mm. in length, and was apparently about three weeks old. Sections showed the early embedding of the embryo, and the characteristic features of the various positions of the decidua. A beautiful wax reconstruction model was also shown of the embryo, yolk sac, amnion, chorion, and decidua, greatly magnified. Dr. ARCHIBALD DONALD read a short paper on a case of *Chronic metritis* in a nullipara, and Dr. W. FLETCHER SHAW (Manchester) read one on the subdivisions of the conditions classed under this phrase.

Reviews.

HYPNOTISM AND SUGGESTION.

IT is only during the last few years that the treatment of various morbid conditions by hypnotism and suggestion has been dissociated in the minds of medical practitioners from the suspicion of fraudulent practices and quackery. In the course of the last twenty years it has been employed with increasing frequency, and has, in consequence, become better understood. The limits within which it may be used with success are now fairly well marked out. A number of books upon the subject have recently appeared, and afford an opportunity for reviewing the present position of the science and art of hypnotism.

There can be little doubt that hypnotism and suggestion have been employed occasionally in treating disease and otherwise in many countries for many centuries. But they were never brought prominently before the scientific world until the time of Mesmer (1733–1815), a medical graduate of Vienna, who set up as a practising hypnotist in Paris in 1778, and created a great stir in medical and fashionable circles by his mummeries and sensational experimental effects. He attributed the cures he effected to "animal magnetism," a supposed new natural force, occult, permeating the universe, acting on the nervous system, and under his own control. How far he was an honest man, and to what extent self-deluded, it is not easy to determine; in the hands of his successors mesmerism became identified with mere trickery and fraud. A great mesmeric revival took place in England about 1837, and was associated with the names of Elliotson, Esdaile, and Braid. Elliotson (1791-1868), physician to St. Thomas's Hospital and afterwards Professor of the Practice of Medicine at University College, was undoubtedly successful as a hypnotist, and, while he believed in various false sciences of his day (clairvoyance, phrenology, odylic force, and the like), was a constant opponent of spiritualism; but his methods aroused a great deal of opposition. Esdaile (1808-1859) practised hypnotism in India for purposes of general anæsthesia with great success, but did not obtain general recognition of the utility of his methods. Braid (1795-1860), again a most successful hypnotist, did more than any of his predecessors to bring the true facts and a simple theory of hypnotism before the public and the profession in both England and France. He believed all hypnotic phenomena to be of a subjective nature. After his day no further progress in the study of hypnotism was made in England till about the year 1889, when it was taken up by Dr. Tuckey and by Dr. Milne Bramwell. In France, however, it was practised by Liébeault, of Nancy, from 1860 onwards; he arrived independently at much the same conclusions as Braid, but his work passed unnoticed until it was taken up by Bernheim in 1882, and later by others. Meanwhile Charcot had turned his attention to hypnotism; and by confusing it with hysteria he did a great deal to obscure and put back the study of hypnotic phenomena generally. It is to Charcot and his pupils that the erroneous ideas as to the dangers of hypnosis, still firmly fixed in the public mind, are mainly due. During the last thirty years the use of suggestion in the treatment of disease, either with or more often without hypnotism, has been increasingly employed. It was originated by Breuer, who called the method "psycho-analysis." This method has recently been brought to the fore again by Freud, who gives it a strong sexual bias. The number of books, periodicals, and papers written about hypnotism and the allied subjects during the last quarter of a century is enormous. The bulk of this literature has resulted in nothing like uniformity in the general views about the way in which hypnosis is produced and acts, although there is a general agreement as to the degree of its utility in the treatment of disease.

As for the methods of inducing hypnosis, they are very numerous, and there is no reason for supposing that one or another of them is better than the rest. The central factor in all hypnotic treatment ought to be the development of the patient's control of his own organism, and this is clearly a matter for suggestion; the reason for the use of hypnotism is that suggestions can often be more readily conveyed to the patient and more forcibly impressed upon

him when he is hypnotized. Some of the most experienced operators have succeeded in hypnotizing more than 90 per cent. of the cases which they have dealt with; hysterical subjects are, as a rule, less easily hypnotized than normal people. In the treatment of disease it must be clearly recognized that hypnotism is not a panacea; but it may often be combined with other remedial measures. It has been successful in countless cases of functional disorder, mental obsession, and the like; and in estimating the results of treatment on these lines it must be remembered that in the majority of cases thus treated many other modes of treatment have been tried and have failed. Hypnotism and suggestion are directed to remedy the lack of moral strength that underlies the patient's sufferings, his want of discipline and self-control. Numerous instances in which they have proved successful are detailed in the two first of the six books mentioned below; among them are many hysterical and neurasthenic troubles, drug habits, obsessions and fears of many varieties, tic, insomnia, somnambulism, enuresis nocturna, sea-sickness, pruritus, hyperidrosis, several cases of eczema, physical and moral breakdown, stammering, morbid impulses, pains of the most varied descriptions. The *modus operandi* of hypnotism has been much discussed, but remains obscure. At any rate there is no physiological or psychological inhibition about it, no automatism, no suspension of the patient's volition. Indeed, the essential characteristic of the hypnotic state is the subject's far-reaching power over his own organism; his volition is increased, according to Dr. Bramwell, and his moral standard is raised. Some theory of subliminal consciousness seems indicated here; the phenomena of hypnosis may, perhaps, arise from voluntary alterations in the association and dissociation of ideas, and may be connected with the existence of alternating states of consciousness. But it is not necessary to conclude that the normal subject and the subject when hypnotized are two distinct personalities. Why hypnotism should be evoked by the methods of hypnotization employed is not understood, nor is the varying susceptibility to its influence shown by different persons.

Dr. BRAMWELL'S well-known book,[1] now in its third edition, gives an excellent account of the whole subject of hypnotism. It is clearly written, complete, and admirably arranged. His long and interesting chapter on "Hypnotic Theories" contains a lucid exposition of the many theories and hypotheses that have been invented to explain the occurrence of the hypnotic state and its phenomena. It is clear, as has been indicated above, that we still have much to learn about them. His chapter on the employment of "Hypnotism in Medicine" is most instructive, and illustrates the great variety of the cases in which hypnotic treatment is likely to be effective. His book may be warmly recommended to all medical men and students who want a well-written and thoroughly practical account of the science and art of hypnotism.

Dr. LLOYD TUCKEY'S well-known volume,[2] now in its sixth edition, consists to a large extent of narratives of cases treated by hypnosis and suggestion, with instructive comments, laying stress on the special points they illustrate. The historical, scientific, and experimental aspects of the subject are touched upon, but the author's main interest seems to lie in the practical applications of the treatment, its successes, and its failures. His book gives a good account of hypnotism and suggestion, and should be read by all who take an interest in treatment by these methods. A chapter by Dr. Constance Long gives an account of Freudian psycho-analysis.

Dr. HILGER'S volume[3] contains a philosophical and scientific exposition of the whole subject, written in a style that is both temperate and convincing. The author concerns himself with the psychological rather than the technical aspect of hypnotism, although his book is far from being unpractical in character, and contains a number of illustrative cases. His point of view and his treatment of the subject are often both suggestive and illuminating, and his book, which has been well translated, is worth reading.

Dr. ASH in his little book[4] aims at summarizing the various practical rules which may be followed by those wishing to carry out treatment by suggestion; and to indicate as far as possible, the several types of cases for which the different methods are particularly suited. It is intended solely for medical practitioners.

The remaining volumes are designed for popular consumption. Dr. JACOBY'S is a serviceable popular guide[5] to the subject of psycho-therapy, written on systematic and scientific lines. It is no doubt meant mainly for the American public, dealing with a number of the mental fads and fashions that prosper in the United States. The text is illustrated with a few diagrams of the brain and of nerve cells, and serves well the purpose for which it has been written. Dr. SOPP'S little manual[6] gives a brief account of treatment by suggestion and hypnotism intended to dispel the atmosphere of mystery that surrounds the subject. It is clearly written, simple, devoid of originality, and so may be said to contain the elements of a deserved success.

TEXTBOOKS OF ANAESTHETICS.

THE latest edition of Dr. DUDLEY BUXTON'S well-known textbook, *Anaesthetics: their Use and Administration*,[7] has been amplified, but it retains in all essentials the character of its predecessors. The period which has elapsed since the last edition was published has been marked by many innovations. A clear, detailed, and unbiassed account of all the recent work is to be found in this volume, and on this ground alone it may be recommended strongly, not only to students, but to all who are interested in the scientific side of anaesthesia. The chapter devoted to the preparation of patients for operation and anaesthesia contains much information. The subject is dealt with not only in a general way, but in detail. The author describes the various "dosimetric" methods of giving chloroform, and quotes many references in support of his contention that anaesthesia may only be safely induced by low percentages of chloroform; and, further, that unless a low percentage apparatus is employed, the anaesthetic should always be removed during struggling if this should occur during the induction. We believe that a different opinion is held by many observers, who maintain that the so-called "syncopal attack" during induction of anaesthesia with chloroform is really a ventricular fibrillation of the heart produced only during a protracted induction, and predisposed to by small percentages of chloroform and by withdrawal during struggling and excitement. This view is supported by some good experimental work and by the clinical experiences of those observers whose practice it is to induce anaesthesia rapidly by the open method. Dr. Buxton has dealt very fully with the various methods of giving ether. The open, intratracheal, intravenous, and colonic methods are all described in detail, and the structure of some rather complicated pieces of apparatus is made quite clear by the excellent illustrations. The portion of the work dealing with local analgesia is clear and well arranged. Considerable space has been devoted to the chemistry and pharmacology of the various substances used, while the directions for the injection of novocain around the various nerve trunks to produce regional analgesia are in most cases very brief; this seems a little out of proportion in a book of this character. The author writes in a characteristically practical way, and his directions and little "tips" for the injection of the intercostal nerves will be as much appreciated by those who from experience know the difficulties of this operation as by those who by following these directions attempt to perform it. In

[1] *Hypnotism: its History, Practice, and Theory.* By J. M. Bramwell, M.B., C.M. Third and cheaper edition. London: W. Rider and Sons, Limited. 1913. (Med. 8vo, pp. 496. 12s. 6d. net.)

[2] *Treatment by Hypnotism and Suggestion; or Psycho-therapeutics.* By C. Lloyd Tuckey, M.D.Aberd. With a foreword by Sir F. R. Cruise, M.D., D.L., K.L.G. London: Baillière, Tindall and Cox. 1913. (Demy 8vo, pp. 459; 5 figures. 10s. 6d. net.)

[3] *Hypnotism and Suggestion: their Nature, Action, Importance, and Position amongst Therapeutic Agents.* By W. Hilger, M.D. Translated from the Dutch by R. W. Felkin, M.D., F.R.S.E. With an Introduction by Dr. Van Reuterghem. Translated by A. Newboldt. London: Rebman, Limited. 1912. (Demy 8vo, pp. 240. 10s. 6d. net.)

[4] *How to Treat by Suggestion: With and Without Hypnosis. A Notebook for Practitioners.* By E. L. Ash, M.D.Lond. London: Mills and Boon, Ltd. 1914. (Cr. 8vo, pp. 104. 1s. net.)

[5] *Suggestion and Psycho-therapy.* By G. W. Jacoby, M.D. London: T. Fisher Unwin. 1912. (Demy 8vo, pp. 367. 7s. 6d. net.)

[6] *Suggestion and Hypnotism.* By Dr. Med. A. Sopp. Würzburg: C. Kabitzsch. 1913. (Demy 8vo, pp. 78. Mk.1.80; bound, Mk.2.20.)

[7] *Anaesthetics: their Use and Administration.* By D. M. Buxton, M.D., B.S. Fifth edition. London: H. K. Lewis. 1914. (Demy 8vo, pp. 491; 84 figures. 10s. 6d. net.)

writing of spinal analgesia, Dr. Buxton recommends a solution of stovaine and dextrose of greater specific gravity than the cerebro-spinal fluid, and describes the way in which the extent of analgesia is regulated by gravity; this view is, we believe, now generally accepted, and indeed it is difficult to understand how any one with much experience of spinal analgesia can hold any other. The selection of method of anaesthesia is discussed in two chapters—on the choice of anaesthetic, and on anaesthetics and analgesics in special surgery respectively. The former appears to be a dissertation upon the relative merits and demerits of chloroform and ether, and it is somewhat surprising that neither spinal nor local analgesia is mentioned as a possible method if active or severe pulmonary disease exists. The book is profusely illustrated, and will maintain the deservedly high reputation won by former editions.

Modern Anaesthetics is a small and compact volume,[8] and the author, Dr. J. F. W. SILK, states in the preface that he has described in detail only those methods which he has found personally useful. He is to be congratulated upon his description of the chemical and physical properties of anaesthetic drugs. He has wisely discussed only such points as have a direct or indirect bearing upon anaesthesia. In discussing the preparation of patients for anaesthesia the author speaks of the "acidosis, which is so dreaded by some surgeons, especially in cases of septic abdominal conditions in children"; this seems a little ambiguous, as we believe that post-anaesthetic acidosis is a well-recognized clinical condition. The various ways of giving hypnotics before anaesthesia are described in detail. The most useful part of the book to students and practitioners will perhaps be the short practical descriptions of the various ways of giving nitrous oxide gas, ether, and chloroform, and the chapter on anaesthetics for special operations. The practical nature of the book does not appear to be maintained in the chapters devoted to local analgesia. Writing of conduction or regional analgesia, the author recognizes endoneural and perineural injection, but remarks that this entails a more or less prolonged search for the nerve, and further maintains that this process has not gone much beyond the experimental stage. But we believe that regional analgesia by means of novocain is extensively used in some institutions for operation upon empyemata, for many operations upon the limbs, for gastrostomy, and even for abdominal sections in advanced cases of intestinal obstruction. In discussing spinal analgesia Dr. Silk advocates puncture a little to one side of the middle line of the back, but we believe the middle line is the more generally recognized position, and further, we do not think many observers would agree that spinal anaesthesia is a favourable method to use for the operation of gastrostomy in a patient in the very last stage of feebleness and emaciation. The anaesthesia in this case would have to reach a high level, and one of the admitted dangers of spinal analgesia in such circumstances is syncope. With these reservations the book is a good and concise guide to the practice of anaesthesia, and should be useful to those for whom it is intended.

THE TREATMENT OF METABOLIC DISORDERS.

THE first edition of Professor UMBER's textbook on diseases of metabolism appeared in 1909; the second edition[9] of this interesting work now lies before us, having dropped its title of textbook and taken on the character of a book of archives. Beginning with a brief summary of the main principles of nutrition considered from the chemical and physical point of view, the author next gives an account of the various methods of fattening thin patients, and of the modes of administering food otherwise than by the mouth. Brief tables showing the food values of various articles of diet, and the time required for their digestion, are given. Sixty pages are devoted to the consideration of adiposity and its treatment; the various diets that have been recommended for this purpose are detailed, with calculations to show their caloric values and the amounts of protein they contain. The author concludes that there is no royal road for those who find themselves too fat and wish to lose weight; each case must be individualized, and must be treated with constant attention to the patient's general health. He condemns the many proprietary medicines and secret remedies to cure obesity, and expresses some strong opinions about them.

Over 170 pages are given to the discussion of diabetes mellitus and to its treatment; here, as in the other sections of the book, the author quotes illustrative cases from his own experience. In many severe cases of diabetes he recommends alcoholic drinks as articles of diet, particularly when diabetic coma threatens, when half a pint of brandy or more may be exhibited, or liquors containing, say, 5 oz. of alcohol; this treatment is particularly recommended before and after any operation that may be found necessary. An excellent account of diabetes insipidus is given, extending over 20 pages. Gout and the tendency to the formation of urinary calculi are very thoroughly discussed, and at the end of the volume is an account of alcaptonuria. Following current practice, Professor Umber spells this word "alkaptonuria," although its inventor, Professor Boetticher (not Boedeker, as Umber states) gave it as "alcaptonuria," with a very proper apology for its "truly barbarous composition." Umber adds an account and the family tree of two alcaptonuric patients he has seen and treated—a man and his sister—who both exhibited ochronosis as well; three coloured plates, showing the peculiar appearances, are given.

The book is well written, thoroughly up to date, and contains a lucid and scientific account of the physiology and pathology of the various disorders with which it deals. In addition, it includes a quantity of sound and practical directions for their treatment, with an estimate of the value of each method and the results it may be expected to yield. The book may be recommended to specialists in metabolic disorders, and might be consulted with advantage by all medical men who have to treat, from day to day, patients with gout, diabetes, stone, and similar diseases.

CHEMICAL PHYSIOLOGY.

PROFESSOR HALLIBURTON has issued the eighth edition of his well-known *Essentials of Chemical Physiology*.[10] Comparing this with the first edition, we see how much more difficult has become the task both of the medical student and his teacher. The examination results show that at all the medical schools more students fail in physiology than in anatomy; this is due partly to the greater difficulty the student has in thinking out and grasping the scientific problems of physiology than in learning anatomical details; but it is due to much greater extent to the stiffening of the demands made on the student. The time spent in studying physiology has been shortened at the University of London, for instance, while the demands made on the student by enthusiastic lecturers have been increased. With the growth of science the textbooks have become longer and more difficult. The number of those who enter as medical students have for a good many years past shown no tendency to expand, but rather the contrary. The causes are complex; the prosperity of trade and the attraction of business methods of livelihood no doubt have an effect, and recent legislation and the paltry salaries offered by public authorities must have a deterrent influence on parents and on ambitious young men, but the policy of the teachers and examiners has contributed. They have made the life of the student a mental burden to him by the mere number and mass of the facts he is asked to assimilate; as an example we may refer to the page (116) on which Professor Halliburton sets forth the bases derived from amino-acids as a result of the putrefactive bacteriological decomposition of proteins. This is, no doubt, a matter of clinical interest, for these bases are a possible cause of the rise of blood

[8] *Modern Anaesthetics.* By J. F. W. Silk, M.D.Lond. London: E. Arnold. 1914. (Cr. 8vo, pp. 212; 37 figures. 3s. 6d. net.)

[9] *Ernährung und Stoffwechselkrankheiten.* Von. Professor Dr. F. Umber. Second edition. Berlin and Vienna: Urban and Schwarzenberg. 1914. (Sup. roy. 8vo, pp. 522; 21 plates; 10 figures. Paper covers, Mk. 18; bound, Mk. 20.)

[10] *The Essentials of Chemical Physiology, for the Use of Students.* By W. D. Halliburton, M.D., LL.D., F.R.S. Eighth edition. London: Longmans, Green, and Co. 1914. (Med. 8vo, pp. 335; 1 plate; 74 figures. 5s. net.)

pressure produced by an over-liberal meat diet. While the ascertained facts and conclusions can be stated in a few lines, the chemistry of these substances can only be understood by a well-trained organic chemist: not five medical students out of a hundred can tackle the decarbonization of histidine leading to the production of imidazoethylamine, and the long formulae provided here or in the account of the purin bodies (to take another example) are altogether beyond the ordinary student—and, if we may say so, beyond not a few of the demonstrators who cram him in tutorial classes for his examination. At present the textbooks and lectures cover far too wide a range, and the demonstrator-crammer comes in and helps to push the student through an examination in which the training of character, exactness of thought, and thoroughness of knowledge are sacrificed to a temporary acquisition of a mass of ill-digested information.

What advantage to the medical student is there in his learning a table showing the decomposition of nucleoprotein, and that nucleic acid yields purin and pyrimidine bases? What are the latter but words to him? Professor Halliburton is bound to give the information to make his book complete, because there are examiners who may ask these things, but one begins to wonder whether an empirical training in medicine and surgery might not be better than a system which seems to encourage pretence to the possession of scientific knowledge which the student has no leisure to assimilate.

For the real student of chemical physiology who has time to give adequate attention to the subject Professor Halliburton's book affords an excellent introduction, all parts of the subject having been brought up to date.

MEDICAL PHYSICS.

The work of Professor Otto Fischer on medical physics[11] deals only with kinematics as applied to the conditions of the human body, with kinetics (muscular mechanism), with acoustics and optics but does not include hydrodynamics, heat, and electricity. The author justifies the omission of these subjects from his treatise upon the ground that their respective phenomena are so fully explained in the lectures on physiology and therapeutics as to enable every medical student even with the elementary knowledge of them which he brings with him on entering upon his curriculum to grasp the laws which govern them. It is otherwise with the matters contained in the present volume. Without an intimate acquaintance with the higher mathematics it is well-nigh impossible to obtain a satisfactory insight into them. Few medical students, however, are so equipped with a knowledge of mathematics as to be able to analyse correctly the facts observed and to apply them usefully to the needs of practice. What they know of them is purely matter of memory, which is soon effaced; and when once their examinations are passed they have neither the opportunity nor the inclination to return to the study of the preliminary subjects. Moreover, except in very isolated instances, the mere sight of mathematical symbols has such a deterrent influence upon those who have once entered upon the practical pursuit of medicine that not even an attempt is made to gain a more intimate acquaintance with the laws of the physical phenomena of health and disease. Professor Fischer has tried to overcome this obstacle to the acquisition of knowledge. Whilst avoiding as far as possible all references to mathematics, he has exhaustively treated and endeavoured to explain the various physical problems of life so as to convey a clear understanding of them; and it must be admitted that he has completely succeeded in attaining the object he had in view. With the fullness and precision which only one who is master of his subject can command, he has accomplished his task, so that whoever reads his disquisitions with the necessary attention can hardly fail to carry away an intelligent idea of the main points at issue. Abstruse though they are in the nature of things, yet the clearness with which they are stated and the numerous illustrations in the text render unnecessary any unusual effort to comprehend them. Of course, not all the problems in connexion with these complex phenomena are satisfactorily solved. There is as yet, in spite of all experimental inquiry, no physical basis upon which the results of percussion and auscultation can be analysed, as is done with musical sounds; but it is to be hoped that such works as this will conduce to bring light where there is still obscurity. The only fault which we can find with Professor Fischer's book is that it is too bulky to be handled conveniently, and that there is no index; this has been deliberately omitted, as the author has not intended the book to afford at a glance a desired explanation of some physical question, but solely and entirely for serious study.

[11] *Medizinische Physik.* Von. Prof. Dr. Otto Fischer. Leipzig: S. Hirzel. 1913. (Med. 8vo, pp. 1140; 334 figures. Mk.36.)

Mr. C. G. Knott's *Physics*[12] is an excellent textbook of the subject for junior students; it is stated in the preface to be provided especially for medical students in their first year of study. It is divided into two distinct parts, or books, headed respectively, "Matter and Energy" and "Matter, Ether, and Energy." The first deals with kinematics, statics, hydrodynamics, and allied matters, and with heat of matter, and sound. The second book treats of electricity and magnetism, light, and radiant heat; a chapter added in this edition gives an outline of the electron theory and the chief facts of radio-activity. The author presents his subject in a clear style, which is aided by frequent reference to everyday experiences exemplifying the principles under consideration, and by numerous illustrations. In a chapter on the ether, introductory to Part II, the views now generally accepted by physicists as to the relations of electrical and magnetic phenomena to the ether are outlined, so that the student begins with the right theory present, at least to a slight extent, in his mind; this is better than studying the phenomena of magnetism, statical and dynamical electricity as though only slightly related and to be described with different terminology.

NOTES ON BOOKS.

White bread, its dangers and their remedy by eating "natural bread," is the theme of a small book by Dr. Monteuuis,[13] who says that our forefathers took 80 to 85 per cent. of the principles of the wheat berry, whereas the modern miller gives only 50 per cent., and that the less nutritive part. The residues, rich in nourishment, are sold for fattening the porcine race! The people are thus robbed of the marvellous food substance prepared by the sun's rays, and the asthenia, chronic alcoholism, and many of the other miseries which afflict society may in this way partly be accounted for. He estimates that in France 400 million francs are lost each year by the fancy for white flour. Professor B. Moore has pointed out that the general practice of bleaching the flour wastes annually an amount of human endeavour which would suffice to secure ample food for all the ill-fed children of the nation. The bleaching is done so that more of the outer coloured layers of the wheat berry can be sold as the finest white flour. The discovery of the fact that polished rice is the cause of beri-beri among rice-eating people, and the study of the class of active principles termed "vitamines" has drawn attention to the danger of modern methods of milling and food faking. In old days a man, when sent to prison, survived on a diet of black bread and water; he could not live on white bread and water, for the vitamines are removed in the preparation of white flour. The consumption of white bread does not injure those who obtain milk, eggs, fresh vegetables, etc., but it is of vital moment to poor children who live on bread, margarine, and tea.

A little book on illumination by electricity, made for slipping into the pocket of the engineer or contractor, has been written by Mr. Justus Eck.[14] The most workmanlike particulars are given of the cost of lighting, installation,

[12] *Physics.* An Elementary Textbook for University Classes. By C. G. Knott, D.Sc.Edin., F.R.S.E. Third edition. London: W. and R. Chambers, Ltd. (Cr. 8vo, pp. 292, 370; 115, 229 illustrations. 7s. 6d.)

[13] *Le pain blanc, ses dangers, et son remède, le pain naturel.* Par Dr. Monteuuis. Avec une préface de Mr. le Pr. Letulle. Nice: Libraire Visconti; Paris: A. Maloine; Bruxelles: Lamertin. 1914. (Cr. 8vo, pp. 367; 2 figures. Fr. 2.50.)

[14] *The Pocket-Book of Illumination: A Handbook for those interested in the practical application of Electric Light.* By Justus Eck, M.A., M.I.E.E. London: S. Rentell and Co., Limited. 1914. (Foolscap 8vo, pp. 85; 32 illustrations. 1s. net.)

and maintenance, and the subject is illustrated by a number of photographs showing the effects obtainable with various lighting systems for shops, factories, and private houses. Several of these are intended to support the claims of the indirect or reflected-light method, which the author regards as being by far the most desirable.

This *Grundriss der Gynäkologie*[15] belongs to a series of manuals, *Seeman's Grundrisse*, in course of publication. Dr. LIEPMANN, who is known as a teacher, announces in his preface that his book is intended to be a "Baedeker to the doctor," so that he may look up any special subject or go through the whole course of systematic gynaecology wherever he may be—in the tramway, lecture room, or study. It is freely interleaved with blank pages, so that the student or practitioner who owns it may make additions; this is a good arrangement, but less commendable is the considerable space devoted to vaginal and urethral massage, including reports of several typical cases. Uterine therapeutics of this type are hardly suitable subjects for manuals. The author's advice about cancer and fibroids is good, and he wastes no pages in descriptions of operations.

MUMPS.

In a recent report to the Local Government Board* Dr. M. H. Gordon gives a careful summary of knowledge as to mumps, or epidemic parotitis, its symptoms, complications, and etiology. The disease was well known in the time of Hippocrates, and at the present day occurs all over the world.

Incidence and Death-rate.

As a rule it is contracted by direct infection from a previous case, and the striking distance appears to be short; it has been stated that an outbreak in a school has been stopped by a door or by a small wall. In most persons an attack confers lifelong immunity. The disease is most prevalent in cold damp weather. In England and Wales it caused 1,763 deaths between the years 1891 and 1910, having an annual death-rate of 3 per million living. The death-rate is practically equal for the two sexes; 17 per cent. of the victims were under 1 year, 44 per cent. under 5 years of age, but even extreme old age is not respected, for 31 of the deaths occurred in persons aged 85 and over.

Complications.

The best known complication of mumps is orchitis, usually accompanied by epididymitis; its incidence varies in different epidemics, and it is rare before puberty. Dr. Gordon goes very fully into the nervous complications of mumps. In France a form of meningitis characterized by hyperpyrexia, delirium, convulsions, and coma is recognized, occurring either at the onset of the mumps or before the complication orchitis occurs—the latter having been described by Trousseau as "the testicular fever of Morton." In 1902 Monod discovered that an increase of the lymphocytes in the cerebro-spinal fluid frequently occurs during mumps, and Dopter in 1904 noted that lumbar puncture might relieve the headache of mumps. Dr. Gordon quotes from the literature a number of instances in which the symptoms of meningitis or meningeal irritation occurred in mumps, or symptoms pointing to cerebral lesions—for example, paralysis, aphasia—or indications suggesting involvement of the cranial nerves and the special senses or polyneuritis. In many of these cases the signs and symptoms were very severe when at their worst, yet the patients habitually recovered. Speaking generally, these nervous complications follow mumps of ordinary intensity. Very few instances have been recorded in which the body of a patient dying of mumps with cerebral complications has been examined *post mortem*. It is believed that the blood shows a slight absolute and relative lymphocytosis in mumps; when orchitis supervenes there may be a lymphocytosis or an increase in the polymorphonuclears. In all cases of mumps with meningeal symptoms the cerebro-spinal fluid probably shows a marked lymphocytosis. There is no reason to suppose that microscopical examinations of the parotid glands in cases of mumps had ever been made till quite recently. Dr. Gordon throws a sinister light on the descriptions of the appearances here that are recorded in the pathological textbooks.

The Nature of the Virus.

A review of the literature makes it plain that ordinary bacteriological methods have hitherto failed to reveal the micro-organism of mumps. Various observers during the last twenty years have isolated various cocci from the inflamed salivary glands, or from the blood of patients with mumps, but there are good reasons for believing that the organisms isolated were contaminations. In August, 1913, Nicolle and Conseil injected three bonnet monkeys with the fluid obtained by puncturing the inflamed parotid of mumps patients, producing fever in all three, and mild symptoms resembling mumps in one of the monkeys after three or four weeks' incubation. Dr. Gordon next describes his own experiments in this direction. The infective material was obtained by making the patients gargle thoroughly about 100 c.cm. of sterile saline solution, while in some instances the parotids were massaged. The mixed saliva and saline thus obtained were passed through a Berkefeld filter, on the supposition that mumps might be due to an ultra-microscopic filtrable virus, and the filtrate was used for intracerebral injection into macaques (*M. cynomolgus* and *M. rhesus*). Up to 2 c.cm. of the filtrates were injected in this way; broth cultures of the filtrates were also made, but in no case did any visible growth occur. Ten cases of mumps were investigated thus, and ten monkeys were injected; four died in from four to nine days with meningitic symptoms, between November, 1912, and February, 1913. It appears that the *Macacus cynomolgus* is more susceptible than *M. rhesus* to the material under investigation. Heating the filtrate to 55° C., in the only case tried, destroyed its toxic quality. In all four fatal cases the symptoms were those of meningeal irritation or meningitis; in one instance lumbar puncture was performed under general anaesthesia, the cerebro-spinal fluid was found to be under increased pressure and to show a marked lymphocytosis. The fluid was turbid, but yielded no growth on culture. *Post-mortem* examination showed that in all four monkeys the meninges and the substance of the brain and cord were congested, though no pus was seen and no growths of microbes could be obtained on culture. In each case the pia-arachnoid was infiltrated with leucocytes, the vessels of the brain and cord were distended, small haemorrhages into the grey matter had occurred; the lymph spaces round the vessels and the grey matter showed no infiltration with leucocytes. In both cortex and cord some of the nerve cells showed degeneration, being in various stages of chromatolysis, vacuolation, or disintegration. No neuronophagy (by leucocytes) was discovered. The parotid glands were unaltered in three cases; in the fourth acute interstitial parotitis was observed. Dr. Gordon concludes that there is evidence to show that mumps, like poliomyelitis, typhus, and small-pox, may be due to an ultra-microscopic virus; an explanation of the severe nervous symptoms shown by some of the patients is offered also.

An Obscure Disease.

In the second and longer section of the report Dr. Gordon gives a detailed account of 12 cases of an obscure disease that came under observation at St. Bartholomew's Hospital in 1913. The patients were all children, and all died in from twenty-four hours to twelve days. In a few instances that are not further noted, recovery took place. Put briefly, the symptoms consisted of pyrexia, collapse, and diarrhoea and vomiting, with evidences of meningeal if not cerebral irritation. *Post mortem* nothing very definite was found, and there was no evidence of any constant local or general bacterial infection; but in 11 of the 12 cases there were foci of acute interstitial inflammation in the salivary glands. The meninges and central nervous system showed congestion, and in some cases evidence of increased intracranial pressure, but nothing more. Experiments in which emulsions of portions of the central nervous system, or of the parotid glands, were injected into monkeys gave negative results, with one doubtful exception. Dr. Gordon is careful not to draw any very definite conclusions from the clinical observations and experimental work upon which the second part of his report is based. As he says, the subject cries out for further investigation.

[15] *Grundriss der Gynäkologie.* Von Dr. W. Liepmann. Berlin: S. Seeman. 1914. (Cr 8vo, pp. 170; 5 plates; 62 figures. Mk. 3.80.)

*Reports to the Local Government Board, New Series, No. 96, pp. 46, with 4 plates. London, 1914, price 1s. 6d.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

A CRITICAL REVIEW OF THEIR RELATIONS.

(*Continued from page 1369.*)

V.

HOSPITAL ABUSE.

We have been unable to secure any data on which it would be safe to base an estimate of the ratio of hospital beds to the population in 1832, and therefore are unable to make any precise comparison between the hospital accommodation available about that period and the same accommodation at the present day. There are, however, sundry reasons for believing that the proportion of actual beds to possible patients was smaller than it is at the present time; however this may be, it seems quite certain that the facilities for obtaining hospital treatment were, from a practical point of view, decidedly less. The accessibility of a hospital to all those resident in the area which it can be regarded as serving, and the number of times that a hospital bed is emptied and filled each year have a bearing on this question, and it is indubitable that in 1832 the "average duration of stay" was much greater than now, and that a visit to a hospital a few miles distant was a bigger undertaking than it would be at the present time.

In view of these circumstances, one would hardly have expected to find that at the date when the British Medical Association first came into existence anything existed in the nature of hospital abuse. Hence interest attaches to the following extract from an early record of the Association's work:

> It cannot be denied that a great proportion of the attendance afforded by the medical charities of this country tends to perpetuate the injurious habit of dependence on others for the supply of necessaries, which by timely forethought and frugality the working classes might procure for themselves; and it is not less obvious that benefactions which were intended for the relief of the indigent are frequently applied for the assistance of those who do not really require them, and who have no legitimate claim on the unrewarded exertions of medical practitioners.

In weighing the significance of this statement, it has to be borne in mind that it is merely an incidental remark in the course of a report on Poor Law medical work drawn up by a committee of the Association in 1836, and that in the Thirties it appears to have been relatively common for home visiting to form part of the work of medical charities. Consequently, if taken by itself, it hardly justifies a belief that hospital abuse was at that period a burning question. Still, it shows that the exploitation of the profession by persons above the indigent class was customary, to some extent at any rate, at that time; and that the Association had decided to attempt to check the evil is evidenced by the fact that about the same time it appointed a committee to obtain information from all parts of the country in regard to the amount of relief extended to persons above the class of Poor Law patients by medical charities, and as to the extent to which the working classes were dependent for medical attendance on the services of medical men acting not purely as private practitioners, but in some more or less definitely official capacity.

This committee drew up and circulated a long list of questions, and if the answers to these were now available they would throw a great deal of light on the conditions of practice in the third decade of the nineteenth century, and on many other matters. Unfortunately, beyond the list of questions there is no available record of the doings of this committee. Possibly it defeated the objects with which it had been constituted by over-elaboration of its plan of work, and by endeavouring to secure too great minuteness of detail in the information sought. It is equally possible that though abuse of medical charities existed at the time, it was not so marked as to evoke resentment among the majority of medical men, and that consequently the appointment of the committee was premature.

About the beginning of the Fifties, however, the Association began to chafe at the continuance and growth of the evil. Complaints on the subject were then coming from many quarters, and by the beginning of the Sixties the question of hospital abuse had become acute. It should be noted, however, that the shape it then assumed was not quite the same as in more recent years; the charges against hospitals and those connected with them then covered a very much wider field.

Apart, for instance, from it being stated that no proper discrimination was exercised in the matter of deciding who should be accorded hospital treatment, allegations to the following effect were quite common: (*a*) That the governors of certain hospitals managed their affairs very badly from a business point of view, and provided no proper information either as to the results of treatment, or as to expenditure and income; (*b*) that institutions were being brought into existence not because they were required, but simply to suit the purpose of some individual medical man who thought a hospital appointment would be useful to him, or to advertise the philanthropy of some social light; (*c*) that a great many rich people supported hospitals merely as a means of getting cheap treatment for their servants and other employees; (*d*) that many "hospital letters" were so used as to encourage mendicancy, and others to secure treatment for persons who had no kind of claim to gratuitous treatment, but obtained it owing to the hospital surgeons being too timid to bring these abuses to the notice of the governors; (*e*) that the medical staffs of hospitals were often treated with contumely by the lay administrators; (*f*) that many special hospitals—besides uselessly covering ground which was already efficiently covered by general hospitals—were merely forms of exploiting some particular treatment employed only by one or two medical men, and under the guise of appealing for funds circulated literature which mainly served as an advertisement of their names; (*g*) that these and other special hospitals aimed at getting as many patients as they possibly could, irrespective of the diseases from which such persons were suffering and their social status; (*h*) that medical men in quite small places were encouraging the commencement of the same evils that existed in large towns; (*i*) and that everywhere it was becoming common to judge a hospital not by the character of its work but by the number of persons it could claim to have visited its buildings in the guise of patients in any given year.

From time to time throughout the Fifties there were some outspoken statements on these points in the pages of the BRITISH MEDICAL JOURNAL, and at sundry Branch and other meetings of the Association, and in 1860 a committee of inquiry was appointed. It did not, however, take any very definite steps, and its creation seems to have been in the nature of a compromise between two conflicting parties. A good deal of feeling had recently been caused by the publication of a letter signed by a number of leading consultants, who cried anathema on special hospitals of every kind. The matter was debated at two consecutive annual meetings of the British Medical Association, and the attitude of the majority of members was much more broad-minded than that of the signatories of the manifesto in question. It was recognized that a certain degree of specialization in medicine and surgery was a natural outcome of increased knowledge and perhaps essential to further progress, and that on this account the Association, instead of condemning special hospitals root and branch, should limit its efforts to checking their unnecessary multiplication, and to seeing that they were properly administered.

After these occurrences feeling on the subject of abuses connected with hospitals seems to have subsided for some years, but in the middle of the Seventies there was a fresh wave, which led to the appointment by the Association of a fresh committee. The primary duty of this body was to study the general question of medical relief at the London hospitals, and to endeavour to bring about reform in the administration of out-patient departments. It was continued for two or three years, and, though its members towards the end seemed disposed to think they had undertaken an impossible task, this committee certainly justified its existence. It succeeded, for instance, in obtaining from the managers of London hospitals a general admission that reform of their out-patient departments was desirable if only it could be brought about without

causing annoyance to the hospital-supporting public and checking the flow of subscriptions.

But, besides this, the work of this committee helped materially towards creating public interest in the subject, the result being that during the next few years discussion was general and active. Many took part in it, and the suggestions made covered a very wide field, including the relation of provident dispensaries to out-patient departments, and the possibility of linking up the latter with some public medical service to be organized by the medical profession itself. This period of somewhat discursive consideration of matters lasted until 1890, when the committee in charge of the question laid before the Association a comprehensive report on the whole subject of hospital administration, including the issue of hospital letters and the proper method of keeping returns relating to out-patient and in-patient work, and to expenditure and receipts.

The discussion during these years was of value, for it enlightened the profession as to the extent of the evil and revealed many of its underlying factors; it had, however, no immediate effect on the question in which general practitioners as a whole were chiefly interested, namely, how to establish a more effective control over the work done in out-patient departments and prevent it from interfering with the work of private practitioners.

It was, perhaps, on this account that in the following year (1891) the British Medical Association appointed a new committee under the title of the Medical Charities Committee, which concentrated its efforts mainly on out-patient departments; it was reappointed for some ten years, and did excellent work. It began with a detailed inquiry into the administration of London hospitals from the point of view of the steps they took to defend their funds from being misapplied. Eventually the committee drew up a series of recommendations to the following effect:

1. That as soon as possible the practice should be abandoned of issuing to subscribers in return for their donations hospital letters—that is to say, documents which entitled the bearer to receive treatment at the hospital, whatever his malady, or ability to pay for treatment himself.

2. That when it was considered essential to continue to issue such letters they should bear on them a printed request to the subscriber to refrain from giving a hospital letter to any person whose financial circumstances did not thoroughly justify his seeking gratuitous treatment.

3. That an income limit for out-patients should be established, an almoner or inquiry officer being appointed by each hospital to see that it was observed.

It was also suggested that there should be posted up in every out-patient department a notice that the treatment afforded was intended only for really necessitous persons, and that any person seeking treatment would be expected to satisfy the authorities that he was a proper person to receive gratuitous treatment.

In the middle of the Nineties this committee of the British Medical Association was able to report to an annual meeting of the parent body that the London hospitals as a whole had received its recommendations very favourably, and that many of them had at once agreed to post up a notice of the kind indicated. This led to a campaign of a corresponding kind being started in the provinces through the Branches, but the whole progress represented by the success of this committee's work, though real, did not satisfy the Association's ambitions. Consequently in 1896 it decided to reinforce its own efforts by assisting in the foundation of the Hospital Reform Association, which had as its first president a late President of its Council, and about the same time it joined hands with the Charity Organization Society, whose general secretary had long been a keen advocate of hospital reform in bringing into existence a central hospital board.

A great deal of activity was exhibited by both these bodies; but so far as the abolition of the abuse of out-patient departments was concerned, not much had been effected at the date when the British Medical Association started work under its present constitution. Consequently one of the first steps that it took was to make a Hospitals Committee one of its standing committees. This committee first cleared the ground by undertaking an investigation of its own, and has since paid attention to all forms of hospital work, and made such further inquiries as it has from time to time deemed necessary. It has also co-operated with the British Hospitals Association—which represents the lay authorities of nearly all the hospitals in the three kingdoms—by taking part as a rule in its annual conferences, and it has helped to secure a useful degree of mutual understanding. The Hospitals Committee has now been in existence for some ten years, its aim throughout having been to establish a clear line of demarcation between first-aid work at hospitals, as represented by their casualty departments, and out-patient work, to get the latter put upon a proper footing, and to establish and maintain desirable relations between the professional staffs of hospitals and the lay administrators.

In all three directions the efforts of the Association are now meeting with a considerable degree of success, and the whole position has been improved to a degree not likely perhaps to be realized by those whose study of the subject has not been continuous nor of long duration. Few now are the hospitals which do not keep proper accounts, fewer still the institutions, whether for in-patient or out-patient treatment, which can be regarded as being run in the interests of individuals or as merely glorified private surgeries. A large proportion of all institutions are making determined efforts to restrict their out-patient work within proper bounds, and King Edward's Hospital Fund for London in its report on out-patient work about a year ago adopted views laid before it by the Association and long since urged in the columns of its journal. These were to the effect that the portals of out-patient departments should invariably be safeguarded by almoners, and that the work done in them should be primarily of a consultative character.

In the matter of the relations between the medical profession and the lay authorities of hospitals and other like institutions, the Association, through its journal and in other ways, has for many years endeavoured to promote the view that those who do the professional work of hospitals must in no wise be regarded as the bonded servants of their governors, but as their free coadjutors, and as such entitled to the fullest consideration.

There have never, perhaps, been many institutions where mere courtesy has been lacking, but the number of those in which the medical staffs have been expected to approach the governors cap in hand, and to submit humbly if their views were entirely set aside, has been very large. They are still far too numerous, but hardly anywhere now is the right of members of the professional staff of a hospital to have a voice in its general management any longer denied, and there is much more general recognition of the fact that if a hospital is to fulfil its objects to the highest degree its lay administrators must secure the co-operation not only of a few leading medical men, but of all those working within the area served by it.

On these improvements both general practitioners and consultants have to be congratulated. Their attainment has been due to many factors, and potent among these has been the persistent spadework of the Association—work which, despite the quietness and absence of ostentation in its performance, has paved the way towards a final solution of the whole difficulty. There are still, of course, very many badly managed out-patient departments, and, in addition to this, looming on the horizon are other questions of hospital administration in respect of which the interests of the medical profession will have to be safeguarded. Its task, therefore, is by no means over.

Consequently, it is especially satisfactory to be able to note that on more than one occasion during recent years, when the lay managers of a hospital have shown an inclination to treat the views of the medical profession with scant consideration, the British Medical Association through its Divisions has proved capable of bringing to bear the weight of the opinion of the whole medical profession working in the locality; for this is a favourable portent as to the success of any action that it may think it right to take in similar circumstances in the future.

(To be continued.)

SIR FRANCIS LAKING, Bart., Physician-in-Ordinary to King Edward VII. and King George and Queen Alexandra, who died May 21st last, left estate of the gross value of £25,436, of which £20,043 is net personalty.

INTERNATIONAL ABOLITIONIST CONFERENCE.

DR. MEARNS FRASER (M.O.H. Portsmouth) presided at the morning session on the second day of the Conference of the International Federation at Portsmouth on June 17th.

The Reduction of Venereal Disease.

Dr. SANTOLIQUIDO, of Rome, gave an account of an inquiry undertaken last year by the International Office of Public Hygiene (Paris), of which he is president. Official reports had been received from the ambassadors of thirty-two countries as to methods adopted for combating venereal disease. If these reports had shown (said Dr. Santoliquido) that the regulation system promoted hygiene, he would have supported it regardless of every other consideration; but as a matter of fact they constituted a remarkable testimony to the superior value of what he described as the *régime de prophylactique libérale*. In illustration he presented the detailed account, prepared by the present director of public hygiene, of the system which has been in force in Italy since 1896, when regulation was abolished and the care of public health was definitely separated from the police department. Under this system all sufferers from any form of venereal disease were entitled to receive free treatment at the expense of the State, either in dispensaries or hospital wards. The utmost care was taken to avoid everything which could deter from treatment; the patients were not even asked to give their names. Since this system was instituted syphilis had diminished: this was proved, not only by the statistics of the army and navy and of infant mortality, but also by the analysis of a return (prepared for a different purpose) as to the deaths from general paralysis of the insane in all the public and private asylums of the country. Dr. Santoliquido gave a summary of the reports from a number of other countries, and made special mention of the remarkable work being done under Dr. Malvoz at Liége by a dispensary modelled on the lines of the well-known tuberculosis dispensary in the same city. Incidentally he mentioned that in some provinces of Russia only 5 to 9 per cent. of the cases of syphilis were of sexual origin. In conclusion, he said that in regard to any disease the aim of public health administration was twofold—first, a correct diagnosis, and second, the isolation and extinction of every focus of infection. By the discoveries of Wassermann and Ehrlich it was now possible to place both at the disposal of every practitioner if the health authorities were supplied with the necessary funds. For practical purposes salvarsan treatment was equivalent to long isolation as a means of preventing contagion. The Committee of the International Office of Hygiene, composed of delegates from the respective Governments, had unanimously accepted certain provisional conclusions—namely, that the best prophylactic measure against venereal diseases was to facilitate the early treatment of all patients; that public authorities should therefore take steps to provide accessible, prompt, and discreet treatment for all classes of the population; and that it was equally important that they should carefully avoid every condition that might directly or indirectly prevent or delay the appropriate treatment during the contagious period of the disease. It is interesting to note that the representative of the French Government was especially emphatic in insisting that to gain the confidence of the patients and to prevent concealment of disease it was essential to provide ample free treatment without any hint of detention or of police intervention in any form.

Dr. SVEND LOMHOLT, of Copenhagen, described the method which had been in force in Denmark since 1906 when the regulation of prostitution was abandoned. In Copenhagen, which has 500,000 inhabitants, there were, he said, 240 hospital beds for venereal cases, besides twelve doctors specially appointed to see all comers at free dispensaries. These doctors, two of whom were women, were at first paid according to the number of their patients, but now received a fixed salary. Of fresh cases of syphilis more than half were treated in hospitals. The careful instruction given to these patients had diffused among the general public reliable information about the diseases and their prevention. The results were good; tertiary cases were now comparatively seldom seen in Copenhagen. Patients suffering from contagious venereal disease who neglected to seek or to follow medical treatment were liable to penalty, but this provision appeared to be little known to the public. No special provision was made for prostitutes. Any person who, knowing himself or herself to be suffering from disease, indulged in sexual intercourse was liable to a legal penalty. Opinions differed as to the value of this clause; and the number of prosecutions under it was small. A system of notification without names was in force, but the statistical results were unreliable, as many cases were notified twice or oftener. The amount of disease under treatment was now about the same as before 1906.

Syphilis in the Army.

Dr. E. F. SKINNER, of Sheffield, presented a paper on syphilis in the army, largely compiled from articles published in the BRITISH MEDICAL JOURNAL and elsewhere by Lieutenant-Colonel Melville, Lieutenant-Colonel Gibbard, and Major Harrison. The remarkable and steady reduction of admission ratios since 1884 was to be attributed partly to improved methods of diagnosis and treatment and partly to the improved moral tone of the soldier, which in turn was due to the betterment of his social conditions, the provision of rational recreation, and the example of sobriety set by his officers. From the work done in the army much might be learnt by civilians. Venereal disease was sufficiently prevalent to demand immediate measures; these must include a personal purity-crusade and efficient early treatment. The latter should be promoted (as in the army) first by persuading infected persons to seek early advice, and, secondly, by instruction of the medical profession in the means of diagnosis and treatment. At the two great hospitals in Sheffield out-patient departments had been opened in the evening for the benefit of working men, who could thus secure treatment without sacrifice of time and wages; and the Sheffield University had just completed a successful course of post-graduate lectures. He advocated an educational campaign among the general public, beginning with instruction of certain classes, such as elementary school teachers and health visitors.

An interesting discussion followed, in the course of which Dr. DOUGLAS WHITE said that not only would diminution of immorality reduce disease, but also diminution of disease would reduce immorality. He urged the necessity of free and adequate treatment, and remarked that at present in this country "where treatment was free it was not adequate and where it was adequate it was not free."

In reply to a question as to whether a doctor, when consulted by a married woman suffering from syphilis, ought to tell her the truth for the sake of securing continuous treatment, Dr. E. RIST of Paris (who had previously proved a most efficient translator) said that in his judgement it was as much the doctor's duty to give to the patient a truthful answer as it was to give careful diagnosis and adequate treatment. His experience in regard to tuberculosis had convinced him that the old fear of telling the truth to patients was in most cases quite baseless.

Dr. HELEN WILSON (Sheffield), who presided over the afternoon session, in winding up the discussion, said that in the long run there was no real divergence between the teaching of true hygiene and true morality; if their ideas appeared to conflict, there was something wrong with one or the other—perhaps with both. But at the present day hygiene and morality were in accord as to the chief measures for checking venereal diseases. The idea that hygiene was promoted by the regulation of prostitution was now as obsolete as the belief that it was in the interests of morality to allow venereal diseases to flourish unchecked.

Causes of Prostitution.

At the close of the conference a public discussion was held in the Albert Hall, Portsmouth, on the Causes of Prostitution. It was presided over by the Rev. G. H. HAMILTON, M.A., Vicar of St. George's Portsmouth, and addressed by Sir VICTOR HORSLEY, Dr. HELEN WILSON, Mr. J. BRONSON REYNOLDS (New York), and others.

A full report of the whole conference will be published shortly, price 3s. 3d., post free, to be obtained from the Secretary, 19, Tothill Street, S.W.

ROYAL COMMISSION ON VENEREAL DISEASES.

THE following is the official report issued to the press by the Secretary of the Commission:

The German Society for Combating Venereal Diseases.

At the forty-second meeting of the Royal Commission on Venereal Diseases evidence was given by Professor Blaschko of Berlin, honorary secretary of the German Society for Combating Venereal Diseases.

Professor Blaschko reviewed the statistics relating to venereal diseases in Germany and other countries. Comparing England and Germany he thought that, though the English army figures were much higher than those of the German army, prevalence of the disease was probably greater in Germany. This he attributed to the fact that conditions of life were better in England; at any rate temptation was far greater in German than in English towns of the same size. The question whether venereal diseases in Germany were increasing was, he said, difficult to answer. During the last forty years Germany had been changed from an agricultural nation into an industrial State with many great towns. In view of the fact that the prevalence of venereal diseases increased with the size of a town it might have been expected that the prevalence would have increased. Trustworthy statistics over a long period did not exist, but the returns relating to German recruits in the last ten years showed that an augmentation was not probable. Professor Blaschko concluded, therefore, that some favourable influences had been acting, and he thought that the work of the German Society had played an important part. This society was constituted in 1902, and its main objects might be stated to be:

1. The enlightenment of the public on the ravages of venereal diseases and the necessity of combating them.

2. The scientific discussion of all problems connected with the combating of the diseases.

3. The keeping in touch with legislative and administrative bodies and the proposing of reforms in the law and administration.

The committees of the society were representative of all classes, including educationalists, insurance bodies, physicians, lawyers, public officials, merchants, members of Parliament, and well-known women. There were branches of the society in nearly all large German towns, and it was through these branches that the principal part of the work was done. These branches organized public meetings and lectures at which discussions might be permitted. The society had a large number of wax figures, diagrams, drawings, and lantern slides, and these were lent for the purposes of exhibition. Representations of Brieux's drama, *Les Avariés* ("Damaged Goods"), had also been organized, and most of the local branches had supported the representations. In Berlin alone this play had been performed more than 100 times at seven theatres.

The German Society had taken much pains to introduce better sexual education at home and school, but in practice it had appeared that there were many difficulties and prejudices to be surmounted.

Professor Blaschko was convinced that the German Society had thoroughly changed public opinion on venereal diseases. The whole press, as well as the general public, were in sympathy with the movement and supported it.

MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held at Gloucester on June 18th. Dr. EDGAR BARNES, the President, took the chair, and was supported by members of the council and the officers of the Union and local members. The President, in presenting the report, delivered an address upon the work of the Union, and the usual statutory resolutions were passed and the accounts duly audited and approved. A cordial vote of thanks to the President and council for the valuable services rendered to the Union and to the profession generally was passed with acclamation.

The report of the council for 1913 is documentary and conclusive evidence of the continued success of the Medical Defence Union. The membership has increased considerably, and is now nearly 9,000. As we have pointed out before so we now repeat, "the Union is a monument of security and protection to those who are wise enough to seek its shelter." Every registered practitioner who is practising in the United Kingdom should from common prudence protect himself from the risks which may fall upon him at any moment. The legal report of the solicitor of the Union is most excellent reading, as it presents in a series of tabulated statements the actual number of cases dealt with from 1899 to 1913, the nature of such, whether libel, slander, malpraxis, or other, and the amount spent by the Union in defence or prosecution during these years. It is interesting to note that the actual number of cases placed in his hands increased in 1913, and this serves as additional evidence of the necessity for membership of a defence society. In the report is also a statement as to the geographical area over which the work has extended. London and the provinces show the greatest number, Wales following next in order. The actual costs disbursed by the Union in fifteen years for out-of-pocket expenses of the solicitor amount to the considerable sum of £10,345, and in one year alone a sum of £1,257 was paid in this respect. The value of co-operation was never more clearly expressed than by this table, as had it not been for the existence of the Union, these sums disbursed must have been paid by the individual practitioners themselves out of their own pockets. The average cost per case is also tabulated by the solicitor; it was as high as £285 in 1908, but fell to £163 in 1913. The council is to be heartily congratulated on this report of work well and ably carried out, and we can with sincere approval recommend readers who have not yet joined a defence society to procure a copy for careful consideration. It must be remembered that the council, as shown by the report, does not confine its duties to individual defence; but in many other ways adds to its work by undertaking collective defence of the profession. This is exemplified in the report before us by its successful prosecution of unqualified practitioners; its appearance before the General Medical Council as "complainants," thereby relieving the practitioner from the personal onus in this respect; and its action in respect of matters affecting the profession under the Insurance Act. The memorandum issued by the Council in the "herbalist" case at Worcester, raised the whole question of the "contracting-out" of insured persons, and has contributed in checking the extension of a procedure which would have been most detrimental to the public welfare, and the action taken in this respect deserves the consideration of the profession. The case of "Anthony Ciaramelli," an unqualified person who gained admission by fraud upon the *Medical Register* and under the Insurance Act was placed on six different panels, is worth reading; and the President of the General Medical Council expressed the thanks of that body to the Medical Defence Union for the watchfulness it had displayed and its success in detecting the encroachment of bogus practitioners. We may also note with satisfaction the clear manner in which the balance sheet and accounts are presented to the members. Worthy of consideration, also, is the indemnity policy which is issued by the Yorkshire Insurance Company to members of the Union: it is fully explained in the pages of the report of the council.

SCHÖBL, while working at the bacteriology of plague in Manila in 1912 (*Philippine Journal of Science, B, Tropical Medicine*, vol. viii, No. 6), found a case of natural plague infection in a cat. Such cases are rare: Thompson in Sydney has reported one case, and Hunter another in Hong Kong. The cat shows a high resistance to the infection, however, and as a means of spreading the disease is held to be of little importance; but the author of the paper is inclined to take rather a more serious view. He believes that, "to appreciate the important part which cats may play in the spreading of the disease, we need only consider the close contact of these animals with rats on one side and human beings on the other. It is also a well-established fact that not only plague infected cats, but also those which have devoured plague-infected material and remained apparently normal, may excrete plague bacilli which have retained their full virulence." As a result of a few experiments he concludes that cats suffer from plague, that the disease may be acute or chronic, that the type is septicaemic, that the animals may occasionally play a part in the dissemination of plague, that in plague-infected areas cats probably become infected through rats which they devour as food, and that in such districts plague infection in cats may be of great importance from a domestic point of view.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE ceremony of unveiling two bronze portrait reliefs of Mr. Joseph Chamberlain and Mr. Austen Chamberlain, erected by the Board of Management of the Seamen's Hospital Society in recognition of their services to the London School of Tropical Medicine, was performed by Mr. LEWIS HARCOURT, Secretary of State for the Colonies, at the Albert Dock Hospital, on Tuesday, June 23rd. Among those present were Mrs. Lewis Harcourt, Mrs. Austen Chamberlain, Mrs. Endicott, Sir John Anderson, Sir David Bruce, Sir William Bennett, Sir M. M. Bhownaggree, Sir George Dashwood, Sir George Denton, Sir James K. Fowler, Sir Thomas Holderness, Sir Frederick and Lady Lugard, Sir Francis Lovell, Sir Thomas Robinson, Sir Reginald Talbot, Sir William Treacher, Major H. Bryan, Dr. C. J. Martin, Surgeon-General Godfrey, Dr. Roland Brinton, Mr. H. J. Read, and Professor W. J. Simpson. The visitors were received by Mr. PERCEVAL A. NAIRNE, Chairman of the Committee of Management, who explained that the President, Admiral Prince Louis of Battenberg, who took the deepest interest in the institution, was unable to be present owing to his having to fulfil a long-standing official engagement.

Mr. LEWIS HARCOURT said he deemed it a distinguished honour to be permitted to perform the ceremony. This, of course, he owed in the first place to his official position, though he hoped he might attribute it in some degree also to his lifelong friendship with both the Mr. Chamberlains. It could seldom have happened to two men—father and son—to have their great services jointly recorded in the lifetime of both, and never was an honour more abundantly deserved. During his eight years' tenure of the office of Colonial Secretary, Mr. Chamberlain became painfully aware how great a part in imperial administration was played by the problems of tropical disease. Had he been present on this occasion, Mr. Chamberlain would, he felt sure, have been the first to acknowledge that the foundation of a school of tropical medicine in connexion with this hospital was largely due to the conception and foresight of Sir Patrick Manson. Many men owed their lives and many millions of mosquitos their deaths to Sir Patrick's suggestive and alleviating discoveries. It was now fifteen years since Mr. Chamberlain, realizing the necessity of further openings for research, observation, and treatment, suggested the institution of a new school of tropical medicine in association with this branch of the Seamen's Hospital. It was one thing, however, to suggest the establishment of a school; it was quite another to endow it. Mr. Chamberlain, with characteristic energy, did both. In May, 1899, he raised at a banquet a sum of £15,000, and by October of the same year laboratories had been built and the school opened. Six years later further accommodation became necessary; and at a second banquet Mr. Chamberlain raised a further sum of £10,000. This equipped a library, a museum, and special tropical wards, which brought the number of beds up to 50. The total capital expenditure up to date had amounted to £50,000, and the annual expenditure was £3,000; the latter amount, however, was nearly met by the students' fees. Grants had been made by the Treasury and other public departments; and an annual contribution of £850 was made by the Crown Colonies as a token of gratitude for the advantages they enjoyed from the institution, while many private benefactors had added to its funds. Experimental work was done in the laboratories, and the students had spread themselves over half the habitable globe in pursuit of further knowledge. Malaria, sleeping sickness, guinea-worm, sprue, dysentery, and ankylostomiasis had each in turn been subjects of their inquiries; and nothing had been more remarkable in the modern progress of medical science than the great and sometimes unexpected results which accrued from the industry of individuals in apparently objectless record and investigation. The microscopic application in the dissection of facts and the observation of phenomena brought into a creative focus by such schools as this materially served the health and happiness of humanity. The number of students had grown steadily from 70 in the first year to nearly 200 in the last. The number who had passed through the school was now close on 1,800, and he was glad to say that nearly 700 of these had entered the Colonial Medical Service. It was only those at the centre, like himself, with the vital statistics of the Colonial Service always before them, who could appreciate what those men had done to ease the pain and modify the dangers of tropical life. The West Coast of Africa, once regarded as a death trap, would soon be looked upon as a sanatorium. During the period to which he had referred the death-rate among British officials had been reduced from 28 to 8 per 1,000, and the invaliding rate from 62 to 28.



Mr. AUSTEN CHAMBERLAIN said he felt himself in this matter to be nothing but an accident, though he hoped a happy accident. To his father, as Mr. Harcourt had said, the school and the hospital owed a great deal. His father entered on his term of office as Colonial Secretary with a double programme of work, one part of which was to do all he could to bring closer together the self-governing dominions of the empire, the other to promote the undeveloped resource of the tropical and semi-tropical dependencies and Crown colonies of the empire. He was saddened by the loss of life incurred in the opening up and development of these dependencies, and it was impressed on him that the first and most urgent need was to study the causes of the ill-health which prevailed among white people there. It seemed to him that the first step towards their development lay in the improvement of the health of their white administrators, because such improvement would give greater attractions to their life, more people would take it up, and progress would be more rapid. The improvement in the health of the whites was necessarily linked with consideration for the health of the native populations, who, though not to the same extent victims of many of the diseases that were fatal to white men, had their own peculiar troubles, for which peculiar remedies were needed. Very early in his career at the Colonial Office his father ascertained that the man who could best advise him and co-operate in combating tropical diseases was Sir Patrick Manson. Sir Patrick, with his large experience of tropical countries, had felt the need of such an institution as this; he himself had suffered from that need, and the suggestion for its foundation came from him. No sooner was the proposal made than the late Sir Alfred Jones set about founding the Liverpool School of Tropical Medicine. The London and Liverpool schools, therefore, came into existence almost simultaneously, and since then had worked with a rivalry that had never been anything but healthy and friendly. Already they had done much, and it was evident they could do infinitely more. He himself was brought in much later in the day, when the present Colonial Secretary invited him to accept the Chairmanship of the Committee. Such an invitation he



could not decline, and he had done all he could to make the undertaking a success. He thanked them for having recorded on the walls of the hospital the association of his father with a work in which he had taken a deep interest, and in which, although he was no longer able to take an active part in forwarding its objects, he still took a deep interest. He would like to acknowledge the great assistance he had had from the Committee of the Seamen's Hospital and its secretary, Mr. Michelli, from Mr. Read of the Colonial Office, and from the Committee which had been formed in the City of London under the auspices of the London Chamber of Commerce, as well as others in the City of London who were interested in tropical and semi-tropical countries.

Mr. Harcourt then unveiled the memorial, a photograph of which is given on page 1418. It was designed by Mr. F. W. Doyle Jones.

In connexion with the London School of Tropical Medicine it may not be inappropriate to add that the chairman, Mr. Perceval A. Nairne, who received the visitors, is the oldest hospital chairman in London. To him much of the success achieved by the school is due: but he is of so retiring a disposition that the value of the services he has rendered is in danger of being unappreciated because unknown. He is one of those who do good by stealth and blush to find it fame.

LITERARY NOTES.

SOME account of Portuguese physicians at the University of Salamanca in the sixteenth century, based on an article by Professor Maximiano Lemos, published in the *Anais Scientificos da Faculdade de Medicina do Pôrto*, was given in the JOURNAL of May 30th. In the same article we get glimpses of the medical curriculum at that period. Before entering on the study of medicine the candidate was required to be a Bachelor of Arts, and during the first two years of professional study lectures on natural philosophy—a term which seems to have included the treatises of Aristotle on physics, metaphysics, morals, ethics, and politics—had to be attended. There were two chairs of medicine; the lectures seem to have consisted mostly in reading and commenting Avicenna. There were also chairs of "simples" or medical botany. About the middle of the sixteenth century the question of the utility of anatomy was referred by Charles V to the Universities of Salamanca and Alcalà, and both expressed the opinion that the study was not only lawful but necessary for physicians as well as surgeons. Salamanca had a chair of anatomy before 1553; it was occupied by Cosme de Medina. The bodies of executed criminals and paupers who died in hospital were dissected. Garcia Lopes speaks of frequent demonstrations on the dead body given by Agostinho Vaquez, *doctore egregio anatomico*. Some autopsies are also recorded. A chair of surgery was in existence before 1574; it was the first founded in Spain and was liberally endowed. Another famous teacher of surgery was André Alcazar, who wrote on injuries of the head and chest. Alcazar after the second year investigated the aptitudes of his pupils, those who showed a taste for surgery being encouraged to continue in that line, whereas those who could not bear the sight of wounds and operations became physicians. Salamanca was the first university in the Peninsula which endowed special chairs for the teaching of theoretical and practical medicine. After having gone through three courses of lectures on medicine the student had to spend half a year in following the practice of some doctors or licentiates of the university. This was an essential condition for admission to a degree. There is no mention of clinical teaching in a hospital. The students followed their master to the bedsides of their private patients as they did in ancient Rome. Philostratus relates that two physicians went to see a patient accompanied by more than thirty pupils. Martial's well-known epigram describes the effect of such crowds on the patient:

> Languebam sed tu comitatus protinus ad me
> Venisti centum, Symmache, discipulis.
> Centum me tetigere manus Aquilone gelatae,
> Non habui febrem, Symmache, nunc habeo.

The professors were elected by the votes of the students, and this sometimes led to deplorable results in the choice of inferior men. The Portuguese physicians, mostly Jews, who frequented Salamanca in the middle of the sixteenth century, all speak with the highest praise of the teaching. Later, however, Henrique Jorge Henriques complains of the laxity of the examinations. Students were admitted to study medicine after a six months' course in arts, and after two years were turned out illiterate Bachelors of Medicine, who did not heal but killed (*non sanando, sino matando*). Salamanca, which in the Middle Ages rivalled in fame Oxford and Paris, is now fallen from its high estate. A writer in the *Times* of June 6th says that while the matriculation lists of 1592 contained the names of more than 6,000 students, to-day there are less than 1,000.

The fact that the Orkney and Shetland islands owe their inclusion among the British Isles to the poverty of a bygone King of Norway, who, finding himself unable to pay his daughter's dowry, pawned this outlying portion of his scattered kingdom to his son-in-law, the King of Scots, from whom it was never redeemed, has never been forgotten by their inhabitants, who have always prided themselves on being of a different race from their fellow subjects of the mainland. Some interesting details as to their origin are given by Mr. A. W. Johnston in his paper on "Orkney and Shetland Folk," which has recently been published under the auspices of the Viking Society for Northern Research. Mr. Johnston's monograph covers the period between the foundation of the Norse earldom of Orkney and Shetland in 872 to the extinction of the Gaelic line of earls somewhere about the year 1350, and the result of his investigations seems to prove that the blood which flows in the veins of the Shetlander and the Orcadian is much the same as that of the Scot of the north-east seaboard. As in Scotland, the earliest known inhabitants of Orkney and Shetland were the Picts, together with a handful of Irish settlers who accompanied the Irish papas and Columban missionaries on their expedition to the far north. The Norse element was not introduced until the middle of the seventh century, and was considerably stronger in Orkney than in Shetland, as is proved by the existence of the older Norse dialect forms in Orkney and a greater preponderance of Celtic names in Shetland. The Picts, however, left an indelible mark upon their conquerors, and traces of the aboriginal race may even yet be found in the small dark type which is still common enough both in Orkney and in Shetland. The next influx came from Scotland. Gaelic names, it is true, do not appear in Orkney until towards the end of the eleventh century, the earlier settlers from the mainland having become merged in the Norse population through the simple device of adopting the Norse "son" in place of the Gaelic patronymic "mac." That they were fairly numerous long before that date, however, may be gathered from the fact that the first three earls of Orkney and Shetland were the only ones of pure Norse descent, their successors, through constant intermarriage, being "never more than a cross between Norse and Gael, sometimes almost approaching pure-bred Gaels, if the rules of a modern breeding society are to be observed." The extent of this dilution of the original Pictish-Norse stock was shown by an incident which occurred in the middle of the twelfth century, when the Norwegian crusaders wintered in Orkney, and spent the greater part of their time there in quarelling violently with the natives. The fault may possibly have been on the side of the islanders, who, judging from contemporary evidence, were hardly improved by the introduction of Gaelic blood, the Scottish Gaels who settled in Orkney being in many cases anything but desirable citizens. The Saxon settlers from the Scottish Lowlands who entered Orkney in the fourteenth century in the train of the great Lowland family of St. Clair were colonists of a different type, who imposed their language and customs upon the native Orcadians, with the result that the Shetlanders, to this day, regard themselves as purer Norsemen than their neighbours of Orkney. Mr. Johnston has not confined his investigations to a single aspect of this interesting subject, but has traced out the lives of the early Norse and Gaelic earls, and has thus enabled his readers to form some conception of the daily life of those far-off days. His paper, which is admirably written and arranged, bears all the marks of careful and laborious study, and should be full of interest to the student of Scottish and Scandinavian history.

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SATURDAY, JUNE 27th, 1914.

ALTERATIONS IN THE FINANCE BILL.

In view of the Budget proposals which have been reviewed in a number of articles in the Journal, medical men will naturally be anxious to ascertain what change, if any, has been made by the alterations announced by Mr. Herbert Samuel on Monday, June 22nd. So far as the grants to insurance services are concerned—namely, to referee-consultants, consultants, and clinics—no change whatever is made. The grants for nursing, laboratories, and tuberculosis also are unaffected. It will be remembered that these grants appeared in a special supplementary grant, and were not included in the general grants-in-aid to be made by the Treasury towards the expenses of local authorities. The only matters, therefore, among those recently discussed in our columns which are affected by the alterations in the Government's plans are the additional grants for special schools, nursery schools, and schools for mothers through the Board of Education. The grants for the feeding of school children and to necessitous schools are unaffected.

Under the Finance Bill the grants to local authorities are due to commence on January 1st next, but the alteration proposed by the Government involves their postponement until April 1st, 1915. The general contention of the members who had been opposed to the making of the grants in existing circumstances was that legislation necessary to enable them to be given in relief of rates on improvements as distinct from land values had not been passed, and that, until the power to make the grants on this basis had been obtained from Parliament, there was nothing to ensure that whilst the money had been found, it would be used in the way and for the purpose for which it was found. As the result of the Government's decision and of the Speaker's ruling, Part 4 of the Finance Bill and the Schedule relating thereto, after the second reading on Thursday, June 25th, of the measure as a whole, will be divided from the rest of the bill and presented in a separate form. This will probably be achieved by passing an instruction to the Committee to divide the bill into two parts.

In order to make the position clear it may, perhaps, be interesting to give a summary of Part 4 of the Finance Bill and of the schedules and conditions attaching to it, which together will form Finance Bill No. 2.

The first, second, and third parts of the present bill relate to the imposition of the duties on tea and to the income tax and death duties. Under the Government's proposal the non-granting of relief to local authorities for the four months of the present financial year will be compensated by the reduction of the proposed increased tax on incomes (not the super-tax) by one penny. This will be achieved by an amendment in Committee to reduce the new scale of income tax as stated in the bill by one penny. The future Finance Bill No. 2 will consist, therefore, of two clauses (Clauses 13 and 14 of the present bill). The first of these clauses relates to England, Wales, and Ireland, and the second to Scotland. At the beginning of the first clause it is stated that "if provision is made by Parliament for dividing the rateable value of land so as to distinguish the value attributable to houses, buildings, and other improvements, and the value attributable to land without the houses, buildings, or other improvements, the following provisions shall have effect," and it then provides that grants shall be made to local authorities as set out in the second schedule of the bill. The various paragraphs of this clause relate to the different payments to local authorities under separate headings and need not be described. The schedule which goes with this clause is very important, and details the objects for which the grants proposed to be made shall be devoted, and the authority which shall receive them. This schedule consists of three parts. In the first part the purposes of the grants to be made in England and Wales are enumerated: in the second, those which are to be made in Scotland; and in the third the conditions under which the grants shall be made are described. Many of the conditions are important, but the second is of much consequence, and marks to a great extent the leading feature of the present Budget. It provides that the grant "or any part of the grant may be withheld if the Government department concerned is satisfied that any of those conditions is not fulfilled or that the service in respect of which the grant is payable has not been efficiently and adequately administered by the authority in any other respect." Hitherto the only power possessed by the Local Government Board in respect of local authorities in nearly all cases was by way of a mandamus. Under the proposed new condition a Government Department will have power to withhold grants for non-performance of duties, and be more or less in the same position as the Board of Education has hitherto been in connexion with some of its grants.

The authorities and purposes of the grants for England and Wales are as follows: To Poor Law guardians 60 per cent. of the average cost and expenses in connexion with the Poor Law officers during the past three years; 3s. a week for each pauper lunatic maintained in a Poor Law institution; and 6s. a week in respect of each pauper lunatic maintained in some institution other than a Poor Law institution. The council of a county or a borough will receive 6s. a week for each pauper lunatic maintained in an asylum provided by it; half the net expenditure on police, including pensions; half the net expenditure on the repair and upkeep of first-class roads, and a quarter on second-class roads. County and district councils also receive half the net expenditure on the salaries and remuneration of medical officers of health and other public health officers. There are also grants to district and county councils based on Inhabited House Duty and population which need not be explained.

THE ETIOLOGY OF MUMPS.

Mumps is a disease that few people except its victims take seriously. Their appearance is commonly the signal for the display of ill-timed merriment rather than sympathy; and, indeed, the dangers of an attack of mumps are but little appreciated. In many village communities a child with mumps, being very properly excluded from school, is promptly converted into a temporary messenger, errand-boy, or milkman, and is freely so employed from house to house as long as he

remains infectious to others. Most people will be surprised to learn that mumps causes on the average over 100 deaths annually in England and Wales, as is recorded in an account of Dr. Gordon's recent Report to the Local Government Board, printed elsewhere in this issue (page 1413). It is probable, too, that few people realize the frequency with which mumps gives rise to serious complications such as orchitis, epididymitis, ovaritis, mastitis, acute pancreatitis, grave nervous disorders, and interference with the eighth pair of cranial nerves. Yet for all this the etiology of the disease has not yet been discovered, unless, indeed, as seems more than probable now that Dr. Gordon's work is published, it is due to an ultra-microscopic virus. Dr. Gordon has rendered great service by showing that this virus can be transmitted to monkeys and may prove fatal to them, at any rate in certain cases or certain epidemics; his observations also cast much light upon the cause of the severe nervous symptoms that occasionally complicate an attack of mumps. Much, of course, remains to be found out about the virus; it has not yet been induced to grow upon artificial media; although it can be transmitted from man to man, and from man to monkeys, our ideas as to the best means of preventing the spread of the disease are still of the most general description. But these and kindred problems may safely be left to the future. Now that there is good reason for believing that the microbic cause of mumps has at last been run to earth, the rest is a matter of time and attention to detail. We have the recent example of poliomyelitis—another acute disease due to a filtrable virus—to show the rapid progress that can be made in the study of an infectious disorder when once investigations have been set and started upon the right lines.

INSURANCE AGREEMENTS.

THE judgement of the Divisional Court in the case raised by Dr. Salter, of Bermondsey, against the London Insurance Committee is of so much general interest that it has been thought advisable to publish a verbatim report; it will be observed that the three judges were unanimous. The matter arose out of the refusal of Dr. Salter to write prescriptions in duplicate; he contended that it was not an obligation laid upon him by the Insurance Act, and declined "to act as a clerk to the chemist." His final refusal was written in September last, but the Insurance Committee took no action at that time. In November the Committee issued a circular letter giving notice that the terms of the agreement would be varied as from the commencement of the ensuing medical year. On December 6th the Insurance Committee sent out a circular letter inviting signature of a new agreement. This Dr. Salter signed after striking out the words "in duplicate"; the Committee on December 30th informed him that it would not include his name in the medical list for the ensuing year, and his name was accordingly omitted. Counsel for the Insurance Committee admitted that the notice of the intention to vary, which gave no indication of the nature of the variations proposed, was not a good notice, and it was not disputed that proper notice must be given not later than two calendar months before the date fixed by the Committee for the revision of the medical list. This in itself is a point of practical importance, and we have on several occasions called attention to the cavalier manner in which insurance authorities have set it aside, thereby, as we contend, failing in their duty as public authorities.

The court held that the Act and regulations contemplated a continuing medical list to be annually revised, and not a new list every year; that, apart from any special agreement, a medical practitioner could not be removed from the list without an inquiry; and that the Committee, by refusing to enter Dr. Salter's name on the list for 1914, did in effect remove him from the list without an inquiry. The court also held that Dr. Salter had not entered into any binding agreement with the Committee by which he lost his rights under Section 15 of the Act. That section provides that an Insurance Committee shall make arrangements with duly qualified medical practitioners, in accordance with regulations made by the Insurance Commissioners, for adequate medical attendance and treatment of insured persons, any duly qualified medical practitioner having the right to have his name placed on the list, subject to the power of the Insurance Commissioners to remove his name if, after due inquiry, they be satisfied that his continuation on the list would be prejudicial to the efficiency of the medical service.

The Insurance Committee took its stand on the ground that it was not removing Dr. Salter's name from the medical list for the ensuing year, but that it was precluded from including his name in the list because he had refused to sign an agreement approved by the Commissioners for that year. The court held that the Committee had no power to determine the agreement without due inquiry as provided by the Act, but only to alter its terms after giving two calendar months' notice. Such notice was not given in this case. It was contended for the Committee that Dr. Salter, by refusing to fill in the form in duplicate, had repudiated his agreement; but for several reasons the court rejected this contention. Among the reasons mentioned was that the Committee had not brought the agreement to an end at the time of such alleged repudiation, but had availed itself of Dr. Salter's services till the end of the year. Moreover—and this is a matter of more general importance—the court held that Section 15, as to inquiry before removal, controlled any implied right of the Committee to treat the agreement as at an end. Moreover, the court said that the admitted object of the Committee in requiring the order to be made in duplicate—which was to save the chemist trouble—was not a regulation to secure that insured persons should receive adequate medical attendance and treatment, the only ground assigned by the Act, but it declined to say whether by proper notice the terms could be so altered as to require this to be done.

The general effect of the judgement ought to be salutary. There has been a great deal of slipshod work in the administration of the Insurance Act by local authorities for which the Insurance Commissioners themselves have not been wholly without responsibility. The judgement shows that the courts will require insurance authorities to act within the law, and in particular to give due notice of any variation they propose to introduce into the agreement. Subject to such variation, properly made after due notice, a medical man whose name has once been put on the list has a right to its retention thereon until he voluntarily withdraws or is excluded after due inquiry conducted in accordance with the procedure laid down in the Act and regulations.

The court did not decide the question whether or no by proper notice the terms of the agreement could

be altered so as to throw some extra burden on the practitioner. The judgement must not be carried further than it will go. The main point decided seems to be that, in the absence of proper notice, variation in the agreement is not valid, and that the agreement is a continuing agreement and not limited to any particular year, and can be terminated only by action taken by one or other party in accordance with the provisions in this respect expressed in the Act.

THE BIRTHDAY HONOURS.

MEMBERS of the British Medical Association will have seen in the Birthday Honours list with special pleasure that the King has conferred a knighthood on Dr. T. G. Roddick, who was President of the Association when it held its annual meeting in Montreal in 1897. He is a Newfoundlander by birth, but for the greater part of his active life has been identified with Montreal and the McGill University. Among other offices, he was at various times Professor of Surgery, Dean of the Faculty of Medicine, and Governor of the University. As the author of the Canada Medical Act, passed in its final form in 1912, Sir Thomas Roddick has rendered an immense service to the profession in the Dominion, and he was elected the first President of the Medical Council of Canada, established in accordance with its provisions. In the history of medicine in Canada his name will ever be remembered as the medical statesman who saw the great need of his time, and through twenty years of arduous endeavour sought, and finally won, the ideal of unity for the profession throughout the Dominion. Surgeon-General A. W. May, C.B., Medical Director-General R.N., is promoted to be K.C.B. Sir Arthur May entered the Medical Service R.N. in 1878, served in the Egyptian war of 1882, in the Suakim Expedition in 1884, and with the Camel Corps in the Nile Expedition for the relief of General Gordon in that and the following year. He was Deputy Director-General from 1905 to 1909, and was appointed Director-General last year. The honour of knighthood is conferred also on Dr. W. P. Herringham, Vice-Chancellor of the University of London, and physician to St. Bartholomew's Hospital. Sir Wilmot Herringham, who in early days took a great interest in the collective investigations instituted by the British Medical Association and is well known to the profession for his writings on renal diseases, has done much public work in other directions. Dr. Seymour J. Sharkey, who likewise receives the honour of knighthood, was physician to St. Thomas's Hospital and Lecturer on Medicine in the medical school, and is now consulting physician to the hospital. Sir Seymour Sharkey is Medical Referee to the Treasury, and a man for whom the profession feels the highest respect. Dr. William Milligan, upon whom the honour of knighthood is conferred, is aurist and laryngologist to the Manchester Royal Infirmary, and lecturer on diseases of the ear in the University of Manchester. Sir William Milligan is well known as an otologist, and has been President of the British Laryngological and Rhinological Association, and of the Otological Section of the Royal Society of Medicine. He is joint author of a well-known book on *Diseases of the Ear*, and of numerous papers on diseases of the ear and their intracranial complications. The same honour is conferred on Lieutenant-Colonel Leonard Rogers, I.M.S., Professor of Pathology, Calcutta Medical College. This is a fitting recognition of untiring scientific work in India extending over some twenty years, and remarkable especially for the practical application of scientific principles to the etiology and therapeutics of dysentery, cholera, and beri-beri. The honour of knighthood is conferred on Dr. Alfred Edward Thomson, of Capetown. Sir Alfred Thomson was educated at Queen's College, Belfast, and graduated M.D., M.Ch., R.U.I., in 1886; he is now the visiting surgeon to the New Somerset Hospital, and was formerly resident medical officer at Kimberley Hospital. The same honour is conferred also upon Dr. Joseph Edward Godfrey, late Surgeon-General and Chairman of the Local Government Board, British Guiana. Dr. Anderson Stuart has received the honour of knighthood for services in connexion with medical research and education in Australia. He has been Professor of Physiology, and Dean of the Faculty of Medicine in the University of Sydney since 1883. Dr. Frank G. Clemow, who graduated at Edinburgh in 1885, and has long been physician to the British Embassy at Constantinople and British delegate to the Ottoman Board of Health, is nominated C.M.G. Dr. Harold R. D. Spitta, bacteriologist to His Majesty's household and to the household of Queen Alexandra, and bacteriologist and lecturer on bacteriology at St. George's Hospital, receives the M.V.O. (fourth class). The Imperial Service Order is conferred upon Dr. Ernest Daniel Rowland, lately resident surgeon, Public Hospital, Georgetown, British Guiana. The honour of C.B. is conferred upon two officers of the Indian Medical Service—Colonel Manifold and Lieutenant-Colonel Rice Edwards. Colonel Courtenay Clarke Manifold, who graduated M.B., C.M.Edin. in 1886, entered the Indian Medical Service the following year, and served in the Tirah campaign of 1897–98. Just before the expedition to China in 1900 he travelled through the interior and west of the country, and in recognition of this journey was awarded the MacGregor silver memorial medal in 1903, being the only medical officer who has ever received this distinction, given annually to an officer of the Indian army for good work in exploration. He served in the China war in 1900, and received the medal with clasps, and was specially promoted to Lieutenant-Colonel. He has since been inspector-general of civil hospitals in the United Provinces. Lieutenant-Colonel William Rice Edwards, who received his medical education at the London Hospital, and graduated M.D.Durh. with honours in 1884, entered the Indian Medical Service in 1886. He was surgeon to Lord Roberts when Commander-in-Chief in India, and accompanied him as his personal surgeon when Lord Roberts was appointed to the chief command in South Africa. Lieutenant-Colonel Edwards received the Queen's medal and five clasps for South Africa, and was made C.M.G. He afterwards served in the political department in India, and is now administrative medical officer of the North-West Frontier Province. The distinction of C.I.E. is conferred upon three officers of the Indian Medical Service—Lieutenant-Colonel Hamilton Bell, Lieutenant-Colonel Molesworth, and Major Greig. Lieutenant-Colonel George James Hamilton Bell, who graduated M.B., C.M.Edin. in 1882, served in the Burma campaigns of 1887–9—medal with clasp—and in the Lushai expedition, 1889—clasp. Most of his service has been spent in the gaol department in Burma, and he was for several years Inspector-General of Prisons; he is now acting as Inspector-General of Civil Hospitals. Lieutenant-Colonel William Molesworth, graduated M.B., B.S.Durh. in 1888, and entered the Indian Medical Service in 1890. For services with the Wuntho Field Force in 1890 he received the medal with clasps. He has held the posts of personal surgeon to the Governor of Madras, Civil Surgeon, Ootacamund, and Surgeon, first district, Madras. Major Edward David Wilson Greig, who took the degree of M.B., C.M.Edin., in 1895, and that of D.Sc. in 1909, entered the Indian Medical Service in 1899. Almost the whole of his service has been spent in the bacteriological department in India, but he carried out special researches on sleeping sickness in East Africa. He is now Assistant Director of the Special Research Institute, Kasauli. The Kaisar-i-Hind gold medal is conferred on Major Charles Edward Southon, who entered the Indian Medical Service in 1901, and is now chief plague officer in the Punjab; and upon Senior Assistant Surgeon and Honorary Captain John Alexander Hogan, who was educated at the Calcutta Medical College, and passed into the Bengal Subordinate

Medical Department. He received the medal and clasp for the Chin Lushai campaign 1889–90, and has been for many years in civil employment in the United Provinces, being now civil surgeon of Muzafarnagar. Among other honours which have an interest for various reasons for the medical profession are the knighthoods conferred upon Mr. J. G. Frazer, Fellow of Trinity College, Cambridge, professor of social anthropology at Liverpool, and the author of *The Golden Bough*; on Mr. James E. Jones, Chairman of the Manchester Royal Deaf and Dumb Schools; and on Mr. James Leishman, Chairman of the National Health Insurance Commission, Scotland.

FILTRATION OF MOORLAND WATER SUPPLIES.

A VERY large proportion of the population of this country now derives its water from moorland gathering grounds. The water is of an exceptionally pure character, but it has two drawbacks. It may become turbid and discoloured, usually from peat, and it is often sufficiently acid to have a plumbo-solvent action. In the early days of the use of such water these two drawbacks were looked upon as extremely serious, but they have now been more or less overcome. In connexion with the water supplied to more than one-half of the population in the Rhondda Valley, which at one time was very much discoloured indeed, an anxious position arose. The water itself was of exceptional purity, but it was so discoloured that the inhabitants refused to use it and procured supplies from the mountain springs and rivulets which abound in that district. The result was that here and there isolated outbreaks of typhoid fever occurred which could clearly be traced to the drinking of water from such sources. In a contribution made to the Royal Sanitary Institute at a recent meeting in Manchester, Professor Sheridan Delépine gave an account of mechanical filtration of the moorland waters. He stated that he had early been driven to the conclusion that sand filtration was not the best or most convenient method of treatment of moorland water, and that in the case of peaty waters it presented serious disadvantages. Straining, more particularly through mechanical filters, was generally effectual in removing the bulk of suspended matter. Water strained through a mechanical filter was materially affected as regards both the bacteriological contents and the hardness. It was only by combining precipitation and mechanical filtration that it had become possible to obtain entirely satisfactory results. Professor Delépine gave an account of observations he had made during several years in connexion with filters erected on waterworks obtaining supplies from upland gathering grounds situated in the Pennine Chain in the counties of Yorkshire, Cheshire, and Derbyshire, at a height of 800 to 1,700 feet above sea level. This water supply, though from a chemical point of view excellent, was discoloured, the colour varying between greenish-yellow and brown. At times the amount of suspended matter was considerable, and the water had marked action on lead. It was therefore necessary to improve the colour, to remove the suspended matter, and to lessen or, if possible, entirely remove the action on lead. The water was treated by precipitation and passed through mechanical filters under pressure, with the result that it was invariably almost entirely deprived of its colour, and the plumbo-solvent action was so far reduced as to be rendered negligible. The result of bacteriological examination of the water before and after it had been treated showed that the total number of bacteria in the untreated water was reduced by treatment. The *Bacillus coli*, which occasionally occurred in small numbers in the untreated water, was never found in the treated water, and Professor Delépine thought that the effect of the treatment on the number of bacteria was certainly more satisfactory than that generally observed with sand filters.

STREET NOISES.

As was said of the power of the Crown in the eighteenth century, the noisiness of the streets of London and other great cities has increased, is increasing, and should be diminished. There was plenty of noise before the advent of the motor, but so quiet, comparatively speaking, was London twenty years ago, that American visitors were struck by the "silence" of our streets. Greater facilities for locomotion are necessarily attended with increase of traffic, and those in populous cities pent now live by day, and in many quarters by night, in a pandemonium of noise that keeps sensitive nerves in a state of almost continuous jar, and frightens away sleep from the pillow of the wearied worker and the invalid. That much of this is unnecessary no one who gives a thought to the matter will be disposed to deny. At the annual meeting held in Birmingham in 1890 Dr. Thomas Barr read a paper on the injury done to the ear by railway whistles owing to their high pitch and their sudden and unexpected character. He expressed the conviction, based on his own experience, that a not inconsiderable number of ear affections were produced or aggravated by the shrillness of railway whistles. A resolution was passed drawing the attention of the railway companies to the matter. Even at that time attempts had been made to mitigate the evil, and Dr. Barr stated that an "organ whistle" had been introduced on the Caledonian railways, and that in America engines had bells which were used as signals for starting. Whether anything ever came of this remonstrance we do not know. The railway whistle, however, is not always with us like the snorting of the motor and the various noises of its movement. Pleas have more than once been put forward in the JOURNAL for a more considerate use of the horn of the motor, especially at night. We are glad to note that Professor Vittorio Grassi, of Pisa, who has long been a leader in the campaign against noise, spoke strongly, in the introductory lecture of his course of oto-laryngology this year, about the injuries to the ear and brain caused by unnecessary noises in the streets of modern cities. He made the following suggestions: That the sound of all whistles, bells, horns, and other instruments used for signals on railway lines and by all manner of vehicles, works, and so forth, should be mitigated; that severe measures should be enacted by the State and by municipal authorities, prohibiting or limiting unnecessary and untimely noises, especially those of high pitch, which science and practice have shown to be the most hurtful to the ear and the brain. As a protection against such injuries, Professor Grassi recommends, as a provisional measure, the blocking of the external auditory passage with cotton-wool, and in serious cases with soft wax. In this Professor Grassi follows the wise Ulysses, who, it may be remembered, plugged the ears of his companions with wax as they approached the island of the sirens. Our ears also need protection against the modern siren, but fortunately its prolonged hoot is not often heard except in seaports. In the discussion at Birmingham, mentioned above, Dr. Ward Cousins said that all persons constantly exposed to loud noises should use plugs of indiarubber; these had proved useful to officers of the navy and army whose ears had to bear the shock of loud explosions at close quarters. Such protections will become more necessary if Futurist music becomes popular. Recently, at the Coliseum, Signor Marinetti gave his audience some examples of what he calls "the art of noises musically attuned"; one piece was called "A Meeting of Motor Cars and Aeroplanes." The general effect of the performance may be gathered from the fact that it was received with cries of disapproval.

FALLACIES RESPECTING INSURANCE.

There is probably no possible mistake as to the nature and meaning of insurance which has not been committed by some supporter or opponent of the Insurance Act. As an example we quote the following from the *National Insurance Gazette* of June 20th. Our contemporary writes:

> The following is a copy of a notice posted up by an Irish firm of woollen manufacturers in its works:
> *National Health Insurance Act.*—This Act came into force on July 15th, 1912. From that date till May 2nd, 1914, there has been paid the following:
>
> | | £ | s. | d. |
> |---|---|---|---|
> | By the workers ... ... | 124 | 5 | 0 |
> | By the firm ... ... | 150 | 7 | 11 |
> | Total ... ... | 274 | 12 | 11 |
> | The benefits paid to insured persons under the Act amount to about ... ... | 88 | 1 | 10 |
> | Showing a loss of ... ... | 186 | 11 | 1 |

The fallacy here is so crude that we are almost tempted to regard the notice as an ebullition of Irish wit, or are we to suppose that commercial firms are not in the habit of making financial provision for contingent liabilities? This sort of ignorance, although it may give rise to discontent among the least educated sections of the working class community, is not likely to do mischief in other quarters; there are, however, some current misconceptions of a more dangerous kind. Thus, it has been asserted that the financial embarrassment from which certain of the approved societies are supposed to be suffering is a consequence of undue laxity in certification on the part of medical men. Whether the facts are as stated—that is, whether the number of medical certificates received is generally greater than anticipated on the basis of the official actuarial computations—we are not in a position to say. It is, however, relevant to observe that, even if this prove to be the case, the inference that there has been undue laxity in certification is quite unwarranted. Actuaries, like other statisticians, are not endowed with absolute foreknowledge. They can only base their predictions on data actually available. It has been pointed out over and over again that calculations based upon a relatively small and select section of the community can only be generalized to cover the vast population within the scope of the national scheme at the risk of error. Had the material used been a strictly random sample, then the computation would have been subject only to the statistical error of sampling, but it was, in fact, a selection, and no one would be surprised were discrepancies between expectation and observation to be revealed. Many critics have used language which is consistent with a belief that actuaries are divinely inspired, and that a valuation never needs to be revised. Such persons should devote a few minutes' study to the principles of actuarial science, and they might then abstain from repeating tittle-tattle respecting the shortcomings of medical men. It is, we suppose, generally admitted that, so far as female insured persons are concerned, the basis of the Act was largely speculative. For males the available data were less inadequate, but even in that case the very wide scope of the Act and the varying status of the approved societies have led to problems of great complexity, and their solution will only be rendered more difficult by the introduction of facile hypotheses as to laxity of certification. Before resorting to these, a serious attempt must be made to prepare a statistical survey of the insured population. This is a matter within the province of vital and medical statisticians, whose collaboration with the official actuaries should be a preliminary to any future revision. At present a modest recognition of ignorance, not hasty criticism of the medical profession, should be the attribute of the statesman and publicist.

THE PRACTICANTE.

A subordinate medical service is still in existence in the Peninsula, and some of its members are men of unusual intelligence. An Irish surgeon who last year spent a holiday in Spain writes: "While staying in the old cathedral city of Jaca, I came across a very interesting pair of 'practicantes'—for so they are styled—who combined with their practice of minor surgery and medicine that of the tonsorial art. Two great parchment diplomas from the universities of Zaragoza and Barcelona hung on the walls of their very well kept barber shop, while a printed scale of fees made me acquainted with the duties which they were allowed to fulfil, as well as the charges which they were permitted to make for the substantial services which they were allowed to render to suffering humanity. The treatment of corns, warts, and callosities, the application of dressings of a minor type, the administration of clysters, the application of poultices, blisters, and plasters, the administration of baths, the laying out of the dead, were among the duties scheduled, and the modest charges made for them were thus publicly displayed. Their recognition by the State does not date back further than 1811. They were then called *Sangradores*. Their duty then was solely that of blood-letting for the regular practitioner, who apparently did not condescend to phlebotomy. From 1830 to 1836 they were styled *Administrantes de Cirujia menor* (practitioners of minor surgery); in 1858 the title was again altered to that of *Practicante*, and in 1901, their education being much modified and amplified by statute, their style was in like manner amplified to that of *Practicante autorizado para la asistencia á los partos normales*, thus adding the duties of man-midwife to their other functions. In order to qualify for recognition they must first pass an entrance examination in general education and then undergo a course of study, which is divided into two parts. Each is of at least one year's duration, and must be taken at a hospital or university. The first part has to do with elementary anatomy, chiefly topographical, the elementary physiology of the internal organs, dressing and bandaging, and the rudiments of materia medica, with reference chiefly to topical medication. The second part of the course must be taken at the university and the lying-in hospital, and consists of lectures, demonstrations of minor surgical operations, the conduct of normal labours, and a general view of the treatment of the intoxications and of what we call first-aid. Then there is a review of the two courses, followed by an examination for the diploma. The duties of the *practicante* are distinctly subordinate, and in almost all cases he acts under the instructions of the doctor. He is the paid assistant of the fully qualified practitioner, as well as his head nurse; he prepares cases for operation, and attends to their after-treatment. Spain is a poor country, and distances are great; regular practitioners are not many, for the inhabitants are too poor to maintain them. Even the *practicante* commonly finds it impossible to live by that calling alone, so that he frequently has some subsidiary business such as that of my friends at Jaca. It is quite usual in Spain to call the *practicante* in the first instance, and then to be guided by him as to whether it is necessary to summon the doctor. In the hospitals and *casas de socorro*, of which there are many in Spain, the *practicante* finds employment always at the direct behest of the medical man, much as a student dresser in our clinical institutions. They are modest and intelligent fellows enough, very interested in British methods of treatment, but ambitious to have their field of activity enlarged; they are accordingly agitating for employment as dressers in the army, navy, and on railways and in mines, where there is little doubt that they would be useful as subordinate coadjutors of the profession."

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH.

A most important statement on this subject was made in the House of Commons on Thursday, June 18th, by Mr. Herbert Samuel on the vote in Committee of Supply for the Local Government Board. It will be seen that the Government proposes to issue a General Order directed to obtain security of tenure for medical and other public health officers. The statement was in the following terms: The Government are of the opinion, expressed by the Chancellor of the Exchequer in answer to a deputation yesterday, that it is of real importance to the efficient administration of our health laws throughout the country, that not only sanitary inspectors, but also medical officers should have a better degree of security of tenure with a view to rendering them independent of influences that may be brought to bear upon them in the administration of duties that may sometimes bring them into conflict with the members of their local authorities. The Department of the Local Government Board is now engaged in examining what can be done to secure this object without legislation, and I am contemplating the issue in the near future of a new General Order which will make use of such powers as are vested in me in order to secure this most desirable object.

SCOTTISH MEDICAL SECRETARY, B.M.A.

Acting in accordance with the resolution adopted by the Annual Representative Meeting last year, the Council of the British Medical Association resolved, at its meeting on June 24th, to establish a Scottish Office with a whole-time Scottish Medical Secretary. This officer will be appointed by the Council of the British Medical Association on the recommendation of the Scottish Committee. The salary attached to the office is £600 a year. Formal notice of the terms and conditions is given in the advertisement pages of the Journal this week. Candidates must be registered medical practitioners, and applications must reach the Medical Secretary, British Medical Association, 429, Strand, not later than Saturday, July 11th. The appointment will be made at a meeting of the Council during the annual meeting at Aberdeen; the officer appointed will be required to begin his duties on January 1st, 1915.

THE TUBERCULOSIS MEDICAL SERVICE.

The Metropolitan Borough of Deptford proposed a short time ago to appoint, at a salary of £400 a year, a tuberculosis officer, who would in fact be the chief clinical officer, and would have to devote the whole of his time to the work. The salary which the Association has declared should be the minimum to be accepted for such an appointment is £500 a year, and a warning notice with regard to the appointment at Deptford appeared in the British Medical Journal. In accordance with that notice, information of all the circumstances of the case was supplied to intending applicants, and we are now glad to be able to state that the matter has been reconsidered by the authorities of the borough of Deptford, and that an advertisement appeared in the Journal of June 20th stating that the council of the borough will appoint at an early date a tuberculosis officer at a salary of £500 a year.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Local Government Board Vote.

On Thursday, June 18th, in Committee of Supply, the House debated the provisions to be made for the salaries and expenses of the Local Government Board.

Sir A. Griffith-Boscawen dealt with the housing question, and quoted many figures to show the urgency of the problem. He criticized the Government for its lack of action in the matter, and dealt particularly with the inefficiency of the powers it at present possessed.

Lord Henry Cavendish-Bentinck supported the contentions of Sir A. Griffith-Boscawen in regard to the housing problem, and devoted the greater part of his remarks to Poor Law questions. In this respect he was followed by Mr. George Toulmin, and Mr. James Parker also discussed Poor Law questions and emphasized the necessity for security of tenure for health officers. Mr. Forster also dealt for the most part with the housing problem.

Mr. Herbert Samuel, in the course of a comprehensive statement, dealt in the first part of his speech with the criticisms of the Board in connexion with housing, and gave many details in connexion with the work of his department. He announced also that he was setting up a special committee to consider any modifications of the existing building by-laws. In regard to health matters, some of his remarks should be quoted in full. As regards security of tenure of medical officers, he made a statement which is noted elsewhere.

Hospitals.

On this subject he said: There is no sufficient information at the present time with respect to hospital accommodation throughout the country. There is no complete information as to the amount of accommodation available. There, again, through the medical inspectors and the women inspectors of the Board, I am acquiring information both as to the precise amount of hospital accommodation and the number of dispensaries, both voluntary and official, hospitals and dispensaries maintained by the public local bodies, and also philanthropic institutions, with a view to enabling Parliament to take action, if it so desires, to make good the deficiency, or to assist to make good the deficiency, in the future where such deficiency exists.

Nursing.

With regard to nursing, which has been mentioned by one or two hon. members, there again the Board is taking action. We summoned a conference with respect to nursing in London at the Local Government Board. The conference consisted of representatives of all the official and philanthropic agencies which are engaged in this work. They appointed a committee under the chairmanship of one of the medical inspectors of the Board. That committee has now reported. The conference has met again in the last few days, and has recommended the creation of a central council of nursing in London, whose duty it shall be to secure that the overlapping of nursing agencies in certain districts shall be avoided, and, on the other hand, that the deficiency which exists in nursing in other districts shall be made good.

Mr. Crooks: To nurse whom?

Mr. Herbert Samuel: To nurse the people generally—not in institutions, but district nursing and other nursing of that character. We have further encouraged the co-operation of voluntary health organizations in London, and a central committee has been established there under the chairmanship of one of the assistant secretaries of the Board in order to secure a proper co-ordination of the very large number of health societies and other similar bodies which are at work in the various boroughs of London. Generally the policy of the Board in all these matters in these days is to lend its co-operation as a Government department with the voluntary agencies that are also at work in similar fields. The day is long past, in my view and also in the view of my predecessor, when any Government department should hold itself aloof from the private societies which are engaged in work of health or nursing, or in the provision of hospitals or dispensaries, and regard its own sphere as something wholly apart from theirs. The State is not apart from the nation. The State is the nation. It is organized for the purpose of co-operate action, and it is clearly the duty of any Government department which represents the State in particular matters to combine with itself all that admirable voluntary philanthropic work, which is touched by an enthusiasm that officialism cannot bring, but which voluntary action often carries with it, and to enable the two to work side by side in matters in which they are jointly concerned. That is being done in these conferences with regard to nursing, public health, and another matter which I shall have occasion to mention subsequently.

After dealing with health questions, Mr. Samuel replied to the various criticisms of the Board and gave an account of its work in connexion with the Poor Law.

Intelligence Department.

In conclusion, he announced that he proposed to set up a Special Intelligence Department in the Local Government Board. He said: This new Department will issue reports upon matters of pressing interest, such as housing, land, infant welfare, tuberculosis, and health questions generally. It will keep in touch with similar work done in other countries about which at the present time we have no systematic means of obtaining information. It will keep in touch with the work done in our Dominions and Colonies, and not least of all with the work of the Local Government Boards in Scotland and Ireland, which at the present time work in watertight departments in the same kind of work as the Local Government Board. That Intelligence Department will also make it its business to keep in touch with voluntary institutions who are in a position to supply it with information.

Mr. Forster: Will reports be published?

Mr. Samuel: Yes; I think there are some reports. Some of them will be published, and much of the information will be of a kind that will be useful to local authorities generally, and I contemplate that it should be disseminated in leaflets and in other ways, in order that the country at large should have the advantage of the facts that have been collected. The whole of this will involve a very small additional cost. There are many other questions with which the Board has to deal that I have not touched upon. I have only dealt with those in which new developments are proposed, or interesting changes are taking place; but perhaps I have said enough to show to the Committee that that active and progressive administration which the House of Commons expects from a Government Department, such as the Local Government Board for England and Wales, is not lacking in it.

Mr. Walter Long's speech was mainly concerned with a considered and exhaustive criticism of the housing policy of the Local Government Board.

Mr. Crooks, Mr. Hills, and Mr. Wing and—to some extent, also—Mr. Charles Bathurst dealt mainly with Poor Law questions.

Dr. Addison called attention to the building by-laws, and criticized the scheme for the treatment of tuberculosis submitted by the London County Council. He contended that the Board should require that all schemes should be comprehensive, and should apply alike to insured as well as non-insured—the scheme of the County Council applied only to uninsured. He stated also that the scheme of the County Council presented a vital defect in that it contained no proper provision for the treatment of advanced cases, and he urged the Local Government Board to make proper provision in this respect a *sine quâ non*, and to give local authorities their full share of Government grants.

Mr. Hohler referred at some length to the principles of grants to local authorities and local expenditure. Mr. Herbert Lewis, on behalf of the Government, made a brief reply at the close of the discussion.

The Dogs Bill.—Standing Committee A was summoned to consider the Dogs Bill for the first time on June 22nd. After waiting for an hour no quorum was obtained, and the Committee adjourned until Wednesday, when again there was no quorum. Some of the members of the Committee, however, who were opposed to the bill were in waiting, but it is needless to say that they did not feel called upon to help to make a quorum. A good deal of protest was heard from some members, who are very busy on Committees, that they should be called upon to waste their time on a bill like this, which in its present form has no chance whatever of being passed into law this session. Mr. Ellis Griffith, on behalf of the Home Office, has, however, given notice of a number of amendments the effect of which would make the bill apply to any experiment of a nature calculated to give pain to a dog, and would prohibit the performance of such experiments, except on a certificate being given, as is mentioned in the Cruelty to Animals Bill, 1876, showing that the object of the experiment will necessarily be frustrated unless it is performed on a dog and that no other animal is available for such experiment. In other words, the effect of the Home Office proposal would add dogs to the classes of animals needing special certificates such as horses, donkeys, and anthropoids. If the bill were modified in this way, it might possibly have a chance this session, and another meeting of the Committee has been summoned for Tuesday next, June 30th. It must, however, be remembered that the whole time of the House, after Friday, June 26th, is appropriated by the Government, and it will not be disposed to give time for the Report stage of any private member's bill which is opposed, and without the giving of such time no private member's bill has a chance of success. An illustration of the fate which awaits private members' bills after Whitsuntide was provided in the House of Commons on Friday, June 19th, when Mr. Denman's bill on the employment of children, which had secured that day for the Report stage, was obstructed by a small number of members, so that at the end of the sitting the discussion had only just commenced on Clause 1.

Professor Warrington Yorke.—In reply to Mr. George Greenwood, the Home Secretary said he had caused very careful inquiry to be made into the case of Dr. Warrington Yorke at the time. Two irregularities were committed by Dr. Yorke, one in keeping the animal in a field which, though attached to the registered premises, was not specifically included in the registration; the other, in injecting a drug which, though included in his general certificate, had not been specifically mentioned in the special certificate required for experiments on donkeys. He was, however, satisfied that the irregularities were committed through oversight and not deliberately, and were not in fact harmful, and that it was not a case for taking proceedings under the Act; but he had warned Dr. Yorke as to the necessity of strict compliance with the law on his part if his licence was to be continued.

Milk and Dairies Bill.

The Milk and Dairies Bill was considered for the first time in Standing Committee B on Thursday, June 18th.

A long discussion arose over an amendment by Mr. George Terrell, the effect of which would be to omit from the first clause of the bill the penalties and restrictions attaching to the sale of tuberculous milk used in the manufacture of products for human consumption. Mr. Herbert Samuel invited the opinion of the Committee on the question, and expressed his willingness to be guided by it on the subject. Mr. Bathurst, Mr. Astor, Mr. Courthope, Dr. Addison, and others objected to the deletion of the words, and contended that it would give rise to difficulties in the administration of the Tuberculosis Order and would encourage unfair discrimination on the part of a dairyman who contended that his milk was for the purpose of the manufacture of cheese, butter, and so forth. It was generally agreed that the danger arising from the consumption of these articles, so far as tuberculosis was concerned, was an open question, and in any event probably very small. The general feeling of the Committee, however, in which the President of the Local Government Board fully concurred, was that it would be better to leave the bill as it was and to give power to the Board to deal with the subject by regulations. A general discussion on the power of the Local Government Board to make regulations as to the conditions under which milk from tuberculous cows may be used was deferred until the next meeting, when the question will arise on an amendment proposed by Mr. Astor; Mr. Terrell's amendment was negatived.

The remainder of the time of the Committee was occupied in an amendment made by Mr. Astor requiring a notification that the milk from a given cow was tuberculous to be sent by the medical officer of health to a dairyman before he should be subject to prosecution. A good deal of misunderstanding appeared to exist as to the drafting and precise meaning of the final portion of the first clause of the bill, although there appeared to be sympathy with the object of Mr. Astor's amendment so as to make it cover those cases in which milk from a given cow was found to be tuberculous whilst the cow was exhibiting no manifest symptoms of disease by which the milk could fairly be suspected by the dairyman. Mr. Herbert Samuel agreed to submit amending words to clear the matter up at the next meeting of the Committee.

Domiciliary Treatment of Tuberculosis.—Mr. Astor asked the President of the Local Government Board whether it was necessary for the Local Government Board to issue an order or regulation sanctioning arrangements by local authorities under Section 3 of the Public Health (Preven-

tion and Treatment of Disease) Act, 1913, in regard to the giving of domiciliary treatment, including the provision of milk, eggs, meat, bread, etc., to uninsured persons suffering from tuberculosis; whether any such order or regulation had been issued; and if not, at what date it was proposed to issue such order or regulation.—Mr. Herbert Samuel said that the sanction of the Board was required under Section 3 of the Public Health (Prevention and Treatment of Disease) Act, 1913, to any arrangements proposed to be made by a local authority for the domiciliary treatment of uninsured persons suffering from tuberculosis, but this sanction need not necessarily take the form of an order or regulation, and no order or regulation had been issued.

Metropolitan Health Visitors.—In reply to Mr. Edmund Harvey, the President of the Local Government Board said that 22 of the 29 councils of metropolitan cities and boroughs had appointed health visitors under the Health Visitors (London) Order, 1909, and every council had appointed sanitary inspectors. Altogether there were in London 298 male sanitary inspectors, 29 female sanitary inspectors, 16 women who were part-time sanitary inspectors and part-time health visitors, and 21 whole-time health visitors. The number of relieving officers was 309. The extent to which co-operation of these officials was maintained varied in the different localities. The Local Government Board had recently addressed a circular letter to the mayor of each metropolitan borough and the chairman of each metropolitan board of guardians advocating further co-operation, and suggesting the calling of conferences at which the public health and Poor Law authorities and the voluntary agencies should be represented, and the question of formulating schemes of co-operation discussed.

Treatment of Tuberculosis in London.—Dr. Addison asked the President of the Local Government Board whether the Local Government Board had approved of the scheme for the provision of treatment for tuberculous persons in London which had been passed by the London County Council; and whether it was the intention of the Board to make grants in aid of the scheme. Mr. Herbert Lewis replied that the matter was under consideration; a decision had not yet been given.

Decline of Population in Scotland.—In reply to Mr. James Hogge, Mr. McKinnon Wood said that the population of Scotland was, according to the estimates of the Registrar-General for Scotland, about 30,000 less than at the date of the census of 1911; and that while the birth-rate of the year 1913 was 0.1 per 1,000 less than that of the year 1911, the birth-rate of the first quarter of 1914 was 0.2 per 1,000 greater than that of the corresponding quarter of 1911. The Board of Trade returns of passenger movement had shown a marked falling off in the volume of emigration during the later months of 1913 and the current year, and this reduction appeared to operate in Scotland somewhat more than in the other divisions of the United Kingdom. The recorded net emigration from Scotland in the first four months of 1914 was less than one-half that of the corresponding months of 1913.

Grants to Training Colleges and Secondary Schools.—Mr. Cassel asked the Chancellor of the Exchequer whether it was intended by the Finance Bill to do away with existing grants to training colleges, secondary schools which were not under the control of local authorities, and universities, and whether this would be the effect of the bill as drawn.—The President of the Board of Education said that the Chancellor of the Exchequer had asked him to answer this question. It was not proposed to deprive institutions for higher education which were not under the control of local education authorities of financial assistance. Grants would continue to be paid direct to the responsible bodies.

Number of Trained Nurses and Midwives.—Mr. King asked the President of the Local Government Board the total number of nurses in the United Kingdom who with hospital or private training were workhouse nurses and asylum nurses respectively; and what was the number of midwives, including nurses, in midwifery homes.—Mr. Herbert Samuel said there were no statistics at present available showing the total number of trained nurses in the United Kingdom, or the number of midwives in midwifery homes. The number of nurses in Poor Law institutions in England and Wales was approximately 9,000, and the total number of names on the roll of midwives for 1913 was 35,513. Information was now being collected as to hospitals which he hoped would furnish the particulars desired, so far as regards hospital nurses in England and Wales.

Grants to Local Authorities (Public Health Officers).—Mr. Bennett-Goldney asked the Chancellor of the Exchequer if he could say which public health officers were included in the list of authorities to receive grants under the Finance Bill, 1914, under the Second Schedule, Part I, England and Wales, line 25, *et seq.*, where medical officers of health and other public health officers were specially mentioned; and whether the definition, "other public health officers," included all such officers as well as surveyors and analysts.—The Parliamentary Secretary to the Local Government Board said that the intention was to pay to local authorities one-half of the salaries of medical officers of health and their assistants, medical officers of hospitals, sanitary inspectors and their assistants, inspectors of foods (including milk), health visitors, veterinary officers, and any other health officers. It was not intended to make a grant in respect of the salaries of surveyors and analysts. Sir Harry Verney asked the President of the Board of Education whether his attention had been called to the fact that the Board reduced the proportion of the grant payable under the Medical Grant Regulations to the local education authority of the Buckinghamshire County Council partly on the ground that its school dental service was inadequate and its working inefficient; whether he was aware that in that county, in spite of the admitted difficulties, the authority had made arrangements to deal completely with the children in the 6 to 8 age group and also with other urgent cases in all the public elementary schools; and whether, in view of these facts, he would consider the possibility of paying the grant at a higher rate for the year ending July 31st, 1914.—Mr. Pease was aware that the grant paid to the Buckinghamshire local education authority under Part I of the Medical Grant Regulations during the financial year 1913-14 in respect of work done during the year which ended on July 31st, 1913, was assessed at a rate of somewhat less than one-half of the authority's expenditure, one reason for this being that the arrangements made by the authority in connexion with the scheme of dental treatment were unsatisfactory in certain respects. Since July, 1913, the scheme of dental treatment had been extended to cover the whole county. In assessing the grant payable during the current financial year in respect of work done during the year which ended on March 31st, 1914, regard would be had to all the circumstances of the case, including the extension of the scheme of dental treatment, and in particular to the extent to which the defects in the authority's arrangements, to which its attention had been directed by the Board, were remedied during the period in question.

Disinfection of Hides.—The President of the Board of Agriculture has informed Mr. Bathurst that extensive inquiry and research had shown that the formic-mercury process could not be regarded a practicable and effective means of destroying the germs of anthrax and foot and mouth disease in hides and skins.

Contagious Diseases of Animals.—Mr. Charles Bathurst asked whether any moneys had been allocated by the Board of Agriculture out of the Development Fund Grant towards independent research into contagious diseases of animals on the part of private investigators not in the employment of his department.—Mr. Runciman replied that grants for this purpose had been made annually since 1911 to the Royal Veterinary College, and for similar purposes to the Wye College and to the University College of Wales at Aberystwyth.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SIR CHARLES CAMERON AND DUBLIN HOUSING.

IN a small book recently published, entitled *Municipal Public Health Administration in Dublin*, Sir Charles Cameron seeks to vindicate the public health authorities against the charges made by the Housing Committee and others. The death-rate in the city has decreased steadily for many years, and from the point of view of health Dublin is certainly in a much better state than it was half a century or even twenty years ago. But with regard to the immediately important question of housing Sir Charles Cameron, at least, realizes that very large reforms are needed; he advocates the policy of building workmen's cottages on derelict sites in the city itself; he ridicules the idea of building on a large scale on the outskirts, but does not discuss the possibility of turning old slum sites into open spaces. He does not disprove the specific charges brought against the department by the Housing Committee. He gives no explanation of the fact that numbers of tenement houses were not closed when they ceased to be habitable. He states that in proportion to its population more houses have been closed in Dublin than in any other city in the United Kingdom; but this does not alter the fact that the slums which remain are larger and in a worse condition than in any other city of its size. With regard to the granting of rebates, which was severely commented on by the majority of the Housing Committee, Sir Charles admits that there has been a "trifling laxity" in enforcing the conditions, due, he says, not to favouritism, but to expediency. Though the explanation is not regarded as wholly satisfactory, it must be recognized that Sir Charles Cameron and his subordinates have accomplished much good work in the face of grave difficulties.

EMIGRATION AND PAUPERISM.

The Registrar-General's return of the number of emigrants (natives of Ireland) who left Irish ports during the month of May shows that the total number was 3,648 (1,875 males and 1,773 females) as compared with 6,069 in the same month last year—a decrease of 2,421. For the first five months of this year the number was 11,449, as against 15,961 in the corresponding period of 1913—a decrease of 4,512. Of the total number for the five months, 1,424 left Leinster, a decrease of 342 when compared with the same period of last year; Munster 3,138, a decrease of 715; Ulster 3,722, a decrease of 2,733; and Connaught 3,165, a decrease of 722. Of last month's emigrants, 2,831 went to the United States, and 825 of these had their passages paid for in America; 581 emigrants went to Canada.

At the last meeting of the Castlerea Board of Guardians the Master reported that there were only 133 inmates in the workhouse. In the corresponding period last year there were 180. The Clerk said that the workhouse was built in the year of the famine to accommodate 900.

WORK OF DERRY HOSPITAL.

At the annual meeting of the subscribers to the Derry Eye, Ear, and Throat Hospital, held last week, the Honorary Secretary reported that 1,691 cases were dealt with during the year, requiring 5,221 attendances. Last year the number of cases was 1,635. The admissions had also increased to 137, all the beds having been occupied. For the first time there was a deficit in the funds. Some of the large employers had ceased to contribute owing to the amounts for which they were liable under the Insurance Act, and the approved societies did not seem able or willing to render any assistance.

ENNISKILLEN WORKHOUSE.

A report on the condition of the Enniskillen Workhouse by the Local Government Board Inspector, read at the guardians' meeting last week, stated that the house was not clean, bed-clothing not sufficient and bad, and classification not properly carried out. The guardians considered the report "very serious," and referred it to a committee to report.

ROYAL VICTORIA HOSPITAL, BELFAST.

The Hospital Saturday collection which was held lately has proved a record; over £1,100 has already been received, a larger sum than in any previous year at the same date.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

QUEEN MARGARET COLLEGE, GLASGOW.

THE Select Committee of the House of Lords has found the preamble of the Glasgow Corporation Tramways Bill proved in regard to the scheme for running a new road through the grounds of Queen Margaret College. This college is the women's college in connexion with Glasgow University, and the decision involves the corporation in the purchase of the college and grounds in their entirety. The college authorities may, however, elect to remain on the present site, in which case the corporation will make them as comfortable as possible. If they decide to remove, a new building will have to be erected elsewhere. The university authorities will have a period of three months within which to come to a decision.

EDINBURGH PROVIDENT DISPENSARY.

Like the other medical charities of Edinburgh, the Provident Dispensary in Marshall Street has found its list of patients lessened since the Insurance Act came into force. At the annual meeting held on June 11th, the Chairman (Mr. James McIntosh) reported that 3,295 patients had been treated during the past year, being a decrease of 1,536 as compared with the previous year. The accounts showed an excess of receipts over payments of £33 11s. 1d. The Chairman was convinced that the dispensary was still doing useful work, and was encouraging thrift among the people of the district in which it was situated.

GLASGOW EAR HOSPITAL.

The annual general meeting in connexion with the Glasgow Ear, Nose, and Throat Hospital was held on June 10th. Dr. Thomas Barr, who submitted the medical reports, said that 3,334 patients had been treated during the past year, and the attendances had been 14,258, or 48 per day. The figures showed an increase of 100 patients over the previous year.

THE HEALTH OF EDINBURGH IN 1913.

Dr. Maxwell Williamson's annual report of the Public Health Department of the City of Edinburgh for the year 1913 deals, as it hardly ever fails to deal, with matters of grave import. This year, perhaps, the emphasis lies upon the two subjects of cancer and infant mortality, and these, so far as they are at present understood, seem far removed from each other; but it is possible that in the kaleidoscopic happenings of advancing medicine they may be found to lie nearer together than any one now imagines.

The Birth-rate.

First, however, a word or two must be said regarding the birth-rate. It is still falling, and now stands in its corrected form—that is, births to Edinburgh citizens—at 19.4 per 1,000. With the exception of Brighton (where the rate is 18.6), Edinburgh is the lowest of the thirty large towns in Great Britain and Ireland which have been selected for comparative purposes. London, which curiously enough has exactly the same death-rate as Edinburgh (namely, 14.3), has a birth-rate of 24.9 as against Edinburgh's meagre 19.4. Brighton's death-rate is 13.7. Another ominous fact, which has a bearing on infantile mortality, is that the 43 per cent. of all the births take place in the five wards of the city in which the housing and hygienic conditions are not such as to make for healthy infancies. Ten years ago (in 1903) the total number of births registered was 8,112 for a population of roughly 318,000; in 1913, for a population estimated at 321,000, the total number of births was only 6,458; and between these years the descent has been practically continuous, and recently it has been accelerating; in 1910 the births numbered 7,063, and 6,700 in 1912. There is, however, a fact which may by some be regarded as a sign of improved morals—namely, the somewhat considerable reduction in the number of illegitimate births, which now constitute only 7.46 per cent. of the total births (in the corrected list—that is, births to Edinburgh citizens). Of course, the pessimist may argue that this fall in the illegitimate birth-rate simply means that the checking of conception in illicit unions is being more thoroughly practised.

Notification of Births.

Leading on to the subject of infantile mortality is that of the notification of births. Among the births notified in 1913, 275 were born dead, and, subtracting these from the total, there is left 5,781 births intimated out of 6,458 registered. Dr. Williamson deplores the number which still fail to appear in the notification list, and the ignorance of the law which so many people exhibit; but it must be borne in mind that the Notification of Births Act of 1907 has not been adopted all the country over, and that persons coming from districts where it is not in force may easily be ignorant of it. On the other hand, the medical officer of health is well pleased with the work of the official visitor and of the voluntary health visitors in respect of the infants who are notified; to the work done by these ladies he attributes the saving of many young lives annually. But, after all, advice and kindly help such as can be given by visitors do not touch the root causes which are really the chief reasons why such visitations are necessary. These reasons are bad housing, overcrowding, and the low *morale* necessarily associated with them; until these are removed much of the infantile mortality must remain unaffected by visits, lectures (of which several were given during the year), and classes in domestic subjects. Still the visitors were glad to report that in nearly every house there was an open window, that two-thirds of the infants had separate cribs, and that every baby had been presented clean although no notice of visitation had been given; on the other hand, the condition of the general bed was one of great uncleanliness, and the disorderliness of the homes was marked even where a measure of cleanliness was recognized.

Infantile Mortality.

Pictorial and cartographic aid has been made use of in this report in order to show clearly the parts of the city with the highest death-rates. By circular maps and photographs typical areas in such crowded wards as St. Leonard's, St. Giles's, and the Canongate, and in the better class Dalry and Merchiston wards, are graphically represented; and, by a mere look at them, one can understand in some measure why Merchiston has a death-rate of 11.1 per 1,000, whilst St. Giles's (with the Cowgate in it) reaches 21.5 per 1,000. The lowest death-rate ever recorded for the city was attained in 1913 (14.3 per 1,000), and it was accompanied by the lowest infantile death-rate (namely, 101 per 1,000); but both varied within wide limits in different parts, the latter falling as low as 29 in Morningside (one of the healthiest wards), and rising as high as 142 in St. Giles's. In the Cowgate and its closes (the very name is ominous) the general mortality-rate was 29.7 per 1,000, and the infantile 204 per 1,000. That 101 infants out of every 1,000 die before reaching the first anniversary of their birth seems a very serious state of matters, and so, indeed, it is; but no further back than fifteen years ago 164 instead of 101 so died out of each 1,000 born alive, and one can see, therefore, that there has been great salvage in young lives going on. It will be of some service if Dr. Williamson can give us in his next annual report a circular diagram showing the chief causes of the infantile deaths, for it has recently been shown for New York and some other large cities that diarrhœa and infectious maladies are gradually being eliminated as causes, leaving such less evident causal states as congenital conditions to be attacked if further reductions in the infantile death-rate are to be accomplished. Apparently the congenital causes are far from negligible, for out of 254 deaths under 4 weeks 128 were assigned to premature birth, 32 to atrophy, debility, and marasmus, 17 to congenital malformations, 8 to atelectasis, and 7 to injury at birth; in other words, 192 deaths out of 254 in infants of less than 4 weeks old were due to ante-natal and intra-natal morbid states of one kind and another. Of course the proportionate frequency of the congenital causes is much less for the whole of the first year of life than for the first month, yet it is not to be disregarded, being 238 out of 631 (or 37 per cent). Of all the causes of death under 1 year, by far the commonest was premature birth—namely, 138 out of 631. It would almost seem, therefore, as if the further marked reduction of the infantile death-rate lay in the hands of the obstetricians, in so far, at any rate, as they make the effort to treat pregnancies, and not to wait for the onset of labour pains. It is an obstetrical problem, and more particularly one of ante-natal pathology and hygiene as produced through the mother, and to be dealt with by treatment administered to her.

Cancer.

Cancer occupies a large place in this annual report. There is a continued increase, and this increase must be described as alarming, for, whilst in 1898 there were 267 deaths from cancer, in 1913 there were 401. If this be considered in reference to the fall in the general death-rate, in the infantile death-rate, and in the mortality from such maladies as phthisis, its significance and gravity become still more evident. It is only necessary to state that whilst 401 persons died of cancer in the city in 1913, the much more widely feared scourge of phthisis only killed 364; and yet for the latter malady there are abundant and elaborate means of treatment, whilst for the former there is almost none. Dr. Williamson asks for some provision in the way of hospital accommodation for cancer cases where they can be segregated and treated apart from sufferers from other maladies. It may not be demonstrable that cancer can pass from one individual to another, but certainly patients in the later stages of this disease can hardly be safe room mates for healthy people in overcrowded tenement blocks and in houses containing several families. The septic side of the danger alone is sufficient to plead strongly for segregation. As a good omen for the future, in relation to cancer and infantile mortality and other dreaded causes of death, it is interesting to read what the medical officer of health has to say about typhoid fever (45 cases and 10 deaths) and diphtheria (448 cases and 35 deaths), the fall in the total number of cases in the former instance and in the number of deaths in the latter being of special significance.

The Sanitary Inspector's Report.

In connexion with Dr. Maxwell Williamson's report it is convenient to take that of Mr. D. Rutherford, the sanitary inspector for the city. He reported that the number of ticketed houses under supervision was 7,238, showing a decrease of 127 due to the closing of the houses as unfit for habitation. The lowest depth of overcrowding was surely reached in the Canongate district, where a two-roomed house was found to be occupied by ten persons, giving to each a space of 197 cubic ft.; but no, in the Haymarket ward there was a two-roomed house with eleven persons, each having only 128 cubic ft. to breathe in: in the St. Giles and Dalry wards there were rooms with five and six persons occupying them. Representations regarding 90 insanitary houses were made during the year, with the result that closing orders were passed against 41 of them. An apparently small but really a great matter was the discovery throughout the city of 109 dark and unventilated bed-recesses; these were opened out or so altered as to prevent them being used as sleeping apartments. Obviously Mr. Rutherford's work is no unimportant adjuvant to that of the medical officer of health.

England and Wales.

MANCHESTER AND DISTRICT.

BABY CLINICS FOR MANCHESTER.

A PUBLIC meeting, called by the Manchester and Salford Sanitary Association, was held on June 16th in the Lord Mayor's Parlour of the Manchester Town Hall to discuss the establishment of a municipal clinic for babies and children in Manchester. The Lord Mayor, who presided, said he believed that a considerable saving to the nation and the rates would be effected by establishing a baby clinic, which was at present the missing link between the maternity cases of the Insurance Act and the school clinic.

A paper, contributed by Professor Benjamin Moore, of Liverpool, who was unable himself to be present, was read. His contention was that the period between birth and school age was that in which healthy care, wholesome food, and healthy homes were of the greatest importance, and yet it was the period hitherto neglected by legislators. The Insurance Act provided the healthiest third of the

nation with a medical service which only came into operation in sickness, while it left the other two-thirds, containing at least nine-tenths of the cases of disease, alone, uncontrolled, and infecting the nation. But it was at least a beginning. The secret of the puzzle why the most important period of life had been left out was that health in itself was never the primary consideration, but was always secondary to something else. The reason given for the feeding of school children was that "you cannot teach a hungry child," and the reason for the medical care of school children was that it was necessary for the purposes of education. The proper reason for feeding children was that they were hungry, and for medical care that they were ill. Professor Moore held that in great cities like Manchester there should be one health authority instead of the many now existing, and a complete system which would cover those five years of life during which, at present, disease was left free to do its work. Miss Ashton recommended that the corporation, for a beginning, should take over the existing school for mothers and add to it at least four clinics for babies in Manchester. A children's hospital was also needed, as the existing children's hospitals were crowded out. It was hoped in the coming autumn—in the diarrhœa season—to conduct by charitable effort a baby clinic as an example and experiment. Mr. T. C. Horsfall, Chairman of the Sanitary Association, moved:

> That in the opinion of this conference the time has now come for the institution of clinics for babies and children under school age, under the control of the Sanitary Committee of the City Council.

This was seconded by Miss Henderson, the corporation teacher on infant hygiene, and supported by Professor Weiss, Vice-Chancellor of the Manchester University, Bishop Welldon, Miss Eckhard, of the School for Mothers, Miss Teale, of the Invalid Children's Aid Society, and Dr. Vipont Brown. Dr. Lapage, while agreeing with the aim of the effort, did not think that the clinic should be under the control of the Sanitary Committee, and Dr. Mumford thought the subject should have more consideration before anything final was done. The resolution was carried with only a few dissentients.

India.

[FROM OUR SPECIAL CORRESPONDENTS.]

Milk Supply of Madras.

Captain A. J. H. Russell, M.D., I.M.S., Acting Health Officer, Madras City, and Professor of Hygiene and Bacteriology in the Medical College, Madras, has issued a report on the milk supply of Madras. From it we learn that the Municipal Act of 1904 provided that places where horses, cattle, goats, and sheep are kept must be licensed, and that by-laws have been made regulating the water supply, lighting, ventilation, cubic space, drainage, and sanitation of dairies and cattle sheds in the occupation of licensed dairymen or milk sellers. It has not been possible to enforce the regulations rigidly, as most of the owners of milch cattle are poor and unable to provide suitable buildings. He recommended:

(*a*) The establishment of a large dairy farm outside the precincts of the city, where plenty of grazing could be had for, say, 1,000 milch cattle.

(*b*) The establishment of milk shops throughout the city, where the milk sent in from the farm could be distributed and sold.

(*c*) The building of large model cow-houses in the city, where numbers of milch cattle could be housed, owners of milch cows being able to rent stalls for a small sum per mensem, and, in connexion with these cow-houses, separate buildings, where all utensils used for collection and distribution of the milk could be cleansed, and where the milk itself could be stored or cooled, the whole scheme being under the supervision and control of the corporation.

The corporation recognized the force of the arguments upon which these recommendations were founded, and two sites are now being prepared which can be conveniently used for cow-houses for the cattle at present distributed throughout two of the most congested parts of the city. As there is abundance of vacant ground in Madras, it has been found possible to place these cow-houses well away from dwelling houses. Later on it is hoped to introduce pasteurizing apparatus, but it will first be necessary that the milch cow owners should become accustomed to having their animals housed away from their dwelling houses. A small monthly fee is to be charged for each stall. The dairy farm and the milk shop must be initiated by the corporation, but it is not intended that it should continue to act as a purveyor of milk. The object is gradually to induce honest traders and capitalists to invest money and eventually to take over the whole scheme, the corporation merely exercising control as regards sanitation, etc.

A considerable quantity of condensed milk is landed in the port of Madras; it has not been possible to ascertain what proportion of it is sold for consumption within the city, but it is known that much of that so sold is used for infant feeding by the middle and especially by the lower classes. Unfortunately it would seem that while the imports of condensed whole milk with full cream are diminishing, those of skimmed condensed milk are rising rapidly. The difference in price may be considerable, but in many places 5 or 6 annas is charged for a tin of condensed skimmed milk, and only 7 annas for a tin of full cream milk. It seems probable that the purchaser does not always understand the difference; the get-up of the package of condensed skimmed milk may so nearly resemble the get-up of the package of condensed whole milk that uneducated persons may easily be deceived. It is stated that the words "prepared from skimmed milk" required by the Merchandise Traders Act are often printed in such small type and so included among the other printed information on the label that they may easily be overlooked. Dr. Russell points out that the increasing use of condensed skimmed milk as food for infants is a grave danger. He therefore advises the corporation to require that every package of condensed skimmed milk should bear, printed in large and legible type in English, Tamil, Telugu, and Hindustani, an intimation to the following effect: "This is skimmed milk. Children under one year of age should not be fed on it."

He adds that the practice of having the cows brought to the house of the consumer to be milked in his presence is followed to a large extent in Madras; but even so, only the closest supervision will prevent adulteration with water.

The Lawley Hospital at Coonoor.

Lord Pentland has opened the Lawley Hospital at Coonoor, the foundation-stone of which was laid by Sir Arthur Lawley three and a half years ago. In recognition of the sympathetic treatment and substantial help which the project received during the term of his Government, the new hospital will fittingly bear his name. The buildings are commodious, and will meet for many years to come the calls likely to be made upon them. The council is, however, anxious to make ample provision to guard against congestion of the buildings, and the Government will give a further sum of Rs. 1,318 for the acquisition of additional land.

Mission to Lepers.

The thirty-ninth annual report of the Mission to Lepers states that the mission has extended its operations to Africa, Persia, British and Dutch Guiana, Palestine, and Kashmir, and has opened the first leper asylum in Siam. Owing to this extension, the title of the mission, formerly the Mission to Lepers in India and the East, has been abbreviated to that of the Mission to Lepers, as being more in keeping with its almost worldwide character. In India, which still continues to be the great centre of its work, there has been much progress. New asylums have been commenced at Manamadura and Vizinagram in South India; the accommodation provided has been already taken up, and extensions are under consideration. In almost every province in India there is the same need of increased accommodation. The greater part of the support of the mission is derived from Great Britain, though contributions from the public in India show an increase.

Medical Teaching in Assam.

The rules for the management of the Berry-White Medical School at Bibrugarh have been revised to suit the altered conditions due to the reconstitution of Assam as a separate province. The superintendent of the school, in awarding scholarships, is given discretion to consider the claims of the different sections of the community and the

requirements of the medical department. Conditions will be changed again if a medical school is opened at Sylhet, and the rules as regards admission and scholarships are therefore of a temporary character.

Correspondence.

THE SPECIAL FUND: TRADE UNION OR TRUST?

SIR,—Dr. Fothergill's letter in your issue of June 13th is an attempt to divert the attention of the Divisions from the question which they have to decide—namely, Shall a special fund be established, and, if so, shall it be a trust fund, or a trade union fund? The interesting series of questions which he propounds might be of interest were it proposed to turn the whole profession into a trade union at once; that is not at the present time a question of practical medical politics, however desirable in my opinion such a course would be. The immediate issue is: How best can the special fund be protected? I would once again urge that every member of the Association before voting should read over with care the opinion of Mr. Colquhoun Dill on this matter, which has appeared at least twice in the pages of the JOURNAL, and in particular, the words on page 359 of the SUPPLEMENT for November 1st, 1913, which runs as follows:

> The risks run by the trust would be that in carrying out the objects of the fund, particularly (*b*) (par. 15) and (*c*) (par. 18) the trust would be open to the charge that it was engaged in activities which might be held to be "in restraint of trade." *Trust funds cannot claim any legal protection in doing such things. The only organization which has effective legal protection in such actions is a trade union* (the italics are not in the original).

This opinion is, I suggest, of the greater weight when one remembers that the sentimental objections to trade unionism were put before Mr. Colquhoun Dill in the memorandum furnished to him for his consideration.

The view of the committee which originally advised a trust should also be noted (see page 360 of the same issue):

> The Council must be reminded, however, that such risks as attach to the adoption of the trust method would be enhanced as the trust increased its activities, and its success drew public attention to its operations.

In other words, if the fund is a failure, or is of little service, it matters little whether it be protected or not; but if it is a success, and is doing real work, even the advocates of the trust method know, and admit, that the funds are only really protected as a trade union fund.

Dr. Fothergill makes one suggestion, which with the considerable alteration which I have made "may be a possibility, and, if so, is worth consideration"—that is, a local trust fund or a local trade union fund (at the option of the local profession) with one central trade union fund encouraged by the Association.

Dr. Fothergill's references to Leicester are beside the question; through ignorance of the facts he has considerably understated the amount paid by non-workers for medical attendance; whether the Leicester and Rutland Union of Practitioners has done much or little, it has so far with success accomplished everything that it has attempted to do. He has also attributed to me the "proposal of one or more trade union funds." I believe in one strong Central Fund, collected locally. In conclusion, Dr. Fothergill's nightmare of medical syndicalism has been evolved out of his own imagination, or is but set up by him as a bogey to arouse suspicion, while, as one of his questions proves, he does not believe in its possibility.—I am, etc.,

Leicester, June 18th. R. WALLACE HENRY.

SIR,—Not infrequently I read very able letters in the JOURNAL, written with transparent honesty yet based upon misapprehension; and I wonder why the Journal Committee and the Editor do not make arrangements in such cases to append an explanatory footnote, to prevent readers being in turn led astray.

In the last issue Dr. Courtenay Lord refers to a "trade union in connexion with the Association," and Dr. Ross wishes to "negative the change" (of the Association into a trade union, as I understand him).

May I point out that neither proposal has been made?

Whether a trust or a trade union be formed, it must and will be an independent body, outside the Association; because it will be formed for the special object of raising money to support a policy which is outside the powers of the Association to undertake.

And the Association cannot, now or ever, obtain those powers by any possible means, except by departing from its original Memorandum; and as soon as it does that the whole of its property and funds will pass to the Charity Commissioners (in default of there being any other body in existence qualified to receive them, the qualification being the possession of a similarly limited memorandum to our own).

If trust and trade union are going to split the Representative Meeting, they will destroy each other (like Kilkenny cats), and I agree with Dr. Courtenay Lord that, in that event, there will never be any fund to administer.—I am, etc.,

Altrincham, June 22nd. T. W. H. GARSTANG.

SIR,—In your issue for June 13th Dr. Rowland Fothergill asks a series of questions that I presume he imagines are posers for the advocates of the trade union. I had hoped that abler pens than mine would deal with him, but in the absence of any better critic I will return to the charge.

If the thoughtful reader will ponder the questions asked he will see that every one, with the exception of Question 7, is just as much an argument against the trust fund as it is against trade unions. Let me give an illustration. If, in Question 1, I substitute the word trust for trade union, it will be seen that the argument cuts both ways, and I am entirely in agreement with Dr. Fothergill that the difficulty in the future will be to ensure that men will stick to what they say. Neither trust nor trade union can force them to do so. If, however, a fund is of any use in helping them, we say that fund must be protected and that it can only be protected efficiently by means of a trade union. If Dr. Fothergill will say that he does not believe in any fund, trust, or trade union, then we are on entirely different ground, but I had always treated him as a believer in the trust. His latest effusion seems to give the lie to that belief.

With regard to Question 7, if Dr. Fothergill will turn to the Osborne judgement, he will find that he has the misfortune to differ from Lord Justice Farwell in the matter. Need I say more?—I am, etc.,

PERCY C. RAIMENT,
General Secretary, National Medical Guild.

London, W.C., June 20th.

SIR,—Dr. Courtenay Lord (p. 1385) speaks of a referendum to ascertain the opinions of the profession. The Representative Meeting directed that not only should *all* members of the profession be invited to the meetings at which the subject was to be discussed, but that all should vote and a separate count of members and non-members be sent to the head office, and that a card vote should be taken if the numbers at the meetings were insufficient. As Chairman of the South-West Essex Division (at that time), I directed that prepaid postcards, with several questions set out so that simply a cross was needed to reply, should be sent out.

Only one-fifth took the trouble to reply, which, as things go now, I suppose is a good percentage, yet it is not enough to represent the opinion of the Division, and any decision arrived at by such means would probably be repudiated afterwards. No such decision will, of course, be arrived at unless the other areas reply in larger ratio. It is most disappointing to those who have tried to get at some plan to consolidate the profession.—I am, etc.,

HARDING H. TOMKINS,
Representative, South-West Essex Division.

Leyton, N.E., June 20th.

THE RESPONSIBILITY OF THE SUICIDE.

SIR,—Probably like most of your readers, I weary for Dr. Mercier's letters. For wit, dialectic skill, and literary style they are unsurpassable. I ventured to intervene in this discussion in the hope that Dr. Mercier would do better, for his first letter was not up to his level. I am sorry if I misrepresented his meaning, but he seemed to imply that the generally accepted idea of suicide being

cowardice was something foreign grafted on to the Christian morality by the early Churchmen. It may be true that this idea is derived mostly by inference from the actual sayings of Jesus, but the same objection, if objection it be, can be brought against the greater part of the system of Christian ethics which has undergone, and still is undergoing, evolution. I quoted Aristotle to show that the idea was pre-Christian, and also to show that the Recorder of York was speaking by the book. The fact that Aristotle does not agree with Dr. Mercier was not put forward to prove Dr. Mercier wrong; by no means, for a live Dr. Mercier is worth more than a two-thousand-years-dead Aristotle. I took the liberty of making a crude paraphrase of the sentence about the difference between martyrdom and suicide being more a matter of casuistry than of fact. It seems to me that it is a question of both. But there was just the possibility that Dr. Mercier, knowing the double meaning of the term "casuistry," purposely played on that double meaning. If he will work out for us the difference between them then much of his case will go. To support his thesis he poses us with problems in casuistics which, for the most part, are so easily soluble as to destroy his case completely. The "fraudulent trustee on the brink of discovery which will disgrace his family and bring down the grey hairs of his parents in sorrow to the grave" (in the true Adelphi style), finding that "his immediate death will restore their property to the orphans"—presumably by defrauding some life insurance company—dies by his own hand. Yet, with a liberal supply of green light and nice slow music, the improbable tragedy would not go down so well with the gallery as would the act of some burly ruffian who bludgeoned this supposititious villain out of existence. No jury, however, would return a verdict of justifiable homicide in this latter case, though it would be a nobler crime than suicide. Surely these hard cases are not the best that Dr. Mercier can imagine?

I felt sure that, sooner or later, he would refer to the case of Captain Oates. The gallant band of explorers were twenty miles from a dépôt; their food was giving out. Oates was unable to march; in fact he was dying. There was the chance that without him they would reach safety, and the certainty that with him they could not; and he gave up for their sakes the last few flickering hours of his life. Greater love hath no man than this. Do not let us smudge that picture of heroism by the misuse of a term that might imply reproach: *favete linguis*. The martyr who gives his life for his creed and the hero who gives his life for others do not commit self-murder; they do not seek to escape painful things or disgrace; they do not annihilate themselves; they do not renounce their personality. They do not take life; they give it. It would be a sad thing if it ever occurred to a coroner's jury to call the self-sacrifice of a hero suicide, justifiable or otherwise.—I am, etc.,

London, S.W., June 23rd. ARCHIBALD LEITCH.

HALFPENNY MUSINGS ON HALFPENNY STAMPS.

SIR,—Whilst laid by the heels after an operation in a nursing home I have had plenty of time to cogitate on things in general, and on halfpenny stamps in particular. I want to know whether any of your numerous correspondents (philatelists by preference) can tell me why there are two distinct kinds of halfpenny in use at the present time—namely, the halfpenny adhesive and the halfpenny postcard, and if also they can further oblige me by telling me and your numerous readers why the former have our honoured King's portrait supported by two porpoises—(?) dolphins rampant. I am not sure of my terms; but it is curious that these same devices are on the coat of arms of the County Borough of Brighton, where the last meeting of the British Medical Association took place! Again, the same portrait on the halfpenny postcard has for its supporters the caduceus of Hermes, adopted subsequently, I believe, as the symbol of medicine, and the emblem of our old friend Aesculapius! Can it be that this Radical Government has thrown out these symbols as a kind of a sort of placebo to the British Medical Association?—I am, etc.,

Brighton, June 20th. M.D.

ROYAL MEDICAL BENEVOLENT FUND.

SIR,—We have read the letter of the Treasurer and Chairman of Epsom College in your issue of last week.

This letter quotes the observation made by Mr. Justice Joyce in the course of the hearing: "If either of you people know, either by inadmissible evidence or otherwise, that this legacy was intended for the other, you ought not to contest it," and proceeds: "Sir John Tweedy and Dr. West were furnished with a copy of Mr. Crosse's proof, which in our view makes it clear that Miss Glenny intended the legacy for Epsom College," and proceeds to state the effect of Mr. Crosse's proof.

The suggestion conveyed by this part of the letter of the Treasurer and Chairman of Epsom College is that Sir John Tweedy and Dr. West, having in their possession copies of Mr. Crosse's proof, ought to have been convinced, and ought not to have contested the case further.

With all respect we venture the opinion that this suggestion is unfair and ought not to have been made, since Sir John Tweedy and Dr. West did not personally see Mr. Crosse's proof till long after the judge had delivered judgement. This fact must have been known both to the Treasurer and Chairman of Epsom College, since Mr. Crosse's proof was sent to Sir John Tweedy and Dr. West in pursuance of a resolution of the Council of Epsom College passed at a meeting held on January 14th, 1914, Mr. Justice Joyce's judgement being given on December 16th, 1913.

Besides this, the letter of the Treasurer and Chairman of Epsom College is based on the assumption that "any impartial and competent person" would be convinced by Mr. Crosse's proof that the legacy in question was intended for Epsom College. The evidence Mr. Crosse was prepared to give was before us at the hearing, and in our view, and in the opinion of our counsel, it proved conclusively and without any possible question, even if there had been any doubt before, that the legacy was intended for the Royal Medical Benevolent Fund.

To support this view we should like to have set out in this letter Mr. Crosse's proof in full, but we are afraid it would make the letter too long.

It will be remembered that Miss Glenny made several wills, and that a legacy was left in the second will to the British Medical Benevolent Fund, the legacy remaining throughout all later wills but the name being altered subsequently to the Royal Medical Benevolent Fund. Mr. Crosse's proof of evidence as to this second will is as follows:

> The next will is dated March 10th, 1902, and I produce her instructions in my own handwriting taken down at the dictation of the testatrix.
>
> When I saw her by her request at Highbury and took these instructions she told me she was leaving charitable legacies to those charities she and her family had subscribed to, and that the whole of her will was based upon the groundwork which her sister had written out as instructions for a will she (the sister) intended to but never did make.
>
> I took the instructions from the testatrix's dictation.
>
> The word "medical" was written down shortly for amplification afterwards—also "lepers."
>
> At the end of these draft instructions is written in pencil by a clerk "British Medical Benevolent Fund, 84, Brook St., Gros. Sq.," and this was the name under which the bequest was inserted in the will.

It will be understood that the Royal Medical Benevolent Fund did not suppress any evidence at the hearing, as might be inferred from the letters which have been published in your paper. What happened was that when counsel for Epsom College asked Mr. Crosse a question, as to which there was a doubt, he told him not to answer until the judge had ruled whether it was admissible or not, and the judge then ruled whether that particular question should be answered or not in accordance with the well-established principles.

Now, the rule of law as to the interpretation of wills is that in cases of doubt documentary evidence, dating from the time the will was made, may be produced to make intentions clear—that is to say, that if, for example, a legacy was left to John Brown, and there were two John Browns, written evidence, dating from the time the will was made, may be produced to show which John Brown was really intended to be benefited; but, on the other hand, evidence which amounts merely to personal recollection and which is not supported by written memoranda of any sort, or which amounts merely to an expression of

opinion, is inadmissible and must be disregarded, and the shortest consideration will show that this rule of law is essentially right in the public interest. It might frequently cause the wishes of a deceased to be ignored if it was possible for his written testimony to be overridden on the evidence of a living person that the written wishes of the deceased were not in accordance with the living person's opinion of the deceased's intentions at the time.

Applying this well-established rule to the present case, we find that there are two John Browns who claim the legacy of £500 left to the Royal Medical Benevolent Fund —that is, the Royal Medical Benevolent Fund and Epsom College; and we find the only written memorandum affecting the matter is stated in Mr. Crosse's proof to be the word "medical" written down shortly for amplification afterwards, and the amplification "British Medical Benevolent Fund, 84, Brook Street, Grosvenor Square." The British Medical Benevolent Fund was in existence at the date when these instructions were given, and it was in fact managed from the address, 84, Brook Street, Grosvenor Square, the address of the late Sir William Broadbent.

We do not think we are overstating the case when we say that this written memorandum must conclusively prove to "any impartial and competent person" who bears the rules of evidence we have referred to in mind (and who disregards, as he is bound to disregard, Mr. Crosse's personal opinion or recollection unsupported by written memoranda) that the legacy was always intended for the Fund which has received it, and that if Epsom College had received it the wishes of the deceased would have been overridden.

Mr. Crosse's proof refers to only one other fact, as distinguished from matters of opinion or recollection—that Miss Glenny and her family had in their lifetime subscribed to Epsom College. It is clear that this fact of itself does not prove that Epsom College were entitled to the legacy. The fact was given by Mr. Crosse in evidence at the hearing, and the judge dealt with the fact in his judgement as follows:

> Now a college and a benevolent fund are essentially different things. If there were no other circumstances in the case, I should consider it more probable that the testatrix referred to and intended the fund rather than the college. Why should she refer to a college as a fund? She was not an illiterate person. For many years she had been an annual subscriber to the college, and by reports, I think also voting papers and otherwise, she must have had her attention repeatedly called to the change in its designation: or at least to its real title. She must have known the charity as a college; and she may well, having aided it by an annual subscription all her life, have chosen to benefit a different medical charity by a legacy at her death.

We apologize for the length of this letter, but the suggestions contained in the letter of the Treasurer and Chairman of Epsom College seemed to us so unfair to our clients that we thought it necessary to write fully in justice to them.—We are, etc.,

London, S.W., June 23rd. BEALE AND CO.

ELECTRICAL TREATMENT OF MILK.

SIR,—In your note on the above subject in the JOURNAL of June 20th inst. you refer to "Dr. Beattie's method." It is true that many of the experiments on which my report is based were done under my control in my laboratory and at the corporation milk dépôt, that certain modifications in the apparatus took place as a result of these experiments, and that a mass of scientific detail which has not yet been published was thus obtained, but it would be unfair to my co-worker (Mr. F. C. Lewis, Assistant Lecturer in Bacteriological Methods in this university) to allow credit which really is his to be given to me.

The apparatus was designed by Mr. Lewis and all the preliminary work was carried out by him. When I took up the position of Bacteriologist to the city of Liverpool, I was asked to report on the process, and following that report an experimental plant was erected in my laboratory, so that the work that had already been done could be repeated and amplified under my direct supervision, but the plant then put up was that previously in use and designed by Mr. Lewis, and therefore, if any name is to be attached to the method, it should be that of Mr. Lewis.—I am, etc.,

J. M. BEATTIE,
City Bacteriologist.

Liverpool University,
June 22nd.

"THEY MANAGE THESE THINGS BETTER IN FRANCE."

SIR,—Under the above heading, in your issue of May 23rd, you briefly chronicle the conviction in France of "Dr." Macaura (p. 1146). During his career in England he was not interfered with. Our police have power to act in cases of obtaining money under false pretences, but there exists no public prosecutor or authority charged with the duty of putting the law in force. In England Macaura held meetings to demonstrate his cures at the Free Trade Hall in Manchester and in the Albert Hall, London. He must have spent an enormous sum on advertisements. It is, however, not only in France that they manage these things differently. There are some parts of our empire where efficient laws are provided, and this, it appears, is the case in the Transvaal. There an unregistered person, whether qualified or not, is subject to heavy punishment, fine, or imprisonment if he attempts to practise. The law has recently been confirmed on an appeal to the Judicial Committee of the Privy Council against a judgement of the Supreme Court of South Africa, which had upheld a conviction in the lower courts. The petitioner declared that he was qualified and registered in Natal; but as he was for some reason unable to register in the Transvaal, he had dropped his titles and had styled his "establishment" merely a "Remedy Dépôt" under his name only. The *Times* report gives the judgement of the Privy Council as delivered by the Lord Chancellor.

> He pointed out that Section 39 of the Transvaal Ordinance dealt with two distinct offences—the first, that of wilfully and falsely pretending to be or taking or using the name or title of a physician, doctor of medicine, licentiate in medicine or surgery, surgeon, general medical practitioner, apothecary, dentist, chemist, or druggist, or any name, title, addition, or description implying or calculated to lead people to infer that he was in any of such professions. The second offence was committed by any unregistered person who practised or did anything or performed such acts as specially belonged to any of these callings. The petitioner appeared to admit that he had practised as a dentist and was not registered, and, if so, he had committed the second offence. At all events, the jury had so found as a matter of fact, and their lordships had no power to review or upset that finding.

The report of the Select Committee on Secret Remedies and the evidence which will be published ought to give strength to the general movement for medical law reform, whether or not the Committee recommend legislation. During many years I have urged that the case for effective amendment of the Medical Acts is overwhelming, and have pleaded for a Royal Commission to get together evidence with indisputable authority. Latterly I have suggested that it is within the power of the Association unaided to prepare a mass of incontrovertible testimony which the educated public would understand and accept, and which statesmen and the Legislature would be compelled seriously to consider. —I am, etc.,

Earlswood Common, May 30th. HENRY SEWILL.

MURMURS IN DILATED HEARTS AND THEIR EXPLANATION.

SIR,—Dr. West's interesting article in the JOURNAL of June 20th emphasizes the difficulty of explaining the absence of murmurs in the normal circulation. Although he refers to transitory murmurs diagnosed as stenosis, etc.—not uncommon in nervous subjects, when examined for life insurance, but passing off while waiting for the patient to get composed—he has evidently omitted to take advantage of the fact, as well as of the existence of the mimic aneurysm of Paget. The cardio-vascular system is composed of muscle specialized to blood stimulation, just as doctors are often specialized to night-bell, etc. The passage of the blood in health can never be the same as the conduction of water in tubes. The contractibility and irritability of muscle are factors which suit the tubes to their contents. Of course disease alters muscle, although there is a good margin, and the cures of so-called arterio-sclerosis point their moral.—I am, etc.,

London, W.C., June 20th. J. REID, M.D.

THE MILWARD FUND.

SIR,—I write to acknowledge through your columns receipt of a further subscription of £4 6s. from the Blackburn Division of the British Medical Association to the above Fund.—I am, etc.,

Cardiff, June 23rd. WILLIAM SHEEN.

Obituary.

J. H. KEAY, M.D.,

GREENWICH.

Dr. J. H. Keay of Greenwich, whose name became widely known to the profession owing to the active part he took in the discussions on the Insurance Act, died at his residence in Greenwich on June 17th at the age of 64. He had been in indifferent health for several years, and had recently been compelled greatly to diminish his activities.

Joseph Hay Keay was born at Forneth, near Blairgowrie, Perthshire, on November 13th, 1849, the second son of John Keay, farmer, of Over Forneth. He was educated at Blairgowrie, Perth Academy, and Edinburgh University, where he graduated M.A. at the age of 18, and won many prizes and scholarships. He studied theology for four years, and became a licentiate of the United Presbyterian Church of Scotland. He, however, turned to medicine, and took the degree of M.B., C.M., in 1876, and that of M.D. in 1892. He practised first in Crook, co. Durham, where he married Anna Laura, eldest daughter of Mr. L. Candler. He then went to Blairgowrie, where he practised for seven years; he became a member of the school board, and took much interest in local education. Afterwards he went to the manufacturing town of Colne in Lancashire, where he practised for ten years, and took a great interest in the building of a cottage hospital and in other municipal affairs. In 1899 he settled in Greenwich. The Greenwich Board of Guardians and later State Insurance took up much of his time. He was an active member of the British Medical Association, and represented the Greenwich Division at the Annual Representative Meetings. All his life he was a loyal member of the Presbyterian Church, and for several years was an Elder of St. Mark's Presbyterian Church, Greenwich. He leaves a widow, a son, and two daughters.



J. H. Keay.

Dr. James Pearse, who served with Dr. Keay on many Committees of the Association, writes:

Dr. Keay's activities in the work of the British Medical Association were an index of the public spirit which animated him in other spheres. He was anxious for the best interests of his profession; he served for some years on the Central Ethical Committee. Living in a poor neighbourhood, he was genuinely and unselfishly concerned with social questions; he served on the board of guardians, was much interested in the work of the recent Poor Law Commission, and found further scope for his activity in the Poor Law and Public Health Committees of the Association. His main interest, however, was in the question of State sickness insurance. Long before this became an active policy in this country he had studied the German system, and articles by him will be found scattered though various medical journals. He had paid several visits to Germany and few probably were better acquainted with the details of the State system in operation there. He was fully alive to the difficulties of the medical profession in Germany and the steps which had been taken to combat these; but he was cognisant also of the developments in the medical service which had accrued, and was, I think, especially struck with the system of convalescent institutions and the well-organized clinical centres. Thus it was natural that when the question of State sickness insurance arose in this country Dr. Keay should take a prominent part in the discussions which ensued. He did this because he was anxious to see the interests of his profession safeguarded, and also because he was convinced that there was great need for improvement in the conditions of medical attendance on the poor. He thus worked hard in the lobby of the House of Commons, in correspondence in the press, on the State Sickness Insurance Committee, at Representative Meetings, and on the committee representative of panel practitioners in London. All this activity, in addition to the work of his practice, proved too much for a man of his years, and he fell a victim to an extremely painful malady, the onset of which was undoubtedly hastened by his overwork. He suffered much, too, from the feeling, which he often expressed, that, though he had laboured for many years in an unobtrusive way for his profession, the attitude which he felt bound to assume on the insurance controversy brought him little but opprobrium, his former labours being forgotten. He felt this very acutely. But perhaps it was inevitable in one of his temperament, for there was little of the conciliator in his disposition; he was uncompromising in his views and in his expression of them. Thus he was readily misjudged, and probably few penetrated beneath the rugged exterior to his kindly and unselfish nature. He was a Scot of the Scots, a son of the soil, passing at an early age to the university, steeped in theology. For social position or for money he cared nothing; his main desire was the service of his fellows. In this he spent himself, and though all may not have agreed with his methods or his aims, there can be none to withhold admiration from the spirit which animated him.

JAMES NEIL, M.D.Aberd.,

MEDICAL SUPERINTENDENT, WARNEFORD MENTAL HOSPITAL, OXFORD.

We regret to announce the death of James Neil, M.D., Medical Superintendent of the Warneford Asylum, Oxford, which took place in a London nursing home on June 13th. Dr. Neil had undergone an operation for duodenal ulcer, which had been completely successful, but he succumbed to an intercurrent affection.

James Neil was the son of the Rev. Robert Neil of Glengairm, where he was born in 1848. He was educated at Glengairm, and entered Aberdeen University in 1873. He there took the degree of Bachelor of Medicine in 1877, and four years later that of Doctor of Medicine. In 1877 he became assistant physician to the Royal Asylum, Aberdeen, and in 1878 assistant medical officer to the Cheshire County Asylum at Macclesfield, a post which he held for five years. Subsequently he was assistant medical officer to the Borough Asylum at Portsmouth. In 1887 he went to the Warneford Mental Hospital as assistant medical officer. In 1897 he was appointed superintendent of the Warneford Asylum, one of the recommendations in support of his candidature being an unsolicited testimonial from the medical practitioners of Oxford, so great was the esteem in which he was held in the city. In 1901 he married Mrs. J. M. Cravie.

During his administration of this institution many improvements have been carried through, the last of which was a new block of buildings, now almost completed, to be used for the provision of better accommodation for the nursing staff.

Dr. Neil was the author of several valuable contributions to the literature of mental diseases. In dealing with cases of mental disease he combined in a peculiarly fortunate way a keen, far-sighted judgement, a large-minded charity, and a just appreciation of the necessity for business methods in administration. He was thus admirably suited to the post he held, and he won in the fullest degree the respect of the governors of the Warneford Hospital, the staff, and the patients under his charge.

He was generally the consultant of the district on difficult cases of incipient mental diseases, and at such times his counsel was always helpful.

He preserved a keen interest in two recreations, first in Scottish history, and secondly in fly-fishing. He was the author of a biography, *Ian Roy of Skellater*, a Scottish soldier of fortune, and he never visited Scotland without enlarging his knowledge of bygone heroes of his country. One of his chief delights was in graveyard inscriptions.

In those who had the benefit of his acquaintance he inspired a feeling of respect and affection which will long remain. Though long resident in England he preserved, both in manner and in mind, the distinctive attributes of the Scot, a fact which served to endear him to both his Scottish and English friends. As a member of a small debating club consisting of medical men to which Dr. Neil belonged, the writer preserves a lively recollection of his many speeches; no matter what the subject, Dr. Neil always spoke with a fullness of knowledge and a kindly humour.

He leaves a widow, with whom the greatest sympathy is felt in her loss.

DR. C. WILLIAMS, Acting Medical Superintendent of the Warneford Hospital, writes: He was an exceptionally good as well as clever man, and as an administrator, business man, and master of method I never met his equal. By his unceasing energy and untiring devotion to its interests he brought the institution over which he presided to the highest pitch of perfection in every department, and his loss is a most serious one, and, on account of his constant thought for the comfort and happiness of those around him, is deplored by all connected with it. By no one, however, is his death more deeply deplored than the writer of these lines, who was associated with him for many hours daily for the last twelve months of his working life, and who not only learnt much from him, but also to love him for his genial, kindly nature, and especially for his numerous acts of consideration and kindness to him personally.

THE LATE PROFESSOR DEAN OF ABERDEEN.

ON opening their classes the day after Dr. Dean's death, the Professors of Anatomy (Dr. Reid), Natural History (Dr. J. Arthur Thomson), Chemistry (Dr. Japp), and Medical Jurisprudence (Dr. Matthew Hay) all paid tributes to his memory.

In the course of his remarks, Professor Matthew Hay said:

We meet to-day in the deep shadow of a great loss. Professor Dean has passed from us after a long and trying illness. I speak with a sincere feeling of personal grief, for I have had the privilege of a fairly intimate acquaintance with Dr. Dean ever since he was a student in this university, and there is no one in my academic relations in all these years for whom as a man and as a scientific worker I had come to entertain stronger feelings of friendship and respect. Professor Dean's personal qualities endeared him to all who knew him. He was to the last, in spite of his great ability and scientific achievements, one of the most modest and unobtrusive of men. But he was no recluse interested only in his own pursuits. He was a man of wide human interests, and of a most genial and sympathetic disposition. There must have been many in this city like myself who had frequent occasion to seek his opinion or his assistance in matters within his own department of medical science, and I am sure that there was never one of us who was not received with a glad face and with the greatest patience and kindness. Professor Dean's relations with his scientific *confrères* in all parts of the country were equally happy. I have had frequent personal opportunity of knowing this, especially since his illness gradually became known. Professor Dean's scientific reputation was distinctly high. At the Lister Institute and elsewhere he did some very valuable original research that has made his name known throughout the scientific world. One of the chief merits of this work was its scrupulous accuracy. It was enough that a certain conclusion should have had Dean's name attached to it for it to be accepted unquestioned by all other workers. This was really a great tribute in these days when inadequately supported conclusions are not infrequently put forward. For the moment our most heartfelt feelings are those of profound sympathy with his wife and family in their great bereavement. We hope that this sense of an irreparable loss will be softened by the assurance from all sides of the permanent worth to humanity of Professor Dean's labours. His life has been cut short but it has not been lived in vain.

IT is with deep regret that we announce the death, on June 5th, of Inspector-General WILLIAM EDWARDS BRETON, M.D.(retired). He entered the Naval Medical Department on September 30th, 1874. From 1874 to 1880 he served on the East Indian and Pacific Stations. In January, 1880, he was appointed to H.M. Dockyard at Sheerness, and transferred in December, 1882, to the Royal Naval Hospital, Cape of Good Hope, where he served until February, 1886. On returning to England he was appointed to H.M.S. *Revenge* at Queenstown, where he served for some months. In July, 1886, he was appointed to H.M.S. *Kingfisher*, and in September was promoted to the rank of staff surgeon. He served subsequently on the East Indian Station until 1888, when he was appointed to H.M.S. *Active*, at that time a unit in the old training squadron. In May, 1889, he was appointed to H.M.S. *Amphion* on the Pacific Station; this ship was transferred to the Mediterranean in 1891, and paid off the following year. He next served in H.M.S. *Superb*, coast guard ship at Greenock, from March, 1892, to March, 1894, when he was appointed to H.M.S. *Trafalgar*, in the Mediterranean. He was promoted to Fleet Surgeon in February, 1895, and in January, 1897, was appointed to H.M.S. *Prince George*. In March, 1898, he was appointed to H.M. Dockyard at Portsmouth, where he served until June, 1901. In October, 1901, he was appointed to the Royal Naval Hospital at Haulbowline. In August, 1902, he was promoted to Deputy Inspector-General and temporarily reappointed in that rank until April, 1903. In December, 1903, he was in charge of the Royal Naval Hospital at Bermuda; he returned to England in April, 1905, on the reduction of that establishment. In November, 1906, he was appointed to the Royal Naval Hospital at Plymouth as Senior Deputy Inspector-General. He served in that capacity until December 31st, 1907, when he was promoted to Inspector-General. He retired on May 30th, 1908. He was in December, 1908, made by the King of Sweden a commander of the Royal Order of Wasa for services rendered to two Swedish naval officers at the Royal Naval Hospital, Plymouth.

A CAREER of great usefulness was terminated on the morning of June 11th by the death at his residence in Edinburgh of Dr. HENRY IRVINE-JONES at the early age of 55. After graduating M.B., C.M. at the University of Edinburgh in 1896, Dr. Irvine-Jones acted as assistant in various parts of the country, and fifteen years ago he settled down in practice in the Gorgie district of Edinburgh, where he has since been a familiar figure and a marked personality. In this densely populated industrial quarter Dr. Irvine-Jones rapidly acquired a large practice. He was a man of unbounded enthusiasm for his profession and an indefatigable worker. Some idea of his capacity for work may be gathered from the fact that in 1909 he received the degree of M.D. of Edinburgh University for a thesis giving an analysis of over 5,000 obstetric cases personally conducted. Added to his professional skill and practical common-sense methods, his cheerful manner endeared him to his patients. He was a man of a big heart, a staunch friend, and in many a humble home he will long be missed for his kindness and acts of unostentatious generosity. It was little wonder that such overwork began some years ago to break down a constitution naturally strong and robust. After a breakdown with heart weakness he made a partial recovery, but chest complications set in later, and to these he eventually succumbed after a long illness. He leaves a widow and four children. He accepted work

under the Insurance Act, and had one of the largest lists of patients. The funeral took place at Montrose on Monday, June 15th.

Dr. Robert Burns Scott, M.B., C.M., died at Easter Manbeen, near Elgin, on June 7th. Dr. Scott, who was 42 years of age, was a Morayshire man, and graduated at Aberdeen University in 1899. After acting as assistant to the late Dr. Mitchell, of Old Rayne, Aberdeenshire, and in Burnham Market, Norfolk, he entered into partnership with Dr. Badcock, Staveley. A few years ago he returned to his native county, and at Easter Manbeen he carried on his late father's farm, and built up a little practice in the surrounding district. In spite of failing health owing to chest trouble, he continued to work among his country friends, by whom his services were much appreciated. He put up a good fight to the very end, being of an optimistic, cheery disposition, and his early death is mourned by his many friends and medical colleagues, whose sympathy goes out to his widow and four young children.

The death occurred on April 23rd of James F. Lovegrove, of Thirroul, New South Wales, at the age of 78. Dr. Lovegrove, who was born at Bray, Berkshire, received his medical education at Guy's Hospital, and took the diplomas of M.R.C.S.Eng. and L.S.A.Lond. in 1860. Before going to New South Wales he practised for some time at Timaru, New Zealand, and held the post of visiting surgeon of the Timaru Hospital. He had practised in New South Wales since 1895, principally at Gunning, where he was Government medical officer, and a Justice of the Peace. Afterwards he practised at Mittagong for about two years. He was a member of the British Medical Association and a worthy exemplar of the best traditions of the profession. Some two years ago he retired from practice and went to Thirroul, where he resided until his death. He leaves a widow and two daughters, one of whom is known for her skill with pencil and brush.

Colonel Harry Beecham Briggs, Bombay Medical Service (retired), died in Edinburgh on June 9th. He was born at Oxcombe on July 25th, 1851, educated at King's College Hospital, London, took the diplomas of L.S.A. and M.R.C.S. in 1875, and the degree of M.D.Lond. in 1876, and entered the Indian Medical Service as surgeon on September 30th, 1878. He became surgeon-major on September 30th, 1890, and lieutenant-colonel on September 30th, 1898; two days later, on October 2nd, 1898, he was placed on the "selected list" for promotion to colonel, for services in the Tirah campaign of the preceding year. Such special promotions have been very rarely given in the Indian Medical Service, only in some dozen cases in all in the history of the service. He was promoted to colonel on July 10th, 1905, and retired on January 1st, 1909. In his first years in India he served as civil surgeon of Sholapur (1880–83) and of Satara (1884–85). In 1885 he was posted to the 12th Bombay Infantry, now the 112th Infantry, in which he did most of his service. His war services included the Burma campaigns of 1885–87, when he received the medal with a clasp; and the Tirah campaign on the North-West Frontier of India in 1897, when he was mentioned in dispatches in the *London Gazette* on April 5th, 1898, and gained another medal and clasp, besides the special promotion mentioned above.

Surgeon-Major-General Robert Lewer, Army Medical Staff (retired), died at Wickham Lodge, Southsea, on May 29th, aged 78. He was the eldest son of Mr. Edward Lewer, of Wimborne. After matriculating at London University, he entered King's College Hospital, and before qualifying served in the Royal Navy during the Russian war of 1855, when he took part in the expedition to the Baltic and the bombardment of Sveaborg, receiving the medal. He took the diploma of M.R.C.S. in 1856, that of L.S.A. in 1857, and that of L.R.C.P.Edin. in 1860. Entering the army as assistant surgeon on August 1st, 1857, he became surgeon in 1869 and surgeon-major in 1873, and after attaining the highest rank as surgeon-major-general retired on October 3rd, 1895. During the regimental period, which did not come to an end till half-way through his nearly forty years of service, he served for the greater part of the time in the Royal Horse Artillery and in the 9th Lancers. His war service in the army comprised the Afghan war of 1878–80, when he was present in the night attack on the rear guard on June 6th, 1879, at the operations around Kabul and Sherpur, the defence of Sherpur cantonments, the famous march under General Roberts from Kabul to the relief of Kandahar, and the battle of Kandahar on September 1st. For his services he was mentioned in dispatches, and received the Afghan medal with two clasps, Sherpur and Kandahar, and the bronze star given for Roberts's march.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Johannes Assmuth, for many years a leading neurologist of St. Petersburg, aged 76; Dr. Theodor Lippmann, a well-known practitioner of Berlin, aged 72; Dr. Samuel O. L. Potter, for many years professor of the principles and practice of medicine in the Cooper Medical College, and since 1896 in the College of Physicians and Surgeons, San Francisco, author of a work entitled *Materia Medica, Pharmacy, and Therapeutics*, which has gone through many editions, and of other writings; Dr. Friedrich Schäfer, reorganizer and director of the medical service of the Siamese army; and Dr. M. Wolters, professor of dermatology in the Medical Faculty of the University of Rostock.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The following degrees have been conferred:

Degrees.

M.D.—A. E. A. Carver, G. B. Fleming.
M.C.—W. S. Perrin.

Examinations.

The following candidates have been approved at the examinations indicated:

Second M.B.—*Part I, Anatomy and Physiology.*—A. M. Ahmad, D. J. Batterham, D. C. Beaumont, W. H. Blackburn, T. A. Butcher, P. D. Chapman, R. S. Corbett, G. P. Crampton, J. M. Downie, A. Drewe, J. R. Earp, H. W. Eddison, R. W. Fawcett, L. P. L. Firman-Edwards, G. A. Fisher, R. French, E. O. Goldsmith, G. A. Goolden, W. S. Gross, E. A. H. Grylls, J. S. La Fontaine, J. H. Le Brasseur, G. Lyon Smith, W. J. MacCombie, H. H. Marten, C. K. Mowll, D. M. Muir, C. L. Odam, A. Orr-Ewing, R. R. Powell, I. M. Rattray, D. W. R. Richardson, E. N. Showell Rogers, O. S. Thompson, G. H. Ward, C. R. H. Weekes, A. Winfield.

Third M.B.—*Part I, Surgery and Midwifery.*—S. G. Askey, W. F. Bensted-Smith, E. C. Bradford, F. L. Cassidi, G. M. Cowper, K. B. Dickson, C. L. Gimblett, C. H. M. Gimlette, H. Hartridge, J. B. Hunter, C. C. Kerby, F. G. Lescher, C. Madge, R. W. Meller, R. K. Merson, A. B. Pavey-Smith, J. W. Pigeon, W. B. Purchase, E. C. Rayner, G. D. Read, J. R. Rees, J. E. Sharp, A. G. Shera, H. A. Smith, R. Stansfeld, C. R. A. Thacker, J. R. A. Todhunter, H. G. Wiltshire.

UNIVERSITY OF EDINBURGH.

University Court.

Post-graduate Courses.

At the meeting of the University Court on Monday, June 15th, Principal Sir William Turner in the chair, it was agreed, on the recommendation of the Senatus, to grant the use of rooms in the university for the purposes of the Edinburgh post-graduate courses in medicine to be held in August and September.

Surgical Pathology.

Mr. James M. Graham, M.B., Ch.B., was appointed University Lecturer on Surgical Pathology in the Department of Surgery.

Usher Institute.

A statement of the bacteriological work performed for the city in the Usher Institute of Public Health and of the expenses incurred in connexion therewith during the year ended May 15th was submitted. The other business was of a non-medical nature.

VICTORIA UNIVERSITY OF MANCHESTER.

The following have been recommended for the degree of M.D.:

M. Moritz (commendation), G. Renshaw (commendation), G. W. Bury, S. J. Clegg, A. H. Holmes, A. Porter, Charlotte E. Warner, H. V. White, W. A. B. Young.

QUEEN'S UNIVERSITY OF BELFAST.

Honorary Degrees in the Medical Faculty.

AT the meeting of the Senate on June 18th the Standing Committee presented its report, which dealt with a large number of important questions, one being that of honorary degrees in the Faculty of Medicine. The original statute gave power to grant honorary degrees in all the various faculties save that of medicine. Strong exception was taken to this restriction at the time, and the matter was brought before Convocation at its first meeting; a resolution asking the Senate to consider the question went through the hands of various committees, and the opinion of counsel was finally taken; the opinion was to the effect that the restriction was illegal; the Standing Committee recommended the Senate to adopt the revised statute which read as if the words "other than degrees in medicine" were not contained therein. No other university or licensing body in Ireland suffers from this restriction; the old Queen's University, its successor the lately defunct Royal University, Trinity University of Dublin, the National University, the Royal Colleges of Surgeons and of Physicians, all had or have the power of granting an honorary medical degree, and it is hoped the Queen's University of Belfast will soon have the same privilege. It is felt that occasion may arise when the grant of such a degree would be appropriate, while an honorary degree in another faculty would be meaningless. It would be required that the recipient should already be registered.

Lecturer in Applied Anatomy.

Mr. P. T. Crymble, M.B., F.R.C.S.Eng., has been elected to the new lectureship of Applied Anatomy in the University. Mr. Crymble has had a distinguished career in this school, and since graduation has done some valuable work in anatomy. His appointment will carry both the confidence and the best wishes of the profession and of the school.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

Surgery.—*C. D. Day, *†G. Mes.
Medicine.—*L. B. Clarke, †H. Dudley, *†A. J. Frädersdorff, *R. J. Hearn, *G. W. Maw.
Forensic Medicine.—R. J. Hearn, C. Ward.
Midwifery.—C. D. Day, A. J. Frädersdorff, G. Mes, C. Ward, J. A. Watson.

*Section I. †Section II.

The diploma of the Society has been granted to Messrs. G. Mes and C. Ward.

Medico-Legal.

ALTERATION OF AGREEMENTS.

ABSENCE OF DUE NOTICE.

ON May 8th the Divisional Court granted Dr. Alfred Salter, of Bermondsey, a rule for a *mandamus* directing the Insurance Committee of the County of London to show cause why it should not reinsert his name on the panel.

The case came before a Divisional Court consisting of Justices Bray, Avory, and Atkin. Mr. Gore-Browne, K.C., and Mr. Neilson, instructed by Messrs. Hempsons, appeared in support of the rule. Mr. Leslie Scott, K.C., M.P., and Mr. T. Mathew, instructed by Messrs. Charles Russell and Co., showed cause against the rule. The facts of the case appear sufficiently from the text of the following verbatim report of the judgement, delivered on June 23rd:

Judgement.

Mr. Justice Bray: The judgement I am about to read is the judgement of the court.

This was an application by Dr. Salter to make absolute a rule for a mandamus directing the London Insurance Committee to insert his name in the panel or medical list (I will call it "a medical list") for the year 1914. The facts were not in dispute, and were as follows:

Dr. Salter's name was entered by the London Insurance Committee (whom I will call the Committee) on the first medical list formed on January 14th, 1913. Before entering upon his duties he signed a document in the form of a letter directed to the Committee called an "agreement between medical practitioners and Insurance Committee for the period ending 14th April, 1913," by which he agreed to undertake the medical attendance and treatment of insured persons upon the terms and conditions mentioned therein, and desired his name to be included in the medical list for a defined area. I will call this the first agreement. The first clause incorporated the National Insurance Act, 1911, the National Health Insurance Regulations, 1912, or other Regulations for the administration of medical benefit made by the Commissioners and in force for the time being in the area, and provided that the agreement should cease to have effect in the event of the Commissioners exercising any of the powers conferred on them by the proviso to Subsection (2) of Section 15 of the Act. Clause 11 is as follows:

> The practitioner shall order in the form provided by the Committee for the purpose such drugs and prescribed appliances as are requisite for the treatment of any patient other than those which the practitioner may under this agreement, or any agreement hereafter to be made with the Committee, himself supply. Provided that if the practitioner orders any drug not included in the list from time to time supplied to him by the Committee, he shall give such order on a special form provided by the Committee for that purpose.

On the 18th March he was invited by the Committee to sign a further document, which he did. The further document, which I will call the second agreement, was in the following terms:

> I hereby agree that the agreement signed by me and made with the London Insurance Committee by which I undertook to provide medical treatment for insured persons under the National Insurance Act, 1911, shall, with the modifications referred to below, continue in force after 14th April, 1913, subject only to the right of the Committee to vary the terms of the agreement in accordance with the regulations of the Insurance Commissioners as from the commencement of any subsequent medical year by giving notice to me not later than two calendar months before the date fixed by the Committee for the revision of the medical list, and to my right to determine the agreement at the end of the current or any subsequent medical year by giving notice to the Committee not later than one calendar month before the said date of revision. I further agree that the method of remuneration contained in the said agreement for the period to 14th April, 1913, shall remain in force during the continuance of the said agreement, subject to the right of the Committee to vary the terms as aforesaid, and that I will accept for the purposes of the said agreement, and as a substitute for the form contained in the second schedule thereto the form set out in the schedule hereto.

In pursuance of Clause 11 of the first agreement the Committee provided Dr. Salter with books of forms for medical prescriptions, containing carbon sheets in order that orders for drugs might be given in duplicate. The duplicate forms were for the convenience of the chemist in order that he might keep a record of the prescription. Dr. Salter did not write the prescriptions in this form in duplicate, and his attention was called to this by the Committee by letter of the 16th July, 1913. Dr. Salter answered this by letter of July 21st, in which he said that he refused to write a copy of the prescription for the chemist's bookkeeping purposes, as it was entirely outside any obligation laid upon him by the National Insurance Act. On the 21st August the Committee replied by calling his attention to Clause 11 in the first agreement, and requesting him to conform to it. Dr. Salter answered this on September 17th, declining to write duplicates. He said: "I am advised on the highest legal authority that I am under no obligation in this respect. I am not only perfectly willing, but am desirous of conforming to all or any reasonable requirement of your Committee, but to call upon me to act as a clerk to the chemist is unreasonable," and he explained the additional time it involved. The Committee did not reply, and took no further step in that matter. On the 19th September, 1913, the National Health Insurance Joint Committee made some provisional regulations under Section 15 of the National Insurance Act, 1911, one of which authorized the Committee to fix the date of revision of the medical list at any date between November 1st in any year, and the succeeding January 11th; and in pursuance the Committee fixed the date for the next revision of the list for January 8th, 1914. On the 7th November, 1913, the Committee sent a circular letter to Dr. Salter and the other doctors on the medical list as follows:

> Dear Sir,—The Insurance Committee for the County of London are informed by the Insurance Commissioners that it may be desirable to make some variation in the form of the agreement with the practitioners on the medical list for the county. I am therefore directed by the Committee to give you notice, as a matter of form, that the terms of the agreement will be varied as from the commencement of the ensuing medical year—namely, 12th January, 1914. A further communication on the subject will be forwarded to you as soon as possible after the Committee have received from the Insurance Commissioners the revised Regulations and form of agreement.

It will be observed that the letter gave no indication whatever as to the nature of the variations proposed. It was admitted by counsel showing cause on behalf of the Committee that this was not a good notice under the second agreement. On the 6th December the Committee sent a further circular letter to Dr. Salter in the following terms:

> Dear Sir,—With further reference to my letter of the 7th November, 1913, giving notice of the Committee's intention to vary the

terms of your agreement with them and to my letter of 19th November, 1913, I am now directed to forward for your consideration a copy of the new agreement to be entered into by practitioners who undertake the treatment of insured persons as from 12th January, 1914, which has been approved by the Insurance Commissioners. I am further directed to request that, in the event of your desiring to continue to undertake the treatment of insured persons during the ensuing medical year you will be good enough to complete the agreement and return it to me at your earliest convenience, and in any case not later than the 12th December, 1913, in order that your name may be included in the issue of the medical list for 1914.

This was accompanied by a copy of the new agreement. Clause 11 was altered and read thus: "The practitioner shall order *in duplicate on* the form provided by the Committee," etc., and the words "in duplicate" were added and the word "on" was substituted for "in." Dr. Salter signed the new agreement after striking out the words "in duplicate" and sent it to the Committee. On the 30th December the Committee wrote to Dr. Salter, and, after referring to the alteration he had made, said:

I have to inform you that the Committee regret that they will be unable to include your name . . . in the medical list for the ensuing year, unless you are prepared to sign the form of agreement including the undertaking as set out in Clause 11.

This was answered by Dr. Salter on the 6th January. He said that if the Committee would undertake to provide him with duplicating books, the use of which involved no more labour or expenditure of time than was occasioned by the writing of single slips, he was prepared to supply the prescriptions in duplicate, and on receipt of an assurance from the Committee to that effect, he would sign the agreement without alteration, but not otherwise. On the 7th January the Committee replied that they would not give such an assurance, and they sent him another form of the agreement to sign, adding:

Unless you are able to see your way to sign the accompanying agreement, the Committee regret that there will be no other course open to them but to arrange for the patients who are at present entitled to receive treatment from you to be given an opportunity of transfer to the lists of other practitioners who undertake the treatment of insured persons after 11th January, 1914.

After a further letter from Dr. Salter the Committee wrote again on the 10th January:

I have to acknowledge receipt of your letter of 9th January informing the Committee that you have written to the National Health Insurance Commission (England) on the subject of the inclusion of your name in the medical list for 1914. In reply I am directed to inform you that the Committee are not removing your name from the medical list for the ensuing year as stated in your letter, but owing to your refusal to sign an agreement which has been approved by the Commissioners under the Regulations for the treatment of insured persons during the ensuing medical year, your name cannot be included in the list of practitioners willing to give service under the National Insurance Acts, 1911 to 1913.

The Committee did not include the name of Dr. Salter in the revised medical list, and after some more correspondence Dr. Salter commenced the present proceedings.

On these facts it was contended on behalf of Dr. Salter that he had been placed on the medical list in January, 1913, and that under Section 15 (2) (*b*) of the Act he could not be removed without an inquiry, and that he had in fact been removed without an inquiry; that the agreements were *ultra vires* and not binding on him, but if they were binding they did not justify his removal. We think it is clear that the Act and the Regulations of 1912 contemplated a continuing medical list which was to be annually revised but not a new list every year (see especially Regulations 13 and 21 (2); see also Section 15 (5) (*b*), which also seems to contemplate that chemists will remain on the list unless removed after inquiry; there appears to be no reason why medical men should be in a less favourable position than chemists), and that apart from any special agreement a medical practitioner could not be removed from the list without an inquiry (see Regulation 23). Further, that the Committee by refusing to enter his name on the list for 1914 did in effect remove him from the list and without an inquiry.

It remains, therefore, to inquire whether Dr. Salter entered into any binding agreement with the Committee by which he lost his rights under Section 15. It seems to us that he did not. First, it is to be observed that the Act, and therefore Section 15, is incorporated into the first agreement, and consequently into the second agreement, which, subject to modifications, renewed the first agreement. Next, the second agreement gives no express power to the Committee to determine it. It does give them power to alter the terms, but only by giving two calendar months' notice, which they did not give. It gives the medical practitioner power to determine it at the end of the current or any subsequent year by one month's notice before the date of revision. This shows that the agreement clearly contemplated a period of service over one year, and in our opinion, having regard to the terms of Section 15, which is incorporated, it contemplated a period of service which could only be put an end to by the act of the practitioner, or after an inquiry into his default. It was contended on behalf of the Committee that the first agreement, by Clause 1, incorporated the Regulations of 10th January, 1914, as being the Regulations in force at the time being, and that under Regulation 17, without anything more and without any notice to the practitioner, he became bound by those Regulations; but that would be directly contrary to the express provision in the second agreement, which provided that the agreement should continue in force *subject only* to the right of the Committee to vary the terms by notice. We think the express provision must prevail, and therefore this contention fails.

Then it was said that Dr. Salter by refusing to fill in the form in duplicate had repudiated his agreement, and that the Committee were entitled to treat it as at an end. There are many answers to this contention. First, the alleged repudiation by Dr. Salter took place in September; that was the time when the Committee, if they had the power, should have elected to treat the agreement as at an end, but they did not do so; they availed themselves of his services to the end of the year. Next, we think the provision of Section 15 as to an inquiry before removal controlled any implied right of the Committee to treat the agreement as at an end. Lastly, we think Dr. Salter was right in his construction of Clause 11 of the first agreement, though this, perhaps, is a more difficult question. He is to order *in the form*, not *on the form*. The natural meaning of those words is that in ordering drugs he must use the words of the form. When it was intended that he should use a particular piece of paper it was so provided in that same clause: "He shall give such order *on a special form*." Nothing is said about the order being in duplicate. The admitted object of the Committee in requiring the order to be in duplicate was to save the chemist trouble. It is difficult to see how this is a Regulation to secure that insured persons shall receive adequate medical attendance and treatment from the medical practitioners with whom arrangements are made within the meaning of Section 15 (2). We do not think we ought to construe this clause of the first agreement so as to give the words any wider meaning than they naturally bear, and certainly we ought not to assume that it was intended to throw upon the medical practitioner a duty which would ordinarily fall on the chemist. Whether by proper notice the terms of Clause 11 could be altered, as was done in the new agreement, so as to throw this burden on the medical practitioner it is unnecessary to decide, and we give no opinion upon the point.

Having come to the above conclusions, it seems unnecessary to decide whether, by voluntarily entering into an agreement expressly so providing, a medical practitioner could lose his rights under Section 15. We think the Act, Section 15, contemplated that the terms and conditions of service should be arranged between the Committee and the practitioner. We think the Committee would be entitled to require that they should be in writing, and that the practitioner should express his desire to undertake the service in writing before they put him on the medical list, but we see no necessity for a fresh agreement every year, and we do not think the Act contemplated this, but we do not desire to express any further opinion on this point. Also we desire to express no opinion as to the effect of the Regulations of 1914.

On the above grounds we are of opinion that the rule should be made absolute.

Mr. Gore-Browne (for Dr. Salter): I ask that it be made absolute with costs.

Mr. Justice Bray: We do not give costs at this stage, because it is open to them to plead. When the time comes you may apply for costs, and we will consider it.

OWING to the cost of establishing a cow barn and dairy to secure pure clean milk for the Yarrow Convalescent Home, Broadstairs, and in consequence of the steady increase in the cost of upkeep the committee has felt obliged to increase the charge for each child to 8s. per week. Prior to the establishment of a dairy for the home, the number of bacteria in the milk supplied was 2,500,000 per cubic centimetre; the milk now obtained from the institution's own dairy contains 1,200 bacteria per cubic centimetre. These tests were made at the Lister Institute.

Medical News.

WE are asked to state that the South African Civil Surgeons' dinner will not take place this year.

PROFESSOR ALEXIS THOMSON has been reappointed surgeon to the Royal Infirmary, Edinburgh, for a further period of five years from September 1st next.

THE annual general meeting of the West London Medico-Chirurgical Society will be held on July 10th at the West London Hospital.

THE annual exhibition of specimens added to the museum of the Royal College of Surgeons of England during the past twelve months will be open from July 2nd—the day for the election of members of Council—until the end of the month, when it will be on view for inspection by the Clinical Congress of Surgeons of North America, which holds its fifth annual session in London this year.

SIR ST CLAIR THOMSON has been elected an Honorary Fellow of the American Laryngological Association. This distinction, which is the blue ribbon of American laryngology, is, we believe, seldom bestowed on more than one representative of each country. The only representatives of Great Britain who have previously received the honour are Morell Mackenzie, Manuel Garcia, and Sir Felix Semon. Up to the end of 1913 there were only four living Honorary Fellows of the association—Professors Chiari, Massei, Moure, and Sir Felix Semon.

THE prizes at the London (Royal Free Hospital) School of Medicine for Women will be presented on Monday, June 29th, at 4 p.m., by the Vice-Chancellor of the University of London, Sir Wilmot Herringham; Mrs. Garrett Anderson, M.D., president of the school, will be in the chair. The prizes at Guy's Hospital Medical School will be distributed by the Right Hon. Sir George Reid, G.C.M.G., High Commissioner for Australia, on Thursday, July 9th, at 3 p.m. As already announced, Sir Clifford Allbutt will distribute the prizes at St. Thomas's Hospital on Tuesday, June 30th, at 3 p.m.

The final meeting of the organizing committee of the seventeenth International Congress of Medicine in London, 1914, will be held at the house of the Medical Society of London, on Tuesday, July 7th, at 5 p.m. It will be proposed to appoint a large national committee of Great Britain and Ireland for the purpose of the International Congresses of Medicine, with Sir Thomas Barlow as president, and Dr. Clive Riviere and Mr. H. J. Paterson as secretaries. On the same evening the president will give a conversazione at the Royal College of Physicians of London.

FROM a report presented to the managing committee last April it appears that the library of the Tropical Diseases Bureau now contains 1,100 bound volumes, mainly serial publications, about double this number of reprints, and some 600 reports, bulletins, and pamphlets. The ninth number of the third volume of the *Tropical Diseases Bulletin* contains notices of a large number of papers on the treatment of dysentery by emetine. All these papers indicate that the treatment is extraordinarily beneficial; in some, however, attention is drawn to the occurrence of subsequent relapses. In the same issue some interesting papers on cholera are abstracted, and leprosy is also dealt with.

THE meteorological observations for the year 1913 made by Mr. John Dover, at Totland Bay, Isle of Wight, show that the year was remarkable for the relatively small variations in temperature, the heavy rainfall, and the deficiency of sunshine, although in this latter respect the station held a high place among health resorts in England; the highest place in the year was taken by Felixstowe with 1,691 hours of bright sunshine; Dover, Broadstairs and Bognor, and Totland Bay, with 1,597 hours, followed not far behind. On the cover of the pamphlet is a "wind rose" showing the percentage of wind from various quarters in 1913 and the averages for the fourteen years. The diagrams are remarkably similar, and show a predominance of westerly winds, which in 1913 constituted 51 per cent. and in the fourteen years 52 per cent.

DR. AND MRS. ALFRED C. JORDAN gave two concerts in aid of the *Empress of Ireland's* sufferers, on the evenings of Friday and Saturday, June 19th and 20th, at 13, Upper Wimpole Street. The programmes included some beautiful examples of instrumental and vocal chamber music, in the performance of which Dr. and Mrs. Jordan were assisted by the well known artists, Mr. Edward Isaacs (pianoforte), Mr. Carl Fuchs and Miss Adelina Leon (violoncello), and Mr. Charles Copland (songs). Among the many letters of encouragement received was a message from Their Royal Highnesses the Duke and Duchess of Connaught, wishing success to the concerts. After reading this message Dr. Jordan made sympathetic reference to the genial good comradeship of Captain Kendall and the splendid efforts of Dr. Grant, the ship's surgeon. He described the sociable and musical side of life on board the ill-fated liner. As the result of the concerts the substantial sum of £74 was collected. This amount will be added to the Mansion House Fund.

ENGLISHMEN are born travellers, and the immense improvement which has taken place during the last half-century in the comfort and rapidity of transit has no doubt helped to foster the love of wandering which seems to be inherent in Britons of both sexes. But up to the present Spain has been somewhat neglected by the ordinary tourist. The Anglo-Spanish Travel Exhibition at Earl's Court has been organized by the Royal Commissioner for *Tourisme* in Spain for the express purpose of making that country better known to the British public. The Spanish section contains some beautiful reproductions of typical Spanish scenery and architecture, which should inspire many with the desire to see the originals; and no more complete change could be devised than a holiday spent amid such novel picturesque surroundings. The exhibition gives a most attractive glimpse into the life of an interesting and hitherto little known country, and should do much to increase the goodwill already existing between Great Britain and Spain.

FROM an article in the *Transactions* of the Cremation Society of England we learn that in Germany four new crematories—at Tilsit, Esslingen, Greifswald, and Goerlitz—were opened during the year 1913. This brings the total number in that country up to forty. It has also been decided to establish a crematory in the Grand Duchy of Luxemburg. The total number of bodies burnt in 1913 was 10,168, being an increase of 1,298 on the number for 1912 and a total of 56,555 since the opening of the first crematorium in 1879. In Paris the total number of bodies disposed of by cremation during 1913 (not including amputated limbs, embryos, and so forth from hospitals) was 590; at Marseilles there were 57 private cremations, at Rouen 7, and at Rheims 3. In Switzerland, in addition to the crematories already established at Zurich, Basel, Geneva, St. Gall, Bern, Lausanne, Chaux-de-Fonds, Winterthur, Bienne, and Aarau, one was installed at Davos Platz in January, 1914. Cremation not being legal in Belgium, it has been decided to erect a crematorium on French territory adjacent to the Belgian frontier at Feignies. In Holland the sanction of the State has recently been obtained, and a crematory is now in course of erection at Haarlem under the auspices of the Netherlands Cremation Society. In South America the municipality of Buenos Aires, Argentina, has recently erected a complete installation in the Western Cemetery.

THE annual general meeting of the Society for the Relief of Widows and Orphans of Medical Men was held on May 27th. The report stated that the 125th anniversary of the foundation of the society occurred in 1913. A legacy of £37,250 had been received from the late Mr. James Brickwell, and the annual income from it, amounting to £1,331 10s., would be available for the increase of grants to widows over the age of 65 by £25 per annum, and under the age of 65 by £10 per annum. Grants under the Copeland Fund might be increased by £20 per annum, and grants to orphans might be increased in certain cases by £15 per annum. The invested funds of the society (£139,500) yielded an income of £4,511 10s., and £330 8s. was received in annual subscriptions and donations. During the year 1913 the sum of £3,760 was distributed among 46 widows and 10 orphans. Since the last annual meeting five new members of the society had been elected and seven had died. The society consisted of 300 members, a very small proportion of the number of medical men eligible for membership, which is open to any registered practitioner who at the time of his election is resident within a 20-mile radius from Charing Cross. Should any member remove beyond the limits of the society he still continues to be a member. The annual subscription is 2 guineas, the payment of this sum for 25 years constituting the subscriber a life member. Further information can be obtained from the Secretary, 11, Chandos Street, Cavendish Square, W. A special general meeting of the society was held on June 24th to confirm the alteration of certain by-laws.

Letters, Notes, and Answers.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*
TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. R. C. HOLT (Didsbury, Manchester) asks for information as to the effect of moonlight upon health, or to any publication in which the subject is discussed.

TREATMENT OF CHRONIC EMPYEMA.

COUNTRY DOCTOR would like any suggestions in prognosis and treatment (including vaccines) of chronic empyema of four years' duration in a man aged 61. At present there are two sinuses; tubes are kept in, and a daily douche of weak carbolic and iodine used.

ANSWERS.

THE FLY NUISANCE.

MR. A. CHRISTIE SMART (dispenser, of Cowes) states that during a plague of flies last year he used a 20 per cent. solution of formaldehyde, which he sprayed with a nebuliser on to the top of the windows. The solution can also be used in a glass syringe for syringing windows and ledges.

ULCERATIVE STOMATITIS.

DR. W. J. YOUNG (Harston, Cambridge) writes, in reply to "Medico's" inquiry about ulcers of the mucous membrane of the mouth, as follows: I think if he touched each newly-formed ulcer with pure nitric acid (on a wooden match) he would be pleased with the result. The pain of application, though exquisite, is but momentary, the subsequent relief from pain complete, and cure rapid.

EXAMINATION FOR M.D.DURH.

IN reply to several correspondents, we may say that we are advised that the following books are suitable for a candidate preparing for the M.D. examination of the University of Durham for practitioners of fifteen years' standing: *The Practice of Medicine.* By F. Taylor, M.D., F.R.C.P. Tenth edition. (London: J. and A. Churchill. 1914. 18s. net). *The Principles and Practice of Medicine.* By Sir William Osler, Bart., M.D., F.R.S. Eight edition, largely rewritten and thoroughly revised, with the assistance of T. McCrae, M.D. (London: Constable and Co., Ltd. 1912. 21s. net.) *Manual of Surgery.* By A. Thomson, F.R.C.S.Edin., and A. Miles, F.R.C.S.Edin. Vols. I, II, and III. (London: H. Frowde; Hodder and Stoughton. 1912. 10s. 6d. per volume.) *A Short Practice of Midwifery.* By H. Jellett, B.A., M.D., B.Ch., B.A.O., F.R.C.P.I. Fourth edition. (London: J. and A. Churchill. 1903. 8s. 6d.) *The Diseases of Women.* By Sir J. Bland-Sutton, F.R.C.S., and A. E. Giles, F.R.C.S. (London: Rebman, Ltd. (W. Heinemann). 1897. 14s.) *Aids to Sanitary Science.* By F. J. Allan, D.P.H. Revised and edited by R. A. Farrar, M.A., M.D., D.P.H. Second edition. (London: Baillière, Tindall, and Cox. 1903. 4s. 6d.) *Crime and Insanity.* By C. Mercier, M.D., F.R.C.P., F.R.C.S. (London and New York: Williams and Norgate; Henry Holt and Co. 1911. 1s. net.) With regard to the Latin books, a candidate would be well advised to obtain information direct from the Secretary of Examinations, College of Medicine, Newcastle-upon-Tyne.

LETTERS, NOTES, ETC.

A DISCLAIMER.

PROFESSOR LEONARD HILL writes: "Kutnow's Powder" have used my name in an advertisement of their proprietary article, which has recently appeared in the *Times.* This is without my permission. I have no knowledge of the article in question, and have not authorized the use of any writings of mine in connexion with this.

AMERICAN MEDICAL SERVICE IN THE CIVIL WAR.

DR. S. HAMILTON (Newport, Mon.), in the course of a note on this subject, writes: Dr. George Foy, in his very instructive letter on the above subject (p. 1271), states that the only two surgeons in the American Civil War to whom public monuments have been raised are Dr. Hunter McGuire and Dr. C. W. Long. There are some points of interest in his communication. Both men were, either by choice or environment, surgeons in the Confederate forces (called by the Federals "the rebel army"). Both were Ulster men—the former a descendant of a family in co. Fermanagh; the latter of a family in co. Derry. Knowing the temper o Ulstermen, I believe Drs. McGuire and Long joined the Confederate army with as fervent a faith in the justice of the Southern quarrel as did Stonewall Jackson (himself an Ulsterman).

MEDICAL BARONETS.

MR. JOHN D. MALCOLM (London) writes: In the JOURNAL of June 6th, p. 1254, in an article on "Dundee Doctors' Fees in 1808," I asserted that Dr. S. D. Clippingdale "mentions ten medical men who inherited baronetcies." Dr. Clippingdale really (BRITISH MEDICAL JOURNAL, March 25th, 1912) gave a list of fourteen gentlemen who "hold, or held, baronetcies of non-medical origin," and he also mentioned six others who inherited this honour from their fathers, who gained it as medical men. I very much regret this mistake.

DR. CLIPPINGDALE writes: In his interesting paper upon "Dundee Doctors' Fees in 1808," which appeared in the JOURNAL of June 6th, Mr. John D. Malcolm suggests that in the list of medical baronets which I contributed to the JOURNAL for May 25th, 1912, I mentioned twice one baronet, Sir Alexander Douglas, of Dundee. I find this is correct. I regret my mistake and thank Mr. Malcolm for kindly calling attention to it. May I take this opportunity of correcting another mistake in my list? Sir Thomas Rudolph Hampden Smith, F.R.C.S., son of the late Sir Thomas Smith, surgeon to St. Bartholomew's Hospital, should have been included among those medical baronets who have practised the profession which has been the means of raising their fathers to titular hereditary rank.

EAR COUGH: CHLOROFORM.

DR. T. ARTHUR MACGIBBON (Christchurch, New Zealand) writes: Here in New Zealand I have just received the JOURNAL of March 14th, and consequently my comments on a note (p. 632) may seem very late indeed. But Mr. George Hamilton there says that irritation of Arnold's nerve in the external ear cannot produce a sensory impression in the respiratory tracts supplied by the vagus nerve, but may produce a motor impulse to the muscles of that tract. This is strange to me, because I have seen a few and heard of many instances where irritation of one part of a sensory nerve has caused a so-called referred irritation of another part of the body supplied by twigs of the same nerve. How does Mr. Hamilton explain the tickle of the throat in cases of impacted cerumen, or the supraorbital pain in enlarged and jambed middle turbinates, or painful knees in hip-joint disease? I wish also to congratulate Dr. Lawrie on his letter *re* the position of chloroform. Given good chloroform, a knowledge of the patient's condition, and proper skill in the administration, chloroform is a much better anaesthetic than ether in every way, and status lymphaticus, etc., would not figure at inquests so frequently.

DENTAL SEPSIS.

DR. ALEXANDER BINNING (Hatfield) writes: I have read with interest the articles by Mr. J. G. Turner on dental sepsis. With reference to that part which deals with the inefficiency of the ordinary toothbrush and the need for thorough cleansing of the teeth, I may mention that in conjunction with a patient of mine I have recently devised an apparatus for the treatment of pyorrhoea alveolaris, which not only cleanses every surface of the teeth, but effectually prevents "stagnation" in the mouth. The arrangement is a combination of a toothbrush with a hydropulsator, which supplies liquid under pressure to orifices situated between the bristles, the orifices being so disposed that the bristles will not interfere with the direct infringement of the jets of liquid upon the free surfaces of the teeth and gums, as well as the various surfaces and sulci of the buccal cavity. The hydropulsator consists of rubber tubing, with a resilient bulb, which is compressed by the left hand, while the right hand manipulates the brush, and the liquid is drawn by suction from a tumbler. The process of brushing and jetting can be operated separately or simultaneously, and the pressure from the jets can be varied from very little to a considerable force; in fact, a needle douche combined with brushing can be obtained, having the effect of massage on the soft parts. The brush has been made for me by Kent and Sons, Farringdon Road, London.

A CORRECTION.

OUR attention has been drawn to an error in the review of Dr. Cowan's book, *Diseases of the Heart,* published in last week's JOURNAL. In the fifth line from the end of the review (p. 1357, col. 1), the word "dullness" should be "resonance."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	5	0
Each additional line	0	0	8
A whole column	3	10	0
A page	10	0	0

An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

THE

British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

SUPPLEMENT

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PROCEEDINGS OF COUNCIL

REPORTS OF STANDING COMMITTEES

MEETINGS OF BRANCHES AND DIVISIONS

PROGRAMME OF ANNUAL MEETING

MEDICAL BILLS IN PARLIAMENT

PROCEEDINGS OF THE GENERAL MEDICAL COUNCIL

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British Medical Association.

EIGHTY-SECOND ANNUAL MEETING, ABERDEEN, JULY, 1914.

PROGRAMME OF BUSINESS.

President: WILLIAM AINSLIE HOLLIS, M.A., M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Brighton.

President-elect: Sir ALEXANDER OGSTON, K.C.V.O., M.D., LL.D., Consulting Surgeon, Aberdeen Royal Infirmary; Surgeon in Ordinary to H.M. the King in Scotland.

Chairman of Representative Meetings: THOMAS JENNER VERRALL, M.R.C.S., L.R.C.P., Consulting Surgeon, Sussex County Hospital, Brighton.

Chairman of Council: JAMES ALEXANDER MACDONALD, M.D., M.Ch.R.U.I., LL.D., Honorary Physician, Taunton and Somerset Hospital, Taunton.

Treasurer: EDWIN RAYNER, B.A., M.D.Lond., F.R.C.S. Eng., Consulting Surgeon, Stockport Infirmary, Stockport.

The Eighty-second Annual Meeting of the British Medical Association will be held in Aberdeen in July, 1914. The President's Address will be delivered on Tuesday, July 28th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 24th, at 10 a.m.

The Address in Medicine will be delivered by ARCHIBALD EDWARD GARROD, M.D., F.R.C.P., F.R.S., Physician, St. Bartholomew's Hospital, London.

The Popular Lecture will be delivered by Professor J. ARTHUR THOMSON, M.A., LL.D., Natural History Department, Marischal College, Aberdeen.

THE SECTIONS.

The scientific business of the meeting will be conducted in sixteen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communication with respect to papers should be addressed to one of the Honorary Secretaries.

With the object of encouraging useful debates, it is proposed, as in previous years, to publish in the BRITISH MEDICAL JOURNAL early in June an abstract or syllabus of the remarks intended to be made in introducing each discussion arranged in any Section. Such publication serves as a guide to members who may desire to take part in the discussion. It is particularly requested that the introducer of each discussion will send an abstract or syllabus of his remarks to one of the honorary secretaries of the Section in which the discussion is to take place not later than Monday, May 22nd.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL *without special permission.*

The following sixteen Sections have been authorized by the Council:

ANATOMY AND PHYSIOLOGY.

President: Professor ROBERT W. REID, M.D., F.R.C.S., Aberdeen.

Vice-Presidents: DENIS PATRICK FITZGERALD, M.B., B.Ch., Cork; JOSEPH STRICKLAND GOODALL, M.B., F.R.C.S., London; Professor JOHN KAY JAMIESON, M.B., C.M., Leeds; Professor JOHN ALEXANDER MACWILLIAM, M.D., C.M., Aberdeen.

Honorary Secretaries: EDWIN PROVEN CATHCART, M.D., D.Sc., Department of Physiology, University of Glasgow; REGINALD JOHN GLADSTONE, M.D., F.R.C.S., 22, Regent's Park Terrace, London, N.W.; HUGH MCLEAN, M.D., Chemical Pathology Department, St. Thomas's Hospital, London, S.E.

DERMATOLOGY AND SYPHILOLOGY.

President: ALFRED EDDOWES, M.D., M.R.C.P., London.

Vice-Presidents: R. CRANSTON LOW, M.B., F.R.C.P.E., Edinburgh; JOHN MACLEOD HENDRIE MACLEOD, M.D., M.R.C.P., London, W.; JOHN ALEXANDER NIXON, M.B., F.R.C.P., Clifton, Bristol; JOHN CHARLES OGILVIE WILL, M.D., C.M., Aberdeen.

Honorary Secretaries: JOHN FARQUHAR CHRISTIE, M.B., C.M., 7, Alford Place, Aberdeen; JOHN DRUMMOND PRYDE MCLATCHIE, M.B., C.M., 34, Welbeck Street, London, W.

DISEASES OF CHILDREN, INCLUDING ORTHOPAEDICS.

President: JOHN THOMSON, M.D., F.R.C.P.E., Edinburgh.

Vice-Presidents: ANDREW FULLERTON, M.Ch., F.R.C.S.I., Belfast; HENRY M. W. GRAY., M.B., F.R.C.S.E., Aberdeen; ERNEST MUIRHEAD LITTLE, F.R.C.S., London; JAMES HUGH THURSFIELD, M.D., F.R.C.P., London.

Honorary Secretaries: ARTHUR SYDNEY BLUNDELL BANKART, M.C., F.R.C.S., 14, Harley Street, London, W.; DAVID WATSON GEDDIE, M.B., C.M., 13, Golden Square, Aberdeen; HENRY TYRRELL GRAY, M.C., F.R.C.S., 60, Harley Street, London, W.

ELECTRO-THERAPEUTICS AND RADIOLOGY.

Presidents: SAMUEL SLOAN, M.D., F.F.P.S., Glasgow.

Vice-Presidents: WM. JAS. STOREY BLYTHELL, M.D., Kersal, Manchester; DAVID LAWSON, M.D., Nordrach-on-Dee, N.B.; JOHN REED LEVACK, M.B., C.M., Aberdeen.

Honorary Secretaries: MAURICE RICHARD JOSEPH HAYES, F.R.C.S.I., 35, Upper Fitzwilliam Street, Dublin; WM. LINDSAY LOCKE, M.B., Ch.B., Guy's Hospital, London; FREDERICK PHILIP, M.B., 183, Great Western Road, Aberdeen.

GYNAECOLOGY AND OBSTETRICS.

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Vice-Presidents: Professor JOHN ALEXANDER KYNOCH, F.R.C.P., F.R.C.S., Dundee; Professor ROBERT GORDON MCKERRON, M.D., C.M., Aberdeen; THOMAS GEORGE STEVENS, M.D., F.R.C.S., London; WALTER CARLESS SWAYNE, M.D., Clifton, Bristol.

Honorary Secretaries: HUGH STEVENSON DAVIDSON, M.B., F.R.C.S., 4, Dundas Street, Edinburgh; ALEXANDER MITCHELL, M.B., 2A, Albyn Place, Aberdeen.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

President: HARRY LAMBERT LACK, M.D., F.R.C.S., London.

Vice-Presidents: JAMES MACKENZIE BOOTH, M.D., C.M., Aberdeen; JOHN SMITH FRASER, M.B., F.R.C.S.E., Edinburgh; ALBERT ALEXANDER GRAY, M.D., F.F.P.S., Glasgow; THOMAS HILLHOUSE LIVINGSTONE, M.D., F.R.C.S.E., Newcastle-on-Tyne.

Honorary Secretaries: OLIVER ST. JOHN GOGARTY, M.D., 15, Ely Place, Dublin; JOHN FRANCIS O'MALLEY, F.R.C.S., 16, Weymouth Street, London, W.; HENRY PETERKIN, M.B., 17, Bon Accord Crescent, Aberdeen.

MEDICAL SOCIOLOGY.

President: JOHN GORDON, M.D., Aberdeen.

Vice-Presidents: J. MUNRO MOIR, M.D., Inverness; DAVID NICOLSON, C.B., M.D., Camberley, Surrey; GEORGE WILLIAMSON, M.B., Aberdeen.

Honorary Secretaries: DAVID RORIE, M.D., 1, St. Devenick Terrace, Cults, Aberdeen; Miss ANNE MERCER WATSON, L.R.C.P. and S.Edin., 22, Waverley Place, Aberdeen.

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President: FREDERICK JOHN SMITH, M.D., F.R.C.P., London.

Vice-Presidents: JOHN ROGER CHARLES, M.D., F.R.C.P., Clifton, Bristol; GEORGE MAITLAND EDMOND, M.D., C.M., Aberdeen; HERBERT FRENCH, M.D., F.R.C.P., London; Professor ASHLEY WATSON MACKINTOSH, M.D., Aberdeen; Professor THOMAS KIRKPATRICK MONRO, M.D., F.F.P.S., Glasgow; Professor ALEXANDER MITCHELL STALKER, M.D., C.M., Dundee.

Honorary Secretaries: D. BARTY KING, M.D., M.R.C.P., 6, Devonshire Street, London, W.; WILLIAM RATTRAY PIRIE, M.B., C.M., 20, Bon Accord Square, Aberdeen.

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President: Deputy Surgeon-General WILLIAM MAXWELL CRAIG, M.B., R.N., Haslar.

Vice-Presidents: Surgeon-General PERCY HUGH BENSON, M.B., I.M.S., Upper Walmer; Brigade-Surgeon Lieutenant-Colonel ROBERT GRAY, M.B., I.M.S., Aberdeen; GEORGE ROBERT LIVINGSTON, M.D., Dumfries; Lieutenant-Colonel GEORGE SCOTT, R.A.M.C.(ret.), Aberdeen.

Honorary Secretaries: Captain CECIL JOHNSON, R.A.M.C. (T.F.), Cricklewood, East Sheen, London, S.W.; Lieutenant-Colonel FRANCIS KELLY, M.D., R.A.M.C.(T.F.), West Craibstone Street, Aberdeen.

NEUROLOGY AND PSYCHOLOGICAL MEDICINE.

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Vice-Presidents: DONALD JOHN ARMOUR, F.R.C.S., London; JAMES NEIL, M.D., Oxford; WILLIAM REID, M.D., Aberdeen; HERBERT CAMPBELL THOMSON, M.D., F.R.C.P., London.

Honorary Secretaries: HUGH DE MAINE ALEXANDER, M.D., Aberdeen District Asylum, Kingseat, Newmachar; MONTAGUE DAVID EDER, M.R.C.S., L.R.C.P., 7, Welbeck Street, London, W.; ARTHUR WELLESLEY FALCONER, M.D., M.R.C.P., 18, Bon Accord Square, Aberdeen.

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President: CHARLES HOWARD USHER, M.B., F.R.C.S., Aberdeen.

Vice-Presidents: ALEX. RUDOLF GALLOWAY, M.B., C.M., Aberdeen; KARL AUGUST GROSSMANN, M.D., F.R.C.S., Liverpool; NATHANIEL BISHOP HARMAN, M.B., F.R.C.S., London; ARTHUR HENRY HAVENS SINCLAIR, M.D., F.R.C.S., Edinburgh.

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Vice-Presidents: CHARLES HY. BENHAM, M.D., M.R.C.P., Hove; CHARLES BOLTON, M.D., F.R.C.P., London; JOHN CHARLES GRANT LEDINGHAM, M.B., Ch.B., London; JOHN HAMMOND TEACHER, M.B., F.F.P.S., Glasgow.

Hon. Secretaries: GEO. MELLIS DUNCAN, M.B., C.M., 12, Bayview Road, Aberdeen; JOHN FOSTER GASKELL, M.D., M.R.C.P., 23, Ladbroke Grove, London, W.; JOHN WM. TREVAN, M.D., B.S., St. Bartholomew's Hospital, London, E.C.

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President: Professor JOHN THEODORE CASH, M.D., F.R.S., Aberdeen.

Vice-Presidents: Professors FRANCIS JAMES CHARTERIS, M.B., Ch.B., Glasgow; OTTO FRITZ FRANKAU GRÜNBAUM, M.D., F.R.C.P., London; JAMES CHARLES MCWALTER, M.D., Dublin.

Honorary Secretaries: WALTER JAMES DILLING, M.B., 2, Gladstone Place, Aberdeen; JOHN MATTHEW FORTESCUE-BRICKDALE, M.D., 52, Pembroke Road, Clifton, Bristol.

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Vice-Presidents: EDGAR LEE COLLIS, M.B., B.Ch., London; Professor FRIEDRICH WILHELM EURICH, M.D., Bradford; WILLIAM HABGOOD, M.D., Sutton; WILLIAM LESLIE MACKENZIE, M.D., F.R.C.P., LL.D., Edinburgh.

Honorary Secretaries: REGINALD EDWARD CROSSE, M.R.C.S., L.R.C.P., 68, Nightingale Lane, Wandsworth Common, London; ROBERT BALFOUR GRAHAM, F.R.C.S.E., Leven, Fife; WILLIAM ALEXANDER MACNAUGHTON, M.D., County Buildings, Stonehaven, Kincardineshire.

SURGERY.

President: JOHN SCOTT RIDDELL, M.V.O., M.B., C.M., Aberdeen.

Vice-Presidents: JAMES GRANT ANDREW, C.M., F.F.P.S., Glasgow; ARTHUR CONNELL, F.R.C.S.E., Sheffield; WILLIAM MCADAM ECCLES, M.S., F.R.C.S., London; THOMAS EAGLESON GORDON, F.R.C.S.I., Dublin; Professor JOHN MARNOCH, M.B., Aberdeen; ALEXANDER MILES, F.R.C.S., Edinburgh.

Honorary Secretaries: GEORGE HERBERT COLT, F.R.C.S., 12, Bon Accord Square, Aberdeen; RUPERT FARRANT, F.R.C.S., 59, Queen Anne Street, London, W.; JAMES METHUEN GRAHAM, F.R.C.S.E., 5, Castle Terrace, Edinburgh; SAMUEL THOMPSON IRWIN, M.Ch., F.R.C.S.Edin., 65, Great Victoria Street, Belfast.

TROPICAL MEDICINE.

President: Professor WILLIAM JOHN RITCHIE SIMPSON, C.M.G., M.D., London.

Vice-Presidents: DANIEL ELIE ANDERSON, M.D., F.R.S.E., London, N.; JOHN MITFORD ATKINSON, M.B., London; HENRY FRASER, M.D., Kuala Lumpur, Federated Malay States.

Honorary Secretary: GEORGE ALEXANDER WILLIAMSON, M.D., 15, Forest Road, Aberdeen.

Honorary Local Treasurer—
GEORGE WILLIAMSON, M.B.,
256, Union Street, Aberdeen.
Honorary Local Secretaries—
THOMAS FRASER, M.B.,
16, Albyn Place, Aberdeen.
FRED. K. SMITH, M.B.,
7, East Craibstone Street, Aberdeen.

PROVISIONAL PROGRAMME.

The following is the provisional time table for the Aberdeen Meeting:

FRIDAY, JULY 24TH.
10 A.M.—Annual Representative Meeting.

SATURDAY, JULY 25TH.
9.30 A.M.—Representative Meeting.

MONDAY, JULY 27TH.
9.30 A.M.—Council Meeting.
10 A.M.—Representative Meeting.

TUESDAY, JULY 28TH.
9.30 A.M.—Representative Meeting.
2 P.M.—Annual General Meeting.
8.30 P.M.—Adjourned General Meeting, President's Address.

WEDNESDAY, JULY 29TH.
9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Medicine.
3 P.M.—Religious Services.
4 P.M.—Secretaries' Conference and Dinner.

THURSDAY, JULY 30TH.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Surgery.
7.30 P.M.—Annual Dinner.

FRIDAY, JULY 31ST.
9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.

SATURDAY, AUGUST 1ST.
Excursions.

EXTRAORDINARY GENERAL MEETING.

ALTERATION OF MEMORANDUM OF ASSOCIATION.

AN Extraordinary General Meeting of the British Medical Association, adjourned from Tuesday, December 23rd, 1913, was held at the registered offices of the Association, 429, Strand, London, W.C., on Tuesday, December 30th, 1913. The President of the Association, Dr. W. AINSLIE HOLLIS, was in the chair.

Mr. GUY ELLISTON, Financial Secretary and Business Manager, read the notice convening the meeting.

The PRESIDENT said the meeting was a purely formal one, and was called for the purpose of confirming the resolution passed unanimously by an extraordinary meeting of the Association on December 5th, 1913. He accordingly moved:

That the provisions of the Association's Memorandum of Association with respect to its objects be altered so as to read as follows:

3. The objects for which the Association is established are:—

(1) To promote the medical and allied sciences, and to maintain the honour and interests of the medical profession.

(2) To hold or arrange for the holding of periodical meetings of the members of the Association and of the medical profession generally.

(3) To circulate such information as may be thought desirable by means of a periodical journal, which shall be the journal of the Association, and by the occasional publication of transactions or other papers.

(4) To grant sums of money out of the funds of the Association for the promotion of the medical and allied sciences in such manner as may from time to time be determined on.

(5) Subject to the provisions of Section 19 of the Companies (Consolidation) Act 1908 to purchase take on lease exchange hire or otherwise acquire any real and personal property and any rights or privileges necessary or convenient for the purposes of the Association.

(6) To sell improve manage develop lease mortgage dispose of turn to account or otherwise deal with all or any part of the property of the Association.

(7) To borrow any moneys required for the purposes of the Association upon such terms and upon such securities as may be determined.

(8) To do all such other lawful things as may be incidental or conducive to the promotion or carrying out of the foregoing objects or any of them.

Provided that the Association shall not support with its funds any object or endeavour to impose on or procure to be observed by its members or others any regulation restriction or condition which if an object of the Association would make it a trade union.

Mr. E. B. TURNER (London) seconded.

The PRESIDENT invited discussion, but no member rose, and the resolution was put and carried with one dissentient.

The proceedings then terminated.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

EDINBURGH BRANCH:

SOUTH-EASTERN COUNTIES DIVISION.

THE annual dinner of the Division was held at Jedburgh on December 19th, 1913. Under the genial presidency of Dr. J. S. MUIR (Selkirk), who had as his croupier Dr. P. C. MACROBERT (Innerleithen), full justice was done to an excellent repast, the members of the Dinner Committee, Drs. Jeffrey, Hume, and MacGregor, of Jedburgh, having carried out their duties in a most efficient manner.

Presentation to Dr. Blair.—The occasion was taken to celebrate the jubilee as a medical practitioner of Dr. William Blair (Jedburgh), Chairman of the Division, who had been invited to be present as the guest of the evening. After the usual loyal toasts had been duly honoured a glowing tribute to Dr. Blair's many good qualities and valuable services was rendered by Dr. Muir, who referred to the strong affection in which Dr. Blair was held by the inhabitants of the district, and the good work he had done both for the public and the profession. Among the many offices he had ably filled were the presidency of the Border Counties Branch (prior to the existing arrangement of Divisional areas), the chairmanship of the South-Eastern Counties Division for several years, and, almost without a break, the post of Representative of the Division at Representative Meetings of the Association. Dr. Muir then, on behalf of the members of the Division, presented Dr. Blair with a silver loving-cup bearing the following inscription:

To Dr. William Blair, M.D.,
Jedburgh.

On his jubilee as a member of the medical profession, from his fellow-practitioners in the south-east of Scotland, as a token of their affection and esteem, and in recognition of his long and valuable services to the British Medical Association.

December 19th, 1913.

Dr. Blair, in reply, made a most interesting speech, containing many personal reminiscences of former practitioners in the district who were known but by reputation to the present generation. In conclusion, Dr. Blair, having duly baptized the cup with the sparkling wine of France, passed it round the assembled guests. Provost Boyd (Jedburgh), in a sympathetic speech, proposed the toast of "The British Medical Association"; this was acknowledged by Dr. W. L. Cullen in an excellent speech advocating unity amongst members of the profession. Dr. Carlyle Johnstone, in proposing "Kindred Professions," made an extremely interesting speech, illumined with many flashes of humour. The Rev. Mr. Drummond (Jedburgh) replied. The toast of "The Guests" was proposed by the Croupier, coupled with the name of Dr. Ridley Bailey (Bilston, Staffordshire). Dr. Bailey again pressed the necessity for unity in the profession and for closing its ranks in face of the conflict that must come before long. Victorious in their preliminary skirmish, in so far at least as regards terms of remuneration, he warned them of the fierce fight that must ensue on the termination of the period of three years for which the Chancellor of the Exchequer had guaranteed existing rates under the Insurance Act, and urged strongly that the profession must organize its forces in view of the coming conflict, with regard to which it was immaterial whether Unionist, Radical, or Labour were in power. Dr. Oliver proposed the health of the Chairman at the conclusion of a most pleasant evening, rendered still further enjoyable by the songs and amusing stories of Messrs. Stedman and Binstead.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

A Divisional meeting was held at the Central Library on December 12th, 1913, at 8.30 p.m., when Dr. Picard was in the chair. Twenty members and visitors were present.

Working of the Insurance Act.—The question of the collection of evidence as regards the working of the National Insurance Act in Hampstead was discussed, and it was decided to refer the matter to the Association of Panel Doctors in Hampstead for consideration and report to the Division.

Mental Deficients.—Dr. Shuttleworth read a paper on mental deficients, their classification and treatment under the Mental Deficiency Act. After quoting Dr. Tredgold's definition of mental deficiency, he drew attention to the grouping in the Act of mental defectives (within its meaning) into four groups—namely, idiots, imbeciles, feeble-minded persons, and moral imbeciles. In this Act Parliament had for the first time laid down statutory definitions of mental conditions. He demonstrated, with the aid of numerous photographs and casts, various typical groups into which mental defectives might be divided from the physiological standpoint, such as gametous, microcephalic, hydrocephalic, paralytic, epileptic, mongoloid and cretinous. He had found diagnosis of the type an aid to prognosis of the amount of improvement possible in a particular case. He then considered the provisions of the Act under the three heads of (1) power and manner of dealing with defectives; (2) central and local authorities; and (3) provision of institutions and certification. He was of opinion that the Act, if judiciously administered, was calculated to benefit not only the individuals dealt with but the community at large; he denounced the wild talk current in some quarters as to the danger of mere "innocents" being immured for life, the fact being that ample—some might say excessive—safeguards had been provided to secure the "liberty of the subject," the majority of those to be dealt with under the Act being those already brought into contact with existing law. He referred to the necessity of provisions of the Education Act of 1899, affecting defective children, being made universally compulsory. The paper was discussed by Dr. Langdon-Down, Dr. Picard, Dr. Buchan, and Dr. Crookshank. A cordial vote of thanks to Dr. Shuttleworth terminated the proceedings.

MIDLAND BRANCH:

Boston and Spalding Division.

A meeting of the Boston and Spalding Division was held at the White Hart Hotel, Boston, on December 17th, 1913, when Dr. White (Chairman) presided, and fifteen other members were present.

Division Area.—Dr. Monham (Stickney), residing in the Lindsey insurance area, proposed that the Boston and Spalding Division be now made coterminous with the Holland insurance area. As he and other members resident in Lindsey had to go to Lincoln to transact insurance business it would be more advantageous to them to be attached to the Lincoln Division, as being in that city they could attend meetings of the Association held there at the same time. Dr. Monro (Spalding) seconded. There being no opposition the proposition was carried *nemine contradicente*.

Friendly Societies' Federation.—On the motion of Dr. R. Tuxford, a subcommittee was appointed, consisting of Drs. Braithwaite, Lock, Mason, Pilcher, Rendall, South, W. H. Smith, R. Tuxford, Wright, and Wrinch, with executive powers to deal with the matters relating to the Friendly Societies' Federation.

Holland Insurance Committee.—Dr. Braithwaite gave his report as representative on the Holland Insurance Committee.

Sickness Benefit Claims.—On the motion of Dr. Tuxford, seconded by Dr. Mason, a committee, consisting of Drs. Mason, Rendall, Monro, Pilcher, White, and Tuxford, was appointed to report to the Association on Form M 8. The Secretary was instructed to write for more forms to be sent to him to forward to the members.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH:

Furness Division.

A meeting of this Division was held in the Masonic Hall on December 12th, 1913. Dr. Parsons was voted to the chair, and sixteen other members were present.

Presentations to Representative and Secretary.

Before the ordinary business of the meeting commenced the Chairman, in making presentations to Drs. Daniel and Livingston, said that the medical profession in the district was under a great obligation to them for the amount of work they had performed during the Insurance Act campaign. Few, he said, could realize the extra amount of work thrown on the Secretary and Representative during those troublous times. He considered it only right that the profession should make the presentation as a small recognition of their appreciation and esteem. He then handed to Dr. Daniel a case of trial lenses, and to Dr. Livingston a silver tray and cake-basket.

Dr. Daniel, in expressing his thanks, said he considered it a great compliment to see the members present. It was the first presentation he had ever received, and he would remember the occasion with pleasure.

Dr. Livingston said he had no idea of a presentation until the matter was well in hand. He considered he had done nothing more than his duty to the profession, and

required no recompense. He would value the gifts as an expression of their friendship. He anticipated some resignations from the British Medical Association; but he would urge all to stick together, as he felt confident there would be another fight within the next two years. He thanked all for their kindness.

It may here be added that Dr. Daniel was the first Secretary when the British Medical Association was reconstructed, the Representative of the Division for many years, including the period of the passage of the Insurance Act; he has also been Chairman of the Division, served on most of the committees, and is at present the President of the Branch.

Dr. Livingston, who succeeded Dr. Daniel as Secretary, held the post for five years, acted as Deputy Representative, and attended the Special Representative Meeting last December; he served also as Representative on the Branch Council, and is at present Secretary of the Branch.

Juvenile Contract Practice.—There was some discussion on the action of a friendly society lodge, and ultimately, on the motion of Dr. LIVINGSTON, seconded by Dr. WILSON, it was resolved:

> That the Friendly Society Committee be requested to meet the Medical Committee on the matter.

Dr. LIVINGSTON proposed, Dr. DANIEL seconded, and it was carried *nemine contradicente*:

> That the resolution passed at the meeting held on June 27th *re* juvenile contract practice be rescinded.

The following resolution, proposed by Dr. LIVINGSTON and seconded by Dr. SINCLAIR, was carried unanimously:

> That the terms of juvenile contract practice be as follows:
> (*a*) Capitation fee of 4s. 4d. for year 1914 and 5s. afterwards, with a two years' agreement.
> (*b*) That surgery, night visits, serum, etc., be extras.
> (*c*) Income limit of £104 per annum for new members.
> (*d*) Age limit 1 to 16 years.
> (*e*) Clubs to be retained by late holders for first year.

The SECRETARY read a requisition signed by more than five-sixths of the members resident in the Barrow area, requesting that the above resolution be restricted to the Barrow area. On the motion of Dr. HARPER, seconded by Dr. WILSON, the Executive Committee was authorized to notify all the medical men resident in the Furness Division of the above resolution.

Previous Contract Practice Agreement.—Dr. DANIEL proposed, Dr. LIVINGSTON seconded, and it was resolved:

> That the Executive Committee reconsider the whole question of previous contract practice agreements.

The Secretaries were instructed to inform the Medical Secretary of the action of a certain practitioner in connexion with one of the local clubs.

Proposed Alteration of Boundary.—The proposal for the alteration of the boundary of the Division was considered, and the Secretary was instructed to invite Dr. Pratt to call a meeting of members residing in Millom to consider the matter.

Association Notices.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, January 28th, in the Council Room, 429, Strand, London, W.C.

By order,

GUY ELLISTON,
Financial Secretary and Business Manager.

December 23rd, 1913.

BRANCH AND DIVISION MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary, 119, East India Road, E., gives notice that a general meeting of the Division will be held at the London Hospital on Tuesday, January 6th, at 4 p.m. Business: (1) Representative's report of Special Representative Meeting. (2) Demonstration of skin diseases by Dr. Sequeira.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, January 23rd, 1914, from 3.15 to 6 p.m. Dr. T. M. Allison: Respiratory Diseases: Some Points in their Diagnosis and Treatment. Professor Sir Thomas Oliver: Gold-miner's Phthisis. Tea. Mr. W. G. Richardson: Malignant Diseases of the Mouth. Mr. A. S. Percival: Errors of Refraction in School Children. Dr. E. Napier Burnett: Fibroid Conditions of the Uterus.

Association Intelligence.

NON-PANEL COMMITTEE.

A MEETING of the Non-Panel Committee was held at 5 p.m. on December 23rd, 1913.

Some letters were received pointing out that a great number of insured persons were still under the impression that they could not obtain sickness benefit unless they were attended by panel practitioners. The Committee resolved that the following letter should be addressed to the lay press:

> British Medical Association,
> Medical Department (Non-Panel Committee),
> 429, Strand, London, W.C.,
> December 30th, 1913.
>
> Sir,—The British Medical Association continues to receive statements that many insured persons are under the impression that they can only obtain payment of their Sickness Benefit on the certificate of a doctor on the "Panel." Therefore we are instructed by the Non-Panel Committee of the Association to ask if you will kindly publish an explanation of the position.
>
> As the result of the case of Heard *v.* Pickthorne it was decided unanimously by three Judges in the Court of Appeal that an Approved Society cannot refuse a certificate for Sickness Benefit simply on the ground that the medical practitioner signing it is not on the "panel." Hence any insured person who chooses to go to such a doctor can obtain all the benefits to which he is entitled under the Insurance Act, with the exception of his doctor's fees and the drugs prescribed.
>
> The reluctance of some authorities to permit insured persons "to make their own arrangements" and the difficulty experienced by many non-panel doctors in signing the undertaking issued by the Commissioners, prevent at present many of the more independent members of the community from obtaining any contribution towards their medical and drug bills. But there are not wanting signs that this condition of affairs may be altered in the future, notwithstanding the recent Memorandum of the Commissioners urging insured persons to select doctors on the panel.
>
> The main point to emphasize is, that if an insured person desires to be attended at his own expense by a doctor not on the panel, he is in no way debarred from applying for and obtaining his weekly sick pay by means of a certificate from his own doctor.—We are, Yours faithfully,
>
> E. B. TURNER,
> Chairman.
>
> CHAS. BUTTAR,
> Honorary Secretary,
> Non-Panel Committee.

Reports were received of the appointment of intermediaries to act between the Committee and the non-panel practitioners in a large number of Division areas.

Dr. BIGGS laid before the Committee a report by Dr. Courtenay Lord of his attendance at the conference of non-panel associations arranged by the National Medical Union.

The consideration of questions of the future policy of the Association with reference to the extension of medical benefit to dependants, and the reform of conditions under which the present medical benefits are administered, was raised by Dr. JOHN STEVENS (Edinburgh), and the further consideration postponed till the next meeting on January 6th.

LOCAL MEDICAL COMMITTEES.

MANCHESTER.

THE Manchester Medical Committee has presented a report, signed by Dr. John D'Ewart, Honorary Treasurer, of work done in Manchester under the Insurance Act for the quarter ending September 29th, 1913.

Number of Doctors.

The report stated that 285 doctors were at that date on the Manchester list, and that the number of insured persons was 266,861 (males 175,310, females 91,551). It also contains the following tables of accounts for the nine months, January to September, corrected to the end of October:

Attendances.	Visits.	Special Visits.	Night Visits.	Operations.	Anæsthetics.	Fractures.	Patients.	£	s.	d.
41,967	14,871	345	110	114	5	20	24,744	6,529	1	0
100,065	27,364	431	160	166	7	12	40,811	13,768	4	6
106,560	26,550	585	232	157	10	13	40,330	14,234	17	6
110,830	24,723	600	252	132	32	24	40,967	14,457	17	6
101,522	20,736	660	235	119	31	18	36,032	13,022	18	6
107,947	19,872	623	239	134	24	27	38,122	13,557	4	0
113,077	18,109	673	214	118	24	20	39,120	13,816	18	6
106,070	17,300	615	264	112	17	15	38,619	13,027	13	0
115,382	18,905	639	219	84	14	14	42,412	14,134	1	0

Finance.

The Panel Fund Account is given as follows:

	Gross Bills.	Net Credits.	Cash on Account.	Rate of Payment.
1st quarter to March 31st, 1913	£33,994	£31,476	£20,929	66⅔ %
2nd quarter to June 30th, 1913	40,600	37,612	18,817	50 %
3rd quarter to Sept. 30th, 1913	41,167	38,346	22,893	60 %
Total to date	£115,761	£107,434	£62,639	58⅓ %

This rate of pay works out at about 1s. 2½d. per consultation for the best paid doctors, whilst the worst paid only receive about 8d.

The following are the Drug Fund Accounts:

Net credit to August 31st, 1913	£23,507
Cash on account of above	£15,661=66⅔%
Number of prescriptions rendered to August 31st, 1913	758,751

Tuberculosis.

The number of fresh cases of pulmonary tuberculosis notified from January 1st to November 8th was 2,254, and of other forms of tuberculosis 1,374. Dr. Niven estimated that the number of cases under observation was approximately 5,000, and the report points out that the number of applications for sanatorium benefit (893) was decidedly below the average which might be expected in the future.

Working of the Act.

Referring to the working of the Act, the report states that so far this has been carried on with the absolute minimum of friction between practitioners and the insured, and the opinion is expressed that the complete freedom of both doctor and patient has been the main cause of this desirable condition. The relations with the pharmacists had been eminently amicable under a strain which might have caused a breakdown. The dissatisfaction of the approved societies with the present state of affairs had been very forcibly expressed, and the report states that unfortunately the societies seem to have accepted all the Government estimates of sickness, despite the repeated warnings of the profession as to the effect of the introduction of large numbers of females and of unselected lives, and as to the probable extension of convalescence and growth of malingering. The hope is expressed that the report of the Departmental Committee will furnish the necessary material upon which to formulate an accurate conception of the state of affairs now actually in existence, and necessarily to be accepted both by the societies and by doctors.

Arrangements were being made for co-operation between the societies and the Local Medical Committee, and it was hoped that, as a result, satisfactory relations would be established and great improvement in results effected. The Committee suggests the appointment by the Commissioners of three full-time referees available equally for the societies and the doctors.

Amount of Medical Work Done.

The report contains the following paragraphs with regard to the number of persons sick and the duration of their sickness.

(*a*) *The Number Sick.*—This naturally varies from year to year, and from season to season. So far as regards this year, of course there has been a huge increase in the demand for the services of doctors, but the bulk of the evidence is that the "sickness rate," as distinct from that new demand, has been about the normal rate or slightly below it. A few practitioners are of the opinion that there has been in their districts a slight increase. The death-rate in 1913 has been less than in 1912. Taking these reports in combination, we will not be far out if we assume that the amount of sickness so far in 1913 has been about the normal; at any rate, we can be confident that the reports of excessive sickness are wholly unfounded. We cannot, therefore, hold out any hope of reduction of the amount of work to be done under this head. In fact, with failing trade, we may expect a marked increase.

As regards seasonal change the figures at first sight are astonishing. In private practice we are individually often accustomed to considerable fluctuations in our work, yet here the reduction never exceeds 15 per cent. instead of the 50 or 60 per cent. expected by some. A very natural explanation is immediately forthcoming, namely, that whilst "A" is slack "B" his immediate neighbour may be very busy, that is, doctors whilst experiencing some slackness, never all experience it at the same time. In other words, the collective curve smooths out the peaks and valleys of the individual curves of sickness incidence. Two other factors in our opinion have a great influence in steadying the fluctuations. First, the very considerable number of "chronics" who are patients for prolonged periods, and who are undeniably profiting, most of all insured persons, by the provision of free medical benefit; and secondly, the group of poorly-paid female workers who for the first time in their lives can afford to be ill. The attention they are now receiving is merely what was hoped for under the Act, but is to a large extent the cause of the heavy demand for medical services, and also of the great expenditure on sick pay. This type of work also will not tend to decrease.

(*b*) *Duration of Sickness.*—Unquestionably there is a distinct inclination on the part of not merely a few, but of the bulk of the insured sick to benefit by the categorical promise that they would not now be compelled to return to work until they were quite recovered. In addition, there is an increasing tendency for advice to be sought early in the illness. Consequent earlier diagnosis ultimately may reduce the duration somewhat, but we think it may be accepted that for the future we must expect a permanent increase in the length of attendance as inevitable.

Further, in considering the amount of work to be done it must not be forgotten that large numbers of insured persons are still consulting their own doctors who are not on the list. The future of these patients is doubtful. A spell of bad trade will force many of them reluctantly to leave their own doctors and seek the advice of those whose services, though not so desired, are not so costly.

It may be concluded, therefore, that the number of patients will be increased on account of increased sickness or bad trade, and that the duration of sickness is not likely to be reduced. Prophecies with regard to this Act have a bad habit of proving erroneous. Most devoutly do we hope that this may be another, early falsified.

A very important point now arises. If the number of patients treated this year is considered a minimum, what becomes of the Government estimated sickness rate? The profession never accepted that estimate for one moment, but protested emphatically against it, and we are of opinion the facts revealed during the first twelve months will finally dispose of it. Still, accepting it as it stands, it should be obvious even to the densest and most prejudiced intellect that it does not mean that there would be a flat rate of illness over the whole country. Necessarily there are districts healthier than others, and even with an average rate some districts might have three or four times that rate without upsetting the estimate. So it has proved in Manchester. Some are dismayed that our sickness rate exceeds that of rural districts or fashionable watering-places. Of course it does, greatly exceeds them, in fact we would not be amazed to find, when the Commissioners publish the returns next year, Manchester appearing amongst the worst, as just at present it has such an unenviable notoriety for its male tuberculosis rate and infantile mortality.

We are satisfied that the publication of the returns will show conclusively the inequity of paying a definite sum per head for

all persons over the country. We, practising in an unhealthy area, are already suffering. The Pharmacists' Drug Fund is already considerably overdrawn. The great approved societies may perchance equalize matters in healthy areas, but we are afraid the smaller local societies will speedily find themselves in the same parlous position as the doctors and pharmacists. We trust that this obvious injustice will be remedied as soon as the definite evidence is available.

NORTH RIDING OF YORKSHIRE.

THE eighth meeting of the Local Medical Committee was held at York on December 6th, 1913, when Dr. CANDLER HOPE was in the chair, and twelve other members were present.

New Agreement and Regulations.—The new draft agreement between a medical practitioner and an Insurance Committee, and the new regulations were considered. A number of suggestions were made which were submitted to the North Riding Insurance Committee by a deputation from the Local Medical Committee. In the result the Insurance Committee, after reference to the Insurance Commissioners, issued a supplementary form of agreement between a medical practitioner and the Insurance Committee modifying the principal agreement by the following clauses:

1. By the addition to Clause 2 (ii) of the following words:

> But nothing in this agreement shall be construed as prohibiting the acceptance by the practitioner from an insured person of such fees as may have been agreed between them in writing as a condition of the acceptance by the practitioner of the insured person where the places of residence of the insured person and the practitioner are so situated that access between them is by reason of distance or otherwise difficult or inconvenient, and where there is another practitioner upon the panel by whom the insured person might have been accepted or to whom he might have been assigned and whose residence is nearer to that of the insured person or is less inconvenient of access.

2. Clause 6 (ii). By the insertion of "two" in the blank space in line three, and the addition of the words "or within a distance not greater than that of his place of residence" after the word "road" on the third line.

3. By the insertion of the following Clause or Subclause (ii) to Clause 7:

> All certificates furnished by the practitioner under this agreement shall be written in ink or indelible pencil, and shall be signed in ink or indelible pencil by the practitioner in his own handwriting.

The CLERK to the Committee notified further that with regard to the first schedule the phrase "any claim for sickness" implied "State sickness," and "rules of the society" referred only to "approved societies" within the meaning of the Insurance Act. The agreed rates referred to in the second schedule were 1s. 7½d. to be inserted in the first space and 1½d. in the second space. The Insurance Committee has made arrangements to supply each medical practitioner on the panel list with duplicate copies of the agreement. The Local Medical Committee unanimously decided to ask the panel practitioners in the North Riding of Yorkshire to sign the supplementary agreement up to the end of the present financial year.

Institutions and the Unallotted Funds.—It was resolved that doctors in institutions should not receive a share of the unallotted moneys, as they had no unallotted persons and were paid by salary.

Mileage.—The Committee named the practices within the North Riding of Yorkshire insurance area which were, without dissent, considered to be wholly difficult. A complete list of practices partially difficult has yet to be drawn up.

Finance.—The balance sheets for the period December 27th, 1912, to February 28th, 1913, and for the statutory period, March 13th, 1913, to October 31st, 1913, audited by Messrs. W. S. Blackburn and Co., chartered accountants, Leeds, were read and adopted.

NORFOLK.

MEETINGS of the Local Medical Committee were held in East Dereham and Norwich on December 3rd and 10th respectively. Dr. R. C. M. COLVIN-SMITH (Cromer) was in the chair, and fifteen members were present at each meeting, including Dr. D. G. Thomson, Honorary Secretary.

New Agreements.—The new agreements were very fully considered. Much objection was taken to paragraph 2 (ii), chiefly owing to the fact that many insured persons in country districts asked their doctors for attendance outside and beyond the scope of the attendance contracted for and specified in the agreement, and expressed themselves willing to pay extra for it. It was also ascertained that the Commissioners would not accept the alteration in paragraph 2 (ii) recommended by the British Medical Association, whereby the clause would have been modified so as to read "shall not be entitled to claim." Eventually it was decided to recommend the practitioners on the Norfolk panel to pass this paragraph and sign the agreements, as it was believed that it only referred to fees for work done strictly within the hours, place of attendance, and other conditions specified in the agreement. It was further agreed to fill in the blank space in paragraph 6 (ii) by the word "four," and the blank spaces in the second schedule by the sums 1s. 7½d. and 1½d. respectively. The SECRETARY to the Insurance Committee informed the meeting that it was not necessary to put a sixpenny stamp on the agreements, and that the Insurance Committee intended this year to send to each practitioner a duly executed duplicate of the agreement for reference.

Drug Tariff.—The new drug tariff was also agreed to, with the exception of the clause objected to by the Commissioners, the practitioners agreeing to continue last year's arrangements as to dispensing.

Medical Referees.—The question of referees was also considered and the Sunderland scheme was adopted—namely, that in each of the eighteen Poor Law districts of the county an alphabetical rota of the resident practitioners be made, and that each one act as referee in turn for a period of three months at a fee of 10s. 6d. a case and extra allowance for mileage. The principle of whole or part time referees was strongly condemned.

BEDFORDSHIRE.

THE eighth meeting of the Bedfordshire Medical Committee was specially summoned on Saturday, December 13th, 1913, at the County Hospital, Bedford. Dr. J. W. BOSH was in the chair, and eighteen members were present.

Death of Dr. Durran.—The CHAIRMAN referred in feeling terms to the loss sustained by the Committee by the sad death of Dr. J. G. Durran, of Leighton Buzzard. On the motion of Dr. WAUGH (Toddington), seconded by Dr. STANBURY PHILLIPS (Bedford), a letter of condolence was directed to be sent to Mrs. Durran and family on behalf of the Committee. The Leighton Buzzard practitioners were requested to nominate one of their number to fill the vacancies on the Local Medical and Panel Committees created by the death of Dr. J. G. Durran.

New Agreements.—The CHAIRMAN announced that of the three amendments to the draft agreement suggested by the Local Medical Committee, the first and third had been declined by the Bedfordshire Insurance Committee, while the second had been submitted to the Commissioners and refused by them. A letter was read from the Clerk to the Insurance Committee, stating with regard to the suggested amendment to Clause 13 that the Commissioners would be glad to be informed as to the reasons for the modifications proposed, and in particular as to the kind of breach it was intended to exclude from the operation of the clause. On the motion of Dr. WAUGH, seconded by Dr. Ross (Bedford), it was resolved that the Clerk be notified to the following effect:

> That, as the alteration in question has been refused by the Commissioners, and, as the agreements have to be signed at such short notice, it will be ineffective for the Medical Committee to give the reasons for the proposed modifications.

The following resolutions were carried:

1. That in future the Bedfordshire Insurance Committee be asked to supply a copy of a new agreement to the Bedfordshire Medical Committee *at least fourteen days* before the date on which its signature is required, so as to permit of adequate consideration and negotiation.
2. That the Bedfordshire Insurance Committee be requested to supply in future each practitioner on the panel with a duplicate copy of the agreement which he may keep for reference.
3. That each practitioner on the county panel be circularized to the following effect: "That this Committee, while not entirely in accord with the terms of the new agreement, or the way in which the negotiations of the Committee have been dealt with by the Bedfordshire Insurance Committee, recommends all panel practitioners in the county to accept and sign it.

Distribution of Unallotted Funds.—The CHAIRMAN explained to the Committee the scheme submitted by him

to the Medical Benefit Subcommittee, and approved by the Medical Committee at its last meeting, to the following effect:

1. The unallotted funds accumulated during the last three quarters on account of those insured persons eligible for medical benefit in the county of Bedford who have not placed themselves on the list of a doctor or an approved institution, or who have been allowed to make their own arrangements, shall be distributed among the panel practitioners of the area, *pro rata*, according to the number of acceptances on each doctor's list for each quarter respectively.

2. Each doctor shall agree to attend any non-allocated insured person eligible for medical benefit who presents himself for treatment, and shall take immediate steps to place such person on his own or some other doctor's list.

3. Should any difficulty arise, for example, if the doctor acting in such emergency does not wish to have any particular insured person placed permanently on his list, he shall forthwith report the fact to the Panel Committee (if it be constituted), or if not, to the Local Medical Committee, giving the reasons for his objection, and if possible, naming the doctor on whose list he thinks the patient ought to be placed.

4. The Panel Committee or the Local Medical Committee, as the case may be, shall undertake to assign such patient to a doctor at once, and shall report such action to the Bedfordshire Insurance Committee.

5. Any doctor declining to accept the responsibility of treating an insured person under Clause III, or accepting an insured person assigned to him under Clause IV, shall not share in the distribution of the accumulated funds.

6. Copies of this scheme shall be sent by the Bedfordshire Insurance Committee to each panel practitioner to be signed by those willing to act under it.

On the motion of Dr. Ross, seconded by Dr. Butters, the scheme was adopted.

Statutory Recognition.—The Secretary, in announcing the result of the referendum, stated that ninety-eight postcards were sent out, asking:

1. Are you satisfied that the present Bedfordshire Medical Committee is representative?

2. Are you desirous that the Commissioners should give it permanent statutory recognition?

Sixty-four replies were received, all of which answered the first question in the affirmative, sixty answered the second question in the affirmative, two in the negative, and two gave no reply to this question. The Secretary was instructed to notify the figures to the Commissioners.

Register Cards.—After some discussion, it was resolved that the Clerk be notified of the following motion of Dr. Bone, seconded by Dr. Ross:

> That this Committee is of opinion that until register cards of the persons who have been accepted by the panel practitioners are returned such persons are not eligible for medical benefit. In consequence, it urges the Insurance Committee to expedite the dispatch of such register cards to the practitioners concerned, so that their lists may be kept right up to date, and that there may be no delay in the treatment of those insured persons who may require it.

Drug Tariff.—A letter, dated December 11th, 1913, from the Clerk to the Insurance Committee, enclosing a copy of the proposed tariff for drugs, appliances, and dispensing charges, December 11th, was submitted to the Committee. On the ground of urgency the Clerk requested that the tariff be submitted to the Medical Committee, and returned to him not later than five days after, with the observations of the Committee. Dr. Ross proposed, and Dr. Sharpin seconded, that, owing to the lack of sufficient time for consideration, the matter be referred to the next meeting, and that the Clerk be notified and requested to forward a copy of the tariff to each member of the Committee. The proposal was carried by a large majority. The following resolution was sent to the Clerk:

> That approval of the new drug tariff be deferred on the ground that the members of the Medical Committee have not had an opportunity of considering the same, the Secretary having been supplied with one copy only, one day before the Committee met, and that in the meantime the Bedfordshire Insurance Committee be requested to supply at least twenty-six copies of the tariff for distribution among the members.

CAMBRIDGESHIRE.

The following resolution was unanimously adopted at the last meeting of the Local Medical Committee:

> That this meeting of the Cambridgeshire Local Medical Committee and panel practitioners in the county, called to consider the terms of the "Model" Agreement, unanimously enters its emphatic protest against the rejection by the Commissioners of the amendments put forward by the Local Medical Committee, considers this rejection as a flat contradiction of paragraph 50 of the "Explanatory Statement as to Medical Benefit as Affecting Medical Practitioners," which promises that "through the Local Medical Committees the profession have security that their collective views shall have full consideration in any arrangements that are made," and that this meeting instructs the Secretary of the Local Medical Committee to inform the Insurance Commissioners that if the agreement is forced on the practitioners as it stands they sign it unwillingly, under unfair compulsion, and with this protest duly registered.

PERTHSHIRE.

A meeting of the Local Medical Committees of Perth and Perthshire was held on December 23rd, 1913, at which twelve members were present.

New Agreement.—The Secretary read letters from the Commissioners in which the amendments asked for were practically all refused; a good deal of feeling was expressed at the action of the Commissioners by a number of members. It was decided, however, to sign the agreements for another year, under a strong protest, which was embodied in the following motion, and passed unanimously by the meeting:

> That this meeting of the Local Medical Committees of Perth and Perthshire enters its emphatic protest against the rejection by the Commissioners of the amendments to the agreement for the ensuing year, as showing a gross want of consideration for the views expressed by large bodies of practitioners all over the country; the agreements having been submitted to practitioners without the terms being placed before the Local Medical Committees in time for due discussion. The Local Medical Committees, especially the county members thereof, also view with concern the fact that no proper provision is made for the payment of mileage, and that the Insurance Committees may only "if they think fit," make arrangements.

The Secretary was directed to transmit a copy of the above motion to the Clerks of the Insurance Committees for the Burgh and the County, and also to send a copy to the Commissioners.

Expenses of Committees.—It was agreed that one halfpenny per annum per insured person be deducted from the last quarter's capitation money of the panel practitioners, the whole amount to be devoted to defraying the Local Medical Committee's expenses for the past year, any balance left over to be carried to next year; the Secretary to arrange that the levies be made by the Clerks to the Insurance Committees before the quarter's payments are sent out.

ROXBURGH.

A meeting of the General Committee of the Roxburgh Local Medical Committee was held at Newtown St. Boswells on December 23rd, 1913, when fifteen members were present. In the absence of the Chairman, Dr. Blair presided.

Mileage Grants.—The Secretary read a letter from the Clerk to the Insurance Committee, and, after discussion, it was agreed by seven votes to five that the special mileage rate should be three times the normal rate.

New Agreement and New Regulations.—The Secretary read letters from the Insurance Committee and the Insurance Commissioners with regard to the modifications in the new agreement proposed by the Local Medical Committee, and Dr. J. Carlyle Johnstone gave the following summary of the points on which the agreement and regulations failed to meet the requirements of the profession:

1. That calls on a practitioner's services within a period of two weeks after a patient's confinement should be considered as attendance on the confinement.

2. That Regulation 11 (2) prohibiting a practitioner from taking any fee or remuneration should be amended to read, "Shall not be entitled to demand."

3. That in the case of patients who have changed their residence attendance should only be required if the new place of residence is within a three-mile radius of the practitioner's house.

4. That in regard to 13 (1) of the agreement whereby a practitioner becomes liable for compensation in the event of any breach of regulations, the word "wilful" should be inserted before "breach."

5. That with regard to the power of the Commissioners to discharge a practitioner on the panel "forthwith," whereas a practitioner can only withdraw his services at the end of a year, except with consent, three months' notice on either side is suggested as preferable.

After discussion, the Secretary was instructed—

1. To communicate with the Clerk to the Insurance Committee and request that members be supplied with copies of the draft agreement.

2. To issue notices to members for a meeting to be held on the 6th proximo on the termination of the meeting of panel practitioners.

3. To issue a circular to members informing them that the Local Medical Committee is of opinion that no practitioner should sign any agreement sent to him by the Clerk to the Insurance Committee until the Local Medical Committee advise his doing so.

4. That he should in further correspondence maintain the position taken up by the Committee with regard to the rules for medical benefit.

Panel Committee.—The meeting instructed the Secretary to intimate to practitioners on the panel their recommendation that the individual members of the Executive of the Local Medical Committee should be elected, with a view to avoid the disorganization of the local profession that would ensue on the endeavour to maintain two separate representative bodies, and in order that conjoint meetings mights be held.

Vote of Thanks.—The proceedings terminated with a vote of thanks to Dr. Blair for presiding.

INSURANCE COMMITTEES.

Isle of Wight.

Sanatorium Benefit and Discharged Soldiers.—At the last meeting of the Isle of Wight Insurance Committee the question was raised as to the responsibility of the Committee for the sanatorium treatment of discharged soldiers. In one case the man was an inmate of the Royal National Hospital for Consumption at Ventnor, and it had been ascertained that his place of residence before he entered the army was Scotland. In these circumstances the Committee had refused to entertain the application, but in the case of another discharged soldier whose home was in the island he had been granted twelve weeks' sanatorium treatment. The action of the Sanatorium Subcommittee was approved after it had been stated that the Committee had informed the military authorities that it would undertake the responsibility of sanatorium treatment in the case of a native of the island, but not in that of others.

Royal Naval College, Osborne.—At the request of the Captain of the Royal Naval College, Osborne, the senior medical officer of that institution was placed on the panel for the treatment of insured civilians residing within the precincts of the College.

New Agreements.—It was reported that the suggested modifications of the new agreements with the doctors had not been sanctioned by the Commissioners; the seal of the Committee was affixed to duplicate agreements with the doctors and chemists on the panel to come into force on January 12th.

New Drug Tariff.—A new drug tariff submitted by the Isle of Wight Pharmacists' Association was approved as from January 12th, subject to the approval of the Local Medical Committee and the Insurance Commissioners.

Payments.—It was reported that the payments to doctors for the quarter ending October 14th amounted to £2,070 1s. 6d., and to chemists £383 1s. 7d. In addition, a capitation rate of 1s. for the half-year ending July 14th had been paid to doctors in respect of persons on their lists residing more than one mile from a chemist to whom the doctors supplied drugs and appliances; the total amount of this payment was £134 1s.

East Suffolk.

At the last meeting of the East Suffolk Insurance Committee, Dr. Cuming Askin protested against the undue haste with which the medical men had been called upon to sign the new agreement, and the failure to issue a statement with regard to the suggestions for the modification of the agreement which had been approved by the Committee. He went on to move that words should be inserted in the agreement defining the implication of Clause 2 (ii). Eventually the following resolution, which had been prepared by the Clerk, was agreed to:

> That in order to remove doubts which have arisen as to the construction which may be placed upon Section 2 (2) of Form Med. 29 (revised), this Committee would, where circumstances justified, and subject to the approval of the Medical and Sanatorium Benefits Subcommittee being obtained on each separate case submitted to them, consider the clause to mean that nothing in Clause 2 (2) of the agreement shall be read as prohibiting the acceptance by the practitioner from an insured person of such fees as may have been agreed between them in writing as a condition of the acceptance by the practitioner of the insured person where the place of residence of the insured person and the practitioner are so situated that access between them is by reason of distance or otherwise difficult or inconvenient, and where there is another practitioner upon the panel by whom the insured person might have been accepted, or to whom he might have been assigned, and whose residence is nearer to that of the insured person, or is less inconvenient of access, subject, however, to the proviso that it must be clearly understood that the passing of this resolution will not in any way admit the right of the practitioner to claim fees in these or in other circumstances, but will merely enable him to enter into an arrangement with the insured person who desires and offers to do so in the circumstances indicated.

The following minute was adopted also:

> That the phrase "accept any fee or other remuneration" does not include a present or a gift made by an insured person to a doctor.

Edinburgh.

At a meeting of the Edinburgh Burgh Insurance Committee, held on December 18th, 1913, Dr. Michael Dewar moved that consideration of the general principle of appointing medical referees for the purpose of detecting malingering should, on the ground of expediency, be delayed until sufficient evidence was produced that malingering among insured persons really existed to any extent. Mr. J. Simpson, Convener of the Medical Benefit Subcommittee, stated that it was waiting for the report to be made by a Committee of the Insurance Commissioners now sitting to consider the question of excessive sickness. He therefore suggested that the matter should be postponed until the report was issued, and Dr. Dewar withdrew his motion.

Berwickshire.

At a meeting of the Berwickshire Insurance Committee, on December 27th, 1913, under the chairmanship of Captain C. B. Balfour (Newton Don), an application was made by Dr. Georgeson (Lauder) to have permission granted him to dispense all medicines used by his patients who were insured persons residing beyond one mile from the nearest panel chemist. There was considerable discussion, and the Chairman expressed the opinion that the Committee could not grant the request, but must first ask the doctor to furnish a list of all patients residing over the mile limit for whom he desired to dispense, and the reason why he required to do so. Dr. Macvie (Chirnside) favoured the granting of permission, holding that to take away this part of a doctor's practice was actually to rob him of a portion of his emoluments—a thing the Insurance Act never intended.

INSURANCE NOTES.

Medical Certificates.

Dr. A. Rose (Horwich, Lancashire) informs us that it had been the custom of friendly societies operating in that district to require a member to pay the lodge surgeon for any certificate he required for clubs other than the one to which he was entitled free. The secretary of the society has now arranged to distribute amongst all the secretaries of the different friendly societies and clubs books of certificate forms with the word "copy" printed thereon. After receiving the initial certificate the secretary copies the particulars along with the doctor's signature on to these forms, and for this, Dr. Rose states, a charge of one penny is made; the certificates are accepted by other societies. Dr. Rose wrote to the Insurance Commissioners drawing their attention to the matter, and received the following reply:

> National Health Insurance Commission (England),
> Buckingham Gate, London, S.W.
> December 19th, 1913.

Sir,—In reply to your letters of the 10th and 24th ultimo, I am directed by the National Health Insurance Commission (England) to state that a medical practitioner in signing the form of agreement with an Insurance Committee undertakes to furnish an insured person with such

certificates as are required to be furnished by that person under the National Insurance Acts in the circumstances set forth in the conditions of the Treasury grant which are stated in the First Schedule to his agreement. He is not required to provide any certificates which are not required for these purposes. Where, however, an insured person requires a certificate to which he is entitled under the terms of the agreement, it does not appear that he can be debarred from using the certificate, obtained for this purpose, for some other purpose also. Apart from any other consideration, it would probably be found to be impracticable to prevent an insured person from using a medical certificate for other purposes than those of National Insurance.

I am to add that the word "Confidential" on Form Med. 34 is intended as an instruction to the society's official into whose hands the certificate may come. It is clearly open to the insured person himself to give information as to his illness to any other person.—I am, Sir, your obedient servant,

S. P. VIVIAN.

A. Rose, Esq., M.B., C.M.,
Duff House, Horwich, Lancashire.

Shoreditch Medical Union.

A special general meeting of the Shoreditch Medical Union, including in its membership all but one of the panel practitioners residing in the borough of Shoreditch, was called on December 17th, 1913, to consider the circular of the Insurance Commissioners 35/I.C. with regard to the formation of a Panel Committee for the County of London. The meeting took place at the Metropolitan Hospital, Kingsland Road, and Dr. Major Greenwood was in the chair. The circular was carefully considered, and attention drawn to the fact that on the Committee which it was proposed to elect *en bloc* there were no representatives for the boroughs of Holborn or Shoreditch. After much discussion the following resolutions were carried unanimously, and the Honorary Secretary was instructed to forward them to the Insurance Commissioners:

1. That the principle of electing *en bloc* so important a Committee as the Statutory Panel Committee for the County of London could not be approved of by the Shoreditch panel practitioners; that in their opinion it was impossible in that manner to obtain proper representatives of the panel practitioners in the metropolitan boroughs.
2. That, if the Commissioners decided to accept the proposed scheme, this union of the Shoreditch panel practitioners desired under Clause 3 of the said scheme to nominate Drs. Major Greenwood and Alban Dixon as representatives of the panel practitioners of the borough of Shoreditch.

The National Medical Union.

The Provisional Federating Council of the National Medical Union (*Morning Post* Building, 346, Strand, London, W.C.) has issued the following as a preliminary statement of the future policy of that body:

1. To maintain the freedom of the medical profession in its professional and personal relations with the public.
2. To support the public in maintaining a corresponding freedom, and to safeguard the national health.
3. To oppose the present arrangements for medical benefits under the National Insurance Acts, and to decline professional service under such arrangements.
4. To preserve an independent attitude with regard to party politics.

IRELAND.

Belfast.

A meeting of the whole profession resident or practising in the county borough of Belfast was held, under the presidency of Sir John Byers, in the Medical Institute on December 18th, 1913, when there was a large and representative attendance.

Work of the Local Medical Committee.

The Honorary Secretary, Dr. Thomas A. Davidson, made a short report of the work done for the year. He said that the present Committee had been in existence since April 25th, 1912, and had been recognized as a statutory committee under the Act in March, 1913. It consisted of sixty members, the officials being: President, Sir John Byers; Vice-President, Dr. T. C. D. Cathcart; Honorary Treasurer, Dr. R. J. Johnstone; Honorary Convener and Secretary, Dr. T. A. Davidson; the last named being also representative to the Irish Medical Committee. The Committee had met twenty-four times and had consulted with the whole profession on eight occasions. Three subcommittees—Complaints, Finance, and Tuberculosis—had met frequently. The Tuberculosis Committee had been the first in Ireland to introduce the domiciliary treatment of tuberculosis, and had secured for the general practitioner a fair remuneration for the work. At present it was in consultation with the Public Health Committee of the Belfast Corporation in reference to its great tuberculosis scheme, which embraced both insured and uninsured persons.

In April, 1913, a grant-in-aid of £50,000 for certification purposes had been made to Ireland in lieu of medical benefits, and a panel had been set up in Belfast. The amount, however, had not proved satisfactory, and a further grant of £41,000 had been promised for next year. Negotiations were in progress and would, it was expected, lead to a satisfactory result. The Local Medical Committee had made arrangements with the Local Insurance Committee whereby the capitation fee for certification was being paid to the medical men on the panel for every insured person in the area; out of 150,000 insured persons 65,000 had not selected a doctor, and these by arrangement had been allocated and paid for.

Election of New Local Medical Committee.

The election of Committee for 1914 having been completed, the Honorary Treasurer, Dr. R. J. Johnstone, said that money was required to carry on the organization, and proposed the following resolution, which was passed unanimously:

> That a levy at the rate of 2s. per annum be imposed on each panel doctor in this insurance area for every 100 persons on his list, the income so derived to be placed at the disposal of the Local Medical Committee for such purposes as the Committee deems advisable in the best interests of the profession.

A small subcommittee, with Dr. W. Burns convener, was then elected to deal with the friendly society question; and the meeting terminated with a very cordial vote of thanks to Sir John Byers for his conduct in the chair.

OFFICIAL PUBLICATIONS.

ENGLAND.

Medical Benefit Cards, 1914.

The Insurance Commission (England) has issued a notice (Form 110/I.C.) to insured persons in the following terms:

NATIONAL HEALTH INSURANCE.

Medical Benefit.

Red Medical Tickets and Forms Med. 32 are no longer available for the purpose of choosing a doctor or institution and will not be accepted. Medical Cards issued by the Insurance Committee must be used instead.

If you have not yet selected a doctor or institution on the panel list for the district where you live you should apply for a Medical Card to the Clerk to the Insurance Committee on a form which you can get at any Post Office. When you receive your Medical Card you should give it to the doctor on the panel or institution you wish to select. You should not delay doing so until you are ill.

If you have already chosen a doctor or institution you will in due course, without making application, receive from the Insurance Committee a Medical Card bearing the name of the doctor or institution. After the Medical Card has been issued to you, you must be prepared to produce it to the doctor or institution whenever you require treatment.

The Medical Card will contain information as to the steps you should take to get Medical Benefit on change of address.

Any inquiries with regard to your Medical Benefit should be addressed to the Clerk to the Insurance Committee, whose address will be found in the panel list exhibited in the nearest Post Office.

National Health Insurance Commission (England),
London, S.W.

The new form for the use of a person who has not hitherto selected a doctor is Form Med. 50, and requires information as to previous addresses and of any intention to remove from the district at an early date.

The card, in addition to general instructions for obtaining medical benefit, contains three parts—Part A, to be filled in when the insured person is not on the list of a doctor or institution, and wishes to choose a doctor or institution; Part B, for use when an insured person has removed

altogether to a new address; and Part C, for use if desired during temporary residence; this part can only be used for obtaining treatment during one period of absence from home not exceeding three months; once used another card must be obtained from the Insurance Committee. The card contains the following intimation to the insured person:

NOTICE.

The Committee require an insured person in receipt of medical benefit to comply with the following rules as to conduct:

(*a*) He shall obey the reasonable instructions of the practitioner attending him.
(*b*) He shall not conduct himself in a manner which is likely to retard his recovery.
(*c*) He shall not make unreasonable demands upon the professional services of the practitioner attending him.
(*d*) He shall, whenever his condition permits, attend at the surgery or place of residence of the practitioner attending him on such days and at such hours as may be appointed by the practitioner.
(*e*) He shall not summon the practitioner to visit him between the hours of p.m. and a.m., except in cases of serious emergency.
(*f*) He shall, when his condition requires a home visit, give notice to the practitioner, if the circumstances of the case permit, before a.m. on the day on which the visit is required.

The rules of the Committee also provide that any complaint by an insured person which is adjudged by them to be frivolous or vexatious shall be regarded as a breach of their rules.

Any insured person who is guilty of a breach of any of the Committee's rules is liable to a fine not exceeding 10s., or in the case of repeated breaches 20s., or to be suspended from medical benefit for a period not exceeding one year.

These rules are liable to alteration, due notice of which will be given in the public press.

Circular to Approved Societies.

A circular (41/I.C.) issued to societies and branches states that the introduction of the medical card system will enable the Commissioners to dispense with the necessity for the notification by societies to Insurance Committees of changes of address taking place after January 11th, 1914, except in removals abroad, or to Ireland, the Channel Isles, or the Isle of Man. The Commissioners, having learnt that some societies are under the impression that a person does not become an effective member until the society has received his contribution card, give notice that effective membership begins on the date from which the society undertakes to admit the person.

Members Aged 65 or Over on Entry into Insurance.

The circular contains the following paragraphs:

Section 12.—On and after January 13th, 1914, an insured person, aged 65 or over, on entry into insurance will, under Section 3 (2) of the National Insurance Act, 1913, become entitled to Medical and Sanatorium Benefits on the same conditions as other insured persons except that in the case of these members Medical Benefit will cease on their attaining the age of 70 unless at least 27 contributions have been paid. Societies have already furnished to Insurance Committees particulars of insured members aged 65 or over on entry into insurance and Committees will, shortly before 12th January, issue to each such members already notified to them as resident in their respective areas a Medical Card in order to enable him to select a doctor on the panel or institution. Should a member of the Society in this class not receive a Medical Card in due course, he should apply to the Insurance Committee on the form, referred to in paragraph 5 above, obtainable at Post Offices.

Section 13.—The Commissioners are advised that the fact that a person insured under Section 49 of the National Insurance Act, 1911, has reached the age of 70 prior to 12th January next, and has therefore ceased to pay contributions will not exclude him from the Medical and Sanatorium Benefits available on and from that date under Section 3 (2) of the National Insurance Act 1913, provided, of course, in so far as Medical Benefit is concerned, that at least 27 contributions have been paid. Persons in this class who have reached the age of 70 and who have not paid at least 27 contributions will not, however, be entitled to Medical Benefit, and Societies should at once proceed to examine their records of persons who were insured under Section 49 who have attained the age of 70 with a view to ascertaining the number of contributions paid. If the number is less than 27, particulars of the member should be forwarded not later than January 3rd next, on the enclosed Schedule (Form 111/I.C.) to the Commissioners, who will communicate with the appropriate Insurance Committee. These persons will not be entitled to Medical Benefit, and a Medical Card will not therefore be issued to them. They will, however, be eligible for Sanatorium Benefit. In a case in which 27 contributions have not been paid at the end of the Fifth Quarter and the member became 70 after the end of that Quarter, care should be taken to ascertain the number of contributions paid in the Sixth Quarter.

The arrangements for future notifications of this nature will be communicated in a subsequent circular.

Section 14.—A person who was 65 or over on the 15th July, 1912, and was at any time insured under Section 49 of the National Insurance Act, 1911, continued in insurance until 13th October, 1913, even although he ceased before that date to be employed within the meaning of the Acts. Any person over 60 years of age on ceasing to be entitled to continue in insurance as an employed contributor is now entitled (under Section 4 of the National Insurance Act, 1913) to remain in insurance as a voluntary contributor at the employed rate. It will therefore be seen that it is possible for every person who was insured at any time under Section 49 to become entitled to Medical Benefit on 12th January, 1914, if he is under 70, irrespective of the number of contributions, and if he is 70 or over provided that at least 27 contributions have been paid before attaining the age of 70. Societies should point out to members concerned the importance to them of declaring their desire to become voluntary contributors under Section 4 of the National Insurance Act, 1913, and of stamping a card accordingly. Any such member who takes these steps before 12th January, 1914, will be entitled to Medical Benefit from that date provided that if he is then over 70 years of age at least 27 contributions have been paid by or in respect of him.

SCOTLAND.

Subscriptions to Hospitals and Nursing Associations.

The Insurance Commissioners for Scotland have issued a circular (A.S. 106 Scotland) stating that they have made regulations providing that expenditure by approved societies under Section 21 of the Insurance Act, 1911, shall be treated as expenditure on sickness benefit. The section enables a society to make such subscription or donation as it may think fit to a hospital, dispensary, or district nursing association, and to appoint nurses for the purpose of visiting and nursing insured members of the society. The circular proceeds to point out that such subscriptions or donations must come from the ordinary benefit fund of the society, and that no margin has been provided in this fund specially for the purpose of meeting expenditure under Section 21. It is therefore for the society to decide for itself whether judicious expenditure of this kind, in return for which members of the society would be able to obtain skilled attendance in illness, might be expected to have the effect of promoting recovery of sick members and so relieving the ordinary expenditure on sickness benefit. Such relief, however, might not be experienced immediately, and before incurring expenditure under Section 21 the Commissioners consider that societies would be well advised to have regard to their immediate liabilities for expenditure out of their sickness benefit funds, and not to incur any expenditure under the Section unless they have already realized actual savings sufficient to cover the expenditure by carrying to the administration account less than the actual amount available for administration under the regulations. Expenditure on nurses for the purpose of visiting and nursing insured members can only be treated as expenditure on benefits under Section 21 if the persons are appointed for actual sick-nursing duties. The payment of sick visitors, whose duties are purely of an administrative character and do not include sick nursing, cannot be made under the section, and must be charged to the administrative account. As the payment of midwives is on a different footing, inasmuch as maternity benefit may be administered otherwise than in cash, a society is entitled to place at the disposal of its members or their wives the services of duly certified midwives, and the payment of such midwives would be made out of the sum payable as maternity benefit to the individual members in accordance with the arrangements explained in Circular A.S. 73.

CORRESPONDENCE.

Capable and Incapable of Work.

DR. SEYMOUR STRITCH (Dublin) writes: The terms *capable* and *incapable* of work require some defining in order that insured persons and their societies may not respectively suffer deprivation or loss.

The words *employment* and *work* are not synonymous. During the passage of the Amending Act to the Insurance Act through Parliament an unsuccessful effort was made to have the former word substituted for the latter, the Government stating such a change would wreck the Act. Obviously a young pianist in a picture palace, losing a finger or two, might justly claim that he was permanently incapable of following his employment, and become a pensioner on his society—whereas being young and otherwise healthy, he might reasonably be expected to adopt some other calling. This may be an extreme case, but it indicates the necessity for safeguarding societies in similar instances. The Act intends that a man no longer able to follow his regular employment owing to some partial disablement, must nevertheless bestir himself to earn his own maintenance. The difficulties lie in the fact that individuals to whom this applies may not be able to find work suitable to their condition. In these cases the Act cannot be used as an alternative to provide for the man. He becomes unemployed and if an employee in one of the scheduled trades he can claim unemployment benefit. This is one of the features of the Act which those administering its provisions find most distressing, and more especially when it applies to a mother, of a few weeks, who has not yet recovered her strength, and whose infant's life may be endangered and its future health enfeebled by want of care and the use of artificial food during the mother's absence at work.

Incapacity has been defined as total inability to do any work whatever, even of a domestic kind, and might be extended so as to include every one not "constantly unconscious," as pointed out by the Fabian Society. These definitions are, in my opinion, entirely contrary to the spirit of an Act described by its author as being of the nature of a "rare and refreshing fruit." In my opinion, the terms "capable" and "incapable" of work should be considered with regard to the individual's educational, physical, and social qualities, which would qualify him to maintain himself by some other means than those of his regular employment. The Fabian Society issued a letter to the daily press asking for information and specifying the absurdity of interpreting capability for work to the extent of supposing that a bedridden individual might write a book. No; the alternative occupation to be followed by a partially incapacitated person must be of a kind possible to the type of insured person affected. Such far-stretched ideas as the last mentioned, if ever seriously entertained by a society, would be not only a base equivocation, but one, I think, as palpably illegal as it would be contrary to the meaning of the Act.

The principle on which I fill in Forms Med. M.A.6 is as follows:

If an insured person is suffering from a *partial disablement of a transitory nature*, I certify him as totally incapable of work, and, on the other hand, if he is afflicted with a *partial disablement of a permanent nature*, I certify him as capable of work.

A skilled labourer, compositor, or bank clerk suffering from whitlow or like ailment I would certify as incapable of work, as it would be monstrous to expect them to seek and obtain other work for the few weeks they might be incapacitated from following their employment. But a case of varicose veins or the loss of some fingers I should certify as capable of work, for the reason mentioned in the second paragraph of this letter. Though this is the principle I adopt, I do not pretend I use it as an invariable rule. The degrees of health and ill health, and the various grades of occupation and exposure, are so extreme that when combined with a consideration of the potential powers any given insured person may possess for adapting himself to a new employment, whether these be educational, physical, or social, the principle I mentioned is but a fundamental rule on which to base one's opinions as to the person's fitness or otherwise for work.

Disablement benefit and the sixth additional benefit (payment in cases partially incapacitated) not being at present in vogue, there are insured persons who should come under these provisions, but failing their application and administration are unprovided for, with the result that those administering the Act, whether as society committees or medical men supplying certificates, are placed in an awkward and confused position. The insured person and his friends become indignant and abuse the Act and all connected with it. In those cases I generally explain that as there was a waiting period for the administration of the existing benefits, there is also one for the latter, though unfortunately of longer duration. No doubt as these benefits become provided for by societies, confusion, hardship, and discontent will be eliminated.

Voluntary Insurance versus Compulsory Insurance.

Miss MARGARET DOUGLAS, Honorary Secretary of the Insurance Tax Resisters' Defence Association (9, South Molton Street, London, W.), writes: I shall be grateful if you will allow me to make one or two comments on the article "Voluntary Insurance" which appeared in your issue of December 6th last.

To begin at the end, it is scarcely sufficient to discuss the advantages or disadvantages of a State-aided voluntary insurance scheme, even in the BRITISH MEDICAL JOURNAL, solely from the medical point of view, as your correspondent suggests. National considerations outweigh any question of gain to separate classes of the community, and I should like to touch on one or two of these broader aspects before outlining any suggestions on the medical position.

Under a Voluntary Insurance Act the right of compulsion and of deduction from wages would be taken away from the employers, and the workers would be left free to insure or not as they pleased. Those who did so would receive from the State a grant in the proportion of 5d. for 4d. contributed. This would be paid in to the funds of the friendly societies.

Directly the employers' power of compulsion and the £10 fine were removed certain classes of workers would drop out of insurance. The first to go would be the governesses, clerks, secretaries, accountants, nurses, and others whose salaries tend to rise above the income limit after a few years of work. These would return to the doctors as private paying patients. The sweated workers and casually employed would also stop paying—not from "thriftlessness," as the writer of the article in some confusion of thought suggests, but because for them insurance is a luxury as much out of reach as port wine or diamonds, and only a cruel and short-sighted national policy would impose a tax on to-day's food for to-morrow's medicine, as the Insurance Act does in the case of these underpaid workers. For these honourable provision should be made, either in the shape of free insurance paid through the local friendly societies on production of a periodical wage-certificate, or by a scheme worked through the public health authorities.

After these two classes had been allowed to drop out at either end of the present scheme there would remain in insurance that great mass of the working population who were in societies before our German Registration Act descended on us—namely, those people who felt the need and the desirability of insurance, and could afford to pay for it. These are the only classes for whom insurance is suitable. The State subsidy would encourage their voluntary efforts and render the provision more adequate than before.

A few really "thriftless" persons would no doubt stop contributing, although the State grant would certainly attract them, and in a few years we should probably see a repetition over here of the Danish experience, where a larger proportion of the population are voluntarily insured in a State-aided scheme than in Germany, where compulsion has been the rule for thirty years. In any case, if we are going to legislate against "thriftlessness" we must do so without distinction of class or position. I have heard of men in Harley Street who lived beyond their means without thought for the morrow quite as shamelessly and with less excuse than an excellent farm labourer who, having got drunk every Saturday night for forty years and "never had a headache," refuses to set aside fourpence a week for Mr. Masterman's cod-liver oil! The spirit which laughs at risks is a far more valuable

national asset than the flannel-underclothing philosophy which takes its temperature on Saturday nights. Under the compulsory insurance Acts, as the whole of modern German experience shows, we encourage the latter spirit rather than a wise modification of the former; we stimulate valetudinarianism to an extent unknown under voluntary insurance; we deprive the workers of their admirable initiative and of their right and responsibility as citizens to control their own incomes, and we relegate them to a definitely inferior place in the community as being liable to a compulsion and interference from which the well-to-do are free. We weaken the fibre of the nation—as German experts agree—without any appreciable diminution in the extent or duration of disease. Indeed, the German experience shows that illnesses tend to last for longer and longer periods.

The actuarial basis of the Insurance Act, far from being prejudicially affected by the change from compulsory to voluntary insurance, would be restored to a condition of soundness and solvency, since the calculations are all based on the past experience of voluntary insurance, and are proving inadequate for the conditions created by compulsion.

So much for the broader aspects of the matter. If compulsion were removed it would appear that the medical profession would lose a certain number of capitation fees, some of which would be set off by an increase in the number of paying patients. But I see no reason why the method of remuneration adopted for the very poor should not be the same as for insured persons—a capitation fee. I would like to suggest in your columns that in place of the present confusion of committees and subcommittees, and regulations and red tape, the medical profession as a whole should accept responsibility for the medical service given under the voluntary State-aided scheme. Mr. Gibbon has thrown out an admirable suggestion in his book on medical benefit in Germany and Denmark, to the effect that the agreed capitation fees should be paid from the societies to the local medical gilds or associations, and should be distributed by the doctors among themselves in proportion to the services rendered. Let us assume for illustration that there are 20 doctors in a town whose population includes 5,000 insured persons. Five of these doctors might have no insured persons on their list, 5 others might have 6, 12, or 18 persons each, while the bulk of the 5,000 would be divided amongst the remaining 10 practitioners. The capitation fees on the 5,000 would be paid to the local medical guild and distributed on the responsibility of all the doctors, who would thus control their own affairs, and be able to check abuses such as arise where an unscrupulous practitioner attempts to secure popularity by giving "easy" certificates. The friendly societies in their corporate capacity would guarantee payment of the fees, the doctors in their corporate capacity would guarantee an efficient service. Any differences would, of course, be settled by some joint committee representing the four interested parties—the State, the societies, the doctors, the insured persons. A system of this kind would, I think, restore to the medical profession some of that prestige it has lost since the panel panic of December, 1912, and it is far more in accordance with our national traditions of freedom and responsibility than the swathings of red tape which are now hampering the doctor's activities, just as compulsion is stifling the magnificent movement which found expression in the friendly societies.

Finally, while apologizing for this inroad on your space, may I point out that our organization is not a "kite-flying" association in the interest of any political party? For two years we have been carrying on a non-party campaign against compulsion as applied to the working classes only and not to the well-to-do. We include among our supporters people of all political views who are in agreement only in their detestation of the compulsory character of the Insurance Act. It is a mere accident of politics that a number of Conservative M.P.'s have openly declared their sympathy with our demand for a voluntary Act, and that no Liberals have as yet done so. Had the Conservative Party introduced compulsion (instead of agreeing to it), Liberal politicians would have found a thousand Liberal arguments in defence of personal liberty.

As far as our association is concerned, we care not who abolishes compulsion so long as it is done.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following announcements are published by the Admiralty: Fleet Surgeon CYRIL JAMES MANSFIELD, M.V.O., M.D., to be Deputy Surgeon-General, September 27th, 1913. Fleet Surgeon HORACE L. MARRIOTT, to the *Egmont*, January 20th. Fleet Surgeon RICHARD A. ROSS, M.D., to the *Diana*, and for duty with group of ships of Third Fleet, December 31st, 1913. Fleet Surgeon ERNEST A. PENFOLD to the *Egmont*, January 20th. Fleet Surgeon ARTHUR H. H. VIZARD to the *Albemarle*, vice Penfold, January 20th. Fleet Surgeon ROBERT H. MORNEMENT to the *Zealandia*, vice Vizard, January 20th. Staff Surgeon HENRY COOPER to the *Vivid*, December 31st, 1913. Staff Surgeon CHARLES E. C. STANFORD, M.B., to the *President*, additional for recruiting head quarters and other special duties, vice Forrester undated. Staff Surgeon NOEL H. HARRIS to the *Weymouth*, vice Anley on the *Weymouth*, completing, undated. Staff Surgeon WITHAM E. ORMSBY, M.B., to the *Thunderer*, vice O'Flynn, December 22nd, 1913. Staff Surgeon JOHN J. H. ROONEY to the *Albemarle*, December 19th, 1913. Staff Surgeon J. D. KEIR to the *Venture*, additional, December 20th, 1913, and on recommissioning, undated. Staff Surgeon P. T. SUTCLIFFE, M.B., to the *Hindustan*, temporary, December, 31st, 1913. Surgeon FRANCIS J. BURKE, M.B., to the *Pembroke*, additional for disposal, December 22nd, 1913, to the *Sirius* on commissioning, January 27th, and to the *Alert* on recommissioning, undated. Surgeon JOSEPH A. O'FLYNN, M.B., to the *Hebe*, vice Burke, December 22nd, 1913. Surgeon G. B. COCKREM to the *Europa* for voyage out and home, December 19th, 1913. Surgeon CHARLES M. R. THATCHER to the *Victory*, additional for long course of physical training, January 1st.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

MAJOR B. F. WINGATE has joined the London District for duty.

Supernumerary Major DAVID HARVEY, M.D., is restored to the Establishment, December 1st, 1913.

Major M. H. BABINGTON has been appointed Clinical Pathologist at the Queen Alexandra Military Hospital.

Captain HERBERT ST. M. CARTER has been appointed to the Aldershot Command for duty as a Specialist in Operative Surgery.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL J. CRIMMIN, V.C., C.B., C.I.E., has been promoted to the rank of Colonel, vice Colonel C. F. Willis, C.B., M.D., V.H.S., retired, with effect from October 1st, 1913.

Lieutenant-Colonel V. G. DRAKE-BROCKMAN is posted as Agency Surgeon, Bundelkhand.

Lieutenant-Colonel P. B. HAIG is granted privilege leave for three months, combined with furlough for one year and six months and study leave for three months, with effect from October 24th, 1913.

The services of Lieutenant-Colonel H. W. PILGRIM, M.B., F.R.C.S., have been replaced at the disposal of His Excellency the Commander-in-Chief in India, and he has been granted an extension of service to complete twenty-seven and a half years up to May 10th, 1914.

The services of Major R. B. B. FOSTER, M.B., have been placed permanently at the disposal of the Government of Madras.

Major J. H. HUGO, D.S.O., is posted Agency Surgeon, Baghelkhund.

Major F. D. S. FAYRER is granted privilege leave for three months combined with furlough for one year, with effect from September 25th, 1913.

The promotion to the present rank of Major C. HUDSON, D.S.O., F.R.C.S.E., is antedated from November 28th, 1911, to July 28th, 1910.

The services of Major W. G. RICHARDS, M.B., have been placed temporarily at the disposal of the Government of Madras.

The services of Major A. GWYTHER are placed temporarily at the disposal of the Director-General, Indian Medical Service, for special duty in connexion with an inquiry into leprosy.

The promotion to the present rank of Major DE VERE CONDON, M.D., is antedated from January 28th, 1910, to July 28th, 1909.

Major H. J. WALTON, M.D., F.R.C.S., is appointed Professor of Pathology at King George's Medical College, Lucknow, with effect from September 1st, 1913.

Major S. R. CHRISTOPHERS is appointed to act as Director, Central Research Institute, Kasauli, with effect from November 6th, 1913, during the absence on deputation of Major W. F. Harvey, I.M.S., or until further orders.

Major W. G. LISTON, M.A., C.I.E., has reverted to his substantive appointment of Director of the Bombay Bacteriological Laboratory, with retrospective effect from April 1st, 1913. He also acts as Senior Member of the Plague Research Commission in addition to his own duties, with effect from that date and until further orders.

Major J. W. WATSON is posted as Agency Surgeon, Bhopal, with effect from November 13th, 1913.

Major J. R. J. TYRRELL is posted as Civil Surgeon, Khyber, with effect from November 13th, 1913.

Major G. Y. C. HUNTER is promoted to the rank of Lieutenant-Colonel, with effect from November 17th, 1913.

Major E. C. MACLEOD is promoted to the rank of Lieutenant-Colonel, with effect from July 29th, 1913.

Captain H. B. STEEN, M.D., has been promoted to the rank of Major, with effect from July 29th, 1913.

Subject to His Majesty's approval, Captain R. E. LLOYD, M.B., has been promoted to Major from July 29th, 1913.

Captain F. H. SALISBURY, M.B., Officiating Superintendent, Central Gaol, Dacca, is granted privilege leave for three months and special leave for the same period in continuation, with effect from October 20th, 1913.

The services of Captain G. HOLROYD, M.B., have been placed temporarily at the disposal of the Government of the United Provinces for employment in the Gaol Department.

Captain J. ANDERSON is posted as Civil Surgeon, Miranshah.

Captain H. CROSSLE is granted privilege leave for two months and two days, combined with special leave for three months and twenty-eight days, with effect from October 6th, 1913.

Captain R. L. GAMLEN, M.D., has been transferred to the temporary Half-pay List, with effect from November 24th, 1913.

Captain H. W. PIERPOINT is appointed to be Medical Officer of the Turco-Persian Frontier Commission, with effect from November 25th, 1913.

Captain H. H. THORBURN is appointed to hold charge of the current duties of the office of His Britannic Majesty's Consul-General and Agent to the Government of India in Khorasan, in addition to his

own duties, with effect from November 20th, 1913, and until further orders.

The services of Captain O. A. R. BERKELEY-HILL have been placed temporarily at the disposal of the Government of Madras.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT ALEXANDER C. COURT, M.B., to be Captain, December 17th, 1913.

Cadet Sergeant JOSEPH H. BAIRD, from the Edinburgh University Contingent, Officers' Training Corps, to be Lieutenant on probation, November 28th, 1913.

Cadet Staff-Surgeon THOMAS O. GRAHAM, M.D., F.R.C.S.I., from the Dublin University Officers' Training Corps, to be Lieutenant on probation, December 4th, 1913.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Fourth Southern General Hospital.—HENRY GEORGE PINKER to be Captain, whose services will be available on mobilization, October 21st, 1913.

Northumbrian Divisional Clearing Hospital.—Lieutenant-Colonel JOHN CLAY, M.B., F.R.C.S., from the First Northumbrian Field Ambulance, to be Lieutenant-Colonel, December 20th, 1913.

Third East Anglian Field Ambulance.—Lieutenant WILLIAM I. COWELL to be Captain, November 10th, 1913.

Second East Anglian Field Ambulance.—Captain JAMES M. G. BREMNER, M.B., to be Major, November 5th, 1913.

Second Western General Hospital.—Lieutenant-Colonel GRAHAM STEELL, M.D., resigns his commission, December 24th, 1913.

First London Division Clearing Hospital.—Major ALEXANDER BARCLAY LYON, M.D., from the list of Officers attached to Units other than Medical Units to be Lieutenant-Colonel, November 28th, 1913.

For Attachment to Units other than Medical Units.—GEORGE HENDERSON to be appointed Lieutenant, November 6th, 1913.

Attached to Units other than Medical Units.—Captain GEORGE BLACK, M.B., to be Major, October 26th, 1913; Captain JAMES A. TAYLOR, M.B., resigns his commission, December 20th, 1913; Captain EDWARD R. WILLIAMS resigned his commission and is granted permission to retain his rank and to wear the prescribed uniform, December 24th, 1913; Major RICHARD C. M. POOLEY is retired under the conditions of paragraph 16 of the Territorial Force Regulations, and is granted permission to retain his rank and to wear the prescribed uniform, December 24th, 1913.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Army Medical Service have been officially reported to have taken place during November:

		FROM		TO
Surgeon-General	T. M. Corker, M.D., K.H.P.	Poona	...	Ootacamund.
Colonel	F. H. Treherne, F.R.C.S. Edin.	Bangalore	...	Meerut.
,,	R. Kirkpatrick, C.M.G., M.D.	Abbottabad	...	Sialkot.
,,	R. H. Firth, F.R.C.S.	Cherat	...	Peshawar.
,,	A. E. Tate	Allahabad	...	Bangalore.
,,	G. D. Hunter, D.S.O.	Dépôt and School of Instruction		Allahabad.
Lieut.-Col.	M. O'D. Braddell, M.B.	Cawnpore	...	Limerick.
,,	N. Manders	Curragh	...	Cairo.
,,	J. H. Daly	Limerick	...	Belfast.
,,	J. W. Bullen, M.D.	Meerut	...	Sheffield.
,,	J. Girvin	Ahmednagar	...	Curragh.
,,	F. W. Begbie	Mhow	...	Maymyo.
Major	E. W. Slayter, M.B.	Mount Abu	...	Irish Command.
,,	H. W. H. O'Reilly, M.B.	Colchester	...	India.
,,	E. S. Clark, M.B.	Holywood	...	,,
,,	G. St. C. Thom, M.B.	Murree	...	Glasgow.
,,	J. P. Silver, M.B.	Kilworth Camp	...	Tipperary.
,,	D. Lawson	Netley	...	Mauritius.
,,	P. J. Probyn, D.S.O., M.B.	Sheffield	...	Leeds.
,,	M. MacG. Rattray, M.B.	Brighton	...	Shorncliffe.
,,	H. G. F. Stallard	Peshawar	...	Mhow.
,,	A. W. N. Bowen	Kirkee	...	Irish Command
,,	W. H. S. Nickerson, V.C., M.B.	Murree	...	Rawal Pindi.
,,	B. Watts	Meerut	...	London.
,,	S. de C. O'Grady, M.B.	Tower of London	...	Aldershot.
,,	H. Herrick	Naini Tal	...	Holywood.
,,	H. E. M. Douglas, V.C., D.S.O.	London	...	Cairo.
,,	E. P. Connolly	Murree	...	Rawal Pindi.
,,	P. S. O'Reilly	Irish Command		Gravesend.
,,	A. H. Safford	Naini Tal	...	Lucknow.
,,	B. F. Wingate	Bellary	...	London.
,,	J. W. West, M.B.	Murree	...	Rawal Pindi.
,,	W. C. Croly	Secunderabad	...	Mount Abu.
,,	A. D. Waring, M.B.	Hilsea	...	Gosport.
,,	J. H. Robinson	Cherat	...	Peshawar.
,,	J. C. Kennedy, M.D.	R.A.M. Coll.	...	India.
,,	C. H. Carr, M.D.	Upavon	...	Tidworth.
,,	G. Baillie, M.B.	Gt. Yarmouth	...	Colchester.
,,	L. L. G. Thorpe	Madras	...	St. Thomas Mount.
,,	J. S. Bostock, M.B.	Agra	...	Aldershot.
,,	A. W. A. Irwin	Clonmel	...	Limerick.
Captain	H. V. Bagshawe	Alexandria	...	Cairo.
,,	J. A. W. Webster	Tipperary	...	India.
,,	C. W. Holden	—		London.
,,	E. M. Pennefather	Fethard	...	India.
,,	D. G. Carmichael, M.B.	Khanspur	...	Sialkot.
,,	B. G. Patch	Derby	...	Bradford.
,,	T. S. Dudding	Colchester	...	India.
,,	M. C. Wetherell, M.D.	Kildare	...	Fethard.
,,	J. A. Turnbull	Tidworth	...	Kamptee.
,,	H. B. Connell	Shrewsbury	...	Liverpool.
,,	A. S. Arthur, M.B.	Wrexham	...	Newport.
,,	A. T. Frost, M.B.	Dublin	...	Calcutta.
,,	K. A. C. Doig	Alderney	...	India.
,,	L. V. Thurston	Aldershot	...	Bordon.
,,	P. Power, M.B.	Kilkenny	...	Poonamallee.
Captain	W. Benson, M.B.	Woolwich	...	Aldershot.
,,	C. E. W. S. Fawcett, M.B.	Cork	...	Queenstown.
,,	R. A. Bryden	Preston	...	Fleetwood.
,,	M. B. H. Ritchie, M.B.	Mhow	...	E. Command.
,,	M. J. Cromie	Chatham	...	Maidstone.
,,	M. Keane	Tidworth	...	Reading.
,,	G. B. Edwards	Leicester	...	Shorncliffe.
,,	A. M. Benett	Mhow	...	W. Command.
,,	G. P. A. Bracken	Malappuram	...	Lichfield.
,,	T. W. Brown	Jhansi	...	Irish Command.
,,	E. C. Phelan, M.B.	Dinapore	...	Barrackpore.
,,	J. J. O'Keefe, M.B.	Naini Tal	...	E. Command
,,	O. C. P. Cooke	Tipperary	...	Cork.
,,	J. L. Wood	Naini Tal	...	Pontefract.
,,	C. P. O'Brien Butler	Kirkee	...	Kildare.
,,	J. W. Houston, M.B.	Cherat	...	Peshawar.
,,	L. Murphy	Bangalore	...	Malappuram.
,,	A. H. T. Davis	Malappuram	...	Poona.
,,	G. G. Collet, M.B.	Quetta	...	Karachi.
,,	D. H. C. MacArthur, M.D.	Lahore	...	Dalhousie.
,,	H. Gall	Khyra Gali	...	Sialkot.
,,	W. H. O'Riordan	Murree	...	Dehra Dun.
,,	F. W. M. Cunningham, M.D.	Kalabagh	...	Sialkot.
,,	A. P. O'Connor, M.B.	Cairo	...	Khartoum.
Lieutenant	R. F. Bridges, M.B.	Cherat	...	Peshawar.
,,	J. D. Bowie, M.B.	Cairo	...	Alexandria.
,,	B. Biggar, M.B.	Alexandria	...	Cairo.
,,	C. M. Finny, M.B.	Barian	...	Changli Gali
,,	W. A. Frost, M.B.	Jubbulpore	...	Kamptee.
,,	P. Hayes, M.B.	Poonamallee	...	Bangalore.
,,	W. B. Laird	Caterham	...	India.
,,	J. M. Elliott, M.B.	Hilsea	...	,,
,,	F. R. B. Skrimsbire	Aldershot	...	,,
,,	D. W. Bruce, M.B.	Ewshott	...	Aldershot.
,,	S. P. Sykes, M.B.	Woolwich	...	Rawal Pindi.
,,	H. J. G. Wells, M.B.	Cork	...	,,
,,	W. Stewart, M.B.	Colchester	...	Lucknow
,,	A. S. Heale	Malta	...	Rawal Pindi.
,,	W. McNaughtan, M.B.	Netley	...	Devizes.
,,	M. Burnett	Cosham	...	Winchester.
,,	E. A. Strachan, M.B.	Edinburgh	...	India.
,,	C. J. Blaikie	Aldershot	...	Ewshott.
,,	O. W. J. Wynne	London	...	Lucknow.
,,	C. M. Ingoldby	Cork	...	Fermoy.
,,	H. W. L. Allott	Galway	...	India.
,,	E. V. Whitby, M.B.	Fermoy	...	Kilworth.
,,	J. E. Hepper	Bulford	...	Upavon.
,,	C. Helm	Curragh	...	Dublin.
,,	E. C. Beddowes	Curragh	...	Kildare.

Lieutenants R. G. Shaw, M.B., and A. F. C. Martyn, appointed on probation July 26th, 1912, have been stationed at Curragh and Aldershot respectively.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-six of the largest English towns 8,321 births and 4,997 deaths were registered during the week ending Saturday, December 20th, 1913. The annual rate of mortality in these towns, which had been 14.1, 13.2, and 14.5 per 1,000 in the three preceding weeks, rose to 14.6 per 1,000 in the week under notice. In London the death-rate was equal to 14.7, against 14.1, 12.7, and 14.2 per 1,000 in the three preceding weeks. Among the ninety-five other large towns the death-rate ranged from 4.2 in Ilford, 6.7 in Acton, 7.6 in Gillingham, 7.9 in Bury, 8.2 in Cambridge, and 8.3 in Walthamstow to 20.4 in St. Helens, 23.2 in Dewsbury, 23.6 in South Shields, 24.5 in Smethwick, 25.4 in West Bromwich, and 29.0 in Middlesbrough. Measles caused a death-rate of 3.0 in West Bromwich, 3.9 in Middlesbrough, and 5.7 in Burnley; scarlet fever of 1.8 in Great Yarmouth and 2.4 in South Shields; whooping-cough of 1.3 in Norwich and 1.4 in Smethwick; and diphtheria of 1.3 in Southampton and in Grimsby, 1.8 in Great Yarmouth, and 2.0 in Barnsley. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 25, or 0.5 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 6 were recorded in Birmingham and 2 each in Preston, Sheffield, South Shields, and Gateshead. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,112, 4,143, and 4,137 at the end of the three preceding weeks, had further fallen to 4,048 at the end of the week under notice; 458 new cases were admitted during the week, against 618, 524, and 552 the three preceding weeks.

In ninety-six of the largest English towns 5,565 births and 5,070 deaths were registered during the week ending Saturday, December 27th, 1913. The annual rate of mortality in these towns, which had been 13.2, 14.5, and 14.6 per 1,000 in the three preceding weeks, further rose to 14.8 per 1,000 in the week under notice. In London the death-rate was equal to 14.0, against 12.7, 14.2, and 14.7 per 1,000 in the three preceding weeks. Among the ninety-five other large towns the death-rate ranged from 5.5 in Cambridge, 8.1 in Southport, 8.7 in Enfield, 9.6 in Leyton and in Ilford, and 9.7 in Oxford and in Gateshead to 20.9 in Bootle, 21.2 in Middlesbrough, 21.4 in Stoke-on-Trent, 22.6 in Oldham, 23.8 in Halifax, and 25.3 in Burnley. Measles caused a death-rate of 1.4 in Sheffield, 1.5 in West Bromwich, 1.9 in Stockport, 2.0 in Aberdare, 2.4 in Middlesbrough, and 6.2 in Burnley; whooping-cough of 1.2 in Birkenhead; and diphtheria of 1.7 in Northampton and 2.0 in Carlisle. The mortality from enteric fever and scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 52, or 1.0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 15 were registered in Birmingham, 4 in Bootle, and 3 each in Liverpool, Warrington, Blackburn, and Hull. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospitals, which had been 4,143, 4,137, and 4,048 at the end of the three preceding weeks, had further fallen to 3,946 on Saturday, December 27th, 1913; 326 new cases were admitted during the week, against 524, 552 and 458 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,249 births and 751 deaths were registered during the week ending Saturday, December 20th, 1913. The annual rate of mortality in these towns, which had been 17.0, 15.6, and 17.0 per 1,000 in the three preceding weeks, rose to 17.3 in the week under notice, and was 2.7 per 1,000 above the rate in the ninety-six large English towns. Among the several towns the death-rate ranged from 8.9 in Perth, 9.8 in Clydebank, and 13.5 in Hamilton to 22.5 in Paisley, 25.6 in Kilmarnock, and 26.0 in Ayr. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Ayr and Kirkcaldy. The 344 deaths from all causes in Glasgow included 16 from measles, 6 from infantile diarrhoeal diseases, 5 from scarlet fever, 3 from diphtheria, and 1 from whooping-cough. Five deaths from measles were recorded in Paisley, 4 in Edinburgh, 3 in Leith, and 3 in Kirkcaldy; from scarlet fever 3 deaths in Kilmarnock; and from diphtheria 4 deaths in Aberdeen and 2 in Greenock.

In the sixteen largest Scottish towns 1,025 births and 777 deaths were registered during the week ending Saturday, December 27th, 1913. The annual rate of mortality in these towns, which had been 15.6, 17.0, and 17.3 per 1,000 in the three preceding weeks, further rose to 17.9 in the week under notice, and was 3.1 per 1,000 above the rate recorded in the ninety-six large English towns. Among the several towns the death-rate ranged from 13.0 in Kirkcaldy, 13.4 in Perth, and 14.9 in Hamilton to 20.5 in Falkirk, 24.8 in Greenock, and 28.9 in Coatbridge. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Clydebank and Greenock. The 338 deaths from all causes in Glasgow included 14 from measles, 5 from whooping-cough, 4 from scarlet fever, 4 from diphtheria, and 3 from infantile diarrhoeal diseases. Eight deaths from measles, 4 from scarlet fever, and 2 from diphtheria were recorded in Edinburgh; 7 deaths from measles in Greenock and 4 in Leith; 3 deaths from diphtheria in Aberdeen; and 3 from whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, December 20th, 1913, 529 births and 435 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 589 births and 407 deaths in the preceding period. These deaths represent a mortality of 18.9 per 1,000 of the aggregate population in the districts in question, as against 17.7 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.3 per 1,000 higher than the corresponding rate in the ninety-six English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 23.0 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 20.3 (as against an average of 18.9 for the previous four weeks), in Dublin city 22.7 (as against 20.6), in Belfast 18.6 (as against 16.7), in Cork 23.1 (as against 19.7), in Londonderry 11.4 (as against 13.0), in Limerick 17.6 (as against 15.6), and in Waterford 34.2 (as against 16.6). The zymotic death-rate was 1.6, as against 1.7 in the previous period.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £140 per annum.

BATH: ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

BIRKENHEAD BOROUGH HOSPITAL. — Junior House-Surgeon (male). Salary, £100 per annum.

BIRMINGHAM: CITY SANATORIUM.—Junior Assistant Resident Medical Officer. Salary, £200 per annum.

BOOTLE: HOSPITAL FOR INFECTIOUS DISEASES. — Resident Medical Officer. Salary, £150 per annum.

BRADFORD POOR LAW UNION.—Assistant Resident Medical Officer (male) for the Hospital and Workhouse. Salary, £150 per annum.

BRISTOL: COSSHAM MEMORIAL HOSPITAL, Kingswood. — House-Surgeon (male). Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—Honorary Medical Registrar.

CARDIFF: KING EDWARD VII HOSPITAL.—(1) House-Surgeon (male) to Special Departments. Salary, £100 per annum and £20 on completion of twelve months. (2) Resident Surgical Officer.

CARMARTHEN JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £200.

CHELMSFORD: ESSEX COUNTY COUNCIL.—Two Tuberculosis Officers. Salary, £500 per annum each.

CHELTENHAM EYE, EAR, AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £200 per annum.

CHESTER COUNTY ASYLUM. — Third Assistant Medical Officer. Salary, £200 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Resident Medical Officer. Salary at the rate of £50 per annum.

CLINICAL RESEARCH ASSOCIATION, Watergate House, Adelphi, W.C.—Assistant Director of the Laboratories. Remuneration, £250 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—House-Physician. Salary, £110 per annum.

CREWE BOROUGH.—Assistant Medical Officer of Health (temporary). Salary, six guineas a week.

DARLINGTON BOROUGH.—Assistant Medical Officer of Health, and Assistant School Medical Officer. Salary, £300 per annum.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—(1) House-Surgeon. (2) House-Physician. (3) Assistant House-Surgeon. Salaries for (1) and (2) £100 per annum, and for (3) £60 per annum.

DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer (female). Salary, £60 per annum.

DOUGLAS: NOBLE'S HOSPITAL. — Resident House-Surgeon. Salary, £100 per annum.

DOWNPATRICK: DOWN DISTRICT LUNATIC ASYLUM.—Junior Male Assistant Medical Officer. Salary, £170 per annum, rising to £200.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £200 per annum, rising to £225.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

ESSEX COUNTY HOSPITAL, Colchester.—(1) House-Physician, (2) House-Surgeon. Salary, £100 per annum.

EXETER CITY.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary, £250 per annum.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary at the rate of 100 guineas per annum.

FLINT COUNTY EDUCATION COMMITTEE.—Dental Surgeon. Salary, £250 per annum.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Pathologist. Salary, £100 per annum.

GLASGOW: HAWKHEAD ASYLUM, Crookston.—Junior Assistant Medical Officer. Salary, £200 per annum.

GLOUCESTER: GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Surgeon.

GREENWICH UNION.—Junior Assistant Medical Officers for the Infirmary and Workhouse. Salary, £125 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £80 per annum.

IPSWICH: EAST SUFFOLK HOSPITAL.—(1) House-Surgeon. (2) House-Physician. Salaries, £80 per annum rising to £100.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary, £250 per annum, rising to £300.

LEEDS TUBERCULOSIS ASSOCIATION.—Resident Medical Officer for the Sanatorium at Gateforth. Salary at the rate of £100 per annum.

LEICESTER EDUCATION COMMITTEE. — School Medical Inspector (female). Salary, £350 per annum, rising to £450.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS.—Assistant Resident Medical Officer. Salary, £140 per annum.

LIVERPOOL PORT SANITARY AUTHORITY.—Assistant Medical Officer. Salary, £350 per annum, rising to £400.

LONDONDERRY COUNTY AND COUNTY BOROUGH INFIRMARY.—House-Surgeon. Salary, £80 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon. Honorarium at the rate of 100 guineas per annum.

MACCLESFIELD GENERAL INFIRMARY. — House-Surgeon. Salary, £125 per annum.

MAIDSTONE: KENT EDUCATION COMMITTEE.—Medical Inspector. Salary, £300 per annum, rising to £350.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Visiting Surgeon to the Throat, Nose, and Ear Department. Honorarium, £25 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Assistant Surgeon for Women.

METROPOLITAN HOSPITAL, Kingsland Road, N.E. — House-Surgeon and Assistant House-Surgeon. Salary at the rate of £60 and £40 per annum respectively.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Pathologist. Salary, £250 per annum.

NEW BARNET: NEW HOSPITAL FOR WOMEN HOUSE OF RECOVERY.—Resident Medical Officer (female).

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Registration Officer. Salary, £100 per annum.

NORTH KENSINGTON SCHOOL TREATMENT CENTRE.—Medical Officer. Salary, £50 per annum for one afternoon a week.

NOTTINGHAM CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary at the rate of £100 per annum.

NOTTINGHAM GENERAL DISPENSARY.—(1) Resident Surgeon, (2) Assistant. Salary £220 and £180 per annum respectively.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum.

PENNYGOWN AND TOROSAY PARISHES.—Medical Officer and Public Vaccinator. Salary, £100 per annum.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PLAISTOW: MEDICAL MISSION HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer. Honorarium at the rate of £30 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum and £10 on completion of appointment.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary at the rate of £90 per annum.

POPLAR HOSPITAL FOR ACCIDENTS, E. — Assistant House-Surgeon. Salary at the rate of £80 per annum.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—Pathologist, Honorarium, £150 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

ROCHDALE INFIRMARY.—Second House-Surgeon. Salary, £100 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C. — Assistant Physician to have care of Out-patients.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Clinical Assistants.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £125 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon (male). Salary, £100 per annum.

SOMERSET AND BATH ASYLUM, Cotford, Taunton.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STOKE-ON-TRENT EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, increasing to £350.

SWANSEA GENERAL AND EYE HOSPITAL. — Third House-Surgeon. Salary, £125 per annum.

TAUNTON RURAL DISTRICT COUNCIL. — Medical Officer of Health. Salary, £110 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician and House-Surgeon. Salary, £40 each for six months.

WALSALL AND DISTRICT HOSPITAL.—Assistant House-Surgeon. Salary, £110 per annum.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £200 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WILTS COUNTY ASYLUM, Devizes.—Junior Assistant Medical Officer. Salary, £200 per annum.

WILLESDEN URBAN DISTRICT COUNCIL.—Assistant Medical Officers of Health and Assistant School Medical Officers. Salary, £300 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL. — House-Physician (male). Salary, £80 per annum.

WORCESTER: WORCESTERSHIRE COUNTY COUNCIL. — Two Assistant Tuberculosis Officers. Salary, £300 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £140 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Warminster (Wiltshire), Worthing (Sussex).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ADDISON, A. Stanley, M.B., B.S.Melb., Junior Medical Officer to the Auckland Hospital, New Zealand.

ALEXANDER, W. A., M.R.C.S., L.R.C.P., District Medical Officer of the Boston Union.

ALLAN, J. C. H., M.B., B.S.Glas., Assistant Medical Officer to the Sheffield Poor Law Union Officer.

DONOVAN, T. H., M.D.N.U.I., Assistant Medical Officer of the Liverpool Parish.

FORREST, J. L., M.B., C.M.Glas., District Medical Officer of the Wisbech Union.

GREEN, W. F. L., M.R.C.S.Eng., L.S.A., District Medical Officer of the Dorchester Union.

HILL, A. T., L.R.C.P.and S.Edin., District Medical Officer of the Llanrwst Union.

HOUSTON, T. H., M.B., B.S.Q.U.Belf., Assistant Medical Officer of the South Manchester Township Workhouse.

MCLORINAN, W., L.R.C.P.and S.Irel., Certifying Factory Surgeon for the Belfast (North) District, co. Antrim.

MEARNS, A., M.B., B.S.Edin., Assistant Medical Officer of the Infirmary and Gordon Road Workhouse of the Parish of Camberwell.

SYME, W. S., M.D.Edin., F.R.S.E., Extra-Academical Lecturer on Diseases of the Nose and Throat, Glasgow.

WADE, R. B., M.D.Syd., Honorary Surgeon to the Royal Alexandra Hospital for Sick Children, Sydney.

WALKER, R. A., M.B., B.C.Camb., F.R.C.S.Eng., Certifying Factory Surgeon for the Peterborough District, co. Northampton.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

MARRIAGE.

LOBB—GREENALL. — On December 23rd, 1913, at Christ Church, Woburn Square, London, W.C., E. Leslie Martyn Lobb, M.S. Lond., F.R.C.S.Eng., of Hong Kong, China, only son of the Rev. J. and Mrs. Martyn Lobb, of Cheshunt, Herts, to Louise Josephine, eldest daughter of J. N. and Mrs. Greenall, of Nottingham.

DIARY FOR THE WEEK.

MONDAY.

ROENTGEN SOCIETY, Middlesex Hospital, Mortimer Street, W., 8.15 p.m.—Paper:—Dr. Jean Clunet (Paris): Histological Changes produced by *X* Rays on Animal Tissues. Practical consequences in regard to Radiotherapy and protection of the Radiologist.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Dr. Charles R. Box: Address on Pellagra (with lantern demonstration).

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNAECOLOGY, 8 p.m.—(1) Demonstration of Specimens. (2) Short Communications:—Dr. Drummond Maxwell: Case of Congenital Coccygeal Tumour. Mr. Hamilton Whiteford: Case of Double Ovariotomy with unusual Post-operative Phenomena. (3) Paper:—Mr. Douglas G. Reid: The Genito-mesenteric Fold of Peritoneum, its Relations and its Functions.

UNITED SERVICES MEDICAL SOCIETY, Royal Naval Medical College, Greenwich, S.E., 5 p.m. — Paper:—Surgeon E. L. Atkinson, R.N.: Antarctic Experiences.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF LARYNGOLOGY, 4 p.m. — Demonstration of Cases and Specimens.

CLINICAL SECTION, 8.30 p.m.—Demonstration of Cases.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Medical and Surgical Clinics daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday. Lectures on special subjects on Tuesday, Wednesday, and Thursday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day: Tuesday, Medical; Wednesday, Surgical; Thursday, Medical; Friday, Eye. Special lectures at 5.15 p.m. each day.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, *X* Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Podiatrics: Wednesday and Saturday.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	1914. JANUARY.
2 Fri.	London: Central Ethical Committee, 2 p.m.
5 Mon.	London: Dominions Committee, 2 p.m. London: Naval and Military Committee, 4 p.m.
6 Tues.	London: Regulations and Standing Orders Subcommittee, 10 a.m. London: Organization of Medical Students Subcommittee, 2.30 p.m. London: Non-Panel Committee, 2.30 p.m. Tower Hamlets Division, London Hospital, 4 p.m.
7 Wed.	London: Journal Committee, 2.30 p.m. London: Insurance Act Tuberculosis Subcommittee, 6 p.m.
8 Thur.	London: Conference of Representatives of Association and Society of Medical Officers of Health.

Date.	Meetings to be Held.
	JANUARY (*continued*).
9 Fri.	London: Medico-Political Committee, 10.30 a.m. London: Joint Meeting Maternity Benefit and Parliamentary Subcommittee.
10 Sat.	Scottish Committee, Station Hotel, Perth, 12 noon.
13 Tues.	London: Metropolitan Counties Branch Council, 4 p.m. London: Organization Committee, 2 p.m.
14 Wed.	London: Hospitals Committee (*provisional*).
21 Wed.	London: Finance Committee, 2.30 p.m.
22 Thur.	Altrincham Division, Annual Meeting, Altrincham.
23 Fri.	Newcastle-upon-Tyne Division, Royal Victoria Infirmary, Scientific Demonstrations, 3.15 to 6 p.m.
28 Wed.	London: Council.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 10TH, 1914.

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Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

BOMBAY BRANCH.

AN ordinary meeting of the Bombay Branch was held in the University Library on November 27th, 1913, Dr. SORAB K. NARIMAN, being in the chair. About twenty-two members were present besides the Honorary Secretary.

New Members.—The election of the following members by the Branch Council was announced: Dr. (Miss) Khareghat of Karachi and Dr. Kothare of Bombay.

Clinical Cases.—Majors NORRIS, I.M.S., and GORDON TUCKER, I.M.S., showed interesting clinical cases. Lieutenant-Colonel STREET, I.M.S., had sent an interesting case of ulcer of the nose caused by a mixed infection. Dr. SORAB K. ENGINEER, M.R.C.P., read notes of an interesting case of typhoid fever.

Proposed Women's Medical Service.—The question of the qualification of the members of the proposed Women's Medical Service for India under the auspices of the Dufferin Fund was desired to be discussed at the meeting, but owing to a technical difficulty in introducing matters for discussion which were not announced on the agenda and other reasons it was left to the Branch Council to look into the matter.

QUEENSLAND BRANCH.

The Association House.

SPEAKING at the monthly meeting of the Queensland Branch of the British Medical Association on October 3rd, 1913, the President, Dr. ESPIE DODS, gave an account of the history of the movement which has culminated in the acquisition of a building of its own by the Branch. The proposal to have permanent head quarters for the Branch had, he said, been under the consideration of the Council for a number of years. At one time the matter had gone so far that, through the efforts of Dr. Brockway, a site had been promised by the Government; it was afterwards required for Commonwealth purposes, and, though this was a disappointment at the time, it was probably a blessing in disguise, for, after studying the house of the Sydney and New South Wales Branch, it was found possible to arrange for the purchase in Adelaide Street of a site affording an adequate area for the erection of a commodious building. Dr. W. N. Robertson, who took great interest in the matter, became the chairman of directors of a company specially formed to purchase the site and erect the building; 5,060 shares were disposed of, 1,470 being taken up by twenty-four country members. The shop floor and first floor of the building had been let for fourteen years at an increasing rental, and the rent it was anticipated would be sufficient to meet all expenses and allow of at least £100 a year being placed to a sinking fund. The building contained a library and reading room, as well as other rooms, and Miss Thomson had been appointed permanent assistant-secretary to attend daily and to have charge of the library and reading room. The thanks of the Branch were due to the company which had purchased the site, to the many members of the Association who, thinking more of their profession than of financial gain, willingly enrolled their names as shareholders, to the directors of the company, and especially to its chairman, Dr. Robertson, to its energetic and untiring secretary, Dr. N. Cameron, and to Messrs. Cameron Brothers, who by their valuable advice had made a success of the venture. The whole scheme had been carried through since July 4th, 1912, at which date only had it been adopted by the Branch.

Dr. W. N. ROBERTSON, in reply, congratulated the Branch on its investment, and expressed the hope that he would live to see the property free of encumbrances and yielding a handsome income.

State Insurance.

Dr. HALFORD moved to appoint a committee to consider the British National Insurance Act and to draw up a plan for a bill, modified to meet local requirements in practical details, as far as it was possible to construct it with due regard to that aspect of national insurance in its widest sense relating to the prevention of disease.

Sir DAVID HARDIE took exception to the concluding part of the motion dealing with the national prevention of disease, as he thought the scheme Dr. Halford had in mind would involve an immense amount of additional work for the medical profession, the Bacteriological Institution and the Health Department; it in fact amounted to the nationalization of the profession. He moved the omission of the words, and this amendment was seconded by Dr. BROCKWAY, who considered the later part of the motion unnecessary, and said that its omission would not prevent the committee from discussing the matter of prevention of disease if it thought fit.

After other members had pointed out that the retention of the words did not necessarily involve the adoption by the committee of the opinions expressed by Dr. Halford in a memorandum he had prepared on the subject, the amendment was lost. The motion was subsequently carried, and a committee was appointed, consisting of the President, the Honorary Secretary, Drs. Brockway, Freshney, J. A. Cameron, Love, Weedon, Elkington, Halford, McLean, with power to add to their number.

Sir DAVID HARDIE then moved the following resolution:

That the New South Wales Branch of the British Medical Association be asked to select three men who may now be in England to draw up a combined report of the working of the National Insurance Act in England, and to submit the same at as early date as possible to the Branches of the Association in Australia. That this Branch of the British Medical Association suggests that the cost of the inquiry be borne by the Branches of the British Medical Association in Australia.

Dr. LOVE observed that it was probable that the other Branches were already doing something in this direction, and, on the suggestion of Dr. A. MARKS, the motion was amended to provide for consultation with other Australian Branches, and was then carried.

British Medical Association.

SHIP SURGEONS.

IN furtherance of the efforts of the Association to assist in all possible ways those of its members engaged as surgeons on board ships, the Ship Surgeons Subcommittee is pleased to report that the following practitioners have kindly undertaken to act as "correspondents" in the ports mentioned:

Correspondent.	*Port.*
Dr. Herbert Bates, Church Road, Wavertree, Liverpool.	Liverpool.
Dr. C. Carlyle, 13, Menlove Avenue, Mossley Hill, Liverpool.	Liverpool.
Dr. J. C. H. Beaumont, 34, Khartoum Road, Southampton.	Southampton
Dr. Edgar Du Cane, 177, Brownhill Road, Catford, S.E.	London.
Dr. J. Godding, 56, Leadenhall Street, London, E.C.	London.
Dr. A. G. Hinks, Lamorna, 40, St. Vincent Road, Southend-on-Sea.	London.

The above practitioners have consented, at the instance of the Subcommittee, to interview and discuss with any ship surgeon in their area any matter of interest either to that surgeon or to ship surgeons in general, and to forward representations to the Subcommittee in regard to any question in connexion with which central action seems desirable.

Ship surgeons visiting these ports and desiring to discuss matters of interest to the service are invited to place themselves in communication with the correspondent for the port.

The Medical Secretary (429, Strand, London, W.C.) will be glad to hear from practitioners in passenger ports not mentioned above who are willing to act as correspondents to the Subcommittee.

ANNUAL MEETING, ABERDEEN, 1914.

PATHOLOGICAL MUSEUM.

THE Committee of the Pathological Museum, to be organized in connexion with the Annual Meeting of the British Medical Association next July, proposes to arrange the material under the following heads:

1. Exhibits bearing on discussions and papers in the various sections.
2. Specimens and illustrations relating to any recent research work.
3. Instruments relating to clinical diagnosis and pathological investigation.
4. Individual specimens of special interest or a series illustrating some special subject.

It is also proposed to make an effort to gather together series of exhibits relating to the pathology of the circulatory system and the ductless glands; the effect of radium on malignant growths; pyelo-radiography and *x*-ray photographs of brain, skull, and gall stones, and of ancient and historical surgical instruments.

While making these suggestions the committee, of which Dr. G. M. Duncan is chairman, will welcome specimens illustrating other subjects. The museum will occupy a central position in the same building as that in which the sectional work is to be carried on.

Communications may be addressed to the honorary secretaries, Dr. A. W. Falconer and Mr. William Anderson, F.R.C.S., Pathological Department, Marischal College, Aberdeen.

Association Notices.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, January 28th, in the Council Room, 429, Strand, London, W.C.

By order,

GUY ELLISTON,
Financial Secretary and Business Manager.

December 23rd, 1913.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—Dr. D. Davidson, Honorary Secretary, 15, Priory Row, Coventry, gives notice that the next meeting of the Coventry Division will be held at the Coventry Hospital on Thursday, January 15th, at 8.30 p.m., when Mr. F. Curry has very kindly consented to give a demonstration of the methods of preparations of the tuberculins. Business: An ethical matter.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, January 23rd, from 3.15 to 6 p.m. Dr. T. M. Allison: Respiratory Diseases: Some Points in their Diagnosis and Treatment. Professor Sir Thomas Oliver: Gold-miner's Phthisis. Tea. Mr. W. G. Richardson: Malignant Diseases of the Mouth. Mr. A. S. Percival: Errors of Refraction in School Children. Dr. E. Napier Burnett: Fibroid Conditions of the Uterus.

Association Intelligence.

NON-PANEL COMMITEEE.

A MEETING of the Non-panel Committee was held on January 6th, when Dr. W. F. MacDonald (Glasgow) was co-opted as a member of the committee.

Lists of Panel and Non-panel Practitioners.—It was decided to recommend that, if the Council approved of the Association obtaining the panel lists of the whole country for reference, a record should be made in the Card Register of the Medical Department of the practitioners on the panel. A list of non-panel practitioners in each area should then be made from the Card Register and forwarded to the intermediaries in each Division for information and correction.

Possible Extension of the Insurance Acts.—As the result of a discussion on the extension of the scope of the Insurance Acts, it was resolved to recommend to the Council that the policy of the British Medical Association be one of opposition to the extension of contract medical practice.

Unallotted Funds.—The Committee considered that portion of the letter addressed by the Insurance Act Committee to the London Insurance Committee and to the Staffordshire Insurance Committee (SUPPLEMENT, December 27th, 1913, page 569) wherein it was suggested that an immediate division of a portion of the unallocated funds among the panel practitioners should be made. The Non-Panel Committee expressed its dissent from the terms of this portion of the letter and decided to recommend the Council that the policy of the British Medical Association should be that all moneys provided for medical benefit of insured persons who have not yet chosen a doctor on the panel should be used in payment of the cost of medical treatment for such insured persons.

Free Choice.—The consideration of questions connected with the free choice of doctor was postponed to the next meeting.

INSURANCE COMMITTEES.

MIDDLESEX.

Complaint against a Medical Practitioner.

THE Medical Service Committee on January 5th recommended the Middlesex Insurance Committee to approach the Commissioners with a view to the removal of a doctor's name from the panel on the ground that he defended the issue of a circular in the following terms:

NATIONAL INSURANCE ACT, 1911.

All persons having medical tickets should sign them with their full names and addresses, and lose no time in having them signed and legalized. If this is not done, they are unable to draw their sick pay and obtain other advantages. Cards may be legalized at [here was given a private address], after which the Insurance Committee will be notified, and the necessary entries made in their books to ensure the proper benefits being received by the insured member.

The Subcommittee was of opinion that the issue of the circular was misleading and objectionable, inasmuch as it obscured the right of insured persons to free choice of doctor amongst practitioners on the panel.

Dr. E. W. LOWRY (Chairman of the County Medical Committee) remarked that the Subcommittee did not appear to have had before it another circular issued from the same address at a later date in the following words: "The National Health Commissioners desire to intimate to all insured persons that it is absolutely necessary for them to register immediately, or they will be unable to obtain medical treatment, sickness or maternity benefit. The panel doctor will be in daily attendance at —— for the necessary purpose of registration."

The CHAIRMAN pointed out that the principal offence in this case was apparently a breach of medical etiquette with which the medical profession had machinery for dealing. It did not directly concern the Committee. It was decided only to take the extreme course recommended by the Subcommittee if the doctor refused to express regret, and to give an undertaking not to issue any such notices.

GLASGOW.

The Glasgow Insurance Committee has issued for the medical year commencing January 12th, a list of the medical practitioners on the city panel, and of the chemists supplying drugs or appliances. This list extends to thirty-one closely printed pages, and shows the names, addresses, and the days and hours of attendance of the 382 medical practitioners who are on the panel, and the names and addresses of 192 chemists and druggists. Copies of this list have been distributed to various public places, including the post offices, city libraries, baths and wash-houses, police stations, etc. The number of insured persons within the city area is about 385,000, an average list of 1,000 persons per doctor. For those who have not yet made a choice of a doctor special instructions are given as to application for a medical card.

INSURANCE NOTES.

SALFORD AND MANCHESTER.

THE SUPPLY OF DRUGS TO INSURED PERSONS.

THE difficulties that have arisen with the pharmacists in Salford owing to the fact that they will not receive more than about 75 per cent. of their accounts for supplying drugs to the insured during the past year seem now to be in a fair way to settlement.

As explained in the SUPPLEMENT of December 20th, 1913, page 521, the Salford Pharmaceutical Committee wrote to the Commissioners saying that unless they were guaranteed their accounts in full they would not enter into any fresh agreement with the Insurance Committee for 1914. They complained that there had been an excessive ordering of drugs by the doctors and that this was partly due to the system of payment by attendance. The inference was that as the doctors were paid a fee for each attendance it was to their interest to encourage patients to attend at their surgeries frequently, and if, for example, a doctor prescribed only a six-ounce mixture with a tablespoon dose every three or four hours, the patient was practically compelled to consult the doctor every two days, though he might be suffering from a chronic complaint that only really required attendance perhaps once a week. The suggestion was that in this way the number of prescriptions to be dispensed by the chemists had been far greater than necessary, with the result that the drug fund, even with the addition of the drug suspense fund, had proved totally inadequate. It has been estimated that to pay the chemists in full at least 2s. 8d. per insured person would be required, while only 2s. is available. In reply to the letter of the pharmacists, the Commissioners wrote to the Insurance Committee insisting that before they considered the question of giving their sanction to a continuance of the Salford system of payment by attendance, some arrangement for controlling prescribing must be made between the doctors and chemists. Negotiations then took place which resulted in a proposal that the whole of the 9s. available for medical benefit should be credited to the doctors' pool, but to counterbalance this, each doctor should be debited with the cost of his own prescriptions, and it was thought that this would act as an incentive to each doctor to keep his prescriptions within reasonable limits, though it was fully understood that in no case would the doctors be able to touch the 1s. 6d. set apart for drugs. The Commissioners, however, declined to sanction the proposal in that form, on the ground that it was not in accord with the regulations, and they suggested that an arrangement between doctors and chemists should be made on the lines of Sections 39 and 40 of the new regulations (excessive ordering of drugs). With such a mutual arrangement the Commissioners would not be directly concerned, though of course the Insurance Committee would have to see that the interests of the insured did not suffer. This practically left it to the doctors and chemists to fight the question out between themselves in accordance with the regulations. According to the new Regulation 40, the Panel Committee *may* at any time make an investigation, but is only *bound* to make an investigation as to excessive ordering of drugs if the Pharmaceutical Committee makes a formal complaint. But the chemists urged that it was an extremely odious thing for any particular chemist to make a complaint against a particular doctor, and it would be likely seriously to damage any chemist in his business who was known to have made such a complaint. They represented further that Regulation 40 only provided for the penalization of individual doctors and offered no redress where there had been excessive ordering of drugs generally throughout an area, unless the Panel Committee of its own free will recommended that a general grant should be made to the drug fund out of the practitioners' pool.

At the joint meeting of the panel practitioners and chemists held on January 4th the situation was fully considered in the light of the Commissioners' decision that any arrangements made should be in accordance with Regulations 39 and 40, and it was resolved that a formal agreement should be drawn up between the Panel and Pharmaceutical Committees, making Regulation 40 automatic in operation. This means that the Panel Committee will systematically at frequent periods, without waiting for any representations from the Pharmaceutical Committee, examine the prescriptions given by each doctor and report to the Insurance Committee, which may then, whenever necessary, surcharge the doctors to such an extent as to bring the average cost of drugs within the 2s. limit. The experience of a large proportion of the Salford practitioners is said to be that a sum between 1s. 6d. and 2s. per insured person is somewhere about a reasonable amount that should be required for drugs and appliances. To carry out the arrangement it will not be necessary to insert any special clause in the ordinary agreements between practitioners and the Insurance Committee, but a special separate agreement will be made between the Panel and Pharmaceutical Committees, to which, if considered advisable, the Insurance Committee may be made a party. Evidently the systematic investigations into the prescriptions of each doctor on the list will involve considerable expense for clerical assistance, and a great amount of time will have to be devoted to the work by the Panel Committee, which can reasonably expect the fullest assistance from the Pharmaceutical Committee.

In Manchester the position of the chemists is similar, and practitioners willing to join the Manchester panel are asked to sign a supplementary agreement giving the Panel Committee authority to fix each month an average cost per patient for drugs and appliances and to surcharge any practitioner whose prescriptions exceed that average. The

number of attendances rendered and the number of prescriptions given are recognized to be closely related, and the supplementary agreement which practitioners are expected to sign also authorizes the Panel Committee, if it thinks fit, not only to reduce the payments to the doctors for attendances to a common average per patient, but to refuse to allow any one practitioner to receive more than a total sum of £800 in a year for his attendances on the insured.

Further details of this agreement will be given next week.

LINCOLNSHIRE.

Medical Institute at Boston.

A medical institute has been established at Boston (Lincs.) with a whole-time medical officer, the members of the profession locally having been unable to agree to the terms proposed by the friendly societies for the treatment of uninsured persons and children. The rates asked by the doctors were 8s. 6d. for adults and 3s. 9d. for children; the contributions of members of the institute have now been fixed at 6s. 6d. for adults and 3s. 4d. for children. The whole-time doctor, who is to undertake no private practice except through the medium of one of the affiliated societies, has been given a minimum guarantee on the basis of 2,000 cases. At the last meeting of the Holland Insurance Committee, Dr. Braithwaite, on behalf of the Local Medical Committee, said that local practitioners alleged that certain approved societies had acted in a way that, in effect, put pressure on their members to transfer from their panel doctor to the institute doctor. He could place evidence before the Committee on this point. Dr. Braithwaite moved a resolution expressing the opinion that the methods of the institute amounted to interference with free choice of doctor, but the motion was lost by 13 votes to 6. It is stated by the *Boston Standard* that the Commissioners have intimated that they decline at present fully to approve the institute.

SCOTLAND.

Edinburgh Panel Committee.

At a meeting of the panel practitioners in Edinburgh, convened by the Scottish Commissioners and held in the Burgh Insurance Committee's rooms on December 31st, 1913, the following gentlemen were elected to form the first Panel Committee on a vote by ballot, of twenty-four nominations: Drs. Dewar, Senter, Orr, Robertson, Veitch, Martin, Crow, Craig, McLarty, Shoolbread, James Wilson, John McLaren, Morrison McIntosh, R. J. Johnston, T. B. Darling, and Barker.

CORRESPONDENCE.

Distribution of Funds available for Medical Benefit of Unallotted Insured Persons.

Dr. John Divine (Secretary of the Hull Local Medical Committee) writes: I am exceedingly sorry to see the letter of the Medical Secretary on pages 569–70 of the Supplement to the British Medical Journal for December 27th, 1913, and I hope that the practitioners on the panels in the London areas and elsewhere, wherever the question has not been properly settled, will resist settlement on such lines, and insist upon their proper dues—the division of the whole panel fund amongst the panel practitioners. The opinion of Mr. Danckwerts, K.C., seems to have become an obsession amongst London people; why I cannot for the life of me see. In the first place, the terms he uses, "presents and largesse to the doctors," do not give evidence of a very judicial frame of mind in approaching the subject; secondly, K.C.s have had differing opinions before now—without greatly affecting judicial decision in the end; and, thirdly, it is quite plain that he has not fully grasped all the facts of the case.

Medical benefit is a sum of 8s. 6d. (exclusive of sanatorium benefit) to be distributed (less 1s. 6d. or possibly 2s. to the chemists) wholly to the panel practitioners undertaking responsibility for the treatment of insured persons in each area. Except for those who have been allowed to "make their own arrangements" the money must be paid out to the panel practitioners. The "making of own arrangements," as is well known, was pounced upon as a lever to upset the working of the Act by men who were too big to become *panel* doctors, but who were not, and are not, too big to seek a share of the panel funds. There is a fallacy underlying the argument that because some insured persons have consulted other than panel practitioners, and have paid (or are owing) therefor, the funds unallocated should go to their relief. The fallacy is this, that these people are not compelled to go to a private practitioner; *they can change their minds at any time*, and the practitioners on the panel in the area are *bound to provide* under their contract attendance and treatment for them. This is the insurance risk the practitioners have collectively and individually taken upon themselves at a premium of 7s. per head per annum.

On February 5th Mr. Masterman, in the House of Commons, made it quite clear "that the amount available for the remuneration of doctors on the panel would be equivalent to a sum of 7s. per annum." Further, on the same date, on this very question of allocation, he said: "The total amount available for insured persons, well or ill, in the area, would be divided amongst the doctors who had thus accepted responsibility for them; and the allocation of patients would carry payment in respect of them as from January 15th."[1] The same fact was definitely established at a Conference of Local Medical Committee Representatives with the Commissioners on February 11th, 1913. In reply to specific questions by myself it was laid down: (1) "That the method of distribution of insured persons among the doctors on the panel was one primarily for consideration by those doctors themselves who could draw up a scheme for the purpose"; and (2) "It was also explained that the method of distribution of the capitation allowance in cases in which the allocation of insured persons was not completed before the end of the quarter was also a matter for the consideration primarily of the doctors on the panel who should make arrangements with the Insurance Committee."[2]

The whole difficulty has arisen because every one expected that the assignment of persons would be completed during the first quarter, and the funds would, of course, have automatically followed. Section 15 (2) of the Act definitely lays down: "The Regulations made by the Insurance Commissioners shall provide for the arrangements being made subject to the approval of the Insurance Commissioners and being such as to secure that *insured persons* shall, save as hereinafter provided, receive adequate medical attendance and treatment from the medical practitioners with whom arrangements are so made . . ." You see here that arrangements are (*a*) for the attendance of *all* insured persons by (*b*) the practitioners (all of them) on the panel—that is to say, payment must be for *all* insured and *to* the panel practitioners. Continuing this section, we find: "Provided that if the Insurance Commissioners are satisfied after inquiry that the practitioners included in any list are not such as to secure an adequate medical service in any area they may dispense with the necessity of the adoption of such system as aforesaid as respects that area." Thus, unless in any area the Commissioners have declared the arrangements to be inadequate, the responsibility for all the insured has been undertaken by the panel, and payment has to come to the panel and to the panel only.

I would draw your attention to Regulations 16 and 17. Regulation 16 requires the Insurance Committee to make announcement in the newspapers of arrangements; Regulation 17 (3) that in that announcement *a date shall have been fixed*, after which "the Committee shall provide for the distribution amongst practitioners on the panel, and so far as practicable, under arrangements made by them of those insured persons for whose treatment no arrangements have been made." The question to be asked where the difficulty has arisen is—Did the Insurance Committee publish such announcement? If so, did they fix such date? If they failed in either respect, or if, having fixed a date and that date being past, they fail to "provide for the distribution," then I think their failure or delay should be made the subject of representation to the Commissioners by the Local Medical Committee, or, if there is no Local Medical Committee, by the practitioners on the panel.

Regulation 39 provides for all moneys for the purposes of treatment going to the *Panel Fund*. The Panel Fund

[1] British Medical Journal Supplement, February 15th, 1913, pp. 155 and 156.
[2] British Medical Journal Supplement, February 22nd, 1913, pp. 197 and 198.

is for payment of panel practitioners only after three-seventeenths has gone to the Drug Fund and one-seventeenth to the Drug Suspense Fund.

The suggestion which I am combating seems to me to partake somewhat of the same nature as the suggestion made last year, that the profession should deal with approved societies on the basis of funds partly supplied by Parliament and wholly collected by machinery devised by Parliament without a "by your leave" or "with your leave" to the Government. Neither the British Medical Association nor the profession as a whole have anything whatever to do with the distribution of the panel funds. That is a matter wholly between practitioners on the panel and Local Insurance Committees under intricate but perfectly understandable regulations.

Statistics for 1913.

Dr. F. W. Selby (Doncaster) writes: The following accurate statistics of work under the Insurance Act of a small panel list composed almost entirely of former private patients may be of interest:

Period.—From January 27th (date of joining panel) to December 31st, 1913 (eleven months and five days).

Numbers.—Number of persons accepted, 236. Index cards 197 on December 31st, equivalent to 154 persons on list for whole period (allowance being made for persons joining throughout year and for removals).

Attendances.—The following is a classified list of attendances:

At surgery	691
Visits	454
Special and night visits	16
Minor operations	3
Fractures and dislocations	2
Total	1,166

Attendance percentage = 91.5 (60 per cent. of total number accepted). Average number of attendances per head, 7.6.

Receipts.—Payment (including estimated addition for latter half of last quarter), £55. Average fee per attendance, 11¼d.

Dr. Percy Rose (Barking Road, E.) sends the following statistics of insurance work up to December 31st, 1913:

Total register cards to December 31st, 1913 ...	833
Total record cards opened from January 21st to December 31st	569

This is equal to 68.3 per cent. of those on my list.

Attendances—	
Visits	260
Surgery	3,436
Total	3,696

The average is 4.43 attendances per each potential patient, or 6.49 attendances per each actual patient. Payment will probably work out at about 1s. 3d. per attendance on these figures.

Dr. Rose adds that as he did not join the panel list till after the Special Representative Meeting in January, 1913, his attendances commenced at a later date than those of some other medical practitioners.

Dr. Charles Fraser (Brighton) has sent the following record of attendances upon insured persons since April 15th, 1913:

Acceptances to December 31st, 1913... ...	1,245
Attendances—	
At surgery: males, 1,717; females, 1,788	3,505
At patients' homes	610
Total attendances...	4,115

The average number of attendances = 3.3 per each potential patient. In the December quarter the record was as follows:

Attendances—	
At surgery	1,304
At patients' homes	287
	1,591

Average number of attendances = 1.28. In the first quarter of 1913 the attendances totalled 799 and the visits 203.

Dr. Fraser points out that assuming next quarter works out approximately equal to the October–December quarter, the grand total for the year will be 5,706, and the approximate attendance on each insured person will be 4.6 per annum.

Accurate Records.

Dr. George Geddes (Heywood) writes: It seems incredible that medical men should neglect to record all the visits and attendances on the record cards. Apart from their value to the Commissioners, I would assume a duplicate record would prove invaluable to the practitioner himself. There seems no doubt, however, that some practitioners keep no record whatever. I heard of one the other day who admitted to the husband of a patient that he did not remember having seen his wife although she had consulted him on the previous day. Comment were superfluous. Personally, I make a point of entering in an index register particulars of every insurance patient when they first seek advice. I have ruled the pages to suit my own taste (see sample). This plan prevents one from making duplicates of record cards, and is invaluable for reference, etc.

Yearly Summary of Attendances, etc. 1913.	1914.	1915.	1916.	Name, Age, and Address.	Approved Society. Contributor's Number. Occupation	Diseases, with Dates, etc.
A. 2 0 V. 30 Op.				Jones, Wm. (aged 50), 3, South St.	Weavers. 10001. Weaver.	1913— Quinsy (4). Pleurisy (5), (6), (7).
A. 10 V. 90 Sp. V. 3				Smith, John (aged 18), 5, Smith St.	Prudential. 100. Clerk.	1913— Hip-joint disease (7), (8), (9), (10), (11), (12). Died 2.12.13.
A. 30 V. 120 Op. 1 Sp. V. 3						

Explanation.—*Col. 1:* A. = attendance; V. = visit; Op. = operation; Sp. V. = special visit. *Last column:* The figures in brackets represent the months during which the disease preceding them required attention. At the foot of each page the total attendances, etc., are recorded for all the patients on the page.

INSURANCE COMMISSION (ENGLAND).

Appointment of Medical Officers.

In connexion with the posts of medical officers on the staff of the National Health Insurance Commission (England), for which applications were recently invited, the Insurance Commissioners announce that they have made the following appointments:

Edward William Adams, M.D.Lond., who has been in general practice in Sheffield since 1899. He is Lecturer in Materia Medica, Pharmacology, and Therapeutics in the University of Sheffield, and Internal Examiner in Materia Medica and Pharmacology, and Honorary Physician to the Sheffield Children's Hospital. He is also Examiner in Life Assurance, and for Workmen's Compensation to the Commercial Union Assurance Company, Phoenix Assurance Company.

Barbara Martin Cunningham, M.D.Edin., D.P.H.Camb., who was an assistant in a private practice in Edinburgh generally concerned with gynaecology, and has since been in charge of certain women's hospitals in India, and on her return to England was appointed Resident Medical Officer to Clayton Vale Hospital, Manchester, and Assistant to the Medical Officer of Health for Manchester.

James Pearse, C.M., M.D.Edin., who was a practising physician at Montrose, and subsequently, for the last eighteen years, in the Trowbridge division of Wiltshire, where he was one of the panel practitioners of the Wiltshire Insurance Committee, and a member of the Insurance Committee for the county; he has also been medical officer of health to the Trowbridge Urban District Council.

William Vernon Shaw, M.A., M.D.Oxon., who has been since 1905 in general practice in a rural district of Yorkshire and a practitioner on the panel for the North Riding, where he was also certifying surgeon under the Factory Acts, and Medical Officer of Health to the Malton and Norton Rural District Councils.

The general duties of these officers will be to conduct inquiries for the Commission in connexion with the health provisions of the National Insurance Acts, to prepare and collate statistical and other medical reports for the Commission, and generally to advise the Commission on matters requiring medical and clinical experience and knowledge.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board was held at Caxton House, Westminster, on December 19th, 1913, with Sir FRANCIS H. CHAMPNEYS in the chair.

A number of midwives were struck of the roll, the following charges amongst others having been proved:

Attending confinements for the purpose of assisting an uncertified person who had been struck off the roll of midwives to continue habitually and for gain to attend women in childbirth in contravention of Section 1 (2) of the Midwives Act; being unable to make use of a clinical thermometer, and consequently unable to take the temperature of patients as required by Rule E. 13; neglect to take the necessary steps to secure the cleanliness and comfort of the patient as required by Rule E. 11, leaving her after the confinement in a very dirty and neglected state and failing to comply with Rule E. 7 (b); giving a false certificate, and a false notification to the Local Supervising Authority, that the child was stillborn. A child suffering from inflammation of and discharge from the eyes from the fourth day, and so suffering during the residue of the midwife's attendance she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E. 20 (5); not keeping the register of cases as required by Rule E. 23; not habitually taking or recording the pulse or temperature of patients, as required by Rule E. 13; when called to a confinement not taking the appliances and antiseptics required by Rule E. 2.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Fleet Surgeon GEORGE R. MACMAHON, M.B., to the *Attentive*, January 1st. Staff Surgeon EDWARD O. B. CARBERY, M.B., to the *Cornwall*, vice Marriott, January 20th. Staff Surgeon FREDERICK E. ANLEY to the *Russell*, on the *Weymouth* completing, undated. Surgeon WILLIAM L. COWARDIN to the *Sirius*, on voyage out on commissioning, January 27th, and to the *Alert* on recommissioning, undated. Surgeon PERCY B. EGAN, M.B., to the *Doris*, vice Hall, January 15th, and for charge on voyage out and to the *Bramble* on recommissioning, undated. Surgeon BERNARD E. P. SAYERS to the *Britomart*, additional, January 15th, and on recommissioning, undated. Surgeon ALBERT E. MALONE, M.B., to the *Thistle*, additional, January 15th, and on recommissioning, undated. Surgeon DAVID G. ARTHUR to the *Halcyon*, additional, for the *Spanker*, vice Malone, January 15th. Surgeon GEORGE F. B. PAGE, M.B., to the *Widgeon*, additional, January 15th, and on recommissioning, undated. Surgeon ARTHUR J. TOZER to the *Woodlark*, additional, January 15th, and on recommissioning, undated. Surgeon FREDERICK C. WRIGHT to the *Snipe*, additional, January 15th, and on recommissioning, undated. Surgeon LOVELL MOSS, M.B., to the *Teal*, additional, January 15th, and on recommissioning, undated. Surgeon DEVONSHIRE P. H. PEARSON to the *Antrim*, vice Moss, January 15th. Surgeon PERCY L. G. GIBSON, M.B., to the *Moorhen*, additional, and on recommissioning, undated. Surgeon JOHN T. D. S. HIGGENS, M.B., to the *Woodcock*, additional, January 15th, and on recommissioning, undated. Surgeon ALEXANDER J. PATTERSON to the *Sandpiper*, additional, January 15th, and on recommissioning, undated. Surgeon WILLIAM A. S. DUCK to the *Robin*, additional, January 15th, and on recommissioning, undated. Surgeon DERMOT LOUGHLIN, M.B., to the *Clio*, additional, January 15th, and on recommissioning, undated. Surgeon ALEXANDER SIMPSON, M.B., to the *Fisgard*, temporary, vice Loughlin, January 15th. Surgeon CHARLES F. WILLES to the *Nightingale* on recommissioning, undated. Surgeon HENRY E. SCARGILL to the *Kinsha* on recommissioning, undated. Surgeon GERALD A. BRADSHAW to the *Doris* for medical charge on voyage home, undated.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL OWEN E. P. LLOYD, V.C., C.B., is placed on retired pay, January 1st.

Colonel WALTER G. A. BEDFORD, C.M.G., to be Surgeon-General, vice O. E. P. Lloyd, V.C., C.B., January 1st.

Lieutenant-Colonel CECIL BIRT, from R.A.M.C., to be Colonel, vice W. G. A. Bedford, C.M.G., January 1st.

Colonel THOMAS J. R. LUCAS, C.B., M.B., on completion of four years' service in his rank, retires on retired pay, January 2nd.

Brevet Colonel ROBERT S. F. HENDERSON, M.B., K.H.P., from R.A.M.C., to be Colonel, vice T. J. R. Lucas, C.B., January 2nd.

Major JOHN V. FORREST, M.B., R.A.M.C., to be a Deputy Assistant Director-General (attached to the Department of the Director of Military Operations at the War Office), vice Major C. E. Pollock, December 29th, 1913.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel ARTHUR R. ALDRIDGE, C.S.I., M.B., retires on retired pay, January 3rd.

Brevet Lieutenant-Colonel EDGAR M. PILCHER, D.S.O., to be Lieutenant-Colonel, vice C. Birt, January 1st.

Major WILLIAM C. BEYTS to be Lieutenant-Colonel, vice E. M. Pilcher, D.S.O., supernumerary, January 1st.

Major WILLIAM D. ERSKINE, M.B., retires on retired pay, January 3rd.

Captain RICHARD J. C. THOMPSON has been restored to the establishment, December 12th, 1913.

Lieutenant BERNARD WOODHOUSE has been restored to the establishment, January 1st.

Lieutenant-Colonel D. D. SHANAHAN has been appointed Deputy Assistant Director of Medical Services of the Eastern Command, vice Lieutenant-Colonel M. W. Russell.

Lieutenant-Colonel A. L. F. BATE has been appointed to Woolwich.

Major J. D. G. MACPHERSON has been appointed Deputy Assistant Director of Medical Services, West Lancashire Territorial Division.

Major W. C. CROLY has been appointed to the command of the Station Hospital, Mount Abu, vice Major E. W. Slayter, transferred to the home establishment.

Major J. H. BARBOUR has been appointed to London for duty.

Captain H. W. RUSSELL has been appointed to the charge of the Brigade Laboratory, Umballa.

Captain R. G. H. TATE has been appointed to Dublin for duty.

Captain F. WORTHINGTON has been posted to the Eastern Command for duty.

Captain H. T. STACK has been appointed to officiate, in addition to his military duties, as Cantonment Magistrate of Ranikhet, vice Lieutenant-Colonel E. Waller, granted leave.

INDIAN MEDICAL SERVICE.

THE HONOURABLE SURGEON-GENERAL A. M. CROFTS, C.I.E., I.M.S., has resigned his office of Additional Member of the Governor-General's Legislative Council.

Surgeon-General Sir PARDEY LUKIS, K.C.S.I., I.M.S., has been nominated to be an Additional Member of the Governor-General's Legislative Council.

Captain R. B. LLOYD, M.B., I.M.S., is appointed to officiate as Chemical Examiner, Bengal, and Professor of Chemistry in the Medical College, Calcutta, with effect from November 24th, 1913.

The services of Captain H. G. STILES-WEBB, I.M.S., are placed temporarily at the disposal of the Honourable the Chief Commissioner of the North-West Frontier Province for employment as Deputy Sanitary Commissioner, North-West Frontier Province.

The services of Captain K. K. MUKERJEE, I.M.S., are placed temporarily at the disposal of the Government of Bengal for employment in the Sanitary Department.

The following officers have been permitted to retire from the service: Lieutenant-Colonel G. H. BAKER, Lieutenant-Colonel W. H. GRAY, Major E. S. PECK.

Lieutenant-Colonel GEORGE HENRY BAKER, M.B., has retired, December 24th, 1913.

Major GEORGE Y. C. HUNTER to be Lieutenant-Colonel, November 17th, 1913.

The promotion of Major DE VERE CONDON, M.D., to his present rank dated from July 28th, 1909, and not from January 28th, 1910.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-six of the largest English towns 9,591 births and 6,375 deaths were registered during the week ending Saturday, January 3rd. The annual rate of mortality in these towns, which had been 14.5, 14.6, and 14.8 per 1,000 in the three preceding weeks, further rose to 18.6 per 1,000 in the week under notice. In London the death-rate was also 18.6, against 14.2, 14.7, and 14.0 per 1,000 in the three preceding weeks. Among the ninety-five other large towns the death-rate ranged from 8.3 in Hornsey, 9.6 in Barrow-in-Furness, 9.9 in Wimbledon, 10.2 in Ilford, 10.5 in Eastbourne, and 10.7 in Ealing to 24.6 in St. Helens and in Bootle, 24.8 in Carlisle, 25.9 in Smethwick, 27.4 in Great Yarmouth, 31.1 in Burnley, and 32.1 in Bath. Measles caused a death-rate of 1.6 in Rhondda, 1.9 in Middlesbrough, 2.0 in Barnsley, 2.1 in Warrington, and 4.8 in Burnley; and whooping-cough of 1.4 in Coventry and 1.8 in Darlington. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 66, or 1.0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 14 were registered in Birmingham, 11 in Liverpool, 4 in West Hartlepool, and 3 each in London, St. Helens, Preston, and Sheffield. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,137, 4,048, and 3,946 at the end of the three preceding weeks, had further fallen to 3,874 on Saturday, January 3rd; 425 new cases were admitted during the week, against 552, 458, and 326 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,138 births and 881 deaths were registered during the week ending Saturday, January 3rd. The annual rate of mortality in these towns, which had been 17.0, 17.3, and 17.9 per 1,000 in the three preceding weeks, further rose to 20.3 last week, and was 1.7 per 1,000 above the rate recorded in the ninety-six large English towns. Among the several towns the death-rate ranged from 7.3 in Falkirk, 10.4 in Perth, and 14.0 in Motherwell to 21.7 in Glasgow, 22.3 in Dundee, and 28.9 in Greenock. The mortality from the principal infective diseases averaged 2.0 per 1,000, and was highest in Motherwell and Greenock. The 424 deaths from all causes registered in Glasgow included 24 from measles, 4 from diphtheria, 3 from scarlet fever, 2 from whooping-cough, and 1 from infantile diarrhoea. Ten deaths from measles were recorded in Edinburgh, 7 in Greenock, 3 in Paisley, and 3 in Leith; from scarlet fever 2 deaths in Motherwell; from diphtheria 3 deaths in Aberdeen and 2 in Edinburgh; from whooping-cough 2 deaths in Greenock; and from infantile diarrhoea 4 deaths in Aberdeen and 2 in Dundee.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £140 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon (male). Salary, £100 per annum.

BIRMINGHAM: CITY FEVER HOSPITAL.—Second Assistant Medical Officer. Salary, £160 per annum.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BRENTWOOD ASYLUM, Essex.—Assistant Medical Officer. Salary, £200 per annum.

BRISTOL: COSSHAM MEMORIAL HOSPITAL, Kingswood.—House-Surgeon (male). Salary, £100 per annum.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

CARDIFF: KING EDWARD VII HOSPITAL.—Resident Surgical Officer. Salary, £160 per annum.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £200.

CHARING CROSS HOSPITAL.—Medical Registrar.

CHELTENHAM EYE, EAR, AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £200 per annum.

CHESTER COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £200 per annum.

CLINICAL RESEARCH ASSOCIATION, Watergate House, Adelphi, W.C.—Assistant Director of the Laboratories. Remuneration, £250 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL.—(1) House-Physician: (2) House-Surgeon (males). Salary, £100 per annum each.

DARLINGTON BOROUGH.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary, £300 per annum.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—Assistant House-Surgeon.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DOUGLAS: NOBLE'S HOSPITAL. — Resident House-Surgeon. Salary, £100 per annum.

DUNDEE ROYAL INFIRMARY. — Outdoor Obstetric Assistant. Salary at the rate of £40 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician and Assistant Casualty Officer (male). Salary at the rate of £75 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £200 per annum, rising to £225.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH: LIVINGSTONE DISPENSARY. — Two Honorary Physicians.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £60 per annum.

GLASGOW DISTRICT MENTAL HOSPITAL, Gartloch.—Medical Officer (Junior). Salary, £200 per annum.

GLOUCESTER: GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Surgeon.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Honorarium, 30 guineas for six months.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING'S COLLEGE HOSPITAL, Denmark Hill, S.E.—(1) Assistant Physician for Diseases of Children. (2) Assistant Surgeon for Diseases of the Throat.

LEEDS: GENERAL DISPENSARY.—Resident Aural Officer. Salary, £100 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS.—Assistant Resident Medical Officer. Salary, £140 per annum.

LIVERPOOL PORT SANITARY AUTHORITY.—Assistant Medical Officer. Salary, £350 per annum, rising to £400.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon. Honorarium at the rate of 100 guineas per annum.

MACCLESFIELD GENERAL INFIRMARY. — House-Surgeon. Salary, £125 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E. — Junior Dental Surgeon.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Anaesthetist.

NORWICH: NORFOLK EDUCATION COMMITTEE.—(1) Assistant School Medical Officer. (2) School Dentist. Salaries, £350 and £250 per annum, rising to £450 and £300 respectively.

NOTTINGHAM CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary at the rate of £100 per annum.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon (male). Salary, £180 per annum.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PIETERMARITZBURG: GREY'S HOSPITAL. — Junior House-Surgeon. Salary, £250 per annum, rising to £300.

READING: ROYAL BERKSHIRE HOSPITAL. — Honorary Physician.

ROCHDALE INFIRMARY.—Second House-Surgeon. Salary, £100 per annum.

ROYAL EAR HOSPITAL, Dean Street, Soho.—Clinical Assistants.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) Senior and Junior House-Surgeons. Salary at the rate of £70 and £50 per annum respectively. (2) Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Laryngologist.

ST. THOMAS'S HOSPITAL, S.E.—Ophthalmic House-Surgeon.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon (male). Salary, £100 per annum.

SHEFFIELD: CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN. — Senior and Assistant House-Surgeons. Salary, £100 and £80 per annum respectively.

SOMERSET AND BATH ASYLUM, Cotford, Taunton.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STAFFORDSHIRE EDUCATIONAL COMMITTEE.—Two Assistant School Medical Officers. Salary, £250 per annum, rising to £300.

STOKE-ON-TRENT EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, increasing to £350.

SUNDERLAND COUNTY BOROUGH. — Tuberculosis Medical Officer (male). Salary, £500 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician and House-Surgeon. Salary, £40 each for six months.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £200 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL. — Junior House-Surgeon. Salary at the rate of £75 per annum.

WESTMINSTER HOSPITAL, S.W.—(1) Resident Medical Officer: salary, £100 per annum, increasing to £200. (2) Medical Officer in charge of Department of Bacterio-Therapeutics: honorarium £100 a year. (3) Resident Obstetrical Assistant.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—House-Physician (male). Salary, £80 per annum.

WOOLWICH INFIRMARY.—Assistant Medical Officer. Salary, £150 per annum, rising to £160.

YORK COUNTY HOSPITAL.—House-Physician. Salary at the rate of £100 per annum.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALDERSON, R., M.D.Durh., District Medical Officer of the Nottingham Union.

BROADBENT, Sir John, Bart., M.D., Full Physician on the staff of St. Mary's Hospital, Paddington.

BRUCE, R., M.R.C.S.Eng., D.P.H.Camb., District Medical Officer of the Lymington Union.

COKE, W. F. H., F.R.C.S.Eng., L.R.C.P., District Medical Officer of the West Ashford Union.

COLE, Sidney John, M.D.Oxon., Medical Superintendent of the Wilts County Asylum, vice Dr. J. Ireland Bowes, resigned.

CRICHTON, C. S., M.D.Edin., Certifying Factory Surgeon for the Redhill District, co. Surrey.

CROWE, P. F. V., M.B., Ch.M.Syd., Medical Officer for the purposes of the Regulations under Section 132 B (*d*) of the Health Act, Queensland.

CUMMING, J. H., M.R.C.S., L.R.C.P., District Medical Officer of the Faringdon Union.

CURRIE, D. W., M.D.Glas., Certifying Factory Surgeon for the Dollar District, co. Clackmannan.

DEAKIN, H. V., M.R.C.S., L.R.C.P., House-Surgeon to University College Hospital, W.C.

DE CRESPIGNY, Constantine T. C., M.D., Director of the Government Bacteriological Laboratory and Clinical Pathologist at the Adelaide Hospital, South Australia.

DUFFET, H. A., F.R.C.S.Eng., Certifying Factory Surgeon for the Sidcup District, co. Kent.

FERGUS, Miss A. G., M.B., B.S.Edin., Assistant Medical Officer, Leicester Parish Infirmary.

FITZGERALD, G. W., M.D.Edin., Honorary Surgeon for Women at the Manchester Northern Hospital for Women and Children, vice Harold Clifford, resigned.

GOULD, A. L. Pearce, M.B., B.Ch., Obstetric Assistant to University College Hospital, W.C.

HAMILTON, Malcolm T., M.B., B.S., Resident Medical Officer to the Adelaide Hospital, South Australia.

HARKIN, T., M.B., Certifying Factory Surgeon for the Moville District, co. Donegal.

KAY, C. W., L.R.C.P. and S.Edin., L.F.P.S.Glas., District Medical Officer of the Lymington Union.

LANGMEAD, F., M.D., F.R.C.P.Lond., Physician in charge of Out-patients at St. Mary's Hospital, Paddington.

MCKENDRICK, W., M.B., Ch.B.Glas., District Medical Officer of the Rochdale Union.

MACKENZIE, W. R., L.R.C.P. and S.Edin., Honorary Assistant Surgeon, Samaritan Hospital, Belfast.

MARSHALL, Cole, M.D.Lond., F.R.C.S.Eng., Assistant Surgeon to the Western Ophthalmic Hospital.

MARSHALL, Robert, M.B., B.Ch., B.A.O.Belf., Resident Medical Officer to the National Hospital for Diseases of the Heart, Westmoreland Street, London, W.

MEYER, Felix, M.B., Ch.B.Melb., Lecturer in Obstetrics and Gynaecology in the Melbourne University.

MORTIMER-WOOLF, M.B., B.C., Demonstrator of Anatomy at King's College, London.

O'CALLAGHAN, T., L.R.C.P. & S.Edin., L.F.P.S.Glas., District Medical Officer of the South Shields Union.

OCKWELL, C.M., M.R.C.S., L.R.C.P., District Medical Officer of the Dartford Union.

RICHARDSON, William George, M.B.Durh., F.R.C.S., Honorary Surgeon, Royal Victoria Infirmary, Newcastle-on-Tyne.

SALISBURY, Walter, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Resident Medical Officer at the Hospital for Women, Soho Square, W.

SHELLSHEAR, C., M.B., C.M.Syd., Junior Demonstrator of Physiology in the Sydney University.

STALLARD, C. M., M.B., Ch.B.Vict., Assistant Medical Officer of the Salford Union Infirmary.

TROTTER, Wilfred, M.S., F.R.C.S., Surgeon on the Staff of University College Hospital, W.C.

WILLIAMS, Gwynne, M.S.Lond., F.R.C.S.Eng., Surgeon to Outpatients at Great Northern Central Hospital.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:

Assistant Physician: Alexander Goodall, M.D., F.R.C.P.E.

Non-Resident House-Physician to Dr. Fred. Gardiner in the Skin Department: Miss Vera N. Bolotine, M.B., Ch.B.

Clinical Assistant to Dr. R. A. Fleming: J. K. Reid, M.B., Ch.B.

Clinical Assistant to Mr. Hodsdon: R. H. H. Newton, M.B., Ch.B.

LEEDS PUBLIC DISPENSARY.—The following appointments have been made:

Honorary Physician: J. le Fleming C. Burrow, M.B., Ch.B.Edin., M.R.C.P.Lond.

Honorary Surgeon: Alfred Richardson, M.B., B.S.Lond., F.R.C.S.Eng.

Honorary Consulting Ophthalmic Surgeon: Michael A. Teale, M.A.Oxon., M.R.C.S.Eng., L.R.C.P.Lond.

Honorary Ophthalmic Surgeon: Harry Lee, B.A., M.B., B.C. Cantab., F.R.C.S.Eng.

Honorary Pathologist: J. Godwin Greenfield, M.B., Ch.B., B.Sc.Edin.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—The following appointments have been made:

Surgical Registrar: Miss Davies-Colley, F.R.C.S. (reappointment).

Clinical Assistant, Throat Department: Miss Bentham, M.B., B.S. (reappointment).

Clinical Assistant Throat Department and Mr. Pannett: Miss Richards, M.B., B.S.

Clinical Assistant, Throat Department: Miss Lowry, M.B., B.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

LEITCH.—On January 5th, at 11, Overstrand Mansions, Battersea Park, S.W., to Mr. and Mrs. Archibald Leitch, a daughter.

WALLIS.—On the 3rd January, at Carlton Road, Worksop, the wife of Dr. Ransome Wallis, a daughter.

MARRIAGE.

BOLDERO—EALES.—On January 7th, at Moseley Farish Church, by the Rev. H. B. Fulford Eales, brother of the bride, Fitzroy Frederick Boldero, of 10, Bolton Gardens, Teddington, younger son of Frederick Boldero, M.R.C.S., of Solihull, formerly of Penkridge, to Dorothy Mary Fulford, younger daughter of the late Henry Eales, of 7, Newhall Street, Birmingham, and of Mrs. Eales, of 32, Mayfield Road, Moseley.

DEATHS.

HALL.—On New Year's Day, at "Tresco," North Finchley, N., James Hall (father of Dr. J. Field Hall), in his 89th year.

MEREDITH.—December 31st, at Llandrindod Wells, John Meredith, M.D.Edin., J.P., C.C., of Wellington, Som., in his 82nd year.

PUBLISHERS' ANNOUNCEMENTS.

MESSRS. JOHN WRIGHT AND SONS, LIMITED, of Bristol, announce the early issue of *The Medical Annual, 1914*. This publication is a yearbook of treatment and practitioner's index.

Messrs. J. and A. Churchill will shortly publish the following new books and new editions: *Materia Medica, Pharmacy, Pharmacology, and Therapeutics*, by Dr. Hale White, 13th edition; *Elementary Practical Chemistry*, Part I, by Frank Clowes, D.Sc.Lond., and J. Bernard Coleman, A.R.C.Sc., 6th edition, with 76 illustrations; and the *Story of Plant Life in the British Isles*, by A. R. Horwood, Member of the British Botanical Society, Ecological, Conchological Societies, etc., illustrated with 73 photographs.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion on The Pathology of Syphilis, to be opened by Dr. W. d'Este Emery.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF SURGERY, 5.30 p.m.—Discussion on Nephropexy and its Results, to be opened by Mr. G. Percival Mills, followed by Messrs. W. Billington, Leonard Gamgee, J. W. Thomson Walker, J. Sherren, and others.

WEDNESDAY.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital, E.C., 9 p.m.—Lecture by Mr. James Cantlie: Recent Advances in Tropical Medicine, illustrated by lantern demonstration.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DERMATOLOGY, 5 p.m.—Demonstration of cases and specimens.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF ELECTRO-THERAPEUTICS, at St. Thomas's Hospital, S.E., 8.30 p.m.—Inspection of electrical department and demonstrations.

SECTION OF OTOLOGY, 5 p.m.—Communications and cases.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, W., 8.30 p.m.—Professor Robert Newstead: The Bionomics and Structural Characters of Glossina, illustrated by lantern slides and an extensive collection of museum specimens illustrative of the known species of the genus.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Medical and Surgical Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday. Lecture on special subject on Thursday.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Monday: Manchester Children's Hospital, Abdominal Tuberculosis in Children. Tuesday: Salford Royal, Prolapse of Uterus and Vaginal Walls. Wednesday: Royal Infirmary, The Diagnosis of Swellings in the Cervical Region. Thursday: Ancoats, Chronic Lesions of the Mouth. Friday: Royal Ear, Subjective Test for Visual Acuity.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin: Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical: Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. will be given each day.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, X Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Wednesday, 4 p.m.: Spinal Caries.

SHEFFIELD UNIVERSITY CLINICAL DEMONSTRATIONS.—Tuesday: Royal Hospital, Borderland Mental Cases. Friday: Royal Hospital, The Electro-cardiograph.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. A lecture at 5 p.m. daily except Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JANUARY.
9	Fri.	London: Medico-Political Committee, 10.30 a.m.
		London: Joint Meeting Maternity Benefit and Parliamentary Subcommittee.
10	Sat.	Scottish Committee, Station Hotel, Perth, 12 noon.
13	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
		London: Organization Committee, 2 p.m.
14	Wed.	London: Hospitals Committee (*provisional*).
15	Thur.	London: Special Committee *re* Future Development of Insurance Acts, 10.30 a.m.

Date.		Meetings to be Held.
		JANUARY (*continued*).
15	Thur.	London: Insurance Act Committee (afternoon). Coventry Division, Coventry Hospital, 8.30 p.m.
20	Tues.	London: Non-Panel Committee (*provisional*).
21	Wed.	London: Finance Committee, 2.30 p.m.
22	Thur.	Altrincham Division, Annual Meeting, Altrincham.
23	Fri.	Newcastle-upon-Tyne Division, Royal Victoria Infirmary, Scientific Demonstrations, 3.15 to 6 p.m.
28	Wed.	London: Council.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 17TH, 1914.

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CONFERENCE OF LOCAL MEDICAL COMMITTEES, 1913.

Report of Deputation to Insurance Commissioners.

At the Conference of Local Medical Committees held at Brighton on July 24th, 1913, it was agreed to send a deputation to the National Insurance Commissioners with reference to the provision of medical benefit to insured persons temporarily resident outside the district in which they habitually reside, and other matters. The deputation nominated consisted of Mr. D. F. Todd (Durham County), Dr. Barrett Heggs (Kent County), and Dr. G. W. Eustace (West Sussex County). The deputation was received on October 28th, when Dr. Barrett Heggs was unavoidably absent.

We have received the following report of the interview; it has, we understand, been delayed by the Commissioners owing to pressure of work:

1. In reply to preliminary inquiries by the deputation, it was stated on behalf of the Commissioners that the Commissioners were pleased to receive the deputation and to have an opportunity of discussing with them the matters which formed the subjects of the resolutions passed by the Conference of Local Medical Committees. It was further stated on behalf of the Commissioners that they would always be pleased to receive similar deputations in future, and that they would continue to give the fullest consideration to any resolutions which might be put before them at the instance of similar conferences.

Treatment of Insured Persons during Temporary Residence.

2. On the general question it was stated, on behalf of the Commissioners, that they adhered to the views expressed by them in Circular 175 I.C. With regard to the particular method of adjustment adopted—namely, the case-value system, its adoption was not necessarily final, and the Commissioners were willing to consider the adoption of any suggestion, either for a new system or for the amendment of the present system, which could be shown to provide a better means of dealing with the problem within the limits of the moneys available. It was, however, intimated on behalf of the Commissioners that the green voucher procedure was under consideration, and that it was hoped to introduce a new voucher system (the medical card system is now in operation) which would simplify procedure, afford protection to doctors against abuse, and meet their convenience in certain other respects.

3. With regard to proposals but forward by the deputation to the effect that the case-value debit against the funds of the Committee should be charged specifically against the moneys available to the Committee in respect of insured persons who had not been accepted or assigned, it was pointed out on behalf of the Commissioners that these moneys were not earmarked, but were part of the general funds in the hands of the Committee for the purpose of defraying the cost of medical benefit. Further, it was stated that even if it were possible to charge the debit against these moneys, the result to the doctors on the panel would be identical, and that the Commissioners would not feel justified in adopting a course which, without modifying the financial effect of the system, would be liable to serious misconstruction.

4. With regard to apprehensions expressed by the deputation to the effect that the debits raised under the case-value system might operate inequitably against individual doctors, it was stated on behalf of the Commissioners that the system provided only for the debits being charged against the total funds of the Committee available to them for the purposes of medical benefit, and that it was open to the doctors in any area to arrange with the Committee for the apportionment of the incidence of debit amongst individual doctors in any manner which was agreed to be equitable.

5. Further, in response to inquiry, it was stated on behalf of the Commissioners that if it were demonstrated by actual working experience that any inequity had been occasioned to any doctor on the panel by reason of any defect in the system which would not have been remedied by the exercise of the option above referred to, the Commissioners would take any practical steps open to them to remedy the defect.

Duty of Insurance Committee to consult Local Medical Committee.

6. It was stated on behalf of the Commissioners that they would use their best endeavours to secure compliance by Insurance Committees with the regulations requiring them to consult Local Medical Committees.

LOCAL MEDICAL COMMITTEES.

KENT.

Mode of Election of Panel Committees.

At the meeting of the Kent Local Medical Committee, held on January 7th, the following resolution was carried unanimously:

> That this Committee feels that the method of election of Panel Committees by a returning officer appointed by the Commissioners is unsatisfactory owing to the fact that the results of the voting are not published, and that there is no provision for any representative of the electors to act as scrutineer.

Annual Report, 1913.

Financial Statement.—This shows a small balance in hand—namely, £9 8s. 4d.—but it is necessary to point out that this is in great part due to the fact that up to April last the Committee was financed by the British Medical Association, and therefore the statement is for nine months only; also during the year the whole of the secretarial duties have been performed single-handed by

the honorary secretary, and that no expenses have been incurred for extra clerical assistance.

Voluntary Levy.—Reference to the list of panel practitioners shows that there is a diversity of opinion as to the proposal to deduct the levy directly from their accounts; the numbers of those holding various opinions are as follows:

Consenting unconditionally	240
Consenting conditionally that all are unanimous	35
Consenting to 600 pennies being maximum deduction	19
Refused to consent	21
Did not reply	86

Clerical Assistance.—The energies of the Committee have been much hampered during the year owing to lack of funds, the consequent fear of running into debt, and the inability to obtain extra clerical assistance. It was therefore impossible to compete with the Insurance Committee's staff of clerks. But notwithstanding these disabilities the Committee have spared no pains to uphold the interests of the profession before the Kent Insurance Committee and the Commissioners. The Committee hopes during the year 1914 to procure the services of a paid secretary. Should this aid be obtained, the Committee trust to be able to lay before the profession, more expeditiously than heretofore, all matters dealing with the interests of its members, and, with the help of the medical men themselves, to organize the profession, so that each agreement for the year 1915 will be forwarded to this Committee, instead of to the Clerk to the Kent Insurance Committee. Such a procedure will materially strengthen the position of the profession in Kent.

Certificates.—Uniformity in medical certificates was at length obtained but only after constant appeals.

Allocation.—The question of the allocation of patients who have not so far chosen a medical attendant has been repeatedly brought before the notice of the Kent Insurance Committee, but, owing to difficulties in obtaining information and to the many and complicated details, it has been found impossible up to the present to complete the allocation.

Temporary Residents.—The Kent Medical Committee is strongly of opinion that temporary residents should not be treated under the Act until they are allocated, and that a special fund should be formed for the treatment of such patients.

Mileage.—The question of mileage has been repeatedly brought before the Kent Insurance Committee and the Commissioners, and the Kent Medical Committee has asked that a sum of £500 should be placed at the disposal of the Kent Insurance Committee for this purpose out of the special mileage fund, but as yet no information has been received.

Juveniles and Uninsured.—It has been reported that certain approved societies are endeavouring to obtain medical services for juveniles at fixed fees according to a scale laid down by the societies. Practitioners on the panel are therefore requested to adhere firmly to the scale of fees laid down by the County Medical Committee during the first quarter, and to demand that any contract for the treatment of juveniles or of uninsured persons should be made (at a minimum of 8s. per annum per patient) between the doctor and the patient personally, and not between the doctor and the approved society.

First Quarter's Accounts.—Early in October the Kent Insurance Committee was instructed to pay in full, as far as funds permitted, the balance of the first quarter's accounts, except sixteen accounts, which required to be further investigated, and these are now in the hands of the Insurance Committee. The Committee expresses its thanks to Dr. Parr-Dudley for the enormous amount of trouble he took in examining these accounts.

Reconstitution of Committee.—The Commissioners have sanctioned a scheme for the reconstitution of the Kent County Medical Committee whereby each District Medical Committee will be represented by two members elected at a meeting of each District Medical Committee, at which meeting all the medical practitioners resident in the area will have been summoned. At least one representative elected must be a panel practitioner. Four representatives will be elected by the seven general hospitals in the county, and one representative elected by the two special hospitals.

ROXBURGH.

A MEETING of the Roxburgh Local Medical Committee was held in the Bailie Memorial Hall, Newtown St. Boswells, on January 6th. Dr. CULLEN was in the chair, and twelve other members were present.

Draft New Medical Agreement.—The clauses of the new medical agreement were gone over seriatim, and after full discussion it was unanimously decided, on the motion of Dr. J. CARLYLE JOHNSTON, seconded by the CHAIRMAN, to endeavour to get the following alterations made in the agreement:

Article 2 (1).—After the word "confinement" there should be inserted the words "or in respect of illness arising from confinement and within fourteen days thereafter." [See Insurance Act, 1911, 8 (6).]

Article 2 (2).—Instead of the word "accept" the words "be entitled to demand" to be substituted.

Article 6 (2).—"Three" miles to be the figure inserted.

Article 13 (1).—The words "wilful or culpably negligent" to be inserted before the word "breach."

Article 15.—The agreement to be determined by the committee or a practitioner on any of the quarter medical days, by giving three months' notice to the other party in writing. (See Regulation 17.)

A letter was read from the Clerk to the County Insurance Committee stating that the Insurance Commissioners had agreed to allow doctors on the panel until January 8th to sign the new agreements, and that failing the agreements being received duly signed on the morning of the date mentioned, the Committee would report that a medical panel had not been formed in Roxburghshire. It was pointed out that Section 5, Subsection 1 of the Insurance Amendment Act, 1913, enacted that the County Insurance Committee must consult the Local Medical Committee and the Panel Committee in order that the terms of the medical agreement may be arranged, and that no such consultation had taken place. The Secretary was accordingly instructed to communicate with the Clerk to the Insurance Committee desiring him to arrange for a consultation taking place between the County Insurance Committee, or preferably the Medical Benefit Subcommittee, and the Medical Committee, in order that the foregoing alterations might be submitted and incorporated into the agreement. In the event of such a meeting taking place, it was decided to remit the negotiations to the Executive Subcommittee with powers. The meeting unanimously decided that none of the members of the Committee should sign the agreements until instructions were received from the Committee, and the Secretary was instructed to communicate this decision to the members of the Committee not present, and also to Dr. MacRobert (Innerleithen), Dr. J. A. Campbell (Duns), and Dr. Muir (Selkirk), as representing the Local Medical Committees in their respective districts.

New Medical Card.—A letter was read from the Clerk to the County Insurance Committee sending copy of Memorandum 187/I.C. with regard to the introduction of the medical card system, together with a specimen copy of the medical card for the information of the Committee. Dr. OLIVER, after observing that the memorandum was very lengthy, explained the terms of the new medical card.

INSURANCE COMMITTEES.

BRISTOL.

The Experience of 1913.

THE monthly meeting of the Insurance Committee was held on January 5th, Dr. WALTER SAISE being in the chair. The first report was to the effect that the Commissioners had approved of the increase in the salary of the clerk voted at the last meeting.

In speaking on the year's experience, the Chairman said that differences with the medical profession had been smoothed over, and that the administration of medical benefits had been commenced with a panel of 124 doctors. This number had been increased by six, and the working of the Act had been satisfactory from the point of view of the medical profession. The emoluments of the doctors for the year would reach £42,000. For the deposit contributors he believed the administration had been prompt, effective, and sympathetic; there were about 2,500 of them, and the applications for sickness payments had been 261, or 11½ per cent. The number of claims for maternity benefit had been 39, which seemed somewhat less than would have been expected when the birth-rate of the city was 20 per 1,000. For sanatorium benefit the applications had been 16, which was a heavy rate, being nearly three times greater than the ordinary incidence of phthisis among insured persons. From the Medical Officer of Health he had received certain figures which showed that the number of notifications for phthisis during the fifty-

two weeks ending December 27th, 1913, was 916, the number of deaths 393. Of these returns 376 concerned insured persons, and the number of persons treated by the Sanatorium Committee were 390, showing that they were being adequately attended to.

The city had beds for phthisical patients at Ham Green and Winsley, one dispensary in Redcliffe, and would soon have another in Portland Square, but the insured persons did not seem to know this. Neither did the uninsured and those that went to the dispensary did not attend regularly, nor did they apply for sanatorium treatment. He hoped the doctors, the societies' officials, and the press would help to make this known.

The Chairman of the Medical Service Committee reported that 66 cases had been sent to the medical adviser; of these 32 had been found fit to work, 15 did not attend, 15 were not fit to work, and 4 were cases under the Workmen's Compensation Act. New contracts had been entered into by 130 doctors, 53 chemists, and 2 contractors. In the discussion that followed it was reported that the Commissioners had sanctioned the appointment of Dr. Rogers till January 12th, and the committee was waiting for a further approval. One speaker stated that the doctors sent more cases to Dr. Rogers than the societies, but this must have been in error, as the societies sent twice as many. A discussion took place on the proposal to suspend from medical benefits any insured person who had failed to pay a fine imposed upon him under the rules made for the administration of those benefits, as it was found that to impose a fine had no effect. In seconding the proposal, Mr. Dyer said he would like to extend the punishment to sanatorium benefits, as they had considerable trouble with some patients who appeared to indulge in practical jokes on the new patients. Dr. Williamson deprecated any attempt to stop medical benefits, but the proposal was carried.

In presenting the Sanatorium Subcommittee report, Mr. Dyer stated that he did not know of any Insurance Committee so favourably placed as that of Bristol, as it had more beds than patients. Speaking generally, the patients were very grateful for the treatment, and offenders such as he had mentioned were few.

INSURANCE NOTES.

THE INSURANCE ACT IN MANCHESTER AND SALFORD.

THE agreements between the Insurance Committees in Manchester and Salford and the panel practitioners were only issued to the profession for signature last week, as considerable delay had been caused by the difficulties with the chemists as described in the SUPPLEMENT last week (p. 19). In the main the provisions of the agreements are similar to those signed throughout the country with modifications to suit the system of payment by attendance. But the Commissioners objected to the insertion in these agreements of clauses giving the Panel Committees the special powers considered to be requisite in order to prevent unnecessary attendances and over-prescribing, as the exercise of these powers does not directly concern the Insurance Committees. It has, therefore, been necessary to have separate special agreements with the Panel Committees signed by every practitioner joining the panels, to entitle the Panel Committees to deal effectively, in the method agreed on, with the accounts sent in monthly for attendances and to control the prescribing of drugs and appliances. In a general way the methods adopted in Manchester and Salford are very similar, but there are some important differences which will best be seen by quoting the special agreements for each area.

In Manchester the special agreement between practitioners and the Panel Committee commences by citing the provisions of Sections 35 (2) and 40 of the Medical Benefit Regulations, 1913, and then continues:

I hereby agree to the adoption of the following scheme by the Panel Committee for ascertaining the amount of remuneration due to me under my agreement with the Manchester Insurance Committee, dated ....., namely:

1. The Panel Committee shall ascertain from the monthly accounts rendered by practitioners under Clause 9 of the aforesaid agreement the average cost per patient in respect of the treatment given by each practitioner during each month, and may, if they so think desirable, take the general average cost per patient in respect of the treatment given to the whole of the patients within the area of the Insurance Committee for each monthly period as the basis upon which the amount to be credited to each practitioner under Article 35 of the Regulations shall be determined, provided that, if the Panel Committee so think desirable, such amount shall not exceed in the aggregate a sum of £800 per annum.

2. The Panel Committee shall ascertain from the monthly accounts rendered by (*a*) practitioners and (*b*) chemists and contractors undertaking to supply drugs and appliances, the average cost per patient, the average value per prescription, and average number of prescriptions per patient in respect of the prescriptions given by each practitioner during each month, and may, if they so think desirable, take the general average cost per patient, the general average value per prescription, and the general average number of prescriptions per patient (or any of them) in respect of the prescriptions given to the whole of the patients treated within the area of the Insurance Committee for each monthly period as the basis upon which deductions to be made under Article 40 of the Regulations from the amounts payable to practitioners shall be determined.

Dated this ..... day of ..... 1914.

Signed .....

Address .....

In furtherance of the obligation laid on the Panel Committee to reduce the cost of drugs and appliances in the area, the Manchester Panel Committee has issued to practitioners some instructions to be strictly observed in prescribing; in carrying out the system set forth in the special agreement above the Panel Committee will consider how far each practitioner conforms to these instructions. The most important points to be observed are as follows: Prescriptions must be as simple as possible, unnecessary drugs being rigidly excluded. As a rule sufficient medicine for four or five days should be ordered, and 8-oz. mixtures with one tablespoonful doses should be given, though a smaller number of doses may be ordered if there is reason to expect that a change of medicine may be necessary. Practitioners must satisfy themselves that the medicines or appliances ordered have been used before a new prescription is given. Extract of malt with cod-liver oil is regarded by the committee as a dietetic article, and therefore not to be prescribed except in tuberculous cases notified as such. Flavouring agents must only be prescribed when required for medicinal value or to disguise distinctly nauseous drugs. Expensive proprietary drugs must not be prescribed, and the committee gives a list of comparatively inexpensive alternatives to some proprietary drugs and a list of articles disallowed by the Pharmaceutical Committee. Practitioners are also to send in monthly copies of any prescriptions they have themselves dispensed in urgent cases, with a full account of the circumstances in which they have been given. Practitioners are also asked to urge all tuberculous cases to apply immediately for sanatorium benefit, as the cost of drugs supplied to such persons ought not to come out of the ordinary drug fund.

In Salford the special agreement between practitioners and the Salford Panel Committee commences by citing Articles 35 (2) and 40 of the Regulations, 1913, and then continues as follows:

And whereas it has been agreed by and between the Salford Panel Committee and the Salford Pharmaceutical Committee that in order that the aforesaid articles of the Regulations should operate automatically the following procedure should be adopted in ascertaining the amount to be paid to the practitioners and chemists and other persons respectively, that is to say:

The Panel Committee shall ascertain from the monthly accounts rendered by practitioners under their agreements with the Insurance Committee the average cost per patient in respect of the treatment given by each practitioner during each month, and may if they think desirable take the general average cost per patient in respect of the treatment given to the whole of the patients within the area of the Insurance Committee for each monthly period as the basis upon which the amounts to be credited to each practitioner under Article 35 of the Regulations shall be determined, and may if they think fit reduce all or any accounts which exceed the general average cost per patient to such general average or may adopt such other method of payment as they may consider desirable. The sums thus obtained will then rank for participation in the funds available.

For the purposes of this agreement the percentage payable of the amounts thus credited to each practitioner shall be ascertained upon a basis of 9s. per insured person per annum, and each practitioner will be credited with the percentage of his account thus obtained.

The Panel Committee shall ascertain from the monthly accounts rendered by chemists and other persons supplying drugs and appliances the total cost of drugs and appliances prescribed by each practitioner, and shall deduct such total cost from the aforesaid percentage of his account.

Provided that—

(1) If the total cost of the drugs and appliances for the period is in excess of the amount available based on 2s. per insured person per annum, a *pro rata* reduction shall be made in the amounts to be deducted from sums credited to practitioners, and the amount of the deductions so made shall be carried forward to the next period.

(2) If the total cost of the drugs and appliances for the period does not exceed the amount based on 1s. 6d. per insured person per annum, a *pro rata* increase shall be made in the amounts to be deducted from sums credited to practitioners.

The accounts of medical practitioners as adjusted in the manner above indicated shall be certified and forwarded to the Insurance Committee for payment.

I, the undersigned, being a medical practitioner undertaking the treatment of insured persons in the area of the Salford Insurance Committee, hereby agree to the adoption of the scheme as herein set out for the purpose of ascertaining the amount due and payable to me under my agreement with the Salford Insurance Committee dated.....day of..... 1914.

Signed.....

Address .....

It will be evident from the above agreements that in both Manchester and Salford a determined attempt is to be made to keep the drug bills within reasonable limits. Some fear was at first expressed that the extra trouble entailed on practitioners by the monthly accounts which each practitioner has to send in to the Panel Committee and the restrictions placed on prescribing, might prevent a number from consenting to work under the Act, but apparently the profession is willing to pay a heavy price rather than resort to the capitation system, as the number of practitioners who have joined is about the same as in the past year. Fears have been expressed by representatives of the approved societies that the insured may suffer owing to the restrictions on prescribing, but there is no more reason why this should occur in Manchester and Salford than in the rest of the country, as whatever happens the full amount of 1s. 6d. per insured person will always be available for drugs and appliances, and the floating 6d. will be just as available to assist the drug fund as it is elsewhere.

A Proposal for a State Medical Service.

A body called the Faculty of Insurance, constituted early last year, held its first conference in April, under the chairmanship of Mr. Handel Booth, M.P. The object of the Faculty was stated to be to collect statistics, to spread information, and possibly to train officials by means of lectures and classes. This conference was attended by some 500 people, and Sir John Collie, who took an active part in it, delivered a lecture last Monday (January 12th) before the Faculty at the Central Hall, Westminster. The subject of the lecture was the medical profession and National Insurance. Mr. H. Kingsley Wood, L.C.C., was in the chair.

Sir John Collie said that the year's experience of medical benefit had revealed certain defects which he classified under the following heads: Defects in the Act itself; defects in local administration; defects inherent in the administration and the panel system.

He contended that it had been a mistake to set up an entirely new body to administer the Act, and expressed the opinion that the Local Government Board was the proper authority to deal with the Insurance Act, as it would be able to unite the two branches of clinical and preventive medicine. Following up the same line of argument, he objected to the creation of four commissions, and to this cause attributed the weakness he detected in the policy of the Commissioners in dealing with outside bodies. He thought the remuneration of 7s. for medical treatment generous, and that the Commissioners should have demanded a complete service instead of limiting the definition of adequate treatment to what could be done by a doctor of ordinary skill and competence. Had economic and equitable arrangements been made, the doctors would have been amply paid, and there would have been money over to meet extra demands. He declared that the local administration was too complex and had given rise to numerous complaints of muddle, delay, and mismanagement. He enumerated the defects he found in the panel system under five heads:

1. No selection of doctors to serve on panel. "This is a tremendous mistake; a large number of doctors with very inferior attainments wished to put down their names; many of them have now large numbers of insured persons on their lists. Surely, the Government should have taken some step to see they are getting value for their money."

2. Competition between doctors for patients. "This is the greatest objection to the panel system. It placed," Sir John said, "a premium on advertising, the 'bedside manner,' and readiness to give certificates. The doctor is safeguarded from safeguarding the insurance funds. Such a system leads to abuse. Much of the over-sickness is due, especially among women, to genuine ill-health, but there is a lot of real malingering."

3. Too many patients on the doctor's list. "No doctor should be allowed to have more than a specified number of patients; lightning diagnosis is a glaring defect of the panel system. The work is scamped, and much of it hurried through in a way that is positively appalling. Nevertheless, there are many doctors giving first-class service under the Act."

4. Inadequacy of treatment through absence of modern methods of scientific diagnosis. "The great bulk of the money provided under the Act is going in the treatment of minor ailments; much of it is hardly more than first aid. If a person needs more than elementary treatment he is only, it seems, entitled to be informed of the fact: he must make his own arrangements for treatment. In Germany full treatment is recognized as being the most economical in the long run."

5. The list of appliances is cut down to the barest possible minimum. Trusses, for example, were nearly always provided by the old friendly societies, but are not included in the list.

The remedy which he suggested was a national medical service, and this expression of opinion was greeted with loud cheers. Proper co-operation and co-ordination of all the present resources of medical treatment was required. The Government should appoint a National State Medical Service providing every sort of treatment, payment should be by fixed salary, admission to the service should be by examination, and administration should be both central and local. Such a national service would, he believed, cost far less than the present system. He believed that a State medical service was inevitable, and would be as great a boon to the profession as to the public. An opportunity would present itself in two years to put such a scheme into effect, but he thought that the system should be started at once in those areas where at present panel doctors were overworked. In such districts a modified State service could work hand-in-hand with the present system.

Borough of Lambeth Insurance Practitioners' Association.

At a meeting of the Executive Committee of this association, held at Stockwell on January 6th, Dr. J. Fleming in the chair, the proposed action of Dr. Nundy against the London Insurance Committee was considered and discussed. The following resolution was passed unanimously:

> That this meeting of the Borough of Lambeth Insurance Practitioners' Association Executive Committee desires most strongly to dissociate itself with the proposed legal action which Dr. Edward Nundy, of Tooting, contemplates entering into against the London Insurance Committee. This meeting considers such action detrimental to prospects of satisfactory and amicable settlement, and inadvisable, as likely to lead to many unforeseen complications.

The Secretary was instructed to forward copies of this resolution to Mr. J. A. Dawes, M.P., Chairman, and Mr. Thomas Batey, Clerk, of the London Insurance Committee, the Chancellor of the Exchequer, and the Insurance Commissioners, and also to write to Dr. Nundy expressing the views of the meeting.

The meeting considered that if any legal action became necessary the proper body to undertake it was the Panel Committee.

Huntingdonshire.

The Commissioners have approved the election of the Huntingdonshire Local Medical Committee as the Panel Committee for the county.

At the meeting of the Local Medical Committee on January 9th, it was resolved that the special mileage grant be paid in respect of insured persons living in houses situated in certain parishes, not on a hard or made road, and more than three miles from the nearest doctor.

SCOTLAND.

Sundays and Holidays.

The Leith Burgh Insurance Committee met on January 9th, when the Medical Benefit Subcommittee reported that a meeting had been held between Mr. Jeffrey, Secretary to the Commission, and the doctors on the Committee, to discuss the rules for the administration of medical benefit. Mr. Jeffrey stated that the Commissioners could not approve of certain of the suggested rules. The rules

included: "No consultation, except in cases of emergency, will be given by practitioners on (*a*) Sunday evenings; (*b*) Wednesday evenings (no medicines being obtainable then, in view of the Shops Act); and (*c*) statutory holidays." Mr. Jeffrey indicated that the principal difficulty was in regard to the desire of the doctors not to give attendance on Wednesday evenings. It was suggested that the difficulty might be got over by the doctors agreeing to find deputies to act for them on any evening during which they might desire not to be in attendance. Mr. Jeffrey promised to place the views of the medical men before the Commissioners, stating that the question of deputies would be a private arrangement among the doctors, and need not appear specifically in the rules. The report was then adopted.

IRELAND.

Irish Medical Committee.

A special meeting of the Irish Medical Committee was held in the Royal College of Surgeons on January 8th. Dr. Marlay Blake presided in the absence of the Chairman and Vice-Chairman, and thirty-one others were present.

Correspondence with the Insurance Commissioners regarding the question of a truce not having been called was read, and after a considerable discussion the following resolutions were passed:

That the Irish Medical Committee, in hope of a speedy settlement of the certification question being arrived at between the Irish Insurance Commissioners and the medical profession, is of opinion that pending such settlement, or failure of the present negotiations, the existing arrangements of the Commission for obtaining evidence of sickness benefit should be acquiesced in by the medical profession, and that pending such settlement or failure of the negotiations no professional interference should be displayed toward the medical advisers.

That in the event of a settlement of the certification question satisfactory to the Irish Medical Committee being arrived at, the Committee will use its influence to prevent any professional interference being displayed toward the medical advisers.

It was pointed out that if there was to be a truce there should be a truce on the part of all contending parties, and that the friendly societies were still penalizing those doctors who had remained loyal to the majority of their brethren, and the following resolution was passed:

That the Insurance Commissioners use their statutory powers and influence to prevent friendly societies from penalizing any doctors who have remained loyal to the majority of their colleagues.

CORRESPONDENCE.

Distribution of Funds Available for Medical Benefit of Unallotted Insured Persons.

Dr. M. G. Biggs (Wandsworth) writes: I am sorry to see that Dr. John Divine still holds about the unallocated funds a view which tends to widen the breach between panel and non-panel practitioners. In order to make the position quite clear may I put to Dr. Divine an exaggerated case? Suppose there are 3,000 insured persons in a small town, and that there are two doctors available to attend them, one on the panel and one non-panel. And suppose that 1,500 of the insured have their cards signed by the panel doctor, and that 1,500 are people whose position and inclinations make them patients of the non-panel doctor as heretofore. Would Dr. Divine, as the panel doctor, claim to receive 14s. a head for the 1,500 patients on his list? If Dr. Divine says "Yes," then further argument with him is futile. If he says "No," then I think that he will be brought to see that there is something in the contention of non-panel practitioners.

Statistics for 1913.

Dr. Legge Bagley (Pulham Market) sends us the following statistics of work done by him under the Insurance Act; they are, he says, imperfect because the use of record cards was not begun in Norfolk until April 16th, 1913:

Acceptances to end of first quarter	637
,, ,, second quarter... ...	643
,, ,, third quarter	647
Allocated during third quarter	83
Record cards opened from April 16th to December 31st	224
Attendances from January 15th to December 31st...	2465

THE STATUS AND DUTIES OF MEDICAL OFFICERS OF HEALTH.

Ilford Urban District Council and its Medical Officer.

The difficulties which have arisen with respect to the administration of the Public Health Department at Ilford and the critical attitude of the Urban District Council towards the Medical Officer of Health, Dr. Stovin, have been reported from time to time in our columns, and last July the Local Government Board held an inquiry in the locality. The Urban District Council in November, purporting to act upon the recommendations contained in the report of this inquiry, suspended Dr. Stovin from duty as medical officer of health and gave him three months' notice to terminate his appointment. Dr. Stovin has had the unanimous support of every medical practitioner in the Ilford district, and the Public Health Committee of the British Medical Association, after fully investigating the facts, directed the letter printed below to be addressed to the Local Government Board. The reply of the Board has recently been received and takes the form of a copy of a letter addressed to the Ilford Urban District Council.

It will be seen that the Local Government Board has assumed a firm attitude. It has expressed the opinion that the action of Dr. Stovin does not afford sufficient ground for the extreme step of dismissal from office and has requested the District Council to reconsider the matter. Incidentally the Board has set out again its views on the relation of the medical officer of health to the sanitary staff.

British Medical Association,
Medical Department,
429, Strand, London, W.C.,
December 23rd, 1913.

Sir,—The attention of the Public Health Committee of the British Medical Association has been drawn to a report, in the *Ilford Recorder* of Friday, November 21st, of a meeting of the Ilford Urban District Council at which the Medical Officer of Health for Ilford was suspended from duty and given three months' notice to terminate his appointment. In that report it is stated that certain regulations which the council had set up to govern the work of the Sanitary Department were adopted almost word for word from suggestions laid down by the Local Government Board Inspectors as the result of the inquiry which they held in Ilford in July last. It would appear that these regulations put the control and supervision of the whole of the work of the sanitary inspectors under the Chief Inspector of Nuisances. This is so contrary to what has long been understood as the established policy of your Honourable Board, that the Public Health Committee is under the impression that the statement that such suggestions came from the Inspectors of the Board is due to some misapprehension, but if this is so, it is a misapprehension which apparently had a great deal to do with the action of the Ilford Urban Council in respect of its medical officer of health.

My Committee would be glad to know whether the policy of the Board, which it has understood is that the Medical Officer of Health must be the responsible head of the Sanitary Department, has undergone any change, and if not, whether the Board will take steps to remove the misapprehension which apparently exists among some of the members of the Ilford Urban Council as to the action of the Inspectors of the Board.—I am, Sir, your obedient servant,

(Signed) Alfred Cox,
Medical Secretary.

The President, Local Government Board,
Whitehall, S.W.

Local Government Board,
Whitehall, S.W.,
9th January, 1914.

Sir,—I am directed by the Local Government Board to advert to your letter of the 23rd ultimo, and to transmit to the British Medical Association for their information the accompanying copy of a letter which the Board have this day addressed to the Ilford Urban District Council.—I am, Sir, your obedient servant,

(Signed) F. J. Willis,
Assistant Secretary.

A. Cox, Esq.,
Medical Secretary, British Medical Association.

Local Government Board,
Whitehall, S.W.,
9th January, 1914.

Sir,—I am directed by the Local Government Board to advert to your letter of the 27th November and previous correspondence applying for the Board's sanction to the dismissal of Dr. Stovin, Medical Officer of Health for the Ilford Urban District.

I am to express the Board's regret that the adjustment of the differences between the Council and their Medical Officer of Health, arrived at as a result of the inquiry held by two of the Board's Inspectors in July last, has been so soon disturbed. It was part of that adjustment that the inspectors should assist the Council in defining the relations between the Medical Officer of Health and the Sanitary Staff, and at a discussion between the inspectors and a special committee on 23rd July, 1913, the following principles, amongst others, were laid down:

The Medical Officer of Health is the head of the Public Health Department, and the Inspector of Nuisances is not independent.

The Assistant Inspectors should report and take instructions from the Chief Inspector of Nuisances as a rule, but in necessary cases the Medical Officer of Health can direct the Assistant Inspectors as he thinks fit, informing the Chief Inspector of what he does or conferring with him first if time permits.

Drainage work and collection of house refuse to be under the direction of the Inspector of Nuisances, who will report and confer with the Medical Officer of Health when necessary with regard to them.

In the minutes and letter which were forwarded by you to the Board on 27th November certain regulations are included which, it is stated, were arrived at with the full concurrence of the Inspectors. The regulations themselves, however, were not communicated to the Board or to their Inspectors, and they were not in complete accord with the principles laid down at the conference on July 23rd.

The Board attach considerable importance to the general principle that the Medical Officer of Health should be regarded as the chief officer of the Public Health Department, and they would refer to Article XX (1) of their General Order of 13th December, 1910, which requires the Inspector of Nuisances, subject to the directions of the Council, to perform his duties under the general supervision of the Medical Officer of Health. In their circular of 14th December forwarding a copy of this Order the Board drew attention to the fact that this article had been altered so as to emphasize the fact that "the Inspector of Nuisances should, as a rule, act under the general supervision of the Medical Officer of Health, who must be regarded as the head of the Public Health Department of the Council."

The Board consider, however, that having been informed of the regulations adopted by the Council as a result of the Consultative Committee's report, Dr. Stovin acted improperly in varying the instructions given in Regulation 4 and in departing from Regulation 8. He should have represented his objections to these regulations to the Public Health Committee of the Council before giving directions to the inspectors and others. His report of 15th November, 1913, with reference to his action as to Regulation 4 was unfortunate in its tone, and especially in its reference to and quotation from his Annual Report for 1912, in view of the terms of heading (2) of the adjustment arrived at during the public inquiry.

At the same time, though the Board consider that Dr. Stovin is deserving of censure for departing from the regulations without the authority of the Committee, they are of opinion that, in view of the efficient manner in which he has discharged the duties of Medical Officer of Health in the district for a number of years, his departure from these regulations was not in itself a sufficient ground for the extreme step of dismissing him from office, and they request the District Council to take the matter into reconsideration. If the Council were to modify their new regulations so as to bring them into complete accord with the principles laid down at the conference, and if Dr. Stovin would give an undertaking that he would in future strictly observe the regulations, the Board would suggest that the Council should withdraw their resolution suspending him from the office and their application to the Board for sanction to dismiss him.—I am, Sir, your obedient Servant,

(Signed) F. J. WILLIS,
Assistant Secretary.

Association Notices.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, January 28th, in the Council Room, 429, Strand, London, W.C.

By order,
GUY ELLISTON,
Financial Secretary and Business Manager.

December 23rd, 1913.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL DIVISION.—Dr. Francis W. Bailey, Honorary Secretary, gives notice that the annual meeting of the Division will take place on Friday, January 30th, at four o'clock in the afternoon at the Medical Institution, Liverpool. Business: Election of officers and alteration of rules.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.—Dr. J. H. Clatworthy, Honorary Secretary, 145, Denmark Hill, S.E., gives notice that an ordinary meeting will be held on Thursday, January 22nd, at 4 p.m., in Peckham House Private Asylum, Peckham Road, S.E., when Dr. Theo. B. Hyslop, F.R.S.E., will read a paper on cerebral congestion. Tea will be served at 4 p.m. and business will commence at 4.15 p.m.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, January 23rd, from 3.15 to 6 p.m. Dr. T. M. Allison: Respiratory Diseases: Some Points in their Diagnosis and Treatment. Professor Sir Thomas Oliver: Gold-miner's Phthisis. Tea. Mr. W. G. Richardson: Malignant Diseases of the Mouth. Mr. A. S. Percival: Errors of Refraction in School Children. Dr. E. Napier Burnett: Fibroid Conditions of the Uterus.

NORTH OF ENGLAND BRANCH: SUNDERLAND DIVISION.—Mr. D. F. Todd (Chairman) and Dr. I. G. Modlin (148, Roker Avenue, Sunderland), Honorary Secretary, give notice that at the meeting of the Division to be held at the Lecture Hall, Subscription Library, Fawcett Street, Sunderland, on Thursday, January 29th, at 4.30 p.m., an address will be given by Dr. G. Sims Woodhead, Professor of Pathology, University of Cambridge, on "How are We to Stamp Out Tuberculosis?" with limelight illustrations. The annual dinner of the Division will be held the same evening at the Edward Hall, Toward Road, at 7 p.m., when Professor Sims Woodhead will be the guest. Tickets (10s. 6d., exclusive of wine) may be obtained from any member of the Committee or from the Honorary Secretary. As a guarantee must be given of the number likely to be present at the dinner, the Committee trusts that those who intend to do so will kindly intimate not later than January 26th. The Division extends a most cordial invitation to all medical men in the North of England Branch area to both the address and the dinner.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest towns, which now include the recently extended city of Exeter, 9,199 births and 6,703 deaths were registered during the week ended Saturday, January 10th. The annual rate of mortality, which had been 14.6, 14.8, and 18.6 per 1,000 in the three preceding weeks in the ninety-six towns, further rose to 19.3 per 1,000 in the week under notice. In London the death-rate rose to 20.5, against 14.7, 14.0, and 18.6 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 8.7 in Barrow-in-Furness, 8.8 in Hornsey, 10.3 in Ilford, 10.4 in Walthamstow, 10.6 in Southend-on-Sea, and 11.1 in Enfield, to 27.3 in Bury, 28.1 in Great Yarmouth and in Norwich, 28.7 in Swansea, 30.8 in Stockton-on-Tees, 31.2 in Bath, and 32.1 in Wolverhampton. Measles caused a death-rate of 2.1 in Middlesbrough, 3.8 in Burnley, and 3.9 in Barnsley; scarlet fever of 1.6 in West Hartlepool and 1.8 in Salford; whooping-cough of 1.1 in West Ham and 1.4 in Smethwick; and diphtheria of 1.7 in Northampton and 1.8 in Great Yarmouth. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 52, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 12 were registered in Birmingham, 8 in Liverpool, 3 in Burnley, and 3 in South Shields. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,048, 3,946, and 3,874 at the end of the three preceding weeks, had further fallen to 3,757 on Saturday, January 10th; 416 cases were admitted during the week, against 458, 326, and 425 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, December 27th, 1913, 350 births and 366 deaths were registered in the twenty-seven principal urban districts of Ireland, against 529 births and 435 deaths in the preceding period. These deaths represent a mortality of 15.9 per 1,000 of the aggregate population in the districts in question, as against 18.9 per 1,000 in the previous period. The mortality in these Irish areas was

therefore, 1.1 per 1,000 higher than the corresponding rate in the ninety-six English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 15.2 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 17.1 (as against an average of 18.5 for the previous four weeks), in Dublin city 19.1 (as against 20.1), in Belfast 19.8 (as against 17.9), in Cork 10.9 (as against 17.8), in Londonderry 11.4 (as against 12.4), in Limerick 13.5 (as against 14.6), and in Waterford 11.4 (as against 16.6). The zymotic death-rate was 1.4, as against 1.6 in the previous period.

During the week ending Saturday, January 3rd, 682 births and 593 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 350 births and 366 deaths in the preceding period. These deaths represent a mortality of 25.7 per 1,000 of the aggregate population in the districts in question, as against 15.9 per 1,000 in the previous period. The mortality in these Irish areas was therefore 7.1 per 1,000 higher than the corresponding rate in the ninety-six English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 29.5 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 30.4 (as against an average of 21.3 for the previous four weeks), in Dublin city 33.1 (as against 23.3), in Belfast 25.4 (as against 20.4), in Cork 28.6 (as against 20.9), in Londonderry 21.6 (as against 13.3), in Limerick 12.2 (as against 13.9), and in Waterford 17.1 (as against 18.1). The zymotic death-rate was 1.4, or the same as in the previous period.

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

MAJOR G. J. S. ARCHER has been appointed a Specialist in Operative Surgery at the Royal Victoria Hospital, Netley.

Major F. E. GUNTER has been posted to the Southern Command.

Major B. F. WINGATE has left the London District for duty in India.

Major R. W. CLEMENTS has been posted to Cork for duty.

Major H. G. PINCHES has been posted to Dublin for duty.

Major A. W. SAMPEY has been appointed Medical Officer in charge of Enteric Convalescent Dépôt, Wellington.

Major C. R. MILLER has been posted to Cork for duty.

Major W. E. MARSHALL has been posted to Cork for duty.

Major G. STCLAIR THOMSON has been appointed Director of Medical Services in the Lowland Territorial Division.

Major H. K. PALMER has been posted to the Southern Command for duty.

Supernumerary Captain WILLIAM E. MARSHALL, M.B., is restored to the establishment, January 1st.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ASHTON-UNDER-LYNE: DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Assistant House-Surgeon. Salary, £90 per annum.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS COUNTY BOROUGH.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary, £250 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon (male). Salary, £100 per annum.

BIRMINGHAM: CITY FEVER HOSPITAL.—Second Assistant Medical Officer. Salary, £160 per annum.

BLACKPOOL: VICTORIA HOSPITAL.—House-Surgeon (male).

BRADFORD CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £150 per annum.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Physician. Salary at the rate of £100 per annum.

CARDIFF: KING EDWARD VII HOSPITAL.—Resident Surgical Officer. Salary, £160 per annum.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, rising to £200.

CHARING CROSS HOSPITAL.—Medical Registrar.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—(1) Surgeon to Out-patients. (2) House-Surgeon. Salary, £80 per annum.

CHELSEA INFIRMARY.—Second Assistant Medical Officer. Salary, £140 per annum.

CHELTENHAM EDUCATION COMMITTEE.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary, £250 per annum.

CHELTENHAM EYE, EAR, AND THROAT HOSPITAL.—Assistant Surgeon. Salary at the rate of £200 per annum.

CHESTER COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £200 per annum.

CHINA: MISSIONARY HOSPITAL, Wenchow.—Locum for six or twelve months. Salary, £250.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician (male). Salary at the rate of £75 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £200.

DERBY: DERBYSHIRE ROYAL INFIRMARY.—Assistant House-Surgeon.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

DUMFRIES COUNTY AND BURGHS.—Two Medical Assistants to the Medical Officer of Health and School Medical Officer (females). Salary, £250 per annum, rising to £300.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician and Assistant Casualty Officer (male). Salary at the rate of £75 per annum.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident (female). Honorarium at the rate of £18 per annum.

EDINBURGH: THE HOSPICE.—Resident Medical Officer (female). Honorarium, £25 per annum.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £60 per annum.

GARTLOCH MENTAL HOSPITAL, near Glasgow.—Pathologist. Salary, £200 per annum.

GLOUCESTER: GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Surgeon.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—House-Surgeon. Salary at the rate of £40 per annum.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

HARROGATE INFIRMARY.—Resident House-Surgeon. Salary, £75 per annum, rising to £100 after six months.

HOLBORN UNION INFIRMARY, Upper Holloway.—Second Assistant Medical Officer. Salary, £110 per annum, rising to £130.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Honorarium, 30 guineas for six months.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LEASOWE SANATORIUM.—Resident Medical Officer. Salary, £250 per annum.

LEEDS: GENERAL DISPENSARY.—Resident Aural Officer. Salary, £100 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Resident Pathologist and Bacteriologist. Salary, £150 per annum.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum.

MADRAS: CASTE AND GOSHA HOSPITAL.—Lady Medical Officer. Salary, £400 per annum.

MANCHESTER EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £450.

NEWCASTLE-UPON-TYNE ASYLUM, Gosforth.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Senior Clinical Assistant in Ophthalmic Department (female).

NEWPORT: ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary at the rate of £80 per annum for first four months, rising to £120.

NORTH RIDING OF YORKSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum.

NORWICH: NORFOLK EDUCATION COMMITTEE.—(1) Senior Assistant School Medical Officer. (2) School Dentist. Salaries, £350 and £250 per annum, rising to £450 and £300 respectively.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon (male). Salary, £180 per annum.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PLAISTOW; MEDICAL MISSION HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer. Honorarium at the rate of £30 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Senior Resident Medical Officer. Salary at the rate of £90 per annum, and £10 on completion of six months' service.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—(1) Pathologist. (2) House-Surgeon. Salary, £150 and £90 per annum respectively.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary at the rate of £80 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) Senior and Junior House-Surgeons. Salary at the rate of £70 and £50 per annum respectively. (2) Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Laryngologist.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £125 per annum.

ST. PANCRAS PARISH.—Junior Assistant Medical Superintendent for the South Infirmary (female). Salary, £100 per annum.

SALISBURY GENERAL INFIRMARY.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £100 and £50 per annum respectively.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2) £80 per annum.

SHOREDITCH: PARISH OF ST. LEONARD.—Junior Assistant Medical Officer for the Infirmary. Salary at the rate of £150 per annum.

SOUTHWARK UNION INFIRMARY.—Third Assistant Medical Officer (male). Salary, £120 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STAFFORDSHIRE EDUCATIONAL COMMITTEE.—Two Assistant School Medical Officers. Salary, £250 per annum, rising to £300.

SUNDERLAND COUNTY BOROUGH.—Tuberculosis Medical Officer (male). Salary, £500 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £125 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

WALTHAMSTOW URBAN DISTRICT COUNCIL.—Resident Medical Officer at the Isolation Hospital. Salary, £150 per annum, rising to £200.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £200 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WEST HAM UNION.—Second Assistant Medical Officer (male) at the Sick Home, Forest Lane. Salary, £140 per annum, rising to £160.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £120 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—House-Physician (male). Salary, £80 per annum.

YORK COUNTY HOSPITAL.—House-Physician. Salary at the rate of £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Bellananagh (Cavan), Charlestown (Mayo), Cromarty (Ross and Cromarty), Exmouth (Devon), Eye (Suffolk), Ketton (Leicester), Wellington (Somerset).

MEDICAL REFEREE.—The Home Secretary announces the vacancy of Medical Referee under the Workmen's Compensation Act, 1906, for all ophthalmic cases arising in County Court Circuit No. 29,

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ANDERSON, Fredk. A., M.D., B.Ch., D.P.H. (Univ. Dub.), Assistant Surgeon to the Eye, Ear, and Throat Hospital for Shropshire and Wales, Shrewsbury.

WHALE, Harold L., M.D., B.C., B.A.Cantab., F.R.C.S.Eng., Surgeon to the Throat, Nose, and Ear Department of the Hampstead and North-West London Hospital.

WILLIAMS, E. Colston, M.D., B.S.Lond., D.P.H.Cantab., Medical Officer of Health for the County of Brecon.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

GEOGHEGAN.—At Government House, Caicos Islands, B. West Indies, on the 3rd inst., the wife (*née* Muriel Kerr-Brown, Edinburgh) of Joseph Geoghegan, M.B., Ch.B., District Commissioner and Government Medical Officer, of a son.

GRAY.—On January 9th, at De Walden Court, the wife of H. Tyrrell Gray, F.R.C.S., 60, Harley Street, of a daughter.

MARRIAGES.

ADAMSON—BUTLER.—December 20th, at St. Aidan's Church, Leeds, by the Rev. W. V. Mason, Wallace Wright Adamson, M.B., Ch.B.Glasg., D.P.H.Camb., to Rhoda Hicks Butler, M.D., B.S.Lond. At home, February 19th, 1, Ashwood Villas, Headingley, Leeds.

STOCKS—AIKMAN.—On the 10th inst., at the Church of St. Marylebone, London (by the Rev. P. R. Mitchell, Chaplain to the Tower of London, assisted by the Rev. Marten W. Shewell, brother-in-law to the bridegroom), Reginald Woolsey Stocks, Acting Medical Officer of Health, West Bromwich, son of the late Dr. Frederick Stocks, of Clapham, S.W., and Mrs. Stocks, of Tankerton, Kent, to Anna Daisy, eldest daughter of Mr. and Mrs. J. H. Aikman, of Jamaica, and St. Vincent, B.W.I. At home, Toronto House, West Bromwich, February 13th, 14th, 15th.

DEATHS.

BOLDERO.—At "Langford," Solihull, on Wednesday, January 7th, Frederick Boldero, M.R.C.S.Eng., aged 72, late of Penkridge.

HEWLETT.—On January 7th, at 12, Colinette Road, Putney, S.W., after a long illness, Louise, the wife of R. Tanner Hewlett, M.D., F.R.C.P.

SUTHERLAND.—At Lungla, South Sylliet, India, on the 9th instant, Charles David Sutherland, M.B., C.M.Edin., aged 48 years.

DIARY FOR THE WEEK.

TUESDAY.

CHELSEA CLINICAL SOCIETY, St. George's Hospital, 8.30 p.m.—Paper:—Mr. Ivor Back: The Mayo Clinic and some other things in America.

ROYAL SOCIETY OF MEDICINE:

SECTION OF THERAPEUTICS AND PHARMACOLOGY, 4.30 p.m.—Discussion on the Therapeutical Value of Hormones, to be opened by Professor G. R. Murray.

THURSDAY.

ROYAL SOCIETY, Burlington House, 4.30 p.m.—The following are among the list of probable papers to be read: R. T. Glazebrook, F.R.S., and D. W. Lye, B.Sc.: Heat Production associated with Muscular Work. M. Wheldale and H. L. Bassett: The Chemical Interpretation of some Mendelian Factors for Flower Colour. Professor G. Dreyer, M.D., and E. W. A. Walker, D.M.: The Minimum Lethal Dose of various Toxic Substances and its Relation to the Body Weight in Warm-blooded Animals. Professor R. Kennedy, M.D.: Paralysed Muscles by means of Nerve Anastomosis. F. N. White, M.D.: Variations in the Sex Ratio of *Mus rattus* following an unusual Mortality of Adult Females.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION FOR THE STUDY OF DISEASE IN CHILDREN, 4.30 p.m.—Cases and Specimens.

SECTIONS OF EPIDEMIOLOGY AND STATE MEDICINE AND OBSTETRICS AND GYNAECOLOGY, 8.30 p.m.—Joint Discussion on Compulsory Registration and Definition of Stillbirths, to be opened by Dr. R. Dudfield.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Friday, 3 p.m., Lecture: Nasal Catarrh.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, Extrauterine Pregnancy; Wednesday, Accidental Haemorrhage. Gynaecological Lecture: Friday, Displacements of the Uterus.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Monday: Manchester Children's Hospitals, Gartside Street, Tuberculous Disease of the Knee-joint. Tuesday: Salford Royal Hospital, Demonstration of Orthopaedic Case. Wednesday: Royal Infirmary, Reflex Dyspepsia. Thursday: Ancoats Hospital, Congenital Heart Disease. Friday: Royal Eye Hospital, Detection of Opacities in the Media.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical: Thursday, Medical; Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Tumour of the Spinal Cord.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—General Clinics and Operations, 2.30 p.m. daily. Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as advertised.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Thursday, 4 p.m., Demonstration of Nose, Ear, and Throat Cases.

SHEFFIELD UNIVERSITY CLINICAL DEMONSTRATIONS.—Tuesday: Royal Infirmary, The Suppurating Ear, What to do with it. Friday: Royal Hospital, The Application of *X* Rays to the Diagnosis of Gastro-intestinal Disease.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, *X* Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special Lectures at 5 p.m.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JANUARY.
21	Wed.	London: Finance Committee, 2.30 p.m.
22	Thur.	Altrincham Division, Annual Meeting, Altrincham.
		Camberwell Division, Peckham House Private Asylum, Peckham Road, S.E., 4 p.m.
23	Fri.	Newcastle-upon-Tyne Division, Royal Victoria Infirmary, Scientific Demonstrations, 3.15 to 6 p.m.
28	Wed.	London: Council.
		JANUARY (*continued*).
29	Thur.	Sunderland Division, Sunderland, 4.30 p.m. Annual Dinner, 7 p.m.
30	Fri.	Liverpool Division, Annual Meeting, Liverpool, 4 p.m.
		FEBRUARY.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10 a.m.
		London: Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 24TH, 1914.

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INSURANCE ACT COMMITTEE.

THE ninth meeting of the Insurance Act Committee was held at the offices of the Association on Thursday, January 15th. Mr. T. JENNER VERRALL (Acting Chairman) was in the chair, and the other members present were:—*England and Wales:* Dr. E. R. Fothergill (Brighton), Dr. Major Greenwood (London), Miss F. Ivens, M.S. (Liverpool), Mr. Herbert Jones (Hereford), Mr. E. C. Montgomery-Smith (London), Mr. D. F. Todd (Sunderland), Mr. E. B. Turner (London). *Scotland:* Dr. John Adams (Glasgow), Dr. R. McKenzie Johnston (Edinburgh). *Ex officio:* Dr. W. A. Hollis (President); and Sir James Barr (Acting Chairman of Council).

DISTRIBUTION OF FUNDS AVAILABLE FOR MEDICAL BENEFIT OF UNALLOTTED INSURED PERSONS.

The question of the proper distribution of money available for medical benefit for unallotted persons arose on the consideration of the letter addressed by the instructions of the Committee at its meeting on December 11th to the London Insurance Committee (SUPPLEMENT, December 27th, 1913, p. 569), and subsequently *mutatis mutandis* to the Staffordshire Insurance Committee, and in connexion also with the opinion expressed by the Non-Panel Committee at its meeting on January 6th (SUPPLEMENT, January 10th, p. 18). The letter, after setting out Minute 73 of the Special Representative Meeting in December, 1913—

That such portion of the unallocated funds in the hands of the Insurance Committees as are attributable to insured persons who had been attended individually as private patients should be distributed as a set-off to the medical bills of these patients,

continued as follows:

If the principle contained in the above resolution should be adopted, the unallocated money would be divided into two parts—first, that composed of the funds available for the medical benefit of those persons who for various reasons have not placed their names upon the list of any doctor on the panel, but who have found it necessary during the course of the year to incur medical bills. Secondly, that part composed of the funds available for the medical benefit of those persons who have not chosen a doctor and who have not needed to employ a doctor during the course of the year.

The first part, it is suggested, should be distributed *pro rata* amongst the persons in the first class who can show that they have been medically attended during the year. The remainder of the fund should, it is suggested, be distributed among the practitioners on the panel.

The Non-Panel Committee had expressed its dissent from the terms of that portion of the letter which suggested an immediate division of a portion of the unallocated funds among panel practitioners, and decided to recommend the Council that the policy of the British Medical Association should be that all moneys provided for the medical benefit of insured persons who have not chosen a doctor should be used only in payment of the cost of medical service to such insured persons. The Chairman of the Non-Panel Committee, Mr. E. B. TURNER, stated that that Committee had not intended to criticize the action of the Insurance Act Committee, or to express any opinion that the letter failed to convey the meaning of the Representative Body as expressed in Minute 73. The intention of the Non-Panel Committee, he stated, had been rather that the way of apportioning the unallotted funds suggested in Minute 73 should at some future date be amended by the Representative Body on the lines desired by the Non-Panel Committee.

At the request of the Insurance Act Committee, the ACTING CHAIRMAN undertook to insert in the quarterly report of the Committee to the Council a paragraph drawing attention to the decisions of both committees in the matter, and to the explanation given by the Chairman of the Non-Panel Committee.

The Committee also considered a communication from a metropolitan member asking whether it would be possible for the Association to take action in respect to the distribution of unallotted medical benefit funds in London, with a view to compelling the London Insurance Committee to allocate the insured persons who have not chosen a doctor. The Committee approved a reply sent, to the effect that it would be inadvisable to take legal action, inasmuch as the problem in London was different from that in other areas; that in those areas practitioners had accepted collective responsibility for all those who had not chosen a doctor, on the ground that it was better to allow these insured persons to choose a doctor for themselves when they feel so inclined; but that a judgement of the High Court would affect all areas.

PROPOSED MODEL AGREEMENT.

The Committee considered a resolution of the Kingston Division requesting the British Medical Association to prepare a model agreement for 1915, which would remove the objections of practitioners on the panel to the present agreement, and that the model agreement should be sent to the Divisions for discussion by April next, with the request that all practitioners on the panel should sign the model agreement and no other. It was resolved to reply to the Kingston Division that, in the opinion of the Committee, the objects aimed at were more likely to be obtained by the circulation of the agreement for 1915 in time for adequate discussion. The Committee resolved to make representations to the Commissioners to that effect.

Co-ordination of Local Medical Committees.

The question of the steps which should be taken to co-ordinate Local Medical Committees was considered, and the Chairman observed that the conference of representatives of such committees held during the annual meeting of the Association at Brighton last July had requested the Association to organize another conference during 1914. Mr. Todd drew attention to the report (published in the Supplement to the Journal of January 17th) of the deputation appointed by the Brighton conference to meet the Commissioners with regard to certain matters. After discussion the Insurance Act Committee resolved to recommend the Council as follows:

(*a*) That the Insurance Act Committee be directed to take all necessary steps, through the organization of the Association, for the holding, at an early date, of a conference of representatives of all Local Medical and Panel Committees in the United Kingdom.

(*b*) That the Council sanction the Insurance Act Committee incurring expenditure in providing for the purposes of the Conference, (i) place of meeting, (ii) necessary printing and postage, and (iii) necessary clerical assistance, but that it be clearly understood that the Committees sending representatives to the Conference must make their own arrangements as regards any other expenditure.

(*c*) The Committee also resolved in the event of the above recommendations being approved by the Council, to authorize the Local Medical Committee Subcommittee to take all necessary steps in the matter of the organization of the Conference without necessarily reporting thereon to the full Committee.

The Committee afterwards rescinded the appointment of a subcommittee previously appointed to consider a similar reference and appointed a new subcommittee to report upon subjects especially affecting the business and co-ordination of Local Medical Committees. The subcommittee was constituted as follows: The Chairman, Dr. Adams, Dr. Finlay, Dr. Greenwood, Dr. McKenzie Johnston, Mr. E. B. Turner, Mr. D. F. Todd, together with Mr. W. J. Greer, Mr. H. H. Tomkins, and Dr. Eustace.

Model Rules for Local Medical and Panel Committees.

The Committee considered the following reply from the Commissioners on the subject of Model Rules for Local Medical Committees, etc., as to which a deputation had met the Commissioners on October 3rd, 1913:

Sir,—I am directed by the National Health Insurance Commission (England) to advert to your letter of October 1st and to the conference between a deputation from the Insurance Act Committee of the British Medical Association and the Commissioners held on October 3rd, and I am to recapitulate, in compliance with request of the deputation, the views of the Commissioners as expressed in the course of the conference upon the matter then under discussion.

(1) *Model Rules for Local Medical Committees in considering complaints under Article 53 of the Medical Benefit Regulations.*

While the Commissioners fully appreciate the advantages which would accrue from the efforts of the Association to secure the adoption of standard rules in this connexion they feel that they are hardly in a position to express any opinion on the model rules submitted or to take any steps in the matter implying their approval or cognizance of those rules. The duties imposed by Article 48 of the Revised Regulations are conferred upon Local Medical Committees without any limitation as to the procedure to be adopted for their discharge; and the Commissioners are of opinion that they could not properly concern themselves with the rules that may be framed for the purpose of carrying out those duties as the Regulation now stands.

(2) *Model Regulations concerning the Constitution of Local Medical Committees.*

In accordance with Section 62 of the National Insurance Act, 1911, before recognizing a Local Medical Committee the Commissioners must satisfy themselves that such Committee is representative of the duly qualified medical practitioners resident in the area. This duty renders it necessary for the Commissioners, in their view, to examine both the "personnel" of individual Committees and the method of their constitution, but the Commissioners are of opinion that their concern in the constitution and procedure of Local Medical Committees is restricted to matters which affect the representative nature of those Committees, and which cannot therefore be excluded from the purview of the Commissioners' functions in regard to recognition.

It is proposed, subject to further consideration, to issue model schemes for the constitution of Committees, but for the reasons stated above any such schemes will deal only with those matters which are essential to the representative nature of the Committee, and will include only such provisions as are, in the opinion of the Commissioners, desirable or indispensable from this point of view. The model schemes will therefore be of the nature of outline schemes, and will require to be supplemented for the purpose of adoption in any particular area by provisions and Standing Orders respecting those features and functions of the Committee with which the Commissioners are not directly concerned.

It would, therefore, be possible for the Association to assist Local Medical Committees in the framing of these supplementary provisions by the issue of model rules, etc., and in this manner to secure for the principles expressed therein the full consideration of the parties directly responsible.

It is the intention of the Commissioners to communicate not later than April 30th next with the existing Local Medical Committees with a view to the preparation by them of schemes for the constitution of Local Medical Committees on a permanent basis; and the Commissioners propose to proceed shortly with the consideration of model schemes with a view to their issue prior to that date. As schemes for the constitution of Panel Committees will doubtless be in course of preparation about that time, advantage would probably be derived in some cases from the simultaneous consideration of the questions arising in connexion with the constitution of both committees, so far as they affect each other.—I am, Sir, your obedient Servant,

(Signed) S. P. Vivian.

The subject was referred to a subcommittee with instructions to recast the rules as soon as the rules which the Commissioners were proposing to issue were received.

Tuberculosis.

The Chairman of the Tuberculosis Subcommittee having reported that the Subcommittee had found it impossible to complete its report in time for submission to that meeting of the Committee, it was resolved that a special meeting of the Committee should be held on Thursday, January 22nd, for the purpose of considering the report of the Tuberculosis Subcommittee and any other matters which might arise in the interval.

Central Insurance Defence Fund.

The Committee had before it eight applications from medical practitioners for assistance from the Central Insurance Defence Fund, and made grants in five cases. In one case in which a grant was not made, the practitioner had agreed that the limited resources of the fund should be reserved for cases of real hardship; in another case the Committee notified the applicant that it was unable to deal with his case in the absence of his permission to make the usual inquiries of the local officials of the Association; and in a third case the decision was postponed for further information.

The Committee also made a grant out of the Administration Account of the Central Insurance Defence Fund of £100 to the Eastern Valleys (Monmouth) Medical Association to meet the expenses incurred in the campaign against the formation of a medical aid institute in the locality.

LOCAL MEDICAL COMMITTEES.

ESSEX.

The fourteenth general meeting of the Local Medical Committee for Essex was held on January 8th, the recognition having been extended to July 15th in conformity with the scheme for the acceptance of the personnel in the dual capacity of the Local Medical Committee and Panel Committee.

Correspondence.—Letters were read (1) of acceptance by the Insurance Committee of the drug tariff, with the insertion on page 2 of the words, "excepting those printed in the tariff," after the word "prices." (2) The acceptance of the scheme for Panel Committee (omitting the part referring to circularizing panel practitioners, which has

been done), with the addition of power to co-opt up to the number of three after formation. A long letter from the Commissioners not thoroughly understood, it was agreed should be a matter for conference between the chairman and secretary, Local Medical Committee, and the Commissioners.

New Agreement.—The Committee having failed to get any alterations has, since its last meeting, circularized all panel doctors to sign the agreement, but at the same time to send a letter objecting to the points enumerated on p. 560 of the SUPPLEMENT of December 20th, 1913.

Referees.—An answer from the Commissioners to complaints sent to them as to the action of certain referees in making comments upon diagnosis and treatment, and examining patients in the presence of the approved societies' secretaries and performing examinations calculated to have a deleterious effect upon the invalid, was received. The answer was to the effect that members of approved societies could appeal to the tribunal appointed by these societies, and afterwards to the Commissioners. The matter will receive further attention from the Local Medical Committee, which requests practitioners to forward details to its Secretary, 492, Lea Bridge Road, Leyton, N.E.

Co-ordination of Local Medical Committees.—The following motion, proposed by Dr. HARDING H. TOMKINS, was, after some discussion, carried *nemine contradicente*:

> That consequent upon the views expressed at the December Representative Meeting of the British Medical Association concerning the co-ordinating of Local Medical Committees and the necessity for so doing, this Local Medical Committee for the county of Essex requests the Insurance Act Committee of the British Medical Association to put in action the necessary machinery for co-ordinating these bodies at once, in order to avoid a separate central co-ordinating body, such as proposed by some Local Medical Committees.

The idea intended was expressed in a covering letter requesting that all Local Medical Committees should be approached, the British Medical Association expressing its willingness to act as co-ordinating centre, while inviting expressions of opinion from these bodies as to any schemes proposed by them in order to evolve a plan best suited to the majority. It was thought that had the scheme of co-ordination proposed by Essex to 140 Local Medical Committees last March been proceeded with, such matters as temporary residents and the new agreement could have been effectively dealt with, and that now a National Insurance Department has been instituted and the Insurance Act Committee formed with definite powers to co-ordinate, the British Medical Association was in the very best position to do this satisfactorily, whereas two bodies doing similar work would cause confusion by overlapping.

Alteration of Rules.—Several rules of the Essex Local Medical Committee were altered in order to make the representation of all districts equally effective and to make the sessions coincide with the period of recognition by the Commissioners.

Record Keeping.—It was decided that the keeping of records was so important, in view of the special inquiry now being arranged, that all practitioners should be circularized with a request to fill in a printed form for return to the Local Medical Committee Secretary.

Finance.—It was decided to repay all District Medical Committees' expenses for meetings, and all third-class railway fares of members of Local Medical Committees as originally proposed. The Secretaries of some District Medical Committees requested that a list of all practitioners who had not subscribed should be handed to them, as they felt it was unfair for any to withhold subscriptions. While some had generously responded upon the basis of ½d. per capita, nearly all members of the Committee had paid £2, in addition to £1 for early expenses.

Honorarium to Honorary Secretary.—The CHAIRMAN having requested the Secretary to retire for a few minutes, in his absence the Committee voted the sum of £150 in recognition of his services. They also decided that a sum of £5 should be drawn for petty cash from time to time as required.

Resignation.—Dr. Arthur Quennell (Brentwood) resigned in order that his place might be filled by a district under-represented.

WEST RIDING OF YORKSHIRE.

THE seventeenth meeting of the Local Medical Committee was held at Wakefield on December 12th, 1913, when Dr. MAY presided and twenty-seven representatives were present.

Expenses of the Committee.—The Treasurer, Dr. FRY, made a statement showing the amount received to date in response to the requests issued under the Committee's resolution of July 18th, 1913, whereupon it was resolved:

> That the representatives on this Committee be requested to send out a second request for the subscription (5s.) to those medical practitioners in their respective districts who have not already subscribed.

Honorarium for Secretary.—On the motion of Dr. GLOVER, seconded by Dr. GABRIEL, it was unanimously resolved:

> That, in view of his hard work for us during the past year, the thanks of the Local Medical Committee be presented to the Honorary Secretary, Dr. Eardley, and we ask him to accept a small honorarium of 20 guineas.

Medical Referees.—The HONORARY SECRETARY reported that he had circularized other Local Medical Committees and the profession of the West Riding area, as directed, and had asked the clerk to notify the societies, but, as the clerk could not undertake to do this without special permission from the Insurance Committee, the Honorary Secretary was instructed to notify the societies direct, obtaining their names and addresses, if possible, from the clerk.

Range of Medical Services.—A letter having been read from a panel doctor asking the opinion of the Local Medical Committee as to whether he might charge a fee for (*a*) removal of polypi of nose and (*b*) electric cautery of pharynx in a panel patient, it was resolved:

> That the doctor, in the opinion of the Local Medical Committee, is entitled to charge for cauterizing the pharynx, but not for removing the polypi.

Revised Drug Tariff.—Dr. FRY presented a report on the conference with the chemists, held on December 11th, 1913, which was approved. Drs. Eames, Fry, and Gabriel attended the conference on behalf of the Committee, and a general agreement on main principles was arrived at. The revised tariff is to come into operation in January, 1914, and remains in force for this year.

BERWICKSHIRE.

A MEETING of panel practitioners summoned by the Secretary of the National Health Insurance Commission (Scotland) took place in the County Buildings, Duns, on January 7th. There were present: Dr. Young (Earlston, Chairman of the Local Medical Committee), Dr. Campbell (Secretary-Treasurer), Dr. MacVie (Chirnside), Dr. MacWatt (Duns), Dr. MacKenzie (Duns), Dr. Taylor (Ayton), Dr. Maclagan (Ayton), Dr. McWhir (Swinton), and Dr. Wallace (Coldstream). Dr. TAYLOR proposed, and Dr. CAMPBELL seconded, that the following eight medical men should constitute the Panel Committee:

Dr. MacVie (Chirnside).	Dr. Maclagan (Ayton).
Dr. MacWatt (Duns).	Dr. McWhir (Swinton).
Dr. Young (Earlston).	Dr. Paxton (Norham).
Dr. Wallace (Coldstream).	Dr. Campbell (Duns).

No other name was proposed, and the returning officer (Mr. James William Herries, 42, Frederick Street, Edinburgh), announced that the Panel Committee was duly constituted.

PANEL COMMITTEES.

MIDDLESEX.

A MEETING of the Middlesex Panel Committee was held at Caxton Hall on January 15th, when thirty-five members were present.

Dr. H. Brackenbury was unanimously elected to the chair, and Dr. Shanks Honorary Secretary.

The following resolutions were passed, and the Secretary instructed to send them to the Middlesex Insurance Committee:

A. That the payment to practitioners on the panel during the past medical year be completed as soon as possible according to the following principles and methods:

(*a*) The practitioners' fund should consist of thirteen-seventeenths of the total amount available for medical benefit, together with 6d. per insured person transferred from the amount available for sanatorium benefit, less an appropriate ascertained amount corresponding to insured persons who have been allowed to make their own arrangements but who were members of approved institutions.

(*b*) The drug fund should consist of four-seventeenths of the total amount available for medical benefit, together with an additional sum transferred from the amount available for sanatorium benefit equal to the estimated cost of prescriptions supplied to persons recommended for sanatorium benefit, less an appropriate ascertained amount corresponding to insured persons who have been allowed to make their own arrangements, or who are members of approved institutions, allowance being made for those practitioners who have been given permission to dispense.

(*c*) The numbers on which the payment is made should in each case be the number of insured persons accepted by the practitioner during the year, such list of persons being corrected as far as possible for errors due to the duplication of names, to the acceptance of persons residing outside the county, or to other similar causes.

(*d*) The total payment (or a proportionate part thereof corresponding to the number of weeks a practitioner has had his name on the panel list) should be made to each practitioner at the rate of 7s. per insured person on his list, *plus* an amount for each such person arrived at by dividing the balance left in the drug fund after all authorized payments to chemists have been made by the total number of insured persons in the county.

(*e*) The balance then remaining in the two funds should then be divided amongst the practitioners in proportion to previous payments, but not to those whose names are on the panel lists for the staffs of institutions only.

B. If the Insurance Committee find it necessary to calculate payments quarter by quarter, this Committee are willing to accept such arrangement (payment being made in accordance with the foregoing methods), but they would prefer that the year should be treated as a whole.

C. That this Committee object to the basis of calculation for the last three quarters being the mean between the number of the insured persons on the practitioner's list on the first day of each quarter and the number on the last day, since this basis is rendered inequitable by the failure of the Insurance Committee to consign all insured persons to a practitioner at the end of the first quarter—a failure which was not contemplated at the time the agreements were signed, and which is not due to any action on the part of the practitioners.

D. That the Chairman and Secretary and four other members be appointed to discuss the method of payment with the General Purposes Subcommittee or their representatives, and that they be given power to approve any arrangement which does not depart seriously from that approved in the foregoing resolutions.

The following resolutions were also passed:

1. That each practitioner be informed as soon as possible of the number of insured persons on his list on January 12th, 1914, and that a list of such persons be supplied to him.
2. That the Committee be informed as soon as possible of the number of insured persons in the county on January 12th, 1914, who had not chosen a doctor.
3. That the liability to accept those insured persons during the quarter be assumed by each practitioner in numbers proportionate to those already on his list, provided that (*a*) any practitioner may decline to accept such liability, and (*b*) practitioners who had more than 2,000 persons on their lists on January 12th, 1914, shall not be credited with any further liability, and others shall not have liability imposed upon them which will bring their total liability above 2,000.
4. That, in accordance with Regulation 35, payment of the capita fees for the quarter be made to each practitioner on the number of insured persons for whom he was responsible under resolutions (*a*) and (*c*). That a payment on account be made at mid-quarter, and the balance due be paid as promptly as possible at the end of the quarter, and that then an additional payment of any balance in the drug fund be made calculated upon the same numbers.

The following were appointed a subcommittee to deal with the above resolutions: Drs. Busfield, Whitehall Cooke, Fuller, Muspratt, with the Chairman and Honorary Secretary. The question of checking and dealing with prescriptions past and future was left to a subcommittee consisting of the Chairman, Vice-Chairman, Drs. Ingram, Burton, Evans and Scott (Twickenham).

INSURANCE NOTES.

A Protest in Court against Form 43.

In the Stafford Police Court on January 8th Dr. F. Milnes Blumer, of Stafford, defended in person an action brought against him by the Insurance Commissioners on account of his refusal to pay the contribution due from him on December 5th, 1913, in respect of one of his five servants—a chauffeur.

The evidence in the case, apart from that necessary to prove the alleged offence, was given by the chauffeur (in cross-examination), the clerk to the Insurance Committee, and the chairman of the Medical Benefits Subcommittee, and, as reported in the *Staffordshire Chronicle*, was to the following effect: The chauffeur said he had been in Dr. Blumer's employ for fifteen years, and together with his family had always received gratuitous medical attendance from him. He had told Dr. Blumer that he would not let his card be stamped unless the Insurance Committee allowed him to make his own arrangements for medical attendance. The clerk to the Insurance Committee said that in the first quarter of 1913 there were many applications by persons desirous of making their own arrangements, and the routine was for a pink card to be handed to them, to be signed by a panel doctor: if they objected that they wished to be attended by a medical man not on the panel they were given Form 21. Subsequently this form was withdrawn, and there was substituted for it Form 43, which had to be signed by the proposed medical attendant as well as by the insured person, and so far—apart from the hospital—no medical man practising in Stafford had consented to sign it. The form was issued by the Commissioners, and the Insurance Committee was not bound to accept all its clauses; if it liked it could vary them. One of them, however—that relating to the keeping of records—it must certainly adopt if it desired to obtain a full Treasury grant, and this was essential. In fact, practically his committee could not grant permission to contract out if the form were not signed. The evidence of the chairman of the Medical Benefits Subcommittee was to the same intent.

In his argument on the facts of the case, Dr. Blumer said he had refused to pay the contribution because there was no other way in which he could get the matter brought before the courts, for no insured person, whatever his grievance against an Insurance Committee, could seek redress in a court of law. He had no objection to the Insurance Act itself, and in any case an Act of Parliament should be obeyed by every one. But every one included officials, and his object was to show that the Commissioners were not obeying the Act, but acting in a way contrary both to its letter and its spirit. The Act clearly intended that an insured person should, subject to the discretion of the Insurance Committee of his area, be allowed to make his own arrangements, and consequently the Commissioners issued Form 21, this form being one which, besides meeting the whole needs of the situation, was unobjectionable from the point of view of medical men. It also allowed the Insurance Committee the discretion to which it was entitled, and in the exercise of that discretion the Committee had in the first instance allowed his chauffeur to make his own arrangements in regard to medical attendance. Subsequently, however, the Commissioners believed that so many people were likely to contract out that the panel system was likely to be rendered superfluous, and as this did not suit their views they withdrew Form 21 and substituted for it a fresh form which contained such drastic stipulations that no medical man in Stafford had signed it. Consequently the issue of Form 43 was *ultra vires*, for it defeated the intention of the Act. Hence he asked the Bench to dismiss the case on the ground that his own refusal, subsequent to the issue of Form 43, to pay the contribution due in respect of his chauffeur was a necessary consequence of illegal conduct on the part of the prosecutors themselves.

The magistrates retired, and when the court resumed the Mayor said that by a majority it had been decided to convict. The Bench considered that Dr. Blumer believed that he had a good legal defence, and proposed to make an order for him to pay a nominal sum of 1s. and costs and arrears. Mr. Dawson, counsel for the Insurance Commissioners, said that an order for the payment of arrears could not be made without serving notice; but Dr. Blumer said he would pay the arrears, and that he had no intention of adopting what was popularly known as passive resistance. The only reason for allowing the case to go into court was to get the law stated upon the question.

SCOTLAND.

LINLITHGOW.

THE medical practitioners resident in the County of Linlithgow dined together in Edinburgh on January 7th, and a most enjoyable evening was spent. The guests of the evening were Mr. Robert Allan, chairman of the County Insurance Committee, Dr. John Keay and Dr. John Hunter, the Chairman and the Honorary Secretary respectively of the Local Medical Committee. Dr. Kirk presided over the gathering, and Dr. Scott acted as croupier. After the loyal toasts had been honoured the Chairman proposed the health of Mr. Allan, and in doing so referred to the great tact and ability with which he had carried out the difficult duties of this position. It was the unanimous desire of the medical practitioners in the county that Mr. Allan would see his way to continue as Chairman of the Insurance Committee. Mr. Allan, in replying, thanked the medical men present for their courtesy. He had a soft side to the profession, as it had been intended at one time that he should enter it; but though that intention was not carried out, one of his sons had done so, and another was proposing to follow in his brother's footsteps. He was glad to know that his chairmanship of the Insurance Committee had the approval of the medical men.

Dr. Alex. Stewart, the father of the profession in the county, proposed the health of Dr. Keay, and in doing so referred to the indebtedness of the Local Medical Committee to him for his help and guidance during the year. Dr. Keay, in replying, spoke of the bringing together of the medical men in the county which had followed on the coming into force of the Insurance Act, and expressed the hope that this would continue.

Dr. Cross, in a humorous speech, proposed the toast of Dr. John Hunter, the Honorary Secretary of the Local Medical Committee, in whose name he thanked Dr. Hunter most heartily for undertaking the many duties of the office. Dr. Hunter, in his reply, was also in humorous vein, and made a topical reference to the names found on the Linlithgowshire panel. He had had great pleasure in undertaking the secretaryship of the Committee, and he was glad to know that his work had been appreciated by his professional brethren.

The other toasts were: "The Local Medical Committee," proposed by Mr. Allan, and acknowledged by Dr. Scott; and "The Chairman," proposed by Dr. Simpson. Songs and recitations were given during the evening by Drs. Stark, Simpson, Ogilvy, and John Hunter. Dr. Campbell gave some selections on the piano, and undertook the duties of accompanist with much acceptance. The meeting closed with the singing of "Auld lang syne" and with a generally expressed desire that the dinner should be in future an annual function.

IRELAND.

Dundalk Doctors and Insurance Certificates.

THE following letter has been sent to the press by the doctors of Dundalk:

We, the undersigned medical men of Dundalk, having pledged ourselves at a meeting of the County Louth practitioners not to issue certificates under the National Insurance Act pending an amicable settlement of our grievances, hereby individually contradict the statement attributed to the Secretary of the Insurance Committee in last week's *Democrat*, namely, that "at present certificates were being issued by the Dundalk doctors." We wish it to be known that we have not been guilty of breaking faith with our professional brethren of the county; and we trust that if such statements are made in future the names will be given. (Here follow the signatures of eight medical men.)

Treatment of Advanced Phthisis.

At the last meeting of the County Meath Insurance Committee the following resolution was unanimously adopted:

That we desire to again bring before the Meath County Council the terms of our resolution dated July 9th, 1913, relative to an allocation of a certain portion of the capital grant available for County Meath under the Finance Act, 1911, for the purpose of purchasing the buildings known as the Isolation Hospital at Navan, as, from our experience of the working of the Insurance Act in the administration of sanatorium benefit, we have had so much evidence of the necessity for such an institution, so that hopeless cases could be isolated, and thereby avoid the danger to their families which at present exists. Further, we find that a hospital for advanced cases is a matter of grave necessity, as the sanatorium authorities at Poamount reserve to themselves the right to refuse to receive hopeless cases.

Sickness Certificates.

The Irish Insurance Commission have sent a circular, dated January 6th, to all the doctors in Ireland who joined the panel for the purpose of granting sickness certificates to insured patients, reminding them that the term of agreement for certification expired on January 14th, and that in view of the present negotiations the Commission propose to continue the existing panel arrangements till March 31st next, the end of the financial year, on the terms and conditions mentioned in the previous agreement. The circular requests the panel doctors to inform the Commissioners if they are willing to serve for this further period, and announces that steps are being taken to have payment made to all the panel doctors for the services already rendered by them.

WALES.

Association of Welsh Insurance Committees.

AT a conference of representatives of all the county and borough insurance committees for Wales and Monmouthshire which was held at Shrewsbury on January 15th, Mr. T. J. Hughes, Chairman of the Welsh Insurance Commissioners, gave an address on the first year's working of the Insurance Act in Wales. He said that there were in Wales 720,000 insured persons. The population of Wales and Monmouthshire was returned at the last census as 2,431,672, and it therefore appears that nearly one-third of the population are insured persons. Further, it should be noted that the number of males in Wales and Monmouthshire is 1,237,545, and allowing for working women and males under 16 years of age, it would seem that nearly the whole of the adult male population of the Principality must have become insured. Mr. Hughes said that the number of deposit contributors was about 20,000, but was steadily decreasing, as they were joining approved societies at the rate of 500 a week. The number of claims made by them had, he said, been remarkably few. The total sum received by the Welsh National Insurance Fund up to the end of September was, he said, £1,740,000, and of this £929,000 had been paid out to Insurance Committees, approved societies, and deposit contributors, leaving £811,000 which had been invested in gilt-edged securities. The average sum paid out weekly in maternity benefit was £1,700, in sickness benefit £7,500, and in medical benefit £6,000. There were, Mr. Hughes said, 996 doctors and 668 chemists on the panels in Wales and Monmouthshire.

The conference decided to form an association of Welsh insurance committees.

CORRESPONDENCE.

THE UNIONIST PARTY AND THE FUTURE OF NATIONAL INSURANCE.

WE have received the following letter from Mr. GODFREY LOCKER-LAMPSON, M.P., Unionist member for Salisbury:

Sir,—I have read with interest the correspondence that has been appearing in your JOURNAL with regard to the possibility of converting the National Insurance Act into a scheme of voluntary insurance, and the effect of such conversion upon the interests of the medical profession.

Some of your correspondents, however, seem to be under a misapprehension as to what Mr. Bonar Law said at a meeting in Norwich a few months ago. They appear to take it for granted that when the Unionist party are again in power the compulsory basis of the Act will be removed and a voluntary system of insurance set up in its place, and they found this assumption on what they allege to have been Mr. Bonar Law's pronouncement at the meeting referred to. But what are the facts?

On that occasion Mr. Bonar Law went no further in this direction than to state that on the return of the Unionist party to power "A committee, as far as possible non-political, impartial and competent," would be appointed to review the whole working of the Insurance Act, and that in the meantime a private committee was at work making inquiries into the various aspects of the whole complicated problem. But Mr. Bonar Law did not

go further than this, and it lies entirely in the lap of the gods what particular recommendation a non-political committee may make. For this is not a question of party politics, but essentially one for non-party practical men to settle.

As a Unionist and one who is interested in the question of national insurance, I am personally convinced that no fundamental alteration of the existing basis of the Act, whether in the shape of a conversion from compulsion to voluntaryism or in any other shape, will be proposed by the Unionist party on its return to power *unless* and *until* an impartial examination has resulted in a recommendation to all political parties that such fundamental change ought to take place.

Moreover, as a Unionist and one having the interests of the medical profession and of the friendly societies closely at heart, I am also convinced that no step will be taken by the Unionist party in any way to prejudice the interests of the medical profession or to injure the relationship between it and the approved societies.

I welcome Mr. Bonar Law's pronouncement that an impartial, non-political committee will be appointed, because I believe that such a committee will discover numerous ways of improving the administration of the Insurance Act, of giving better value to the insured community for the contributions paid, and of removing a large number of flagrant injustices that at present disfigure the fabric of the scheme.

Yours faithfully,
Godfrey Locker-Lampson.

A State Medical Service.

Dr. Milson Russen Rhodes (Eastbourne) writes: As a ten-year member and active worker in the British Medical Association, I beg to thank you for your timely illuminating leading article on this subject in last Saturday's Journal. The Association owes you thanks for your open recognition of the fact that "in the discussion of the question of the present method of administration of medical benefit, the views of those who advocate a State Medical Service are beginning to loom large and must be carefully examined."

That the views of the various bodies of thinkers and reformers in our Association should have courteous and careful consideration will be self-evident to every member, but as you well say, "these views have certain *intrinsic* attractions, and they are advanced and supported by not a few earnest and able members of the profession itself."

To these who, as you write, now look on the panel system as only one stage toward the evolution of an intrinsically valuable and co-ordinated State medical service your appeal at this crisis to them—to explain their position with regard to the salient factors you have clearly brought up—should meet with immediate response. You will thus, I know, bear with me in my presentation of the case for State medicine and the State Medical Service Association, so far as you in your leading article dealt with: "The proposals as put forward by the official organ of this Association *and enumerated with certain variations* by Sir John Collie in his lecture this week to the Faculty of Insurance, *to which now we do not propose further to refer*." (The italics are mine.)

The salient factors or the most important matters with which your article deals appear to be the following:

1. The rights of the individual under State medicine.
2. Importance of the support of general practitioners in any scheme of State medicine.
3. Free choice of doctor.

1. *The Rights of the Individual under State Medicine.*

Throughout your article you couple the question of "free choice of doctor" with "the rights of the individual," and with regard to the former you contend, rightly, that a principle fought for by the profession should not be given up, and that "the onus is on those who advocate a State service to show how such a service can be reconciled with this principle." "Principle," of course, must underlie any action of a scientific body of men, and I would thus like to lift the whole subject free of political bias or self-interest into the quiet, restful, and dispassionate atmosphere of science and reason, the two making, with principle, the three great assets of our noble profession.

You generously concede that "zeal for the State" actuates State service advocates. It is true you state "the State is only an abstraction," but how can that be when it is composed of individuals? We are entirely in agreement with you that "the primary function of the general practitioners is and always must be to meet the demands of the individual."

Such is self-evident. But this is precisely the reason that the State Medical Service Association stands for the new principle of "prevention" as the general practitioner's duty to the individual as opposed to the old principle that the general practitioner's duty was only "curative," dependent on a lay public's estimate of deviation from normal health or disease; and thus, his services being only brought into operation for the individual when disease was already established, the reserve forces of health taken by the enemy, and thus the general practitioner's aid to the health of the individual in many cases—for example, tuberculosis—hopelessly handicapped. His work was often thus not even "curative," but only the third duty fell to his lot, and that was merely "palliative."

The old private practice system of medicine stood for the principles of curative and palliative treatment. The new system of State medicine stands for the principle of preventive treatment, for the first time, to the individual patient, in contradistinction to the concurrrent work of the medical officers of health, which has stood for preventive treatment to society in general or to the State.

Here, then, you and we are in agreement, and it is one of my purposes in writing to find a common platform on which both panel and State service advocates in the British Medical Association can stand together for the mutual benefit of the profession and the national health it exists to serve.

This State system of preventive treatment to the individual you rightly say we regard "as a logical and necessary sequel to the panel system," thus to the National Insurance Act, which already has been shown to just fail in that very point we are in agreement about—namely, preventive treatment for the individual; for though the patients can come early, it is still left to the lay mind to say who is ill or who is well, and too many patients are crowded on to each doctor for the proper diagnosis of incipient disease—for example, cancer of the stomach, or even appendicitis, treated for ages as dyspepsia, under the panel system. Thus there is no indication, I respectfully submit, that "advocates of a whole-time service have ignored or flouted elementary facts of human nature."

The recognition of this great failure of general practice in the past, and its only half remedy in the Insurance Act as at present administered, led some general practitioners to formulate a scheme of State medicine, to be ready for the Amendment Act in a couple of years' time.

2. *Importance of the Support of General Practitioners in any Scheme of State Medicine.*

This brings me to the second important matter touched on in your excellent article—namely, the importance of the support of general practitioners. You remark, "It is significant to note that the chief supporters of the plan in the profession are professors, consultants, and others, who, if they ever knew anything about general practice among the industrial classes, have evidently forgotten it."

Now, this is entirely controverted by facts, which, with your permission, I propose briefly to recapitulate—as I have been, in fact, asked to do by my own Division—and to bring to your recollection your own broad-minded action in publishing in the Journal the beginnings of the movement.

The State Medical Service Association took its origin from the realization by general practitioners of the degrading conditions under which they had to work in private practice, and that under such conditions there was no leisure for self-education in the science of medicine, no means for proper application of the newest forms of scientific treatment, inadequate relationship between the "generals" in the hospital and "the rank and file" in general practice, and, finally, the deep wound to honour in playing flunky to the wealthy for the sake of necessary means in this day of dearer living, to meet family ties and professional duties and expenses.

When the general practitioner had stated, as I did in

a pamphlet entitled, *A National Medical Service*, published July 3rd, 1912, for the purpose of ventilating the case of the general practitioner, and his utter incapacity to deal with the overwhelming advance of scientific treatment in private practice and under present social conditions, then came the professors and consultants you speak about into active co-operation with us, their less fortunate brothers, to advocate State medicine, and for such purpose to found the State Medical Service Association, as a voice for the aspirations of the rank and file of the profession in this direction.

It was in the April 20th, 1912, issue of the JOURNAL you published my first letter on "A National Medical Service," which advocated an efficient medical service, based on the following seven principles, among which is "free choice of doctor." They are as follows:

1. Let the medical profession be made a branch of the Civil Service with salaries ranging from £400 to £1,000 per annum.
2. Let every medical man be placed on that service, and let the one State examination fit him for that service.
3. Let every householder or lodger already in or coming into a neighbourhood put his name down to the medical man of his choice.
4. Let such medical man's duty be to call on and see such household and note where constitutional tendencies, such as indicated above, exist, and where medical or surgical assistance is needed; and thus his duty will be the prevention of disease and the maintaining the health of his patients.
5. Let such medical man be allowed only a certain number of families, say 300 to 500, and as soon as the number is made up for one doctor, then the neighbourhood must choose one of the others.
6. Let any medical man newly starting be drafted to a place where he is required, in the same way as in Germany—the *Apotcker*—corresponding to our dispensing chemist, is appointed to a certain vacant place; or he may take up his stand where there is a vacant place.
7. Let there be a central dépôt for instruments, books, serums, etc., and even a cottage hospital.

On May 3rd, 1912, I was invited and gave a paper before the Manchester (South) Division, with regard to which, by the courtesy of its present secretary, I have been enabled to give the following "minute," which appears in its *Transactions* for that date:

A NATIONAL MEDICAL SERVICE.

Dr. Russell Rhodes in a paper explained more fully his letter, which appeared in the SUPPLEMENT, BRITISH MEDICAL JOURNAL, April 20th, 1912, on the subject of a National Medical Service, giving also a detailed account of this scheme, which will appear in the SUPPLEMENT, BRITISH MEDICAL JOURNAL, on May 4th, 1912. An interesting discussion followed, after which it appeared that the meeting on the whole was favourable to some such scheme of a National Medical Service; several members refrained from voting.

On May 4th, 1912, you published as a separate article the "Detailed Outline of the Scheme" above referred to, and under the seven particular heads mentioned above. This meeting was composed entirely of general practitioners, and was, I believe, the first body of medical men, if not in the history of the profession, as I believe, at any rate in this particular crisis, to pass by a majority a policy or scheme of State medicine.

On the results of this meeting, as acknowledged to me by my friend—and many year advocate of State medicine—Dr. E. Vipont Brown of Manchester, he and his partner and nephew, Dr. Arnold Gregory, wrote to or communicated with Professor Benjamin Moore of the Liverpool University.

This is, then, when the professors and consultants began to appear as active political workers and whole-hearted reformers for a new system of State medicine, and generously came to the aid of their colleagues in the rank and file of the profession, knowing we could not effect our purpose without the aid of their great names and abilities. Owing, then, to the activity of my friend and co-worker, Professor Benjamin Moore, a meeting of the profession was held at the time of the Liverpool meeting of the British Medical Association in Liverpool in July, 1912, and to aid that meeting I published the pamphlet, *A National Medical Service* (J. E. Cornish, Ltd., St. Ann's Square, Manchester) on July 3rd, 1912. The general practitioners voted Professor Moore—a long time advocate of State medicine—to the chair, and owing to the pressure brought to bear by the general practitioners (who, I think, alone were present with the one exception of Professor Moore) it was decided to form an association for the advocacy of State medicine.

A provisional basis was at once drawn up, which practically contained the seven points or principles above quoted, as in my letter in the BRITISH MEDICAL JOURNAL of April 20th, 1912; in the address before the Manchester Division on May 3rd, 1912, and in my article of May 4th, 1912, in the BRITISH MEDICAL JOURNAL—one of the chief points being, "Free choice of doctor."

Professor Moore was able to obtain the valuable services of Dr. Charles A. Parker, F.R.C.S., of Upper Wimpole Street, as Secretary, Dr. Jane Walker became Treasurer, and Dr. G. A. Heron, F.R.C.P., became Chairman, both of Harley Street. With their aid and that of many other whole-hearted workers among consultants, the Association was founded and came actively into being, as well as with the co-operation of general practitioners, who came from all parts of the country—as, for example, Dr. George Geddes of Heywood, whom last year the members of the Rochdale Division made their Chairman.

Subsequently, the Association heartily co-operated with Professor Walter Malden, M.D., of Cambridge, in the founding of *The Medical World* as its official organ. Of Professor Malden's work for the cause I cannot speak too highly, but every step of the way came before the general practitioners of our Association.

I must claim your indulgence thus to point out that it is only the usual appearance that, as in all great movements, the movement is chiefly supported by professors and consultants. They stand shoulder to shoulder with their less renowned brothers—the general practitioners, as myself—my ten to fifteen years' experience of general practice having, as in the case of Dr. Ferdinand Rees of Wigan, led inevitably to the conclusion that State medicine alone is the ultimate solution of the problem of medical efficiency and the national health.

One word with regard to the working classes. In Lancashire, after lectures from me, industrial audiences unanimously passed the above scheme of State medicine in preference to, or as an evolution from, the National Insurance Act and the panel system, as published in the papers at the time. Thus they had no grudge against a system which could not, as you indicate or state, "deprive the poorer members of the community of that free choice, which would be left to the well-to-do." The *Manchester Guardian*, which also published on the above date the paper I gave before the Manchester (South) Division, is now, in its January 15th last issue, calling loudly for State medicine. Pardon me if I consider this disposes of the most important question raised by you as to the chief support of State medicine not having come from the general practitioners; though I admit without these necessary details the appearance might justify you in considering such were the case.

3. *Free Choice of Doctor.*

With regard to this last important point raised by you, you have been misinformed in considering that "the idea of a whole-time salaried service is based on a negation of that right."

We do not simply "sweep away free choice." At that very first meeting at Liverpool "free choice of doctor" was made the chief plank in our political platform, and advocacy of State medicine by an overwhelming majority, only one voting against it—an F.R.C.S. I, for one, am in entire agreement with you in this matter, and would never submit patients to the indignity of that intimacy which is essential in general practice with a medical man they individually would not like.

If any one truly wishes to perceive a general practitioner's life experience and the exact position of State medicine to the work of the general practitioner, I would earnestly invite him to peruse the pamphlet above referred to, where with every point you have made or brought up as against State medicine it is an actual fact the advocates of State medicine are shown to be at one with you.

To summarize: We advocate free choice of doctor. We advocate the rights of the individual patient. We were and are essentially in the first place general practitioners, who yet realize our debt of gratitude to the professors and consultants who have courageously come forward to support our cause and come to our aid when so overwhelmed by conditions of practice that in this political crisis, without their co-operation, we should have been swamped.

Mr. PENROSE WILLIAMS, F.R.C.S.Edin. (Bridgwater) writes: In your article in the JOURNAL of January 17th (p. 158) opposing a State Medical Service you say that the onus lies on its advocates to show how such a service can be reconciled with the principle of free choice. May I, admitting that this is necessary, endeavour to show how the objection can be met?

A grave defect in the present Insurance Act is that, while it involves millions, both of people and money, medically it stops short at "ordinary attendance," and makes no provision for the more serious ailments. If the Act is to be extended to include the "vast majority of the population," it surely must also be extended to include real treatment. A consideration of this question immediately involves that of the voluntary hospitals. No one can doubt the enormous benefit to the nation entailed in the system of charitable institutions. At the same time, it must be admitted that hospitals are as necessary to the community as police, fire brigades, and street scavengers, yet these latter are systematically provided, while the emergencies of life and death receive treatment—good, bad, or indifferent—varying in different localities according to the private enterprise and generosity of the comparatively few.

The Poor Law system of medical relief is notoriously antiquated, cumbrous, and inefficient. The Public Health Service is hampered by the system of part-time and insecure appointments, and all the authorities—Poor Law, Public Health, education, hospital, and insurance—act more or less independently, and overlap, with consequent waste of both energy and money. With all these systems at work in the field of medical relief, I beg leave to make two definite assertions: (1) That the majority of the sick poor of this country do not receive the necessary and efficient treatment that they should and would receive if they were sick rich; and (2) that every man, woman, and child requiring medical treatment could under proper organization have it of the best, with no more expense to the community at large than is incurred at present.

These are, to me, unanswerable arguments in favour of a State Medical Service. Such a service should include everything medical. Poor Law should confine itself to destitution, education authorities to education, and would comprise two main branches—institutional and district. The working centre of every district should be a general hospital, and every district should have institutional accommodation either to itself or combined with other districts for tuberculosis, infectious diseases, lunacy and defectives, chronics and incurables.

The main objection, from the patient's point of view, to a State Medical Service we have already had: Loss of freedom of choice of medical attendant.

The chief objection, from the profession's point of view, appears to be a fear of the loss of individuality and reward of personal effort.

Both of these objections are answered, I venture to think, in the following brief outline of how the work would be done. A man recently qualified would start with a resident appointment in a district hospital; the district hospital would be staffed by men in general practice in the neighbourhood and holding paid part-time appointments as hospital physicians and surgeons and consultants for the district. The junior, having completed his resident appointments, would take a whole-time appointment as district medical officer, at the same time keeping in touch with the work going on at his district hospital. After a term of years he would pass on either into the whole-time services of Public Health, lunacy, schools, etc., or obtain a part-time staff appointment to a district hospital and set up in private practice, the particular line of work being governed by inclination and ability.

From the profession's point of view, such a scheme would distinctly encourage individual effort and specialization. The need for the latter in every walk of life is becoming increasingly apparent, and as regards medicine let me ask as an example how many general practitioners of ten years' standing are either competent or wishful to perform *post-mortem* examinations? If one man in every district were pathologist to the local hospital and the coroner's court, there would be some probability of inquests being something more than the farcical procedures that most of them are at present.

From the patients' point of view, although they would have no choice in the initial attendant they would have in every district their choice of several senior practitioners all doing special work at the district hospital, and available for consultation either there or at the patient's homes; in effect, it would extend the present system of junior and senior hospital staffs to the industrial population in their homes.

Such in brief outline is a scheme which would meet what I conceive to be the three great needs of the moment:

1. Full treatment to any individual, whether he can pay for it wholly, in part, or not at all.
2. The progressive education of the medical practitioner with opportunity to develop, after a course of general practice, in any direction that his inclinations may select.
3. Efficiency with due regard to economy in the sense that there would be no waste.

This scheme purposely takes no account of the great teaching hospitals. They are one of the great institutions of England, and must always stand above and apart from any schemes which aim at improving the everyday work of the rank and file.

Dr. A. CHRISTIE REID (Nottingham) writes: The emphasis put by you in your leader of January 17th on the principle of free choice may justify a few comments. I think it is worth while recognizing a distinction between free choice given and free choice exercised. What proportion of the insured are really keen on free choice? In this city (266,000), after the first quarter, from 12 to 15 per cent. of the insured had not exercised any choice at all, and this despite the pressure from various quarters (including the medical men themselves!) that had been put on them. With two or possibly three exceptions, all the men in industrial practice are on the panel, so that the choice was not seriously limited.

Moreover, it would not be rash to say that half the remainder exercised their "free" choice under such pressure that it could no longer be so called.

In a matter like this estimates will vary within wide limits, but no man will deny that at least 60 per cent. of his patients of the working class would not be greatly perturbed if, owing to circumstances, they were compelled to have some one else instead of him (for example, in the event of his illness, removal, etc.). If this were not so, practices would be unsaleable. We depend on this in estimating goodwill, and in transferring we ask the patient to accept not his free choice, but ours; and the man who does not retain 60 per cent. of his predecessor's patients complains, and rightly so in most cases.

This is an instance of a recognized curtailment of free choice.

Now, under a State service the amount of free choice that is exercised at present (with a margin) can yet be retained in our large towns by keeping the lists open for a certain time, or reopening them periodically. The difficulty does not appear to be insuperable. A further opportunity might be offered to those assigned by the central authority by allowing a period for objections, and, if not frivolous, these would be taken into consideration.

Without "abandoning the principle of free choice," some of us may be allowed to think that, as a result of experience among the insured, many of them do not regard it as so vital as we were pleased to think.

Dr. T. L. BUNTING (Scotswood, Newcastle-on-Tyne) writes: Your leading article in opposition to a State Medical Service is based chiefly on the erroneous assumption that "it would not be possible to incorporate free choice in any system of salaried whole-time medical officers serving the whole community." This is so far from correct that many, probably most, of the medical advocates of a State service incorporate free choice in their proposed scheme.

There is no difficulty in combining freedom of choice, equal to that which obtains at present, with a State service. Absolutely free choice of doctor does not exist now, and never has. It is always limited by the willingness of the doctor and by his ability to undertake more work than he already has. In rural districts, in addition, there is the geographical limit, so that choice lies between, at most, two or three doctors, and in many cases, except to the patient who can afford to pay mileage fees, there is no choice at all. To these limits a State service need add only the condition that no doctor should be asked to be

responsible for more potential parents than he could reasonably be expected to treat well. A similar limit is already imposed voluntarily by every conscientious practitioner, so that practically there would be no change.

May I point out how it might work? For each town or district a maximum number of persons would be fixed for whom a doctor ought to be responsible. The number would differ according to the density of population and the difficulty of travelling. Every person would then exercise a free choice amongst the doctors of the district, and if there were no more names on any doctor's list than the maximum allowable, each person would have his first choice. If, however, any doctor's list were full, persons wishing to get on to his list would have, in the meantime, to exercise a second choice amongst the other doctors; but they might at the same time place their names on a waiting list to be transferred to the doctor of their first choice as vacancies occurred. In very large towns and in rural districts a distance limit might have to be fixed. Such a limit is at present in force for poor people in the shape of extra fees charged to distant patients. In some rural districts, therefore, the result would be, as it is now, that no effective free choice would exist.

I cannot see where such a scheme of choice differs essentially in its freedom from present conditions, except in two particulars. These are: (1) That those doctors (if any) who do now attempt more work than they can do thoroughly would no longer be tempted, nor allowed, to do so. (2) That persons who could not at once become patients of the doctor of their choice would have the chance of becoming his patients later if they desired. This scheme would doubtless cost more than the parcelling out which you depict, but it would be no more costly than the present arrangement, and therefore it is a practicable combination of free choice with State service.

I have no intention of discussing the other points of your article, but, in reference to your objection that "merit and hard work would by no means necessarily lead to the best posts," I should like to ask you whether they necessarily lead there now?

As you have condescended to the *argumentum ad hominem*, it is, perhaps, necessary for me to assure you that I am neither a consultant nor a professor.

Dr. N. MACFADYEN (Letchworth), writes: Your leader on a National Medical Service was most timely. Out of the turmoil surrounding the administration of the Insurance Act there are one or two practical issues emerging. One of them is that the dependants of insured persons wil soon have to be catered for, and when this is done, a strong effort backed up by influential men will be made to form a "National Medical Service" staffed by full time salaried officers. Such a service with a highly organized scientific equipment behind it would on the surface be attractive to many able young men in our profession. The time has already gone by for us to sigh for a former state of things, and I venture to say that those of us who, by holding aloof from panel work, are making the work more difficult and unsatisfactory for others, are hastening the day when a solution still more distasteful to them will be tried. The general practitioner has the good will of the public because people know the arduous work he has to do, and value highly the human sympathy and help he takes with him on his daily round. Cannot we keep that good will by ourselves adopting a forward policy? The need seems to be to find some way of linking up our every-day work with the new methods and aids which are placed at our disposal by medical science. The problem is how to preserve the personal element which is such a valuable asset in treatment, together with a well-organized system of using scientific methods. Could not our Association, for instance, work out a scheme by which each local hospital is made the centre of scientific treatment for its district, and each doctor kept in touch with his hospital and the latest developments of medicine and surgery? I am myself convinced that by adopting some forward policy such as this we shall occupy a strong position; if we drift on we may lose what we hold.

DISTRIBUTION OF FUNDS AVAILABLE FOR MEDICAL BENEFIT OF UNALLOTTED INSURED PERSONS.

Dr. MAJOR GREENWOOD (Hackney Road) writes: Dr. Biggs's little syllogism on the above subject in the form he puts it does appear to point to but one conclusion, but I do not think it properly includes all the facts.

Might it be put this way? Suppose there are 3,000 insured persons in a small town, and that there are two doctors available to attend them, one on the panel and one non-panel. And suppose that an Act of the Legislature says that none of the insurance money is to be paid to any non-panel doctor, except on certain distinct conditions. Suppose, further, that those who have the carrying out of the provisions of the Act promise to the non-panel doctor that he shall have all the insurance money for the medical attendance on insured persons. Then suppose that, in spite of all this, which is general knowledge, the panel doctor only signs cards for 1,500 insured persons, and the other 1,500 go to the non-panel doctor, can the panel doctor claim to receive 7s. a head for the whole 3,000?

With all deference to Dr. Biggs, I do not think the answer that he naturally expects to his syllogism would necessarily be given to it if put in this form.

Dr. JOHN DIVINE, Secretary, Local Medical Committee, Kingston-upon-Hull, writes: It is good to have the definitely clear picture of the case as it does *not* stand by Dr. M. G. Biggs. As an old doggerel verse has it, "If if's and an's were pots and pans, there'd be no use for tinkers." Why should we discuss a hypothetical impossible case when we have those in the concrete before us?

Let me not, however, do Dr. Biggs's intelligence, nor my own, the injustice of treating what he says as argument; rather let me fare forth with him into the realms of imagination. Imagine, then, as he has done, a small town (not too small, however) with an insured population of 3,000—that is, a total population of about 9,000—in Merrie England of to-day with only two practitioners; imagine further in such a fine field one practitioner too high and haughty to come on to the panel, but ready to cry if he gets no share of the panel fund; imagine also the Commissioners approving the unit panel—self-contained and fully detached—as being "adequate under the Act"; let imagination stretch so far that 1,500 insured persons solidly and stolidly determine to swell the ledger of our non-panel friend, and expect the Commissioners to assist them to discharge their debts against all law and regulation; and then, finally, imagine that, to the panel practitioner banned and forsaken by 1,500 of insured persons, a kind Providence so arranges it that amongst the other 1,500 who have selected him there is neither ache nor pain, nor other sign of disease to treat for one whole year, so that he gets 3,000 capitation fees for nothing. When we have imagined all this, let us return to our muttons and talk sense.

I have set forth reasons for the position I take up, and have quoted in support thereof both the Act and the Regulations. The fact that Article 35 of the Regulations which came into force on January 12th, 1914, categorically lays down precisely what I have argued is hardly one to make me think that I have been wrong. If Dr. Biggs can confute me with arguments, well and good, but he really must forgive me if I am not convinced by his setting up and knocking down a pseudological Aunt Sally.

Dr. W. COODE ADAMS (Chairman of the Hampstead Insurance Medical Society) writes: Your article in the JOURNAL of January 17th on the above subject displays such an unusual conception of the principles of insurance that I crave a little of your space to call attention to it.

For instance, in the course of your article I come across this sentence, "When the time arrives for one of these persons to need a doctor," etc. Now, this suggests the belief on the part of the writer that the proper time for effecting an insurance is at the moment when the calamity has occurred. He would not, I submit, be permitted to apply this principle in the case of his house or his motor car, nor would it be accepted by any approved society of any standing.

The principle on which the Act was founded is the same as in any other insurance—namely, that payments are made during health, and treatment supplied free during illness. It is the doctor who insures free treatment during illness, and therefore it is the doctor who should receive the payments during health.

Further on you say again, "Supposing such a person is not ill for three years there would be a credit balance to his account of a guinea." But this is not insurance of

any kind. No one can claim a credit balance on insurance premiums. We insure our houses, often for a lifetime, but we have no credit balance at the insurance company. Besides, by the Regulations no doctor could claim the "credit balance of a guinea," for he is allowed only one quarter's premium for each patient quarterly.

The position is briefly this: the State guarantees sick benefit and takes all the premiums on that account, and the medical men on the panel guarantee medical benefit, and therefore for the same reason claim all the premiums on that account. The State does not decline to accept the premiums from those who never draw sick benefit, and there is therefore no valid reason for withholding the premiums for medical benefit from those who are responsible for its supply, even if they have had no occasion to render it.

The neglect on the part of any insured person to nominate a doctor does not vitiate this principle, and is no valid reason for breaking the contract made with the doctors. This we have documentary evidence to prove is the view taken by the Government.

But though this claim is made, and justly so, it might be permissible for any Insurance Committee to retain a sum not exceeding 10 per cent. of the whole for those rare instances (and they must of necessity be rare) in which the insured are permitted to make their own arrangements.

STATISTICS FOR 1913.

Dr. LEONARD B. CANE (Peterborough) writes: The following statistics of the first year's work done under the Insurance Act by my partner and myself in the Soke of Peterborough insurance area may be of interest.

The figures show the percentage of insured persons on our Peterborough list attended during the year, the average number of attendances per case and per insured person on our list, and the average cash value per attendance.

Since we did not join the panel list until after the Special Representative Meeting in January, 1913, the total of attendances represents only a little over eleven months' work, and the average cash value per attendance for a complete year would be proportionately less than that given.

The figures are based upon the number of insured persons on our list on December 31st, 1913, after deducting all removals. (No allocation of funds in respect of persons who have not chosen a doctor has yet been made in Peterborough.)

The number on our list (corrected to December 31st) was 2,882.

Of these approximately 60 per cent., or 3 persons out of every 5 on our list, had, in a little more than eleven months, been attended.

Upwards of 12,700 visits and attendances were given, an average of 7.3 attendances or visits per case, and 4.4 per insured person on our list (for the Soke of Peterborough).

Of the 2,882 insured persons on this list, 149 are "dispensing" cases, for which 9s. is credited, and the remainder are "prescribing" cases at 7s. each.

Division of the total sum (which we hope to receive in due course) by the total number of visits and attendances recorded gives a cash value per visit or attendance of 1s. 6¾d., and for this we have dispensed medicines for about 100 cases.

I venture to suggest that you should issue annually with the BRITISH MEDICAL JOURNAL a model form for recording yearly statistics of this nature, so that all may be recorded in a uniform manner, and that as many as possible be filed for reference at the offices of the Association.

Dr. A. G. INCE (Sturry, near Canterbury) sends the following particulars of work done under the Insurance Act:

Number of insured persons accepted, giving number at the end of quarter:

First quarter	—
Second "	310
Third "	330
Fourth "	—

As no cards have been issued since July, it is impossible to arrive at an accurate estimate at present.

Number of patients seeking treatment		172
Attendances at surgery		735
Number of visits paid:		
Under 1 mile	306	
Over 1 mile and under 2	97	
" 2 " " 3	7	
" 3 " " 4	78	
" 4 "	17	505
Operations		1

Eleven special visits were paid, none of which were necessary. Several accidents, including fractures, were attended, and a case of empyema was sent to the hospital for operation.

Dr. T. E. WHITE (Catford) sends the following statistics calculated to January 12th, 1914, of work done under the Insurance Act:

Number on panel		607
Number of persons attended (males, 243; females, 204)		447
Occupations of persons attended:		
Clerks and typists	68	
Domestic servants	81	
Engineers and mechanics	95	
Dressmakers and milliners	30	
Warehousemen, agents, and collectors	19	
Labourers and others	154	
Total number of attendances		2,043
Visits (males, 118; females, 149)		267
Surgery (males, 930; females, 846)		1,776
Average attendance on each case		4.5
Average attendance per day minus Sundays		6.5
Greatest number of attendances on one patient		39
Seen once only*		120
Deaths		2

Remuneration:

	£ s. d.
Cheques received	166 12 3
Average per attendance	1 7¾

*The large number of single attendances is accounted for by the trivial ailments some persons complained of, such as corns, chilblains, blistered feet, herpes of lips, colds in the head, and constipation.

DEPENDANTS.

Dr. CHARLES STANDRING (Broadway, Worcestershire) writes: I should like to ask one broad question: "Are we as practitioners to encourage women and others to come into the Insurance Act as voluntary contributors or are we to set our backs up and say, 'No, as you are not an employed person I will refuse you'?" It seems to me this can only be answered from head quarters, and should not be left to the various County Committees and practitioners.

*** The Council of the Association, at its meeting on October 29th appointed a special committee to consider the policy of the Association with regard to what a national health insurance Act should be with special reference to the probability that the existing Act might be extended so as to include in its operations the treatment of children and dependants of insured persons, as well as dental treatment, hospital treatment, and alterations in the methods of dealing with deposit contributors and casual labourers. This committee, at a meeting held recently, came to the provisional conclusion that the Association should not suggest any extensions of the Act, but should be ready with the considered opinion of the profession on any changes which may be suggested by politicians. It is intended shortly to circulate a report to the Divisions with the view of obtaining their views.

Hospitals and Asylums.

WOODILEE MENTAL HOSPITAL.

FROM the annual report of the Committee of the Glasgow District Mental Hospital, Woodilee, it appears that on May 15th, 1913, there were 1,065 patients in the hospital—a decrease of 80 as compared with the previous year, ascribed largely to the boarding out of a number of patients in the Haddington and Kirklands Asylums, and to the discharging of a number to the new epileptic colony at Stoneyetts, near Chryston. The medical superintendent (Dr. Henry Carre) comments upon the difficulty in filling the posts rendered vacant by nurses leaving. Emigration was one cause, for during the year six nurses and one attendant resigned in order to emigrate to the colonies. Another cause was the Insurance Act, which had produced discontent among both the male and female staff, for they had now to pay 4d. or 3d. a week for medical benefits which they got free before the Act came into force. Dr. Carre, in his report, says: "A claim for exemption under the Act was formally lodged, but the requirements of the Insurance Commissioners, especially regarding the paying up of the arrears of employees leaving the service, were so onerous that the question of exemption could not be favourably entertained by your Board."

MEMBERS ELECTED TO THE BRITISH MEDICAL ASSOCIATION

(August 30th, 1913, to January 8th, 1914).

BY THE COUNCIL.

Crocket, John, M.B., Ch.B., Lieutenant, R.A.M.C.
Macfarlane, Ian, M.B., Ch.B., British Hospital, Nazareth, Palestine
Todd, R. W. L., M.B., Ch.B.Edin., 2406 via 22 Marzo, Venice

BY BRANCH COUNCILS.

Aberdeen Branch.

Chambers, J. M., Esq., Deeside Hydro, Martle
Fyfe, T. H., M.B., Rotunda Lodge, Ferryhill, Aberdeen
Greig, H. W., M.B., Dounby, Orkney
Melville, W. S., M.B., Stromness, Orkney
Melvin, G. S., M.D., Physiological Department, University of Aberdeen

Birmingham Branch.

Anderson, H. M., M.B., The Hospital, Coventry
Goodwin, B. G., F.R.C.S., The University, Birmingham
Griffith, R. F., Esq., 84, St. Thomas Street, Netherton, Dudley
Lloyd, B. A., M.B., 25, Hallewell Road, Edgbaston
Power, J. H., M.B., 60, Stoney Stanton Road, Coventry
Scott, David, Esq., Dudley Road Infirmary, Birmingham

Bombay Branch.

Bapat, K. P., Esq., C.M.O., Miraj
Baxi, N. A., Esq., Rajkote, C.S.
Cama, Frearry, M.D., Lady Dufferin Hospital, Patiala
Khareghat, Miss D. N., L.M.S., Clerk Street, Karachi
Kothare, G. R., Esq., 13, Dhus Wadi, Thakoredwar, Girgaum, Bombay

Border Branch, South Africa.

Houghton, W. N., Esq., Market Square, Alice, C.P.

Cape of Good Hope—Western Province Branch.

Booth, Ainsley, M.B., Victoria Road, Woodstock
Drennan, R. M., M.B., South African College, Orange Street, Cape Town

Ceylon Branch.

Caldera, J. B. Hamer, Esq., Dandagamuwa
Mendis, R. E., Esq., General Hospital, Colombo
Saravanamuttu, R., M.B., 16, Kuruwe Street, Colombo
Silva, A. Simon, Esq., Beruwala

Dundee Branch.

Burgess, W. L., M.D., 1, Tally Street, Dundee
Milne, John M., Esq., Linden Avenue, East Newport
Valentine, Jessie M., M.B., Royal Infirmary, Dundee

East Africa and Uganda Branch.

Baker, C. J., Esq., c.o. P.M.O., Entebbe
Carpenter, G. D. H., Esq., c.o. P.M.O., Entebbe
Cook, E. N., M.B., C.M.S. Mengo Hospital, Uganda
McConnell, R. E., M.D., c.o. P.M.O., Entebbe
Owen, H. B., M.B., c.o. P.M.O., Entebbe
Van Someren, R. A. L., M.D., Jinja, Uganda

East Anglian Branch.

Habgood, A. H., M.B., The Old House, Coltishall
Perry, Lionel B., M.B., Royal Ter., Lowestoft
Somers, C. D., M.B., Shelley, Aldeburgh

East York and North Lincoln Branch.

Couldrey, T. R., Esq., 116, High Street, Scunthorpe
Houlton, Charlotte L., M.B., 92, Beverley Road, Hull
Savage, A. C. M., M.B., 93, Newland Avenue, Hull

Glasgow and West of Scotland Branch.

Anderson, R. M., M.B., 3, Beech Av., Ibrox
Anderson, Robert, Esq., Dunward, Gareloch-head
Barbour, David, M.B., Irondale Ho., Muirkirk
Barrie, T. S., M.B., 23, Granville St., Glasgow
Campbell, Malcolm, M.D., 4, Burnbank Terrace W., Glasgow
Carstairs, J. L., M.B., 6, Sardinia Terrace, Hillhead, Glasgow
Clarke, J. A., M.B., Milton House, Dunoon
Conway, J. A. J., M.B., 2, Westercraigs, Dennistoun, Glasgow
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Association Notices.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, January 28th, in the Council Room, 429, Strand, London, W.C., at 11 o'clock in the forenoon.

By order,

GUY ELLISTON,
Financial Secretary and Business Manager.

December 23rd, 1913.

SUGGESTED CHANGES OF BOUNDARIES.

A.—NOTICE OF PROPOSAL FOR REORGANIZATION OF AREA OF GLASGOW AND WEST OF SCOTLAND BRANCH.

NOTICE is hereby given under By-law 73 to all concerned, of the following proposals made by the Council of the Glasgow and West of Scotland Branch for reorganization of the Branch area:

I. That the outer boundaries of the Glasgow Divisions (North, South, West, and East) be adjusted to correspond with the extended city boundaries; the internal boundaries remaining as at present.

II. As regards the county Divisions, that the boundaries be the geographical boundaries of the counties.

III. That henceforth the Renfrewshire Division (which at present includes Buteshire) be known as the Renfrewshire and Buteshire Division.

IV. That the Dumbartonshire and Argyllshire Division be separated to form two Divisions, designated the Dumbartonshire and Argyllshire Divisions respectively.

Formal written notice of the proposals has been given, pursuant to Article 13, to all the existing Divisions concerned, and the matter will be determined in due course

by or on behalf of the Council of the Association. Any member affected by the proposed changes, and objecting thereto, is requested to notify the fact, and his reason therefor, to the Medical Secretary, 429, Strand, London, W.C., not later than February 24th, 1914.

B.—NOTICE OF PROPOSAL FOR FORMATION OF AN ISLANDS DIVISION OF THE NORTHERN COUNTIES OF SCOTLAND BRANCH.

Notice is hereby given under By-law 73 to all concerned, of a proposal made by members of the Association resident on the western borders of Inverness-shire and Ross-shire, and in the Hebrides, for the formation of a new Division of the Northern Counties of Scotland Branch, to be called the Islands Division, and to comprise (*a*) the Hebrides of Inverness-shire and of Ross-shire, and (*b*) the portion of the western mainland border of these counties shown on a marked map forwarded by the Northern Counties of Scotland Branch, including Ardmore, Loch Carron, Stromeferry, Glenshiel, and Glenfinnen, and the area west of these.

The proposal has already been approved on behalf of the Northern Counties of Scotland Branch.

Formal written notice of the suggested change has been given pursuant to Article 13 to the Inverness and Ross and Cromarty Divisions, and the matter will be determined in due course by or on behalf of the Council. Any member affected by the proposed change, and objecting thereto, is requested to notify the fact, and his reason therefor, to the Medical Secretary, 429, Strand, London, W.C., not later than February 24th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL DIVISION.—Dr. Francis W. Bailey, Honorary Secretary, gives notice that the annual meeting of the Division will take place on Friday, January 30th, at four o'clock in the afternoon at the Medical Institution, Liverpool. Business: Election of officers and alteration of rules.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed. The Honorary Secretary will be glad if members proposing to show cases, or specimens, or read short abstracts of cases, will kindly notify him not later than February 16th.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—Mr. T. H. Parkes Peers, Honorary Secretary (20, Surrey Square), gives notice that an ordinary meeting of the Division will be held on Wednesday, January 28th, at 4 p.m. at the South-Western Fever Hospital, Landor Road, Stockwell. Agenda: Representative's Report of the Special Representative Meeting, December 4th and 5th, 1913. A paper will be read by Dr. F. Foord Caiger on "The Duration of Infection in the Common Infectious Fevers, and the means by which they are Probably Spread."

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, February 20th, from 3.15 to 6 p.m. Dr. T. C. Hunter: Phthisis in Children. Professor T. Beattie: Chorea and Choreiform Movements. Tea. Mr. A. M. Martin: Surgical Treatment of Some Congenital Deformities. Dr. E. F. Pratt: Experiences of the National Health Insurance Act. Dr. T. H. Livingstone: Common Diseases of the Accessory Sinuses.

NORTH OF ENGLAND BRANCH: SUNDERLAND DIVISION.—Mr. D. F. Todd (Chairman) and Dr. I. G. Modlin (148, Roker Avenue, Sunderland), Honorary Secretary, give notice that at the meeting of the Division to be held at the Lecture Hall, Subscription Library, Fawcett Street, Sunderland, on Thursday, January 29th, at 4.30 p.m., an address will be given by Dr. G. Sims Woodhead, Professor of Pathology, University of Cambridge, on "How are We to Stamp Out Tuberculosis?" with limelight illustrations. The annual dinner of the Division will be held the same evening at the Edward Hall, Toward Road, at 7 p.m., when Professor Sims Woodhead will be the guest. Tickets (10s. 6d., exclusive of wine) may be obtained from any member of the Committee or from the Honorary Secretary. As a guarantee must be given of the number likely to be present at the dinner, the Committee trusts that those who intend to do so will kindly intimate not later than January 26th. The Division extends a most cordial invitation to all medical men in the North of England Branch area to both the address and the dinner.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest towns, 8,637 births and 5,917 deaths were registered during the week ended Saturday, January 17th. The annual rate of mortality in these towns, which had been 14 8, 18.6, and 19.3 per 1,000 in the three preceding weeks, fell to 17.0 per 1,000 in the week under notice. In London the death-rate was also 17.0, against 14.0, 18.6, and 20.5 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.9 in Ealing, 8.1 in Edmonton, 8.2 in Hornsey, 9.7 in Ilford, 9.8 in Bournemouth, and 10.2 in Wallasey to 22.7 in Burnley and in Middlesbrough, 23.2 in Exeter, 24.3 in Plymouth and in West Hartlepool, 24.4 in Halifax, and 25.1 in Barnsley; measles caused a death-rate of 1.9 in Burnley, 2.0 in Ipswich, 2.3 in West Bromwich, and 4.8 in Barnsley; and whooping-cough of 1.3 in Swansea and 1.6 in Barrow-in-Furness. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 49, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 9 were recorded in Birmingham, 6 in Liverpool, 4 in Gateshead, and 3 each in Stoke-on-Trent, Preston, Sunderland, and South Shields. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,946, 3,874, and 3,757 at the end of the three preceding weeks, had further fallen to 3,676 on Saturday, January 17th; 388 new cases were admitted during the week, against 326, 425, and 416 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,398 births and 889 deaths were registered during the week ended Saturday, January 10th. The annual rate of mortality in these towns, which had been 17.3, 17.9, and 20.3 per 1,000 in the three preceding weeks, fell to 20.2 in the week under notice, but was 0.9 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 11.0 in Ayr, 13.8 in Perth and in Motherwell, and 14.4 in Leith to 28.1 in Clydebank, 31.5 in Coatbridge, and 32.8 in Paisley. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Paisley and Coatbridge. The 370 deaths from all causes registered in Glasgow included 15 from measles, 6 from diphtheria, 2 from scarlet fever, 2 from whooping-cough, 2 from infantile diarrhœa, and 1 from enteric fever. Five deaths from measles were recorded in Edinburgh, 6 in Paisley, 3 in Greenock, 2 in Leith, and 2 in Kirkcaldy; from scarlet fever, 4 in Edinburgh and 2 in Aberdeen; from diphtheria, 3 in Edinburgh and 2 in Aberdeen; and from whooping-cough, 2 in Coatbridge.

In the sixteen largest Scottish towns 1,207 births and 895 deaths were registered during the week ended Saturday, January 17th. The annual rate of mortality in these towns, which had been 17.9, 20.3, and 20.2 per 1,000 in the three preceding weeks, rose to 20.4 in the week under notice, and was 3.4 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 10.1 in Motherwell, 11.0 in Falkirk, and 14.1 in Clydebank to 22.4 in Paisley, 23.0 in Hamilton, and 31.5 in Ayr. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Coatbridge and Paisley. The 423 deaths from all causes registered in Glasgow included 9 from measles, 5 from diphtheria, 4 from scarlet fever, 2 from whooping-cough, and 2 from infantile diarrhœal diseases. Six deaths from measles were recorded in Edinburgh, 6 in Paisley, and 4 in Greenock; from diphtheria 5 deaths in Aberdeen and 2 in Edinburgh; and from whooping-cough 2 deaths in Paisley and 2 in Coatbridge.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 10th, 640 births and 583 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 682 births and 593 deaths in the preceding period. These deaths represent a mortality of 25.4 per 1,000 of the aggregate population in the districts in question, as against 25.7 per 1,000 in the previous period. The mortality in these Irish areas was therefore 6.1 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.7 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 26.3 (as against an average of 23.5 for the previous four weeks); in Dublin city, 28.6 (as against 25.9); in Belfast, 26.5 (as against 22.6); in Cork, 29.2 (as against 22.9); in Londonderry, 14.0 (as against 14.6); in Limerick, 16.2 (as against 14.9); and in Waterford, 30.4 (as against 23.3). The zymotic death-rate was 2.1, as against 1.4 in the previous period.

VITAL STATISTICS OF LONDON DURING THE FOURTH QUARTER OF 1913.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London, based upon the Registrar-General's returns for the fourth quarter of last year. The mortality figures in the table relate to the deaths of persons actually belonging to the several boroughs, and are obtained by distributing the deaths in institutions among the boroughs in which the deceased persons had previously resided. The 28,766 births registered during the quarter were equal to an annual rate of 23.7 per 1,000 of the population, estimated at 4,518,191 persons in the middle of last year; in the corresponding quarters of the three preceding years the birth-rates were 24.7, 24.0, and 23.9 per 1,000 respectively. The lowest birth-rates last quarter were 11.9 in the City of Westminster, 12.8 in Hampstead, 14.7 in Holborn, 15.5 in Chelsea, 17.5 in Kensington, and 19.1 in the City of London and in Wandsworth; among the highest rates were 28.7 in Bermondsey, 29.1 in Shoreditch and in Stepney, 29.3 in Bethnal Green, 30.3 in Poplar, and 35.0 in Finsbury.

During last quarter the deaths of 17,070 London residents were registered, equal to an annual rate of 14.1 per 1,000; in the corresponding quarters of the three preceding years the rates were 15.8, 14.3, and 15.0 per 1,000. The death-rates last quarter ranged from 10.0 in Wandsworth, 10.3 in Lewisham, 10.9 in Hampstead, 11.9 in the City of Westminster, and 13.0 in Kensington to 16.2 in Poplar, 16.6 in Bermondsey, 16.8 in the City of London, 17.3 in Southwark, 17.8 in Finsbury, and 19.3 in Shoreditch.

The 17,070 deaths from all causes included 37 from enteric fever, 52 from measles, 49 from scarlet fever, 116 from whooping-cough, 138 from diphtheria, and 1,027 from diarrhœa and enteritis among

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1913.

Boroughs.	Estimated Population middle of 1913.	Births.	Deaths.	Annual Rate per 1,000 Living.		Deaths from								Deaths of Children Under 1 Year of Age to 1,000 Registered Births.
				Births.	Deaths.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhoea and Enteritis (Under 2 Years).	Phthisis.	
COUNTY OF LONDON	4,518,191	28,766	17,070	23.7	14.1	37	—	52	49	116	138	1,027	1,600	115
Paddington	142,210	748	526	19.6	13.8	2	—	2	3	5	6	29	46	127
Kensington	171,284	806	598	17.5	13.0	—	—	—	—	—	2	25	51	117
Hammersmith	123,745	757	437	22.8	13.2	—	—	—	1	1	5	20	36	108
Fulham	157,117	1,110	568	26.3	13.5	5	—	1	—	3	9	43	53	118
Chelsea	64,598	268	252	15.5	14.5	—	—	—	1	2	1	7	17	127
City of Westminster ...	154,810	493	496	11.9	11.9	—	—	—	1	—	2	18	62	128
*St. Marylebone ...	114,532	976	404	31.7	13.1	1	—	—	5	1	1	14	38	51
Hampstead	86,346	297	253	12.8	10.9	—	—	—	1	4	—	9	10	114
St. Pancras	214,330	1,297	855	22.5	14.9	2	—	1	—	6	2	38	82	120
Islington	325,585	1,995	1,338	22.8	15.3	—	—	—	4	7	10	72	140	113
Stoke Newington ...	50,518	302	195	22.3	14.4	2	—	—	—	1	4	9	10	129
*Hackney	223,353	1,477	803	24.6	13.4	2	—	—	3	4	4	55	66	112
*Holborn	46,949	185	172	14.7	13.6	—	—	—	—	1	2	5	18	81
*Finsbury	84,679	796	404	35.0	17.8	—	—	—	1	9	1	30	42	122
City of London	17,916	92	81	19.1	16.8	1	—	—	—	1	—	2	6	76
Shoreditch	109,654	857	568	29.1	19.3	—	—	3	—	11	10	72	57	186
Bethnal Green	127,324	1,004	528	29.3	15.4	—	—	4	1	16	3	48	54	138
*Stepney	275,300	2,148	1,092	29.1	14.8	2	—	3	3	7	3	83	114	127
Poplar	160,913	1,308	699	30.3	16.2	3	—	2	4	8	11	39	61	125
Southwark	188,487	1,466	875	27.8	17.3	1	—	7	7	6	6	66	90	129
Bermondsey	124,739	962	557	28.7	16.6	1	—	3	2	—	5	53	56	140
*Lambeth	297,139	2,040	1,123	25.6	14.1	1	—	2	3	5	12	68	110	83
Battersea	167,464	1,013	595	22.5	13.2	5	—	3	1	2	7	36	43	122
Wandsworth	330,395	1,697	886	19.1	10.0	2	—	1	—	4	6	36	85	87
Camberwell	261,805	1,668	1,016	23.7	14.5	1	—	11	6	5	6	62	84	130
Deptford	109,280	796	453	27.1	15.4	1	—	8	1	1	4	39	41	132
Greenwich	96,015	653	382	25.3	14.8	1	—	1	1	—	2	22	29	106
Lewisham	168,822	896	467	19.8	10.3	4	—	—	—	3	10	19	32	84
Woolwich	122,382	719	447	21.9	13.6	—	—	—	—	3	4	8	67	85

* No correction is made for births in lying-in institutions; the boroughs principally affected are marked thus (*).

children under two years of age. Enteric fever was proportionally most fatal in Fulham, Stoke Newington, the City of London, Poplar, Lewisham, and Battersea; measles in Shoreditch, Bethnal Green, Southwark, Bermondsey, Battersea, Camberwell, and Deptford; scarlet fever in Paddington, St. Marylebone, Poplar, Southwark, and Camberwell; whooping-cough in Finsbury, Hampstead, the City of London, Shoreditch, Bethnal Green, and Poplar; and diphtheria in Fulham, Stoke Newington, Shoreditch, Poplar, and Lewisham. The mortality from diarrhoea and enteritis among children under 2 years of age in proportion to the births registered during the quarter was greatest in Shoreditch, Bethnal Green, Southwark, Bermondsey, and Deptford.

The deaths from phthisis among London residents last quarter numbered 1,600, and were equal to an annual rate of 1.32 per 1,000, against 1.40 and 1.47 per 1,000 in the corresponding quarters of the two preceding years. The death-rates from this disease last quarter ranged from 0.43 in Hampstead, 0.71 in Lewisham, 0.74 in Stoke Newington, 0.96 in Battersea and in Wandsworth, and 0.98 in Chelsea to 1.60 in Islington, 1.67 in Bermondsey, 1.78 in Southwark, 1.85 in Finsbury, 1.94 in Shoreditch, and 2.04 in Woolwich.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 115 per 1,000 last quarter, against 128, 113, and 103 in the corresponding quarters of the three preceding years. Among the lowest rates recorded last quarter were 76 in the City of London, 81 in Holborn, 83 in Woolwich, 84 in Lewisham, 87 in Wandsworth, and 88 in Lambeth; the highest rates were 130 in Camberwell, 132 in Deptford, 138 in Bethnal Green, 140 in Bermondsey, and 186 in Shoreditch.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon EDMUND CORCORAN has been placed on the retired list with the rank of Deputy Surgeon-General, January 6th. Fleet Surgeon HENRY B. HALL to the *Talbot*, January 15th. Fleet Surgeon M. CAMERON, M.B., to the *Cornwall*, January 20th. Fleet Surgeon P. H. M. STAR to the *Conqueror*, additional for Queensferry Sick quarters, February 16th. Fleet Surgeon H. P. JONES to the *Columbine*, additional for Queensferry sick quarters, February 16th. Fleet Surgeon H. B. BEATTY to the *Pembroke*, additional for East London Recruiting District, and for medical charge of Naval Store Dépôt, March 1st. Staff Surgeon HARRY A. KELLOND-KNIGHT to the *Pembroke*, additional for disposal, January 23rd. Staff Surgeon LIDBROOKE F. COPE to the *Victory*, additional for Portsmouth Dockyard, temporary, vice Kellond-Knight, January 23rd. Staff Surgeon PERCIVAL T. NICHOLLS to the *Highflyer*, on recommissioning, January 20th. Staff Surgeon RICHARD S. OSBORNE to the *Birmingham*, on commissioning, undated. Staff Surgeon ARTHUR R. THOMAS, F.R.C.S.Ed., to the *President*, additional for the *Maine* vice Dudley, January 14th. Surgeon ROBERT M. RIGGALL to the *Alecto*, temporary, January 31st. Surgeon JOHN H. BURDETT to the *Victory*, additional for disposal, January 31st, and the *Vivid*, additional for Plymouth Hospital, temporary, February 14th. Surgeon ALBERT V. J. RICHARDSON, M.B., to the *Victory*, additional for disposal, January 31st, and R.N. Division, Portsmouth, temporary, February 14th. Surgeon ARTHUR M. HENRY to the *Pomone*, additional for Dartmouth College, temporary, January 31st. Surgeon HENRY R. ORMSBY, M.B., to the R.M. Dépôt, Deal, temporary, January 31st. Surgeon RICHARD CONNELL, M.B., to the *Vivid*, additional for disposal, January 31st, and to the *Prince of Wales*, vice Briggs, February 14th. Surgeon GILBERT B. SCOTT to the *Vivid*, additional for disposal, January 21st. Surgeon GUSTAVUS W. M. CUSTANCE to the *Victory*, additional for disposal, January 31st, and to the *Racer*, additional for Osborne College, temporary, February 16th. Surgeon CHARLES J AVELING to the *Victory*, additional for disposal, January 31st, and to the *Colleen*, additional for Haulbowline Hospital, vice Rivers, February 14th. Surgeon FRANK H. STEPHENS to the *Vivid*, additional for disposal, January 31st, and to R.M. Division, Plymouth, temporary, February 14th. Surgeon GILBERT F. SYMS to the *Pembroke*, additional for disposal, January 17th. Surgeon DAVID G. ARTHUR to the *Britomart*, additional, January 15th, and on recommissioning, undated. Surgeon BERNARD E. P. SAYERS to the *Halcyon*, additional for the *Spanker*, vice Malone, January 15th. Surgeon LOVEL MOSS to the *Widgeon*, additional January 15th, and on recommissioning, undated. Surgeon GEORGE F. B. PAGE to the *Teal*, additional, January 15th, and on recommissioning, undated. Surgeon GEORGE A. FINEGAN to the *Woolwich*, vice Thatcher, January 12th. Surgeon FREDERICK ST. B. WICKHAM to the *Sirius* for voyage out on commissioning, January 27th, and to the *Alert* on recommissioning, undated. Surgeon WILLIAM L. COWARDIN to the *Jason*, additional for duty with minesweeping gunboats, vice Cock, January 27th. Surgeon H. WHITE to the *Victory*, additional for disposal, undated, and for Portsmouth Dockyard, February 14th. Surgeon G. CARLISLE to the *Victory* for Haslar Hospital, February 14th. Surgeon A. G. V. FRENCH to the *Carnarvon*, February 14th. Surgeon THOMAS COCK to the *Blake*, vice Wickham, January 27th. Surgeon SHELDON F. DUDLEY to the *Pembroke*, additional for Chatham Hospital for instruction of sick berth reserve, vice Parnell, January 14th. Surgeon HENRY E. Y. WHITE, M.B., to the *Excellent*, vice Thomas, January 14th. Surgeons GEORGE M. LEVICK, ARTHUR T. RIVERS, THOMAS R. L. JONES, KENNETH H. HOLE, M.B., GILBERT F. SYMS, HUGH F. BRIGGS, MICHAEL P. FITZGERALD, M.B., JAMES BARRATT, M.B., GORDON A. JACKSON, M.B., ALFRED G. MALCOLM, M.B., HORACE O. DEVAS, HENRY W. NICHOLLS to the *President*, additional, for five months' course of instruction at the Naval Medical School, Greenwich, from February 2nd to June 30th, inclusive.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon JAMES KEOGH MURPHY, F.R.C.S., M.D., transferred to the unattached list, January 6th. The following have been appointed Surgeons, January 6th: WILLIAM H. A. SINCLAIR-LOUDIT, M.B., and JAMES LORIMER, M.B.

ARMY MEDICAL SERVICE.

COLONEL SIR W. B. LEISHMAN has been appointed a member of the Army Medical Advisory Board as expert in tropical diseases.

Colonel ROBERT PORTER, M.B., on completion of four years' service in his rank, is placed on the half-pay list, January 14th.

Lieutenant-Colonel MICHAEL W. RUSSELL to be Colonel, vice R. Porter, M.B., to half-pay list, January 14th.

ROYAL ARMY MEDICAL CORPS.

Major F. S. PENNY has been posted to Cork for duty.

Major C. W. BOWLE has been posted to Belfast for duty.

Captain T. C. LUCAS is granted combined leave from January 4th to May 9th, with such privilege as may be due to him on the date of departure.

Captain J. R. FOSTER has been posted to Dublin for duty.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Third Southern General Hospital.—Captain WILLIAM E. ROBINSON, M.D., ceases to hold a commission in the Territorial Force, January 1st.

Second East Lancashire Field Ambulance.—Supernumerary Captain GEORGE ASHTON, M.D., ceases to serve with the No. 18, Field Force Ambulance, R.A.M.C., Special Reserve, and is restored to the establishment, January 7th.

Third North Midland Field Ambulance.—WILLIAM BOYD, M.D., to be Lieutenant (to be supernumerary), November 27th, 1913.

Third London General Hospital.—Captain FREDERICK H. MILLER to be Major, January 7th.

West Lancashire Clearing Hospital.—Lieutenant-Colonel WILLIAM B. COCKILL, M.D., from the Third West Lancashire Field Ambulance, to be Lieutenant-Colonel, December 1st, 1913.

South Midland Clearing Hospital.—Major SEYMOUR G. BARLING, from the First Southern General Hospital, to be Lieutenant-Colonel, January 7th.

Sanitary Service.—Major HAROLD M. RICHARDS, M.D., resigns his commission, January 7th.

Attached to Units other than Medical Units.—Lieutenant ANDREW G. T. HANKS to be Captain, October 6th, 1913. Lieutenant WILLIAM C. F. HARLAND, M.B., to be Captain, October 6th, 1913. Captain GEORGE MCKELLAR, M.D., resigns his commission, January 7th.

For Attachment to Units other than Medical Units.—JOHN E. BRYDON, M.B., to be Lieutenant, January 3rd. GEORGE P. ANNING to be Lieutenant, November 22nd, 1913. WILLIAM DOUGLAS FREW to be Lieutenant, December 1st, 1913. JAMES SAFFLEY, M.B., to be Lieutenant, January 7th.

Supernumerary for Service with the Officers' Training Corps.—The following Lieutenants serving with the Royal College of Surgeons in Ireland Contingent resign their commissions, January 7th: THOMAS THOMSON, HENRY STOKES.

Unattached List for the Force.—Major EVELYN JOHN R. EVATT, M.B., from the R.A.M.C. Territorial Force (attached to the Second Welsh Brigade, Royal Field Artillery), to be Major, and is appointed to command the Royal College of Surgeons in Ireland Contingent, Senior Division, Officers' Training Corps, November 11th, 1913.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS COUNTY BOROUGH.—Assistant Medical Officer of Health and Assistant School Medical Officer. Salary, £250 per annum.

BIRKENHEAD BOROUGH HOSPITAL. — (1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male).—Salary, £120 and £100 per annum respectively.

BIRMINGHAM AND MIDLAND EYE HOSPITAL. — Pathologist. Salary, £50 per annum.

BLACKPOOL: VICTORIA HOSPITAL.—House-Surgeon (male).

BOURNEMOUTH: ROYAL NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST. — Visiting Physician. Honorarium, 100 guineas per annum.

BRADFORD CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £150 per annum.

BRADFORD ROYAL INFIRMARY. — (1) Resident Surgical Officer. (2) Male House-Surgeon. Salary, £150 and £100 per annum respectively.

BURNLEY: VICTORIA HOSPITAL. — Second House-Surgeon. Salary at the rate of £80 per annum.

CARDIFF: KING EDWARD VII HOSPITAL.—House-Physician (male). Honorarium at the rate of £60 per annum.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £230.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W. — (1) Surgeon to Out-patients. (2) House-Surgeon. Salary, £80 per annum.

CHESTER COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £200 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician (male). Salary at the rate of £75 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL.—House-Physician (male). Salary, £100 per annum.

COVENTRY EDUCATION COMMITTEE. — (1) Assistant School Medical Officer. (2) School Dentist. Salary for (1) £300 per annum, rising to £350, and for (2) £300 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £200.

DORCHESTER: COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £250 per annum, rising to £350.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

DUNDEE ROYAL INFIRMARY.—Resident Medical Officers.

DURHAM COUNTY ASYLUM, Winterton.—Third and Fourth Assistant Medical Officers (males). Salary, £200 per annum, rising to £250.

DURHAM COUNTY COUNCIL. — Assistant Tuberculosis Medical Officer. Salary, £300 per annum, increasing to £400.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident (female). Honorarium at the rate of £18 per annum.

EDINBURGH: THE HOSPICE.—Resident Medical Officer (female). Honorarium, £25 per annum.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £60 per annum.

GARTLOCH MENTAL HOSPITAL, near Glasgow. — Pathologist. Salary, £200 per annum.

GLOUCESTER: GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Surgeon.

HOVE: LADY CHICHESTER HOSPITAL. — Medical Woman. Salary, £30.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL, Church Street, W.—Resident Medical Officer (male). Salary, £100 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LEASOWE SANATORIUM.—Resident Medical Officer. Salary, £250 per annum.

LEEDS: GENERAL INFIRMARY.—(1) Resident Aural Officer. (2) Resident Obstetric Officer. Salary, £100 and £50 per annum respectively.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.— Resident Pathologist and Bacteriologist. Salary, £150 per annum.

MIDDLESEX HOSPITAL, W.—Ophthalmic Surgeon.

MORAVIAN MISSION HOSPITAL, Labrador.—Medical Officer.

NEWCASTLE-UPON-TYNE ASYLUM, Gosforth.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Senior Clinical Assistant in Ophthalmic Department (female).

NEWPORT: ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary at the rate of £80 per annum for first four months, rising to £120.

NEW ZEALAND GOVERNMENT MENTAL HOSPITALS.— Two Junior Assistant Medical Officers. Salary, £260 per annum, rising to £300.

NORTH RIDING OF YORKSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon (male). Salary, £180 per annum.

NOTTS COUNTY COUNCIL.—Resident Medical Officer at the Ransom Sanatorium. Salary, £100 per annum, and £50 for taking charge of laboratory, etc.

PADDINGTON INFIRMARY.—First Assistant to the Medical Superintendent. Salary, £170 per annum, rising to £180.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PLAISTOW: MEDICAL MISSION HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer. Honorarium at the rate of £30 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Senior Resident Medical Officer. Salary at the rate of £90 per annum, and £10 on completion of six months' service.

PRESCOT UNION.—Assistant Medical Officer of the Workhouse and Infirmary (non-resident). Salary, £240 per annum, increasing to £250.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary at the rate of £80 per annum.

READING: ROYAL BERKSHIRE HOSPITAL. — Second House-Surgeon. Salary at the rate of £80 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £125 per annum.

SALISBURY GENERAL INFIRMARY. — (1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £100 and £10 per annum respectively.

SCARBOROUGH HOSPITAL AND DISPENSARY. — (1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2) £80 per annum.

SHEFFIELD: CHILDREN'S HOSPITAL.—House-Surgeon (female). Salary, £100 per annum.

SHREWSBURY: COUNTY ASYLUM.—(1) Senior Assistant Medical Officer; salary, £250 per annum, rising to £300. (2) Second Assistant Medical Officer; salary, £200 per annum.

SOUTHEND-ON-SEA COUNTY BOROUGH. — Tuberculosis Officer. Salary, £500 per annum.

SOUTHWARK UNION INFIRMARY. — Third Assistant Medical Officer (male). Salary, £120 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STAFFORDSHIRE EDUCATIONAL COMMITTEE.—Two Assistant School Medical Officers. Salary, £250 per annum, rising to £300.

STRAITS SETTLEMENTS.—Three Medical Officers for the Government Service. Salary, £300 per annum, rising to £400, and subsequently to £600.

SUNDERLAND: ROYAL INFIRMARY.—House Physician (male). Salary, £120 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £125 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Physician. Salary, £100 per annum.

WALTHAMSTOW URBAN DISTRICT COUNCIL. — Resident Medical Officer at the Isolation Hospital. Salary, £150 per annum, rising to £200.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £200 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST HAM COUNTY BOROUGH.—Resident Medical Officer (male) at the Temporary Sanatorium, Dagenham. Salary, £300 per annum.

WESTMINSTER HOSPITAL, S.W.—Assistant House-Surgeon.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £120 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—House-Physician (male). Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Ballymore Eustace (Kildare), Fleetwood (Lancs.), Keyingham (Yorks.), Trowbridge (Wilts.), Uttoxeter (Staffs.).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

LLOYD, David, M.B., C.M.Glas., Medical Officer of Health to the Denbigh Town Council, vice Dr. Collins Lewis, resigned.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:

Clinical Assistants: Mr. R. Aitken, M.B., Ch.B., to Dr. Norman Walker; Mr. Stanley Arnott, M.B., Ch.B., to Mr. David Wallace; Mr. Thomas Lindsay, M.B., Ch.B., and Mr. William S. McLaren, M.B., Ch.B., D.P.H., to Dr. J. V. Paterson.

Dental Surgeon: Mr. John H. Gibbs, L.D.S., F.R.C.S.Edin. (reappointed).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

STEVENSON.—On January 13th, at 90, Chesterton Road, Cambridge, to Dr. and Mrs. C. M. Stevenson, a daughter (Ruth Marian).

MARRIAGES.

COCKERELL—GILFORD.—On January 14th, Douglas Cockerell, of Pixmire Farmhouse, Letchworth, to Marion Gilford, M.B., of Norton Way, Letchworth.

JEFFERSON—FLUMERFELT.—On January 17th, at Victoria, British Columbia, Geoffrey Jefferson, M.S.Lond., F.R.C.S.Eng., elder son of Dr. and Mrs. Jefferson, Rochdale, Lancashire, to Gertrude, elder daughter of A. C. Flumerfelt, Esq., and Mrs. Flumerfelt, Rubebubue, Victoria, British Columbia.

DEATHS.

BRADLEY.—On December 6th, at 3, Napier Road, Allahabad, India, Esther Ellen Lacey, the darling wife of Captain F. H. Bradley, R.A.M.C.

LONGTON.—On January 10th, suddenly, aged 43, George Harold Longton, M.R.C.S., L.R.C.P., of 77, New Cavendish Street, W., youngest son of the late Edward John Longton, M.D., J.P., of The Priory, Southport, and Brown House, Ulverston.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical Evening.

ROYAL SOCIETY OF MEDICINE:

5 p.m.—Surgeon Murray Levick: Lecture on the Experiences of Captain Scott's Northern Party from a Medical Point of View.

SECTION OF ODONTOLOGY, 8 p.m.—Discussion on Mr. S. P. Mummery's paper on the Conservative Treatment of the Pulp. Casual communication by Mr. Leonard Harwood: A Case of Congenital Absence of Maxillary Teeth.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF MEDICINE, 5.30 p.m.—Discussion on Vaccines from the Standpoint of the Physician, to be opened by Dr. T. J. Horder, followed by Sir John McFadyean, and others.

SECTION OF PSYCHIATRY, 8.30 p.m.—Dr. D. Orr and Dr. R. G. Rows: Further Observations on the Influence of Toxins on the Central Nervous System. Dr. R. G. Rows: The Importance of Disturbance of the Personality in Mental Disorders.

WEDNESDAY.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital, 9 p.m.—Clinical and Pathological Evening, open to all members of the medical profession.

ROYAL SOCIETY OF MEDICINE:

SECTION OF THE HISTORY OF MEDICINE, 5 p.m.—Dr. Henry Barnes: Roman Medicine and Roman Medical Inscriptions found in Britain (illustrated by the Epidiascope). Sir Ernest Clarke: The Medical Education of Oliver Goldsmith. Dr. Chalmers and Captain Archibald, R.A.M.C.: Two Early Eighteenth Century Treatises on Tropical Medicine. Mr. C. J. F. Thompson: Specimens from the Wellcome Historical Museum.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, St. Mary's Hospital, 8.15 p.m.—A Clinical Meeting.

ROYAL SOCIETY OF MEDICINE:

SECTION OF BALNEOLOGY AND CLIMATOLOGY, 5.30 p.m.—Dr. S. D. Clippingdale: London as a Health Resort.

SECTION OF NEUROLOGY, 8.30 p.m.—Papers:—(1) Dr. F. E. Batten: Progressive Cerebral Degeneration in an Infant with Pathological Examination. (2) Dr. S. A. Kinnier Wilson: The Pathology of Pellagra.

POST-GRADUATE COURSES AND LECTURES.

BRITISH OTO-LARYNGOLOGICAL SOCIETY, 11, Chandos Street, Cavendish Square, W., 4 p.m.—Exhibition of Cases and Specimens.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday and Wednesday, 10 a.m., Antepartum Haemorrhage (continued). Gynaecology Lecture: Friday, 10 a.m., Displacement of the Uterus (continued).

LONDON (HOSPITAL MEDICAL COLLEGE, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children—Study of the Mental Status of a Child.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted) at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Protozoology, 2 to 3.30 daily. Advanced Protozoology, 10.30 to 1 p.m. daily. Medical Clinics, Tuesday and Thursday at 3 p.m. Operations, Friday at 3 p.m.

MANCHESTER: HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Tuesday: Salford Royal Hospital, Demonstration of Medical Cases in the Wards. Wednesday: Royal Infirmary, Demonstration of Surgical Cases. Thursday: Ancoats Hospital, Exhibition of Medical and Surgical Cases. Friday: Royal Eye Hospital, Shadow and Vessel Test.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical demonstrations at 4 p.m. each day: Monday: Skin. Tuesday: Medical. Wednesday: Surgical. Thursday: Surgical. Friday: Eye. Special lectures at 5.50 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Clinical Demonstration.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Wednesday, 4 p.m., Epilepsy.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JANUARY.
28	Wed.	London: Council, 11 a.m. Lambeth Division, South-Western Fever Hospital, Landor Road, Stockwell, 4 p.m.
29	Thur.	Sunderland Division, Sunderland (address by Professor G. Sims Woodhead), 4.30 p.m.; Annual Dinner, 7 p.m.
30	Fri.	Liverpool Division, Annual Meeting, Liverpool, 4 p.m.
		FEBRUARY.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
14	Sat.	Last day for receipt of Nominations for election of Members of Council outside the United Kingdom.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10 a.m. Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m.

Date.		Meetings to be Held.
		FEBRUARY (*continued*).
20	Fri.	Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
27	Fri.	City Division, Manor Lodge, Upper Clapton, 9.30 p.m.
		MARCH.
10	Tues.	London: Metropolitan Branch Council, 4 p.m.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*). London: Naval and Military Committee, 4 p.m. (*provisional*).
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
15	Wed.	London: Finance Committee, 2.30 p.m.
22	Wed.	London: Council.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 31ST, 1914.

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REGULATIONS FOR MEDICAL BENEFIT FOR 1914.

We have received a copy of the National Health Insurance (Medical Benefit) Regulations (England), 1913, dated January 10th, 1914. These Regulations came into operation on January 12th, 1914, and although apart from mere verbal modifications they do not differ in many respects from the Provisional Regulations issued in November, 1913, and published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of November 15th, there are certain new clauses introduced to which we propose to direct attention.

Regulation 44 (2) is new and provides that—

> Where the insured person contracts with a person other than a duly qualified medical practitioner to obtain treatment (whether including drugs and appliances or not) from him for a fixed sum for the year or any part thereof, the Committee may make such contribution towards the sum contracted to be paid not exceeding in amount the maximum contribution payable in the case of a person who contracts with a duly qualified medical practitioner as they think fit, but upon any representation being made by a society that the treatment is not such as will adequately protect the funds of the society, the Committee may either withhold the contribution or make such a deduction therefrom as they may in any case determine.

The effect of this clause is apparently to legalize by virtue of the Regulations, medical attendance, and in some cases the supply of drugs, by an unqualified person. It is open to grave question whether a provision of this kind, though promulgated with all the weight of a Regulation made under the National Health Insurance Acts, is not *ultra vires* and contrary to the spirit and intentions of the original National Insurance Act of 1911 and to the provisions of the Apothecaries Act, 1815 (George III, cap. cxciv). We presume the effect of this Regulation will be to sanction insured persons being allowed to make their own arrangements with herbalists, Christian Scientists, bonesetters, and other kinds of unqualified practitioners. We understand that the General Medical Council has already had this possibility under its consideration, and we shall not be surprised to hear that steps are taken at once to challenge the validity of Regulation 44 (2) and to demand its withdrawal.

Regulation 30 (2) is a new clause, and provides that a practitioner may, not later than six weeks before the end of any year, give notice to the Committee that he does not desire to undertake the treatment in the succeeding year of any insured person whose name is, on the date on which notice is given, included in his list; this makes good a deficiency in the Provisional Regulations, to which the attention of the Commissioners was drawn by the British Medical Association

Regulation 14.—A new clause is introduced in Regulation 14 which will have the effect of fixing the period for which an insured person may be allowed to make his own arrangements; this period is to the end of the year in respect of which application is made, or to the end of the succeeding year at the discretion of the Committee.

Regulation 16 is modified in respect of the length of notice to be given by the Committee to every practitioner on the panel of the alterations, if any, in the terms of service which will take effect in the succeeding year. The Regulation now requires that the notice given shall be not less than eight weeks instead of six weeks as formerly. This is a step in the right direction, but its value is diminished by the fact that in Regulation 17 it is now provided that any practitioner who desires to withdraw from the panel must give notice in writing to the Committee to that effect not later than six weeks before the commencement of any year, whereas in the Provisional Regulations only four weeks' notice was required. This is a matter of some importance, as the practitioner on the panel, after receiving notice of alterations coming into force, is still only allowed a fortnight in which to make up his mind whether to accept the new conditions.

Regulation 17 (3) now provides for the removal from the medical list of the name of any practitioner who ceases to be duly qualified, and modifies to some extent the arrangements that may be made with regard to the patients of a deceased practitioner.

INSURANCE COMMITTEES.

LONDON.

Subsistence Allowance for Members.

THE London Insurance Committee on January 22nd devoted some time to the consideration of a scheme—similar to those adopted by other committees—for the payment to members of a subsistence allowance and compensation for loss of remunerative time, on the basis of 5s. a meeting.

Mr. E. B. TURNER moved the reference back of the proposal on the ground that it raised an important question of principle. Many members would prefer that their work should be on a voluntary basis, and very few, he imagined, were in a position making the remuneration proposed of pecuniary importance.

Several representatives of approved societies spoke in favour of the scheme on the ground that it would encourage the democratic administration of the Act, and ultimately the amendment was defeated by a large majority. A proposal that only those who made a claim should receive the allowance found no support.

Dr. LAURISTON E. SHAW proposed that the allowance should not be given to members of the Special Medical Committee which advises the Medical Service Sub-

committee on questions involving technical details of treatment, on the ground that the Committee was set up in the interests of the medical profession. This, however, was negatived, it being felt that a distinction in this case might lead to misunderstanding as to the impartial character of the Special Medical Committee. Dr. Lauriston Shaw also called attention to a clause of the scheme to the effect that unless otherwise specially determined by resolution a member should not be on more than two subcommittees. He objected that this would interfere with the useful representation of the medical profession on the various subcommittees. This view was supported by lay members, and by a narrow majority the clause was deleted.

Provision and Cost of Sanatorium Benefit.

The Sanatorium Benefit Subcommittee reported that 481 men and 294 women were receiving institutional treatment on January 12th; 767 men and 279 women were receiving domiciliary treatment; 275 men and 126 women dispensary treatment, and 76 men and 21 women hospital treatment. It was stated that experience had shown the cost of maintaining patients at the Downs Sanatorium to be 40s. 2½d. a week, but this high figure included a proportion of the cost of adaptation (£1,767) and rent at the rate of £6,000 a year. The Subcommittee, whilst acknowledging the assistance of the Metropolitan Asylums Board, remarked that the Downs Sanatorium was not entirely suitable for tuberculosis treatment, and recommended that the London County Council should be reminded of the unsatisfactory and expensive nature of the present temporary arrangements, and urged to secure permanent accommodation as early as possible, and the Committee passed a resolution to this effect.

The County Council and Mount Vernon Hospital.

Having been informed that the Mount Vernon Hospital, Hampstead, had been disposed of to the Medical Research Committee, formed under the Insurance Act, the Sanatorium Benefit Subcommittee recommended that a resolution be passed expressing regret that no effective action had been taken by the London County Council to acquire the hospital for the permanent accommodation of tuberculous persons.

Mr. O. E. Warburg spoke in defence of the County Council view, declaring that its policy in this matter was similar to that adopted in the case of the medical treatment of school children—namely, to make use of voluntary hospitals and the accommodation at the disposal of the Metropolitan Asylums Board rather than itself acquire or build sanatoriums and have staffs of physicians under its control. Mr. Warburg moved the reference back of the recommendation, but this found no seconder, and it was decided to send a letter of remonstrance to the County Council.

Dispensary and Domiciliary Treatment in Lambeth.

In connexion with an application for a grant towards the cost of a tuberculosis clinic under the control of Lambeth Borough Council, it was pointed out by the Sanatorium Benefit Subcommittee that the method of dealing with cases was to send all persons in respect of whom tuberculosis notifications were received an invitation to attend at one of the dispensaries in the borough. This practice reduced to a minimum the services required of practitioners on the panel in respect of domiciliary treatment, for which they were credited with 6d. per insured person. The Subcommittee contended that in these circumstances the grant could not be based on the proportion of the number of insured persons treated to the total number treated at the dispensaries, and the Committee decided to make a grant representing between one-quarter and one-fifth of the total cost of the dispensaries.

Number of Practitioners on the Panel.

A return was presented showing that the number of medical practitioners under agreement with the Committee had risen from time to time as follows: July, 1913, 1,396; October, 1,437; November, 1,458; December, 1,462; January, 1914, 1,468. In reply to Mrs. Handel Booth, the Chairman of the Medical Benefit Subcommittee, Dr. H. H. Mills, said that at the end of the year there were 40 resignations, whilst 46 practitioners came into the service. This was satisfactory, because it conformed with the progress of the panels for the preceding months, and the Chairman, Mr. Dawes, said that the doctors were still coming on.

Limited Acceptances: A Circular to the Profession.

The Medical Benefit Subcommittee reported that in the case of practitioners who undertook the treatment of a limited number of persons, new agreements had been modified by the omission in those cases of the clause requiring practitioners to treat persons who might be assigned to him by the Committee.

Dr. H. H. Mills suggested the issue of a circular to the medical profession calling attention to this matter. Many doctors had not come on the panel because they were afraid of having a number of people assigned to them. He understood that only about 1,000 to 1,100 members of the profession in London who had not already accepted service were likely to be available, and if any proportion of these could be persuaded to join the panel it would be advantageous.

Dr. Lauriston E. Shaw moved, and Dr. B. A. Richmond seconded, that a circular on these lines be issued, and this was agreed to.

The Adequacy of the Medical Service.

Dr. Mills moved:

> That it be referred to the Medical Benefit Subcommittee to consider and report as to the sufficiency of the arrangements for the provision of medical benefit in the different metropolitan boroughs.

Dr. Mills suggested that any shortage of medical practitioners on the panel as compared with the numbers of the insured in a given area should be inquired into, and particulars collected with reference to an attack made by a medical member of the Insurance Committee on the work of the doctors on the panel. Incidentally, Dr. Mills said he regretted that the attack had not been made in a subcommittee rather than in public.

Dr. B. A. Richmond, who seconded, said that unfair advantage had been taken of the difficult position in which practitioners on the panel found themselves at a time of great pressure of medical work. Everything should be done to improve the service where it was inadequately manned.

Mr. F. Coysh (Chairman of the General Purposes Subcommittee) thought an inquiry of this kind would be far preferable to the sterile abuse of the panel system which had been too frequently indulged in upon the Committee.

A Member urged that the accommodation of waiting-rooms in East London and the matter of lavatory provision in them should also be the subject of report.

The motion was carried.

Nursing of Insured Persons.

Miss Z. L. Puxley moved that it be referred to the General Purposes Committee to consider and report as to the adoption of a scheme for the nursing of insured persons. She urged this on economic grounds as tending to reduce the period of sickness. Of the cases attended by district nurses about one-fifth were insured persons.

Dr. Lauriston Shaw seconded, urging that a definite scheme for the co-ordination of the work of doctor and nurse was required.

Mrs. Handel Booth suggested that the funds at the disposal of the Committee were too strictly allocated to permit of expenditure for the purpose suggested, but ultimately the Committee passed the resolution by 35 votes to 18.

Contracting-Out.

It was stated that the number of persons allowed to make their own arrangements for medical treatment was 1,549; in institutions, 3,233.

Complaints against Medical Practitioners.

Reports upon twelve cases of complaints against practitioners were considered by the Committee. In three cases the Subcommittee stated that it found the complaints to have been substantiated.

In one of these cases Mr. Brown moved the reference back to the Subcommittee with a view to a communication being sent to the Insurance Commissioners. He suggested that penalties should be imposed on doctors as well as upon insured persons in cases in which complaints were substantiated.

The amendment was lost by a large majority, Mr. WARBURG, Chairman of the Medical Service Subcommittee, pointing out that in the case in question it was recommended that no action be taken because the instance of neglect occurred while the practitioner was ill. Mr. Warburg drew attention to another case in which the Subcommittee found that a doctor had gone to exceptional trouble to obtain special treatment for an insured person only to be rewarded with a complaint which was shown to be entirely unjustified.

CORRESPONDENCE.

THE UNIONIST PARTY AND NATIONAL INSURANCE.

DR. B. A. RICHMOND (Chairman of the Panel Committee for the County of London) writes: Your editorial comment in last week's issue on Mr. G. Locker-Lampson's letter on this subject betrays a singular readiness to find satisfaction therewith. It is not a readiness that is shared by all of us who remember the events of the last session of Parliament.

In the first place, Mr. Locker-Lampson does not quote the whole of Mr. Bonar Law's undertaking. He says that Mr. Law promised that on the return of the Unionist party to power "a Committee, as far as possible non-political, impartial, and competent, would be appointed to review the whole working of the Insurance Act," but he omits to add that Mr. Law said that the Committee "will consider this—whether or not it is possible, and whether if it is in the interests of the nation, even yet to turn it into a voluntary system."

As a matter of fact the only change in the Act that Mr. Bonar Law mentioned was the suggestion that its basis might possibly be altered from a compulsory to a voluntary one.

I agree with you, however, that there is no cause for "undue anxiety" on this account, as every one must realize who has any intimate knowledge of the working of the Act, of the power of established arrangements, and of the practical impossibility of carrying on insurance on national lines on any other but a compulsory basis.

The anxiety which, I know, many of us feel with respect to the Unionist party and national insurance is on quite other grounds. Since Dr. Addison profoundly altered the whole system of the Act by persuading the House of Commons to transfer the administration of medical benefit from the approved societies to the Insurance Committees we know that repeated attempts have been made, and much pressure exercised, to alter or undo that arrangement. The report of the Insurance Act Committee to Council on the subject last year[1] showed clearly enough that we have to thank Dr. Addison, on the Ministerial side, and Sir Philip Magnus and Sir Henry Craik on the Unionist side, for their determined hostility to such attempts. At the same time we know that there was a real effort last session on the Unionist side to reverse the policy of the Act in this respect, and that Mr. G. Locker-Lampson was one of the leaders in this enterprise. It is all very well for him to say that "I am also convinced that no step will be taken by the Unionist party in any way to prejudice the interests of the medical profession, or to injure the relationship between it and the approved societies." This is an amiable saying which may mean anything or nothing.

What medical men are much more concerned with are the terms of the amendment which Mr. Locker-Lampson himself put down last year in Committee in the bill to amend the Insurance Act. The amendment was in the following terms, and I have ventured to italicize the vital words:

> *Where* in any town or district *an approved society proves* to the satisfaction of the Commissioners that it can provide adequate medical benefit for its members, and that it has made arrangements with one or more resident local medical practitioners to that end, *it shall be at liberty to administer such benefit*, and the provisions of the principal Act shall be varied accordingly, but so, however, that any member of such society shall be at liberty to take medical benefit as provided by the principal Act.

Whether this proposal represents the policy of the Unionist party or not, it evidently represents the policy of Mr. G. Locker-Lampson.

[1] SUPPLEMENT, November 22nd, 1913, pp. 443-4.

A STATE MEDICAL SERVICE.

DR. HARRY ROBERTS (London, E.) writes: Your recent article on the question of a State Medical Service has, by the correspondence evoked in the last number of the JOURNAL, been justified of one of its phrases. You said in your article that "the views of those who advocate a State Medical Service are beginning to loom large," and one has but to read the letters which have been sent to you on this subject to realize why this is so. Although probably well over 90 per cent. of your readers are in agreement with your article, and view with entire disapproval the nationalization of medical practice, yet 75 per cent. of the letters published are written by State service advocates. A few men organized, having their minds clear as to the goal at which they are aiming, with enthusiasm and pertinacity, are notoriously more effective as a propagandist and as a political force than a much larger number of men unorganized, without ideals, and consequently without proselytizing energy or enthusiasm. Also, of course, the advocates of change are naturally much more vocal than even the serious and conscientious defenders of the *status quo*.

It is certain that a large proportion, possibly even a majority, of medical practitioners look upon this question purely from a commercial point of view. Nearly all of us, to some extent, look upon it from a commercial point of view. But if there is no better reply to the undoubtedly good arguments which the State service advocates put before the public than that certain vested interests will be hit, and certain medical men docked of their motor cars, then the end of the fight is already settled. But is there no other reply? Is it a simple case of public welfare *versus* private interest?

It is an unfortunate thing, though an undoubted one, that, in its recent public appearances as an organized body or guild, the medical profession has not impressed the general public as being concerned with national well-being so much as with its own pockets. Consequently the public will be indisposed to treat very seriously the merely obstructive opposition of medical practitioners to proposals advocated from the point of view of the national health. If, in the eyes of the public, our organization were more of a guild, accepting responsibilities, and with a high sense of social duty to which it expected its members to conform, and less of a trade union, devoted mainly to fighting the public on behalf of its members' pockets, our position would be more dignified, and our words would have more weight. From the point of view of our patients, and of the national health, is there, then, any reply to the arguments of the State service men? That there is need for a considerable extension of publicly appointed salaried medical officers of various kinds few of us will dispute. That part of medical service which is concerned with sanitation and public hygiene in the broad sense undoubtedly needs strengthening, and I, at any rate, think that there is urgent need for the establishment throughout the country of publicly appointed salaried specialists—operating surgeons, ophthalmic surgeons, dental surgeons, and any other specialists with a claim to public utility—to supply a real need of the industrial population.

Towards the establishment of such a State service as this, probably nearly all of us would be willing to work. But the nationalizing of general medical practice is a very different proposition, and the same arguments do not apply. In the first place, ordinary medical skill and attention are already within the command of nearly every man, woman, and child in the country. If the medical benefits under the National Insurance Act are, as is anticipated, extended to the families of insured persons, then even the word "nearly" can be omitted. So that it cannot be urged that the nationalizing of general practice would give the people anything which they do not already possess. Now, in so far as general practice, as distinguished from specialism and operative surgery, has any serious excuse for its existence, that excuse lies in the curious personal relation between the doctor and the patient. Except in the rarest instances this relation would not exist, in the present state of class feeling, between poor people and a medical civil servant appointed by rich people to look after them, in whose selection they would have no real voice, who would be in the position, which, unfortunately, few people can safely occupy, of being independent of the goodwill of those to whom he would be called upon to minister. For a State doctor would bear

the same relation of independence to his patients as does a relieving officer or master of a workhouse to the unfortunate victims he is called upon to relieve. That many devoted, conscientious, kindly, and public-spirited men would give up their lives to the well-being of their patients under a State system, as under a system of free choice and competition, is certainly true, but that the average medical practitioner could safely be placed in such a position is a matter concerning which even the least cynical of us may be permitted to doubt. The two great instruments for the raising of the quality of general medical practice are, first, the better education of the whole people in the *rationale* of living; and, secondly, the re-establishment of the spirit of the Aesculapian oath as the very basis of our guild. Meanwhile, I hope that poor people, the management of whose affairs is being more and more taken out of their hands by politicians and middle-class people generally, will retain one of the few rights left to them—the right to choose the doctor in whom they have confidence, and for whom they feel affection and respect.

Mr. Charles A. Parker, F.R.C.S.Edin. (London, W.), writes: Will you allow me to make a few comments on your article on this subject, published in your issue of January 17th?

You rightly lay great stress on "free choice" of doctor, for, undoubtedly, with certain patients, "faith" in their doctor is all-important, no matter whether the foundation for that faith be logical or illogical. For this reason "free choice," to some extent at all events, should be retained, whatever system of medical practice may be evolved in the future. You state that the idea of a salaried whole-time service is based on a negation of the right to "free choice," and that advocates of a State service simply sweep that right aside, declaring that they stand for utility and not for sentiment. These statements are not quite accurate, for advocates of a State service maintain that as great a "free choice" could, and should, be given under a system of salaried whole-time doctors as at present, and that such choice would then be unattended by the evil by-products which are inherent to it under a competitive system. There is no reason why the present system of allotting patients should be discontinued if to-morrow the 14,000 panel doctors became whole-time salaried medical officers.

Possibly the doctor with 1,000 people on his list would cease to envy the man with 4,000; indeed, the latter might even become jealous of the former, and begin to think his popularity a misfortune! But things would soon adjust themselves to altered circumstances. There would have to be, as there should be now, some limit put upon the amount of work a man was called upon to undertake—say, as suggested in your article, a limit of 3,000 persons on his list. When a doctor's list reached this number, other patients choosing him would have to be put upon his waiting list and take their turn as vacancies occurred, and in the meanwhile go to the doctor of their next choice. After all this is much what occurs at present. There is a limit to every man's capacity for work, and when that limit is reached would-be patients are either refused or handed over to a partner or assistant.

Under a whole-time salaried service there is no reason why that most unfortunate class of society, the recipients of Poor Law relief, should not become eligible for treatment. They never have had any "free choice," but have been rigidly chained to the doctor selected for them by the guardians. They form a very large part of suffering humanity, because ill health and disease bring destitution, followed by Poor Law help, and it is strange that no demand has ever been made by the medical profession to extend to them a "free choice" which just now is said to be of such immense therapeutic value.

There are several other methods by which a salaried whole-time service and "free choice" could be combined, but I have already trespassed too far on your valuable space.

In conclusion, may I say that your statement that the chief supporters of a State Medical Service in the profession are professors and consultants is hardly correct? The general membership of the Association and its Executive Committee are thoroughly representative of all branches of the profession, but in both general practitioners far outnumber all others. A comprehensive and efficient State service must include consultants, specialists, dentists, and probably the existing public medical services, and it is good that all branches should be represented on a body formed to consider this most important question.

Distribution of Funds Available for Medical Benefit of Unallotted Panel Persons.

Dr. H. Falconer Oldham (Morecambe) writes: In your issue of January 17th Dr. M. G. Biggs (Wandsworth) states what he calls an exaggerated case. To the exaggeration no objection can be raised, for the problem is one which is best looked stark in the face, and in raising the issue in this form Dr. Biggs has done good service. In stating the case, however, he has omitted to mention one very important factor. I would amend the statement thus:

The Case.

Suppose there are 3,000 insured persons in a small town and that there are two doctors practising in that town, one on the panel and one non-panel; the panel doctor having entered into an agreement with the Insurance Committee to provide medical attendance for any insured person requiring it, and the Insurance Committee having undertaken to pay for this service a sum equal to 7s. for each insured person in the town; the non-panel doctor having declined to undertake any responsibility for insured persons as such and having refused to enter into any agreement.

The Proposition.

Suppose 1,500 of the insured have their cards signed by the panel doctor, thereby signifying their intention, if ill, to avail themselves of medical benefit under the Act, and that 1,500 are people whose position and inclinations make them patients, if ill, of the non-panel doctor as heretofore, thereby foregoing voluntarily their privilege of medical benefit under the Act, but reserving to themselves still the privilege of claiming such benefit from the panel doctor if at any time they find it convenient to do so.

Question.

What moneys are due to the panel doctor?

Surely there can be but one reply—3,000 times 7s. This was the contract between him and the Insurance Committee—7s. for every insured person in the town. The Committee cannot break its contract. To ask the doctor on the panel to forego his rights after he has carried the whole burden of the responsibility is unfair. In dealing with this question we should never forget that the 7s. per head is not a payment for medical advice given, but a cover for medical services that may possibly be demanded.

*** As it seemed that it would be to the general convenience, we furnished Dr. Biggs with a proof of Dr. Oldham's letter, published above.

Dr. Biggs writes as follows: Abuse and ridicule, though frequent arguments with politicians, are not a reply to a direct question. Dr. Divine appears to avoid answering the question, so that it is futile to argue with him, while it is a mistake to be led off the scent by red herrings. When he will tell us definitely whether the Insurance Act originally contemplated the possibility of having to pay him 14s. a head for patients on his list, it will be a different matter.

Dr. Greenwood seems to misunderstand the word "syllogism." No syllogism was used; merely an imaginary case. Dr. Greenwood, also, dislikes giving a direct answer, and tries to divert the discussion.

Dr. Coode Adams agrees in hating a monosyllabic answer. He drifts into the usual fallacy of "insurance liability," and wishes to take the premiums for a liability he never undertook.

The facts are that the Government considered 7s. a head ample remuneration for each insured person that a panel doctor was liable to attend—by having them on his list; that, as the Act has worked out, a very large number of insured persons are never going to be a liability to any panel doctor. The simple question is, Did the Act contemplate paying premiums for a non-existing liability? In answer see Mr. Lloyd George, *passim*. Doubtless it is pleasant to receive a premium of 14s. instead of the

expected 7s.; but why try to soothe one's conscience by reference to regulations drafted as an afterthought?

The letter of Dr. Oldham merits more consideration, first, because of its courteous expression, and secondly, because he has the courage to answer the question in the affirmative; but the only valid reason he gives for doing so appears to be that the patient who is paying his own fees to a non-panel doctor may ultimately claim the privilege of treatment by a panel practitioner. This question was recognized as one for discussion in your annotation in the JOURNAL of January 17th, wherein was suggested a method by which a liability of this kind might be met. I venture to suggest that the scheme outlined in that annotation proposes an equitable method not only of dealing with the present accumulation of unallocated funds, but also of disposing for ever of any question of allotting patients.

The last sentence in Dr. Oldham's letter must surely be erroneous. Throughout all the negotiations between the Association and the Chancellor the subject of remuneration turned entirely on the question of the exact sum per head of patients on each doctor's list necessary to pay for the sum total of the advice given to those patients. The 7s. was never intended to be of the nature of a "cover" or retaining fee.

Association Notices.

ELECTION OF CENTRAL COUNCIL, 1913-1914.

Notice is hereby given that nominations for a candidate for election as a Member of Council by the Cambridge and Huntingdon, East Anglian, and South Midland grouped Branches for the year 1913-14 must be forwarded to reach the Financial Secretary and Business Manager, at the Office of the Association, not later than Saturday, February 14th, 1914. Each nomination must be on the prescribed form, copies of which will be furnished by the Financial Secretary and Business Manager upon application.

Separate forms have been prepared:

(A) For a nomination by a Division, and

(B) For a nomination by any three Members of a Branch respectively.

Those applying are requested to state for which purpose the form is desired.

An announcement of the Nominations received will be made in the Journal of February 21st.

Election will be by voting papers if more than one nomination is received. These papers will contain the names of all duly nominated candidates, and will be issued from the Central Office on Saturday, February 28th, and will be returnable not later than Saturday, March 7th.

The result of the election of Members to the Central Council will be published in the Journal of March 14th.

BY ORDER OF THE COUNCIL,

GUY ELLISTON,

Financial Secretary and Business Manager.

January 31st, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—Dr. D. Davidson, Honorary Secretary (15, Priory Row, Coventry), gives notice that a meeting of the Division will be held at the hospital on Thursday, February 5th, at 8.30 p.m. After the business, it is proposed to hold a clinical evening, cases being examined first and then discussed. The Honorary Secretary will be glad to hear from members willing to bring forward interesting cases under their care.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed. The Honorary Secretary will be glad if members proposing to show cases or specimens, or read short abstracts of cases, will kindly notify him not later than February 16th.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at Whipps Cross Infirmary on Thursday, February 19th, at 4 p.m., when the Medical Superintendent, Dr. J. C. Muir, will give a clinical demonstration.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.), announces that a general meeting of the Division will be held at the Stepney Central Hall, Commercial Road, on Tuesday, February 3rd, at 4 p.m., when Dr. James Milner Adams, of the Clinical Research Association, will give a demonstration on Laboratory Aids to Diagnosis.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that a meeting of the Division will be held at the Royal Infirmary, Leicester, on Wednesday, February 11th, at 4 o'clock. Agenda: Report of Representatives to the Representative Meeting. Address by Dr. Pratt on the Estimation and Significance of the Systolic and Diastolic Arterial Pressures.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, February 20th, from 3.15 to 6 p.m. Dr. T. C. Hunter: Phthisis in Children. Professor T. Beattie: Chorea and Choreiform Movements. Tea. Mr. A. M. Martin: Surgical Treatment of Some Congenital Deformities. Dr. E. F. Pratt: Experiences of the National Health Insurance Act. Dr. T. H. Livingstone: Common Diseases of the Accessory Sinuses.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Fleet Surgeon GEORGE GIBSON to the *Indomitable* on recommissioning, February 3rd. Fleet Surgeon FREDERIC J. BURNS, M.D., to the *Orion* on recommissioning, February 4th. Staff Surgeon SAMUEL H. VICKERY, M.B., to the *Orion* on recommissioning, February 4th. Staff Surgeon JOHN G. PEEBLES to the *Active* on recommissioning, February 3rd. Staff Surgeon RICHARD S. OSBORNE to the *Victory*, additional, for the *Birmingham*, January 29th. Staff Surgeon MAURICE W. HAYDON to the *Vivid*, additional, for disposal, January 27th, and to the *Defiance*, vice Fitzgerald, January 31st. Surgeon A. R. PRICE to the *Indomitable* on recommissioning, February 3rd. Surgeon ARTHUR M. HENRY to the *Minotaur*, January 19th. Surgeon LEONARD A. MONCRIEFF to the *Vivid*, additional, for Plymouth Hospital, February 2nd. Surgeon CYRIL V. GRIFFITHS to the *Pembroke*, additional, for disposal, January 22nd.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL T. DU B. WHAITE, M.B., has been restored to the Establishment, vice R. S. F. Henderson, January 2nd.

Lieutenant-Colonel HERBERT E. WINTER has been restored to the Establishment, vice G. A. T. Bray, supernumerary, January 20th.

Major V. J. CRAWFORD is to join the Southern Command.

Captain LEONARD COTTERILL, M.B., has been appointed Major, December 5th, 1913.

Captain W. J. S. HARVEY to be Major, January 14th.

Major E. F. L'ESTRANGE has been posted to Belfast for duty.

Major J. M. CUTHBERT has assumed medical charge of the staff and department of the Scottish Command.

Major D. LAWSON has been appointed Senior Medical Officer at Mauritius, vice Lieutenant-Colonel B. J. Inniss.

Captain J. B. HANAFIN has been appointed a Specialist in Electrical Science, Third (Lahore) Division.

Captain D. DE C. O'GRADY has been appointed to the Eastern Command for duty.

Supernumerary Lieutenant P. D. WARBURTON is restored to the Establishment, January 24th.

INDIAN MEDICAL SERVICE.

SURGEON-GENERAL WILLIAM B. BANNERMAN, C.S.I., M.D., has been appointed an Honorary Physician to the King, vice Surgeon-General J. Richardson, deceased, August 13th, 1913.

Lieutenant-Colonel R. C. MACWAT is posted as Agency Surgeon, Eastern Rajputana States, with effect from November 7th, 1913.

Major THOMAS A. GRANGER, M.B., to be Lieutenant-Colonel, January 1st.

The services of Major A. C. MACGILCHRIST are placed temporarily at the disposal of the Director-General, Indian Medical Service, with effect from October 30th, 1913, for research work.

Major J. E. CLEMENTS has been confirmed in the Gaol Department of the United Provinces.

The promotion to present rank of Major W. G. HAMILTON is antedated from June 28th, 1912, to December 28th, 1911.

Lieutenant W. O. WALKER, M.B., is promoted to Captain, with effect from October 22nd, 1913.

Lieutenant V. P. NORMAN has been transferred to the temporary half-pay list, with effect from November 12th, 1913.

The services of Major J. C. H. LEICESTER, M.D., F.R.C.S., are replaced at the disposal of the Government of Bihar and Orissa.

The Hon. Major J. C. ROBERTSON, M.B., Sanitary Commissioner with the Government of India, has been appointed to be a Companion of the Order of the Indian Empire.

Brevet-Colonel H. F. CLEVELAND has been appointed an Honorary Surgeon to His Excellency the Viceroy.

INDIAN SUBORDINATE MEDICAL DEPARTMENT.

Senior Assistant Surgeon and Honorary Captain JOSEPH S. SUMMERS has retired, December 7th, 1913.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

MAJOR HAROLD E. MORTIS resigns his commission, and is granted permission to retain his rank and wear the prescribed uniform, January 3rd.

Cadet Staff Sergeant OWEN HAIRSINE, from the University of London Contingent, Officers' Training Corps, to be Lieutenant on probation, November 29th, 1913.

Cadet Sergeant A. J. GIBSON, from the Glasgow University Contingent, Officers' Training Corps, to be Lieutenant on probation, December 22nd, 1913.

Cadet Sergeant THOMAS W. WYLIE, from the Glasgow University Contingent, Officers' Training Corps, to be Lieutenant on probation, December 19th, 1913.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Third North Midland Field Ambulance.—Lieutenant MARTIN HALLAM resigns his commission, January 21st.

First South Midland Field Ambulance.—Lieutenant EDWARD J. BOOME, M.B., to be Captain, August 19th, 1913.

North Midland Clearing Hospital.—Lieutenant-Colonel WILLIAM P. PEAKE, from the Second North Midland Field Ambulance, to be Lieutenant-Colonel, January 21st.

West Riding Clearing Hospital.—Lieutenant-Colonel ALGERNON E. LUKE WEAR, M.D., from the First West Riding Field Ambulance, to be Lieutenant-Colonel, January 21st.

Welsh Clearing Hospital.—Major CONRAD T. GREEN, from the list of officers attached to units other than medical units, to be Lieutenant-Colonel, November 12th, 1913. Captain A. BIRD, from the list of officers attached to units other than medical units, to be Captain, December 20th, 1913.

Attached to Units other than Medical Units.—Captain WILLIAM A. GIBB, M.D., to be Major, December 3rd, 1913; Lieutenant ALFRED S. BRUZAND to be Captain, December 4th, 1913.

Notts and Derby Mounted Brigade Field Ambulance.—Lieutenant-Colonel L. W. POCKETT, M.D., resigns his commission and is granted permission to retain his rank and wear the prescribed uniform, January 24th.

Second East Anglian Field Ambulance.—Colonel J. H. STACEY resigns his commission and is granted permission to wear the prescribed uniform, January 24th.

First North Midland Field Ambulance.—J. C. GRIEVE, M.B., to be Lieutenant, January 1st.

First West Riding Field Ambulance.—Captain A. D. SHARP to be Major, January 24th.

Second Welsh Field Ambulance.—A. F. B. SHAW, M.B., to be Lieutenant, December 8th, 1913.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest towns, 8,490 births and 6,098 deaths were registered during the week ended Saturday, January 24th. The annual rate of mortality in these towns, which had been 18.6, 19.3, and 17.0 per 1,000 in the three preceding weeks, rose to 17.5 per 1,000 in the week under notice. In London the death-rate was equal to 18.2, against 18.6, 20.5, and 17.0 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 7.8 in Leyton, 8.6 in Ilford, 8.8 in Edmonton, 9.0 in Cambridge, 9.3 in Walthamstow, and 9.9 in Willesden, to 22.8 in Wakefield, 24.3 in Plymouth, 24.5 in Bath, 24.7 in Rotherham, 26.1 in Barnsley, and 26.7 in Wolverhampton. Measles caused a death-rate of 1.4 in South Shields, 1.6 in Rhondda, 1.8 in Great Yarmouth, 2.0 in Dudley, 2.8 in Burnley, and 6.8 in Barnsley; scarlet fever of 1.8 in Merthyr Tydfil; whooping-cough of 1.3 in Swansea; and diphtheria of 1.0 in Tottenham, 1.5 in West Bromwich, and 1.7 in Enfield. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 47, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 16 were registered in Birmingham, 13 in Liverpool, 2 in Dudley, 2 in Burnley, and 2 in South Shields. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,874, 3,757, and 3,676 at the end of the three preceding weeks, had further fallen to 3,567 on Saturday, January 24th; 375 new cases were admitted during the week, against 425, 416, and 388 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,167 births and 919 deaths were registered during the week ended Saturday, January 24th. The annual rate of mortality in these towns, which had been 20.3, 20.2, and 20.4 per 1,000 in the three preceding weeks, further rose to 20.9 in the week under notice, and was 3.4 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 12.6 in Motherwell, 13.8 in Perth, and 14.0 in Kirkcaldy to 26.8 in Greenock, 27.1 in Hamilton, and 32.3 in Kilmarnock. The mortality from the principal infective diseases averaged 2.3 per 1,000, and was highest in Greenock and Ayr. The 413 deaths from all causes registered in Glasgow included 25 from measles, 5 from scarlet fever, 5 from diphtheria, 4 from infantile diarrhœal diseases, 2 from whooping-cough, and 1 from enteric fever. Five deaths from measles were recorded in Edinburgh, 5 in Greenock, 4 in Leith, and 3 in Ayr; from scarlet fever, 4 deaths in Aberdeen; and from diphtheria, 5 deaths in Edinburgh, 5 in Aberdeen, and 2 in Dundee.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 17th, 647 births and 500 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 640 births and 588 deaths in the preceding period. These deaths represent a mortality of 21.6 per 1,000 of the aggregate population in the districts in question, as against 25.4 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.6 per 1,000 higher than the corresponding rate in the ninety-six English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 28.0 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 24.0 (as against an average of 24.4 for the previous four weeks), in Dublin city 25.7 (as against 26.6), in Belfast 22.7 (as against 23.6), in Cork 19.7 (as against 22.1), in Londonderry 12.7 (as against 14.9), in Limerick 29.8 (as against 17.9), and in Waterford 15.2 (as against 18.5). The zymotic death-rate was 1.6 as against 2.1 in the previous period.

During the week ending Saturday, January 24th, 618 births and 550 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 647 births and 500 deaths in the preceding period. These deaths represent a mortality of 23.8 per 1,000 of the aggregate population in the districts in question, as against 21.6 per 1,000 in the previous period. The mortality in these Irish areas was therefore 6.3 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 26.7 per 1,000 of the population. As for mortality of individual localities, that in the Dublin registration area was 28.4 (as against an average of 27.3 for the previous four weeks), in Dublin city 30.6 (as against 29.5), in Belfast 23.8 (as against 24.6), in Cork 24.5 (as against 25.5), in Londonderry 16.5 (as against 16.2), in Limerick 14.9 (as against 18.3), and in Waterford 17.1 (as against 20.0). The zymotic death-rate was 1.8, as against 1.6 in the previous period.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum, increasing to £120.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, £120 and £100 per annum respectively.

BIRKENHEAD UNION.—Senior Male Resident Assistant Medical Officer. Salary, £150 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Pathologist. Salary, £50 per annum.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

CALCUTTA CORPORATION.—Two District Health Officers. Salary, Rs. 500 per month, rising to Rs. 700.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL, Plaistow, E.—Junior Resident Medical Officer (female). Honorarium at the rate of £30 per annum.

CARDIFF: KING EDWARD VII HOSPITAL.—(1) House-Surgeon (male). (2) House-Physician (male). Honorarium at the rate of £60 per annum each.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £230.

CHESTER COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £200 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Physician to Out-patients. (2) Radiographer. (3) House-Physician (male). Honorarium attached to (1) and (2), and for (3) salary at the rate of £75 per annum.

DARTFORD: DARENTH INDUSTRIAL COLONY FOR THE FEEBLE-MINDED.—Third Assistant Medical Officer. Salary, £180 per annum, increasing to £200.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £200.

DEWSBURY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

DORCHESTER: COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £250 per annum, rising to £350.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

DONCASTER: ROYAL INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £100 per annum.

DURHAM COUNTY ASYLUM, Winterton.—Third and Fourth Assistant Medical Officers (males). Salary, £200 per annum, rising to £250.

DURHAM COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary, £300 per annum, increasing to £400.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician and Assistant Casualty Officer (male). Salary at the rate of £75 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £200 per annum, increasing to £225.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH: THE HOSPICE.—Resident Medical Officer (female). Honorarium, £25 per annum.

ELY COUNTY COUNCIL.—Assistant Medical Officer of Health (male). Salary, £350 per annum.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £60 per annum.

GLASGOW DISTRICT MENTAL HOSPITAL, Lenzie.—Junior Assistant Medical Officer (male). Salary, £200 per annum.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon. (2) House-Physician. (3) Surgeon Dentist. Salary for (1) and (2), £30 for six months and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho Square, W.—Clinical Assistant to Out-Patient Department.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL, Church Street, W.—Resident Medical Officer (male). Salary, £100 per annum.

KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer (male). Salary, £220 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary, £250 per annum, rising to £300.

LEEDS: GENERAL INFIRMARY.—(1) Resident Aural Officer. (2) Resident Obstetric Officer. (3) House-Physician. Salary for (1) and (2) £100 and £50 per annum respectively.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Two Assistant Resident Medical Officers. Salary, £150 per annum.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.—(1) Assistant Physician. (2) Assistant Surgeon for Diseases of the Eye. (3) Assistant Gynaecological Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Salary for (1), £200 per annum, and for (2) £40 for six months.

MANCHESTER ROYAL INFIRMARY.—Accident-Room House-Surgeon. Salary at the rate of £100 per annum.

MANCHESTER TOWNSHIP.—(1) Assistant Medical Officer of the Workhouse at Crumpsall. (2) Assistant Medical Officer to the Convalescent Hospital, Cheadle. Salary, £120 and £80 per annum respectively.

MIDDLESEX HOSPITAL, W.—Director of the Institute of Pathology. Salary, £800 per annum.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—Honorary Physician.

NOTTINGHAM CITY.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon (male). Salary, £180 per anum.

NOTTS COUNTY COUNCIL.—Resident Medical Officer at the Ransom Sanatorium. Salary, £100 per annum, and £50 for taking charge of laboratory, etc.

PADDINGTON INFIRMARY.—First Assistant to the Medical Superintendent. Salary, £170 per annum, rising to £180.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Surgeon Dentist.

PRESTON ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

READING: ROYAL BERKSHIRE HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE BOROUGH.—Second Assistant Medical Officer of Health. Salary, £250 per annum, rising to £300.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Resident House-Physician. Salary, £110 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon (male). Salary, £125 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2), £80 per annum.

SHEFFIELD EDUCATION COMMITTEE.—(1) Assistant School Medical Officer. (2) School Dental Surgeon. Salary for (1), £300 per annum, and for (2) £250, rising to £300.

SHREWSBURY: COUNTY ASYLUM.—(1) Senior Assistant Medical Officer; salary, £250 per annum, rising to £300. (2) Second Assistant Medical Officer; salary, £200 per annum.

SOUTHWARK BOROUGH.—Tuberculosis Officer. Salary, £500 per annum.

STRAITS SETTLEMENTS.—Three Medical Officers for the Government Service. Salary, £300 per annum, rising to £400, and subsequently to £600.

SUNDERLAND: ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £125 per annum.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £250 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House-Physician. Salary, £75 per annum.

WEST HAM COUNTY BOROUGH.—Resident Medical Officer (male) at the Temporary Sanatorium, Dagenham. Salary, £300 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—House-Physician (male). Salary, £80 per annum.

YORK COUNTY HOSPITAL.—House-Physician. Salary at the rate of £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Arnesby (Leicester), Ballyward (Down), Midleton (Cork), New Ross (Wexford).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

CARLILE, Hildred B., M.A., M.D.Cantab., M.R.C.P., Physician to the Miller General Hospital, Greenwich.

CASTELLAIN, H. George P., M.A.Oxon., B.C.Cantab., Medical Registrar to St. Mary's Hospital, Paddington.

COOPER, George, B.A., M.D.Belf., House-Physician at the National Hospital for the Paralysed and Epileptic, Queen Square, W.C.

DAVIES, Ivor J., M.D., M.R.C.P.Lond., Assistant Physician to the King Edward VII Hospital, Cardiff.

DOBSON, J. F., M.S.Lond., F.R.C.S.Eng., External Examiner in Surgery in the University of Durham.

DOUGAL, Daniel, M.D., Honorary Assistant Surgeon for Women to the Manchester Northern Hospital.

EVANS, Herbert T., M.B., B.Ch.Oxon., Assistant Physician to the King Edward VII Hospital, Cardiff.

GUTHRIE, Douglas J., M.D.Edin., Clinical Assistant in the Electrotherapeutic Department of Edinburgh Royal Infirmary.

FAULKNER, Alfred J., L.R.C.P. and S.Irel., Medical Officer of the Balla Dispensary District of the Castletown Union.

HODGSON, John Frederick, M.D., Ch.B.Vict., D.P.H., Honorary Medical Officer to the Royal Halifax Infirmary.

HOPE, Charles W. M., M.D.Durh., F.R.C.S.Eng., Assistant Surgeon to the Throat Department of King's College Hospital.

JONES, R. Fleming, M.D., Chief Medical Officer, Territory of Papua, British New Guinea.

LLOYD, D., M.B., C.M.Glas., Certifying Factory Surgeon for the Denbigh District, co. Denbigh.

MURRAY, W., M.B., Certifying Factory Surgeon for the Clackmannan District, co. Clackmannan.

PATERSON, M. W., B.A.Cantab., M.R.C.S., Medical Officer at the Central Branch of the Manchester Royal Infirmary.

PERN, L., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Whitby District, co. York.

RIGDEN, George F., M.B., B.S.Lond., M.R.C.S., L.R.C.P., Medical Officer and Public Vaccinator to the Fourth District, Westbury-on-Severn Union, Gloucestershire.

ROBSON, William M., M.D., Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 36, and to be attached more particularly to the Ampthill, Brackley, Buckingham, Kettering, Northampton, and Wellingborough County Courts, vice Dr. F. Buszard, deceased.

SHAW, P. W., M.B., C.M.Edin., Certifying Factory Surgeon for the Blairgowrie District, co. Perth.

SHEEHAN, D. T., M.B., B.Ch., R.U.I., Certifying Factory Surgeon for the Milltown District, co. Kerry.

STARK, J., L.R.C.P. and S.Edin., L.F.P.S.Glas., Certifying Factory Surgeon for the Kirkliston District, co. Linlithgow.

STEELE, J., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Kidsgrove District, co. Stafford.

STORAR, W. M., L.R.C.P. and S. Edin., Certifying Factory Surgeon for the Ramsgate District, co. Kent.

TAYLOR, A. L., B.Sc., M.B.Edin., M.R.C.P.Edin., Senior Assistant Medical Officer at the Govan District Asylum.

TEMPLETON, William, M.B., Ch.B.Glasg., D.P.H.Camb., Assistant School Medical Officer to the West Sussex and Chichester Joint Education Committee.

THOMPSON, A., B.A.Camb., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Newbury District, co. Berks.

THOMPSON, Charles J., B.S.Bham., L.M.S.S.A.Lond., Clinical Assistant to the Royal Orthopaedic and Spinal Hospital, Birmingham.

TURNER, F. Douglas, M.B., Medical Superintendent of the Royal Eastern Counties Institution for Imbeciles and the Feeble-Minded, Colchester.

WALKER, Harold, F.R.C.S., Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 15, and to be attached more particularly to the York, Thirsk, Helmsley, and Easingwold County Courts, vice Dr. F. Shann, resigned.

WILLIAMSON, A. J., M.D.Aberd., D.P.H.Cantab., Tuberculosis Officer to the County Council of Essex.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

AIKEN.—On January 25th, at Drumadravey, Irvinestown, the wife of Acheson Aiken, L.R.C.P. and S., of a daughter.

BRUCE.—On January 27th, at 72A, East Dulwich Grove, S.E., the wife of H. W. Bruce, M.D., F.R.C.S., of a daughter.

M'EWEN.—On January 24th, at North Lakhimpur, Assam, the wife of Thos. M'Ewen, Medical Officer, Jokai Tea Estates, of a son.

DEATH.

SKELTON.—On December 8th, 1913, at his residence, "Overn Hill," Downend, Bristol, Henry Skelton, M.D., M.R.C.P., M.R.C.S., aged 71 years.

PUBLISHERS' ANNOUNCEMENTS.

MESSRS. J. AND A. CHURCHILL have just ready for publication volume eight of the new edition of *Allen's Commercial Organic Analysis*; this volume has been rewritten under the editorship of Mr. W. A. Davis, B.Sc., and Mr. S. S. Sadtler, S.B. The subjects and authors are as follows: Enzymes, Proteins of Plants, by E. Frankland Armstrong; the Proteins and Albuminoid Substances, Digestion Products of the Proteins, by S. B. Schryver; Proteins of Milk, by L. L. Van Slyke; Milk, by H. Leffmann; Milk Products, by C. Revis and E. R. Bolton; Meat and Meat Products, by W. D. Richardson; Haemoglobin and its Derivatives, by J. A. Gardner and G. A. Buckmaster; Albuminoids or Sclero-proteins, by J. Alexander; Fibroids, by W. P. Dreaper.

Messrs. Longmans, Green and Co. have in the press a work entitled, *Flying: Some Practical Experiences*, by Mr. Gustav Hamel and Mr. Charles C. Turner. Mr. J. Elrick Adler will contribute a chapter on the Physiological and Medical Aspects of Aviation. There will also be other special contributions.

Messrs. Cassell and Co., Ltd., announce for immediate publication a work entitled *Surgical Diseases and Injuries of the Genito-Urinary Organs*, by Mr. Thomson Walker.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Lecture by Mr. Hastings Gilford on Infantilism.

TUESDAY.

ROENTGEN SOCIETY, London Hospital, Whitechapel, 8.15 p.m.—Dr. Gilbert Scott will conduct visitors over the *X*-Ray and Electro-Therapeutic departments of the Hospital, and give a demonstration of the Wilson Portable Coil Apparatus, and will show a number of interesting plates.

ROYAL SOCIETY OF MEDICINE:

SECTION OF SURGERY, AND SUBSECTION OF ORTHOPAEDICS, 4.30 p.m.—Mr. A. H. Tubby: Case of Operative Reduction of Dislocation of the Elbow. Mr. Paul P. Roth: Case of Injury to Upper Epiphysis of Left Femur, with Scoliosis.

SECTION OF MEDICINE, 5 p.m.—Adjourned Discussion on Vaccines from the Standpoint of the Physician, to be opened by Dr. H. D. Rolleston.

SECTION OF PATHOLOGY, Pathological Department, University College Hospital Medical School, 8.30 p.m.—Laboratory Meeting.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Lecture by Mr. Hastings Gilford on Infantilism.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OPHTHALMIOLOGY, 8 p.m.—Cases: Mr. Frank Moxon: Congenital Diffuse Opacity of the Cornea in Two Sisters. 8.30 p.m., Discussion on the Use of Salvarsan in Ophthalmic Practice, to be opened by Mr. W. Lang, Lieutenant-Colonel Gibbard, R.A.M.C., and Mr. S. H. Browning.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Meeting.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNAECOLOGY, 8 p.m.—Specimens: Dr. Herbert Spencer: (1) Fibroma of the Hymen; (2) Degenerated Myomatous Uterus resembling the Pregnant Organ. Short Communications: Dr. T. G. Stevens: Three Cases of Caesarean Section. Mr. Gordon Ley and Mr. J. Preston Maxwell (China): Case of Congenital Sacro-coccygeal Tumour. Paper: Professor H. Briggs and Dr. R. A. Hendry (Liverpool): Uncontrollable Uterine Haemorrhage, a Report on 104 Bleeding Uteri after Hysterectomy.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF LARYNGOLOGY, 4 p.m.—The President (Dr. D. R. Paterson): Two Cases of Intranasal Dacryocystotomy for Lacrymal Disease. Cases and specimens will be shown by Mr. E. B. Waggett, Mr. Lawson Whale, Mr. George Wilkinson (Sheffield), Mr. Harold Kisch, Mr. J. F. O'Malley, and others.

SECTION OF ANAESTHETICS, 8.30 p.m.—Discussion on Intratracheal Ether, to be opened by Mr. Robert E. Kelly, followed by Mr. H. E. G. Boyle. Dr. F. E. Shipway and Mr. M. S. Pembroy: Observations upon Respiration and Circulation during Intratracheal Anaesthesia. Members of the Sections of Laryngology and Surgery are specially invited to attend the meeting.

POST-GRADUATE COURSES AND LECTURES.

CANCER HOSPITAL.—Wednesday, 5 p.m., Cancer of the Uterus.

DUBLIN: ROTUNDA HOSPITAL.—Post-graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday and Wednesday, 10 a.m., Post-partum Haemorrhage. Gynaecological Lecture: Friday, 10 a.m., Prolapse of the Uterus.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4.30 p.m., Tuberculous Infection of Lung, Considered Anatomically.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children, Action of Brain Corresponding to Motor Signs Observed.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted) at 12 and 4 p.m. Practical laboratory work daily (Saturday excepted), 10 to 12 a.m. Practical Protozoology, 2 to 3.30 p.m., daily. Advanced Protozoology, 10.30 to 1 p.m., daily. Medical Clinics, Tuesday and Thursday at 3 p.m. Operations, Friday at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.—At 4.30 p.m. each day. Monday: Manchester Children's Hospital, Malnutrition and Vomiting in Infancy. Tuesday: Salford Royal Hospital, Bronchopneumonia in Children. Wednesday: Royal Infirmary, The Differential Diagnosis of Functional and Organic Disease of the Nervous System. Thursday: Ancoats Hospital, Tuberculous Peritonitis. Friday: Royal Eye Hospital, Detachment of the Retina, Vitreous Opacities.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical demonstrations at 4 p.m. each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Medical. Friday, Ear, Nose, and Throat. Special Lectures at 5.15 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Surgery of the Pituitary Gland. Friday, 3.30 p.m., Cerebral Abscess.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Thursday, 4 p.m., Orthopaedic Cases.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, *X* Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special Lectures at 5 p.m.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		FEBRUARY.
3	Tues.	Tower Hamlets Division, Stepney Central Hall, Commercial Road, 4 p.m.
5	Thur.	Coventry Division, Coventry, 8.30 p.m.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
11	Wed.	Leicester and Rutland Division, Leicester, 4 p.m.
14	Sat.	Last day for receipt of Nominations for election of Members of Council outside the United Kingdom.
19	Thur.	South-West Essex Division, Whipps Cross Infirmary, 4 p.m.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10 a.m. Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m.
		Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
		FEBRUARY (*continued*).
27	Fri.	City Division, Manor Lodge, Upper Clapton, 9.30 p.m.
		MARCH.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*).
		London: Naval and Military Committee, 4 p.m. (*provisional*).
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15	Wed.	London: Finance Committee, 2.30 p.m.
22	Wed.	London: Council.

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SUPPLEMENT

TO THE

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LONDON: SATURDAY, FEBRUARY 7TH, 1914.

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INDIAN MEDICAL SERVICE.

In September last the Secretary of State for India invited the British Medical Association to assist him to ascertain the causes of the falling off of candidates for the Indian Medical Service. The Association, in reply, submitted the following statement on the subject, which had been independently and previously drawn up for publication as an article in the BRITISH MEDICAL JOURNAL. We are informed that the statement, which is now published for information, is at present under the consideration of the India Office.

STATEMENT SUBMITTED BY THE BRITISH MEDICAL ASSOCIATION TO THE SECRETARY OF STATE FOR INDIA

ON THE

PRESENT POSITION AND FUTURE PROSPECTS OF THE INDIAN MEDICAL SERVICE.

UNSATISFACTORY RESULT OF RECENT EXAMINATION.

THE results of recent examinations for entry into the Indian Medical Service have made it obvious to any one who is able to judge that there has been great diminution in the popularity of that service during the last few years. For various reasons it is deemed unnecessary to discuss these results at length, but careful inquiries show that the standard of the competition has fallen even lower than the list would at first indicate. This is a danger signal which cannot be ignored. The issues involved are very large. If this grand old service, with its magnificent past traditions, is to enlist in the future a stamp of man inferior to that of its present officers, very wide interests will inevitably suffer. The Government of India and the millions it rules will obviously be the first losers, and in this loss its European and Indian subjects will share alike. More gradually, but with equal certainty, the standard of education will fall, thereby inflicting lasting injury on the medical profession in India and reacting balefully on the health of the people. Last, but far from least, comes a grave moral question: India wants our best in all departments of service. Those who know the Indian most intimately, and who admire most intelligently his many excellent qualities as a professional man, cannot blind themselves to the fact that his standards are still far from being those of his British brother. Much has been done during the last two decades to raise the tone of medical practice in India, but much assuredly remains to do, and for this work we want the best men we can get. Men unlikely to make a mark in other walks of life are useless for our purpose. History furnishes us with a recent object lesson in the experiences which followed the shutting of the portals of the larger medical schools to the Royal Army Medical Corps. It was not merely that that fine corps found its ranks filled with men who did not reach the high standard of efficiency the profession could have provided, but it took over twenty years of troublous times and patient weeding to bring it back into line again.

DISSATISFACTION OF PRESENT OFFICERS WITH THE CONDITIONS OF SERVICE.

The Indian Medical Service is on the verge of just such another catastrophe to-day. Its own officers are spreading widecast their warning through the British schools, and advising the young medical man to "wait and see" what is to be the next move, before he links his fortunes with a service which may bring him nothing but disappointment. For some years past communications both verbal and written have been received from officers of all ranks in the Indian Medical Service, and there can be no hesitation in saying that the present position is very grave indeed. It is not too late even now to avert disaster if those in authority will boldly face the position, but a mistake made to-day will take half a century to unmake, for it will not end with the retirement of the inferior men whose enrolment it will involve, but, snowball-like, will go rolling on in the lives and practice of the Indian profession, whose duties, privileges, and tasks it is the lot of the Indian Medical Service officer to inspire.

Causes of Dissatisfaction.

Before attempting to discuss the remedies for the evil indicated, it is obviously essential that the way in which the present position has arisen should be clearly understood. For this purpose we must go back some twenty to twenty-five years, to the time when the Indian Medical Service could command competition among the best men of the leading British schools. Less than a quarter of a century ago the private practice amongst all classes and races in India lay in the hands of the officers of the Indian Medical Service, and large fees were fairly frequently and comparatively easily obtained. Any man of average ability and industry could, especially in civil employ, be sure of considerably augmenting his income by means of private practice, whilst a few made considerable sums thereby. A great change has come over the situation, and the medical practice of India is rapidly passing into the hands of the native medical practitioners trained in our colleges, with the obvious result that in very many cases the Indian Medical Service officer has now to live on his pay alone, which is insufficient for the purpose. The second factor of importance is that the work expected of *all* officers in India has greatly increased during the last two decades, whilst in the Indian Medical Service, at least, allowances have been steadily and ruthlessly cut down. In consequence of the great increase in their official duties, many medical officers, who might otherwise still command private practice, find that they have neither the time nor the strength to give to it. It must be remembered that the climate of India in the plains where most of these officers serve is very exhausting, and that there is therefore a limit to the amount of work which even the most energetic and healthy man can do without breaking down. The third factor in the situation has been the steady rise in the cost of living. Every year sees prices going up. Rents are higher, food is dearer, and the standards of living are on the up-grade all round. A medical man is bound to live as those around him are doing. The result is that his pay does not suffice to enable him to keep up the position expected of an official of his rank. It is no exaggeration to say that the cost of living in India has gone up from 30 to 50 per cent. during the last two decades. Nor is there any chance of matters improving. The well-to-do Indian is adopting our standards of living and taking up the best houses, with the obvious result that house rent is rapidly rising, and in the Presidency towns is becoming prohibitive. Further, the rupee has depreciated enormously during recent years, with the result that great hardship is entailed upon a married officer whose wife and children are residing in England.

Into a situation which has thus been yearly growing more tense, and more fully charged with possibilities of disruption, a new factor has been working its way, and this it is which has lately driven the officers of the Indian Medical Service to advocate what is practically a boycott of the entrance examination for their own service. The causes of their misfortunes so far discussed have come from without, and the medical officer has felt that they have been the automatic outcome of influences which neither could nor in most instances should be controlled. The fourth factor he regards from a widely different standpoint; he bluntly calls it "unjustifiable State interferences with his rights," and is not slow to say that the Government he serves has broken faith with him, and is prepared to do so again. This question will be considered in detail later on, but it may here be stated broadly that the Indian Medical Service officer holds that he came into the service with the "right of private practice" assured to him. The first signal of alarm was hoisted when the Government of India introduced its very injudicious regulations limiting the fees of its medical officers. In response to a powerful agitation, in which the British Medical Association took the leading part, the objectionable regulations were repealed, but not until they had produced on the minds of the natives of India a lasting and very damaging impression that the Indian Medical Service had not the confidence of the Government. Before the service had had time to recover from this shock it received one still more serious. A rumour, which soon received private official confirmation, was set on foot to the effect that Government meant to introduce regulations which would greatly curtail the "right to private practice" hitherto enjoyed by its doctors. The motive of the move, like that of Lord Morley's memorandum, is said to be the encouragement of the indigenous practitioner. This is a question which we will discuss in all its bearings later on. It would, however, be a mistake to leave the impression that the movement emanates from the Government. It comes from the educated Indians who have been trained in our colleges, and is the expression of their very natural desire to share in the administration of their own country. It is essential that such ambitions should be considered in a large and statesman-like spirit, a spirit worthy of our great empire, and the Indian Medical Service officer will not be the last to exhibit such a spirit. On the roll of his great service are borne many names distinguished in both peace and war, and the triumphs of its glorious past are not a few; but we venture to predict that in the judgement of generations still unborn no achievement of them all will outshine the work he has done in the medical colleges of India. He has turned out a body of men of whom he well may be proud; the modern medical profession in that land is the child of the service, and that child looks to its parent for sympathy, encouragement, and help. It will not look in vain—the traditions of our flag assure that. At the same time it is most essential that no precipitate action should be taken. We must move to our goal with "the ordered action" of our race. The time is not yet ripe for any wide or sudden change in past policy if the medical education of the rising generation, using the word "education" in its widest sense, is not to suffer; it is a vital necessity that the teaching staffs of the great Indian colleges should be maintained in the future at as high a level as, if possible even at a higher level than, in the past. This will most certainly not be the case if the competition for entry into the Indian Medical Service remains as low as it is at present, or if it falls still lower, as now threatens. Still more essential is it that the Government of India should do nothing which can be construed as a breach of faith with its officers. The effects of such an action would extend far beyond the vast tract it governs, and would be of the nature of an imperial calamity.

The Methods of Recruiting for the Indian Medical Service and the Conditions of Service and Salary Therein.

The scope of our inquiry is considerably widened by the fact that the Public Services Commission meets again in India very shortly to take up for the various services in that land the very questions now under consideration. The Indian Civil Service was dealt with last year.

The present method of recruitment for the Indian Medical Service is by competitive examinations held in England, and it is most important that this system should be continued and that the examination should be kept as practical as possible, stress being laid on the practical rather than on the theoretical side of the work. It is the "practical man" who excels in medicine and surgery, whilst unfortunately the tendency of the Indian is to break down on this side of his work, and to shine on the other. To flood the Indian Medical Service with unpractical men would be most injurious to the true interests of India. It is of little advantage that a man should be able to make high marks in a competitive entrance examination for a medical service, unless he has those attributes of mind without which he can never make a really good surgeon or physician. Hence it is necessary to insist that the examination shall be kept practical rather than theoretical. It is true that the syllabus as it stands at present is a practical one, but the importance of this aspect of the question should be brought prominently before the attention of the examiners. If this were done we could hardly hear of such glaring mistakes as are now commonly reported to have been recently made by candidates who have occupied high positions on the list.

Then, again, it is a very necessary part of the education of Indian medical students who desire to serve in the Indian Medical Service that they should learn enough of English ways, manners, and customs to enable them to live without mutual discomfort in the society of British officers and of other Europeans of the same class. For this reason we consider that candidates from India should be encouraged to spend as much time as possible in a British school of medicine. A period of three years would be none too long to permit a man to become

acquainted with the methods of sanitation, the modes of living, hospital treatment and dietary, and the other features of medical practice which are so widely different in Europe and in India. Without this knowledge he cannot understand or treat the European in India, and this is no unimportant part of his work. Special hospitals for fevers and for nervous diseases are as yet non-existent in India, whilst in Europe they are considered very important for the instruction of students. As Europe is the home of Western medicine, the whole tone and atmosphere of a British medical school is better, higher, and more stimulating than that of an Indian medical college. The staff in a British school is much more numerous, whilst success in teaching—both by precept and example—forms there the avenue by which great medical men climb to fame. In short, British medical schools are far more efficient than Indian medical colleges. High aims, a sense of duty and of responsibility, and a knowledge of ordinary social convention are more easily, more certainly, and more soundly acquired in a British medical school than in an Indian medical college. This question of recruitment has been thus fully dealt with because there is a widespread belief that the aim and object of the Public Services Commission is to pave the way for the admission of a much larger proportion of Indians into the various services in India. In the case of the Indian Medical Service, at least, any such step must be taken most carefully if it is not to prove a most costly failure to the very part of the empire whose sons it is intended to benefit.

Training in India.

When a young officer has passed into the service, he is sent for a period of training to Aldershot and to Millbank. All authorities are agreed that the time he spends at Aldershot in learning something of his relations with his future comrades in arms is very valuable, but there are many who think—and the opinion seems well grounded—that the Millbank course might be done away with, and that this part of an Indian Medical Service officer's professional training would be much better conducted in the large hospitals and schools of medicine in the Indian Presidency towns, where a course of study of tropical diseases, bacteriology, and hygiene could be carried out under ideal conditions. The Indian Government would in this way obtain a more highly-trained staff of officers, and at less cost, than is possible at present. The machinery for the work lies ready to its hand; all that is needed is to make use of it. The adoption of this proposal would also enable officers, while still on probation and unemployed, to acquire a sufficient knowledge of the language of the country they are to work in. If they were ensured six months' continuous residence in one place, they would be able to secure continuity of language teaching and good teachers, both of which they are now often prevented from obtaining, owing to the frequent transfers to which under the existing system they are liable in the early years of their service. Moreover, the proposed changes in system would enable the senior officers to become acquainted at an early stage with their juniors, and so to judge of their fitness for various important appointments at a later stage of their career. During this period of training, instruction in station hospital management, and in the hygiene of British troops could also easily be arranged for. Larger facilities should be afforded to medical officers for taking up resident appointments before going out to the East. The existing rules are sufficient if only they are carried out.

Too Frequent Transfers: Inadequacy of Transfer Allowance.

There is a very strong feeling in the service that officers are subjected to too frequent transfers. We recognize that the "exigencies of the service" demand transfers, but these moves are said to be more frequent than in the other Government services. Such sudden and frequent changes of station often entail heavy pecuniary loss. The majority of medical officers are married, and the whole cost of moving children, servants, household effects, horses, etc., falls on the officer, who is thereby out of pocket every time he is moved "in the interests of Government." Reasonable cost of transfer should be provided by Government instead of the present entirely inadequate allowances.

Life Insurance.

All medical officers are compelled to subscribe to the Indian Service Family Pension Fund, whether they are otherwise insured or not. Yet the pensions awarded to widows and children under this fund are very inadequate; they do not afford a bare subsistence under present conditions. The original object of the Government in establishing this fund was to ensure that the dependants of any officer who died in the public service, should not be left absolutely destitute, but should be in such financial circumstances as to assure the education and upbringing of the children in the same station of life as their father occupied. Considering that few officers have private means, and that the majority cannot possibly save much, the pensions thus provided for surviving dependants are quite inadequate. The pensions for sons cease at 21, the most critical period in their education or embarkation on a career in life; these pensions should continue up to the age of 25. In the case of daughters who have become widows, they should be again eligible for the pension toward which their fathers subscribed. The complete loss to an officer of all benefit from his past subscriptions in the event of the death of his wife or children is also a grave defect of the existing system. Many officers, without being in the possession of accurate actuarial knowledge, believe that many insurance offices would give much better terms than those of the Indian Service Family Pension Fund, and that the whole question should be thoroughly investigated. The Council believes that there are good grounds for this opinion, and that an independent inquiry, which will carry conviction to the officers concerned, is urgently called for alike in their interests and in those of the Government they serve.

Leave.

So far as furlough is concerned, the conditions of leave as laid down in the Civil Service Regulations would be adequate, provided that the whole amount allowed could be taken during an officer's service. Under present circumstances this is the exception and not the rule.

Under Article 302, Civil Service Regulations, the maximum amount of furlough that may be taken by an officer is six years, but under present conditions such an amount of leave cannot possibly be taken by an officer during his service. Should an officer not be able to take the full period of leave to which he is entitled, he should be allowed to take the balance due to him under much more favourable rates of pay. But if the Government of India is to enjoy a reputation for fair play it is essential that an officer should be allowed to take the leave due to him, and to take it when it falls due, instead of having, as too often happens at present, to forego it for long periods, or else to "go sick." The situation has been aggravated owing to the fact that on many occasions during the past twenty years leave has been entirely closed to the Indian Medical Service officer on account of war, famine, and plague. Between the years 1895 and 1901 such periods of stoppage were both frequent and prolonged. The leave thus stopped has too often been entirely lost, instead of being merely deferred, as should have been the case under the Civil Service Regulations.

In the matter of casual leave, too, the Indian Medical Service has a very real grievance. The ordinary civil officer can always count on his Sundays, and on the numerous gazetted and seasonal holidays, whilst the medical officer has to work the whole year round. It would be in the interests of the Government and of the service if a more liberal grant of casual leave were made to the Indian Medical Service. There is also a very strong feeling that the granting of this form of leave should lie entirely in the hands of the local Surgeon-General, who is the official responsible that in an officer's absence his duty is satisfactorily performed. At the present time the local Governments have hedged this form of leave about with regulations of their own, with the result that the heads of the medical service can only sanction a very limited allowance on their own responsibility. When a reference is made on this subject to the local Government, it sometimes acts with a most regrettable want of generosity towards its medical officers.

The Right of Private Practice in the Indian Medical Service.

Reference has already been made to the changes in the conditions of life of the medical officer in India, which have served greatly to lessen the solid advantages he formerly enjoyed. Those changes are due:

1. To the greatly diminished purchasing power of the rupee, and the consequent rise in the cost of living.
2. To the rise in the standard of expenditure, which obviously accentuates the last factor.
3. To the enormous increase of official work now thrown on Government medical officers as compared with what was expected of them in the past.
4. To the fact that the Indian practitioner has gradually acquired much, and is acquiring more, of the private practice once undisputedly enjoyed by the officers of the Indian Medical Service.

It is proposed now to discuss the vexed question of the "right to private practice" which is claimed so tenaciously by the officers of the Indian Medical Service that any further interference therewith will prove the rock on which this old and distinguished service may find shipwreck. This question must be approached from the point of view of supply and demand alone. The Indian Government can no more obtain first-class medical men at the wage of second-class men than it can buy silk in the open market for the price of cotton. This puts the whole case in a nutshell. What price does the Secretary of State mean to give in the future? and what class of man does he wish to recruit? The medical market awaits the reply to these questions, suspending its judgement and already in anticipation withholding the pick of its supply.

There can be no doubt that the interference of the Government of India with the fees received by its officers in private practice was a serious mistake. The fact that that Government has had to withdraw from its original position sufficiently indicates this. Unfortunately the results of its action remain behind in resentment in the hearts of its officers, and in the widespread impression naturally conveyed to the minds of Indians that the medical department does not enjoy the full confidence of its rulers. Profoundly as the Government has modified its orders, nothing less than their complete withdrawal with the restoration of the *status quo ante* would suffice to allay the irritation produced, and to undo the mischief done. Even then, years of careful administration would be needed. It should in this connexion be borne in mind that a barrister or a private medical practitioner may demand any fee he cares to fix without in any way being interfered with. It is idle to say that there were instances in which the privilege of private practice was abused. This argument is often used with bated breath, as though the facts had never been allowed to creep out to the light of day, whereas they have long been well known. There is no defence for improper conduct, and none is made, but it is submitted that the duty of a Government is to face such situations boldly, and punish the offenders. To make all the innocent suffer for a very few guilty is always a course to be avoided, and yet this is what has been done with the Indian Medical Service.

Government Encouragement of Hospital Abuse.

On the top of this unfortunate "limitation of fees" incident came an order issued by one of the local Governments in September, 1908, dealing with its State hospitals, and prohibiting "the making of any distinction between out-patients who are really or apparently poor and out-patients who are really or apparently rich." Older still is the practice of the various local Governments of permitting the admission to the special paying wards of the Presidency State hospitals of both male and female patients, whether they are Government servants or not, and their treatment whilst in those wards, at very cheap rates, by Indian Medical Service officers, the fees being credited to Government. The effect of this ruling and practice is to diminish private practice by bringing into the State hospitals for free treatment patients who are well able to afford treatment in their own homes.

When this fresh departure (1908) of a local Indian Government was brought to the notice of the British Medical Association, it drew the attention of the Secretary of State for India to it, urging strongly that it was an abuse of hospital relief, and that it was unfair both to the Indian Medical Service officer and to the local medical man. After a very long period of delay the Government of India issued an order, which plainly showed that the action of the local Government had been taken without either its advice or consent, but the information available is to the effect that, so far as practical results are concerned, nothing has yet been changed.

Further Suggested Curtailment of Private Practice.

Of late years the various Governments have shown a tendency to add to the list of those officers who are excluded from the privilege of practice. This has caused a good deal of uneasiness in the service, but nothing to that excited by the rumour that a further large curtailment of private practice is intended. The first step contemplated would appear to be the limitation of the right to practise of professors in the colleges of the Presidency towns in their own speciality, and to "consulting" practice only.

The terms of the letter of the Government of India are not calculated to dispel the apprehension very generally felt that an interpretation both rigid and unusual will be given to the word "consulting." Is it to be understood that the new rules which are avowedly framed in the interests of the independent medical practitioner are intended to define and limit consulting practice as practice in relation to patients brought to the officer by other, that is by Indian, practitioners? At the present time those officers of the Indian Medical Service who confine themselves to one line of practice—and their number already considerable is steadily increasing—interpret the term "consulting practice" in the same sense as it is interpreted by leading specialists in London and elsewhere throughout the world. It is a recognized rule that a specialist is at liberty to see a patient who seeks his special services and to operate if necessary in the patient's own house or in a nursing home. To put any other interpretation on the term would either compel patients to pay a double fee every time they wish to consult the medical man of their real choice, for they would be obliged to pay the man who brought them as well as the consultant, or it would drive them from a consideration of expense alone to resort to what they themselves consider inferior advice.

It is necessary to bear in mind that though the professors may be assumed to be the pick of the service, not a few of them find that they cannot contrive to live in a Presidency town if they confine themselves to their own speciality in their earlier years of professorship. Again, Government does not always permit an officer to keep to one line of work in the Indian colleges. The "exigencies of the service" render universal complete specialization impossible. So it may easily come to pass that a man may be teaching one subject for a few years and may then be transferred to teach another. Something very like this occurs no doubt amongst the junior men of much older universities and schools of medicine, but not to the same extent as in India, where it is necessary that a man should be much more a "jack of several trades" than it is in Europe. Such a man has little chance of building up a specialist practice in his early days, and in some departments there would be little to get, even were he to keep to one line. It must also be remembered that the professorial staffs are largely recruited from the appointments in which general practice is the main occupation of the officer. Such men, even for years after entering a special appointment, remain most excellent general practitioners, and their services are greatly sought after in that capacity in the Presidency towns by both Europeans and Indians. The time is not ripe for any sudden or violent action, and the more so because natural conditions are slowly eliminating this class of man. Much greater care is taken now than formerly to find out the line of work for which an officer is best suited, and to keep him to it as far as possible. Changes in professorial work are now less frequent than formerly, with the result that the specialists are more expert and that there is a growing tendency in the Presidency towns for men to confine their practice, especially if they have time to take firmer root, to their own speciality. The administrative officers are not slow to foster this tendency, and a definite move in the direction of specialists confining themselves to their own speciality in private work is unmistakably in progress. If Govern-

ment would stand aside and allow this evolution to take place gradually, there can be no doubt of the issue. A word to the administrative officers in the various Presidencies and provinces would undoubtedly hasten the process. The Indian Medical Service officer, with long years of discipline behind him, will not be slow to be led by his own senior officer, but he will strongly resent being driven, when he considers that such action is a violation of a definite agreement made with him before he entered the service, and as such he most undoubtedly does consider it.

The opinion of the Indian Medical Service officer is formulated by the question so often heard, "Why can Government not let the matter work itself out along ordinary lines, without unfair interference with the service, and without a breach of faith with us in the matter?"

So widespread and deep-rooted is this view that it is important to examine the grounds on which the position rests. Reliance is placed on three main contentions:

1. The pay of Indian Medical Service officers was fixed on the assumption that they could considerably augment it by private practice (*vide* para. 44 of the report of the Commission on the Indian Medical Service, dated Calcutta, March 7th, 1866). This is the reason why the civil surgeon draws less pay than a medical officer in medical charge of a regiment, although his work is admittedly much harder, and far more responsible and trying.

2. To the young medical man who desires information as to the terms of service under the Government of India, His Majesty's Secretary of State has for many years used, and to this day still uses, the following words in his memorandum regarding the position of officers appointed to His Majesty's Indian Medical Service: "Medical officers are not debarred from taking private practice so long as it does not interfere with their proper duties." In view of this very explicit statement, it is difficult to understand how any Government within the empire could venture to change so essential a condition of service without very fully compensating those of its officers who would be deleteriously affected by such a change.

3. One of the principal attractions of the Indian Medical Service is, and always has been, that private practice is available for those who desire it. The keenest men of the service naturally gravitate to posts in which they can exercise this right; it has always been the case that most capable surgeons, physicians, and research workers have been found in the ranks of the civil side of the Indian Medical Service. It is obviously to the advantage of Government to preserve the attractions of the civil branch of the service.

It has always been understood that private practice was one of the rights of the Indian Medical Service, this right being founded on the East India Company's Act of 1772 (13 Geo. III, c. 63).

> 24. And . . . from and after the first day of August one thousand seven hundred and seventy-four no person holding or exercising any civil or military office under the Crown or the said United Company in the East Indies shall accept, receive, or take, directly or indirectly, by himself or any other person or persons on his behalf, or for his use or benefit, of and from any of the Indian princes or powers, or their ministers or agents (or any of the natives of Asia), any present, gift, donation, gratuity, or reward, pecuniary or otherwise, upon any account or on any pretence whatsoever; or any promise or engagement, or any present, gift, donation, gratuity, or reward. . . .
>
> 25. Provided always . . . that nothing herein contained shall extend or be construed to extend to prohibit or prevent any person or persons who shall carry on or exercise the profession of a counsellor of law, *a physician or a surgeon*, or being a chaplain, from accepting, taking, or receiving *any* fees, gratuity, or rewards in the way of their profession. [The italics are not in the original.]

Further comment on the "right" of private practice seems superfluous. It has been admitted by the Government of India as a powerful factor in fixing the scale of pay of its medical officers at a low rate as compared with that of its other services; it is held out as an inducement by the Secretary of State for India to young medical men who are thinking of joining the Indian Medical Service, and it is assured to the service by an Act of Parliament. The next move lies with the India Office, and the whole medical profession will await it anxiously. On it hangs the future of a service with great past traditions and with a magnificent present mission.

The Indian Medical Service as a War Reserve for the Army in India.

The Indian Medical Service officers in civil employ form a medical war reserve for the army, both European and Indian, and may be called upon at any moment to take the field with troops. No one who knows the facts will be likely to dispute that the civil side of the Indian Medical Service forms the finest medical war reserve in the world. The officers have all had military training with troops, and most of them have seen active service. They have all had considerable administrative experience, that of many of them being very large indeed. Professionally they are an exceptional class of men, whose work has covered a very large field, and whose services to an army in war time are an asset no nation can afford to lose without very serious reason for so doing. Most important of all, they are a body of officers who know the customs, the habits, the prejudices, and the languages of Indian peoples, as well as they know the climatic conditions, the peculiarities of sanitary requirements, and the variations of the manifestations of disease in the land of their adoption. To know India and its peoples a European requires to give his life to the task. To serve usefully with an army in the field a surgeon or a physician must have been "broken" to discipline, and trained to the methods by which an army works. This medical war reserve has been extensively drawn upon on many occasions during the last quarter of a century, and when any serious trouble is afoot on the frontier a large number of officers in civil medical employ are called to the colours. The Indian Medical Service officer is always in expectation of such a call, and responds to it quickly, smoothly, and as a matter of course. As soon as the trouble is over, he slips quietly back into civil life again, and takes up his interrupted duties as though he had only left them for a short period of leave. It is most important that no officers should be found in the Indian Medical Service who would naturally shrink from active service, or whom it would be considered inadvisable to send on active service. In this connexion it is necessary to bear carefully in mind that many of the Indians who have in the past obtained commissions in the Indian Medical Service have belonged to the non-martial races of India, from amongst which Sepoys are very sparingly or not at all enlisted. This in large measure explains the very strong objection which combatant officers have to the appointment of Indians as medical officers to the units they command or serve with. That this objection is founded on actual experiences in the past it is impossible for any one who has moved in army circles in India to deny. At the same time, a tribute of admiration is due to those Indian officers of the medical service whose performance of the difficult and dangerous duties of war time has won them a warm place in the regard of their comrades in arms. Yet another difficulty arises from the prejudices of the Indian peoples themselves, for we find that the combatant native officer, who is sometimes of better family and higher caste than the Indian commissioned medical officer, considers himself unfairly treated, in that he has not the same army rank and is not admitted to the British officers' mess, as is the Indian commissioned medical officer. Yet, at the same time, the combatant Indian officer not seldom looks down on his brother Indian of the Indian Medical Service for availing himself of the privilege of mixing with the British officer and thereby damaging his caste. The question is very complicated.

Moreover, difficulties always arise, even in peace time, and still more in time of war, when it becomes necessary to place the medical charge of European troops in the hands of non-European medical officers. The British soldier resents this more quickly, more determinedly and with less attempt at concealment than his officer. The result is constant friction for all concerned.

Though it seldom finds voice, the same feeling, probably all the deeper for being usually mute, underlies far other relations in life. Both in the army and in the civil services the wives of European officers strongly object to treatment by non-European medical men, especially in cases of confinements, or of diseases peculiar to women. The restrained and weighty protest of the European Defence Association, issued last July, will, without doubt, evoke a very wide response in Great Britain.

The question naturally asked is, What is the price which India pays for this magnificent medical war reserve, a reserve which has been at once the envy and the admiration of Europe, America and Japan? The answer is a sufficiently surprising one: that price is the maintenance of the civil side of the Indian Medical Service, the maintenance, in fact, of a department which by its genius, labour, and devotion to duty, has done such work as should wipe out all petty considerations of the cost of its upkeep. The routine administration of the many Indian hospitals, the creation of a Western School of Medicine in India, and the great work done in connexion with research, sanitation, and preventive medicine, have entitled the civil medical officer to be considered a benefactor to the land "where he spent his toil." His department owes but little to India, as compared with India's debt to it. To what fortunate circumstance, then, is the Government of India indebted for the possession of a war reserve as cheap as it is efficient? The answer is shortly that it has always been the great attraction of the Indian Medical Service that facilities are afforded for practice among the civil population in addition to experience acquired in military life. It is therefore essential that these facilities should be preserved, and that no new restrictions be imposed, provided always that Government work is performed to the satisfaction of the head of the department and of the Government.

The line of reasoning is very easy to follow. India, by virtue of the attractions of the civil side of the Indian Medical Service, possesses a war reserve of great value and of undisputed efficiency at a very low cost. The maintenance of that reserve hangs on the prosperity of the Civil Medical Department; injudicious legislation or undue interference will shatter that prosperity in a very brief period, whilst it will take a very long time to re-establish it, if, indeed, that end could ever be achieved.

Alleged Motive of New Restrictions on Private Practice.

The question naturally arises, What is the alleged motive of the new restrictions on private practice? It is said to be a move "in the interests of the Indian medical practitioner." This aspect of the case, therefore, deserves the most careful study. It is alleged that the Indian medical officer interferes with the practice that rightly belongs to the Indian practitioner. No one can attempt to dispute that the Indian Medical Service officer not only originally built up this medical practice, but that he has trained the men by whom it is now proposed so lightheartedly to replace him. Nor can anyone who knows the facts doubt for a moment that during the last twenty-five years the teacher has been largely replaced by his pupil in this lucrative field, and that it will go on increasing in the future. The indigenous profession is in a very active and virile state, and instead of officers of the service encroaching on the rights of independent members of the profession it is they who have acquired the practice formerly enjoyed by officers in the service. All this notwithstanding, it need not be denied that a large imperial policy might demand and even justify the replacement of the men of the governing class by those of the governed, provided that it could be shown that the time had come for such a step, and provided always that the men replaced were compensated on such a scale as to remove all trace of a suspicion that they had been unfairly treated. The Council would insist that the time has *not* come, and that for many long years India will need the best men the profession at home can supply to foster and to care for its still immature profession. High standards of work and morals must be set before the Indian students, and any tendency to be satisfied with low ideals must be zealously combated by both precept and example; this high standard of action can only be set by men whose enthusiastic devotion to duty, and unhesitating obedience to a high code of probity and honour are the inheritance of long generations of thought and training. To take the step now contemplated by the Government of India is to cut off the supply of such material at its source, and there can be no doubt that, apart from the effect on the war reserve, the result would be a widespread deterioration in the morale, the training, and the efficiency of the medical profession in India.

There is a tendency to lose sight of the fact that at the present time the ratio of the number of civil Indian Medical Service officers who are eligible for private practice to the population is less than one in a million. It cannot be pretended that so small a proportion as this can seriously check the spread of indigenous medical enterprise. If the Indian medical practitioner of to-day were of the same mental and moral fibre as his teacher, the European Indian Medical Service officer would speedily be swept away by a force which would prove irresistible. The medical profession in India is but a small quota of the total population—smaller far than in European countries—and the interests of the masses and of the army which safeguards them must not be lost sight of in those of a minute section of the community. It would be most impolitic to forget the "toiling millions," or to neglect "the suffrage of the plough," in response to the organized agitation of a particular profession. Even small sections have their rights, and are entitled to fair consideration, when big questions are being approached, and the position of Englishmen, and still more of English women and children, in India must not be forgotten when the subject of the provision of medical aid for the country is being handled.

Proposed Provincial Medical Service.

Sufficient reasons have been given for the assertion that interference by Government with the "right" of its medical officers to practise their profession in a private capacity would be a grave mistake from every point of view. A larger and more statesmanlike method of dealing with the present situation would be by the creation of a Provincial Medical Service on lines similar to those of the Provincial Civil Service. In this way Western medicine, with all the blessings it brings, could be pushed much farther into the country districts and small towns of India, where it is now practically unknown. Better educated medical men, and more of them, better equipped hospitals in the small towns, and more of them—these are some of the pressing needs of India. They have been brought prominently before the notice of the various Governments on many recent occasions. Money will be needed and good organization. Neither of these requirements will prove insuperable obstacles if once the conviction that the need really exists is seriously brought home to the mind of the Viceroy's Government. In any case, nothing should be done in India at the present time to weaken the European medical officer's position as an educationalist, as an exponent of all that is best in the practice of Western medicine, or as a unit of the extremely important war reserve. These three strands of his work are so closely bound up with each other that it is impossible to injure one without injuring all three.

Some other Grievances of the Indian Medical Service.

The above paragraphs have not exhausted the list of grievances of the officers of the Indian Medical Service. With many of them it does not seem necessary or expedient to deal at present, but reference must be made to a few of the really big questions which have not hitherto been discussed.

Period on Probation.

The first of these is the question of counting the period spent on probation, and the time from completing the period of probation until arrival in India, towards an officer's service for promotion. Previous to the year 1892 this privilege was enjoyed by all officers of the Indian Medical Service; then it was withdrawn and lay in abeyance for a period of about fifteen years, until, in response to representations, it was restored to the service. The large body of officers who have been adversely affected by the rule have long felt it a grievance that, when the Secretary of State acknowledged that a mistake had been made, as he clearly did when he restored the privilege to those who came after, they should have been left out from participation in the benefits enjoyed by so large a proportion of their comrades. All officers now in the service should be treated alike in this matter. If it has been considered equitable for a certain number of officers, it is equally so for all alike.

The Position of the Surgeon-Generals in their Relations to the Local Governments.

Under present conditions the Surgeon-General, who is the head of the Medical Department in his Presidency, advises Government on medical questions and gives reasons for his opinion. These are transmitted to Government through the Secretariat, and are there criticized by non-medical men. Unless the Government chooses to ask any further questions of the Surgeon-General, the matter is settled and orders are passed. Often no opportunity is given to the Surgeon-General of supporting or refuting the opinions expressed by the Secretariat. The Surgeon-General is, in fact, in the position of a debater who moves a motion in a debating society, but who is not entitled to hear the debate or to reply, and to whom the results of the debate are communicated as a Government order. The natural result is that a number of regrettable mistakes are made, simply through lack of expert guidance. For the undoing of such mistakes a complicated machinery has to be set in action, and much valuable time is lost thereby. Not seldom, however, the mistake once made is allowed to stand, however glaring it may be, rather than that it should be acknowledged.

To avoid such unedifying spectacles the Surgeon-General should be a Secretary to Government, and the personal assistant to the Surgeon-General an Under Secretary to Government in the Medical and Sanitary Departments, both being paid as such.

It is true that a local Government occasionally consults the Surgeon-General (by unofficial reference) on the different points raised by the Secretaries and others, through whose hands the files pass in the Secretariat; but this is not the routine procedure. If he were a Secretary to Government all files would necessarily come through his office. The Medical Department is just as technical as the Public Works Department, which is represented by two Secretaries to Government, each with an Under Secretary. The arrangement proposed would facilitate work and relieve the Chief Secretary from a burden which is daily increasing. It would also rid the Indian Medical Service of a serious grievance and of a very real and constant source of irritation. When a medical officer in charge of a large district or of an important institution has made carefully considered recommendations, which he has ascertained beforehand to have the approval of the head of his department, it is most galling to him to have them thrown out or altered, and to find grounds given for such action which are patently in contradiction of the elementary principles of professional knowledge; yet this is what not infrequently happens in India at the present time.

Status of District Medical Officer.

Nor is the Surgeon-General the only officer who is treated in this offhand fashion. The district medical and sanitary officer of a district should, in the interests of discipline and efficiency, have complete control over his medical subordinates, including vaccinators, as regards transfers from one station to another within the district. The present system, by which transfers of medical subordinates can only be carried out with the sanction of the President of the District Board, tends to lower the status of the district medical and sanitary officer in the eyes of his subordinates, who are aware that he has no real power over them. The provincialization of all district head quarter hospitals should be the first step in the direction of this very necessary reform.

Confidential Reports.

At the end of every year each Indian Medical Service officer is reported on confidentially by the Surgeon-General; this report is sent to the local Government, which adds its own remarks. The report is then forwarded to the Director-General, Indian Medical Service, who files it for reference until the question of selecting the officer for promotion arises. When the time of selection comes, these confidential records are scrutinized, first by the Director-General, Indian Medical Service, and then by the Government of India, and are used in forming a judgement on the suitability or otherwise, for promotion, of the officer in question. It will be seen, therefore, that it is of the utmost importance that the remarks of the Surgeon-General and of the local Government should be absolutely self-explanatory and clear, because, when this scrutiny occurs the officers responsible for these remarks and reports may have long since left the country, and no explanation of an ambiguous remark is available. Should an unfavourable remark be entered in these confidential reports, it is laid down in regulations that it shall be communicated to the officer concerned, either verbally or in writing, but there is nothing which compels the Government to give reasons for their opinions, should the officer reported on consider them unjust. It is important, therefore, that no remark contained in these reports should be of an ambiguous nature, in order that an officer may be in no doubt as to the nature of his alleged deficiency or transgression, and may therefore be in a position to correct his fault, or to prefer an appeal, according to the course he wishes to pursue. Another very important point is that in all matters which affect the professional conduct or qualifications of a medical officer, it should not be open to any lay authority to override or disregard the Surgeon-General's opinion. Should such a lay authority be dissatisfied with the Surgeon-General's opinion, the matter should be referred to the Director-General of the Indian Medical Service, whose decision should be final.

October 30th, 1913.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

EAST ANGLIAN BRANCH:

WEST SUFFOLK DIVISION.

A SPECIAL meeting of the Division was held at the Friars, Sudbury, on January 27th. Dr. WOOD was in the chair, and fourteen members were present.

Report of Representative.—The CHAIRMAN, as Representative, reported briefly on the action taken at the last Representative Meeting.

New Organization Rules.—The new organization rules were considered, as modified by the Executive Committee, and after a brief discussion adopted for submission to the Central Council.

Systolic Pressure: the Sphygmomanometer.—Dr. CURL (Colchester) read an interesting paper on (*a*) some sources of error in the estimation of systolic pressure, (*b*) systolic pressure in pneumonia. An interesting discussion followed, and Dr. CURL gave a practical demonstration of the use of the sphygmomanometer in conjunction with auscultatory determination of the obliteration of the brachial pulse. A very hearty vote of thanks was expressed to Dr. Curl for his paper, several members expressing the hope that this, the first clinical meeting for many years, might establish the custom of holding such meetings at frequent intervals. Tea was provided by the members resident in Sudbury.

EAST YORK AND NORTH LINCOLN BRANCH:

EAST YORK DIVISION.

Presentation to the Retiring Honorary Secretary.

AT the annual meeting of the East York Division of the British Medical Association, held at Hull last month, Dr. E. Turton, who recently resigned the secretaryship of the Division, was presented with a silver dessert service as a mark of his colleagues' appreciation of services during six years' tenure of the office. Sir JAMES BARR, responding for the guests, who included most of those taking a prominent part in the life of the city, expressed the view that nowadays the craving for truth was not as strong as it used to be. It was not easy, amid the complexities of modern life, to discover where truth was to be found, but he claimed that the medical profession more than any other sought to find out what was really true. Every man should think, act, and work for himself, always seeking the truth and holding to his principles, whether he were in a majority or a minority. The Chairman (Dr. A. E. SPROULLE), in making the presentation to Dr. Turton,

spoke of the regard in which he was held by members in East Yorkshire, and their gratitude for valuable services rendered to the profession and the Association through a very trying period. Dr. Turton, in reply, spoke of the important concessions secured in regard to the position of the medical profession under the Insurance Act as a result of the efforts of the Association.

LANCASHIRE AND CHESHIRE BRANCH:

Liverpool Division.

The annual meeting of the Liverpool Division was held at the Medical Institution, Liverpool, on January 30th, when Dr. R. I. Richardson was in the chair.

Annual Report.—The report of the Division for the year 1913, signed by Dr. Francis W. Bailey, Honorary Secretary, on behalf of the Executive Committee, was received and adopted.

The report stated that the work of the Division had this year been more concerned with local affairs and Association matters, in contradistinction to that of the previous year, when interest centred round the National Insurance Act in its relation to the medical profession.

It pointed out that the Division could congratulate itself in that the Watch Committee of the Liverpool Corporation finally granted all the requirements of the Police Surgeons Subcommittee in relation to the appointment of a surgeon to the Liverpool police force, thus bringing things to a satisfactory conclusion, and improving the position of all the police surgeons in the district. Attention is also called to the fact that, mainly due to the intervention of the Association, the position of the tramways medical officers has been somewhat improved.

The Executive Committee regretted that in spite of the Division having decided to support the Voluntary Levy Fund, the response was so small as to nullify the efforts spent in collecting for the fund and necessitating the return of the amount collected to the subscribers.

During the year seven meetings of the Division were held—one annual, four ordinary, and two special; the average attendance at the seven meetings was 43.6. The Executive Committee met thirteen times during the year; the average attendance was 15.9 The Ethical Committee met once, the Police Surgeons Subcommittee seven times, and the Tramways Medical Officers Subcommittee twice; there had been no work necessitating the calling together of the Hospitals Subcommittee or the Medical Treatment of School Children Subcommittee.

The number of members on the list on December 31st, 1912, was 406, and on December 31st, 1913, 391.

The Committee regrets the loss the Division has sustained by the deaths of Dr. J. P. Bligh, Dr. J. H. Evans, Dr. J. H. Finegan, Dr. C. G. Lee, Dr. O. T. Williams, Dr. A. J. Wallace, and Dr. H. Waters.

Votes of Thanks.—A hearty vote of thanks was, on the proposition of Dr. Barnes, seconded by Dr. Gullan, accorded to the retiring Chairman (Dr. R. I. Richardson) for his valuable services as Chairman during the last year. On the motion of Dr. Donnelly, seconded by Dr. Harvey, a vote of thanks to the Vice-Chairman (Mr. Damer Harrisson), the Honorary Secretary, and the Executive Committee for their services was unanimously adopted. A vote of thanks was passed to the President and Council of the Medical Institution for kindly placing at the disposal of the Division the rooms of the Institution for the use of the meetings of the Division and its committees and subcommittees.

Election of Officers.—The following were elected:

Chairman.—Dr. J. C. M. Given.
Vice-Chairman.—Dr. T. Bushby.
Honorary Secretary.—Dr. Francis W. Bailey (re-elected).
Executive Committee.—Bootle Ward, Drs. Claxton and J. Dunn; Central Ward, Dr. F. J. S. Heaney and Mr. G. P. Newbolt; Northern Ward, Drs. Owen Bowen and Percy Edwards; Southern Ward, Drs. W. B. Bennett and Donnelly; Western Ward, Drs. W. T. D. Allen and Henry Jones.
Representatives on the Representative Body (to take Office at the Next Annual Meeting).—Drs. R. I. Richardson, J. Walker, J. J. Tisdall, and R. Paterson.
Representatives on the Branch Council (to take Office at the Next Annual Meeting of the Branch).—Drs. Francis W. Bailey, F. H. Barendt, T. R. Bradshaw, E. T. Davies, K. Grossmann, and N. P. Marsh.

Rules.—The rules of the Division were altered in accordance with the draft organization rules of the Association, and as a result the following were elected as an Ethical Committee of the Division: Dr. J. C. M. Given, Chairman, and Dr. Francis W. Bailey, Secretary (*ex officio* members), and Drs. N. P. Marsh, T. R. Bradshaw, H. Harvey, F. J. S. Heaney, and R. I. Richardson.

Standing Orders.—The standing orders of the Division were adopted.

METROPOLITAN COUNTIES BRANCH:

Camberwell Division.

An ordinary meeting of the Division was held at Peckham House Private Asylum on January 22nd, when Dr. Batten was in the chair, and eight members and two visitors were present.

Report of Representative.—Dr. Langford, the Representative of the Division, read his report of the recent Representative Meeting, and it was resolved that the report be received and adopted. A hearty vote of thanks was unanimously accorded to Dr. Langford for his services as Representative.

Cerebral Congestion.—Dr. Theo. B. Hyslop, F.R.S.E., read a paper on "Cerebral Congestion," and a discussion ensued, in which Messrs. Batten, Esler, Oldfield and Clatworthy took part.

Votes of Thanks.—On the motion of Dr. Esler, seconded by Dr. Batten, a hearty vote of thanks was accorded to Dr. Hyslop for his exceedingly interesting paper. A vote of thanks to Dr. King and the authorities at Peckham House for so kindly entertaining the Division was unanimously carried, on the motion of Dr. Langford, seconded by Dr. Cripps.

Association Notices.

SUGGESTED CHANGES OF BOUNDARIES.

Notice of Proposal for Formation of a Hyde Division of the Lancashire and Cheshire Branch.

Notice is hereby given under By-law 73 to all concerned, of a proposal made by the Ashton-under-Lyne Division for the formation of a new Hyde Division of the Lancashire and Cheshire Branch, coterminous with the corresponding Insurance area of Cheshire, embracing the following:

> The municipal boroughs of Hyde, Stalybridge, and Dukinfield, the urban districts of Bredbury and Romiley, Compstall, Hollingworth, Marple, and Mottram-in-Longdendale, and the rural district of Tintwistle.

Formal written notice of the proposal has been given, pursuant to Article 13, to the Stockport, Macclesfield, and East Cheshire Division and to the Council of the Lancashire and Cheshire Branch, and the matter will be determined in due course by or on behalf of the Council of the Association. Any member affected by the proposed change, and objecting thereto, is requested to notify the fact, and his reason therefor, to the Medical Secretary, 429, Strand, London, W.C., not later than March 7th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Metropolitan Counties Branch: City Division.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed. The Honorary Secretary will be glad if members proposing to show cases or specimens, or read short abstracts of cases, will kindly notify him not later than February 16th.

Metropolitan Counties Branch: South-West Essex Division.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at Whipps Cross Infirmary on Thursday, February 19th, at 4 p.m., when the Medical Superintendent, Dr. J. C. Muir, will give a clinical demonstration.

Midland Branch: Leicester and Rutland Division.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that a meeting of the Division will be held at the Royal Infirmary, Leicester, on Wednesday, February 11th, at 4 o'clock. Agenda: Report of Representatives to the Representative Meeting. Address by Dr. Pratt on the Estimation and Significance of the Systolic and Diastolic Arterial Pressures.

North of England Branch: Newcastle-on-Tyne Division.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, February 20th, from 3.15 to 6 p.m. Mr. C. F. M. Saint: A Comparison of Inflammation and Tumour Formation. Professor T. Beattie: Chorea and Choreiform Movements. Tea. Mr. A. M. Martin: Surgical Treatment of Some Congenital Deformities. Dr. E. F. Pratt: Experiences of the National Health Insurance Act. Dr. T. H. Livingstone: Common Diseases of the Accessory Sinuses.

LOCAL MEDICAL COMMITTEES.

WEST SUFFOLK.

Panel Committee.—The application on November 22nd, 1913, to the Commissioners for the recognition of the Local Medical Committee as fulfilling the duties and having the powers of a Panel Committee not having been acceded to, a general meeting of practitioners on the panel was held on January 23rd, when it was decided to nominate twenty practitioners to form the Panel Committee on the following basis: (1) Four representatives of the County Insurance Committee, (2) two representatives of the Executive Committee of the West Suffolk Division of the British Medical Association, (3) two representatives from each of the seven districts in which the area of West Suffolk is divided. It was also decided to accept the offer of the Commissioners to recognize the existing Local Medical Committee up to July 15th, 1914.

Annual Report.—The annual report presented to the meeting stated that in all twenty-three meetings had been held. It also stated that the Committee found that practically every suggestion as to amendment in the administration of medical benefit had met with refusal by the Commissioners. Though the Insurance Committee had on the whole been willing to meet the request of the Local Medical Committee as far as possible, on all points of importance the Commissioners' approval was required and usually refused. The suggestion was made that the medical profession should have two representatives on the Medical Benefit Subcommittee in place of one as at present.

After discussion of the report the following resolution was carried, and has been circularized to every practitioner on the panel:

> That medical men on the panel be requested to send all complaints as to the administration of medical benefits to the Secretary of the Local Medical Committee, or of the Panel Committee (when it is constituted), and not to the Clerk to the County Insurance Committee.

Allocation.—It was reported that the Commissioners had agreed to the distribution of the annual credit which will be made in respect of those persons who had not chosen a doctor by January 11th, 1914, on a quarterly basis proportional to the number of persons on the list of each doctor for each quarter. The Commissioners had as yet made no ruling as to the allocation of the Drug Fund and Drug Suspense Fund in respect of such persons.

Vaccines.—The question of the supply of vaccines, serum, etc., is postponed pending the decision of the Chemists Committee.

STAFFORDSHIRE.

An ordinary meeting of the Staffordshire Local Medical Committee was held on December 12th, 1913.

Form of Agreement.—The Clerk to the Insurance Committee read a letter from the Insurance Commissioners in reference to suggested modifications in the form of agreement in which they refused modification of Clause 2 (ii), of Clause 6 (i) and Clause 15. The other modifications suggested were accepted by the Commissioners, or they gave explanations which made clearer the meaning of the original clauses. After discussion, the following resolution was adopted, and the Honorary Secretary was directed to bring it to the notice of all doctors on the panel:

> That having regard to the explanatory letter of the Commissioners the Committee recommends doctors to sign the new form of agreement without modification, but as far as Clause 2 (ii) is concerned does so under protest.

Certificates.—On a recommendation from the Stafford District Medical Committee, the following resolution, proposed by Dr. Hodder, was adopted by the meeting:

> That in the provision of certificates entitling insured persons to sickness benefit, medical men will welcome the co-operation of sickness visitors and secretaries of approved societies in order to secure the exposure of bogus claims.

This resolution was circulated to all doctors on the panel.

Free Choice of Doctor.—Dr. J. K. Butter brought to the notice of the meeting certain circulars issued by an approved society which seemed to operate against the exercise by insured persons of their right to free choice of doctor. The Honorary Secretary was directed to request the Insurance Committee to take notice of the matter, and to request that the transfers obtained in the manner set out in the documents be ignored by the Committee.

Next Meeting.—This being the last meeting of the Committee under its existing terms of recognition, Dr. Hodder was appointed convener of the next meeting, whenever it should be held, and the Chairman and Honorary Secretary received the thanks of the Committee for their services in the past year.

Annual Meeting.

The annual meeting of the Committee was held at Stafford on January 30th.

Constitution of Committee.—The return of members elected to serve showed that the Committee was constituted as last year, with the exception of one representative—namely, Dr. Lyth for Dr. Sowry, of Newcastle (resigned). The following officers were elected for the remainder of the Committee's term—that is, till July 15th, 1914.

Chairman: Dr. T. Ridley Bailey (Bilston).
Honorary Secretary: Dr. A. E. Hodder (Stafford).
Honorary Treasurer: Dr. F. N. Cookson (Stafford).

The above, with the addition of Dr. F. Daly (Silverdale), to be the four members chosen to serve on the Medical Services Subcommittee. The Executive Subcommittee and the Pharmaceutical Subcommittee were re-elected.

Annual Report.—The report of the Honorary Secretary was adopted. After giving particulars with regard to the formation of the Committee, the report stated that the arrangement of a method of allocation of funds accumulated in respect of persons who had not chosen a doctor had been the most difficult business; but it was hoped that the method adopted would prove satisfactory to the majority. In the matter of drug provision, a cordial agreement had been reached with the Pharmacists Committee, so that at present there were no outstanding points of difference; nor was any serious difference anticipated in the future. There had been no need so far for a disciplinary meeting of the Medical Service Subcommittee. Various complaints had at times reached the clerk or the Medical Benefit Committee, but in no case had the complaint been sufficiently substantial or definite to be put into form for presentation to the Disciplinary Subcommittee.

Expenses of Committee.—The report of the Honorary Treasurer showed that on the levy of 5s. per doctor on the panel only £48 was received instead of nearly £90, the amount which should have been received. The report was adopted, and a resolution carried that members of the Committee use all their influence with those who had failed to subscribe to induce them to pay the trivial sum asked for the necessary expenses of a committee which is of the first importance to the influence and welfare of the profession. In order to keep the expenses within the money in hand, members of the Committee resolved that for the present no travelling expenses should be refunded to members attending meetings.

Scale of Fees.—A communication from the Insurance Committee was considered relating to the scale of fees to be adopted in respect of exempt insured persons who had to make their own arrangements for medical attendance, and for which the Central Fund should be responsible. After discussion, the scale previously adopted for temporary residents was adopted and recommended to the Insurance Committee. The opinion of the Committee was sought in regard to the following case, referred to as under the provisions of Art. 50 (i) of the Medical Benefit Regulations: A doctor on the panel performed on an insured person, under local anaesthesia, an operation for removal of portions of cartridge, etc., carried into the scrotum as the result of a gunshot wound. The Committee was of opinion that the operation performed, and of which a description was furnished by the doctor in question, fell within the scope of medical benefit as defined by the Acts and Regulations.

INSURANCE COMMITTEES.

Manchester.

The Prescribing of Extract of Malt with Cod-liver Oil. At a meeting of the Manchester Insurance Committee last week the recent decision of the Local Medical Committee with regard to the prescribing of extract of malt with cod-liver oil came up for review. The chemists had complained that this preparation had been ordered in an extremely

lavish way, and that this had contributed in no small degree to the deficiency in the Drug Fund. It had been suggested that insurance patients had obtained it nominally for themselves, but had given it to their children, and in some cases had actually sold it to neighbours. In any case there appeared to be need for greater care in ordering it, and the Local Medical Committee had issued a circular letter to the practitioners stating that "extract of malt and cod-liver oil are considered by your committee to be dietetic articles, and therefore not to be prescribed except in tuberculous cases notified as such." The Medical Subcommittee of the Insurance Committee had, however, refused to sanction this restriction, and had passed a resolution informing the Local Medical Committee that "they were unable to recognize or approve of the exclusion of malt and cod-liver oil from the drugs, etc., to be prescribed for insured persons, where in the opinion of the practitioner in charge of the case such articles are necessary to the adequate treatment of the patient." This resolution was carefully considered by the Insurance Committee and confirmed, and the Chairman said that he had no doubt that the Local Medical Committee would inform the doctors that the Insurance Committee had refused to sanction the restriction on the ordering of malt with oil.

Incomes of Insurance Doctors.

Serious complaints were made by several members of the Committee that a number of the panel doctors were undertaking the treatment of far more insured persons than they could properly attend. One member of the Committee, Mr. E. Lloyd Jones, said that during the severe weather of several weeks ago he had visited two surgeries and found them stuffed with people, many of them spitting and coughing, and dozens of others standing outside. The doctor was turning them out as quickly as he could, but it was impossible for each individual to get proper attention. He asked that insured persons should be better protected in future, and hoped that the doctors as a body would take steps to prevent certain doctors making their £1,000 a year.

Dr. Johnston said that some of the societies were partly to blame for this, as they had fostered the idea among their members that they must attend their old club doctor.

Mr. J. U. Smith declared that doctors were "jerrying" their work and not diagnosing the complaints of patients properly. There were a number of doctors getting £1,000 a year, and he thought that no doctor could give efficient service under present conditions to such a large number of patients. If the insured knew all that was happening there would be a great outcry.

The Chairman, Mr. W. Davies, said that complaints of this kind ought to be sent to the Medical Subcommittee, but in this matter neither the Insurance Committee nor the medical practitioners were at fault, as the insured had free choice of doctor, and there was no power inside or outside of the Act to dictate how many patients a doctor should have. During the past twelve months, he said, the Medical Subcommittee had not had fifty compaints sent in.

It was evident, however, that some members of the Committee were not satisfied with the present conditions, and notice of motion for the next meeting was handed in to the following effect: "That the Medical Subcommittee be requested to investigate and report not later than September next as to the desirability or otherwise of establishing a full-time medical service for insured persons and their dependants for the commencement of the year 1915."

The New Medical Tickets.

In connexion with the issue of the new medical tickets which had been sent by post to the insured, it was reported that out of about 250,000, no fewer than 48,000 had been returned through the Dead Letter Office owing in 98 per cent. of the cases to changes of address. In many cases, no doubt, the insured persons themselves were to blame for not informing their societies of their change of address, but in the large bulk of the cases the fault was on the part of the societies which had neglected to notify the Committee, and the Committee had thus had to do the work of the societies and to bear the cost of it.

The New Medical List.

The Clerk of the Committee reported that there were 300 doctors on the new list, compared with 295 at the end of the last year. The chemists numbered 152, contractors for drugs (excluding poisons) 13, and contractors for appliances only 5.

In connexion with the charge that a number of the doctors are undertaking far more patients than they can properly attend, it appears that up to the end of September the medical practitioners had received in cash rather over £62,000, half of which had gone to less than 50 doctors, whose average income at this rate would exceed £300 a year. The figures for the whole year are not yet available, but it appears that 43 doctors have altogether made about £36,000, and, on the basis of the returns already available, 4 doctors will receive for the whole year from £1,300 to £1,700 each, 20 will receive £800 to £1,200 each, and 13 will receive from £675 to £800 each. In this calculation the earnings of partnerships have been divided by the number of the partners, in order to arrive at the income of each doctor. These amounts are for attending Manchester insured persons alone, apart from any income from private practice, and without taking into account the fact that some of those who are receiving the largest amounts from Manchester are at the same time receiving in addition sums from the Salford Insurance Committee for the treatment of Salford insured. It has already been explained in the Supplement that the medical practitioners have now signed a special agreement with the Local Medical Committee empowering the Committee, if it thinks fit, to restrict the income of individual doctors from insurance work to £300 a year. The amounts stated above are actual cash, and if each consultation or visit brought in from 2s. to 2s. 6d. as the tariff provides, an annual income of £300 would necessitate something like 20 attendances every day of the year; but as the total available fund only suffices to pay slightly over half the tariff rate, an income of £300 in cash means something like 40 attendances every day of the year.

Birmingham.

Complaints against Practitioners.

At a meeting on January 27th a report was received from the Medical Service Subcommittee dealing with the investigation of several complaints. In one case the doctor was severely censured for certifying that a patient had been incapable of work for a given period, whereas the patient had been at work in the interval. The doctor had stated to the Subcommittee that he was unable to recollect the circumstances in which the certificate was issued, and could only assume that he had made a mistake in the dates. The Subcommittee reported that the practitioner had on a previous occasion been severely censured for issuing a certificate of incapacity in respect of a person not attended by him, and recommended that he be informed that he had been grossly negligent in issuing the certificate referred to, and that while reluctant to direct proceedings to be taken to remove the name of a doctor from the panel, it would have no alternative but to adopt that extreme course if he were again found to be negligent. The report was adopted without comment.

Sanatorium Benefit.

The report of the Sanatorium Subcommittee stated that since the meeting in December 120 applications for sanatorium benefit had been received, making a total of 2,428 up to January 15th; on the same date 148 persons—86 men and 62 women—were receiving treatment in various sanatoriums.

Allocation of Medical Funds.

Father Chattaway, in bringing up the report of the Medical Benefit Subcommittee, referred to the scheme of allocation among the doctors on the panel of those insured persons who had not yet been accepted by a doctor, in order to secure a distribution of the available funds among doctors on the panel, in accordance with the risk which they respectively assumed. The Local Medical Committee had recommended that the amounts available in the panel fund in respect of the second and third quarters should be distributed among the doctors on the panel in accordance with the method of remuneration embodied in the agreement in respect of the first quarter—that is, according to

the number accepted by each doctor. For the purpose of ascertaining the quarterly credits in respect of the fourth quarter, the unassigned residue should be allocated numerically among the doctors on the panel who had not more than 2,000 insured persons on their list, in proportion to the number on each doctor's list, but no doctor should have allocated to him a greater number than would bring the number of persons on his list, together with the number allocated to him, to a total of more than 2,000. The Finance Subcommittee concurred in the recommendation made, and the report was adopted.

Local Medical Committee.

The period of office of the Local Medical Committee has been extended by the Commissioners until July 15th, 1914.

PANEL COMMITTEES.

Denbighshire.

The preliminary meeting of the Denbighshire Panel Committee was held at the Queen Hotel, Chester, on January 21st. Mr. E. D. Jones (Clerk to the Denbighshire Insurance Committee) took the chair at the beginning of the meeting; fifteen members were present.

Appointment of Secretary and Chairman.—Dr. Rowland (Wrexham), Secretary of the Local Medical Committee, was unanimously elected Honorary Secretary to the Committee, and Dr. E. Moss (Wrexham) Chairman. At the request of the Committee, Mr. E. D. Jones remained in the room during the rest of the proceedings. Dr. Moss, on taking the chair, referred to the excellent services rendered to the profession by the Clerk, and the courteous and prompt manner in which he had at all times answered inquiries.

New Medical Card.—Mr. E. D. Jones gave an explanation of the advantages of the new medical card, and answered numerous questions put to him by members present.

Consideration of Allocation.—The Secretary detailed the methods of payment adopted during the past year, and, in regard to the money still owing for the past three quarters from those who had not chosen their medical attendant, referred to a resolution of the Local Medical Committee that funds from unallocated persons should be paid to the doctors in proportion to the numbers on their respective lists. On the motion of Dr. Morris Jones (Colwyn Bay), seconded by Dr. E. D. Evans (Wrexham), it was resolved to recommend this method of distribution.

Levy to Pay Expenses of Committee.—For the expenses of the Local Medical Committee a voluntary subscription of 2s. 6d. had been asked for. The Secretary stated that only 50 per cent. of panel practitioners had responded to the call, with the result that the funds of the Committee were short by £3 on the year's working. Much surprise was expressed at the failure of those who had not shared in the expenses, but had, nevertheless, enjoyed the fruits of the labours of the Committee. On the motion of Dr. Owen (Brymbo), seconded by Dr. Hill (Llanrwst), it was unanimously resolved to apply for a levy up to ½d. per insured person to meet expenses of this Panel Committee.

Vacancy on Committee.—Dr. Price Morris (Old Colwyn) having resigned, it was resolved to recommend to the Commissioners that Dr. Webster (Colwyn Bay) be elected to fill the vacancy.

Prescription Book.—The Secretary submitted a sample copy of a "Carbac" prescription book, which met with the approval of the meeting. It was resolved that the Secretary and Clerk should confer together as to minor alterations necessary, and as to the supply of books.

Vote of Thanks.—The meeting concluded with a hearty vote of thanks to the Clerk for his services to the Committee.

INSURANCE NOTES.

SCOTLAND.

Edinburgh.

From the minutes of the December meeting of the Insurance Committee for the burgh of Edinburgh it appears that a report on an examination of the prescriptions given during the month ending July 15th was presented; 10,788 prescription forms were given, and 6,715 were checked. The average cost was 10¾d., the total amount claimed £489 16s., and the total amount allowed £488 2s. Attention was drawn to orders for tubes of a proprietary vaccine, and the clerk was instructed to write to the Scottish Insurance Commissioners asking whether such vaccine could be prescribed or supplied to insured persons. It was also reported that during the period from January 15th to November 15th, 1913, the payments to doctors amounted to £20,796 7s. 6d., and to chemists to £4,558. At the same meeting a letter was read from the Scottish Insurance Commissioners, enclosing a circular which the Commissioners had issued to approved societies with regard to the appointment of medical referees. The Commissioners stated that they had felt obliged to advise that the consideration of the appointment by an Insurance Committee of medical referees, where such appointments involved any charge upon the funds made available to committees for other purposes, should be delayed, but that they saw no objection to such appointments being made by Insurance Committees at the request of and as agents for those societies which did not desire to make direct arrangement with doctors, on the clear understanding that the whole cost was defrayed by the societies for whose advantage and convenience the scheme was established.

Dundee.

At the recent meeting of the Dundee Insurance Committee it was decided to ask the Commissioners to make arrangements to restrict each doctor's panel to 2,000 insured persons. It was stated that of the forty-two panel doctors in Dundee ten had over 2,000 patients on their lists, six of these having over 2,500, two over 3,000, and one 3,900. The mover of the resolution to this effect and his seconder alleged that the doctors were not doing justice to panel patients, and the Chairman expressed the opinion that if the Commissioners had no power to restrict the numbers they could perhaps get it in some future amending Act.

Fife.

A meeting of medical practitioners resident or practising in the area of the Fife County Insurance Committee will be held at the Station Hotel, Kirkcaldy, on Friday, February 13th, at 3.15 p.m. The business will include the reception of the annual report and financial statement of the Fife County Local Medical Committee, the election of members of the committee for the ensuring year, and the consideration of the method of allocation of insured persons who have not yet selected a doctor.

The Insurance Act in Leith.

The Chairman of the Leith Burgh Insurance Committee (Mr. D. W. Kemp) on January 20th gave some details, at a meeting of the Rose of Leith Lodge of the British Order of Ancient Free Gardeners, of the working of the Insurance Act in Leith. The Insurance Committee was composed of 50 members, of whom 8 were doctors. There were 54 medical practitioners on the Leith panel, 25 of whom resided in Leith and 29 in Edinburgh. Nearly £7,000 had been paid to them on the capitation basis, and about £3,000 was yet to be handed over to them to complete the financial year. The medical benefits in Leith would cost fully £10,000 for doctors. There were 53 pharmaceutical chemists on the list, and they had made up 45,000 prescriptions for the year, and about £1,900 would be paid for their work. It had lately been found that 6,141 persons had not selected a doctor; a circular was sent to them, and at once 1,163 made their choice, 1,693 circulars were returned through the Dead Letter Office, and there were still 3,285 persons to be allocated among the doctors.

IRELAND.

Insurance Certificates.

The main point of interest to the medical profession in Ireland is still the question of certification of the insured sick. Early last autumn, when the Chancellor of the Exchequer offered the increased grant for Ireland if an agreement were come to between the Insurance Commissioners, the doctors, and the insurance societies, it was hoped that it would quickly be settled; but now, nearly six months later, a solution of the difficulty seems to be no nearer. The medical profession demand that the certificate of the member's own medical attendant should be

received as the necessary evidence of the patient's fitness or unfitness to receive insurance benefit. The insurance societies, on the other hand, demand that all the certifying should be done by special whole-time medical officers. This amounts to an extension of the present system, which so far has proved most unsatisfactory to everybody concerned, patients and doctors alike. At the present time there are a certain number of so-called panel doctors and medical referees scattered over Ireland to whom the Commissioners have agreed to pay for signing certificates at so much a head for the insured persons in their districts. In Dublin the difficulty is acute, for although there are said to be about a dozen panel doctors for certifying, patients are continually applying to the hospitals where they are being treated for certificates, and complaining that their society will not pay their benefit without a certificate, and will give them no information as to the doctor who should sign it. In most cases the rule appears to be for the hospital authorities to sign the certificate on the payment of half a crown, which in most cases has to come out of the patients' benefit money.

Insured Persons in Workhouses.

At the last meeting of the Granard Board of Guardians Dr. Kenny, medical officer, reported: "I wish to particularly direct attention to a case admitted during the past week. The patient was under the treatment (formal) of the tuberculosis officer. It appears from his statement that he was compelled to seek admission to this infirmary. He has no right to be here." The master stated that the patient had been admitted on a letter from Dr. Yorke. The relieving officer stated that the patient came from Westmeath, where he had been under treatment by Dr. Cunningham, and had been in receipt of 10s. a week benefits, but these benefits were stopped by the insurance society before Christmas. He then went to Dr. Yorke, who sent him to the workhouse as he was destitute. The Chairman advised the man to go back to his own county and seek through his society to get admission to Peamount Sanatorium. One of the guardians said the farmers had to pay their contributions for these men, and yet when they fell sick they were still a burden on the ratepayers.

Meath County Infirmary.

At the last meeting of the joint committee of the Meath County Infirmary at Navan, a letter was read from the Local Government Board approving of the Meath County Infirmary at Navan as an institution for the treatment of surgical cases of tuberculosis on certain conditions. The letter was approved.

CORRESPONDENCE.

A State Medical Service.

Dr. Ferdinand Rees (Wigan) writes: I must commend you for bringing forward for discussion the question of a State Medical Service. It is essential that the profession should make up its mind on the subject. There is no doubt that public opinion is rapidly running in the direction of a State Medical Service. As one who has taken a keen interest in all public questions for the last thirty years, nothing has amazed me so much as the manner in which this question has rapidly come to the front. I am in the position of being a general practitioner and of also being an honorary physician to the Royal Albert Edward Infirmary, Wigan. Therefore the nature of the profession as a medical organization has, perhaps, been presented to me more forcibly than to others differently situated. It is the weakness of the profession as an efficient medical organization that strikes me. The two principal causes of this weakness are, in my opinion:

1. The competitive, commercial basis of general practice.
2. The separation between the general practitioner and the charitable hospital.

I was immensely struck with Dr. Rhodes's words:

> At the same time, it must be admitted that hospitals are as necessary to the community as police, fire brigades, and street scavengers, yet these latter are systematically provided (*and organized*), while the emergencies of life and death receive treatment—good, bad, or indifferent—varying in different localities according to the private enterprise and generosity of the comparatively few.

These words will bear repetition. This inefficient organization is becoming more glaringly evident under the working of the Insurance Act, and not only to members of the profession, but to the lay members, the business men, on our Insurance Committees. Commercial medicine and preventive medicine are antagonistic. Now, just a word on the "free choice of doctor" question. The community is becoming educated. Medicine is now a science. The use of hypnotism is confined to certain few psychological cases. Given a definite standard of professional competency and a convenient system of consulting with superiors and specialists, such as would be provided in an efficiently organized medical service, and I am confident that very little will be heard of "free choice of doctor." Sick people desire to get well *cito*, *tuto*, *et jucunde*, and are not particular as long as that desire is gratified.

Dr. Lauriston E. Shaw (London, W.) writes: On several occasions lately, when I have been discussing with medical or lay friends the danger of the replacement of the existing insurance system of medical benefit by a State Medical Service, I have been referred for an authoritative explanation of difficult points in a State service scheme to Mr. Charles A. Parker. When I have pressed my friendly disputant, for example, to explain how a State service would increase the number of doctors in undermanned industrial districts, would change slack doctors into keen ones, and incompetent into competent ones, or when I have asked how it was possible to combine "free choice of doctor" with a whole-time salaried service, I have been told that these are matters of detail which Mr. Parker would easily make clear to me. Mr. Parker is well known as an enthusiast for a State or National Medical Service, and I have read denunciations by him of some existing medical arrangements which I have enjoyed, and at least one article in a monthly review giving his ideas of the general arrangements of a nationalized medical service, which I could not quite understand. It was, therefore, with much pleasure that after I had already written a criticism of an unsatisfying letter of his in this week's *Lancet*, I found in your columns a further letter from him, which seemed to promise to deal with the subject in sufficient detail to clear up some of my difficulties.

I must confess, however, that after reading the letter to the end I am disappointed. Mr. Parker writes: "There is no reason why the present system of allotting patients should be discontinued if to-morrow the 14,000 panel doctors became whole-time salaried medical officers."

It seems incredible that any one with knowledge of the existing methods of forming the doctors' lists of insured persons and with experience of human nature could make this statement. Mr. Parker cannot be familiar with the fact that under the existing arrangements a panel practitioner can voluntarily limit his list to any dimensions he likes, and can by giving notice remove any number of insured persons from his list once each year.

Such a right is surely quite incompatible with any system of fixed salary. Human nature being what it is, it is a necessary corollary of free choice as permitted under the Insurance Act that the lessening of one's responsibilities shall be accompanied by a lessening of one's remuneration. The whole basis of this scheme is that doctors shall be placed in honourable competition with each other to secure patients by pleasing them, and that success in so doing shall entail increased remuneration. The temptation to compete with each other by underselling is removed, but competition by the highly desirable means of exercising the best professional skill with consideration and sympathy for the patient is encouraged.

I know that to some people competition is so objectionable that they will not consider either the aims it has in view or the methods by which it is put in operation, but condemn it utterly. Some keen supporters of a whole-time salaried service holding these views frankly desire to remove all competition for patients, and openly denounce the principle of free choice of doctor as inconsistent with their aims. Mr. Parker cannot agree with these, or he would not endeavour to persuade your readers that free choice and a whole-time service are compatible, and commend you for laying great stress on free choice of doctor in your leading article of January 17th. The particular method of combining these two principles that Mr. Parker

has put forward must, I think, have been submitted under a misapprehension as to existing arrangements. He, however, says, "There are several other methods by which a salaried whole-time service and 'free choice' could be combined, but I have already trespassed too far on your valuable space."

This question is of such vital importance to the profession and to all those members of the community who are already included, or likely to be included later on, in the insurance scheme, that no effort should be spared to clear it up. Mr. Parker speaks with such authority for the supporters of a State Medical Service that I am sure your readers will be grateful to you if you will give him all the space necessary to explain the compatibility of a scheme of whole-time salaried officials and "free choice" of doctor. I for one agree with Mrs. Sidney Webb that the two ideas are absolutely irreconcilable.

Dr. G. A. Wyon (Bow, E.) writes: On the question of free choice of doctor under a State Medical Service, I should like to make the following suggestion as a method a little different from those made by your other correspondents.

On the introduction of a whole-time service in any area, public notices should be issued that the population would, on and after a certain date, be allocated to the doctors in their neighbourhood in a specified way. The notice should state that any person who preferred some other doctor should give notice to some appointed authority. Lists would then be drawn up of these persons under the doctors respectively chosen.

My belief, confirmed particularly by the past year's experience of wholesale enforced choosing under the Insurance Act, is that a free (not enforced) choice exercised in this way would be taken advantage of by only a small proportion of the population, and that in most areas the resulting transfers would roughly cancel each other numerically. The problem of the "popular" doctor remains to be dealt with. He, of course, would have a large list, the surplus of which over a certain figure would have to be distributed over other doctors pending vacancies on his list. This curtailment of a doctor's list is not the new thing it appears; it is going on now under the private-practice system, for when a doctor gets too busy what does he do but take on an assistant or partner, or else refuse certain patients or certain work—for example, midwifery—thus preventing free choice by patients.

I do not by any means claim this method as perfect, but this and your other correspondents' letters show that the question of "free choice" is not an obstacle to a State service.

Distribution of Funds Available for Medical Benefit of Unallotted Insured Persons.

Dr. W. Coode Adams (Hampstead) writes: Although in my letter to you I was referring to some aspects of the Insurance Act as depicted in your article, Dr. Biggs appears to take it as a comment also upon his letter. This was never intended. But since he does refer to me, and by name, I consider it only courteous to respond. May I put this question therefore to him? In the hypothetical example he has raised, would it, or would it not, be the case that the one panel doctor might be called upon by his Committee to attend not only the 1,500 on his list, but any, or indeed all (since he is the only panel doctor), of the whole 3,000? Dr. Biggs knows, of course, that the former is the case, and that therefore the panel doctor, from the mere fact that he has signed his agreement, has accepted the contingent liability to attend 3,000 patients. Therefore, as in all insurance, the premiums must be proportionate to the contingent liability, that is, he has a right to 3,000 premiums. There are some 400,000 persons in London whom the panel doctors have agreed to attend when ill, but who have not designated any individual doctor. Any number of these may some day send for some panel doctor in sudden illness, and, though we have the right to refuse individuals, some panel doctor or other must attend them. Does he suggest that the panel doctor who has to do so is to receive only 1s. 9d. for the quarter's attendance?

A panel doctor's responsibility is not determined by the number of patients on his list, but only by the requirements of the Committee of his area.

Dr. John Divine (Secretary, Local Medical Committee, Kingston-upon-Hull) writes: It was not my intention to indulge in abuse, but gentle ridicule did seem to me the most appropriate way of meeting a ridiculous hypothetical proposition. Dr. Biggs seems to have curious ideas as to what constitutes argument, and speaks of its futility before he has even begun to argue. He should refrain from speaking of "red herrings," for he himself has proved to be the only fish merchant in the discussion.

Let me once more, and for the last time, refer to my letter of January 10th. In it are argument, text, and reference. If these can be met let it be done; if not, then have done. I have not argued on any "regulations drafted as an afterthought," but on the Act of 1911, and on the Revised Regulations as printed in the Supplement of the British Medical Journal of December 7th, 1912, five weeks before medical benefit began, and three weeks before the signing of contracts of which the Regulations are an integral part.

I fear me Dr. Biggs has tackled this subject—if I may say so without being accused of abuse—with the proverbial little knowledge which is a dangerous thing.

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held at Caxton House, Westminster, on January 15th, with Sir Francis H. Champneys in the chair.

Issuing of Certificates.

A letter was considered from the Registrar-General transmitting a copy of a letter from a superintendent registrar with regard to the conduct of a certified midwife in issuing two certificates, one of death and one of still-birth, in respect of the same child. The Board decided that the case be referred to the Penal Cases Committee.

Qualification for Midwives Roll.

A letter was considered from the Secretary of the Bombay Presidency Nursing Association asking the Board to recognize the certificate of the association as a qualification for the entry of a name on the Midwives Roll, or in the alternative to establish a branch examination of the Board in Bombay. The Board decided to inform the Secretary of the Bombay Presidency Nursing Association that it regretted that it was unable to entertain either application.

Notification of Stillbirth.

A letter was considered from the county medical officer for Somerset calling the attention of the Board to the difficulties which may arise in connexion with the notification by a midwife of a stillbirth which has occurred before her arrival as provided by Rule E 22 (c). The Board decided to state in reply that the matter had been noted for consideration on the next revision of the rules.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest towns 8,776 births and 6,408 deaths were registered during the week ended Saturday, January 31st. The annual rate of mortality in these towns, which had been 19.3, 17.0, and 17.5 per 1,000 in the three preceding weeks, further rose to 18.4 per 1,000 in the week under notice. In London the death-rate was equal to 18.0, against 20.5, 17.0, and 18.2 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 4.7 in Eastbourne, 8.8 in Hornsey, 10.4 in Lincoln, 10.5 in Acton, 11.6 in Southport, and 11.8 in Cambridge and in Southend-on-Sea to 26.1 in Dudley, 26.2 in Newport (Mon.), 27.2 in Wolverhampton, 27.8 in West Bromwich, 30.9 in Barnsley, and 39.0 in Great Yarmouth. Measles caused a death-rate of 1.6 in Middlesbrough and in Rhondda, 1.7 in Swansea, 4.0 in Dudley, 4.7 in Burnley, and 5.8 in Barnsley; whooping-cough of 1.2 in West Ham, in Middlesbrough, and in Newport (Mon.), 1.6 in St. Helens, 1.7 in Swansea, 1.8 in Darlington, and 2.0 in Dudley; diphtheria of 1.4 in Oldham, 1.5 in Portsmouth, 1.7 in Northampton, and 1.8 in Great Yarmouth; and enteric fever of 2.1 in Warrington. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 44, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 12 were recorded in Birmingham, 4 in Liverpool, 3 in Rochdale, 3 in Sheffield, and 2 each in Warrington, Preston, South Shields, and Carlisle. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,757, 3,676, and 3,567 at the end of the three preceding weeks, had risen to 3,599 on Saturday, January 31st; 469 new cases were admitted during the week, against 416, 388, and 375 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,077 births and 878 deaths were registered during the week ended Saturday, January 31st. The annual rate of mortality in these towns, which had been 20.2, 20.4, and 20.9 per 1,000 in the three preceding weeks, fell to 20.0 in the week under notice, but was 1.6 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 16.4 in Paisley and in Clydebank, 17.2 in Dundee, and 17.6 in Hamilton to 25.5 in Coatbridge, 26.4 in Kilmarnock, and 37.8 in Ayr. The mortality from the principal infective diseases averaged 2.1 per 1,000, and was highest in Motherwell and Ayr. The 386 deaths from all causes registered in Glasgow included 19 from measles, 4 from diphtheria, 3 from scarlet fever, 3 from whooping-cough, and 3 from diarrhœal diseases. Eight deaths from measles were recorded in Edinburgh, 5 in Leith, 5 in Greenock, and 3 in Motherwell; from scarlet fever 3 deaths in Aberdeen and 2 in Edinburgh; from diphtheria 4 deaths in Edinburgh and 3 in Aberdeen; and from infantile diarrhœal diseases 3 deaths in Dundee and 3 in Aberdeen.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 31st, 645 births and 555 deaths were registered in the twenty-seven principal urban districts in Ireland, as against 618 births and 550 deaths in the preceding period. These deaths represent a mortality of 24.1 per 1,000 of the aggregate population in the districts in question, as against 23.8 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.7 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.9 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 24.4 (as against an average of 25.8 for the previous four weeks), in Dublin city 26.0 (as against 27.7), in Belfast 25.7 (as against 24.7), in Cork 19.7 (as against 23.3), in Londonderry 22.8 (as against 16.5), in Limerick 24.4 (as against 21.3); and in Waterford 32.3 (as against 23.8). The zymotic death-rate was 1.0 as against 1.8 in the previous week.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments are announced by the Admiralty: Staff Surgeon Frederick G. Wilson to the *Pomone*, for Royal Naval Barracks, Dartmouth, temporary, January 28th. Staff Surgeon Francis J. L. P. McKenna, to the *Liverpool*, February 24th. Staff Surgeon Warren G. Westcott to the *Eclipse* for voyage out on completing, February 4th, and to the *Yarmouth*, on recommissioning, undated. Surgeon Frederick G. Goble to the *Colossus*, January 28th.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Unattached for Auxiliary Force.—Lieutenant-Colonel and Honorary Colonel William A. Ellison, M.V.O., resigns his commission, and is granted permission to wear the prescribed uniform, January 24th.

Third East Lancashire Field Ambulance.—Supernumerary Lieutenant Kingsmill W. Jones, M.D., ceases to serve with No. 18 Field Ambulance, R.A.M.C., Special Reserve, and is restored to the establishment, February 4th.

Attached to Units other than Medical Units.—Lieutenant Henry E. S. Richards, M.D., to be Captain, December 15th, 1913. Captain Albert E. Vidler resigns his commission, February 4th. Lieutenant William F. Roach, M.D., resigns his commission, February 4th.

For Attachment to Units other than Medical Units.—Alexander G. V. van Someren, M.B., to be Lieutenant, January 1st. Thomas J. Mackie, M.B., to be Lieutenant, January 13th.

CHANGES OF STATION.

The following changes of station amongst the officers of the Army Medical Service have been officially reported to have taken place during December:

		FROM		TO
Surgeon-General	H. G. Hathaway	Darjeeling	...	Lucknow.
Colonel	W. G. A. Bedford, C.M.G., M.B.	—	...	Pretoria.
Lieut.-Col.	C. C. Reilly	Colaba	...	Calcutta.
,,	J. M. F. Shine, M.D.	Belfast	...	Nowshera.
,,	S. C. Philson	Bareilly	...	Lucknow.
,,	H. M. Adamson, M.B.	Strensall	...	Belgaum.
,,	J. Fallon	Lahore	...	Chakrata.
,,	C. T. Blackwell, M.D.	Rangoon	...	Hyderabad.
,,	A. P. Blenkinsop	Simla	...	Delhi.
,,	W. Hallaran, M.B.	Chakrata	...	Bareilly.
,,	C. W. R. Healey	London	...	Woolwich.
,,	D. D. Shanahan	Ootacamund	...	London.
Major	E. E. Powell	Aldershot	...	Ambala.
,,	J. Hennessy, M.B.	Colaba	...	Ahmednagar.
,,	J. D. Alexander, M.B.	Calcutta	...	Jubbulpore.
,,	G. A. Moore, M.D.	Chatham	...	Aldershot.
,,	H. W. H. O'Reilly, M.B.	Colchester	...	Secunderabad.
,,	E. H. Condon, M.B.	Cardiff	...	India.
,,	F. M. Mangin	Allahabad	...	Poona.
,,	B. W. Longhurst	Fleetwood	...	India.
,,	W. Tibbits, M.B.	—	...	Ambala.
,,	W. S. Harrison, M.B.	London	...	Jamaica.
,,	L. F. Smith, M.B.	Nowshera	...	Aden.
,,	S. A. Archer	Jullundur	...	Irish Command.
,,	R. W. Clements, M.B.	Wellington	...	,,
,,	L. Addams Williams	Tidworth	...	India.
,,	M. MacG. Rattray, M.B.	Shorncliffe	...	Woolwich.
,,	A. W. N. Bowen	Kirkee	...	Belfast.
,,	S. de C. O'Grady, M.B.	Aldershot	...	Deepcut.
,,	E. A. Bourke	Pembroke Dock		Cardiff.
,,	N. H. Ross, M.B.	Aldershot	...	Fyzabad.
,,	D. Harvey, M.D.	Nyasaland	...	R.A.M. College.
,,	G. J. S. Archer, M.B.	Cosham	...	Dorchester.
,,	H. B. G. Walton	Ranikhet	...	Bareilly.
,,	A. L. Scott	Deepcut	...	Colaba.
,,	J. W. H. Houghton, M.B.	Aldershot	...	Meerut.
,,	H. D. Packer	Devonport	...	India.
,,	G. J. A. Ormsby, M.D.	Landour	...	Meerut.
,,	L. W. Harrison, M.B.	London	...	Jamaica.
,,	H. M. Morton, M.B.	Perth	...	Glasgow.
Major	M. H. Babington	Scutari	...	London.
,,	F. Harvey	Leeds	...	Colaba.
,,	A. A. Seeds, M.D.	Kuldana	...	Campbellpore.
,,	T. C. MacKenzie, D.S.O.	York	...	Richmond, Yorks.
,,	P. S. O'Reilly	Gravesend	...	R. Arsenal, Woolwich.
,,	A. M. MacLoughlin, M.B.	Madras	...	Bellary.
,,	W. M. H. Spiller, M.B.	Liverpool	...	India.
,,	R. L. Argles	Cork	...	Ferozepore.
,,	L. M. Purser, M.B.	Sialkot	...	Meerut.
,,	J. T. Johnson, M.D.	Bareilly	...	Lucknow.
,,	W. S. Crosthwait	Upper Topa	...	Ambala.
,,	H. G. Pinches	Singapore	...	Irish Command.
,,	J. H. Barbour, M.B.	Ferozepore	...	London.
,,	E. V. Aylen	Gharial	...	Rawal Pindi.
,,	H. W. Long, M.B.	Devonport	...	Choulston.
,,	A. W. A. Irwin	Limerick	...	Cork.
Captain	L. Cotterill	Aldershot	...	India.
,,	J. Mackenzie, M.B.	Pirbright	...	Calcutta.
,,	H. J. Crossley	Richmond, Yorks	...	Bareilly.
,,	F. A. H. Clarke	Darjeeling	...	Calcutta.
,,	R. J. Franklin	Solon	...	Ferozepore.
,,	T. S. Coates, M.B.	Royal Arsenal, Woolwich	...	India.
,,	J. B. Meldon, M.B.	Shorncliffe	...	Gibraltar.
,,	D. Ahern	Cairo	...	Irish Command.
,,	R. T. Collins	Glencorse	...	Glasgow.
,,	R. J. Cahill, M.B.	Belfast	...	Athlone.
,,	H. W. Russell, M.D.	Aldershot	...	Ambala.
,,	H. St. M. Carter, M.D.	Netley	...	Aldershot.
,,	C. R. Millar	—	...	Irish Command.
,,	R. E. Humfrey, M.B.	Queenstown	...	India.
,,	H. H. A. Emerson, M.B.	Derby	...	Leicester.
,,	M. B. H. Ritchie, M.B.	Mhow	...	Chatham.
,,	M. J. Cromie	Maidstone	...	,,
,,	M. Keane	Reading	...	Bulford.
,,	R. G. H. Tate, M.D.	Lahore	...	Irish Command.
,,	D. de C. O'Grady	Barian	...	Rawal Pindi.
,,	A. C. Amy, M.D.	Agra	...	W. Command.
,,	W. Mitchell, M.B.	Sabathu	...	Ambala.
,,	E. B. Lathbury	Ranikhet	...	Bareilly.
,,	M. J. Lochrin	Bangalore	...	Aldershot.
,,	H. L. Howell	Ahmednagar	...	Kirkee.
,,	T. W. Browne	Jhansi	...	Tipperary.
,,	J. J. O'Keefe, M.B.	Naini Tal	...	Chatham.
,,	C. H. Denyer	Landour	...	Agra.
,,	R. D. O'Connor	Murree	...	Multan.
,,	T. H. Scott, M.B.	Ferozepore	...	N. Command.
,,	E. M. Middleton	Rawal Pindi	...	E. Command.
,,	A. W. Howlett, M.B.	Bareilly	...	Aldershot.
,,	G. F. Dawson, M.B.	Chakrata	...	Bareilly.
,,	F. J. Stuart, M.B.	,,	...	Meerut.
,,	J. R. Lloyd	Jubbulpore	...	Aden.
,,	F. Worthington, M.B.	Ceylon	...	E. Command.
,,	A. Shepherd, M.B.	Agra	...	Maymyo.
,,	A. G. Wells	Kasauli	...	Ambala.
,,	W. H. S. Burney	Campbellpore	...	Ferozepore.
,,	W. E. Marshall, M.B.	—		Irish Command.
,,	G. G. Collet, M.B.	Karachi	...	Meerut.
,,	A. W. Byrne, M.B.	Kasauli	...	Lahore.
,,	C. G. Sherlock, M.D.	Dalhousie	...	,,
,,	S. S. Dykes, M.B.	Dum Dum	...	Lebong.
,,	C. T. V. Benson	Bangalore	...	Madras.
,,	R. C. Priest, M.B.	Lebong	...	Allahabad.
,,	T. H. Dickson, M.B.	Gibraltar	...	India.
Lieutenant	C. M. Finny, M.B.	Changli Gali	...	Ambala.
,,	W. S. R. Steven, M.B.	Quetta	...	Karachi.
,,	C. D. K. Seaver	Dalhousie	...	Jullundur.
,,	B. H. H. Spence, M.B.	R.A.M. College	...	India.
,,	W. B. Laird	Caterham	...	Bangalore.
,,	H. S. Blackmore	London	...	,,
,,	F. R. B. Skrimshire	Aldershot	...	,,
,,	D. W. Bruce, M.B.	Aldershot	...	India.
,,	T. E. Osmond	London	...	Lucknow.
,,	R. T. Vivian	Curragh	...	Bangalore.
,,	E. G. H. Cowen, M.B.	Warley	...	Lucknow.
,,	L. Buckley, M.B.	Bordon	...	Rawal Pindi.
,,	E. B. Allnutt	London	...	Poona.
,,	E. C. Deane	Chester	...	Lucknow.
,,	J. R. Hudleston	Aldershot	...	Jamaica.
,,	W. Stewart, M.B.	Lucknow	...	Agra.
,,	W. McNaughtan, M.B.	Devizes	...	Netley.
,,	M. Burnett	Winchester	...	Gosport.
,,	O. W. J. Wynne	Lucknow	...	Allahabad.
,,	P. A. With	Curragh	...	Bangalore.
,,	C. J. H. Little, M.B.	Strensall	...	India.
,,	S. J. Barry	Woolwich	...	,,
,,	E. P. A. Smith, M.B.	Aldershot	...	,,
,,	E. C. Lang, M.B.	Kilbride	...	Curragh.
,,	R. E. Porter, M.B.	Cork	...	Limerick.
,,	E. V. Whitby, M.B.	Kilworth	...	Fermoy.
,,	G. F. Allison	York	...	Strensall.
,,	R. C. Carlyle, M.B.	London	...	Caterham.
,,	E. C. Beddows	Kildare	...	Curragh.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

AYLESBURY: ROYAL BUCKINGHAMSHIRE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum, increasing to £120.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, £120 and £100 per annum respectively.

BIRKENHEAD UNION.—Senior Male Resident Assistant Medical Officer. Salary, £150 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL. Pathologist. Salary, £50 per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Selly Oak Infirmary. Salary, £160 per annum.

BLACKBURN COUNTY BOROUGH.—Male School Medical Inspector and Assistant to the Medical Officers of Health. Salary, £250 per annum.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum.

CALCUTTA CORPORATION.—Two District Health Officers. Salary, Rs. 500 per month, rising to Rs. 700.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CARDIFF CITY MENTAL HOSPITAL.—Second Assistant Medical Officer (male). Salary, £250 per annum, rising to £280.

CARDIFF: KING EDWARD VII HOSPITAL.—House-Physician (male). Honorarium at the rate of £60 per annum.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £230.

CHESTER COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £200 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Physician to Out-patients. (2) Radiographer. Honorarium attached to (1) and (2).

CORHAM: SCHIFF HOME OF RECOVERY.—Resident Surgical Officer. Honorarium, £100 for six months.

CORNWALL COUNTY ASYLUM, Bodmin.—Third Assistant Medical Officer. Salary, £180 per annum, rising to £200.

DERBY: DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £200.

DEVON COUNTY ASYLUM, Exminster.—Assistant Medical Officer. Salary, £200 per annum, rising to £250.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

DURHAM COUNTY ASYLUM, Winterton.—Third and Fourth Assistant Medical Officers (males). Salary, £200 per annum, rising to £250.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician and Assistant Casualty Officer (male). Salary at the rate of £75 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £200 per annum, increasing to £225.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

FARRINGDON GENERAL DISPENSARY, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £100 per annum.

GLASGOW DISTRICT MENTAL HOSPITAL, Lenzie.—Junior Assistant Medical Officer (male). Salary, £200 per annum.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

HOLBORN UNION.—Second Assistant Medical Officer at the Infirmary, Archway Road, N. Salary, £110 per annum, rising to £130.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon. (2) House-Physician. (3) Surgeon Dentist. Salary for (1) and (2), £30 for six months and £2 10s. washing allowance.

KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer (male). Salary, £220 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LEEDS GENERAL INFIRMARY.—(1) Resident Medical Officer at the Ida and Robert Arthington Hospitals; salary at the rate of £60 per annum. (2) House-Physician. (3) House-Surgeon.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100.

LEICESTERSHIRE COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer (male). Salary, £300 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Two Assistant Resident Medical Officers. Salary, £150 per annum.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.—Assistant Pathologist. Honorarium, £50.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

LONDONDERRY: COUNTY INFIRMARY.—House-Surgeon. Salary at the rate of £100 per annum.

MANCHESTER TOWNSHIP.—Second and Junior Resident Medical Officers at the Workhouse at Crumpsall. Salary, £135 and £120 per annum respectively.

MIDDLESEX HOSPITAL, W.—Director of the Institute of Pathology. Salary, £800 per annum.

MILDMAY MISSION HOSPITAL, Bethnal Green, E.—House-Surgeon. Salary, £80 per annum.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon (male). Salary, £180 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary, £150 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

PRESTON ROYAL INFIRMARY.—House-Physician. Salary, £10 per annum.

READING: ROYAL BERKSHIRE HOSPITAL.—(1) Honorary Assistant Physician. (2) Second House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE BOROUGH.—Second Assistant Medical Officer of Health. Salary, £250 per annum, rising to £300.

ROYAL EAR HOSPITAL, Soho.—House-Surgeon (non-resident). Honorarium, £40 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House-Surgeon (male). Salary, £125 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2), £80 per annum.

SHEFFIELD EDUCATION COMMITTEE.—(1) Assistant School Medical Officer. (2) School Dental Surgeon. Salary for (1), £300 per annum, and for (2) £250, rising to £350.

SMETHWICK EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum, rising to £350.

SOUTHWARK UNION INFIRMARY.—(1) Second Assistant Medical Officer; salary, £120 per annum, rising to £140. (2) Third Assistant Medical Officer; salary, £120 per annum.

STRAITS SETTLEMENTS.—Three Medical Officers for the Government Service. Salary, £300 per annum, rising to £400, and subsequently to £600.

SUNDERLAND: ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

TOXTETH PARK TOWNSHIP.—Assistant Resident Medical Officer of the Workhouse and Infirmary. Salary, £125 per annum.

WALTHAMSTOW URBAN DISTRICT COUNCIL.—Resident Medical Officer for Infectious Disease Hospital. Salary, £150 per annum, rising to £200.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £250 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £75 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House-Physician. Salary at the rate of £75 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—Honorary Surgeon-in-Ordinary.

WOOD GREEN EDUCATION AUTHORITY.—Ophthalmic Surgeon.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: High Wycombe (Bucks); Lynton (Devon).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALDRIDGE, F. J., M.B., B.Ch.Oxon., Certifying Factory Surgeon for the Glastonbury District, co. Somerset.

ARMSTRONG, W. H. Stirling, Medical Superintendent to the Renfrew and Clydebank Joint Hospital, vice Dr. J. N. Todd, resigned.

CULLEN, J. Patrick, M.D.Lond., D.P.H., etc., Deputy Medical Officer of Health to the Metropolitan Borough of Poplar.

DRUMMOND, J. C., B.Sc., Assistant to the Chemical Department of the Research Institute of the Cancer Hospital Free, Fulham Road, London, S.W.

HARRIS, H. S., M.R.C.S., L.R.C.P., District Medical Officer of the Kingston Union.

MOORE, A. G. H., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Greenwich Workhouse and Infirmary.

MORRIS, Miss E. H., M.D.Lond., Assistant Medical Officer at the Camberwell Parish Infirmary.

MORT, S. P., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Shardlow Union.

SKIPTON, A., L.R.C.P.Edin., L.R.C.S.I., District Medical Officer of the Barrow-on-Soar Union.

WILLIAMS, W. M., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Pontyberem District, co. Carmarthen.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

WOOLLATT.—On January 29th, at Shiraz, Persia, the wife of Percy Woollatt, M.D., M.R.C.S., Medical Officer, H.B.M.'s Consulate, etc., a son. (By cable.)

MARRIAGE.

KELLY—CHILD.—On January 22nd, at Corpus Christi Church, the Strand, London, by the Very Rev. James, Canon Kearney, Rector of the Church, assisted by the Rev. Father McGuckin, Claude Bernard, third son of the late Peter Kelly, Esq., J.P., of Mall House, County Donegal, Ireland, to Dorothea Elizabeth, only daughter of Mr. and Mrs. Herbert Child, East Southernhay, Exeter.

DEATHS.

JOHNSTONE.—On January 25th, suddenly, at 10, Southwick Street, Hyde Park, James Pierce Johnstone, L.R.C.P., L.R.C.S., etc., of Langport, Somerset, aged 55, son of the late John Maxwell Johnstone, M.D., Medical Officer of Health, Georgetown, Demerara.

TAYLOR.—On January 26th, at "Sunnyside," Grosvenor Road, Caversham, Isabelle Martha Taylor (*née* Farmer), the beloved wife of Gerard Charles Taylor, M.D.

PUBLISHERS' ANNOUNCEMENTS.

Messrs. Collins announce for publication early in February new titles (five in all) in the *Nation's Library*. These new volumes are in continuation of the seventeen already issued during 1913, and deal with present-day problems. The first book on the list is one on the *Panama Canal*, by G. Reginald Enoch; Mr. L. Lovell Price writes on *Co-operation and Co-partnership;* Mr. L. G. Redmond-Howard writes on the *New Birth of Ireland;* Mr. C. R. Gibson, author of *Romance of Modern Manufactures*, writes on the *Twentieth Century Inventions;* and the Rev. L. MacLean Watt is the author of a volume on *Burns*.

DIARY FOR THE WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion: The Value of the Operation of Decompression of the Brain in Cases of Intracranial Haemorrhages the Outcome either of Accident or Disease. To be introduced by Mr. L. B. Rawling and Dr. Hamill, followed by Mr. C. A. Ballance, Mr. Percy Sargent, Dr. Judson Bury, and others.

Royal College of Surgeons of England, Lincoln's Inn Fields, W.C., 5 p.m.—Professor A. Rendle Short: Changes in the Blood in the Causation of Surgical Shock.

TUESDAY.

Royal Society of Medicine:

Section of Surgery, 8.30 p.m.—Papers:—Mr. W. G. Spencer: The Thyreoglossal Tract. Mr. H. J. Curtis: The Most Efficient Method of Drainage in Septic Peritonitis. Members of the Section of Obstetrics and Gynaecology are invited to attend.

WEDNESDAY.

Hunterian Society, St. Bartholomew's Hospital Library, E.C., 9 p.m.—Hunterian Oration by Dr. Arnold Chaplin: John Hunter and his Work, and the Past and Future of the Medical Profession.

Royal Society of Medicine:

Section of Surgery, and Subsection of Proctology, 5 p.m.—Paper:—Mr. Hamilton Drummond: An Anatomical Study of the Vessels of the Pelvic Colon and Rectum, with special reference to the operation for Abdomino-Perineal Excision. Cases and Specimens:—Mr. Percy Furnivall: Three Recent Specimens of Multiple Polypi becoming Carcinomatous—two of the Rectum and one of the Sigmoid Colon. Mr. Ivor Back: Case and Specimen of Multiple Polypi of the Colon becoming Carcinomatous. Mr. C. Gordon Watson: Specimen of Inoperable Carcinoma of the Rectum in a woman aged 20. Mr. Sampson Handley: Specimen of Rectum removed by Operation subsequent to Treatment by Radium.

THURSDAY.

Harveian Society of London, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Discussion on Oral Sepsis in its Medical and Surgical Aspects, to be opened by Dr. William Hunter, Mr. Dolamore, and Dr. Charles Buttar.

United Services Medical Society, Royal Army Medical College, Grosvenor Road, S.W., 5 p.m.—Paper: The Siege of Ladysmith, by Colonel S. Westcott, C.M.G., A.M.S.

FRIDAY.

Royal College of Surgeons of England, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Beckwith Whitehouse: The Pathology and Causation of Idiopathic Uterine Haemorrhages.

Royal Society of Medicine:

Clinical Section, 8.30 p.m.—Cases in which Splenectomy has been performed, or is contemplated, for Disease. Cases will be shown by Dr T. R. Whipham, Dr. James Collier and Mr. Crisp English, Sir Bertrand Dawson, K.C.V.O., Mr. Percy Sargent, Dr. Herbert French and Mr. Philip Turner, Mr. E. W. Everett (Norwich), Dr. W. Essex Wynter and Sir John Bland-Sutton, Fleet Surgeon P. W. Bassett-Smith, C.B., Dr. Thursfield.

POST-GRADUATE COURSES AND LECTURES.

Cancer Hospital, Fulham Road, S.W.—Wednesday, 5 p.m., The Surgery of Cancer of the Rectum.

Dublin: Rotunda Hospital.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Post-partum Haemorrhage (continued); Wednesday, 10 a.m., Rupture of the Uterus. Gynaecological Lecture: Friday, 10 a.m., Special Lecture in Gynaecological Pathology.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.—Wednesday, 4.30 p.m., Gangrene of the Lung.

London Hospital Medical College, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children, Description of Children, Types of Childhood.

London School of Clinical Medicine, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

London School of Tropical Medicine, Royal Albert Dock, E.—Lectures daily (Saturday excepted) at 12 and 4 p.m. Practical laboratory work daily (Saturday excepted), 10 to 12 a.m. Practical Protozoology, 2 to 3.30 p.m. daily. Advanced Protozoology, 10.30 to 1 p.m. daily. Medical Clinics, Tuesday and Thursday at 3 p.m. Operations, Friday at 3 p.m.

Manchester Hospitals Post-Graduate Clinics.—At 4.30 p.m. each day. Monday: Children's Hospital, Manchester, Rickets. Tuesday: Salford Royal Hospital, Treatment of Cystitis. Wednesday: Royal Infirmary, Ophthalmoscopic Cases. Thursday: Ancoats Hospital, Melaena. Friday: Royal Eye Hospital, Myopia—Staphyloma Posticum.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Clinical demonstrations at 4 p.m. each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Eye. Special lectures at 5.15 p.m. each day.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m., Paraplegia. Friday, 3.30 p.m., Clinical Cases.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

Queen's Hospital for Children, Hackney Road, E.—Thursday, 4 p.m., Difficulties in Diagnosis in Disease in Children.

West London Post-Graduate College, Hammersmith, W.—Medical and Surgical Clinics. *X* Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special Lectures at 5 p.m. daily except Saturday.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		FEBRUARY.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
11	Wed.	Leicester and Rutland Division, Leicester, 4 p.m.
12	Thur.	London: Insurance Act Committee.
14	Sat.	Last day for receipt of Nominations for election of Members of Council outside the United Kingdom.
19	Thur.	South-West Essex Division, Whipps Cross Infirmary, 4 p.m.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10a.m. Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m.
		Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
27	Fri.	City Division, Manor Lodge, Upper Clapton, 9.30 p.m.

Date.		Meetings to be Held.
		MARCH.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*).
		London: Naval and Military Committee, 4 p.m. (*provisional*).
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
3	Fri.	London: Central Ethical Committee, 2 p.m.
		London: Medico-Political Committee, 10.30 a.m. (*provisional*).
7	Tues.	London: Organization Committee, 2 p.m. (*provisional*).
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15	Wed.	London: Finance Committee, 2.30 p.m.
22	Wed.	London: Council.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 14TH, 1914.

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Association Intelligence.

PROCEEDINGS OF COUNCIL.

A MEETING of the Council was held at 429, Strand, London, on Wednesday, January 28th, at 11 a.m., when a large amount of the time of the Council was devoted to matters which are to be reported to the Representative Body, and as to which full reports will be published in due course.

Present:

Sir JAMES BARR, M.D., LL.D., Liverpool, Deputy Chairman of Council, in the Chair.

Dr. W. AINSLIE HOLLIS, Hove, President.

Mr. T. JENNER VERRALL, Bath, Chairman of Representative Meetings.

Dr. EDWIN RAYNER, Stockport, Treasurer.

Dr. JOHN ADAMS, Glasgow
Dr. J. MITFORD ATKINSON, London
Dr. R. M. BEATON, London
Dr. M. G. BIGGS, London
Mr. W. F. BROOK, Swansea
Dr. CHARLES BUTTAR, London
Dr. H. J. CAMPBELL, Bradford
Mr. W. F. CHOLMELEY, Wolverhampton
Dr. J. SINGLETON DARLING, Lurgan
Mr. E. J. DOMVILLE, Chelwood
Dr. D. E. FINLAY, Gloucester
Dr. ADAM FULTON, Basford, Nottingham
Mr. T. W. H. GARSTANG, Altrincham
Dr. JOHN GORDON, Aberdeen
Surgeon-General J. P. GREANY, I.M.S. (Indian Medical Service)
Dr. T. D. GREENLEES (South African Branches)
Dr. MAJOR GREENWOOD, London
Dr. J. R. HAMILTON, Hawick, N.B.
Dr. G. E. HASLIP, London
Dr. T. ARTHUR HELME, Manchester
Mr. R. J. JOHNSTONE, Belfast
Mr. P. NAPIER JONES, Crowthorne
Mr. F. CHARLES LARKIN, Liverpool
Mr. C. COURTENAY LORD, Gillingham
Dr. J. LIVINGSTONE LOUDON, Hamilton
Mr. ALBERT LUCAS, Birmingham
Dr. C. H. MILBURN, Hull
Dr. J. MUNRO MOIR, Inverness
Mr. E. C. MONTGOMERY-SMITH, London
Dr. J. E. MOORHOUSE, Stirling
Dr. B. H. MUMBY, Portsmouth
Dr. H. F. OLDHAM, Morecombe
Dr. GEORGE PARKER, Bristol
Sir JAMES PORTER, K.C.B., M.D. (Royal Navy Medical Service)
Dr. F. J. SMITH, London
Mr. D. F. TODD, Sunderland
Mr. E. B. TURNER, London
Mr. E. H. WILLOCK, Croydon

DEATH.

The CHAIRMAN reported the death of Dr. J. G. Durran of Leighton Buzzard, a former member of the Council, and was requested to forward to the family expressions of sympathy in their bereavement and appreciation of the work Dr. Durran had done for the Association.

VACANCIES ON COUNCIL.

A vacancy having occurred among the four members of Council elected by the Representative Body under By-law 43 (*d*), owing to the resignation of Dr. J. Pearse, the Chairman of Representative Meetings had, pursuant to By-law 52, declared as elected to fill the vacancy Mr. E. J. Domville of Chelwood, near Bristol. For the two vacancies among the twelve members of Council elected by the Branches in the United Kingdom under By-law 43 (*c*), caused by the resignations of Drs. Mactier and Clow, he had, pursuant to By-law 52, declared as elected Mr. W. F. Cholmeley, Wolverhampton, and Dr. J. E. Moorhouse, Stirling.

ANNUAL MEETING, CAMBRIDGE, 1915.

The Executive of the Cambridge Meeting have urged that it is desirable to arrange that the Cambridge Meeting should commence on Friday, July 2nd, and finish on July 10th, 1915, and the Council will recommend these dates to the Annual Representative Meeting.

NATIONAL TEMPERANCE LEAGUE.

An application from the National Temperance League for permission to hold its annual breakfast during the Aberdeen meeting was granted.

FINANCE COMMITTEE.

The TREASURER presented the minutes of the Finance Committee for the December quarter.

ACCOUNTS.

The accounts, amounting to £19,408 3s. 8d., were approved, and the Treasurer empowered to discharge those remaining unpaid.

Dr. Haslip was appointed to fill a vacancy on the Committee.

ASSISTANT MEDICAL SECRETARY (INSURANCE).

The Council decided to postpone the question of the appointment of an Assistant Medical Secretary (Insurance) pending a report by the Special Inquiry Committee.

ORGANIZATION COMMITTEE.

The Chairman, Mr. F. CHARLES LARKIN, presented the quarterly report of this Committee.

SOUTH AFRICAN MEDICAL CONGRESS.

The Council decided that an effort should be made on some future occasion to appoint a delegate to attend the South African Medical Congress.

ELIGIBILITY FOR MEMBERSHIP OF ASSOCIATION.

The Organization Committee was authorized to communicate with the Overseas Divisions and Branches, reporting to them on the whole matter of eligibility for membership, and asking whether it is desired that any practitioner registered in any portion of the British Empire should be eligible for election. It is hoped these replies may be in the hands of the Council by September 1st, 1914.

SUGGESTED INCORPORATION OF SOUTH AUSTRALIAN BRANCH.

A communication from the South Australian Branch, stating that the Branch has no corporate existence, and that it is felt by the members of the Branch that in order to protect themselves it is necessary to become incorporated under their own law, which would necessitate alteration of their rules, was referred to the Organization Committee with power to act.

MEDICAL STUDENTS AND ANNUAL MEETINGS.

The Organization of Medical Students Subcommittee of each year was instructed, when the annual meeting is to be held at a place containing a medical school or schools, to forward on behalf of the Association a request to the local Executive Committee (1) that such arrangements as are possible be made to enable medical students studying

in that town to attend the meetings of Sections and the social functions of the annual meeting; and (2) that, if possible, at a date during or prior to the annual meeting a special meeting of local medical students be convened by the local Executive Committee, to consider some matter or matters of professional interest.

A request on the foregoing lines is being addressed to the Executive Committee of the Aberdeen meeting.

Representatives of the Services on the Council.

It will be recommended to the Representative Body that in future as a standing procedure the representatives of the Services on the Council be appointed to hold office for a period of three years instead of one year as at present.

Lapse of Membership through Arrears.

The Financial Secretary and Business Manager was instructed to compile yearly at a suitable date, in respect of each Division and Branch, a list of those members who are in arrears with their subscriptions, and that three months before the time when these members' names will (if the subscription remains unpaid) be removed from the register of members, copies of such list be sent to the honorary secretaries of the Division and Branch concerned.

DOMINIONS COMMITTEE.

Eligibility for Membership.

The Chairman of the Committee, Dr. T. D. Greenlees, submitted a recommendation that the powers conferred upon Colonial Branches by Article 4 to prescribe by their rules who shall be eligible for membership be not interfered with.

The Deputy Chairman of Council pointed out that as a decision of the Council passed that day, upon a recommendation of the Organization Committee, dealt with the same subject, it would be well that the Dominions Committee should withdraw their proposal meantime, and the Chairman consented to do so.

SCIENCE COMMITTEE.

The Chairman of the Committee, Dr. F. J. Smith, presented the quarterly report.

Appointment of a Research Scholar.

Dr. Edward G. Schlesinger, of London, was appointed a Research Scholar of the Association.

MEDICO-POLITICAL COMMITTEE.

Mr. Garstang, Chairman of the Committee, presented the quarterly report.

Vacancies upon Committee.

Mr. E. J. Domville and Dr. P. Napier Jones were appointed to fill vacancies on the Committee.

Right of Masters of Ships to Information as to Illness from which Passengers or Crew are Suffering.

The Council expressed the opinion that professional secrecy should be maintained by ship surgeons in respect to all cases of illness attended by them on board ship, except in those cases which come within the quarantine regulations of any port visited, or which arise under other legal obligations.

Appointment of "Correspondents" with respect to Ship Surgeons.

A full list of "Correspondents" of the Ship Surgeons' Subcommittee will be published regularly in either the Journal or Supplement, with a request that all ship surgeons communicate either with one of the "Correspondents" or with the Subcommittee, on any matter of interest to ship surgeons generally. It is hoped that all practitioners acting as ship surgeons will forward their names to the Subcommittee, with a view to the compilation of a register of ship surgeons.

Payment of Ship Surgeons for Attendance upon First and Second Class Passengers.

The Council decided to urge upon shipping companies the advisability of adopting some fixed scale of fees for medical attendance on first and second class passengers.

Hospital Accommodation on Board Ship.

It was decided to inform the Board of Trade that the British Medical Association notes with satisfaction the action of the Board in issuing to ship owners the following recommendation of the recent Committee appointed to revise the medical scales for merchant vessels:

> Our attention has been called to the absence on board cargo vessels of any separate accommodation for members of the crew who fall ill or meet with accidents.
>
> We are of opinion that it would be very desirable that some suitable provision should be made on board all ocean-going cargo vessels for the separate and reserved accommodation of sick persons, and trust the Board will see fit to use its influence with ship owners in this direction.

It is also proposed to urge upon the Board of Trade the necessity of making the above recommendation compulsory upon all ship owners.

Publication in "Journal" of Certain Advertisements.

The Council gave instructions that advertisements of any vacant *medical* appointments, including assistancies and locumtenencies, tendered for insertion in the Journal, in which applicants are requested to state the amount of salary they would require or accept, be not accepted.

Representatives upon Milk Certification Committee of the Pure Food and Health Society of Great Britain.

Dr. T. Barrett Heggs (Sittingbourne) was appointed representative of the Association upon the Central Milk Certification Committee of the Pure Food and Health Society of Great Britain.

Workmen's Medical Aid Associations and Members of the Staffs of Voluntary Hospitals.

The Council authorized the Medico-Political and Hospitals Committees to issue to the Divisions at the earliest possible moment a joint report upon the subject of Minutes 82 and 83 of the Special Representative Meeting, December, 1913, concerning the question of the policy to be pursued by the staffs of hospitals with regard to patients sent from medical aid associations; the report to be issued with the object of obtaining the opinions of Divisions, and not of recommending definite action to be taken by them pending further consideration of the whole subject by the Council and Representative Body.

Scheme for Co-operation with Colliery and Public Works Surgeons Committee for Scotland.

The following scheme for co-operation with Colliery and Public Works Surgeons Committee for Scotland was approved:

(i) That the Scottish Committee appoint three of its members to be members of the Colliery and Public Works Surgeons Committee for Scotland.

(ii) That the Colliery and Public Works Surgeons Committee for Scotland submit a formal constitution, showing the number of its members, the conditions of admission to the right of its franchise, the method of election of the Committee, and the sources of revenue of the Committee.

(iii) That the Colliery and Public Works Surgeons Committee for Scotland shall not take public action except in so far as its proposals have been approved by the Scottish Committee on behalf of the British Medical Association.

(iv) That the Scottish Committee may by resolution make grants, out of the annual grant received from the Association, towards the general expenses of the Colliery and Public Works Surgeons Committee for Scotland, subject to the approval of the Council, and that the financial liability of the British Medical Association be limited to such grant.

The recommendations contained in above subparagraphs (i) and (iv) were approved subject to the conditions contained in subparagraphs (ii) and (iii) being accepted by the Colliery and Public Works Surgeons Committee.

INSURANCE ACT COMMITTEE.

"Free Choice."

Mr. T. Jenner Verrall, Acting Chairman of the Committee, presented the quarterly report.

The Council considered Minute 93 of the Special Representative Meeting, December, 1913, which was referred to it, and decided that any action taken in connexion therewith must be in strict accordance with the line of policy laid down in the following Minute 145 of the Annual Representative Meeting, 1913:

Minute 145.—Resolved: That the following be the form of amendment of Section 15 (3) of the Insurance Act to be placed before Parliament in connexion with the Amending Bill:

Clause 4, page 4, line 5. Insert the following new sub-clause:

5. The following subsection shall be substituted for Subsection (3) of Section 15 of the principal Act:

"The regulations made by the Insurance Commissioners shall provide that the Insurance Committee by which medical benefit is administered shall require any contributor whose total income from all sources exceeds one hundred and sixty pounds a year or such smaller sum as may with the approval of the Commissioners be fixed by that Committee (not being a voluntary contributor whose total income from all sources exceeds one hundred and sixty pounds a year), and also any person who holds a certificate of exemption, and shall allow any other such person as the Local Medical Committee may in writing approve, in lieu of receiving medical benefit under such arrangements as aforesaid, himself to make his own arrangements with any duly qualified medical practitioner selected by himself (whether the name of the practitioner be on any such list or not) for receiving for himself alone medical attendance and treatment and on the personal applications of such contributors and persons the Committee shall, subject to the regulations, contribute from the funds out of which medical benefit is payable towards the cost of medical attendance and treatment for such contributors and persons sums not exceeding in the aggregate the amount which the Committee would otherwise have expended in providing for them medical benefit (including medicine and appliances)."

Medical Referees.

Pending the issue of the Report of the Departmental Committee on alleged Excessive Sickness Benefit Claims, it was resolved that no action be taken with respect to the following Minute 69 of the Special Representative Meeting, 1913:

Minute 69.—Resolved: That the Council be requested to consider whether the system of approved societies calling in any medical referee they like, without the sanction of the Commissioners and the Local Medical Committee, is undesirable, and whether one or more should be appointed for the whole area for a definite term.

Central Insurance Defence Fund.

The Council deferred the question of the advisability of making no further calls upon the guarantors to the Central Insurance Defence Fund pending the settlement of the question of the formation of a Special Fund, and without prejudice to any future decision. This will be reported to the Representative Body in connexion with the following Minute 61 of the Special Representative Meeting, December, 1913:

Minute 61.—Resolved: That in view of the proposal to raise a special fund the Council be requested to consider the advisability of making no further calls upon the guarantors to the Central Insurance Defence Fund.

Proposed Special Fund for the Organization of the Profession.

In view of the fact that the work of the proposed Special Fund, if formed, will be entirely outside the organization of the Association, a special *ad hoc* Committee was appointed to deal with the question, consisting of the following: Dr. W. A. Hollis (Hove), Mr. T. Jenner Verrall (Bath), Sir James Barr (Liverpool), Dr. E. Rayner (Stockport), Dr. R. M. Beaton (London), Dr. C. Buttar (London), Dr. E. R. Fothergill (Hove), Dr. R. W. W. Henry (Leicester), Dr. R. McKenzie Johnston (Edinburgh), Mr. Herbert Jones (Hereford), Mr. David F. Todd (Sunderland), Mr. H. H. Tomkins (London). The following Minutes 58 (*a*) (*b*), 59, and 60 of the Special Representative Meeting, December, 1913, were referred to it for consideration and report:

Minute 58.—(*a*) That seeing that a large majority of Representatives present at this meeting is in favour of the formation of a fund, the Council be instructed to consider the whole question and submit the matter to the Divisions in order that it may come before the Annual Representative Meeting next July for decision.

(*b*) That in making its report to the Divisions the Council be authorized to issue therewith, if necessary, a minority report containing any objections to the scheme.

Minute 59.—That when the Divisions are consulted an opportunity be taken of recording the votes for and against the scheme at Divisional meetings.

Minute 60.—That the Divisions be instructed to take the opinion of practitioners resident within their areas by means of a postal vote.

Drug Tariff.

The Council decided to try to arrange Conferences some time during the summer of each year between representatives of the British Medical Association and of the Pharmaceutical Society, for the purpose of arriving at some agreement with regard to the Drug Tariff for the succeeding insurance year. The agreement could then be recommended by each parent body to the various Local Medical, Panel, and Pharmaceutical Committees throughout the kingdom.

It was left to the Insurance Act Committee to make all necessary arrangements for the holding of such Conferences, and to appoint the Association's representatives thereat.

Co-ordination, etc., of Local Medical Committees.

The Insurance Act Committee was directed to take all necessary steps, through the organization of the Association, for the holding at an early date of a Conference of representatives of all Local Medical and Panel Committees in the United Kingdom; and the Council sanctioned the expenditure in providing, for the purposes of the Conference, place of meeting, printing and postage, and clerical assistance. Practitioners taking part in the Conference must make their own arrangements as regards any other expenditure.

Treatment of all Forms of Tuberculosis by Members of Medical Staffs of Tuberculosis Dispensaries or Voluntary Medical Institutions.

The Council approved certain recommendations concerning the treatment of all forms of tuberculosis by the members of the medical staffs of tuberculosis dispensaries or voluntary medical institutions. The Insurance Act Committee was authorized to forward to the Divisions the recommendations together with an amended version of the model scheme of the Association for the treatment of tuberculosis.

It was left to the discretion of the Insurance Act Committee to decide as to when, and to what bodies, the report and model scheme should be issued. When issued the report will be published in the JOURNAL.

Medical Officers of Voluntary Hospitals and other Charitable Institutions and Treatment of Members of the Staff who are Insured Persons.

It will be recommended to the Representative Body that in those cases where the medical officer of any voluntary hospital is required to attend insured members of the staff of such institutions, the moneys paid by the Insurance Committee in respect of the medical attendance and treatment of such insured persons (exclusive of drugs and appliances) shall be paid to the medical officer of the institution who is responsible for such attendance and treatment, irrespective of any salary paid to such officer by the hospital authority.

Central Insurance Defence Fund.

The Council, acting as trustees of the Central Insurance Defence Fund, gave instructions that the report and accounts of the auditors as to the Central Insurance Defence Fund be published in the JOURNAL. They will be found on page 76.

Filling of Vacancy in Committee.

Dr. C. H. Milburn (Hull) was appointed a member of the Insurance Act Committee, in place of Dr. James Pearse, resigned.

NON-PANEL COMMITTEE.

The Chairman of the Committee, Mr. E. B. TURNER, introduced the quarterly report.

Card Register and Lists of Non-Panel Practitioners.

It was decided to obtain a complete set of panel lists issued by the various Insurance Committees throughout the country in January, 1914, for the purpose of making the Card Register indicate whether or not a particular practitioner is on a panel.

It was also decided to make from the Card Register complete lists of non-panel practitioners in each area, and to forward them to honorary secretaries of Divisions for correction, and for information as to whether such practitioners are in active practice, and if so, the nature of their practice.

Policy as regards Extension of Insurance Acts.

A proposal that the policy of the British Medical Association, as regards any extension of the Insurance

Acts, should be one of opposition to the extension of contract medical practice was referred to the Future Developments of the Insurance Acts Committee for consideration, and without any expression of opinion by the Council.

SECRETARIAL WORK OF COMMITTEE.

It was decided that in future the Secretary of the Non-Panel Committee shall be the Medical Secretary or a deputy acting for him.

The Council, having concluded its business, adjourned at 7.15 o'clock.

AUDITORS' REPORT ON THE CENTRAL INSURANCE DEFENCE FUND.

Gresham College, Basinghall Street,
London, E.C.,
30th January, 1914.

Guy Elliston, Esq., Financial Secretary and Business Manager, British Medical Association, 429, Strand, W.C.

Dear Sir,

We send herewith account of the receipts and payments of the Central Insurance Defence Fund, up to the 31st ultimo, which we have audited. We desire to draw the attention of your Committee to the following matters in connection with this account:—

The account has been divided into two parts. The first relating to administration comprises all receipts in respect of calls made for administration, and has been charged with such expenditure out of the Fund as relates to administration. The second compensation account comprises all sums received and disbursements made in respect of compensation.

Both these accounts include subscriptions received direct from members and also subscriptions received through Branches and donations from Branches out of their funds.

In respect of sums received from Branches it will be understood that we have not in any way inspected or audited the Branch accounts, and it may be that there are balances collected by the Branches which are still due to the Association. All that has been included in this account are the sums that have actually come into the possession of the Central Fund.

We have allocated to the Compensation Account so much of the interest received from the Bankers upon the deposit account as appears to be due to the balances held from time to time on behalf of the Compensation Branch.

We have checked the payments recorded against the vouchers, but with reference to the Divisional and Provisional Medical Committee expenses amounting to £1,923 13s. 5d., we would remark that while the greater part of this item has been vouched against detailed accounts rendered by the Branches and approved by the Medical Secretary, payments to Branches amounting to £335 12s. 11d. could not be verified in this way owing, as we understand, in many cases to the fact that the accounts of expenses had already been returned to the Local Committees. In these cases as in all others the receipt of, or cheque endorsed by, the recipient has been produced as a voucher for the disbursements out of the Central Fund.

We are,
Dear Sir,
Yours faithfully,
(Signed) PRICE, WATERHOUSE & CO.

BRITISH MEDICAL ASSOCIATION.

CENTRAL INSURANCE DEFENCE FUND.

Account of Receipts and Payments for the period from 22nd July, 1911, to 31st December, 1913.

ADMINISTRATION ACCOUNT.

RECEIPTS.	£ s. d.	PAYMENTS.	£ s. d.
To Subscriptions received, 22nd July, 1911, to 31st December, 1913	16,780 1 8	By Grant to British Medical Association to meet extraordinary expenditure in connection with the National Insurance Act	13,500 0 0
,, Proportion of Interest on Deposit	27 6 10	,, Divisional and Provisional Medical Committee Expenses	1,923 13 5
		,, Grant to Irish Conjoint Committee	300 0 0
		,, Legal Expenses	34 18 2
		,, Expenses of Deputation to Insurance Commissioners	22 15 9
		,, Bank Charges and Sundries	10 10 8
		,, Postages	327 11 4
			16,119 9 4
		,, Balance, being amount unexpended on Administration Account	687 19 2
	£16,807 8 6		£16,807 8 6

COMPENSATION ACCOUNT.

	£ s. d.		£ s. d.
To Subscriptions received, 1st January to 31st December, 1913	17,556 2 2	By Grants to Members	2,747 5 0
,, Interest on Deposit	180 0 0	,, Grant to "Courtenay Milward Memorial Fund"	200 0 0
,, Interest on Loan to British Medical Association	187 8 0	,, Loans to Members	2,975 0 0
		,, Balance, being amount unexpended	12,001 5 2
	17,923 10 2		£17,923 10 2
Unexpended Balances, 31st Dec., 1913—			
Administration Account 687 19 2		Cash with Bankers—	
Compensation Account 12,001 5 2		Current Account 1,189 4 4	
	12,689 4 4	Deposit Account 1,500 0 0	
			2,689 4 4
		British Medical Association Loan Account (secured by Deposit of Investments)	10,000 0 0
	£12,689 4 4		£12,689 4 4

We have compared the above account of receipts and payments with the books and vouchers of the Fund, and find it correct. We have verified the Bank Balances at the 31st December, but we have not audited the accounts of the Local Committees who have collected contributions for the Fund.

PRICE, WATERHOUSE & CO.

Gresham College, Basinghall Street, E.C.
30th January, 1914.

OFFICIAL PUBLICATIONS.

NATIONAL HEALTH INSURANCE COMMISSION (ENGLAND).

MEMORANDUM WITH REGARD TO PERSONS MAKING THEIR OWN ARRANGEMENTS UNDER SECTION 15 (3) OF THE NATIONAL INSURANCE ACT, 1911.*

1. The Commissioners desire to draw the attention of Insurance Committees to certain provisions in the current Medical Benefit Regulations, as regards persons making their own arrangements, in which those Regulations differ from the Regulations previously in force.

(a) Persons who were Allowed to make their own Arrangements for Medical Benefit during the past Year.

2. Inquiries have been received from Committees with regard to the position of persons under this head who have not given the notice required by Article 21 of the Regulations in force in 1913 of their desire to change their method previously adopted of obtaining treatment.

3. The Commissioners accordingly desire to point out that under the Article named such persons are deemed to have applied to obtain treatment in the current year in the same manner as in the preceding year, *i.e.*, they are deemed to have applied to make their own arrangements. It will, accordingly, be necessary for Committees to review the individual cases in which they have already given consent to persons making their own arrangements, in order that they may consider whether for any reason, such as change of circumstances, permission should be refused.

4. For this purpose, a copy of the appropriate form of application (see (*d*) below) should be issued to each person to whom permission has previously been granted. In the event of the circumstances of the insured person remaining unchanged the Committee will doubtless desire to extend the permission previously given, refusing permission in those cases only in which, in the proper exercise of their discretion on the particular facts before them, the Committee are satisfied that the existing circumstances justify this course.

5. The consent or the refusal, as the case may be, of the Insurance Committee should be notified to the insured person as soon as practicable, and, in this connexion, attention is drawn to Article 14 (7) of the Medical Benefit Regulations now in operation, which specifies the periods for which an insured person may be allowed to make his own arrangements—namely, up to the end of the year in which application is made or up to the end of the succeeding year, as the Committee think fit. Care should be taken, therefore, to indicate in the notice to the insured person in each case where permission is given the period it is intended to cover.

6. Where permission is refused, the insured person will revert to the ordinary arrangements, and the Committee should recover the endorsed Medical Card, if any, previously issued, and provide him with a Medical Card for his selection of a doctor on the panel or of an institution.

(b) Exempt Persons required to make their own Arrangements.

7. As Committees are aware, exempt persons whose total income from all sources exceeds £160 a year are *required* under Section 9 of the National Insurance Act, 1913, to make their own arrangements for medical benefit. Exempt persons entitled to medical benefit whose incomes exceed £160 have been instructed to notify the Committee to that effect. As these persons are required by the Act to make their own arrangements, Committees have no discretion in the matter, and it will not be necessary to accord to the exempt person the consent of the Committee. The latter will, however, require to be satisfied, either at the time that the notice is given or when a contribution is claimed, that the necessary conditions specified in the Regulations have been satisfied. In order that they may not incur expense under a misapprehension, it is extremely important that exempt persons required to make their own arrangements should have the position placed before them as soon as practicable. The Commissioners have accordingly prepared a model form for the convenience of Committees in this connexion (see paragraph (*d*) below). A copy of this form should be issued to each exempt person notifying that he is required to make his own arrangements. The form will also be found to be applicable to other persons who, by the operation of any income limits fixed by the Committee, are required to make their own arrangements.

(c) Persons making their own Arrangements otherwise than with duly qualified Medical Practitioners.

8. It is within the knowledge of Committees that the old Regulations did not deal under expressly separate provisions with arrangements made with qualified practitioners and those made with other persons. It was, of course, contemplated that the great majority of applications under Section 15 (3) of the National Insurance Act, 1911, would be received from persons desirous of making private arrangements with qualified practitioners; and this expectation has, it is understood, been justified by the experience of Committees, who will, in all probability, continue to receive the bulk of their applications from persons desirous of making arrangements of that nature. But the Regulations did not exclude the possibility of arrangements of another class, and it was left to Insurance Committees to consider the particulars of individual applications with a view to giving or withholding consent, in accordance with a proper exercise of their discretion, upon the merits of each case.

9. It is understood, however, that difficulty was experienced last year by Committees in some cases in dealing with the applications of persons desirous of arranging otherwise than with qualified practitioners, practically the whole of which have, according to the Commissioners' information, been received from those who wish to obtain treatment from persons known as "herbalists," on grounds of preference based either on a long existing habit, or on some objection to the treatment given by qualified medical practitioners. In the course of their consideration of these cases it is believed that doubts have occurred to Insurance Committees as to whether their discretion was not fettered by the terms of the Regulations, as appearing to suggest, in the absence of any specific appropriate provision, that, failing the satisfaction of the standards applicable to the case of treatment by qualified practitioners, the Committee were not empowered to consent to, or contribute to the cost of, arrangements for other kinds of treatment.

10. It is not the case, in the opinion of the Commissioners, that the old Regulations fettered the discretion of Insurance Committees in the manner suggested; and it was open to them, as the Commissioners have advised when consulted, to exercise that discretion upon the merits of each application before them in accordance with their duties to the insured persons concerned. But as confusion seemed likely to arise in the consideration by Committees, under one provision of general application, of cases differing so widely in character, and as situations of difficulty would certainly be created by an indiscriminate adoption, in respect of all types of cases, of administrative procedure primarily devised with a view to the circumstances of treatment by qualified practitioners only, the Commissioners have, both for the purpose of removing doubts and for the administrative convenience of Committees, amended the Regulations in making them substantive, so as to restate (in Article 44) their practical effect in the form of distinct and separate provisions governing, in the two sets of cases, the conditions to be observed and the circumstances in which a contribution may be made.

11. Before, however, these provisions are dealt with, it should perhaps be pointed out that, though the conditions of the Special Exchequer Grant are no longer specifically referred to in the Regulations as conditions of a contribution by the Committee, the position is in

*Memo. 191/I.C.

no respect modified by this amendment. The conditions in question are still required to be complied with as conditions of the Exchequer Grant to Insurance Committees; and in the event of any breach of those conditions in connexion with treatment privately arranged for under Section 15 (3) of the National Insurance Act, 1911, the Committee will be liable to a proportionate diminution of their share of the grant. Moreover, paragraph 4 of Article 44 now expressly provides, in such cases, for a reduction being made in the contribution which would otherwise have been payable under that article to the person, in whose case non-fulfilment of the conditions has occurred, of the amount of the loss occasioned thereby; and as this provision is one of general application, the effect is that in the case of every person making his own arrangements, the Committee's contribution is liable to be reduced by the amount payable from the Exchequer in respect of his treatment, unless the conditions of the Exchequer Grant have been fully complied with.

12. Proceeding now to the separate provision governing private arrangement cases with qualified practitioners, it will be observed that the previous position is not materially modified by the new Regulations. The Committee are required to satisfy themselves that the private arrangements made "are such as to secure treatment (including drugs and appliances) not inferior in nature, quality, and extent to that provided under the arrangements made by the Committee." They will also, of course, secure compliance with the conditions of the Exchequer Grant, as having general application to all cases, in the manner indicated in the preceding paragraph.

13. It should perhaps be pointed out that the Regulations have been slightly amended as to the methods according to which the Committee's contributions are to be calculated. It is now possible for the Committee to contribute to the cost of arrangements, for receiving treatment from a qualified practitioner, made in either of the following ways, namely:

(1) As regards both treatment and the supply of drugs, etc., by contract at a fixed rate or rates;
(2) As regards treatment alone, by contract at a fixed rate; drugs, etc., being obtained when required, and accounts therefor being presented to the Committee;
(3) As regards drugs, etc., alone, by contract at a fixed rate; treatment being obtained when required, and accounts presented; and
(4) Both treatment and drugs being obtained when required, and accounts presented.

14. With regard to the separate provision (paragraph 2 of Article 44) governing private arrangements for receiving treatment otherwise than from qualified practitioners, it will be seen that it contains no explicit requirements as to the manner in which the Committee are to satisfy themselves as to the arrangement made. It will, of course, be obvious that any definite standards established, such as that prescribed in the case of treatment by qualified practitioners (paragraph 1 of Article 44) must be comparative, and must thus fail to apply where the circumstances are not comparable; and it will therefore not be possible for the Committee to judge of the satisfactoriness of any arrangements made with unqualified persons by the standards applicable to the panel system.

15. Paragraph 2 of Article 44 accordingly leaves the matter at the discretion of the Committee, who "may make such contribution . . . as they think fit." But private arrangements with unqualified persons, like all other private arrangements, are subject to the application of the conditions of the Exchequer Grant. These conditions require, *inter alia*, that the person undertaking treatment should also undertake to provide domiciliary treatment for tuberculosis, in accordance with the Local Government Board Order of 26th July, 1912; and as it is not legally open to any person other than a duly qualified medical practitioner to perform this service, it is clear that no arrangements otherwise than with qualified practitioners could earn the Grant to which these conditions attach. The Committee will not therefore be able to rely upon receiving any sum from the Exchequer Grant in respect of treatment afforded by unqualified persons; and they would be well advised, in the Commissioners' opinion, to make it clear to any person desirous of being so treated that, in the probable event of a reduction in their share of the Grant, the maximum sum available to them for contribution would be limited to the sum (amounting, with the State proportion, to 6s.) which is payable in respect of the applicant by his approved society or out of his account in the Deposit Contributors Fund, or from the Exempt Persons Fund, as the case may be.

16. It will be seen that the Regulations only admit of a contribution being made by the Committee to the expense of arrangements for treatment by an unqualified person if the insured persons pay at a fixed capitation rate. The difficulty of equating the value of services rendered under widely varying systems, with a view to the adoption of a scale for the calculation of contributions on an attendance basis, would in practice prove almost insuperable.

17. The provisions of the old Regulations, enabling the Committee in these cases to reduce or withhold their contribution in the event of their receiving representations from an approved society that the treatment is not such as will adequately protect the society's funds, is retained in the Regulations now current.

(d) Forms for use in connexion with Applications by Persons desiring or required to make their own Arrangements.

18. The forms already in use by Committees will require revision in certain respects in consequence of the provisions of the current Regulations. Model revised forms have accordingly been prepared, copies of which are enclosed herewith. Forms 43/I.C. and 43(*b*)/I.C. are the ordinary forms, and will be used in the appropriate circumstances where the arrangements are proposed with duly qualified practitioners. Form 43(*c*)/I.C. will be used in the case of persons required to make their own arrangements, either under Section 9 of the National Insurance Act, 1913, or by the operation of any income limit adopted by the Committee. In view of the "Travellers" arrangements now in operation, it is not thought that Committees will have occasion to require any form similar to the original Form 43(*a*)/I.C.; but in the event of such a form being necessary, or in the event of any Committee requiring forms in a case where an insured person is desirous of making his own arrangements with an unqualified person, the Commission will advise, on application, as to a suitable form in either case for adoption with their approval.

19. The Commissioners would be prepared to approve forms in accordance with the models enclosed herewith if adopted by the Committee. The forms actually adopted, with the scale of fees completed where necessary, should, however, be submitted for formal approval and for purposes of record.

National Health Insurance Commission (England),
February, 1914.

SCOTLAND.

Powers and Duties of Panel and Pharmaceutical Committees.

The following memorandums have been issued by the Insurance Commission (Scotland):

MEMORANDUM AS TO THE POWERS AND DUTIES OF THE PANEL COMMITTEE.*

1. Under the provisions of Section 32 of the National Insurance Act, 1913, the Panel Committee is to perform such duties and exercise such powers as may be determined by the National Health Insurance Commission (Scotland).

2. The National Health Insurance (Panel and Pharmaceutical Committees) Regulations (Scotland), 1913, governing the election of these committees, provide for arrangements being made by the Commission for the first meeting of the Panel Committee, and for the appointment of a Secretary who shall forthwith notify his appointment to the Commission.

3. Having been duly constituted, the Panel Committee is to be the medium through which the Insurance Committee is to ascertain the opinion of the medical practi-

* Memo. 502/I.C., Scotland.

tioners who have undertaken the attendance and treatment of insured persons under the National Insurance Acts or Regulations made thereunder in regard to any matter affecting the administration of medical benefit. These matters, which are incorporated in the National Health Insurance (Medical Benefit) Regulations (Scotland), 1913, are briefly outlined below.

Conditions of Service.

4. Before embodying in a draft agreement the terms upon which it is proposed to invite practitioners to undertake the treatment of insured persons, an Insurance Committee must first consult the Panel Committee. (Regulation 5 (1).)

Keeping of Records.

5. In addition to the records of the diseases of his patients which a practitioner is required to keep as conditions of any Treasury Grant, he may be called upon to keep such further records as may be agreed upon between the Panel Committee and the Insurance Committee. (First Schedule (8).)

Revision of Terms of Service.

6. If at any time the Insurance Committee desire to alter the terms of service of practitioners, they must consult the Panel Committee before submitting the changes to the Commissioners. (Regulation 16 (1).)

Allocation.

7. It will be the duty of the Insurance Committee to arrange with the Panel Committee for enabling any insured person, who is entitled to select a practitioner from the panel and makes due application for the purpose, to be assigned to a practitioner on the panel. (Regulation 21 (4).)

Calculation of Remuneration.

8. The Panel Committee will agree with the Insurance Committee upon the proportion of capitation fees to be credited at the beginning of every quarter to each practitioner in respect of the insured persons on the Committee's register who have not been accepted by or assigned to any other practitioner, in addition to the capitation fees credited to the practitioner on account of the persons on his list. (Regulation 35 (1).)

Note.—Subsection 2 of Regulation 35, relating to the payment of practitioners ordinarily on an attendance basis, does not apply in any area in Scotland, and it is accordingly unnecessary to refer to it here.

Payments to Practitioners.

9. Advances at the rate agreed upon between the Panel Committee and the Insurance Committee are to be made to each practitioner as soon as may be after the end of each quarter. (Regulation 37.)

Drugs and Appliances.

10. An Insurance Committee must consult the Panel Committee before preparing the list of the prices of drugs and appliances, known as the Drug Tariff. (Regulation 8.)

Arrangement for Supply of Drugs and Appliances by Practitioner.

11. Where an insured person is resident in a rural area at a distance of more than one mile from the place of business of the nearest chemist, the Insurance Committee may, after consulting the Panel and the Pharmaceutical Committees, with the consent of the Commissioners, make arrangements for the supply to that person by the practitioner attending of such drugs and appliances as would otherwise ordinarily be supplied by a chemist. (Regulation 12 (1).)

Revision of Drug Tariff.

12. In any alteration of the Drug Tariff or of the terms upon which the supply of drugs and appliances is to be undertaken, the Panel Committee has a right to be consulted. (Regulation 18 (1).)

Submission of Accounts for Drugs.

13. If the Panel Committee so require, the accounts of the persons supplying drugs and appliances are to be submitted to them, together with any report on such accounts made by the Pharmaceutical Committee, and if the Panel Committee take objection to any items in the accounts or to any recommendation contained in the report, the Insurance Committee must decide as to the validity of the objection. The Panel Committee may, either with or without an examination of the accounts, indicate their willingness to accept all or any of them, and in so far as they are accepted, they shall be binding on all the practitioners on the panel, and the Insurance Committee will proceed to pay on them as arranged. (Regulation 39 (3) and (4).)

The same powers of the Panel Committee apply to the provision of medicines to temporary residents. (Regulation 42 (8).)

Excessive Ordering of Drugs.

14. Where it appears to the Panel Committee that by reason of the character or amount of the drugs ordered for insured persons by any practitioner or practitioners on the panel, the cost of the supply of those drugs and appliances is in excess of what may reasonably be necessary for the adequate treatment of those persons, the Panel Committee may, and, if any representation to the effect indicated is made to them by the Pharmaceutical Committee, must make an investigation into the circumstances, and, after hearing the Pharmaceutical Committee and any practitioner concerned, report to the Insurance Committee. (Regulation 40 (1) and (2).)

Medical Service Subcommittee.

15. The Panel Committee is entitled to appoint two (and in certain circumstances more) representatives to a Special Subcommittee, known as the Medical Service Subcommittee, appointed by an Insurance Committee for dealing with any question arising between an insured person entitled to obtain treatment from a practitioner on the panel and the practitioner attending him in respect either of the treatment rendered by the practitioner or the conduct of the insured person while receiving that treatment. (Regulation 45 (2).)

16. The Secretary or other officer of the Panel Committee has a right to be present at a hearing of any question referred to the Medical Service Subcommittee. (Regulation 45 (7) (*c*).)

17. Where, in the opinion of the Medical Service Subcommittee, any matter referred to that Subcommittee involves a question relating to a person supplying drugs and appliances, or where, in the opinion of the Pharmaceutical Service Subcommittee, any matter referred to that Subcommittee involves a question relating to a practitioner on the panel, the Subcommittee, instead of dealing with the matter themselves, must refer it to the Joint Services Subcommittee. In such a case the Secretary or other officer of the Panel Committee is entitled to be present at the hearing. (Regulation 47 (4).)

Inquiries relating to Practitioners.

18. Where an inquiry is held by the Commissioners in pursuance of a representation made to them by the Panel Committee or any other body or person, that the continuance of a practitioner upon the panel is prejudicial to the efficiency of the medical service of the insured, the Panel Committee may appear at the inquiry by their clerk or other officer duly appointed for the purpose, or with the consent of the Chairman of the Inquiry Committee by counsel or solicitor. (Regulations 52–74.)

Income Limit.

19. Before fixing, varying, or abolishing an income limit the Insurance Committee must consult the Panel Committee. In the event of an income limit being fixed, the Panel Committee is entitled, by giving notice in writing, to dispute the right of any insured person to receive medical benefit under the arrangements made by the Insurance Committee on the ground that his income exceeds the limit so fixed. (Regulation 14 (2) and (3).)

Rules for Administration of Medical Benefit.

20. The Panel Committee are to be consulted by the Insurance Committee before rules with regard to the administration of medical benefit are made in accordance with Section 14 of the National Insurance Act, 1911. (Regulation 81.)

Arrangements for Administration of Medical Benefit.

21. An Insurance Committee is required to submit its arrangements proposed to be made for the administration of medical benefit in its area to the Commissioners, who, before approving, will consider any representations on the subject made by the Panel Committee. (Regulation 82.)

Additional Powers and Duties.

22. In addition to the duties under the Medical Benefit Regulations above referred to, the Panel Committee, in terms of Section 32 of the Act of 1913, is to perform such duties and exercise such powers as may be determined by the Commissioners.

Panel Committee to Act as Local Medical Committee.

23. If in any area within six months of the passing of the Act of 1913 no Local Medical Committee has been recognized under Section 62 of the principal Act, the Panel Committee may, in terms of Section 32 of the Act of 1913, be recognized as the Local Medical Committee for the area.

Administrative Expenses.

24. Attention is drawn to the terms of Section 33 (2) of the Act of 1913 under which the Insurance Committee, if requested to do so by the Panel Committee *and* the Pharmaceutical Committee, may be authorized by the Commissioners, out of moneys available for the provision of medical benefit within the area, to allot to, and for the administrative expenses of, each of the Committees such a sum *not exceeding one penny in all* in respect of each insured person entitled to obtain treatment from insurance service practitioners as may be determined by the Insurance Committee with consent of the Commissioners. It should be observed that neither Committee can receive any payment under this subsection without the concurrence of the other. If the two committees decide to put forward such a request, it is expedient that they should come to an agreement as to how the amount to be allotted to them is to be divided.

MEMORANDUM AS TO THE POWERS AND DUTIES OF THE PHARMACEUTICAL COMMITTEE.

This memorandum is, *mutatis mutandis*, on the same lines as that with regard to the Panel Committee, and sets out the matters upon which the Pharmaceutical Committee is to be consulted. It specifies its duty to appoint a special pharmaceutical service subcommittee, and indicates the procedure in the case of complaints.

LOCAL MEDICAL AND PANEL COMMITTEES.

ABERDEENSHIRE.

The annual general meeting of the medical practitioners on the insurance panel for Aberdeenshire was held on February 7th, for the purpose of electing a Local Medical Committee for 1914, and to receive the annual report for the past year. Dr. Rorie (Cults), Chairman of the Local Medical Committee, presided, and there was a large gathering of county practitioners.

The late Dr. Patrick Mitchell.—Before proceeding to the formal business of the meeting, the Chairman referred to the loss which the profession had sustained through the death of Dr. Patrick Mitchell, Old Rayne, and it was resolved to send an expression of the deepest sympathy to the relatives.

Annual Report.—In the annual report was mentioned the numerous meetings held during the year and the circulars which had been issued to all the medical men on the panel. A list of matters which had fallen to be dealt with was gone through in detail, and the work done by the medical representatives on the Insurance Medical Benefit and Sanatorium Committees was explained. It was stated that, owing to the formation of a Scottish Committee of the British Medical Association, with increased powers for dealing with Scottish affairs, there was now a chance of securing concerted action on behalf of the Local Medical Committees throughout Scotland. The financial statement for the year was submitted, and the new scheme for 1914 was intimated. Regret was expressed in the report that the Commissioners had seen fit to deal so inconsiderately with the profession by the undue and vexatious delay in issuing agreements for the current year, a delay which had prevented proper consideration of the matter. These agreements had only been ultimately signed by the panel practitioners under a strong and unanimous protest against the methods employed towards them. As regards the medical service to insured persons in the county, the Local Medical Committee had, with the evidence in its possession, full confidence in stating that thoroughly efficient work had been done by the medical men in Aberdeenshire since the Insurance Act came into operation, and that their part of the contract had been fulfilled in its entirety.

The report was unanimously adopted.

Election of Officers.—The following were elected as office-bearers and members of the Local Medical Committee: *Chairman*, Dr. David Rorie: *Vice-Chairman*, Dr. Robert Rannie; *Secretary*, Dr. Robert Bruce (Cults); Drs. Beddie, Cameron, Cockburn, Forbes, Gray, Hendry, Henry, Howie, Maver, Middleton, Nicol (Alford), Skinner, Smith, Stewart, Trail (Strichen), Turner, and Wilson.

Panel Committee.—A meeting of the newly formed Panel Committee was held subsequently, when routine business was transacted.

FIFESHIRE.

The first meeting of the Panel Committee for Fife County was held in the offices of the Fife County Insurance Committee on January 29th.

Election of Officers.—Mr. Newlands, representing the Scottish Insurance Commissioners, took the chair, and called for nominations for Chairman of the Committee. Dr. Graham was elected Chairman, Dr. Anderson Secretary, and Dr. Dickson and Dr. Anderson members to serve on the Medical Service Subcommittee.

The annual general meeting of the Fife County Local Medical Committee was held at Kirkcaldy on February 3rd. Dr. Orr presided, and nine members were present.

Prescribing.—The Honorary Secretary intimated that he had heard from the Clerk to the Fife County Insurance Committee in connexion with the matter of panel doctors issuing insurance prescriptions to insured persons not on their list. The Clerk stated that the Commissioners had given their decision against this practice, and it was unanimously agreed to abide by the decision of the Commissioners.

Annual Report.—The annual report of the Committee for the year ending December 31st, 1913, which was submitted, stated that the Committee was formed on March 4th, 1913, and had held six meetings, at which various matters in connexion with the working of the National Insurance Act had been discussed, including alternative schemes for medical records, supply of emergency drugs and appliances, the allocation of insured persons who had not selected a doctor, extension of sanatorium benefit to dependants of insured persons and charges connected therewith, model rules for medical benefit, schemes for provision of medical benefit to temporary residents, the signing of maternity certificates by uncertified midwives, the franking of correspondence between practitioners and Insurance Committees, mileage, etc. The Committee was represented by Drs. Orr and Dickson, together with the Honorary Secretary, at the conference of representatives of Scottish Local Medical Committees held in Dundee in June, but it had been decided not to send representatives to the conference held at Brighton in July. The accounts for the past year showed a credit balance of £11 14s. 5d. at December 31st, 1913. Only sixty practitioners had paid the 5s. levy for the past year, thus leaving about forty who had as yet not paid the subscription. It was unanimously resolved to submit the report to the meeting of practitioners to be held on February 13th.

Medical Services Subcommittee.—Dr. Douglas (Cupar) was unanimously appointed the representative of the Committee on the Medical Services Subcommittee.

Constitution of Committee.—The Honorary Secretary submitted a letter from the Scottish Insurance Commissioners dealing with Article 30, on the constitution of the Committee, and it was decided to adopt Article 30 as it stood in the original constitution. The meeting unanimously decided to recommend to the meeting of practitioners on February 13th that the Local Medical Committee should in future consist of fifteen members, instead of thirty as at present, provided that this should meet with the approval of the Scottish Insurance Commissioners. The Honorary Secretary was instructed to apply to the Commissioners for the necessary permission, and to act accordingly.

INSURANCE COMMITTEES.

Bristol.

The monthly meeting of the Bristol Insurance Committee on February 2nd was chiefly concerned with tuberculosis matters. The Chairman, Dr. Saise, said that the publicity given by the reports of the last meeting regarding those waiting for treatment had had gratifying results, for in the past month 84 applications had been received.

The Chairman of the Sanatorium Subcommittee stated that he wished to make an explanation with regard to the case of a man who, it had been stated in the public press, had been recommended for sanatorium treatment on January 20th, 1913, but had been kept waiting by the committee till 1914 for benefits, and had died in the interval. The facts were that the man had been notified to the medical officer of health at the date mentioned,

not to the Insurance Committee. The medical officer of health's inspectors had attended to the case, and the committee heard nothing about the case till September 15th, when the proper form was sent to be filled up. As this was not returned inquiries were made, and it was found that the man had died in October. At that time the medical officer of health was not working under the Insurance Act.

The Sanatorium Benefit Subcommittee presented a long statistical report which showed that from January 15th, 1913, to January 11th, 1914, 488 cases had been under treatment (286 men and 202 women); 211 had received sanatorium treatment, 147 dispensary treatment, and 130 domiciliary treatment, with the following results: 70 reported as fit for work, 67 improved, 17 not improved, and 16 worse. All patients discharged from sanatoriums were referred to the dispensary and were given dispensary or domiciliary treatment, except in the case of those who were considered sufficiently well to need no further treatment, but they were advised to report at regular intervals. The results of dispensary treatment were: 15 reported as fit for work, 10 improved, 7 not improved. Of domiciliary treatment, 10 reported fit for work, 16 recommended for further treatment, 41 died; the number under treatment here at sanatoriums was 41, under dispensary treatment 160, under domiciliary 56. It was suggested that there should be an after-care committee, which should look after those who had been discharged from sanatoriums, for the treatment did not always effect a cure, but only set people on the way, and required following up.

Among miscellaneous matters it was reported that the index register had been again counted, and the number of insured persons in the city was 125,408. On the motion of the Deposit Contributors Subcommittee the following new rule was approved and ordered to be sent to the Commissioners for sanction:

> An insured woman in respect of whom a maternity benefit is payable in virtue of Subsection 3 of Section 14 of the National Insurance Act, 1913, shall abstain from remunerative work during a period of four weeks after her confinement, provided that any penalties imposed for breaches of this rule in the period of four weeks shall not exceed in the aggregate the sum payable in respect of the maternity benefit.

No reference was made to the work of the medical adviser, as the Commissioners had not sanctioned his reappointment; the work being, therefore, except by private arrangement, at a standstill. The total number of cases seen was 701 from February 12th to January 12th, 1914.

INSURANCE NOTES.

IRELAND.

Irish Medical Committee.

A meeting of the Irish Medical Committee was held in the Royal College of Surgeons on February 6th. Dr. P. J. Macnamara occupied the chair, and thirty-three other members were present, with Dr. M. R. J. Hayes, Medical Secretary, and Mr. C. H. Gick, Assistant Secretary. The following resolutions were passed:

> That the Irish Medical Committee, being cognizant of numberless instances of failure in the administration of the Insurance Act under the present system of supervision by medical men other than the regular attendant on the sick, cannot acquiesce in any scheme of whole-time certifying medical officers, knowing from past experience that such would prove injurious to the efficient treatment of sick persons.
>
> As a medical organizer is urgently needed at the present crisis, we request the aid of the Irish Medical Association and Irish Committee of the British Medical Association in providing for this officer, who may be nominated by this Committee and appointed by the two above-mentioned bodies.

The Medical Secretary of the Irish Medical Committee published a letter in the daily press last week explaining the present position of the medical profession in Ireland. He stated that the free choice of doctor by the insured person was made inoperative in many instances by the representatives of the friendly societies, who handed over the identification notes of their members in bundles to the societies' own doctors. The evidence of alleged loose certification on the part of the doctors was procured at a secret inquiry, and no opportunity was given to medical men to meet the charges brought against them. As a result of inquiries made in the panel areas the Irish Medical Committee had no reason to believe that malingering has been permitted, and the cause of the excessive sickness might be sought in the insanitary homes and uneconomic conditions of the insured, and in the unrestricted acceptance of members by the societies rather than in the dishonesty of the poor and the connivance of their medical attendants. Furthermore, the charges which have been made against medical men of giving certificates loosely have not been borne out by the results of the cases which have gone to appeal. The appointment of a large number of whole-time certifiers was open to several serious objections: it caused the constant intrusion of a third person between the patient and his own medical attendant, and in most cases the opinion of the medical attendant as to his patient's condition was more likely to be trustworthy than that of a visitor who saw the patient once and had no knowledge of the history of his illness.

CORRESPONDENCE.

A State Medical Service.

Dr. J. Charles (Stanley, co. Durham) writes: In reading the case for a State Medical Service, as presented by its accredited exponents, it is difficult to escape the impression that most of the advantages claimed for it are illusory, or based on exaggerated notions of the possibilities of preventive medicine as applied to general family practice; and, on the other hand, that many of the lauded benefits of a State Medical Service can be equally well obtained by extensions and adaptations of the panel service as it already exists.

Take, for instance, the claims made in regard to the prevention of disease put forward as the essential feature of the State Medical Service. This is to be secured, for the most part, by a system of "household inspections" carried out by the State medical officer as part of his routine duties. Now, does any practitioner of experience in family practice seriously maintain that, from the point of view of public health, any tangible benefit is to expected from such inspections? Will they prevent or lessen to any appreciable extent that large mass of disease which constitutes the bulk of the family practitioner's work—for example, febrile catarrhs, gastric and intestinal troubles, pulmonary catarrhs and inflammations, rheumatic affections, fevers, measles, pertussis, injuries of all kinds, appendicitis, etc.? With the exception, probably, of tuberculosis, cancer, and other chronic affections, is it at all likely that household inspections would reveal anything of importance, or produce by prophylactic measures the slightest change in the mortality-rate of the district?

It will be conceded that such household inspections to be effectual must be conducted continually and extensively over the entire area of each medical officer's district. In the nature of things is this really possible, in addition to the ordinary curative work which each medical officer will be called upon to perform as his chief duty? Again, it is pertinent to inquire, when would such household inspections be carried out? Not during weekdays, surely, when all the members of the household are seldom at home together! At such times inspection would be incomplete and comparatively valueless. Obviously, then, only on Sundays and public holidays, when the entire family would be most likely at home. Certainly a nice prospect for the poor State medical officer.

In regard to the principle of "free choice," which the advocates of a State Medical Service maintain would not be invalidated, the exact position is by no means clear. There is a financial aspect of this so-called principle which must not be overlooked.

Under the panel system the practitioner receives the full benefit of the application of this principle of "free choice"; it determines his income, and insures for him the full reward of all that his reputation, skill, and industry have earned for him.

Now, under a State medical system this result of "free choice," I take it, would not accrue, at least in a definite, tangible way as regards the practitioner's income; that is to say, he would have a certain number of patients attached to him by their own choice, but for attendance on these he would be paid a salary, not a *pro rata* grant as under the panel system. Now, if the salary is not to be

regulated by the amount of work done—roughly by the number of persons on each man's list—how is the practitioner to be equitably remunerated? The salary might or might not be commensurate with the work done, most likely not if whole-time State appointments as at present paid are taken as a criterion. Is such a system of payment by salary likely to bring forth the best results in work, ability, energy, and initiative as applied to the conduction of family practice? In any case, is there any security that ability, energy, and industry in professional work would receive their legitimate reward, or be as satisfactorily remunerated as under the panel system?

It must be remembered that under a State Medical Service competition in the medical field would be in large measure abolished as regards the great bulk of the population, and with it would go the best means at the public disposal of maintaining adequate attendance and the efficiency of the medical service. What would the public get in exchange that would satisfy it as a sufficient guarantee and safeguard of its health? *Quis custodiet ipsos custodes?* Are the State medical officers to work under a system of bureaucratic surveillance with medical officials constantly at their heels? If so, their peace of mind is not to be envied.

As a confirmed believer in the potentialities of the panel system, I respectfully contend that there is no advantage or benefit attached to a State Medical Service, as regards either the public or the profession, that cannot be readily obtained by an extension and adaptation of the panel system to the desired ends.

Once the medical benefits of the Insurance Act are extended to the dependants of the workers, and the great bulk of the population have the advantage of free medical advice and attendance, the panel doctors will have ample scope and opportunity for "preventive medicine," and every inducement, in his own interest, to exercise his powers as a prophylactist. He will then be in constant touch with a fourth or fifth of his entire *clientèle* at all times of the year, and have as many opportunities for "household inspections" as he thinks necessary.

He will continue, however, as at present, practically a free agent, in charge of his own practice—not one held on hire from the State—and with every encouragement to keep his own patients at the highest standard of health possible, for on that the amount of his work depends.

He will not need to go in constant fear of the medical supervisor, or curry favour with the powers that be; but, on the other hand, will know that his income, reputation, and advancement depend mainly on himself.

To secure "completeness of treatment," a proportion of the patients, not so large as the advocates of the State Medical Service would wish us to believe, must pass into the hands of specialists or enter suitable hospitals. This is inevitable under any system of medical service, and must be provided for.

The linking up of ordinary domestic practice with hospitals and special infirmaries, and the co-operation of the consultant and specialist with the general practitioner are extensions of the panel system which offer no insuperable difficulty of accomplishment, and would place the panel system in a position to provide a complete service for all who come under its operation.

The other accessories and advantages of the State Service, so much vaunted by its advocates—for example, cottage hospitals, central dépôts for instruments, books, etc., pensions and holiday allowances, etc.—are all within the reach of co-operative action between local and State authorities and the general body of medical panel workers. They will be provided when the demand for them is strong enough.

To sum up—by the change from an elastic and adaptable panel system (based on general family practice lines) to a rigid State Medical Service conducted by whole-time officials, the public would break with a system of practice which has long and adequately served its purpose, and which, in virtue of a competitive régime, has guaranteed it satisfactory medical attendance, and a steadily rising standard of efficiency of the service rendered; the State would depart from a system which has already found widespread favour with the public and a general acceptance by the medical profession; the members of the profession would lose entirely their independence and liberty; their free scope for the development and exercise of whatever ability and energy they possess; would relinquish the legitimate rewards of such ability and industry in exchange for a salary probably much less than they had previously earned; would abandon the possession of practices in their own right; in a word, would lose nearly everything that gives savour, interest, and stimulus to their daily work.

The question naturally suggests itself—who would be the gainers?

Dr. C. COURTENAY LORD (Gillingham) writes: In his letter on the subject of a State Medical Service, in the SUPPLEMENT of last week, Dr. Shaw makes a great deal of the "danger" of such a system. He does not commit himself by defining the danger. It would be interesting to know who is in danger, the profession or the public. If the profession is in danger, is it from pecuniary loss, loss of independence, or loss of any inducement to individual effort? If the public is in danger, does the danger lie in the cost or in the detriment to health which might ensue from treatment by members of a salaried service? Dr. Shaw seems to set very much store by free choice of doctor. In this now hackneyed phrase one seems to recognize the ghost of one of the famous "cardinal points," and it remains to be seen if he will attach any more importance to it when the pinch comes than he did to another of the ghosts, namely, that extremely moderate demand for 8s. 6d. without medicine, at which, according to his Dartford oration (vide BRITISH MEDICAL JOURNAL SUPPLEMENT, p. 522, May 12th, 1912), he was so amazed less than two years ago.

Does Dr. Shaw really seriously believe that the panel system gives free choice of doctor, even where all practitioners are on the panel? Does he maintain that a panel patient has that free choice which a non-panel patient has, or that free choice is given to members of the National Deposit Friendly Society? If so, why does one of our greatest friendly societies, the Manchester Unity of Oddfellows, charge its members an extra penny a week in order to give them what the Act promises, but will not give them, the untrammelled right to go to any doctor they like whenever they please? Can it be seriously advanced that a man who is tied to a doctor for twelve long months has complete free choice? What is the position of the man with acute lobar pneumonia who, quite reasonably, feels that he has no confidence in his doctor and wants to make an immediate change? Even if the Insurance Committee accepted his plea of want of confidence as a valid excuse for a change (which it certainly would not), would another doctor on the panel be keen on accepting him for immediate treatment in the midst of such an illness? I trow not. Mr. Lloyd George has told us that some doctors make people sick at sight. Let us take a man who has applied to be provided with a doctor on coming to a strange town. He has never seen the doctor, but the first time they have the misfortune to meet the unfortunate patient vomits. Will any Insurance Committee accept this as a valid excuse for an immediate change of doctor? No, certainly not. Where, then, is free choice?

If Dr. Shaw is coming out to lead the profession to victory against the whole-time service brigade, and takes "Free choice" as his battle-cry, he will be leaning on a bruised reed and will be foredoomed to failure. Mr. Lloyd George has told us that the man in the street cares not a damn who the doctor is so long as he is a doctor. If that is really his view he will remain unmoved by the cry for free choice. Is Dr. Shaw in a position to convert him? We have learnt, or ought to have learnt, a great deal in the past two years, and we must face facts. We ought to know—and we do know if we are honest enough to allow it—that if the Government intend to start a State service they can do so any day they please. There would, no doubt, be a good deal of shouting on the part of the profession, and possibly some on the part of the public, but a few blacklegs ably led on the one hand, and a £10 penalty on the other worked wonders twelve months ago, and will do so again. I maintain, as I have always done, that unequivocal free choice of doctor cannot be enjoyed under any system of payment by capitation or salary.

If Dr. Shaw is going to make a crusade against a State service he had better begin at once, for even then he will have begun late. He will also be well advised to get to work on the public and not on the medical profession, and try to educate them to the dangers of which he seems

so keenly aware. In this he will be hampered by the fact that the public will never credit him with any honesty of purpose, for there will always be present the fixed impression that the real danger is the reduction of the incomes of the members of the medical profession.

There is one other statement in Dr. Shaw's letter which surely is a little wide of the truth. He says: "Under the existing arrangements a panel practitioner can limit his list to any dimensions he likes, and can remove from his list once a year any number he likes." This is nothing more nor less than the limited panel which we were clearly given to understand twelve months ago would not be countenanced under any consideration. Times have no doubt changed, but even so can Dr. Shaw prove to me from the 1914 agreement that I could go on the panel in Kent for a limited number if I so desired, or that if I were on the panel with a list of, say, 1,000 patients, I should under any circumstances be allowed to jettison 999 of them? I, of course, exclude such attendant circumstances as retirement, selling out, or sudden death.

Dr. F. L. Pochin (Oldham) writes: Dr. Milson Russen Rhodes has a very interesting letter on State Medical Service in the Supplement of January 24th, and has put the whole case in favour of this service with great ability. So exhaustive is his statement that I turned with eagerness to the section entitled, "The Rights of the Individual under State Medicine," to see what the rights of the individual doctor are supposed to be. But I found in it not one word on this subject. Dr. Rhodes is eloquent on the rights of the individual patient (or "voter" as I prefer to call him nowadays), but, judging from the letter, the doctor has no right at all except to be paid from £400 to £1,000 per annum, which right we will look at in a minute.

To take only one point, what about the right of the doctor to the goodwill of his practice laboriously built up during, perhaps, twenty to thirty years? The present Government has robbed us of a good deal of this; are we to consent to lose the rest smilingly? For it is very certain that when practices are Government appointments, as these amiable visionaries want them to be, the man appointed is not going to pay a premium before he can enter his district and do his work.

There is to be an examination to pass, we hear. What about those of us who have been long enough in practice to lose the habit, or knack, or trick, or whatever you like to call it, of passing examinations? Are we to be turned out into the world at 50 or so, robbed of our livelihood robbed of our capital, and robbed of the value of our practices? It is time Dr. Rhodes, Sir John Collie, and the others turned their attention to matters from *our* point of view, I think.

Let us leave the unfortunates who are to be turned adrift at the instance of benevolent idealists, who can see nobody's rights except those of the voters, and turn to the standpoint of the men who are to secure these brilliant appointments.

These men will have 300 houses to visit periodically, we are told (say once a month). There is to be free choice of doctor, so that these houses will be scattered over a considerable area and a car or other conveyance will be required, which the doctor will have to pay for, of course. There will be some 900 persons to be treated when ill (for does any one really seriously believe we are, or ever shall be, able to abolish disease while human nature is what it is?), so that there will be the rent of a consulting and waiting room, etc., to pay as usual. A proportion of the sick voters will have to be visited regularly at home in addition to the periodical house inspection (or inquisition). The doctor will be expected to weave red tape for his master—the Government. There will be the usual number of urgent calls, night visits, etc., and he will spend his "spare time" at hospital rubbing up his knowledge. He will be hated by the voters for his interference if he does his duty, and despised by his colleagues if he does not, and altogether will have an exceedingly interesting time. And all for what? For what is left out of £400 a year, for of course the appointments at £1,000 or thereabouts will be monopolized by the wirepullers as usual, and we are assuming that the victim in question is only an ordinary steadygoing member of medical society. In the words of an eminent literary critic, "Assuming there are persons who like that sort of thing, that is just about the sort of thing they would like."

Besides, are the advocates of a State Medical Service really so enamoured of officialism, as seen, for instance, in the telephone service, that they would like to see every doctor an official? Would they like to be attended by a mere official themselves? It is all very well for them to draw a rosy picture, and present it to an audience of Lancashire operatives for their approval, but did they ever know an official who was not officious, and do they really think the voters are prepared for medical officiousness?

I venture to think that the rank and file of the profession will not fall in love with this proposal quite so readily as those who are far enough away from the firing line think they ought. But how are we to be protected from it? Those of us who are Representatives will spend an arduous and exhausting four days at Aberdeen in the summer, beating the air, trying to convince the British Medical Association that a fighting fund is useless unless protected, trying to reason the Council out of its absurd belief that professional men cannot strike (how about the strike of teachers in Herefordshire? how about the medical strike in Germany?), and trying to wake it up to the fact that there is already a medical trades union fully equipped with the necessary weapons as the British Medical Association never will be until the crisis is over and it is too late to fight.

With all loyalty to the British Medical Association as a scientific body we should all support, we must recognize the fact that such a body was not formed for a struggle, and that our fighting can only be done for us by an organization built for the purpose, such as the National Medical Guild.

Meetings of Branches and Divisions.

LEINSTER BRANCH:

Dublin Division.

A meeting of the Division was held at the Royal College of Physicians on January 30th. Dr. Henry Jellett occupied the chair, and eight other members were present.

Annual Report.—The annual report of the Division and the financial statement were adopted. The Honorary Secretary was directed particularly to notify the Branch Council that the deficit shown in the last annual financial statement of the Division was £20 18s. 5½d., which during the year 1913 was increased by £3 5s. 7d., making the total deficit at December 31st, 1913, £24 4s. 0½d. The receipts for amounts paid by the Honorary Secretary, together with vouchers of accounts due, were submitted to the meeting and confirmed.

Resignations.—The Honorary Secretary reported that to date nineteen members had signified their intention to resign the Association. The resignation of these members would become effectual in the month of March.

Election of Officers.—The following officers were unanimously appointed:

Chairman.—Dr. Frederick William Kidd.
Vice-Chairman.—Dr. O'C. J. Delahoyde.
Honorary Secretary.—Dr. M. R. J. Hayes, 35, Upper Fitzwilliam Street, Dublin.
Representative for Representative Meeting.—Dr. F. W. Kidd.
Representatives on Branch Council and Divisional Executive.—Mr. O'C. J. Delahoyde, F.R.C.S.I.; Sir Andrew Horne, M.D.; F. W. Kidd, M.D.; Thomas Neale, M.B.; Sir Joseph Redmond, F.R.C.P.I.; R. J. Rowlette, M.D.; Alfred Smith, M.D.; Trevor N. Smith, F.R.C.S.I.; and W. I. Wheeler, F.R.C.S.I.

NORTH OF ENGLAND BRANCH:

Sunderland Division.

Annual Dinner.

The annual dinner of the Sunderland Division took place in Newcastle, after the address given by Professor Sims Woodhead, which is reported in the Journal (p. 384).

The chair was taken by Dr. D. F. Todd, the chairman of the Division, and after the usual loyal toasts had been honoured Dr. Morgan proposed a toast to the Mayor and Corporation of Sunderland; he referred to the time, knowledge, and care devoted by the aldermen and councillors of Sunderland to the town's interests. The Mayor, in responding, said that the services of the two doctors

who were members of the corporation were greatly appreciated, especially by the Health Committee on which they served. The corporation was what the ratepayers made it, and it endeavoured to discharge to the best of its ability the ever-increasing duties and responsibilities the Government was continually putting upon it.

The health of Professor Sims Woodhead was given by the Chairman, Dr. Todd, who observed that all the statements made by Professor Woodhead in his address were founded on careful inquiry and research. While Cambridge had benefited by reason of his studies in that university, the North, from which he went, was the poorer, but he felt sure that Professor Woodhead kept a warm corner in his heart for his brethren in the North. The lecture had been of great interest not only to members of the medical profession, but to laymen, and he was pleased to hear from several laymen present that some of their difficulties had been removed by Professor Woodhead.

Professor Woodhead, in his reply, said that it was a great pleasure to him to come again amongst old friends, colleagues, and pupils. He believed that within a short time there would be a very appreciable diminution in mortality from consumption and tuberculosis generally. This would be due to increased power of preventing the spread of infection, and when that was accomplished it would be possible to concentrate energies in combating the disease in other directions.

The toast to the Sunderland Division was proposed by Dr. Lachlan G. Fraser, who said he believed that the Division was the first in the North of England to institute regular clinical meetings; that was one of the many ways in which the Division had thoroughly carried out its work. The toast was acknowledged by Dr. I. G. Modlin, and the proceedings were brought to an end by a toast to the Chairman given by the Mayor. The menu card, which was designed by Mr. Edward Hall, was illustrated by sketches bearing on the manifold activities of a medical man, including a prescription for weak heart hanging on the telephone receiver.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37) must be published in the British Medical Journal not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

Alfred Cox,
Medical Secretary.

February 11th, 1914.

CHANGES OF BOUNDARIES.

Notice of Formation of a New (Islands) Division of the Northern Counties of Scotland Branch.

The following change has been made in accordance with the Articles and By-laws of the Association, and takes effect as from the date of publication of this notice:

That a new Division, to be known as the Islands Division be formed to include the following area:

1. In Inverness-shire: The parishes of Arisaig and Glenelg and the islands of that county.
2. In Ross-shire: The parishes of Applecross, Glenshiel, Kintail, Lochalsh, Lochcarron and Lochbroom and the islands of that county,

the new Division to form part of the Northern Counties of Scotland Branch, and the existing areas of the Inverness and Ross and Cromarty Divisions to be modified accordingly.

Representation in Representative Body.—The area of the new Division is at present represented in the Representative Body as part of the Inverness, Ross and Cromarty, and Sutherland and Caithness constituency. The question of the representation of the area of the Branch in the Representative Body, 1914–5, will be determined by the Council, under the By-laws, upon publication of the Annual List of Members, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Edinburgh Branch.—Drs. John Stevens and John Eason (Honorary Secretaries) give notice that the winter clinical meeting of the Edinburgh Branch will be held in the Royal Infirmary on Friday, February 27th. The other Scottish Branches have as usual been invited to join in the meeting. The museum will be open from 11 a.m. onwards. Arrangements will be made for holding special clinics during the forenoon. The clinical meeting will be held in the Royal Infirmary, at 3.30 p.m., and an address on urinary antiseptics will be delivered by J. W. Thomson Walker, Esq., F.R.C.S., of London, at 5.15 p.m. Dinner in the Balmoral Hotel at 6.30 p.m., morning dress; dinner ticket, 5s.

Metropolitan Counties Branch: City Division.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed. The Honorary Secretary will be glad if members proposing to show cases or specimens, or read short abstracts of cases, will kindly notify him not later than February 16th.

Metropolitan Counties Branch: Lambeth Division.—Dr. T. H. Parkes Peers (Honorary Secretary) gives notice that a supper will be held at The Horns, Kennington, at 9.45 p.m., on Saturday, February 21st. Tickets 3s. 6d. (not including wine) may be obtained of Drs. Brebner Scott, Pywell, McNickel, Farman, or Parkes Peers. Members proposing to be present are requested to notify the Honorary Secretary on or before February 16th. The guests of the evening will be Dr. Alfred Cox, Medical Secretary, and Dr. Richmond, Chairman of the London Panel Committee. Invited guests should be practitioners residing in the Lambeth Division.

Metropolitan Counties Branch: South-West Essex Division.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at Whipps Cross Infirmary on Thursday, February 19th, at 4 p.m., when the Medical Superintendent, Dr. J. C. Muir, will give a clinical demonstration.

North of England Branch: Newcastle-on-Tyne Division.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, February 20th, from 3.15 to 6 p.m. Mr. C. F. M. Saint: A Comparison of Inflammation and Tumour Formation. Professor T. Beattie: Chorea and Choreiform Movements. Tea. Mr. A. M. Martin: Surgical Treatment of Some Congenital Deformities. Dr. E. F. Pratt: Experiences of the National Health Insurance Act. Dr. T. H. Livingstone: Common Diseases of the Accessory Sinuses.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1913.

[Specially Reported for the "British Medical Journal."]

In the accompanying table will be found summarized the vital statistics of ninety-six of the largest English towns, based upon the Registrar-General's weekly returns for the fourth quarter of 1913. The 115,425 births registered in these towns during the fourteen weeks ending January 3rd, 1914, were equal to an annual rate of 24.1 per 1,000 of the population, estimated at 17,852,766 persons in the middle of last year. In London the birth-rate last quarter was 23.7 per 1,000, while among the other large towns it ranged from 14.1 in Bournemouth, 14.2 in Hastings, 14.3 in Bath, 14.6 in Southport, and 14.8 in Ealing and in Eastbourne to 30.0 in Stockton-on-Tees, 30.1 in Barnsley, 30.3 in West Ham and in St. Helens, 30.5 in South Shields, 30.9 in Rotherham, 31.1 in Stoke-on-Trent, and 33.5 in Rhondda.

Analysis of the Vital Statistics of Ninety-six of the Largest English Towns during the Fourth Quarter of 1913.

Towns.	Estimated Population middle of 1913.	Births.	Deaths.	Annual rate per 1,000 Living.		Deaths from							Deaths of Children under 1 year of age to 1,000 Births.	Rate per Cent. of Uncertified Deaths.
				Births.	Deaths.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhœa and Enteritis (under 2 years of age).		
96 Towns	17,852,766	115,425	68,083	24.1	14.2	264	—	629	408	610	782	4,037	125	0.8
London	4,518,191	28,766	17,070	23.7	14.1	37	—	52	49	116	138	1,027	115	0.1
Croydon	178,094	1,021	544	21.4	11.4	2	—	—	1	4	5	19	87	—
Wimbledon	58,156	246	144	15.8	9.2	1	—	—	—	—	1	3	98	—
Ealing	67,977	271	169	14.8	9.3	1	—	—	1	—	1	5	74	1.8
Acton	62,230	375	178	22.4	10.7	—	—	—	1	1	3	8	88	0.6
Willesden	163,655	1,022	425	23.3	9.7	—	—	—	2	1	5	21	88	—
Hornsey	87,596	358	219	15.2	9.3	1	—	—	—	—	—	4	59	—
Tottenham	145,736	902	463	23.1	11.8	—	—	3	—	2	11	22	110	—
Edmonton	69,086	521	211	28.1	11.4	2	—	—	—	1	7	17	111	—
Enfield	59,597	319	142	19.9	8.9	—	—	—	1	—	4	8	82	—
West Ham	294,223	2,397	1,172	30.3	14.8	3	—	1	4	23	8	101	113	—
East Ham	142,467	916	401	23.9	10.5	2	—	1	1	5	7	18	62	—
Leyton	130,922	721	359	20.5	10.2	—	—	—	1	3	4	15	85	—
Walthamstow	131,636	836	353	23.7	10.0	1	—	—	2	2	4	18	93	—
Ilford	87,040	386	185	16.5	7.9	—	—	—	—	1	4	2	65	—
Gillingham	54,530	342	138	23.4	9.4	1	—	1	1	—	4	4	82	5.1
Hastings	60,095	229	204	14.2	12.6	—	—	—	—	4	2	3	87	1.0
Eastbourne	54,691	217	152	14.8	10.4	1	—	—	1	—	2	2	65	—
Brighton	133,096	602	486	16.8	13.6	2	—	7	4	—	4	13	113	—
Portsmouth	241,256	1,536	798	23.7	12.3	10	—	6	9	—	25	35	89	0.9
Bournemouth	83,205	315	220	14.1	9.8	—	—	1	—	—	—	—	70	—
Southampton	122,412	725	464	22.1	14.1	2	—	1	—	3	17	16	119	—
Reading	89,339	498	278	20.8	11.6	1	—	—	—	—	1	8	94	1.8
Oxford	53,937	251	166	17.3	11.5	—	—	—	—	—	1	5	80	1.2
Northampton	90,793	430	342	17.6	14.0	—	—	—	3	2	15	15	116	1.5
Cambridge	57,096	270	189	17.6	12.3	—	—	—	—	—	12	4	67	—
Southend-on-Sea	70,825	322	190	16.9	10.0	1	—	—	—	—	1	4	78	1.6
Ipswich	75,682	458	296	22.5	14.6	—	—	3	1	2	3	14	96	—
Great Yarmouth	57,005	363	270	23.7	17.6	3	—	3	4	2	9	19	149	—
Norwich	123,288	688	518	20.8	15.6	1	—	27	3	8	7	27	145	—
Swindon	52,128	289	141	20.6	10.1	—	—	—	2	—	—	5	100	—
Plymouth	113,083	722	447	23.8	14.7	1	—	—	1	1	5	18	125	—
Devonport	84,371	576	248	25.4	10.9	4	—	—	—	3	9	13	99	—
Bath	69,944	268	236	14.3	12.6	—	—	1	—	—	2	—	56	—
Bristol	361,362	2,129	1,158	21.9	11.9	4	—	19	4	4	10	37	85	—
Gloucester	50,533	298	166	22.0	12.2	—	—	—	1	—	2	8	81	2.4
Stoke-on-Trent	239,284	1,999	1,163	31.1	18.1	9	—	45	1	15	25	105	175	1.2
Wolverhampton	95,601	645	328	25.1	12.8	1	—	—	—	2	1	20	118	—
Walsall	93,477	705	374	28.1	14.9	—	—	2	—	1	2	26	140	—
West Bromwich	69,088	555	292	29.9	15.7	1	—	13	2	3	5	33	146	2.7
Dudley	51,641	361	236	26.0	17.0	4	—	2	1	3	—	19	158	2.5
Birmingham	859,644	6,100	3,424	26.4	14.8	9	—	17	46	65	60	246	144	3.2
Smethwick	74,565	569	309	28.4	15.4	1	—	—	1	3	3	26	149	—
Coventry	115,064	772	356	25.0	11.5	1	—	1	1	10	7	19	96	1.7
Leicester	230,970	1,386	861	22.3	13.9	1	—	16	2	5	2	41	126	0.4
Lincoln	59,322	365	180	22.9	11.3	—	—	—	1	—	2	10	126	0.6
Grimsby	77,420	472	265	22.7	12.7	4	—	—	—	2	7	16	114	1.9
Nottingham	264,735	1,593	1,020	22.4	14.4	3	—	12	2	3	16	63	134	0.2
Derby	125,462	735	388	21.8	11.5	2	—	3	—	5	3	23	79	—
Stockport	112,480	692	480	22.9	15.9	2	—	31	—	6	4	38	163	0.4
Birkenhead	135,557	1,028	474	28.2	13.0	2	—	1	3	11	5	20	94	0.2
Wallasey	84,476	421	286	18.6	12.6	—	—	—	3	8	2	13	121	0.7
Liverpool	756,553	5,888	3,649	29.0	18.0	7	—	24	23	58	27	222	146	1.9
Bootle	72,186	548	332	28.3	17.1	—	—	—	2	4	3	28	153	2.7
St. Helens	99,460	810	421	30.3	15.8	—	—	1	—	4	2	19	154	4.0
Southport	71,092	279	221	14.6	11.6	—	—	2	—	—	—	7	97	4.5
Wigan	90,763	651	364	26.7	14.9	9	—	—	1	2	5	31	163	—
Warrington	74,065	520	308	26.1	15.5	2	—	10	5	—	4	22	138	3.2
Bolton	183,879	961	741	19.5	15.0	3	—	—	1	15	12	61	165	0.4
Bury	59,159	320	233	20.1	14.7	1	—	—	2	—	5	18	141	1.7
Manchester	730,976	4,841	3,000	24.7	15.3	16	—	10	35	32	28	171	143	0.2
Salford	233,849	1,575	1,022	25.1	16.3	8	—	16	17	3	12	58	156	0.1
Oldham	149,936	854	727	21.2	18.1	2	—	11	9	13	10	64	194	—
Rochdale	93,420	496	387	19.8	15.4	—	—	1	3	3	3	20	143	2.8
Burnley	109,021	659	547	22.5	18.7	1	—	56	4	—	2	37	202	1.6
Blackburn	133,971	732	565	20.4	15.7	6	—	1	1	2	3	42	180	2.3
Preston	118,070	678	489	21.4	15.4	2	—	1	13	2	14	58	165	2.9
Blackpool	61,012	265	237	16.2	14.5	—	—	7	2	2	2	14	192	4.2
Barrow-in-Furness	65,252	479	230	27.3	13.1	1	—	—	1	1	8	25	125	2.2
Huddersfield	110,832	553	398	18.6	13.4	4	—	—	1	3	1	10	101	0.5
Halifax	100,740	508	421	18.8	15.7	1	—	—	—	1	11	19	136	—
Bradford	290,540	1,434	1,203	18.4	15.4	8	—	25	1	6	8	42	153	—
Leeds	457,295	2,825	1,707	23.0	13.9	10	—	2	1	21	25	72	123	0.1
Dewsbury	53,855	336	239	23.2	16.5	1	—	11	—	—	—	11	128	—
Wakefield	52,291	290	181	20.7	12.9	—	—	2	1	1	4	7	103	—
Barnsley	52,897	427	231	30.1	16.3	1	—	18	2	2	4	18	136	—
Sheffield	471,662	3,493	2,025	27.6	16.0	6	—	77	29	23	15	124	147	0.6
Rotherham	64,432	534	250	30.9	14.5	—	—	1	5	2	1	20	122	0.8
York	85,329	510	253	22.8	11.3	2	—	—	1	3	1	10	94	—
Hull	287,032	2,086	1,176	27.1	15.3	19	—	1	2	16	11	117	142	0.6
Middlesbrough	107,993	799	545	27.6	18.8	—	—	33	11	7	10	37	164	0.9
Darlington	58,295	392	215	25.0	13.7	—	—	—	4	3	6	13	122	4.7
Stockton-on-Tees	52,316	421	208	30.0	14.8	—	—	2	5	1	—	17	157	1.0
West Hartlepool	64,234	504	265	29.2	15.4	1	—	1	2	5	1	26	147	3.0
Sunderland	152,377	1,171	715	28.6	17.5	1	—	3	13	6	10	63	148	1.1
South Shields	110,513	905	568	30.5	19.1	2	—	8	22	3	1	24	140	4.0
Gateshead	118,601	837	424	26.3	13.3	7	—	1	—	7	2	30	112	2.1
Newcastle-on-Tyne	271,295	1,836	1,053	25.2	14.5	8	—	2	10	12	6	36	117	0.4
Tynemouth	60,601	469	264	28.8	16.2	1	—	—	2	3	3	23	149	1.5
Carlisle	52,630	289	210	20.5	14.9	—	—	1	—	—	5	8	114	3.3
Newport (Mon.)	87,626	627	257	26.6	10.9	1	—	—	2	—	2	12	97	—
Cardiff	186,554	1,288	684	25.7	13.7	3	—	5	8	5	13	14	117	—
Rhondda	162,137	1,459	545	33.5	12.5	8	—	16	3	1	15	60	121	0.7
Merthyr Tydfil	83,808	604	284	26.8	12.6	—	—	—	1	—	4	22	124	—
Aberdare	52,619	408	209	28.9	14.8	—	—	6	2	1	—	12	172	0.5
Swansea	119,485	881	499	27.5	15.6	1	—	5	1	8	6	37	144	0.4

The 68,083 deaths in these towns during the quarter were equal to an annual rate of 14.2 per 1,000; in London the rate was 14.1 per 1,000; while amongst the other towns the lowest rates were 7.9 in Ilford, 8.9 in Enfield, 9.2 in Wimbledon, 9.3 in Ealing and in Hornsey, 9.4 in Gillingham, and 9.7 in Willesden; the highest rates were 17.6 in Great Yarmouth, 18.0 in Liverpool, 18.1 in Stoke-on-Trent and in Oldham, 18.7 in Burnley, 18.8 in Middlesbrough, and 19.1 in South Shields.

The deaths included 264 which were attributed to enteric fever, 629 to measles, 408 to scarlet fever, 610 to whooping-cough, 782 to diphtheria, and 4,037, among children under 2 years of age, to diarrhoea and enteritis. The 264 deaths from enteric fever were equal to an annual rate of 0.06 per 1,000; in London the rate was only 0.03, but it ranged upwards in the other towns to 0.18 in Devonport and in Rhondda, 0.19 in Grimsby, 0.20 in Great Yarmouth, 0.22 in Gateshead, 0.25 in Hull, 0.29 in Dudley, and 0.37 in Wigan. The 629 fatal cases of measles were equal to an annual rate of 0.13 per 1,000; in London only 52 deaths, equal to a rate of 0.04, were registered during the quarter; among the ninety-five other large towns the highest death-rates from measles were 0.70 in Stoke-on-Trent and in West Bromwich, 0.76 in Dewsbury, 0.82 in Norwich, 1.03 in Stockport, 1.14 in Middlesbrough, 1.27 in Barnsley, and 1.91 in Burnley. The 408 deaths from scarlet fever were equal to a rate of 0.09 per 1,000; in London the death-rate from this disease was only 0.04 per 1,000, while in the other towns it ranged upwards to 0.27 in Salford, 0.29 in Rotherham, 0.32 in Sunderland, 0.36 in Stockton-on-Tees, 0.38 in Middlesbrough, 0.41 in Preston, and 0.74 in South Shields. The 610 fatal cases of whooping-cough corresponded to an annual rate of 0.13 per 1,000; in London the rate was 0.10 per 1,000, while among the other large towns the highest rates were 0.28 in Birmingham, 0.29 in West Ham, Liverpool, and West Hartlepool, 0 30 in Birkenhead and in Bolton, 0.32 in Coventry and in Oldham, and 0.35 in Wallasey. The 782 deaths from diphtheria were equal to an annual rate of 0.16 per 1,000; in London the diphtheria death-rate was 0.11 per 1,000, while in the other towns it ranged upwards to 0.39 in Portsmouth and in Stoke-on-Trent, 0.40 in Devonport, 0.41 in Halifax, 0.44 in Preston, 0.46 in Barrow-in-Furness, 0.52 in Southampton, 0.59 in Great Yarmouth, 0.62 in Northampton, and 0.78 in Cambridge. The 4,037 deaths from diarrhoea and enteritis among children under two years of age were in the proportion of 34.98 to 1,000 births registered during the quarter; in London the proportion was 35.70 per 1,000, while among the other large towns it ranged upwards to 54.91 in Stockport, 56.09 in Hull, 56.15 in Burnley, 56.25 in Bury, 57.38 in Blackburn, 59.46 in West Bromwich, 63.48 in Bolton, 74.94 in Oldham, and 85.55 in Preston.

Infant mortality, measured by the proportion of deaths among children under one year of age to births registered during the quarter, was equal to 125 per 1,000; in London the rate of infant mortality was 115 per 1,000, while among the other large towns it ranged from 56 in Bath, 59 in Hornsey, 62 in East Ham, 65 in Ilford and in Eastbourne, and 67 in Cambridge to 163 in Stockport and in Wigan, 164 in Middlesbrough, 165 in Bolton and in Preston, 172 in Aberdare, 175 in Stoke-on-Trent, 180 in Blackburn, 192 in Blackpool, 194 in Oldham, and 202 in Burnley.

The causes of 520, or 0.8 per cent., of the deaths registered in the ninety-six towns last quarter were not certified either by a registered medical practitioner or by a coroner. In forty of the towns the causes of all the deaths were duly certified; among the other towns the highest proportions per cent. of uncertified deaths were 4.0 in St. Helens and in South Shields, 4.2 in Blackpool, 4.5 in Southport, 4.7 in Darlington, and 5.1 in Gillingham.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns 8,961 births and 5,750 deaths were registered during the week ended Saturday, February 7th. The annual rate of mortality in these towns, which had been 17.0, 17.5, and 18.4 per 1,000 in the three preceding weeks, fell to 16 5 per 1,000 in the week under notice. In London the death-rate was equal to 16.6, against 17.0, 18.2, and 18.0 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate last week ranged from 4.7 in Eastbourne, 6.3 in Ilford, 8.1 in Walthamstow, 8.5 in East Ham, 8.8 in Edmonton, and 9.2 in Coventry to 22 1 in Cardiff and in Merthyr Tydfil, 23.4 in Plymouth and in Wolverhampton, 24.7 in Swindon and in Carlisle, 24.9 in Gateshead, and 27.5 in Burnley. Measles caused a death-rate of 1.6 in Middlesbrough, 1.7 in Cardiff, 2.0 in Ipswich, and 5.2 in Burnley; whooping-cough of 1 3 in Sheffield and in Swansea, 1.9 in Burnley and in Barnsley, 2.0 in Dudley, 2.4 in Rotherham, 2.6 in Gateshead, and 3.2 in West Hartlepool; diphtheria of 1.7 in Northampton and 2.9 in Aberdare; and enteric fever of 1.6 in Halifax. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 51, or 0.9 per cent. of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 12 were registered in Birmingham, 7 in Liverpool, 6 in Gateshead, 3 in London, and 3 in Bootle. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,676, 3,567, and 3,599 at the end of the three preceding weeks, had fallen to 3,554 on Saturday, February 7th; 379 new cases were admitted during the week, against 388, 375, and 460 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,207 births and 807 deaths were registered during the week ended Saturday, February 7th. The annual rate of mortality in these towns, which had been 20.4, 20.9, and 20.0 per 1,000 in the three preceding weeks, fell to 18.4 in the week under notice, but was 1.9 per 1,000 higher than the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.6 in Motherwell, 12.3 in Perth, and 14.7 in Greenock to 23.5 in Kilmarnock, 26.7 in Falkirk, and 31.1 in Hamilton. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Coatbridge and Hamilton. The 367 deaths from all causes registered in Glasgow included 18 from measles, 4 from scarlet fever, 4 from whooping-cough, 4 from diphtheria, 3 from infantile diarrhoeal diseases, and 1 from enteric fever. Four deaths from measles were recorded in Greenock, 3 in Edinburgh, and 3 in Hamilton, and 9 deaths from diphtheria in Aberdeen.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 7th, 665 births and 597 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 615 births and 555 deaths in the preceding period. These deaths represent a mortality of 21.9 per 1,000 of the aggregate population in the districts in question, as against 24.1 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.4 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 28.8 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 25.3 (as against an average of 25.5 for the previous four weeks), in Dublin city 26.9 (as against 27.3), in Belfast 21.4 (as against 23.4), in Cork 21.8 (as against 21.4), in Londonderry 16.5 (as against 17.1), in Limerick 24.4 (as against 23.4), and in Waterford 11.4 (as against 19.0). The zymotic death-rate was 1.7 as against 1.0 in the previous period.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Staff Surgeon ROBERT W. B. HALL to the *Victory*, additional, February 3rd. Staff Surgeon LIDBROOKE F. COPE to the *Victory*, additional, for disposal, February 19th. Surgeon WILLIAM L. COWARDIN to the *Neptune*, additional, for mine-sweeping flotilla, February 3rd. Surgeon MAURICE C. MASON to Portsmouth Dockyard, February 19th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL C. C. REILLY has been appointed to the command of the Station Hospital, Calcutta, vice Colonel Smith, vacated.

Lieutenant-Colonel D. M. O'CALLAGHAN has been appointed to the charge of the Military Hospital at Dover.

Lieutenant-Colonel C. W. H. WHITEHOUSE has been ordered to Hilsea for duty.

Lieutenant-Colonel MONCKTON O. D. BRADDELL, M.B., has retired on retired pay, February 4th.

Supernumerary Lieutenant-Colonel and Brevet Colonel Sir WILLIAM B. LEISHMAN, F.R.S., M.B., K.H.P., is restored to the establishment, vice W. M. Russell, promoted February 1st.

Supernumarary Lieutenant-Colonel HUGH C. THURSTON, C.M.G., is restored to the establishment, vice A. R. Aldridge, retired January 24th.

Major S. L. CUMMINS has been appointed a Professor at the Royal Army Medical College, Millbank, vice Brevet Colonel Sir W. B. Leishman, M.B., F.R.S., February 1st.

Major W. R. BLACKWELL has been appointed for temporary duty at the War Office.

Major H. F. SHEA has been appointed a Specialist in Advanced Operative Surgery in the Third (Lahore) Division.

Major FREDERICK A. STEPHENS is placed temporarily on the half-pay sick list on account of ill-health, February 4th.

Major H. W. GRATTAN has been appointed Surgeon to the Viceroy of India, vice Lieutenant-Colonel Holt.

Major CHARLES E. P. FOWLER has retired on retired pay, February 4th.

Captain A. W. BYRNE has been appointed Deputy Assistant Director of Medical Services (Sanitary) Third (Lahore) Division.

Captain G. G. COLLET has been appointed a Specialist in Dermatology in the Seventh (Meerut) Division.

Captain ARTHUR C. H. GRAY, M.B., has been appointed an Assistant Professor at the Royal Army Medical College, Millbank, vice Major S. L. Cummins, February 1st.

Captain H. M. J. PERRY has joined the London District for duty at the Military Hospital, Rochester Row.

Captain BARRY A. CRAIG has been appointed Major, January 29th.

Supernumerary Captain MALCOLM LECKIE is restored to the establishment, February 11th.

The following Lieutenants have been appointed Captains, January 29th: CHARLES H. H. HAROLD, M.D., ERIC L. FYFFE, M.B., ROBERT F. BRIDGES, M.B., THOMAS J. HALLINAN, M.B., HUGH G. MONTEITH, JOHN D. BOWIE, M.B., CHARLES H. STRINGER, GUY O. CHAMBERS, JOHN K. GAUNT, M.B., and LESLIE F. K. WAY.

Lieutenant SUMNER H. SMITH is confirmed in his rank.

Supernumerary Lieutenant GEORGE E. DYAS is restored to the establishment, January 24th.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

RAYMOND J. CLAUSEN, M.B., late Cadet University of London Contingent, Officers' Training Corps, to be Lieutenant on probation, January 9th.

Lieutenant WILLIAM H. JOHNSTON is confirmed in his rank.

GEORGE A. COLE, late Cadet Colour-Sergeant, Durham Contingent, Officers' Training Corps, to be Lieutenant on probation, December 14th, 1913.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Vauxhall Bridge Road, S.W.—(1) House-Surgeon (non-resident). Honorarium, £40 per annum. (2) Clinical Assistants.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BARRY URBAN DISTRICT COUNCIL.—House-Surgeon for the Town Accident and Surgical Hospital. Salary, £150 per annum, increasing to £200.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon (male). Salary, £100 per annum.

BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at the rate of £120 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salary, £80 per annum each.

BIRMINGHAM EDUCATION COMMITTEE.—Anaesthetist at Dental Clinic. Salary at the rate of £100 per annum.

BLACKBURN COUNTY BOROUGH.—Male School Medical Inspector and Assistant to the Medical Officer of Health. Salary, £250 per annum.

BLACKBURN UNION.—Resident Assistant Medical Officer for the Workhouse and Medical Officer for the Union Cottage Homes. Salary, £150 per annum.

BOARD OF CONTROL (MENTAL DEFICIENCY ACT, 1913).—Three Inspectors (one a woman). Salary, £500, £400, and £300 per annum, rising to £800, £600, and £650 respectively.

BRADFORD CITY COUNCIL.—Resident Medical Officer at Brierley Hall Sanatorium. Salary, £150 per annum.

BRENTFORD UNION.—Second Assistant Medical Superintendent of the Infirmary, etc. Salary, £150 per annum, rising to £170.

BRENTWOOD ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

BRIDGE OF WEIR: SANATORIUM OF SCOTLAND.—Lady Assistant. Salary, £75 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CARDIFF CITY MENTAL HOSPITAL.—Second Assistant Medical Officer (male). Salary, £250 per annum, rising to £280.

CARDIFF: KING EDWARD VII HOSPITAL.—House-Physician (male). Honorarium at the rate of £60 per annum.

COBHAM: SCHIFF HOME OF RECOVERY.—Resident Surgical Officer. Honorarium, £100 for six months.

CORNWALL COUNTY ASYLUM, Bodmin.—Third Assistant Medical Officer. Salary, £180 per annum, rising to £200.

DAVOS PLATZ: QUEEN ALEXANDRA SANATORIUM.—Assistant Medical Officer. Salary, £100 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £200 per annum.

DEVON COUNTY ASYLUM, Exminster.—Assistant Medical Officer. Salary, £200 per annum, rising to £250.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DONCASTER: ROYAL INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £100 per annum.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £125 per annum.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH: FOREIGN MISSION COMMITTEE.—Medical Missionary.

EDINBURGH: LIVINGSTONE MEDICAL MISSION DISPENSARY.—Resident Surgeon (male). Salary at the rate of £80 per annum.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House-Physician. Salary at the rate of £75 per per annum.

FARRINGDON GENERAL DISPENSARY, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £100 per annum.

GLASGOW: LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES, Shettleston.—Resident Physician. Salary, £170 per annum.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Remuneration at the rate of £80 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Third House-Surgeon. Salary, £80 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon. (2) House-Physician. (3) Surgeon Dentist. Salary for (1) and (2), £30 for six months and £2 10s. washing allowance.

INDIA: IMPERIAL BACTERIOLOGICAL (VETERINARY) LABORATORY, Muktesar.—Physiological Chemist. Salary, Rs. 800 a month, rising to Rs. 1,200.

KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer (male). Salary, £220 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING EDWARD VII SANATORIUM, Midhurst.—First Assistant Medical Officer. Salary, £200 per annum, rising to £250.

LEAMINGTON SPA: WARNEFORD GENERAL HOSPITAL.—House-Physician. Salary, £85 per annum.

LEICESTERSHIRE COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer (male). Salary, £300 per annum.

LEICESTER ROYAL INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Salary at the rate of £80 per annum.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—Three House-Surgeons and Two House-Physicians. Salary at the rate of £60 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

LONDON MEDICAL MISSION, Short's Gardens, W.C.—Medical Superintendent.

MANCHESTER ROYAL INFIRMARY.—(1) Accident-Room House-Surgeon; (2) Assistant Medical Officer to the Convalescent Home, Cheadle. Salary at the rate of £100 and £80 per annum respectively.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Two House-Surgeons. Honorarium at the rate of £50 per annum.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Fitzroy Square, W.—Clinical Assistant.

MIDDLESEX HOSPITAL, W.—Director of the Institute of Pathology. Salary, £800 per annum.

MILDMAY MISSION HOSPITAL, Bethnal Green, E.—House-Surgeon. Salary, £80 per annum.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £85 per annum.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Deputy Anaesthetists.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Honorary Assistant Surgeon.

NOTTINGHAM CITY.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum, increasing to £180.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

PRESTON ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Pathologist and Registrar. Remuneration, £80 per annum.

READING: BERKSHIRE COUNTY COUNCIL.—Tuberculosis Officer. Salary, £500 per annum.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Resident House-Physician. Salary at the rate of £110 per annum.

ROYAL EAR HOSPITAL, Soho.—House-Surgeon (non-resident).—Honorarium, £40 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2) £80 per annum.

SEAMEN'S HOSPITAL SOCIETY: DREADNOUGHT HOSPITAL, Greenwich.—(1) Assistant Physician; (2) Medical Registrar, salary, £100 per annum.

SHEFFIELD: EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary, £75 per annum.

SMETHWICK EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum, rising to £350.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTHPORT INFIRMARY.—Senior House-Surgeon. Salary at the rate of £120 per annum.

SOUTHWARK UNION INFIRMARY.—(1) Second Assistant Medical Officer; salary, £120 per annum, rising to £140. (2) Third Assistant Medical Officer; salary, £120 per annum.

SUNDERLAND: ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Surgeon. Salary, £125 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

WARWICK COUNTY ASYLUM, Hatton.—Second Assistant Medical Officer. Salary, £250 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Physician.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House-Physician. Salary at the rate of £75 per annum.

WESTMINSTER UNION.—Second Assistant Medical Officer for the Infirmary. Remuneration, £130 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Chipping Norton (Oxford), Dinas Mawddwy (Merioneth), Miltown Malbay (Clare), Wokingham (Berks).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALDERTON, C. H., L.R.C.P. and S.Edin., Senior Assistant Medical Superintendent of the North Infirmary of the Parish of St. Pancras.

FIRTH, Douglas, M.B.Camb., M.R.C.P.Lond., Assistant Physician to the Royal Free Hospital, Gray's Inn Road.

FLETCHER, W. J., L.A.H.Dubl., District Medical Officer of the Hinckley Union.

GREENE, Arthur M., M.D., F.R.C.S.I., Full Honorary Surgeon to the Norfolk and Norwich Eye Infirmary.

HEWAT, A. Middleton, M.D., Ch.B., D.P.H.Edin., Tuberculosis Officer and Assistant Medical Officer of Health to the Preston Town Council.

HUGHES, John, M.B., B.Ch., R.U.I., Medical Officer of the Louisburgh Dispensary District.

JOHNSTONE, D., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Cromarty District, co. Ross and Cromarty.

KEMPSTER, Christopher, M.R.C.S.Eng., L.R.C.P.Lond., Physician in Charge of *X* Ray and Electro-therapeutic Department, St. John's Hospital, Leicester Square, W.

MACDONALD, A. H., M.D.Brux., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Warminster District, co. Wilts.

MILBANK-SMITH, H. J. M., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Worthing District, co. Sussex.

MORRIS, W. J., M.D., Second Assistant Medical Officer of the Hammersmith Infirmary and Workhouse.

MOSS, Miss, M.D., Assistant Anaesthetist and Junior Clinical Assistant to the Gynaecological Department of the Royal Free Hospital, Gray's Inn Road, W.C.

SANDILANDS, Ernest L., M.B.Lond., D.P.H., Clinical Tuberculosis Officer to the Hereford County Council, vice Dr. Adam White.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

DEATH.

WISE.—On February 7th, William Clunie, M.D., D.P.H., Barrister-at-Law, at 9, Ravensbourne Gardens, West Ealing, aged 76.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of Anthropoid Apes.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OPHTHALMOLOGY, 8.30 p.m.—Adjourned discussion on the Use of Salvarsan in Ophthalmic Practice, to be reopened by Lieutenant-Colonel R. H. Elliot, I.M.S.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Club Rooms, St. George's Hospital Medical School, 8.30 p.m.—Paper:—Dr. Maurice Wright: The Psychology of Freud and its Relation to the Psychoneuroses, to be followed by a discussion.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, Leicester Square, W.C.—4.30 p.m., Demonstration of Pathological Specimens; Cases sent for consultation; and Clinical Cases. 5.15 p.m., Discussion on Bullous Eruptions, to be opened by the President.

MEDICO-LEGAL SOCIETY, 11, Chandos Street, W., 8.30 p.m.—The Medico-legal Aspects of Hernia, by Mr. W. McAdam Eccles, M.S., F.R.C.S.

ROYAL SOCIETY OF MEDICINE:

SECTION OF THERAPEUTICS AND PHARMACOLOGY.—4.30 p.m., Laboratory Meeting at the Pharmacological Laboratory, University College (Professor Cushny). General Meeting of Fellows: 5 p.m., Ballot.

SECTION OF PATHOLOGY, 8.30 p.m.—Mr. Rupert Farrant: The Pathological Changes of the Thyroid in Disease. Dr. F. H. Thiele: Paths of Spread in Bacterial Infection. Mr. A. C. Morson: The Changes which Occur in Malignant Tumours on Exposure to the Gamma Rays of Radium.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of Anthropoid Apes.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Milroy Lecture, by Dr. F. Shufflebotham: The Hygienic Aspect of the Coalmining Industry in the United Kingdom.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DERMATOLOGY.—4.30 p.m., Dr. H. G. Adamson: (1) A Family Group of Cases of Multiple Benign Epithelioma; (2) Lentigenous Eruption in an Adult. Dr. Freeman: Bromide Eruption. Dr. Nixon: (1) Case for Diagnosis; (2) Acanthosis Nigricans. Dr. Pernet: Rodent Ulcer. Dr. Norman Meachen: Two Cases of Congenital Mole. Dr. J. M. H. MacLeod: Grouped Comedones in a Young Child. Dr. Russell Wilkinson: Dermatitis Herpetiformis. Dr. Knowsley Sibley: Case for Diagnosis. Dr. Corbett: Lichen Planus Verrucosus. Special Meeting, 8.30 p.m.: Debate on Pityriasis Rosea, to be opened by Dr. Graham Little.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of Anthropoid Apes.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OTOLOGY, 5 p.m.—Cases and Specimens by Dr. Dundas Grant, Dr. W. H. Kelson, Mr. C. Ernest West, Mr. Richard Lake, Mr. G. J. Jenkins, and Mr. W. M. Mollison.

SECTION OF ELECTRO-THERAPEUTICS, 8.30 p.m.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, W., 8.30 p.m.—Paper on Recent Research relating to Undulant or Mediterranean Fever, by Fleet Surgeon P. W. Bassett-Smith, C.B., R.N., when specimens illustrating Barton's bodies and the other blood changes in Oroya fever will be shown.

POST-GRADUATE COURSES AND LECTURES.

CANCER HOSPITAL, Fulham Road, S.W.—Wednesday, 5 p.m., The Value of Combined Treatment in Cases of Inoperable Cancer.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Rupture of the Uterus (continued); Wednesday, 10 a.m., The Varieties of the Pelvis. Gynaecological Lecture: Friday, 10 a.m., Special Lecture in Gynaecological Pathology.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children: Elements of Brain Training.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted), at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Entomology, 2 to 3.30 p.m. daily. Special Entomology, 10.30 to 1 p.m. daily. Medical Clinics, Tuesday and Thursday, at 3 p.m. Operations, Friday, at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS, 4.30 p.m. each day.—Monday, Manchester Children's Hospital: Surgical Cases in Children. Tuesday, Salford Royal Hospital: Hernia. Wednesday, Royal Infirmary: Demonstration of Medical and Surgical Cases. Thursday, Ancoats Hospital: Information derived from Blood Counts. Friday, Royal Eye Hospital: Choroiditis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Medical; Friday, Ear, Nose, and Throat. Special lectures at 5.15 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Labyrinthine Forced Movements; Friday, 3.30 p.m., Labyrinthine Nystagmus.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Wednesday, 4 p.m., Some Skin Diseases in Children.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith.—Medical and Surgical Clinics, 2 p.m.; *X* Rays, 2 p.m.; Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special lectures at 5 p.m. daily except Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		FEBRUARY.
14	Sat.	Last day for receipt of Nominations for election of Members of Council outside the United Kingdom.
17	Tues.	London: Non-Panel Committee.
18	Wed.	London: Insurance Act Tuberculosis Subcommittee, 4.30 p.m.
19	Thur.	South-West Essex Division, Whipps Cross Infirmary, 4 p.m.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10 a.m. Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m. Afterwards—Medico-Political Committee. Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
21	Sat.	London: Insurance Act Excessive Sickness Benefit Claims Subcommittee, 10.30 a.m. Lambeth Division, Supper, The Horns, Kennington, 9.45 p.m.
27	Fri.	City Division, Manor Lodge, Upper Clapton, 9.30 p.m. Edinburgh Branch, Winter Clinical Meeting, Royal Infirmary, 3.30 p.m.; Dinner, 6.30 p.m.

Date.		Meetings to be Held.
		MARCH.
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
13	Fri.	London: Conference of Representatives of Local Medical and Panel Committees; and following day if necessary.
18	Wed.	South Middlesex Division, Free Library, Twickenham, 8.30 p.m. Address by Sir John Collie: The Business Side of Medical Practice.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*). London: Naval and Military Committee, 4 p.m. (*provisional*).
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
3	Fri.	London: Central Ethical Committee, 2 p.m. London: Medico-Political Committee, 10.30 a.m. (*provisional*).
7	Tues.	London: Organization Committee, 2 p.m.
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15	Wed.	London: Finance Committee, 2.30 p.m.
22	Wed.	London: Council.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 21ST, 1914.

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A STATE MEDICAL SERVICE.

DR. MICHAEL DEWAR (Edinburgh) writes: It is reported that Miss Margaret Douglas stated, at a meeting held in London some two or three weeks ago, that "the panel doctor did nothing but minor treatment, which practically was little better than first-aid work," and, more recently, that Dr. Preston King, the Mayor of Bath, speaking at the annual meeting of the Royal United Hospital, said that "the Act practically only supplied people with a bandage and a bottle of medicine." These statements may be true or false, but they are certainly reckless, and it is hardly necessary at present to inquire into the motives underlying them. They may be true in a few cases, but surely they cannot be held as condemning all the good work which is being done by the big majority of panel practitioners throughout the whole country. I cannot speak as to what is being done outside the Edinburgh area, but I can speak with some authority and knowledge of the work carried on in this city, and I make bold to say that 98 per cent. of the panel doctors here are doing their duties under the Act honestly and efficiently. There have been a few complaints brought before the Medical Service Subcommittee at two meetings, all of which were unanimously dismissed as being frivolous, with the exception of one, which brought down upon the doctor concerned the censure of the committee. That is a fairly good record of the treatment of an insured list of upwards of 110,000 persons during the first year of the administration of a complicated Act, when doctors, societies, and insured persons were shaking themselves down, as it were, to the new conditions. One cannot ignore the fact, as proved by our experience of the as yet limited duties of that committee, that the half-dozen or so complaints laid against the doctors were made because the patients were not visited within a short time of the messages being delivered, and that a non-panel doctor in the guise of the family doctor was always ready to respond to the call of the insured person, sometimes without notifying the panel doctor that such a call had been made. I will not attempt to criticize this procedure, but as an ounce of fact is always worth more than a ton of loose, reckless, and ill-considered statements, perhaps you will allow me to record an analysis of my panel work for the complete year, from January 15th, 1913, to January 14th, 1914:

Average panel list during the year, 460.

Attendances	844	Dressing cases	49
Visits	547	Minor operations	8
Patients*	505	Major operations	11
New patients per month	306		

* Of course duplicated over several months.

Attendances and visits per head per annum = 3.02.

Sickness-Rate:

No. of sick benefit days (that is, less the three days) signed for	1,779
Average sick days per head per annum	3.87

Of the 1,779 sick days, 764 days were absorbed by eight patients:—

Males: One phthisis, 72 days; 1 fracture, 60 days; 1 phthisis, 144 days; 1 prostatectomy, 114 days; 1 appendicitis, 78 days; 1 cardiac disease, 114 days.

Females: One appendicitis, 78 days; 1 chlorosis and radical mastoid, 104.

The rest of the sick-rate varied from 3 to 42 days.

In addition to the above 4 major operations, there were 7 other major operations: 4 radical hernias (males); 1 short-circuiting for duodenal perforation (male); 1 large operation for glands in neck and upper mediastinum (female); 1 loose cartilages in knee-joint.

There were other two hernias in males, both treated with trusses.

All the major operations were treated in the Royal Infirmary, except one in the Queen Mary Nursing Home.

Number of cases requiring dressings	49
Number of individual dressings	222
Average number of dressings in each	4.5

The cases were all personally dressed in my consulting-room, as I considered that in that way they would sooner be better and off the sick benefit list.

Mortality.—There were 4 deaths (0.87 per cent.): 2 cases of tubercle, 1 cancer of liver, 1 duodenal perforation six weeks after operation (operation was performed four hours after perforation).

Among the various diseases treated were: Cases of bronchitis, pneumonia, rheumatism (acute and subacute), cancer of liver, fistula, adenitis, threatened appendicitis no operation, fracture, dislocation, dyspepsia (gastric and intestinal), haematemesis, pleurisy, specific disease, heart disease, cyclitis, iritis, minor operations for nasal polypi and tonsils, and one radiograph for a supposed needle to satisfy the patient.

I would like to ask Miss Margaret Douglas and Dr. Preston King if they consider the work as recorded above

is "first-aid work," or nothing but a bandage and a bottle of medicine. I fear that if they really meant what they said they have not realized the enormity of the charge they are making against the whole of the doctors who have undertaken the work. They speak in general terms embracing all, and not of individual cases which have come under their cognizance. They and their medical friends who are opposed to the working of the Act apparently do not realize that by making such rash and reckless statements they are playing into the hands of those who are advocating the establishment of a State Medical Service. That may suit their book in the meantime, but they will sing a different tune in the future, when, if established, it will be found to spell ruination to the medical profession—individually and as a whole. What about free choice of a doctor? In a State Medical Service there can be no free choice, not even a shadow of it. I know perfectly well that the members of the National Medical Union and the Guilds assert that there is no free choice of doctor under the present arrangements; but I maintain just as strongly that there would be an absolutely free choice of doctor if they would only realize their plain duty to their patients and insured persons generally by rendering obedience to an Act which is on the Statute Book, and is going to remain there. A few days ago I was present at a lay meeting in this city held for the purpose of establishing a branch of the Faculty of Insurance. Mr. Appleton, a leading member of the Trades Union Association, advocated the need for a State Medical Service, on the ground that the panel system was a failure. In the course of his speech he stated that in London a medical man had certified in the case of a patient that that patient was suffering from four distinct diseases in the short period of four weeks, insinuating that the doctor was guilty of culpable negligence. That may or may not be, but I hold that such a blunder might be made by the most painstaking doctor with 500 or 600 on his list, far less one who may have 3,000, and this simply due to the fact that some societies a few months ago insisted on the doctor inserting the nature of the disease on the continuation certificate week by week, instead of accepting the initial certificate stating the disease once for all. I do not in the least condone such a mistake, but I say that it is pardonable in the circumstances as they existed at the time, and that instead of it being used as an argument for the establishment of a State Medical Service, it should rather be an argument for the limitation of panel lists. He also stated as an argument for a State Medical Service that the sickness rate was 6.5 days, a figure far above the actuarial calculation of the Government actuaries. It is now admitted that the actuaries made too low an estimate, and it is not to be wondered at, because the Act is now dealing with a vast number of men and women, the halt, the infirm, and the aged, who would never have been looked at by them in the old friendly societies days.

That is not the fault of the panel doctors, but that of the actuaries. At the moment I challenged his statement by saying that 4.5 per cent. would be nearer the mark (at the time I had not figured out my own percentage of 3.87). He pulled himself in a little bit then, and said that he was referring to a particular district. Naturally my reply was that he ought to have said so, and not have made a general statement applicable to the whole country. These inaccurate statements go down with a lay audience, much to the detriment of the profession.

From the past year's experience I am strongly of opinion that the panel system with free choice of doctor is the only system which will carry out satisfactorily to the medical profession, the societies, and the insured persons the aims and objects of the Act, and that the establishment of a State Medical Service would be fatal to the welfare and interests of all the parties concerned.

Mr. Charles A. Parker, F.R.C.S.Edin. (London, W.), writes: I ventured to make a few remarks in your issue of January 31st on the free choice of doctor because the Journal, the *Lancet*, and the *Morning Post* had all laid so great a stress upon it; but surely, in discussing the *pros* and *cons* of a State Medical Service, there are other and bigger questions beside which "free choice" becomes comparatively insignificant.

No medical man will, I feel sure, deny that there is a great wastage of life through death or permanent disability from preventable or postponable disease, and no one will deny that the physique of the nation is faulty and not what it might be; further, the birth-rate is declining to a somewhat alarming extent, and consequently the conservation of the health of those who are born is becoming a matter of vital importance to the prosperity of the nation. The question is whether the present method of bringing the public into touch with the medical profession is as good as it could be, or whether by some change the standard of the national health and physique could be raised.

There have been enormous advances in medical knowledge and methods of diagnosis and treatment which have been of great value to individual patients, but, so far, have done but little to prevent disease and raise the standard of the health of the community as a whole. Rightly or wrongly, it seems to me that these very advances have put the science of medicine beyond the power of individual effort to deal with and that for the sake of the nation individualism and competition should give way to co-operation. Again, rightly or wrongly, it seems to me that the only way to obtain whole-hearted co-operation within the profession and to extend to the whole nation the advantages of the recent advance in medicine and allied sciences is to establish a whole-time salaried State Medical Service with prevention of disease as its chief object. It is from this point of view that I would like to see the question of State Medical Service *versus* the present panel system discussed, therefore there are only one or two points in Dr. Lauriston Shaw's letter to which I shall allude before answering his question as to "free choice" under a State service.

The article in your issue of January 17th certainly gave me the impression that you were laying stress on *patients* having free choice of doctor, and it was from this point of view that I stated that there was "no reason why the present system of allotting patients should be discontinued if to-morrow the 14,000 panel doctors became whole-time salaried medical officers." Dr. Shaw criticizes the statement purely from the point of view that *doctors* must have free choice of patients. I admit that under a State Medical Service there would not be the same facilities for an individual doctor to "limit his list to any dimension he likes," but I see no reason why with a little give and take between the service men there should not be a certain amount of rearrangement of patients on the various lists at least once a year.

Dr. Shaw says that the whole basis of the panel system "is that doctors shall be placed in honourable competition with each other to secure patients by *pleasing them*, and that success in doing so shall entail *increased remuneration*." Quite so; but surely in a learned profession this is not a very high ideal. Competition to advance knowledge, to make a great discovery or to benefit one's fellow beings is excellent, and was the inspiration of Darwin, Pasteur, Koch and Lister, but to compete for patients and their fees must be altogether bad. The present panel system and private practice encourage *brute*-nature to compete for increased remuneration, but a State Medical Service would encourage *human*-nature to compete for higher ends.

In discussing the possibilities of a free choice of doctors under a State service it must be remembered how limited is the freedom of choice to-day. Poor Law patients, dispensary patients and hospital patients have practically no choice, and until a year ago club patients had none. In country towns the choice is strictly limited, and in "unopposed" practices there is none. Financial and geographical considerations limit the choice of even better class patients, whilst amongst the very poor the cheapest doctor is of necessity invariably chosen. Many of these limitations would necessarily continue under any conceivable system of State service.

Now from the *patient's* point of view the panel system adapted to a whole-time salaried service, free and open to all, would extend to thousands and thousands such a choice of doctors as they never have had before, and I still maintain it is quite a feasible scheme, with the safeguards to protect any one doctor from overwork which I suggested in my previous letter. By the time any definite advance is made towards a complete State service the panel system will be well understood by the multitude, and I think it would be the best plan to continue it until the State service became fully organized.

A fully organized State Medical Service, including all branches of the profession, allied sciences, hospitals and other institutions, nursing and dispensing, must necessarily evolve slowly, and it is difficult to forecast the exact form it will ultimately assume. However, I picture in my mind the hospitals greatly increased in number and made the centres of all medical activities. To each hospital will be atttached senior, junior, and assistant general practitioners, who will be as integral and essential a part of the hospital staff as any other branch of the profession, and according to my vision will be paid grade for grade equally with physicians, surgeons, and specialists. As members of the staff general practitioners will be able to keep in touch with their patients, and themselves do for them many things which they cannot now do in cottages and workmen's dwellings. As members of the staff they will have the advantage of being in daily touch with representatives of all other branches of the profession, which will add greatly to the interest of their work. Each member of the staff of general practitioners will have his definite hours on duty for seeing patients at the hospital, instead of, as now, at his own private dwelling, and a list of the staff, with their hours of attendance, will be posted up in the hospital and published weekly in the local papers. All patients who are able to leave their homes will thus be able to come to the hospital and seek the advice of the practitioner of their choice, whilst those who are stricken with serious illness will send or telephone to the hospital and ask the doctor of their choice to visit them. If the chosen doctor on that particular day has already filled up all the available hours of his time on duty, the patient will have to be content with one of the assistants, or ask the senior of his next choice to take up his case, just as now happens in private practice.

In the smaller towns there must be outposts in the shape of cottage hospitals, worked on the same lines as regards "free choice," and linked up with the bigger centres by means of telephone, motor cars, and motor ambulances. In the rural districts there must be dispensaries, linked up in their turn with the cottage hospitals, at which the local doctors will have their consulting rooms, well equipped with instruments and all modern appliances, and with a nurse or nurses to help them in their work. In such districts as require more than one doctor, some choice can be given to patients.

It is some such system as this for which advocates of a State Medical Service are working, and it would give as great a freedom of choice of doctor as there is now, and it would extend that freedom to a larger proportion of the population. But it is probable that as the work of the service became, as it is bound to do, more and more specialized, as each branch of the profession worked more and more in close co-operation with every other branch, and as modern methods of diagnosis and treatment became more and more scientific and exact and available to all, the desire for "free choice" would gradually die a natural death. It is even possible that in the days to come advancing knowledge will throw more light on those diseases now classified as neurotic, and point to a better and more scientific way of dealing with them than by "faith in the doctor."

Dr. J. H. KEAY (Greenwich) writes: In a time of enforced leisure, when glancing over the periodicals of the past years, I find that it is now about eight years since I contributed a long article advocating a whole-time medical service. I soon emerged from that period of darkness, and about five years ago, long before the Insurance Act was heard of, began to urge, in season and out of season, the principle of compulsory insurance so inadequately expressed in our present Act of Parliament. Nor, though open to conviction, have I yet changed my mind on the subject. Of course, like Dr. Lauriston Shaw, I may be painfully ignorant, and need such compassion and enlightenment as is furnished by Dr. Courtenay Lord in last week's JOURNAL. But, while open to conviction, I have seen nothing yet to induce me to accept a whole-time medical service in preference to a panel one. On one or two matters I certainly need more enlightenment than has yet been supplied by any of your correspondents.

One of the main objections to the club system was that medical men were under lay control. When the Insurance Bill was brought forward the voting was strongly in favour of being placed under Insurance Committees—somewhat prematurely, as it was not then known of whom they were to consist. So far as matters have gone, however, one has not heard of many of them proving absolutely unreasonable and tyrannical. But what of the whole-time service? Of course it may be said that there is to be a medical department and a medical man at the head. This may or may not be, but is it not just as likely to be for the most part a lay body with more power than the present Insurance Committees, badly fitted to judge as to who is to deserve or not deserve promotion, and with whom, as has often proved the trouble in Germany, political opinions and backstairs influence are likely to weigh more than skill or diligence in one's profession?

In our system of education we can see what it is to be placed under lay control. Judging from what one sees daily in London, a teacher has not a soul he can call his own. Whatever objection he may have to the system or order of subjects taught, if he dare make a suggestion it is at his peril. He is entirely under the control of Spring Gardens, the consequence being that the education given at council schools at three shillings a week is often inferior to that given by the few remaining private schools at half that sum. With a whole-time service under lay control, regulating all appointments, need we anticipate anything better in medicine?

One other point, and that briefly. When the change took place in education, so that private schools were all but abolished, there are many of us old enough to remember when teachers of old standing, many of them well educated and cultured, were reduced to the extremity of applying to the parish. If attendance on the working classes is to pass entirely into the hands of younger men, who will be selected for whole-time appointments, what is to become of the older men, who, if they applied, would have little chance of getting them? And what of those of us who have got to an age that, sooner or later, we must think of disposing of our practices? When the Insurance Bill was introduced there was a great outcry that practices would be unsaleable. In some cases there may have been difficulty, but judging from the advertisement columns a large number on a panel seems to be an advantage rather than otherwise. When attendance on the working classes has passed over entirely into the hands of whole-time men, will some one kindly tell us how much one may expect to get for a working-class practice?

Doubtless there are many who have gained largely by the panel system. But if that advantage is to be maintained, it is not a few leaders, but one and all, who must fight for it. The great majority of men on the panel are doing their work honourably. There are a few who are doing it very badly indeed. Is it not time that the honourable men on the panel took the matter up firmly, and bluntly ask the question in committees how it is that some men with a thousand on their list are signing double the number of certificates as others with the same number, and why the average duration of a disease such as pneumonia, for example, is two or three times longer in one practice than in another? Unpleasant questions, certainly; but if the panel is to be a success they have got to be asked.

Dr. M. S. HARFORD (London, S.W.) writes: We have lately had some feelers thrown out from many quarters, but notably from those within panel organizations, as to the early launching of a State Medical Service.

Sir John Collie, in particular, had much prominence given to a paper read by him before a group of friendly society officials and others. One is not quite sure whether Sir John takes himself or expects others to take him seriously in his impulsive moments. As a fellow member of the Advisory Committee (on which it is only fair to bear testimony that he often strongly pleaded the cause of the general practitioner in the dark days of the Insurance Act) I was, however, particularly amused with his statement, in the paper above alluded to, as to the want of firmness displayed by the Insurance Commissioners in not insisting on what he describes as a full service, when the panel system was being initiated. I am afraid criticism of the Commissioners in this matter comes with bad grace from one who, at the most critical moment, and when the Government and Commissioners required help to give the Act any kind of start, resigned from the Advisory Committee—no doubt firmly convinced that Lloyd George's Waterloo had arrived. Though afterwards

he came back again to that Committee to help to bring the panel system into operation, he has now, apparently, deserted the panel doctors and taken sanctuary in the State Medical Service organization. He is no doubt on his Spion Kop now, and there we will leave him.

One may well ask, Do either the general practitioners or the British industrial classes desire a State Medical Service? I am very confident that the British workers, if the matter were put before them fairly, say, by means of some form of referendum, would indignantly reject such a service. True, certain friendly society officials who try to set up a claim to represent the workers have some hazy, nebulous idea of such a service, but it has always struck me that by a State service they mean one controlled, somehow, by the approved societies; which would, indeed, be a State service *pour rire*. Those people have an uneasy feeling that they are being fettered by the Insurance Commissioners, and for every yard of red tape they feel, or think they feel, being tied round their legs they make a kick—at the doctors! Their State service is one of the phases of this state of mind.

No statesman is likely to introduce such a measure if he bears in mind that amongst the industrial classes there is evidently dissatisfaction enough with the compulsory element in the Insurance Act, and that to compel them to accept any doctor the State would appoint to attend them, would most certainly add fuel to the fire. Possibly, if the advocates of compulsory military service succeed in their aims at some remotely future date, the British democracy might consent to be German-dragooned by a confraternity of State doctors; but such a service would then quickly become a hateful and tyrannous bureaucracy.

And the doctors? Is the State first to pay over to nearly every general practitioner in practice the capital value of his practice? Or is the practitioner's capital to be confiscated? In the former case the cost will be enormous. If his capital is confiscated for a pension (the mention of which reminds one of the famous "three acres and a cow"), then I am sure a great number will object to the bargain.

I fear it is this coquetting with a State service by some embryonic medical statesmen that threatens to paralyse the panel service—a service which largely preserves private practice, as well as gives free choice to the compulsorily insured. One may well ask how the panel practitioners are to be expected to give their best services to the insured whilst noting those insidious attempts to supplant them, and use the service as a stepping-stone to a State service. The beneficent army formed to fight disease has, instead of doing its proper work, daily to engage in fortifying itself against attack, in which efforts seemingly every one wants to be a general. To apply a political phrase to the present situation, it is not dissolution we want, but resolution—resolution to get the best out of the service for the insured and for the nation; and most decidedly, by harmonious co-operation with the voluntary hospitals, a service, amply satisfying to the working classes, will soon be evolved. Meanwhile there should be no place in panel organization for those who wish to supplant the panel system by a State service. If there is, most certainly the dry rot will soon set in, as it will also if there is a further extension of the big firms with the enormous lists and a managing director and four or five dummy directors on the board—limited liability companies registered under the Companies Act, 1911.

The Act itself, too, may be endangered by malingering, but I deny it is at all endangered by the doctors, who have given, on the whole, devoted service to the insured. The question of malingering is, indeed, a large and complex one; but there can be no doubt of its existence, and, unfortunately also, its continued growth, which may go far to undermine the moral fibre of the workers. How best to grapple with it is another matter. At present we have divided authority. The approved societies by their autonomous rights are appointing medical referees, who lately, in London, seem to be springing up like mushrooms, and then Insurance Committees are also appointing their referees. There is no uniformity in this system, and I am certain there will be little confidence in it either. It would, I believe, be entirely different if the Insurance Commissioners appointed as whole-time officers highly qualified men of standing in the profession whose duty it would be to examine, with some exceptions, every person in receipt of sickness benefit for a period of over four weeks (and exceptionally other persons). We would then be near the end of systematic malingering.

On the general question of the administration of the Act, the London Insurance Committee, as a business proposition, must be the despair of many. I am not now alluding to the action of some members of the Committee in hoarding up the doctors' treasures, but to the clerical work of the staff, the members of which I have invariably found most courteous and obliging. Their work is, however, overwhelming, and to cope with such work efficiently must require a much larger staff as well as an Exchequer subsidy. But, even then, I think the Act would need to be amended so that the London Insurance Committee would be divided into four sections—two north of the Thames, and two south, co-ordinated, if necessary, by Chancery Lane. It would then be possible effectively to administer medical benefit to London's 1½ millions of insured persons.

It has been objected that if too much zeal is shown for the panel system attempts may be made to further rivet the fetters of lay control on the profession. However, if the panel practitioners recognize their power and strength, and show their teeth a little too, they will be able to repel all attacks on their liberties and preserve their practices. But the time is approaching for action. We are within a few months of a general election, with, to say the least, the possibility of the pendulum swinging round. Then matters momentous to us all may be in the melting-pot. It requires very little imagination to picture the position we may then be in—that looming largest before our minds being the attempt of the approved societies to regain their hated control of the profession.

It is, then, in view of such a serious situation arising that the importance of conciliating the non-panel practitioners must seem so obvious to us all. I believe much of the trouble would have been avoided if insured persons had been allowed, or even encouraged in certain suitable circumstances, to make their own arrangements. That this has not been done has been a disappointment to me, as has also been the recognition of those institutions, detested by every right-minded practitioner. Personally I have written and said many hard things about the British Medical Association during the late controversy. I held the view then, and still think, that the greatest contributing cause of its defeat was that so little account was taken of the economic condition of the profession before the Act. We have only to look on the picture then and now to see the truth of this contention. I also held the view then that the Association should have accepted the invitation of the Chancellor of the Exchequer to actively help, mould, and work the Act after it became operative. This failure was a great loss to the profession as a whole, but it was an even greater loss to the Government and the nation. What a difference the control of this great ethical and scientific body as the dominant force in working the Act would have made must be obvious to every unprejudiced observer, especially to those who are not too biassed to see that the ethical bonds of the profession were never looser than they are at present.

Surely, then, the present time of doubts, dangers, and difficulties is the acceptable moment to reorganize the Association for the great future task which it, and it alone, can successfully accomplish.

Dr. R. Galway Murray (London, W.) writes: The State Medical Service is in being; not a whole-time one, it is true, but is that either necessary or desirable? I think not. The efficiency of a whole-time service depends almost entirely on the amount of money which is to be spent upon it—witness the state of the Army Medical Service before the Boer war and the Naval Medical Service before the recent reforms in pay, etc., took place, when recently qualified men were advised by their professors not to enter the services, with the result that the services were starved. There are many practitioners of experience, both on and off the panel, who would be lost to the State if a whole-time service were instituted.

Medical men who like that kind of work enter either the military or civil services. Those who go into private practice do so, for the greater part, because they prefer it. Either the emoluments of the public services are not considered attractive enough, or the discipline is objected to.

In my opinion the gulf which now exists between panel

and non-panel men would be bridged if the system which obtains in the West Indies were introduced in this country. My father was for forty years a district surgeon in Trinidad. He was paid a salary which increased with his years of service. He was also allowed private practice. He retired on a two-thirds pension.

It goes without saying that a man who is allowed to supplement his income by private practice would not expect so large a salary from Government, as he certainly and reasonably would were he a whole-timer.

Dr. George Geddes (Heywood, Lancs.) writes: May I claim your indulgence to reply to a few of the observations advanced by Dr. Lauriston E. Shaw against a State Medical Service? Mr. Charles E. Parker has defended himself against the criticisms advanced by Dr. Shaw as to the possibility of including "free choice of doctor" in any scheme of State medicine, but I doubt whether Mr. Parker can from personal experience bear testimony to the advantages and disadvantages of the panel system, nor, judging from one's knowledge of Dr. Shaw's experience and practice, am I convinced that he is able to express an authoritative opinion upon the system. My professional life has been spent in general practice, and since I can safely assert that my present panel list is much above the average of the ordinary general practitioner, a statement of my personal experience may interest your readers, and perhaps convince Dr. Shaw that the panel system as presently administered is not the unalloyed blessing he imagines it to be.

I speak as one who welcomed the Insurance Act and voted in the minority with those who advised acceptance of Mr. Lloyd George's final offer; nor have I had any sympathy with those members of the Association who attribute our defeat to the policy pursued by the Council throughout the negotiations, believing as I do that, had there been no British Medical Association, the profession would have had to accept 5s. instead of 7s. as at present. Holding that view, I trust, if a State Medical Service is evolved out of the present system, its organization will be carried out by or through the British Medical Association. While the fight between Mr. Lloyd George and the Association was at its height I fondly hoped that I might persuade the State Medical Service Association to co-operate with the British Medical Association in an attempt to introduce a voluntary State Medical Service to be worked by those members of the Association prepared to resign their private practices to such members of the Association as preferred to remain outside the insurance scheme. I realize now the idea was quixotic, but I still cherish the hope that the Association will look kindly upon such of us as believe in the ideal of a State Medical Service. Dr. Shaw writes:

> The whole basis of this scheme (that is, the Insurance Act) is that doctors shall be placed in honourable competition with each other to secure patients by *pleasing them*, and that success in so doing shall entail increased remuneration . . . and *sympathy for the patient* is encouraged. (The italics are mine.)

Note first that Dr. Shaw lays emphasis on pleasing the patient and sympathizing with him, and by doing so you increase your remuneration. Apparently, Dr. Shaw forgets that the State should be considered, and that, while in private practice the patient who "pays the piper should call the tune," he cannot in justice expect his medical adviser to consider him alone in a scheme of national insurance.

Unfortunately, insurance patients, being human, do not yet realize or appreciate their medical adviser in the dual capacity of "our doctor" and custodian of national funds.

National interests loomed large in the mind of Mr. Lloyd George when he reminded the doctors that he had no intention of subsidizing the medical profession through national insurance, but, apparently, Dr. Lauriston E. Shaw persuaded him they were safe under a panel system. Let your readers judge after a perusal of the following facts.

A few days ago I received a list of patients who have changed their doctor for the ensuing year. They number 10, and I am unaware of any reason why they should have changed unless my refusal to grant certificate of incapacity in 4 of the cases will be accepted as a sufficient explanation. The circumstances may be stated shortly:

Mrs. A., a neurasthenic, was advised that she ought to strive against a feeling of inability to do her work after being allowed several weeks' rest. She construed this advice as an imputation that "there is nothing wrong with me," with the result that she and her husband change their doctor.

Mrs. B., after receiving sick benefit for several months previous to confinement, because of severe vomiting, and maternity benefit *plus* four weeks' sick benefit subsequent to confinement, was informed that the fact of an imaginary cough, combined with the engagement of a washerwoman, would not justify her receiving further sick benefit. She apparently felt aggrieved, since her name and that of her husband disappear from my list.

Mr. C., troubled with a backache, which became active during wet weather, which under ordinary circumstances prevented him following his occupation, felt aggrieved that I should visit him at his house to satisfy myself that he was resting his spinal muscles. The result is that he and his two daughters have sought fresh advice.

Mrs. D. took upon herself the responsibility of staying at home a fortnight on account of dysmenorrhœa. Because I declined to sign her "unfit" certificate without having seen her during the attack, she has gone in search of a more obliging adviser.

The remaining two have changed their doctor from a cause having no connexion with insurance. All were "good" patients of several years' standing, and would most certainly have continued to employ me had the insurance benefits not proved too great a temptation for them.

Fortunately their loss will not embarrass me, but I doubt whether it is fair to place a practitioner in less fortunate circumstances in a position in which his conscience is sure to be influenced by the probable loss of his bread-and-butter.

Doubtless many doctors could unfold similar tales, and if one assumes that each of the 14,000 panel doctors lost 10 patients rather than sacrifice his self-respect for £3 10s., we find that 140,000 panel patients are given an opportunity of depleting the insurance funds at the expense of their more honest fellow countrymen, and that £49,000 passes from honest medical men to others less scrupulous. Will Dr. Shaw contend that those figures are calculated to promote national health and public morality? It is paying too high a price to please the patient.

It may be argued that the majority of medical men would not hesitate to decline certificates under such conditions. Well, it may be that having inherited more than the average amount of original sin I judge others as being no better than myself, but when I hear my medical friends discussing ways and means of bringing such patients to justice without involving themselves in the consequences I flatter myself I am no worse than my neighbours.

If the panel system persists, some means must be devised whereby such patients will be restrained from "sponging" upon the national funds, and also that their wrongdoing should react upon themselves instead of upon their medical advisers, whose only crime is a conscientious discharge of duty.

It is to be hoped that the medical profession will accept the situation and organize a State service from the inside, instead of permitting a State scheme to be forced upon them by outraged public opinion.

Dr. James Harrison (Chairman, Tynemouth Local Medical Committee) writes: The discussion in your columns on a State Medical Service is interesting and at times amusing. The advocates of this system seem chiefly concerned about its effects upon the public, and they draw a rosy picture of the millennium which is to come, so far as the health of the people is concerned.

Now, so far as the benefits of a State service concern the public, we need not trouble ourselves. The wire-pullers and so-called reformers will see that the public gets its pound of flesh.

Let us examine the question as to how it affects us. Have we any reason to imagine that the State medical officer of the future will be any better off than the private practitioner of the present? We have some striking examples of State munificence (?) so far as medical salaries are concerned. What about the School Medical Service offering less salary than an assistant can secure? What about medical officers of health, who have not even got security of tenure? Tuberculosis, Prison, Asylum, and Poor Law officers—all more or less State medical officers—are any of these paid on the lavish scale expected by the misguided members of the profession who support the idea

of State service? How about the seething mass of discontent in the most highly paid of all the Government medical services, the I.M.S.?

No, Sir, State service does not appeal to the practitioner endowed with an average amount of common sense, and happily such constitutes the majority of the profession.

There is no doubt we are in critical times. We are open to attack by both political parties, neither of whom will hesitate to use us in the game of catching votes. The half-crown additional grant comes to an end in 1915. Will it be renewed, or will it be renewed with more onerous conditions attached to it? There is a feeling abroad, shared by the press and the public, that we are overpaid, and that our treatment is only of an elementary character. The old friendly societies are clamouring for the restoration of the control of medical benefits, and by combination they can start medical aid societies anywhere they like, as has been done in South Wales. These are the "institutions" so frequently referred to in the Act (Section 14 (4)) and repeated in the Regulations.

These Regulations, judging by the last, will become more stringent year by year. All the amendments sent up by the British Medical Association, all the protests from Local Medical Committees were severely ignored by the Commissioners, even when supported by the Insurance Committees. Why? Simply because we had no fighting organization behind us. We had neither union of Panel Committees nor panel practitioners—a thing which must come if the panel practitioner is not to be robbed of what he gained during the last struggle. As Dr. Pochin of Oldham pointed out last week, we must wake up and move with the times. The only logic that appeals to any Government is a strong union—one that can show its teeth if necessary. We do not wish in any way to act against the British Medical Association, whose past services we fully appreciate, but surely 20,000 men doing the same work, and liable to attacks from all sides, must see the absolute necessity of being brought together through an association of their Panel Committees for mutual protection and combined action. This should be the keynote of the meeting of the Local Medical Committees to be called together by the British Medical Association next month. The Insurance Committees have their association, so have the clerks to the committees, why should not we have the same?

There should be much spadework this year, for assuredly the battle will be upon us in 1915.

Refusal of Permission to make Own Arrangements.

Dr. Henry H. Sturge (Maida Vale, W.) writes: The Chancellor recently at a public banquet m ioned with gratification the number of doctors that were on the panels, and the multitude of the insured who had chosen doctors on the panel.

The facts disclosed in this letter indicate what means have been resorted to to obtain such results.

Mr. Mosley's reply is courteous, but in it there is not sufficient encouragement for me to go and vote.

South Bucks Election.

81, Elgin Avenue, W.,
February 13th, 1914.

Dear Sir,—I received your election address to the electors of South Bucks, and I note that in reference to the National Insurance Act you say, "much depends upon its administration."

I have twice before voted in South Bucks and in London for this Government, but before I decide to go down from London next week to vote I should be obliged if you would kindly let me know if you would do your best, if returned to Parliament, to prevent Insurance Committees from carrying out a persistent policy of refusing insured persons permission to make their own arrangements for medical benefit, as a clause in the Act allows.

In my own case large numbers of my own patients applied last year to the London Insurance Committee to be allowed to make their own arrangements with me. In the month of March alone thirty applied on the form supplied. Up to the end of the year every single applicant was refused in the first instance, and at one time a note was sent to say that if they did not choose a panel doctor they would be allotted to such by the Committee! A few of my patients, angry at this injustice, protested, and at the end of the year the Committee had altered its policy as regards these few patients, and eighteen were allowed to do as they wished—seven of these belonged to one household. In Parliament it was stated by a member of the London Insurance Committee that permission was given to all those who had been under one doctor for eight years; such statement was inaccurate, as some of those who applied and were refused had been patients from their birth, and for eighteen years.

Indeed, there appeared to be neither method nor justice in this matter, but a consistent and cruel policy of preventing honest and industrious but poor people from having their desire. Among the eighteen one had known me only for a year.

Towards the end of last year, finding the Committee hopeless, I forebore to advise patients to seek relief, and many, disheartened, reluctantly went to strange doctors, who had panel lists.

It is, in my opinion, contrary to Liberal principles to take money from poor people and then to refuse them permission to spend their money in a way permitted by the Act. It is also, I consider, contrary to Liberal principles for a Committee established under a Liberal Government to do its best to ruin a medical practitioner who had secured the confidence of a sufficient number of people to gain a livelihood. In my case the efforts of the Committee have been in vain.

I should be obliged if you would let me know if you agree or not with these methods of the London Insurance Committee.—I am, yours faithfully,

Henry H. Sturge
(of Highfield Cottage, Tylers Green, Bucks).

Tonman Mosley, Esq., C.B.,
Bangors Park, Iver, Bucks.

[*Copy.*]

Bangors Park, Iver, Bucks.

To Dr. Henry H. Sturge.

Dear Sir,—The Government hardly seem at fault with regard to the action taken by the London Insurance Committee. Before pledging myself to any course, which might interfere with the administrative discretion of County Insurance Committees, I should require to be fully acquainted with their side of the question as well as the other side.—Yours sincerely,

Tonman Mosley.

"Surplus Funds."

Dr. A. R. Eates (London, W.) writes: At a meeting of the panel practitioners of Marylebone, on February 6th, the circular letter sent to all panel men by the London Panel Committee was read and considered. It was resolved to inform the Committee that the only way approaching fairness in the allocation of "surplus funds" would be the equal division of such funds amongst all doctors on the panels, excluding only those men with 2,000 or more persons on their lists and those who limit their lists to a number below 2,000. That so fair a proposition should not have found a place in the letter referred to fills one with many serious misgivings as to the wisdom and justice with which the Committee is likely to deal with the men whom they are supposed to represent. The majority of panel men are those who have small lists. Is the belief that the majority should decide all issues a mere fancy? And are the majority in agreement with the recommandation of this Committee "that the surplus funds . . . be divided . . . in direct proportion to the number of insured persons on each practitioner's list . . ."?

The whole claim of the panel doctors to the "surplus" funds is based upon two arguments: First, that of liability to attend those who have not selected a doctor; and, secondly, the "insurance principle" argument. Now, these arguments are sound, and apply to all panel men equally. Then why this recommendation? What has 1913 to do with 1914? The man with 2,000 or more on his list is already well paid—as well, that is to say, as he can be under the Act. And, indeed, he is much better paid for "work done" than the man who went on late, and has therefore, say, only 500 persons on his list; for, while the list of the first man is made up chiefly of the prudent people who "selected" a doctor in the early days, the second man's list represents chiefly those who signed on only when they came for medical aid, and many of these had first been refused by the men with lists large enough to make them independent to that extent. These men could and did pick and choose. Then again, the method of paying the doctor on the average

number on his list for the quarter tells very heavily against the man who went on late, and has therefore a small list.

The London Insurance Committee has expressed the opinion that we should not undertake to attend more than 2,000 persons, and will soon have the power to limit our numbers accordingly. To pay out the surplus fund according to the recommendation of the London Panel Committee will, therefore, be to pay the man with a large list money which he cannot earn.

But there is another argument against this proposal. No one can say to whose list the yet unallotted persons will ultimately attach themselves. We are all liable to accept them, and the man with a small number is more liable than the big list man, as appears clear from the before-mentioned considerations.

I append my statistics for the year ended January 11th. They are interesting and instructive. No big list man has attended in eight months 57 per cent. of persons he is responsible to treat, nor does his average number entail so big a reduction of pay.

307 persons accepted in 240 days.

First quarter (May to July)	76	
Second quarter (to October, 1913) ...	...	165*
Third quarter (to January 11th, 1914) ...	...	307†

* Paid for 121. † Paid for 236.

Number attended: men, 85; women, 90—that is, 57 per cent. of acceptances; 59 per cent. came in the first instance for treatment. Only three persons had first of all applied to non-panel doctors for treatment as private patients.

Total number of attendances, 977, including 132 visits; 85 men had 427 attendances; 90 women had 553.

As payment has not yet been made in full, I am unable to average the rate of payment per attendance, but from what I am told I shall receive it works out at about 9d. a time, including visits, fractures, analyses of urine, stitching of wounds, removing small growths, opening and dressing of boils, abscess, ulcers; supplying first dressings, lotions, silk, horsehair, bandages; examining and syringing ears; testing vision; using eight shillingsworth of stamps and stationery; and for doing the work of one national insurance clerk for eight months.

MEDICAL CERTIFICATES.

The following letter appeared in the *Birmingham Daily Post* of January 29th:

Sir,—I am sorry to see that the Insurance Committee has had to censure one of the panel doctors for giving a false certificate to an insured person. I regret that the Committee did not publish his name, as the matter is a serious one, and such actions are a slur upon the whole body of panel doctors. The General Medical Council takes a strong view of this question, and has issued a special warning, to which attention has been repeatedly drawn in the medical press. It has removed two practitioners from the *Medical Register* for this offence, thereby depriving them of their means of livelihood. This severe punishment is one which the Council hoped would act as a sufficient deterrent to prevent other cases, yet apparently without this desired result having been attained. I think the Insurance Committee should in such cases as this publish the name of the offender. No doubt this would be a severe punishment, but much less severe than that of having his name removed from the *Register*—a risk which he is apparently willing to incur, for it is stated that this is the second time that complaint has been made of the manner in which he has performed his duty of certification. If such a case is reported to the General Medical Council there can be no doubt of the gravity with which the offence will be regarded.

ROBERT SAUNDBY,
Member, General Medical Council.

Birmingham, January 28th.

LOCAL MEDICAL AND PANEL COMMITTEES.

SOMERSET.

PANEL COMMITTEE.

THE first meeting of the Panel Committee for Somerset was held at Weston-super-Mare on February 12th, and as the members were the same as those forming the Somerset Medical Committee, that body held a meeting immediately after the session of the Panel Committee ended.

Election of Officers.

Mr. AMES, Clerk to the Somerset Insurance Committee, convened the meeting, and asked the members present to elect a chairman, whereupon Dr. Wallace was unanimously elected to the post, and Dr. Crouch was appointed secretary.

The twelve district secretaries of the Medical Committee were appointed to also act as secretaries to the new Panel Committee.

Mr. AMES kindly agreed to remain during the meeting and give information upon various points. The thanks of the meeting were accorded to Mr. Ames for the work he had done in the past year, which had largely contributed to the smooth working of the Act in the district.

Chemists' Prescriptions.

Mr. AMES reported that the chemists' prescriptions, numbering 178,000 for 1913, had been checked in his office. The Committee decided to accept them as correct without further checking. The average cost per insured person amounted to about 1s. 8½d.

Temporary Residents.

Mr. AMES stated that 299 persons had been treated in the county under green vouchers, at a cost of £282 5s. 1d., of which £25 18s. was for drugs.

Representatives on Committees.

Drs. Crouch and Wallace were elected members of the Medical Service Subcommittee under the new Medical Benefit Regulations, Section 45 (2).

The Committee agreed that the nine practitioners representing the Somerset Medical Committee upon the Non-statutory Joint Committee should also represent the Panel Committee—namely, Drs. Bristowe, Colmer, Crouch, Farrant, Graham, Pollard, Stewart, Temple, and Wallace, and to these were added Drs. Pineo and Gomez.

Mileage Fund.

Dr. SYDENHAM stated that the Insurance Committee had approved the Cutcombe scheme for distributing the Special Mileage Fund of £350, provided all the doctors interested agreed to it. As one practitioner, however, had objected, none of the money had yet been paid over, although a year's work had been done in these districts. He moved that the Commissioners be asked to press this scheme, and, failing its acceptance, that the Commissioners themselves should settle the matter by imposing a scheme of their own, and that in the meantime 75 per cent. of the money be paid. This was agreed to.

Mr. AMES explained that no scheme could be arranged, and consequently no money paid over, until certain figures had been supplied by the Exmoor and Brendon practitioners, and that in reply to his application to them for particulars only seven out of eighteen had thought it worth while to reply.

MEDICAL COMMITTEE.

This concluded the business of the Panel Committee, and the meeting resolved itself into the Somerset Medical Committee.

Contracts.

The Committee approved of the action taken by the Chairman and Secretary in getting certain alterations in the contracts, which had already been detailed in a circular sent to each practitioner on the medical list.

Resignations from Committee.

The following resignations were announced: Drs. Humphrys and Lawrie.

Contracting Out with Unqualified Persons.

A resolution protesting against Regulation 44 (2) was passed. Copies of the resolution have been sent to the Somerset Insurance Committee, the members of Parliament for the county, the coroners and their deputies, in each case with covering letters, and the following letter has been addressed to the Insurance Commissioners:

February 16th, 1914.

The Secretary,
The National Health Insurance Commission
(England), Buckingham Gate, S.W.

Dear Sir,—The following resolution was passed by the Somerset Medical Committee at the meeting on Thursday, February 12th:

That this meeting protests against the new Regulation of the Insurance Commissioners, permitting insured

persons to contract out with unqualified persons for medical benefit. And that this resolution be sent to the Insurance Commissioners.

And I was instructed to express the surprise of the Committee that in administering the National *Health* Insurance Act the Commissioners should have allowed themselves to interpret the phrase "medical attendance and treatment" occurring in Section 15 (3) as including that by unqualified persons. It seemed to the Committee unthinkable that treatment by unqualified persons could be of a character "not inferior in nature, quality, or extent to that provided under the arrangements made by the Committee" 44 (1), but the mere fact that the above interpretation is thought permissible must give the impression that treatment by unqualified persons is of an equal quality to that given by qualified medical practitioners, and thus widely opens the door to imposition upon the gullible and ignorant, who more than any other require the protection of a Government Department.

The Committee trust that the Regulation in question will be withdrawn.—I am, dear Sir, yours faithfully,

C. P. CROUCH,
Honorary Secretary.

EASTBOURNE.

A MEETING of the Eastbourne Local Medical Committee was held on February 5th, when there were present Mr. J. H. EWART, Chairman, and eight others.

Range of Medical Service.—The question of eyesight testing, referred to the Committee by the Insurance Committee, was considered, and it was unanimously resolved:

In the opinion of this Committee eyesight testing, being a "kind" of treatment not consistent with the terms of Class 2 (i) of the medical practitioners' agreement, must be considered outside the range of medical service.

With regard to the question of operation for enlarged tonsils, submitted to the Committee by a practitioner on the panel, it was unanimously resolved:

That the terms of the foregoing resolution, *mutatis mutandis*, be sent to the practitioner and Insurance Committee.

A meeting of the Panel Committee was held on February 5th, with Mr. J. H. EWART in the chair: eight others were present. The following matters referred by the Insurance Committee for consideration were discussed:

(*a*) *Arrangements under Regulation 12 (3) (a) and (b).*—It was unanimously resolved:

Thereafter the practitioner may be refunded a supply of the drugs or appliances used in such emergencies by presenting to any pharmacist on the panel an order written in the name of the insured recipient on Form Med. 13.

(*b*) *Scale of Remuneration of Medical Referees.*—It was unanimously resolved:

That a minimum fee of 10s. 6d. be paid for each examination with report thereon.

It was also unanimously agreed to send the following recommendations:

(1) That the appointment should be made by the Insurance Committee.
(2) That only non-panel practitioners should be appointed.

The Honorary Secretary was instructed to notify the terms of Resolution 2 (*b*) to all practitioners in the area, and to appeal for their loyal co-operation in giving uniform effect to the Committee's decision.

ESSEX

THE fifteenth general meeting of the Essex Local Medical Committee was held on February 12th. Dr. Edgcumbe Burrows was welcomed upon his appointment, vice Dr. Drake, resigned. Dr. Ross Steen was re-elected upon the Medical Service Subcommittee.

Insurance Act Committee of the British Medical Association.—A reply from Dr. Cox in reference to the *personnel* of the Insurance Act Committee disclosed the fact that of a committee of 23 (including 4 *ex officio*) 17 were engaged in working the Act either upon Advisory, Local Medical, or Insurance Committees. As it was elected to consider matters affecting the working of the Act, this was held to be of importance in the light of the coming conference of Local Medical and Panel Committees to consider co-ordination.

Local Medical Committee and Panel Committee.—A letter from the Commissioners stated that the members now forming the Local Medical Committee were duly elected as the members of the Panel Committee.

Refraction and Dentistry.—In answer to a letter from the Clerk to the Insurance Committee, it was decided that cases of refraction and dental cases could not be considered as within the work of a practitioner of ordinary competence and skill.

Records.—Upon the proposition of the Secretary, Dr. HARDING H. TOMKINS, it was decided to ask all panel doctors to keep accurate records of the number of persons on their lists, the number of persons seen, and the number of attendances given (including visits and surgery calls), and make a complete return to the Secretary, for private use, at the end of the year. The Committee also asks all secretaries of District Medical Committees to urge upon practitioners in their districts to do this, and personally to collect as many as possible and send to the Secretary in order that they may be grouped according to district areas.

Allocation of Funds.—The Committee decided to request the few doctors who had not signed the paper asking whether they were willing to accept the allotment and allocation scheme to do so at once. Forms can be obtained from Mr. Wylie, 4, Broad Street Place, E.C.

First Panel Committee Meeting.—The Local Medical Committee here adjourned and resumed as the Panel Committee, the meeting being presided over by Mr. BURROWS, Chairman of the Insurance Committee (the clerk and accountant attending), until the officers of the Committee were appointed.

Appointment of Officers.—The following officers were elected:

Chairman.—Dr. Leigh Day.
Vice-Chairman.—Dr. J. Douglas Wells.
Secretary.—Dr. Harding H. Tomkins (the same officers as in the Local Medical Committee).
Representatives upon the Medical Service Subcommittee.—Dr. Brunton and Dr. Pottinger Eldred.

Relations between Insurance Committee and Profession.—Mr. BURROWS thanked the practitioners of Essex through the Panel Committee for their attitude of forbearance towards the great difficulties the Insurance Committee had to surmount, and said he considered the relations between the profession and his committee were really excellent. Dr. LEIGH DAY thanked Mr. Burrows for attending, at the same time explaining to the Panel Committee that Mr. Burrows, with the help of the clerk and accountant, was prepared to make certain explanations with a view to the proper understanding of some difficulties regarding allocation of funds with which both committees were faced. After a number of matters had been discussed and explained, Mr. Burrows withdrew, a vote of thanks having been unanimously passed.

Finance.—The Committee then passed a resolution to the effect that the Commissioners be approached through the Insurance Committee to allow a deduction of ¼d. (one farthing) per insured person for six months to finance the Panel Committee, as it was not possible to estimate expenses until the duties were defined. The unexpended money would automatically return to the fund from whence it was derived.

KENT.

Presentation to the Secretary of the Local Medical Committee.

AT a meeting of the Kent Local Medical Committee, held at Maidstone on February 4th, a presentation was made by Dr. ARTHUR MAUDE, Chairman of the Committee, on behalf of a large number of practitioners in Kent who have subscribed to present a pianola to Mr. George Potts, in recognition of his valuable and laborious services during the past two and a half years as Secretary to the Kent Medical Committee. The sum handed to Mr. Potts was over 50 guineas.

Constitution of Committees.

The members of the new Local Medical Committee and the Panel Committee are to a large extent identical.

The two Committees met successively on the same day, February 4th, and elected the same Chairman, Vice-Chairman, and Honorary Medical Secretary—namely, Dr. A. Maude (Westerham), Dr. G. R. F. Stilwell (Bromley), and Mr. G. Potts (Maidstone), who have held these offices for the last year in the Kent Local Medical Committee.

The two Committees then agreed to sit conjointly for the transaction of such business as the Regulations permit of them transacting conjointly. But a separate agenda

paper will be prepared for each Committee, and no power of vote allowed to any member outside the agenda of his own Committee.

Finance.

The Committee has obtained the services of a well-known firm of accountants to act as its clerical staff under the supervision of the secretary.

The Committee is now financed by a voluntary levy of one penny for each insured person per annum on each panel practitioner's list, together with a voluntary subscription of not more than half a guinea from each non-panel practitioner. The levy has been accepted by the panel practitioners and sanctioned by the Kent Local Insurance Committee, which undertakes to deduct the money from the quarterly payments.

GLASGOW.

From the first annual report of the Glasgow Burgh Local Medical Committee it appears that 19 meetings had been held, with an average attendance of 31 out of a membership of 50, and that the Executive Subcommittee, comprising 10 members, had met ten times, with an average attendance of 8.

Canvassing.—The report states that soon after the inception of medical benefit several cases of canvassing on behalf of certain practitioners were reported to the Committee, which at once took steps to have the practice stopped by publishing a warning notice in the newspapers, and by notifying the Commissioners and the General Medical Council, as well as by communicating with the practitioners concerned.

Rules for Administration of Medical Benefit.—A set of rules drawn up by the Committee were adopted by the Insurance Committee and approved by the Commissioners. Their publication on the medical tickets now being issued to insured persons will, it is hoped, tend to minimize unnecessary calls upon the services of practitioners.

Conference with Chemists.—A conference with the Pharmaceutical Committee had been held to discuss difficulties in connexion with prescribing. The method of obtaining a supply of dressings and emergency drugs had been found to work well, and had since been recommended by the Commissioners for general adoption throughout Scotland.

Uniform Form of Certificate.—As the result of representations made, the Commissioners had promised to try to persuade societies to agree to uniformity. The majority of approved societies had undertaken to use the model form as soon as their stocks of certificates in use had been exhausted.

Temporary Residents.—The Committee had strenuously opposed the proposal to pay for medical attendance and treatment of insured persons temporarily resident from home by deduction from the money available for medical benefit, which was ultimately withdrawn last year, but it had not been possible to prevent it being embodied in the regulations for the present year.

Range of Service.—Since the Commissioners hold that the provision of an anaesthetist is part of the service that a practitioner is under contract to provide, the Committee feels that the matter will not be finally settled until its suggestion has been adopted to refer a specific case to a court of referees for decision.

Allocation.—It is proposed that those insured persons who have failed to choose a doctor should be distributed amongst the practitioners whose lists do not exceed 1,500. With regard to the distribution of money remaining in the panel fund, it is stated that, certain suggestions having been opposed, the Committee had reconsidered the matter, and had resolved to recommend that the money should be distributed equally among all practitioners on the panel, proportionately to the time they had been on the panel. The hope is expressed that all practitioners will accept the recommendation as a reasonable compromise.

Future of Committee.—The report deprecates the impression that Local Medical Committees have been rendered unnecessary by the formation of Panel Committees, and states that both for present purposes and for probable developments of the Insurance Act there is as much need as ever for a committee which was representative of all classes of the profession. The Local Medical Committee still retained the duty of considering complaints by one practitioner against another, the duty of deciding as to the range of medical service and the privilege of electing three members on the Insurance Committee and one of the members of the Medical Service Subcommittee.

Financial Statement.—The financial statement showed a balance in hand of £51 8s. 11d.

Panel Committee.—The following have been elected members of the Glasgow Panel Committee:

Chairman.—Dr. A. T. Campbell.
Vice-Chairman.—Dr. Miller Semple.
Honorary Secretary.—Dr. J. R. Drever.
Committee.—Drs. John Adams, J. Grant Andrew, John Baird, Forbes Brown, Wm. Bryce, P. S. Buchanan, Walter Colquhoun, John Gardner, J. Gibson Graham, J. Wishart Kerr, David Lamb, J. F. MacGregor, Arch. McCrorie, Ed. Primrose, James Todd, Andrew Wauchope, John C. Wright.

At a meeting held on February 10th it was resolved to ask the Insurance Committee to retain one halfpenny per insured person to meet the expenses of the Committee, on the understanding that the unexpended balance should be refunded to the Medical Fund at the close of the year.

Correction.—Dr. Douglas (Cupar) was elected Chairman of the Panel Committee for Fife County, and not Dr. Graham, as printed last week.

INSURANCE NOTES.

Medical Attendance on Insured Persons in Street Accidents and Sudden Illness.

In a recent accident in Liverpool the nearest doctor was called to the assistance of an insured person. The doctor called in furnished an account for his services to the Insurance Committee. The Committee decided that it had no funds from which the account could rightly be paid, but referred the case to the Commissioners. The decision of the Committee was confirmed by the Commissioners, but they suggested that perhaps some arrangement for payment of the fee might be made as between the panel doctor and the doctor attending. It is felt in Liverpool that though panel doctors, in virtue of their agreements, are safe from liability for the fees in such cases, the Commissioners' suggestion should not pass without protest.

Suggested Association of Panel Committees.

A meeting was held in Newcastle-upon-Tyne on February 11th to discuss this question. There were present: Drs. Dickie (Chairman of the Northumberland Panel Committee), Harbottle (Honorary Secretary of the Northumberland Panel Committee), Don (Chairman, Newcastle Local Medical Committee), Leslie Wilson (Honorary Secretary Newcastle Local Medical Committee), Dillon (Chairman Durham County Local Medical Committee), Gray (Chairman, West Hartlepool Local Medical Committee), S. Robson (Honorary Secretary, Gateshead Local Medical Committee), McDonald (Honorary Secretary, South Shields Local Medical Committee), Fraser (Honorary Secretary Tynemouth Local Medical Committee), W. S. Campbell, A. Campbell, A. C. Farquharson, J. W. Smith, A. Smith, C. C. Moore, W. J. Durrant, and F. C. Mears. Dr. Dickie was voted to the chair.

Dr. R. Farquharson wrote approving of the suggested scheme, Dr. Davis wired to the same effect, and Dr. Modlin wrote urging that consideration of the matter be postponed until after the projected meeting of Panel and Local Medical Committees had been held.

Dr. Fraser urged the necessity for setting up a strong combination of Panel Committees, and suggested that an association should be formed (*a*) to afford a means of keeping Panel Committees in touch, (*b*) to secure mutual support and co-operation, and (*c*) generally to protect the interests of practitioners on the panel. In the course of the discussion which ensued it was made evident that those present did not wish in any way to encroach on the work of the British Medical Association, but rather to leave that body free for the fight which is in front of us, and to relieve it of the necessity of seeking to look after practitioners so far as their work on the panel is concerned.

It was unanimously resolved that it is desirable that the Panel Committees should be federated.

Those present agreed to bring the resolution before the

next meeting of the committees of which they were members, and the meeting was declared adjourned for three weeks, to ascertain the wishes of the members of the committees.

OFFICIAL PUBLICATIONS.

Contracts of Persons Making their Own Arrangements.

We have received copies of the Model Forms, referred to in paragraphs 18 and 19 of the Memorandum 191/I.C. (published in the Supplement last week, page 77), for use by Insurance Committees in connexion with applications by persons desiring or requiring to make their own arrangements. Two of these forms, 43/I.C. and 43 (b)/I.C. are revised editions of the forms already in use, and are modified in certain respects so as to conform to the current Regulations. In both it is now stated that they are applicable only when arrangements are proposed for receiving treatment from a duly qualified medical practitioner.

In Form 43/I.C. an applicant is now requested to state for what period he desires to make his own arrangements, and it is pointed out that the Committee cannot in any event grant permission for a period exceeding two years from the commencement of the year in which permission is granted. If the applicant holds a certificate of exemption he is required to state the fact on the form. It is made clear that the records to be furnished by the practitioner undertaking to give medical attendance are to be sent to the Commissioners at the end of the year. The undertaking to be signed by the practitioner states definitely that the certificates to be furnished by the practitioner at the request of the insured person are "such certificates as are required to be furnished by him in connexion with any claim for sickness or disablement benefit made by him in pursuance of the rules of the society of which he is a member, or the Insurance Committee as the case may be, or for the purpose of determining or calculating the period during which sickness benefit is or would, but for any section of the National Insurance Act, 1911, disentitling him, have been payable, or of calculating arrears" and in a footnote to the undertaking it is made clear that where the arrangements are made on a contract basis the Committee's contribution will not in any event exceed the contract rate and that any further expenditure incurred by the insured persons, including any such expenditure incurred during temporary absence from home, would have to be borne by the insured person. The instructions do not state as formerly that the Committee in considering applications from persons who desire to be allowed to make their own arrangements will also have regard to the effect of such arrangements upon the general scheme of provision of medical benefit for insured persons in their area. The instructions now state that, with certain exceptions, medicine and appliances must be supplied otherwise than by or at the profit of the practitioner undertaking the treatment, whereas formerly in such cases it was provided that no contributions can be made by the Insurance Committee towards the cost of medicine and appliances supplied by or at the profit of the doctor. It is now pointed out that it is open to an insured person to contract with a chemist to supply the necessary medicines, etc., at a fixed rate per quarter or year, and that if this course is adopted a statement of the arrangement made, signed by the chemist, should be attached to the form. The following new clause is printed in large type:

11. If you remove otherwise than temporarily outside the area of the Insurance Committee by whom you have been allowed to make your own arrangements their consent will lapse, and you will thereupon be entitled either to choose a doctor on the panel or approved institution (if any) in the area of your new address or to make a fresh application to the Insurance Committee for that area for permission to make your own arrangements. The first named Committee will not, of course, contribute to the cost of any private arrangements subsequent to such removal.

In Form 43 (b)/I.C., which is for use under Section 15 (3) by insured persons employed at hospitals, asylums, and other similar institutions similar modifications are introduced in respect of the certificates to be furnished at the request of the insured person, and in respect of arrangements made on a contract basis, and it is now provided that the records to be kept shall be such as may be agreed between the Insurance Committee and the Panel Committee instead of the Insurance Committee and the Local Medical Committee as formerly. A note appended includes Regulation 44 (i) of the current Medical Benefit Regulations, and draws attention to the consequences of an insured person removing otherwise than temporarily outside the area of the Insurance Committee by whom he has been allowed to make his own arrangements.

Form 43 (c)/I.C. is entirely new, and will be used in the case of persons *required* to make their own arrangements either under Section 9 of the National Insurance Act, 1913, or by the operation of any income limit adopted by the Committee. In the former case the Committee has no discretion in the matter, but will require to be satisfied, either at the time that the notice is given, or when a contribution is claimed, that the necessary conditions specified in the Regulations have been satisfied. Consequently, the first page on Form 43 (c)/I.C. is in the form of a letter from the Committee to the insured person placing the position before him.

The undertaking to be signed by the doctor is similar to the one used in the case of persons allowed to make their own arrangements, and appropriate instructions are appended.

INSURANCE ACT IN PARLIAMENT.

Administration of the Act.

In reply to Mr. Cassel, the Prime Minister said: It is proposed that the arrangement under which the Financial Secretary to the Treasury has also been Chairman of the National Health Insurance Joint Commission should cease, and that the latter appointment should be held by a Minister of Cabinet rank.

Mr. Harry Lawson: May I ask the Prime Minister whether the duties are to be permanently attached to the Chancellor of the Duchy of Lancaster?—The Prime Minister: I will not say that. We will try the experiment.

Women's Approved Societies (Claims).

Mr. G. Locker-Lampson asked the Secretary to the Treasury whether the actuarial expectation of claims in several women's approved societies was being exceeded; whether, as a consequence, deficiencies were probable after the first valuation; and whether this would entail a reduction of benefits or levies in such societies, or whether the Government proposed to come to the assistance of those societies.—Mr. Benn: It is impossible to say, in the case of women members of approved societies, whether the actuarial expectation has been exceeded until the age distribution and the condition of the members as to marriage has been ascertained, and also until the accounts of the societies have been made up so as to show their actual experience for at least the first year of benefits. Information on the first head is now being forwarded by the societies to the offices of the Commissions in connexion with the crediting of reserve values. Full information on the second head will not be available until the accounts of the societies have been audited. Meanwhile, the Departmental Committee, as the hon. member is aware, is inquiring into the allegations that excessive claims are being made in respect of women's as well as men's societies.

Mr. Harry Lawson: When will the accounts be audited?—Mr. Benn: The accounts for a complete year cannot be audited until a complete year has terminated.

Departmental Committee on Excessive Sickness Claims.

In reply to Mr. G. Locker-Lampson, Mr. Benn said that the Departmental Committee on alleged excessive sickness claims was taking evidence, and it was not known when it would complete its labours. In reply to Mr. Lough, he said that the evidence taken would be published in addition to the report.

The following further information with regard to the Committee was circulated with the votes:

The terms of reference of the Committee are to inquire into and report upon the alleged excessive claims upon and allowances by approved societies in England in respect of sickness benefit, and any special circumstances which may cause any such claims or allowances. The Committee as originally constituted was as follows:

Sir Claud Schuster, Insurance Commission.
Walter Davies, Esq., National Secretary of the Order of the Sons of Temperance; Chairman, Manchester Insurance Committee.
Adam Fulton, Esq., M.B.
Miss M. H. Frances Ivens, M.B.
Miss Mary McArthur, Secretary of the Women's Trade Union League.
William Mosses, Esq., Secretary of the Federation of Engineering and Shipbuilding Trades of the United Kingdom; Secretary of the United Pattern Makers' Association (Approved Society).
James Pearse, Esq., M.D., M.B., Medical Officer of Health, Trowbridge Urban District Council.
Lauriston Elgie Shaw, Esq., M.D., M.B., F.R.C.P., M.R.C.S.
A. C. Thompson, Esq., President of the National Conference of Industrial Assurance Approved Societies.
A. H. Warren, Esq., J.P., President of the National Conference of Friendly Societies.
A. W. Watson, Esq., Chief Actuary, National Health Insurance Joint Committee.
J. S. Whitaker, Esq., M.R.C.S., Deputy Chairman, Insurance Commission.
Miss Mona Wilson, Insurance Commission.
Walter P. Wright, Esq., Grand Master, Independent Order of Oddfellows (Manchester Unity).
On November 1st, 1913, J. Burn, Esq., actuary, of the Prudential Approved Society, was appointed a member of the Committee during the unavoidable temporary absence of Mr. Thompson, and on February 4th, 1914, T. M. Carter, Esq., M.D., M.R.C.S., L.R.C.P., was appointed a member of the Committee, in the room of Dr. Pearse, resigned.

Sanatorium Benefit.

In reply to Mr. Soames, Mr. Benn said that a return showing how many persons had received treatment for tuberculosis under the Insurance Act, distinguishing between sanatorium and other treatment, was in preparation, and would be laid before Parliament at an early date.

Deposit Contributors.

Mr. Godfrey Locker-Lampson asked what proportion of insured persons were now deposit contributors; whether that proportion was increasing; and whether the Insurance Commissioners were seizing every available opportunity to induce deposit contributors to join approved societies.—Mr. Wedgwood Benn said that less than 3 per cent. of insured persons were now deposit contributors. The proportion had considerably decreased, and was still decreasing. The answer to the second part of the question was in the affirmative.

Mr. G. Locker-Lampson asked the Secretary to the Treasury whether, in view of the fact that the case of deposit contributors must be dealt with by legislation this year, he would take an early opportunity of laying all available facts and figures about them, to the end of the first year of benefit, before the House, so that the subject might be studied and suggestions made by those interested.—Mr. Wedgwood Benn said that special investigations into the position of deposit contributors were in progress, and it was hoped to lay the result of them before the House at an early date. Suggestions in the matter from any hon. members interested would be gladly received.

In reply to a question by Mr. Hills on a later date, Mr. Wedgwood Benn said that any further statements would be premature.

Numbers of Deposit Contributors and Voluntary Insurers.

In reply to a question by Mr. Will Crooks the following table, giving the number of insured persons, has been circulated:

Workmen's Compensation: Position of Societies.

Mr. G. Lockyer-Lampson asked the Secretary to the Treasury whether his attention had been drawn to the decision of the Court of Appeal on January 31st in Bonney *v.* Hoyle, which had placed approved societies in a difficult position by preventing them appearing in Court as interested parties in workmen's compensation cases; and, if so, what the Government intended to do to meet the situation.—Mr. Wedgwood Benn said that the effect of the decision upon the interests of approved societies was under consideration. It did not, however, in any way affect the right given to a society by Section 11 (2) of the National Insurance Act, 1911, to take action on behalf of its members in order to secure compensation. In reply to further questions, Mr. Benn said the principal Act provided that a society might take action on behalf of members if it chose to do so. The legal decision did not affect that. The degree in which it affected their rights, except those rights to which he had referred, was being considered by the Commissioners.

Insurance Committees' Travelling Expenses.

In reply to Mr. Harry Hope, Mr. Benn said that schemes for payment of subsistence allowances to members of Insurance Committees under Section 31 of the National Insurance Act, 1913, had been submitted by a number of Insurance Committees, and were now receiving consideration. Payment of travelling expenses under Section 61 of the principal Act was being made in a number of Insurance Committee areas, but no information was available as to the number of the recipients. The estimated annual cost of the travelling expenses authorized was approximately £7,300.

Disablement Benefit.

In reply to Mr. Worthington-Evans, Mr. Benn said that a contributor from whom contributions were not payable owing to unemployment might pay up contributions at 4d. a week so as to complete the 104 weeks' waiting period and qualify for disablement benefit.

Medical Panels.

Mr. Snowden asked the Secretary to the Treasury if he would state, with regard to England, Scotland, and Wales respectively, for the latest dates for which he had the figures, how many doctors were on the panel, how many chemists had contracted to supply medicine, and what was the average cost of drugs and appliances per insured person.—Mr. Wedgwood Benn said the approximate numbers of doctors on panels in England, Scotland, and Wales respectively were 16,300, 2,700, and 1,250, including doctors who were on more than one panel. The number of individual chemists who had contracted to supply medicine could not be given without calling for a special return from all Insurance Committees in Great Britain. The information asked for in the third part of the question would not be available until a final settlement of accounts had been effected by all Insurance Committees with the chemists on their panels for the past year.

Prosecutions.

Mr. Wedgwood Benn stated, in reply to Mr. Rendall, that the number of prosecutions instituted for failure to comply with the National Insurance Act in England, Scotland, Ireland, and Wales, were respectively 294 (including 48 cases in which the summonses were withdrawn by leave of the court on payment by the defendants of arrears of contributions), 72, 349, and 15.

	England.		Scotland.		Ireland.		Wales.		United Kingdom.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Number of employed contributors in approved societies	7,217,700	3,187,800	1,021,400	430,900	478,100	231,400	570,300	110,600	9,287,500	3,960,700
Number of voluntary contributors	12,400	3,800	1,300	400	400	100	2,100	700	16,200	5,000
Total number in approved societies ...	7,230,100	3,191,600	1,022,700	431,300	478,500	231,500	572,400	111,300	9,303,700	3,965,700
Number of persons in Army and Navy Fund ...	—	—	—	—	—	—	—	—	130,000	—
Number of deposit contributors	200,600	94,400	27,900	10,100	6,200	3,800	13,900	3,100	248,600	111,400
Total number of insured persons... ...	7,430,700	3,286,000	1,050,600	441,400	484,700	235,300	586,300	114,400	9,682,300	4,077,100

The average weekly amount received from the sale of stamps is about £359,200. The average weekly amounts issued to approved societies and Insurance Committees are, approximately, £191,300 and £105,300 respectively.

Deposit Contributors.

Sir Richard Cooper asked the Chancellor of the Exchequer if the accounts of deposit contributors in England and Wales under the National Insurance Act were debited in October last with the cost of medical benefit and administration for the year 1914; if so, what was the total amount thus debited?—Mr. Wedgwood Benn said the sums payable in respect of deposit contributors for medical and sanatorium benefit and the expense of administration for the year 1914 were not actually debited in the accounts of contributors in October last, but, under the provisions of Statutory Order 1330 of 1913, where a claim for sickness or maternity benefit was made during the last quarter of 1913, a sum was reserved in the account in order to secure the contributor's right to medical and sanatorium benefit for the year 1914. The sums so reserved amounted to less than £900.

A Mysterious Answer.

In reply to Mr. Peto, who asked the amount of the fund on January 1st, 1914, derived from persons who had chosen other doctors than those on the panels, Mr. Wedgwood Benn said that if the hon. member's inquiry related to insured persons who had continued to be attended by non-panel doctors as private patients without reference to the provisions of the National Insurance Acts, no information was available as to their number, and no separate account was or could be kept in respect of them.

CENTRAL MIDWIVES BOARD.

A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on January 27th, with Sir Francis H. Champneys in the chair.

A number of midwives were struck off the Roll, the following charges, amongst others, having been brought forward: The patient suffering from abdominal pains and a temperature of 104° the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E 20 (4). Not carrying to a confinement the appliances or antiseptics required by Rule E 2; continuing in attendance upon a patient and being in contact with another patient who was suffering from puerperal fever and not undergoing disinfection to the satisfaction of the Local Supervising Authority as required by Rule E 5. Not wearing a clean dress of washable material when attending a patient, as required by Rule E 1; neglecting to adopt the antiseptic precautions prescribed by Rules E 3 and 7; not keeping the register of cases as required by Rule E 23, and, medical aid having been sought, the midwife neglected to send any notification thereof to the Local Supervising Authority, as required by Rule E 21 (1).

Hospitals and Asylums.

TAINAN HOSPITAL, FORMOSA.

The annual report of this hospital for 1912—which is under the auspices of the English Presbyterian Mission, and under the supervision of Drs. Maxwell and Taylor—has lately been issued. The number of in-patients admitted during the year was 2,734. Among these, at least a third were eye cases; a large proportion of these are cases of entropion, the operations for which numbered 664. Referring to tuberculous disease it is stated that all varieties are common, and the remark is made that while there are observers who confidently divide the clinical manifestations of tubercle between the human and bovine varieties of the germ, beef is eaten but little, fresh milk almost never used, yet tuberculosis in all its forms is very rife. Malaria and dysentery seem to be the commonest diseases, the latter being mostly of the bacillary variety. Reference is made to a disease in which the liver and spleen are enlarged, the former undergoing a form of cirrhosis with a terminal ascites often extensive. The reporters state that the affection is unknown even to tropical textbooks of medicine unless it be a form of Banti's disease. A large number of surgical operations—2,099—were performed during the year.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

EAST ANGLIAN BRANCH:

East Norfolk Division.

At a meeting of the members of the British Medical Association resident in the eastern half of the County of Norfolk, held in the Medical Library, Norwich, on January 31st, Dr. R. C. M. Colvin-Smith (Cromer) in the chair, the consent of the Council to the dissolution of the former Mid-Norfolk Division was reported, its accounts audited and passed, and its finances wound up.

The new East Norfolk Division was formally inaugurated, and the following resolutions were unanimously passed:

1. That the officers and Executive Committee of the former Mid-Norfolk Division be and are the officers and Executive Committee of the new East Norfolk Division, and shall hold office till the annual meeting in June.
2. That the deficit balance as at November 22nd, 1913, of £3 19s. 6d. in the accounts of the Mid-Norfolk Division be taken over into the accounts of the East Norfolk Division.
3. That the organization rules and ethical rules which had been adopted by the Mid-Norfolk Division be the organization rules and ethical rules of the East Norfolk Division. The Secretary was instructed to have these rules printed and circulated in booklet form among the members.

Resignations.—The Secretary reported that he had had notice of the resignation of five members, only one of whom, however, was in actual practice, the other four having retired.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

A meeting of the Division was held in the Central Library, Finchley Road, on February 13th, Dr. Picard in the chair.

Reports on Sickness Benefit Claims.—The report of the Association of Panel Doctors in Hampstead on sickness benefit claims was read and adopted, and a cordial vote of thanks accorded to Dr. S. Barker for the trouble he had taken in the matter.

Annual Report.—The annual report of the Division was presented by the Honorary Secretary and adopted.

Election of Officers.—The following officers were elected:

Vice-Chairman.—Dr. G. E. Shuttleworth, in place of Dr. Pritchard.

Representative on the Branch Council.—Dr. Hugh Thompson, in place of Dr. Oakley.

Members of Executive Committee.—Drs. Barnett, Haggard, Peck, Meggitt, R. T. Smith, H. Pinto-Leite, King Patrick, and Leslie Rawes.

MIDLAND BRANCH:

Chesterfield Division.

A meeting of the Chesterfield Division was held at Chesterfield on February 5th. Mr. H. B. Fletcher took the chair in the absence of Dr. Shea, and six other members were present.

Revision of Contract Rates.—The Secretary reported upon the position in certain districts, and discussion followed.

Minutes of Executive Committee.—The minutes of the Executive Committee held on January 20th were read, with particular reference to the questions of "Warning Notice," and the same were approved.

Leicester and Rutland Division.

A meeting of the Division was held at the Royal Infirmary, Leicester, on February 11th.

Report of Representative.—Dr. Wallace Henry gave a report of the proceedings of the Special Representative Meeting. A vote of thanks was accorded the Representatives for their services to the Division.

Arterial Pressure.—An address was given by Dr. Pratt on the estimation and significance of the systolic and diastolic arterial pressures.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,
ALFRED COX,
Medical Secretary.

February 11th, 1914.

NOMINATIONS FOR COUNCIL, 1913-14.

(CASUAL VACANCY.)

Cambridge and Huntingdon, East Anglian, and South Midland Branches:

LEWIS WILLIAM REYNOLDS, M.R.C.S., L.S.A., J.P., The Priory, High Wycombe.
ORBY RUSSELL MORGAN WOOD, M.B., C.M., Woolpit, Suffolk.

ELECTION OF MEMBERS OF COUNCIL, 1914-15, BY BRANCHES NOT IN THE UNITED KINGDOM.

THE following nominations have been received from the Branches not in the United Kingdom (By-law 46):

Branches (Grouped).	Candidate.
South Australian Tasmania Victoria Western Australian	WILLIAM THORNBOROUGH HAYWARD, L.R.C.P.I., M.R.C.S., Norwood, South Australia.
Assam Baluchistan Bombay Burma Punjab South Indian and Madras	SAMUEL HERBERT LEE ABBOTT, M.B., Captain, Indian Medical Service, Punjab, India.
Ceylon Hong Kong and China. Malaya	CHARLES THOMAS GRIFFIN, M.R.C.S., c/o. Crown Agent for the Colonies, Whitehall Gardens, S.W.

Only one nomination having been received for each of the foregoing groups of Branches, the said William Thornborough Hayward, Samuel Herbert Lee Abbott, and Charles Thomas Griffin are hereby duly elected members of the 1914–15 Council, and will come into office at the first meeting of the 1914–15 Council at Aberdeen in July next.

By order of the Council,
GUY ELLISTON,
Financial Secretary and Business Manager.

February 21st, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Drs. Ernest C. Hadley (Burbury Street, Lozells, Birmingham) and Bernard J. Ward (141A, Great Charles Street, Birmingham) give notice that an ordinary general meeting of the Central Division of the Birmingham Branch will be held in the library of the Medical Institute, Edmund Street, on Wednesday, March 25th, at 3.30 p.m. Business: To elect four Representatives for the Annual Representative Meeting. To consider and pass, if approved, several recommendations of the Executive Committee, of which due notice will be given on the circular convening the meeting. NOTE.—Nominations for Representatives in writing must be in the hands of the Honorary Secretary not later than Monday, March 2nd, that the names of those nominated may be printed upon the circular convening the meeting.

EDINBURGH BRANCH.—Drs. John Stevens and John Eason (Honorary Secretaries) give notice that the winter clinical meeting of the Edinburgh Branch will be held in the Royal Infirmary on Friday, February 27th. The other Scottish Branches have as usual been invited to join in the meeting. The museum will be open from 11 a.m. onwards. Arrangements will be made for holding special clinics during the forenoon. The clinical meeting will be held in the Royal Infirmary, at 3.30 p.m., and an address on urinary antiseptics will be delivered by J. W. Thomson Walker, Esq., F.R.C.S., of London, at 5.15 p.m. Dinner in the Balmoral Hotel at 6.30 p.m., morning dress; dinner ticket, 5s.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.—Dr. J. H. Clatworthy, Honorary Secretary (145, Denmark Hill, S.E.), gives notice that an ordinary meeting will be held at Southwark Infirmary, East Dulwich Grove, S.E., at 4 p.m., on Thursday, February 26th, when Dr. Robert Hutchison, F.R.C.P., will read a paper on Cases of Fever of Obscure Origin.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—Dr. T. H. Parkes Peers, Honorary Secretary (20, Surrey Square, S.E.), gives notice that a meeting of the Division will be held at the Evelina Hospital, Southwark Bridge Road, at 4 p.m., on Wednesday, February 25th, when a paper will be read by Dr. T. R. Whipham. The first annual supper of the Division will be held on Saturday, February 21st, at The Horns, Kennington, at 9.45 p.m. The guests of the evening will be Dr. A. Cox, Medical Secretary, British Medical Association, and Dr. B. A. Richmond, Chairman of the London Panel Committee.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—Dr. W. A. Milligan, Honorary Secretary (11, Upper Brook Street, W.), gives notice that a meeting of the Division will be held on Wednesday, March 4th, at 8.30 p.m., in St. James's Vestry Hall, Piccadilly. A discussion on the question of a State Medical Service will be opened by Mr. F. Lawson Dodd at 9 p.m. All members of the profession are cordially invited to be present.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, March 20th, from 3.15 to 6 p.m. Mr. J. Clay: The Diagnosis of Diseases of the Genito-Urinary Organs. Dr. A. Parkin: Empyema Thoracis. (Tea.) Professor H. B. Angus: The Treatment of Simple Fractures. Professor W. E. Hume: The Differential Diagnosis of Cases with a Splenic Enlargement. Mr. R. H. P. Orde: Hospital Management.

STAFFORDSHIRE BRANCH.—Dr. Harold Hartley, Honorary General Secretary (Basford, Stoke-on-Trent), gives notice that the second general meeting of the session will be held at the Swan Hotel, Stafford, on Thursday, February 26th. The President, Mr. W. F. Cholmeley, F.R.C.S., will take the chair at 5.15 p.m. Business: Correspondence. Exhibition of living cases. Papers:—(1) John Priestley: "A Curious Numerical Relationship in the Incidence of the Common Infectious Diseases of School Children." (2) William Mitchell Smith: "Meningitis in Children." Exhibition of pathological specimens, etc. Dinner at 7 p.m. Charge 5s.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

MAJOR J. T. JOHNSON has been appointed Deputy Assistant Director of Medical Services (Sanitary) in the Eighth (Lucknow) Division.

Major C. E. POLLOCK has left the London District for duty at Sierra Leone.

Captain ARTHUR IRVINE-FORTESCUE, M.B., is seconded whilst studying the Japanese language, December 21st, 1913.

Lieutenant FRANCIS D. CAIRNS, M.B., resigns his commission, February 7th.

Captain W. W. BROWNE has been appointed to the charge of the Brigade Laboratory, Ahmednagar.

Captain H. M. PERRY has been posted to the Military Prison, Rochester Row, for duty.

The following Lieutenants have been confirmed in their rank: ROBERT B. PRICE, M.B., WILLIAM V. CORBETT, FRANK C. COWTAN, NOEL T. WHITEHEAD, and HENRY C. D. RANKIN, M.B.

INDIAN MEDICAL SERVICE.

THE services of Lieutenant-Colonel E. JENNINGS are, on his return from leave, replaced at the disposal of His Excellency the Commander-in-Chief in India.

The services of Captain D. D. KAMAT are placed at the diposal of the Government of Bombay for civil employment.

Major W. F. HARVEY, M.B., Director, Central Research Institute, Kasauli, is granted privilege leave for three months, and in continuation study leave for six months, and furlough out of India for one year and three months, with effect from February 5th, 1914.

Brevet-Major S. R. CHRISTOPHERS, M.B., Assistant Director, Central Research Institute, Kasauli, is appointed to officiate as Director during the absence on leave of Major W. F. Harvey, or until further orders.

The Honourable Surgeon-General H. W. STEVENSON, C.S.I., is permitted to retire from the service, with effect from January 10th, 1914.

Major R. E. LLOYD, Professor of Biology, Medical College, Calcutta, sub *pro tem.*, is confirmed in that appointment, with effect from December 14th, 1913.

The services of Captain H. R. DUTTON are replaced at the disposal of the Government of Bengal, with effect from September 3rd, 1913.

The services of Captain E. J. PHIPSON are placed at the disposal of the Government of Burma for employment in the Sanitary Department.

The services of Captain BABINGTON are placed at the disposal of the Government of Madras for civil employment.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Second North Midland Field Ambulance.—Captain ALBERT J. RIDDETT to be Major, February 7th.

First Northern General Hospital.—Captain WILLIAM J. PHILLIPS, M.B., resigns his commission, February 7th.

First Western General Hospital.—Captain CLAUDE RUNDLE, M.D., to be Major, February 7th.

First Highland Field Ambulance.—Major THOMAS FRASER, M.B., to be Lieutenant-Colonel, November 1st, 1913.

Third Northumbrian Field Ambulance.—JAMES M. FOORD, M.B., to be Lieutenant, December 21st, 1913.

First West Riding Field Ambulance.—HENRY N. GOODE, M.B., F.R.C.S.Ed., to be Lieutenant, December 9th, 1913.

Third West Riding Field Ambulance.—Captain JOHN W. STOKES to be Major, February 11th, 1914.

West Riding Clearing Hospital.—Captain FRANCIS DARLOW, M.B., from the First West Riding Field Ambulance, R.A.M.C., to be Captain, February 11th, 1914.

Sanitary Service.—Lieutenant JOHN J. BUCHAN, M.D., from the Third West Lancashire Field Ambulance, to be Captain whose services will be available on mobilization, January 7th.

For Attachment to Units other than Medical Units.—JOHN G. COOKE, M.B., to be Lieutenant, January 2nd. WILLIAM J. PHILLIPS, M.B. (late Captain First North General Hospital), to be Lieutenant, February 7th. Surgeon Captain EDWARD C. STACK, F.R.C.S.I., from the Sixth Battalion, Prince of Wales's (North Staffordshire Regiment), to be Captain, February 11th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns, 8,407 births and 5,430 deaths were registered during the week ended Saturday, February 14th. The annual rate of mortality in these towns, which had been 17.5, 18.4, and 16.5 per 1,000 in the three preceding weeks, again fell to 15.6 per 1,000 in the week under notice. In London the death-rate did not exceed 14.4, against 18.2, 18.0, and 16.6 per 1,000 in the three preceding weeks. Among the ninety-six other large towns, the death-rate ranged from 5.7 in Ilford, 7.7, in Walthamstow, 8.4 in Eastbourne, 8.5 in Enfield, 9.4 in Hornsey, and 9.6 in Wimbledon to 21.9 in Stockport, 22.2 in Barnsley, 22.7 in Rochdale and in Gateshead, 23.9 in Merthyr Tydfil, 25.5 in Bury, and 27.0 in Burnley. Measles caused a death-rate of 1.6 in Middlesbrough, 1.9 in Barnsley and in Cardiff, 2.6 in Swansea, 5.0 in Dudley, and 5.7 in Burnley; whooping-cough of 1.1 in Leicester and in Birkenhead, 1.2 in Newport (Mon.), 1.6 in Halifax, 1.7 in Swansea, and 2.2 in Rochdale; and diphtheria of 1.7 in Walsall, 2.0 in Wakefield, and 2.7 in Cambridge. The mortality from scarlet fever or from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 31, or 0.6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 5 were recorded in Birmingham, 4 in Liverpool, 3 in Rochdale, 2 in Stoke-on-Trent, and 2 in Coventry. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,567, 3,599, and 3,554 at the end of the three preceding weeks, had fallen to 3,537 on Saturday, February 14th; 428 new cases were admitted during the week, against 375, 460, and 379 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,159 births and 743 deaths were registered during the week ended Saturday, February 14th. The annual rate of mortality in these towns, which had been 20 9, 20.0, and 19.4 per 1,000 in the three preceding weeks, had further fallen to 16.9 in the week under notice, but was 1.3 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 9.2 in Perth, 10.8 in Hamilton, and 14.1 in Clydebank to 20.5 in Ayr, 21.6 in Kirkcaldy, and 21.8 in Coatbridge. The mortality from the principal infective diseases averaged 1.7 per 1,000, and was highest in Greenock and Ayr. The 338 deaths from all causes registered in Glasgow included 20 from measles, 5 from infantile diarrhoeal diseases, 4 from whooping-cough, 3 from diphtheria, 2 from enteric fever, and 2 from scarlet fever. Eight deaths from measles were recorded in Edinburgh, 3 in Paisley, 2 in Leith, 2 in Greenock, and 2 in Ayr; from scarlet fever 2 deaths in Edinburgh; and from diphtheria 3 deaths in Edinburgh and 2 in Aberdeen.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BATH UNION.—Medical Officer for the Union, Institution, Infirmary, etc. Salary, £200 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Physician (male). Salary at the rate of £75 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon (male). Salary, £100 per annum.

BIRMINGHAM CITY.—Assistant Medical Officer to the Yardley Road Sanatorium and Antituberculosis Centre. Salary, £250 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £220 per annum.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Physician; (2) House-Surgeon; (3) House-Surgeon to Special Departments. Salary, for (1) and (3) £50 per annum, and for (2) £40 per annum for three months, rising to £50.

BIRMINGHAM MATERNITY HOSPITAL.—House-Surgeon (lady). Salary at the rate of £50 per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Selly Oak Infirmary. Salary, £160 per annum.

BLACKBURN COUNTY BOROUGH.—Male School Medical Inspector and Assistant to Medical Officer of Health. Salary, £300 per annum, rising to £350.

BLACKBURN UNION.—Resident Assistant Medical Officer for the Workhouse and Medical Officer for the Union Cottage Homes. Salary, £150 per annum.

BOARD OF CONTROL (MENTAL DEFICIENCY ACT, 1913).—Three Inspectors (one a woman). Salary, £500, £400, and £300 per annum, rising to £800, £600, and £650 respectively.

BRIDGE OF WEIR: SANATORIUMS OF SCOTLAND.—Lady Assistant. Salary, £75 per annum.

BRENTWOOD ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Second House-Surgeon. Salary, £80 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer (male). Salary at the rate of £80 per annum for first six months, rising to £100.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—Assistant Surgeon.

CHARING CROSS HOSPITAL, W.C.—Obstetric Registrar.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, £40 per annum.

CHELTENHAM EYE, EAR, AND THROAT FREE HOSPITAL.—Assistant Surgeon. Salary, £200 per annum.

CHESTER GENERAL INFIRMARY.—House-Physician. Salary, £90 per annum.

DAVOS PLATZ: QUEEN ALEXANDRA SANATORIUM.—Assistant Medical Officer. Salary, £100 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £200 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—Honorary Surgeon.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £125 per annum.

DURBAN MUNICIPALITY.—Assistant Medical Officer of Health. Salary, £600 per annum.

EDAY PARISH.—Medical Officer. Salary, £70 per annum, and appointments £20.

EDINBURGH: FOREIGN MISSION COMMITTEE.—Medical Missionary.

GLASGOW MATERNITY AND WOMEN'S HOSPITAL.—(1) Two Indoor House-Surgeons; (2) two Outdoor House-Surgeons; (3) one Outdoor House-Surgeon at the West End Branch.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer (male). Salary, £250 per annum, rising to £300.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Remuneration at the rate of £80 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Third House-Surgeon. Salary, £80 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 for six months and £2 10s. washing allowance.

INDIA: IMPERIAL BACTERIOLOGICAL (VETERINARY) LABORATORY. Muktesar.—Physiological Chemist. Salary, Rs. 800 a month, rising to Rs. 1,200.

KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer (male). Salary, £220 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING EDWARD VII SANATORIUM, Midhurst.—First Assistant Medical Officer. Salary, £200 per annum, rising to £250.

LANCASHIRE COUNTY COUNCIL.—(1) Medical Superintendent at the Elswick Sanatorium; (2) Four Assistant Dispensary Tuberculosis Officers. Salary, for (1) £300 per annum, rising to £350, and for (2) £350 per annum, rising to £400.

LEAMINGTON SPA: WARNEFORD LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House-Physician. Salary, £85 per annum.

LEEDS GENERAL INFIRMARY.—House-Physician.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum.

LEEDS TOWNSHIP.—Two Male Assistant Medical Officers. Salary, £160 per annum.

LEEDS UNIVERSITY.—Demonstrator in Bacteriology. Salary, £250 per annum.

LEICESTER BOROUGH EDUCATION COMMITTEE.—Female Assistant School Medical Officer. Salary, £250 per annum.

LEICESTER ROYAL INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Salary at the rate of £80 per annum.

LEICESTERSHIRE COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer (male). Salary, £300 per annum.

LEICESTERSHIRE EDUCATION COMMITTEE.—Second Assistant School Medical Officer. Salary, £250 per annum.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—Three House-Surgeons and Two House-Physicians. Salary at the rate of £60 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) Three House-Surgeons; (2) two House-Physicians. Salary at the rate of £60 per annum.

LIVERPOOL: SAMARITAN HOSPITAL FOR WOMEN.—Honorary Surgeon.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon (non-resident). Honorarium at the rate of 100 guineas a year.

MANCHESTER CHILDREN'S HOSPITAL.—(1) Male Resident Medical Officer; (2) Assistant Medical Officer at the Out-patient Department. Salary, for (1) £100 per annum, increasing to £120, and for (2) £100 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer for the Crossley Sanatorium. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY AND DISPENSARY.—(1) Two Honorary Assistant Physicians; (2) two Honorary Assistant Surgeons; (3) Honorary Dental Surgeon.

MORAVIAN MISSION HOSPITAL, Labrador Coast.—Qualified Medical Man to take charge.

NOTTINGHAM CITY.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum for six months, increasing to £180 if reappointed.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PAISLEY: ROYAL ALEXANDER INFIRMARY.—(1) House-Physician; (2) House-Surgeon. Salary, £80 per annum each.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—Pathologist. Honorarium, £150 per annum.

PRESTON ROYAL INFIRMARY.—House-Physician. Salary, £120 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—1) Pathologist and Registrar; (2) Resident Medical Officer for Out-patient Department. Salary at the rate of £80 and £60 per annum respectively.

READING: BERKSHIRE COUNTY COUNCIL.—Tuberculosis Officer. Salary, £500 per annum.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Resident House-Physician. Salary at the rate of £110 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgenn (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2) £80 per annum.

SEAMEN'S HOSPITAL SOCIETY: DREADNOUGHT HOSPITAL, Greenwich.—(1) Assistant Physician; (2) Medical Registrar, salary, £100 per annum.

SHEFFIELD: EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary, £75 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £120 per annum.

SINGAPORE MUNICIPALITY.—Medical Superintendent of the Infectious Diseases Hospital. Salary, 4,200 dols., rising to 4,800 dols.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTHPORT INFIRMARY.—Senior House-Surgeon. Salary at the rate of £120 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SUNDERLAND ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Surgeon. Salary, £125 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

WEST BROMWICH COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, ETC., Welbeck Street, W.—Clinical Assistants to the Out-patients' Physicians.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) three House-Surgeons; (3) Resident Casualty Officer.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—(1) Honorary Physician; (2) Honorary Radiographer.

WESTMINSTER UNION INFIRMARY.—(1) Assistant Medical Officer; (2) Second Assistant Medical Officer. Remuneration, £180 and £130 per annum respectively.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary, £125 per annum.

WOOLWICH INFIRMARY.—Resident Assistant Medical Officer (male). Salary, £180 per annum, increasing to £200.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Crediton (Devon), Knaresborough (Yorks), Ongar (Essex).

CORRECTION.—In the notice of the vacancy for an Assistant Medical Officer at the Devon County Asylum, Exminster, published last week, the commencing salary was accidentally printed as £200 instead of £220.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ABRAM, G. Stewart, M.B., B.C.Cantab., Honorary Physician to the Royal Berkshire Hospital, Reading.

ADAMS, J. A., M.B., B.Ch., R.U.I., Certifying Factory Surgeon for the Sowerby Bridge District, co. York.

ALDERVON, Wilfred E., M.D.Durh., M.S., B.Hy., D.P.H., Administrator of Anaesthetics, Dental Hospital, Newcastle-upon-Tyne.

ALMOND, G. Hely-Hutchinson, M.B., B.Ch.Oxon., Assistant Pathologist to the Royal United Hospital, Bath.

BARNES, H. E., M.D.Lond., Certifying Factory Surgeon for the Eye District, co. Suffolk.

CLAYTON, H. J., M.B., Ch.M.Sydney, Medical Superintendent of the Sydney Hospital, New South Wales.

EDEN, W. A., M.R.C.S., L.R.C.P., District Medical Officer of the West Bromwich Union.

FULLER, H. Wardlaw, L.D.S.Eng., Dental Surgeon to the Poplar Schools situated at Shenfield, Essex.

HEPPLE, R. A., M.B., Ch.B.Edin., Assistant Medical Officer to the Dudley Road Workhouse of the Birmingham Parish.

HUGHES, Emy, M.R.C.S., L.R.C.P., Honorary Surgeon to the Macclesfield General Infirmary.

JOLL, C. A., F.R.C.S., Assistant Surgeon to the Royal Free Hospital, Gray's Inn Road, W.C.

MARSHALL, Herbert F., F.R.C.S.E., L.R.C.P.Lond., Honorary Surgeon to the Macclesfield General Infirmary.

MURPHY, Daniel, L.R.C.P.I., L.R.C.S.I., L.M., House-Physician and Ophthalmic House-Surgeon to the Swansea General and Eye Hospital.

MEREDITH, R. W. H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Wellington District, co. Somerset.

NORRIS, Arthur H., M.R.C.S., L.R.C.P., Medical Inspector of Reformatory and Industrial Schools.

PALMER, F. W. Morton, M.A., M.D., B.C.Cantab., Honorary Medical Officer to the Teignmouth Hospital.

PARRY, L. A., M.D., B.S., F.R.C.S., Assistant Surgeon, Sussex Eye Hospital, Brighton.

POPPLE, T. M., M.B., Ch.B.Vict., District Medical Officer of the Salford Union.

PURCELL, N., M.B., Senior Assistant Medical Officer to the Salford Union Infirmary.

RIXON, C. H. L., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Children's Homes of the Camberwell Parish.

ROY, S. Charan, M.B., C.M.Edin., District Medical Officer and Public Vaccinator, Parish of Leicester.

SHERLOCK, E. B., M.D.Lond., Medical Superintendent of the Darenth Industrial Colony of the Metropolitan Asylums Board.

STREATFIELD, P. W., M.R.C.S., L.R.C.P., District Medical Officer of the Edmonton Union.

SWAINSON, E. A. C., M.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P., Assistant School Medical Officer to County Borough of Stoke-on-Trent.

WALSH, J. F., M.B., B.Ch., N.U.I., Certifying Factory Surgeon for the Slievereagh District, co. Cork.

WATSON, Frank H., M.B., B.C.Cantab., Police Surgeon at Sheerness.

WHITELAW, T., M.B., Assistant Medical Officer of the Swansea Union Workhouse.

WILKINSON, Kennet D., M.D.Birm., Pathologist to the Birmingham and Midland Free Hospital for Sick Children.

WINTER, Laurence A., M.D.Durh., M.R.C.S.Eng., L.R.C.P.Lond., Police Surgeon at Sheerness.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

DEATHS.

CUTHBERTSON.—On February 13th, at Highfield, Droitwich, John Montagu Cuthbertson, F.F.P.S.G., J.P., for Worcestershire, aged 72.

KNOX.—On Sunday, February 8th, suddenly, at Church House, Bakewell, Derbyshire, John Knox, M.D., aged 69.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8 p.m.—Clinical and Pathological Evening.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of the Anthropoid Apes.

ROYAL SOCIETY OF MEDICINE:
SECTION OF ODONTOLOGY, 8 p.m.—Mr. F. St. J. Steadman: Oral Sepsis as a Predisposing Cause of Cancer.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Second Milroy Lecture, by Dr. F. Shufflebotham: The Hygienic Aspect of the Coalmining Industry in the United Kingdom.

ROYAL SOCIETY OF MEDICINE:
SECTION OF MEDICINE, 5.30 p.m.—Dr. R. Hutchison and Dr. John Parkinson: Paroxysmal Tachycardia in a Child. Dr. Gordon R. Ward: Secondary or Symptomatic Leukaemia with reference to Cancer with Bone Metastases.

WEDNESDAY.

BRITISH OTO-LARYNGOLOGICAL SOCIETY, 11, Chandos Street, W.—Cases, 4 p.m. The chair will be taken at 4.30.

HUNTERIAN SOCIETY, Guy's Hospital, S.E., 4 p.m.—Clinical Afternoon. Demonstrations:—Dr. Iredell: Diathermy and its Results. Dr. Hunt: Electro-cardiograph. Mr. J. G. Sauer: Cases of Sigmoidostomy and Colectomy Operated on between January and June, 1910. (By permission of Sir Arbuthnot Lane.)

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of the Anthropoid Apes.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Third Milroy Lecture, by Dr. F. Shufflebotham: The Hygienic Aspect of the Coalmining Industry in the United Kingdom.

ROYAL SOCIETY OF MEDICINE:
COMBINED MEETING OF SECTIONS OF NEUROLOGY, OPHTHALMOLOGY, AND OTOLOGY, 9 p.m.—Discussion on Nystagmus, to be opened by Mr. Holmes Spicer, Dr. James Taylor, and Mr. Sydney Scott, preceded at 8 p.m. by a Demonstration. The discussion will be continued on Wednesday, March 4th, at 8.30 p.m., when Dr. Llewellyn, Dr. Dan McKenzie, and others will take part in it.

FRIDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith: The Evolution, Anatomy, and Diseases of the Anthropoid Apes.

ROYAL SOCIETY OF MEDICINE:
SECTION FOR THE STUDY OF DISEASE IN CHILDREN, 4.30 p.m.—Clinical Meeting: Cases.
SECTION OF EPIDEMIOLOGY, 8.30 p.m.—Lecture by Sir Ronald Ross, K.C.B., F.R.S., on Malaria in Cyprus and Greece.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, W., 8.30 p.m.—Paper: Recent Research relating to Undulant or Mediterranean Fever, by Fleet Surgeon P. W. Bassett-Smith, C.B., M.R.C.P., R.N., who will also show specimens illustrating Barton's bodies and the other blood changes in Oroya fever.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION, S.W., 4.30 p.m.—Demonstration of Cases of Non-tuberculous Diseases of the Chest.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Friday, 3 p.m., The Cause of and Treatment of Hoarseness.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Rupture of the Uterus (continued); Wednesday, 10 a.m., The Varieties of Contracted Pelvis. Gynaecological Lecture: Friday, 10 a.m., The Operative Treatment of Backward Displacement of the Uterus. Major operations Tuesday and Thursday, 10 a.m.; minor operations, Monday, Wednesday, and Friday, 11 a.m.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children: Cultivation of Mental Powers and Systematic Training. Tuesday, Wednesday, and Friday, 4.15 p.m., Syphilology.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted), at 12 and 4 p.m. Practical Laboratory work daily (Saturday excepted), 10 to 12 a.m. Practical Entomology, 2 to 3.30 p.m. daily. Special Entomology, 10.30 to 1 p.m. daily (Saturday excepted). Medical Clinics, Tuesday and Thursday, at 3 p.m. Operations, Friday, at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS, 4.30 p.m. each day.—Monday, Manchester Children's Hospital: Aural Sepsis. Tuesday, Salford Royal Hospital: Demonstration of Medical Cases in Wards. Wednesday, Royal Infirmary: Cases of Enlarged Liver. Thursday, Ancoats Hospital: Chronic Pain in the Right Iliac Fossa. Friday, Royal Eye Hospital: Optic Neuritis and Atrophy.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Special lectures at 5.15 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Optic Atrophy.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, X Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Thursday, 4 p.m., The Common Eye Disease of Childhood—Phlyctenulosis.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special Lectures at 5 p.m. daily except Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		FEBRUARY.
20	Fri.	London: Joint Meeting Medico-Political and Hospitals Committees, 10 a.m. Joint Meeting Medico-Political and Public Health Committees, 2.30 p.m. Afterwards—Medico-Political Committee.
		London: Insurance Act Excessive Sickness Benefit Claims Subcommittee, 6 p.m.
21	Sat.	Lambeth Division, Supper, The Horns, Kennington, 9.45 p.m.
24	Tues.	London: Central Ethical Committee, 2 p.m.
25	Wed.	Lambeth Division, Evelina Hospital, Southwark Bridge Road, 4 p.m.
26	Thur.	Camberwell Division, Southwark Infirmary, 4 p.m.
		Staffordshire Branch, Stafford, 5.15 p.m.; dinner, 7 p.m.
26	Thur.	London: Insurance Act Committee, 11 a.m.
27	Fri.	London: Special Fund Committee, 11 a.m.
		City Division, Manor Lodge, Upper Clapton, 9.30 p.m.
		Edinburgh Branch, Winter Clinical Meeting, Royal Infirmary, 3.30 p.m.; Dinner, 6.30 p.m.
		MARCH.
4	Wed.	Westminster Division, St. James's Vestry Hall, Piccadilly, W., 9 p.m.
		MARCH (*continued*).
10	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
13	Fri.	London (Connaught Rooms, Great Queen Street, W.C.): Conference of Representatives of Local Medical and Panel Committees; and following day if necessary.
18	Wed.	South Middlesex Division, Free Library, Twickenham, 8.30 p.m. Address by Sir John Collie: The Business Side of Medical Practice.
20	Fri.	Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
25	Wed.	Central Division, Medical Institute, Edmund Street, 3.30 p.m.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*).
		London: Naval and Military Committee, 4 p.m. (*provisional*).
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
3	Fri.	London: Central Ethical Committee, 2 p.m.
		London: Medico-Political Committee, 10.30 a.m.
7	Tues.	London: Organization Committee, 2 p.m.
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 28TH, 1914.

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THE ROYAL NAVAL MEDICAL SERVICE.

ADDRESS BY THE MEDICAL DIRECTOR-GENERAL, R.N.

SURGEON-GENERAL A. W. MAY, Director-General of the Medical Department, Royal Navy, delivered an address to medical students in the New University Buildings, Edinburgh, on February 20th. There was a large attendance of students. Principal Sir WILLIAM TURNER occupied the chair.

Sir WILLIAM TURNER said they wished to give a word of welcome to a very distinguished professional brother—a gentleman who held one of the highest positions open to members of their profession. There was perhaps a stronger feeling among Scottish medical graduates towards the land services than the sea service, but it must be kept in mind that Scotland was about to become one of the greatest resorts of the navy. He remembered the time when it was a rare thing to see a warship larger than a gunboat in the Firth of Forth, and people used to go in crowds to see a large warship when it came to the Firth. Now one of the greatest, if not the greatest, naval port in the country was to be established in the Firth of Forth, and therefore the navy would come home to Scotsmen much more closely than it had. He could not but think that this was an appropriate time for the Director-General of the Medical Department of the Royal Navy to tell something about the navy as a service which he wished to commend to them.

Surgeon General MAY said he esteemed it a great honour to be allowed to address the students of that great university. He was also highly honoured in the fact that the Chairman was a man who was known all over the medical world. He had come to speak to them about the Naval Medical Service. He must plead the importance of the subject as his excuse; knowing the importance of the subject in his own mind, he came there, he frankly confessed, with a very definite object. He came there to try and persuade some of the young men to join the Naval Medical Service. The navy was short of men at the present time. It did not get enough of candidates and the Service was dangerously short, and no one knew when a time of peril might come again upon this nation. One of the chief reasons for that shortage was that the Naval Medical Service was judged by the conditions that existed thirty-five years ago, when he entered the navy, and judged unfavourably, because at that time the Service was not efficient. Popularity and efficiency must go together. If the navy had an efficient Service, it would have a popular Service. Thirty-five years ago the medical officers were not up to the mark; the nursing in the Service was about tenth rate; the hospitals were fifty years behind the time in organization and equipment. To-day all this was absolutely altered. He had no hesitation in saying—and he could say it without any self-laudation because he had passed away from the active workers in the Service to a great extent—that to-day there existed no finer body of working medical men, especially in the younger branches of the Naval Medical Service. The nurses were second to none, and the organization and equipment of the hospitals were as fine as any equipment and organization in the world. That was absolutely true, and any one of them could prove it by paying a visit to any of the large naval hospitals. The Service to-day was an absolutely efficient living branch of medicine.

Another reason for the shortage of men in the Service was, he thought, the idea that they were not rewarded according to their merits, and that, as compared with some of the other Services, the disabilities they suffered from were very considerable. It was difficult to compare the Services. If the Medical Service were to draw its recruits from the same rank as the army and the Indian Service, then the Naval Medical Service must offer the same advantages. A young man was not going to enter a career that was going to be a blind alley, or that did not offer a reward which he thought he deserved to gain by good work. The navy had suffered from disabilities, but they were gradually being worn down, and in a few years he hoped it would be possible to say that everything was up to the mark. Before beginning to relate the conditions of the Service, he would first say that the men wanted were only first-rate men. The navy was second to none in the world, and it would ill behove the medical profession to be the only

part of that navy which could not compare with that of other nations. First-rate men and hard workers were wanted, and he thought he would be able to show that if such men were got they would be rewarded as their work and their merits deserved.

There were many well-meaning people who would tell them that they were reaching the millennium, and that neither naval nor military forces were required in this country; but he would ask them to look round the world to-day and consider the feverish activity in building ships of every kind, work going on night and day. Was all this for amusement? Was it a kind of pastime that nations built ships for? No; they meant them for business, and quite rightly. If this nation was not prepared for that self-same business it would find itself in a serious plight. To-day, more perhaps than at any other time in the world's history, England required a strong, powerful navy. She did not want it for offence, but for defence. Consider, he said, the number of ships coming into this country bearing food and raw material for manufacturers. Were they going to protect those ships by trusting to the goodwill of their neighbours? No; he thought that every reasonable man would agree with him when he said that the navy was necessary.

What was meant by the navy? The newspapers constantly contained speeches and articles to the effect that the strength of the navy could be calculated by a process of arithmetic, showing how many battleships, how many cruisers, how many auxiliaries, torpedo boats, submarines, and so on were wanted, and that if these were in existence then we had a powerful navy. But in such calculations one important point—an infinitely more important point than those he had just mentioned—was left out, and that was the personnel. Without personnel trained to the highest pitch of perfection, absolutely fit, both physically and mentally, battleships in the day of trouble would be nothing better than scrap iron. To the officers of the Naval Medical Service largely was given the task of seeing that the physical strength of the men was maintained under every circumstance. It was very important work indeed; so critical that sometimes in days of depression the work seemed to be overpowering, especially in view of the fact that it had to be done by a very small body of medical officers. He hoped that when the facts were put clearly before the country they would get plenty of young men who would come in and help to bear the burden.

Speaking of the nature of their work, Surgeon-General May said it was clear that it was far more important to prevent the officers and men becoming ill than to cure them when they were sick. The aim was to put into the fighting line at any moment—to-morrow if necessary—as many men who were absolutely fit to be in the forefront of the battle as was possible. It was far more important to be able to do that than to be able to open an abdomen for acute appendicitis. Therefore, the first work of the Naval Medical Service must be the work of preventive medicine. Preventive medicine on shore was often a difficult task, but afloat it was ten times more difficult. If any of those who were listening to him went on board a man-o'-war and saw the conditions under which officers and men had to live they would fully understand the difficulties to which he had been referring. It would tax the powers of the most energetic and the most competent medical officers to deal with the questions that would arise, and must arise from day to day, in dealing with the prevention of illness among the officers and men. They had to know every part of a most intricate battleship—how it was ventilated, the amount of dampness or the reverse in the living spaces, about the men's clothing, their daily work, and their daily recreations—they had to get into close touch with the whole of the life of the officers and men if they wished to be efficient medical officers as regarded the prevention of disease. Moreover, the conditions would vary from time to time by reason of changes of climate and by reason of many other difficulties which must arise in a service like the navy. Preventive medicine in the navy offered a field of work which was worthy of the very best men. As to curative medicine in the navy, its lines differed very little from what was seen every day in the Edinburgh Infirmary; the conditions, indeed, under which the work would have to be done would vary very materially from what was seen ashore, but the actual work, that would differ very little. The same class of cases would have to be dealt with and treated in the same way as far as possible.

In addition to those two branches of medicine, there were auxiliary branches with which medical officers of the Royal Navy had to deal. In the first place, there was the organization for the wounded in war. The whole of that organization had to be framed and carefully worked out beforehand. In a very striking speech made a couple of years ago by a great patriot, the present Prime Minister of Canada, he said that the day of peril was too late for preparation. It was doubly so in the navy. The preparation for the wounded did not differ in any material respect from the preparation for fighting. The necessity for preparation did not differ; all the arrangements must be prepared beforehand for dealing with the wounded, for transferring them to hospital ships, and for transferring them to ambulance trains or to base hospitals. The arrangements must be thoroughly complete and ready to work with perfect smoothness.

Naval medical officers had also to study the question whether a man was fit for service or not. They had to consider the question of invaliding, and they had also to consider the question whether the disability was attributable to the service, and therefore whether he was entitled to an increased pension.

As to circumstances in which medical officers had to work, Surgeon-General May said there was an enormous difference in the conditions of service in civil life and in naval life. Speaking of the organization for dealing with the sick and wounded ashore and afloat in peace and in war, he said every ship was practically self-contained, except smaller ships, such as destroyers. Each ship had its medical officers, nurses, equipment, and small hospital. Each ship at times had to deal with its own cases. It was recognized that the ship was not the best place to treat sick people, but at times it was found impossible to get them out of it. The ship might be knocking about to such an extent the landsman could scarcely appreciate, yet the medical officer might have to operate, as in a case of acute appendicitis. It might be steaming in the tropics and a perfect epidemic of heat-stroke set in. In the tropics diseases might be encountered they had never heard of. (Dissent.) Well, if they had heard of them, it would puzzle them how to treat them. (Laughter.) They would come across tropical diseases and branches of disease of which they knew the name very well, but which they could hardly recognize under conditions of different climates and surroundings. The ships went to all parts of the world. Two naval medical officers served in the Antarctic, where a temperature of 109 degrees of frost was encountered, and he had himself seen the thermometer standing at 129° F. in the shade. It might be imagined what a case of typhoid fever was in those circumstances, and in hot climates typhoid was a very common disease. A naval medical officer was also very often cast upon his own resources. He had to come to a decision on his own initiative.

Again, it was recognized that in war the ships were not places in which to treat the wounded. Every one recognized that it would be practically impossible to do much medical work during a naval action; the conditions were such that it would be impossible to do more than first aid, and that under very adverse circumstances. After the action—though on the ship everything was ready—it was very necessary, if possible, to get the wounded men out of the ship for the sake of the wounded themselves, and because the ship was not the place to treat them. The damage to the morale of the remainder of the crew of an enormous body of very seriously wounded cases on board had also to be considered. The cases after a naval action were not small wounds produced by the modern high-velocity bullet but wounds of the most terrible description, or, if caused by large fragments of armour-plate and the action of high explosives wounding, were such as to render the unfortunates almost unrecognizable. In war the aim would be to get the wounded to the base hospitals as quickly as possible. In those hospitals the conditions would be as favourable as in any hospital on shore. The hospitals were beautifully fitted up in every possible way, and provision was made in the naval hospitals for about 6,000 wounded. In those hospitals every year somewhere about 6,000 operations were performed. In time of war this number might be doubled.

In closing, Surgeon-General May said he had shown that the Service was worthy of the best among the students. If he had his time to go over again, he should unhesitatingly choose the navy, but it must not be supposed that the naval medical officer would have an easy time. He would have many a hard time. From a personal point of view, the navy offered a service worthy of any man. But quite apart from the personal point of view, there was another, and that was the public or general. In these days every one must grasp the understanding of the idea that, outside the petty circle of his own personal and private interests, lay the larger and wider field of duty—duty to that country to which they all were proud to belong. And it was to their spirit of duty, to their sense of patriotism, that he would appeal. One of the ships he served in for naval cadets had two mottoes on the quarter-deck; one was the last signal of the greatest British admiral—"England expects every man this day will do his duty"; the other the old naval motto—"Ready, aye ready." He would commend those mottoes to them. Their country called to-day just as loudly and insistently as to their forefathers on that dull grey October morning more than 100 years ago, and if they as young men would in the day of peril stand shoulder to shoulder and four-square to every danger, and would say with confidence "Ready, aye ready," then they must not disobey the call to-day. And though it had been true in the past, and no doubt would be true in the future, that

> Not once nor twice in our rough island story
> The path of duty is the path of glory,

still, when the evening of life came on, when the time came for each of them to take their hand from the plough, then it would not be the position they had gained, or the honours that had been showered upon them, or the wealth that they might have obtained, that would give them the greatest pleasure, but rather the simple thought that in fair weather or in foul, in prosperity or in adversity, in success or in failure, they had tried to do their duty.

Professor HARVEY LITTLEJOHN (Dean of the Faculty of Medicine) said they could not separate without offering their very hearty thanks to the Medical Director-General of the Navy for his most interesting and eloquent address. He had told Surgeon-General May that in Scotland they had always been in the habit of giving their best to the Services, and would continue to do so; and that they would in future do to the navy as they had done in the past to the army and the Indian Medical Service, if he would promise to those who went in for the navy not merely so much pay but if he would offer in addition good work to be done. He had been told by the Director-General that the navy offered to any one who went into it a fine career with plenty of good work to be done. In addition to thanking the Director-General he thought they must thank their Principal, who always showed such willingness to do anything he could to help on the university. He was sure that all appreciated Sir William Turner's kindness in presiding.

LEGISLATION AS TO DEFECTIVE CHILDREN.

IN the last session of Parliament it was found impossible to proceed with the bill introduced by the Government to amend the Elementary Education (Defective and Epileptic Children) Act with a view to making it obligatory instead of permissive. Possibly one of the reasons for dropping the measure was that in its original form it was found to be not altogether satisfactory, and likely to rouse opposition on the part of education authorities. Be that as it may, the Government has lost no time in introducing a measure this year with the same general object, but modified in some important particulars.

The Subclause 1 (2) in last year's bill empowering the Board of Education to penalize any local education authority which in the opinion of the Board fails to make suitable provision for the education of a defective child, by making a deduction from any grants payable to the authority to such amount as the Board thinks just, has been omitted. Presumably special powers for enforcing its decision were unnecessary. Further, the obligation placed on the local education authority to make suitable provision for the education of mentally defective children whose age exceeds 7 years is limited by the following provisos:

1. The authority is not required to make provision for boarding and lodging a mentally defective child unless the Board of Education is satisfied that suitable provision for the child's education cannot be made in any other way, and unless the grants payable out of moneys provided by Parliament in respect of a child so boarded and lodged amount to not less than one half of the cost of educating, boarding, and lodging the child.

2. The authority is not required to establish a certified school for boarding and educating mentally defective children unless there are shown to be at least thirty children belonging to that area for whose education suitable provision cannot be made in any other way.

The obligation placed on parents of mentally defective and epileptic children to send them to a certified class or school is the same as in last year's bill, but is limited in the present bill by the following proviso: that no order shall be made requiring the child to be sent to a certified class or school which is not within reach of the child's residence without the consent of the parent, unless such consent is unreasonably withheld, but such consent must not be deemed to be unreasonably withheld if withheld with the bona fide intention of benefiting the child. This concession to the liberty of the parent to choose is surely the least that would be insisted on by the public.

In other respects the bill is unchanged. As the Mental Deficiency Act, 1913, left matters there was undoubtedly a gap which required filling in regard to mentally defective children of school age. This Act (Section 31) throws upon the local education authority the duty (1) of ascertaining what children within their area are defective, (2) of ascertaining which of such children are incapable, by reason of their mental defect, of receiving benefit from instruction in a special school or class, and (3) of notifying to the county council or the county borough council the names and addresses of all defective children above the age of 7 who are so incapable of benefiting from a special school or class or are a detriment to the interests of the other children in the class, or who, for special reasons, should be dealt with by way of supervision or guardianship under the Act, or who are about to leave a special school or class and in whose case it is desirable that they should be sent to an institution or placed under guardianship.

Children may be sent to special schools or classes as early as the age of 5 years, but before that age the educational authority will for practical purposes not take any cognizance of them, and it is not till the age of 7 that they can be notified to the local authority under the Mental Deficiency Act as above explained. The local authorities have no duties as respects defective children except as to those whose names and addresses have been notified to them by the local education authority under the provisions above cited. The local education authority having ascertained that a child is mentally deficient—that is, not imbecile on the one hand, nor merely dull and backward on the other—and having no good reason for considering him unsuitable for a special school or class, will, if he is over 7, be obliged, under the bill now before Parliament, to provide him with suitable education in a special school or class up to the age of 16, and will be responsible for the expenses of such education.

From the nature of the case, except in populous districts, it will be impracticable to set up special classes near enough to the children and large enough to make them practically workable or reasonable in cost. It follows that for the children in the less populous areas residential school accommodation will have to be found. This will, of course, be expensive. At the age of 16 the children will either be discharged or transferred to the local authority under the Mental Deficiency Act, to be placed in an institution or under guardianship. The question arises whether any considerable number of such children will at the age of 16 be sufficiently capable to be discharged with a view to earning their living in the open world under such supervision as can be given by the local authority or by voluntary after-care agencies. It must be remembered that the children will have been certified as mentally deficient and not merely dull or backward. The answer to be given to this question must depend partly on the criterion which is adopted as a guide in the selection and on the strictness with which it is applied, so as to exclude from these schools cases for which they are not intended, and partly on the view that is held or may come to be formed in regard to the nature of mental deficiency, to the natural curve of its rise or fall in relation

to the age of the child, and to the possibility of altering this curve by educational methods.

We have at present little in the way of precise facts to guide us certainly in regard to these matters, but a paper has recently been published by Dr. Goddard, of Vineland, based on the results of Binet tests applied at an interval of two years to a number of defective children, the tendency of which is to show that the possibility of mental development, in its strict sense, under training is very limited. Thus, if a child of 10 or 11 show a mental age of 7, the probability is that two years later he will react to the tests in almost exactly the same way, in spite of training. The training he has had may have given him a greater range of acquirements of the 7-year-old standard, but no marked development of intelligence will be found which will enable him to accomplish things requiring the 8-year-old capacity. If this be so—and it does not seem to be discordant with general experience of these cases—then it raises the question whether the setting up of residential schools under the education authority may not be based on a mistaken view of the matter and lead to inappropriate methods of education, followed by a break in the training, which is undesirable, and a possible overlapping involving wasteful expenditure.

GENERAL MEDICAL COUNCIL.

INSURANCE ACTS, 1911, 1913.

ARRANGEMENTS WITH UNQUALIFIED PERSONS.

At the meeting of the Executive Committee of the General Medical Council on February 23rd, the President, Sir Donald MacAlister, who was in the chair, presented the following Memorandum with attached correspondence.

Memorandum by the President.

The President desires to remind the Committees that, in November, 1913, he received and transmitted to members certain communications in which it was alleged that one or more Local Insurance Committees had entered into or sanctioned forms of agreement with unqualified persons, by which the latter undertook to provide medical attendance and medicines to insured persons who were permitted to "make their own arrangements" for medical treatment under the National Insurance Act. Owing to his illness, the President was unable to be present at the meetings of the National Insurance Act Committee at which these communications were considered. The Minutes of the meetings, at which Dr. Langley Browne acted as chairman, were laid before the Council at its November session, and approved. The Minutes showed that the Committee were of opinion that the action taken by one at least of the Local Insurance Commitees raised questions of grave importance as to the relation of the Medical Acts to certain Regulations made under the Insurance Acts. As it appeared doubtful whether the Local Committee in question was acting with the official sanction of the Insurance Commissioners, inquiries were addressed to the latter, and, as will be seen from the annexed correspondence, objections of a legal character were urged, in the public interest, against the Local Committee's proceedings.

The Chairman of the National Health Insurance Commission for England (Sir Robert L. Morant) met the Council's Committee on 27th November, 1913, and after a statement made by Dr. Norman Walker, at the request of the Committee, in regard to the changes in their Regulations which it was desired that the Commissioners should make in respect of unqualified persons, a discussion took place on the questions thus raised. Sir Robert Morant agreed that the objections that had been raised to some aspects of the action of the Local Committee were valid, and stated that its procedure had apparently been adopted under a misapprehension. At the same time, it was the case that, as had been explained by the Government during the consideration of the bill in Committee in the House of Commons, under the provisions of the present Section 15 (3) it was open to Insurance Committees, if they thought fit, to allow insured persons who so desired to make their own arrangements, subject to certain conditions, with persons not medically qualified, and to receive a contribution towards the cost thus incurred. The 1913 Regulations contained no reference to this matter, and therefore made no special provision for such cases. It was thus impossible for the Commissioners to prevent the recurrence in those cases of action such as that referred to without issuing new and explicit Regulations dealing with the case of arrangements with unqualified persons.

Sir Robert Morant stated that the Commissioners, in drawing up the amended Regulations and Memoranda for 1914 (which were already in course of preparation), would be prepared to meet the wishes of the Council in regard to the objections in question. By making the requisite amendments in the Regulations and issuing instructions to Local Committees they would set forth clearly that the procedure to be adopted in the case of "own arrangements" made by insured persons with qualified practitioners was not applicable to the case of "arrangements" which certain insured persons might be permitted by the Insurance Committee to make, on their own responsibility, with unqualified persons. It was beyond question that, in the case of arrangements made by insured persons with unqualified persons, some of the conditions of the Exchequer Grant, for instance, the undertaking to give domiciliary treatment for tuberculosis in accordance with the Local Government Board Order, could not be fulfilled. As to a point which had been raised about medical certificates furnished to approved societies by insured persons when claiming sickness benefit, Sir Robert Morant stated that no question arose as to treating any statement of an unqualified person as a medical certificate. The rules of approved societies require the society to be satisfied by a medical certificate or other evidence of incapacity before admitting the claim to sickness benefit. Any such statement will be merely evidence which the society may have to consider in adjudicating upon a claim for sickness benefit in accordance with its rules. Responsibility for weighing that evidence rests with the society.

After further discussion, Sir Robert Morant repeated that the Commissioners, in the revision of the Regulations then in progress, would gladly give the fullest possible effect to the wishes then expressed to him on behalf of the Council, and in particular would endeavour to secure that the memoranda and official forms now to be issued by the Commissioners on this subject, for the guidance of Local Committees and others concerned, should be worded with a view to avoid misunderstanding. Every effort would be made to exclude phrases which might seem to afford occasion for any contravention of existing statutes bearing on the subject. Nor would the Commissioners approve any procedure which failed to make the necessary discrimination between the unqualified person and the practitioner who is "duly qualified" according to law.

The letter written by the President at the request of the Council in order to give formal expression to its views, and the letters sent by the Commissioners in reply thereto, are appended. The new Regulations issued by the Commissioners in pursuance of the above-mentioned discussion have been circulated to members of the Council, and published for general information. The new Memorandum[1] (191/I.C.) of the Commissioners, explaining more fully the purport of Regulation 44, is circulated herewith.

These documents appear to the President to give substantial effect to the wishes which the Council requested him to express to the Commissioners. He is satisfied that the Commissioners fully apprehend that the Council attaches great importance to its contention that nothing should be done, by administrative action, which would tend to defeat the purpose of the Legislature in framing the Medical Acts, namely, "to enable persons requiring medical assistance to distinguish qualified from unqualified practitioners"; or which might be deemed to confer official "recognition" on persons who according to law are "unqualified" and are prohibited from assuming the status and responsibilities of registered medical practitioners. He submits the Regulations and Memorandum to the Executive Committee, in the belief that his colleagues will desire to acknowledge cordially the readiness the Commissioners have shown to consider the representations made to them, and to remove difficulties which have arisen in connexion with the local administration of the National Insurance Act.

Donald MacAlister,
President.

February 23rd, 1914.

[1] Published in the Supplement, February 14th, p. 77.

A.

(*Copy.*)

General Council of Medical Education and Registration of the United Kingdom,
299, Oxford Street, London, W.
9th December, 1913.

No. 34946.

Dear Sir Robert,—The General Medical Council has learned that one of the local Insurance Committees has recently approved a form of agreement between certain insured persons and a person who is not qualified under the Medical Acts, by the terms of which the latter undertakes to provide the insured persons with medical attendance and medicines, to give the domiciliary treatment included as a part of sanatorium benefit, and to furnish such certificates as may be required to enable the insured persons to obtain the several benefits of the National Insurance Act.

The Council has no reason to believe that the form of agreement in question has received the official approval of the Commissioners; and I am now, on behalf of the Council, writing to ask that the Commissioners should formally intimate their disapproval of it to the local Insurance Committee.

The information in the possession of the Council makes it clear that the form of agreement employed in this case is appropriate only to an arrangement made with a legally qualified practitioner, and that some of the undertakings it contains cannot be legally carried out by an unqualified person. I am advised that such agreements are in fact invalid, inasmuch as they contravene the provisions and defeat the purpose of the Acts regulating medical practice in this country. If such action on the part of Local Insurance Committees were to become general, it would, moreover, in my opinion, defeat the objects of the National Insurance Act itself.

The Council is confident that the Commissioners will realize the importance in the public interest of the question of principle thus raised; and that they will take all proper steps both to bring to an end the procedure to which objection is taken, and to inform the authorities who may be concerned that, in connexion with the administration of medical benefit, no valid agreement of the kind can subsist with an unqualified person.—I am, yours very faithfully,

(Signed) DONALD MACALISTER,
President.

Sir Robert Morant, K.C.B.,
National Health Insurance Commission.

B.

(*Copy.*)

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.
10th December, 1913.

Dear Sir,—I am desired by Sir Robert Morant to acknowledge the receipt of your letter of the 9th instant, which shall receive immediate attention.—Yours faithfully,

(Signed) J. S. EAGLES,
Private Secretary.

Sir Donald MacAlister, K.C.B., M.D.,
299, Oxford Street, W.

C.

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.,
January 9th, 1914.

Dear Sir Donald MacAlister,—I write to say that we now have our new Medical Regulations practically completed, containing paragraphs that will make it possible to deal, in the way that the General Medical Council indicated to be in their view desirable, with the various points about unqualified practitioners that were discussed at my meeting with your Committee on 27th November; and I shall hope in a few days to be able to send you, as we arranged, a draft of the explanatory circular and forms needed in this connexion. I will send you copies of the new Regulations directly any are available from the printer.

When you receive them, you will see that the subsections of the new Section 44 (formerly Section 49) set out in separate paragraphs the procedure to be followed in the case of those insured peasons, on the one hand, who make "own arrangements" with unqualified persons and those, on the other hand, who make "own arrangements" with registered practitioners. The words "in such manner" in the new Section 24 (formerly Section 14) mean that a special form will be required for use in these cases. The separation of Subsection (2) from Subsection (1) of the new paragraph 44 in the new Regulations makes it clear that the Committee does not have to institute any comparison between the treatment provided by the unqualified person and the treatment provided by the qualified practitioner. Furthermore, under the new wording of paragraph 44 (4) it will be necessary for the Insurance Committee to make plain in any "own arrangements" with unqualified persons that there are some things required as conditions of the Treasury Grant which the unqualified person will not be expected to do (for the reason, of course, that he is not qualified for doing them), without for that reason precluding all possibility of contributions being made by the Insurance Committee towards the insured person's expenditure in such cases.

With the new Regulations thus clear on these points I do not think we shall now find any particular difficulty in arriving at suitable means for giving effect to what your Committee indicated, when we draft the explanatory circular and forms; but I shall be glad if you let me know of any points in the latter, when I send them to you, which seem to you either not clear or inconsistent with what is in view.—I am, yours very truly,

ROBERT L. MORANT.

D.

(*Copy.*)

National Health Insurance Commission (England),
Buckingham Gate, London. S.W.,
19th January, 1914.

Dear Sir Donald MacAlister, —I have pleasure in sending you as promised copies of the new Regulations for Medical Benefit, in which you will see, particularly in Section 44, that steps have been taken to make definite distinction between qualified practitioners and unqualified persons in the case of insured persons desiring to make their own arrangements. A special circular and forms are now in course of preparation for the latter, the abnormal cases, which will, we think, remove the objections to which the General Medical Council called attention.—I am, yours very truly,

(Signed) R. L. MORANT.

E.

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.
14th February, 1914

Dear Sir Donald MacAlister,—Following up my letter to you of the 19th ultimo, I have pleasure in now sending you, for your information as President of the General Medical Council, copies of the documents referred to in that letter as being in course of preparation.

You will see that these documents comprise:

(1) A Memorandum that is being circulated to Insurance Committees, explaining generally the provisions of the Medical Benefit Regulations for 1914, governing "own arrangements" under Section 15 (3) of the 1911 Act, both with registered practitioners and with unqualified persons;

(2) Forms designed for the assistance of Insurance Committees in dealing with various types of applications for "own arrangements."

As regards the Memorandum, you will find, I think, that the two points which your Council pressed us to make explicit have been fully met—*i.e.*,

(*a*) Attention has been unmistakably drawn to the distinction between "own arrangements" with registered practitioners and "own arrangements" with unqualified persons; and

(*b*) It has been made quite clear that Insurance Committees, in dealing with applications for "own arrangements" of the latter kind, are under no obligation to institute any comparison with the treatment afforded by a qualified doctor, or, indeed, to inquire into the nature of form of the proposals under consideration between the unqualified person and the insured person making his own arrangements.

I trust that your Council will feel that their wishes in the matter have been met in a satisfactory way.—I am, yours very truly,

ROBERT L. MORANT.

INSURANCE ACT COMMITTEE.

THE eleventh meeting of the Insurance Act Committee was held at the offices of the Association on Thursday, February 12th. Mr. T. JENNER VERRALL (Acting Chairman) was in the chair, and the other members present were:—*England and Wales:* Dr. E. R. Fothergill (Brighton), Dr. Major Greenwood (London), Miss F. Ivens, M.S. (Liverpool), Dr. I. W. Johnson (Bury), Mr. Herbert Jones (Hereford), Dr. Constance F. Long (London), Mr. E. C.

Montgomery-Smith (London), Mr. D. F. Todd (Sunderland), Dr. W. B. Crawford Treasure (Cardiff), Mr. E. B. Turner (London). *Ex officio:* Dr. W. A. Hollis (President).

VACANCIES UPON COMMITTEE.

It was reported by the CHAIRMAN that Dr. C. H. Milburn (Hull) had been appointed by the Council to fill one of the vacancies caused by the resignation of Dr. G. E. Haslip and Dr. James Pearse. The Committee decided not at present to exercise the permission given by the Council to fill the other vacancy.

DRUG TARIFF.

The Medical Secretary was instructed to communicate with the Pharmaceutical Society with regard to the proposal for conferences to be held each year between the representatives of the British Medical Association and of the Pharmaceutical Society for the purpose of arriving at some agreement with regard to the drug tariff for the succeeding insurance year, which agreement could then be recommended by each parent body to the various Local Medical, Panel, and Pharmaceutical Committees throughout the kingdom.

ARRANGEMENTS WITH UNQUALIFIED PERSONS.

A memorandum by the Acting Chairman upon questions arising out of Regulation 44 (2) was received, and it was resolved to postpone the matter to allow ample time for the consideration of the Memorandum 191 I.C., a copy of which had been received from the Insurance Commissioners for insertion in the SUPPLEMENT to the JOURNAL of that week (February 14th, p. 77).

MEDICAL BENEFIT REGULATIONS, 1914.

The revised Medical Benefit Regulations for 1914 and a statement comparing them with the draft Medical Regulations issued in November, 1913, were considered by the Committee. After postponing Regulations 13 (3) (*b*), 16 (3), 17 (2), and 17 (3) as matters for further consideration, the Committee resolved with regard to Regulation (30) (1) to take steps as early as possible to again bring before the Commissioners the abuse of the Regulation which had taken place with regard to transfers at the end of the medical year, and to press for the amendment of the Regulation, so as to prevent such abuses.

TUBERCULOSIS SUBCOMMITTEE.

In accordance with the recommendation of the Tuberculosis Subcommittee that additional members should be appointed, the Committee nominated Drs. Beaton, Finlay, and McKenzie Johnston.

SEAMEN'S NATIONAL INSURANCE SOCIETY.

A circular letter was considered by the Committee, in which the general manager of the Shipping Federation, Ltd., complained that shipowners had been under the necessity of paying fees of varying amounts for medical attendance on seamen in ports of the United Kingdom, and maintaining that so far as seamen who were members of the Seamen's National Insurance Society were concerned, they were entitled to the services of the doctors on the panel of the society at the various ports free of charge. The Committee, after consideration, referred the whole question of the constitution of the Seamen's National Insurance Society and its powers and duties under the Act in connexion with the administration of medical benefit, to the Local Medical Committee Subcommittee for consideration and report, with a view to such administration being brought as far as possible into line with the administration of medical benefit generally.

MEDICAL BENEFIT IN IRELAND.

A letter was read from Dr. M. R. J. Hayes, Medical Secretary of the Irish Committee, and the Medical Secretary of the Association was instructed to take every opportunity to help forward the policy of the Irish Committee in opposing the principle of whole-time medical certifiers.

CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

A report was received and approved from the Local Medical Committee Subcommittee setting out the arrangements which had been made to hold a conference of representatives of Local Medical and Panel Committees in London on March 13th and the following day if necessary. The Local Medical and Panel Committees in every insurance area had been invited to appoint a representative to attend the conference, but it had been suggested that where the personnel of the two committees was practically identical only one joint representative should be appointed. A preliminary agenda had been prepared and issued; it had been decided that no committee of the Association should be represented as such at the conference, but that the Medical Secretary and his staff should be placed at its disposal.

PUBLICATION OF NAMES ON PANEL.

The Committee resolved to address a letter to the editor of a newspaper which had published the names of panel practitioners in Hampstead, stating that while it did not impugn his freedom of action in publishing information, it was of opinion that his course in publishing the names of members of part of the London panel was extremely distasteful not only to the practitioners concerned, but to the medical profession as a whole.

CANVASSING AND ADVERTISING.

The Committee resolved to address a letter to the General Medical Council on canvassing and advertising by medical practitioners in connexion with the Insurance Acts.

CENTRAL INSURANCE DEFENCE FUND.

Letters of thanks were read in respect of six cases in which assistance had been granted. Five further applications for assistance were read; in three of the cases the Committee made grants, while in the other two it found itself unable to do so.

LOCAL MEDICAL AND PANEL COMMITTEES.

NORTH RIDING OF YORKSHIRE.

THE following is the scheme for the distribution of the Special Fund (£2,600) made available in the insurance area of the North Riding of Yorkshire for the payment of mileage to medical practitioners for the medical year ended January 11th, 1914:

1. That all sums received from the Insurance Commissioners in respect of mileage be carried to a special Mileage Fund.
2. That payment of mileage out of the Special Fund be made in respect of all insured persons living in the areas named in the Third Schedule of the Scheme in accordance with the provisions of this Scheme, having regard to the proviso contained in Section (4).
3. That for the purpose of calculating the credit to each practitioner for the purpose of remuneration from the special mileage grant there shall be placed to his account in respect of each such insured person on his list resident more than two miles, measured along the nearest road from the residence of the nearest panel practitioner, an amount calculated in accordance with the first schedule of this Scheme.
4. That the sum to be paid in respect of the insured persons on the list of the practitioner at Rosedale Abbey be an amount equal to 5s. per head, irrespective of distance, according to the provisions of calculating, as explained in Section 6, providing that the total of such charge does not exceed £90.
5. That the amount in respect of the provision contained in Sections 4 of this scheme, be the first charge upon the mileage fund, the provisions of Section 7 to apply in respect of the balance available.
6. That a sum shall be credited half yearly to each practitioner calculated at the rate of 1s. in respect of each unit to his account; the number of such units in respect of the half year ending July 14th, 1913, to be taken as the number of units to his account at the end of the half year; and the number of units to his account in subsequent half years to be ascertained by adding the number of units to his account at the close of the half year to the number of such units at the commencement of the next half year and dividing it by 2.
7. That the Committee do pay in each year to each practitioner a sum equal to the total of such half yearly credits or an amount bearing the same proportion to such total as the balance of the special fund (made available by the Insurance Commissioners for the payment of mileage in the North Riding of Yorkshire area) bears to the aggregate amount so credited to all practitioners on the panel, whichever shall be less (after payment has been made in accordance with paragraph 4 of this scheme).
8. That payment for mileage be made out of the Special Mileage Fund as from January 15th, 1913.
9. That each practitioner, excepting the one referred to in Section 4 of this scheme, be requested to furnish the Insurance Committee with a return containing the number of the persons on his panel list as set out in Schedule 2 of this scheme.

SCHEDULE I.

Table of Distances of Insured Persons from nearest Panel Practitioner's Residence.

Between 2 and 3 miles	...	2 units per annum.
Between 3 and 4 ,,	...	3 ,, ,,
Between 4 and 6 ,,	...	5 ,, ,,
Six miles and over	...	10 ,, ,,

A unit, for the purpose of calculating the above, is 1s., or such amount according to Section (5) of the Mileage Scheme.

SCHEDULE II

Number of Insured Persons at the following Distances from the nearest Panel Practitioner's Residence.

2 to 3 miles.	3 to 4 miles.	4 to 6 miles.	6 miles and over.

SCHEDULE III.

This schedule contains a classified list of the towns and rural districts.

BOLTON.

LOCAL MEDICAL AND PANEL COMMITTEES

A MEETING was held at the Central Hall, Acresfield, on February 20th, when Sir THOMAS FLITCROFT was in the chair, and fourteen other members were present.

Circular to Panel Practitioners.—The meeting was asked by the Insurance Committee whether the following suggestion contained in a circular issued to the panel practitioners in the Bolton area should be withdrawn or allowed to stand:

That on account of the drug fund being overspent it would be advisable if the medical practitioners on the panel would observe the restrictions, which were decided to come into operation on January 12th, 1914, at a conference of representatives of the Local Medical Committee, the Local Pharmacists' Association, and the Insurance Committee held on November 24th, 1913, and which are as follows:—*Items to be Disallowed* (except for tuberculous patients): Extract of malt and oil, cod-liver oil emulsion, petroleum emulsion. *Items Restricted:* Not more than three dozen tablets or pills to be prescribed at one time by the medical practitioner.

The meeting agreed that the circular should not be withdrawn.

Conference in London — Sir Thomas Flitcroft was appointed to attend the conference of Local Medical Committees and Panel Committees to be held in London on March 13th next.

Expenses of the Local Medical Committee.—A letter was read from the Commissioners stating that there was no provision in the Insurance Acts for the payment of the administrative expenses of a Local Medical Committee.

Expenses of the Panel Committee.—The meeting, as the Panel Committee, instructed the Secretary to request the Commissioners to authorize the Bolton Insurance Committee to allot for the administrative expenses of the Panel Committee a sum of one farthing in respect of each insured person in this area entitled to medical attendance from doctors on the panel, such sum to be paid out of the money available for the provision of medical benefit within the area.

Certificates.—Dr. THORNLEY brought to the notice of the meeting the fact that the certificates of disability issued to insured members of approved societies were being copied at a charge of 1d. to the insured person, and used for other purposes. The meeting expressed disapproval of these methods, and instructed the Secretary to communicate with the Registrar of Friendly Societies on the matter, asking whether societies should not produce a certificate bearing the actual signature of the medical attendant.

WOLVERHAMPTON.

PANEL COMMITTEE.

THE first meeting of the Panel Committee was held on January 26th.

Appointment of Secretary.—The Clerk to the Insurance Committee having explained that the business was to appoint a Secretary, it was unanimously resolved that Dr. Mactier be appointed Secretary.

Appointment of Chairman.—The second meeting was held on February 10th, when Dr. MACTIER explained that the first duty was to appoint a Chairman. On the motion of Dr. BAILEY, seconded by Dr. MCTURK, Dr. A. H. Carter was appointed.

Medical Service Subcommittee.—On the motion of Dr. BAILEY, seconded by Dr. STOCKWELL, it was resolved:

That Drs. Craig and Galbraith be appointed members of the Medical Service Subcommittee in accordance with the Regulations of January, 1914.

Vote of Thanks.—On the motion of Dr. CARTER, seconded by Dr. STOCKWELL, it was unanimously resolved:

That the best thanks of the Local Medical and Panel Committees be accorded to Mr. A. B. Bantock, Chairman of the Wolverhampton Eye Infirmary, for his kind permission to hold the meetings in that building.

LOCAL MEDICAL COMMITTEE.

A meeting of the Local Medical Committee was held at the Wolverhampton Eye Infirmary on February 10th. Dr. CARTER presided, and seven other members were present.

Financial Statement.

Dr. COLEMAN, Honorary Treasurer, presented the financial report, which showed a balance of £2 12s. 4½d. in the hands of the Secretary, as well as twelve copies of the Pharmacopœia. On the motion of Dr. RIDLEY BAILEY, seconded by Dr. CODD, the report was unanimously adopted.

Annual Report.

The annual report stated that the Committee was recognized by the National Health Insurance Commission on February 18th, 1913, and had met five times, while the average attendance of members had been 9.6. After enumerating the changes in the Committee the report stated that only one complaint of the action of a medical practitioner had been brought before the Committee, and he had not been found guilty of any offence.

After a conference with the Chemists' Association, the Birmingham Health Insurance Pharmacopœia, with the consent of the Insurance Committee, had been adopted in May, and a triplicate prescription book requiring one carbon only was also adopted.

The Model Regulations for the constitution of Local Medical Committees of the British Medical Association with certain modifications were adopted by the Committee on September 30th, but the Commissioners refused to sanction them pending the issue by themselves of regulations for their constitution in July, 1914, up to which time they are willing to recognize the present Committee. The report was adopted.

Medical Service Subcommittee.

On the motion of Dr. MACTIER, seconded by Dr. O'MEARA, Dr. A. H. Carter was appointed a member of the Medical Service Subcommittee.

The Committee accepted the recommendation of the Commissioners to recognize it as in office until July, 1914.

New Members of Committee.

The following, who are also members of the Panel Committee, were elected to fill the three vacancies: Drs. McTurk, Mann, and Turton.

NORFOLK.

LOCAL MEDICAL COMMITTEE.

A MEETING of the Local Medical Committee was held in Norwich on February 11th, Dr. B. D. Z. WRIGHT in the chair. Dr. Thomson, Honorary Secretary, and nineteen other members were present.

Financial Statement.—After formal business, the SECRETARY AND TREASURER presented last year's accounts, which were duly examined and passed, the expenditure for the year being £7 12s. 10d. It was resolved to raise the sum necessary by a 2s. 6d. subscription from the practitioners in the area, and the medical representatives on the district committees agreed to collect and remit.

Medical Referees.—The question of referees was again considered and the resolution of December 3rd reconsidered in the light of recent developments and confirmed, namely, that the Local Medical Committee was entirely opposed to whole-time or half-time referees, appointed as such, but approved of a rota formed in each Insurance District Committee area from among the practitioners in that area, each panel practitioner acting in turn for a period of three or six months at a fixed fee of 10s. 6d. and mileage. Dr. BELDING reported that the Insurance Committee was generally favourable to such a scheme; on his suggestion a resolution was passed unanimously by the

Medical Committee to meet an objection on the part of the Insurance Committee to men acting as referees in their own immediate neighbourhood with a rider that "in exceptional cases the referee may appoint a substitute at the same fee." The meeting then terminated.

PANEL COMMITTEE.

Subsequently a meeting of the Panel Committee took place, with Dr. R. C. M. COLVIN-SMITH in the chair; twelve other members, including Dr. Thomson (Honorary Secretary), were present.

Election of Members.—The meeting first proceeded to the election of five additional members of the Committee, it having been decided at the last meeting to complete the full number of the Committee to twenty-four, the number decided upon by the Insurance Commissioners. The following were elected by ballot: Dr. Fisher (Fakenham), Dr. Howard (New Buckenham), Dr. Kingdon (King's Lynn), Dr. Cutting (Stalham), and Dr. Legge Paulley (Pulham Market).

Expenses of Committee.—The Committee then proceeded to a consideration of Sections 32 and 33, Subsection 1, of the Amending Act, 1913, which permits of a levy being made on the practitioners on the panel, so as to meet the expenses of the Panel Committee, not exceeding in amount one penny for each insured person on each practitioner's list, the same to be deducted by the Insurance Committee from the amount due to the practitioner; whereupon, on the motion of Dr. HORN, seconded by Dr. HOWARD, it was resolved that a levy of one halfpenny be made. After some other business of purely local interest the meeting terminated.

BEDFORDSHIRE.

PANEL COMMITTEE.

THE first meeting of the Panel Committee was held at Luton on February 3rd, when fifteen members were present. The Clerk to the Bedfordshire Insurance Committee attended and outlined the duties of the Panel Committee.

Elections.—The meeting unanimously elected Dr. Ernest Hamilton Wagstaff (Leighton Buzzard) to fill the vacancy occasioned by the lamented death of Dr. J. G. Durran. The Committee elected its officers as follows:

Chairman.—Dr. J. W. Bone.
Vice-Chairman.—Dr. J. Waugh.
Treasurer.—Dr. S. J. Ross.
Secretary.—Dr. F. S. Lloyd.

LOCAL MEDICAL COMMITTEE.

The ninth meeting of the Medical Committee was held on the same day and place. Dr. BONE was in the chair, and seventeen members were present.

Appointment to Vacancy.—On the proposal of Dr. H. D. POLLARD (Bedford), seconded by Dr. J. WAUGH (Toddington), Dr. E. H. Wagstaff (Leighton Buzzard) was unanimously elected to fill the vacancy on the Committee created by the death of Dr. J. G. Durran.

Finance.—The TREASURER and SECRETARY presented the financial statements of the Medical Committee and of the South Bedfordshire Medical Committee respectively, and it was announced that the balance in hand of the South Bedfordshire Committee had been handed to the Treasurer to add to the general fund; the meeting approved.

Travelling Expenses.—On the motion of Dr. POLLARD, seconded by Dr. DIXON (Potton), the Treasurer was instructed to refund to members travelling expenses incurred by them in attending the meetings of the Committee at the rate of third class return fare from the nearest available station. It was also agreed, on the motion of Dr. K. ROBERTS (Shillington), seconded by Dr. O'MEARA (Luton), that travelling expenses at the rate of 2d. per mile should be paid to those country members to whom train service was not available or highly inconvenient.

Allocation of Surplus Funds.—The revised scheme of the Medical Benefit Subcommittee for the allocation of unallotted insured persons entitled to medical benefit, and for the distribution of the accumulated surplus, was laid again before the Committee. The CHAIRMAN having explained that the present scheme had been remodelled and called attention to the new paragraphs 6 and 7, announced that the allocation would be definitely made at a meeting of the County Insurance Committee during the month. The scheme was carried unanimously.

Drug and Appliance Tariff.—The tariff proposed by the Insurance Committee was submitted; and though the meeting was of opinion that certain items were considerably overcharged, it resolved to accept it.

Appointment of Medical Referees by Approved Societies.—Dr. WAUGH considered that the fee of 5s. proposed was too low, and that the appointment of local medical referees was objectionable, as the referee should be absolutely independent of the approved societies and local medical men. On the motion of Dr. POLLARD, seconded by Dr. WAUGH, it was resolved:

> That this meeting is of opinion that the minimum fee for examination and report in the capacity of medical referee should be 10s. 6d. per case. It strongly disapproves of the principle of part-time salaried medical referees, and urges the practitioners of Bedfordshire to support it in this decision by refusing any offer differing in principle from the foregoing.

It was further decided that a circular letter to this effect should be sent to every practitioner in the county.

Cards of Insured Persons.—Letters were read from medical men complaining of the delay in receiving from the Clerk to the Bedfordshire Insurance Committee index cards for persons accepted by them; furthermore, that numerous patients accepted by them and duly notified to the Clerk had apparently not been placed on their lists. The Clerk having arrived to inaugurate the first meeting of the Panel Committee, the meeting was adjourned, and on its resumption the letters were read to him, and numerous similar complaints made to him by the members present. The CLERK, in replying, explained that the delay in returning cards for accepted members to the doctors was due, not to the Committee, but to the approved societies, who were experiencing much difficulty in tracing some of the names attributed to them. Immediately a society sent back cards to the Committee they were forwarded to the doctors. Post offices should no longer issue Form 32. The Bedfordshire Insurance Committee would shortly supply to each panel practitioner a list of every person on his panel to whom the Committee had supplied medical books. Doctors in future would be paid on their acceptances, and any surplus moneys would be allotted in proportion to the size of their lists.

Communications from Commissioners.—Letters were read from the Commissioners stating: (1) That they were extending the period of recognition of the Medical Committee until July 15th, 1914; (2) that they were not prepared to approve any scheme for the constitution of the Local Medical Committee on a permanent basis; (3) that they could not make any arrangement for the payment of postage on communications addressed by panel practitioners to the Insurance Committee.

HERTS.

PANEL COMMITTEE.

THE first meeting of the Panel Committee was held in London on February 2nd. The present members of the Medical Committee were elected by practitioners as the members of the Panel Committee, and the new committee has been recognized by the Commissioners.

Election of Officers.—The following were elected: *Chairman*, Dr. Shelly (Hertford); *Honorary Secretary*, Dr. Sidney Clarke (St. Albans); *Representatives on Medical Service Subcommittee*, Dr. F. H. Berry (Watford), and Dr. C. E. Shelly (Hertford) (re-elected).

Resignations.—The resignations of Dr. B. H. Stewart (Barnet) and Dr. C. J. Grellett (Hitchin) were received with regret. The Committee was of opinion that it was not desirable to fill the vacancies at present, since the numbers upon the Committee exceeded those suggested by the Commissioners.

Expenses.—Application was made for the allocation of ½d. in respect of each insured person entitled to obtain medical attendance under Section 33 of the 1913 Act, to meet the expenses of the Panel Committee.

Treatment of Insured Persons.—The Committee agreed that the agreement between the Medical Committee and the County Insurance Committee made on November 24th, 1913, should continue until further notice upon the understanding that the names of all insured persons who apply for treatment but who had not been allocated would eventually be allocated to the panel practitioners who had accepted them, if such persons were found to be on the Index Register of the Insurance Committee.

Vote of Thanks.—A vote of thanks to the Chairman, to the members, and to the Clerk and other officials of the Insurance Committee was passed, and a number of points were discussed with the Clerk of the Insurance Committee.

Payments.—It is hoped in future to make payments to practitioners after the first Insurance Committee meeting after each quarter.

SURREY.

Panel Committee.

The first meeting of the Panel Committee for Surrey was held at Surbiton Cottage Hospital on February 13th. Twenty-one members were present, together with the Clerk and Assistant Clerk of the County Insurance Committee.

Election of Officers.—The following officers were elected:

Chairman, Dr. Lankester (Guildford); *Vice-Chairman*, Dr. Evans (Kingston Hill); *Honorary Secretary*, Dr. Cran (New Malden). These are also the officers of the Local Medical Committee. *Representatives on Medical Service Subcommittee*, Dr. F. Deas, Dr. McDonogh Ellis, Dr. A. E. Evans, and Dr. F. Gayner.

Assignment of Insured Persons.—It was decided to continue the present method by which patients that have to be allotted to a practitioner should be allotted to the nearest practitioner.

Expenses of Committee.—A subcommittee was appointed to report on the financing of the Committee, and a resolution was passed that members should be allowed travelling expenses.

Local Medical Committee.

A meeting of the Local Medical Committee was then held.

Range of Medical Service.—A case was submitted by the County Committee, in which a practitioner had excised a malignant growth from a patient's lip, and had made a charge for the operation. The County Committee desired the opinion of the Local Medical Committee as to whether such an operation was of a kind which could consistently with the best interests of the patient be properly undertaken by a general practitioner of ordinary professional competence and skill. The Committee decided that the operation was not one that comes within the scope of a general practitioner of ordinary professional competence and skill.

Finances of Committee.—The Treasurer reported a balance of £24 in hand.

Election of Representative.—Dr. Oliver (Richmond) was elected the representative on the Medical Service Subcommittee.

FIFE.

Meeting of Practitioners.

A meeting of duly qualified medical practitioners resident or practising in the area of the Fife County Insurance Committee was held at Kirkcaldy on February 13th, under the chairmanship of Dr. Douglas (Cupar); fourteen other members were present.

Annual Report of Local Medical Committee.—The annual report of the Local Medical Committee for the county area stated that since its formation on March 4th, 1913, six meetings had been held. Amongst other matters the following points had received consideration: Alternative schemes for medical records; supply of emergency drugs and appliances; the allocation of insured persons who had not selected a doctor; extension of sanatorium benefit to dependants of insured persons and charges connected therewith; model rules for medical benefit; schemes for provision of medical benefit to temporary residents; the signing of maternity certificates by uncertified midwives; the franking of correspondence between practitioners and Insurance Committees; mileage, etc. Drs. Orr and Dickson, along with the honorary secretary, had attended the conference of representatives of Scottish Local Medical Committees held in Dundee in June, but it had been decided not to send representatives to the conference held at Brighton in July. The accounts for the past year showed a credit balance of £11 14s. 5d. at December 31st, 1913. Only sixty practitioners had paid the 5s. levy for the past year, thus leaving about forty who had as yet not paid. The report was unanimously adopted. The meeting considered the following recommendation from the Local Medical Committee:

> That the Committee consist of fifteen members, who shall hold office for one year, but shall be eligible for reappointment.

The change had been suggested for the purpose of facilitating the working arrangements throughout the county, it being found desirable that the personnel of the Panel Committee and the Local Medical Committee should be the same. A motion to reduce the Local Medical Committee from thirty members to fifteen members, so as to correspond with the Panel Committee, met with the hearty support of the meeting. The necessary alterations in the constitution were left to the Local Medical Committee to arrange. On the motion of Dr. Dawson, seconded by Dr. Sneddon, the following were appointed the Local Medical Committee for the ensuing year—namely: Drs. Orr (Tayport), Douglas (Cupar), Shearer (Auchtermuchty), Eggeling (Largo), Mactier (St. Andrews), MacNicol (Leven), Graham (Leven), Heron, Markinch, Crawford (Kirkcaldy), Dickson (Lochgelly), Craig (Cowdenbeath), Keay (Kelty), Love (Kincardine), Dalgleish (Dunfermline), and Anderson (Denbeath).

Allocation of Insured Persons.—The question of the allocation of insured persons who had not yet selected a doctor was discussed, and the Secretary was instructed to write to the Clerk of the Fife County Insurance Committee recommending that the Fife County Insurance Committee should proceed at once with the allocation of these insured persons upon a numerical basis.

Certain matters were remitted to the Local Medical Committee for their consideration.

Statutory Recognition.—The Honorary Secretary was instructed to apply to the Commissioners for recognition.

The inaugural meeting of the Fife County Local Medical Committee was held on the same day at the same hall.

Election of Officers.—The following officers were elected:

Chairman.—Dr. Douglas (Cupar).
Secretary.—Dr. Anderson (Denbeath), re-elected.
Executive Subcommittee.—Drs. Dickson (Lochgelly), MacNicol (Leven), and Shearer (Auchtermuchty), along with the Chairman and Secretary.

The quorum for the Committee was fixed at 7 and of the Executive at 3. Dr. Douglas, in thanking the meeting for the honour conferred upon him, made reference to the work done by Dr. Orr, and on his suggestion the meeting passed a hearty vote of thanks to Dr. Orr for his services as chairman during the past year.

Matters Referred to the Committee.—The meeting then considered the points which had been remitted to them for consideration from the practitioners' meeting, and the Honorary Secretary was instructed to write the Clerk of the Fife County Insurance Committee with regard to the following matters: (*a*) Mileage payment; (*b*) transfers; (*c*) 10 per cent. deductions which had been made to doctors during past quarters; (*d*) floating sixpence; and (*e*) additions to doctors' lists during the past year. The Committee was of the opinion that payment for these items should be no longer delayed.

Midwives Act for Scotland.—The Committee expressed its full sympathy with the following memorial to the Secretary for Scotland, which had been submitted to a meeting of the Executive Committee of the Association of Insurance Committees, and had received its hearty support.

> The Secretary for Scotland is respectfully and urgently requested to introduce into the present session of Parliament a Midwives Bill for Scotland on the lines of the English Act.
>
> The pressing need for such legislation for the registration, proper qualification, and supervision of midwives is admitted, and is based upon actual experience, after careful investigation by medical officers of health.
>
> Now that the maternity benefit under the National Insurance Act is in full operation there is little excuse for the employment of unqualified midwives whose fees are small compared with those charged by medical practitioners.
>
> From the public health standpoint, the health of the mother, the prevention of infant mortality, and the welfare of infancy, a very strong case exists for extending the provisions of the Midwives Act to Scotland.

INSURANCE COMMITTEES.

LONDON.

Departmental Committee on Alleged Excessive Sickness Claims.

The Insurance Committee for London had before it at its meeting on Thursday afternoon, February 26th, a report from the General Purposes Subcommittee which recommended that the chairman, Mr. J. Arthur Dawes, M.P., should be asked to represent the Committee before the Departmental Committee on sickness benefit claims, and to express the views of the London Insurance Committee on the various matters upon which the Insurance Commissioners have invited evidence. The subcommittee also recommended that the following statement of the information in the possession of the Committee should be forwarded to the Departmental Committee as indicating the nature of the evidence the London Insurance Committee would be prepared to give; all the figures relate to the period ended January 11th, 1914:

Statement by the London Insurance Committee.

1. The number of doctors on the panel 1,475
2. The number of doctors in the area in general industrial practice who are not on the panel (approximately) 500
3. The greatest number of insured persons on any individual doctor's list... 5,177
4. The average number of insured persons on the lists of all the doctors 909
5. The number of doctors (including practitioners in partnership) who had on their list—
   - (*a*) Less than 500 insured persons 500
   - (*b*) Between 500 and 1,000 insured persons ... 261
   - (*c*) Between 1,000 and 1,500 insured persons ... 189
   - (*d*) Between 1,500 and 2,000 insured persons ... 151
   - (*e*) Between 2,000 and 2,500 insured persons ... 84
   - (*f*) Between 2,500 and 3,000 insured persons ... 50
   - (*g*) Over 3,000 insured persons 48
6. The number of insured persons—
   - (*a*) Who failed to select a method of treatment (approximately) 228,000
   - (*b*) Who elected to receive treatment through an approved institution 3,233
   - (*c*) Who were allowed to make their own arrangements for medical attendance and treatment 1,549
7. The number of cases of change of doctor by consent during the year. (No information is available as to the number of cases in which permission to transfer during the year was refused) (approximately)... 7,480
8. The number of cases of change of doctor at the end of the year 12,439
9. The number and nature of cases referred to the Medical Service Subcommittee and the result of the reference to the Subcommittee.

During the year 1913 there were referred to the Medical Service Subcommittee 71 cases in which complaints were made by insured persons regarding the treatment rendered by practitioners and 4 cases by practitioners regarding the conduct of insured persons on their lists of patients.

Of the 71 complaints made by insured persons, 28 cases were found to have been substantiated, and in about half of these cases it appeared that the insured persons concerned had, in consequence of neglect on the part of practitioners on the panel, incurred expenditure in obtaining treatment from other practitioners.

Of the 43 cases which were found to be unsubstantiated, a large number were of a trivial nature, and one was considered to be of a frivolous and vexatious character.

In each of the 4 complaints made by practitioners regarding the conduct of insured persons on their lists, the allegations were proved. Arrangements were accordingly made for the transfer of the insured persons concerned to the lists of other practitioners.

10. As to whether practitioners are complying with the conditions of the Treasury grant as regards furnishing of certificates and whether representations have been received from societies with regard to details of certification.

A small number of complaints with regard to the furnishing of medical certificates by practitioners has been received. The majority of these cases occurred in the early part of 1913 and apparently arose in consequence of the practitioners concerned not being fully aware of the requirements of their agreements in this connexion, more particularly with regard to continuing certificates.

The number of questions which have arisen as to the ante-dating and post-dating certificates is, so far as the Committee are aware, negligible, and failure to state the nature of the illness when furnishing a certificate has been complained of in a few cases only.

Cases have arisen as to the practitioner furnishing a certificate without seeing the patient. As a rule these have been in respect of persons who were, at the dates concerned, in-patients or out-patients of hospitals and similar institutions. This question is now under the consideration of a Special Section of the Medical Benefit Subcommittee.

A number of complaints as to charges being made for the furnishing of certificates have been dealt with. These cases, as a rule, appear to have been due to misunderstanding on the part of practitioners concerned.

Where representations have been received concerning the provision of certificates the attention of the practitioner concerned has been drawn to his agreement, and he has refunded the amount charged or otherwise dealt with the matter as the circumstances required. In one case it was necessary to refer the question to the Medical Service Subcommittee.

11. As to whether representations have been received to the effect that there is delay on the part of chemists in dispensing prescriptions.

In the cases of complaints brought to the notice of the Committee as to delay on the part of chemists in dispensing prescriptions, these have, as a rule, been settled to the satisfaction of the complainants. The Committee have no evidence that the necessity of taking the prescription to the chemist leads to sickness claims which would not be made if the practitioner dispensed his own medicines, or that insured persons fail to take to the chemist the prescriptions received from the doctors.

MANCHESTER.

Proposal for a Whole-time Service.

At a meeting of the Manchester Insurance Committee held on February 23rd Mr. E. Lloyd Jones, who is Chairman of the Finance Committee, brought forward a motion, of which he had given notice, instructing the Medical Subcommittee to investigate and report, not later than next September, into the desirability or otherwise of establishing a full-time medical service for insured persons and their dependants at the commencement of the year 1915. He said he had no desire to return to the old friendly society system, but the Insurance Committee must have control of the doctors and not the doctors control of the Insurance Committee. Insured persons were not getting proper attention from many of the doctors at present. The Manchester system encouraged doctors to see too many patients and to make an excessive number of visits and consultations, but it did not encourage prevention of disease. If a doctor could see a hundred patients in three hours there could not be much the matter with them, and the doctor ought to have the courage to tell them so. The effect on approved societies of certificates being given too easily was most disastrous. There were 300 doctors on the list, and last year they sent in accounts amounting to about £162,286. The medical auditors allowed £150,042, and the Insurance Committee sanctioned the payment of £83,186, which was about 11s. 6d. in the £. It was a remarkable fact that the medical men themselves had disallowed a sum of £12,243, which was equivalent to about 110,190 visits and consultations. But that was not the end of it, for the chemists had had to make up prescriptions as the outcome of these visits and consultations, and the drug fund might very well be £18,000 short. Another remarkable fact was that half the total amount paid to the doctors went to 45 of them. The total claims of these 45 were £81,565, of which £74,993 was allowed, and £41,762 was, or would be, paid. In 13 cases over £1,000 was paid. Some doctors had had a quarter of their claims disallowed, and the only remedy the doctors offered was a limitation of incomes to £800 a year. That meant that a doctor could do as much work as he liked, and do it as he liked, and with as little attention as he liked, and at the end of the year he must hand over any excess of £800 to the medical fund, to be distributed amongst those who had not been very anxious whether they attended insured persons or not. The Manchester system had been a failure, and there ought to be a full-time service with a better distribution of the doctors so that the patients could receive prompt attention and not have to wait three or four hours in a surgery. He included in his motion the dependants of the insured to avoid the need for two doctors calling at the same house.

Mr. E. E. Farrow seconded the motion, and complained that the sickness experience of the societies had been excessive because certificates of incapacity had been given too readily.

Mr. H. H. Irwin moved as an amendment that the Medical Subcommittee be requested to investigate and report not later than next September on the present medical system, and if the Manchester system were found unsatisfactory to recommend some improved system. He

suggested as a half-way house to a State service the setting up in congested districts of a kind of dispensary, where all the medical men who cared to do so might attend at specified times and visit in the neighbourhood, or the dispensary might be in charge of a medical officer with assistants.

Dr. McGOWAN, who is secretary of the Panel Committee, seconded the amendment, and thought that the suggestion for dispensaries in congested areas was a good one. These areas were suffering, not from the faults of the doctors, but because they were congested. If a doctor had a hundred patients, could he send away fifty of them? The doctors were doing their best in a difficult position, and some were paying the price in illnesses which would shorten their lives. Two were rapidly dying from phthisis. The fact that deductions were made from doctors' accounts was no reflection on them, as the deductions were made, not for excessive attendances, but because the medical fund was insufficient, and if any one was suffering it was the doctors.

After some further discussion, the Chairman, Mr. W. DAVIES, pointed out that Mr. Jones's motion, to justify it, must allege the inadequacy of the present system. Mr. JONES thereupon withdrew his motion, and the amendment was carried unanimously.

INSURANCE NOTES.

SCOTLAND.

NATIONAL INSURANCE CONFERENCE IN GLASGOW.

AT a National Insurance Conference held in Glasgow, under the auspices of the Faculty of Insurance, and attended by 300 delegates representing forty approved societies, Mr. James Leishman, Chairman of the Scottish Insurance Commission, said that the number of insured persons in Scotland was, in round figures, 1,470,000, and the fund was about 3¾ million pounds. Of this 1¾ millions had been paid out and nearly 2 millions had been accumulated for future benefits and reserves. Nearly 50,000 people were getting some kind of benefit every week in Scotland.

Mr. W. A. Appleton (London), Secretary of the General Federation of Trade Unions Approved Society, described some of the difficulties connected with the administration of medical benefits. They had had many medical difficulties, he said, that they ought not to have had and would not have had if the medical profession had taken a more liberal view of the societies' difficulties and their own responsibilities. He felt that they had not been fairly treated, and that the doctors should not only draw their salaries, but should recognize not only their responsibility to the patient but to the societies. They should realize that any negligence or foolishness or stupid bias, political or not, on their part meant pushing the approved societies toward bankruptcy. It would be very discreditable if the societies had to say that their financial difficulties were due to the negligence of the medical profession. Mr. Appleton advocated limiting the number of patients on a doctor's panel. He was in favour of a State Medical Service.

A delegate held that by limiting the number of patients they would be putting the practitioner with years of experience in the same position as the young medico just out of the university, and the doctor who made golf his hobby on the same plane as the doctor who made his profession his hobby.

A resolution was adopted directing the attention of the Treasury to the fact that, in the opinion of the meeting, the medical practitioners were not generally acting in accordance with their agreements as regarded certifying total incapacity, and desiring that such regulations should be passed as would limit the number of patients whom a doctor may be permitted to accept on his panel.

At the first annual dinner of the Glasgow centre, held the same evening, Mr. James Leishman said that societies looked to the medical profession as a bulwark against undue and improper claims on the sickness funds. It was a matter of the most supreme importance that the medical profession should realize that the basis of this Act was financial; that if, owing to their lack of appreciation of the responsibility of their duties, societies in general were compelled to pay funds that they ought not to pay, and that many societies when the valuation came found themselves in a deficit, then he believed the movement for a State Medical Service would receive an impetus that would make it difficult for any one to withstand.

IRELAND.

Proposed Whole-time Service for Sickness Certification.

AT a meeting of the County Antrim Local Medical Committee held recently in the Town Hall, Ballymena, to consider the question of whole-time service for the purpose of sickness certification under the Insurance Act, 1911, the following resolutions were unanimously passed:

That, in the opinion of this meeting, a whole-time service for the purpose of sick certification alone would not be satisfactory to the great majority of insured persons; would give rise to endless friction between the doctor in attendance and his patient on the one hand and the doctor called in to issue the sick certificate on the other; would be practically unworkable; and would not be successful from any point of view.

That, in order to show our willingness to do all in our power to make the Insurance Act a success, we are willing, provided the Irish Medical Committee does not object, and provided satisfactory terms for sick certification generally can be arranged with the Insurance Commission, to form local medical boards throughout the county, to which persons suspected of malingering could be referred for the purpose of medical examination, and to work these free of cost for one year.

At the same time we would point out that the approved societies are now suffering from the effects of their own insane competition with each other for members, and, having accepted as members insured persons suffering from such diseases as chronic Bright's disease, heart disease, tuberculous disease, etc., they cannot possibly expect sickness claims to be as low as in the case of the old friendly societies, who only admitted persons to membership after medical examination.

Limerick Doctors and Friendly Societies.

The dispute which has existed in Limerick between the doctors and the friendly societies for the last fifteen months is now settled. In the autumn of 1912 the doctors gave notice to terminate their agreements with the societies, stating that in future they would charge 8s. 6d. a member for attendance and 12s. for attendance on a member and his dependants. These terms were refused by the societies, and for the last twelve months or more no terms could be agreed on. Now the societies have accepted the terms offered, and have reappointed their former medical officers.

Delay in Payment of Insurance Benefits.

At last week's meeting of the Ardee Guardians attention was called to the unreasonable delay caused in paying sick benefits to insured persons. The relieving officer declared that in some cases weeks elapsed, and that if outdoor relief were not granted the persons concerned would starve.

Sanatorium for Tyrone.

At a meeting of the Tyrone County Council last week it was decided, by 15 votes to 6, to purchase Dungannon House, with fifty acres attached, for £2,200, and to transform it into a county sanatorium, capable of accommodating forty-six beds. An amendment to select a site on the Greer estate, Omagh, was rejected. A further resolution was adopted that convalescent homes be also established in the county at Cookestown, Omagh, Strabane, and the Clogher Valley, and that an additional dispensary be established at Castlederg.

CORRESPONDENCE.

A STATE MEDICAL SERVICE.

DR. J. H. MEERS (Fulham) writes: The first thing to be regarded in any form of service is its efficiency. It seems to be too frequently overlooked that in no other calling, excepting that of the priest, does the personal equation enter so largely into the question of efficient treatment. The doctor, like the priest, must have the faith of his patient; he must have time to study his peculiarities, and in many cases must base his treatment on them. Now in all forms of contract work the tendency is to welcome the pay and dislike the work. In the case of a doctor this means giving less attention to the

individual, and this may be already seen under the panel system, where we also have so many persons coming up for absolutely trivial complaints that we have less time to give to the more serious cases. At the same time, we do our best for our patients if only for the reason that they can leave us at the end of the year, and that we are therefore in competition with our fellow medical men. This may seem a low view to take, but it cannot be too strongly emphasized that competition is the strop by which efficiency is kept keen. To take a parallel in another walk of life—the efficiency of certain railways used to be much greater when they were competing against each other. When they formed agreements and the competition ceased, the efficiency became blunted.

Apply these facts to a State Medical Service. Later on, if not in the near future, a man will be dumped down in an area where he has a definite number of people to look after, at a fixed salary. If he is clever or has influence he will look upon the appointment merely as a stepping stone to better things. If he is dull he will sink into the rut of apathy. In either case he will not feel inclined to take a personal interest in his patients, but merely regard them as disagreeable necessities. He will have no motive to go out of his way to please them, as even if they prefer to go and pay another doctor, his own income remains unaffected. In such circumstances, the man who is unable or unwilling to obtain promotion is bound to forget his work, and the "lightning diagnoses" complained of under the Insurance Act will become an everyday occurrence, excepting that they will be more frequently wrong.

So much for the fate of the patient—how about the prospects of the medical man? In the first place the majority of men on the panel will suffer considerable pecuniary loss. Assume that an ordinary appointment is going to be worth £700 per annum, which is probably more than it would be. There is a large number of men in working-class districts who are making quite £1,000 per annum from panel patients and the cash payments of their uninsured dependants. There is an equally large number of men with a fairly extensive better-class practice who are also making, say, two or three hundred a year from the panel. The first class is obviously bound to lose; the second will also lose, because private practice will not be allowed to men in the service, and they must therefore give up one or the other. At certain drawing-room meetings we have been told that compensation will be allotted by the Government in such cases, but such compensation is bound to be trivial compared with the loss of perhaps three or four hundred a year for the rest of one's life; also let me remind those in favour of a State Medical Service that once their practice has been turned into an appointment, the goodwill vanishes into thin air. So far I have demonstrated disadvantages both for patient and doctor. What are the advantages promised? They are the following:

1. Circumscribed working hours and time for research work, etc.
2. A staff of consultants to fall back upon.
3. Greater facilities for admission of patients into institutions.
4. Nursing and clinical centres.
5. A definite salary, increasing by promotion.
6. Pensions.

The above are all for medical men. Patients, so far as I can ascertain, get no privileges excepting admission into institutions.

To take these so-called advantages in their order:

1. An eight-hour day has been advocated. This seems to me to be an absurdity; the only possible meaning is that we are to work in eight-hour shifts. This places the doctor more out of touch with the patient than ever; in fact, it simply turns him into a health official. Doubtless an arrangement could be made as regards night work, but nothing else is possible; we shall still work from morning till night.

2 and 3. Concerning the next two points, I can only speak as I find things now. What has rather impressed me is the very courteous way in which members of hospital staffs see patients sent to them, and give them the best possible treatment. I have had patients *x*-rayed dozens of times; they have had salvarsan at my request; and, in fact, all the resources of modern hospitals are at mine and others' command. Cases for admission have, of course, to wait their turn, unless urgent, and the only way to remedy this is for the Government to build new hospitals—a rather costly process.

4. Nursing and clinical centres would undoubtedly be a great boon, and are very badly wanted.

5. As regards the pay, it has been suggested that the scale would be from £200 per annum to £1,250 per annum. How many men are ever going to get anywhere near £1,250? Perhaps one in a thousand. In the ordinary way the salary would probably increase automatically by about £20 a year to £500 per annum; and there the vast majority would stick, if only for the reason that there is not room for all at the top.

6. But we have the pension to console us. Well, that would be two-thirds of the salary; so for £500 per annum, one would get a pension of about £334 per annum. Not very much, is it, after perhaps forty years' work? Also it must be understood that to obtain a pension at all one must work a good many years, probably forty, as in the Civil Service, or at the very least thirty. The vast majority of present practitioners will therefore be ineligible. They will be paid a few hundreds in compensation, have reduced incomes for the rest of their lives, be compulsorily retired at 60, and then—well, they can go to the workhouse if they like, nobody will mind.

I think I have said enough to show that for men now in practice a State service is bound to result in loss—loss of the noblest ideals of the profession, loss of income, and also loss of social standing. The only thing they will not lose will be the amount of work to do. As regards the more distant future, the loss will be greater still, in that the lowered status of the profession will become more and more a disadvantage to the public.

I need not repeat other people's words in indicating how the present panel system can be extended and improved. Nursing centres, easier access to laboratories, a staff of consultants maintained by the Government—all are wanted, and all can be provided without any change in the panel system. As I said at the beginning, let me say at the end, "Competition is the strop of efficiency."

Dr. HARRY GREY (Bristol) writes: The discussion on a State Medical Service, though interesting so far, seems to me to partake too much of the nature of a game of nine-pins—the one side setting up objections, the other knocking them down, or in the last resort denying their existence. Now, whether the nation desires free choice of doctor or a whole-time service or a return to the system of private practice, is a question which the lay public will eventually decide for itself, and that we dislike the one or the others is a point that will receive very little attention and less consideration; our only scope here is to point out the merits and demerits of each system as we see them, which I do not think we have so far done very well. Nor am I myself very much interested in helping the nation to come to a choice, since recent events have rendered me pessimistic as to the existence of common sense in the populace or statesmanship in our Government. Legislation in a hurry, specializing in "novelties" and "bargains," seems to be the order of the day. But I am concerned about a grave danger which I find in the tone of the organ of the profession in dealing with this matter which would lead us to imagine that the bulk of the profession was solidly against the institution of a State Medical Service and only needed the clarion cry of a leader to rally as one man to defend the *status quo*, in default of any hope of attaining the *status quo ante* (the Insurance Act). This I am certain is not so. Time and again in the JOURNAL, in publications of the Council, and in the Representative Meetings during the last three years this assumption has been made, its only basis being, I believe, the answers to the March, 1910, report, where the votes for a whole-time service were numerically not worth recording. But the answer then given was to a question that was not put as a practical proposition and was never seriously discussed in the JOURNAL or in Division meetings.

The danger that presents itself now is that the profession may be led to put up a fight against a State service, relying on the assumption that the majority of its members are averse to it. My opinion is that the majority, if taken singly and offered whole-time appointments, will not think twice before accepting them, and that the few who are reluctant to do so will pay for their loyalty to a mistaken policy by losing their livelihood and incurring contumely. The disadvantages of a State service to the insured are

great; whether medicine itself will suffer is a debatable point; but there is no doubt whatever that for the medical practitioner a State service of whole-time appointments with regular hours, regular holidays, sick leave, and pensions, and one master instead of two or three thousand, offers a life of secured comfort such as no general practitioner at the present time enjoys. That most men already know this is proved by, as the latest example, the rush of first-class men for the £500 medical officerships offered by the Insurance Commission, and it requires but little propaganda on the part of those interested in the State service to convince the remainder. If the profession wishes to put up a fight against a State service, I trust it will not be led to put up a vain one in its own interest, but see that to win it must fight the battle of the insured, who will suffer, if any one does, from its institution.

Dr. Lauriston E. Shaw (London, W.) writes: Your readers will, I am sure, be interested to have the additional details furnished by Mr. Parker with regard to the proposal for a State Medical Service, of which he is such a prominent supporter. Mr. Parker cannot, however, be allowed to escape the issue which he himself raised with regard to the combination of free choice of doctor with a whole-time salaried service on the ground that there are other and bigger questions to discuss. There can be no bigger question in any discussion than the accuracy of the statements made in the support of the main proposition. Certain people, including Mr. Parker, are trying to persuade the public and the profession that a whole-time salaried medical service is an essential first step in any further progress towards the organization of medical practice. Some support it in Socialist papers on the ground that it will eliminate what they call the evils of free choice of doctor. Mr. Parker supports it in the medical press on the ground that all the advantages which the great majority of people believe to result from free choice of doctor can be combined with the whole-time salaried service. I had found several of Mr. Parker's disciples, both lay and medical, who supported his view that free choice and a salaried service were compatible for no other reason, as far as I could gather, except that Mr. Parker, a medical man, had told them so. They could not explain it, and I could not understand it. Fortunately we now have the explanation from Mr. Parker's own lips.

The free choice of doctor which some of Mr. Parker's colleagues in the State Medical Service are anxious to destroy, and which the majority of the public and the profession are anxious to maintain, is quite a different sort of thing from the free choice of doctor which Mr. Parker thinks he could combine with a salaried service. These two sorts of free choice are as different from each other as free love and matrimony. As soon as I put before Mr. Parker what are, I feel confident, regarded as the essential features of the "free-choice" system as generally understood, he is shocked at the brutal competitive element therein contained. One feels from his criticism of my remarks that, if he were pressed further, he would soon join with those of his colleagues who write in the Socialist press, and with a certain section of friendly society officials, in demanding the complete elimination of the evil thing called "free choice." On further consideration I feel sure that, holding these views and understanding more fully what nearly everybody means by the abbreviated expression "free choice of doctor," Mr. Parker will endeavour to avoid the suspicion of continuing to mystify his professional colleagues, and will admit that whatever may be the virtue of a whole-time salaried medical service, it cannot possibly be claimed for it that it affords free choice of doctor.

I believe the majority of your readers will sympathize with the beginning of Mr. Parker's letter in which he bewails defects in our present arrangements, and with the end, in which he describes the fair visions he has seen of multiplied hospitals working hand-in-hand with general practitioners, and constantly advancing the public health and the science of medicine. Most of us would willingly co-operate in all possible ways to bring about these desirable results. But no evidence whatever is put before us by Mr. Parker or any one else to show that the project for linking up hospital and general practice, and for perfecting in other ways the work of our profession, could only be attained, or would necessarily be attained, by the formation of a whole-time salaried service of medical attendants.

But I must not take more than my share of your space this week in maintaining the thesis that a whole-time salaried service will not bring us nearer to the medical millennium. For the moment I am concerned with demolishing the proposition that such a service could possibly afford anything worth calling free choice of doctor. With its other defects I should like to deal on another occasion if you will give me space.

Dr. J. S. Manson (Warrington) writes: The correspondence on a State Medical Service is unusually interesting, especially to those who, like myself, advocated the panel system as an intermediary step towards a State Medical Service, whose constitution would involve a thorough reorganization of the whole profession and its establishment on the basis and status of one of the higher branches of the Civil Service.

The responsibilities and the dignity of the profession demand no less than this, and it is to the credit of the panel system that it has prevented the establishment of local whole-time services in the various county areas throughout the country. Those who abhor (I think that is the right word) the idea of a State Medical Service should look round and view the present rapid growth of medical services under county councils and municipal corporations, and consider whether these bodies will stop at the appointments of medical officers of health, school doctors, and tuberculosis officers. Already some corporations, like Manchester and Liverpool, are paying the fees of general practitioners called to emergency labour cases by midwives, and this is likely to be only an initial step towards the appointment of official obstetricians. Not only has one to consider the medical officers appointed by these bodies, but there are, in addition, their various subordinates and assistants in the form of sanitary inspectors, school nurses, health visitors, and inspectors of midwives. Altogether they form a fairly numerous and important body of public servants.

The unchecked development of these local medical services will raise in time similar problems, and the same dissatisfaction as at present occurs in the asylum services. Already school medical officers are crying out that they are in a "blind alley."

A State Medical Service will no doubt have its own defects, but it is less likely to foster the vices of nepotism and wire-pulling than small local services. Its creation would certainly establish order and economy, and perhaps efficiency, where at present there exists much confusion and overlapping. The opponents of a State Medical Service write sneeringly of officials; but how many have we now? There are medical officers of health, whole-time and part-time; school doctors, whole-time and part-time; Poor Law medical officers, whole-time and part-time; vaccination officers and factory surgeons; in fact, a very large proportion—probably near 7,000 of the medical men in this country outside the army and the navy—are already officials more or less connected with the State. If this number were doubled, and the 14,000 employed as whole-time officers, it would probably suffice to meet the medical needs of the nation from the State point of view.

The question of free choice of doctor is largely a factitious one, and several correspondents have already commented on the apathy of the people to exercise a choice under the panel system. In towns there would be little difficulty in allowing a limited choice to those who had strong "faith" in some particular doctor; but, after all, the chief attribute of a doctor in the popular estimate is propinquity, and this attribute can easily be acquired by the State doctors living in the district to which they are appointed. Those who oppose a State Medical Service should take comfort in the fact that no State service will ever abolish private practice in medicine. The two systems can exist and develop together; but the present hybrid series of systems should no more exist than the old method of assisting the regular navy in war by privateers.

Dr. Ferdinand Rees (Wigan) writes: I hardly like asking for more of your valuable space, especially as there must be so many of our members who must desire to

express their views on this important question. But I do not think it is to the advantage of good discussion that important points should be overlooked. I think it will soon be agreed that too much importance is being given to "free choice of doctor." In considering the good of the profession, too much stress cannot be laid on the importance of "time off and time on." A doctor ought to have some time which he can absolutely claim as his own. The difference that such an arrangement would make in our lives is very great. This great reform can hardly be brought about except by a State Medical Service. Pensions also are worthy of great consideration. The lay control bogie needs careful examination. Some members seem to me always to be hankering after a medical priesthood with medical mysteries. The day for that sort of thing has gone past.

In the future the community will insist, and quite rightly I believe, in some form of lay control over medical organization. This will probably be something of the character of our hospital boards and Insurance Committees. There will naturally be a Minister of Health in supreme control and responsible to Parliament.

As far as the patients are concerned, most of the evils connected with Poor Law and other State services have been allowed to exist simply owing to this lack of representation of the patients on the boards of management.

Dr. S. J. Ross (Bedford) writes: No reflecting member ever takes serious notice of people who make wide, sweeping assertions without adducing a grain of evidence in support. Therefore, the assertions attributed to Dr. Preston King and Miss Margaret Douglas will perturb nobody. Nevertheless, lest they should regard silence as giving consent, I may point out some of the work which I have done this year for members of a comparatively small panel list:

Refraction cases (headache), 7 (5 corrected, 2 emmetropic).
Bacteriological examination of throat "sweeps" in cases of tonsillitis, 10.
Aspirations of pleura for pleural effusions, 2.
Examinations of urine in cases of lumbago, and patients whose symptoms might point to renal complications, 18.
Drainage of ilio-psoas abscess, 1.
Ligature of cut radial artery, 1.

Miss M. Douglas is asserted to have said that "the panel doctor did nothing but minor treatment, which practically was little better than first-aid work." Not, it will be noticed, the panel doctors of any special district—her assertion includes all panel doctors. Mine is no exceptional experience. Dr. Preston King is alleged to have stated that the Act "only supplied people with a bandage and a bottle of medicine." This is a travesty of fact. The Act supplies skilled medical attendance and the necessary dressings for surgical cases, as well as the bandage; and if the bottle of medicine cures a medical ailment which is capable of being cured, or improves the general condition of patients suffering from incurable diseases, or relieves pain, surely neither the patient nor Dr. King has ground for complaint.

Such statements may appear humorous, and tickle the ears of the groundlings, but they are most unjust to the medical men who are conscientiously doing their work, even though they vigorously opposed the bill becoming law.

Medical Certificates.

Dr. Maurice Jacobs (Hull) writes: In your article on the above subject in the Journal of February 21st, as well as in letters that have appeared, no reference is made to a point which should prove of great importance when the time comes for the Association to defend the profession against the charge of permitting excessive claims for sickness benefit under the Insurance Act. I mean the memorandum dated September, 1913, issued by the National Health Insurance Commission (England) to all the practitioners on the panels throughout the country. In this document we are informed that under no circumstances must we antedate or post-date a certificate, but that the date must be that on which the certificate is given. On receipt of these tidings I consulted a friend whose opinion I value, and he told me that, like most official documents, it did not mean exactly what it said; but in spite of this testimony my attitude towards the granting of certificates has been perceptibly modified.

Let me point out how the regulation works in practice. In the old days of club practice it was customary (I speak of my personal experience only) to postpone the granting of certificates in apparently trivial cases. If the patient soon recovered (as he generally did) he suffered no hardship and soon returned to work, and the society's funds were conserved. If the illness were protracted I, with the approval of the society, ante-dated the certificate, and the patient did not forfeit one penny of his sick pay. Under the regulation of the Commissioners the doctor is placed in an awkward dilemma. If he refuse a certificate in a case of incapacity from a trivial cause, and if recovery be unexpectedly retarded, there will in all probability be a breach in the harmonious relations between doctor and patient, and the strictures of the latter, robbed of a portion of the sick benefit which is his due, will be quite justified.

On the other hand, if he should grant the certificate, he runs the danger of falling into the category which Dr. Keay in his letter denounces by implication as dishonourable. It is an open question whether the men whom Dr. Keay holds up to reprobation are not precisely those who are most conscientiously carrying out the regulations of His Majesty's Commissioners. In my opinion, the latter have blundered badly in this matter, and it will be the duty of the Association, when the time comes, to see that the responsibility is brought home to the right quarter.

Abuse of Sick Benefit.

Dr. J. Batteson (West Ealing, W.) writes: After a year's working of the Insurance Act certain matters of importance may be noted.

Without referring to minor irregularities, those persons who seek to abuse the privileges of the Act may be arranged in classes:

1. The malingerers who deliberately seek to exploit the Act.
2. Those constitutionally delicate who frequently want "screwing up" and are unfit for continuous work.
3. Those whose morbid conditions arise from want of food.
4. Those out of situations who seek to bridge over the difficulties of no wages by going on the funds.

The ingenuity of the latter sometimes excites admiration, at others contempt.

Recently one patient, whose only complaint was that she had pain on passing water, requested me to put her on the funds. As I declined to do so, she expressed herself with much freedom on the "advantages" of the Insurance Act, and opined that "the whole thing" wanted showing up. On further investigation, I found that she had left her situation and had calculated on "going into retreat" on insurance allowance.

Another patient, also a female, had managed to keep on the funds for two months, in spite of several warnings from me that I was not quite satisfied with her statements about herself. At last, with such remnants of conscience as I had left, I declined to certify for her any longer. I then learnt that this was the way the poor were treated. That, after all she had contributed out of her hard-earned savings on the promise that in her need she would be provided for, she was now refused what she was entitled to. I also learnt some other things about myself. I ventured to suggest to her that her loss in the transaction with the Commissioners was not so great as it appeared to be, for, on a mental calculation, I found that since she had been on the list the whole of the money paid by her and her mistress together amounted to about 14s., whereas she had received over £2 in sick pay.

The doctor who seeks to hold the scales fairly between his panel patients and their approved societies has a most invidious task. To offend his panel patients is often to injure his private practice. If he could refer certain cases about which he has conscientious scruples to an outside authority he would be saved much trouble and the approved societies much money. There is need of a medical referee—not a local man—to whom such patients as above indicated might be referred, and whose decision should be final as to the continuance of the persons referred to on the funds.

Distribution of Funds available for Medical Benefit of Unallotted Panel Persons.

Dr. K. Mayoh Gibbins (Parkstone) writes: It seems to me that the letter of Dr. W. Coode Adams in the Journal of January 24th hits the right nail on the head. His contention that it is all a question of insurance, and that those medical men who guarantee the medical benefit should receive the premiums in full is perfectly correct. It is obviously no longer a question of insurance if the medical man is only to be paid when the patient comes to him for treatment; surely he is entitled to take the good with the bad, otherwise the 7s. a year premium is grossly inadequate.

It also seems to me that if a part of the funds is to be used as a set-off to the medical bills of those of the insured who do not choose to avail themselves of the medical benefit part of the Act, the non-panel men will be deriving an unfair advantage—they are to be paid out of the fund, but object to the restrictions of the Act, such as keeping of records, and also they can pick and choose whom they will attend. On the other hand, the panel doctor has to keep records, he cannot pick and choose, and, further, if any of the "private" insured patients get tired of running up bills, the panel doctor has to take them on his list, although he has not received any of the insurance premiums when they were well.

Panel *v.* Non-panel Courtesies.

Dr. James Cameron (Edinburgh) writes: In his interesting report on his year's panel work, Dr. Michael Dewar remarks "that a non-panel doctor in the guise of the family doctor was always ready to respond to the call of the insured person, sometimes without notifying the panel doctor that such a call had been made."

Now, while such a courtesy should not be neglected, can Dr. Dewar tell me if the panel men in Edinburgh, after the great tergiversation, notified their non-panel *confrères* of the fact when they had acquired patients who had previously been on their colleagues' lists, and whether he intends, when the allotment of unallotted patients in Edinburgh comes on, to notify, or have notified, to non-panel men, that their patients will after that date have been conveyed to certain individual panel men?

Federation of Panel Committees.

Dr. A. C. Farquharson (Spennymoor, Durham) writes: Permit me to draw the attention of members of Panel Committees to the necessity for some form of combination, association, or federation of committees which will at least insure identity of aim and purpose when subjects of vital interest to panel practitioners come to be discussed. The meeting to be held shortly in London will afford an opportunity of saying many things which one may not care to write, but I am convinced that the necessity for strong combined action becomes daily greater.

One may be inclined to smile at the forceful verbiage which we have week by week from members of our own profession in condemnation of the panel system. One may console oneself with the feeling that no sensible Legislature would ever make law on such fanciful hypotheses. The smile and the consolation would both be justifiable if the matter were limited to the word-pictures of our professional brethren, but the matter is not so limited. Strong lay bodies, avowedly hostile not only to the panel system, but also to the interests of the medical profession, are springing up, and with one or two of these an association of Panel Committees will have to reckon. I notice my friend Dr. Dewar refers to one such body in his letter published on February 21st. It is called the Faculty of Insurance. The other day a meeting of this body was held in a large northern city, when a very influential lay gentleman had a good deal to say about the shortcomings of the medical profession, and gave to the meeting what he regarded as very condemnatory figures in the matter of the notification of tuberculosis. To show how much keenness is displayed in criticism of our work, this gentleman had furnished himself with figures pertaining to the death-rate from tuberculosis in the county in question for the year 1913; he multiplied this figure by four, and assumed that the resultant figure would be a fair measure of the number of cases that ought to have been notified during the year. The figure, however, was far in excess of the actual number of notifications, and the inference was immediately established that the doctors were careless, lazy, or indifferent, and therefore did not trouble to notify.

There is another lay body, however, to which I would wish to draw attention, as it seems to me to do exactly for the friendly society element what I should wish our new federation to do for the panel element of Insurance Committees. It is called the "National Association of Insurance Committees." It has received in some way or another the sanction or recognition of the National Insurance Commission. It has its Executive Council and a complete organization ready to watch the operation of the Act throughout the country. The chairman of this association, a gentleman whom I would exonerate of anything suggestive of hostility to the medical profession, told me the other day that 88 per cent. of the approved societies are represented on the Executive Council. A body of this nature seems to call for a parallel body representative of the medical faculty. It is not necessary to assume that hostility must of necessity always exist between two bodies of this kind; on the contrary, it is for one to hope that in co-operation and in friendly conference it may be possible for each to help the other as difficulties arise.

There is no use in shutting one's eyes to the fact that some matters are capable of fair and reasonable rearrangement under the Act. Everything that is being done at present in virtue of the Act is, in my view, far removed from perfection, and if anything approaching this is ever to be arrived at it will be best achieved by friendly exchange and mutual adoption of view of two bodies having the standing of a National Federation of Panel Committees or Association of Insurance Committees.

Inquiries by Approved Societies.

We have received from a doctor on a panel the following correspondence. It may draw attention more particularly to certain sections of the Insurance Act, 1911, that are bound to come into prominence more often as time passes:

February 10th, 1914.

X. Y. Z.

Dear Sir,—We have received a claim from the above-named insured person, the medical certificate on which, given by yourself, shows him to be suffering from "periostitis."

As you will be aware, in one or two cases—namely, if the condition were caused by injury, or, say, by "syphilis," we should be debarred from payment of benefit by the Act of Parliament and our authorized rules.

We should be exceedingly obliged if you could let us have a word as to the cause, at the foot of this letter, and in the enclosed stamped addressed envelope.

Thanking you in anticipation,

Yours truly,

.....

Reply. February 13th, 1914.

Dear Sir,—I am in receipt of your letter dated the 10th inst. You state that I am aware that if the condition of "X. Y. Z." were caused by injury, or, say, by syphilis, you are debarred from payment of benefit by the Act of Parliament and your authorized rules.

I am not aware of any such thing.

As to your authorized rules I know nothing.

With regard to the Act of Parliament, unless your society could prove that the disease syphilis had been caused by the misconduct of the person claiming the benefit, I take it that your refusal to pay the benefit because your member had syphilis would render you liable to an action at law, besides one possibly for libel. You may have heard of a person having syphilis as a result of the misconduct of another [Sec. 14 (4)].

With regard to injury, you are not debarred from payment of benefit because the disease is a result of injury. In many cases you can recover the payments made if the injury comes under the Employers' Liability or similar Acts, or is one actionable at common law [Sec. 11 (3)]. You may have heard of a person having an injury not included in above—for example, cycling.

Nothing in the Act or Regulations requires a panel doctor to assist an approved society in a roving inquiry having reference to the morality of one of its members. The authorized certificate having been given to the member for such use as he thinks fit, any such inquiries should be made of him.

Yours faithfully,

.....

Concluding Letter.

February 16th, 1914.

X. Y. Z.

Dear Sir,—We are in receipt of your letter of the 13th inst., and thank you for your remarks respecting this person.

We shall have to make fresh inquiries in this case, and if satisfactory information is not received we shall have to arrange for our member to be seen on our behalf by a medical referee.

Yours truly,

.....

INSURANCE ACT IN PARLIAMENT.

Insurance on a Voluntary Basis.

On Wednesday evening, February 25th, a debate took place on a motion brought forward by Mr. Hamilton, the member for Altrincham, asking for the appointment of a Committee to inquire into the working of the National Insurance Act, and particularly to consider whether it would not be possible to substitute a voluntary for the present compulsory basis.

The mover and seconder of the resolution brought forward various complaints in connexion with the administration of the present benefits, and said little on the question of the possibility of the substitution of a voluntary basis for a compulsory one.

Mr. Ramsay Macdonald, the leader of the Labour Party, who followed, described the proposition as entirely impracticable, and not worthy of being made the subject of a reference to a Parliamentary Committee. He expressed the hope, however, that, before the time of the first triennial valuation, a committee would be appointed to make a full inquiry into the working of the Act in various respects, amongst which he mentioned the question of medical benefit.

Mr. Worthington Evans expressed his belief in the possibility of establishing a scheme on voluntary lines, but did not bring forward many arguments to show on what this conclusion was based. For the most part he dealt with the statements which have been made as to the financial position of some societies, arising particularly out of the sickness claims of women members, especially married women, and he urged that this question should be the subject of immediate inquiry. He asked that the Government should give the House the information in its possession as to the financial position of these societies, and state what it proposed to do in connexion with the matter.

The Chancellor of the Exchequer, in reply, pointed out that under a voluntary scheme large numbers of those who are at present insured (at least probably four or five millions) would drop out of insurance altogether, and would thereby revert to the position existing before the Act, in that they would have no means of assistance save through the Poor Law. He elicited from Mr. Bonar Law a statement to the effect that the idea of the Opposition was that contributions should be compulsory on the employer for all his workpeople, whether they were insured or not, but should be voluntary for the employed. He announced that he proposed before the valuation to have an inquiry into the working of the Act with regard to various matters, some of which had been mentioned by Mr. Ramsay Macdonald. With regard to the granting of certificates and the working of medical benefit, he said that great difficulties had been experienced at first, on account of the large number of medical men who had come in unwillingly, but added that there was full evidence to show that during the last six months medical men generally were co-operating heartily in the working of the Act. They were exercising more vigilance in the matter of their certificates, and he had every reason to believe that this improvement would continue.

Mr. Bonar Law concluded the debate with a short speech in which he contended, whilst not committing himself to any definite opinion, that there was sufficient evidence in favour of the possibility of the establishment of insurance on voluntary lines to justify the setting up of a committee to inquire into it. He dealt with the financial position of some of the societies, and urged the Chancellor to give him definite information on the point, undertaking to put down a question.

The net result of the debate appears to have left things much as they were, and the suggestion for the substitution of a voluntary basis cannot be said to have made any advance.

One important result, however, was the undertaking by the Government to have a special inquiry into the working of the Act in various respects before the first valuations were completed, apparently in a year or eighteen months.

Insurance Fund: Receipts and Payments.

In reply to Lord Henry Cavendish-Bentinck, Mr. Wedgwood Benn has circulated the following statement as to the total receipts of the Insurance Fund from various sources up to December 31st, 1913, with details as to the manner in which the total has been disposed of:

	England.	Scotland.	Ireland.	Wales.	United Kingdom
	£	£	£	£	£
Total receipts	26,661,000	3,668,000	1,335,000	1,740,000	33,424,000
Issues to approved societies for:					
Benefits	5,916,000	829,000	427,000	433,000	7,605,000
Administration ...	2,859,000	401,000	206,000	210,000	3,675,000
Issues to Insurance Committees for:					
Medical benefit ...	3,772,000	496,000	—	234,000	4,502,000
Sanatorium benefit...	647,000	85,000	29,000	40,000	801,000
Administration ...	204,000	27,000	9,000	12,000	252,000
Payment to deposit contributors in sickness and maternity benefits	15,400	1,300	400	1,000	18,100
Issues to societies for investment or invested on their behalf	905,000	8,000	—	24,000	937,000
Amounts invested by Commissioners through the National Debt Commissioners	12,100,000	1,785,000	637,000	741,000	15,263,000

Approved Societies (Deficiencies).

Mr. Godfrey Locker-Lampson asked the Prime Minister whether he had received any reports as to the probability of deficiencies at the first valuation of approved societies, which deficiencies would entail levies on or reduced benefits for the members.—The Prime Minister said that he had no personal knowledge of the subject, but he understood that any information at present available was necessarily so incomplete as to preclude the possibility of accurate inferences or reliable judgements being based on it.

Mr. Worthington Evans: Would the right hon. gentleman inquire of the National Insurance Commissioners whether they had not already realized that at least 100 societies were about to go into deficiencies, and that they had called upon these societies to make claims on their reserve funds?—The Prime Minister said he could not at the moment add anything to what he had already said.

Medical Benefit.

Removals.

Mr. Rupert Gwynne asked the Chancellor of the Exchequer if his attention had been called to cases in which insured persons, on moving their residence, had been refused medical treatment by panel doctors on the grounds that they had recently had a touch of influenza and were therefore in need of a bottle of medicine; whether doctors, in so acting, complied with the regulations which governed the administration of the sickness benefit under the National Insurance Act; and if so, what steps insured persons were to take to obtain advice and medicine if all the local doctors on the panel acted similarly.—Mr. Benn said that no cases of the kind referred to had been brought to his notice. Doctors on the panel had, of course, a right under the National Insurance Act, 1911, to refuse in the first instance to accept an individual insured person, but arrangements had been made whereby a doctor might be obtained by any insured person so refused.

Panel Doctors.

Mr. Butcher asked the Secretary to the Treasury whether his attention had been called to the Form 110/I.C., recently issued by the Insurance Commissioners for England, and inquired as to the proceedings in connexion therewith.—In reply, Mr. Benn said: Under the Regulations insured persons who had selected or been assigned to a doctor in the course of last year were deemed to have selected that doctor for the current year, unless they gave the notice required of their intention to make a fresh selection. The advice in question only referred, therefore, to insured persons who were not already on the list of a doctor or approved institution, and who had not been allowed or required to make their own arrangements.

Accumulated Funds.

Colonel Greig asked the Secretary to the Treasury whether the accumulated funds in the hands of the Insurance Committees in Scotland, arising from payments for medical benefit for insured persons who had not yet or did not desire to claim a panel doctor, were to be distributed among the existing panel doctors or to be otherwise applicable, and, if so, how; whether any regulation had been laid down in London or elsewhere for the application of such funds; and whether such regulation was applicable in Scotland.—Mr. Wedgwood Benn said that both in Scotland and elsewhere in Great Britain the whole of the sums available to a committee in respect of the responsibility for the treatment of those insured persons (including the persons referred to in the question) who had not been allowed or required to make their "own arrangements," and who had not yet selected an approved system or institution, were payable, under the regulations and the agreements entered into between committees and doctors, to the doctors on the panel upon whom that responsibility devolved.

London Insurance Funds.

Mr. F. Hall asked whether the Treasury Estimates of the cost of treating insured persons had been exceeded, and if there were enough funds in the case of the London Insurance Committee to give proper medical treatment to insured patients; and if it had been suggested to the London County Council that half of the deficiency should be met out of the rates.—Mr. Benn said that under the arrangements entered into between Insurance Committees —including the London Insurance Committee—and the doctors on their respective panels no deficit could occur upon the funds available for defraying their liabilities to those doctors, and the rest of the question did not, therefore, arise.

Sir Henry Craik asked whether the amount accruing in respect of insured persons who had not chosen a doctor, and had not been assigned to any doctor on the panel, fell to be paid to the doctors who had joined the panel; and why such amount had not been distributed accordingly by the London Insurance Committee.—Mr. Wedgwood Benn, as regards the first part of the question, referred to his reply to Colonel Greig above. With regard to the second part of the question, it was understood that the matter of the distribution of funds was receiving the attention of the London Insurance Committee.

Panel Chemists.

Mr. G. Locker-Lampson asked whether the Secretary to the Treasury was aware that panel chemists in several districts, particularly in Manchester, Salford, and Scotland, were dissatisfied with their position and prospects of full payment of their accounts under the National Insurance Act; and, if so, what the Government proposed to do to avoid the danger of insufficiency or inferiority of medicines supplied to the public.—Mr. Benn said that the Secretary to the Treasury was not aware of any such general dissatisfaction in Scotland. The chemists on the panel in Manchester and Salford expressed dissatisfaction at the arrangements in force in those areas during 1913, but it was understood that they had renewed their agreements for the current year under special arrangements for their protection against extravagant prescribing. In reply to the second part of the question, the regulations and the agreements which doctors and chemists had entered into provided ample safeguards both as regards the quality and the sufficiency of the supply of medicines.

Drug Fund in Manchester.

Mr. G. Locker-Lampson asked whether there was a deficiency in the insurance drug fund in the Manchester district to the extent of about £16,000; and, if so, whether, in consequence, chemists on the panel had only been paid 50 per cent. of their accounts during the three latter months of 1913, and only about 27 per cent. for December, although it was one of their heaviest months; and what the Government proposed to do in the matter.—Mr. Benn replied that the total sums already paid, or in course of being paid, by way of advances amounted to approximately 60 per cent. of the total amount of the accounts presented for the year. It was not, however, possible to estimate what further sums would be payable until those accounts had been scrutinized in accordance with the Regulations and the total sums available to the Insurance Committee for the purpose had been finally ascertained.

SANATORIUM BENEFIT.

Statistics.

In reply to Mr. Locker-Lampson, Mr. Benn announced that a return was being prepared and would shortly be laid before the House as to the number of persons who had received sanatorium benefit; to the ways in which it had been provided, and other matters of like character.

It was also announced by Mr. Montagu, in reply to Mr. Denniss, that he would circulate a statement showing the amount of money which had been spent out of the £1,500,000 provided in the Finance Act of 1911 for the provision of institutions for the treatment of tuberculous persons.

In reply to the Marquis of Tullibardine, who asked how many persons had applied for sanatorium benefit in the county of Fife since October 15th, 1913, and how many of these had received it under the provisions of the National Insurance Act, including any applicants whose applications were standing over at the date mentioned, Mr. Benn said the answer to the first part of the question was forty-eight; five applications were outstanding at the date mentioned, and forty-nine persons had received treatment since that date.

Vaccination.

Mr. Thomas asked the First Lord of the Treasury whether the Insurance Commissioners had taken any steps to safeguard patients whom they were sending to sanatoriums in Derbyshire against the infringement of the provisions of Subsection (2) (*e*) of Section 14 of the National Insurance Act by the managers of those institutions; and whether he would prohibit the payment of any money by the Insurance Committees to any sanatorium in Derbyshire the managers of which might refuse to respect conscience in the manner provided in the above-mentioned subsection.—Mr. Benn stated that the duty of making arrangements to provide treatment for tuberculous insured persons in institutions or otherwise, and of considering cases with a view to recommendation for such treatment, was by the Act laid upon Insurance Committees, not upon the Insurance Commissioners. The arrangements made by Insurance Committees required the Commissioners' approval, and in no case did they impose any obligation upon insured persons to submit to vaccination as a condition of their being recommended for treatment.

County Schemes.

In reply to Mr. G. Locker-Lampson, Mr. Herbert Samuel said that the great majority of county councils and councils of county boroughs had submitted schemes for the provision of institutional treatment which would be available for all classes of the community. Six county councils out of fifty, and seven councils of county boroughs out of the total of seventy-five, had not yet submitted proposals, and the Local Government Board was in communication with those authorities. He understood that proposals would shortly be submitted by the London County Council for providing additional sanatorium accommodation. In a further reply, relating to the provision for advanced cases, Mr. Samuel said that in some districts there was insufficient accommodation at present for advanced cases of tuberculosis, but county and county borough councils generally were taking steps to provide additional accommodation for such cases as part of their schemes for the institutional treatment of the disease in all classes of the community. The question was receiving his immediate attention.

In reply to Sir Randolph Baker, Mr. Samuel said that county councils were providing the necessary sanatorium accommodation in various ways. Nine county councils had already acquired existing buildings or provided new buildings, eight had acquired beds at existing institutions, and were arranging for extensions to be provided for the use of the council, and ten had purchased, or proposed to purchase, sites for the erection of new buildings. The other councils which proposed to provide sanatorium accommodation as part of their schemes had not yet definitely decided in what way the accommodation should be provided. Only seven of the councils had limited their schemes for the present to dispensary treatment.

Women.

Approved Societies.

Mr. Godfrey Locker-Lampson asked the Secretary to the Treasury whether one of the consequences of a threatened deficiency of approved societies under the National Insurance Act was the refusal of benefits by some societies to women who were certified as incapable of work owing to pregnancy; and, if so, what steps the Commissioners and the Government were taking in the matter.—Mr. Benn said that the societies were responsible for determining, in the first instance, whether an insured person claiming sickness benefit satisfied the conditions of Section 8 (1) (c) of the Act of 1911 of being rendered incapable of work by specific disease or disablement. The Commissioners had no reason to think that societies were refusing benefit in cases where they considered that this condition was satisfied.

Worcestershire.

Mr. Godfrey Locker-Lampson asked whether the attention of the Secretary of the Treasury had been called to a report of a Worcestershire Insurance Subcommittee on the sickness in Cradley, in which statements of Mr. Appleton, secretary to the General Federation of Trade Unions Approved Society, were admitted to the effect that the sickness-rate amongst female workers in the district was enormous, and was between 6 and 7 per cent., or three times the normal; and whether, if this rate was continued until the first valuation, it would entail a very heavy levy on, or a reduction of benefits to, the compulsorily insured members.—Mr. Benn said the Secretary of the Treasury had seen the report, but it did not appear that the figures had been tested. In any case, since approved societies or branches of societies, and not geographical districts, were the units for valuation purposes, the benefits of insured persons resident in the Cradley district would be governed after the first valuation (subject to the provisions of the Act for pooling surpluses and deficiencies) by the general experience of the different approved societies or branches of which they had respectively become members.

Sickness Claims.

Mr. G. Locker-Lampson asked whether attention had been drawn to the statement of Mr. Cross, the secretary of the Amalgamated Weavers' Association Approved Society—a society with over 65,000 women members—who said that his society had overspent the allowance per the actuaries' estimate of 2s. 2d. per female per quarter by £10,500 for the half-year ending July 13th, 1913, and had not found themselves in a much better position for the half-year ending January 13th, 1914; whether these facts were admitted by the Government; and, if so, what they proposed to do in that state of affairs, which adversely affected many thousands of compulsorily insured persons.—Mr. Benn said that attention had not been called to the statements mentioned. Speaking generally, it was impossible to say, in the case of women members of approved societies, whether the actuarial expectation had been exceeded, until the age distribution and the condition of the members as to marriage had been ascertained, and also until the accounts of the societies had been made up so as to show their actual experience for at least the first year of benefits.

Mr. G. Locker-Lampson asked whether the Government would pay a grant to those members whose benefits were reduced owing to no fault of their own, but on account of deficiencies in their societies.—Mr. Benn thought no statement on that subject could be made until it had been ascertained whether the facts as stated or any such statements were correct.

Hospitals and Asylums.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, GLOUCESTER.

The annual report for the year 1912 for this large private asylum contains the report of the Committee and that of the Medical Superintendent, Dr. James Grieg Soutar, from which we see that the average daily number resident remained at the average of the last four years, namely, 149, which was also the number resident on the last day of 1912. This number does not include 4 voluntary boarders under treatment during the year.

In all 30 certified patients were admitted, of whom 22 were direct admissions, and of these latter, in 6 the attacks were first attacks within three, and in 3 more within twelve months of admission; in 7 not-first attacks within twelve months; and in 6 the attacks, whether first or not, were of more than twelve months' duration on admission. There were no congenital cases, such being ineligible for admission to this institution. The direct admissions were classified according to the forms of mental disorder into: Recent mania, 4; recent melancholia, 7; primary dementia, 5; delusional insanity, 3; senile dementia, general paralysis and volitional insanity, 1 each.

As to causation, the numbers dealt with are too small to be of independent value, but it may be mentioned that the chief were various bodily affections and mental stress, whilst an insane heredity was ascertained in 8 and a neurotic heredity in 2 more. During the year 11 were discharged as recovered, giving a recovery-rate on the direct admissions of 50 per cent., or of recoveries in and on the direct admissions of 40.9 per cent.; also 2 were discharged as relieved and 8 as not improved, whilst 8 died. The deaths, which gave a death-rate calculated on the average number daily resident of 5.3 per cent., were due in 2 cases to senile decay, and in single numbers to lobar pneumonia, malignant disease of bladder, general paralysis, chronic Bright's disease, pyelitis, and poisoning with carbolic acid. This last case was that of a lady who committed suicide whilst at home on trial. The general health of the patients during the year was good, and no use of seclusion or mechanical restraint was made in any case.

BOOTHAM PARK HOSPITAL FOR THE INSANE, YORK.

After thirty years' tenure of office, Dr. Hitchcock retired from the medical superintendentship of this institution at the close of 1912. We are glad to note that the Committee recognized the value of his services by granting him a substantial pension, which we cordially hope he will long enjoy. Dr. Hitchcock was succeeded by Dr. G. R. Jeffrey, late Assistant Physician at the Crichton Royal Institution, Dumfries.

The annual report for 1912, submitted by Dr. Jeffrey, shows that on January 1st, 1912, there were 111 certified patients on the hospital registers, and on the last day of the year 114. The total cases under care during the year numbered 150, and the average number daily resident was 111. Also 4 voluntary boarders were in residence on January 1st, 5 were admitted during the year, 6 were discharged, and 3 remained in residence at the end of the year. During the year 39 certified cases were admitted, of whom 22 were direct and 17 indirect admissions. Of the direct admissions, in 8 the attacks were first attacks within three, and in 8 more within twelve, months of admission; in 3 not-first attacks within twelve months', and in the 3 remaining the attacks were of more than twelve months', duration on admission. The direct admissions were classified according to the forms of mental disorder into: Recent mania, 3; chronic, 1; recent melancholia, 10; recurrent, 1; delusional insanity, 3; confusional insanity, 2; and insanity with gross brain lesions, 1.

As to causation, alcohol was assigned in only 2, critical periods (13) and mental stress (14) being the principal assigned factors. An insane heredity was ascertained in 4 and a neurotic heredity in 1. During the year 16 were discharged as recovered, giving a recovery-rate on the direct admissions of 72.7 per cent., or of recoveries in and on the direct admissions of 54.5 per cent.; also 6 were discharged as relieved and 7 as not improved.

During the year 7 died, giving a death-rate on the average number resident of 6.3 per cent. All deaths were due to natural causes, and none calls for special mention. The general health throughout the year is stated to have been "extremely good," and there were no cases of zymotic disease.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Books Needed to Complete Series.

The Librarian will be glad to receive any of the following volumes, which are needed to complete series in the Library:

American Association of Genito-Urinary Surgeons. Transactions. 1906.
American Climatological Transactions. Vols. 1, 4, 5, 6.
American Dermatological Association Transactions. Vols. 5, 7, 8, 11, and 29.
American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-3; vols. 14, 15, 1847-8; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-5; vol. 59; or any parts of these vols.
Society of Tropical Medicine and Hygiene, London, Transactions. Vol. 2.
South African Medical Journal. February and April, 1895. Titles, Vols. 3 and 4.
United States Department of Agriculture, Bureau of Animal Industry. Reports 1-7, 10-14.
United States Hygienic Laboratory Bulletins. Nos. 3, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 24, 29, 43.
Virchow's Archiv. Vols. 1-150.
Watt. Bibliographia Britannica, 4 vols., 1824.
Yearbook of Pharmacy, 1912.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

ALFRED COX,
Medical Secretary.

February 11th, 1914.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Drs. Ernest C. Hadley (Burbury Street, Lozells, Birmingham) and Bernard J. Ward (141A, Great Charles Street, Birmingham) give notice that an ordinary general meeting of the Central Division of the Birmingham Branch will be held in the library of the Medical Institute, Edmund Street, on Wednesday, March 25th, at 3.30 p.m. Business: To elect four Representatives for the Annual Representative Meeting. To consider and pass, if approved, several recommendations of the Executive Committee, of which due notice will be given on the circular convening the meeting. NOTE.—Nominations for Representatives in writing must be in the hands of the Honorary Secretary not later than Monday, March 2nd, that the names of those nominated may be printed upon the circular convening the meeting.

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.—Dr. J. Dewar Robson, Honorary Secretary (Dalston House, Maxwelltown, Dumfries), gives notice that a meeting of the Division will be held in the Royal Infirmary, Dumfries, on Tuesday, March 10th, at 3 p.m. Business: Representative's Report. Consideration of letter from Scottish Secretary, British Medical Association, in relation to juvenile societies and terms of remuneration. Any other competent business. A clinical meeting will be held after the business, and cases and specimens will be submitted. An adjournment for dinner will be made shortly before 5 p.m. to the Royal Restaurant, where Dr. Rodger will be the guest of the members, who will render him a suitable acknowledgement for his services to the Division in the past. Members intending to be present at the dinner will please notify same to the Secretary not later than March 7th.

KENT BRANCH: ISLE OF THANET DIVISION.—Dr. B. H. Palmer, Honorary Secretary (13, Albion Place, Ramsgate), gives notice that the next meeting of the Division will be held at the Granville Hotel, Ramsgate, on Thursday, March 5th, at 3.45 p.m., Dr. Street in the chair. (Tea.) Dr. Herbert French, of Guy's Hospital, will read a paper entitled Some Further Therapeutic Points. Members are especially asked to make an effort to attend.

METROPOLITAN COUNTIES BRANCH CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a clinical evening of the Division will, by the invitation of Dr. C. F. Hadfield, be held at Manor Lodge, Upper Clapton, at 9.30 p.m., on Friday, February 27th, when cases and reports will be presented and discussed.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at the Walthamstow Hospital on Thursday, March 19th, at 4 p.m., when Mr. G. Bellingham-Smith, F.R.C.S., Obstetric Surgeon to Guy's Hospital, will read a paper on the Proper Use of the Pessary in the Treatment of Uterine Displacements.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119 East India Road, E.), gives notice that the next meeting of the Division will take place on Tuesday, March 3rd, at 4 p.m., at the Stepney Central Hall, Commercial Road, E., when Dr. Clive Riviere will give an address on The Use of Tuberculin.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—Dr. W. A. Milligan, Honorary Secretary (11, Upper Brook Street, W.), gives notice that a meeting of the Division will be held on Wednesday, March 4th, at 8.30 p.m., in St. James's Vestry Hall, Piccadilly. A discussion on the question of a State Medical Service will be opened by Mr. F. Lawson Dodd at 9 p.m. All members of the profession are cordially invited to be present.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, March 20th, from 3.15 to 6 p.m. Mr. J. Clay: The Diagnosis of Diseases of the Genito-Urinary Organs. Dr. A. Parkin: Empyema Thoracis. (Tea.) Professor H. B. Angus: The Treatment of Simple Fractures. Professor W. E. Hume: The Differential Diagnosis of Cases with a Splenic Enlargement. Mr. R. H. P. Orde: Hospital Management.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

THE accompanying diagram shows the prevalence of the principal epidemic diseases during the fourth quarter of last year. The fluctuations of each disease and its relative fatality, compared with the average in the corresponding periods of recent years, can thus be readily seen, except in the case of diarrhoea and enteritis among children under two years of age, for which the average mortality is not available.

Enteric Fever.—The fatal cases of enteric fever, which had been 29, 20, and 28 in the three preceding quarters, were 37 last quarter, and were 30 below the corrected average number in the corresponding period of the five preceding years. This disease showed the highest proportional mortality in Fulham, Stoke Newington, the City of London, Poplar, Lewisham, and Battersea. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 42, 35, and 56 at the end of the three preceding quarters, had declined again to 51 at the end of last quarter; 148 new cases were admitted during the quarter, against 86, 68, and 113 in the three preceding quarters.

Small-pox.—No death from small-pox was registered last quarter, and no case of this disease was under treatment in the Metropolitan Asylums Hospitals at the end of the quarter.

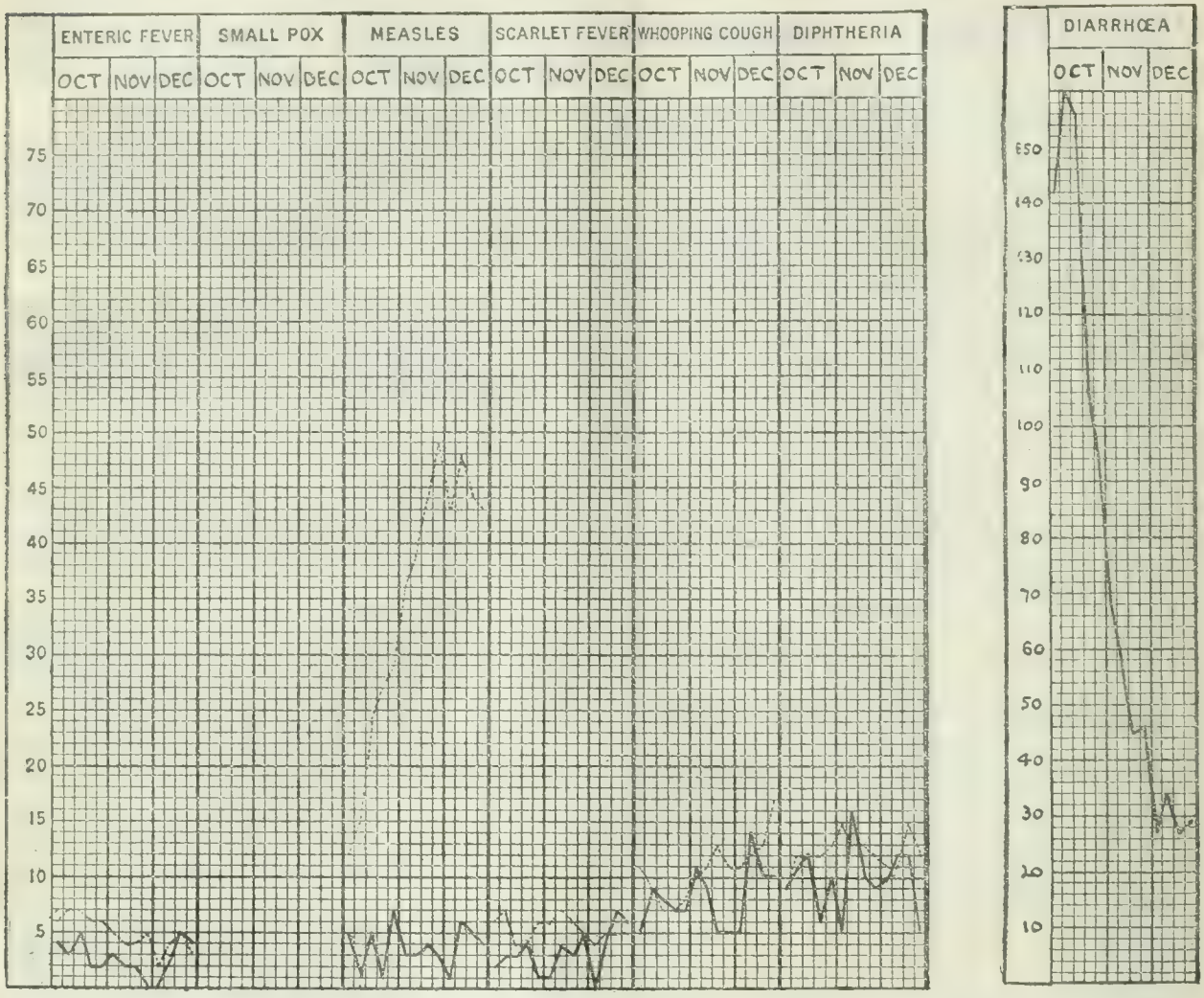
Measles.—The deaths from measles, which had been 844, 549, and 124 in the three preceding quarters, further declined last quarter to 52, and were 444 below the average in the corresponding period of the five preceding years. This disease was proportionally most fatal last quarter in Shoreditch, Bethnal Green, Southwark, Bermondsey, Battersea, Camberwell, and Deptford.

Scarlet Fever.—The fatal cases of scarlet fever, which had been 52, 41, and 47 in the three preceding quarters, further rose last quarter to 49, but were 30 below the corrected average number. Among the several boroughs this disease was proportionally most fatal in Paddington, St. Marylebone, Poplar, Southwark, and Camberwell. The Metropolitan Asylums Hospitals contained 3,810 scarlet fever patients at the end of last quarter, against 1,436, 1,579, and 2,552 at the end of the three preceding quarters; 7,113 new cases were admitted during the quarter, against 2,366, 2,573, and 4,203 in the three preceding quarters.

Whooping-cough.—The deaths from whooping-cough, which had been 300, 265, and 120 in the three preceding quarters, was 116 last quarter, and were 41 fewer than the corrected average number. The highest death-rates from this disease last quarter were recorded in Finsbury, Hampstead, the City of London, Shoreditch, Bethnal Green, and Poplar.

Diphtheria.—The fatal cases of diphtheria, which had been 115, 107, and 75 in the three preceding quarters, rose again last quarter to 135, but were 30 below the corrected average number. The greatest proportional mortality from this disease was recorded in Fulham, Stoke Newington, Shoreditch, Poplar, and Lewisham. The number of diphtheria patients in the Metropolitan Asylums Hospitals, which had been 901, 811, and 909 at the end of the three preceding quarters,

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FOURTH QUARTER OF 1913.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the five preceding years, 1908–12. Under the heading "Diarrhœa" are given the deaths from diarrhœa and enteritis among children under 2 years of age; the corrected average number of these deaths is not available.

had further risen to 1,099 at the end of last quarter; 2,281 new cases were admitted during the quarter, against 1,568, 1,341, and 1,624 in the three preceding quarters.

Diarrhœa.—The 1,027 deaths under this heading are those attributed to diarrhœa and enteritis among children under 2 years of age; measured in proportion to deaths registered during the quarter the mortality from this cause was greatest in Shoreditch, Bethnal Green, Southwark, Bermondsey, and Deptford.

In conclusion it may be stated that the aggregate mortality last quarter from these epidemic diseases, excluding diarrhœa, was nearly 60 per cent. below the average.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns, 8,453 births and 5,203 deaths were registered during the week ended Saturday, February 21st. The annual rate of mortality in these towns, which had been 18.4, 16.5, and 15.6 per 1,000 in the three preceding weeks, further fell to 15.0 per 1,000 in the week under notice. In London the death-rate did not exceed 14.2, against 18.0, 16.6, and 14.4 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.3 in Hornsey, 5.7 in Ilford, 6.2 in Southend-on-Sea, 6.6 in Eastbourne, 6.7 in Oxford, and 7.9 in Swindon to 20.6 in Gillingham and in South Shields, 21.0 in West Bromwich, 22.3 in Exeter and in Swansea, 27.3 in Bury, and 27.5 in Burnley. Measles caused a death-rate of 2.3 in Nottingham, 4.8 in Barnsley, 5.2 in Burnley, and 5.6 in Swansea; whooping-cough of 1.3 in Swansea, 1.7 in Rochdale and in Newport (Mon.), and 1.8 in Great Yarmouth and in Bury; and diphtheria of 1.3 in Norwich. The mortality from scarlet fever or from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 37, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 7 were recorded in Birmingham, 5 in Liverpool, 3 in South Shields, 2 in Rotherham, and 2 in Gateshead. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,599, 3,554, and 3,537 at the end of the three preceding weeks, had further fallen to 3,457 on Saturday, February 21st; 351 new cases were admitted during the week, against 460, 379, and 428 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,167 births and 727 deaths were registered during the week ended Saturday, February 21st. The annual rate of mortality in these towns, which had been 20.0, 18.4, and 16.9 per 1,000 in the three preceding weeks, further fell to 16.5 in the week under notice, but was 1.5 per 1,000 above the rates recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 10.7 in Perth, 10.8 in Hamilton, and 14.1 in Clydebank to 23.5 in Kilmarnock, 24.2 in Coatbridge, and 30.5 in Kirkcaldy. The mortality from the principal infective diseases averaged 1.9 per 1,000, and was highest in Coatbridge and Kirkcaldy. The 314 deaths from all causes in Glasgow included 25 from measles, 6 from infantile diarrhœal diseases, 4 from diphtheria, 2 from scarlet fever, and 1 from whooping-cough. Ten deaths from measles were recorded in Edinburgh and 2 in Paisley; 4 deaths from diphtheria in Dundee and 4 in Aberdeen; and 2 deaths from scarlet fever in Kirkcaldy.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 14th, 638 births and 437 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 665 births and 507 deaths in the preceding period. These deaths represent a mortality of 18.9 per 1,000 of the aggregate population in the districts in question, as against 21.9 per 1,000 in the previous period. The mortality in these Irish areas was therefore 3.3 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.6 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 20.4 (as against an average of 24.6 for the previous four weeks), in Dublin city 18.6 (as against 25.5), in Belfast 18.6 (as against 22.4), in Cork 19.0 (as against 21.3), in Londonderry 5.1 (as against 15.2), in Limerick 23.0 (as against 21.7), and in Waterford 28.5 (as against 22.3). The zymotic death-rate was 1.5, as against 1.7 in the previous week.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon WILLIAM E. MARSHALL to the *Duke of Edinburgh* on recommissioning, March 3rd. Fleet Surgeon CHARLES M. BEADNELL to the *Shannon* on recommissioning, March 10th. Fleet Surgeon HAROLD HUSKINSON, M.B., to the *Thunderer*, vice Langford, February 19th. Fleet Surgeon MORRIS C. LANGFORD has been placed on the retired list at his own request, February 19th. Staff Surgeon WALTER G. EDWARDS to the *Duke of Edinburgh* on recommissioning, March 3rd. Staff Surgeon ERNEST F. ELLIS to the *Alecto*, temporary (during absence of Surgeon Malcolm), vice Riggall, March 10th. Staff Surgeon CHARLES C. MACMILLAN, M.B., D.S.O., to the *London* on recommissioning, February 18th. Staff Surgeon HORACE B. HILL, M.B., to the *Highflyer* and for physical training duties, vice Nicholls, February 14th. Staff Surgeon PERCIVAL T. NICHOLLS to the *Vivid*, additional, February 14th. Staff Surgeon SAMUEL H. VICKERY to the *Victory* for Royal Naval Barracks, February 16th. Staff Surgeon ARTHUR D. C. CUMMINS to the *Orion*, February 16th. Staff Surgeon ADRIAN A. FORRESTER, M.B., to the *Implacable*, February 16th. Staff Surgeon LIDBROOKE F. COPE to the *Victory* for Royal Naval Barracks temporary, February 19th. Staff Surgeon LEONARD WARREN to the *Halcyon* additional for the *Speedy* on recommissioning, undated. Staff Surgeon ARTHUR S. BRADLEY has been allowed to withdraw from the Service with a gratuity, February 11th. The following Surgeons have been promoted to the rank of Staff Surgeons, February 10th: LOUIS L. GREIG, M.B.; EWEN CAMERON, M.B.: PERCY F. MINETT, FREDERICK G. GOBLE, HERBERT A. BROWNING, M.A. Surgeon CYRIL W. GRIFFITHS, to the *Shannon*, on recommissioning, March 10th. Surgeon ROBERT M. RIGGALL to the *Pembroke*, additional for disposal, March 10th. Surgeon LIONEL C. E. MURPHY has been placed on the retired list, February 12th. Surgeon ALFRED B. CLARK, M.B., to the *Halcyon*, additional for the *Seagull* on recommissioning, March 5th.

ROYAL NAVAL VOLUNTEER RESERVE.

LEONARD C. D. IRVING, M.R.C.S., L.R.C.P., has been appointed Surgeon, with seniority, January 30th. WILLIAM PICKLES, M.B., EDWARD P. PUNCH, and ROBERT T. T. BROTCHIE have been appointed Surgeons unattached.

ARMY MEDICAL SERVICE.

COLONEL W. W. PIKE, D.S.O., is to replace Colonel R. Kirkpatrick, C.M.G., Assistant Director of Medical Services, Abbottabad and Sialkot Brigade.

ROYAL ARMY MEDICAL CORPS.

Major HENRY N. DUNN, M.B., has been promoted to Lieutenant-Colonel, vice M. O. D. Braddell, M.B., retired February 4th.

Major JOHN D. G. MACPHERSON, M.B., to be Deputy Assistant Director of Medical Services of a Territorial Division, January 29th.

Major C. J. O'GORMAN, D.S.O., is appointed to have charge of the civil medical duties of the Barrackpore Division from January 10th, vice Lieutenant-Colonel Morgan.

Major P. S. LELEAN has been appointed Assistant Professor of Hygiene at the Royal Army Medical College.

Captain BENJAMIN A. ODLUM is seconded for service under the Colonial Office, January 1st.

Supernumerary Captain MALCOLM LECKIE is restored to the establishment, February 11th.

The following have been appointed Lieutenants on probation, January 30th: Lieutenant TREFFRY O. THOMPSON, M.B., from R.A.M.C. Special Reserve; STANLEY J. LINZELL, M.B.; LEWIS R. SHORE, M.B.; JOHN G. GILL, M.B.; JOHN W. C. STUBBS, M.B.; SIDNEY M. HATTERSLEY, M.B.; DAVID W. RINTOUL, M.B.; ALLAN WATSON, M.B.; Lieutenant NORMAN V. LOTHIAN, M.B., from R.A.M.C. Special Reserve; THOMAS F. P. BREEN, M.B.; Lieutenant JOHN F. GWYNNE, M.B., from the Third West Riding Field Ambulance R.A.M.C. (T.F.); and ARTHUR J. A. MENZIES, M.B.

The following Lieutenants have been seconded under the provisions of Article 343, Royal Warrant for Pay and Promotion, 1913: BERNARD W. WOODHOUSE, January 1st; TREFFRY O. THOMPSON, M.B.; STANLEY J. LINZELL, M.B.; LEWIS R. SHORE, January 30th.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

SUPERNUMERARY CAPTAIN WILLIAM M. BROWNE is restored to the establishment, April 6th, 1913.

Lieutenants WILLIAM W. WAGSTAFFE, M.B., ERNEST F. W. GRELLIER, and ROWLAND B. CHAMPION have been confirmed in their rank.

INDIAN MEDICAL SERVICE.

THE services of Colonel R. W. S. LYONS, M.D., are placed at the disposal of the Government of Bombay with effect from January 10th, 1914, for appointment as Surgeon-General with the Government of Bombay, vice Surgeon-General Stevenson, C.S.I., retired.

Major S. P. JAMES, M.D., is granted privilege leave for one month and seven days, with leave on medical certificate for eight months in continuation, with effect from January 22nd, 1914.

Surgeon-General W. B. BANNERMAN, C.S.I., M.D., has been appointed Honorary Physician to the King.

Captain R. A. NEEDHAM, M.B., has been placed on deputation in the office of the Director-General, Indian Medical Service.

Captain A. D. STEWART, M.B., has been appointed to officiate as Health Officer, Simla.

The services of Captain F. B. SHETTLE have been placed at the disposal of the Government of Bombay for civil employment.

Captain R. FLOWERDEW has been appointed officiating Second Medical Officer, Port Blair.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Second West Highland Field Ambulance.—ALASTAIR R. GRANT, M.B., to be Lieutenant, January 28th.

First Home Counties Field Ambulance.—CHARLES KILLICK, M.D., F.R.C.S., to be Lieutenant, February 21st.

Second East Lancashire Field Ambulance.—Captain WILLIAM F. MUNRO, M.B., ceases to serve with No. 18 Field Ambulance, R.A.M.C., Special Reserve, and is restored to the establishment, February 21st.

Second South Midland Field Ambulance.—Major GEORGE W. CRAIG to be Lieutenant-Colonel, October 1st, 1915.

Third Southern General Hospital.—PHILIP E. H. ADAMS, M.B., F.R.C.S., to be Captain, whose services will be available on mobilization, January 1st.

First Western General Hospital.—Lieutenant-Colonel NATHAN RAW, M.D., F.R.C.S.Edin., whose retirement was announced in the *London Gazette* of August 19th, 1913, is granted permission to retain his rank and to wear the prescribed uniform.

Attached to Units other than Medical Units.—Lieutenant JOHN GOSS resigns his commission, February 21st; Captain ARTHUR ROBERTS, F.R.C.S., to be Major, August 8th, 1913; Surgeon-Major JAMES SOUTTER resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform, February 14th; Lieutenant WILLIAM L. HODGE has resigned his commission, February 14th.

Sanitary Service.—Captain JAMES W. SOMERVILLE, M.D., resigns his commission, February 18th.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Army Medical Service have been officially reported to have taken place during January:

		FROM	TO
Colonel	W. M. Russell	London	Malta.
Lieut.-Col.	T. du B. Whaite, M.B.	Royal Arsenal, Woolwich	India.
,,	A. L. F. Bate	Preston	Woolwich.
,,	H. C. Thurston, C.M.G.	R.M. College	Aldershot.
,,	H. I. Pocock	Murree	Campbellpore.
,,	B. J. Inniss	Mauritius	India.
,,	H. E. Winter	Royal Hospital, Chelsea	,,
,,	G. A. T. Bray	Canterbury	Royal Hospital, Chelsea.
,,	C. W. H. Whitestone, M.B.	Lahore	Hilsea.
,,	G. W. Tate, M.B.	Dublin	Bermuda.
,,	N. Falchnie, M.B.	Meerut	W. Command.
Major	C. B. Martin, M.B.	Cahir	R.M. College.
,,	E. W. Slayter, M.B.	—	Cahir.
,,	C. E. Pollock	War Office	West Africa.
,,	C. T. Samman	Mhow	Kamptee.
,,	E. S. Clark, M.B.	Holywood	Jhansi.
,,	F. E. Gunter, M.B.	Meerut	S. Command.
,,	J. V. Forrest, M.B.	—	War Office.
,,	S. A. Archer	Jullundur	Dundalk.
,,	R. W. Clements, M.B.	Wellington	Cork.
,,	F. S. Penny, M.B.	Hong Kong	,,
,,	J. D. G. Macpherson, M.B.	Kamptee	Liverpool.
,,	G. J. S. Archer, M.B.	Dorchester	Cosham.
,,	A. L. Scott	Colaba	Ahmednagar.
,,	J. M. Sloan, D.S.O., M.B.	Quetta	Lahore.
,,	D. E. Curme	—	Pontefract.
,,	H. K. Palmer	Aden	S. Command.
,,	V. J. Crawford	Mauritius	,,
,,	L. W. Harrison, M.B.	Jamaica	R.A.M. Coll.
,,	A. A. Seeds, M.D.	Campbellpore	Rawal Pindi.
,,	W. L. Bennett, M.B., F.R.C.S.Edin.	Pontefract	Halifax.
,,	J. C. Kennedy, M.D.	R.A.M.Coll.	Lucknow.
,,	R. L. Popham	Cork	India.
,,	R. McK. Skinner	Curragh Camp	,,
,,	E. E. Parkes, M.B.	Plymouth	,,
,,	E. F. Q. L'Estrange	Cannanore	Irish Command.
Captain	A. H. Hayes	York	India.
,,	R. Storrs	Portsmouth	Dorchester.
,,	W. W. Browne	Poona	Ahmednagar.
,,	R. Rutherford, M.B.	Singapore	W. Command.
,,	J. E. H. Gatt, M.D.	Cawnpore	Benares.
,,	J. C. G. Carmichael, M.B.	Manchester	Malta.
,,	J. A. W. Webster	Tipperary	Neemuch.
,,	F. C. Lambert	Pembroke Dock	India.
,,	D. Ahern	Cairo	Dublin.
,,	G. W. G. Hughes	Devonport	Plymouth.
,,	A. C. H. Gray, M.B.	Dublin	R.A.M.Coll.
,,	T. S. Dudding	Colchester	Colaba.
,,	O. Ievers, M.B.	Chatham	Shorncliffe.
,,	R. H. MacNicol, M.B.	Woolwich	Malta.
,,	J. H. Douglass, M.D.	Enniskillen	West Africa.
,,	A. S. Arthur, M.B.	Newport	Pembroke Dock.
,,	N. Low	Portsmouth	Golden Hill.
,,	J. St. A. Maughan	Netley	Exeter.
,,	E. B. Booth, M.D.	Dundalk	West Africa.
,,	R. E. Humfrey, M.B.	Queenstown	Secunderabad.
,,	G. Ormrod, M.B.	Aldershot	West Africa.
,,	M. J. Cromie	Chatham	,, ,,
,,	M. Keane	Bulford	India.
,,	R. G. H. Tate, M.D.	Lahore	Dublin.
,,	T. C. C. Leslie	Youghal	India.
,,	D. De C. O'Grady	Rawal Pindi	E. Command.
,,	A. H. Heslop, M.B.	,,	Aldershot.
,,	W. Mitchell, M.B.	Ambala	W. Command.
,,	E. D. Caddell, M.B.	Aden	Dublin.
,,	W. E. C. Lunn, M.B.	Lahore	Aldershot.
,,	J. R. Foster	Neemuch	Irish Command.
,,	J. A. Bennett, M.B.	—	Newport.
,,	C. W. Bowle	Jubbulpore	Irish Command.
,,	A. Irvine-Fortescue, M.B.	Benares	Japan.
,,	J. L. Wood	Pontefract	Richmond, Yrks.
,,	A. C. Elliott, M.B.	Sialkot	E. Command.
,,	E. M. Middleton	Rawal Pindi	Chatham.
,,	H. P. Hart, M.B.	Wellington	Cannanore.
,,	A. L. Stevenson, M.B.	Nowshera	Secunderabad.
,,	A. Shepherd, M.B.	Maymyo	Rangoon.
,,	C. Ryles, M.B.	Naini Tal	Alderney.
,,	W. E. Marshall, M.B.	—	Cork.
,,	E. V. Vaughan, M.B.	Singapore	S. Command.
,,	A. N. R. McNeill, M.B.	Mauritius	N. Command.
,,	W. H. O'Riordan	Dehra Dun	Rawal Pindi.
,,	P. C. Field	Alexandria	Cairo
,,	E. C. Stoney	Shwebo	[illegible]
Lieutenant	R. Davidson, M.B.	Hounslow	[illegible]
,,	J. M. Elliott, M.B.	Hilsea	[illegible]
,,	E. G. H. Cowen, M.B.	Lucknow	Agra.
,,	W. L. Webster, M.B.	Limerick	Egypt.

		FROM		TO
Lieutenant	H. C. Todd, M.B. ...	Bangalore	...	Secunderabad.
,,	H. J. G. Wells, M.B.	Rawal Pindi	...	Nowshera.
,,	E. C. Deane	Lucknow	...	Bareilly.
,,	A. G. Biggam, M.B....	York ...	...	India.
,,	R. K. Mallam, M.B....	Bordon ...	...	,,
,,	W. McNaughtan, M.B.	Netley ...	...	,,
,,	D. T. M. Large, M.B.	Edinburgh	...	,,
,,	M. Burnett	Gosport ...	...	,,
,,	A. Hood, M.B. ...	Lichfield	...	,,
,,	E. A. Strachan, M.B.	Edinburgh	...	Lucknow.
,,	C. J. Blaikie	Ewshott ...	...	Bangalore.
,,	J. H. M. Frobisher, M.B.	York ...	...	India.
,,	W. B. Stevenson, M.B.	Deepcut ...	...	,,
,,	J. L. Ritchie, M.B. ...	Aldershot	...	,,
,,	D. T. Richardson, M.B.	Edinburgh	...	,,
,,	C. M. Ingoldby ...	Fermoy ...	...	,,
,,	S. J. Higgins	Cork ...	...	,,
,,	G. A. Blake, M.B. ...	Aldershot	...	,,
,,	C. J. H. Little, M.B. .	Strensall...	...	,,
,,	S. J. Barry	Woolwich	...	,,
,,	R. W. Vint, M.B. ...	Aldershot	...	,,
,,	H. W. L. Allott ...	Galway ...	...	Lucknow.
,,	J. Hare, M.B.	Belfast ...	...	Enniskillen.
,,	L. T. Poole, M.B. ...	Richmond, Yorks	...	York.
,,	H. J. S. Shields ...	Pirbright Camp		London.
,,	J. E. Hepper	Upavon ...	...	Oxford.
,,	A. A. M. Davies ...	York ...	...	India.
,,	L. Dunbar, M.B. ...	Netley ...	...	,,
,,	H. F. Panton, M.B. ...	Tidworth	...	,,

Lieutenant S. H. Smith appointed on probation, January 24th, 1913, has been stationed at Woolwich.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRMINGHAM CITY.—Assistant Medical Officer to the Yardley Road Sanatorium and Antituberculosis Centre. Salary, £250 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £220 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Honorary Dental Surgeon.

BIRMINGHAM AND MIDLAND HOSPITAL FOR NERVOUS DISEASES.—Physician to Out-patients.

BLACKBURN COUNTY BOROUGH.—Male School Medical Inspector and Assistant to Medical Officer of Health. Salary, £300 per annum, rising to £350.

BRIDGE OF WEIR: SANATORIUMS OF SCOTLAND.—Lady Assistant. Salary, £75 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Second House-Surgeon. Salary, £80 per annum.

CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer (male). Salary at the rate of £80 per annum for first six months, rising to £100.

CATERHAM ASYLUM.—Assistant Medical Officer. Salary, £300 per annum, rising to £360.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C. —Assistant Surgeon.

CHARING CROSS HOSPITAL, W.C.—Obstetric Registrar.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, £40 per annum.

CHELTENHAM EYE, EAR, AND THROAT FREE HOSPITAL.—Assistant Surgeon. Salary, £200 per annum.

CHESTER EDUCATION COMMITTEE.—Fourth Assistant to the Chief School Medical Inspector. Salary, £350 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—Honorary Surgeon.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £125 per annum.

DURBAN MUNICIPALITY.—Assistant Medical Officer of Health. Salary, £600 per annum.

DURHAM COUNTY ASYLUM, Winterton.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) House-Surgeon; (2) Medical Officer (male) to the Casualty Department. Salary at the rate of £75 and £100 per annum respectively.

EDINBURGH: FOREIGN MISSION COMMITTEE.—Medical Missionary.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary at the rate of 100 guineas per annum.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £75 per annum.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer (male). Salary, £250 per annum, rising to £300.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Third House-Surgeon. Salary, £80 per annum.

HAMPSTEAD AND NORTH-WEST LONDON HOSPITAL.—Clinical Assistants at the Out-patients Department.

INDIA: IMPERIAL BACTERIOLOGICAL (VETERINARY) LABORATORY, Muktesar.—Physiological Chemist. Salary, Rs. 800 a month, rising to Rs. 1,200.

KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer (male). Salary, £220 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING EDWARD VII SANATORIUM, Midhurst.—First Assistant Medical Officer. Salary, £200 per annum, rising to £250.

LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary, £250 per annum, rising to £300.

LANGPORT UNION.—Medical Officer of the Workhouse, District Medical Officer, and Public Vaccinator.

LEEDS PUBLIC DISPENSARY.—(1) Honorary Pathologist; (2) Junior Resident Medical Officer, salary £100 per annum.

LEEDS UNIVERSITY.—Demonstrator in Bacteriology. Salary, £250 per annum.

LEICESTERSHIRE EDUCATION COMMITTEE.—Second Assistant School Medical Officer. Salary, £250 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—(1) Two Resident House-Physicians; (2) Resident House-Surgeon. Salary, £50 each for six months.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) Three House-Surgeons; (2) two House-Physicians. Salary at the rate of £60 per annum.

LIVERPOOL: SAMARITAN HOSPITAL FOR WOMEN.—Honorary Surgeon.

LONDON HOSPITAL, E.—Special Clinical Clerkships.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon (non-resident). Honorarium at the rate of 100 guineas a year.

MANCHESTER CHILDREN'S HOSPITAL.—(1) Male Resident Medical Officer; salary, £100 per annum, rising to £120. (2) Assistant Medical Officer for Out-patients Department; salary, £100 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer for the Crossley Sanatorium. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for Out-patients and Accidents at the Central Branch. Salary at the rate of £100 per annum.

MARGATE: ROYAL SEA-BATHING HOSPITAL FOR SURGICAL TUBERCULOSIS.—Resident Surgeon. Salary at the rate of £150 per annum for first six months, rising to £200 per annum.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—Honorary Assistant Physician.

NOTTINGHAM CITY.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum for six months, increasing to £180 if reappointed.

OLDHAM ROYAL INFIRMARY.—Third House-Surgeon. Salary at the rate of £80 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary at the rate of £60 per annum.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Administrator of Anaesthetics.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Anaesthetist.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.—Pathologist and Bacteriologist.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon (male). (2) Junior House-Surgeon (male). Salary, (1) £100, (2) £80 per annum.

SEAMEN'S HOSPITAL SOCIETY: DREADNOUGHT HOSPITAL, Greenwich.—(1) Assistant Physician; (2) Medical Registrar, salary, £100 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £120 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SOUTH AFRICA.—Medical Officer for Leprosy Work on Robben Island. Salary, £280 per annum, rising to £360.

SOUTHPORT INFIRMARY.—Senior House-Surgeon. Salary at the rate of £120 per annum.

SUNDERLAND ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.—Assistant Surgeon.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, ETC.—Assistant Resident Medical Officer. Salary, £100 per annum.

WEST AFRICAN MEDICAL STAFF.—Appointments to the Service. Salary, £400 per annum, rising to £600.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) three House-Surgeons; (3) Resident Casualty Officer.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, ETC., Welbeck Street, W.—Dental Surgeon.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House-Physician. Salary at the rate of £75 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Radiographer.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary, £125 per annum.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALDERSON, Wilfred E., M.D.Durh., M.S., B.Hy., D.P.H., Administrator of Anaesthetics, Dental Hospital, Newcastle-upon-Tyne.

BARNES, H. E., M.D.Lond., District and Workhouse Medical Officer of the Hartismere Union.

BIDEN, W. M., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Ketton District, co. Rutland.

BOURKE, C. J., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Bellananagh District, co. Cavan.

BUCKLEY, Timothy, L.R.C.P. and S.Irel., Medical Officer of the Ballylongford District of the Listowel Union, vice Dr. John Buckley, deceased.

CARLILL, Hildred B., M.A., M.D., M.R.C.P., Physician to Out-patients at the City of London Hospital for Diseases of the Chest, Victoria Park, E.

CLUFFE, W. A. G., M.D.Dubl., District Medical Officer of the Eastbourne Union.

DAY, S. A., M.R.C.S., L.R.C.P., Assistant Medical Officer of the St. Marylebone Parish Infirmary.

DUNSMUIR, Allan, M.B., B.S., Official Visitor to the Hospital for Insane, New Norfolk, Tasmania.

EDMOND, J. A., M.B., B.S.Lond., Assistant Medical Officer, Lambeth Parish Infirmary, etc.

FURNESS, J. C., L.M.S.S.A.Lond., District Medical Officer of the Wolstanton and Burslem Union.

HEASMAN, Frank, M.R.C.P.Ed., L.R.C.P.Lond., M.R.C.S.Eng., Physician to the Royal Victoria and West Hants Hospital, Bournemouth.

JOHNSTON, G. J. W., M.D., R.U.I., Certifying Factory Surgeon for the Fleetwood District, co. Lancaster.

JONES, W. L., M.D.Glasg., District Medical Officer of the Merthyr Tydfil Union.

MARTIN, Thomas Hartley, M.B., Ch.B., Resident Medical Officer to the Leasowe Sanatorium for the Treatment of Surgical Tuberculosis in Children, Leasowe, Cheshire.

O'BRIEN, James, L.R.C.P. and S.I., Medical Officer for the No. 2 District of the Oughterard Union.

O'BRIEN, P. J., M.D., R.U.I., Certifying Factory Surgeon for the Midleton District, co. Cork, and Medical Officer to the Constabulary, Midleton, vice Dr. Lowton, deceased.

OLLERHEAD, T. H., M.R.C.S., L.R.C.P., District Medical Officer of the Williton Union.

SCARISBRICK, W., M.D., Tuberculosis Officer to the Southend-on-Sea County Borough Council.

SHAW, Miss Jean R., M.B., D.P.H.Birm., Assistant School Medical Officer for Cheshire.

TUCKER, S., M.B.Lond., D.P.H., School Medical Inspector to the Kent County Education Committee.

TWIST, N. S., M.B., Ch.B.Leeds, Poor Law Medical Officer for Normanton District and Public Vaccinator for Normanton and Altofts District of the Wakefield Union.

WEBB, C. W., M.D.Dub., Certifying Factory Surgeon for the Ballyward District, co. Down.

ST. THOMAS'S HOSPITAL.—The following appointments have been made:

Casualty Officers and Resident Anaesthetists.—H. P. Dawson, B.A.Cantab., M.R.C.S., L.R.C.P. P. G. Doyne, B.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P. E. Wordley, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P. F. E. Daunt, M.B., B.S.Lond., M.R.C.S., L.R.C.P. W. J. F. Symons, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P. L. N. Reece, M.R.C.S., L.R.C.P. S. G. Askey, B.A. Cantab., M.R.C.S., L.R.C.P. J. S. Sloper, M.R.C.S., L.R.C.P.

Casualty Assistants.—W. G. Bigger, B.A.Cantab., M.R.C.S., L.R.C.P. C. W. Wheeler-Bennett, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.

Resident House-Physicians.—A. Viney, M.R.C.S., L.R.C.P. L. E. S. Sharp, B.A.Cantab., M.R.C.S., L.R.C.P. E. W. N. Hobhouse, B.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P. L. G. Bourdillon, M.R.C.S., L.R.C.P.

Resident House-Surgeons.—R. M. de Mowbray, M.R.C.S., L.R.C.P. V. C. Pennell, B.A.Cantab., M.R.C.S., L.R.C.P. A. R. C. Doorly, M.R.C.S., L.R.C.P. E. L. K. Sargent, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P.

House-Surgeon to Block 8.—E. Rayner, B.A., M.B., B.C.Cantab., F.R.C.S.Eng.

Obstetric House-Physicians.—(Senior) N. F. Hallows, M.A., M.B., B.Ch.Oxon. (Junior) E. J. Boyd, B.A.Cantab., M.R.C.S., L.R.C.P.

Ophthalmic House-Surgeon.—E. H. Marshall, M.R.C.S., L.R.C.P.

Clinical Assistants.—(Throat) K. H. McMillan, M.R.C.S., L.R.C.P. S. G. Platts, B.A.Cantab., M.R.C.S., L.R.C.P. (Skin) N. P. L. Lumb, M.R.C.S., L.R.C.P. (Ear) J. C. Davies, B.A.Oxon., M.R.C.S., L.R.C.P. (Children's Surgical) G. A. Bird, B.Sc.Lond., M.R.C.S., L.R.C.P. A. C. Ballance, B.A.Oxon., M.R.C.S., L.R.C.P. (Children's Medical) G. T. Hebert, B.A., M.B., B.Ch.Oxon. J. A. G. Sparrow, M.A., M.B., B.Ch.Oxon. (Urological Department) K. H. McMillan, M.R.C.S.Eng., L.R.C.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

COURT.—At Norton Cuckney, Mansfield, on February 20th, the wife of P. H. Court, L.M.S.S.A., of a daughter.

HODDER.—On 23rd February, at Foregate Street, Stafford, to Dr. and Mrs. A. E. Hodder, a daughter.

WHARTON.—On February 21st, at 102, King Street, Oldham, to Dr. and Mrs. Alwyn Wharton, a daughter (Joan).

MARRIAGE.

GILLIATT—KANN.—On February 24th, at Weybridge, William Gilliatt, M.S., F.R.C.S., of 58A, Wimpole Street, W., to Anne Louise, eldest daughter of John Kann, of Lyne Hill House, Chertsey, Surrey.

DEATH.

PAUL.—On February 14th, from pneumonia, at Costebelle, Torquay, John Ernest Paul, M.D.

PUBLISHERS' ANNOUNCEMENTS.

MESSRS. W. B. SAUNDERS COMPANY are about to publish *The Principles of Pathologic Histology*, by Frank B. Mallory, M.D., Harvard Medical School, Boston. The work will be profusely illustrated, a large number of coloured plates having been made specially for the book. The same publishers have almost ready a small volume entitled *Diagnostic Symptoms in Nervous Diseases*, by Edward L. Hunt, M.D., of New York.

Messrs. William Hodge and Co. announce for early publication a new volume of their series of Notable English Trials. It deals with the trial of the Seddons. Mr. Filson Young, the editor, having had certain official records placed at his disposal, has prepared a very full account of this trial. The case is remarkable for the fact that two persons were indicted for the same offence, the same evidence was offered against both of them, and the jury were given their choice of four verdicts.

A book entitled *Noted Murder Mysteries*, by Philip Curtin, which was published by Messrs. Simpkin, Marshall, and Co. on February 19th, contains what is believed to be the first connective narrative of the Bravo case. The other "mysteries" include the case of Marie Lefarge, Madeleine Smith, the murder of the Duchess of Praslin, and the extraordinary crime of the Brothers Peltzer.

The forthcoming issue of "The People's Books," published by T. C. and E. C. Jack, of Edinburgh, includes twelve volumes, among which are the following: *Bismarck and the Origin of the German Empire*, by Professor Powicke; *Industrial Revolution*, by Arthur Jones, M.A.; *Schopenhauer*, by Margrieta Beer, M.A.; *Land, Industry, and Taxation*, by Frederick Verinder; and *Wild Flowers*, by Macgregor Skene, B.Sc. The last mentioned is very fully illustrated.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Dr. David Waterston: Some Recent Researches in Human Development.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Fourth Milroy Lecture, by Dr. F. Shufflebotham: The Hygienic Aspect of the Coal-Mining Industry in the United Kingdom.

ROYAL SOCIETY OF MEDICINE:

SECTION OF PATHOLOGY, Laboratory Meeting at the Lister Institute, Chelsea Gardens, S.W., 8.30 p.m. Dr. Penfold: Agglutination of Red Cells by Bacteria. Dr. Sherwin: Complement-Fixation Reactions in Eclampsia. Dr. Dalyell: The Isolation of Intestinal Anaërobes. Dr. Ledingham: Bacterial Variation. Dr. Arkwright: Cat Distemper. Dr. Schütze: Cataphoresis Experiments with Leucocytes.

SECTION OF SURGERY: SUBSECTION OF ORTHOPAEDICS, 4.30 p.m.—Mr. J. E. H. Roberts: Calve's Pseudocoxalgie. Mr. Max Page: Astragalectomy. Mr. A. S. Blundell Bankart: Bilateral Charcot's Disease of Tarsus and other cases. Mr. Laming Evans: Scoliosis associated with Myopathic Paralysis.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Dr. F. Wood Jones: The Morphology of the External Genitalia.

Royal Society of Medicine:

Section of the History of Medicine, 5 p.m.—Dr. Dan McKenzie: Healing Wells and Waters, with a Suggestion as to the Origin of the Votive Offering. Dr. Parkes Weber: Art and Epigram in Science and Medicine in Relation to Death. Mr. Glanvill Corney, I.S.O.: Physiological Phantasies (Third Century). Dr. Fielding H. Garrison: A Relic of the King's Evil in the Surgeon-General's Library (Washington D.C.). Mr. Wm. Buckler and Professor Richard Caton: Surgical Instruments found recently made at Colophon, in Asia Minor.

Combined Meeting of Sections of Neurology, Ophthalmology, and Otology, 8.30 p.m.—Discussion on Nystagmus, reopened by Dr. Llewellyn, and Dr. Dan McKenzie, Dr. Wilfred Harris, Dr. S. A. K. Wilson, and others will speak.

THURSDAY.

North-East London Clinical Society, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Address by Dr. Arthur E. Giles on Meditations based on 1,000 Abdominal Operations at the Prince of Wales's Hospital.

Royal College of Physicians, Pall Mall East, S.W., 5 p.m.—Fifth Milroy Lecture by Dr. F. Shufflebotham: The Hygienic Aspect of the Coal-Mining Industry in the United Kingdom.

Royal Society of Medicine:

Section of Balneology and Climatology, 5.30 p.m.—Paper:—Dr. J. Barnes Burt (Buxton): Osteophytes and Exostoses in Chronic Gout and Arthritis Deformans.

Section of Dermatology, 5 p.m.—Epidiascope Demonstration:—Dr. Louis W. Sambon: Cutaneous Diseases in the West Indies.

Section of Obstetrics and Gynaecology, 8 p.m.—Specimens:—Dr. T. G. Stevens: Unimpregnated Horn of a Uterus Didelphys. Dr. Cuthbert Lockyer: Multiple Myomectomy at the Fifth Month of Pregnancy. Dr. Victor Bonney: (1) Ovarian Dermoid Cyst Expelled through the Rectum during Labour; (2) Hernia into the Umbilical Cord; (3) Simultaneous Carcinomatous Growths in the Body of the Uterus and the Cervix. Dr. Drummond Maxwell: (1) Fibroid Uterus Removed in the Third Stage of Labour; (2) Defective Ossification of Infant's Head. Short Communications:—Dr. Herbert Williamson and Dr. Charles Noon: Chorion-Epithelioma. Dr. J. Barris: Treatment of Pregnancy Complicated by Morbus Cordis by means of Caesarean Section under Spinal Anaesthesia. Paper:—Dr. T. W. Eden: Abdominal Operation for Superior Recto-Vaginal Fistula.

FRIDAY.

Royal College of Surgeons, Lincoln's Inn Fields, W.C., 5 p.m.—Dr. F. Wood Jones: The Morphology of the External Genitalia.

Royal Society of Medicine:

Section of Anaesthetics, 8.30 p.m.—Discussion on Posture in Relation to General Anaesthesia, opened by Dr. W. J. McCardie. Sir Frederic Hewitt, M.V.O., Mr. E. B. Waggett, Mr. Douglas Harmer, Mr. Ivor Back, Mr. Harold Barwell, and others will take part.

Section of Laryngology, 5 p.m.—Cases will be shown by Mr. H. J. Davis, Mr. W. Stuart-Low, and others.

West London Medico-Chirurgical Society, West London Hospital.—Cases at 8 p.m. Chair taken at 8.30 p.m. Paper:—Dr. Harry Campbell: The Treatment of Syphilis of the Central Nervous System.

POST-GRADUATE COURSES AND LECTURES.

Cancer Hospital, Fulham Road, S.W.—Wednesday, 5 p.m., Tumours of the Thyroid Gland.

Dublin: Rotunda Hospital.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., The Varieties of Contracted Pelvis (continued); Wednesday, 10 a.m., The Treatment of the Common Forms of Contracted Pelvis. Gynaecological Lecture: Friday, 10 a.m., The Operative Treatment of Backward Displacement of the Uterus (continued). Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

Hospital for Consumption, Brompton, S.W.—Wednesday, 4.30 p.m., The Treatment of Febrile Cases of Pulmonary Tuberculosis.

London Hospital Medical College, Mile End, E.—Monday, 4.15 p.m., Neuroses and Psychoses of Children; Training, Mental and Physical; Mental Hygiene. Tuesday, Wednesday, and Friday, 4.15 p.m.: Syphilology.

London School of Tropical Medicine, Royal Albert Dock, E.—Lectures daily (Saturday excepted), at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Entomology, 2 to 2.30 p.m. daily. Special Entomology, 10.30 to 1 p.m. daily (Saturday excepted). Medical Clinics, Tuesday and Thursday, at 3 p.m. Operations, Friday, at 3 p.m.

Manchester Hospitals Post-Graduate Clinics, 4.30 p.m. each day.—Tuesday, Salford Royal Hospital: Palpitation. Wednesday, Royal Infirmary; Suppurative Labyrinthitis and its Surgical Treatment. Thursday, Ancoats Hospital: Exhibition of Cases by Medical Staff. Friday, Royal Eye Hospital: Retinitis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Medical; Friday, Ear, Nose, and Throat. Lectures will be delivered at 5.15 p.m. each day.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m., Hemiplegia. Friday, 3.30 p.m., Clinical Cases.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—General Clinics and Operations at 2.30 p.m. daily. Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as advertised.

Queen's Hospital for Children, Hackney Road, E.—Friday, 4 p.m., Clinical Significance of Enlargements of the Liver and Spleen in Infancy and Childhood.

Royal Hospital for Diseases of the Chest, City Road, E.C.—Friday, 5 p.m., Diagnosis of Pulmonary Tuberculosis by the Roentgen Rays. Clinics are held daily in the several Departments of the hospital during March.

West London Post-Graduate College, Hammersmith, W.—Medical and Surgical Clinics, 2 p.m.; *X* Rays, 2 p.m.; Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. Special lectures at 5 p.m. daily, except Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	FEBRUARY.
27 Fri.	London: Special Fund Committee, 11 a.m. City Division, Manor Lodge, Upper Clapton, 9.30 p.m.
	MARCH.
3 Tues.	Tower Hamlets Division, Stepney Central Hall, Commercial Road, 4 p.m.
4 Wed.	Westminster Division, St. James's Vestry Hall, Piccadilly, W., 9 p.m.
5 Thur.	Isle of Thanet Division, Ramsgate, 3.45 p.m.
10 Tues.	London: Metropolitan Counties Branch Council, 4 p.m. Scottish Division, Dumfries, 3 p.m.; Dinner afterwards.
13 Fri.	London (Connaught Rooms, Great Queen Street, W.C.): Conference of Representatives of Local Medical and Panel Committees; and following day if necessary.
17 Tues.	London: Standing Ethical Subcommittee, 2.30 p.m.
18 Wed.	London: Ship Surgeons Subcommittee (*provisional*). South Middlesex Division, Free Library, Twickenham, 8.30 p.m. Address by Sir John Collie: The Business Side of Medical Practice.
	MARCH (*continued*).
19 Thur.	South-West Essex District, Walthamstow Hospital, 4 p.m.
20 Fri.	Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
25 Wed.	Central Division, Medical Institute, Edmund Street, 3.30 p.m.
30 Mon.	London: Dominions Committee, 2 p.m. (*provisional*). London: Naval and Military Committee, 4 p.m. (*provisional*).
31 Tues.	London: Public Health Committee, 3 p.m.
	APRIL.
1 Wed.	London: Journal Committee, 2.30 p.m.
3 Fri.	London: Central Ethical Committee, 2 p.m. London: Medico-Political Committee, 10.30 a.m.
7 Tues.	London: Organization Committee, 2 p.m.
8 Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
22 Wed.	London: Council.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 7TH, 1914.

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GENERAL MEDICAL COUNCIL.

EXECUTIVE COMMITTEE.

A MEETING of the Executive Committee of the General Medical Council was held in London on February 23rd, when Sir DONALD MACALISTER, President, was in the chair, and the following members were present: Dr. Norman Moore, Sir Henry Morris, Dr. Langley Browne, Mr. Hodsdon, Dr. Norman Walker, Sir John Moore, Sir Charles Ball.

MEDICAL CERTIFICATES.

The Committee considered the following letter from the Chairman of the National Health Insurance Commission (England):

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.,
19th February, 1914.

Dear Sir Donald MacAlister,—The attention of the Insurance Commissioners has been called to the warning notice published by the General Medical Council in October last, in which medical practitioners are reminded of their duty to exercise proper care and exactness in filling up and signing medical certificates, and calling attention to the resolution of the Council that false, untrue, or misleading certification renders a practitioner liable to be adjudged by the Council to be guilty of "infamous conduct in a professional respect." In view of this pronouncement from your Council on this important matter the Commissioners have come to the conclusion that it is right that you, as President, should be informed that statements are rife amongst persons engaged in the administration of sickness benefit under the Insurance Act, and have been brought to the notice of the Commissioners from too many quarters to be lightly disregarded, alleging the existence of culpable laxity on the part of medical practitioners in various places, in connexion with the signing and giving of certificates to their patients who are insured persons.

It may well be that such irregularity in certification as exists should probably be attributed in the main to forgetfulness of the importance of exercising proper care in the matter; and the Commissioners believe that complaints of laxity would be very greatly diminished if the importance of this care were brought home to the practitioners concerned, and to others, in an unmistakable manner, by your Council as the official body invested by Parliament with statutory powers and duties in this important matter of medical certificates. The Commissioners feel sure that the General Medical Council would willingly, both in the interest of the general public and of the profession itself, co-operate with them in taking steps to bring to an end a state of affairs which all must deprecate.

I have therefore been asked by the Commissioners to inquire from you whether, in the event of your Council being officially placed in possession of a substantiated complaint of blameworthy carelessness on the part of a practitioner in signing certificates for a patient for the purpose of claiming sickness benefit under the Insurance Act, you would be prepared in due course to initiate such disciplinary steps as are within your statutory powers. We feel that a pronouncement on this matter by you, as President of the General Medical Council, would not only remind those practitioners who are alleged to be acting with culpable laxity in this respect of the disciplinary powers of the Council, but would be approved by medical practitioners generally, as being to the interest not only of the general public but also of the profession.

May I have a note of your views and those of your Executive Committee on this at your convenience?

I am, yours very truly,
ROBERT L. MORANT,
Chairman of the Commission.

The Executive Committee requested the President to inform Sir Robert Morant as follows:

That in the event of the Council being officially placed in possession of a substantiated complaint of blameworthy carelessness on the part of a practitioner in signing certificates for a patient for the purpose of claiming sickness benefit under the Insurance Act, it would be prepared in due course to take such disciplinary steps as are within its statutory powers, in accordance with the terms of the Warning Notice which has been issued for the information of members of the medical profession.

Insurance Act.

Arrangements with Unqualified Persons.

The memorandum by the President with regard to arrangements with unqualified persons under the National Health Insurance Act, published in the Supplement last week, p. 108, with the appended correspondence, was received and entered on the minutes.

Newfoundland.

The Committee received, through the Lord President of the Council, notification that by an order in Council made on December 19th, 1913, on and after January 14th Part II of the Medical Acts, 1886, shall apply to the colony of Newfoundland.

The Committee thereupon resolved:

That any person who holds the licence of the Medical Board of Newfoundland, granted after examination in Medicine, Surgery, and Midwifery, together with the licence to practise in the colony, shall be entitled to be registered in the Colonial List of the *Medical Register*, provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886.

New Brunswick.

The Committee had before it further particulars received from the Registrar of the Council of Physicians and Surgeons of New Brunswick with regard to the professional course in that province to which Part II of the Medical Act, 1886, was applied by an Order in Council dated October 14th, 1913. The Committee resolved as follows:

(*a*) That any person who holds the Licence of the Council of Physicians and Surgeons of the Province of New Brunswick, granted after examination in Medicine, Surgery, and Midwifery, together with the licence to practise in the province, shall be entitled to be registered in the Colonial List of the *Medical Register*, provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886.

(*b*) That the attention of the Council of Physicians and Surgeons of New Brunswick be called to the use of the expression "Great Britain" in Requirement 9 and the schedule. The correct expression is "the United Kingdom."

Korea.

The Committee received through the Lord President of the Council the information that by a notification in the *Korean Government Gazette* of January 4th, 1914, Great Britain was designated in an order recently issued by the Korean Government as a country whose nationals having obtained doctors' licences in their own country might be granted licences to practise in Korea. It appears from the letter of the British Consul that Great Britain is the only country thus designated, as is also the case in Japan proper. Regulations were issued at the same time with regard to foreign dentists, and concerning unqualified physicians (Korean old style doctors), who will be allowed to continue in practice although unqualified by modern standards.

New Zealand.

The Committee thanked the Colonial Office for forwarding a copy of the New Zealand Medical Act, 1908, and directed the text to be entered upon the minutes.

Yukon.

The Committee having considered the Yukon Medical Ordinance, 1912, requested the Colonial Office to call the attention of the proper authorities in Canada to the fact that a five years' course of study was required for a registrable qualification in the United Kingdom and in the provinces of the Dominion of Canada to which Part II of the Medical Act, 1886, has been applied by an order in Council.

Tasmania.

Opticians Act.

The Committee entered upon its minutes a copy of the Tasmanian Opticians Act, 1913, establishing a register of persons engaged in the practice of optometry, and providing that in future persons applying for registration must pass an examination before two examiners, of whom one must be a legally qualified practitioner practising as an oculist. An uncertified person practising as an optician is rendered liable to a fine of £20. The Executive Committee resolved to request the Colonial Secretary to transmit to the proper authorities in Tasmania the documents relating to the Council's action with regard to proposals for similar legislation in this country.

Medical and Dental Registers.

The Registrar presented a memorandum on the printing of the *Medical* and *Dentists Registers*, and the thanks of the Committee were accorded to the Registrar for the manner in which he had directed the work of resetting the *Medical* and *Dentists Registers*.

May Session of the Council.

The Committee resolved that the plenary session of the Council should commence on Tuesday, May 26th, in spite of the fact that the following Monday would be Whit-Monday.

Dental Business.

The Committee considered the *précis* of the evidence proposed to be given to the Board of Education with regard to the acceptance by that Board of certificates from unqualified persons testifying to the dental condition of applicants for posts as teachers. The Registrar was instructed to attend and give evidence accordingly on behalf of the Council.

MEDICAL REGISTRATION IN BRITISH NORTH BORNEO.

The *Official Gazette* of British North Borneo for October 1st contains the text of a bill then about to be introduced in the Legislative Council to provide for the registration of medical practitioners in the State.

The bill would provide for the establishment of a Medical Council of British North Borneo, consisting of the Principal Medical Officer, two medical officers in the public service of the State, and two registered medical practitioners not in the public service, to be appointed by the Principal Medical Officer with the approval of the Governor. The Principal Medical Officer would be president of the Council, which would be charged with the duty of keeping a register of medical practitioners. The fee for registration would be 50 dols.; but no charge would be made for the registration of any medical officer in the public service of the State. The Principal Medical Officer would act as registrar, and would publish annually in the *Gazette* a list of the names and qualifications of all registered medical practitioners. The appearance of a name in the list would be *prima facie* evidence that the person named was registered, and the absence of a name *prima facie* evidence to the contrary. The persons entitled to registration are thus defined:

Persons Entitled to Registration.

11. (1) The following persons shall subject to the next subsection, and with the sanction of the Governor previously obtained in writing thereto be entitled to registration under this Proclamation:

(*a*) The holder of any of the British, British-Indian, or British Colonial Degrees, Diplomas, or Licences approved by the Principal Medical Officer.

(*b*) The holder of any degrees or licence in medicine and surgery of any medical school in Europe, the United States of America, or the Empire of Japan, the degrees, diplomas, and licences of which are recognized as entitling to registration by the General Council of Medical Education and Registration in the United Kingdom.

(*c*) Any person who on satisfying the Medical Council that he has been engaged in medical practice in the State for no less than six months immediately preceding the commencement of this Proclamation shall submit himself for examination by the Medical Council in medicine, surgery (including clinical medicine and surgery), midwifery, and therapeutics, and who shall satisfy the Medical Council that he possesses a competent knowledge of such subjects.

A person convicted of a heinous offence or found after due inquiry by the Medical Council to have been guilty of infamous conduct in any professional respect would not be registered, and power is taken to remove after due inquiry the name of any person convicted of a heinous offence or found guilty by the Medical Council of infamous conduct in any professional respect.

A registered person would be entitled to practise medicine, surgery, and midwifery and to recover fees in a court of law for professional advice and for medicine or medical or surgical appliances, and an unregistered person would not be entitled to recover fees by process of law. No certificate or other document required by law to be signed by a duly qualified medical practitioner would be valid unless signed by a registered person.

The last two clauses are as follow:

Penalty for Unlawfully Using Title Implying Qualification or Practising without being Registered.

20. Any person who after the coming into force of this Proclamation wilfully and falsely makes or uses in the State any name, title or addition implying a qualification to practise medicine or surgery or not being registered under this Proclamation or exempted from registration under Section 17 of this Proclamation practises or professes to practise or publishes his name as practising medicine or surgery or receives any payment as practising medicine or surgery, shall be liable on summary conviction before a Magistrate to a penalty not exceeding five hundred dollars for each offence and to a further penalty of fifty dollars a day during the continuance of such offence.

Provided that nothing contained in this section shall apply to unqualified persons in charge of Government or Estate Hospitals and acting under the direct supervision of a duly qualified Medical Practitioner.

Native Practitioners.

21. Nothing contained in this Proclamation shall be construed to prohibit or prevent the practice of native systems of therapeutics according to Indian, Chinese or other Asiatic method.

It would appear that the proviso to Clause 20 leaves a loophole for the employment of unqualified practitioners, and unless the meaning of the terms "direct supervision" is clearly defined in the regulations which the Council is empowered to make, the provisions of the bill, if it becomes an ordinance, may be rendered largely nugatory.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (SOUTH) DIVISION.

A MEETING of the Division was held at Dr. Hopkinson's house, Withington, on February 4th. Dr. GOODFELLOW presided, and twelve other members were present. Dr. Catherine Chisholm was present by invitation.

Amalgamation of Divisions.—A letter was read from the Joint Committee of Manchester and Salford on the urgent necessity for amalgamation of the Manchester Divisions. Dr. COTTERILL, one of the Honorary Secretaries of the Joint Committee, spoke at length on this question, pointing out the disadvantages under which the present Joint Committee worked, and the essential need for some organization that could represent the profession in Manchester, particularly in matters outside the scope of the Insurance Act. On the motion of the CHAIRMAN, the following resolution was unanimously carried:

> That this Division is of the opinion that amalgamation of the four Manchester Divisions is imperative, and desires the central office to take such steps as are necessary in the matter.

On the motion of Dr. SAWERS SCOTT, seconded by Dr. HOLT, it was unanimously resolved:

> That this resolution be sent to the other Divisions, with the hope that they will take similar action.

Public Medical Service.—The letter from the Joint Committee also referred to the question of the desirability, or otherwise, of forming a Public Medical Service in Manchester to deal with all approved forms of contract practice—any other form being prohibited, and as far as possible prevented. The matter was fully discussed, and on the motion of Dr. HOPKINSON, seconded by Dr. MACGREGOR, the following resolution was carried with one dissentient:

> That, in the opinion of this Division, the present time is not opportune for the formation of a Public Medical Service in Manchester.

Report of Representative.—In the unavoidable absence of Dr. Mitchell, the SECRETARY read the report of the proceedings of the Special Representative Meeting on December 4th and 5th, 1913, and the thanks of the Division were accorded to Dr. Mitchell for his excellent report.

Dosage of Some Commoner Drugs.—On account of the lateness of the hour the resumption of the discussion of Dr. Hopkinson's paper on the dosage of some of our commoner drugs was adjourned until the evening of February 17th, when a meeting of the Division was held at Dr. Hood's house, West Didsbury. Dr. GOODFELLOW presided, and ten other members were present. A very free and interesting exchange of opinion took place. A hearty welcome was accorded to Dr. FRANK HOLMES, a practitioner of fifty years' standing, for his presence and interesting remarks on the dosage of drugs.

Dr. MITCHELL expressed his thanks for the resolution passed by the Division.

METROPOLITAN COUNTIES BRANCH:

CAMBERWELL DIVISION.

A MEETING of the Division was held at the Southwark Infirmary on February 26th. Dr. BATTEN was in the chair, and ten members and two visitors were present. The members were first entertained to tea by Dr. Bruce, the Medical Superintendent of the Infirmary.

Obscure Fever Cases.—Dr. ROBERT HUTCHISON read a paper on cases of fever of obscure origin. An interesting discussion followed, in which Drs. BATTEN, CAPES, CLITHEROW, COUPER, CRIPPS, CLATWORTHY, GUBBINS, and PARTRIDGE took part.

On the motion of Dr. BATTEN, seconded by Dr. CAPES, a hearty vote of thanks was unanimously accorded to Dr. Hutchison for his interesting paper, and also to Dr. Bruce for having so kindly entertained the Division.

SOUTH MIDDLESEX DIVISION.

A MEETING of this Division was held at the Albany Hotel, Twickenham, on February 19th, Dr. M. F. COCK in the chair, and ten other members were present.

Finances.—The HONORARY SECRETARY made a satisfactory statement as to the financial position of the Division. Drs. Stiil and Murphy were reappointed auditors and thanked for past services.

A State Medical Service.—Mr. LAWSON DODD, from the State Medical Service Association, read a paper on what a State Medical Service would mean. He said that public interest was shown by the columns of the daily papers, and by the fact that there was an association devoted to the promulgation of the idea running its own weekly paper, the *Medical World*. Two facts were very noticeable: First, the growing belief in scientific medicine, and secondly, the increasing suspicion that it was not yet within the reach of the great majority. The signs of distrust in the medical profession evidenced by the growth of Christian Science, quackery, and patent medicines were not due to a disbelief in science so much as to the opinion of the layman that the profession was not organized on lines which were favourable to the practice of scientific medicine. The best evidence of this value of scientific medicine was found in the great modern hospital, with its appliances and opportunities for diagnosis and treatment. It was a great co-operative concern for the treatment and cure of disease. Its position in this respect was unassailable. Scientific medicine in its preventive function also had the support of the community. The public health and kindred services had amply justified themselves, and their enormous power for good when properly organized was seen in the Panama administration, and even better in the health statistics of the Indian army. The following figures taken from the statistical abstract for India read more like a romance than scientific fact:

	Admissions into Hospital.	Constantly Sick.	Deaths.	Mortality.	Total Loss per 1,000.
1902 ...	1,078	66	14.68	37	51.68
1905 ...	834	52	10.05	21	31.05
1908 ...	840	46	9.78	16	25.78
1911 ...	525	29	4.89	7	11.89

Invalided for venereal diseases: 1902, 5.12; 1905, 1.16; 1911, 0.19.

There was good ground for suspecting that scientific treatment was not yet within the reach of the community as a whole. The Insurance Act was an admission of this fact. It contained much good, but the great blots were the inadequacy of the treatment, the exclusion of children and most women from its advantages. The want of some form of insurance for the lower middle classes, who were often very hard pressed, was also a serious fact. It was impossible to deny that professional conditions were against the supply of adequate medical service. The lack of real co-operation among doctors, commercial competition, the lack of specialization and adequate post-graduate facilities, the fee system with its control put into the hands of the sick and fastidious—all made for lack of scientific achievement. The Insurance Act did nothing to improve the profession in these important respects. A State Service would mean (1) the extension of the present State services—a result of almost every important fresh Act of Parliament. (2) The organization of the profession on the lines of a great hospital staff. To this end specialization was vital, as the area of medical science had become too wide for most individuals to grasp it. The country would be divided into districts, with adequate staffs; hospitals would be nationalized; the profession paid adequate salaries, and their hours of work and leisure reasonably regulated. The whole service would be under the ultimate control of a Ministry of Health. What was needed was an army for defence against disease and death, and an emancipation of the profession from conditions of life which were highly distasteful to its better members, inimical to the interests of science, and disastrous to that feeling of fellowship which must be the basis of any great calling in the future.

A full debate on the present conditions of the profession of medicine in relation to the public followed, in which the Chairman, Dr. R. Langdon-Down, Dr. Camps, Dr. Stevenson, and Dr. Dupont took part; and Mr. Dodd replied.

SURREY BRANCH:

Guildford Division.

A meeting of the Guildford Division was held at the Royal Surrey County Hospital, Guildford, on February 27th. The Chairman, Mr. H. B. Butler, presided, and eight other members and two guests were present.

Genital Prolapse.—A short paper on a new method of treatment of genital prolapse was read by the Chairman, Mr. Butler, and a brief discussion followed.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the British Medical Journal not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

Alfred Cox,

February 11th, 1914. *Medical Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A list of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

BRANCH AND DIVISION MEETINGS TO BE HELD.

Birmingham Branch: Central Division.—Drs. Ernest C. Hadley (Burbury Street, Lozells, Birmingham) and Bernard J. Ward (141A, Great Charles Street, Birmingham) give notice that an ordinary general meeting of the Central Division of the Birmingham Branch will be held in the library of the Medical Institute, Edmund Street, on Wednesday, March 25th, at 3.30 p.m. Business: To elect four Representatives for the Annual Representative Meeting. To consider and pass, if approved, several recommendations of the Executive Committee, of which due notice will be given on the circular convening the meeting.

Border Counties Branch: Scottish Division.—Dr. J. Dewar Robson, Honorary Secretary (Dalston House, Maxwelltown, Dumfries), gives notice that a meeting of the Division will be held in the Royal Infirmary, Dumfries, on Tuesday, March 10th, at 3 p.m. Business: Representative's Report. Consideration of letter from Scottish Secretary, British Medical Association, in relation to juvenile societies and terms of remuneration. Any other competent business. A clinical meeting will be held after the business, and cases and specimens will be submitted. An adjournment for dinner will be made shortly before 5 p.m. to the Royal Restaurant, where Dr. Rodger will be the guest of the members, who will render him a suitable acknowledgement for his services to the Division in the past. Members intending to be present at the dinner will please notify same to the Secretary not later than March 7th.

Lancashire and Cheshire Branch.—Mr. F. Charles Larkin, Secretary (54, Rodney Street, Liverpool), gives notice that a meeting of the Branch Organization and Finance Committee will be held in the Liverpool Medical Institution on Wednesday, March 11th, at 4.30 p.m. A meeting of the Branch Council will take place at Onward Buildings, Deansgate, Manchester, on Wednesday, March 18th, at 4 p.m.

Metropolitan Counties Branch: City Division.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a meeting of the Division will be held, by invitation of Dr. Gerald Johnston, at Brooke House, Upper Clapton, on Friday, March 27th, at 9.30 p.m., when Dr. H. MacNaughton Jones will give a lecture on Everyday Gynaecology, illustrated by lantern slides and sections.

Metropolitan Counties Branch: South-West Essex Division.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at the Walthamstow Hospital on Thursday, March 19th, at 4 p.m., when Mr. G. Bellingham-Smith, F.R.C.S., Obstetric Surgeon to Guy's Hospital, will read a paper on the Proper Use of the Pessary in the Treatment of Uterine Displacements.

North of England Branch: Newcastle-on-Tyne Division.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, March 20th, from 3.15 to 6 p.m. Mr. J. Clay: The Diagnosis of Diseases of the Genito-Urinary Organs. Dr. A. Parkin: Empyema Thoracis. (Tea.) Professor H. B. Angus: The Treatment of Simple Fractures. Sir Thomas Oliver: Gold-Miner's Phthisis. Mr. R. H. P. Orde: Hospital Management.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THE following books were added to the Library between April and June, 1913:

Presented by the Authors.

Fink, L. G.: Blackwater Fever. 1913
Hearsey, H. H.: Nyasaland Protectorate Diary, No. 19. 1912
Osler, Sir William: Principles and Practice of Medicine, eighth edition. 1912
Ross, H. C.: Researches into Induced Cell Reproduction and Cancer, vol. iii. 1913
Ross, H. C.: Further Researches, vol. ii. 1912
Saundby, R.: Old Age, its Care and Treatment. 1913
Thorne, L. T.: Nauheim Treatment of Heart Diseases, fourth edition. 1913
Williams, F.: Röntgen Rays in Medicine and Surgery. 1913
Wise, K. S.: British Guiana Medical Annual, vol. xviii. 1911

Presented by Dr. F. J. Allen, Westminster.

The Journal of the Royal Statistical Society. 1896-1906

Presented by Dr. Branthwaite.

Report of H.M. Inspector under the Inebriates Acts. 1911

Presented through the "British Medical Journal."

Adler: Primary Malignant Growths of the Lungs and Bronchi. 1912
Adami and McCrae: A Textbook of Pathology. 1912
Béchamp, A.: The Blood and its Third Anatomical Element, transl. Leverson. 1912
Bernays, T.: Augustus Charles Bernays, a Memoir. 1912
Blackham, R. J.: Aids to Tropical Hygiene. 1912
Cantonnet, A.: L'ophtalmologie du praticien. 1912
Carrington, T. S.: Fresh Air and How to Use it. 1912
Carruthers: Urine Examination Made Easy, second edition. 1911
Churchward: Signs and Symbols of Primordial Man. 1910
Clemesha: Bacteriology of Surface Waters in the Tropics. 1912
Collected Papers Printed from the Journal of the Royal Army Medical Corps, vol. i. 1912
Crandon and Ehrenfried: Surgical After-treatment, second edition. 1912
Daniels, C. W.: Tropical Medicine and Hygiene, part 3. 1912
Davis, A.: A Layman's Philosophy. 1912
Debove, Achard, Castaigne: Manuel des maladies de la nutrition. 1912
Dendy, A.: Outlines of Evolutionary Biology. 1912
Doty, A. H.: Manual of Instruction in the Principles of First Aid, fifth edition. 1912
Douglas, L. M.: The Bacillus of Long Life. 1911
Elliot-Blake, H.: University Reform for the Royal Medical Colleges and Reformed Adages, vol. ii. 1913
Escherich and Schick: Scharlach. 1912
Evans, W.: Diseases of the Skin. 1912
Fearis, W. H.: Treatment of Tuberculosis by Means of the Immune Substances. 1912
Fernandez: Patogenia de la Eclampsia Puerperal. 1908
Fischer L.: Diseases of Infancy and Childhood, fourth edition. 1911
Garry, T. G.: Some Factors influencing Health in Tropical and Subtropical Climates. 1911
Geiger, G.: Précis pratique d'électricité médicale. 1913
Gemerich: Der Praxis der Salvarsansbehandlung. 1912
Gilman, C. P.: The Man Made World. 1911
Goizet, L. H.: La vie prolongée méthode de Brown-Séquard. 1911
Green: Manual of Pathology and Pathological Anatomy, eleventh edition by Dr. Bosanquet. 1911
Griffiths, F. G.: Studies in Pulmonary Tuberculosis. 1911
Grunwald, M.: Die Hygiene der Juden. 1911
Hallion, H.: La pratique de l'opothérapie. 1911
Hamm, A.: Die puerperale Wundinfektion. 1912
Hanna, W.: Studies in Small-pox and Vaccination. 1913
Hardwicke, W. W.: Sight Testing Made Easy, second edition. 1910
Harris, A.: Etiology, Diagnosis, and Prophylaxis of Pulmonary Phthisis. 1912
Harston, G. M.: Care and Treatment of European Children in the Tropics. 1912
Holt, L. H.: Diseases of Infancy and Childhood, sixth edition. 1911
Holmes, B.: Friends of the Insane and Other Essays. 1911
Home Counties: The Case for the Goat, second edition. 1908
Hutchison and Rainy: Clinical Methods, fifth edition. 1912
Jahr, R.: Die Krankheiten der Harnorgane. 1912
Jennings, O.: Le bain Turco-Romain. 1912
Kiebel and Mall: Manual of Human Embryology, vols. i and ii. 1910-1912
Keith, A.: The Human Body. 1912
Ker, C. B.: A Manual of Fevers. 1911
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NON-PANEL COMMITTEE.

The Non-panel Committee held its fifth meeting on February 17th. Mr. E. B. Turner was in the chair, and the other members present were:—*England and Wales:* Dr. R. M. Beaton (London), Dr. Charles Buttar (London), Dr. H. B. Densham (Stockton-on-Tees), Mr. C. Courtenay Lord (Gillingham), Mr. E. C. Montgomery-Smith (London), and Dr. G. T. Myles (Bristol).

Resignation of Member of Committee.

The Committee received with regret the resignation of one of its panel members—namely, Dr. J. Hay, of London.

Co-option of Additional Member of Committee.

In the exercise of its powers the Committee co-opted Sir Rudolf Smith, Bart. (London).

Medical Referees.

The Committee approved advice given to a non-panel member that there could be nothing bringing him in any way under the Insurance Acts in his acceptance of the post of medical referee to an approved society.

Central Insurance Defence Fund.

The Committee decided to make representations to the Insurance Act Committee that a grant be made from the Central Insurance Defence Fund to a practitioner who had incurred certain out-of-pocket expenses as a result of his action in a matter of the utmost importance to non-panel practitioners in connexion with the Insurance Acts.

Reasons why Practitioners will not Accept Service under Insurance Acts.

An interesting discussion took place upon the various reasons why non-panel practitioners do not accept service upon the panel under the Insurance Acts, but no definite decisions were arrived at, and the matter is to be discussed at the next meeting, when it is hoped that the Committee will have before it a draft report upon the subject.

INSURANCE ACT COMMITTEE.

The twelfth meeting of the Insurance Act Committee was held at the office of the Association on Thursday, February 26th. Mr. T. Jenner Verrall (Acting Chairman) was in the chair, and the other members present were:—*England and Wales:* Dr. R. M. Beaton (London), Dr. Major Greenwood (London), Dr. I. W. Johnson (Bury), Dr. Constance E. Long (London), Dr. C. H. Milburn (Hull), Mr. E. C. Montgomery-Smith (London), Dr. G. K. Smiley (Derby), Dr. W. B. Crawford Treasure (Cardiff), Mr. E. B. Turner (London). *Scotland:* Dr. John Adams (Glasgow), Dr. R. McKenzie Johnston (Edinburgh). *Ex officio:* Dr. W. A. Hollis (President).

Departmental Committee on Sickness Benefit.

The subcommittee charged to prepare a memorandum of evidence for submission to the Departmental Committee on alleged excessive sickness benefit claims presented a draft, which was approved and directed to be submitted on behalf of the Association. The Committee expressed its appreciation of the work of the Subcommittee and of the Medical Secretary in preparing the draft, and resolved that the witnesses to give evidence on behalf of the Association should be—

1. The Medical Secretary.
2. Dr. J. Divine (Hull) as representing medical practice in industrial areas.
3. Dr. H. F. Oldam (Morecambe) as representing medical practice in seaside towns, and in the county of Lancashire generally.
4. Dr. C. A. Marsh (Bath) as representing medical practice in a residential non-industrial town.
5. Dr. R. J. Farman (London, S.E.) as representing medical practice in the metropolitan area.
6. Dr. J. A. Parsons (Market Overton, Oakham) as representing medical practice in a rural area.

It was further resolved that the memorandum should be published in the Journal after the evidence of the witnesses for the Association had been given.

Maternity Benefit Subcommittee.

In view of the difficulty in arranging meetings owing to the small number of its members, the Maternity Benefit Subcommittee was empowered to co-opt five additional members.

Surgery Hours and the Rules of an Approved Society.

The attention of the Committee at a previous meeting had been called to certain regulations of the Prudential approved society as follows:

(32) A member in receipt of sickness or disablement benefit—
(*a*) Shall obey the instructions of the doctor attending him.
(*b*) Shall not be absent from home between the hours of 7 p.m. and 7 a.m., and shall not be absent at any time without leaving word where he may be found, provided that the Committee of Management may, if they think fit, exempt the member from the operation of this rule upon such conditions as they may impose.

A letter had in consequence been addressed to the secretary of the society, and his reply was read to the Committee. He pointed out that subsection (*a*) was intended to assist the doctor in his treatment of the patient, and to ensure as far as possible that nothing should be done by the patient likely to retard his recovery. The proviso in subsection (*b*) was so drawn that if the doctor should properly require the attendance at his surgery outside the hours stated in the rules, the Committee of Management would not penalize the member in such circumstances. The letter concluded by stating that it was not anticipated that the position was one likely to arise at all frequently, and that the society would be prepared to give every consideration to such a case.

Arrangements with Unqualified Persons.

The Committee resumed the consideration of Medical Regulation 44 (2) concerning insured persons being allowed to make their own arrangements with unqualified persons, and had before it in addition to a memorandum by the Acting Chairman, the memorandum sent to the General Medical Council by the Medical Defence Union, the memorandum issued by the Insurance Commissioners, and published in the Supplement of February 14th, p. 77, and the memorandum by the President of the General Medical Council published in the Supplement to the Journal of February 28th, p. 108. Dr. Bateman, Secretary of the Medical Defence Union, who was present by invitation, stated the action taken by the Union in the matter, and read a case submitted by it to counsel and counsel's opinion thereon. After discussion the Committee adopted the following resolutions:

That the Commissioners be urged to take the first opportunity of altering the word "treatment" in Regulation 44 (2), as, in view of the definition (in Regulation 2 (1)) of that word, it means "medical attendance and treatment," and therefore it cannot be properly applied to the "treatment" given by an unqualified person.

That upon consideration of Medical Benefit Regulation 44 (2), allowing insured persons to make their "own arrangements" for treatment with unqualified persons, the Committee record its protest against the principle involved in that Regulation—namely, the official recognition of unqualified practice.

The Committee thanked Dr. Bateman for his attendance.

Central Insurance Defence Fund.

Four applications for assistance from the Central Insurance Fund were considered. In one instance the Committee made a grant, while in the remainder it found itself unable to do so.

LOCAL MEDICAL AND PANEL COMMITTEES.

BUCKS.

Panel Committee.

The first meeting of Panel Committee was held on February 27th at the Royal Bucks Hospital, when seventeen members were present. Dr. Baker was elected chairman and Dr. Larking secretary, while the Medical Service Subcommittee, consisting of Drs. Churchill, Kennish, and Lewis Reynolds, was reappointed. Mr. Broughton, the Clerk to the Insurance Committee, was present, and read the notice convening the meeting.

Allocation of Insured Persons.—A subcommittee, consisting of the Chairman, Secretary, and Dr. Rose, was

appointed to allocate persons to a doctor in cases of urgency, and it was recommended that the local representative on the Local Medical Committee be also always consulted.

Expenses of Pharmacists' Committee.—The Pharmaceutical Committee, having estimated its annual expenses at £35, asked whether the Medical Committee would consent to this amount being paid to them out of the medical benefit fund. The SECRETARY drew attention to the fact that the medical men had decided to make a voluntary levy to pay the expenses of the Local Medical Committee, and therefore would not adopt the compulsory deduction authorized by the Act of 1913. He thought it was far better to keep the Local Medical Committee as the principal committee and to make the Panel Committee a secondary one; in fact it would prevent confusion if the Panel Committee could delegate its duties to the Local Medical Committee. There was no necessity whatever for the two committees. Would it not be reasonable to suggest to the Pharmacists' Committee that it should pay its own expenses by a voluntary levy also? Dr. ROSE said that the difference between the two was that the chemists were paid for work done, whereas the medical practitioners were paid by capitation. Dr. BENSON also thought it was unreasonable to expect the chemists to pay their own expenses. Mr. BROUGHTON said in the methods of deduction in the new Act it would entail very little calculation, whereas a voluntary levy meant over 160 calculations. Dr. HENDERSON proposed:

> That the Pharmaceutical Committee be advised to write to the Insurance Committee asking that the sum of £35 be paid to them out of the Drug Fund to defray their expenses.

It was stated that there was plenty of money in the Drug Fund, but Mr. Broughton said that this course was not possible, and also that, as many doctors dispensed their medicines and others did not, it would be difficult to adjust. The so-called floating sixpence fund amounted to 70,000 sixpences, or £1,750. After a long discussion as to whether it would be better to adopt the compulsory or voluntary levy, the main argument against the statutory levy sanctioned in the new Act being that the Commissioners would want to know how the money was spent, and insist that it be spent on purely panel business, whereas a voluntary levy could be spent in any way the medical men wished, it was proposed by Dr. BELL—

> That this Committee consents to the sum of £35 being paid out of the Medical Benefit Fund to the Pharmaceutical Committee.

This was seconded by Dr. HARVEY. Dr. ROSE pointed out that this would be over and above the voluntary levy. A proposition that the further consideration be deferred having been lost, it was finally proposed as an amendment and then as a substantive resolution—

> That the Joint Committee, consisting of the Pharmacists' Committee and the Subcommittee, who met the chemists on a previous occasion, should meet and consider the question and report to the Panel Committee.

These were Drs. Baker, Bell Bailey, Deyns, Harris, Rose, and Shaw.

The meeting of the Panel Committee then closed, after a hearty vote of thanks had been accorded to Mr. Broughton for his assistance.

Scheme for Future Elections.—It was decided that a scheme for the future election of the Panel Committee be submitted to the Commissioners based on the method adopted in electing the Local Medical Committee.

LOCAL MEDICAL COMMITTEE.

The meeting then resolved itself into a meeting of the Local Medical Committee.

Domiciliary Treatment.—Dr. BURRA, the Tuberculosis Officer for the County, attended and explained the method to be adopted in the domiciliary treatment of tuberculosis. Quarterly reports would be required. He was arranging with the Local Government Board about the details.

Expenses of Committee.—It was resolved:

> That this Committee authorizes the Clerk of the Insurance Committee to deduct from the fees of all those who had signed the "authority for deduction" an amount equal to one farthing for each person on each medical man's list, such deduction to be made for the current quarter, and, further, this Committee agrees to indemnify the clerk for any loss or trouble he may incur by carrying out this deduction.

Complaints.—Four cases of complaints against medical men referred to the Medical Committee by the Insurance Committee were then considered. In the first it was averred that the doctor had charged a fee for doing insurance work, but after inquiries it was found that some part of the bill was for work done before the medical benefits came into force, and that the other bill had been sent by a mistake in book-keeping. The second case was that a doctor had neglected a patient and refused to sign her certificates. On inquiry it was found that the patient had simply taken the certificates to be signed on her return from hospital, where she had been under the care of another doctor, and that she had never asked the doctor to treat her. The third case was a complaint that a doctor had refused to sign a medical card and had charged her for treatment. On its being pointed out to the doctor that under the scheme existent in the county of allocating the money due on account of persons who had not selected a doctor according to the number on each list, and that the Committee had guaranteed that all insured persons should get medical advice, and that they could allocate the patient to some one, the doctor at once consented to sign the card. The circumstances of the fourth case being of a very contradictory nature, it was referred to the Medical Service Subcommittee.

Medical Referees.—Attention was called to the fact that the Prudential Assurance Company as an approved society was endeavouring to get all its referees to act as local medical referees in cases of suspected malingering or prolonged sickness and was offering a fee of 5s. a case. The following resolution was carried and a copy was directed to be sent to all medical men and to the Prudential Company, and all present bound themselves to abide by it and not to accept any appointment in the meantime:

> That this Committee expresses its opinion that the medical men are already doing all they can to prevent prolonged sickness, that it is most undesirable that a neighbouring practitioner should be called in to act as medical referee, that the referee called in should practise entirely out of the district in which he acts, and that the fee should be at the least one of half a guinea.

The medical representatives on the Insurance Committee were requested to bring the matter forward at the meeting of the Insurance Committee. It was pointed out that a medical man who accepted such duties laid himself open to be put to a lot of trouble if a law suit resulted.

Conference of Local Medical and Panel Committees.—The Secretary, Dr. LARKING, was appointed to attend the conference in London on March 13th.

Payment of Railway Fares.—The railway fares of members who attend meetings of subcommittees are to be paid.

Financial Statement.—The financial statement showed a balance in hand of about £4.

BIRKENHEAD.

A JOINT meeting of the Local Medical and Panel Committees was held on February 26th, Dr. A. C. E. Harris, J.P., and fifteen members present.

Conference of Local Medical and Panel Committees.—Dr. Ratcliff-Gaylard, Honorary Secretary, was appointed to attend the conference to be held in London on March 13th.

Expenses of Panel Committee.—It was resolved to make a levy of one farthing in respect of each insured person assigned to or accepted by practitioners on the panel. In the event of any difficulty being experienced in carrying out this levy, the Panel Committee will put in force Section 33 (2) of the Act.

TYNEMOUTH.

PANEL COMMITTEE.

THE first meeting of the Panel Committee was held on February 19th.

Election of Officers. — The following officers were elected:

Chairman.—Dr. Mears.
Vice-Chairman.—Dr. Adams.
Secretary.—Dr. Fraser.
Representatives on the Medical Service Subcommittee.—Drs. William Bower and Adams.
Medical Benefits Subcommittee and Pharmacists.—Drs. Golton, William Bower, A. Bower, and Adams.
Clerk.—Mr. F. H. Kidd.

Constitution and Standing Orders.—The Clerk, in conjunction with the Secretary, was instructed to draft a constitution and standing orders, to be brought before the next meeting.

Scale of Fees.—The scale of fees to be charged to persons required or allowed to make their own arrangements for medical attendance and treatment was considered, and it was resolved that "Schedule 5 to the Regulations be adopted down to item 8."

Allocation of Insured Persons.—With reference to a resolution received from the Insurance Committee, stating that "where an insured person was to be allocated to a practitioner he should be allocated to a practitioner with less than 1,000 on his list," it was decided that the resolution be not agreed to, that it was not in accordance with Regulation 79 (1) and (2), and was an infringement of the agreement entered into between the Local Medical Committee and the Insurance Committee, and that, in the opinion of the Committee, there was no need to impose a limitation to the number of patients on the lists in this area.

Federation of Panel Committees.—A resolution was adopted expressing the opinion that it was desirable that Panel Committees should be federated.

ELGIN AND NAIRN.

Annual Meeting of Practitioners.

The annual meeting of the duly qualified medical practitioners in the insurance area of Elgin and Nairn was held in Elgin on February 14th, under the chairmanship of Dr. Taylor (Elgin). Twelve other members were present.

Annual Report of Local Medical Committee.—The annual report of the Local Medical Committee stated that during the year six ordinary and two special meetings had been held, and the Executive Subcommittee had met four times. Various points of interest to the practitioners had been dealt with, including model rules for medical benefit. The Commissioners had been approached as to the necessity for mileage beyond one mile, the distribution of the mileage grant, and the allocation of the unallocated residue. No cases of complaint against practitioners had come before the Medical Service Subcommittee. The accounts for the year showed that the expenditure had been met by a levy of 2s. 6d. a member, which had been paid by most of the members.

Recommendation of Local Medical Committee.—The meeting then considered a recommendation from the Local Medical Committee as to the unallocated residue, and in accordance therewith it was unanimously agreed to recommend to the Insurance Committee:

> That payment be made on a *pro rata* basis, that is, in proportion to the average number of patients for which the individual practitioners were paid for 1913.

This was subsequently confirmed by the Local Medical Committee and agreed to by the Insurance Committee at a meeting on February 16th.

Distribution of Mileage Grant for 1913.—It was unanimously agreed to accept the provisional allocation submitted by the Commissioners for 1913, and to recommend that in future a more accurate allocation be made, based on a complete list, and that the practitioners get sufficient opportunity of checking the mileage returns. This also was confirmed by the Local Medical Committee and agreed to by the Insurance Committee.

Election of Members of Local Medical Committee.—The members of the Local Medical Committee were re-elected for 1914, with Dr. George Wilson (Nairn) in the room of Dr. Lee, who had resigned.

Local Medical Committee.

The inaugural meeting of the Local Medical Committee for 1914 was held immediately after, and Dr. Taylor (Elgin) was re-elected Chairman and Dr. Stephen (Elgin) Secretary. The Secretary intimated that the suspense sixpence would not be required for the drug fund for 1913, and would, therefore, be available for the practitioners.

At a meeting of the Local Insurance Committee, held on February 16th, the Clerk intimated that the cost per insured person for drugs and appliances for 1913 was a little over 1s. 4d.

ROSS AND CROMARTY.

Local Medical Committee.

The annual general meeting of the Local Medical Committee was held in Dingwall on February 26th, under the chairmanship of Dr. McLean, five other members being present.

Annual Report.—The annual report stated that since its formation on February 13th, 1913, the Committee had held ten meetings. Among other matters discussed were alternative schemes for medical records, supply of emergency drugs, model rules for medical benefit, the allocation of insured persons who had not selected a doctor, schemes for the provision of medical benefit to temporary residents, mileage, etc.

Election of Officers.—The following officers were elected: *Chairman*, Dr. Duncan; *Secretary*, Dr. J. Broadfoot (Dingwall); *Executive Subcommittee*, Drs. McLean, Galbraith, Smith, Ross, Somerville, Brodie, and Cameron.

Dr. McLean, Dr. Ross, and Dr. Brodie were appointed representatives to meet the managers of the Ross Memorial Hospital to discuss the framing of a revised constitution.

Conference of Local Medical and Panel Committees.—The Committee regretted that it was unable to appoint a representative to attend the Conference in London of Representatives of Local Medical Committees and Panel Committees on March 13th.

INSURANCE COMMITTEES.

LONDON.

Departmental Committee on Alleged Excessive Sickness Claims.

Somewhat protracted consideration was given by the London Insurance Committee on February 26th to the statement proposed to be submitted to the Departmental Committee on alleged excessive sickness claims as representing the views of the Insurance Committee. The draft of the statement was published in the last issue of the Supplement, p. 114.

In an introductory statement the General Purposes Subcommittee discussed the relations of the medical referees to insured persons, approved societies, and the Committee. As regards insured persons, if the practitioner in attendance was not satisfied as to the incapacity of the patient, there was no right of appeal by the insured person with a view to a second opinion being obtained at the expense of the Insurance Fund. The Departmental Committee should be informed that, in the opinion of the Committee, the case of an insured person who had been refused a certificate by his doctor was too hopeless to justify the right of access to the medical referee. As to the position of the medical practitioner in relation to the medical referees, a practitioner was not allowed, at the expense of the Insurance Fund, to obtain a second opinion as to the nature of an insured person's illness. It was a matter for consideration whether the action of the approved society in referring cases to the medical referee, without consulting the panel practitioner, did not tend to create resentment on the part of the practitioner, and to encourage the issue of certificates without due regard to the terms of his agreement. Although no formal representations had been made by the Panel Committee, or any other representative body of practitioners as to the advisability of conferring on practitioners the right of access to the medical referee, a large number of communications to that effect had been received from individual practitioners in connexion with the examination of their patients by the referee. The Subcommittee felt that medical practitioners should be given the right of access to the medical referee, subject to the consent of the approved society concerned.

The question of the incapacity of an insured person arose with the approved society mainly from the point of view of the extent to which a medical certificate should be accepted without demur. It had not always been easy to appreciate the reason given by an approved society for doubting the accuracy of a medical certificate. In a large number of cases the reason advanced had been either "prolonged duration of illness" or "question of total incapacity." In such cases it would appear that the

practitioner, if he had been approached by the approved society in the first instance, would no doubt have been willing to support the certificate by further information. The desirability of the approved society first consulting the panel practitioner was particularly apparent in cases where the only reason for the society referring the case to the referee had been that the sick visitor had failed to appreciate the condition of the patient, and had apparently doubted the practitioner's certificate of incapacity. In conclusion, the Subcommittee expressed the view that the appointment of referees should remain in the hands of the Insurance Committee, in order that records might be analysed and greater uniformity in the conditions of issue and acceptance of certificates be secured.

In regard to the statistics included in the statement published last week,

Dr. B. A. RICHMOND asked whether the Clerk had any better information which warranted the estimate of 500 as the number of doctors in the area in general industrial practice who were not on the panel (Item 2 of Statement by the London Insurance Committee). In his opinion the figure should be much higher.

Mr. E. B. TURNER explained that the Subcommittee referred the question to Dr. Mills and himself. Dr. Mills arrived at the figure of 200 and he (Mr. Turner) submitted the figure 1,000. At present it was impossible to say certainly, because the new panel list was not yet published. The figure 500 appeared to him to be underestimated. There were about 5,300 practitioners in the London insurance area. About 1,400 were on the panel, leaving slightly under 4,000 who were not working the Insurance Act. The deduction of those in hospitals, specialists, whole-time practitioners, medical officers of health, and those whose practices did not touch in any degree insured persons, would not account for 3,500 doctors. In Wandsworth there were over 100 men in industrial practice who were not on the panel, in Islington 78 or 79, and in Paddington, Kensington, and Hammersmith a large number with practices including many insured persons who were not on the panel. The new panel lists for Middlesex and Essex showed that only 46 per cent. of the doctors in those areas were on the panel, and of the remainder there would be very few whose practices would be entirely outside the scope of the Act. Mr. Turner stated that the Metropolitan Counties Branch of the British Medical Association regarded the estimate of 1,000 as too low, and he added that more than 500 additions to the panel list must be received before the working of the Act in London could be thoroughly satisfactory.

Dr. MILLS said his view was that at the very most only 1,000 other doctors could be expected to be on the panel, and of that 1,000 practically only 100 or 200 were doctors with purely industrial practices. Therefore he saw very little difference between Mr. Turner's estimate and his own. If the figure 500 in the statement included residential areas with a proportion of insurance practice he agreed that it should be doubled.

In reply to a comment, the Chairman, Mr. J. A. DAWES, M.P., mentioned that the practitioner who was stated to have 5,177 persons on his list now had a partner.

The report of the Subcommittee and the draft statement were then approved.

THE FUTURE DISTRIBUTION OF UNALLOTTED FUNDS.

Without prejudice to the action to be taken when legal opinion had been received in regard to funds accumulated in respect of insured persons who had not chosen a doctor before the Insurance Commissioners issued the new regulation on the point, the Medical Benefit Subcommittee submitted a scheme for dealing with such moneys in the future. In view of the Committee's expression of opinion that it was undesirable that any medical man should undertake to treat a larger number of insured persons than 2,000, the Subcommittee had come to the conclusion that no "further" capitation fees should be credited in respect of, or in proportion to, any number of insured persons on a list in excess of 2,000, but that such fees should be credited amongst practitioners in proportion to the numbers not exceeding 2,000 on their lists. practitioners who had only accepted a limited number of insured persons to be excluded from such participation. It was stated that this decision had been accepted as a compromise by the Panel Committee.

Mr. KINGSLEY WOOD proposed that the figure fixed as a limit in the above arrangement should be 1,500.

Mr. O. E. WARBURG questioned the advisability of striking out from participation in the surplus any doctors with more than 2,000 names on their lists.

Dr. H. H. MILLS urged the Committee to accept the compromise without modifications which must have the result of reopening the whole question. Considerable pressure had been brought to bear upon insured persons to choose a doctor, and in many areas the number of doctors, either panel or non-panel, was limited. The result had been the accumulation of large numbers on single lists. The practitioners who had attended large numbers of insured persons conscientiously and without cause of complaint were under a grievance in accepting the compromise. The Insurance Committee should avoid emphasizing differences, but co-operate earnestly with the Panel Committee. There was a shortage of doctors on the panel in London, and he appealed to those doctors who were standing aloof to join the panels.

Dr. B. A. RICHMOND mentioned that at first the Panel Committee was very much opposed to the present proposals, which were felt to be hard on men whose practices had been swallowed up by insurance work and who had made thorough arrangements whereby they could satisfactorily attend more than 2,000 persons.

Dr. L. E. SHAW remarked that only the uncertainty surrounding the distribution of the unallotted funds had prevented the movement of doctors to areas where there was a shortage.

The amendment was lost, and another amendment to the effect that no further capitation fees should be credited to a doctor with more than 3,000 names on his list was also defeated.

The proposals of the Subcommittee were then approved.

The Committee adjourned before the business on the agenda was completed.

ISLE OF WIGHT.

At a meeting of the Isle of Wight Insurance Committee on February 21st the reports for the previous quarter of the Maternity, Sanatorium, and Finance and Medical Benefit Subcommittees were presented and considered.

Medical Benefit.

The Finance and Medical Benefit Subcommittee reported, among other matters, that it had made payments to doctors to the amount of £2,044 7s. for the quarter ending January 11th in accordance with the number of insured persons on each doctor's list, and had also made payments of 1s. a head in respect of the number of persons on a doctor's list residing more than one mile from a chemist and to whom the doctor concerned proposed to supply drugs and prescribed appliances. This payment of 1s. a head was to cover the half-year ending January 11th, and the total amount thus disbursed was £132 7s. The amount claimed by chemists for the concluded quarter—namely, £523 7s. 5d.—was about £100 in excess of the claims for the previous quarters, but had been paid in full, while 10 per cent. deducted from the accounts for three earlier quarters had also now been refunded. At the end of the year 219 persons had applied for permission to change their doctors. The number of insured persons within the area on January 11th was 24,554, or 486 more than on October 12th, 1913. Of the total, 23,842 were members of approved societies and 711 deposit contributors.

On consideration of the report it was objected by certain members that the subcommittee had exceeded its powers in making any payments to doctors and chemists before the holding of the meeting, and exception was taken to the omission in the report of any details of the payments. In reply, it was stated that though the subcommittee had abandoned its previous plan of publishing the list of payments in the report, a list was available and open to the inspection of members of the Committee. Statements were also made to the effect that medical certificates stating that a man was incapacitated from work and placing him in receipt of benefit were being signed by doctors who had not yet seen the persons concerned, and that in other cases continuation certificates were being signed without the patient visiting the doctor or the doctor visiting the patient. There was also one doctor

who persisted in signing certificates in pencil, a practice which permitted of dates being easily altered by the patient. In the event, the report was adopted by 16 votes to 5.

Maternity Benefit.

The report of the Maternity Benefit Subcommittee recommended that in addition to the regulations for the administration of this benefit, which came into operation on January 12th, the Committee should make a rule that an insured woman in respect of whom a second—that is, double—maternity benefit was payable must abstain from remunerative work during a period of four weeks after her confinement, but that any penalties imposed for breaches of this rule during the period of four weeks should not exceed in the aggregate the sum payable in respect of maternity benefit. Objection to this recommendation was raised by various members, on the ground that the report offered no suggestion as to what work must be regarded as remunerative and what unremunerative: all work was, or ought to be, remunerative, even house-work. It was explained that by "remunerative work" was meant work for which direct payment was received; but in the event the recommendation was referred back to the subcommittee for further consideration.

Panel Committee.

The names of the practitioners on the panel and not on the panel appointed by the Insurance Commissioners to form the Panel Committee were also read out.

INSURANCE NOTES.

Sickness Benefit Claims Committee.

The Sickness Benefit Claims Committee appointed by the Right Hon. G. F. C. Masterman under the National Insurance Act, 1911, which held its first meeting on October 15th, 1913, has since held 38 meetings, and examined 50 witnesses. We are asked to contradict the statement which appeared in the press last week to the effect that the Committee was only now beginning its work.

Statutory Local Medical Committee for London.

The Council of the Metropolitan Counties Branch of the British Medical Association is this week issuing a circular and nomination paper to medical practitioners in the county of London with respect to the nomination of candidates to the statutory Local Medical Committee for the county. It has been decided that the Committee shall consist of sixty members. It is estimated that the number of those practitioners who being on the panel for London are also resident in London is about 1,300, and that the number of practitioners resident in London not on the panel whose practices in the main are composed of persons of the industrial classes is approximately 1,000. Observing this proportion it has been arranged that practitioners on the panel shall have 29 representatives on the Committee, and those not on the panel 22. In addition members of hospital staffs will be invited to elect 6 members, and the number will be completed by a medical officer of health, a Poor-law medical officer and a medical woman. The provision is made that a practitioner shall not vote in more than one capacity.

CORRESPONDENCE.

State Medical Service.

Mr. C. A. Parker, F.R.C.S.Edin. (London, W.), writes: It seems to me that Dr. Lauriston Shaw is trying to confuse the issue. The articles in the British Medical Journal, the *Lancet*, and the *Morning Post* undoubtedly laid all the stress on the importance of patients being able to choose their own doctor, and it was from this point of view I took up the question, and tried to show that such "free choice" could be offered under a State Medical Service. Dr. Shaw, instead of "demolishing the proposition that such a service could possibly afford anything worth calling free choice of doctor," as he claims to have done, has raised the question of doctors being able to limit their work by selecting their patients, and he now suggests, as far as I can gather from his letter in your issue for February 28th, that the profession and the public include in the phrase "free choice" all that is involved in the present competitive system, and states that my idea of "free choice" is as different from his as free love is from matrimony. This is evidently a fact, but in spite of Dr. Shaw's pleading I still prefer matrimony with its united effort and co-operation for the welfare of the family (the nation) to his free love with unstable union, constant competition, and lack of concerted effort.

In an article written over two years ago, and published in *Progress* in October, 1912, I expressed my views as regards "free choice" in the following words:

> As long as doctors work under a competitive system and are dependent for their living, not only on their ability, but on their popularity with the public, the free choice of doctors must have dangers from the point of view of national health. To speak the truth, the whole truth and nothing but the truth, requires great courage when a man's income is at stake; yet if wrong living, unhealthy surroundings and other fundamental causes of the nation's illhealth are to be attacked, the whole truth must be spoken to lord, squire, and peasant alike. First establish a system under which a doctor has an income independent of his popularity and then a free choice of doctors within a reasonable extent would be harmless and even beneficial.

To this view I still adhere, and I do not think there is anything in it to "mystify my professional colleagues," as Dr. Shaw accuses me of trying to do. I frankly admit that under a whole-time salaried service doctors will not be able to limit their work by choosing patients, nor will they be able to compete for increased remuneration by pleasing patients, but I have never stated that they would be able to do so.

I still maintain that under a State Medical Service patients could be offered a free choice of doctors within certain limitations, and so far Dr. Shaw has not shown this to be impossible.

Dr. Arthur T. Todd-White, Honorary Secretary, South-West Essex Branch of the British Medical Association (Leytonstone), writes: I have been greatly interested in the letters on a State Medical Service in the Supplement, more especially as I have published schemes which contain many of the suggestions made by your correspondents, and having therefore had the views of a considerable number of medical men given me on the subject, sometimes in a most forcible manner, I feel I know something about the subject, and the points which will be accepted and those which will not; I had the honour of placing them before a meeting of the Association last December.

The advocates of a State Service approach the matter from two points of view—one that of the benefit to the public, and the other the benefit to the profession. Dr. Charles Parker, in his most admirable desire to benefit humanity, seems to me to rather lose sight of the members of the profession, who, after all—whilst on earth—are men and not angels; his scheme would be excellent applied to many professions, but the medical man cannot be made into a machine like a Government clerk: he cannot successfully treat a patient who has no confidence in him, and if a patient is not to have a choice of doctor he will never have much confidence in any one. Do we find that when patients are entitled to a certain doctor, such as in the post-office, they all go to him? No! they will pay a fee rather than do so in some cases, and so in a State Service scheme, with every one allotted to various doctors, what is the man to do who does not like his particular doctor? He cannot, of course, go to any one else, as they have their own people. Result: he does not see the doctor, probably dies, and where is humanity then? This kind of State Service is absolutely impossible. Now, the other side look at the matter from the medical man's point of view, and either dismiss the whole thing—which is a mistake—or look with distrust on it from a financial point of view, and say, as I say above, that they will not be machines. I entirely disagree with Dr. Lauriston Shaw in saying that a whole-time salaried service will not bring us nearer to the medical millennium, and it is obvious to me, if not very flattering, that Dr. Shaw did not read my paper which I sent him some months ago. I say that a national service with free choice

of doctor is the simplest State Service there is, that it is the best thing for the profession and for the public, and that a scheme such as I outlined to the Association on December 18th is possible, and would save the lives of thousands every year, pay the whole medical profession, and be cheaper than any other scheme run on other lines.

Many of your correspondents are evidently in favour of extending the panel as I suggest, but they do not suggest all the machinery required. All these expensive committees, etc., suggested by correspondents cannot be considered for years; we cannot ruin the nation, and John Bull will not pay. In my scheme we proceed up the ladder step by step, the profession urging Parliament on. (1) The first step was made by the Insurance Act. (2) The appointment of a Minister of Public Health. (3) He will then appoint a committee of medical inspectors. (4) These inspectors will each organize his own department. One will tackle the medical officers of health and run that department; another will take charge of the school medical inspection department, etc.; another will devote himself entirely to organizing medical men who are treating tuberculosis; another will tackle ambulance arrangements, which are a disgrace to England in these days of motors. Another medical inspector will tackle the coroners' work throughout the country. Probably the most important post from a public point of view would be the appointment of a chief medical inspector of food supplies.

Having got these departments in order, say, in five years from their foundation, we might begin to think of a State Medical Service, and of course the fifth step in that direction would be to make all the hospitals public property; you cannot organize a State Service without them, and this huge question of the State taking over the hospitals would probably take ten years to settle. But if you wished to be progressing with a State Service all these fifteen years I have mentioned, the only way is to put more and more people on the panel, only certainly not at less than 10s. a year a head, until the moment arrives when the Minister of Public Health through his inspectors controls all the medical departments of the State; he controls the hospitals, he controls perhaps two-thirds of the population under the Insurance Act, and the public has got used to the idea—then, and not before, a complete National Service can come in. You place the rich, and in fact every man, woman, and child on the panels.

In my scheme 10s. a year is suggested for every one under the Insurance Act. The hospital staffs are all paid, and, as at present, consultants would charge their own fees to the sick as before. I am told that 10s. a year is too much, and it means about £20,000,000 a year for the general practitioners of the country. I would limit the number of men in practice in any one district, say, to one man to 1,500 people (£750 a year), free choice of doctor, but no man allowed more than 3,000 patients on his list, and, I think, £1,500 a year, with extras for major operations and fixed fees for midwifery, should satisfy most general practitioners, so if a medical man neglects his patients he may get none; if he is a good man and his opponents are equally good, he gets £750 a year; if he is better than his opponents, he might get £1,500 a year, and he would be allowed to sell his practice instead of a pension. You simply cannot appoint a man to a district and give him so many patients and so much a year however he treats them. I maintain that as a class there are no better fellows on earth than medical men, but I have met in twenty years at least three medical men who I would not send for if I were dying, and what should I do if I had to be a patient of one of those men? I might perhaps mention that the three men I refer to are not neighbours of mine—in fact, I believe they are abroad.

I have only given a few points; there are hundreds of others, but I am glad to say my views have been favourably received in most unexpected quarters.

Panel *v.* Non-panel Courtesies.

Dr. Michael Dewar (Edinburgh) writes: When Dr. James Cameron learns to apply other terms to panel men than the one which he makes use of in his letter last week, which admits of a variety of meanings, I will be very pleased to supply him with the information which he desires.

INSURANCE ACT IN PARLIAMENT.

Finance.

Position of Approved Societies.

In connexion with the debate, which took place on Wednesday, February 25th, on the National Insurance Act, Mr. Bonar Law gave notice that he would ask the Chancellor of the Exchequer certain specific questions in connexion with the position of various societies. His questions were asked on Monday, March 2nd, and led to a lively passage of arms with the Chancellor.

Mr. Bonar Law: I would like to ask the Chancellor of the Exchequer a question of which I have given him notice: Whether or not it is the case that, on the evidence now available, the chief actuary has reason to consider that a large number of approved societies would, on valuation, be unable to pay the minimum benefits under the Insurance Act?

The Chancellor of the Exchequer (Mr. Lloyd George): In view of the short experience of approved societies in meeting claims for benefit, disablement benefit in particular being not yet operative, I do not propose at the present moment to direct any actuarial examination to be made such as would be requisite for arriving at a reliable professional opinion. I may say, however, that the evidence at present at my disposal indicates that the experience in respect of men's societies generally has been well within the actuarial expectation. The experience in respect of women, however, indicates some excessive sickness benefit expenditure, and that this excess arises particularly from the claims in respect of married women. There are also considerations affecting some societies having an undue proportion of members in specially unhealthy trades. A strong departmental committee is now examining the whole subject, and I hope that its report and evidence will be helpful in the consideration of how best to meet the particular difficulties.

Mr. Bonar Law: Is the right hon. gentleman not aware, although he has given information which is not asked for, he has not answered the question which he promised to answer? The question which I requested his permission to put on Wednesday, and which he promised to answer was: Whether in the opinion, not of himself, but of the chief Government actuary, there was evidence which would lead him to consider that the minimum benefits in the case of a large number of societies could not be paid? Why does he not answer that question?

Mr. Lloyd George: The right hon. gentleman assumes that this is my opinion. I certainly would not express an opinion without consulting the chief actuary of the Government. In fact, I have been in consultation with him on the very question of the right hon. gentleman, and the answer I have given the right hon. gentleman is given after consultation with him.

Mr. Bonar Law: Then does the right hon. gentleman say that he has the authority of the chief actuary for the statement that he has not evidence to lead him to suppose that a great many of the societies will not be able to pay the benefits?

Mr. Lloyd George: I have given the answer most fully. [Hon. members: "Yes or No?"] I stated exactly on Tuesday last, and I have repeated it now, that there are only two points in respect of which there could be any doubt. I have stated with respect to the men's societies that they are well within the actuarial expectation.

Mr. Bonar Law: I am sorry to press it, but I only put this question after I had received a definite assurance from the right hon. gentleman that he would answer it. The question was: Is it the opinion of the chief actuary, on the evidence now available, that a large number of societies will not be able to pay minimum benefits? Does the right. hon. gentleman say that the chief actuary gives an answer in his words to that effect?

Mr. Lloyd George: The answer is that he has not made an actuarial examination of these societies at the present moment. As a matter of fact, the time has not arrived for him to do so. There is a time specified in the Act for the purpose, and the chief actuary would not give an opinion on any particular society without an actuarial investigation into the matter. That, up to the present moment, he has not made. I think he is keeping his eye on the working of the Act, and I am giving his general view of the working of the Act.

Mr. Bonar Law: Does the right hon. gentleman not realize that after promising to answer my question and refusing to do so, the public will draw the inference—(hon. members: "Oh!")—that the Act is insolvent, and that he is now, on Monday, afraid to answer a question which on Wednesday he promised to answer?

Mr. Lloyd George: The right hon. gentleman has given the inference which he would like the public to draw, and which, like a good many inferences he draws, is based upon most imperfect information.

Cost of Administration.

In reply to Mr. Worthington-Evans, Mr. Wedgwood Benn said the amount provided in the Estimates for the financial year 1913–14 for the cost of central administration by the several Commissions and the Joint Committee was £855,659.

Sickness Benefit.

In reply to Mr. Astor, who asked what was the total sum paid in sickness benefit to female insured persons up to January 1st, 1914, and what the total sum was which the Government actuaries estimated would be required for this benefit for these persons up to the date mentioned, Mr. Benn said that the sums spent in sickness benefit for the twelve months ending January 11th, 1914, would only be reliably ascertained when the accounts of the expenditure of all the approved societies and branches in the United Kingdom had been made up and audited. The figures asked for in the second part of the questions were £4,200,000 for men, £1,250,000 for women.

Administration Accounts (Deficiencies).

Mr. Cassel asked what was the number of members in the 356 societies and branches in which deficiencies in administrative accounts had already been shown; and what was the total amount of such deficiencies.—Mr. Wedgwood Benn said that in the 318 cases in which the Commissioners had information as to the exact amount of the deficiency the total amount involved was £4,550, and the number of members concerned 172,482.

Deposit Contributors' Fund.

Mr. MacCallum Scott asked whether a deposit contributor who was over 65 years of age at the commencement of the National Insurance Act, and who had paid more than twenty-six contributions, was entitled to free medical benefit for the rest of his life.—Mr. Benn replied: A deposit contributor is only entitled to such benefits as can be provided from the amount standing to his credit in the deposit contributor's fund (including the moneys provided by Parliament). It follows, therefore, that when a deposit contributor has passed the age of 70, and further contributions are not payable in respect of him, he will not be entitled to medical benefit after the sum standing to his credit has been exhausted.

Medical Benefit.

Allocation and Doctors' Lists.

Mr. Butcher asked the Secretary to the Treasury whether he was aware that the allocation of insured persons to a doctor who had not been selected by them had given, and was giving, rise to discontent and dissatisfaction; whether surprise and dissatisfaction had been caused by the interpretation which had been placed by the National Insurance Commissioners on Form 110/I.C. to the effect that a person who had been allocated to a doctor whom he had not selected was deemed to have selected that doctor; and whether the Commissioners would issue, or cause to be issued, to insured persons a circular instructing them what steps they should take if they wished to change the doctor whom they had not selected but to whom they had been allocated.—Mr. Benn stated that under the Regulations now in force no allocation was carried out except upon the application of insured persons themselves. It was open to insured persons who were allocated to doctors last year to change their doctor at the end of the year by giving the necessary notice; and every opportunity was taken of bringing to the knowledge of insured persons their rights in this respect. It was still open to insured persons who omitted to take the necessary steps last year and who now desired to change their doctor to do so by consent, and the medical card issued to insured persons already on the lists of doctors contained full instructions on the subject.

Insured Persons (Selection of Doctor).

Mr. Worthington-Evans asked how many insured persons had not selected a doctor for the purpose of the National Insurance Acts at the end of the first insurance year; and in how many cases had doctors been assigned to insured persons by Insurance Committees before that date.—Mr. Benn said that the information was not available, and could not be obtained without a special return from all Insurance Committees in Great Britain. He added, in reply to a further question, that there was no information sufficiently accurate and extensive to be given in answer to the question.

Panel Doctors.

Mr. G. Locker-Lampson asked whether complaints had been made by Gloucester panel doctors that certain approved societies had failed to supply forms for medical certificates and had ignored requests for such forms; whether insured persons' benefits were thereby in danger of disturbance, refusal, or delay; and what the Government proposed to do in the matter.—Mr. Benn said that the matter had not previously been brought to notice, but a communication had been addressed to the Insurance Committee and the approved societies concerned.

Medical Certificates.

In reply to Mr. G. Locker-Lampson, the President of the Local Government Board (Mr. Herbert Samuel) said that it was the duty of the medical officer of a Poor Law infirmary under the Local Government Board's regulations to give a certificate to the person on whom he was attending of the sickness of such person or the cause of his attendance on him. He would call the attention of the guardians in a specific case mentioned in the question to this requirement.

Drug Fund.

Mr. Godfrey Locker-Lampson asked the Prime Minister whether, in view of the anxiety felt by panel chemists in Manchester owing to the deficiency in the drug fund in that district under the National Insurance Act and the non-payment of a large portion of their accounts for 1913, he would give a pledge on behalf of the Government that they would all be paid in full.—The Prime Minister replied: I have pointed out that I have no knowledge myself of these matters. I think the question ought to be addressed to my hon. friend beside me. No occasion arises for such an undertaking as that asked for in the question. The amount of the remuneration payable to the Manchester panel chemists is governed by the contracts into which they have entered with the Manchester Insurance Committee, and they will receive the whole of the sums due to them under those contracts.

State Medical Service.

Mr. Godfrey Locker-Lampson asked whether a Government Committee was at present considering the subject of a State Medical Service, and was actually preparing plans for such a scheme.—Mr. Benn: No, sir.

Maternity Benefit.

Mr. Courthope asked whether complaints had been received to the effect that cheques drawn for the sum of 30s. maternity benefit had, after presentation, been returned marked "No effects"; and whether effective steps had been, or would be, taken to prevent the recurrence of such incidents.—Mr. Wedgwood Benn replied that no complaints of the character referred to had been received, but that if particulars of any specific case were supplied inquiry would be made.

Sickness Benefit.

Excessive Sickness.

Mr. Astor asked in how many cases the amounts drawn by approved societies indicated a probability of excessive expenditure, and in how many cases the Commissioners had assisted or were assisting the societies in making reforms required in their system of administration.—Mr. Benn replied: In just over 100 cases societies have been requested to make provisional claims for reserve values, the amounts issued to them having indicated a probability either that the societies were abnormal in respect of the age distribution of the members or of the proportion of married women, or that the actuarial estimate was being exceeded. Further information has in some of these cases corrected the first conclusions drawn from the issues of

funds. In the remaining cases the Commissioners have either already given advice to the societies or are obtaining further information from them in order to be in a position to give such advice.

Sickness Benefit.

Mr. Worthington-Evans asked whether, if an insured person became entitled to sick benefit in September and again in February of the following year, sick benefit was payable from the first day or the fourth day on the second occasion, having regard to the fact that the financial year closes on January 15th, and to the fact that such a second illness was deemed to be a continuation of the first?—Mr. Benn replied: In the circumstances stated benefit is payable from the first day. Under Section 8 (5) of the Act of 1911 a second illness is deemed to be a continuation of a previous illness in respect of which benefit has been paid unless a period of twelve months has elapsed between the two illnesses. The fact that the second illness does not occur in the same financial year as the first does not affect the question.

Mr. Godfrey Locker-Lampson asked whether some approved societies in the area of the Worcester Insurance Committee were refusing to give sick benefit for certain diseases, including gout and bronchitis, in order to help themselves out of the difficulty of inevitable deficiencies in the future.—Mr. Benn replied that the Commissioners had no information in regard to the alleged action of societies operating in the district referred to beyond that made in the answer to a previous question. No cases had been brought before them for decision on appeal in accordance with Section 67 of the National Insurance Act, 1911.

SANATORIUM BENEFIT.

Domiciliary Treatment.

Mr. Godfrey Locker-Lampson asked the Secretary to the Treasury whether his attention had now been drawn to the statement in paragraph 11. page 171, of the report of a subcommittee of the West Ham Insurance Committee that out of ninety-five tuberculous persons receiving domiciliary treatment in their area at the end of 1913, no fewer than thirty-seven were sleeping in the same rooms as other persons. Mr. Benn replied that it was the duty of the Committee to arrange for the provision of treatment for tuberculous insured persons recommended for sanatorium benefit, and for their receiving all necessary instructions and advice as to the conduct and habits conducive to recovery, but the Committee had no means of enforcing those instructions in such cases as those referred to in the question except by making their observance a condition of the receipt of treatment, which would in many cases deprive the insured person, for causes beyond his control, of all the benefit of treatment.—Mr. Worthington-Evans asked whether in those cases in which insured persons could not be properly treated in their own rooms it would not be better to treat them in a sanatorium. Mr. Benn replied that might be so, but it was a matter for the Insurance Committee to say what the treatment should be in each case.

Poor Law Accommodation.

Mr. G. Locker-Lampson asked the Secretary to the Treasury whether his attention had been called to the conference of the Poor Law authorities on February 18th last, where it was stated that such authorities had spare accommodation for tuberculous persons; and whether, in view of the fact that there was still a shortage of accommodation for insured tuberculous persons which was causing delay in their treatment, he would do his best to effect a temporary arrangement similar to that in connexion with the Metropolitan Asylums Board, so that such spare accommodation might be utilized for them?—Mr. Benn replied that it was not open to Insurance Committees to make arrangements for the treatment of insured persons by Poor Law authorities. The case of the Metropolitan Asylums Board was governed by special provisions in the 1913 Act.

NUMBER OF APPROVED SOCIETIES.

In reply to Mr. Astor, the Secretary to the Treasury stated that the present number of approved societies open to men only was 794; open to women only, 65; and open to both sexes, 1,398.

INSURANCE COMMITTEES (BOARD OF GUARDIANS).

Mr. Bridgeman asked the President of the Local Government Board how many boards of guardians had petitioned him to secure representation on Insurance Committees; and whether he proposed to take any steps to advance their petition. Mr. Herbert Samuel replied that two boards of guardians had made representations to the Local Government Board to the effect referred to. The last part of the question raised a matter for the consideration of the National Health Insurance Commissioners.

Hospitals and Asylums.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, LONDON.

SIR RICHARD BIDDULPH MARTIN, Bart., who presided on February 12th at the annual general meeting of the St. Mark's Hospital for Cancer, Fistula, and other Diseases of the Rectum, City Road, E.C., in moving the adoption of the report, said he felt very strongly that nurses ought to have better pay and more leisure than at present, especially at such a hospital as St. Mark's, where their duties were of a most trying and disagreeable nature. He hoped that funds would permit the hospital to be among the first to see that nurses had the consideration they deserved. At present he knew that the treatment of nurses was very often not so good as that given to patients.

Mr. F. Swinford Edwards, F.R.C.S., who moved the confirmation of the change of rule passed by the Board on July 15th, 1913, "that a representative of the active surgical staff should in future have a place on the Committee of Management," said he was convinced that this was most desirable, as such a member of the active staff knew by experience the daily surgical exigencies of the place. The resolution was carried without dissent.

The report, which was adopted, made reference to the inevitable difficulties incidental to appealing for funds owing to the nature of the hospital. It also showed that during the past year the number of in-patients had been 621. The number of out-patients was 1,854, who made a total of 6,324 attendances.

DROGHEDA MEMORIAL HOSPITAL.

AT the annual general meeting of the Drogheda Memorial Hospital, the Chairman said that the accounts were very satisfactory, as, while the number of patients treated last year had been much larger than in any previous year, the expenses had not increased. Since the year 1911 the subscriptions, which up to that time had been steadily decreasing, had shown a satisfactory improvement. A vote of thanks was passed to the honorary medical officer, Dr. Thunder, for the great care and attention he at all times gave to the patients.

BIRMINGHAM HOSPITAL SATURDAY FUND.

THE receipts of the Fund for last year amounted to £23,000 11s., but had it not been for the donation of £280 by Sir John Holder, Bart., the total would have been between £100 and £200 less than in the previous year. In some other cities the National Insurance Act has had the effect of reducing the amount collected by this and similar funds, so that it is a matter for congratulation that so much has been collected under unfavourable circumstances. The number of contributing firms was 1,968, as compared with 2,190 in the previous year, a decrease of 222. In October last £10,000 was distributed among the medical institutions of the city. Since 1873, when the Fund was established, £503,864 has been collected.

During the past year 1,438 patients were admitted to Tyn-y-Coed Convalescent Home, 1,495 at Marle Hall, Llanrhos (the Women's Convalescent Home), and 677 children and 121 women in the Red House, Great Barr. The total number of patients in 1913 was 3,731, against 3,429 in 1912, an increase of 302.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 8,957 births and 5,258 deaths were registered during the week ended Saturday, February 28th. The annual rate of mortality in these towns, which had been 16.5, 15.6, and 15.0 per 1,000 in the three preceding weeks, was 15.1 per 1,000 in the week under notice. In London last week the death-rate did not exceed 14.1, against 16.6, 14.4, and 14.2 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 4.4 in Ealing, 4.5 in Bath, 4.6 in Ilford, 6.3 in Cambridge, 6.6 in Eastbourne, and 7.9 in Wimbledon to 20.7 in Carlisle, 21.8 in Great Yarmouth, 22.7 in Rochdale, 23.9 in Wigan, 24.3 in Burnley, and 28.0 in Barnsley. Measles caused a death-rate of 1.6 in Leicester, 1.9 in Rhondda, 2.2 in Cardiff, 2.9 in Barnsley, and 5.7 in Burnley: scarlet fever of 1.0 in Oldham; whooping-cough of 1.4 in Smethwick, 1.5 in West Bromwich, 1.6 in West Hartlepool, and 1.7 in Swansea; and

diphtheria of 1.3 in Southampton and 1.5 in Edmonton. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 50, or 1.0 per cent. of the total deaths, were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 12 were recorded in Birmingham, 6 in Liverpool, 5 in London, 4 in South Shields, and 3 in Sunderland. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,554, 3,537, and 3,457 at the end of the three preceding weeks, had further decreased to 3,392 on Saturday, February 28th; 401 new cases were admitted during the week, against 379, 428, and 351 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,278 births and 770 deaths were registered during the week ended Saturday, February 28th. The annual rate of mortality in these towns, which had been 18.4, 16.9, and 16.5 per 1,000 in the three preceding weeks, rose to 17.5 in the week under notice, and was 2.4 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 6.3 in Falkirk, 7.7 in Perth, and 11.3 in Motherwell to 19.2 in Dundee, 20.9 in Edinburgh, and 21.1 in Clydebank. The mortality from the principal epidemic diseases averaged 2.2 per 1,000, and was highest in Coatbridge and Ayr. The 351 deaths from all causes in Glasgow included 28 from measles, 7 from whooping-cough, 7 from infantile diarrhoeal diseases, 4 from scarlet fever, and 4 from diphtheria. Nine deaths from measles were recorded in Edinburgh, 4 in Ayr, and 3 in Leith; 3 deaths from scarlet fever in Edinburgh, 2 in Dundee, and 2 in Kirkcaldy; from diphtheria 3 deaths in Aberdeen, 2 in Edinburgh, and 2 in Dundee; and from whooping-cough 3 deaths in Coatbridge and 2 in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 21st, 622 births and 441 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 638 births and 437 deaths in the preceding period. These deaths represent a mortality of 19.1 per 1,000 of the aggregate population in the districts in question, as against 18.9 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.1 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 26.9 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 20.7 (as against an average of 22.7 for the previous four weeks), in Dublin city 2.22 (as against 23.4), in Belfast 18.8 (as against 21.1), in Cork 19.0 (as against 19.9), in Londonderry 10.1 (as against 13.6), in Limerick 23.0 (as against 23.7), and in Waterford 17.1 (as against 22.3). The zymotic death-rate was 1.2, as against 1.5 in the previous week.

During the week ending Saturday, February 28th, 618 births and 480 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 622 births and 441 deaths in the preceding period. These deaths represent a mortality of 20.8 per 1,000 of the aggregate population in the districts in question, as against 19.1 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.7 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 26.7 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 22.3 (as against an average of 22.2 for the previous four weeks), in Dublin city 23.3 (as against 22.7) in Belfast 20.0 (as against 19.7), in Cork 17.0 (as against 19.2), in Londonderry 21.6 (as against 13.3), in Limerick 29.8 (as against 25.0), and in Waterford 15.2 (as against 18.1). The zymotic death-rate was 1.6, as against 1.2 in the previous week.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following notifications are announced by the Admiralty: Fleet Surgeon Edwyn R. Grazebrook to the *Neptune*, vice Colbourne, on transfer of flag, March 10th. Fleet Surgeon William J. Colbourne to the *Iron Duke*, and for general staff duties on commissioning, March 10th. Staff Surgeon Edward A. G. Wilkinson to the *Iron Duke* on commissioning, March 10th. Staff Surgeon Gerald Nunn to the *Neptune*, vice Wilkinson, on transfer of flag, March 10th. Staff Surgeon John Whelan to the *Exmouth*, February 27th. Staff Surgeon Percy T. Sutcliffe to the *Cyclops*, vice Whelan, February 27th. Staff Surgeon Robert F. MacMahon to the *Hindustan*, vice Sutcliffe. Staff Surgeon Gerald Nunn to the *Victory*, additional for disposal, February 25th. Surgeon William L. Cowardin to the *Skipjack* on commissioning, March 5th.

ROYAL NAVAL VOLUNTEER RESERVE.

William H. Condell appointed Surgeon (unattached list), February 24th.

ARMY MEDICAL SERVICE.

Colonel Edward Butt, from the half-pay list, is placed on retired pay, March 4th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel William Turner is placed on retired pay, February 25th.

Major Samuel M. Withers, M.B., to be Lieutenant-Colonel, vice W. Turner, February 25th.

Major E. W. Bliss has been posted to the Eastern Command for duty.

Captain N. Low has been appointed Sanitary Officer to the Eastern Command at Colchester.

Captain E. B. Lathbury has been posted to Cork for duty.

The following Captains have been appointed Majors, March 1st: Brevet Major Arthur B. Smallman, M.D., Wentworth F. Tyndale, C.M.G., M.D., William F. Ellis, Ralph B. Ainsworth, Charles A. J. A. Balck, M.B., Dudley S. Skelton, Philip G. Easton, and Richard Rutherford, M.B.

INDIAN MEDICAL SERVICE.

The following Captains have been promoted to the rank of Major, with effect from January 29th, 1914: S. H. L. Abbott, M.B., A. W. Greig, R. J. Bradley, M.B., J. Woods, M.B., T. W. Harley, M.B., J. W. McCoy, R. D. Willcocks, M.B., T. G. F. Paterson, M.B., D. G. Rai, R. M. Barron, W. R. J. Scroggie, H. H. G. Knapp, M.D.

Major M. Dick, M.B., has been permitted to retire from the service, with effect from February 15th, 1914.

The services of Captain E. B. Munro have been placed at the disposal of the Bengal Government for civil employ.

Major T. A. Granger has been gazetted Brevet-Lieutenant-Colonel.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Third Home Counties Field Ambulance.—Horace T. N. Merrick, M.B., to be Lieutenant, March 4th.

Second London Clearing Hospital.—Captain Frederick W. Higgs, M.D., from the List of Officers attached to Units other than Medical Units, to be Captain, January 29th.

South Midland Clearing Hospital.—Douglas P. Taylor to be Quartermaster, with the rank of Honorary Lieutenant, January 29th.

Attached to Units other than Medical Units.—Lieutenant William J. Harrison, M.B., to be Captain, October 29th, 1913. Major William T. Hannah, M.D., resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform, March 4th.

For Attachment to Units other than Medical Units.—James E. G. Thomson, M.B., to be Lieutenant, December 27th, 1913. William Simpson McCune, M.B., to be Lieutenant, January 3rd. Edmund F. Rose (late Surgeon-Lieutenant, 3rd Volunteer Battalion Queen's Royal West Surrey Regiment), to be Lieutenant, March 4th.

Supernumerary for Service with Officers' Training Corps.—Lieutenant Andrew F. Dixon, serving with the Dublin University Contingent, Senior Division Officers' Training Corps, resigns his commission, January 29th. Quartermaster-Sergeant Philip H. Mitchiner, M.B., F.R.C.S., serving with the University of London Contingent, Senior Division, Officers' Training Corps, to be Lieutenant, for service with the medical unit of that contingent, March 4th.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

AYR DISTRICT ASYLUM.—Junior Assistant Physician. Salary, £200 per annum.

BARROW-IN-FURNESS NORTH LONSDALE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Physician (male). Salary at the rate of £75 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Junior House-Surgeon. Salary, £100 per annum and £5 laundry allowance.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salary, £80 per annum each.

BIRMINGHAM AND MIDLAND HOSPITAL FOR NERVOUS DISEASES.—Physician to Out-patients.

BIRMINGHAM UNION.—Resident Assistant Medical Officer to the Dudley Road Infirmary. Salary, £140 per annum.

BRENTFORD UNION.—Second Assistant to the Medical Superintendent of the Infirmary and Medical Officer of the Workhouse and Schools. Salary, £150 per annum, rising to £170.

BRIDGE OF WEIR: SANATORIUMS OF SCOTLAND.—Lady Assistant.—Salary, £75 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £125 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary at the rate of £100 per annum.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Second Assistant Medical Officer for the Infirmary, etc. Salary, £170 per annum, increasing to £180.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary, £70 per annum.

CATERHAM ASYLUM.—Assistant Medical Officer. Salary, £300 per annum, rising to £360.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—Assistant Surgeon.

CHELTENHAM EYE, EAR, AND THROAT FREE HOSPITAL.—Assistant Surgeon. Salary, £200 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon.—Salary, £120 per annum.

DONCASTER: ROYAL INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £100 per annum.

DORCHESTER: DORSET COUNTY HOSPITAL.—House-Surgeon. Salary, £125 per annum.

DURBAN MUNICIPALITY.—Assistant Medical Officer of Health. Salary, £600 per annum.

DURHAM COUNTY ASYLUM, Winterton.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) House-Surgeon; (2) Medical Officer (male) to the Casualty Department. Salary at the rate of £75 and £100 per annum respectively.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary at the rate of 100 guineas per annum.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £100 per annum.

FOLKESTONE: ROYAL VICTORIA HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

GLASGOW PARISH COUNCIL.—(1) Medical Superintendent for the Stobhill General Hospital, Springburn; salary, £500 per annum, rising to £700. (2) Junior Resident Medical Officer; salary, £150 per annum.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant Surgeon.

GREAT YARMOUTH HOSPITAL.—House Surgeon (male). Salary, £140 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—(1) Second House-Surgeon. (2) Third House-Surgeon. Salary, £100 and £80 per annum respectively.

HOLBORN UNION INFIRMARY.—Second Assistant Medical Officer. Salary £140 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING EDWARD VII SANATORIUM, Midhurst.—First Assistant Medical Officer. Salary, £200 per annum, rising to £250.

KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—Assistant Tuberculosis Physician. Salary, £300 per annum.

LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary, £250 per annum, rising to £300.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum.

LEEDS UNIVERSITY.—(1) Demonstrator in Bacteriology. (2) Junior Demonstrator in Pathology. Salary, £250 and £150 per annum respectively.

LEICESTERSHIRE EDUCATION COMMITTEE.—Second Assistant School Medical Officer. Salary, £250 per annum.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.—Assistant Pathologist. Honorarium, £50.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—(1) Two Resident House-Physicians; (2) Resident House-Surgeon. Salary, £30 each for six months.

MANCHESTER: ANCOATS HOSPITAL.—Three Anaesthetists. Salary, £20 per annum.

MANCHESTER CHILDREN'S HOSPITAL.—(1) Male Resident Medical Officer; salary, £100 per annum for six months, rising to £120. (2) Assistant Medical Officer to Out-patients' Department; salary, £100 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Junior House-Surgeon. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to the Convalescent Hospital, Cheadle. Salary at the rate of £80 per annum.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers in the Infectious Hospitals Service. Salary, £180 per annum, rising to £240.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £35 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWPORT: ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary at the rate of £80 per annum for first four months, rising to £120 per annum.

NORWICH CITY ASYLUM, Hellesdon.—Assistant Medical Officer. Salary, £200 per annum.

NOTTS EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

NOTTINGHAM CITY.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum for six months, increasing to £180 if reappointed.

OLDHAM ROYAL INFIRMARY.—Third House-Surgeon. Salary at the rate of £80 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

PRESTON COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

REIGATE BOROUGH.—Medical Attendant at Isolation Hospital and Police Surgeon. Salary, £200 and £26 5s. respectively.

ROCHDALE BOROUGH.—Second Assistant Medical Officer of Health. Salary, £250 per annum, rising to £300.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Administrator of Anaesthetics.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Anaesthetist.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.—Half-time Pathologist and Bacteriologist. Salary, £80.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon (male). Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £120 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Surgeon. Salary at the rate of £100 per annum.

SOUTHWARK UNION.—Second and Third Assistant Medical Officers (males), at the Infirmary. Salary, £120 per annum each, the former increasing to £140.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, rising to £140.

STAFFORDSHIRE, WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS.—Assistant Tuberculosis Officer. Salary, £300 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SUNDERLAND ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

SURREY DISPENSARY, Southwark, S.E.—Resident Medical Officer. Salary, £140 per annum, rising to £150.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £80 per annum.

TOXTETH PARK TOWNSHIP.—Assistant Resident Male Medical Officer of the Workhouse and Infirmary. Salary, £150 per annum.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.—Assistant Surgeon.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum.

WEST AFRICAN MEDICAL STAFF.—Appointments to the Service. Salary, £400 per annum, rising to £600.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House-Physician. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) three House-Surgeons; (3) Resident Casualty Officer.

WESTERN DISPENSARY, Rochester Row, S.W.—Resident Medical Officer. Salary, £75 per annum.

WESTMINSTER GENERAL DISPENSARY, Soho, W.—Resident Medical Officer. Salary, £120 per annum.

WESTMINSTER UNION INFIRMARY.—Second Assistant Medical Officer. Remuneration, £130 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOOLWICH INFIRMARY.—Resident Male Assistant Medical Officer. Salary, £180 per annum, rising to £200.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £90 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) House-Surgeon. Salary, £125 per annum each.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointment: Shoreham (Sussex).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

CRONIN, M. J., M.R.C.S., L.R.C.P., Assistant Medical Officer to the Bethnal Green Parish Infirmary.

CUTTLE, Miss G. E., L.M.S.S.A., Assistant Medical Officer of the Ashton-under-Lyne Union Workhouse.

HEFFERMAN, E., M.B., B.Ch., N.U.I., Assistant Medical Officer to the Kensington Parish Infirmary.

JAMES, A. H., M.R.C.S., L.R.C.P., District and Workhouse Medical Officer of the Lutterworth Union.

KNIGHT, Charles Voughton, M.D.Lond., M.R.C.S., L.R.C.P., Surgeon on the Honorary Staff of the Gloucestershire Royal Infirmary and Eye Institution, vice Dr. E. Dykes Bower, retired.

MACGOWN, J., L.R.C.P. and S.Edin., Assistant Medical Officer, Eastby Sanatorium of the Bradford Union.

NOEL, H. L. C., M.R.C.S., L.R.C.P., Assistant Medical Officer to the Kensington Parish Infirmary.

PITTS, Arthur T., M.R.C.S., L.R.C.P., L.D.S., Dental Surgeon to the Hospital for Sick Children, Great Ormond Street.

WARDROP, J. G., M.R.C.S., L.R.C.P., House-Physician to University College Hospital.

WHITE, Hill Wilson, M.B., B.Ch., B.A.O., N.U.I., L.M.Rotunda, Assistant Medical Superintendent of the Paddington Infirmary.

CHELSEA HOSPITAL FOR WOMEN, S.W.—The following appointments have been made:

Surgeon to Out-Patients.—J. Bright Banister, M.A., M.D. Cantab., M.R.C.P.Lond., F.R.C.S.Edin.

House-Surgeon.—Ivan S. Wilson, M.D., Ch.B.New Zealand, F.R.C.S.Eng.

Clinical Assistants.—Major W. T. McCowen, M.R.C.S., L.R.C.P., I.M.S.; Captain A. F. Hamilton, M.B., F.R.C.S., I.M.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

MARRIAGE.

HOSFORD—COLEMAN.—On February 28th, at St. John's, Hove, J. Stroud Hosford, F.R.C.S.Edin., to May, daughter of the late Mr. W. Coleman, of Runhall, Norfolk, and niece of the late Mr. Alfred Coleman, of Paris. Colonial papers please copy.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion on Radium-therapy, to be introduced by Mr. Hayward Pinch, followed by Sir Frederick Treves, Bart., Sir Alfred Pearce Gould, and others.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Professor C. Mansell Moullin: Further Observations upon the Biology and Classification of Tumours.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Medical School Club Rooms, St. George's Hospital, 8.30 p.m.—Annual Clinical Debate on Arterio-sclerosis, to be opened by Professor Leonard Hill, F.R.S., by a paper entitled New Facts concerning the Measurement of Blood Pressure in Man. Drs. McQueen, Martin Flack, Russell Wells, Hamill, and others will take part in the discussion.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—First Goulstonian Lecture, by Dr. M. A. Cassidy: Rheumatoid Arthritis.

ROYAL SOCIETY OF MEDICINE:

SECTION OF PSYCHIATRY, 8.30 p.m.—(Joint meeting with British Psychological Society.) Papers:—(1) Mr. W. McDougall, F.R.S.: The Definition of the Sexual Instinct. (2) Dr. H. Devine: The Biological Significance of Delusions.

SECTION OF SURGERY, 5.30 p.m.—Paper:—Mr. Herbert J. Paterson: Gastro-jejunostomy; the Principles which should Determine its Application and the Indications for its Use.

WEDNESDAY.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital, 9 p.m.—Papers:—(1) Dr. W. H. Kelson: Nasal Suppuration, more particularly as Associated with Diseases of the Eye. (2) Dr. R. Drummond Maxwell: Specimens of Two Fetal Heads, with Remarks on their Obstetric Significance. (3) Mr. A. S. Blundell Bankart: Colles's Fracture and its Treatment.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—The Harveian Lecture, by Mr. D'Arcy Power, on English Medicine and Surgery under Edward III, illustrated by lantern slides.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Second Goulstonian Lecture, by Dr. M. A. Cassidy: Rheumatoid Arthritis.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor Road, S.W., 5 p.m.—Paper:—Major E. T. F. Birrell, R.A.M.C.: Some Experiences of the Balkan War.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 8.30 p.m.—(1) Demonstration of Cases. (2) Paper:—Mr. V. Zachary Cope: Traumatic Sensory Aphasia.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION, S.W.—Wednesday, 4.30 p.m., Technique of the X-ray Examination of the Lungs.

CANCER HOSPITAL, Fulham Road, S.W.—Post-graduate Lectures: Wednesday, 5 p.m., Cancer of the Breast.

DUBLIN: ROTUNDA HOSPITAL.—Post-graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Treatment of Common Forms of Contracted Pelvis (continued). Wednesday, 10 a.m., Induction of Labour. Gynaecological Lecture: Friday, 10 a.m., Use of Pessaries in Uterine Displacements. Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

LONDON HOSPITAL MEDICAL COLLEGE, E.—Tuesday, Wednesday, and Friday, 4.15 p.m.: Syphilology.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted), at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Helminthology, 2 to 3.30 p.m. daily. Medical Clinics, Tuesday and Thursday, at 3 p.m. Operations, Friday, at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS, 4.30 p.m. each day. Tuesday, Salford Royal: Demonstration of Surgical Cases in the Wards. Wednesday, Royal Infirmary: A New Modification of Colporrhaphy. Thursday, Ancoats Hospital: Enemata. Friday, Royal Eye: Congenital Abnormalities.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m., Clinical Cases.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Throat; Tuesday, Gynaecology; Wednesday, Skin, Eye, Children; Tuesday and Thursday, X Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations on Tuesday and as announced.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Special Lectures at 5.15 p.m. each day.

POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. A lecture at 5 p.m. daily, except Saturday.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Tuesday, 4 p.m., Anaemia in Childhood.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST MEDICAL SCHOOL, City Road, E.C.—Friday, 5 p.m., Use of Graphic Records in Heart Disease. Clinics are held daily in the several departments of the hospital during March—Cardiac, Laryngology, X-ray, and the Prevention of Consumption.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	MARCH.
10 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
	Scottish Division, Dumfries, 3 p.m.; Dinner afterwards.
11 Wed.	Lancashire and Cheshire Branch, Meeting of Branch Organization and Finance Committee, Liverpool Medical Institution, 4.30 p.m.
13 Fri.	London (Connaught Rooms, Great Queen Street, W.C.): Conference of Representatives of Local Medical and Panel Committees; and following day if necessary.
17 Tues.	London: Regulations and Standing Orders Subcommittee, 10 a.m. (*provisional*).
	London: Standing Ethical Subcommittee, 2.30 p.m.
18 Wed.	London: Ship Surgeons Subcommittee (*provisional*).
	Lancashire and Cheshire Branch, Meeting of Branch Council, Onward Buildings, Deansgate, Manchester, 4 p.m.
	South Middlesex Division, Free Library, Twickenham, 8.30 p.m. Address by Sir John Collie: The Business Side of Medical Practice.
19 Thur.	South-West Essex District, Walthamstow Hospital, 4 p.m.
	MARCH (*continued*).
20 Fri.	Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
25 Wed.	Central Division, Medical Institute, Edmund Street, 3.30 p.m.
27 Fri.	City Division, Brooke House, Upper Clapton, 9.30 p.m.
30 Mon.	London: Dominions Committee, 2 p.m. (*provisional*).
	London: Naval and Military Committee, 4 p.m. (*provisional*).
31 Tues.	London: Public Health Committee, 3 p.m.
	APRIL.
1 Wed.	London: Journal Committee, 2.30 p.m.
3 Fri.	London: Central Ethical Committee, 2 p.m.
	London: Medico-Political Committee, 10.30 a.m.
4 Sat.	London: Science Committee (*provisional*).
7 Tues.	London: Organization Committee, 2 p.m.
8 Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
22 Wed.	London: Council.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 14TH, 1914.

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THE MILWARD FUND.

MR. WILLIAM COURTENAY MILWARD, B.A.Oxon., M.R.C.S., L.R.C.P., of Cardiff, died on April 9th, 1913, leaving a widow and three boys, aged 15, 9, and 2. His estate produced £200, to which is to be added £163 collected from the local profession as a testimonial to Mr. Milward shortly before his death.

A fund, for the benefit of the widow and children, was opened on April 15th, 1913, and closed on January 31st, 1914. The total amount collected from medical men and a few non-medical friends with Bank interest is £1,348 11s. 1d. The expenses of collection were £20 5s. 2d., leaving £1,328 5s. 11d. Besides this sum, promises of further annual subscriptions to the Fund will bring in the following amounts—namely:

	£	s.	d.
In 1914	56	5	0
„ 1915	56	5	0
„ 1916	51	5	0
„ 1917	44	19	0
„ 1918	36	12	0

The Committee of the Fund met for the last time on January 29th, when Dr. C. Octavius Parsons and Mr. William Sheen were appointed Trustees of the Fund with instructions as regards the £1,328 5s. 11d. to invest £1,300 in trust securities, whereof the income should go to Mrs. Milward, and to hold the balance of £28 5s. 11d. on her behalf. Also, as regards the annual subscriptions, to collect these and pay them over to Mrs. Milward. To fulfil these instructions and provide for all eventualities a trust deed has been executed.

The Investments have been made as follows:

	£	s.	d.
£250 India 3 per cent. Stock, at 79¼	198	2	6
£250 Barry Railway 3 per cent. Debentures, at 76	190	0	0
£250 Midland Railway 2½ per cent. Preference Stock, at 66⅔	166	11	3
£300 Great Northern Railway 4 per cent. Preference Stock, at 105½	315	15	0
£250 Metropolitan Water Board 3 per cent. "A" Stock, at 85½	212	16	3
£250 Natal 3 per cent. Stock, at 82½	205	12	6
	1,288	17	6
Cost of stamps and fees ...	5	11	0
Total	£1,294	8	6

These investments are estimated to produce £47 10s. annually. The Committee of the Fund desires to express acknowledgements to all who helped, particularly Dr. C. Courtenay Lord of Gillingham, Dr. J. F. Walker of Southend, Dr. James Brownlee of Middlesbrough, Dr. Russell Coombe of Exeter, Dr. T. Harrison Butler of Leamington, Dr. W. H. F. Oxley of Poplar, Dr. K. C. Mackenzie of Caerphilly, Dr. D. R. Price of Ammanford and Mrs. Le Cronier Lancaster of Swansea; to the Honorary Secretaries of the various Divisions of the British Medical Association where collective subscriptions were made; to the medical press for giving publicity to the Fund, and to Mr. C. Massey, stockbroker, of Cardiff, who kindly undertook the investments free of commission. Mrs. Milward has continued to live in the same house since her husband died. She takes in boarders, and is just able to pay her way. The eldest boy is at Christ's Hospital as a Foundation Scholar. Every effort is being made to get the second boy into Epsom College at the next election in June, 1914, and communications regarding this and votes

should be sent direct to Mrs. Milward, 5, Glossop Terrace, Cardiff. For the baby it is believed a presentation to Christ's Hospital will be available when he has arrived at the proper age.

The subscribers numbered 458. Of the subscriptions 442 were from individuals, 11 from Divisions of the British Medical Association, and 5 from other sources.

There follows a complete list of subscriptions. The names of those subscribers who are not medical men are marked with an asterisk.

William Sheen, Honorary Treasurer
A. L. Thornley, Honorary Secretary
} *Milward Fund.*

	£	s.	d.
A. L. J., Mumbles	1	0	0
Ackland, J. M., Exeter	0	10	6
Addison, H. C., Broxbourne	1	1	0
*Alvanez, Rev. Thos. E., Northern Nigeria	1	1	0
Anstey-Chave, T., Cardiff (and £2 2s. per ann. for 5 yrs.)	5	5	0
Anonymous	0	10	6
Anonymous, London	1	0	0
Anderson, A. W., Ogmore Vale	2	2	0
Andrew, H., Exeter	0	10	6
Arthur, John, Llandaff (and £1 1s. per ann. for 5 yrs.)	2	2	0
Askin, T. C., Woodbridge	1	1	0
Atkinson, T. R., Chadwell Heath	0	5	0
Atkins, S. E., Exeter	0	10	6
Ayre, F. J., Llantwit Major	1	1	0
Barry, W. J. M., Penarth	5	5	0
Bangay, R., New Tredegar	1	1	0
Barton, H. T., Blackpool	2	2	0
Barnard, B., Machen	2	2	0
Bevan, H. C., Blaina	1	1	0
Berryman, H. A., Major, R.A.M.C.	1	0	0
Beddow, J., Exeter	0	10	6
Bennett, H., Builth Wells	1	1	0
Biddle, C., Merthyr	2	2	0
Binns, J. B., London	0	10	6
Blight, W. Lyne, Cardiff	5	5	0
Blandford, L. J., Stockton-on-Tees	1	1	0
Blake, A. F., Grays, Essex	0	5	0
Brownlee, Alex., Cardiff	1	1	0
Boyd, J., Cardiff	2	2	0
Bowen, E. R., Bargoed	1	17	0
Boyd, S. M., Harrogate	0	10	6
Bowen, Owen, Liverpool	1	1	0
Body, T. M., Middlesbro'	0	10	6
Bolton Division B.M.A.	4	15	0
Brierley, E. E., Cardiff (and £1 per ann. for 5 yrs.)	1	0	0
Broad, B. W., Cardiff (and £5 5s. per ann. for 5 yrs.)	5	5	0
Brewer, R.E.W. } Newport, Mon. Brewer, F.H.W. }	3	3	0
Brown, John, Bacup	0	10	6
Brickdale, J. M. Fortescue, Bristol	1	1	0
Brazil, W. H., Coventry	1	1	0
Bruce, H. W., London	1	1	0
B.M.A. Insurance Defence Fund	200	0	0
Brownlee, James, Middlesbro'	0	10	0
Bryans, A., Middlesbro'	0	5	0
Brook, W. F., Swansea	3	3	0
Brigstocke, C. A., Haverfordwest	1	1	0
Brighton B.M.A. Representative Meeting	25	4	0
*Britton, F. C., London	0	10	6
*Burke, Miss Ethel R., Cardiff (and £1 1s. per ann. for 4 yrs.)	3	3	0
Burke, J. P. T., Abertridwr	2	2	0
Butler, T. Harrison, Leamington (and £5 5s. per ann. for 5 yrs.)	5	5	0
Buckham, F., Cardiff	3	3	0
Budge, E. J. H., Barry	2	2	0
Burd, G. V., Okehampton	0	10	6
Bucks Division B.M.A.	4	7	6
*Butt, Mrs. A. S., Abergavenny	0	10	0
Cantillon, D. E., Cardiff	2	2	0
Campbell, H., Cardiff	3	3	0
Cameron, R., Cardiff	5	5	0
Carruthers, J. F., Jersey	0	10	6
Cardale, H. J., London	0	10	6
Candler, A. L., Exeter	0	10	6
Cambridge Division B.M.A.	1	15	0
Cecil, H. A., Ystrad Mynach	2	2	0
Clayton, F., Leamington	1	1	0
Clapp, G. T., Exeter	0	10	6
*Clarke, L. S. G., Balaghat, India	1	0	0
Child, H., Exeter	0	10	6
"Charitable Fund," per E. Hooper May, London	5	0	0
Corrigan, W. J., Cardiff	5	5	0
Cownie, J. F., Cardiff	5	5	0
Collins, E. T., Cardiff (and £1 1s. per ann. for 4 yrs.)	3	3	0
Cochrane, C. E., Porth	1	1	0
Coulter, R. J., Newport, Mon.	5	5	0
Cook, H. G., Cardiff	5	5	0
Coombe, Russell, Exeter	1	1	0
Cox, Alfred E., London (and £1 per ann. for 4 yrs.)	1	0	0
Cowie, R. A., Ebbw Vale	1	1	0
Collis, Edgar L., London	2	0	0
*Cory, Mrs. John, Penarth	25	0	0
Corbett, E., Exeter	0	10	6
Cory, E. J. Trevor, Aberdare	3	3	0
Coventry Division B.M.A.	6	15	0
Cresswell, F. P. S., Cardiff	5	5	0
Coumbe, J. Batten, Gillingham	1	1	0
Cropper, J., Chepstow	5	0	0
Crerar, J. W., Maryport	1	1	0
*Crapper, Mr. and Mrs. H.S., Poole	2	2	0
Cumberlege, G. I., Cardiff (and £1 1s. per ann. for 5 yrs.)	2	2	0
Curme, Decimus, Blandford	1	0	0
Cutcliffe, M., Dawlish	0	10	6
Davies, J. E. P., Llanelly	2	2	0
Davies, F. W. S., Cardiff (and £1 1s. per ann. for 3 yrs.)	2	2	0
Davies, Howard, Pontypridd	2	2	0
Davies, G. L., Histon	0	10	6
Davies, R. T. E., New Tredegar	2	2	0
Davies, Ivor, Cardiff	2	2	0
Davies, D. Leighton, Cardiff (and £1 1s. per ann. for 5 yrs.)	3	3	0
Davies, Eleazar, Fochriw	2	2	0
Davies, D. Arthur, Sketty, Glam.	1	1	0
Davies, Evan N., Pontyclun	2	2	0
Davies, J. Hopkin, Port Talbot	1	1	0
David, W. W., Pontypridd	3	3	0
Davy, H., Exeter	0	10	6
Devereux, A. C., Cardiff (and £1 1s. per ann. for 4 yrs.)	2	2	0
Deas, P. M., Budleigh Salterton	0	10	6
Derbyshire Division, B.M.A.	12	16	0
Dickin, E. P., Brightlingsea	1	1	0
Dickie, W. S., Middlesbrough	0	10	6
*Dillwyn, Miss, Swansea	1	0	0
Dawkin, G. M., Pontypridd	2	2	0
Downing, Charles, Cardiff	3	3	0
Dover, J. F., Whitchurch, Glam.	2	2	0
Domville, E. J., Exeter	1	1	0
Donaldson, James, Middlesbro'	0	10	6
*Dovey, C. E., Cardiff	5	5	0
Dunbar, H. J., Cardiff	3	3	0
Dunn, L. A., London	5	5	0
Duncan, T., Exeter	0	10	6
Drapes, T. L., Chepstow	2	2	0
*Drewry, F., Buxton	1	1	0
Dyball, B., Exeter	0	10	6
Eager, Richard, Exminster	0	10	6
East, W., Norwood, London	1	1	0
Edwards, W. T., Cardiff	5	5	0
Edwards, D. T., Taffs Well	2	2	0
Edwards, W. B. and C. Armstrong, Seven Sisters	5	5	0
Edwards, J. W., Middlesbro'	0	10	6
Elder, Elizabeth, Cardiff	2	2	0
Elworthy, H. S., Ebbw Vale	2	2	0
*Elliott-Drake, Rev. H. M., Briscoe	1	1	0
Elsworth, R. C., Swansea	2	2	0
*Egles, Miss D., Outshoorn, Cape Colony	1	10	0
*Edwards, E., Cardiff	2	2	0
Emrys-Roberts, E., Cardiff	2	2	0
England, P. J. Cardiff	2	2	0
*England, Councillor, E., Cardiff	1	1	0
Essex, S. E. Division B.M.A.	5	5	0
Evans, Erie, Cardiff (and £1 per ann. for 5 yrs.)	1	0	0
Evans, W. T., Treharris	1	1	0
Evans, Evan, Llanelly	1	1	0
Evans, H. T., Blackwood	1	1	0
Evans, W. H., Colyton, Devon	0	10	6
Fagge, R. Hilton, Melton M'bray	2	2	0
Falconer, J. E., Middlesbro'	0	5	0
Fenwick, C., Exeter	0	10	6
Finney, Thomas, Aberaman	1	1	0
*Finch, H. Wynne, Crowboro'	30	0	0
Fiddian, E. A., Cardiff (and £1 1s. per ann. for 3 yrs.)	1	1	0
Fitzgerald, D. A., Cardiff	2	2	0
Fort, C. L., British Columbia	10	0	0
Forsdike, H. S., Porthcawl	5	5	0
Fordyce, B. E., Cambridge	2	2	0
Forsyth, Chas., So'thend-on-Sea	0	10	6
*Fisher, Col. H., Oakden, Radyr.	5	5	0
Fripp, Sir Alfred D., London	10	10	0
Fremantle, F. E., Hertford (and £5 per ann. for 2 yrs.)	5	0	0
Frost, T. J., Llanhilleth	0	10	6
Frost, J. K., Exeter	0	10	6
*Friend, An Old Oxford	50	0	0
Fuller, W. A., Milnthorpe	1	1	0
Fulton, A., Nottingham	1	1	0
Gallaher, J. F., Cardiff (and £1 1s. per ann. for 3 yrs.)	1	1	0
Gamgee, Leonard P., Birmghm.	2	2	0
Gates, M. E., Exeter	0	10	6
*Gilbertson, F. W., Swansea	2	2	0
Gillespie, W. J., London	0	10	6
Gidley, G. G., Cullompton, Devon	0	10	6
Goodhart, Sir James, London	21	0	0
Goodall, E., Cardiff	5	5	0
*Goldberg, Hyam, Swansea	1	1	0
Griffiths, P. Rhys, Cardiff	2	2	0
Griffiths, Percy W., Bridgend	1	1	0
Griffiths, W. L., Swansea	1	1	0
Griffiths, C. A., Cardiff	5	5	0
Grant, J. W. Geary, Cardiff	1	1	0
Grant, R., Cromer	2	2	0
Greer, W. J., Newport, Mon.	1	1	0
*Gregory, Mrs., Caerphilly	0	10	0
Gordon, W., Exeter	0	10	6
Gough, Bernard B., Bristol	1	1	0
Glastonbury "Medicos"	1	1	0
Greenwood, Major, London	1	0	0
Greene, C. W., Rochester (and £2 2s. per ann. for 4 yrs.)	2	2	0
Harris, W. B., Cardiff	2	2	0
Harries, D., Carmarthen	0	10	6
Hacquoil, P. H., Penarth	1	1	0
Haycraft, J. B., Cardiff	1	1	0
*Hazel, A. E. W., Oxford	2	2	0
*Harries, D., Cardiff	3	3	0
*Handcock, Colonel J. J., Cardiff	5	5	0
*Harris, A. J., Llanishen	1	1	0
Harding, R., New Radnor	1	1	0
Hall, E. S., Bitterne, Hants	1	8	8
Halifax Division B.M.A.	4	0	0
Harris, Robert, Southport	1	1	0
*Hempson, W. E., London	5	5	0
Hepburn, David, Cardiff	2	2	0
*Herring, Mrs. A., Quebec	1	0	0
Hedden, R., Honiton, Devon	0	10	6
*Higson, Rev. G. L., Knutsford	2	2	0
Hinks, A. G., Westcliff-on-Sea	0	10	0
Hind, Wheelton, Stoke-on-Trent	10	0	0
Hicks, Phillip, Leamington	1	1	0
Howell, John, Cheltenham (and £1 1s. per ann. for 3 yrs.)	1	1	0
Hoops, H. L., Cardiff	1	1	0
Hodgson, V. J., Westcliff-on-Sea	0	10	0
Howell, Alf., Cardiff	4	4	0
Hopkins, Edward, Bedlinog	1	1	0
Hopkin, R., Llangadock	1	1	0
*Hughes, W. Hawker, Oxford	1	1	0
Hunt, De Vere, Cardiff	2	2	0
Ibotson, E. C. B., Briton Ferry	1	1	0
Isaac, R. J., Pontardulais	1	1	0
Inman, E., Ammanford	0	10	6
*Ingledew, J. P., Cardiff	1	1	0
*James, C. H., Cardiff	3	0	0
*James, Mrs. C. H., Cardiff	2	0	0
James, P., Senghenydd	2	2	0
Jackson, T. L., Cheadle	1	1	0
Jackson, H. W., Middlesbrough	0	5	0
James, W. T., Newquay, Cardigan	0	10	6
Jephcott, Charles, Chester	1	1	0
Joscelyne, E. W., Cardiff	2	2	0
Jenkins, J. D., Pentre	1	1	0
"J. F."	0	5	0
*Jones, Mrs. R. W., Penrhiwceiber	2	2	0
Jones, D. Rhys, Cardiff	2	2	0
Jones, T. W., Barry Dock	1	1	0
Jones, J. Bowen, Cardiff	2	2	0
Jones, Evan, Llanybyther	0	10	6
Jones, C. A., Penarth	1	1	0
Jones, W. Llewelyn, Merthyr	2	2	0
Jones, B. G. Phillips, Penrhiwceiber	2	2	0
Jones, Evan, London	3	3	0
John, Thos., Swansea	1	1	0
Jones, Evan, Aberdare	1	1	0
King, J. C., Barry	2	2	0
*Lainé, J. M., Leamington	4	4	0

	£	s.	d.
*Laing, Mrs. J. M., Leamington	1	1	0
*Lancaster, Arthur H., Send, Surrey	5	5	0
*Lancaster, Percy Locke, Ealing	1	1	0
The *Lancet* Medical Insurance Committee Discretionary Fund	5	0	0
The *Lancet* Relief Fund	5	0	0
Lawrence, A. G., Chepstow	3	3	0
Lancaster, E. Le Cronier, Swansea	3	3	0
Lane, Sir W. Arbuthnot, Bart., London	2	2	0
*Lewis, Rupert, Taffs Well	0	10	6
*Lewis, W. Morgan, Cardiff	3	3	0
Lewis, Cyril, Cardiff	2	2	0
Leigh, W. W., Treharris	3	3	0
Ley, H. Rooke, Boscombe	1	0	0
Latimer, H. A., Tunbridge Wells	1	1	0
Levick, M. H., Middlesbrough	0	5	0
Leeming, Arnold, Sudbury	0	10	0
Lindsay, W. J., London	2	2	0
Llewellyn, T. R., Penygraig	2	2	0
*Llewellyn, Sir J. T. D., Bart., Penllergaer	5	5	0
Lloyd, M., Llanarthey	1	4	0
Lloyd, P. A., Haverfordwest	1	1	0
Lovely, C. N., Dawlish	0	10	6
Lord, C. C., Gillingham	1	1	0
Lyttle, J. Shaw, Creigiau	1	1	0
"M."	2	2	0
Maclean, E. J., Cardiff	10	10	0
Martin, William, Cardiff	5	5	0
Martin, Allan, Cardiff	3	3	0
Martin, H. C., Caerleon	1	1	0
Martin, D. Cargill, Cardiff	2	2	0
Mathias, C. D., Tenby	1	1	0
Marsh, F., Birmingham	1	1	0
Martin, E. W. S., Brithdir	2	2	0
MacManus, J. R. H., Bedwas	2	2	0
Mackenzie, K. C., Caerphilly	2	2	0
Maunsell, F. I., Tirphil	2	2	0
Macevoy, H. J., London	1	1	0
Maxwell, J. B., Southend-on-Sea	0	10	0
Macpherson, W. H., Exeter	0	10	6
McDowell, S. E. C., Nantymoel	1	1	0
McLaughlin, James, London	0	10	6
McCutcheon, J. P., Blaengarw	2	2	0
Mills, Y. H., Haverfordwest	1	1	0
Millea, W. C., London	0	10	6
Morgan, Naunton, Gilfach	0	10	0
Morgan, W., Swansea	1	1	0
Morgan, E. Rice, Morriston	1	1	0
Morgan, Thomas, Llandovery	0	10	6
Moon, R. O., London	3	3	0
Morgan, Idris N., Tonypandy	0	10	6
Morgan, W. H., Westcliff-on-Sea	0	10	0
*Morgan, Col. W. L., Swansea	1	0	0
Musgrove, C. D., Penarth	3	3	0
Mules, Bertha, Exeter	0	10	6
Neale, George, Barry	2	2	0
Neish, W. A., Cardiff	5	5	0
*Newsam, Mr. and Mrs. Fowler, Broxbourne	1	11	6
Nelis, F. W., Caerleon	2	2	0
Niall, W. G., Chatham	0	10	0
Nicholls, Frank J., Eastbourne	1	1	0
Norman, Ralph, Southend-on-Sea	0	10	6
Nolan, J. S., Bedwas	2	2	0
O'Donovan, M., Cardiff	2	2	0
O'Donnell, P. J., Barry	2	2	0
Parsons, C. O., Cardiff (and £5 5s. per ann. for 5 yrs).	5	5	0
Paterson, D. R., Cardiff	10	10	0
Paterson, H., Cardiff	3	3	0
Parry, E. J., Pontycymmer	3	3	0
Paxton, J., London	0	10	6
Pearse, Athol S. J., Cardiff	5	5	0
Pegge, E. V., Briton Ferry (and £1 1s. per ann. for 5 yrs.)	5	5	0
Penfold, F. W., Rainham	1	1	0
Pereira, J. A. W. Exeter	0	10	6
*Petherick, Mrs., St. Austell	1	1	0
*Peter, R. A., Looe	1	1	0
Phillips, John, St. Clears	0	10	6
Pickard, Ransom, Exeter	0	10	6
Powell, Laura G., Cardiff	2	2	0
Poole, T. B., Westcliff-on-Sea	2	2	0
Portsmouth Division, B.M.A.	7	10	4
*Price, F. H. Glynn, Swansea	1	1	0
Price, William, Southerndown	5	5	0
Price, R. G., Carmarthen	1	1	0
Price, D. R., Ammanford	1	1	0
Price, E. O., Bangor	1	1	0
Price, E. H., Cardiff	1	1	0
Prichard, R., Cardiff	5	5	0
Prosser, E., Monmouth	1	1	0
Pugh, C. G., Southend-on-Sea	0	10	0
Quick, H. E., Swansea	1	1	0
Ramsden, Walter, Oxford (and £1 1s. per ann. for 5 yrs.)	5	5	0
Randall, Wyndham, Bridgend	2	2	0
Rees, Alfred, Cardiff	2	2	0
*Rees, Canon W. G. Edwards, Pendleton	1	0	0
Rees, J. Hugh, Penarth	3	3	0
Rhys, Owen L., Cardiff	5	5	0
Rix, B., Tunbridge Wells	1	1	0
Reidy, C., Bargoed	2	2	0
Richmond, H. B., London	0	10	6
*Richards, Mrs. Richard, West Cross	1	1	0
Roberts, Henry H., Llanelly	2	2	0
Roberts, D. R., New Tredegar	2	2	0
Robinson, J., Cardiff	1	1	0
*Riddelodell, H. J., Llandaff	0	10	6
Rogers, W., Barry	1	0	0
Rosewarne, D. D., London	0	10	6
Rochester, Chatham, and Gillingham Division, B.M.A.	2	5	0
Rogers, A. B., Cliffe	0	5	0
Roper, A. C., Exeter	0	10	6
Ryce, R., Merthyr	0	10	6
Sansome, T., West Bromwich	1	1	0
Sandoe, J. W., Exeter	0	10	6
Schölberg, H. A., Cardiff (and £1 1s. per ann. for 3 yrs.)	3	3	0
Scudamore, L., Abertysswg	1	1	0
Sheen, William, Cardiff (and £1 1s. per ann. for 5 yrs.)	10	10	0
Shepperd, C. C., Cardiff (and £1 1s. per ann. for 3 yrs.)	1	1	0
Shaw, Lauriston E., London (and £2 2s. per ann. for 5 yrs.)	5	5	0
Shepperd, Albert, London	0	10	6
Shadwell, St. Clair B., London	1	1	0
Shiach, S. A., Llanishen	2	2	0
Shand, W., Guisborough	0	5	0
Shearer, D. F., Exeter	0	10	6
Simpson, H. E., Southend-on-Sea	0	10	0
Skyrme, H. E., Cardiff	3	3	0
Smith, R. J., Cardiff	5	5	0
Smith, R. W. Innes, Sheffield	0	10	6
Smith, Percival, Sirhowy	1	1	0
Smeall, W. F., Middlesbrough	0	5	0
Soden, Wilfred N., London	1	1	0
Southampton Division B.M.A.	2	15	0
Solly, R. V., Exeter	0	10	6
*South Wales and Mon. Clerks' Association, Cardiff	7	7	0
Sparrow, G. R., Cardiff	5	5	0
Spurgin, H. B., Northampton	1	1	0
Spurr, J., Lyme Regis, Dorset	0	10	6
Stevens, W. Mitchell, Cardiff (and £5 5s. per ann. for 5 yrs.)	5	5	0
Stewart, F. R., Penarth	2	2	0
Stone, W. Domett, London	1	1	0
Stretton, J. L., Kidderminster	1	1	0
*Stutfield, V. C., Durban, Natal (and £2 2s. per ann. for 4 yrs.)	2	2	0
Steinhaeuser, J. R., Lewes	1	1	0
Starling, Hubert J., Norwich	2	2	0
Steel, W., Middlesbrough	0	10	0
Staffordshire, Mid, Div. B.M.A.	4	14	6
Staples, E. P., Strood	1	1	0
Stokes, C. E., Exeter	0	10	6
Swiney, F. S., Cardiff (and £1 per ann. for 5 yrs.)	2	2	0
Symonds, C. J., London	5	5	0
Sympathizers, Two	0	7	0
Terry, R. H., Nelson	1	1	0
Telling, W. H. Maxwell, Leeds	2	2	0
Thornley, A. L., Cardiff	2	2	0
Thomas, D. E., Newport (Mon.)	0	10	6
Thomas, W. E., Bridgend	1	1	0
Thomas, Frank G., Swansea	5	5	0
Thomas, W. E., Ystrad Rhondda	3	3	0
Thomas, Jabez, Swansea	5	5	0
Thomas, R. L., Whitland	0	10	6
Thomas, J. Lyun, Cardiff	10	10	0
Thomas, D. J., Bargoed	5	5	0
Thomas, T. W., Caerphilly	2	2	0
*Thomas, Sir W. J., Ynyshir	5	5	0
*Thomas, Iltid, Swansea	1	1	0
*Thomas, Alderman Morgan, Lord Mayor of Cardiff, 1913	1	1	0
Thomas, R. Tudor, Cardiff	3	3	0
Thompson, A., Oxford	3	0	0
Thornely, M. H., Major, I.M.S. (and £1 1s. per ann. for 5 yrs.)	2	2	0
Thornley, Joseph, Bolton	1	0	0
Tighe, Vincent, Dublin	1	0	0
Todd, D. F., Sunderland	1	1	0
Tombleson, J. B., Southend-on-Sea	0	10	0
Timothy, J. H., Nantgaredig	0	10	6
Tomkys, L. S., Lichfield	0	10	0
Tonge, E., Seaton, Devon	0	10	0
Tweed, E. R., Honiton, Devon	0	10	6
Treasure, W. B. C., Cardiff	5	5	0
Tyson, W. J., Folkestone	0	10	6
Tyson, Wilson, Lowestoft	1	1	0
*Turberville, Mrs. Picton, Swansea	1	1	0
Turner, J. Hill, Cardiff	1	1	0
*Vaughan, Colonel E. M. Bruce, Cardiff	2	2	0
Vachell, C. T., Cardiff (and £1 1s. per ann. for 5 yrs.)	6	6	0
Vachell, H. R., Cardiff	5	5	0
"H. C. V."	1	1	0
Verrall, T. Jenner, Bath	2	2	0
Wallace, Thomas, Cardiff	5	5	0
Wallace, John, Cardiff	3	3	0
Wallace, Sam., Cardiff	2	2	0
Walker, R., Cardiff	3	3	0
Walker, J. F., Southend-on-Sea	2	2	0
Ward, J., Merthyr	1	1	0
Ward, Ernest, Merthyr	1	1	0
Wayne-Morgan, L., Whitchurch	5	5	0
Walker, J. C., Rochdale	0	10	6
Waller, W. A. E., Rugby	1	1	0
Webster, T. J., Merthyr	2	2	0
Weichert, C. J., Penygraig	2	2	0
Whelan, J. H., Cardiff	1	1	0
White, W. Hale, London	3	3	0
White, C. F., London	0	10	6
Whiting, A. J., London	1	1	0
Williams, J. D., Cardiff	2	2	0
Williams, Sam., Llanelly	2	2	0
Williams, D. Lewis, Ferryside	1	1	0
Williams, E. R., Carmarthen	0	10	6
Williams, Owen, Bury Port	1	1	0
*Williams, Mrs. John, Cardiff	10	10	0
*Williams, Mrs. Morgan Bransby, Killay	1	1	0
Williams, D. J., Llanelly	10	10	0
Wills, W. Kenneth, Bristol	1	1	0
Willock, E. H., Croydon	1	1	0
Woods, W. H. O., Bridgend	2	2	0
Worthington, R. A., Exeter	0	10	6
*Wright, Col. J. Roper, Swansea	1	1	0
"X"	0	10	0
Yeld, R. A., Okanagau Lake, British Columbia	1	1	0
Young, C. R., London	0	10	6
Young, J. D., Blackpool	1	1	0
*Young, Mrs. J. W. Islay, Mumbles	1	1	0

Hospitals and Asylums.

BARRINGTON'S HOSPITAL, LIMERICK.

THE annual report of Barrington's Hospital, Limerick, showed that the income of the year was £1,405 11s., and the expenditure was £1,913 10s. 11d. The hospital, the report added, was in a very serious financial position, and it was a question whether its beneficent work would not have to be curtailed. Its income was £500 to £400 short of its expenditure, and expenses showed a tendency to increase. Unless the public responded to the appeal for aid, the closing of a portion of the hospital and a serious curtailment of its good work seemed the only way out of the present difficulty.

PERTH INFIRMARY.

AT the annual meeting of the subscribers to the Perth Infirmary the directors reported that the misgivings and misunderstandings inevitably arising from the various views expressed regarding the working and effect of the Insurance Act accounted in no small measure for the reduced income. About 400 insured persons received treatment as in-patients during the year, or 38 per cent. of the total patients treated. In view of this, the directors considered that they had a very strong [illegible] essential measure of support from the Insurance Committee [illegible] approved societies. During the year the infirmary has [illegible] its doors freely to all insured persons requiring admission. It was impossible, however, that this policy could long be maintained, and it would be necessary to place the provision of in-patient treatment for all insured persons on a new basis.

LOCAL MEDICAL AND PANEL COMMITTEES.

ROXBURGHSHIRE.

LOCAL MEDICAL COMMITTEE.

A MEETING of the Local Medical Committee was held at St. Boswells on February 10th. Dr. CULLEN was in the chair, and seven other members were present.

Medical Service Subcommittee.—It was reported that Drs. Barrie and Fleming had been elected to the Medical Service Subcommittee as representing the Panel Committee, and it was unanimously resolved to elect Dr. Blair, as representative of the Local Medical Committee.

Co-ordination of Local Medical and Panel Committees.—The SECRETARY was also instructed to inform the Ayrshire Committee that the proposal to form a Central Association of Local Medical Committees for Scotland was premature in view of the fact that the British Medical Association were in course of drawing up a scheme for the co-ordination of Committees throughout the United Kingdom.

Alteration of Constitution.—Dr. OLIVER pointed out that the members of the Panel Committee numbered eleven, and that the executive of this Committee numbered eight, and suggested that it would facilitate the work of both committees if the executive of the Local Medical Committee were the same as the Panel Committee. The SECRETARY said that the question of change of constitution of the Committee could only be raised at the annual general meeting of the Committee, unless a requisition was signed by three-fourths of the members requiring a special general meeting of the Committee to be called for the purpose of considering a change in the constitution and stating the change proposed to be considered. The Secretary was instructed to see that this was carried out, with a view to the proposed alteration being made.

PANEL COMMITTEE.

A meeting of the Panel Committee was held on the same day and place, under the chairmanship of Dr. CULLEN.

Administrative Expenses.—The representatives of the Pharmaceutical Committee attended, and a general discussion took place as to the expenses which would be incurred by the respective committees. It was pointed out that the maximum grant for the administration expenses of the two committees amounted to 1d. per insured person in the county, and that a sum of about £70 would be available. This sum would come out of the medical benefit fund, to which the panel doctors contributed thirteen-seventeenths and the panel chemists four-seventeenths. The members of the Medical Committee expressed their desire to deal fairly with the Pharmaceutical Committee, and on the motion of Dr. CARLYLE JOHNSTON it was unanimously agreed to make joint application to the County Insurance Committee for one-half of the grant to be distributed to each committee for one year, until some experience was gained of the expenses incurred in the carrying out of the work of the two committees. The Pharmaceutical Committee expressed approval of this arrangement, and it was resolved that the clerk to each committee should draw up a joint application to the Insurance Committee. The representatives of the Pharmaceutical Committee then retired.

Dispensing by Panel Doctors.—A conference then took place, under the chairmanship of Mr. JOHNSTON, Vice-Chairman of the County Insurance Committee, with the Medical Benefit Subcommittee for the discussion of the following resolutions of the Pharmaceutical Committee:

1. That the Local Pharmaceutical Committee did not object to doctors in rural areas dispensing for insured persons on their lists where there was no chemist.
2. That the Local Pharmaceutical Committee did not object to those doctors in rural areas being paid on a capitation basis in respect of the insured persons for whom they dispense.
3. That the Local Pharmaceutical Committee strongly object to doctors in a town or village dispensing for insured persons where there was a chemist. In exceptional cases, however, where the County Insurance Committee may grant permission to dispense to a doctor who resided in a town or village where there was a chemist, that doctor shall render accounts to the Insurance Committee each quarter, and shall be paid on the same basis as a chemist.

The first and second resolutions were approved of by the Panel Committee without comment. With regard to the third resolution, the Committee unanimously expressed its disapproval of doctors dispensing for insured persons in a town or village where there was a chemist. Dr. CARLYLE JOHNSTON stated that where the County Insurance Committee granted permission to dispense in special cases to a doctor in a town or village where there was a chemist the doctor should not be asked to render accounts to the Insurance Committee each quarter, and moved that the words "each quarter" in the resolution passed by the Pharmaceutical Committee should be deleted. This was unanimously agreed to. Mr. JOHNSTON intimated that he was disappointed that none of the members of the Panel Committee who dispensed were present to express their view, and that he would report to the County Insurance Committee the views expressed by the Panel Committee.

PERTHSHIRE.

MEETING OF PRACTITIONERS.

THE annual meeting of practitioners resident in Perth and Perthshire was held at Perth on February 24th. Twelve practitioners from the burgh and county were present. Dr. ROBERT STIRLING was elected to the chair.

Annual Report.—The annual report of the Local Medical Committees for the burgh and county for the past year were submitted and adopted.

Election of Local Medical Committee.—The following names were approved of to form the Local Medical Committees for the ensuing year, 1914:

For the Burgh.—Drs. Bisset, J. Hume, W. Maitland Hume, Hunt, Lyell, Macmaster, Menzies, Paton, Parker Stewart, McCall Smith, Taylor, Trotter, Stirling. Executive: Drs. J. Hume, Paton, Trotter, Bisset, Stirling, Menzies, Lyell.

For the County.—Drs. Taylor (Dunkeld), Liddell (Errol), Robertson (Scone), Haig (Crieff), Beatty (Pitlochry), Mackay (Aberfeldy), Shaw (Blairgowrie), Harvey (Callender), Lyell (Perth), Davidson (Coupar Angus), Tait (Alyth), Trotter (Perth).

Payments Due to Panel Practitioners.—The meeting then took into consideration the fact that a large amount of money, along with interest thereon, was still standing due to panel practitioners for the past year, consisting of balances due for capitation grants for patients on the panel lists and also for allocations which had now been made of patients who did not choose their doctor for the past year. The Secretaries were empowered to communicate with the Commissioners requesting that immediate attention be given to the payment of these overdue moneys, or otherwise that the Commissioners should furnish reasons in explanation of the delay in payment, seeing that the first quarter of a new insurance year was now well advanced, and the carrying on of two accounts simultaneously would only lead to confusion.

EAST LOTHIAN.

THE following are the members of the Local Medical and Panel Committees:

Panel Committee.—Dr. W. R. Martine, Haddington (Chairman); Dr. T. P. Caverhill, Haddington (Secretary); Drs. Robarts, Macdonald, Selkirk, McLagan, Wedderburn, J. F. Crombie, McEwan, Shed, and de Spiganovicz.

Local Medical Committee.—Dr. D. R. Macdonald, Dunbar (Chairman); Dr. J. F. Crombie, North Berwick (Vice-Chairman); Dr. W. R. Martine, Haddington (Secretary and Treasurer); Drs. Gordon, D. D. Black, McLagan, Wedderburn, D. R. C. McLagan, J. D. Black, Selkirk, J. L. Crombie, A. Matheson, Ewart, Ballantyne, A. J. W. Buchanan, McEwan, de Spiganovicz, Miller, Shed, G. T. Buchanan, Caverhill, and Robarts.

Executive Committee.—Drs. Macdonald, J. F. Crombie, Martine, de Spiganovicz, McEwan, D. D. Black, and Caverhill.

Medical Members of County Insurance Committee.—Dr. W. C. McEwan, elected by Commissioners; Dr. T. P. Caverhill, elected by County Council; Dr. J. F. Crombie, Dr. W. R. Martine, elected by practitioners.

HERTFORD.

PAYMENT OF TRAVELLING EXPENSES.

IN response to a request for payment for railway expenses for the Panel Committee, the Clerk to the Hertfordshire Insurance Committee has received the following reply dated March 6th, 1914, from the Commissioners:

In reply to your letter of the 24th ultimo, regarding Section 33 (2) of the National Health Insurance Commission (England), I am directed to state that they observe that in the statement of expenses furnished by the Panel and Pharmaceutical Committees respectively provision is made for the payment of travelling expenses incurred by members in respect of meetings of these

Committees, and in the latter case for the additional payment of a sum of 5s. per member for each attendance. The Commission are of opinion that such expenditure cannot be regarded as included in the administrative expenditure of the Committee for the purposes of the Section, and I am to say that the Committee should be informed accordingly.

I am also to request that you will be good enough to ascertain whether either the Panel Committee or the Pharmaceutical Committee desires to make any observations with regard to the proposal of the other Committee.

I am, Sir,
Your obedient Servant,
(Signed) S. P. VIVIAN.

INSURANCE NOTES.

LONDON.

Address by Dr. C. Addison, M.P.

AT a meeting of the Lambeth Insurance Practitioners' Association to be held at the Horns Hotel, Kennington, S.E., on Tuesday next, at 9.30 p.m., Dr. Christopher Addison, M.P., will give an address on the present position under the Insurance Act. To this meeting insurance practitioners from other districts are invited. The following recommendations with regard to the allocation of insured sick persons who have not chosen a doctor have been drawn up:

That for allocation purposes the borough be divided into nine wards.

That a rota of panel doctors be adopted in each ward for the treatment of sick insured persons who have hitherto not chosen their doctor, each doctor taking a case in turn.

No doctor to refuse any particular case without giving sufficiently satisfactory reason for so doing.

In the event of any panel doctor refusing to accept and treat any individual patient in his turn he should be considered to have limited his responsibility, and shall not participate in any distribution of any unallotted funds.

In each ward one doctor to be nominated as the source of communication between that particular ward and the clerk of the London Insurance Committee. Practitioners undertaking this duty shall be on the telephone.

Proposed Nursing Benefit.

At a conference in Westminster convened by the Association of Approved Societies, Mr. Charles Bathurst, M.P., who presided, said that it did not regard the insurance scheme from a partisan point of view. An inquiry had been undertaken for the association by a committee presided over by Lord Lytton, and it was already shown that there was a lack of facilities for affording adequate treatment to insured persons in hospitals, and not sufficiently speedy treatment for ordinary sickness, particularly in the case of those entering insurance for the first time, or changing their doctor or place of residence. Sir Victor Horsley, chairman of a subcommittee, presented the outline of a proposal for providing nursing for insured persons. The committee considered that the provision of nurses would undoubtedly shorten the duration of treatment and so lessen the demand for sick pay. Nursing was an essential part of medical treatment; its administration should be conducted through the Insurance Committees, on which nurses should be represented. As the financial basis of medical benefit could not carry any further service, special financial provision must be made for nursing benefit. This special nursing fund should be set up by the Commissioners, and should be comparable in constitution and administration to the special mileage fund. The secretary of the association, Mr. A. Gordon, estimated the cost at about half a million annually. After a discussion, in which several delegates said that they were not authorized to accept the proposals, the report was received but not adopted.

"Surplus Funds."

Dr. Bazett, of St. Mary's Terrace, Paddington, and Dr. Eates, of 12, Thayer Street, Manchester Square, have had numerous letters on this subject from panel doctors with small lists, with a view to taking common action to test the legality of the proposed action of the various committees who have the handling of these "surplus" funds. It has been decided to hold a meeting at Dr. Eates's house on Tuesday next, March 17th, at 3 o'clock, for the purpose of deciding the nature of the action to be taken. All panel doctors with small lists are cordially invited to attend.

We have received a long letter from Dr. Edmund Naudy (Wandsworth, S.W.) in which he expresses the opinion that the arrangement sanctioned by the London Insurance Committee at its meeting on February 26th is inequitable, and contends that Dr. H. H. Mills, Dr. B. A. Richmond, and Dr. L. E. Shaw, who spoke at that meeting, did not represent the views of the panel practitioners as a whole, but only a small proportion not exceeding at most 30 per cent. He suggests that the matter is one which should be adjusted by arbitration. "Let the leaders on both sides," he writes, "the leaders of the small as well as the big battalions [referred to by Dr. Eates] submit their respective claims to an arbitrator carefully selected, and abide by his decision." This, he adds, will "save time and avoid an unseemly squabble which might end in the law courts."

Limited Lists.

The London Insurance Committee has issued a circular stating that, after consultation with the Panel Committee, it has made special arrangements whereby a practitioner who desires to undertake the treatment of a limited number of insured persons shall not be required to undertake the treatment of other persons, and that his name shall appear in the county panel list with a suitable indication, and not in the borough panel list which is available for reference at local post-offices, public libraries, etc. The idea is that certain medical practitioners in London will be prepared to enter into such an agreement for the purpose of undertaking the treatment of a limited number of insured persons—for example, the servants of their private patients.

MANCHESTER.

Approved Societies and a Whole-time Medical Service.

There can be no escape from the fact that a large majority of the officials of the approved societies of Manchester and district have set their minds on a full-time service to replace the present system of payment by attendance, and at a meeting of the Manchester Association of Secretaries of Approved Societies, Mr. E. Lloyd Jones, who recently brought up the subject before the Manchester Insurance Committee, made a violent attack on the Manchester doctors and the Manchester system in general. He said that the dispensing of medical benefit in Manchester was a disgrace to national insurance. Malingerers were pandered to and certificates given without examination or visits, so that the doctors' incomes had gone up by leaps and bounds. The doctors, he said, were bleeding the working classes, and about £40,000 out of the £83,000 available had gone into about forty-five pockets. He thought that if Manchester employed about 190 doctors, allotting them a proper proportion of insured persons, salaries of £400 would be a fair amount, and if they were allowed to treat dependants of the insured that would bring them in another £100, and he added "at the end of the year we should not be told that two or three of them are dying of phthisis because they have overworked themselves. As a trade unionist speaking to trade unionists—for the British Medical Association is really a big trade union—all the sympathy I give them is that of one who blames his fellow workman who is always wanting to work overtime to grab a few more shillings at the week-end and brings himself to an early grave. I have no sympathy with those doctors who are fools enough to kill themselves in order to keep themselves." Under the scheme which he suggested, in addition to the 190 doctors at £400 a year, there could be provided forty or fifty nurses for about £2,500 and four or five specialists at, say, £1,000 a year each; all this, he said, could be done with the £83,000 available.

Mr. Roberts, who is a member of the Salford Insurance Committee, followed with an attack on the Salford system, and said that one doctor in Salford had a queue outside his surgery as large as any theatre queue because his certificates were given *ad lib.* Mr. E. E. Farrow, a member of the Manchester Insurance Committee, said the Manchester system was the right one if the doctors were honest, but unfortunately they were not. "The doctors on the Insurance Committee were not playing the dishonest game, but it was the fellows outside." Ultimately a resolution was adopted to the effect that the Manchester system was an unqualified failure, and calling on the Manchester and Salford Insurance Committees to inquire

into the advisability of establishing a full-time service at an early date.

The proposal for a full-time service also came up at a meeting of the Trade Union Approved Societies Association in Manchester on March 2nd, when the Chairman, Mr. R. J. Davies, proposed: "That this meeting is of opinion that the present method of paying medical practitioners for half-time service is unsatisfactory, and calls upon the Insurance Commissioners to amend the National Insurance Act so that a complete State Medical Service may be secured." An amendment to this was proposed by Mr. Lowe, of the Typographical Society, asking that an inquiry should be made by the Commissioners and a report presented at an early date to Parliament as to the efficacy of the following systems: (1) State Medical Service, (2) the payment by attendance system, (3) the capitation system, and (4) full-time service. Mr. Lowe thought that sufficient data were not available to support a State Medical Service, and deprecated the attacks on the doctors which some of the officials of the approved societies were making. In the course of the discussion several speakers expressed the opinion that something should be done to prevent any doctor attempting to treat too many patients with the result that the treatment was inadequate, but doubt was expressed whether under a State Medical Service free choice of doctor would be possible. Finally, however, the amendment was rejected, and the motion in favour of a State Medical Service was carried by a large majority.

Drug Fund Deficits in Lancashire.

A conference of representatives of Lancashire Insurance Committees was held at Blackburn on March 6th, each committee sending three representatives. Previous to the meeting a tabular statement of the state of the drug fund of the nineteen Insurance Committees of Lancashire was circulated, the chief points of which are as follows: In reply to a series of questions sent to all the Insurance Committees throughout the county by the Clerk of the Blackburn Committee, the following committees reported that their drug and drug suspense funds were sufficient to meet all the chemists' bills in full, and the cost for drugs and appliances per insured person for the year 1913 is added in each case: Barrow-in-Furness, 1s. 8½d.; Blackpool, 1s. 6¾d.; Bootle, 1s. 6d.; Lancashire County, cost not stated, but apparently about 1s. 7d.; Liverpool, 1s. 9.37d.; St. Helens, 1s. 4½d.; Southport, 1s. 6½d; Warrington, 1s. 7d. In all these areas evidently the doctors will receive the whole or part of the floating sixpence. St. Helens is in the best position, as not only will the doctors receive the whole of the floating sixpence, but a further balance of 1½d. per insured person will be carried forward to the credit of the drug fund of the current year.

In the case of the following towns the Insurance Committees estimate that there will be deficiencies in the combined drug and drug suspense funds, and the figures given below will afford some clue as to the way in which the deficiencies have arisen.

	Average Cost per Prescription.	Average Number of Prescriptions per Insured Person.	Cost per Insured Person for Drugs and Appliances if Accounts were Paid in Full.	Estimated Deficit per Cent.
Blackburn ...	8¼d.	3.22	2s. 3d.	20
Bolton	7¾d.	3.7	2s. 4¾d.	24
Burnley ...	9.15d.	3.19	2s. 5¾d.	20
Bury	8¼d.	2.57	1s. 11d.	?
Manchester ...	7.9d.	4.88	3s. 2.55d.	35 to 38
Oldham ...	7¾d.	4	2s. 2¼d.	10
Preston ...	9.4d.	3.48	2s. 4d.	25
Rochdale ...	8.3d.	3	2s. 0¾d.	25 (?)
Salford ...	7.1d.	4.4	2s. 7¾d.	28
Stockport ...	8¼d.	3.75	2s. 7¾d.	25
Wigan	7½d.	3.3	2s. 1¾d.	Slight deficit.

In the case of Rochdale the deficit is put down at 25 per cent., but this can hardly be correct, as the chemists have already received about 92 per cent. of their bills. The largest deficits are seen to be in Manchester and Salford, and the full figures are of interest:

Total insured persons—Manchester 262,700, Salford 90,843.
Estimated credits of Drug and Drug Suspense funds—Manchester £26,270, Salford £8,700.
Aggregate chemists' accounts—Manchester £42,270, Salford, £12,063.

Thus there is a deficiency of £16,000 in Manchester and £3,363 in Salford. In both cases, however, it is probable that some contribution towards meeting this deficit may be made from the sanatorium benefit fund, as it is found that in a large number of cases the panel doctors have neglected to mark prescriptions given to persons receiving sanatorium benefit with the word "domiciliary," and in consequence these prescriptions have been charged to the drug fund instead of to the sanatorium benefit fund. It is possible that in Manchester as much as £2,000 may thus be handed over to the drug fund, and in Salford several hundred pounds. In both cases, too, the Pharmaceutical Committees are calling on the Local Medical Committees under Section 46 of the Regulations of 1912 to investigate the prescriptions given by a number of the panel practitioners who are in the opinion of the Pharmaceutical Committees guilty of over-prescribing, and if this is proved to the satisfaction of the respective Insurance Committees these doctors will be surcharged and the sums surcharged handed over to the drug funds. It is, therefore, still doubtful what percentage of their accounts the chemists will ultimately get. The contrast between Manchester and Liverpool is very striking. Liverpool has 247,118 insured persons against Manchester's 262,700, but in Liverpool there were only 634,000 prescriptions given, compared with 1,281,781 in Manchester, or, in other words, in Liverpool each insured person on the average received 2.5 prescriptions, and in Manchester 4.88 prescriptions. The average cost of each prescription was 8.3d. in Liverpool and 7.9d. in Manchester, so that clearly the large deficit in Manchester as compared with Liverpool was due not to the expensiveness of the drugs ordered, but to the greater number of prescriptions given in Manchester. The same applies in only a slightly less degree to Salford, where each insured person received 4.4 prescriptions, costing on an average 7.1d. each.

After the conference at Blackburn, which was held with closed doors, it was announced that the feeling of the representatives was distinctly against any application being made by Insurance Committees to county borough councils for assistance under Section 15 (7) (8) of the Act. There was also a general opinion that, while there had been a considerable amount of over-prescribing by the panel doctors in certain districts, there had also been a great drain on the drug fund owing to the large amount of sickness among the women workers in the textile trades. Various proposals were discussed, and many of the representatives seemed in favour of the drug fund being centralized, but it was pointed out that this could not be done for the past year, and that it would be useless to approach either the Government or the Commissioners with applications for a special grant to meet the deficits until Section 46 of the Regulations had been enforced relating to surcharging of doctors for excessive prescribing. It was accordingly resolved to recommend each Insurance Committee to see that this Regulation was at once put into operation, and the conference was then adjourned until the results of the investigations could be known.

INSURANCE ACT IN PARLIAMENT.

National Insurance Act Debate.

The Civil Service Estimates were considered in Committee on Thursday, March 5th. This was the first allotted day, and the greater part of the time of the sitting was occupied in a debate on the National Insurance Act.

For the most part the debate was occupied with the question of the financial position of various societies, but it contained some matters of particular medical interest, and the subjoined report contains the chief matters relating thereto.

Mr. Worthington-Evans, who moved the reduction of the vote by £100, in regard to the allotment of insured

persons to medical men and the destination of the moneys relating to those insured persons who had made no choice of doctor, said: The first charge that I make is the refusal to give information relating to the administration of benefits. In this connexion I asked the Chancellor of the Exchequer how many insured persons have not selected a doctor on the panel, how many persons have had panel doctors assigned to them, and how many persons have been allowed to make their own arrangements with the doctors, whether on the panel or not. The answer that the representative of the Insurance Commissioners gave was that there was no information sufficiently accurate or extensive to be given in answer to this question, but if I would put a motion down for a return it would be considered. Following that suggestion, I put a motion down for a return, and the hon. member for St. George's-in-the-East (Mr. Wedgwood Benn) replied that he was not satisfied that the return asked for would be of public utility sufficient to justify the time and labour necessary for its compilation. I would say this with regard to the necessity for this information. It is impossible to say, until we have this information, whether all the insured people do in practice get proper medical attention, and, if not, how many do not get it, and what can be done to improve the administration. We know that the London Insurance Committee has published the fact that something like 400,000 insured persons have not yet, or had not, selected a doctor. I believe that is something like 25 per cent. of the whole. Of course, if 25 per cent. of all the insured people in the country had not selected a doctor, it would be a very large figure, but the conditions of London are peculiar, and consequently the percentage in London is likely to be very much higher than the percentage throughout the country. I do not believe, however, that it is any exaggeration to say, taking the figures throughout the country, that there is something between 5 and 10 per cent. at least of the insured people who have not selected a doctor. That means that there are something like 1,000,000 people who have not selected a doctor, although they are charged, by a deduction from their wages, for the payment of the doctor. In other words, they are getting no medical benefit whatever. The sum of money which results from people not selecting a doctor is now in the hands of the Insurance Committees. In London we know there is a large sum. Counsel's opinion has been taken with a view to ascertaining what the Committee is entitled to do with the money. The doctors claim it, but the Insurance Committee is advised by Mr. Danckwerts that it cannot be divided amongst the panel doctors—that there is nothing in the regulations to justify that. Consequently the Committee has retained it in hand for the present. Mr. Masterman was standing for re-election to this House a short time ago at Bethnal Green, and was interviewed by a deputation of Bethnal Green doctors, who asked whether these unallotted funds in the hands of the Insurance Committee would be paid over to the panel doctors. He is reported in the *Times* to have replied, "Yes, even if counsel's opinion should once more prove unfavourable, the doctors are to get the money." The deputation is said to have gone away pleased. I submit it is of public utility to know which of the insured are being charged without getting benefit. It is of public utility to know how the £300,000 or £400,000 which has been contributed by these insured people is to be used. The doctors may be entitled to it. I do not know whether they are or not. If they are not, there are many good objects for which it could be used—medical referees, nursing, and various other benefits which could be given to insured persons. I claim that the information was withheld by the Government, not in the public interest, but because it would disprove many of the statements which had been made by the Chancellor of the Exchequer.

Mr. Glyn-Jones, the Chairman of the Middlesex Insurance Committee, in reply to Mr. Worthington-Evans, with regard to the question of the unallotted funds, spoke as follows: Let me take one example which the hon. member gave of lack of information. The Government were asked to make a return showing how many insured persons have not selected a doctor or been assigned to a doctor. The hon. member told us why the information was required. It was required in order that the country should know how many poor people were paying for medical benefit and not getting it. That information could be got from nowhere else than the Insurance Committees. I cannot speak for any other Insurance Committee but my own; but, speaking for that committee, I tell him that at no period has the Middlesex Insurance Committee been able to give that information. One very good reason is this, and I am sure the hon. member will appreciate it. Take a county where there are anything between 330,000 and 350,000 insured persons. I believe I am safe in saying that one-third of those insured persons move every year, and I ask, How is it possible to say how many insured persons you have on any particular day? Then, when you come to the number of persons who have chosen a doctor, supposing you get the number on the index who are supposed to represent the number of insured persons in the county, and that you knew how many of these persons are on the doctors' lists, have you then the information which the hon. member asks for? Of course you have not. If you take the balance who are not on the doctors' lists, and to whom cards have been issued, you will see how hon. members desire to use the figure which shows the difference. In Middlesex it would be said there are 20,000, 30,000, or 40,000 who have been absolutely without medical benefit, but it would be absolutely untrue to say that. What are the facts? I am speaking from memory, but I believe I am right in saying that in the county of Middlesex we have not assigned more than twenty insured persons to doctors. What has happened to the rest? This is what has happened: The whole of the doctors, something like 550, are collectively responsible to treat the whole of the insured population of Middlesex, and my Committee has deliberately avoided assigning healthy insured persons to a doctor, because we had the assurance, which, I am bound to say, has been carried out, that the doctors collectively were responsible, and would provide treatment for the whole of the insured population of the county. We have had under a score of cases where persons have been ill and have neglected—it is their own fault—to select a doctor. That has led to an hour's or two hours' difficulty, but a doctor has been communicated with, and these people have been assigned, with the doctor's consent, to a doctor in the vicinity. If it is a fact that every insured person in the county who has been ill has had a doctor, what nonsense to get up and say that because certain people are not on doctors' lists they have not had the medical benefit they have paid for! You might as well say that people on a doctor's list who have been fortunate enough not to need his services have not had medical benefit. I suppose that what has happened in Middlesex is happening throughout the whole country, and, indeed, under the new regulations it is now the normal course with doctors on the panel to become collectively responsible to treat every insured person, so that it really does not much matter whether they are on the doctors' lists or not. They are guaranteed medical benefit throughout the whole course of the year. I am not going into the question raised by the hon. member for Colchester, whether the doctors were entitled to the "unallotted money," as it has been called. This is a matter which the London Insurance Committee will settle for itself, but in so far as Middlesex is concerned there never was any unallotted money. There never was any balance or residue. It was quite clear that we made a contract with the doctors, and I am not going to say whether the capitation fee was too much or too little. But it is quite clear upon what the capitation was to be paid. It was to be paid on the average life of the whole population. My committee would have been guilty of a gross breach of faith to the doctors if they had said, "Although under our contract we agreed to assign the whole population among you, yet because we have not done it we will take away the money for the healthy lives who have not needed a doctor, and will leave you with a capitation not on the normal lives which we arranged to give you, but on the bad lives."

Mr. G. Locker-Lampson referred to the deficiency in the payment of the Drug Fund in Manchester and other districts, and criticized the efficiency of the fund and the administration of sanatorium benefit.

Mr. Lloyd George, in reply, referring to the criticisms in connexion with the Drug Fund, said: The first point raised by the hon. member for Salisbury (Mr. G. Locker-

Lampson) was with regard to drugs. The allowance for drugs made by the Government is 2s. per member. In the old friendly society days 4s. per member covered drugs and everything. In some cases 2s. 6d. covered everything. There were cases, especially in Scotland, where the doctors got 2s. 6d. to cover doctoring and everything. I remember that I was told by some of the doctors' deputations that, as a rule, drugs came to something like 6d. Here you have a system by which doctors get 7s., and 2s. for drugs. It never occurred to the hon. member when he was indicting the national insurance system for the injustice it inflicted on the people to state that they were getting, at any rate, four times the benefit that they had before in the matter of drugs, and two or three times the earlier benefit in the matter of doctoring. That is a little fact, and not an unimportant one, that I put forward by way of supplementing the argument of the hon. member. The Government have never undertaken to give a blank cheque to the doctors to issue as many prescriptions for as expensive drugs as they like, and to bankrupt the fund. They made it perfectly clear that this sum was to be allocated for the purpose. They regarded it as perfectly adequate. If 6d. was considered satisfactory by the friendly societies before, we thought that 2s. allowed a very adequate margin. We propose to do our best to keep within that margin. It would be folly for us not to do so. In certain districts the doctors have been prescribing very freely. More especially was that the case in the first few months. I am not going to make any comment as to how that occurred. It has been especially the case in districts where the doctors have chosen the method of payment by attendance. That also is rather significant. I think that nearly all the cases put by the hon. gentleman are cases of that kind.

Mr. G. Locker-Lampson: No; Canterbury.

Mr. Lloyd George: I said nearly all. Canterbury is the smallest town mentioned by the hon. member. He referred to Manchester, Blackburn, and Salford. Canterbury is small in comparison with those. The majority of the cases to which he referred were cases where payment is by attendance. That in itself gives food for reflection to those who want to deal with the problem fairly. Matters are being scrutinized by the Pharmaceutical Society. I do not know that we are bound to pay bills of this kind in excess of the very liberal and generous allowance made. We desire to know the reason why these extravagant bills have been sent in—extravagant, I mean, on the face of them—for I do not want to make a general charge. We have got to examine these accounts very carefully. We have to see whether the doctors prescribe fairly and reasonably, or whether they prescribe in order, in some cases, to get rid of their patients; whether they have prescribed drugs and sent to the chemists unnecessarily. It would be folly on the part of the Government not to examine these things. Meanwhile, all these chemists have again gone on the panel, which shows that they, at any rate, are perfectly satisfied to go on on the old terms whilst these cases are being examined. If they are satisfied, I do not think it is for the hon. member to complain. There may be two or three malcontents who have written to him, but he has had no representation from their organization. At any rate, we have had none. The same thing applies to other cases as well. Meanwhile, I think these various people may very well leave their case in the hands of their organization.

In a further portion of his reply, the Chancellor complained seriously of what he described as "gross misrepresentations of the Act," and the following extract may afford some indication of the temper of the debate at certain times: "'You are paying your fourpences and threepences, and what have you got to show for it?' There was the suggestion of no benefit, and nothing but payment! I agree this was not always done by hon. members like the hon. gentleman who has just sat down, nor like the hon. member for Colchester. But that is not the way it is done. It is done like a particular paragraph in the *Evening News*. Then hon. members come here and say they never attacked insurance officials—Commissioners who, they say, are hardly worked. So they are—perhaps the most hard-worked body of officials in the United Kingdom! The hon. gentleman who sits below the gangway has spoken very highly of them. That, however, is not what is said in leaflets and newspapers circulated in Bethnal Green. This is the sort of thing that is circulated there—

> There are plenty of grand officials drawing a decent screw
> For signing their own initials to payments by me and you;
> They smoke while the poor stand round and spit,
> And that's what is known as their benefit.

(An Hon. Member: 'Hear, hear.') An hon. member who has never shown the slightest disposition favourable to the Insurance Act, that I can see, is prepared to support that. Let me ask somebody who knows something about it. Will the hon. gentleman below the gangway or the hon. member who preceded me suggest that what I have quoted is even a decently fair representation of the officials who are working the Insurance Act?

"Mr. Worthington-Evans: Where is your sense of humour?

"Mr. Lloyd George: What I have quoted is, in the hon. member's opinion, dictated by a sense of humour. I can understand a good many things now. What does the hon. gentleman mean by 'sense of humour'? A sense of humour means that you go down to constituencies and tell the poor people that officials who are working hard are simply sitting around, smoking, and lolling about upon the money which the poor people are compelled to pay. That is very funny—extraordinarily funny! It is one of the most amusing things I ever heard. I wonder how the hon. gentleman would have regarded it if it had been said by me?

"Mr. Worthington-Evans: Why do you take it seriously?

"Mr. Lloyd George: It was taken pretty seriously at Bethnal Green. I would have thought far more of the hon. member if he had said at Bethnal Green that he did not treat the *Evening News* seriously, but regarded it as only a joke. That would have been honourable and straightforward. But, after the election is over, to say that facts circulated by the Unionist paper were merely meant in jest and not in earnest is a little too late. Next election we will bear in mind what the hon. gentleman says—that all these facts circulated are really not meant, but are really an indication of the Unionist sense of humour."

In respect of sanatorium benefit Mr. Lloyd George said: It is perfectly true that you cannot bring sanatoriums into perhaps every desirable spot. In the first place, it is very difficult to move the municipalities. We only promised money to help localities who were prepared to meet us. The hon. member said "You, at least, should provide the money." We have provided £1,600,000. If that has not all been spent it is very largely because time has been needed to bring proposals before the corporations, and secondly, because you have some slack municipalities as well as some active ones. Just look at what has happened in the meantime. Consider the number of people dealt with. You have got between 30,000 and 40,000 people who are receiving consumptive treatment of one kind or another. What does that mean? Some of it is domiciliary treatment, which means that they have doctors—and many of these people could not afford doctors before at all. They have received very excellent food, as well as medicine of a strengthening character to fortify their system to fight the tuberculosis. That, again, would probably be to some hon. members a matter of humour. It is very funny! I have heard a good deal of mockery about the giving of milk and eggs and cod-liver oil and malt. Is it not one of the most important things in the treatment of consumption that you should strengthen the man to fight against the disease? I do not think that is a matter for mockery or laughter. Those are the people who had not the slightest chance before of receiving anything. Most of them, since January 1st, have been receiving their 10s. per week, which has enabled them to stay at home instead of going about their work. Is that nothing? What about institutional treatment? I agree that in two, three, or four years' time you will have more room and more beds, while the institutions will improve; but you cannot do everything in eighteen months. As it is, you have 24,000 people treated in institutions. Some of these are admirable institutions. Some of them are not so good, because you have had to improvise some for the time being. But even the least good are infinitely better than the homes in which many of these people had to be treated—or, rather, had to be neglected—before. That is the point. When you

consider whether you should put the matter off two or three years, or do your best in the meantime, does any one doubt for a moment that it was infinitely better to do our best with the resources at hand than to put the matter off? It is not treating insurance fairly to say, "Your institutions are not perfect; your dispensaries are not all they ought to be; you ought to be able to do more!" Of course we ought to be able to do more. Not a month passes but what improvements are effected. Experience is teaching us. If the hon. member applied the energies which he has applied to vilifying and slandering the Insurance Act to stirring up slumbering and apathetic municipalities, then they would have been rendering some service to the people they represent. Between 30,000 and 40,000 people received infinitely better treatment than they ever received before. A large number are receiving treatment they never would have received at all before, and over 24,000 have been in institutions, some of them very admirable institutions and some not quite as good, but constantly improving.

With reference to the general question of the solvency of societies, malingering, and associated questions, the Chancellor dealt at some length as follows: I come now to the next point raised by the hon. gentleman opposite, that is the question of deficiency. I gave an answer in the House the other day, and I stand absolutely by that answer after having given fuller investigation to it than I had given to it then. The case of the women's societies is causing anxiety, and I will show why later on. But taking the case of the men as a whole, they are within the estimate. Let me examine the proposition, for this is a very important matter. I never said otherwise; on the contrary, the hon. gentleman quoted words of mine to show I fully appreciated that the last time. Let us consider this matter. The hon. gentleman who spoke last laid down a proposition which I should like to come to at once. I understand the leader of the Opposition is going to speak, and I should like to know whether he accepts this proposition that if you apply compulsion to the payment of contributions there ought to be compulsion to deliver the benefits. Now just see what that means. It is a very serious proposition, and if you are going to commit yourselves to it, there is an end of friendly societies in this country. Let hon. gentlemen fully realize that. I am applying myself to the argument advanced by the hon. gentleman opposite. Does he mean to say this: that whatever the management by the society, whether it condones malingering or not, whether the failure of the society is due to the fact that those who are at the head of affairs are slack, even then the State is bound to deliver the benefits. If you say that, there is absolutely an end to the whole system of friendly societies, and there is only one alternative—that the State must come in and take over the whole concern and have State officials, State secretaries, and State doctors. Is that the proposition of the hon. gentleman? In that alternative there will be a premium on malingering. [An Hon. Member: "There is now."] Well, it would be a double premium then. Just see what it means. It is not a very popular thing for the secretary of a society or the doctor to pull a man up and say, "You are fit to work. Off you go. No more payment for you." That is not a popular thing for a doctor, and the doctor who does it runs the risk of having his panel considerably shortened. But if the society goes on, whether it overruns its allowance or not, and if the State will always come in, why should the officials make themselves unpopular? They will say, "If you join such-and-such a society you will always have the secretary pulling you up, but in such-and-such a society it is very different. The secretary never worries whether you are fit to go back to work or not." That is a direct encouragement to malingering. You must make up your mind whether you are going on with the friendly society system or whether you want a State system altogether. If you are going to stick to the friendly society system, you must make the society responsible in cash for their own business. There is no other way. You must say, if you allow malingering, if you allow men to loiter when they are not really ill, the result of the deficiency will have to be met by themselves. I take it that is generally assented to. If it is not, I should like to know the reason why. I understand from the right hon. gentleman opposite he does not in the main challenge that proposition, and does not put forward the argument that the State should guarantee the benefit whatever the management may be. Societies are only entitled to expect that losses should be met where they arise from causes beyond their control. That is a totally different proposition, and that is why I have always examined the question of the women's societies on a totally different basis. It is acknowledged that there is more malingering among women's societies than men's societies. That is the information we have been able to get. On the other hand, there is excessive sickness which we have to take into account. That is a different thing. I should like to say one or two more words about this. If any system of insurance is to be a success, there must be really business societies to appoint the management and to manage ruthlessly their own affairs. There is a margin, no doubt, for improvement in management. There is a margin for improvement in the doctoring—a considerable margin—and that is a question which will have to be considered. There are some doctors who have been slack and give certificates much too readily. Here is a case brought to our notice, and I should like to ask the hon. gentleman opposite whether he thinks the State should guarantee things of this sort. The Commissioners asked one society to show their sickness pay in different parts of the country, and they picked out at random a town or village where there were twenty-two persons drawing benefit in that particular society—I do not say it is typical, but it shows the sort of thing that might happen—and they said we will send a medical referee down to that village, and they gave notice. Before the medical referee arrived fifteen went back to their work without waiting examination, three were declared to be fit for work, and out of the twenty-two there were only four declared to be incapable of returning to work, and therefore entitled to draw sick benefit. I do not say that is typical. It cannot be, otherwise the figures we got in regard to men's societies would not be what they are, because at the moment undoubtedly the men's societies are well within our estimates. What I want to know is this, Does the hon. gentleman say that if things of that sort are allowed in societies the Government are to come in and subsidize that sort of fraud, practically, not merely upon the State but upon their own fellow-workers? There is considerable margin for improvement in management and in doctoring, for these men must have had doctors. There is another margin for improvement. Under Section 63 of the Act, where excessive sickness is attributable to bad housing, insanitary workshops and factories, power is given to the committees to deal with these cases. We do not want to offer any State inducements for societies not to put that power into operation, otherwise you will be putting a premium on slums, on sweating, on insanitary factories and workshops; that would be a cardinal blunder, because this is not merely an Act for providing some sort of allowance for men in sickness, but it is really meant to be healthful as well. If there are conditions over which a society has no control which lead to excessive sickness, then, I say, undoubtedly it is the business of the State to come to the rescue, and if that excessive, I will not say sickness, but excessive payment in respect of sickness, is due either to slackness on the part of the medical profession, or slackness on the part of the managers or secretary, then it is our business to call attention to it, and to compel the society to pull itself together. You can only do that by telling them that if there is deficiency due to these causes they have to make it up amongst themselves. I would like to say there is no slackness at the present moment. The hon. gentleman opposite wants us to come to a conclusion now upon twelve months' experience. That is not fair to the societies. Just see what the societies have got to do. There were 6,000,000 of people more or less—I think that was the figure given by the hon. gentleman, but I think, on the whole, that it is rather above the figure, but let us take 6,000,000—who were in insurance. There were 8,000,000 people who did not belong to any society, who were not accustomed to the discipline of societies, and the officials of such societies have to deal with millions of people of that sort. More than that, there are absolutely new societies that number amongst their members about 4,000,000 or 5,000,000 of people. They have got officials never accustomed to deal with sick claims before, and

these societies themselves are improving from month to month. They are getting more experienced and beginning to realize where the difficulties and defects are. It is the business of the Insurance Commissioners to bring pressure to bear and tighten up their organization, and make it better and more efficient. That is going on from week to week and from month to month, and to test societies on the first year is not merely not a final test, but it is the very worst test that could be applied. Test them after they have had two or three years' experience, and that is fair, but to test them after the first year is to do them a gross injustice. The same observation applies to the doctors. They are dealing for the first time with a condition of things which before the Act they really had not to deal with. Millions of people are brought into insurance who never could afford a doctor before. Here, for the first time, these people are on the doctor's panel. They can go to the doctor at any time, ask his advice, have drugs prescribed, and it is quite a novel experience for these poor people, and for the doctor to deal with them. It is too much to ask of the doctors that you should test them by the first year's experience of conditions to which they have never been accustomed. What does the hon. member ask? He asks that we should come to a permanent, definite, and final conclusion with regard to the finance of insurance upon a year which is no test at all—I will not say no test at all, but it is not at any rate a good test of the way in which the Insurance Act does work.

Mr. Bonar Law, in the course of a short reply, severely criticized the answers of the Government with regard to the financial situation of different societies, and contended that the system of the Act in a very widespread degree had broken down. He stated that if the State began stepping in to make up deficiencies there would be no limit to expenditure, and that it would be like pouring money into a sieve; he contended that the whole question should be inquired into by an impartial committee. In reply to the Chancellor, *re* this committee, he said: I am sure it would be of value to you from an electioneering point of view, because, after all, though we do think of elections, we sometimes think of something beyond, and I believe that as long as this Act stands as it is to-day it is going to be an open sore that will grow continually, and that it must be dealt with, and dealt with drastically, by some one.

Medical Benefit.

Insurance Sickness Benefit.

Mr. Charles Bathurst put a question with regard to the case of a railway employee whose claim that the rupture from which he was suffering was caused in the course of his employment, was disputed by the railway company; it had been found that he was also suffering from hydrocele, which could have no connexion with the accident, and the Oddfellows, his approved society, disputed his claim to sickness benefit, attributing his incapacity to the alleged accident. Although during his employment contributions had been paid by him and for him to the insurance fund, and also by way of premiums for insurance against accident, he was now unable to obtain any financial benefit.—Mr. Wedgwood Benn, in reply, said that the insured person could, under Section 67 of the Act of 1911, appeal against the decision of his society first in accordance with the procedure for arbitration provided for by the society's rules, and ultimately to the Commissioners. Unless the case was so brought before the Commissioners for formal decision on appeal, they had no power to decide whether or not benefit was payable by the society.

Arrangements with Unqualified Persons.

Mr. Aubrey Herbert asked a question as to the mischief and danger caused to compulsorily insured contributors through the Medical Benefit Regulations of January 10th, 1914, Section 44 (2), which allowed members to contract out with unqualified persons; and if he would take steps to advise the withdrawal of this regulation.—Mr. Wedgwood Benn said the hon. member was under a misapprehension. The Act had always conferred on Insurance Committees the power to allow insured persons to make their own arrangements with persons other than duly qualified medical practitioners, and no subsequent regulations have had or could have had the effect of varying the terms of the statute. The object of the regulation in question was merely to indicate more definitely the procedure to be followed by Insurance Committees in such cases.

Allotment of Refused Patients.

Mr. Rupert Gwynne asked how an insured person who had been refused medical attendance by three panel doctors could obtain medical benefit without further delay.—Mr. Benn replied that Insurance Committees had power under the agreements with doctors to assign to a doctor any insured person applying to them for the purpose who experienced difficulty in getting accepted, and this power had always been exercised when necessary. The recent constitution of Panel Committees under the 1913 Act had made it possible to facilitate the procedure of assignment, which was now being revised by Insurance Committees with this object.

Medical Tickets.

Mr. Astor asked the Secretary to the Treasury how many medical tickets had been sent out by the Liverpool Insurance Committee; and how many had been returned owing to the insured person having changed his address; how many persons were engaged by the Liverpool Insurance Committee to deal with returned medical tickets; how many days they were employed in tracing the insured persons who had removed without notifying their change of address; what was the total cost of employing this staff on this work; and out of what fund this money was paid.—Mr. Benn said that the number of medical cards was over 225,000, of which about 37,000 were returned. The staff employed in dealing with the returned cards were twelve girls and three men. The approximate cost of this staff was £40.

Mr. Astor asked whether the collectors of the panel doctors were employed by the Blackburn Insurance Committee to deliver medical tickets to insured persons; how many collectors were so employed; what remuneration was paid to them for this service; how many doctors' collectors had refused to undertake this work; and what arrangements were made to deliver the cards in these cases.—Mr. Benn replied that in a large number of cases the collectors of the panel doctors were employed by the Blackburn Insurance Committee to deliver medical cards to insured persons, but he was unable to state how many were so employed or how many declined to undertake the work. The remuneration offered was 2s. 6d. a hundred cards. In those cases in which it was not possible to secure the delivery of the cards by the doctors' collectors, the cards were sent by post or delivered by other persons engaged for the purpose.

Mr. F. Hall asked a question with regard to an insured person who had presented his card to a doctor on the panel; the doctor had accepted but the patient was still awaiting for the return of his card in the ordinary course from the London Insurance Committee in order to obtain benefit.—Mr. Benn said that the card had now been returned to the insured person, who appeared, owing to a misunderstanding, to have refrained in the meantime from applying to the doctor for medical attendance.

Panel Chemists (Manchester).

Mr. Godfrey Locker-Lampson asked whether the Manchester panel chemists had any control over the nature of the prescriptions ordered by the doctors; and, if not, why they should not be entitled to full payment for the prescriptions they made up.—Mr. Benn said that the answer to the first part of the question was in the affirmative. Under the Regulations it was open to the chemists on the panel in any area to obtain a scrutiny of the prescriptions dispensed by them with a view to surcharging the individual doctor responsible with the cost of those shown to be excessive or extravagant.

Sanatorium Benefit.

Cost of Erection of Sanatoriums.

Mr. Worthington-Evans asked how much of the £1,500,000 voted for the building of sanatoriums was actually expended on December 31st, 1913; how the remainder was invested; and to whom the income from such investments was payable?—Mr. Lloyd George said that there had been no vote for the building of sanatoriums. Under Section 16 (1) (*b*) of the Finance Act, 1911, £1,500,000 out of the Old Sinking Fund of 1910–11 was retained in the Exchequer, to be issued for the purpose of

the provision of, or making grants in aid to, sanatoriums at such times as the Treasury might direct. Pending such issue, the money formed part of the ordinary Exchequer balance, and no question of investment arose. The total issues up to December 31st, 1913, amounted to £88,500, of which £71,872 had been expended, the difference between these sums representing the working balances in the hands of the departments charged with the distribution of the grants.

Patient Referred to Poor Law Guardians.

Mr. F. Hall asked whether attention had been called to the correspondence between the South Stoneham guardians and the county medical officer for Hampshire with regard to the discharge, in January last, from a sanatorium of an insurance patient suffering from tuberculosis; why this discharge resulted in the patient becoming a charge upon the guardians, having regard to the provisions of the National Insurance Act; if any person suffering from tuberculosis, who had contributed under the Act, was liable at any time after a short period of treatment under an Insurance Committee to be passed on to the guardians to be dealt with; and if, in such circumstances, the Insurance Committee was called upon to contribute to the person's upkeep.—Mr. Benn said that the insured person referred to received three months' treatment in a sanatorium, at the expiration of which the medical officer of the sanatorium reported that the patient would derive no advantage from a continuance of this form of treatment. The Insurance Committee accordingly recommended, on the advice of its medical adviser, a course of domiciliary treatment, but finding, on inquiry, that the patient had no home at which treatment could be given, they communicated with the guardians.

Mr. F. Hall asked if this method of placing an additional burden on local authorities was for the purpose of concealing the bankruptcy of the Insurance Act.—Mr. Benn said: No. I have no doubt this was a very sad case, but unfortunately it was not a case provided for by the Insurance Act.

MINIMUM BENEFITS.

In reply to Mr. Godfrey Locker-Lampson, Mr. Wedgwood Benn said that the phrase "minimum benefits" was used in the first actuaries' report published when the Insurance Bill was first introduced into the House of Commons, and its use in that report was explained in paragraphs 70 to 73. In leaflets, and in other communications to insured persons, and in official correspondence, the benefits payable before valuation were described as "ordinary" or "usual" benefits, as distinct from the "reduced" or "additional" benefits which might be payable after a valuation.

CORRESPONDENCE.

SUGGESTIONS FOR THE IMPROVEMENT OF THE PANEL SERVICE.

DR. W. OWEN WILLIAMS (Representative of Stepney on the Panel Committee for the County of London) writes: The enthusiastic advocates of a State Medical Service have not yet advanced their scheme beyond the stage of a nebulous hypothesis. When they condescend to essential details they flounder and disagree with each other. Obviously the necessity for such a service depends upon the failure of the panel system, and it is therefore surprising to find men occupying a prominent position in panel organizations in open or secret consort with the new enemy, thereby creating a feeling of profound distrust. The nightmare of another upheaval is not conducive to good work. That the panel service is defective must be admitted, but the faults are not irremediable, neither do they warrant the sweeping condemnation of the system by critics of Sir J. Collie's type.

There is a substratum of truth in Sir J. Collie's strictures, but he made the profound mistake of judging the efficiency of the majority of panel practitioners by the standard of a small minority. Panel men are therefore between two fires—the National Medical Service idealists and those who propose supplanting the present régime by a scatter-brained scheme of voluntary insurance. Believing, as we do, that both these alternatives would be detrimental to our interests, it is incumbent upon us to set our house in order. By remedying imperfections, and dealing drastically with individuals who are not rendering honest service, we can thus disarm our detractors. Some of the defects have already been pointed out in your columns.

1.—*The Provision of Consultative and Specialist Services.*

In spite of difficulties, there ought not to be an insuperable obstacle to the attainment of this desideratum. The hospitals have rendered excellent services, particularly in the poorer districts of London. It would be almost criminal for a practitioner to undertake major operative work in a poor district, even if he had the necessary skill and experience, which few possess. The environment of the patient is a prime consideration if his interests are to be studied. The Commissioners interpret the Act in a more reasonable manner than Sir J. Collie, who apparently has forgotten the conditions obtaining prior to the operation of the Act.

The specialists would, of course, be highly skilled men of ripe experience, and not newly-qualified men who may have dabbled a bit in a particular branch.

2.—*The Prevention of Malingering.*

It is undeniable that malingering, and particularly valetudinarianism, exist to a considerable extent. The appointment of referees possessing the confidence of the profession in each area is an urgent necessity. To secure independence they should not be on the panel. If every practitioner in the insurance service did his duty honourably towards his profession and the State disinclination to work would soon cease to exist. It is a matter of regret that some practitioners show undue leniency in granting certificates. This matter was referred to by Drs. Keay and Geddes in the SUPPLEMENT. I have heard men admit that they do not like to offend patients by refusing certificates; they fear a shrinkage in their list. Not long ago I heard of a family of four insured persons who were all drawing sickness benefit at the same time, and they did not present any striking evidence of disability. Women are on the funds for weeks and months prior and subsequent to confinement, suffering from that blessed disease "debility." Personally, I have felt it my duty to refuse scores of certificates; a penalty was forthcoming in the shape of about twenty-four transfers attributable to this cause. Is no protection to be afforded those of us who place honour before personal gain? It is stated that the General Medical Council will deal severely with delinquents, but one is constrained to think that its bark is worse than its bite.

The approved societies should be in a position to afford information to the Insurance Committees. The latter, acting in conjunction with Panel Committees, could then deal effectively with offenders who had betrayed the trust reposed in them. It would be instructive to secure a return of cases already reported upon by referees showing the number of cases attended by individual practitioners, and in each instance the percentage of cases declared fit for work, including those who failed to appear for examination, but "declared off" themselves.

3.—*Limitation of Lists.*

The enormous lists of a few panel men have provided the critics with their chief weapon of attack. If we are to maintain the integrity of the panel system, efficiency must be our chief consideration. There appears to be a consensus of opinion that the list should be restricted to a maximum of 2,000, which is a reasonable proposition. The big-list brigade contend that restriction interferes with freedom of choice, but surely the latter is not unlimited, and the Act imposes upon Insurance Committees the duty of providing adequate treatment. How can the practitioner supply the latter, with a mob waiting to see him? Doubtless there are men with lists slightly in excess of 2,000, who are doing their work conscientiously, but their private practice is small, and midwifery is declined; others, with lists of 3,000 and even more, have, in addition, several uninsured societies. In this district panel men are found willing to undertake Jewish societies at the old rate of 1s. a quarter, although they derive substantial incomes from panel practice. Private practice at ridiculously low fees and cheap midwifery are also resorted to, thereby supplementing big incomes by unfair competition.

4.—*Suppression of Various Abuses.*

The establishment of firms, with branch surgeries employing assistants whose names are entered on the panel, needs attention, as the commercialization of medicine is undesirable. When Insurance Committees decide to limit the lists, or to distribute the unallotted funds, they should have regard to bona fide partners solely. This is in accord with the explicit declaration of the Chancellor of the Exchequer that excessive substitution of assistants would be prohibited. The principals, of course, reap a harvest if paid on their total list. With regard to certificates, laxity on the part of some panel doctors is not the only evil. Agents of approved societies are in the habit of providing insured patients with a "declaring on" form, requesting the doctor to sign it before the latter has provided the initial certificate of incapacity, and yet societies complain loudly of the excessive drain on the sickness fund. Other societies act in a high-handed manner, demanding from the member notification of illness on the *first* day, together with a certificate of incapacity from the doctor. If a member, endeavouring to avoid declaring on the funds unless compelled, fails to conform to the above rule, he is threatened with penalties, and it is suggested to him that a complaint should be laid against his doctor.

Another evil practice resorted to, particularly by Jewish societies in this district, is to require the certificates of panel practitioners to be countersigned by their own medical officer who is also on the panel. For this service the latter receives payment of 1s. per quarter for each member in some instances. This practice is supposed to protect their funds, but their proper course is to avail themselves of the referees appointed by the Insurance Committee. The question arises whether the acceptance of this money does not constitute a breach of the agreement. Another aspect of the matter is that it is liable to lead to serious interference with freedom of choice, as it is to the interest of the friendly societies concerned to get as many members as possible on the panel list of their own medical officer, and no doubt secret efforts will be made in this direction. It constitutes another insidious attempt to regain control, and it is scandalous that medical men are found willing to act as tools to restore an incubus which the Association did much to destroy.

Canvassing has also been resorted to, though it is difficult to bring offenders to book. Transfer forms in bulk should never have been issued by Committees.

There is reason to believe that investigation by Insurance Committees and Panel Committees of last year's prescriptions would show that excessive prescribing of drugs and appliances had been indulged in by a few practitioners. One hears of the habitual ordering of 12-oz. and 16-oz. bottles of medicine, dressings galore, and cod-liver oil and malt *ad lib.* Regardless of economy, the 32-dose bottle of medicine doubtless results in a decrease of attendances, whilst the unlimited dressings, etc., is evidence of the kindness which ensures "popularity," even though the latter be at the expense of the State and fellow-practitioners.

Medical Certificates: The Need for a Revised Form.

Dr. R. W. Morgan (Gillingham, Dorset) writes: In the Supplement of March 7th you print a letter from Sir Robert Morant to the Executive Committee of the General Medical Council in reference to medical certificates, and also the Council's reply.

A man who would deliberately and wilfully sign a false certificate is deserving of the greatest censure. I do not believe for a moment that there are many men in the profession who would do it.

It appears to me that the members of the General Medical Council do not quite realize the extraordinary amount of work and the difficulties experienced by men on the panel who endeavour to perform their work conscientiously. They themselves have no practical experience of what the work of a doctor on the panel means.

Now, in regard to certificates under the Insurance Act. Form Med. 34 represents the form for initial certificate of incapacity to work. It starts as follows: "I hereby certify that I have *to-day* examined you, etc." (my italics). No exception can be taken to this form of certificate at the commencement of the illness, for the doctor must actually see the patient on that day. It is in the "continuation certificates" that the word "to-day" is misleading. These certificates have to be signed each week in succession—that is, seven days from the date of the initial certificate, and so on till the patient has recovered. It is clearly impossible for a doctor to see all his insured patients on a set day so as to be able to sign the "continuation certificate" on the particular day. It could not be done in a town practice, and certainly not in a country one with a wide area. Moreover, patients frequently bring in their continuation certificates to the doctor's surgery several days after the day on which they should be signed. It is quite obvious to all panel practitioners that they must be signed, whether brought on the day, which rarely occurs, or after a further interval.

The remedy is clearly this: The word "to-day" should either be eliminated from the continuation certificate or the doctor should be allowed to delete it when necessary. Of course the old friendly society formula is the correct one—that is, James Brown is suffering from influenza and *still* unable to work.

I think this matter is of very urgent importance, in view of the recent action of the General Medical Council in regard to certificates, and I think it is the duty of the Insurance Act Committee of the British Medical Association to point out to the Commissioners the necessity of amending the "to-day" in the continuation certificates, and at the same time to communicate with the General Medical Council.

Doctors on the panel have quite enough anxieties with their work and the constant flow of fresh regulations and advisory circulars. It seems a pity that it should be necessary, however unwittingly, for the General Medical Council to give the impression of backing up the Commissioners. Patients now arrive not only with their malady, but with their pockets crammed with certificates of all colours of the rainbow. It is hardly a wonder if the unfortunate doctor occasionally makes mistakes.

It is no use adopting counsels of perfection that will not work, and I hope the Insurance Act Committee of the Association will look into this matter without delay.

A State Medical Service.

Dr. Lauriston E. Shaw (London, W.) writes: Mr. C. A. Parker thinks I am trying to confuse the issue. I hope your readers will agree with me that Mr. Parker and I are gradually clearing up what was at first a very confused issue. May I recapitulate? On January 17th you concluded a leading article with the following words: "The onus is on those who advocate a State Service to show either how such a service can be reconciled with the principle of free choice, or alternatively that the profession in fighting for this principle was profoundly mistaken."

Whereupon Mr. Parker, a prominent advocate of a State Service, wrote denying the existence of your dilemma, and asserting both that the profession was right in fighting for free choice, and that free choice as great as is given at present could be secured under a whole-time salaried State Service.

It seemed to me that by such statements as this Mr. Parker must, however unintentionally and unconsciously, mystify his professional colleagues. I claim that from the further statements I have encouraged Mr. Parker to make in your columns it is clear that the basis of the mystification, as in nearly all similar confusions, is one of words, and depends on the different meanings attached by most of us on the one hand and by Mr. Parker on the other to the words "free choice." Definitions are always difficult, but I doubt whether Mr. Parker is really justified in using the adjective "free" to the extremely "limited" choice which he claims to be possible under the whole-time service scheme. During our correspondence some of my friends have attacked me from the other side for seeming to admit that anything worth calling "free choice" was possible under the panel system of the Insurance Act.

No doubt absolute freedom of choice is destroyed as soon as there is introduced, however guardedly, any third party into the relationship between patient and doctor. But when the third party, in the person of the State, appoints, pays, directs, promotes, degrades, and dismisses the doctor, the freedom can only be as limited and elusive as that which will shortly be enjoyed by the beasts at the Zoo when liberated on to the Mappin Terraces. With this further understanding of Mr. Parker's position I shall not attempt to demonstrate the impossibility of his contention "that under a State Medical Service patients could be *offered* a *free* choice of doctors within certain *limitations*."

I must leave Mr. Parker to settle with you, Sir, whether you would admit that such an extremely limited offer is as great as is given at present or conforms to "the principle of free choice" to which you referred in the leading article I have quoted.

In his last letter Mr. Parker quotes a brief extract from an article of his on "Progress," which, I think, shows a serious misapprehension with regard to the supposed advantages of a whole-time salaried service. Such a salaried officer, says Mr. Parker, will be able to speak the whole truth "to lord, squire, and peasant alike." The unpleasant suggestion here is, of course, that if any small portion of a doctor's remuneration is risked by speaking the truth to one who might cease to be a patient, the doctor is tempted to lie. While absolutely disbelieving that such motives would actuate any but the smallest percentage of doctors, I fail to understand why those who have this distrust of their fellows do not see that such danger as there may be increases the more the paying of the remuneration and the power of dismissal are concentrated in one hand. If a doctor cannot speak the truth to a peasant lest he should lose a fee of half a crown or an annual capitation payment of seven shillings, why should he speak the truth to the State when thereby he endangers a salary of £1,000 a year? Does not Mr. Parker see that, as long as the world runs on the basis of paying cash in some sort for services rendered, he does not eliminate the competitive system by instituting salaried posts? He only alters the basis of the competition: the prizes are bigger, the danger of losing them greater, the desire to secure them keener. The need of pleasing in order to maintain the position and secure promotion will be the same, but the person to be pleased will be different. Do not clergymen paid by salary compete with each other for preferment? Though preferment is not secured by pleasing the parishioners, with all its attendant dangers, it is by pleasing the patron or the bishop, which may be far more dangerous. I do not, of course, myself believe in these terrible dangers of competition; but I put it to Mr. Parker and others who do, that there might be dangers to one's freedom of thought and liberty of professional development in a salaried service quite as detrimental to true progress as the economic dangers they see in pleasing the patient under the panel system. Will they not, therefore, accept this panel system, which at least does not give such unlimited free choice as the independent fee system, and, joining hands with other progressive forces in the profession, endeavour to link it up with hospital work, and add to it such nursing, specialist, and institutionalist services as are necessary to complete it? It is impossible to get on with this useful work if a powerful section of the progressive forces is constantly engaged in trying to throw down the foundation upon which others are proceeding to build.

I read with much interest Dr. A. T. Todd-White's address on a medical service, and although I did not agree with it, I was pleased with the suggestion of gradual evolution which he commends. If Mr. Parker and his colleagues will recognize that we have already taken one step and help us now to take a second one instead of a different one, there might be some chance of persuading the public to provide the necessary funds for further immediate developments.

Medical Certificates.

Dr. A. G. C. Irvine (General Secretary, Birmingham and District General Medical Practitioners' Union) writes: On January 29th a letter appeared in the *Birmingham Daily Post* which was reprinted in the Supplement of February 21st, and commented on in the Journal.

As the Council of the Birmingham and District General Medical Practitioners' Union takes a view of this letter different from yours, I have been directed to forward you a resolution passed at its last meeting, and to request the favour of its publication in the Journal, the matter being, in the opinion of the Council, one of importance.

Resolution of Council of Birmingham and District General Medical Practitioners' Union, passed *nemine contradicente* at their meeting, March 4th, 1914:

> That the Council of the Birmingham and District General Medical Practitioners' Union, whilst reprobating misconduct in medical men, strongly deprecates any action of a member of the profession, much more a member of the General Medical Council, in condemning such misconduct in the public press.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the British Medical Journal not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

Alfred Cox,
Medical Secretary.

February 11th, 1914.

ELECTION OF COUNCIL, 1913-14.

In consequence of the resignation of Dr. B. E. Fordyce as a representative of the Cambridge and Huntingdon, East Anglian, and South Midland grouped Branches on the Council, nominations were invited, and the following were duly nominated:

Lewis William Reynolds, M.R.C.S., L.S.A., J.P., The Priory, High Wycombe, Bucks.
Orby Russell Morgan Wood, M.B., C.M., Woolpit, Suffolk.

A contest was necessary, and as a result Orby Russell Morgan Wood, M.B., C.M., of Woolpit, Suffolk, is declared to be duly elected to represent the above-named Branches on the 1913–14 Council.

Guy Elliston,
Financial Secretary and Business Manager.

March 14th, 1914.

CHANGES OF BOUNDARIES.

Notice of Formation of Two New Divisions—namely, Argyllshire and Dumbartonshire Divisions—and Adjustment of Boundaries of Existing Divisions, of the Glasgow and West of Scotland Branch.

The following changes have been made in accordance with the Articles and By-laws of the Association, and take effect as from the date of publication of this notice:

1. That the outer boundaries of the Glasgow Eastern, Glasgow North-Western, and Glasgow Southern Divisions be adjusted to correspond with the extended city boundaries, their internal boundaries and those of the Glasgow Central Division remaining as at present.

2. That the boundaries of the County Divisions of the Glasgow and West of Scotland Branch be the geographical boundaries of the Counties.

3. That the Renfrewshire Division be known in future as the Renfrewshire and Buteshire Division, in accordance with its composition.

4. That the Dumbartonshire and Argyllshire Division be divided to form two new Divisions, namely, Argyllshire and Dumbartonshire Divisions;

the new and adjusted Divisions to form part of the Glasgow and West of Scotland Branch.

Representation in Representative Body.—The representation of the new and altered Divisions in the Representative Body, 1914–15, will be determined at an early date by the Council, pursuant to the By-laws.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Drs. Ernest C. Hadley (Burbury Street, Lozells, Birmingham) and Bernard J. Ward (141A, Great Charles Street, Birmingham) give notice that an ordinary general meeting of the Central Division of the Birmingham Branch will be held in the library of the Medical Institute, Edmund Street, on Wednesday, March 25th, at 3.30 p.m. Business: To elect four Representatives for the Annual Representative Meeting. To consider and pass, if approved, several recommendations of the Executive Committee, of which due notice will be given on the circular convening the meeting.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a meeting of the Division will be held, by invitation of Dr. Gerald Johnston, at Brooke House, Upper Clapton, on Friday, March 27th, at 9.30 p.m., when Dr. H. Macnaughton-Jones will give a lecture on Everyday Gynaecology, illustrated by lantern slides and sections. Members are reminded that professional friends will be welcomed as visitors.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a meeting of the Division will be held at the Walthamstow Hospital on Thursday, March 19th, at 4 p.m., when Mr. G. Bellingham-Smith, F.R.C.S., Obstetric Surgeon to Guy's Hospital, will read a paper on the Proper Use of the Pessary in the Treatment of Uterine Displacements.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.—Mr. R. J. Willan, F.R.C.S., 25, Ellison Place, Newcastle-upon-Tyne, gives notice that a scientific demonstration meeting will be held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Friday, March 20th, from 3.15 to 6 p.m. Mr. J. Clay: The Diagnosis of Diseases of the Genito-Urinary Organs. Dr. A. Parkin: Empyema Thoracis. (Tea.) Professor H. B. Angus: The Treatment of Simple Fractures. Sir Thomas Oliver: Gold-Miner's Phthisis. Mr. R. H. P. Orde: Hospital Management.

YORKSHIRE BRANCH.—Dr. Bronner, Honorary Secretary (33, Manor Row, Bradford), gives notice that a meeting of the Yorkshire Branch will be held at the University, Sheffield, on Wednesday, March 18th, at 4.15 p.m.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Deputy Surgeon-General ALEXANDER G. WILDEY to the *Victory*, additional for Haslar Hospital, vice Craig, March 27th. Deputy Surgeon-General GEORGE A. DREAPER to the *Vivid*, additional for Plymouth Hospital, vice Wildey, March 27th. Fleet Surgeons JONATHAN SHAND, F. W. PARKER, ERNEST A. PENFOLD, PERCY H. BOYDEN, MICHAEL J. SMITH, M.D., F.R.C.S.I., EUSTACE ARKWRIGHT, and Staff Surgeon H. SHEWELL to the *President*, additional for Senior Medical Officers' Course at the Royal Naval Medical School, Greenwich, April 1st to June 30th, inclusive. Fleet Surgeon WILLIAM JACKSON, M.B., to the *Venerable*, vice Shewell, April 1st. Fleet Surgeon EDWARD H. MEADEN to the *Impregnable*, temporary, undated. Fleet Surgeon ROBERT H. NICHOLSON has been placed on the retired list at his own request, March 1st. Surgeon GERALD ARTHUR BRADSHAW has been allowed to retire from the Service, March 2nd. Surgeon ROBERT M. RIGGALL has been allowed to withdraw from the Service, February 27th. Surgeon THOMAS C. PATTERSON, M.B., to the *Vivid*, additional for disposal, March 3rd. Surgeon IVOR S. GABE to the *Devonshire*, vice Langdale, March 21st.

ARMY MEDICAL SERVICE.

COLONEL WILLIAM G. MACPHERSON, C.M.G., M.B., K.H.P., to be Deputy Director-General, and to be granted the temporary rank of Surgeon-General, whilst so employed, vice Surgeon-General W. Babtie, V.C., C.M.G., M.B., March 6th.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel C. A. YOUNG has been posted to the Eastern Command.

Lieutenant-Colonel A. KENNEDY has been noted for a tour of service in India.

Major FITZGERALD G. FITZGERALD has been noted for posting to Gibraltar.

Major W. R. BLACKWELL has been appointed Deputy Assistant Director-General.

Captain P. S. STEWART has been posted to the Southern Command for duty.

INDIAN MEDICAL SERVICE.

THE King has approved of the retirement of Surgeon-General H. W. STEVENSON, C.S.I., January 10th, and Major M. DICK, February 13th.

The services of the undermentioned officers have been placed permanently at the disposal of the Government of Bombay: Major R. M. CARTER, F.R.C.S., Captain R. F. STEEL, M.B., Captain M. S. IRANI, Major W. D. A. KEYS, M.D., Captain J. L. LUNHAM, F.R.C.S., Captain I. D. JONES, M.D., Captain A. F. HAMILTON, M.B.

The following Majors have been promoted to be Lieutenant Colonels from January 29th, 1914: J. FISHER, D.S.O., M.B., S. A. HARRISS, M.B., D. W. SUTHERLAND, M.D., W. SELBY, D.S.O., F.R.C.S., V.H.S., V. B. BENNETT, M.B., F.R.C.S., C. R. PEARCE, M.B.

The following Lieutenants have been promoted to be Captains from January 28th, 1914: A. R. S. ALEXANDER, M.B., F. W. HAY, M.B., G. TATE, S. M. HEPWORTH, M.B., J. L. SEN, M.B.

The promotion of the following to their rank are antedated as under: Major HENRY R. BROWN, from July 29th, 1908, as notified in the *Gazette* of October 20th, 1908, to January 29th, 1908; Major G. C. L. KERANS, from June 27th, 1913, as notified in the *Gazette* of August 15th, 1913, to December 27th, 1912.

INDIAN SUBORDINATE MEDICAL DEPARTMENT.

Senior Assistant Surgeons with the honorary rank of Lieutenant to be Senior Assistant Surgeons with the honorary rank of Captain: L. G. QUADROS (November 25th, 1913); J. E. B. MACQUEEN, A. G. ALPHONSO (December 1st, 1913).

To be Senior Assistant Surgeons with the honorary rank of Lieutenant: First Class Assistant Surgeons P. N. DE SOUZA (November 25th, 1913) and A. DE CUNHA (December 1st, 1913).

The King has approved of the retirement of Senior Assistant Surgeon and Honorary Captains J. GOLDSMITH (November 8th, 1913), D. S. OLLENBACH (November 22nd, 1913), A. D. COTTON (December 8th, 1913), and G. W. DAVIES (February 1st).

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 8,484 births and 5,497 deaths were registered during the week ended Saturday, March 7th. The annual rate of mortality in these towns, which had been 15.6, 15.0, and 15.1 per 1,000 in the three preceding weeks, rose to 15.8 per 1,000 in the week under notice. In London the death-rate was equal to 15.6, against 14.4, 14.2, and 14.1 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.6 in Eastbourne, 8.1 in York, 8.2 in Hornsey, 9.0 in Cambridge, 9.3 in Willesden, and 9.4 in Leyton to 21.6 in Gillingham and in Gloucester, 21.8 in Ipswich, 22.0 in Bury, 23.1 in Middlesbrough, 24.4 in Warrington, and 24.9 in Rochdale. Measles caused a death-rate of 1.9 in West Ham and in Barnsley, 2.6 in Swansea, and 4.7 in Burnley; scarlet fever of 1.2 in Middlesbrough; whooping-cough of 1.6 in Leicester, 1.8 in Devonport, 2.2 in Rochdale, and 2.6 in Darlington; and diphtheria of 1.4 in Plymouth and 1.7 in Lincoln. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 37, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 7 were recorded in Liverpool, 5 in Birmingham, 3 in St. Helens, and 2 each in Gloucester, Warrington, Blackpool, and Carlisle. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,537, 3,457, and 3,392 at the end of the three preceding weeks, had further fallen to 3,307 on Saturday, March 7th; 340 new cases were admitted during the week, against 428, 351, and 401 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,187 births and 728 deaths were registered during the week ended Saturday, March 7th. The annual rate of mortality in these towns, which had been 16.9, 16.5, and 17.5 per 1,000 in the three preceding weeks, fell to 16.6 in the week under notice, but was 0.8 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 3.1 in Perth, 8.1 in Hamilton, and 10.9 in Coatbridge to 19.9 in Clydebank, 22.0 in Ayr, and 24.9 in Aberdeen. The mortality from the principal infective diseases averaged 1.6, and was highest in Ayr and Aberdeen. The 321 deaths from all causes in Glasgow included 24 from measles, 6 from whooping-cough, 3 from infantile diarrhoeal diseases, 2 from scarlet fever, and 1 from diphtheria. Five deaths from measles and 2 from diphtheria were recorded in Edinburgh; 6 deaths from infantile diarrhoea, 2 from scarlet fever, and 1 from small-pox in Aberdeen; 2 deaths from measles in Ayr; and 2 from whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ended Saturday, March 7th, 639 births and 444 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 618 births and 480 deaths in the preceding period. These deaths represent a mortality of 19.2 per 1,000 of the aggregate population in the districts in question, as against 20.8 per 1,000 in the previous period. The mortality in these Irish areas was therefore 3.4 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.6 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 20.9 (as against an average of 21.1 for the previous four weeks), in Dublin city 22.3 (as against 21.6), in Belfast 18.3 (as against 18.9), in Cork 25.2 (as against 20.0), in Londonderry 19.0 (as against 14.0), in Limerick 23.0 (as against 24.7), and in Waterford 7.6 (as against 17.1). The zymotic death-rate was 1.5, as against 1.6 in the previous week.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BARNSTAPLE: NORTH DEVON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—House-Surgeon (male). Salary, £120 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Honorarium, £100 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Junior House-Surgeon. Salary, £100 per annum and £5 laundry allowance.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant to Electrical Department. Honorarium at the rate of 52 guineas per annum.

BIRMINGHAM CITY.—Lady Assistant Medical Officer of Health. Salary, £300 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £220 per annum.

BIRMINGHAM GENERAL HOSPITAL.—Surgical Casualty Officer (non-resident). Salary, £50 per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officer to the Dudley Road Infirmary. Salary, £140 per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Selly Oak Infirmary. Salary, £160 per annum.

BOURNEMOUTH: ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRIGHTON AND HOVE HOSPITAL FOR WOMEN. — House-Surgeon. Salary, £80 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon (males). Salary, £120 and £80 per annum respectively.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL: COSSHAM MEMORIAL HOSPITAL, Kingswood.—House-Surgeon (male). Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL. — Second House-Surgeon. Salary at the rate of £80 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Second and Third Assistant Medical Officers at the Infirmary. Salary, £170 and £150 per annum, rising to £180 and £160 respectively.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary, £70 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician (male). Salary, £90 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 to £250.

DUBLIN: PEAMOUNT SANATORIUM, Hazelhatch.—Assistant Resident Medical Superintendent. Salary, £150 per annum.

DURHAM COUNTY COUNCIL.—School Medical Inspector (male). Salary, £300 per annum, increasing to £350.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EDINBURGH: SCOTTISH PRISON SERVICE.—Resident Medical Officer at Peterhead. Salary, £350 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Ten Qualified Clinical Assistants in Out-patient Departments.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary at the rate of 100 guineas per annum.

FALKLAND ISLANDS.—Assistant Colonial Surgeon. Salary, £300 per annum.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—(1) House-Physician. (2) House-Surgeon. Salary at the rate of £40 per annum each.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £140 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—(1) Second House-Surgeon. (2) Third House-Surgeon. Salary, £100 and £80 per annum respectively.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HULL: ROYAL INFIRMARY.—Casualty House-Surgeon. Salary at the rate of £80 per annum.

ILFORD URBAN DISTRICT COUNCIL.—School Dentist. Salary commencing at £200 per annum.

INDIA: IMPERIAL BACTERIOLOGICAL LABORATORY, Muktesar.—Pathologist. Salary, £560 per annum, rising to £360, and after twenty years' service to £1,040.

IPSWICH: EAST SUFFOLK HOSPITAL.—House-Physician. Salary commencing at £80 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—Assistant Tuberculosis Physician. Salary, £300 per annum.

LEICESTER CORPORATION.—Resident Medical Officer at the Sanatorium and Isolation Hospital. Salary, £250 per annum.

LEICESTER ROYAL INFIRMARY.—(1) Assistant House-Physician. (2) Assistant House-Surgeon. Salary at the rate of £80 per annum.

LONDON COUNTY ASYLUM, Horton.—Junior Assistant (Sixth) Medical Officer. Salary, £200 per annum, rising to £220.

LONDON LOCK HOSPITAL, Harrow Road, W.—Assistant House-Surgeon. Salary, £80 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Junior House-Surgeon. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—(1) Medical Officer for Out-patients and Accidents to Central Branch. (2) Assistant Medical Officer at the Convalescent Hospital, Cheadle. Salary at the rate of £100 and £80 per annum respectively.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Dental Surgeon.

MIDDLESEX COUNTY ASYLUM, Napsbury.—Junior Assistant Medical Officer. Salary, £250 per annum.

MIDDLESEX HOSPITAL.—Assistant Ophthalmic Surgeon.

MONTROSE: ROYAL ASYLUM.—Junior Assistant Medical Officer. Salary, £200 per annum.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Deputy Anaesthetists.

NEWARK-UPON-TRENT HOSPITAL. — Resident Medical Officer. Salary, £100 per annum.

NEWPORT: ROYAL GWENT HOSPITAL. — Resident Medical Officer. Salary at the rate of £80 per annum for first four months, rising to £120 per annum.

NORWICH CITY ASYLUM, Hellesdon.—Assistant Medical Officer. Salary, £200 per annum.

NOTTS EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Junior Resident Medical Officer (male). Salary at the rate of £70 per annum, and honorarium of £10 on completion of six months.

PRESTON COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300, and on promotion to £450.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL. — Third House-Surgeon (male). Salary at the rate of £90 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—(1) Pathologist and Registrar. (2) House-Physician. Salary at the rate of £200 and £80 per annum respectively.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROYAL AUSTRALIAN NAVY.—Two Surgeons.

ST. HELENA.—Assistant to Colonial Surgeon. Salary, £250 per annum.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.—Three Clinical Assistants.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion Square, W.C.—Clinical Assistant to Out-Patient Department.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon (male). Salary, £80 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Dreadnought Hospital, Greenwich: (1) Medical Registrar. (2) Two House-Physicians. (3) Two House-Surgeons. Albert Dock Hospital: (4) House-Surgeon. (5) House-Surgeon to Out-patients. Salary for (1) £100, (2) and (3) £50, and (4 and 5) £75 per annum.

SHEFFIELD: EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary, £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £120 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Surgeon. Salary at the rate of £100 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, rising to £140.

STAFFORDSHIRE, WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS.—Assistant Tuberculosis Officer. Salary, £300 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SUNDERLAND: ROYAL INFIRMARY.—House-Physician (male). Salary, £120 per annum.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Assistant Resident Medical Officer. Salary, £100 per annum.

WAKEFIELD GENERAL HOSPITAL. — Second House-Surgeon (male). Salary, £100 per annum, increasing to £120.

WESTMINSTER GENERAL DISPENSARY, Soho, W.—Resident Medical Officer. Salary, £120 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E. Junior House-Physician. Salary at the rate of £75 per annum.

WEST HAM UNION.—Second Assistant Resident Medical Officer (male) at the Sick Home. Salary, £160 per annum, increasing to £200.

WEST RIDING COUNTY COUNCIL.—(1) Assistant Medical Officer (male) at the Scalebor Park Asylum. (2) Assistant Medical Officer at the Cardigan Sanatorium, near Wakefield. Salary, £220 and £250 per annum respectively.

WHITECHAPEL UNION INFIRMARY.—Second Assistant Resident Medical Officer (male). Salary, £120 per annum, rising to £140.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £90 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon. Salary, £125 per annum.

WOOLWICH INFIRMARY.—Resident Male Assistant Medical Officer. Salary, £180 per annum, increasing to £200.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following appointments:—Hay (Brecknock), Old Meldrum (Aberdeen), Sutton Bridge (Lincoln), Tredegar (Monmouth).

MEDICAL REFEREE.—The Home Secretary announces a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for Reading, Newbury, Farnham and Aldershot, and Chertsey County Courts.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BARR, Thomas, M.D.Glasg., Medical Referee under the Workmen's Compensation Act, 1906, for the Sheriffdom of Lanarkshire, with a view to being employed in all aural cases arising in the sheriffdom in which the services of a medical referee are required.

BELL, J. T., M.B., B.S.Durh., Certifying Factory Surgeon for the High Wycombe District, co. Buckingham.

BHUTTACHARJI, J. C., L.R.C.P.and S.Edin., Certifying Factory Surgeon for the Arnesby District, co. Leicester.

CARLILL, Hildred B., M.A., M.D.Cantab., M.R.C.P.Lond., Assistant Physician to the Seamen's Hospital, Greenwich.

CAUNTER, R. L., M.D., District Medical Officer of the Cannock Union.

CONSTABLE, Evelyn A., M.B., B.S.Durh., C.M.S. Hospital, Isfahan, Persia.

DAVIDSON, H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Teddington District, co. Middlesex.

FAZAN, E. A. C., M.R.C.S., L.R.C.P., Assistant Medical Officer to the Nottingham Parish Workhouse and Infirmary.

GAULT, Arthur Henry, M.D., Honorary Physician to the Adelaide Hospital, South Australia.

GIBBIN, Wilfrid W., M.R.C.S., L.R.C.P., Honorary Medical Officer, General Hospital, Hobart, Tasmania.

HOLDEN, Oscar, M.D.Birm., D.P.H., Assistant Medical Officer of Health, Southampton.

JENKINS, Evan L., M.B., B.S.Durh., Certifying Factory Surgeon for the Lynton District, co. Devon.

O'SULLIVAN, J. E., M.B., B.Ch., N.U.I., Certifying Factory Surgeon for the Charlestown District, co. Mayo.

MARTIN, Albert E. S., F.R.C.S.I., D.P.H., Tuberculosis Officer to the County Borough of Sunderland.

MORGAN, R. W., M.D.Durh., District Medical Officer of the Shaftesbury Union.

ROBERTS, G. A., F.R.C.S.Eng., Honorary Surgeon-in-Ordinary to the Royal Hampshire County Hospital, Winchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

PRICE.—On March 6th, at 295, Cowbridge Road, Cardiff, to Dr. and Mrs. Ernest Price, a son.

DEATH.

VACHER.—At sea, after a short illness, on February 25th, 1914, Francis Vacher, J.P., F.R.C.S., M.R.C.P., late Medical Officer of Health for Cheshire.

DIARY FOR THE WEEK.

TUESDAY.

MEDICO-LEGAL SOCIETY, 11, Chandos Street, W., 8.30 p.m.—Paper by Roland Burrows: Must a Prison Governor keep Prisoners not Merely Safe, but Safe and Sound?

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Third Goulstonian Lecture:—Dr. M. A. Cassidy: Rheumatoid Arthritis.

ROYAL SOCIETY OF MEDICINE:

SECTION OF THERAPEUTICS AND PHARMACOLOGY, 4.30 p.m.—Paper:—Dr. G. C. Low: The Therapeutic Uses of Emetine.

SECTION OF PATHOLOGY, 8.30 p.m.—Dr. J. F. Gaskell: The Lesions of the Kidney in Ulcerative Endocarditis.

WEDNESDAY.

BRITISH OTO-LARYNGOLOGICAL SOCIETY, 11, Chandos Street, Cavendish Square, W., 4 p.m.—Epidiascope Demonstrations.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—First Lumleian Lecture:—Dr. J. A. Ormerod: Some Modern Theories concerning Hysteria.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DERMATOLOGY, 4.30 p.m.—Demonstration of Cases and Specimens.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION, Wednesday, 4.30 p.m.—Lecture: The Treatment of Tuberculosis of the Larynx.

CANCER HOSPITAL, Fulham.—Post-graduate Lecture, Wednesday, 5 p.m., New Growths of the Testicle.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3 p.m., and Friday, at 3 p.m., Diseases of the Larynx.

DUBLIN: ROTUNDA HOSPITAL,—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Induction of Labour (continued); Wednesday, 10 a.m., Obstetrical Operations. Gynaecological Lecture: Friday, 10 a.m., Hysterectomy, its Forms and General Technique. Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

LONDON HOSPITAL MEDICAL COLLEGE, E.—Tuesday, Wednesday, and Friday, 4.15 p.m., Syphilology.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted) at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Helminthology, 2 to 3.30 p.m. daily. Medical Clinics, Tuesday and Thursday, at 3 p.m. Operations, Friday, at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS, at 4.30 p.m. each day.—Tuesday, Salford Royal: Treatment of Obstructed Labour. Wednesday, Royal Infirmary: Demonstration of the Use of Local Anaesthetics. Thursday, Ancoats Hospital: Chronic Lesions of the Knee-joint. Friday, Royal Eye: Glaucoma.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Medical; Friday, Ear, Nose, and Throat. Lectures will be delivered at 5.15 p.m. each day.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Treatment of Tabes; Friday, 3.30 p.m., Lesions of Visual Path.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—General Clinics and Operations at 2.30 p.m. daily. Monday, Gynaecology; Tuesday, Throat; Wednesday, Skin, Eye, Children; Tuesday and Thursday, X Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations as in Syllabus.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—Friday, 4 p.m., Some Surgical Cases with Comments.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Medical School. Clinics held daily in the several departments of the hospital during March: Cardiac, Laryngology, X Ray, Dental, and the Prevention of Consumption.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. A Lecture at 5 p.m. daily (except Saturday).

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	MARCH.
13 Fri.	London (Connaught Rooms, Great Queen Street, W.C.): Conference of Representatives of Local Medical and Panel Committees, 10 a.m.; and following day if necessary, at 9.30 a.m.
17 Tues.	London: Regulations and Standing Orders Subcommittee, 10 a.m.
18 Wed.	London: Ship Surgeons Subcommittee, 11 a.m. London: Standing Ethical Subcommittee, 2.30 p.m. Lancashire and Cheshire Branch, Meeting of Branch Council, Onward Buildings, Deansgate, Manchester, 4 p.m. South Middlesex Division, Free Library, Twickenham, 8.30 p.m. Address by Sir John Collie: The Business Side of Medical Practice. Yorkshire Branch, Sheffield, 4.15 p.m.
19 Thur.	South-West Essex District, Walthamstow Hospital, 4 p.m.
20 Fri.	London: Special Fund Committee, 10 a.m. Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
25 Wed.	Central Division, Medical Institute, Edmund Street, 3.30 p.m.
27 Fri.	City Division, Brooke House, Upper Clapton, 9.30 p.m.
30 Mon.	London: Dominions Committee, 2 p.m. (*provisional*). London Naval and Military Committee, 4 p.m.
31 Tues.	London: Public Health Committee, 3 p.m.
	APRIL.
1 Wed.	London: Journal Committee, 2.30 p.m.
3 Fri.	London: Central Ethical Committee, 2 p.m. London: Medico-Political Committee, 10.30 a.m.
4 Sat.	London: Science Committee (*provisional*).
7 Tues.	London: Organization Committee, 2 p.m.
8 Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
22 Wed.	London: Council.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 21ST, 1914.

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CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

London, Friday, March 13th, 1914.

DECISION TO FORM A CENTRAL ORGANIZATION IN CONNEXION WITH THE BRITISH MEDICAL ASSOCIATION.

THE Conference of Local Medical Committees held during the annual meeting of the British Medical Association at Brighton last July[1] passed a resolution asking the Association to call another conference in 1914, and this took place on Friday, March 13th, at the Connaught Rooms, Great Queen Street, W.C., 126 representatives being present, many of these representing grouped Local Medical and Panel Committees.

ELECTION OF CHAIRMAN.

The proceedings began at 10 a.m., when, on the proposition of Dr. A. E. LARKING (Bucks), seconded by Dr. G. W. EUSTACE (West Sussex), Mr. D. F. TODD (Sunderland) was elected to the chair.

In opening the Conference Mr. TODD expressed the hope that its labours would result in the benefit of all concerned. The necessity for such a gathering was generally recognized; the feeling in all parts of the country was that there should be greater co-ordination and a cordial working together for the mutual benefit of all members of the profession, whether panel or non-panel. He hoped speakers would remember that statements of facts which would be useful to the country generally were what was needed by the meeting.

In reply to a question by Dr. DEVIS (Bristol), the CHAIRMAN said the British Medical Association had undertaken to provide all the clerical work connected with the meeting and for the taking of the minutes.

REASONS FOR CALLING THE CONFERENCE.

Dr. COX then read the following statement, explaining the reasons for calling the meeting: The Conference of Representatives of Local Medical Committees held at Brighton last July asked the British Medical Association to convene a Conference of representatives of Local Medical Committees at the time of and in connexion with the annual meeting of the British Medical Association, or at such earlier time as the Council should determine, and also appointed a deputation to wait upon the Insurance Commissioners with reference to the question of the treatment of temporary residents. That deputation met the Commissioners on October 28th, 1913, and its report was published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of January 17th, 1914. On January 15th a member of that deputation, who is also a member of the Insurance Act Committee of the Association, raised the question of the desirability of the Association arranging for the holding of a conference of representatives of Local Medical Committees during 1914, and it was decided to recommend the Council:

> That the Insurance Act Committee be directed to take all necessary steps through the organization of the Association for the holding at an early date of a conference of representatives of all Local Medical Committees and Panel Committees in the United Kingdom.

This recommendation was approved by the Council on January 28th, 1914, and as a result arrangements have been made for the Conference to take place to-day. For the convenience of the meeting an agenda has been prepared setting out in approximate form the various subjects for discussion. The convening of this Conference has been cordially undertaken by the Association, which, as the only organization capable of representing every medical interest, desires to provide opportunities for full discussion on all important matters affecting the medical profession. In pursuance of its objects the Association has always taken an active part in the negotiations relative to the introduction of the National Insurance Acts, and will continue on behalf of the whole profession to press for such amendments in the condition of the medical service as seem desirable in the best interests of the profession.

The statement was approved and ordered to be entered on the minutes.

[1] SUPPLEMENT, August 2nd, 1913.

Standing Orders.

The Chairman proposed that a number of standing orders be adopted for the regulation of the proceedings of the Conference. These were agreed to.

A rider proposed by Dr. H. F. Devis (Bristol), that a formal division, in which names would be recorded, could be demanded by twenty members, was agreed to.

Dr. C. H. Benham (East Sussex) remarked that the way the Conference had been summoned had brought about a peculiar state of affairs. A representative could be sent from each Local Medical and Panel Committee, and in the few districts where there were differences amongst the profession and the two committees were separate there was double representation. The consequence might be that undue weight would be given to the opinion of districts where the profession was at variance. He proposed that when a formal division was demanded each member should have one vote for each committee he represented. The effect would be that many members would have two votes.

Dr. E. Burchell (Brighton) seconded.

The Chairman said he hoped complications would not be introduced, and Mr. Russell Coombe (Exeter) and Dr. F. E. Apthorpe Webb (Cambridgeshire) having expressed similar views, the proposal was lost by a large majority.

The return of representatives to the Conference, notice of appointment of substitutes, and letters of apology for non-attendance were received.

Report of Deputation to Insurance Commissioners.

The report of the deputation appointed to wait upon the Insurance Commissioners by the Conference of Local Medical Committees held at Brighton last year was received, and the deputation was thanked for its services. The report was published in the Supplement, January 17th, 1914.

PERMANENT CENTRAL ORGANIZATION OF COMMITTEES.

The meeting proceeded to consider the establishment of a central organization of Local Medical and Panel Committees, the question being raised on the following clause of a motion by Dr. G. W. Eustace (West Sussex Local Medical and Panel Committee):

> That it is imperative that there should be a permanent organization to co-ordinate the work of the Local Medical and Panel Committees, and to safeguard and promote the interests of those represented by them.

Dr. Eustace remarked that some might think the proposal unnecessary; that no organization was required because the British Medical Association could cover the ground. The West Sussex Committee was content to say that there should be an organization, without saying who should run it. In two years' time the Insurance Act would come up for review, and the position of the medical profession would have to be considered. It was essential that an organization should be founded and be ready to meet the position when it arose. The resolution might create differences of opinion, but he earnestly hoped the meeting would not send away a strong and dissatisfied minority on any question; that there would be give and take, so that unanimity might be arrived at. The resolution proposed to co-ordinate both Local Medical and Panel Committees. It would be a very great mistake to do anything which would set up a hard and fast line between practitioners on the panel and those who had not accepted service under the Act. In most areas of the country the Local Medical and Panel Committees, if not identical, were working together harmoniously. There were a few areas in which this was not so—but undoubtedly Panel Committees had established their position, and it was merely a question of time when they would run smoothly in areas where there were difficulties at present. Local Medical Committees had large statutory powers and needed a central organization. However, to have two organizations—one for Local Medical and one for Panel Committees—would be going too far in devolution and would cause friction.

Dr. M. Dewar (Edinburgh) seconded. He thought there would be no difference of opinion as to the necessity of having an organization. All through the country the need was for unity of purpose and action, and a central organization representing all the bodies concerned would have much greater weight with the Commissioners and Insurance Committees than could Local Committees acting separately.

Dr. H. H. Tomkins (Essex) said he had heard objections to the inclusion of Local Medical Committees in the proposed association, on the ground that Local Medical Committees would not survive. Even if that were to happen, he thought it better to include them.

Dr. G. G. Genge (Croydon) supported the motion, and remarked that it was foolish to make acute distinctions between doctors on or off the panel, seeing that one man might draw practically the whole of his income from the Act, and another have only a few names on his list.

Proposed Exclusion of Local Medical Committees.

Dr. H. B. Brackenbury (Middlesex) said that the opinion of the Middlesex Panel was that the proposed organization was very desirable, but that it should be an organization of Panel Committees alone. It was not to be an organization of the profession as a whole in the way that the British Medical Association represented the profession as a whole. The new body would focus and co-ordinate the opinions of doctors doing panel work, as expressed through the Panel Committees, which were the statutory organizations of such doctors. Therefore, Middlesex urged that the new association should be confined to Panel Committees. It was an organization of committees, not an organization of practitioners. Seeing that in most parts of the country the membership of the Local Medical and Panel Committees was composed of nearly the same persons, the omission of Local Medical Committees would make no difference. Although there was uniformity throughout the country generally, in some areas, especially the metropolitan, this was not so. If the central organization represented both committees, from those parts of the country where the committees represented more or less antagonistic points of view a dissentient minority would come, and this would militate against any combined representations to a Government department. Financial questions would also cause difficulty. If as the result of this method of organization a voluntary system of raising money were resorted to, the new association would not survive very long. Local Medical Committees had no other than a voluntary income, but Panel Committees could obtain a definite income. Bodies so differentiated would be incompatible, and should not be combined. He moved an amendment to exclude Local Medical Committees.

Dr. A. C. Farquharson (Durham) seconded the amendment, and said that Local Medical Committees and Panel Committees were on two different legal levels. The first existed in virtue of regulations, and the second under a statute.

The Chairman said that was not so; both bodies were formed under statute.

Dr. F. E. Apthorpe Webb (Cambridgeshire) supported the amendment, and mentioned that in the area he represented the two committees were identical. An association was needed composed of the men who were doing the work under the Act, and who knew the difficulties under which it had to be done. The profession need not be any further divided because an association of panel workers was formed. Such an organization would be able to speak with a united voice in a way that might not be possible if those who were not altogether in sympathy with the work of the panel were included.

Dr. G. R. Penrose (Southport) said his instructions were not on any account to do anything which would drive a wedge between panel and non-panel practitioners. (Applause.) In Southport a Panel Committee was thought to be hardly necessary; the Local Medical Committee was quite able to do the work, and when the Panel Committee was formed it was thought by many to tend towards putting panel practitioners before those who were not on the panel. The profession in Southport was very friendly, and those on the panel did not want to do anything to upset the present excellent relations. The profession should look forward, for when a fight arose in two years' time it would be a great disadvantage if the ranks were divided into two classes.

Dr. J. Holmes (Bury) urged that unity should be preserved. It would be ridiculous to restrict the new organization to Panel Committees, because some of the Panel Committees contained non-panel practitioners. As to the financial aspect, money for the proposed associa-

tion could not be raised readily from Panel Committees, because their funds only existed for special purposes. The Local Medical Committees could raise money without being subject to restrictions.

Dr. B. A. RICHMOND (London) said he represented one of those unfortunate areas in which there was division, though he believed the time was fast approaching when the members of the profession in London would see eye to eye and work together. It would be best to advance step by step in forming the new association, and begin by having an association of Panel Committees. He urged this not with any intention of ignoring the claim of the Local Medical Committees or of suggesting that they had inferior duties. On the contrary, he thought Local Medical Committees had, if anything, a superior kind of duty. He wished to avoid any line of argument that would accentuate differences, but he declared that it was not a question of panel practitioners having divided the profession. The differences were not due to the panel practitioners, who, nevertheless, had had a great deal of abuse. The panel practitioners were quite as ready to work for the best traditions of the profession as any one who was not on the panel. The fact that so many Local Medical and Panel Committees were identical in membership he regarded as an argument for not combining the two. Let them form an association of Panel Committees as being the bodies with actual experience. If the Local Medical Committees wished to assist afterwards by all means let them do so, but at present the time was not quite ripe for the union of the two.

Dr. W. E. THOMAS (Glamorgan) hoped the Conference would not accept the amendment, which would be simply to walk into the politicians' net. The Amending Act made an attempt to split the profession into two camps, composed of members of Local Medical and Panel Committees. The two committees had the same people as members, and the right policy was to combine them. To form an association for each would be to have internecine war and make the profession once more the dupe of politicians. (Applause.)

The meeting agreed to take a vote, when the amendment was lost, only 14 voting for it.

AN ASSOCIATION OF PANEL PRACTITIONERS.

Dr. H. F. DEVIS moved an amendment:

> That immediate steps be taken to organize an association of panel practitioners throughout the country.

Dr. Devis remarked that his proposal was an amendment only in so far as it went a step further than already suggested, and proposed to organize the practitioners engaged under the Insurance Act as well as Local Medical and Panel Committees.

Dr. F. E. APTHORPE WEBB (Cambridgeshire), on a point of order, suggested that the amendment was not in accordance with the vote just taken that there should be one body, including both the committees.

The CHAIRMAN ruled that the amendment was in order.

Dr. DEVIS, continuing, said that the paramount need at the present moment was an organization of panel practitioners.

Mr. RUSSELL COOMBE (Exeter) asked whether if this amendment were carried it would negative the formation of a federation of Panel Committees? He submitted that the amendment raised a totally different question, and that an association of Panel Committees and one of panel practitioners should be discussed separately.

Dr. DEVIS, resuming, said that Bristol thought that local committees would naturally form themselves in the process of forming an association of panel practitioners. He was willing to add to the amendment that the organization of Panel and Local Medical Committees should proceed simultaneously with the formation of an association of panel practitioners.

Dr. C. R. WILLANS (Bournemouth) seconded. He urged that to form an association of committees and not go any further was a waste of time. The only good which could come out of the present Conference was an association of panel and non-panel practitioners forming a body which had power to fight actions and administer a large fund. An organization was needed which could be extended to a guild or trade union.

Dr. G. W. EUSTACE (West Sussex) appealed to Dr. Devis to withdraw the amendment and bring forward the proposal as an instruction to the new organization.

The amendment was withdrawn, and the motion that a permanent organization be formed co-ordinating Local Medical and Panel Committees was then carried *nemine contradicente*.

ASSOCIATION WITH THE BRITISH MEDICAL ASSOCIATION.

The meeting next considered the form of organization that should be adopted. There appeared on the agenda a motion by the Brighton Local Medical and Panel Committees to the effect that the British Medical Association be asked to form a permanent "Local Medical and Panel Committee Standing Committee," on which the Conference of Local Medical and Panel Committees should nominate three-fourths of the members and the Representative Body and Council of the Association the remaining fourth between them.

Another motion, in the name of the Devonport Local Medical and Panel Committees, was to the effect that an independent organization should be established to co-ordinate the activities of Panel Committees, which should be affiliated to a central body as units.

The attention of the meeting was drawn to these motions, but it was decided that a simple issue would be best raised on the following motion adapted from one in the name of the Newcastle-on-Tyne Local Medical and Panel Committees:

> That the new organization should be associated with the British Medical Association.

Dr. H. L. RUTTER (Newcastle-on-Tyne), in moving the resolution, said the feeling in Newcastle was that it was essential for the new organization to be in close association with the British Medical Association. It was felt that an organization such as now proposed was necessary, but that in a fight reliance must be placed on the British Medical Association.

Dr. E. BURCHELL (Brighton) seconded. He had been instructed to propose an even closer connexion with the British Medical Association, but the present proposal would meet the case. He quite agreed that if it came to fighting, the British Medical Association was the only body which could adequately represent the profession. There were other reasons for a close association that had nothing to do with fighting. First, there was a desire that the doctors working the Insurance Act should be co-ordinated. By a vote already taken, the Conference had approved the principle that the co-ordination should not only be of panel practitioners, but of all practitioners, because every medical practitioner was affected by the Act. He had a horror of multiplying unnecessary associations, and the British Medical Association should be closely connected with any body now formed. His orders went further, and desired that the organization should be actually part of the British Medical Association. Another reason for close union was a financial one. A separate organization would require separate financial arrangements. If there were legal objections to the Panel Committees finding money, and it became necessary to depend upon voluntary contributions, he foresaw difficulties. He strongly urged the Conference to aim at the most intimate association possible with the British Medical Association.

Dr. M. DEWAR (Edinburgh) expressed the view that the British Medical Association was the only feasible body to bring the new organization into being. The Association was quite willing to undertake the work, and whatever the decision of the meeting might be the Association would continue its policy of looking after and fighting for the interests of the profession as a whole. He had the support of the Scottish members when he stated that they looked forward to the Association undertaking the work.

Dr. B. A. RICHMOND (London) said he did not wish to be too precise about the nature of the connexion to be arranged with the British Medical Association. His constituents did not wish to appear to be acting apart from the Association, but he liked the words "if possible" (which appeared in the motion as originally set down by Newcastle), because the practical possibility of the proposal had to be considered. The Council of the Association would have to discuss in what manner it could help the new organization. Kindred bodies of medical men, such as the Poor Law Medical Officers or the Association of Colliery Surgeons, had separate organizations, but voiced their demands through the Association.

Dr. H. Priest Shanks (Middlesex) said the meeting ought, first of all, to ascertain whether the British Medical Association would associate itself with the proposed body. Would the latter be worked by the British Medical Association or in harmony with the British Medical Association?

Dr. F. L. Pochin (Oldham) observed that the opinion of the Oldham committees was that the Conference should so form the new organization that it would be effective and available for fighting purposes. If the organization were connected with the British Medical Association it could make use of that body, but the Association was handicapped by its elaborate machinery. In the last fight the Association was probably enthusiastic enough, but it could not move until the crisis was over. The new organization should not be hampered in any way. If the suggested organization associated itself with the National Medical Guild it would be strong enough to do all that was needed. If the new body was to fight it must have funds. A trade union had funds, and could use them.

Dr. L. K. H. Hackman (Portsmouth) expressed the view that the new organization should be separate and distinct from the British Medical Association.

The motion in favour of the new organization being associated with the British Medical Association was carried by a large majority, only seven voting against it.

Relations with the National Medical Guild.

Dr. J. W. Pridmore (Isle of Wight) moved a rider to the effect that the new organization should also be associated with the National Medical Guild. He urged this on the ground that the Guild was a trade union, and that a fighting fund was required. He quoted counsel's opinion to the effect that the funds of the British Medical Association could not safely be used for trade union purposes. If the present Government continued in power a State Medical Service was likely to be instituted in the near future. To resist such a scheme a trade union line of action would be necessary.

Dr. A. Manknell (Bradford), who seconded, said that while the new body should be associated with both the Association and the Guild, it should be under the control of neither.

Dr. F. Farrow (Manchester) said there was a strong feeling amongst the profession there that a fighting instrument was necessary. He asked what the duties of the new body would be.

The Chairman said that had yet to be decided.

Dr. F. L. Pochin (Oldham) said he was a keen supporter of the British Medical Association, but his constituents did not rely on it as a fighting organization. The Association and the Guild might be linked up to the gain in strength of both bodies.

Dr. C. E. Douglas (Fife) remarked that a new question had been introduced—namely, whether or not a trade union should be supported by the meeting. His feeling was that those who were promoting the idea had no conception of the feeling which existed against it amongst the medical profession. The great bulk of the medical profession wished to support the British Medical Association, and it was undesirable to create division.

Dr. H. P. Shanks (Middlesex) thought that trade unionism was inapplicable to the medical profession because the principle of arbitration in case of dispute would not apply.

Dr. S. A. Bonton (Hertfordshire) proposed as an amendment to the rider:

> That the question of association of the new organization with the National Medical Guild be referred to the Local Medical and Panel Committees.

The question of association with the National Medical Guild was, he said, far-reaching. If the matter were referred to the Local Medical and Panel Committees it did not follow that the proposal would be negatived. The acceptance of the amendment would simply mean that the question would be deferred.

Dr. A. E. Larking (Bucks) seconded the amendment.

Dr. Napier Jones said he had no desire to slight the National Medical Guild, and suggested that if the rider were withdrawn its import might go to the executive of the new body as an instruction.

Dr. J. W. Pridmore then withdrew his rider as to association with the Guild for discussion at a later period, and as a consequence Dr. Bontor's amendment lapsed.

Manner of Association with the British Medical Association.

On behalf of the Brighton Local Medical and Panel Committees, Dr. E. Burchell proposed:

> That the British Medical Association be requested to form a permanent "Local Medical and Panel Committee Standing Committee," on which the Conference of Local Medical and Panel Committees be invited to nominate three-quarters of the members, the remainder being selected by the Representative Body and the Council of the Association in equal numbers.

He invited the Conference to consider whether it would not be wise to have the machinery of the British Medical Association behind the new body. The Association might not be a perfect organization, but it had machinery, and had done a large amount of work in connexion with the Insurance Act..

Dr. J. E. Healey (Preston), in seconding, said that his instructions were very definite. In his district members of the profession were quite willing to entrust the work to the Association.

Mr. Russell Coombe proposed an amendment that the phrase "associated with British Medical Association" should be taken to mean

> (*a*) The appointment by the new organization of members (members so appointed being members of the British Medical Association) to those British Medical Association committees concerned in contract practice;
>
> (*b*) The appointment by the British Medical Association of members of the same committees to the Council and committees of the new organization.

Mr. Russell Coombe said the effect of the amendment was that the new body should send to the contract practice committees of the British Medical Association certain representatives who would keep those committees informed. The contract practice committees, on the other hand, should appoint certain members who would attend meetings of the new organization. That was very different from making the new body a standing committee of the Association. He thought a connexion such as he had outlined was as close as would be desirable. The organization now being formed should be an independent body.

Dr. W. Duncan (Derby) seconded. He held that it would be a mistake for a great organization, as this would be, to sink its identity in one of the standing committees of the Association. He was favourably disposed to the Association, but that body was suspect in certain quarters. It was because of their connexion with the Association that the Local Medical Committees had been shorn of some of their duties. ("No, no.") It was by being virtually an independent body that the new body could maintain the silken bond of unity with the Association. The tie between the Colonies and the Mother Country was an example of the kind of relation he thought desirable. The connexion between the new body and the Association should be as loose as possible.

Dr. B. A. Richmond (London) thought the motion cumbrous and verging on the impossible. Representation on the committees would be all that was necessary. The Conference had already decided to have an independent organization in the sense of using their own brains for their own purposes, but not in antagonism to the British Medical Association. He thought the meeting could not do better than adopt Mr. Russell Coombe's suggestion.

A Representative suggested that close association with the British Medical Association would lead to refusals to join the new body on the part of those who were not keen supporters of the Association. The relation between the two should be partnership rather than dependence.

Dr. J. C. S. Burkitt (Leicestershire) said he was instructed to support any motion in favour of a trade-union method of organization. If the new body were under the direct aegis of the British Medical Association, it would be impossible to fight because the funds would be vulnerable.

Dr. Williams Freeman (Hampshire) said he was instructed not to oppose a loose association with the

British Medical Association; but as many members of the Panel Committee were not members of the British Medical Association, it was felt that any close association would be against the interests of Panel Committees. The Hampshire Committee had expressed the following opinion: "That all negotiations between associations of Panel Committees and the Government should be conducted directly, and not through the mediation of the British Medical Association."

Dr. E. B. HINDE (Norwich) said that Panel Committees needed an organization to protect their interests when the Insurance Act came up for amendment or extension. Such an organization must be representative and authoritative. If it were inaugurated apart from the British Medical Association the two bodies might not speak with the same voice. To avoid that, the two organizations should be identical. Non-members in his district did not oppose co-operation with the Association. It was essential that the organization should have a journal, and that it should be a weekly one. If an association were started which might be antagonistic to the British Medical Association, the use of the JOURNAL could not be ensured. Further, to use the existing machinery of the British Medical Association would make for economy.

Dr. H. F. OLDHAM (Lancashire) thought the Conference must be careful not to make the link so loose that it could not resist, or so rigid that it would break when any strain was put upon it. The British Medical Association had done the work for the profession that it was asked to do. He was sick of hearing members of the profession making complaints on that score. Whatever non-panel men said about the weakness of the Association or the great surrender, or the great failure at the inception of the Act, at any rate the remuneration of the panel practitioner was what it was through the action of the Association. It could not be expected that the Association would accomplish everything; how many of them could say that they had attained the ideals of youth? The Association did accomplish more than many of them expected. The closer the union with the Association of the new organization the better for its prospects. On the question of finance, Dr. Oldham foresaw difficulties in using for organization part of the money that Panel Committees were allowed by law to raise. He was afraid that a contribution to a central fund for the organization of Panel Committees, in order to resist pressure from Insurance Committees, would not be sanctioned.

Mr. Russell Coombe's amendment was then put to the vote and lost by a large majority.

A PROVISIONAL COMMITTEE TO PREPARE A SCHEME OF ORGANIZATION.

Dr. G. W. EUSTACE (West Sussex) then moved an amendment:

> That a provisional committee be at once appointed, with power to carry out the foregoing resolutions and to prepare and submit to the Local Committees a memorandum embodying the name, constitution, objects, and powers of the new organization, and the nature and method of its association with the British Medical Association.

He remarked that while it was a good thing to get business done quickly, it was possible to go too fast, and the Conference had now reached the stage when it must set up some form of committee to thresh out details. In due course the Conference should give the committee general instructions.

Dr. H. B. BRACKENBURY (Middlesex), who seconded, said that it would be open to each Local Committee to decide whether or not to join the new organization, and its constitution and the nature of its association with the British Medical Association must have some weight with the Local Committees in making their decisions. Having decided the principle that the organization should be associated with the British Medical Association, it must be a matter of negotiation to decide how a connexion might be effected.

Dr. A. E. LARKING (Buckinghamshire) said that the new body would not get money from every member of the profession if it showed any indication of putting itself entirely under the British Medical Association. In his district every practitioner who had more than thirty or forty on his panel had agreed to a voluntary levy. He believed a deduction would be generally accepted if everybody had to contribute. The British Medical Association should not be called upon for everything. The new body should be maintained by those who received money under the Act.

The amendment was carried unanimously, and adopted as the substantive motion.

METHOD OF APPOINTMENT OF THE PROVISIONAL COMMITTEE.

The CHAIRMAN remarked that the Conference had now reached a very important stage—the appointment of a committee. The great bugbear of those who had taken an active part in the fight in the past had been the feeling that they were surrounded by suspicion. He hoped the Conference would appoint men in whom it had confidence, so that there would be no recriminations.

Some discussion then took place as to the size and method of selection of the Provisional Committee.

Dr. G. W. EUSTACE proposed, and Dr. E. MCCULLOCH (Devonport) seconded, that the number of members should be twenty-five. Dr. G. J. B. CANDLER-HOPE (Yorks, North Riding, Local Medical Committee) proposed, and Mr. T. I. MILLS (North Riding Panel Committee) seconded, an amendment that the number be thirty. Dr. S. A. BONTOR (Hertfordshire) urged that a small committee, whose members lived within reach of a centre and who could meet frequently, would best meet the purpose.

The CHAIRMAN suggested that a membership of twelve would be best. He appealed to the proposers of the motion and amendment to withdraw their proposals, and this they agreed to do. The CHAIRMAN then moved that the number of members be twelve. To this Dr. J. HOLMES (Bury) moved an amendment that the number be twenty-four; he felt that so small a number as twelve would not give adequate representation to the interests of the various parts of the country. Dr. C. H. BENHAM (East Sussex) seconded the amendment. On a vote the amendment was lost, and the motion in favour of twelve was carried, only two voting against.

Dr. H. F. DEVIS (Bristol) proposed, and Dr. B. A. RICHMOND (London) seconded, a motion that the provisional committee be elected upon a geographical basis. Whereupon an amendment was moved by Dr. H. B. BRACKENBURY (Middlesex), seconded by Dr. H. H. TOMKINS (Essex) that the election of the twelve members be upon the following basis: Seven from England, two from Scotland, two from Wales, and one from Ireland. This was carried, and adopted as a substantive motion. It was also agreed, on the motion of the CHAIRMAN, that the representatives of each country on the committee should be elected by the members of the Conference representing that country. It was then pointed out that only one representative of Ireland was present at the Conference, whereupon the CHAIRMAN moved, and it was agreed to, that Dr. W. DOOLIN (Dublin) be forthwith elected the representative of Ireland upon the Provisional Committee.

It was next proposed by Dr. L. W. DRYLAND (Northamptonshire), seconded by Dr. B. A. RICHMOND, that the seven representatives of England should be distributed as follows: Two from London and the Home Counties, two from the Northern Counties, one from the East, one from the Midlands, and one from the South and West. Discussion showed the difficulty of defining such areas, and representatives of the Midlands, especially, objected to having no more representatives than the more sparsely populated Eastern Counties.

Dr. S. A. BONTOR (Hertfordshire) urged that the scheme on which the new organization was to be conducted could quite easily be formulated by representatives residing near London.

Dr. J. ORTON (Coventry and Warwickshire) objected that it would be unwise to have a scheme drawn up by those residing in one part of the country. It was then agreed that the members of the Committee representing England be elected irrespective of any geographical distribution.

Dr. J. BRADLEY (Salford) expressed the hope that when nominations were made it would be remembered that Manchester and Salford were under a different system to that of the panel.

It was then agreed that the election of the Committee should be by ballot.

THE PROVISIONAL COMMITTEE.

The following is a list of the members elected to the Provisional Committee:

Mr. RUSSELL COOMBE (Devonshire) Dr. H. F. DEVIS (Bristol) Dr. G. W. EUSTACE (West Sussex) Dr. P. NAPIER JONES (Berkshire) Dr. H. F. OLDHAM (Lancashire) Mr. D. F. TODD (Sunderland) Dr. F. E. APTHORPE WEBB (Cambridgeshire)	English Representatives.
Dr. J. R. DREVER (Glasgow) Dr. C. FORBES (Aberdeen)	Scottish Representatives.
Dr. J. R. PRYTHERCH (Anglesey) Dr. W. E. THOMAS (Glamorgan)	Welsh Representatives.
Dr. W. DOOLIN (Dublin)	Irish Representative.

FINANCE OF THE NEW ORGANIZATION.

Dr. H. F. DEVIS (Bristol) moved:

That a subscription of £5 be asked from each Panel Committee to cover immediate expenses.

A suggestion that the words "and Local Medical Committee" be inserted in the motion was accepted.

Dr. DEVIS thought it was fairly certain that such a subscription as proposed could be paid from the levy authorized by the Amending Act.

The CHAIRMAN believed there was very grave doubt whether money could be paid from that source for such a purpose as a subscription to an association.

Dr. G. PARKER (Bristol) seconded the motion.

Dr. H. C. MACTIER (Wolverhampton) said he had an interview with the Commissioners on the previous day, and had put to them the point now raised. He was told that the only purposes for which the money could be used were clerical assistance, printing and stationery, hire of rooms, and expenses of checking prescriptions.

The CHAIRMAN mentioned that the Medical Secretary hoped to receive during the day a reply from the Insurance Commissioners to a letter on this subject from the Insurance Act Committee of the British Medical Association. He suggested that further consideration of that aspect of the subject be postponed meantime, and this was agreed to.

Dr. H. L. RUTTER (Newcastle-on-Tyne) moved as an amendment:

That the rate of subscription for each insurance area in Great Britain be £1 for every 25,000 insured persons or part thereof.

He thought that a flat rate of £5 would be unfair to small areas.

Mr. F. H. WALLACE (Rutland) seconded.

Dr. B. A. RICHMOND pointed out that under such a method London would have to contribute between £60 and £70. Such a proposal should not be adopted without fixing a maximum. It was hardly fair that London should have only as many representatives as, say, Rutland, though paying a great deal more.

The CHAIRMAN said he was surprised at the attitude of London. This was money which had to be found; the Conference was setting up machinery, and must find the motive power. In reply to Dr. E. BURCHELL (Brighton), the CHAIRMAN added that no estimate of the sum of money required could be given at present.

The amendment was carried, and on being put as a substantive motion,

Dr. H. PRIEST SHANKS (Middlesex) proposed a sliding scale. This proposal was seconded by Dr. B. A. RICHMOND, but on being put to the meeting was lost.

The CHAIRMAN, in reply to a question, mentioned that the British Medical Association was paying the expenses (excluding travelling expenses) of the present Conference, and the cost would be approximately £100.

Dr. A. E. LARKING (Bucks) proposed a further amendment:

That the rate of subscription for each insurance area in Great Britain be £1 for every 20,000 insured persons or part thereof.

This was carried by 72 votes to 53.

Upon being put as a substantive motion,

Dr. H. F. DEVIS said that such a method of raising money might prevent some areas from joining the organization. He proposed a flat rate of £3 for each insurance area.

Mr. RUSSELL COOMBE seconded.

The amendment was lost, and after further debate it was agreed, with one dissentient, that the subscription be £1 for every 20,000 insured persons, as proposed by Dr. Larking.

INSTRUCTIONS TO THE PROVISIONAL COMMITTEE.

THE QUESTION OF A TRADE UNION.

The CHAIRMAN next invited the meeting to consider the instructions to be given to the Provisional Committee. There was a proposal that one of the objects of the permanent organization should be to form a trade union of panel practitioners. Did the meeting seriously wish to consider that? (Cries of "No.")

Dr. S. A. BONTOR said that the question of the National Medical Guild should be referred to the local committees. It was a wide question whether the organization should be a trade union or not, and the opinion of the constituencies should be obtained.

It was moved by the CHAIRMAN and carried:

That the question of the National Medical Guild be referred to the Local Medical and Panel Committees and that such committees communicate their instructions thereon to the Provisional Committee.

This was carried by 60 votes to 37.

The CHAIRMAN, in reply to a question, ruled that the above instruction came within the scope of the reference to the Provisional Committee.

THE INSURANCE COMMISSIONERS AND PANEL FUNDS.

At this point the CHAIRMAN announced that the Medical Secretary had received a reply from the Insurance Commissioners as to the purposes for which the funds raised under statute by Panel Committees could be used. The letter contained the following paragraph:

Before the precise sums to be allotted to a Panel Committee can be determined it will be necessary for the Insurance Commissioners to be reasonably satisfied that the moneys have been or will be expended for the purpose specified in the Section, *videlicet*, the administrative expenses of the Committee. The Insurance Committee will therefore desire to have before them in connexion with any request for allotment a provisional estimate of the expenses for the purpose of which the allotment is desired in order that they may be in a position to criticize any items which appear to them to be improperly included therein.

The Chairman added that as this statement was not very clear, they had been in telephonic communication with the Insurance Commissioners, and had received a message to the effect that none of the money arising from the one penny deduction for Panel and Pharmaceutical Committees could be used for such purposes as that for which the Conference was assembled, and that power to do so could only be obtained by statute.

Dr. B. A. RICHMOND said that this statement justified the position he had taken up in regard to the subscription. The money would have to be raised from voluntary sources, and it would have been difficult for him to pledge his committee to raise £60 or £70.

The Method of a Voluntary Levy.

Dr. W. J. SUSMANN (Oxfordshire) said that a compulsory levy was limited in its use, but a voluntary levy was in force in some counties. All that was necessary was that practitioners should sign a paper saying they would allow the Clerk to the Insurance Committee to deduct the money from their quarterly accounts. If the Panel Committee made a compulsory levy the Pharmaceutical Committee would have a like right. A voluntary levy would not be participated in by the Pharmaceutical Committee, and as the money came out of the floating sixpence it was rather an important point. There was not the slightest difficulty in getting the money; he could not believe that the practitioners on the London or any other panel would grudge the money. A penny or a halfpenny per insured person a year would give quite a large sum. He moved:

That it be a recommendation to all Panel Committees that the expenses of those Committees be raised by voluntary levy.

Dr. S. HAMILTON (Newport) seconded.

Dr. R. H. RIGBY (Huddersfield), Dr. J. C. S. BURKITT (Leicestershire), Dr. J. W. BONE (Bedfordshire), Dr. A. E. LARKING (Bucks) and others described the methods by

which voluntary levies were made in their areas. Dr. Larking said that the principle only needed explaining for practitioners to agree to sign the request for the levy. The local secretary should give individual attention to any who stood out and explain the matter to them.

Dr. OLDHAM (Lancashire) thought it would be better if contributions were drawn in this way by local committees and a certain sum was remitted to the central organization, rather than that practitioners should contribute individually to the central organization.

Dr. H. B. BRACKENBURY (Middlesex) observed that the organization to be financed was one of Panel and Local Medical Committees. Where these were practically the same no question would arise, but where there were large sums to be called for and the two committees were not the same and were even diametrically opposed, a difficulty would occur. Was it right that the whole of the finances of the organization should be raised by the Panel Committee, and, if not, in what way would a corresponding contribution be ensured from the Local Medical Committee? That Committee could not make a voluntary levy, for the members were non-panel practitioners, and might not see eye to eye with the panel practitioners. At present the financial proposals were not complete.

The Position in Edinburgh.

Dr. M. DEWAR (Edinburgh) said he noticed some optimism amongst representatives as to the method of raising money voluntarily. That was not his experience; it always ended in some six or a dozen having to pay all the expenses, while the others paid nothing. In Edinburgh nothing could be obtained from the panel practitioners to pay for the administration of the Local Medical Committee. The money had to be levied upon members of the Local Medical Committee only, and only a proportion of them paid anything. In Edinburgh the greater number of the panel practitioners said they would have nothing to do with a voluntary levy through the Clerk to the Insurance Committee. So far as Edinburgh was concerned, he would not take the responsibility of trying to get money from the panel practitioners, and he would not pay twelve or twenty times his share.

Dr. F. FARROW said that in Manchester a levy was made of 1d. in the £ each quarter from the money received by practitioners. Those not working the Act were exempted from making a contribution; this also applied to Salford. Out of 300 practitioners only 3 proved "refractory," and now only 1 made no contribution.

Dr. G. W. EUSTACE thought the argument as to the difficulty of raising the money was one of the strongest reasons for forming an organization. Now that practitioners on the panel had an organization more or less of their own he believed they would readily support it. In West Sussex every non-panel practitioner had contributed voluntarily on being requested to do so. The experience of Local Medical Committees throughout the country would be the same when they found they were part of the new organization.

Dr. J. R. DREVER (Glasgow) said the position there was better than in Edinburgh, although not many non-panel practitioners subscribed, and some of those on the panel also refrained. Nevertheless, £240 was raised.

Dr. S. A. BONTOR mentioned that some Insurance Committees had objected to undertaking to make the deduction.

The CHAIRMAN said the Insurance Commissioners had not raised any difficulty; it was purely a local objection, and the formation of an organization would give the profession the power to bring those Insurance Committees into line.

The motion that funds should be raised by a voluntary levy was then carried *nemine contradicente*.

LOCAL OPTION AS TO FUNDS RAISED.

Proceeding with the matter of instructions to the Provisional Committee,

Dr. OLDHAM (Lancashire) expressed the view that the voluntary levy for expenses should be the same in each insurance area. If one Committee levied a penny and another a halfpenny, and so on, friction might arise. A 1 per cent. levy would produce about £45,000, and he moved that the levy be ½ per cent.

This was seconded.

Dr. J. HOLMES (Bury) urged that each area should be left to raise what it required, as long as each Committee made the contribution due from it to the central organization. He moved an amendment:

That it be left to local option as to the raising of any special funds.

The amendment was carried and adopted as a substantive motion.

QUESTION OF A BRANCH FOR SCOTLAND.

The Conference next considered the desirability of a separate branch for Scotland, suggested by the Lanarkshire Committee.

Dr. MUNRO MOIR said that at a meeting in Edinburgh recently the opinion was expressed that to bring the Scottish Representatives to London for all meetings was a disadvantage on grounds of inconvenience and expense.

Dr. DREVER (Glasgow) said that Scotland did not desire to cut itself adrift from the rest of the United Kingdom, but there was a separate Scottish Insurance Commission, and it would be more convenient if there was a central committee of the present organization for Scotland.

Dr. FORBES (Aberdeen) urged that there were geographical reasons for this. It took too long to come to London for all meetings. It was desirable to place the views of Scottish practitioners before the Scottish Commissioners.

Dr. DUNCAN (Derbyshire) thought the Scottish members should be required to convince the Provisional Committee that devolution was desirable in this matter.

Dr. E. S. ROWLAND (Reading) then proposed and Dr. NAPIER JONES (Berkshire) seconded:

That it be an instruction to the Provisional Committee to consider the desirability of a central committee being formed to settle general principles, leaving detail work to separate committees for England, Scotland, Ireland, and Wales.

This was agreed to.

VOTE OF THANKS TO THE BRITISH MEDICAL ASSOCIATION.

Dr. W. J. SUSMANN (Oxfordshire) proposed and Mr. J. W. PRIDMORE (Isle of Wight) seconded:

That this Conference expresses its very hearty thanks to the Council and Insurance Act Committee of the British Medical Association for organizing the Conference, and especially for allowing it the benefit of the presence and assistance of Dr. Cox, the Medical Secretary.

The motion was carried with acclamation.

Dr. Cox, who was called upon by the CHAIRMAN to reply, said he would have great pleasure in conveying to the Council of the Association the expression of appreciation given by the Conference. As for himself, it was a pleasure to do anything for his profession and to have it recognized in a rather pleasanter way than his efforts had sometimes been acknowledged recently. (Laughter.)

MEDICAL CERTIFICATION IN IRELAND.

The CHAIRMAN called upon Dr. W. DOOLIN, the representative of the Dublin Local Medical Committee, who made the following statement with regard to the Insurance Act in Ireland:

Ireland.

The difficulty of working the Insurance Act in Ireland satisfactorily hinged on the suspension of medical benefit in that country. The medical profession in Ireland within the last two years on several occasions had expressed its willingness to work the Act upon the same terms as afforded to the profession in England. Owing to the absence of the medical benefit clauses of the Act in Ireland, the main difference of opinion between the profession and those officials responsible for the administration of the Act centred round certification. The medical profession from the beginning had insisted, as an essential principle, that the primary certificate should be given by the medical attendant, no objection being raised to a proper system of medical referees. The profession was of opinion that a fair system of certification could be worked at a capitation rate of half a crown per insured person, and this sum was now available. In June, 1912, a meeting of medical delegates, representatives of the profession of the whole of Ireland, took place in Dublin. With reference to the question of certification the following scale of fees was fixed as the uniform demand of the profession, namely:

1. A 3*s.* capitation rate per insured person in rural areas for members of friendly societies and their dependants who would

be receiving medical attendance; and in the case of urban areas, with a population of over 10,000, a fee of 2s. 6d. per certificate.

2. A minimum fee of 2s. 6d. per certificate in cases of insured persons not entitled to medical attendance.

3. All medical certificates to be issued by the medical attendant.

As there was no provision at the time for payment for certification, a supplementary parliamentary grant in aid, amounting to £50,000, was provided by the Chancellor of the Exchequer in the autumn of 1912. This amounted roughly to one-half the sum demanded by the Irish medical profession.

On March, 1913, a scheme for the distribution of this Exchequer Grant in respect of the cost of medical certification was submitted to the medical profession through the Conjoint Committee by the Irish Insurance Commissioners. By this scheme the country was to be divided into four areas, the respective capitation rates for certification in them being 9d., 1s. 4d., 1s. 6d., and 2s. In the six county boroughs of Dublin, Belfast, Derry, Cork, Limerick, and Waterford, and in urban arears of over 10,000 the 9d. capitation rate was to have obtained. This scheme had the provisional approval of the then Conjoint Committee, subject to its acceptance by the various Local Medical Committees, which were simultaneously urged by the Conjoint Committee to press that this sum should be supplemented by the approved societies in order that the total rate of payment should come up to the 2s. 6d. standard demanded by the profession. In April, 1913, panels were declared by the Irish Commissioners to be completed in 11 out of 38 administrative areas; but in many of these the number of medical practitioners who actually went on the panels was so small as to render them obviously insufficient. In the rest of the country the panels failed utterly.

On May 24th, 1913, owing to the general failure to form certification panels, the Irish Insurance Commissioners advertised in the daily press the posts of "medical advisers" for certification purposes to the Commission, in the county boroughs of Dublin, Limerick, and Waterford, at a salary of £130 per annum. In Dublin they got fifteen medical men to accept these posts, three of whom shortly afterwards resigned, owing to pressure from the Local Medical Committee. A public protest was inserted by the Local Medical Committee in the lay press, but notwithstanding this and private remonstrances, the other "advisers" appointed refused to resign. These appointments were declared by a meeting of the whole profession in Dublin (June 25th, 1913) and by the Irish Colleges of Surgeons and Physicians to be contrary to the ethics of the medical profession. On July 17th, 1913, the body hitherto known as the Conjoint Committee of the British Medical Association and the Irish Medical Association was reorganized as the "Irish Medical Committee," the new committee being in every way representative of, and having the fullest confidence of, the whole medical profession in Ireland. The demand in respect of payment for the certification of insured persons under the Act was reaffirmed at a minimum capitation rate of 2s. 6d. per annum, the ratio of distribution to be arranged by the Irish Medical Committee. The action of the Irish Insurance Commissioners in appointing the "medical advisers" for Dublin, Limerick, and Waterford was again condemned as a contravention of the fundamental principle of free choice of doctor; and the medical men who had gone on the "ninepenny panels" in the other areas were called upon to withdraw as soon as they legally could. Shortly afterwards (July 23rd) the Irish Commissioners endeavoured to extend the system of certification in operation in Dublin to the country at large, by the wholesale appointment of some forty additional "medical advisers" for the rural areas.

On August 14th, 1913, in answer to a question in the House of Commons by Mr. John Redmond, M.P., the Chancellor of the Exchequer, being satisfied of the inadequacy of the sum already offered, promised to find an additional sum for purposes of certification in Ireland, not to exceed altogether a sum equal to a capitation rate of 2s. 6d. per insured person. He made this promise on condition that a scheme satisfactory to the Irish Insurance Commissioners, the medical profession, and the approved societies, could be agreed upon. The Irish Medical Committee at once approached the Irish Commissioners to offer its help in the drafting of such a scheme, but it was not until the following November that the Commissioners actually discussed matters with the representatives of the Irish Medical Committee. In two succeeding interviews the Irish Commissioners discussed at length alternate "panel" and "pooling" schemes for the distribution of the money available, and substantial agreement was come to, subject to the consent of the approved societies. The Irish Commissioners made a strong point of the necessity for providing a second opinion or referee in cases of doubt or suspicion. The Irish Medical Committee agreed that payment for such second opinion could be found from the sum provided for certification. When the conference adjourned the impression left in the minds of the medical representatives was that an arrangement satisfactory to the medical profession had at last been practically arrived at. Late in January, 1914, the Irish Commissioners met the representatives of the approved societies who refused even to consider any scheme, "panel or pooling," in which the medical profession would be included as a whole, and demanded that a number of whole-time officers should be appointed whose sole duty should be to certify the fact of fitness or unfitness. As such a scheme was contrary to the essential principle that the medical attendant should give the primary certificate, and entailed the continuous interference of a third party between the patient and his doctor, it was obvious that the medical profession in Ireland could never give its consent to such an arrangement.

The societies — principally the Ancient Order of Hibernians—had a political pull, and the medical profession was afraid that it would be beaten, and that the whole-time medical certifiers would be appointed out of money the Chancellor of the Exchequer had agreed to find, subject to an agreement between the three parties. The representations of the medical profession had been censored and misrepresented. The British Medical Association had helped the profession in Ireland financially on several occasions, and he had been sent to ask the Conference for its moral support. An attempt was being made to get a deputation received, and the support of the Conference might help in this direction.

The Chairman said the profession would feel deeply sorry for their brethren in Ireland, and it was to be hoped that united action would lead to a successful result. The Conference could do more than give moral support to the profession in Ireland. Individual members had some influence with members of Parliament, and they should take steps to insist that members of Parliament should take an interest in the question and support the profession in the House of Commons, so that the grievance might be removed. He moved:

1. That this Conference is of opinion that the certification of claimants for sickness benefit under the Insurance Act by persons other than the medical attendant is liable to lead to serious abuses; the medical attendant alone is in a position to form a sound opinion as to the physical condition of the patient, since he alone knows the course of his illness; the intrusion of a third party who knows nothing of the previous history of the patient is liable to interfere with successful treatment, to cause injustice to be done to the patient in the consideration of his claim, and to interfere with the confidential relation which exists between the patient and his medical attendant.
2. That the examination of a patient by a medical man other than the medical attendant without the knowledge of the latter is a breach of the fundamental ethical principles of the medical profession.

The resolutions were carried unanimously, and copies were supplied to each member of the Conference, so that they could be brought to the notice of local members of Parliament.

ADMINISTRATION OF THE INSURANCE ACTS.

The Conference dealt with the following general matters affecting the administration of the Insurance Acts.

Administration of Medical Benefit by Approved Societies.

The following resolution, moved by Dr. M. Dewar on behalf of the Edinburgh Local Medical and Panel Committees, was agreed to without debate:

That every endeavour should be made to resist any proposal to place the administration of medical benefit in the hands of the approved societies.

The Question of a State Medical Service.

Dr. Dewar also moved:

That Local Medical and Panel Committees should use all their influence in urging upon panel practitioners their duty to make the panel system a success, and thus avoid the alternative possibility of a whole-time State Medical Service being established.

The institution of a whole-time State Medical Service could, he said, be avoided if every panel doctor would do his utmost to make the panel system a success. Every doctor should attend his panel patients as well as he did his private ones.

Dr. RICHMOND seconded, and urged that non-panel doctors should do all they could to co-operate with those on the panel. It was unfortunate that there were dissensions in certain localities. One of the most important things at present was to realize the harm that was being done to the profession by the behaviour of certain panel and non-panel practitioners. A great many panel practitioners would never have had to come before Insurance Committees to answer complaints were it not for some unfortunate action on the part of a non-panel colleague in their area. Even if the non-panel doctors had a prejudice against those who went on the panel, they ought to remember the interests of the profession at large.

Dr. J. RATCLIFF GAYLARD (Birkenhead) said his constituents felt that while there was much to be said in favour of a State Medical Service there was more to be urged against it. It was not only the non-panel doctors who might be the means of bringing about a State service but the panel doctors as well. In order to stave off the evil day the panel system must be made a success.

Dr. BURKITT (Leicestershire) held that no doctor should take upon his panel list more patients than he could reasonably expect to attend properly. The time had come when the panel practitioners themselves should recognize that.

Dr. H. P. SHANKS said that the great obstacle to a whole-time State service was that a patient would probably not have the free choice of a doctor. A scheme, however, had lately been suggested to get over that difficulty. This made the State Medical Service all the more possible. The profession must strive to make the panel system a success so that the question of a State service would be shelved.

Dr. C. FORBES moved an amendment:

> That it is inexpedient for the Conference to make a pronouncement either for or against a State Medical Service.

He did not appear as an advocate of a State Medical Service. The question was, in essence, a political one; was the profession to turn itself into a propagandist body? The signs of the times pointed to a possibility of the reconstruction of the panel system. The Labour Party and the trade unionists had voted in favour of a State service. If that system were inevitable the medical profession should study the question seriously and avoid friction in order to safeguard the interests both of the public and the profession.

Dr. H. G. LANGWILL (Leith) seconded.

The amendment was put and lost by a large majority. The motion was then adopted.

TERMS OF APPOINTMENT OF MEDICAL REFEREES.

Dr. E. WILKINSON (Birmingham) urged that referees should be appointed by the Insurance Commissioners or by Insurance Committees with the approval of the Panel and Local Medical Committees. The difficulty was that men had been appointed who were unsuitable for the position. They were often doctors on the panel and their work was often of an unsatisfactory character. Suitable referees would receive the help of the profession. Personally he would like to see the referees act in conjunction with the panel practitioners, who should themselves refer cases to the referees with the agreement of the approved societies.

Dr. JOHN ORTON (Warwickshire and Coventry), who seconded, mentioned cases in which referees gave certificates at a fee of 2s. 6d. a head. Fees should not be paid from the money due to the practitioners on the panel.

Dr. DIVINE (Hull) said there was nothing in the Insurance Acts to compel a patient to submit to any examination other than that of a panel practitioner. The referees ought to be appointed by a central and independent authority.

Dr. H. F. DEVIS stated that the profession in Bristol had, in the early days of the Act, had a conference with the Commissioners, who agreed to the appointment on definite terms. These were: That the referee should be appointed by the Commissioners; that he should be approved by the practitioners generally; and that he should not be a panel practitioner. He was to be paid a certain salary, contributed by the Insurance Committee and approved societies. All the doctors now had access to the referee. About one-third of the cases referred returned to work without appearing before the referee. In every instance the referee corresponded with the practitioner in attendance. The scheme made for the smoother working of the Act. The Commissioners thought the doctors ought to pay a certain amount of the adviser's salary. The doctors, in reply, pointed out that the arrangement did not benefit them pecuniarily, and that, if the societies were willing to accept the practitioners' certificates, there was no need for a medical referee. The doctors eventually decided to pay a small proportion of the salary, on condition that all the approved societies should employ the referee and not their own advisers.

Dr. BURKITT said the Insurance Commissioners refused to allow the doctors in Leicestershire to give any sum towards the cost of a referee. The whole expense would have to be borne by the approved societies if one were appointed.

Dr. RICHMOND said that in London the Insurance Committee contributed half a crown in each case, while the approved society gave 5s., making 7s. 6d. for the referee. The drawback was that the question of consultation was entirely in the hands of the approved society. To show how foolishly the societies had used their power, he stated that many of the cases were referred to the Insurance Committee before it was ascertained whether the person concerned were on the fund at the moment or even whether he were alive. There had been cases in which the referee came to inquire about a person who had been dead one or two months. An approved society sent to the Committee for the services of the referee without consulting the practitioner. The Commissioners should have the appointment and the removal of the referees. The question of finance was a separate matter. Men of good standing were required.

After some further discussion, Dr. EDMUND WILKINSON submitted the Birmingham motion in the following more detailed form:

> That medical referees should be appointed by the Commissioners, and be removable only by them; that they should be whole-time officers and practitioners of at least ten years' standing; that the appointments should be pensionable; and that the salary should be £750 per annum.

It was decided to consider the various points in the resolution *seriatim*.

It was moved from the Chair, and adopted:

> That the Conference is of opinion that referees be appointed.

It was also agreed:

> That the final appointment of medical referees should be by the Insurance Commissioners, and that referees should be doctors of at least ten years' standing in general practice.

Dr. DUNCAN proposed that referees should be whole-time officers.

Dr. S. A. BONTOR (Herts) seconded, remarking that the referees would probably be appointed to cover wide areas.

The motion was carried.

The following resolution was also carried:

> That in the opinion of the Conference no portion of the money paid to medical referees should come out of the moneys available for medical benefit.

It was resolved that the various resolutions on this subject be communicated to the Departmental Committee.

MEDICAL CERTIFICATES.

Dr. E. WILKINSON, on behalf of the Birmingham Medical Committee, moved:

> That this meeting presses for—
> (*a*) Uniformity of certificates;
> (*b*) Regulation of certificates during pregnancy;
> (*c*) Doctors to keep continuation and declaring-off certificates;
> (*d*) Prevention of interference by insurance agents *re* certificates.

At present the Insurance Commissioners could not compel approved societies to use uniform certificates. The organization now to be formed might be able to force the hands of the societies, especially if it could be shown that uniform certificates were entirely in the interests of the

societies. The uniform certificate of the Commissioners which stated that "the patient is suffering from the disease specified in my last certificate" was sufficient. If one big society were allowed to break down the uniformity of the certificates, others would follow until the position would be what it was when the Act first came into working. As to the regulation of certificates during pregnancy, a rule should be laid down by the Commissioners as to how soon a pregnant woman should be allowed to receive benefit. Dr. Wilkinson thought it would be convenient for practitioners to keep continuation forms for issue. As to interference by insurance agents, it was said that in some districts agents were instigating people to make claims on the funds. Insured persons came to him with a cold in the head, bringing with them a "certificate" issued by an insurance agent to the effect that they were sick and had better go on the funds.

Dr. J. Gardner (Burnley) said the continuation certificate had to be taken to the society every week, so that it would not be convenient for the doctor to keep it.

Dr. Wilkinson said he was referring to cases in which continuation certificates were newly issued every week.

The Chairman said that this clause of the motion did not seem generally applicable, and that, as to certificates during pregnancy, the Commissioners did not want a hard-and-fast rule; every case must be dealt with on its merits.

The clauses of the motion referring to continuation certificates and certificates during pregnancy were withdrawn, and the Conference agreed to the two remaining clauses:

That the meeting presses for (1) uniformity of certificates, and (2) prevention of interference by insurance agents *re* certificates.

Certificates on the Post Office Model.

Dr. C. E. Douglas moved, on behalf of the Fife Committees:

That this Conference is of opinion that the form of certificates under the National (Health) Insurance Acts should be simplified upon the Post Office model.

The Post Office system of payment had, he said, been adopted as the fundamental principle, and the postal method of certification would easily follow. By this system serious difficulty in regard to continuation and final certificates would be avoided; the doctor stated at the beginning what, in his opinion, was likely to be the duration of the illness.

The Chairman said the difficulty was that this method could not be adopted until the societies altered their organization.

The motion was withdrawn.

Liability of Practitioners in Respect of Certificates.

Mr. E. W. Simpson, on behalf of Roxburgh, Peebles, Selkirk, and Berwick Local Medical and Panel Committees, proposed the following:

That any organization of Local Medical and Panel Committees formed as a result of this Conference should, immediately on its formation, take into consideration the question of the protection of panel practitioners in the carrying out of their duties under the Insurance Act, particularly in connexion with the liability which may be incurred through practitioners granting medical certificates to approved societies and insured persons.

The motion, he said, aimed at safeguarding the interests of practitioners in respect of certificates as to diseases of misconduct. These certificates might render a doctor liable to an action for damages. The Committees he represented considered that a fund should be established by the new organization for the protection of practitioners.

Dr. J. Holmes (Bury) suggested that the difficulty only arose under the law of Scotland; that it would be best for practitioners to join the Medical Defence Union and agitate for an alteration of the law to make certificates issued by panel practitioners privileged.

The motion was agreed to, with the insertion, suggested by Dr. C. H. Benham, of the words "or refusing to grant" to cover both positive and negative action by a practitioner.

Contracting Out with Herbalists, etc.

The following motion by Birmingham was accepted without discussion:

That contracting out with herbalists, bone-setters, etc., be disallowed.

The Drug Tariff.

The following motions relating to the drug tariff were referred to the Provisional Committee:

That the drug tariff should be submitted to the critical consideration of a medical committee.

That the Provisional Committee be instructed to press the Commissioners to give at least three months' notice of any future alterations in the drug tariff.

Charges upon Panel and Pharmaceutical Committees.

The following motion by Dr. E. McCulloch (Devonport) was adopted:

That the attempts of certain Insurance Committees to impose the cost of performing such administrative duties as checking of prescriptions on Panel and Pharmaceutical Committees (and through these, on Panel and Drug Funds) are a breach of agreement between themselves and practitioners, and should be resisted to the utmost.

Conclusion of the Conference.

This concluded the business of the Conference, and the Chairman congratulated the Representatives on having carried the business through so smoothly and expeditiously. He moved that those resolutions of the Conference which needed to be submitted to the Insurance Commissioners be so submitted by a deputation consisting of as many members of the Provisional Committee as could attend. This was agreed to.

Dr. A. Drury (Halifax) proposed a hearty vote of thanks to Mr. Todd for presiding. Dr. G. G. Genge (Croydon) seconded, and the motion was carried with acclamation.

The proceedings terminated just before 7 p.m.

We have received the following letter from Dr. J. W. Pridmore, Honorary Secretary, Isle of Wight Local Medical and Panel Committees:

I wish to explain why, at the Conference of Local Medical and Panel Committees, held in London on Friday, March 13th, I asked that Motion 29 on the Agenda should contain an expression of opinion that medical referees appointed under the Insurance Act should be non-panel practitioners. In a small area like the Isle of Wight there is not enough work for a whole-time appointment, and doubtless this is the case in many other areas; I take it that in every such area there are non-panel practitioners in touch with the local profession who would gladly do the work entailed, providing the conditions are satisfactory; such men would be more independent in their judgement and better able to give an unbiassed opinion. Also, it is to my mind important at this juncture not to widen the breach between the panel and non-panel practitioners; the latter are constantly saying that the Insurance Act has nothing to do with them, and therefore that it is futile for them to belong to various bodies set up under the Act. Why should not this opening be taken as a proof that this is not the case? Undoubtedly they will be required in other capacities in the future under the Act as it develops, and I think it is only right to take the first opportunity to further a more sympathetic attitude between panel and non-panel men.

As the Chairman of the Conference would not accept the alteration which I suggested in the wording of the motion, I think it only due to myself and my committees to send this letter to the Journal, hoping you may find room for it.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

CAMBRIDGE AND HUNTINGDON BRANCH:

Isle of Ely Division.

A meeting of the Division was held on March 10th. Dr. H. F. Curl presided, and 11 others were present.

Annual Report.—The Secretary presented the annual report of the Division and the balance sheet, which showed a deficit due to the Secretary of £2 15s. 9½d. at the end of December, 1913. The Chairman stated that he had examined the accounts and had signed the annual report and balance sheet, which was quite in order, and

copies had been sent to head quarters and to the Branch Council. By a unanimous vote the balance sheet was passed and a hearty vote of thanks accorded to the Honorary Secretary for his work during the past year.

SOUTH-EASTERN OF IRELAND BRANCH.

An ordinary meeting of the Branch was held in the Club House, Carlow, on March 4th. Dr. GEORGE MACKEY occupied the chair, and four other members were present.

Annual Report.—The annual report of the Branch was accepted on the motion of Dr. WALSH, seconded by Dr. RYAN.

Irish Committee.—Notices from the Secretary of the Irish Medical Committee of the British Medical Association were read. The members present expressed the opinion that a central office and general organizer should be established in Ireland.

Branch Council.—At a meeting of the Branch Council held subsequently Dr. Thomas Farrell (Bagnelstown) was elected a member of the Branch.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,
ALFRED COX,
Medical Secretary.

February 11th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Drs. Ernest C. Hadley (Burbury Street, Lozells, Birmingham) and Bernard J. Ward (141A, Great Charles Street, Birmingham) give notice that an ordinary general meeting of the Central Division of the Birmingham Branch will be held in the library of the Medical Institute, Edmund Street, on Wednesday, March 25th, at 3.30 p.m. Business: To elect four Representatives for the Annual Representative Meeting. To consider and pass, if approved, several recommendations of the Executive Committee, of which due notice will be given on the circular convening the meeting.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.—Dr. J. H. Clatworthy, Honorary Secretary (145, Denmark Hill, S.E.), gives notice that a meeting of the Division will be held on Thursday, March 26th, at 4 p.m., in Camberwell Infirmary, Brunswick Square, S.E., when Dr. G. B. Batten will read a paper entitled "Physical and Electrical Therapeutics in General Practice." Tea will be served before the meeting.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a meeting of the Division will be held, by invitation of Dr. Gerald Johnston, at Brooke House, Upper Clapton, on Friday, March 27th, at 9.30 p.m., when Dr. H. Macnaughton Jones will give a lecture on Diseases in Everyday Gynaecology, illustrated by lantern slides and sections. Members are reminded that professional friends will be welcomed as visitors.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—Dr. R. Tuxford, Honorary Secretary (12, Wide Bargate, Boston), gives notice that a meeting will be held at the White Hart Hotel, Boston, at 3.30 p.m. on Friday, March 27th. Agenda: Receive the report of subcommittee appointed to deal with matters relating to the Friendly Societies' Federation. Receive report of subcommittee on Form M 8. Consider letter from Dr. Moxham, Stickney. Discuss question of fee to be charged for referees under National Insurance Act. Discuss the advisability of appointing a representative for the Holland Division. Any other business. Tea will be provided at the hotel at 4.30.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that a meeting of the Division, to which all members of the profession are invited, will be held at the Crown Hotel, Oakham, on Friday, March 27th, at 5.45 o'clock, when an address will be given by Dr. Cox, Secretary of the British Medical Association, on "The Medical Profession on its Trial." Dr. Cox will be entertained to dinner by the Rutland Medical Society after the meeting, at the Crown Hotel at 7 o'clock. All those intending to dine are requested to communicate with Dr. Parsons, Market Overton, Oakham, not later than March 20th. The charge for dinner will be 5s., exclusive of wine. Morning dress. Trains leave the Midland Station, Leicester, for Oakham at 4.40, and Oakham for Leicester at 8.45 o'clock.

LEICESTER MEDICAL UNION.

THE second annual meeting of the Leicester Union of Medical Practitioners was held at the Public Medical Service Buildings, Leicester, on February 27th.

Election of Officers.—Dr. Wallace Henry was elected President, Dr. J. B. Pike Vice-President, and Dr. A. V. Clarke Treasurer.

Membership.—The SECRETARY reported that the membership had increased during the year by 105.

Legal Arrangements.—Arrangements had been made to enable members to obtain without any charge legal advice on matters connected with the relations between themselves and their patients, to have debts collected, and insurance effected on extremely favourable terms.

Finance.—The TREASURER reported that there was a balance in hand of £132 18s.

Federation with National Medical Guild.—The Committee was authorized to consider the desirability of federating with the National Medical Guild.

Public Medical Service.—The meeting was followed by the annual meeting of the Leicestershire and Rutland Public Medical Service, which is managed by the union. Reports were presented from the various subdivisions of the service, which showed that there were now over eighty thousand subscribing members (uninsured persons); that the year's work had been done under conditions which were satisfactory alike to medical men and patients, and that the financial results were most satisfactory. Suggestions for further improving the work of the service were referred to the Committee.

Hospitals and Asylums.

THE EDINBURGH EYE, EAR, AND THROAT INFIRMARY.

THE annual meeting of the Eye, Ear, and Throat Infirmary of Edinburgh was held on February 10th, when it was reported that the number of new patients who attended during the year was 5,102, that the number of visits paid was 9,076, and that 183 patients were accommodated in the wards. There was a falling off in the number of new patients as compared with the past two years, when the number was over 5,500, and it was thought that the reduction was due to the Insurance Act, patients being treated by their own doctors. The ordinary income was £338, including voluntary subscriptions amounting to £64, placed by the patients in the collection boxes in the infirmary. There was a deficit on the year's working of £90. The cost per patient attending the infirmary as dispensary or in-patients was 1s. 8d., and about one-fifth of this was contributed by the patients themselves.

LOCAL MEDICAL AND PANEL COMMITTEES.

LONDON.

ELECTION OF LOCAL MEDICAL COMMITTEE.

THE following is a list of nominations received for the election of a Local Medical Committee for London:

Panel Practitioners.

*Marylebone	David Steel Roxburgh, John Pollock Simpson.
Woolwich	Albert Edward Thomson.
*Greenwich	W. H. Reed, Christopher Whewell Hogarth.
Deptford	William Henry Payne.
Bermondsey	Benjamin Arthur Richmond.
Southwark	J. V. C. Denning.
Lambeth	Herbert Taylor.
Camberwell	George Beckett Batten.
Wandsworth	A. C. B. Biggs.
Battersea	John Theodore Richards.
Fulham	John Fletcher.
Chelsea	John James Orr.
Hammersmith	J. A. Butler.
Kensington	Herbert Henry Mills.
Paddington	John Alexander Angus.
Westminster	Albert Ernest Cope.
St. Pancras	Thomas Marshall.
Islington	J. J. A. Sherry.
Stoke Newington	Alfred Welply.
Hampstead	E. Claude Taylor.
*Shoreditch	David Livingston Hamilton, Major Greenwood.
City of London	John James Scanlan.
Holborn	Michael Joseph Ryan.
Finsbury	Robert Drummond MacGregor.
Hackney	Thomas Francis Keenan.
Bethnal Green	G. Henderson.
*Stepney	W. Owen Williams, Percy T. Goodman.
Poplar	H. J. Cardale.

* Indicates that there will be a contest in these boroughs.

Non-Panel.

Three nominations were required for each group of boroughs, except Marylebone, for which only one was required.

Marylebone	Charles Wynn Wirgman.
Group 1: Woolwich, Greenwich, Deptford, Lewisham	No nominations.
Group 2: Bermondsey, Southwark, Lambeth, Camberwell	No nominations.
Group 3: Wandsworth, Battersea, Fulham, Chelsea	No nominations.
Group 4: Hammersmith, Kensington, Paddington, Westminster	W. H. Burnhill, Wilfred Kingdon.
Group 5: St. Pancras, Islington, Stoke Newington, Hampstead	No nominations.
Group 6: Shoreditch, City of London, Holborn, Finsbury	J. H. Porter, W. F. Roe.
Group 7: Hackney, Bethnal Green, Stepney, Poplar	A. G. Southcombe, Gilbert Nicholson, M. C. Corner.

Six Representatives of the Medical Staff of Hospitals.

As there are eight nominations for the six representatives there will, of course, be a contest:

W. McAdam Eccles.
Thomas Watts Eden.
James Galloway.
N. Bishop Harman.
Vincent Warren Low.
Lauriston E. Shaw.
Fred. J. Smith.
George Robertson Turner.

One Poor Law Medical Officer: H. E. Garrett.
One Medical Officer of Health: No nomination.
One Registered Medical Woman: Mina Dobbie.

OXFORD.

PANEL COMMITTEE.

THE third meeting of the Panel Committee was held on February 25th, when only one member of the panel was absent. The SECRETARY having read various communications from the British Medical Association and the Commissioners, the following matters were fully discussed, and the decisions in each case were unanimous.

Conference of Local Medical and Panel Committees.—Dr. RIVERS-WILLSON (Chairman) was appointed as the representative to the London meeting on March 13th, and was instructed to strongly support the federation of all Panel Committees.

Medical Referees.—The advisability of appointing medical referees was discussed, and it was decided to ask the Insurance Committee and the approved societies to recognize the whole panel as a board of referees, three to sit at a time, for a period of one month, the three to be taken alphabetically from the panel list; that all cases referred be examined and reported on by the sitting three, provided that if one of the three be interested in the case the next on the list shall take his place for that case; and that a fee of 10s. 6d. be paid for each case, such fees to be paid into a common fund and divided periodically amongst the members of the panel equally. This arrangement was based on the Tynemouth scheme reported in the SUPPLEMENT of September 27th, 1913. It having been mentioned that some of the insurance companies were sending their medical referees to examine and report on cases under the Insurance Act, and paying a fee of 5s., it was decided that no member of the panel would in future examine or report on another member's case, excepting under the foregoing arrangement, as it was thought that this practice might lead to friction between the members of the panel, which contains several referees to life assurance companies now working as approved societies.

Limitation of Lists.—On the advisability of voluntarily limiting the size of lists, it was decided that any doctor having a total list, from all insurance areas in which he worked, of 2,000 or over should not accept any more cases so long as his list did not fall below 2,000, but if it fell below that number he would be entitled to accept such numbers as would bring him up to that total again; no list at present over the number to be interfered with.

Distribution of Funds.—Eleven members agreed to guarantee the treatment of any person applying who was not on any doctor's list; this decided the point as to who was to share the surplus arising from those persons who had not yet selected their doctor, and it was agreed that the division should be made according to the size of those members' lists.

Pharmacopoeia.—The SECRETARY reported that the new Oxford Pharmacopoeia had been printed and issued to the doctors and chemists. Any extra copies could be obtained from him at a cost of 1s.

Drug Fund.—It was reported that the Drug Fund having ended the year with a credit balance, the doctors would receive the floating sixpence.

ISLE OF ELY.

PANEL COMMITTEE.

A MEETING of the Panel Committee was held at March on March 10th, when there were present Dr. C. E. STEPHENS, Chairman, and eleven others.

Expenses of Committee.—The question of funds for the carrying on of the important work of this committee was discussed. The Commissioners had written to say that no separate grant could be allowed towards this object, but that it was open to members of the Panel Committee to arrange that a portion of the fees due to panel practitioners should be set aside for this object. It was resolved:

> That panel practitioners be asked to allow the Clerk of the Local Insurance Committee to deduct 1s. per 100 panel patients per annum from fees due to them to form a fund for the expenses of the Committee, whose duty it was to protect the interests of panel workers.

Conference in London.—Dr. Waters was appointed the representative of the Committee at the conference of Local Medical and Panel Committees to be held in London on March 13th.

Fen Mileage Grant.—The SECRETARY read a letter from the Clerk to the Local Insurance Committee explaining that the Commissioners required a return of the places specially difficult of access and of sparsely populated areas in the Isle for the purpose of the Fen mileage grant. It was resolved:

> That the following practitioners be appointed to consult with the Clerk of the Local Insurance Committee in order to draw up the scheme required: Drs. Gunson, Fegan, Martin, Stephens, Hay, Hamilton, Harding, Curl, Barrett, Clapham, Waters.

Pharmacopoeia.—It was formally resolved that the *Prescribers' Pharmacopoeia* (published by Henry Frowde, London, price 1s.) be adopted.

Medical Referees.—It was also unanimously resolved that 10s. 6d. be recognized as the minimum fee for practitioners to accept for examining cases as referees to any approved society under the Act.

LOCAL MEDICAL COMMITTEE.

A meeting of the Local Medical Committee was held at March on March 10th; twelve members were present.

Chairmanship.—The SECRETARY reported that he had written to Dr. H. C. Meacock asking him to reconsider his resignation as Chairman of the Local Medical Committee and medical representative of the Local Insurance Committee. In reply Dr. Meacock thanked the Committee for their continued confidence, but regretted he was unable to continue to fill the above posts. A hearty vote of thanks was unanimously accorded to Dr. Meacock for his great help and interest during the past year. Dr. C. E. Stephens was thereupon unanimously elected Chairman of the Committee, and Dr. H. F. Curl was unanimously elected as a medical representative of the Local Insurance Committee.

Financial Statement.—The SECRETARY then presented a balance sheet showing the financial position of the provisional Local Medical Committee. With the assistance of a grant of £3 1s. 4d. from the Central Insurance Fund and donations subscribed by local practitioners, the Committee finished its career with a balance in hand of £6 10s. It was decided that this amount should be handed on to the statutory Local Medical Committee, which had no funds at present.

Conference in London.—Dr. C. H. Gunson was unanimously elected to represent the Committee at the Conference in London on March 13th.

WEST SUFFOLK.

LOCAL MEDICAL COMMITTEE.

Administration of Medical Benefit.—Meetings of the Committee were held on February 6th, 13th, and 21st, and on March 5th, to deal with various complaints from practitioners as to the way in which medical benefit is administered in the area. Finally a deputation from the Local Medical Committee was received by the Medical Benefit Subcommittee of the Insurance Committee. After hearing a full statement of the case the Subcommittee agreed to the issue of the following circular letter to every practitioner on the panel, together with a memorandum by the clerk, which is too extensive for publication:

WEST SUFFOLK COUNTY INSURANCE COMMITTEE.
Circular N.B., 18A.
4, Lower Baxter Street,
Bury St. Edmunds,
14th March, 1914.

Dear Sir,—At the request of the Local Medical Committee, the Medical Benefit Subcommittee of the County Insurance Committee received a deputation of four members of the Local Medical Committee on February 24th to discuss certain matters which have given rise to a feeling of dissatisfaction among practitioners serving on the panel as to the method of administration of medical benefit in the area. The following is a summary of the complaints made by the deputation:

1. Issue of buff medical cards. The white slips issued with the cards produced the result that:
   (*a*) Many cards which were already stamped with a doctor's name were taken or posted to doctors.
   (*b*) In Circular M.B. 5A doctors were advised to sign part A without particulars being filled in. This in the opinion of the Local Medical Committee might give rise to errors.
2. Many cards were issued with no doctor's name on to persons in respect of whom medical slips have already been issued.
3. Many cards bore the wrong doctor's name.
4. Discrepancies in payment. The number on the basis of which payment was made for the quarter ending January 11th, 1914, do not correspond with the medical slips issued, the difference being considerable in several cases.
5. Unnecessary clerical work. Doctors have quite wrongly been made responsible for the accuracy of particulars given on Forms Med. 20 and Med. 32. And where the questions have been asked as to the payments made, the office has thrown the onus of checking their lists on the doctors, who, even if it were their duty, have no means of doing so, as the issue of removals was delayed until after the January payment.

Issue of Medical Cards.

Having had a full statement from them of the case, the Medical Benefit Subcommittee readily agreed that the issue of the white slips had caused a considerable amount of annoyance to the doctors. Knowing the great indifference shown by a large number of insured persons in exercising their choice of a doctor, and the importance to both the Committee and the medical practitioners on the panel of bringing the medical slips into accord with the index slips, on the basis of which payment is made by the Commissioners to the Committee, these white slips were inserted, but the Committee regret that a considerable number of insured persons whose cards were already stamped with the doctor's name unnecessarily sent them again to the doctor for his signature.

The section of Circular M.B. 5A, to which the deputation drew attention, was inserted to lessen the work of the doctor, but the Subcommittee agrees that as there is a danger in accepting a card not filled in by the insured person himself the white slips issued in future shall instruct the insured person to fill in Part A before asking the doctor to sign it.

The fact that many cards were issued without doctors' names to persons in respect to whom medical slips had been already issued and that some cards bore the wrong doctor's name is explained in a memorandum submitted by the Clerk to the Committee. The initial steps taken in bringing the Insurance Act into operation over which the Committee had no control were mainly the cause of those errors.

Discrepancies in Payments.

A list of these apparent discrepancies submitted by the Secretary of the Local Medical Committee states there are differences in a number of payments, in eight cases the apparent discrepancy being more than ten. It was agreed to investigate these apparent discrepancies, and adjust them where necessary. As explained in the Memo., the medical slips do not correspond with the number of acceptances, but the issue of the buff cards in terms of the index slips in the Register will insure this event. Lists of removals will be issued regularly in future, so that doctors will be in a position to check their payments if they wish to do so.

Unnecessary Clerical Work.

The Committee regret any annoyance caused the doctors by the request to supply the particulars which were lacking in Form Med. 32 when sent in. This form has, however, been withdrawn, and it is the duty of the Committee to issue the medical card with all the necessary particulars, so this difficulty will not arise again.

The Medical Benefit Subcommittee desire to again thank the medical practitioners on the panel for their support in the provision of medical benefit, and to assure them it is their sincere desire not to add to the amount of necessary clerical work.

The Memo. submitted by the Clerk of the Committee, a copy of which is enclosed, is a full explanation of the work entailed and the many difficulties to be overcome in the administration of medical benefit, and the Committee trust the doctors will give it their careful perusal.

This letter, which was drafted by the Vice-Chairman of the Insurance Committee and the Secretary of the Local Medical Committee, has been submitted both to the Medical Benefit Subcommittee and the deputation of the Local Medical Committee which was received by that Subcommittee, and is jointly approved.—Yours faithfully,

D. A. CARRUTHERS,
The Clerk.

Mileage.—A grant of £180 has been authorized in respect of mileage in the Fen district of the area.

PANEL COMMITTEE.

The first meeting of the Panel Committee was held on March 10th, when eleven members were present.

Election of Officers.—The officers elected were the same as for the Local Medical Committee:

Chairman.—Dr. Wood (Woolpit, Suffolk).
Secretary—Dr. Batt (6, Angel Hill, Bury St. Edmunds).

Subjects for Discussion.—An informal discussion took place as to (1) permanent constitution, (2) expenses, (3) medical referees, (4) respective duties of Panel and Local Medical Committees. It was decided to defer any decisions on these points to the next meeting.

Conference in London.—The appointment by the Local Medical Committee of the Secretary to act as representative at the Conference in London was confirmed.

WORCESTER.

LOCAL MEDICAL COMMITTEE.

THE first meeting of the County of Worcester Local Medical Committee in the present year was held at Kidderminster Infirmary on February 11th, Mr. J. L. STRETTON in the chair, and seven other members were present.

Agreements.—A letter was read from the Clerk of the Insurance Committee, giving the results of the interview which the Chairman had with the Commissioners, in which he endeavoured to obtain their sanction to the alterations in the Agreement, which the Insurance Committee and the Local Medical Committee had agreed to. The only alterations which the Commissioners would agree to—after much pressure—were in the wording of Schedule I, where it referred to "certificates" and "sanatorium" benefit.

Matters Referred to the Insurance Committee.—The SECRETARY reported that the following requests had been granted:

1. Practitioners to be allowed to stock dressings for the use of those insured persons whom they are not entitled to dispense for.

2. The Commissioners had been advised to agree to the deduction of one halfpenny per insured person from the Panel Fund for the expenses of the Local Medical or Panel Committees.

3. To supply all insured persons with vouchers, which they must bring with them to the doctor before being entitled to treatment.

4. To have all record cards stamped before issue.

Election of Officers and Representatives.—The officers of the previous year were re-elected:

Chairman.—Mr. J. L. Stretton.
Honorary Secretary.—Dr. H. E. Moore.
Honorary Treasurer.—Dr. F. J. Coaker.
Representative on Medical Service Subcommittee.—Dr. H. B. Emerson.
Medical Representatives on the Joint Subcommittee.—Drs. B. Addenbrooke, A. O. Holbeche, C. L. Hawkins.
Representatives on Committee.—Drs. Whitcombe and Liptrot were elected to fill the vacancies caused by the resignations of Drs. Taylor and Clarke. Drs. Crowe, Protheroe-Smith, and Freer, were appointed as additional members; the final constitution of the Committee being the same as the Panel Committee.

Alteration of Rules.—The question of altering the rules so as to have one set of rules to apply to both the Local Medical and Panel Committees was discussed; the Secretary was instructed to make the necessary emendations, and to bring the amended rules before the next meeting of the Committee.

Matters Referred by the Insurance Committee to the Local Medical Committee.

The Committee considered certain matters referred to it by the Insurance Committee. With regard to a case of an insured person who had been refused by a doctor on the panel it was decided that the Secretary should communicate with the medical practitioner the insured person had selected to suggest he should accept the patient, or arrange for his acceptance by another practitioner, otherwise the Committee would be obliged to take further action.

The Committee decided (1) that vaccine injections should not form part of the medical benefit for insured persons, (2) that the operation for appendicitis could not be expected from practitioners of ordinary competence and skill, (3) that panel practitioners were not entitled to charge for an abortion operation or for the anaesthetic.

The Committee directed its thanks to be transmitted to Mr. Willis Bund for his endeavours on behalf of the profession in his interview with the Commissioners, and also to the Clerk of the Insurance Committee for his invariable courtesy and valuable assistance on many occasions during the past year.

PANEL COMMITTEE.

The first meeting of the Panel Committee for the county was held at Kidderminster Infirmary on February 11th, when eleven members were present.

Election of Officers and Representatives.—The following were elected:

Chairman.—Mr. J. L. Stretton.
Honorary Secretary.—Dr. H. E. Moore.
Honorary Treasurer: Dr. F. W. Coaker.
Representatives to fill Vacancies.—Dr. J. Wilkinson (Droitwich), Drs. H. N. Crowe and M. Johnson (Shipston-on-Stour), Dr. H. L. Miles (Oldbury), Dr. J. J. Dickinson (Tenbury).
Co-opted Additional Members.—Drs. J. Pierce, H. C. Kidd, D. G. Dykes, E. H. Corder. Total number of the Committe. 28.
Representatives on the Joint Subcommittee.—The following were elected: Drs. B. Addenbrooke, C. L. Hawkins, A. O. Holbeche.
Representatives on Medical Service Subcommittee.—Drs. J. L. Stretton, A. O. Holbeche, W. Kirkpatrick, H. E. Moore.

Second Panel Committee.—On the motion of Dr. KIRKPATRICK, it was resolved that the scheme for the formation of the second Panel Committee already adopted by the general meeting of the panel practitioners be sent to the Commissioners with such alterations as will bring it into line with the regulations.

Expenses of Committee.—Some discussion arose as to whether Section 33, paragraph 2, of the Insurance Act, 1913, referred to the Local Medical or Panel Committee, and the Secretary was instructed to write to the Clerk of the Insurance Committee on this point, and, failing a satisfactory reply, to the Commissioners.

DENBIGHSHIRE.

PANEL COMMITTEE.

THE second meeting of the Committee was held at Chester on March 6th. Dr. E. Moss occupied the chair, and, in addition to seventeen members present, Dr. Ll. Williams (Medical Officer of the Welsh Insurance Commission) also attended.

Expenses of Committee.—After the usual preliminary business had been disposed of, reference was made to the resolution passed at the last meeting regarding payment of expenses of this Committee, and it was resolved:

That, as far as funds allow, third class railway fares of members attending meetings be paid.

Conference in London.—Dr. Morris-Jones (Colwyn Bay) was appointed to represent the Committee at the conference of Local Medical and Panel Committees in London on March 13th.

Local Medical Committee.—On the motion of Dr. MORRIS-JONES, seconded by Dr. PETER JONES, the members of the Panel Committee were nominated *en bloc* for membership of the Local Medical Committee. The SECRETARY stated that he had been in communication with the Commissioners regarding the amalgamation of the two Committees, and, on receiving a reply to the effect that they were not adverse to this proceeding provided that it met the wishes of the general body of practitioners in the area, he had sent a circular letter to all practitioners acquainting them of this proposal.

Address by Medical Officer of Insurance Commission.—Dr. LL. WILLIAMS then addressed the meeting on the following matters: (*a*) Certificates; (*b*) excessive sickness claims; (*c*) administration of medical and sanatorium benefits. He gave instances of cases in which grave irregularities had been committed by practitioners in the matter of certificates, such as signing them without even seeing the patient on a single occasion, and referred to the circular letter of the General Medical Council. Whilst admitting that these cases were exceptional, he appealed to the members present to bring any such cases to the notice of the Local Medical Committee. Dr. Williams asked that care should be taken to prevent any imposition on the sick funds on the part of patients, and that no unnecessary leniency be shown by entering or retaining persons on the sick list who were not strictly entitled. He instanced the case of a person out of employment, or one who had lost his employment through sickness but had fully recovered his health. Regarding sanatorium benefits, the number of cases receiving domiciliary treatment was small, and did not warrant the sum spent for them (the extra 6d. capitation). He doubted if all cases had been notified, and asked that attention should be given to the matter, and also that when prescribing for these persons the prescriptions should be appropriately marked as the payments came from the Memorial Fund.

Nearly all members present took part in the discussion which followed. Dr. HARRISON suggested that Form A.S. 75 should be made compulsory on all societies. Several speakers attributed the excessive sickness claims to the fact that unsuitable lives (especially female) had been accepted by the societies. Some favoured the appointment of referees independent of the approved societies, and Dr. WILLIAMS said that the Departmental Committee would no doubt consider the matter. An inquiry from Dr. J. C. DAVIES elicited the reply that the money due for attendance on temporary residents would be paid very shortly. Drs. MEDWYN HUGHES and DAVID LLOYD said that the sum of £450 has been granted to the county of Denbigh for special mileage, but the Insurance Committee had applied for an increase to at least £600. Dr. WILLIAMS said that the money could be claimed for visits under three miles in difficult country. Dr. MEDWYN HUGHES asked that the various circulars issued from time to time by the Commissioners should be supplied to the practitioners in book form.

Vote of Thanks.—A hearty vote of thanks to Dr. Williams for his attendance and the cordial manner in which he had replied to the numerous questions was passed by the meeting.

INSURANCE COMMITTEES.

PRESTON.

Doctors and the Deficiency in the Drug Fund.

EXCEPTION was taken by the medical representatives, at the last meeting of the Preston Insurance Committee, to a suggestion that doctors, by over-prescribing, were responsible for a deficiency in the Drug Fund. It was stated that

the average cost of prescriptions in Preston was 9.4d.—the highest figure in Lancashire—which itself had a higher average than most districts. The recent conference held at Blackburn recommended Lancashire Insurance Committees to put into operation Clause 46 of the Act, which surcharged medical practitioners in respect of over-prescribing. Nevertheless, Mr. WILSON, the Committee's delegate at the conference, who gave these particulars, urged that no allegations should be made against the doctors until there had been a thorough investigation, as he believed a large amount of "arrears in sickness" had been dealt with during the past year, and that the pressure in 1914 would not be so heavy.

Dr. RIGG did not agree with the last remark; people had learnt what they could get from the Act, and they were forming the habit of calling on the doctor for the least thing. Medical men had a tremendous amount of work to do, and there was bound to be a great deal of prescribing. Who was to decide that doctors had prescribed too much? He advised the Committee to examine the drug tariff, as several items were in need of revision.

Dr. DERHAM said doctors were prescribing what they had done all their lives; the fault was that the tariff was inelastic. A medicine-drinking public could not be educated out of the habit in twelve months. Already a quarter of his whole list had been to see him this year, and there was only one case in which he had not had to prescribe.

Dr. MOONEY disputed a suggestion of the Chairman that if one doctor with a list of 2,000 prescribed three times oftener than another with a list of equal dimensions, it was reasonable to assume over-prescribing. Dr. Mooney said that every prescription would have to be judged in its relation to the case. A layman could not decide in this matter; that was why he had always objected to the Insurance Act, that professional work was liable to be criticized by non-professional persons. A reasonable way out of the present difficulty would be to make the Drug Fund national and not local; then districts with a high or low sickness rate would be equalized.

The discussion concluded when it was pointed out that the onus lay on the Pharmaceutical Committee to make a complaint of over-prescribing, and no such complaint had been received.

DERBYSHIRE.

Complaints as to Issue of Certificates.

AT the last meeting of the Derbyshire Insurance Committee, the CHAIRMAN stated that complaints had been made as to the post-dating of certificates by medical practitioners, and the signing of certificates by deputy. Certificates on occasions had certainly not been signed with the care practitioners ought to exercise, and it was to be hoped doctors would be more careful. The Panel Committee had undertaken to deal severely with any lapses.

In the course of discussion a representative of the Midland Railway Friendly Society said he dealt with a large area, and knew there were more unbusiness-like doctors in this respect than those of Derbyshire.

Dr. BOWDEN declared that doctors were no more to blame than officials of approved societies, and several other speakers expressed the view that officials should be called to book for any act of negligence or carelessness equally with the doctors.

BRISTOL.

THE monthly meeting of the Insurance Committee was held on March 2nd, Dr. W. SAISE being in the chair. The resignation of Dr. George Hall was reported, and Dr. L. A. Fleming and Dr. J. Wright attended as the new members elected by the Local Medical Committee.

The Success of Medical Benefit.

Dr. SAISE said that the Act had now been in working for a year, and the doctors' records recently sent in enabled him to give some interesting figures of the work. During that time 80,000 insured persons had been treated for some ailment or another, receiving nearly 400,000 prescriptions. Both these numbers were larger than were expected, but it showed how freely the insured persons had availed themselves of medical benefits, and that the doctors had kept open door to them. Of this number of insured persons only 600 had asked to have their doctor changed at the end of the year, which in his opinion showed that free choice of doctor was the right line to go on and had been a great success. The result indicated that whoever might be dissatisfied with the panel doctor it was not the insured person, and after all he was the person most concerned.

Sanatorium Benefit.

Mr. DYER, in presenting the sanatorium report, said that there were twenty-four persons waiting for beds. Hitherto they had been congratulating themselves on the promptness with which they were able to find beds for their patients, but wherever they applied they received the same answer that none would be available for six weeks or so. The report showed that since the last statement on December 29th, 1913, there had been 30 applications for benefits, of which 16 had been sent to sanatoriums, 2 given domiciliary treatment, 1 dispensary treatment, 2 had been withdrawn and were waiting for the completion of the forms. Since the last report 28 cases had been examined on their return from sanatoriums, with the following results: 9 fit for work, 5 disease arrested, 9 considerably improved, 2 improved, 2 little improvement, and 1 case worse. During the past year 286 men and 202 women had been treated, of which 211 had had sanatorium treatment, 147 dispensary, and 130 domiciliary treatment. The results of sanatorium treatment were: 70 fit for work, 67 improved, 17 not improved, and 16 worse (the balance of 49 are not accounted for but may be under treatment). The results of dispensary treatment were: 15 fit for work, 10 improved, 7 not improved, 9 died; and of the domiciliary, 10 fit to work, 16 recommended other treatment, 41 died (in both the latter there is an unexplained balance).

Since the last meeting of the Committee there had been 50 applications for sanatorium treatment, of which it appears only 13 had been found beds, 37 having to wait either for accommodation or for completion of forms. Of the returned cases (15), 4 were reported as "disease arrested," 5 as fit for work, 3 greatly improved, and 3 improved "a little." The subcommittee stated they had made arrangements for patients to be taken in at the St. Raphael's, St. Luke's, and St. Barnabas's Home, Torquay, at 30s. a week, and this had had the sanction of the Commissioners.

Work of the Medical Adviser.

The Medical Service Subcommittee reported that since December 29th the medical adviser had reported on 136 cases referred to him; 54 were found fit for work, 34 did not attend, and 48 were unfit to work. Of the 136 cases, 121 had been referred by societies, and 15 by doctors (for about six weeks the work was stopped as far as the cases sent by doctors were concerned, which accounts for the large proportion of society cases).

In discussing the report of the financial subcommittee, the subject of the payment of the medical adviser came up again, and Dr. CARTER explained that the doctors were making a temporary payment as a matter of policy and without prejudice to the future, this being on the understanding that the societies made use of the adviser, and did not appoint their own. Dr. MICHELL CLARKE said that it was more to the interests of the societies to prevent malingering than to the doctors to use the services of the adviser. It was obviously a matter of great convenience to have a third person to refer to in cases of doubt. The best way would be for the Committee to make the payments. Mr. Fox thought the only logical way was for the adviser to be paid by the State.

Chemists' Accounts.

The report of the Medical Benefit Subcommittee gave details of the chemists' bills, which were as follows:

	Prescriptions.		Amount. £ s. d.		Average Price.
First quarter	105,793	.....	3.207 4 11	.....	7.28d.
Second quarter	96,353	.....	3.174 10 0	.....	7.9d.
Third quarter	87,197	.....	2,886 12 6	.....	7.94d.
Fourth quarter	105,451	.....	3.531 1 11	.....	8.05d.
	394,794	.....	£12,799 9 4	.....	7.78d.

It also reported that the Panel Committee had agreed to pay for the ensuing three months £50 towards the remuneration of the medical adviser, and the subcommittee recommended the reappointment of Dr. Rogers.

Mr. YOUNG, in discussing this report, said that the Committee had bills from the chemists for £1,800 and only

£900 to meet them with. Bristol was not singular in this state of affairs, and from inquiries he found that where there was a large amount of female labour the drug bill was high and the fund short. The heavy call on the drug fund was found to exist where the people were poorly paid and were never really very fit. The report was adopted.

INSURANCE NOTES.

LONDON.

Poplar.

The annual general meeting of the Poplar Medical Union was held on February 26th. Dr. Byrne was in the chair.

The following officers were elected for the ensuing year: *Chairman*, Dr. Paxton; *Treasurer*, Dr. J. Fearnley; *Secretary*, Dr. Toland.

On the motion of Dr. Oxley (Secretary of the Tower Hamlets Division of the British Medical Association) the following resolution was passed unanimously:

That in the opinion of this meeting the statements appearing from time to time in the press as to the inefficiency of the panel service, and the gross encouragement of malingering by doctors working under the National Insurance Act are unfounded, but at the same time it recognizes that there is room for expansion in certain particulars, such as:

1. The provision of some means of consultation in doubtful cases; and
2. The provision of further facilities for special means of diagnosis;

and hereby appoints a committee to consider and report as to what means, if any, can be taken by the Poplar Medical Union to remedy these deficiencies in its own area.

The following committee was appointed in terms of the resolution: Drs. Cardale, Oxley, and J. Fearnley, with the Chairman and Secretary.

Surplus Funds.

Dr. A. R. Eates, honorary secretary (*pro tem.*) of a meeting of panel doctors with small lists, held on March 17th at 12, Thayer Street, W., informs us that the following resolutions were then passed:

1. That a committee be formed to arrange for a deputation to (*a*) members of the Government, or (*b*) to the Insurance Commissioners, or (*c*) to the Insurance Committee; or to more than one of them, in order to represent to them that the requirements of the Insurance Act, 1911, in respect of the allocation or assignment of insured persons to doctors on the panel are not being carried out; to inquire why they have not been carried out; and to ask what alternative proposals, equitable to the doctors working the Act, are put forward by these bodies.
2. That this meeting of London panel doctors asks the Commissioners not to sanction the agreement arrived at between the London Insurance and the Panel Committees as regards the allocation of surplus funds, on the grounds that the agreement does not take into consideration the responsibility incurred by doctors on the panel for treating unallocated persons as required by the Medical Benefit Regulations. The meeting is of opinion that this responsibility does not vary directly with the size of a doctor's list.
3. That this responsibility be measured for each quarter by the number of new patients accepted for treatment during that quarter, and that the unallocated funds be divided in proportion to these numbers.
4. That copies of these resolutions be sent to the Commissioners, the London Insurance Committee, and to the Panel Committee, and to the medical journals.

The number who voted on resolution 3, which was carried by a small majority, was limited, and we are informed that the feeling of the meeting was absolutely for the exclusion from participation in any surplus funds of all doctors with 2,000 or more persons on their lists.

IRELAND.

Dissatisfaction with the Act.

Every day increases the unpopularity of the Insurance Act in Ireland, not only among the members of the medical profession but also among the public. It is alleged that most of the societies seem to regard the medical certificate less as a test of honesty on the part of the applicant for insurance benefit than as a means of evading their obligations to the insured. It is believed that this hardship will become greater if the proposal for a body of whole-time medical advisers is adopted, as such a body would be more or less completely in the hands of the societies. The following resolutions passed recently by the Royal Colleges of Surgeons and Physicians show clearly the views of the medical profession on this subject:

That, in the opinion of the Royal Colleges of Physicians and Surgeons, Ireland, the existing arrangements for obtaining evidence of incapacity, entitling to benefit under the National Insurance (1911) Act, have given rise to serious abuses.

In forming a judgement as to whether a person is "incapable of work," it is essential, alike in the interests of the public and of the claimant, that the fullest possible information as to the medical condition of the claimant should be before the person whose duty it is to adjudicate on the claim. This information is, as a rule, in the possession only of the claimant's medical attendant.

The Colleges are of opinion that medical certificates under the Insurance Act should be accepted only if given by the claimant's medical attendant, if any, unless such medical attendant refuses to certify.

If the Body claimed against desires to review a certificate, the Colleges are of opinion that the medical referee should have before him the certificate originally given by the claimant's medical attendant, and should give such medical attendant sufficient notice of the time and place of examination, and an opportunity of stating the grounds on which he arrived at the opinion expressed in his certificate.

That the manner in which the duties of the office of "Medical Adviser," either to the Insurance Commissioners, or approved societies, are being discharged at present in many parts of Ireland is contrary to medical ethics, and deserving of punishment by the Colleges.

A case was reported lately of an ex-servant of one of the big railway companies in Ireland who was forced to apply for outdoor relief to the Fermoy Board of Guardians. The chairman of the board pointed out that but for the existence of the Insurance Act the man would have had a life-pension from the company, and that "the Act threw him on the ratepayers as a charge." As regards sanatorium benefit, there is no accommodation for a large proportion of those who apply; it was stated a few weeks ago that the Dublin Insurance Committee had the names of over sixty applicants who had been recommended for institutional treatment, and for whom no accommodation could be provided. Among the doctors who went on the panel for certification purposes much discontent has been caused by the as yet unexplained delay in payment. Under the terms of their agreement they were to be paid quarterly, but more than ten months have elapsed without any payment being made. All those who went on the panel were assured that those insured persons who failed to choose a doctor would be allotted without delay, and they accepted their appointment on the understanding that the entire money accruing in each area would be divided *pro rata* among the medical men on the panel for that area. County Cork was one of the areas in which a complete panel was said to have been formed by the Commissioners, who now say that there were in that county several districts in which there were no facilities for the certification of insured persons, and refuse to make any payment for the insured persons in their areas. Presumably the Commissioners will offer the same excuse for avoiding payment for insured persons in other areas where the panel was stated by them to be complete. Finally, there is little or no doubt that in the case of a large number of the smaller insurance societies which were brought into being in Ireland by the Act, the limited number of members and the want of care in their choice have prevented them being worked on an economic basis, and their financial condition is such that many of them are on the verge of bankruptcy, and are in no position to provide the benefits promised to their members.

Cork.

At a meeting of the medical profession in Cork, held on February 28th, the following resolution was unanimously adopted:

We, the medical profession of the city of Cork (unless in the meantime instructed otherwise by the Irish Committee), will refuse to work the panel for certification after March 31st, 1914.

A copy of the resolution was directed to be sent to every member of the medical profession resident in the city of Cork.

INSURANCE ACT IN PARLIAMENT.

DEPARTMENTAL COMMITTEE ON EXCESSIVE SICKNESS.

MR. GODFREY LOCKER-LAMPSON asked whether the evidence taken by the Departmental Committee on Excessive Sickness under the National Insurance Acts, which was already in type and extended to some thousands of questions, could be published for the information of approved societies and others interested in the subject, and who might wish to offer rebutting evidence.—Mr. Benn said that the publication of the evidence so far given before the Committee would create a misleading impression. He did not understand what it was intended to suggest as to the offering of rebutting evidence by approved societies and others. The Committee was not inquiring into allegations in respect of specific societies, but into the general question affecting the administration of sickness benefit.

CLASSES OF WORKERS EXCLUDED.

Mr. Butcher in a question called attention to the orders issued by the Insurance Commissioners and the Joint Committee (916 and 1,886 of 1912) which excluded from compulsory insurance persons engaged in certain subsidiary employments (pickers of hops, fruit, peas, potatoes, and flowers, and onion peelers), provided they were not insured persons immediately before such employment, and asked whether women could also be excluded who were employed in the subsidiary employments of clover-winning, hay-making, harvesting, and potato-gathering, working on an average two or three days a week during the summer months.—Mr. Benn, in reply, said that the employments mentioned belonged to a series of seasonal field employments which were the principal source of livelihood of the bulk of the women engaged in them. If those women engaged in hop-picking or fruit-picking they continued to be liable to insurance. The special orders referred to were intended to meet the case of those persons not otherwise insurable who engaged for short periods in hop-picking or fruit-picking. The Commissioners were not prepared to make an order which would put a premium on the employment of casual labour to the detriment of those persons who had to rely on those field employments for their living.

MEDICAL BENEFIT.

London Insurance Committee.

Sir Henry Craik asked the Secretary to the Treasury whether the Insurance Commissioners were prepared to require the London Insurance Committee to distribute the money now in their hands and available for medical services, so as to implement the understanding upon which the doctors joined the panel.—Mr. Benn said the distribution of the funds available to the London Insurance Committee among the doctors on the panel, in accordance with the Regulations and the doctors' agreements, was in the first instance, at any rate, a matter for the Committee with whom those agreements had been made; this distribution was engaging its attention. Sir H. Craik asked whether there was no means of bringing the Insurance Committee to book for default.—Mr. Benn thought that its attention having been called to the matter it would deal with the question.

Mr. F. Hall asked the Chancellor of the Exchequer whether the London Insurance Committee had made any request for increased grants to enable it to meet expenditure arising out of the working of the National Insurance Act; if so, what reply had been made to such request; and if any suggestion had been made to the London County Council in the matter, and the nature thereof.—Mr. Wedgwood Benn said that the London Insurance Committee communicated with the Treasury early last year as to the provision of further funds to defray the expenses of sanatorium benefit, and was informed of the conditions under which further funds were available for the treatment of tuberculosis. He had no information as regards the last part of the question.

Approved Societies Administration.

Major Hope asked how many schemes, under Section 72 of the National Insurance Act, 1911, submitted by registered friendly societies and branches, had been confirmed; and what was the total amount of the funds of friendly societies and branches thereby set free, either to provide increased benefits or reduced contributions, or to redeem deficiencies existing in the valuations of these societies and branches.—Mr. Montagu replied that the total number of schemes confirmed to date was 2,647, consisting of 2,161 schemes for continuing the contributions and benefits specified in the rules, and 486 providing for a reduction of contributions and benefits. In the case of the latter reserves amounting to £240,934 had been applied in reduction of existing deficiencies or the grant of additional benefits.

In reply to Major Hope, the Secretary to the Treasury said the Regulations forbidding the meeting of approved societies on licensed premises were unanimously approved by the Scottish Advisory Committee, on which approved societies of all types were represented.

Income Limit.

Mr. MacCallum Scott asked whether a sea-going boiler-maker earning £11 per month and his keep was considered to be a manual worker and therefore compulsorily insured, although his income, including his keep, was reckoned to exceed £160 a year.—Mr. Benn said that the question whether employment was employment by way of manual labour depended upon the nature of the duties performed in the particular case. The facts of a specific case might be put before the Commissioners with a view to a formal decision being obtained under Section 66 of the principal Act.

Mr. MacCallum Scott asked whether a person who ceased to pay contributions in August last because his income then exceeded £160 a year was entitled to claim benefit until arrears began to have effect in July next.—Mr. Benn replied in the negative, and added that a person who ceased to be employed within the meaning of the Act because his rate of remuneration exceeded £160 a year was suspended from insurance, and therefore ceased, during suspension, to be entitled to benefit quite apart from the operation of the arrears provisions.

Payment by Attendance.

In reply to Mr. G. Locker-Lampson, Mr. Wedgwood Benn stated that the only Insurance Committees in whose areas the doctors were now working on a per-attendance system were Manchester and Salford. In the following areas, however, that system was originally adopted, either in whole or in part, and discarded at the end of the first quarter of medical benefit—namely: Blackpool, Canterbury, Cambridgeshire, Dorset, Eastbourne, Kent, Stoke-on-Trent, Suffolk West, Wallasey, and Zetland.

Drugs.

Mr. Godfrey Locker-Lampson asked whether attention had been drawn to the issue of a circular to the panel doctors in Bolton, advising them that, on account of the drug fund being overspent, they should not prescribe extract of malt and oil, petroleum emulsion, etc., except to tuberculous patients; whether the Government proposed to take any steps to see that the rights of insured persons were not thereby imperilled and their medical needs ignored; and whether they agreed with restrictions of this kind being placed on doctors with regard to the medicine that panel patients could have.—Mr. Benn replied that the circular contained no allusion to the condition of the drug fund, and had no reference to financial considerations. It merely expressed the general views of the Committee arrived at in the course of administration as to the interpretation to be placed, in its opinion, upon the provisions of the Act regarding the supply of medicines in connexion with medical benefit. The rights of insured persons could not, of course, be restricted by any such general announcement as that referred to.

Mr. Godfrey Locker-Lampson asked whether the panel chemists in the area of the London Insurance Committee had been paid their accounts in full for 1913.—Mr. Wedgwood Benn replied that no settlement had as yet been effected, but advances had been made to the extent of over 80 per cent. of the bills presented, which had not all been checked.

Mr. Godfrey Locker-Lampson asked whether there was a deficiency in the drug fund in the area of the Birmingham Insurance Committee; and whether the Birmingham panel chemists would be paid in full.—Mr. Benn said that it was not possible at the present stage to make any statement as to the amounts which would ultimately be available for payment to the chemists in any particular area.

Sanatorium Benefit.

Tuberculous Insured Persons.

Mr. Benn has informed Mr. Astor that the great majority of Insurance Committees have necessarily under their provisional arrangements availed themselves of the existing institutional treatment outside their own areas. Apart, however, from this necessity, the accommodation provided for Insurance Committees under comprehensive county or county borough schemes must often, naturally and advantageously, be situated outside their areas. So far as he was aware one committee only, the Isle of Wight, has been able to provide all the necessary accommodation within its own area.

Tuberculous Patients.

Mr. Hume-Williams asked how many hospitals, or other institutions intended for the care of the sick, had been commandeered for the purpose of tuberculosis patients under the National Insurance Act; and what arrangements had been made for the housing elsewhere of the patients for whose benefit those institutions were intended at the time when they were so taken.—Mr. Herbert Samuel said that the use of the term "commandeered" was not understood. So far as England was concerned, the Local Government Board had approved of voluntary arrangements for the use of vacant infectious diseases hospitals in thirty-one instances, and of spare accommodation at such hospitals in fifty-nine cases, for the treatment of tuberculous patients, on condition that such patients were removed in the event of the accommodation being required for cases of other infectious diseases.

Treatment of Tuberculosis.

In reply to questions by Mr. Astor as to the total amount made available by the Finance Act, 1911, for England and Wales and Ireland respectively for providing institutions for the treatment of tuberculosis and how it had been allocated, the following information has been supplied by the President of the Local Government Board and the Chief Secretary for Ireland respectively: Mr. Herbert Samuel has stated that the share of England in the capital grant was £1,116,156, and of Wales £80,302. In England £40,101 had been actually paid to local authorities in aid of expenditure already incurred on providing new dispensaries, sanatoriums, and hospitals, or on extending existing institutions. In addition capital grants amounting to £120,574 had been definitely promised in aid of expenditure now being incurred or about to be incurred for these purposes. Information as to the distribution of the grant in Wales was not available.—Mr. Birrell has stated that the amount allocated to Ireland was £145,623. Out of this grant, £30,077 had been issued by the Local Government Board in respect of the counties of Carlow, Cavan, Louth, Kerry, Mayo, Leitrim, Donegal, Kildare, Kilkenny, Meath, Roscommon, Tipperary (South Riding), Westmeath, Galway, and Dublin County Borough, but in all the other counties and county boroughs, with one or two exceptions, schemes involving expenditure from the grant were in a more or less advanced stage of preparation.

CORRESPONDENCE.

Medical Certificates.

Dr. T. Cromwell Winn (South Hackney) writes: The Insurance Commissioners have requested the General Medical Council to haul us over the coals for laxity in the signing of panel certificates.

It is my belief that the Council would describe as "infamous" the regulations under which those certificates have to be given. No wonder the doctors regard the certificates as a farce when they know the reason for these Regulations (Memo. 173/I.C.).

The earlier form of certificate was far more genuine. In that we had to state that we had seen the patient a second time. That was usually signed on the third day, and the benefit began on the fourth.

The societies found that doctors made a charge for certificates required on the first day for outside benefits. This was quite in order, but the societies did not like it. Now we are ordered to do the impossible—to state on the first day that the patient will be entitled to benefit on the fourth day, when, for all we know, he may be dead or recovered.

We have to give the name of the disease, which is often impossible. Personally, I have been told by a leading member of the London Insurance Committee that "if I had taken the trouble" I could, no doubt, have made a diagnosis (I had certified "pyrexia"), and that if I did not comply he would withhold the benefit and report me to the Committee.

It was a great help to a doctor who wished to do his work fairly to say to a man who was over-anxious to go on the funds, "Let me see how you are in a day or two. No time will be lost, as benefit does not begin until the fourth day." Some of the societies have realized the blunder, and are trying to get a second certificate before paying benefit. Owing to this we may have to give three certificates for one week's benefit, or, if the case is better on the third day, two certificates to no purpose. This works out unfairly to the straight man, who says, "I will not go on the funds until I see how I am in a day or two." It is true we are allowed to write a note to the society explaining the matter in such a case, but this is a burden we could not undertake. We must not ante- or post-date under any circumstances. This rule is broken by the societies who require the doctor to do so.

There are so many instances in which the certificate is not forthcoming on the exact day, that a refusal to ante-date would bring about chaos. No wonder the doctors are lax with regulations such as these. Do the Commissioners imagine that the Council will back them up?

We doctors have to be trusted with far more serious matters than the signing of certificates; why should we not be trusted a little further, and treated as honourable men?

Of course, those men who do wrong should be punished, but why these gratuitous insults? I try to do my work with fairness, and yet I have been insulted and abused—at one time for not cutting a man off benefit, at another for not keeping him on.

Complaint is made that continuing certificates are signed at a date when the doctor has not seen the patient. I plead guilty to having cut out the words "to-day seen" when the certificate has been brought to my surgery in the morning. For instance, in order to get the week's money the doctor's signature is necessary. It is expected that the agent of the society will call on the patient at 11 a.m. I do not start on my round until 11.30. A messenger is sent to my surgery with the certificate for my signature. I have to delete the words "to-day" as I have not yet visited the patient. In some instances I may visit the patient within a few hours and the agent has been able to pay the benefit if he called before my visit.

The General Medical Council has hitherto been regarded by the laity as unduly severe, but we doctors have always respected its decisions. Now it is to be incited by the Commissioners to more severity. It is degrading to have to guess at a diagnosis and dishonest to the better-intentioned insured person. It also affords facilities for malingering to those who are over-anxious to get the benefits. It is also, I think, illegal to compel us to sign on the first day, for the certificate can be used to secure benefits outside the Act.

Dr. Thomas MacCarthy (Sherborne, Dorset) writes: Dr. Morgan's letter raises an important question, and I believe the Commissioners are aware of the difficulty, although, so far as I know, they have made no pronouncement on it.

Some months ago, when samples of the new forms were sent us, I wrote to the Commissioners pointing out difficulties in the initial and continuing forms. The point I raised in the initial form was the "to-day" part. An insured person consults his doctor, say, on Monday, March 16th, and at the moment it is not possible to decide if he will or will not be able to resume work by the following Thursday. A certificate is not given on March 16th, but on finding that work cannot be resumed on Thursday a certificate is given on that day and, of course, dated March 19th. The question then arises, Will the man suffer the loss of those three days by the approved society assuming that March 19th is the first day of incapacity? I pointed out that if this were so the only course open to a doctor was to give every insured person

an initial certificate on the first day of incapacity, but that this would lead to a good deal of malingering, for the possession of an initial certificate would provide a great temptation to going unnecessarily on sick pay.

With regard to the continuing certificate, I raised the same point as Dr. Morgan. Mr. Vyvian answered at length, and, although I cannot lay my hand on his letter, it was to the following effect. In every case without exception the date on the certificate must be the date on which it is given. In the case of the initial certificate, it is quite in order to add a statement to the effect that the person has been ill since such and such a date, provided, of course, that it is within the certifier's knowledge that such is the case—for example, in the case given by me after the words "incapable of work" add, "and has been since March 16th."

The continuing certificate can also be modified by a statement to make matters clear, but I believe the simplest plan is to delete the words "that I have to-day examined you, and" in cases in which one has not seen the person on the day for which the certificate has to be dated. I have done this some hundred times. In fact the approved societies do not appear to attach much importance to this, for a common instruction of the agent to insured persons is "ask the doctor to sign this, but not to date it." I mentioned this to the Commissioners in my letter, but no comment was made on it. All through the answer I received again and again the main point made was "the certificate must be dated for the day on which it is given," apparently all else is of minor importance.

Continuation Certificates.

Dr. W. SPETTIGUE (Wellington, Somerset) writes: There appears to be some misunderstanding as to continuation certificates. On November 12th, 1913, I addressed this question to the Commissioners:

> Is the doctor bound to furnish the continuing certificate on a day specified by the approved society, without any regard to the advisability or convenience of seeing the patient on that particular day? Such a course would, in my opinion, be both impracticable and detrimental to the efficiency of medical service to the insured.

On January 16th I received the following reply:

> It seems to the Commission that in general a practitioner should attend the insured person at such times as his condition required, and should, at the request of the insured person, give the necessary certificate *at those times*, and, as indicated in Memo. 173 I.C., they attach the greatest importance to the principle that under no circumstances whatever should certificates either be post- or antedated. Circumstances may, however, arise in practice in which a doctor may feel justified in making a statement relating either to the patient's condition at a date prior to that on which the certificate is given or to the patient's prospective incapacity for work on a subsequent date. In such cases the certificates may be annotated by the doctor, but the date of the doctor's signature on the certificate should, of course, be the date on which the signature is affixed.

Surely, the phrase in Section 8 (1) (*c*) . . . "of which notice has been given" is the foundation of the administrative requirement for sickness benefit. The society may specify the draft on which notice of incapacity must be given, and any certificate in support of this should be at a reasonably approximate date. The society may also specify the day on which a declaration of continued incapacity shall be given; but the certificate in support of this should again bear an approximate and not of necessity an identical date. To be correct, the formula quoted by your correspondent should be, *I am informed* "James Brown is suffering from influenza and still unable to work." It is just this elastic way of giving certificates that has led to their being looked upon, by member and official, as only a tick against a name in a column. If we can educate the public to consider such documents as something more than a scratch on paper—actually a written medical opinion after examination—we may lessen the overwhelming demand for numberless certificates.

THE IMPROVEMENT OF THE PANEL SERVICE.

Dr. HARRY ROBERTS (Stepney) writes: The way to improve the panel service is to do our best for our patients, to treat them as private patients expect to be treated, and to look for faults in ourselves rather than in our professional neighbours. Nothing is more sickening than the cant of those—fortunately a very few among us—who publish accounts of their own professional honesty and the dishonesty of the other doctors in their districts. My experience leads me to believe that the great majority of doctors, panel and otherwise, do their best for their patients according to their lights, and are as honest as any other body of men. When the few scandalmongers among us can be induced to transfer their attention from their neighbours' motes to their own beams, the panel service and medical practice in general will have taken an important step towards improvement. The unsuccessful nearly always console themselves for their comparative unattractiveness by the belief that the successful must be very wicked people.

With several things in Dr. Owen Williams's letter[1] one is bound to agree. For instance, the time seems to have come for a consideration of the question of the limitation of the lists. In country districts only an exceptional man could deal satisfactorily with more than 2,000 insured people, if he had much of a private practice as well. This corresponds with a list of about 3,000 in an industrial district. But exceptional men can often do, and do better, twice the amount of work that other men can do. Are they to be kept back to the average level, or in what way are they to be given scope for their greater energy and ability? My experience (I have about 1,800 on my list) is that 1,000 insured persons represent an average of about two visits and twelve consultations daily. The consultations are largely (probably to the extent of three-quarters) concerned with chronic diseases (for which the same patient comes once or twice a week for the rest of his life) and minor ailments, such as colds and dyspepsia. Every man can judge for himself how many multiples of this amount of work he feels competent to undertake.

The part of Dr. Williams's letter, however, with which I am most in agreement is that which deals with the employment of assistants who are often given salaries which bear but a fractional relation to the value of the work they do. Assistants have recently made some kind of a stand for better terms. But even now I understand that there are men, whose practices bring them in thousands a year, who get the bulk of their work done by full-time assistants, to whom they pay annual salaries of £250 to £300—that is, about sixpence an hour. This kind of sweating calls for suppression. A man who by hard work has built up a good practice is clearly entitled to draw something more than the share of a younger man who gives him help in the less responsible part of his work; but the relation of principal and assistant is not really a satisfactory one, and should—so soon as mutual confidence gives reasonable promise of concord—at an early stage be replaced by a true partnership relation. And here, I believe, lies the solution of some of the difficulties of panel practice in crowded districts. Let three or four men who know each other well enough to work together, who take a reasonable pride in doing their work well, join together into a partnership, sharing the work to their mutual convenience, and equitably sharing the total income according to their respective values to the partnership. Let them, if they have the ability, specialize in such directions as their talents and experience suggest, and let them organize their work co-operatively, directly for the benefit of their patients and indirectly for their own greater leisure and interest. They will, if they have in them any elements of success, be in a position to lighten and improve the quality of their work by obtaining secretarial, laboratory, nursing, and dispensing help. They will be in a position so to organize their work that each will be able to take, for recreation or study, one or two days a week from the routine work of the practice. In such a way as this—and not by the "commercial" employment of ill-paid assistants—may panel work be made efficient and vital. So long as every practitioner forms a solitary unit, fighting alone for his own hand, with perhaps a dozen rival practitioners within a mile of him, so long will he be liable to that saddest failing of little minds—suspicion and hatred of those who succeed.

DENTAL TREATMENT.

Dr. EVELYN A. CONSTABLE (West Green, N.) writes: At the end of fifteen months' experience of a panel practice in

[1] SUPPLEMENT to the BRITISH MEDICAL JOURNAL, March 14th, p. 155.

partnership with my father I venture to send a few particulars of the incalculable benefits of the Act *re* one branch, namely, dental surgery and dental hygiene.

The amount of dental caries amongst the working classes is simply *appalling*, and unless the teeth actually ache it is almost impossible to get such patients to see the necessity of having them attended to. But what one can do is—get hold of them when convalescent from minor ailments, for example, chills, colds, tonsillitis, etc., and by promising to sign their certificates for a week or two longer provided they on their part will attend a dental clinic; one, so to speak, catches them with guile. We have done this in numberless instances, sending our patients to Guy's Dental School—an institution which stands in no need of our praise, but which will have our deepest gratitude for all it has done for our poorer patients.

The following typical cases come to my mind:

G. D., aged 28. Druggist's assistant. A hopeless neurasthenic. Seen for us by Dr. Whipham, who agreed in the diagnosis. The only mischief we could find was in his teeth. After a great deal of persuasion he had them all out and new ones in. Result: After a few weeks all his symptoms (of about two years' standing) all cleared up, and he is now a cheerful member of society.

P. B., aged 17. Factory girl. Very anaemic; chill. Coaxed, cajoled, entreated her to go to Guy's to have teeth stopped and others extracted. Finally, would not sign any more certificates till she did go. Now she has a beautifully clean mouth, and says she is very glad she had them attended to.

We certainly benefit our cases of gastric ulcer and rheumatoid arthritis by attending to their teeth, but how very much better to catch the young before their teeth have gone too far. The younger generation are certainly learning to appreciate a toothbrush in preference to the face flannel (!) of their parents. For this the school clinics merit our praise and gratitude. Indeed, we are profoundly thankful to the National Insurance Act for making it possible for our hard-working poor to get their teeth attended to gratis and yet have enough to keep body and soul together in the meanwhile.

The Needs of the Future.

Dr. N. Macfadyen (Letchworth) writes: From week to week different suggestions for the improvement of the medical service under the Insurance Act appear in your paper. Many of the suggestions, probably most of them, have value, but who is to judge if they are possible and practical or not?

It strikes me forcibly that if our Association would take steps to collect all these ideas, and actually take the lead in any movement for improving or altering the Act, it would be of great advantage to the profession, the Association, and the public.

Besides the questions of contracting out, malingering, and hospitals, there is the whole subject of nursing coming up. Is it better for us to wait until we are attacked from some quarter, or shall we lead?

Dr. Flemming has pointed out that it is of great importance for us to choose the right men for the Council and Representative Body. In my opinion we should spare no pains to carry this out, and only ask those to represent us who have the energy and the imagination to appreciate the new and changed condition of affairs, whether they enjoy the new condition or not.

Co-ordination of Work of Panel and Local Medical Committees.

Dr. G. Gilbert Genge (Croydon) writes: It seems to me that, however great the difficulties may be, a supreme effort must be made to co-ordinate the work of the various medical committees.

Any scheme that deals with this subject in a one-sided and partisan manner is doomed to failure, and a good thing too; for it is of transcendent importance to preserve the essential unity of the profession. It is no good trying to preserve a mere fictitious appearance of unity by affecting to ignore the very different aims and interests of various men in the profession. There must be found a means that will leave each class free to develop its own special line of defence and yet federate them all to resist everything and everybody that threatens the common professional interest.

The following simple plan might solve the difficulty:

1. Let an association of non-panel practitioners be formed in each town or district, each with its own committee, financed by themselves.

2. Let the panel men in each area band themselves together as branches of one big combination, governed by an executive, elected by a federation of panel committees. It would be for this executive to consider whether any advantage would be gained by registering under the Trade Union Act. Finance the combination by a deduction of ¼d. per head of insured persons on each man's list, with power of levy of 1d. or 2d. per head. Financial provision is already made for the Panel Committees themselves.

3. Now the Local Medical Committee must represent *all* the practitioners in the district—panel and non-panel men, hospital and health officers, medical women, etc.—in proportion to their numbers, together with the executive officers of the panel and non-panel committees. On this joint medical committee these men will meet and agree on a common course of action—to resist the common foe.

The Local Medical Committees should be in close communion with the British Medical Association, which would act as a central organizing authority and superintend the election of these committees.

This scheme leaves each class of practitioner free to follow its own bent, and yet preserves the organic unity of the profession.

I believe that if the Council of the British Medical Association had the pluck and the initiative to propound a scheme similar to this it would carry all before it.

We have now a golden opportunity; if we fail to seize it we never may be given another.

State Medical Service.

Mr. Charles A. Parker, F.R.C.S.Edin. (London), writes: You have been very generous in giving space for the discussion of this interesting question, so I will be brief in my reply to Dr. Lauriston Shaw's last letter.

I maintain:

1. That I have shown that, from the patient's point of view, there could be the same free choice of doctor under a State service as there is under the present panel system, and this Dr. Shaw has not disproved.

2. That there is all the difference in the world between competing for promotion in a service and competing for increased remuneration by pleasing individual patients.

3. That few who have any appreciable experience of private practice will deny that it is very difficult in existing circumstances to speak the truth, the whole truth, and nothing but the truth to lord, squire, and peasant alike.

4. That few will deny that the present panel system, with all its imperfections, must be accepted for the time being, and that to it must be added "such nursing, specialist and institutionalist services as are necessary to complete it."

What I want Dr. Shaw and the profession generally to recognize is that each step towards perfecting the present panel system is a step in the direction of a whole-time salaried State Medical Service, free and open to all who may need its help, and controlled by a Board of Health under the presidency of a Cabinet Minister. It is of the utmost importance that the profession should recognize the trend of things towards such a service, and should guide each step in its advance, so that in the end it shall be for the welfare of the nation and at the same time shall secure for every member of the profession an honourable and honoured position.

Statutory Local Medical Committee for London.

Dr. George Crichton (South Kensington) writes: It was with great pleasure that I read in the Journal that the Metropolitan Branch Council is taking a forward step in the working of the Act. Panel doctors may have been too suspicious of its attitude regarding them. Here is now manifested a recognition of their importance and one freed from the suspicion of haughty superiority of its members over men working quietly, most of them at their usual work, although with some new and unfamiliar conditions.

The proportion of panel and non-panel representatives on the proposed Committee is of minor importance. I hardly think as many as twenty-two will be found to serve on a committee which does not to any great degree personally concern them.

The Panel Committee for the County of London has issued a vague statement regarding allotment of insured persons, and states that it cannot be done, and then places the duty of allotting upon the doctors on the panel. There is need that allotment be carried out, and certainly it is not for the doctors to have anything to do with it. This would be advertising, and has been censured.

The Branch Council does not make clear the meaning of "panel" and "non-panel" doctor. Strictly speaking, the former is one who treats only insured persons, and the latter only the uninsured (or, at any rate, for fees paid by the patient). This is by no means actually the existing condition, for probably the most of those who work the Act have private practice also. The ordinary man with a middle-class practice finds that some insured persons call him in, and he therefore puts his name on the panel. Not 2,000, but 200 or 300 are all that he cares to have, so as not to interfere with his other work. I have gone far beyond what I thought would be a reasonable limit, and if I sign three or four every week, it is only because there are few panel doctors near. But I would strongly resent another 50 or 100 being dumped down upon me by the allotment committee. The threat is held out—by those Committees who should protect our interests—that our pay will be docked. With management, there should be little unallotted surplus in future years, and this should be applied otherwise. There should be a clear understanding for it to be entirely optional on the part of any doctor to take on as many or as few as he pleases, he being the sole judge of his ability to attend to them all.

The mode of election to the Branch Councils Committee is not quite clear. Am I to vote only for panel or for non-panel candidates? For my practice is in both spheres. The whole scheme requires further deliberation and discussion.

The Panel Committee already referred to comprises nearly seventy panel doctors, elected—I know not how—by the boroughs, and there are two co-opted members. Suppose, now, the Branch Council and the leading medical societies—about four or five—were each to nominate one or two men of independent opinion, and that this committee were to be persuaded to co-opt them. Could we not, with their help and co-operation, get some substantial work done?

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon JAMES D. S. MILLN, M.B., to the *Argyll* on recommissioning, March 17th. Fleet Surgeon JOHN D. HUGHES to Royal Marine Division, Chatham, vice Menary, April 8th. Fleet Surgeon JOHN MENARY, M.D., to the *Queen* and for general staff duties, vice Whitelegge, April 8th. Fleet Surgeon WILLIAM A. WHITELEGGE, M.D., to Greenwich Hospital School and College, vice Munday, April 8th. Fleet Surgeon RICHARD C. MUNDAY to the *President*, additional for service at the Admiralty, temporary, April 8th. Fleet Surgeon THOMAS AUSTEN to the *St. Vincent*, vice Hughes, April 8th. Staff Surgeon ROBERT W. B. HALL to the *Lowestoft* on commissioning, undated. Staff Surgeon EDWARD T. BURTON to the *Nottingham* on commissioning, undated. Staff Surgeon WILLIAM N. BLATCHFORD to the *Pembroke*, additional for disposal, vice Meehan, March 17th. Surgeon GUY B. COCKREM to the *Victory*, additional for disposal, March 13th. Surgeon MICHAEL MEEHAN to the *Argyll* on recommissioning, March 17th. Surgeon RONALD J. BARLEE to the *Victory*, additional for disposal, March 18th.

ARMY MEDICAL SERVICE.

COLONEL CHARLES E. NICHOL, D.S.O., appointed Deputy Assistant Director of Medical Services, Jubbulpore and Jhansi Brigades.

Colonel ROBERT W. FORD, D.S.O., from the half pay list, is restored to the Establishment, vice Colonel W. G. Macpherson, C.M.G., M.B., appointed Deputy Director-General, March 6th.

ROYAL ARMY MEDICAL CORPS.

Major HAROLD B. FAWCUS, M.B., from an Assistant Professor at the Royal Army Medical College to be Instructor at the School of Army Sanitation, vice Major C. E. P. Fowler, F.R.C.S., March 1st.

Major FRANCIS M. M. OMMANNEY retires, receiving a gratuity, March 11th.

Major R. McK. SKINNER appointed a Specialist in Midwifery and Diseases of Children in the Lahore Division.

Major H. P. W. BARROW has been posted for temporary duty at the War Office.

Captain J. A. BENNETT has been posted to the Dublin District for duty.

Captain T. S. DUDDING has been transferred from Bombay to Belgaum.

Captain A. T. FROST appointed a Specialist in Dermatology in the Eighth (Lucknow) Division, with effect from January 12th.

Captain J. STARTIN has been granted six months' leave, ex India.

Cadet Corporal ANDREW J. HORNE, from the Dublin University Contingent, Officers' Training Corps, to be Lieutenant on probation, February 20th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL H. BURDEN, C.I.E., is granted privilege leave for three months, combined with furlough for one year and nine months, with effect from February 1st, 1914.

Major C. F. MARR, M.B., Officiating Medical Storekeeper to Government, Lahore Cantonment, is appointed to be a Medical Storekeeper to Government, vice Major W. G. Richards, M.B., whose services have been placed temporarily at the disposal of the Government of Madras.

The provisional promotion to the rank of Captain of T. A. HUGHES, M.B., with effect from July 30th, 1913, is confirmed.

Lieutenant-Colonel P. P. KILKELLY, M.B., is permitted to retire from the service, with effect from March 1st, 1914.

Colonel BRUCE SETON, V.H.S., I.M.S., Deputy Director-General, Indian Medical Service, proceeds home on nine months' furlough, from February 28th.

Lieutenant-Colonel JAY GOULD, I.M.S., officiates as Deputy Director-General, Indian Medical Service, and Captain R. A. NEEDHAM officiates as Assistant Director-General, Indian Medical Service.

The Secretary of State has sanctioned fifteen new appointments to the Bacteriological Department.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANTS JOHN FRASER and J. H. C. GREENE resign their commissions.

The following Lieutenants to be Captains: SARSFIELD J. A. H. WALSHE, M.B., February 15th; CLARENCE E. GREESON, M.B., February 18th.

The following have been appointed Lieutenants on probation: DAVID DEMPSTER, late Sergeant, St. Andrew's University Contingent, Officers' Training Corps; Cadet Corporal RICHARD O'KELLY, from the Dublin University Contingent, Officers' Training Corps; Cadet Lance-Corporal EWEN S. MACPHEE, from the Glasgow University Contingent, Officers' Training Corps; Cadet THOMAS YOUNG, from the Glasgow University Contingent, Officers' Training Corps; Cadet ANDREW C. CASSELLS, from the St. Andrew's University Contingent, Officers' Training Corps; Cadet CLIVE A. WHITTINGHAM, from the Glasgow University Contingent, Officers' Training Corps; Cadet Sergeants JOHN P. HUBAN and JAMES O'S. BEVERIDGE, from the Royal College of Surgeons of Ireland Contingent, Officers' Training Corps; ALBERT L. F. SHIELDS, late Corporal, Belfast University Contingent, Officers' Training Corps; Cadet Sergeant FREDERICK MCKIBBIN, from the Belfast University Contingent, Officers' Training Corps; Cadet Sergeant THOMAS M. DAVIE, from the Edinburgh University Contingent, Officers' Training Corps; Cadet Sergeant CAMPBELL MCN. MACCORMACK, from the Belfast University Contingent, Officers' Training Corps.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Third East Anglian Field Ambulance.—Lieutenant ALEXANDER GRAHAM, M.B., to be Captain, January 7th.

Third Home Counties Field Ambulance.—Lieutenant JAMES BARKLEY to be Captain, February 3rd.

Notts and Derby Mounted Brigade Field Ambulance.—Captain ALEXANDER R. TWEEDIE, F.R.C.S., to be Major, March 14th.

Yorkshire Mounted Brigade Field Ambulance.—JOHN DOWNIE, M.B., to be Lieutenant, January 24th; Lieutenant THOMAS E. LISTER, M.B., resigns his commission, March 14th; EDWARD D. ELLIS to be Lieutenant, March 14th.

Fifth London Field Ambulance.—WILLIAM B. HILL, M.D., to be Lieutenant, February 17th.

Second Lowland Field Ambulance.—WILLIAM H. MANSON, M.D., to be Lieutenant, February 17th.

Northumbrian Clearing Hospital.—Captain WILLIAM T. HARKNESS, M.B., from the First Northumbrian Field Ambulance, to be Captain, March 14th.

Attached to Units other than Medical Units.—Captain CHARLES R. BROWNE, M.D., to be Major, January 5th.

For Attachment to Units other than Medical Units.—KENNETH D. WILKINSON, M.B. (late Cadet Sergeant, Birmingham University Contingent, Senior Division, Officers' Training Corps), to be Lieutenant, January 23rd; JAMES ANDERSON, M.B., to be Lieutenant, January 31st; Lieutenant CECIL W. ROWNTREE, M.B., F.R.C.S., from the Third London (City of London) Field Ambulance, to be Lieutenant, February 18th.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING 1913.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London based upon the Registrar-General's returns for last year. The births and deaths are those belonging to the several boroughs; the former, when occurring in any of the principal institutions receiving maternity cases, having been distributed to the boroughs in which the mothers resided, and the latter having been distributed according to the usual residence of the deceased.

The 112,637 births registered during the year were equal to an annual rate of 24.5 per 1,000; in the two preceding years the rates had been 25.0 and 25.7 per 1,000 respectively. The birth-rates in the several boroughs ranged from 9.2 in the City of London, 14.2 in the City of Westminster, 15.1 in Hampstead, 16.7 in Holborn, 19.1 in Chelsea and in St. Marylebone, and 19.3 in Kensington to 29.3 in Stepney, 29.6 in Finsbury, 30.7 in Bermondsey, 30.8 in Bethnal Green, 31.0 in Southwark, 31.5 in Shoreditch, and 32.0 in Poplar.

During last year the deaths of 65,030 London residents were registered, equal to a rate of 14.2 per 1,000; in the two preceding years the rates were 15.0 and 13.6 per 1,000 respectively. Among the several boroughs the death-rates, after correction for variations in the sex and age constitution of the several populations, ranged from 10.4 in Lewisham, 10.6 in Wandsworth, 11.3 in Hampstead, 12.9 in Fulham and in Stoke Newington, and 13.0 in Woolwich to 16.1 in Bethnal Green and in Poplar, 17.6 in Southwark, 17.8 in Bermondsey, 18.1 in Finsbury, and 19.2 in Shoreditch.

The 65,030 deaths from all causes included 114 from enteric fever, 1,570 from measles, 188 from scarlet fever, 800 from whooping-cough, 431 from diphtheria, and 3,098 (among children under 2 years of age) from diarrhoea and enteritis. Enteric fever was proportionally most fatal in Paddington, Fulham, St. Marylebone, Stoke Newington, the City of London, Stepney, Battersea, and Lewisham; measles in Kensington, Shoreditch, Bethnal Green, Poplar, Southwark, Bermondsey,

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Year 1913.

Boroughs.	Estimated Population Middle of 1913.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Deaths from Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhoea and Enteritis (Under 2 Years).	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Registered Births.
COUNTY OF LONDON	4,518,191	112,637	65,030	24.5	14.2	114	—	1,570	188	800	431	3,098	5,981	105
Paddington	142,210	3,055	1,941	21.1	13.4	6	—	55	7	37	12	71	157	100
Kensington	171,284	3,357	2,377	19.3	13.7	4	—	84	3	29	6	80	188	112
Hammersmith	123,745	3,043	1,754	21.2	13.9	—	—	47	7	47	12	64	151	103
Fulham	157,117	4,302	1,992	26.9	12.5	8	—	50	3	27	14	98	209	96
Chelsea	64,598	1,257	911	19.1	13.9	1	—	18	3	5	1	24	81	90
City of Westminster ...	154,810	2,227	1,992	14.2	12.7	3	—	22	7	7	8	52	206	95
St. Marylebone	114,532	2,221	1,633	19.1	14.0	5	—	33	10	10	6	37	158	91
Hampstead	86,346	1,326	938	15.1	10.7	1	—	21	4	11	3	18	50	75
St. Pancras	214,330	5,512	3,321	25.3	15.2	6	—	41	6	31	16	114	327	92
Islington	325,585	8,357	5,009	25.3	15.1	5	—	107	17	61	34	221	441	107
Stoke Newington ...	50,518	1,144	698	22.3	13.6	2	—	11	1	6	6	16	48	82
Hackney	223,353	5,522	3,037	24.3	13.4	4	—	63	11	23	11	141	261	99
Holborn	46,949	798	628	16.7	14.6	—	—	10	—	6	4	15	89	104
Finsbury	84,679	2,547	1,575	29.6	18.3	—	—	30	4	31	9	97	173	138
City of London	17,916	167	276	9.2	15.2	2	—	—	1	2	1	2	27	96
Shoreditch	109,654	3,513	2,068	31.5	18.6	1	—	52	3	29	14	207	200	155
Bethnal Green	127,824	3,993	2,006	30.8	15.4	4	—	62	3	34	10	151	201	118
Stepney	275,300	8,187	4,172	29.3	14.9	11	—	95	8	26	22	287	471	113
Poplar	160,913	5,230	2,668	32.0	16.3	5	—	69	12	38	34	159	239	112
Southwark	188,487	5,936	3,343	31.0	17.4	6	—	105	11	38	19	182	354	115
Bermondsey	124,739	3,896	2,266	30.7	17.9	3	—	90	4	47	17	165	204	132
Lambeth	297,139	7,233	4,314	23.9	14.3	8	—	99	14	47	37	202	389	102
Battersea	167,464	4,239	2,361	24.9	13.9	6	—	93	7	28	20	125	192	111
Wandsworth	330,395	6,840	3,550	20.4	10.6	5	—	116	11	23	16	148	288	88
Camberwell	261,805	6,671	3,653	25.1	13.7	5	—	68	13	54	18	179	306	106
Deptford	109,280	3,103	1,704	27.9	15.3	2	—	50	3	46	17	93	144	112
Greenwich	96,015	2,541	1,385	26.0	14.2	2	—	40	2	24	12	52	114	103
Lewisham	168,822	3,522	1,814	20.5	10.6	8	—	25	5	23	35	50	127	78
Woolwich	122,382	2,893	1,573	23.3	12.6	1	—	9	8	10	17	48	186	79

Battersea, Deptford, and Greenwich; scarlet fever in Hammersmith, St. Marylebone, Poplar, Southwark, and Woolwich; whooping-cough in Paddington, Hammersmith, Finsbury, Shoreditch, Bethnal Green, Bermondsey, and Deptford: diphtheria in Shoreditch, Poplar, Bermondsey, Deptford, Lewisham, and Woolwich; and diarrhoea and enteritis in Finsbury, Shoreditch, Bethnal Green, Stepney, and Bermondsey.

The deaths from phthisis among London residents last year numbered 5,981, and were equal to a rate of 1.30 per 1,000; in each of the two preceding years the rate was 1.35 per 1,000. The rates in the several boroughs ranged from 0.57 in Hampstead, 0.74 in Lewisham, 0.86 in Wandsworth, and 0.93 in Stoke Newington to 1.68 in Stepney, 1.79 in Shoreditch, 1.85 in Southwark, 1.87 in Holborn, and 2.01 in Finsbury.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 105 per 1,000 last year, against 102, 128, and 90 in the three preceding years. The lowest rates were 73 in Hampstead, 78 in Lewisham, 79 in Woolwich, 82 in Stoke Newington, and 88 in Wandsworth; the highest rates were 115 in Southwark, 118 in Bethnal Green, 132 in Bermondsey, 138 in Finsbury, and 155 in Shoreditch.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

THE Registrar-General has just issued his return relating to the births and deaths in the fourth quarter of last year, and to the marriages during the three months ending September last. The marriage-rate during that period was equal to 18.0 per 1,000, or 0.8 per 1,000 more than the mean rate in the corresponding quarter of the ten preceding years.

The 212,135 births registered in England and Wales during the quarter ending December last were equal to an annual rate of 22.8 per 1,000 of the population, estimated at 36,919,339 persons in the middle of the year; the average rate in the ten preceding fourth quarters was 25.0 per 1,000. The birth-rates in the several counties last quarter ranged from 13.4 in Rutlandshire, 15.7 in Westmorland, 15.8 in Sussex, 16.3 in Carnarvonshire, 16.5 in Merionethshire, 17.1 in Dorsetshire, and 17.2 in Cardiganshire to 25.4 in Northumberland, 25.5 in Carmarthenshire, 25.7 in Warwickshire, 26.9 in Staffordshire, 28.5 in Glamorganshire, 28.6 in Monmouthshire, and 29.1 in Durham. In ninety-six of the largest towns the birth-rate averaged 24.1 per 1,000; in London the rate was 23.7 per 1,000, while among the other towns it ranged from 14.1 in Bournemouth, 14.2 in Hastings, 14.3 in Bath, 14.6 in Southport, and 14.8 in Ealing and in Eastbourne to 30.3 in West Ham and in St. Helens, 30.5 in South Shields, 30.9 in Rotherham, 31.1 in Stoke-on-Trent, and 33.5 in Rhondda.

The excess of births over deaths during the quarter was 88,874, against 86,280, 85,506, and 87,975 in the corresponding quarters of the three preceding years. From a return issued by the Board of Trade it appears that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance outward of 19,130 passengers of British nationality and of 2,808 aliens. From the Continent of Europe there was an outward balance of 13,182 British passengers, and of 3,263 aliens; thus, the total passenger movement resulted in a net balance outward of 38,383 persons.

The deaths registered last quarter in England and Wales numbered 123,261, and were equal to an annual rate of 13.2 per 1,000, which was 1.6 per 1,000 less than the mean rate in the corresponding quarter of the ten preceding years. The lowest county death-rates last quarter were 9.7 in Middlesex, in Buckinghamshire, and in Huntingdonshire, 9.9 in Rutlandshire, 10.1 in Oxfordshire, and 10.3 in Wiltshire; the highest rates were 14.8 in Yorkshire North Riding, in Durham, in Pembrokeshire, and in Radnorshire, 15.1 in Cardiganshire, and 15.4 in Lancashire. In ninety-six of the largest towns the death-rate averaged 14.2 per 1,000; in London the rate was 14.1 per 1,000, while among the other large towns it ranged from 7.9 in Ilford, 8.9 in Enfield, 9.2 in Wimbledon, 9.3 in Ealing and in Hornsey, and 9.4 in Gillingham to 18.0 in Liverpool, 18.1 in Stoke-on-Trent and in Oldham, 18.7 in Burnley, 18.8 in Middlesbrough, and 19.1 in South Shields.

The 123,261 deaths from all causes last quarter included 537 from enteric fever, 2 from small-pox, 1,064 from measles, 668 from scarlet fever, 1,007 from whooping-cough, 1,438 from diphtheria, and 5,991 from diarrhoea and enteritis among children under 2 years of age. The mortality from diphtheria was slightly below the average; that from measles was less than half the average; and that from enteric fever, scarlet fever, and whooping-cough was about two-thirds of the average.

The rate of infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births was equal to 113 per 1,000, and was 15 per 1,000 less than the average proportion in the ten preceding fourth quarters. Among the several counties the rates of infant mortality last quarter ranged from 32 in Huntingdonshire, 57 in Buckinghamshire, 59 in Dorsetshire, 62 in Wiltshire, and 63 in Hertfordshire to 132 in Staffordshire, 133 in Warwickshire, 139 in Westmorland, 140 in Durham, 144 in Lancashire, and 145 in Carnarvonshire. In ninety-six of the largest towns the rate averaged 125 per 1,000; in London it was 115 per 1,000, while among the other towns it ranged from 56 in Bath, 59 in Hornsey, 62 in East Ham, and 65 in Ilford and in Eastbourne to 172 in Aberdare, 175 in Stoke-on-Trent, 180 in Blackburn, 192 in Blackpool, 194 in Oldham, and 202 in Burnley. The deaths of persons aged 1 to 65 years were equal to an annual rate of 7.2 per 1,000, and those among persons aged 65 years and upwards to an annual rate of 76.5 per 1,000 of the population estimated to be living at these groups of ages respectively.

The mean temperature of the air last quarter was considerably above the normal, the excess varying in most districts from 2½ to 3 degrees. The rainfall during the quarter was less than the average in all districts. The duration of bright sunshine was in excess of the average, the difference amounting to more than 10 per cent. in most districts, to 20 per cent. in the south-eastern, and to 27 per cent. in the eastern counties.

HEALTH OF ENGLISH TOWNS.

IN ninety seven of the largest English towns 8,620 births and 5,338 deaths were registered during the week ended Saturday, March 14th. The annual rate of mortality in these towns, which had been 15.0, 15.1, and 15.8 per 1,000 in the three preceding weeks, fell to 15.4 per 1,000 in the week under notice. In London the death-rate did not exceed 14.5, against 14.2, 14.1, and 15.6 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.2 in Wimbledon, 6.3 in Ilford, 7.4 in Leyton, 8.2 in Hornsey, 8.4 in Eastbourne, and 8.7 in Hastings to 21.2 in St. Helens, 21.4 in Reading, 22.0 in Stockton-on-Tees, 22.1 in Oldham, 22.7 in Swansea, and 22.9 in South Shields. Measles caused a death-rate of 1.9 in Barnsley and in Cardiff, 2.4 in Burnley and 3.0 in Swansea; scarlet fever of 1.6 in Middlesbrough; and whooping-cough of 2.1 in Oldham, 2.2 in Edmonton, and 3.4 in Swansea. The mortality from diphtheria and enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 36, or 0.7 per cent. of the total deaths, were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 8 were recorded in Birmingham, 8 in Liverpool, 3 in London, and 3 in Gateshead. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, and the London Fever Hospital, which had been 3,457, 3,392, and 3,307 at the end of the three preceding weeks, had further fallen to 3,222 on Saturday, March 14th; 320 new cases were admitted during the week, against 351, 401, and 340 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,216 births and 787 deaths were registered during the week ended Saturday, March 14th. The annual rate of mortality in these towns, which had been 16.5, 17.5, and 16.6 per 1,000 in the three preceding weeks, rose to 17.9 in the week under notice, and was 2.5 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 6.8 in Hamilton, 9.4 in Falkirk, and 14.2 in Ayr to 20.0 in Perth, 20.1 in Greenock, and 22.8 in Kirkcaldy. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Glasgow and Aberdeen. The 392 deaths from all causes in Glasgow included 24 from measles, 8 from whooping-cough, 4 from scarlet fever, 3 from diphtheria, 2 from enteric fever, and 2 from infantile diarrhoeal diseases. Four deaths from measles were recorded in Edinburgh, 2 in Paisley, and 2 in Leith; from diphtheria 5 deaths in Aberdeen and 2 in Edinburgh; and 1 death from typhus in Greenock.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ABERDEEN ROYAL INFIRMARY.—Second Assistant Ophthalmic Surgeon.

ARGENTINA: ANGLO-GERMAN HOSPITAL, Rosario.—Resident Medical Officer. Salary, £314 per annum.

AYR COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £70 per annum.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARNSTAPLE: NORTH DEVON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Honorarium, £100 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant to Electrical Department. Honorarium at the rate of 52 guineas per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officers (males) (1) at the Selly Oak Infirmary; (2) at the Dudley Road Infirmary. Salary, £160 and £140 per annum respectively.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Two House-Surgeons (males). Salary at the rate of £75 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD UNION.—Assistant Resident Medical Officer at the Eastby Sanatorium (female). Salary, £130 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary, £125 per annum.

BRIGHTON AND HOVE HOSPITAL FOR WOMEN.—House-Surgeon. Salary, £80 per annum.

BRIGHTON THROAT AND EAR HOSPITAL.—Non-resident House-Surgeon. Salary at the rate of £150 per annum.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL: COSSHAM MEMORIAL HOSPITAL, Kingswood.—House-Surgeon (male). Salary, £100 per annum.

BRISTOL GENERAL HOSPITAL.—Anaesthetist in Dental Department. Honorarium, £15 for six months.

BRISTOL: ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Physician. Salary, £80 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—(1) Surgeon. (2) House-Surgeon. Salary, £70 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £120 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DOLGELLY UNION.—District Medical Officer and Public Vaccinator. Salary, £20 per annum, £5 allowance for expensive medicines, and fees.

DONCASTER: ROYAL INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £100 per annum.

DUMFRIES: CRICHTON ROYAL MENTAL HOSPITAL.—Locumtenent for six months. Salary, 5 guineas a week.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary at the rate of 100 guineas per annum.

FALKLAND ISLANDS.—Assistant Colonial Surgeon. Salary, £300 per annum.

GLASGOW: ROYAL SAMARITAN HOSPITAL FOR WOMEN.—(1) Resident Medical Officer; honorarium, £25 per annum. (2) Vacancy on Outdoor Dispensary Staff.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant Surgeon.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £140 per annum.

GROSVENOR HOSPITAL FOR WOMEN, Vincent Square, S.W.—Honorary Assistant General Surgeon.

HALIFAX: ROYAL HALIFAX HOSPITAL.—(1) Second House-Surgeon. (2) Third House-Surgeon. Salary, £100 and £80 per annum respectively.

HASTINGS: EAST SUSSEX HOSPITAL.—Assistant House-Surgeon (male). Salary at the rate of £80 per annum.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HOSPITAL OF ST. JOHN AND ST. ELIZABETH, Grove End Road, N.W.—Resident Medical Officer. Salary at the rate of £80 per annum and possible bonus of £10.

HULL: ROYAL INFIRMARY.—Casualty House-Surgeon. Salary at the rate of £80 per annum.

INDIA: IMPERIAL BACTERIOLOGICAL LABORATORY, Muktesar.—Pathologist. Salary, £560 per annum, rising to £960, and after twenty years' service to £1,040.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

LEICESTER ROYAL INFIRMARY.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Salary at the rate of £80 per annum each.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM, Parkside.—Locumtenents. Salary, 4 guineas a week.

MALLWYDD URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £20 per annum.

MANCHESTER ROYAL INFIRMARY.—(1) Assistant Medical Officer. (2) Assistant Surgical Officer. (3) Assistant Medical Officer to the Convalescent Home, Cheadle. Salary at the rate of £35 per annum for (1) and (2), and £80 for (3).

MIDDLESEX COUNTY ASYLUM, Napsbury.—Junior Assistant Medical Officer. Salary, £250 per annum.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £85 per annum.

MONTROSE: ROYAL ASYLUM.—Junior Assistant Medical Officer. Salary, £200 per annum.

NATIONAL SANATORIUM, Benenden.—Assistant Medical Officer. Salary, £120 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NOTTS EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £225 per annum, increasing to £250.

PRESTON: COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—(1) Pathologist and Registrar. (2) House-Physician. Salary at the rate of £200 and £80 per annum respectively.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Anaesthetist.

ST. HELENA.—Assistant to Colonial Surgeon. Salary, £250 per annum.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Anaesthetist. Honorarium, £15 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon (male). Salary, £80 per annum.

SCULCOATES UNION.—Resident Assistant Medical Officer at the Workhouse Infirmary. Salary, £170 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Dreadnought Hospital, Greenwich: (1) Medical Registrar. (2) Two House-Physicians. (3) Two House-Surgeons. Albert Dock Hospital: (4) House-Surgeon. (5) House-Surgeon to Out-patients. Salary for (1) £100, (2) and (3) £50, and (4 and 5) £75 per annum.

SHEFFIELD: EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary, £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £120 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHWARK UNION INFIRMARY.—Second and Third Assistant Medical Officers. Salary, £120 per annum, the former increasing to £140.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, rising to £140.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SUNDERLAND: ROYAL INFIRMARY.—(1) House-Physician. (2) Junior House-Surgeon (males). Salary, £120 per annum each.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, ETC.—Assistant Resident Medical Officer. Salary, £100 per annum.

WAKEFIELD GENERAL HOSPITAL.—Second House-Surgeon (male). Salary, £100 per annum, increasing to £120.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street.—Resident House-Surgeon. Salary at the rate of £90 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—Junior House-Physician. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Honorary Medical Registrar.

WEST RIDING COUNTY COUNCIL.—(1) Assistant Medical Officer (male) at the Scalebor Park Asylum. (2) Assistant Medical Officer at the Cardigan Sanatorium, near Wakefield. Salary, £220 and £250 per annum respectively.

WESTERN DISPENSARY, Rochester Row, S.W.—Resident Medical Officer. Salary, £75 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WILTS COUNTY COUNCIL, Trowbridge.—Assistant School Medical Inspector. Salary, £300 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £90 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) House-Surgeon. Salary, £125 per annum each.

WOOLWICH INFIRMARY.—Resident Assistant Medical Officer (male). Salary, £180 per annum, rising to £200.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Crewkerne (Somerset), St. Just (Cornwall).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

DOWN, Elgar, F.R.C.S.Edin., M.R.C.S., L.R.C.P.Lond., Honorary Physician to the Royal Albert Hospital, Devonport.

DUNWOODY, W. G., M.D Dubl., District Medical Officer of the Isle of Thanet Union.

FERGUSON, Robert, M.D.Aberd., Certifying Factory Surgeon for the Ongar District, co. Essex.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street.—The following Clinical Assistants have been appointed:
John Russell Higson, M.B., C.M., D.P.H.; Julian Landman, M.D., Ch.B.; John William Pugh, M.D., M.R.C.S.

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Vauxhall Bridge Road, S.W.—The following appointments have been made:
House-Surgeon.—Skene Keith, M.B., B.S.
Clinical Assistants.—Henry Braund, M.R.C.S., L.R.C.P.Lond.; Edward O'Connor, M.A., M.B., B.Ch.Oxon.; H. E. Gibson, B.A.Oxon., M.B., B.Ch.; S. Zobel, M.D.Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

HARRIS.—On March 3rd, at S. Cuthberts, Chandlersford, Hants, the wife of Frederic Rosenberg Harris, a son.

DIARY FOR THE WEEK.

MONDAY.

ROYAL SOCIETY OF MEDICINE:
SPECIAL MEETING, 5 p.m. Lecture: Surgeon-General Gorgas on his work at Panama.
SECTION OF ODONTOLOGY, 8 p.m.—Paper:—Dr. T. J. Horder: Dental Sepsis from the Point of View of the Physician.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
SECTION OF MEDICINE, 5.30 p.m.—Papers:—Dr. J. A. D. Radcliffe and Dr. D. L. V. de Wesselow: Diagnosis of Pulmonary Tuberculosis. Professor Theodore Schott (Nauheim): Changes Induced in the Circulatory Apparatus by Physical Methods of Treatment.
SECTION OF PSYCHIATRY, 8.30 p.m. Paper:—Dr. H. Devine: The Biological Significance of Delusions. Discussion of Dr. R. G. Rows's paper: The Importance of Disturbances of the Personality in Mental Disorders.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W. 5 p.m.—Second Lumleian Lecture by Dr. J. A. Ormerod: Some Modern Theories concerning Hysteria.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Third Lumleian Lecture by Dr. J. A. Ormerod: Some Modern Theories concerning Hysteria.

ROYAL SOCIETY OF MEDICINE:
SECTION OF NEUROLOGY, 8.30 p.m.—Paper:—Dr. David Orr and Dr. R. G. Rows: Experimental Infection of the Central Nervous System.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:
SECTION OF DISEASES OF CHILDREN, 4.30 p.m.—Cases and Specimens.
SECTION OF EPIDEMIOLOGY AND STATE MEDICINE, 8.30 p.m.—Paper:—Mr. Major Greenwood, jun., and Mrs. Frances Wood: Changes in the Recorded Mortality from Cancer and their Possible Interpretation.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Lecture, Wednesday, at 4.30 p.m., The Diagnosis of Early Pulmonary Tuberculosis.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday, 3 p.m., Diseases of the Larynx; Friday, 3 p.m., Facts and Fallacies regarding Voice Production.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Tuesday, Wednesday, and Friday, 4.15 p.m., Syphilology.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, E.—Lectures daily (Saturday excepted) at 12 and 4 p.m. Practical Laboratory Work daily (Saturday excepted), 10 to 12 a.m. Practical Helminthology, 2 to 3.30 p.m. daily. Medical Clinics, Tuesday and Thursday at 3 p.m. Operations, Friday, at 3 p.m.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Wednesday, Royal Infirmary: Suppuration of the Accessory Cavities of the Nose. Thursday, Ancoats Hospital: Some Slight Ailments. Friday, Royal Eye Hospital: Cases for Diagnosis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day; Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Special Lectures at 5.15 p.m. each day.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—General Clinics and Operations at 2.30 p.m. daily. Monday, Gynaecology; Tuesday, Throat; Wednesday, Skin, Eye, Children; Tuesday and Thursday, *X* Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations as in Syllabus.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Monday, 4 p.m., Demonstration of Medical Cases.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Medical School, Friday, 5 p.m., Pleurisy. Clinics are held daily in the several departments of the hospital during March: Cardiac, Laryngology, *X* Ray.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, *X* Rays, and Operations, 2 p.m. daily. Gynaecological: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday. A Lecture at 5 p.m. on Monday and Tuesday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		MARCH.
20	Fri.	London: Special Fund Committee, 10 a.m.
		Newcastle-upon-Tyne Division, Scientific Demonstrations, 3.15 p.m. to 6 p.m.
24	Tues.	London: Regulations and Standing Orders Subcommittee, 12.15 p.m.
25	Wed.	Central Division, Medical Institute, Edmund Street, 3.30 p.m.
26	Thur.	Camberwell Division, Camberwell Infirmary, Brunswick Square, S.E., 4 p.m.
27	Fri.	City Division, Brooke House, Upper Clapton, 9.30 p.m.
		Leicester and Rutland Division, Oakham, 5.45 p.m.; dinner, 7 p.m.
30	Mon.	London: Dominions Committee, 2 p.m. (*provisional*).
		MARCH (*continued*).
30	Mon.	London Naval and Military Committee, 4 p.m.
31	Tues.	London: Public Health Committee, 3 p.m.
		APRIL.
1	Wed.	London: Journal Committee, 2.30 p.m.
3	Fri.	London: Central Ethical Committee, 2 p.m.
		London: Medico-Political Committee, 10.30 a.m.
4	Sat.	London: Science Committee (*provisional*).
7	Tues.	London: Organization Committee, 2 p.m.
8	Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
15	Wed.	London: Finance Committee, 2.30 p.m.
22	Wed.	London: Council.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 28TH, 1914.

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INSURANCE ACT COMMITTEE.

THE thirteenth meeting of the Insurance Act Committee was held at the office of the Association on Thursday, March 19th, Mr. T. JENNER VERRALL (Acting Chairman) in the chair, and the other members present were:—*England and Wales:* Dr. D. E. Finlay (Gloucester), Dr. E. R. Fothergill (Brighton), Dr. Major Greenwood (London), Miss M. F. Ivens, M.S. (Liverpool), Dr. I. W. Johnson (Bury), Mr. Herbert Jones (Hereford), Dr. C. H. Milburn (Hull), Dr. H. F. Oldham (Morecambe), Dr. G. K. Smiley (Derby), Mr. D. F. Todd (Sunderland), Dr. W. B. Crawford Treasure (Cardiff), Mr. E. B. Turner (London). *Scotland:* Dr. John Adams (Glasgow), Dr. R. McKenzie Johnston (Edinburgh). *Ex Officio:* Dr. W A. Hollis (President).

MEMBERSHIP OF COMMITTEE.

The CHAIRMAN announced that Dr. Constance E. Long had resigned the membership of the Committee as the representative of the Association of Registered Medical Women, and that Dr. Mina L. Dobbie had been nominated in her place. The Committee placed on record its cordial appreciation of the services rendered by Dr. Long, who had been a member of the Committee since its appointment, and recommended the Council to approve the appointment of Dr. Dobbie in her place.

CONFERENCE OF REPRESENTATIVES OF LOCAL MEDICAL AND PANEL COMMITTEES.

The report of the proceedings of the Conference of Local Medical and Panel Committees, held in London on March 13th (SUPPLEMENT, March 21st), was received, and Mr. D. F. TODD, the Chairman of the Conference, stated that the provisional committee appointed by the Conference had met, and would in all probability shortly ask for a meeting with the Insurance Act Committee to discuss certain questions arising out of the decisions of the Conference. The Committee expressed its willingness to accept such an invitation when received.

INSURED PERSONS AND THE POOR LAW.

Dr. MAJOR GREENWOOD drew attention to the inconvenience caused to Poor Law medical officers by the failure of the Insurance Committees to supply insured persons promptly with cards to obtain the services of a panel doctor, and the consequent application of persons to relieving officers, who gave them orders on the Poor Law doctor. The Committee resolved to suggest to the Insurance Commissioners that Form Med. 50 be amended by the provision of a space for signature by the medical practitioner chosen by the insured person, as was provided in the old Form Med. 32. The alteration it was felt was advisable in the interest both of the insured person and of the doctor.

CENTRAL INSURANCE DEFENCE FUND.

Two letters of thanks for assistance granted from the Central Insurance Defence Fund were read, and two applications for assistance from the fund were granted.

FUTURE OF MEDICAL BENEFIT.

The ACTING CHAIRMAN drew attention to the future position of medical benefit under the Insurance Act as affected by the necessity for the renewal of the Treasury grant and by the proposed valuation of approved societies. After discussion a special subcommittee, consisting of the Acting Chairman, Dr. John Adams, Dr. E. R. Fothergill, Dr. I. W. Johnson, and Dr. Crawford Treasure, was appointed to take into consideration the questions involved in the following motion:

> That the Committee (1) report to the Council that it considers that the approaching termination of the period for which the Government undertook to provide a Treasury grant towards the cost of medical benefit, the complaints which have been made as to excessive claims for sickness benefit, and the criticism on the actual or prospective financial status of approved societies, create a situation which requires the most careful consideration; and (2) recommends that the Council include in its annual report to the Representative Body a full statement on the subject, so that the profession, through the Annual Representative Meeting, may be prepared with a definite defence against suggestions as to laxity in the granting of certificates, and against any possible raising of difficulties as to the conditions of service or its remuneration.

Mr. D. F. TODD, the Chairman of the Special Committee on the Extension of the Scope of the Insurance Act

appointed by the Council in accordance with the instructions of the Annual Representative Meeting, 1913, stated that his Committee intended at its next meeting to proceed to consider further the recommendations which should be made to the Council with regard to the means which should be taken for rendering modern methods of diagnosis and treatment readily available for insured persons, and with regard to hospital treatment and other cognate matters which should be taken into consideration in determining the policy of the Association "as to what a National Health Insurance Act should be, not merely from the point of view of the interests of the profession, but also from that of public health and the advancement of medical science."

Approved Societies making Frivolous Complaints.

The Committee had before it a letter addressed by the Sunderland Local Medical Committee to the Insurance Commissioners suggesting that approved societies should be subject to fines for frivolous complaints preferred against medical practitioners. The Committee resolved to urge upon the Insurance Commissioners that the liability to fines to which insured persons who preferred frivolous complaints against medical practitioners were subject should be extended to any bodies or persons who make complaints of such nature.

Title of Panel Committee.

At the suggestion of the Sunderland Local Medical Committee, the Insurance Act Committee resolved to urge the Insurance Commissioners to alter the title of "panel committee" to "practitioners' committee."

1915 Agreements—Supply of Drugs.

The Committee considered the following reply from the Insurance Joint Committee to a letter addressed to it as to the arrangements for 1915 agreement, and as to the quality of drugs supplied to insured persons.

National Health Insurance Joint Committee,
Buckingham Gate, London, S.W.,
5th March, 1914.

Sir,—I am directed by the National Health Insurance Joint Committee to acknowledge the receipt of your letter of the 9th ultimo.

The Agreement for 1915.

With regard to your representations under this head, I am to remind you that on the occasion of a deputation from the British Medical Association to the Commissioners on the 3rd October last, the Commissioners indicated the time table which they proposed to follow in connexion with the 1914 Agreements, and that those proposals appeared to meet with general satisfaction. As the time table indicated was in fact adhered to, it is presumed that, contrary to the expectations then entertained by the representatives of the Association, the subsequent experience of the Association has led them to the view that a longer period than that allowed for the consideration of the 1914 Agreements should be available for the consideration of any future agreements.

If this is the view of the Association the Commissioners will be glad to give the fullest consideration thereto. They think it necessary to point out, however, that if the period for negotiations, etc., is to be extended, this could only be effected by fixing earlier dates in the year for the issue of Regulations and for the preliminary discussions, thus making it necessary for the Commissioners to arrive at their conclusions as to the matters requiring amendment at a still earlier date, when little, if any, experience would be available for their guidance as to the working of the current year's agreements.

Supply of Drugs.

The Commissioners are, of course, aware that general statements to the effect reported in your letter are occasionally made, but the Regulations and Agreements now in operation contain provisions for securing and maintaining a proper standard of quality and accuracy to the dispensing and supply of medicines, and the Commissioners have reason to believe that Insurance Committees are fully alive to their duties as regards the enforcement of those provisions where necessary.

They would, however, be glad to be furnished with particulars of definite cases with a view to thorough investigation; and they would value the assistance of the Association in bringing any such cases to light.—I am, Sir, Your obedient Servant,

(Signed) R. W. Harris.

After considering the letter the Committee adopted the following resolutions:

That it be pointed out to the Commissioners that what the Committee desires is the publication, at as early date as possible, of a definite time table which will be adhered to as regards the arrangements for 1915.

That, concerning the question of the supply of drugs, the Insurance Commissioners be informed that the Committee is aware that the Regulations and Agreement now in operation contain provision for securing and maintaining a proper standard of quality and accuracy in the dispensing and supply of medicines, but that the Committee would like to know what steps the Commissioners or Committees are actually taking to ascertain whether or not these standards are being maintained.

Local Medical Committee for London.

The following resolution, referred by the Acting Chairman of Council to the Committee, was directed to lie on the table:

That the London Organization Committee of the National Medical Union repudiates the action of the Metropolitan Counties Branch of the British Medical Association in attempting to elect a Local Medical Committee for London which would be unrepresentative of the profession, and prejudicial to the interests of non-panel practitioners.

Expenses of Panel Committees.

The following letter from the Insurance Commissioners in response to a communication addressed to them concerning the expenses of Panel Committees was read:

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.,
March 13th, 1914.

Sir,—In reply to your letter of the 10th instant, regarding Section 33 (2) of the National Insurance Act, 1913, I am directed by the National Health Insurance Commission (England) to state that the total amount which may be allocated to the Panel and Pharmaceutical Committees under this Section for their administrative expenses in any year will not exceed an amount calculated at the rate of 1d. per insured person entitled to obtain treatment from practitioners on the Panel of the Insurance Committee.

The determination of the sums to be allotted to each Committee is a matter for the Insurance Committee, subject to the consent of the Commission; and the Commission consider that a sum may be allotted to the one Committee, although no desire for an allotment of funds has been expressed by the other Committee. Generally speaking, however, it will be necessary for the Insurance Committee and the Commissioners to be satisfied that any request for an allotment of funds put forward by either the Panel or the Pharmaceutical Committee is made with the concurrence of the other Committee.

Under Article 33 (3) (iii) of the National Health Insurance (Medical Benefit) Regulations (England), 1913, any sums allotted to the Panel Committee or the Pharmaceutical Committee will be charged to the Practitioners' Fund or the Drug Fund as the case may require.

Before the precise sums to be allotted to a Panel Committee can be determined it will be necessary for the Insurance Committee to be reasonably satisfied that the moneys have been or will be expended for the purpose specified in the Section, videlicet, the administrative expenses of the Committee. The Insurance Committee will, therefore, desire to have before them in connexion with any request for allotment a provisional estimate of the expenses for the purpose of which the allotment is desired in order that they may be in a position to criticize any items which appear to them to be improperly included therein.

The final determination of the sum for any year will, of course, have to be deferred until the actual administrative expenses of the Panel Committee are ascertained.—I am, Sir, your obedient Servant,

(Signed) S. Vivian.

The Medical Secretary,
British Medical Association,
Medical Department,
429, Strand, W.C.

The Committee also had before it the statement of the Commissioners elicited by the conference of representatives of the Local Medical and Panel Committees, to the effect that the Commissioners held that moneys allotted to a Panel Committee out of the 1d. deduction provided for in Section 33 (2) of the National Insurance Act, 1913, would not be available to defray expenses of any association

of Panel Committees. The Insurance Act Committee thereupon passed the following resolution:

> That the Committee is of opinion that Panel Committees should be urged to make provision for their expenses by means of voluntary schemes; and that such opinion and the reasons therefor be expressed in the next communication to Panel Committees.

INQUIRY AS TO THE CONTINUANCE OF PRACTITIONERS ON THE PANEL.

Two sittings were held at the offices of the Insurance Commissioners, Buckingham Gate, London, on March 20th and 21st, of the Inquiry Committee set up under Section 15 (2) (*b*) of the Insurance Act, 1911, and Part VI of the Medical Benefit Regulations, 1913, to consider representations from two Insurance Committees alleging the continuance of certain practitioners on the panel to be "prejudicial to the efficiency of the medical service of the insured." The Regulations provide that an inquiry shall be held if a representation is made by an Insurance Committee, Local Medical Committee, or Panel Committee, and may be held if the representation is made by any other body. The Inquiry Committee must be composed of a barrister-at-law or solicitor in actual practice and two practitioners; the Commissioners appoint one of the three to be chairman. The Inquiry Committee is not a tribunal invested with plenary powers; its duty is to report to the Commissioners, who afterwards publish their decision. On this occasion the Inquiry Committee consisted of Mr. J. Fischer Williams, barrister, Chairman, and Dr. T. M. Carter and Dr. Milburn, with Mr. P. A. Koppel, Clerk.

COMPLAINT BY THE GLOUCESTER INSURANCE COMMITTEE.

The Gloucester (County Borough) Insurance Committee made a representation in respect of Dr. Oswald Arnold Gee. Mr. C. E. Jeens, the Clerk, represented the Committee, and Mr. A. L. Lane represented Dr. Gee.

Mr. JEENS said the allegations were that Dr. Gee did not give proper attention to an insured person named William Withers, and that he gave sickness benefit certificates to persons whom he had not examined. The allegation in regard to Withers was that the insured person was taken ill on Wednesday, July 2nd, 1913, and sent for Dr. Gee, his panel doctor, on Thursday, July 3rd, before 8 a.m., receiving the answer that the doctor would be round as soon as possible. As the patient was not visited for some time the wife called again at about mid-day, and the doctor's servant took the message. Still no call was made, and another doctor was called in. He diagnosed the case as one of pneumonia. Another message was sent later in the day to Dr. Gee, but he did not come. His explanation of this was that he understood another doctor had been sent for. A third doctor was then called in, on the instructions of the Chairman of the Insurance Committee, to give continuing treatment. The doctor's explanation before the Insurance Committee was that he did not think it necessary to attend after the third doctor was called in; that the reason he did not respond to the earlier calls was that he was very busy; and that he did call late on the Thursday evening, but could make no one hear.

Mr. LANE (for Dr. Gee) said he was prepared to admit that in regard to the issue of certificates there had been an indiscretion on the part of the doctor, to express regret, and to leave the matter entirely in the hands of the Committee.

The CHAIRMAN: I ought to warn you we are not sitting as judges; it is not our business to take any action. We report the facts to the Commissioners and they take action. We are not in the ordinary position of justices in a court of first instance.

Mr. JEENS (continuing) said that when before the Committee Dr. Gee expressed regret the matter was carried no further, until complaints of another kind were received. The allegation was that at least one initial certificate and several continuing certificates were given by Dr. Gee without his having seen the persons in respect of whom they were issued. On the certificate relating to a Mrs. Harris (handed in) the signature was not that of the doctor but that of his sister.

Dr. T. M. CARTER: Is it the sister's initials or a forgery of the doctor's signature?

Mr. LANE: It is common ground that she was instructed to sign.

Mr. JEENS said the doctor's explanation before the Committee was that he was ill in bed at the time; that in the case of the continuing certificates he was well acquainted with the state of the patients, who were suffering from illnesses from which they could not then have recovered. The initial certificate was given to a pregnant woman whom he had seen ten days previously, and only refrained then from giving her a certificate because she wished to continue working as long as she could. He authorized his sister in these cases to sign his name, and said it was a practice followed in many business houses. He could not get a locumtenent, and a neighbouring doctor attended to new cases. Dr. Gee told the Insurance Committee that he saw no harm in what he had done, and, as he did not appear to realize the seriousness of the position, the Committee sought for an inquiry, as in its opinion the continuance on the panel of a practitioner holding such views was undesirable. Mr. Jeens now understood, however, that the doctor took a different view, although he did not express it to the Insurance Committee, but said, in fact, that he would do the same thing again under similar circumstances.

The CHAIRMAN: Did he actually say that?

Mr. JEENS: Yes, I can prove it.

Mr. LANE: I admit it.

Mr. JEENS added that Dr. Gee now realized that what he did was indefensible and utterly wrong, and constituted a course of conduct which, if persisted in, would be extremely detrimental to the panel system, which otherwise, he was glad to say, was working very efficiently in Gloucester. Mr. Jeens said that the Insurance Committee desired him to point out that the inquiry had occasioned considerable expense; the administration funds, particularly of a small county borough, were earmarked, and the Committee felt very strongly that the costs of the inquiry should be borne by the doctor whose conduct had made it necessary.

The CHAIRMAN said the Inquiry Committee had no power in the matter; those observations might or might not be taken notice of in another quarter.

Mr. LANE: Have you no power to make a recommendation? Otherwise my position might be somewhat different.

The CHAIRMAN: We report as to facts and inferences from facts.

Mr. LANE: But you don't make any recommendation? My friend and I have come to an understanding.

The CHAIRMAN: Representations to the Insurance Commissioners can be made through some other channel.

Mr. LANE: Assuming that the Gloucester Committee intimates that it will be content with a certain course of action, would that not go to the Commissioners through your report?

The CHAIRMAN: A note is taken of what is said.

Some discussion then took place as to the calling of evidence on behalf of the Insurance Committee. The CHAIRMAN pointed out that not much detail had been given by Mr. Jeens as to the manner in which the fact of the illness of Withers had been communicated to Dr. Gee, and a good deal might turn on that. Mr. LANE said he was prepared to admit that at least two calls reached the doctor personally. Mr. JEENS said he was in a difficulty as to calling evidence. Rather to his surprise, this inquiry had taken place in London and not in Gloucester, and he had no power to compel the attendance of witnesses. No witnesses were, therefore, called by the Insurance Committee, and the CHAIRMAN remarked that it practically came to this, that the Inquiry Committee would accept in evidence as many of the facts as were admitted by Dr. Gee.

Mr. LANE, on behalf of Dr. Gee, said that the reason for the inquiry was that the Gloucester Committee did not think Dr. Gee appreciated the seriousness of what he had done. He did not at the time; he had no legal advice, and he was not a business man. If he had given the Committee the desired assurance, nothing more would have been heard of the matter. If an undertaking was given that nothing of the kind should occur again and that Dr. Gee thoroughly realized the position and paid the costs, would that meet the view of the Inquiry Committee?

The CHAIRMAN: I do not think you quite realize the position. The Commission has been asked to inquire into certain facts, and the Committee will report on those facts. This is not a civil case which can be settled between you, we as a court having mercy to enter an agreed judgement.

Mr. JEENS: There was no settlement outside this room.

The CHAIRMAN: It was put a little in that way.

Mr. Jeens: This is the first time we have been able to get an undertaking from Dr. Gee.

The Chairman: An undertaking not to do it does not really carry you much further than the actual contract in the agreement with the doctors.

Continuing his remarks on behalf of Dr. Gee, Mr. Lane said it must be admitted that as the wording of the certificate was "I have to-day examined," Dr. Gee's action was indefensible, but his explanation was that he knew the cases perfectly well. He had pointed out to Dr. Gee the dangers of his course of action, and the doctor now realized it.

The Chairman: It is perfectly obvious that if this practice were general the whole financial system of the Act would break down. The security of a proper medical certificate by a practitioner who has examined the patient would be lost.

Dr. Gee was then sworn. He said he had just over 1,500 insured patients. His surgery hours were 10 to 11 o'clock in the morning and 6 to 7 o'clock in the evening. He was seeing from 70 to 80, or even 90 patients a day last July, and the surgery hours were much extended. In regard to the case of Withers, he received a communication about 10 o'clock, but before he had an opportunity of leaving the surgery he received a telephone message from Dr. Hadwen to say that he had been called in and had attended the patient. He (Dr. Gee) had to go into the country in the afternoon, and had another long surgery in the evening, and on his way back from a case in the city he called at Withers's house, but could not make any one hear. In the morning Mrs. Withers called, and he told her he came the previous night. When a third doctor—Dr. Bibby—had been instructed by the Insurance Committee he felt there was no further use in attending; he had paid Dr. Bibby's fees. As to the certificates, he was ill in August with pneumonia, and was confined to his bed for about ten days. Dr. Jones kindly attended urgent cases and visited patients. In the case of insured persons who called, and whose cases he knew, he told his sister to sign his name to the continuing certificates. With the exception of the case of Mrs. Harris, his sister never signed an initial certificate. He had seen this woman before his illness, and had prescribed. He now realized the danger of the course he had followed; his difficulty was that the people would have lost sickness benefit if the certificates had not been forthcoming.

The Chairman: You authorized the affixing of your signature to a statement which was not true?

Dr. Gee: I examined the woman on the 11th; if she had taken my advice to go on the funds then, or if I had dated the certificate back, it would have been all right. I see the mistake now.

Dr. Gee's advocate had admitted on his behalf that he knew the case of Withers was a serious one, whereas Dr. Gee now said in evidence that he was only told by Dr. Hadwen on the telephone that it was a case of bronchial trouble. The impression left on his mind was that the case was not a serious one, and that the immediate needs of the situation had been met by Dr. Hadwen's visit.

Mr. Lane mentioned that a petition against the removal of Dr. Gee from the panel, signed by 800 or 900 of those on his list, had been sent to the Insurance Commissioners.

This concluded the hearing, and the Chairman said the Committee would consider its report.

Complaint by the Liverpool Insurance Committee.

On Saturday, March 21st, the Committee sat again to consider a representation by the Liverpool Insurance Committee in the case of a practitioner on the panel, Dr. Robert Fawcitt Granger, who did not attend and put in no defence.

The allegations, as stated by Mr. W. G. Hodgson, administrative officer to the Insurance Committee, and borne out in sworn evidence by him and two clerks in the office of the Committee, were that Dr. Granger went on the panel on January 3rd, 1913. About 30 persons went on his list then, and the number afterwards increased to 66. On more than one occasion in 1913 the doctor could not be found at the addresses at which he purported to give treatment; he was on these occasions undergoing imprisonment for non-payment of instalments for the maintenance of his son at an industrial school. No deputy was appointed by Dr. Granger during his absence. On various occasions the Committee had to make arrangements for insured persons on Dr. Granger's list to receive treatment from another practitioner. Dr. Granger had been traced in the course of migrations from various addresses in the Old Swan district of Liverpool, where he had lodged for short periods, but at the present time the officials of the Insurance Committee had been unable to find him, though they believed him to be still in Liverpool.

The Chairman intimated that the Inquiry Committee would consider its report.

LOCAL MEDICAL AND PANEL COMMITTEES.

LIVERPOOL.

Panel Committee.

On November 11th, 1913, a meeting of the panel practitioners in the Liverpool area was held to formulate a scheme to put before the Commissioners for the election of the first Panel Committee, and the following scheme, which had been suggested by the Local Medical Committee, was unanimously adopted:

> That the Liverpool area be divided into five districts. Each district shall elect its own representatives to the total number of twenty-one panel practitioners, the remaining seven to be co-opted by these twenty-one from among the non-panel practitioners in the Liverpool area.

The scheme was forwarded to the Commissioners at once, but it was not until late in January, 1914, that it was officially adopted. Another month was occupied by the arrangements made by the Commissioners for elections in the various districts. The following are the names of those panel practitioners who have been elected:

Northern Area.—Dr. J. G. Moyles (Walton), Dr. G. Oldershaw (Walton), Dr. J. Rafter (Bootle), Dr. G. Wild (Bootle).

North Central Area.—Dr. E. W. Barnes, Dr. S. H. House, Dr. R. Paterson, Dr. R. G. Sheldon, Dr. J. Unsworth.

Southern Area.—Dr. W. B. Bennett (Aigburth), Dr. D. Donnelly (Garston), Dr. A. S. Parkinson (Wavertree), Dr. P. F. Tinne (Grassendale).

South Central Area.—Dr. W. T. D. Allen, Dr. S. H. Shaw, Dr. J. E. Stott, Dr. H. Jones.

Eastern Area.—Dr. J. G. Baxter, Dr. T. Clarke, Dr. A. W. German, Dr. R. J. Richardson.

It has been arranged that at the first meeting of this Panel Committee, summoned for March 25th, seven non-panel practitioners shall be co-opted.

WORCESTERSHIRE.

Local Medical and Panel Committees.

A meeting of the Local Medical and Panel Committee was held at Worcester Infirmary on March 13th. Mr. J. L. Stretton was in the chair, and twenty-one other members were present.

The report of a meeting of the Joint Subcommittee was read and approved.

Communications from Commissioners. — The Commissioners having notified their willingness to recognize the present Local Medical Committee until July 15th, 1914, it was resolved that the present committee should remain in office accordingly. It was reported that with regard to the administrative expenses of the Local Medical Committee that the Commissioners had informed the Secretary that there were no funds available for any such expenses. Although the personnel of the Local Medical and Panel Committees were identical, the Commissioners had informed the Secretary that they could not recognize them as one body. It was announced that the Commissioners had notified their approval of the additions to the original panel committee.

The Commissioners having asked for a provisional estimate of the probable total of administrative expenditure of the panel committee for the year, the matter was referred to the Finance Subcommittee.

Election of Representatives.—The following representatives were appointed:

On the Finance Subcommittee.—Drs. J. L. Stretton, H. E. Moore, H. L. Miles.

On the Executive Committee.—Drs. J. L. Stretton, H. E. Moore, J. Wilkinson, M. Johnston.

Resolutions of Insurance Committee.—The resolutions of the Insurance Committee, adopted (1) on the recommendations of the Joint Subcommittee, (2) on the recommendations of the Local Medical Committee, were read and approved.

Refusal of Insured Person.—It was decided to refer to the Insurance Committee the question of the refusal by a

panel practitioner to accept on his list a particular insured person.

Index Cards of Patients.—The Secretary was instructed to write to the Clerk of the Insurance Committee with regard to the continuance of the system of furnishing index cards to each panel practitioner in respect of every insured person accepted by him.

WEST SUFFOLK.

A JOINT meeting of the Panel and Local Medical Committees was held on March 17th for the discussion of matters which are by the regulations referable to both of them.

Report on Conference.—The SECRETARY read a detailed report on the Conference held in London, March 13th.

Medical Referees.—It was agreed that pending some permanent arrangement by the Commissioners no practitioner should consent to act as medical referee under the Insurance Act at a less fee than 10s. 6d. per case. Every doctor in the area whether on the panel or not has been circularized to this effect.

Unallotted Funds.—A letter was read from the Clerk to the Insurance Committee stating that the Commissioners had decided that no payments could be made from the Drug and Drug Suspense Fund in respect of persons who were unallotted last year. After discussion it was resolved:

> That this Committee is of opinion that unallotted persons and unallotted funds should be at once distributed among practitioners on the panel.

A small committee was appointed to discuss this resolution with the Medical Benefit Subcommittee of the County Insurance Committee with power to act.

Limited List.—The meeting decided to refuse an application submitted to it by the Medical Benefit Subcommittee from a doctor in an adjoining area to join the West Suffolk panel for a limited list.

PANEL COMMITTEE.

Permanent Constitution.—The Committee agreed upon a scheme for submission to the Commissioners.

Vacancy on Committee.—Dr. C. F. Gray (Newmarket) was nominated to fill the vacancy in District 4.

Expenses.—The Committee agreed to defer decision in the matter of expenses pending advice from the Provisional Committee elected at the Conference.

Checking Chemists' Accounts.—It was decided that it was desirable that the Committee's right to check the chemists' accounts should be exercised, and a subcommittee of four was appointed to act.

New Prescription Book.—The Secretary was instructed to ask all practitioners on the panel, when the new Carbac book is issued, to instruct their patients to retain the triplicate copy of the prescription and bring it with them at each visit for reference by doctor and chemist. It was agreed that if the method were found successful the work involved in tracing "Rep. Mist.," which the chemists are finding excessive, would be avoided.

BRISTOL.

LOCAL MEDICAL COMMITTEE.

THE Commissioners have recognized the Committee, elected in January, until July 15th, 1914.

Chairman.—Dr. H. Grey.
Vice-Chairman.—Dr. G. H. Barker.
Honorary Treasurer.—Dr. G. Parker.
Honorary Secretary.—Dr. C. Bernard.

Drs. Collinson, G. S. Page, Mather, Devis, Lucas, J. W. Wallace, Leonard, Staniland, Ormerod, Hall, Semple, Dobbyn, W. H. Elliott, Lily Baker, Atchley, Carling, Flemming, Elwin Harris, G. T. Myles, C. Williams, Ellington Jones, Wright, and *ex officio* Drs. Michell Clarke, T. M. Carter, Barclay Baron, and Scott-Williamson. The *ex officio* members are the Insurance Commissioners and Borough Council's nominees on the Insurance Committee.

Representatives on Insurance Committee.—Drs. Fleming and Wright.

Representative on Medical Service Subcommittee.—Dr. E. G. Hall.

Professional Secrecy.—The Committee has considered a reference from the Medical Service Subcommittee with regard to the officials of approved societies interviewing doctors before the societies send patients to the Medical Adviser, and has referred the matter to the Panel Committee accompanied by the following resolutions:

> That it is a breach of professional confidence to impart any intelligence of a patient's condition to the agent of a society.
>
> That in the opinion of this Committee a medical man is always at liberty to receive information in writing, and to act upon it, if he considers it advisable.

ESSEX.

PANEL COMMITTEE.

THE adjourned first meeting of the Panel Committee was held on February 26th, when it was found that the additional members elected to the Local Medical Committee and Panel Committee were not accepted by the Commissioners, on the ground that the personnel of the committees had been accepted till July, 1914.

A scheme for the permanent Panel Committee was passed and sent to the Commissioners, the representatives being in the proportion of 1 in 20 of doctors in the twenty-one panel areas of Essex.

Extravagant Dispensing.—The Drug Suspense Fund having declined to about 2½d. in the last quarter, the Secretary was instructed to issue as soon as possible a report with suggestions to panel doctors advising that they should order from the tariff list as much as possible, should refrain from ordering two 6-oz. bottles when one 12-oz. bottle would do, and also to be careful to order the exact quantities of dressings, etc. A subcommittee was appointed to look into these matters, which reported to the second meeting of the Panel Committee on March 12th, when the form of report on extravagant dispensing was decided upon. The circular will contain a list of proprietary articles used in 1913 which it is recommended should not in future be prescribed.

Inaccuracies in Doctors' Lists.—The Secretary was instructed to bring to the notice of the Insurance Committee certain inaccuracies which appeared in the lists supplied to doctors on the panel.

LOCAL MEDICAL COMMITTEE.

Medical Referees.—A resolution was adopted recommending that referees should be appointed centrally and paid by joint contributions from approved societies. It was considered that referees sent by individual societies not only transgressed the ordinary rules of ethics, but also were really sent to put patients off benefit rather than to decide their true condition, thereby not carrying out the spirit of the Act.

[This decision was confirmed at the resumed meeting of the Panel Committee. The Secretary draws attention to the fact that "continuation" certificates appear to have been given so freely in some cases as to arouse the adverse comment of societies, and points out that such action is likely to promote the appointment of referees locally, which is considered by the Panel Committee to be against the interests of the patients and likely to cause friction in the profession.]

LONDON.

PANEL COMMITTEE.

THE first Panel Committee for the County of London, which consists of 71 members, elected, under a special scheme approved by the Insurance Commissioners, by the practitioners on the panel for the City of London and for the twenty-eight metropolitan boroughs, at their first meeting appointed Dr. B. A. Richmond, Dr. G. B. Batten, Dr. Lauriston E. Shaw, and Dr. A. Welply to be their chairman, vice-chairman, honorary treasurer, and secretary respectively, and appointed four subcommittees to deal with the following matters:

1. *Finance and General Purposes Subcommittee* (Chairman, Dr. H. J. Cardale).—All questions connected with the provision of office accommodation, stationery and printing, staff, standing orders, accounts, and any matter not delegated or referred to any other subcommittee.
2. *Organization Subcommittee* (Chairman, Dr. C. W. Cunnington).—All questions connected with the organization of the Committee and of practitioners on the London panel, in order to secure the efficient administration of medical and sanatorium benefits.
3. *Panel Service Subcommittee* (Chairman, Dr. W. H. Hatfield).—All questions connected with the service of practitioners under the National Insurance Acts.
4. *Pharmacy Subcommittee* (Chairman, Dr. C. W. Hogarth).—All questions connected with the supply of drugs and appliances as part of medical benefit under the National Insurance Acts.

Chemists' Accounts.—The Committee have had under consideration the arrangements to be made for the examination of the accounts furnished by chemists and other

persons for the supply of drugs and appliances to insured persons under the National Insurance Acts, 1911–13, and in conjunction with the Pharmaceutical Committee and the Panel Committee they have appointed a Joint Committee for the examination of such accounts, the three committees to contribute equally towards the expenses of the Joint Committee.

In accordance with the provisions of the regulations of the Insurance Commissioners the Committee has decided to submit for the Commissioners' approval a scheme for the election of subsequent Panel Committees.

Assignment of Insured Persons who have Failed to Select a Doctor.—The Panel Committee has arranged with the Insurance Committee that any person entitled to select a practitioner on the panel who makes application for that purpose shall be assigned to the practitioner on the panel whose surgery is nearest to the insured person's residence.

Unallotted Patients.—The Insurance Committee and the Panel Committee have submitted for the approval of the Insurance Commissioners a scheme whereby these further capitation fees shall be credited quarterly to all practitioners on the panel (other than practitioners who indicate that they are not prepared, or who refuse, to treat persons assigned to them) in proportion to the number of insured persons on their lists at the commencement of the quarter, provided that no such further capitation fees shall be credited in respect of, or in proportion to, any number of insured persons on a practitioner's list in excess of 2,000.

Secretary.—At their meeting in March the Committee determined to appoint a whole-time medical secretary and a chief clerk, and the Chairman of the Committee, Dr. B. A. Richmond, consented to accept the position of secretary referred to, vice Dr. A. Welply, resigned.

Offices.—The Committee have taken offices in Staple House, Chancery Lane, W.C., and all communications intended for the Committee should be addressed to the Secretary of the London Panel Committee, Staple House, Chancery Lane, W.C.

ELECTION OF LOCAL MEDICAL COMMITTEE.

In the list of nominations for the Panel Committee published last week, the name of Dr. Robert Vincent Donnellan, of 2, Lewisham Park, S.E., nominated as a panel practitioner representing Lewisham, was accidentally omitted; he was duly elected, without opposition.

Dr. WILFRED KINGDON (London, W.) writes: Would you kindly—to clear up any misunderstanding—insert in your Saturday's issue the following copy of a letter I have to-day addressed to the Honorary Secretaries of the "National Medical Union"?

(Copy.)

Local Medical Committee for London.

Dear Sirs,—I am in receipt of your letter of yesterday's date, with enclosure, and I also received the marked copy of the *Lancet*. May I inform you:

1. That my colleague Dr. Burnhill and I were nominated as non-panel representatives for Group 4 Boroughs in accordance with a resolution of the executive of the Kensington Division of the British Medical Association, whose members are elected from the boroughs of Kensington, Paddington, and Hammersmith.

2. That such resolution was passed unanimously after full discussion as to how the best interests of the profession at large and the non-panel practitioners in particular could be served.

3. That my first nomination was signed by Mr. E. B. Turner, than whom, I trust you will admit, there has been during the time of stress and warfare no more powerful advocate of all that is in the best interests of the profession.

And that, having been requested to stand for election by the representative men of the area of the above-named boroughs—where my views on the working of the Insurance Act are very well known—I do not see my way to acceding to your request that I should withdraw my name.

Further, I may add that in my opinion your action in this matter can only have a bad—if any—result.—Yours faithfully,

WILFRED KINGDON.

The Honorary Secretaries of the "National Medical Union."

INSURANCE COMMITTEES.

SALFORD.

Investigation of the Administration of Medical Benefit.

AT a meeting of the Salford Insurance Committee on March 18th, a letter was read from the secretary of the Manchester and District Association of Secretaries of Approved Societies, forwarding the following resolution of the association:

> That the present system of dispensing medical benefit in Salford has been an unqualified failure, and this association therefore calls upon the Salford Insurance Committee to inquire as to the advisability of establishing a full-time medical service at an early date.

A proposal was then made to appoint a subcommittee to inquire into the desirability of establishing a full-time service. In the debate that followed several members of the Committee objected to the statement that the Salford system had been an unqualified failure, but the feeling was almost unanimous that some investigation was necessary, and an amendment appointing a subcommittee to inquire and report on the present system was eventually carried unanimously. The subcommittee appointed consisted of five members representatives of the approved societies, Councillor Delves and Mrs. Hampson representing the Salford corporation, and Drs. S. Hodgson and J. H. Taylor.

Tuberculosis.

It was reported that the total number of persons who had received domiciliary treatment for tuberculosis in 1913 was 231, the duration of treatment being 3,466 weeks. It was estimated that the average cost of drugs per week for these persons was 1s. 6d., making a total of about £260. Owing to oversight, however, on the part of the panel practitioners, the prescriptions marked "domiciliary" only amounted to £69 15s., and the Committee confirmed a recommendation of the Medical Benefit Subcommittee that "the Commissioners be requested to authorize the Committee to transfer the sum of £190 from the Sanatorium Benefit Fund to the Drug Fund in order to meet the cost of drugs supplied to persons receiving domiciliary treatment which had been charged against the Drug Fund." In order still further to reduce the deficiency in the Drug Fund, which as it stands at present is only estimated to be sufficient to pay the chemists 72 per cent. of their accounts, it was announced that the Pharmaceutical Committee had, under Regulation 46, given the Panel Committee a list of the medical practitioners who were considered to have prescribed excessively, and that the Panel Committee after investigation would report to the Insurance Committee.

The CHAIRMAN stated that pending the building of the new sanatorium at Marple, which will not be ready for at least fifteen months, the corporation had decided to open another ward at the Drinkwater Park Hospital to provide from 16 to 20 beds for tuberculous patients, in addition to the 33 beds now available at the hospital.

A letter had been received from an insured person receiving domiciliary treatment for tuberculosis, who complained that he had not been supplied with extra nourishments, and in connexion with this a letter was read from the Local Government Board stating that:

> The Board do not consider that it is within the powers of the town council to supply food except in the case of patients receiving treatment in residential institutions, though the council could supply drugs, including cod-liver oil, where prescribed by the tuberculosis officer, to patients who are receiving treatment at or in connexion with the council's dispensary. . . . The Board also think it desirable that the consideration of the question whether the town council should undertake the domiciliary treatment of non-insured persons should be deferred until the council have had experience of the working of the dispensary arrangements proposed in connexion with their complete scheme.

The letter also contained the following statement, which is of the utmost importance to general practitioners throughout the country:

> If at some future time experience should show that it is desirable for the Corporation to provide domiciliary treatment the Board are inclined to think that as far as practicable it should be given by officers of the local authority especially qualified to treat tuberculosis and acting under the direction of the tuberculosis officer.

Whether this foreshadows a possible withdrawal of the domiciliary treatment of tuberculosis from the panel practitioners remains to be seen, but it would appear that there is a tendency in that direction, though the present letter only directly refers to non-insured persons.

Appointment of Clerk.

The Committee unanimously endorsed a recommendation of the Finance Committee that Mr. F. A. Anderson,

chief clerk, should be appointed clerk to the committee at a commencing salary of £175, in place of the town clerk of Salford, who has hitherto held the position.

INSURANCE NOTES.

THE VALUE OF CO-OPERATION.

AT a meeting of the Lambeth Panel Practitioners' Association on March 17th an address was given by Dr. Christopher Addison, M.P.; the chair was taken by Dr. Herbert Taylor, and before the address the Honorary Secretary, Dr. Pywell, presented the second general report of the association, tracing its work since the first general report issued on December 5th, 1913.

DR. ADDISON'S ADDRESS.

Dr. Addison began by saying that it was very desirable that medical men should learn the art of co-operation, for he thought that the fact that so many medical men pursued an active life quite removed from their fellows was responsible for a good many of the troubles which the profession had experienced in recent times. It should be remembered that there was no real professional interest which could in the end conflict with the public interest. The more closely the views of the profession were examined the more fully would this truth be realized. As an illustration he referred to certain parts of the report that had been read, and said that it was fashionable in certain quarters, not always disinterested quarters, to run down the medical service of the Insurance Act. The medical service under the Act was not all it was intended it should become; it was only a beginning, and would grow. It would, he said, be foolish to try and ignore the fact that there were medical men who did not conduct and had not conducted their practices in the highest and most scientific manner. Previously there had been nothing to show whether this was the case, but it must be recognized that in the insurance committee, the medical services subcommittee, and other committees, the Insurance Act provided machinery by which complaints could be made and heard, and anything which tended to heighten the quality of medical practice would in the end strengthen the profession in the public esteem; the more any inefficiency of the medical service was inquired into the better it would be for the men in the services, because now that the State was assuming responsibility in those matters it was the duty of the State to provide what was shown to be wanting. It was impossible not to feel regret whenever complaints were made that insured persons were treated unfairly. Sometimes, on rare occasions, it appeared to be true, and whenever an isolated case was shown to be established it to some extent prejudiced the panel doctor in the eyes of the people. But as a matter of fact it could in fairness be said that the more those things were inquired into the more they showed that throughout the country the medical men had risen to their responsibility. The more facts of that kind were established the more difficult it became for any section to suggest any change which was against the interests of the men in the service. It was quite certain that nothing could be carried through which would militate against the real interests of any men who were trying to do their duty, otherwise the foundation of confidence upon which the whole service must rest would be taken away. It had been, for example, suggested that it was possible to place insurance on a voluntary basis; judging from his own correspondence a good many men were anxious on that account. Any man who had given a close study to the principle of insurance, however, knew perfectly well that such a suggestion was moonshine; a solvent system could not be devised on that basis.

Medical Benefit.

The definition of medical benefit and its scope was "such a service as can be rendered by any medical man of average competence and skill," but the profession should aim at a service which should be such that any medical man should be free to render under it any service that he felt honestly capable of rendering. With regard to a State Medical Service, he said that the term had become a sort of shibboleth; but those who used it had often failed to define what they meant. There were certain governing considerations which nobody could get away from. If a State had to provide medical attendance for the people it could only provide it through and by the medical men existing and practising at the time. When men had been accustomed for a number of years to look upon their patients and their work from a certain point of view that point of view could not be abruptly changed. Any service must develop and grow, and it was the business of statesmen to-day to see that it grew in the right way and developed on right lines.

Laboratories and Consultations.

Referring to the provision of facilities for laboratory inquiries, he said that it would be desirable, if possible without trouble or red tape, to make use of laboratories for diagnosis and for the other special services which laboratories could render.

Another question was the practicability of providing centres for groups of medical men where they could help one another and have at their disposal special provisions for making diagnoses, and perhaps in some places *x*-ray apparatus and a nurse. He believed a good many men would be stimulated in their work if they could meet and work together at a convenient time and place. Such an arrangement would provide for consultation in difficult cases. A further branch of the service which he thought was within reach of practical politics, provided the money could be obtained, was a system of consultants in association with the panel practitioners' work. A consulting service would be of two kinds. There would be what he might call the general consultants, who, if they were men of sufficiently high standing, and trusted by their professional brethren, would be a great addition to the insurance service. Another branch which would be useful, if it could be secured, was an expert consultant service. He did not think a specialist service would be difficult to arrange for, and it would be of great value to the insured.

The hospital question was much bigger than many people realized. If as many hospital beds in accessible places as were really needed were to be available for the whole community the total cost at the rate of 30s. a bed a week would amount, on a moderate estimate, to something like 2½ millions a year, entirely apart from what was provided already. It was a big undertaking, and the sound policy would be to feel the way carefully.

Excessive Sickness and the Duty of the Medical Profession.

A great deal was being heard just now of the revelation of ill health made under the National Insurance Act, particularly amongst women workers. All thinking men must be glad that this revelation was being made. The tale was only beginning to be told. No class of men collectively knew so much as medical men of the conditions under which the people were born, brought up, lived and worked; who knew so well their struggles, their daily and domestic difficulties, and their ignorances and their mistakes as well; their habits and the dire effects of those of them that are bad. None knew better how vital a thing it was that there should be more sound teaching, more understanding of the necessity and use of cleanliness, of the value and choice of food, of how to prepare it, of the necessity for temperance and so on. None knew better how very difficult—often how well-nigh impossible—it was for multitudes, from the position of their home, from the condition of their life and work, to escape from the vicious circle of adverse circumstances in which they found themselves engaged. It was time to attack these causes, and no class could give more help and guidance than medical men. But their voice was not heard as it might be, with considerate judgement. If the medical men of a district were, from the point of view solely of the promotion of public health, in the light of the knowledge they had, after inquiry and full deliberation, to make a report of what in their judgement were the material facts with regard to the habits and conditions of the life and labour of the people which were responsible for abating their vigour, made easy the onset of disease and retarded recovery, that would be a contribution to the promotion of the public good which would not only be valuable and significant in itself, but would bring honour and dignity to themselves.

He believed that during the recent unfortunate disputes the medical profession as a whole lost a great deal of

public respect in that it failed to take a wide enough view of the situation. This resulted, he believed, from the isolated lives so many medical men lead. Those to whom the great body of medical men might rightfully have looked for guidance and sane counsel failed them. This was not so much a fault as a misfortune, arising out of the fact that the machinery and training for the consideration of public questions from a professional point of view had been lacking. In conclusion he said: "We need not only to make our medical service more expert and more available, but we need that wider vision which will lead to the provision of means whereby the knowledge gained shall be collectively available to be applied, as far as can be, in public life and administration; and I think that the life and work of medical men should be such that it will afford reasonable time and facilities for this being done. In so far as the medical profession rises to its duties and opportunities in this respect, so far, I believe, does it add to its own security and become more valuable to, and valued by, the people to whom it renders aid."

INSURANCE ACT IN PARLIAMENT.

Discussion on Medical and Sanatorium Benefit.

A general discussion took place for a short time on Tuesday evening, March 24th, on a motion brought forward by Sir Henry Craik to call attention to the administration of medical benefit and related matters under the Insurance Act. Sir Henry Craik dealt with the scope of medical benefit, and pressed the need for the provision of specialists' services, laboratory facilities, and others. He warmly defended the medical men from charges which had been made against them in respect of their services under the Act, and contended that they were loyally co-operating in carrying out its provisions in accordance with the best traditions of their profession.

Mr. Godfrey Locker-Lampson raised the question of sanatorium benefit, and complained of the inadequate nature of the provision made up to the present. He raised also the question of the payment of drug accounts in certain areas.

Mr. Herbert Samuel, on behalf of the Government, described the extensive arrangements which were being made by the Local Government Board in connexion with the provision of sanatoriums, and pointed to the continuous and unremitting efforts of the present administration with regard to tuberculosis and health matters. He claimed the sympathetic co-operation of all parties in his efforts to carry forward and perfect the organization of institutions and the other machinery necessary for dealing effectively with tuberculosis.

Mr. Wedgwood Benn replied to other points which had been raised in the debate.

Excessive Sickness Inquiry.

Mr. Godfrey Locker-Lampson asked whether the inquiry of the Departmental Committee into excessive sickness and deficiencies under the National Insurance Act was a secret inquiry, or whether the evidence would be published when complete.—Mr. Benn replied that he did not know what was meant by a secret inquiry. In accordance with the usual practice, the proceedings of the Committee were confidential, but, as already stated, evidence would be published.

Jurymen.

Mr. Rupert Gwynne asked the Chancellor of the Exchequer if his attention had been called to the case of a juryman who, after serving for nine days at Lewes assizes this month, applied to Mr. Justice Bray to have his national health insurance card stamped, and would he say who was responsible in such cases for the employer's contribution and for the workman's contribution.—Mr. Benn said service on a jury was the performance of a public duty, and was not employment within the meaning of the Act.

Medical Benefit.

Medical Cards.

Mr. C. Bathurst asked whether the Insurance Commissioners had required in Memorandum 187/I.C. that no insured person would on and from January 12th last be able without a medical card to exercise a choice of, or to claim treatment from, a doctor selected by him; that in spite of such regulations the medical cards had not reached insured persons in several hundred thousands of cases, with the result that they were wholly unable to obtain medical benefit when sick except at their own expense; and whether, as in such cases insured persons were being deprived of the benefit promised to them as the result of their own and their employers' contributions, the Government proposed to take any and, if any, what action.—Mr. Benn replied that under the arrangements indicated in the memorandum in question, doctors were not permitted to require the persons on their lists to produce medical cards as a condition of their receiving treatment until notified by the Insurance Committee that medical cards had been issued to all such persons. Those arrangements, moreover, provided a special procedure whereby persons who desired to choose a doctor might obtain a medical card for the purpose upon application, and there was no reason to believe that there was any ground for the apprehension of the hon. member.

Mr. C. Bathurst asked whether, in fact, a large number of insured persons were not receiving medical benefit since this order was issued, and Mr. Benn replied that he was not aware that anything had been done which had prevented from obtaining medical benefit any one who had a right to it.

In reply to Mr. Godfrey Locker-Lampson, Mr. Benn said that no grant from public funds had been promised to certain Insurance Committees in order to meet their expenditure in connexion with the recent issue of medical cards.

Panel Doctors (Country Areas).

Mr. Cowan asked what steps the Insurance Commissioners proposed to take to provide medical attendance by panel doctors in country places at present without resident medical practitioners and to which doctors from a distance objected to come.—Mr. Benn replied that the arrangements for medical benefit provided that the doctors on the panel for any area were collectively responsible for the medical attendance of all insured persons in that area. If special circumstances in any particular district were brought to notice inquiries would be made.

Homœopathic Treatment.

In reply to Mr. M. Barlow, Mr. Benn said that it was open to an insured person who desired the services of a homœopathic doctor not on the panel to apply to the Insurance Committee for leave to make his own arrangements for the purpose.

Drug Fund.

Mr. Godfrey Locker-Lampson asked what were the Insurance Committees in Lancashire which expected a deficiency in the drug fund, and had met at Blackburn on March 6th to consider the question of the payment of the panel chemists accounts and to make representations to the Insurance Commissioners; and whether the representations they had made could be laid before the House.—Mr. Benn said that it was understood that the conference decided that it would be premature to make any representations to the Commissioners on the subject of deficiencies until the provisions of the Regulations with regard to scrutiny and surcharging had been put into operation and it had been ascertained whether there was in fact any deficiency. No representations had been received by the Commissioners from the conference.

Mr. Godfrey Locker-Lampson asked whether the Stoke-on-Trent Insurance Committee had officially stated that in round figures the chemists in their area would only be paid 85 per cent. of their bills for 1913; whether the cost per prescription had risen during the year; and whether he proposed to see that these accounts were paid in full.—Mr. Benn replied that the drug funds of the Insurance Committee referred to (in whose area the per-attendance system was in operation for the first quarter of 1913) were estimated to amount to approximately 85 per cent. of the total chemists' bills presented. In the absence of any action by the chemists concerned to put into operation the surcharging provisions of the Regulations, the total amount available in the drug funds would be paid in settlement of their accounts as provided by the agreements into which they had entered. The average cost per prescription had risen during 1913, but the number of prescriptions had steadily decreased.

SICKNESS BENEFIT.

Finance.

Mr. Mitchell-Thomson asked (1) whether the amount of the Government actuaries' estimate of the sum to be expended in sickness benefit by approved societies was in respect of women 2s. 2d. per quarter and in respect of men 3s. 3d. per quarter, and whether there was any margin beyond these amounts in the contributions; and (2) what was the Government actuaries' estimate of the cost of maternity benefit per annum per 100 male members and per 100 female members of approved societies, and whether, in addition to such estimate, there was any margin.—Mr. Benn: The figures referred to in the first question represent an approximate estimate of the cost of sickness benefit and maternity benefit, and include the provision for additional cost represented by the margin in the original actuarial calculations. It should be understood that these are general average rates, in arriving at which any abnormalities of age distribution and marriage status are disregarded, as also is the variation of claims with reference to the particular time of the year.

Domestic Servants.

Mr. MacCallum Scott asked whether, in the case of a domestic servant who was drawing sickness benefit, and whose employer was also paying wages for a month in lieu of notice, the employer was obliged to pay insurance contributions in respect of the domestic servant during that month.—Mr. Benn said that the Commissioners were advised that the payment of a month's wages in lieu of notice was in the nature of liquidated damages, and that the employer was not required to pay contributions in respect of any week after the week in which the employment terminated.

Deposit Contributors.

Mr. Cassel asked the Prime Minister whether, in view of the fact that the provisions of the Insurance Act, 1911, with regard to deposit contributors expired at the end of this year, it was the intention of the Government to introduce legislation at an early date to deal with the position of deposit contributors; whether the bill for this purpose would be introduced before Easter; and whether ample time would be allowed for the consideration of the Government's proposals on this complicated problem.—The Prime Minister said: As I recently stated, special investigations in regard to this class of insured persons are in progress, and until they are completed it would be premature to make any statement.

MATERNITY BENEFIT.

Mr. MacCallum Scott asked whether an insured married woman, whose employer was paying reduced contributions under Section 47 of the National Insurance Act, was entitled to claim wages in full from her employer for four weeks after a confinement; and whether she was entitled to claim two maternity benefits from her society, or from her husband's and her own society.—Mr. Wedgwood Benn: The point raised in the first part of the question is under consideration, and I will communicate with my hon. friend when a conclusion has been arrived at.

SANATORIUM BENEFIT.

Dependants.

Mr. Astor asked how many Local Insurance Committees had extended sanatorium benefit to dependants, how many had ceased giving this benefit to dependants, and how many were still giving it to dependants of insured persons.

Mr. Wedgwood Benn said that in England sanatorium benefit had been extended to the dependants of insured persons by fifty-four Insurance Committees, of whom thirty-eight had now revoked the extension, and sixteen were still treating dependants. Apart from the last-mentioned areas, however, dependants of insured persons were receiving treatment in many other areas under comprehensive schemes for the treatment of tuberculosis. In Scotland twenty-four, and in Ireland twenty-three, Insurance Committees had extended the benefit to and were still treating dependants. In Wales all the Insurance Committees had extended benefit to dependants who were receiving treatment under the arrangements with the Welsh National Memorial Association.

Residential Institutional Treatment.

Mr. Astor asked whether any consumptive insured person had received residential institutional treatment for more than eight months; and, if so, how many had received such treatment for this or a longer period.—Mr. Benn said that the precise number of consumptive insured persons who had received more than eight months' residential treatment could not be stated without obtaining a special return from all Insurance Committees in the United Kingdom.

Mr. Cassel asked the Prime Minister whether the Government intended to introduce legislation to enable the expenditure incurred in treating insured persons suffering from tuberculosis in workhouse infirmaries to be recouped to the ratepayers.—The Prime Minister said that the question of the treatment of tuberculosis in insured persons was receiving consideration, but the Government had no intention of amending Section 12 of the National Insurance Act, 1911, in the direction suggested.

Workhouse Infirmaries.

Mr. Astor asked whether any tuberculous persons were being or had been treated in workhouse infirmaries; and if so, whether he could give any approximate estimate of the numbers so treated.—Mr. Herbert Samuel replied that according to a special return obtained in November, 1911, there were at that time 6,908 cases of pulmonary tuberculosis, and 1,946 cases of other forms of tuberculosis, under treatment in Poor Law institutions in England and Wales. Later figures were not available.

TUBERCULOSIS.

Scotland.

In reply to Mr. Astor, the Secretary for Scotland said that the total amount made available for Scotland by the Finance Act, 1911, for providing institutions for the treatment of tuberculosis was £157,919. Except for the nominal sums after-mentioned, grants would not be paid by the Local Government Board for Scotland to the local authorities pending final approval of their schemes which, in a number of instances, were practically complete. Meantime, several authorities had made institutional provision, with the approval of the Board, for the treatment of persons suffering from tuberculosis, and the Board had made nominal grants to the county councils of the following counties in order to place them in a position to exercise their powers under Section 64 (2) of the National Insurance Act, namely: Ayr, Berwick, Dumfries, Fife, Forfar, Haddington, Inverness, Kirkcudbright, Linlithgow, Midlothian, Peebles, Renfrew, Roxburgh, Selkirk, and Wigtown. No provisional allocation of the sum apportioned to Scotland had been made.

Tuberculous Children.

In reply to Mr. Astor, the President of the Local Government Board said that out of England's share of the capital sum made available by the Finance Act of 1911 £100,000 had been provisionally allocated for the erection of institutions for tuberculous children.

Tuberculous Dependants.

Mr. Astor asked how many local authorities had intimated to the Board that they were prepared to treat tuberculous persons who were other than insured persons or dependants under the grant promised by the Chancellor of the Exchequer in a letter to Mr. Hobhouse dated July 31st, 1912.—Mr. Herbert Samuel said that 115 councils had submitted schemes for providing treatment for persons suffering from tuberculosis. In every case the scheme either expressly provided for the treatment of non-insured persons, as well as insured, or made no distinction between insured and non-insured persons.

Tuberculosis Schemes.

Mr. Astor asked the President of the Local Government Board whether any county councils or county borough councils, in preparing schemes for treating tuberculosis, had submitted proposals for treating non-pulmonary tuberculosis.—Mr. Herbert Samuel replied that the schemes submitted by the county councils of Gloucestershire, Hertfordshire, Lancashire, and Worcestershire, and the county borough councils of Brighton, Bury, Gloucester, Liverpool, Plymouth, and Southport specifically included provision for the treatment of non-pulmonary tuberculosis.

and in the large majority of other cases the schemes were not expressly limited to the treatment of pulmonary tuberculosis.

Tuberculin.

In reply to Mr. Stanier, who asked whether the Board of Agriculture proposed to take into their own hands the manufacture of tuberculin to be used in this country, in order to get a standard quality, Mr. Runciman said that he would consider the suggestion, but, as at present advised, doubted whether it was either necessary or practicable.

CORRESPONDENCE.

Medical Referees.

Dr. George Parker (Bristol) writes: The Conference of Local Medical and Panel Committees has passed a resolution so much at variance with the feelings of my own Local Medical Committee that I should like to say a few words of explanation.

We feel that the essential thing is that the referee or medical adviser should be one whom the local profession approves of and feels confidence in. Provided that the men with whom he has to work in the most delicate and confidential matters wish for him, it matters little whether he is a whole-time man, a panel man, or a non-panel man. They are the best judges. Circumstances differ in each place. In one a whole-time man would be most acceptable. In perhaps a smaller place a part-time man whom the men know would alone be liked. We are for local option, and against hard and fast rules forcing every one unnecessarily into the same mould. The resolution practically tells the Commissioners that we do not want a voice in choosing the man we have to work with. It makes all sorts of demands, except the most essential one—that we should approve of the man. It is like a certain father who told his son, "Yes, you shall certainly marry, your wife shall have an independent income and no profession or accomplishment of her own, but she shall not be chosen by you, but by me." Most of us would say that would be absurd, but here we have the son actually suggesting that he should not choose his partner.

The fact is the majority seem to me to be led away by the specious analogy of the case of the medical officers of health, for whom we have properly claimed independence. They have to decide endless matters against the financial interests of local people, and must have protection.

The medical adviser or referee is quite different. He does not need protection against the panel doctors. His decisions as to fitness for work or the reverse affect them little financially; but the all-important thing is the way he gives those decisions, and how he interposes between doctor and patient. In short, he is a consultant on one point—the fitness for work—whom all parties can trust. He must give an honest opinion, without making mischief by want of tact.

I doubt whether he needs protection against the approved societies, but on that point I am quite open to argument. He must certainly be able to give an unbiassed opinion. For us, then, the chief point is whether he is a man with whom we can work satisfactorily, and the words of the first resolution as to Ireland against whole-time certifiers are a curious contrast to the resolution for England. I am one of those who think that we should never lose an opportunity of asserting our right to the approval of all conditions on which we sell our services. The approval of the Local Medical Committee as one great safeguard of contracting out was agreed to at Brighton, and we may even yet succeed in getting it some day.

Dr. R. Roberts (Festiniog) writes: The Birmingham motion regarding the terms of appointment of medical referees submitted to the Conference of Local Medical and Panel Committees by Dr. E. Wilkinson, and published in the Supplement for March 21st, p. 169, is undoubtedly excellent. But I venture to suggest that the services of such capable and experienced men, as medical referees should be, ought to be available, not only in cases of malingering, but also in certain cases where a second opinion or consultation is desired by a patient or practitioner. That would greatly increase the usefulness of such officers.

A State Medical Service.

Dr. Henry Hick (New Romney) writes: Truly circumstances alter cases. At the beginning of the month the Journal had a number of letters asking what was to become of the income of the practitioners if a State Service were established, and objecting strongly to such a service because it would interfere with the earnings of medical men. In the issue for March 14th Dr. Shaw states:

> The unpleasant suggestion here is that if any small portion of a doctor's remuneration is risked by speaking the truth to one who might cease to be a patient, the doctor is tempted to lie. While absolutely disbelieving that such motives would actuate any but the smallest percentage of doctors, I fail to understand why those who have this distrust of their fellows do not see that such danger as there may be increases the more the paying of the remuneration and the power of dismissal are concentrated in one hand.

A few months ago we were told that the part-time medical officer of health must go. That this was the considered opinion of the profession ascertained by the British Medical Association. When we pleaded that to lose our appointments meant great hardship to many of us, we were told that we must bow to the necessity of considering the good of the public first. We were further told that it was impossible for a man holding a part-time appointment to do his duty because he might risk losing patients.

We struggled to free ourselves from these accusations, but our case was never put better than Dr. Shaw puts it. For surely the small percentage he speaks of cannot be all in the sanitary service, and a man whose whole living depends on satisfying his Board is not more likely to speak out than one who is only dependent on it for a portion of his.

Dr. Lauriston Shaw (London, W.) writes: I will try to be as concise and categorical as Mr. C. A. Parker, though I fear I shall not be able to avoid being contradictory.

1. *Free Choice.*—Free choice of doctor as understood and strongly objected to by most Socialists and by many friendly society officials cannot be maintained under a scheme of salaried whole-time practitioners. The scheme is openly advocated by them to avoid this very "evil." When Mr. Parker wrote "as great a 'free choice' could be given under a system of salaried whole-time doctors as at present," he was stating what, if literally interpreted, is not true. He now modifies the form of words and substitutes "State service" for "a system of salaried whole-time doctors," and this modified contention is only true if we recognize that a wise State would not adopt a whole-time salaried system.

2. *Competition.*—I understood Mr. Parker to maintain earlier that any competition where money was concerned he regarded as brute competition. If he as a specialist in the evils of competition now tells us he regards it as more brutal to compete for increased remuneration than for a higher salary we must accept his statement. To me it seems that the manner of the competition, and not its object, is the important consideration.

3. *Speaking the Truth.*—There are many other things that are difficult for a medical practitioner to do besides speaking "the truth, the whole truth, and nothing but the truth, to lord, squire, and peasant." It is often hard to find out what is the matter with a patient, and harder still sometimes to cure him. I still fail to see that a whole-time salaried service would develop our truthfulness any more than our diagnostic or therapeutic skill.

4. *Acceptance of Panel System.*—On the necessity of accepting the present panel system as the basis on which to build a complete scheme of medical service for the community Mr. Parker and I seem to be agreed, and I am content to leave it at that, without attempting to compete with Mr. Parker in the rôle of prophet as to what the distant future has in store for us.

Dr. Donald F. Shearer (Exeter), in the course of a letter on this subject, writes, referring to the possible extension of medical benefit to the dependants of the insured, as follows:

When this proposal materializes the State will have undertaken to provide efficient medical attendance on somewhere about seven-eighths of the whole population, and will be responsible for the payment of some eight or ten millions a year to the medical profession. There can

be no dispute that it will be the duty of the State to maintain sufficiently tight control over the profession to ensure the maximum of efficiency in the medical service, and the first and most natural measure would be to insist that no individual doctor was permitted to undertake more work than he could satisfactorily perform; in other words, the numbers on the list of an individual doctor would be limited. The limit must of necessity be determined by the extent to which private practice was allowed, and, seeing that in a very large number of urban areas practically no private practice would remain, it is certain that quite a large number of practitioners would find it to their pecuniary advantage to devote themselves entirely to State practice. Now it cannot be supposed that either the State or the profession would consent to the man straight from the hospital undertaking the same amount of work or receiving the same pay as the man of twenty years' experience; hence it follows that some form of graduation both as to work and pay must be introduced, and it would not be difficult to devise a scheme by which such graduation would give both to the doctors and to the public a certain amount of "free choice," probably quite as much as either enjoy at present or as they are likely to demand. . . . We have agreed to the State exercising the function of providing medical attendance on the people, and we are in no way able to resist or oppose the full fruition of the tree we have planted. We may perhaps be permitted to prune it and train it, and even graft it, but we can neither destroy it nor uproot it. What remains to us is to exercise our influence and power to obtain for the profession the best conditions of service, and to make sure that there are provided opportunities for each officer to exercise himself in the higher walks of the profession, and openings by which the able man may leave the ranks and devote himself to special practice without sacrificing the years during which he has worked or the emoluments to which he has become entitled.

DISTRIBUTION OF FUNDS AVAILABLE FOR MEDICAL BENEFIT OF UNALLOTTED INSURED PERSONS.

Dr. M. A. CURRY (London) informs us that at a recent interview with the Insurance Commissioners he pointed out that under Section 54 of the National Insurance Act (1911) all medical funds forming part of the National Health Insurance Fund "are under the control and management of the Insurance Commissioners." The Insurance Commissioners admitted positively that, notwithstanding the dual control, they were the real custodians of the Fund. He goes on to recall that the London Insurance Committee passed a resolution on February 26th last, that no surplus capitation fees should be credited in respect of, or in proportion to, any number of insured over 2,000 on any one list, but that they should be paid in proportion to numbers not exceeding 2,000. At an interview with the London Insurance Committee Dr. Curry ascertained that this resolution referred to the year 1914. He contends that no such "surplus of capitation fees" is mentioned in the Act, and that the resolution is invalid and misleading. With regard to the money accruing in 1913 he writes as follows: I submit that the whole essence of this disquisition centres around the allocation of persons or moneys (and not surplus) as they stood on April 14th, 1913. If the authorities, the Treasury, and the Insurance Commissioners had duly carried out their functions and had not been guilty of neglect, big lists of over two, three, and four thousand, would obviously never have been created, and the small-list men would never have been deprived of their just rights. The fault lies entirely with the forementioned authorities and not with the small-panel men who honourably performed their part of the contract. They are experienced, duly qualified, and some well qualified, and have done the best and hardest and noble work. They have taken the chronic and not selected cases, the latter requiring little or no attention whatever.

UNPAID FUNDS.

Dr. GEORGE H. H. MANFIELD (Shenstone, Lichfield) writes: Under the Insurance Act a great deal of money must stand to the credit of medical men. These funds, owing to the difficulty of apportioning to individual medical men, are retained by the Insurance Committees. Of the disadvantages to medical men of not receiving the full amount due to them I will not speak, but I think at least the interest on that money ought to be, and might be, paid to the British Medical Association or some other fund for the benefit of the profession as a whole. I think many medical men have not received more than two-thirds of what was due to them for the year ending January 11th, 1914. I should like to call attention to Form Med. 28. It is necessary to divide it into two at the end of the year; that operation would be much more easily done if the perforation were more complete. Another point with regard to the form is the difficulty of finding the necessary date quickly; if each division contained the date a great deal of time would be saved.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

ALFRED COX,
Medical Secretary.

February 11th, 1914.

CHANGES OF BOUNDARIES.

NOTICE OF DISCONTINUANCE OF MAIDENHEAD DIVISION AND ABSORPTION OF ITS AREA IN BUCKINGHAMSHIRE AND READING DIVISIONS.

THE following changes have been made in accordance with the Articles and By-laws of the Association, and take effect as from the date of publication of this notice:

That the existing Maidenhead Division be discontinued and the Berks portion thereof be merged in the Reading Division of the Oxford and Reading Branch, and the Bucks portion thereof in the Buckinghamshire Division of the South Midland Branch.

Representation in Representative Body.—The change involves the discontinuance of Maidenhead as a constituency, and proportionate increases of the areas of the Buckinghamshire and Reading constituencies.

SCOTTISH COMMITTEE.

THE following circular has been issued by the Scottish Committee of the British Medical Association to the Local Medical Committees in Scotland:

Sir,—I am instructed by the Scottish Committee to inform you that a Subcommittee has been appointed to deal with all questions affecting the organization of the profession in Scotland, more especially in connexion with the administration of the National Insurance Act, and the Subcommittee will be glad to consider any question which may be brought before it by any of the Local Medical Committees with reference to suggested improvement in organization.

At a conference between the Scottish Insurance Commissioners and the Scottish Committee of this Association,

which was held recently, the Commissioners recorded their gratification that the Association had appointed a Scottish Committee, and stated that they would at all times be very glad to discuss with the Committee any question of difficulty which might arise.

The Committee will be pleased to bring before the Commissioners any question which may require consideration between the profession and the Commissioners, with a view to a satisfactory adjustment in the interests of the profession.

The Committee also instructs me to state that it is of great importance that all Local Medical Committees in Scotland should represent to panel practitioners in their respective districts the urgent necessity of keeping a full and accurate note of each case under treatment, of marking every attendance made (whether at the patient's or at the practitioner's residence), and of recording and noting the issue of every certificate as an act of medical attendance.

I shall be glad if you will bring these matters before your Committee and report the result to me.—Yours faithfully,

155, St. Vincent Street, Glasgow.

W. FINDLAY, Clerk.

BRANCH AND DIVISION MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a meeting of the Division will be held, by invitation of Dr. Gerald Johnston, at Brooke House, Upper Clapton, on Friday, March 27th, at 9.30 p.m., when Dr. H. Macnaughton-Jones will give a lecture on Diagnosis in Everyday Gynaecology, illustrated by lantern slides and sections. Members are reminded that professional friends will be welcomed as visitors.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a conjoint meeting of the Division and the City Division will be held in the Wesleyan Church School, High Road, Leyton, on Friday, April 24th, at 4 p.m., when Mr. Bishop Harman, F.R.C.S., Assistant Ophthalmic Surgeon, West London Hospital, will give a lantern demonstration on the Cure of Squint.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—Dr. A. E. Larking, Secretary (Buckingham), gives notice that a meeting of the Division will be held on Tuesday, April 7th, at 3 p.m., at the Royal Bucks Hospital, Aylesbury. Members are reminded that medical friends are welcomed as visitors.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—Dr. Hichens, Honorary Secretary (47, Sheep Street, Northampton), gives notice that a meeting of the Division will be held in the Board Room of the Northampton General Hospital at 2.30 on Tuesday, April 14th. The meeting will be preceded by a luncheon at Franklin's Restaurant at 1.30. Members wishing to attend the luncheon should notify the Honorary Secretary at least two days beforehand. Agenda: Minutes of the preceding meeting. Dr. Relton will propose: "That members of the Division in Rugby and the neighbourhood shall in future be joined to the Leamington Division." Any other business. Clinical cases.

WEST SOMERSET BRANCH.—Mr. Charles Farrant, Honorary Secretary (Shrapnels, Taunton), gives notice that the spring meeting of the Branch will be held at the Taunton and Somerset Hospital on Friday, April 3rd, at 3.30 p.m. Agenda: To elect a President-elect. An exhibition of clinical cases. Mr. Farrant will be very glad to hear from any member who can show any case or specimen of interest. The following members, among others, have promised to exhibit: Mr. Penrose Williams, Mr. A. R. Iles, Dr. Birkbeck, Dr. Meade-King, Dr. Joscelyne, Mr. A. J. H. Iles, Mr. Watkins, and Mr. Farrant. The President invites the members to tea after the meeting.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns 8,598 births and 5,286 deaths were registered during the week ended Saturday, March 21st. The annual rate of mortality in these towns, which had been 15.1, 15.8, and 15.4 per 1,000 in the three preceding weeks, further fell to 15.2 per 1,000 in the week under notice. In London the death-rate did not exceed 14.2, against 14.1, 15.6, and 14.3 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.3 in East Ham, 6.6 in Edmonton, 6.7 in Oxford, 6.9 in Swindon, 7.4 in Bath, and 8.0 in Ilford to 23.3 in St. Helens, 23.7 in Burnley, 23.9 in Plymouth, 24.1 in Dudley, 24.7 in Bury, and 27.0 in Swansea. Measles caused a death-rate of 1.9 in Burnley and in Barnsley, 2.0 in Dudley, and 3.0 in Swansea, and whooping-cough of 2.1 in Sheffield and 2.7 in Great Yarmouth. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 37, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 6 were recorded in Birmingham, 6 in Liverpool, 3 in St. Helens, and 2 each in Warrington, Rochdale, Sunderland, South Shields, and Gateshead. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,392, 3,307, and 3,222 at the end of the three preceding weeks, had further fallen to 3,173 on Saturday last; 319 new cases were admitted during the week, against 401, 340, and 320 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,208 births and 729 deaths were registered during the week ended Saturday, March 21st. The annual rate of mortality in these towns, which had been 17.5, 16.6, and 17.9 per 1,000 in the three preceding weeks, fell to 16.6 in the week under notice, but was 1.4 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 6.8 in Hamilton, 11.7 in Clydebank, and 11.8 in Dundee and in Kilmarnock to 20.0 in Aberdeen, 21.6 in Leith, and 24.1 in Greenock. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Coatbridge and Ayr. The 323 deaths from all causes in Glasgow included 24 from measles, 8 from whooping-cough, 3 from scarlet fever, 3 from diphtheria, and 3 from infantile diarrhoeal diseases. Seven deaths from measles and 2 from scarlet fever were recorded in Edinburgh, and 2 deaths from measles in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, March 14th, 636 births and 463 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 639 births and 444 deaths in the preceding period. These deaths represent a mortality of 20.0 per 1,000 of the aggregate population in the districts in question, as against 19.2 per 1,000 in the previous period. The mortality in these Irish areas was, therefore, 4.6 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.5 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 22.1 (as against an average of 21.5 for the previous four weeks), in Dublin city 24.0 (as against 22.9), in Belfast 19.1 (or the same as in the previous week), in Cork 17.0 (as against 19.6), in Londonderry 15.2 (as against 16.5), in Limerick 20.3 (as against 24.0), and in Waterford 15.2 (as against 13.8). The zymotic death-rate was 1.6 as against 1.5 in the previous week.

During the week ending Saturday, March 21st, 572 births and 469 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 636 births and 463 deaths in the preceding period. These deaths represent a mortality of 20.3 per 1,000 of the aggregate population in the districts in question, as against 20.0 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.1 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 24.7 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 22.3 (as against an average of 21.9 for the previous four weeks), in Dublin City 24.9 (as against 23.6), in Belfast 21.3 (as against 19.7), in Cork 24.5 (as against 20.9), in Londonderry 19.0 (as against 18.7), in Limerick 17.6 (as against 22.7), and in Waterford 24.7 (as against 15.7). The zymotic death-rate was 2.0, as against 1.6 in the previous week.

ENGLISH URBAN MORTALITY DURING 1913.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

In the accompanying table will be found summarized the vital statistics of ninety-six of the largest English towns, based upon the Registrar-General's returns for last year. The 455,059 births registered in these towns were equal to a rate of 25.1 per 1,000 of the population, estimated at 17,852,766 persons in the middle of the year. In London the birth-rate was 24.5 per 1,000, while among the other towns it ranged from 14.4 in Hastings, 14.9 in Southport, 15.2 in Bournemouth, 15.8 in Hornsey and in Bath, 16.0 in Eastbourne, and 16.5 in Blackpool to 31.0 in West Ham, in Sunderland, and in South Shields, 31.1 in Middlesbrough, 31.4 in Stoke-on-Trent and in Stockton-on-Tees, 31.9 in St. Helens, and 33.2 in Rhondda.

The 260,155 deaths in these towns were equal to a rate of 14.3 per 1,000; in London the rate was 14.2 per 1,000, and among the other towns it ranged from 8.3 in Ilford, 8.9 in Ealing, 9.4 in Hornsey and in Gillingham, 9.7 in Enfield, and 9.9 in Walthamstow and in Eastbourne to 17.6 in West Bromwich and in Middlesbrough, 17.8 in Sunderland, 18.0 in Liverpool, 18.1 in Stockton-on-Tees, 18.3 in Wigan, 18.6 in Stoke-on-Trent, and 18.8 in St. Helens.

The deaths included 717 which were attributed to enteric fever, 1 to small-pox, 6,239 to measles, 1,230 to scarlet fever, 3065 to whooping-cough, 2,344 to diphtheria, and 13,347, among children under 2 years of age, to diarrhoea and enteritis. The 717 deaths from enteric fever were equal to a rate of 0.04 per 1,000; in London the death-rate from this disease was only 0.02 per 1,000, but among the other towns the rates ranged upwards to 0.10 in Stoke-on-Trent, 0.11 in Dudley and in Salford, 0.12 in Warrington and in Gateshead, 0.13 in Hull, and 0.17 in Wigan. The 6,239 fatal cases of measles corresponded to a rate of 0.34 per 1,000, which was also the rate in London; among the other large towns the highest rates were 0.81 in Wolverhampton, 0.90 in Aberdare, 0.96 in Stoke-on-Trent, 1.08 in Walsall, 1.33 in Wigan, 1.94 in St. Helens, and 2.34 in West Bromwich. The 1,230 deaths from scarlet fever were equal to an annual rate of 0.07 per 1,000; in London this disease caused a death-rate of 0.04 per 1,000, while in the other towns the rates ranged upwards to 0.17 in Aberdare, 0.19 in Tynemouth, 0.20 in Middlesbrough, 0.21 in Birmingham, 0.26 in Newport (Mon.), 0.27 in St. Helens, and 0.28 in Preston and in South Shields. The 3,065 fatal cases of whooping-cough were equal to an annual rate of 0.17 per 1,000; the rate of mortality from this cause in London was equal to the mean rate for all the other large towns, among which the highest rates were 0.31 in Liverpool, 0.32 in Warrington, 0.34 in Brighton, in Stockton-on-Tees, and in Newcastle, 0.43 in Rotherham, 0.49 in Stoke-on-Trent, and 0.50 in Bootle. The 2,344 deaths from diphtheria were equal to a rate of 0.13 per 1,000; in London the rate was 0.09 per 1,000, but among the other large towns it reached 0.30 per 1,000 in Northampton, 0.31 in Coventry, 0.32 in Rhondda, 0.35 in Portsmouth, 0.36 in Cambridge, 0.38 in Stoke-on-Trent, and 0.44 in Barrow-in-Furness. The mortality among children under 2 years of age from diarrhoea and enteritis, measured in proportion to the births registered during the year was proportionally greatest in Walsall, Stockport, Birkenhead, Bootle, Wigan, Bolton, Burnley, Preston, Barnsley, Rhondda, and Aberdare. The fatal case of small-pox belonged to Liverpool.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 117 per 1,000; in London the rate was 105 per 1,000, while among the other large towns it ranged from 60 in Hornsey, 64 in East Ham, 65 in Bournemouth, 66 in Eastbourne, 70 in Ilford, and 71 in Gillingham, to

Analysis of the Vital Statistics of Ninety-six of the Largest English Towns during the Year 1913.

Towns.	Estimated Population middle of 1913.	Births.	Deaths.	Annual rate per 1,000 Living.		Deaths from							Deaths of Children under 1 year of age to 1,000 Births.	Rate per Cent. of Uncertified Deaths.
				Births.	Deaths.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhœa and Enteritis (under 2 years of age).		
96 Towns	17,852,766	455,059	260,155	25.1	14.3	717	1	6,239	1,230	3,065	2,344	13,347	117	0.8
London	4,518,191	112,637	65,030	24.5	14.2	114	—	1,570	188	800	431	3,098	105	0.1
Croydon	178,094	3,964	2,096	21.9	11.6	6	—	59	5	26	15	81	94	—
Wimbledon	58,156	1,106	620	18.7	10.5	2	—	20	1	3	5	33	105	0.2
Ealing	67,977	1,229	614	17.8	8.9	1	—	6	2	5	1	18	76	0.5
Acton	62,230	1,500	712	23.7	11.3	—	—	25	2	17	8	31	91	0.3
Willesden	163,655	3,995	1,677	24.0	10.1	3	—	68	7	24	9	50	83	0.1
Hornsey	87,596	1,406	838	15.8	9.4	3	—	12	—	8	4	12	60	0.1
Tottenham	145,736	3,796	1,634	25.6	11.0	—	—	35	2	13	27	76	89	—
Edmonton	69,086	1,949	810	27.8	11.5	3	—	49	1	10	13	54	105	—
Enfield	59,597	1,350	587	22.3	9.7	—	—	9	1	3	7	27	89	0.3
West Ham	294,223	9,282	4,335	31.0	14.5	10	—	67	18	55	29	351	107	0.1
East Ham	142,467	3,623	1,458	25.0	10.1	2	—	17	4	14	15	50	64	—
Leyton	130,922	2,968	1,354	22.3	10.2	—	—	31	2	19	10	42	83	0.1
Walthamstow	131,636	3,210	1,328	24.0	9.9	2	—	23	2	18	21	49	80	—
Ilford	87,040	1,507	731	17.0	8.3	—	—	19	1	3	6	9	70	0.1
Gillingham	54,530	1,295	523	23.4	9.4	5	—	1	2	1	9	8	71	3.8
Hastings	60,095	879	779	14.4	12.8	—	—	4	—	7	3	12	81	0.5
Eastbourne	54,691	891	550	16.0	9.9	2	—	22	5	—	11	7	66	0.2
Brighton	133,096	2,477	1,833	18.3	13.6	5	—	31	11	46	7	53	117	—
Portsmouth	241,256	5,989	2,998	24.4	12.2	23	—	25	20	16	87	112	90	0.9
Bournemouth	83,205	1,284	854	15.2	10.1	—	—	1	1	12	4	7	65	—
Southampton	122,412	2,951	1,581	23.7	12.7	6	—	29	2	9	29	45	82	—
Reading	89,339	1,901	1,022	21.0	11.3	3	—	1	—	10	5	20	79	0.7
Oxford	53,937	1,017	687	18.6	12.5	—	—	1	—	3	3	21	90	0.4
Northampton	90,793	1,862	1,162	20.2	12.6	4	—	36	7	4	28	40	94	0.9
Cambridge	57,096	1,127	681	19.5	11.7	—	—	1	5	14	21	11	75	0.3
Southend-on-Sea	70,825	1,311	725	18.2	10.1	2	—	12	1	8	3	17	85	2.1
Ipswich	75,682	1,837	1,043	23.9	13.6	—	—	6	4	15	11	33	96	0.2
Great Yarmouth	57,005	1,341	835	23.1	14.4	4	—	8	4	5	12	34	108	0.2
Norwich	123,288	2,760	1,740	22.0	13.9	2	—	52	6	35	17	67	114	0.1
Swindon	52,128	1,238	632	23.4	11.9	—	—	42	4	5	1	7	86	—
Plymouth	113,083	2,695	1,790	23.5	15.6	7	—	57	7	6	14	80	125	0.1
Devonport	84,371	2,030	939	23.7	11.0	8	—	10	5	12	21	46	84	—
Bath	69,944	1,126	928	15.8	13.1	—	—	34	1	6	4	5	77	—
Bristol	361,362	8,261	4,657	22.5	12.7	6	—	49	6	53	29	156	96	—
Gloucester	50,533	1,233	693	24.0	13.5	1	—	28	3	1	13	23	87	3.0
Stoke-on-Trent	239,284	7,644	4,535	31.4	18.6	24	—	233	4	118	92	293	170	2.0
Wolverhampton	95,601	2,575	1,521	26.5	15.6	4	—	79	2	15	7	102	130	0.1
Walsall	93,477	2,876	1,595	30.3	16.8	2	—	112	—	17	15	125	154	—
West Bromwich	69,088	2,102	1,237	29.9	17.6	2	—	164	3	12	7	83	140	1.5
Dudley	51,641	1,499	883	28.6	16.8	6	—	40	6	12	1	58	145	2.7
Birmingham	859,644	23,876	12,857	27.3	14.7	19	—	393	180	164	170	843	129	3.2
Smethwick	74,565	2,065	1,009	27.2	13.3	2	—	36	12	12	7	70	129	0.4
Coventry	115,064	3,062	1,368	26.2	11.7	2	—	12	2	24	36	36	92	1.8
Leicester	230,970	5,312	3,129	22.6	13.3	2	—	35	7	11	19	152	120	0.4
Lincoln	59,322	1,460	741	24.2	12.3	2	—	5	3	12	3	30	104	0.9
Grimsby	77,420	2,150	1,021	27.3	13.0	7	—	20	—	5	10	63	112	1.4
Nottingham	264,735	6,110	3,805	22.7	14.1	8	—	20	17	42	39	201	130	0.2
Derby	125,462	3,013	1,597	23.6	12.5	3	—	12	2	5	6	67	101	—
Stockport	112,480	2,642	1,749	23.3	15.4	10	—	34	1	12	14	123	145	0.2
Birkenhead	135,557	3,989	1,988	29.0	14.4	2	—	8	6	39	25	181	116	0.2
Wallasey	84,476	1,873	975	21.8	11.4	3	—	12	6	12*	4	39	83	0.2
Liverpool	756,553	23,095	13,799	30.1	18.0	30	1	319	59	240	76	881	134	1.9
Bootle	72,186	2,173	1,256	29.6	17.1	—	—	33	4	37	4	105	145	3.9
St. Helens	99,460	3,221	1,904	31.9	18.8	5	—	196	27	19	15	119	157	3.8
Southport	71,092	1,078	912	14.9	12.6	1	—	3	1	5	1	32	94	3.1
Wigan	90,763	2,582	1,685	28.0	18.3	16	—	123	1	21	6	124	180	0.1
Warrington	74,065	2,212	1,154	29.4	15.5	9	—	22	7	24	9	82	130	4.9
Bolton	183,879	4,036	2,931	21.6	15.7	16	—	83	4	48	29	176	144	0.3
Bury	59,159	1,216	906	20.2	15.1	3	—	25	7	1	7	46	138	2.9
Manchester	730,976	19,276	11,561	26.0	15.6	48	—	264	94	140	99	621	127	0.3
Salford	233,849	6,336	3,752	26.7	15.8	25	—	129	30	40	30	197	136	0.2
Oldham	149,936	3,535	2,564	23.2	16.8	3	—	38	20	36	19	118	140	—
Rochdale	93,420	1,957	1,422	20.6	15.0	4	—	10	8	3	8	59	108	1.8
Burnley	109,021	2,541	1,830	22.9	16.5	4	—	56	7	3	19	138	171	1.9
Blackburn	133,971	2,968	2,124	21.8	15.6	8	—	10	1	11	7	121	148	1.9
Preston	118,070	2,862	2,037	23.9	17.0	10	—	68	34	6	32	145	159	2.9
Blackpool	61,012	1,024	901	16.5	14.5	—	—	13	2	4	6	35	127	2.7
Barrow-in-Furness	65,252	1,921	960	29.0	14.5	3	—	45	4	2	29	51	117	2.7
Huddersfield	110,882	2,195	1,630	19.5	14.4	6	—	25	7	8	6	38	103	0.6
Halifax	100,740	1,924	1,578	18.8	15.4	8	—	9	2	4	18	35	101	0.7
Bradford	290,540	5,804	4,411	19.7	14.9	17	—	36	10	22	53	169	127	0.1
Leeds	457,295	10,947	7,162	23.6	15.4	19	—	107	15	94	85	331	134	0.1
Dewsbury	53,855	1,284	917	23.5	16.8	3	—	14	3	4	2	42	130	—
Wakefield	52,291	1,225	719	23.0	13.5	3	—	3	2	7	6	20	109	0.3
Barnsley	52,897	1,639	852	30.5	15.9	2	—	23	3	11	8	72	143	—
Sheffield	471,662	13,511	7,544	28.2	15.7	20	—	372	78	69	57	412	128	0.8
Rotherham	64,432	1,982	980	30.3	15.0	3	—	7	7	28	11	60	141	1.1
York	83,329	2,027	1,052	23.9	12.4	3	—	—	1	12	8	37	93	—
Hull	287,032	8,175	4,309	28.0	14.8	37	—	12	3	78	33	337	128	0.5
Middlesbrough	107,993	3,413	1,936	31.1	17.6	2	—	54	22	23	21	106	130	1.1
Darlington	58,295	1,582	816	26.7	13.8	1	—	9	8	6	12	27	95	5.3
Stockton-on-Tees	52,316	1,667	963	31.4	18.1	5	—	40	8	18	5	31	142	0.9
West Hartlepool	64,234	1,939	1,054	29.7	16.1	5	—	23	4	15	7	44	138	1.4
Sunderland	152,377	4,797	2,749	31.0	17.8	2	—	78	20	19	22	180	134	1.5
South Shields	110,513	3,479	1,967	31.0	17.5	6	—	59	31	10	8	63	118	3.3
Gateshead	118,601	3,519	1,740	29.2	14.4	15	—	13	1	21	8	104	122	4.1
Newcastle-on-Tyne	271,295	7,479	4,149	27.1	15.0	15	—	64	21	94	29	126	121	0.5
Tynemouth	60,601	1,792	944	29.1	15.3	3	—	5	12	3	9	48	122	2.1
Carlisle	52,630	1,188	789	22.2	14.8	—	—	3	—	7	6	24	130	2.8
Newport (Mon.)	87,626	2,372	1,130	26.6	12.7	4	—	32	23	—	9	58	116	0.8
Cardiff	186,554	4,914	2,534	25.9	13.4	7	—	11	17	17	39	157	115	—
Rhondda	162,137	5,479	2,306	33.2	14.0	12	—	59	22	17	53	257	139	0.7
Merthyr Tydfil	83,808	2,431	1,130	28.5	13.3	7	—	7	6	9	14	77	126	0.4
Aberdare	52,619	1,587	871	29.7	16.3	—	—	48	9	15	4	73	174	0.3
Swansea	119,485	3,400	1,739	28.0	14.3	5	—	14	3	16	27	115	127	0.4

154 in Walsall, 157 in St. Helens, 159 in Preston, 170 in Stoke-on-Trent, 171 in Burnley, 174 in Aberdare, and 180 in Wigan.

The causes of 2,052, or 0.8 per cent., of the deaths registered in the ninety-six towns last year were not certified either by a registered medical practitioner or by a coroner. In 19 of the towns the causes of all the deaths were duly certified; among the other 77 towns the highest proportions of uncertified deaths were 3.2 in Birmingham, 3.3 in South Shields, 3.8 in Gillingham and St. Helens, 3.9 in Bootle, 4.1 in Gateshead, 4.9 in Warrington, and 5.3 in Darlington.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon JOHN H. STENHOUSE, M.B., to the *Prince of Wales*, temporary, April 1st. Fleet Surgeon ALBERT N. LAVERTINE, to the *Monarch*, on recommissioning, April 7th. Staff Surgeon EDWARD O. B. CARBERY, M.B., to the *Vanguard*, on recommissioning, March 31st. Staff Surgeon HENRY A. KELLOND-KNIGHT, to the *Vanguard*, on recommissioning, March 31st. Staff Surgeon LEONARD S. WHITWAM, M.B., to the *Bellona*, on recommissioning, March 31st. Staff Surgeon JAMES C. BRINGAN, to the *Victory*, additional for disposal, April 6th. Surgeon RONALD J. BARLEE, to the *Monarch*, on recommissioning, April 7th.

ROYAL NAVAL VOLUNTEER RESERVE.

PHILIP D. PICKLES, NORMAN J. L. ROLLASON, M.D., and BERTRAM COHEN, M.B., have been appointed Surgeons (unattached), to date March 6th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL GEORGE W. ROBINSON, C.B., is placed on the retired list, March 22nd.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel D. M. O'CALLAGHAN has been appointed Senior Medical Officer, South-Eastern Coast Defence, vice Lieutenant-Colonel F. R. Newland.

Lieutenant-Colonel E. M. PILCHER, D.S.O., has been posted to the Military Hospital, Tidworth, for special duty.

Lieutenant-Colonel B. H. SCOTT has been appointed for duty in the London Recruiting District, vice Major P. H. Falkner.

Major C. E. POLLOCK has been appointed Senior Medical Officer, West Africa, vice Lieutenant-Colonel J. J. Gerrard.

Major W. L. BAKER has been posted to London as Medical Examiner of Recruits.

Major F. E. GUNTER has been appointed to the Royal Military College, Sandhurst.

Captain M. LECKIE has been appointed to the Southern Command.

Captain A. G. JONES has been appointed Staff Surgeon at Rawal Pindi temporarily.

Captain F. C. LAMBERT has been appointed a Specialist in Advanced Operative Surgery in the Sixth (Poona) Division, with effect from February 8th.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

CADET COLOUR-SERGEANT F. DAVIES, from the Birmingham University Contingent, Officers' Training Corps, to be Lieutenant on probation, February 19th.

JOHN G. RONALDSON, M.B., to be Lieutenant on probation, February 23rd.

Lieutenant GEORGE H. STEVENSON, M.B., to be Captain, March 1st.

Lieutenant CHARLES C. W. MYLES, M.B., resigns his commission, January 7th.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Second South-Western Mounted Brigade Field Ambulance.—Captain JOHN R. BENSON, F.R.C.S., to be Major, March 15th.

Second East Lancashire Field Ambulance.—Major FRED D. WOOLLEY resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform, March 21st.

Attached to Units other than Medical Units.—Major WILLIAM B. FERGUSON, M.D., resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform, March 21st.

Second Welsh Field Ambulance.—CHARLES W. C. MYLES, M.B., late Lieutenant R.A.M.C. Special Reserve, to be Lieutenant, supernumerary, March 25th; IVOR J. DAVIES, M.D., to be Lieutenant supernumerary, February 16th.

Third Northern General Hospital.—Major ARTHUR M. CONNELL, F.R.C.S.Edin., to be Lieutenant-Colonel, February 20th.

Wesser Clearing Hospital.—Captain CLARENCE I. ELLIS, from the list of officers attached to units other than Medical Units, to be Major, March 25th.

Attached to Units other than Medical Units.—Lieutenant CUTHBERT D. S. AGASSIZ, M.B., to be Captain, October 30th, 1913; Lieutenant FRANCIS D. BLANDY, M.D., to be Captain, November 3rd, 1913; Lieutenant EDWARD O. LIEBEY, to be Captain, February 16th.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Assistant Surgeon.

BETHLEM HOSPITAL.—Two Resident House-Physicians (males). Honorarium, £25 each per quarter.

BIRKENHEAD UNION INFIRMARY.—Resident Assistant Medical Officer. Salary, £120 per annum.

BIRMINGHAM EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £260 per annum, rising to £310.

BIRMINGHAM UNION.—Resident Male Assistant Medical Officer to the Dudley Road Infirmary. Salary, £140 per annum.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Two House-Surgeons (males). Salary at the rate of £75 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary, £125 per annum.

BRIGHTON PARISH POOR LAW INSTITUTION.—Resident Assistant Medical Officer. Salary, £140 per annum.

BRIGHTON THROAT AND EAR HOSPITAL.—Non-resident House-Surgeon. Salary at the rate of £150 per annum.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—(1) House-Physician; salary, £80 per annum. (2) House-Surgeon.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer at the Workhouse. Salary, £200 per annum, rising to £250.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—House-Physician. Salary, £80 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Surgeon.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer. Salary, £200 per annum.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistants.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, to £250.

COLCHESTER: SEVERALLS ASYLUM.—Fourth Assistant Medical Officer and Pathologist. Salary, £210 per annum, increasing to £230.

CROYDON GENERAL HOSPITAL.—Anaesthetist and Second House-Surgeon. Salary, £80 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £120 per annum.

DAVOS PLATZ: QUEEN ALEXANDRA SANATORIUM.—Resident Assistant Medical Officer. Salary, £100 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DUNDEE MATERNITY HOSPITAL.—Out-door Assistant. Salary, £40 per annum (if non-resident, £70).

FOLKESTONE: ROYAL VICTORIA HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant Surgeon.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £100 per annum.

GREAT YARMOUTH HOSPITAL.—House Surgeon (male). Salary, £140 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HALIFAX: ROYAL HALIFAX HOSPITAL.—(1) Second House-Surgeon. (2) Third House-Surgeon. Salary, £100 and £80 per annum respectively.

HASTINGS: EAST SUSSEX HOSPITAL.—Assistant House-Surgeon (male). Salary at the rate of £80 per annum.

HAWKHEAD ASYLUM, Crookston, near Glasgow.—Second Assistant Medical Officer (male). Salary, £200 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Casualty Medical Officer. Salary, £50 for six months and £2 10s. washing allowance.

HUDDERSFIELD ROYAL INFIRMARY.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon (males). Salary, £100 and £80 per annum respectively.

HULL: ROYAL INFIRMARY.—(1) House-Physician. (2) Casualty House-Surgeon. Salary at the rate of £100 and £80 per annum respectively.

INDIA: IMPERIAL BACTERIOLOGICAL LABORATORY, Muktesar.—Pathologist. Salary, £563 per annum, rising to £960, and after twenty years' service to £1,040.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon for In-patients.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

KING EDWARD MEMORIAL HOSPITAL, Ealing.—Resident Medical Officer. Salary at the rate of £80 per annum.

LEICESTER ROYAL INFIRMARY.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Salary at the rate of £80 per annum each.

LIVERPOOL UNIVERSITY.—George Holt Chair of Physiology. Salary, £700 per annum.

LONDON MEDICAL MISSION, Short's Gardens, W.C.—Assistant to Resident Medical Officer. Salary, £2 10s. weekly.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM, Parkside.—Locumtenents. Salary, 4 guineas a week.

MANCHESTER CHILDREN'S HOSPITAL.—Male Medical Officer for Out-patient Department. Salary, £180 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Junior House-Surgeon. Salary, £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to the Convalescent Hospital, Cheadle. Salary at the rate of £80 per annum.

MANCHESTER; VICTORIA MEMORIAL JEWISH HOSPITAL.—Locumtenent (lady).

MONTROSE: ROYAL ASYLUM.—Junior Assistant Medical Officer. Salary, £200 per annum.

NATIONAL SANATORIUM, Benenden.—Assistant Medical Officer. Salary, £120 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE: CITY HOSPITAL FOR INFECTIOUS DISEASES.—Male Resident Medical Assistant. Salary, £125 per annum, rising to £150.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—Junior Medical Officer (male). Salary, £80 for six months.

PRESTON: COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300, and on promotion to £450.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Medical Officer. Salary, £100 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Male and Female House-Physicians and House-Surgeons. (2) Junior Obstetric Assistant. (3) Assistant Anaesthetist. Salary for (3) £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Honorary Anaesthetist.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Vacancy on Honorary Medical Staff.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.—(1) House-Surgeon. (2) Half-time Pathologist and Bacteriologist. Salary at the rate of £80 and £100 per annum respectively.

ST. MARYLEBONE PARISH INFIRMARY, W.—Third Assistant Medical Officer (male). Salary, £70 for six months.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion Square, W.C.—Male Clinical Assistant in the Out-patient Department.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon (male). Salary, £80 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Dreadnought Hospital, Greenwich: (1) Medical Registrar. (2) Two House-Physicians. (3) Two House-Surgeons. Albert Dock Hospital: (4) House-Surgeon. (5) House-Surgeon to Out-patients. Salary for (1) £100, (2) and (3) £50, and (4) and (5) £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £80 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTHPORT INFIRMARY.—Junior House and Visiting Surgeon. Salary, £100 per annum.

SOUTHWARK UNION INFIRMARY.—Second and Third Assistant Medical Officers. Salary, £120 per annum, the former increasing to £140.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SUNDERLAND ROYAL INFIRMARY.—Junior House-Surgeon (male). Salary, £120 per annum.

SURREY COUNTY COUNCIL EDUCATION COMMITTEE.—Oculists. Payment at the rate of one guinea for each school session of about two hours.

TOTTENHAM PARK TOWNSHIP.—Assistant Resident Medical Officer of the Workhouse and Infirmary. Salary, £150 per annum.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Honorary Medical Registrar.

WEST RIDING COUNTY COUNCIL.—Assistant Medical Officer (male) at the Scalebor Park Asylum. Salary, £220 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WILTS COUNTY COUNCIL, Trowbridge.—Assistant School Medical Inspector. Salary, £300 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) House-Surgeon. Salary, £125 per annum each.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary at the rate of £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Enniscorthy (Wexford), King's Cliffe (Northampton), Sanquhar (Dumfries).

MEDICAL REFEREE.—The Home Secretary announces a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for the Portsmouth, Petersfield, Newport, and Ryde, and Bishops Waltham County Courts.

To ensure notice in this column—which is compiled from our Advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALDERSON, Gerald Graham, B.A., M.B., B.C., F.R.C.S.Eng., Registrar to the Chelsea Hospital for Women.

BISSET, W. Fraser, M.B., Ch.B.Aberd., Dispensary and Out-patient Surgeon at the Perth Royal Infirmary.

BROOKS, S. T., L.R.C.P.and S.Edin., L.F.P.S.Glas., District Medical Officer of the Haslingden Union.

BROWN, J. Percival, M.B., Ch.B.Vict., Medical Officer of Health and School Medical Officer for [illegible] Small-pox Hospital.

CANNON, D. J., M.B., Assistant Medical Officer to the Islington Parish Infirmary.

DUCKETT, A. Harold, M.B., Ch.B., Medical Officer of the Bath Poor Law Institution.

EDWARDS, James S., M.B., Ch.B.Edin., Pathologist to the Perth Royal Infirmary.

ENGLISH, T. H., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Guisborough Union.

EVANS, D. Gordon, M.B., B.S.Lond., Senior House-Surgeon to the Scarborough Hospital and Dispensary.

FAULL, W., L.R.C.P. and S.Edin., L.F.P.S.Glasg., District Medical Officer of the Northallerton Union.

FIGDOR, Philip, M.B., Ch.B.Glasg., Assistant Medical Officer and Clinical Pathologist to the City of Westminster Union Infirmary, Hendon, N.W.

FINDLAY, Leonard, M.D., Ch.B., D.Sc., F.R.F.P.S.Glasg., Honorary Visiting Physician to the Royal Hospital for Sick Children, Glasgow.

GRELLIER, E. F. W., B.C.Camb., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Chelsea Parish Infirmary.

HINDLE, J., L.R.C.P. and S.Edin., District Medical Officer of the Wolstanton and Burslem Union.

IVENS, Frances, M.B., M.S.Lond., Surgeon to the Liverpool Samaritan Hospital for Women.

LAMBERT, Gordon Ormsby, B.A., M.D., B.C.Cantab., Honorary Assistant Physician to the Royal Berkshire Hospital, Reading.

LOUGHNANE, F. McG., M.R.C.S., L.R.C.P., Assistant Medical Officer to the Camberwell Parish Infirmary.

MACLENNAN, Alexander, M.B., C.M., L.M.Rot.Dub., Honorary Visiting Surgeon to the Royal Hospital for Sick Children, Glasgow.

MACQUEEN, R. C., F.R.C.S., Senior Resident Medical Officer to the Royal Free Hospital, Gray's Inn Road, W.C.

MITCHELL, T. W., M.D.Edin., District Medical Officer of the Tonbridge Union.

NICHOL, F. E., M.B., B.C.Cantab., Medical Officer to the Royal School for Deaf and Dumb Children, Margate, vice Bertram Thornton, deceased.

NICHOLSON, C. J., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Wokingham District, co. Berks.

PHIPPS, H. H., M.R.C.S., L.R.C.P., District Medical Officer of the Barton-upon-Irwell Union.

POWNE, Leslie, M.R.C.S., L.S.A., Certifying Factory Surgeon for the Crediton District, co. Devon.

PRENTICE, H. Ridley, M.B.Lond., M.R.C.P.Lond., Assistant Physician to the Dreadnought Hospital, Greenwich.

RENTON, A. C., M.B., Ch.B.Edin., District and Workhouse Medical Officer of the Chester-le-Street Union.

RIGDEN, G. F., M.B., B.S.Lond., District Medical Officer of the Westbury-on-Severn Union.

ROY, S. C., M.B., C.M.Edin., District Medical Officer of the Leicester Parish.

SOUTTER, J., L.R.C.P., M.R.C.S., Certifying Factory Surgeon for the Hendon District, co. York.

STEINBACH, Horace, M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Knaresborough District, co. York.

TURNER, William, M.S., F.R.C.S., External Examiner in Surgery to London University.

TWIST, N. S., M.B., Ch.B.Leeds, District Medical Officer of the Wakefield Union.

VAN INGEN, Miss M. A., M.B., B.S.Lond., Assistant Medical Officer to St. Pancras Parish Workhouse.

WALKER, John Frederick, M.B.Lond., M.R.C.S., L.R.C.P., Surgeon to the County Borough Police, Southend-on-Sea, Essex.

WILKINS, C. R., M.B., B.S.Durh., Certifying Factory Surgeon for the Uttoxeter District, co. Stafford.

WILLAN, Robert J., M.B., M.S., F.R.C.S., Honorary Assistant Surgeon to the Royal Victoria Infirmary, Newcastle-upon-Tyne, vice W. G. Richardson, F.R.C.S., appointed Honorary Surgeon.

WILLIAMS, C., M.R.C.S., L.R.C.P., Radiographer to the Royal Free Hospital, Gray's Inn Road, W.C. (reappointment).

WRIGHT, A. F., M.B., Ch.B.Edin., District Medical Officer of the Malton Union.

WYLIE, J., L.R.C.P. and S.Edin., L.F.P.S.Glasg., District Medical Officer of the Fylde Union.

YOUNG, Alfred Alexander, M.A., M.B., C.M., F.R.F.P.S.Glasg., Honorary Visiting Surgeon to the Royal Hospital for Sick Children, Glasgow.

ZUNDEL, C. E., M.D., M.R.C.P., Assistant Physician at the Dreadnought Hospital, Greenwich.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:

Resident Physicians.—Francis G. Foster, M.A., M.B., Ch.B., to Professor Wyllie; Wm. R. Addis, M.B., Ch.B., to Sir Robert Philip; G. Maxwell Brown, M.B., Ch.B., to Professor Russell; H. F. W. Adams, M.B., Ch.B., to Dr. Lovell Gulland; W. H. Armistead, M.B., Ch.B., to Dr. Graham Brown; H. W. Wilson, M.B., Ch.B., to Dr. Boyd; J. K. Reid, M.B., Ch.B., to Dr. Fleming.

Resident Surgeons.—Gideon Walker, M.B., Ch.B., to Professor Caird; George D. Ferguson, M.B., Ch.B., to Mr. Hodsdon; Stanley Arnott, M.B., Ch.B., to Mr. Wallace; Wm. Barclay, M.B., Ch.B., to Professor Thomson; H. Ward Smith, M.B., Ch.B., to Mr. Miles; John M. Gillespie, M.B., Ch.B., to Dr. Barbour.

Clinical Assistants.—A. L. S. Pringle-Pattison, M.B., Ch.B., to Professor Wyllie; Sydney R. Moll, M.B., Ch.B., to Sir Robert Philip; D. A. Ross Haddon, M.B., Ch.B., to Professor Russell;

R. Johnston Tait, M.B., Ch.B., to Dr. Lovell Gulland; D. A. [illegible], M.B., Ch.B., to Dr. Gresham Brown; R. H. H. Newton, M.B., Ch.B., to Dr. Boyd; H. A. von Roun, M.B., Ch.B., to Dr. Fleming; Wm. Gilchrist Watson, M.B., Ch.B., to Mr. Holgate [illegible]; J. N. J. Hardey, M.B., Ch.B., to Mr. Miles.

Resident Medical Officer, Convalescent House, Murrayfield.—N. Hay Bolton, D.T.M. and H., M.B., Ch.B.

MANCHESTER ROYAL INFIRMARY.—The following appointments have been made:

[illegible] Physicians.—F. E. Tylecote, M.D., Ch.B., [illegible], and C. H. Melland, M.D., M.R.C.P. Lond., B.Sc.Vict.

[illegible] Surgeon.—W. H. Hey, M.B., Ch.B.Vict., [illegible], M.R.C.S. Eng., L.R.C.P. Lond.

Honorary Dental Surgeon.—E. G. Long, L.D.S.Eng.

PUBLISHERS' ANNOUNCEMENTS.

Messrs. BAILLIÈRE, TINDALL AND COX, Bell Yard, Temple Bar, will [illegible] a new revised and enlarged second edition of [illegible] *Diseases and Syphilis*, by Edgar G. Ballenger, A.M., M.D., Professor of Genito-urinary Diseases, Atlanta Medical College; [illegible] by Drs. Oscar F. Elder and J. Edgar Paullin. The book contains 109 illustrations.

BIRTHS, MARRIAGES, AND DEATHS.

The [illegible] announcements of Births, Marriages, and Deaths [illegible] Post Office Orders or Stamps with the [illegible]; later than first post Wednesday morning in order to ensure insertion in the current issue.

BIRTH.

STRATFORD.—On March 19th, at 103, Earl's Court Road, Kensington, W., the wife of Howard M. Stratford, F.R.C.S. Edin., of a son.

MARRIAGE.

HOLROYD—THORPE.—At St. Oswald's, Millhouses, Sheffield, J. B. H. Holroyd, M.R.C.S., L.R.C.P., to Alice, daughter of J. A. Thorpe, Bannerdale Road, Millhouses. At home, Woodside, Pitsmoor, May 13th and 14th.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers:—(1) Sir StClair Thomson: Three Years' Sanatorium Experience of Laryngeal Tuberculosis. (2) Mr. T. B. Layton: Tonsils and Adenoids in Children: A Plea for Fewer Operations.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—First Oliver-Sharpey Lecture by Dr. F. G. Hopkins: On Some Effects which follow upon Disturbances in the Chemical Reaction of the Blood.

ROYAL SOCIETY OF MEDICINE:

SECTION OF PATHOLOGY, 8.30 p.m.—Laboratory Meeting at St. Mary's Hospital. Demonstrations by Drs. Charles Russ, E. H. Kettle, H. Warren Crowe, and B. H. Spilsbury.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Paper:—Dr. Claye Shaw: A Plea for the Degenerate.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Meeting.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m.—Second Oliver-Sharpey Lecture by Dr. F. G. Hopkins: On Some Effects which follow upon Disturbances in the Chemical Reaction of the Blood.

ROYAL SOCIETY OF MEDICINE:

SECTION OF BALNEOLOGY AND CLIMATOLOGY, 1, Wimpole Street, W., 5.30 p.m.—Paper:—Dr. C. W. Buckston (Buxton): Painful Affections of the Shoulder: Their [illegible].

SECTION OF OBSTETRICS AND GYNÆCOLOGY, 1, Wimpole Street, W., 8 p.m.—Discussion on "The Need for [illegible] in Maternal Pathology," to be opened by Dr. Amand Routh.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF LARYNGOLOGY, 4 p.m.—Discussion on "The Intranasal Treatment of Frontal Sinusitis;" to be opened by Dr. Watson-Williams and Mr. Herbert Tilley.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m., Lecture: On Sputum, Tuberculous and otherwise.

CANCER HOSPITAL, Fulham.—Post-Graduate Lecture, Wednesday, 5 p.m.: Some Problems of Cancer.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3 p.m., Endoscopy.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynæcology. Obstetrical Lectures: Monday, 10 a.m., Operative Delivery: Version; Wednesday, 10 a.m., Version (continued). Gynæcological Lecture: Friday, 10 a.m., Radical Abdominal Hysterectomy. Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Tuesday, Wednesday, and Friday, 4.15 p.m., Syphilology.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS, at 4.30 p.m. each day.—Tuesday, Salford Royal: Orthopaedic Demonstration. Wednesday, Manchester Royal Infirmary: The Use of Nitrous Oxide and Oxygen for Long Operations. Thursday, Ancoats Hospital: Surgical Cases. Friday, Royal Eye: Cases for Diagnosis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day. Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Medical. Friday, Eye. Special Lectures at 5.15 p.m. each day.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Medical and Surgical Clinics and Operations at 2.30 p.m. daily. Also Monday, Gynæcology: Tuesday, Throat; Wednesday, Skin, Eye, Children; Tuesday and Thursday, X Rays and Electrical Methods; Tuesday and Friday, Eye. Special Lectures and Demonstrations as announced.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—Monday, 4 p.m., Cardiac Manifestations of Rheumatism.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Medical School, Monday and Tuesday. Clinics in Special Departments of the Hospital: Cardiac, Laryngological, and Prevention of Consumption.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, and Operations, 2 p.m. daily. Gynæcology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	MARCH.
27 Fri.	City Division, Brooke House, Upper Clapton, 9.30 p.m.
28 Sat.	Scottish Committee, Station Hotel, Perth, 12.15 p.m.
30 Mon.	London: Dominions Committee, 2 p.m. London: Naval and Military Committee, 4 p.m.
31 Tues.	London: Grants Subcommittee, 12.15 p.m. London: Public Health Committee, 3 p.m.
	APRIL.
1 Wed.	London: Journal (Editorial) Subcommittee, 2 p.m. London: Journal Committee, 2.30 p.m.
3 Fri.	London: Medico-Political Committee, 10.30 a.m. London: Central Ethical Committee, 2 p.m.

Date.	Meetings to be Held.
	APRIL (*continued*).
3 Fri.	West Somerset Branch, Taunton and Somerset Hospital, 3.30 p.m.
4 Sat.	London: Science Committee (*provisional*).
7 Tues.	London: Organization Committee, 2 p.m. Buckinghamshire Division, Aylesbury, 3 p.m.
8 Wed.	London: Hospitals Committee, 2 p.m. (*provisional*).
14 Tues.	Northamptonshire Division, Northampton General Hospital, 2.30 p.m.; Luncheon, 1.30 p.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
21 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
22 Wed.	London: Council.
24 Fri.	South-West Essex Division, Wesleyan Church School, High Road, Leyton, 4 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

MEMORANDUM BY THE JOINT MEDICO-POLITICAL AND HOSPITALS COMMITTEES CONCERNING THE QUESTION OF MEDICAL AID INSTITUTES.

1. Members of the profession who have followed the developments of the Insurance Act campaign cannot fail to have been impressed with the conspicuous part played at different times by what are known as Medical Aid Institutions. The profession has for many years held very strongly the view that such institutions are objectionable, but in view of the fact that a certain class of them is recognised under the Insurance Acts, and that another class has recently given rise to much trouble in South Wales and other mining districts, the whole question was brought before the Special Representative Meeting, December, 1913, when the following resolutions were carried:—

> *Minute* 82.—Resolved: That in order to check the extension of Medical Aid Institutions and to assist the profession in combating them where established, the Association endeavour to enlist the support of the staffs of voluntary hospitals, not only in refusing professional recognition to the medical officers of these institutions, but also by refusing treatment to patients sent by them to hospitals, except in cases of grave urgency.
>
> *Minute* 83.—Resolved: That the foregoing resolution (Minute 82) shall not apply to those institutions where the Medical Officer of the Institution has retained his post with the consent of the Council of the Association.

2. The matter was referred by the Council to the Medico-Political and Hospitals Committees with authority to issue a Memorandum on the subject to the Divisions and Branches. The following statement is therefore submitted, first, in order that the present situation may be thoroughly understood, and, secondly, to elicit from the Divisions and Branches expressions of opinion as to whether and to what extent they are prepared to enter into a more vigorous campaign against these institutions. The Divisions and Branches are not asked at this juncture to take any action but merely to furnish the Committees with information as to their local conditions and opinions which will enable the Council to put a further report on the subject before the Divisions, Branches and Annual Representative Meeting, 1914.

What is meant by a Medical Aid Institution?

3. The term Medical Aid Institution is a generic title which covers Friendly Society Institutes, Workmen's Medical Associations, Workmen's Medical Funds, certain Provident Dispensaries, and various institutions known in Wales as medical "Schemes." These Institutions differ in many respects but agree in the following:—

(1) They provide medical attendance.

(2) They are financed by small regular contributions, either collected from the members or deducted at the works from the wages of the workmen.

(3) As a rule they employ whole-time officers paid by salary, though in a few of the "Schemes" in South Wales and other mining districts there are, as yet, no whole-time appointments.

(4) The appointment and control of the medical officer are in the hands of a purely lay committee.

How did these Institutions arise?

4. It is difficult to ascertain when the first institute was founded, but in 1892, when the subject came before the notice of the General Medical Council through a memorial addressed to it by the Medical Defence Union, it was reported to the Council by the Friendly Societies Medical Alliance that over 25,000 Friendly Society members and co-operators were connected with existing Medical Associations. In 1911 it was known that there were at least 100 of these Associations.

5. The subject first began to receive prominence in the medical press in 1895, when disputes in connection with institutions of this kind arose at Cork, Portsmouth and Eastbourne, and the *Lancet* began a special investigation, the results of which were published under the title "The Battle of the Clubs." In 1896 the Great Yarmouth practitioners addressed a memorandum to all the licensing bodies in the

Kingdom, setting forth the following abuses which they alleged to exist in connection with these institutions :—

(a) The admission of persons not needing such assistance to medical benefits intended primarily for the relief of the poorer classes.

(b) The admission of women and children to these benefits at entirely inadequate rates of payment for the medical officer.

(c) Specially, in the case of industrial assurance and similar societies, a system of indiscriminate canvassing, whereby the private patients of other medical men are solicited directly or indirectly for its medical officer.

(d) The conduct of medical practice by lay organisations purely as a commercial speculation, this being most flagrant where, as in some cases, the medical officer receives a fixed salary ; and beyond this amount the fees accruing from his work are appropriated as the profits of his non-medical employers.

6. The majority of the institutes and "Schemes" have been established as a protest against efforts made by the local doctors to improve contract practice conditions, either by raising the rate of payment per head which in many cases was grossly inadequate, or by instituting a wage limit, or both. Some institutes have been established because the local profession declined to attend women and children on any contract terms. Institutes have then been formed by Committees of members of Friendly Societies, or of workmen, who have fixed rates of payment, generally about 1d. per head, or an inclusive rate per family per week.

7. It is always interesting to hear the other side of the question, and in their memorial to the General Medical Council in 1892 the Friendly Societies Alliance made the following statements :—

"The Medical Defence Union, in the letter addressed to your Council and which has been also widely circulated throughout the country, have prudently omitted any mention of the course which led to the formation of associations in place of the old club system. It is necessary that the abuses which accompanied the club system should be first considered in order to arrive at a clear understanding of the evils which the association system is intended to obviate.

Under the club system arrangements were usually made by clubs or societies with medical men who agreed to provide medical attendance and medicine for all members of the club for contributions varying from 3s. to 4s. per member per year.

This system left much to be desired, as it usually occurred that attendance on a club patient was a secondary consideration with the club doctor. Private patients monopolised the care and attention of the medical men, who naturally looked more closely after the patients with fees in prospective than after those whose money was certain to be paid whether the member was attended to or not. Club patients were commonly relegated to the care of assistants, usually inexperienced and often unqualified. The attendance of sick members at the surgery entailed sometimes hours of weary waiting in passages, kitchens and other unsuitable and uncomfortable waiting places. In some towns a practice existed and still exists of the medical man sub-letting part of his contract to a chemist, and the unfortunate sick member, after wearily waiting to see the surgeon, had then to trudge off to the chemist's shop to obtain his prescribed bottle of mixture, or perhaps be told to call another time.

Frequently club members were addressed and treated with utterly undeserved harshness, and dealt with as if the attendance afforded was given as a charity. Needless to say there were many honourable exceptions to this manner of dealing with club patients, but the general want of sympathy displayed, the indifferent attendance and the miserable and cheeseparing policy of supplying the sick with medicine of inferior quality and in improperly small quantities, were surely sufficient justification for the adoption of a system which might lead to improvement and could hardly be worse. The existence of these evils and abuses is of such common knowledge that it appears to us superfluous to offer arguments on this point.

The Societies interested, having decided that a change was necessary, resolved to combine and if possible secure the services of properly qualified men who would agree not to engage in any private practice, and who would therefore have time to attend duly to the sick members of the clubs and societies, as well as to those members' wives and families who were to be admitted to the benefits on the same terms as those on which some club doctors had for many years accepted them. Further, it was resolved to pay directly from the funds for such drugs and other requisites as the medical officers might think necessary, instead of permitting the latter to provide. The medical men would thus have no pecuniary interest in the cost of drugs or in any undue economy in their use."

8. However much or little truth there may be in the above allegations it is undoubted that the profession has been as unanimous in its opposition to these institutions as any body of thirty thousand persons well could be. Nevertheless the institutes have generally succeeded, though often with considerable difficulty, in getting practitioners to take their appointments. Their advertisements are excluded from the medical journals, it is believed that none of the reputable medical agents will act for them, and they are reduced to advertising in lay journals. The medical officers who are secured for these posts may be divided into four classes :—

(i.) The failures of the profession.

(ii.) Practitioners who though competent and steady have not sufficient initiative to make a success of private practice and prefer the fixed salary offered by such appointments with all its drawbacks.

(iii.) Reputable members of the profession who, through financial loss or through too early marriage and the responsibilities consequent thereon, find it imperative to secure a salary larger than they could get as assistants.

(iv.) Junior members of the profession who take these appointments unwittingly.

9. It may advisedly be said that of the two latter classes there is scarcely one medical officer who would not gladly leave the service of these institutes if he could afford to do so. The objections raised to the service by those who have had practical experience are mainly :—

(i.) The inadequate salary for the great amount of work generally required to be done.

(ii.) The intolerable interference by lay committees in purely professional matters, and often with the private affairs of the doctor.

(iii.) The feeling of insecurity. The tenure of office depends entirely on the goodwill of a changing body whose responsibilities often fall into the hands of two or three members whose favour the medical officers find it necessary to retain, often at the cost of self respect and independence.

Attitude of Local Profession towards Medical Officers of Institutes.

10. Generally speaking, the medical officers of these institutes or "Schemes" are not professionally or socially recognised, but in some places they are recognised, or at any rate tolerated, and in some few instances are even members of the British Medical Association. In each of these cases it is believed that there have been special local reasons why no active steps have been taken by the profession to exclude those concerned from professional recognition. For example, in one or two areas in South Wales there are some half-dozen of our members who are in whole-time appointments under institutes, and who are recognised professionally, attend Division Meetings, and are held to be loyal members of the Association. Such members took up their appointments at a time when local medical opinion had not been aroused to the evils of the system, or in places where the profession acquiesced, not feeling itself sufficiently well organised to prevent the making of such appointments. In these circumstances the members of the local profession feel that they cannot fairly ostracise the practitioners concerned. A special difficulty will therefore be created by such cases. If the Association organises a campaign against all institutes it must do so on general principles, and it may be assumed that these would be based on the objection to (1) purely lay management, (2) the inadequacy of the salaries generally given to medical officers, and (3) to the principle of profit being made by lay persons on the employment of medical officers. But if such general principles are established it would be very difficult to make local exceptions, and it would seem therefore to follow that no member of the Association could be allowed to accept or to continue to hold one of these appointments. If this line were taken it would involve the resignation from the Association of all such members, as after a service of some years medical officers of these institutions could scarcely be expected to resign their appointments without some security as to their future position. This would,

of course, raise acutely the question of compensation, and, though it is very difficult to make a computation, it is fairly certain that to place elsewhere those of our members who are now employed in institutions of this kind in as good a financial position as they are now would cost some thousands of pounds.

11. In discussing what is to be the future position of the Association as regards these institutions, the Committees wish to make it clear that, though they do not consider the position of the present institutes to be at all a strong one either from a public or a professional point of view, if judged merely on their merits as agents for the provision of medical attendance, yet they are bound to regard the recent tendency to the spread of "systems" in South Wales as a real danger, unless a more active attitude of opposition to all such institutions is adopted by the profession throughout the country. The Committees hold this opinion mainly because of the obvious political use which may be made of these institutes. It is instructive to note what happened at the recent By-election at Chesterfield. Under the original Medical Benefit Regulations, institutions approved under the Act were to submit their accounts to a rigid audit by the Commissioners, in order to ascertain whether or not the money paid over to them by Insurance Committees had as a matter of fact been spent on the medical attendance of insured persons only. Such a restriction was strongly resented by the "approved" institutions, because they wanted to make use of the medical benefit fund to subsidise the medical attendance on their uninsured members. There is a strong medical aid association at Chesterfield, and when the By-election occurred strong political pressure was brought to bear upon the Chancellor of the Exchequer and Mr. Masterman, which resulted in the alteration of the Regulations, so that now, in order to get the full 9s. per head for its members, an "approved" institute has only to present to the Insurance Committee a statement, signed by one of its officials, to the effect that the money received from the Medical Benefit Fund has been spent on the medical attendance of its insured members. It is an open secret that in most cases this statement will be a "legal fiction," for some of these institutes are undoubtedly using the money in order to provide cheap medical attendance for their uninsured members. One instance is known where a medical man in the employment of an association in Wales attends a number of insured persons and their dependants for a salary which is less than the amount received from the Insurance Committee for the payment of medical attendance on the insured persons alone. Such a practice conveys to the ordinary mind a suggestion of malversation of public funds, but it must not be forgotten that it is to all intents legalised by the Regulations under the Insurance Act, and unless the medical profession is on the alert such an example may be copied elsewhere. No money can be granted from the Insurance Fund to any *new* institution, but if the same pressure were put on at some other election as was used at the Chesterfield by-election the Government might possibly be induced to recognise new institutions. On these grounds the Committees would urge that even in those areas where institutions of the kind are unknown the profession cannot afford to ignore this most important question. If it were only a question of a fair fight with no favour between the independent members of the profession and these institutes, the result could not be in doubt; for it is impossible to suppose that, at the same price, members of the public would prefer the services of the medical staff of an institute, the personnel of which is constantly changing, to those of the independent members of the local profession. But the institutes have two great advantages. First, they are able to provide medical attendance for dependants, by means of the money received for their insured members, at a rate lower than is generally acceptable to the medical profession; and secondly, they are able to dispense their medicines at the institute, whereas the patients of most doctors on the panel must go to a chemist for them. This by some persons is felt to be a great convenience.

How to Check the Spread of these Institutions.

12. The most effective means of combatting such institutions is undoubtedly for the members of the profession competing with them to show, as on professional grounds they can quite easily, that the independent members of the profession are able to provide a much better service than can be got from the institutions. Not only have the public more choice among the local doctors but the quality of the independent practitioners is necessarily higher than that of practitioners recruited as has been described in paragraph 8 of this memorandum. The Committees wish to lay special stress upon the necessity of the profession in the areas where institutes exist doing everything they can to show that the professional service they can give is superior to that of the institutes though possibly not at so low a price.

13. It appears to the Committees that an important duty devolves upon those Divisions in whose areas there are medical schools. Steps should be taken to prevent newly qualified medical men from taking, in ignorance, appointments, the acceptance of which can only have a most damaging effect upon their future professional career. Those members of the profession who are consulted by junior practitioners in such matters should be urged to dissuade the latter from accepting appointments which they see advertised *only* in lay papers. Full use should also be made of the Notices which appear in the Journal as regard appointments, and the Committees are glad to know that these Notices have been of the greatest possible service in the past in preventing the institutes from getting the services of practitioners who would be likely to make the professional side of these institutions a success. A notice placed in the newspapers in which the advertisements of such institutions appear, urging medical men before accepting such appointments to apply for information about them, would undoubtedly be the means, in a large majority of cases, of preventing medical men in the second, third and fourth of the classes referred to in paragraph 8 from accepting such appointments.

14. The Committees would also call attention to the existence of the Central Emergency Fund, a Trust Fund separate from the funds of the Association, which, if properly supported, could be used for the purpose of tiding applicants for these posts over temporary financial difficulty. If practitioners, especially those in the areas in which these institutions exist, would contribute freely to this Fund, it is probable that by its means every practitioner who accepted appointment at an institute and who was personally and professionally trustworthy could be helped over any temporary financial embarrassment and provided with employment elsewhere.

15. Much good can be done by tactful representations made by practitioners who know the local conditions thoroughly to those who have accepted these appointments. It is of course impossible to urge practitioners who have made contracts to break them, but there is no doubt that, if full information were laid before practitioners who had accepted these appointments unwittingly, most of them would be glad to take the first available opportunity to resign. The practitioners referred to in class (i.), namely, the failures of the profession, would probably resist all persuasive efforts, but, as they are a source of weakness to anyone who employs them, they might well be left alone.

16. It remains now to consider the suggestion contained in Minute 82 of the Special Representative Meeting, namely, of a campaign conducted through the staffs of the voluntary hospitals, and on this question the Committees, fully realising the great difficulties of the proposal, ask for the serious consideration of the Divisions and Branches and for their opinions as to the probability of the success of such a campaign in their own areas. The Committees specially wish the Divisions in whose areas there are no institutions not to pass this matter over as one which does not concern them. Not only is it necessary that the profession should show a united front on this subject, but there is always the possibility of the hospitals in areas where no institute exists being used to defeat the efforts made by the staffs of hospitals in neighbouring and less fortunate areas. In some areas where an attempt has been made by the staffs of hospitals to refuse all cases, not urgent, coming from medical aid institutes or "schemes," attempts, very often successful, have been made to direct the flow of the patients to some other hospital where the staff has not taken action. The Committees are of opinion, therefore, that isolated action would be much less useful than organised general action, and would moreover throw a very unfair burden of publicity and obloquy on the staffs which had the courage to take a determined line.

17. It is necessary in this connection to call special attention to the position affecting London. Medical aid institutions have never found any secure footing in London, but it is well known that patients are sent from all parts of the country to the London hospitals. It is little use local hospital staffs refusing to see these patients if, when they come to London, no obstacle is placed in their way. But how are the doctors at the London hospitals to know that patients come from medical institutes? And even if means were devised for letting all the members of the hospital staffs in London know that institutes were in existence in certain areas, experience shows that with changing staffs the information would have to be renewed pretty frequently. In addition, fresh institutions might spring up, and it would be a matter requiring very considerable organisation to convey promptly the information as to these institutes to the members of the staffs which might be concerned.

18. It must be realised also by the Divisions that to ask members of hospital staffs to take the line suggested in Minute 82 is to ask them to run the risk of being dismissed from their posts, and it would not be fair to make such a demand unless the local profession was prepared to ensure that members of staffs taking this line would not be victimised. This aspect of the question should receive the most earnest consideration.

19. The object of this Memorandum is not to ask the Divisions to take definite action in the way of commencing a campaign of this sort, but to urge them to give this matter their very serious consideration, to consult with the members of the staffs of their local hospitals, and to ascertain how far those gentlemen would be prepared to support such a campaign if initiated. The London Divisions are specially requested to ascertain as far as possible the opinions of the members of the staffs of London hospitals, and to forward for the information of the Association the information they are in this way able to collect.

20. A special appeal is made to all the Divisions and Branches to give the Association every assistance in their power in considering a matter which appears to the Committees to be of the greatest possible importance. Any suggestions for dealing with the subject will receive full consideration, and it is hoped that after consideration of all the replies the Council will be able to issue a further report on this subject to the Divisions in time for them to instruct their Representatives for the Annual Representative Meeting. A series of questions is being sent to the Secretaries of the Divisions and Branches to be answered after these bodies have given the matter their full consideration.

INSURANCE ACT COMMITTEE.

MODEL SCHEME FOR THE TREATMENT OF TUBERCULOSIS.

Staff.

Chief Tuberculosis Officers.

1. The chief tuberculosis officer should be a whole-time officer, and should receive not less than £500 per annum, or £400 if resident.

Assistant Tuberculosis Officers.

2. The assistant tuberculosis officers, where such are needed, should be whole-time officers at a salary of not less than £350 per annum, or £250 if resident, but tuberculosis officers whose duty, whatever their designation, includes the charge of the clinical arrangements concerning tuberculosis cases, and whose relation as regards such cases to the local profession will be that of consultant, should receive not less than £500 per annum.

Consultants.

3. The need for expert medical opinion cannot be met by the appointment of an assistant tuberculosis officer, acting under the administrative control of the medical officer of health, as an officer who could be secured at the salary of an assistant would not have the necessary experience to enable him to act as consultant to the district. When a medical practitioner is called in to act as a consultant, his services should be paid for at the local recognised rate for consultation fees.

Medical Officer of Health as Tuberculosis Officer.

4. The medical officer of health, in his capacity as administrative tuberculosis officer, should have an increase in his salary corresponding to the increase in his duties. He should not act as clinical tuberculosis officer unless it can be shown:—

(1) that he has ample time for clinical work;

(2) that he fulfils the conditions as to clinical experience laid down by the Interim Report of the Departmental Committee on Tuberculosis (Astor Committee, pars. 27 and 28.)

"*Whilst not desiring to lay down any hard-and-fast conditions, the Committee are of opinion that preference should be given to registered medical practitioners of suitable qualifications and experience, and not less than twenty-five years of age, who have held house appointments for at least six months in a general hospital, in addition to a similar period of attendance at a special institution for the treatment of tuberculosis. They should also be competent to supervise such laboratory work as may be necessary.*"

"*He should be of suitable age and attainment and enough of an expert on the subject of tuberculosis to command general confidence.*"

Procedure in providing Treatment.

5. For the efficient working of any tuberculosis scheme, it is recommended that any person applying to a tuberculosis officer or authority for benefit under the scheme should present a statement of his case signed by a medical practitioner.

Domiciliary Treatment.

6. The medical practitioner should confer with the consulting officer at such times and in such circumstances as may be arranged between them in regard to patients under the care of the medical practitioner. (L.G.B. Order, 26th July, 1912, Article II. (6)).

7. The medical practitioner should prepare and transmit to the consulting officer at such times as may be arranged between them, not being less often than once in three months, a report in regard to each patient, giving particulars as to:—

(a) the progress of the patient;
(b) whether the conditions under which the patient is living and receiving the treatment are satisfactory;
(c) the behaviour of the patient in carrying out instructions given to him; and
(d) whether in the opinion of the medical practitioner any form of institutional treatment has become desirable. (L.G.B. Order, 26th July, 1912, Article II. (5)).

8. The medical practitioner should from time to time inform the Medical Officer of Health of the Sanitary District in which the patient resides of any circumstances known to the medical practitioner which may affect adversely the sanitary conditions under which the patient is living, and in respect to which action by the medical officer of health or of the Sanitary Authority would, in the opinion of the medical practitioner, be necessary or desirable. (L.G.B. Order, 26th July, 1912, Article II. (7)).

Remuneration of Profession.

9. Where the local profession of any Insurance area decide that they shall be paid by a capitation fee for the domiciliary treatment of tuberculosis cases of *insured persons* such fee should be not less than 6d., and should be for domiciliary treatment only.

10. Where the local profession of any Insurance area decide that they shall be paid upon a scale of fees for the domiciliary treatment of tuberculosis cases either of insured or uninsured persons, the following should be the minimum scale of fees:—

Scale of Minimum Fees.

	s.	d.
(a) For full medical report (including consultation at the surgery, or visit if within two miles of the doctor's house; if beyond that distance a mileage fee of not less than 1s. per mile (outwards) or in outlying and sparsely populated districts such sum as is suitable to local circumstances and the local customs of the profession)	5	0
(b) Extra for first visit with chief tuberculosis officer	2	6
(c) Continuous record	5	0
(d) Quarterly reports	5	0
(e) Consultation at doctor's residence or surgery	2	6
(f) Visit at patients' home	2	6
(g) Night Visit—that is, visit paid between 8 p.m. and 8 a.m. in response to call within these hours	5	0
(h) Special visit—that is, visit paid in response to call sent after 10 a.m and before 8 p.m.	3	6
(i.) Injection of vaccines (vaccines to be provided by Local Authority)	2	6

Note.—Mileage in (a) will apply to (f), (g), and (h).

Dispensary Treatment, whether attached to an Institution or not.

11. The attendance and treatment of cases of tuberculosis in tuberculosis dispensaries should be carried on in accordance with the following principles:—

A.—General principles, applicable to *all* tuberculosis dispensaries, whether voluntary or otherwise:—

(i.) That the services of all medical practitioners connected with the dispensary should be paid for;

(ii.) that no patient should be treated at the dispensary except on the recommendation of a medical practitioner;

(iii.) that it is essential that every tuberculous patient should have his own medical attendant to carry out any necessary domiciliary treatment;

(iv.) that in order to keep the medical practitioner in touch with the work of detection and prevention of tuberculosis it is recommended that he should co-operate with the medical officer of health or tuberculosis officer in all inspection work (including the examination of "contacts" and "suspects");

(v.) that the medical officer in charge of the dispensary should not be engaged in private practice.

B.—Special principles, applicable to tuberculosis dispensaries established in connection with a voluntary institution:—

(i.) that the dispensary should be co-ordinated with the institution but carried on as a separate department.

(ii.) that the accounts of the institution should be kept so as to show the receipts and the estimated expenditure of the dispensary.

12. All attempts to make tuberculosis dispensaries into institutions merely for the application of some form of special treatment should be rigidly discouraged.

Treatment as In-patients in Voluntary Medical Institutions.

13. A voluntary institution providing beds for the treatment of cases of tuberculosis, if the institution accepts payment, should be carried on in accordance with the following principles:—

(i.) that the organisation may run concurrently with that of the institution;

(ii.) that the accounts should be kept so as to show the estimated aggregate cost of the treatment of such patients, including the cost of medical attendance and treatment;

(iii.) that the services of all members either of the resident or honorary medical staff concerned with the treatment of such patients shall be paid for.

14. When a patient is discharged from an institution it is imperative for the continuity of treatment that his usual medical attendant should be advised of the patient's discharge and be supplied with a report and temperature chart covering the period of the patient's residence in the institution.

Method of Payment of Members of Honorary Medical Staffs of Voluntary Tuberculosis Dispensaries and Voluntary Medical Institutions.

15. From all moneys received by the Governing Body of a voluntary tuberculosis dispensary or voluntary medical institution in respect of the Tuberculosis Medical Service, a proportion to be agreed upon between the Governing Body and the medical staff should be placed to a special Fund which shall be distributed as the medical staff shall decide.

Mode of Distribution of Special Fund.

16. Honorary Medical Staffs may find the following suggestions valuable in connection with the disposal of the moneys in the special Fund, and accordingly the Committee suggests to the Hospital Staffs concerned that one or more of the following methods of distribution of any moneys in the special Fund may be found suitable:—

(i.) The distribution to the members of honorary medical staffs for their own personal disposal;

(ii.) for the assistance of Members of the medical staff in connection with research work;

(iii.) for the purchase of instruments, books, etc., for the use of the medical staff or for lending to other Members of the profession;

(iv.) for the initiation or development of post-graduate teaching in the institution;

(v.) the institution of a local medical benevolent fund, administered by the members of the Honorary Medical Staff, for dealing with necessitous cases (*e.g.*, widows and children of former colleagues);

(vi.) grants to any recognised medical benevolent fund or institution; or

(vii.) otherwise as the majority of the medical staff may decide.

Treatment of Persons not Insured under the National Insurance Act.

17. The terms and conditions for treatment of uninsured persons, when such is undertaken by the local authority, should be the same, *mutatis mutandis*, as those for treatment of insured persons, except that for domiciliary attendance the terms, where a contract is desired, shall be at the rate of £1 per quarter per patient.

Ireland.

18. Until Medical Benefit is extended to Ireland, payment for domiciliary attendance reports, certificates, and other services should be on a scale of fees for work done.

19. It is hoped that this extension and the treatment of all forms of tuberculosis will be introduced at an early date, in which case it is urged that the arrangements should be similar to those prevailing in England.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

NEW ZEALAND BRANCH.

Address on the Insurance Act by Dr. J. A. Macdonald.

At a meeting of the New Zealand Branch held in Auckland on February 9th, with Dr. Parkes, President of the Branch, in the chair, Dr. J. A. Macdonald delivered an address on the British National Insurance Act.

After thanking the profession of Australasia for the cordial reception extended to him as Chairman of the Central Council of the British Medical Association, he gave a sketch of the provisions of the National Insurance Act, pointing out that it was compulsory and contributory. All manual labourers, whatever their wages, were compulsorily insured, and it was open to any other employed persons whose income did not exceed £160 a year to become voluntary contributors. To this provision the medical profession had objected, as it had previously objected to the refusal of the friendly societies to discuss a wage limit. The Act provided for medical benefit, sickness benefit, maternity benefit, sanatorium or tuberculosis benefit, and for a special payment in special trades—unemployment benefit, for which a special contribution had to be made both by the employer and the insured person. He pointed out that the only person insured under the British Act was the worker; he understood that in Australasia in contracts with the friendly societies the members of the family were included. Mr. Lloyd George had introduced his bill after two years' discussion with the friendly societies, and consideration of the German system. Originally it was drafted on friendly society lines, and medical men considered that to be its fundamental error. The friendly societies in England in pre-insurance days had not the same arrangements as prevailed in Australasia. The amount paid to the doctors in those days was, on the average, 4s. a head a year, and the service included the supply of drugs and appliances. He had been astounded to find that the system in Australasia was not much if at all better than it was in Great Britain in connexion with the old friendly societies. Some years ago the question of contract practice in England was investigated and discussed by the British Medical Association very fully, because it was considered that it was time to get better terms from the friendly societies. A report had been drafted which, containing as it did evidence as to the wretched terms which the profession had accepted for contract work, was used as a sword against the profession by Mr. Lloyd George, and had smitten it very hard. The fundamental error made by Mr. Lloyd George prior to the introduction of the bill was that he made no attempt to consult the medical profession with regard to its drafting. The Association had attempted to get into communication with the Government in regard to the bill, but without success. When the text of the bill became available, its terms were found utterly unsuitable. The Association declared them to be "derogatory to the profession." Many medical men absolutely refused to have anything to do with the bill, and tried to wreck it, but the bulk of the members of the British Medical Association came to the conclusion that its

policy should not be to wreck the bill, but to try to amend it. With this object the Association drafted its policy, which came to be known as "the six cardinal points." Many unsuccessful attempts were made to get Mr. Lloyd George to define what he meant by medical benefits; the definition he eventually gave was that the medical benefit that was to be expected by an insured person was the treatment that might be expected from any medical man of average skill and ability. Thus Mr. Lloyd George asked the profession practically to give everything that could be done by a medical man on the terms he laid down, which he said were very generous terms. He offered 6s. a head of the insured persons, to include provision of drugs and appliances. He estimated the cost of drugs and appliances at 1s. 6d., so that the medical man was to receive 4s. 6d. a head for his services. The Association could not agree with Mr. Lloyd George that his terms were generous; it demanded 8s. 6d. a head, inclusive of drugs and appliances, that every insured person should have the free choice of doctor, and that the doctor should also have the right to refuse any patient that came to him. A further point was that the administration of medical benefit should be transferred from the friendly societies to the Insurance Committees. Another was that there should be adequate medical representation on all the administrative bodies. The experience on this point showed the difficulty medical men met with when they came to deal with politicians. It was agreed that a certain number of medical men should be placed on the Insurance Committees, but the number was insufficient, and an appeal was made for a larger representation; this was granted, but the constitution of the Committees was so modified that the insured persons had a majority of representatives on each Committee. Another condition asked for was that the ultimate court of appeal on all matters dealing with medical questions should consist of medical men, as it was considered that no other body was competent to decide such questions. No clear understanding could be reached with the Government, and ultimately the Association declared that its members would not undertake the duties the bill required of them until the terms asked were granted. The great majority of the medical men of the country had signed an undertaking that they would not take service under the Act until the terms agreed upon were such as the British Medical Association would approve, and that they would resign from the clubs as soon as they were asked by the Association to do so. When the Association came to the decision to refuse to take service in consequence of the failure to get an agreement from the Government to alter the terms, the Association called upon the medical men to resign from the clubs—a call to which the response was magnificent—and established a guarantee fund to recoup medical men who might incur losses through thus acting. The latter part of the business was badly managed to begin with, and he advised the New Zealand Branch, if ever it decided to form such a fund, to take care to get in the money, and not be content with guarantees. As soon as the medical ultimatum was put before the Government there was started in England a press campaign, fostered by the Government, which was really lamentable. It was stated boldly that the Government had enough medical men at their command to man the whole of the proposed service. There were about 14 million insured persons to deal with, and the Association's calculation was that it would take from 10,000 to 12,000 medical men, devoting their whole time to it, to work the Act. As a matter of fact, at the time the statement was made that the Government had sufficient men available to work the Act, it had not more than at most 2,000 at its command. Nevertheless, the statement was made broadcast throughout the country; it was made by Cabinet Ministers, and was also fostered by some of our own leading men. The result was that the doctors began to break away—they became afraid. There were a number of men throughout the country whose incomes depended upon this class of work, and he had never blamed very seriously those who gave way on this occasion. A body of medical men was one of the most difficult bodies to lead. They were trained from the time when they entered their profession to independence of thought and action—trained to rely on their own judgement—and it was difficult to get them to give up their individual opinions, and surrender their judgement to a few men at the head of affairs. It was the old story of the bundle of sticks, and in a measure the profession was beaten. In January, 1913, the Association, at its final meeting on that phase of the question, decided to release the men from their pledges, because it found that many of them were breaking away. The result was that the Act was in force, and apparently for a time there seemed to be a danger that there would be a split in the British Medical Association. He believed, however, that the Association came out of the struggle stronger and more united than before. The present position was that the medical profession was getting more money than it got under the old friendly society system, but whether it was an actual gain to the profession, or whether the money was transferred from the pockets of one part of the profession into the pockets of another, had not been ascertained. Formerly some four or five million people had received medical attendance under the contract system, but under the Insurance Act there were now some fourteen millions. His definite opinion was that contract service was not the highest form of medical service. The individualism of the medical profession was a great asset not only to themselves but to the nation. The best way of working was a contract between the medical man and his patient, and that was perfectly possible, even with an Insurance Act. There was no reason why the Government should not hand over the control of the medical part of national insurance to medical men. That would be the ideal system, and if an insurance system was to be introduced into New Zealand the profession should strive to get it established on some such plan. Let the Government insure the workers, not for medical benefits, but for the cost of medical benefits, and not interfere with the worker's liberty of contract with any medical man he chose. He strongly advised the profession in the Dominions first to formulate its policy early with regard to State insurance; secondly, to be thoroughly organized. Every man in the profession ought to be a member of the British Medical Association. Every well-informed man must know the amount of work the Association has done for the profession, and it was, in fact, the only body that could do good work for the profession in such matters. To carry out the organization there should be a paid organizing secretary to go about the country from district to district, and keep the doctors in the various areas thoroughly informed as to the condition of affairs in the other areas. The third point was that a defence fund should be established before the fight began.

In reply to questions, Dr. MACDONALD said that the provision an insured person made for medical attendance on his family was entirely a matter for private arrangement. Adult members were generally taken at the same rate and on the same terms as under the Act, and children at a reduced rate. In the case of a large family a further reduction was made, as, for example, that not more than four children were paid for. Medical men in Great Britain to-day were in a better position than they had dared to hope for because the Association had got much better terms than were at first offered.

Dr. PURDY said that in New Zealand the medical man got £1 for attending a member of a lodge, his wife, and the children of the family under 16, and in some cases the grandmother and grandchildren. In England the doctor who attended the father, mother, and one child would get 8s. 6d. for each adult and 6s. for the child—a total of 23s. Dr. MACDONALD pointed out that the Insurance Act as a rule provided only for one person, the father. In reply to questions as to extras, Dr. Macdonald said that there was no classification. The position as to anaesthetics and a second opinion was curious; the medical man had either to give the anaesthetic himself or pay another man to do it, but if a patient wanted a second opinion he must pay for it himself.

In reply to a question by Dr. BRENNAN as to what the effect of the Act had been upon the friendly societies in general, Dr. MACDONALD said that Mr. Lloyd George had originally led the societies to believe that the administration of medical benefit would be in their hands, but when it was found that 14,000,000 persons would be insured instead of the 4,000,000 or 5,000,000 with whom the friendly societies had dealt, certain other bodies were admitted as approved societies. Dr. Macdonald instanced the Prudential Assurance Company, which in the course of the first year of the operation of the Act had, it was stated, put over 3,000,000 insured persons on its lists; the

company's collectors went from door to door collecting the money due from the insurers and paying any benefit due to them. The operations of such great collecting societies had injured the friendly societies, and it was doubtful whether they could hold out long unless the Act was amended. In reply to Dr. CARRUTHERS, who asked what had been the effect of national insurance upon the class of people who in the past had not paid a doctor and had got free attendance at the hospitals, Dr. MACDONALD said that that was one of the advantageous results of the Act: it had diminished the attendance in the out-patient departments, and the doctor was now paid for attending a certain number of people for whom he was not paid before.

In reply to further questions, Dr. MACDONALD said that persons could insure through any approved society, that the whole of the administration of medical benefit was in the hands of the Insurance Committees, and that the societies administered sickness and maternity benefits. After some further questions a vote of thanks to Dr. Macdonald was carried by acclamation.

BIRMINGHAM BRANCH:

CENTRAL DIVISION.

AN ordinary general meeting of the Division was held in the Medical Institute, Edmund Street, on March 25th. Dr. C. E. PURSLOW (Chairman) presided and seventy-four members were present.

Election of Representatives.—The following were elected representatives for the Division for the Annual Representative Meeting: Mr. J. Furneaux Jordan, Mr. Albert Lucas, Mr. Joseph R. Ratcliffe, and Mr. T. Jenner Verrall. Mr. Frederic Lilley (Vice-Chairman of the Division) was elected Deputy Representative.

Canvassing Committee.—It was decided to elect a Canvassing Committee, whose duty should be to induce resigned members to reconsider their decision and to obtain new members by means of personal persuasion. The selection of this Committee was left to the Executive Committee.

The CHAIRMAN moved the following resolution on behalf of the Executive Committee:

> That this Division is of opinion that there is no need for a new hospital for nervous diseases, and disapproves of the establishment of the Birmingham and Midland Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy.

This resolution was carried by the necessary three-quarters majority of members present and voting; 53 members voted for and 17 against the resolution.

Ethical Cases.—Two ethical cases were next considered and a decision arrived at in each case.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

ALFRED COX,

February 11th, 1914. *Medical Secretary.*

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, April 22nd, in the Council Room, 429, Strand, London, W.C.

By order,

GUY ELLISTON,

Financial Secretary and Business Manager.

April 2nd, 1914.

CHANGES OF BOUNDARIES.

NOTICE OF ADJUSTMENT OF AREAS OF BOSTON AND SPALDING AND LINCOLN DIVISIONS.

THE following changes have been made in accordance with the Articles and By-laws of the Association, and take effect as from the date of publication of this notice:

> That the common boundary of the Boston and Spalding and Lincoln Divisions of the Midland Branch be adjusted to coincide with the boundary between the Holland and Lindsey County Council areas, the Boston and Spalding Division area thus becoming coterminous with the area of Holland County Council.

Representation in Representative Body.—The representation of the area in the Representative Body, 1914–15, will be decided at an early date by the Council, pursuant to the By-laws.

CHANGE OF TITLE.

THE Manchester (Salford) Division having passed a resolution requesting that the name of the Division be altered to "Salford" Division, the name of the Division is hereby altered accordingly, the change taking effect as from the date of publication of this notice.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—Dr. P. R. Cooper, Honorary Secretary Science Committee (8, St. Peter's Square, Manchester), gives notice that a clinical and scientific meeting of the Lancashire and Cheshire Branch will be held at the Royal Infirmary, Liverpool, on Wednesday, April 29th, at 4 p.m. (tea from 3.30). Members desirous of showing cases or making scientific communications are requested to write to Dr. Cooper before April 20th.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a conjoint meeting of the Division and the City Division will be held in the Wesleyan Church School, High Road, Leyton, on Friday, April 24th, at 4 p.m., when Mr. Bishop Harman, F.R.C.S., Assistant Ophthalmic Surgeon, West London Hospital, will give a lantern demonstration on the Cure of Squint.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.), gives notice that the next meeting of this Division will be held at the Stepney Central Hall on Tuesday, April 7th, at 4 p.m., when an address will be delivered by Dr. E. W. Goodall, entitled "The Initial and Secondary Rashes of the Acute Infectious Diseases."

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—Dr. Arthur E. Larking, Honorary Secretary (Buckingham), gives notice that a meeting of the Division will be held on Tuesday, April 7th, at the Aylesbury Hospital, at 3 p.m. Members of the profession are cordially invited to the meeting. The agenda of the meeting includes, among other items, an address on Some Abdominal Tumours due to Chronic Infective Processes, by Mr. Charters Symonds, Consulting Surgeon to Guy's Hospital; the selection of a President of the Branch from the Buckinghamshire Division; account of the Representative Meeting by Dr. Shaw; resolutions for next Representative Meeting; financial statement and report; resolution *re* election of Central Council; and the question of mileage under the Insurance Act.

South Midland Branch: Northamptonshire Division.—Dr. Hichens, Honorary Secretary (47, Sheep Street, Northampton), gives notice that a meeting of the Division will be held in the Board Room of the Northampton General Hospital at 2.30 on Tuesday, April 14th. The meeting will be preceded by a luncheon at Franklin's Restaurant at 1.30. Members wishing to attend the luncheon should notify the Honorary Secretary at least two days beforehand. Agenda: Minutes of the preceding meeting. Dr. Relton will propose: "That members of the Division in Rugby and the neighbourhood shall in future be joined to the Leamington Division." Any other business. Clinical cases.

SHIP SURGEONS SUBCOMMITTEE.

A meeting of the Standing Ship Surgeons Subcommittee of the Medico-Political Committee was held on March 18th, when there were present Mr. J. T. Macnamara (in the chair), Dr. A. V. Elder, and Dr. W. P. Norris.

Election of New Members.

It was decided to recommend the Medico-Political Committee to add the following members to the Subcommittee: Dr. T. W. H. Parkes Peers (London), and the present London correspondents of the Subcommittee, Drs. Edgar Du Cane, J. Godding, and A. Grosvenor Hinks.

Professional Secrecy.

The decision arrived at by the Subcommittee at its last meeting with regard to the right of a master to information as to illness of passengers or crew was reconsidered, and it was decided to recommend the Medico-Political Committee as follows:

That professional secrecy should be maintained by ship surgeons in respect to all cases of illness attended by them on board ship, except in those cases which come within the quarantine or immigration laws in force at any port visited, or other legal obligations.

Shore Pay.—Annual Leave on Full Pay.

The Subcommittee considered a communication from a ship surgeon with regard to shore pay and annual leave on full pay. It decided to request the correspondents of the Subcommittee to endeavour to obtain the views of ship surgeons as to:

(1) Whether ship surgeons should receive full sea pay while in port *plus* a subsistence allowance at the same rate granted to the chief officer, with a possible liability to have to report every day at the office of the company, or whether they would prefer to receive full sea pay only in port without such liability; subsistence pay, however, to be paid upon those days in port when any duty connected with the ship is performed.

(2) Their views generally on the question of annual leave being granted with full pay to permanent ship surgeons.

"Casual" Ship Surgeons.

The attention of the Subcommittee having been drawn to the practice of certain shipping companies in obtaining the services of medical practitioners for certain trips at the nominal salary at 1s. a month, the Subcommittee decided to recommend the Medico-Political Committee:

That no medical practitioner should accept, for purposes of holiday or similar reasons, any "casual" appointment as surgeon on board a ship upon terms lower than the minimum rate approved by the Representative Body.

Correspondents Outside the United Kingdom.

It was decided to appoint Dr. O. V. Currie, of Cape Town, as correspondent of the Subcommittee for that port, and to make efforts to obtain correspondents in other ports outside the United Kingdom.

Advertisements for Ship Surgeons.

It was decided to recommend the Medico-Political Committee:

That advertisements for ship surgeons tendered for insertion in the Journal be not accepted unless facilities are, in the first instance, afforded intending applicants for obtaining all essential information as to such appointments.

Payment for Attendance upon First and Second-class Passengers.

The action taken by the Council, as the outcome of the recommendation on this question made by the last meeting of the Subcommittee, was reported, and suggestions were made as to a scale of fees suitable for suggestion to the various shipping companies. The final decision of the matter was postponed until the next meeting of the Subcommittee.

Conditions of Service.

The Subcommittee decided to recommend the Medico-Political Committee to invite the various shipping companies to furnish the Association with particulars as to the terms and conditions of service offered by them to ship surgeons, and to publish such particulars when ascertained.

LOCAL MEDICAL AND PANEL COMMITTEES.

LONDON.

Election of Local Medical Committee.

At a meeting of the Election Committee of the Metropolitan Counties Branch on March 27th the votes for candidates for election as members of the London Medical Committee were counted. The result is as follows:

Panel Practitioners.

Marylebone	John Pollock Simpson.
Woolwich	Albert Edward Thomson.
Greenwich	Christopher Whewell Hogarth.
Deptford	William Henry Payne.
Lewisham	Robert Vincent Donnellan.
Bermondsey	Benjamin Arthur Richmond.
Southwark	J. V. C. Denning.
Lambeth	Herbert Taylor.
Camberwell	George Beckett Batten.
Wandsworth	A. C. B. Biggs.
Battersea	John Theodore Richards.
Fulham	John Fletcher.
Chelsea	John James Orr.
Hammersmith	J. A. Butler.
Kensington	Herbert Henry Mills.
Paddington	John Alexander Angus.
Westminster	Albert Ernest Cope.
St. Pancras	Thomas Marshall.
Islington	J. J. A. Sherry.
Stoke Newington	Alfred Welply.
Hampstead	E. Claude Taylor.
Shoreditch	Major Greenwood.
City of London	John James Scanlan.
Holborn	Michael Joseph Ryan.
Finsbury	Robert Drummond MacGregor.
Hackney	Thomas Francis Keenan.
Bethnal Green	G. Henderson.
Stepney	W. Owen Williams.
Poplar	H. J. Cardale.

Non-Panel.

Marylebone	Charles Wynn Wirgman.
Group 1: Woolwich, Greenwich, Deptford, Lewisham	No representative.
Group 2: Bermondsey, Southwark, Lambeth, Camberwell	No representative.
Group 3: Wandsworth, Battersea, Fulham, Chelsea	No representative.
Group 4: Hammersmith, Kensington, Paddington, Westminster	W. H. Burnhill. Wilfred Kingdon.
Group 5: St. Pancras, Islington, Stoke Newington, Hampstead	No representative.
Group 6: Shoreditch, City of London, Holborn, Finsbury	J. H. Porter. W. F. Roe.
Group 7: Hackney, Bethnal Green, Stepney, Poplar	A. G. Southcombe. Gilbert Nicholson. M. C. Corner.

Six Representatives of the Medical Staff of Hospitals.

W. McAdam Eccles.	Vincent Warren Low.
Thomas Watts Eden.	Fred. J. Smith.
James Galloway.	George Robertson Turner.

One Poor Law Medical Officer: H. E. Garrett.
One Medical Officer of Health: No representative.
One Registered Medical Woman: Mina Dobbie.

A meeting of the Committee will be held at Caxton Hall, Westminster, on Tuesday, April 7th, at 3.30 p.m., for the appointment of a Chairman and a Secretary and for any other competent business.

CROYDON.

Panel Committee.

At a meeting of the Croydon Panel Committee held on March 24th, the following resolutions were passed:

That this Committee approves of the formation of a permanent organization for co-ordinating the work of Local Medical and Panel Committees, and will use every reasonable endeavour to make that organization successful.

The number of insured persons in the area being 50,000, that the sum of £3 be sent at once as the contribution for the provisional expenses of the organization.

That steps be taken to arrange a voluntary levy of ¼d. a quarter per insured person.

That the Insurance Committee be asked to amend the note in the tariff *re* "Aqua" to: "Wherever the term 'Aqua' appears, ordinary pure water should be used, unless 'aqua destillata' is especially prescribed."

That in order to prevent, as far as possible, friction between panel practitioners and insured persons, the Insurance Committee be requested to issue a notice to the latter, embodying: That the medical benefit part of the Insurance Act is intended to provide against sickness only, and not against unemployment; and is not meant to furnish the means for a holiday or a rest, but only for total inability to work; and also to request the friendly societies and insurance companies to instruct their agents not to advise insured persons to go on the sick fund, or to give them their sick pay, before the doctor's certificate has been received.

PRESTON.

Local Medical and Panel Committee.

At a joint meeting of the Panel and Local Medical Committees, which was attended by 18 out of 20 members, the following resolutions were unanimously carried:

That the Preston Panel Committee are not prepared to give their adhesion to the new organization until they are informed as to the nature and objects of the proposed association and as to its relations with the British Medical Association.

That we are of the opinion the British Medical Association is the proper body to safeguard the interests of the profession, and we believe it is entirely in our own hands to make the British Medical Association representative on all points.

That we pay our proportion of the preliminary expenses incurred by the Provisional Committee.

INSURANCE COMMITTEES.

LONDON.

A meeting of the London Insurance Committee was held on March 26th, Mr. J. A. Dawes, M.P., presiding.

Expenses of Panel and Pharmaceutical Committees.

The Panel and Pharmaceutical Committees having asked that a sum of £3,080 and £2,975 respectively be allotted out of moneys available for medical benefit for the administrative expenses of each Committee, under Section 33 (2) of the Amending Act, 1913, the General Purposes Subcommittee recommended that a sum of £3,000 be allotted to the Panel Committee and £2,600 to the Pharmaceutical Committee for the medical year, 1914. The inclusion by the Pharmaceutical Committee of £300 for payment of expenses of members of the Committee was not allowed.

Deposit Contributors.

It was reported that the number of deposit contributors in the county was 83,065, of whom 14,018 were suspended from benefits.

Number of Practitioners on the Panel.

During January there were 1,377 general practitioners on the London panel; during February, 1,384; and during March, 1,384. The number of medical practitioners in institutions under agreement with the Committee during the three months were respectively 91, 101, and 102.

The Administration of Sanatorium Benefit.

The Sanatorium Benefit Subcommittee drew attention to the following statement reported to have been made during a lecture at Preston by the medical officer of the St. Marylebone Tuberculosis Dispensary:

> There was distinctly apparent an unfortunate tendency to limit the stay of all patients in sanatoriums to a definite period. Patients were sent out to make room for others. To admit unsuitable cases to a sanatorium, or to discharge patients half cured, implied a gigantic waste of public funds. If a patient could be restored to working capacity at a sanatorium, he should be kept there six, nine, or eighteen months.

As this statement had been taken as a criticism of the administration of sanatorium benefit in London, the Subcommittee thought that an emphatic protest should be made. The suggestions were entirely inaccurate as regards London. As many as 936 patients had remained in sanatoriums for more than three months, while of these 109 received institutional treatment for varying periods, in each case exceeding six months and in 3 cases exceeding a year. The average duration of the institutional treatment given was necessarily lowered owing to the fairly large proportion who were admitted for a short period for observation or instructional purposes. When there was little expectation of permanent benefit the individual was recommended for a short time for instructional purposes and to improve the general condition. These patients were recommended for one month, and if improvement was noted and further improvement seemed likely an extension was granted. In the case of patients admitted at the outset for three months an extension was granted whenever further improvement seemed likely. It was necessary to place some limit on the recommendation for admission, as many patients considered they had the right to remain for the full period entered on the recommendation or "till cured" if no period was stated. It was obviously impossible to recommend a patient for six, twelve, or eighteen months' treatment without taking into consideration the extent and stage of the disease and observing the effect of sanatorium treatment. It seemed advisable therefore to admit patients for a short period and to grant extensions in suitable cases. In recommending a long period of treatment it must not be forgotten that after several months' comparative idleness a distaste for work might be produced, and this might counteract the beneficial effects of treatment. The Subcommittee recommended that a statement be issued to the press on the lines of this report.

Mr. Kingsley Wood thought it would be a pity if the Committee were drawn into controversy. He objected to the quotation of an isolated paragraph from a speech. Dr. Sutherland was making legitimate criticism of sanatorium benefit in London, and he said certain things which it was impossible for the Insurance Committee to controvert. He stated, for example, that the average duration of treatment was just over twelve weeks and that the results were not equal to those obtained by a well-known society dealing with the problem. He also said that an isolation hospital did not become a sanatorium merely by changing its name, that many of these institutions were unsuitable, and that in many cases different types of patients were under treatment side by side. If the Committee criticized any part of the speech it might as well say that it agreed with the remainder. The Committee had passed a resolution to the effect that the funds for sanatorium benefit were insufficient.

The Chairman (who also presides over the Sanatorium Benefit Subcommittee) said the statements made practically amounted to a charge of maladministration. The expert medical adviser had explained that it was not in the interests of the patient to fix definitely the length of stay. If at the end of a given time it was recommended that the treatment be continued this was invariably done. Although later on the finances of the Committee might or might not be adequate to keep persons in the institutions, yet up to the present no person had been denied treatment nor had the period of treatment been shortened on account of lack of funds.

Miss McGaw, the representative on the Committee of the Central Fund for the promotion of tuberculosis dispensaries, thought that nothing Dr. Sutherland had said was half as damaging as the Subcommittee's own statements. The report did not answer the criticisms, especially as to advanced and early cases being treated in the same wards. The admission that the Committee sent patients to any sanatorium where they were likely to get slack was a serious one. It meant that the patients were not getting the right treatment; anything except a system of graduated labour was bad. In its great difficulties the Committee had thankfully accepted from the Metropolitan Asylums Board accommodation at the Downs Sanatorium, but it was well known that patients did not there receive real sanatorium treatment. A month at a sanatorium for educational purposes might be useful if the patient was under medical supervision in his home afterwards, but as to that no information was given.

A motion to refer the report back to the Subcommittee was lost, and the Committee then decided to issue a statement to the lay press.

Relation of Dispensary to Domiciliary Treatment.

The Committee decided to make a grant of £2,000 towards the cost of the provision by the Central Fund for dispensary treatment of tuberculosis. The Sanatorium Benefit Subcommittee stated that a definite basis of grant could not be arrived at until the division of work between practitioners on the panel, in respect of domiciliary treatment, and of medical officers in regard to dispensary

treatment had been considered, and as to this an early report was promised.

COMPLAINTS AGAINST PRACTITIONERS.

The Committee considered a number of complaints against practitioners, the list representing an accumulation of two months. In six cases the complaints were found to have been substantiated, in others there was found to be either no evidence of neglect or merely technical breaches of the doctor's agreement.

One case the Medical Service Subcommittee described as of an unusual character. It was alleged that in respect of an insured person who was suffering from influenza and also developed a severe attack of hiccough that the practitioner said he could not treat the patient as an insured person, as medicine would be of no use. He was paid 2s. 6d., and then, without intimating to the patient's wife what he was going to do, he hypnotized the patient. He did this again the next day. He did not make a medical examination, and, as the wife was not satisfied, she called in another doctor, who found a temperature of 103°, and that the patient was suffering from congestion of the lungs and bronchitis. The practitioner's statement was that the patient needed sleep, and he did not think he would be able to produce it by means of drugs. When the wife objected to the kind of treatment adopted, he left the house, as he felt that his special knowledge was not appreciated. The Subcommittee came to the conclusion that the practitioner did not make a careful diagnosis and that he should have offered to provide some other form of treatment when objection was made to his methods. He should be required to refund the cost of obtaining treatment elsewhere.

In another case it was alleged that a practitioner was under the influence of drink when visited in his surgery, that he gave a certificate without making an examination, and that he postponed writing other certificates required, because he was too intoxicated to write. Afterwards his services could not be obtained on more than one occasion. The defence was that the practitioner was suffering from ague and that he could not obtain a deputy. In the absence of direct evidence, the Subcommittee found that the charge of intoxication had not been proved, but that the neglect to provide the treatment amounted to a breach of the agreement. The doctor should be required to refund £2 10s. expended in obtaining treatment elsewhere. Two other practitioners, who did not find a deputy when ill, were asked to pay smaller sums towards the cost of obtaining treatment elsewhere.

Complaints were made of a doctor the Committee had already censured for neglect. In the present cases the doctor admitted that whilst ill he made no arrangements for the treatment of persons on his list. The Subcommittee was not satisfied that the practitioner had made serious efforts to obtain the services of a deputy. The practitioner had failed to appreciate the responsibility devolving upon him. He resided a considerable distance from the surgery, and he had supplied the Committee with no definite information as to his private address. Consequently it had not been possible to include in the panel list any information which would enable insured persons to obtain his services at such times as he was not in attendance at the surgery. The Subcommittee considered that the continuance of the practitioner on the panel would be prejudicial to the efficiency of the medical service, but that before taking the extreme step of making representations to the Commissioners, the doctor should be given an opportunity of disposing of his practice. Should he have failed to dispose of it by June 30th the Subcommittee proposed then to make representations to the Commissioners.

A complaint was made that the treatment given by a doctor to a patient suffering from menstrual trouble was unnecessary and indecent. The Subcommittee stated that it was convinced that the treatment was applied in all good faith, but it was to be regretted that the practitioner did not arrange for a woman to be present during the examination. It was of opinion that the practitioner was guilty of grave indiscretion in applying treatment of the character given to a woman patient who was not accompanied by a friend, or even in examining her in those circumstances.

THE UNALLOTTED FUNDS.

On April 2nd the Insurance Committee received the opinion of Mr. Danckwerts, K.C., as to the money remaining undistributed in respect of medical benefit owing to the number of insured persons who had not chosen a doctor. Mr. Danckwerts replied as follows:

1. (*Q.* Can the Committee now distribute?)
   A. "The answer is in the negative. Nothing can be distributed to the practitioners unless the practitioner is by his contract entitled to something, and then he can get only what he is entitled to by his contract."
2. (*Q.* As to the personal liability of members of the Committee.)
   A. "Does not arise. I may say, however, that, in my opinion, any member of the Committee who sanctioned the unauthorized expenditure would be personally legally liable to make it good."
3. (*Q.* As to whether the money can be used for providing nursing, or returned to insured persons not accepted for treatment by doctors on the panel, or otherwise utilized for the benefit of insured persons.)
   A. "I desire to refer to paragraph 4 of my previous opinion. I think the fund cannot be utilized for returning anything to insured persons who have not been accepted for treatment or have not been imposed by allocation on some practitioner's list. As I have already advised, Section 21 of the Act contains machinery by using which the funds may be utilized for nursing purposes provided it is prescribed by the proper authority that the sums so expended shall be treated as expenditure under the head of medical benefit."

MANCHESTER.

PROTEST BY THE MEDICAL PROFESSION.

AT a meeting of the Manchester Insurance Committee on March 24th, Mr. WALTER DAVIS in the chair, after the routine business had been disposed of, Dr. T. ARTHUR HELME submitted a number of resolutions adopted by the Local Medical Committee referring to the efficiency of the present medical service. The CHAIRMAN pointed out that the whole question had been referred for consideration and report to a special subcommittee, and though he would permit Dr. Helme to make some remarks in submitting the resolutions, no discussion on them could be allowed at present. The Medical Committee drew attention to the following matters, which it considered important in any investigation as to the efficiency of the service in Manchester:

That on the official scale of fees for work done agreed to by the Insurance Committee in January, 1913 (2s. per consultation, 2s. 6d. per visit, etc.), the doctors working the Insurance Act in this area are now out of pocket to the extent of at least £70,000; that the average amount actually paid for each attendance upon an insured patient is approximately 1s.; that this rate of remuneration is insufficient to secure the same standard of investigation and treatment as was given to private patients by an average practitioner prior to the Insurance Act.

That, in addition to this heavy loss under the contract, the doctors in this area have surrendered the floating sixpence, amounting to some £7,000, to the chemists, in order to obtain for their insurance patients similar drugs to those prescribed for private patients, but they now realize that, even with this contribution on their part to the drug fund, the money available is insufficient to provide the most appropriate remedies for many serious cases.

That general charges of malpractice, careless treatment, and so on, such as were recently made in public by some members of the Insurance Committee against doctors on the list, are not merely unfair and untrue, but may also be prejudicial to the efficiency of the service, inasmuch as some practitioners, failing to assess at their true value oratorical outbursts of the kind, may feel indignant and resentful, and therefore take less interest in insurance work. The Medical Committee is of opinion that a friendly and fair co-operation of all interests is essential if a reasonably satisfactory working of the present Act is ever to be attained.

That the statutory Local Medical Committee, while seriously deprecating general allegations and vague innuendos of the kind complained of, recognize the fact that some doctors have been obliged to deal with more patients than is desirable. Such a state of affairs was inevitable at the inception of an admittedly experimental scheme like the National Insurance Act, but the Medical Committee reiterates its desire, already conveyed to the Insurance Committee on more than one occasion, to co-operate in dealing with any instances of malpractice brought to its notice.

That the attention of the Insurance Committee be again directed (*a*) to the delay in making payment for last year's services; (*b*) to the fact that the chemists were at fault in failing to point out under Regulation 46 instances of extravagant prescribing each month or each quarter, and that in these circumstances the Insurance Committee be urged to expedite the final settlement.

Dr. HELME, who is Chairman of the Local Medical Committee, said he cordially supported the position taken by the resolutions submitted. He drew special attention to the words of the first paragraph: "That the rate of remuneration is insufficient to secure the same standard of investigation and treatment as was given to private patients by an average practitioner prior to the Insurance Act." He admitted that the whole of the medical profession was not perfect, but the profession as a whole was giving the same treatment to the patients as they had done before. He recalled the day when he was one of those who undertook that the profession, in circumstances most galling to them, would give an efficient service. They had done so, and he looked back to the last twelve months with deep gratification to find that his trust in the profession had in that respect been justified. But the work had been done, not by legitimate payment but through the charity of the profession. It would be said, "What about the large incomes being made, those over £1,200?" He replied that they had been made by over-

working the profession, and a heavy toll would be paid by those men who, by force of circumstances in the industrial and overcrowded districts, had worked themselves almost to death.

A member of the Committee here objected to some of the statements being made without the Committee being allowed to reply, but the Chairman said that the opportunity was being given out of courtesy to the medical profession, so that it could not be said that the profession had had no opportunity. Dr. Helme proceeded to say that the allegations made at the last meeting of the Committee were brought forward in an irregular manner, and the profession had no opportunity to refute them, as it had not time to prepare its case. The Chairman disagreed with this, and thought the doctors had ample time to fortify themselves; he suggested that the Committee should neither accept nor contradict the statements being made, but that they should be referred to the special Subcommittee already appointed to consider the whole question of the medical service.

Dr. Helme, proceeding, made a strong protest against the attacks on the medical profession. They were merely insinuations, allegations, and general charges, with no specific cases that could be dealt with. There was a subcommittee formed where such matters could be carefully and dispassionately sifted by medical men and laymen who would do the best for the insured persons, but those who attacked the profession had not used the means thus provided, and in the circumstances the members of the medical profession could not help thinking that the charges made against it were not made in the interests of the insured person. Evidently they were made for other reasons.

Mr. Mellor, secretary of the Manchester Trades and Labour Council, here remarked, "None of the allegations have been so gross as those we have now to listen to."

Dr. Helme said he challenged those who made the allegations to bring specific cases so that they could be investigated by the Committee. Although he himself had opposed the details of the Insurance Act, he had done so conscientiously, and not so much for the present as for the future, when there might be a different type of men in the profession from that represented to-day. He was there to offer on behalf of the medical profession of Manchester its most cordial support to make the Act a success, if that be possible, but the persistent attacks on the profession now being made could only disturb the possibility of the cordial working of the Act, and make men who were trying to do their best sick of the whole thing. He asked members of the societies represented on the Committee not to make vague charges but to bring definite cases, so that they could be investigated. If the attacks were continued he warned them that there might be on the part of the medical profession attacks on the societies that they little dreamt of, and the medical profession was a powerful body.

The Chairman said that Dr. Helme's statement presented the situation from the doctor's point of view. The whole of it was controversial, and was by no means accepted by the Committee. Some people believed, and thought they could prove, that the medical service had not been adequate, but the Committee wanted to find out whether the statements made were correct or not, and it was the business of the special committee to report on that. The question of the floating sixpence was another matter for the Committee, and it would be unwise to offer any statement till the Committee reported.

It was then resolved to refer the resolutions of the Local Medical Committee to the special committee already appointed.

INSURANCE NOTES.

LONDON.

A State Medical Service.

At a meeting of the Hackney Medical Society, held at No. 1, Clapton Square (by invitation of Dr. Deighan), on March 24th, at 9.30 p.m., under the chairmanship of the President, Dr. C. F. Hadfield, Mr. Charles A. Parker, F.R.C.S., gave an interesting address on "A State Medical Service." He first outlined the causes which, in his opinion, made a State Medical Service necessary, and then suggested a scheme under which the public would have the benefit of institutional treatment, and the skilled advice and treatment of specialists, surgeons, bacteriologists, etc.

Mr. Parker's address was followed with keen attention by those members present, but unfortunately he had to leave before any discussion could take place. On the motion of Dr. T. Rushbrooke, seconded by Dr. Deighan, a hearty vote of thanks was unanimously accorded to Mr. Parker.

Considerable discussion took place after Mr. Parker had left, and the following resolution was adopted:

> That a State Medical Service, as described by Mr. Parker, is considered by the members of this society to be impracticable, and the scheme outlined to be detrimental to the interests of existing medical practitioners; also that the arguments submitted by him afford no proof that it would be to the benefit of the public.

IRELAND.

Certification and Malingering.

Last autumn it was suggested by the Irish Insurance Societies that they were being victimised by the careless manner in which certificates of sickness were granted and the consequent malingering that was being practised by insured persons. The Irish Medical Committee therefore gave directions to the Local Medical Committees in the panel areas to make inquiries as to whether malingering under the National Insurance Act took place in such areas, and in particular to investigate any specific complaints against particular medical men for laxity in certification. The local medical secretaries applied to the societies operating in their respective areas for information on this point, and the replies received have now been laid before the Irish Medical Committee. A few societies declined to give any help, but many others replied fully. None have ventured to make any specific charges. The secretary of one of the largest societies in the North of Ireland has borne testimony to the very conscientious manner in which the profession in County Antrim has discharged the duty of certification. The local representative of a large English society also bears testimony to the thoroughly honest way in which certificates have been given. Only one secretary of a small society makes any general charge of laxity, but he gives no particulars, and many secretaries declare they have not experienced excessive claims for sickness benefit.

INSURANCE ACT IN PARLIAMENT.

DEBATE IN THE HOUSE OF COMMONS.

Specialist Treatment: Administration of Sanatorium Benefit: Medical Certification and a Whole-time Service.

A further debate on the administration of the National Insurance Act took place in the House of Commons on March 26th. The occasion of the debate was on the motion "That the Speaker do leave the Chair" on going into Committee on the Civil Service Estimates. It is the custom in the House that members ballot for a motion, which may be made when "getting the Speaker out of the Chair" on the Army, the Navy, and the Civil Service Estimates.

Sir Clement Kinloch-Cooke was successful in the ballot for the Civil Service Estimates, and had put down the following motion:

> That in the opinion of this House, the working of the National Insurance Act shows that, while the cost to the State increases, the benefits held out to insured persons are, in many instances, not forthcoming, and there is reason to believe, in the near future, that the situation will become more acute, and a still larger number of insured persons will suffer.

The debate followed the usual lines, and presented no new features. The political crisis in connexion with Home Rule overshadowed everything else, and it was with some difficulty that the debate was kept going until 8.15, at which time the motion was negatived without a division.

Sir Clement Kinloch-Cooke's speech may, perhaps, best be described as an attack on the administration of the Act both from the front, from the flanks, and from the rear. He described the arrangements for medical and sanatorium benefits as entirely inadequate, and prophesied financial ruin to the friendly society movement, and suggested, in conclusion, that if the matter were thoroughly

inquired into "we should find that it would not be altogether impossible to substitute for the compulsory insurance principle a voluntary principle." The motion was seconded by Mr. Charles Bathurst in a well-informed and entirely non-partisan speech. He stated that, in so far as medical treatment was inadequate, he considered that it was due to the Regulations of the Commissioners and to the lack of proper organization for supplying special forms of treatment. He regretted the insufficiency of the provision for apparatus, the absence of special forms of treatment, and of dental treatment, as well as the lack of hospital provision. He also criticized the cumbrousness of the arrangements in connexion with the card index and the facilities for obtaining medical benefit after change of address. He discussed the excessive sickness which is stated to exist in certain women's societies, and indicated his view that special and separate arrangements should be made for the sickness attendant on pregnancy.

Mr. Astor dealt chiefly with the provisions made for supplying sanatorium benefit, and criticized the slowness with which claims were being put through and proper sanatoriums provided. He emphasized particularly the need of special provision for advanced and hopeless cases, in order to avoid infection of others, and the need for proper arrangements for laboratory investigations.

Dr. Addison agreed as to the desirability of pushing forward arrangements for the provision of proper treatment for advanced cases, for laboratory assistance, and for other forms of special treatment. He contended, however, that excellent progress had been made, in view of the difficulties which had been experienced and the strong opposition of a political character which had been met with. He claimed that it was a great achievement to have been able to treat more than 20,000 tuberculous persons in sanatoriums, although many of the sanatoriums in which the treatment had been undertaken were frankly of a provisional kind. He stated that over the greater part of the country schemes had already been prepared and approved for making adequate provisions for all classes of cases, whether they might be insured persons or not. In connexion with the charge that the funds were insufficient and that schemes would entail a heavy cost to the ratepayer, he pointed out that the provision of half the cost under the Hobhouse grant, apart from being an assistance in itself, had greatly facilitated arrangements, the result of which would be to remove a heavy portion of the charges which at present fell on the Poor Rate in consequence of the large number of tuberculous persons treated in the workhouses and infirmaries.

Mr. Forster supported the contention put forward by Mr. Bathurst and Mr. Astor, and complained particularly of the non-provision of special forms of treatment.

Mr. Herbert Samuel, replying in connexion with the provision of sanatoriums, said that there were already provided in the country more beds, both for sanatorium and hospital cases, than had been foreshadowed as necessary by the Astor Committee for insured persons. The Astor Committee estimated that one bed per 5,000 would be required of each kind, which, so far as insured persons were concerned, would be in England 2,100 beds of each kind. As a matter of fact, there were at the present moment 5,145 beds available in sanatoriums, there were 3,215 persons accommodated in them, and nearly 50 per cent. more than it was estimated would be required so far as the insured were concerned. There were already provided also 2,580 hospital beds, which was 480 more than the Committee suggested should be provided at the commencement, and there were at present 1,658 insured persons under treatment in them.

The debate was continued by Viscount Wolmer and Mr. Wedgwood Benn, who replied to various points to which Dr. Addison and Mr. Herbert Samuel had not referred. Mr. Hodge dealt particularly with the experiences of women workers in connexion with the tinplate trade in Wales; he blamed the medical men for laxity in giving certificates, and said that in his opinion the heavy sickness experienced, particularly with respect to males, was absolutely due to the fact that the doctors did not do the duty they were paid for doing; he expressed his belief that the proper remedy would be the provision of a State Medical Service and that "that would place doctors in such a position that they would not have to dread individuals changing from one panel to another."

Mr. Worthington Evans was speaking at 8.15, but did not resist the closure which was moved by Mr. Pease on behalf of the Government.

Expenses of District Insurance Committees.

Mr. Benn stated, in reply to a question by Mr. William Thorne, that the National Insurance Commissioners had no power under Section 61 of the Act of 1911, and Section 31 of the Act of 1913, to allow expenses to delegates attending district committees.

Medical Benefit.

Women Doctors.

Mr. Jowett asked whether women who were forced to pay for medical attendance and treatment under the National Insurance Act, and who had never been attended by men doctors in the past, were being refused permission to make their own arrangements for medical attendance and treatment under Section 15 (3) of the National Insurance Act, 1911, although there was no woman doctor on the panel of doctors of their local insurance committee; whether the Bradford Insurance Committee was one of the committees so refusing; and what action he intended to take in order to secure the medical benefit for insured women who were unwilling to consult with men doctors concerning their individual ailments.—Mr. Benn replied that there was no evidence of any such general action on the part of insurance committees. In two or three cases the Bradford Insurance Committee refused permission to applicants to make their own arrangements with a woman doctor, but he believed that in none of these cases was the ground for the application as stated.

Medical Benefit and Additional Fees.

Sir Walter Essex asked whether a panel doctor was entitled to receive from a patient on his panel a fee in addition to that provided in the National Insurance Act.—Mr. Wedgwood Benn replied: No, sir, not in respect of medical benefit.

Panel Chemists.

Mr. G. Locker-Lampson asked whether the Government would give facilities for the introduction of a bill to provide a grant for those panel chemists whose accounts for 1913 could not be met out of the Drug Fund under the National Insurance Act.—The Prime Minister replied: No, sir. I am not aware that a case has been made out for altering the arrangements under which the existing parliamentary grant was given.

Mr. G. Locker-Lampson then asked for an assurance that no panel chemist would suffer financial loss merely because he carried out his duties under the Act.—The Prime Minister said in reply that he was told that they had entered into an agreement which was still current and valid.

Seamen.

Mr. F. Hall asked whether officers, apprentices, and sailors on British ships on long voyages were provided by the shipowners with medical attendance; whether it was compulsory for such persons to be insured; and, if so, what medical treatment they obtained in return for their contributions to the National Insurance funds.—Mr. Benn said that the answer to the first two questions was in the affirmative. Insured persons in the mercantile marine were entitled to medical benefit in Great Britain in respect of any period during which the owner of the ship was not liable under the Merchant Shipping Acts to defray the expenses of medical attendance and medicine, and the contributions both of masters and men on foreign-going ships were reduced in consideration of the periods during which they did not require benefit under the Insurance Acts.

Tuberculosis Schemes.

Capital Expenditure (Scotland).

Major Hope asked the amount paid in Scotland up to date for the erection or maintenance of institutions for the treatment, under the National Insurance Act, of tuberculous patients out of the capital grant of £1,500,000, out of funds available for sanatorium benefit under the National Insurance Act, and out of rates.—Mr. McKinnon Wood replied that, as he had explained to Mr. Astor on March 19th, only a nominal amount had as yet been issued in Scotland out of the capital grant of £1,500,000, but schemes for the erection of institutions by local authorities were approaching completion which would shortly involve

the issue of large amounts from the grant. With regard to the other portions of the question, the information was not available in a form which enabled the expenditure for the particular purposes mentioned to be distinguished from expenditure on sanatorium benefit generally. He was informed that the expenditure by Insurance Committees in Scotland under Section 16 (2) of the National Insurance Act, 1911, towards the sanatorium benefit amounted to £6,180 for the period from July 16th, 1912, to January 11th, 1913, and to approximately £57,000 for the period from January 12th, 1913, to January 11th, 1914; while the total expenditure by local authorities for the treatment of tuberculous cases in hospitals and sanatoriums for the period from July 15th, 1912, to March 31st, 1913, was £32,488, and their estimated expenditure for the period from April 1st, 1913, to March 31st, 1914, was approximately £80,000. One-half of the two last-mentioned sums was chargeable to the rates.

CORRESPONDENCE.

THE EDINBURGH LOCAL MEDICAL COMMITTEE.

DR. MICHAEL DEWAR (Edinburgh) writes: In reference to the statement which I made at the recent conference of representatives of Panel and Local Medical Committees that only a small proportion of the Edinburgh panel practitioners had responded to the levy made by the Local Medical Committee for its administrative expenses, it seems that a misstatement was made. I, along with others, have been under a misconception of the actual facts. I was informed yesterday by the Treasurer of the Local Medical Committee that over 90 per cent. of the panel practitioners had paid up, and I now hasten to correct what I said and apologize.

PROPOSALS FOR A STATE MEDICAL SERVICE.

A PUBLIC meeting, called by the State Medical Service Association, was held at the Essex Hall, London, on April 1st, to consider the responsibility of the State for the national health, especially in relation to a State Medical Service. Sir GEORGE KEKEWICH presided, and an audience of a little over one hundred assembled.

Sir JOHN COLLIE moved the following resolution:

> That this meeting, being of opinion that the present arrangements for the prevention and treatment of disease are wholly inadequate to the needs of the community, calls upon the Government to establish a complete State Medical Service, freely available to all, as the only means by which the health of the nation can be efficiently maintained.

Sir JOHN COLLIE addressed himself mainly to the question of alleged excessive sickness claims under the Insurance Act, remarking that in many cases the apparent excess was due to the unrealized amount of ill-health amongst women, the failure to appreciate that in pregnancy there was a large amount of sickness, and the absence of proper hospital accommodation. Nevertheless, every malingerer had a medical certificate, and it was on the question of medical certification that other sickness insurance systems had broken down. It was difficult for a doctor to tell an insured person that he was malingering. When the Insurance Act was extended to dependants of insured persons, a national medical service must follow. The present basis of the profession was wrong; all medical practitioners were competing for the favour of patients, and it was the necessity of pleasing patients that led to the tremendous strain of unnecessary sickness claims.

Professor LEONARD HILL, who seconded the resolution, described in detail some of the advances in medical science on its preventive side and urged that this was the most important field of medical work. Every branch, however, should be co-ordinated and along with treatment should go the education of the public in matters of health, and study of the conditions under which they lived.

Mr. A. G. GARDINER said that it was not to be expected that the medical profession, as a whole, would be enthusiastic for a State service, but the question was primarily for the public. There was never a better chance of forming public opinion than at present. He considered that the present system of supplying medical service to the community in general was a failure. A system under which doctors prospered according to the measure of ill-health of the community made the possession of a fine and delicate conscience a luxury a doctor could not afford, and the effect was to degrade the standard of the profession.

Dr. ALFRED SALTER dealt first with the unequal distribution of medical practitioners throughout the country. In well-to-do districts there was one doctor to every 500 approximately of the population, in mixed districts about 1 to 1,500, and in purely working class districts 1 to 3,000 or 4,000, or even 5,000 of the population. Poor districts, therefore, where birth, death, and sickness-rates were high, were medically understaffed. It was notorious before the passing of the Insurance Act that doctors in working-class districts were overworked, had little opportunity to keep up to date in medical knowledge, and had a great deal of night work. The conditions in those respects were very much worse now. A great many more persons came under the notice of the doctor; more trivial ailments were treated; the hospitals put pressure on people to go to their panel doctor, and many who formerly were attended under the Poor Law received treatment under the Act. Mr. Lloyd George had said that the financial basis of the Insurance Act was the assumption that the doctor in a year would see not more than 30 per cent. of the persons on his list. Last year he and his partners saw 89 per cent. of those on their lists; another doctor in the East End, 90 per cent.; others 82, 89, 92, and so on. Dr. Cox, the Medical Secretary of the British Medical Association, estimated the percentage for the whole country as 65 or 67. Dr. Salter gave details of the long hours worked in practices in poor districts. His experience in Bermondsey, and that of many others, was a working day of from 10 a.m. to 11.30 p.m., and even later, day after day, with many night calls. Patients had to be seen at the rate of eighteen an hour, which gave an average of three and a quarter minutes for each patient and a minute and a quarter of that time was occupied with clerical work. Doctors not in partnership had been having a terrible time in poor districts since the passing of the Act. No practitioner could do justice either to himself or his patients under the conditions that existed. The panel doctor, in order to be fair to all who were waiting in the surgery, had to resort to all sorts of time-saving expedients; he had to hurry through his work, often giving a prescription for a bottle of medicine in cases where, if he had time, he would go into the habits of the patient and give advice. The difficulties of the medical service in poor districts were due, first, to the general shortage of doctors. The number of entrants into the profession was decreasing, because, under present conditions, business life had superior attractions. Another reason was the serious residential disadvantages of a working-class practice to a professional man drawn from a class accustomed to reasonably comfortable surroundings. If he settled in the East End of London he found it impossible to get a good house to live in; more than half the doctors in Bermondsey were living in houses that had no bathrooms, and recently, when the local board of guardians appointed whole-time Poor Law medical officers, it was found impossible to obtain sufficient houses of a suitable kind for them to live in. The only remedy for the present state of affairs in poor districts he believed to be a State Medical Service, under which special terms could be offered as inducements in the way of salary, continuity of tenure, pensions, holidays, and a reorganization to do away with the enormous over-work. It might be arranged that only five days' work in the week should be the rule, with a rota for night work. He did not believe a State Medical Service would completely remedy the appalling conditions in the poorest districts. Something must be done to increase the total medical supply, and the only way to do that was to democratize the profession. He knew that was an unpopular idea with many medical men, but there was no likelihood of the numbers being made up sufficiently from the upper middle classes; secondary county scholarships should be made tenable not only at universities but at medical schools, so that a student whose general level of educational attainment was sufficiently high could enter the medical profession as he might other professions. It would be possible, if desired, to establish

a State Medical Service for the poorer districts only and make the conditions such that they would attract those who had just qualified and doctors from districts well supplied. As to the complaints of approved societies of excessive sickness claims, if medical practitioners had time to give preventive advice, a great deal would be done towards reducing sickness rates.

The CHAIRMAN, in putting the resolution, said he was in favour of a State Medical Service, and urged that there should be in this country—what many other nations possessed—a Minister of Public Health. The hospitals should be under State inspection, and the attention of the nation should be concentrated upon problems of poverty and housing.

The resolution was carried without any dissentients, and the proceedings terminated.

SCHOOL MEDICAL SERVICE.

THE following letter has, we are informed, been addressed to the Honorary Secretaries of Divisions of the British Medical Association:

Dear Sir,—As a matter of urgency I write, as Honorary Secretary of the School Medical Service Group of the Society of Medical Officers of Health and on behalf of the local Honorary Secretary of our group for your Division, to request you to kindly bring the two following resolutions of the group before your next constituency Division Meeting, with the object of their instructing their representative to bring up these two resolutions at the next Annual Representative Meeting of the Association and vote for the same if proposed by one of the other representatives:

1. That assistant whole-time medical officers whose duties include school medical work shall commence at a salary of not less than £350, rising by annual increments of £25 to a maximum of not less than £500.
2. That whole-time medical officers whose duties include school work be included in the provisions of the bill to secure superannuation, security of tenure, etc.

Yours faithfully,

ARMLY ASHKENNY,

Honorary Secretary of the School Medical Service Group,
38, George Road, Edgbaston, Birmingham.

March 31st, 1914.

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

BREVET-COLONEL S. HICKSON, M.B., has been appointed Inspector of Medical Services at the War Office, vice Colonel M. W. O'Keefe.

Lieutenant-Colonel J. C. CONNOR has been appointed to the Head Quarters, Irish Command, for duty.

Major A. G. THOMPSON has been posted to the Southern Command for duty.

INDIAN MEDICAL SERVICE.

CAPTAIN J. H. MURRAY is confirmed in the appointment of Senior Medical Officer, Port Blair, with effect from November 6th, 1913.

The services of Major J. M. WOOLLEY are placed temporarily at the disposal of the Government of Bengal with effect from November 26th, 1913.

Lieutenant-Colonel W. R. EDWARDS, C.M.G., resumed charge of his duties as an officiating Agency Surgeon of the First Class and Chief Medical Officer, North-West Frontier Province, with effect from February 5th.

Lieutenant-Colonel T. W. IRVINE is posted as Civil Surgeon, Peshawar, with effect from February 5th.

Captain C. I. BRIERLEY is placed on general duty in the Peshawar District, with effect from February 5th.

The undermentioned officers of the Indian Medical Service, having completed their courses at the Royal Army Medical College and at Aldershot, have been finally admitted to the Service; their commissions will bear date July 26th, 1913: S. S. SOKHEY, M.B., A. K. SINHA, M.B., S. DORAISAMY, A. SEDDON, M.B., J. FINDLAY, M.B., W. C. SPACKMAN, M.B., J. C. DE, M.B., N. M. MEHTA, R. M. EASTON, M.B., C. H. P. ALLEN, P. S. B. LAUGHTON, R. V. MARTIN.

The promotion to his present rank of Major J. GOOD, M.B., is antedated from June 28th, 1912, to December 28th, 1911.

Colonel R. W. S. LYONS, M.D., is promoted to the rank of Surgeon-General, vice Surgeon-General H. W. Steveuson, C.S.I., retired with effect from January 10th.

The promotion to his present rank of Major H. H. G. KNAPP, M.D., is antedated from January 29th, 1914, to July 29th, 1913.

Major W. D. HAYWARD, I.M.S., Medical Store Keeper to Government, Madras, is granted twenty months' combined leave from March 25th.

Major C. F. MARR, I.M.S., Medical Store Keeper, is posted to Madras during Major Hayward's absence.

CHANGES OF STATION.

THE following changes of station among the officers of the Army Medical Service have been officially reported to have taken place during February:

		FROM		TO
Colonel	C. E. Nichol, D.S.O., M.B.	Calcutta	...	Jubbulpore.
,,	R. Kirkpatrick, C.M.G., M.D.	Sialkot	...	Calcutta.
,,	C. Birt	London	...	India.
Lieut.-Col.	T. B. Winter	Colchester	...	Canterbury.
,,	E. Eckersley, M.B.	Delhi	...	Quetta.
,,	D. M. O'Callaghan	Hilsea	...	Dover.
,,	F. R. Newland, M.B.	Dover	...	Colchester.
,,	J. F. Donegan	Woolwich	...	Secunderabad.
,,	R. Holyoake	Sheerness	...	India.
,,	F. J. Morgan	Barrackpore	...	Royal Arsenal, Woolwich.
,,	M. P. C. Holt, D.S.O.	Kasauli	...	Aldershot.
,,	B. J. Inniss	Mauritius	...	Delhi.
,,	N. Faichnie, M.B.	Meerut	...	Preston.
Major	F. E. Gunter, M.B.	,,	...	Tidworth.
,,	E. W. Bliss	Quetta	...	E. Command.
,,	L. Addams Williams	Tidworth	...	Karachi.
,,	E. Brodribb	Malta	...	Scutari.
,,	F. S. Penny, M.B.	Cork	...	Limerick.
,,	M. M. Lowsley	Ambala	...	Kasauli.
,,	C. J. O'Gorman, D.S.O.	Calcutta	...	Barrackpore.
,,	G. J. S. Archer, M.B.	Cosham	...	Netley.
,,	S. O. Hall	Hyderabad	...	Rangoon.
,,	G. H. Goddard	Shorncliffe	...	Brighton.
,,	H. D. Packer	Devonport	...	Karachi.
,,	H. K. Palmer	Aden	...	Cosham.
,,	W. R. Blackwell	Lucknow	...	London.
,,	H. B. Fawcus, M.B.	R.A.M. College	...	Aldershot.
,,	J. Matthews	Secunderabad	...	N. Command.
,,	A. H. Safford	Lucknow	...	Irish Command.
,,	W. M. H. Spiller, M.B.	Liverpool	...	Calcutta.
,,	W. L. Baker	Malta	...	E. Command.
,,	P. S. Lelean, F.R.C.S.	Colchester	...	R.A.M. College.
,,	G. Baillie, M.B.	,,	...	Landguard Fort.
,,	H. G. Pinches	Irish Command		Chatham.
,,	E. F. Q. L'Estrange	Cannanore	...	Londonderry.
,,	L. Cotterill, M.B.	Aldershot	...	Nowshera.
Captain	J. Mackenzie, M.B.	Calcutta	...	Dinapore.
,,	H. V. Bagshawe	Cairo	...	Cyprus.
,,	E. M. Pennefather	—		Multan.
,,	B. G. Patch	Bradford	...	India.
,,	R. J. Cahill, M.B.	Athlone	...	Londonderry.
,,	H. C. Winckworth	Woolwich	...	India.
,,	N. Low	Golden Hill	...	Colchester.
,,	A. T. Frost, M.B.	Calcutta	...	Lucknow.
,,	K. A. C. Doig	--		Meerut.
,,	C. R. Millar	—	...	Fort Camden, Queenstown.
,,	L. V. Thurston	Bordon	...	Aldershot.
,,	C. E. W. S. Fawcett, M.B.	Queenstown	...	India.
,,	M. Keane	Bulford	...	Calicut.
,,	D. De C. O'Grady	Rawal Pindi	...	Chatham.
,,	P. S. Stewart, M.B.	Malta	...	S. Command.
,,	A. C. Amy, M.D.	Agra	...	Manchester.
,,	E. B. Lathbury	Bareilly	...	Irish Command.
,,	J. R. Foster	Neemuch	...	Dublin.
,,	A. M. Benett	—	...	Newport.
,,	J. A. Bennett, M.B.	Newport	...	Irish Command.
,,	C. W. Bowle	Jubbulpore	...	Enniskillen.
,,	T. W. Browne	Tipperary	...	Bullevant.
,,	O. C. P. Cooke	Cork	...	Queenstown.
,,	W. K. Beaman	Malta	...	N. Command.
,,	R. D. O'Connor	Multan	...	,,
,,	T. H. Scott, M.B.	Ferozepore	...	Bradford.
,,	A. C. Elliott, M.B.	Sialkot	...	Landguard Fort.
,,	F. Casement, M.B.	Lucknow	...	Scot. Command.
,,	J. B. Hanafin, F.R.C.S.I.	Gharial	...	Ambala.
,,	J. A. Renshaw	Secunderabad	...	Wellington.
,,	D. B. McGrigor, M.B.	Ranikhet	...	Agra.
,,	B. A. Odlum	Simonstown	...	Bloemfontein.
,,	F. Worthington, M.B.	—	...	Gravesend.
,,	A. Shepherd, M.B.	Rangoon	...	Shwebo.
,,	W. E. Marshall, M.B.	Cork	...	Kinsale.
,,	H. H. Leeson	Alexandria	...	Cairo.
,,	M. J. Williamson, M.B.	Potchefstroom	...	Wynberg.
,,	C. M. Nicol, M.B.	Cairo	...	Alexandria.
Lieutenant	D. Reynolds, M.B.	Sialkot	...	Attock.
,,	B. H. H. Spence, M.B.	R.A.M. College	...	Rawal Pindi.
,,	D. W. Bruce, M.B.	Aldershot	...	,, ,,
,,	T. E. Osmond	Lucknow	...	Ambala.
,,	L. Buckley, M.B.	Rawal Pindi	...	Ferozepore.
,,	S. P. Sykes, M.B.	,, ,,	...	Jutogh.
,,	H. J. G. Wells, M.B.	Nowshera	...	Rawal Pindi.
,,	W. W. Pratt, M.B.	London	...	India.
,,	C. J. H. Little, M.B.	Strensall	...	Rawal Pindi.
,,	E. P. A. Smith, M.B.	Aldershot	...	Lucknow.
,,	H. J. S. Shields	London	...	Caterham.
,,	P. M. J. Power	Cosham	...	Winchester.
,,	R. B. Phillipps	Cork	...	Tipperary.
,,	R. C. Carlyle, M.B.	Caterham	...	Malta.
,,	H. Beddingfield, M.B.	Woolwich	...	Hounslow.
,,	F. C. Davidson, M.B.	Glasgow	...	Fort George.
,,	S. D. Large	Aldershot	...	Ewshott.
,,	W. O. W. Ball, M.B.	,, ,,	...	Bordon.
,,	J. Rowe, M.B.	,, ,,	...	Deepcut.
,,	A. G. Brown, M.B.	Dublin	...	Curragh.

The following Lieutenants, appointed on probation July 26th, 1912, have been stationed as follows: R. B. Price, M.B., and W. V. Corbett at London; F. C. Cowtan and N. T. Whitehead, M.B., at Woolwich.

Lieutenant H. C. D. Rankin, M.B., appointed on probation July 25th, 1913, has been stationed at Aldershot.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 8,982 births and 5,741 deaths were registered during the week ended Saturday, March 28th. The annual rate of mortality in these towns, which had been 15.8, 15.4, and 15.2 per 1,000 in the three preceding weeks, rose to 16.5 per 1,000 in the week under notice. In London last week the death-rate was also equal to 16.5, as against 15.6, 14.3, and 14.2 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.1 in Edmonton, 6.9 in Ilford, 7.3 in Devonport, 7.5 in Eastbourne, 8.0 in Grimsby, and 8.7 in Southend-on-Sea to 22.6 in Cambridge, 22.7 in Burnley, 23.3 in Preston, 23.5 in Stoke-on-Trent, 25.3 in Swansea, and 30.0 in West Bromwich. Measles caused a death-

rate of 2.3 in Nottingham and in West Bromwich, 2.9 in Leicester, and 3.9 in Swansea; scarlet fever of 1.3 in Preston; whooping-cough of 1.7 in Exeter, in Bolton, and in Newport (Mon.), 1.9 in Barnsley, and 2.6 in Swansea; and diphtheria of 1.4 in South Shields, 1.7 in Tynemouth, and 2.7 in Cambridge. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 37, or 0.6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 11 were recorded in Birmingham, 4 in Liverpool, 3 in Preston, and 2 in Middlesbrough. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,307, 3,222, and 3,173 at the end of the three preceding weeks, had further fallen to 3,143 on Saturday last; 347 new cases were admitted during the week, against 340, 320, and 319 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns, 1,204 births and 726 deaths were registered during the week ended Saturday, March 28th. The annual rate of mortality in these towns, which had been 16.6, 17.9, and 16.6 per 1,000 in the three preceding weeks, fell further to 16.5 per 1,000 in the week under notice, and coincided with the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 9.4 in Clydebank, 11.0 in Falkirk, and 11.1 in Leith to 19.1 in Kilmarnock, 20.6 in Paisley, and 25.5 in Coatbridge. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Motherwell and Coatbridge. The 323 deaths from all causes registered in Glasgow included 21 from measles, 9 from infantile diarrhoeal diseases, 5 from scarlet fever, 5 from whooping-cough, 4 from diphtheria, and 1 from enteric fever. Five deaths from measles were recorded in Motherwell, 3 in Coatbridge, and 2 in Edinburgh; 3 deaths from diphtheria in Aberdeen; and 3 deaths from whooping-cough in Coatbridge, and 2 in Paisley.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ABERDEENSHIRE: PARISH OF TYRIE.—Medical Officer.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Assistant Surgeon.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Two House-Surgeons (males). Salary at the rate of £75 per annum.

BRADFORD POOR LAW UNION.—Assistant Resident Medical Officer. Salary, £150 per annum.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BRIGHTON THROAT AND EAR HOSPITAL.—Non-Resident House-Surgeon. Salary, £150 per annum.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL GENERAL HOSPITAL.—(1) House-Physician. (2) Casualty House-Surgeon. Salary at the rate of £80 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—House-Physician. Salary, £80 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Surgeon.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer. Salary, £200 per annum.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Senior House-Surgeon. Salary, £120 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

CORNWALL EDUCATION COMMITTEE, Truro.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

CROYDON GENERAL HOSPITAL.—Anaesthetist and Second House-Surgeon. Salary, £80 per annum.

DAVOS PLATZ: QUEEN ALEXANDRA SANATORIUM.—Resident Assistant Medical Officer. Salary, £100 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £200 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DONCASTER: ROYAL INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Salary, £100 per annum.

DORCHESTER: COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £250 per annum, rising to £350.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £250 per annum, rising to £275.

FOLKESTONE: ROYAL VICTORIA HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £120 per annum.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £140 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—(1) Resident Medical Officer. (2) House-Physician. (3) House-Surgeon. (4) Casualty Officer at Out-patients' Department. Salary for (1) £200 per annum, and for (2), (3), and (4) at the rate of £70 per annum.

HASTINGS: EAST SUSSEX HOSPITAL.—Assistant House-Surgeon (male). Salary at the rate of £80 per annum.

HAWKHEAD ASYLUM, Crookston, near Glasgow.—Second Assistant Medical Officer (male). Salary, £200 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House-Physicians. Honorarium £50 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Casualty Medical Officer. Salary, £30 for six months and £2 10s. washing allowance.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon (male). Salary, £80 per annum.

HULL: ROYAL INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

INFANTS' HOSPITAL, Vincent Square, S.W.—Assistant Physician.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon for In-patients.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

LANARK COUNTY SANATORIUM, Stonehouse.—Resident Medical Officer (male). Salary, £300 per annum.

LANCASHIRE COUNTY ASYLUM, Winwick.—Locumtenent Medical Officer. Salary, 5 guineas a week.

LEEDS GENERAL INFIRMARY.—Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Honorary Assistant Physician.

LIVERPOOL PARISH.—Resident Assistant Medical Officer for the Workhouse Hospital. Salary, £140 per annum.

LIVERPOOL UNIVERSITY.—George Holt Chair of Physiology. Salary, £700 per annum.

LONDON COUNTY COUNCIL: CAMBERWELL CENTRE FOR TREATMENT OF SCHOOL CHILDREN.—(1) Dentist. (2) Anaesthetic. Salary, £200 and £25 per annum respectively.

LONDONDERRY: COUNTY INFIRMARY.—House-Surgeon. Salary at the rate of £100 per annum.

MANCHESTER: ANCOATS HOSPITAL.—(1) Honorary Physician. (2) Honorary Surgeon.

MANCHESTER CHILDREN'S HOSPITAL.—Male Medical Officer (non-resident). Salary, £180 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

METROPOLITAN HOSPITAL, Kingland Road, N.E.—Assistant Dental Surgeon.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland Street, W.—Assistant Dental Surgeon.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE: CITY HOSPITAL FOR INFECTIOUS DISEASES.—Male Resident Medical Assistant. Salary, £125 per annum, rising to £150.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Casualty Officer. Salary at the rate of £60 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician. (2) House-Surgeon. Salary at the rate of £52 10s. per annum.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Salary at the rate of £80 per annum.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £225 per annum, rising to £250.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300, and upon promotion to £450.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Medical Officer. Salary, £110 per annum.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Examiners in Anatomy and Physiology for the Fellowship. (2) Examiners under the Conjoint Examining Board in England.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Male and Female House-Physicians and House-Surgeons. (2) Junior Obstetric Assistant. (3) Assistant Anaesthetist. Salary for (3) £50 per annum.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Vacancy on Honorary Medical Staff.

ST. GEORGE'S HOSPITAL, Hyde Park Corner, S.W.—Medical Superintendent. Salary, £500 per annum.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, Etc., City Road, E.C.—(1) House-Surgeon. (2) Half-time Pathologist and Bacteriologist. Salary, £80 and £100 per annum respectively.

ST. MARYLEBONE PARISH INFIRMARY.—Third Assistant Medical Officer. Salary, £70 for six months.

ST. PANCRAS PARISH.—Senior Assistant Medical Superintendent of the South Infirmary and Senior Assistant Medical Officer of Workhouse. Salary, £175 per annum.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £65 per annum each.

SALFORD ROYAL, MANCHESTER CHILDREN'S, AND MANCHESTER NORTHERN HOSPITALS.—Joint Pathologist. Salary, £250 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon (male). Salary, £80 per annum.

SHEFFIELD: CHILDREN'S HOSPITAL.—House-Surgeon for the East End Branch. Salary, £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—(1) House-Surgeon. (2) Ophthalmic House-Surgeon. Salary, £80 per annum each.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTH INDIAN RAILWAY COMPANY.—District Medical Officer. Salary, Rs.500 per month, increasing to Rs.700.

SOUTHPORT INFIRMARY.—Junior House and Visiting Surgeon. Salary, £100 per annum.

STATE CRIMINAL LUNATIC ASYLUM, Broadmoor. — Junior Assistant Medical Officer. Salary, £225 per annum, rising to £250.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £120 per annum.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Honorary Medical Registrar.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WILTS COUNTY COUNCIL, Trowbridge.—Assistant School Medical Inspector. Salary, £300 per annum.

WOKINGHAM: PINEWOOD SANATORIUM. — Assistant Medical Officer. Salary, £150 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY —House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) House-Surgeon. (2) Resident Medical Officer. Salary, £125 per annum each.

WOMEN'S HOSPITAL FOR CHILDREN, Harrow Road, W.—(1) Assistant Anaesthetist; honorarium £10. (2) Surgical Clinical Assistant to Out-patients.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary at the rate of £100 per annum.

CERTIFYING FACTORY SURGEONS. — The Chief Inspector of Factories announces the following vacant appointments: Cavan (Cavan), Pontyberem (Carmarthen), Watford (Hertford).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

DINNICK, Oswald Tilson, M.B., Medical Registrar to the Cancer Hospital, London.

HICKEY, G. A., L.R.C.S.I., Certifying Factory Surgeon to the New Ross District, co. Wexford.

MACCLANCY, D. I., M.B., B.Ch.N.U.I., Certifying Factory Surgeon for the Miltown Malbay District, co. Clare.

WALSH, M. J., M.B., Assistant Medical Officer of the Crumpsall Workhouse of the Manchester Township.

WILLIAMS, Gwynne, M.S., F.R.C.S., Assistant Surgeon to University College Hospital.

WILLIAMSON, George A., M.A., M.D., D.P.H., D.T.M., Lecturer on Tropical Medicine in the University of Aberdeen.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

MYERS.—On March 27th, at Roseau, Dominica, B. West Indies, the wife of Dr. A. A. Myers, of a daughter. (By cable.)

SPENCER.—On March 29th, at The Green, Wallsend-on-Tyne, the wife Dr. G. Herbert Spencer, of a son.

THOMPSON.—On March 31st, at Comberton House, Halesowen, to Dr. and Mrs. Douglas Thompson, a daughter.

MARRIAGE.

INGRAM—BARCLAY.—At St. Columba's, Grantown-on-Spey, on March 26th, by the Rev. W. B. Black, M.A., assisted by the Rev. D. S. Ingram, M.A., father of the bridegroom, Arthur Charles Ingram, M.D., M.R.C.P., Captain Indian Medical Service, son of the Rev. and Mrs. D. S. Ingram, of Great Oakley, to Margaret Yorke, youngest daughter of Dr. W. M. Barclay, J.P., and Mrs. Barclay, of Grantown-on-Spey.

DIARY FOR THE WEEK.

TUESDAY.

RÖNTGEN SOCIETY, Institution of Electrical Engineers, Victoria Embankment, 8.15 p.m.—Paper:—Mr. R. T. Beatty, M.A., B.E., D.Sc.: The Energy of the Roentgen Ray.

THURSDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor Road, S.W., 5 p.m.—Paper:—Major Josiah Oldfield, R.A.M.C.(T.): The Scope of the Field Ambulance as a Training School.

POST-GRADUATE COURSES AND LECTURES.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday, 10 a.m., Version (continued); Wednesday, 10 a.m., Extraction in Breech Cases. Gynaecologic Lecture: Friday, 10 a.m., Diagnosis of Uterine Cancer. Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—Clinical Demonstrations at 4 p.m. each day. Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical. Special Lectures at 5.15 p.m.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—General Clinics and Operations at 2.30 p.m. daily. Monday, Gynaecology; Tuesday, Throat, Eye, X Rays; Wednesday, Skin, Eye, Children; Thursday, X Rays and Electrical Methods; Friday, Eye. Special Lectures and Demonstrations as announced.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, and Operations, 2 p.m. daily. Gynaecological: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		APRIL.
3	Fri.	London: Medico-Political Committee, 10.30 a.m. London: Central Ethical Committee, 2 p.m. West Somerset Branch, Taunton and Somerset Hospital, 3.30 p.m.
4	Sat.	London: Science Committee, 11 a.m.
7	Tues.	London: Organization Committee, 2 p.m. Buckinghamshire Division, Aylesbury Hospital, 3 p.m. Tower Hamlets Division, Stepney Central Hall, 4 p.m.
8	Wed.	London: Medico-Political Crime and Punishment Subcommittee, 11 a.m. London: Special Fund Committee, 3 p.m.
14	Tues.	Northamptonshire Division, Northampton General Hospital, 2.30 p.m.; Luncheon, 1.30 p.m.
		APRIL (*continued*).
15	Wed.	London: Finance Committee, 2.30 p.m.
16	Thur.	London: Insurance Act Committee, 10.30 a.m. (*provisional*).
17	Fri.	London: Future Developments of Insurance Acts Committee (*provisional*).
21	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
22	Wed.	London: Council.
24	Fri.	South-West Essex Division, Wesleyan Church School, High Road, Leyton, 4 p.m.
29	Wed.	Lancashire and Cheshire Branch, Clinical and Scientific Meeting, Royal Infirmary, Liverpool, 4 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 11TH, 1914.

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INSURANCE ACT.

MEDICAL RESEARCH FUND.

THE memorandum of the Chancellor of the Exchequer setting out the preliminary arrangements made for the organization of the work of medical research for which provision was made under the Insurance Act, 1911, was published in the SUPPLEMENT to the JOURNAL of June 28th, 1913. The provision was made by Section 16 (2) of the Act, which is as follows:

> (2) The sums available for defraying the expenses of sanatorium benefit in each year shall be:
>
> (*a*) One shilling and threepence in respect of each insured person resident in the county or county borough, payable out of the funds out of which benefits are payable under this part of this Act;
>
> (*b*) One penny in respect of each such person payable out of moneys provided by Parliament;
>
> Provided that the Insurance Commissioners may retain the whole or any part of the sums so payable out of moneys provided by Parliament to be applied, in accordance with regulations made by the Commissioners, for the purposes of research.

Provisional regulations for the administration of the Fund were issued last August. These regulations have been revised, chiefly in respect of certain accounting and legal technicalities, and have now been issued by the National Health Insurance Joint Committee as substantive regulations as follows:

NATIONAL HEALTH INSURANCE (MEDICAL RESEARCH FUND) REGULATIONS, 1914.

The National Health Insurance Joint Committee, in pursuance of the powers conferred on them by subsection (2) of Section 16 of the National Insurance Act, 1911, and by the National Insurance (Joint Committee) Amendment Regulations, 1913, hereby make the following Regulations:

1.—These Regulations may be cited as the National Health Insurance (Medical Research Fund) Regulations, 1914.

2.—(1) In these Regulations, unless the context otherwise requires—

The expression "The Act" means the National Insurance Act, 1911:

The expression "the Joint Committee" means the National Health Insurance Joint Committee.

(2) The Interpretation Act, 1889, applies to the interpretation of these Regulations as it applies to the interpretation of an Act of Parliament.

3.—All sums which may be retained for the purposes of research in accordance with the proviso to subsection (2) of Section 16 of the Act, either by the Joint Committee or by any of the several bodies of Commissioners appointed for the purposes of Part I of the Act, shall be paid at such times and by such instalments as the Joint Committee may direct into a fund, to be called the Medical Research Fund, under the control and management of the Joint Committee, and any such moneys may be paid to that Fund, and applied for those purposes in accordance with these Regulations at such times as the Joint Committee may direct during the financial year in respect of which they are provided by Parliament, notwithstanding that they would not, if not so retained, be available to be paid or credited to Insurance Committees until the commencement of the calendar year next following the date upon which the provision becomes available.

4.—(1) A Committee shall be constituted for the purposes of research, called the Medical Research Committee, of which the persons whose names appear in the First Schedule to these Regulations shall be the first members.

(2) The first members of the Committee shall hold office for a period of not less than three years from the 20th day of August, 1913, and thereafter three members of the Committee, to be selected in such manner as the Committee may determine, shall retire at intervals of two years, but shall be eligible for reappointment.

(3) Any vacancy whether casual or otherwise which may hereafter occur among members of the Committee shall be filled by appointment by the Chairman of the Joint Committee; but any person appointed to fill a casual vacancy shall only hold office for the remainder of the period of office of the member in whose place he is appointed.

5.—(1) There shall also be constituted an Advisory Council for Research, of which the persons whose names

appear in the Second Schedule to these Regulations shall be the first members.

(2) The first members of the Advisory Council shall hold office for a period of three years from the 20th day of August, 1913, and shall be eligible for reappointment.

(3) All appointments to the Advisory Council whether in the event of any casual vacancy or otherwise shall hereafter be made by the Chairman of the Joint Committee in such manner and for such periods as he may determine from time to time.

6.—(1) The Medical Research Committee shall appoint one of their members in writing to be Treasurer of the Committee, and it shall be the duty of the Treasurer to receive on behalf of the Committee all sums payable to the Committee out of the Medical Research Fund.

(2) The Committee may appoint such officers and servants and may expend such moneys for the administrative purposes of the Committee (including travelling expenses and subsistence allowances for members and staff) as it thinks fit, subject, as to the number of such officers and servants and their remuneration and as to the scale of travelling expenses and subsistence allowances, and as to the amount of such moneys, to the approval of the Chairman of the Joint Committee.

7.—(1) The Medical Research Committee shall from time to time prepare schemes for research, including, if the Committee think fit, schemes for inquiries and the collection and publication of information and statistics, and shall submit such schemes to the Chairman of the Joint Committee for his approval.

(2) Every such scheme shall contain an estimate of the expenditure necessary for the carrying out of the scheme, and shall specify the period within which such expenditure is to be incurred.

8.—Subject to the provisions of these Regulations, the Medical Research Committee may, for the purposes of any scheme approved as aforesaid, apply any moneys received by the Treasurer of the Committee from the Medical Research Fund in the purchase or other acquisition of land or any interest therein, or any plant, furniture, or other chattels, and in the erection, alteration, or maintenance of any building or other works, and in the payment of any costs, charges, and expenses of, or incidental to, the said scheme or any powers conferred by or pursuant to these Regulations.

9.—(1) The Chairman of the Joint Committee may from time to time by writing appoint two or more members of the Medical Research Committee to be trustees of the Committee, and the provisions of the Trustee Act, 1893, shall apply accordingly.

(2) All property purchased out of moneys received by the Treasurer of the Medical Research Committee from the Medical Research Fund or otherwise acquired for the purposes of the Committee, shall be vested in the trustees for the time being of the Committee, and in the case of land on trust for sale with full powers of management and disposition.

(3) No interest in land shall be acquired by the Medical Research Committee under these Regulations, or under any scheme made in pursuance thereof, without the consent in writing of the Chairman of the Joint Committee.

(4) The trustees shall execute a declaration of trust declaring such trusts and containing such powers and provisions relating to any property for the time being vested in them or the proceeds of sale thereof as the Chairman of the Joint Committee shall, subject to the provisions of these Regulations, approve.

10.—Before approving any scheme so submitted to him by the Medical Research Committee, the Chairman of the Joint Committee shall consult the Advisory Council for Research.

11.—There shall be paid from time to time out of the moneys standing to the credit of the Medical Research Fund—

(*a*) to members of the Advisory Council for Research travelling expenses and subsistence allowances, upon a scale to be approved by the Chairman of the Joint Committee, incurred by them in attending meetings of the Council;

(*b*) such sums as the Chairman of the Joint Committee may direct, as honoraria to members of the Medical Research Committee, not being the Chairman of the Committee or members of the Commons House of Parliament;

(*c*) such sums as may be required for the administrative purposes of the Medical Research Committee;

(*d*) such sums as the Chairman of the Joint Committee may from time to time direct to be paid to the Medical Research Committee for the purposes of any scheme or schemes approved as aforesaid.

12.—(1) The accounts of the Medical Research Fund shall be made up for each financial year ending the 31st March, and shall be audited in such manner as the Treasury may direct. Any balance standing to the credit of the Fund as at the end of any financial year shall, if the terms of the Parliamentary grant so provide, be carried forward to the next financial year.

(2) Any moneys from time to time standing to the credit of the Fund and not for the time being required for the purposes of these Regulations may, if the Joint Committee so direct, be invested in any securities for the time being authorised as investments for approved societies under subsection (2) of Section 56 of the Act.

13.—The accounts of the Medical Research Committee shall be audited in such manner as the Treasury may direct.

14.—Save as otherwise expressly provided in these Regulations, no moneys shall be paid by way of salary, fee, or otherwise, out of the Medical Research Fund to any members of the Medical Research Committee or to the Advisory Council for Research.

March 21st, 1914.

First Schedule.

The Right Hon. Lord Moulton of Bank, LL.D., F.R.S. (Chairman).
Christopher Addison, M.D., M.P.
Waldorf Astor, M.P.
Sir T. Clifford Allbutt, K.C.B., M.D., F.R.C.P., F.R.S., Regius Professor of Physic, University of Cambridge.
Charles John Bond, F.R.C.S., Senior Honorary Surgeon, Leicester Infirmary.
William Bulloch, M.D., F.R.S., Bacteriologist to the London Hospital and Professor of Bacteriology in the University of London.
Matthew Hay, M.D., LL.D., Professor of Forensic Medicine and Public Health, Aberdeen University.
Frederick Gowland Hopkins, M.B., D.Sc., F.R.S., Reader in Chemical Physiology in the University of Cambridge.
Brevet-Colonel Sir William Boog Leishman, M.B., F.R.S., Professor of Pathology, Royal Army Medical College.

Second Schedule.

The Right Hon. Lord Moulton of Bank, LL.D., F.R.S. (Chairman).
Miss. L. B. Aldrich-Blake, M.D., M.S.
Sir W. Watson Cheyne, Bart., C.B., F.R.C.S., F.R.S.
Sir William S. Church, Bart., K.C.B., M.D.
Sidney Coupland, M.D.
David Davies, M.P.
Sheridan Delépine, M.B.
Sir James Kingston Fowler, K.C.V.O., M.D.
Sir Rickman J. Godlee, Bart., F.R.C.S.
Sir Alfred Pearce Gould, K.C.V.O., F.R.C.S.
David Hepburn, M.D.
E. C. Hort, F.R.C.P.Edin.
Arthur Latham, M.D.
Sir John McFadyean, M.B.
W. Leslie Mackenzie, M.D.
J. C. McVail, M.D.
W. J. Maguire, M.D.
S. H. C. Martin, M.D., F.R.S.
Robert Muir, M.D.
Alexander Napier, M.D.
Sir George Newman, M.D.
Arthur Newsholme, C.B., M.D.
J. M. O'Connor, M.B.
Sir William Osler, Bart., M.D., F.R.S.
A. C. O'Sullivan, M.B.
Marcus S. Paterson, M.D.
Sir Robert W. Philip, M.D.
Sir William H. Power, K.C.B., F.R.C.S., F.R.S.
H. Meredith Richards, M.D.
Lauriston E. Shaw, M.D.
Albert Smith, M.P.
J. Lorrain Smith, M.D., F.R.S.
T. J. Stafford, C.B., F.R.C.S.I.
T. H. C. Stevenson, M.D.
Harold J. Stiles, F.R.C.S.Edin.
Sir Stewart Stockman, M.R.C.V.S.
W. St. Clair Symmers, M.B.
Miss Jane Walker, M.D.
Norman Walker, M.D.
J. Smith Whitaker, M.R.C.S., L.R.C.P.
Sir Arthur Whitelegge, K.C.B., M.D.
G. Sims Woodhead, M.D.

ARRANGEMENTS WITH UNQUALIFIED PERSONS.

REPORT BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

IN the course of last year communications passed between the Censors' Board and the Insurance Commissioners on the subject of the employment of non-qualified persons under the Insurance Act. The contention of the Commissioners appeared to be that, while none but registered medical practitioners are admissible to the panels, yet there was nothing in the Act of 1911 to prevent insured persons, who are allowed or required to make their own arrangements for medical benefit, from making such arrangements with persons who are not legally qualified medical practitioners.

More recently the Commissioners, "for the purpose of removing doubts and for the convenience of Insurance Committees," have altered the Regulations in this respect, and in their new Regulations (National Health Insurance (Medical Benefit) Regulations, 1913, Section 44 (2)), and in a "Memorandum with regard to persons making their own arrangements under Section 15 (3) of the National Insurance Act, 1911," the possibility of treatment by unqualified persons under this Section of the Act is specifically recognized, and provisions are made with respect to it.

The President and Censors consider that to give unqualified persons any status whatever under an Act of Parliament is an innovation which should not pass unnoticed by the College.

They therefore submitted a resolution, which was adopted by the College, in the following form:

National Health Insurance (Medical Benefit) Regulations, 1913.

The College observes with regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the Memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act may obtain treatment from non-qualified persons.

Hitherto none but duly qualified medical practitioners have been employed, as such, in any public capacity, and the College deplores that now, under an Act professing to promote the health of the nation, recognition should be given and provision made for the payment of public money to a class of persons who have not obtained a legal qualification to practise medicine and concerning whose medical knowledge there exists no sort of guarantee.

INQUIRIES AS TO THE CONTINUANCE OF PRACTITIONERS ON THE PANEL.

THE COMMISSION'S DECISIONS.

THE proceedings at the two inquiries held at the offices of the Insurance Commissioners, London, under Section 15 (2) (*b*) of the Insurance Act and Part VI of the Medical Benefit Regulations, 1913, were reported in the SUPPLEMENT to the JOURNAL of March 28th, p. 187. The Inquiry Committee in each case consisted of Mr. J. Fischer Williams, barrister, Chairman, and Dr. T. M. Carter and Dr. Milburn, with Mr. P. A. Koppel, Clerk. At the conclusion of each inquiry the CHAIRMAN stated that the Committee would consider its report. The reports have now been presented to the Commissioners, and we are informed by the Insurance Commission that, after considering these reports, the Commissioners have decided as follows:

Complaint by Gloucester Insurance Committee.

With regard to the inquiry on March 20th to investigate representations made by the Gloucester (County Borough) Insurance Committee in respect to Dr. Oswald Arnold Gee, a medical practitioner on the panel, we are informed that the Commissioners have been satisfied, as the result of that inquiry, that the continuance of this practitioner on the list of medical practitioners who have agreed to attend and treat insured persons whose medical benefit is administered by the Committee, would be prejudicial to the medical service of the insured, and have accordingly directed, in pursuance of the provisions of Section 15 (1) (*b*) of the National Insurance Act, 1911, and the Regulations made thereunder, that his name be removed from the list. The Commissioners have, however, notified the Committee that, in the opinion of the Commission, having regard to the particular circumstances of the case, there would be no impropriety in the Insurance Committee acceding to any application made by Dr. Gee on or after January 1st, 1915, to be restored to the list.

Complaint by the Liverpool Insurance Committee.

We are informed by the Insurance Commission that the Commissioners, as the result of the inquiry on March 21st to investigate the representations made by the Liverpool Insurance Committee with respect to Robert Fawcitt Granger, a medical practitioner on the panel, have been satisfied that the continuance of this practitioner on the list of medical practitioners who have agreed to attend and treat insured persons whose medical benefit is administered by the Committee would be prejudicial to the medical service of the insured, and have accordingly directed, in pursuance of the provisions of Section 15 (1) (*b*) of the National Insurance Act, 1911, and the Regulations made thereunder, that his name be removed from the list.

MEDICAL CERTIFICATES.

MEMORANDUM BY WELSH COMMISSIONERS.

THE Insurance Commissioners for Wales have issued a circular letter to medical practitioners, Memo. 173 a/I.C. (Wales), covering a preliminary memorandum prepared as the result of suggestions made at conferences with Panel Committees. The Commissioners state that they are aware that the great majority of practitioners on the panel are already acting strictly in accordance with the memorandum, and it is for this reason that the Commissioners have every confidence in asking for their co-operation in securing a uniform standard of practice. It is stated that upon other questions discussed at the conferences, concerning which the views of the other Commissions and of the approved societies will have to be ascertained, a further communication will be issued.

Memorandum on Medical Certificates.

In view of the recent decision of the General Medical Council to take such disciplinary steps as are within its powers in reference to any substantial complaint of blameworthy carelessness on the part of a practitioner in signing certificates for a patient for the purpose of claiming sickness benefit under the National Insurance Acts, it has been thought well to summarize certain points which were recently discussed with Panel Committees by representatives of the Welsh Insurance Commissioners.

In the opinion of the Commissioners the following considerations should be borne in mind by practitioners when undertaking the responsible duty of signing certificates of incapacity of work:

(*a*) Certificates should be strictly limited to the actual duration of incapacity and should be so worded as to make it impracticable for the insured person to claim sickness benefit for even a day beyond the actual period of incapacity.

(*b*) The cause of the incapacity should be stated with the greatest possible precision, as far as the personal knowledge and professional skill of the practitioner permit. This is obviously of great importance when the possibility of the condition being due to accident or to misconduct has to be considered. When specific disease or bodily disablement is due to traumatism or to venereal disease the certificate should be so worded that these facts are not concealed. It will then be open to the approved society to make such inquiries from the insured person as they may think desirable, with the object of determining the member's eligibility for sickness benefit, in accordance with their rules and the National Insurance Acts.

(*c*) The date of the certificate should always be that of the day on which it is signed, and should under no circumstances imply that the patient has been seen or examined when he has not actually been seen.

In respect of malingering the Commissioners are of opinion that practitioners should, without fear or favour,

resist all attempts to secure sickness benefit to which the claimants are not entitled.

The Commissioners consider that representations that a practitioner is attracting insured persons to select him owing to laxity in certification would afford grounds for inquiry as to the desirability of the continuance of that practitioner on the panel.

It should be added that the giving of a certificate which is not in accordance with the facts might lead to very serious consequences. Complaint might be made to the Insurance Committee, who would refer the matter to the Medical Service Subcommittee, or the circumstances might be the subject of a representation to the Commissioners, with the view of removing the practitioner's name from the panel, or representations might be made to the General Medical Council, which has clearly indicated that it will take a very serious view of any substantial complaint of this nature.

It may be convenient to recall the action taken by the General Medical Council. On November 30th, 1911, it adopted a resolution stating that it had been made to appear to the Council from time to time that some registered practitioners had given and signed untrue, misleading, or improper certificates in their professional capacity for subsequent use either in courts of justice or for administrative purposes. A number of such certificates were enumerated, including certificates "for excusing attendance . . . at ordinary employments." The Council by its resolution gave notice:

That any registered medical practitioner who shall be shown to have given any untrue, misleading or improper certificate . . . is liable to be adjudged by them guilty of "infamous conduct in a professional respect," and to have his name erased from the *Medical Register* under Section 29 of the Medical Act, 1858.

At its meeting on February 23rd, 1914, the Executive Committee of the General Medical Council, after considering a letter from the Chairman of the National Health Insurance Commission (England), requested the President to inform Sir Robert Morant as follows:

That in the event of the Council being officially placed in possession of a substantiated complaint of blameworthy carelessness on the part of a practitioner in signing certificates for a patient for the purpose of claiming sickness benefit under the Insurance Act, it would be prepared in due course to take such disciplinary steps as are within its statutory powers, in accordance with the terms of the Warning Notice which has been issued for the information of members of the medical profession.

NON-PANEL COMMITTEE.

The Non-Panel Committee held its fifth meeting on April 2nd, when there were present: Dr. M. G. Biggs (and afterwards Mr. E. B. Turner) in the chair, Dr. Chas. Buttar, Dr. H. B. Densham, Dr. G. T. Myles, Dr. John Stevens, Dr. Alexander Thomson.

Reasons why Practitioners will not Accept Service under the Insurance Act.

The Committee has drawn up a memorandum on the reasons why practitioners will not accept service under the National Health Insurance Acts, and has recommended it to the Council for approval at its meeting on April 22nd. This memorandum is an endeavour on the part of the Committee to frame a statement which may be taken as the foundation of the policy of the Association from the point of view of non-panel practitioners.

Free Choice of Doctor.

After consideration of Minute 92 of the Special Representative Meeting, December, 1913, and Minute 96 of the Council of January 28th, 1914, the Committee recommended to the Council that the policy of the Association be that such insured persons as may wish to make their "own arrangements" with medical practitioners not on the panel may do so without the necessity of such practitioners entering into any written contract, and with no consequential loss of benefits to the insured persons. The Committee has also requested the Deputy Chairman of Council to place this recommendation before the Committee concerning the future developments of the Insurance Acts.

Co-option.

The Committee, in pursuance of the powers conferred upon it by the Council, has invited Dr. E. N. Nason (Nuneaton) and Dr. Leslie J. Wilson (Newcastle) to accept appointment upon the Committee.

Local Medical Committee for London.

The Committee received and approved a report of action by its Chairman, who, on being applied to for names of representative non-panel practitioners suitable for election upon the Local Medical Committee for the County of London, had expressed the opinion that it would be an unwarrantable interference on his part to take any steps outside his own area, as to which he had already taken action.

Vacancies upon Committee.

The Committee received the resignation of Dr. R. M. Beaton, London, and has recommended the Council to appoint two members of the Committee in the place of Dr. Beaton and of Dr. E. Hay, London, whose resignation was referred to in the report of a previous meeting.

Central Insurance Defence Fund.

The Committee had recommended the Insurance Act Committee to make a grant to a practitioner out of the Central Insurance Defence Fund, but has been informed by that Committee that, while desirous of making a grant, it had been advised by the Solicitor of the Association that such grant did not fall within the objects of the Fund. The Committee decided to recommend the Council to make the grant in question.

LOCAL MEDICAL AND PANEL COMMITTEES.

DUMBARTONSHIRE.

Local Medical Committee.

The annual general meeting of the Dumbarton County Local Medical Committee was held in Glasgow on March 27th.

Annual Report.—The report on the work done during the past year, presented by the Secretary, stated that five meetings were held, with an average attendance of ten. Many matters affecting practitioners' interests were dealt with and brought before the Insurance Committees and Commissioners; various details had been adjusted as desired, some requests had been refused, and others were still under consideration. Rules for insured persons were now printed on the medical cards to be issued. The Insurance Committee had been induced to appoint medical members to all its subcommittees, and their presence had had considerable influence in producing a correct understanding of many questions affecting doctors and insured persons. An emergency drug list adopted at the Committee's request had been amplified as found necessary. The Secretary attended the Dundee conference of Local Medical Committees. There were now approximately 24,000 insured persons in the county, and 63 doctors on the panel. So far no complaints by patients against doctors or by doctors against patients had been brought before the Insurance Committee. For the first medical year, £7,724 had been paid to practitioners, and £1,050 which remained in the hands of the Commissioners would shortly be paid out. The Insurance Committee adopted the scheme submitted unanimously by the Local Medical Committee, whereby the amount accumulated during 1913 in respect of unallocated persons was to be distributed among doctors on the panel in proportion to the number of insured persons on their lists, and, in accordance with the Commissioners' instructions, formal notification of the proposed distribution would be issued shortly.

Expenses of Committee.—In October a levy of 2s. 6d. was made on all practitioners in the county. Fifty out of sixty-three on the panel responded. There was a balance of £1 8s. in hand, but there would have been a deficit of £2, had not the expenses incurred previous to "recognition" of the Committee been paid by the British Medical Association.

Meeting of Practitioners.

The annual practitioners' meeting took place forthwith, Dr. W. S. Young in the chair.

Local Medical Committee.—The report of the Local Medical Committee was read and approved. It was

decided that the Local Medical Committee should now consist of twelve members, and the following (who also constitute the Panel Committee) were elected: Drs. Alexander (Kilcreggan), Anderson (Garelochhead); Armstrong (Lenzie), Blakely (Kirkintilloch), Blyth (Old Kilpatrick), Cook (Alexandria), Gilmour (Dalmuir), Kerr (Renton), Reid (Milngavie), Sutherland (Cardross), J. Young (Bearsden), W. S. Young (Helensburgh).

LOCAL MEDICAL AND PANEL COMMITTEES.

Thereafter the Panel and Local Medical Committees met. The following were appointed by the Local Medical Committee:

Executive.—Drs. W. S. Young (Chairman), Sutherland (Secretary), Blakely, Kerr, Anderson.

Member of Medical Service Subcommittee.—Dr. Armstrong.

Organization of Panel and Local Medical Committees.—The meeting approved the suggestion of the Provisional Committee on Organization of Panel and Local Medical Committees that the subscription should be £2.

Dispensing.—The SECRETARY reported that the Insurance Committee had agreed to pay by capitation for dispensing where permitted to be done by doctors; also that while any application would be treated on its merits generally doctors were not now to be permitted to dispense for insured persons when there was a chemist's shop in the same town or village, or otherwise convenient. Any doctor dispensing for insured patients this year without the express sanction of the Insurance Committee would do so at his own risk, and would probably be refused payment.

Medical Cards.—The issue of "medical cards" was almost complete. Inaccuracies were reported—patients having been entered as on the lists of doctors to whom they had not applied. After discussion it was agreed to await complete issue of cards before taking action.

Travelling Expenses.—It was agreed that the travelling expenses of members attending committee meetings should be paid from the funds.

Expenses.—It was reported that the Insurance Committee had approved of the grant asked by the Panel Committee, but the Commissioners' sanction had not yet been received.

Practitioners are invited to write to the Secretary, Dr. Sutherland, Cardross, regarding any matter requiring the attention of the Panel or Local Medical Committee, or on which information is desired.

ABERDEENSHIRE.

PANEL COMMITTEE.

A MEETING of the Committee was held on March 26th in the Hall of the Aberdeen Medico-Chirurgical Society, Dr. RORIE in the chair.

The late Dr. Wm. Cockburn, Old Meldrum.—The CHAIRMAN referred to the loss the Committee had sustained by the death of Dr. Cockburn. Dr. Bruce (Secretary) and the Chairman were requested to express the sympathy of the Committee with the relatives.

Committee's Expenses.—A communication was read from the Clerk to the Insurance Committee intimating that the Commissioners desired a detailed account of how the money deducted from the practitioners' quarterly cheques for administrative expenses of the Panel Committee was to be employed. The Secretary was instructed to reply that this demand was *ultra vires*, as the money to be used was the property of the practitioners, and that an account of the expenditure would be laid before the practitioners' meeting at the end of the year.

Election to the Committee.—Dr. MAVOR (Bucksburn), was unanimously appointed to the vacancy on the Committee caused by the death of Dr. Cockburn.

Demands by the Pharmaceutical Committee.—A letter was read from the Clerk of the Insurance Committee forwarding a communication from the Pharmaceutical Committee asking that the majority of dispensing practitioners should be made to render accounts at tariff rates, and that certain others should be prevented from dispensing at all. The Clerk was instructed to repudiate the right of the Pharmaceutical Committee to dictate to the Panel Committee as to what practitioners should or should not dispense, and to state that the Panel Committee asserted the rights of the practitioners as laid down in the Act.

Contribution to the Organization of Local and Panel Medical Committees.—It was agreed to forward a contribution of £2 provided that a separate committee for Scotland was formed. Failing this the Committee decided to take no action.

COUNTY OF WORCESTER.

PANEL COMMITTEE.

THE third meeting of the Panel Committee was held at the Kidderminster Infirmary on March 27th, when Mr. J. L. STRETTON presided, and twelve other members were present. The Clerk of the Insurance Committee attended during the earlier part of the meeting.

Card Index.—The Clerk of the Insurance Committee stated that compliance with the request for the continuance of the card index would involve expenditure of time and money, but would be incurred if necessary. The Committee, after consideration, determined to adhere to its request for a card index.

Panel Work.—The Committee expressed the opinion that all inquiries by practitioners on the panel should be made direct to the Panel Committee, and not to the Insurance Committee.

Chemists' Hours.—The Committee recommended that chemists should be required to keep open until 9 p.m. during winter, and that after that hour should only be required to dispense prescriptions marked "Urgent." At a later hour the medicine should be supplied by the doctor, when necessary, as in emergencies.

Pharmacopœia.—The following subcommittee was appointed to draw up a pharmacopœia for the county: Drs. Addenbrooke, W. Horton, Protheroe-Smith, H. Freer, H. B. Emerson, and H. E. Moore.

Finance.—The accounts in the hands of the Treasurer were passed, and the provisional estimate of expenses for the year approved. It was also resolved that a voluntary levy of 1d. per annum for each insured person on a doctor's list should be made in addition to the compulsory levy allowed under the Act, and that every practitioner be asked to sign an agreement to this effect.

Organization of Local Medical and Panel Committees.—A resolution was adopted expressing the willingness of the Worcestershire Panel Committee to make a grant of £5 towards the expenses of the provisional committee for the Organization of Local Medical and Panel Committees.

Tuberculosis.—The Secretary was instructed to ask the medical officer of health if authority had been given to an assistant tuberculosis officer who was canvassing the doctors to hand over to his charge all their cases of tuberculosis, and whether such procedure received his approval.

PORTSMOUTH.

PANEL COMMITTEE.

THE fourth meeting of the Portsmouth Panel Committee was held on March 27th.

Constitution.—It was resolved to postpone the consideration of a scheme for the permanent constitution of the Committee until after the issue by the Commissioners of their promised model scheme.

Report on Conference.—The HONORARY SECRETARY made his report as Representative at the conference held in London on March 13th. The Committee agreed to the propositions passed at the conference, and to subscribe £5 to the fund for preliminary expenses, the number of insured persons on the index register being 59,618.

Expenses.—It was resolved to adopt a voluntary levy as the method for raising an expenses fund, and a Finance Subcommittee was appointed to consider and report on the matter.

Aqua.—It was reported that, after a good deal of discussion, the full Insurance Committee had adopted the recommendation of the Joint Services Subcommittee that, when the term "aqua" appears in a prescription, ordinary tap water should be used, except when otherwise specified.

WEST HAM.

MEETING OF PRACTITIONERS.

A MEETING of all practitioners residing in West Ham and of any other practitioners on the West Ham panel was held in the Town Hall, Stratford, on April 2nd. Dr. F. H. DAVIS was in the chair.

Report of Conference.—The meeting was called to hear the report of the Representative at the recent conference

of Local Medical and Panel Committees and to discuss other matters in connexion with the administration of medical benefit. Having heard the report of the Representative, a discussion followed, during which the opinion was expressed that the proposed new association would not serve any purpose which could not be fulfilled by the British Medical Association, and that it was better to concentrate all support, financial and otherwise, upon the British Medical Association. The following resolution was then carried unanimously:

> That the practitioners of West Ham do not see their way to contribute anything to this new organization.

Prescribing and Certificates.—The meeting then discussed the question of prescriptions and certificates, and the following resolutions were carried unanimously:

1. That this general meeting of practitioners, having discussed the question of over-prescribing, desires to call the attention of every practitioner on the West Ham panel to the advisability of exercising due economy in prescribing and to the fact that the cost of unnecessarily expensive prescriptions can be recovered from the practitioners by a surcharge. The meeting is of opinion that proprietary preparations should be avoided as much as possible.
2. That this meeting recommends that great care be exercised in the granting of initial and continuing certificates, and especially in the accuracy of the dating of the same.

The meeting directed the Secretary to send a copy of these two resolutions to every practitioner on the West Ham panel.

INSURANCE NOTES.

IRELAND.

Certification of Insured Persons.

EIGHT months ago the Chancellor of the Exchequer promised funds for certification in Ireland sufficient to satisfy the demands of the medical profession, but no agreement has yet been reached between the profession, the Insurance Commissioners, and the societies. At the beginning of the year the Commissioners asked the doctors who had joined the certification panels and the "insurance advisers" to continue their duties up to the end of March; last week they appointed the medical advisers for a further period of three months, and invited the panel doctors to continue their duties for a similar period. It would appear that there is not much hope of an immediate agreement being reached. In the meantime the insured patients are being put to great trouble in many cases to get their certificates signed, and the medical staffs of the city hospitals are worried by continual requests to sign certificates for which, as a rule, no payment is forthcoming. The trouble is specially great in the case of some societies which require a weekly certificate during the patient's illness. In many cases the insured persons are being deprived of benefits, and find it impossible to obtain any redress. The fault of the delay does not lie with the medical profession, as it expressed its readiness many months ago through the Irish Medical Committee to come to an agreement with the Insurance Commissioners.

INSURANCE ACT IN PARLIAMENT.

EXCESSIVE SICKNESS INQUIRY.

MR. BENN informed Captain Wilson that sixty-six invitations had been issued to secretaries of approved societies with a view to the selection of representatives for the purpose of giving evidence before the Departmental Committee on excessive sickness and deficiencies under the National Insurance Act.

MARRIED WOMEN (EXEMPTIONS).

Mr. Jowett asked whether a married woman ordinarily and mainly dependent on her husband, but engaged for three months in each year to assist a near relative, for which assistance she received wages, was entitled to exemption from the payment of contributions under the National Insurance Act, 1911; and, if so, which of the printed forms issued under the said Act she should fill up and send to the Insurance Commissioners in order to obtain exemption.—Mr. Benn: The answer to the first part of the question is in the affirmative. The appropriate form is Form X 1 (revised), a copy of which I am sending to the hon. member. The applicant should fill in the application and send it to the Customs and Excise officer for the district in which she lives.

DOMICILIARY VISITS.

Mr. Gretton asked whether officials of the Insurance Commissioners visited private houses and, without stating their business, endeavoured to effect an entrance for the purpose of putting questions to householders or their servants upon the answers to which legal proceedings might be founded; and whether instructions would be given that such action by the Commissioners or their officials should be stopped.—Mr. Benn said that he was not aware of any case in which an official of the Commission had concealed the nature of his business in order to effect an entrance into a private house; the latter part of the question did not, therefore, arise.

MEDICAL BENEFIT.

Operations.

Mr. Godfrey Locker-Lampson asked whether attention had been called to the decision of the County of Worcester Local Medical Committee that vaccine injections and operations for appendicitis should not form part of the medical benefit for insured persons; and whether it was proposed to take any action in the matter, so that insured persons should have the adequate treatment to which they were statutorily entitled.—Mr. Wedgwood Benn said the medical benefit regulations provided that any question as to whether an insured person was entitled to any particular service should be considered by the Local Medical Committee and the Insurance Committee, and their conclusions reported to the Commissioners, by whom the question might further be referred for decision by a board of referees specially constituted for the purpose. It was understood that in the cases referred to no decision had yet been reached, and it would be premature, therefore, to make any statement on the subject.

Sparsely Populated Areas in Scotland.

Captain Waring asked what steps were to be taken to provide special medical service for sparsely populated districts in Scotland outside the Highland area, and what sum of money was to be devoted to that purpose.—Mr. Benn replied that the matter was at present under consideration; provision had been made in the Estimates for the ensuing financial year to enable a grant for this purpose to be made.

SANATORIUM BENEFIT.

Domiciliary Attendance (Wales).

Mr. Godfrey Locker-Lampson asked the Chancellor of the Exchequer whether his attention had been called to the statement of the medical officer of the Welsh Insurance Commission that the number of insured cases receiving domiciliary treatment was small and did not warrant the sum spent for them—namely, 6d. per insured person, paid to the panel doctors; whether several Insurance Committees had found themselves short of funds for sanatorium benefit in consequence of the above 6d. being diverted from them; and whether he proposed to make a temporary grant to needy Insurance Committees, so that consumptive insured persons might receive the sanatorium benefit they needed, and to which they were entitled.—Mr. Wedgwood Benn said that it was understood that the report quoted did not accurately represent the observations of the officer in question. These were addressed solely to the circumstances of a particular area in which domiciliary treatment had in many cases been given without formal recommendation for sanatorium benefit. With regard to the latter part of the question, expenditure upon domiciliary treatment was part of the Committee's expenditure upon sanatorium benefit as a whole, and extensive grants were already provided towards the cost of comprehensive schemes comprising arrangements for the treatment of insured persons.

Special Nourishment for Tuberculous Persons.

Mr. Cawley asked whether district insurance committees had power at their own discretion to allow special nourishment to tuberculous persons discharged from sanatoriums, or whether such nourishment could only

be allowed when a tuberculosis officer recommended it for assisting the restoration of working capacity in other than hopeless cases.—Mr. Benn said: The powers and duties of district insurance committees in connexion with the administration of sanatorium benefit are determined by the scheme adopted for the area in accordance with Section 59 of the National Insurance Act, 1911, and the Regulations made thereunder. Generally speaking, accessories in the form of special nourishment may be afforded to insured persons in receipt of domiciliary treatment where recommended on medical grounds. As the hon. member is aware, however, it is the duty of the Insurance Committee to provide treatment and not to relieve destitution.

Ireland.

In reply to Mr. Lardner, Mr. Wedgwood Benn said that up to the present time one county council in Ireland, namely, Meath, had agreed to meet one half of an anticipated deficiency under Section 17; the other half would be met by the Treasury in due course.

CORRESPONDENCE.

The Unallotted Funds.

Dr. Henry George Dixon (City Road, E.C.) writes: With all due respect to Mr. Danckwerts, K.C., it seems to me that his opinion, received on April 2nd, was due the day previous: "A practitioner is only entitled to get what his contract entitles him to"! Is the learned K.C. poking fun at the profession?

As I understand insurance, its essence consists in the payment of a fixed premium for incurring certain risks. Under the Insurance Act a doctor's risk begins as soon as he puts his name on the panel; that day fixes the date from which should begin the payment to him of all premiums in respect of all insured persons who then or subsequently select him as their doctor, or are assigned to him as patients.

Even in the extreme case of an insured person who does not select a doctor for, say, twenty years, I contend that the doctor who is then selected is entitled to all the back premiums which have accrued in repect of that person during those twenty years, provided the doctor was on the panel for that period; otherwise, from the date he went on the panel, and to payment of that sum with interest, simple, or perhaps compound. And why not? Who would be incurring the risk during all those years? Evidently the doctor whom the insured person fixed upon in the end, and called upon to fulfil his part of the insurance contract. I think if this principle was applied in every case there would be a big hole made in the unallotted funds. If it is not so applied the Insurance Committee will be in the position of a medical aid society making a profit out of its sweated doctors. No regulations can override the common law of the land, but it will require some test case to be taken into court.

Proposed Association of Local Medical and Panel Committees.

Dr. Lachlan Fraser (Chairman Northumberland Local Medical Committee) writes: We decided at the recent Conference that an association of Local Medical and Panel Committees should be formed, and the Provisional Committee is now at work drafting a scheme to carry this into effect.

It will be some time before such an association can be formed, and meanwhile many matters of pressing importance are being dealt with by the various Panel Committees throughout the country. We all feel the need of getting into touch with one another, and at the last meeting of the Local Medical and Panel Committees of the County of Northumberland we decided that that Committee should invite conferences with the various Committees in the counties of Northumberland and Durham, leaving the arrangements in the hands of our chairman. This, of course, is a provisional arrangement only, but I think it will prove of advantage to the bodies concerned, and I am reporting it, as similar arrangements might with advantage be carried out in other parts of the country, the most central committee in each case undertaking the arrangements, and each area roughly corresponding to that of the local Branch of the British Medical Association.

British Medical Association.

EIGHTY-SECOND ANNUAL MEETING, ABERDEEN, JULY, 1914.

PROGRAMME OF BUSINESS.

President: William Ainslie Hollis, M.A., M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Brighton.

President-elect: Sir Alexander Ogston, K.C.V.O., M.D., LL.D., Consulting Surgeon, Aberdeen Royal Infirmary; Surgeon in Ordinary to H.M. the King in Scotland.

Chairman of Representative Meetings: Thomas Jenner Verrall, M.R.C.S., L.R.C.P., Consulting Surgeon, Sussex County Hospital, Brighton.

Chairman of Council: James Alexander Macdonald, M.D., M.Ch.R.U.I., LL.D., Honorary Physician, Taunton and Somerset Hospital, Taunton.

Treasurer: Edwin Rayner, B.A., M.D.Lond., F.R.C.S. Eng., Consulting Surgeon, Stockport Infirmary, Stockport.

The Eighty-second Annual Meeting of the British Medical Association will be held in Aberdeen in July, 1914. The President's Address will be delivered on Tuesday, July 28th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 24th, at 10 a.m.

The Address in Medicine will be delivered by Archibald Edward Garrod, M.D., F.R.C.P., F.R.S., Physician, St. Bartholomew's Hospital, London.

The Address in Surgery will be delivered by Sir John Bland-Sutton, Surgeon to the Middlesex Hospital, London, W.

The Popular Lecture will be delivered by Professor J. Arthur Thomson, M.A., LL.D., Natural History Department, Marischal College, Aberdeen.

THE SECTIONS.

The scientific business of the meeting will be conducted in sixteen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

With the object of encouraging useful debates, it is proposed, as in previous years, to publish in the British Medical Journal early in June an abstract or syllabus of the remarks intended to be made in introducing each discussion arranged in any Section. Such publication serves as a guide to members who may desire to take part in the discussion. It is particularly requested that the introducer of each discussion will send an abstract or syllabus of his remarks to one of the honorary secretaries of the Section in which the discussion is to take place, not later than Monday, May 22nd.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the British Medical Journal *without special permission.*

The following sixteen Sections have been authorized by the Council:

ANATOMY AND PHYSIOLOGY.

President: Professor Robert W. Reid, M.D., F.R.C.S., Aberdeen. *Vice-Presidents:* Denis P. Fitzgerald, M.B., B.Ch., Cork; J. Strickland Goodall, M.B., F.R.C.S., London, S.E.; Professor John K. Jamieson, M.B., C.M.,

Leeds; Professor J. ALEXANDER MACWILLIAM, M.D., C.M., Aberdeen. *Honorary Secretaries:* NORMAN J. CALDER, M.B., Ch.B., Anatomy Department, Marischal College, Aberdeen; E. P. CATHCART, M.D., D.Sc., Department of Physiology, University of Glasgow; R. J. GLADSTONE, M.D., F.R.C.S., University of London, King's College, Strand, W.C.; HUGH MCLEAN, M.D., Chemical Pathology Department, St. Thomas's Hospital, London, S.E.

The arrangement of the programme is not yet sufficiently advanced for its publication. Those who desire to read a paper or would like some particular subject to be discussed are requested to communicate with Dr. Calder.

DERMATOLOGY AND SYPHILOLOGY.

President: ALFRED EDDOWES, M.D., M.R.C.P., London. *Vice-Presidents:* R. CRANSTON LOW, M.B., F.R.C.P.E., Edinburgh; J. M. HENDRIE MACLEOD, M.D., M.R.C.P., London, W.; J. A. NIXON, M.B., F.R.C.P., Clifton, Bristol; J. C. OGILVIE WILL, M.D., C.M., Aberdeen. *Honorary Secretaries:* J. FARQUHAR CHRISTIE, M.B., C.M., 7, Alford Place, Aberdeen; J. D. PRYDE MCLATCHIE, M.B., C.M., 34, Welbeck Street, London, W.

The following programme has been arranged provisionally:

July 29th.—Discussion: On the Need for some Method in the Conflict with Lupus and Ringworm. To be opened by Dr. NORMAN WALKER.

July 30th.—Discussion: On the Modern Treatment of Syphilis. To be opened by Mr. J. E. R. MCDONAGH.

July 31st.—Reading of Papers.

Arrangements will also be made for the demonstration of cases. Contributions of drawings, photographs, microscope and other specimens relating to dermatology and syphilis are invited, and should be sent as early as possible—not to London, but to Aberdeen.

DISEASES OF CHILDREN, INCLUDING ORTHOPAEDICS.

President: JOHN THOMSON, M.D., F.R.C.P.E., Edinburgh. *Vice-Presidents:* ANDREW FULLERTON, M.Ch., F.R.C.S.I., Belfast; H. M. W. GRAY, M.B., F.R.C.S.E., Aberdeen; E. MUIRHEAD LITTLE, F.R.C.S., London; J. HUGH THURSFIELD, M.D., F.R.C.P., London. *Honorary Secretaries:* A. S. BLUNDELL BANKART, M.C., F.R.C.S., 14, Harley Street, London, W.; D. WATSON GEDDIE, M.B., C.M., 13, Golden Square, Aberdeen; H. TYRRELL GRAY, M.C., F.R.C.S., 60, Harley Street, London, W.

The arrangement of the programme is not yet sufficiently advanced for publication.

ELECTRO-THERAPEUTICS AND RADIOLOGY.

President: SAMUEL SLOAN, M.D., F.F.P.S., Glasgow. *Vice-Presidents:* W. J. S. BLYTHELL, M.D., Kersal, Manchester; DAVID LAWSON, M.D., Nordrach-on-Dee, N.B.; J. R. LEVACK, M.B., C.M., Aberdeen. *Honorary Secretaries:* M. R. J. HAYES, F.R.C.S.I., 35, Upper Fitzwilliam Street, Dublin; W. L. LOCKE, M.B., Ch.B., 31, Queen Anne Street, London, W.; F. PHILIP, M.B., 183, Great Western Road, Aberdeen.

The following programme has been arranged:

July 29th.—(1) An Introductory Address by Professor Leduc on Cerebral Galvanization. (2) Discussion on the Therapeutic Value of High-Frequency Currents.

July 30th.—Discussion on (1) The Comparative Value of X-Rays and Radium in the Treatment of Malignant Growths; to be opened by Dr. W. DEANE BUTCHER and Dr. JOHN MACINTYRE. (2) Electro-Therapy in Neurasthenia; to be opened by Dr. AGNES SAVILL and Dr. W. F. SOMERVILLE. (3) Demonstration on Muscle Testing by means of Condensers.

July 31st.—(1) Joint Discussion on the Diagnosis of Chronic Pulmonary Tuberculosis. (See Section of Medicine.) (2) Discussion on X-Ray Diagnosis in Gastro-Intestinal Conditions.

GYNAECOLOGY AND OBSTETRICS.

President: F. W. NICOL HAULTAIN, M.D., F.R.C.P.E., Edinburgh. *Vice-Presidents:* Professor J. ALEXANDER KYNOCH, F.R.C.P., F.R.C.S., Dundee; Professor R. G. MCKERRON, M.D., C.M., Aberdeen; T. G. STEVENS, M.D., F.R.C.S., London; W. C. SWAYNE, M.D., Clifton, Bristol. *Honorary Secretaries:* H. S. DAVIDSON, M.B., F.R.C.S., 6, Atholl Place, Edinburgh; S. G. LAKER, M.D., F.R.C.S., 1, Harley Street, London, W.; ALEXANDER MITCHELL, M.B., 2A, Albyn Place, Aberdeen.

The following programme has been arranged:

1. Discussion on the Treatment of Fibromata. To be opened by Dr. HENRY JELLETT.

2. Discussion on the Management of Pregnancy and Labour in Contracted Pelves. To be opened by Dr ARCHIBALD DONALD.

3. Pathological Demonstration and short papers.

The Secretaries will be glad to hear from those who desire to take part in the proceedings of the Section.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

President: H. LAMBERT LACK, M.D., F.R.C.S., London. *Vice-Presidents:* J. M. BOOTH, M.D., C.M., Aberdeen; J. S. FRASER, M.B., F.R.C.S.E., Edinburgh; A. A. GRAY, M.D., F.F.P.S., Glasgow; T. H. LIVINGSTONE, M.D., F.R.C.S.E., Newcastle-on-Tyne. *Honorary Secretaries:* O. ST. J. GOGARTY, M.D., 15, Ely Place, Dublin; J. F. O'MALLEY, F.R.C.S., 16, Weymouth Street, London, W.; H. PETERKIN, M.B., 17, Bon Accord Crescent, Aberdeen.

The following programme has been arranged provisionally:

July 29th.—Discussion on the Treatment of Inoperable Growths of the Nose and Throat. To be opened by Mr. W. D. HARMER (Diathermy), Dr. WILLIAM HILL (Radium), and Dr. JOHN MACINTYRE (X Rays).

July 30th.—Discussion on Oto-sclerosis. To be opened by Dr. A. A. GRAY (Etiology and Pathology), Mr. J. S. FRASER (Clinical Aspects), Mr. G. J. JENKINS (Various Methods of Treatment), and Mr. F. F. MUECKE (Auditory Re-education).

July 31st.—Demonstration:—Mr. J. S. Fraser: The Pathology of Rhinitis.

Members wishing to read papers before the Section should communicate with Mr. O'Malley at the address given. Contributions for the division of the Museum set apart for preparations, specimens, drawings, and instruments relating to the work of the Section should be sent to Dr. Henry Peterkin, 17, Bon Accord Crescent, Aberdeen.

MEDICAL SOCIOLOGY.

President: JOHN GORDON, M.D., Aberdeen. *Vice-Presidents:* J. MUNRO MOIR, M.D., Inverness; DAVID NICOLSON, C.B., M.D., Camberley, Surrey; GEORGE WILLIAMSON, M.B., Aberdeen. *Honorary Secretaries:* DAVID RORIE, M.D., 1, St. Devenick Terrace, Cults, Aberdeen; ANNE WATSON, 22, Waverley Place, Aberdeen.

The following subjects have been chosen for discussion:

1. State Medical Service or Panel System?

2. The Responsibility of the State as regards Venereal Disease.

3. The Duty of the State towards the Early Environment of the Child.

4. Medical Certification: (*a*) Generally (except Lunacy Certification); (*b*) Under the National Health Insurance Act.

MEDICINE.

President: F. J. SMITH, M.D., F.R.C.P., London. *Vice-Presidents:* J. R. CHARLES, M.D., F.R.C.P., Clifton, Bristol; G. MAITLAND EDMOND, M.D., C.M., Aberdeen; HERBERT FRENCH, M.D., F.R.C.P., London; Professor A. W. MACKINTOSH, M.D., Aberdeen; Professor T. K. MONRO, M.D., F.F.P.S., Glasgow; Professor A. M. STALKER, M.D., C.M., Dundee. *Honorary Secretaries:* D. BARTY KING, M.D., M.R.C.P., 6, Devonshire Street, Portland Place, London, W.; W. RATTRAY PIRIE, M.B., C.M., 20, Bon Accord Square, Aberdeen.

The following programme has been arranged:

July 29th.—Discussion on Headache: Its Causes and Treatment. To be opened by Dr. HARRY CAMPBELL.

July 30th.—Discussion on Artificial Pneumothorax in Pulmonary Tuberculosis. To be opened by Dr. RIST (Physician to the Laënnec Hospital, Paris).

July 31st.—Conjoint discussion on The Diagnosis of Chronic Pulmonary Tuberculosis in Infancy and Child-

lood. To be opened by Dr. BARTY KING (Section of Medicine), Dr. CLIVE RIVIERE (Section of Diseases of Children), Dr. IRONSIDE BRUCE (Section of Radiology).

NAVAL AND MILITARY MEDICINE AND SURGERY.

President: Deputy Surgeon-General W. MAXWELL CRAIG, C.B., R.N., Haslar. *Vice-Presidents:* Surgeon-General P. H. BENSON, I.M.S., Upper Walmer; Brigade-Surgeon Lieutenant-Colonel R. GRAY, I.M.S., Aberdeen; Major G. R. LIVINGSTON, M.D., R.A.M.C.(T.F.); Lieutenant-Colonel GEORGE SCOTT, R.A.M.C. (ret.), Aberdeen. *Honorary Secretaries:* Captain CECIL JOHNSON, R.A.M.C. (T.F.), Cricklewood, East Sheen, London, S.W.; Lieutenant-Colonel FRANCIS KELLY, M.D., R.A.M.C.(T.F.), West Craibstone Street, Aberdeen.

The following programme has been arranged provisionally:

July 29th.—Discussion on (1) the Treatment of Wounded in Naval Warfare. To be opened by Fleet Surgeon D. WALKER HEWITT, R.N. (2) Gangrene in War. To be opened by Captain C. MAX PAGE, R.A.M.C.(S.R.).

July 30th.—Discussion on (1) the Treatment of Syphilis. To be opened by Lieutenant-Colonel T. W. GIBBARD, R.A.M.C., and Major L. W. HARRISON, R.A.M.C. (2) On Common Ailments in Camp: their Prevention and Treatment. To be opened by Captain C. JOHNSON, M.B., R.A.M.C.(T.F.).

July 31st.—A lecture, with limelight illustrations, on Experiences of the Northern Party of Captain Scott's Expedition, by Staff Surgeon G. MURRAY LEVICK, R.N.

NEUROLOGY AND PSYCHOLOGICAL MEDICINE.

President: F. W. MOTT, M.D., F.R.C.P., F.R.S., London. *Vice-Presidents:* DONALD J. ARMOUR, F.R.C.S., London; JAMES NEIL, M.D., Oxford; WILLIAM REID, M.D., Aberdeen; H. CAMPBELL THOMSON, M.D., F.R.C.P., London. *Honorary Secretaries:* H. DE MAINE ALEXANDER, M.D., Aberdeen District Asylum, Kingseat, Newmachar; M. D. EDER, M.R.C.S., L.R.C.P., 7, Welbeck Street, London, W.; A. W. FALCONER, M.D., M.R.C.P., 18, Bon Accord Square, Aberdeen.

The following programme has been arranged provisionally:

July 29th.—Discussion on the Diagnosis and Treatment of Parenchymatous Syphilis. To be opened by Dr. F. W. MOTT, Dr. BYROM BRAMWELL, and Professor MACINTOSH.

July 30th.—Discussion on the Significance of the Unconscious in Psycho-Pathology.

July 31st.—Independent Papers.

Those desirous of reading papers before the Section are requested to communicate with the Secretaries as soon as possible. Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, and in regard to these to communicate directly with the Committee of the Pathological Museum.

OPHTHALMOLOGY.

President: C. H. USHER, M.B., F.R.C.S., Aberdeen. *Vice-Presidents:* A. R. GALLOWAY, M.B., C.M., Aberdeen; KARL A. GROSSMANN, M.D., F.R.C.S., Liverpool; N. BISHOP HARMAN, M.B., F.R.C.S., London; A. H. H. SINCLAIR, M.D., F.R.C.S., Edinburgh. *Honorary Secretaries:* F. R. HILL, M.B., C.M., 62, Warwick Road, Carlisle; Miss EUPHAN M. MAXWELL, M.B., 19, Lower Baggot Street, Dublin; W. CLARK SOUTER, M.D., 12, Bon Accord Square, Aberdeen.

The following programme has been arranged provisionally:

1. Discussion on the Choice of Cataract Operation. To be opened by Mr. E. E. MADDOX.
2. Discussion on the Hygiene of Reading and Near Vision. To be opened by Mr. J. HERBERT PARSONS.
3. Discussion on the Teaching of Ophthalmology to Medical Students. To be opened by Dr. MAITLAND RAMSAY.

The Secretaries will be glad to hear from those wishing to read papers or to give demonstrations before the Section as early as possible.

Contributions to the division of the Pathological Museum set apart for objects relating to the work of the Section are also invited. Communications relating to this subject should be addressed to the Secretaries of the Museum.

PATHOLOGY AND BACTERIOLOGY.

President: W. S. LAZARUS-BARLOW, M.D., F.R.C.P., London. *Vice-Presidents:* C. H. BENHAM, M.D., M.R.C.P., Hove; CHARLES BOLTON, M.D., F.R.C.P., London; J. C. G. LEDINGHAM, M.B., Ch.B., London; J. H. TEACHER, M.B., F.F.P.S., Glasgow. *Honorary Secretaries:* G. MELLIS DUNCAN, M.B., C.M., 12, Bayview Road, Aberdeen; J. F. GASKELL, M.D., M.R.C.P., 23, Ladbroke Grove, London, W.; J. W. TREVAN, M.D., B.S., St. Bartholomew's Hospital, London, E.C.

The following programme has been arranged provisionally:

July 29th.—Discussion on (1) the Action of Radiations on Cells and Fluids, to be opened by the PRESIDENT; (2) The Importance of Biochemistry in Immunity Reactions, to be opened by Dr. CARL BROWNING.

July 30th.—Discussion (in conjunction with the Section of Pharmacology) on the Pathology of Heart Function. To be opened by Dr. THOMAS LEWIS.

July 31st.—Discussion on the Importance of Variability among Bacteria and its Bearings on Diagnosis. To be opened by Dr. W. J. PENFOLD.

PHARMACOLOGY, THERAPEUTICS, AND DIETETICS.

President: Professor J. THEODORE CASH, M.D., LL.D., F.R.S., Aberdeen. *Vice-Presidents:* F. J. CHARTERIS, M.D., Glasgow; O. F. F. GRÜNBAUM, M.D., F.R.C.P., London; J. C. MCWALTER, M.D., Dublin. *Honorary Secretaries:* W. J. DILLING, M.B., Ch.B., Materia Medica Department, Marischal College, Aberdeen; J. M. FORTESCUE-BRICKDALE, M.D., 52, Pembroke Road, Clifton; J. DAVENPORT WINDLE, M.D., Cippenham Lodge, Southall.

The following programme has been arranged provisionally:

July 29th.—Discussion on Recent Advances in the Relationship between Chemical Constitution and Pharmacological Activity.

July 30th.—Discussion on the Pathology of Heart Function, including the Experimental Pharmacology and Therapeutics of Pathological Conditions of the Heart (Joint Discussion).

July 31st.—Discussion on the Pharmacology and Therapeutics of the Animal Extracts, exclusive of Thyroid Extract.

Those desirous of taking part in these discussion, or of making independent communications to the Section, are requested to write as soon as possible to the Secretaries.

STATE MEDICINE AND MEDICAL JURISPRUDENCE.

President: Professor MATTHEW HAY, M.D., LL.D., F.R.C.P.I., Aberdeen. *Vice-Presidents:* E. LEE COLLIS, M.B., B.Ch., London; Professor F. W. EURICH, M.D., Bradford; W. HARGOOD, M.D., Sutton; W. LESLIE MACKENZIE, M.D., F.R.C.P., LL.D., Edinburgh. *Honorary Secretaries:* R. BALFOUR GRAHAM, F.R.C.S.E., Leven, Fife; W. ALEXANDER MACNAUGHTON, M.D., County Buildings, Stonehaven, Kincardineshire; FRANK E. ROCK, M.D., Town Hall, Edmonton, N.

The following subjects have been suggested for discussion:

1. The State Organization of Medical Service.
2. The Legal Investigation of Cause of Death and possible Reforms.
3. Modern Views regarding the Period and Duration of Infectiousness in the Commoner Zymotics.
4. Certification of Births and Deaths.
5. The Administrative Treatment of Tuberculosis, especially in regard to After-Care. In connexion with this subject a Paper on Garden Cities for Consumptives will be read by Dr. J. E. ESSLEMONT.
6. Malingering: its Extent and Control. Discussion to be opened by Sir JOHN COLLIE.
7. Unqualified Practice—Medical, Obstetrical, and Dental.

SURGERY.

President: J. Scott Riddell, M.V.O., M.B., C.M., Aberdeen. *Vice-Presidents:* J. Grant Andrew, C.M., F.R.F.P.S., Glasgow; Arthur Connell, F.R.C.S.E., Sheffield; W. McAdam Eccles, M.S., F.R.C.S., London; T. Eagleson Gordon, F.R.C.S.I., Dublin; Professor John Marnoch, M.B., C.M., Aberdeen; Alexander Miles, F.R.C.S., Edinburgh. *Honorary Secretaries:* G. H. Colt, F.R.C.S., 12, Bon Accord Square, Aberdeen; Rupert Farrant, F.R.C.S., 59, Queen Anne Street, London, W.; J. M. Graham, F.R.C.S.E., 5, Castle Terrace, Edinburgh; S. Thompson Irwin, M.Ch., F.R.C.S.Edin., 29, University Square, Belfast.

The following programme has been arranged provisionally:

1. Discussion on the Surgical Treatment of Arthritic Deformities. To be opened by Mr. Robert Jones.

2. Discussion on Anoci-association, or the Evolution of the Shockless Operation. To be opened by Mr. H. M. W. Gray.

3. Discussion on the Etiology and Treatment of Carcinoma of the Tongue. To be opened by Mr. W. G. Spencer.

The Secretaries will be glad to hear as soon as possible from those desirous of taking part in any of these discussions, or of reading independent papers before the Section.

TROPICAL MEDICINE.

President: Professor W. J. R. Simpson, C.M.G., M.D., London. *Vice-Presidents:* Daniel E. Anderson, M.D. Lond. and Paris, B.Sc., F.R.S.E., London, W.; J. Mitford Atkinson, M.B., London; Henry Fraser, M.D., Kuala Lumpur, Federated Malay States. *Honorary Secretary:* G. A. Williamson, M.D., 15, Forest Road, Aberdeen.

The following subjects have been selected for discussion:

Wednesday, July 29th.—The Training and Position in Administration of the Sanitarian in the Tropics. To be opened by Colonel King, I.M.S., C.I.E.

Thursday, July 30th.—The Surgical Treatment of Colitis and Post-Dysenteric Conditions. To be opened by Mr. James Cantlie.

Friday, July 31st.—Kala-azar and Allied Conditions.

The officers of the Section will be glad to hear as soon as possible from those who propose to take part in the discussions or make any communication to the Section. Any such communication should not occupy in reading more than fifteen minutes (about 1,500 words), and for profitable discussion should be given the following form: (1) A definite statement of what it is intended to state, suggest, or prove; (2) a statement of the facts or arguments on which such thesis rests; (3) a very brief summary of the leading points.

A Special Subsection of the Museum is being reserved for exhibits in Tropical Medicine, and the Pathological Museum Committee, Marischal College, will be glad to receive instruction as soon as possible from intending exhibitors, and will later forward information as to packing, insurance of exhibits, etc., the expense of which will be borne by the Association.

PATHOLOGICAL MUSEUM.

The Committee of the Pathological Museum, to be organized in connexion with the Annual Meeting of the British Medical Association next July, proposes to arrange the material under the following heads:

1. Exhibits bearing on discussions and papers in the various sections.
2. Specimens and illustrations relating to any recent research work.
3. Instruments relating to clinical diagnosis and pathological investigation.
4. Individual specimens of special interest or a series illustrating some special subject.

It is also proposed to make an effort to gather together series of exhibits relating to the pathology of the circulatory system and the ductless glands; the effect of radium on malignant growths; pyelo-radiography and *x*-ray photographs of brain, skull, and gall stones, and of ancient and historical surgical instruments.

While making these suggestions the committee, of which Dr. G. M. Duncan is chairman, will welcome specimens illustrating other subjects. The museum will occupy a central position in the same building as that in which the sectional work is to be carried on.

Communications may be addressed to the honorary secretaries, Dr. A. W. Falconer and Mr. William Anderson, F.R.C.S., Pathological Department, Marischal College, Aberdeen.

Honorary Local Treasurer—
George Williamson, M.B.,
256, Union Street, Aberdeen.
Honorary Local Secretaries—
Thomas Fraser, M.B.,
16, Albyn Place, Aberdeen.
Fred. K. Smith, M.B.,
7, East Craibstone Street, Aberdeen.

PROVISIONAL PROGRAMME.

The following is the provisional time table for the Aberdeen Meeting:

Friday, July 24th.
10 A.M.—Annual Representative Meeting.

Saturday, July 25th.
9.30 A.M.—Representative Meeting.

Monday, July 27th.
9.30 A.M.—Council Meeting.
10 A.M.—Representative Meeting.

Tuesday, July 28th.
9.30 A.M.—Representative Meeting.
2 P.M.—Annual General Meeting.
8.30 P.M.—Adjourned General Meeting, President's Address.

Wednesday, July 29th.
9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Medicine.
3 P.M.—Religious Services.
4 P.M.—Secretaries' Conference and Dinner.

Thursday, July 30th.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Surgery.
7.30 P.M.—Annual Dinner.

Friday, July 31st.
9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.

Saturday, August 1st.
Excursions.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

The following books were added to the Library between July and September, 1913:

Presented by the Authors.

Hawthorne, C. O.: Studies in Clinical Medicine. 1912
Hearsey, H.: Nyasaland Protectorate: Sleeping Sickness, Diary No. 20. 1913
Ross, E. H.: The Reduction of Domestic Flies. 1913
Wale, W.; Bibliography of the Published Writings of J. H. Targett, Esq. 1913
Greenlees, T. D., of Streatham, S.W.: A Collection of Papers and Reprints by T. D. Greenlees. 1885–1910
Also Volume I Caledonian Medical Journal (to complete series).

Added to the Library through the "British Medical Journal."

André-Thomas: Cerebellar Functions. 1912
Auerbach, S.: Headache, its varieties, etc. 1913
Barnardo and Megan: Report on Experiments with Nastin B in Leprosy. 1912
Bastian, H. C.: The Origin of Life. 1913
Beale, O. C.: Racial Decay. 1911
Beatson, Sir G. T.: Modern Wound Treatment. 1913

Berkeley and Bonney: Difficulties and Emergencies of Obstetric Practice. 1913
Bhishagratna, K. K. L.: An English Translation of the Sushruta Samhita, in 3 vols. Vol. I. 1907
Bloch, I.: Die Prostitution I. 1912
Braun, L.: Diagnose und Therapie der Herzkrankheiten. 1913
Bruns-Kramer-Ziehen: Handbuch der Nervenkrankheiten im Kindisalter. 1912
Bryce, A.: Modern Theories of Diet. 1912
Burch, G. J.: Practical Exercises in Physiological Optics. 1912
Cantonnet, A.: l'Ophtalmologie du praticien. 1912
Casper, L.: Lehrbuch der Urologie. 1910
Castellani and Chalmers: Manual of Tropical Medicine, second edition. 1913
Chantemesse-Mosny: Traité de Médecine, XVII. Etiologie et Prophylaxie des Maladies transmissibles par la peau. 1911
Choyce, C. C.: System of Surgery, vol. 2. 1912
Collie, Sir J.: Malingering and Feigned Diseases. 1913
Cooper, J. W. Astley: Pathological Inebriety. 1913
Cotar. Mineral Waters of Vichy. 1913
Cushing: The Pituitary Body and its Disorders. 1912
Davis, H: Skin Diseases in General Practice. 1913
Delille, A.: l'Hypophyse et la médication hypophysaire. 1909
Doty, A. H.: The Mosquito. 1912
Ehrlich, P.: Beiträge zur experimentellen Pathologie u. Chemotherapie. 1909
Escudero, P.: Kystes Hydatiques du Poumon. 1912
Ewald and Heffter: Handbuch der Arzneiverordnungslehre. 14 Aufl. 1911
Fischer, H.: Kriegchirurgische Rück und Ausblicke von Asiatischen Kriegsschauplatze. 1909
Fox, H.: Elementary Bacteriology and Protozoology. 1913
Froin, G.: La Vie et les maladies du sang. 1911
Fry, Sir E.: The Liver Worts. 1911
Gardner, W. S.: Textbook of Gynaecology. 1912
Giffen and Dundas: Students' Manual of Medical Jurisprudence, third edition. 1913
Gilbert-Thoinot: Maladies des meninges. 1912
Godlee, Sir R. J.: The Hunterian Oration. 1913
Goldzicher: Die Nebennieren. 1911
Gouley, J. W. S.: Surgery of the Genito-Urinary Organs. 1907
Gray, H. M. W. and W. Anderson: Developmental Abnormalities affecting the lower end of the Ileum and Colon. 1912
Grotenfelt, C.: Über Stieldrehung der Ovarialtumouren. 1911
Haas, P.: Laboratory Notes on Organic Chemistry. 1910
Haffkine, W. M.: Protective Inoculation against Cholera. 1913
Haig, K. G.: Health through Diet. 1913
Hallam: The Key to Perfect Health. 1912
Herman and Maxwell: Diseases of Women, new edition. 1913
Herms, W. B.: Malaria—its Cause and Control. 1913
Herms, W. B.: Laboratory Guide to Parasitology. 1913
Hewitt, Sir F.: Anaesthetics and their Administration, fourth edition. 1912
Hirschfelder, A. D.: Diseases of the Heart and Aorta. 1910
Holtos, J.: Symptomatologie und Therapie der latenten und larvierten Tuberculose. 1911
Holmes, A.: Conservation of the Child. 1912
Humphris, F. H.: Electro-therapeutics for Practitioners. 1913
Jamieson, W. A.: The Care of the Skin in Health. 1912
Kanavel: Infections of the Hand. 1912
Keith, A.: Human Embryology, third edition. 1913
Kleine, J. F.: Die Heilung der gichtisch-Rheumatischen Erkrankungen. 1912
Krause, P.: Lehrbuch der klinischen Diagnostik innerer Krankheiten, 2 Aufl. 1913
Kuhnemann, G.: Taschenbuch der speziellen Bakterioserologischen Diagnostik.
Lake, R.: Handbook of the Diseases of the Ear, fourth edition. 1912
Leduc, S.: La Biologie synthétique. 1912
Lees, D. E.: Incipient Tuberculosis (The Bradshaw Lecture, 1912). 1913
Lenzmann, R.: Die Pathologie und Therapie der plötzlich das Leben Gefahrdenden Krankheitszustande, 3 Aufl. 1913
London, E. S.: Das Radium in der Biologie und Medizin. 1911
Lorand, A.: Die rationelle Ernahrunpweise. 1911
Lorenz und Saxl: Orthopaedics in Medical Practice, translated by Ritchie. 1913
Mann, Sievers, and Cox: The Real Democracy. 1913
Martin, A., and P. Jung: Pathology and Treatment of Diseases of Women, translated by Schmitz. 1912
Mathes, P.: Der Infantilismus, die Asthenie und deren Beziehungen zum Nervenssystem 1912
Meyer und Gottlieb: Die experimentelle Pharmakologie. 2 Aufl. 1911
Moullin, C. M.: The Bradshaw Lecture on the Biology of Tumours. 1913
Murat, L.: Les Merveilles du corps humain. 1912
Von Noorden, C.: Die Zuckerkrankheit und ihre Behandlung. 6 Aufl. 1912
Oppenheim: Lehrbuch der Nervenkrankheiten. 5 Aufl. Bd. 2. 1908
Paterson, H. J.: Surgery of the Stomach. 1913
Plant-Rehm-Schottmuller: Leitfaden zur Untersuchungen der Zerebrospinalflussigkeit. 1913
Practical Medicine Series, vols. 1—5. 1913
Provincial Hospital Pharmacopoeias. 1913
Pusey: Care of the Skin and Hair. 1912
Reilly, S. F.: The Building of a Profitable Practice. 1912
Reynolds, S. H.: The Vertebrate Skeleton, second edition. 1913
Richet, C.: Anaphylaxis (translated by Bligh). 1913
Robin, A.: Les Ferments métalliques et leur emploi en thérapeutique. 1907
Robin, A.: Treatment of Tuberculosis, translated by Leon Blanc. 1913
Robinson, V.: Pathfinders in Medicine. 1912
Roget, B. F.: Hints on Alpine Sports. 1912
Schmidt, H. E.: Kompendium der Röntgen Therapie. 1913
Schottelius, M.: Bacteria, translated by Geoghegan. 1912
Sergent, E.: Technique clinique médicale et Semeiologie. 1913
Singer, K.: Die Ulnaris Lähmung. 1912
Smith, Major-General F.: Veterinary Physiology, fourth edition. 1912
Snow, M. L. H. A.: Mechanical Vibration. 1912
Spiller, G.: Papers on Inter-racial Problems. 1911
Swanton, E. W.: British Plant Galls. 1912
Tanzi, E.: Textbook of Mental Diseases, translated by Ford Robertson and T. C. Mackenzie. 1909
Thorpe, Sir E.: Dictionary of Applied Chemistry (Oilstone to Soda), vol. iv. 1913
Thresh: Examination of Water and Water Supplies, second edition. 1913
Turner and Carling: Treatment after Operation. 1912
Watson, Chalmers: The Book of Diet. 1913
Wickham and Degrais: Radiumtherapie. 1909
Willey, A.: Convergence in Evolution. 1911
Williams, Leonard: Minor Maladies, third edition. 1913
Wilson and Calvert: Textbook of Trade Waste Waters. 1913
Wingent, R. M.: Historical Notes on the Borough and the Borough Hospitals. 1913
Wood, H. C.: Pharmacology and Therapeutics. 1912
Yule, G. U.: Introduction to the Study of Statistics, second edition. 1912

Calendars, Reports, and Society Transactions have been received from the following bodies:

American Association of Genito-Urinary Surgeons, Transactions, vol. vii. 1912
Australian Institute of Tropical Medicine, Report. 1911
Boston City Hospital, Medical and Surgical Reports, sixteenth series. 1913
Calcutta University Calendar. 1913-14
Cancer Hospital Research Institute. Selected Papers, I. 1913
Canal Zone Medical Association, Proceedings. 1911-12
Chief Inspector of Factories, Annual Report. 1912
Commissioners in Lunacy, Sixty-seventh Report. 1912
Cornell University, Medical Bulletin, vol. ii. 1912-13
Durham University, Calendar of Medical School. 1913-14
France—Ministère de la Guerre, Statistique Médicale de l'Armée. 1910
Glasgow University Calendar. 1913-14
Harvard Medical School, Studies from the Department of Neurology, vol. v.
Home Office, Return of the Experiments on Animals. 1912
Imperial Cancer Research Fund, Tenth and Eleventh Annual Reports. 1912-13
India Office, Report of the Sanitary Commissioners with the Government of India. 1911
India, Director-General of the Indian Medical Service. The Indian Journal of Medical Research, No. 1. 1913
Ireland, National University Calendar. 1913-14
Japan, Annual Report of the Health of the Imperial Navy. 1910
Manchester University, Prospectus of the Faculty of Medicine. 1913-14
Medical Officer to the Local Government Board, Forty-Second Annual Report. 1912-13
Metropolitan Asylums Board, Annual Report. 1912
Metropolitan Water Board, Ninth Research Report. 1912
Michigan University, Transactions of the Clinical Society of, vol. iii. 1912
Middlesex Hospital Medical School, Prospectus. 1913-14
Philadelphia Academy of Surgery, Transactions, vol. xv. 1913
Registrar-General for Ireland, Forty-ninth Report. 1912
Registrar-General for Scotland, Twelfth Census Report, vol. ii. 1913
Rockefeller Institute, Studies-Reprints, vol. xvii. 1913
Royal Academy of Medicine in Ireland, Transactions, vol. xxxi. 1913
St. Luke's Hospital Medical and Surgical Reports, vol. iii. 1911
St. Thomas's Hospital Reports, vol. xl. 1913
Sanitary Commissioner with the Government of India, Report of the Third Meeting of the General Malaria Committee, Madras. 1912
Shanghai Municipal Council, Report of the Health Department. 1912
Sweden, Report of the State Medical Institute on Infantile Paralysis. 1912
United States War Department, Studies of Syphilis. 1913
Westminster Hospital Medical School, Prospectus. 1913-14

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

THE Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.

March 30th, 1914.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GLASGOW AND WEST OF SCOTLAND BRANCH:

ARGYLLSHIRE DIVISION.

AT a meeting of members of the Association resident in Argyllshire, held in the Christian Institute, Bothwell Street, Glasgow, on April 3rd, the new Argyllshire Division was duly constituted, model rules adopted, and the following office-bearers elected:

Chairman.—Dr. J. P. Brown, Drumfin, Campbeltown.
Vice-Chairman.—Dr. Lachlan Grant, Ballachulish.
Honorary Secretary and Treasurer.—Dr. Joseph A. Clarke, Milton House, Dunoon.
Representatives to Branch Council.—Dr. John A. Cameron, Lagganbuie, Dalmally; Dr. Joseph A. Clarke, Milton House, Dunoon.
Executive Committee.—Dr. Reginald N. Macdonald, L.R.C.P., etc., Salen, Mull; Dr. Duncan McDonald, M.D., Argyll Square, Oban; Dr. John D. McCallum, M.B., Lochgilphead; Dr. John Landsborough, M.B., Tighnabruaich.

Pending the decision of the Central Council, no Representative to Representative Meeting was elected.

DUMBARTONSHIRE DIVISION.

The Dumbartonshire Division held its first meeting on April 3rd, when Dr. GILMOUR (Dalmuir) presided.

Model Rules.—The model rules for a Division not itself a Branch were adopted.

Election of Officers.—The following office-bearers were elected:

Chairman: Dr. John Gilmour, Dalmuir.
Vice-Chairman: Dr. W. B. Armstrong, Lenzie.
Honorary Secretary: Dr. A. W. Sutherland, Cardross.
Representative for Representative Meeting: (Election delayed.)
Representatives on Branch Council: Dr. John Reid, Milngavie; Dr. A. W. Sutherland (Representative for Representative Meeting).
Executive: Chairman, Vice-Chairman, Secretary, and Dr. J. B. Stewart, Kirkintilloch; Dr. C. L. Kerr, Renton.

Representation.—It was unanimously agreed to apply to the Council to grant the Division separate representation on the Representative Body.

Ethical Rules.—The "rules governing procedure in ethical matters of a Division not itself a Branch" were unanimously adopted.

Defence Union.—It was decided strongly to recommend members who had not already so protected themselves to join the Scottish Medical and Dental Defence Union.

METROPOLITAN COUNTIES BRANCH:

CAMBERWELL DIVISION.

A MEETING of the Division was held on March 26th at Camberwell Infirmary. Dr. BATTEN was in the chair, and eighteen members and ten visitors were present.

Local Medical Committee for London.—Dr. CAPES asked for information about the election of a Local Medical Committee for the county of London under the Insurance Act. The SECRETARY stated that full details of the plan of election had been sent to every medical man in London by the Branch Council.

Physical and Electrical Therapeutics in General Practice.—Dr. Batten then vacated the chair, which was taken by the Vice-Chairman, Dr. PARTRIDGE, who then called on Dr. BATTEN to read his paper on "Physical and electrical therapeutics in general practice." During the reading of the paper demonstrations were given of solid carbon dioxide applications and ionization. At the conclusion of the paper Dr. CAPES moved a vote of thanks to Dr. Batten, and referred with pride to the prominent part the Chairman of the Division had taken in the pioneer work in connexion with electrical therapeutics. This was seconded by Dr. LANGFORD and carried unanimously. The meeting then adjourned to the electro-therapeutical department of the infirmary, where Dr. BATTEN gave demonstrations of portable incandescent electric and gas lamps, the ultra-violet lamp, portable *x*-ray apparatus, ringworm technique, high-frequency treatment, and Bergonié's apparatus.

Votes of Thanks.—On the motion of Dr. REYNOLDS, seconded by Dr. CLATWORTHY, votes of thanks were unanimously accorded to Dr. Keats for his kind hospitality, and to the guardians of the parish for the use of the rooms in the infirmary.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

A MEETING of the Boston and Spalding Division was held at Boston on March 27th, when Dr. WHITE (Chairman) presided, and twelve other members were present.

Friendly Societies.—The report of the committee appointed to deal with matters relating to friendly societies was read and confirmed.

Departmental Committee on Excessive Benefit Claims.—The report of the subcommittee on Form M. 8 was brought to the notice of the members, and the SECRETARY announced the receipt of a letter and cheque from Dr. Moxham (Stickney) in support of the attitude taken by the Division with regard to friendly societies. On the motion of Dr. SOUTH, seconded by Dr. MONRO, the secretary was requested to write a letter of thanks to Dr. Moxham, and the amount was applied to the funds of the Association.

Medical Referees.—A discussion took place on the question of medical referees, and various opinions were

expressed, but the tenor of the meeting was in favour of the appointment of a whole-time referee. On the motion of Dr. Rendall, seconded by Dr. Walker, it was resolved, *nemine contradicente*:

> That no fee less than 10s. 6d. be accepted by any member of this Division.

Representation.—On the question of representation, it was thought that if the Kesteven Division secured representation the Holland area ought to have equal rights. It was resolved to await further information.

OXFORD AND READING BRANCH:

Reading Division.

A meeting of the Division was held at the Royal Berkshire Hospital on March 19th. Dr. Abram was in the chair, and seventeen other members were present.

Resignation of Secretary.—The resignation of Dr. E. W. Squire from the office of Honorary Secretary of the Division was accepted with regret. The Division passed a hearty vote of thanks to him for his arduous and valuable work during a period of three years, including the trying time of the Insurance Act conflict. In replying, Dr. Squire thanked the members for their whole-hearted support during his term of office. He thought that the recent struggle had resulted in considerable improvement in the conditions of contract practice, and also that the Government had shown since that time a greater inclination to meet the reasonable demands of the profession and to make the work as easy as possible. On the motion of Dr. G. S. Abram, seconded by Dr. Stansfield, Dr. Lambert was unanimously appointed Honorary Secretary of the Division. Dr. Lambert thanked the meeting for electing him.

Fee for Medical Referee.—A discussion took place with regard to the amount of the minimum fee to be accepted for giving an opinion as referee in the case of an insured person. Drs. Squire and Lambert explained that the Executive Committee had referred the matter to the meeting of the Division, with a recommendation that the resolution passed at a meeting of the Representative Body in December, 1913, suggesting a minimum fee of half a guinea, should be adopted. Speaking in favour of a minimum fee of 1 guinea, Dr. Rowland said that the Conference of Local Medical and Panel Committees was strongly in favour of the appointment of whole-time rather than of part-time referees. Dr. S. Gilford, in supporting the minimum fee of 1 guinea, stated that he had voted for the resolution passed at the executive meeting, solely with the object of bringing it before the Division for discussion. Several members reported that lower fees were being accepted by practitioners in several places. Dr. Hope quoted statistics of approved societies, intended to show that malingering was not at all frequent, and that approved societies could well afford to pay a fee of 1 guinea. On the motion of Dr. Rowland, seconded by Dr. Freeman, it was unanimously resolved:

> That the fee for a second opinion on an insured person, given in the capacity of referee, shall remain at not less than 1 guinea, as decided at the annual meeting of the Reading Division held in 1913.

In reply to Dr. Bokenham, it was stated that the resolution did not affect the fees for private consultations on insured persons. It was decided that notice of the resolution should be sent to all members of the Maidenhead Division and to those members of the Reading Division not present. Dr. Squire, Secretary of the Oxford and Reading Branch, agreed to communicate with the Oxford Division in the matter.

Non-Panel Committee.—Dr. Napier Jones explained that the Non-Panel Committee of the British Medical Association had been formed, at his suggestion, to safeguard the interests of members not practising as panel practitioners, and moved the following resolution, which was seconded by Dr. May and unanimously adopted:

> That Dr. Freeman be appointed intermediary between the Non-Panel Committee of the British Medical Association and the non-panel practitioners of the Reading Division.

Dr. Freeman accepted the office.

SOUTHERN BRANCH:

Salisbury Division.

A meeting of the Salisbury Division was held at the Salisbury Infirmary on April 1st. Dr. J. O. March was in the chair, and sixteen members and two visitors were present.

Proposed New Branch.—On the motion of Dr. Kempe, seconded by Dr. Saunders, it was resolved by 8 votes to 2:

> That a Branch of the Association be formed coterminous with the boundaries of Wiltshire.

Telephones and the Medical Profession.—The following resolution was adopted unanimously:

> That the British Medical Association should approach the Postmaster-General with the object of securing that practitioners should have telephonic communication afforded them at a flat and reduced rate.

Mental Deficiency.—Dr. R. C. Monnington, Assistant Medical Officer at Darenth Industrial Colony, Dartford, read an interesting and instructive paper on mental deficiency, including reference to recent legislation on the subject.

Pathological Specimens.—Dr. Kempe showed specimens of: (*a*) An early tuberculous kidney, which was diagnosed by catheterization of the ureters; (*b*) an ectopic gestation. Dr. Fison showed a specimen of a large pyonephrotic kidney.

General Anasarca.—Dr. Farr read notes of a case of general anasarca treated with digipuratum and diuretin with very satisfactory results.

Atony of the Large Intestine.—Dr. Thornton showed a series of skiagrams demonstrating atony of the large intestine treated by short circuit.

STAFFORDSHIRE BRANCH:

Mid-Staffordshire Division.

An ordinary meeting of the Division was held at Lichfield on March 31st, the Chairman, Dr. F. M. Rowland, presiding.

Medical Referee.—The Chairman moved as follows:

> That, subject to such alterations as may from time to time be adopted by the Association, where any medical practitioner not devoting his (or her) whole time to the work is called upon by a lay body to express an opinion as to the capacity or incapacity of an insured person, the lowest fee such practitioner should accept should be 10s. 6d., exclusive of expenses; and that such practitioner should only express his opinion after the practitioner in attendance has been given an opportunity of consultation.

The resolution was carried unanimously, but as less than one-third of the members of the Division were present a notice of the resolution is being circulated in accordance with ethical rules.

Model Organization Rules.—The revised form of model rules of organization were adopted.

Assistant Medical Officers of Asylums.—On the motion of Dr. Hodder, the following resolution was carried unanimously:

> That this Division of the British Medical Association is of opinion that a Subcommittee of the Medico-Political Committee should be formed to deal with the special interests of the assistant medical officers of mental hospitals and public asylums.

YORKSHIRE BRANCH.

At a meeting of the Branch at Sheffield, on March 18th, Dr. Stanger, President, in the chair, the following business was transacted previous to the scientific proceedings reported at page 762.

Elections.—A list of candidates for admission was submitted, and six new members were added to the Branch.

Financial Reports.—The financial reports of the Branch and Divisions having been presented, extra grants were voted as follows: To Rotherham £3, to Sheffield £4, and York £2. As the details of expenditure of the Bradford Division had not been supplied, no additional grant was made. Attention was drawn to the large amount paid by the York Division for the use of rooms.

Eye Specialists.—The following resolution was carried:

In the opinion of this meeting, £350, as offered by the Education Committee of the West Riding County Council, for a whole-time eye specialist, is totally inadequate to secure the services of an experienced surgeon, and that the lowest fee offered should be £500.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions and Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, relating to questions affecting the honour and interests of the medical profession or of the Association (By-law 37), must be published in the BRITISH MEDICAL JOURNAL not later than the issue of April 25th, and for this purpose should be received by me not later than April 18th, 1914. Notices of Motion proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,
ALFRED COX,
Medical Secretary.

February 11th, 1914.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, April 22nd, at 10.30 a.m., in the Council Room, 429, Strand, London, W.C.

By order,
GUY ELLISTON,
Financial Secretary and Business Manager.

April 2nd, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—Dr. P. R. Cooper, Honorary Secretary Science Committee (8, St. Peter's Square, Manchester), gives notice that a clinical and scientific meeting of the Lancashire and Cheshire Branch will be held at the Royal Infirmary, Liverpool, on Wednesday, April 29th, at 4 p.m. (tea from 3.30). Members desirous of showing cases or making scientific communications are requested to write to Dr. Cooper before April 20th.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a conjoint meeting of the Division and the City Division will be held in the Wesleyan Church School, High Road, Leyton, on Friday, April 24th, at 4 p.m., when Mr. Bishop Harman, F.R.C.S., Assistant Ophthalmic Surgeon, West London Hospital, will give a lantern demonstration on the Cure of Squint.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon ARTHUR R. H. SKEY, M.B., to the *Princess Royal*, vice Bradshaw, March 31st. Fleet Surgeon HUGH P. TURNBULL to the *Roxburgh*, vice Skey, March 31st. Fleet Surgeon JOHN MENARY, M.D., to the *Lord Nelson*, and for general staff duties on transfer of flag, undated. Fleet Surgeon ELYSTON G. E. O LEARY to the *Queen*, on transfer of flag, undated. Fleet Surgeon JOHN C. G. REED to the *Terror*, additional, for Bermuda Yard and Ireland Island, vice Rees, March 31st. Fleet Surgeon ERNEST S. TUCK to the *Natal*, vice Reed, March 31st. Fleet Surgeon WILLIAM R. TRYTHALL to the *Caesar*, vice Tuck, March 31st. Fleet Surgeon ROBERT J. MACKEOWN, M.B., to the *Black Prince*, on recommissioning, April 21st. Fleet Surgeon LOUIS E. DARTNELL to the *Africa*, on recommissioning, April 15th. Fleet Surgeon THOMAS AUSTEN to the *St. Vincent*, on recommissioning, April 21st. Fleet Surgeon HERBERT H. PEARSE to the *Talbot*, for voyage out, April 27th, and to the *Blenheim*, on commissioning, undated. Staff Surgeon RICHARD R. HORLEY to the *Sirius*, for medical charge on voyage out, April 21st, and to the *Psyche*, on recommissioning, undated. Staff Surgeon JAMES C. BRINGAN, M.B., to the *Vernon*, temporary, vice Horley, April 21st. Staff Surgeon CHARLES A. G. PHIPPS to the *Pyramus*, on recommissioning, undated. Staff Surgeon JOHN H. LIGHTFOOT to the *Sirius*, for medical charge on voyage home, undated. Staff Surgeon WILLIAM N. BLATCHFORD to the Royal Naval Dépôt, Deal, temporary, vice Ormsby, March 31st. Staff Surgeon ELIJAH R. L. THOMAS to the *Caesar*, temporary, April 1st. Staff Surgeon WILLIAM R. D. BRETON to the *Africa*, on recommissioning, April 15th. Staff Surgeon DOUGLAS V. LOWNDES to the *St. Vincent*, on recommissioning, April 21st. Staff Surgeon REGINALD H. ST. B. E. HUGHES to the *Pembroke*, vice Lowndes, April 21st. Staff Surgeon REGINALD ST. G. S. BOND to the *Commonwealth*, vice Pearse, April 25th. Staff Surgeon MAURICE T. WHALE to the *Blenheim*, on commissioning, undated. Surgeon JOHN C. FOLLIOTT D. VAUGHAN to the *Vernon*, additional for the *Vindictive*, vice Turnbull, March 31st. Surgeon JAMES H. WRIGHT, M.B., has been allowed to withdraw from the Service with a gratuity, March 25th. Surgeon RODERICK J. G. PARNELL to the *Victory*, additional for disposal, March 28th. Surgeon HENRY H. ORMSBY, M.B., to the *Wildfire*, additional for Sheerness Dockyard and Barracks, vice Wright, March 31st. Surgeon GUY B. COCKREM to the *Black Prince* on recommissioning, April 21st. Surgeon RODERICK J. G. PARNELL to the *Victory* for Royal Naval Barracks, vice Breton, April 15th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

MAJOR WILLIAM R. BLACKWELL to be Deputy Assistant Director-General at the War Office, vice M. H. G. FELL, April 1st.

The following are restored to the establishment: Supernumerary Lieutenant-Colonel CHARLES A. YOUNG, vice F. J. Morgan, April 1st; Supernumerary Major ALBERT E. HAMERTON, D.S.O., March 28th; Supernumerary Lieutenant WILLIAM K. MORRISON, M.B., April 1st; Supernumerary Lieutenant EDGAR PERCIVAL, M.B., April 1st; Supernumerary Lieutenant STANLEY J. LINZELL, M.B., April 4th.

Major G. J. A. ORMSBY has been posted to Dublin.

Major A. H. SAFFORD has been posted to the Eastern Command.

Captain S. FIELD has been posted to the Irish Command at Cork.

Captain M. O. WILSON has been posted to the Eastern Command.

Captain W. F. M. LOUGHNAN has been posted to the Eastern Command.

Lieutenant T. A. WATSON has been appointed a Specialist in Advanced Operative Surgery in the Eighth (Lucknow) Division, with effect from January 16th.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

CADET CORPORAL GEORGE A. MACDONALD, from the Edinburgh University Contingent, Officers' Training Corps, to be Lieutenant on probation, February 20th.

Cadet JOSEPH H. C. WALKER, from the Dublin University Contingent, Officers' Training Corps, to be Lieutenant on probation, February 21st.

Cadet ROBERT FORGAN, from the Aberdeen University Contingent, Officers' Training Corps, to be Lieutenant on probation, March 4th.

No. 18 Field Ambulance.—Lieutenant-Colonel FRED D. WOOLLEY resigns his commission, March 21st.

Lieutenants confirmed in their rank: GEORGE H. HAINES, HOWELL G. JONES, and HENRY C. ROOK.

Cadet ANDREW R. F. CLARKE, from the Edinburgh University Contingent, Officers' Training Corps, to be Lieutenant on probation, February 17th.

INDIAN MEDICAL SERVICE.

COLONEL C. C. MANIFOLD, Inspector-General of Civil Hospitals, United Provinces, is granted privilege leave for three months, combined with special leave for three months and twenty days, with effect from March 28th, 1914.

Lieutenant-Colonel C. MAYNAGGART, C.I.E., is appointed to officiate as Inspector-General of Civil Hospitals, United Provinces, during the absence on leave of Colonel C. C. Manifold, or until further orders.

Major DE V. CONDON is posted as Agency Surgeon in Kotah and Jhalawar, with effect from February 17th, 1914.

The services of Captain H. A. H. ROBSON have been placed at the disposal of the Government of Bengal, for employment in the Alienists Department.

INDIAN SUBORDINATE MEDICAL DEPARTMENT.

Senior Assistant Surgeons, with the honorary rank of Lieutenant, to be Senior Assistant Surgeons with the honorary rank of Captain, December 8th, 1913: THOMAS H. BONNAR, CHRISTOPHER A. FARMER, JOHN ROBERTSON, WILLIAM D. NEAL, ARTHUR J. ARCHER.

To be Senior Assistant Surgeon with the honorary rank of Lieutenant: First Class Assistant Surgeon WILLIAM T. WHITE, December 8th, 1913.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

South Midland Clearing Hospital.—BERNARD G. GOODWIN, F.R.C.S., late Lieutenant R.A.M.C., to be Captain, December 4th, 1913.

Fourth London Field Ambulance.—Lieutenant HERBERT E. MIDDLEBROOKE resigns his commission, April 4th.

Fifth London Field Ambulance.—JOHN E. SANDILANDS, M.D., late Captain, List of Sanitary Officers, whose services will be available on mobilization, to be Lieutenant, April 4th.

First Lowland Field Ambulance.—ROBERT S. TAYLOR, M.B., to be Lieutenant, February 19th.

First London (City of London) Sanitary Company.—Lieutenant JOSEPH GROUNDS, to be Captain, December 4th, 1913.

Sanitary Officers whose services will be available on Mobilization.—Captain JOHN E. SANDILANDS, M.D., resigns his commissions, April 4th.

Second London Clearing Hospital.—Lieutenant-Colonel CHARLES MONK, retired list (late I.M.S.) to be Lieutenant-Colonel, March 6th.

For Attachment to Units other than Medical Units.—Captain WILLIAM RITCHIE, M.B., is seconded under the conditions of Paragraph 114 of the Territorial Force Regulations, February 19th; Captain ARTHUR H. W. HUNT resigns his commission, April 4th.

COLONIAL MEDICAL SERVICES.

THE following changes have been notified by the Colonial Office:

WEST AFRICAN MEDICAL STAFF.

New Appointments.—The following gentlemen have been selected for appointment to the staff: W. H. Kauntze, B.A.Viet., M.B., B.Ch.Viet., M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Nigeria: A. R. Paterson, M.B., Ch.B.Glas., Nigeria; R. G. Ball, B.A.Dub., M.B., B.Ch.B.A.O.Dub., Gold Coast: E. J. H. Garstin, B.A.Dub., M.B., B.Ch.B.A.O.Dub., Nigeria; P. A. Clearkin, M.B., B.Ch. B.A.O., Queen's University, Belfast, Sierra Leone; J. McC. Clark, M.B., B.Ch.Aberd. D.T.M.L'pool., Sierra Leone; J. Atkinson, M.B., Ch.B.Glas., Gold Coast.

Resignations. — A. Hipwell, L.R.C.S. and P.Irel., D.P.H.L'pool., D.T.M.L'pool., Medical Officer, Nigeria; F. G. Thompson, M.B.Lond., Medical Officer, Gold Coast.

Retirement. — G. C. Walker, M.D., Ch.B.Viet., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., D.P.H.Lond., D.T.M.L'pool., Sanitary Officer, Gold Coast, retires on pension.

OTHER COLONIES AND PROTECTORATES.

J. T. Duncan, F.R.C.S.Irel., has been selected for appointment as a Medical Officer in the Straits Settlements; G. V. Fiddian, M.B., B.C.Cantab, has been selected for appointment as an Assistant Medical Officer in British Guiana; J. M. Mackinnon, M.B., Ch.B.Edin., has been selected for appointment as a Temporary Medical Officer in the East Africa Protectorate; B. C. N. O'Reilly, M.R.C.S.Eng., L.R.C.P.Lond., and E. E. Wilbe, L.S.A.Lond., have been selected for appointment as Medical Officers in the Gilbert and Ellice Islands; S. D. Stewart, M.B., Ch.B.Edin., has been selected for appointment as a Supernumerary Medical Officer, Trinidad; G. H. Lewis, M.D.Edin., and C. W. L. Cassel, M.B., Ch.B.Edin., D.T.M Liverpool, have been selected for appointment as Assistant Medical Officers, British Honduras; H. B. Dodds, L.R.C.P., F.R.C.S.Irel., Medical Officer, St. Vincent, has been selected for appointment as a Medical Officer in the Straits Settlements.

Vital Statistics.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 28th, 667 births and 526 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 572 births and 469 deaths in the preceding period. These deaths represent a mortality of 22.8 per 1,000 of the aggregate population in the districts in question, as against 20.3 per 1,000 in the previous period. The mortality in these Irish areas was therefore 7.3 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 28.9 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 27.2 (as against an average of 23.1 for the previous four weeks), in Dublin City 31.1 (as against 25.6), in Belfast 19.6 (or the same as in the previous week), in Cork 22.4 (as against 22.3), in Londonderry 14.4 (as against 16.2), in Limerick 29.8 (as against 22.7), and in Waterford 19.0 (as against 16.6). The zymotic death-rate was 3.0, as against 2.0 in the previous week.

During the week ending Saturday, April 4th, 747 births and 502 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 667 births and 526 deaths in the preceding period. These deaths represent a mortality of 21.7 per 1,000 of the aggregate population in the districts in question, as against 22.8 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.5 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 32.3 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration areas was 26.1 (as against an average of 24.4 for the previous four weeks), in Dublin City 25.7 (or the same as in the previous week), in Belfast 17.8 (as against 19.5), in Cork 21.1 (as against 21.2), in Londonderry 14.0 (as against 14.9), in Limerick 17.6 (as against 21.3), and in Waterford 36.1 (as against 23.7). The zymotic death-rate was 2.1, as against 3.0 in the previous week.

Hospitals and Asylums.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

THE report presented to the annual meeting stated that during the past year 1,701 patients had been admitted to the wards and 1,854 had been attended and nursed in their own homes. Towards the scheme for a new out-patient department and other improvements King Edward's Hospital Fund had made a grant of £1,000. Other contributions to the special fund amounted to £2,000, but there still remained about £7,000 to be raised. The Ladies' Association had been able to supply the whole of the ward and household linen for the hospital during the past year, to continue the subscription of £50 to the Ladies' Association Bed, and to contribute a further sum of £400 to the special fund for the new out-patient department.

LEITH HOSPITAL.

THE annual meeting of the subscribers to Leith Hospital was held on February 27th, with Mr. Edmund Berry, president, in the chair. An outstanding fact in the past year's history of the hospital was the fall in the number of the out-patients, the decrease in that department being 2,049; there was an increase of 226 in the patients treated in the wards, but this left a total decrease of 1,823. Another outstanding fact was the fall of 10 per cent. in the subscriptions, and the chairman attributed this mainly to the Insurance Act, although he admitted that the prolonged dock strike might have had some influence. The total number of patients (indoor and outdoor) treated during the year was 12,616.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ABERDEEN COUNTY.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BATH: EASTERN DISPENSARY.—Resident Medical Officer (lady). Salary, £140 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BETHLEM HOSPITAL.—Resident House-Physician. Honorarium, £25 per quarter.

BIRMINGHAM GENERAL HOSPITAL.—(1) Two House-Surgeons. Salary, £40 per annum for three months, rising to £50. (2) House-Surgeon to Special Department. Salary, £50 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeons (male). Salary, £100 per annum.

BRISLINGTON HOUSE ASYLUM, near Bristol.—Assistant Medical Officer (male). Salary, £200.

BRISTOL GENERAL HOSPITAL.—(1) House-Physician. (2) Casualty House-Surgeon. Salary at the rate of £80 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Physician. Salary, £80 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary, at the rate of £80 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CARLISLE CITY.—Assistant Medical Officer of Health, Tuberculosis and School Medical Officer. Salary, £350 per annum, rising to £450.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary, £100 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

COLCHESTER: SEVERALL'S ASYLUM.—Fourth Assistant Medical Officer and Pathologist. Salary, £210 per annum, rising to £230.

CORNWALL EDUCATION COMMITTEE, Truro.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £200 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DORCHESTER: COUNTY ASYLUM. — Third Assistant Medical Officer. Salary, £250 per annum, rising to £350.

DURHAM COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary, £300 per annum, rising to £400.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £250 per annum, rising to £275.

ESSEX ADMINISTRATIVE COUNTY. — Assistant Tuberculosis Officer. Salary, £300 per annum.

FOLKESTONE: ROYAL VICTORIA HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

GLASGOW: VICTORIA INFIRMARY.—Assistant Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—House-Physician. Salary at the rate of £40 per annum.

GREAT YARMOUTH HOSPITAL.—House-Surgeon (male). Salary, £140 per annum.

GROCERS' COMPANY.—Two Scholarships, each £300 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HASTINGS: EAST SUSSEX HOSPITAL.—Assistant House-Surgeon (male). Salary at the rate of £80 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House-Physicians. Honorarium £30 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Casualty Medical Officer. Salary, £50 for six months and £2 10s. washing allowance.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon (male). Salary, £80 per annum.

HULL: ROYAL INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

LEEDS MATERNITY HOSPITAL.—Honorary Medical Officer.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Honorary Assistant Physician.

LIVERPOOL UNIVERSITY.—George Holt Chair of Physiology. Salary, £700 per annum.

MANCHESTER: ANCOATS HOSPITAL.—(1) Honorary Physician. (2) Honorary Surgeon.

MANCHESTER ROYAL INFIRMARY.—Junior House-Surgeon.

METROPOLITAN HOSPITAL, Kingsland Road, N.E. — Assistant Dental Surgeon.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Salary, £200 and £150 per annum, rising to £250 and £200 respectively. (3) Medical and Surgical Registrars.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Casualty Officer. Salary at the rate of £60 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £225 per annum, rising to £250.

PRESTON COUNTY ASYLUM, Whittingham.—Assistant Medical Officer. Salary, £250 per annum, rising to £300.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Resident Medical Officer. Salary, £100 per annum.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—Junior House-Surgeon. Salary at the rate of £75 per annum.

SALFORD ROYAL, MANCHESTER CHILDREN'S, AND MANCHESTER NORTHERN HOSPITALS. — Joint Pathologist. Salary, £250 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SHEFFIELD: CHILDREN'S HOSPITAL.—House-Surgeon for the East End Branch. Salary, £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—(1) House-Surgeon. (2) Ophthalmic House-Surgeon. Salary, £80 per annum each.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTHPORT INFIRMARY.—(1) Senior House-Surgeon. (2) Junior House and Visiting Surgeon (males). Salary, £120 and £100 per annum respectively.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—(1) Assistant Ophthalmic Surgeon. (2) House-Physician. (3) Casualty and Out-patient Officer. Salary for (2) and (3) at the rate of £110 per annum, increasing £10 annually.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £120 per annum.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

WAKEFIELD: WEST RIDING ASYLUM.—Locumtenent Assistant Medical Officer (male).

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST HARTLEPOOL CAMERON HOSPITAL.—House-Surgeon. Salary, £120 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Honorary Medical Registrar.

WEST RIDING ASYLUM, Menston.—Fourth Assistant Medical Officer. Salary, £200 per annum, rising to £230.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) Two House-Surgeons. Salary, £125 per annum in each case.

WOLVERHAMPTON EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Colnbrook (Bucks), Leicester (Leicester).

MEDICAL REFEREE.—The Home Secretary announces a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for the Bloomsbury and Hampstead, Whitechapel, and Westminster County Courts.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

GILL, H. T., M.B., B.S., R.U.I., Medical Officer of the Children's Homes of the Oldham Union.

GROGAN, P. J., M.B., B.Ch., R.U.I., Certifying Factory Surgeon for the Ballymore Eustace District, co. Kildare.

HINCKS, T. E., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Hay District, co. Brecknock.

LEAHY, John P. D., M.D., D.P.H., Port Health Officer, Napier, Victoria.

LETCHWORTH, T. W., M.B., F.R.C.S., Ophthalmic Surgeon to the Hospital of St. John and St. Elizabeth.

PIRIE, J. H. H., M.D., F.R.C.P.Edin., Pathologist and Assistant Bacteriologist to the Protectorate, Nairobi, British East Africa.

POWELL, J. A., M.D., District Medical Officer of the Cheltenham Union.

STARKIE, R. W., M.R.C.S., L.R.C.P., District Medical Officer of the St. Pancras Parish.

STEELE, Russell V., M.B., B.S.Durh., House-Surgeon at the West London Hospital.

TAAFFE, R. H. F., L.R.C.P. and S.I., Assistant Medical Officer to the Birkenhead Union Workhouse.

TAYLER, T. E., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Trowbridge District, co. Wilts.

THOMSON, Ruby, M.B., Ch.B.Edin., School Medical Officer, County of Stafford.

WEIR, W., M.B., B.S.Lond., District Medical Officer of the Reigate Union.

WAREHAM, S. J., F.R.C.S.Eng., Honorary Consulting Surgeon to the Enfield Cottage Hospital.

YORKE, Courtenay, M.D.Liverpool, M.B., B.S.Lond., F.R.C.S.Eng., Honorary Laryngologist to the Liverpool Hospital for Consumption and Diseases of the Chest.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

FRENCH.—On March 30th, at 135, Harley Street, London, W., the wife of J. Gay French, M.S.Lond., F.R.C.S., of a son.

DEATH.

HICKMAN.—On March 31st, at The Hollies, Wanstead, Herbert Brian, the dearly-beloved and loving only son of Alice Maude and Herbert Vigers Hickman, M.B.Lond., aged 13 years 11 months.

DIARY FOR THE WEEK.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:
SECTION OF DERMATOLOGY, 4.30 p.m. — Cases and Specimens.

FRIDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Professor A. Keith: Museum Demonstration — Imperfect Differentiation of Sex.

ROYAL SOCIETY OF MEDICINE:
SECTION OF OTOLOGY, 5 p.m.—Cases and Specimens.
SECTION OF ELECTRO-THERAPEUTICS, 8.30 p.m.—Papers:—Dr. R. W. A. Salmond: Some Experiments on X-Ray Filtration. Dr. Curtis Webb: Electrolysis in the Treatment of Haemorrhoids. Dr. C. Russ: The Measurement of Radium Rays as used Clinically.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday. Special Lectures: Thursday, at 4.30, Cancer of the Rectum; Friday, at 2.15, Dropsy and its Treatment.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	APRIL.
14 Tues.	Northamptonshire Division, Northampton General Hospital, 2.30 p.m.; Luncheon, 1.30 p.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
16 Thur.	London: Insurance Act Committee.
17 Fri.	London: Future Developments of Insurance Acts Committee.
	APRIL (*continued*).
21 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
22 Wed.	London: Council Meeting, 10.30 a.m.
24 Fri.	South-West Essex Division, Wesleyan Church School, High Road, Leyton, 4 p.m.
29 Wed.	Lancashire and Cheshire Branch, Clinical and Scientific Meeting, Royal Infirmary, Liverpool, 4 p.m.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 18TH, 1914.

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ELECTION OF PANEL COMMITTEES.

MEMORANDUM BY THE INSURANCE COMMISSIONERS (ENGLAND).

IN accordance with the intention expressed in the circular letter addressed to Panel Committees on March 17th (I.C.L./80), the Commissioners have now prepared and forwarded to Secretaries of such Committees two model schemes for the constitution of Panel Committees, and ask the Committees to take the matter into early consideration, with a view to the adoption of the scheme best suited to local requirements and its submission for the Commissioners' approval.

MEMORANDUM.

The schemes are accompanied by an explanatory Memorandum (Circular 44/I.C.). The two model schemes are Model A, for areas where a single meeting will suffice for the election, and Model B, for areas where division into districts is necessary. The Memorandum continues as follows:

2. . . . Judging by the experience derived from the methods adopted for the appointment of the first Panel Committees, these models appear to contain the type of scheme which has given most satisfaction; and as the advantage and convenience of uniformity to all parties concerned will doubtless be recognized, it is suggested that Committees should not depart from the principles embodied in the model schemes without very cogent reasons based on exceptional local conditions which render the principles of the models inapplicable to the circumstances of the area.

3. It will be observed that the method of appointment adopted in the model schemes is that of election by meetings of panel practitioners, summoned for the purpose by a Returning Officer. The only alternative method is that of a postal vote conducted substantially in the manner set out in the National Health Insurance (Panel and Pharmaceutical Committees) Regulations, 1913, and adopted in many areas. From an analysis, however, of the experience of the Commissioners in conducting the postal vote and of those areas which adopted the method of election by meetings, it appears that the latter procedure forms the most convenient, expeditious and economical method of conducting the election. If a postal vote is adopted, two separate circulars, one inviting nominations and one for the purpose of taking the vote, must necessarily be addressed to all the panel practitioners, and arrangements have, moreover, to be made for the withdrawal of nominations. Difficulties also arise owing to the late delivery of nominations or voting papers, and the general experience is that the various details of the election can only be carried out by a well organized and efficient clerical staff. While, however, the Commissioners are of opinion on these grounds that the best method of conducting an election of this description is by means of a meeting or meetings, and have framed the model schemes accordingly, they would be prepared to approve schemes involving a postal vote if that method of election is preferred; but they would in that event require adequate and well-defined arrangements for the clerical work of the election to be included in the scheme, together with a definite undertaking by the Panel Committee or other body to defray the necessary expense. Further, as the Commissioners are not prepared to impose the obligation of conducting a postal vote upon a Returning Officer appointed by themselves, provision would require to be made in the scheme for the appointment of a properly qualified professional man, other than an elector.

4. A suitable model for the provisions necessary for an election by means of a postal vote will be found in the National Health Insurance (Panel and Pharmaceutical Committees) Regulations, 1913, Articles 5 (5), (6), (7), and 6 (1), (2), (3), (4), and the second schedule. These articles would, of course, require certain modification, as, for example, the substitution of the "Returning Officer" for "the Commissioners" in several places.*

5. It has been suggested to the Commissioners that the model scheme should include rules as to the appointment of the Chairman and officers of the Committee, as to an Executive Committee, and as to General and Special Meetings. The inclusion in the scheme of such rules, which should be capable of alteration from time to time to

* See SUPPLEMENT, November 8th, 1913, p. 386; January 31st, 1914, p. 49.

meet local circumstances, appears to the Commissioners to be undesirable, but they are willing to furnish any Panel Committee with model standing orders dealing with these matters.

6. With regard to the details of the model schemes, the following observations may be of use to Committees in their consideration of the matter. Where two references are given, the first number relates to the rules as numbered in Model A, the numbers in square brackets denoting the corresponding rule in Model B. Where only one reference number is given, the rule does not appear in the other model.

[*Persons Eligible for Membership.*

3. (1) All the members of the Committee shall be duly qualified medical practitioners, and not less than three-fourths of the members shall be practitioners on the panel.]

7. *Rule* 3 (1) [3 (1)].—This is a requirement of the Regulations and cannot be varied in any scheme.

[*Number of Members of Committee.*

4. The Committee shall consist of—

(i) ..... practitioners duly elected in accordance with the procedure hereinafter laid down;

(ii) Such number of practitioners as may be co-opted members of the Committee in accordance with Rule 24.

Rule 24 provides that in exercising the power of co-option regard shall be had to the requirement that at least three-fourths of the Committee shall be practitioners on the panel.]

8. *Rule* 4 [4].—The number to be filled in in the blank space is a matter for the practitioners concerned, but the Commissioners suggest that due regard should be had to the number required for the adequate representation of different districts within the area, even if no special division into districts is included in the scheme.

Some schemes submitted to the Commissioners have included a provision that the medical members of the Insurance Committee for the area should be ex officio members of the Panel Committee. In the rule as now drafted, these persons can, if it is desired, be co-opted under subsection 2; and a special provision is therefore unnecessary. The total number of persons to be co-opted should not exceed one-fifth of the full Committee.

9. *Rule* 5 [10].—The appointment of a Returning Officer presents some difficulty. As the members of the Panel Committee are themselves in most cases candidates for re-election, the Committee are not the most suitable body to appoint a Returning Officer, and the provision in the rule ["The Returning Officer shall be a person appointed by the Commissioners for the purpose."] seems the most convenient method of appointing an impartial person. The Commissioners would be prepared to consider suggestions from the profession on any particular occasion for the appointment of a particular person, or to allow a provision in the scheme for the appointment to be made in some other manner; but any such provision must specify some professional qualifications for the person to be appointed.

10. *Rule* 6 [7].—As the general work of the medical profession is most heavy in the winter months, and as one of the most important duties of a Panel Committee is the conduct of the negotiations with regard to agreements which take place in the autumn, the summer appears to be the most suitable time for the election of the Committee in each year. [Meeting to be held between June 1st and July 1st.]

11. *Rule* 9 [13].—While the Returning Officer or his deputy must necessarily be responsible for seeing that the provisions of the scheme and the Regulations as to the election are carried out, it would appear that the actual conduct of the meeting would be most suitably entrusted to a person chosen by the electors present at the meeting. [Meeting to appoint a chairman and two scrutineers.]

12. *Rule* 10 [15].—It appears desirable to allow nominations to be made both in writing before the meeting and at the meeting itself, since experience has shown that, in many cases, sufficient nominations are not forwarded in writing. As regards the nominations sent in writing, it is necessary to provide that they shall be delivered at a specified interval [48 hours] before the meeting in order that there should be no risk of them failing to reach the Returning Officer before the meeting. Forty-eight hours appears to be the shortest period which will secure this object. It is also necessary that the candidate's consent to stand for election should be obtained before the vote takes place, as otherwise persons who, for lack of time or some other reason, are not willing to stand, are elected and immediately resign.

13. *Rule* 11.—The Regulations, as before stated, provide that at least three-quarters of the Panel Committee shall be practitioners on the panel. The proviso to Rule 11 is inserted to meet the possible case of the nominations being less than one-half of the vacancies, and more than one-half of the persons nominated being non-panel practitioners. In such a case, in the absence of this proviso, the Panel Committee, as first constituted, would consist of more non-panel than panel practitioners, and the non-panel practitioners would be able to fill the vacancies by co-option from panel practitioners, and in this manner the constitution of the Committee would in fact be in the hands of practitioners not on the panel.

14. *Rule* 12 [17].—A period of three months, within which vacancies must be filled, is inserted, since it is desirable that Committees should be at the full number fixed by the panel practitioners in the scheme in order that their representative character should be maintained. It is not desirable that vacancies should be left which might be filled with reference to particular questions under discussion by the Committee.

15. *Rules* 14 [19] *and* 15 [20].—In view of the fact that some practitioners are unable to attend a meeting at the time which is most convenient to the majority, and also that practitioners who intend to be present at the meeting may be uncertain as to their ability to be present, and that these electors may desire that their vote shall have effect, a provision for voting by proxy is desirable.

[*Voting.*

16. Voting shall be in accordance with the following rules:

(*a*) The Returning Officer shall prepare a list of the duly nominated candidates showing the names of the electors by whom each candidate has been nominated.

(*b*) The chairman shall, in such manner as he thinks fit, inform the meeting of the names of the candidates and of the number of vacancies.

(*c*) Each elector shall write on a list the names of those candidates for whom he desires to record his vote, and shall sign his name at the foot thereof.

(*d*) An elector acting as proxy for another elector shall prepare a list on behalf of that elector, and shall sign it in his own name and insert below his own name the name of the elector on behalf of whom the list has been prepared.

(*e*) A voting paper be invalid if—

(i) It contains the names of more candidates than there are vacancies to be filled;

(ii) It is not signed in accordance with these rules;

(iii) If in any other respect it does not comply with these rules, or is marked in such a manner as to cause any uncertainty as to the candidates for whom the elector desires to record his vote: Provided that the Returning Officer shall, if he thinks fit, treat a voting paper so marked as valid for the purpose of any vote other than that in connexion with which the uncertainty arises.]

16. *Rule* 16 [21].—The method of voting set out in this rule is the simplest possible in an election at a meeting which involves voting for several persons at the same time, since, in such a case, voting by a show of hands is not practicable. The method set out in this rule has also the advantage that a complete record of the election exists, and doubtful points can be decided on reference to that record at a later date.

17. *Rule* 19.—This rule is necessary in view of the fact that the number of non-panel practitioners who can be elected is limited to a proportion of the whole. The Returning Officer has to preserve the correct proportions of panel and non-panel practitioners elected. Under this rule he examines the list and first declares elected the panel practitioners to a number sufficient to complete three-quarters of the vacancies in respect of which the election is being held. He then re-examines his list and elects the remainder of the Committee from those candidates who stand highest upon it and who have not yet been declared elected.

18. *Rule* 22 [27].—The experience of the Commissioners in conducting elections of this nature has shown that owing to misapprehensions on the part of electors or to miscarriage in the post, the rules laid down by the scheme may have been technically infringed without any substantial deviation from the proposals of the scheme having

taken place. In such cases, which from their nature cannot be specifically defined in advance, it seems desirable that a certain latitude should be possible. In order to keep within strict limits the use of any discretionary power of this nature, it seems undesirable that a large number of Returning Officers, who might act on slightly different principles, should be allowed to exercise it to any considerable degree. The rule, therefore, suggests that technical errors should only be ignored where the Commissioners are satisfied that the election was conducted substantially in accordance with the provisions of the rules.

19. *Rule* 23 [28].—It is necessary that the Returning Officer should, as in all other elections, have the power of deciding as to the validity of proxies, nominating or voting papers, but a right of appeal is desirable to prevent differences in practice arising in different areas.

20. *The particulars of the scheme proposed to be adopted by the Panel Committee should be brought to the notice of all practitioners on the panel, as required by Article 11 of the National Health Insurance (Panel and Pharmaceutical Committees) Regulations, 1913, before the scheme is formally submitted for the Commissioners' approval; but the Commissioners will be glad to discuss any proposed alterations in the model scheme before the formal submission.*

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.,
April, 1914.

LOCAL MEDICAL AND PANEL COMMITTEES.

TYNEMOUTH.

PANEL COMMITTEE.

A MEETING of the Panel Committee was held on March 19th, when thirteen members were present.

Standing Orders.—The proposed standing orders were read and adopted.

Constitution.—It was resolved to postpone the consideration of the constitution until the model constitution that was being drawn up by the Commissioners was received.

Executive Committee.—An Executive Committee, consisting of the Chairman, Vice-Chairman, and Secretary, and Drs. Tindle, A. Bower, and Gofton, was elected with full power to act and report.

Pharmacy Subcommittee.—A Pharmacy Subcommittee, consisting of Drs. Wm. Bower, A. Bower, Gofton, Adams, and Baker, was appointed, with power to add to their numbers, and it was resolved not to discuss the question of the checking of the chemists' accounts until it was ascertained what portion, if any, of the floating sixpence had been spent.

Payments to Practitioners.—It was resolved:

That for the purpose of crediting practitioners on the panel with a further capitation grant for those insured persons who have not been accepted by or assigned to any practitioners the unit for the current quarter be fixed at 25, and for every 25 on the doctors' list, four be added.

It was also resolved:

That inasmuch as practitioners on the panel of the county borough of Tynemouth guaranteed medical treatment for the whole of the insured persons in this area during the year 1913, whether such persons had chosen a doctor or not, the Committee considers that the money due in respect of the unallocated persons for the year 1913 should be paid forthwith, and that the Secretary be instructed, and is hereby instructed, to forward a copy of this resolution to the Commissioners.

Treatment of Unallocated Persons.—With reference to the undertaking to be given to the Insurance Committee as to the treatment of unallocated persons, it was resolved that the practitioners should agree to give it to such persons as require it.

Certificates.—It was agreed:

(1) That the date upon the certificate issued by the practitioner when an insured person declared off should be the last day of sickness or the day previous to being able to resume work. (2) That certificates of sickness be in no case dated back more than three days. (3) That the Commissioners' attention be drawn to the fact that medical certificates were being used otherwise than for purposes of the Act, and that steps be taken to prevent it.

Meetings of Committee.—It was agreed that when possible meetings of the Committee should be held on a Wednesday.

LIVERPOOL.

PANEL COMMITTEE.

THE following seven non-panel practitioners have been co-opted by the twenty-one elected members of the above Committee: Mr. F. Charles Larkin, Mr. G. P. Newbolt, Dr. F. H. Barendt, Dr. T. R. Bradshaw, Miss Ivens, M.S., Dr. J. C. M. Given, Dr. W. Macdonald.

Election of Officers.—The following officers were elected at the meeting on April 1st, when twenty-four members were present.

Chairman: Mr. F. Charles Larkin.
Vice-Chairman: Dr. T. Clarke.
Secretary: Dr. W. T. D. Allen.

Organization of Local Medical and Panel Committees.—A letter was read from Mr. D. F. Todd, Chairman of the Provisional Committee appointed by the Conference of Local Medical and Panel Committees, explaining the preliminary steps in the formation of the new organization and asking for the support of the Committee. A Subcommittee consisting of the Chairman, the Secretary, and Drs. Richardson, Paterson, and Bennett was appointed to consider the question and report.

A meeting of the Liverpool Panel Committee was held at the Medical Institution on April 7th. The chair was taken by Dr. T. CLARKE (Vice-Chairman), and twenty-four other members were present.

Organization of Local Medical and Panel Committees.—The report of the subcommittee appointed at the previous meeting to consider the question of the new organization of Local Medical and Panel Committees was submitted, and was approved by the Committee. It was decided to agree to the principles laid down in the letter of Mr. D. F. Todd, and to support the new organization. It was also decided to summon at an early date a meeting of the panel practitioners in the Liverpool area to consider further recommendations made by the subcommittee.

Surplus Funds.—A discussion took place on the question of distribution of the surplus funds, and on the motion of Dr. J. G. MOYLES, seconded by Dr. STOTT, it was unanimously resolved:

That this Committee recommends that panel practitioners be paid for every insured person on their lists who are certified by the Insurance Committee as entitled to medical benefit between January 12th, 1913, to January 12th, 1914. Payment to be made from the date the insured person becomes entitled to medical benefit, and that the balance of surplus money be distributed equally among the panel practitioners, with the exception of those practitioners who have only taken a limited panel or who only attend the staff of institutions.

CHESHIRE.

LOCAL MEDICAL COMMITTEE.

THE last four meetings were engaged in the negotiations with the Insurance Committee, the results of which have already been announced in the JOURNAL.

On the last day of its term of office, January 14th, the Committee entertained its constituents at the Liverpool Medical Institution, and some interesting clinical demonstrations were given.

Clinical Demonstrations. — Mr. THURSTAN HOLLAND showed the method of examining the stomach by a barium sulphate test meal and *x* rays, and also exhibited the radium belonging to the Royal Infirmary. Dr. JOHN HAY demonstrated the working of the electro-cardiograph and the polygraph. Dr. PERCY COOPER and Dr. HUGH ASHBY demonstrated pathological specimens, the latter showing an example of congenital pyloric stenosis. Mr. BICKERSTETH gave an account of his work on ureteral catheterization, the success and refinement of which was much admired. Mr. ROBERT JONES's demonstration on some points in the treatment of fractures was closely followed by the practitioners present, to whom it was of great practical interest. Many original methods were clearly and simply explained by the lecturer.

Presentation to Honorary Secretary.—During the course of the afternoon a presentation was made to the Honorary Secretary, Dr. Lionel J. Picton. It took the form of a

cheque for £100, an illuminated address, and, for Mrs. Picton, a handsome gold watch bracelet. Dr. John Hughes had acted as Secretary of the Presentation Committee. Dr. Garstang made the presentation in a graceful speech, and the Honorary Secretary expressed his deep sense of the honour which had been done to his wife and himself.

Constitution of Committee.—The scheme formulated by the outgoing Committee for the permanent constitution of the Local Medical Committee and submitted to the Commissioners still awaits their approval. But the scheme also submitted for the Panel Committee's constitution, which was identical with it, has been approved and put into operation.

Panel Committee.

The scheme provides for the election of the Committee, which is limited to thirty-two by the Commissioners' schedule, as follows: One representative of each of the twenty-three District Medical Committees, one extra representative of a District Medical Committee with over forty members, the six medical representatives on the Insurance Committee, and two other members co-opted by the above at the first meeting. The first meeting was summoned by the Clerk to the Insurance Committee for April 4th at Crewe. The following are the members, all being elected without a contest:

Boroughs:—
Congleton: Patrick N. Davidson, Congleton.
Crewe: William Hodgson, Crewe.
Dukinfield: Edward A. Clark, Dukinfield.
Hyde: John Kerr, Hyde.
Macclesfield: John H. Marsh, Macclesfield.
Stalybridge: Harold S. McLellan, Stalybridge.

Districts:—
Altrincham and Bowdon: Thomas W. H. Garstang, Altrincham.
Ashton-under-Lyne and Stockport: John H. Godson, Cheadle; Henry Wilson, Cheadle.
Bebington and Neston: Herbert W. Nott, Little Sutton.
Chester: Alexander G. Hamilton, Hoole.
Congleton: Charles H. W. Bennett, Sandbach.
Hoylake and West Kirby: James Pinkerton, West Kirby.
Knutsford and Wilmslow: Alfred Byers, Wilmslow.
Lymm and District: Henry A. Burrows, Lymm.
Macclesfield and Hayfield: George W. Dowling, Alderley Edge.
Nantwich Area: Frank E. Matthews, Nantwich.
Northwich: Henry E. Gough, Northwich.
Runcorn Rural: John A. Howard, Stockton Heath.
Runcorn Urban: Arthur J. Briant, Helsby, near Warrington.
Sale and Ashton-on-Mersey: George E. Anderson, Ashton-on-Mersey.
Tarvin: Samuel W. Foster, Chester.
Malpas: John E. Phillips, Malpas.
Winsford and Middlewich: Laurence Hislop, Middlewich.

Representatives of the Medical Profession on the Cheshire Insurance Committee.
John B. Hughes, Macclesfield.
William McI. Brown, West Kirby.
Edward G. Holmcroft, Crewe.
George Okell, Winsford.
Lionel J. Picton, Holmes Chapel.
Thomas Watts, Hyde.

The following were co-opted: Dr. Percy Cooper (Altrincham) and Dr. Hardy Fleetwood (West Kirby).

Election of Officers.
Chairman.—Dr. Garstang (re-elected).
Honorary Secretary.—Dr. Picton (re-elected).
Drug Subcommittee.—Drs. Garstang (*ex officio*), Hodgson, Marsh, Clarke, Matthews, and the Honorary Secretary.
Medical Members of Medical Service Subcommittee.—Dr. Garstang, Dr. Picton, Dr. Marsh, Dr. Matthews, and Mrs. Phillips Brocklehurst.

The principle of electing a lady, though not a member of the profession, to represent it upon this Committee was approved by a large majority.

Resignations and Appointments.—Dr. MacIntyre Brown tendered his resignation, which was received with regret. Dr. Marsh was nominated to succeed him as a medical member of the Insurance Committee. Dr. Grant (Neston) was elected to the vacancy on the Panel Committee.

Finance.—The question of using the statutory powers of the Committee to obtain revenue was postponed until the Commissioners' ruling had been obtained as to whether their use could be made contingent upon there being sufficient surplus of the "floating 6d." The same decision was taken in regard to an application by the Pharmaceutical Committee for funds for the expenses of that Committee.

Insurance Committee and Clerical Errors.—In response to complaints from many of the District Medical Committees of errors in the clerical work of the Insurance Committee's office, the Clerk announced the steps which are being taken for the reorganization of the office into departments, each concerned solely with a special portion of the work.

Drug List.—The reply of the Commission to the request by the Local Medical Committee that the list of doses which it had prepared at the request of the Insurance Committee should not, as suggested by the Commission, be deleted from the drug list was received. It was, that the list be permitted to stand if accompanied by a statement that the Local Medical Committee assumes responsibility for it.

Inquiry as to Excessive Sickness.—It was decided not to give any corporate sanction to the evidence of a member of the Committee who had been invited to give evidence before the departmental inquiry on excessive sickness.

ISLE OF WIGHT.

Panel Committee.

A meeting of the Panel Committee was held at Ryde on April 8th.

Allocation of Insured Persons.—The following scheme was adopted with regard to the allocation of insured persons who have difficulty in securing acceptance by practitioners on the panel, and manner of crediting fees due to doctors (Medical Benefit Regulation 21 (4) and 35 (1)):

1. Insured persons who have applied to and been rejected by a doctor on the panel must make application to the Clerk of the Committee to be placed on a doctor's list for treatment.
2. The Clerk to the Committee is authorized to allot such persons to the doctors practising in the area, the first to Dr. A., the second to Dr. B., and so on, the doctors' names being taken alphabetically.
3. Any doctor on the panel must give immediate treatment in urgent cases until an allocation can be carried out in accordance with the scheme.
4. Doctors on the panel, in cases where an insured person has applied to and been rejected by a doctor, shall give the insured person full instructions at the time of rejection as to his right to make immediate application to the Committee to be allotted.
5. The capitation fees in respect of insured persons who have not been accepted by, or assigned to any practitioner on the panel, shall be distributed amongst the doctors in the following manner: One-half the amount shall be divided equally amongst the doctors, and the remaining half in proportion to the number of insured persons on each doctor's list.

Report of Conference.—The representative of the Local Medical and Panel Committees at the conference held in London on March 13th, reported as to the conclusions arrived at and work done at that conference (see Supplement to the British Medical Journal, March 21st). A letter was read from the Leicester Local Medical and Panel Committees to the effect that the new organization which was formed as the result of the above-mentioned conference should be registered as a trades union in conjunction with the National Medical Guild. It was agreed to adopt the views of the Leicester Committees as the only safe way of preventing a possible attachment of funds owned by the organization. The Honorary Secretary was instructed that these views should be communicated to the new organization in order that the position of this Committee might be clearly understood—namely, that the registration of the organization as a trades union is a condition of their support by this Committee.

At a meeting of the Local Medical Committee subsequently held it was resolved to contribute the sum of £3 for the initial expenses of the new organization of Local Medical and Panel Committees, at the same time approving the views of the Panel Committee with regard to the registration of that body as a trade union, and agreeing that no further financial support should be given unless this condition is fulfilled.

INSURANCE COMMITTEES.

BRISTOL.

The monthly meeting of the Insurance Committee was held on April 6th.

Medical Adviser.—The report of the Medical Service Subcommittee stated that since the last meeting of the

Committee 151 cases had been sent to the Medical Adviser, with the result that 68 were reported as fit for work, 58 as unfit, and 24 did not attend, while one was a workman's compensation case.

Allocation of Insured Persons.—The report of the Medical Benefit Subcommittee stated that negotiations were going on between that Committee and the Panel Committee to formulate a scheme for the allocation of persons who had not selected their doctor and for those who found difficulty in being accepted, and that it was hoped that a report would be ready by the next meeting.

Remuneration of Doctors.—The CHAIRMAN, Dr. WALTER SAISE, stated he had been asked by the doctors to tell them how much their remuneration came to per attendance, but he could not do so for the whole number. Taking five doctors who paid or received 32,000 visits, the remuneration worked out at 1s. 4½d. a visit; this he considered "quite a decent remuneration," and no doctor had been "reduced to the level of the threepenny or sixpenny doctor," as they had been told they would be under the Act.

Unallotted Funds.—With the consent of the Committee, the following motion was proposed with regard to the use of the unallotted funds, which amount to over £4,000:

> That in view of the legal opinion obtained by the London Insurance Committee in respect to the unallotted surplus of the Panel Fund, this Committee is of opinion that Insurance Committees throughout the country should be permitted to expend such surplus for the benefit of insured persons; they are further of opinion that such sums could be beneficially used in this direction—under Clause 21 of the National Insurance Act—in the provision of trained nurses for the purpose of visiting insured persons in cases of serious illness at their own homes or at suitable institutions, as provided by the Act.

This motion was discussed at some length, and the CHAIRMAN said that it was open to any member at any time to move its rescission if it was now carried. An amendment was proposed to refer it to the Medical Benefit Subcommittee for report, and it was pointed out that the doctors had claimed that they were to be paid for the well as for the sick, and the unallotted ones were those who had not needed a doctor. On a division the amendment was lost, and the CHAIRMAN pointed out that the motion was a mere expression of opinion. The motion was carried.

Sanatorium Benefit.—The Sanatorium Committee reported the following statistics for the period since July 1st, 1913: Receiving sanatorium treatment, 51; dispensary treatment, 199; domiciliary treatment, 70; waiting, 18.

GLASGOW.

"Unable to Work."—At a meeting of the Insurance Committee for the Burgh of Glasgow on April 8th the interpretation of the words "unable to work" in the medical certificates was raised by Dr. ROBERTSON, who made a motion to the effect that in the opinion of the Committee the words should mean "unable to follow his usual employment." The Chairman, Mr. R. D. M'EWAN, said that, though the motion expressed the view of the Committee, it would have effect only so far as deposit contributors were concerned, whose benefits were administered by the Committee. In the opinion of the CLERK, the validity of any certificate with respect to a member of an approved society was to be determined in accordance with the rules of the society, subject to the right of the insured person to appeal to the Commissioners. Dr. ROBERTSON said that some decision was absolutely necessary, but Mr. JOHN GRIEVE maintained that if a man was able to be a wage earner he was not entitled to be on the sick list. After some discussion, Dr. ROBERTSON withdrew his motion.

Unfound Insured Persons.—A communication from the Insurance Commissioners intimating that 43,388 medical cards had been returned through the Post Office, and would be forwarded to the Committee, was accompanied by certain suggestions for the clearance of the index registers, and in particular in connexion with the undelivered medical cards, against which the Business and Finance Committee recommended that an emphatic protest should be made. The CHAIRMAN, in reply to a question, said it was not proposed to adopt the suggestion of the Commissioners and to take, even provisionally, the names of those persons off the registers until they had been indentified.

Fines.—Draft rules under Section 14 with regard to the administration of medical benefit were brought up, providing that the Committee might inflict a fine for certain offences of a sum not exceeding 10s., and in cases of repeated breaches 20s., if the member was a member of an approved society, and of 5s. and 10s. in the case of a deposit contributor, and might in the case of repeated breaches suspend the offender's medical benefit for a period not exceeding one year. Objection was taken to the discrimination in favour of the deposit contributor; but the CLERK said that he believed the Commissioners would not recede from the position they had taken up to give preference to deposit contributors. Finally an amendment to make the fees uniform was carried by 19 votes to 4; and the CHAIRMAN said that the effect would be that the rules would be altered and submitted to the Commissioners for approval.

INSURANCE NOTES.

LONDON.

WE are informed that the following letter has been sent to all members of the London Insurance Committee:

Dear Sir,—You will shortly be called upon to vote as to the manner of disbursing large sums of money due to doctors on the London panel. Might I beg you to consider the following facts before you cast your vote? The resolution dealing with the "surplus" funds for the current year could not have had your support had you had all the facts before you. Possibly your interest in the subject was slight, or possibly you were misled by the representations of the London Panel Committee. (The personal bias of many members of this body, however, renders them unfair arbiters in the question under discussion.) The effect of that resolution will be to pay to doctors who have large lists of insured persons moneys that belong rightly to those whose lists are small. Would it be offensive to characterize this as the quaint manner in which your Committee supports its own recommendation that doctors should not undertake to treat more than 2,000 persons lest the quality of their service fall below the standard of adequacy?

Of the 1,475 doctors on the London Panel more than 600 have small lists, and not more than 250 have lists exceeding 1,800. The latter are paid as well as they can expect, because the large numbers on their lists secure the operation of the insurance principle in determining their remuneration. This is not the case with the small list man. The small list doctors (*en masse*) have small lists because they joined the panel late, insured persons coming on their lists, as a rule, only when ill. Many of these doctors have had virtually a list of sick persons, as can be proved by reference to the records for the past year. Were they paid the full capitation fees in respect of these sick persons the pay would be poor enough, but when anything from 15 to 25 per cent. is subtracted the balance is barely sufficient to cover the cost of postage and stationery in trying to recover it from your Committee! To make the statements clearer I will give two cases. The figures are hypothetical, but actual figures in confirmation are available in plenty from the records for the past year:

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Big List:	1,500	1,800	2,000	2,200
Paid on	1,500	1,650	1,900	2,100
Reduction	—	8.66%	5%	under 5%
Small List:	100	200	400	700
Paid on ... ...!	100	150	300	550
Reduction	—	25%	25%	about 21%

It will be seen that the reduction in numbers for calculating payment after the first quarter is all against the small list doctor.

The records for the past year will reveal the fact to any inquirer that small list doctors attended professionally from 50 to 80 per cent. of their insured clients, and received from 4d. to 1s. per attendance; whereas it was only in exceptional cases that doctors with a list of 1,500 attended more than 25 per cent. of the people on their lists, receiving per attendance an incomparably higher rate of pay.

Had the allocation of persons by name (or by number), as required by the Act, been made, these discrepancies would not now exist, or certainly not in the same degree.

It is to be hoped that you will assist your Committee in devising a more just way of paying all doctors on the panel than has yet been proposed or attempted: for the present proposals will almost inevitably lead to litigation and the disaffection of

many doctors; and they will certainly not encourage a very large number of other doctors to take service under the Act.—Yours faithfully,

12, Thayer Street, Manchester Square, W. A. R. Eates, M.B.

BIRMINGHAM.

The Drug Account.

During the first year of the working of the National Insurance Act in Birmingham, which ended on January 11th, the prescriptions issued by the panel doctors exceeded considerably the sum represented by the allocation of 2s. per insured person. In a circular issued to the members of the Birmingham Pharmaceutical Committee on April 8th it was pointed out that when all adjustments are made there will probably be a deficiency of something like £5,000 in the money available for the discharge of the chemists' accounts for the year ending January 11th. This means that unless some other means are found to provide the money necessary to settle their accounts they will have to be discounted to the extent of 15 per cent. approximately. The Pharmaceutical Committee has also drawn attention to the fact that the drug accounts for the month ending February 11th, 1914, amount to about 50 per cent. above the average, and that if this condition were to prevail for any lengthy period the chemists would be in a worse position at the end of the present year than they were in January. The Committee requested the chemists to go through all the prescriptions for the past year and to sort them out under the different doctors' names in order to find out the extravagant subscribers. It has been suggested that the deficiency is due to extravagant prescribing, but the more probable cause is that the Insurance Act has had the effect of increasing the number of patients seeking advice for trivial ailments, and that these patients are not content unless they have a bottle of medicine. This means that far more medicine is taken by the public than before the Act came into operation.

For the first three quarters of last year the Birmingham chemists received payment in full of their bills. On the fourth quarter's accounts they have received a sum bringing the total payment for the whole year up to 82 per cent. of the amounts due. There is some doubt as to what the total deficiency of the drug account will be, but the Pharmaceutical Society's figure of 15 per cent. is not likely to be exceeded. The Birmingham Insurance Committee's estimate of the insured persons in the Birmingham area is roughly 320,000, which at 2s. a head would yield £32,000 for the drug fund. The Insurance Commissioners, however, so far have based their grants to the Birmingham Committee on an estimate of between 280,000 and 290,000 insured persons—yielding £28,000 or £29,000 for the drug fund at 2s. a head. The chemists' bills amount to about £33,000, so that if, when the returns have been completed, the Birmingham Insurance Committee's estimate is found accurate, the deficiency will be comparatively small. The prescriptions are dispensed according to a price list agreed between the Insurance Commissioners and the pharmacists. This list, the chemists generally state, is so framed as to yield them practically no profit on the ingredients in the average prescription, their gain on the transaction being the 2d. dispensing fee allowed them.

SCOTLAND.

The Insurance Commission (Scotland) has published a classified list, revised to March 31st, 1914, of official publications. It fills twelve octavo pages; the publication referring, under the general head of Benefits, include ten referring to medical benefit and eleven to sanatorium benefit, besides six other miscellaneous publications referring to sickness and maternity benefits and other matters.

INSURANCE ACT IN PARLIAMENT.

Medical Benefit.

Panel Chemists.

Lord Ninian Crichton-Stuart asked whether there were any outstanding unpaid accounts owing to chemists or dispensaries under the National Insurance Act; if so, the amount outstanding; and the date of the longest outstanding account.—Mr. Benn said that the Regulations did not admit of a final settlement of chemists' accounts until after the close of each year. The settlement for the year to January 11th, 1914, was now in progress, but payments on account had already been made to an amount not far short of the sums expected to be due.

Insured Persons in Scotland.

In reply to Mr. James Hogge, Mr. Wedgwood Benn said that the total number of insured persons in Scotland was approximately 1,494,000; with the exception of 40,197 deposit contributors, all obtained their benefits through approved societies, and, in the event of a dispute, had an appeal to the Scottish Commission. The other information asked for as to how many assured persons in other parts of the United Kingdom would be valued for such purposes in Scotland could not be given until the necessary investigations under Section 16 of the National Insurance Act, 1913, had been completed.

Beds in Sanatoriums (Jews).

In reply to Mr. G. Locker-Lampson, the President of the Local Government Board said that the Jewish board of guardians had reported that there was no large increase in the total number of beds in sanatoriums available for Jews, but that no complaint had been received that the number was inadequate.

CORRESPONDENCE.

Certification under the National Insurance Act.

Dr. E. D. Evans (Wrexham) writes: The helpful article under the above heading, which appeared in the British Medical Journal of April 4th, should serve to strengthen the hands of panel practitioners who hesitate to take up a firm attitude with regard to certificates lest vexatious patients should apply for transfer to another practitioner's list. Before a transfer can be effected it is essential that the practitioner on whose list the patient's name appears consents to the transfer; and if it is made an invariable rule that no patient can be removed from a practitioner's list without a transfer certificate, each case in which consent is not given can be investigated, and whenever adequate grounds for refusal are furnished the Insurance Committee will be within its rights in declining to approve it.

As your article pertinently puts it, "Many such patients will, by the end of the year, have come to the conclusion that they had better stick to a doctor who knows his own mind than change to one who always takes the line of least resistance."

Dr. S. J. Ross (Bedford) writes: With regard to giving certificates, the question arises at the commencement of the indisposition: Should this patient be put on the funds? Almost invariably, and possibly naturally, the patient thinks that he should; but I have almost invariably found that, if it is explained to the patient that he will in all probability be fit for work in a few days, he is willing to abide by that decision. When the time for declaring off arrives I have experienced very little difficulty in enforcing my view of ability or inability to work upon the patient.

I have come across one person who declared he felt well, and would go to work in a few days, who has reappeared a few weeks after I saw him last, and informed me that the day after I called he developed a severe chill and went to bed, but did not think it necessary to send for me; but such cases are extremely rare. I cannot understand the attitude of a practitioner who signs a certificate in order to please the patient and prevent him changing his medical adviser. Personally, I never allow a layman to dictate to me upon a medical matter, of which presumably I am the best judge. Again, I should rejoice rather than grieve if one of the malingering type left me. I can understand an easygoing colleague collecting in time all the malingerers of the district in which he works, and I know that his wickedness in giving certificates so freely would fall upon his own pate. Our burden would

grow lighter, his increasingly heavier, until it became unsupportable.

Dr. Hubert Cheetham (Ashton-under-Lyme) writes: It is obvious that before writing your editorial on "Certification under the National Insurance Act" in the Journal of April 4th, p. 775, you have not read the agreement between the Commissioners of Lancashire and Cheshire at least and the panel doctors, for that agreement distinctly says in paragraph 7, "the practitioner . . . shall at the request of any patient furnish such certificates as are referred to in the first schedule," and this schedule says "that such certificates shall be furnished to every insured person, where he so desires and requests, as are required to be furnished by that person in connexion with any claim for sickness or disablement benefit made by him in pursuance of the rules of the society of which he is a member or of the committee, as the case may be," etc.

So you will see that your remarks and those of Mr. Hodge are quite beside the question, as it is only too clear that if a patient requests a certificate the practitioner is bound to give it.

The efforts we all naturally make to reduce the number of certificates to a minimum are, strictly speaking, a breach of our agreement with the Commissioners.

It is evident that there has been a definite object in taking away the discretion of the practitioner by the agreement, and for this no doubt the approved societies are themselves responsible.

From the above I trust you will agree that what little honour is left in the profession is not at stake.

*** The terms of the agreement quoted as applying to Lancashire and Cheshire are those of the draft agreement issued by the Commissioners in November last. The quotations do not appear to us to touch the point at issue.

Statistics.

Dr. Charles Fraser (Brighton) has forwarded the following particulars of work under the Insurance Act:

Number of insured persons on list for whom payment is due on April 15th	1,217
Total visits from April 15th, 1913, to April 1st, 1914	917
Total attendances from April 15th, 1913, to April 1st, 1914	5,192
Total visits and attendances	6,109

The remuneration received amounts to £411. The payment works out at slightly over 1s. 4d. per professional attendance.

Cards taken out between April 15th and December 31st, 1913 (males 407, females 301)	708
Cards taken out from January 1st to April 7th, 1914	524

Dr. Fraser states that the proportion of males to females on his list of acceptances is 3 males to 1 female.

Dr. George Crichton (South Kensington) writes that he finds that the sum he is to receive per head for the past year is not more than 5s. 6½d., the excuse alleged being that many insured persons were late in taking their tickets to him for signature. This, he says, was not his fault, and he wishes to know what has become of the eighteenpence. He considers Dr. George Dixon's letter plain and incontrovertible. We are entitled, he says, to full pay for every patient accepted, whenever it happens, besides a reasonable share in the overplus payments in the money chests of the London Insurance Committee.

ONE THOUSAND CASES REFERRED TO A MEDICAL ADVISER.

By Bertram M. H. Rogers, B.A., M.D.,
Medical Adviser to the Bristol Insurance Committee.

The completion of 1,000 cases is a fitting occasion for putting before the profession the statistical results of the work that I have been engaged upon for the last twelve months as medical adviser to the Bristol Insurance Committee. It will be in the recollection of the readers of the Journal that a little less than a year ago I gave my experience of a small number. I have nothing to add to what I said then about the kind of cases sent to me or the nature of the conditions generally complained of. Neither have I anything to add to what I then wrote about the class of patient. I have all through found that the most difficult persons to deal with are the oldish men who find work hard to get on account of age and physical disablement; the charwoman who gets seldom more than 6s. a week with meals; the young girl who is fed up with monotonous work, such as sticking labels on boxes or packing articles in cases, and would like a holiday; the recently confined woman, the epileptic, the casual labourer, and the persons employed in such trades (if they can be called trades) as rag-picking and bottle-washing. There is also the lazy man who will not work while his wife earns enough to keep the house going, and those who are able to get along on the wages of their children. These, while they are loud in their protestations that they would rather be back at work, find a very trivial ailment quite sufficient to keep them on the sick list.

Of the 1,000 cases 309 have been sent me by doctors, the balance, of course, by approved societies, of which 301 come from the National Amalgamated Approved Society and 142 from the Prudential. No other society has sent more than 61; these came in the first 500 cases from a society which, for reasons I need not go into, has now ceased to exist.

The number of men sent was 429, and of women 571. Of the men, 170 were found fit to work and 145 unfit; 80 did not take any notice of the order to come to me; 21 were found to have gone back to work either before or immediately on being referred to me, and 13 were workmen's compensation cases and receiving pay from their employers. These give the following averages:

	Per Cent.
Fit	39.6
Unfit	33.7
Not come	18.5
Gone back	4.4
Workmen's compensation	3.8

Of the women's cases 232 were found fit to work, 183 unfit, 129 did not come, and 22 had gone back to work, which give the percentages on 571 cases of

Fit	40.6
Unfit	32.9
Not come	22.7
Gone back	3.8

The percentages for the 1,000 cases are

Fit	40.2
Unfit	33.3
Not come	20.9
Gone back	4.3
Workmen's compensation	1.3

When I was first appointed I was paid a salary by the Insurance Committee, but, owing to various circumstances which it is not necessary to enter into, a charge is made to the societies for each case sent, though I am still paid a fixed sum per quarter, irrespective of the numbers sent. It was expected that this arrangement would somewhat damp the ardour of the societies in sending me cases, though that was not the object of doing it. It has not, however, had that effect, and the societies are evidently feeling the advantage of sending me suspected persons, as they are doing so in increasing quantity. My number of cases per month since February last year are: February, 0—this was due to few, if any, understanding, or perhaps knowing, I was appointed; March, 22; April, 50; May, 62; June, 67; July, 123—this number is rather surprising, and was due to a great activity of a certain visitor, who referred cases to me pell-mell, with little regard to their suitability; August, 80; September, 76; October, 74; November, 50; December, 64; January, 88; February, 84; and March, 148. This gives a total of 988—an average of 76, not taking February of 1913 into consideration, as none came in that month.

My postage account for stamps alone comes to £7 9s. 1d., which represents 1,789 letters, but as my reports to the Committee often contain four, six, or even eight to ten letters, the actual number of letters written by me must be well over 2,000. I must add that all cost of correspondence is met by the Insurance Committee, except that I have my own typewriter.

Out of the whole number, 37 have been referred to me more than once and 2 have been referred three times.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

EAST ANGLIAN BRANCH:

West Suffolk Division.

The annual meeting of the Division was held at the Angel Hotel, Bury St. Edmunds, on April 2nd, when seventeen members were present.

New Rules.—The Secretary reported that the new rules had been issued to every member.

Election of Officers.—The following officers were elected:

Chairman: Dr. Caie.
Vice-Chairman: Dr. Wood.
Honorary Secretary and Treasurer: Dr. Batt.
Representative on Branch Council: Dr. Batt.
Representative at Representative Meeting: Dr. Batt.
Executive Committee: The office-bearers, and Drs. Barwell, Bennett, Hinnell, Leeming, and Ritchie.

Vote of Thanks.—A very hearty vote of thanks was unanimously accorded to Dr. Wood for his services as chairman during the past three years.

Dinner.—The members dined together at the conclusion of the business part of the meeting. Several guests were present, including Dr. Robert Hutchison (London), Dr. Brown (Ipswich), Mr. Ballance (Norwich), and Dr. Pringle (Ipswich).

Discussion on the Indications for Appendicectomy.—After dinner Dr. Robert Hutchison opened a discussion with a most interesting and comprehensive review on this subject. He ruled out of the discussion all cases of acute appendicitis and interval operations, and dealt with the remaining indications under the following headings: (1) Persistent dyspepsia; (2) pain on discomfort in the right iliac fossa; (3) impairment of general health; (4) recurring abdominal pain in children. Several members and guests took part in the subsequent discussion, and the proceedings closed with a hearty vote of thanks to Dr. Hutchison.

GLASGOW AND WEST OF SCOTLAND BRANCH

Dumbartonshire Division.

The complete list of the Executive Committee of the Dumbartonshire Division consists of the following, and not as printed last week: Chairman, Vice-Chairman, Honorary Secretary, Representative for Representative Meeting, Representatives on Branch Council, and Dr. C. L. Kerr (Renton) and Dr. J. B. Stewart (Kirkintilloch).

MIDLAND BRANCH:

Chesterfield Division.

A meeting of the Division was held at Chesterfield on April 7th, when Dr. J. H. Shea was in the chair, and thirteen other members were present.

Medical Aid Institutes.—The Memorandum on the subject of Medical Aid Institutes, published in the Supplement of April 4th, was considered, and the following resolutions were unanimously passed:

1. That to stop or oppose effectively such institutes united action should be taken as suggested in Minute No. 82 of the Special Representative Meeting, December, 1913 (Supplement, April 4th, p. 201).
2. That it be urged on the Association to press that the present system of dispensing enjoyed by approved associations, being prejudicial to the interests of the general public and to the chemists, be withdrawn.
3. That the Association press for steps to be taken to ensure the taking of a strict audit of the accounts of approved institutions by Commissioners or their nominee, such nominee not to be a member of the institute in question.
4. That the model scheme for the treatment of tuberculosis, as set out in the Supplement of the British Medical Journal of April 4th, be approved.

Colliery Appointments.—The question of the acceptance of a local colliery appointment (in dispute) by a member of the Division was considered and dealt with.

Medical Referees.—Mr. W. Stratton (Bolsover) stated that he had been asked by the Prudential Assurance Company to act as their referee for the Mansfield district, covering an area of fifteen miles, at a fee of 5s. per case, and that he replied that he could not accept less than the fee approved by the British Medical Association. He read a copy of his reply to the company, and his action in the matter was approved, and an expression of appreciation of his loyalty to the profession was accorded to him. It was resolved that a circular be issued to all practitioners in the area informing them of this matter, and setting out the fee approved by the Association.

Auditors.—Mr. H. B. Fletcher, of Dronfield, and Dr. A. Court, of Staveley, were appointed auditors of the Division.

SOUTH MIDLAND BRANCH:

Buckinghamshire Division.

A meeting of the Buckinghamshire Division was held on April 7th at the Royal Bucks Hospital, Aylesbury. Dr. J. Shaw, the Chairman of the Division, presided, and there were also present thirteen members and three visitors, including Mr. Charters Symonds, who gave an address.

Votes of Condolence.—A vote of condolence was passed with the relatives of the late Drs. Durran and Fleck.

Resignations.—A list of twelve names of those who had resigned the Association was read; four were non-panel men who, for some reason difficult to understand, thought the Association did not help them. The others were members who seldom attended meetings or took any interest in the Division. Sympathy was expressed with retired men who resigned on account of the raising of the subscription when they received no benefit. A list of non-members was read and checked.

Meetings of the Division.—A discussion took place as to the best way to make the meetings more attractive, and it was remarked that rules of debate should be adopted and the agenda be cut as short as possible. The Secretary pointed out that the attendance at the meetings of the Buckinghamshire Division was one of the best in the whole Association, being an average of over 30 per cent.

Elections to Branch Council.—The vacancies on the Branch Council were filled by the election of Drs. Kennish and Deyns.

President-elect of Branch.—It was resolved to put forward the name of Dr. Lewis Reynolds as the President of the Branch for 1916.

Abdominal Tumours due to Infective Processes.—Mr. Charters Symonds then gave an address on some abdominal tumours due to chronic infective processes. He gave an account of cases that were thought to be malignant and in the end got well, owing to their being inflammatory in nature. The address was much appreciated, and a hearty vote of thanks was given.

Charges at Cottage Hospitals.—The question of charges to be made by the cottage hospitals was brought forward, and it was proposed and carried that each cottage hospital should frame its own charges for insured persons. It was generally agreed that the scale mentioned by Dr. Dickson was very low.

Next Meeting.—It was decided to hold the next meeting at Aylesbury in May. The poor attendance (only 25 per cent. of the members) was due greatly to the inclement weather.

SUSSEX BRANCH:

Eastbourne Division.

Presentations to Mr. J. H. Ewart and Dr. Muir Smith. On Saturday, April 4th, the Eastbourne Division entertained Mr. J. H. Ewart and Dr. Muir Smith at a dinner at the Grand Hotel, in recognition of the conspicuous and untiring services they have rendered to the Division, especially during the last few years. Some thirty members were present. Mr. Harper, Chairman of the Division, presided, and, in proposing the health of Mr. Ewart and Dr. Muir Smith, thanked them warmly, on behalf of the Division, for the unstinted devotion and self-sacrifice with which they had worked over a long period of years in the interests of the Association. He concluded by presenting to Mr. Ewart, on behalf of the Division, a silver tea and

coffee service, one piece of which was inscribed as follows:

This silver tea and coffee service was presented by the Eastbourne Division to Mr. J. H. Ewart, in lasting gratitude for his wise counsel, his self-sacrificing work, and his untiring devotion to the interests of the Association. April, 1914.

Similarly the Chairman, on behalf of the Division, presented Dr. Muir Smith with a Yöst typewriter and a duplicator, and, in addition, a silver tray, bearing the following inscription:

Presented, together with a typewriter, to Dr. William Muir Smith, J.P., by the members of the Eastbourne Division, in grateful recognition of his long and invaluable services as Honorary Secretary, especially during the years 1910-13.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions or Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

Alfred Cox,
Medical Secretary.

February 11th, 1914.

QUARTERLY MEETING OF COUNCIL.

The Quarterly Meeting of Council will be held on Wednesday, April 22nd, at 10.30 a.m., in the Council Room, 429, Strand, London, W.C.

By order,

Guy Elliston,
Financial Secretary and Business Manager.

April 2nd, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

To ensure the insertion of notices in this column they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Edinburgh Branch: South-Eastern Counties Division.—Dr. M. J. Oliver, Honorary Secretary (St. Boswells), gives notice that a meeting of the Division will be held in the Railway Hotel, Newtown St. Boswells, on Friday, April 24th, at 3 o'clock afternoon. Business: Letter from Scottish Committee, British Medical Association; medical aid institutes: report of Committee; letter from Scottish Committee; statement as to attitude of Division (vide Supplement, April 4th); model scheme for the treatment of tuberculosis; payment of hospital staffs, etc. (vide Supplement, April 4th); submit print of rules.

Lancashire and Cheshire Branch.—Dr. P. R. Cooper, Honorary Secretary Science Committee (8, St. Peter's Square, Manchester), gives notice that a clinical and scientific meeting of the Lancashire and Cheshire Branch will be held at the Royal Infirmary, Liverpool, on Wednesday, April 29th, at 4 p.m. (tea from 3.30). Members desirous of showing cases or making scientific communications are requested to write to Dr. Cooper before April 20th.

Metropolitan Counties Branch: South-West Essex Division.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a conjoint meeting of the Division and the City Division will be held in the Wesleyan Church School, High Road, Leyton, on Friday, April 24th, at 4 p.m., when Mr. Bishop Harman, F.R.C.S., Assistant Ophthalmic Surgeon, West London Hospital, will give a lantern demonstration on the Cure of Squint.

Metropolitan Counties Branch: Tower Hamlets Division.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.) gives notice that a special general meeting of the Division will be held at the Stepney Central Hall on Tuesday, April 21st, at 4 p.m., to consider the following matters referred to Divisions, and published in the Supplement of April 4th: (*a*) Medical Aid Institutes; (*b*) Model Scheme for Treatment of Tuberculosis. As the subjects are of urgent and pressing importance it is hoped that every member will make an effort to attend.

North Wales Branch.—Dr. H. Jones Roberts, Honorary Secretary (Llywenarth, Penygroes, S.O.), gives notice that the spring meeting of the Branch will be held at Bala, on Tuesday, April 28th. Members having papers to read, cases or specimens to show, will please notify the Honorary Secretary before Saturday, April 18th.

South-Western Branch: Exeter Division.—Dr. Richard Eager, Honorary Secretary (Devon County Asylum, Exminster), gives notice that a meeting of the Division will be held at the Royal Devon and Exeter Hospital on Tuesday, April 21st, at 4 p.m., to consider communications from the head office with regard to Medical Aid Institutions and the Model Scheme for the Treatment of Tuberculosis.

Sussex Branch: Hastings Division.—Dr. George Locke, Divisional Secretary *pro tem.* (47, Wellington Square, Hastings), gives notice that the annual meeting of the Division will be held at the Public Hall, Hastings (entrance Havelock Road), on Thursday, April 23rd, at 4.15 o'clock. Agenda: Secretary's report; election of officers for ensuing year; correspondence and other business; a lantern lecture by Dr. N. Bishop Harman (London) on the study of heredity as a hobby for medical men.

ANNUAL MEETING AT ABERDEEN, 1914.

PATHOLOGICAL MUSEUM.

The Committee of the Pathological Museum, to be organized in connexion with the Annual Meeting of the British Medical Association next July, proposes to arrange the material under the following heads:

1. Exhibits bearing on discussions and papers in the various sections.
2. Specimens and illustrations relating to any recent research work.
3. Instruments relating to clinical diagnosis and pathological investigation.
4. Individual specimens of special interest or a series illustrating some special subject.

It is also proposed to make an effort to gather together series of exhibits relating to the pathology of the circulatory system and the ductless glands; the effect of radium on malignant growths; pyelo-radiography and *x*-ray photographs of brain, skull, and gall stones, and of ancient and historical surgical instruments.

While making these suggestions the committee, of which Dr. G. M. Duncan is chairman, will welcome specimens illustrating other subjects. The museum will occupy a central position in the same building as that in which the sectional work is to be carried on.

Communications may be addressed to the honorary secretaries, Dr. A. W. Falconer and Mr. William Anderson, F.R.C.S., Pathological Department, Marischal College, Aberdeen.

A list of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

British Medical Association.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An Ernest Hart Memorial Scholarship, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. Three Research Scholarships, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Alfred Cox, *Medical Secretary.*

429, Strand, London, W.C.
March 30th, 1914.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

The following books were added to the Library between October and December, 1913:

Presented by the Authors.

Alderson: Dental Anaesthetics. Second edition. 1912
Bateman, A. G: Translation of Wickham and Degrais on Radium. 1913
Cole, R. H.: Mental Diseases. 1913
Davies, Lieutenant-Colonel A. M.: Handbook of Hygiene. Fourth edition. 1913
Hurry, J. B.: Ideals and Organization of a Medical Society. 1913
Hearsey, H.: Nyasaland Protectorate, Sleeping Sickness Diary, No. 21. 1913
Howarth, W. J., and Williams, H.: Report on Actinomycosis in Ox Tongues. 1913
Maylard, A. E.: Practice and Problem in Abdominal Surgery. 1913
Philps, E. B.: Supposed Death-rates of Abstainers and Non-abstainers and their Lack of Scientific Value. 1913

Presented by the George Crocker Special Research Fund, Columbia University.

Studies in Cancer and Allied Subjects. Vols. i, iii, and iv. 1913

Presented by Dr. Mackeith (London).

Lizars's System of Anatomical Plates. 1822

Presented by the Medical Officer of the Local Government Board.

Further Report (No. 6) on Flies as Carriers of Infection. 1913
Dr. Johnstone's Report to the Local Government Board on Venereal Diseases. 1913
Dr. Morgan Rees's Report on Housing and other Sanitary Conditions at S. Dogmells Rural. 1913

Presented by A. Palmer, Esq., F.R.C.S., Sydney, N.S.W.

Transactions of the Ninth Session of the Australasian Medical Congress, Sydney. Two vols. 1911

Presented by H. D. Rolleston, Esq., M.D., London.

The Harveian Oration for 1873. By Dr. G. Rolleston.

Presented by J. D. Rolleston, Esq., M.D., Grove Hospital, Tooting.

The Medical Review. 1913

Presented by the Superintendent of Government Printing, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Staff. No. 60. Fourth volume on Blood-sucking Diptera. By F. W. Cragg. 1913

Calendars, Reports, and Society Transactions have been received from the following bodies:

Aberdeen University Calendar. 1913-14
Adelaide (Australia), Report of the Medical Officer of Health to September. 1912
American Association of Obstetricians and Gynecologists, Transactions, vol. xxv. 1912
American Ophthalmological Society, vol. ii. 1913
American Otological Society, vol. i. 1913
American Urological Association, vol. vii. 1913
Bellevue and Allied Hospitals Medical and Surgical Reports, vol. v. 1911-12
Bengal, First Report on Malaria in. 1912
Bihar and Orissa, Report on Hospitals and Dispensaries. 1912
Birmingham University Calendar. 1913-14
Board of Education, Annual Report of the Chief Medical Officer for 1912. 1913
Bombay Bacteriological Laboratory Report. 1912
British Guiana Medical Annual, nineteenth issue. 1912
British Pharmaceutical Conference, The Year Book of Pharmacy. 1913
Calcutta University Calendar. 1913-14
Cape Town Corporation, Report of the Medical Officer of Health, June. 1913
China, Annual General Summary of the Medical Reports. 1912
Deutsche Schutsgebiete (Medizinal Berichte). 1910-11
Dublin University Calendar, vol. i. 1913-14
Edinburgh Obstetrical Society, Transactions xxxviii. 1912-13
Edinburgh University Calendar. 1913-14
Jamaica, Annual Report of the Malaria Committee. 1912
Johannesburg, Report on Milk Production. 1913
Lister Institute of Preventive Medicine, Collected Papers, No. 9. 1913
London County Council, Asylums Committee Report. 1913
Massachusetts, Forty-third Annual Report of the State Board of Health. 1911-1912
Metropolitan Water Board, Reports on the Metropolitan Water Supply to May-July. 1913
Middlesex Hospital, Archives of the, vol. xxix. 1913
Middlesex Hospital, Twelfth Report of the Cancer Research Laboratories. 1913
Navy, Statistical Report of Health of the for 1912. 1913
New Jersey, Thirty-fifth Annual Report of the Board of Health for 1911. 1912
New South Wales, Report of the Inspector-General of the Insane. 1911
New South Wales, Report on Leprosy in. 1911
New Zealand, Report on Public Health and Hospitals. 1911-12
Ohio, Twenty-sixth Annual Report of the Board of Health. 1913
Queensland, Report of the Inspector of Hospitals for the Insane. 1911
Registrar-General, Seventy-fourth Annual Report on Births, Deaths, and Marriages in England and Wales for 1911. 1911
Royal College of Surgeons of England, Calendar. 1913
Shanghai Municipal Council, Annual Report of the Health Department. 1912
Sheffield University Calendar. 1913-14
Society of Experimental Medicine and Biology, Proceedings. 1913
Southern Surgical and Gynaecological Association, Transactions, vol. xxv. 1913
Sydney University Calendar. 1913-14
Tasmania, Annual Report of the Department of Public Health. 1911-12
Trinidad and Tobago. Annual Report of the Surgeon-General. 1912
United States Marine Hospital Service (Hygienic Laboratory Bulletins):
No. 87. Digest of Comments on the Pharmacopoeia of the United States of America for year 1911. 1913
No. 88. Hale, W.: Method for Determining the Toxicity of Coal Tar Disinfectants. 1913
University College, Dundee. Calendar. 1913-14
University College, London. Calendar. 1913-14
Victoria, N.S.W. Report of the Inspector-General for the Insane. 1911

Victoria University, Manchester. Calendar. 1913 14
West Kent Medico-Chirurgical Society. Transactions, vol. lvii. 1912-13
Westminster Hospital Reports, vol. xviii. 1913
Western Australia. Annual Report: Medical, Health, Factories. 1911

Added to the Library through the "British Medical Journal."

Abel: Bakteriologisches Taschenbuch, 7 Aufl. 1913
Armstrong and Brickdale: Manual of Infectious Diseases occurring in Schools. 1912
Bandelier and Roepke: Clinical System of Tuberculosis, translated from second German edition by G. B. Hunt. 1913
Bandelier and Roepke: Tuberculin in Diagnosis and Treatment, second enlarged edition by Christopherson. 1913
Barclay, A. E.: The Stomach and Oesophagus. 1913
Baumgartner: Maladies de la mamelle. 1913
Beck, E. G.: Bismuth Paste in Chronic Suppurations. 1910
Berry and Legge: Hare Lip and Cleft Palate. 1912
Bickel and Katch: Technik der normale u. pathol. Physiol. des Verdauungsapparates. 1912
Bidwell, L.: Minor Surgery, second edition. 1913
Bing, R.: Lehrbuch der Nervenkrankheiten. 1913
Birch: Management of Children in India, fifth edition. 1913
Blumenthal: Handbuch der speziellen Pathologie des Harns. 1913
Borchgrevink: Die Hernien und ihre Behandlung 1911
Bryson, R.: Indian Lunacy Manual, third edition 1913
Bulkeley, L. D.: Compendium of Diseases of the Skin, fifth edition. 1912
Bulkeley, L. D.: Diet and Hygiene in Disease of the Skin. 1913
Cabot, R. C.: Case Histories in Medicine. 1911
Clarke, O.: The National Insurance Act, 1911, second edition. 1913
Cunningham: Textbook of Anatomy, fourth edition by Robinson 1913
Cushny, A. R.: Textbook of Pharmacology and Therapeutics, fifth edition. 1910
Dock, L. L.: History of Nursing, vols. iii and iv. 1912
Elliot-Blake: Nerve Aggregation and Medical Freepaths, vol. iii. 1913
Erskine, A.: Hypnotism. 1912
Faber, A.: Die Arteriosklerose. 1912
Feldman: Nursery Hygiene. 1912
Forel: La question sexuelle. 1906
Fox, Fortescue: Medical Hydrology. 1913
Fraser: The National Insurance Act. 1912
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SCOTTISH VITAL STATISTICS FOR 1913.

The Registrar-General for Scotland has issued a report upon the vital statistics of Scotland for the concluding quarter of the year 1913, and, based upon the figures for the whole year thus available, a preliminary statement of the vital statistics of Scotland for the full period of the year 1913. Perhaps the outstanding feature of the report emerges in the comparisons and averages affecting the numbers of births and of marriages. The steady increase in the number of marriages over a period of one decade is rendered the more striking as a statistical quantity when placed against the equally steady and more strongly marked decline in the number of births. The year 1913 has proved a record year for marriages, the nearest approach to its total being in the year 1907. In 1913 the birth-rate was the lowest ever recorded in Scotland; the death-rate was lower than in any year since 1896, with the exception of the years 1910, 1911, and 1912.

General Survey of the Year.

A general survey of the figures for the year shows that in Scotland there were registered the births of 120,549 living children, the deaths of 73,073 persons, and marriages to the number of 33,689. Comparing those figures with the returns for the previous year, it is found that in 1913 there were 2,167 fewer births, 1,179 more marriages, and 736 more deaths. The decline in the number of births assumes a decided and distinctive place in the returns when comparison is made with the preceding five years. Compared with the average numbers registered during the five years, the births for 1913 were 5,174 fewer, the marriages 2,302 more, and the deaths 687 fewer. A comparison covering a decade still further accentuates the feature of the birth returns, as, compared with the averages of the preceding ten years, the births for 1913 were 8,151 fewer, the marriages 1,762 more, and the deaths 1,952 fewer. The registered births of the year were less than in any year since 1873. The record year for births in Scotland was 1903, and the year 1913 has fallen short of the highest figures, 9.7 per cent. As indicated, the number of marriages in 1913 was a record, the previous highest since the institution of national registration in Scotland being in 1907, when the total was 33,298.

Natural Increase Lowest for Eighteen Years.

The natural increase of the year, as the excess of births over deaths is regarded, amounted to 47,476, and here again there appears a steady decline. The natural increase in 1913 was 2,903 less than in 1912; as compared with the mean of the natural increases of the preceding five years, it was 4,487 less; and, taking the mean of those of the preceding ten years, it was down 6,199. It was the lowest natural increase since 1895.

Chief Statistical Facts of the Year.

During the year there were registered 120,549 births, 8,535 or 7.1 per 1,000, being illegitimate, and the total birth-rate was 25.5 per 1,000 of the population, or 0.4 less than in the previous year, and 1.1 less than the mean of those of the preceding ten years. This is the lowest annual Scottish birth-rate yet recorded, and is 10.1, or 28.4 per cent., less than that of the year 1876, which was the highest since 1855.

The marriage-rate of the year was 7.1 per 1,000, and was 0.2 more than that of the previous year, 0.5 more than the mean of the marriage-rates of the preceding five years, and 0.2 more than the mean of those of the preceding ten years.

Of the total number of deaths (73,073), those of children under 1 year accounted for 13,214; the principal epidemic diseases claimed 6,801, or 1.44 per 1,000 of population; tuberculosis accounted for 7,997, or 1.69 per 1,000 of the population; phthisis was accountable for 5,999, or 1.03 per 1,000 of the population. The death-rate of the year was 15.5 per 1,000, and though 0.2 more than that of the previous year, was 0.1 less than the mean of the death-rates of the preceding five years, and 0.6 less than the mean of those of the preceding ten years. This was the fifth consecutive year in which the Scottish death-rate was less than 16 per 1,000. The Scottish infantile mortality-rate of the year was 110 per 1,000 registered births, a rate which, though 2 more than that of the year 1910 (the most recent at present available for comparison), was 6 less than the mean of the rates of the ten years 1901 to 1910. The death-rate from all tubercle was 12 per 100,000 less than in 1910, and 42 less than the mean of the corresponding rates for the ten years 1901 to 1910. The death-rate from phthisis was 7 less than that of 1910, and 31 less than the mean of the corresponding rates of the ten years 1901 to 1910. Deaths from the principal epidemic diseases numbered 6,801, and included 171 from enteric fever, 1,329 from measles, 592 from scarlet fever, 1,819 from whooping-cough, 794 from diphtheria and croup, and 2,103 from the diarrhoeas of childhood. The death-rate from these causes collectively was 144 per 100,000. The death-rate from enteric fever was 4 per 100,000; from measles 28; from scarlet fever 13; from whooping-cough 38; from diphtheria 17; and from the diarrhoeas of childhood 44. There were no deaths from small-pox registered in Scotland during the year. Deaths from typhus fever numbered 7. Deaths registered during the year and attributed to violent causes numbered 3,111, 273 of them being ascribed to suicide.

The Position in Populous Centres.

Special interest attaches to the figures regarding the death-rate from tuberculosis in the populous centres. In the sixteen principal towns the birth-rate of the year averaged 26.2 per 1,000, and varied from 34.0 in Clydebank, and 32.9 in Coatbridge to 19.5 in Edinburgh, 19.8 in Perth, and 23.9 in Aberdeen. In those towns the death-rate of the year corrected for the deaths of non-residents and for deaths of residents registered elsewhere in Scotland, averaged 16.4, and varied from 18.2 in Greenock, 17.6 in Dundee, 17.6 in Aberdeen, and 17.2 in Glasgow to 13.3 in Kilmarnock, 12.6 in Clydebank, and 13.8 in Motherwell.

In the same towns, the infantile mortality-rate averaged 125 per 1,000 births, and varied from 162 in Dundee, 153 in Aberdeen, 129 in Glasgow, and 126 in Coatbridge to 79 in Kilmarnock, 95 in Falkirk, 93 in Ayr, 101 in Edinburgh, and the same in Motherwell. The principal epidemic diseases death-rate averaged 1.9 per 1,000 of the population, and varied from 2.8 in Motherwell, 2.6 in Aberdeen, 2.5 in Hamilton, 2.3 in Glasgow, and 2.2 in Greenock to 0.7 in Kilmarnock, 0.9 in Perth, 0.9 in Ayr, and 1.0 in Edinburgh.

In these towns the death-rate from all tuberculous disease averaged 2.0 per 1,000, and from phthisis 1.3 per 1,000. The former ranged from 2.3 in Greenock, 2.2 in Glasgow, 2.2 in Hamilton, and 2.1 in Leith and Coatbridge to 1.5 in Clydebank, and 1.6 in Motherwell, Kirkcaldy, Kilmarnock,

and Ayr. The phthisis death-rate ranged from 1.5 in Greenock, 1.4 in Glasgow, 1.3 in Leith, 1.3 in Falkirk, and 1.2 in Dundee and Motherwell to 0.5 in Hamilton, 0.8 in Coatbridge, and 1.0 in Ayr, Clydebank, and Perth.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Fleet Surgeon HY. B. BEATTY to Chatham Dockyard; Fleet Surgeon EDWARD H. HODNET DE COURTMACSHERRY to the *Terrible*, and for group of ships of Third Fleet; Fleet Surgeon JOHN E. COAD to the *Pembroke*, additional, for East London Recruiting Barracks and medical charge of Naval Store Dépôt, West India Dock, temporary, April 8th; Fleet Surgeon HY. B. HALL, M.B., to the *Challenger*, and for group of Third Fleet ships, April 27th; Staff Surgeon JOHN BOURDAS to the *Triumph*, additional, for Hong Kong Hospital, May 8th; Staff Surgeon JAS. E. JOHNSTON, M.B., to the *Adamant*, May 8th; Staff Surgeon DOUGLAS D. TURNER to the *Hearty*, temporary, April 9th.

ROYAL NAVAL VOLUNTEER RESERVE.

ARNIM G. V. ELDER has been appointed a Surgeon, April 8th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL R. H. HALL has been appointed to succeed Lieutenant-Colonel J. Meek in charge of the Alexandra Military Hospital, Cosham.

Lieutenant-Colonel S. G. MOORES has been posted to Warley for duty.

Major J. G. GILL has been posted to the Southern Command.

Major M. H. G. FELL has been appointed Deputy Assistant Director of Medical Services, Aldershot Command, vice Lieutenant-Colonel S. G. Moores.

Captain J. T. MCENTIRE has been posted to the Cork District for duty.

Captain H. O. M. BEADNELL has been noted for service in Jamaica.

Lieutenant T. A. WESTON has been appointed a Specialist in Advanced Operative Surgery in the Eighth (Lucknow) Division, with effect from January 16th.

Lieutenant T. E. OSMOND has been appointed a Specialist in Dermatology in the Eighth (Lucknow) Division.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL T. E. DYSON, M.B., is promoted to the rank of Colonel, vice R. W. S. Lyons, promoted, with effect from January 10th.

The promotion to their present rank of Majors J. J. ROBB, M.B., and S. A. RUZZAK is antedated from January 29th, 1913, to July 29th, 1912.

Major E. A. C. MATTHEW, I.M.S., has been appointed as Honorary Surgeon to the Viceroy.

Lieutenant-Colonel PATRICK P. KILKELLY, M.B., has resigned, March 1st.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT GEORGE B. MCCAUL, M.D., resigns his commission, April 8th.

Cadet Lance-Corporal THOMAS MENZIES, from the Aberdeen University Contingent, Officers' Training Corps, to be Lieutenant on probation, March 9th.

HUBERT C. G. PEDLER, late Surgeon-Lieutenant, 1st Life Guards, and late Staff Sergeant, University of London Contingent, Officers' Training Corps, to be Lieutenant on probation, March 13th.

Cadet Staff Sergeant ROBERT L. HORTON, M.B., from the University of London Contingent, Officers' Training Corps, to be Lieutenant on probation, March 13th.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Second South-Western Mounted Brigade Field Ambulance.—Lieutenant RUPERT WATERHOUSE, M.D., from the list of officers attached to Units other than Medical Units, to be Lieutenant, February 9th.

First East Anglian Field Ambulance.—Major ERNEST V. GOSTLING to be Lieutenant-Colonel, April 8th.

Third West Lancashire Field Ambulance.—Major ARCHIBALD G. GULLAN, M.D., from the 1st West Lancashire Field Ambulance, R.A.M.C., to be Lieutenant-Colonel, April 8th. Major ELISHA H. MONKS resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform, April 8th.

For Attachment to Units other than Medical Units.—Major CHARLES THOMSON, retired list (late I.M.S.) to be Major, November 1st, 1913; RICHARD MERVYN WILSON, M.D., late Surgeon-Captain, Derbyshire Yeomanry, to be Captain, March 1st; ALFRED J. GIBSON, M.B., late Lieutenant, King Edward's Horse (The King's Oversea Dominions Regiment) Yeomanry, to be Lieutenant, March 7th.

Supernumerary for Service with Officers' Training Corps.—Captain NORMAN C. RUTHERFORD, M.B., F.R.C.S., from the Unattached List for the Territorial Force, to be Captain, for service with the University of London Contingent, Senior Division, Officers' Training Corps, February 12th.

Attached to Units other than Medical Units.—Lieutenant JACOB F. FARROW to be Captain, March 6th; Captain JOHN C. S. BURKITT, M.D., to be Major, April 8th; Captain HENRY S. WALKER, M.D., resigns his commission, April 8th.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN ARTHUR T. SISSONS, M.B., from the Unattached List for the Territorial Force, to be Captain, April 8th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 9,011 births and 5,630 deaths were registered during the week ended Saturday, April 4th. The annual rate of mortality in these towns, which had been 15.4, 15.2, and 16.5 per 1,000 in the three preceding weeks, fell to 16.2 per 1,000 in the week under notice. In London the death-rate was 15.5, against 14.3, 14.2, and 16.5 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 7.7 in Enfield, 8.1 in Ealing, 8.4 in Eastbourne, 8.7 in Wimbledon and in Dewsbury, 8.8 in Edmonton, and 8.9 in Acton to 22.5 in Smethwick, 22.7 in Great Yarmouth and in Swansea, 23.3 in St. Helens, 23.9 in Plymouth, 27.6 in Rochdale, and 28.1 in Dudley. Measles caused a death-rate of 1.7 in Sheffield, 1.8 in Stockton-on-Tees and in Leicester, 1.9 in West Ham, 2.0 in Dudley and in Nottingham, and 2.2 in Rochdale; and whooping-cough of 1.7 in Exeter and in Rochdale, 1.8 in Great Yarmouth and in Darlington, and 2.0 in Dudley. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 51, or 0.9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 9 were registered in Birmingham, 7 in Liverpool, 3 in Preston, 3 in Gateshead, and 3 in Tynemouth. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospital and the London Fever Hospital, which had been 3,222, 3,173, and 3,143 at the end of the three preceding weeks, had risen to 3,182 on Saturday, April 4th; 400 new cases were admitted during the week, against 320, 319, and 347 in the three preceding weeks.

In ninety-seven of the largest English towns 7,853 births and 5,212 deaths were registered during the week ended Saturday, April 11th. The annual rate of mortality in these towns, which had been 15.2, 16.5, and 16.2 per 1,000 in the three preceding weeks, further fell to 15.0 per 1,000 in the week under notice. In London the death-rate did not exceed 13.5, against 14.2, 16.5, and 15.5 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 6.3 in Ilford, 8.9 in Croydon, 9.1 in Devonport, 9.2 in Coventry, 9.3 in East Ham and in Reading, and 9.5 in Edmonton to 20.1 in Dudley and in Blackpool, 20.6 in Middlesbrough, 21.0 in Gateshead, 21.3 in Barnsley, 22.7 in Rochdale, and 24.2 in Burnley. Measles caused a death-rate of 1.6 in Leicester, 1.8 in Stockton-on Tees, 1.9 in Barnsley, 2.1 in Middlesbrough and in Swansea, and 2.9 in Nottingham, and whooping-cough of 1.8 in Darlington, 2.2 in Rochdale, and 2.6 in Swansea. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 32, or 0.6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 8 were recorded in Birmingham, 4 in Liverpool, 3 in St. Helens, and 2 each in Bury, Preston, Huddersfield, South Shields, and Merthyr Tydfil. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,173, 3,143, and 3,182 at the end of the three preceding weeks, had fallen to 3,068 on Saturday, April 11th; 306 new cases were admitted during the week, against 319, 347, and 399 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,240 births and 819 deaths were registered during the week ended Saturday, April 4th. The annual rate of mortality in these towns, which had been 17.9, 16.6, and 16.5 per 1,000 in the three preceding weeks, rose to 18.6 in the week under notice, and was 2.4 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.6 in Kirkcaldy, 8.2 in Clydebank, and 13.8 in Perth and in Motherwell to 20.9 in Aberdeen, 23.5 in Kilmarnock, and 25.4 in Greenock. The mortality from the principal infective diseases averaged 1.8 per 1,000, and was highest in Ayr and Coatbridge. The 381 deaths from all causes registered in Glasgow included 21 from measles, 8 from whooping-cough, 4 from scarlet fever, 3 from diphtheria, 3 from infantile diarrhoeal diseases, and 2 from enteric fever. Five deaths from measles were recorded in Edinburgh, 3 in Ayr, and 2 each in Paisley, Coatbridge, and Motherwell; 4 deaths from whooping-cough in Coatbridge; and from infantile diarrhoea 5 deaths in Dundee and 3 in Aberdeen.

In the sixteen largest Scottish towns, 1,140 births and 727 deaths were registered during the week ended Saturday, April 11th. The annual rate of mortality in these towns, which had been 16.6, 16.5, and 18.6 per 1,000 in the three preceding weeks, fell to 16.5 in the week under notice, but was 1.5 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 11.0 in Falkirk, 11.8 in Leith, and 14.5 in Coatbridge to 18.4 in Perth, 18.9 in Hamilton, and 24.1 in Kirkcaldy. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Motherwell and Hamilton. The 334 deaths from all causes in Glasgow included 22 from measles, 4 from whooping-cough, 3 from scarlet fever, 3 from diphtheria, 3 from enteric fever, and 1 from infantile diarrhoea. Three deaths from diphtheria were recorded in Aberdeen; from whooping-cough 2 deaths in Aberdeen, 2 in Coatbridge, and 2 in Kirkcaldy; and from measles 6 deaths in Edinburgh and 2 in Hamilton.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 11th, 500 births and 470 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 747 births and 502 deaths in the preceding period. These deaths represent a mortality of 20.3 per 1,000 of the aggregate population in the districts in question, as against 21.7 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.3 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 21.6 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 24.1 (as against an average of 24.9 for the previous four weeks), in Dublin city 28.7 (as against 27.8), in Belfast 18.6 (as against 19.3), in Cork 19.7 (as against 21.9), in Londonderry 22.8 (as against 16.8), in Limerick 16.2 (as against 20.3), and in Waterford 11.4 (as against 22.8). The zymotic death-rate was 2.8, as against 2.1 in the previous week.

Hospitals and Asylums.

SCOTTISH ASYLUMS.

Glasgow District Mental Hospital, Gartloch.

THE annual report for the year ended May 15th, 1913, of Dr. W. A. Parker, the Medical Superintendent of Gartloch Mental Hospital for Glasgow District, shows that on May 15th, 1912, there were 788 patients on the register, whilst on May 15th, 1913, there were 753. This fall in numbers, due partly to a diminished admission-rate but also to active co-operation between the superintendent and the parish council authorities, will have afforded some relief to the congestion which has existed at this institution for years. The total cases under care during the year numbered 1,023, and the average number daily resident 778.1. During the year 235 were admitted, as compared with 258 in the previous year and 307 in 1911. Of the total admissions 146 were first admissions, 85 not-first admissions (to any asylum), and in 4 it was unknown whether they were first admissions or not. Only 40.7 per cent. were first-attack cases of less than one year's duration. The actual numbers are as follows: In only 44 first attacks within three, and in 54 more within twelve months of admission; in 50 not-first attacks within twelve months of admission; in 75 first and not-first attacks of more than twelve months' duration, and in twelve of congenital origin. Further, 42.5 per cent. were hopelessly incurable, senile and organic dements, general paralytics, etc. Also a table, covering the years 1898 to 1913, shows that the proportion of admissions of over 50 years of age has risen during that period from 14.8 per cent. to 31.9 per cent., whilst those of 30 years and under has fallen from 25 per cent. to 22.1 per cent., and those between 30 and 50 years from 60 per cent. to 45.9 per cent. Such conditions, added to an inadequate margin of accommodation, make the management doubly difficult and onerous.

The admissions for the year were classified into: Mania, simple and recurrent, 5; melancholia, 15; dementia, secondary, organic and senile, 43; primary dementia, 37; manic-depressive insanity, 25; delusional insanity, 14; confusional insanity, 29; paranoia and hysterical insanity, 3 each; epileptic insanity, 13; chronic alcoholic insanity, 9; general paralysis, 27; mental defect, 12.

As to causation, alcohol was assigned alone in 27, and in association with syphilis in 19 more, and with sunstroke in 1; acquired syphilis in 34 and congenital syphilis in 5; puberty, adolescence, the climacteric and senility in 47; epilepsy, hysteria, brain disease, and apoplexy in 20; various other bodily diseases in 20; bodily trauma in 1 and privation and adverse circumstances in 2. Previous attacks had occurred in 8, congenital defect in 10, and an hereditary predisposition to neuroses was recorded in 11. It will be noted, as perhaps exemplifying a point of view, that of the total 235 the usually assigned "mental or emotional stress" is doubtfully represented here by the two cases under "loneliness and privation" and "adverse circumstances."

With regard to syphilis among the admissions, an interesting and useful piece of work was carried out by the pathologist, Dr. Ronald Stewart. As far as possible, Dr. Stewart tested every admission by the Wassermann reaction. Of the 235 admissions, 213 were tested, and of these 30 per cent. gave a positive result (males, 37.4 per cent.; females, 24.5 per cent.). Dr. Stewart's results are tabulated in detail in the report, and we need only note here that positive results were obtained in the whole number of general paralytics. In last year's annual report Dr. Gilmour recorded finding 100 per cent. positive results in 94 general paralytics.

With regard to those of the admissions which gave a history of parental alcoholism, a suggestive statement is made by Dr. Parker, namely, that if the cases be separated into two groups, namely, those who were above and those who were not above 26 years of age at first onset of mental illness, the greater majority fall within the first group. Dr. Parker's figures include the years 1904 to 1913, and show that in 75.46 per cent. of those who gave a history of parental alcoholism, the insanity appeared first before the completion of their 26th year of age. These results suggest some relation to those obtained by Dr. Mott with regard to "antedating" in the inheritance of pathological conditions, and would well bear further study.

Returning to the fluctuation of the asylum population, there were 81 discharged as recovered during the year, giving a recovery-rate on the admissions of 34.4 per cent.; also 95 were discharged as relieved, and 4 as not improved; 90 died, giving a death-rate on the average number resident of 11.5 per cent. The deaths were due in 36 to cerebro-spinal diseases, including 18 from general paralysis; in 35 to "thoracic diseases," including 9 from pulmonary tuberculosis, and 15 from heart disease; in 2 to nephritis, and in 17 to general diseases, including in this 5 from tuberculosis, 4 from senile decay, and 1 from asphyxia.

The "Verandah Hospital" is still the ideal aimed at at this institution, and almost all acute cases, bodily and mental, are treated in the open air, whilst free use is made of Swedish drill, farm and garden work and out-of-door games.

Govan District Asylum.

We regret to note in the annual report for 1913 of the Medical Superintendent, Dr. W. R. Watson, a reference to his approaching retirement from the onerous post which he has so long and so ably filled. This, which is probably his last annual report, shows that on May 15th, 1912, there were 657 patients on the register, and on May 14th, 1913, there were 647. The total cases treated during the year numbered 920, and the average number daily resident 660.2. Notwithstanding the actual decrease of 10 in those remaining at the end of the year, the average number daily resident was the highest recorded at this institution.

During the year 263 were admitted, of whom 214 were first admissions. Of the total admissions, in 158 the attacks were first attacks within three, and in 5 more within twelve months of admission; in 77 not-first attacks within twelve months; and in the remainder, including 6 congenital cases and omitting 6 of unknown duration, the illness was of more than twelve months' duration on admission. The admissions were classified according to the forms of mental disorder into: Mania of all kinds 101, melancholia of all kinds 50, dementia 52, acquired epilepsy 23, general paralysis 15, delusional insanity 11, less common forms 5, and congenital defect 6. Concerning the probable causative and associated factors Dr. Watson gives a table showing in the case of each patient suffering from first attacks admitted or discharged, the social condition and associated conditions, existent or pre-existent. The table is, however, too lengthy to analyse here.

During the year 100 were discharged as recovered, giving a recovery-rate on the admissions of 38.0 per cent.; also 33 as relieved and 40 as not improved. Also 100 died during the year, giving a death-rate on the average number daily resident of 10.8 per cent. The deaths were due in 51 cases—an unusually high proportion of the total—to cerebro-spinal diseases, including 22 deaths from general paralysis; in 20 to "thoracic diseases," including 8 from pulmonary consumption; in 3 to abdominal diseases; and in the remainder, with two exceptions, to general diseases, including in this category 13 from senile decay. The two exceptions were one death from cerebral concussion following a fall, and one death from shock following burns. The general health was good throughout the year, and except the two fatal casualties mentioned, no serious accident fell to be recorded. During the year electric lighting and heating was installed.

The good wishes of all who have been privileged to know him will follow Dr. Watson into his well-earned retirement.

Stirling District Asylum, Larbert.

The annual report for the year ended May 15th, 1913, of Dr. R. D. Campbell, the Medical Superintendent of the Stirling District Asylum, serving the counties of Dumbarton, Linlithgow, and Clackmannan, shows that on May 15th, 1912, there were 755 patients on the register, and on May 14th, 1913, there were 779. The total cases under treatment during the year numbered 999, and the average number daily resident 766.

During the year 244 were admitted, of whom 194 were first and 50 not-first admissions. Only 20 of the admissions are said to have been in average health. A very large proportion were acute cases, no less than 102 being the subjects of first attacks within three months, and in 36 within twelve months of admission; in 52 not-first attacks within twelve months; in the remainder, excluding 4 cases of unknown duration, but including 13 congenital cases, the attacks being of more than twelve months' duration on admission. The total admissions were classified according to the forms of mental disorder into: Simple and acute mania, 46, chronic mania, 7; simple and acute melancholia, 57, chronic melancholia, 5; secondary, senile and organic dementia, 43; primary dementia, 17; confusional insanity, 17; acute delirious insanity, 13; delusional insanity, 11; general paralysis, 11; and congenital defect, 17. Acute mania, acute melancholia, and acute delirium together accounted for 64 of the admissions.

As to probable causation, alcohol was assigned in 44; organic brain disease in 9, and epilepsy in 21; adolescence, the climacteric, and senility in 77; previous attacks in 50, and "moral" causes in 13; whilst, with the exception of 4 in whom no cause could be assigned, the remainder are distributed in small numbers over the other usually assigned etiological factors. Curiously enough, syphilis does not appear as cause in any case, nor does general paralysis, unless it be included under "organic brain disease." This surmise, however, can hardly be correct, as there were 11 general paralytics admitted, and organic brain disease was only assigned in 9.

During the year 95 were discharged as recovered, giving a recovery-rate on the admissions of 38.9 per cent., and 44 as relieved. Also 81 died, giving a death-rate on the average number resident of 8.1 per cent. The deaths were due in 14 to cerebro-spinal diseases, including 9 from general paralysis; in 38 to thoracic diseases, including 15 from heart disease, and 8 from pulmonary consumption; in 10 to various abdominal diseases, and in 19 to general diseases, of whom 14 died from senile decay. The general health was good on the whole, and no illness of epidemic character occurred.

Roxburgh, Berwick, and Selkirk District Asylum.

The annual report for the year ended May 15th, 1913, of Dr. J. Carlyle Johnstone, Medical Superintendent of this asylum, shows that on May 15th, 1912, there were 324 patients on the registers, of whom 9 were absent on probation, and on May 15th, 1913, there were 327 on the registers, of whom 5 were on probation. The total cases under treatment during the year numbered 390, and the average number daily resident 322.6. During the year 66 were admitted, of whom 55 were first admissions. Of the total admissions, in 17 the attacks were first attacks within three, and in 13 more within twelve months of admission; in 16 not-first attacks within twelve

months, and in the remainder, including 5 congenital cases, the attacks were of more than twelve months' duration on admission. The physical conditions of the admissions was good or average in only 18 per cent. The admissions were classified into: Mania of all kinds 27, melancholia of all kinds 21, senile and secondary dementia 5, delusional insanity 3, general paralysis 2, epileptic insanity 3, and congenital defect 5. As to causation, alcohol was assigned in only 2 and venereal disease in 1; critical periods in 29; epilepsy in 4; various bodily diseases in 9; and previous attacks in 17. An insane heredity was ascertained in 29, and congenital defect existed in 8. Finally, mental stress of some kind or other was assigned in 18.

During the year 27 were discharged as recovered, giving a recovery-rate on the admissions of 40.9 per cent.; also 11 as relieved and 1 as not improved. During the year 24 died, giving a death-rate on the average number resident of 7.4 per cent. In 4 cases the principal cause of death was disease of the nervous system; in 9 of the circulatory system; in 6 disease of the respiratory system, in 1 cancer, in 1 pernicious anaemia, in 2 senile decay, and in 1 suicidal cut-throat, the last whilst living at home on probation.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

ABERDEEN COUNTY.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRKENHEAD UNION.—Senior Male Resident Assistant Medical Officer. Salary, £150 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer; (2) Resident Surgical Officer. Salary, £80 per annum each.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £220 per annum.

BIRMINGHAM GENERAL HOSPITAL.—(1) Resident Medical Officer. Salary, £105 per annum. (2) Two House-Surgeons. Salary, £40 per annum for three months, rising to £50. (3) House-Surgeon to Special Department. Salary, £50 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £150 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeons. Salary, £100 per annum each.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £250.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Physician. Salary, £80 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. (3) Throat, Nose, and Ear House-Surgeon. Salaries at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £100 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £220.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Resident House-Surgeon. Salary, £50 per annum.

CHELTENHAM GENERAL HOSPITAL.—House-Physician. Salary, £100 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

COLONIAL OFFICE.—Three Medical Officers for Ankylostomiasis Campaign in Trinidad. Salary for officer in charge £600 per annum, and for two assistant medical officers £400 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £200 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £120 per annum.

DURHAM COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary, £300 per annum, rising to £400.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EDINBURGH: ROYAL INFIRMARY.—Clinical Pathologist. Salary, £250 per annum.

ENNISKILLEN FERMANAGH COUNTY HOSPITAL.—House-Surgeon (male). Salary, £104 per annum.

ESSEX ADMINISTRATIVE COUNTY.—Assistant Tuberculosis Officer. Salary, £300 per annum.

GROCERS' COMPANY.—Two Scholarships, each £300 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HALIFAX UNION POOR-LAW HOSPITAL.—Resident Medical Officer. Salary, £120 per annum and £20 for dispensing.

HASTINGS: EAST SUSSEX HOSPITAL.—House-Physician (male). Salary at the rate of £80 per annum.

HEREFORD COUNTY AND CITY ASYLUM.—Locumtenent Assistant Medical Officer. Salary, £5 5s. per week.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £75 per annum.

HULL: ROYAL INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

LEEDS MATERNITY HOSPITAL.—Honorary Medical Officer.

LEEDS UNIVERSITY.—Locumtenent for Demonstrator of Bacteriology.

LEICESTER POOR-LAW INFIRMARY.—First and Second Resident Assistant Medical Officers. Salary, £200 and £150 per annum respectively.

MANCHESTER CHILDREN'S HOSPITAL.—Assistant Medical Officer for Out-patients' Department. Salary at the rate of £50 per annum.

MANCHESTER CORPORATION: MONSALL FEVER HOSPITAL. Third Assistant Medical Officer. Salary, £130 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—(1) Honorary Physician for Diseases of Children; (2) Male House-Surgeon.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £85 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE: CITY HOSPITAL FOR INFECTIOUS DISEASES.—Male Resident Medical Assistant. Salary, £200 per annum.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—Junior Medical Officer (male). Salary, £80 per annum.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Salary, £200 and £150 per annum, rising to £250 and £200 respectively. (3) Medical and Surgical Registrars.

NORWICH: NORFOLK EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

OLDHAM ROYAL INFIRMARY.—(1) Senior House-Surgeon; (2) Second House-Surgeon. Salary, £140 and £120 per annum respectively.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) Honorary Medical Registrar. (2) Senior House-Physician. (3) Pathologist. Salary for (2) £75 per annum, and for (3) 120 guineas per annum.

PRESTON: ROYAL INFIRMARY.—Resident Medical and Surgical Officer (male). Salary, £150 per annum.

READING: ROYAL BERKSHIRE HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £160 per annum, rising to £120 after first six months.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Assistant Surgeon.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, Etc., City Road, E.C.—House-Surgeon. Salary, £80 per annum.

ST. PANCRAS PARISH.—Senior Assistant Medical Superintendent of the South Infirmary and Senior Assistant Medical Officer of the Workhouse. Salary, £175 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—(1) House-Surgeon. (2) Ophthalmic House-Surgeon. Salary, £80 per annum each.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £140 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTHPORT INFIRMARY.—(1) Senior House-Surgeon. (2) Junior House and Visiting Surgeon (males). Salary, £120 and £100 per annum respectively.

STATE CRIMINAL LUNATIC ASYLUM, Broadmoor.—Junior Assistant Medical Officer. Salary, £225 per annum, rising to £250.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—(1) House-Physician. (2) Casualty and Out-patient Officer. Salary at the rate of £110 per annum, increasing £10 annually.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary, £130 per annum.

THROAT HOSPITAL, Golden Square, W.—Honorary Dental Surgeon.

WAKEFIELD: WEST RIDING ASYLUM.—Locumtenent Assistant Medical Officer (male).

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Out-patients' Physician.

WEST HARTLEPOOL CAMERON HOSPITAL.—House-Surgeon. Salary, £120 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon.

WESTMINSTER HOSPITAL.—Surgical Registrar. Honorarium, £50 per annum.

WESTMORLAND CONSUMPTION SANATORIUM AND HOME, Meathop.—Second Assistant Medical Officer (male). Salary, £150 per annum, rising to £200.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) Two House-Surgeons. Salary, £125 per annum each.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointment: Kirkcaldy (Fife).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALLFREY, F. H., M.B., B.C.Camb., Certifying Factory Surgeon for the Shoreham District, co. Sussex.

DAVIES, E. T. H., M.D.Lond., Certifying Factory Surgeon for the Tredegar District, co. Monmouth.

EDWARDS, H. N., L.R.C.P., M.R.C.S., Clinical Assistant, Royal Chest Hospital, City Road.

HERNAMAN-JOHNSON, Francis, M.D., Consulting Radiologist to the Darlington Education Committee.

MCILROY, Jaine Hamilton, M.A., M.B., D.Sc., D.P.H., Whole-time Oculist to the School Board of Glasgow.

ORCHARD, J. E. R., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Crewkerne District, co. Somerset.

PRIDMORE, J. W., M.R.C.S., L.R.C.P.Lond., Honorary Medical Officer to the Royal Isle of Wight County Hospital.

RICHMOND, J. R. M., L.M.S.S.A., Certifying Factory Surgeon for the St. Just District of the co. Cornwall.

THORNTON, Frank B., M.B., B.S.Lond., Surgeon to Police and Medical Officer to Isolation Hospital, Reigate.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

ADDISON.—At Prestwood, Great Missenden, on Easter Sunday, the wife of Doctor Christopher Addison, M.P., of a son.

DEATHS.

SCOTT.—At Dunedin, New Zealand, on February 25th, 1914, John Halliday Scott, M.D.Edin., M.R.C.S., F.R.S., Professor of Anatomy in the University of Otago, and Dean of the Medical Faculty.

WALLACE.—At 67, St. Andrew's Drive, Pollokshields, Glasgow, in his 48th year, Jas. W. Wallace, M.D., husband of Helen I. McCutcheon, and youngest son of the late Robert Wallace, Killoch, Ochiltree, Ayrshire.

WHITE.—On April 11th, at Shortlands, Blake Hall Road, Wanstead, Eleanor Constance, dearly beloved wife of Dr. Henry White, C.M.S., Yezd, Persia, and daughter of the late Thomas Davies-Colley, Esq., M.D., J.P., of Chester.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Mr. Shattock. Specimen illustrating Osteoma.

TUESDAY.

CHELSEA CLINICAL SOCIETY, St. George's Hospital, 8.30 p.m.—Papers: Dr. E. G. Reeve: Some Points in the Administration of Intensive Nascent Iodine Treatment. Dr. Halls Dally: Some Observations on the Intensive Nascent Iodine Treatment.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester Square, W.C.—4.30 p.m.: Cases and Specimens. 5.15 p.m.: Dr. Prosser White, of Wigan: Some Dermatological Problems.

WEDNESDAY.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital, 8.30 p.m.—Election of Officers, 9 p.m. Paper: Dr. B. T. Parsons Smith: The Intermittent Pulse (founded on the essay for which he has been awarded the society's annual medal).

FRIDAY.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C., 3 p.m.—Lecture: Suppuration in the Region of the Pharynx.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Professor Keith: The Comparative, Surgical, and Pathological Anatomy of the Great Bowel.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DISEASES OF CHILDREN, 4.30 p.m.—Demonstration of Cases.

SECTION OF EPIDEMIOLOGY AND STATE MEDICINE, 8.30 p.m.—Paper: Dr. Harold Kerr and Professor H. J. Hutchens: An Outbreak of Food Poisoning caused by the *Bacillus enteritidis* (Gaertner) in Milk.

POST-GRADUATE COURSES AND LECTURES.

BIRMINGHAM POST-GRADUATE.—Demonstrations at 3.30 p.m. each day. Tuesday, General Hospital: Surgical Aspects of Gastric and Duodenal Ulceration. Friday, Queen's Hospital: Diagnosis and Treatment of Common Eye Diseases.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear; Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday. Special Lectures: Monday, 3.15, The Diagnosis of Hepatic Abscess. Wednesday, 3.15, The Routine of Ophthalmoscopic Examination. Thursday, 4.30, Tachycardia.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Tuesday, Manchester and Salford Hospital for Skin Disease: Radium in Dermatology. Wednesday, Royal Infirmary: Haematuria. Thursday, 4.15 p.m, Ancoats Hospital: The Clinical Examination of the Nervous System.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Medical School. Clinics are held daily in the several departments of the hospital, Cardiac, Laryngological, X Ray, and the Prevention of Consumption.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, X Rays, and Operations 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday.

[For further particulars of Lectures consult the Index to Advertisements.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		APRIL.
21	Tues.	London: Metropolitan Counties Branch Council, 4 p.m. Exeter Division, Royal Devon and Exeter Hospital, 4 p.m. Tower Hamlets Division, Stepney Central Hall, 4 p.m.
22	Wed.	London: Council Meeting, 10.30 a.m.
23	Thur.	Hastings Division, Hastings, 4.15 p.m.
24	Fri.	London: Standing Subcommittee, Central Ethical Committee, 2 p.m. South-Eastern Counties Division, Newtown St. Boswells, 3 p.m.
		APRIL (*continued*).
24	Fri.	South-West Essex Division, Wesleyan Church School, High Road, Leyton, 4 p.m.
28	Tues.	North Wales Branch, Bala.
29	Wed.	Lancashire and Cheshire Branch, Clinical and Scientific Meeting, Royal Infirmary, Liverpool, 4 p.m.
		MAY.
5	Tues.	London: Medico-Political Crime and Punishment Subcommittee, 12 noon.
12	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 25TH, 1914.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPRESENTATIVE MEETING AT ABERDEEN.

JULY 24th AND FOLLOWING DAYS.

NOTICES OF MOTION.

THE following Notices of Motion by the Divisions and Branch stated have been received for consideration by the Annual Representative Meeting of the Association, to be held at Aberdeen on Friday, July 24th, 1914, and following days:

A.—AFFECTING MEMORANDUM, ARTICLES AND BY-LAWS OF ASSOCIATION.

Question of Association becoming also a Federation for other Medical Bodies.

By BRIGHTON:

That it be referred to a Special Committee to consider and report, with recommendations, what alterations and additions to the Articles and By-laws and in the organization of the British Medical Association in the United Kingdom would allow of it becoming also a Federation for other Medical Bodies formed to safeguard the interests of one or more sections of the medical profession, while allowing all such bodies to continue their separate existence. That such Committee consist of six Representatives not members of the Council, six members of the Council, together with the *ex officio* members of the Council.

B.—AFFECTING ADMINISTRATION OF ASSOCIATION.

Grouping of Branches outside United Kingdom for Election of Council, 1915–16.

By HONG KONG AND CHINA:

That the Hong Kong and China and Malaya Branches form a separate group for the election of a member of Council, 1915–16, as was the case in 1913–14.

C.—AFFECTING POLICY OF ASSOCIATION.

Scope of Policy of Association.

By PLYMOUTH:

That it is desirable for the future that the British Medical Association should confine its policy to promoting the scientific and social welfare of the medical profession by leaving all medico-political work to be done by some other body formed for such purpose and registered as a "trade union."

National Medical Guild.

By ALTRINCHAM:

That this Representative Meeting is of opinion that the members of the British Medical Association should be officially advised to become members of the National Medical Guild, and that the Council be instructed to give effect to this opinion.

National Insurance Act.

By ST. PANCRAS AND ISLINGTON:

That this Representative Meeting is of opinion that the working of the medical clauses of the National Insurance Act by members of the profession is derogatory to the profession and against the public interest.

Tuberculosis.

By St. Pancras and Islington:

(*a*) That this Representative Meeting, while recognizing that there is a place for the co-operation of sanatoriums and hospitals in the treatment of tuberculosis, is strongly of opinion that the domiciliary treatment of tuberculous persons, as well as that carried out in local dispensaries, ought to be entrusted to the fullest possible extent to practitioners engaged in general practice.

(*b*) That the voluntary hospitals to which medical schools are attached should have the opportunity of having all clinical material they need for teaching purposes.

Alfred Cox,
Medical Secretary.

April 21st, 1914.

SOUTH AFRICAN COMMITTEE.

Meetings of the South African Committee of the British Medical Association were held at Bloemfontein on February 25th and 26th, when the following members were present: Sir Kendal Franks and Dr. Maynard (Witwatersrand Branch), Dr. Dunstan (Pretoria Branch), Drs. Ward Bidwell and Manning (Orange Free State Branch), Dr. Burton Nicol (Natal Coastal Branch), Dr. Campbell Watt (Natal Inland Branch), Dr. Jasper Anderson (Western Branch), and Dr. Symonds (Griqualand West Branch). The following members were represented by substitutes: Drs. Anderson, Ganteaume, and Miller (Border Branch), Drs. Beck, Moffat, and Smith (Western Branch), Dr. Hyslop (Natal Inland Branch), Dr. Howden (Natal Coastal Branch), and Dr. Troup (Pretoria Branch).

Election of Officers.—This being the first meeting of the Committee after the triennial elections held in January, it was necessary to elect office-bearers to hold office for the next three years, and the following were re-elected unopposed:

President.—Sir Kendal Franks.
Vice-President.—Dr. Jasper Anderson.
Honorary Secretary.—Dr. Campbell Watt.
Honorary Treasurer.—Dr. Barcroft Anderson.

Organizer for the Association in South Africa.—The Pretoria Branch raised the question of appointing a medical man as paid organizer to travel throughout South Africa and arouse a greater interest in and augment the membership of the Association. The opinion of the meeting was that the expense would be prohibitive and that it devolved upon the Branches themselves to make an endeavour to increase their membership.

Ethical Inquiries.—After considering the evidence in an ethical inquiry held by the Council of a Branch, the Committee considered the charge proved and recommended the Branch Council to take action under Article 11 of the Articles of the Association. The Committee expressed the general opinion that it was the body which should deal with such cases after the evidence has been collected by the Branch concerned, and that unless strong action was taken against members of the Association who acted in a manner detrimental to the interests, not only of their Branch but of the profession generally throughout South Africa, one of the most important functions of the Association would be rendered null and void.

Union Defence Forces.—The Secretary reported that the questions and observations drawn up at the July meeting had been forwarded to the Minister for Defence, who had thanked the Committee therefor, and that the regulations had since been gazetted.

Medical Witnesses' Fees.—The opinions of the Branches were placed before the meeting, and the Secretary was instructed to write to the Minister stating that, from the information at its disposal, the Committee found that the profession, although generally satisfied with the fee for giving evidence, considered that the travelling allowance and the subsistence allowance were too low, involving in all cases an actual loss, and strongly recommending the Minister to consider the advisability of materially increasing the present travelling and subsistence rates.

Railway Medical Officers.—The Secretary reported to the meeting that he had issued a circular, enclosing a form, to [illegible] railway medical officer in the Union, asking for certain information as to the railway medical appointments. It was with difficulty that he had obtained the names and addresses of these officers, as the Railway Sick Fund Board refused to furnish them to him. The returns made it evident that there was widespread dissatisfaction with the terms of these appointments in many respects, and numerous suggestions for amendments were made. After considerable discussion, a subcommittee, consisting of Sir Kendal Franks, Drs. Jasper Anderson, Ward, Nicol, and Watt, was appointed to obtain further information and discuss the grievances with the Sick Fund Board with a view to their removal.

Referendum.—The proposal to give any two members of Committee power, within forty-eight hours of receiving a copy of the minutes, to demand a referendum on any subject therein to the members of the Association in South Africa, was defeated. The opinion was expressed that the proposal was impracticable, and unfair to those members who attended the meetings, and it was also stated that provision for a referendum already existed in the regulations.

Unprofessional Conduct.—The proposal that if any member of Committee was found guilty of unprofessional conduct by any Medical Council, he should *ipso facto* cease to be a member of the Committee, failed to obtain the requisite three-fourths majority of votes. It was considered to be an infringement of the rights of Branches.

Payment of Member's Travelling Expenses.—It was recommended that each Branch should pay its member's out-of-pocket expenses when attending meetings of Committee other than those held during congresses.

Finance.—Accounts to the value of £39 5s. 2d. were passed for payment. The Secretary stated that he had obtained clerical assistance at the rate of £30 per annum, and this was approved.

Medical Defence.—The following subcommittee was appointed to go into this question and submit a scheme for consideration: Drs. Hugh Smith, Jasper Anderson, L. A. W. Beck, and H. A. Moffat, and Sir Kendal Franks *ex officio*.

First Aid and Ambulance.—It was resolved that all lecturers and examiners (other than those practitioners whose appointments required them to act in those capacities) should be paid for their services, that medical men should not examine when a layman had been the lecturer, and that as far as possible the names of lecturers and examiners should not appear in the lay press.

The following is a list of members of the South African Committee elected in 1914 for three years:

Western Branch: Drs. Jasper Anderson, H. A. Moffat, L. A. W. Beck, and the President (Dr. Hugh Smith), all of Capetown.
Eastern Province: Dr. Dru Drury and the President (Dr. Cowper), both of Grahamstown.
Griqualand West: Drs. Chas. Symington, De Aar, and the President (H. Symonds), Kimberley.
Border: Drs. Barcroft Anderson and Ganteaume, both of East London; and the President (Duncan Miller), Fort Beaufort.
Natal Coastal: Dr. Burton Nicol and the President (Dr. Howden), both of Durban.
Natal Inland: Dr. Campbell Watt and the President (Dr. Hyslop), both of Pietermaritzburg.
Orange Free State: Drs. Ward and Bidwell and the President (Dr. Manning), all of Bloemfontein.
Witwatersrand: Sir Kendal Franks, Dr. Maynard, and the President (Dr. R. P. McKenzie), all of Johannesburg.
Pretoria: Dr. Troup and the President (Dr. Dunstan), both of Pretoria.
Rhodesia: Dr. Strong, Buluwayo, and the President.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A list of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

British Medical Association.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

THE Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.
March 30th, 1914.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GIBRALTAR BRANCH.

THE annual meeting of the Gibraltar Branch was held at the Royal Naval Hospital on April 4th; Deputy Surgeon-General W. W. PRYN, R.N., President of the Branch, occupied the chair.

Election of Officers.—The following office-bearers were appointed for 1914:

President: N. D. I. Oman, M.D. (Gibraltar).
Vice-President: Colonel J. Maher, D.D.M.S. (Gibraltar).
Secretary: Jas. Lochhead, M.D., F.R.C.S.Edin. (Colonial Hospital, Gibraltar).
Representative on Council of Association: T. D. Greenlees, M.D. (Weymouth).
Members of Council: Deputy Surgeon-General W. W. Pryn, R.N., Major Dansey-Browning, R.A.M.C., Mr. P. F. Lyons (Gibraltar), Staff Surgeon L. C. Rowan-Robinson, M.B., R.N., Mr. J. V. Abrines (Gibraltar).

KENT BRANCH:

ISLE OF THANET DIVISION.

THE sixty-ninth meeting of this Division was held at Ramsgate on March 3rd, Dr. STREET being in the chair. The principal event was a discussion on therapy. It was introduced by Dr. HERBERT FRENCH, of Guy's Hospital, who was present at the meeting as a guest, and read a valuable paper entitled "Some further therapeutic points." The proceedings concluded with a cordial vote of thanks to Dr. French, those present then taking tea together.

LANCASHIRE AND CHESHIRE BRANCH:

BLACKPOOL DIVISION.

A MEETING of the Blackpool Division was held at the Athenæum Club on April 14th. Dr. MITCHELL PENMAN, the chairman of the Division, presided, and there was a large attendance of members. All the non-members of the Association resident in the borough were invited to the meeting.

Victoria Hospital, Blackpool.—The chief business of the meeting was the consideration of the dispute between the medical profession and the Board of Management of the Victoria Hospital, Blackpool. After some discussion, in which Drs. RICHARDSON, MCINTOSH, DUNDERDALE, CARR, PENMAN, BROWN URQUHART, BUTCHER, and HODGSON took part, the following resolution was unanimously adopted:

> That this meeting of the members of the Blackpool Division of the British Medical Association, for the reasons now stated, are of the opinion that the four members of the Honorary Medical Staff who resigned in January last were justified in their action, and that for the reasons also now stated, and which reasons are known to the Board of Management, the medical practitioners of the Borough of Blackpool are justified in refusing to accept honorary service at the hospital.

At a meeting of all the practitioners resident in the borough, held on March 25th, eight delegates from the profession were appointed to confer with the hospital board of management, but not until the following three requests had been granted by the board: (*a*) Two seats on the board of management to be filled by members of the honorary staff, such members to be nominated by the medical staff; (*b*) the resignation of the matron; (*c*) the resignation of Dr. Molloy from the board of management.

[We are informed that the Blackpool Company House Proprietors' Association at a meeting last week adopted the following resolution:

> That we do give our support to the Doctors' Medical Association in their efforts to remodel the constitution of the Victoria Hospital, Blackpool.]

SOUTH MIDLAND BRANCH:

NORTHAMPTONSHIRE DIVISION.

A MEETING of the Division was held in the Board Room of the Northampton General Hospital on April 15th, when Dr. COOKE was in the chair, and five other members were present.

Change of Boundary.—On the proposition of Dr. HICHENS, seconded by Dr. EVANS, it was unanimously resolved:

> That members of the Northamptonshire Division in Rugby and the neighbourhood shall in future be joined to the Leamington Division.

Clinical Cases.—The following clinical cases were shown and discussed:—By Dr. HARVEY (for Dr. ROBSON): (1) Spasmodic contraction of the abdominal muscles coming on after slight injury (? hysterical in man); (2) a case of chronic pyrexia (case for diagnosis); (3) a case of myxœdema. By Dr. HICHENS: (4) A case of syphilitic endocarditis with a tendency to gangrene of the feet; (5) a case of tertiary syphilis with gummata not amenable to mercury and potassium iodide, and successfully treated by salvarsan followed by mercury and potassium iodide; (6) a case of spastic paraplegia, probably due to transverse myelitis.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions or Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

Alfred Cox,
Medical Secretary.

February 11th, 1914.

CHANGES OF BOUNDARIES.

The following changes have been made in accordance with the Articles and By-laws of the Association, and take effect as from the date of publication of this notice:

(1) East Norfolk and North Suffolk Divisions.

That the common boundary between the East Norfolk and North Suffolk Divisions be adjusted to make that boundary identical throughout with the boundary between the counties.

Representation in Representative Body.—It has been decided by the Council that East Norfolk Division shall form a separate constituency, and North Suffolk Division be grouped with Great Yarmouth Division, for representation in the Representative Body, 1914–15.

(2) English and Scottish Divisions.

That the areas of the English and Scottish Divisions of the Border Counties Branch be adjusted by inclusion of the Dumfries-shire portion of Eskdale in the Scottish, instead of as at present in the English, Division, the boundary between the two Divisions thus to be the boundary between England and Scotland.

Representation in Representative Body.—Unaffected.

SUGGESTED CHANGES OF BOUNDARIES.

Notice of Proposal for Formation of a Wiltshire Branch, with Salisbury, Swindon, and Trowbridge Divisions.

Notice is hereby given under By-law 73 to all concerned of a proposal made by the Trowbridge Division for the formation of a new Branch of the Association to be known as the Wiltshire Branch, co-terminous with Wilts county, with Divisions as follows:

1. *Salisbury Division.*—That part of the county south of a line drawn from west to east from north of Warminster to south of Ludgershall.

2. *Swindon Division.*—That part of the county to the north and east of a line drawn from west of Malmesbury to west of Ludgershall (not including Pewsey).

3. *Trowbridge Division.*—That part of the county lying between these two lines.

Formal written notice of the proposal has been given under Article 13 to the Bath and Bristol and Southern Branches and to the Bath, Salisbury, and Winchester Divisions, and the matter will be determined in due course by or on behalf of the Council of the Association. Any member affected by the proposed change, and objecting thereto, is requested to notify the fact, and his reason therefor, to the Medical Secretary, 429, Strand, London, W.C., not later than May 25th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Glasgow and West of Scotland Branch.—Dr. William Bryce, Honorary Secretary (30, Armadale Street, Dennistoun, Glasgow), gives notice that the annual general meeting of the Branch will be held in the Western Infirmary on Tuesday, May 12th, 1914, at 3 p.m., when Dr. A. T. Campbell will preside. Business: Honorary Secretary's report, Honorary Treasurer's report, election of office-bearers. At 2 p.m. a visit of inspection will be paid to the new Royal Hospital for Sick Children at Yorkhill, under the guidance of Dr. D. J. Mackintosh, M.V.O. Tea will be served in the Western Infirmary at the close of the business meeting. At 4 p.m. a clinical demonstration will be given by the members of the staff of the Western Infirmary in the theatre. The members of the Branch will dine in the Grosvenor Restaurant, Gordon Street, at 6.30 p.m. Dinner ticket, 5s. Morning dress.

Lancashire and Cheshire Branch.—Dr. P. R. Cooper, Honorary Secretary Science Committee (8, St. Peter's Square, Manchester), gives notice that a clinical and scientific meeting of the Lancashire and Cheshire Branch will be held at the Royal Infirmary, Liverpool, on Wednesday, April 29th, at 4 p.m. (tea from 3.30).

Metropolitan Counties Branch: Marylebone Division.—Dr. Francis W. Goodbody, Honorary Secretary (6, Chandos Street, W.), gives notice that all nominations, duly proposed and seconded and accompanied by the consent of the candidate to act, for the post of chairman, vice-chairman, treasurer, secretary, six Representatives to the Representative Meeting, six Representatives to the Branch Council, and six members of the Executive Committee, must reach him before May 1st, 1914.

Metropolitan Counties Branch: South-West Essex Division.—Dr. A. Todd-White, Honorary Secretary (23, Fillebrook Road, Leytonstone), gives notice that a conjoint meeting of the Division and the City Division will be held in the Wesleyan Church School, High Road, Leyton, on Friday, April 24th, at 4 p.m., when Mr. Bishop Harman, F.R.C.S., Assistant Ophthalmic Surgeon, West London Hospital, will give a lantern demonstration on the Cure of Squint.

North Wales Branch.—Dr. H. Jones Roberts, Honorary Secretary (Llywenarth, Penygroes, S.O.), gives notice that a meeting of the Branch will be held at the White Lion Hotel, Bala, on Tuesday, April 28th, at 2.45 p.m. Agenda: Correspondence; to receive the report of the Branch Council; to submit the financial statement for 1913. The following papers will be read: Dr. J. Lloyd Roberts: "Movable Kidney in the Male." Mr. K. W. Monsarrat: "The Indications for Removal of the Prostate." Dr. J. Hill Abram: "(*a*) "The Treatment of Haematemesis in Gastric Ulcer;" (*b*) "Two Cases of Multiple Arthritis." Mr. H. E. Jones: (*a*) "Elliot's Operation for Glaucoma, with Remarks on the Diagnosis of the Affection;" (*b*) "Demonstration of Sluder's Method of Removing Tonsils in their Capsule." Mr. J. Howell Evans: "Cancer of the Male Breast" (specimen). The Branch Council will meet at 2.40 p.m. Luncheon at 2 p.m.; tickets, 3s.

South-Eastern of Ireland Branch.—Dr. P. Grace, Honorary Secretary (Kilkenny), gives notice that the annual meeting of this Branch, also a meeting of the Branch Council and Local Division will be held at the Victoria Hotel, Kilkenny, on Wednesday, May 6th, at 5.15 p.m. Agenda: Correspondence; installation of president-elect; election of officers of the Branch for the ensuing year; any other business.

South Wales and Monmouthshire Branch: South-West Wales Division.—Dr. D. R. Price, Honorary Secretary (Ammanford, Carmarthen), gives notice that a meeting of the South-West Wales Division will be held on Tuesday, April 28th, at the Infirmary, Carmarthen, at 3 p.m. Mr. W. F. Brook, F.R.C.S., Swansea, will read a paper, "Some Points in Connexion with Modern Methods in Diagnosis and Treatment of Fractures and Fracture Dislocations, with Demonstrations of a Portable *X*-ray Plant."

Hospitals and Asylums.

QUEEN'S HOSPITAL, BIRMINGHAM.

The number of patients treated in 1913 was 34,687; of these 3,013 were in-patients and 31,674 out-patients. No fewer than 6,249 insured patients were treated as out-patients and 969 as in-patients, making a total of 7,218 insured patients treated. The income was £10,846, and the expenditure £17,553, making a deficit of £6,846, and it is only by transferring this amount from the legacies account that the hospital can be maintained. Application was made to the Local Government Board to approve the hospital provisionally as an institution for the treatment of tuberculosis, and this was granted. The Hospital Aid Society has done most admirable work in the distribution of sanatorium notes, clothing, and other useful articles to necessitous in-patients. The Birmingham District Nursing Society has given very valuable assistance to patients leaving the hospital.

ELECTION OF PANEL COMMITTEES.

MODEL SCHEMES FOR THE CONSTITUTION OF PANEL COMMITTEES.

THE Memorandum issued by the Insurance Commissioners with regard to the schemes of election of Panel Committees was published last week, and indicated that the Commissioners had drawn up two schemes, the one (A) for county boroughs and small counties where a single meeting will suffice for election, and the other (B) for counties and large county boroughs where division into districts is necessary. The Memorandum indicated the general character of the two model schemes and the respects in which they differ. We are, however, informed that it will be convenient to members to have before them the actual text of the schemes, which are, therefore, printed below.

DRAFT MODEL SCHEMES FOR CONSTITUTION OF PANEL COMMITTEES.

A. COUNTY BOROUGHS AND SMALL COUNTIES.

General.

1. In the following Scheme, unless the context otherwise requires:

"The Insurance Committee" means the Insurance Committee for the $\frac{\text{County}}{\text{Borough}}$ of .....

"The Committee" means the Committee appointed under the provisions of Section 32 of the National Insurance Act, 1913, for the area of the Insurance Committee.

"The Commissioners" means the Insurance Commissioners.

"Practitioner on the Panel" means a duly qualified medical practitioner who is under agreement with the Insurance Committee to undertake the medical attendance and treatment of insured persons.

Title.

2. The Committee shall be known as the "..... Panel Committee."

Persons Eligible for Membership.

3. (1) All the members of the Committee shall be duly qualified medical practitioners and not less than three-fourths of the members shall be practitioners on the panel.

(2) Any member of the Committee shall be eligible for re-election or reappointment.

Number of Members of Committee.

4. The Committee shall consist of—

(i) .....practitioners duly elected in accordance with the procedure hereinafter laid down;

[(ii) Such number of practitioners as may be co-opted members of the Committee in accordance with Rule 24.]

Method of Election.

5. The Returning Officer shall be a person appointed by the Commissioners for the purpose, and in the event of his absence or inability to act he shall appoint some person, other than an elector, to act in his place.

6. The election of the Committee shall take place at a meeting to be held as soon as may be after the 1st day of June, and in any case not later than the 1st day of July in each year.

7. Every person who was on the last day of the first quarter, as fixed by the Insurance Commissioners, for the purposes of the administration of medical benefit, a practitioner on the panel, shall be entitled to be present and to vote at the meeting and shall be eligible for election as a practitioner on the panel, and a list of the persons so entitled (who are in this Scheme referred to as "the electors") and their addresses shall be prepared and furnished to the Returning Officer by the Clerk to the Insurance Committee.

8. The Returning Officer shall send written notice of the time and place of the meeting to each elector, and such notice shall be sent so as to be delivered to the elector not more than fourteen nor less than seven clear days before the meeting.

9. The electors present at the meeting for the election of the Committee shall appoint a chairman to preside at the meeting and two scrutineers to assist the Returning Officer in counting the votes.

10. Every candidate for election shall be nominated by at least two electors either personally at the meeting or in writing delivered to the Returning Officer at least 48 hours before the meeting. The Returning Officer shall not accept any nomination unless a statement in writing signed by the candidate is furnished before the time of voting that, if elected, he is prepared to accept office.

11. If the number of duly qualified candidates does not exceed the number of vacancies the Returning Officer shall declare those candidates to be elected; and for the purpose of filling any vacancy or vacancies in respect of which more than the corresponding number of duly qualified candidates is nominated, a vote shall be taken in the manner hereinafter provided:

Provided that where the number of electors nominated is not sufficient to fill the vacancies for which that qualification is required, the number of vacancies for persons other than electors shall be reduced so as to secure that at least three-fourths of the persons elected are electors.

12. Where the number of persons elected is less than .....* by reason that no duly qualified candidate has been nominated or that the number of persons other than electors entitled to be elected has been reduced under the provisions of the last preceding rule, the Committee may within three months after its constitution appoint a duly qualified person or duly qualified persons to fill any or all of the vacancies and in the event of no such appointments being made the Commissioners may make an appointment or appointments to fill any or all of the vacancies in such manner as they may think fit.

13. Each elector shall be entitled to cast a number of votes equal to the number of vacancies in respect of which the vote is taken, but he may not cast more than one vote for any one candidate.

14. Votes may be given either personally or by proxy, but only electors may act as proxies.

15. An elector shall not be entitled to act as proxy for another elector unless he is authorized so to act in writing signed by the elector nominating him as proxy and unless and until he has deposited with the Returning Officer at the meeting the instrument appointing him. An authorization to act as proxy may be withdrawn at any time before the commencement of the voting.

16. Voting shall be in accordance with the following rules:—

(*a*) The Returning Officer shall prepare a list of the duly nominated candidates showing the names of the electors by whom each candidate has been nominated.

(*b*) The chairman shall in such manner as he thinks fit inform the meeting of the names of the candidates and of the number of vacancies.

(*c*) Each elector shall write on a list the names of those candidates for whom he desires to record his vote, and shall sign his name at the foot thereof.

(*d*) An elector acting as proxy for another elector shall prepare a list on behalf of that elector and shall sign it in his own name and insert below his own name the name of the elector on behalf of whom the list has been prepared.

(*e*) A voting paper be invalid if—

(i) it contains the names of more candidates than there are vacancies to be filled;

(ii) it is not signed in accordance with these rules;

(iii) if in any other respect it does not comply with these rules or is marked in such a manner as to cause any uncertainty as to the candidates for whom the elector desires to record his vote: Provided that the Returning Officer shall, if he thinks fit, treat a voting paper so marked as valid for the purpose of any vote other than that in connexion with which the uncertainty arises.

17. The Returning Officer shall examine the voting papers and after rejecting any that are invalid shall count the votes recorded on the remaining papers and shall prepare a list of the candidates according to the number

* This number will be the same as that of the persons to be elected under Rule 4 (i).

of votes which each has received, the person receiving the greatest number of votes being placed highest on the list.

18. If the votes received by any two or more candidates are equal and the addition of a vote to any one of such candidates would enable that candidate to be declared elected, the chairman shall take a vote of the meeting, whether by show of hands or in writing, as he thinks fit, to decide which of the candidates shall be placed highest on the list, or, if the meeting has been declared at an end before the count is complete, the Returning Officer shall decide by lot which of the candidates shall be placed highest on the list.

19. The Returning Officer shall first declare to be elected such number of the electors who are highest on the list as will fill the vacancies reserved for electors, and thereafter shall declare the remaining candidates, whether electors or not, who are the highest on the list to be elected in such number as to fill the remaining vacancies.

20. The Returning Officer shall forthwith give notice in writing of the result of the election to the Commissioners, who shall give notice to the Insurance Committee and to each of the persons elected of the result of the election.

21. Where any document is, under these rules, required to be sent to a practitioner on the panel, it shall be deemed to have been duly sent if it has been delivered or posted, directed to the address which is stated in the return to be made by the Clerk to the Insurance Committee to be the address of the place of residence of the practioner on the panel.

22. No election shall be invalid by reason of any misdescription or non-compliance with the provisions of these rules, or by reason of any miscount or of the non-delivery, loss, or miscarriage in the course of post of any document required or authorized by these rules to be dispatched by post, if the Commissioners are satisfied that the election was conducted substantially in accordance with the provision of these rules.

23. (1) Any question as to the validity of any proxy, nomination or voting paper or otherwise in connexion with an election shall be determined in the first instance by the Returning Officer, but in any case of doubt it shall be open to any two electors present at the meeting within seven days after the meeting to appeal in writing to the Commissioners, whose decision shall be final.

(2) Where an appeal has been lodged the Returning Officer shall dispatch to the Commissioners the voting papers and such other documents connected with the election as they may require.

Co-option.

24. The Committee may within three months after its constitution appoint in addition to be members of the Committee any duly qualified medical practitioners to a number not exceeding.....,* but in making such appointments they shall secure that at least three-fourths of the Committee are practitioners on the panel.

First Meeting of Committee.

25. The Returning Officer shall give not less than seven clear days' notice to the members of the Committee of the time and place of the first meeting.

Appointment of Secretary.

26. (1) The Committee shall appoint a person to act as Secretary to the Committee; and in the event of the death, resignation, or removal from office of the Secretary so appointed, the Committee shall appoint a person to act as Secretary in his place; and any person appointed Secretary shall forthwith notify his appointment to the Commissioners.

(2) In the event of a member of the Committee being appointed Secretary no payment for his personal services as Secretary to the Committee shall be made to him.

Quorum.

27. One-third of the number of members of the Committee or, if one-third is not a whole number, the next whole number above one-third shall form a quorum of the Committee.

Term of Office.

28. The members of the Committee shall hold office for one year and shall go out of office on the 15th day of July in each year.

Disqualification or Retirement of Members.

29. (1) Where a member of the Committee was at the time of his appointment a practitioner on the panel and subsequently ceases to be a practitioner on the panel, his seat on the Committee shall thereupon be vacated, and a casual vacancy shall be deemed to have occurred.

(2) Where a member of the Committee was not at the time of his appointment a practitioner on the panel, and subsequently becomes a practitioner on the panel, his seat on the Committee shall thereupon be vacated and a casual vacancy shall be deemed to have occurred.

(3) Where a member of the Committee has been absent from three consecutive meetings of the Committee to which he has been summoned, the Secretary to the Committee shall inform the Commissioners, and unless they are satisfied that his absence was due to illness or other reasonable cause, they shall declare that his seat on the Committee has been vacated and shall inform the Committee accordingly, and thereupon a casual vacancy shall be deemed to have occurred.

(4) A member of the Committee may at any time by notice in writing signed by him and delivered to the Secretary to the Committee resign his office.

Method of Filling Casual Vacancies.

30. (1) Where by reason of the resignation, death, or disqualification of a member of the Committee, a casual vacancy in the membership of the Committee occurs, the Committee may, within three months after its occurrence, appoint a person to fill the vacancy.

(2) Where the Committee have made no appointment within the period aforesaid, the Commissioners shall appoint a person to fill the vacancy.

(3) Pending any such appointment, the proceedings of the Committee shall not be invalid by reason of a vacancy.

(4) The person so appointed shall hold office for the remainder of the period for which the member in whose place he is appointed would have been entitled to hold office.

Information to be sent to Commissioners and Insurance Committees.

31. The Secretary to the Committee shall, as soon as may be, inform the Commissioners and the Insurance Committee of the names and addresses of the persons, if any, appointed in pursuance of Rule 24, and of any casual vacancies in the membership of the Committee which may from time to time occur, and of the names and addresses of the persons, if any, appointed to fill those vacancies.

32. The Committee shall prepare in each year a report of their proceedings since the publication of the last report, together with a statement of accounts, and this report and statement of accounts shall be circulated to practitioners on the panel not later than the date on which notice summoning the meeting for the election of a Committee for the ensuing year is issued.

Amendment of Scheme.

33. This Scheme may be amended in the following manner, but not otherwise:—

(1) The Secretary to the Committee shall, if requested so to do by not less than two-thirds of the members of the Committee or ..... of the persons who were electors at the last preceding election, summon a special meeting of such electors, and shall give not more than fourteen nor less than seven clear days' notice to each such elector, stating the time and place of the meeting and the objects for which it has been summoned.

(2) If any amendment to the Scheme is carried by a majority of the persons present and voting at such meeting it shall be submitted by the Secretary to the Committee to the Commissioners, and if approved by the Commissioners shall come into operation as from the date of such approval.

B.—Counties and Large County Boroughs.

General.

1. In the following Scheme, unless the context otherwise requires:—

"The Insurance Committee" means the Insurance Committee for the County (Borough) of .....

"The Committee" means the Committee appointed under the provisions of Section 32 of the National Insurance Act, 1913, for the area of the Insurance Committee.

"The Commissioners" means the Insurance Commissioners.

"Practitioner on the panel" means a duly qualified medical practitioner who is under agreement with the Insurance Committee to undertake the medical attendance and treatment of insured persons.

Title.

2. The Committee shall be known as the "..... Panel Committee."

* This number must not exceed one-fourth of the total membership of the Committee.

Persons Eligible for Membership.

3. (1) All the members of the Committee shall be duly qualified medical practitioners, and not less than three-fourths of the members shall be practitioners on the panel.

(2) Any member of the Committee shall be eligible for re election or reappointment.

Number of Members of Committee.

4. The Committee shall consist of—

(i) ..... practitioners on the panel duly elected in accordance with the procedure hereinafter laid down.

(ii) Such number of practitioners, whether practitioners on the panel or not, as may be co-opted members of the Committee in accordance with Rule 29.

Method of Election.

5. For the purposes of the election of the Committee the County Borough / County shall be divided into ..... constituencies as defined in the first column of the schedule to this Scheme, and a separate election shall be held in respect of each constituency.

6. The number of representatives on the Committee to be assigned to the practitioners on the panel in each constituency shall be the number shown in the second column of the schedule to this Scheme.

7. The election of the Committee shall take place at meetings of electors held in the several constituencies as soon as may be after the 1st day of June, but in any case not later than the 1st day of July in each year.

8. Every person who was on the last day of the first quarter, as fixed by the Commissioners for the purposes of the administration of medical benefit, a practitioner on the panel shall be entitled to be present and to vote at one of the meetings, and shall be eligible for election, and a list of the persons so entitled (who are in this scheme referred to as "the electors") and their addresses shall be prepared and furnished to the Returning Officer and the Secretary to the Committee by the Clerk to the Insurance Committee.

9. As soon as may be after receiving the list of electors the Secretary to the Committee shall summon a meeting of the Committee, and the Committee shall assign each elector to one of the constituencies in the area by reference to the district in which he resides or practises. The Secretary to the Committee shall forward the lists of electors for each constituency to the Returning Officer, and shall, not later than the date on which he furnishes the list to the Returning Officer, send to each elector notice of the constituency to which he has been assigned, unless the constituency is the same as that to which he was assigned for the purpose of the previous election under this scheme.

Any elector who desires to vote in a constituency in which he practises or resides other than that to which he has been assigned shall within three days of the receipt of the said notice notify the Returning Officer and the Returning Officer shall transfer his name to the list of electors in the constituency of his choice.

10. The Returning Officer for the elections shall be a person appointed by the Commissioners for the purpose, and in the event of his absence or inability to act, he shall appoint some person, other than an elector, to act in his place.

11. The Returning Officer shall appoint Deputy Returning Officers to act in his place at any meetings which he is unable himself to attend.

12. The Returning Officer shall send written notice of the time and place of the meeting to each elector for the constituency for which the meeting is called, and such notice shall be sent so as to be delivered to the elector not more than fourteen nor less than seven clear days before the meeting.

13. The electors present at each meeting for the election of the Committee shall appoint a chairman to preside at the meeting, and two scrutineers to assist the person acting as Returning Officer in counting the votes.

14. Any practitioner on the panel may be nominated for election as representative for any constituency.

15. Every candidate for election shall be nominated by at least two electors entitled to vote in that constituency, either personally at the meeting, or in writing delivered to the Returning Officer at least 48 hours before the meeting. The Returning Officer shall not accept any nomination unless a statement in writing signed by the candidate is furnished before the time of voting that, if elected, he is prepared to accept office.

16. If the number of candidates does not exceed the number of vacancies for the constituency, the person acting as Returning Officer shall declare those candidates to be elected; if the number of candidates exceeds the number of vacancies, a vote shall be taken in the manner hereinafter provided for the purpose of filling those vacancies.

17. Where the number of persons elected is less than .....,* the Committee may within three months after its constitution appoint a practitioner or practitioners on the panel to fill any or all of the vacancies; and in the event of no such appointments being made, the Commissioners may make an appointment or appointments to fill any or all of the vacancies in such manner as they think fit.

18. Each elector shall be entitled to cast a number of votes equal to the number of vacancies in respect of which the vote is taken, but he may not cast more than one vote for any one candidate.

19. Votes may be given either personally or by proxy, but only electors may act as proxies.

20. An elector shall not be entitled to act as proxy for another elector unless he is authorized so as to act in writing signed by the elector nominating him as proxy and unless and until he has deposited with the person acting at the meetings as Returning Officer the instrument appointing him. An authorization to act as proxy may be withdrawn at any time before the commencement of the voting.

21. Voting shall be in accordance with the following rules:—

(*a*) The person acting as Returning Officer shall prepare a list of the duly nominated candidates showing the names of the electors by whom each candidate has been nominated.

(*b*) The chairman shall in such manner as he thinks fit inform the meeting of the names of the candidates and of the number of vacancies.

(*c*) Each elector shall write on a list the names of those candidates for whom he desires to record his vote and shall sign his name at the foot thereof.

(*d*) An elector acting as proxy for another elector shall prepare a list on behalf of that elector and shall sign it in his own name and insert below his own name and the name of the elector on behalf of whom the list has been prepared.

(*e*) A voting paper be invalid if

(i) it contains the names of more candidates than there are vacancies to be filled;

(ii) it is not signed in accordance with these rules;

(iii) if in any other respect it does not comply with these rules or is marked in such a manner as to cause any uncertainty as to the candidate for whom the elector desires to record his vote: provided that the person acting as Returning Officer shall, if he thinks fit, treat a voting paper so marked as valid for the purpose of any vote other than that in connection with which the uncertainty arises.

22. The person acting as Returning Officer shall examine the voting papers and after rejecting any that are invalid shall count the votes recorded on the remaining papers and shall prepare a list of the candidates according to the number of votes which each has received, the person receiving the greatest number of votes being placed highest on the list.

23. If the votes received by any two or more candidates are equal and the addition of a vote to any one of such candidates would enable that candidate to be declared elected, the chairman shall take a vote of the meeting whether by show of hands or in writing, as he thinks fit, to decide which of the candidates shall be placed highest on the list, or if the meeting has been declared at an end before the count is completed the person acting as Returning Officer shall decide by lot which of the candidates shall be placed highest on the list.

24. The person acting as Returning Officer shall declare elected such number of electors highest on the list as will fill the vacancies to be filled at the election.

25. (1) Where a Deputy Returning Officer has acted at a meeting he shall forthwith give notice in writing of the result of the election to the Returning Officer.

(2) The Returning Officer shall as soon as may be inform the Commissioners of the result of the elections.

(3) The Commissioners shall give notice to the Insurance Committee and to each of the persons elected of the result of the election.

26. Where any document is, under these rules, required to be sent to a practitioner on the panel, it shall be deemed

* This number will be the same as that of the persons to be elected under Rule 4 (i).

to have been duly sent if it has been delivered or posted, directed to the address which is stated in the return to be made by the Clerk to the Insurance Committee to be the address of the place of residence of the practitioner on the panel.

27. No election shall be invalid by reason of any misdescription or non-compliance with the provisions of these rules, or by reason of any miscount or of the non-delivery, loss or miscarriage in the course of post of any document required or authorized by these rules to be dispatched by post, if the Commissioners are satisfied that the election was conducted substantially in accordance with the provisions of these rules.

28. (1) Any question as to the validity of any proxy, nomination or ballot paper or otherwise in connexion with an election shall be determined in the first instance by the Returning Officer, but in any case of doubt it shall be open to any two electors present at the meeting, within seven days after the meeting, to appeal in writing to the Commissioners, whose decision shall be final.

(2) Where an appeal has been lodged the Returning Officer shall dispatch to the Commissioners the voting papers and such other documents connected with the election as they may require.

Co-option of Members.

29. The Committee may within three months after its constitution appoint, in addition to be members of the Committee, any duly qualified medical practitioners to a number not exceeding.....*

First Meeting of Committee.

30. The Returning Officer shall give not less than seven clear days' notice of the time and place of the first meeting to the members of the Committee.

Appointment of Secretary.

31. (1) The Committee shall appoint a person to act as Secretary to the Committee: and in the event of the death, resignation or removal from office of the Secretary so appointed, the Committee shall appoint a person to act as Secretary in his place; and any person appointed Secretary shall forthwith notify his appointment to the Commissioners.

(2) In the event of a member of the Committee being appointed Secretary no payment for his personal services as Secretary of the Committee shall be made to him.

Quorum.

32. One-third of the number of members of the Committee or, if one-third is not a whole number, the next whole number above one-third shall form a quorum of the Committee.

Term of Office.

33. The members of the Committee shall hold office for one year, and shall go out of office on the 15th day of July in each year.

Disqualification or Retirement of Members.

34. (1) Where a member of the Committee was at the time of his appointment a practitioner on the panel, and subsequently ceases to be a practitioner on the panel, his seat on the Committee shall thereupon be vacated and a casual vacancy shall be deemed to have occurred.

(2) Where a member of the Committee was not at the time of his appointment a practitioner on the panel and subsequently becomes a practitioner on the panel, his seat on the Committee shall thereupon be vacated and a casual vacancy shall be deemed to have occurred.

(3) Where a member of the Committee has been absent from three consecutive meetings of the Committee to which he has been summoned, the Secretary to the Committee shall inform the Commissioners, and unless they are satisfied that his absence was due to illness or other reasonable cause, they shall declare that his seat on the Committee has been vacated and shall inform the Committee accordingly, and thereupon a casual vacancy shall be deemed to have occurred.

(4) A member of the Committee may at any time by notice in writing signed by him and delivered to the Secretary to the Committee resign his office.

Method of Filling Casual Vacancies.

35. (1) Where by reason of the resignation, death, or disqualification of a member of the Committee a casual vacancy in the membership of the Committee occurs, the Committee may, within three months after its occurrence, appoint a person to fill the vacancy. Where the person whose seat is vacated was at the time of his appointment a practitioner on the panel who had been elected to the Committee, the person appointed by the Committee in his place shall be a practitioner on the panel.

(2) Where the Committee have made no appointment within the period aforesaid, the Commissioners shall appoint a person to fill the vacancy.

(3) Pending any such appointment, the proceedings of the Committee shall not be invalid by reason of a vacancy.

(4) The person so appointed shall hold office for the remainder of the period for which the member in whose place he is appointed would have been entitled to hold office.

Information to be sent to Commissioners and to Insurance Committee.

36. The Secretary to the Committee shall, as soon as may be, inform the Commissioners and the Insurance Committee of the names and addresses of the persons, if any, appointed in pursuance of Rule 29, and of any casual vacancies in the membership of the Committee which may from time to time occur, and of the names and addresses of the persons, if any, appointed to fill these vacancies.

37. The Committee shall prepare in each year a report of their proceedings since the publication of the last report, together with a statement of accounts, and this report and statement of accounts shall be circulated to practitioners on the panel not later than the date on which notice summoning the meeting for the election of a Committee for the ensuing year is issued.

Amendment of Scheme.

38. This Scheme may be amended in the following manner, but not otherwise:

(1) The Secretary to the Committee shall, if requested so to do by not less than two-thirds of the members of the Committee or ..... of the persons who were electors at the last preceding election, summon a special meeting of such electors, and shall give not more than fourteen nor less than seven clear days' notice to each such elector, stating the time and place of the meeting and the objects for which it has been summoned.

(2) If any amendment to the Scheme is carried by a majority of the persons present and voting at such meeting it shall be submitted by the Secretary to the Committee to the Commissioners, and if approved by the Commissioners shall come into operation as from the date of such approval.

SCHEDULE.

Name of Constituency.	Number of Persons Elected by each Constituency.

*This number must not exceed one-fourth of the total membership of the Committee.

ADMINISTRATION OF MEDICAL AND SICK BENEFIT.

An Address delivered before the Faculty of Insurance in Edinburgh on April 8th.

By MICHAEL DEWAR, M.D.Edin.,
Chairman of the Edinburgh Local Medical Committee.

[AFTER discussing some points in connexion with the mode of administration of medical and sanatorium benefit, and the prescription of excessive quantities of drugs, Dr. Dewar continued as follows:]

Medical Certificates.

A good deal of confusion arose as to what certificates and as to what number were required during the first months of 1913. This, I am glad to say, has now almost passed away. You are all aware that under the doctors' agreement with the Insurance Committee we are required to give three certificates in connexion with the administration of sick benefit. The first or so-called initial certificate (a book of forms has been supplied by the Insurance Committee, which are in the hands of the doctors) is given to each patient, who may require sick benefit, on the first day on which the patient is seen by the doctor. In order to avoid any difficulty and the possibility of the doctor having to antedate certificates in cases which may have been considered slight when first seen, and not likely to require sick benefit, the Medical Service Subcommittee

has advised that it would be well to give an initial certificate to each person who is off work owing to illness, and if by preliminary treatment he so far recovers as to be able to resume work before the fourth day, the certificate need not be used, and can be destroyed. It would be the duty of the doctor in such a case to visit the patient, or have the patient to visit him before the completion of the third day, so as to satisfy himself as to the condition of the patient. If this were done as a matter of routine, it would save the societies many days of sickness during the year. I speak feelingly on this point, because there are a certain number of insured persons who try to take advantage of any laxity on the part of the doctor, and remain off work for a week in order to secure three days' benefit at least. Perhaps the greatest difficulty the doctors have in coming to a decision is in the case of those who come complaining of sore backs. This is a class of cases in which no doctor can say definitely that a man has not got a sore back, and unfortunately they know it only too well. Doctors sometimes can by conversation and other methods distract the patient's attention for a moment or two from his real or imaginary ailment, and thus casually get him to make some particular movement which may prove its reality or give the show away. I need hardly say that doctors are always very suspicious of sore backs, but, despite their carefulness, a man may, and often does, secure a week or ten days' sick benefit when he simply thinks he requires or would like a week's rest in bed. An old friend and colleague of mine, now dead, had a somewhat sharp and short method of dealing with these cases—running a cylinder with short sharp needles up and down the back. I do not for one moment agree with this form of treatment, and often said so to him, but he used to say, in reply, that it cured the real cases by its counter irritation in a very short time, while it deterred the malingerers.

During the first year some little trouble was occasioned over these initial certificates, and even yet in the second year some of the society's agents are giving trouble to the doctor and the patient by refusing to accept this initial certificate granted by the doctor, and give their own form to the patient with the request that the doctor must sign it, else no sick benefit will be paid. You will admit that such action on their part is nonsensical, and, to say the least, somewhat tyrannical. If the agents wish to have a complete record of each case, it would be a very simple matter to attach the doctor's initial certificate to their own form, as is now being done by most of the societies.

Some medical men think that the words "I have to-day examined" involves a hardship to the insured person, inasmuch as the first three qualifying days count from that date. It may be, and it sometimes occurs, that a man may be off work for one day or two days before he sends for the doctor, thinking he will be all right again in a couple of days, and does not wish to trouble the doctor. There *are* such men, but not many. When he does send for the doctor—say on the third day—the doctor, from the signs and symptoms of the case, sees that the man has really been ill for a couple of days, but is not allowed to use his judgement and antedate the certificate. The patient must either be punished to the extent of two days, or the doctor must tell a lie by certifying that he saw him, say on the first, when really he saw him for the first time on the third. It might be well to give a little latitude to the doctor in saying when a patient is entitled to sick benefit, and thus avoid a hardship to the really industrious and well-meaning person, but as such a concession might prove dangerous in the hands of some doctors I oppose it.

Then we have the second certificate at the end of a week, and, if necessary, the following weeks—the continuation certificate. This is absolutely essential, so as to guide the society in the payment of benefit. Here, again, there is room for improvement. Some societies have (1) a separate sheet for each week; (2) some have a different sheet for the continuation and declaring off, or final certificates; and (3) some have, what is simpler and preferable—a continuation sheet with columns for signature and date for several successive weeks by the doctor and sick steward, combined with the final certificate at the bottom.

Even then different societies have the columns differently arranged: sometimes the doctor's column is on the right side and sometimes on the left. When pressed for time it is very easy for the doctor if he has been in the habit of signing on the right side for one society to do so on the same side for another society, when he should have signed on the left. These are, perhaps, minor details; but when a certificate is signed in the wrong place it looks bad and careless, and they are a very strong argument in support of a uniform system. Again, some societies still demand the insertion of the nature of the illness in the continuation certificate—that is, where separate sheets are used, week by week, instead of being content with the statement in the initial certificate. This is irksome to the doctor, is quite unnecessary; and, indeed, I have sometimes thought that it is subtly meant as a trap for the doctor, to see if he will insert the same illness week by week. Discrepancies as to diagnosis have been observed in these weekly certificates, but in some cases at least the second weekly certificate may justly certify a different illness from the initial certificate, because further observation may satisfy the doctor that his first diagnosis was not altogether correct. For instance, a doctor may state in the initial certificate that the illness is a catarrh or an influenza, but after a day or two's observation he may find that it is a pneumonia or pleurisy, or something else; and I say that he is perfectly justified in stating on his second certificate a different disease from what he stated on the first, and this without any prejudice to him, as the one often runs into the other. Societies and the lay public are too prone to expect perfection from doctors, especially in a class of cases where a correct and final diagnosis is very difficult and often impossible in the early stage of a disease. At the same time I do not condone a different diagnosis each week. That is bad, and is probably due to the fact that when a doctor has a very large panel list he, when very busy and pushed for time, gets mixed up among the many illnesses he has to deal with. I do not mean that he gets mixed up with the individual case which he has under his attention at the visit, but with the aggregate certificates when they are being signed.

Then we have the third or final certificate, which in all the forms used is quite simple. Speaking generally after a year's experience, we are of opinion that the simplest series of certificates are the best, and this would be on the lines of the doctor having the initial certificate in his possession ready to use at any time, which could be attached to the continuation and final forms for filing purposes, and which should be in the possession of the societies. I would here suggest that the societies should immediately on receipt of the initial certificate from the patient regularly hand to the patient the continuation and final certificate forms, so that either the one or the other could be signed by the doctor when necessary without any delay or trouble. I have repeatedly to ask the patient to get the continuation and final forms from his society. It is only by strict co-ordination between the societies and the doctors on this point that the number of sick days per insured person can be kept down.

I know perfectly well that some doctors decline to act as watchdogs over sickness benefit, as they say it is the business of the societies to look after that. I sympathize with them a little in that respect, because it is really your business and not ours, but at the same time I regret this attitude very much on the ground that it is in our interests as well as yours, now that we have undertaken the work of the Act, to make the panel system a success, and do all we can to make it work smoothly. As an example of what can be done in that respect, I may be allowed to refer to my own sick-rate returns for 1913. Mr. Appleton stated at the first meeting of the Faculty in Edinburgh, that the sick-rate was 6.5 days during the first year of the Act, considerably over the actuarial estimates, without making any reference to the large number of women and men of all sorts who had been swept into insurance, and for whom no proper estimate had been, or could be, made by the actuaries. I challenged his statement at the time, and said that 4.5 days would be nearer the mark.

He gracefully climbed down a bit, and said that he was referring to a particular society or district, I did not catch which. Naturally I retorted that he should have said so, and not have made a general statement. Since then I have made up my statistics, and find that my sick-rate is 3.87 days, less than 4 days.

While on the question of certificates I would like to have the opinion of the members on two very interesting points: (1) When a patient enters a public hospital for a surgical operation or special medical treatment, do the societies

propose to pay sick benefit during the time they are in the hospital (*a*) to patients who have no dependants, (*b*) to patients who have dependants? If sick benefit is paid to either class, do the societies wish a continuation certificate signed week by week by the panel doctor, or are they willing to pay sick benefit on the report of the sick steward that they are still under treatment in the hospital? Again, if they delay payment of sick benefit until they leave the hospital, will the societies pay the sick benefit which has accrued during their stay in the hospital on a certificate given by their doctor on returning to their homes? This is a very important matter, as the addition of three or four weeks' accrued benefit during the convalescent period at their homes makes a very considerable difference in providing them with extras to hasten their recovery, so as to enable them to return to their work as soon as possible. (2) We would like to know what is the definite attitude of the societies in cases of sickness during pregnancy, and due to pregnancy. Of course we all know that a patient, married or unmarried, suffering from illness rendering her incapable of work, not in any way directly due to pregnancy, is entitled to sick benefit; but what is your position as regards illness directly due to pregnancy? Is it that you will or will not pay sick benefit to such a patient up to and four weeks after labour? Do you discriminate between married and unmarried women in your action?

These are questions on which as yet we have failed to get a definite ruling from the Commissioners. They say they cannot do so, because they may have in the future to act in their judicial capacity in individual cases, and that to give a general ruling would prejudice them. So far as I can learn, some societies at least have definite rules of their own on this matter, and others have not, and it would be well if all the approved societies could come to a general agreement, and have it put, if necessary, in an amended Act. If such were done, there would be similar decisions given by the Medical Service Subcommittees on disputed cases all over the country, and thus the spectacle of one Insurance Committee allowing it and another disallowing it would be avoided.

Before leaving the subject of certificates I may be allowed to draw the attention of the societies to what I fear may become an established custom, if not checked at once. Some agents have been advising their insured clients to go on sick benefit when neither the doctor nor the patient considered it was necessary. I will give two cases in illustration. A young woman was visited on a Saturday forenoon for diarrhoea, and prescribed for. As I was passing her door on the following day I looked in and found her better, and it was agreed that she would be able to go to her work on the Monday. On the following Friday evening her mother called to ask for a certificate up to the following day (Saturday)—that would be four days' sick benefit—on the ground that the visiting agent, on calling for another purpose, and learning that the girl had been ill, had advised the patient to take the week. I gave the certificate under protest.

A few weeks ago I visited a patient who was on my list. She at once told me frankly that she was not now an insured person, and that she had sent for me as her private doctor. She was a patient of mine for years before the Act came into force. She had not paid contributions since the end of last July, having ceased to be an employed person at that time. Her society agent (a large collecting society) also calling for another purpose, advised her to claim sick benefit, and supplied her with the declaring on certificate, telling her to get me to sign it. I pointed out to her, what she already knew, that as she was not now an insured person, and had not paid contributions for nearly eight months, and as this was a new financial year, she was not entitled to any kind of benefit. She admitted the fact, but said she only came for the certificate because she was pressed to do so by the agent. This is a thing that should be put down by the societies at once with a firm hand. If this is done by visiting agents with any ulterior object whatever it is very wrong, and doctors have quite enough sins and faults to answer for without having such a sin of commission added to their problematical faults.

The question of excessive certification is not very acute in Scotland, so far as I can learn. There are certainly a few cases where doctors have been somewhat easy in granting certificates, but the effects have not been very marked. Statements have been made, both in and out of Parliament, regarding the solvency of societies, as to whether they are or would be able to pay the minimum benefits, and more especially the women's societies. During the past few months several approved societies have published their annual reports, showing a very considerable balance to the good. Three weeks ago four women's societies in Scotland disclaimed the charge that they had expended any sums in excess of the actuarial expectation of sickness for women. On the contrary, they have accumulated substantial surpluses in respect that the sickness benefit actually paid has been materially less than the estimate of the Government actuary. Mr. Handel Booth, at a recent meeting of the Faculty in London, stated that the sickness claims for women were undoubtedly larger than those for men, and more was paid out in actual cash, despite the fact that men were entitled to 10s. a week, against a smaller receipt by women. On the other hand, a doctor in an industrial district in the North of England, with a list of about 1,800, published some interesting figures a fortnight ago. For six months, from July 1st to December 31st, he made 3,665 visits and consultations, at an average fee of 1s. 8d. each. Dividing the patients into sexes, he found that

Men and boys received	... ...	2,778 visits.
Women and girls received	...	887 ,,

Or in the proportion of 3 to 1.

He also found the

Proportion of males to females on his list was 3 to 1.
Proportion of visits to males, as compared with visits to females, was 3 to 1.
Proportion of males under treatment to females under treatment was 3 to 1.

These figures, though on a smaller scale than those of Mr. Booth, would seem to indicate that women were not receiving more attendance than their share as compared with men, and inferentially would not receive more sick benefit than their share as compared with men. My own figures fairly well corroborate these facts. One, however, cannot dogmatize too much on these figures, for while Scotland is coming through the ordeal very well, a very different state of matters is being experienced in England, where it is said the sick benefit and certification are excessive; but for actual facts we must wait till the report of the Departmental Commission is published.

To summarize the question of certificates:

1. They should be uniform in every way and as simple as possible.
2. The initial certificate given by the doctor should be accepted and attached to the society's form. It is bad form to say to an insured person that no sick benefit will be paid unless the doctor fills up the declaring-on form on the society's certificate after he has already granted the initial certificate.
3. It is bad form to refuse sick benefit to a patient without dependants while in hospital. It helps very much during convalescence after leaving hospital.
4. It is bad form for any agent to advise a patient to go on sick benefit without being advised by the medical man to do so.

Medical Referees.

On the broad question I do not think many panel practitioners object to the principle, for in certain cases, I believe, most doctors would welcome their appointment, on the ground that it would share the responsibility of deciding the suitability or otherwise of a particular individual being entitled to sick benefit. Personally, while I can very well make up my mind whether a person should or should not receive sick benefit in the majority of cases which I have to deal with, as I have no fear of a complaint being trumped up against me, so long as I feel and know I am doing rightly, yet there are cases coming to me, a very small number, for which I do not altogether care to take the whole responsibility of deciding at once. Yet in the two cases in question I decided, after a little more observation, that they were fit for work, and they accepted the decision quite cheerfully; and in these cases I would welcome a competent referee. But really it is not a question for the doctors to say whether there should or should not be referees appointed—it is a matter for the Commissioners and the approved societies themselves, and them alone. That there is some ground for the appointment of referees is evidenced by the experience of some insurance areas where medical referees have been made use of.

In Bristol there were 50 cases in November last sent to the referee, and of these 26 were found fit for work, 7 did not attend for examination, and 17 were found unfit. During the nine months January to September 593 cases were seen, and 380 were pronounced fit, and 213 unfit.

In London up to October 31st, 1913, there were—

	Fit.	Unfit.	Withdrawn.	In Suspense	Total.
Men ...	33	54	13	3	103
Women ..	175	113	63	17	368
	208	167	76	20	471

Other places have a similar record, less or more.

Before undertaking the duty of appointing medical referees for the purpose of detecting cases of malingering, many cases of which are quite patent to the doctors, though some of them have not yet realized their obligation through ignorance or inadvertence, while others have not yet been able to summon up the courage to be firm and say No! I would offer some suggestions to the societies, which may or may not be of some use to them:

1. A medical referee should be a man of some standing and experience of working-class practice.

2. He should be a man whose opinion would have some weight, and be acceptable to the average panel practitioner, whether he were a panel or non-panel doctor.

3. As the referee must make a very careful diagnosis, which requires time and skill, he must be paid a decent fee—10s. 6d. has been considered a fair fee for each case.

In the discussion that ensued the following information was given on the question of payment of sick benefit to insured persons while in hospital:

(*a*) *Patients who had no Dependants.*—The representatives of the societies present said that all paid benefit to the patients after they left hospital to assist convalescence, except one society, which deducted one half and made a donation of this amount to the hospital.

(*b*) *Patients who had Dependants.*—All the benefit was paid week by week to the dependants.

Pregnancy.—As regards the question of payment of sick benefit during pregnancy and due to pregnancy it was stated that some societies paid and others did not. Those which did not would pay if they were satisfied that the patient was absolutely unfit for work. If the visiting steward found such a patient moving about the house or doing any little jobs, the sick benefit was cut off. As regards differentiation between married and unmarried women, one or two societies, according to their rules, did not pay benefit to unmarried women on the ground that it fostered immorality.

Resolution.—At the close of the discussion a resolution, "That it was desirable to have a uniform system of certificates all over the country," was unanimously adopted.

INSURANCE ACT COMMITTEE.

THE fourteenth meeting of the Insurance Act Committee was held at the office of the Association on Thursday, April 16th. Mr. T. JENNER VERRALL was in the chair, and the other members present were:—*England and Wales:* Dr. Mina L. Dobbie (London), Dr. E. R. Fothergill (Brighton), Dr. Major Greenwood (London), Miss M. F. Ivens (Liverpool), Dr. I. W. Johnson (Bury), Dr. Herbert Jones (Hereford), Dr. C. H. Milburn (Hull), Mr. D. F. Todd (Sunderland), Mr. E. B. Turner (London). *Scotland:* Dr. John Adams (Glasgow). *Ex Officio:* Sir James Barr (Deputy Chairman of Council).

VOLUNTARY HOSPITALS AND TREATMENT OF CASES IN RECEIPT OF MATERNITY BENEFIT.

The Committee received and approved a report on this subject and recommended the Council to submit the same to the Divisions and Representative Body.

UNTRACED PERSONS.

The Committee recorded its strong protest against the ruling of the Scottish Insurance Commissioners that the names of all insured persons whose addresses are untraceable should, if appearing upon any medical practitioner's list, be removed therefrom, as many insured persons whose addresses might be untraceable were still upon practitioners' lists, and were receiving medical attendance and treatment. The Committee expressed the opinion that the whole difficulty had been created by the failure of the approved societies to supply correct addresses of insured persons to Insurance Committees.

PANEL COMMITTEES.

It was resolved to advise Panel Committees to adopt the Commissioners' model schemes for Panel Committees (see SUPPLEMENT, April 18th, p. 233, and p. 253 of this issue), and to ask the Insurance Commissioners to supply proofs of the proposed Standing Orders for Panel Committees.

CENTRAL INSURANCE DEFENCE FUND.

Letters of thanks were read from two practitioners to whom the Committee had granted assistance. Two further applications for assistance were acceded to.

LOCAL MEDICAL AND PANEL COMMITTEES.

WEST HAM.

PANEL COMMITTEE.

AT a meeting of the Panel Committee on April 7th, when Dr. F. H. DAVUS was in the chair, it was unanimously resolved that the medical members of the Joint Pharmaceutical Subcommittee be instructed to ask the pharmacists to agree that when *aqua* appears in a prescription it shall mean ordinary water.

Allocation of Insured Persons.—A letter from the Clerk of the Insurance Committee, enclosing a copy of a letter from the Commissioners, was read, asking the Panel Committee to take into consideration the methods by which insured persons who were unable to obtain acceptance by a panel doctor should obtain treatment. It was unanimously resolved:

> That on the rare occasions on which an insured person is unable to obtain attendance from a doctor, he should immediately apply to the Clerk of the Insurance Committee, who should immediately allot him to the nearest doctor other than the one to whom he first applied.

Defence of the Profession.—The following resolution was unanimously carried:

> That this meeting of the West Ham Panel Committee, recognizing that the British Medical Association is the only force on which it can depend, asks the Association to forthwith organize a fighting fund.

Reports of Medical Service Subcommittee.—The SECRETARY reported the results of a conference held between the Chairman of the Insurance Committee, the Chairman of the Panel Committee, and himself, following an interview with the Commissioners' representatives upon the exact nature of reports from the Medical Service Subcommittee to the Insurance Committee and the powers of the latter body with respect to them. The report, which was inserted in the minutes of the last Insurance Committee meeting, was as follows:

1. The report to a Medical Service Subcommittee upon a complaint should contain all such relevant facts as appear to the Subcommittee to be established by the evidence placed before them, together with a recommendation as to the action, if any, which should be taken by the Committee.
2. The report should contain no inferences.
3. The detailed facts thus placed before the Insurance Committee by the Medical Service Subcommittee are binding upon the Insurance Committee, and should be sufficient to enable them to decide upon the reasonableness or otherwise of the recommendation.
4. Any discussion which may arise in full Insurance Committee must be confined strictly to the recommendation included in the report.
5. It is competent for the Committee to refer a report back to the Subcommittee to investigate further points and bring up further findings if they consider such action necessary in view of any new evidence that has not been before the Medical Service Subcommittee, but no discussion can take place upon such evidence.

LOCAL MEDICAL COMMITTEE.

A meeting of the Local Medical Committee followed, and considered a case referred by the Medical Service Subcommittee. The Committee instructed the Secretary to inform the Subcommittee that the extraction of teeth forms no part of the duties of a practitioner on the panel under his agreement.

Decision as to Arrangements with Herbalists.

At the last monthly meeting of the West Ham Insurance Committee the Medical Benefit Subcommittee reported the receipt of applications from five insured persons to make their own arrangements for medical attendance and treatment through herbalists. After considering the applications and the memorandum on the subject received from the Insurance Commissioners, the Subcommittee recommended that in the interests of the insured persons no individual should be allowed to make his own arrangements with any other than a qualified medical practitioner. An amendment to refer the report back was moved and seconded, but was opposed by Dr. Challans, and by Dr. Dayus, who said that if the Committee allowed insured persons to receive medical treatment otherwise than from a qualified medical practitioner it would take a very grave responsibility. It was true that the regulations allowed permission to be given, but the Commissioners had safeguarded themselves by saying "with the consent of the Insurance Committee." They therefore threw the onus upon the Committee, trusting to its good sense not to give permission. On being put to the meeting the amendment was declared lost; the report was therefore adopted.

EAST SUFFOLK.

Panel Committee.

The monthly meeting of the East Suffolk Panel Committee held at Saxmundham on April 14th was attended by thirteen members, including the Chairman, Dr. Helsham (Beccles).

Organization of Committees.—The Chairman submitted a report of the recent Conference of Panel Committees, and it was resolved that this committee should subscribe to the preliminary expenses of the Provisional Committee at the rate of £1 per 20,000 insured persons in the area. On the motion of Dr. Askin, seconded by Dr. Ranson, it was agreed to ask the National Medical Guild to send a representative to address the meeting of panel practitioners which would be summoned to elect the new Panel Committee in June. The model scheme for electing the next Panel Committee having been considered, it was agreed to hold the election at a central meeting at Saxmundham on the second Tuesday in June, and that the numbers of the Committee should remain at twenty-four.

The arrangements under Articles 21 (4) and 35 (1) were discussed. On the motion of Dr. Wood-Hill, seconded by Dr. Leach, it was agreed: "That undesirable persons shall not be refused by the nearest doctor," and that by adopting this rule questions A, B, and C would be answered.

Allocation of Insured Persons.—After considerable discussion it was resolved, on the motion of Dr. Ranson, seconded by Dr. Jeaffreson:

> That the unallocated patients should be allotted to doctors in proportion to the number of patients already on their lists.

Accurate Records.—On the motion of Dr. Askin, seconded by Dr. Wood-Hill, it was resolved:

> That this Committee desires to draw the attention of doctors on the panel to the extreme importance of keeping a most accurate record of all services rendered to insured patients, inasmuch as an attempt is certain to be made in the near future to prove that they are overpaid.

A copy of this resolution was directed to be sent to every panel practitioner in the area.

Reallocation of Patients.—A complaint from a doctor, relating to the reallocation of patients whose original attendant had resigned from the panel, was considered. The doctor resigned on January 12th, and his patients could not be on the lists of other doctors on that date; and as the payment for this year was based on the number of patients on a doctor's list on the first day of each quarter, no doctor could receive payment for these patients for that quarter. The Committee considered that this arrangement was unfair to the other doctors, and instructed the Secretary to ask the Insurance Committee if they could allow these doctors to receive payment for the first quarter for all those patients who came on their lists during that quarter.

GLASGOW.

Local Medical and Panel Committees.

By instruction of a joint meeting of the Local Medical and Panel Committees of the Burgh of Glasgow, held on April 17th, the following letter has been sent to the Scottish Insurance Commissioners:

The Secretary, National Health Insurance Commission (Scotland).

Dear Sir,—I am instructed by the Local Medical and Panel Committees to convey to the Commissioners an expression of the intense dissatisfaction felt by insurance service practitioners in Glasgow at the protracted delay in adjusting the medical accounts for last year, and the absence of any indication that the administration of medical benefit will proceed on a less unsatisfactory basis in the current year. While recognizing the many difficulties that the insurance authorities have had to deal with, practitioners feel that it is not unreasonable to expect that the end of the first quarter of the second year should have witnessed some way out of the chaos of the first year. As a matter of fact, after fifteen months of service, they are still in the dark as to the extent of their responsibilities, and they are still far short of having received their just remuneration for services rendered. During the year persons were accepted and attended by doctors on production of any evidence of their being insured, on the understanding that payment would ultimately be made as soon as "identification" was completed. I may remind you that, towards the end of 1913, in view of the failure by some approved societies to complete their returns, the Insurance Committee proposed to pay in full for all unidentified forms, and it is understood that the Commissioners ratified the proposal. But the payment has not yet been made, three months after the close of the year, and the unidentified persons are still receiving attendance and treatment. The Committees wish to know now definitely when the promise made to practitioners will be implemented, and the balance, amounting to 15 to 20 per cent. of the total sums due to practitioners, will be paid.

Apart from the delay on the part of the authorities to fulfil their bargain with practitioners, the latter feel that they have been unjustly dealt with in other respects, as, for example:

Temporary Residents.—It is understood that payment for the treatment of temporary residents during last year is to be made out of the Medical Benefit Fund, in spite of the admission made by the Commissioners that a deduction for such a purpose would be *ultra vires*. The injustice appears all the greater in view of the fact that apparently the sum to be allocated to Glasgow for medical benefit for last year is much smaller than was anticipated.

Allocation.—In the agreements between practitioners and Committees the Medical Benefit Regulations are incorporated and form part. Regulation 17 (3) required Committees "to provide for the distribution amongst practitioners on the panel of those insured persons for whose treatment no arrangements have been made." In your letter to me of October 9th you state that "the allocation of those insured persons who have not yet chosen a doctor will take place at the earliest possible date." Meetings of practitioners were held, time and money and energy were spent in arriving at an equitable method of allocation, and it was naturally expected that the bargain would be carried through. On the strength of that expectation many practitioners incurred financial responsibilities they would not otherwise have undertaken. The end of the year arrived without any allocation having been made, and in time it was discovered that none would be made. And yet not a word of explanation has been given of this breach of faith. Apparently doctors are expected to observe their agreement, while the other parties—the insurance authorities—may ignore it.

I am to point out further that, just as Regulation 17 (3), incorporated in the agreements for last year, was absolutely ignored, so also, as far as regards the first quarter of this year, the corresponding regulations, namely, Articles 21 (4) and 35 (1) have not been carried out. The Panel Committee has not yet been asked by the Insurance Committee to consider a scheme, and it is understood that the latter is awaiting the issue of a memorandum on the subject which the Commissioners promised on February 24th to circulate at an early date. It was hoped that, whatever might be the confusion in the first year, at least the second year would get a fair start. So far there is no evidence that that is so. Some part of the administrative machinery has completely broken down, and it would be some satisfaction to know that attempts were being made to repair it.

Undelivered Medical Cards.—It was with amazement and dismay that practitioners learnt that the Commissioners propose to withdraw from doctors' lists the names of some 43,000 insured persons whose medical cards have been returned undelivered. Apart altogether from the

obvious injustice to the doctors concerned, the proposal is unfair to the insured. Its immediate effect would be to deprive those people of their right to medical attendance and treatment. In the absence of any arrangements for the treatment of insured persons not on doctors' lists, such treatment as they are entitled to under the Act is contingent upon the good will of practitioners. Such good will has been cheerfully manifested during the past year. No insured person who desired it need have failed to get treatment; it was given freely, whether the individual was on a doctor's list or not. But that good will cannot be counted upon to last indefinitely, or to stand such a strain as the proposal in question would put upon it. It is the sincere desire of practitioners in this area to work harmoniously and to further the Act as best they can, and they have done so in the face of considerable provocation; but the time has now come when the committees representing the profession feel that, unless justice is done and the claims of practitioners satisfactorily adjusted at a very early date, they will be reluctantly compelled to advise doctors to refuse to treat any person not definitely on their lists, and to charge all others as private patients.

It is also contemplated that an appeal to some other source of authority may require to be made for the satisfaction that has hitherto been denied them by the authorities constituted under the Act.

I am instructed to forward a copy of this letter to the British Medical Journal.—I am, yours faithfully,

James R. Drever,
Secretary, Glasgow Burgh Local Medical and Panel Committees.

MIDLOTHIAN.

Panel Committee.

A special meeting of the Panel Committee for the County of Midlothian was held on April 9th, when Dr. S. C. Fowler was in the chair, and seven other members were present.

Dispensing by Panel Practitioners.

A letter was submitted from the Secretary of the Medical Benefit Subcommittee suggesting that the Panel Committee should report to the Subcommittee on the individual cases of doctors claiming to dispense on a capitation basis.

The Panel Committee welcomed the opportunity of expressing its views upon such an important matter, and adopted a memorandum in which it reminded the Insurance Committee that the inducement had been held out to rural practitioners that they would receive any benefit there was to be got from the capitation fee for dispensing in order to compensate them for the difference of circumstances when compared with their colleagues in towns and burghs. But with the introduction of the 1913 Regulations and the issue of the 1914 agreement, the conditions were changed and the power to arrange matters was now vested in the hands of the Insurance Committee, subject to the approval of the Commissioners. The Panel Committee maintained that the practitioners received scant consideration from the Commissioners, but only raised the question at this time in order to emphasize again the protest already made against the absolute failure of the Insurance Committee to submit such changes for the opinion or approval of the recognized Statutory Committee as prescribed in the Regulations. It was for the County Committee to make the best arrangements for the benefit of the insured persons irrespective of the rights or claims of either chemist or doctor, having always in view that no injustice be done to either; but the Panel Committee was strongly of opinion that in the whole matter the rights or supposed rights of chemists were being considered and enforced without any regard being paid to the views of medical practitioners, and even without consultation with them. The Committee protested against any such one-sided treatment, and pointed to the distribution of surplus drug funds amongst chemists as being a demonstration of the tendency to treat the chemist to a capitation fee without calling it such. In cases of emergency the practitioner was bound to supply drugs. This he did willingly in terms of his agreement, because of the sensible arrangement which saved him the necessity of rendering accounts.

In the rural areas there was a point at which the insured patient was better served when the medical practitioner dispensed, and that point could only be determined by a knowledge of each practice and its requirements. It was only fair that an arrangement should be made which would not entail a hardship on the practitioner, and rendering accounts would certainly be a hardship. If dispensing by the practitioner was the best course for some of that practitioner's insured patients, it was not possible to treat the matter in other than a broad manner. The only possible working plan was to confer on the practitioner, where his practice made it necessary or advisable, the privilege of dispensing for districts so long as these could be tolerably well defined.

For these reasons the Panel Committee recommended that practitioners in certain specified districts should be allowed to dispense on a capitation basis.

INSURANCE NOTES.

Lambeth Insurance Practitioners' Association.

At a meeting on April 15th the Executive Committee of the Lambeth Insurance Practitioners' Association, after deciding to support the suggestions put forward in circular No. 3 of the London Panel Committee, formulated opinions to the following effect:

It would be a good thing to get established in the area a clinic to which local medical men could attach themselves and send or bring cases for discussion. If those in the district who had specialized in various branches of medical practice joined its staff, such a clinic would be a real step in advance in the administration of medical benefit under the Insurance Act. It might be associated with the dental clinic whose establishment in the area had already been proposed.

If there were any changes in the conditions of service in future agreements with the London Insurance Committee, much longer time for their consideration by practitioners should be allowed.

It should be regarded as legitimate for a doctor to refuse a new insurance patient if any other panel practitioner lived nearer the patient in question.

Sick sheets, together with initial, continuation, and final certificate forms and counterfoil, should be supplied.

A flat rate of, say, 1s. 6d. should be paid to medical men for an urgency supply of drugs, and surgery cards, stating the hours at which the shops of local chemists are open, should be supplied. The drug tariff should be revised every six months and an official pharmacopœia, containing priced prescriptions for stock mixtures, be issued. A moderate use of prescriptions in the form of "Rep. mist." should be regarded as legitimate, and attention should be directed to the possibility of the doctor being surcharged in cases of continuous extravagant prescribing.

CORRESPONDENCE.

Certification under the National Insurance Act.

Dr. Maurice Jacobs (Hull) writes: I should like to endorse the remarks of Dr. Hubert Cheetham. I have searched the Journal in vain for some appreciation of the fact that we are compelled by the terms of our agreement to furnish a certificate in every case of incapacity, no matter how trivial the ailment or how brief its probable duration. And if, as is the rule in my experience, the society fail to investigate the case during the first week or ten days, and in consequence the patient claim one or two weeks' sick pay when he is not entitled to it, how on earth can the honour of the profession be involved? Not the honour of the profession, but the Commissioners' reputation for common sense is at stake.

INSURANCE ACT IN PARLIAMENT.

Investment of Reserve Funds.

The Financial Secretary to the Treasury has informed Mr. Fred Hall (Dulwich) that further legislation would not be required to enable the reserve funds under the National Insurance Act to be utilized for rural housing schemes. The funds could be so applied through the machinery of the Local Loans Fund, and Section 54 (3) of the National Insurance Act gave a preference to Local Loans Fund securities issued for the purpose of providing capital for housing as investments for insurance funds. The question of giving special facilities for loans from the Local Loans Fund for sanatorium purposes was under consideration.

Full Benefits (Capital Sum Payable).

Mr. Tyson Wilson asked a question with regard to a man, aged 28, who until January 21st was a member of the West Riding police force, but was now a tram driver,

who had been informed by the secretary of the approved society he desired to join that he would have to pay a capital sum of £4 8s. if he wished to have the full monetary benefit provided by the Act; Mr. Wilson inquired how this amount was made up.—Mr. Wedgwood Benn said the capital sum payable under Section 9 (4) of the National Insurance Act, 1911, to secure full benefits for a man entering insurance for the first time after October 12th last was £4 8s. at age 29. This amount represented approximately the liability incurred by the society in accepting members of this age who did not bring with them any reserve value.

Medical Benefit.

Mr. Shirley Benn asked a question about an insured woman in the area of the Essex Insurance Committee who had been refused permission to contract out of medical benefit, although she was subject to fits and had for over two years been under a medical practitioner who refused to join the panel. He asked whether anything could be done to induce the Committee to assent to the father's request to be allowed to keep his daughter, the injured person, under the same doctor. Mr. Wedgwood Benn replied that the grounds stated in the application were not considered by the Committee to justify consent, but that it was open to the insured person to renew her application, and to bring to the notice of the Committee any facts not previously before it.

Funds in Hand in London.

Sir Henry Craik asked the Chancellor of the Exchequer whether, in view of the difficulties which had arisen in distributing the money, now in the hands of the London Committee in respect of insured persons who had not been allocated to a doctor, amongst the doctors on the panel, in accordance with the understanding clearly laid down, he was prepared to introduce a single-clause bill to remedy this injustice.—Mr. Wedgwood Benn said that he had nothing at present to add to the reply made on March 10th (Supplement, March 21st, p. 177), when he stated that the distribution of these funds was in accordance with the Regulations and the doctors' agreements, and was a matter—in the first instance, at any rate—for the Committee itself with whom the agreements had been made. Mr. Benn therefore is still hoping that the London Insurance Committee will deal with the question. [Notices of motion on the subject were placed on the agenda paper of the Committee for April 23rd.]

Ireland.

Mr. Arthur Henderson asked whether the Chancellor of the Exchequer intended to make an attempt this session to secure the passage of the bill to extend medical benefits under the National Insurance Act to insured persons in Ireland.—Mr. Benn said that he feared that it was impossible to make the promise asked for.

Medical Tickets.

Mr. C. Bathurst asked (1) whether approved societies were instructed to cease notifying the Insurance Committees of the changes of addresses of their members as from January 12th, whereas the London Insurance Committee failed to send out medical tickets to insured persons resident in its area until the end of March, and that over 25 per cent. of the medical tickets sent out by that Committee had already been returned through the dead letter office, and what steps he proposed to take to secure that the medical tickets should reach insured persons in London who had not received the same and who were having to pay for medical treatment as private patients; and (2) whether attention had been called to the letters of complaint constantly being received by approved societies from members who had not received medical tickets and who had not received any answer to the applications they had made for the same upon the prescribed form; whether in a number of such cases insured persons were being compelled to pay fees to panel doctors for treatment given before their medical card was received, and what steps the Government proposed to take to deal with such cases?—Mr. Wedgwood Benn (Lord of the Treasury) said that experience had shown that approved societies did not become aware of the changes of address of their members sufficiently early to render their notification to Insurance Committees of any value commensurate with the labour involved; and arrangements had accordingly been made under the system now established with the express object of enabling such notifications to be dispensed with. As he had already stated, special procedure had been set up to enable insured persons who had not received medical cards to obtain them on application. There was no reason to believe that these arrangements were not adequate for the purpose, but if particulars were furnished of the cases referred to in which applications had not been promptly dealt with, he would cause inquiries to be made.

Maternity Benefit.

Mr. G. Locker-Lampson asked how many deposit contributors approximately had been unable to obtain the full maternity benefit of 30s. owing to the funds to their credit being exhausted.—Mr. Benn said that the number was approximately 4,300 up to March 31st.

Mr. F. Hall (Dulwich) asked how many deposit contributors had received maternity benefit under the National Insurance Act, and the average amount received by each such contributor.—Mr. Benn said that the figures up to March 31st were 6,242 and 22s.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following notifications are announced by the Admiralty: Staff Surgeon Nelson J. Roche to the *Victory*, additional, and for trial of the *Isis*, April 21st; Staff Surgeon Thomas W. Jeffrey to the *Victory*, additional, and for trials of the *Victor*, April 21st. Surgeon Charles F. O. Sankey to the *Dwarf*, on recommissioning, undated. Acting Surgeon Arthur E. Panter to the *Victory*, additional, for course of instruction at the Naval Medical School, Royal Naval College, Greenwich, and at Haslar Hospital, April 29th. The following Acting Surgeons have been confirmed in the rank of Surgeons: Percy P. Wallis, April 11th, 1913; Arthur R. Sharrod, M.B., John S. Elliot, M.B., Albert J. Tomkinson, M.B., Thomas J. Kilbride, M.B., John R. Haldane, M.B., Gerald S. Harvey, M.B., John P. Blockley, M.B., William H. Murray, George H. Hayes, M.B., Henry C. A. T. Cannon, and Hugh J. Hopps, M.B., October 3rd, 1913. The following have been appointed Acting Surgeons with seniority of April 3rd and all appointed to the *Victory*, additional, for course of instruction: F. C. Hunot, H. B. Parker, M.B., R. F. Quinton, M. J. Aitken, M.B., J. L. Priston, J. A. Maxwell, M.B., B.A., W. G. Thwaytes, M.B., M. S. Moore, M.D., B.A., W. F. Peattie, M.B., F. E. Fitzmaurice, C. E. Greeson, M.D., T. J. O'Riordan, M.B., J. C. Kelly, M.D., B.A., H. W. Fitzroy-Williams, M.B., T. Hill, M.B., J. M. Horan, and G. M. Graham, M.B.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Cadet-Corporal Ribton G. Blair, from the Belfast University Contingent, Officers' Training Corps, to be Lieutenant on probation, March 24th.

Cadet Thomas Warrington, from the London University Contingent, Officers' Training Corps, to be Lieutenant on probation, March 25th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns 8,946 births and 5,192 deaths were registered during the week ended Saturday, April 18th. The annual rate of mortality in these towns, which had been 16.5, 16.2, and 15.0 per 1,000 in the three preceding weeks, fell to 14.9 per 1,000 in the week under notice. In London the death-rate was equal to 14.5, against 16.5, 15.5, and 13.5 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 6.0 in Enfield, 6.4 in Hornsey, 6.9 in Wakefield, 7.3 in Edmonton, 7.4 in Ilford, and 7.8 in Willesden to 21.0 in Blackburn, 21.6 in Gloucester, 22.2 in Barnsley, 24.3 in Rochdale, 25.5 in Stockton-on-Tees, and 29.1 in Dudley. Measles caused a death-rate of 2.3 in Nottingham and in Sheffield, 2.6 in Swansea, 2.8 in Bootle, 3.0 in Dudley, and 3.5 in Stockton-on-Tees, and whooping-cough of 1.7 in Walsall and 2.6 in Swansea. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 44, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 7 were recorded in Birmingham, 7 in Liverpool, 4 in Stoke-on-Trent, and 2 each in Dudley, St. Helens, Southport, Preston, and Rotherham. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,145, 3,182, and 3,068 at the end of the three preceding weeks, had fallen to 2,992 on Saturday last; 289 new cases were admitted during the week, against 347, 399, and 306 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 18th, 623 births and 319 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 500 births and 470 deaths in the preceding period. These deaths represent a mortality of 22.5 per 1,000 of the aggregate population in the districts in question, as against 20.3 per 1,000 in the previous period. The mortality in these Irish areas was, therefore, 7.6 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.0 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 26.1 (as against an average of 25.9 for the previous four weeks), in Dublin city 29.4 (as against 23.0), in Belfast 21.2 (as against 19.3), in Cork 27.9 (as against 22.8), in Londonderry 17.8 (as against 16.5), in Limerick 27.1 (as against 22.7), and in Waterford 32.3 (as against 24.7). The zymotic death-rate was 3.4, as against 2.8 in the previous week.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary, £120 per annum.

BIRKENHEAD UNION.—Senior Male Resident Assistant Medical Officer. Salary, £150 per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salary, £80 per annum each.

BIRMINGHAM CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £160 per annum.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Salary, £105 per annum.

BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Salary at the rate of £50 per annum and £10 bonus on satisfactory completion of six months' service.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Dudley Road Infirmary.—Salary, £150 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £150 per annum.

BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY.—Medical Officer. Salary, Rs. 500 per calendar month.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon (male). Salary, £100 per annum.

BRIGHTON PARISH POOR LAW INSTITUTION.—Resident Assistant Medical Officer. Salary at the rate of £140 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—(1) Honorary Medical Clinical Assistant. (2) Honorary Surgical Clinical Assistant.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £250.

BURNLEY: VICTORIA HOSPITAL.—Second House-Surgeon. Salary at the rate of £100 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Resident House-Surgeon. Salary, £50 a year.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistants.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

COLONIAL OFFICE.—Three Medical Officers for Ankylostomiasis Campaign in Trinidad. Salary for officer in charge, £600 per annum, and for two assistant medical officers, £400 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £140 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £200 per annum.

DERBY COUNTY BOROUGH.—Assistant Medical Officer of Health (Junior). Salary, £150 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £120 per annum.

DUDLEY: GUEST HOSPITAL—Senior Resident Medical Officer. Salary, £120 per annum.

DURHAM COUNTY COUNCIL.—Two School Medical Inspectors. Salary, £300 per annum, rising to £350.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) Medical Officer to Casualty Department; (2) House-Surgeon. (Males.) Salary at the rate of £100 and £75 per annum respectively.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer (male). Salary, £250 per annum, rising to £275.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

ENNISKILLEN FERMANAGH COUNTY HOSPITAL.—House-Surgeon (male). Salary, £104 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HALIFAX UNION POOR-LAW HOSPITAL.—Resident Medical Officer. Salary, £120 per annum and £20 for dispensing.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Clinical Assistant to the Throat, Nose, and Ear Department.

HASTINGS: EAST SUSSEX HOSPITAL.—House-Physician (male). Salary at the rate of £80 per annum.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £75 per annum.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KENT COUNTY COUNCIL, Maidstone.—Locumtenent Tuberculosis Officer. Salary at the rate of £500 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon, £100 per annum.

LANCASHIRE COUNTY ASYLUM, Winwick.—Locumtenent Medical Officer. Salary, 5 guineas a week.

LEEDS GENERAL INFIRMARY.—(1) Two House-Surgeons. (2) Resident Medical Officer at the Ida and Robert Arthington Hospitals, salary, £60 per annum.

LEICESTER POOR-LAW INFIRMARY.—First and Second Resident Assistant Medical Officers. Salary, £200 and £150 per annum respectively.

LEICESTER ROYAL INFIRMARY.—Assistant House-Surgeon. Salary at the rate of £100 per annum.

LIVERPOOL: ST. PAUL'S EYE HOSPITAL.—House-Surgeon. Salary, £80 per annum.

MALDON UNION.—Medical Officer and Public Vaccinator. Salary, £80 per annum and fees.

MANCHESTER CHILDREN'S HOSPITAL OUT-PATIENTS' DEPARTMENT.—(1) Male Senior Medical Officer. (2) Assistant Medical Officer. Salary, £180 and £50 per annum respectively.

MANCHESTER CITY.—Assistant Medical Officer at the Baguley Sanatorium for Treatment of Tuberculosis. Salary, £200 per annum.

MANCHESTER ROYAL INFIRMARY.—Assistant House-Surgeon. Salary at the rate of £100 per annum.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland Street, W.—Assistant Dental Surgeon.

NATIONAL SANATORIUM, Benenden.—Assistant Medical Officer. Salary, £120 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—(1) Honorary Assistant Surgeon. (2) Junior Medical Officer. Salary at the rate of £80.

NOTTINGHAM CITY ASYLUM.—Locumtenent Assistant Medical Officer. Terms, 5 guineas per week.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

OLDHAM ROYAL INFIRMARY.—(1) Senior House-Surgeon; (2) Second House-Surgeon. Salary, £140 and £120 per annum respectively.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Salary at the rate of £52 10s. a year each.

PEMBROKESHIRE EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary, £300 per annum.

PERTH ROYAL INFIRMARY.—House-Surgeon. Salary, £60 per annum.

PETERBOROUGH INFIRMARY AND DISPENSARY.—House-Surgeon (male). Salary at the rate of £120 per annum.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £225 per annum, rising to £250.

PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer (male) for Workhouse Infirmary, etc. Salary, £130 per annum, increasing to £140.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) Honorary Medical Registrar. (2) Pathologist; salary, 120 guineas per annum.

PRESTON: ROYAL INFIRMARY.—Resident Medical and Surgical Officer (male). Salary, £150 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—House-Physician. Salary at the rate of £80 per annum.

READING: ROYAL BERKSHIRE HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Two Honorary Physicians.

ST. PANCRAS UNION.—Senior Assistant Medical Superintendent of the South Infirmary and Senior Assistant Medical Officer of Workhouse. Salary at the rate of £175 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SHEFFIELD: EAST END BRANCH OF CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SHEFFIELD ROYAL INFIRMARY.—(1) House-Surgeon. (2) Ophthalmic House-Surgeon. Salary, £80 per annum each.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £140 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTHPORT INFIRMARY.—(1) Senior House-Surgeon. (2) Junior House and Visiting Surgeon (males). Salary, £120 and £100 per annum respectively.

SOUTH YORKSHIRE ASYLUM, Wadsley.—Locumtenent Assistant Medical Officer (male). Salary, £5 5s. per week.

STATE CRIMINAL LUNATIC ASYLUM, Broadmoor.—Junior Assistant Medical Officer. Salary, £225 per annum rising to £250.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST BROMWICH UNION.—Resident Assistant Medical Officer at the Infirmary and Hallam House. Salary, £200 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—(1) Ophthalmic Surgeon. (2) Resident Casualty Officer.

WEST RIDING ASYLUM, Menston.—Fourth Assistant Medical Officer. Salary, £200 per annum, increasing to £230.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY. Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) Two House-Surgeons. Salary at the rate of £125 per annum each.

WREXHAM INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointment: Llanwrtyd Wells (Brecknock).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

CROSSE, R. E., M.R.C.S., Medical Referee under the Workmen's Compensation Act, attached more particularly to the Wandsworth County Court in County Court Circuit No. 45, to act also for the Reading, Newbury, Farnham and Aldershot, and Chertsey County Court, in that Circuit, vice Dr. F. H. Hawkins, deceased, and also as one of the Medical Referees for County Court Circuit No. 52, and to be attached more particularly to the Hungerford County Court.

GRAY, J. S., M.B., District Medical Officer of the Barrow-upon-Soar Union.

JOYNT, N. L., M.B., B.Ch., N.U.I., Assistant Medical Officer to the Crumpsall Workhouse, Manchester.

LEGAT, R. E., M.B., C.M.Edin., District Medical Officer of the Warmley Out-Relief Union.

MACKILLOP, M. H., M.B., Ch.B.Glasg., Assistant Medical Officer of the Merthyr Tydfil Union.

MEARNS, A., M.B., Assistant Medical Officer to the Paddington Parish Infirmary.

MELVILLE-ANDERSON, G. A., M.B., Ch.B.Edin., Surgeon to H.M.S. *Pioneer* in the Royal Australian Navy.

PARSONS, G. L., M.R.C.S., L.R.C.P., District Medical Officer of the Newbury Union.

SMITH, V. Ramsay, M.B., Ch.B.Edin., Surgeon to H.M.S. *Australia* in the Royal Australian Navy.

SUGDEN, E. S., M.D.Durh., Visiting Medical Officer of the Seafield House Institution of the West Derby Union.

SPONG, Ambrose, M.D., Ch.B., F.R.C.S.Eng., Honorary Surgeon to the Torbay Hospital.

THOMSON, A. Maurice, M.B., B.Ch., B.A.O., R.U.I., D.P.H.Camb., Assistant Medical Officer, Middlesex County Asylum, Napsbury, St. Albans.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

BLACK.—On the 20th inst., the wife of James Black, M.D.Edin., Springs, Transvaal, South Africa, of a son.

HIBBERT.—On April 15th, at Auldyn House, Greek Street, Stockport, the wife of Cecil Hibbert, M.D., F.R.C.S.E., of a son.

MARRIAGE.

FOWLER—STONE.—On April 18th, at All Saints, Isleworth, Middlesex, by the Vicar, the Rev. J. H. C. McGill, Oliver H. Fowler, M.R.C.S. Eng., of Cirencester, to Helen Grace Stone, daughter of C. Stone, Lancing, Worthy Road, Winchester.

DEATHS.

LAING.—At Brambletye, Limpsfield, Surrey, on the 19th inst., Alexander George Laing, son of George Davison and Dorothy Laing.

PEARSE.—On April 14th, 1914, at Torquay, Thomas Frederick Pearse, M.D., F.R.C.S.Eng., late Medical Officer of Health, Calcutta, aged 57 years. Indian papers please copy.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W. 8.30 p.m.—Dr. Purves Stewart: Recent Treatment of Cerebro-spinal Syphilis and General Paralysis.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Mr. Shattock: Specimens illustrating Papilloma and Adenoma.

ROYAL SOCIETY OF MEDICINE:
SECTION OF ODONTOLOGY, 8 p.m.—Casual Communications.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
SECTION OF MEDICINE, 5.30 p.m.—Dr. E. P. Poulton: Observations on CO_2 in Alveolar Air of Diabetics, especially in relation to onset of coma. Dr. E. Parkes Weber: (1) Aplastic Anaemia; (2) Multiple Superficial Linear Ulceration of the stomach. Dr. J. A. Braxton Hicks: A Pedunculated Intratracheal Tumour (Sarcoma) causing Bronchiectasis.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Paper: Mr. Ernest Clarke: Errors in Diagnosis and Treatment in Ophthalmic Practice.

FRIDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Professor Keith: Various forms of peritoneal adhesions, bands and mesenteries.

ROYAL SOCIETY OF MEDICINE:
SECTION OF LARYNGOLOGY, 4 p.m.—(1) Annual Meeting and Election of Officers; (2) Cases and Specimens.
SECTION OF ANAESTHETICS, 8.30 p.m.—Paper: Dr. Goodman Levy: Sudden Death under Chloroform Anaesthesia.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY. West London Hospital.—8 p.m., Exhibition of Cases. 8.30 p.m., Paper: Dr. F. G. Crookshank: Exophthalmic Goitre—Its Pathogeny and Treatment.

POST-GRADUATE COURSES AND LECTURES.

DUBLIN: ROTUNDA HOSPITAL.—Post-Graduate Course on Obstetrics and Gynaecology. Obstetrical Lectures: Monday and Wednesday, 10 a.m., Version and Extraction (continued). Gynaecological Lecture; Friday, 10 a.m., Pelvic Infection. Major Operations: Tuesday and Thursday, 10 a.m. Minor Operations: Monday, Wednesday, and Friday, 11 a.m.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—General Clinics, daily. Throat, Nose, and Ear: Monday and Thursday. Skin: Tuesday and Friday. Eye: Wednesday and Saturday. Pathology: Thursday. Radiography: Saturday. Special Lectures: Tuesday, 4.30, Renal Emergencies. Thursday, 3.15, Auricular Fibrillation; 4.30, Affections of the Colon in Tropical Ailments.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS at 4.30 p.m. each day.—Tuesday, Manchester and Salford Hospital for Skin Diseases: Lupus erythematosus. Wednesday, Manchester Royal Infirmary: Demonstration of Medical Cases. Thursday, Ancoats Hospital: Demonstration of Cases. Friday, Royal Eye Hospital: Disease of the Cornea.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Medical School. Friday, 5 p.m., Myocarditis and its Symptoms. Clinics are held daily in the several departments of the hospital: Cardiac, Laryngological, *X* Ray, and the Prevention of Consumption.

UNIVERSITY OF SHEFFIELD.—Post-Graduate Lectures on Syphilis: Tuesday, 3 p.m.; Friday, 3 p.m.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—Medical and Surgical Clinics, *X* Ray, and Operations, 2 p.m. daily. Gynaecology: Monday, Tuesday, Wednesday, and Friday. Eye: Monday, Wednesday, Thursday, and Saturday. Throat, Nose, and Ear: Tuesday, Wednesday, Friday, and Saturday. Skin: Tuesday and Friday. Pediatrics: Wednesday and Saturday.

[*For further particulars of Lectures consult the Index to Advertisements.*]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	APRIL.
24 Fri.	London: Standing Subcommittee, Central Ethical Committee, 2 p.m.
28 Tues.	North Wales Branch, Bala, 2.45 p.m.; Luncheon, 2 p.m.; Branch Council, 2.40 p.m. South-West Wales Division, Carmarthen, 3 p.m.
29 Wed.	Lancashire and Cheshire Branch, Clinical and Scientific Meeting, Royal Infirmary, Liverpool, 4 p.m.

Date.	Meetings to be Held.
	MAY.
5 Tues.	London: Medico-Political Crime and Punishment Subcommittee, 12 noon.
6 Wed.	South-Eastern of Ireland Branch, Kilkenny, 5.15 p.m.
12 Tues.	London: Metropolitan Counties Branch Council, 4 p.m. Glasgow and West of Scotland Branch, Western Infirmary, 3 p.m.; Dinner, 6.30 p.m.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 2ND, 1914.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPORT OF COUNCIL, 1913-14.

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[*For Proceedings of Council (April 22nd): Scottish Committee and Insurance Commissioners: Association Notices: Insurance Reports and Notes: Vital Statistics: Vacancies, etc., see p. 321 et seq.*]

(A) Preliminary.

THE ANNUAL MEETING, 1914.

1. It will be a matter of general congratulation to Members that the 82nd Annual Meeting of the British Medical Association will be held in the historic City of Aberdeen, with its ancient seats of learning and magnificent University Buildings. Under the distinguished presidency of Sir Alexander Ogston, a large and representative gathering from all parts of the British Empire is expected. The Annual Representative Meeting will commence on Friday, July 24th.

THE SCIENTIFIC WORK OF THE ANNUAL MEETING, 1914.

2. The Address in Medicine will be delivered by Dr. Archibald Edward Garrod, the Address in Surgery by Sir John Bland-Sutton, and the Popular Lecture by Professor J. Arthur Thomson. The remainder of the scientific work has been arranged in sixteen sections, and the subjects selected promise material for much interesting discussion. The Sections will meet on Wednesday, Thursday and Friday, July 29th, 30th and 31st.

THE ANNUAL MEETING, 1913.

3. The thanks of the Association are due to Dr. W. Ainslie Hollis, and all those who worked with him, for the great success of the Brighton Meeting. Throughout his year of office Dr. Hollis has shown the keenest interest in the work of the Association, and has been indefatigable in his attendances at Council and Committee Meetings.

ANNUAL MEETING, 1915.

4. The Council recommends:

Recommendation.—That the Annual Meeting, 1915, be held in Cambridge from July 1st to 10th.

OBITUARY.

Name.	Offices held in the Association.
Dr. John Adam	A former President, Northern Counties of Scotland Branch.
Mr. Thomas Launcelot Archer.	Member of the Council of the Metropolitan Counties Branch.
Mr. William Grounds Booth...	A Representative of the Manchester Central Division.
Dr. Robert Leamon Bowles ...	Ex-President of the South-Eastern Branch, Member of the Parliamentary Bills Committee, 1898-1901, and Vice-President of the Section of Medicine, 1888.
Dr. John Henry Brown ...	Vice-President of the Section Gynæcology, 1908.
Dr. Johnston Brown	Former Treasurer of the Johannesburg Branch.
Dr. Frank Buszard	A former President of the South Midland Branch and Chairman of the Northampton Division.
Mr. Andrew Clark	President of Council, 1902-4, Treasurer, 1899-1901. Received Gold Medal for Distinguished Merit, 1905, Vice-President of the Association.
Mr. William Bruce Clarke ...	Vice-President, Section of Surgery, Oxford, 1904.
Dr. John George Durran ...	Member of Council.
Mr. John William Fawcitt ...	President of the North Lancashire and S. Westmorland Branch, 1910.
Dr. Alfred Godson	Member of Council for many years.
Mr. John Thomas Hartill ...	At one time President of the Staffordshire Branch.
Dr. Thomas Hayes	A former Secretary of the Cardiff Division and Representative of the Division in Representative Meetings; a former President of Munster Branch.
Dr. H. Critchley Hinder ...	President of the New South Wales Branch, 1909.
Sir Jonathan Hutchinson, F.R.S.	Founder of the Pathological Museum at the Annual Meeting.
Dr. John Herbert Hawkins Manley	Ex-President of the Birmingham Branch; Vice-President of the Section State Medicine, 1905. Member of Council.
Mr. William Courtenay Milward	Secretary and Representative Cardiff Division.
Mr. Richard Macartney ...	Ex-President of the Gloucestershire Branch.
Dr. Roderick Maclaren ...	Secretary and President of the Border Counties Branch; delivered Address in Surgery Carlisle Meeting, 1896.
Mr. Jerome Eugene O'Sullivan	Representative for Liverpool.
Dr. Rees Griffiths Price ...	Past-President of the South Wales and Monmouthshire Branch.
Dr. John Roberts	A former President of the North Wales Branch.
Dr. John Lloyd Roberts ...	Past-President and formerly Honorary Secretary, North Wales Branch.
Dr. Cecil E. Shaw	Member of Council, 1904-1909; Secretary of the Belfast Meeting in 1909; Member of the Science Committee, 1906-1910; Vice-President, Section of Laryngology and Otology, 1904, and of the Section of Ophthalmology, 1910; and Representative of the Ulster Branch on the Irish Committee, 1909-1911.
Dep. Surg.-Gen. John Lloyd Thomas, R.N.	Member of Council; President of the Navy, Army, and Ambulance Section, 1903.
Sir John Batty Tuke	President of the Section of Psychology, 1895, and gave Address in Psychology at Edinburgh Meeting, 1898.
Mr. Frederick Wallace ...	Member of Council, 1885-1895; President, Metropolitan Counties Branch, 1897.
Mr. Walter Whitehead ...	President of the Association at the Manchester Meeting, 1902.
Mr. Alfred Willett	Vice-President of the Section of Surgery, London Meeting, 1895.
Dr. William Michael Williams..	A former President of the North Wales Branch.

Professor Nathaniel H. Alcock, Mr. James Acworth Angus, Dr. Robert Moore Bowman, Surgeon-General Sir Arthur Mudge Branfoot, K.C.I.E., Mr. John Broadbent, Dr. W. Carnegie Brown, Dr. Robert Hopeton Browne, Dr. Donald Campbell, Dr. Arthur Bristowe Carpenter, Dr. Edward John Walter Carruthers, Dr. Oscar William Clark, Dr. Frederick John Clendinnen, Dr. John Montagu Cuthbertson, Dr. G. H. Roque Dabbs, Dr. Frederic Dale, Mr. Thomas O'Conor Donelan, Mr. Raymond Broadley Etherington-Smith, Mr. Edward Prichard Evans, Dr. William Robinson Evans, Brigadier-Surgeon Edward Footner, Major Herbert Cumming French, Dr. Clement Godson, Dr. John Gorman, Professor Francis Gotch, F.R.S., Dr. Joseph George Harsant, Dr. O. E. Higgens, Inspector-General Sir Duncan McCormick Hilston, K.C.B., Dr. Arthur Edward Horsfall, Dr. James Jeken, Dr. Herbert Stanley Jenkins, Fleet-Surgeon Alfred Hutton

Jeremy, R.N., Mr. James Pierce Johnstone, Dr. Hermann Johnston Jones, Dr. Olaf Kloster, Dr. John Knox, Mr. Cecil Firmin Lillie, Dr. Alexander Lindsay, Inspector-General John Lyon, R.N., Dr. Matthew Martin, Dr. John Meredith, Dr. George Middlemiss, Dr. John Stewart Milne, Dr. Henry Bannerman Morison, Dr. Forbes Robertson Mutch, Dr. Kenneth McAdam, Dr. J. McGee MacCormack, Mr. Keith Norman Macdonald, Dr. Agnes McLaren, Dr. Alexander S. L. Newington, Colonel John Henry Newman, Dr. Edward James Nix, Dr. J. O'Donovan, Surgeon-Lieutenant-Colonel John O'Neill, Dr. John Ernest Paul, Dr. H. B. W. Plummer, Dr. Samuel Poole, Mr. William James Reid, Dr. William Matthew Renton, Lieutenant-Colonel John Ritchie, Dr. F. W. Forbes Ross, Dr. Henry Skelton, Mr. Edward Skinner, Dr. D. Malcolm Smith, Mr. William Smith, Mr. Percy Kingsley Steele, Dr. James Dodd Swallow, Sir Henry R. Swanzy, Dr. Richard Deane Roker Sweeting, Dr. James Henry Targett, Dr. Arthur Hope Taylor, Mr. George Templeton, Dr. Gavin Paterson Tennent, Dr. William Watts Thetford, Professor Jules Thiriar, Dr. John Charles Thorowgood, Mr. Francis Vacher, Mr. Hubert Liston Willcox, Dr. W. R. Willis, Mr. Hugh Begbie Wilmot, Dr. Francis Kenneth Wilson, Dr. H. Garnett Wilson, Dr. Lyttelton Stewart Forbes Winslow, Dr. N. V. Wise.

Growth of the Association.

5. The Association is still able to congratulate itself on the growth of its membership. It is true that the large and abnormal increase of 1911 and 1912 has not been entirely held, yet the membership to-day, notwithstanding the increase in the subscription to £2 2s. for Members resident within the British Islands, shows that the development of the Association is steadily maintained.

Council and Committee Work.

6. The Council and Committee work has been heavy, although not so severe as in 1911 and 1912. At the same time, even now, the demands on the time and leisure of the honorary workers is great, and the Association owes them its special thanks.

(A list of the attendances at Council, Committee, and Sub-Committee Meetings during the year (up to April 30th) will be published in the Supplement to the JOURNAL of May 9th.

Deputy Chairman of Council.

8. In the absence of Dr. Macdonald, attending the Australasian Medical Congress as the official representative of the Council, Sir James Barr, past President of the Association, has acted as Deputy Chairman of Council.

Medical Benevolence.

9. During the year 1913 amounts have been collected through the Central Office for medical benevolence as follows:—

Royal Medical Benevolent Fund ...	£640
Epsom College	£456
Royal Medical Benevolent Fund Society of Ireland	£36

10. The Council is always glad of an opportunity to commend these splendid charities, to bring under the notice of the medical profession the great work they are performing, and to appeal on their behalf for more generous support.

(B) Finance.

Financial Statement.

11. In the last Annual Report it was stated that the finances of the Association were causing the Council great anxiety, and it had become apparent that it was impossible to meet the steadily increasing demands which the profession is making upon the Association unless the subscription for members resident within the United Kingdom was increased. The subscription was accordingly increased as from the 1st January, 1914. It is hoped that the additional revenue will relieve the financial tension consequent upon the great expenditure necessitated by the introduction of the Insurance Act.

12. In the Balance Sheet the Trading Liabilities are normal, and the Loan from the Bank is £3,650 less than at the close of 1912. It will be noticed, however, that there is a loan of £10,000 to the Association from the Insurance Defence Fund, and £600 from the Central Emergency Fund.

Revenue, or Profit and Loss Account.

13. The General Association expenses are less by some £5,000, the variation being almost entirely due to the decrease in legal expenses. This expenditure is still a large item, but it is hoped that it may be further reduced unless the Association unfortunately should be involved in further litigation.

Central Meeting Expenses.

14. Central Meetings expenses show a decrease of nearly £5,000, £2,400 of this represents less expenditure on Representative and Council Meetings, while the State Sickness (Insurance Act) Committee has spent some £1,600 less, the Fractures Committee, which has now completed its work, £400 less, the Medico-Political Committee £175 less, the Science Committee £200 less, and the Scottish Committee £100 less.

Central Premises Expenses.

15. The Central Premises expenses show little variation. The rates and taxes are rather higher and more electric current has been used.

Printing, Stationery and Postage.

16. It is satisfactory to note a shrinkage under these heads.

Central Staff Expenses.

17. With the easing of the pressure of work in connection with the Insurance Act it has been possible to reduce the temporary clerical staff of the Medical Department, and as a result the Central Staff expenses are less by some £400.

Library Account.

18. The Library Account shows little variation compared with former years.

Journal Account.

19. The Editorial expenses are practically the same as for the previous year. The Managerial expenses are less by some £2,550. Of this decrease £1,754 is due to the fact that in the JOURNAL proper the total number of pages for the year was 240 less, while in the Supplement there were 340 pages less. Even with this reduction the publication of so large a Supplement must be a matter of some anxiety when it is remembered that while in the last ten years the JOURNAL itself has remained practically the same size, the number of advertisement pages has substantially decreased, while the Supplement has jumped from 248 pages to 1,212.

20. The total number of JOURNALS produced in 1913 was 1,546,121, or 16,433 more copies than in 1912.

21. The postage for dispatch of the JOURNAL has gone up by some £150. This is on the copies sent out of the United Kingdom. The membership in the Overseas Dominions grows, a fact which will be welcomed throughout the Association.

22. As to the books "Secret Remedies" and "More Secret Remedies," it will be noticed nearly £900 less was spent than in 1912. The sales of "Secret Remedies" have now exceeded 100,000 copies, and "More Recent Remedies" is still in good demand.

Revenue.

23. Advertisements receipts show a slight increase, which must be a matter of satisfaction when it is borne in mind that a large number of advertisements, which would have produced substantial revenue, have been refused insertion during the year on the grounds either that they were unsuitable for the JOURNAL, or that the articles mentioned were being advertised elsewhere in an exaggerated and misleading manner.

24. The £24,000 revenue so derived has been earned without incurring serious bad debts. The total amount that has had to be so provided represents 5s. per cent., a favourable feature when the wide field from which advertisements are drawn is taken into account.

British Medical Association.

Balance Sheet 31st December, 1913.

Dr. **Cr.**

LIABILITIES.

1912		1913 £ s. d.	£ s. d.
£			
337	To Subscriptions paid in advance	392 10 8	
1,033	„ Advertisements ditto	1,188 1 11	
684	„ Contributions	682 4 11	
			2,262 17 6
320	„ Reporting	67 16 6	
161	„ Engraving	71 1 11	
566	„ Printing Journal	521 12 0	
1,344	„ Paper for Journal	1,270 6 10	
1,164	„ Miscellaneous Printing	628 0 2	
154	„ Stationery	106 0 1	
21	„ Repairs	85 11 11	
606	„ Legal Charges	756 9 7	
482	„ Rates and Taxes, Insurance and Electricity	481 2 3	
21	„ Plant and Type	30 3 11	
10	„ Sundries	7 11 9	
77	„ Library Books	91 12 0	
			4,120 8 11
	„ **Loans—**		
	London County and Westminster Bank—Amount of Loan at December 31st, 1913, on Account of New Building, secured by Deposit of Deeds of Freehold		
48,650	Property	45,000 0 0	
	Central Insurance Defence Fund Secured by charge on £3,200 Bank of England Stock and £6,400 Midland Railway Consolidated 2½% Perpetual Guarantee		
—	Preferential Stock	10,000 0 0	
600	Central Emergency Fund	600 0 0	
			55,600 0 0
46	„ Exhibition Account Reserve per contra		56 19 7
	„ **Total Liabilities**		62,010 6 0
	„ **Surplus Account –**		
106,791	Balance on January 1st, 1913	97,667 6 9	
8,834	Less Excess of Expenditure over Income for 1913 brought from Revenue Account	4,076 11 7	
97,667	**Balance being total of Excess of Assets over Liabilities ...**		**93,590 15 2**
			£155,681 1 2

ASSETS.

1912		1913 £ s. d.	£ s. d.
£			
3,459	By Subscriptions in arrear	3,622 7 10	
2,928	„ Advertisements „	3,061 0 9	
802	„ Sundry Sales	525 4 7	
194	„ Furniture and Fittings	202 18 2	
2,027	„ Library	2,020 3 2	
2,056	„ Plant and Type	1,660 4 8	
563	„ Stock of Paper in hand for printing Journal	318 12 5	
417	„ Accrued Rent, &c.	439 12 0	
21	„ Cash at Office	70 4 1	
108	„ Cash at London County and Westminster Bank	1,662 7 2	
	„ INVESTMENTS—		
150,516	„ Freehold Site and Premises, 429, Strand, Agar Street, and Harvey's Buildings	150,516 6 9	
7,560	„ £3,200 Bank of England Stock @ 234½	7,504 0 0	
	„ £6,400 Midland Railway Consolidated 2½% Perpetual Guaranteed		
4,192	Preferential Stock @ 62	3,968 0 0	
			11,472 0 0
39	„ Exhibition Account—Cash at Bank	49 1 2	
7	„ „ „ Cash in hand	7 18 5	
			56 19 7

(The above Assets do not include the unexpended Balances of Capitation Grants held by the various Branches).

£155,681 1 2

Revenue or Profit and Loss Account for the Year ending 31st December, 1913.

		1912.		1913.	
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
General Association Expenses	*Abstract A* ...	11,421 2 0		6,268 9 0	
Central Meeting Expenses	,, *B* ...	11,429 15 10		6,587 12 11	
Central Premises Expenses	,, *C* ...	1,597 9 7		1,699 8 5	
Printing, Stationery, and Postage Expenses ...	,, *D* ...	1,745 6 9		1,638 18 11	
Central Staff Expenses	,, *E* ...	6,656 7 0		6,350 4 6	
Library Account	,, *F* ...	333 6 4		349 17 5	
Journal Account Expenses	,, *G* ...	42,509 7 8		39,966 0 0	
Capitation Grant to Branches	... ...	3,770 15 7		4,199 9 11	
Subscriptions Written off for Deaths	... ...	73 4 0		113 16 3	
Arrears Written off	... ...	1,076 3 6		1,480 10 3	
		£80,612 18 3		£68,541 7 7	
Library—Written off towards Depreciation ...		200 0 0		200 0 0	
Plant and Type—Ditto		500 0 0		500 0 0	
Furniture and Fittings—Ditto		200 0 0			
Investments—Ditto		250 0 0		450 0 0	
		1,150 0 0		1,150 0 0	
		£81,800 18 3		£69,721 7 7	

		1912.	1913.
		£ s. d.	£ s. d.
Subscriptions		33,[illegible] 7 5	33,770 12 0
Journal Account, Total Receipts	See *Abstract G* ...	29,[illegible] 18 10	28,932 2 2
Interest on Investments		[illegible] 13 4	438 13 4
Rent received and accrued		2,[illegible] 15 6	2,[illegible]97 9 6
Returned Scientific Grants		[illegible] 2 2	5 19 0
Transferred from Insurance Defence Fund		7,[illegible] 10 8	...
		£[illegible] 3 0	£[illegible] 7 0
Excess of Expenditure over Income drawn from Surplus Account ...		[illegible] 17 3	[illegible] 11 7
		£81,800 18 3	£[illegible] 7 7

Abstract A.

General Association Expenses.

	1912.	1913.
	£ s. d.	£ s. d.
Auditors' Fee	105 0 0	157 10 0
Award of Gold Medal and Engraving Presidents Badge	—	56 14 0
Bank Charges	71 10 8	82 15 4
Donation to Charing Cross Hospital	10 10 0	10 10 0
Grant to Chairman of Council for Expenses attending Australasian Medical Congress	—	400 0 0
Interest on Loans	1,815 13 3	2,244 9 2
Legal Expenses	7,984 6 10	2,278 16 5
New Typewriter Machines, Repairs and Hire	165 19 2	18 8 9
Office—Petty Cash	171 9 5	164 1 7
Parliamentary Papers	—	20 15 10
Research Scholarships	650 0 0	537 10 0
Scientific Grants	290 0 0	249 0 0
Sundries	173 12 10	67 17 11
	£11,121 2 6	£6,268 9 0

Abstract B.

Central Meetings Expenses.

	1912.		1913.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
ANNUAL MEETING *Daily Journal*	150 0 0		151 3 0	
" " Section Expenses	69 10 7		66 4 10	
		219 10 7		217 7 10
REPRESENTATIVE MEETINGS—				
Railway Fares	1,841 16 10		1,149 18 11	
Printing	1,116 11 10		687 1 11	
Sundries	165 9 7		163 17 4	
Postage	38 9 2		—	
		3,162 10 5		1,000 13 2
COUNCIL—				
Railway Fares	967 15 7		644 16 10	
Printings	882 13 2		503 9 8	
Reporting	203 4 6		40 18 6	
Sundries	—		25 7 0	
		2,053 15 3		1,214 12 0
Railway Fares, Secretaries' Conference		66 2 0		96 17 11
		5,851 18 3		3,429 15 11

Committees.

Arrangements Committee—				
Railway Fares	20 7 5		56 12 2	
Printings	12 11 6		10 9 0	
		32 18 11		69 1 2
Central Ethical Committee—				
Railway Fares	83 1 2		146 17 1	
Printings	75 4 6		119 1 6	
		158 5 8		265 18 7
Dominions Committee—				
Railway Fares	3 0 4		9 12 2	
Printings	3 9 0		7 18 0	
		6 9 4		17 10 2
Election Returns Committee—				
Printings	25 13 6		2 16 0	
		25 13 6		2 16 0
Finance Committee—				
Railway Fares	72 5 8		62 17 8	
Printings	85 0 6		74 12 0	
		157 6 2		137 9 8
Fractures Committee				
Railway Fares	231 18 2		—	
Fees to Townrow and Bromley	—		10 10 0	
Printings	213 1 2		—	
		444 19 4		10 10 0
Hospitals Committee—				
Railway Fares	39 6 5		6 3 7	
Printings	14 17 1		2 10 0	
		54 3 6		8 13 7
Carried forward		£6,711 17 8		£3,961 15 1

Committees—*continued.*

	1912.		1913.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward		6,711 17 8		3,961 15 1
Insurance Act Committee (State Sickness)—				
Copying and Assistance	102 16 0		55 4 11	
Printings	808 17 0		691 15 3	
Parliamentary Papers	30 18 0		—	
Postages	102 17 9		68 10 9	
Railway Fares	1,776 18 3		630 3 6	
Stationery	125 10 0		—	
Sundries	8 4 0		—	
Dr. C. A. Renshaw Special Information supplied	15 0 0		—	
Dr. L. Freeman Marks re Deputation to Parliament	18 13 7		—	
Lothians Special Canvass Campaign	15 3 4		—	
		3,004 17 11		1,458 1 5
Irish Committee—				
Railway Fares	118 6 1		208 5 4	
Printings	39 0 0		7 10 0	
		157 6 1		215 15 4
Journal Committee—				
Railway Fares	41 17 1		31 3 10	
Printings	36 6 9		37 14 5	
		78 3 10		68 18 3
Medico-Political Committee				
33 Copies of Report re Patent Medicines and evidence given before Select Committee	—		11 17 0	
Railway Fares	200 11 8		83 1 9	
Printings	124 6 0		52 16 6	
		325 0 8		147 15 3
Naval and Military Committee—				
Railway Fares	2 15 3		5 0 0	
Printings	2 16 0		9 2 0	
		5 11 3		14 2 0
Non-Panel Committee—				
Railway Fares	—		6 13 6	
Printings	—	—	8 3 6	
				14 17 0
Organisation Committee—				
Railway Fares	60 15 6		95 8 11	
Printings	288 0 0		198 13 3	
		348 15 6		294 2 2
Public Health Committee—				
Railway Fares	30 12 1		46 13 8	
Printings	31 4 0		18 14 6	
		61 16 1		65 8 2
Science Committee—				
Railway Fares	19 6 6		21 13 0	
Printings	251 9 0		30 0 4	
		270 15 6		51 13 4
Scottish Committee—				
Railway Fares	61 6 2		11 0 3	
Printings	14 12 0		12 11 6	
Special Grant re Insurance Work	250 0 0		200 0 0	
Hire of Rooms and Stationery	11 5 11		—	
		337 4 1		223 11 9
Special Executive Organisation—				
Printings	2 2 0	—	—	—
		2 2 0		—
Therapeutic Committee—				
Railway Fares	6 5 3		8 1 11	
Special Report and Research Work	60 0 0		30 0 0	
		66 5 3		38 1 11
Special Enquiry Committee—				
Railway Fares	—		24 18 9	
Printings	—		2 15 0	
Reporting	—		5 17 6	
				33 11 3
		£11,429 15 10		£6,567 12 11

Abstract C.]

Central Premises Expenses.

	1912. £ s. d.	1913. £ s. d.
Cleaning Offices	335 14 9	336 7 4
Coals, Coke and Wood	105 4 2	108 6 7
General Repairs and Upkeep	171 3 5	223 3 2
Rates, Taxes, Insurance, and Electricity	964 7 3	1,027 11 4
	£1,586 9 7	£1,695 8 5

Abstract D.]

Central Printing, Stationery and Postage Expenses.

	1912.	1913.
General Printing	417 11 1	433 6 6
Office General Postage :—		
Finance Department	426 17 5	420 0 4
Medical Department	279 0 0	219 10 6
Stationery	621 18 3	566 1 5
	£1,745 6 9	£1,638 18 11

Abstract E.]

Central Staff Expenses.

	1912. £ s. d.	£ s. d.	1913. £ s. d.	£ s. d.
Financial Secretary and Business Manager	900 0 0		900 0 0	
Assistant Secretary (Late)	400 0 0		200 0 0	
Clerical Staff, General Association, Journal, Subscription and Advertisement Departments	2,896 11 9		3,113 13 6	
		4,296 11 9		4,213 13 6
Less Proportion of Salaries debited to Journal Account		2,089 4 0		2,027 8 0
		2,207 7 9		2,186 5 6
Medical Secretary	800 0 0		800 0 0	
Deputy Medical Secretary	600 0 0		600 0 0	
Assistant Medical Secretary	325 0 0		350 0 0	
Temporary Medical Assistance	530 0 0		—	
Clerical Staff, Medical Department	2,929 5 0		2,914 15 1	
		5,184 5 0		4,664 15 1
TRAVELLING EXPENSES :—				
Finance Department	90 2 3		75 8 3	
Medical Department	172 16 9		184 15 7	
Contribution to Office Staff Superannuation Fund	300 0 0		300 0 0	
Insurance (Fidelity Guarantee)	1 17 3		76 19 11	
	564 16 7		636 13 10	

Abstract F.]

Library Account.

1913.		£ s. d.
Jan. 1.	To Balance	2,027 4 8
Dec. 31.	„ Purchase of Books	155 5 3
	„ Binding Books	37 13 3
	„ Librarian's Salary	250 0 0
	„ Librarian's Clerk's Salary	78 12 9
	„ Printing and Postage of Circulars, &c.	12 4 3
		£2,561 0 7

1913.		£ s. d.	£ s. d.
Dec. 31.	By Librarian's Salary	250 0 0	
	„ Librarian's Clerk's Salary	78 12 9	
	„ Printing and Posting of Circulars, &c.	12 4 8	
			340 17 5
	Amount written off for Depreciation		200 0 0
	Balance carried to Balance Sheet		2,020 3 2
			£2,561 0 7

Abstract G.]

JOURNAL ACCOUNT.

Income and Expenditure Account for the year ending 31st December, 1913.

		1912. £ s. d.	1912. £ s. d.	1913. £ s. d.	1913. £ s. d.
	EDITORIAL.				
Salaries:	Editor	1,000 0 0		1,000 0 0	
„	Assistant Editor	750 0 0		750 0 0	
„	„ „ Temporary Assistance	—		30 9 0	
„	Sub Editor	400 0 0		400 0 0	
„	Clerical Staff	678 1 6		698 10 9	
Contributions:	Editor	317 11 6		332 18 0	
„	Assistant Editor	361 12 6		261 0 6	
„	Sub Editor	160 0 6		173 17 0	
„	Editor's Clerk	53 1 6		52 15 0	
„	Medical Secretary	4 15 6		39 16 0	
„	(General) and Reporting	2,703 12 9		2,716 3 11	
Engraving		221 10 5		199 12 3	
Legal Charges		50 13 0		48 16 0	
Postage		76 0 0		65 0 0	
Analyses		38 16 0		14 3 6	
Travelling, Telephone, Parliamentary Papers, and Sundries		151 18 4		137 15 10	
Advance Slips circulated to the Press		19 4 6		10 14 5	
Compiling Indices for JOURNAL and SUPPLEMENT ...		73 0 6		126 1 0	
Editorial Petty Cash		33 10 9		31 18 5	
			7,091 12 3		7,093 11 7
	MANAGERIAL.				
JOURNAL—Compositors' Wages, Machining, &c. ...		9,710 2 9		9,434 1 9	
„ Paper		11,796 8 10		10,816 18 8	
SUPPLEMENT—Compositors' Wages, Machining, &c. ...		1,739 19 6		1,638 0 0	
„ Paper		2,080 0 0		1,687 14 0	
Postage for Dispatch of JOURNAL		5,571 0 1		5,725 14 1	
Address Bands for JOURNAL		604 2 0		605 13 7	
Proportion of Manager's and Clerks' Salaries		2,089 6 0		2,107 8 0	
General Postage		177 10 3		172 5 2	
Printings		96 10 6		107 7 9	
Reprints		244 8 8		163 4 5	
"Secret Remedies"		244 19 10		156 0 0	
"More Secret Remedies"		829 0 7		20 3 6	
Stationery (Ledgers, Letter Books, &c.)		155 4 9		136 10 6	
Travelling		11 10 2		12 2 0	
Insurance (Workman's Compensation, &c.)		22 5 11		27 9 7	
Sundries		45 7 4		61 15 5	
			35,417 15 5		32,872 8 5
			£42,509 7 8		£39,966 0 0

		1912. £ s. d.	1912. £ s. d.	1913. £ s. d.	1913. £ s. d.
Advertisements		24,100 3 5		24,169 4 6	
Sundry Sales: Journals		2,757 12 6		2,793 3 11	
„ Reading and Binding Covers, &c.		72 18 0		73 14 5	
„ Reprints		356 15 6		243 18 0	
„ "Secret Remedies"		517 11 2		159 16 10	
„ "More Secret Remedies" ...		6 0 10		16 2 0	
Sale of Waste, &c.		18 0 4		11 15 8	
Discounts on Machining Paper, &c.		1,222 17 1		1,320 6 10	
			29,729 18 10		28,932 2 2
Balance from Subscriptions for the cost of production and issue of the JOURNAL		12,779 8 10		11,033 17 10	
		£42,509 7 8		£39,966 0 0	

Premises Account.

1913.		£ s. d.	1913.		£ s. d.
Jan. 1.	To purchase of original Site and Buildings	85,345 0 0	Dec. 31.	By C.S.S.A. re Party Wall	50 0 0
	„ Rebuilding of Premises	45,231 6 9		„ Balance	130,526 6 9
		£130,576 6 9			£130,576 6 9

TRUST FUNDS FOR WHICH THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION ACT AS TRUSTEES.

Office Staff Superannuation Fund.

Account for the Year ending December 31st, 1913.

Dr.

	£ s. d.	£ s. d.
To Balance brought over from 1912	4,622 10 7	
„ Less amount written off Investments at 31st Dec., 1913	213 0 0	
	4,409 10 7	
„ Less amount transferred to Francis Fowke Bequest Fund	47 6 1	
		4,362 4 6
„ Payments by Members of Staff	111 5 10	
„ Amounts Refunded	22 1 8	
		89 4 2
„ Contribution from General Funds		300 0 0
„ Interest on Investments and Deposit Account		167 2 5
		£4,918 11 1

Cr.

	£ s. d.
By Balance carried down at 31st Dec., 1913—	
Cash at Bank, Current and Deposit Accounts	559 11 1
Investments—	
„ £800 Cape of Good Hope 3 per cent. Stock @ 79	474 0 0
„ £100 Bristol Corporation 3½ per cent. Redeemable Stock @ 89½	89 10 0
„ £1,150 Midland Railway Consolidated 2½ per cent. Perpetual Guaranteed Preferential Stock @ 62	713 0 0
„ £100 Midland Railway 2½ per cent. Debenture Stock @ 62½	62 10 0
„ £200 New Zealand 4 per cent. 1929 Stock @ 99	198 0 0
„ £400 New Zealand 3 per cent. Inscribed Stock @ 78	312 0 0
„ £200 Furness Railway Consolidated 4 per cent. Preferential Stock @ 84	168 0 0
„ £250 Bank of England Stock @ 234½	586 5 0
„ £400 India Stock 3 per cent. @ 72	288 0 0
„ £450 Stockton-on-Tees Corporation 3 per cent. Redeemable Stock @ 82	369 0 0
„ £900 North Eastern Railway Company 3 per cent. Debenture Stock @ 74¼	668 5 0
„ £600 Lancashire and Yorkshire Railway 3 per cent. Consolidated Preferential Stock @ 71¼	430 10 0
	£4,918 11 1

Francis Fowke Bequest.

£700 Midland Railway Consolidated 2½% Perpetual Guaranteed Preferential Stock.

1913.		£ s. d.	1913.		£ s. d.
Jan. 1.	To Balance brought over from 1912	16 9 8	Dec. 31.	By Balance, Cash at Bank	80 5 5
	„ Interest	16 9 8			
	„ Transfer from Office Staff Superannuation Fund	47 6 1			
		£80 5 5			£80 5 5

Stewart Fund.

£579 Caledonian Railway 4 per cent. Debenture Stock.

1913.		£ s. d.	1913.		£ s. d.
Jan. 1.	To Balance brought over from 1912	65 17 11	Dec. 31.	By Award to Dr. W. Leonard Braddon, F.R.C.S.	50 0 0
Dec. 31.	,, Interest	22 15 1	,,	Engrossing	1 17 6
			,,	Balance, Cash at Bank, Current and Deposit Accounts	36 15 6
		£88 13 0			£88 13 0

Middlemore Fund.

£666 13s. 4d. North British Railway 3 per cent. Debenture Stock.

1913.		£ s. d.	1913.		£ s. d.
Jan. 1.	To Balance brought over from 1912	59 13 8	Dec. 31.	By Balance, Cash at Bank, Current and Deposit Accounts	80 6 1
Dec. 31.	,, Interest	20 12 5			
		£80 6 1			£80 6 1

Having examined the Balance Sheet, dated 31st December, 1913, and Accounts with the books and vouchers of the Association, and having received all the information and explanations we have required, we report that the Balance Sheet is, in our opinion, properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Association according to the best of our information and the explanations given to us and as shown by the books of the Association.

We have verified the Investments of the Association on General Account and on account of the Trust Funds shown and of the Office Staff Superannuation Fund, and we have verified the possession by the Bankers of the Association of the Deeds of the Freehold Property.

EDWIN RAYNER,
Treasurer.

GUY ELLISTON,
Financial Secretary and Business Manager.

PRICE, WATERHOUSE & CO.,
3, Frederick's Place, Old Jewry, London, E.C.,
8th April, 1914.

Central Emergency Fund.

FOR WHICH THE MEDICO-POLITICAL COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION ACT AS TRUSTEES.

Receipts and Payments for the Year ending 31st December, 1913.

1913.		£ s. d.	£ s. d.	1913.		£ s. d.	£ s. d.
Jan. 1.	To Balance—			Dec. 31.	By L. E. Acomb, Secretary Monmouth Division	50 0 0	
	Cash at Bank	75 14 5			„ D. C. Evans, Secretary Cardiff Division	100 0 0	
	Loan to British Medical Association	600 0 0					150 0 0
			675 14 5		„ Balance Cash with Bankers—Current Account	16 17 3	
Dec. 31.	„ Subscriptions and Donations from 1st January to 31st December	186 4 6			„ „ „ Deposit „ ...	100 0 0	
	„ Interest	4 18 4					116 17 3
			191 2 10		„ British Medical Association Loan Account	600 0 0	
							716 17 3
			£866 17 3				£866 17 3

Remittances received on behalf of Medical Benevolent Funds for the Year ending 31st December, 1913.

Royal Medical Benevolent Fund.

1913.		£ s. d.	£ s. d.	1913.		£ s. d.	£ s. d.
Jan. 1.	To Balance Cash at Bank	0 16 0		Dec. 31.	By Cheques sent to Treasurer	615 13 0	
Dec. 31.	„ Subscriptions and Donations	648 13 0			„ Balance Cash at Bank	0 16 0	
			£649 9 0				£649 9 0
			£649 9 0				£649 9 0

Royal Medical Foundation of Epsom College.

1913.		£ s. d.	1913.		£ s. d.
Dec. 31.	To Subscriptions and Donations	456 11 9	Dec. 31.	By Cheques sent to Secretary	456 11 9

Royal Medical Benevolent Fund Society of Ireland.

1913.		£ s. d.	£ s. d.	1913.		£ s. d.	£ s. d.
Jan. 1.	To Balance Cash at Bank	7 13 6		Dec. 31.	By Cheques sent to Treasurer	36 7 0	
Dec. 31.	„ Subscriptions and Contributions	29 8 6			„ Balance Cash at Bank	0 15 0	
			37 2 0				37 2 0
			£37 2 0				£37 2 0

We have compared the above four accounts of Receipts and Payments with the Books and Vouchers of the Association relating thereto and find them correct. We have verified the Balances held at the 31st December, 1913.

EDWIN RAYNER,
Treasurer.

GUY ELLISTON,
Financial Secretary and Business Manager.

PRICE, WATERHOUSE & CO.,
3, Frederick's Place, Old Jewry, London, E.C.,
8th April, 1914.

25. In view of the increase in the advertisement rates which came into force at the commencement of the current year, it is interesting to review the results of the previous change initiated in 1906. In 1905 the advertisement revenue was £20,440, produced from 4,652 advertisement pages. In 1913 the advertisement revenue was £24,169, produced from 3,893 advertisement pages, an increase of £3,660 revenue with a decrease of 773 pages, from which resulted substantial consequential saving in machining and paper. For a similar period prior to 1906 there was an increase in revenue of £3,086 but with an increase of 528 pages.

26. A satisfactory feature is the continued growth of the sales of the JOURNAL. Reprints show a decrease but this item varies a good deal from time to time.

27. After allowing for these various sources of revenue, but without providing anything from the subscription revenue, the JOURNAL for the year 1913 cost the Association £11,033.

ARREARS OF SUBSCRIPTIONS.

28. It is a matter of regret that arrears of subscriptions have gone up by £400 and for 1913 totalled a sum of £1,480.

29. It would seem as though there are some members of the medical profession who are willing to turn to the Association in time of need but are not willing to meet their financial obligations. The expense such members involve is not merely the writing off of the amount of subscription but means that at no small expense to the Association they have had each week a copy of the BRITISH MEDICAL JOURNAL post free. The Council has decided to interpret By-law strictly in the future and to stop the issue of the JOURNAL to all Members who are more than one year in arrears with their subscription.

SUMMARY.

30. In 1912 the Insurance Defence Fund contributed £7,054 towards the abnormal demands of that year, and in addition £8,834 had to be taken from Reserve in order to meet the expenditure. For the past year the Association received no grant from the Insurance Defence Fund, and to meet its expenditure again had to draw from its reserve to the extent of £4,168. This must be a matter of regret and anxiety, but it is hoped that now the subscription to home members is raised no further inroads on the reserve will be necessary, but rather that the Association will be able to revert to its consistent practice for many years of strengthening annually its cash reserves and thus be in a more favourable position to meet any attack upon the honour and interests of the medical profession.

Apportionment of Member's Subscription.

31. The following table shows how a Member's subscription of £1 5s. has been apportioned towards defraying the expenses of the Association during the year ending December 31st, 1913:—

	£	£ s. d.
General Association Expenses ...	6,268	0 5 0
Central Meeting Expenses	6,587	0 5 2
Central Premises Expenses ...	1,695	0 1 3
Printing, Stationery, and Postages	1,638	0 1 2
Central Staff Expenses	6,250	0 5 0
Library Account	340	0 0 3
"Journal" and Supplement ...	39,966	1 12 5
Subscriptions Written off	1,594	0 1 2
Written for Investments, Plant, and Type	1,189	0 0 10
Capitation Grants	4,199	0 3 4
Total Expenditure per Member		2 15 7

32. To arrive at the net expenditure it is necessary to deduct the Receipts derived from the publication of the "Journal," &c., amounting to £28,932, the Rents and Interest on Investments amounting to £2,936, and the amount of £4,076 drawn from Reserve. This is shown as follows:—

"Journal" Account.	Receipts. Total.	Per Member.
Receipts from Advertisements, Sales, &c.	£28,932	£1 4 9
Investments and Rents	2,936	0 2 7
Drawn from Reserve	4,076	0 3 3
Members' Subscriptions to the Association	33,770	1 5 0
		£2 15 7

33. The total expenditure on the production and distribution of the "Journal" and Supplement was £39,966. Of this amount the Association was recouped £28,932 from receipts from advertisements and sales, leaving £11,033, which is equivalent to 7s. 8d. per member, to be provided out of the subscriptions of members, which amounted to £33,770.

34. Estimate of Expenditure and Receipts for 1914.

EXPENDITURE.

	£
General Association Expenses	5,200
Central Meeting Expenses	6,500
Central Premises Expenses	1,800
Printing, Stationery and Postages	1,500
Central Staff Expenses	6,500
Library	300
"Journal" Account	38,000
Capitation Grants	4,000
Arrears of Subscriptions	1,500
Depreciation	1,200
Reduction of New Premises Account	1,000
Reduction of Loan Account	2,000
Estimated total expenditure, 1914 ..	£69,500
Estimated surplus, 1914	6,500
	£76,000

RECEIPTS.

	£
Subscriptions	44,000
Advertisements	24,500
Sundry Sales of "Journals" etc.	3,500
Investments	450
Rents	2,350
Discounts on Printing and Purchase of Paper ..	1,200
Estimated total receipts, 1914	£76,000

It will be noticed that it is anticipated that the surplus will be sufficient to allow £2,000 to be set aside for the reduction of the Loan.

(C) Organisation.

MEMBERSHIP OF ASSOCIATION.

35. The total membership of the Association on 31st December, 1913, was 24,376, or 2,192 less than at the close of the previous year. The most sanguine could hardly have anticipated holding the large influx of members consequent upon the introduction of the National Insurance Act, but the article published in the JOURNAL of 14th March, page 600, demonstrated that the Association is maintaining its normal and consistent growth.

1912.		1913.	
New Members	2,500	New Members	1,058
Resigned	715	Resigned	2,675
Died	264	Died	255
Removed in Arrears	250	Removed in Arrears	315
Expelled	3	Expelled	5
Removed from Medical Register..	1	Removed from Medical Register..	—
	1,233		3,250
Increase ...	1,267	Decrease ...	2,192

LAPSE OF MEMBERSHIP THROUGH ARREARS.

36. With a view to obviating so far as possible lapse of membership through arrears, the Council has arranged for the compilation yearly at a suitable date, in respect of each Division and Branch, of a list of those Members who are in arrears with their subscriptions. In future, three months before the time when these Members' names will (if the subscriptions remain unpaid) be removed from the Register of Members, copies of such list will be sent to the Honorary Secretaries of the Divisions and Branches concerned, in the hope that these officers will be able to induce many of those concerned to pay their subscriptions.

REVISION OF ARTICLES AND BY-LAWS.

37. Questions of revision of Articles and By-laws required to give effect to various resolutions of the Annual Representative Meeting, July, and the Special Representative Meeting, December, 1913, have received the careful attention of the Council, and in conference with Counsel certain draft revised Articles and By-laws have been prepared and are now submitted. In view of the technical and intricate nature of many of these proposals they are submitted in a Special Report. The Council at the same time reports as to other questions of Articles and By-laws, including proposals for certain alterations which appear to be desirable. It must be remembered that practically all these suggested alterations are presented on the instruction of the Representative Body.

(For Special Report and **Recommendations A to AA** *see* Appendix I., page 293).

RETURNS OF ATTENDANCE OF COUNCIL, COMMITTEES, AND SUB-COMMITTEES: ELECTION OF COMMITTEES.

38. The Council has had under review the provisions contained in the Standing Orders of the Representative Body and of the Council in respect of yearly returns of the attendances at meetings of Council, Committees and Sub-Committees, and in respect of the election of new Committees, and has amended its own Standing Orders with a view to saving unnecessary trouble and expense. It has been the practice to prepare, in all, three yearly returns of attendances, but the Council has made arrangements whereby two shall be made to suffice, namely, (1) the return of attendances up to April 30th published yearly in the Supplement for the information of members generally; and (2) the return of attendances up to three weeks before the commencement of the Annual Meeting, issued under Standing Order 39 of the Representative Body to each Member of the Representative Body.

The Council recommends:—

Recommendation BB.—That the Standing Orders of the Representative Body be altered to provide that instead of the Election Returns Committee of the Representative Body preparing the return of attendances up to three weeks before the commencement of the Annual Meeting that return shall be prepared by the Financial Secretary and Business Manager and issued to all members of the Representative Body with the Agenda of the A.R.M., and, in the case of members of Council not up to then elected, as soon as possible.

ELECTION BY BRANCHES OF MEMBERS OF COUNCIL FOR 1915-16.

(a) *Grouping of Branches in United Kingdom for 1915-16.*

39. The Council recommends:—

Recommendation CC.—That the Branches in the United Kingdom be grouped for election of members of Council, 1915-16, in the same way as for 1914-15, the new Kent, Surrey and Sussex Branches taking the place of the South-Eastern Branch, now discontinued.

(For the 1914-15 grouping of the U.K. Branches *see* Appendix II., page 309).

(b) *Grouping of Branches outside United Kingdom for 1915-16.*

40. The Council will report on this subject in its Supplementary Report.

ALTERATION OF MEMORANDUM OF ASSOCIATION.

41. The extension of the Memorandum of the Association to include the power of borrowing money on mortgage or otherwise, which Minute 31 of the Annual Representative Meeting, 1913, instructed the Council to take steps to secure, became effective in March, 1914.

PROPOSED NATIONAL INSURANCE DEPARTMENT OF THE CENTRAL OFFICE.

42. The Council has considered Minute 269 of the Annual Representative Meeting:—

> That it be an instruction to the Council to consider the desirability of creating a separate National Insurance Department, and, if it deems such a course desirable, to carry out the arrangements as soon as possible.

The Council is fully convinced that it is necessary to provide further medical assistance at the Head Office. It has been demonstrated to the Council that the pressure caused by the addition to the ordinary work of the Medical Department of the work in connection with the Insurance Acts has been and is so great as to prevent the other work of the department receiving adequate attention. In the opinion of the Council there should now be a definite recognition of specialisation in the Medical Department. The Council is, however, convinced that it would be a mistake to set up an entirely separate department for Insurance Act work.

43. The Finance Enquiry Committee in 1908, after an exhaustive enquiry, came to the conclusion, endorsed by the Representative Body, that the work of the Association naturally falls into three distinct departments, Editorial, Financial and Business, and Medical, and this classification has been followed ever since. The Representative Body agreed that these separate departments should be respectively under the control of officers holding equal official positions in the Association. To the Medical Department was assigned all the purely professional work as distinguished from the other work of the Association, and the Council believes that this is the best arrangement, and that to set up a separate department within a department would be a mistake. The Council takes the view that there should be a devolution of work in the Medical Department, under the control and responsibility in chief of the Medical Secretary. He will be relieved of much of the detailed Committee work, but will act as the responsible head of the office and adviser of the assistants who undertake the more routine work. He will thus always have a general knowledge of and responsibility for the whole professional work of the Association.

44. The Council has accordingly taken steps to appoint an additional Assistant Medical Secretary at a salary of £500 per annum, and it is hoped that this addition to the Medical Staff will relieve the congestion in the office and allow much more organising work to be done outside.

POSSIBILITY OF MORE EFFECTIVE PROPAGANDA WORK BEING CARRIED OUT BY THE ASSOCIATION.

45. The Council has arranged for the yearly appointment by the Organisation Committee of a Standing Propaganda Sub-Committee to organise and control systematic endeavours to awaken interest in the Association and devise means to make it more attractive. In connection with this matter the Council considers that the primary necessity for efficient propaganda work is the possession by the Association of an adequate head-quarters staff, and the Council has, therefore, taken the steps alluded to in the previous paragraph and also under the head Ireland (*see* paragraphs 183-9, page 291).

46. The Council has come to the conclusion that efforts should be made to have every Division in the United Kingdom visited by one of the secretarial staff at least once in every two years, and it is hoped that the increase in the head-quarters staff will enable the Association to send at any time without delay one of the secretarial staff to any Division in the United Kingdom requiring such assistance in disputes or other matters of difficulty.

MEDICAL STUDENTS AND ANNUAL MEETINGS.

47. It is hoped during the present session to deal in a more thorough way than has up to the present been possible with the question of the relation of medical students to the Association. Meantime the Council has placed on a permanent basis certain arrangements which have hitherto been made from year to year in connection with Annual Meetings. Thus in future whenever the Annual Meeting is being held in a town containing a medical school, the Local Executive Committee of the Annual Meeting will be asked to make such arrangements as are possible to enable the local medical students to attend the meetings of sections and social functions of the Meeting; and also if possible, to hold, at a date during or prior

to the Annual Meeting a special meeting of local medical students to consider some matter or matters of professional interest. The Council has already made these suggestions to the Executive Committee of the Aberdeen Meeting.

ANNUAL REPORTS OF DIVISIONS AND BRANCHES.

(a) *Reports of Divisions in United Kingdom for 1913.*

48. Satisfactory reports have been received from most of the Divisions in the United Kingdom for 1913. The following Divisions have, however, not up to the present reported: —

Aberdeen, Birkenhead, Bishop Auckland, Blyth, Bradford, Bristol, Croydon, Derry, East Herts, Hendon and Finchley, Kilkenny, Lothians, Manchester (West), Mid Connaught, Mid Essex, Mid Leinster, Monaghan and Cavan, North Carnarvon and Anglesey, North Glamorgan and Brecknock, North-West Leinster, Orkney, Portadown and West Down, Richmond, Rotherham, South Connaught, St. Pancras and Islington, South Carnarvon and Merioneth, Waterford, Woolwich.

49. In addition, the following Divisions are unorganised: —

Carlow, Consett, Ealing, Enniskillen, Isle of Man, Lewes and East Grinstead, North Connaught, North Leinster, North Munster, Omagh, Shetland, South-East Leinster, South Munster, West Munster.

The Council has instituted enquiries in respect of these areas with a view to, if necessary, including them in the areas of neighbouring Divisions.

50. Special attention is drawn to the necessity of every Division reporting annually in January, as required by the By-laws. Gradual improvement in regard to this matter is noted, but the lack of these reports prevents the Council from taking that comprehensive view of the organisation of the Association which it should be able to take.

(b) *Reports of Branches in United Kingdom for 1913.*

51. Reports for 1913, due March 15th, have been received from all the Branches in the United Kingdom except the following: —

Aberdeen, Bath and Bristol, Connaught, Shropshire and Mid Wales, Surrey.

52. The attention of Branches is specially drawn to the fact that non-receipt of a report from any of its Divisions should on no account delay beyond March 15th the making of the Branch report. Failure on the part of a Branch to report at the proper time renders it impossible for the Council to award a grant early in the year, inasmuch as in the absence of a report for the previous year the Council has no adequate information as to the work and resulting financial needs of the Branch.

53. An analysis of the reports of the Branches will be found in Appendix III., page 310.

(c) *Reports of Divisions and Branches outside United Kingdom for 1913.*

54. A considerable number of these Divisions and Branches have already reported. It has been arranged that in future the Overseas bodies will be communicated with earlier as regards their reports for the expiring year, in order that they may all be in a position to furnish them by March 15th.

GRANTS TO BRANCHES FOR 1914.

(a) *Branches in United Kingdom.*

55. Grants for 1914 varying from 1s. to 4s. per member have been made to those Branches in the United Kingdom which required grants, and have furnished satisfactory reports for 1913.

(b) *Overseas Branches.*

56. As in previous years, grants for 1914 have been made to these Branches at the rate of 4s. per member who has paid the full subscription for the year, and 2s. per member, elected after July 1st, who has paid half the ordinary subscription.

FINANCIAL RELATIONS OF DIVISIONS AND BRANCHES.

57. In connection with the annual reports of Divisions and Branches under By-law 24, the Council has had under consideration the general question of the financial relations between Branch Councils and Divisions. The matter is provided for by By-law 23, which contemplates that Branch Councils shall pay to each Division of the Branch such sum as the Branch Council may consider necessary to enable the Division to defray its expenses. The Council finds that in the case of a small minority of the Branches the bills of Divisions are paid by the Branch Council, with the result that these Divisions are frequently unable to prepare an adequate financial statement under By-law 24, the Division Secretary being sometimes unaware as to what sums the Branch Council has paid on the Division's behalf. Some difficulty and misunderstanding, involving needless correspondence, have at times resulted. In the opinion of the Council the procedure contemplated by By-law 23, namely, that it should be left to each Division to disburse to the best advantage the grant it receives from the Branch Council, is a good one, helping to promote a proper degree of independence on the part of the Division, with resulting efficiency, while on the other hand it is obvious that the proper activities of a Division may be seriously crippled if it is always left without funds in hand with which to pay its way. The Council is therefore of opinion that in future all Branch Councils should pay to Divisions as a general rule, as early in each year as practicable, such sum as the Branch Council may consider necessary to enable the Division to defray its expenses.

RULES.

58. The Divisions and Branches in the United Kingdom mentioned in Appendix IV. (page 312) are still without Rules of Organisation, which are absolutely necessary for effective working.

MODEL RULES OF ORGANISATION OF DIVISIONS AND BRANCHES.

59. These Model Rules have been brought up to date, and Divisions and Branches desiring to adopt them can have copies on application to the Medical Secretary.

ANNUAL CONFERENCE OF SECRETARIES, 1914.

60. In view of the helpfulness to the work of the Association of the Annual Conference of Secretaries, the Council has arranged that the 1914 Conference shall have more time for its work than has up to the present been the case. The Aberdeen Conference, which will meet on Wednesday, July 29th, 1914, will accordingly commence at 2.30 p.m., instead of 4.30 p.m. as was the case in 1913.

DIVISION AND BRANCH SECRETARIES ATTENDING ANNUAL AND REPRESENTATIVE MEETINGS.

61. Being of opinion that it will be to the advantage of all concerned to be able to know early which Division and Branch Secretaries are in attendance at Annual and Representative Meetings, the Council has arranged that in future the names of Honorary Secretaries will be suitably indicated in the lists of attendances published in the Daily Journal, as well as in the lists contained in the Minutes of Representative Meetings.

DIVISION AND BRANCH AREAS.

(1) *New Divisions and Branches.*

62. The following new Divisions and Branches have been formed since the Council reported to the A.R.M. 1913: —

(a) In United Kingdom.

Divisions.

Argyllshire, Dumbartonshire, Great Yarmouth, Islands (Northern Counties of Scotland Branch), Lewes and East Grinstead.

Branches.

Kent, Surrey, Sussex (partition of old South-Eastern Branch).

(b) Outside United Kingdom.

Branches.

Natal Coastal, Natal Inland, Pretoria, Witwatersrand.

CONSTITUENCIES IN UNITED KINGDOM FOR REPRESENTATIVE BODY, 1914-15.

63. The Constituencies provisionally formed by the Council under By-law 30 for the purpose of election of Representatives for 1914-15, are the same as those for 1913-14, except that independent representation has been given to the following Divisions of a membership of over 50: —

East Norfolk, Lewes and East Grinstead (both new Divisions) and Wandsworth.

The new Great Yarmouth Division has been grouped with North Suffolk, and Richmond with Wimbledon. The Council has authorised the Organisation Committee finally to settle on its behalf the 1914-15 Constituencies on consideration of the membership figures made up to April 30th, contained in the Annual List of Members published early in May, and the Council will submit the final list of Constituencies in its Supplementary Report.

64. The Council has experienced some difficulty in respect of applications for independent representation, some of these being from Divisions which have a good case under By-law 30 for separate representation, it being practically impossible for some of them to hold joint meetings with neighbouring Divisions. These applications include such cases as those of the new Argyllshire, Dumbartonshire, and Islands Divisions of the Glasgow and West of Scotland and Northern Counties of Scotland Branches respectively. In view, however, of the opinion expressed by the Representative Body that that body is already too large, the Council has not seen its way to afford the separate representation desired.

Constituencies Outside United Kingdom for Representative Body, 1914-15.

65. In accordance with precedent the Council has accorded each Division and Division-Branch outside the United Kingdom having an Honorary Secretary and the necessary organisation separate representation for 1914-15.

Appointment of *ad hoc* Welsh Committee.

66. Pursuant to Minute 271 of the A.R.M. 1913, the Council appointed a Welsh Committee for 1913-14 on the lines laid down by the resolution of the Representative Body. The Council reports separately (*see* paragraph 46 of Special Report, Appendix I. page 300) as to the question of a Standing Welsh Committee.

Selection of Places of Annual Meetings of Association.

67. The Council considered a suggestion that it might be desirable to adopt a rota system for the purpose of selecting the places of Annual Meetings a certain time in advance, but is of opinion that the adoption of such a system is undesirable, and that applications should continue to be considered on their merits.

Under Consideration.

68. (a) Compilation of pronouncements of Association.
(b) Preparation of Secretaries' Handbook.
(c) Date of publication of annual list of members.
(d) Question of co-ordination of work of Local Medical Committees with that of Association.
(e) Question of reorganization of certain Branch areas.

(D) Journal.

The British Medical Journal.

69. Last year the Council in its Report drew attention to the size of the Supplement. In 1913 this was reduced by 340 pages in the year. The total Supplement for the year was 1,212 pages, or nearly 24 pages per week. Such a size involves large expenditure in printing and material. In other journals as a rule a Supplement, in addition to providing special news for its readers, is also used as a source of increased revenue from advertisements. No such advantage, however, has ever occurred with the Supplement of the British Medical Journal.

Advertisements.

70. The application of the principles laid down to govern the acceptance and rejection of advertisements to cases reserved for its consideration has been the subject of much thought on the part of the Journal Committee. Among the general principles by which the Committee is guided is, that no advertisement shall be accepted which is also being issued to the general public in an exaggerated or misleading manner.

Reports of Local Medical and Panel Committees.

71. Much space has been occupied in the Supplement by the reports of Local Medical Committees and of such proceedings of Insurance Committees as are of medical interest, and since the Panel Committees have come into force their proceedings also have been reported. The Council considers it important that such reports should be published for the information of the profession, and hopes that the Secretaries of Local Medical and Panel Committees will co-operate by forwarding notes of all proceedings of general professional interest to the Editor of the British Medical Journal.

(E) Science

Scientific Work of Annual Meeting, 1914.

72. The scientific work of the forthcoming Annual Meeting of the Association, at Aberdeen, is being organised in sixteen Sections, namely:—

Anatomy and Physiology; Dermatology and Syphilology; Diseases of Children, including Orthopædics; Electro-Therapeutics and Radiology; Gynæcology and Obstetrics; Laryngology, Rhinology and Otology; Medical Sociology; Medicine; Naval and Military Medicine and Surgery; Neurology and Psychological Medicine; Ophthalmology; Pathology and Bacteriology; Pharmacology, Therapeutics and Dietetics; State Medicine and Medical Jurisprudence; Surgery; and Tropical Medicine.

Scientific Work of Divisions and Branches.

73. In October, 1913, a communication was addressed to Divisions and Branches, inviting them to suggest subjects for consideration by the Sections at the Annual Meeting, and to form Science Committees to assist in the organisation of the scientific work of the Divisions and Branches. Very few replies were received, and these, with one exception, indicated that the local arrangements for scientific work were considered adequate.

Standing Therapeutic Sub-Committee.

74. This Sub-Committee has held several meetings and has considered chiefly the question of the preparation of a statement as to the therapeutic value of the various drugs in use, together with an indication as to those which should become obsolete. The list of drugs contained in the 1898 edition of the British Pharmacopœia has been carefully examined, and those which, in the Sub-Committee's opinion, have become obsolete, have been deleted. A list of new drugs and preparations which are considered to be of value has been compiled. These two lists have now been classified, and where it seems to be necessary a short explanatory note as to the therapeutic value or mode of preparation of various drugs will be appended. It is proposed later to publish a report on the whole subject.

75. The Sub-Committee is also co-operating with the British Pharmaceutical Conference, both by undertaking the investigation of the therapeutic value of certain drugs and also by referring to the Conference new drugs for which suitable formulæ for exhibition are required.

76. The Council being of opinion that the Sub-Committee should be in a position to carry out any special investigations that may be necessary in connection with this work, has empowered the Science Committee to make grants for the purpose up to a sum not exceeding £100.

Middlemore Prize.

77. The Middlemore Prize will be awarded during the current year to the writer of the best essay on "The Physiology of Vision and Fusion (excluding the question of colour vision)."

Under Consideration.

78. Proprietary preparations and the relation of the British Medical Association to them.

Sight tests of the Board of Trade.

(F) Medical Ethics.

Expulsion.

79. The Council regrets to have to report that it has been found necessary to remove from membership of the Association two Members who accepted and continued to hold appointments the holding of which was in opposition to the declared view of the Division complaining, and also one Member who contravened the decision of the Association in respect of changing his residence for the express purpose of accepting service under the National Insurance Act.

Ethical Rules of Divisions and Branches.

80. During the past year the Council has frequently urged the adoption without modification of the Model Ethical Rules approved by the Representative Body in 1912, by Divisions and Branches in the United Kingdom which had previously failed to do so. At the present time 52 Divisions and 11 Branches have not reported that they have adopted these new Rules, and they are consequently still unprepared to deal effectively with any Ethical dispute in which they may become involved.

Procedure in Reference to Cases for Presentation to the General Medical Council.

81. It is the intention of the Council to place before the General Medical Council at its May Session four cases in which the action of the practitioners concerned seems to call for disciplinary action by that body.

82. The Council has given very careful consideration to the question of the best procedure to be adopted with reference to the presentation of such cases to the General Medical Council, and, after consultation with the Solicitor, has authorised a course which, it is believed, will prevent any delay, confusion, or unnecessary expense.

"The Family Encyclopædia of Medicine."

83. The attention of the Association was drawn in February to the inclusion of the names of certain medical practitioners in a new publication, "The Family Encyclopædia of Medicine," and in the advertisements issued in connection therewith. A letter was sent to those practitioners mentioned who are Members of the Association, asking them to give an explanation of their connection with the advertising and issue of this publication, for the assistance of the Council in the consideration of the whole matter.

Publication of Books to the Public upon Medical Subjects.

84. Arising out of the consideration of the question of the publication of "The Family Encyclopædia of Medicine," the Council has approved the publication of the following decisions:

(i.) That the publication of a book to the public upon a subject of general interest—such, for instance, as dietetics—by a medical man, is not a transgression of any definite rules of medical ethics if the object of the publication is to inform the public, and not to advertise the medical man.

(ii.) That such a book may be advertised in the lay press, but the propriety thereof would depend upon the nature of the advertisement, which should conform to certain recognised principles.

(iii.) That there can be no objection to signing the preface to a book, if the object of the publication is to inform the public and not to advertise the medical man, but it is desirable that his address should not be added.

(iv.) That the publication of a book to the public on medical subjects which contains a large number of prescriptions in common language is highly dangerous to the public, and should not be countenanced.

Libel Action.

85. The Council regrets that an action for libel was brought against certain Members of the Bedford Division and the Association in respect of certain Ethical proceedings taken by the Division. The action was heard at the Bedford Assizes in October, 1913, and was settled on the Association undertaking to expunge certain resolutions from the Minutes of the Bedford Division, and to pay the plaintiff £500 and taxed costs.

Rule "Z."

86. The Council has authorised the circulation of Rule "Z" in respect of 11 practitioners whose conduct, after due enquiry, was deemed by the Divisions in the area of which those practitioners resided, to be detrimental to the honour and interests of the profession.

Under Consideration.

87. The question of Medical Practitioners prescribing in lay papers.

(G) Medico-Political.

State Registration of Nurses.

88. The principle of State registration of nurses, first endorsed by the Association at its Annual Meeting in 1895, was reaffirmed by the Annual Representative Meetings of 1904, 1905 and 1910, and the Annual Representative Meetings of 1905, 1907, 1908, 1909 and 1911 approved action taken in furtherance of the principle. In 1909 the Annual Representative Meeting approved the appointment of representatives of the Association upon the Central Committee for the promotion of State registration of trained nurses.

89. In July, 1913, the Prime Minister stated to a deputation in favour of the Nurses' Registration Bill, which included members of the Association, that he was not convinced that there was a large body of professional opinion behind the proposals. In these circumstances the Council is of opinion that the Association should make its position perfectly clear by re-affirming its belief in the principle. The Nurses' Registration Bill has been re-introduced in the House of Commons in the 1914 session by Dr. Chapple, and is backed by Dr. Addison and representatives of all parties. The mistake in the 1913 Bill to which the Council drew attention in its 1912-13 Report has been corrected, and the Bill as it stands makes clear that the Association shall have three representatives on the "General Council for the Registration of Nurses in the United Kingdom," one resident in England, one in Scotland, and one in Ireland.

The Council recommends:—

Recommendation A.—That the Representative Body re-affirm its opinion that the State registration of nurses is desirable.

Payment of Medical Practitioners called in on Advice of Midwives.

90. The Council has had under its consideration the question of the policy of the Association with respect to the payment of fees for medical practitioners called in on the advice of midwives, and is of opinion that the time is ripe for a re-statement by the Representative Body of its policy in this matter, having regard to the changes in the position occasioned by the National Insurance Acts since the last declaration by the Representative Body on the subject. The receipt of maternity benefit by so many women has greatly simplified the situation, enabling a great number who previously could not do so to pay a doctor privately if he is called in. The problem is thus a much smaller one than heretofore.

The Council recommends :

Recommendation B.—That the Representative Body express the following opinions :—

Assistance given by Private Practitioners in Cases where they are called in by Midwives.

(a) That midwives could depend upon the assistance of the medical profession being forthcoming whenever required, provided the profession were assured of adequate provision being made for (i.) free choice of doctor by patient and (ii.) payment of the medical practitioner called in.

(b) That payment of the medical practitioner so selected should be assured to him by a public authority such as the County or County Borough Councils in England and Wales.

(c) That the following should be the minimum scale of fees for the payment of medical practitioners called in on the advice of midwives, but power should be obtained to pay special fees in special cases :—

	£	s.	d.
Attendance at cases of operative interference and three subsequent visits if necessary	2	0	0
Attendance at cases without operative interference, and three subsequent visits if necessary	1	1	0
Assistance for administration of an anæsthetic	1	1	0
Visit (including any necessary prescription) :			
Day (7 a.m. to 7 p.m.)		3	6
Night (7 p.m. to 7 a.m.)...		7	6

Note.—The above fees apply to visits within two miles of the doctor's house ; if beyond that distance an additional mileage fee of not less than 1s. per mile (outwards) or in outlying and sparsely populated districts such sum as is suitable to local circumstances and the local customs of the profession should be paid.

Assistance given by Members of Lying-in Hospital Staffs.

(d) (i.) That all women receiving treatment through the out-patient department of a voluntary hospital or similar institution who are entitled to a maternity benefit shall be required to pay such a sum to the hospital or institution as shall be demanded by the Governing Body.

(ii.) That from each such sum an amount, to be agreed upon between the Governing Body and the Medical Board, shall be placed to a special fund which shall be distributed as the Medical Board shall decide.

MEDICAL INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

91. The Council has considered the following instructions of the Annual Representative Meeting, 1913 :—

Minute 283.—Resolved : That the Council be instructed to codify the various decisions of the Association in connection with the medical inspection and treatment of school children, and at the same time to consider and report to the Divisions and Representative Body as to any modification of that policy which may seem to the Council to be desirable.

Minute 284.—Resolved : That the Representative Body empower the Council to use for the present its discretion as to putting into action or otherwise the policy of the Association concerning medical inspection and treatment of school children.

92. To enable the Association to deal adequately with this important subject the Council circularised the Divisions throughout England and Wales with a view to collecting information as to the general situation. Of a total of 215 Divisions 122 replied, with particulars more or less full as regards the inspection and treatment arrangements at present prevailing in the areas of 145 Education Authorities. The policy of the Association on the subject has been brought into line with what appears to be the present tendency of Education Authorities and medical opinion, and as re-stated is now submitted to the Divisions and Representative Body. In considering the matter the Council has had the benefit of the assistance of representatives of the Society of Medical Officers of Health, and the Memorandum now submitted has been approved by that body.

The Council recommends :

Recommendation C.—That the Representative Body rescind all previous decisions having reference to any question of the Medical Inspection and Treatment of School Children.

Recommendation D.—That the Memorandum submitted by the Council be approved as the policy of the Association in the matter of Medical Inspection and Treatment of School Children.

(For the Memorandum *see* Appendix V, page 313.)

MEDICAL TREATMENT OF SCHOOL CHILDREN IN VOLUNTARY HOSPITALS.

93. The Council submits herewith to the Divisions and Representative Body a Memorandum on the subject of the Treatment at Voluntary Hospitals of School Children found defective on medical inspection.

The Council recommends :

Recommendation E.—That the Representative Body approve the following Memorandum submitted by the Council on the treatment at voluntary hospitals of school children found to be defective on medical inspection :—

MEMORANDUM ON TREATMENT AT VOLUNTARY HOSPITALS OF SCHOOL CHILDREN FOUND DEFECTIVE ON MEDICAL INSPECTION.

1. The results of the medical inspection of elementary school children have shown that very large numbers are suffering from disease and defective conditions urgently calling for treatment.

2. At present provision is not made by Education Authorities to meet this national evil, except in a fragmentary and unorganised manner.

3. In spite of the establishment in certain places of School Clinics or Treatment Centres, many children receive no treatment at all, a few are taken by their parents to voluntary hospitals ; and in a very few instances the Education Authority has entered into a restricted arrangement with such institutions.

4. The Association has for six years formulated and published the principles on which, in its opinion, the medical treatment of school children as a national measure of public health should be based.

5. These principles are as follows :

(1) That all treatment must be adequately remunerated by the State ;

(2) That no case should be referred to a voluntary (charitable) institution for treatment ;

(3) That treatment should be carried out, if possible, in a Treatment Centre or School Clinic, staffed by the local medical practitioners, or at a recognised surgery, and under special conditions.

6. The enquiry initiated by the Association during the latter part of 1913, in accordance with the resolution of the Annual Representative Meeting, 1913, shows that though unofficially some cases have drifted to voluntary hospitals, in only a few areas (probably not more than 12-15) have the Education Authorities attempted officially to provide treatment for the children at charitable institutions.

7. The question is therefore one on which the opinion of the Association must be again stated. To secure a comprehensive settlement it is needful that every Division should (as soon as possible) put before the Local Education Authority of the district the scheme of the British Medical Association. Such a scheme has been authorised by the Association (*see* Appendix V, Sub-Appendix B, page 314), and is capable of providing for all such medical treatment as can be furnished without the child becoming an in-patient of an institution.

8. The provision of hospital or institutional treatment is a further matter which should be dealt with as follows :—

I. The co-operation with the Association of the members of the Medical Staffs of the hospitals must be first obtained in support of the principles laid down by the Association.

II. The Local Education Authority must then be invited to provide such hospital treatment by either

(a) paying the hospital authorities for accommodation and the medical officers for treatment supplied;

or

(b) itself providing hospital accommodation and obtaining the services of private practitioners for treatment of the children.

QUESTION OF ESTABLISHMENT OF DENTAL CLINICS.

94. A Division having drawn attention to the establishment in its area of a dental clinic and requested advice and guidance in view of the precedent likely to be established, the Council has considered the general question in view of the fact that such clinics are likely to be set up in many districts.

The Council recommends:

Recommendation F.—That the Representative Body approve the principle of the establishment of Dental Clinics, inasmuch as such Clinics are calculated to diminish the amount of unqualified dental practice now in existence.

SHIP SURGEONS.

Appointment of "Correspondents" with respect to Ship Surgeons: Register of Ship Surgeons.

95. In the interests of ship surgeons, "Correspondents" have been appointed by the Association in Liverpool, London, and Southampton to act as intermediaries between ship surgeons and the Association. Similar appointments will be made in other ports. The Council has arranged that a full list of "Correspondents" shall be published regularly in either the JOURNAL or Supplement, together with a request that all ship surgeons communicate either with one of the "Correspondents" or with the Ship Surgeons Sub-Committee of the Association on any matters of interest to ship surgeons generally, and that practitioners acting as ship surgeons forward their names to the Sub-Committee with a view to the compilation of a register of ship surgeons.

Question of right of Masters of Ships to information as to illness from which Passengers or Crew are suffering.

96. The attention of the Council has been drawn to the practice of masters of merchant vessels to enquire of ship surgeons as to the nature of the illness of passengers, and requests have been received from ship surgeons that the Association should draw the attention of shipping companies to the fact that for a medical practitioner to divulge such information is not only unprofessional but is not in the best interests of the passengers and is often strongly objected to by them. The Council has expressed and published in the JOURNAL the opinion that professional secrecy should be maintained by ship surgeons in respect of all cases of illness attended by them on board ship, except those which come within the quarantine or immigration laws in force at any port visited, or other legal obligations.

Payment of Ship Surgeons for attendance on First and Second Class Passengers.

97. The Council has urged upon shipping companies the adoption of a fixed scale of fees for medical attendance on first and second class passengers, an arrangement already in operation in the case of some companies to the advantage of all concerned.

Conditions of Service in Shipping Companies.

98. The shipping companies who carry surgeons are being invited to furnish the Association with particulars as to the terms and conditions which they offer to surgeons, with a view to publication in the JOURNAL.

Hospital Accommodation on Board Ship.

99. A Committee of the Board of Trade has recently drawn the attention of the Board to the desirability of separate accommodation being reserved in all ocean-going cargo ships for cases of illness and accident. Representations to the same effect were made to the Association by ship surgeons and the Imperial Merchant Service Guild. The Association has urged the Board to make such provision compulsory, but has been informed that the Board has at present no power to do so.

MEDICAL CERTIFICATES.

100. The Council has considered the following Minute 208 of the Annual Representative Meeting, 1913:—

Minute 208.—Resolved: That every effort be made to secure that medical practitioners required to sign medical certificates in conformity with the requirement of any Act of Parliament or of any Public Authority be rendered immune from any pecuniary consequences flowing therefrom,

and recommends:—

Recommendation G.—That the following report be adopted by the Representative Body:—

(a) Under the present state of the law medical practitioners are afforded reasonable immunity from any pecuniary risk consequent upon the giving of medical certificates in connection with any Act of Parliament, provided that in doing so they act in good faith and with reasonable care. No action which could be taken by the Association would be likely to provide absolute immunity from legal action.

(b) Medical practitioners can secure themselves from costs incurred in any legal action consequent upon the giving of medical certificates in conformity with any Act of Parliament, by insuring with one of the Medical Protection Societies, which precaution is strongly urged upon all practitioners.

(c) As a result of the action of the Association there has been secured to medical practitioners giving medical certificates under the National Insurance Acts what amounts to practically absolute immunity from legal risk, owing to the wording of the model form of certificate issued by the Insurance Commissioners. This form makes it clear that the certificate is given to the insured person, and that therefore the divulgence of any information contained therein can only be due to the action of the insured.

(d) The precedent set by the wording of the model form of certificate issued by the Insurance Commissioners should, whenever possible, be followed by medical practitioners in the case of certificates required of them under any other Act of Parliament.

MENTAL DEFICIENCY ACT, 1913.

101. The Mental Deficiency Bill of the Government, as to which the Council reported fully in its Supplementary Report for 1912-13 (SUPPLEMENT, July 5th, 1913, page 4), became law on July 29th, 1913. The Council approved representations made to the Home Secretary concurring in representations made by the National Association for the Feeble Minded as to the undesirability of a provision, introduced at the Committee stage, that "approval" of practitioners for certification purposes should be limited to practitioners approved by the local authority. It was urged that the Board of Control should be empowered to approve practitioners for these purposes. The provision in question however remained included in the Bill when it became law.

SALARIES OF WOMEN MEDICAL INSPECTORS OF REFORMATORY AND INDUSTRIAL SCHOOLS, AND UNDER BOARD OF CONTROL.

102. Representations were made to the Home Secretary protesting against the proposal made in the report of the Departmental Committee on Reformatory and Industrial Schools that the salary of women Medical Inspectors should be £350 to £500, as compared with £500 to £700 for men inspectors, especially having regard to the fact that the report itself suggested that the work of the woman would in some cases be more valuable than that of the man inspector. The Home Secretary replied that if and when it was decided to make such appointments the Association's representations would be borne in mind.

103. On February 17th, 1914, a protest was addressed to the Home Secretary in respect of a salary of only £350 to £500 being offered to women medical inspectors, while a salary of from £400 to £600 was offered to men inspectors for duties of apparently identical scope. Owing to it having been supposed that the difference in the proposed remuneration represented a difference of duties the advertisement of the posts was published in the JOURNAL in February, but it was suggested to the Association by the Northern Association of Medical Women that the scope of the duties was identical in the two cases. The Home Secretary replied that the question raised by the

Association being of a general character not specially applying to one department of the Government, any representations thereon should be made to the Treasury. In view of representations made to the Council by the various Societies of registered medical women and of the fact that the Representative Body, so far back as 1907, adopted the principle that no distinction be made on the ground of sex, as regards the amount of the emoluments to be paid to women practitioners, the Council has offered to join with these Societies in joint representations to the Treasury on the whole question.

Fees for Emergency Cases attended through Municipal Ambulance Service.

104. A communication from a local Medical Officer of Health to a Division was reported to the effect that the local Council being desirous of establishing an Ambulance Service for cases of sickness or accident, wished to enquire as to the possibility of emergency cases occurring under either head being taken to the nearest practitioner for medical attention, and to be informed upon what conditions practitioners would attend such cases, the Corporation to be responsible for the fees. The Council was gratified at the precedent thus created by the local Council approaching the Division, and suggested that the fees paid by the Metropolitan Police for similar cases should be accepted, namely, 7s. 6d. for night and 3s. 6d. for day calls.

Fees for Examination of Emigrants for Governments of Overseas Dominions.

105. Attention having been drawn to the fees offered medical practitioners by the Government of Australia for medical examination and certification of emigrants from the United Kingdom, viz., 5s. for each adult (over 16) and 2s. for each child in the family, of which the Government in question pays 3s. and 1s., the Council has come to the conclusion that the fee for medical examination of emigrants for the Government of any Overseas Dominion should be not less than 5s. per head.

Conferences of Representatives of Association and of Society of Medical Officers of Health.

106. The Council in 1913 reported, and the Representative Body approved, that conferences of representatives of the Association with representatives of the Society of Medical Officers of Health should be held at regular intervals for the consideration of questions of common interest. One such conference has already been held in the 1913-14 Session, at which the question of medical inspection and treatment of school children was discussed. Other conferences will be arranged.

Assistant Medical Officers of Asylums.

107. A conference was recently held of representatives of the newly formed Association of Assistant Asylum Medical Officers (England and Wales) with representatives of the British Medical Association, the former body having expressed a desire for co-operation. With a view to retaining the interest of Assistant Asylum Medical Officers in the British Medical Association and of carrying out the policy for which the Association was founded, namely, to protect the interests of every section of the medical profession, the Council has arranged for the appointment of a Standing Sub-Committee to consider all questions affecting the interests of Assistant Medical Officers of Asylums. Medical practitioners specially conversant with the subject will be appointed on the Sub-Committee together with members of the parent Committee.

Treatment of Incipient Insanity without Certification.

108. The Council has appointed members of the Association to act upon a Joint Committee of the Medico-Legal Society and the Association, on the question of the treatment of incipient insanity without certification, with the stipulation that any report of the Committee must be submitted to the Association before publication.

Dogs Bill.

109. Owing chiefly to the opposition of the medical and university Members of Parliament the Dogs (Protection) Bill introduced each session for some time past into Parliament did not until last year obtain a second reading. Owing to unforeseen circumstances the Bill did, however, obtain a second reading late in the 1913 Session and was sent to a Standing Committee. Sir Philip Magnus, who had taken a prominent part in opposing it, was approached by its supporters with a suggestion that he should accept the insertion of a clause which would allow experiments on dogs only by those experimenters possessing a special license. He applied to the Association for advice, and on behalf of the Association the proposed compromise was at once condemned. As a result the opposition of Sir Philip Magnus and his colleagues was continued, and the Bill was finally abandoned. Under the title of the Dogs Bill it has been reintroduced in the 1914 Session and has passed its Second Reading. Its progress in Committee will be carefully watched.

Advertisements for Medical Appointments: Statements as to Salary Required.

110. In May, 1913, the Council reported to the Divisions and Representative Body that in future no advertisement would be accepted for publication in the JOURNAL in which applicants were asked to state the salary they would require or accept. Doubt having arisen, the Council has made clear that this restriction applies only to appointments which can be filled by qualified medical practitioners only. It is hoped that advertisers who may be put to some little inconvenience by the restriction will realise that it has been imposed to prevent medical practitioners bidding against each other, and thus tending to lower medical remuneration.

Present State of the Law as to Legal Responsibility for Crime.

111. A Special Sub-Committee has been appointed to consider and report upon a resolution of the Section of Medical Sociology at Brighton concerning the present state of the law with regard to legal responsibility for crime. The Medico-Legal and Medico-Psychological Societies are represented on the Sub-Committee, and it is hoped to obtain also the co-operation of the Bar Council and the Law Society in discussing this most important and difficult question.

Treatment of Uninsured Persons.

112. The Council noted for its guidance the decisions contained in Minute 141 of the Annual Representative Meeting, 1913, concerning the fees and conditions for treatment of uninsured persons on contract terms. Various schemes for the treatment of uninsured persons, submitted for the approval of the Association, have been approved by the Council subject to certain provisions as to economic conditions. The Divisions concerned have been asked to report within 18 months as to their experience of the schemes.

Reduced Telephone Service Rates for Medical Practitioners.

113. Representations having been made by certain Divisions that efforts should be made to secure reduced telephone rates for medical practitioners, the Council does not consider that members of the profession can reasonably claim preferential telephone terms. In the opinion of the Council, however, it would be to the advantage of the profession, as well as to that of the general public, if a flat rate for telephone subscribers could be arranged. Representations to the Postmaster-General are being made accordingly.

Central Emergency Fund.

114. A grant of £50 from the Fund was made to the Monmouthshire Division on behalf of a practitioner who had unwittingly accepted an appointment with a Medical Aid Institute, which he resigned at the instance of the local profession at financial loss to himself. A grant of £100 was made to the Cardiff Division on behalf of certain of its members who had suffered financial loss owing to circumstances indirectly arising from their loyalty to the Association in its Insurance Act campaign. As at March 31st, 1914, there was lying to the credit of the fund a sum of £796 1s. 3d. The Council would draw the attention of members of the Association to the claims of this Fund on their support. The Fund is a trust which is under the control of the Medico-Political Committee, and being entirely separate from the funds of the Association can be and has for years been used for purposes for which the general funds of the Association are not available. It has been found extremely useful as a means of supporting practitioners who by their loyalty to the profession have incurred financial loss.

(H) National Insurance.

Constitution of Insurance Act Committee.

115. In accordance with Minute 199 of the Annual Representative Meeting, 1913, the Association of Registered Medical Women nominated Dr. Constance E. Long; the Northern Association of Registered Medical Women nominated Miss

M. F. Ivens; the Society of Medical Officers of Health nominated Mr. Herbert Jones; and the Poor-Law Medical Officers' Association of England and Wales nominated Dr. Major Greenwood; and these nominees were duly appointed by the Council.

The following have resigned membership of the Committee during the year:—

Dr. Charles Buttar, succeeded by Dr. G. E. Haslip; on the resignation of the latter Dr. C. H. Milburn was appointed;

Dr. Constance E. Long, whose place was filled by Dr. Mina L. Dobbie; and

Dr. James Pearse.

National Health Insurance (1913) Amending Bill.

116. Pursuant to the instructions of the Annual Representative Meeting, Brighton, steps were taken to bring the amendments to the Amending Bill desired by the Association before the House of Commons. Sir Philip Magnus and Sir Henry Craik kindly took charge of the amendments and did their best to press them on the attention of the House, but without success. The amendment of Mr. Godfrey Locker-Lampson providing for the transference of the administration of medical benefit to the Approved Societies was withdrawn, and it was apparent that great pressure had been brought to bear upon Members of the House not only by the central official representations of the Association, but by many Divisions and individual members of the profession. The net result of the exertions of the Association as regards the Amending Bill may be summed up by saying that, although the amendments desired by the Association concerning free choice of doctor, income limit, and limitation of the scope of medical benefit had to be withdrawn or were not passed, the same fate befell some of the most dangerous amendments of an anti-medical character. The most important sections of the 1913 Act, so far as the profession is concerned is that which provides for the election of a Panel Committee. Forseeing the danger that the Panel Committees, which are elected only by practitioners under agreements with Insurance Committees, might eventually undermine the position of the Local Medical Committees, which are elected by the whole profession in each insurance area, the Council has urged upon all Divisions, Branches, and Local Medical Committees the desirability of making the personnel of the two Committees as far as possible the same. The Council is glad to report that this advice has been followed in nearly every insurance area.

Enquiries into the Working of Medical Benefit.

117. The Association was invited to present evidence before the Departmental Committee appointed in August, 1913, with the following reference:—

> "To inquire into and report upon the alleged excessive claims upon and allowance by approved societies in England in respect of sickness benefit and any special circumstances which may cause any such claims or allowances."

Every Division, Branch, and Local Medical Committee was furnished with a copy of the specification of points upon which the Departmental Committee was prepared to receive evidence, and asked to supply any information in their knowledge for the purpose of drafting the evidence of the Association. There was an excellent response to the request, the evidence was carefully sifted, and a Memorandum of Evidence was forwarded to the Departmental Committee on March 3, 1914. As all the witnesses of the Association have not been heard, it is not yet possible to publish the Memorandum, but it is hoped to do so in an early number of the Supplement. The following were appointed to give evidence on behalf of the Association and in support of the Memorandum, namely:—Dr. John Divine (Hull), representing medical practice in industrial towns; Dr. H. F. Oldham (Morecambe), practice in seaside towns and in the County of Lancashire; Dr. C. A. Marsh (Bath), practice in residential, non-industrial towns: Dr. R. J. Farman (London, S.E.), practice in the metropolitan area; Dr. J. A. Parsons (Market Overton, Oakham), practice in rural areas; and the Medical Secretary.

118. The Council was also informed that the Association of Approved Societies, a body composed of about forty Approved Friendly Societies and Trade Unions, and the Prudential Approved Societies, representing in all some four million insured persons, contemplated holding an inquiry into the working of medical benefit with a view to reporting as to its efficiency or otherwise, and, if thought fit, of making suggestions as to possible alternative schemes. The Council was asked to appoint a representative on the Committee, and appointed the Medical Secretary, at the same time making it quite clear that the Association reserved the right of independent action whatever the result of the inquiry might be. The inquiry is proceeding, and the experience of the Medical Secretary of its proceedings confirms the Council in its belief that it was wise to have an official representative on the Enquiry Committee.

Central Insurance Defence Fund.

119. The Auditor's Report on the position of the Fund on December 31st, 1913, was published in the Supplement to the JOURNAL of February 14th, 1914, and is appended (Appendix VI, page 315.)

120. The position on 31st March, 1914, as certified by the Auditors, was as follows:—

1914.		£ s. d.			£ s. d.
31st Mar.	By Contributions from 1st Jan.	225 3 11	To Allocation		Nil.
	„ Interest on Deposit ..	4 5 6			
		£229 9 5			

ADMINISTRATION ACCOUNT.

1914.		£ s. d.	1914.		£ s. d.
1st Jan.	By Balance from 1913.. ..	687 19 2	31st Mar.	To Disbursements since 1st. January	288 3 6
				„ Balance in hand ..	399 15 8
		£687 19 2			£687 19 2

COMPENSATION ACCOUNT.

1914.		£ s. d.	1914.		£ s. d.
1st Jan.	By Balance from 1913	12,001 5 2	31st Mar.	To Disbursements since 1st Jan. ..	2,533 0 0
27th „	„ Repayment on behalf of Loan ..	50 0 0		„ Balance in hand ..	9,518 5 2
		£12,051 5 2			£12,051 5 2

121. The contributions to this Fund may now be said practically to have ceased, and the Council after careful consideration of the proposal contained in the following Minute 61 of the S.R.M., December 1913:—

> "That in view of the proposal to raise a Special Fund the Council be requested to consider the advisability of making no further calls upon the Guarantors to the Central Insurance Defence Fund,"

has come to the conclusion that a decision on the matter had better be postponed until after the Representative Body has decided whether it will or will not establish a Special Fund.

122. Grants to individual practitioners by way of compensation for loss sustained have been made during the session to the amount of £6,345, and the Council is glad to report that the existence of the Fund has enabled it to alleviate many extremely hard cases. Some of the applicants who had declined to accept service on a panel would without the assistance of the Fund probably have been reduced to bankruptcy. Others, who by declining to join the panel until the Pledge was revoked had lost a large number of patients whom they might otherwise have had, were also in great need of assistance.

123. In addition to the individual cases which have received compensation, grants of £100 and £400 respectively have been made to the practitioners in two districts in Wales to enable them to conduct special local disputes in connection with the Insurance Act in which considerable numbers of the profession were involved, and in which legal assistance had been employed.

124. The legal defence of a case arising under the Insurance Act was also undertaken out of the Fund, in consequence of the important bearing which it appeared to have upon the general professional position. The circumstances were as follows: After all contract practice appointments had been resigned, in accordance with the policy of the Association, the medical men of Prescot failed to come to terms with the local Friendly Societies, as regards the remuneration to be paid to their juvenile members, and the Societies thereupon began to send all their members who were sick to one doctor, as private patients, promising that the bills should be paid when rendered. No arrangements were made with the doctor and it was some time before he realised that this was the method which the Societies were adopting in order to create suspicion and disunion among the local profession, thus hoping to induce the latter to agree to the Societies' terms. Had the practitioners in Prescot not been few in number and thoroughly united the plan would probably have succeeded. The practitioner specially involved

brought an action against the Society asking for an injunction to restrain it from canvassing and touting on his behalf, thus rendering him liable not only to suspicion from his colleagues, but possibly to prosecution before the General Medical Council. The case was heard in the Liverpool Chancery Court but the judge, while expressing the opinion that the practitioner had done all in his power to clear himself from any suspicion, did not grant the injunction. At this point the Fund took up the case and employed eminent counsel to fight it. The judge again found himself unable to give the plaintiff any relief and dismissed the case, making some very strong remarks, however, on the action of the defendants, which he said had undoubtedly caused the plaintiff serious annoyance and expense. Although the desired injunction was not obtained the Council believes that the prosecution of the action has had the desired effect in discouraging the ingenious but very objectionable practice complained of.

Co-operation of the Association with the Insurance Commissioners.

125. It is obvious that with the large number of practitioners who are now giving service under the Insurance Act and who are therefore bound by the Regulations of the Insurance Commissioners, it is to the interest of the profession that the Association, acting on behalf of the profession generally, should be on good working terms with the Commissioners. The Council is glad to report that its requests for information and suggestions for conference have been received by the Commissioners most courteously. In response to a communication stating that the Association would be glad to be given an opportunity of being consulted upon questions affecting the medical profession in its relation to the National Insurance Act, prior to the Commissioners' ideas being formulated in the shape of Regulations, etc., the Commissioners welcomed the suggestion and stated that so far as circumstances would permit they would avail themselves of the co-operation of the Association before their decisions were arrived at. On several occasions since that time the Commissioners have asked for the opinion of the Association on various points, with advantage, it is believed, to all parties concerned.

Concessions to Approved Institutes.

126. The attention of the Association was drawn by the Chesterfield Division to certain concessions granted to Medical Aid Institutions operating under the Harmsworth Clause by the Insurance Commissioners, as a result of promises given by Mr. Masterman at an interview between the Commissioners and representatives of Approved Institutes at the time of the recent Chesterfield By-election. The concessions in question, which are altogether contrary to the Commissioners' own previous circular on the subject (163/1.C.), are to the following effect:—

> 1. Any existing Approved Institution will receive 9s. a head for every insured person who selects the institution to provide his medical treatment upon the Principal Officer signing a statement that an average of 9s. per head has been expended in respect of insured persons for medical treatment (including provision of drugs) and general establishment charges; treatment to be not inferior to that given by doctors on the panel.
>
> 2. Arrangements will be made as soon as possible whereby insured persons, when permanently changing residence, shall have the option either of joining another Medical Association in their new location or of selecting a panel doctor.

127. It will be observed that the first of these concessions considerably diminishes the control which the Commissioners formerly had over these institutes through their finances, and enables the institutes much more easily to utilise the funds received on behalf of the attendance on insured persons for the treatment of the dependants. The second concession is one to which the profession could not reasonably take exception, but the net result is to give these institutions a position of advantage over the local practitioners in the area, as not only are all former disadvantages removed, but these institutes are able to dispense for their patients while the doctors cannot.

128. The Commissioners were asked to receive a deputation on the question, but they replied that they did not think any good purpose would be served by them receiving a deputation seeing that Mr. Masterman was out of town. The Committee then asked Mr. Masterman to receive a deputation, and after a considerable interval his secretary replied in a way which left no hope of any good resulting from an interview. The Council will take any opportunity which offers to place before Parliament the unfair position in which the Government's concession has left the doctors on the panel in areas where Medical Aid Institutes exist.

Position in South Wales as regards "Schemes" under Section 15 (3) of the National Insurance Act, 1911.

129. In its Supplementary Report issued to the Divisions in July last the Council drew attention to the very unsatisfactory position which had arisen in Wales owing to the encouragement by the Welsh Commissioners of the device whereby insured persons collectively are given permission to "make their own arrangements," thus practically allowing the setting up of new Medical Aid Institutes subsidised by the insurance funds, and thereby over-riding the decision of Parliament which was to the effect that only institutions which existed at the time of the passing of the 1911 Act should be recognised. As foreshadowed in the Supplementary Report a conference of representatives of the profession and of the workmen of South Wales was held, with Dr. Addison, M.P., in the chair, and a decision was arrived at that those present at the Conference should endeavour to obtain the consent of their constituents to a compromise which was put before the conference. Nothing, however, has come of the project. The profession in South Wales, with few exceptions, are as determined as ever in their opposition to the fundamental idea underlying the formation of "Schemes," namely, that the independent medical practitioner shall gradually be eliminated and all the colliery and works surgeons placed under the control of lay committees, separate from, and in addition to, the Insurance Committees. On the whole, the position is probably better than it was last year, as owing to the difficulty which most of the "Schemes" have in obtaining medical officers, the independent practitioners have in most cases improved their position. The situation is, however, still very grave. The Council, acting as Trustees of the Central Insurance Defence Fund, has promised the practitioners who are fighting these "Schemes" all the support both moral and pecuniary that it can give them, and would urge upon the profession generally the duty of supporting the Welsh profession in a fight which is by no means of merely local importance. If the doctors in Wales should be brought under the control of bodies of workmen there is no doubt that workmen in other parts of the country would wish to follow the example. Much can be done by those who are in a position to influence newly qualified medical men. The latter should be advised to look upon appointments offered in South Wales industrial areas with great suspicion, especially if advertised in lay newspapers. In fighting this battle the profession is certainly fighting in the best interests of the insured persons in Wales, for if "Schemes" are successfully established on a large scale it will be impossible for self-respecting, enterprising young medical men to contemplate practising in the Welsh industrial areas, and the result must be a deterioration of the standard of the local profession, obviously to the detriment of the local public.

Medical Referees.

130. In view of the fact that many of the large Approved Societies have been appointing local medical referees and offering terms which, in the opinion of the Council, are very inadequate, the attention of Local Medical Committees and Divisions was drawn to the terms of the following Minute 58 of the S.R.M., December, 1913:—

> "That where any medical practitioner not devoting his or her whole time to the work is called upon by a lay body to express an opinion as to the capacity or incapacity of an insured person, the lowest fee such practitioner should accept should be 10s. 6d. exclusive of expenses, and that such practitioner should only express his opinion after the practitioner in attendance has been given an opportunity of consultation."

131. It is very regretable to note that many Divisions have taken no action with regard to the above Minute, and have allowed terms to be accepted for work of a most responsible character which may form an extremely dangerous precedent. Some Divisions by prompt action have prevented their members from accepting inadequate terms, but it has been very discouraging to them to find that practitioners in neighbouring Divisions were accepting the terms which their members had decided to refuse.

"Free Choice."

132. The Council has carefully considered the following Minute 93 of the Special Representative Meeting, December, 1913:—

> *Minute* 93.—That the Council be instructed to take such instant and vigorous action as shall induce the Government and the Commissioners to grant to insured persons and the medical profession free choice of doctors, whether the doctor is on or off the panel,

and has resolved that any action taken in connection therewith shall be in strict accordance with the line of policy laid down in the following Minute 145 of the Annual Representative Meeting, 1913:—

Minute 145.—Resolved: That the following be the form of amendment of Section 15 (3) of the Insurance Act to be placed before Parliament in connection with the Amending Bill:—

Clause 4, page 4, line 5. Insert the following new Sub-clause:—

5. The following Sub-section shall be substituted for Sub-section (3) of Section 15 of the principal Act:—

"The regulations made by the Insurance Commissioners shall provide that the Insurance Committee by which medical benefit is administered shall require any contributor whose total income from all sources exceeds one hundred and sixty pounds a year or such smaller sum as may with the approval of the Commissioners be fixed by that Committee (not being a voluntary contributor whose total income from all sources exceeds one hundred and sixty pounds a year), and also any person who holds a certificate of exemption, and shall allow any other such person as the Local Medical Committee may in writing approve, in lieu of receiving medical benefit under such arrangements as aforesaid, himself to make his own arrangements with any duly qualified medical practitioner selected by himself (whether the name of the practitioner be on any such list or not) for receiving for himself alone medical attendance and treatment and on the personal applications of such contributors and persons the Committee shall, subject to the regulations, contribute from the funds out of which medical benefit is payable towards the cost of medical attendance and treatment for such contributors and persons sums not exceeding in the aggregate the amount which the Committee would otherwise have expended in providing for them medical benefit (including medicine and appliances)."

Drug Tariff.

133. Various questions have arisen during the course of the year in relation to the drug tariff, a subject which up to the present has probably not received from the profession the attention which it deserves. The Council came to the conclusion that the interests of the profession would be best served by considering this matter in conjunction with the Pharmaceutical Society. Accordingly it has been suggested to that Society that in future a Conference should be held during the summer of each year between representatives of the Association and of the Society for the purpose of arriving at some agreement with regard to the drug tariff for the succeeding insurance year. It is intended that any such agreement should then be recommended by the respective central bodies to the various Local Medical, and Pharmaceutical Committees throughout the country. The Pharmaceutical Society has not yet replied to the invitation.

Co-ordination of Local Medical and Panel Committees:

Conference of Representatives—Local Medical and Panel Committees.

134. Many representations were made to the Council as to the necessity of closer co-ordination of the various Local Medical and Panel Committees throughout the country. Various proposals were also mooted for the establishment of some separate body. Feeling that it would not be in the interests of the profession that any other body should step in to reap the benefits of the work which has hitherto been done by the Association, and desiring to meet the very natural wishes of those who feel that some closer combination should be formed among these Committees, the Council called a Conference on March 13th, to which each Local Medical and Panel Committee was invited to appoint a representative. A skeleton Agenda was sent out, and the Committees were invited to submit motions for discussion. A full report of the Conference appeared in the Supplement of March 21st, 1914, and the Council is glad to report not only that it was a great success, but that during the Conference many expressions of gratitude and loyalty to the Association were evinced, as was a strong desire that any new organisation set up should work in close co-operation with the Association. The Conference appointed a Provisional Committee, which has informed the Council that it is at present considering the position, and hopes shortly to ask for a conference with representatives of the Association to discuss the lines which future co-operation should take. The Council hopes to report further on this most important question in its Supplementary Report.

Treatment of all forms of Tuberculosis by the Members of the Medical Staffs of Tuberculosis Dispensaries or Voluntary Medical Institutions.

135. The Council has approved the issue to the Divisions, Branches, Local Medical Committees and Panel Committees of a Model Scheme for the treatment of Tuberculosis, which was printed in the Supplement of April 4th, 1914. This Model Scheme is an adaptation of that issued by the Association in 1912, but contains in addition certain new proposals as to the payment of the Medical Staffs of Institutions which treat cases now subsidised either by Insurance Committees or Public Health authorities. The Council trusts that the Divisions will give this matter their careful attention so that the policy of the Association on this important subject may be laid down at the forthcoming Annual Representative Meeting.

The Council recommends:

Recommendation A.:—That the Representative Body approve the Model Scheme for the Treatment of Tuberculosis. (See Appendix VII., page 316.)

Voluntary Hospitals and Treatment of Cases in receipt of Maternity Benefit.

136. The Council has carefully considered the questions involved in the following Minute 87 of the Annual Representative Meeting, 1913:—

Minute 87.—Resolved: That the Council be instructed to take into consideration the question of the acceptance by maternity and voluntary hospitals of patients in receipt of Maternity Benefit under the National Insurance Act, to confer on the matter with representatives of Teaching Institutions, to find a temporary *modus vivendi* and to report to the next Representative Meeting.

In doing so the hospitals and other institutions engaged in the training of medical students and pupil midwives were consulted. In presenting the appended Report the Council would point out to the Divisions that certain new principles which are recommended, namely, the deductions of portions of the moneys paid by patients to the funds of voluntary hospitals to create a fund from which the services of the medical staff may be remunerated, and the suggested methods of dealing with the funds so obtained, are the same as those which are recommended in the Model Tuberculosis Scheme referred to in the previous paragraph of this report.

The Council recommends:

Recommendation B.:—That the Representative Body approve the appended Report on the question of voluntary hospitals and their treatment of cases in receipt of maternity benefit. (See Appendix VIII., page 317.)

Medical Officers of Voluntary Hospitals and other Charitable Institutions and Treatment of Members of the Staff who are Insured Persons.

137. The Council has given consideration to the question of the position of Medical Officers of voluntary hospitals and other charitable institutions who are called upon to treat members of the staff who are insured persons.

The Council recommends:

Recommendation C.:—That in those cases where the medical officer of any voluntary hospital is required to attend insured members of the staff of such an institution, the moneys paid by the Insurance Committe in respect of the medical attendance and treatment of such insured persons (exclusive of drugs and appliances) shall be paid to the medical officer of the institution who is responsible for such attendance and treatment, irrespective of any salary paid to such officer.

The Council would draw the attention of the Representative Body to the fact that the principle enunciated in the above Recommendation was approved by the Annual Representative Meeting, 1913, and again by the Special Representative Meeting, December, 1913, in the following form:—

Minute 78.—That this Meeting strongly condemns any arrangement made by indoor Poor Law Medical Officers

with Boards of Guardians in reference to insured members of their staffs whereby the whole or portion of the fees paid to the said Medical Officers by an Insurance Committee is handed over to the Treasurer of the Guardians.

Model Rules for Local Medical and Panel Committees.

138. The Council has been in communication with the Commissioners on the question of the Model Rules for Panel Committees which have just been issued, and is glad to report that the Commissioners have adopted most of the suggestions made by the Association as to these Rules.

Arrangements for the 1915 Agreement.

139. Representations have been made to the Commissioners that the early publication of a time-table in regard to any arrangements necessary for discussing alterations which may be required in the Regulations, and consequently in the agreements for 1915, would be greatly to the advantage of all concerned. A similar suggestion was made last year, and an attempt was made to carry it out, but the suggestion was not made until a later period, and there was no publication of the arrangements. The result was that considerable delay occurred in many areas between the sending down to the Insurance Committees of the draft Agreement and its submission to the Local Medical Committees. It is hoped that the representations of the Association may have the effect of bringing about a working arrangement which will obviate such haste and consequent dissatisfaction in the future.

Prospective situation of Profession as regards the Insurance Acts.

140. Full consideration is being given to the position which will shortly arise as regards remuneration of medical practitioners under the Insurance Act in view of (i) the approaching termination of the period for which the Government undertook to provide a Treasury Grant of 2s. 6d. towards the cost of Medical Benefit, (ii) the complaints which have been made as to excessive claims for sickness benefit, and (iii) the criticism on the actual or prospective financial status of Approved Societies. The situation thus created is one which the Council is of opinion will require the most careful handling, and one as to which there should, if possible, be included in the Supplementary Report of Council to the Representative Body a full statement, so that the profession, through the Annual Representative Meeting, may be prepared with a definite defence against suggestions as to laxity in the granting of certificates, and against any possible raising of difficulties as to the conditions of service or remuneration. The preparation of such a statement is in hand, and it will be issued at the earliest possible moment to the Divisions and Branches so as to allow ample time for consideration by the profession.

Insured Persons Making Their Own Arrangements with Unqualified Persons.

141. The Council has given a good deal of attention to Regulation 44 (2) of the revised Medical Benefit Regulations dated January 10th, 1914. This Regulation prescribes the method whereby insured persons may make their "own arrangements" with unqualified persons. On its publication many protests were received against this endorsement by the State of the practice of unqualified persons, but it must be remembered that, during the progress of the 1911 Bill through Parliament, representatives of the Government specifically stated on more than one occasion that Clause 15 (3) of the Act was intended to cover those cases in which insured persons wished to make their "own arrangements" with herbalists and other unqualified persons. Protests were made at the time, but without avail. Under the Regulations of 1913, if the insured person was allowed by his Insurance Committee to make his "own arrangements" with an unqualified person the latter had to sign the same form and enter into the same contract as if he were a qualified practitioner. On representations being made that this was objectionable, the Commissioners drafted Regulation 44 (2), which makes a clear distinction between unqualified and qualified practitioners.

142. In considering this matter, the Council has had considerable help from the Medical Defence Union, which body memorialised the General Medical Council upon the subject. The Council was also supplied by the General Medical Council with various communications which had passed between that body and the Insurance Commissioners. The situation, as reluctantly accepted apparently by all the medical bodies concerned, is that as the Insurance Act allows insured persons, if they can get the permission of their Insurance Committee to do so, to make their "own arrangements" with unqualified persons, it is desirable that the conditions under which they can do so should be laid down as explicitly as possible. The new Regulation makes it quite plain that persons making their "own arrangements" with unqualified practitioners are placed at a considerable pecuniary disadvantage, as, according to the ruling of the Commissioners, no part of the 2s. 6d. Treasury grant can be used for this purpose, nor can the unqualified practitioner receive the 6d. for sanatorium benefit domiciliary treatment. It would appear, therefore, that the disadvantages to insured persons making their "own arrangements" with unqualified persons are so obvious that it is doubtful whether any considerable number will desire to do so, even if allowed by their Insurance Committees.

143. The Council, while realising that Regulation 44 (2) is probably the best way of dealing with the situation as it at present exists, has forwarded to the Commissioners an emphatic protest against the principle involved in that Regulation and in the National Insurance Act of 1911, namely, the official recognition of unqualified practice.

Interference with Free Choice of Doctor—Canvassing and Advertising by Medical Practitioners.

144. A large amount of evidence has been received by the Association as to the wholesale distribution in some areas of transfer forms by officials of Approved Societies, and as to canvassing and advertising by medical practitioners in order to secure insured persons on their lists. Representations were made to the Commissioners, who replied that they had advised the Insurance Committees in all cases which had come to their notice of interference with free choice of doctor that where the Committee was satisfied upon investigation that the circumstances had been such as to obscure the rights of insured persons in this connection, it was their duty to take all steps open to them to remove the source of the interference. The Commissioners went on to say, however, that while they would strongly deprecate any attempt to coerce insured persons to change their doctors and would take any action open to them to remedy any such abuse of insured persons' rights, they would not feel justified in taking a similar view of cases in which the advantages purporting to accrue to insured persons from one of the alternative methods of receiving medical benefit were brought to their notice by interested organisations. This reply was considered to be unsatisfactory as giving direct encouragement to Approved Societies to canvass and advertise. A communication was accordingly addressed to the General Medical Council, forwarding the correspondence with the Commissioners and asking the Council to make representations to the Commissioners direct. The General Medical Council replied that they had already been in communication with the Commissioners; that the Council had taken every step they could to draw the attention of officials and doctors connected with certain societies and institutions about which complaints had been made to the decisions of the Council as regards canvassing and advertising; that they were at present circulating all the practitioners on the Register with a special letter drawing attention to the subject and enclosing copies of their resolutions on the subject of touting and advertising.

145. The Council views this question with the gravest concern, as, if the practices complained of are allowed to continue, and especially if they are allowed to continue with the apparent sanction of an important body like the Commissioners, serious injury will be done to the *morale* of the profession, and its valued traditions in regard to canvassing and advertising will rapidly be undermined. Several cases in which complaints have been made have been brought to the attention of the Registrar of the General Medical Council, who has thereupon warned the practitioners concerned of the risks they were running. As mentioned in the Ethical section of this Report certain cases which seem to warrant extreme steps are being brought formally before the General Medical Council at its May Session.

Frivolous Complaints by Approved Societies.

146. Representations have been made to the Commissioners that there is evidence that in some areas complaints, which have been proved to be frivolous, have been brought against doctors by Approved Societies. It has been represented that the Regulations should provide for some penalty in such cases, as there seems no reason why insured persons should be fined for action which, when taken by an Approved Society, is apparently not regarded as reprehensible. The Council has accordingly

urged upon the Insurance Commissioners that the liability to fines to which insured persons are subject who prefer frivolous complaints against medical practitioners, should be extended to any bodies or persons who make complaints of such a nature.

Title of Panel Committee.

147. On the representation of a Local Medical Committee the Council has suggested to the Insurance Commissioners that the title of "Panel Committee" should be altered on the first opportunity to that of "Practitioners' Committee." It is felt that the altered title would be more appropriate to the status of the Panel Committee, especially having regard to the fact that the equivalent Committee of Pharmacists is called the "Pharmaceutical Committee."

Interests of Non-Panel Practitioners.

148. In October last the Council appointed a Committee to represent the interests of medical practitioners not on the panel, with the following reference :—

To consider in what manner the British Medical Association can best promote the interests of members who have not entered into agreements with Insurance Committees.

Classification of Practitioners.

149. With a view to obtaining reliable information as to the status of individual practitioners, instructions have been given to obtain a complete set of Panel Lists issued by the various Insurance Committees throughout the country in January, 1914, for the purpose of making the Card Register in the Office indicate whether or not a particular practitioner is on the Panel. By this means it is intended to make complete lists of Non-Panel practitioners in each area which will be forwarded to Honorary Secretaries of Divisions for correction and classification as to nature of practice. In this way it is hoped to provide not only lists of practitioners on panels and not on panels but also greatly to improve the Card Register in the office so as to indicate whether practitioners are retired, or in various whole-time services.

Appointment of Intermediaries.

150. To facilitate communication between the Non-Panel Committee and Non-Panel practitioners in the area of each Division, and to ascertain the views of such practitioners, "intermediaries" who are not on the panel have been appointed in as many areas as possible.

Reasons why Medical Practitioners will not accept Service under the Insurance Acts.

151. It having been realised that the foundation of any policy to be framed by the Association from the point of view of those practitioners who are unwilling to accept service under the National Insurance Acts must be the formulation of reasons for such refusal, a Memorandum has been prepared as to the reasons why medical practitioners will not accept service under the National Health Insurance Acts (*see* Appendix IX., page 318). This Memorandum the Council has received and now submits for the consideration of the Divisions and Representative Body.

Free Choice of Doctor.

152. After careful consideration of Minute 92 of the Special Representative Meeting, December, 1913, the Council submits a recommendation as regards free choice of doctor in connection with the National Health Insurance Acts the adoption of which will, it is believed, go a long way to meet the views of non-panel practitioners.

The Council recommends:

Recommendation D. That the policy of the Association be that such insured persons as may wish to make their "own arrangements" with medical practitioners not on the panel may do so without the necessity of such practitioners entering into any written contract, and with no consequential loss of benefits to the insured persons.

Future Developments of the Insurance Acts.

153. The Annual Representative Meeting, 1913, passed the following resolutions :—

Resolved : That the following Recommendation M (a) of Council be adopted :

(a) That in view of the fact that it is exceedingly likely that the scope of the National Health Insurance Act will be so extended as to include in its operations various additional matters (*e.g.*, the treatment of children and dependants of insured, dental treatment, hospital treatment, alterations in the methods of dealing with deposit contributors and casual labourers) it is desirable that the Association should be ready with its policy as to what a National Health Insurance Act should be, not merely from the point of view of the interests of the profession but also from that of public health and the advancement of medical science. Resolved : That the following Recommendation M (b) of Council be adopted :

(b) That the preparation of a full report upon the above lines be referred to the Insurance Act Committee ; that such report be issued to the Divisions for their consideration and comment ; and that the Report, together with a statement of the views of the Divisions thereon, be submitted, if possible, to the next Representative Meeting, and that the Council be given power to act for the Representative Body should an emergency arise in the meantime.

154. On consideration of the above resolutions the Council came to the conclusion that the subject would be more adequately dealt with by a Special Committee than by the Insurance Act Committee, the time of which was already fully occupied. The matter was thereupon referred to a Committee of nine, together with the Honorary Officers of the Association.

155. The Council has come to the conclusion that, inasmuch as the immediate developments to be expected in the medical service of the National Insurance Act will probably involve a section of the profession which is not at present directly concerned in the working of the Act, namely, the consulting and scientific research ranks of the profession, the Committee should be strengthened by the addition of representative members of those sections, and steps are being taken to that end. The Council has also empowered the Committee to ascertain the views of the Divisions upon certain questions within the scope of its reference. Divisions may therefore shortly expect to be consulted on these matters, and the Council hopes to be able to present a report to the A.R.M. which will allow of a general discussion upon the whole question.

(I.) Proposed Special Fund.

156. It will be remembered that at the S.R.M. of December, 1913, there was a long discussion upon the question of a proposed Special Fund which originated in reports which the Council presented to the Divisions in December last. After discussion the following resolutions were passed :—

58. Resolved : (a) That, seeing that a large majority of representatives present at this meeting is in favour of the formation of a fund, the Council be instructed to consider the whole question and submit the matter to the Divisions, in order that it may come before the Annual Representative Meeting next July for decision.

(b) That in making its Report to the Divisions the Council be authorised to issue therewith, if necessary, a Minority Report containing any objections to the scheme.

59. Resolved : That when the Divisions are consulted an opportunity be taken of recording the votes for and against the scheme at Divisional Meetings.

60. Resolved : That the Divisions be instructed to take the opinion of practitioners resident within their areas by means of a postal vote.

This important subject has been considered by a Special Committee and the Council now presents a Report (*see* Appendix X, page 319). It is hoped that after the expression of opinion of the S.R.M. in December last this subject will receive the earnest attention of the Divisions, so that Representatives may be in a position at the forthcoming A.R.M. to come to a conclusion whether steps should at once be taken to establish a Fund, and if so, what form the Fund should take. It will be noted that the Report is in three parts. First, a general report with **Recommendations**. Secondly, a report (which was adopted by a majority of the Council) in favour of the establishment of the Fund on Trade Union lines. Thirdly, a report in favour of the Trust Method, which was adopted by a minority of the Council, to which is appended some notes by Mr. H. H. Tomkins, a member of the Special Fund Committee. Fourthly, a report, signed by Dr. McKenzie Johnston, another Member of the Committee, which is against the setting up of any special Fund at the present time. In accordance with Minute 59 of the S.R.M., Divisions are asked to record the number of votes for and against (i) the establishment of a Fund ; and (ii) for and against its establishment as a Trade Union or as a Trust.

157. It will be noted also that the S.R.M. was of opinion that the Divisions should take the opinion of the practitioners resident within their areas by means of a postal vote. As any Fund which might be established could only be successful if supported by a considerable proportion of the profession, it is hoped that Divisions will use this method of ascertaining whether not only their members but other practitioners are in favour of the establishment of a fund, and whether, if established, they are prepared to support it.

(J) Public Health and Poor Law.

PUBLIC HEALTH OFFICERS (SECURITY OF TENURE) AND MEDICAL OFFICERS OF HEALTH (SUPERANNUATION) BILLS OF ASSOCIATION.

158. Representatives of the Association conferred with Dr. Addison, M.P. and Sir Philip Magnus, M.P., in December, 1913, as to these Bills. As a result of this conference the Council arranged that a joint deputation with representatives of the Society of Medical Officers of Health should be received by the Chancellor of the Exchequer, the President of the Local Government Board, and the President of the Board of Education in March, 1914, upon the whole question of the position of medical officers of health as regards security of tenure, superannuation and other matters. Unfortunately at the last moment the illness of Mr. Lloyd George necessitated the postponement of the interview, for which it is hoped another opportunity will be found at an early date. It will be representative of all sections of the profession, as well as of prominent public men who have expressed their sympathy with the policy of security of tenure, and of societies interested in housing and hygiene which have supported the Bills. The Association is greatly indebted to Dr. Addison and Sir Philip Magnus for valuable help in connection with the Bills and in arranging for this deputation.

159. On the advice of Sir Philip Magnus, M.P., who introduced the Superannuation Bill into Parliament in the 1913 Session, it was thought well to ascertain the grounds of objection to this Bill held by the Local Government Board and those members of Parliament who objected to its second reading, in order if possible to endeavour to meet these objections. It is hoped that the interview above referred to will clear up the position.

SECURITY OF TENURE AND SUPERANNUATION FOR SCHOOL MEDICAL OFFICERS.

160. The Council has considered a request from the School Medical Service Group of the Society of Medical Officers of Health to include School Medical Officers, Assistant School Medical Officers and officers whose duties include school work, in the provisions of the Association's Bills for superannuation and security of tenure for Medical Officers of Health. The Council has, of course, full sympathy with this request, but has felt itself obliged to point out to the Group that a good deal of experience in respect of the promoting of Parliamentary Bills has impressed upon the Council the undesirability of overloading Bills. In previous years the Association has been specially warned by its Parliamentary friends as to this risk in connection with its Bills for Superannuation and Security of Tenure. The Council has accordingly informed the Group that they would do well to concentrate their efforts on getting support for an amendment to the Association's Bills when they are presented to Parliament.

MILK AND DAIRIES BILLS OF GOVERNMENT.

161. As foreshadowed in the Supplementary Report of Council 1912-13 (paragraph 280), the Council addressed to the Local Government Board a protest against the dropping of the Government Milk and Dairies Bills in the 1913 Session. The Association at the same time asked the Board if there was any way in which the Association could assist in securing legislation. In reply the Association has been given to understand that the Board has been doing everything in its power to obtain legislation, the urgent need for which it fully recognises, and that it deeply regretted that the demands on Government time in the 1913 Session involved the English and Scottish Milk Bills being dropped. The Board expressed the opinion that there is still much to be done to secure an enlightened public opinion as to the need for legislation as to milk supplies.

ROYAL COMMISSION ON VENEREAL DISEASES.

162. The Association having been requested by the Royal Commission on Venereal Diseases to suggest suitable witnesses to give evidence before that Commission, the names of several members of the profession who have taken a special interest in this question have been forwarded for the assistance of the Commission.

MINIMUM SALARY FOR JOINT WHOLE-TIME APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER.

163. The Council has noted for its guidance Minute 286 of the Annual Representative Meeting, 1913, fixing £400 as the minimum salary which can be recognised in respect of such a joint appointment. The Council has under consideration the question as to whether the Association should express the opinion that no medical practitioner should accept a less salary for such an appointment. The matter will be discussed at a future conference of representatives of the Association and of the Society of Medical Officers of Health.

INTER-COLONIAL CONFERENCE ON NATIONAL HEALTH.

164. An Inter-Colonial Conference on National Health will be held in May, 1914, under the auspices of the Victoria League. The Council on behalf of the Association has appointed a representative upon the Sub-Committee set up to organise an exhibition in respect of public health matters which it is proposed to hold in connection with the Conference.

POOR LAW INSTITUTIONS ORDER, 1913, AND POOR LAW INSTITUTIONS (NURSING) ORDER, 1913.

165. The Council has considered these Orders of the Local Government Board. While admitting the importance and value of some of the changes therein inaugurated, especially in the Nursing Order, some of the new medical recommendations are, in the opinion of the Council, likely to prove burdensome and impracticable. Considerable additional work is thrown upon the indoor Poor Law Medical Staff, and it is nowhere laid down in the Orders that there shall be any increase in their remuneration. The increase in clerical work is enormous, and the repeated examination of healthy children required by the Order seems unnecessary. The Association has always insisted on the importance of medical control in institutions for the sick, but by this Order it is definitely laid down that the master is to control, subject to the directions of the Guardians, the institution and the officers, including the medical officers. A communication has accordingly been addressed to the Local Government Board (i.) expressing the Council's approval of the Poor Law Institutions (Nursing) Order, 1913; (ii.) drawing attention to the absence of provision in the Poor Law Institutions Order, 1913, for the payment of Poor Law Medical Officers in respect of the increased duties imposed upon them under that Order; (iii.) urging that the Board make representations to the various Boards of Guardians throughout the country that extra payment for such work be made to the Poor Law Medical Officers; (iv.) pressing the opinion of the Association that medical officers should have control of the medical arrangements of Poor Law Hospitals.

POOR LAW MEDICAL OFFICERS AND ATTENDANCE (UPON RELIEVING OFFICER'S ORDER) UPON PERSONS IN CHARGE OF POLICE.

166. The Council made representations to the Local Government Board and Home Office in connection with the apparently unfair practice obtaining in a county borough whereby the police applied to the relieving officer for an order on a Poor Law Medical Officer to attend persons in their charge. The Poor Law Medical Officer concerned refused to attend upon such an order, with the result that the Guardians applied to the Local Government Board for instructions, the Board replying that it was the duty of the Medical Officer to attend all cases on receipt of a lawful order to that effect.

167. A reply was received from the Home Secretary to the effect that he understood that the Local Government Board had considered the matter, and had come to the conclusion, with which the Home Secretary concurred, that the cases in which the District Medical Officers were summoned were cases in which there was *prima facie* evidence of destitution and not cases of persons under arrest, which it appeared were dealt with entirely by the Police Surgeon. The Local Government Board replied to the effect (i.) that it was the duty of a District Medical Officer upon the receipt of an order from the relieving officer to attend any case within his district and that if he considered an order was improperly given it would be open to him subsequently to make representations to the Guardians

and (ii.) that concerning the borough in question the Board, as a result of its enquiries, had come to the conclusion referred to in the Home Secretary's reply.

168. It is believed that the representations of the Association have had a useful effect in drawing attention to a procedure which if allowed to go unchallenged might have formed a most undesirable precedent.

PUBLIC HEALTH AND POOR LAW APPOINTMENTS AS TO WHICH ACTION TAKEN.

169. Action has been taken by the Association in respect of the following appointments:—

Burnley (District Medical Officers), Ilford (Medical Officer of Health), Yeovil (Medical Officer of Health and School Medical Officer), Wallasey (Tuberculosis Medical Officer), Wigan (Assistant School Medical Officer and Tuberculosis Officer), Basingstoke (District Medical Officers), Kingsclere Union (Tadley and Banchurst) (District Medical Officer), Brighton Workhouse Infirmary (Consulting and Operating Surgeon), Abertillery (Medical Officer of Health and School Medical Officer), East Suffolk (Assistant Medical Officers), Rotherham (Tuberculosis Officer), West Riding of Yorkshire (Dispensing Tuberculosis Officer), Norwich (Tuberculosis Officer), Cambridgeshire (Tuberculosis Officer), Breconshire (Medical Officer of Health and School Medical Officer), Amersham Rural District Council (Medical Officer of Health), Inverurie and Garloch Infectious Hospital (Medical Officers), North Evington Poor Law Infirmary, Leicester (Resident Medical Officers), Lancashire and Bury (Tuberculosis Officer), Plymouth (Poor Law (Medical) Appointments), Shipston-on-Stour Union (District Medical Officer), Deptford (Tuberculosis Officer), and Lambeth (Assistant Tuberculosis Officer).

(K) Hospitals.

MEDICAL AID INSTITUTIONS AND MEMBERS OF MEDICAL STAFFS OF HOSPITALS.

170. The Council considered the following Minutes 82 and 83 of the Special Representative Meeting, December, 1913:—

82. That in order to check the extension of Medical Aid Institutions and to assist the profession in combating them where established, the Association endeavour to enlist the support of the staffs of voluntary hospitals not only in refusing professional recognition to the medical officers of these institutions, but also by refusing treatment to patients sent by them to hospitals, except in cases of grave urgency.

83. That the foregoing resolution shall not apply to those institutions where the Medical Officer of the Institution has retained his post with the consent of the Council of the Association,

and authorised the Hospitals and Medico-Political Committees to issue to the Divisions a joint report upon the subject, with the object of obtaining the opinions of the Divisions with a view to further consideration of the whole matter by the Council and Representative Body. Accordingly on April 1st, 1914, the memorandum published in the Supplement of April 4th was issued to all Honorary Secretaries of Divisions in the United Kingdom together with a covering letter requesting the Divisions to take the matter into early consideration and advise the Council as to their opinions. The Council hopes to report further on the matter in its Supplementary Report.

(L) Naval and Military.

ELECTION OF MEMBERS OF COUNCIL.

171. In pursuance of the power conferred by the Annual Representative Meeting, 1913, the Council elected Director-General Sir James Porter, K.C.B., R.N. (Retd.) to represent the Royal Navy Medical Service upon the Council in place of Inspector-General Bentham, R.N. (Retd.), for the unexpired term of office of the latter, namely, until the close of the Annual Representative Meeting, 1914.

PRESENT POSITION AND FUTURE PROSPECTS OF THE INDIAN MEDICAL SERVICE.

172. A communication having been received from the Secretary of State for India inviting the assistance of the British Medical Association in ascertaining the probable cause of the deficiency of high-class candidates for the Indian Medical Service, the Council forwarded in reply a Memorandum upon the present position and future prospects of the Indian Medical Service (*see* BRITISH MEDICAL JOURNAL, March 7th, 1914), which had previously been prepared for publication in the JOURNAL. Subsequently an invitation was received from the Royal Commission on Public Services in India, asking that a representative of the Association might be sent to give evidence with regard to the Medical Services, and the Council appointed Lt.-Col. R. H. Elliott, I.M.S.

REDUCED RAILWAY FARES FOR OFFICERS OF THE ROYAL ARMY MEDICAL CORPS AND INDIAN MEDICAL SERVICE.

173. As a result of representations made to the India Office with a view to obtaining the extension to Officers of the Royal Army Medical Corps and the Indian Medical Service of the concessions with regard to reduced Railway Fares to Regimental Captains and Subalterns notified in India Army Order No. 162, 1911, the Council has pleasure in reporting a communication from the India Office to the effect that Captains and Subalterns of the British and Indian Services serving with Regiments of Cavalry and Infantry, Batteries or Companies of Artillery, and Companies of Sappers and Miners, and Captains and Subalterns of the Indian Medical Service serving with such units, will in future be allowed to travel first class upon payment of second class fare on all occasions on which they travel by rail at their own expense.

ELECTION OF SERVICE MEMBERS OF COUNCIL.

174. The Representative Body in 1911 approved the opinion expressed by the Council that in future the Representative Body should take advantage of the power conferred in the By-laws (By-law 49 (2)) to appoint the Members elected to represent the Services on the Council for a period of three years instead of for one year as in the past.

Recommendation.

The Council recommends:—

That the Officers elected at the Annual Representative Meeting 1914, to represent on the Council, the Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, be appointed to serve for a period of three years in each case.

NOMINATIONS FOR ELECTION AS REPRESENTATIVES OF SERVICES.

175. In accordance with By-law 43 (e), the Council submits the following nominations for election by the Representative Body of Members of the Council representing the Services:—

Recommendation: That the following representatives of the Services on the Council be appointed for the period 1914-17:—

(a) For the Royal Navy Medical Service:—
Director-General Sir James Porter, K.C.B., R.N. (Retd.)

(b) For the Army Medical Service:—
Col. H. J. Waller Barrow, A.M.S., (Retd.)

(c) For the Indian Medical Service:—
Surg. Gen. P. H. Benson, I.M.S., (Retd.)

(M) Scotland.

COMPOSITION OF SCOTTISH COMMITTEE.

Power of Co-option.

176. The Council reports elsewhere (see paragraph 56, page 301, of Special Report of Council as to Questions of Articles and By-laws, contained in Appendix I.) as to the question of the composition of the Scottish Committee, including a proposal submitted by the Council for that Committee to be given power of co-option.

Question of Chairman of Committee being a Member of Council of Association.

177. The Council is also elsewhere reporting (see paragraph 57, page 301, of Special Report as to Articles and By-laws) as to power being obtained under the By-laws whereby the Scottish Committee may be able to have as its Chairman a member of the Committee who is not a member of Council, the number of meetings of Council and of the Scottish Committee making it difficult or impossible for one person to attend all the meetings in connection with both bodies.

SCHEME FOR CO-OPERATION BETWEEN SCOTTISH COMMITTEE AND COLLIERY AND PUBLIC WORKS SURGEONS COMMITTEE FOR SCOTLAND.

178. Considerable time and attention have been devoted to the question of co-operation between the Scottish Committee and the Colliery and Public Works Surgeons Committee for Scotland. The following arrangements have been made by the Scottish Committee and approved by the Council:—

(i.) That the Scottish Committee appoint three of its members to be members of the Colliery and Public Works Surgeons Committee for Scotland.

(ii.) That the Colliery and Public Works Surgeons Committee submit a formal Constitution, showing the number of its members, the conditions of admission to the right of its franchise, the method of election of the Committee, and the sources of revenue of the Committee.

(iii.) That the Colliery and Public Works Surgeons Committee for Scotland shall not take public action except in so far as its proposals have been approved by the Scottish Committee on behalf of the British Medical Association.

(iv.) That the Scottish Committee may by resolution make grants towards the general expenses of the Colliery and Public Works Surgeons Committee and that the financial liability of the British Medical Association be limited to such grants.

NATIONAL INSURANCE ACT.

Local Medical and Panel Committees in Scotland.

179. It is proposed that the whole detailed work of co-ordination of Local Medical and Panel Committees in Scotland shall be carried out by the Scottish Committee. The Provisional Committee appointed by the recent Conference of Local Medical and Panel Committees held in London has been requested to make financial provision from the Scottish levies to meet the expenses of the Scottish Committee in connection with this work. It is gratifying to note that the Scottish Commissioners have recognised the Scottish Committee as the representatives, on insurance matters, of the profession in Scotland.

Sickness Benefit Certificates.

180. The Council has received from the Scottish Committee a report of a conference between the Committee and the Scottish Insurance Commissioners held in January, 1914, as to the position of practititioners in connection with special risks alleged to be incurred in Scotland in stating the nature of the disease upon certificates supplied to insured persons. In view of the doubt which still exists as to the amount of protection which the practitioner giving a certificate has under Scottish law, the Committee has recommended all members of the Association in Scotland who are not members of any Medical Protection Society to join one and to take out through that Society an insurance policy against any damages in which they might be found liable in claims for alleged negligence or malpraxis.

QUESTION OF CONTRACT PRACTICE IN SCOTLAND.

181. On behalf of the Scottish profession the Committee has deprecated any increase in contract practice in respect of uninsured persons in Scotland. Where economic conditions necessitate contract work, the remuneration should be not less than that which is deemed by the Council to be equivalent to that paid in respect of insured persons.

UNDER CONSIDERATION.

182. Question of future policy of Association as to contract practice.

Remuneration of colliery practitioners.

(N) Ireland.

ORGANISATION OF PROFESSION IN IRELAND.

Appointment of Irish Medical Secretary.

183. The Council has given special consideration to the question of the organisation of the profession in Ireland and of the position of the Association in connection therewith.

184. It was found by the Council that the raising of the Association's subscription in December, 1913, had had a bad effect on its membership in Ireland, which, recently about 1,000, has fallen to 756, whereas the total membership of the profession in Ireland is nearly 3,000.

185. In considering the position, the Council has had to recognise that the Association has not at any time been able to do for its members in Ireland as much work as it does for members resident in Great Britain. This has partly been due to the fact that the conditions of practice in Ireland differ materially from those of the rest of the United Kingdom, mainly because of the existence of the Irish Poor Law Dispensary system, and partly through the comparative absence of any industrial population in Ireland. Recent events in connection with the National Insurance Act have intensified this feeling of isolation. The Friendly Societies are committed, without opposition from the Irish Commissioners, to the policy of excluding the general practitioner from work under the Act as it at present exists, and of introducing a system of whole-time certifiers. In addition, the report of the Departmental Committee appointed to consider the question of the application of Medical Benefit to Ireland has recommended that when Medical Benefit comes into force it should include the dependents of the insured, and be paid for at a capitation rate of 8s. 6d. *for the whole family.* It is not necessary to dwell on the immense importance to the whole profession of the result of the fight over this question.

186. In these circumstances the Council has realised that only effective organisation can save the profession in Ireland from a defeat which would be disastrous not only to themselves but by reflex action to the whole profession. At present such effective organisation does not exist. The Irish Committee and the Irish Medical Association have done their best to organise the profession, but it cannot be said that the result has been satisfactory and there is no permanency about the working arrangement between the two bodies. The Council has therefore come to the conclusion that the needs of the profession in Ireland demand the institution of a separate office in Ireland, with a whole-time Medical Secretary, to create under the auspices of the Association and the immediate supervision of the Irish Committee a strong and permanent organisation. It will be remembered that the Council in its report to the Divisions and Representative Body in December last intimated its intention of setting up separate offices in Scotland, Ireland and Wales.

187. The Council has accordingly taken steps for the establishment of an Irish office of the Association and has appointed as Irish Medical Secretary Dr. Thomas Hennessy, of Clogheen, County Tipperary. Dr. Hennessy was warmly recommended to the Council by the Irish Committee as a man trusted by the whole Irish profession, and eminently fitted for the difficult task of creating an efficient organisation in Ireland. His duties will be to act as Secretary to the Irish Committee and carry out its instructions, subject to any resolutions of the Representative Body and Council. He will also be responsible for collecting, editing and transmitting to the Editor of the BRITISH MEDICAL JOURNAL all reports of Irish Divisions, Branches and Local Medical Committees, and so far as necessary other Irish medico-political bodies. His salary will be £600 per annum.

188. An annual grant for the expenses of the Irish Office and Committee, including the Secretary's salary, will be made to the Irish Committee, the grant for the first year being £1,300. A detailed financial statement will be regularly presented by the Committee to the Council.

189. Under the new arrangement the affairs of the profession in Ireland will be left in the hands of the Irish Committee, subject always to any decision of the Representative Body or Council, and with full co-operation between the Irish Office and the Central Office.

(O) Branches outside United Kingdom.

VISIT OF CHAIRMAN OF COUNCIL TO AUSTRALASIAN MEDICAL CONGRESS.

190. Representatives of some of the Australasian Branches who were present at the Annual Meeting at Brighton having expressed a strong desire that the Council should be officially represented at the Australasian Congress held at Auckland, New Zealand, in February of this year, the Council was happy to find that Dr. J. A. Macdonald, Chairman of Council, was willing to represent the Council at the Congress. The Council felt that the Association could have no better representative than Dr. Macdonald. He has not only attended the Congress and given an address to the New Zealand profession on the subject of National Insurance, but has taken the opportunity to visit some of the Australian Branches. The reports which have reached this country show that Dr. Macdonald's reception has

been most cordial, and the Council believes that the home members of the Association will greatly appreciate the compliment paid to one who has been so prominent in the work of the Association. At the same time the Council would place on record its pleasure that circumstances have allowed it thus to demonstrate to some of the Overseas Branches the pride the Association takes in their prosperity and the anxiety the home members have that no opportunity should be lost of strengthening the ties which bind these Branches to the parent Association.

RECIPROCITY WITH FOREIGN COUNTRIES IN THE MATTER OF REGISTRATION OF MEDICAL DEGREES.

191. The deplorable state of affairs as regards Medical Registration in certain remote colonies has been under consideration, and more especially the injustice caused in some Dominions by a practitioner holding only the medical qualifications of a foreign country being permitted to practise, even though the country whose qualifications he holds allows no such privilege to the holders of British qualifications. The Council made representations to the Government Departments responsible for Medical Registration in the various Dominions and Dependencies, to the effect that throughout the whole of the British Dominions only the medical qualifications of those foreign countries which grant reciprocity to practitioners holding the medical qualifications of Great Britain or any of her Dominions should be registrable.

192. The Colonial Secretary has replied that he is aware that it might be advantageous, in certain respects, if it were possible to restrict the right to practise medicine in His Majesty's Oversea Dominions, to practitioners who possess British qualifications or the diploma of a foreign country in which the holders of British qualifications are permitted to practise, but that in certain parts of the Empire the population consists mainly of persons who are not British subjects, and who are closely connected, by blood, language, and sentiment with races whose attitude towards medical questions differs from that of the inhabitants of the United Kingdom. In such cases it would not, in his opinion, be expedient to confine the practice of medicine to persons trained in British methods. He states that similar considerations also apply, though in a somewhat less degree, to those Colonies in which the inhabitants are British subjects, but have, as in the former class of case, strong affinities with non-British races, and he could not in any case undertake to make representations in regard to the law of medical registration in the Australian States or other parts of the self-governing Dominions.

193. The Council has informed the Colonial Branches and Divisions of the action taken in this matter and has invited their views upon the question as affecting their own areas.

FEDERAL COMMITTEE OF ASSOCIATION IN AUSTRALIA.

194. On behalf of the Association the Council has sanctioned the formation and approved the constitution of a Federal Committee of the Association in Australia, the formation of such a Committee being desired, the Council was informed, by all the Australian Branches. Generally speaking, the constitution and scope of the Committee are similar to those of the South African Committee formed a few years ago.

APPLICATION BY SOUTH AUSTRALIAN BRANCH FOR PERMISSION TO INCORPORATE THE BRANCH.

195. An application having been received from the South Australian Branch for permission to incorporate the Branch under local Australian Acts with the title "British Medical Association, South Australian Branch (Incorporated)" the Council carefully considered the matter in consultation with the Solicitor and with due regard to the precedents in connection with such proposals. The Council found to its great regret that the Memorandum, Articles and By-laws of the Association do not permit the Association according its sanction to any Branch to incorporate itself. While, therefore, it has been unable to consent to the proposal the Council has informed the Branch that the parent Association will gladly do everything legally within its powers to be of help to the Branch.

"SIGHT-TESTING" OPTICIANS IN VICTORIA, AUSTRALIA.

196. It having been noticed by the Head Office that legislation was proposed in Victoria, Australia, for the registration of persons, other than medical practitioners, estimating refraction and prescribing lenses in cases of defective eyesight the attention of the Victorian Branch was drawn to the successful action taken in England against similar attempted legislation, and the Branch was supplied with full information on the subject. The Victorian Branch expressed its gratification that the parent Association had followed its affairs so closely and pointed out that the action taken by the Branch practically followed identically that adopted in the home country some years ago.

SOUTH AFRICAN MEDICAL CONGRESS.

197. The Council has noted with pleasure a resolution unanimously passed by the South African Medical Congress, 1913, expressing the hope that on some future occasion the parent Association will appoint a delegate to attend this annual Congress. The Council has decided that efforts shall be made on some early future occasion to send a delegate.

MEDICAL CERTIFICATES AS TO GOVERNMENT OF CEYLON EMPLOYEES' INABILITY TO WORK.

198. Representations made by the Council to the Secretary of State for the Colonies protesting against the rule of the Ceylon Government by which practitioners other than Government Medical Officers are debarred from issuing certificates of ill-health to Government servants have been ineffectual. The Secretary of State, after consultation with the Officer administering the Government, states that after consideration of all the circumstances he quite concurs with the view expressed by the latter officer, namely, that the rule in question should be retained.

UNDER CONSIDERATION.

199. (1) Appointment of a Condominium Medical Officer in the New Hebrides, (2) Medical Registration in North Borneo, (3) Medical Registration in the Falkland Islands.

JAMES BARR,
Deputy Chairman of Council.

April 28th, 1914.

APPENDICES TO ANNUAL REPORT OF COUNCIL.

I. Special Report of Council as to Questions of Articles and By-laws.

II. Grouping, 1914-15, of Branches in United Kingdom.

III. Analysis of Reports for 1913 of Branches in United Kingdom.

IV. Branches and Divisions in United Kingdom which are without Rules of Organisation.

V. Memorandum of Policy of Association as to Medical Inspection and Treatment of School Children.

VI. Auditor's Report on Central Insurance Defence Fund up to December 31st, 1913.

VII. Model Scheme for Treatment of Tuberculosis (previously published, Supplement April 4th, 1914).

VIII. Memorandum on Voluntary Hospitals and Treatment of Cases in receipt of Maternity Benefit.

IX. Memorandum of Reasons why Practitioners will not accept Service under National Insurance Acts.

X. Report on Proposed Special Fund.

APPENDIX I.

SPECIAL REPORT OF COUNCIL TO DIVISIONS AND REPRESENTATIVE BODY AS TO QUESTIONS OF ARTICLES AND BY-LAWS.

1. The matters in connection with Articles and By-laws as to which the Council has to report to the Divisions and Annual Representative Meeting, 1914, fall under four heads :—

(I.) Matters in connection with resolutions of Annual Representative Meeting, July, and Special Representative Meeting, December, 1913, altering certain By-laws.

(II.) Action taken by Council under Instructions of these Representative Meetings to draft Alterations of Articles or By-laws.

(III.) Questions in connection with Instructions of these Representative Meetings to Council to consider advisability of altering certain Articles and By-laws.

(IV.) Recommendations by Council for Alteration of Articles or By-laws, not arising out of resolutions of Representative Body.

2. In all cases where this was deemed necessary the legal advisers of the Association have been consulted as to the questions dealt with in this Report.

(I.) MATTERS IN CONNECTION WITH RESOLUTIONS OF A.R.M., JULY, AND S.R.M., DECEMBER, 1913, ALTERING CERTAIN BY-LAWS.

3. The resolutions of the Representative Body, July and December, 1913, altering By-laws will be found in Sub-Appendix I (page 302). All these By-laws now appear, as thus altered, in the latest print (dated March, 1914) of the Articles and By-laws. All are operative except two, viz., By-laws 16 (d) and 18 (c), as to which see next paragraph.

Question of By-laws 16 (d) and 18 (c), as to Possible Insurance Members of Branch Councils and of Division Executive Committees.

4. The question of amendment of the By-laws, to provide for possible addition to Branch Councils and Executive Committees of Divisions, of members of Local Medical Committees and medical members of Insurance Committees, was brought before the A.R.M., 1913, by the 1912-13 Council in its Annual Report (Supplement, May 3rd, 1913, page 373, paragraph 38). Reference to that Report will show that it was the intention of the Council that these By-laws should be amended in such a way as to permit of the Branches and Divisions being able to declare by their Rules that certain members of the Local Medical Committees or medical members of the Insurance Committees, if already members of the Branch or Division, as the case might be, should be members, *ex officio*, of the Branch Council or Division Executive Committee.

5. When the matter came up for consideration by the Representative Body at Brighton, it was moved as an amendment and approved by the meeting, that in the draft By-law 16 (d), as to Branch Councils, the word "co-opt" should be substituted for the word "declare," and the words "*ex-officio*" be deleted. Consequentially, a similar amendment was made by the meeting with regard to By-law 18 (c), as to Division Executive Committees, and the paragraphs as thus amended were approved by the meeting, and were printed, and now appear, in the Articles and By-laws in the following form thus adopted by the Representative Body in each case :—

16 (d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such medical members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may co-opt to be members of the Branch Council.

18. (c) Such members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such medical members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may co-opt to be members of the Executive Committee.

6. In connection with the model Rules of Organisation of Divisions and Branches the question arose as to the exact meaning of these paragraphs—did they actually provide for that which was intended by the Representative Body, namely, that the Branch Council and Division Executive Committee respectively should have the power to co-opt to themselves such Insurance representatives? To embody such an intention it would have been necessary for the paragraphs to read " . . . as the Branch Council may co-opt to be members of the Branch Council" and . . . "as the Executive Committee may co-opt to be members of the Executive Committee." The Solicitor was consulted and he stated that in his opinion the procedure whereby these paragraphs were adopted in the form in which they at present stand in the printed By-laws was irregular, and that, as a result and in view of their obvious ambiguity, it was open to serious doubt whether they could be regarded as operative at all. He stated his opinion that the exact words of any proposed new By-law must be submitted to the Divisions and Representative Body, and wording so submitted cannot subsequently be altered without involving submission to the Divisions and Representative Body of a further draft By-law containing the actual wording proposed to be adopted.

7. The Council has thus had to regard the present paragraphs as inoperative.

8. In these circumstances it is necessary that the paragraphs be re-submitted to the Divisions and Representative Body in such form as shall correctly convey the sense intended. In view of another addition requiring to be made to By-law 18 (*see* paragraph 61 of this Report), it is proposed by the Council that this new paragraph of that By-law shall be numbered 18 (d).

9. The Council recommends :—

Recommendation A.—That the following paragraphs be incorporated by the A.R.M., 1914, in By-laws 16 and 18, as to composition of Branch Councils and Division Executive Committees respectively, to be paragraphs 16 (d) and 18 (d) :—

16 (d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee constituted under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may appoint, or the Branch Council may co-opt, to be Members of the Branch Council.

18 (d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee constituted under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may appoint, or the Executive Committee may co-opt, to be Members of the Executive Committee.

[Existing By-laws 16 and 18 :—

Local Management : Branches.

16. The management of the affairs of each Branch shall, save as otherwise provided in the By-laws, be vested in a Branch Council, composed of the following Members :—

(a) Those Members of the Council who are elected (as hereinafter provided) by the Branch or by any group of Branches to which the Branch belongs or (wholly or in part) by Representatives of Constituencies comprised in the Branch.

(b) The Members elected to represent on the Representative Body the Divisions comprised in the Branch.

(c) Such Officers of the Branch as the Branch shall declare to be members *ex officio* of the Branch Council.

(d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may co-opt to be members of the Branch Council.

(e) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the Membership of such Division.

Local Management: Divisions.

18. The management of the affairs of each Division shall, save as otherwise provided in the By-laws, be vested in an Executive Committee composed of the following Members:—

(a) The Member or Members representing the Division on the Representative Body;

(b) The Member or Members representing the Division on the Branch Council;

(c) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may co-opt to be Members of the Executive Committee.

(d) Such other Members elected by the Division as the Division may determine.]

(II.)—ACTION TAKEN BY COUNCIL UNDER INSTRUCTIONS OF A.R.M., JULY, AND S.R.M., DECEMBER, 1913, TO DRAFT ALTERATIONS OF ARTICLES AND BY-LAWS.

10. The resolutions of the Representative Body, July and December, 1913, instructing the Council to draft alterations of Articles and By-laws are printed in Sub-Appendix II (page 303). It will be convenient to deal with these in the order of the Articles and By-laws to which they relate.

11. The numbers given to the draft new or altered Articles and By-laws are, it will be seen, provisional only, as at the present stage it facilitates reference to retain unchanged the numbers of existing Articles and By-laws. If the new Articles and By-laws are adopted by the Divisions and Representative Body the numbers will be made to run consecutively.

REFERENDUM AND POSTAL VOTE.

12. Column 1 shows the draft new Articles and By-laws submitted, Column 2 shows the resolutions of the A.R.M., 1913, or, where necessary, the existing provisions, on which these are based. For existing Articles 31 and 32 as to Referendum *see* Sub-Appendix III (page 305). The Association has not at present any By-laws on this subject.

DRAFT ARTICLES AND BY-LAWS.	RESOLUTIONS OF A.R.M. 1913 (OR EXISTING ARTICLES AND BY-LAWS).
Draft Article 31, Resolutions of Representative Body.	*(Is identical with existing Article 31 (1), but is set out here in order that the purport of the proposed new Article may be readily appreciated.)*
Article 31 (1)—Subject as provided by the Regulations a resolution of the Representative Body (not being a resolution inconsistent with the provisions of any Statute or of the Memorandum of Association) which affects the funds of the Association, or relates to the Regulations, or By-laws, or to the policy of the Association in matters affecting the honour or interests of the medical profession and is carried by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws, or which relates to any other business within the powers of the Representative Body and is carried by a simple majority, shall be deemed to be a decision of the Association.	
(2) Provided that it shall be competent for the Representative Body to add to any resolution any one or more of the following declarations:—	
(a) That such resolution shall be of local effect only, namely, shall apply only to Divisions in England or in Scotland or in Ireland or in Wales (including Monmouthshire) or in any British Colony, Dominion or Province, or in any two or more of those areas.	*Minute 237 (d)*—That the Representative Body should be empowered, when passing any resolution, to say to what portion of the Kingdom the resolution should apply. In this case, if the Council decided to take a Referendum or postal vote, it would consult only that portion of the country designated by the Representative Body.
	Minute 237 (e)—That it should be competent for the Representative Body to discuss and come to decisions upon matters of policy which are only to affect and to be made applicable to certain portions of the Association.
	Minute 240.—That it is desirable that the policy laid down in a specific resolution be able to be declared to be the policy of the Association in certain areas, and not in others, or in areas where a certain majority is reached—not in others, and if it is possible to have such local policy, it is desirable to have all matters connected with it kept local to the area affected.

13. *Note by Council on foregoing.*—*Minutes* 237 (d) and (e) and 240, contemplate that the Representative Body would decide whether a given resolution was to affect certain areas only, and Minute 237 (b) (*see* Sub-Appendix II (page 304), proposing to give a similar power to the Council, appears to the Council to be inconsistent. Only the body which passes the resolution should have power to say to what places it shall apply. Draft Article 31 (2) (a) provides accordingly.

(b) That such resolution shall not be binding upon the Association (or if the same be declared to be of local effect only shall not be binding upon the Divisions proposed to be affected thereby) unless and until it shall have been approved on a Referendum by the Association (or, if declared to be of local effect only, by the Divisions proposed to be affected) and that the Representative Body require a Referendum to be taken thereon accordingly.	*Minute 238.*—That the Representative Body deems it desirable that, after having decided that a certain procedure or policy is advisable, it should be able to declare that its decision on the matter should not be considered "the policy of the Association" and should be ignored by the Council until the result of a postal vote of the Association or profession to be taken forthwith by the Council, either on the whole question or on some portion thereof, has been ascertained.
(c) That such resolution shall not be binding upon the Association (or if the same be declared to be of local effect only shall not be binding upon the Divisions proposed to be affected thereby) unless and until the opinion thereon (or on some part thereof) of the members of the medical profession resident within the United Kingdom or (in the case of a resolution declared to be of local effect only) of the members of that profession resident within the Divisions proposed to be affected thereby (whether Members of the Association or not) shall have been ascertained by a Referendum and the result of such Referendum shall have been considered by the Council and that such opinion shall be ascertained accordingly.	*Minute 238*, quoted above.
And any such declaration shall have effect accordingly.	

14. *Note by Council on foregoing.*—Under draft Article 31 (2) (c) it will be for the Representative Body, and not for the Council, to require that a Referendum directed by the Representative Body shall be extended to the whole profession in the area concerned. Minute 238 differs on this point from the last clause of Minute 237 (a) (for which *see* below under draft Article 32 (b) (page 295). The Council took the view that decision as to the scope of a Referendum directed by the Representative Body would be a matter for that body itself.

(3).—Provided also that no resolution of the Representative Body to make any addition to or any amendment, alteration, or repeal of any Regulation or By-law, or to make any new Regulation or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body, either by the Council, or by a Branch, or by a Division, and shall have been published in the JOURNAL not less than two months before the Annual Representative Meeting or one month before the Special Representative Meeting, at which such resolution is passed.

(Is identical with existing Article 31 (2), except that the draft Article, consequentially to there being now 2 (draft) proviso clauses, reads:—"Provided also that" instead of "Provided that").

Draft Article 32, Referendum.

Article 32.—In respect of every resolution of a General Meeting of the Association (except a resolution capable of being confirmed as a special resolution or a resolution confirming as a special resolution a resolution previously passed, or an extraordinary resolution or a resolution relating solely to the procedure of the Meeting), and in respect of every resolution of the Representative Body the following provisions shall have effect:—

(Is identical with existing Article 32 (a).)

(a) Within three months after the date on which the resolution is passed, the Council shall hold a Meeting for the purpose of considering the resolution. Such Meeting may be convened by a notice given either before or after or during the progress of the Meeting at which the resolution is passed.

(b) Except in the case of a resolution of the Representative Body in respect of which that Body shall have required a Referendum, the Council, at its said meeting, or at any adjournment, thereof may approve the resolution, and shall be deemed to have approved the same unless one half at least of the total number of the Council be present, and it be determined by a majority of not less than two-thirds of the votes given on the question that the resolution does not properly represent the wishes of the Association and that a Referendum is required and is to be taken either amongst Members of the Association or amongst members of the medical profession.

(Is identical with existing Article 32 (b), except (1) for the limitation contained in the opening words "Except . . . referendum," rendered necessary by Minute 238; (2) the insertion in the draft Article after the word "meeting," of the words "or at any adjournment thereof"; and (3) substitution, in the draft, of the words "required and is . . . medical profession" for the word "expedient" in the last line, pursuant to the following Minute 237 (a) of the A.R.M., 1913:—

Minute 237 (a).—That the Council should be empowered to take a referendum on any decision of the Representative Body either in the way suggested in Article 32 (that is by Meetings of the Divisions) or by a postal vote, and should also be empowered to extend the Referendum or postal vote if it thought fit to the whole profession.

15. *Note by Council on foregoing.*—Under existing Article 32 (b) it is open to the Council to adjourn a meeting of Council held for the consideration of a resolution of the Representative Body. The words referred to (in (2) foregoing) have been inserted to make it clear that the Council can do so.

(c) Where in the case of any resolution a Referendum (whether to Members of the Association or to members of the medical profession) shall have been duly required (either by the Representative Body or by the Council) in manner aforesaid, the same shall be taken in any manner for the time being prescribed by the By-laws, but so that in the case of a resolution of the Representative Body declared to be of local effect only, such Referendum shall be taken only in the Divisions proposed to be affected by such resolution.

Minute 237 (a), quoted above.

16. *Notes by Council on foregoing.*—Under draft Articles 32 (*b*) and (*c*) the Council will have power to extend a Referendum, directed by itself, to the whole profession in the area concerned, if the Council so desire. To this extent, therefore, these draft Articles give effect to the last clause of Minute 237 (a) of the A.R.M., 1913. The drafts submitted do not, however, empower the Council to alter the scope of a Referendum directed by the Representative Body.

17. The detailed machinery for the taking of a Referendum has been transferred by the Council to the By-laws (*see* draft By-laws 42 a—g below, pages 296-7).

(d) Before taking such a Referendum upon a resolution which has been declared to be of local effect only, it shall be competent for the Council to decide that the approval of the resolution on the Referendum shall be subject to both or either of the following conditions, namely, (a) that a specified number or proportion of the Members of the Association qualified to vote shall vote on the question, and (b) that a specified majority of the votes of such Members shall be in favour of the resolution. Any such decision shall be published in such manner as the Council may think fit, and where such decision has been given and published the resolution shall not be deemed to have been approved on the Referendum unless the conditions or condition shall have been fulfilled. Where no such decision has been given and published before the taking of the Referendum, it shall be competent for the Council, after the result thereof has been ascertained, to decide whether, having regard to the number or proportion of the voters (being Members of the Association) who voted on the question and to the majority (if any) of the votes given by such Members in favour of the resolution, the same shall or shall not be deemed to have been approved on the Referendum. Any decision of the Council under this clause shall be final and conclusive.

Minute 237 (c).—That in taking a referendum or postal vote on any question, the Council should have power to decide what majority of the votes received would justify it in making the result of the votes binding upon the Members of the Association in those parts of the country consulted.

Minute 239.—That it is not desirable that the Representative Body at the same time should lay down the majority, either of voters or of the whole Members of the Association or profession, it considers necessary for the carrying of the question.

Minute 240, quoted above.

18. *Note by Council on foregoing.* The Council interpreted Minutes 237 (*c*) and 240 of the A.R.M., 1913, as to resolutions of local effect, as meaning that the Council should be given power to decide either before or after submitting a resolution to a Referendum or postal vote, (1) whether the proportion of votes cast to the total possible number of votes would justify it in further consideration of the matter, and (2) what majority of the votes actually given should be necessary to make the result of the vote binding.

(*c*) Where any Referendum is taken amongst members of the medical profession generally the votes given upon such Referendum by persons not being members of the Association shall be reckoned separately and shall not be counted for the purpose of ascertaining the result of the Referendum to Members of the Association, but the opinion of the medical profession as ascertained upon such Referendum shall at the earliest opportunity be considered by the Council, and if upon such consideration it shall appear to the Council that the resolution is contrary to the opinion of the medical profession it shall be competent for the Council finally to disallow the same notwithstanding that it has been approved on the Referendum to Members of the Association.

Minutes 237 (a) and 238, quoted above.

19. *Note by Council on foregoing.*—The Council has made provision as to the mode of taking a Referendum to the medical profession by draft By-law 42d below.

20. Such a Referendum will necessarily be for the purpose of obtaining information and guidance only. Provision is made by the Council in draft Article 32 (e) accordingly.

21. It would obviously be improper that the votes of non-members should be allowed directly to affect the question whether a certain resolution should be made a decision of the Association intended to bind its Members.

(*f*) No resolution to which this Article relates shall have any operation unless and until it shall have been duly approved either on a Referendum (in cases in which a Referendum has been duly required) or by the Council (in other cases). Any resolution so approved shall (unless the same shall be finally disallowed by the Council in pursuance of the last preceding paragraph of this Article) have effect according to the tenor thereof as a valid and effectual decision of the Association.

Represents existing Article 32 (f), which is as follows :—

(*f*) If the said Meeting of the Council shall not be held within the said period of three months, or if the requisition prescribed by paragraph (c) of this Article shall not have been issued within the said period of eight weeks, then the resolution shall come into operation immediately upon the expiration of the said period of three months or of the said period of eight weeks (as the case may be). Save as aforesaid the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

22. *Note by Council on foregoing.*—It will be seen, however, that draft Article 32 (f) omits the provision contained in existing Article 32 (f) for the automatic coming into effect of resolutions of a General Meeting or of the Representative Body in cases where no meeting of Council is held within the three months. The Council is advised that such a clause is not really necessary and that its omission does not involve the risk of a resolution of a General Meeting or of the Representative Body being shelved. Any 15 members of Council can under existing By-law 56 require a meeting of Council to be held.

(*g*) The result of any Referendum and the fact of any approval or disallowance of a resolution shall be forthwith published in the Journal.

(Corresponds with existing Article 32 (g).)

Draft By-law 42a, Modes of taking Referendum.

By-law 42a.— (1) Where in pursuance of the Regulations a Referendum to Members of the Association has been required to be taken in respect of any resolution of a General Meeting of the Association or of the Representative Body the same may at the option of the Council (subject as hereinafter provided) be taken either by votes of Members given at meetings of the Divisions of the Association (which mode is hereinafter referred to as "Referendum by Division Meetings") or by votes of Members given by means of voting papers transmitted by post (which mode is hereinafter referred to as "Referendum by Postal Vote"). Provided that the Council shall conform to any directions which may be given by the Representative Body as to which of the said modes shall be adopted for the taking of a Referendum on any particular resolution.

Minutes 237 (a) and 238, quoted above.

(2) The Council shall at its meeting at which the resolution is considered determine (subject as aforesaid) in which mode the Referendum is to be taken in the Divisions affected by the resolution, and shall as soon as may be thereafter arrange for the same being so taken according to the provisions hereinafter contained.

24. *Note by Council.*—This and the succeeding draft By-laws give the detailed machinery as regards Referendum whether by Division meetings or postal vote.

25. It will be seen that draft By-law 42a gives to the Council (subject to any directions of the Representative Body to the Council in specific cases) the sole power of deciding in which mode, *i.e.*, whether by meetings or postal vote, a Referendum is to be taken. The Council has thus not given effect, in the draft Articles and By-laws now submitted, to Minute 237 (f) of the A.R.M., 1913 (for which *see* Sub-Appendix II., page 304). It appeared to the Council to be essential that the voting on any specific question must be taken throughout by one means only, namely, by whichever means the Representative Body or, failing the Representative Body, the Council decides upon for the given case.

Draft By-law 42b.

Referendum by Division Meetings.

(This By-law repeats, in its paragraphs (1) and (2), the existing machinery in respect of referendum by Division Meetings, transferred from present Article 32 (c) and (d).)

42b. Where a Referendum is to be taken by Division Meetings the mode of taking the same shall be as follows :—

(1) An official of the Association shall as soon as may be after the said Meeting of the Council and not later than eight weeks from the date thereof, send by post to the Secretary of each Division affected a requisition requiring him within four weeks to convene a Meeting of the Members of the Division (hereinafter

called "the Division Meeting") for the purpose of considering the resolution, and such requisition shall specify a time within which his certificate as to the voting at the Division Meeting is to be received at the Head Office of the Association.

(2) The Secretary of the Division shall convene the Division Meeting accordingly, and shall within the time specified in the requisition certify in writing, under cover addressed to the Association at the Head Office, the number of Members present at the Division Meeting and the number of the votes given thereat for and against the resolution.

(3) At or as soon as may be after the time specified in the requisition for the receipt of the said certificate, the votes given and certified as aforesaid for and against the Resolution in all the Divisions in which the Referendum has been taken shall be counted by an official of the Association and the result of the voting shall be notified by him to the Council.

26. *Notes by Council on foregoing.*—The word "Officer" of existing Article 32 (c) (*see* Sub-Appendix III., page 305) is changed to "official," the latter being intended. Paragraph (3) of this draft By-law renders more definite the present practice by providing that the votes shall be counted by an official of the Association and the result notified by him to the Council.

27. In taking a Referendum in either way the Council proposes that the Council shall not put forward any observations on the subject of the resolution. Such observations could hardly be printed on a voting paper (where a postal vote was being taken), and if they are inappropriate in connection with a postal vote it seems preferable that they should not be put forward on a Referendum by Division Meetings. The concluding words of present Article 32 (c) ("and shall . . . . direct," *see* Sub-Appendix III., page 305) have therefore been omitted by the Council from proposed By-law 42b (1).

Draft By-law 42c.

Referendum by Postal Vote.

Minutes 237 (a) and 238, quoted above.

By-law 42c.—Where a Referendum to Members of the Association is to be taken by postal vote the mode of taking the same shall be as follows:—

(1) The Council shall cause to be prepared and shall approve a form of voting paper containing a copy of the resolution and the date upon which and the majority by which the same was passed and a request that each Member will signify his approval or disapproval thereof by writing the word "Aye" or the word "No" and signing his name and stating his address in spaces provided in the voting paper for those purposes and returning the same by post under cover, addressed to the Association at the Head Office, within a time to be specified on the voting paper.

(2) A voting paper, in the form prepared and approved as aforesaid, shall be sent by post by an official of the Association to each Member of the Division at his last known address.

(3) At or as soon as may be after the expiration of the time specified in the voting papers for the return thereof to the Head Office the votes given for and against the resolution as appearing by the voting papers duly signed and received within the time aforesaid shall be counted by an official of the Association, and the result of the voting shall be notified by him to the Council.

Draft By-law 42d.

Referendum to Members of Medical Profession.

Minutes 237 (a) and 238, quoted above.

42d. Where a Referendum to members of the medical profession is to be taken the same shall be taken in a mode similar to the mode hereinbefore prescribed for the taking by postal vote of a Referendum to Members of the Association, and the Council shall, on the occasion of any such Referendum, make all arrangements required for that purpose.

Draft By-law 42e,
Official for Purposes of Referendum.

By-law 42e.—The official of the Association to perform the duties referred to in the preceding By-laws shall be an official to whom the said duties shall be assigned by the Council.

Draft By-law 42f,
Result of Referendum.

Minute 237 (c) quoted above and existing Article 32 (e) and (g).

42f. Subject to any decision of the Council in pursuance of the Regulations as to the conditions required for the approval of the resolution, the same shall be deemed to have been approved on a Referendum if the aggregate number of votes given for the resolution and so ascertained and notified to the Council as aforesaid shall exceed the aggregate number of votes given against the resolution and likewise ascertained and notified or if no vote shall be given against the resolution.

Draft By-law 42g,
Expenses of Referendum.

42g. The expenses of a Referendum shall be borne by the Association.

SUMMARY.

28. Taken together it will be seen that the foregoing draft Articles and By-laws provide as follows.

29. The Representative Body in passing resolutions may make declarations (one or more) that the resolution is of local effect, or requires reference, before becoming effective, to the Association or the profession, or to the portion of the Association or of the profession concerned.

30. The Council on considering resolutions of General Meetings or of the Representative Body as to which a Referendum is not already directed by that body may similarly refer them.

31. In respect of resolutions referred to the whole or part of the Association the Council may employ either the machinery of Division Meetings, or that of postal vote by issue of voting papers by the Council to each Member concerned. The Council must, however, conform to any directions of the Representative Body as to which method is to be used in a given case.

32. As regards resolutions declared to be of local effect and referred, the Council may, before it refers them, decide that, for the resolution to be approved, (a) a specified number or proportion of Members must vote, or (b) a specified majority of the Members must be in favour, or both. In the alternative the Council may simply decide on considering the numbers of Members who voted for and against, whether the resolution shall be deemed to have been approved on the Referendum.

33. In the case of a Referendum, general or local, to members of the profession generally, the votes of non-members shall be reckoned separately. The Council will, however, take into its consideration the opinion of the profession as a whole, as ascertained by the Referendum. If that opinion is against the resolution the Council may, if it think fit, finally disallow the resolution, though approved on the Referendum to the Members of the Association.

34. Subject to any decision of the Council as to the conditions required for approval of a resolution, resolutions shall be deemed approved on Referendum if they have obtained a simple majority.

35. The Council recommends :—

Recommendation B.—That the draft new and amended Articles and By-laws as to Referendum and postal vote submitted by the Council be approved by the Annual Representative Meeting, 1914, to take the place of existing Articles 31 and 32; that the necessary steps be taken to amend the Articles accordingly: and that the relative By-laws as to Referendum and postal vote come into effect on the date on which the amended Articles come into effect.

Powers and Duties of Council.

36. The Council finds on consideration of Minute 70 of the A.R.M., 1913 (*see* Sub-Appendix II., page 304), as to delegation of powers to the Council by the Representative Body, that the Representative Body already has this power of delegation.

37. To remove any doubt, and at the same time better co-ordinate Article 34 with the existing and proposed provisions as regards Referendum,

The Council recommends :

Recommendation C.—That steps be taken to amend Article 34 to read as follows (words proposed to be inserted are shown in italics) :—

34. It shall be the duty of the Council *(subject to the provisions as to Referendum hereinbefore contained)* to carry into execution resolutions passed by a General Meeting or of the Representative Body, *and to act upon any delegation by that Body and to* administer the affairs of the Association in accordance with the Memorandum of Association and the Regulations and the By-laws, and the Council shall exercise such powers and do such acts and things as may be exercised or done by the Association, and are not by the provisions of any Statute or of the Regulations or the By-laws directed to be exercised or done by a General Meeting or by the Representative Body.

By-law 11, as to Association Subscriptions.

Question of Membership Subscription payable by newly-qualified Practitioners.

38. On this subject the Council submits a separate Report (*see* Sub-Appendix IV, page 305).

The Council recommends :

Recommendation D.—That the A.R.M., 1914, amend existing By-law 11, as to Subscriptions, to read as follows (new words proposed to be inserted are shown in italics) :—

"Subscriptions.

Amount.

11.—(1) On and after the first day of January, *1915*, and except *as hereinafter provided*, the Annual Subscription to the Association shall be :—

(a) For a Member resident in any part of the British Islands,* Two Guineas.

(b) For a Member resident elsewhere, Twenty-five Shillings.

Provided as follows:—

(c) *In the case of a Member resident in the British Islands* and admitted before the expiration of two years from the date of his registration under the Medical Acts the annual subscription shall be Twenty-five Shillings until the 31st of December next occurring after the expiration of the period of four years from the date of such registration.*

(d) A Member admitted on or after the 1st of July in any year shall pay half *his* current subscription for that year.

(2) For the purposes of this By-law a Member shall be deemed to reside in that place in which his ordinary place of abode is situate at the time at which according to the Regulations his subscription is considered due."

* *Note.*—For Recommendation (O) of Council that the words "British Islands" of existing By-law 11 be altered to "United Kingdom," *see* paragraphs 50-1, page 300.

[Existing By-law 11 :—

Subscriptions.

Amount.

"11.—(1) On and after the 1st of January, 1914, and except in the case of Members elected on or after the 1st of July in any year, the Annual Subscription to the Association shall be :—

(a) For a Member resident in any part of the British Islands—Two Guineas.

(b) For a Member resident elsewhere—Twenty-five Shillings.

(2) A Member admitted on or after the 1st of July in any year shall pay half the current subscription for that year.

(3) For the purposes of this By-law a Member shall be deemed to reside in that place in which his ordinary place of abode is situate at the time at which according to the Regulations his subscription is considered due."]

Composition of Branch Councils.

39. To give effect to Minute 308 of the A.R.M., 1913 (*see* Sub-Appendix II., page 305),

The Council recommends :

Recommendation E.—That By-law 16 (e), which reads as follows :—

"(e) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the membership of such Division,"

be amended by the A.R.M., 1914, to read as follows :—

"(e) Such other Members as the Branch may by its Rules decide."

Note.—For existing By-law 16 *see* paragraph 9 of this Report (page 293).

Co-ordination of Policy of Divisions in Branch.

40. To give effect to Minutes 55-8 of the A.R.M., 1913, as to powers of Branch Councils (*see* Sub-Appendix II., page 304),

The Council recommends :

Recommendation F.—That the A.R.M., 1914, adopt the following new By-law 16*a* :—

"*Co-ordination of Policy of Divisions.*

"16*a*. It shall be the duty of every Branch Council to advise the Divisions forming the Branch in matters of policy affecting the medical profession, with a view to promoting a common policy throughout those Divisions. The Branch Council shall report to the Representative Body or to the Council upon the questions dealt with by such advice in all cases in which such a report is considered by the Branch Council to be necessary or desirable or is requested by the Representative Body or by the Council."

RELATIONS BETWEEN DIVISIONS AND BRANCHES.

41. To give effect to Minute 42 of the A.R.M., 1913, as to co-ordination of Divisions with Branches (*see* Sub-Appendix II., page 303),

The Council recommends:

Recommendation G.—That the A.R.M., 1914, adopt the following new By-law 18*x*:—

"*Relations between Divisions and Branches.*

"18*x*. The Executive Committee of every Division shall, as soon as may be, notify to the Council of the Branch comprising that Division each decision of the Division or of the Executive Committee relating to or affecting the organisation or policy of the Branch or of any Division comprised in the Branch."

SUB-DIVISIONS: JOINT COMMITTEES OF DIVISIONS.

42. To give effect to Minute 46 of the A.R.M., 1913, as to Sub-Divisions and amalgamations of Divisions (*see* Sub-Appendix II., page 303)

The Council recommends;

Recommendation H.—That the A.R.M., 1914, adopt the following new By-law 18*y*:—

"*Sub-divisions: Joint Committees of Divisions.*"

18y. (1) Any Division by resolution from time to time may divide the local area of the Division into Sub-Divisions, and may appoint local bodies consisting of Members of the Division, for the exercise within such Sub-divisions of any powers or functions of the Division which in the opinion of the Division can and ought to be exercised by such local bodies, and may specify the powers and duties of such local bodies and provide for their constitution and term of office.

(2) Any Division may concur with any other Division or Divisions in appointing a joint Committee for any purpose in which those Divisions are jointly interested, and in conferring with or without conditions or restrictions on any such joint Committee any powers which each appointing Division might exercise if the purpose related exclusively to the area of such appointing Division, and in providing for the constitution and term of office of such joint Committee.

(3) Meetings of the Members of more Divisions than one shall be convened (if the Divisions are comprised in a single Branch by the Secretary of that Branch, and if the Divisions are comprised in more Branches than one by the Secretaries of those Branches jointly) upon the requisition of any of those Divisions for the purpose of discussing matters in which those Divisions are jointly interested, and appointing any such joint Committees as aforesaid."

REPRESENTATIVES AND DEPUTY-REPRESENTATIVES.

43. To give effect to Minute 249 of the A.R.M., 1913 (*see* Sub-Appendix II., page 304),

The Council recommends:

Recommendation I. That the A.R.M., 1914, amend By-law 33, "Term of Office of Representatives" to be entitled "Term of Office: Resignation," and to read as follows (words proposed to be inserted are shown in italics):—

"Term of Office: *Resignation.*

33. (1) Every Representative of a Constituency shall come into office at the commencement of the Annual Representative Meeting next succeeding the date of his election, and shall *(unless he shall die or resign)* continue in office until the commencement of the Annual Representative Meeting in the following year, and shall be re-eligible.

(2) Any Representative of a Constituency may resign his office by notice in writing to the Secretary of the Division or of one of the Divisions forming the Constituency.

(3) A Constituency may, by a resolution passed by a majority of not less than two-thirds of the Members present and voting at a meeting of the Constituency specially convened for the purpose, request any Representative of that Constituency to resign his office. Any such meeting shall be convened (in the manner provided by the last preceding By-law) upon a request in writing signed by not less than 10 members of the Constituency and delivered to the Secretary of the Division or of one of the Divisions forming the Constituency. A copy of any resolution passed at such meeting shall be sent as soon as may be by the convener of the meeting to the Representative in question.

(4) A casual vacancy caused by the death or resignation of a Representative shall be filled as soon as may be by an election to be conducted in accordance with the provisions of the last preceding By-law.

PROPOSED CHANGE IN NATURE OF REPRESENTATIVE BODY.

44. To give effect to Minute 67 of the A.R.M., 1913, as to proposed change in nature of Representative Body (*see* Sub-Appendix II., page 304),

The Council recommends:

Recommendation J.—That the A.R.M., 1914, amend By-law 32 (3) by inserting in the 6th line (7th line of (3) below), after the word "and," the words "passing resolutions and."

[Existing By-law 32:—

Election of Representatives.

32.—(1) Every Representative shall be elected not more than nine months nor less than four weeks, before the Annual Representative Meeting at which he takes office, by a General Meeting, or by voting papers sent to each Member of the Constituency as the said Constituency may decide.

(2) The said Meeting shall be convened (or where the election is by voting papers, the voting papers shall be despatched) by the Secretary of the Division forming the Constituency, or in the case of a Constituency comprising more Divisions than one, by the Secretary of one of those Divisions to be chosen by the Secretaries of those Divisions, or, if they cannot agree, by the Council.

(3) Where the election is by voting papers, a Meeting of the Members of the Constituency (convened as aforesaid) shall be held after the election, and not less than twenty-one days before the date of the Annual Representative Meeting, for the purpose of considering the Agenda of that Representative Meeting, and instructing the Representative or Representatives thereon, and if such Meeting of the Members of the Constituency shall not be held, no Representative of the Constituency shall be entitled to attend the Representative Meeting.

(4) The person acting under Clause (2) of this By-law shall, not less than twenty-one days before the Annual Representative Meeting, give notice to the Association at the Head Office of the name and address and mode of election of the Representative or Representatives elected by the Constituency, and if the election was by voting papers, shall submit satisfactory evidence as to the holding of the subsequent Meeting of the Members of the Constituency, and the Chairman of Representative Meetings, or any person authorised by him in that behalf, shall, on being satisfied as to the matters aforesaid, cause a ticket of admission to the Meeting to be issued to every such Representative.]

Recommendation K.—That the A.R.M., 1914, substitute for existing By-law 39 (4), as to voting in Representative Meetings, the following revised wording:—

(4) In speaking and voting upon any matter the Representative or Representatives of any Constituency shall have regard and so far as may be conform to the preponderance of opinion of the members of that Constituency so far as such opinion is known to him or them.

[Existing By-law 39:—

Voting.

39.—(1) In any Representative Meeting only Representatives of Constituencies and Members of Council representing the Navy, Army, and Indian Medical Services shall be entitled to vote.

(2) Voting shall be by show of hands, unless before such vote is taken twenty Representatives present request that the vote be taken by card.

(3) Where a vote is taken by card the Representative of each Constituency shall be entitled (or in the case of a Constituency electing two or more Representatives, such of those Representatives as are present shall together be entitled) to record a total number of votes equal to the number of Members in that Constituency according to the Annual List then in force; and where two or more Representatives of a Constituency are present the total number of votes of that Constituency shall be divided equally between those Representatives, fractions of votes being ignored. Members of Council representing the Navy, Army and Indian Medical Services shall not take part in a vote taken by card.

(4) In voting upon any matter upon which a Constituency has passed a resolution within the three months immediately preceding such Meeting, the Representative or Representatives of that Constituency shall be under obligation to vote in accordance with such resolution,

(5) The Chairman shall in the case of an equality of votes have a casting vote, but shall not otherwise be entitled to vote.]

Question of Making the Insurance Act Committee a Standing Committee.

45. The Council has considered the instructions contained in Minutes 193-200 of the A.R.M., 1913 (*see* Sub-Appendix II., page 304), as to provision being incorporated in the By-laws to make the Insurance Act Committee a Standing Committee of the Association. In view, however, of the fact that it is probable that, in the near future, further alterations of the constitution of that Committee may be required to provide for the inclusion of additional members,

The Council recommends:

Recommendation L.—That the addition to the Schedule to the By-laws of a provision setting up a Standing Insurance Act Committee of the Association be left over until the A.R.M., 1915.

Provision for a Standing Welsh Committee.

46. To give effect to Minute 224 of the A.R.M. (*see* Sub-Appendix II., page 304).

The Council recommends:

Recommendation M.—That the following be added to the Schedule to the By-laws as to Standing Committees:—

	Additional Members, ex-officio.	*Otherwise appointed.*	*Duties, Powers, &c.*
Welsh	The Secretaries of the North Wales and the South Wales and Monmouthshire Branches. All the Members of the Council who represent Branches in Wales or Monmouthshire.	1 Member appointed by the North Wales Branch, 2 Members appointed by the South Wales and Monmouthshire Branch, 1 Member appointed by the Members of the Shropshire and Mid Wales Branch resident in Wales.	To consider all matters specially concerning Wales or Monmouthshire. It shall have an Honorary Secretary resident in Wales or Monmouthshire and shall meet at such place and time as the Committee may itself direct.

Recommendation N.—That, consequentially to the foregoing, the heading of column 5 of the Schedule to the By-laws be altered throughout to read, for "Appointed by other Bodies," "Otherwise appointed."

(III.) QUESTIONS IN CONNECTION WITH INSTRUCTIONS OF A.R.M., JULY, AND S.R.M., DECEMBER, 1913, TO COUNCIL TO CONSIDER ADVISABILITY OF ALTERING CERTAIN ARTICLES AND BY-LAWS.

47. These resolutions of the Representative Body are printed in Sub-Appendix V. to this Report (page 306). It will be convenient to consider them in the order of the Articles and By-laws to which they relate.

Proposal that Medical Practitioners Registered anywhere in the British Empire should be Eligible for Membership.

(Minute 306 of A.R.M., 1913; *see* Sub-Appendix V., page 307.)

48. On consideration of this matter it appeared to the Council that the proposal thus made by the Natal Branch and endorsed, the Council understands, by the South African Committee, is an important and far-reaching one. Inasmuch as it primarily affects the British medical profession outside the United Kingdom, it appears to the Council that before any alteration of the kind in the Articles of the Association is decided upon, the matter should be considered by the Overseas Divisions and Branches. The Council has accordingly invited an expression of the opinions of these bodies. They have been requested to arrange for the replies being in the hands of the Council by at latest, September 1st, 1914. On consideration of these the Council will report finally on the proposal to the Divisions and Representative Body.

49. In connection with this matter there will be found in Part (IV.) of this Report (*see* paragraph 60, page 301) a proposal put forward by the Council itself for amendment of Article 4, as to eligibility.

Association Subscriptions.

Proposal that the Channel Islands Members be exempted from the Two Guinea Subscription.

(Minute 35 of S.R.M., December, 1913; *see* Sub-Appendix V., page 307.)

50. Representations to the same effect as this Minute of the Representative Body have been received from the Channel Islands Divisions.

51. It appears to the Council to be only fair that not only the Channel Islands, but also the Isle of Man, which areas differ materially in respect of legislature and medico-political matters from the United Kingdom, and are in these respects on a footing similar to that of the Overseas Divisions and Branches, should be excluded from the higher rate of subscription applicable to the United Kingdom.

The Council recommends:

Recommendation O.—That the A.R.M., 1914, amend By-law 11, as to Subscriptions, to commence as follows (new words proposed to be inserted are shown in italics):—

"Subscriptions.

Amount.

11 (1). On and after the 1st of January, *1915*, and except *as hereinafter provided*, the Annual Subscription to the Association shall be

(a) For a Member resident in any part of the *United Kingdom*—Two Guineas."

Note.—For existing By-law 11 and Recommendation D of Council, also proposing amendment of that By-law, *see* paragraph 38, page 298, above.

If both Recommendations D and O of Council are adopted, By-law 11 will read as shown in Recommendation D, with the substitution, however, of "United Kingdom" for "British Islands."

If Recommendation D, only, is adopted, the By-law will read as there shown.

If Recommendation O, only, is adopted, the remainder of the By-law will read as at present.

Question of Possible Shorter Notice of Special Representative Meetings.

(Minute 68 of A.R.M., 1913; *see* Sub-Appendix V., page 306.)

52. On this subject the Council presents a separate Report to the Divisions and Representative Body (*see* Sub-Appendix VI., page 307).

53. In paragraph 6 of that Report (page 308) there will be found the terms of a draft By-law such as, if adopted by the Divisions and Representative Body, would place in the hands of the Chairman of Representative Meetings the power to call a Special Representative Meeting at less than the fourteen days' notice which is now the minimum under By-law 36 (2).

54. For the reasons stated in the separate Report, however, the Council cannot recommend the Divisions and Representative Body to adopt the proposal.

ELECTION AND COMPOSITION OF COUNCIL.

(Minutes 221-3 of A.R.M., 1913; *see* Sub-Appendix V., page 306.)

55. The subject of the election and composition of the Council has at various times been very fully discussed by the Council and Representative Body. Considerable diversity of opinion exists on the subject, the preponderance of opinion being against change. In the opinion of the Council the method of election of the Council should remain as at present.

SCOTTISH COMMITTEE.

(Minute 298 of A.R.M., 1913; *see* Sub-Appendix V, page 307.)

56. Having conferred with the Scottish Committee on the subject of Minute 298 of the A.R.M., the Council is of opinion that it is desirable in the interests of the profession in Scotland that the Scottish Committee should have power of co-option, such a power being already possessed by the Irish Committee.

The Council recommends:—

Recommendation P.—That the A.R.M., 1914, add the following words to the definition of the duties and powers of the Scottish Committee, contained in the Schedule to the By-laws:—

"The Committee shall have power to add to its number not more than four Members specially qualified to assist in the business of the Committee.

57. The Council has under consideration questions in connection with the suggestion of the desirability of amendment of By-law 67 to make it possible for the Chairman of the Scottish Committee to be other than a Member of Council, and will report with a recommendation on this subject to the Divisions and Representative Body in its Supplementary Report in June.

(IV.) RECOMMENDATIONS BY COUNCIL FOR ALTERATION OF ARTICLES OR BY-LAWS, NOT ARISING OUT OF RESOLUTIONS OF REPRESENTATIVE BODY.

58. The Council submits certain minor alterations of Articles and By-laws which appear to the Council to be expedient.

59. Some of these, it will be seen, are of considerable practical importance. Others are matters of form which, at the suggestion of Counsel, it is proposed to take the opportunity of adjusting.

ELIGIBILITY FOR MEMBERSHIP.

60. In connection with the question of eligibility for membership the Council has considered the claim of a certain class of practitioners, not eligible for membership under present Article 4, to be eligible to join the Association. The Council refers to the case of those practitioners, resident outside the area of any Branch, who have taken degrees or diplomas in the United Kingdom and are thus in possession of qualifications registrable there. The practitioners in question, however, owing to the fact that their future work is to lie in districts in which registration in the United Kingdom is not required, do not find it necessary to incur the expense of placing their names on the medical register of the United Kingdom. The Council considers that the claim of these practitioners to be eligible for membership is a good and valid one, inasmuch as it is merely the accident of the place of their work which results in their not registering in the United Kingdom, to which registration their qualifications fully entitle them. In addition it appears to the Council to be desirable in the interests of the profession and of the Association that these practitioners should be able to join the Association if they so desire.

The Council recommends:—

Recommendation Q.—That steps be taken for amendment of Article 4 to read as follows (words proposed to be inserted are shown in italics):—

Eligibility.

4. Any Medical Practitioner registered in the United Kingdom under the Medical Acts, *and any medical practitioner who does not reside within the area of any Branch of the Association and who though not so registered is possessed of any of the qualifications described in Schedule (A) of the Medical Act, 1858,* and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualification as shall, subject to the By-laws, be prescribed by the Rules of the said Branch, shall be eligible as an ordinary Member of the Association. Subject as aforesaid the mode and conditions of election to membership shall from time to time be determined by or in accordance with the By-laws.

DIVISION OFFICERS AND EXECUTIVE COMMITTEES OF DIVISIONS.

(By-law 18.)

61. In connection with the procedure and rules of Divisions, the fact that By-law 18 contains no provision to the effect that the Officers or some of the Officers of the Division may be members *ex officio* of the Executive Committee of the Division, analogous to the existing provision (By-law 16 (c)) in respect of Branch Councils, has been found by the Council to cause some difficulty.

The Council recommends:—

Recommendation R. That the A.R.M. 1914, adopt the following new paragraph, to be paragraph (c), for incorporation in By-law 18, as to local management of Divisions:—

"(c) Such Officers of the Division as the Division shall by its Rules declare to be Members *ex officio* of the Executive Committee."

Note.—For existing By-law 18 *see* paragraph 9 of this Report (page 294).

BRANCH OFFICERS AND BRANCH COUNCILS (By-law 16).

62. Consequentially to the foregoing,

The Council recommends:—

Recommendation S. That the A.R.M. 1914, amend By-law 16 (c) by inserting after the word "shall" the words "by its Rules," the paragraph as amended to read as follows:—

"(c) Such Officers of the Branch as the Branch shall by its Rules declare to be members *ex-officio* of the Branch Council.

Note.—For existing By-law 16 *see* paragraph 9 of this Report (page 293).

BUSINESS OF ANNUAL REPRESENTATIVE MEETING (By-law 37).

63. Difficulties have frequently been caused by the discrepancy between the provision of Article 31 (2) whereby not less than two months' notice must be given in the JOURNAL of any proposal to be made at an A.R.M. for alteration or repeal of any Article or By-law and the provision of By-law 37 whereby not less than three months' notice must be given of any resolution intended to be brought forward at an A.R.M. to alter the constitution or policy of the Association. With the concurrence of Counsel the Council suggests that the By-law should be assimilated to the Article.

The Council recommends:

Recommendation T. That the A.R.M., 1914, amend By-law 37, as to business of A.R.M.'s, to read, in the last line (last line but one, below), for "three months," "two months."

[Existing By-law 37:—

Business of Annual Representative Meeting.

37. The business of the Annual Representative Meeting shall be to elect a Representative of a Constituency as the Chairman of Representative Meetings, and also a Representative of a Constituency as Deputy-Chairman; to elect a President of the Association; to elect twelve members of the Council, and such other Officers and such Members of Committees as by the Regulations or By-laws may be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting, and Reports of Branches and motions relating to the adoption of such Reports in whole or in part; to make new By-laws, and alter and repeal By-laws, and to consider any Resolution relating to the honour and interests of the medical profession or of the Association which shall have been adopted by any Division or Branch; provided that any such Resolution proposing material alteration of the Constitution or Policy of the Association shall have been submitted through the Journal for the consideration of all the Divisions not less than three months previously.]

CASUAL VACANCIES IN COMMITTEES.

64. Circumstances have frequently drawn attention to the awkwardness of the present position as regards the filling of casual vacancies in Committees, the only existing provision being that contained in By-law 68. Under that By-law the only case in which a Committee can fill a vacancy in its number is that in which a Member by absence from three successive Meetings is deemed to have resigned his membership of the Committee. The Council considers that each Standing Committee should have power to fill any casual vacancy occurring in its membership.

The Council recommends:

Recommendation U. That the A.R.M., 1914, adopt the following new By-law, to follow immediately after existing By-law 67:—

"67a. Each Standing Committee shall have power to fill any casual vacancy arising amongst its appointed Members."

65. Consequentially to the foregoing,

The Council recommends:

Recommendation V. That the A.R.M., 1914, amend existing By-law 68, to read as follows in the last two lines:—

"and a casual vacancy shall thereupon arise."

[Existing By-law 68:—

68. If any appointed Member of a Standing Committee shall be absent from three successive Meetings of that Committee (except in case of illness or for some reason approved by the Chairman of that Committee) he shall be deemed to have resigned his membership of that Committee, and that Committee shall fill the vacancy so created.]

ARTICLE 3, AS TO EXISTING AND FUTURE MEMBERS.

66. This Article embodies provisions which were required in 1910 when the present scheme of Articles and By-laws was adopted. Counsel advises that, having served its purpose, the Article is now superfluous, and should be deleted.

The Council recommends:—

Recommendation W.—That steps be taken for the deletion of Article 3, as to existing and future Members of the Association.

Existing Article 3:—

Existing and Future Members.

3 (1).- The existing Members of the Association are those whose names are entered in the Register of Members of the Association as Members at the time when these Articles come into operation.

(2) Future Members shall be those persons who, being eligible, shall, after the date when these Articles come into operation, be duly elected in such manner and upon such conditions as may be prescribed from time to time by the By-laws.]

ARTICLE 9, AS TO DURATION OF MEMBERSHIP.

67. For similar reasons,

The Council recommends:—

Recommendation X.—That steps be taken for the deletion of the words

"whether an existing Member or a future Member,"

in the first and second lines of Article 9, as to duration of membership.

[Existing Article 9:—

Duration of Membership.

9.—Every Member, whether an existing Member or a future Member, shall remain a Member until his membership is terminated in accordance with the provisions hereinafter contained.]

68. For similar reasons,

The Council recommends:—

Recommendation Y.—That steps be taken for the deletion of Articles 43 and 44, as to By-laws, and Saving for Existing Constitution, respectively.

[Articles 43 and 44:—

By-laws.

43.—The By-laws set forth in the Schedule hereto (including the Schedule to the said By-laws) are hereby approved by the Association, and shall remain in force until and save in so far as the same shall be added to, amended, altered, or repealed in pursuance of the foregoing powers.

Saving for Existing Constitution.

44.—The existing Representatives of Divisions of the Association shall be deemed to be the Representatives duly elected under these Articles and the By-laws, and shall continue to hold office as such until their successors are appointed in pursuance of the Regulations and the By-laws and the existing Members of the Council of the Association shall be deemed to be the Members of and to form the Council constituted under these Articles and the By-laws, and shall continue to act as such until a new Council is elected in pursuance of the Regulations and the By-laws, and all existing Officers and Committees of the Association shall continue to hold their respective offices and discharge their respective duties and receive such emoluments, if any, as pertain to the offices which they fill until it shall be otherwise determined in pursuance of the Regulations and the By-laws and the existing Divisions and Branches of the Association, with their Officers, Councils and Committees shall be deemed to be Divisions and Branches, Officers, Councils and Committees constituted or appointed in pursuance of these Articles and the By-laws, and shall continue until it shall be otherwise determined as aforesaid.]

VERBAL AMENDMENTS PROPOSED BY COUNCIL IN ARTICLES.

69. At the suggestion of Counsel,

The Council recommends:

Recommendation Z. That steps be taken to make the following verbal amendments in the Articles:—

(a) *Article 12.* For present heading "Divisions or Branches" *read* "Divisions and Branches."

(b) *Article 28, as to procedure at General Meetings.* For "provision as to Referendum hereafter contained" *read* "provisions as to Referendum hereinafter contained."

VERBAL AMENDMENTS PROPOSED BY COUNCIL IN BY-LAWS.

70. At the suggestion of Counsel,

The Council recommends:

Recommendation AA.—That the A.R.M., 1914, make the following verbal amendments in the By-laws:—

(a) By-law 5. Delete the word "new" in the phrase "mode of election of new members."

(b) By-law 13. For "31st December" read "31st of December."

(c) By-law 24. For "March 15th" read "the 15th of March."

(d) By-law 46 (2). For "15th February" read "15th of February."

(e) By-law 46 (5). For "15th day of May" read "15th of May."

(f) By-law 63. For "Officers" read "officials."

SUB-APPENDIX I.

RESOLUTIONS OF REPRESENTATIVE BODY, JULY AND DECEMBER, 1913, ALTERING CERTAIN BY-LAWS.

(A) RESOLUTIONS OF A.R.M., 1913.

QUESTION OF MODE OF ELECTION OF MEMBERS OF COUNCIL BY BRANCHES OUTSIDE UNITED KINGDOM.

Minute 243.—Resolved: That the following new By-law 46 be adopted by the Annual Representative Meeting, 1913, in substitution for existing By-law 46:

Mode of Election by Groups not in the United Kingdom.

46. (1) The election of seven Members of Council by the Groups of Branches not in the United Kingdom shall be conducted in the manner prescribed by this By-law.

(2) All nominations of candidates shall be in writing sent to the Association so as to be received at the Head Office on or before such day, not being later than the 15th February in each year, as shall be specified for the purpose by a notice published in the JOURNAL during the second or

third week of October in the preceding year, and no nomination paper received after the day so specified shall be valid.

(3) The said notice shall prescribe a form in which the nominations are to be made, and the nominations shall be made in the form so prescribed, or in a form to the like effect. Nomination papers may be signed by not less than three Members of any Branch comprised in the Group.

(4) As soon as may be after the 15th day of February in each year :—

(*a*) In the case of any Group for which one candidate only has been duly nominated, there shall be published in the JOURNAL a notice that such candidate has been elected as Member for that Group ; and—

(*b*) In the case of any Group for which more candidates than one have been duly nominated, a voting paper shall be sent by post from the Head Office to each Member of every Branch comprised in that Group.

(5) Every voting paper shall contain a statement that the same must be returned to the Association so as to be received at the Head Office on or before a specified day (not being later than the succeeding 15th day of May), and no voting paper received after the day so specified shall be counted.

(6) Not later than the second week in the succeeding month of June, a notice of the result of the elections shall be published in the JOURNAL.

QUESTION OF APPEALS TO COUNCIL IN CONNECTION WITH ETHICAL DECISIONS OF COUNCILS OF BRANCHES OUTSIDE THE UNITED KINGDOM.

Minute 250.—Resolved : That in order to carry out the proposal contained in Minute 256 of the Annual Representative Meeting, 1912, the following words be added by the Annual Representative Meeting, 1913, to the definition of the "Duties, Powers, etc.," of the Central Ethical Committee, contained in the Schedule to the By-laws :—

Provided that, notwithstanding the foregoing provisions, the Committee shall not adjudicate in or entertain any such matter of dispute as aforesaid which has arisen in a Branch not in the United Kingdom having a membership of not less than thirty, except upon the request of the Council of that Branch.

CO-ORDINATION OF ACTION OF DIVISIONS AND BRANCHES WITH ACTION OF LOCAL MEDICAL COMMITTEES AND MEDICAL MEMBERS OF INSURANCE COMMITTEES.

Minute 256.—Resolved : That By-laws 16 and 18 of the Association be amended to read as follows respectively (words proposed to be inserted are printed in italics) :—

By-law 16 :

Local Management : Branches.

16. The management of the affairs of each Branch shall, save as otherwise provided in the By-laws, be vested in a Branch Council, composed of the following members :

(a) Those Members of the Council who are elected (as hereinafter provided) by the Branch or by any group of Branches to which the Branch belongs, or (wholly or in part) by Representatives of Constituencies comprised in the Branch.

(b) The Members elected to represent on the Representative Body the Divisions comprised in the Branch.

(c) Such Officers of the Branch as the Branch shall declare to be members *ex officio* of the Branch Council.

(d) *Such Members (if any) of any Local Medical Committee formed under the National Insurance Act*, 1911, *and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may co-opt to be Members of the Branch Council.*

(e) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the membership of such Division.

By-law 18 :

Local Management : Divisions.

18. The management of the affairs of each Division shall, save as otherwise provided in the By-laws, be vested in an Executive Committee composed of the following Members :—

(a) The Member or Members representing the Division on the Representative Body ;

(b) The Member or Members representing the Division on the Branch Council ;

(c) *Such Members (if any) of any Local Medical Committee formed under the National Insurance Act*, 1911, *and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may co-opt to be Members of the Executive Committee.*

(d) Such other Members elected by the Division as the Division may determine.

COLONIAL COMMITTEE.

Minute 301.—Resolved : That steps be taken to alter the title of the Colonial Committee to that of "Dominions Committee," and that it be referred to the Council to carry out the necessary alteration of the By-laws.

(B) RESOLUTION OF S.R.M., DECEMBER, 1913.

ASSOCIATION SUBSCRIPTION.

Minutes 13-20.—Resolved : That the Special Representative Meeting, London, December, 1913, delete present By-law 11 of the Association and adopt the following new By-law 11 to take its place :

Proposed new By-law :

SUBSCRIPTION.

Amount.

11. (1) On and after the 1st January, 1914, and, except in the case of members elected on or after the 1st of July in any year, the annual subscription to the Association shall be :—

(a) For a member resident in any part of the British Islands, Two guineas.

(b) For a member resident elsewhere, Twenty-five shillings.

(2) A member admitted on or after the 1st of July in any year shall pay half the current subscription for that year.

(3) For the purposes of this By-law a member shall be deemed to reside in that place in which his ordinary place of abode is situate at the time at which according to the Regulations his subscription is considered due.

SUB-APPENDIX II.

RESOLUTIONS OF REPRESENTATIVE BODY, JULY AND DECEMBER, 1913, INSTRUCTING COUNCIL TO DRAFT ALTERATIONS OF ARTICLES OR BY-LAWS.

(A) RESOLUTIONS OF A.R.M. 1913

CO-ORDINATION OF DIVISIONS WITH BRANCHES.

Minute 42.—Resolved : That all the decisions of Divisions shall be notified to Branch Councils.

SUB-DIVISIONS AND AMALGAMATION OF DIVISIONS.

Minute 45.—Resolved : That the following paragraph (iv.) in italics be deleted :—

(iv.) *The System of Wards to be encouraged in each Division.*

Minute 46.—Resolved : That the following words be added to paragraph 7 of the Special Report of Council, "As should also amalgamations of Divisions or parts of Divisions for special or other purposes, these amalgamations to have such powers as are conferred on them by the Divisions creating them."

(PARAGRAPH 7 OF SPECIAL REPORT OF COUNCIL REFERRED TO) : —

Wards, or Sub-Divisions.

"7. With regard to paragraph (iv.) of the Scheme, viz. :

(iv.) *The System of Wards to be encouraged in each Division.*

the Council prefers the title of Sub-Division to that of Ward, because the term Ward suggests merely town areas, whereas the idea contemplated by the Branch Council is the subdivision of either town or country Division areas.

The Council is strongly of opinion that the system of Sub-divisions might be very useful in some areas, and suggests that the paragraph be amended to read as follows :—

The system of Sub-divisions should be encouraged in suitable Division areas, Sub-divisions to have such powers only as are conferred upon them by the Division."

Powers of Branch Councils.

Minutes 55-8.—Resolved: That paragraph (ii.) in italics as amended be approved as follows:—

(ii.) *To co-ordinate their constituent Divisions, reporting upon the questions involved to the Representative Body or Council, when it is necessary or desirable or when so directed by either of these bodies.*

Proposed Change in Nature of Representative Body.

Minute 67.—Resolved: That the Representative Body should be an assembly with deliberative powers, and be responsible for formulating the policy of the Association, but in speaking and voting on any matter the Representative of a Constituency shall be under obligation to give effect to what he believes would be the opinion of his constituents on the question at issue.

Delegation of Duties by Representative Body to Council.

Minute 70.—Resolved: That the following sub-paragraph 30 (d) be approved:—

(d) To be empowered to delegate specific powers to the Council to take action upon its behalf until the next meeting of the Representative Body.

Provision for Standing Insurance Act Committee.

Minute 193.—Resolved: That steps be taken for the constitution of a State Sickness Insurance Committee as a Standing Committee of the Association, to be named the Insurance Act Committee.

Minute 199.—Resolved: That the Insurance Act Committee consist of the *ex-officio* Members, 4 Members to be elected by the Council, 12 Members to be elected on a territorial basis by the Representative Body, and one Representative of each of the following organisations, to be elected by the Council on the nomination of these bodies respectively, such nominees to be also Members of the British Medical Association:—

(a) Association of Registered Medical Women;
(b) Northern Association of Registered Medical Women;
(c) Society of Medical Officers of Health;
(d) Poor Law Medical Officers' Association of England and Wales.

That at least one-fifth of the Members of this Committee shall have practical experience of the working of the National Insurance Act.

Minute 200.—Resolved: That the reference to the Insurance Act Committee in the Schedule to the By-laws be as follows:

To deal with all matters arising under the National Insurance Act that are dealt with by the National Insurance Commissioners, Insurance Committees, and Local Medical Committees; to watch the interests of the profession in relation to the National Insurance Act; and report to the Council.

Provision for a Standing Welsh Committee.

Minute 224.—Resolved: That a Welsh Committee be established having the same duties and powers assigned to it as are possessed by the Scottish and Irish Committees already in existence.

Question of Reform of Constitution of Association.

Minute 225.—Resolved: That the remainder of the Scheme of the Metropolitan Counties Branch Council for the Reform of the Constitution of the Association, together with other relevant items on the Agenda, be referred to the Council, and that the Council be instructed to draft the alterations in the Regulations necessitated by the Resolutions arrived at as the result of the discussion of that Scheme, and submit them to the Divisions and to the next Representative Meeting, together with any other alterations which would seem naturally to arise therefrom.

Referendum and Postal Vote.

On consideration of paragraph 15 of the Report of Council on Question of Referendum and Postal Vote:

Minute 237.—Resolved (a) That the Council should be empowered to take a referendum on any decision of the Representative Body either in the way suggested in Article 32 (that is by Meetings of the Divisions) or by a postal vote, and should also be empowered to extend the referendum or postal vote if it thought fit to the whole profession.

(b) That the Council should have power to consider whether the question to be submitted was one which affected one or more parts of the Kingdom, namely, England, Scotland, Ireland, Wales, or some Dominion, and to take the vote in any one or more of these parts as it thought fit.

(c) That in taking a referendum or postal vote on any question, the Council should have power to decide what majority of the votes received would justify it in making the result of the vote binding upon the Members of the Association in those parts of the country consulted.

(d) That the Representative Body should be empowered, when passing any Resolution, to say to what portion of the Kingdom the Resolution should apply. In this case, if the Council decided to take a referendum or postal vote, it would consult only that portion of the country designated by the Representative Body.

(e) That it should be competent for the Representative Body to discuss and come to decisions upon matters of policy, which are only to affect and to be made applicable to certain portions of the Association.

(f) That the Divisions shall be empowered to lay down in their Rules that the opinion of the Division may be ascertained either by a postal vote of its members or by a vote in meeting as the Division shall decide.

Policy of Association.

Formation of.

In connection with paragraph 16 of the Report:

Minute 238.—Resolved: That the Representative Body deems it desirable that, after having decided that a certain procedure or policy is advisable, it should be able to declare that its decision on the matter should not be considered "the policy of the Association," and should be ignored by the Council until the result of a postal vote of the Association or profession to be taken forthwith by the Council, either on the whole question or on some portion thereof, has been ascertained.

Minute 239.—Resolved: That it is not desirable that the Representative Body at the same time should lay down the majority, either of voters or of the whole Members of the Association or profession, it considers necessary for the carrying of the question.

Question of Formation of Policy of Association as regards Certain Areas only.

On consideration of paragraph 17 of the Report:

Minute 240.—Resolved: That it is desirable that the policy laid down in a specific Resolution be able to be declared to be the policy of the Association in certain areas, and not in others, or in areas where a certain majority is reached—not in others, and if it is possible to have such local policy, it is desirable to have all matters connected with it kept local to the area affected.

Minute 241.—Resolved: That the Council be instructed to draft the alterations in the Regulations necessitated by the passing of the above Resolutions, and submit them to the Divisions and the next Representative Meeting.

Remainder of Report of Council on Question of Referendum and Postal Vote.

Minute 242.—Resolved: That the remainder of the Report of Council on the Question of Referendum and Postal Vote be approved.

Representatives and Deputy-Representatives.

Minute 249.—Resolved: That the Council be instructed to prepare the alterations in the Regulations of the Association necessary to carry out the following suggestions contained in paragraph 36, sub-paragraph 2, of the Annual Report of Council:

(1) The Representative of a Constituency should be able to resign his position.

(2) Any vacancy arising should be filled by the Constituency in accordance with the Rules of the Division or Divisions forming the Constituency.

(3) If a Representative be permitted to resign, the Constituency should not be empowered to dismiss a Representative, but should be able, at a special meeting called for the purpose and by a two-thirds majority of those present and voting, to call upon a Representative to resign.

(4) It would be inadvisable to allow a Deputy to act for a Constituency during such portion only of a Meeting as the Representative might be unable to attend.

COMPOSITION OF BRANCH COUNCILS.

Minute 308.—Resolved: That steps be taken for the amendment of present By-law 16 (*d*), in connection with composition of Branch Councils, which at present reads as follows:—

(*d*) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the Membership of such Division,

to read as follows:—

(d) "Such other Members as the Branch may by its Rules decide."

(B) RESOLUTIONS OF S.R.M., DECEMBER, 1913.

ASSOCIATION SUBSCRIPTION AND NEWLY REGISTERED PRACTITIONERS.

Minute 31.—Resolved: That the Council be instructed to draft a new By-law for submission to the Divisions and the A.R.M., 1914, incorporating the principle that special consideration in the matter of subscription should be given to newly-registered Members.

Minute 32.—Resolved: That the following motions by Dundee, and Leicester and Rutland, be referred to the Council for their consideration in carrying out Minute 31:—

Motion by Dundee: That for four years after registration practitioners be admitted as Members of the Association at a subscription of £1 5s.

Motion by Leicester and Rutland: That in the case of any person joining the Association during the first year after registration the subscription shall be 25s. a year during the first five years of membership.

SUB-APPENDIX III.

EXISTING ARTICLES 31 AND 32, AS TO REFERENDUM.

Resolutions.

31.—(1) Subject as provided by the Regulations a resolution of the Representative Body (not being a resolution inconsistent with the provisions of any statute or of the Memorandum of Association) which affects the funds of the Association, or relates to the Regulations, or By-laws, or to the policy of the Association in matters affecting the honour or interests of the medical profession and is carried by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws, or which relates to any other business within the powers of the Representative Body, and is carried by a simple majority, shall be deemed to be a decision of the Association.

(2) Provided that no resolution of the Representative Body to make any addition to or any amendment, alteration, or repeal of any Regulation or By-law, or to make any new Regulation or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body, either by the Council, or by a Branch, or by a Division, and shall have been published in the JOURNAL not less than two months before the Annual Representative Meeting, or one month before the Special Representative Meeting at which such resolution is passed.

VI. REFERENDUM.

32. In respect of every resolution of a General Meeting of the Association (except a resolution capable of being confirmed as a special resolution or a resolution confirming as a special resolution a resolution previously passed, or an extraordinary resolution or a resolution relating solely to the procedure of the Meeting), and in respect of every resolution of the Representative Body the following provisions shall have effect:—

(a) Within three months after the date on which the resolution is passed the Council shall hold a Meeting for the purpose of considering the resolution. Such Meeting may be convened by a notice given either before or after or during the progress of the Meeting at which the resolution is passed.

(b) The Council, at its said Meeting, may approve the resolution, and shall be deemed to have approved the same unless one half at least of the total number of the Council be present, and it be determined by a majority of not less than two-thirds of the votes given on the question that the resolution does not properly represent the wishes of the Association, and that a Referendum is expedient.

(c) If the Council, at its said Meeting, determine in manner aforesaid that a Referendum is expedient, then an officer of the Association to whom such duty shall be assigned by the Council shall as soon as may be after the said Meeting, and not later than eight weeks from the date thereof, send by post to the Secretary of each Division of the Association a requisition requiring him within four weeks to convene a meeting of the Members of his Division (hereinafter called "the Division Meeting") for the purpose of considering the resolution, and shall with each such requisition transmit such observations on the subject of the resolution as the Council may direct.

(d) The Secretary of each Division shall convene the Division Meeting accordingly, and shall immediately after the holding thereof certify in writing to the Council the number of the votes given at the Division Meeting for and against the resolution.

(e) If the aggregate number of votes given for the resolution at all the Division Meetings shall exceed the aggregate number of votes given against the resolution at all the Division Meetings, or if no vote shall be given at any Division Meeting against the resolution the same shall be deemed to have been approved on a Referendum. Provided that for the purpose of this provision, no vote shall be reckoned unless the same shall be included in such certificate as aforesaid and such certificate shall have been received at the Head Office of the Association within four months after the date of the said Meeting of the Council.

(f) If the said Meeting of the Council shall not be held within the said period of three months, or if the requisition prescribed by paragraph (c) of this Article shall not have been issued within the said period of eight weeks, then the resolution shall come into operation immediately upon the expiration of the said period of three months or of the said period of eight weeks (as the case may be). Save as aforesaid the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

(g) The fact of the resolution having been so approved shall be forthwith published in the JOURNAL.

SUB-APPENDIX IV.

SPECIAL REPORT OF COUNCIL TO DIVISIONS AND REPRESENTATIVE BODY, PREPARED PURSUANT TO MINUTE 31 OF SPECIAL REPRESENTATIVE MEETING, DECEMBER, 1913, AS TO DESIRABILITY OR OTHERWISE OF BY-LAWS OF ASSOCIATION BEING AMENDED TO PROVIDE THAT NEWLY REGISTERED PRACTITIONERS SHALL BE ADMITTED TO MEMBERSHIP AT A REDUCED SUBSCRIPTION.

1. The Special Representative Meeting, December, 1913, passed the following resolutions:—

Minute 31.—Resolved: That the Council be instructed to draft a new By-law for submission to the Divisions and the Annual Representative Meeting, 1914, incorporating the principle that special consideration in the matter of subscription should be given to newly registered Members.

Minute 32.—Resolved: That the following motions by Dundee and Leicester and Rutland be referred to the Council for their consideration in carrying out Minute 31:—

Motion by Dundee: That for four years after registration practitioners be admitted as Members of the Association at a subscription of £1 5s.

Motion by Leicester and Rutland: That in the case of any person joining the Association during the first year after registration the subscription shall be £1 5s. a year during the first five years of membership.

2. In reporting on the question thus raised the Council would draw attention to the fact that the suggested principle of a reduced rate of subscription to practitioners joining the Association, when newly registered, is a matter which was raised for the first time in the Special Representative Meeting of December, 1913, and has not previously been before the Divisions. Thus the subject is one requiring consideration *de novo* by the Divisions.

3. The principle, though a new one as applied to the Association, has been adopted by various organisations and, so

far as known, with success. It is of special interest to note that at least one Branch of the Association, namely, the New South Wales Branch, already makes such a distinction. The following is the scale of subscription payable by ordinary Members of that Branch:—

(1) Members residing within 20 miles of the G.P.O., Sydney, £3 3s.

(2) Members residing elsewhere than within 20 miles of G.P.O., Sydney, £2 12s. 6d.,

while Branch Members, wherever residing, of less than three years' standing as registered medical practitioners, pay only £2 2s.

ARGUMENTS IN FAVOUR OF PRINCIPLE OF A REDUCED SUBSCRIPTION FOR NEWLY REGISTERED PRACTITIONERS.

(1) *That special inducement should be offered to the Younger Members of the Profession to join the Association.*

4. On an average about 1,114 names are added to the medical register for the first time in the course of a given year. Of these about 27 per cent. join the Association within two years. It is therefore obvious that there is scope for increase in the proportion who at once become Members.

5. To the profession as a whole the advantage of the Association having within its ranks as large a percentage as possible of the newly-qualified practitioners is very considerable, because it is precisely this class who, owing to ignorance and inexperience and the fact that they are unsettled or un-attached are most apt to accept appointments on terms detrimental to the profession. In addition, any device which would enable the Association more nearly to approach its ideal of including every reputable member of the profession is of course *prima facie* well worth consideration.

(2) *That the average newly registered Practitioner cannot easily pay a Subscription of Two Guineas.*

6. This contention is no doubt to some extent well founded. Many newly registered practitioners are without financial resources. Some have to look to their first earnings to recoup them in whole or part for the expense incurred during their final years as students and the fees incidental to registration.

ARGUMENTS AGAINST THE PRINCIPLE.

(1) *That such an arrangement would unduly complicate the By-laws of the Association in respect of Subscriptions and make these difficult of application.*

7. The change would mean some increase of work at the head office. It is probable too that there would sometimes arise in a Member's mind confusion, and perhaps disagreement with the head office, as to the amount of the subscription payable by him, when he was nearing or had reached the end of the period for which the lower rate of subscription was made applicable. The matter could obviously, however, be definitely settled by reference to the medical register. The Council therefore does not think that if the principle itself is approved the consideration of the extra clerical work involved should be allowed to stand in the way. In stating this opinion, the Council quite recognises that the proposal would inaugurate a state of matters in which there would be a considerable number of different rates of subscription (new Members who were junior practitioners, new Members not recently qualified, ordinary Members, Members resident in the Channel Islands or Isle of Man, Members of Overseas Branches requiring special subscriptions from their Members, cases of change of residence, etc.), but any difficulty could to a large extent be obviated by the adoption by the head office of a procedure whereby at the time of the first admission of such a Member a note was made in the books stating definitely the year at which the subscription would revert to the ordinary one. Notice of this could also be given to the Member on joining.

(2) *That such a principle, if adopted, would interfere with existing rights of Overseas Branches.*

8. No such interference would appear to be involved.

(3) *That Members admitted in the first instance at a lower rate of Subscription would experience a sense of hardship or dissatisfaction when they had presently to pay the ordinary Subscription.*

9. In the opinion of the Council such feeling would be exceptional. On the contrary it is probable that the average Member admitted at the reduced rate would when the period of reduced subscription terminated rather take the view that he had, while doing a good thing for himself in a professional sense by joining the Association, effected a considerable economy by joining early. It may be regarded as probable that these young Members would in the interval have fully appreciated the advantages of membership of the Association, including those of receipt of the JOURNAL and of membership of what is practically a local Medical Society, and would thus not be likely to let their membership lapse when the term of reduced subscription expired. As a matter of fact it appears to be frequently the case that the work of the Association for the profession, and the future possibilities of that work, impress themselves more readily upon the mind of the recently than upon that of the longer qualified member of the profession.

(4) *That the financial position of newly qualified Practitioners has of recent years greatly improved, insomuch that they are now quite able to pay the ordinary Subscription.*

10. It is certainly the case that the financial position of newly qualified members of the profession has of late improved. Reference to the advertisement pages of the JOURNAL will amply bear out this fact. Thus only a few years ago it was possible to obtain the services of a satisfactory indoor assistant at a salary of from £80 to £100. Such posts are now quite commonly advertised at £200 and upwards. And of other work a similar statement holds good. The Council is none the less of opinion that from the point of view of their remuneration it is a reasonable proposition that newly qualified practitioners should be received at a reduced subscription for a few years, quite apart from the obvious advantage to the Association and profession of securing them as Association members.

CONCLUSION.

11. In the opinion of the Council a satisfactory scheme to adopt would be a middle course between the proposals of Dundee and Leicester and Rutland, and that two years after registration would be a suitable period for the offer of reduced subscription to remain open. A period of one year would in the opinion of the Council not be sufficient, in view of the fact that the life of a young practitioner is often during his first year after registration an unsettled one, while within a period of two years his plans are more settled and his address less apt to be temporary. On the other hand to tell a young practitioner that he could still obtain the reduced rate if he postponed joining the Association until his fourth or fifth year might possibly result not only in his not joining in his first or second year but perhaps not even by his fifth.

12. The Council considers that a reasonable time during which the reduced rate of payment should hold good would be a period of four years from the date of registration.

RECOMMENDATION.

13. If the above suggestion is adopted it would be best put into operation by the draft By-law, which is accordingly submitted herewith for the approval or otherwise of the Constituencies and Representative Body (*see* paragraph 38 of foregoing Report, page 298).

SUB-APPENDIX V.

RESOLUTIONS OF A.R.M., JULY, AND S.R.M., DECEMBER, 1913, INSTRUCTING COUNCIL TO CONSIDER ADVISABILITY OF ALTERING CERTAIN ARTICLES AND BY-LAWS.

(A) INSTRUCTIONS OF A.R.M., 1913.

QUESTION OF POSSIBLE SHORTER NOTICE OF S.R.M.'s.

Minute 68.—Resolved: That paragraphs 24 and 25 (of the Special Report of Council), dealing with the question of possible shortening of time calling Special Representative Meetings, be referred back to the Council for further consideration and report.

ELECTION AND COMPOSITION OF COUNCIL.

Minute 221.—Proposed: That the Representative Body shall in future elect the entire Council, with the exception of the Colonial Representatives.

The Motion was lost.

Minute 222.—Proposed: That the election of Council shall take place as heretofore, except that in the case of Members elected by Branches in the United Kingdom, the Candidates shall be the Representatives already elected by the Divisions in each of the Groups of Branches, and the election shall be by the whole body of Members in each Group.

Minute 223.—Resolved: That all suggestions on the Agenda as to alteration in the mode of electing the Council be referred to the Council.

SUGGESTIONS REFERRED TO IN FOREGOING MINUTE 223 OF A.R.M., 1913, AS TO MODE OF ELECTION OF COUNCIL.

(1) By St. Pancras and Islington:

That in the opinion of the Representative Body effect should be given to the following principles:

(a) The Council to be elected by the Representative Body, the tenure of office to be for one year, the retiring members of Council to be eligible for re-election.

(b) The Council to have general administrative powers in the intervals between Representative Meetings.

(c) The Council to have power to initiate policy for submission to Representative Body.

(2) By Tower Hamlets:

That for the words "five-sixths" in Section (i.) of the Report of the Metropolitan Counties Branch Council, as to election of the Council, there be substituted the words "one-half."

(3) By N. Middlesex:

That the election of Council should take place as heretofore.

(4) By Buckinghamshire:

That the mode of election of the Council be altered so that more notice is given of any vacancy and an opportunity given of publishing the addresses of candidates in the JOURNAL.

(N.B.—The foregoing motion was **withdrawn**. Minute 310 of A.R.M., 1913.)

(5) By West Suffolk: That By-law 45 be altered to read as follows:—

45. (1) The election of twenty-four Members of Council by the Branches or groups of Branches and Divisions in the United Kingdom shall be carried out as follows:—

(2) Candidates shall be nominated either (a) by a Division or (b) in writing signed by not less than three members of any such Branch.

(3) Such nominations shall be sent to the Association at the Head Office on or before an appointed day, of which not less than fourteen days' notice has been given in the JOURNAL, and to the Secretary of each Division of the Branches concerned.

(4) Voting papers, containing the names of those candidates who have been nominated, together with the names of the Divisions or members by whom they were nominated, and such other particulars as the Council may from time to time prescribe, shall be sent by post by the Association from the Head Office to each member of every Branch comprised in the Group.

(5) The said voting papers shall be returned to the Association at the Head Office within such time as the Council may from time to time prescribe by notice given as aforesaid.

(6) The expenses of the said election shall be borne by the Association.

(N.B.—The foregoing motion was **lost**. Minute 311 of A.R.M., 1913).

SCOTLAND.

Minute 298.—Resolved: That the Council be asked to consider whether, as the powers of the Scottish Committee are proposed by the Council to be increased, it is necessary that it should be reconstituted on a basis properly representing the different sections of the profession in Scotland.

ELIGIBILITY FOR MEMBERSHIP.

Minute 306.—Resolved: That the following Motion be referred to the Council for further consideration, and that a Report be brought up at the next Representative Meeting:—

(1) That the Council of the Association be instructed to take the necessary steps to have Section 4 of the Articles of Association of the British Medical Association deleted, and the following substituted:—

"Any Medical Practitioner registered in any portion of the British Empire shall, subject to the By-laws, be eligible for admission as an ordinary Member of the Association."

(2) That By-law 17 (2) (v) be deleted, and that any other By-law in conflict with the foregoing new Section of the Articles be deleted, or so altered as to be in conformity therewith.

(3) That in applications for membership a declaration should be made that the applicant is registered in a certain portion of the Empire.

(B) INSTRUCTION OF S.R.M. DECEMBER, 1913.

SUGGESTED EXCLUSION OF CHANNEL ISLANDS FROM INCREASED SUBSCRIPTION.

Minute 35.—Resolved: That the Council in drafting the new By-law for Subscription for submission to the Divisions and the A.R.M., 1914, take into consideration the advisability of the increased Subscription not applying to the Channel Islands Divisions, which are not involved in the general medico-political questions of the United Kingdom, and are not affected by the National Insurance Act.

SUB-APPENDIX VI.

SPECIAL REPORT OF COUNCIL TO DIVISIONS AND REPRESENTATIVE BODY AS TO QUESTION OF POSSIBLE SHORTER NOTICE OF SPECIAL REPRESENTATIVE MEETINGS.

1. Proposals to effect the above were made by the Metropolitan Counties Branch Council and the Maidstone Division and others, and the Council considered the matter and reported thereon to the Divisions and Representative Body (B.M.J. Supplement, June 21st, 1913, p. 557).

2. The matter was discussed at the A.R.M., Brighton. Some suggestions were made which the Meeting thought of value, and it was decided (Minute 68) to refer the question back to the Council for further consideration and report. The Council now submits the result of its reconsideration of the matter.

3. The existing provisions as to period of notice and mode of convening of Special Representative Meetings are contained in By-law 36, as follows:—

36. (1) Representative Meetings, other than the Annual Representative Meeting, shall be styled Special Representative Meetings, and shall be convened at any time by the Chairman of Representative Meetings on the requisition of the Council or on the requisition of not less than seven Constituencies.

(2) At least fourteen days' notice of such Meeting shall be given in the JOURNAL, and such notice shall indicate the object for which such Meeting is convened.

4. Before dealing with the way in which the shortening of the period of notice might be brought about, mention must be made of the fact that the Council, pursuant to explicit resolutions of the A.R.M., 1913, is submitting to the Divisions far-reaching amendments of the Articles and By-laws, the adoption of which may influence the Divisions considerably in coming to a conclusion on the matter now under discussion. Thus, to give effect to Minute 67 of the A.R.M., 1913, the Council is elsewhere recommending that By-law 39 (4), which at present reads as follows:—

39. (4) In voting upon any matter upon which a Constituency has passed a resolution within the three months immediately preceding such Meeting the Representative or Representatives of that Constituency shall be under obligation to vote in accordance with such resolution,

shall be altered to read as follows:—

39. (4) In voting upon any matter the Representative or Representatives of any Constituency shall vote in accordance with the preponderance of opinion of the Members of that Constituency so far as such opinion is known to him or them.

If this alteration of By-law were carried it might be considered to empower Representatives to take the responsibility of voting for their constituencies on any matter which the constituencies had not discussed, leaving them to justify their vote afterwards. If the Divisions are willing to take this view of the duties of a Representative, then it is obvious that the notice for a Special Representative Meeting need only be long enough to give the Representatives themselves time to consider the business and to make their arrangements for attending the meeting. Such a view of the status of Representatives is however quite foreign to the present constitution of the Association, and it is exceedingly doubtful whether Representatives themselves would care to take the responsibility of giving a vote on a matter, presumably of great importance, which their constituents had had no opportunity of considering.

5. It must also be noted in connection with the proposed change that the Council is submitting for the consideration of

the Divisions, pursuant to instructions of the A.R.M., 1913, extensive alterations of the Articles and By-laws in respect of referendum and postal vote. These if adopted would doubtless considerably diminish the necessity for calling Special Representative Meetings by the Organisation Committee, as questions capable of being decided by a Referendum could be put direct to the members individually.

6. In order that the Divisions and Representative Body may come to a decision as to whether or not it is desirable to shorten the period of notice of Special Representative Meetings, a subject which has now been under discussion for two years, the Council submits the following draft amended By-law 36 (2) :—

> (2) At least fourteen days' notice of such Meeting shall be given in the JOURNAL unless in the opinion of the Chairman of Representative Meetings such conditions of urgency exist as to render a shorter notice expedient, in which case such shorter notice may be either given in the JOURNAL or served by post upon the members of the Representative Body. Every such notice shall indicate the object for which such Meeting is convened.

This, it will be seen, would place in the hands of the Chairman of Representative Meetings the power to call a Special Representative Meeting at less than the 14 days' notice which is now the minimum, and to give notice to the Members of the Representative Body either through the JOURNAL or by post.

7. A detailed account of the procedure at present necessary in the calling of a Special Representative Meeting is given in the Sub-Appendix, and careful study of this will show that the only practical way of shortening the time for calling a Special Meeting would be to place discretion, as suggested in the draft By-law, in the hands of the Chairman of Representative Meetings.

ARGUMENT IN FAVOUR OF SHORTENING THE NOTICE.

8. The only argument which has been adduced in favour of the proposal is that a shortening of the notice would enable the Association to arrive at a decision in a matter of urgency more expeditiously than is at present possible. Reference to the Appendix will show that at present the shortest time in which a Special Representative Meeting could be called, dating from the first movement in one of the Constituencies which wishes to call the Meeting, to the actual holding of the Meeting, is about a month. No method which the Council can devise, with due regard to the importance of such a Meeting, would shorten this period by more than a week at most.

ARGUMENTS AGAINST SHORTENING OF THE TIME.

9. (a) If less than fourteen days' notice is to be given of a Meeting it will be difficult for Representatives, even in the urban areas, to consult their constituents, and almost impossible in the more scattered areas. (b) If it be agreed that meetings of the Constituencies must be called to consider the business to be brought before the Representative Body it must be remembered that the secretarial difficulties of calling meetings at such short notice would be very great, and where arrangements have to be made between Secretaries of two or more Divisions they would be almost insuperable. It would make very invidious distinctions if meetings were held in some areas and not in others. (c) It would be very difficult for members of the Representative Body to arrange to get away from their practices at shorter notice than at present, and there is increasing difficulty in the matter of getting locum tenentes. It must be also remembered that it takes some of the Representatives nearly two days to reach London. (d) The 14 days' minimum which the present scheme allows for the central arrangements is felt to be quite short enough, and it is doubtful if these could be carried out efficiently in less time. (e) Circumstances which render it imperative that a decision of the Association should be arrived at in less than the time now allowed must be of extremely rare occurrence, if indeed they could ever arise. (f) Finally and most important, it is essential that the resolutions of the Representative Body should be received with respect, as the considered opinion of a body of Representatives who are speaking with a knowledge of the views of their constituents. Resolutions, presumably of great importance, passed by a meeting composed of Representatives many of whom had had no opportunity of consulting their constituents could not have the weight which they at present possess. The resolutions of such a body would therefore be of the nature of "panic legislation," and Representative Meetings convened under such circumstances would be more likely to be of detriment than of advantage to the Association and the profession. The Council would strongly deprecate the adoption of any method of procedure which would prevent any Representative from ascertaining the opinions of his constituents on a subject important enough to warrant the calling of a Special Representative Meeting.

10. Having thus placed the arguments before the Divisions the Council leaves the matter to be decided by them and the Representative Body. If Divisions think that the advantage of being able to have Special Representative Meetings called in a week less than they can be called at present outweighs the disadvantages which have impressed the Council and have been detailed above, the Council submits that the most practical method would be to adopt the revised form of By-law 36 quoted in paragraph 6 of this Report.

SUB-APPENDIX.

PRESENT PROCEDURE IN RESPECT OF CONVENING SPECIAL REPRESENTATIVE MEETINGS.

Special Representative Meetings are under existing By-law 36 convened by the Chairman of Representative Meetings. The initiative may come either from the Council or from not less than seven Constituencies. The following is the procedure in each case.

A. *Special Representative Meeting called upon Requisition of Council.*

(i.) Proposition originates—

(a) With Chairman of Council, or (b) with 15 members of Council.

(ii.) Chairman of Council orders notices to be issued for Special Meeting of Council.

(iii.) Preparation and issue of Council Meeting Notices.

(iv.) Period of Notice at discretion of Chairman of Council (By-law 56). It is, however, usual to give seven clear days' notice of the Agenda of each Meeting of Council (Standing Order 2 of Council).

(v.) Meeting of Council.

(vi.) Requisition of Council forwarded to Chairman of Representative Meetings. As the latter is generally present at a Council Meeting no interval would usually occur.

(vii.) Chairman of Representative Meetings orders insertion of notice in JOURNAL.

(viii.) 14 days' interval (By-law 36 (2)) occupied by :—

(i.) Constituencies in

(a) Honorary Secretaries of Constituencies issuing notice of Meeting of Constituency.

(b) Period of notice, which by Rules of some Divisions must be several days.

(c) Meetings of Constituencies and instructions to Representatives.

(ii.) Head Office in

(a) Engaging rooms.

(b) Printing documents.

(c) Other general arrangements.

B. *Representative Meeting called on Requisition of not less than Seven Constituencies.*

(i.) Originates by intercommunication between Constituencies and passage of identical resolutions demanding meeting and stating specific business.

(ii.) Requisition received at Head Office.

(iii.) Requisition forwarded to Chairman of Representative Meetings (interval of one day occupied in transmission by post (By-law 73 (3)).

(iv.) Chairman of Representative Meetings orders insertion of notice in JOURNAL (interval of one day).

(v.) Same as A (viii.).

It will be clear from the above statement that except for other delays caused by unavoidable or avoidable causes the only stage that could be shortened is A (viii.) or B (v.). By giving only 10 days' notice in the JOURNAL, the Meeting could be held in the middle of the second week after the notice was published. Thus if the notice appeared in the JOURNAL published on Friday, January 1st, for example, the Meeting could be held on Tuesday, the 12th.

APPENDIX II.

re GROUPING (a) OF DIVISIONS AND BRANCHES IN UNITED KINGDOM FOR ELECTION OF 24 MEMBERS OF COUNCIL, 1915-16, UNDER BY-LAW 43 (a) (*see cols. 1 and 2*), AND (b) OF CONSTITUENCIES IN UNITED KINGDOM FOR ELECTION OF 12 MEMBERS OF COUNCIL, 1914-15 AND 1915-16, UNDER BY-LAW 43 (c) (*see cols. 1 and 3*).

(NOTE.—*The table shows the 1914-15 Grouping, as determined by the A.R.M., 1913. The list of Branches and the membership figures are brought up to March, 1914.*)

COLUMN 1.	GROUPS SHOWN BY BRACKETS.							
	COLUMN 2.			COLUMN 3.				
BRANCHES IN THE GROUPS, WITH MEMBERSHIPS AS AT MARCH, 1914.	24 Members of Council elected by Grouped Branches by voting paper.			12 Members of Council elected by grouped Representatives.				Members in the Groups
England and Wales.								
North of England Branch, 790	915	...	1	...	1	...	...	1,900
North Lancashire and South Westmorland Branch, 125								
Yorkshire Branch	985	...	1					
Lancashire and Cheshire Branch	1,882	...	2	...	1	...	...	1,882
East York and North Lincoln Branch, 191	841	...	1	...	1	...	...	1,703
Midland Branch, 650								
Cambridge and Huntingdon Branch, 124								
East Anglian Branch, 490	862	...	1					
South Midland Branch, 248								
Birmingham Branch, 606	872	...	1	...	1	...	...	1,830
Staffordshire Branch, 266								
North Wales Branch, 194								
Shropshire and Mid-Wales Branch, 131	958	...	1					
South Wales and Monmouthshire Branch, 633								
Metropolitan Counties Branch, 2,961:								
Central, East and North Metropolitan Group:								
City (174), East Hertfordshire (52), Finchley and Hendon (55), Hampstead (90), Harrow (54), Marylebone (581), North Middlesex (142), South West Essex (79), St. Pancras and Islington (151), Stratford (113), Tower Hamlets (68), and Willesden (63) Constituencies	1,622	...	...	...	1	...	...	1,622
South and West Metropolitan Group:		...	4					
Camberwell (85), Chelsea (94), Ealing (73), Greenwich and Deptford (63), Kensington (288), Lambeth (122), Lewisham (60) with Woolwich (32), South Middlesex (51), Wandsworth (168), West Hertfordshire (75) and Westminster (228) Constituencies	1,339	...	...	...	1	...	...	1,339
Bath and Bristol Branch, 397	745	...	1	...	1	...	...	1,437
Gloucestershire Branch, 136								
West Somerset Branch, 78								
Worcestershire and Herefordshire Branch, 134								
Dorset and West Hants Branch, 214	692	...	1					
South-Western Branch, 478								
Oxford and Reading Branch, 230	644	...	1	...	1	...	...	1,894
Southern Branch, 414								
*Kent Branch	421	1,250	1					
*Surrey Branch	429							
*Sussex Branch	400							
Scotland.								
Aberdeen, Northern Counties, Dundee, and Perth Branches	497	...	1	...	1	...	...	983
Edinburgh and Fife Branches	486		1					
Glasgow and West of Scotland Branch (4 City Divisions)	420	...	1	...	1	...	...	1,008
Glasgow and West of Scotland Branch (5 County Divisions)	588	...	1					
Border Counties and Stirling Branches		...						
Ireland.								
Connaught and South-Eastern of Ireland Branches	92	...	1	...	1	...	...	293
Leinster Branch	201	...	1					
Munster Branch	85	...	1	...	1	...	...	444
Ulster Branch	359	...	1					

* These new Branches practically took the place of the South-Eastern Branch, discontinued November, 1913.

APPENDIX III.

ANALYSIS OF BRANCH REPORTS (U.K.) FOR 1913.

(Paragraphs 51-3 of Annual Report of Council.)

Branch.	Membership.		Financial Statement.							Meetings.					
	On December 31st, 1912.	On December 31st, 1913.	Balance (if any) from 1912.	Deficit (if any) from 1912.	Receipts (if any) 1913.	Expenditure, 1913.	Balance (if any) to 1914.	Deficit (if any) to 1914.	Outstanding Liabilities as at December 31st, 1913.	Branch.	Scientific.	Medico-Political, Ethical, &c.	Social Functions.	Average Attendance.	Branch Council.
(A) BRANCHES IN UNITED KINGDOM.			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.						
(1) Aberdeen...	207	207			(No Report)										
(2) Bath and Bristol	475	467			(No Report)										
(3) Birmingham	699	672	78 5 5		134 12 0	155 10 11	57 6 6		66 2 4	7	6	0	1	36·1	8
(4) Border Counties	156	154		25 19 3	44 0 11	23 1 4		4 19 8	20 4 8						
(5) Cambridge and Huntingdon...	158	129	30 18 4½		22 1 0	40 19 7	11 19 9½		12 0 0	7	5	1	1	26	3
(6) Connaught	60	60			(No Report)										
(7) Dorset and West Hants ...	245	252	10 2 6		47 12 0	10 6 4	47 8 2		14 2 11	3	3	0	3	39	3
(8) Dundee	111	112	7 3		22 0 0	17 13 1	4 14 2								
(9) East Anglian	575	554		68 9 10	10 9 8	104 4 2		63 6 0		3	3		3	40	5
(10) East York and North Lincoln	205	206	12 5 6		41 5 0	35 18 8	17 11 10				1			18	2
(11) Edinburgh	515	462	70 4 10		74 8 0	63 11 6½	81 1 3½			2	1	1	1	60	3
(12) Fife	105	103		5 5 11	22 3 9	13 12 0	3 5 10		3 12 3	3				30	4
(13) Glasgow and West of Scotland	865	854	74 17 6		42 12 2	89 6 7	28 3 1		57 9 0	2		1	2	159	6
(14) Gloucestershire	161	151			(No Report)										
(15) Kent*		520			38 1 4	1 11 1	36 10 3		2 4 9						1
(16) Lancashire and Cheshire ...	2,192	1,918	481 2 8		331 15 0	355 9 7	457 8 1			2	2	1	2	200	5

Branch.	Membership.		Financial Statement.							Meetings.					
	On December 31st, 1912.	On December 31st, 1913.	Balance (if any) from 1912.	Deficit (if any) from 1912.	Receipts (if any), 1913.	Expenditure, 1913.	Balance (if any) to 1914.	Deficit (if any) to 1914.	Outstanding Liabilities as at December 31st, 1913.	Branch	Scientific.	Medico-Political, Ethical, &c.	Social Functions.	Average Attendance.	Branch Council.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.						
(17) Leinster	295	284	(No Report)												
(18) Metropolitan Counties ...	4,089	3,788	267 6 4		819 17 3	819 7 5	267 16 2		6 11 6	1		27			14
(19) Midland	723	660	133 0 0		112 1 6	136 0 7	103 0 11			1		1		40	2
(20) Munster	122	120	23 15 9		17 14 0	9 11 9	31 18 0			2		2		8	1
(21) North of England	854	839		144 18 2	312 18 2	197 13 0½		29 13 0½		4	7	2	2		5
(22) Northern Counties of Scotland	146	147		12 3 11	28 0 0	22 9 6		6 13 5		2		2		12	4
(23) N. Lancashire and S. Westmorland	138	144	33 15 9		0 8 3	8 1 11	26 2 1		6 0 0	1	1			23	
(24) North Wales	249	224	9 9 7		46 13 7	20 6 5	35 16 9			2	2	1	2	44	3
(25) Oxford and Reading	354	305	58 5 8		33 1 2	42 8 0	49 9 8			1	1		1	50	1
(26) Perth	60	61	0 3 3		12 0 0	11 13 3	0 10 0			5	2	4	1	15	3
(27) Shropshire and Mid-Wales ...	151	147	(No Report)												
(28) South-Eastern*	1,391	1,384	7 14 6½		339 18 1	246 2 5½	101 10 2			1		1	1	39	3
(29) South-Eastern of Ireland ...	66	65	1 7 8		13 0 0	8 16 0	5 11 8			7		5	5	10	3
(30) Southern	521	499	22 16 6		100 8 0	88 18 7	40 0 2			2	2		1	31	5
(31) South Midland	283	268		7 0 5	55 0 0	38 16 6	9 3 1			2	2	1	1	32	1
(32) South Wales and Monmouthshire	715	683	0 2 3		138 12 0	64 1 0	71 13 3			4	4	4	1	36	6
(33) South Western	582	563	60 13 8		112 16 0	151 17 0	21 12 8			4	2	2	1	31	6
(34) Staffordshire	270	285	17 5 6		57 16 6	65 4 10	9 17 2		1 15 8	4	3	1	4	26	4

*Part year. Figures must be read accordingly.

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.								MEETINGS.					
	On December 31st, 1912.	On December 31st, 1913.	Balance (if any) from 1912.	Deficit (if any) from 1912.	Receipts (if any), 1913.	Expenditure, 1913.	Balance (if any) to 1914.	Deficit (if any) to 1914.	Outstanding Liabilities as at December 31st, 1913.	Branch.	Scientific.	Medico-Political, &c.	Social Functions.	Average Attendance.	Branch Council.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.						
(35) STIRLING	92	86	1 7 10		17 4 0	11 16 3	6 15 7			4		4		23	1
(36) SURREY		524			(No Report)										
(37) SUSSEX*		520			38 1 4		38 1 4			1					
(38) ULSTER	444	441	26 9 0			17 13 6	8 15 6			4	4		5	33	5
(39) WEST SOMERSET	95	90	25 18 5½			4 16 5½	21 2 0			5	2	3	1	21·2	4
(40) WORCESTERSHIRE & HEREFORDSHIRE	162	143	9 5 4		30 0 0	13 4 11	26 0 5		4 9 7	3	3	1		21	2
(41) YORKSHIRE	1,189	1,140		1 0 9	228 16 0	156 18 11	70 16 4			3	3		2	32	4
TOTALS (*Branches in United Kingdom*)	—	—	1,457 1 1½	264 18 3	3,345 6 8	3,047 3 2	1,694 1 11	104 12 1½	194 12 8½	—	—	—	—	—	—

APPENDIX IV.

BRANCHES AND DIVISIONS IN U.K. WHICH ARE NOT, ACCORDING TO THE REGISTER AT THE HEAD OFFICE, IN EFFECTIVE POSSESSION OF RULES OF ORGANISATION UNDER ARTICLE 17.

(*Note.*—Branches whose names are included in brackets are mentioned merely for purposes of reference, being already in possession of effective Rules).

Branches and Divisions.

(ABERDEEN BRANCH)—
- Aberdeen
- Orkney
- Shetland

(BIRMINGHAM BRANCH)—
- Bromsgrove
- Dudley
- Warwick and Leamington
- West Bromwich

(CAMBRIDGE AND HUNTINGDON BRANCH)—
- Cambridge and Huntingdon
- Isle of Ely

(CONNAUGHT BRANCH)—
- Mid Connaught
- North ,,
- South ,,

(EAST ANGLIAN BRANCH)—
- Great Yarmouth

(EAST YORK AND NORTH LINCOLN BRANCH)—
- North Lincoln

(EDINBURGH BRANCH)—
- Lothians

(GLASGOW AND WEST OF SCOTLAND BRANCH)—
- Ayrshire
- Glasgow Central

(KENT BRANCH)—
- Rochester, Chatham and Gillingham

(LANCASHIRE AND CHESHIRE BRANCH)—
- Birkenhead
- Glossop
- Isle of Man
- Leigh
- Preston
- St. Helens
- Wigan

(LEINSTER BRANCH)—
- Mid Leinster
- North ,,
- North-West Leinster
- South-East ,,

(MET. COUNTIES BRANCH)—
- Chelsea
- Finchley and Hendon
- Harrow
- S. Middlesex
- Woolwich

(MIDLAND BRANCH)—
- Boston and Spalding
- Chesterfield
- Derby

Branches and Divisions.

(MUNSTER BRANCH)—
- N. Munster
- S. ,,
- W. ,,

(NORTH OF ENGLAND BRANCH)
- Hexham

(NORTHERN COUNTIES OF SCOTLAND BRANCH)—
- Banff, Elgin and Nairn
- Caithness and Sutherland
- Inverness
- Islands
- Ross and Cromarty

OXFORD AND READING BRANCH—
- Oxford
- Reading

(SOUTH EASTERN OF IRELAND BRANCH)—
- Carlow
- Kilkenny
- Waterford

S. WALES AND MONMOUTHSHIRE BRANCH—
- Cardiff
- Monmouthshire
- N. Glamorgan and Brecknock

(SOUTH WESTERN BRANCH)—
- E. Cornwall
- Exeter
- Plymouth
- W. Cornwall

SURREY BRANCH—
- Wimbledon

SUSSEX BRANCH—
- Lewes and E. Grinstead

(ULSTER BRANCH)—
- Ballymoney, N. Antrim and S. Derry
- Belfast
- Derry
- Enniskillen
- Monaghan and Cavan
- Omagh
- Portadown and W. Down

WEST SOMERSET BRANCH—

(WORCESTER AND HEREFORD BRANCH)—
- Hereford

(YORKSHIRE BRANCH)—
- Harrogate
- Huddersfield
- Rotherham
- Scarborough

APPENDIX V.

MEMORANDUM ON THE POLICY OF THE BRITISH MEDICAL ASSOCIATION WITH REGARD TO THE MEDICAL INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

I.—INSPECTION.

(a) Conditions of Employment.

1. A whole-time Medical Officer of Health who is also School Medical Officer should not as a general rule undertake any of the actual work of Inspection of School Children. Exception may be made in the case of the smaller Education Authorities.

2. The titles of Assistant Medical Officer of Health and Assistant School Medical Officer should not be combined merely for the sake of allowing the holder of these offices to base a claim for an appointment elsewhere as Medical Officer of Health.

Where the title of Assistant Medical Officer of Health is assumed, it is very important that the public health duties of the Officer should be commensurate with the title.

3. Officers in the School Medical Service should have reasonable security of tenure of office, and their appointments should only be terminable with the consent of the Board of Education. They should also be admitted to participation in a Government Superannuation Scheme.

(b) Methods of Remuneration.

4. Officers of the School Medical Service may be remunerated by a fixed salary, or in the case of part-time officers by payment in proportion to the time they devote to the work. In sparsely populated districts special systems of capitation payment, such as are at present in operation, may be adequate.

(c) Amount of Remuneration.

Part-time School Medical Officers.

5. The remuneration for a part-time School Medical Officer should be at the rate of £50 per school year for attendance on half a school day per week, half a school day being defined to be two and a half hours.

Whole-time School Medical Officers.

6. Practitioners who enter the School Medical Service as whole-time officers are, by reason of longer and special education, justified in expecting a higher rate of remuneration than they would receive in ordinary clinical positions. The minimum whole-time salary should therefore commence at £300 per annum for Assistant School Medical Officers, and it is desirable that such salary should be subject to an annual increment. The minimum salary for a senior responsible whole-time School Medical Officer should be £500 per annum, and should be proportionately greater in the case of large towns or county areas. Such salary should also rise by suitable annual increments. These salaries are net salaries, exclusive of travelling expenses, clerical assistance, postage, etc.

Salaries of Women School Medical Officers.

7. The salaries paid to medical women should not be less than those paid to medical men in respect of the same work.

II.—TREATMENT.

8. Treatment by an education authority should be confined to necessitous children, that is, to those children whose parents cannot afford to pay privately for the treatment recommended as a result of inspection. Parents should always in the first place be recommended to seek treatment for their children from their family doctor.

9. The support of the Association should be given to the schemes by which medical treatment, and the treatment of refractions, should be carried out by local private practitioners (for reasons in favour of the employment of private practitioners, *see* Sub-Appendix A). In these areas the duties of the School Medical Officers and their assistants should consist of inspection and the important work of "following up."

Treatment by Private Practitioners.

10. Where treatment by private practitioners is adopted this should be done by means of a "School Centre" (*see* Model Scheme—Sub-Appendix B), or in sparsely populated districts by the "recognition" of places (for example, a room in the school buildings) where the local practitioner or practitioners could carry out the necessary treatment.

The term "private practitioner" includes both specialists and general practitioners.

11. Where practitioners in any area are desirous of carrying out treatment of school children who have been found on examination to be defective, it is their duty to make representations to the Local Education Authority and to place before that body a scheme.

12. The duty of the Division should be to place before the Local Education Authority a simple scheme and to present reasons why in its opinion such a scheme would be in the best interests of the public.

13. If the Local Education Authority is not convinced of the superiority of such a scheme it is not part of the policy of the Association to resist the adoption of some other scheme on the ground that it involves the employment of whole or part-time officers for the purpose of treating necessitous children.

A scheme for treatment might be a combination of treatment by whole-time and private practitioners.

14. Divisions desirous of placing a scheme of treatment by local practitioners before the Local Education Authority will have the full support of the Association, but for purposes of co-ordination such Schemes should be submitted to the Central Office of the Association, prior to being forwarded to the Education Authority.

15. The responsibility of the Local Education Authority for seeing that treatment is secured is recognised. If treatment is carried out by a private practitioner the School Medical Officer acting as the agent of the Local Education Authority is fulfilling his duty in "following up" the case to see if treatment has been obtained. On the occasion of such "following up" visits and also in cases where treatment is undertaken by a whole-time officer, the latter should always offer the private practitioner (if any) an opportunity of consultation on the case.

Dental Inspection and Treatment.

16. The inspection and treatment of the teeth of school children should be carried out by qualified dentists in Treatment Centres (for an outline Model Scheme for treatment by medical practitioners and dentists, *see* Sub-Appendix B).

Treatment by Medical Charities.

17. School children found upon medical inspection to be defective should not be referred to public medical charities for treatment, whether or not the Local Education Authority is prepared to subsidise these charities.

18. The medical staffs of voluntary hospitals should do all in their power to prevent the reference to those hospitals of school children who have been found on examination to be defective and should decline to countenance in any way a method which is an abuse of voluntary charity and an inadequate provision for a public need.

Treatment by Provident Dispensaries.

19. There is no objection to treatment by Provident Dispensaries, by Public Medical Services, or other contract medical practice organisations, provided that the remuneration of the practitioners is adequate for the work done and that effect is given to the principle of free choice of doctor by the parents of the patient, with a corresponding right on the part of the doctor to refuse any patient

Treatment by Poor Law.

20. Any scheme for the provision for the treatment by the Poor Law of school children found upon inspection to be defective should be opposed.

Remuneration.

(a) *Of Private Practitioners.*

21. Remuneration of appointments under any scheme in which private practitioners are appointed should be made on a scale agreed upon between the medical profession as represented by the local Branch or Division of the British Medical Association and the Local Education Authority, and should be based on terms laid down in paragraph 5 where the circumstances permit of such an arrangement being made.

(b) *Of Whole-time Medical Officers.*

22. Where whole-time Medical Officers are engaged in the treatment of school children, their salaries should not be less than those paid to School Medical Officers and Assistant School Medical Officers engaged in inspection.

III.—DUTIES OF NURSE.

Inspection and Treatment.

23. The School Nurse should always act under the instructions and supervision of a registered medical practitioner.

SUB-APPENDIX A.

REASONS IN FAVOUR OF THE EMPLOYMENT OF PRIVATE PRACTITIONERS AS COMPARED WITH WHOLE-TIME SCHOOL MEDICAL OFFICERS IN THE TREATMENT OF SCHOOL CHILDREN.

1. The medical treatment of school children is a great national undertaking, the ultimate success of which largely depends upon the number of persons who are interested. From this point of view it is better that as many as possible of the medical profession should have personal contact with the work, rather than that familiarity with it should be confined to a small class of public officials.

2. Medical practitioners who are engaged in private practice enjoy the benefit of a wider experience of the treatment of disease in general than those whose work is confined to the treatment (or the treatment and inspection) of school children.

3. Treatment and recurrent supervision of the school children by such practitioners supplemented by the "following up" work of the School Medical Officer in the opinion of the Association alone gives security that the medical needs of the children will be adequately met.

4. The treatment of diseases of children gives those who carry it out opportunities of obtaining valuable experience. If the work is done by private practitioners who are engaged, apart from their school work, in treating members of the general public, the general public derives great benefit from the profession generally receiving this additional experience.

5. The employment of private practitioners gives the Education Authority a much wider field of choice than if the work is carried out by whole-time officers, and by the employment of part-time officers the authority would be able to adjust the appointment of persons of special skill to its requirements in each direction.

SUB-APPENDIX B.

OUTLINE MODEL SCHEME FOR TREATMENT CENTRE.

I.—Precautions taken by the Local Authority to ensure that only those Children shall be treated at the Centre for whose treatment adequate provision cannot otherwise be made.

1. Formation by Education Committee of a Committee called the "Medical Treatment Committee."

2. The chief duty of this Committee would be to determine, from information obtained by its Officers, whether any child applying for treatment is necessitous, and, if so, to sign a voucher for treatment. Due regard would be paid to the amount of income of the parent, to the existing facilities for obtaining the special treatment, and to its cost; and the Committee would decide whether the treatment was to be free, or what part, if any, of the charge for any operative treatment to be provided shall be paid by the parent. In default of payment in a case in which the parent was required to contribute the amount would be recovered summarily as a civil debt.

3. The parents or guardians of all children requiring treatment should in the first place be informed that it is their duty to have the child treated by a doctor of their own choosing, and if he considers the child suitable for treatment at the Centre he would sign a voucher to that effect. The voucher would be endorsed by the Medical Treatment Committee before treatment is given.

4. The parents or guardians of those children who have no medical attendant would be advised to apply direct to the Medical Treatment Committee for a voucher.

5. In the case of any child sent from school to the School Medical Officer and diagnosed as suffering from a contagious skin disease, the head teacher would sign a voucher for treatment if the child were known to be necessitous; this would warrant treatment until the next meeting of the Medical Treatment Committee. Any further treatment should only be obtained if the Medical Treatment Committee countersigned the voucher.

II. Method to be Adopted to secure Adequate Treatment of Defects discovered on Inspection.

Management of Centre.

6. The Treatment Centre should be managed by a Committee of.....persons to be appointed by the Education Authority as follows:—

.....Members of the Education Committee who shall also be members of the Medical Treatment Committee.

.....Members nominated by the.....Division of the British Medical Association.

.....Members nominated by the.....Division of the British Dental Association.

Note.—The numbers would be so arranged as to place the Education Committee members in a majority.

Supervision of Centre.

7. The carrying out of the practical side of the Centre should be under the supervision of the Senior School Medical Officer, and the whole of the work of the Treatment Centre Committee would be subject to the approval of the Education Authority.

Staff of the Centre.

8. The staff of the Centre should be appointed by the Education Authority on the nomination of the Treatment Centre Committee, and would consist of duly qualified and registered practitioners for each of the medical, surgical, and dental departments it was decided to establish.

9. The members of the staff should hold office for..... years and should at the expiration of that time be eligible for re-election by the Education Committee on the recommendation of the Treatment Centre Committee.

Payment of Staff.

10. Each member of the staff should be remunerated at the rate of not less than £50 per school year for each half-day's attendance per week.

Arrangements as regards Accommodation, etc.

11. All necessary accommodation with suitable lighting and heating should be provided by the Education Authority.

12. All drugs and apparatus required by the staff should be provided by the Local Education Authority.

Provision of Nurses.

13. The Education Committee should provide a nurse or nurses for the assistance of the staff.

Clerical Assistance, Stationery, etc.

14. The Education Committee should provide all necessary stationery, and the services of a clerk, when official returns are required to be made.

Opportunities for Inspection of Centre.

15. The Centre would be open at any time to the medical officers of the Board of Education or of the Local Education Authority; to any of the medical or dental members of the Treatment Centre Committee of the Centre; and, when no medical treatment is actually taking place, to the lay members of the Committee.

APPENDIX VI.

Central Insurance Defence Fund.

FOR WHICH THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION ACT AS TRUSTEES.

Account of Receipts and Payments for the period from 22nd July, 1911, to 31st December, 1913.

ADMINISTRATION ACCOUNT.

RECEIPTS.

	£ s. d.	£ s. d.
To Subscriptions received 22nd July, 1911, to 31st December, 1913	16,780 1 8	
,, Proportion of Interest on Deposit...	27 6 10	
	£16,807 8 6	

PAYMENTS.

	£ s. d.	£ s. d.
By Grant to British Medical Association to meet extraordinary expenditure in connection with the National Insurance Act ...	[illegible] 0 0	
,, Provisional and Local Medical Committee Expenses ...	[illegible] 13 5	
,, Grant to Irish Conjoint Committee	[illegible] 0 0	
,, Legal Expenses...	[illegible] 18 2	
,, Expenses of Deputation to Insurance Commissioners	22 15 9	
,, Bank Charges and Sundries	10 10 8	
,, Postage...	[illegible] 11 4	
	[illegible]	16,119 9 4
,, Balance, being amount unexpended on Administration Account		687 19 2
		£16,807 8 6

COMPENSATION ACCOUNT.

	£ s. d.	£ s. d.
To Subscriptions received 1st January to 31st December, 1913	17,556 2 2	
,, Interest on Deposit	180 0 0	
,, Interest on Loan to British Medical Association	187 8 0	
	£17,923 10 2	
Unexpended Balances, 31st December, 1913 :—		
Administration Account	687 19 2	
Compensation Account	12,001 5 2	
	12,689 4 4	
	£12,689 4 4	

PAYMENTS.

	£ s. d.	£ s. d.
By Grant to Members	2,717 5 0	
,, Grant to "Courtenay Milward Memorial Fund"	[illegible] 0 0	
,, Loans to Members	[illegible] 0 0	
	[illegible]	7,922 5 0
,, Balance, being amount unexpended		12,001 5 2
		£[illegible] 10 2
Cash with Bankers :—		
Current Account	[illegible] 4 4	
Deposit Account	[illegible] 0 0	
	[illegible]	2,689 4 4
British Medical Association Loan Account (secured by Deposit of Investments)		10,000 0 0
		£12,689 4 4

We have compared the above account of receipts and payments with the books and vouchers of the Fund and find it correct. We have verified the Bank Balances at the 31st December, but we have not audited the accounts of the Local Committees who have collected contributions for the Fund.

3, FREDERICK'S PLACE, OLD JEWRY, LONDON, E.C., *30th January, 1914.*

PRICE, WATERHOUSE & Co.

APPENDIX VII.

MODEL SCHEME FOR THE TREATMENT OF TUBERCULOSIS.

STAFF.

Chief Tuberculosis Officers.

1. The chief tuberculosis officer should be a whole-time officer, and should receive not less than £500 per annum, or £400 if resident.

Assistant Tuberculosis Officers.

2. The assistant tuberculosis officers, where such are needed, should be whole-time officers at a salary of not less than £350 per annum, or £250 if resident, but tuberculosis officers whose duty, whatever their designation, includes the charge of the clinical arrangements concerning tuberculosis cases, and whose relation as regards such cases to the local profession will be that of consultant, should receive not less than £500 per annum.

Consultants.

3. The need for expert medical opinion cannot be met by the appointment of an assistant tuberculosis officer, acting under the administrative control of the medical officer of health, as an officer who could be secured at the salary of an assistant would not have the necessary experience to enable him to act as consultant to the district. When a medical practitioner is called in to act as a consultant, his services should be paid for at the local recognised rate for consultation fees.

Medical Officer of Health as Tuberculosis Officer.

4. The medical officer of health, in his capacity as administrative tuberculosis officer, should have an increase in his salary corresponding to the increase in his duties. He should not act as clinical tuberculosis officer unless it can be shown:—

(1) that he has ample time for clinical work:

(2) that he fulfils the conditions as to clinical experience laid down by the Interim Report of the Departmental Committee on Tuberculosis (Astor Committee, pars. 27 and 28.):—

"*Whilst not desiring to lay down any hard-and-fast conditions, the Committee are of opinion that preference should be given to registered medical practitioners of suitable qualifications and experience, and not less than twenty-five years of age, who have held house appointments for at least six months in a general hospital, in addition to a similar period of attendance at a special institution for the treatment of tuberculosis. They should also be competent to supervise such laboratory work as may be necessary.*"

"*He should be of suitable age and attainment and enough of an expert on the subject of tuberculosis to command general confidence.*"

PROCEDURE IN PROVIDING TREATMENT.

5. For the efficient working of any tuberculosis scheme, it is recommended that any person applying to a tuberculosis officer or authority for benefit under the scheme should present a statement of his case signed by a medical practitioner.

DOMICILIARY TREATMENT.

6. The medical practitioner should confer with the consulting officer at such times and in such circumstances as may be arranged between them in regard to patients under the care of the medical practitioner. (L.G.B. Order, 26th July, 1912, Article II. (6)).

7. The medical practitioner should prepare and transmit to the consulting officer at such times as may be arranged between them, not being less often than once in three months, a report in regard to each patient, giving particulars as to:—

(a) the progress of the patient:

(b) whether the conditions under which the patient is living and receiving the treatment are satisfactory:

(c) the behaviour of the patient in carrying out instructions given to him; and

(d) whether in the opinion of the medical practitioner any form of institutional treatment has become desirable. (L.G.B. Order, 26th July, 1912, Article II. (5)).

8. The medical practitioner should from time to time inform the Medical Officer of Health of the Sanitary District in which the patient resides of any circumstances known to the medical practitioner which may affect adversely the sanitary conditions under which the patient is living, and in respect to which action by the medical officer of health or of the Sanitary Authority would, in the opinion of the medical practitioner, be necessary or desirable. (L.G.B. Order, 26th July, 1912, Article II. (7)).

REMUNERATION OF PROFESSION.

9. Where the local profession of any Insurance area decide that they shall be paid by a capitation fee for the domiciliary treatment of tuberculosis cases of *insured persons* such fee should be not less than 6d., and should be for domiciliary treatment only.

10. Where the local profession of any Insurance area decide that they shall be paid upon a scale of fees for the domiciliary treatment of tuberculosis cases either of insured or uninsured persons, the following should be the minimum scale of fees:—

Scale of Minimum Fees.

	s.	d.
(a) For full medical report (including consultation at the surgery, or visit if within two miles of the doctor's house; if beyond that distance a mileage fee of not less than 1s. per mile (outwards) or in outlying and sparsely populated districts such sum as is suitable to local circumstances and the local customs of the profession)	5	0
(b) Extra for first visit with chief tuberculosis officer	2	6
(c) Continuous record	5	0
(d) Quarterly reports	5	0
(e) Consultation at doctor's residence or surgery	2	6
(f) Visit at patient's home	2	6
(g) Night Visit—that is, visit paid between 8 p.m. and 8 a.m. in response to call within these hours	5	0
(h) Special visit—that is, visit paid in response to call sent after 10 a.m and before 8 p.m.	3	6
(i.) Injection of vaccines (vaccines to be provided by Local Authority)	2	6

Note.—Mileage in (a) will apply to (f), (g), and (h).

DISPENSARY TREATMENT, WHETHER ATTACHED TO AN INSTITUTION OR NOT.

11. The attendance and treatment of cases of tuberculosis in tuberculosis dispensaries should be carried on in accordance with the following principles:—

A.—General principles, applicable to *all* tuberculosis dispensaries, whether voluntary or otherwise:—

(i.) That the services of all medical practitioners connected with the dispensary should be paid for;

(ii.) that no patient should be treated at the dispensary except on the recommendation of a medical practitioner;

(iii.) that it is essential that every tuberculous patient should have his own medical attendant to carry out any necessary domiciliary treatment;

(iv.) that in order to keep the medical practitioner in touch with the work of detection and prevention of tuberculosis it is recommended that he should co-operate with the medical officer of health or tuberculosis officer in all inspection work (including the examination of "contacts" and "suspects");

(v.) that the medical officer in charge of the dispensary should not be engaged in private practice.

B.—Special principles, applicable to tuberculosis dispensaries established in connection with a voluntary institution:—

(i.) that the dispensary should be co-ordinated with the institution but carried on as a separate department.

(ii.) that the accounts of the institution should be kept so as to show the receipts and the estimated expenditure of the dispensary.

12. All attempts to make tuberculosis dispensaries into institutions merely for the application of some form of special treatment should be rigidly discouraged.

TREATMENT AS IN-PATIENTS IN VOLUNTARY MEDICAL INSTITUTIONS.

13. A voluntary institution providing beds for the treatment of cases of tuberculosis, if the institution accepts payment, should be carried on in accordance with the following principles:—

(i.) that the organisation may run concurrently with that of the institution;

(ii.) that the accounts should be kept so as to show the estimated aggregate cost of the treatment of such patients, including the cost of medical attendance and treatment;

(iii.) that the services of all members either of the resident or honorary medical staff concerned with the treatment of such patients shall be paid for.

14. When a patient is discharged from an institution it is imperative for the continuity of treatment that his usual medical attendant should be advised of the patient's discharge and be supplied with a report and temperature chart covering the period of the patient's residence in the institution.

METHOD OF PAYMENT OF MEMBERS OF HONORARY MEDICAL STAFFS OF VOLUNTARY TUBERCULOSIS DISPENSARIES AND VOLUNTARY MEDICAL INSTITUTIONS.

15. From all moneys received by the Governing Body of a voluntary tuberculosis dispensary or voluntary medical institution in respect of the Tuberculosis Medical Service, a proportion to be agreed upon between the Governing Body and the medical staff should be placed to a special Fund which shall be distributed as the medical staff shall decide.

Mode of Distribution of Special Fund.

16. Honorary Medical Staffs may find the following suggestions valuable in connection with the disposal of the moneys in the special Fund, and accordingly the Committee suggests to the Hospital Staffs concerned that one or more of the following methods of distribution of any moneys in the special Fund may be found suitable:—

(i.) The distribution to the members of honorary medical staffs for their own personal disposal;

(ii.) for the assistance of members of the medical staff in connection with research work;

(iii.) for the purchase of instruments, books, etc., for the use of the medical staff or for lending to other members of the profession;

(iv.) for the initiation or development of post-graduate teaching in the institution;

(v.) the institution of a local medical benevolent fund, administered by the members of the Honorary Medical Staff, for dealing with necessitous cases (*e.g.*, widows and children of former colleagues);

(vi.) grants to any recognised medical benevolent fund or institution; or

(vii.) otherwise as the majority of the medical staff may decide.

TREATMENT OF PERSONS NOT INSURED UNDER THE NATIONAL INSURANCE ACT.

17. The terms and conditions for treatment of uninsured persons, when such is undertaken by the local authority, should be the same, *mutatis mutandis*, as those for treatment of insured persons, except that for domiciliary attendance the terms, where a contract is desired, shall be at the rate of £1 per quarter per patient.

IRELAND.

18. Until Medical Benefit is extended to Ireland, payment for domiciliary attendance reports, certificates, and other services should be on a scale of fees for work done.

19. It is hoped that this extension and the treatment of all forms of tuberculosis will be introduced at an early date, in which case it is urged that the arrangements should be similar to those prevailing in England.

APPENDIX VIII.

MEMORANDUM ON VOLUNTARY HOSPITALS AND TREATMENT OF CASES IN RECEIPT OF MATERNITY BENEFIT.

1. The Council has considered the following Minute 87 of the Annual Representative Meeting, 1913:—

Minute 87.—Resolved: That the Council be instructed to take into consideration the question of the acceptance by maternity and voluntary hospitals of patients in receipt of Maternity Benefit under the National Insurance Act, to confer on the matter with representatives of Teaching Institutions, to find a temporary modus vivendi, and to report to the next Representative Meeting.

2. Careful attention has also been given to the replies of various hospitals and other institutions engaged in the training of medical students and pupil midwives in the subject of obstetrics. From these replies it appears that those responsible for the teaching of medical students have found that the institution of the maternity benefits of the Insurance Act has materially lessened the number of women applying for assistance to the maternity charities, and the provision of sufficient clinical material for the teaching of medical students and pupil midwives has become a matter of considerable difficulty. Some of these institutions have tried the experiment of excluding women in receipt of maternity benefit with the result that there was an alarming deficiency of cases, and the exclusion had to be abandoned.

3. The Council is of opinion that for the sake of the education of the profession and, therefore, for the ultimate welfare of the public, it is essential that no obstacle should be placed in the way of the maternity charities obtaining sufficient patients to allow of the proper training of their pupils. In view of the natural objection that women have to be used for teaching purposes, there appears to be every reason to suppose that even if no objection to admission to these institutions be raised on the ground of eligibility for a maternity benefit, the knowledge that these benefits will be received will induce many women who would formerly have applied for charitable treatment to make private arrangements for their confinement. Thus there will probably in any case be an increasing difficulty in securing the number of cases required for educational purposes.

4. On these grounds the Council submits the following **recommendation** to the Representative Body:—:

(I.) That as it is necessary for the training in midwifery of medical students and pupil midwives that there should be an adequate supply of clinical material available for that purpose, no parturient woman should be refused treatment in the obstetric department of a voluntary hospital or similar institution* on the ground that she is eligible for a Maternity Benefit.

5. In view of the rapid developments which may be expected as a result of the operations of the National Insurance Act, it appears to the Council more important than ever that the policy laid down in Minute 676 of the Annual Representative Meeting, 1908, should not be weakened:

Minute 676.—Resolved: That the Representative Meeting considers that the services of the profession should not be given gratuitously to patients who are maintained by public funds.

The Council accordingly **recommends**:

(II.) That women entitled to a Maternity Benefit under the National Insurance Acts should not be regarded as eligible for free treatment except on the recommendation of a medical practitioner.

(III.) That all women receiving treatment through the Obstetric Department of a voluntary hospital or similar institution who are entitled to a Maternity Benefit shall be required to pay such sum to the hospital or institution as shall be determined upon by the Governing Body.

6. It follows from a consideration of the above Recommendations taken together with Minute 676 of the Annual Representative Meeting of 1908 that provision must be made, out of the payments of the women who are admitted to the institutions, for the remuneration of the medical staff. The Council makes the following **Recommendation**:—

(IV.) That from each such sum an amount, to be agreed upon between the Governing Body and Medical Board, shall be placed to a special fund which shall be distributed as the Medical Board shall decide.

7. If the above Recommendation is adopted it appears to the Council that the question of the distribution of the money may well be left to the members of the staff concerned.

* By "similar institution" is meant "places of study admitting medical students and recognised by Universities and examining bodies whose diplomas are accepted by the General Medical Council, or admitting pupil midwives and recognised by the Central Midwives Board."

8. The money could be distributed to the individual members of the staff in proportion to the work done by them or it could be used to provide comforts and conveniences for the common use of the staff. The one ruling principle to be kept always in mind is that the money is the property of those who do the work to be distributed or used just as the staff pleases. It will be observed that this principle could be adapted to all forms of voluntary hospital work in which honorary staffs are asked to undertake the treatment of persons for whose treatment the State is responsible, or on whose behalf the State offers payments.

APPENDIX IX.

MEMORANDUM ON THE REASONS WHY MEDICAL PRACTITIONERS WILL NOT ACCEPT SERVICE UNDER THE NATIONAL HEALTH INSURANCE ACTS

Received by the Council and submitted for the consideration of the Divisions and Representative Body.

In October last the British Medical Association appointed a Committee to consider in what way the Association could best promote the interests of the Members who have refused to enter into agreements with Insurance Committees for service on the Panel System.

The Committee has carefully considered the matter and decided that it is necessary to issue to the public a clear statement of what, in the opinion of the Committee, are the main objections to the present rigid system for the administration of medical benefits under the Insurance Act.

These objections involve the interests of the State, the Insured, and the Medical Profession.

(1) Interests of the State.

A large sum of money has been contributed from the National Exchequer in the hope of obtaining efficient medical treatment for those insured under the Act.

This money as at present expended (with few exceptions) obtains for the insured the professional services only of those medical men who—either from choice or necessity—are prepared to give their services on the Panel System.

Many thousands of medical men refuse to work under these conditions, without being in any way antagonistic to the principles of Health Insurance. They are prepared to give their services to the insured, but not on the Panel System.

Various systems have been suggested for the administration of medical benefits. The Committee, while of opinion that no system of contract medical practice will give the most efficient service, considers that it is not impossible to devise a system which would enable each insured person to obtain the professional services of the doctor of his or her choice.

It is not in the best interests of the State that its money should be expended in obtaining for the insured a needlessly restricted medical service.

(2) Interests of the Insured.

All those insured under the Act were repeatedly promised, while the Act was under discussion in the House of Commons, that under the Act they would obtain "Free Choice of Doctor."

At present their choice is limited (with the few exceptions who are permitted to contract out by the Insurance Committees) to those medical men serving on the Panel.

If the doctor they select is not on the Panel, the only "Free Choice" at present is to sacrifice their medical benefits, or change their doctor.

Hundreds of thousands of insured persons at present are sacrificing their medical benefits.

A very large—but unknown—number of insured persons have accepted Panel services, not from choice, but because they could not afford to sacrifice their medical benefits.

This is not just to the insured.

The administration of medical benefits should be so modified as to give to each insured person what has been definitely promised to them, that is a real Free Choice of Doctor whether or no the doctor of their choice is serving on the local Panel.

(3) Interests of the Medical Profession.

There is no essential antagonism between the interests of the Medical Profession and the interests of the State.

It is to the interest of the Medical Profession that it should receive adequate remuneration for efficient service.

It is to the interest of the State that the standard of Medical Service be raised to as high a level as possible.

The medical men who have refused to give their services on the Panel System have various and definite objections to this system of medical service.

The majority of them have always refused to accept contract work in any form, as they are convinced that it is only under the conditions of private practice that the public can obtain the most efficient service of the medical profession.

They hold that it is not possible to fix a fair remuneration for work which must vary in quality, according to the skill and conscientiousness of the medical man, and quantity, according to the health of the person receiving such contract services.

One essential reason why medical practitioners will not go on the Panel is that they object to contract medical practice being substituted for the previously prevailing private relations between doctor and patient. Another great objection is that the Panel System handicaps the work of the more efficient member of the medical profession, and puts a premium on that of the less efficient.

The members of the Medical Profession supply an article of varying value, *i.e.*, their professional skill. Insured persons, as other persons, require that article in varying degree. Some have frequently to seek the advice of their doctor. Others more fortunate rarely require the services of the Medical Profession.

The result of these two factors is that, in urban districts where there are a number of medical men and a large number of insured persons, those insured persons who suffer most from ill-health tend, more than the average person, to seek the services of those medical men who are regarded by the public as being most efficient in their work.

It therefore follows that there is a higher average rate of sickness among the patients of these practitioners. It also follows that if these medical men, who are thus regarded by the public as most efficient in their work, give service on the Panel System they will be receiving the same rate of remuneration per head as will those medical men who are regarded by the public as being less efficient. But the earning capacity of the former will be less because, in addition to spending more money and time in doing their work, they will actually have more work to do.

As a result, the more efficient medical men serving on the Panel are handicapped, and the less efficient receive a bonus in that their Panel lists have a diminished proportion of unhealthy lives.

This must be disastrous to the health of the nation, because a system which pays for good work on a lower scale than it pays for inferior work must result in a lower standard of efficiency, whether the work done is medical treatment or casual labour.

On the other hand, if the medical men regarded by the public as most efficient who give service on the Panel take advantage of their position to select their lives, and refuse to place upon their Panel list the names of those who suffer above the average from sickness, they will ignore the best traditions of their profession and the interests of those who have relied on them in the past for professional services.

Therefore, if the administration of medical benefit under the Insurance Act is continued on the present rigid system, the result must be to lower the standard of efficiency in the medical profession, and to prevent the insured receiving the best medical service.

It is earnestly to be hoped that immediate attention will be given to this question, and that a system will be adopted which will enable insured persons to obtain the services of the doctor of their choice, without the loss of any portion of the Medical Benefit they are entitled to receive under the Insurance Act.

APPENDIX X.

REPORT CONCERNING THE PROPOSED SPECIAL FUND.

1. The reference on this subject is contained in the following Minute of the S.R.M., December, 1913:—

Minute 58.—Resolved: (a) That seeing that a large majority of Representatives present at this Meeting are in favour of the formation of a Fund, the Council be instructed to consider the whole question and submit the matter to the Divisions in order that it may come before the Annual Representative Meeting next July for decision.

(b) That in making its Report to the Divisions the Council be authorised to issue therewith, if necessary, a Minority Report containing any objections to the scheme.

Minute 59.—Resolved: That when the Divisions are consulted an opportunity be taken of recording the votes for and against the Scheme at Divisional Meetings.

Minute 60.—Resolved: That the Divisions be instructed to take the opinion of practitioners resident within their areas by means of a postal vote.

2. From consideration of the above Minutes and of the proceedings of the Special Representative Meeting of December, 1913, it appears that

(i.) A large majority of Representatives was in favour of the formation of a Fund.

(ii.) It is recognised that the work of the Fund will be entirely outside the organisation of the Association.

(iii.) It is desired that the Council should submit a Scheme not only to the Divisions, but also to the whole of the practitioners resident in each Division area.

(iv.) It was recognised that there was some probability of a Minority Report being presented.

3. The Council agrees that a Fund is necessary.

4. It considers that the Fund is required as a *reserve* for the protection of the medical profession in future emergency by means of organisation and consolidation.

5. It is of opinion that even if the growth of the Fund should be slow at first, this fact is no argument against starting it.

6. The Council realises that the Fund will be devoted mainly to work which the British Medical Association is precluded by its constitution from undertaking. Its collection and administration must, therefore, necessarily be undertaken by its own separate governing body. If a Trust be formed, then in the initial stages the organisation and the Journal of the Association could be used for advertising and promoting the existence and objects of the Fund. In the event of a Trade Union being formed the funds of the Association could not be so used in advertising and promoting the existence and objects of the Fund if such necessitated the employment of the Association's funds, *e.g.* for affording clerical assistance or the use of the paid officials of the Association There would be no objection to the Journal of the Association publishing anything either in its own columns or that of the Supplement concerning the Trade Union by way of approval or advocating its claims or otherwise; and the question of the Trade Union and the advisability of joining it could be raised and debated at Division Meetings.

7. It is strongly recommended that the administrative and organising expenses should be cut down to a minimum in order that the essential character of the Fund as a *reserve* should be maintained.

8. The Fund should be collected locally as far as possible and administered centrally. For the purpose of local collection the country should be divided into grouped areas as, for example, the following eight:—

A. England.—*Group 1* (London and the Home Counties). *Group 2* (North of England and Yorkshire Branches). *Group 3* (Lancashire and Cheshire Branch and North Lancashire and South Westmorland Branch). *Group 4* (Midland Group of Counties). *Group 5* (South-Western Group of Branches).
B. Scotland.
C. Ireland, and
D. Wales.

9. The Council is of opinion that only two methods of forming a Fund need be considered:—

(i.) By means of a Trust.
(ii.) By means of a Trade Union.

(i.) *Points for and against administration of a Fund by Means of a Trust.*

For.	*Against.*
The method would appeal to those who object to a Trade Union, and may hence result in larger membership at the beginning.	
While it is admitted that there would not be the same amount of legal protection of Trust Funds if these are used for objects which may be deemed to be "in restraint of trade" as there would be under a Trade Union, the Trust method has been used successfully by several organisations, notably by the National Union of Teachers. This body is an unincorporated body which has deliberately refrained from seeking legal incorporation either as a company or as a Trade Union, on the ground that it is freer as an unincorporated body. It carries out objects very similar to those suggested in connection with the proposed Special Fund, by the method of Trusts, and it was recently successful in carrying out a strike of school teachers in Herefordshire without interference. If an official or a trustee were sued successfully he could probably be reimbursed from the trust funds.	A Trust might be open to the charge that its activities were in restraint of trade. Thus no protection against attachment of funds. All lawyers agree that the maximum degree of legal protection to Funds which it is intended shall be used "in restraint of trade" is to be obtained by registration as a Trade Union. A Trust is always open to the charge that its activities are "in restraint of trade," and the fact that a Trust which indulges in such activities has had no legal action taken against it is no guarantee for the future.
The organisation and JOURNAL of the Association could be used in the initial stages of the Trust for advertising and promoting its existence and objects.	

(ii.) *Points for and against administration of Fund by means of Trade Union.*

For	*Against*
Fullest legal protection possible to funds. In Germany where the profession has for years been fighting against lay organisations and against the State, the Leipzig Union, its most successful organisation has been formed under laws which are analogous to our Trade Union laws. The most recent forms of medical organisation in this country designed to meet present needs, namely, the Leicestershire Medical Union and the National Medical Guild, have been registered as Trade Unions.	If the funds of the Union itself are protected against attack, at least one judge has laid it down that there is no reason why the individual officers of the Union should not be sued. If the official is a man of straw, the prosecutor would probably proceed against the members of the Executive who give the official his instructions. The official probably could not be reimbursed from the funds of the Union. Hence, possible difficulty in obtaining members of Council of a Trade Union.
	The organisation and JOURNAL of the Association could not be used for advertising and promoting the existence and objects of a trade union, if such necessitated the spending of money by the Association by affording clerical assistance or the use of the paid Officials of the Association.

10. In the event of its being decided that the Fund should be administered by a Trust, the Committee is of opinion that the Provisional Committee of Management should consist of 12 members, six of whom should be appointed by the Representative Body and six by the Council. The Committee should continue to hold office either until the Fund is completely inaugurated or until the next Annual Representative

Meeting, whichever shall first occur. The permanent governing body of the Fund would, of course, be elected from and by the subscribers to the Fund.

11. In the event of its being decided that the Fund should be registered as a Trade Union, consideration should be given to the question of whether use should be made of either of the Trade Unions already in existence, namely, the Leicestershire Union and the National Medical Guild.

RECOMMENDATIONS.

A. That immediate steps be taken to inaugurate a Fund.

B. That the object of the Fund shall be to protect the interests of the medical profession (a) by the formation of a reserve and (b) by doing such work as the British Medical Association is precluded by its constitution from undertaking.

C. That the Fund shall be collected and administered by a body separate from the British Medical Association.

D. That the Fund shall be collected locally through grouped areas and administered centrally by a Committee.

E. That the organisation of the Association and its Journal shall be used for the promotion of the Fund.

In the case of a Trade Union use would be limited to encouragement or advocacy in the columns of the Journal or in Divisional Meetings. (See Sub-Appendix I.) In the case of a Trust it might be possible to arrange that the funds of the Association during the inauguration of the Fund, should provide clerical assistance or the use of paid officials (*See* Sub-Appendix II.)

SUB-APPENDIX I.

REPORT ON THE *TRADE UNION* METHOD OF ORGANISATION OF THE PROPOSED SPECIAL FUND, ADOPTED BY A MAJORITY OF THE COUNCIL.

It is admitted on all hands

(1) That a Fund is necessary.

(2) That a Fund should be started forthwith.

(3) That the Fund must be collected and administered apart from the British Medical Association.

It may be added that the Fund is certain to be used in "restraint of trade" and consequently should be protected in every way possible.

The following opinions serve to indicate the advantages obtained by the formation of a trade union. On page 363 of the Supplement for November 1, 1913, Mr. Colquhoun Dill gives it as his opinion that :—

> "If it is the desire of the Association to adopt a policy involving the regulation of the mode in which medical men are to conduct their practice, the best course appears to me to be to form a separate Society and register it as a trade union."

At the bottom of page 359 of the same Supplement, after showing that a Trust will be open to the charge that its activities might be held to be in "restraint of trade," the State Sickness Insurance Committee states : "Trust funds cannot claim any legal protection in doing such things. The only organisation which has effective legal protection in such actions is a trade union."

The objections raised to administering a fund through a trade union are :—

1. Dislike of the name. This is merely temporary and sentimental. Dislike will be eliminated by the results obtained, as is instanced by the successful trade unions of medical men which have already been formed.

2. That it will involve greater separation from the British Medical Association. That this view is erroneous may be seen from the successful working of the Leipzig League in Germany, side by side and in harmony with the Federation of Medical Societies. Moreover, there may be a possibility of devising some scheme by which the subscriber to the trade union will pay less than the full subscription to the British Medical Association, thus ensuring membership of both bodies.

3. It is stated that individual members of a trade union executive are possibly not protected from attack. This point is by no means settled at present; but, as a matter of fact, there are methods by which such attacks can be minimised; and in any case it is clear that there is no protection whatever for the trustees of the trust fund.

4. Curtailment of freedom owing to trade union rules. To prevent this the rules can be framed widely. Moreover, trustees of a trust will inevitably be bound still more firmly to the precise terms of their trust. The only evidence so far produced of curtailment of freedom is that a trust might be able to support members of Parliament out of its ordinary subscription, while the trade union can only do this by means of a voluntary levy.

It appears, therefore, to the Council that objections 1 and 2 are not deserving of weight; that objections 3 and 4 apply with greater weight to a trust fund; and that the advantages of registering as a trade union are greatly in excess of anything which can be urged against this course. The Council, therefore, strongly recommends that the collection and administration of the Special Fund shall be placed in the hands of a trade union.

SUB-APPENDIX II.

REPORT ON THE *TRUST* METHOD OF ORGANISATION OF THE PROPOSED SPECIAL FUND, ADOPTED BY A MINORITY OF THE COUNCIL.

1. In view of the fact that the Council is not unanimous in its recommendation to the Representative Body that the Fund should be formed by means of a trust, and that consequently a report is to be attached advocating its formation by means of a trade union, we consider it desirable to state, as shortly as possible, why we recommend the former procedure and our reasons for not advocating the formation of a trade union.

A. Objections to a Trade Union for the Medical Profession.

2. The main body of the report correctly states that a trust is preferable, because the appeal will have a greater success, seeing the antipathy existing amongst a majority of the profession against a trade union in any shape, and also because of the obvious success that has resulted from the campaign recently conducted by school teachers under an organisation entirely unfettered.

3. There seems to be a far too great optimism as to ultimate success of a national trade union formed for medical practitioners. This would seem to have arisen from what appears to be the fallacy of accepting as a fact that the cohesion obtained amongst those engaged in mine, railway, or factory employment can be hoped for amongst members of the medical profession. The former work in close juxtaposition to and sympathy for one another and under one employer; their work can be, and undoubtedly is, scrutinised by their companions; and they are undoubtedly influenced in their daily conduct by the advice or speeches of influential comrades or recognised leaders.

4. The members of the medical profession, on the other hand, work apart and as individuals, often in antagonism to the private interests of a colleague and for many employers; their work is seldom, if ever, open to the criticism or control of others; and consequently any influence that can be brought to bear is at the best spasmodic and fleeting.

5. Again, the employers of workpeople are comparatively few in number in any one trade, and can and do combine for self-protection and as a means of assisting or opposing the wishes of their employees. No such combination of the millions of members of the community who employ members of the medical profession is possible; each one will, and does, consider his own interests. This fact militates against any chance of bringing pressure to bear on the employers of a medical blackleg. One could not peaceably picket a large number of the private houses in any town.

6. With regard to employment by the State, or local Corporations, it is necessary to point out at this stage that the whole aim and tendency of trade unionism amongst members of the industrial classes—although it may not be generally recognised as yet—is toward the formulation of a demand for representation on those Boards or Councils which have the direct control of the employees. Such a demand no doubt in time will have to be conceded. The medical profession should recognise and duly appreciate that on its behalf such a demand has been made by those who in the past few years have laboured so assiduously for it; and that the demand has been accepted and granted by the State in the central and local organisations formed for the conduct of the National Insurance Acts. Thus the medical profession finds itself—and without any trade union so called—years in advance of the position now held by members of the industrial classes with all their powers of votes and Funds.

7. The chief objects of a trade union are stated to be (a) for the purpose of collective bargaining; (b) for the maintenance of a standard rate; and (c) for the provision of strike, lock-out, or out-of-work funds. It should be recognised at once that in the ultimate resort there is no force, direct or indirect, that can be brought to bear on a member of the medical profession in order to ensure that he will not offer or sell his services at his own estimated value, or that he will pay any promised or demanded levy toward a fund formed for any of the three above-mentioned purposes. Whether a trade union be formed or a trust, the only power that can exist on which it will be possible to depend in the last resort is the honourable conduct of one medical practitioner to the other. If he refuses to pay a levy demanded and resigns rather than do so, no Court of law can enforce payment, nor can it enforce a fine for so refusing. If he is turned out of a trade union he will receive the sympathetic support of the laity, who up to the present have not been educated to approve of the medical profession being thus banded together. The British Medical Association could not assist a medical trade union, consequently there would be either two active opposing bodies often disagreeing in decisions and actions, or one would eventually go under.

B. In Favour of a Trust Fund.

8. In favour of a Fund formed under a trust, it is urged that the active co-operation of the British Medical Association can be expected in promoting, encouraging, or organising it. That body could, at the request of the members of the Fund, nominate certain of its members to seats on the Council controlling the Fund, thus keeping the two in close relation to one another. A fund under a trust, on the Council of which—in addition to representatives of private subscribers—representatives of all unions, leagues, associations, and guilds, formed to safeguard the interests of one or more sections of the medical profession, could have seats, would seem to be one that could be expected to approach most nearly to what the medical profession would approve and requires at this juncture.

**Note by Mr. Harding H. Tomkins, a member of the Special Fund Committee:*

While signing the Trust Report of this Committee, I feel personally that what is wanted is organisers to go about the country explaining accurately and forcibly the position of affairs, arousing enthusiasm, resuscitating "esprit de corps" (now languishing), and pointing out the uses of and necessity for the Fund.

As proof of my contention I would recall the difficulty in getting men, even in the crisis of the Insurance Act, to grasp the actual facts or understand the real meanings of documents sent to Divisions for consideration: while, on the other hand, I would point to the success of the personal campaign, first, of the London Medical Committee, and, second, of the National Medical Guild, in the face of all the dislike of trade unionism and the vote against it at the Representative Meeting.

Without a personal campaign I do not believe it is possible to float the Fund at all, considering the growing apathy and the increasing belief that no fund can be made safe enough to be available for the objects intended. For this belief we have, in my opinion, to thank the energetic personal campaign of the National Medical Guild, another proof of the efficacy of living advocacy of any proposition over cold, dead, black print.

I hope, therefore, the increased subscriptions will soon be available for the appointment of at least one such organiser, who could, among his other duties, combine that of advocate for the Special Fund.

SUB-APPENDIX III.

REPORT AGAINST THE ESTABLISHMENT AT THE PRESENT TIME OF A SPECIAL FUND.

By Dr. McKenzie Johnston, a Member of the Special Fund Committee.

I am fully alive to the necessity for a large special fund which would be available to meet some serious crisis or difficulty affecting the profession.

I am however, opposed, to the earlier suggestions that such a fund should be allocated to certain immediate objects of expenditure. What we require, I hold, is a fund which would gradually accumulate till required.

In view of the present rise in the subscription and of the various calls for subscriptions resulting directly or indirectly from the effects of the Insurance Act, I have regretfully come to the conclusion that it is impossible at the present time to raise from any large number of the profession such an effective fund as is needed.

I hope the matter will not be lost sight of, and that the Council may find it possible to obtain the appointment of Trustees with large powers who may be ready to act whenever the time seems more opportune for raising the fund which is so greatly needed in the interests of the profession.

Association Intelligence.

PROCEEDINGS OF COUNCIL.

A meeting of the Council was held at 429, Strand, London, W.C., on Wednesday, April 22nd, 1914, at 10.30 a.m.

Present.

Sir James Barr, M.D., LL.D., Liverpool, Deputy Chairman of Council, in the Chair.

Mr. T. Jenner Verrall, Bath, Chairman of Representative Meetings.

Dr. Edwin Rayner, Stockport, Treasurer.

Dr. John Adams, Glasgow
Dr. J. Mitford Atkinson, London
Colonel H. J. Waller Barrow, Ealing (Army Medical Service)
Dr. R. M. Beaton, London
Dr. M. G. Biggs, London
Dr. Charles Buttar, London
Mr. W. F. Cholmeley, Wolverhampton
Dr. J. Singleton Darling, Lurgan
Mr. E. J. Domville, Chelwood
Dr. D. E. Finlay, Gloucester
Dr. Adam Fulton, Basford, Nottingham
Mr. T. W. H. Garstang, Altrincham
Surgeon-General J. P. Greany, I.M.S.; Ealing (Indian Medical Service)
Dr. T. D. Greenlees, Weymouth (South African Branches)
Dr. Major Greenwood, London
Dr. J. R. Hamilton, Hawick, N.B.
Dr. G. E. Haslip, London
Mr. R. J. Johnstone, Belfast
Mr. P. Napier Jones, Crowthorne
Mr. F. Charles Larkin, Liverpool
Mr. C. Courtenay Lord, Gillingham
Mr. Albert Lucas, Birmingham
Dr. C. H. Milburn, Hull
Mr. E. C. Montgomery-Smith, London
Mr. C. G. D. Morier, London (Victorian, South and West Australian Branches).
Dr. B. H. Mumby, Portsmouth
Dr. George Parker, Bristol
Sir James Porter, K.C.B., M.D., London (Royal Navy Medical Service).
Dr. F. J. Smith, London
Mr. D. F. Todd, Sunderland
Mr. E. B. Turner, London
Professor A. H. White, Dublin
Mr. E. H. Willock, Croydon
Dr. O. R. M. Wood, Woolpit

Apologies.

Letters of apology for non-attendance were received from the President, Mr. W. F. Brook, Dr. H. J. Campbell, Dr. David Ewart, Dr. Frank Fowler, Dr. John Gordon, Dr. J. Livingstone Loudon, Dr. J. Munro Moir, Dr. J. E. Moorhouse, Dr. H. F. Oldham, and Mr. Denis Walshe.

New Member.

The Chairman welcomed Dr. O. R. Morgan Wood (Woolpit, Suffolk) as the Representative of the Cambridge, Huntingdon, East Anglian, and South Midland Branches grouped, vice Dr. Fordyce, resigned.

Death.

A vote of condolence on the death of Dr. T. Druslyn Griffiths, President of the Association at the Swansea Annual Meeting in 1903, was passed, and a copy ordered to be sent to Mrs. Griffiths and family.

The President.

The Chairman reported that the President of the Association had had to undergo surgical treatment, and the Council expressed its sympathy with Dr. Hollis and its hope for his speedy recovery.

The Chairman of Council's Visit to Australasia.

Communications from the Victorian Branch and the Queensland Branch were read expressing appreciation of Dr. Macdonald's visit to Australasia:

British Medical Association
(Victorian Branch), E. Melbourne,
February 14th, 1914.

The Secretary,
British Medical Association,
London.

Dear Sir,

I am directed by my Council to convey to you its sincere appreciation of the honour you have conferred upon it by permitting your President, Dr. J. A. Macdonald, to visit it and give to it his valuable experience in connexion with the working of the British Social Insurance Scheme.

His visit at this juncture in our history was very welcome, and the information he imparted was of the utmost value.

We trust that this will not be the last occasion upon which a distinguished member of the parent Association will honour the Branch by a personal visit.—Yours sincerely,

C. STANTON CROUCH,
Secretary.

British Medical Association Building,
Adelaide Street, Brisbane,
March 16th, 1914.

The Medical Secretary,
British Medical Association, London.

Dear Dr. Cox,—I am writing this to tell you of Dr. Macdonald's visit to us. I was fortunate enough to be a member of the Federal Committee (in place of Dr. Love) at the last meeting in Sydney at which Dr. Macdonald was present, and to meet him at various functions, public and private, in Sydney, also to be a fellow passenger to New Zealand, where I attended the Congress. Dr. Macdonald's visit here was most unfortunately seriously and unexpectedly encroached on by time, his boat arriving some eight hours later than was expected and only allowing him two and a half hours in Brisbane. It was only possible therefore for a few members of our Branch to meet him and in a rather hurried and informal way. I cannot, however, forbear (indeed, I am especially instructed by the Council of the Branch to do so) to write to express our feeling both of the extreme value and interest to the Branches out here of Dr. Macdonald's visit and also most cordially our appreciation of the qualities in Dr. Macdonald which would have made his visit to us, apart from its official nature, of the very greatest pleasure and interest. I was able to form an opinion as to the feelings of the Federal Committee of the medical men in New South Wales and of the Australasian Medical Congress, and it was universally obvious that, whether or no any direct action was evoked by the visit, it was an event of unique interest and importance.

It was fortunately timed to coincide with evolution of important kind in the history of the Australian Branches, and Dr. Macdonald's advice will be of the most direct and practical value.—I am, yours faithfully,

A. GRAHAM BUTLER,
Honorary Secretary.

UNIVERSITY OF WALES.

A communication from the Registrar of the University of Wales concerning the appointment of a representative of the Association upon the Medical Board of the university was read, but before making an appointment it was decided to consult the Welsh Branches.

FINANCE COMMITTEE.

The TREASURER presented the minutes of the Finance Committee for the March quarter, and the accounts, amounting to £12,009 11s. 5d., were approved, and the Treasurer empowered to pay those remaining unpaid.

ARREARS OF SUBSCRIPTION.

In the event of a member being in arrears of subscription for a full twelve months, in future By-law 13 (1) will be strictly adhered to, and the JOURNAL stopped.

SCIENCE COMMITTEE.

The Science Committee was empowered to make grants up to a sum not exceeding £100 for the current year for special investigations, in addition to the sums already sanctioned for the ordinary science grants.

IRISH COMMITTEE.

Dr. Thomas Hennessy, of Clogheen, co. Tipperary, was appointed Irish Medical Secretary.

ORGANIZATION COMMITTEE.

The Council will proceed immediately to appoint an Assistant Medical Secretary (Insurance). The vacancy and conditions of appointment will in due course be advertised.

ANNUAL CONFERENCE OF SECRETARIES, 1914.

The Conference of Secretaries will be held at Aberdeen on Wednesday, July 29th, 1914, at 2.30 in the afternoon.

NAVAL AND MILITARY COMMITTEE.

Lieutenant-Colonel R. H. Elliot, I.M.S., was appointed to represent the Association before the Royal Commission of the Public Services in India at the India Office.

CANDIDATES FOR ELECTION TO THE ASSOCIATION.

Eight candidates whose names appeared on the notice convening the meeting were elected members of the British Medical Association.

ANNUAL REPORT.

The Council met at 10.30 a.m., and sat until 9.5 p.m. The results of its deliberations are embodied in the Annual Report, which is published elsewhere in this week's SUPPLEMENT.

SCOTTISH COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

RECOGNITION BY THE SCOTTISH INSURANCE COMMISSIONERS.

THE Scottish Committee of the British Medical Association had an interview on January 30th with the Scottish Insurance Commissioners on the subject of sickness certificates. The Committee has presented to the Council the following report of the interview, and it will be noticed with satisfaction that at the conclusion of the interview Dr. J. C. McVail, Deputy Chairman, said that the Commissioners would at all times be glad to discuss with the Scottish Committee of the British Medical Association any matter on which difficulty might arise, for the Commissioners recognized the great value of a national medium through which the Commissioners could discuss matters affecting the medical profession in Scotland.

REPORT.

The deputation stated the object of their interview. In view of the law in Scotland as to defamation differing from that of England in respect that no loss or damage requires to be proved by a person raising an action for slander, the Committee submitted that doctors in Scotland incurred risk in giving certificates of disease, particularly when the diagnosis raised the question of the personal misconduct of the insured person. They urged accordingly that doctors in Scotland should be relieved altogether from the liability to state the nature of illness on sickness certificates under the National Insurance Acts.

It was pointed out by Mr. Leishman that the medical certificate was essential to protect the sickness funds of approved societies, and the rules of societies in the great majority of cases required a statement of the nature of the disease. The Commissioners were advised that panel practitioners are effectively protected against actions of slander in respect of the medical certificates which they are required to give to insured persons by the common law of privilege.

It was also pointed out that, so far as the Commissioners know, there had been no action for slander raised in connexion with certificates given under the National Insurance Act. The measure of the risk involved was indicated by the fact that the Medical and Dental Defence Union guaranteed doctors against such a risk for a very small yearly payment. The matter seemed therefore too trivial to bring before Parliament, in view of the generous financial concessions already made to doctors under the National Insurance Act.

It was suggested, on behalf of the Committee, that a doctor should be empowered to refuse to give a certificate in cases of diseases of misconduct.

In reply it was stated that at present if a society required a certificate the doctor was bound to give one.

Dr. McVail pointed out that the refusal of a certificate might itself lay the doctors open to appreciable risk, since while the diagnosis of, for example, venereal disease might involve no imputation of personal misconduct, the refusal to grant a certificate would infer a charge of misconduct. He pointed out that the medical profession had always been faced with a certain amount of risk of legal proceedings in connexion with certificates—for example, certificates under the Lunacy Acts.

The question was then raised by the deputation of the possibility of statutory provision being made for giving panel practitioners a larger measure of protection in granting certificates for the purposes of the National Insurance Acts than it was contended they at present enjoyed. The Commissioners expressed their agreement that panel practitioners should have all reasonable protection in granting these certificates, and indicated their willingness to submit any suggestions made by the Association to the proper authorities.

It was indicated that the Committee was considering the question of arranging a discussion between representatives of medical practitioners and of societies on the borderland questions which were continually arising in

connexion with certificates. The Commissioners expressed their hearty concurrence.

On behalf of the Commission, Dr. McVail expressed gratification at the appointment of a Scottish Committee of the British Medical Association, and said that the Commissioners would at all times be very glad to discuss with the Committee any matter on which difficulty had arisen. It would be the greatest use to have a national medium through which the Commissioners could discuss matters affecting the medical profession in Scotland.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1914 Annual General Meeting of the British Medical Association will be held in Marischal Hall, Aberdeen, on Tuesday, July 28th, 1914, at Two o'clock in the Afternoon.

BY ORDER OF THE COUNCIL,

GUY ELLISTON,

May 2nd, 1914. *Financial Secretary and Business Manager.*

ELECTION OF COUNCIL, 1914-1915.

Notice is hereby given that nominations for candidates for election as Members of Council by Branches or Groups of Branches in the United Kingdom for the year 1914-15 must be forwarded to reach the Financial Secretary and Business Manager, at the Office of the Association, not later than Saturday, May 16th, 1914. Each nomination must be on the prescribed form, copies of which will be furnished by the Financial Secretary and Business Manager upon application.

Separate forms have been prepared:

(A) For a nomination by a Division, and

(B) For a nomination by any three Members of a Branch respectively.

Those applying are requested to state for which purpose the form is desired.

An announcement of the Nominations received will be made in the Journal of May 23rd.

Election will be by voting papers. These papers will contain the names of all duly nominated candidates, and will be issued from the Central Office on Saturday, June 6th, and will be returnable not later than Saturday, June 13th.

The result of the election of Members to the Council will be published in the Journal of June 27th.

BY ORDER OF THE COUNCIL,

GUY ELLISTON,

May 2nd, 1914. *Financial Secretary and Business Manager.*

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

ATTENTION is drawn to the fact that Notices of Motion from Divisions or Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the JOURNAL not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,

ALFRED COX,

February 11th, 1914. *Medical Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

To ensure the insertion of notices in this column they must be received at the Central Offices of the Association not later than the first post on Tuesday.

GLASGOW AND WEST OF SCOTLAND BRANCH.—Dr. William Bryce, Honorary Secretary (30, Armadale Street, Dennistoun, Glasgow), gives notice that the annual general meeting of the Branch will be held in the Western Infirmary on Tuesday, May 12th, 1914, at 3 p.m., when Dr. A. T. Campbell will preside. Business: Honorary Secretary's report, Honorary Treasurer's report, election of office-bearers. At 2 p.m. a visit of inspection will be paid to the new Royal Hospital for Sick Children at Yorkhill, under the guidance of Dr. D. J. Mackintosh, M.V.O. Tea will be served in the Western Infirmary at the close of the business meeting. At 4 p.m. a clinical demonstration will be given by the members of the staff of the Western Infirmary in the theatre. The members of the Branch will dine in the Grosvenor Restaurant, Gordon Street, at 6.30 p.m. Dinner ticket, 5s. Morning dress.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.), gives notice that the annual meeting of the Division will be held on Tuesday, May 5th, at the Stepney Central Hall, at 4 p.m. Business: Secretary's report; report *re* Special Representative's Fund; election of officers and committee; any other business.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—Dr. R. Tuxford, Honorary Secretary (12, Wide Bargate, Boston) gives notice that the annual meeting of the Division will be held at the White Hart Hotel, Boston, on Friday, May 22nd, 1914, at 12.45 p.m. Agenda: Receive report of the Committee on Forms D 21 and D 22; elect chairman, vice-chairman, and secretary for the ensuing year; election of Representative; election of Representative in Branch Council; election of committee; adoption of model rules by the Division. Lunch will be provided at the hotel if a sufficient number of members signify their intention to be present.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that a meeting of the Division will be held at the Royal Infirmary, Leicester, on Friday, May 8th, at 4 o'clock. Agenda: Election of Representatives to the Representative Meeting; consideration of matters referred to the Division *re* medical aid institutions and sanatorium benefit (BRITISH MEDICAL JOURNAL SUPPLEMENT, April 4th); a discussion will take place on gonorrhoea, in which Drs. Carter, Clare, Johnston, and Southam, among others, have promised to take part; other business.

SOUTH-EASTERN OF IRELAND BRANCH.—Dr. P. Grace, Honorary Secretary (Kilkenny), gives notice that the annual meeting of this Branch, also a meeting of the Branch Council and Local Division will be held at the Victoria Hotel, Kilkenny, on Wednesday, May 6th, at 5.15 p.m. Agenda: Correspondence; installation of president-elect; election of officers of the Branch for the ensuing year; any other business.

SURREY BRANCH: REIGATE DIVISION.—Dr. Francis Gayner, Honorary Secretary, gives notice that the annual meeting of the Division will be held at Laker's Hotel, Redhill, on Wednesday, May 13th, 1914, at 4 o'clock. Business: (1) Election of officers. The following have been nominated by the Executive Committee: Chairman, Dr. A. R. Walters; Representative at Representative Meetings, Dr. S. Morton Mackenzie; Honorary Secretary and Treasurer, Dr. C. S. Crichton; Executive Committee, Drs. Walters, Caldecott, S. A. Clarke, Gayner, Hewetson, Mackenzie, Price, Prince, Thornton, Baker, Weir, and Crichton; Representative on Branch Council, ——. It is hoped that the Vice-Chairman and four additional members of the Executive Committee may be elected from the districts which have recently become incorporated in the Reigate Division. (2) Annual report. (3) Letters from the Medical Secretary dealing with (*a*) Medical Aid Institutes, (*b*) Model Scheme for the Treatment of Tuberculosis (SUPPLEMENT, April 4th), (*c*) Medical Referees. (4) Other business.

LOCAL MEDICAL AND PANEL COMMITTEES.

BEDFORDSHIRE.

Local Medical Committee.

The tenth meeting of the Bedfordshire Medical Committee was held on April 16th at the County Hospital, Bedford. Dr. J. W. Bone was in the chair, and twenty members were present.

Conference of Local Medical and Panel Committees.

The Chairman reported that as the representative of the Bedfordshire Committees he had attended the conference of representatives of Local Medical and Panel Committees held in London on March 13th, and enumerated the decisions come to. (See Supplement, March 21st.) A letter from Mr. D. F. Todd, of Sunderland, the Chairman of the Provisional Committee, having been read, it was resolved, on the motion of Dr. S. J. Ross (Bedford), seconded by Dr. Kilham Roberts (Shillington), to support the formation of the new organization. It was further resolved, on the motion of Dr. Waugh (Toddington), seconded by Dr. Kilham Roberts, that the Committee contribute annually a sum of £1 per 20,000 insured persons in the county towards the finances of the new organization. A letter from the Local Medical and Panel Committees of the Borough of Leicester urging all Committees to insist on the registration of the new organization as a trade union having been read, after discussion, it was proposed by Dr. Waugh, seconded by Dr. Stanbury Phillips (Bedford), that the consideration of this question be postponed until the next meeting of the Committee. An amendment that the consideration of the matter be postponed *sine die* was moved by Dr. S. J. Ross and seconded by Dr. E. H. Wagstaff (Leighton Buzzard), but on being put to the meeting was lost by a large majority, and the original motion was carried.

Panel Committee.

The second meeting of the County of Bedford Panel Committee was held at the County Hospital, Bedford, on April 16th, when Dr. J. W. Bone was in the chair, and fifteen members were present.

Model Schemes for Election of Panel Committees.

The Chairman described to the meeting the communications received from the Commissioners as to the methods of election of the new Panel Committee, and briefly explained the model schemes (Supplement, April 18th, p. 233, and April 25th, p. 253). After considerable discussion, it was resolved, on the proposal of Dr. J. Waugh (Toddington), seconded by Dr. S. J. Ross (Bedford), that the Model Scheme A be adopted, and that the new Committee should comprise twenty-four members, of which number twenty would be elected and four co-opted members.

INSURANCE COMMITTEES.

NEWCASTLE-UPON-TYNE.

The Committee has recently issued a very complete report, embracing the period from July, 1912, to January, 1914. According to the latest returns, there were in Newcastle-upon-Tyne 93,142 insured persons, of whom 2,726 were deposit contributors. The difficulties due to the complexities of the Act seem to have been met in a businesslike manner. Much more time must, however, elapse before the statistical figures will be of any permanent value, but they have been carefully analysed, and at all events form a good beginning.

Sanatorium Benefit.

Dealing with sanatorium benefit, it may be noted that a certain number of the dependants of insured persons have already been treated, and that health lectures have been provided for the population generally, the cinematograph having been requisitioned for that purpose also. During the time covered by the report, 266 persons applied for sanatorium benefit, and 252 received treatment. Of these, 120 received it at special institutions, and the total number that received domiciliary treatment was 227. Of the latter, 59 died. In addition, 58 dependants enjoyed sanatorium benefit. It is to be noted that a considerable amount of nourishment was given to necessitous cases receiving domiciliary treatment, milk and eggs being largely supplied; 89 insured persons were recipients of this extra relief.

As stated in the report, "The extra power of supplying food has been of the greatest value, as it has given the medical adviser a firm hold over the patient, and enables him to insist upon the adherence to the rules for the prevention of the spread of the disease." Unless some arrangement of this kind is organized, it is difficult to see how prophylactic measures in many cases can be adopted. Further, it renders medical treatment far more effectual.

Medical Benefit.

At the end of 1913 there were 112 doctors on the panel, 83 of whom were resident in the city. But 40 general practitioners resident in the city still remain off.

The number of insured persons who had selected doctors up to the end of 1913 was 80,671, and their distribution was as follows:

Doctors with less than	250			...	...	33
,, between	250	and	500	...	...	13
,, ,,	500	,,	1,000	...	...	20
,, ,,	1,000	,,	1,500	...	...	20
,, ,,	1,500	,,	2,000	...	...	7
,, ,,	2,000	,,	2,500	...	...	5
,, ,,	2,500	,,	3,000	...	...	3
,, over	3,000			...	...	1

Five doctors on the panel are in partnership, and the numbers are not separated. Five of the panel doctors, also, have no insured persons on their list. At the end of the year, only 300 insured persons changed their doctors.

The number of insured persons who had failed to select a doctor, or institution, at the end of 1913 was 12,413. The total number of those permitted to make their own arrangements under S.15 (3) was 11. It is much to be regretted that so small a number should have been allowed to avail themselves of this right. As 40 of the doctors resident in the city are not on the panel, many of their former patients must have been forced out of their hands. It could scarcely be alleged that there was any danger of an insufficient panel, when two-thirds of the local profession had accepted service, and the residue might have been treated with more liberality.

Much time and trouble have been taken in collecting all the details set out, and Mr. F. W. Schultz is to be congratulated on an excellent report.

LANCASHIRE.

Increase in Chemists' Accounts.

At a meeting of the Lancashire Insurance Committee held at Preston on April 20th, the Clerk made an announcement about the drug fund, which, while satisfactory to the chemists in regard to the past year, will cause some anxiety about the coming year. For the last year the chemists' accounts are found to exceed by only a small and insignificant sum the amount available for payment, and the chemists will thus receive their accounts practically in full. This is what ought to be expected when the character of the population included in the county area is considered. The high sickness-rate in Lancashire is mostly in the towns where there is a great proportion of female labour, but in the county area in only a few districts is any great part of the population engaged in mills and factories, nor is there any large proportion of female labour such as occurs in towns like Burnley, Blackburn, and Bolton. It is thus all the more surprising when the clerk announces that for the first quarter of the present year in the county area there has been a very large increase in the chemists' accounts for insured persons. Normally, of course, the first three months of the year have the highest sickness rate of the year, but the comparison made by the clerk is with the corresponding period of last year, when the insurance was new and when undoubtedly the novelty of being able to get medical attendance free of cost increased the work of the insurance doctors. And yet, in spite of this, the chemists' accounts for the first quarter of this year show an increase of 30 per cent. over the corresponding quarter of last year, and they are substantially in excess of the amount which the clerk calculated would be available. The Clerk said that it was impossible as yet to state the cause of this surprising increase in the claims on the drug fund, but advised the Committee to pass a resolution that the Finance

Committee should authorize the payment of not more than two-thirds of the chemists' accounts for the present. Mr. PEAKE, the representative of the chemists on the Committee, said there had been a considerable increase both in the number of prescriptions and the cost of them. More expensive drugs were being prescribed than was the case last year, and the Pharmaceutical Committee, after carefully considering the matter, thought that something might and should be done to limit the cost of prescriptions without interfering with their efficiency.

ABERDEENSHIRE.

MEDICAL BENEFIT SUBCOMMITTEE.

A MEETING of the Medical Benefit Subcommittee of the Aberdeenshire Insurance Committee was held in the County Hall, Aberdeen, on April 24th. Major REIACH, of Fraserburgh, convener of the Subcommittee, presided.

A communication was submitted from the Insurance Commissioners to the effect that an additional allowance of £450 had been made to supplement the mileage grant to doctors in those cases which, in the opinion of the committee, deserved special attention. A scheme of allocation of the grant was submitted and approved of.

The meeting discussed the recent communication from the Commissioners with regard to the amount of the medical benefit fund for the past year. In the case of Aberdeenshire, in common with all other insurance areas throughout the country, a deduction of about 10 per cent. has been made to meet the difference between the membership of societies and the number of index slips in the registers of the different areas. In the county of Aberdeen the result is that, while the Committee did not receive so much money as was anticipated, there is still a small sum available for division among the panel doctors. The meeting considered that a general deduction from all committees involved a hardship on those committees whose registers were kept in a satisfactory condition, but gratification was expressed that in Aberdeenshire no repayment would be asked from the doctors in respect of the sums paid to them last year.

An agreement with Kingseat Asylum with reference to the medical benefit of the employees in the institution was submitted, and the meeting decided to recommend the Insurance Committee to execute the agreement.

In the course of a discussion, it was mentioned that the chemists' bills for the past quarter were greatly in excess of those for any of the previous quarters.

INSURANCE NOTES.

SCOTLAND.

SANATORIUM BENEFIT EXPENSES IN EDINBURGH.

AT a meeting of the Insurance Committee of the Burgh of Edinburgh on April 23rd, Councillor F. J. Robertson presiding, a minute of the Sanatorium Benefit Subcommittee recommending that the increased rate of 30s. a week for a tuberculous patient in the City Hospital be agreed to, was the subject of discussion and vote. Intimation had been received from Sir Thomas Hunter, town clerk, that the magistrates and council had resolved to fix the charge for treatment of insured persons at the City Hospital at 30s. per insured person, as from the commencement of the current financial year (January 12th, 1914), and the Subcommittee recommended acceptance. An amendment by Mr. J. Simpson was moved that the clerk be instructed to inform Sir Thomas Hunter that in the opinion of the Insurance Committee no sufficient reason had been given for the increase, that the Committee was not satisfied that such reason existed, and that, if the council insisted upon the new charge of 30s. per patient instead of 25s., the Committee would proceed to reconsider its position. In moving the adoption of the minute, Lady Carlaw Martin reminded the Committee that the figure of 25s. a week had been a provisional arrangement, and stated that she did not believe that a tuberculosis patient could be treated as cheaply as a fever patient. It was true that treatment at the Victoria Hospital was 25s. a week, but it had endowments. The Chairman gave details showing how the 30s. charge was made up. On a vote the minute was approved by 20 votes to 12.

IRELAND.

ARRANGEMENTS WITH UNQUALIFIED PERSONS.

Report of Royal College of Surgeons in Ireland.

THE following resolution was passed by the Royal College of Surgeons in Ireland on April 19th:

National Health Insurance (Medical Benefit) Regulations, 1913.

The College observes with regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act may obtain treatment from non-qualified persons.

Hitherto none but duly qualified medical practitioners have been employed, as such, in any public capacity; and the College deplores that, under an Act professing to promote the health of the nation, recognition should be given and provision made for the payment of public money to a class of persons who have not obtained a legal qualification to practise medicine, and concerning whose medical knowledge there exists no sort of guarantee.

Approved Societies and the Panel System of Certification.

At a largely-attended meeting of representatives of approved societies in the south of Ireland, held at the Municipal Buildings, Cork, the panel system of certification was severely criticized and condemned, and it was unanimously decided to send the following resolution to all southern approved societies with a view to its adoption:

That, from experience, we are satisfied that the panel system for the purpose of medical certification under the Insurance Act is most unsatisfactory, and that we request the Insurance Commissioners to take such steps as may be necessary to secure a more efficient service of medical certification.

The following resolution was passed by a largely-attended meeting of the medical profession of County Clare, held last week in the county courthouse:

That we strongly condemn as unjust and inequitable the unreasonable and selfish attitude assumed by some of the benevolent societies towards the medical profession, in trying to divert from their proper object the moneys set aside by the State for certification under the Insurance Act; and we unanimously pledge ourselves neither to associate, consult with, nor assist in any way, any whole-time or part-time officers who may be appointed to pry into the cases of our patients behind our backs for the purpose of certification; and we consider such men guilty of dishonourable conduct in a professional sense. We are further of opinion that it would be in the best interests of the insured, as well as of the societies, that this question of certification should be settled without delay in a manner that can be honourably accepted by the medical men of Ireland.

INSURANCE ACT IN PARLIAMENT.

INSURANCE FUND.

IN reply to Lord Henry Cavendish-Bentinck, Mr. Wedgwood Benn supplied the following table of receipts and expenditure of the Insurance Fund:

	United Kingdom.	
	Period July 15th, 1912, to January 12th, 1913.	Year ended January 11th, 1914.
	£	£
Total receipts	8,780,000	24,644,000
Issues to approved societies ...	1,040,000	10,240,000
Issues to insurance committees ...	141,000	5,414,000
Payments to deposit contributors, sickness and maternity	Nil.	18,100
Issues to societies for investment or invested on their behalf ...	Nil.	937,000
Amounts invested by Commissioners through National Debt Commissioners	7,136,000	8,127,000

REDUCTION IN NUMBER OF SOCIETIES.

Mr. Worthington Evans asked how many approved societies or branches of approved societies had ceased to carry on business under the National Insurance Acts since February 16th last, in addition to the 986 which had so ceased up to that date.—Mr. Wedgwood Benn said that 31 societies had ceased to administer the Act as separate units, and other societies had made changes in their organization, resulting in a reduction of 112 in the number of their branches since the date referred to.

TRAVELLING EXPENSES OF INSURANCE COMMITTEES.

Mr. Bentham asked whether any of the £30,000 promised by the Treasury in July, 1913, towards paying travelling and out-of-pocket expenses to members on Insurance Committees had been so applied; and, if not, when the Insurance Commissioners would authorize the necessary arrangements.—Mr. Benn replied that payment out of the sum referred to could only be made under schemes submitted by Insurance Committees and approved by the Commissioners. The schemes submitted were still under examination, and no payments had, therefore, yet been made.

MEDICAL BENEFIT.

Institutes.

Mr. Snowden asked what number of institutions had been approved for medical benefit under Section 15, Subsection (4), of the National Insurance Act in England and Wales; the number of persons who had accepted this method of medical benefit; and the number of institutes which had received the full amount allowed for medical benefit.—Mr. Wedgwood Benn said that eighty-seven systems and institutions in England and Wales had been approved under Section 15 (4) of the National Insurance Act, 1911. The rest of the information asked for was not available.

Declaring-on Certificates.

Mr. Charles Bathurst asked a question as to the feeling among approved societies and their various organizations that the form of declaring-on certificate, Medical 34, issued by the Insurance Commissioners to panel doctors should bear upon it words to the effect that the certificate should be sent in to the society immediately it was signed; and whether he would take steps to have the desired alteration carried into effect.—Mr. Benn replied that the question of the revision of the form in the manner referred to was now under the consideration of the Insurance Commissioners.

Returned Medical Cards.

Mr. Denniss asked what was the number for England, Wales, and Scotland respectively, of insured persons' medical cards which had not been delivered by the Post Office to the addressee; where those cards were at present; what steps were being taken, or were proposed to be taken, to find the addressees and deliver the cards; and whether the approved societies had been invited to furnish the addresses of those of their members whose medical cards had been returned through the post; and, if so, with what result.—Mr. Benn replied that the numbers of medical cards returned through the Post Office were approximately 800,000, 125,000, and 20,000. These cards were with the Insurance Committees by whom they were issued; and steps were being taken in many cases to trace addressees by means of the sources of information accessible, including approved societies. Apart from any such steps, cards had been issued upon application to a very large number of insured persons who did not receive a card upon the initial distribution.

Payments to Panel Doctors.

Sir Henry Craik asked a question as to the delay in paying the doctors on the Stoke-on-Trent panel; and whether the Insurance Commissioners could bring to an end a state of matters which inflicted heavy loss upon the doctors who had undertaken to serve under the Act.—Mr. Benn said that it was not known that there had been any avoidable delay. The doctors had already been paid 94 per cent. of the amount estimated to be available for their remuneration, and the accounts with a view to a settlement were in the hands of the doctors themselves for agreement by them.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Surgeon-General WILLIAM H. NORMAN to the *Virid*, additional for Plymouth Hospital, vice James, May 1st. Fleet Surgeon JOHN MCELWEE to the *Egmont*, additional for Malta Dockyard, vice Andrews, May 1st. Fleet Surgeon EDWARD COOPER to the *Carnarvon*, vice McElwee, May 1st. Staff Surgeon CHARLES J. O'CONNELL to the *Pembroke*, additional, May 1st. Staff Surgeon ARTHUR I. SHELDON to the *Philomel*, on recommissioning for service under New Zealand Government. Staff Surgeon JOHN BOURDAS to the *Hearty*, vice Turner, May 8th. Surgeon BASIL TAYLOR, M.B., to the *Triumph*, additional for Hong Kong Hospital, vice Hastings, May 11th. Surgeon CHARLES M. R. THATCHER, M.B., to the *Dreadnought*, vice Taylor, May 11th.

ARMY MEDICAL SERVICE.

COLONEL MENUS W. O'KEEFFE, M.D., on completion of four years' service in his rank, is placed on the half-pay list, April 23rd.

Lieutenant-Colonel CHARLES C. REILLY, to be Colonel, vice M. W. O'Keeffe, M.D., April 23rd.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. TURNER, retired pay, has been appointed Deputy Assistant Director of Medical Services, Welsh Territorial Division, vice Lieutenant-Colonel C. A. Young.

Lieutenant-Colonel J. H. DALY has been appointed Senior Medical Officer, North Irish Coast Defence, vice Lieutenant-Colonel J. M. F. Shine.

Lieutenant-Colonel FRANCIS H. M. BURTON, M.D., has been placed on retired pay, April 20th.

Lieutenant-Colonel MICHAEL L. HEARN has been placed on retired pay, April 21st.

Major E. W. BLISS has been transferred from the Eastern to the Southern Command.

Major J. B. CLARKE has been noted for a tour in North China.

Major S. O. HALL has been appointed a Specialist in Midwifery and Diseases of Children, Burma Division.

Major EDWARD M. MORPHEW to be Lieutenant-Colonel, vice F. H. M. Burton, retired, April 20th.

Major NICHOLAS TYACHE to be Lieutenant-Colonel, vice M. L. Hearn, retired, April 21st.

Captain H. J. CROSSLEY has been appointed a Specialist in Advanced Operative Surgery, Seventh (Meerut) Division.

Lieutenant H. S. BLACKMORE has been appointed a Specialist in Prevention of Disease, Brigade Laboratory, Bangalore.

Brevet Colonel F. SMITH has been posted to the Irish Command, for duty as Medical Inspector of Recruits.

Major G. M. GOLDSMITH has been posted to Dublin for duty.

Major E. T. INESON, V.C., has been posted to Exeter for duty.

Captain E. D. CADDELL has been transferred from the Irish to the Eastern Command.

Captain C. H. DENYER has been posted to the Southern Command for duty.

Captain E. C. PHELAN has been posted to the Belfast District for duty.

Major J. C. B. STATHAM has joined the London District for temporary duty.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN SAMUEL M. SLOAN resigns his commission, April 25th.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

First South Midland Mounted Brigade Field Ambulance.—WILLIAM T. TORRANCE to be Lieutenant, March 1st. HENRY E. MCCREADY, M.D., to be Lieutenant, January 31st.

Welsh Clearing Hospital.—Captain ASHLEY BIRD to be Major, March 28th.

Second London (City of London) Field Ambulance.—Lieutenant LESLIE RAWES to be Captain, December 4th, 1913.

Second Welsh Field Ambulance.—The appointment of Lieutenant CHARLES W. C. MYLES is amended to date January 7th, 1914, and not March 25th, 1914, as announced in the *Gazette* of March 24th.

For Attachment to Units other than Medical Units.—HUGH M. GALT, M.B., to be Lieutenant, March 9th. SAMUEL M. SLOAN, M.B., late Captain Special Reserve, R.A.M.C., to be Captain, April 25th.

Attached to Units other than Medical Units.—Captain JAMES B. SIMPSON, M.D., to be Major, March 11th. Lieutenant ARTHUR H. BURNETT resigns his commission, April 22nd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 9,467 births and 5,259 deaths were registered during the week ended Saturday, April 25th. The annual rate of mortality in these towns, which had been 16.2, 15.0, and 14.9 per 1,000 in the three preceding weeks, rose to 15.1 per 1,000 in the week under notice. In London the death-rate was equal to 14.4, against 15.5, 13.5, and 14.5 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 4.7 in Eastbourne, 4.9 in Swindon, 6.9 in Ilford, 7.3 in Edmouton, 7.5 in Reading, and 7.7 in Barnsley to 20.4 in Sheffield, 21.1 in Plymouth and in Dudley, 21.8 in Great Yarmouth, 23.1 in Dewsbury, and 23.5 in Stoke-on-Trent. Measles caused a death-rate of 1.7 in Sheffield, 1.8 in Merthyr Tydfil, 1.9 in Burnley, 2.0 in Leicester, and 3.0 in Dudley; diphtheria of 1.3 in Coventry; and whooping cough of 1.6 in Rotherham, 1.7 in Tynemouth and in Swansea, 1.9 in Cardiff, and 2.1 in Middlesbrough. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 35, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 8 were registered in Birmingham, 3 in Gateshead, and 2 each in Stoke-on-Trent, Blackburn, Liverpool, and Bootle. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,182, 3,068, and 2,992 at the end of the three preceding weeks, had fallen to 2,886 on Saturday last; 305 new cases were admitted during the week, against 399, 306, and 289 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,359 births and 702 deaths were registered during the week ended Saturday, April 18th. The annual rate of mortality in these towns, which had been 16.5, 18.6, and 16.5 per 1,000 in the three preceding weeks, fell to 16.0 in the week under notice, but was 1.1 per 1,000 above the rate recorded in the ninety-

seven large English towns. Among the several towns the death-rate ranged from 8.8 in Motherwell, 11.8 in Leith, and 12.1 in Dundee to 19.0 in Kirkcaldy, 21.8 in Coatbridge, and 22.0 in Ayr. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Coatbridge and Ayr. The 552 deaths from all causes in Glasgow included 15 from measles, 6 from infantile diarrhœa, 5 from scarlet fever, 5 from whooping-cough, and 2 from diphtheria. Three deaths from measles were recorded in Ayr and 2 in Edinburgh; from whooping-cough 3 deaths in Coatbridge; and from infantile diarrhœa 2 deaths in Dundee and 2 in Aberdeen.

In the sixteen largest Scottish towns, 1,246 births and 741 deaths were registered during the week ended Saturday, April 25th. The annual rate of mortality in these towns, which had been 18.6, 16.5, and 16.0 per 1,000 in the three preceding weeks, rose to 16.9 in the week under notice, and was 1.8 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.7 in Perth, 7.8 in Falkirk, and 12.6 in Motherwell to 21.6 in Hamilton, 21.9 in Aberdeen, and 23.6 in Ayr. The mortality from the principal infective diseases averaged 1.6 per 1,000, and was highest in Hamilton and Kilmarnock. The 559 deaths from all causes in Glasgow included 20 from measles, 10 from infantile diarrhœa, 8 from whooping-cough, 4 from diphtheria, 2 from scarlet fever, and 2 from enteric fever. Three deaths from measles were recorded in Edinburgh and 3 in Hamilton; and from diphtheria 2 deaths in Edinburgh and 2 in Kilmarnock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 25th, 673 births and 584 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 623 births and 519 deaths in the preceding period. These deaths represent a mortality of 25.3 per 1,000 of the aggregate population in the districts in question, as against 22.5 in the previous period. The mortality in these Irish areas was therefore 10.2 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 29.1 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 27.9 (as against an average of 26.0 for the previous four weeks), in Dublin city 30.9 (as against 28.9), in Belfast 23.4 (as against 20.3), in Cork 33.3 (as against 25.5), in Londonderry 16.5 (as against 17.8), in Limerick 28.4 (as against 22.3), and in Waterford 14.7 (as against 26.1). The zymotic death-rate was 3.1, as against 3.4 in the previous week.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRMINGHAM CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £160 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £5 5s. per week.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Dudley Road Infirmary. Salary, £150 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD POOR-LAW UNION.—Lady Assistant Resident Medical Officer. Salary, £150 per annum.

BRADFORD ROYAL INFIRMARY.—Two House-Surgeons (males). Salary, £100 per annum each.

BRENTFORD UNION.—Second Assistant to the Medical Superintendent of Infirmary and Medical Officer to the Workhouse and Schools. Salary, £150 per annum, rising to £170.

BRIGHTON COUNTY BOROUGH ASYLUM, Hayward's Heath.—Locumtenent Assistant Medical Officer. Salary, 4 guineas a week.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary at the rate of £100 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—(1) Honorary Medical Clinical Assistant. (2) Honorary Surgical Clinical Assistant.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CAMBRIDGE: ADDENBROKE'S HOSPITAL.—House-Physician. Salary, £100 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Assistant Surgeon.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Resident House-Surgeon. Salary, £50 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

DERBY COUNTY BOROUGH.—Assistant Medical Officer of Health (Junior). Salary, £150 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum.

DURHAM COUNTY COUNCIL.—Two School Medical Inspectors. Salary £300 per annum, rising to £350.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) Medical Officer to Casualty Department; (2) House-Surgeon (males.) Salary at the rate of £100 and £75 per annum respectively.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

FEDERATED MALAY STATES.—Assistant Superintendent of the Government Central Lunatic Asylum. Salary, £400 per annum, rising to £600.

FIFE AND KINROSS EDUCATION COMMITTEE.—Assistant School Medical Officer (male). Salary, £250 per annum, rising to £300.

FLINTSHIRE EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum.

GLOUCESTER ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Salary at the rate of £80 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon (male). Salary, £80 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £200 per annum, rising to £220.

KENT COUNTY COUNCIL, Maidstone.—Locumtenent Tuberculosis Officer. Salary at the rate of £500 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £120 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £130 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON COUNTY COUNCIL.—Lecturers in First-Aid, Home Nursing, Health, and Infant Care. Salary, £1 1s. a lecture.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—House-Surgeon. Honorarium at the rate of £50 per annum.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEW ZEALAND: UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary, £800 per annum.

PEMBROKESHIRE EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary, £300 per annum.

PETERBOROUGH INFIRMARY AND DISPENSARY.—House-Surgeon (male). Salary at the rate of £120 per annum.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £225 per annum, increasing to £250.

PRESTON COUNTY ASYLUM, Whittingham.—Junior Assistant Medical Officer. Salary, £250 per annum, rising to £300.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) Honorary Medical Registrar. (2) Pathologist; salary, 120 guineas per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Salary at the rate of £50 per annum, rising to £60 on appointment as senior.

READING: ROYAL BERKSHIRE HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY.—Senior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, rising to £120 after first six months.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Male House-Physician.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Two Honorary Physicians.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

ST. MARK'S HOSPITAL FOR FISTULA, CANCER, Etc., City Road, E.C.—House-Surgeon. Salary, £80 per annum.

ST. MARY'S HOSPITAL, PADDINGTON, W.—Casualty House-Surgeon. Salary, £100 per annum.

ST. PANCRAS PARISH.—Senior Assistant Medical Superintendent of the South Infirmary and Senior Assistant Medical Officer of the Workhouse. Salary, £175 per annum.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £80 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SCULCOATES UNION INFIRMARY.—Resident Assistant Medical Officer. Salary, £200 per annum.

SHEFFIELD: EAST END BRANCH OF CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Assistant House-Surgeon. Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £100 per annum.

SOUTH YORKSHIRE ASYLUM, Wadsley.—Locumtenent Assistant Medical Officer. Salary, £5 5s. per week.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—(1) House-Physician. (2) Casualty and Out-patient Officer. (Males.) Salary, £110 per annum, rising £10 annually in each case.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £130 per annum, rising to £150.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Surgeon. Salary £100 per annum.

WAKEFIELD: WEST RIDING OF YORKSHIRE COUNTY COUNCIL.—Dispensary Tuberculosis Officer. Salary, £400 per annum.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) Two House-Surgeons. Salary at the rate of £125 per annum each.

WOOLWICH TUBERCULOSIS DISPENSARY.—Medical Officer. Salary, £500 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Brixham (Devon), Langport (Somerset).

MEDICAL REFEREE.—The Home Secretary announces a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for the Carlisle, Haltwistle and Alston, Brampton, Penrith, Wigton, Appleby, and Keswick County Courts, in Circuit No. 3.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

KINLOCH, W. A., M.B., C.M.Aberd., District Medical Officer of the Steyning Union.

OWEN, A. G. W., M.D.Liverp., District Medical Officer of the Birkenhead Union.

WILLIAMS, Richard, L.R.C.P., M.R.C.S., Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 29, with a view to his being employed in all ophthalmic cases in the circuit in which the services of a medical referee are required.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Mr. Shattock: Specimens illustrating Sarcoma.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SUBSECTION OF ORTHOPAEDICS, 5 p.m.—Annual Meeting and Election of Officers.

SECTION OF PATHOLOGY, 8.30 p.m.—(1) Annual Meeting and Election of Officers and Council for Session 1914-1915; (2) Papers: Dr. H. C. Ross: White Blood Cell Division in Pernicious Anaemia. Dr. E. F. Bashford and Dr. J. A. Murray: The Mechanism of Cell Division.

WEDNESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OPHTHALMOLOGY.—8 p.m., Demonstration of Cases. 8.30 p.m., Papers on the Treatment of Glaucoma by Lieutenant-Colonel Herbert and Messrs. R. Affleck Greeves, N. Bishop Harman, and W. G. Laws.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNAECOLOGY, 8 p.m.—(1) Annual Meeting and Election of Officers. (2) Demonstration of Cases and Specimens. (3) Paper: Dr. James Young: The Etiology of Eclampsia.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Meeting.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 8.30 p.m.—(1) Demonstration of Cases and Specimens. (2) Paper: Dr. J. Alison Glover: Rupture of an Aneurysm of the Abdominal Aorta in a Young Woman.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, London, E.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.—The summer session will commence on Monday, May 11th.

[*Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.*]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

MONTGOMERY.—At Messina, Northern Transvaal, on April 27th, the wife of Dr. W. H. Montgomery (*née* Dr. Winifred Muirhead), of a daughter. (By cable.)

STUART.—On April 9th, at 130, New Cross Road, S.E., the wife of James Hamilton Stuart, L.R.C.P. and S.Edin., L.F.P. and S.Glasg., of a son.

MARRIAGE.

HARRISON—HARRISON.—On Thursday, April 16th, at St. Andrew's, Wells Street, Marylebone, by the Rev. Trevor H. Lingley, B.A., Walter Parker, eldest son of Walter and Ada Harrison, of 10, Windlesham Road, Brighton, to Gwendoline Kate, youngest daughter of George and Clara Harrison, of Fairlea, Harlesden Road, Willesden Green, N.W.

DEATHS.

BARRATT.—On Sunday evening Thomas James Barratt, of "Bell-Moor," Hampstead Heath (Chairman of Messrs. A. and F. Pears, Ltd.), passed peacefully to the Great Beyond in his seventy-third year.

LYON.—Suddenly, at Ingatestone Hall, Essex, on April 20th, George Lyon, M.D., M.R.C.P.Edin., of 71, Palace Gates Road, Alexandra Park, N., dearly beloved husband of Annie Lyon, and third son of George and Jessie Lyon, Ingatestone Hall.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	MAY.
5 Tues.	London: Medico-Political Crime and Punishment Subcommittee, 12 noon. London: Ethical Subcommittee, 3 p.m. Tower Hamlets Division, Annual Meeting, Stepney Central Hall, 4 p.m.
6 Wed.	South-Eastern of Ireland Branch, Kilkenny, 5.15 p.m.
8 Fri.	Leicester and Rutland Division, Leicester, 4 p.m.
12 Tues.	London: Metropolitan Counties Branch Council, 4 p.m. Glasgow and West of Scotland Branch, Western Infirmary, 3 p.m.; Dinner, 6.30 p.m.
13 Wed.	Surrey Branch, Annual Meeting, Redhill, 4 p.m.
16 Sat.	Last day for receipt of Nominations for Election on Council.
22 Fri.	Boston and Spalding Division, Boston, 12.45 p.m.
	MAY (*continued*).
23 Sat.	List of Nominations for Election on Council will be published in the JOURNAL of this date.
	JUNE.
3 Wed.	London: Journal Committee, 2.30 p.m.
5 Fri.	London: Medico-Political Committee, 10.30 a.m.
6 Sat.	Date of issue of Voting Papers for Council Election from Head Office.
9 Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
13 Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17 Wed.	London: Finance Committee, 2.30 p.m.
24 Wed.	London: Council Meeting.
27 Sat.	Announcement of result of Election of Members to Council.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 9TH, 1914.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

British Medical Association.

Annual Representative Meeting, Aberdeen, 1914.

THE Annual Representative Meeting of the British Medical Association will be held in Aberdeen on Friday, July 24th, 1914, and following days as may be necessary.

PROVISIONAL AGENDA.

I.—RECEPTION OF RETURN OF REPRESENTATIVES.

1. **Motion:** That the return of election of Representatives of Constituencies for the year 1914-15 be received and entered on the minutes.

2. **Motion:** That the notices (if any) of appointment of substitutes for Representatives under By-law 34 be received and entered on the minutes.

II.—STANDING ORDERS.

3. **Motion:** That the Standing Orders submitted by the Chairman be adopted as Standing Orders of the Meeting.

The Chairman will submit the Standing Orders as adopted at Brighton, 1913 (see page 340 of this SUPPLEMENT*), subject to such additions and alterations as may hereafter be notified to the Representatives.*

III.—ANNUAL REPORT OF COUNCIL.

(For Annual Report of Council, 1913-14, *see* B.M.J. SUPPLEMENT of May 2nd, page 265.)

4. **Motion:** That the Annual Report of Council for the year 1913-14, Balance Sheet and Financial Statement for the year 1913, and Estimate of Income and Expenditure for the year 1914, be received.

5. **Motion** (by the CHAIRMAN): That all Motions by Divisions and Branches which relate to matters dealt with in the Annual Report of Council be considered as amendments or riders to the Recommendations, if any, to which they are relevant, or to the motion: "That the remainder of the Report under heading . . . be approved."

(A) Preliminary.

6. **Motion:** That the following Recommendation A of Council be adopted (paragraph 4, page 266 of B.M.J. SUPPLEMENT of May 2nd, 1914):

That the Annual Meeting, 1915, be held in Cambridge from July 1st to 10th.

7. **Motion:** That the following Recommendation B of Council be adopted:

That Sir Thomas Clifford Allbutt, K.C.B., LL.D., be elected President-Elect for the year 1914-15.

8. **Motion:** That the remainder of the Annual Report of Council under heading "(A) Preliminary" be approved (paragraphs 1-10, pages 266-7 of B.M.J. SUPPLEMENT of May 2nd, 1914).

(B) Finance.

9. **Motion:** That paragraphs 11-34 of the Annual Report of Council under heading "(B) Finance" be approved (pages 267-76 of B.M.J. SUPPLEMENT of May 2nd, 1914.)

(C) Organisation.

10. **Motion:** That the Special Report of Council as to Questions of Articles and By-laws (SUPPLEMENT, May 2nd, 1914, pages 293-308) be received.

Possible Insurance Members of Branch Councils and Division Executive Committees.

11. **Motion:** That the following Recommendation A of Council be adopted (paragraph 9 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT, May 2nd, 1914, page 293):

That the following paragraphs be incorporated by the A.R.M., 1914, in By-laws 16 and 18, as to composition of Branch Councils and Division Executive Committees respectively, to be paragraphs 16 (d) and 18 (d):—

Proposed New By-laws:

16 (d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee constituted under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may appoint, or the Branch Council may co-opt, to be Members of the Branch Council.

18 d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee constituted under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may appoint, or the Executive Committee may co-opt, to be Members of the Executive Committee.

[Existing By-laws 16 and 18:

Local Management: Branches.

16. The management of the affairs of each Branch shall, save as otherwise provided in the By-laws, be vested in a Branch Council, composed of the following Members:—

(a) Those Members of the Council who are elected (as hereinafter provided) by the Branch or by any group of Branches to which the Branch belongs or (wholly or in part) by Representatives of Constituencies comprised in the Branch.

(b) The Members elected to represent on the Representative Body the Divisions comprised in the Branch.

(c) Such Officers of the Branch as the Branch shall declare to be members *ex officio* of the Branch Council.

(d) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Branch as the Branch may co-opt to be members of the Branch Council.

(e) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the Membership of such Division.

Local Management: Divisions.

18. The management of the affairs of each Division shall, save as otherwise provided in the By-laws, be vested in an Executive Committee composed of the following Members:—

(a) The Member or Members representing the Division on the Representative Body;

(b) The Member or Members representing the Division on the Branch Council;

(c) Such Members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such Medical Members (if any) of any Insurance Committee formed under that Act, being (in either case) ordinary Members of the Association resident within the area of the Division as the Division may co-opt to be Members of the Executive Committee.

(d) Such other Members elected by the Division as the Division may determine.]

Referendum and Postal Vote.

12. **Motion:** That the following Recommendation B of Council be adopted (paragraph 35 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT of May 2nd, 1914, page 298):—

That the following draft new and amended Articles and By-laws as to Referendum and postal vote, submitted by the Council, be approved by the Annual Representative Meeting, 1914, to take the place of existing Articles 31 and 32; that the necessary steps be taken to amend the Articles accordingly; and that the relative By-laws as to Referendum and postal vote come into effect on the date on which the amended Articles come into effect:—

[NOTE.—*The numbers given to the draft new or altered Articles and By-laws are provisional only, as at the present stage it facilitates reference to retain unchanged the numbers of existing Articles and By-laws. If the new Articles and By-laws are adopted, the numbers will be made to run consecutively. For existing Articles 31 and 32, see B.M.J. Supplement, May 2nd, 1914, page 305.*]

Proposed New Articles 31 & 32:

ARTICLE 31.

Resolutions (of Representative Body).

31 (1)—Subject as provided by the Regulations a resolution of the Representative Body (not being a resolution inconsistent with the provisions of any Statute or of the Memorandum of Association) which affects the funds of the Association, or relates to the Regulations, or By-laws, or to the policy of the Association in matters affecting the honour or interests of the medical profession, and is carried by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws, or which relates to any other business within the powers of the Representative Body and is carried by a simple majority, shall be deemed to be a decision of the Association.

(2) Provided that it shall be competent for the Representative Body to add to any resolution any one or more of the following declarations:—

(a) That such resolution shall be of local effect only, namely, shall apply only to Divisions in England or in Scotland or in Ireland or in Wales (including Monmouthshire) or in any British Colony, Dominion or Province, or in any two or more of those areas.

(b) That such resolution shall not be binding upon the Association (or if the same be declared to be of local effect only shall not be binding upon the Divisions proposed to be affected thereby) unless and until it shall have been approved on a Referendum by the Association (or, if declared to be of local effect only, by the Divisions proposed to be affected) and that the Representative Body require a Referendum to be taken thereon accordingly.

(c) That such resolution shall not be binding upon the Association (or if the same be declared to be of local effect only shall not be binding upon the Divisions proposed to be affected thereby) unless and until the opinion thereon (or on some part thereof) of the members of the medical profession resident within the United Kingdom or (in the case of a resolution declared to be of local effect only) of the members of that profession resident within the Divisions proposed to be affected thereby (whether Members of the Association or not) shall have been ascertained by a

Referendum and the result of such Referendum shall have been considered by the Council and that such opinion shall be ascertained accordingly.

And any such declaration shall have effect accordingly.

(3).—Provided also that no resolution of the Representative Body to make any addition to or any amendment, alteration, or repeal of any Regulation or By-law, or to make any new Regulation or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body, either by the Council, or by a Branch, or by a Division, and shall have been published in the JOURNAL not less than two months before the Annual Representative Meeting or one month before the Special Representative Meeting, at which such resolution is passed.

ARTICLE 32.

Referendum.

32.—In respect of every resolution of a General Meeting of the Association (except a resolution capable of being confirmed as a special resolution or a resolution confirming as a special resolution a resolution previously passed, or an extraordinary resolution or a resolution relating solely to the procedure of the Meeting), and in respect of every resolution of the Representative Body the following provisions shall have effect:—

(a) Within three months after the date on which the resolution is passed, the Council shall hold a meeting for the purpose of considering the resolution. Such meeting may be convened by a notice given either before or after or during the progress of the Meeting at which the resolution is passed.

(b) Except in the case of a resolution of the Representative Body in respect of which that Body shall have required a Referendum, the Council, at its said meeting, or at any adjournment thereof, may approve the resolution, and shall be deemed to have approved the same unless one half at least of the total number of the Council be present, and it be determined by a majority of not less than two-thirds of the votes given on the question that the resolution does not properly represent the wishes of the Association and that a Referendum is required and is to be taken either amongst Members of the Association or amongst members of the medical profession.

(c) Where in the case of any resolution a Referendum (whether to Members of the Association or to members of the medical profession) shall have been duly required (either by the Representative Body or by the Council) in manner aforesaid, the same shall be taken in any manner for the time being prescribed by the By-laws, but so that in the case of a resolution of the Representative Body declared to be of local effect only, such Referendum shall be taken only in the Divisions proposed to be affected by such resolution.

(d) Before taking such Referendum upon a resolution which has been declared to be of local effect only, it shall be competent for the Council to decide that the approval of the resolution on the Referendum shall be subject to both or either of the following conditions, namely, (a) that a specified number or proportion of the Members of the Association qualified to vote shall vote on the question, and (b) that a specified majority of the votes of such Members shall be in favour of the resolution. Any such decision shall be published in such manner as the Council may think fit, and where such decision has been given and published the resolution shall not be deemed to have been approved on the Referendum unless the conditions or condition shall have been fulfilled. Where no such decision has been given and published before the taking of the Referendum, it shall be competent for the Council, after the result thereof has been ascertained, to decide whether, having regard to the number or proportion of the voters (being Members of the Association) who voted on the question and to the majority (if any) of the votes given by such Members in favour of the resolution, the same shall or shall not be deemed to have been approved on the Referendum. Any decision of the Council under this clause shall be final and conclusive.

(e) Where any Referendum is taken amongst members of the medical profession generally the votes given upon such Referendum by persons not being members of the Association shall be reckoned separately and shall not be counted for the purpose of ascertaining the result of the Referendum to Members of the Association, but the opinion of the medical profession as ascertained upon such Referendum shall at the earliest opportunity be considered by the Council, and if upon such consideration it shall appear to the Council that the resolution is contrary to the opinion of the medical profession it shall be competent for the Council finally to disallow the same notwithstanding that it has been approved on the Referendum to Members of the Association.

(f) No resolution to which this Article relates shall have any operation unless and until it shall have been duly approved either on a Referendum (in cases in which a Referendum has been duly required) or by the Council (in other cases). Any resolution so approved shall (unless the same shall be finally disallowed by the Council in pursuance of the last preceding paragraph of this Article) have effect according to the tenor thereof as a valid and effectual decision of the Association.

(g) The result of any Referendum and the fact of any approval or disallowance of a resolution shall be forthwith published in the JOURNAL.

Proposed New By-laws 42A 42G:

BY-LAW 42A.

Modes of taking Referendum.

42a.—(1) Where in pursuance of the Regulations a Referendum to Members of the Association has been required to be taken in respect of any resolution of a General Meeting of the Association or of the Representative Body the same may at the option of the Council (subject as hereinafter provided) be taken either by votes of Members given at meetings of the Divisions of the Association (which mode is hereinafter referred to as "Referendum by Division Meetings") or by votes of Members given by means of voting papers transmitted by post (which mode is hereinafter referred to as "Referendum by Postal Vote"). Provided that the Council shall conform to any directions which may be given by the Representative Body as to which of the said modes shall be adopted for the taking of a Referendum on any particular resolution.

(2) The Council shall at its meeting at which the resolution is considered determine (subject as aforesaid) in which mode the Referendum is to be taken in the Divisions affected by the resolution, and shall as soon as may be thereafter arrange for the same being so taken according to the provisions hereinafter contained.

BY-LAW 42B.

Referendum by Division Meetings.

42b. Where a Referendum is to be taken by Division Meetings the mode of taking the same shall be as follows:—

(1) An official of the Association shall as soon as may be after the said Meeting of the Council and not later than eight weeks from the date thereof, send by post to the Secretary of each Division affected a requisition requiring him within four weeks to convene a Meeting of the Members of the Division (hereinafter called "the Division Meeting") for the purpose of considering the resolution, and such requisition shall specify a time within which his certificate as to the voting at the Division Meeting is to be received at the Head Office of the Association.

(2) The Secretary of the Division shall convene the Division Meeting accordingly, and shall within the time specified in the requisition certify in writing, under cover addressed to the Association at the Head Office, the number of Members present at the Division Meeting and the number of the votes given thereat for and against the resolution.

(3) At or as soon as may be after the time specified in the requisition for the receipt of the said certificate, the votes given and certified as aforesaid for

and against the resolution in all the Divisions in which the Referendum has been taken shall be counted by an official of the Association and the result of the voting shall be notified by him to the Council.

BY-LAW 42C.

Referendum by Postal Vote.

42c. Where a Referendum to Members of the Association is to be taken by postal vote the mode of taking the same shall be as follows:—

(1) The Council shall cause to be prepared and shall approve a form of voting paper containing a copy of the resolution and the date upon which and the majority by which the same was passed and a request that each Member will signify his approval or disapproval thereof by writing the word "Aye" or the word "No" and signing his name and stating his address in spaces provided in the voting paper for those purposes and returning the same by post under cover, addressed to the Association at the Head Office, within a time to be specified on the voting paper.

(2) A voting paper, in the form prepared and approved as aforesaid, shall be sent by post by an official of the Association to each Member of the Division at his last known address.

(3) At or as soon as may be after the expiration of the time specified in the voting papers for the return thereof to the Head Office the votes given for and against the resolution as appearing by the voting papers duly signed and received within the time aforesaid shall be counted by an official of the Association, and the result of the voting shall be notified by him to the Council.

BY-LAW 42D.

Referendum to Members of Medical Profession.

42d. Where a Referendum to members of the medical profession is to be taken the same shall be taken in a mode similar to the mode hereinbefore prescribed for the taking by postal vote of a Referendum to Members of the Association, and the Council shall, on the occasion of any such Referendum, make all arrangements required for that purpose.

BY-LAW 42E.

Official for Purposes of Referendum.

42e. The official of the Association to perform the duties referred to in the last preceding By-laws shall be an official to whom the said duties shall be assigned by the Council.

BY-LAW 42F.

Result of Referendum.

42f. Subject to any decision of the Council in pursuance of the Regulations as to the conditions required for the approval of the resolution, the same shall be deemed to have been approved on a Referendum if the aggregate number of votes given for the resolution and so ascertained and notified to the Council as aforesaid shall exceed the aggregate number of votes given against the resolution and likewise ascertained and notified or if no vote shall be given against the resolution.

BY-LAW 42G.

Expenses of Referendum.

42g. The expenses of a Referendum shall be borne by the Association.

Powers and Duties of Council.

13. **Motion:** That the following Recommendation C of Council be adopted (paragraph 37 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT of May 2nd, page 298):—

Amendment of Article:

That steps be taken to amend Article 34 to read as follows (words proposed to be inserted are shown in italics):—

34. It shall be the duty of the Council *(subject to the provisions as to Referendum hereinbefore contained)* to carry into execution resolutions passed by a General Meeting or of the Representative Body, *and to act upon any delegation by that Body and to* administer the affairs of the Association in accordance with the Memorandum of Association and the Regulations and the By-laws, and the Council shall exercise such powers and do such acts and things as may be exercised or done by the Association, and are not by the provisions of any Statute or of the Regulations or the By-laws directed to be exercised or done by a General Meeting or by the Representative Body.

Question of Membership Subscription payable by newly-qualified Practitioners.

14. **Motion:** That the Special Report of Council as to desirability or otherwise of By-laws of Association being amended to provide that newly registered practitioners shall be admitted to membership at a reduced subscription (SUPPLEMENT May 2nd, 1914, pages 305-6) be received.

15. **Motion:** That the following Recommendation D of Council be adopted (paragraph 38 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT of May 2nd, 1914, page 298):—

Amendment of By-law:

That the A.R.M., 1914, amend existing By-law 11, as to Subscriptions, to read as follows (new words proposed to be inserted are shown in italics):—

SUBSCRIPTIONS.

Amount.

11.—(1) On and after the 1st of January, *1915*, and except *as hereinafter provided*, the Annual Subscription to the Association shall be:—

(a) For a Member resident in any part of the British Islands,* Two Guineas.

(b) For a Member resident elsewhere, Twenty-five Shillings.

Provided as follows:—

(c) In the case of a Member resident in the British Islands and admitted before the expiration of two years from the date of his registration under the Medical Acts the annual subscription shall be Twenty-five Shillings until the 31st of December next occurring after the expiration of the period of four years from the date of such registration.*

(d) A Member admitted on or after the 1st of July in any year shall pay half *his* current subscription for that year.

(2) For the purposes of this By-law a Member shall be deemed to reside in that place in which his ordinary place of abode is situate at the time at which according to the Regulations his subscription is considered due.

[Existing By-law 11:—

SUBSCRIPTIONS.

Amount.

11.—(1) On and after the 1st of January, 1914, and except in the case of Members elected on or after the 1st of July in any year, the Annual Subscription to the Association shall be:—

(*a*) For a Member resident in any part of the British Islands—Two Guineas.

(*b*) For a Member resident elsewhere—Twenty-five Shillings.

(2) A Member admitted on or after the 1st of July in any year shall pay half the current subscription for that year.

(3) For the purposes of this By-law a Member shall be deemed to reside in that place in which his ordinary place of abode is situate at the time at which according to the Regulations his subscription is considered due.]

16. **Motion:** That the remainder of the Special Report of Council as to desirability or otherwise of By-laws of Association being amended to provide that newly registered practitioners shall be admitted to membership at a reduced subscription (SUPPLEMENT, May 2nd, 1914, pages 305-6) be approved.

* *Note.*—For Recommendation (O) of Council that the words "British Islands" of existing By-law 11 be altered to "United Kingdom," *see* Item 27 of this Agenda (page 334).

Composition of Branch Councils.

17. **Motion:** That the following Recommendation E of Council be adopted (paragraph 39 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT, May 2nd, 1914, page 298): —

Amendment of By-law:

That By-law 16 (e), which reads as follows:—

"(e) In the case of a Branch comprising more Divisions than one, Members elected by such Divisions in such manner that the number to be elected by each Division shall be as nearly as possible proportionate to the membership of such Division,"

be amended by the A.R.M., 1914, to read as follows:—

"(e) Such other Members as the Branch may by its Rules decide."

(*Note.*—For existing By-law 16 *see* Item 11 above.)

Co-ordination of Policy of Divisions in Branch.

18. **Motion:** That the following Recommendation F of Council be adopted (paragraph 40 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT, May 2nd, 1914, page 298):—

Proposed New By-law:

That the A.R.M., 1914, adopt the following new By-law 16*x*:—

Co-ordination of Policy of Divisions.

16*x*. It shall be the duty of every Branch Council to advise the Divisions forming the Branch in matters of policy affecting the medical profession, with a view to promoting a common policy throughout those Divisions. The Branch Council shall report to the Representative Body or to the Council upon the questions dealt with by such advice in all cases in which such a report is considered by the Branch Council to be necessary or desirable or is requested by the Representative Body or by the Council.

Relations between Divisions and Branches.

19. **Motion:** That the following Recommendation G of Council be adopted (paragraph 41 of Special Report of Council as to Articles and By-laws, B.M.J. SUPPLEMENT, May 2nd, 1914, page 299):—

Proposed New By-law:

That the A.R.M., 1914, adopt the following new By-law 18*x*:—

Relations between Divisions and Branches.

18*x*. The Executive Committee of every Division shall, as soon as may be, notify to the Council of the Branch comprising that Division each decision of the Division or of the Executive Committee relating to or affecting the organisation or policy of the Branch or of any Division comprised in the Branch.

Sub-divisions: Joint Committees of Divisions.

20. **Motion:** That the following Recommendation H of Council be adopted (paragraph 42 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 299):

Proposed New By-law:

That the A.R.M., 1914, adopt the following new By-law 18*y*: —

Sub-divisions: Joint Committees of Divisions.

18y. (1) Any Division by resolution from time to time may divide the local area of the Division into Sub-divisions, and may appoint local bodies consisting of Members of the Division, for the exercise within such Sub-divisions of any powers or functions of the Division which in the opinion of the Division can and ought to be exercised by such local bodies, and may specify the powers and duties of such local bodies and provide for their constitution and term of office.

(2) Any Division may concur with any other Division or Divisions in appointing a joint Committee for any purpose in which those Divisions are jointly interested, and in conferring with or without conditions or restrictions on any such joint Committee any powers which each appointing Division might exercise if the purpose related exclusively to the area of such appointing Division, and in providing for the constitution and term of office of such joint Committee.

(3) Meetings of the Members of more Divisions than one shall be convened (if the Divisions are comprised in a single Branch by the Secretary of that Branch, and if the Divisions are comprised in more Branches than one by the Secretaries of those Branches jointly) upon the requisition of any of those Divisions for the purpose of discussing matters in which those Divisions are jointly interested, and appointing any such joint Committees as aforesaid.

Representatives and Deputy-Representatives.

21. **Motion:** That the following Recommendation I of Council be adopted (paragraph 43 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 299):

Proposed Amendment of By-law:

That the A.R.M., 1914, amend By-law 33, "Term of Office of Representatives" to be entitled "Term of Office: Resignation," and to read as follows (words proposed to be inserted are shown in italics): —

Term of Office: *Resignation.*

33. (*1*) Every Representative of a Constituency shall come into office at the commencement of the Annual Representative Meeting next succeeding the date of his election, and shall *(unless he shall die or resign)* continue in office until the commencement of the Annual Representative Meeting in the following year, and shall be re-eligible.

(2) Any Representative of a Constituency may resign his office by notice in writing to the Secretary of the Division or of one of the Divisions forming the Constituency.

(3) A Constituency may, by a resolution passed by a majority of not less than two-thirds of the Members present and voting at a meeting of the Constituency specially convened for the purpose, request any Representative of that Constituency to resign his office. Any such meeting shall be convened (in the manner provided by the last preceding By-law) upon a request in writing signed by not less than 10 members of the Constituency and delivered to the Secretary of the Division or of one of the Divisions forming the Constituency. A copy of any resolution passed at such meeting shall be sent as soon as may be by the convener of the meeting to the Representative in question.

(4) A casual vacancy caused by the death or resignation of a Representative shall be filled as soon as may be by an election to be conducted in accordance with the provisions of the last preceding By-law.

Proposed Change in nature of Representative Body.

22. **Motion:** That the following Recommendation J of Council be adopted (paragraph 44 of Special Report of Council as to Articles and By-laws, SUPPLEMENT May 2nd, 1914, page 299):

Proposed Amendment of By-law:

That the A.R.M., 1914, amend By-law 32 (3) by inserting in the 6th line (7th line of (3) below), after the word "and," the words "passing resolutions and."

[Existing By-law 32:

Election of Representatives.

32.—(1) Every Representative shall be elected not more than nine months nor less than four weeks before the Annual Representative Meeting at which he takes office, by a General Meeting, or by voting papers sent to each Member of the Constituency as the said Constituency may decide.

(2) The said Meeting shall be convened (or where the election is by voting papers, the voting papers

shall be despatched) by the Secretary of the Division forming the Constituency, or in the case of a Constituency comprising more Divisions than one, by the Secretary of one of those Divisions to be chosen by the Secretaries of those Divisions, or, if they cannot agree, by the Council.

(3) Where the election is by voting papers, a Meeting of the Members of the Constituency (convened as aforesaid) shall be held after the election, and not less than twenty-one days before the date of the Annual Representative Meeting, for the purpose of considering the Agenda of that Representative Meeting, and instructing the Representative or Representatives thereon, and if such Meeting of the Members of the Constituency shall not be held, no Representative of the Constituency shall be entitled to attend the Representative Meeting.

(4) The person acting under Clause (2) of this By-law shall, not less than twenty-one days before the Annual Representative Meeting, give notice to the Association at the Head Office of the name and address and mode of election of the Representative or Representatives elected by the Constituency, and if the election was by voting papers, shall submit satisfactory evidence as to the holding of the subsequent Meeting of the Members of the Constituency, and the Chairman of Representative Meetings, or any person authorised by him in that behalf, shall, on being satisfied as to the matters aforesaid, cause a ticket of admission to the Meeting to be issued to every such Representative.]

23. **Motion:** That the following Recommendation K of Council be adopted (paragraph 44 of Special Report of Council as to Articles and By-laws, *Supplement*, May 2nd, 1914, page 299):—

Proposed Amendment of By-law:

That the A.R.M., 1914, substitute for existing By-law 39 (4), as to voting in Representative Meetings, the following revised wording:—

(4) In speaking and voting upon any matter the Representative or Representatives of any Constituency shall have regard and so far as may be conform to the preponderance of opinion of the members of that Constituency so far as such opinion is known to him or them.

[**Existing By-law 39:**

Voting.

39.—(1) In any Representative Meeting only Representatives of Constituencies and Members of Council representing the Navy, Army, and Indian Medical Services shall be entitled to vote.

(2) Voting shall be by show of hands, unless before such vote is taken twenty Representatives present request that the vote be taken by card.

(3) Where a vote is taken by card the Representative of each Constituency shall be entitled (or in the case of a Constituency electing two or more Representatives, such of those Representatives as are present shall together be entitled) to record a total number of votes equal to the number of Members in that Constituency according to the Annual List then in force; and where two or more Representatives of a Constituency are present the total number of votes of that Constituency shall be divided equally between those Representatives, fractions of votes being ignored. Members of Council representing the Navy, Army and Indian Medical Services shall not take part in a vote taken by card.

(4) In voting upon any matter upon which a Constituency has passed a resolution within the three months immediately preceding such Meeting, the Representative or Representatives of that Constituency shall be under obligation to vote in accordance with such resolution.

(5) The Chairman shall in the case of an equality of votes have a casting vote, but shall not otherwise be entitled to vote.]

Question of making Insurance Act Committee a Standing Committee.

24. **Motion:** That the following Recommendation L of Council be adopted (paragraph 45 of Special Report of Council as to Articles and By-laws, *Supplement*, May 2nd, 1914, page 300):

That the addition to the Schedule to the By-laws of a provision setting up a Standing Insurance Act Committee of the Association be left over until the A.R.M., 1915.

Provision for a Standing Welsh Committee.

25. **Motion:** That the following Recommendation M of Council be adopted (paragraph 46 of Special Report of Council as to Articles and By-laws, *Supplement*, May 2nd, 1914, page 300):

That the following be added to the Schedule to the By-laws as to Standing Committees:—

	Additional Members ex-officio.	*Otherwise appointed.*	*Duties, Powers, &c.*
Welsh	The Secretaries of the North Wales and the South Wales and Monmouthshire Branches. All the Members of the Council who represent Branches in Wales or Monmouthshire.	1 Member appointed by the North Wales Branch, 2 Members appointed by the South Wales and Monmouthshire Branch, 1 Member appointed by the Members of the Shropshire and Mid Wales Branch resident in Wales.	To consider all matters specially concerning Wales or Monmouthshire. It shall have an Honorary Secretary resident in Wales or Monmouthshire and shall meet at such place and time as the Committee may itself direct.

26. **Motion:** That the following Recommendation N of Council be adopted (paragraph 46 of Special Report of Council as to Articles and By-laws, *Supplement*, May 2nd, 1914, page 300):

That, consequentially to the foregoing, the heading of column 5 of the Schedule to the By-laws be altered throughout to read, for "Appointed by other Bodies," "Otherwise appointed."

Proposal that Channel Islands and Isle of Man Members be exempted from the Two Guinea Subscription.

27. **Motion:** That the following Recommendation O of Council be adopted (paragraph 51 of Special Report of Council as to Articles and By-laws, *Supplement*, May 2nd, 1914, page 300):

Proposed Amendment of By-law:

That the A.R.M., 1914, amend By-law 11, as to Subscriptions, to commence as follows (new words proposed to be inserted are shown in italics):—

"SUBSCRIPTIONS.

Amount.

11. (1) On and after the 1st of January, *1915*, and except *as hereinafter provided*, the Annual Subscriptions to the Association shall be

(a) For a Member resident in any part of the *United Kingdom*—Two Guineas."

(*Note.*—For existing By-law 11 and Recommendation D of Council, also proposing amendment of that By-law, *see* Item 15 of this Agenda (page 332).

If both Recommendations D and O of Council are adopted, By-law 11 will read as shown in Recommendation D, with the substitution, however, of "United Kingdom" for "British Islands" wherever the latter words occur.

If Recommendation D, only, is adopted, the By-law will read as there shown.

If Recommendation O, only, is adopted, the remainder of the By-law will read as at present).

Question of Possible Shorter Notice of S.R.M's.

28. **Motion:** That the Special Report of Council as to question of possible shorter notice of S.R.M.'s (SUPPLEMENT, May 2nd, 1914, page 300, paragraphs 52-4, and pages 307-8) be received.

29. **Motion:** That the Special Report of Council as to question of possible shorter notice of S.R.M.'s be approved.

Scottish Committee.

30. **Motion**: That the following Recommendation P of Council be adopted (paragraph 56 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 301):—

That the A.R.M., 1914, add the following words to the definition of the duties and powers of the Scottish Committee, contained in the Schedule to the By-laws:—

"The Committee shall have power to add to its number not more than four Members specially qualified to assist in the business of the Committee."

Eligibility for Membership.

31. **Motion**: That the following Recommendation Q of Council be adopted (paragraph 60 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 301):—

Proposed Amendment of Article:

That steps be taken for amendment of Article 4 to read as follows (words proposed to be inserted are shown in italics):—

Eligibility.

4. Any Medical Practitioner registered in the United Kingdom under the Medical Acts, *and any medical practitioner who does not reside within the area of any Branch of the Association and who though not so registered is possessed of any of the qualifications described in Schedule (A) of the Medical Act, 1858*, and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualification as shall, subject to the By-laws, be prescribed by the Rules of the said Branch, shall be eligible as an ordinary Member of the Association. Subject as aforesaid the mode and conditions of election to membership shall from time to time be determined by or in accordance with the By-laws.

Division Officers and Executive Committees.

32. **Motion**: That the following Recommendation R of Council be adopted (paragraph 61 of Special Report of Council as to Articles and By-laws, SUPPLEMENT May 2nd, 1914, page 301):—

Proposed Amendment of By-law:

That the A.R.M., 1914, adopt the following new paragraph, to be paragraph (c), for incorporation in By-law 18, as to local management of Divisions:—

"(c) Such Officers of the Division as the Division shall by its Rules declare to be Members *ex officio* of the Executive Committee."

(*Note.*—For existing By-law 18, *see* Item 11 of Agenda above, (page 330.)

Branch Officers and Branch Councils.

33. **Motion**: That the following Recommendation S of Council be adopted (paragraph 62 of Special Report of Council as to Articles and By-laws, SUPPLEMENT May 2nd, 1914, page 301):—

Proposed Amendment of By-law:

That the A.R.M., 1914, amend By-law 16 (c) by inserting after the word "shall" the words "by its Rules," the paragraph as amended to read as follows:—

"(c) Such Officers of the Branch as the Branch shall by its Rules declare to be members *ex-officio* of the Branch Council."

(*Note.*—For existing By-law 16, *see* Item 11 of Agenda above, (page 330).

Business of Annual Representative Meeting.

34. **Motion**: That the following Recommendation T of Council be adopted (paragraph 63 of Special Report of Council as to Articles and By-laws, SUPPLEMENT May 2nd, 1914, page 301):—

Proposed Amendment of By-law:

That the A.R.M., 1914, amend By-law 37, as to business of A.R.M.'s, to read, in the last line (last line but one, below), for "three months," "two months."

[Existing By-law 37:—

Business of Annual Representative Meeting.

37. The business of the Annual Representative Meeting shall be to elect a Representative of a Constituency as the Chairman of Representative Meetings, and also a Representative of a Constituency as Deputy-Chairman; to elect a President of the Association; to elect twelve members of the Council, and such other Officers and such Members of Committees as by the Regulations or By-laws may be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting, and Reports of Branches and motions relating to the adoption of such Reports in whole or in part; to make new By-laws, and alter and repeal By-laws, and to consider any Resolution relating to the honour and interests of the medical profession or of the Association which shall have been adopted by any Division or Branch; provided that any such Resolution proposing material alteration of the Constitution or Policy of the Association shall have been submitted through the JOURNAL for the consideration of all the Divisions not less than three months previously.]

Casual Vacancies on Committees.

35. **Motion**: That the following Recommendation U of Council be adopted (paragraph 64 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 302):—

Proposed new By-law:

That the A.R.M., 1914, adopt the following new By-law, to follow immediately after existing By-law 67:—

"67a. Each Standing Committee shall have power to fill any casual vacancy arising amongst its appointed Members."

36. **Motion**: That the following Recommendation V of Council be adopted (paragraph 65 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 302):—

Proposed Amendment of By-law:

That the A.R.M., 1914, amend existing By-law 68, to read as follows in the last two lines:—

"and a casual vacancy shall thereupon arise."

[Existing By-law 68:—

68. If any appointed Member of a Standing Committee shall be absent from three successive Meetings of that Committee (except in case of illness or for some reason approved by the Chairman of that Committee) he shall be deemed to have resigned his membership of that Committee, and that Committee shall fill the vacancy so created.]

Article 3, as to Existing and Future Members.

37. **Motion**: That the following Recommendation W of Council be adopted (paragraph 66 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 302):—

Proposed deletion of obsolete Article:

That steps be taken for the deletion of Article 3, as to existing and future Members of the Association.

[Existing Article 3:—

Existing and Future Members.

3 (1).—The existing Members of the Association are those whose names are entered in the Register of Members of the Association as Members at the time when these Articles come into operation.

(2) Future Members shall be those persons who, being eligible, shall, after the date when these Articles come into operation, be duly elected in such manner and upon such conditions as may be prescribed from time to time by the By-laws.]

Article 9, as to Duration of Membership.

38. **Motion:** That the following Recommendation X of Council be adopted (paragraph 67 of Special Report of Council as to Articles and By-laws, SUPPLEMENT, May 2nd, 1914, page 302):—

Proposed Amendment of Article:

That steps be taken for the deletion of the words

"whether an existing Member or a future Member,"

in the first and second lines of Article 9, as to duration of membership.

[Existing Article 9:—

Duration of Membership.

9.—Every Member, whether an existing Member or a future Member, shall remain a Member until his membership is terminated in accordance with the provisions hereinafter contained.]

39. **Motion:** That the following Recommendation Y of Council be adopted (paragraph 68 of Special Report of Council as to Articles and By-laws, Supplement, May 2nd, 1914, page 302):—

Proposed deletion of obsolete Articles.

That steps be taken for the deletion of Articles 43 and 44, as to By-laws, and Saving for Existing Constitution, respectively.

[Existing Articles 43 and 44:

By-laws.

43.—The By-laws set forth in the Schedule hereto (including the Schedule to the said By-laws) are hereby approved by the Association, and shall remain in force until and save in so far as the same shall be added to, amended, altered, or repealed in pursuance of the foregoing powers.

Saving for Existing Constitution.

44.—The existing Representatives of Divisions of the Association shall be deemed to be the Representatives duly elected under these Articles and the By-laws, and shall continue to hold office as such until their successors are appointed in pursuance of the Regulations and the By-laws and the existing Members of the Council of the Association shall be deemed to be the Members of and to form the Council constituted under these Articles and the By-laws, and shall continue to act as such until a new Council is elected in pursuance of the Regulations and the By-laws, and all existing Officers and Committees of the Association shall continue to hold their respective offices and discharge their respective duties and receive such emoluments, if any, as pertain to the offices which they fill until it shall be otherwise determined in pursuance of the Regulations and the By-laws and the existing Divisions and Branches of the Association, with their Officers, Councils and Committees shall be deemed to be Divisions and Branches, Officers, Councils and Committees constituted or appointed in pursuance of these Articles and the By-laws, and shall continue until it shall be otherwise determined as aforesaid.]

Verbal Amendments proposed by Council in Articles.

40. **Motion:** That the following Recommendation Z of Council be adopted (paragraph 69 of Special Report of Council as to Articles and By-laws, Supplement, May 2nd, 1914, page 302):—

Proposed Amendments of Articles.

That steps be taken to make the following verbal amendments in the Articles:—

(a) *Article 12.* For present heading "Divisions or Branches" *read* "Divisions and Branches."

(b) *Article 28, as to procedure at General Meetings.* For "provision as to Referendum hereafter contained" *read* "provisions as to Referendum hereinafter contained."

Verbal Amendments proposed by Council in By-laws.

41. **Motion:** That the following Recommendation AA of Council be adopted (paragraph 70 of Special Report of Council as to Articles and By-laws, Supplement, May 2nd, 1914, page 302):—

Proposed Amendments of By-laws.

That the A.R.M., 1914, make the following verbal amendments in the By-laws:—

(a) By-law 5. Delete the word "new" in the phrase "mode of election of new members."

(b) By-law 13. For "31st December" read "31st of December."

(c) By-law 24. For "March 15th" read "the 15th of March."

(d) By-law 46 (2). For "15th February" read "15th of February."

(e) By-law 46 (5). For "15th day of May" read "15th of May."

(f) By-law 63. For "Officers" read "officials."

Remainder of Special Report as to Articles and By-laws.

42. **Motion:** That the remainder of the Special Report of Council as to Questions of Articles and By-laws (SUPPLEMENT, May 2nd, 1914, pages 293-308) be approved.

Question of Association becoming also a Federation for other Medical Bodies.

43. **Rider** by BRIGHTON:

That it be referred to a Special Committee to consider and report, with recommendations, what alterations and additions to the Articles and By-laws and in the organization of the British Medical Association in the United Kingdom would allow of it becoming also a Federation for other Medical Bodies formed to safeguard the interests of one or more sections of the medical profession, while allowing all such bodies to continue their separate existence. That such Committee consist of six Representatives not members of the Council, six members of the Council, together with the *ex officio* members of the Council.

(SUPPLEMENT, April 25th, 1914.)

Returns of Attendance of Council, Committees, and Sub-Committees; Election of Committees.

44. **Motion:** That the following Recommendation BB of Council be adopted (paragraph 38 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 277):—

Proposed Amendment of Standing Orders:

That the Standing Orders of the Representative Body be altered to provide that instead of the Election Returns Committee of the Representative Body preparing the return of attendances up to three weeks before the commencement of the Annual Meeting that return shall be prepared by the Financial Secretary and Business Manager and issued to all members of the Representative Body with the Agenda of the A.R.M., and, in the case of members of Council not up to then elected, as soon as possible.

Election by Branches of Members of Council for 1915-16: Grouping of Branches in U.K. for 1915-16.

45. **Motion:** That the following Recommendation CC of Council be adopted (paragraph 39 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 277):—

That the Branches in the United Kingdom be grouped for election of members of Council, 1915-16, in the same way as for 1914-15, the new Kent, Surrey and Sussex Branches taking the place of the South-Eastern Branch, now discontinued.

(For the 1914-15 grouping of the U.K. Branches, *see* SUPPLEMENT, May 2nd, 1914, page 309.)

Remainder of Report under heading "(C) Organisation."

46. **Motion:** That the remainder of the Annual Report of Council under heading "(C) Organisation" (paragraphs 35-68, pages 276-9, SUPPLEMENT, May 2nd, 1914) be approved.

Grouping of Branches outside United Kingdom for 1915-16.

47. **Rider** (arising out of paragraph 40, "Grouping of Branches outside United Kingdom for 1915-16," page 277), by HONG KONG and CHINA:

That the Hong Kong and China and Malaya Branches form a separate group for the election of a member of Council, 1915-16, as was the case in 1913-14.

(SUPPLEMENT, April 25th, 1914.)

(D) Journal.

48. **Motion**: That the Annual Report of Council under heading "(D) Journal," (paragraphs 69-71, page 279) be approved.

(E) Science.

49. **Motion**: That the Annual Report of Council under heading "(E) Science" (paragraphs 72-8, page 279), be approved.

(F) Medical Ethics.

50. **Motion**: That the Annual Report of Council under heading "(F) Medical Ethics" (paragraphs 79-87, page 280) be approved.

(G) Medico-Political.

State Registration of Nurses.

51. **Motion**: That the following Recommendation A of Council be adopted (paragraph 89 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 280):

That the Representative Body re-affirm its opinion that the State registration of nurses is desirable.

Insufficiently Trained Nurses.

52. **Rider** by Trowbridge:

That this meeting views with concern the increasing number of insufficiently trained nurses and calls upon the Government, and the other authorities concerned, to take steps to remedy this evil.

Payment of Medical Practitioners called in on Advice of Midwives.

53. **Motion**: That the following Recommendation B of Council be adopted (paragraph 90 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 280-1):—

That the Representative Body express the following opinions:—

Assistance given by Private Practitioners in Cases where they are called in by Midwives.

(a) That midwives could depend upon the assistance of the medical profession being forthcoming whenever required, provided the profession were assured of adequate provision being made for (i.) free choice of doctor by patient and (ii.) payment of the medical practitioner called in.

(b) That payment of the medical practitioner so selected should be assured to him by a public authority such as the County or County Borough Councils in England and Wales.

(c) That the following should be the minimum scale of fees for the payment of medical practitioners called in on the advice of midwives, but power should be obtained to pay special fees in special cases:—

	£	s.	d.
Attendance at cases of operative interference and three subsequent visits if necessary	2	0	0
Attendance at cases without operative interference, and three subsequent visits if necessary	1	1	0
Assistance for administration of an anæsthetic	1	1	0
Visit (including any necessary [illegible]n)		s.	d.
Day (7 a.m. to 7 p.m.)		3	6
Night (7 p.m. to 7 a.m.)		7	6

Note.—The above fees apply to visits within two miles of the doctor's house; if beyond that distance an additional mileage fee of not less than 1s. per mile (outwards) or in outlying and sparsely populated districts such sum as is suitable to local circumstances and the local customs of the profession should be paid.

Assistance given by Members of Lying-in Hospital Staffs.

(d) (i.) That all women receiving treatment through the out-patient department of a voluntary hospital or similar institution who are entitled to a maternity benefit shall be required to pay such a sum to the hospital or institution as shall be demanded by the Governing Body.

(ii.) That from each such sum an amount, to be agreed upon between the Governing Body and the Medical Board, shall be placed to a special fund which shall be distributed as the Medical Board shall decide.

Medical Inspection and Treatment of School Children.

54. **Motion**: That the following Recommendation C of Council be adopted (paragraph 92 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 281): —

That the Representative Body rescind all previous decisions having reference to any question of the Medical Inspection and Treatment of School Children.

55. **Motion**: That the following Recommendation D of Council be adopted (paragraph 92 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 281):—

That the Memorandum submitted by the Council be approved as the policy of the Association in the matter of Medical Inspection and Treatment of School Children.

(For the Memorandum *see* Appendix V to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 313-14.)

Medical Treatment of School Children at Voluntary Hospitals.

56. **Motion**: That the following Recommendation E of Council be adopted (paragraph 93 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 281):—

That the Representative Body approve the Memorandum submitted by the Council on the Treatment at Voluntary Hospitals of School Children found to be Defective on Medical Inspection:—

(For Memorandum *see* May 2nd, SUPPLEMENT, pages 281-2.)

Question of Establishment of Dental Clinics.

57. **Motion**: That the following Recommendation F of Council be adopted (paragraph 94 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 282.)

That the Representative Body approve the principle of the establishment of Dental Clinics, inasmuch as such Clinics are calculated to diminish the amount of unqualified dental practice now in existence.

Medical Certificates.

58. **Motion**: That the following Recommendation G of Council be adopted (paragraph 100 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 282.)

That the following report be adopted by the Representative Body:—

(a) Under the present state of the law medical practitioners are afforded reasonable immunity from any pecuniary risk consequent upon the giving of medical certificates in connection with any Act of Parliament, provided that in doing so they act in good faith and with reasonable care. No action which could be taken by the Association would be likely to provide absolute immunity from legal action.

(b) Medical practitioners can secure themselves from costs incurred in any legal action consequent upon the giving of medical certificates in conformity with any Act of Parliament, by insuring with one of the Medical Protection Societies, which precaution is strongly urged upon all practitioners.

(c) As a result of the action of the Association there has been secured to medical practitioners giving medical certificates under the National Insurance Acts what amounts to practically absolute immunity from legal risk, owing to the wording of the model form of certificate issued by the Insurance Commissioners. This form makes it clear that the certificate is given to the insured person, and that therefore the divulgence of any information contained therein can only be due to the action of the insured.

(d) The precedent set by the wording of the model form of certificate issued by the Insurance Commissioners should, whenever possible, be followed by medical practitioners in the case of certificates required of them under any other Act of Parliament.

Remainder of Report under heading "(G) Medico-Political."

59. **Motion**: That the remainder of the Annual Report of Council under heading "(G) Medico-Political" (paragraphs 88-114, SUPPLEMENT, May 2nd, 1914, pages 280-3), be approved.

Scope of Policy of Association.

60. **Rider** by PLYMOUTH:

That it is desirable for the future that the British Medical Association should confine its policy to promoting the scientific and social welfare of the medical profession by leaving all medico-political work to be done by some other body formed for such purpose and registered as a "trade union."

(SUPPLEMENT, April 25th, 1914.)

(H) National Insurance.

61. **Motion**: That the following Recommendation A of Council be adopted (paragraph 135 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 286:

That the Representative Body approve the Model Scheme for the Treatment of Tuberculosis.

(For the Model Scheme for the Treatment of Tuberculosis *see* Appendix VII. to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 316-7.)

62. **Amendment** by TROWBRIDGE:

That sub-paragraph 11A (ii.) of the Model Scheme for the Treatment of Tuberculosis (*see* page 316 of May 2nd Supplement) be amended, by the insertion of the words "if possible," to read as follows:

"(2) That, if possible, no patient shall be treated at the dispensary except on the recommendation of amedical practitioner."

Local Government Board Report.

63. **Rider** by TROWBRIDGE:

That the present Local Government Board Report is unsatisfactory and might with advantage be simplified and improved.

64. **Rider** by ST. PANCRAS and ISLINGTON:

(*a*) That this Representative Meeting, while recognising that there is a place for the co-operation of sanatoriums and hospitals in the treatment of tuberculosis, is strongly of opinion that the domiciliary treatment of tuberculous persons, as well as that carried out in local dispensaries, ought to be entrusted to the fullest possible extent to practitioners engaged in general practice.

(*b*) That the voluntary hospitals to which medical schools are attached should have the opportunity of having all clinical material they need for teaching purposes.

(SUPPLEMENT, April 25th, 1914.)

Voluntary Hospitals and Treatment of Cases in receipt of Maternity Benefit.

65. **Motion**: That the Special Report of Council on voluntary hospitals and treatment of cases in receipt of maternity benefit (*see* Appendix VIII. to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 317-8) be received.

66. **Motion**: That the following Recommendation (I.) of Council be adopted (paragraph 4 of the above-mentioned Special Report):

(I.) That as it is necessary for the training in midwifery of medical students and pupil midwives that there should be an adequate supply of clinical material available for that purpose, no parturient woman should be refused treatment in the obstetric department of a voluntary hospital or similar institution* on the ground that she is eligible for a maternity benefit.

67. **Motion**: That the following Recommendation (II.) of Council be adopted (paragraph 5 of above-mentioned Special Report):—

(II.) That women entitled to a maternity benefit under the National Insurance Acts should not be regarded as eligible for free treatment except on the recommendation of a medical practitioner.

68. **Motion**: That the following Recommendation (III.) of Council be adopted (paragraph 5 of above-mentioned Special Report):—

(III.) That all women receiving treatment through the obstetric department of a voluntary hospital or similar institution who are entitled to a maternity benefit shall be required to pay such sum to the hospital or institution as shall be determined upon by the governing body.

69. **Motion**: That the following Recommendation (IV.) of Council be adopted (paragraph 6 of above-mentioned Special Report):—

(IV.) That from each such sum an amount, to be agreed upon between the governing body and medical board, shall be placed to a special fund which shall be distributed as the medical board shall decide.

Remainder of Special Report on Voluntary Hospitals and Treatment of Cases in receipt of Maternity Benefit.

70. **Motion**: That the remainder of the Special Report of Council on voluntary hospitals and treatment of cases in receipt of Maternity Benefit (Appendix VIII. to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 317-18) be approved.

Medical Officers of Voluntary Hospitals and other Charitable Institutions and Treatment of Members of the Staff who are Insured Persons.

71. **Motion**: That the following Recommendation C of Council be adopted (paragraph 137 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 286):—

That in those cases where the medical officer of any voluntary hospital is required to attend insured members of the staff of such an institution, the moneys paid by the Insurance Committee in respect of the medical attendance and treatment of such insured persons (exclusive of drugs and appliances) shall be paid to the medical officer of the institution who is responsible for such attendance and treatment, irrespective of any salary paid to such officer.

Free Choice of Doctor.

72. **Motion**: That the following Recommendation D of Council be adopted (paragraph 152 of Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 288):—

That the policy of the Association be that such insured persons as may wish to make their "own arrangements" with medical practitioners not on the panel may do so without the necessity of such practitioners entering into any written contract, and with no consequential loss of benefits to the insured persons.

Remainder of Annual Report of Council under Heading "(H) National Insurance."

73. **Motion**: That the remainder of the Annual Report of Council under Heading "(H) National Insurance," (paragraphs 115-55, SUPPLEMENT, May 2nd, 1914, pages 283-8,) be approved.

* By "similar institution" is meant "places of study admitting medical students and recognised by Universities and examining bodies whose diplomas are accepted by the General Medical Council, or admitting pupil midwives and recognised by the Central Midwives Board."

Title of Panel Committee.

74. **Amendment** by Stratford to paragraph 147 of Annual Report of Council, as to title of Panel Committee :—

That the title of the Panel Committee should be Panel Practitioners Committee in preference to the title of Practitioners Committee suggested by the Council.

National Insurance Act.

75. **Amendment** by St. Pancras and Islington to paragraph 153 of Annual Report of Council, as to future developments of Insurance Acts :—

That this Representative Meeting is of opinion that the working of the medical clauses of the National Insurance Act by members of the profession is derogatory to the profession and against the public interest.

(SUPPLEMENT, April 25th, 1914.)

Future Developments of Insurance Acts.

76. **Amendment** by North Middlesex to paragraph 153 of Annual Report of Council, as to future developments of Insurance Acts :—

That this Representative Meeting, realising that the medical clauses of the National Insurance Act in their present or some other amended forms are permanent, instructs the Council to ascertain from the Divisions what alterations in the Act would facilitate its working.

(I) Proposed Special Fund.

77. **Motion** : That the Special Report of Council concerning the proposed Special Fund (see Appendix X. to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 319-20) be received.

78. **Motion** : That the following Recommendation A of Council be adopted (Special Report as to Proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That immediate steps be taken to inaugurate a Fund.

79. **Motion** : That the following Recommendation B of Council be adopted (Special Report as to Proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That the object of the Fund shall be to protect the interests of the medical profession (a) by the formation of a reserve and (b) by doing such work as the British Medical Association is precluded by its constitution from undertaking.

80. **Motion** : That the following Recommendation C of Council be adopted (Special Report as to Proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That the Fund shall be collected and administered by a body separate from the British Medical Association.

81. **Motion** : That the following Recommendation D of Council be adopted (Special Report as to proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That the Fund shall be collected locally through grouped areas and administered centrally by a Committee.

82. **Motion** : That the following Recommendation E of Council be adopted (Special Report as to Proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That the organisation of the Association and its JOURNAL shall be used for the promotion of the Fund.

In the case of a Trade Union use would be limited to encouragement or advocacy in the columns of the JOURNAL or in Divisional Meetings. (*See* Sub-Appendix I, SUPPLEMENT, May 2nd, page 320.) In the case of a Trust it might be possible to arrange that the funds of the Association during the inauguration of the Fund, should provide clerical assistance or the use of paid officials. (*See* Sub-Appendix II, SUPPLEMENT, May 2nd, page 320).

83. **Motion** : That the following Recommendation of Council be adopted (last paragraph of Sub-Appendix I to Special Report of Council as to proposed Special Fund, SUPPLEMENT, May 2nd, 1914, page 320) :—

That the collection and administration of the Special Fund shall be placed in the hands of a trade union.

Remainder of Special Report of Council concerning Proposed Special Fund.

84. **Motion** : That the remainder of the Special Report of Council concerning the proposed Special Fund (*see* Appendix X to Annual Report of Council, SUPPLEMENT May 2nd, 1914, pages 319-320) be approved.

Minority Report as to Trust Method of Organisation of Proposed Special Fund.

85. **Motion** : That the Report on the Trust Method of organisation of the proposed Special Fund, adopted by a minority of the Council, be received (Sub-Appendix II to Appendix X to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, pages 320-1).

Minority Report against establishment at present time of a Special Fund.

86. **Motion** : That the report by Dr. McKenzie Johnston, member of the Special Fund Committee, against the establishment at the present time of a Special Fund (*see* Sub-Appendix III. to Appendix X. to Annual Report of Council, SUPPLEMENT, May 2nd, 1914, page 321), be received.

Remainder of Annual Report of Council under heading "(I) Proposed Special Fund."

87. **Motion** : That the remainder of the Annual Report of Council under heading "(I) Proposed Special Fund" (paragraphs 156-7, SUPPLEMENT, May 2nd, 1914, pages 288-9), be approved.

National Medical Guild.

88. **Rider** by ALTRINCHAM :

That this Representative Meeting is of opinion that the Members of the British Medical Association should be officially advised to become members of the National Medical Guild, and that the Council be instructed to give effect to this opinion.

(SUPPLEMENT, April 25th, 1914.)

(J) Public Health and Poor Law.

89. **Motion** : That the Annual Report of Council under heading "(J) Public Health and Poor Law" (paragraphs 158-69, SUPPLEMENT, May 2nd, 1914. pages 289-290), be approved.

(K) Hospitals.

Medical Aid Institutions and Members of Staffs of Hospitals.

90. **Motion** : That the Annual Report of Council under heading "(K) Hospitals," as to medical aid institutions and members of medical staffs of hospitals (paragraph 170, SUPPLEMENT, May 2nd, 1914, page 290), be approved.

(L) Naval and Military.

Election of Service Members of Council.

91. **Motion** : That the following Recommendation A of Council be adopted (paragraph 174 of Annual Report of Council, page 290) :—

That the Officers elected at the Annual Representative Meeting 1914, to represent on the Council the Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, be appointed to serve for a period of three years in each case.

92. **Motion** : That the following Recommendation B of Council be adopted (paragraph 175 of Annual Report of Council, page 290) :—

That the following representatives of the Services on the Council be appointed for the period 1914-17 :—

(a) For the Royal Navy Medical Service :—

Director-General Sir James Porter, K.C.B., R.N. (Retd.)

(b) For the Army Medical Service :—

Col. H. J. Waller Barrow, A.M.S. (Retd.)

(c) For the Indian Medical Service :—

Surg. Gen. P. H. Benson, I.M.S. (Retd.)

Remainder of Annual Report of Council under heading "(L) Naval and Military."

93. **Motion**: That the remainder of the Annual Report of Council under heading "(L) Naval and Military" (paragraphs 171-5, SUPPLEMENT, May 2nd, 1914, page 290) be approved.

(M) Scotland.

94. **Motion**: That the Annual Report of Council under heading "(M) Scotland" (paragraphs 176-182, pages 290-1) be approved.

(N) Ireland.

Organisation of Profession.

95. **Motion**: That the Annual Report of Council under heading "(N) Ireland," as to organisation of profession in Ireland (paragraphs 183-9, page 291), be approved.

(O) Branches Outside United Kingdom.

96. **Motion**: That the Annual Report of Council under heading "(O) Branches outside United Kingdom" (paragraphs 190-9, pages 291-2) be approved.

General Approval of Annual Report of Council.

97. **Motion**: That, subject to the amendments and other resolutions adopted by the meeting with reference thereto, the Annual Report of Council be approved as a whole.

IV.—SUPPLEMENTARY AND ANY OTHER SPECIAL REPORTS OF COUNCIL.

(NOTE.—The Supplementary Report of Council will probably be published in the B.M.J. SUPPLEMENT of June 27th, 1914.)

V.—REPORTS OF COMMITTEES (IF ANY).

VI.—PROPOSED ALTERATIONS OF ARTICLES OF ASSOCIATION (IF ANY) OTHER THAN ABOVE.

VII.—PROPOSED ALTERATIONS OF BY-LAWS OF ASSOCIATION (IF ANY) OTHER THAN ABOVE.

VIII.—ELECTION OF OFFICERS.

98. (a) Elect a Chairman of Representative Meetings under By-laws 37 and 58 and Standing Order 34 (*see* page 342 of this SUPPLEMENT).

99. (b) Elect a Deputy-Chairman of Representative Meetings under By-law 37 and Standing Order 34 (*see* page 342 of this Supplement).

100. (c) Elect a Treasurer under By-law 60 and Standing Order 34 (*see* page 342 of this Supplement).

IX.—ELECTION OF VICE-PRESIDENTS AND HONORARY MEMBERS (IF ANY).

Under By-laws 62, 8 and 37, and Standing Order 35 (*see* page 343 of this Supplement).

X.—ELECTION OF MEMBERS OF COUNCIL.

101. (a) Election of 12 Members of Council by Grouped Representatives under By-law 43 (c) and Standing Order 36 (*see* page 343 of this Supplement).

102. (b) Elect 4 Members of Council under By-law 43 (d) and Standing Order 37 (*see* page 343 of this Supplement).

XI.—ELECTION OF MEMBERS OF COMMITTEES.

103. (a) Elect 4 Members of Finance, 3 of Organisation, 3 of Journal, 6 of Central Ethical, 6 of Medico-Political, 4 of Public Health, 6 of Hospitals, 2 of Naval and Military, and 2 of Dominions Committee and other Committees, if any, under By-law 66 and Schedule thereto, and Standing Orders 38-48 (pages 343-4 of this Supplement).

104. (b) Elect such number of members of Insurance Act Committee as the meeting may determine.

XII.—STANDING ORDERS.

105. Consider proposed amendments (if any) of Standing Orders other than relating to Order of Business.

106. XIII.—ANY OTHER BUSINESS.

107. XIV.—CONFIRM MINUTES.

By Order,
ALFRED COX,
Medical Secretary.

May 6th, 1914.

STANDING ORDERS

RELATIVE TO

BUSINESS AT REPRESENTATIVE MEETINGS,

As adopted at Brighton, July, 1913.

I.—ORDER OF BUSINESS.

(A)—*Annual Representative Meeting.*

1. Except as may be otherwise determined in the manner prescribed by the Standing Orders, the order of business shall be as follows:—

i. **Election Returns.**—Receive the return of the Election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives under By-law 34.

ii. **Standing Orders.**—Adopt Standing Orders.

iii. **Annual Report of Council.**—Receive the Annual Report of the Council with the Balance Sheet and Financial Statement for the past year, and the Estimate of income and expenditure for the current year presented under Article 40, and consider motions relating to the adoption thereof in whole or in part.

iv. **Special Reports of Council.**—Receive Special Reports of the Council, if any, in the order in which the Council shall submit them for consideration, and consider motions for the adoption thereof in whole or in part.

v. **Reports of Committees (if any).**—Receive Reports of Committees, if any, and consider motions for the adoption of the same in whole or in part.

vi. **Consider By-laws.**—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting, by which it is proposed to make By-laws or to alter or repeal existing By-laws.

vii. **Consider other Motions by Divisions or Branches.**—Consider, in such order as the Meeting shall determine, any other motions placed upon the Agenda of the Meeting by Divisions or Branches.

viii. **Election of Officers.**—Elect at such time as the Meeting shall determine:—

(*a*) President of the Association under By-law 57.

(*b*) Chairman of Representative Meetings, under By-law 58.

(c) Deputy-Chairman of Representative Meetings, under By-law 37.

(d) Treasurer (if the office be vacant), under By-law 61.

ix. **Election of Vice Presidents and Honorary Members.**—Consider, at such time as the Meeting shall determine, nominations, if any, by the Council of :—

(a) Vice-Presidents, under By-law 62.

(b) Honorary Members, under By-law 8.

x. **Election of Members of Council.** Elect at such time as the Meeting shall determine :—

(a) Twelve Members of Council, under By-law 43 (c);

(b) Four Members of Council, under By-law 43 (d);

(c) Three Members of Council, under By-law 43 (e).

xi. **Election of Members of Committees.** Elect Members of Standing Committees in accordance with the By-laws, and such Members of other Committees and Conferences, if any, as it falls to the Representative Meeting to elect.

xii. **Amendment of Standing Orders.**—Consider proposed amendments of Standing Orders, other than those relating to the order of business.

2. **General Order of Daily Sessions : Confirmation of Minutes.**—The matters described in Clause 1 shall be considered in the order therein prescribed, or as otherwise duly determined, from day to day until the completion thereof or until the expiration of four days from the first day of the Meeting, whichever shall first occur; provided that at each daily session after the first, the Meeting shall, before proceeding to the consideration of the matters aforesaid, (A) confirm the Minutes of the Proceedings of the previous daily session; (B) consider motions, if any, relating to the order of business of the day. At the conclusion of the business of the last daily session the Meeting shall confirm the Minutes thereof for presentation to the Council.

3. **Hours of Daily Sessions.**—All Representative Meetings not concluded by 6.30 p.m. shall stand adjourned either to 8 p.m. of the same day, or to the next day, as may be decided by a show of hands. All such Meetings shall stand adjourned at 10 p.m.

4. **Varying Order of Business.**—The order of business may be varied at any time by the vote of two-thirds of those present and voting.

5. **Precedence of Motions of which Notice Given.**—Motions and amendments of which notice shall have been given to the Secretary of the Meeting in time for them to be circulated with the Minutes of the previous day's proceedings, shall have precedence, in the order in which such notice shall have been given, over those relating to the same subject, or otherwise having a like claim to precedence in the order of business, of which such notice has not been given.

6. **Motions on the Same Subject.**—If two or more of the motions placed on the Agenda of the Meeting by the Council and by Divisions and Branches shall appear to the Chairman to relate to the same subject, he shall ascertain the will of the Meeting in respect of the consideration of one of such motions as an original motion, and of the others as amendments thereto, in such order as the Meeting may determine.

7. **Motions on Subjects dealt with in Reports.**—If any motion placed upon the Agenda shall in the opinion of the Chairman relate to the same subject as a recommendation or other portion of a Report submitted by the Council or by a Committee, the Chairman shall ascertain the will of the Meeting as to whether the said Motion shall be considered as an Amendment or Rider to the adoption or approval of the said Recommendation or other portion of a Report.

8. **Resolutions Involving Special Expenditure.**—The Meeting shall not proceed on any motion involving special expenditure which has not previously been considered by the Finance Committee.

(B)—*Special Representative Meetings.*

9. **Read Authority for Convening Meeting.**—Read the Resolution of Council, or the requisition from Divisions, in pursuance of which the Meeting is convened.

10. **Notice of Substitutes.**—Receive notices, if any, of the appointment of substitutes for Representatives.

11. **Order of Business.**—If the Meeting is convened to consider more than one matter, determine the order in which such matters shall be considered.

12. **Special Business.**—Consider the matters which the Meeting is specifically convened to consider, in order determined by the Meeting.

13. **Minutes.**—Confirm the minutes of the Meeting for presentation to the Council.

I.—COMPOSITION AND ARRANGEMENT OF THE MEETING.

14. **Composition.**—The Persons constituting the Meeting, hereinafter called members of the Meeting, shall be those duly elected Representatives of Divisions, or substitutes duly appointed under By-law 34, of whose election or appointment the Secretary of the Meeting shall have received due notice, together with Members of Council for the time being in office, or elected to take office at the conclusion of the Meeting.

15. **Arrangement.**—Distinctive seats shall be provided for the following groups of persons respectively, namely :

(A) Representatives of Divisions.

(B) Members of Council who are not Representatives of Divisions or Officers of the Association.

(C) Officers of the Association, present in virtue of their office, or at the request of the Meeting, for the assistance thereof.

(D) Members of the Association who are not Representatives of Divisions or Members of Council.

(E) Reporters representing such journals as may be authorised by the Chairman, subject to the approval of the Meeting.

16. **Withdrawal of Strangers.**—It shall be competent at any time for a member of the Meeting to move that persons who are not members of the Meeting be requested to withdraw, or that persons who are not Members of the Association be requested to withdraw, but it shall rest in the discretion of the Chairman to submit or not to submit such motion to the Meeting.

III.—PROCEDURE.

17. **Temporary Chairman.**—In the absence of the Chairman of Representative Meetings, the Deputy-Chairman shall preside; or, if he be also absent, the Chairman of Council or the Treasurer, if present, shall take the chair, and call upon the Meeting to appoint a temporary Chairman.

18. **Minutes.**—Minutes shall be taken of the proceedings of the Meeting, and the same shall be duly entered in a book provided for the purpose. The Minutes of each daily session of the Annual Representative Meeting shall be printed and circulated to the Members of the Meeting. Minutes (if) (when) printed in the Daily Journal of the Annual Meeting shall be deemed thereby to have been circulated as required by this order.

19. **Attendance.**—No Representative shall leave the Meeting without permission obtained personally from the Chairman at the time of leaving. If during any daily session of a Representative Meeting it shall at any time appear to the Chairman that a quorum is not present, the roll shall be called of Representatives appointed to attend the Meeting, and those Representatives who are found to be then absent, not having previously obtained leave from the Chairman, shall be deemed to have been absent from the said session. A list of Members reported as absent from any daily session or sessions of a Representative Meeting shall be supplied at the close of such Meeting to the Chairman and shall by him be transmitted to the Council, together with such explanations of the cause of absence as any Members so reported may have furnished to him in writing.

20. There shall be an Agenda Committee of the Representative Body to consider and report to each Meeting of the Representative Body on the method of dealing with the Agenda of such Meeting, and such Committee shall consist of the Chairman of Representative Meetings, the Chairman of Council, and the four members of Council elected by the Representative Body under By-law 43 (d), then in office.

21. **Reports : Notice.**—Subject as herein provided, no Report by the Council, or by a Committee, to the Representative Meeting shall be considered by the Meeting unless it shall

have been sent to the Divisions and published in the Journal at least one month before such Meeting. The exceptions to this rule shall be—

(A) That the Council shall submit, in addition to their Annual Report, a Supplementary Report dealing with those matters of importance, arising subsequent to the issue of the Annual Report in which action has been taken, or action by the Representative Meetings is recommended.

(B) That any Special Committee appointed by the Representative Meeting shall report in accordance with the terms of the instructions given to such Committee by the Meeting.

22. Form of Reports.—Reports of Council and Reports, if any, of Standing Committees, to the Representative Meeting, shall comprise the following:—

(i.) A list of matters referred by the Representative Meeting to the Council or Committee.

(ii.) Reports with specific recommendations upon all matters in which the Council or Committee considers that action should be taken involving a new declaration of policy or expenditure not already authorised.

(iii.) A short report of all action taken by the Council or Committee in accordance with instructions of the Meeting.

(iv.) A list of matters under consideration but not completed.

23. Presentation of Reports.—The report of the Council or of a Committee shall be presented by the Chairman, or, in his absence, by a Member, of the body submitting such Report, who shall move—

(i.) That the Report be received.
(ii.) That the Recommendations, if any, be adopted.
(iii.) That the rest of the Report be approved.

The adoption of each recommendation shall be the subject of a separate motion. The approval of the rest of the Report shall be moved as a whole, unless the Chairman rule or the Meeting resolve that the approval of each paragraph, or of any specified paragraph, be the subject of a separate motion.

24. Amendments and Riders—

(i.) To a Motion that the Report be received, no amendment shall be moved.

(ii.) To a motion that a Recommendation be adopted amendments may be moved.

(iii.) To a motion that a Report, or a specified paragraph of a Report, be approved, an amendment may be moved to the effect that the Meeting do disagree with, or do refer back to the Council or Committee, any specified portion thereof, or that with reference thereto the meeting do express an opinion in terms stated.

25. Procedure as to Other Motions.—Motions placed on the Agenda of the Meeting by a Branch shall be introduced by a Member of Council elected by the Branch, and Motions so placed by a Division shall be introduced by the Representative thereof.

26. Absence of Authorised Mover of Adoption of Report or Other Motion.—In the absence of any Member authorised to make any motion referred to in Standing Order 23 or 25, any other Member deputed by such Member may make such motion on his behalf, and if no Member shall have been so deputed, such motion shall be made formally by the Chairman.

27. Seconding Motions.—No seconder shall be required for any of the motions referred to in Standing Order 23 or 25. All other motions and all amendments shall be required to be moved and seconded.

28. References to Central Executive.—Each motion or amendment which is of the nature of an instruction or reference to any central executive body, other than a Committee, specially appointed by the Representative Meeting, shall be moved in the form of an instruction or a reference to the Council.

29. Rescission of Resolutions.—No motion to rescind any Resolution of a Representative Meeting, shall be in order at any subsequent Representative Meeting, unless at least two months' notice of such proposed motion shall have been given to the Divisions through the Supplement to the Journal.

30. Time Limits of Speeches.—(A) A member of the Meeting shall be allowed to speak for fifteen minutes in moving a resolution which does not require seconding, and for ten minutes in moving any other resolution, or any amendment. Except as aforesaid, no speech shall exceed five minutes

31. Reducing Time Limit.—(B) The Meeting may at any period of any session reduce the time to be allowed to speakers, whether in moving resolutions or otherwise, during the remainder of such session.

32. Voting.—Only Representatives of Divisions shall vote on any question before the Meeting.

33. Mode of Voting.—Voting shall be by show of hands, except in the cases following, namely:—

(i.) **Vote by Card.**—(A) If, upon the Chairman proceeding to take the vote of the Meeting upon any motion or amendment, any Representative of a Constituency shall move that the said vote be taken by card, and twenty Representatives rise in their places in support of such motion, the vote shall be taken by card, and the names of those voting for and against such motion or amendment, of those not voting, and of the Constituencies which they severally represent, shall be entered on the minutes.

A card vote shall be taken in the following manner:—

At the commencement of the Representative Meeting a list of those entitled to vote shall be prepared, with, in a column opposite the name of each, the number of votes to which the voter is entitled in accordance with By-law 39 (3).

The names of the Representatives shall be grouped together under their respective Branches in the alphabetical order of their Constituencies, and the reply "Aye" or "No" entered opposite each name in another column.

The necessary additions shall then be made.

(ii.) **Division.**—(B) If the Chairman, after taking a vote by show of hands upon any motion or amendment, shall be of opinion that the numbers of members voting for and against such motion or amendment are not thereby ascertained with sufficient accuracy, he shall have power to direct that the Meeting shall divide upon the said motion or amendment.

(iii.) **Vote by Roll Call.**—(C) If, upon the Chairman proceeding to take the vote of the Meeting upon any motion or amendment, it shall be moved and seconded that the said vote be taken by roll call, and ten Representatives rise in their places in support of such motion, the vote shall be taken by roll call, provided a vote by card is not requested and obtained pursuant to the provisions of By-law 39 and Standing Order 33 (i.), and the names of those voting for and against such motion or amendment, of those not voting, and of the Constituencies which they severally represent, shall be entered on the minutes and published in the Supplement.

34. Election of Officers of the Association:

NOMINATION.

(i.) Nominations for the offices of President of the Association, Chairman of Representative Meetings, Deputy Chairman of Representative Meetings, and Treasurer, shall be handed in writing to the Secretary of the Meeting not later than one hour after the commencement of the second day's proceedings. Each nomination shall be signed by the nominator, and shall contain a declaration that the candidate nominated has agreed to serve.

(ii.) If only one candidate be nominated for any office, such candidate shall at once be declared by the Chairman to be elected.

VOTING.

(iii.) If more than one candidate be duly nominated, the names of all such candidates shall be duly placed in a voting paper, which shall be issued and collected at such times as the Meeting shall direct. Each voter shall number the names of the candidates for each office in the order of his preference.

The Scrutineers shall proceed as follows:

(a) On the first count each candidate shall be credited with the number of votes given by those voters who have numbered him (1), and if any candidate be found to have received an absolute majority of votes cast he shall be declared to be elected.

(b) If no candidate be thus elected, that candidate who has received fewest votes shall be excluded, and his votes shall be transferred to the candidates respectively numbered as next preference on his voting papers, and any candidate now found to have an absolute majority shall be declared to be elected.

(c) If after the first transfer, no candidate be declared to be elected, the procedure of exclusion and transfer shall be repeated, and so on until one candidate is declared to be elected.

(d) If on a count between three candidates no candidate be found to be elected, and the candidates who have fewer have an equal number of votes, the preferences on the voting papers of the highest candidate shall, for the time being, be credited to the other two candidates, and that candidate who has fewer votes shall be excluded.

(e) If on a count between two candidates, after the others have been excluded, the votes are equal, that candidate who has the larger number of first preference votes shall be declared to be elected.

(f) In any case of equality subsisting after this procedure, one of the candidates shall be excluded by lot.

(g) Any voting paper shall become invalid if its preferences be exhausted before a candidate is declared elected.

ENTRANCE INTO OFFICE.

(iv.) Except with regard to *ex-officio* membership of Council and Committees, the Chairman and Deputy Chairman so elected shall not assume their functions until the close of the Annual Meeting.

35. Election of Vice-Presidents and Honorary Members.—The name of any person nominated by the Council for election as a Vice-President or an Honorary Member shall be submitted to the Meeting from the Chair.

36. Election of Twelve Members of Council by Grouped Representatives under By-law 43 (c)—

(i.) The election shall take place at the time of the Annual Representative Meeting.

(ii.) Nominations for a Member of Council to be elected by any group of Representatives shall be required to be made by a Division (through its Representative) or by a Representative of a Division included in the group.

(iii.) Nominations shall be required to be on the prescribed form.

(iv.) Nominations shall be received up to the end of the first hour of the third day's session of the Annual Representative Meeting.

(v.) There shall be issued to each Representative or Deputy Representative of a Constituency in the United Kingdom in attendance at the Meeting a voting paper containing the names of all candidates duly nominated for election as Members of Council by the group to which such Representative belongs.

(vi.) The voting paper shall be in the prescribed form

(vii.) Each Representative shall number the candidates on the list in the order of his preference. The voting papers shall be collected at such time as the Meeting shall direct.

(viii.) The votes shall be counted in accordance with the method of the Single Transferable Vote. In the event of two candidates being found at any stage in the counting to have the same number of votes in their favour, each voter shall be credited with the number of votes which he would be entitled to give on a vote by card, and the candidate who shall then be found to have received the greatest number of votes shall have the preference.

(ix.) The details of the voting shall be placed before, and verified by, the Chairman before being declared.

37. Election of 4 Members of Council under By-law 43 (d)

(i.) Nominations of candidates for election as Member of Council by the Representative Meeting under By-law 43, Sub paragraph (d), shall be handed to the Secretary of the Meeting not later than the end of the first hour of the morning session, on the fourth day of the Annual Representative Meeting.

(ii.) Any Member of the Association may be nominated for election.

(iii.) A nomination may be made by any person entitled to take part in the meeting. Each nomination shall be on the prescribed form, which shall contain a statement of the candidate's experience in the Central Executive work of the Association, and shall contain, or be accompanied by, a statement by the candidate that he is willing to serve if elected.

(iv.) Voting papers containing the names of all candidates duly nominated, with such particulars as to their previous official experience as are stated in the nomination papers, shall be distributed to all Representatives or Deputy-Representatives in attendance at the Meeting, at the commencement of the afternoon session on the fourth day of the Annual Representative Meeting.

(v.) Each voter shall number the names of candidates in the order of his preference—one, two, three, etc., and sign the Voting Paper.

(vi.) The votes shall be counted and the result of the Election ascertained by the method of the Single Transferable Vote.

(vii.) The details of the voting shall be submitted to, and verified by, the Chairman before the result is declared.

Election of Members of Standing Committees.

38. There shall be an Election Returns Committee of the Representative Meeting, which shall consist of the Chairman of Representative Meetings, the Chairman of Council, the Deputy-Chairman of Representative Meetings, the Chairmen of those Standing Committees of which under the By-laws Members are appointed by the Representative Meeting and the Chairman of the Scottish and Irish Committees.

39. The Committee shall prepare a Return showing for each Committee, Members of which are elected by the Meeting: (1) the Members of such Committee for the past year (those not appointed by the Representative Meeting being specially indicated); (2) the years of service on the Committee; (3) their possible and actual attendances at (i.) Meetings of the full Committee, and (ii.) Meetings of its Sub-Committees, held up to three weeks before the commencement of the Annual Meeting. The Return shall be issued to each Representative with the Agenda of the Meeting.

40. With regard to the Finance, Journal, and Organisation Committees, only Representatives of Divisions shall be eligible for appointment.

41. After the commencement of the Annual Representative Meeting the Committee shall prepare a list of nominations for the various Committees. In this list it shall indicate which of those nominated are Representatives, and which, if any, are Members of Council for the ensuing year.

42. In preparing the list the Committee shall have regard to (A) geographical representation on Committees where this is important; (B) the previous attendance of Members on Committees; (C) the declarations of Members as to the Committees on which they are prepared to serve.

43. With the Agenda of the Representative Meeting nomination papers for Committees shall be issued to all Members of the Meeting.

44. Each Member of the Meeting shall be entitled to nominate not more than one Member for each Committee.

45. Nomination papers by Members of the Meeting shall be handed to the Secretary of the Meeting.

46. No Representative shall be eligible for election by the Representative Meeting as a Member of more than two Committees, and no person not a Representative shall be eligible for election by the Representative Meeting as a Member of more than one Committee. If any Representative be nominated as a Member of more than two Committees, the Committee shall ascertain from him on which he prefers to serve, or, if this be impracticable, shall decide which nomina-

tion shall stand; and if any person, not a representative, be nominated for more than one Committee, the Committee shall decide which of such nominations shall stand.

47. Voting papers, containing the names of all candidates duly nominated, shall be circulated to all Representatives at the commencement of the fourth day's proceedings, and shall be collected before 1 p.m. that day.

48. The word "Representative" in these Standing Orders shall be taken as meaning the duly appointed Representative of a Constituency, or, in his absence, the Deputy duly appointed in his stead, in attendance at the Meeting.

49. Election of Service Members of Council.—The election of Members to represent the Royal Naval Medical Service, the Army Medical Service, and the Indian Medical Service on the Council shall be conducted as follows:—

(i.) In addition to Members nominated by the Council, it shall be open to any Member of the Representative Body to nominate a candidate for election as a Service Member of Council.

(ii.) Voting papers containing the names of all candidates duly nominated shall be circulated to the Representatives and be collected at the same time as the voting papers for the election of the Chairman and Deputy-Chairman of Representative Meetings.

(iii.) The votes shall be counted and the result of the election ascertained by the method of the Single Transferable Vote.

(iv.) The details of the voting shall be submitted to the Chairman of Representative Meetings and verified by him before the result is declared

Committee of the whole Representative Body.

50. Upon it being resolved that any item or items of the Agenda of a Representative Meeting be considered in Committee of the whole Representative Body, the following shall be the procedure:—

(i.) The consideration of the business in Committee shall take place at such time as the Representative Meeting shall determine.

(ii.) In Committee of the Representative Body, Representatives of Divisions and Members of Council respectively shall have the same rights of voting and speaking as in a Representative Meeting, and the rules of debate shall be the same as for a Representative Meeting, except that a Member may, subject to the consent of the Chairman, speak more than once on the same motion or amendment.

(iii.) On the conclusion of the consideration of the business referred to the Committee, the Committee shall confirm its Minutes as the Report of the Committee to the Representative Body, and the Representative Meeting shall thereupon resume.

(iv.) The proceedings of the Committee may be temporarily suspended at any time by a resolution that the Committee be adjourned, whereupon the Representative Meeting shall resume. The business of the Committee shall be resumed at such time as shall be fixed by the Committee, unless otherwise determined by a vote of the Representative Meeting.

IV.—RULES OF DEBATE.

51. Every member shall be seated except the one who may be addressing the Meeting, and when the Chairman rises no one shall continue to stand, nor shall any one rise until the Chair is resumed.

52. A member of the Meeting shall stand when speaking and shall address the Chair.

53. A member who speaks shall direct his speech strictly to the motion under discussion, or to a motion or amendment to be proposed by himself, or to a question of order.

54. A member shall not address the Meeting more than once on any motion or amendment, but the mover of a resolution or amendment may reply, and in his reply shall strictly confine himself to answering previous speakers, and shall not introduce any new matter into the debate: provided always that a member may speak to a point of order, or, by consent of the Meeting, in explanation of some material part of a speech made by him which he believes to have been misunderstood.

55. A motion or amendment once made and seconded shall not be altered or withdrawn without the consent of the Meeting.

56. An amendment shall be either—

To leave out words;

To leave out words and insert or add others;

To insert or add words;

or in such form as shall be approved of by the Chairman, provided always that the amendment be relevant to the motion on which it is moved, and be not equivalent to the direct negative thereof.

57. No notice of motion, or amendment to any motion before the Meeting, not already published, shall be considered by the Meeting until a copy of the same with the name of the proposer has been handed in in writing to the Chairman.

58. Whenever an amendment upon an original motion has been moved and seconded no second or subsequent amendment shall be moved until the first amendment shall have been disposed of, but notice of any number of amendments may be given.

59. If any amendment be rejected, other amendments may be moved on the original motion. If an amendment be carried, the amendment or motion as amended shall take the place of the original motion, and shall become the question upon which any further amendment may be moved.

60. If it be proposed and seconded that the Meeting do now adjourn, or that the debate be adjourned, or that the Meeting do proceed to the next business, or that the question be now put, such motion shall immediately be put to the vote without discussion, except as to the time of adjournment, provided always that the Chairman shall have power to decline to put to the Meeting the motions that the Meeting do proceed to the next business, or that the question be now put.

61. A motion that the Meeting do now adjourn, or that the Meeting do now proceed to the next business, or that the debate be now adjourned, or that the question be now put, shall not be made within a period of one hour after a previous motion to the like effect, unless, in the opinion of the Chairman, the circumstances are materially altered.

62. Smoking shall not be allowed during such time as the Chairman is in the Chair.

V.—SUSPENSION OF STANDING ORDERS.

63. Any one or more of the Standing Orders, in any case of urgency, or upon motion made on notice given through the Daily Journal, may be suspended at any Meeting, so far as regards any business of such Meeting, provided that three-fourths of those present and voting shall so decide.

Meetings of Branches and Divisions.

EDINBURGH BRANCH:

South-Eastern Counties Division.

A meeting of the Division was held in the Railway Hotel, Newtown St. Boswells, on April 24th, under the presidency of Dr. W. Blair, Chairman; nine other members were present.

Medical Defence.—A letter was read from the Scottish Committee of the British Medical Association, recommending members of the Association to join a defence union, and take out an insurance policy through such a union for damages in respect of any claim for alleged negligence or malpraxis. After explanations by Dr. Johnstone, it was agreed, on the motion of Dr. Campbell, to bring the matter to the notice of the Local Medical Committees in the Division.

Medical Aid Institutes.—The memorandum by the Medico-Political and Hospitals Committees concerning the question of medical aid institutes (Supplement, April 4th, p. 201) was read, and a letter dated January 30th from Dr. Stevens on behalf of a Subcommittee on Contract Practice, dealing with the same question, was received. The members present stated that there were no institutes within the area of the Division to which the definition in the above memorandum applied. Dr. Muir referred to certain institutes in Selkirk known as dispensaries which were somewhat of the character described, but differed in

respect that they were under medical control. He further stated that about twelve years ago an attempt had been made to establish institutes within the area of the Division, but failed owing to the opposition of the profession. On the suggestion of Dr. Muir it was agreed that there was no necessity for such institutes within the South-Eastern Counties, and that in the event of action being taken to establish them it should be opposed on the lines suggested in the memorandum.

Model Scheme for the Treatment of Tuberculosis.—The memorandum of the Insurance Act Committee on a model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th, p. 204) was read, and the SECRETARY explained that as a county medical officer he was aware that such schemes were under consideration by local authorities, the Local Government Board of Scotland, and the Scottish Insurance Commissioners, but at present the nature and amount of work that would be required of medical practitioners were not determined definitely. When that question was settled, the amount of remuneration to be offered would fall to be considered. The meeting approved generally of the scheme as a model, but agreed that schemes must be varied in accordance with local conditions.

Division and Ethical Rules.—The SECRETARY submitted a copy of the rules and ethical rules of the Division, ordered to be printed at the meeting held on June 11th, 1912, and corrected in accordance with the requirements of the Organization Committee, as contained in a letter from the Medical Secretary, dated February 23rd, 1914. Dr. MUIR having pointed out that there was no rule providing a quorum for a meeting of the Division, it was agreed that the Secretary should make inquiries on this point and report later.

Cards of Insured Persons.—The SECRETARY intimated that he had received in the morning a telephone message from Dr. J. R. Hamilton, Chairman of the Scottish Committee, regarding the advisability of the Division making representations to the Insurance Commissioners on the subject of the failure of certain approved societies to issue cards whereby many persons were not on the list of any medical practitioner who in consequence failed to receive the capitation payment due to him in respect of such persons. Owing to the fact that medical benefit is in the hands of the Insurance Committees and not of approved societies, the members present, in default of further information, were unable to understand how such failure on the part of approved societies could affect the practitioner, unless it were in regard to unallotted insured persons, in respect of whom within the area of the Division the proper payments to practitioners had been made by the Insurance Committees.

Local Defence Fund.—The SECRETARY stated, in reply to Dr. MUIR, that he had no information in regard to a circular issued by the Treasurer of the Branch Council as to a call on the local Defence Fund. Dr. JOHNSTONE, representative on the Branch Council, related the circumstances under which the circular had been issued and referred to the strong moral obligation on all members who had guaranteed sums to the fund to make payments on the call of the proper authorities in charge of the fund.

LANCASHIRE AND CHESHIRE BRANCH:

ROCHDALE DIVISION.

THE annual meeting of the Rochdale Division was held on April 22nd, when Dr. GEDDES was in the chair and thirteen other members were present.

Annual Report.—The annual report, presented by the SECRETARY, showed a decrease of one in the membership of the Division as compared with the previous year. The financial statement showed a balance in hand. Six meetings had been held during the year, with an average attendance of fifteen. The Executive Committee had met twice, when the average attendance had been four.

Election of Officers. — The following officers were unanimously elected for the year:

Chairman: Dr. Jefferson (Rochdale).
Vice-Chairman: Dr. Geddes (Heywood).
Representative to Representative Meetings: Dr. Walker (Rochdale).
Deputy Representative: Dr. Lord (Castleton).
Secretary and Treasurer: Dr. James Melvin (Rochdale).
Executive Committee: The office-bearers and Drs. Carse, Cox, Grant, and Richmond.

Expenses of Representative to Representative Meeting.—On the motion of Dr. COX, seconded by Dr. CARSE, the Chairman and Secretary were requested to make a levy in order to pay the Representative 42s. a day.

Medico-political Work.—The question of the medico-political work of the Association, raised by Dr. WALKER, was postponed till the next meeting of the Division.

Vote of Thanks.—A vote of thanks to the officers for their services during the year was acknowledged by Dr. Geddes.

METROPOLITAN COUNTIES BRANCH:

ISLINGTON AND ST. PANCRAS DIVISION.

A MEETING of the St. Pancras and Islington Division was held on April 16th.

Model Ethical Rules.—On the motion of the Chairman (Dr. P. W. RATTRAY), seconded by Dr. WICKHAM, the model ethical rules were agreed to *nemine contradicente*.

Medical Aid Institutes.—The memorandum by the Joint Medico-Political and Hospital Committees concerning the question of Medical Aid Institutes (SUPPLEMENT, April 4th, p. 201) was discussed, and replies respecting the position of the Islington Dispensary—the only institute of the kind in the area—were settled.

Model Scheme for Treatment of Tuberculosis.—On the motion of Dr. MORISON, seconded by Dr. WICKHAM, 1 and 2 under IV (*b*) were agreed to.

Election of Representative to Representative Meetings.—Dr. Beaton was appointed Representative, and Dr. B. G. Morison Deputy Representative of the Division.

Working of the Insurance Act.

A motion in Dr. Brown's name as to whether or not it is now derogatory for the profession to work the National Insurance Act was in his absence brought forward by Dr. BEATON, who expressed the opinion that the Act was still derogatory as lowering the dignity and repute of the profession. He asked practitioners on the panel who were present frankly to state their views in the light of their experience as to whether service under the Act was derogatory.

Dr. BEATON proposed and Dr. WICKHAM seconded the following motion:

> That this Division is of opinion that the working of th medical clauses of the National Insurance Act by members of the profession is derogatory to the profession and against the interest of the public.

Dr. ROCHE objected to the statement that such service was derogatory and believed that when more practitioners undertook service under the Act its beneficial effects would be more apparent. Dr. COTTER spoke to the same effect.

Dr. WICKHAM was of opinion that many persons who were getting very inadequate treatment before were now receiving better attendance.

Dr. MORISON maintained that the Act was derogatory.

Dr. WYLLIE said that he had been obliged to go on the panel, but he had not been satisfied with the methods of the Insurance Committees. He found that the tendency in his case was to overwork and under-payment. He had repeatedly protested to the Commissioners, and his representations had been ignored. He considered that the resolution embodied a dignified and useful protest.

Dr. MAUGHAN considered the Act was detrimental to the public, as his experience showed that patients did not receive from the practitioner who had a large number of patients such efficient treatment as they were entitled to. The same applied to the quality of drugs.

The CHAIRMAN quoted Dr. Salter of Bermondsey, who, at first a strong advocate of the Act, now concluded that it merely provided overwork for practitioners and defective treatment for insured.

Dr. BEATON, in winding up the discussion, asked for a clear statement of opinion, and held that the Representative Meeting should also speak definitely. At present it was open to the accusation that it was sailing under false colours. He contended that the clause providing for free choice of doctor was futile, and maintained that under the Act it was impossible to avoid taking patients of a neighbouring practitioner, which was not professional. He considered that no practitioner could deal fairly with his patients under present conditions.

On being put to the meeting, the "Ayes" and "Noes" were equally divided, and Dr. Beaton's motion was carried by the Chairman's casting vote.

SOUTH-WESTERN BRANCH:
Exeter Division.

A meeting of the Division was held on April 21st at the Royal Devon and Exeter Hospital.

Model Scheme for the Treatment of Tuberculosis.—The model scheme for the treatment of tuberculosis (Supplement, April 4th, p. 204) was considered, and it was decided that a copy of the scheme as far as the words "Astor Committee, paragraphs 27 and 28" should be sent to the Chairman of the Public Health Committee of the County Council in support of Dr. Adkins's application for increase in salary. The Honorary Secretary was instructed to write to head quarters for further instructions to be brought before a future meeting of the Division with regard to the treatment of tuberculous persons not insured under the National Insurance Act.

Medical Aid Institutes.—The memorandum on medical aid institutes was considered, and it was decided that, as no medical aid institutes or "schemes" of the kind (defined in paragraph 3 of the Memorandum of the Supplement of April 4th, 1914) existed in the area of the Division, it was unnecessary to approach the honorary members of the local hospital staffs on the subject unless and until occasion arose.

STAFFORDSHIRE BRANCH:
South Staffordshire Division.

The annual meeting of the Division was held at Wolverhampton on April 28th, when Dr. Craig, Vice-Chairman, presided, and fourteen members were present.

Vote of Condolence.—It was resolved to send a vote of condolence with the Chairman, Dr. Galbraith, in the recent bereavement he had sustained in the death of his mother.

Election of Officers.—The following officers were elected for 1914-15:

Chairman: Mr. J. A. Wolverson.
Vice-Chairman: Dr. T. H. Galbraith.
Honorary Secretary: Dr. H. C. Mactier.
Representative in Representative Meeting: Dr. H. C. Mactier.
Three Members of Branch Council: Dr. Ridley Bailey, Dr. T. Connell Craig, and Dr. H. Malet.
Six Members of Executive Committee: Dr. A. M. Bankier, Dr. W. Bates, Dr. J. A. Codd, Dr. F. A. Cooke, Dr. D. Mann, and Dr. E. W. Strange. Mr. W. F. Cholmeley, as President of the Staffordshire Branch, is *ex officio* a member of the Committee.

Contract Practice.—In accordance with the ethical rules, the resolutions of the Division as to contract practice as set forth on the agenda were confirmed.

Medical Aid Institutes.—After a discussion of the memorandum on medical aid institutes (Supplement, April 4th), in which the honorary members of hospital staffs present joined, it was resolved, on the proposition of Dr. Ridley Bailey, seconded by Mr. Cholmeley:

That the Chairman and Secretary be authorized to answer the questions in D 22.

Treatment of Tuberculosis.—The model scheme for the treatment of tuberculosis (Supplement, April 4th) was unanimously approved.

School Medical Officers.—A letter from the School Medical Service group of the Society of Medical Officers of Health was then read, asking the Division to support two resolutions—(1) as to salary of assistant whole-time medical officers, and (2) as to security of tenure, etc. On the motion of Mr. Deanesly, seconded by Mr. Wolverson, an amendment by Dr. Badger not having been seconded, it was resolved:

That the Secretary be instructed to reply to Dr. Ashkenny, that while sympathizing with the principles of the resolutions, the Division did not desire to bind itself to support them.

Vote of Thanks.—Mr. Wolverson briefly thanked the meeting for electing him Chairman, and proposed a vote of thanks to Dr. T. H. Galbraith for his conduct in the chair. This was seconded by Mr. Cholmeley, and carried unanimously.

BOMBAY BRANCH.

The annual meeting of the Bombay Branch was held in the University Library on April 2nd, when Dr. Sorab K. Nariman, M.D., occupied the chair, and about twenty members were present.

Election of Officers.—The following Branch Council was declared to have been elected by voting papers according to Rules 5, 6, and 9:

President: The Honourable Surgeon-General R. W. Lyons, I.M.S.
Vice-Presidents: Lieutenant-Colonel Ashton Street, I.M.S.; Dr. Sorab K. Nariman, M.D.
Honorary Secretary and Treasurer: D. R. Bardi, Esq., F.R.C.S.I., L.M. and S.
Branch Council: Dr. R. Row, M.D., D.Sc.Lond.; Lieutenant-Colonel S. C. Evans, I.M.S.; Major E. F. Gordon-Tucker, I.M.S.; Dr. Sorab K. Engineer, M.R.C.P.Edin.; Miss A. M. Benson, M.D.; Assistant-Surgeon Erneh S. Bharucha.
Representative at the Representative Meeting: Major E. F. Gordon-Tucker, I.M.S.

Annual Report.—The annual report of the Branch Council, together with the financial statement, was adopted. The report enumerated the change in the composition of the Council, and stated that six meetings of the Branch had been held during the year with an average attendance of 18, at which scientific papers were read and clinical cases were shown. It also contained a list of reports, etc., which had been received. The question of bogus degrees and diplomas issued by unauthorized bodies had also been discussed, and the Branch had unanimously resolved to support the Government in its effort to prohibit unauthorized bodies from granting degrees and diplomas, and penalizing the issuing of such as well as those practising under them. The report recorded the fact that the Government had made a substantial grant to the College of Physicians and Surgeons, which it was thought would enable the College to diffuse Western medicine far and wide through the Presidency, and allow of the M.B., B.S., and other university degrees being made more searching tests of medical and scientific knowledge.

Clinical Cases.—Miss A. M. Benson, M.D., read notes and showed drawings and microscopical specimens of a myomatous uterine tumour. Dr. A. K. Contractor showed very interesting *x*-ray negatives, including various rare fractures, pulmonary phthisis, and dilatation of oesophagus and stomach. Dr. A. Powell described a specimen of urine in which his assistant Dr. Bana had detected *Bodo-Urinarius*, which he proved was a parasite in the case under consideration.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

NOTICES OF MOTION: LAST DAY FOR RECEPTION.

Attention is drawn to the fact that Notices of Motion from Divisions or Branches for the consideration of the Annual Representative Meeting at Aberdeen in July next, proposing to make any addition to, or any amendment, alteration, or repeal of, any Regulation or By-law, or to make any new Regulation or By-law (Article 31), must be published in the Journal not later than the issue of May 23rd, and received by me not later than May 16th, 1914.

By Order,
Alfred Cox,
Medical Secretary.

February 11th, 1914.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A list of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are

stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

BRANCH AND DIVISION MEETINGS TO BE HELD.

To ensure the insertion of notices in this column they must be received at the Central Offices of the Association not later than the first post on Tuesday.

GLASGOW AND WEST OF SCOTLAND BRANCH.—Dr. William Bryce, Honorary Secretary (30, Armadale Street, Dennistoun, Glasgow), gives notice that the annual general meeting of the Branch will be held in the Western Infirmary on Tuesday, May 12th, 1914, at 3 p.m., when Dr. A. T. Campbell will preside. Business: Honorary Secretary's report, Honorary Treasurer's report, election of office-bearers. At 2 p.m. a visit of inspection will be paid to the new Royal Hospital for Sick Children at Yorkhill, under the guidance of Dr. D. J. Mackintosh, M.V.O. Tea will be served in the Western Infirmary at the close of the business meeting. At 4 p.m. a clinical demonstration will be given by the members of the staff of the Western Infirmary in the theatre. The members of the Branch will dine in the Grosvenor Restaurant, Gordon Street, at 6.30 p.m. Dinner ticket, 5s. Morning dress.

LANCASHIRE AND CHESHIRE BRANCH.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—Dr. T. W. H. Garstang, Joint Honorary Secretary (22, Station Buildings, Altrincham), gives notice that a meeting of the Altrincham Division will be held at Altrincham on Wednesday, May 20th, at 4 p.m.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.—Dr. J. H. Clatworthy, Honorary Secretary (145, Denmark Hill, S.E.), gives notice that the annual meeting will be held on Wednesday, May 20th, at 4 p.m., at 2, Underhill Road, Lordship Lane, S.E., where the retiring chairman, Dr. G. B. Batten, has kindly offered to entertain the meeting. Agenda: Election of officers for the coming session. To instruct the Representative how to vote at the Annual Representative Meeting: (*a*) On the Report of Council (SUPPLEMENTS, May 2nd and 9th); (*b*) On the model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th); (*c*) On the question of medical aid institutes, vide memorandum (SUPPLEMENT, April 4th); it is particularly requested that members should make themselves familiar with the contents of this memorandum; (*d*) To consider a request from the Society of Medical Officers of Health (School Medical Service Group) that the Division should support certain resolutions. The Bermondsey guardians have decided to substitute for the services of district Poor Law medical officers that of whole-time medical officers. The opinion of the Division, especially those members resident in Bermondsey, is desired on that point, and also as to what action should be taken, if any.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice of alteration of date of the annual meeting of the Division, which will be held in Balfour Hall, Kingsland Road, on Tuesday, May 26th, at 3.30 p.m.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.—Dr. Francis W. Goodbody, Honorary Secretary, gives notice that the annual general meeting will be held at the rooms of the Medical Society of London, 11, Chandos Street, W., on Friday, May 15th, at 5 p.m. Agenda: Correspondence. Questions (of which due notice should be given). To receive the annual report of the Executive Committee. Mr. Somerville Hastings gives notice that he will bring forward a motion claiming a date for the discussion for the advantages of a State Medical Service. To elect the officers of the Division for the ensuing year.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—Dr. R. Tuxford, Honorary Secretary (12, Wide Bargate, Boston), gives notice that the annual meeting of the Division will be held at the White Hart Hotel, Boston, on Friday, May 22nd, 1914, at 12.45 p.m. Agenda: Adoption of model rules by the Division; receive report of the Committee on Forms D 21 and D 22; election of officers, committee, and Representatives; to consider annual report of the Council (SUPPLEMENT, May 2nd). (Lunch will be provided at the hotel if a sufficient number of members signify their intention to be present.)

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH: FURNESS DIVISION.—Drs. A. E. Thompson and George Alexander, Honorary Secretaries, give notice that the annual meeting will be held in the Masonic Hall, Barrow, on Friday, May 29th, at 3.15 p.m. Business: Annual report; election of office-bearers; resolution by Dr. Harper, "That the Furness Division take a more active part in public health work"; proposed alteration in boundary of the Division; proposition from School Medical Officers' Association; Representative's expenses.

NORTH OF ENGLAND BRANCH.—Mr. David F. Todd, Honorary Secretary (Beech House, Sunderland), gives notice that the annual meeting of the North of England Branch will be held at the Assembly Rooms, Westgate Road, Newcastle-on-Tyne, on Thursday, May 14th, at 4 p.m. Business: Election of President, and Presidential Address by Dr. A. C. Farquharson, entitled "The Influence and Responsibilities of the Medical Profession in Social Legislation and Administration."

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—Dr. Arthur E. Larking, Honorary Secretary (Buckingham), gives notice that the annual meeting of the Division will be held at the Royal Bucks Hospital, Aylesbury, on Tuesday, May 19th, at 3 o'clock. Mr. Whitelocke, Surgeon to the Radcliffe Infirmary, Oxford, will give an address on "The Treatment of Sprains." The other business will be: Election of officers, Representative, etc.; receive annual report; instruct Representative for Representative Meeting.

SURREY BRANCH: REIGATE DIVISION.—Dr. Francis Gayner, Honorary Secretary, gives notice that the annual meeting of the Division will be held at Laker's Hotel, Redhill, on Wednesday, May 13th, 1914, at 4 o'clock. Business: (1) Election of officers. The following have been nominated by the Executive Committee: Chairman, Dr. A. R. Walters; Representative at Representative Meetings, Dr. S. Morton Mackenzie; Honorary Secretary and Treasurer, Dr. C. S. Crichton; Executive Committee, Drs. Walters, Caldecott, S. A. Clarke, Gayner, Hewetson, Mackenzie, Price, Prince, Thornton, Baker, Weir, and Crichton; Representative on Branch Council, ——. It is hoped that the Vice-Chairman and four additional members of the Executive Committee may be elected from the districts which have recently become incorporated in the Reigate Division. (2) Annual report. (3) Letters from the Medical Secretary dealing with (*a*) Medical Aid Institutes, (*b*) Model Scheme for the Treatment of Tuberculosis (SUPPLEMENT, April 4th), (*c*) Medical Referees. (4) Other business.

SHIP SURGEONS.

THE following practitioners have consented to act as "Correspondents" of the Ship Surgeons Subcommittee, and are prepared to discuss with any ship surgeon in their area any matter of interest either to that surgeon or to ship surgeons in general, and to forward representations to the Subcommittee in regard to any question in connexion with which central action seems desirable:

Correspondent.	*Port.*
Dr. J. Godding, 56, Leadenhall Street, London, E.C.	London.
Dr. A. G. Hinks, 40, St. Vincent Row, Southend-on-Sea	London.
Dr. H. T. Bates, Church Road, Wavertree, Liverpool	Liverpool.
Dr. C. Carlyle, 13, Menlove Avenue, Mossley Hill, Liverpool	Liverpool.
Dr. J. C. H. Beaumont, Chinsura, Khartoum Hill Road, Southampton	Southampton.
Dr. O. V. Currie, Union Castle Buildings, 58, Adderley Street, Capetown	Capetown.

Ship surgeons visiting these ports and desiring to discuss matters of interest to the service are invited to place themselves in communication with the correspondent for the port.

The Medical Secretary, 429, Strand, London, W.C., will be glad to hear from practitioners in passenger ports not mentioned above who are willing to act as correspondents to the Subcommittee.

Ship surgeons are also asked to forward for the guidance of the Subcommittee, either to one of the above correspondents or to the Medical Secretary, British Medical Association, 429, Strand, London, W.C., their views upon the following questions:

(1) Whether ship surgeons should receive full sea pay while in port *plus* a subsistence allowance at the same rate granted to the chief officer, with a possible liability to have to report every day at the office of the company, or whether they would prefer to receive full sea pay only in port without such liability; subsistence pay, however, to be paid upon those days in port when any duty connected with the ship is performed.

(2) Their views generally on the question of annual leave being granted with full pay to permanent ship surgeons.

LOCAL MEDICAL AND PANEL COMMITTEES.

SURREY.

PANEL COMMITTEE.

THE second meeting of the Panel Committee for the county of Surrey was held at Surbiton Cottage Hospital on April 17th, when Dr. A. E. EVANS was in the chair.

Election of Member.—Dr. Gordon (Richmond) was appointed to fill a vacancy which had occurred in the Richmond area.

Organization of Panel Committees.—It was unanimously decided to support a scheme for the organization of the Panel Committees. It was decided to ask all practitioners in the county voluntarily to allow a deduction of ½ per cent. of all moneys due to them from the Insurance Committee so as to finance the Panel Committee on a voluntary basis; it was felt that this was the only method by which the profession could use its own money as it wished.

Contracting Out.—A resolution was sent to the County Committee pointing out that the method of dealing with persons allowed to make their own arrangements was very unjust in that, owing to the delay in making repayments to them, they had to decide whether they wished to be allowed to contract out for the current year before they had any idea of how much repayment they were going to receive for the previous year.

Special Mileage Fund.—It was decided that the area covered by the Guildford and Reigate District Insurance Committees and the Epsom and Godstone Rural District Councils should be the areas to which this fund should apply.

Checking of Prescriptions.—A resolution was sent to the County Insurance Committee expressing the opinion of the Panel Committee that the checking of prescriptions was an administrative expense, which should not be borne by the practitioners on the panel.

BERKSHIRE.

LOCAL MEDICAL AND PANEL COMMITTEES.

THE twenty-first meeting of the Berks Local Medical Committee and the fourth meeting of the Berks Panel Committee were held conjointly on May 1st at the Royal Berks Hospital, when twelve members were present.

Election of Members.—Dr. Hollist (Maidenhead) was elected on the Committee, vice Dr. Anderson (Maidenhead) resigned.

Transference of Insured Persons.—The Honorary Secretary was instructed to send the following resolution to the Clerk of the Insurance Committee:

> That this Committee is of the opinion that an insured person should not be removed from a doctor's list for any reason except in case of death, or suspension from medical benefit, until such person has signified in writing that he or she desires to be transferred to another doctor.

Finance Subcommittee.—The report of the Finance Subcommittee was approved and cheques were signed.

Drug Subcommittee.—The report of the Drug Subcommittee was also approved.

Election of Panel Committees.—It was decided to adopt Scheme A of the draft Model Schemes for the Constitution of Panel Committees (SUPPLEMENT, April 18th, p. 233; April 25th, p. 253), with a few amendments.

Mileage.—The Special Mileage Grant Subcommittee reported that it was unable to come to a decision as the Insurance Committee had refused certain details, and the Honorary Secretary was instructed to obtain these details from the Insurance Committee.

Adjournment.—Other business was postponed, as the meeting had already lasted three hours.

BUCKS.

COMBINED PANEL AND LOCAL MEDICAL COMMITTEE.

A MEETING of the combined Panel and Local Medical Committee was held on May 1st at the Royal Bucks Hospital. Dr. BAKER was in the chair, and fifteen members were present. It was decided that the minutes of the two committees should be signed as one.

Election of Panel Committee.—Memorandum 44 I.C. (SUPPLEMENT, p. 233) and the model schemes for the election of Panel Committees (SUPPLEMENT, p. 253) were considered, together with a letter in answer to an inquiry by the Secretary, which stated that a model scheme was in preparation for the election of Local Medical Committees, and that in one of these it was made possible for the two committees to be the same in personnel. The letter also stated that the returning officer should be some such person as a barrister, solicitor, chartered accountant, or officer of some public authority. The costs of the election were to be paid out of the grant under Section 33 (2) of the 1913 Act. The Secretary of the Panel Committee, if paid for his services, must not be a member of the committee. Finally, on the motion of Dr. E. O. TURNER, seconded by Dr. BENSON, it was agreed:

> That a Committee, consisting of the Chairman, Dr. Rose, Dr. Shaw, and the Secretary, be appointed to draw up a scheme based on Model B and adapted to meet the conditions existing in the county, and that it be submitted to a meeting of the Committee.

Medical Referees.—Correspondence was read showing that the Prudential Approved Society was endeavouring to get certain medical men to act as referees at a lower fee than 10s. 6d., but that, owing to the action taken by the Committee, it had been unsuccessful. It was decided to support the suggestions of the British Medical Association, and a copy of the resolution that medical referees should be whole-time officers of not less than ten years' standing, pensionable, and with a salary of not less than £750 per annum, was sent to the Commissioners and to the Departmental Committee.

Emergency Medicines.—It was reported that the Buckinghamshire Chemists' Association had written to the Insurance Committee asking that its resolution, allowing doctors to supply medicines in emergencies at a cost of 1s., be rescinded. The Panel Committee, to whom the matter had been referred, pointed out that, although the chemists stated that they had arranged to supply at all reasonable times, it was just in cases which did not come under that condition that it was necessary to supply medicine, and that although the number of cases that had been supplied was very small indeed, the Panel Committee could not, in the interests of the insured, recommend that the resolution be rescinded.

Expenses of Chemists.—It was resolved to offer no objection to an application from the chemists for the consent of the Panel Committee for a grant of £35 for their expenses, and notice was given to rescind a resolution passed at the last meeting to enable this to be carried out.

Range of Medical Service.—It was resolved that neither the testing of refraction cases nor the supply of oxygen came under the ordinary term of medical benefit. With regard to charging a fee for consultations, it was resolved to ask the opinion of the Insurance Committee of the British Medical Association.

Unallotted Insurance Persons.—In reply to a letter from the Commissioners relating to patients who had a difficulty in obtaining a doctor, it was pointed out that the Committee had already appointed three of its members to undertake this duty in cases of urgency.

Medicines for Temporary Residents.—It was resolved that a flat rate of 1s. per supply of medicine be charged to temporary residents in cases in which the doctor supplied medicine.

Financial Statement.—The accounts for the first quarter were submitted and passed and a letter was read from the Clerk stating that he would endeavour in future to supply the details of how the cheques were made up, but that he did not know when the 1913 accounts would be quite settled owing to the difficulty of paying for temporary residents and to the fact that the index registers are inflated. The SECRETARY reported that a sum of £63 11s. 10d. had been received from the Clerk, being the voluntary deduction of one farthing per person on the list signed by nearly every medical man on the Bucks panel. An honorarium of 3 guineas was presented to the Clerk for the trouble he had taken in the matter.

Honorarium to Honorary Secretary.—It was decided to grant an honorarium of 50 guineas to Dr. Larking, who had acted as Secretary since the formation of the Local Medical Committee, the decision to be included in the agenda for next meeting for confirmation.

Organization of Committees.—A report on the conference of Panel Committees was made by the SECRETARY, who had attended as representative, and it was decided to

contribute £4 towards the expenses, being at the rate of £1 per 20,000 insured persons in the county.

Continuing Certificates.—The custom of the National Deposit Friendly Society requiring all continuing certificates to be given on a Tuesday was again discussed and various ways of getting over the difficulty were named.

Partnership.—A letter of inquiry as to partnerships was read, and the opinion was expressed that no difficulty would be created whether only one or both partners signed the cards.

Resignation of Member.—Dr. Charsley having resigned the Committee, it was resolved that Dr. Meggs be asked to invite some other practitioner from Slough to take his place.

Complaints.—A few cases of difficulty between doctors and insured persons that had been referred to the Committee were settled.

GLOUCESTERSHIRE.

PANEL COMMITTEE.

THE first meeting of the County of Gloucestershire Panel Committee was held at the Shire Hall, Gloucester, on March 27th, and, being unable to complete its business, adjourned until April 9th. The meeting on March 27th was attended by Mr. Gardom and Mr. Goodchild, members of the County Insurance Committee. The following is a summary of the business transacted at the two meetings.

Constitution of Committee.—Dr. Campbell was elected chairman, and Dr. D. E. Finlay (Gloucester) secretary. It was announced that the following members had been elected by the districts indicated:

Cheltenham: R. Davies, A. A. Dighton, H. F. Powell.
Chipping Sodbury: E. F. Clowes.
Thornbury: L. H. Williams.
Kingswood: T. Aubrey, R. E. Legat, C. J. Perrott.
Wheatenhurst, Berkeley, and Dursley: A. J. Campbell.
Gloucester: J. A. Bell.

The meeting co-opted members to represent districts in which no candidates had been nominated, and the following have accepted nomination;

Tewkesbury: A. F. Turner.
East Dean: T. G. Miles.
Northleach, Campden, etc.: W. Cox, E. Dening.
Stroud: A. B. Davies, R. Wilson.
West Dean: P. Buchanan.
Cirencester and Tetbury: H. E. Graham.

Six other members were co-opted, and all have accepted nomination—namely, Awdry, Johnston, Knight, Conder, Finlay, and Waller.

Payments to Medical Men.—Mr. GOODCHILD made a statement on behalf of the Insurance Committee with regard to the distribution of funds for medical men for the past year, and showed that the amount was inadequate to pay the arrears due. At the adjourned meeting a letter from Mr. Goodchild on this subject to Dr. Campbell was read. It was resolved to send a letter to the Commissioners with regard to the arrears of payment to medical men for 1913.

Work of the Committee.—A Subcommittee, consisting of Dr. Campbell, Dr. H. Powell, and Dr. Finlay, was appointed to consider the arrangements which should be made for clerical assistance, the date of the next election, and as to the term of office of members. At the adjourned meeting a scheme for the election of the next Panel Committee was considered, and the SECRETARY undertook to embody certain proposed additions, and to bring the matter up again.

Distribution of Unallotted Funds.—The following resolution was passed on March 27th regarding money for those insured persons who had not chosen a doctor:

> The money to be divided into two equal parts.
> One moiety to be distributed equally between every man on the panel for the county of Gloucester.
> The other moiety to be distributed among those men with open panels, in proportion to number of panel patients on their lists credited by the County Insurance Committee.

It was decided at the adjourned meeting that doctors on the panel should be paid in proportion to the length of time they had served—quarter, half, and three-quarter year; that the list of patients on which the division was based should be the list of the end of the year, and that if the above scheme was carried out all panel practitioners must accept any patient coming to them. The following were elected to meet the Subcommittee of the Insurance Committee to discuss payment of surplus money: Dr. Campbell, Dr. H. Powell, Dr. Witson, and Dr. Finlay.

Expenses of Committee.—On the motion of Dr. CAMPBELL, seconded by Dr. AWDRY, it was resolved:

> That a voluntary levy be made of 1d. from all panel practitioners for expenses and work of Panel Committee for 1914, and that if possible this be deducted from moneys due at insurance offices by the Clerk to the Insurance Committee.

Excessive Prescribing.—The notice of the Committee was drawn to alleged excessive supply of drugs in the case of six doctors. The Secretary was requested to write to the doctors asking them whether they wished to make any statements.

DEVONSHIRE.

PANEL COMMITTEE.

A MEETING of the Devon County Panel Committee was held at Exeter on April 22nd.

Conference of Panel Committee Representatives.—The CHAIRMAN reported that he attended the Conference of the Panel Committee Representatives, and that it had been resolved to form a federation, and referred members to the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of March 21st for further information. He also reported that the Committee had been asked by the Secretary of the conference to subscribe £1 per 20,000 insured persons in their area towards the preliminary expenses of the conference, and that he and the Secretary had agreed to this payment, without calling a meeting of the Committee, because it would have cost most members of the Committee more to come to a meeting than to subscribe the amount asked for, which would be about 5s. a head. The meeting unanimously approved of this action.

A letter from the Leicester Panel Committee, asking the Devon County Committee to press for the registration of the Conference of Panel Committee Representatives as a trades union, was, after discussion, allowed to lie on the table.

Administrative Expenses of Panel and Pharmaceutical Committees.—A letter, dated April 17th, received by the Clerk to the Devon County Insurance Committee from the Commissioners, was read, asking for an estimate of the expenses of the Panel and Pharmaceutical Committees. The meeting expressed the unanimous opinion that the money concerned, being a portion of the practitioners' fund, belonged to the panel in the county, and that therefore the Commissioners could not dictate how it should be used, provided that the men on the panel agreed in the matter. It was felt that there was no justification for calling a meeting to discuss any business which the Commissioners might wish transacted, until proper arrangements had been made for meeting the expenses incurred by members in attending such meetings of the Committee.

Rules for Election of Panel Committee.—The time at the disposal of the meeting not allowing of the reading through of the model scheme issued by the Commissioners (SUPPLEMENT, April 18th, p. 233, and April 25th, p. 253), even apart from the accompanying explanations thereof issued, it was decided to defer the matter.

WEST SUFFOLK.

PANEL COMMITTEE.

A MEETING of the Committee was held on April 21st.

Prescription Books.—The SECRETARY reported that the new prescription books are now available.

Correspondence.—A letter from the Borough of Leicester Panel and Local Medical Committees was received suggesting that the proposed new organization should be registered as a trade union. It was decided to reconsider the question at a later date.

Unallotted Funds for Year 1913.—Copy of letters from the Commissioners were submitted by the Clerk to the Insurance Committee, in which it was stated:

1. That the drug and drug suspense funds in respect of unallotted persons cannot be allotted among practitioners as suggested.
2. That no further payments in respect of the past year are to be made to practitioners pending the receipt by the Insurance Committee of their revised credit, according to Memo. 192 I.C.

It was agreed that no further action should be taken until the amount of the revised credit was known.

Persons Refused by Doctors or Unallotted.—A small subcommittee was appointed to draw up a scheme for submission to the Committee at its next meeting.

Provisional Committee.—A letter from the Chairman (Mr. D. F. Todd) was received. It was agreed to guarantee the sum required—namely, £2—towards the expenses of this Committee.

Schemes for Permanent Constitution.—Model Schemes A and B submitted by Commissioners (SUPPLEMENT, April 18th, p. 233; April 25th, p. 253) were considered, and it was decided to adopt Scheme A. The number of elected members to be twelve, and of co-opted members three.

LOCAL MEDICAL COMMITTEE.

This Committee held a meeting with the Panel Committee on April 21st, and such of the business as concerned both of the Committees was transacted conjointly.

WEST RIDING OF YORKSHIRE.

LOCAL MEDICAL AND PANEL COMMITTEES.

MEETINGS of the Local Medical and Panel Committees, which are identical in personnel and officers, have been held recently and the following is a summary of the proceedings:

Recognition of Committee.—The Commissioners have recognized the present Local Medical Committee until July 15th, 1914.

Changes in the Local Medical Committee.—The resignation of Dr. Pringle as the representative of Harrogate and Ripon was received with regret, and it was announced that Dr. Newton Wade of Intake, near Sheffield, had been appointed representative of Handsworth, vice Dr. John Hill, resigned.

Medical Service Subcommittee.—Drs. May and Hillman and Russell have been appointed members of the new Medical Service Subcommittee.

Assignment of Patients and Allocation of Funds.—The scheme of the Medical Benefit Subcommittee for the assignment of insured persons to doctors, and the allocation of the pool arising from insured persons not assigned, was discussed in detail, and a deputation was appointed to meet the Medical Benefit Subcommittee for the purpose of discussing the scheme. A letter of protest was sent to the Commissioners with reference to the recent decision of the West Riding Insurance Committee to publish a list of doctors with the number of their panel patients. In their reply the Commissioners pointed out (*a*) that the information contained in the list was required in connexion with the preparation of a scheme under Article 21 (4) of the Regulations (1914), and (*b*) that the Commissioners had no power to veto the circulation of information by an Insurance Committee to its members. The Commissioners had, however, impressed on the Insurance Committee the strictly private and confidential nature of the return. It was thereupon decided to await the action of the Insurance Committee.

Financial Statement.—The financial statement for the year 1913 showed a balance in hand of £37.

Excessive Ordering of Drugs.—With regard to the recommendation of the Local Medical Committee of November, 1913, that certain doctors should be surcharged for proprietary articles prescribed, a letter was read from the Clerk to the Insurance Committee referring the matter back in order that the doctors concerned should have an opportunity of appearing before the Local Medical Committee in accordance with Clause 46 (2) of the Regulations, 1913. It was agreed to invite the doctors concerned to appear.

Range of Medical Service.—After considering a letter from a panel doctor inquiring whether the operation of circumcision in an adult under a general anaesthetic came within the scope of medical service under the Act, it was decided to reaffirm the resolution of January 30th, 1913:

> That any operation requiring a general anaesthetic be considered as outside the scope of medical benefit under the Act.

The Honorary Secretary was instructed to reply to the inquirer and to the Clerk of the Insurance Committee accordingly.

Disputed Removals.—The action of the Clerk of the Insurance Committee in striking insured persons off the doctors' lists before the fact of their change of address and removal from the district had been established beyond dispute, was referred to a subcommittee for inquiry and report.

Officers of Panel Committee.—At the first meeting of the Panel Committee held at Wakefield on February 5th, when twenty-five members were present, the following officers were appointed: *Chairman*, Dr. May; *Vice-Chairman*, Dr. Hillman; *Secretary*, Dr. Eardley; *Treasurer*, Dr. Fry.

COUNTY OF GLAMORGAN.

PANEL COMMITTEE.

A MEETING of the County of Glamorgan Panel Committee was held in the Glamorgan County Hall, Cardiff, on April 28th, Dr. W. E. THOMAS (Ystrad-Rhondda), in the chair, there being fifteen members present.

Medical Service Subcommittee.—The following were appointed representatives on the Medical Service Subcommittee: Drs. W. E. Thomas (Ystrad-Rhondda), J. Arnault Jones (Aberavon, Port Talbot), P. J. O'Donnell (Barry). [The Local Medical Committee has appointed Dr. W. Bickerton Edwards (Seven Sisters) as its representative.]

Election of Treasurer.—The Honorary Secretary, Dr. J. Shaw Lyttle (Creigiau), was appointed Treasurer to the Panel Committee.

Medical Referees.—The following resolution was adopted:

> That where any medical practitioner not devoting his whole time to the work is called upon by a lay body to express an opinion as to the capacity or incapacity of an insured person the lowest fee he should accept should be 10s. 6d.

Excessive Prescribing.—The meeting also discussed the subjects of excessive prescribing, sanatorium benefit, and the allocation of cards.

ROXBURGHSHIRE.

PANEL COMMITTEE.

A MEETING of the Panel Committee was held at St. Boswells on April 1st, when Dr. CULLEN was in the chair, and six other members were present.

Dispensing for Rural Patients.—A deputation was received from the Hawick Medical Association and from the medical profession in Selkirk to discuss the question of the supply of medicine to panel patients. Dr. HAMILTON (Hawick) explained the difficulties of the situation where medical practitioners attended patients in rural districts situated a considerable distance from a chemist, and said he personally would not consent to rendering quarterly accounts to the Insurance Committee to be paid on the same basis as a chemist. Unless doctors attending such patients were allowed to continue to dispense as formerly on a capitation basis, great inconvenience would be caused to insured persons who were quite satisfied with the present arrangement. Drs. GEORGESON and WILSON (Selkirk) having also spoken on the subject, the deputation withdrew. Owing to the request to receive the deputation not having been received in time to be placed on the agenda, it was decided that it could not be discussed at that meeting.

Grant under Section 33 (2) of the Act to Pharmaceutical and Panel Committees.—In reply to a letter from the County Insurance Committee, the clerk was instructed to state that the Panel Committee was not in a position to give a reliable estimate of the expenses which would be incurred by it for administration during the year ending January, 1915.

Emergency Drugs and Appliances.—After a conference with the Medical Benefit Subcommittee and the Pharmaceutical Committee, Drs. Fleming and Dixon were appointed representatives of the Panel Committee on a subcommittee appointed to formulate a list of emergency drugs and appliances for the approval of the Commissioners.

Conference of Local Medical and Panel Committees.—The CLERK, in reporting the decisions reached at the conference in London which he attended on behalf of the Committee, said that the account of the conference published in the SUPPLEMENT of March 24th was so complete that the only matter to which he need specifically refer was as to the granting of medical certificates and the remarks by Dr. Cox, Medical Secretary to the British Medical Association, who had stated that unless panel practitioners were to keep in view that their duty was to make the

panel system a success and to safeguard the funds of approved societies by keeping a watchful eye on malingerers, the machinery of the Act would break down, and that the only substitute for the present system would be a State medical service.

Subsequently a special general meeting was held under the chairmanship of Dr. CULLEN, when ten other members were present. It had been called on the requisition of twenty-one members, being three-fourths of the members of the Local Medical Committee, to discuss the increase of the number of members of the Executive Committee from seven to twelve. On the motion of the CHAIRMAN, seconded by Dr. CARLYLE JOHNSTONE, the following were unanimously appointed additional members of the Executive Committee: Drs. M. J. Oliver, John Shearer, A. D. Fleming, and Wm. T. Barrie, with Mr. E. W. Simpson, who had been appointed Secretary, vice Dr. Oliver, who had resigned that position.

Electrical Treatment under the Act.—The Secretary was instructed to reply to the inquiry of a panel practitioner that electrical treatment did not come within the scope of medical benefit under the Insurance Act.

Letter from Scottish Committee of British Medical Association.—A letter was read from the Scottish Committee of the British Medical Association intimating that it would be pleased to bring before the Commissioners any question which might require consideration between the profession and the Commissioners, with a view to a satisfactory adjustment in the interests of the profession. The meeting indicated that there was no question it wished to submit in this form at the present time.

Conference of Local Medical and Panel Committees.—The CLERK presented a report on the proceedings of the conference in London, which he attended as representing the counties of Roxburgh, Selkirk, Peebles, and Berwick.

A letter was read from Mr. D. F. Todd, Sunderland, Chairman of the Provisional Committee appointed at the Conference of Representatives in London, asking if this Committee would remit its proportion of the expenses of the new organization. The SECRETARY pointed out that the contribution for Roxburghshire would be £1, and the meeting instructed the Secretary to intimate that this Committee would contribute its proportion.

DUMBARTON.

PANEL COMMITTEE.

THE Dumbarton County Panel Committee met in Glasgow on April 29th, when Dr. W. S. YOUNG presided over a good attendance.

Mileage Grants.—A scheme of distribution of the grants for the first medical year was submitted and approved. Those practitioners who were entitled to claim receive an amount based on the number of "units" of mileage credited to them—each "unit" having a standard value—also (except as follows) a proportionate share of the unabsorbed balance available: Practitioners in Arrochar and Garelochhead instead of this share would receive a special grant on account of geographical difficulties.

Repeat Prescriptions.—It was agreed to inform the Insurance Committee that strong objection was taken to the additional clerical work involved in writing out all "repeat" prescriptions in full, and that it was sufficient to give the number or date of the original together with the name and address of the patient; further, that there was no need to require chemists to write out "repeats" in detail every time, but that these could be sent in for checking or account along with the original, or with one detailed copy.

Balance of Drug Fund.—It was decided to request that to each doctor who during the first year was permitted to dispense for the persons on his list there be paid a share of the balance of the Drug Fund proportionate to his share of the balance of the Panel Fund.

Certificates.—A request that the "name of the disease" should be inserted on "continuing" certificates was unanimously refused.

Medical Referees.—The standard laid down by the British Medical Association with regard to whole-time officers was approved, and it was also generally agreed that any practitioner (not a whole-time officer) called upon to report as to the capacity or incapacity for work of an insured person should not accept a lower fee than 10s. 6d. and expenses.

INSURANCE COMMITTEE.

At the meeting of the County Insurance Committee, on May 2nd, the scheme of distribution of mileage grants was approved, and it was stated that the payments were to be made shortly. The question of "repeat" prescriptions was remitted to the Panel and Pharmaceutical Committees for joint consideration, and it was also left to them to arrange the share from the Drug Fund balance to be paid to certain doctors in respect of unallocated persons.

It was reported that the total number of prescriptions issued during the first medical year was 34,908, average cost per prescription 9d., per insured person 1s. 1d. There are 24,000 insured persons in the county.

INSURANCE COMMITTEES.

BIRMINGHAM.

REPRESENTATIONS AS TO REMOVAL FROM THE PANEL.

THE Birmingham Insurance Committee last week decided to make representations to the Commissioners with a view to an inquiry in the case of a practitioner who it found reason to conclude had acted negligently in persistently refusing to attend when summoned, and in failing to provide proper treatment, and had issued a certificate of incapacity seven days after his last attendance on the patient. A previous complaint against the practitioner had been substantiated to the satisfaction of the Committee.

BRISTOL.

THE monthly meeting of the Bristol Insurance Committee was held on May 4th, Dr. WALTER SAISE being in the chair.

Cases referred to Medical Adviser.

The Medical Service Subcommittee reported that the Medical Adviser had seen 1,000 cases since March of last year with the following results:

Fit for work	40.2
Unfit for work	33.3
Did not attend	20.9
Returned to work	4.3
Workman's compensation	1.3
	100.0

Unallotted Funds.

The Medical Benefit Subcommittee in its report dealt with the additions to the panel, and stated that it hoped to make recommendation about the unallotted funds at the next meeting. With reference to this a letter from the Commissioners was read which stated:

As to the legality of payments being made to practitioners in respect of the insured persons who have not yet been accepted by any doctor, I am directed by the National Health Insurance Commission (England) to state that they have given their fullest consideration to this question and are advised that, on a proper interpretation of the Medical Benefit Regulations and the agreements entered into with practitioners, the practitioners on the panel are collectively entitled under the Regulations and their agreements to the whole sum available for the medical treatment and attendance of persons who do not receive their medical benefit through institutions or under special arrangements sanctioned by the Committee. . . . In particular I am to call your attention to Article 40 (3) of the National Health Insurance (Administration of Medical Benefit) Regulations, 1912, which provides that the whole of the Panel Fund shall be distributed upon the basis of the annual credits of practitioners and to the similar provision as regards the distribution of the Practitioners' Fund embodied in Article 35 of the current regulations. There can, therefore, be no unallotted surplus of the Panel Fund available for distribution in the manner suggested in the resolution of your Committee.

Mr. MORRIS said that the doctors had collectively taken the responsibility of treating all insured persons.

Mr. BELSTEN protested against what he called the robbery of the people's money, and held that the Commissioners were overriding the Act.

Dr. MICHELL CLARKE pointed out that if one man made a bargain with another, as the Chancellor had done with the medical profession, the money should be paid on condition responsibility was undertaken to treat insured persons, and that an honourable bargain should be kept.

Dr. CARTER reminded the Committee that some time ago it pressed the doctors to accept the system of payment according to incidence of sickness, which would mean that the whole of the funds would be available for the doctors.

Number of Insured Persons.

The report also stated that the number of insured persons in the area on April 12th, 1914, was—

Members of societies	79,661 men. 50,387 women.
Married women, Class H ...	112
Deposit contributors	1,535 men. 706 women.
Exempted persons	393
Navy and army	6
	132,800

Tuberculosis.

The question of the new temporary sanatorium and the healthiness site was discussed, and it was pointed out that the neighbourhood was by no means unsatisfactory.

An arrangement whereby the medical officer of health notified to the Civic League all cases of tuberculosis who would like the services of the after-care visitors was agreed to. Since the last report 36 applications for sanatorium benefits had been received, and the following cases were now under treatment at institutions: Winsley 38, Royal National Sanatorium 7, Ham Green Sanatorium 6, Clift House 13. The chairman stated that there were now 640 tuberculous persons being treated.

MANCHESTER.

COMPLAINTS AGAINST DOCTORS.

AT a meeting of the Manchester Insurance Committee held on April 28th a report was presented by the Medical Service Subcommittee on four complaints brought by approved societies against doctors on the panel. In two cases the Subcommittee decided that the charges were unproved, and expressed its disapproval of the way in which one case had been put forward. In a third case the committee thought that the society and the doctor might have arranged a settlement between themselves without reference to the Committee. The fourth case involved an apparent disagreement between two medical men as to the diagnosis of a case, but the Committee decided that the charge was not proved. The society is now at liberty, if so disposed, to lay the facts before the Insurance Commissioners. Mr. Alderman PLUMMER, Chairman of the Subcommittee, uttered a protest against societies making charges without sufficient previous investigation. Referring to the fourth case, Dr. MCGOWAN said the two doctors might yet be found to be in agreement, but he thought that the requirement of a definite diagnosis on a doctor's first certificate probably caused 20 per cent. of the diagnoses to be incorrect, and as societies objected to alterations in subsequent certificates, an incorrect diagnosis was then continued, but the doctors could hardly be blamed for this. Several representatives of approved societies present strongly objected to Dr. McGowan's further statement that it appeared that some societies objected to having the truth on the certificates. The Chairman, Mr. W. DAVIS, interposed, as he considered that any discussion of medical diagnoses was out of order.

General Charges Against Chemists.

Mr. J. U. SMITH made an attack on the chemists which was generally much resented. He asked if any method existed for checking the chemists in their making up of the doctors' prescriptions, as he asserted that there were general complaints that chemists were robbing the patients, and that the doctors were getting the blame for not giving proper medicine. A doctor had told him that certain powders which he had prescribed were not of the proper weight. In reply to the CHAIRMAN, Mr. SMITH said he was making a general charge, but the CHAIRMAN strongly deprecated such general statements. He considered that the doctor referred to ought to have made his complaint to the Committee, and it was an insult to the Committee to pass it over and make such statements to a person in the street instead of to the Committee appointed to investigate such matter. Mr. SMITH, however, persisted in saying that medicines were not as strong as had been supplied by private doctors, and he wondered how many doctors examined the medicines to see if they were properly made up. The CHAIRMAN said there was a plain remedy, for if either Mr. Smith or the doctor could prove that any chemist had altered a doctor's prescription in any way, such chemist would be open to dismissal from the panel and his living would be gone. Mr. KEMP, the representative of the pharmacists, assured the meeting that the Pharmaceutical Committee would carefully investigate any case of the kind brought to its notice, and the sooner any chemist found guilty of any such act was expelled from the list, the better. On the other hand, it was only fair to the chemists and in the interests of the insured that such charges, if unfounded, should be exposed. Mr. Alderman PLUMMER said it was unthinkable to him that the chemists should tamper with a doctor's prescriptions, and he would not hesitate to expose and punish any offender as severely as possible, but the Committee must have definite charges and not general statements. Dr. T. ARTHUR HELME said that the medical profession had suffered from similar charges, and in the same way the chemists would be very improperly besmirched by such general charges. The Medical Subcommittee took no part in these charges, and it had made no charges of the kind. There was no reason for a doctor to make such charges to lay persons, as there was proper machinery for the investigation. The matter then dropped.

The CLERK reminded the Committee that at the close of the year 1913, 25 per cent. of the amounts credited to the panel doctors had been retained by the Committee to meet possible surcharges against the doctors if over-prescribing should be proved. Certain cases were still under investigation, but the sum of £7,661 was due to doctors against whom there were no charges of over-prescribing. The Committee then passed a resolution that this amount be paid. It was further resolved that the sum of £15,771 be paid to the doctors on account of their work during the first quarter of the present year, this being at the rate of 40 per cent. of the accounts sent in.

INSURANCE NOTES.

SURPLUS FUNDS.

DR. A. R. EATES, Honorary Secretary (12, Thayer Street, Manchester Square, W.), asks us to state that a meeting, which all "small list doctors" are invited to attend, will be held on Saturday, May 9th, at 3 p.m., at the Eustace Miles Restaurant, Chandos Street, Charing Cross, to hear the report of the committee formed by them on March 17th last (SUPPLEMENT, March 21st, p. 176). A statement will also be made of the interview of the committee with the Panel Service Subcommittee.

"FREE CHOICE."

At a meeting of the Executive Committee of the Hampstead Insurance Medical Society held on May 5th, the following resolution was unanimously adopted:

> That whereas the amendment proposed by the Representative Meeting and now adopted by the Council to grant "free choice" to insured persons will afford to the friendly societies the opportunity to resume their arbitrary powers over the service, and to retain whole-time medical officers in their pay and under their authority, this Panel Association do protest against any such attempt, etc., to amend the Insurance Act.

AN INQUIRY AS TO MALINGERING.

Opinions have been collected from approved societies in Barrow in regard to a proposal to appoint a medical referee. The replies to the question, Has malingering taken place? were: Yes 8, No 22. To the question, Has your society experienced excessive sickness? the replies were: Yes 10, No 20; and to the question, Are you in favour of the appointment of a referee? the answers were: Yes 5, No 25. The Insurance Committee has decided, therefore, to take no further action in the matter.

INADEQUACY OF MEDICAL BENEFIT.

The Coventry Insurance Committee has passed a resolution expressing the opinion that medical benefit is unduly restricted, and that Insurance Committees should be empowered to provide whatever hospital accommodation is needed, further facilities for modern means of exact diagnosis, the services of trained nurses when recommended by the practitioner, and the provision of additional appliances.

WORDING OF CERTIFICATES.

The suggestion was made at the last meeting of the York Insurance Committee that some practitioners, in issuing certificates, disguised under other names diseases

due to misconduct in respect of which sickness benefit was not payable. The Vice-Chairman (Dr. Macdonald) pointed out that there were cases in which it was against the patient's interest that he should know what he was suffering from. Difficulties of diagnosis also precluded a definite statement in some cases. Dr. Evelyn, on behalf of the Panel Committee, promised that any specific complaints would be promptly considered.

MILEAGE, 1913.

We have received for publication a copy of the following letter addressed to the Insurance Commissioners, once more calling attention to the unfair distribution of the mileage fund for 1913, by the Chairman and Secretary of the Northumberland Insurance Committee.

25, Bridge Street,
Berwick-on-Tweed.
April 25th, 1914.

To the Secretary,
National Health Insurance Committee,
Buckingham Gate, London, S.W.

Mileage, 1913. J.C. 25/51. June 5th, 1913, to December 28th, 1913, et seq.

Sir,—I beg to refer you to the above correspondence, and in continuation beg to inform you that the scheme for mileage is being allowed to pass with little practical modification, which scheme is causing hardship to many of the local medical practitioners engaged in country practice, as these were assured by the Insurance authorities that if the agreement for 1913 was signed, satisfactory mileage would be forthcoming.

As at present arranged, some six practitioners will divide £1,600 amongst themselves, and two £125, whilst some forty-eight (who incur the same expenses and work) will divide £750. Notwithstanding this, some of the above practitioners who are thus treated most generously are also to be allowed to count once more amongst the other forty-eight who are to receive on an average some £16 towards their motor expenses for 1913.

It is argued that we did not make our demands clear, etc., at an early date. This, however, is incorrect, as there was correspondence with Newcastle before June 5th, 1913.—I am, yours faithfully,

JOHN PACTON,
Chairman.
J. CLEASBY TAYLOR, M.D.,
Secretary.

METHOD OF DEALING WITH REJECTED INSURED PERSONS.

The Bournemouth Insurance Committee, acting apparently on a communication from the Insurance Commissioners, has recommended that if an insured person has applied to, and been rejected by, a doctor, the latter shall inform the insured person that he should apply to the doctor on the panel nearest his residence, who shall thereupon accept such person on his list and give what treatment is required, as if such person had been allotted by the Insurance Committee.

The Isle of Wight Committee has decided that insured persons who have been rejected must make application to the clerk, who will allot them to the doctors on the panel list, alphabetically, taking the insured persons in the order of their application. The Medical Benefit Subcommittee explained that the first applicant would go to Dr. A., the second to Dr. B., and so on.

The East Suffolk Panel Committee has accepted the principle that "undesirable" persons should not be refused by the nearest doctor.

FREE CHOICE OF CHEMIST.

The Medical Benefit Subcommittee reported to the West Riding Insurance Committee that it had recently received complaints of undue influence exercised by practitioners upon insured persons in the choice of chemists. The Subcommittee found that there had been cause of complaint, but that this had been removed by the display in the surgeries of a notice informing insured persons that they had free choice of chemist. The Subcommittee proposed to take the opinion of the Commissioners as to the legality of any arrangement whereby a practitioner could carry on the business of a chemist by means of a qualified chemist as his agent. The Committee approved this course.

EXPENSIVE PRESCRIBING.

A general meeting of doctors and chemists on the panel in Wigan was held on April 24th to consider the steps which should be taken in view of a large increase in prescriptions during the first three months of the year as compared with the corresponding quarter of last year. A circular was drawn up and has been issued to practitioners working under the Insurance Act, appealing to them to replace prescriptions ordering two tablespoonful doses in 6-oz. bottles by 8-oz. mixtures with one tablespoonful dose. In this way an 8-oz. mixture ordered thrice daily would be a five days' supply. It was also stated that the drug fund for last year had been overspent by about £200, and that the Panel and Pharmaceutical Committees had decided that all last year's prescriptions in Wigan, together with those from certain other overspent boroughs in Lancashire, should be sent to a central office, possibly in Preston under joint management, where prescriptions considered extravagant would automatically be picked out and the doctors responsible surcharged. The circular indicated that in the opinion of the meeting the following may be classed under the head of extravagant prescribing:

1. The prescribing of extract of malt, malt and oil, cod-liver oil, and cod-liver oil emulsion for those not in receipt of sanatorium benefit, unless in exceptional cases. (For those receiving sanatorium benefit, 1 lb. per week of either of the two former, or half a pint per week either of the two latter, is deemed an ample supply.)
2. The prescribing of medicines by proprietary names when chemically equivalent terms might have met the case.
3. The prescribing of expensive liniments in quantities larger than 2 oz. at one time.
4. The prescribing of bandages and dressings in large or unnecessary quantities.
5. The prescribing of 1½ oz. or more of tinct. rhei. co. in a mixture.
6. "We also most emphatically deprecate 'counter prescribing' by pharmacists."

SCOTLAND.

CONFERENCE WITH THE DEPUTY CHAIRMAN OF THE SCOTTISH INSURANCE COMMISSION.

A MEETING of National Insurance Service practitioners was held in the Perth Infirmary, on April 30th, to meet Dr. John C. McVail, Deputy Chairman of the Insurance Commission for Scotland, when Dr. Stirling was in the chair, and thirteen others were present.

The Chairman explained that the object of the meeting was to discuss with Dr. McVail the subject of certification in relation to excessive sickness.

The Insurance Registers.

Dr. McVail spoke first on the present position of insurance registers in relation to the payment of medical benefit. He said that some anxiety existed amongst many practitioners because they were finding in many places that, although they had a certain number of persons on their panel lists, there was not for the moment the sum of 9s. available in their locality for payment of medical attendance and medicines for all these individuals. The position was, that although there was inalienably a sum of 9s. for these purposes, this was only for each individual during the year. An insured person, however, was apt to change from place to place, and thus get on more than one doctor's panel during that time. The first doctor was likely to get the 9s., and the other doctors would feel aggrieved. Thus, while there were only about 1½ million of insured persons in Scotland there was good evidence to show that the index slips for Scotland would amount to something like 10 per cent. above that total. He then explained the method of using "suspense slips," and said that great efforts were being used at the Scottish Insurance Office to remedy the confusion arising from the carelessness of the societies in the issuing of these.

Dr. Trotter at this stage asked various questions, more especially as regards the means being taken to put matters right, and the meeting was assured by Dr. McVail that the utmost was being done, in view of the great difficulty of the task.

Certification and "Excessive Sickness."

Passing to the question of certification, Dr. McVail said that "excessive sickness" meant sickness in excess of what the actuaries had calculated for in the framing of the Act *plus* 10 per cent. for contingencies, and went on to mention various reasons for excessive sickness with which the doctors had nothing to do. Such were, for example, the admission to insurance of many persons who were not passed by a medical examination; the absence of a

personal interest in the insurance fund which formerly existed, and was a motive in keeping down expenses; and the large number of women, especially married women, now insured. The way in which the doctors came in, however, was in certification. In dealing with this subject, Dr. McVail gave instances in which, by greater care and strictness in certifying patients fit for work, the expenses of societies for sickness benefit might be much reduced. It must, he said, be remembered that the societies were complaining that they had now no control over the doctors, and the profession was now between two dangers: On the one hand, the recovery by the societies of this control, which would be a disaster to the profession, which might be accomplished by legislation; and, on the other hand, the institution of a State Medical Service, which would put an end to the panel system, with all its difficulties of administration.

Dr. McVail, on the conclusion of his remarks, was again closely questioned by members present on various points, and, after an interesting discussion, was accorded a hearty vote of thanks for the clear way in which he had stated all his points.

Medical and Sanatorium Benefit.

The clerk and treasurer (Mr. James Russell) of the Insurance Committee for the Burgh of Edinburgh sets out some interesting figures in his report on the administrative work of the Committee from July, 1912, to April, 1914. A substantial bonus is to be paid over to the chemists on the Edinburgh panel, since there has been an unexpended balance on the drug fund. Comparatively few complaints against practitioners on the panel had been made—21, of which only 6 were upheld. For insurance service work the incomes of panel practitioners in Edinburgh for the year 1913 were as follows: 1 over £900, 1 over £800, 4 over £700, 7 over £600, 10 over £500, 12 over £400, 12 over £300, 15 over £200, 16 over £100, 4 over £50, and 39 at £50 or under. The highest number of insured persons on the list of any one medical practitioner was 2,903, and the lowest was 3. The highest amount credited in the past year to a practitioner on the panel was £988 13s. and the lowest amount 8s. 8d. The chemists, too, have in some instances received considerable sums: 1 received between £500 and £450, 3 over £200, 4 over £150, 7 over £100, 25 between £100 and £50, and 95 less than £50 (from 11d. to £49 6s. 4d.). Since the commencement of the medical benefit to the present time the practitioners on the Committee's panel have received payments amounting in total to £39,981 1s. 7d.; the payments to panel chemists for supply of medicines and appliances to insured persons for the year to January 15th, 1914, amounted to £6,398 13s. 10d. At the present time the Committee has on its register of persons entitled to medical benefit 111,637 members of approved societies, 2,800 deposit contributors, 9 members of the Navy and Army Insurance Fund, and 616 exempt persons (115,062 in all). From the commencement of sanatorium benefit in July, 1912, to April 23rd, 1914, domiciliary treatment has been granted to 46, institutional treatment to 397, and dispensary treatment to 77. Payments made to deposit contributors in respect of sickness benefit since January, 1912, was £1,973 1s. 10d., and in respect of maternity benefit £45 9s. 10d. The total number of claims were: Sickness, 551; maternity, 42.

IRELAND.

Arrangements with Unqualified Persons.

The following resolution was adopted by the Royal College of Physicians of Ireland at its meeting on May 4th:

National Health Insurance (Medical Benefit) Regulations, 1913.

That the President and Fellows of the Royal College of Physicians of Ireland observe with regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the Memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act, 1911, may obtain treatment from non-qualified persons.

Hitherto none but duly qualified medical practitioners have been employed, as such, in any public capacity, and the President and Fellows deplore that, under an Act professing to promote the health of the nation, recognition should be given and provision made for the payment of public money to a class of persons who have not obtained a legal qualification to practise medicine, and concerning whose medical knowledge there exists no sort of guarantee.

A resolution in similar terms has been adopted by the Apothecaries' Hall in Ireland.

Tuberculosis.

At a meeting of the Tyrone County Council held last week at Omagh, it was decided to apply for a loan of £3,000 to carry out a scheme of alterations in Dragannon House to transform it into a sanatorium for the county, also for the erection of a doctor's residence and dispensary in connexion therewith.

At the last meeting of the Louth County Council it was agreed to accept a sum of £800 per annum as payment by the Louth Insurance Committee to the County Council for the services of the tuberculosis medical officer, etc.

Dispensary Doctors and Insurance Act.

The Listowel Board of Guardians at their last meeting passed a resolution requesting their parliamentary representatives to press upon the Government the advisability and necessity, in the interests of the poor as well as the ratepayers, of retaining the services of dispensary doctors and workhouse medical men for the purposes of the Insurance Act, as no one knew the requirements of the poor better than the local practitioner.

SICKNESS BENEFIT OF INSURED PERSONS IN INSTITUTIONS.

A conference was held at the City Chambers, Glasgow, on April 24th, between representatives of the medical profession and the managing bodies of the larger medical institutions in the city regarding the question of the certification for sickness benefit of insured persons while under treatment in institutions; those present were:

Representing the Local Medical Committee: Drs. Alexander Johnston and John McKie (Dr. G. H. Edington was prevented from attending). *Panel Committee:* Drs. A. T. Campbell, Miller Semple, and James R. Drever. *Medical Institutions:* Drs. D. J. Mackintosh, Western Infirmary; D. O. Macgregor, Victoria Infirmary; J. Maxtone Thom, Royal Infirmary; W. J. Richard, Merryflatts Hospital; John Brownlie, Ruchill Hospital; and A. J. Chalmers, Medical Officer of Health. *Insurance Committee:* Messrs. R. D. McEwan, John Grieve, John Maillie, and Dr. J. Grant Andrew.

With Dr. Alexander Macgregor, Tuberculosis Officer; and the Clerk, Mr. William Jones.

Mr. R. D. McEwan, who was in the chair, said that the conference had been called in consequence of a motion in the following terms adopted by the Insurance Committee:

That a conference be arranged of Representatives of the Insurance Committee, the Local Medical Committee, the Panel Committee, and institutions treating insured persons, with a view to securing co-ordination in the certification of insured persons for sickness benefit while under treatment in institutions.

He referred briefly to the position of insured persons under treatment in institutions, to the inability of panel practitioners to grant the usual certificates of incapacity during such period of treatment, and to the delays which had occurred, particularly in cases where there were dependants, in making payment of sickness benefit through lack of the necessary certificate.

The following forms of certificates were submitted; that used at the Western Infirmary is endorsed with the words, "The public are requested not to attend to this certificate if presented for the purpose of soliciting aid."

Glasgow Royal Infirmary.

.....191

This is to certify that.....is at present under treatment in the Infirmary, and is unable for work.

.....

House-Surgeon.

Western Infirmary, Glasgow.

.....191

This is to certify that.....is at present an.....Patient of this Infirmary.

A discussion ensued, in which, among others, Drs. Mackintosh, Chalmers, Brownlie, McKie, Richard, Mr. Maillie, and Mr. Grieve took part, and as the result of

the views expressed by the several speakers, it was agreed that such institutions as were not already doing so should be recommended to adopt a form of certificate, certifying that the insured person was an inmate of the institution, similar to the forms in use at the Royal and Western Infirmaries, which forms, it was understood, were freely accepted by approved societies.

It was resolved to send a report of the conference to the Scottish Insurance Commissioners, and to ask them to inform approved societies of the recommendations made.

INSURANCE ACT IN PARLIAMENT.

FEEDING OF TUBERCULOUS PATIENTS TREATED AT HOME.

In reply to Mr. Astor, Mr. Wedgwood Benn said that all Insurance Committees were empowered to provide, and did in fact provide, for persons in receipt of sanatorium benefit in the form of domiciliary treatment, such accessories as formed part of the treatment and were prescribed as such on medical grounds, and milk, butter, eggs, fish, and meat had in particular instances been thus given; but Insurance Committees were not empowered to provide maintenance by way of general relief.

MEDICAL BENEFIT.

Panel Fund Surplus.

Sir J. D. Rees asked whether the Government had sanctioned the distribution proposed by the London Insurance Committee of the unallotted surplus of about £200,000 in the panel fund to the doctors on the panel; and whether legal advice had been taken by the Insurance Commissioners as to the legality of such distribution.—Mr. Benn said the proposals of the London Insurance Committee as to the manner in which the sum at issue (the amount of which was overstated in the question) was to be distributed among the doctors had not as yet been submitted to the Commissioners. Mr. Benn said that he must ask Mr. Ian Malcolm to give notice of a question as to whether it would be possible for the unpaid chemists' bills to be paid out of the surplus before the surplus was distributed.

Medical Treatment by Non-qualified Persons.

Mr. Newman asked a question as to the resolution passed by the Royal College of Surgeons in Ireland on April 19th, expressing regret that insured persons who made their own arrangements for medical benefit might obtain treatment from non-qualified persons, and deploring that recognition should be given and provision made for the payment of public money to persons who had no legal qualification to practise, and concerning whose medical knowledge there existed no sort of guarantee; and, if so, whether he proposed to take any action in the matter.—Mr. Benn said that attention had already been drawn to the resolution in question, which appeared to be based on a misapprehension as to the scope of the Regulations alluded to. In reply to the question, he referred to the answer given to Mr. Aubrey Herbert on March 6th (SUPPLEMENT, March 14th, p. 154), in which he pointed out that the Act conferred on Insurance Committees the power to allow insured persons to make their own arrangements with persons other than duly qualified medical practitioners, and that the object of the regulation was to indicate more definitely the procedure to be followed by Insurance Committees in such cases.

Insured Persons.

Mr. Denniss asked the Secretary to the Treasury what steps were taken in England, Wales, and Scotland respectively to secure that names of insured persons who had died, or ceased to be insured, or had moved from an area in which they were formerly insured, were taken off the list of the panel doctor whom they had selected, or to whom they had been assigned, and whether the arrangements made for this purpose were working satisfactorily; whether there was any reason to believe that some doctors had been paid on account of insured persons in respect of whom they were not entitled to be paid; and what instructions, if any, had been given to Insurance Committees to prevent the possibility of a panel doctor being paid in respect of an insured person for whom he was not entitled to make a claim.—Mr. Benn: Arrangements were originally made for the notification by approved societies to Insurance Committees of the deaths, lapses from insurance, and removals of their members. As regards removals, a new system has been instituted which enables their notification by societies to be dispensed with. As regards deaths and lapses, the procedure is being revised in connexion with the new system and as a result of the experience gained. Cases may have occurred in which, notwithstanding the advice of the Commissioners, advances have been made to practitioners out of proportion to the amount due to them, but any such overpayments would, of course, be adjusted on the final settlement.

Mr. Denniss: Has the hon. member not already estimated the number of doctors who have in the past been paid twice or three times over the amount in the estimate?—Mr. Benn: No, sir.

SICKNESS BENEFIT.

Mr. MacCallum Scott asked whether it was the intention of the Chancellor of the Exchequer to appoint a committee or commission to report on the working of the National Insurance Acts, and to make suggestions for amendment.—Mr. Wedgwood Benn replied in the negative, and referred to the Departmental Committee on Sickness Benefit Claims now sitting.

Insured Person in Prison.

Mr. MacCallum Scott asked whether an insured person in prison was entitled to sickness benefit while an inmate of the prison if he became ill; and whether the sickness benefit would be administered under Section 12 of the original Act.—Mr. W. Benn replied that the Act did not deal expressly with the case referred to, and the Commissioners were advised that Section 12 of the 1911 Act did not apply. The conditions of the Act, and of the rules of societies, for the payment of sickness benefit could not, however, ordinarily be satisfied in such a case.

Mr. MacCallum Scott asked whether, if a man were ill in prison and certified to be unfit for work, a claim from him for benefit would be a valid claim.—Mr. W. Benn said that he could not add anything to the answer already given. The case was very difficult to decide.

CORRESPONDENCE.

LOCAL MEDICAL AND PANEL COMMITTEES.

Identical Personnel.

DR. HARDING H. TOMKINS (Secretary Local Medical Committee and Panel Committee, Essex) writes: In the report of the Council (SUPPLEMENT, May 2nd, p. 284, par. 116) occurs the following:

> Foreseeing the danger that the Panel Committees, which are elected only by practitioners under agreements with Insurance Committees, might eventually undermine the position of the Local Medical Committees which are elected by the whole profession in each insurance area, the Council has urged upon all Divisions, Branches, and Local Medical Committees the desirability of making the personnel of the two Committees as far as possible the same. The Council is glad to report that this advice has been followed in nearly every insurance area.

I should like to point out that there is as much danger of the Local Medical Committees being superseded when adopting the model schemes, for they are based on the previous election of a Panel Committee in each area.

Now, as the Panel Committee is, as said above, elected only by panel men, it is clear that if the Local Medical Committee is to be identical in personnel with the Panel Committee, it means accepting the Panel Committee as the Local Medical Committee. How these men can be a Local Medical Committee I fail to see, since they are not elected by the whole of the profession in the area, and all the non-panel men are thereby disfranchised. The plan I suggest is that all doctors resident in the area or areas (Essex is divided into 21 panel areas) be invited to nominate and elect men on the Local Medical Committee first, and at the same meeting all men on the panel in the area (including non-residents) be invited to nominate and elect men on the Panel Committee, explaining to the meeting that to save expense, overlapping of work, and confusion, it is advisable to elect the same men. All that is necessary is for panel men to nominate and then elect the men already elected on the Local Medical Committee.

Of course it is imperative that the non-resident panel men should not vote for any Local Medical Committee candidate, and that the non-panel men should not vote for any Panel Committee candidate. This plan I have discussed with the Commissioners, who saw no objection to it as it conforms to the regulations, and includes the whole electorate of each Committee respectively, which the procedure of the schemes does not. It has the advantage of simplicity, saving of expense, and if panel men agree (as they do in Essex), of absolute identity of representation on both Committees, whereas the model schemes necessitate two different Committees unless the Local Medical Committee is formed by accepting the Panel Committee men as the Local Medical Committee, in which case no non-panel man can nominate or take part in the original election. In my plan panel men can do so.

Mode of Election.

Dr. ARTHUR E. LARKING (Buckingham) writes: There is at present no way of communicating with the members of Panel and Local Medical Committees than by means of the SUPPLEMENT of the JOURNAL, and I wish at the earliest possible moment to draw the attention of all to the latest phase of the dominating power of the Insurance Commissioners.

The matter that appears to me to require serious protest is Circular 44 I.C. and the Model Scheme for the election of Panel Committees.

In addition to this, we are now informed that the Commissioners are drawing up a scheme for the election of Local Medical Committees also. We are not to be allowed even to elect our own committees in our own way, and yet we are told that the cost of these elections must be paid out of the compulsory levy allowed by the 1913 Act, our own money!

In Bucks we took great trouble, and went to great expense in drawing up rules and a constitution for our committee; we are now told that this cannot be accepted, and that we must accept the Model Scheme, or that we can submit a scheme of our own that must contain certain stipulations. Moreover, there are in the Model Scheme certain methods that are entirely new to us, and cast a reflection on our capacity to do anything for ourselves.

Let me take a few points from the Model Scheme B.

Para. 3 (1).—All members of the Committee shall be duly qualified medical practitioners, and not less than three-fourths of the members shall be practitioners on the panel.

But the electors must all be on the panel, thus differing from the electors for the Local Medical Committee. It totally ignores those not on the panel, although, if their panel neighbours see fit, they can put a quarter of the Committee on as non-panel members.

The election of the Panel Committee is to be by meetings in the various constituencies. The method of an election by postal vote is condemned as being expensive, slow, and inconvenient. Moreover, we are told that if we decide to have a postal vote method the Commissioners would require "the appointment of a properly qualified professional man, other than an elector," as returning officer.

I wrote to inquire what sort of professional man is meant, and the reply states that he must possess some professional or official qualification such as those of a barrister, solicitor or chartered accountant, or officer of some public authority.

A nice expense we are to be put to, and quite unnecessarily. For when we in Bucks elected our Local Medical Committee by means of nomination papers the difficulty was, not in the receipt of numerous nominations, but by their absence, and there was the greatest difficulty in getting the requisite number of medical men to consent to accept office. At the meeting at which the nominations were finally confirmed there was not a third of the resident men present, and if the total on the panel is taken there was not one-fifth present.

And so it will be with regard to the meetings in the various constituencies. Few will attend. Yet the expense of employing a returning officer and two deputies must be incurred and paid for by the medical men.

The culminating sally of the scheme is that the elections are to take place in June, when most medical men are away on their holidays.

Another proviso to which I object is in

Para. 31 (2).—In the event of a member of the Committee being appointed Secretary no payment for his personal services as Secretary of the Committee shall be made to him.

This means that if a medical man acts as Secretary he must not be an elected member of the Committee, but must be appointed from outside. This may conform with the practice of public bodies, but is decidedly hard on those of us who value our vote and like to occupy an independent position. Yet the duties that are put upon the Secretary make it impossible for a medical man in practice to perform the duties unless he is compensated for the loss of time thus incurred.

Another point thus arises, for, although many or most Committees have adopted a voluntary levy, this rule precludes them from spending the money as they like.

ALLEGED OVERWORK OF THE PANEL DOCTOR.

Dr. J. R. FULLER (Crouch End, N.) writes: Looking on as a doctor who is perfectly satisfied with the Act as far it concerns him, I am anxious to have certain controversial points cleared up.

The opponent of the Act maintains: (1) That the panel doctor is overworked; (2) that he should have no more than 2,000 on his list. This opponent never, to my knowledge, has stated whether these arbitrary figures apply to the man who does whole time or part time. If it applies to whole time, 2,000 at 7s. is £700 a year; this, apparently, is the maximum that this opponent thinks should be the income of a doctor. If it applies to part-time men, it may or may not be true—it depends on the amount of the private practice. But he makes the assertion, without distinction, "the panel doctor is overworked," with what knowledge I know not, or where he gets his figures from. This statement is manifestly untrue of the panel practitioners as a whole.

The difficulty that the panel practitioner experiences in this matter is: If he says he is not overworked, he is told at once that he is overpaid; if he says he is overworked, he is told he must have his list reduced; and so he is between the devil and the deep sea.

Looking at the situation from a possibly favoured locality point of view, I can give facts that prove that in a big general practice, where the private visits outnumber the insurance ones by ten to one, the panel patients cause little or no extra work; with 1,600 on the insured list, the visits in one day have never exceeded 10, the average being about 4; this cannot be called overwork. It is true that in the surgery about 20 a day are seen, but this is not overwork; the patients for the most part are suffering from trivial ailments, and any serious case is at once set aside for further examination; the chance of missing a serious case is *nil*. Further, in fifteen months there have been two night calls.

Our critics for the most part are men who are accustomed to see perhaps four or five cases in the morning consultations, for which they receive, 5s., 7s. 6d., or 10s. 6d. each case. The experience of these men, therefore, does not render them competent to judge of ordinary general practice as pursued by the vast majority of their fellow practitioners from time immemorial.

What I gather chiefly from the foregoing is that for the medical profession to indulge in internecine warfare is to expose us to our enemies, and to hasten the accomplishment of the State Medical Service with whole-time men at an average of £400 a year, which may satisfy some, but for which I personally entertain a wholesome dread.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns, 9,069 births and 4,938 deaths were registered during the week ended Saturday, May 2nd. The annual rate of mortality in these towns, which had been 15.0, 14.9, and 15.1 per 1,000 in the three preceding weeks, fell to 14.2 per 1,000 in the week under notice. In London the death-rate did not exceed 12.9, against 13.5, 14.5, and 14.4 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.9 in Swindon, 6.6 in Eastbourne, 7.9 in Wimbledon, 8.3 in Coventry, 8.4 in Willesden, and 8.5 in East Ham to 20.1 in Dudley, 20.4 in Salford, 20.6 in South Shields, 21.9 in Middlesbrough, in West Hartlepool, and in Swansea, 22.0 in Plymouth, and 23.2 in Barnsley. Measles caused a death-rate of 1.8 in Merthyr Tydfil, 2.0 in Smethwick, 2.9 in Barnsley, 3.0 in Dudley, and 3.5 in Stockton-on-Tees; and whooping-cough of 1.3 in Gateshead and in Swansea, and 1.7 in Enfield. The mortality from the remaining epidemic diseases showed no marked excess

in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 31, or 0.6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 4 were recorded in Liverpool, 3 in Birmingham, and 2 each in London, Bootle, Warrington, Manchester, Blackburn, and Hull. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,068, 2,992, and 2,886 at the end of the three preceding weeks, had further fallen to 2,876 on Saturday last; 377 new cases were admitted during the week, against 306, 289, and 305 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,285 births and 669 deaths were registered during the week ended Saturday, May 2nd. The annual rate of mortality in these towns, which had been 16.5, 16.0, and 16.9 per 1,000 in the three preceding weeks, fell to 15.2 in the week under notice, but was 1.0 per 1,000 above the rate recorded in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.6 in Kirkcaldy, 8.2 in Clydebank, and 9.4 in Falkirk to 19.1 in Kilmarnock, 20.6 in Coatbridge, and 21.4 in Motherwell. The mortality from the principal infective diseases averaged 1.4 per 1,000, and was highest in Kilmarnock and Coatbridge. The 297 deaths from all causes in Glasgow included 11 from measles, 8 from whooping-cough, 8 from infantile diarrhœa, 2 from diphtheria, 1 from scarlet fever, and 1 from enteric fever. Three deaths from measles and 2 from diphtheria were recorded in Edinburgh; 2 deaths from measles in Dundee; and 3 deaths from whooping-cough in Coatbridge.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 2nd, 712 births and 477 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 673 births and 584 deaths in the preceding period. These deaths represent a mortality of 20.6 per 1,000 of the aggregate population in the districts in question, as against 25.3 in the previous period. The mortality in these Irish areas was therefore 6.4 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 30.8 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 24.5 (as against an average of 25.6 for the previous four weeks), in Dublin city 26.7 (as against 28.9), in Belfast 18.2 (as against 20.4), in Cork 23.1 (as against 26.0), in Londonderry 19.0 (or the same as in the previous period), in Limerick 23.0 (as against 23.7), and in Waterford 20.9 (as against 22.3). The zymotic death-rate was 2.8, as against 3.1 in the previous week.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following announcements have been notified by the Admiralty: Surgeon-General Charles James has been placed on the retired list at his own request, May 1st. Deputy Surgeon-General William M. Craig, M.B., C.B., promoted to Surgeon-General, May 1st. Fleet Surgeon Widal G. Thorpe promoted to Deputy Surgeon-General, May 1st. Staff Surgeon Richard R. Horley to the *Psyche*, additional, April 21st, and on recommissioning, undated. The appointment of Staff Surgeon John H. Lightfoot to the *Sirius* for passage home is cancelled. Staff Surgeon William N. L. Cherry to the *Topaze* on completing, May 5th. Surgeon Douglas A. Mitchell, M.B., to the *Egmont*, additional for Malta Royal Hospital, vice Robinson, May 18th.

ARMY MEDICAL SERVICE.

Royal Army Medical Corps.

Major W. M. H. Spiller is appointed to command the Station Hospital, Calcutta, vice Lieutenant-Colonel Reilly.

Major H. M. Nicholls has been posted to the Scottish Command.

Lieutenant Ernest W. Wade, M.B., is restored to the establishment, May 1st.

Lieutenant D. T. Large is posted to Mhow.

Lieutenant Richardson is posted to Jubbulpore.

Supernumerary Colonel Bertal H. Scott, M.B., is restored to the establishment, vice C. C. Reilly, May 1st.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Cadet John Alston, from the Glasgow University Contingent, Officers' Training Corps, to be Lieutenant on probation, April 6th.

Cadet Charles Robertson McIntosh, from the Glasgow University Contingent, Officers' Training Corps, to be Lieutenant on probation, April 8th.

James Cameron to be Lieutenant on probation, April 9th.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. D. Sutherland, M.D., is appointed Imperial Serologist for two years, with effect from March 1st, 1914.

The services of Captain H. H. King, M.B., are placed temporarily at the disposal of the Director-General, Indian Medical Service, with effect from March 7th, 1914, for employment on a special malaria inquiry.

The services of Captain A. F. Babonau, M.B., are placed temporarily at the disposal of the Chief Commissioner, Assam, for civil employment.

Lieutenant-Colonel P. Carr-White is posted as Residency Surgeon and *ex officio* Assistant to the Resident in Nepal, with effect from February 20th, 1914.

Major T. S. B. Williams is posted as Residency Surgeon, Gwalior, with effect from March 5th, 1914.

Lieutenant-Colonel J. R. Adie, M.B., is permitted to retire from the service, with effect from March 22nd, 1914.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Third East Lancashire Field Ambulance.—Arthur M. Johnson, M.D., to be Lieutenant, March 16th.

Third Lowland Field Ambulance.—Robert B. Barnetson, M.B., to be Lieutenant, April 29th.

For Attachment to Units other than Medical Units.—Harold Seddon, M.B., to be Lieutenant, February 1st.

Attached to Units other than Medical Units.—Lieutenant John Graham, M.B., to be Captain, November 7th, 1913; Captain William W. Jones, M.D., to be Major, December 1st, 1913; Lieutenant Charles H. Caldicott, M.B., to be Captain, January 22nd; Captain Walter R. N. Smithard, M.B., to be Major, March 17th; Captain William S. Paterson, M.B., resigns his commission, April 29th.

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps.

Major William W. Jones, from the list of officers attached to units other than medical units, to be Major, December 1st, 1913.

CHANGES OF STATION.

The following changes of station among the officers of the Army Medical Service have been officially reported to have taken place during March:

		FROM		TO
Surgeon-General	W. Babtie, V.C., C.B., C.M.G., M.B.	War Office	...	Army Head Quarters, India
Colonel	R. W. Ford, D.S.O.	—		Aldershot.
,,	W. G. Macpherson, C.M.G., M.B., K.H.P.	Quetta	...	War Office.
,,	W. W. Pike, D.S.O., F.R.C.S.I.	Bombay	...	Sialkot.
,,	C. Birt	London	...	Poona.
Lieut.-Colonel	S. Hickson, M.B., K.H.S.	Aldershot	...	London.
,,	T. du B. Whaite, M.B.	Royal Arsenal, Woolwich		Lahore.
,,	C. A. Young	Shrewsbury	...	Chatham.
,,	J. W. Bullen, M.D.	Shemeld	...	Strensall.
,,	S. G. Moores	Aldershot	...	Warley.
,,	H. E. Winter	R. Hosp., Chelsea		Colaba.
,,	J. C. Connor, M.B.	Wellington	...	Dublin.
Major	A. G. Thompson, M.B.	Pachmarhi	...	S. Command.
,,	E. H. Condon, M.B.	—		Bareilly.
,,	B. W. Loughurst	—		Ambala.
,,	K. B. Barnett, M.B., F.R.C.S.I.	Shorncliffe	...	Lydd.
,,	S. J. C. P. Perry, F.R.C.S.I.	Deolali	...	Lebong.
,,	G. T. K. Maurice	Tidworth	...	Worcester.
,,	J. C. B. Statham	—		London Dist.
,,	E. W. Bliss	Quetta	...	Chatham.
,,	L. Addams-Williams	Karachi	...	Quetta.
,,	E. T. Inkson, V.C.	Wellington	...	Exeter.
,,	J. Cowan, M.B.	Lahore	...	Pachmarhi.
,,	M. H. G. Fell	War Office	...	Aldershot.
,,	J. G. Gill	Rangoon	...	S. Command.
,,	G. J. A. Ormsby, M.D.	Meerut	...	Irish Command.
,,	H. M. Nicholls, M.B.	Poona	...	Scot. Command.
,,	H. C. R. Hinne, M.B.	Bangalore	...	Wellington.
,,	A. H. Safford	Irish Command		E. Command.
,,	W. L. Baker	E. Command	...	London.
,,	A. E. Hamerton, D.S.O.	Nyasaland	...	E. Command.
,,	E. Bennett	Purandhar	...	Deolali.
,,	G. Baillie, M.B.	Landguard Fort		Co chester.
,,	R. L. Popham	Cork	...	Nowshera.
,,	R. McK. Skinner	Curragh Camp	...	Lahore.
,,	E. E. Parkes, M.B.	Plymouth	...	Jubbulpore.
,,	A. W. Gibson	Poona	...	Lahore.
,,	J. L. Jones	Calicut	...	Wellington.
Captain	A. H. Hayes	York	...	Ambala.
,,	H. V. Bagshawe	Cyprus	...	Cairo.
,,	T. S. Coates, M.B.	—		Meerut.
,,	F. C. Lambert	Pembroke Dock		Poona.
,,	T. S. Dudding	Colaba	...	Belgaum.
,,	J. T. McEntire, M.B.	-		Irish Command.
,,	R. J. Cahill, M.B.	Londonderry	...	Belfast.
,,	A. T. Frost, M.B.	Lucknow	...	Poona.
,,	C. R. Millar	Fort Camden, Queenstown Harbour		Ballincollig.
,,	C. E. W. S. Fawcett, M.B.	Queenstown	...	Secunderabad.
,,	M. B. H. Ritchie, M.B.	Chatham	...	Colchester.
,,	T. C. C. Leslie	Youghal	...	Allahabad.
,,	A. C. Amy, M.D.	Manchester	...	Bury.
,,	E. B. Lathbury	Bareilly	...	Cork.
,,	J. R. Foster	Dublin	...	Kilbride.
,,	J. A. Bennett	Newport	...	Cork.
,,	W. F. M. Loughnan	Aden	...	E. Command.
,,	T. W. Browne	Buttevant	...	Cork.
,,	S. Field	Jamaica	...	Irish Command.
,,	O. R. McEwen	Multan	...	Irish Command.
,,	M. O. Wilson, M.B.	Aden	...	E Command.
,,	A. W. Howlett, M.B.	Aldershot	...	Pordon.
,,	T. McC. Phillips, M.B.	Cawnpore	...	Allahabad.
,,	R. G. S. Gregg, M.B	Karachi	...	Aden.
,,	M. Leckie	—	...	S. Command.
,,	C. E. L. Harding, M.B.	Quetta	...	Aden.
,,	A. L. Foster	Rawal Pindi	...	,,
,,	A. G. Wells	Ambala	...	Scottish Comd.
,,	E. W. Vaughan, M.B.	—	...	Devonport.
,,	A. N. R. McNeill, M.B.	Mauritius	...	Lichfield.
,,	C. H. O'Rorke, M.B.	Allahabad	...	Darjeeling.
,,	H. H. Leeson	Cairo	...	Khartoum.
,,	J. W. Lane, M.D.	Kamptee	...	Lahore.
,,	A. D. Stirling, M.B.	Khartoum	...	Cairo.
,,	M. J. Williamson, M.B.	Wynberg	...	Simonstown.
,,	T. B. Dickson, M.B.	-	...	Bareilly.
,,	V. P. Hutchinson	Pretoria	...	Potchefstroom.
Lieutenant	C. M. Finny, M.B.	Ambala	...	Rawal Pindi.
,,	W. S. R. Steven, M.B.	Karachi	...	Quetta.
,,	F. A. Robinson, M.B.	Mhow	...	Nasirabad.
,,	R. Davidson, M.B.	Hounslow	...	Lucknow.
,,	D. W. Bruce, M.B.	Rawal Pindi	...	Lahore.
,,	W. L. Webster, M.B.	Limerick	...	Cairo.

		FROM	TO
Lieutenant	E. B. Allnutt	Poona ...	... Purandhar.
,,	A. G. Bigham, M.B....	York ...	... Rawal Pindi.
,,	R. K. Mallam, M.B....	Bordon ...	... ,,
,,	W. McNaughtan, M.B.	Netley ...	... Quetta.
,,	M. Burnett	Gosport ...	... Poona.
,,	A. Hood, M.B. ...	Lichfield...	... Rawal Pindi.
,,	E. A. Strachan, M.B.	Lucknow...	... Bareilly.
,,	J. H. M. Frobisher, M.B.	York ...	... Lucknow.
,,	W. B. Stevenson, M.B.	Deepcut ...	... Rawal Pindi.
,,	J. L. Ritchie, M.B., F.R.C.S.	Aldershot ...	... ,,
,,	D. T. Richardson, M.B.	Edinburgh ...	... Poona.
,,	C. M. Ingoldby ...	Fermoy ...	... Rawal Pindi.
,,	S. J. Higgins	Cork ...	... Lucknow.
,,	G. A. Blake, M.B. ...	Aldershot ...	... ,,
,,	S. J. Barry	—	Poona.
,,	R. W. Vint, M.B. ...	Aldershot ...	... Lucknow.
,,	H. W. L. Allott ...	Lucknow...	... Bareilly.
,,	J. Hare, M.B.	Enniskillen ...	... Belfast.
,,	R. B. Phillipps ...	Tipperary ...	... Cork.
,,	G. F. Allison	Strensall...	... York.
,,	A. A. M. Davies ...	York ...	... Lucknow.
,,	L. Dunbar, M.B. ...	Netley ...	... ,,
,,	H. F. Panton, M.B. ...	Tidworth ...	... Rawal Pindi.
,,	W. O. W. Ball, M.B.	Bordon ...	... Longmoor.
,,	H. N. Sealy	Curragh ...	... Kildare.

COLONIAL MEDICAL SERVICES.

THE following changes are notified by the Colonial Office:

WEST AFRICAN MEDICAL STAFF.

New Appointments.—The following gentlemen have been selected for appointment to the staff: T. P. Fraser, M.B., Ch.B.Aberd., D.P.H.Cantab., Nigeria; A. S. Burgess, M.R.C.S.Eng., L.R.C.P.Lond., M.B., B.C.Cantab., Gold Coast.

Transfers.—G. F. Forde, L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glasg., Medical Officer, has been transferred from the Gold Coast to Nigeria; J. A. Harley, M.B., Ch.B.Edin., and S. L. Brohier, M.R.C.S.Eng., L.R.C.P.Lond., Medical Officers, have been transferred from the Gambia to the Gold Coast; J. C. Franklin, L.R.C.S. and P.Edin., L.F.P.S.Glasg., Medical Officer, has been transferred from the Gambia to Nigeria; G. Rollason, L.M.S.S.A.Lond., Medical Officer, has been transferred from Sierra Leone to Nigeria.

Resignations.—A. Lundie, M.B., Ch.B.Edin., B.Sc.St. Andrews, Medical Officer, Gold Coast; E. J. Wyler, M.D., B.S.Lond., L.R.C.S.Eng., L.R.C.P.Lond., Medical Officer, Nigeria; A. Hutton, M.B., Ch.B.Aberdeen, D.T.M. and H.Cantab., Medical Officer, Nigeria.

Retirement.—A. Bremner, M.B., C.M.Edin., D.T.M.Liverp., Medical Officer, Sierra Leone, retires on pension.

Promotions.—The following promotions in the staff have been made since January 1st, 1914: T. Hood, M.R.C.S.Eng., L.R.C.P.Lond., Principal Medical Officer, Nigeria Southern Provinces, to be Director of the Medical and Sanitary Service of Nigeria; E. A. Chartres, F.R.C.S.Irel., L.R.C.P., L.M.Irel., D.P.H.Irel., F.R.G.S., Senior Medical Officer, Gambia, to be a Senior Medical Officer (Grade I), Nigeria; C. R. Chichester, M.B.Dubl., L.R.C.P. and S.Irel., D.P.H.Irel., Provincial Medical Officer, Southern Nigeria, to be Senior Medical Officer (Grade I), Nigeria; W. H. G. H. Best, L.R.C.S. and P.Irel., Provincial Medical Officer, Southern Nigeria, to be a Senior Medical Officer (Grade I), Nigeria; C. F. Watson, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Irel., D.T.M.Liverp., Senior Medical Officer, Northern Nigeria, to be Senior Medical Officer (Grade II), Nigeria; W. H. A. Gordon-Hall, M.B., C.M.Edin., Senior Medical Officer, Northern Nigeria, to be a Senior Medical Officer (Grade II), Nigeria; W. I. Taylor, M.R.C.S.Eng., L.R.C.P.Lond., Senior Medical Officer, Northern Nigeria, to be a Senior Medical Officer (Grade II), Nigeria; H. P. Lobb, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Irel., Medical Officer, Northern Nigeria, to be a Senior Medical Officer (Grade III), Nigeria; M. E. O'Dea, M.B., Ch.B.Edin., Medical Officer, Southern Nigeria, to be a Senior Medical Officer (Grade III), Nigeria; W. W. Claridge, M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer, Gold Coast, to be a Senior Medical Officer (Grade III), Gold Coast; A. E. Horn, M.D., B.Sc.Lond., M.R.C.S.Eng., L.R.C.P.Lond., D.T.M. and H.Camb., Personal Assistant to the Principal Medical Officer, Southern Nigeria, to be Senior Medical Officer (Grade III), Gambia; J. M. Dalziel, M.D., C.M.Edin., B.Sc. Public Health, Edin., Medical Officer, Northern Nigeria, to be a Sanitary Officer, Nigeria.

Deaths.—D. Mackinnon, M.B., Ch.B.Edin., D.P.H.Edin., D.T.M. and H. Cantab., Medical Officer, Nigeria; C. B. Hunter, M.B., C.M.Glasg., Senior Medical Officer, Gold Coast.

OTHER COLONIES AND PROTECTORATES.

N. S. Williams, M.R.C.S.Eng., L.R.C.P.Lond., has been selected for appointment as a Temporary Medical Officer in Uganda; J. H. Paterson, M.B., D.P.H., has been selected for appointment as a Supernumerary Medical Officer in Jamaica; C. H. Sills, M.R.C.S.Eng., L.R.C.P.Lond., has been selected for appointment as a Supernumerary Medical Officer in the Leeward Islands; S. Vassallo, D.M. and S.Malta, has been selected for appointment as a Supernumerary Medical Officer in the Leeward Islands; W. A. S. George, L.R.C.P. and S.Edin., has been selected for appointment as a District Medical Officer in St. Vincent; H. P. Hacker, M.D., B.S., B.Sc.Lond., has been selected for appointment as a Supernumerary Medical Officer in the Federated Malay States.

Vacancies and Appointments.

VACANCIES.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

BARNSLEY: BECKETT HOSPITAL AND DISPENSARY.—Second House-Surgeon. Salary, £100 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELFAST: ROYAL VICTORIA HOSPITAL.—Four Resident Medical Officers.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Honorarium, £100.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary at the rate of £80 per annum.

BIRMINGHAM AND MIDLAND HOMŒOPATHIC HOSPITAL.—Resident House-Surgeon. Salary, £100.

BIRMINGHAM EDUCATION COMMITTEE. — Assistant School Medical Officer. Salary, £300 per annum, rising to £450.

BIRMINGHAM GENERAL HOSPITAL. — (1) Honorary Physician. (2) House Physician. (3) Resident Pathologist. (4) House-Surgeon. Salary at the rate of £50 per annum for (2) and (3), and for (4) £40 per annum for three months, rising to £50.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at Dudley Road Infirmary. Salary, £150 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £90 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD ROYAL INFIRMARY.—Two Male House-Surgeons. Salary, £100 per annum each.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary at the rate of £100 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House-Surgeon (male). Salary, £80 per annum.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £250.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—(1) Senior Resident Medical Officer. (2) Second House-Surgeon. Salary at the rate of £120 and £100 per annum respectively.

BURSLEM: HAYWOOD HOSPITAL.—Resident Medical Officer (female). Salary, £100 per annum.

BURY INFIRMARY. — Junior House-Surgeon. Salary, £100 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—House-Physician. Salary, £100 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Assistant Surgeon.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary, £200 per annum.

CHARING CROSS HOSPITAL, W.C.—Resident Obstetric Officer.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—(1) Honorary Anæsthetist. (2) House-Physician. Salary, £90 per annum

CHICHESTER: WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary, £200 per annum, rising to £250.

CHORLEY; RAWCLIFFE HOSPITAL. — House-Surgeon (male). Salary, £100 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL. — Two Honorary Assistant Surgeons.

DERBY COUNTY BOROUGH.—Assistant Medical Officer of Health (Junior). Salary, £150 per annum.

DERBYSHIRE EDUCATION COMMITTEE. — Assistant School Medical Officer. Salary, £300 per annum, increasing to £400.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon; salary, £50 for first six months, rising to £150 during second year. (2) Assistant House-Surgeon; salary at the rate of £75 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

FEDERATED MALAY STATES.—Assistant Superintendent of the Government Central Lunatic Asylum. Salary, £400 per annum, rising to £600.

FLINTSHIRE EDUCATION COMMITTEE. — Assistant Medical Officer. Salary, £250 per annum.

GLOUCESTER ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House-Surgeon. Salary at the rate of £80 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £100 and £80 per annum respectively.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer (male). Salary, £200 per annum.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HERTS COUNTY ASYLUM, Hill End, St. Albans.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £240.

HOSPITAL FOR WOMEN, Soho Square, W.—Clinical Assistants in the Out-patient Department.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon (male). Salary, £80 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £120 per annum.

KIRKMABRECK PARISH.—Medical Officer. Salary, £40 per annum.

LIVERPOOL EDUCATION COMMITTEE.—Two Assistant School Medical Officers. Salary, £250 per annum, rising to £350.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS. - Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON HOSPITAL, Whitechapel, E. — (1) Surgical Registrar. (2) Medical Registrar. Salary, £100 per annum.

MANCHESTER CORPORATION. -Fourth Medical Assistant to the Monsall Fever Hospital. Salary, £130 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Senior and Junior House-Surgeons (males).

MANCHESTER ROYAL INFIRMARY. — (1) Surgical Registrar. (2) Medical Officer for Out-patients and Accidents to the Central Branch. Salary, £75 and £100 per annum respectively.

MANCHESTER: ST MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Honorary Assistant Surgeon for Children.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer (Junior) for the Infectious Hospitals Service. Salary, £180 per annum, rising to £240.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

MIDDLESEX HOSPITAL, W. -Resident Officer to the Special Departments for Diseases of Eye, Skin, and Ear, Nose and Throat.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY. — Vacancy on Visiting Medical Staff. Salary, £200 per annum.

NEW ZEALAND: UNIVERSITY OF OTAGO. — Professor of Anatomy. Salary, £800 per annum.

NORWICH: NORFOLK EDUCATION COMMITTEE. — Assistant Medical Officer. Salary, £300 per annum, rising to £350.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

OLDHAM ROYAL INFIRMARY. — Senior House-Surgeon (male). Salary, £140 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W. — (1) House-Physician. (2) House-Surgeon.

PLAISTOW: CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL FOR WOMEN AND CHILDREN. — Junior Resident Medical Officer (female).

PRESTON COUNTY ASYLUM, Whittingham.—Junior Assistant Medical Officer. Salary, £250 per annum, rising to £300.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—(1) Senior House-Physician, (2) Senior House-Surgeon, (3) Junior House-Physician, (4) Junior House-Surgeon. Salary for (1) and (2), £75 per annum, and for (3) and (4), £60 per annum.

READING: ROYAL BERKSHIRE HOSPITAL.—Second House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY AND DISPENSARY. — Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL. — Senior and Junior House-Surgeons. Salary, £120 and £100 per annum respectively.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Hunterian Professors and Arris and Gale Lecturers.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House-Surgeon. Salary at the rate of £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Director of the Pathological Department. (2) Medical Registrar. Salary, £400 and 100 guineas per annum respectively.

ROYAL INSTITUTE OF PUBLIC HEALTH, Russell Square, W.C.—Assistant Director of the Bacteriological Laboratories. Salary, £250.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Additional Honorary Physician.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, etc., City Road, E.C.—House-Surgeon. Salary, £80 per annum.

SALFORD ROYAL HOSPITAL. — (1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary at the rate of £80 per annum each.

SALFORD UNION INFIRMARY.—Two Male Resident Assistant Medical Officers. Salary, £130 rising to £150, and £120 per annum respectively.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SCULCOATES UNION.—Resident Assistant Medical Officer at the Workhouse Infirmary. Salary, £200 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Assistant House-Surgeon. Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL. —Resident Assistant Medical Officer. Salary, £140 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £120 per annum.

SOUTHWARK UNION. — (1) Second Assistant Medical Officer. (2) Third Assistant Medical Officer. Salary, £170 and £160 per annum, rising to £180 and £170 respectively.

STAFFORDSHIRE COUNTY MENTAL HOSPITAL, Cheddleton. — Junior Assistant Medical Officer. Salary, £210 per annum, rising to £270, and on promotion to £320.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—(1) House-Physician. (2) Casualty and Out-patient Officer. (Males.) Salary, £110 per annum, rising £10 annually in each case.

STROUD GENERAL HOSPITAL.—House-Surgeo Salary, £120 per annum.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £130 per annum, rising to £150.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: WEST RIDING OF YORKSHIRE COUNTY COUNCIL.—Dispensary Tuberculosis Officer. Salary, £400 per annum.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith, W. — Ophthalmic Surgeon.

WESTMINSTER HOSPITAL, S.W.—Surgical Registrar. Honorarium, £50 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY. House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL. —House-Surgeon. Salary at the rate of £125 per annum.

WOLVERHAMPTON EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

WOOLWICH INFIRMARY. -Resident Male Assistant Medical Officer. Salary, £180 per annum, rising to £200.

WREXHAM INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments.—Croom (Limerick), Sleivereagh (Cork), Templemartin (Cork).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

ALCOCK, Arnold, M.B., B.S.Lond., Assistant Surgeon to the Gloucestershire Royal Infirmary and Eye Institution, vice Dr. C. V. Knight, appointed a Surgeon.

ARCHER, S. H. L., L.R.C.P. and S.Edin., L.F.P.S.Glasg., District Medical Officer of the Nantwich Union.

ATKINS, F. R. L., M.R.C.S., L.R.C.P., District Medical Officer to the Blandford Union.

BAXTER, A., M.B., C.M.Edin., Certifying Factory Surgeon for the Old Meldrum District, co. Aberdeen.

DISMORE, C. J. S., M.R.C.S., L.R.C.P., Medical Officer to the Gravesend and Milton Union Workhouse.

DORE, S. E., M.D., M.R.C.P., Consulting Physician for Diseases of the Skin to the Evelina Hospital for Sick Children.

GANDY, T. H., M.B.Lond., District Medical Officer of the Henley Union.

GRAHAME, R. C. M., M.B., Ch.B.Edin., D.P.H., Assistant Medical Officer to the Ely County Council.

HART, John W., M.D., M.S., Government Medical Officer, Bingara, N.S.W.

HARWOOD-HARDMAN, Frederick, M.D.Edin., Honorary Radiologist to the Croydon General Hospital.

KRAMER, A. B. H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the King's Cliffe District, co. Northampton.

LEA, Charles Edgar, M.D., Ch.B.Vict., M.R.C.P.Lond., Honorary Physician to the Ancoats Hospital, Manchester, vice Dr. C. H. Melland.

MOORE, R. Foster, M.A., B.C.Cantab., F.R.C.S., Assistant Surgeon to the Royal London Ophthalmic Hospital (Moorfields Eye Hospital).

PELLEW, L. J., M.B., B.S., Medical Officer, Port Augusta Gaol, South Australia.

PLATT, Harry, M.S., M.B.Lond., F.R.C.S., Honorary Surgeon to the Ancoats Hospital, Manchester, vice W. H. Hey.

ROWNTREE, Cecil, M.B., B.S., F.R.C.S., Surgeon to the Cancer Hospital, Fulham Road, S.W.

SHUTTLEWORTH, G. E., M.D., etc., approved by the Board of Control for the purpose of signing Certificates of Mental Defect under the Mental Deficiency Act, 1913 (Sections 3 and 5).

SMITH, J. R., L.R.C.P. and S.Edin., L.R.F.P.S.Glas., Certifying Factory Surgeon for the Pontyberem District, co. Carmarthen.

TIBBITTS, A. C., M.R.C.S., L.R.C.P., Assistant School Medical Officer to the Notts Education Committee.

VALENTINE, Jessie M., M.B., School Medical Officer and Deputy Medical Officer of Health, West Bromwich.

WALKER, G., M.B., B.C.Cantab., Certifying Factory Surgeon for the Colnbrook District, co. Buckingham.

CHELSEA TUBERCULIN DISPENSARY. — The following appointments have been made:

Honorary Assistant Physicians. — A. D. Serrell-Cooke, M.B., Ch.B.Edin.; J. Neville Griffiths, M.B., Ch.M., D.P.H.; F. Silva Jones, M.B., B.S.Durh., M.R.C.S., F.R.C.S., L.R.C.P.; Miss Annie McCall M.D., L.K.Q.C.P.I.; John MacKeith, M.B., C.M.Glas.; H. Norman Marrett, M.R.C.S., L.R.C.P.Lond.; H. C. Manning, M.R.C.S., L.R.C.P., D.P.H.; J. Horne Wilson, M.D.Aberd., M.B., Ch.B., L.M.Dub.

Honorary Surgeon.—A. Boyce Barrow, F.R.C.S., M.B.Lond.

Honorary Laryngologist.—John MacKeith, M.B., C.M.Glas.

Honorary Clinical Assistant.—Miss Christina Goode, M.B., B.S.Melb., D.P.H.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—The following appointments have been made:

Resident Medical Officer.—A. S. C. Courts, M.D.Lond.

House-Physician.—H. Austin Williams, B.A.Cantab., M.R.C.S., L.R.C.P.

House-Surgeon.—J. Z. Truter, M.B., Ch.B.Edin.

ROYAL FREE HOSPITAL, GRAY'S INN ROAD, W.C.—The following appointments have been made:

House-Surgeon.—Norman Gray, M.R.C.S., L.R.C.P.

House-Physician.—Miss M. F. Forrester-Brown, M.B., B.S.

House Surgeon.—Miss E. M. Moss, M.B., B.S.

Assistant Anaesthetist.—Miss Dearnley, M.B., B.S.

Junior Obstetric Assistant.—Miss E. M. Powell, M.R.C.S., L.R.C.P.

Junior Clinical Assistants to Mrs. Vaughan Sawyer.—Miss Dearnley, M.B., B.S.; Miss D. Milne, M.B., B.Ch.Dub.

Clinical Assistant to Mr. Cunning.—Miss D. Milne, M.B., B.Ch.Dub.

DIARY FOR THE WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W.—8 p.m., General Meeting and Election of Officers, etc. 8.30 p.m., Discussion on a Case of Ascites and its Treatment, to be introduced by Dr. F. de Havilland Hall, followed by Sir R. Douglas Powell, Sir William Osler, Dr. Hale White, and others.

Royal Society of Medicine:

Meeting of Fellows, 5 p.m.—Dr. David Thomson: A Microscopic and Lantern Demonstration on the Cultivation of Various Tissues *in Vitro*, including Human Tumour Tissue.

TUESDAY.

Royal Society of Medicine:

Section of Surgery, 5.30 p.m.—(1) Annual Meeting and Election of Officers. (2) Paper: Mr. G. Lenthal Cheatle: The Relation of Ducts and Acini to Cysts and Cancer of the Breast.

WEDNESDAY.

British Oto-Laryngological Society, 11, Chandos Street, Cavendish Square, W., 4.30 p.m.—Cases and Specimens.

Royal Society of Medicine:

Subsection of Proctology, 5 p.m.—(1) Demonstration of Cases and Specimens. (2) Notes of Cases: Dr. Hertz: Four Cases of Polypus of the Rectum in one family. Mr. P. Lockhart Mummery: A Case of Haematoma of the Broad Ligament simulating Sarcoma of the Rectum.

THURSDAY.

United Services Medical Society, Royal Army Medical College, Grosvenor Road, 5 p.m.—Paper: Major A. J. Hull, R.A.M.C.: The Transport of Wounded in War.

FRIDAY.

Royal Society of Medicine:

Section of Otology, 5 p.m.—(1) Annual Meeting and Election of Officers. (2) Demonstrations, Cases, and Specimens.

Section of Electro-Therapeutics, 7.30 p.m.—Annual Meeting and Dinner.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

City of London Hospital for Diseases of the Chest, Victoria Park, London, E.

Dublin: Rotunda Hospital.

London Hospital Medical College, Turner Street, E.

London School of Tropical Medicine, Royal Albert Dock.

London School of Clinical Medicine, Dreadnought Hospital, Greenwich, S.E.

Manchester Hospitals Post-Graduate Clinics.

Medical Graduates' College and Polyclinic, Chenies Street, London, W.C.

National Hospital for the Paralysed and Epileptic, Queen Square, London, W.C.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.

Royal Hospital for Diseases of the Chest, City Road, E.C.

Sheffield University.

West London Post-Graduate College, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

Bentley.—On April 28th, at "Haworth," Mitcham, the wife of Harold Bentley, M.R.C.S., L.R.C.P., of a son.

Dicks.—On Wednesday, April 29th, at "The Limes," Framlingham, to Dr. and Mrs. Dicks, a daughter.

MARRIAGES.

Parkin—Fenwick.—At Matfen Parish Church, on April 29th, by Rev. C. C. Petch, Alfred Parkin, M.D., M.R.C.P., F.R.C.S., son of the late George Parkin and Mrs. Parkin, of Gateshead, to Elizabeth, daughter of the late Matthew Fenwick, of Steelridge, and Mrs. Fenwick, of South Clarewood, Corbridge. At home, 56, Jesmond Road, Newcastle-on-Tyne June 10th and 11th.

Telfer—Watson.—At the Tontine Hotel, Greenock, on April 29th, 1914, by the Rev. Donald Campbell, Gaelic U.F. Church, and the Rev. C. Ross Lowdon, M.A., Middle U.F. Church, Walter Telfer, M.B., Ch.B., D.P.H., D.T.M.H., to Elizabeth Stewart Weir, youngest daughter of James Watson, late head master, Hillend Public School, Greenock.

Ward—Newman.—On April 25th, at St. Margaret's, Westminster, by the Rev. Geoffrey Gordon, Chaplain to the Westminster Hospital, Gordon Reginald, second son of the late John Barron Ward, of Streatham, S.W., and Mrs. Ward, of 2, Perham Crescent, West Kensington, to Gladys Mary, daughter of the late Frederick Newman, of Barnsley, Yorks, and Mrs. Newman.

DEATHS.

Arderne-Wilson.—On April 29th, at Sausmarez Place, Les Gravées, Guernsey, Agnes, wife of Richard Arderne-Wilson, M.B., C.M. Edin., and youngest daughter of the late David Goodsir, Portobello, N.B. Will friends kindly accept this the only intimation?

Pinder.—On May 1st, 1914, in his 71st year, Thomas Henry Pinder, Surgeon, of Edenwood, Wilmslow, and Temple Chambers, Brazennose Street, Manchester.

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		MAY.
12	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
		Glasgow and West of Scotland Branch, Western Infirmary, 3 p.m.; Dinner, 6.30 p.m.
13	Wed.	Surrey Branch, Annual Meeting, Redhill, 4 p.m.
14	Thur.	London: Insurance Act Committee 2 p.m.
		North of England Branch, Annual Meeting, Newcastle-on-Tyne, 4 p.m.
15	Fri.	Marylebone Division, 11, Chandos Street, W., 5 p.m.
16	Sat.	Last day for receipt of Nominations for Election on Council.
19	Tues.	Buckinghamshire Division, Annual Meeting, Aylesbury, 3 p.m.
20	Wed.	Altrincham Division, Altrincham, 4 p.m.
		Camberwell Division, Annual Meeting, 2, Underhill Road, Lordship Lane, S.E., 4 p.m.
22	Fri.	London: Medico-Political Ship Surgeons Subcommittee.
		Boston and Spalding Division, Annual Meeting, Boston, 12.45 p.m.
23	Sat.	List of Nominations for Election on Council will be published in the JOURNAL of this date.
25	Mon.	London: Naval and Military Committee, 3.30 p.m.

Date.		Meetings to be Held.
		MAY (*continued*).
26	Tues.	City Division. Annual Meeting, Balfour Hall, Kingsland Road, 3.30 p.m.
29	Fri.	Furness Division, Barrow, 3.15 p.m.
		JUNE.
2	Tues.	London: Public Health Committee, 3 p.m.
3	Wed.	London: Journal Committee, 2.30 p.m.
		London: Medico-Political Crime and Punishment Subcommittee, 12 noon.
5	Fri.	London: Medico-Political Committee, 10.30 a.m.
		London: Central Ethical Committee, 2 p.m.
6	Sat.	Date of issue of Voting Papers for Council Election from Head Office.
9	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.
		London: Organization Committee, 2 p.m.
10	Wed.	London: Hospitals Committee (*provisional*).
13	Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17	Wed.	London: Finance Committee, 2.30 p.m.
		Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, 12 noon to 1 p.m.; Business Meeting, 3 p.m. to 6 p.m.; Dinner, 7.30 p.m.
24	Wed.	London: Council Meeting.
27	Sat.	Announcement of result of Election of Members to Council.
		JULY.
11	Sat.	London: Science Committee, 10.30 a.m.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 16TH, 1914.

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SCOTTISH COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

NON-DELIVERY OF MEDICAL CARDS: REDUCTION OF PROVISIONAL CREDIT TO DOCTORS.

AT a meeting of the Chairman's Subcommittee of the Scottish Committee of the British Medical Association held on May 12th the following recommendations were unanimously adopted:

1. That practitioners should be strict in insisting that every person claiming medical attendance produces a medical card.

2. That, although practitioners are not responsible for medical cards, as it would be a personal advantage to themselves, they should make a practice of inspecting at the Insurance Offices the undelivered medical cards of persons on their lists, as they might thereby enable persons to be traced and cards delivered; and

3. That Insurance Committees in individual areas should be encouraged to furnish evidence to the Insurance Commissioners of the inaccuracy and unfairness of the provisional credits as applicable to their own respective areas.

The following is the text of a correspondence which has passed between the Scottish Committee and the Scottish Insurance Commissioners:

155, Saint Vincent Street, Glasgow,
16th April, 1914.

The Secretary,
National Health Insurance Commission (Scotland).

Sir,—I am directed by the Scottish Committee of this Association to communicate with you, and to state that great uneasiness exists in the mind of the medical profession owing to the recent instructions issued to insurance Committees reducing the provisional credit and ordering the withdrawal from doctors' lists of all persons whose medical cards have not been delivered. I am instructed to point out to the Commissioners that the system is built up on the basis that for an individual person on the doctor's list an individual payment will be made to that doctor. The Scottish Committee have experienced considerable difficulty in satisfying the mind of the individual doctor that even if the whole medical payment should reach the profession, he would, under any system of dividend, receive the definite payment to which he was entitled in respect of those persons for whom he was responsible. The course of a contribution from the insured person through the Commissioners' pool to the doctor becomes obscured under various circumstances. Between the insured person and the Commissioners, this occurs in cases where the person ceases to become contributory, owing, for example, to prolonged illness or other cause, and also when the person is unauthenticated. Between the Commissioners and the doctor, it occurs when the person is either unauthenticated or when his medical card is undelivered and he is withdrawn from the doctor's list.

The money in respect of each insured person, being represented by stamps, certainly reaches the Commissioners, but if no card is delivered, it cannot be traced to that insured person, and it is equally difficult to trace it to the doctor.

The Scottish Committee will be glad if the Commissioners will reply to the following questions which embody the difficulties that have arisen before the profession: (1) In the event of an undelivered medical card being subsequently delivered, will the doctor from whose list the insured person has provisionally been taken off receive payment for the intervening period during which he has in fact been responsible for that insured person's medical attendance? (2) Whence is provision made for payment for persons who get medical cards before they are authenticated by index slips, and will payment be made from the date of the issue of the medical card? (3) In calculating credits from the number of contribution cards, what provision is made for insured persons who are for the time being non-contributory, but still in medical benefit, for example, in prolonged illness?

If desired by the Commissioners, the Scottish Committee will be glad to send a deputation to meet the Commissioners in conference, but probably the information given in this letter is sufficiently specific.

I shall be glad to hear from you.—I am, your obedient servant,

W. FINDLAY,
Clerk.

155, Saint Vincent Street, Glasgow,
April 27th, 1914.

The Secretary,
National Health Insurance Commission
(Scotland), 83, Princes Street,
Edinburgh.

Sir,—The Insurance Act Committee of this Association at its last meeting had before it the correspondence regarding the ruling of the Scottish Commissioners that the names of all insured persons whose addresses are untraceable should be removed from the lists of medical practitioners, and passed the following resolution:

> That the Committee records its strong protest against the ruling of the Scottish Insurance Commissioners that the names of all insured persons whose addresses are untraceable should, if appearing upon any medical practitioner's list, be removed therefrom, as many insured persons whose addresses may be untraceable are still upon practitioners' lists and are receiving medical attendance and treatment, and the whole difficulty has been created by the failure of the approved societies to supply the correct addresses of insured persons to Insurance Committees.

I am directed by the Chairman to communicate this resolution to you, and to ask you to be good enough to let me hear from you. The matter is somewhat urgent, and

I trust you will be able to let me have the views of the Commissioners at an early date.—Yours faithfully,

W. FINDLAY,
Clerk.

National Health Insurance Commission (Scotland),
83, Princes Street, Edinburgh.
May 6th, 1914.

W. Findlay, Esq.,
Clerk, The British Medical Association
(Scottish Committee),
155, St. Vincent Street, Glasgow.

Sir,—(1) With reference to your letters of April 16th and 27th, I am directed by the Commissioners to enclose for the information of the Scottish Committee of the British Medical Association a copy of a circular letter recently issued to Insurance Committees in explanation of the principles upon which have been calculated the provisional credits in respect of medical and sanatorium benefit and the expenses of administration.

2. The manner in which the Provisional Medical Fund has been made up is set out on pages 2 and 3 of the circular letter. It should be noted that, to provide the income for that Fund on a final basis, a debit will be made against Approved Societies in respect of every member entitled to medical benefit. Similar debits will be made against the accounts of deposit contributors. To these will be added the State Grant of 2s. 6d. and a further 6d. payable in respect of the domiciliary treatment of cases suffering from tuberculosis. The Fund will thus represent a total sum of 9s. in respect of every insured person entitled to medical benefit for a year. Where the insured person is so entitled for less than a year the amount of the debits will be correspondingly reduced.

3. The fact that in any particular area medical cards have not been delivered to insured persons or that index slips have not been received has no bearing upon the income credited to the Fund. Any suggestion, therefore, that the withdrawal of the name of an insured person from a doctor's panel list will result in a reduction of the provisional credit in the Fund may be regarded as inaccurate.

4. The circular letter explains in detail the reasons why the income of the Medical Fund must be regarded as provisional at present and the adjustments which are necessary before this income can be distributed on a final basis. It may be emphasized, however, that, subject to the foregoing adjustments, the full sum payable in respect of all persons entitled to medical benefit will be distributed to Insurance Committees.

5. With regard to the distribution of the Provisional Medical Fund between the Insurance Committees concerned, I am directed to state that the Index Register has been taken as the basis of distribution. It must be noted, however, that at present the Index Register for Scotland as a whole contains index slips in excess of the number of insured persons entitled to medical benefit to the extent of 10 per cent. This excess is due to the duplication of index slips by societies and to the retention on the Register of index slips in respect of persons who have died, married, been suspended from benefit, removed abroad, or ceased to be insured. The position is further complicated as between committees by the fact that the Index Register of Committees contains slips for insured persons who have removed to other areas. Clear evidence of this may be found in the number of suspense slips in existence and the number of undelivered medical cards, a very considerable percentage of which belong to persons who have removed to the areas of other Committees. For these reasons the Index Register cannot be regarded as representing the insured persons actually resident in the area of an Insurance Committee. The Commission are about to proceed with certain arrangements intended to secure greater accuracy in intimating deaths, lapses from insurance, suspensions, etc., and to facilitate the clearance of the Index Register so far as duplication of index slips is involved. Any adjustments resulting from these arrangements will be taken into consideration in determining the final credit to Insurance Committees for the year 1913-14.

6. In order to enable Insurance Committees to be in a position to distribute as large a sum as possible to doctors, chemists, etc., in respect of the Provisional Medical Fund pending a final settlement of the income of the fund, the Commission have distributed the provisional credit to Insurance Committees on the basis of the Index Register as explained on pages 6 and 7 of the accompanying circular letter. It is assumed that the foregoing remarks as to the defects in the Index Register apply generally throughout Scotland, but a margin is being retained to provide for any adjustments as between individual Committees that may be found necessary on the final settlement.

7. With regard to the payments by Insurance Committees to individual doctors and to the proposal to withdraw the names of the persons concerned from the doctors' lists, I am to state that the foregoing references to the state of the Index Register apply equally to the doctors' medical lists. A doctor is entitled to the full capitation payment in respect of an insured person only when that person has been resident in the particular area throughout the year. He will, however, be entitled to a proportionate payment in respect of an insured person who is on his list and for whose treatment he is responsible for only part of a year. Applications by insured persons to a doctor to be placed on his list cannot be regarded as a satisfactory test of the liability incurred by the doctor, as it is known that a considerable percentage of insured persons have chosen doctors in more than one area, and also that many have removed from one area to another and have there chosen a doctor without any intimation being given to the Committee of the first area. So far as the insured person is concerned, his right to medical attendance and treatment still holds good notwithstanding the proposal to remove his name from the doctor's list on the ground that his medical card has not been delivered to him. The Commissioners have already advised Insurance Committees that on the issue of medical cards to all persons on a panel practitioner's list, each practitioner should be informed that he must require the production of a medical card as proof of title to medical benefit. In the event of an insured person requiring medical treatment and being without a medical card, he can obtain it at once from the Clerk to the Insurance Committee on production of proof of title, and his name will at the same time be restored or added to the panel practitioner's list. A suggestion in your letter of 27th ultimo to the effect that the approved societies are entirely responsible for the difficulties that have arisen is scarcely justified by the facts, inasmuch as experience has shown that thousands of members fail to notify their societies of changes of address until long after their removal. The introduction of the medical card system will, it is hoped, remove this complication in future.

The payments already made by Insurance Committees to doctors in respect of their responsibility for treatment of insured persons during 1913-14 have been in the nature of advances and have been based upon the number of persons actually on their medical lists—that is, persons who have applied to and been accepted by doctors and for whom index slips are in the possession of the respective Insurance Committees. In view of the remarks made with reference to the Index Register it is found that in some cases doctors have already received sums in excess of the amounts to which they are actually entitled. When the final adjustment is made a correction will be necessary in such cases and similarly with cases in which doctors may have received less than they were entitled to receive.

Referring to the specific questions asked in your letter, I am to state:

(1) That in the event of the subsequent delivery of a medical card to an insured person whose name has been provisionally removed from a doctor's list, a doctor will be entitled to receive payment from the Insurance Committee for the full period during which the insured person in question was in the area and entitled to receive treatment (the Commission, when making the suggestion, recognized that the removal from the list would in many cases be only temporary pending receipt of information as to the insured person's correct address);

(2) That on the receipt of an index slip by an Insurance Committee for which a corresponding suspense slip is held payment at the capitation rate will be made for the full period during which the insured person concerned was in the area of the Committee and entitled to receive treatment;

(3) This question has already been answered.

With regard to (1) and (2) I may add that the margin of the fund retained by the Commissioners has been calculated as sufficient to provide for these among other adjustments.—I am, sir, your obedient servant,

JOHN JEFFERY,
Secretary.

National Health Insurance Commission (Scotland),
Edinburgh,
March 31st, 1914.

To the Clerk of the Insurance Committee for the
County / Burgh of .....

Provisional Credits.

Sir,—The Commissioners yesterday had a meeting with representatives of the Association of Insurance Committee Clerks in Scotland, at which the desire was expressed that

information should be afforded to Insurance Committees of the basis on which the provisional credits recently intimated were arrived at.

The manner in which the income of Insurance Committees was proposed to be ascertained was dealt with fully in Memorandum I/C. 144. It will be observed that it was proposed that the income should be ascertained on a mean of the societies' membership during 1913. It was assumed that to ascertain this figure it would be necessary to await the return of the contribution cards for each of the four quarters of that year, and it is now obvious, on the experience of the past, that the cards for the quarter ending on January 11th, 1914, will not be all received by the Commission until probably towards the close of the current year.

The Commissioners, with a view to accelerating a final settlement, have under consideration the question of whether, if the number of cards returned at the end of the second quarter of last year were taken as the basis for the mean, there would be any substantial difference between that figure and the mean arrived at by taking the average for the four quarters. They are not yet in a position to say whether that course, which would enable a much earlier settlement to take place, can be adopted. It has to be kept in view that there probably will be more delay in receipt of the sixth quarter's cards than in any previous quarter, due to the adoption as from January 12th last of a half-yearly card. Societies with longer time to prepare their returns will probably not send in cards in some cases until towards the close of the six months.

On January 21st, 1914, the Commission had received the following contribution cards for members of approved societies:

First quarter	1,454,465
Second quarter	1,449,735
Third quarter	1,427,814
Fourth quarter	1,357,665
Fifth quarter	756,462
Sixth quarter	Nil.

These figures include persons not entitled to medical or sanatorium benefits.

It was obvious that unless there was to be very considerable delay some figure other than the mean based on the average of the four quarters would have to be taken as the bases of provisional credits. The Commission accordingly determined to calculate the provisional credits on the cards for the first quarter as adjusted shortly prior thereto for the purposes of the appropriation account. For the Medical Fund there were included only those who were entitled to medical benefit. This figure amounted to 1,421,017. For the purposes of general administration the figure taken was 1,434,055. For sanatorium benefit the figure was 1,421,008.

I. The Provisional Medical Fund was made up of—

1. The sum of 6s. per insured member entitled to medical benefit.
2. The State grant of 2s. 6d. per insured member entitled to medical benefit.
3. Contributions at similar rates in respect of deposit contributors and proportionately for parts of the period subject always to the amount at the contributor's credit permitting the full payment. The total sum credited in respect of deposit contributors amounted to £8,704 2s. 8d., but this sum is subject to adjustment of the Treasury grant, which has provisionally been credited at the full rate of 2s. 6d. per contributor.
4. A transfer of $\frac{8}{85}$ of the sanatorium fund provisionally ascertained as explained below for the year ending January 11th, 1914.

II. The Provisional Sanatorium Fund was made up of the following contributions per insured person entitled to sanatorium benefit, namely:

(1) *Members of Approved Societies:*

(*a*) 3$\frac{3}{4}$d. in respect of each quarterly card surrendered for the period to January 12th, 1913, and
(*b*) 1s. 3d. per member for the period to January 11th, 1914.

(2) *Deposit Contributors:*

(*a*) 1d. for every four contributions for the period to January 12th, 1913, and
(*b*) 1s. 3d. for the period to January 11th, 1914, and proportionately for shorter periods. In some cases the balance at the contributor's credit did not permit of the full deduction.

The total sum credited to the fund in respect of deposit contributors amounted to £954 12s. 11d., for the period ending January 12th, 1913, and £985 1s. 1d. for the period ending January 11th, 1914.

Of the total fund for the year ending January 11th, 1914, six-fifteenths was carried to the credit of the Medical Benefit Fund as the provisional adjustment of the domiciliary 6d.

III. The Provisional General Administration Fund was made up of the following sums:

(*a*) Sums available under Section 15 (6) of the 1911 Act (cost of administration of medical benefit). These sums are:

1. The sum of 2d. per insured person in respect of the period to January 12th, 1913.
2. 3d. per insured person for the period ending January 11th, 1914. This sum of 3d. consisted of a contribution of 1$\frac{1}{2}$d. per insured person made by the approved societies and a special State contribution of 1$\frac{1}{2}$d. per insured person.

(*b*) Administration expenses chargeable to approved societies and to deposit contributors under Sections 61 (2), 42 (*c*) and (*e*) of the 1911 Act. These sums are respectively:

(1) (*a*) For approved societies $\frac{5}{8}$d. per male member for the period to January 12th, 1913;
(*b*) 1$\frac{3}{4}$d. per male member for the period to January 11th, 1914; and
(*c*) $\frac{3}{4}$d. and $\frac{1}{2}\frac{5}{5}$d. for those periods respectively in the case of women members.

(2) In the case of deposit contributors:
(*a*) For the first half year, $\frac{1}{2}$d. per contribution; and
(*b*) For the year ending January 11th, 1914, 1s. 9d. per insured person.

Contributors entering into insurance after July 15th, 1912, were charged only sums proportionate to the period in insurance.

The sums so credited to the fund were £1,280 14s. 11d. for the period to January 12th, 1913, and £1,487 15s. 2d. for the year to January 11th, 1914.

The total funds provisionally ascertained as above were as follows:

	£	s.	d.
Medical Fund (including domiciliary 6d.)...	648,555	14	9
Sanatorium Fund (exclusive of domiciliary 6d.)	105,269	19	11
General Administration	44,183	4	8

The General Administration Fund for County Committees was supplemented by sums of £1,177 18s. 9d. for the period to January 12th, 1913, and £2,202 17s. 2d. for the year to January 11th, 1914, in respect of travelling expenses in terms of Section 61 (2) of the 1911 Act.

These funds so provisionally ascertained will, for the final settlement, fall to be adjusted to meet:

1. The difference between the first quarter's figures taken as the basis and the mean as finally determined either on the basis of the average of the four quarters' contributions or on the contribution cards for the second quarter of the year 1913.
2. The addition of persons coming into insurance after the first quarter less those falling out of insurance by lapse, resignation, suspension, emigration, marriage, or death. It is impossible at this stage to say whether or not this will lead to an increase on the provisional figures taken. Probably there will be a small increase.
3. An adjustment between the funds for England, Scotland, and Wales, to secure that the average sum per insured person carried to the Fund is equal in the three countries. It will be obvious to Insurance Committees that there may be a number of insured persons who are registered with societies in the one country, but who are receiving benefits in another. The only practicable means of securing international equality in these cases would appear to be an adjustment as suggested above.
4. Adjustments between the medical funds of England, Scotland, and Ireland, and between the funds of each Insurance Committee within these countries in respect of treatment afforded to temporary residents under Regulation 22 of the No. 2 Regulations, including green voucher adjustments.
5. Refunds to approved societies in respect of mercantile marine members in terms of the agreement between the committees and the societies.
6. An adjustment between the Medical Fund for the year 1913 and that for the year 1914 in respect of the medical year having been terminated for convenience of administration three days prior to the normal period. There will fall accordingly to be carried from 1913 to the current year $\frac{3}{3}\frac{3}{6}\frac{5}{5}$ths of the Fund.
7. An adjustment on Sanatorium and General Administration for similar reasons of $\frac{1}{3}\frac{1}{6}\frac{5}{5}$.
8. An adjustment on the society membership as finally determined on in consequence of transfers to the society

from the Deposit Contributor Fund where the deposit contributor himself has suffered the whole or part of the charge for medical benefit for the year ending January 11th, 1914.

9. Such adjustments between Committees as may be necessary to give effect to arithmetical and other corrections in the index counts of the Committees.

10. Deductions in cases where, owing to the failure of practitioners to observe the conditions of the special Treasury grant of 2s. 6d. per insured person, the grant, or some portion thereof, has not been earned.

The Commissioners, after careful consideration, determined, in order to meet those contingencies, to make the following deductions from the provisional funds before distributing them among Insurance Committees—namely:

	£	s.	d.
Medical Fund	32,487	15	9
Sanatorium Fund	5,263	10	0
General Administration	2,209	3	3

and to distribute the balance of the funds to Insurance Committees proportionately on the basis of:

(*a*) The index count at October 29th, 1912, for the period ending January 12th, 1913; and
(*b*) The mean of the counts of index slips taken as at October 29th, 1912, and April 14th, 1913, for the year ending January 11th, 1914,

subject only to such arithmetical corrections as had already been adjusted between the Commissioners and the Committee. It will be remembered that separate counts were taken for each purpose. The travelling expenses of £3,380 15s. 11d. were apportioned to the county committees on the basis of the return of society members resident in the areas.

In making these deductions the Commissioners had in view the desirability that Insurance Committees should immediately be placed in the position as being able to distribute as large a sum as possible in payments to doctors, chemists, etc. They considered, however, that it was undesirable that over-payments should be made which committees would have to endeavour to recover from individual practitioners, etc. While there may be a certain risk of small over-payments in particular areas, the Commissioners are of opinion that on the provisional credits over-payments, if any, will be so unsubstantial as [not] to create any injustice as between the doctors and chemists in the different areas. On the other hand, on the information before them, the Commissioners consider that in a number of areas the Insurance Committee will be able to count on receiving only a small, if any, further payment, and that additional sums ascertained on the final adjustment will probably fall to be distributed only to a proportion of the total Insurance Committees.

When explaining the position to practitioners and others it is well to keep in view that:

1. The total funds, as finally ascertained, will be substantially accurate, as societies can receive credit for contributions only in respect of surrendered contribution cards, and as the deductions for medical benefit and for other Insurance Committee purposes represent only a small proportion of the average contributions per card, there is a strong inducement to societies to send in cards.
2. The index slips represent approximately an excess of 10 per cent. over contribution cards, due, amongst other causes, to duplication in membership or in the issue of index slips, failure of the society to send, or of the Committee to give effect to intimations of suspensions, removals, emigrations, and deaths.
3. Applications for treatment are not a satisfactory test of the liability incurred to practitioners, as it is known that a considerable percentage of insured persons have chosen doctors in more than one area, and also that many of them have removed from one area to another and have there chosen a doctor without any intimation being given to the Committee of the first area.
4. That the Commissioners have under consideration and hope to issue at an early date proposals under which greater accuracy will be secured in intimating lapses from insurances, suspensions, etc.; and
5. So soon as Committees are relieved of the immediate pressure of issuing medical cards, the Commissioners will submit schemes for facilitating the clearance of the index registers.

I am to add that should your Committee desire any further explanations the Commissioners will be glad to afford them.—I am, Sir, your obedient servant,

H. L. F. FRASER, Assistant Secretary.

LOCAL MEDICAL AND PANEL COMMITTEES.

SOMERSET.

LOCAL MEDICAL AND PANEL COMMITTEES.

THE second meeting of the Panel Committee and the fifteenth meeting of the Local Medical Committee for Somerset were held at Taunton on April 23rd, when Dr. WALLACE occupied the chair, and twenty other members were present.

Election of Panel Committees.—The CHAIRMAN explained the proposals of the Insurance Commissioners for the election of the new Panel Committees, and it was decided to adopt Scheme "B" (SUPPLEMENT, April 25th, p. 254), it being left to the Chairman and the Honorary Secretary to arrange the details.

Election of New Members.—The elections of Dr. Aldridge of Glastonbury, vice Dr. Lawrie, resigned, and Dr. Graves of Clevedon, vice Dr. Humphrys, resigned, were announced.

Accrued Arrears.—Dr. BRISTOWE, a member of the Finance Subcommittee of the Insurance Committee, reported that accrued arrears would be distributed on May 15th, and that the funds accruing from unallocated patients would be distributed in accordance with the arrangements made early in 1913 as soon as the Insurance Commissioners remitted the necessary amount.

Administrative Expenses of the Pharmaceutical Committee.—A letter was read from the Secretary of the Pharmaceutical Committee presenting a revised estimate of their administrative expenses for 1914, which reduced the sum asked for from £120 to £90. It was decided that, as the information in the possession of the Panel Committee was inadequate to enable them to criticize this estimate, it should be left to the Insurance Committee to deal with it.

Provisional Committee.—An application from the Chairman of the Provisional Committee formed at the meeting of representatives of Local Medical and Panel Committees held in London on March 13th was read by the HONORARY SECRETARY and discussed. It contained a request for a sum of £1 per 20,000 insured persons in the county to meet preliminary expenses. This would amount to £6 for Somerset. The Committee decided not to join the new organization at present.

Surgery and Waiting-room Accommodation.—The Clerk to the Somerset Insurance Committee having asked, on behalf of the Medical Subcommittee, that the Panel Committee should consider the question of the adequacy of the surgery and waiting-room accommodation of doctors having 700 patients or upwards upon their lists, the matter was discussed, and, on the motion of Dr. FARRANT, seconded by Dr. BREW, it was unanimously resolved:

That the Honorary Secretary write to the Clerk of the Insurance Committee that the Panel Committee is prepared to look into any case where a specific complaint is made.

Hours for Seeing Insured Patients.—The HONORARY SECRETARY read a letter from the secretary of the Friendly Society's Council complaining of the hours of 6 to 7 p.m. fixed by some doctors for seeing insured persons, as it led patients to infringe the society's rules that sick members must be indoors by 6 p.m. between March and October. Dr. ROUTH said that in many clubs there was a proviso to this rule: "Except when visiting the doctor." It was also represented that the 6 to 7 hour suited the working man best. The Honorary Secretary was instructed to put these points forward.

Medical Referees.—Dr. DICKINSON raised the question of the appointment of medical referees for the county of Somerset, and incidentally mentioned that one large approved society was offering 5s. a case for referee work. Dr. FARRANT and Dr. MARSH also spoke, and mentioned specific cases of doctors who had been offered fees under 10s. 6d. a case and had refused to accept them. The meeting was reminded that the British Medical Association and the Somerset Local Medical Committee had passed resolutions that 10s. 6d. should be the minimum fee for referee work, and it was decided to give the strongest support to these resolutions.

Signing Certificates.—Reference was made to difficulties with certificates when the date of signing was not that of

the day that the patient was examined. It was explained that all difficulty was avoided if the necessary alterations were made in the wording of the body of the certificate, bringing it into accordance with the facts, but that the date affixed must be the actual date of signing.

Examinations by Tuberculosis Officer.—Dr. DUPONT read correspondence with the chief tuberculosis officer about school children referred to the tuberculosis officer for diagnosis, his complaint being that the family doctor was not advised that the case required examination, or even of the result of the examination when it was made. The Honorary Secretary was instructed to write to the chief tuberculosis officer on the subject, and to draw his attention to the fact that this was not in keeping with the spirit of the third and fourth paragraphs of his circular on Tuberculosis—Uninsured Persons, March 27th, 1914, and to suggest that the chief tuberculosis officer should embody in his letter to the parents a request that they should communicate with their doctor, and that the chief tuberculosis officer should also instruct tuberculous visitors to tell the parents the same.

Unallocated Patients.—It was decided that the arrangements which had been made by the Local Medical Committee with the Clerk to the Insurance Committee in respect of the unallocated patients getting the services of a doctor should be confirmed by the Panel Committee. These arrangements were:

1. That in the case of urban districts the Clerk should communicate with the District Secretary of the Panel Committee in which the patient lived, requesting him to allocate him to a doctor.
2. That in the case of rural districts the Clerk himself should allocate the patient to the nearest doctor on the list.

GLOUCESTERSHIRE.

In the resolution referring to the expenses of the Gloucestershire Panel Committee published last week (p. 349), the amount of the voluntary levy on all panel practitioners should have been stated as 1d. in the £1 of each cheque received from the Insurance Committee.

INSURANCE NOTES.

ALTERATION OF AGREEMENTS.

Absence of Due Notice.

ON May 8th the Divisional Court granted Dr. Alfred Salter, of Bermondsey, a rule for a *mandamus* directing the Insurance Committee of the County of London to show cause why it should not reinsert his name on the panel.

Mr. Neilson (instructed by Messrs. Hempsons), who appeared for Dr. Salter, said that Dr. Salter had put his name on the panel at an early date, under an agreement which lasted till 1913, when it was superseded by a new agreement, which provided, among other things, that no variation in it should be introduced unless two months' notice was given of the intended variation before the beginning of any subsequent medical year. In November, 1913, notice was given that some variation would be made for the new year beginning on January 14th, but no details were given until December 6th, when a draft of the proposed new agreement was sent. That was less than two months before the new medical year began. The draft included a provision as to the issue of prescriptions in duplicate, which Dr. Salter thought objectionable. Therefore, he returned it with the words "in duplicate" crossed out. The Committee omitted his name from the panel. Counsel said that a doctor could not be removed from a panel without an inquiry under Section 15 of the principal Act. The grounds for the application for a *mandamus* were that the Committee had deleted Dr. Salter's name from the panel without taking the necessary steps to justify it in doing so, and that it had not given him proper notice of variation in the terms of his engagement.

CORONER'S INQUIRIES.

In opening a recent inquest the coroner for the City of London said he had received a circular letter from the Home Secretary asking him to inform the Insurance Commissioners of any cases in which charges were made affecting the administration of the Insurance Act, in order that the Commissioners might have the opportunity of sending a representative to the inquest. It was also asked that should such charges be made during the course of an inquest it should be adjourned to allow a representative of the Commissioners to attend. The Coroner pointed out that these requests involved additional work and responsibility for the coroner and jury.

MANCHESTER AND SALFORD.

PANEL SERVICE INQUIRY.

SEVERAL months ago the Manchester Insurance Committee appointed a special subcommittee to consider and report on the medical service provided for insured persons in the Manchester area, and it is announced that the Committee intends to make the inquiry as complete as possible, and with this object will invite evidence from any bodies or persons who are in a position to give information bearing on the inquiry. Every facility will be given to persons having complaints to make as to the medical service to lay their complaints with their evidence before the Committee. It is clearly in the interest of the panel practitioners and panel chemists, as well as for the benefit of the insured, that the inquiry should not be restricted in any way. Obviously mere general statements not substantiated by specific proofs would hardly assist the Committee, but if the inquiry is to be complete the relative merits of different methods of administering the medical service, such as the ordinary capitation service or even a State Medical Service, could hardly be left out of consideration. It is doubtful whether the reference to the subcommittee is sufficiently wide to enable it to enter fully into these questions, but they can hardly be left out of consideration by the Insurance Committee when the report of the subcommittee is received.

A similar special committee was appointed several months ago by the Salford Insurance Committee, but it has not yet met to consider its procedure. Apparently it is awaiting the outcome of the dispute between the Panel Committee and the Pharmaceutical Committee as to the charges against a number of the panel practitioners of over-prescribing. This dispute at present appears to be no nearer settlement than it was two months ago, and it is not unlikely that the arbitration of the Insurance Commissioners may be invoked, as neither side is inclined to give way at present.

THE MANCHESTER WAREHOUSEMEN AND CLERKS' ASSOCIATION.

After one of the stormiest meetings ever held, the Manchester Warehousemen and Clerks' Association was unable to arrive at any decision as to its medical service. When the Insurance Act first came into operation, the association applied to the Commissioners to be allowed to contract out of the medical benefit regulations, so that its members could have an absolute free choice of doctors, whether panel or non-panel, but the application was refused. The association then decided that those of its members who maintained their voluntary contributions at the old rate of 2s. a month should have free choice of doctors, the association undertaking to repay all doctors' fees incurred to the extent of 3s. 6d. a visit. Such members were thus doubly insured for medical attendance, and it was thought that they would be able to get additional medical treatment such as was not included under the treatment that could be required from the panel practitioners. Owing to the refusal of the Commissioners to allow contracting out, the Insurance Committee has received on behalf of these members the usual contribution which enables them to obtain free treatment from the panel practitioners, but the members are also at liberty to go to any practitioner whether on the panel or not. As a matter of fact, a large proportion have gone to panel practitioners and said that they preferred to be treated, not as panel patients, but as private patients, and have asked the panel doctor to send in his bill to the association. The Insurance Committees of Manchester and Salford decided that the panel practitioners should not be at liberty to receive payment twice over; they must decide at once in every case on which fund the patient must be placed, and if an insured member preferred to be treated as a private patient his name must not also be put on the insurance day-sheets for payment to be made out of the panel fund. When the scheme was inaugurated it was thought that a large proportion of the members would be content with the panel service, and that the funds of the association would thus benefit, but this expectation has not been realized. A large number of the members thus doubly insured have apparently had the idea that they would receive better attention from the panel doctor whom they chose if they went to him as a private patient than if they went as a panel patient, their reasoning being that the doctor would only receive a little

over 1s. per attendance from the panel fund if he treated them as panel patients, but would receive 3s. 6d. per attendance from the association if he treated them as private patients. The result of this has been an enormous call on the funds of the association, and largely for this reason the expenditure of the association for medical attendance alone, excluding specialists and drugs, during the last year was £1,434 more than in the previous year. The actuary of the association had calculated that the scheme would cost the association about 6s. a member for the year, which would have left a fair margin, but he now reports that the actual cost has been much nearer 12s. a member, and he adds: "It can be gathered from the balance sheet that to provide for the increased cost the reserve for medical attendance would require to be doubled; this would involve an additional liability of nearly £26,000, and thus substitute a deficiency of £17,000 for the surplus of £8,000 odd. The present resources of the association cannot, it is clear, meet the demands which the new system entails."

The board of directors in their report indicate that they consider that they have reason to complain that so large a number of members, instead of taking advantage of the State service, have let their doctors understand that they can charge the fees allowed by the association. During the year 2,410 doctors' bills have been presented, and the directors complain that without good reason the maximum fee of 3s. 6d. has often been charged. Six of the bills sent in amounted to no less than £187, while another 158 varied between £3 and £18. It is proposed that in future the members should have two alternatives, either to continue to pay their present contributions, in which case they would be allowed only 2s. 6d. for a doctor's visit, including medicine; 1s. 6d. for consultation at the surgery, with medicine; and 1s. for repeat medicine without consultation; or alternatively, that the members should pay an extra 6d. a month, when their doctors' fees would be 3s. 6d., 2s. 6d., and 2s. for the respective services. It may be added that less than 5 per cent. of the members have availed themselves of the option which the association gives them to have their contributions reduced in lieu of medical treatment, and one of the retiring directors in a letter to the press regards this as proof that "the system of public doctoring is so distasteful to the majority that they prefer private attention, even at a sacrifice to pay for it. There are some 3,400 members thus affected, who will doubtless appreciate at its proper value the desire to inflict this objectionable panel service upon them." The proposals of the board of directors have met with a great deal of criticism, and the special meeting held after the annual meeting arrived at no decision. A further special meeting was held, and again no decision was arrived at, and the meeting broke up in disorder. A still further meeting will have to be held very soon, as it is necessary to come to some decision.

LANCASHIRE INSURANCE AREA.

Special Mileage Grant.

The Insurance Commissioners have allotted the sum of £1,000 to the Lancashire county area from the special mileage grant for the year ending last January, and the Insurance Committee has further allocated £850 of this amount to certain special areas of the county where means of communication are difficult, the remaining £150 being set aside for payment to panel practitioners in special cases elsewhere, and in respect of tolls necessarily paid in attending insured persons. Any claims made under these headings must be sent in before Saturday, May 16th, and must specify full details of the amounts expended in tolls and give particulars of the claims for mileage. The Medical Committee will scrutinize the claims before sending them on to the Insurance Committee for payment.

Medical Referees.

At a general meeting of the practitioners of Area 22 of the county, which embraces the districts surrounding Manchester and Salford, a resolution was passed to the effect that medical practitioners acting as medical referees to approved societies ought not to accept any fee less than 7s. 6d. per case. In some of the neighbouring towns the panel practitioners have been requested by the Local Medical Committees not to accept less than 10s. 6d. per case, and it is a pity that no uniform agreement has been possible.

CORRESPONDENCE.

A CO-OPERATIVE SCHEME FOR CHECKING MALINGERING.

DR. H. P. MOTTERAM (Smethwick) writes: The best method of dealing with malingering is a thorny problem, of which apparently the most favoured solution at present is by the appointment of referees.

The referees apparently who so far have been appointed are general practitioners, and their interference between panel doctor and patient is viewed with somewhat contemptuous resentment. The panel doctor can hardly be expected complacently to submit to having his cases overhauled by a man whose opinion he would not take in the ordinary way, and who is possibly less experienced and less well qualified than himself.

I think it will be generally admitted that the attitude of the approved societies towards panel doctors is not quite as it should be. The societies no doubt have in their possession evidence that certificates have been given carelessly and laxly. The panel doctors as a whole, it must be admitted, have not shown any excessive consideration for the financial strain the societies have experienced. Possibly the doctors have felt that the societies, neither during the passing of the Act nor since, have been friends of theirs—the fight against the demands of these societies loomed too largely for that—so that the societies cannot complain if the doctors have been indifferent to their interests.

All this, however, is past history, and time is blunting the feeling of resentment. The doctors have no wish that the societies should go under; many of the doctors have had a long connexion with them to the advantage of both. It is therefore now time that the mutual relation of doctors and societies should be modified with advantage. The Act has come to stay, and in order to be worked satisfactorily in the best interests of the insured persons, the societies, and the doctors, there must be no antagonism, passive or active, between the two latter.

The attitude of the panel doctor towards a patient who he considers is malingering may be stated to be *nolle prosequi*. He has nothing to gain and possibly may lose a patient. He therefore goes no further than to ask, each time he sees a patient, if he is able to return to work, and salves his conscience with the thought that the society has its inspectors to put on pressure, to whom he is willing to give a guarded answer if requested.

I therefore suggest that the societies should consider the advisability of approaching the doctors to seek their aid in combating the malingerer who causes so disastrous a drain. I think it will be conceded that each practitioner knows which of his patients stay longer on the "box" than he considers the illness warrants. (These may or may not be the same persons whom the inspectors suspect.) Then what more simple way is there of getting at the facts than for the society to apply for information to the practitioner in attendance? The doctor might be asked to make a special examination and to fill up a form supplied to him, adding any further information not covered. The fee for such a report might safely be left for further consideration. The later effect of such reports would be that discussion would arise on the various Panel Committees on the character of, and the recommendations in, the reports. Various nebulous incapacities—for example, pregnancy—would become defined and a general uniformity throughout the country would be evolved.

It might be objected that the doctors would thus become the tools of the societies in a sort of inquisition, but it is only necessary to point out that reports could not affect genuine cases, and that malingerers only—who are a nuisance not only to the societies but also to the doctors—would be affected.

The mere fact that a report had been asked for would have a salutary effect, and of itself would tend to diminish the evil; and since the society itself requested the report, the patient would have no animus against his doctor, and there would be no advantage in his changing his doctor unless he also changed his society.

But, being only flesh and blood, the doctor might not always be right, and a genuinely ill person reported as able to work. Cases of this sort might be met by the society asking the insured person who disputed the accuracy of the report to submit the report of a physician or surgeon of a consulting rank, but not nominated by the

society, the society undertaking to refund the cost if the panel doctor's opinion were contradicted.

In the place, then, of referees, who must be highly qualified and enjoy the confidence of the profession, and must therefore be highly paid, I submit the above method. It might at least be given a year's working, and if experience shows that it is not satifactory, then suitable referees can be substituted without hardship to any one. If referees, either part or whole time, are appointed now there will be difficulty in dispensing with their services if not quite satisfactory, and a much larger increase in the expense of the working of the Act will have been established than if the method outlined above be adopted.

INSURANCE ACT IN PARLIAMENT.

AMENDING BILL.

MR. LLOYD GEORGE has announced that this bill will not be introduced before Whitsuntide.

DISALLOWED CONTRIBUTORS.

Mr. Gretton asked whether it was not the case that several classes of persons from whom contributions under the Insurance Act had been levied since July 1st, 1912, were now declared by the Insurance Commissioners to be outside the Act, and that in their case contributions would cease, and that they could draw no benefits; what was to be done with the moneys thus extracted from those persons and their employers; and would the employed persons' contribution be returned to those persons.—Mr. Wedgwood Benn replied that where contributions had been paid in respect of a person not required to be insured, the excess of the contributions over a sum equivalent to the liabilities incurred by the society in respect of him was, on application, repaid to the employer to be divided between him and the employed person.

PAYMENTS TO INSURANCE COMMITTEE.

Mr. Gretton asked for what reason the Insurance Commissioners sent £600 only in response to a requisition by the Rutland Insurance Committee, made in the regular way, for the sum of £900; if the committee was in consequence unable to pay the accounts, less certain deductions as required by the Commissioners, due to doctors, chemists, and others; and when the money required would be paid.—Mr. W. Benn: The sum of £600 was placed to the committee's account pending reconsideration by it of the basis of its advances. The matter had already been fully explained to the committee.

MEDICAL BENEFIT.

Panel Doctors (Payments).

Mr. Fell asked why some better arrangement was not made for the payment of the panel doctors under the National Insurance Act; and why money due was paid by driblets and was nearly always in arrear for periods of weeks—treatment of the doctors which did not conduce to efficient and satisfactory work by them.—Mr. W. Benn replied as follows: As payments to doctors during the year are advances on account of remuneration which cannot be determined till the end of the year, a margin must necessarily be reserved for the final settlement. It will, however, be possible for Insurance Committees in many cases to reduce the margin reserved when the accounts for last year are completed, and more precise information is accordingly forthcoming as to the actual sums available.

Panel Lists.

Mr. Wedgwood Benn stated in reply to questions by Sir J. D. Rees and Mr. Frederick Whyte that the maximum number of insured persons on the list of any single doctor on the panel in Great Britain was 5,455. Mr. Frederick Whyte asked further if the figures given related to a single doctor working alone, or to a practitioner with one or more assistants.—Mr. Benn said that the doctor in question was the only doctor on the panel in respect of those patients; he had at least one assistant.

Prescriptions on Sundays.

Mr. F. Hall (Dulwich) asked whether attention had been called to the number of cases in which contributors under the National Insurance Act had been unable, even in urgent cases, to get prescriptions made up on Sundays and on early closing days; and if it would be practicable to make some arrangements to provide that doctors on the panel should furnish medicine in urgent cases when a chemist was not readily available.—Mr. W. Benn said that the answer to the first part of the question was in the negative. With regard to the latter part of the question the regulations already provided for the doctors themselves dispensing in circumstances such as those referred to, and arrangements had been made by Insurance Committees accordingly. If particulars were furnished of any particular case, inquiries would be made.

SANATORIUM TREATMENT.

Sanatorium Accommodation.

In reply to Mr. Godfrey Locker-Lampson, Mr. Herbert Samuel said that on March 31st last the Bristol Insurance Committee had forty-one insured persons in residential institutions for the treatment of tuberculosis, and that the Bristol Corporation was carrying out a scheme under which a total number of 125 beds will be available. Twenty-two additional beds would be ready for use in the course of a few weeks. On the same date the Salop Insurance Committee had twenty-six insured persons in such institutions. The sanatorium in Shropshire was being enlarged so as to contain an additional twenty-five beds, and these additional beds would be ready for use in a month or six weeks.

Domiciliary Treatment.

Mr. Worthington Evans asked whether the Middlesex Insurance Committee was refusing to carry out its tuberculosis officer's recommendation that no insured person should receive domiciliary treatment with extras unless the insured person had chosen a panel doctor; and whether, in a case where an insured person had provided and paid for his own medical man, who was willing to act in consultation with the tuberculosis officer, it was the intention of the Government that the insured person was to forfeit the extras under the sanatorium benefit which the tuberculosis officer recommended.—Mr. W. Benn said that the recommendation of an Insurance Committee for sanatorium benefit and the nature of the treatment provided thereunder was a matter for the discretion of the Committee. He was informed, however, that no such advice as suggested had been given by the tuberculosis officer referred to.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

THE Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. AN ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

ANY further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (SUPPLEMENT, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (SUPPLEMENT, May 9th), will be published in the SUPPLEMENT of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the SUPPLEMENT of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in SUPPLEMENT of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,

ALFRED COX,
Medical Secretary.

May 13th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—Dr. Newman Neild, Honorary Secretary (9, Richmond Hill, Clifton), gives notice that the annual meeting of the Branch will be held at Bristol University, on Wednesday, May 27th, at 5 p.m., when Mr. R. G. P. Lansdown, President-elect, will give an address on "The Etiology of Appendicitis, Gastric Ulcer, and Allied Conditions."

BIRMINGHAM BRANCH.—Mr. Seymour Barling, Honorary Secretary (52, Newhall Street, Birmingham), gives notice that the annual meeting of the Branch will be held at the Medical Institute, Edmund Street, Birmingham, at 3.30 p.m. on Thursday, June 18th.

DORSET AND WEST HANTS BRANCH.—Dr. Frank Fowler, Honorary Secretary (29, Poole Road, Bournemouth), gives notice that the annual meeting will be held on Wednesday, May 20th, at the Dorset County Hospital, Dorchester, at 3.30 p.m. Agenda: Report of Branch Council. Reports of Bournemouth and West Dorset Divisions. The Honorary Secretary will propose that Rule 4 (paragraph 1) be altered, and, if this be adopted by the requisite majority, a second Secretary will be elected. To receive reports of election of new officers, who will thereupon take office. The President, Mr. H. H. Du Boulay, will deliver the Presidential Address: "Eye Cases in General Practice." Dr. Macdonald and Dr. Perdrau will show Pathological Specimens and Microscopical Slides. Mr. Burrough Cosens will read notes on Gall-stone Cases. The members of the honorary staff will show any cases of interest in the hospital. The practitioners of Dorchester and district kindly invite members to luncheon at the Antelope Hotel, Dorchester, at 1.30 p.m.

LANCASHIRE AND CHESHIRE BRANCH.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—Dr. T. W. H. Garstang, Joint Honorary Secretary (22, Station Buildings, Altrincham), gives notice that a meeting of the Altrincham Division will be held at Altrincham on Wednesday, May 20th, at 4 p.m.

LANCASHIRE AND CHESHIRE BRANCH: CHESTER AND CREWE DIVISION.—Dr. C. Jephcott, Honorary Secretary (12, Upper Northgate Street, Chester), gives notice that the annual meeting of the Division will be held at the Royal Infirmary, Chester, on Friday, May 22nd, at 4 p.m. Business: Election of Officers, Annual Report.

METROPOLITAN COUNTIES BRANCH.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers, Annual Reports of Council and of Representatives of the Branch on the Central Council, and President's Address.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.—Dr. J. H. Clatworthy, Honorary Secretary (145, Denmark Hill, S.E.), gives notice that the annual meeting will be held on Wednesday, May 20th, at 4 p.m., at 2, Underhill Road, Lordship Lane, S.E., where the retiring chairman, Dr. G. B. Batten, has kindly offered to entertain the meeting. Agenda: Election of officers for the coming session. To instruct the Representative how to vote at the Annual Representative Meeting: (*a*) On the Report of Council (SUPPLEMENTS, May 2nd and 9th); (*b*) On the model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th; (*c*) On the question of medical aid institutes, vide memorandum (SUPPLEMENT, April 4th); it is particularly requested that members should make themselves familiar with the contents of this memorandum; (*d*) To consider a request from the Society of Medical Officers of Health (School Medical Service Group) that the Division should support certain resolutions. The Bermondsey guardians have decided to substitute for the services of district Poor Law medical officers that of whole-time medical officers. The opinion of the Division, especially those members resident in Bermondsey, is desired on that point, and also as to what action should be taken, if any.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice of alteration of date of the annual meeting of the Division, which will be held in Balfour Hall, Kingsland Road, on Tuesday, May 26th, at 3.30 p.m.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—Dr. T. H. Parkes Peers, Honorary Secretary (20, Surrey Square, S.E.) gives notice that the annual meeting will be held on Wednesday, May 27th, at 4 p.m., at Bethlem Royal Hospital, when the Chairman, Mr. W. H. B. Stoddart, will give a demonstration on "Dementia Praecox." Agenda: Election of officers for the coming session. To instruct the Representative how to vote at the Annual Representative Meeting: (*a*) On the Report of Council (SUPPLEMENTS, May 2nd and 9th); (*b*) on the Model Scheme for the Treatment of Tuberculosis (SUPPLEMENT, April 4th); (*c*) on the question of Medical Aid Institutes, vide Memorandum (SUPPLEMENT, April 4th); it is particularly requested that members should make themselves familiar with the contents of this Memorandum; (*d*) to consider a request from the Society of Medical Officers of Health (School Medical Service Group) that the Division should support certain resolutions.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—Dr. R. Tuxford, Honorary Secretary (12, Wide Bargate, Boston), gives notice that the annual meeting of the Division will be held at the White Hart Hotel, Boston, on Friday, May 22nd, 1914, at 12.45 p.m. Agenda: Adoption of model rules by the Division; receive report of the Committee on Forms D 21 and D 22; election of officers, committee, and Representatives; to consider annual report of the Council (SUPPLEMENT, May 2nd). (Lunch will be provided at the hotel if a sufficient number of members signify their intention to be present.)

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH: FURNESS DIVISION.—Drs. A. E. Thompson and George Alexander, Honorary Secretaries, give notice that the annual meeting will be held in the Masonic Hall, Barrow, on Friday, May 29th, at 3.15 p.m. Business: Annual report; election of office-bearers; resolution by Dr. Harper, "That the Furness Division take a more active part in public health work"; proposed alteration in boundary of the Division; proposition from School Medical Officers' Association; Representative's expenses.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—Dr. Arthur E. Larking, Honorary Secretary (Buckingham), gives notice that the annual meeting of the Division will be held at the Royal Bucks Hospital, Aylesbury, on Tuesday, May 19th, at 3 o'clock. Mr. Whitelocke, Surgeon to the Radcliffe Infirmary, Oxford, will give an address on "The Treatment of Sprains." The other business will be: Election of officers, Representative, etc.; receive annual report; instruct Representative for Representative Meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Mr. W. J. Greer (19, Gold Tops, Newport) and Dr. J. E. P. Davies (Fairfield, Llanelly), Honorary Secretaries, give notice that the annual meeting of the South Wales and Monmouthshire Branch will be held in Llanelly, on Thursday, June 11th. Accounts, election of officers, etc.

ATTENDANCES OF COUNCIL, COMMITTEES, AND SUBCOMMITTEES FOR 1913-14.

FROM THE ANNUAL MEETING AT BRIGHTON, JULY, 1913, TO APRIL 30TH, 1914.

The *President*, *Chairman of Representative Meetings*, *Chairman of Council*, and *Treasurer* are *ex officio* members of all Committees.

COUNCIL.

Members of Council.	Representative Meetings.		Council Meetings.					Total.
	Brighton, July 18, 19, 21, 22, 23, 1913.	London, Dec. 4th and 5th, 1913.	Brighton, July 21, 23, 1913.	October 29, 1913.	December 5, 1913.	December 23, 1913.	January 28, 1914.	April 22, 1914.	
MACDONALD, Dr. J. A., Taunton (Chairman)	5	2	2	1	1	—	—	—	11
Hollis, Dr. W. Ainslie, Hove (President)	5	2	1	1	1	1	1	—	12
Ogston, Sir Alex., K.C.V.O., Aberdeen (President-elect)	—	—	—	—	—	—	—	—	—
Barr, Sir James, M.D., LL.D., Liverpool (Past President)	4	1	1	1	1	1	1	1	11
Verrall, Mr. T. Jenner, Bath (Chairman of Rep. Meetings)	5	2	2	1	1	1	1	1	14
Rayner, Dr. Edwin, Stockport (Treasurer)	5	1	2	1	—	1	1	1	12
Adams, Dr. John, Glasgow	5	2	2	1	1	1	1	1	14
Atkinson, Dr. J. Mitford, London (Hong Kong and China Branches, etc.)	—	—	—	1	—	1	1	1	4
Barrow, Col. H. J. W., London (Army Medical Service)	5	1	1	—	1	1	—	1	10
Beaton, Dr. R. M., London	5	2	2	1	1	1	1	1	14
Biggs, Dr. M. G., London	5	2	2	1	1	1	1	1	14
Brook, Mr. W. F., Swansea	—	2	—	1	1	1	1	—	6
Buttar, Dr. Charles, London	5	2	—	1	1	1	1	1	12
Campbell, Dr. H. J., Bradford	3	—	1	1	—	1	1	—	7
*Cholmeley, Mr. W. F., Wolverhampton	—	—	—	—	—	—	1	1	2
†Clow, Dr. W., Paisley	4	2	1	1	—	—	—	—	8
Corby, Professor H., Cork	—	—	—	—	—	—	—	—	—
Darling, Dr. J. Singleton, Lurgan	—	—	—	1	—	1	1	1	4
*Domville, Mr. E. J., Bristol	—	—	—	—	—	—	1	1	2
Ewart, Dr. David, Chichester (New Zealand Branch)	1	1	—	1	1	—	—	—	4
Finlay, Dr. D. E., Gloucester	5	2	2	1	1	—	1	1	13
†Fordyce, Dr. B. E., Cambridge	5	—	2	1	—	—	—	—	8
Fowler, Dr. Frank, Bournemouth	5	2	1	1	1	1	—	—	11
Fulton, Dr. Adam, Nottingham	5	1	—	1	1	1	1	1	11
Garstang, Mr. T. W. H., Altrincham	5	2	2	1	1	1	1	1	14
Gordon, Dr. John, Aberdeen	3	—	2	—	—	—	1	—	6
Greany, Surgeon-General J. P., I.M.S., London (Indian Medical Service)	3	2	2		—	1	1	1	11
Greenlees, Dr. T. D., Weymouth (South African Branches)	5	—	2	1	—	—	1	1	10
Greenwood, Dr. Major, London	5	2	2	1	1	1	1	1	14
Hamilton, Dr. J. R., Hawick	4	2	1	1	1	—	1	1	11
Haslip, Dr. G. E., London	4	2	—	1	1	1	1	1	11
Helme, Dr. T. Arthur, Manchester	—	2	—	—	1	—	1	—	4
Johnstone, Mr. R. J., Belfast	—	—	—	—	—	—	1	1	2
Jones, Mr. P. Napier, Crowthorne	5	2	1	1	1	1	1	1	13
Larkin, Mr. F. Charles, Liverpool	5	2	1	1	1	1	1	1	13
Lord, Mr. C. Courtenay, Gillingham	5	2	2	1	1	1	1	1	14
Loudon, Dr. J. Livingstone, Hamilton	—	2	—	1	1	—	1	—	5
Lucas, Mr. Albert, Birmingham	5	2	2	1	1	—	1	1	13
†Mactier, Dr. H. C., Wolverhampton	5	2	2	1	—	—	—	—	10
Martin, Dr. C. J., F.R.S., London (N. S. Wales and Queensland Branches)	—	—	—	—	—	—	—	—	—
†Meyer, Lieut.-Col. C. H. L., I.M.S., London (Indian Branches)	—	—	—	—	—	—	—	—	—
Milburn, Dr. C. H., Hull	4	—	2	1	—	—	1	1	9
Moir, Dr. J. Munro, Inverness	4	2	—	1	1	—	1	—	9
Montgomery-Smith, Mr. E. C., London	4	1	—	1	1	1	1	1	10
*Moorhouse, Dr. J. E., Stirling	—	—	—	—	—	—	1	—	1
Morier, Dr. C. G. D., London (Victoria, S. and W. Australia Branches)	—	—	1	1	—	—	—	1	3
Mumby, Dr. B. H., Portsmouth (deceased)	1	1	1	1	1	1	1	1	8
Oldham, Dr. H. F., Morecambe	3	2	1	—	1	—	1	—	8
Parker, Dr. George, Bristol	5	2	2	1	1	1	1	1	14
†Pearse, Dr. James, Trowbridge	5	—	—	—	—	—	—	—	5
‡Porter, Sir James, K.C.B., London (Royal Navy Medical Service)	—	2	—	1	1	—	1	1	6
Smith, Dr. F. J., London	1	1	—	1	1	1	1	1	7
Todd, Mr. D. F., Sunderland	5	2	2	1	1	1	1	1	14
Turner, Mr. E. B., London	4	2	1	1	1	1	1	1	12
Walshe, Mr. Denis, Graigue	2	—	1	—	—	—	—	—	3
White, Professor A. H., Dublin	2	1	—	—	1	—	—	1	5
Willock, Mr. E. H., Croydon	5	2	2	1	1	1	1	1	14
§Wood, Mr. O. R. M., Woolpit	—	—	—	—	—	—	—	1	1

* Elected January 28th, 1914.
† Resigned January 28th, 1914.
‡ Elected October 29th, 1913.
§ Elected April 22nd, 1914.

AGENDA COMMITTEE.

REPRESENTATIVE BODY.

(Meetings held, 1.)

CHAIRMAN OF REPRESENTATIVE MEETINGS (*Chairman*)	1
Haslip, Dr. G. E., London	1
Turner, Mr. E. B., London	1
Willock, Mr. E. H., London	1

AGENDA COMMITTEE.

Re ABBREVIATED FORM OF COUNCIL AGENDA.

(Meetings held, 1.)

BARR, Sir James, M.D., LL.D., Liverpool (*Chairman*)	1
President	0
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Biggs, Dr. M. G., London	1
Buttar, Dr. Chas., London	1
Campbell, Dr. H. J., Bradford	0
Garstang, Mr. T. W. H., Altrincham	1
Greany, Surg.-Gen. J. P., I.M.S., London	1
Greenlees, Dr. T. D., Weymouth	1
Hamilton, Dr. J. R., Hawick, N.B.	1
Johnstone, Mr. R. J., Belfast	0
Larkin, Mr. F. Charles, Liverpool	0
Lucas, Mr. Albert, Birmingham	1
Mumby, Dr. B. H., Portsmouth (deceased)	1
Smith, Dr. F. J., London	1
Todd, Mr. D. F., Sunderland	1
Turner, Mr. E. B., London	1

ARRANGEMENTS COMMITTEE.

(Meetings held, 2.)

CHAIRMAN OF COUNCIL (*Chairman*)	2
President	2
Chairman of Representative Meetings	2
Treasurer	1
Fordyce, Dr. B. E., Cambridge	0
Hamilton, Dr. J. R., Hawick, N.B.	2
Murray, Professor G. R., Manchester	0
Parry, Dr. L. A., Brighton	2
Smith, Dr. F. J., London	2
White, Professor A. H., Dublin	1

Local Representatives.

(Meetings held, 1.)

Ogston, Sir Alexander, K.C.V.O., LL.D. (President-elect), Aberdeen	0
Cash, Professor Theodore, M.D., F.R.S., Aberdeen	0
Fraser, Dr. Thomas, Aberdeen	1
Gordon, Dr. John, Aberdeen (co-opted)	1
Gray, Mr. H. M. W., Aberdeen	1
Mackintosh, Professor Ashley W., M.D., Aberdeen	1
Marnoch, Professor John, M.B., Aberdeen	1

CENTRAL ETHICAL COMMITTEE.

(Meetings held, 4.)

BIGGS, Dr. M. G., London (*Chairman*)	4
President	3
Chairman of Representative Meetings	3
Chairman of Council	0
Treasurer	2
Bateman, Dr. A. G., London	4
Ewart, Mr. J. Henry, Eastbourne	3
Greany, Surgeon-General J. P., I.M.S., London	4
Jones, Mr. P. Napier, Crowthorne	4
Kerr, Dr. J. Wishart, Glasgow	3
Langdon-Down, Dr. R., Hampton Wick	4
Lee, Mr. P. G., Cork	4
Milburn, Dr. C. H., Hull	3
Moore, Dr. Milner, Eastbourne	2
Parker, Dr. George, Bristol	3
Turner, Mr. E. B., London	3

STANDING ETHICAL SUBCOMMITTEE.

(Meetings held, 6.)

CHAIRMAN OF CENTRAL ETHICAL COMMITTEE (*Chairman*)	6
Bateman, Dr. A. G., London	6
Ewart, Mr. J. Henry, Eastbourne	6
Langdon-Down, Dr. R., Hampton Wick	6

DOMINIONS COMMITTEE.

(Meetings held, 3.)

Greenlees, Dr. T. D., Weymouth (*Chairman*)	3
President	3
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Benson, Surgeon-General P. H., I.M.S., Walmer	3
Daniels, Dr. C. W., London	0
Greany, Surgeon-General J. P., I.M.S., London	3
Metcalfe, Dr. James, London	3
Members of Council who represent Colonial Branches.	
Atkinson, Dr. J. Mitford, London	2
Ewart, Dr. David, Chichester	2
Martin, Dr. C. J., F.R.S., London	0
Meyer, Lieutenant-Colonel C. H. L., I.M.S. (resigned)	1
Morier, Mr. C. G. D., London	2

FINANCE COMMITTEE.

(Meetings held, 3.)

Treasurer (*Chairman*)	3
President	2
Chairman of Representative Meetings	3
Chairman of Council	1
Barr, Sir James, M.D., LL.D., Liverpool (Deputy Chairman of Council)	1
Beaton, Dr. R. M., London	1
Buttar, Dr. Charles, London	2
Ewart, Mr. J. Henry, Eastbourne	2
Fordyce, Dr. B. E., Cambridge (resigned)	0
Haslip, Dr. G. E., London	1
Langdon-Down, Dr. R., Hampton Wick	2
Lawson, Dr. David, Nordrach-on-Dee	2
Parker, Dr. George, Bristol	2
Todd, Mr. D. F., Sunderland	2
Chairman of Central Ethical Committee	3
Chairman of Journal Committee	3
Chairman of Science Committee	2
Chairman of Medico-Political Committee	1
Chairman of Organization Committee	3

* Elected April 15th, 1914.

EMERGENCY FINANCE SUBCOMMITTEE.

(Meetings held, 1.)

Treasurer (*Chairman*)	1
Chairman of Council	1
Chairman of Journal Committee	1
Smith, Dr. F. J., London	1
Chairman of Representative Meetings (by invitation)	1

FUTURE DEVELOPMENTS OF INSURANCE ACTS COMMITTEE.

(Meetings held, 3.)

Todd, Mr. D. F., Sunderland (*Chairman*)	3
President	2
Chairman of Representative Meetings	2
Chairman of Council	0
Treasurer	1
Barr, Sir James, M.D., LL.D., Liverpool (Deputy Chairman of Council)	1
Adams, Dr. John, Glasgow	3
Beaton, Dr. R. M., London (resigned)	0
Ivens, Miss M. F., M.S., Liverpool	1
Montgomery-Smith, Mr. E. C., London	0
Oldham, Dr. H. F., Morecambe (resigned)	0
Picton, Dr. L. J., Holmes Chapel	3
Smith, Dr. F. J., London	2
Turner, Mr. E. B., London	3

HOSPITALS COMMITTEE.

(Meetings held, 1.)

Campbell, Dr. H. J., Bradford (*Chairman*)	1
President	0
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Biggs, Dr. M. G., London	1
Brook, Mr. W. F., Swansea	1
Bushby, Dr. T., Liverpool	1
Dobbie, Miss Mina L., M.D., London	0
Eason, Dr. J., Edinburgh	1
Eccles, Mr. W. McAdam, London	1
Fowler, Dr. Frank, Bournemouth	0
Harman, Mr. N. Bishop, London	1
Johnstone, Mr. R. J., Belfast	0
Mactier, Dr. H. C., Wolverhampton	1
Tomkins, Mr. Harding H., Leyton	1

INSURANCE ACT COMMITTEE.

(Meetings held, 14.)

Chairman of Council (*Chairman*)	6
President	12
Chairman of Representative Meetings	12
Treasurer	5
Barr, Sir James, M.D., LL.D., Liverpool (Deputy Chairman of Council)	2
Adams, Dr. John, Glasgow	10
Beaton, Dr. R. M., London	8
Buttar, Dr. Charles, London (resigned)	1
Darling, Dr. J. Singleton, Lurgan	2
*Dobbie, Miss Mina L., M.D., Association of Registered Medical Women, London	1
Finlay, Dr. D. E., Gloucester	6
Fothergill, Dr. E. R., Brighton	13
Greenwood, Dr. Major, Poor Law Medical Officers' Association of England and Wales	13
Haslip, Dr. G. E., London (resigned)	2
Ivens, Miss Mary F., M.S., Northern Association of Medical Registered Women	10
Johnson, Dr. I. W., Bury	11
Johnston, Dr. R. McKenzie, Edinburgh	6
Jones, Mr. Herbert, Society of Medical Officers of Health	11
Long, Miss Constance E., M.D., Association of Registered Medical Women (resigned)	9
†Milburn, Dr. C. H., Hull	3
Montgomery-Smith, Mr. E. C., London	7
Oldham, Dr. H. F., Morecambe	4
Pearse, Dr. James, Trowbridge (resigned)	2
Smiley, Dr. G. K., Derby	8
Todd, Mr. D. F., Sunderland	12
Treasure, Dr. W. B. C., Cardiff	10
Turner, Mr. E. B., London	12
White, Professor A. H., Dublin	0

[Since November 20th, 1913, in the absence of the Chairman of Council abroad, the Chairman of Representative Meetings has acted as Chairman of the Committee.]

* Elected April 16th, 1914.
† Elected January 28th, 1914, vice Dr. Haslip.

AMENDING ACT SUBCOMMITTEE.

(Meetings held, 1.)

Turner, Mr. E. B., London (*Chairman*)	1
Beaton, Dr. R. M., London	0
Fothergill, Dr. E. R., Brighton	1
Johnston, Dr. R. McKenzie, Edinburgh	0
Macdonald, Dr. J. A., Taunton	0
Smiley, Dr. G. K., Derby	1

LOCAL MEDICAL COMMITTEE SUBCOMMITTEE.

(Meetings held, 2.)

Adams, Dr. John, Glasgow (*Chairman*)	1
Eustace, Dr. G. W., Arundel	2
Finlay, Dr. D. E., Gloucester	1
Greenwood, Dr. Major, London	2
Greer, Mr. W. J., Newport	0
Johnston, Dr. R. McKenzie, Edinburgh	0
Todd, Mr. D. F., Sunderland	1
Turner, Mr. E. B., London	2
Tomkins, Mr. H. H., London	2
Verrall, Mr. T. Jenner, Bath	1

MATERNITY BENEFIT SUBCOMMITTEE.

(Meetings held, 3.)

Ivens, Miss M. F., M.S., Liverpool (*Chairman*)	3
Chairman of Insurance Act Committee	0
Andrews, Dr. H. Russell, London	0
Beaton, Dr. R. M., London (resigned)	0
Carter, Dr. T. M., Bristol	1
Eccles, Mr. W. McAdam, London	1
Fothergill, Dr. E. R., Brighton	2
Fremantle, Mr. F. E., London	1
Goodbody, Dr. F. W., London	1
Jordan, Mr. J. Furneaux, Birmingham	1

SICKNESS BENEFIT CLAIM SUBCOMMITTEE.

(Meetings held, 3.)

Todd, Mr. D. F., Sunderland (*Chairman*)	2
Chairman of Insurance Act Committee	0
Beaton, Dr. R. M., London	1
Johnston, Dr. R. McKenzie, Edinburgh	2
Long, Miss Constance E., M.D., London	2
Treasure, Dr. W. B. C., Cardiff	3

DEFENCE SUBCOMMITTEE.

(Meetings held, 1.)

VERRALL, Mr. T. Jenner, Bath (*Chairman*)	1
Adams, Dr. John, Glasgow	1
Fothergill, Dr. E. R., Brighton	1
Johnson, Dr. I. W., Bury	1
Treasure, Dr. W. B. C., Cardiff	1

SPECIAL FUND SUBCOMMITTEE.

(Meetings held, 2.)

BEATON, Dr. R. M., London (*Chairman*)	2
Fothergill, Dr. E. R., Brighton	2
Johnston, Dr. R. McKenzie, Edinburgh	0
Jones, Mr. Herbert, Hereford	2
Todd, Mr. D. F., Sunderland	1
Tomkins, Mr. H. H., London (co-opted)	2

FORMER TUBERCULOSIS SUBCOMMITTEE.

(Meetings held, 5.)

JONES, Mr. Herbert, Hereford (*Chairman*)	5
Beaton, Dr. R. M., London (resigned)	0
Eccles, Mr. W. McAdam, London	2
*Evans, Mr. Wilmott, London	3
*Eve, Sir Frederic, F.R.C.S., London	2
Fothergill, Dr. E. R., Brighton	5
Harman, Mr. N. Bishop, London	5
Johnson, Mr. Stewart, London	4
Johnstone, Mr. R. J., Belfast	0
Mackintosh, Dr. D. J., M.V.O., Glasgow	2
Thies, Mr. Conrad W., London	1
Todd, Mr. D. F., Sunderland	1
†Wall, Dr. R. C. B., London	3

* Elected November 14th, 1913. † Co-opted December 10th, 1913.

PRESENT TUBERCULOSIS SUBCOMMITTEE.

(Meetings held, 4.)

JONES, Mr. Herbert, Hereford (*Chairman*)	4
Chairman Insurance Act Committee	0
Fothergill, Dr. E. R., Brighton	1
Todd, Mr. D. F., Sunderland	2
with—	
Eccles, Mr. W. McAdam, London	3
*Finlay, Dr. D. E., Gloucester	2
*Johnston, Dr. R. McKenzie, Edinburgh	1
Wall, Dr. Cecil, London	1

* Elected February 18th, 1914.

IRISH COMMITTEE.

(Meetings held, 5.)

JOHNSTONE, Mr. R. J., Belfast (*Chairman*)	4
President	0
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	1
Corby, Professor Henry, M.D., Cork	3
Costello, Dr. T. B., Tuam	2
Craig, Dr. James, Dublin	0
Darling, Dr. J. S., Lurgan	5
Giusani, Dr. Joseph J., Cork	5
Grace, Dr. Pierce, Kilkenny	0
Kenny, Dr. J. M., Granard	3
Kidd, Dr. F. W., Dublin (resigned)	1
Lee, Dr. Philip G., Cork	1
Mahon, Dr. R. B., Ballinrobe	0
Mills, Dr. John, Ballinasloe	5
O'Kane, Dr. Michael, Londonderry	0
Power, Dr. Joseph, Cahir	3
Ryan, Dr. J. V., Carlow	2
Storey, Dr. W. L., Belfast	4
Walshe, Dr. Denis, Graigue	5
Warnock, Dr. H. T. A., Donegal	2
White, Professor A. H., Dublin	4

JOURNAL COMMITTEE.

(Meetings held, 3.)

LUCAS, Mr. Albert, Birmingham (*Chairman*)	3
President	3
Chairman of Representative Meetings	2
Chairman of Council	0
Treasurer	2
Barr, Sir James, Liverpool (Deputy Chairman of Council)	2
Brook, Mr. W. F., Swansea (resigned)	0
Finlay, Dr. D. E., Gloucester	3
Milburn, Dr. C. H., Hull (resigned)	1
Smith, Dr. F. J., London	2
Stevens, Dr. J., Edinburgh	1
Chairman, Central Ethical Committee	3

LIBEL ACTIONS SUBCOMMITTEE.

(Meetings held, 1.)

CHAIRMAN OF JOURNAL COMMITTEE (*Chairman*)	1
President	1
Chairman of Representative Meetings	1
Chairman of Council	0
Treasurer	0
Biggs, Dr. M. G., London	1
Smith, Dr. F. J., London	1

SUBCOMMITTEE *RE* EDITORIAL STAFF.

(Meetings held, 3.)

CHAIRMAN OF JOURNAL COMMITTEE (*Chairman*)	3
President	1
Chairman of Representative Meetings	2
Deputy Chairman of Council	3
Treasurer	3
Biggs, Dr. M. G., London	3

MEDICO-POLITICAL COMMITTEE.

(Meetings held, 4.)

GARSTANG, Mr. T. W. H., Altrincham (*Chairman*)	4
President	4
Chairman of Representative Meetings	1
Chairman of Council	0
Treasurer	0
*Domville, Mr. E. J., Chelwood	1
Duncan, Dr. W., Clay Cross	1
Fordyce, Dr. B. E., Cambridge (resigned)	1
Fulton, Dr. Adam, Nottingham	1
Greer, Mr. W. J., Newport	1
Henry, Dr. R. Wallace, Leicester	4
*Jones, Mr. P. Napier, Crowthorne	2
Macnamara, Mr. J. T., London	4
Mactier, Dr. H. C., Wolverhampton	2
Moir, Dr. J. Munro, Inverness	1
Montgomery-Smith, Mr. E. C., London (resigned)	0
Robertson, Dr. C. E., Glasgow	4
Todd, Mr. D. F., Sunderland	2
Chairman, Public Health Committee	2

* Elected February 20th, 1914.

CRIME AND PUNISHMENT SUBCOMMITTEE.

(Meetings held, 1.)

DOMVILLE, Mr. E. J., Chelwood (*Chairman*)	1
Chairman, Medico-Political Committee	1
Barr, Sir James, M.D., LL.D., Liverpool	1
Duncan, Dr. W., Clay Cross	0
Jenning, Mr. A. O., Brighton	1
Langdon-Down, Dr. R. L., Hampton Wick	1
Moir, Dr. J. Munro, Inverness	1
Mumby, Mr. B. H., Portsmouth (deceased)	1
Thomson, Dr. D. G., Norwich	1
Verrall, Mr. T. Jenner, Bath	0
Appointed by Medico-Legal Society.	
Burrows, Mr. Ronald, London	0
Russell, Earl, London	1
Appointed by Medico-Psychological Association.	
Scott, Dr. James, London	1
Smith, Dr. Percy, London	1

MEDICAL INSPECTION AND TREATMENT OF SCHOOL CHILDREN SUBCOMMITTEE.

(Meetings held, 2.)

HENRY, Dr. R. Wallace, Leicester (*Chairman*)	1
Chairman of Medico-Political Committee	2
Fordyce, Dr. B. E., Cambridge (resigned)	0
Mactier, Dr. H. C., Wolverhampton	2
Montgomery-Smith, Mr. E. C.	0
with—	
Flemming, Mr. C. E. S., Bradford-on-Avon	1
Horsley, Sir Victor, F.R.S., London	2

SHIP SURGEONS SUBCOMMITTEE.

(Meetings held, 2.)

MACNAMARA, Mr. J. T., London (*Chairman*)	2
Chairman of Medico-Political Committee	0
Elder, Dr. A. V., London	2
Godding, Dr. J., London	0
Hinks, Mr. A. G., Southend-on-Sea	0
Norris, Dr. W. P., London	1
Peers, Mr. T. H. Parkes, London	0
Taylor, Dr. J. H., Salford	1

JOINT MEDICO-POLITICAL AND HOSPITALS COMMITTEE

Re Workmen's Medical Aid Associations and Members of the Medical Staffs of Voluntary Hospitals.

(*Meetings held, 1.*)

Members of Medico-Political Committee.

Garstang, Mr. T. W. H., Altrincham (*Chairman*)	1
Domville, Mr. E. J., Chelwood	1
Henry, Dr. R. Wallace, Leicester	1
Macnamara, Mr. J. T., London	1
Mumby, Dr. B. H., Portsmouth (deceased)	1
Robertson, Dr. C. E., Glasgow	1

Members of Hospitals Committee.

Biggs, Dr. M. G., London	1
Brook, Mr. W. F., Swansea	1
Bushby, Dr. T., Liverpool	1
Campbell, Dr. H. J., Bradford	1
Eason, Dr. J., Edinburgh	1
Fowler, Dr. F., Bournemouth	1
Harman, Mr. N. Bishop, London	1
Mactier, Dr. H. C., Wolverhampton	1
Tomkins, Mr. H. H., Leyton	1
Chairman of Representative Meetings	1

JOINT MEDICO-POLITICAL AND PUBLIC HEALTH COMMITTEE

Re Medical Inspection and Treatment of School Children.

(*Meetings held, 1.*)

Garstang, Mr. T. W. H., Altrincham (*Chairman*)	1
President	1
Chairman of Representative Meetings	1

Members of Medico-Political Committee.

Henry, Mr. R. Wallace, Leicester	1
Jones, Dr. P. Napier, Crowthorne	1
Macnamara, Mr. J. T., London	1
Robertson, Dr. C. E., Glasgow	1

Members of Public Health Committee.

Atkinson, Dr. J. Mitford, London	1
Blandford, Dr. L. J., Stockton-on-Tees	1
Domville, Mr. E. J., Chelwood	1
Mumby, Dr. B. H., Portsmouth (deceased)	1

NON-PANEL COMMITTEE.

(*Meetings held, 5.*)

Turner, Mr. E. B., London (*Chairman*)	5
President	1
Chairman of Representative Meetings	1
Chairman of Council	0
Treasurer	1
Barr, Sir James (Deputy Chairman of Council), Liverpool	1
Beaton, Dr. R. M., London (resigned)	3
Biggs, Dr. M. G., London	4
Buttar, Dr. Chas., London	5
*Densham, Dr. H. B., Stockton-on-Tees	3
Hay, Dr. Edmund (resigned)	1
Jones, Mr. P. Napier, Crowthorne	2
Lord, Mr. C. Courtenay, Gillingham	2
*Macdonald, Dr. W. F., Glasgow (resigned)	0
Montgomery-Smith, Mr. E. C., London	3
*Myles, Dr. G. T., Clifton	3
†Nason, Mr. E. N., Nuneaton	0
§Smith, Sir T. R. H., Bart., Torquay	0
Stevens, Dr. John, Edinburgh	4
Thomson, Dr. Alexander, Glasgow	3
‡Wilson, Dr. J. Leslie, Newcastle-on-Tyne	0
‡Wood, Dr. O. R. M., Woolpit	0

* Co-opted January 6th, 1914. † Co-opted April 2nd, 1914.
‡ Elected April 22nd, 1914. § Co-opted February 17th, 1914.

NAVAL AND MILITARY COMMITTEE.

(*Meetings held, 3.*)

Greany, Surg.-Gen. J. P., I.M.S., London (*Chairman*)	3
President	2
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Benson, Surg.-Gen. P. H., I.M.S., Walmer (resigned)	3
*Bull, Col. W. H., Stony Stratford	2
Meyer, Lieut.-Col. C. H. L., I.M.S., London	1
Mumby, Dr. B. H., Portsmouth (deceased)	0
Thomas, Col. J. Raglan, K.H.P., R.A.M.C.(T.F.), Exeter	3

* Elected January 5th, 1914.

Representatives on the Council of the Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service.

Porter, Sir James, K.C.B., M.D., London	3
Barrow, Col. H. J. Waller, A.M.S., London	3

ORGANIZATION COMMITTEE.

(*Meetings held, 4.*)

Larkin, Mr. F. Charles, Liverpool (*Chairman*)	4
President	4
Chairman of Representative Meetings	2
Chairman of Council	1
Treasurer	1
Coombe, Mr. Russell, Exeter	3
Garstang, Mr. T. W. H., Altrincham	4
Lord, Mr. C. Courtenay, Gillingham	2
Moir, Dr. J. Munro, Inverness (resigned)	0
Ward, Dr. Gordon R., London	4
Turner, Mr. E. B., London (by invitation)	1

GRANTS SUBCOMMITTEE.

(*Meetings held, 2.*)

Chairman of Organization Committee (*Chairman*)	2
Coombe, Mr. Russell, Exeter	2
Lord, Mr. C. Courtenay, Gillingham	2
Rayner, Dr. Edwin, Stockport	0
Ward, Dr. Gordon R., London	1

REGULATIONS AND STANDING ORDERS SUBCOMMITTEE.

(*Meetings held, 4.*)

Chairman of Organization Committee (*Chairman*)	4
Chairman of Representative Meetings	4
Chairman of Council	0
Treasurer	0
Coombe, Mr. Russell, Exeter	3
Barr, Sir James, Liverpool	1
Atkinson, Dr. J. Mitford, London (by invitation)	1
Greenlees, Dr. T. D., Weymouth (by invitation)	1
Haslip, Dr. G. E., London (by invitation)	1

ORGANIZATION OF MEDICAL STUDENTS SUBCOMMITTEE.

(*Meetings held, 1.*)

Chairman of Organization Committee (*Chairman*)	1
Bolam, Professor R. A., Newcastle-on-Tyne	1
Dixon, Professor W. E., F.R.S. (Cambridge)	1
Goodbody, Dr. F. W., London	1
Griffith, Dr. T. W., Leeds (resigned)	0
Hepburn, Professor David, M.D., Cardiff	0
Verrall, Mr. T. Jenner, Bath (Chairman of Representative Meetings)	1

CONFERENCE OF SECRETARIES SUBCOMMITTEE.

(*Meetings held, 1.*)

Lord, Mr. C. Courtenay, Gillingham (*Chairman*)	1
Greer, Mr. W. J., Newport	1
Larkin, Mr. F. C., Liverpool	1
Smith, Dr. Tennyson, Orpington	1
Southcombe, Dr. A. G., London	1
Ward, Dr. Gordon R., London	1

PROPAGANDA SUBCOMMITTEE.

(*Meetings held, 1.*)

Ward, Dr. Gordon R., London (*Chairman*)	1
Larkin, Mr. F. C., Liverpool	1
Lord, Mr. C. Courtenay, Gillingham	1

PUBLIC HEALTH COMMITTEE.

(*Meetings held, 3.*)

Mumby, Dr. B. H., Portsmouth (*Chairman*) (deceased)	3
President	2
Chairman of Representative Meetings	1
Chairman of Council	0
Treasurer	0
Atkinson, Dr. J. Mitford, London	2
Blandford, Dr. L. J., Stockton-on-Tees	2
Clow, Dr. Wm., Paisley (resigned)	0
Domville, Mr. E. J., Chelwood	3
Greenwood, Dr. Major, London	3
Heggs, Dr. T. B., Sittingbourne	3
Jones, Mr. Herbert, Hereford	3
Loudon, Dr. J. Livingstone, Hamilton, N.B.	1

VACCINATION SUBCOMMITTEE.

(Meetings held, 1.)

CHAIRMAN OF PUBLIC HEALTH COMMITTEE (*Chairman*) (deceased)	1
Domville, Mr. E. J., Chelwood	0
Blandford, Dr. L. J., Stockton-on-Tees	0
Drury, Dr. A., Halifax	1
Greenwood, Dr. Major, London	1

SCIENCE COMMITTEE.

(Meetings held, 2.)

SMITH, Dr. F. J., London (*Chairman*)	2
President	0
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Atkinson, Dr. J. Mitford, London	2
Bolton, Dr. Charles, London	1
Dixon, Professor W. E., F.R.S., Cambridge ...	2
Haldane, Dr. J. S., F.R.S., Oxford	1
Martin, Dr. C. J., F.R.S., London	1
Stockman, Professor Ralph, Glasgow	0
White, Professor, A. H., Dublin	0

CONFERENCE, THERAPEUTIC SUBCOMMITTEE AND RESEARCH SUBCOMMITTEE OF THE BRITISH PHARMACEUTICAL CONFERENCE.

(Meetings held, 1.)

Therapeutic Subcommittee.

STOCKMAN, Professor Ralph, Glasgow (*Chairman*) ...	1
Chairman of Science Committee	1
Cushny, Professor A. R., F.R.S., London	1
Dixon, Professor W. E., F.R.S., Cambridge ...	1
Marshall, Professor C. R., M.D., Dundee	0
Wild, Professor R. B., Manchester	0

Representatives of British Pharmaceutical Conference.

Finniemore, Mr. H.	1
Gamble, Mr. F. W.	1
Harrison, Mr. E. F.	1
Hill, Mr. C. A.	1

THERAPEUTIC SUBCOMMITTEE.

(Meetings held, 2.)

STOCKMAN, Professor Ralph, Glasgow (*Chairman*) ...	2
Chairman of Science Committee	2
Cushny, Professor A. R., F.R.S., London	2
Dixon, Professor W. E., F.R.S., Cambridge ...	2
Marshall, Professor C. R., M.D., Dundee	0
Wild, Professor R. B., Manchester	0
Harrison, Mr. E. F., London (co-opted)	2

SCOTTISH COMMITTEE.

(Meetings held, 3.)

HAMILTON, Dr. J. R., Hawick, N.B. (*Chairman*) ...	3
President	0
Chairman of Representative Meetings	0
Chairman of Council	0
Treasurer	0
Adams, Dr. John, Glasgow	0
Anderson, Dr. G. C., Methil	1
Bryce, Dr. W., Glasgow	0
Buist, Dr. R. C., Dundee	3
Clow, Dr. William, Paisley	1
Eason, Dr. John, Edinburgh	0
Fraser, Dr. T., Aberdeen	0
Gordon, Dr. John, Aberdeen	3
Livingston, Dr. G. R., Dumfries	2
Loudon, Dr. J. Livingstone, Hamilton	3
Lyell, Dr. J. H., Perth	3
Moir, Dr. J. Munro, Inverness	2
Moorhouse, Dr. J. E., Stirling	3
Smith, Dr. F. K., Aberdeen	1
Smith, Dr. James Martin, Dundee	0
Stevens, Dr. John, Edinburgh	3
Taylor, Dr. W. A., Perth	0
Trotter, Dr. A., Perth	0

CHAIRMAN'S SUBCOMMITTEE.

(Meetings held, 3.)

HAMILTON, Dr. J. R., Hawick (*Chairman*)	3
Buist, Dr. R. C., Dundee	3
Livingston, Dr. G. R., Dumfries	0
Loudon, Dr. J. Livingstone, Hamilton	2
Moorhouse, Dr. J. E., Stirling	1
Smith, Dr. F. K., Aberdeen	1
Stevens, Dr. John, Edinburgh	2

CONTRACT PRACTICE SUBCOMMITTEE.

(Meetings held, 1.)

MOORHOUSE, Dr. J. E., Stirling (*Chairman*) ...	1
Anderson, Dr. G. C., Methil	0
Hamilton, Dr. J. R., Hawick	1
Livingston, Dr. G. R., Dumfries	0
McPherson, Dr., Hawick	1
Stevens, Dr. John, Edinburgh	1

RURAL PRACTICE SUBCOMMITTEE.

(Meetings held, 2.)

RORIE, Dr. David, Cults (*Chairman*)	1
Hamilton, Dr. J. R., Hawick	2
Livingston, Dr. G. R., Dumfries	0
Loudon, Dr. J. Livingstone, Hamilton, N.B. ...	1
Moir, Dr. J. Munro, Inverness	1
McKenzie, Dr. John C., Douglas	0
Rodger, Dr. T. R., Sanquhar	2

ORGANIZATION SUBCOMMITTEE.

(Meetings held, 1.)

GORDON, Dr. John, Aberdeen (*Chairman*)	1
Bryce, Dr. William, Glasgow	1
Dyer, Dr. E. E., Alloa	1
Eason, Dr. J., Edinburgh	1
Hamilton, Dr. J. R., Hawick	1
Livingston, Dr. G. R., Dumfries	1
Moir, Dr. J. Munro, Inverness	1

SUBCOMMITTEE *RE* RECONSTITUTION OF SCOTTISH COMMITTEE.

(Meetings held, 1.)

HAMILTON, Dr. J. R., Hawick (*Chairman*) ...	1
Buist, Dr. R. C., Dundee	1
Clow, Dr. W., Paisley	0
Eason, Dr. John, Edinburgh	0
Livingston, Dr. G. R., Dumfries	1
Stevens, Dr. John, Edinburgh	1

SUBCOMMITTEE *RE* APPOINTMENT OF CLERK.

(Meetings held, 1.)

HAMILTON, Dr. J. R., Hawick (*Chairman*) ...	1
Buist, Dr. R. C., Dundee	1
Clow, Dr. W., Paisley	1
Livingston, Dr. G. R., Dumfries	1
Stevens, Dr. J., Edinburgh	0

SPECIAL ENQUIRY COMMITTEE.

(Meetings held, 8.)

TODD, Mr. D. F., Sunderland (*Chairman*)	8
President	7
Chairman of Council	0
Chairman of Representative Meetings	7
Treasurer	8
Barr, Sir James, Liverpool (Deputy Chairman of Council)	3
*Biggs, Dr. M. G., London	4
Buttar, Dr. Charles, London	8
Haslip, Dr. G. E., London	7
Lucas, Mr. Albert, Birmingham	3
Smith, Dr. F. J., London	5

* Appointed January 28th, 1914.

SPECIAL FUND COMMITTEE.

(Meetings held, 6.)

BUTTAR, Dr. Charles, London (*Chairman*)	6
President	1
Chairman of Council	0
Chairman of Representative Meetings	4
Treasurer	2
Barr, Sir James, Liverpool	2
Beaton, Dr. R. M., London	1
Fothergill, Dr. E. R., Brighton	3
Johnston, Dr. R. McKenzie, Edinburgh	3
Jones, Mr. Herbert, Hereford	5
Todd, Mr. D. F., Sunderland	3
Tomkins, Mr. H. H., London	6

JOINT MEDICO-POLITICAL, PARLIAMENTARY, AND INSURANCE ACT MATERNITY BENEFIT SUBCOMMITTEE.

(*Meetings held, 1.*)

Parliamentary Subcommittee.

CHAIRMAN OF MEDICO-POLITICAL COMMITTEE (*Chairman*)	1
Fulton, Dr. A., Nottingham	0
Macnamara, Mr. J. T., London	1
Todd, Mr. D. F., Sunderland	0
with—	
Horsley, Sir Victor, F.R.S., London	0
Turner, Mr. E. B., London	0

Maternity Benefit Subcommittee.

Chairman of Insurance Act Committee	0
Beaton, Dr. R. M., London	0
Eccles, Mr. W. McAdam	1
Fothergill, Dr. E. R., Brighton	1
Ivens, Miss M. F., Liverpool	0

CONFERENCE OF REPRESENTATIVES OF ASSOCIATION AND OF SOCIETY OF MEDICAL OFFICERS OF HEALTH.

(*Conferences held, 1.*)

Representatives of British Medical Association.

GARSTANG, Mr. T. W. H., Altrincham (*Chairman*)	1
Domville, Mr. E. J., Chelwood	1
Heggs, Mr. T. Barrett, Sittingbourne	1
Henry, Dr. R. Wallace	1
Horsley, Sir Victor, F.R.S., London	0
Mumby, Dr. B. H., Portsmouth (deceased) ...	1

Representatives of Medical Officers of Health.

Bailey, Dr. T. Ridley, Bilston	1
Buchan, Dr. George F., London	1
Butler, Dr. William, London	1
Hill, Dr. A. Bostock, Birmingham	1
Hutt, Dr. C. W., Brighton	1
Jones, Mr. Herbert, Hereford	1
Lawrence, Dr. Sidney C., London	1
Stott, Mr. Hugh, Lewes	1
Walsh, Dr. S. B., Gillingham	1

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

METROPOLITAN COUNTIES BRANCH:

NORTH MIDDLESEX DIVISION.

THE fourth ordinary meeting of the Division was held on April 24th, when the Chairman, Dr. LEONARD GRANT, and fifteen members were present.

Medical Aid Institutes.—The Representatives were instructed to support the action of the British Medical Association against medical aid institutes.

Model Scheme for the Treatment of Tuberculosis.—The Secretary was instructed to send two suggestions from the scheme to the Middlesex County Council to aid the successful working of the County Council scheme for treatment of tuberculosis. The Representatives were instructed to give their hearty support to the working of this model scheme of the British Medical Association.

Future Developments of National Insurance.—It was moved, seconded, and passed unanimously:

> That this Representative Meeting, realizing that the medical clauses of the National Insurance Act in their present or some other amended forms are permanent, instructs the Council to ascertain from the Divisions what alterations in the Act would facilitate its working.

Vote of Sympathy.—The Secretary was instructed to send a letter of condolence and sympathy to the widow of the late Dr. Geo. Lyon.

NORTHERN COUNTIES OF SCOTLAND BRANCH:

INVERNESS DIVISION.

A MEETING of the Inverness-shire Division was held on April 29th at the Northern Infirmary, Inverness, under the presidency of Dr. J. MUNRO MOIR, Chairman; nine other members were present.

Scottish Committee.—A letter was read from the Secretary, Scottish Committee, British Medical Association, pointing out the advisability of members in Scotland joining a medical defence union in connexion with charges of alleged negligence or malpraxis which might be brought against them.

Islands Division.—A letter was read from the Medical Secretary intimating the formation of an Islands Division of the North of Scotland Branch, which was constituted on February 14th, 1914.

Medical Aid Institutes.—In reply to the inquiry as to whether there were any medical aid institutes within the Division, and what action was taken therewith, the Secretary was instructed to state that there were no institutes of the kind in the area of the Division.

Model Scheme for Tuberculosis.—The model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th, p. 204) was read and agreed to.

Annual Meeting of Association at Aberdeen.—The CHAIRMAN read a letter from the Secretary of the Aberdeen Branch regarding the arrangements for entertainment of members in connexion with the Annual Meeting of the Association at Aberdeen next July, and submitted a proposed programme drawn up by local committees in Elgin, Nairn, Inverness, and Strathpeffer for submission to the Entertainments Committee, Aberdeen.

NORTH WALES BRANCH.

A MEETING of the Branch was held at Bala on April 28th, the President, Dr. ENOCH MOSS, J.P. (Wrexham), was in the chair, and twenty-six other members were present.

Representative on the Medical Board of the University of Wales.—It was resolved:

> That this Branch approves of the re-election of Dr. E. J. Maclean, of Cardiff, by the Council of the British Medical Association as a representative on the Medical Board of the University of Wales.

Testimonial to Dr. E. O. Price.—It was resolved:

> That the sum of £5 be subscribed from the private fund of the Branch towards the testimonial to Dr. Price, and that the motor car be formally presented at the annual meeting at Beullech in July.

Circular Letter from Medical Secretary: Insurance Act.—Attention was drawn to a circular letter from the Medical Secretary, referring to the appointment of medical referees and other matters. It was resolved:

> That Panel Committee secretaries be asked to bring the contents of the circular before their committees as soon as possible, that special attention be directed to the question of medical referees, and further that this Branch is of the opinion that 10s. 6d. should be the minimum fee paid to the referee, and that the practitioner in attendance shall be given the option of being present at the examination of the patient by the referee.

Report of Branch Council.—The HONORARY SECRETARY presented the report of the Branch Council, which was received and adopted.

Financial Statement for 1913.—The financial statement of the Branch, which had been printed and circulated, was submitted, a balance credit of £35 16s. 9d. being shown in the general fund and of £13 4s. 9d. in the private fund. The balance sheet was received and adopted.

Congratulations.—The congratulations of the Branch were tendered to Mr. J. Howell Evans, who was present, on gaining the Jacksonian Prize at the Royal College of Surgeons.

Papers, etc.—Dr. J. LLOYD ROBERTS on movable kidney in the male; Mr. K. W. MONSARRAT on the indications for the removal of the prostate; Dr. J. HILL ABRAM on (1) the treatment of haematemesis in gastric ulcer, (2) two cases of chronic multiple arthritis; Mr. H. E. JONES on (1) Elliot's operation for glaucoma, with remarks on the early diagnosis of the affection; (2) demonstration of Sluder's method of removing tonsils in their capsule. Mr. J. HOWELL EVANS showed a specimen of cancer of the male breast. A vote of thanks was accorded to the readers of papers.

Luncheon.—Prior to the meeting the members present lunched together at the White Lion Hotel.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

BARNSLEY: BECKETT HOSPITAL.—Second House-Surgeon. Salary, £160 per annum, rising to £200.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL. House-Surgeon. Salary at the rate of £80 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—(1) Clinical Assistant. (2) Clinical Assistant to Electrical Department. Salary at the rate of 52 guineas per annum each.

BIRMINGHAM CORPORATION.—Assistant Resident Medical Officer at the City Hospital. Salary, £160 per annum.

BIRMINGHAM EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £450.

BIRMINGHAM GENERAL DISPENSARY.—(1) Resident Medical Officer; salary, £220 per annum. (2) Resident Surgeon; salary £5 5s. per week.

BOLTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £90 per annum.

BOOTLE BOROUGH HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

BRADFORD ROYAL INFIRMARY.—Two House-Surgeons (males). Salary, £100 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £100 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—(1) House-Physician. (2) Assistant House-Surgeon. (Males.) Salary, £100 and £80 per annum respectively.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BRITISH MEDICAL ASSOCIATION.—Assistant Medical Secretary. Salary at the rate of £600 per annum.

BURNLEY: VICTORIA HOSPITAL.—(1) Senior Resident Medical Officer. (2) Second House-Surgeon. Salary at the rate of £120 and £100 per annum respectively.

BURSLEM: HAYWOOD HOSPITAL.—Resident Medical Officer (female). Salary, £100 per annum.

BURY COUNTY BOROUGH.—Clinical Tuberculosis Officer and Assistant to Medical Officer of Health. Salary, £500 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—House-Physician. Salary, £100 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Assistant Surgeon.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL FOR WOMEN AND CHILDREN, Plaistow.—Junior Resident Medical Officer (female). Honorarium at the rate of £30 per annum.

CARDIFF: KING EDWARD VII'S HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistants.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHICHESTER: WEST SUSSEX COUNTY ASYLUM.—Locumtenent Medical Officer. Salary, 5 guineas a week.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £170 per annum.

DERBY COUNTY BOROUGH.—Assistant Medical Officer of Health (junior). Salary, £150 per annum.

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £400.

DEVON COUNTY HOSPITAL, Exminster.—Assistant Medical Officer. Salary, £225 per annum, rising to £275, and on promotion to £350.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary at the rate of £150 and £75 per annum respectively.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

DURHAM COUNTY COUNCIL.—Chief Assistant School Medical Officer (male). Salary, £350 per annum, rising to £450.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EGYPT: PUBLIC HEALTH DEPARTMENT.—Medical Officer as an Inspector for the Ankylostomiasis Campaign. Salary at the rate of £600 per annum.

ESSEX COUNTY HOSPITAL, Colchester.—House-Surgeon (male). Salary, £100 per annum.

FLINTSHIRE EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum.

GLASGOW: ROYAL SAMARITAN HOSPITAL FOR WOMEN.—Resident Medical Officer. Honorarium, £25 per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—(1) House-Physician. (2) House-Surgeon. (3) Anaesthetist. Salary for (1) and (2), £40 per annum; (3) 10 guineas.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Casualty Officer. Salary at the rate of £70 per annum.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HERTS COUNTY ASYLUM, Hill End, St. Albans.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £240.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum.

HULL EDUCATION COMMITTEE.—Two Assistant School Medical Officers (male and female). Salary, £300 per annum each.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £120 per annum.

LAMBETH PARISH INFIRMARY.—Sixth Assistant Medical Officer. Salary, £120 per annum.

LEEDS GENERAL INFIRMARY.—(1) Assistant Clinical Pathologist. (2) Two House-Surgeons. (3) Resident Medical Officer at the Ida and Robert Arthington Hospitals. Salary for (1) £150 per annum, and for (3) at the rate of £60 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £130 per annum.

LEEDS TOWNSHIP GUARDIANS.—Second and Third Assistant Medical Officers. Salary, £180 and £160 per annum respectively.

LEICESTER PARISH.—Resident Medical Superintendent of the North Evington Poor-Law Infirmary. Salary, £400 per annum, rising to £450.

LONDON COUNTY ASYLUM, Bexley.—Sixth Junior Assistant Medical Officer. Salary, £200 per annum, increasing to £220.

LONDON HOSPITAL, Whitechapel, E.—(1) Surgical Registrar. (2) Medical Registrar. Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum.

MANCHESTER CORPORATION.—Fourth Medical Assistant to the Monsall Fever Hospital. Salary, £130 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—Senior and Junior House-Surgeons (males).

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—House-Surgeon. Honorarium, £50 per annum.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY.—Vacancy on Visiting Medical Staff. Salary, £200 per annum.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) House-Physician. (2) Two House-Surgeons. (3) Obstetric Assistant. (4) Clinical Assistant to Out-patient Department. (5) Assistant Pathologist.

NEW ZEALAND: UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary, £800 per annum.

NORTH RIDING ASYLUM, Clifton, York.—Assistant Medical Officer. Salary, £200 per annum, rising to £250.

NOTTINGHAM EDUCATION COMMITTEE.—Senior Medical Inspector. Salary, £400 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

NOTTS COUNTY COUNCIL.—Assistant Tuberculosis Officer. Salary, £300 per annum.

OLDHAM ROYAL INFIRMARY.—Senior House-Surgeon (male). Salary, £140 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Salary at the rate of £80 per annum each.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £250 per annum.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—(1) Senior House-Physician, (2) Senior House-Surgeon, (3) Junior House-Physician, (4) Junior House-Surgeon. Salary for (1) and (2), £75 per annum, and for (3) and (4), £60 per annum.

PUBLIC DISPENSARY, Drury Lane, W.C.—Resident Medical Officer. Salary, £105 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road.—House-Physician. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £150 and £100 per annum respectively.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House-Surgeon. Salary at the rate of £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Director of the Pathological Department. (2) Medical Registrar. Salary, £400 and 100 guineas per annum respectively.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Additional Honorary Physician.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Honorary Physician for Out-patients.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.—House-Surgeon. Salary, £80 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—(1) Honorary Surgeon. (2) Honorary Medical Radiographer.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon. (2) Casualty House-Surgeon. Salary, £80 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £90 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Assistant House-Surgeon. Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £140 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £120 per annum.

SOUTHWARK UNION.—(1) Second Assistant Medical Officer. (2) Third Assistant Medical Officer. Salary, £170 and £160 per annum, rising to £180 and £170 respectively.

STAFFORDSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £130 per annum, rising to £150.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—Lady House-Surgeon. Salary, £90 per annum for first six months, rising to £100.

WALSALL AND DISTRICT HOSPITAL.—(1) Senior House-Surgeon. (2) Assistant House-Surgeon. Salary, £150 and £110 per annum respectively.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two Assistant Anaesthetists. (2) Second Resident Casualty Officer.

WESTMINSTER HOSPITAL, S.W.—Administrator of Anaesthetics.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. (2) Junior House-Surgeon. Salary, £170 and £150 per annum respectively.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BARLOW, R. G., M.B., Ch.B.Liverp., Assistant Medical Officer of the Prescot Union Workhouse.

BROWN, G. H., M.D., District Medical Officer of the Uttoxeter Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTH.

LEWIS.—On April 19th, at Tai Yüan Fu, North China, the wife of John Lewis, M.B., B.S., a daughter.

MARRIAGE.

MARRINER-PLUM.—On May 12th, at Hellerup, Denmark, Dr. Kenneth D. Marriner, Crosshills, Yorkshire, youngest son of the late Mr. W. L. Marriner, Worthville, Keighley, and Mrs. Marriner, Queen's Gate Gardens, S.W., to Margrethe, eldest daughter of Mr. and Mrs. T. Plüm, Hellerup.

DEATH.

SAVAGE.—On May 8th, at Hafton, Uphill Road, Weston-super-Mare, Mary Adèle May Savage, the beloved wife of William George Savage, M.D.

DIARY FOR THE WEEK.

TUESDAY.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, Leicester Square.—4.30 p.m., Cases and Specimens. 5.15 p.m., Mr. Frank Curry: Laboratory Demonstration.

MEDICO-LEGAL SOCIETY, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Dr. W. A. Brend: Paper, "A Supposed Death from Tight-lacing in a Male."

ROYAL SOCIETY OF MEDICINE:

SECTION OF THERAPEUTICS AND PHARMACOLOGY, 4.30 p.m. Paper: — Dr. E. W. Ainley Walker, and Professor Georges Dreyer: The Dosage of Drugs, Toxins, and Antitoxins.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DERMATOLOGY.—4.15 p.m., Demonstration of Cases of Mycosis Fungoides. 5 p.m., Debate regarding this disease, to be opened by Dr. J. H. Sequeira.

SECTION OF NEUROLOGY, 8.30 p.m.—Paper:—Dr. Ivor J. Davies: The Senghenydd Explosion from a Medical Standpoint.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DISEASES OF CHILDREN, 4.30 p.m.—Papers:—Dr. F. Parkes Weber: A Familial Case of Splenomegalic Anaemia with Infantilism. Major R. McCarrison, I.M.S.: Nervous Cretinism.

SECTION OF EPIDEMIOLOGY AND STATE MEDICINE, 8.30 p.m. — Paper: — Lieutenant-Colonel Wilkinson, I.M.S.: Tuberculosis in India.

SATURDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF BALNEOLOGY AND CLIMATOLOGY.—Provincial Meeting at Leamington.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.
LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.
LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.
LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.
MANCHESTER HOSPITALS POST-GRADUATE CLINICS.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.
NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.
WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[*Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.*]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		MAY.
15	Fri.	Marylebone Division, 11, Chandos Street, W., 5 p.m.
16	Sat.	Last day for receipt of Nominations for Election on Council.
19	Tues.	Buckinghamshire Division, Annual Meeting, Aylesbury, 3 p.m.
20	Wed.	Dorset and West Hants Branch, Annual Meeting, Dorchester, 3.30 p.m. Altrincham Division, Altrincham, 4 p.m. Camberwell Division, Annual Meeting, 2, Underhill Road, Lordship Lane, S.E., 4 p.m.
21	Thur.	London: Insurance Act Committee, 11 a.m.
22	Fri.	London: Medico-Political Ship Surgeons Subcommittee. Boston and Spalding Division, Annual Meeting, Boston, 12.45 p.m. Chester and Crewe Division, Annual Meeting, Chester, 4 p.m.
23	Sat.	List of Nominations for Election on Council will be published in the JOURNAL of this date.
25	Mon.	London: Naval and Military Committee, 3.30 p.m.
26	Tues.	City Division, Annual Meeting, Balfour Hall, Kingsland Road, 3.30 p.m.
27	Wed.	Lambeth Division, Annual Meeting, Bethlem Royal Hospital, 4 p.m. Bath and Bristol Branch, Bristol University, 5 p.m.
29	Fri.	Furness Division, Barrow, 3.15 p.m.

Date.		Meetings to be Held.
		JUNE.
2	Tues.	London: Public Health Committee, 3 p.m.
3	Wed.	London: Journal Committee, 2.30 p.m. London: Medico-Political Crime and Punishment Subcommittee, 12 noon.
5	Fri.	London: Medico-Political Committee, 10.30 a.m. London: Central Ethical Committee, 2 p.m.
6	Sat.	Date of issue of Voting Papers for Council Election from Head Office.
9	Tues.	London: Metropolitan Counties Branch Council, 4 p.m. London: Organization Committee, 2 p.m.
10	Wed.	London: Hospitals Committee (*provisional*).
11	Thur.	South Wales and Monmouthshire Branch, Annual Meeting, Llanelly.
13	Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17	Wed.	London: Finance Committee, 2.30 p.m. Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, noon to 1 p.m.; Meeting, 1 to 3 p.m.; Excursions, 3 to 6 p.m.; Dinner, 7.30 p.m.
18	Thur.	Birmingham Branch, Annual Meeting, Birmingham, 3.30 p.m.
24	Wed.	London: Council Meeting.
26	Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
27	Sat.	Announcement of result of Election of Members to Council.
		JULY.
11	Sat.	London: Science Committee, 10.30 a.m.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 23RD, 1914.

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ANOMALIES OF MEDICAL AND SICKNESS BENEFIT.

THE medical profession has already had experience of the double-edged nature of a provision in an Act of Parliament. The Addison amendment of the Insurance Act of 1911, enabling insured persons to "make their own arrangements," was introduced with the cordial approval and active support of the profession. Practitioners in Wales are at present engaged in a struggle to prevent an interpretation of this clause by the Welsh Commissioners under which "schemes" would be sanctioned giving to bodies of workmen permission to make their own arrangements collectively, and to appoint whole-time medical officers under the control of lay committees. The profession is there falling back for defence on the Hamsworth amendment, which expressly provided that insured persons might receive medical treatment through any system or institution existing at the time of the passing of the Act. This amendment was strongly opposed by the profession at the time, but is now being called upon to assist practitioners in preventing any new schemes from coming into being. The position holds a certain element of irony and piquancy.

It would now appear that insured persons will very shortly find that clauses in the Act ostensibly introduced in their favour are capable of various interpretations, and that in this, as in many other affairs, things are not what they seem. The clause defining sickness benefit expressly stipulates for three waiting days at the commencement of the illness before the benefit is payable. But if the insured person recovers from the illness any subsequent illness is to be deemed to be a continuation of the previous disease unless a period of twelve months has elapsed since his recovery. The ordinary interpretation of this by the insured person and the general public is merely that for the second illness there will be no waiting days, and that sickness benefit will be payable from the first day. The insured person has assumed that it is to his advantage, and more on the lines of his old friendly society, which knew nothing of waiting days for any illness.

But his simple faith will receive a rude shock when the full force of the phrase "deemed to be a continuation of the previous disease" is appreciated. A recent circular[1] of the Commissioners to approved societies gently but firmly drives this home. Sickness benefit for any illness continues only for a period of twenty-six weeks. In estimating the number of weeks' benefit available for the second illness, the number of weeks during which payment was made for the first illness have to be deducted from the total of twenty-six. Cases have already arisen in which the first illness has lasted for twenty-six weeks, and the insured person finds that on a second breakdown of health he is not entitled to any sickness benefit.

At present the condition of the sick insured person is aggravated by the fact that he is not eligible for disablement benefit, as this only comes into force after he has been in insurance for 104 weeks and has paid 104 contributions. So that no insured person can claim disablement benefit before July of this year.

It is important to note also that this "linking up" of illnesses is not confined to the first and second. Any number of illnesses can be linked together so long as there has not been an interval of at least twelve months between any two of them. It would be a nice actuarial calculation to ascertain how many years could be occupied by the continuation of an attack of quinsy followed at suitable intervals by a fracture, pneumonia, or influenza, or any of the ills to which flesh is heir. Assuming the illnesses were not serious, and each one incapacitated him for one week at a time, it should be possible for the quinsy to be "continued" for at least twenty-five years. By that time he should be considering seriously the advisability of tonsillectomy. The abolition of the three days' waiting period for the second illness begins to assume the aspect of a Greek gift when looked at in the light of its full development.

The final thrust and the most masterly of all which the circular contains is that "the period of twelve months which must elapse between two illnesses in order that the latter should not be treated as a continuation of the former runs from the date of the member's recovery from the former illness and not from the date on which he ceased to receive sickness benefit for that illness." This would appear to refer to the fact that during illness his subscriptions are excused. This has been regarded

[1] Circular A.S., 129.

as a beneficent provision, doing away with an old grievance under the friendly society system, and full credit was taken for it by the author of the Act himself. But the member will find the double edge of the clause when he discovers that the time during which he has been previously absolved from subscriptions, even though he has not been receiving sickness benefit, will count as part of the duration of his illness, and consequently as an addition to the twelve months he must wait before coming into benefit again. The obvious remedy is for him to stamp his own card during the later portion of the illness, thus reverting to friendly society practice, with the addition that his stamp must include the employer's threepence in addition to his own fourpence.

The circular evidently sets forth the interpretation of Section 8 (5) of the Act of 1911 which has been arrived at by the legal advisers to the Commissioners. It becomes apparent that the section was not intended to be to the advantage of insured persons, but rather to operate as a limitation of their right to sickness benefit. For the space of a few years it limits the obligations of a society to an adult male member to £13 until he becomes entitled to disablement benefit. Such anomalies did not exist under the old friendly society system, on which it is understood that the actuaries who advised the Government based their figures, and it would be interesting to know whether these limitations were included in their estimates. More probably the section assumed its final form at a later period, during the rude and stormy passage of the bill through the House of Commons, and the circular represents what the Commissioners believe to be the strict interpretation of the Act.

In the meantime these inner complications only affect a few insured persons, but their number will gradually increase, and we can hardly doubt that these asperities will appeal very directly to the dispensers of amending Acts and supplementary grants.

MEDICAL BENEFIT: DRUG TARIFF.

A CIRCULAR letter (No. 545) bearing date May 2nd, and in the following terms, has been issued to the medical practitioners in Scotland by the Insurance Commission, Scotland:

(Circular No. 545.)

MEDICAL BENEFIT—DRUG TARIFF.

1. In the beginning of October, 1913, the Pharmaceutical Standing Committee submitted to the Commission, on behalf of the panel chemists of Scotland, certain proposals for a revision of the Drug Tariff, the most important of these being an increase of the fees to be allowed for dispensing prescriptions. A list of the proposed increased fees is appended to this letter (Schedule I). Consultations took place on the subject between the Commission on the one hand and the Chairman and Secretary of the Committee on the other. The Chairman of the Commission also attended a mass meeting of the Scottish Panel Chemists held in Edinburgh on the 31st October.

2. At that meeting the views of the chemists were fully placed before the Chairman, who discussed with those present the various financial aspects of the proposals, including the effect which, if sanctioned, these might have on the destination of what is popularly known as the "floating 6d." in which both chemists and doctors are interested parties. It was stated to the Chairman that informal inquiries by chemists had been made among doctors in different areas, and that they had generally indicated that they would have no objection to the demand for an increased dispensing fee. On this point, however, the Chairman stated that the Commission would require to ascertain definitely the views of the doctors before the Commission could, in any way, deal with the matter.

3. After the Chairman had retired, the meeting resolved to recommend chemists throughout Scotland to renew their agreements for another year subject to a break at the end of the first quarter. The agreements as eventually signed by the chemists provide, however, for a break at the end both of the first and of the second quarters. The following was the resolution adopted at the meeting:

> "That this meeting of Panel Chemists in Scotland agrees, without prejudice to further bargaining, to accept as suggested by Mr. Leishman the principle of discounting for one year, provided that the Commissioners accept the new Scale of Dispensing Fees put forward by our representatives.
>
> "The meeting further agrees that, in the event of the Insurance Commissioners not accepting the new Scale of Dispensing Fees on the foregoing conditions prior to the time fixed for terminating the existing agreements, the Pharmaceutical Standing Committee (Scotland) be authorized to proceed as indicated in the following paragraph of the resolution.
>
> "This meeting of Scottish Panel Chemists renews the protest made at the mass meeting on March 31st, 1913, as to the inadequate remuneration provided for Scottish chemists under the present Drug Tariff, and adheres to the stated case for revision of terms submitted to the Scottish Insurance Commissioners on October 1st, 1913, as being their minimum demand. In view of a promise given at this meeting by the Chairman of the Scottish Insurance Commissioners that an endeavour will be made to secure all necessary information within an early date after January 14th, 1914, to enable a definite reply to be made by the Insurance Commissioners to the claim lodged on behalf of chemists, and in view also of an offer at the same time made by the Chairman of the Scottish Insurance Commissioners to insert a proviso in the existing agreement or any other agreement making it terminable at the close of the first three months of the medical year beginning on January 15th, 1914, this meeting recommends that, subject to the foregoing proviso, the present arrangement as to dispensing charges be allowed to continue till the date on which the aforesaid proviso makes the agreement terminable, and that a final decision be deferred till a date prior to the foregoing after the Insurance Commissioners have obtained the information which they consider necessary. Such adjustment of the Drug Tariff as to prices of drugs and appliances as may be sanctioned by the Commissioners to take effect from the beginning of the second medical year."

4. Immediately after the end of the medical year the Commission proceeded to obtain returns from clerks to Insurance Committees showing the amount expended on drugs supplied by chemists under doctors' prescriptions during the year 1913–14, and the number of prescription forms issued. These returns have only now been completed. The Commission have also been supplied by the Pharmaceutical Standing Committee with statistics showing the relative frequency with which the various classes of prescriptions in respect of which increased dispensing fees were claimed by the chemists are dispensed by them in actual practice.

5. From the data thus obtained it would appear that on the average—

(1) the number of prescription forms used* by doctors during 1913–14 was equivalent to:

In Burghs...1.92 in respect of every insured person;
In Counties 1.58 " " ; and

(2) the proposed dispensing fees would increase the cost of each prescription by about 1¾d.

6. If, therefore, these fees had been in operation during the year 1913-14 they would have entailed an additional charge for drugs per insured person amounting to:

In Burghs	3.36d.
In Counties	2.76d.

7. The Commission desire, however, to point out that these figures should be regarded as only approximately accurate. They are based on the mean of the counts of the Index Registers as at 29th October, 1912, and 14th April, 1913, and, as doctors are doubtless aware, the number on these Registers is, owing to causes which need not be detailed in this letter, in excess of the actual number of insured persons in Scotland. Everywhere, indeed, the Registers are considerably inflated, and the Commission are at present endeavouring to eliminate from them as far as possible duplications and other errors. At the time of taking the above-mentioned two counts the average inflation amounted to about 3 per cent., but varied in different areas. The average figures quoted above as to the number of prescription forms and the cost of the additional dispensing fees may therefore be regarded as understated to about that extent.*

*Occasionally a single form contained more than one prescription.

8. As indicated, the figures are averages for the whole country, and do not represent the effect of the proposals as regards particular areas. With regard to these it may be stated that, so far as the Commission have been able to ascertain on the information before them, and on the basis of the figures for 1913-14:

(1) In 7 Burghs and 20 Counties the increased dispensing charges could probably be granted without trenching upon the floating 6d.;

(2) in 9 Burghs and 6 Counties the charge of 1s. 6d. per insured person is at present sufficient to meet the cost of drugs, but would probably be insufficient for this purpose if the increased charges were agreed to; and

(3) in 9 Burghs and 5 Counties the expenditure on drugs already exceeds the rate of 1s. 6d.; in such areas, therefore, the chemists' proposals would mean still further encroaching upon the floating 6d.

9. I am to add that the Insurance Committee of would appear to fall within the of these groups.

10. I am to inform you that, in addition to the statistical inquiries above referred to, the Commission have instructed a highly trained and expert chemist to make a detailed investigation of the prescriptions issued in certain selected areas of Scotland, in order to ascertain whether it would not be possible without impairing the efficiency of the medical service to secure certain economies in the supply of drugs to insured persons, by more detailed examination of the drug accounts, and as a result of consultations between Panel and Pharmaceutical Committees. Until the report of that investigation is available it will be impossible for the Commission to offer any reliable opinion as to how far the procedure referred to will tend to balance the cost of the increased dispensing charges and of the possible nett increase in the prices of certain drugs referred to in paragraph 12.

11. The matter is one of much importance, and requires very careful consideration. The Commission find, for example, that the cost of drugs supplied under doctors' prescriptions varies in the case of Burghs from 8.59 pence to 25.78 pence per insured person, and in the case of counties from 7.51 pence to 22.13 pence. The Commission have no evidence that insured persons resident in those areas in which the cost of drugs is lowest have received treatment inferior in quality to that given in those areas where the cost is highest. Neither has it been demonstrated that the differences are accounted for by an excessive sickness rate in the latter areas. It would therefore appear that the differences are, to some extent at least, due to doctors in different areas having different ideas and methods with regard to drug prescribing. This is, however, a matter on which the Commission will be able to speak with greater confidence after they have perused the report referred to.

12. In addition to increased dispensing fees, the chemists have suggested an alteration in the prices allowed for certain drugs contained in the Drug Tariff in order that these prices might be adjusted to market fluctuations. The Commission have been unable to ascertain what would be the financial effect of these adjustments either for the country as a whole or for individual Committees, and I am therefore to append for your information a list of the drugs affected, showing the prices for the year 1913-14 and the proposed prices for 1914-15 (see Schedule II). It will be observed that the price is in a number of cases increased and in other cases decreased. The Commission cannot say whether the increases and decreases will balance each other, and they feel that they must leave the doctors to judge for themselves the probable effect of the proposed alterations on the drug expenditure for their areas, regard being had to the relative frequency with which the several drugs are prescribed and the quantities thereof generally used.

13. The foregoing particulars regarding the chemists' proposals are now placed before you in order that the Commission may ascertain the views not merely of the Panel Committees but of the insurance practitioners throughout Scotland, in accordance with the undertaking given by the Chairman at the meeting which he had with the chemists on 31st October last. It is important that the views of the practitioners should be known as soon as possible. The Commission have had difficulty in devising an arrangement by which the opinions of the practitioners may reach the Commission through the Panel Committees, and to facilitate expression of opinion the questions on the enclosed card should be answered and the card forwarded (either as a post-card or in an envelope) as soon as possible, but not later than 9th May, to the Secretary to the Panel Committee, who has been asked to be good enough to send to the Commission the replies thus received with or without comment by the Panel Committee as that Committee may determine.

14. It may be explained that the Commission hope to have in their possession additional valuable information bearing on the question above discussed in time to allow them to bring the matter again before the practitioners in relation to the arrangements to be made for the year 1915. The present question therefore refers solely to the current medical year, that is, from 12th January, 1914, to 31st December, 1914.

Schedule I contains a tariff of dispensing charges for 1913-14 and 1914-15 respectively, and Schedule II a similar list of prices of drugs and appliances.

The post-card referred to in paragraph 13 is in the following terms:

Form No. 547.

MEDICAL BENEFIT—DRUG TARIFF.

To be completed and sent to the Secretary of the Panel Committee.)

1. Do you approve of payment out of the Drug Fund including, if necessary, the Drug Suspense Fund, of the increased dispensing fees desired by the chemists in respect of the current medical year 1914?.....

2. Do you approve of the adjustment of prices as explained in paragraph 12 of circular letter from Scottish Insurance Commissioners dated May 2nd, 1914?.....

Signature.....

Address.....

Date.....

LOCAL MEDICAL AND PANEL COMMITTEES.

HERTFORDSHIRE.

PANEL COMMITTEE.

A SPECIAL meeting of the Panel Committee and of practitioners was held at Hatfield on May 6th.

Constitution of Panel Committees.—Model Scheme B (SUPPLEMENT, April 18th and 25th, pp. 233, 254) was accepted with slight amendment of Section 9, whereby the Secretary was given power to assign, without calling a meeting, practitioners to a constituency. There are to be two constituencies—East and West Herts; East Herts (meeting at Hertford) to elect eleven members, and West Herts (meeting at Watford) to elect thirteen members. Steps are to be taken to get the members of the Panel Committees more in touch with the practitioners of their various districts after and before each Panel meeting.

Finance.—The HONORARY SECRETARY submitted the accounts to date. It was agreed that in future money should be raised by a voluntary levy, provided that the County Insurance Committee agreed, such levy to be similar to the scheme adopted in Bedfordshire, and the money to be deducted from practitioners' accounts by the Insurance Committee, but that such deduction shall not exceed 10s. per £100 from the money received for medical attendance. The Panel Committee may declare any lower rate in any future year, but for the remainder of the current year the rate to be ½ per cent.

Pharmaceutical Committee's Estimates.—It was agreed than any sum would be permitted which, in the opinion of the County Insurance Committee and of the Commissioners, was reasonable and in conformity with the Act and Regulations.

Some Difficulties dealt with.—A report by the Honorary Secretary summarized some small difficulties which had arisen and which had been dealt with satisfactorily—the mileage fund, the payments to practitioners, medical cards, etc.

The Organization of Panel Committees.—The grant of £5 to this was confirmed. It was thought that there was a great need for some such organization. The Representative at the Conference supplied a brief account of the meeting.

Medical Referees.—The following resolution was passed, and is to be sent to all practitioners to prevent bad precedents being established:

That where any medical practitioner not devoting his time to the work is called upon by a lay body to express an opinion as to the capacity or incapacity of an insured person, the least fee he should accept should be 10s. 6d.

HUNTINGDONSHIRE.

LOCAL MEDICAL COMMITTEE.

A MEETING of the Local Medical Committee was held at the County Hospital on May 5th, when it was resolved that the Local Medical Committee should consist as heretofore of all the medical men living in the county. It was also agreed that the subscription be paid to the organization for the co-ordination of Local Medical and Panel Committees.

Treatment of Tuberculosis.—It was further agreed:

> In view of the necessity of treating many cases of tuberculosis at their own homes, it is absolutely necessary that in a rural area such as this the local medical men should take a share in the treatment.

The Secretary was instructed to forward copies of the resolution to the President of the Local Government Board, the Insurance Commissioners, the Hunts County Council.

Expenses of Committee.—A levy of ¼d. per insured person on practitioners' lists was made for expenses.

PANEL COMMITTEE.

The Panel Committee, which consists of the medical men resident in the county, held a meeting afterwards, and made arrangements for the assignment to the nearest practitioner of insured persons who have difficulty in finding acceptance.

PLYMOUTH.

LOCAL MEDICAL COMMITTEE.

A MEETING of the Plymouth Local Medical Committee was held on May 14th, at the Medical Society's Rooms, Plymouth.

Medical Referees.—The recommendation of the British Medical Association as to whole-time referees was read, and several members being unconvinced of the advantages of having whole-time men, the matter was deferred for further discussion.

Conference with the Pharmaceutical Society.—It was decided to send some suggestions for consideration at the proposed conference with the Pharmaceutical Committee.

Medical Service Subcommittee.—Dr. E. L. Fox was appointed as the representative of the Committee on the Medical Service Subcommittee.

Constitution of Local Medical Committees.—Memorandum 194 I.C. and model schemes for constitution of Local Medical Committees to hold office after July 15th, 1914, were considered. Scheme C was selected as being applicable to the area, the Committee to consist of two-fifths of panel and three-fifths of non-panel practitioners. The Honorary Secretary was instructed to inquire of the Insurance Commissioners whether they would pay the cost of the returning officer whose appointment they recommended. He was also instructed to point out to the Commissioners that their definition of "resident practitioner" should, in the opinion of the committee, be enlarged to include the words "and who is actually engaged in private practice."

NEWPORT, MON.

PANEL AND LOCAL MEDICAL COMMITTEES.

THE usual fortnightly meeting of these committees was held on May 12th at Newport, when Mr. W. J. GREER occupied the chair, and twenty members were present.

Medical Referees.—A letter was read from the Welsh Insurance Commissioners promising to give the resolutions of the Panel Committee on this subject their early consideration. A further resolution was passed that the minimum fee for each examination and report by a part-time referee should be 10s. 6d.

Lists of Insured Persons.—By a previous resolution the Clerk to the Newport Insurance Committee was requested to supply each panel doctor with a complete list of insured persons accepted by him. He declined to do so, and alleged certain difficulties in his way. It was decided to call his attention to paragraph 25 of the Insurance (Medical Benefit) Regulations (Wales), 1913, and to press for a list.

Expenses of Provisional Committee.—It was agreed to send £2 to Mr. D. F. Todd towards the expenses of the Provisional Committee for the organization of Local Medical and Panel Committees.

Voluntary Levy for Panel Committee's Expenses.—All the doctors on the panel agreed to a voluntary levy of one farthing per insured person per quarter and arranged with the Clerk to the Insurance Committee to make the deduction. This he did for the first quarter of 1914, but he now reported that the Newport Insurance Committee refused to permit him to make any further deductions. It was decided that in future the levy should be collected by the Honorary Secretary (Dr. S. Hamilton).

Outstanding Accounts for 1913.—Drs. Hurley, Cook, Gratte, Lloyd Davies, and the Honorary Secretary (Dr. Hamilton), were appointed to meet the Insurance Committee and to arrange if possible a settlement of the considerable balance still owing to the panel doctors for the year 1913.

Pharmaceutical Committee.—A request of the Newport Pharmaceutical Committee to have £5 allowed them by the Insurance Committee for their administrative expenses which had been referred to the Committee was approved.

COUNTY OF CHESHIRE.

LOCAL MEDICAL AND PANEL COMMITTEE.

THE second meeting of the combined Local Medical and Panel Committee was held at the Liverpool Royal Infirmary on April 29th. Dr. GARSTANG was in the chair, and fourteen others were present. The following minute of the previous meeting was omitted from the account in the SUPPLEMENT of April 18th, p. 235:

> That in view of the refusal of the Insurance Commissioners to accept the offer made by this Committee and agreed to by the Insurance Committee in the matter of "green vouchers," the resolution refusing to accept green vouchers be rescinded, and practitioners be advised to accept patients on the terms of Form 92/I.C. (revised).

With this addition the account in the SUPPLEMENT was adopted as the minutes and confirmed.

Constitution of Panel Committees.—The Commissioners' Scheme B for the permanent constitution of this Committee was adopted, subject to various modifications submitted for the approval of the Commissioners. These modifications achieve the desire of the Committee that, whilst complying with the requirement that three-fourths of the Committee shall be panel practitioners, the scheme shall be formulated so that (1) the six representatives on the Insurance Committee shall be *ex officio* members of this Committee; (2) so as to admit of either panel or non-panel being direct representatives of constituencies; (3) that the electors shall all reside in Cheshire. On the other hand, the Committee would be willing for Cheshire residents near the borders of adjacent areas to forego any right to vote for the Panel Committees of those areas.

Fees.—The fees for operations and mileage of the Poor Law and Factory Acts were adopted for insured persons applying to make their own arrangements.

Complaints.—Many complaints were received and discussed *re* the management of the business of the Chester office, and it was resolved to send a letter of protest to the Insurance Committee and a copy at the same time to the Commission.

Expenses of Committee.—It was resolved to issue to the county panel a circular on the lines of that of Bedfordshire, requesting a voluntary levy of ½ per cent. of panel receipts to finance the committee. At the third meeting held at the Altrincham Hospital on May 17th, when Dr. Garstang presided, it was reported that about one-third of the members of the panel had agreed to the voluntary levy. It was resolved to issue a circular to the 23 district secretaries, requesting them to call meetings of their committees to discuss the voluntary levy, and pointing out that unless it be agreed to the compulsory powers to levy, conferred on this committee by Section 33 (2) of the 1913 Act, must be resorted to, as the committee must be financed; that if that be done the Pharmaceutical Committee would also be financed from the panel money, a contingency which would be avoided by agreeing to the voluntary levy; and that a voluntary levy allowed the committee to spend the money received without the supervision of the Insurance Committee and Commission which would be exercised over a statutory levy, and which would prevent the accumulation of a defence fund.

The secretary was directed to reply to an inquiry by the Pharmaceutical Committee that it was the intention of this committee to try to finance itself by a voluntary levy; but that if this endeavour failed the Pharmaceutical Committee would be informed, and the question of a statutory levy would be raised.

Delays in Payment.—The arrears of panel pay for 1913 not yet having been received, it was decided to ask the Medical Secretary of the British Medical Association to inquire from the solicitor to the Association whether it would be competent for a panel doctor to sue the Insurance Committee for the payment of moneys overdue. At the same time it was pointed out that the cheques would probably not be sent until the office had received from practitioners acknowledgements that the revised lists of patients sent them were correct; and that as large numbers of these lists appear from complaints received to be highly incorrect, great delay would result in the payment unless practitioners each personally undertook by visiting the office at Chester or by correspondence to get their own lists correct. Practitioners were accordingly to be advised that, great as the labour involved, it was in the general interest that this should be at once done.

Constitution of Local Medical Committees.—The circular of the Commission on the Permanent Constitution of Local Medical Committees was considered, and Model Scheme C was adopted in such a form as would allow the county profession at a general annual meeting to formally adopt the personnel of the Panel Committee as the Local Medical Committee for the year. This would obviate the inconvenience of having a dual committee, and at the same time it would not absolutely prevent the profession having a different Local Medical Committee from the Panel Committee should it ever happen that the latter was not properly representative of all medical interests in the county.

The Budget.—The main item on the agenda was to consider the allocation of moneys provided in the Budget for medical purposes, including consultant referees and clinics; the upshot of a prolonged and interesting discussion was that the Secretary was instructed to write the following letter to Mr. Lloyd George:

> Sir,—I am instructed by my Committee, which has had under consideration the new Budget grants for medical purposes, to inform you of the views at which it has arrived with regard to the administration of these moneys, particularly those provided for clinics, consultants, consultant-referees, and hospitals.
>
> My Committee thinks that the authority to be entrusted with that duty should combine clinical with administration experience, and should be in touch with existing general hospitals as well as with the public health and education medical services.
>
> So far as this Committee is aware, there does not exist at present a body which has these requisite qualifications; and it would therefore venture to suggest that an altogether new authority should be formed for the purpose.
>
> Such a body should, in the opinion of my Committee, be a board composed of representatives of:
>
> 1. The Insurance Committee.
> 2. The Local Medical Committee.
> 3. The Public Health Authority.
> 4. The Hospitals Association.
> 5. The Education Authority.
>
> As this Committee foresees the great potentialities of the medical grants in the Budget, it regards the initial steps taken for their administration as likely to lay down the lines on which what may become a great department of State activity may eventually develop.—I am, Sir, your obedient servant,
>
> LIONEL JAS. PICTON,
> Honorary Secretary.

NORTH RIDING OF YORKSHIRE.

LOCAL MEDICAL AND PANEL COMMITTEES.

Local Medical Committee.

THE ninth meeting of the Local Medical Committee was held at York on March 7th, when Dr. CANDLER-HOPE was in the chair, and sixteen other members were present.

Proposed District Committees.—To enable representatives on the Local Medical and Panel Committees to express the opinions and wishes of practitioners living in their own neighbourhood, it was decided to divide the North Riding insurance area into districts, each having a convenient centre at which from time to time the local doctors might assemble and there discuss with their representatives any question which affected their interests in the working of the Insurance Act. The Secretary was instructed to obtain from the several district secretaries and others the most acceptable scheme of district medical meetings.

Medical Referees.—The schemes of the British Medical Association and of the West Riding of Yorkshire were discussed and the following resolutions adopted:

1. That medical referees under the Insurance Act be appointed.
2. That the appointments be part-time appointments and revised every twelve months.
3. That cases be referred to the referees by the approved societies, either on the initiative of the approved society or in consequence of a suggestion from the practitioner attending the case. In either case it is understood that both the approved society and the practitioner communicate with one another on the subject before the referee is actually authorized.
4. That the referees be named by the panel doctors of the several "districts" of the North Riding insurance area, one referee from each district.
5. That no referee shall act within the "district" in which he resides.
6. That the remuneration be as follows:

   (*a*) Half a guinea for every case examined at the doctor's surgery; the doctor to be paid for every case referred to him the above fee of 10s. 6d. if the case is seen and examined, a retaining fee of five shillings (5s.) if the case is referred to him but does not turn up.

   (*b*) A guinea for every case when the doctor has to go to visit the insured person away from the surgery, and mileage extra.
7. That the referees be paid by the approved societies.

Certificates.—The following resolutions were carried unanimously:

> That the North Riding Insurance Committee be urged to adopt after July, 1914, a uniform certificate in the working of the Act.
>
> All certificates apart from those necessary to obtain sickness benefit by insured persons shall, according to the custom of each locality, be charged in accordance with the district tariff which has hitherto prevailed.

Panel Committee: First Meeting.

The first meeting of the Panel Committee was then held, when Dr. G. J. B. CANDLER-HOPE took the chair, and sixteen panel and one non-panel practitioners were present. Mr. J. W. Peacock, Clerk to the North Riding Insurance Committee, also attended.

Dr. G. J. B. Candler-Hope and Dr. T. I. Mills, chairman and honorary secretary respectively of the Local Medical Committee, were unanimously elected chairman and secretary of the Panel Committee.

It was arranged that the Local Medical and Panel Committees of the North Riding of Yorkshire should meet on the same day.

Second Meeting.

At the second meeting of the Panel Committee, on March 26th, Drs. Foley, J. A. Hutchinson, and Leishman were appointed to the Local Medical and Panel Committees; Dr. T. I. Mills was appointed treasurer of the Panel Committee. It was also resolved that the Panel Committee as at present constituted should continue for three years or for such period as the Insurance Commissioners might determine from July 15th, 1914.

Finances.—To meet the expenses of the Committee it was resolved, after discussing the provisions of Section 32, Subsection (2), of the Insurance Act, 1913, to adopt the system of a voluntary levy, and to ask all practitioners on the panel to sign an undertaking agreeing to the deduction by the Clerk of the Insurance Committee from the sums due to them of a sum not exceeding one penny per annum for each insured person on their list.

Organization of Committees.—The CHAIRMAN stated that Dr. Mills and he had attended the conference in London, and outlined the proposed scheme for the federation of Local Medical and Panel Committees. It was resolved to join the federation and that a preliminary subscription of £5 be made.

Treatment of Uninsured Persons.—With regard to a scheme which had been proposed in one of the districts of Yorkshire for the purpose of providing medical attendance and medicine for persons not coming under the Insurance Act, it was resolved, on the motion of Dr. R. A. SCOTT, seconded by Dr. J. G. MURRAY:

> That this Committee feels that this is the wrong time to bring forward any scheme for the treatment of uninsured persons at other terms than those already approved by the British Medical Association at their meeting held in the spring of 1913.

EDINBURGH.

Panel Committee.

At a meeting of the Burgh of Edinburgh Panel Committee held in the Goold Hall, Saint Andrew Square, on May 8th, Dr. Dewar occupied the chair, and twelve members were present.

Emergency Drugs and Appliances.—A discussion took place on a remit by the Edinburgh Insurance Committee regarding emergency drugs and appliances. It was agreed to suggest that liq. cresol. sapon. (*B.P.C.*) be substituted for lysol, and that picric acid gauze be added to the list of drugs and appliances allowed as a monthly supply to panel practitioners. It was further agreed to suggest that hypodermic tablets of morphine, heroin, and strychnine be emergency drugs, to be supplied to panel practitioners for the treatment of insured persons. A subcommittee was instructed to bring these suggestions before the Medical Benefit Subcommittee.

Vaccines and Serums.—At the request of the Insurance Committee the following list of vaccines and serums was drawn up on April 6th, in order that the Commissioners might be asked to state whether any of them might be supplied as part of medical benefit: (1) Staphylococcus, (2) *Bacillus coli*, (3) von Pirquet, (4) tuberculin, (5) streptococcus, (6) blood serum, (7) diphtheria antitoxin. The list having been remitted by the Medical Benefits Subcommittee for further consideration, it was agreed to retain the same list, omitting diphtheria antitoxin. A motion "that in the meantime no list of vaccines approved by the Panel Committee be submitted to the Edinburgh Insurance Committee" was defeated.

Secret Formulae.—It was unanimously agreed to oppose the prescribing or dispensing of secret formulae.

Administrative Expenses.—Some time ago the Committee made application for the sum of one farthing per insured person in the area for this purpose. On account of the prolonged delay in granting the application, and the searching investigation as to how the money was to be spent, the application was withdrawn, and a voluntary levy of £1 1s. asked from each panel practitioner in the area. The Treasurer, Dr. Morrison McIntosh, gave a very satisfactory report on the manner in which the subscriptions were coming in. The Treasurer was authorized to pay the Committee's subscription to the Panel Association, which amounts to £6.

Proposed Increased Dispensary Fees to Chemists.—It was resolved, by 8 votes to 2, that Question I on a post-card recently issued by the Commissioners to panel practitioners be answered in the negative, and Question II in the affirmative. The Committee, while not wholly opposed to an increase in certain of the dispensing fees for panel chemists, was of opinion that it could not approve of the scheme set forth in the memorandum issued by the Commissioners.

Checking Prescriptions.—It was unanimously resolved that the Committee does not contribute to the expense of checking prescriptions.

It was decided to draw up and issue to panel practitioners in the area a circular dealing with the following subjects: (1) Emergency drugs and appliances; (2) vaccines and serums; (3) secret formulae; (4) response to levy; (5) caution in prescribing.

ABERDEENSHIRE.

A largely attended meeting of panel practitioners was held in the Medico-Chirurgical Society's Hall, Aberdeen, on May 15th, under the presidency of Dr. David Rorie.

Deductions from Quarterly Cheques.—The question of the deduction of 20 per cent. from the quarterly cheques of medical practitioners was discussed, and it was pointed out that the deduction constituted a distinct breach of the agreement between the Insurance Committee and the individual practitioners concerned, since the Panel Committee had not previously been consulted on the matter as required by Regulation 37. It was decided to take a legal opinion on the question. It was also resolved that the County Panel Committee should combine with the Burgh Panel Committee in any action taken to protect practitioners' interests, and that in the meantime the facts of the case be at once laid before the Scottish Committee of the British Medical Association to secure an immediate protest being made to the Commissioners. (The action taken by the Scottish Committee of the British Medical Association was shown in the resolutions and correspondence published in the Supplement last week, p. 361.) It was further resolved that as the present unsatisfactory state of affairs was largely due to the carelessness of approved societies in regard to index slips, the Commissioners be requested to take immediate steps to deal with the societies concerned.

Drug Tariff.—The meeting considered the circular letter (No. 545) and the post-card (Form No. 547) issued by the Insurance Commission (Scotland) and published in this issue (page 378). During the discussion it was pointed out that the wording of the post-card was so ambiguous that it made it impossible for a definite answer of any value to be given. On the motion of Dr. Beddie (Fraserburgh), it was unanimously agreed that no notice be taken of the post-card, as it was calculated to create strife between the chemists and the panel practitioners. With regard to the drug fund, it was resolved that in the opinion of the meeting the fund for Scotland should be pooled to enable chemists to receive the money due to them; and, further, that an auditor paid by the Insurance Committee, as in the case of Glasgow, should be appointed to check the chemists' accounts. As regards Circular 545, it was resolved to express no opinion upon the purely commercial matter of drug prices, but it was added that the meeting saw no reason to doubt the statements made by the chemists as regards the inadequate remuneration which they were receiving for dispensing where skilled compounding was required, and expressed its sympathy with them in their demand for better terms.

INSURANCE COMMITTEES.

ISLE OF WIGHT.

At the April meeting of the Committee some matters of general interest to the profession were considered. The first related to soldiers invalided from the army on account of tuberculous disease, and the question arose as to who was responsible for obtaining sanatorium treatment under the Insurance Act for them. This difficulty is likely to frequently arise in garrison towns, and it seems advisable that a general rule should be laid down applicable to the whole country.

It was reported that medical cards had been issued to the number of 24,000, and that about 4 per cent. had been returned undelivered, being insufficiently or wrongly addressed or the person having removed. Mr. Hunt, a member of the Committee, and an official of an approved society, suggests that these undelivered cards should be sent to the different societies, which would be pleased to help to get them to the right people.

A scale of fees was adopted in the case of those persons who, by reason of being in receipt of an annual income of £160 or more, are required to make their own arrangements for medical attendance. The amount to the credit of such persons for medical benefit is to be paid into a pool from which the doctors' bills will be met. If the amount of such pool be insufficient, then the same percentage will be paid on each bill, and the insured persons themselves will be responsible for the remainder. The scale adopted is as follows:

	£	s.	d.
Attendance on the patient at the practitioner's surgery	0	2	0
Visit to the patient's residence	0	2	6
Special visit—that is, visit paid by the patient's desire on the same day as a call received after 9.30 or on Sunday	0	3	6
Night visit—that is, visit made between the hours of 8 p.m. and 8 a.m. in response to a call received between those hours ...	0	5	0
Surgical operations requiring local or general anaesthetic, abortion, or miscarriage ...	1	1	0
Administration of general anaesthetic ...	1	1	0
Setting fractures	0	10	6
Reducing dislocations	0	10	6

The case of those persons who may be refused by practitioners on the panel came up for consideration, and the scheme approved at a meeting of the Local Panel Committee was adopted. The scheme is as follows:

1. Insured persons who have applied to and been rejected by a doctor on the panel must make application to the Clerk to the Committee to be placed on a doctor's list for treatment.

2. The Clerk to be authorized to allot such persons to the doctors practising in the area, the first to Dr. A., second to Dr. B., and so on, the doctor's names being taken alphabetically.

3. Any doctor on the panel must give immediate treatment in urgent cases until an allocation can be carried out in accordance with this scheme.

The number refused by practitioners during the year in the district was two only.

The Committee also adopted a resolution to distribute the accumulated funds as follows:

> The capitation fees in respect of insured persons who have not been accepted by, or assigned to, any practitioner on the panel will be distributed as follows—one half of the amount shall be divided equally amongst the doctors, and the remaining half in proportion to the number of insured persons on each doctor's list.

INSURANCE NOTES.

MANCHESTER.

The Warehousemen and Clerks' Association.

IN the SUPPLEMENT of last week (p. 365) an account was given of the proposals of the directors of the Warehousemen and Clerks' Association which were considered necessary to prevent the excessive drain on the association's medical fund. Two special meetings of members held to consider these proposals had been unable to arrive at any decision, and as it was imperative to come to some decision, a third special meeting was held on May 14th, and a long and at times heated discussion took place. The members are, of course, entitled as insured persons to the ordinary panel treatment, but in addition, by virtue of their monthly subscription of 2s., they are entitled to choose any doctor privately whether on the panel or not, and the doctor giving private treatment receives from the association a fee of 3s. 6d. a visit, 2s. 6d. a consultation, and 2s. for medicine without consultation; the vast majority of the members have preferred this private treatment. The directors, however, pointed out that the experience of the last year showed that it would be necessary to raise the monthly subscription to 2s. 6d. if this system were to continue, but gave the members an option of continuing their present subscription of 2s. a month, though in that case the doctor whom they chose to attend privately would in future only be entitled to 2s. 6d. a visit with medicine, 1s. 6d. a consultation with medicine, or 1s. for medicine without consultation. At the meeting held last week there was evidently an impression among the members that the directors were attempting indirectly to compel them to accept the panel treatment as insured persons simply to save the association's funds, and no arguments as to the insecure position of the funds seemed to weigh. An amendment to the directors' proposals was made, substituting for the suggested optional increase of subscription a rebate of 4s. per annum to each member who surrendered his claim to a private doctor. This amendment, however, made no provision for members retaining their right to the benefit of treatment by medical specialists, and it was argued that the proposals of the directors would be setting up two grades of ordinary medical service. After a long discussion both the amendment and the directors' proposals were rejected by large majorities. Thus for the present the old arrangement which the directors considered to have had disastrous effects on their medical fund will continue. It now remains to be seen whether the directors will accept their defeat or what other proposal they will make.

The Insurance Drug Fund in Lancashire.

At Preston, on May 14th, an important conference was held between representatives of doctors, chemists, and Insurance Committees of the whole of Lancashire, including the county boroughs, to consider the best means of controlling the drug fund under the Insurance Act, especially in view of the fact that in so many areas the drug fund and the drug suspense fund together have not been sufficient to pay the chemists' accounts in full. The conference was convened by the Pharmaceutical Society, and was presided over by Alderman J. Travis-Clegg, Chairman of the Lancashire Insurance Committee, and a considerable number of the Insurance Committees sent representatives, while Local Panel Committees and Pharmaceutical Committees had also been invited to send representatives. The proceedings were held in private. The chemists in many areas have openly expressed their conviction that the drug fund would have been sufficient to pay them in full if there had not been overprescribing on the part of a small proportion of the panel doctors, but they hesitate to incur the odium of making specific complaints and demanding the inquiry for which the medical regulations make provision. It was understood that the Pharmaceutical Society had a proposal for creating a central committee for the whole of Lancashire to carry out the duty of examining the whole of the doctors' prescriptions. Such a central committee would probably meet at Preston, which is the head quarters of the Lancashire Insurance Committee, and would sort out all the prescriptions of every individual doctor and make comparisons with those of other doctors in the same district. Any doctor whose prescribing was thought to be excessive would then be called on to explain, and, failing satisfactory explanation, would be surcharged. Apparently, this would involve some alteration in the medical regulations unless a complete agreement could be arrived at between all the Insurance, Panel, and Pharmaceutical Committees throughout the county and the county boroughs. Already several local Pharmaceutical Committees have spent considerable sums of money in checking the prescriptions in their own areas, but it was stated that if the checking and reporting were done centrally it would cost an additional sum of possibly £4,000 a year. Opinion at the conference was divided as to whether the local checking was better than investigation by a central committee for the county, and it was finally decided to appoint a joint committee of doctors, chemists, and laymen to report on the advantages and disadvantages of the two methods.

CONFERENCE OF REPRESENTATIVES OF LOCAL MEDICAL AND PANEL COMMITTEES.

MEETING OF PROVISIONAL COMMITTEE.

THE Provisional Committee appointed by the Conference of Local Medical and Panel Committees held in March last held its fourth meeting on Saturday, May 9th, when there were present: Mr. D. F. Todd (Sunderland) in the chair, Mr. Russell Coombe (Exeter), Mr. H. F. Devis (Bristol), Mr. W. Doolin (Dublin), Dr. J. R. Drever (Glasgow), Mr. G. W. Eustace (Arundel), Dr. C. Forbes (Aberdeen), Mr. P. Napier Jones (Crowthorne), Dr. J. R. Prytherch (Anglesey), Dr. B. A. Richmond (London), Mr. F. E. Apthorpe Webb (Cambridge).

For the time being the meetings of the Committee are being held at the offices of the British Medical Association, 429, Strand, accommodation for such purpose having been kindly provided by the Council of the Association.

Support accorded Proposed new Organization.

On March 29th last the Committee issued to the various Local Medical and Panel Committees in the United Kingdom a circular letter drawing attention to the decisions of the Conference in March, and to the proposals of that body as to the formation of a new organization of Local Medical and Panel Committees, and asking for financial support to the preliminary work of organization. The Provisional Committee is pleased to report that of the English insurance areas 94 have replied favourably to the proposals of the Conference, 11 unfavourably, 3 are still considering the matter. Of the Scottish insurance areas 36 have replied favourably, 2 unfavourably, 2 are doubtful. Of the Welsh insurance areas 7 have replied favourably, 1 unfavourably: and of the Irish insurance areas 2 have replied favourably, 2 unfavourably, and 1 is doubtful.

Scheme of Voluntary Levy.

In view of the decision of the Conference that Panel Committees should raise their funds by means of a voluntary levy rather than making use of the provision in the Insurance Act (1913), the Committee has approved a model form of request by medical practitioners to Clerks of Insurance Committees authorizing the deduction of a certain amount from the moneys due to practitioners from the Insurance Committees. A copy of this model form will be forwarded to any Committee upon application to

the Chairman of the Provisional Committee (Mr. D. F. Todd, Beech House, Sunderland).

Relationship of Proposed New Organization to the British Medical Organization.

The Committee appointed at its meeting on May 9th its Chairman, Mr. Eustace (Arundel), and Mr. F. E. Apthorpe Webb (Cambridge) to meet and discuss with the Insurance Act Committee of the British Medical Association the question of the relationship of that body to the proposed new organization.

MALINGERING AND THE INSURANCE ACT.

By W. ELWOOD, M.B., Ch.B.Aberd.,

Medical Referee, London and North-Western Railway Company Provident and Insurance Societies, Salford.

SINCE my last communication (SUPPLEMENT, September 20th, 1913, p. 255) I have taken figures which may be of some interest.

The cases examined by me are all insured persons, but a proportion of them are claiming to be unfit for work owing to an accident at work, and thus come under the Employers' Liability Act if they are off duty long enough to entitle them to compensation. They range in age from boys of 16 to men of 65, and they are all picked lives, having to pass a strict medical examination before entering the service of the London and North-Western Railway Company, by whom they are employed. They are of different grades, but the bulk of them are engaged in laborious work as carters, platelayers, loaders, etc.

There are two societies in connexion with the London and North-Western Railway Company: (1) A provident society; (2) an insurance society. A man incapacitated by an ordinary illness claims from the former; if his incapacity is due to an accident arising out of his employment, from the latter. This entitles him to an allowance from the insurance society *plus* half his wages. They are sent to me for my opinion as to their fitness or unfitness for work. If I find they are unfit, I furnish them with a certificate to that effect, stating that their incapacity, in my opinion, will continue for so many days. At the expiration of that time they again present themselves for examination, and if they are still unfit their notes are renewed for a further period.

During the six months from October 1st to March 31st I examined 1,085 claims. I refused certificates to 85, as, in my opinion, they were fit to work, except 2 who were suffering from venereal disease and were not entitled to sick pay, though unfit for work.

My experience of venereal cases is that when in the acute stage, with profuse discharge, they look ill and generally complain of vague pains about the head or stomach. A question about their water elicits the presence of scalding, and an examination reveals the cause. When the condition is chronic the usual complaint is that they have strained themselves when lifting, and well marked epididymitis is present. In contrast to the acute cases they are quite willing to submit to examination, as there is often no discharge, but a little questioning generally leads to the admission of a previous gonorrhoea.

Of the remaining 83, 48 claimed to have had an accident varying from "a strained back," which is one of the commonest claims, to a kick in the abdomen from a horse; 35 claimed to be suffering from "influenza," "bronchitis," and various pains in different parts of the body. In the majority there were no objective signs of any kind, and they had no difficulty in resuming work.

This leaves 1,000 cases in which there was enough evidence to grant a certificate of disability. Of these I refused to renew the certificates of 220 after they had been off work from a few days to several weeks.

I am still of opinion that actual malingering is not common, but since the introduction of the Insurance Act there is a greater tendency to exaggerate trivial ailments and to remain off work longer than is necessary. One important factor leading to this is over-insurance, as I find many men are in two or even three societies, and the amount they draw when off sick approximates, and in some cases exceeds, their wages.

At the same time, though one comes across some flagrant attempts at malingering, there is another side to the shield. I have often experienced the greatest difficulty in preventing a man from going to his work when he was obviously unfit. There is a lot of unrecorded heroism—men with valvular lesions, advanced phthisis, etc., struggling to work when they ought to be in bed.

INSURANCE ACT IN PARLIAMENT.

AMENDING INSURANCE BILLS.

MR. GODFREY LOCKER-LAMPSON asked the Prime Minister whether he would arrange for the Committee stages of the two bills amending the health and unemployment parts of the National Insurance Act not to be taken at the same time, so as to allow members interested in both these subjects an opportunity to take part in the discussions.—The Prime Minister replied that he would note the suggestion, and see what could be done with regard to it, but he was not yet in a position to make a definite statement on the subject.

SCHEMES FOR TREATMENT OF ALL TUBERCULOUS PERSONS.

Mr. Astor asked the President of the Local Government Board how many local authorities had agreed to provide treatment for all tuberculous persons in their area; and how many local authorities had only made provision for the treatment of insured persons suffering from tuberculosis.—Mr. Herbert Samuel replied that 115 councils had submitted to the Local Government Board schemes for providing institutional treatment for persons suffering from tuberculosis, and in all these cases the scheme, either expressly or by application, provided for the treatment of non-insured as well as insured persons. Six county councils and five county borough councils had not yet submitted such schemes. In the case of one of the counties, the Isles of Scilly, no scheme was needed; in another (London) arrangements for providing institutional treatment for the non-insured as well as the insured population were now being developed. Of the county boroughs, two, Bournemouth and Grimsby, would, he had reason to believe, submit schemes at an early date.

Mr. Astor asked the President of the Local Government Board whether the local authorities which undertake the treatment of uninsured persons suffering from tuberculosis within their district, with the aid of the Hobhouse grant, had power to provide for persons in receipt of domiciliary treatment the following among other articles of food—namely, milk, butter, eggs, bread, fish, and meat; and, if so, whether he would state what statute or statutes gave local authorities the power to make the above provision.—The Parliamentary Secretary to the Local Government Board (Mr. Herbert Lewis) replied that the President was in communication with the Treasury on this subject, and was not at present in a position to answer the question.

Mr. Astor asked whether it was to be understood that no such form of domiciliary treatment was now being given.—Mr. Lewis replied that the whole question was under consideration.

NURSING GRANT.

Mr. C. Bathurst asked the Chancellor of the Exchequer if he would state what would be the exact amount of the Exchequer grant towards nursing in connexion with national health insurance; what authority would have the administration of this grant; and whether the county nursing associations would be utilized for the purposes of a national scheme of nursing.—Mr. Lloyd George said the grant for nursing would this year amount to £50,000, and next year to £250,000. The details of the administration of this service were still under consideration, but he would certainly bear in mind the suggestion contained in the last part of the question. Mr. C. Bathurst further asked if it was proposed to pay any part of this grant to the approved societies, so as to enable them to reduce the drain on their resources, owing to prolonged illnesses.—Mr. Lloyd George said that that was one of the matters which was under consideration at the present moment.

ALLOWANCES TO MEMBERS OF INSURANCE COMMITTEES.

In reply to Mr. Goldstone, Mr. Wedgwood Benn said that a model scheme relating to arrangements for subsistence allowances and compensation for loss of remunerative time to members of Insurance Committees had been

prepared by the Commissioners, and was being issued for the guidance of Insurance Committees.

MEDICAL BENEFIT.

Medical Cards.

Mr. Charles Bathurst asked why Form Medical 32 of the Insurance Commissioners was withdrawn; and whether, in view of the complaints consequent upon the inability of insured persons to obtain medical benefit owing to the difficulty of obtaining a medical card, the Commissioners would reissue Form Medical 32, making it obtainable from such persons' approved society only.—Mr. W. Benn said that the form was part of the system which had now been superseded, and its adoption was incompatible with the present system. The form of application for a medical card which had taken its place was obtainable at all post offices, and no difficulty should be experienced by insured persons in securing a medical card upon application.

Mr. Bathurst asked whether Mr. Benn was aware that there was still unanimity amongst approved societies as to the advantages of this Medical Form 32, enabling members to get their medical treatment very much quicker than under the present system.—Mr. Benn replied that he was not aware that approved societies desired to go back to the system that had been superseded.

Removals.

Lord Ninian Crichton-Stuart called attention in a question to a case of an insured person who had removed from one part of Cardiff to another, and had been unable to obtain the services of a panel doctor at his new address.—Mr. Wedgwood Benn said that the Welsh Insurance Commissioners could not trace the receipt of any communication from the insured person referred to. It was understood that he was on a doctor's list prior to his removal, and that arrangements had now been made for his transfer to another doctor's list. It was open to him to obtain treatment at any time from the doctor on whose list he was first placed, or to make a fresh choice of doctor by means of his medical card in the district of his new residence.

Change of Doctor.

Sir C. Kinloch-Cooke asked what provision was made for change of doctor in the case where an insured person moved from one place to another; and, if notice was given on the day of removal, say, from one part of London to another, how long a time should elapse before an insured person was given another doctor in his or her new domicile.—Mr. W. Benn said that a fresh choice of doctor was exercised, in the circumstances referred to, by means of the medical card already in the insured person's possession. The card set out clearly the steps to be taken by the insured person for this purpose, and no delay need occur.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW CENTRAL DIVISION.

THE annual meeting was held in the Faculty Hall, Glasgow, on May 8th, when Dr. GRANT ANDREW was in the chair.

Report of Representative.—The report of the Representative and the report and financial statement of the Honorary Secretary were adopted.

Election of Officers.—The following office-bearers were elected:

Chairman: Dr. J. Grant Andrew.
Vice-Chairman: Dr. John Paterson.
Representative: Dr. John Adams.
Honorary Secretary: Dr. W. S. Syme.
Executive Committee: Drs. R. Stockman, P. Maguire, G. H. Edington, R. Jardine, C. Bennett, J. F. Fergus.
Representatives on Branch Council.—Drs. J. Grant Andrew and W. S. Syme.

METROPOLITAN COUNTIES BRANCH:

EAST HERTFORDSHIRE DIVISION.

AN ordinary meeting of the East Hertfordshire Division was held at Hertford on May 15th. Dr. J. H. GILBERTSON was in the chair, and twelve members and two visitors were present.

Resignations.—The HONORARY SECRETARY reported that since the Special Representative Meeting last December eight members had resigned from the Division, four being retired practitioners, two practitioners not on the panel, and two panel practitioners.

Association Memorandums.—Letters were received from the Medical Secretary in reference to (*a*) medical aid institutes, (*b*) model scheme for the treatment of tuberculosis, and (*c*) medical referees. On the motion of Dr. CLARK, seconded by Dr. HODGES, it was decided to reaffirm the resolution of the last Representative Meeting in reference to medical referees who do not devote their whole time to the work.

Panel Committee.—The representation of each district in the East Hertfordshire constituency was considered, and names of practitioners were suggested. The Honorary Secretary was instructed to obtain the nomination of these practitioners before the election to be held in June, so as to ensure an even distribution of members of the Committee throughout the constituency.

Annual Meeting.—It was decided to hold the annual meeting of the Division at Hitchin on Thursday, June 18th.

Paper.—Mr. H. S. SOUTTAR, F.R.C.S., Assistant Surgeon to the West London Hospital, then read a short paper on local anaesthesia, which aroused great interest among the members present. Numerous questions were asked, and, on the motion of the CHAIRMAN, a very hearty vote of thanks was accorded to Mr. Souttar.

TOWER HAMLETS DIVISION.

THE second annual meeting of this Division was held at the Stepney Central Hall on May 5th.

Annual Report.—The Secretary's annual report showed a membership of 79 at the beginning of the year and 68 at the present date. The diminution was caused chiefly by the reaction of the Insurance Act campaign, and, to a lesser degree, to the increase of the subscription to £2 2s. Eleven general meetings and six executive meetings were held during the year. An analysis of the attendances showed that only 35 of the total members had attended meetings, and only 10 had attended more than half the possible number. The scientific meetings were exceptionally interesting, and it was regretted that more members did not take advantage of them. Negotiations carried on in the early part of the year with the Seamen's National Insurance Society had resulted in that society allowing free choice of doctor to its members residing within the Division, the medical men previously appointed remaining on the staff for the purpose of treating those sailors who were strangers in the port and had no medical attendant within it. The report was approved.

Election of Officers.—The following were elected officers and Committee for the ensuing year:

Chairman: Dr. B. Byrne.
Vice-Chairman: Dr. G. Michael.
Honorary Secretary and Representative: Dr. W. H. F. Oxley.
Representatives on Branch Council: Dr. G. Michael, Dr. C. K. Toland.
Committee: Drs. Black, Cardale, Grant, Hume, Thomas, Williams, Goodman, Tooker.

Next Meeting.—The Secretary was instructed to call a meeting for June 8th to consider the Annual Report of Council.

MIDLAND BRANCH:

KESTEVEN DIVISION.

THE annual meeting of the Kesteven Division was held at Grantham on May 13th.

Election of Officers.—The officers for the year were appointed as follows:

Chairman: Dr. J. Galletly.
Vice-Chairman: Dr. T. P. Greenwood.
Honorary Secretary: Dr. C. H. D. Robbs.
Representative on Branch Council: Dr. C. Frier.
Executive Committee: Drs. H. T. Benson, J. G. Cooper, J. A. Macdonald, G. W. Shipman, H. N. Turner.

Medical Aid Institutes.—The memorandum on medical aid institutes, published in the SUPPLEMENT to the JOURNAL of April 4th, together with a letter from the Medical Secretary, and a paper of questions were discussed, and the Honorary Secretary was instructed to frame a suitable reply.

Agenda of Annual Representative Meeting.—A preliminary discussion took place of the agenda of the annual meeting of the Association.

LEICESTER AND RUTLAND DIVISION.

A MEETING of the Division was held at the Royal Infirmary on May 8th.

Election of Representatives to the Representative Meeting.—Drs. R. Wallace Henry and R. R. Young were unanimously elected Representatives of the Division to the Representative Body, and Dr. T. Arnold Johnston, Deputy Representative, should either of the Representatives be unable to attend.

Model Scheme for the Treatment of Tuberculosis.—The recommendations of the Council were approved.

Medical Aid Institutes.—Dr. WALLACE HENRY proposed, Dr. PRATT seconded, and after a discussion in which Drs. BURKITT, STANLEY, SEVESTRE, and CLARKE took part, it was resolved unanimously:

> That the Division expresses again its strong disapproval of medical aid institutions, and is prepared to support such united action as may be taken by the profession for their suppression.

Gonorrhœa.—A discussion took place on gonorrhœa, in which Drs. JOHNSTON, CLARE, CARTER, HENRY, and MARRIOTT took part.

NORTH OF ENGLAND BRANCH.

THE annual meeting of the North of England Branch was held in the Old Assembly Rooms, Newcastle-upon-Tyne, on May 14th, when nearly 100 members were present.

Induction of President.—Dr. FRASER, the ex-President, who was voted to the chair, moved that the President-elect, Dr. A. C. Farquharson, be elected President. This was unanimously agreed to, and Dr. FARQUHARSON, on taking the chair, immediately proposed a vote of thanks to his predecessor, Dr. Fraser, for his many and valued services to the Branch during his tenure of the office of President. Dr. FRASER suitably acknowledged the vote.

Work of Branch.—A report was presented on behalf of the Branch Council dealing with the duties of the Honorary Secretary and the work of the Branch generally. After some discussion this report, which advocated considerable alteration in the routine work of the Branch, was approved on the motion of Dr. FRASER, seconded by Dr. CAMPBELL (Whitley Bay).

Appointment of Secretary.—Mr. D. F. Todd having previously intimated his intention of retiring from the office of Secretary, Dr. Don (Newcastle-upon-Tyne) was appointed to the office, and Mr. R. J. Willan was appointed Scientific Secretary.

Vote of Thanks to Mr. Todd.—A vote of thanks was heartily accorded to Mr. Todd for his prolonged and valuable services on behalf of the Branch.

Presidential Address—Dr. FARQUHARSON then delivered his presidential address, entitled, "The Influence and Responsibilities of the Medical Profession on Social Legislation and Administration." It was closely followed by an attentive and appreciative audience, and enthusiastically applauded at the close.

OXFORD AND READING BRANCH:

READING DIVISION.

A MEETING of the Reading Division was held in the Hospital Library on May 7th, when Dr. ABRAM was in the chair, and eleven other members were present.

Medical Referees.—Dr. ABRAM laid before the meeting a letter he had received from a medical man in London, offering him the post of referee to an approved society. The district which the society proposed to allot to him included certain outlying places. The fee for each examination was 7s. 6d. Dr. Abram had written declining the offer on the ground that the fee was very inadequate.

Medical Aid Institutes.—The HONORARY SECRETARY read an abstract of the report published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 4th, 1914. He explained that the Joint Medico-Political and Hospital Committees had sent a series of questions to the honorary secretaries of Divisions, with a view to collecting information on the subject of medical aid institutes conducted on lines contrary to the principles of the British Medical Association. The Joint Committee intended to place a further report before Branches at the annual meetings in 1914. Divisions were not required to pledge themselves to any definite line of policy in the matter now, but to give answers to the questions on the form provided, which would be returned by the honorary secretaries. The CHAIRMAN then read out the questions, and the answers were supplied by the meeting after discussion.

Salary of Assistant School Medical Officers.—A letter from the Honorary Secretary of the School Medical Service Group of the Society of Medical Officers of Health was read, asking Divisions to instruct Representatives to support two resolutions at the next Annual Representative Meeting regarding initial salary and annual increment of salary, superannuation and tenure of office of assistant school medical officers (SUPPLEMENT, April 4th, p. 214). It was resolved, on the motion of Dr. SIDNEY GILFORD, seconded by Dr. STANSFIELD, that the support of the Division be given to the two resolutions.

SOUTH-EASTERN OF IRELAND BRANCH.

THE annual meeting of the Branch was held in Kilkenny on May 6th.

Election of Officers.—Dr. O'CONNELL (Fethard) was installed as President for the year 1914–15, and thanked the members. The following officers were also elected:

President-elect: Dr. James Quirke (Kilkenny).
Secretary: Dr. P. Grace (Kilkenny).
Treasurer: Dr. Jellett (Waterford).
Representative at Annual Representative Meeting: Dr. Laffan (Cashel).
Deputy Representative at Annual Representative Meeting: Dr. Power (Ardfinnan).
Representative on Irish Committee: Dr. Ryan (Carlow).
Branch Council: Drs. James, Jellett, Mackesy, Morrissey, Morris, O'Connell, Ryan, Stephenson, Shee, and Grace.
Representative on the Central Council: Dr. Denis Walshe, Graigue (co. Kilkenny) was nominated to represent the South-Eastern (Ireland) and Connaught Branches.

Insurance Act.—A circular, dated April 24th, 1914, was read from the Medical Secretary, referring to the appointment of medical referees and other matters. On the motion of Dr. LAFFAN, seconded by Dr. WALSH, it was resolved to defer the further consideration of the question of medical referees pending the decision of the Irish Medical Committee.

Annual Report of Central Council.—On the motion of Dr. LAFFAN, seconded by Dr. WALSH, it was resolved to defer the further consideration of the annual report of Central Council till the meeting on June 3rd at Clonmel.

Votes of Thanks.—On the motion of Dr. WALSH, seconded by Dr. O'CONNELL, a cordial vote of thanks was accorded to Dr. O'Gorman for the manner in which he had conducted the meetings during the year. A cordial vote of thanks was, on the motion of Dr. LAFFAN, seconded by Dr. O'CONNELL, accorded to the Secretary for his assistance to the Branch for the past two years.

The meeting then adjourned, and the members dined together.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

A MEETING of the Portsmouth Division was held in the Medical Library on April 28th, when Mr. C. P. CHILDE was in the chair and twelve other members were present.

Medical Aid Institutes.—The memorandum on this subject (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, April 4th) was considered and the questions appended to it answered.

Treatment of Tuberculosis.—The model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th, p. 204) was approved.

A special meeting of the Division was held in the Medical Library on May 7th, Mr. C. P. CHILDE, F.R.C.S., in the chair.

The late Dr. Mumby.

The CHAIRMAN explained that the sad necessity for the meeting was the sudden and much to be deplored death of Dr. B. H. Mumby, to whose memory he paid deep and feeling tribute; he read sympathetic letters of regret from many friends, and moved that a letter of condolence and sympathy be sent to Mrs. Mumby. This was carried in silence, all members standing. On the motion of Dr. D. A. SHEAHAN, seconded by Mr. A. BOSWORTH WRIGHT, it was unanimously resolved that a memorial be raised by the Division to the memory of the late Dr. B. H. Mumby. A committee was formed to organize a scheme, and it was resolved to throw the subscription list open to all friends. As a result of general conversation there seemed to be a consensus of opinion that a memorial should take the form of an extended and improved medical library.

Vacancy on Central Council—On the motion of Dr. A. MEARNS FRASER, seconded by Dr. C. ROUTH, it was unanimously resolved that Mr. James Green be nominated by the Division for election to fill the vacancy on the Central Council of the Association caused by the death of Dr. Mumby.

Medico-Political Secretary.—On the motion of Mr. A. BOSWORTH WRIGHT, seconded by Dr. D. A. SHEAHAN, it was unanimously resolved that Mr. L. K. H. Hackman be appointed to the vacant office of Medico-Political Secretary and Treasurer of the Division.

Association Notices.

NOMINATIONS FOR COUNCIL, 1914-15.

ENGLAND AND WALES.

North of England and North Lancashire and South Westmorland Branches:
Todd, David Fee, L.R.C.P., L.R.C.S.Edin., Beech House, Sunderland.

Yorkshire Branch:
Campbell, Henry Johnstone, M.D., F.R.C.P., 36, Manningham Lane, Bradford.

Lancashire and Cheshire Branch:
Goodfellow, Thomas Ashton, M.D., 60, Palatine Road, West Didsbury, Manchester.
Larkin, Frederic Charles, F.R.C.S., 54, Rodney Street, Liverpool.

East York and North Lincoln and Midland Branches:
Fulton, Adam, M.B., Old Basford, Nottingham.

Cambridge and Huntingdon, East Anglian, and South Midland Branches:
Wood, Orby Russell Morgan, M.B., Woolpit, Suffolk.

Birmingham and Staffordshire Branches:
Lucas, Albert, F.R.C.S., 9, Easy Row, Birmingham.

North Wales, Shropshire and Mid-Wales, and South Wales and Monmouthshire Branches:
Brook, William Frederick, F.R.C.S., Longlands House, Swansea.

Metropolitan Counties Branch:
Biggs, Moses George, M.D., 101, Northcote Road, Battersea, S.W.
Brackenbury, Henry Britten, M.R.C.S., L.R.C.P., 21, Quernmore Road, Stroud Green, N.
Buttar, Charles, M.D., 10, Kensington Gardens Square, Bayswater, W.
Cardale, Henry Jasper, M.B., 41, Glengall Road, Isle of Dogs, E.
Galloway, James, M.D., F.R.C.P., 54, Harley Street, W.
Greenwood, Major, M.D., LL.B., 243, Hackney Road, N.E.
Montgomery-Smith, Edwin Charles, M.R.C.S., L.R.C.P., 36, Abbey Road, St. John's Wood, N.W.
Richards, John Theodore, M.B., 71, Thurleigh Road, Wandsworth Common, S.W.
Smith, Frederick John, M.D., F.R.C.P., 138, Harley Street, W.
Tomkins, Harding Henbest, M.R.C.S., L.R.C.P.E., 492, Lea Bridge Road, Leyton, N.E.

Bath and Bristol, Gloucestershire, West Somerset and Worcestershire and Herefordshire Branches:
Parker, George, M.D., 14, Pembroke Road, Clifton, Bristol.

Dorset and West Hants and South-Western Branches:
Smyth, William Johnson, M.D., the Bournemouth Hydro Establishment, Bournemouth.

Oxford and Reading and Southern Branches:
Green, James, M.R.C.S., L.R.C.P., Brandon House, Mile End, Portsmouth.

Kent, Surrey, and Sussex Branches:
Smith, Alfred Tennyson, M.D., "Shanklin," Orpington, Kent.

SCOTLAND.

Aberdeen, Northern Counties of Scotland, Dundee, and Perth Branches:
Gordon, John, M.D., 1, Rubislaw Terrace, Aberdeen.

Edinburgh and Fife Branches:
Hamilton, John Rogerson, M.D., Elm House, Hawick, N.B.

Glasgow and West of Scotland Branch (Four City Divisions):
Adams, John, M.B., 1, Queen's Terrace, Glasgow.

Glasgow and West of Scotland (Five County Divisions) Border Counties, and Stirling Branches:
Loudon, James Livingstone, M.D., Linnwood, Hamilton, N.B.

IRELAND.

Connaught and South-Eastern of Ireland Branches:
Walshe, Denis, L.R.C.P.I., Graigue, co. Kilkenny.

Leinster Branch:
White, Professor Arthur Hamilton, L.R.C.P. and S.I., "Malvern," Terenure Road, Dublin.

Munster Branch:
Corby, Professor Henry, M.D., 19, St. Patrick's Place, Cork.

Ulster Branch:
Johnstone, Robert James, F.R.C.S., 14, University Square, Belfast.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

ANY further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (SUPPLEMENT, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (SUPPLEMENT, May 9th), will be published in the SUPPLEMENT of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the SUPPLEMENT of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in SUPPLEMENT of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,

ALFRED COX,
Medical Secretary.

May 13th, 1914.

CHANGE OF TITLE.

THE Orange Free State Branch having requested that the name of the Branch be altered to Orange Free State and Basutoland Branch, the latter title better defining the Branch area, the name of the Branch is hereby altered accordingly, the change taking effect as from the date of publication of this notice.

SUGGESTED CHANGES OF BOUNDARIES.

Notice of Proposal for Reorganization of Area of the Cheshire Divisions.

Notice is hereby given under By-law 73 to all concerned of the following proposals made by the Council of the Lancashire and Cheshire Branch for reorganization of the Cheshire Divisions of the Branch, in order that the respective Divisions be constituted as follows:

1. *Altrincham Division.* — Ashton-on-Mersey, Sale, Altrincham, Bowdon, Hale, Knutsford, Lymm, Wilmslow, Northwich, Middlewich, and Winsford U.D.s, Bucklow and Northwich R.D.s, and Great Budworth Civil Parish.

2. *Birkenhead Division.* — Birkenhead and Wallasey C.B.s, Higher Bebington, Lower Bebington, Bromborough, Neston and Parkgate, Ellesmere Port and Whitby, and Hoylake and West Kirby U.D.s, and Wirral R.D.

3. *Chester Division.*—Chester C.B., Hoole, Runcorn, and Tarporley U.D.s, and Chester, Runcorn, and Tarvin R.D.s.

4. *Crewe Division.*—Crewe M.B., Nantwich, Alsager, Buglawton, and Sandbach U.D.s, and Nantwich, Malpas, and Congleton R.D.s.

5. *Hyde Division.*—Dukinfield, Hyde, and Stalybridge M.B.s, Bredbury and Romiley, Compstall, Hollingworth, Marple, and Mottram in Longdendale U.D.s, and Tintwistle R.D.

6. *Stockport, Macclesfield, and East Cheshire Division.*—Stockport C.B., Macclesfield and Congleton M.B.s, Alderley Edge, Bollington, Yeardsley cum Whaley, Cheadle and Gatley, Handforth, and Hazel Grove and Bramhall U.D.s, Macclesfield and Disley R.Ds.

Formal written notice of the proposals has been given, pursuant to Article 13, to all the existing Divisions concerned, and the matter will be determined in due course by or on behalf of the Council of the Association. Any member affected by the proposed changes, and objecting thereto, is requested to notify the fact, and his reason therefor, to the Medical Secretary, 429, Strand, London, W.C., not later than June 23rd, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD

Bath and Bristol Branch.—Dr. Newman Neild, Honorary Secretary (9, Richmond Hill, Clifton), gives notice that the annual meeting of the Branch will be held at Bristol University, on Wednesday, May 27th, at 5 p.m., when Mr. R. G. P. Lansdown, President-elect, will give an address on "The Etiology of Appendicitis, Gastric Ulcer, and Allied Conditions."

Birmingham Branch.—Mr. Seymour Barling, Honorary Secretary (52, Newhall Street, Birmingham), gives notice that the annual meeting of the Branch will be held at the Medical Institute, Edmund Street, Birmingham, at 3.30 p.m. on Thursday, June 18th.

Birmingham Branch: Central Division.—Dr. Ernest C. Hadley, Honorary Secretary (Burbury Street, Lozells, Birmingham), gives notice that members of the Central Division, Birmingham Branch, are requested to nominate officers for the posts of Chairman, Vice-Chairman, and two Honorary Secretaries for this Division to one of the honorary secretaries, Dr. Ernest C. Hadley, Burbury Street, Lozells, Birmingham, or Mr. Bernard J. Ward, 141a, Great Charles Street, Birmingham, in writing as early as possible. The annual meeting will be called at a late date in June, of which every member will have due notice.

Kent Branch.—Dr. E. A. Starling, Honorary Secretary (Chillingworth House, Tunbridge Wells), gives notice that the first annual meeting of the Branch will be held on Friday, June 12th, at 2.30 p.m., at the Town Hall, Maidstone (by kind permission of His Worship the Mayor). The council will meet before lunch, and due notice, together with the agenda, will be sent to members of the council. Dr. William Douglas, President, kindly invites members to lunch at The Star Hotel, at 1.30 p.m. Agenda: In addition to the business of an ordinary meeting: (1) To receive the report of the election of officers for 1914-15, who shall thereupon take office. (2) To receive the annual report and financial statement. (3) To appoint two auditors. (4) Any other business decided on by the council, or any other competent business. The following excursions have been arranged, starting at 3.30 p.m.: (*a*) To visit Allington Castle, where Sir Martin and Lady Conway kindly invite members to tea (number limited to twenty). (*b*) To visit Leeds Castle, by kind permission of Mr. and Mrs. C. P. Wykeham Martin. Tea will be provided at the Park Gate Inn, Leeds. The annual dinner will be held at the Star Hotel, at 6.30 p.m.; charge, 6s. each. Wine will be provided by the local members. Members intending to be present at the lunch or dinner are requested to signify their intention, and also to state which of the excursions they select, not later than Saturday, June 6th, to Mr. Geo. Potts, Maidstone.

Lancashire and Cheshire Branch.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester. Members desiring to make scientific, clinical, or other communications are requested to notify the Branch Secretary on or before June 1st.

Lancashire and Cheshire Branch: Warrington Division.—Dr. T. A. M. May, Honorary Secretary, gives notice that the annual meeting of the Division will be held at the Infirmary, Warrington, on Thursday, May 28th, at 8.30 p.m. Agenda: Election of officers (Chairman, Committee, etc.); Agenda of Representative Meeting (see Supplement, May 9th); Model Rules (new).

Metropolitan Counties Branch.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers; Annual Reports of Council and of Representatives of the Branch on the Central Council, and the President's Address, "Some Observations on Modern Vascular Problems."

Metropolitan Counties Branch: City Division. — Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice of alteration of date of the annual meeting of the Division, which will be held in Balfour Hall, Kingsland Road, on Tuesday, May 26th, at 3.30 p.m.

Metropolitan Counties Branch: Lambeth Division.—Dr. T. H. Parkes Peers, Honorary Secretary (20, Surrey Square, S.E.) gives notice that the annual meeting will be held on Wednesday, May 27th, at 4 p.m., at Bethlem Royal Hospital, when the Chairman, Mr. W. H. B. Stoddart, will give a demonstration on "Dementia Praecox." Agenda: Election of officers for the coming session. To instruct the Representative how to vote at the Annual Representative Meeting: (*a*) On the Report of Council (Supplements, May 2nd and 9th); (*b*) on the Model Scheme for the Treatment of Tuberculosis (Supplement April 4th); (*c*) on the question of Medical Aid Institutes, vide Memorandum (Supplement, April 4th); it is particularly requested that members should make themselves familiar with the contents of this Memorandum; (*d*) to consider a request from the Society of Medical Officers of Health (School Medical Service Group) that the Division should support certain resolutions.

Metropolitan Counties Branch: South-West Essex Division.—Dr. Arthur T. Todd-White, Honorary Secretary, gives notice that the annual meeting of the Division will be held in the Wesleyan Church Schoolroom, Leyton, on Thursday, May 28th, at 4 p.m., for the election of officers and other business. A discussion on matters referred to Divisions will follow. (See Supplement, May 2nd.) (*a*) Financial relations of Divisions and Branches. (*b*) Medical inspection and treatment of school children. (*c*) Voluntary hospitals and maternity benefit cases. (*d*) Proposed special fund. (See Appendix X, p. 319). N.B.—Members must instruct their Representative whether they will have a "trust" or a "trade union," and if the latter, whether they will have one already in existence?

North Lancashire and South Westmorland Branch: Furness Division.—Drs. A. E. Thompson and George Alexander, Honorary Secretaries, give notice that the annual meeting will be held in the Masonic Hall, Barrow, on Friday, May 29th, at 3.15 p.m. Business: Annual report; election of office-bearers; resolution by Dr. Harper, "That the Furness Division take a more active part in public health work"; proposed alteration in boundary of the Division; proposition from School Medical Officers' Association; Representative's expenses.

South Wales and Monmouthshire Branch.—Mr. W. J. Greer (19, Gold Tops, Newport) and Dr. J. E. P. Davies (Fairfield, Llanelly), Honorary Secretaries, give notice that the annual meeting of the South Wales and Monmouthshire Branch will be held in Llanelly, on Thursday, June 11th. Accounts, election of officers, etc.

South Wales and Monmouthshire Branch: Monmouthshire Division.—Drs. L. Ernest Acomb and P. C. P. Ingram, Honorary Secretaries, give notice that the annual meeting of the Division will be held in the Royal Gwent Hospital, Newport, on Friday, May 29th, at 3.35 p.m. Agenda: To elect officers. To receive report of Executive Committee. To consider the business of the Annual Representative Meeting. To fix meetings of the Division during the ensuing year. To consider certain "schemes" in the area of the Division. To transact any business that may be transacted at an ordinary meeting. Note.—A meeting of the Executive will be held at 3 p.m.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns 8,938 births and 4,896 deaths were registered during the week ended Saturday, May 9th. The annual rate of mortality in these towns, which had been 14.9, 15.1, and 14.2 per 1,000 in the three preceding weeks, fell to 14.1 per 1,000 in the week under notice. In London the death-rate was equal to 13.8, against 14.5, 14.4, and 12.9 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 4.9 in Aberdare, 6.2 in Walthamstow, 6.3 in Ilford, 6.4 in Hornsey, 7.0 in Tottenham, and 7.1 in East Ham to 19.5 in Tynemouth, 19.8 in Ipswich, 20.2 in West Hartlepool, 20.6 in Middlesbrough and in South Shields, 21.8 in Southport, and 22.9 in Bury. Measles caused a death-rate of 1.4 in Sheffield, 1.6 in Middlesbrough, 2.1 in Nottingham and 4.4 in Stockton-on-Tees; and whooping-cough of 1.6 in Middlesbrough, 1.7 in Rochdale, and 2.0 in Carlisle. The mortality from the remaining infective diseases showed no marked excess in any of the large towns; a fatal case of small-pox was registered in Dewsbury, but not one in any other of the ninety-six towns. The causes of 48, or 1.0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 10 were registered in Liverpool, 9 in Birmingham, 3 in Southend-on-Sea, and 2 each in Reading, Stoke-on-Trent, St. Helens, Bury, Gateshead, and Swansea. The number of scarlet-fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,992, 2,886, and 2,876 at the end of the three preceding weeks, had risen to 2,901 on Saturday, May 9th; 398 new cases were admitted during the week, against 289, 305, and 377 in the three preceding weeks.

In ninety-seven of the largest English towns 9,246 births and 4,905 deaths were registered during the week ended Saturday, May 16th. The annual rate of mortality in these towns, which had been 15.1, 14.2, and 14.1 per 1,000 in the three preceding weeks, was again 14.1 per 1,000 in the week under notice. In London the death-rate did not exceed 13.4, against 14.4, 12.9, and 13.8 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 2.8 in the Eastbourne, 6.3 in Cambridge, 6.8 in East Ham, 7.4 in Ilford, 7.5 in Southend-on-Sea, and 7.8 in Willesden and in Walsall to 20.1 in Stoke-on-Trent, 20.4 in Tynemouth, 20.5 in Gateshead, 21.7 in Carlisle, and 23.1 in Dudley and in Middlesbrough. Measles caused a death-rate of 1.4 in Smethwick, in Bootle, and in Burnley, 1.5 in Sheffield, 1.7 in Rochdale, and 2.0 in Dudley; and whooping-cough of 1.7 in Hastings and in Gateshead, 1.8 in Bury, and 2.2 in Walsall. The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 39, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 6 were recorded in Birmingham, 3 in Stoke-on-Trent, 3 in Liverpool, 3 in Sunderland, and 2 each in Gillingham, Southend-on-Sea, Coventry, Bootle, Preston, Sheffield, and Tynemouth. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,886, 2,876, and 2,901 at the end of the three preceding weeks, fell to 2,862 on Saturday, the 16th inst.; 349 new cases were admitted during the week, against 305, 377, and 398 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,239 births and 713 deaths were registered during the week ended Saturday, May 9th. The annual rate of mortality in these towns, which had been 16.0, 16.9, and 15.2 per 1,000 in the three preceding weeks, rose to 16.2 in the week under notice, and was 2.1 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.9 in Ayr, 11.7 in Clydebank, and 12.3 in Perth to 19.4 in Greenock, 20.0 in Paisley, and 21.8 in Coatbridge. The mortality from the principal infective diseases averaged 1.5 per 1,000, and was highest in Coatbridge and Hamilton. The 315 deaths from all causes in Glasgow included 19 from measles, 10 from whooping-cough, 3 from diphtheria, 3 from infantile diarrhoeal diseases, 1 from enteric fever, and 1 from scarlet fever. Four deaths from measles were recorded in Edinburgh, 3 in Hamilton, and 2 in Dundee; from scarlet fever, 2 deaths in Aberdeen; from diphtheria, 2 deaths in Aberdeen and 2 in Kirkcaldy, and from whooping-cough, 3 deaths in Coatbridge.

In the sixteen largest Scottish towns 1,230 births and 673 deaths were registered during the week ended Saturday, May 16th. The annual rate of mortality in these towns, which had been 16.9, 15.2, and 16.2 per 1,000 in the three preceding weeks, fell to 15.3 in the week under notice, but was 1.2 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 7.6 in Motherwell, 10.9 in Paisley, and 12.1 in Dundee to 18.2 in Coatbridge, 22.0 in Ayr, and 23.4 in Clydebank. The mortality from the principal infective diseases averaged 1.3 per 1,000, and was highest in Clydebank and Coatbridge. The 336 deaths from all causes in Glasgow included 13 from measles, 9 from whooping-cough, 3 from scarlet fever, 2 from enteric fever, 2 from infantile diarrhoea, and 1 from diphtheria. Two deaths from measles were recorded in Edinburgh and 2 in Dundee; and from whooping-cough 3 deaths in Coatbridge and 2 in Falkirk.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 9th, 661 births and 431 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 712 births and 477 deaths in the preceding period. These deaths represent a mortality of 18.6 per 1,000 of the aggregate population in the districts in question, as against 20.6 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.5 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 28.6 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 21.7 (as against an average of 25.0 for the previous four weeks), in Dublin city 22.0 (as against 27.2), in Belfast 15.2 (as against 19.5), in Cork 19.7 (as against 26.0), in Londonderry 12.7 (as against 16.5), in Limerick 19.0 (as against 24.4), and in Waterford 26.6 (as against 26.1). The zymotic death rate was 2.1, as against 2.8 in the previous week.

VITAL STATISTICS OF LONDON DURING THE FIRST QUARTER OF 1914.

[Specially Reported for the "British Medical Journal."]

In the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London based upon the Registrar-General's returns for the first quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the several boroughs, and are obtained by distributing the deaths in institutions among the boroughs in which the deceased persons had previously resided. The 28,235 births registered during the quarter under notice were equal to an annual rate of 25.1 per 1,000 of the population, estimated at 4,516,612 persons in the middle of the year; in the corresponding quarters of the three preceding years the birth-rates were 25.9, 25.8, and 25.7 per 1,000 respectively. The lowest birth-rates last quarter were 13.2 in Hampstead, 14.2 in the City of Westminster, 16.1 in Holborn, 18.5 in Chelsea, 18.6 in Kensington, 18.8 in Lewisham, and 18.9 in Paddington; among the highest rates were 26.0 in Fulham, 31.2 in Poplar, 31.5 in Bermondsey, 31.7 in Shoreditch, and 32.4 in Stepney.

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1914.

Boroughs.	Estimated Population middle of 1914.	Births.	Deaths.	Annual Rate per 1,000 Living.		Deaths from								Deaths of Children under 1 Year of Age to 1,000 Registered Births.
				Births.	Deaths.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhœa and Enteritis (Under 2 Years).	Phthisis.	
COUNTY OF LONDON	4,516,612	28,235	18,112	25.1	16.1	47	—	148	66	281	161	265	1,783	96
Paddington	142,055	668	543	18.9	15.3	—	—	1	2	4	8	4	52	100
Kensington	170,817	793	632	18.6	14.8	—	—	1	5	1	4	9	59	110
Hammersmith	124,750	705	486	22.7	15.6	1	—	—	2	4	3	5	44	105
Fulham	158,349	1,031	599	26.0	15.1	5	—	1	1	9	3	11	64	123
Chelsea	63,791	294	259	18.5	16.3	—	—	—	—	2	4	6	26	95
City of Westminster ...	152,346	541	562	14.2	14.8	3	—	—	1	8	2	6	58	105
*St. Marylebone	112,892	978	484	34.8	17.2	1	—	—	1	7	2	15	43	62
Hampstead	86,731	285	245	13.2	11.3	2	—	—	—	9	1	3	13	98
St. Pancras	212,497	1,221	970	23.0	18.3	1	—	3	5	26	7	8	106	105
Islington	324,764	1,997	1,411	24.7	17.4	8	—	6	7	30	5	17	133	101
Stoke Newington ...	50,454	261	173	20.7	13.8	—	—	—	—	2	3	1	15	57
*Hackney	223,724	1,427	863	25.6	15.5	2	—	2	4	23	8	15	78	88
*Holborn	45,861	184	201	16.1	17.6	3	—	4	—	2	—	1	20	92
*Finsbury	83,212	809	423	38.6	20.4	2	—	8	—	6	5	6	35	69
City of London	17,129	117	74	27.4	17.3	—	—	—	—	1	1	—	11	34
Shoreditch	108,869	859	525	31.7	19.3	—	—	1	2	11	1	11	71	139
Bethnal Green	127,662	941	553	29.6	17.4	1	—	5	2	18	1	15	57	131
*Stepney	273,265	2,209	1,215	32.4	17.8	1	—	24	2	25	12	23	132	98
Poplar	160,222	1,245	734	31.2	18.4	2	—	4	4	16	6	17	76	102
Southwark	186,941	1,353	905	29.0	19.4	—	—	5	4	22	11	13	105	110
Bermondsey	124,213	976	569	31.5	18.4	—	—	14	3	2	7	5	53	108
*Lambeth	296,724	2,047	1,222	27.7	16.5	4	—	4	5	11	7	20	101	83
Battersea	167,338	1,036	620	24.8	14.9	—	—	3	2	6	1	7	54	92
Wandsworth	338,998	1,653	1,015	19.6	12.0	3	—	3	4	8	11	19	79	90
Camberwell	162,020	1,676	1,067	25.7	16.3	1	—	21	7	12	10	16	124	94
Deptford	109,182	782	442	28.7	16.2	—	—	25	1	1	5	5	37	92
Greenwich	96,037	613	344	25.6	14.4	2	—	10	—	2	3	1	42	80
Lewisham	172,433	808	496	18.8	11.5	4	—	1	1	4	8	3	43	58
Woolwich	122,836	735	480	24.0	15.7	1	—	2	1	9	8	3	52	87

* No correction is made for births in lying-in institutions; the boroughs principally affected are marked thus (*).

During last quarter the deaths of 18,112 London residents were registered, equal to an annual rate of 16.1 per 1,000; in the corresponding quarters of the three preceding years the rates were 17.2, 15.3, and 17.5 per 1,000. The death-rates last quarter ranged from 11.3 in Hampstead, 11.5 in Lewisham, 12.0 in Wandsworth, 13.8 in Stoke Newington, and 14.4 in Greenwich to 18.3 in St. Pancras, 18.4 in Poplar and in Bermondsey, 19.3 in Shoreditch, 19.4 in Southwark, and 20.4 in Finsbury.

The 18,112 deaths from all causes included 47 from enteric fever, 148 from measles, 66 from scarlet fever, 281 from whooping-cough, 161 from diphtheria, and 265 from diarrhoea and enteritis among children under 2 years of age. Enteric fever was proportionally most fatal in Fulham, Islington, Holborn, Finsbury, and Lewisham; measles in Holborn, Finsbury, Stepney, Bermondsey, Camberwell, Deptford, and Greenwich; scarlet fever in Kensington, St. Pancras, Islington, Poplar, Southwark, Bermondsey, and Camberwell; whooping-cough in Hampstead, St. Pancras, Hackney, Shoreditch, Bethnal Green, Poplar, and Southwark; and diphtheria in Chelsea, Stoke Newington, Finsbury, Shoreditch, Bethnal Green, Southwark, and Woolwich. The mortality from diarrhoea and enteritis among children under 2 years of age in proportion to the births registered during the quarter was greatest in Kensington, Chelsea, St. Marylebone, Shoreditch, Bethnal Green, Poplar, and Wandsworth.

The deaths from phthisis among London residents last quarter numbered 1,783, and were equal to a rate of 1.58 per 1,000, against 1.52, 1.52, and 1.55 per 1,000 in the corresponding quarters of the three preceding years. The death-rates from this disease last quarter ranged from 0.69 in Hampstead, 0.93 in Wandsworth, 1.00 in Lewisham, 1.19 in Stoke Newington, and 1.29 in Battersea to 1.90 in Poplar and in Camberwell, 1.91 in Stepney, 2.00 in St. Pancras, 2.25 in Southwark, 2.58 in the City of London, and 2.62 in Shoreditch.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 96 per 1,000 last quarter, against 108, 95, and 116 per 1,000 in the corresponding quarters of the three preceding years. Among the lowest rates recorded last quarter were 54 in the City of London, 57 in Stoke Newington, 58 in Lewisham, 80 in Greenwich, 83 in Lambeth, and 87 in Woolwich; the highest rates were 108 in Bermondsey, 110 in Kensington and in Southwark, 123 in Fulham, 131 in Bethnal Green, and 139 in Shoreditch.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon EDWARD T. MEAGHER to the *Cumberland* on recommissioning, May 19th; Fleet Surgeon FRANK BRADSHAW has been placed on the retired list at his own request, April 9th; Staff Surgeon THOMAS W. JEFFREY to the *Excellent*, temporarily, vice White, undated; Staff Surgeon LOUIS L. GREIG, M.B., to Royal Military Dépôt, Deal, vice Harrison, May 19th; Staff Surgeon WILLIAM BASTIAN to the *Columbine*, additional, for service at Cromarty, May 19th; Staff Surgeon WILLIAM R. HARRISON to the *Amethyst*, vice Bastian, May 19th; Staff Surgeon ARTHUR H. S. RICHARDSON to the *Topaze* on completing, May 5th; Staff Surgeon N. J. ROCHE to the *Pembroke*, additional, for Calshot Naval Air Station, temporary, May 7th; Staff Surgeon JOHN N. ROBERTSON promoted to the rank of Fleet Surgeon for conspicuous professional merit with seniority of May 15th. Staff Surgeon HERBERT A. BROWNING to the *Research*, vice Searle, May 23rd; Staff Surgeon GERALD C. CROSS to the *Endeavour*, vice Carson, May 23rd; Staff Surgeon GEORGE E. DUNCAN to the *Pembroke*, additional for the Yarmouth Hospital, temporary, June 1st; Surgeon HENRY E. Y. WHITE to the *Commonwealth*, vice Markham, May 5th; Surgeon GILBERT B. SCOTT to the *Cumberland* on recommissioning, May 19th; Surgeon ARTHUR R. SHARROD to the *Hibernia*, vice Richardson, May 23rd; Surgeon RICHARD CONNELL promoted to Staff Surgeon for proficiency in professional examination, May 14th; Surgeon THOMAS J. KILBRIDE, M.B., to the *Leander*, vice Browning, May 23rd; Surgeon PERCY B. WALLIS to the *Vernon*, additional for the *Niger*, vice Cross, May 23rd; Surgeon J. P. BLOCKLEY, M.B., to the *Triton*, May 23rd; Surgeon ROGER A. RANKINE to the *Ganges*, additional for Shotley Sick Quarters, vice Lindep, May 25th; Surgeons JOHN S. ELLIOTT, M.B., ALBERT J. TONKINSON, and JOHN R. HALDANE to the *Victory*, additional for disposal, May 23rd; Surgeons WILLIAM H. MURRAY, GEORGE H. HAYES, M.B., and HUGH J. HEPPS to the *Pembroke*, additional for disposal, May 23rd; Surgeons GERALD S. HARVEY, M.B., and HENRY C. A. T. CANNON to the *Vivid*, additional for disposal, May 23rd.

ARMY MEDICAL SERVICE.

MAJOR HAROLD P. W. BARROW, R.A.M.C., to be Deputy Assistant Director-General at the War Office, vice Lieutenant-Colonel B. H. Scott, May 1st.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. C. CONNOR has been appointed to officiate as Deputy Director-Assistant of Medical Services, Irish Command, vice Lieutenant-Colonel C. Dalton proceeding to Aldershot.

Lieutenant-Colonel H. E. WINTER has taken over the duties of Officiating Assistant Director of Medical Services, Bombay Brigade, vice Lieutenant-Colonel A. T. I. Lilly, on leave.

Major H. P. W. BARROW appointed a Deputy Assistant Director General at the War Office, vice Lieutenant-Colonel B. H. Scott.

Major E. T. INKSON, V.C., appointed Deputy Assistant Director of Medical Services, Wessex Territorial Division.

Major P. J. PROBYN, D.S.O., has been detailed to act as Senior Medical Officer at the Officers' Training Corps Camp (Junior Division) to be held at Hagley Park, Rugeley, from July 28th to August 6th.

Major G. T. K. MAURICE has been detailed as Medical Officer-in-charge of the Officers' Training Camp at Salisbury Plain in July.

Captain C. W. HOLDEN has joined the Royal Army Medical College for duty.

INDIAN MEDICAL SERVICE.

THE services of Major J. M. WOOLLEY, I.M.S., are placed permanently at the disposal of the Government of Burma, with effect from the afternoon of November 26th, 1913, but he will continue to serve temporarily in Bengal.

Lieutenant-Colonel F. P. MAYNARD, M.B., F.R.C.S., I.M.S., Professor of Ophthalmic Surgery, Medical College and Ophthalmic Surgeon, College Hospital, Calcutta, is granted combined leave in India for six months, with effect from April 1st, 1914, or the subsequent date on which he may avail himself of it.

Major E. C. HEPPER, I.M.S., has been confirmed in civil employment in the United Provinces.

Major W. V. COPPINGER, M.D., F.R.C.S.I., I.M.S., is appointed Officiating Professor of Ophthalmic Surgery, Medical College and Ophthalmic Surgeon, College Hospital, Calcutta, during the absence on leave of Lieutenant-Colonel F. P. Maynard, M.B., F.R.C.S., I.M.S., or until further orders.

The following Captains have been promoted to Majors, subject to His Majesty's approval: J. MCPHERSON, M.B., F.R.C.S.E., G. D. FRANKLIN, M.B., O. A. GOURLAY, M.D., R. A. LLOYD, M.D., J. C. G. KUNHARDT, E. A. WALKER, M.B., F.R.C.S.E., L. COOK, M.B., F.R.C.S., L. B. SCOTT, M.D., G. I. DAVYS, M.D., W. L. TRAFFORD, M.B., F.R.C.S.E., H. CROSSLE, M.D., E. C. C. MAUNSELL, M.D., J. W. ILLIUS, F.R.C.S.E., J. P. CAMERON.

Colonel R. B. ROE, I.M.S., has been permitted by the Most Honourable the Secretary of State for India to retire from the Service, subject to His Majesty's approval, with effect from May 15th.

Lieutenant-Colonel R. BIRD, M.V.O., C.I.E., M.D., F.R.C.S., Professor of Surgery, Medical College, Calcutta, and Surgeon to the College Hospital, is granted combined leave for six months, with effect from April 14th, 1914.

Major E. O. THURSTON, M.B., F.R.C.S., is appointed to officiate as Professor of Surgery, Medical College, Calcutta, and Surgeon to the College Hospital, during the absence on leave of Lieutenant-Colonel R. Bird.

The following Captains have been promoted to be Majors, dated March 1st, 1914: J. H. MURRAY, M.D., F. P. MACKIE, M.B., F.R.C.S., F. P. CONNOR, F.R.C.S., H. EMSLIE-SMITH, M.B., H. R. DUTTON, H. G. S. WEBB, W. W. JEUDWINE, M.D., T. C. MCC. YOUNG, M.B., H. C. BROWN, M.B., W. J. COLLINSON, M.B., H. M. H. MELHUISH.

The services of Major J. WOODS, M.B., have been placed at the disposal of the Government of the Punjab, for employment on plague duty.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

MAJOR EDGAR INKSON, V.C., R.A.M.C., to be Deputy-Assistant Director of Medical Services of a Territorial Division, April 25th.

Third North Midland Field Ambulance.—Supernumerary Lieutenant WILLIAM BOYD, M.D., is absorbed into the establishment, January 21st.

Second South-Western Mounted Field Ambulance.—HENRY N. BARNETT, F.R.C.S.Edin., to be Captain; JOHN M. DUPONT, M.D., to be Captain, May 16th.

Third South Midland Field Ambulance.—Captain BERTRAM M. H. ROGERS, M.D., to be Major, May 16th.

First Northumbrian Field Ambulance.—Captain ARTHUR G. DUNN, M.B., resigns his commission, May 13th.

Second Scottish General Hospital.—Major FRANCIS M CAIRD, M.B., F.R.C.S.Edin., to be Lieutenant-Colonel, April 9th; Major JOHN D. COMRIE, M.B., from the permanent personnel, to be Major whose services will be available on mobilization, April 9th; Captain DAVID J. GRAHAM, M.D., from the Third Lowland Field Ambulance, to be Captain (Registrar), April 9th.

For Attachment to Units other than Medical Units.—FRANK HARRIS WHITE to be Lieutenant, April 17th; ROBERT ELLIS, M.B., late Cadet Cambridge University, Volunteer Rifle Corps, to be Lieutenant, May 9th; Lieutenant-Colonel CHARLES L. FRASER, F.R.C.S.Edin., resigns his commission and is granted permission to retain his rank and wear the prescribed uniform, May 16th.

Attached to Units other than Medical Units.—Lieutenant LEONARD COLEBROOK, M.B., to be Captain, April 3rd; MATTHEW B. RAY, M.B., late Captain, Fifth Battalion, Prince of Wales's Own (West Yorkshire Regiment), to be Captain (supernumerary), May 9th; Lieutenant STANLEY F. LINTON, M.B., to be Captain, August 9th, 1913.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ABERDEEN UNIVERSITY.—Lectureship in Public Health. Salary, £400 per annum.

BARNSLEY: BECKETT HOSPITAL.—Second House-Surgeon. Salary, £160 per annum, rising to £200.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £120 per annum.

BEDFORD COUNTY ASYLUM.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Surgeon (male). Salary at the rate of £75 per annum.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—(1) Clinical Assistant. (2) Clinical Assistant to Electrical Department. Salary at the rate of 52 guineas per annum each.

BIRMINGHAM: CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £160 per annum.

BIRMINGHAM CORPORATION.—Assistant Resident Medical Officer at the City Hospital. Salary, £160 per annum.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Physician; (2) Resident Pathologist; (3) House-Surgeon; (4) Obstetric House-Surgeon. Salary for (1), (2), and (4) £50 per annum, and for (3) £40 per annum, rising to £50.

BRADFORD CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £200 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon (male). Salary, £100 per annum.

BRENTFORD UNION.—Second Assistant Medical Superintendent of the Infirmary, etc. Salary, £150 per annum, rising to £170.

BRIGHTON COUNTY BOROUGH ASYLUM, Hayward's Heath.—Locumtenent Assistant Resident Medical Officer. Salary, £5 5s. a week.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £100 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—House-Physician (male). Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BRITISH MEDICAL ASSOCIATION.—Assistant Medical Secretary. Salary, £600 per annum.

BURSLEM: HAYWOOD HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BURY COUNTY BOROUGH.—Clinical Tuberculosis Officer and Assistant to Medical Officer of Health. Salary, £500 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—House-Physician. Salary, £100 per annum.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL FOR WOMEN AND CHILDREN, Plaistow.—Junior Resident Medical Officer (female). Honorarium at the rate of £30 per annum.

CARDIFF: KING EDWARD VII'S HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—Assistant Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £170 per annum.

DEVON COUNTY HOSPITAL, Exminster.—Assistant Medical Officer. Salary, £225 per annum, rising to £275, and on promotion to £350.

DEVONPORT: ROYAL ALBERT HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary at the rate of £150 and £75 per annum respectively.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer to Casualty Department; (2) House-Physician (males). Salary at the rate of £100 and £75 per annum respectively.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EGYPT: PUBLIC HEALTH DEPARTMENT.—Medical Officer as an Inspector for the Ankylostomiasis Campaign. Salary at the rate of £600 per annum.

ESSEX COUNTY HOSPITAL, Colchester.—House-Surgeon (male). Salary, £100 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

GALWAY: UNIVERSITY COLLEGE.—(1) Professorship of Ophthalmology. (2) Lectureship in Mental Diseases. (3) Lectureship in Operative Surgery.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £120 and £100 per annum respectively.

HAMPSHIRE COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £300 per annum, rising to £400.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Casualty Officer. Salary at the rate of £70 per annum.

HARTLEPOOL HOSPITAL.—Locumtenent.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HERTS COUNTY ASYLUM, Hill End, St. Albans.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £240.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House-Surgeon (male). Salary, £80 per annum.

HULL EDUCATION COMMITTEE.—Two Assistant School Medical Officers (male and female). Salary, £300 per annum each.

HULME DISPENSARY.—House-Surgeon. Salary, £180 per annum, rising to £200.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S COLLEGE.—Demonstrator of Physiology. Salary, £120 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £120 per annum.

KIRKMABRECK PARISH.—Medical Officer. Salary, £40 per annum.

LEAMINGTON: WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—Honorary Pathologist.

LEEDS GENERAL INFIRMARY.—(1) Assistant Clinical Pathologist. (2) Two House-Surgeons. (3) Resident Medical Officer at the Ida and Robert Arthington Hospitals. Salary for (1) £150 per annum, and for (3) at the rate of £60 per annum.

LEEDS HOSPITALS FOR INFECTIOUS DISEASES AND TUBERCULOSIS.—Assistant Medical Officer. Salary, £130 per annum.

LEICESTER POOR LAW INFIRMARY.—Second Resident Assistant Medical Officer. Salary, £150 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON HOSPITAL, Whitechapel, E.—(1) Surgical Registrar. (2) Medical Registrar. Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar. Salary, £75 per annum.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

NEW ZEALAND: UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary, £800 per annum.

NOTTINGHAM GENERAL HOSPITAL.—(1) Assistant House-Physician; salary at the rate of £100 per annum. (2) Locumtenent; salary, £4 4s. per week.

NOTTS COUNTY COUNCIL.—Assistant Tuberculosis Officer. Salary, £300 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PLAISTOW FEVER HOSPITAL, E.—Second Assistant Medical Officer. Salary, £100 per annum.

PORTSMOUTH LUNATIC ASYLUM.—Medical Superintendent. Salary, £600 per annum.

PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer (male) to the Workhouse Infirmary, etc. Salary, £130 per annum, rising to £140.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—Three House-Surgeons (males). Salary for senior, £110 per annum, and for juniors, £90 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—Junior Assistant Medical Officer. Salary, £250 per annum, rising to £300.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £150 and £100 per annum respectively.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House-Surgeon. Salary at the rate of £50 per annum.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical Assistants.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W. (1) Honorary Surgeon. (2) Honorary Medical Radiographer.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary at the rate of £80 per annum each.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £90 per annum.

SALVATION ARMY: MOTHERS' HOSPITAL, Clapton.—Lady Resident Doctor.

SHEFFIELD CHILDREN'S HOSPITAL.—House-Surgeon at East End Branch. Salary, £100 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Assistant House-Surgeon. Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £140 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SOUTH LONDON HOSPITAL FOR WOMEN.—Anaesthetist (lady).

STAFFORDSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

STORTHES HALL ASYLUM, Kirkburton, near Huddersfield.—Locumtenent. Salary, 5 guineas per week.

SUNDERLAND: ROYAL INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—Lady House-Surgeon. Salary, £90 per annum for first six months, rising to £100.

WALSALL AND DISTRICT HOSPITAL.—Assistant House-Surgeon. Salary, £110 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Two Assistant Anaesthetists.

WESTMORLAND CONSUMPTION SANATORIUM AND HOME, Meathop.—Second Assistant Medical Officer. Salary, £150 per annum, rising to £200.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. (2) Junior House-Surgeon. Salary, £170 and £150 per annum respectively.

WOKINGHAM: PINEWOOD SANATORIUM.—Assistant Medical Officer. Salary, £150 per annum.

WREXHAM INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces the following vacant appointment: Brackley (Northants).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BARKER, W. E., M.B., Ch.B.Vict., District Medical Officer of the Clitheroe Union.

COLYER, Claude G., M.R.C.S., L.R.C.P., L.D.S., Dental Surgeon to the Surrey County Asylum, Netherne.

CONWAY, Thomas W., F.R.C.S.Ire., Visiting Physician to the Tuberculosis Hospital of the Dublin Municipal Council.

COX, Frederick H., M.B., Government Medical Officer, Helensburgh, N.S.W.

DUNLOP, J. K., M.B., Ch.B.Glas., Certifying Factory Surgeon for the Sanquhar District, co. Dumfries.

FELDMAN, W. M., M.B., B.S Lond., Assistant Physician to the Infants' Hospital, Vincent Square, Westminster.

GREIG, J. I., M.B., Ch.B.Glas., Certifying Factory Surgeon for the Kirkcaldy District, co. Fife.

KEATING, George M., F.R.C.S.Ire., Visiting Physician to the Tuberculosis Hospital of the Dublin Municipal Council.

LEWIS, T. P., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Fulham Road Infirmary of the Westminster Union.

MACNEILL, Roger, M.D.Edin., Tuberculosis Officer to the County Council of Argyll.

MALLESON, H. C., L.R.C.P., M.R.C.S., L.D.S., R.C.S., Assistant Dental Surgeon to Guy's Hospital, vice Mr. H. P. Aubrey, resigned.

NORRIS, Arthur Herbert, M.R.C.S., L.R.C.P., Medical Inspector of Reformatory and Industrial Schools.

ORCHARD, J. E. R., M.B., Ch.B.Edin., District Medical Officer of the Beaminster Union.

RANKEN, David, M.S.Lond., B.S.Dunelm, F.R.C.S.Eng., Assistant Surgeon to the Hospital for Sick Children, Newcastle-upon-Tyne.

ROSS, W. H., M.B., Ch.B.Vict., District Medical Officer of the Clitheroe Union.

ROBINSON, W. E., M.D., B.Ch.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., Anaesthetist to the West London Hospital, Hammersmith, W.

STEDMAN, T. B., M.D., District Medical Officer of the Leighton Buzzard Union.

TURNER, J. W., M.R.C.S., L.R.C.P., District Medical Officer of the Saffron Walden Union.

WHITE, H. W., M.B., Assistant Medical Superintendent to the Paddington Parish Infirmary.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-on-Trent.—The following appointments have been made:

Honorary Consulting Ophthalmic Surgeon.—H. H. Folker, M.R.C.S.Eng., L.R.C.P.Lond.

Honorary Ophthalmic Surgeon.—R. H. Dickson, F.R.C.S., L.R.C.P.Irel.

Honorary Assistant Ophthalmic Surgeon.—S. McMurray, M.B., B.Ch., B.A.O.Irel., F.R.C.S.Edin.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

MARRIAGE.

WROUGHTON-STUART.—On April 2nd, at Howick, Natal, John Henry Wroughton, M.R.C.S., L.R.C.P., son of the late Lieutenant-Colonel F. J. Wroughton, to Ethel Susan, daughter of G. B. W. Stuart, late D.I., R.I.C., Kingstown, Dublin.

DEATHS.

CRAVEN.—On May 17th, at 7, Albert Road, Birkdale, Southport, suddenly, in his 63rd year, Robert Musgrave Craven, M.R.C.S., D.P.H., Medical Officer of Health for the Combined County Districts of Westmorland.

MACLURE.—On May 19th, at the Grove, Brill, Bucks, Herbert William Maclure, M.B.Cantab., aged 50.

WALLACE.—On May 17th, at 133, Clapton Common, Richard Unthank Wallace, M.B.Lond., M.R.C.S., L.R.C.P.Eng., in his 81st year, after nine months' illness.

DIARY FOR THE WEEK.

MONDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF ODONTOLOGY, Royal College of Surgeons, 8 p.m.—Mr. J. F. Colyer: Work of the Odontological Museum.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF MEDICINE, 5.30 p.m.—Papers:—Dr. Samuel West: The Murmurs Heard in Dilated Hearts. Dr. J. Michell Clarke: A Case of Leukaemia from Prolonged Use of X Rays.

WEDNESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF LARYNGOLOGY, 3.30 p.m.—(1) Demonstration:—Professor Gustav Killian: Suspension Laryngoscopy on Living Subjects. (2) Cases and Specimens.

SECTION OF THE HISTORY OF MEDICINE, 5 p.m.—Mr. Edward Lovett: London Folk Medicine. Dr. C. E. Lea: Dr. Thomas Spens—the First Describer of the Stokes-Adams Syndrome. Dr. Singer: History of the Microscope. Sir William Osler: Suggested Scheme for the Restoration of the Tomb of Avicenna.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Paddington Infirmary, 8.30 p.m.—Clinical Meeting.

SEMON LECTURE by Professor Gustav Killian, of Berlin, on Suspension Laryngoscopy and Its Practical Use, at Royal Society of Medicine, 1, Wimpole Street, 5 p.m.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges and hospitals:

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[*Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.*]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		MAY.
22	Fri.	London: Future Developments of Insurance Acts Committee, 10.30 a.m. London: Medico-Political Ship Surgeons Sub-committee, 2.30 p.m.
23	Sat.	Scottish Committee, Station Hotel, Perth, 12.30 p.m.
25	Mon.	London: Naval and Military Committee, 3.30 p.m.
26	Tues.	City Division, Annual Meeting, Balfour Hall, Kingsland Road, 3.30 p.m.
27	Wed.	Lambeth Division, Annual Meeting, Bethlem Royal Hospital, 4 p.m. Bath and Bristol Branch, Bristol University, 5 p.m.
28	Thur.	South-West Essex Division, Annual Meeting, Leyton, 4 p.m. Warrington Division, Warrington, 8.30 p.m.
29	Fri.	Furness Division, Barrow, 3.15 p.m. Monmouthshire Division, Annual Meeting, Newport, Executive Committee, 3 p.m.; Meeting, 3.35 p.m.
		JUNE.
2	Tues.	London: Public Health Committee, 3 p.m.
3	Wed.	London: Journal Committee, 2.30 p.m.
5	Fri.	London: Medico-Political Committee, 10.30 a.m.

Date.		Meetings to be Held.
		JUNE (*continued*).
5	Fri.	London: Central Ethical Committee, 2 p.m.
6	Sat.	Date of issue of Voting Papers for Council Election from Head Office.
9	Tues.	London: Organization Committee, 2 p.m. London: Metropolitan Counties Branch Council, 4 p.m.
10	Wed.	London: Hospitals Committee (*provisional*).
11	Thur.	South Wales and Monmouthshire Branch, Annual Meeting, Llanelly.
12	Fri.	Kent Branch, Maidstone, Lunch, 1.30 p.m.; Dinner, 6.30 p.m.
13	Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17	Wed.	London: Finance Committee, 2.30 p.m. Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, noon to 1 p.m.; Meeting, 1 to 3 p.m.; Excursions, 3 to 6 p.m.; Dinner, 7.30 p.m.
18	Thur.	Birmingham Branch, Annual Meeting, Birmingham, 3.30 p.m.
24	Wed.	London: Council Meeting.
26	Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
27	Sat.	Announcement of result of Election of Members to Council.
		JULY.
11	Sat.	London: Science Committee, 10.30 a.m.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 30TH, 1914.

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GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1914.

Tuesday, May 26th, 1914.

Sir DONALD MACALISTER, K.C.B., President, in the Chair.

THE ninety-ninth session of the General Council of Medical Education and Registration began at the offices of the Council, 299, Oxford Street, on Tuesday, May 26th, 1914, at 2 p.m.

NEW MEMBER.

Sir Lambert Hepenstal Ormsby, F.R.C.S.Irel., introduced by Sir Henry Morris, took his seat as representative of the Royal College of Surgeons in Ireland.

PRESIDENT'S ADDRESS.

The PRESIDENT then delivered his address.

Personal.

GENTLEMEN,—The severe illness, which prevented me from attending the Council and delivering my customary address last November, has enabled me to apprehend more clearly than before two facts of importance. One is that, in a time of weakness, I may count securely on your active support and sympathy; for this gratifying experience I thank you all from my heart. The other is that, when the President is away, the Council carries on its work as efficiently as ever; this experience also is most salutary—for the President.

Let me express my deep personal gratitude to the Senior Treasurer, Mr. Tomes, for undertaking the responsibilities and performing with such acceptance the duties that are incident on the Chair; to Dr. Norman Moore and the other Chairmen of Standing Committees for their readiness to lighten the Acting President's burdens, and so to lessen my own; to Dr. Norman Walker for keeping me informed of the progress of the sessional business from day to day, and for acting in many other ways as my helper in matters concerning the Council's interests; to all my colleagues for their most friendly encouragement and co-operation; and to the Registrar and his staff, without whose capable assistance I could not, during my convalescence, have carried out the various instructions conveyed to me under the resolutions of the Council. In view of all the valuable help extended to me, I venture to hope that the work of the Council will be found to have suffered no detriment from my temporary failure of health.

It falls to me to record with regret the deaths of two old and esteemed friends—Sir John Batty Tuke, who in 1912 retired after twenty-five years of office as a member of the Council; and Dr. P. H. Pye-Smith, for over six years (1901–7) one of our Treasurers. I have also to note the retirement, since I last addressed you, of Dr. Lorrain Smith, consequent on his translation to a distinguished position in the University of Edinburgh; and of Sir Arthur Chance, on the completion of his last term of able service as representative of the Royal College of Surgeons of Ireland.

On the other hand, I desire to offer a personal welcome to the new members—Dr. Elliot Smith from the University of Manchester, a former pupil of mine at Cambridge, of whose scientific eminence I am naturally proud; and Sir Lambert Ormsby, past President of the Irish College, who has already rendered assistance to the Council as one of its Examiners in Surgery. I would further take the opportunity of congratulating Sir Christopher Nixon on his admission to the Privy Council of Ireland, and of wishing him renewed health to enjoy that right honourable distinction.

New Brunswick and Newfoundland.

His Majesty in Council has issued Orders applying Part II of the Medical Act (1886) to the Province of New Brunswick in the Dominion of Canada, and to the ancient Colony of Newfoundland. In each case the Executive Committee has been satisfied that the educational and other requirements prescribed by law for the local qualification of practitioners are in accordance with the conditions desired by the Council. Under the powers given by your Standing Orders, the Committee has therefore intimated that practitioners possessing recognized qualifications granted in New Brunswick or Newfoundland, who produce the statutory evidence required under the Act, may be registered in the Colonial List of our *Medical Register*.

India.

Although Part II of the Medical Act (1886) has for many years been applied to India, no general law has yet been passed for the regulation of medical practice throughout the Indian Empire. The Council has therefore, for purposes of recognition and registration, had to deal only with the curricula and degrees of the Indian universities severally. Graduates of these universities applying for registration here have not hitherto had to show, in the terms of the Act, that they were "by law entitled to practise" in any Indian presidency or province, for it appeared that the law imposed no restriction on the practice of any one, qualified or unqualified. The Secretary of State for India has now informed the Council that legislation for the registration of medical practitioners, in terms similar to those of the Medical Acts, is now operative in the Bombay Presidency, and is contemplated in Madras and Bengal. Such legislation will doubtless be welcomed by the Council in the interest of the people of India, for it should tend to

promote medical education in that country, and so to increase the efficiency of medical practice. As the new legislation takes effect the Council will be able to co-operate with the provincial Governments, by requiring Indian graduates applying for registration in the United Kingdom to show, as the Act directs, that they are "by law entitled to practise" in the "British possession" within which their qualifications have been granted.

Japan and Corea.

The Council will remember that relations of reciprocity have also been established between this country and Japan. British qualifications are current in that empire, and the Japanese degrees corresponding to Bachelor and Doctor of Medicine qualify for admission to the Foreign List of our *Register*. We have received an official intimation that the Japanese medical laws have now been extended to the empire of Corea, and a further intimation that at present the only professional qualifications, other than Japanese, conferring a title to practise in Corea are those accepted for registration in the United Kingdom.

Mode of Election of Direct Representatives.

The bill, prepared in the Privy Council Office, for amending the existing provisions relating to the election of Direct Representatives, with a view to greater economy of labour and money, has again been presented to Parliament, this time in the House of Commons. Last year the bill passed the House of Lords, but failed to reach the Statute Book. I am given to understand that, if conditions are favourable for its consideration this year, it will receive important support from both sides of the House.

Insurance Act: Arrangements with Unqualified Persons.

Much attention was given by the Council at the end of last year to certain questions arising under the Regulations for National Health Insurance. The correspondence with the Insurance Commissioners on these questions, undertaken by the President at the instance of the Council's special Committee and of the Executive Committee, has been communicated to members of the Council and published in the current Minutes. From these it will appear that, in response to representations made on the Council's behalf, the Commissioners have issued new Regulations. These they believe will remove the misapprehensions entertained by certain local authorities as to the legal status and responsibilities of qualified medical practitioners, and the legal disabilities of unqualified practitioners, in regard to the medical treatment of insured persons. The Commissioners have further intimated to the President that, in framing their official forms and memoranda, every effort will be made to exclude phrases which might seem to afford occasion for any contravention of existing statutes bearing on the subject. There is good reason to believe that the efforts of the Commissioners have been effective in informing local authorities of their duty in relation to the "medical treatment" of insured persons desirous of making their "own arrangements." The recent conviction, for illegal practice, of a person with whom it is alleged that such "arrangements" had for a short time subsisted, will no doubt serve to impress on Insurance Committees the necessity of safeguarding the insured against "treatment" by persons who cannot administer it without breaking the law.

Canvassing and Advertising.

From time to time communications reach the Registrar vaguely alleging that medical men, sometimes described as "panel" and sometimes as "non-panel" practitioners, are disregarding the Warning Notices of the Council in respect of canvassing or advertising with the intent to attract patients, or of issuing certificates of a misleading or inaccurate character. By direction of the Executive Committee the Registrar has made it widely known that the Council takes a grave view of such practices, and has intimated its purpose to inquire judicially into the conduct of any practitioner against whom a substantiated complaint of the kind may be brought. Certain complaints of this nature will, on the advice of the Penal Cases Committee, be submitted for your judgement during the present session. But it is proper to say that a few general allegations have been sent to the office, which were unsupported by tangible evidence, or were made by persons who declined to take the responsibility of formulating any specific complaint on which even a preliminary inquiry could be based.

Certification of Deaths.

The unsatisfactory state of the law in relation to the certification of deaths has frequently been commented on by the Council; and numerous representations have been made on its behalf to successive Governments in favour of its amendment. The attention of the Executive Committee has again been directed to the subject, partly on account of communications I have had before me from coroners and others, pointing out anomalies in the methods of local registration, partly also on account of the efforts of our own Registrar to ensure that local registration authorities shall be provided with proper means of ascertaining that persons signing what purport to be valid certificates are in fact legally registered practitioners. A memorandum setting forth the relevant extracts from the Council's Minutes was prepared in the office, and forwarded to the present Registrar-General for his information. In acknowledging its receipt the Registrar-General was good enough to inform me that fresh instructions were being issued which would effect certain improvements long desired by the Council. In particular, the local registrars were to be instructed that any death for which no certificate of cause of death is produced from a registered medical practitioner must be reported to the coroner; and, further, that the expression "Medical certificate of the cause of death" means exclusively "the certificate of a registered medical practitioner who was in attendance during the last illness."

But in addition to the improvement in registration practice thus contemplated, much remains to be done for the safeguarding both of the public and of the profession, and for the procuring of trustworthy statistics of disease and death. It will probably be found that fresh legislation is necessary. The subject is still under consideration by the Executive Committee with a view to suggesting what steps the Council may properly take in regard to it.

Royal Commission on Venereal Diseases.

The Royal Commission on Venereal Diseases asked me, as President, to give evidence before it. I was questioned on such matters, within the Council's purview, as the training and testing of the medical student in respect of these diseases, the mischief of "unqualified" treatment of them, and how the mischief may be checked, the sufficiency of the existing methods of certification, especially in their bearing on the vital statistics of syphilis, etc. I thought you would deem it my duty to place at the disposal of the Royal Commission the reports, yearly tables, and the like, showing the results of qualifying examinations throughout the country, together with recent answers from officials of the examining bodies to particular questions which I sent them at the instance of the Commission. Information obtained by the efforts of the Unqualified Practice Committee was also furnished; and I understand that it has been found exceedingly useful and suggestive. On the question of death certification the Memorandum, to which I have already alluded, was of value in showing the action of the Council in this matter, before the new instructions were issued. My evidence will no doubt be published by the Commission, and you will be able to judge how far I have correctly represented the knowledge and the judgement of the Council concerning the questions that were raised.

The Indian Medical Service.

Another Royal Commission, namely, that on the Indian Services, requested me to appear in person, or to name a representative, to testify on questions relating to the medical service of India. As such questions have recently been before the Examination Committee, I asked the Chairman, Sir Charles Ball, to take my place as a witness, and he kindly consented to do so. It is probable that his Committee will present a further report on certain points that have arisen out of communications from the Government of India and the India Office on the qualifications of members of the Subordinate Medical Service.

Dental Certificates for Educational Purposes.

The Registrar, with my approval, has appeared before a Committee appointed by the Board of Education. The Committee had to consider a proposal, made by a body of unqualified persons practising dentistry, that their "certificates" of dental soundness should be recognized and accepted by the Board in the case of candidates for employment as Teachers. The Registrar supplied the Committee with official information relating to dental students, the dental curriculum and examinations, the provisions of the Dentists Act, the legal decisions bearing on dental practice, and the disabilities of unqualified practitioners. He was thanked by the Committee for the assistance he had afforded them.

The Midwives (Scotland) Bill.

The Midwives Act of 1902, under which certain duties are laid upon this Council, does not apply to Scotland. A Bill "to secure the better training of Midwives in Scotland, and to regulate their practice," has on the initiative of Lord Balfour of Burleigh passed the House of Lords, and now awaits consideration in the other House. Having in mind certain improvements on the English Act that have from time to time been desired by this Council, I ventured on your behalf to suggest to Lord Balfour at an early stage that these might advantageously be introduced into the Scottish Bill, and I believe that nearly all of them have now been incorporated. The Lord President has sent us a copy of the Bill as thus adjusted, with a request for our observations. The Executive Committee will in due course be ready to propose a convenient method of dealing with the subject.

Highlands and Islands Board.

His Majesty has been pleased to appoint Dr. McVail, Dr. Norman Walker, and myself to be members of a Board for improving the medical and nursing services in the Highlands and Islands of Scotland. The Board has only begun its work, but already it is impressed with the urgent importance of securing better training for midwives, and of legally regulating their practice, in the districts with which it is concerned.

Finance.

I have dwelt at some length on what I may call the external activities of the Council. Inasmuch as these are mainly exercised during the recess, it is proper that they should be reported to you in full session, that those who have acted on your behalf may be assured that they have rightly understood your directions. Let me now say something about more domestic matters.

The finances of the Council are in a satisfactory condition. Although the income last year rose by only £72, the expenditure fell considerably, chiefly owing to our shorter sessions. There is, therefore, a surplus on the annual account of £1,645. The net deficit accumulated during the five years 1908–1912 amounted to £1,363. At the end of 1913 we were able to pay off this deficit entirely, and to start the present year with £282 to the good. This result is highly favourable to the Branch Councils; for while in 1908 we had to draw upon their incomes to the extent of nearly 90 per cent., in 1913 the "percentage rate" was under 60. The Treasurers report that the current year also may be expected to produce a surplus, but for various reasons it is likely to be of less amount.

The "British Pharmacopoeia."

The Pharmacopoeia Committee and the Editors have been busily occupied in forwarding the preparation of the Text and Appendices of the *British Pharmacopoeia*. Before the end of the present session the Committee will be able to lay on the table of the Council a copy of the revised proof. Subject to typographical and other editorial corrections to be made in the final proof, this will represent the completed work, and the Committee hope to have it ready for issue during the summer. Following the procedure approved on the last occasion, you will probably desire to delegate to the Executive Committee, at its regular meeting in July, the duty of formally adopting the *British Pharmacopoeia, 1914*, and of arranging with the Treasury as to cost and price, indicating the conditions under which copies may be made accessible to the public, and advertising the date of official publication in the *Gazettes*. I may be allowed here, as Chairman of the Pharmacopoeia Committee, to express publicly our deep obligations to the Editors, Professor Tirard and Professor Greenish, for their skilful and devoted labours, and to the several Committees of Reference who have aided us in manifold ways to attempt a work worthy to take its place as the official dispensatory of the British Empire.

The Registers.

Turning to other official publications, I would call your special attention to the new and much improved form in which the *Medical Register*, the *Dentists Register*, and the *Students Register* are now produced. Thanks to the ingenuity of the Registrar, and the skill of the Council's publishers and printers, all of these works are now handsomer in appearance, lighter to handle, and easier of reference than ever before; and yet I believe that in a year or so, when the cost of entire resetting is paid off, it will be found that the improvement is accompanied by a considerable economy in the cost of production and publication. The Registrar's constant endeavours to this end deserve to be warmly acknowledged by the Council.

Inspection of Qualifying Examinations.

I have suggested to the Chairmen of the Education and Examination Committees that it may be well to consider the question of beginning, at an early date, another cycle of Inspection of Qualifying Examinations. Since the Reports on the last cycle were considered, a number of new Licensing Bodies have been created by Parliament, and are now fully organized for the work of professional education and examination. It would appear desirable that the Council should possess detailed information, derived from actual inspection, concerning their methods and standards. Such information may at any time be required of us for the use of Government and other official authorities, and it behoves us to procure it in the ways that the law directs us to follow. My own opinion is that in view of recent changes affecting the profession of medicine, and of the prospective demands upon professional knowledge, skill, and practical efficiency, a general inquiry extending to all the Bodies, and carried out by Inspectors appointed under our Standing Orders, would be timely and useful. But on that head it rests with the two Committees, acting jointly, to offer you considered advice.

My address is already unduly prolonged, and I refrain from referring to other matters appearing in the Programme. For the most part they speak for themselves; the rest will be spoken to by members who are abler than I am to deal with them fitly.

VOTE OF THANKS.

A vote of thanks, moved by Dr. JAMES LITTLE, who congratulated Sir Donald MacAlister on his restoration to health, and seconded by Mr. R. J. PYE-SMITH, was carried by acclamation. The PRESIDENT expressed his thanks for the sympathetic manner in which the motion had been received.

SERVICE EXAMINATIONS.

The yearly tables relating to examinations having been referred to the Examination Committee for its consideration, the Council received and directed to be acknowledged with thanks three returns relating to competitions for admission to the medical department of the Royal Navy, the Indian Medical Service, and the Royal Army Medical Corps, which had taken place since its meeting in December.

For admission to the Navy, only 24 candidates presented themselves for 25 commissions, and of these 17 failed to obtain the qualifying number of marks. The first place was taken by a holder of the English Conjoint diploma, the second by a holder of the same diploma coupled with a degree of the University of London, the third by a holder of the English Conjoint diploma; the fourth and fifth places were taken by a graduate of the University of Glasgow and a holder of the English Conjoint diploma, the number of marks obtained being equal. Of the 7 rejected candidates, 3 held the Irish Conjoint diploma, 1 the English Conjoint diploma, 2 a degree from the University of Edinburgh, and 1 a degree from the University of Dublin.

For admission to the Royal Army Medical Corps there were 34 candidates for 12 vacancies, and all proved qualified but only 12 received commissions. The first place was taken by a graduate of the University of Oxford, the second by a graduate of the University of Edinburgh, the third by a holder of the English Conjoint diploma, the fourth by a graduate of the University of Edinburgh, and the fifth by a graduate of the University of Dublin.

For admission to the Indian Medical Service there were only 22 candidates for 20 vacancies, but all proved duly qualified. The first place was taken by a graduate of the National University of Ireland, the second by a graduate of the University of Edinburgh, the third by a graduate of the University of London, the fourth by a graduate of the University of Edinburgh, and the fifth by a holder of the English Conjoint diploma. Of the other successful candidates, 5 held degrees or licences of Indian origin, these in 3 cases being combined with the English Conjoint diploma.

Committees.

The following committees were elected:

Business Committee.—Dr. Norman Moore (Chairman), the President, Sir Henry Morris, Sir Christopher Nixon, Dr. Norman Walker.

Pharmacopœia Committee.—The President (Chairman), Dr. Norman Moore, Sir George Philipson, Sir Thomas Fraser, Dr. Cash, Dr. Caton, Dr. Barrs, Sir John Moore, Sir William Whitla.

Finance Committee.—Mr. Tomes (Chairman), the President, Sir Henry Morris, Mr. Hodsdon, Dr. Little.

Dental Committee.—The President (Chairman), Sir Henry Morris, Mr. Tomes, Mr. Hodsdon, Sir Charles Ball.

Dental Education and Examination Committee.—Mr. Tomes (Chairman), the President, Sir Henry Morris, Mr. Hodsdon, Dr. Knox, Sir Charles Ball, Sir William Whitla.

Students' Registration Committee.—Dr. Norman Moore (Chairman), the President, Dr. Langley Browne, Dr. Mackay, Dr. Norman Walker, Dr. Adye-Curran, Sir Christopher Nixon.

Penal Cases Committee.—Dr. Saundby, Dr. Norman Walker, Mr. Tomes, Sir Christopher Nixon.

Executive Committee.—Dr. Norman Moore, Sir Henry Morris, Mr. Tomes, Dr. Langley Browne, Mr. Hodsdon, Dr. Norman Walker, Sir John Moore, Sir Charles Ball.

Mode of Appointment of Examiners.

Sir Charles Ball (Chairman of the Examination Committee) moved:

> That the powers vested in the General Medical Council by Section 5 of the Medical Act, 1886, of appointing from time to time examiners to assist at the qualifying examination held by a medical corporation for the purpose of granting its diploma, conferring the right of registration under the Medical Acts, be delegated under Section 6 of the Medical Act, 1858, to the Branch Council for the part of the United Kingdom in which such medical corporation is domiciled.

Sir Charles Ball said that the Committee considered that the election of assistant examiners should be made by the Branch Councils, which would know the institution requiring an assistant examiner. The representative of the body concerned would be a member of the Branch Council, and as the proceedings of that Council were held *in camera*, there would be every opportunity for discussion. The members of the Branch Council would have the guarantee that the name of a proposed assistant examiner was put forward in such a way that it would be possible to criticize his merits, and so the General Council would be assured that the responsibility in the matter would be efficiently discharged. He could assure the Apothecaries' Society of London that the gentlemen hitherto proposed as assistant examiners had always been worthy of the complete confidence of the Council, and if in future the same class of men were nominated their election would go through as a matter of course, but it was felt that the Council's responsibility in the matter would be more efficiently safeguarded if it were known that there had been an opportunity of criticism.

Mr. Wilks, on behalf of the Apothecaries' Society of London, one of the licensing corporations more immediately affected by the resolution, informed the Council that that Society was not only always most anxious not to obstruct but to assist the Council in its efforts on behalf of medical education. He was instructed unreservedly to second the resolution.

The President observed that last year the Council conferred upon him a somewhat difficult duty in this matter. He recognized at the time that that course was taken merely for the sake of convenience, and he was glad that a general resolution of this kind should take the place of and supersede that duty, and that the Council should delegate the responsibility to another body.

The resolution was agreed to unanimously.

Recognition of Diplomas.

On the recommendation of the Executive Committee the Council resolved to recognize for registration on the Colonial List of the *Medical Register* the licence of the Medical Board of Newfoundland, and the licence of the Council of Physicians and Surgeons of the Province of New Brunswick, and to add the Master of Surgery of the Punjab University to those granted by that university to which recognition had previously been accorded.

Finance Committee.

Mr. Tomes moved, Sir Henry Morris seconded, and it was agreed:

> That the Report of the Finance Committee on Income and Expenditure for the year 1913 be received and entered on the Minutes.

The Council then went into *camera*, and afterwards adjourned at 4 p.m. to enable certain Committees to meet for the completion of their reports.

LOCAL MEDICAL AND PANEL COMMITTEES.

LONDON.

Panel Committee.

The Panel Committee for London has opened its meetings to representatives of the medical press, and the first meeting under these conditions was held on May 26th, when a heavy agenda was considered.

Local Medical and Panel Committees.—The Committee passed a resolution that in the interests of the profession the personnel of the Panel and Local Medical Committees should be identical, and in the discussion the view was taken that although the advantages of this to panel practitioners were not immediately apparent, the Panel Committee would be strengthened by having upon it representatives of every professional interest and not those of panel practitioners only.

Deputies for Practitioners.—The Committee agreed to provide deputies, if requested, for panel practitioners during temporary absence, and it was stated that the proposal met with the approval of the medical and transfer agencies.

Checking Acceptances.—Article 42 (2) of the Regulations for 1912, requiring the Insurance Committee to submit all accounts of medical practitioners to a committee appointed by doctors on the panel, has not been observed in London up to the present. The Panel Committee passed a resolution asking that the accounts might be submitted, not so much for the purpose of checking as for allowing the number of acceptances to be checked. As there have been differences on this point between the Insurance Committee and practitioners, the Panel Committee also expressed the view that a receipt should be sent by return of post for all medical cards sent to the Insurance Committee's office.

Prescriptions in the Form "Rep. Mist."—A discussion took place on a proposal that the prescription of drugs and appliances in the form "rep. mist." should be discouraged. The suggestion was the outcome of a conference with the Pharmaceutical Committee. Sharply divergent views were expressed as to whether "rep. mist." was a necessary expedient to a busy practitioner, and the possibilities of prescribing drugs by numbers based on a standard codex, or of introducing the German prescription book retained by the patient, were mentioned. Ultimately the matter was referred back to the Pharmacy Subcommittee for further consideration.

The Drug Fund.—The Committee expressed the opinion, by a large majority, that proprietary drugs and preparations should not be supplied at the cost of the drug fund; that practitioners should have liberty to obtain serums and vaccines—including autogenous vaccines—themselves or through a chemist, in each case at the cost of the drug fund; that the practitioner rather than the chemist should provide tuberculin; and that the list of prescribed appliances required extension as soon as funds would permit.

Period of Office of the Committee.—A letter, dated May 26th, was received from the Insurance Commissioners refusing a request that the period of office of the Panel Committee might be for three years instead of one. It was decided to urge upon the Commissioners that, owing to the size of the area and on grounds of expense, a three-year period would be preferable.

The Budget Proposals.—The Panel Service Subcommittee presented a series of resolutions intended to

crystallize the professional view of the proposals in the Budget to provide money to aid the establishment of laboratories, the provision of skilled nursing, the employment of referees, and the establishment of centres for the co-operation of practitioners on the panel. The Panel Committee agreed that the character of the assistance that would be most beneficial to the practitioner and the insured person would be on the following lines:

Medical Referees.

1. That the services of medical referees should be available to practitioners on the panel without fee for the examination of insured persons whose fitness or otherwise for work is in question.
2. That it is most undesirable to combine the duties of medical referee with the ordinary duties of a consultant advising a practitioner as to the diagnosis and treatment of special and difficult cases; and that it should be a condition attaching to the appointment of medical referee that the candidate should have had long experience of general practice.
3. That the medical referees should be appointed by the Insurance Commissioners, and should consist partly of whole-time officers, whose duties would include the general organization of the examination of insured persons by medical referees, and partly of part-time officers.
4. That a part-time medical referee who is engaged in general practice should not examine insured persons resident in the area in which he practises.
5. That an insured person who is dissatisfied with the opinion of his panel practitioner as to his fitness or otherwise for work should, under certain conditions, have the right of access to the medical referee through the Insurance Committee.
6. That an insured person should be examined by a medical referee only in co-operation with the practitioner responsible for the case, and that the examination should, where possible, take place at the practitioner's surgery.

The Committee decided not to deal with the question of the remuneration of referees, and rejected an amendment that women doctors should be available as referees in the case of insured women who desired them.

Provision of Nursing.

On the question of nursing, the Committee passed the following resolutions:

1 That the services of skilled nurses should be available to the practitioner on the panel without fee for the nursing of insured persons for whom such attendance is necessary.

2 That it is desirable that the present voluntary nursing agencies and societies should be aided under suitable safeguards, rather than that nurses should be appointed by the State, the local authorities, the insurance committees, or by approved societies, and that it should be a condition attaching to the receipt of a grant that provision shall be made for increases in the salaries of nurses, and for pensions on retirement.

Provision of Laboratories.

On the question of laboratories the following resolutions were passed:

1. That there should be available to the practitioner on the panel without fee the assistance of a laboratory for chemical, pathological, and bacteriological examinations.
2. That it is most undesirable that the proposed Government grants to local authorities in aid of pathological laboratories should result in the provision in London of a large number of small laboratories, and that in London the London County Council should be the administering authority.
3. That it should be a condition attaching to the receipt by a London laboratory of a grant in aid that the laboratory should be fully staffed with specialists in the different branches of the sciences represented and well equipped with modern scientific apparatus; and that the grant should be confined to existing institutions until such time as it is found that the existing provision in this direction is inadequate.
4. That the assistance of the laboratory should be available to a practitioner in connexion with an uninsured person upon a certificate that that person is unable to pay the necessary fees.
5. That the Panel Committee are of opinion: (1) That it is desirable that steps should be taken to secure that, by a closer co-operation between practitioners on the panel and the institutions concerned, the benefits of consultative advice, specialized treatment, and skilled surgery are made fully available to the practitioner on the panel and to the insured person. (2) That additional hospital accommodation is required, especially for female patients.
6. That the action of the Panel Service Subcommittee in appointing a deputation consisting of the Chairman and Treasurer of the Committee, and Drs. Mills, Cardale, and Welply to place before the Government the views set out in the foregoing resolutions be approved.

Dr. WELPLY brought forward a detailed proposal for the organization of practitioners' centres, which after debate was referred to a subcommittee. It was felt that the subject was too new for definite opinions to be expressed, and that there was some danger lest the reception of insured persons at special centres might be misunderstood by the public as a policy of distinguishing between insured and private patients.

It was stated that Mr. Lloyd George had expressed his willingness to receive the deputation in place of the President of the Local Government Board.

ROXBURGHSHIRE.

PANEL COMMITTEE.

A MEETING of the Panel Committee of Roxburghshire was held in the Railway Hotel, St. Boswells, on May 12th. Dr. CULLEN was in the chair, seven other members and the Clerk being present.

Model Scheme for the Treatment of Tuberculosis.—The meeting had before it the model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th), but did not consider that it could take any useful action upon it at present.

Co-ordination of Local Medical and Panel Committees.—A letter from the Local Medical and Panel Committees for the Burgh of Leicester, urging upon all Committees to insist upon the new organization of Local Medical and Panel Committees being registered as a trades union, was allowed to lie on the table.

Mileage Fund Account for 1913.—The following letter, dated April 18th, was read from the County Insurance Committee:

Dear Sir,—I have to inform you that my Committee have a balance of £96 standing at the credit of the mileage fund account for 1913, and the Insurance Commissioners suggest that my Committee might consult the Panel Committee as to the detailed allocation of this balance. I shall be glad to have your views in the matter. The Commissioners state that no further mileage grant will be paid in respect of 1913 for any cause whatsoever, and that therefore each Insurance Committee should see that all possible claims of the area are exhausted. The Commissioners further state that the payments of the grant in respect of 1913 in no way commit the Commissioners to the same scheme or amounts of grant next year.—I am, yours faithfully,

(Signed) A. DOUGLAS HADDON, Clerk.

From a letter received from a practitioner and the observations of members present, it appeared that in some cases the Insurance Committee had paid a proportion of the grant in respect of the mountainous districts and bad road. The Clerk was instructed to inquire of the County Insurance Committee on what grounds certain practitioners had already received a grant towards mileage, while others who were equally, if not more, entitled to such a grant had not received payment. Further consideration as to the allocation of the credit balance of £96 was deferred until some enlightenment on the subject referred to was obtained.

Emergency Drugs and Appliances.—The Subcommittee appointed at the last meeting submitted a list of emergency drugs and appliances, which it had drawn up along with the representatives from the Pharmaceutical Committee, and the list was gone over in detail by the meeting. The list as amended was approved by the meeting, and the Clerk was instructed to send a copy of it to the County Insurance Committee.

Proposed Increase of Charges in Drug Tariff and Dispensing Fees to Chemists.—The circular letter from the Insurance Commissioners with regard to the revision of the drug tariff printed in the SUPPLEMENT to the JOURNAL of May 23rd was read, together with a letter from the Pharmaceutical Standing Committee in Scotland, pointing out that the schedule of revised prices contained many errors. The CLERK submitted the following statement of the position of the medical fund in Roxburghshire in 1913.

Amount of fund, £6,664.
Divided into:

Practitioners' fund (12/17)	...	...	...	£5,096
Drug fund (5/17)	...	...	...	£1,568
				£6,664

Practitioners' Fund.

From the Practitioners' Fund the doctors were paid in respect of attendance and treatment	...	...	£5,678
Showing an overpayment of	...	...	582

The discrepancy arose owing to their being about 1,500 more index slips than contribution cards. The explanation had been put forward that when medical benefit came into force societies in their anxiety to secure as many insured persons as possible had submitted several applications for the same person.

Drug Fund.

From the Drug Fund there was paid to chemists and dispensing doctors ...	£1,150
Leaving a credit balance of	418
The "floating sixpence" from this fund absorbs	392
Leaving at the credit of the fund for the year	26

This sum would be paid to the chemists proportionately to make up the 1s. 6d. per insured person which they are entitled to.

As to the £392 representing the "floating sixpence" from the Drug Fund, to which the panel practitioners were entitled, instructions had been given by the Commissioners to retain this sum against the overpayment of £582 above mentioned.

In connexion with the proposal to increase the dispensing fee to chemists, or to increase the charges allowed under the drug tariff, it was noted that there was a credit balance for the year 1913 of £26 only in the Drug Fund after paying chemists and dispensing doctors. For the first quarter of 1914 the amount paid for drugs and dispensing showed an increase of £153 as compared with the same quarter for 1913. It might therefore be safely assumed that the "floating sixpence" would be encroached upon for drugs and dispensing during the present year, and that without any increase either in dispensing fees or the charges in the drug tariff.

In view of the position of the Medical Fund and the likelihood of the "floating sixpence" being encroached upon for 1914, the meeting considered that panel practitioners could not afford to agree to the proposal either to increase the charges in the drug tariff or the dispensing fees, and the Clerk was instructed to reply accordingly, and to write to the Secretary of the Pharmaceutical Committee, intimating that the panel practitioners sympathized with the position of the chemists in asking for an increase of the tariff and dispensing fees, but considered that provision from some other funds should be made by the Commissioners for meeting such increased charges. The Clerk was also instructed to communicate with all panel practitioners in the county, pointing out that care should be taken in prescribing this year, owing to the Drug Fund having been entirely used up for 1913, and circumstances at present pointing to an increase in the supply of drugs for this year.

Medical Referees.—The meeting considered the circular from the British Medical Association on the subject of the appointment of referees, and approved the opinion expressed therein, that medical referees should be whole-time officers and practitioners of not less than ten years' standing, and that the appointment should be pensionable, with a salary of not less than £750 per annum. The Clerk was also instructed to communicate to the panel practitioners the opinion of the meeting that in the event of any practitioner being called upon to act as a referee in any particular case he should not accept a fee of less than 10s. 6d., and mileage in addition.

Conference with Pharmaceutical Society.—The reference in the same circular to the proposed joint conference between the British Medical Association and the Pharmaceutical Society with reference to the drug tariff for next year was referred to the Subcommitee, consisting of Drs. Dixon and Fleming, appointed in connexion with the preparation of the list of emergency drugs and appliances.

INSURANCE ACT COMMITTEE.

THE fifteenth meeting of the Insurance Act Committee was held at the office of the Association on Thursday, May 21st. Mr. T. JENNER VERRALL was in the chair, and the other members present were:—*England and Wales:* Dr. Mina L. Dobbie (London), Dr. E. R. Fothergill (Brighton), Dr. Major Greenwood (London), Dr. I. W. Johnson (Bury), Dr. Herbert Jones (Hereford), Dr. C. H. Milburn (Hull), Mr. E. C. Montgomery-Smith (London), Dr. G. K. Smiley (Derby), Mr. D. F. Todd (Sunderland), Dr. W. B. Crawford Treasure (Cardiff), Mr. E. B. Turner (London). *Scotland:* Dr. R. McKenzie Johnston (Edinburgh).

RETURNED MEDICAL CARDS.

A communication having been read concerning the question of payments to insurance practitioners for those insured persons on their lists whose medical cards had been returned to the Insurance Committee marked "No trace," it was resolved to advise the Council to make the following recommendations to the Representative Body:

(*a*) That it is no part of the duty of a panel practitioner to correct and keep up to date the list of addresses of insured persons.

(*b*) That, in view of the instruction of the various Insurance Commissioners to Insurance Committees that when the medical card system is in full operation a practitioner would be entitled, on giving treatment, to require insured persons on his list to present their medical cards should such a course appear necessary, a medical practitioner should be entitled to charge private fees to those insured persons demanding treatment of him but who fail to produce their medical card.

CONSIDERATION BY INSURANCE COMMITTEES OF REPORTS OF MEDICAL SERVICE SUBCOMMITTEES.

In connexion with two inquiries concerning the procedure adopted by Insurance Committees with respect to the reception and consideration of the reports of the Medical Service Subcommittee, the Insurance Act Committee had before it the following letter addressed by the Insurance Commissioners (England) to the Leicester Local Medical Committee:

National Health Insurance Commission (England),
Buckingham Gate, London, S.W.,
April 9th, 1914.

Sir,—In reply to your letter of the 3rd April, I am directed by the National Health Insurance Commission (England) to state that where any question has been referred by the Insurance Committee to the Medical Service Subcommittee in accordance with Article 45 (i) of the National Health Insurance (Medical Benefit) Regulations (England), 1913, the Insurance Committee are required to accept as conclusive any finding of fact contained in the report of the Medical Service Subcommittee to the Insurance Committee.

It is, therefore, not open to the Committee, on receiving the report of the Subcommittee, to question any finding of fact contained in the report or to re-hear the evidence upon which the Medical Service Subcommittee have based the findings of fact contained in their report.

With reference to your further inquiry, I am to state that since it is possible that the printed reports of the Insurance Committee might fall into the hands of persons for whom they are not intended, minutes or written reports relating to complaints made by insured persons against practitioners upon the panel, or conversely, should be so worded as not to disclose the names of the persons affected.

The Commissioners are of opinion that this object might be met by the reference to the persons concerned as "the patient" and "the doctor," or in some similar manner which will secure that identification is impossible. If this course is adopted members of the Committee and Medical Service Subcommittee only will be aware of the identity of the persons. Issues of grave importance to the parties concerned may, of course, be under consideration, and, whatever may be the decision of the Committee, the mere fact that a doctor is publicly known to have been implicated in such questions may seriously prejudice him in his profession. In cases where the complaint is ill-founded, or where for any other reason the Committee propose to take no action, it would also be undesirable that the names should be disclosed, and in all the circumstances the Commissioners are of opinion that some such procedure as that indicated should be generally adopted.—I am, Sir, your obedient servant,

(Signed) S. P. VIVIAN.

The Committee resolved to recommend to Local Medical and Panel Committees that it be suggested that Insurance Committees should be urged to adopt, on the reconsideration of their Standing Orders in July next, a suitable Standing Order which should carry out the intention of the Medical Benefit Regulations, that no discussion be allowed on findings of fact of a Medical Service Subcommittee's Report, and that no mention be made of the names of the parties concerned therein. It was also thought expedient to point out that this action should be taken in every insurance area, whether or not such question has arisen in that particular area.

INSPECTION OF PATIENTS BY LAY REPRESENTATIVES.

An incident was brought to the notice of the Committee in which there had been interference with medical treatment by a lay official of an approved society, and after discussion the Insurance Act Committee resolved to address a communication to the Joint Committee of Insurance Commissioners, stating that cases had arisen in which lay officials of approved societies, under cloak of the rules adopted by the society under its powers of

Section 14 (2) of the 1911 Act for the purpose of deciding whether or not sick benefit be paid to an insured person, had actively interfered with the treatment of the medical practitioner concerned; and that the Association desired the Commissioners to exercise their jurisdiction to secure that rules submitted for their approval by approved societies under Section 14 (2) for the purpose of providing proof of disease or disablement, should make it quite clear that all investigation for the purpose of questioning the validity of a practitioner's certificate should be made by a medical practitioner and not by a layman.

Malingering.

The Committee discussed a proposal which it was informed had been made in a locality for co-operation between the practitioners on the panel and the local approved societies to prevent malingering. The Committee considered that the proposal was not the best that could be made, but decided to defer expressing an opinion as to what method should be adopted pending the expected early issue of the Report of the Departmental Committee on Excessive Sickness Benefit Claims, which will in all probability make suggestions for dealing with such difficulties.

Expenses of Election of Local Medical Committee.

In connexion with the minute of the Committee of November 6th, 1913, expressing its willingness to pay out of the Central Insurance Defence Fund the reasonable expenses incurred for organizing a Local Medical Committee for the County of London, an application was received from the Treasurer of the Metropolitan Counties Branch of the British Medical Association for the amount incurred in the election of such a Committee. The accounts were passed for payment.

Approved Societies making Frivolous Complaints.

It was reported that, in accordance with the decision of the Committee at its meeting on March 19th, a communication had been addressed to the Insurance Commissioners urging that all persons or bodies making what were proved to be frivolous complaints should be subject to fine in the same manner as insured persons. The reply received from the English Commissioners was that they were of opinion that, in view of the terms of Section 14 of the 1911 Act, it would not appear to be open to the Commissioners to amend the Regulations relating to the administration of medical benefit in the manner desired.

Drug Tariff.

The following were appointed a Subcommittee to confer with the Pharmaceutical Society with regard to the revision of the drug tariff and collateral matters: Drs. H. R. Fothergill (Brighton), I. W. Johnson (Bury), A. E. Larking (Buckingham), Edmund Barker (Hull), A. S. J. Pearse (Cardiff), A. C. Farquharson (Spennymoor), and B. A. Richmond (London).

Medical Practitioner as Clerk and Medical Referee.

In reply to an inquiry, the Committee expressed the opinion that it was undesirable that a medical practitioner acting as Clerk to an Insurance Committee should also simultaneously act as medical referee under the Insurance Act for the area.

Statement of Nature of Disease upon Sickness Benefit Certificates.

The Committee resumed consideration of Minute 207 of the Annual Representative Meeting, 1913, stating that the nature of the illness should not be inserted on any certificate issued for the purpose of sickness benefit. The Committee also had before it a report of information received as to the views of practitioners in various areas concerning the matter, together with a report of the conference held on January 30th, 1914, between the Scottish Committee of the British Medical Association and the Scottish Commissioners (SUPPLEMENT, May 2nd, 1914, p. 322). It was decided to repeat its recommendation to the Council as follows:

> That in view of the altered position with regard to the statement of the nature of disease upon certificates brought about by the issue by the Insurance Commissioners of model forms of certificates, and of the apparent indifference of the majority of the profession upon this question, the above Minute 207 of the Annual Representative Meeting, 1913, be rescinded.

Compensation Cases.

Two applications for compensation from the Central Insurance Defence Fund were considered, but the Committee were unable to recommend a grant in either case.

INSURANCE COMMITTEES.

London.

Distribution of Unallotted Funds.

As reported in the JOURNAL of May 2nd, p. 990, the London Insurance Committee at its last meeting instructed a Special Subcommittee to prepare at once a scheme for the distribution of the moneys accumulated in the Panel Fund in respect of insured persons who had not chosen a doctor during 1913, the period prior to the issue by the Commissioners of Regulations dealing with the allocation of moneys so accumulated. The Special Subcommittee reported on May 28th that a scheme for distribution was not necessary, because the matter was covered by Article 40 (3) of the Medical Benefit Regulations, 1912. Under this article each practitioner would be paid an amount bearing the same proportion to the sums credited to him as the aggregate amounts credited to all practitioners bore to the amount in the Panel Fund.

An official of the Insurance Committee courteously explained to a representative of the BRITISH MEDICAL JOURNAL the method that will be adopted in dealing with the £95,000 or so that has accumulated for 1913. That sum itself will not be separately distributed, but it will be included in the total sum in the Medical Benefit Fund for London for 1913, namely, about £490,000 (including £28,436 for domiciliary treatment). A distribution of the £490,000 will be made on paper to practitioners on the panel, on the basis of the number of persons on their lists; the sums they have already received will be deducted, and they will receive cheques for the balance. The position has been misunderstood in several of the daily papers; £490,000 is not to be immediately distributed—practitioners have already received the greater part of this sum in their quarterly cheques during 1913.

The Insurance Committee on May 28th debated the desirability of the proposed method, but the matter was referred back once more.

Salford.

Alleged Over-prescribing.

At a meeting of the Salford Insurance Committee held on May 21st the question of over-prescribing by certain of the panel doctors came up for consideration. The Pharmaceutical Committee had complained that the chemists had only been paid about 66 per cent. of their accounts for the year 1913, and had stated its opinion that part of the deficit was due to over-prescribing by panel doctors. The Commissioners had accordingly suggested that the Pharmaceutical Committee should put into operation Section 46 of the Regulations of last year. This was done, and the Panel Committee, after considering all the cases where over-prescribing was alleged, reported that it saw no reason for surcharging any of the doctors named. This report was referred to the Medical Benefit Subcommittee, and a counter-report was issued by the Pharmaceutical Committee. The Medical Benefit Subcommittee was unable to arrive at any decision between the two rival reports, and recommended that the Insurance Committee should refer the whole question to the Commissioners. At the meeting of the Insurance Committee several representatives of approved societies expressed a fear that the system now in vogue in Salford might have the effect of inducing the panel doctors to cut down their prescribing to an undesirable and even dangerous extent. Briefly it may be explained that for the purposes of calculation the full sum of 9s. per insured person is credited to the panel fund, and the doctors are then credited with amounts for visits and attendances actually made at this rate of 9s., but, as this includes the 1s. 6d. which properly belongs to the drug fund and the floating 6d., the doctors are then debited, each with the tariff value of the prescriptions

given by him, provided that on the average of the whole area at least 1s. 6d., but not over 2s., per insured person must go to the chemists. The idea in this arrangement is to impress each practitioner with the fact that he is personally responsible for the cost of his own prescriptions.

Dr. Garrard, who is Chairman of the Panel Committee, said that in his opinion the amount provided for drugs and appliances was not sufficient, at any rate on the present tariff rates, which in many cases were too high.

Dr. Taylor said he was convinced that fully 90 per cent. of the doctors in the past year had prescribed reasonably, but the amount of sickness among the large number of women workers was so great that even the doctors, who had beyond all doubt exercised care in prescribing, found themselves unduly restricted, and he thought the new system made no difference to them whatever. But in a small number of cases there had been such an enormous drop in the prescriptions given since the new system came into force in January that there was no escaping the conclusion that either there had been over-prescribing in 1913 or there was under-prescribing at present, and in some cases probably both; he believed that in the interests of insured persons a proper inquiry by an independent authority was essential.

On the motion of Dr. Garrard, seconded by Dr. Taylor, and supported by Mr. Gill, who is Chairman of the Pharmaceutical Committee, the Insurance Committee unanimously decided to refer the matter of over-prescribing to the Commissioners, and to request them to send representatives to Salford to hold an inquiry on the spot, when evidence from all parties interested could be given.

Sanatorium Treatment.

Mrs. Garrett complained that a large number of persons who applied for sanatorium benefit were unable to obtain treatment in a sanatorium, and suggested that temporary provision should be made to obtain more beds pending the completion of the sanatorium which is to be erected by the corporation at Marple.

Dr. Taylor thought there was an exaggerated idea as to the real efficacy of sanatorium treatment. It was unfortunately the fact that no small proportion of the cases that appeared to receive benefit in sanatoriums quickly relapsed when they had to return to their miserable homes in the slums. There was a real danger of employers of labour refusing to engage persons who had been in a sanatorium, and they often returned home to find themselves out of situation and unable to find fresh suitable work. He had no fault to find with the treatment in the sanatoriums, and believed that the best possible care was being given to the patient in the Drinkwater Park Hospital, which was a sanatorium in everything but the name. But with existing social conditions, treatment in a sanatorium without the most vigorous and effective after-care was often a waste of money which could far better be used in providing better homes, proper homes, proper food, and suitable employment. A large proportion of the cases that applied for sanatorium benefit were, in the opinion of the tuberculosis officer, totally unfitted for treatment in a sanatorium, and could just as well or better be treated at the tuberculosis dispensary or at home. The problem of tuberculosis was not to be solved by bundling every case into a sanatorium, valuable as such treatment might be in suitable cases.

The Chairman pointed out that the Health Committee was not dependent on the Crossley Sanatorium, but had recently added sixteen beds to the Drinkwater Park Hospital, which in every sense of the word was a sanatorium for phthisis. He knew of no cases in Salford which had failed to receive sanatorium treatment when regarded by the medical officers as requiring it. The matter was then allowed to drop.

Nursing.

On the motion of Dr. Taylor the following resolution was carried unanimously:

> That this Committee, being of opinion that there is urgent need in the interests of insured persons for extended nursing facilities, requests the Insurance Commissioners to state as early as possible what funds are available to the Committee under Section 21 of the Insurance Act or otherwise, for subscriptions by the Committee to existing nursing institutions, or otherwise, for the provision of nurses to assist the panel practitioners in the treatment of the insured.

West Hartlepool.

The Limitation of Doctors' Lists.

At the monthly meeting of the West Hartlepool Insurance Committee it was proposed that it be recommended to the medical profession that the number of insured persons upon any doctor's list (dual or otherwise) should not exceed 1,500; and that the Medical Service Subcommittee consider the desirability of reducing the number of insured persons on lists exceeding 1,500 to that number. Those who supported the proposal urged that if an epidemic broke out doctors with large lists would be in serious difficulties. Although the curtailment would interfere with the free choice of doctor, it was suggested that equality of distribution was a greater advantage. The mover regretted that the Committee had not published the numbers on each doctor's list so that insured persons would be able to choose those from whom they would be likely to receive the best attention.

On the other hand, it was pointed out that the matter was entirely out of the control of the Committee, and, further, that in West Hartlepool the highest number of insured persons, even on a list would be to penalize a doctor on account of his popularity. It was also stated that up to the present the Committee had not received a single complaint of inattention in respect of any doctor. The Chairman remarked that through the exercise of the principle of free choice the matter would tend in time to adjust itself; persons who thought they were not receiving proper attention would change their doctor. The Clerk mentioned that he had compiled a statement as to the attitude on this question of several insurance committees of a similar size. Of these, forty-three had fixed no limit to doctors' lists, one was considering the matter, one had fixed the limit at 2,500, and another at 2,200. One of the committees had been informed by the Insurance Commissioners that they could not approve of any arrangement which imposed an absolute limit to the numbers on any panel list.

The resolution was lost by a large majority.

INSURANCE NOTES.

Arrangements with Unqualified Practitioners.

The following resolution has been adopted by the Court of Assistants of the Society of Apothecaries:

> That this Court regrets that in paragraph 44 (2) of the Regulations dated January 10th, 1914, made by the National Health Insurance Joint Committee, acting jointly with the Insurance Commissioners, and the memorandum issued in connexion therewith, provision is made whereby insured persons making their own arrangements for medical treatment under Section 15 (3) of the National Insurance Act, are allowed to obtain treatment from unqualified persons. Further, that this Court strongly objects to public money being paid for the encouragement of unqualified medical practice, and begs to draw the attention of the General Medical Council to the matter.

Election of Pharmaceutical Committees.

The Insurance Commission for England has issued a draft model scheme for the constitution of Pharmaceutical Committees, setting out the mode of election of such committees to hold office after July 15th, 1914. In a covering letter it is stated that the scheme follows in its general lines the method adopted in the regulations for the conduct of the first elections, but adds that the Commissioners will be prepared to receive proposals for modifications before June 8th. Copies of the scheme, it is stated, will shortly be placed on sale.

IRELAND.

Medical Certification under the Insurance Act.

For some time past the Irish Medical Committee, a body elected by delegates from all insurance areas in Ireland, has been trying to induce the Chancellor of the Exchequer to receive a deputation from the profession in Ireland on the subject of medical certification under the National Insurance Act in that country. This is a matter in which many interests, political and otherwise, are involved, and correspondence proved unavailing; but finally the Irish Committee succeeded, through the Medical Secretary of the British Medical Association, in enlisting the assistance of Dr. Addison, M.P. He has

taken a great deal of trouble in attempting to bring the parties concerned together. For the present it would seem that his efforts have failed, but, as will be noticed from the following letter, the Irish Medical Committee, fully realizing the great difficulties of the situation, has put on record its appreciation of Dr. Addison's services.

Irish Medical Committee,
35, Upper Fitzwilliam Street, Dublin,
23rd May, 1914.

Dr. C. Addison, M.P.,
House of Commons, London.

Dear Sir,—It was with regret that the Committee learned at their meeting yesterday that so far your efforts to bring about an amicable settlement of the certification question have been unsuccessful. The meeting was very largely attended, and I was unanimously requested specially to convey to you the thanks and appreciation of the Committee for all the valuable time which you spent, and the work that you have done, in the interests of the Irish medical profession.—I am, yours faithfully,

(Signed) M. R. J. HAYES,
Medical Secretary.

INSURANCE ACT IN PARLIAMENT.

INSURANCE LEGISLATION.

MR. DUNCAN MILLAR asked the Chancellor of the Exchequer whether he would issue at an early date a White Paper embodying the proposals, foreshadowed in his Budget speech, dealing with the case of deposit contributors, the appointment of medical referees, and the provision of health lectures under the National Health Insurance Act.—Mr. Lloyd George said that so far as legislation might be necessary to give effect to the proposals referred to, he must ask Mr. Millar to await the terms of the bill, but that so far as legislation might not be necessary, he would consider the suggestion.

GRANTS TO IRELAND.

Mr. Cassel asked the Chancellor of the Exchequer what proportion of the grants of £1,250,000 for the year 1914–15, and of £2,000,000 for the year 1915–16, for national health insurance, tuberculosis, nursing, and pathological laboratories, it was estimated will be attributable to Ireland.—Mr. Lloyd George: The figures may be stated provisionally as follows:

	1914–15.	1915–16.
	£	£
National Insurance	52,000	65,000
Tuberculosis, nursing, and pathological laboratories	22,500	67,500
	74,500	132,500

DOMICILIARY TREATMENT.

Mr. Worthington Evans asked the Chancellor of the Exchequer (1) whether he was aware that the Great Yarmouth Insurance Committee was refusing to recommend domiciliary treatment for an insured person requiring it unless the insured person agreed to give up the doctor who had attended her or her family for some twenty-five years and selected in his place a panel doctor; and whether he would take steps to prevent this refusal in the future; and (2) whether he was aware that the Middlesex Insurance Committee was refusing to continue the giving of extras in lieu of sanatorium benefit to an insured person who had been under treatment by the tuberculosis officer in conjunction with a non-panel doctor unless the insured person changed his doctor and selected a panel doctor; and whether he would take action to prevent such refusal in the future.—Mr. Wedgwood Benn replied that extras were provided, not, as suggested, in lieu of sanatorium benefit, but as part of the domiciliary form of sanatorium benefit. Under Section 16 (1) (*b*) domiciliary treatment could be provided, with such extras as were suitable to the particular case, whether the insured person was attended by a doctor on the panel or had been allowed by the Insurance Committee to make his own arrangements.

NURSES.

Mr. F. Hall (Dulwich) asked whether it was proposed to establish any complete and uniform nursing scheme in connexion with the provision of medical and sanatorium benefits under the Insurance Act, or whether it was left to each Insurance Committee to frame its own scheme; and how many nurses were at present employed for the purposes of the Act.—Mr. W. Benn referred Mr. Hall to Mr. Lloyd George's reply to Mr. Bathurst (SUPPLEMENT, May 23rd, p. 384). As regards the last part of the question, he was afraid that he could not give the information without calling for a special return from all approved societies and insurance committees.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

ANY further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (SUPPLEMENT, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (SUPPLEMENT, May 9th), will be published in the SUPPLEMENT of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the SUPPLEMENT of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in SUPPLEMENT of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,
ALFRED COX,
Medical Secretary.

May 13th, 1914.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH.—Mr. Seymour Barling, Honorary Secretary (52, Newhall Street, Birmingham), gives notice that the annual meeting of the Branch will be held at the Medical Institute, Edmund Street, Birmingham, at 3.30 p.m. on Thursday, June 18th.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Dr. Ernest C. Hadley, Honorary Secretary (Burbury Street, Lozells, Birmingham), gives notice that members of the Central Division, Birmingham Branch, are requested to nominate officers for the posts of Chairman, Vice-Chairman, and two Honorary Secretaries for this Division to one of the honorary secretaries, Dr. Ernest C. Hadley, Burbury Street, Lozells, Birmingham, or Mr. Bernard J. Ward, 141a, Great Charles Street, Birmingham, in writing as early as possible. The annual meeting will be called at a late date in June, of which every member will have due notice.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—Dr. Duncan Davidson, Honorary Secretary (15, Priory Row, Coventry), gives notice that the annual meeting of the Coventry Division will be held at the Coventry Hospital on Thursday, June 11th, at 8.15 p.m. (1) To receive the recommendations of the Executive Committee. (2) To receive the annual report. (3) To elect officers for the ensuing year. (4) To receive correspondence. (5) To hear a special speaker on the subject of a medical trade union.

Kent Branch.—Dr. E. A. Starling, Honorary Secretary (Chillingworth House, Tunbridge Wells), gives notice that the first annual meeting of the Branch will be held on Friday, June 12th, at 2.30 p.m., at the Town Hall, Maidstone (by kind permission of His Worship the Mayor). The council will meet before lunch, and due notice, together with the agenda, will be sent to members of the council. Dr. William Douglas, President, kindly invites members to lunch at the Star Hotel, at 1.30 p.m. Agenda: In addition to the business of an ordinary meeting: (1) To receive the report of the election of officers for 1914–15, who shall thereupon take office. (2) To receive the annual report and financial statement. (3) To appoint two auditors. (4) Any other business decided on by the council, or any other competent business. The following excursions have been arranged, starting at 3.30 p.m.: (*a*) To visit Allington Castle, where Sir Martin and Lady Conway kindly invite members to tea (number limited to twenty). (*b*) To visit Leeds Castle, by kind permission of Mr. and Mrs. C. P. Wykeham Martin. Tea will be provided at the Park Gate Inn, Leeds. The annual dinner will be held at the Star Hotel, at 6.30 p.m.; charge, 6s. each. Wine will be provided by the local members. Members intending to be present at the lunch or dinner are requested to signify their intention, and also to state which of the excursions they select, not later than Saturday, June 6th, to Mr. Geo. Potts, Maidstone.

Lancashire and Cheshire Branch.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester. Members desiring to make scientific, clinical, or other communications are requested to notify the Branch Secretary on or before June 1st.

Lancashire and Cheshire Branch: Liverpool Division.—Dr. Francis W. Bailey, Honorary Secretary (51A, Rodney Street, Liverpool), gives notice that a meeting of the Division will be held at the Medical Institution, Mount Pleasant, Liverpool, on Friday, June 12th, at 4 p.m. Business: Report of Council and agenda of Annual Representative Meeting.

Metropolitan Counties Branch.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers; Annual Reports of Council and of Representatives of the Branch on the Central Council, and the President's Address, "Some Observations on Modern Vascular Problems."

Metropolitan Counties Branch: East Hertfordshire Division.—Dr. H. D. Ledward, Honorary Secretary (123, Norton Way, Letchworth), gives notice that the second annual meeting of the Division will be held at 3 p.m., on Thursday, June 18th, at the North Hertfordshire and South Bedfordshire Hospital, Hitchin. Agenda: To receive correspondence; to receive the Honorary Secretary's annual report; to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; to elect the Representative and Deputy Representative of the Division in Representative Meetings; to consider the business of the Annual Representative Meeting.

Northern Counties of Scotland Branch.—Dr. J. Munro Moir, Honorary Secretary (Inverness), gives notice that the annual meeting of the Branch will be held at the Commercial Hotel, Invergordon, on Wednesday, June 3rd, at 11.30 a.m. Business: Election of office-bearers. Annual report. Instruction to Representative in Representative Meeting. Arrangements will be made to visit one of the battleships. In order to facilitate arrangements as to luncheon, etc., members proposing to be present are requested to notify the Honorary Secretary.

Northern Counties of Scotland Branch: Inverness-shire Division.—Dr. J. W. Mackenzie, Honorary Secretary, gives notice that the annual meeting of the Division will be held at the Northern Infirmary, Inverness, on Saturday, June 6th, at 3.30 p.m. Business: Correspondence. Annual report. Election of office-bearers. Instruction to Representative in Representative Meeting.

South Wales and Monmouthshire Branch.—Mr. W. J. Greer (19, Gold Tops, Newport) and Dr. J. E. P. Davies (Fairfield, Llanelly), Honorary Secretaries, give notice that the annual meeting of the South Wales and Monmouthshire Branch will be held in Llanelly, on Thursday, June 11th. Accounts, election of officers, etc.

Yorkshire Branch.—Dr. Adolph Bronner, Honorary Secretary (33, Manor Row, Bradford), gives notice that the annual meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, June 17th, at 4.15 p.m., for the election of Vice-President, Secretary and Treasurer, etc. Members intending to read papers, make any communications, propose new members, or show cases or specimens, are requested to notify him at once. The annual dinner will take place at the Midland Hotel at 6.30 p.m.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

BORDER COUNTIES BRANCH:
Dumfriesshire and Galloway Division.

The annual general meeting of the Division took place in Dumfries Infirmary on May 15th at 3 p.m., when twenty-four members were present. Dr. Easterbrook was elected chairman *pro tem.* in the absence of Dr. Shaw, who wrote regretting his inability to be present and expressing his valedictory thanks for the honour of the past year.

The late Dr. Gill.—Before commencing the business proper Dr. Ross referred to the loss the profession had sustained through the death of Dr. Gill of Langholm. An expression of regret was incorporated in the minutes, and the Secretary was requested to transmit to Mr. Hastie, his nephew, the sympathy of the meeting.

Vote of Thanks.—On the motion of Dr. Easterbrook, a vote of thanks was heartily accorded to Dr. E. Shaw for his services during the past year.

Election of Officers.—The following officers were elected:

Chairman: Dr. Livingstone.
Vice-Chairman: Dr. Chalmers (Crocketford).
Secretary: Dr. J. D. Robson.
Representative: Dr. J. D. Robson.
Representative in Council: Dr. Livingston Loudon.
Representatives in Branch Council: Drs. Ross, Martin, and Scott.
Executive Committee: Drs. Easterbrook, Sanders, Sir George Watt, and Dr. Reid.

Model Scheme for the Treatment of Tuberculosis.—The model scheme for the treatment of tuberculosis (Supplement, April 4th) was considered, and, on the motion of Dr. Easterbrook, seconded by Dr. Bell, it was resolved:

> That the Division approve generally of the scheme, reserving the power to amend if occasion arise.

Financial Statement.—The financial statement for the year was read and approved.

Panel Committee and Juvenile Societies.—A letter regarding the attitude of the Panel Committee to juvenile societies was read, and, on the motion of Dr. Ross, seconded by Dr. Reid, the following resolution was adopted, and the Secretary was instructed to circularize all practitioners in the area:

> That all members of the Dumfriesshire National Insurance Panel be called upon to resign at the earliest opportunity their contracts with juvenile societies in conformity with the agreements signed on the pink form, and hold to the cardinal points therein stated—namely, free choice of doctor and payment of 8s. 6d. per head per annum for medical attendance and medicine.

Name of Division.—It was agreed that the name of the Division should be the Dumfriesshire and Galloway Division (including Dumfriesshire, Kirkcudbright, and Wigtownshire).

DORSET AND WEST HANTS BRANCH:
Bournemouth Division.

The annual meeting of the Bournemouth Division was held on May 8th, at the Medical Library, Municipal College, Bournemouth. Dr. Marriner, Chairman of the Division, presided, and nineteen members were present.

Annual Report of Division.—The report and financial statement for 1913 were read and approved.

Election of Officers.—The following officers were elected:

Chairman: Harold Simmons, M.B.
Vice-Chairman: W. Alexander, M.D.
Past Chairman: W. H. L. Marriner, M.B.
Representative: W. Johnson Smyth, M.D.
Honorary Secretary and Treasurer: Eleanor C. Bond, M.D.
Representatives on the Branch Council: Drs. Alexander, Forster, Le Fleming, Marriner, Milner, Montgomery, Simmons, Spinks, Willans, Johnson Smyth, and Bond.
Executive Committee: The officers of the Division, the Representatives on the Branch Council, and Drs. Bottomley, Haylock, and Richardson.
Ethical Committee: Drs. Batterbury, Davidson, Greves, Milner, Muspratt, Ramsay, Vernon, with the Chairman and Honorary Secretary *ex officio*.

Election of Council.—The Division nominated Dr. W. Johnson Smyth for election to the Council.

Organization Rules.—The Division agreed to adopt the model organization rules, with the modifications suggested by the Subcommittee appointed to revise them, as the ordinary rules of the Division.

Model Tuberculosis Scheme.—This scheme (SUPPLEMENT, April 4th) was brought forward and considered. A letter was read from the medical officer of health on behalf of the local Tuberculosis Committee of the Council, and it was agreed that a subcommittee be appointed to meet the medical officer of health as requested to discuss the details of a local tuberculosis scheme which the Town Council has under consideration.

Medical Aid Institutes.—This memorandum (SUPPLEMENT, April 4th) was considered. The Division decided that further information was required from the staffs of the hospitals in the area, and the Secretary was instructed to take the necessary steps to obtain this.

Medical Referees.—The letter from the Medical Secretary on this subject was read, and considerable discussion ensued. On the motion of Dr. MAHOMED, seconded by Dr. MARTLAND, the following resolution was passed:

> That medical referees under the National Insurance Act should be appointed by the Commissioners and only removable by them; that they should be whole-time officers and practitioners of not less than ten years' standing, and that the appointments should be pensionable.

It was resolved, on the motion of Dr. W. H. L. MARRINER, seconded by Dr. W. DAVIDSON:

> That the commencing salary be not less than £750 per annum.

The following motion by Dr. HUNTER WOODS, seconded by Dr. JOHNSON SMYTH, was carried unanimously:

> That where a medical practitioner, not devoting his whole time to his work, is called upon by a lay body to express an opinion as to the capacity or incapacity of an insured person, the minimum fee that he should accept should be 10s. 6d.

The Division approved the suggestion that steps be taken to use the disciplinary machinery of the Association in regard to any practitioner who accepts less than the rate fixed, and the Secretary was instructed to bring the resolution before all practitioners in the area.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THE annual general meeting of this Branch was held in the Western Infirmary on May 12th. Dr. A. T. CAMPBELL, the retiring President, was in the chair, and there was a large attendance.

Annual Report.

The reports of the Honorary Secretary and Honorary Treasurer were adopted, on the motion of Dr. JAMES CRAIG (Dennistoun). The HONORARY SECRETARY reported that on December 31st, 1913, the membership of the Branch was 854, as compared with 864 on December 31st, 1912, showing a loss during the year of 10 members. During the previous year, when the profession was confronted with the likelihood of the National Health Insurance Act finding its place on the Statute Book, there was a large accession to the membership. Naturally, differences of opinion arose, and the members of the Branch Council congratulated themselves that the withdrawals had not been more numerous. It was, however, unfortunate that there should have been any resignations. Next year the Act would come up for review and amendment. This would most probably entail a bigger fight than the profession had had in the past, so that the need for standing shoulder to shoulder was quite as imperative as ever it had been. That the Act had been made workable was in no small measure due to the concessions obtained by the energetic action of the Association, and if the interests of the profession were still to be conserved it could only be done by the British Medical Association, which represented the larger proportion of medical men in the United Kingdom, and was the most democratic of institutions.

During the year one meeting of the Branch and six of the Branch Council were held. The meeting of the Branch was held on November 11th, 1913, in the Hall of the Royal Philosophical Society, and was well attended. It was addressed by Dr. Alfred Cox, the Medical Secretary of the Association, who spoke on the present position of the medical profession, and its dangers in the immediate future, very strongly urging the consolidation of the profession as the only effective means of meeting and defeating all assaults from without. The reorganization of the Divisions of the Branch so as to make their areas coterminous with those of the Insurance Committees was now an accomplished fact, with the result that the Branch at present consisted of nine Divisions in place of eight as formerly.

The financial report submitted by the HONORARY TREASURER showed that, beginning the year with a balance of £74 17s. 6d., grants from head quarters had been received amounting to £42 10s., while the expenditure totalled £89 6s. 7d., leaving in hand the sum of £28 3s. 1d.

The Insurance Act.—Dr. JOHN ADAMS, the representative on the Central Council of the Association, said that the question which was troubling them at the present moment was the Insurance Act, but all sections of the profession were well represented in the Council. The Act had come to stay, and he was glad to say that the relations existing between the Insurance Commissioners and the British Medical Association, which was the mouthpiece of the profession, had now become much more friendly, and it was pleasing to find that their suggestions were listened to with respect, many being adopted, some slightly modified, and but few rejected.

Election of Officers.—The following office-bearers were elected for the ensuing year:

President: Dr. John Goff, Bothwell.
President-elect: Dr. D. J. Mackintosh, M.V.O., Western Infirmary.
Vice-Presidents: Dr. A. T. Campbell, Glasgow; Dr. Wm. Semple Young, Helensburgh.
Honorary Secretary: Dr. Wm. Bryce, 30, Armadale Street, Dennistoun, Glasgow.
Honorary Treasurer: Dr. Wm. A. Caskie, Jordanhill.

Votes of Thanks.—The retiring PRESIDENT, in vacating the chair, thanked the members of the Branch Council for their help during his term of office, and introduced Dr. John Goff as president. Votes of thanks were afterwards passed to the retiring office-bearers.

Clinical Demonstration.—An account of the clinical demonstration which followed in the dispensary is published in this week's JOURNAL, p. 1184.

Dinner.—In the evening the members of the Branch dined in the Grosvenor Restaurant. Dr. JOHN GOFF presided, and Mr. C. W. Cathcart and Dr. John Stevens (President and Secretary of the Edinburgh Branch), Dr. E. E. Dyer and Dr. J. E. Moorhouse (President and Secretary of the Stirling Branch), and Dr. J. R. Hamilton, Hawick (Chairman of the Scottish Committee) were present as guests.

KENT BRANCH:
BROMLEY DIVISION.

Presentation to Dr. Tennyson Smith.—A meeting of the Bromley Division was held on May 8th, by kind invitation of Dr. YOLLAND, Chairman, at 53, Bromley Common, when Dr. Tennyson Smith was the recipient of a testimonial in recognition of his services as the Representative and Honorary Secretary of the Division during the insurance fight. The testimonial, which took the form of a cheque subscribed by the medical profession in the Division, was presented by Dr. Scott, of Edenbridge, Vice-President of the Kent Branch. The members were very kindly entertained to tea by the Chairman and Mrs. Yolland.

METROPOLITAN COUNTIES BRANCH:
LEWISHAM DIVISION.

THE second annual meeting of the Lewisham Division was held at the Co-operative Buildings, Catford, on May 21st. Dr. THORNTON COMBER presided, and there were sixteen members present.

Annual Report of Division.—The annual report was unanimously adopted. The report stated that during the past year there had been four Divisional meetings, with an average attendance of 24. It contained a table showing that the number of members of the Division was 82; the total number of medical men in the area was 115, but 44 were not in practice. It recorded the fact that 22 resignations had taken place since the Extraordinary Representative Meeting.

The decision of the Association in raising the subscription at the present time accounted for the major portion of these resignations. The Executive Committee had held five meetings. In addition there had been two meetings of a subcommittee consisting of the Chairman, Vice-Chairman, and Honorary Secretary, in particular to investigate and report upon the London County Council dental clinic for children in the Division. Among the matters the Executive had had under discussion and dealt with were:

1. Medical treatment for school children.
2. Departmental Committee Report on Sickness and Benefit Claims.
3. The amalgamation, for representative purposes, with the Woolwich Division.
4. The establishment of medical referees under the Insurance Act.
5. The remuneration of school medical officers.

Dr. Wilson had resigned his position on the Executive Committee and Dr. Townend was appointed in his place. The Committee expressed its appreciation of those members who had cordially supported the Executive, but at the same time expressed regret at the sparse attendance of members at the general meetings. In conclusion, the Committee expressed the hope that members would recognize the necessity of cohesion in the Division in the trying times in store for the profession. The financial statement showed an excess of expenditure over receipts to the amount of £1 17s. 6d.

Annual Report of Council.—The discussion of the report of Council (Supplement, May 2nd) was not concluded, and will be resumed at the next meeting.

Dental Clinic.—The Honorary Secretary read correspondence with regard to the establishment of a dental clinic for Lewisham, and explained what had been done by a subcommittee appointed to investigate the matter. On the motion of Dr. Barnett, seconded by Dr. Munro, it was unanimously resolved:

That this meeting of the Lewisham Division of the British Medical Association approves of the principle of the establishment of a dental clinic under proper professional control, but does not see its way to proceed further in the matter at present.

Medical Referees.—The question of the remuneration of medical referees was discussed, and finally the following motion was adopted:

That where any medical practitioner not devoting his whole time to the work accepts a request from a lay body to express an opinion as to the capacity or incapacity of an insured person, the least fee he should accept should be 10s. 6d.

Election of Officers.—The following office-bearers were elected for the ensuing year:

Chairman: Dr. Thornton Comber.
Vice-Chairman: Dr. Hemmans.
Honorary Secretary and Treasurer: Dr. Bundey.
Representative to Representative Meeting: Dr. T. Macnamara.
Representative on Branch Council.—Dr. Hudson Evans.
Executive Committee: Drs. Atkinson, Barnett, Blue, Cato, Townend, Wheeler O'Bryen.

Assistant Whole-time Medical Officers.—After discussion the following resolutions were agreed to:

That assistant whole-time medical officers whose duties include school medical work shall commence at a salary of not less than £350, rising by annual increments of £25 to a maximum of not less than £500.

That whole-time medical officers whose duties include school work be included in the provisions of the bill to receive superannuation and security of tenure.

Vote of Thanks.—The meeting terminated with a vote of thanks to Dr. Thornton Comber for presiding.

Marylebone Division.

The annual general meeting of the Marylebone Division was held on May 15th.

Election of Officers.—The following elections were declared:

Chairman: Mr. N. Bishop Harman.
Vice-Chairman: Mr. W. McAdam Eccles.
Honorary Treasurer: Dr. Comyns Berkeley.
Honorary Secretary: Dr. Harold Pritchard.
Representatives to the Representative Meeting: Dr. James Galloway, Dr. Francis Goodbody, Mr. N. Bishop Harman, Dr. Gordon Lane, Dr. Harold Pritchard, Dr. Percy Spurgin.
Representatives to the Branch Council: Mr. W. McAdam Eccles, Dr. E. Clinson Greenwood, Dr. W. Griffith, Dr. C. O. Hawthorne, Mr. H. Betham Robinson, Dr. Florence Willey.

MIDLAND BRANCH:

Chesterfield Division.

The annual meeting of the Chesterfield Division was held at Chesterfield Hospital on May 19th, when Dr. J. G. Shea (the retiring Chairman), Dr. H. B. Fletcher (the Chairman-elect), and nine other members were present.

Financial Statement.—Dr. Chawner presented his report and accounts, which were duly accepted. It was resolved:

That a summary of the report and accounts be issued to the members of the Division, accompanied by a circular calling attention to the fact that the local working expenses of the Division had been contributed by half only of its members, and asking for payment of the levy of £1, made some months ago, by those who have not paid, and inquiring if the members were willing to pay an annual levy of 10s. for local working expenses.

Election of Officers.—The following were appointed:

Chairman: Dr. H. B. Fletcher, J.P.
Vice-Chairman: Dr. A. Court.
Honorary Secretary: Dr. A. McL. Pilcher.
Honorary Treasurer: Dr. A. Chawner.
Representative for Representative Meeting: Dr. W. Duncan.
Representatives on Branch Council: Drs. J. G. Shea and A. Green.
Executive Committee: Drs. J. H. Blight, T. Corkery, R. A. M. L. McCrea, J. A. Magee, Mr. G. H. Mead, Dr. R. Godwin Chase, Mr. G. H. West Jones, Mr. W. H. Lee, together with the officers of the Division *ex officio*.

Votes of Thanks.—Votes of thanks were passed to the retiring officers.

Instructions to Representative.—The preliminary agenda for the Representative Meeting was considered, and it was resolved:

That a free hand be given to the Representative, and that he be urged to use all his force and eloquence to restrain any advances and encroachments attempted to be made by the approved societies, and to oppose any concessions likely to be made to any such bodies.

SOUTH MIDLAND BRANCH:

Buckinghamshire Division.

The annual meeting of the Buckinghamshire Division was held at the Royal Buckinghamshire Hospital on May 19th. In the absence of the Chairman, Dr. Shaw, through illness, and that of the Vice-Chairman, Dr. Deyns, the chair was taken by Dr. Reynolds; twelve other members were present.

Annual Report of Division.—The annual report of the Division was read and adopted. The report stated that the membership of the Division was now 66. Since the last annual meeting it had lost 18 members. Of these 4 were retired men who had resigned, 2 had died (Drs. Durran and Fleck), 3 had removed from the area, and 9 were practitioners who for some reason were dissatisfied, notably those not on the panel. The report, in referring to the last resignations, said it was difficult to understand why these should have resigned unless they thought the Association did not resist the Insurance Act to the utmost, and that they were determined to have nothing to do with it nor with any body that did. The loss was made good by the inclusion of the medical men of Marlow, Slough, and other parts of South Bucks, but there were at least 30 medical men in active practice who were not members. They had been invited to the meetings, but had not attended. It might be regarded as quite certain that it was to the members of the Association alone that the profession must look for help in fighting its battles, the others content to be non-combatants—but looking on and ready to partake in the results of any victory. Meetings were held in November at High Wycombe and Aylesbury, with an attendance of 23 and 20. Another was held in April, with 17 present. Mr. Waugh gave an address on appendicitis, and Mr. Charters Symonds on abdominal tumours, and the Division was deeply grateful to them. There remained about £2 in the entertainment fund, and members were reminded that each was expected to give 2s. 6d. to this every year.

Election of Officers.—The officers for the coming year were elected as follows:

Chairman: Dr. Deyns.
Vice-Chairman: Dr. Dunbar Dickson.
Secretary: Dr. Larking.
Assistant Honorary Secretary: Dr. Henderson.
Representative: Dr. Bradbrook.
Deputy Representative: Dr. Shaw.

Committee: Drs. Fraser, Henderson, Long, Perrin, Reynolds, and Rose.

Branch Council: Drs. Baker, Deyns, and Kennish.

It was resolved that the Deputy Representative should be a member of the Committee.

Sprains.—Mr. WHITELOCKE then read a paper on sprains, and a discussion followed in which Drs. REYNOLDS, LARKING, BAKER, HENDERSON, and ROSE took part. A very hearty vote of thanks was accorded to Mr. Whitelocke for his most interesting and instructive paper.

Annual Report of Council.—The annual report of the Council (SUPPLEMENT, May 2nd) was considered, and after discussion three resolutions were passed to be sent to the Representative Meeting. One had reference to an ethical matter; the second proposed that clinics should be started to treat defective school children in place of sending them to voluntary hospitals; and the third suggested the deletion of Appendix IX referring to the reasons why medical practitioners did not accept service under the Insurance Act.

British Medical Association.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

THE Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

THE Registrar-General has just issued his return relating to the births and deaths in the first quarter of the year and to the marriages during the three months ending December last. The marriage-rate during that period was equal to 16.3 per 1,000, or 0.3 per 1,000 less than the average rate in the corresponding quarters of the ten preceding years.

The 217,187 births registered in England and Wales during the first quarter of the year were equal to an annual rate of 25.6 per 1,000 of the population, estimated at 37,302,982 persons in the middle of the year. The birth-rates in the several counties ranged from 15.0 in Cardiganshire, 16.6 in Sussex, 16.8 in Westmorland, and 16.9 in Rutlandshire to 27.3 in Northumberland, 27.9 in Staffordshire, 29.5 in Monmouthshire, 29.7 in Glamorganshire, and 31.5 in Durham. In ninety-seven of the largest towns the birth-rate averaged 25.1 per 1,000; in London the rate was 25.1 per 1,000, while among the other towns it ranged from 12.4 in Bournemouth, 13.1 in Southport, 14.1 in Blackpool, 14.2 in Eastbourne, and 14.5 in Hastings to 32.4 in Barnsley and in Stockton-on-Tees, 33.0 in Sunderland, 33.1 in West Bromwich, 33.6 in Middlesbrough, 34.2 in St. Helens, and 35.4 in Rhondda.

The excess of births over deaths during the quarter was 71,001, against 80,457, 77,947, and 69,934 in the corresponding quarter of the three preceding years. From a return issued by the Board of Trade, it appears that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance outward of 27,561 passengers of British nationality and of 1,869 aliens; between the United Kingdom and the Continent of Europe there was an inward balance of 2,491 British passengers and of 8,280 aliens; thus the total passenger movement resulted in a net balance outward of 18,659 persons.

The deaths registered last quarter in England and Wales numbered 146,186, and were equal to an annual rate of 15.9 per 1,000, or 1.2 per 1,000 below the mean rate in the ten preceding first quarters. The lowest county death-rates last quarter were 11.0 in Middlesex, 12.4 in Westmorland, and 12.8 in Buckinghamshire and in Essex; the highest rates were 17.2 in Cornwall, 17.3 in Norfolk and in Staffordshire, 17.4 in Merionethshire, 17.5 in Rutlandshire, in Lancashire, and in Carmarthenshire, 17.9 in Glamorganshire, and 19.0 in Cardiganshire. In ninety-seven of the largest towns the death-rate averaged 16.4 per 1,000; in London the rate was 16.1 per 1,000, while among the other large towns the lowest rates were 8.4 in Ilford and in Eastbourne, 9.9 in Hornsey, 10.3 in Edmonton, 10.8 in Southend-on-Sea, and 10.9 in Walthamstow; the highest rates were 20.8 in Plymouth and in South Shields, 21.1 in Barnsley, 21.7 in Swansea, and 23.3 in Burnley.

The 146,186 deaths from all causes last quarter included 413 from enteric fever, 1 from small-pox, 1,805 from measles, 795 from scarlet fever, 2,318 from whooping-cough, 1,650 from diphtheria, and 1,606 from diarrhœa and enteritis among children under 2 years of age. The mortality from scarlet fever and diphtheria was equal to the average; that from measles was about half the average; and that from enteric fever and whooping-cough about two-thirds of the average.

The rate of infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 115 per 1,000, or 10 per 1,000 less than the average proportion in the ten preceding first quarters. Among the several counties the rates of infantile mortality last quarter ranged from 73 in Oxfordshire, 76 in Buckinghamshire, 80 in Middlesex, and 82 in Surrey and in Dorsetshire to 141 in Nottinghamshire, 145 in Glamorganshire, 153 in Anglesey, 175 in Carmarthenshire, and 191 in Rutlandshire. In ninety-seven of the largest towns the rate averaged 116 per 1,000; in London it was 96 per 1,000, while among the other towns it ranged from 38 in Wimbledon, 51 in Eastbourne, 56 in Ilford, and 57 in Edmonton to 167 in South Shields, 168 in Dudley, 175 in Norwich, 203 in Swansea, and 245 in Burnley. The deaths among persons aged 1 to 65 years were equal to an annual rate of 8.5 per 1,000, and those among persons aged 65 and upwards to a rate of 101.6 per 1,000 of the population estimated to be living at those ages.

The mean temperature of the air last quarter was above the average, the excess amounting to more than 2° in nearly all districts; the rainfall exceeded the average in all districts except the north-east; and the duration of bright sunshine was below the average, the deficiency in the east and south-east being only slight.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns, 8,500 births and 4,834 deaths were registered during the week ended Saturday, May 23rd. The annual rate of mortality in these towns, which had been 14.2, 14.1, and 14.1 per 1,000 in the three preceding weeks, fell to 13.9 per 1,000 in the week under notice. In London the death-rate was equal to 12.7, against 12.9, 13.8, and 13.4 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.1 in Ealing, 6.2 in Leyton, 6.4 in Reading, 6.9 in Ilford, 7.5 in Eastbourne, and 7.9 in Swindon to 20.0 in Oldham, 20.2 in Oxford, 20.5 in Sunderland, 21.0 in Middlesbrough, 21.1 in West Hartlepool, and 22.0 in Stockton-on-Tees. Measles caused a death-rate of 2.0 in Sheffield and in Dudley, 2.2 in Warrington, and 2.8 in Rochdale; and whooping-cough of 1.6 in Barrow-in-Furness and in West Hartlepool, and 1.7 in Walsall and in Newport (Mon.). The mortality from the remaining infective diseases showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 37, or 0.8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 8 were recorded in Birmingham, 6 in Liverpool, 3 in Portsmouth, 2 in Leicester, and 2 in Nottingham. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,876, 2,901, and 2,862 at the end of the three preceding weeks, had risen to 2,909 on Saturday last: 415 new cases were admitted during the week, against 377, 398, and 349 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns, 1,268 births and 709 deaths were registered during the week ended Saturday, May 23rd. The annual rate of mortality in these towns, which had been 15.2, 16.2, and 15.3 per 1,000 in the three preceding weeks, rose to 16.1 in the week under notice, and was 2.2 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 3.1 in Falkirk, 8.8 in Kilmarnock, and 10.5 in Clydebank to 16.9 in Perth, 17.8 in Glasgow, and 23.3 in Hamilton. The mortality from the principal infective diseases averaged 1.4 per 1,000, and was highest in Coatbridge and Hamilton. The 358 deaths from all causes in Glasgow included 17 from measles, 10 from infantile diarrhœa, 7 from whooping-cough, 3 from scarlet fever, 1 from diphtheria, 1 from enteric fever, and 1 from typhus. Four deaths from measles were recorded in Dundee, 2 in Edinburgh, and 2 in Hamilton; from scarlet fever, 3 deaths in Edinburgh; and from whooping-cough, 2 deaths in Coatbridge.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 16th, 677 births and 4 1 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 651 births and 451 deaths in the preceding period. These deaths represent a mortality of 18.2 per 1,000 of the

aggregate population in the districts in question, as against 18.6 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.1 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 29.3 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 19.5 (as against an average of 23.4 for the previous four weeks), in Dublin city 21.8 (as against 25.3), in Belfast 17.6 (as against 18.6), in Cork 21.1 (as against 24.3), in Londonderry 12.7 (as against 15.2), in Limerick 10.8 (as against 20.3), and in Waterford 19.0 (as against 22.8). The zymotic death-rate was 1.9, as against 2.1 in the previous week.

During the week ending Saturday, May 23rd, 630 births and 438 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 677 births and 421 deaths in the preceding period. These deaths represent a mortality of 18.9 per 1,000 of the aggregate population in the districts in question, as against 18.2 per 1,000 in the previous period. The mortality in these Irish areas was therefore 5.0 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.3 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 19.3 (as against an average of 21.3 for the previous four weeks), in Dublin city 21.3 (as against 22.9), in Belfast 17.9 (as against 17.2), in Cork 19.7 (as against 20.9), in Londonderry 16.5 (as against 15.2), in Limerick 24.4 (as against 19.3), and in Waterford 19.0 (as against 21.4). The zymotic death-rate was 2.2 as against 1.9 in the previous week.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Fleet Surgeon ELYSTAN G. E. O'LEARY, F.R.C.S.E., to the *Queen* on recommissioning, undated. The following Staff Surgeons have been promoted to the rank of Fleet Surgeons with seniority of May 23rd: HENRY C. WHITESIDE, ROBERT L. DICKINSON, HERBERT W. B. SHERWELL, M.B., JOHN MARTIN, CHRISTIAN B. FAIRBANK, FRANCIS F. LOBB, HAROLD J. CHATER, REGINALD STG. S. BOND, M.B., F.R.C.S.I., CHARLES C. MACMILLAN, D.S.O., M.D., FRED C. B. GITTINGS, M.D., RAMSAY M. RICHARDS, ALAN G. EASTMENT, GEORGE E. DUNCAN. Staff Surgeon LESLIE M. MORRIS to the *Bristol*, on relief of the *Hermione*, undated; Staff Surgeon JOHN STODDART, M.B., to the *Hermione*, on relief by the *Bristol*, undated; Staff Surgeon CHARLES J. O'CONNELL to the *Pembroke*, additional for Calshot Naval Air Station, vice Eastment, May 27th; Staff Surgeon THOMAS W. JEFFERY, to the *Vulcan*, vice Baxter, May 25th; Staff Surgeon NELSON J. ROCHE to the *Sutlej*, for voyage out and home, June 10th; Surgeon FRANCIS J. D. TWIGG to the *Queen* on recommissioning, undated; Surgeon JAMES L. BARFORD, promoted to Staff Surgeon, May 19th; Surgeon ALBERT J. TONKINSON to the *Excellent*, temporary, vice White, May 25th.

ROYAL NAVAL VOLUNTEER RESERVE.

STANLEY H. SCOTT appointed Surgeon, unattached, May 15th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL C. H. HALE, D.S.O., has been selected for the command of the Station Hospital, Sialkot.

Lieutenant-Colonel W. E. HARDY has been selected for the command of the Station Hospital, Calcutta.

Lieutenant-Colonel F. S. LE QUESNE, V.C., has been noted for a tour of service in India, Southern Army.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

THE following Captains, Army Medical Reserve, to be Captains, retaining their rank and seniority, May 1st: JAMES FINDON MURPHY, MURRAY R. TAYLOR, M.B. Lieutenant VIVIAN R. SMITH, M.B., resigns his commission, May 6th.

The undermentioned officers resign their commissions, April 3rd: Captain CLARENCE E. GREESON, M.B., Lieutenants GERALD M. GRAHAM, M.B., HENRY B. PARKER.

Lieutenant HENRY R. BORCHERDS, M.B., resigns his commission, May 13th.

Lieutenant GEORGE E. PEPPER is confirmed in his rank.

Lieutenant WILLIAM R. GARDNER, M.B., to be Captain, May 18th.

Cadet Sergeant JAMES C. BRASH, M.B., from the Leeds University Contingent, Officers' Training Corps, to be Lieutenant on probation, April 17th.

Cadet JAMES O'BRIEN, from the Royal College of Surgeons in Ireland Contingent, Officers' Training Corps, to be Lieutenant on probation, March 26th.

Cadet-Sergeant ALEXANDER C. JEBB, from the Glasgow University Contingent, Officers' Training Corps, to be Lieutenant on probation, April 24th.

Cadet (late Cadet Colour-Sergeant) FRANCIS G. MACNAUGHTON, from the Edinburgh University Contingent, Officers' Training Corps, to be Lieutenant on probation, April 29th.

ARMY MEDICAL RESERVE.

Captain SAMUEL K. ADAMS, M.B., and Lieutenant ALFRED S. MILLARD, M.B., are removed on completion of periods of service prescribed by Article 641 of the Royal Warrant for Pay and Promotion, 1907, dated April 30th and January 31st respectively.

INDIAN MEDICAL SERVICE.

THE services of Captain C. E. PALMER are placed permanently at the disposal of the Government of the United Provinces for employment in the Gaol Department, with effect from January 22nd, 1914.

The services of Major A. W. GREIG are placed permanently at the disposal of the Government of the Punjab, with effect from October 24th, 1913, for employment in the Gaol Department.

Colonel R. N. CAMPBELL, C.B., C.I.E., M.B., is permitted to retire from the service, with effect from April 2nd, 1914.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Second East Anglian Field Ambulance.—Lieutenant BENJAMIN B. MORGAN, M.D., from the Third West Riding Field Ambulance, to be Lieutenant, April 18th.

First Home Counties Field Ambulance.—Lieutenant ARTHUR P. DRAPER, M.B., resigns his commission, May 23rd.

Third Home Counties Field Ambulance.—Lieutenant EDWIN A. HOUCHIN to be Captain, April 12th.

Sanitary Service.—Captain GEORGE A. BROWN, M.B., resigns his commission, May 23rd.

For Attachment to Units other than Medical Units.—JOHN C. MCKENZIE, M.B., to be Lieutenant, April 20th; JOHN D. STALEY to be Lieutenant, January 22nd.

Attached to Units other than Medical Units.—Captain HENRY A. C. HARRIS, Lieutenant JOHN A. WEST, OWEN J. PARRY EDWARDS M.B., resign their commissions.

Second London Sanitary Company.—Lieutenant WILLIAM A. BERRY M.B., resigns his commission, May 20th.

CHANGES OF STATION.

THE following changes of station among the officers of the Army Medical Service have been officially reported to have taken place during April:

		FROM		TO
Colonel	C. C. Reilly	Calcutta	...	Chatham.
Lieut.-Colonel	R. H. Hall, M.D.	—		Aldershot.
,,	J. J. Gerrard, M.B.	—		W. Africa.
,,	R. Holyoake	Sheerness	...	Kamptee.
,,	F. Smith, D.S.O.	Calcutta	...	Dublin.
Major	L. P. More, M.B.	Secunderabad	...	Wellington, Madras.
,,	St. J. B. Killery	Bangalore	...	Lucknow.
,,	G. T. K. Maurice	Worcester	...	Tidworth.
,,	F. E. Gunter, M.B.	Tidworth	...	R.M. College.
,,	E. W. Bliss	Chatham	...	Tidworth.
,,	A. W. N. Bowen	Belfast	...	Curragh.
,,	H. B. G. Walton	Bareilly	...	Ranikhet.
,,	G. M. Goldsmith, M.B.	Lebong	...	Irish Command.
,,	G. J. A. Ormsby, M.D.	Meerut	...	Dublin.
,,	J. Matthews	Secunderabad	...	York.
,,	J. F. Martin, M.B.	R.M. College	...	Aldershot.
,,	A. H. Safford	Lucknow	...	Warley.
,,	A. E. Hamerton, D.S.O.	Nyasaland	...	Colchester.
,,	J. T. Johnson, M.D.	Lucknow	...	Naini Tal.
,,	J. C. Kennedy, M.D.	...	...	Lebong.
,,	H. G. Pinches	Chatham	...	Sheerness.
,,	W. Davis	Meerut	...	Naini Tal.
,,	D. L. Harding, F.R.C.S.I.	Londonderry	...	Mullingar.
,,	H. W. Long, M.B.	Choulston	...	Netheravon.
,,	R. Rutherford, M.B.	—	...	Cardiff.
Captain	R. Storrs	Dorchester	...	Portland.
,,	B. G. Patch	Bradford	...	Kirkee.
,,	J. T. McEntire, M.B.	—	...	Cork.
,,	J. A. Turnbull	Kamptee	...	Jubbulpore.
,,	H. C. Winckworth	Woolwich	...	Quetta.
,,	K. A. C. Doig	Meerut	...	Chakrata.
,,	C. R. Millar	Ballincollig	...	Cork.
,,	R. J. C. Thompson	—	...	Chatham.
,,	C. W. O'Brien	London	...	Pirbright.
,,	A. C. Amy, M.D.	Bury	...	Preston.
,,	W. Mitchell, M.B.	—	...	Wrexham.
,,	E. B. Lathbury	Cork	...	Kilworth.
,,	C. Scaife, M.D.	Belgaum	...	N. Command.
,,	D. M. Corbett, M.B.	Ambala	...	W. Command.
,,	E. D. Caddell, M.B.	Dublin	...	E. Command.
,,	J. A. Bennett, M.B.	Cork	...	Youghal.
,,	W. F. M. Loughnan	Aden	...	Hounslow.
,,	E. C. Phelan, M.B.	Barrackpore	...	Irish Command.
,,	C. H. Denyer	Agra	...	S. Command.
,,	W. K. Beaman	Malta	...	York.
,,	S. Field	Jamaica	...	Queenstown Harbour.
,,	F. H. M. Chapman	Meerut	...	Delhi.
,,	R. D. O'Connor	Multan	...	Sheffield.
,,	O. R. McEwen	,,		Londonderry.
,,	M. O. Wilson, M.B.	Aden	...	Chatham.
,,	A. C. Elliott, M.B.	Landguard Fort		Colchester.
,,	F. Casement, M.B.	Lucknow	...	Edinburgh.
,,	W. J. Tobin	Madras	...	Bangalore.
,,	W. E. Marshall, M.B.	Kinsale	...	Cork.
,,	E. W. Vaughan, M.B.	Devonport	...	Okehampton.
,,	T. J. Mitchell, M.B.	Lahore	...	Sabathu.
,,	S. S. Dykes, M.B.	Lebong	...	Dum Dum.
,,	H. F. Joynt, M.B.	Cape Town	...	Wynberg.
,,	A. S. Cane	Kirkee	...	Purandhar.
,,	J. M. Weddell	Fyzabad	...	Delhi.
,,	F. H. Dickson, M.B.	Bareilly	...	Ranikhet.
,,	G. O. Chambers	Cairo	...	Alexandria.
Lieutenant	D. Reynolds, M.B.	Attock	...	Sialkot.
,,	W. L. E. Fretz, M.B.	Ambala	...	Peshawar.
,,	R. Davidson, M.B.	Lucknow	...	Meerut.
,,	T. E. Osmond	Ambala	...	Lucknow.
,,	R. T. Vivian	Bangalore	...	Secunderabad.
,,	E. B. Allmett	Purandhar	...	Poona.
,,	E. C. Deane	Bareilly	...	Meerut.
,,	W. McNaughtan, M.B.	Quetta	...	Karachi.
,,	D. T. M. Large, M.B.	—		Mhow.
,,	W. W. Pratt, M.B.	London	...	Poona.
,,	E. A. Strachan, M.B.	Bareilly	...	Ranikhet.
,,	J. H. M. Frobisher, M.B.	Lucknow	...	Barrackpore.
,,	D. T. Richardson, M.B.	Poona	...	Jubbulpore.
,,	S. J. Higgins	Lucknow	...	Sitapur.
,,	G. A. Blake, M.B.	,,		Fyzabad.
,,	R. W. Vint, M.B.	,,		Agra.
,,	C. Sproule	Devonport	...	Taunton.
,,	L. E. Repper	Oxford	...	Larkhill Camp.
,,	A. M. Davies	Lucknow	...	Allahabad.
,,	L. Dunbar, M.B.	,,		Calcutta.
,,	F. C. Davidson, M.B.	—		Glasgow.
,,	W. P. Croker, M.B.	Dublin	...	Newry.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ABERDEENSHIRE: PARISH OF TYRIE.—Medical Officer. Salary, £30 per annum.

ABERDEEN UNIVERSITY.—Lectureship in Public Health. Salary, £400 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £150 per annum.

BEDFORD COUNTY ASYLUM.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Surgeon (male). Salary at the rate of £75 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House-Surgeon (male). Salary, £120 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Locumtenent. Remuneration, £4 4s. weekly.

BIRMINGHAM CITY.—(1) Assistant Medical Officer for the Yardley Road Sanatorium; (2) Non-resident Assistant Medical Officer for Central Tuberculosis Dispensary. Salary, £250 and £350 per annum respectively.

BIRMINGHAM: CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £160 per annum.

BIRMINGHAM GENERAL DISPENSARY.—(1) Resident Medical Officer; salary, £220 per annum. (2) Locumtenent; salary, £5 5s. a week.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Dudley Road Infirmary. Salary, £150 per annum.

BISHOP AUCKLAND RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £500 per annum.

BOURNEMOUTH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

BRADFORD CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £200 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon (male). Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BRITISH MEDICAL ASSOCIATION.—Assistant Medical Secretary. Salary, £600 per annum.

BURNLEY: VICTORIA HOSPITAL.—Two House-Surgeons. Salary, £135 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £100 per annum.

CANADA: QUEEN'S UNIVERSITY MEDICAL FACULTY, KINGSTON.—(1) Assistant Professor in Bacteriology and Hygiene. (2) Assistant Professor in Practical Physiology. Salary, £300 per annum each.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £90 per annum respectively.

CARDIFF: KING EDWARD VII HOSPITAL.—(1) House-Surgeon for the Ophthalmic and Ear, Nose, and Throat Departments; (2) Two House-Surgeons. Salary for (1) £100 per annum, and for (2) £60 per annum each.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street, W.C.—Assistant Surgeon.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.—Registrar.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—(1) Second Honorary Anaesthetist. (2) House-Physician; salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant in the Out-patient Department.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Pathologist and Registar.

DEVONPORT: ROYAL ALBERT HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £120 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer to Casualty Department; (2) House-Physician (males). Salary at the rate of £100 and £75 per annum respectively.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EGYPT: PUBLIC HEALTH DEPARTMENT.—Medical Officer as an Inspector for the Ankylostomiasis Campaign. Salary at the rate of £600 per annum.

ESSEX EDUCATION COMMITTEE, Chelmsford.—Medical Inspector of School Children. Salary, £300 per annum, rising to £400.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

FRENCH HOSPITAL, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £60 per annum.

GALWAY: UNIVERSITY COLLEGE.—(1) Assistant in Anatomy; (2) Assistant in Physiology. Salary, £175 per annum each.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House Surgeons. Salary, £120 and £100 per annum respectively.

HAMPSHIRE COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary, £300 per annum, rising to £400.

HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £30 for six months and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho Square, W.—Resident Medical Officer. Salary at the rate of £80 per annum.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House-Surgeon (male). Salary, £80 per annum.

HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.

HULME DISPENSARY.—House-Surgeon. Salary, £180 per annum, rising to £200.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S COLLEGE.—Demonstrator of Physiology. Salary, £120 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £150 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £130 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.—(1) Physician; (2) Physician for Diseases of Children; (3) Assistant Pathologist (part time). Honorarium, £50 per annum for (3).

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital, Harrow Road. Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum.

MANCHESTER CORPORATION.—Fourth Medical Assistant at the Monsall Fever Hospital. Salary, £130 per annum.

MANCHESTER EAR HOSPITAL.—Assistant Anaesthetist. Honorarium, £15 15s. a year.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for Out-patients and Accidents to Central Branch. Salary at the rate of £100 per annum.

MIDDLESBROUGH: NORTH ORMESBY HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £100 per annum for six months, rising to £110.

MIDDLESEX HOSPITAL, W.—Richard Hollis Scholarship in Cancer Research Laboratories. Value, £100 per annum.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland Street, W.—Resident Medical Officer (male). Salary at the rate of £80 per annum.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Demonstrator of Anatomy. Salary, £200 per annum.

NEW ZEALAND: UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary, £800 per annum.

NOTTINGHAM GENERAL HOSPITAL.—(1) Assistant House-Physician; salary at the rate of £100 per annum. (2) Locumtenent; salary, £4 4s. per week.

NOTTINGHAM GUARDIANS.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum for six months, increasing to £180.

NOTTS COUNTY COUNCIL.—Assistant Tuberculosis Officer. Salary, £300 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

PADDINGTON INFIRMARY.—Second Assistant Medical Superintendent of the Infirmary and Medical Officer at Workhouse. Salary, £140 per annum, rising to £150.

PLAISTOW FEVER HOSPITAL, E.—Second Assistant Medical Officer. Salary, £100 per annum.

PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer (male) for the Workhouse Infirmary, Workhouse, and Children's Home. Salary, £140 per annum, rising to £150.

PRESTON: COUNTY ASYLUM, Whittingham.—Junior Assistant Medical Officer. Salary, £250 per annum, rising to £300.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £80 per annum each.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £150 and £100 per annum respectively.

ROYAL DENTAL HOSPITAL, Leicester Square, W.—Assistant Dental Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Medical Registrar; (2) Additional Medical Officer for X-Ray Department. Salary, 100 guineas and 25 guineas per annum respectively.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary at the rate of £80 per annum each.

SALFORD UNION INFIRMARY.—(1) Male Senior Assistant Medical Officer; (2) Male Resident Assistant Medical Officer. Salary, £200 and £150 per annum respectively.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £90 per annum.

SALVATION ARMY: MOTHERS' HOSPITAL, Clapton.—Lady Resident Doctor.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Honorary General Physician.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £180 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £230 per annum, rising to £250.

SOUTH MANCHESTER GUARDIANS.—Junior Resident Medical Officer at Hospital. Salary, £120 per annum.

SOUTHWARK UNION.—Second and Third Assistant Medical Officer. Salary, £170 and £160 per annum, rising to £180 and £170 respectively.

STAFFORDSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum, rising to £350.

SUNDERLAND: ROYAL INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.—Honorary Anaesthetist.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Two Assistant Anaesthetists.

WESTMINSTER HOSPITAL, S.W.—(1) Assistant House-Physician; (2) Assistant House-Surgeon.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. (2) Junior House-Surgeon. Salary, £170 and £150 per annum respectively.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £120 per annum.

WOLVERHAMPTON EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BAKER, A. de Winter, M.R.C.S.Eng., L.R.C.P.Lond., Honorary Anaesthetist to the Putney Hospital (Chester Bequest).

BAYLIS, Kathleen, M.B., House-Surgeon to the Dewsbury and District Infirmary.

BETHUNE, W., M.B., C.M.Edin., Assistant Medical Officer to the Whitechapel Union Infirmary.

BONALL, F., L.R.C.P., M.R.C.S., District Medical Officer of the Horsham Union.

BROUGHTON-HEAD, L. C., M.B., Ch.B.Glasg., L.D.S.Eng., Dentist to the Royal Hospital for Sick Children, Glasgow.

DOYLE, J. S., M.B., Certifying Factory Surgeon for the Enniscorthy District of County Wexford.

GALLACHER, Thomas, L.R.C.P. and S.Edin., District Medical Officer of the Tynemouth Union.

GALPIN, Patrick Albert, M.D., B.Hy., D.P.H.Durh., Assistant Medical Officer under the Tuberculosis (Sanatorium Benefit) Scheme of the Bristol Health Committee.

GREEVES, R. Affleck, B.A., M.B., B.S., F.R.C.S., Assistant Ophthalmic Surgeon to the Middlesex Hospital.

HALL, C. H., M.D.Glasg., Certifying Factory Surgeon for the Watford District, co. Hertford.

LILLEY, Charles M., M.B.Syd., Resident Medical Officer, Warwick General Hospital, Queensland.

PARSONS, Ernest, L.D.S., R.C.S.Eng., Consulting Dental Surgeon to the Metropolitan Hospital.

POTTS, W. A., M.A., M.D., approved by the Board of Control for the purpose of signing Certificates of Mental Defect under the Mental Deficiency Act, 1913 (Sections 3 and 5).

RICHMOND, D. Stevenson, M.B., B.S.Glasg., Medical Officer and Public Vaccinator for Cwmamman District of Llandilofawr Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

DEATHS.

BUSTEED.—On April 27th, at "Tregare," 37, Hawke Road, Upper Norwood, Brigade Surgeon William John Busteed, M.D., late Indian Army, aged 78.

OZANNE.—On May 23rd, at Sheen House, Harrogate (suddenly), Frederic N. Ozanne, M.R.C.S., L.R.C.P. Funeral service, Holy Trinity Church, Guernsey; interred at Foulon Cemetery, Guernsey, on Thursday, May 28th, at 3 p.m.

DIARY FOR THE WEEK.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges and hospitals:

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JUNE.
2	Tues.	London: Public Health Committee, 3 p.m.
3	Wed.	London: Journal Committee, 2.30 p.m. Northern Counties of Scotland Branch, Annual Meeting, Invergordon, 11.30 a.m.
4	Thur.	London: Insurance Act Committee, 11 a.m. London: Medico-Political Assistant Medical Officers of Asylums Subcommittee, 5 p.m. (*provisional*).
5	Fri.	London: Medico-Political Committee, 10.30 a.m. London: Joint Medico-Political and Hospitals Committee, 3 p.m. (*provisional*). London: Central Ethical Committee, 2 p.m.
6	Sat.	Date of issue of Voting Papers for Council Election from Head Office. London: Organization of Medical Students Subcommittee, 12.15 p.m. Inverness-shire Division, Annual Meeting, Inverness, 3.30 p.m.
9	Tues.	London: Organization Committee, 2 p.m. London: Metropolitan Counties Branch Council, 4 p.m. London: Regulations and Standing Orders Subcommittee (*provisional*).
11	Thur.	Coventry Division, Annual Meeting, Coventry Hospital, 8.15 p.m. South Wales and Monmouthshire Branch, Annual Meeting, Llanelly.
12	Fri.	Liverpool Division, Liverpool, 4 p.m.
		JUNE (*continued*).
12	Fri.	Kent Branch, Maidstone, Lunch, 1.30 p.m.; Dinner, 6.30 p.m.
13	Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17	Wed.	London: Finance Committee, 2.30 p.m. Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, noon to 1 p.m.; Meeting, 1 to 3 p.m.; Excursions, 3 to 6 p.m.; Dinner, 7.30 p.m. Yorkshire Branch, Annual Meeting, Bradford, 4.15 p.m.; Annual Dinner, 6.30 p.m.
18	Thur.	East Hertfordshire Division, Annual Meeting, Hitchin, 3 p.m. Birmingham Branch, Annual Meeting, Birmingham, 3.30 p.m.
24	Wed.	London: Council Meeting.
26	Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
27	Sat.	Announcement of result of Election of Members to Council.
		JULY.
11	Sat.	London: Science Committee, 10.30 a.m.

ANNUAL MEETING, ABERDEEN, 1914.

Annual Representative Meeting, July 24th, and following days.

Presidential Address, Tuesday, July 28th.

Sections—Wednesday, July 29th; Thursday, July 30th; and Friday, July 31st.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 6TH, 1914.

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GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1914.

Sir DONALD MACALISTER, K.C.B., President, in the Chair.

DISCIPLINARY CASES.

ON May 27th the Council proceeded to the consideration of penal cases. Mr. Bodkin attended as Legal Assessor, Mr. Harper as Solicitor to the Council.

The first case was one in which the British Medical Association was complainant, and members of the Council who are also members of the Association retired during the proceedings in this case.

Medical Aid Association: Alleged Canvassing.

The case was that of Haripado Chatterjee, registered as of 1, East View, South Moor, Stanley, co. Durham, L.R.C.P. and S.Edin., and L.R.F.P.S.Glasg. 1910, who had been summoned to appear before the Council on the following charge:

That, being a registered medical practitioner, you, in the year 1913, accepted the post of medical officer of an association known as the South Moor Medical Association in the knowledge that such association had through its officials, by widely distributed circulars, by personal canvassing, and by solicitation of members of the miners' union in the South Moor district, sought to secure members of such association who, on joining it, would become the patients of the medical officer thereof.

And further that you have by public speaking in the South Moor district and by advertising in such speeches your own qualifications taken a prominent part in inducing and endeavouring to induce persons to join the said association and so to become your patients.

And further that throughout the year 1913, knowing that you were being advertised in the South Moor district as the doctor of the said association, you acquiesced in such advertising and continued to be employed as its medical officer.

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. HEMPSON (who, accompanied by the Medical Secretary, appeared for the British Medical Association) said that he had four cases to lay before the Council this session all of which presented many features in common, two being practically identical and arising out of the same set of circumstances. He desired the Council first of all to understand that there were no individual complainants in these cases. The complainant was the British Medical Association, which in the interests of the profession brought forward those cases which it felt merited the consideration of the General Medical Council. The cases had relation to medical aid institutions which were governed by lay bodies. He put it to the Council whether it was possible for these institutions to be formed without the aid of canvassing and touting for patients. Personally he did not think it was. He would submit evidence to show that it was the foundation of such institutions. It was not sufficient for medical men whose conduct was impugned to say they were unaware of such practices. It was their duty to the profession to make every possible inquiry, and satisfy themselves thoroughly that the institutions to which they proposed to attach themselves were not maintained by canvassing and touting for patients. Recent legislation had altered the conditions of medical practice very considerably, and the cases to be brought before the Council were due almost entirely to that altered condition of things which had caused these institutions to spring up all over the country in order to defeat the purpose of that legislation. Generally the attitude of those whose conduct was complained of was that they were sorry, and did not know that there had been canvassing and touting, they would do all in their power to prevent it in the future while retaining the position of which complaint was made. Was that sufficient? He contended that to remain in that position was a direct encouragement to similar institutions to do the same thing. Again, others admitted what occurred, and showed repentance by dissociating themselves from the particular institution complained of. But if they continued to practise in the locality they were taking to themselves the fruits of that which had occurred, and this, he should submit, merited the disapproval of the Council. With regard to the case of Dr. Haripado Chatterjee there were three branches of the case—first, as to accepting an appointment in the South Moor Association, which canvassed for patients; the second branch related to speaking at meetings, Dr. Chatterjee in his speeches advertising himself; the third was that, knowing there had been advertising, the respondent continued to associate himself with the South Moor Medical Association. The short point of the case was that the association was formed in 1913 for the purpose of supplying medical attendance to workmen at a reduced rate. There was no doubt that there had been a wide canvass in order to advertise the formation of the association. Notices had been published stating that the object of forming the association was that the best medical men could be kept. Canvassing had been carried on at the different collieries and circulars distributed broadcast. There had been issued by the medical association slips, circulars, and notices at the pit mouth. The terms on which medical men were to be engaged were that they were to receive a salary of

£350, which seemed to have been considered a fitting salary to offer. That opened up an extraordinary position with regard to the National Insurance Act, which he (Mr. Hempson) thought could not meet with the approval of the Council. The salary of £350 represented the sole benefit Dr. Chatterjee derived. Nevertheless, he went on the panel, and as a panel practitioner he would be entitled to the emoluments provided by the State. As a matter of fact the moneys thus received went to the society. Assuming that Dr. Chatterjee attracted to himself such a number of patients that the contributions from the State exceeded his salary, he was then working for the association at a profit to it. In this case transfer forms had been distributed amongst the workers, the object being to induce more people to join the medical association, and thus a larger profit would accrue to it. Dr. Chatterjee had in his declaration said that he knew nothing of what was going on. The question for the Council would be whether he did not shut his eyes and wilfully refuse to assume any knowledge on the matter. Mr. Hempson further stated that Dr. Charles had made a statutory declaration in which he referred to two meetings which had been reported in the local press. The meetings were open to all, and had been previously announced by a man going round the neighbourhood as a sort of crier. Dr. Chatterjee had said, in his declaration, that he thought the meetings were simply private meetings to introduce the doctor to his patients. That did not seem to be an explanation which could hold water. Dr. Chatterjee, in his speech at one of the meetings, said "he would try and introduce the latest methods of treatment, investigate cases properly, and give proper treatment. He considered it his duty to explain those facts to answer those who were not in favour of the association." If that was not a direct invitation to come into the fold, what could it be? At the meeting it was further stated that Dr. Chatterjee considered himself in no way inferior to medical men in the locality, and it was hoped the association would prove to be a death blow to one or two of the practitioners in the locality. Dr. Chatterjee had practically admitted that he was advertising himself at the meetings in question. What other construction could be placed upon it? In conclusion, Mr. Hempson said that if the Council found that there had been advertising then Dr. Chatterjee must assume full responsibility for it; if he disavowed advertising and canvassing, and the Council was of opinion that he could not be held responsible for it, then the submission was that the case was fully and sufficiently established by the speeches Dr. Chatterjee himself had made.

Dr. John Charles, in answer to Mr. Hempson, confirmed his declaration, and denied that he had been actuated by spite against Dr. Chatterjee in making the statements he did.

Cross-examined by Mr. Strother Stewart, solicitor, who appeared for Dr. Chatterjee: He had no knowledge of anonymous letters appearing in the local press stating that the doctors of the association were of doubtful reputation, that the appointments were a kind of Chinese slavery, and that the doctors were black doctors. Dr. Chatterjee's speeches were not, in the witness's opinion, in answer to such a letter. A number of letters appeared in the press at the time, but none alluded to black doctors. The witness could not remember any allusion to the doubtful qualifications of the doctor. He did not suggest that the announcements in the press regarding the meetings had been inserted by Dr. Chatterjee. Dr. Charles admitted that the circulars were all issued prior to Dr. Chatterjee coming into the neighbourhood.

With the Council's permission, Dr. Ingram Johnson and Dr. W. A. Benson were not called, but their declarations were admitted as evidence.

Mr. Henry Peart, in answer to Mr. Hempson, said he had seen the circulars issued on behalf of Dr. Chatterjee.

Cross-examined by Mr. Stewart, he said he had read the circular attached to the declaration. It was issued before Dr. Chatterjee came into the district. If it was not issued in support of Dr. Chatterjee, it was issued on behalf of anybody else who might come there. The circular was issued because of the suggestion to form a society.

By the President: He could not say that canvassing went on after Dr. Chatterjee came.

Mr. Stephen James Lyonette, in reply to Mr. Hempson, confirmed his declaration, from which it appeared that he had worked at the South Moor Colliery for about three years, and had lived in the neighbourhood for about ten years. In March he received a circular advocating the formation of a medical aid association; to it a slip was annexed to be signed by those who were in favour of such an institution; this he declined to sign. Extensive canvassing took place on behalf of the association and Dr. Chatterjee to witness's personal knowledge.

By the President: He was canvassed by some or all of the persons mentioned after Dr. Chatterjee came to the district.

Cross-examined by Mr. Stewart: Dr. Chatterjee's name was mentioned to witness by George Walton. The circular was issued as the result of an agitation for reducing the miners' contributions under the Insurance Act from 9d. to 6d. a fortnight. Dr. Chatterjee first came to the district on April 2nd, 1914.

Mr. John Muirhead, of 21, Oliver Street, South Moor, Durham, a miner, was also called; he had made a similar declaration, which he confirmed. In reply to Mr. Hempson, he said he was familiar with the circular with the slip annexed, which had been sent out as the result of the agitation, but he was told at the time it was handed to him at the pit that it was for the purpose of balloting for a doctor, and that they were to sign the slip as an authority to the manager to deduct the money from the men's wages. The circular was left at miners' houses, and was also distributed in the streets. This closed the case on behalf of the complainants.

Mr. Stewart, in addressing the Council on behalf of Dr. Chatterjee, said the circular had been issued as the result of an agitation by the Durham Miners' Union, the members of which had been in the habit of paying 9d. to the local doctor for attendance on themselves and their families, with a view to getting a reduction to 6d., having regard to the passing of the Insurance Act. Their opinion was that as the doctors would get their fees under the Act, and in addition their drugs supplied, which would mean a considerable addition to the doctor's fees, they, the miners, ought to benefit to the extent of paying 6d. instead of 9d. a fortnight for attendance on their families, and accordingly approached the local doctors to get that reduction, which they failed to do. They then held a meeting, and resolved that they would approach the manager of the mine to see whether he would cease deducting their contribution under the Act from their wages, and that they should form a society to provide medical attendance, and circulars were issued to that effect with the slip annexed for the miners who were in favour of the proposal to sign. Their idea in forming the society was to call in doctors when necessary in case of illness and pay them privately until a settlement with the local practitioners was arrived at, but at this time no idea was entertained of forming a medical aid society. It was soon found that the payment of full fees swallowed up the subscription of 6d. Some 900 miners in all signed the forms which were sent to the manager of the mine. They then formed the idea of inviting a medical practitioner into the district to serve them at a sixpenny rate, and it was in consequence of that that the circular complained of was issued, so that they could guarantee an amount which would be sufficient to make it worth the while of a medical man to come. All this took place at the beginning of last year. As a matter of fact, the handing out of the slips and the circulars took place before Dr. Chatterjee came into the district. They advertised, and Dr. Chatterjee applied for the post on or about March 29th, and on the same day he was appointed. He had no idea of what had gone on previously, and he thought—and his inquiries bore it out—that everything seemed in order. The gist of the charge against him was that he had accepted this appointment knowing that canvassing for patients had taken place, and unless the evidence actually brought this home to him, then the charge against him must fall through. The evidence of the witnesses called was not at all satisfactory, and was not sufficient to bring home such a serious charge against a medical practitioner; he would call witnesses who would contradict them, and prove that the circular was not issued until after Dr. Chatterjee came to the district.

Dr. Chatterjee, in answer to Mr. Stewart, confirmed his declaration which was before the Council. At the meetings which had been spoken of he was under the impression he was addressing only subscribers to

the association. He had received a Warning Notice from the Registrar of the Council, and a letter alleging canvassing. His reply had been to deny canvassing. If any canvassing had taken place it was entirely unauthorized by him and without his knowledge or consent.

Cross-examined by Mr. HEMPSON, Dr. CHATTERJEE adhered to his statement that he had no knowledge that canvassing had gone on in connexion with the association. He had asked the committee the very day before his appointment and was assured that no canvassing had been done. He was not aware until a few days after his appointment that any circular had been issued. Then he was informed that a circular was issued a few months before he took the appointment. He saw the circular. It had occurred to him then that the means of founding the association had been the circular, but it did not occur to him that the circular had anything to do with his appointment. There was no written agreement with regard to remuneration, but the salary was fixed at £350 per annum, horse and trap expenses found, and drugs supplied. He had 958 panel patients; from those patients £335 approximately was received and went to the society. Anything that was left over after all expenses were paid was to go to the doctor. The meetings at which he had been present he thought were meetings of subscribers only. He was told by the secretary to the association that there was to be a subscribers' meeting and that it was desired that the doctors should be present. He had received warnings—one from the Registrar of the Council in May, 1913—but satisfied himself as far as he could that there was nothing wrong.

Mr. JOHN REECE, called by Mr. STEWART, confirmed his declaration, and denied that any canvassing had taken place after the appointment of Dr. Chatterjee.

Cross-examined by Mr. HEMPSON: His committee dictated the circular referred to, and was responsible for it. About 5,000 of them were printed and distributed over an area covering 3,000 houses. They were issued for the purpose of ascertaining the feeling of the miners with regard to forming an association. They were distributed by six collectors; the distribution extended over a week. They were returned to the office before March 21st. Those signing the circular formed a guide as to whether there were sufficient members to form the association and to advertise for a doctor; after that there was no need to send it out. Five of the collectors were paid 7s. 6d. a day and one 5s. It was not to their interest to get persons to join the association. There were now only three collectors, and he was safe in saying that there was no encouragement for them to canvass or to seek to get new members in any way.

By the PRESIDENT: The whole of the money of the association was paid to the doctors, less expenses. Anything left over after paying the reasonable working expenses of the association was handed to the doctors over and above their salary. For the present year the association had guaranteed £400 and the whole of the confinements. The doctors were told that at the end of the year, if there was a surplus, the association would go better than £400. It was not the intention of the association to retain any profit; that was thoroughly understood.

Mr. THOMAS LIDDELL was called and confirmed his declaration, which consisted of a denial of the statements of Mr. Lyonette, that he had been canvassed by the witness.

Cross-examined by Mr. HEMPSON, he said that Mr. Lyonette's statements were wholly untrue.

Mr. GEORGE WALTON, Mr. PETER CLARKE, and Mr. JOHN HALL verified their declarations in support of Dr. Chatterjee.

This closed the respondent's case.

Mr. HEMPSON, summing up the case, said there was a conflict of evidence, and the Council had to satisfy itself as to what was the truth. There was one part of the case upon which there could be no doubt at all. That the medical association was founded by means of canvassing was abundantly established by the respondent's own showing. Their evidence had proved that they had distributed 5,000 circulars over a district containing 3,000 houses. Was it possible to have a wider canvass for an institution where a medical man's time, labour, and services were to be exploited? He admitted, apart from the speeches of Dr. Chatterjee, there was very slender evidence of anything like systematic canvassing going on after he became attached to the association. It had been said that the Council had to be satisfied that the canvass was with the knowledge of the medical man, but he (Mr. Hempson) did not accept that standard. If that were to be so the Council would be only encouraging such institutions to be formed by such methods, creditable or disgraceful, as they thought fit. He had touched on the aspects of the case which he asked the Council to take into its consideration, and in conclusion would leave the matter in the hands of the Council.

Strangers and the parties were directed to withdraw. At 6.30 the PRESIDENT intimated that the further consideration of the case was adjourned till the following day, when the Council resumed consideration of the case *in camera*, and strangers were directed to withdraw. On readmission, the decision of the Council was announced by the PRESIDENT as follows:

Mr. Chatterjee, I have to inform you that the Council has carefully considered the facts alleged against you in the notice of inquiry, and has found that the following fact has been proved, namely, "that you have by public speaking in the South Moor district and by advertising in such speeches your own qualifications taken a prominent part in inducing and endeavouring to induce persons to join the said association and so to become your patients"; but that the Council have suspended judgement till the November session, when you will be required to be present and to produce evidence as to your professional conduct in the interval, and as to the methods of the association under which you have accepted employment. The other facts alleged in the notice of inquiry had not been proved to the satisfaction of the Council.

Medical Aid Association: Alleged Canvassing: Charge Withdrawn.

The Council proceeded on May 28th to the consideration of the case of William Samuel Daroux, registered as of Station Road, Stanley, co. Durham, L.A.H.Dubl. 1910, L.R.C.S.Irel. 1911, who had been summoned to appear before the Council on the following charge:

That being a registered medical practitioner you, in the year 1913, accepted the post of medical officer of an association known as the Stanley and District Workers' Medical Association, in the knowledge that such association had, through its officials by widely distributed circulars, by personal canvassing, and by solicitation of members of the Miners' Union in the Stanley district, sought to secure members of such association who, on joining it, would become the patients of the medical officer thereof.

And that throughout the year 1913, knowing that you were being advertised in the Stanley district as the doctor of the said association, you acquiesced in such advertising and continued to be employed as its medical officer.

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants are the British Medical Association.

Mr. Hempson appeared in support of the charge, accompanied by Dr. Alfred Cox, Medical Secretary of the British Medical Association. Mr. Strother Stewart appeared for Dr. Daroux.

Mr. HEMPSON said he proposed to adopt a course which would shorten the inquiry. There was a declaration by Dr. Daroux stating that he had severed his connexion with the Stanley and District Workers' Medical Association. Mr. Stewart had informed him that the separation was complete, and there was no intention of resuming connexion either in this or any other such association. He was satisfied that Dr. Daroux recognized the position he had been called upon to explain was an untenable one.

The PRESIDENT inquired whether Mr. Stewart was willing that the case should be withdrawn.

Mr. STEWART expressed his willingness to assent to that course, but did not admit that the position of Dr. Laroux was an untenable one. It was true the doctor had severed his connexion with the association, and did not intend to renew it, but at the same time he desired to say that he was quite prepared to meet the charge. It was not admitted, and never had been, that canvassing had taken place.

Strangers and parties were directed to withdraw; on readmission,

The PRESIDENT announced the decision of the Council as follows:

Mr. Hempson and Mr. Stewart, the Council has considered the application of Mr. Hempson to withdraw the complaint and the charges made thereunder against Mr. Daroux, and has assented to the application.

Miners' Medical Aid Association: Alleged Canvassing Charge Dismissed.

The Council, on May 29th, considered the case of William Young, registered as of 13, Elliott Terrace, Usworth, Durham, M.B., Ch.B.Edin., 1902, who had been summoned to appear before the Council on the following charge:

That being a registered medical practitioner you, in the year 1913, accepted the post of workmen's doctor for Usworth Colliery, Durham, in the knowledge that a number of the members of the Miners' Union had been canvassed in your interest by the officials of the local branch of the said union at Usworth with a view to their becoming your patients, and that you having been appointed such doctor for the Usworth Colliery miners knowingly exhibited and caused and permitted to be exhibited at Usworth Colliery and at Washington Colliery notices signed by you inviting and soliciting persons to become your patients. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the British Medical Association.

Mr. Hempson, solicitor, accompanied by Dr. Alfred Cox, Medical Secretary of the British Medical Association, appeared for the Association. Mr. Lloyd-Graeme, instructed by Messrs. Rawle, Johnson, and Co., appeared for Mr. Young.

Mr. Hempson said that Dr. William Jaques, a medical man in the neighbourhood, within whose knowledge the facts in regard to this matter lay, had made a declaration to which he had adhibited a document which showed how the matter originated. Dr. Young at that date had not taken up his position, and therefore was not aware of its being issued. But from it other acts of canvassing flowed in which Mr. Young himself admittedly bore a prominent part. Mr. Young took up the appointment in May, 1913, and there were a series of advertisements emanating from this institution in or about October and November, 1913. A Mr. Postlethwaite had made a declaration to which he adhibited a document headed "Medical attendance under the Insurance Act," which was dated October 12th, 1913. Dr. Young in his declaration dissociated himself from that document, but he, Mr. Hempson, had reason to believe that Mr. Young on another occasion admitted what might be termed the paternity of the document. Mr. Whittle and Mr. Daniel Hamilton also exhibited notices which were admitted by Mr. Young to have been signed by him, and in his declaration he purported to explain the reasons why he found it necessary to publish them. It would be the question whether those reasons satisfied the Council. It was beyond doubt that the notices were put up in public positions and clubs where miners and men who belonged to the clubs had the opportunity to read them, and therefore an inducement offered to them to become patients of Dr. Young. He would call the declarants and submit them for cross-examination.

Dr. William Jaques, of Naworth House, Washington, Durham, confirmed his declaration which stated that at the collieries there was a suggested reduction of the medical contribution from 9d. to 6d. Practitioners affected by the question, on the ground of the extra work imposed upon them by the Insurance Act, refused to countenance any such reduction. Meetings of the Miners' Union were held and a ballot was taken upon which it was decided that a new rate of reduction should be made and a doctor advertised for. An advertisement appeared for a doctor at a salary of £375. Dr. Young commenced practice shortly afterwards. Within a few days 658 names had been put on his list of subscribers. It was the witness's view that such a large number could not have been obtained by spontaneous selection. Meetings were held urging the miners to support Dr. Young, and a specially printed form was issued by the officials of the Miners' Union. He believed that the men were induced under great pressure to sign these forms in favour of Dr. Young.

Cross-examined by Mr. Lloyd-Graeme, he said that all the miners employed in Usworth were members of the Durham Miners' Union, and three-fourths of the men were his patients. Naturally, when the miners appointed Dr. Young he supposed they would want him to attend them. He believed the union used great pressure to make the men support Dr. Young; in fact he (the witness) had been told by many men that it was not with their knowledge and consent that they were transferred to Dr. Young. He suggested that Dr. Young knew of the circulars before they were sent out. He had it on most reliable authority that Dr. Young admitted that to be a fact when before the Subcommittee of the Durham Insurance Committee. At the same time he had never known Dr. Young to ask any one personally to become his patient.

Mr. Daniel Hamilton (61, Spout Lane, Washington, Durham), examined by Mr. Hempson, verified his declaration, from which it appeared he was a member of the Usworth and District Working Men's Club, on the notice board of which in the month of October, 1913, at various times he saw the following notices displayed:

(A) Those men who are employed at Washington Colliery and who wish to pay to Dr. Young can do so by sending his name and address to Dr. Young, when a trustworthy collector will be sent every fortnight to collect the money. Those who wish to be placed on Dr. Young's panel list for next year must sign a form which he will receive from Dr. Young before October 24th. Washington men will be allowed the same privileges as those at Usworth. Signed, William Young, M.B., October, 1913.

(B) Notice.—Those men who are employed at Washington Colliery and who wish that Dr. Young should be their medical attendant are requested to send their names and addresses to him at his residence as soon as convenient. Washington men will be allowed the same privileges as those at Usworth. A trustworthy collector will be sent round every fortnight to collect the money. Those men who are not at present on Dr. Young's panel list can be placed on his list for next year by signing a special form, which they can obtain at his residence before October 24th. Signed, William Young.

(C) Notice.—Those persons who have sent in a paper to have Dr. Young as their panel doctor and who have received another from the Insurance Committee must bring it personally to Dr. Young at any time during the day as soon as possible.

The notices were put up in a conspicuous part of the club, where they would be seen by the 1,300 members and members of other clubs who were affiliated. In answer to the President, he said that he had never seen a doctor's notice exhibited on the club's notice board before, and he removed them from curiosity.

Mr. Richard Atkinson, 1, Gladstone Road, Usworth, said that before Dr. Young was appointed an attempt was made to collect all insurance tickets in the interests of the medical men who might be appointed. He was approached by the secretary of the Usworth Miners' Lodge and asked to mark his ticket so that he paid to Dr. Young. The witness was told he would have to pay or very likely leave the colliery.

Mr. Joseph Whittle, of Washington Village, Durham, said, in answer to Mr. Hempson, that he had seen the notice already referred to hanging in the public bar of his club.

Mr. James Postlethwaite, of Usworth, Durham, was called and verified his declaration which exhibited one of the notices displayed in the working men's club.

Mr. Lloyd-Graeme admitted Mr. Young's signature to them. This closed the evidence on behalf of the complainants.

The Council then adjourned.

When it resumed on May 30th, Mr. Lloyd-Graeme intimated that he would call his evidence at once and address the Council at its conclusion.

Mr. William Richardson, of 2, Manor View, Washington, Usworth, in reply to Mr. Lloyd-Graeme, said he was secretary of the Usworth Lodge of the Durham Miners' Association, and also secretary of the Usworth Branch of the Durham Miners' Association Approved Society under the Insurance Act. All the men working at Usworth Colliery were members of the union, and half of them were insured for the purpose of the Insurance Act in the Durham Miners' Association Approved Society. After the Insurance Act came into force the miners of Usworth asked the doctors to reduce the charge of 9d. a fortnight which they had hitherto made for attendance on miners and their families, the view of the miners being that as the doctors received payment under the Act, the 9d. should be reduced. A deputation saw the medical men, who refused to revise their charges. This was reported to a general meeting of the miners, and in consequence of what passed at the meeting he was authorized to tell the colliery company not to deduct the 9d. from the pay of the men. Subsequently a meeting was held to consider whether they should appoint a doctor to be paid by the men, and he was instructed to send out a circular with a ballot paper annexed, and a vote was taken on the question in exactly the same way as the union ballots were taken and a return made. There was no compulsion upon the men to vote one way or the other. The result of the vote was that between 700 and 800 voted in favour of the

proposal and about 50 against. He was then instructed to insert an advertisement in various papers for a fully qualified medical man at a salary of £375 *plus* maternity fees, with good prospects, which he did. A subcommittee was appointed to consider the applicants, of which there were fourteen, and ultimately Mr. Young was appointed, and he commenced his duties on May 13th. The agreement with Mr. Young was entirely independent of the Insurance Act. He was paid the £375 per annum for attendance on the members, which in no way depended on the amount he received under the Insurance Act.

By the PRESIDENT: The £375 was in addition to what the doctor would receive under the Act.

By Mr. LLOYD-GRAEME: Throughout the transaction his lodge had acted strictly from a business point of view. No steps were taken to compel any one to join, and there was no canvass on behalf of Mr. Young or an endeavour to take men from other doctors.

Cross-examined by Mr. HEMPSON: The agreement with Mr. Young was not in writing. He was employed for twelve months certain, determinable by a month's notice on either side. For the £375 a year he was to render the usual services of a medical man in the district, to provide the necessary drugs which were needed, and generally to look after the interest of the members from a medical point of view. The men would be on the panel, but the £375 was given because it was not clear that what the doctor was paid under the insurance would cover the payment for notes or certificates which were given to miners for compensation. It was a common thing to take a ballot of the men where their names and addresses were filled in. The form of the ballot was settled by the meeting.

Re-examined by Mr. LLOYD-GRAEME: After the Insurance Act came into force the medical men of the district refused to give notes or certificates for the purposes of compensation without being paid a fee; these had to be produced every week.

By the PRESIDENT: Sickness benefit under the Insurance Act was not paid to persons receiving compensation except where the compensation was less than 10s. a week. The words "good prospects" in the advertisements meant that it was a large and increasing district, and in addition to being works doctor the medical man appointed would be allowed to take as private patients persons who were not connected with the mine.

By Mr. LLOYD-GRAEME: The whole object of the advertisement was to get a man who would do for 6d. what the other medical man did for 9d.

Mr. MILES HANDY, in reply to Mr. LLOYD-GRAEME, said he was the treasurer of the Usworth Lodge of the Durham Miners' Association and also treasurer of the Usworth Branch of the Approved Society. He confirmed the evidence of Mr. Richardson so far as the facts were within his knowledge, and generally denied that any intimidation or compulsion was exercised on the men to induce them to join the association.

Mr. HEMPSON took it that there was a general denial of the complaint, and did not cross-examine the witness.

Mr. LLOYD-GRAEME was proceeding to call a number of miners who deposed that no pressure was brought to bear upon them to join, when

The LEGAL ASSESSOR intimated that it was unnecessary to duplicate evidence of this description.

Mr. LLOYD-GRAEME said that he had other witnesses of a like character, but after this intimation he would at once call his client.

Dr. YOUNG, in reply to Mr. LLOYD-GRAEME, said that before he took the appointment he had no knowledge that a ballot had been taken or that circulars were sent out. He had nothing to do with the drawing up of the circulars, and knew nothing about them. He never saw a copy until after the distribution. As to the question of the transfers, he did not know Mr. Richardson was going to put them up signed in his (Dr. Young's) name. He had been asked by the Washington men to address a meeting explaining how those men could join in with the Usworth men. He refused to address the meeting, but handed a copy of the circular to Mr. Fletcher, of the Washington Lodge, to give the men an idea of what to do. He never intended in any way to canvass, and had never attempted personally to get patients away from another doctor. So far as circulars might have reached the Washington men, he expressed regret for that; all the circulars had been drawn up and issued hurriedly.

Cross-examined by Mr. HEMPSON, Dr. YOUNG said he did not consider even a limited amount of canvassing was necessary; he had told Mr. Richardson to stop the issue of circulars. The circulars did form the subject of inquiry before the County of Durham Insurance Committee, where he admitted that he knew of the publication of the circular, but denied that it was published with his consent. His appointment was solely with the Usworth Colliery, and he had nothing to do with the Washington Colliery.

By the LEGAL ASSESSOR: He was not asked whether he consented to the circulation of the circular when before the Insurance Committee. He knew nothing about it, and when he found it was being issued he did everything he could to stop it.

By the PRESIDENT: He had 763 panel patients now, all of whom were members of the club.

Mr. LLOYD-GRAEME submitted to the Council that there was no evidence in support of the first part of the charge as to the balloting of members before Dr. Young's appointment. He submitted there had been no canvassing of any kind after the appointment. If the Council were to hold that there had been, it would mean that no trade union could vote as to whether they would employ a doctor of their own or not. On the second branch of the charge there was no evidence proving that Dr. Young knew of the issue of the circulars. As had been said, when he discovered it he did everything to stop any further issue. With regard to the notices given by Dr. Young to Mr. Fletcher, it was proved that inquiries had been made by Washington men as to how they were to get Dr. Young's services. Dr. Young was asked to address a meeting of them, and refused, but he gave Mr. Fletcher a copy of the notice complained of, and the sole intention he had in doing that was that the men who had already made up their minds to become his patients might know exactly the way in which it could be done. Dr. Young had stated frankly in the box that if he had known how the circulars were to be used, or if he had known that the notices were going to be put in public places where they would reach a wider public, he would not have assented to it. Mr. Lloyd-Graeme submitted that the whole conduct of Dr. Young in the box showed he was throughout determined to support the honour and integrity of the profession. If he had acted in a wrong way with regard to the Washington men, it was entirely through inadvertence, and not in any sense wrongdoing. The last thing in his mind was to canvass for patients. Dr. Jaques admitted he had never known a case of personal canvassing by Dr. Young. Notice (C) was addressed only to men who had expressed a wish to become Dr. Young's patients. In conclusion, Mr. Lloyd-Graeme submitted that what had been done could not possibly be called infamous conduct. So far as there was indiscretion, Dr. Young apologized most humbly, and left the case in the hands of the Council, with the knowledge that it would do what was right and just.

Mr. HEMPSON, in reply, submitted that it was clearly proved that there had been canvassing in connexion with the appointment of Dr. Young, and that it was clear from the evidence that before accepting the appointment he made no inquiries with regard to it. Further, the notices which were admittedly issued within a week of his appointment contained frequent references to him, and it was a most extraordinary thing, if his feelings were so outraged by the issue of them as had been suggested, that he took no steps to repudiate them. It was uncontradicted and unchallenged by the evidence that the notices were exhibited in public places, and they remained there for some considerable time. All this was done at a critical period for the profession—namely, the period of transfer under the Act, and whatever might have been the motive of Dr. Young in issuing them, it was impossible not to see what the effect of such a practice would be; the excuse put forward that it was done in hurry was wholly insufficient. It was, of course, for the Council to take into its consideration the whole of the circumstances of the case on the evidence placed before it, but he contended that the case submitted on behalf of those he represented was proved, and he would leave it in the hands of the Council to deal with.

Strangers and the parties were directed to withdraw; on readmission,

The President announced the decision of the Council as follows:

Mr. William Young, I have to inform you that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council, and that the complaint is accordingly dismissed.

The Council then adjourned till 2 o'clock on Monday, June 1st.

Alleged Canvassing: Apology Accepted.

On June 1st the Council considered the case of Edward Nangle Smartt, registered as of Leven, Hull, L.R.C.P. and S.Irel., who had been summoned to appear before the Council on the following charge:

That being a registered medical practitioner you have sought to attract to yourself patients by canvassing in person and by an agent for subscribers to a private medical club instituted by you, and by sending out to persons who were not your patients a printed circular letter signed by you offering your services in connexion with such club, and intimating that your secretary would call on the recipient. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the British Medical Association.

Mr. Hempson, solicitor, accompanied by the Medical Secretary (Dr. Alfred Cox), appeared for the British Medical Association. Mr. Dobbs appeared for Dr. E. N. Smartt.

Mr. Hempson said that prior to the coming into operation of the Insurance Act Dr. Smartt was medical officer of certain clubs which on the passing of the Act were disbanded. There were a number of people who derived no benefit under the Act, and for the purpose of providing medical attendance for them Dr. Smartt proposed forming a medical club. To this end he sent out a circular inviting those persons to join it. The fact of the issue of this circular was brought to the attention of the local medical men, and through the East Riding Medical Committee to that of the British Medical Association, and by the Association to the General Medical Council. The Council communicated with Dr. Smartt, and the latter wrote in reply expressing his sincere regret for the course he had adopted, stating that it was due to an error of judgement. If that was Dr. Smartt's attitude to-day, the British Medical Association had no desire to press the case harshly, and if his counsel could assure them it was so, he (Mr. Hempson) would leave the case in the hands of the Council.

Mr. Dobbs, interposing on behalf of Dr. Smartt, assured the Council at once that he frankly adhered to the position taken up by him in his letter. He took up this position spontaneously as a professional man, without any pressure from his legal advisers and on his own initiative. He felt he had made a mistake, and desired to express to the Council and his fellow practitioners his sincere regret for the error he had committed. Mr. Hempson formally put in the declarations.

Mr. Dobbs said that he did not desire to cross-examine the declarants.

This closed the case on behalf of the complainants.

Mr. Dobbs formally called Dr. Smartt, who repeated to the Council his regret for what had occurred. He realized he had been guilty of an error of judgement, for which he expressed his regret.

Mr. Hempson, in reply to the Legal Assessor, did not dispute the frankness and sincerity of Dr. Smartt's apology.

Strangers and the parties were directed to withdraw; on readmission,

The President announced the decision of the Council to Dr. Smartt as follows:

I have to inform you that the Council have found the facts alleged against you in the notice of inquiry to be proved to their satisfaction, but they have considered the explanations and apologies you have offered as given in good faith, and accordingly they have not seen fit to direct the Registrar to erase your name from the *Medical Register*.

Irregularity in Issue of Sickness Certificate.

The Council considered on May 29th the case of William Blaikie Mason, registered as of 218, Somers Road, Southsea, M.R.C.S.Eng. 1893, L.R.C.P.Lond. 1893, who had been summoned to appear before the Council on the following charge:

That being a registered medical practitioner you on November 1st, 1913, signed a certificate that one Patrick Matthews, of 46, Raglan Street, Southsea, was suffering from gastric colic, and was unable to follow his occupation, whereas you had neither seen nor examined the said Patrick Matthews, which said certificate was untrue, misleading, or improper.

And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the Lords Commissioners of the Admiralty, for whom Mr. Brigstocke appeared.

Dr. W. B. Mason appeared in person.

Mr. Brigstocke said that at the naval ports men were frequently given leave of absence, and since the concentration of the fleet in home waters ten years ago the practice prevailed far more than formerly. Frequently the naval authorities found difficulty in getting men to rejoin their ships in the proper time, more so at home ports than abroad. In the present case Patrick Matthews went on leave from H.M.S. *St. Vincent* on November 1st, which was a Saturday He did not return, and nothing was heard of him for two days. A certificate was received on the Monday signed, stating that he was unable to follow his occupation. Subsequently Dr. Mason admitted that he had not seen the man before granting the certificate. The naval authorities felt they would have no check over these men if they were able to procure certificates from doctors without first being seen by them. The certificate given by Dr. Mason was put in evidence. The captain of the *St. Vincent* communicated with Dr. Mason, who replied that on the evening of November 1st he was told that Matthews had pain of the same nature as he had had once before, and made up a bottle of medicine and gave a certificate. On the evening of November 4th Matthews called and said he was all right, and was given a certificate to that effect. The Lords Commissioners of the Admiralty had no desire to press the case in any way. Their only object was to endeavour to stop the practice of the giving of such certificates without the medical man first seeing the patient.

Dr. Mason said the facts of the case were that the landlady of Matthews came to the surgery and described symptoms which she said Matthews was suffering from. These symptoms resembled those present on a previous occasion, and he accordingly supplied medicine and gave a certificate that the man was unfit to work. Dr. Mason admitted that the certificate was misleading, and that he had acted improperly in giving it. He was very sorry for what he had done, and appealed to the Council to take no further action.

Strangers and parties were directed to withdraw; on readmission,

The President, addressing Dr. Mason, said that the Council had found that the facts alleged in the notice of inquiry had been proved; that the Council took a very serious view of the gravity of the matter. and had marked its sense of the gravity of such an offence by issuing a warning notice in the medical journals and elsewhere in November, 1911. After drawing attention to the terms of this notice, the President said that the Council, in order to give Dr. Mason an opportunity of proving that he realized the gravity of the offence, had decided to postpone judgement till the November session, when he would be required to produce testimony from his professional brethren regarding his character and conduct generally and as to his conduct in the interval.

Irregular Death Certificate.

The Council on May 28th considered the case against Alexander Girvan, registered as of 8, Palace Street, Buckingham Gate, London, S.W., M.B., C.M., 1894, M.D., 1904, Glasg.

Mr. Geo. Elliott, K.C., and Mr. Wickham appeared for Dr. Girvan.

Mr. Harper (solicitor to the Council) said the charge against Dr. Girvan was:

That being a registered medical practitioner, you were on December 4th, 1913 (after having elected to be dealt with summarily), convicted at the Westminster Police Court of unlawfully and wilfully making a certain false declaration under and for the purposes of a certain Act relating to the registration of deaths, and fined ten pounds and ten pounds costs.

The case arose out of the death of a woman which was the subject of a coroner's inquest, at which the jury added as a rider to their verdict that the circum-

stances attending the giving of the death certificate should be reported to the General Medical Council. The certificate certified that the woman died from appendicitis, peritonitis, and cardiac failure. Dr. Girvan alleged that he omitted the word "miscarriage" from the certificate without the slightest intention to deceive, and solely for the purpose of saving the patient's honour, and he did not know and could not have known that an illegal operation had been performed. Before the coroner the patient's brother and her mistress in evidence said that Dr. Girvan told them before giving the certificate that an illegal operation had been performed. Before the magistrate Dr. Girvan disclaimed having performed the operation, and it was not suggested that he had had anything to do with it. He pleaded guilty to the charge of giving an illegal certificate, which was described by the solicitor who appeared for him as a highly technical offence. A practitioner who suspected or ought to suspect that a crime had been committed, and yet gave a certificate which had the effect of covering up that fact, prevented attention being called to a possible crime. It was true Dr. Girvan reported the matter to the coroner, but only after he had been told by the relatives that they were going to do so.

Dr. SPILSBURY, who made the *post-mortem* examination, said, in answer to the PRESIDENT, that he found peritonitis. He came to the conclusion that some instrument had been used for the purpose of procuring abortion, apparently in the case of a three or four months pregnancy. In his opinion the cause of death ought to have been discovered before the *post-mortem* examination, though the cause of death might have been uncertain.

Dr. GIRVAN, in answer to Mr. GEORGE ELLIOTT, said he had been a member of the profession for eighteen years, and, with the exception of this unfortunate incident, no shadow of reproach had rested upon him during the whole of that time. The girl in question consulted him, complaining of pain over the appendix, and tenderness. He prescribed for her, and she got better. Shortly afterwards the patient came again, and Dr. Girvan wished her to go to Westminster Hospital, but she refused. A day or two later she came to the surgery in agony, saying that she had something coming away from her. Questioned as to whether she was pregnant, she replied in the affirmative, but begged the doctor to keep it secret. A nurse was sent for, who took her to a nursing home. She had an abortion, and a few days later died. Dr. Girvan repeated that he had no suspicion first of all, and when he asked the girl if she had been illegally treated, she denied it. Asked again in the presence of the nurse, she still denied it. There was nothing to lead to the supposition that the girl had been illegally treated. He did not put the word "miscarriage" in the death certificate as he had promised the patient not to do so.

Miss EMILY CARTER, a certified nurse, in answer to Mr. GEORGE ELLIOTT, said when she first saw the patient the question was raised in her presence as to whether the girl had had an illegal operation performed. The doctor asked the question, and the girl replied in the negative. On the way from the doctor's house the girl repeated the same statement, and there was nothing to lead to a contrary conclusion.

Mr. ELLIOTT, addressing the Council on behalf of Dr. Girvan, said the charge was now limited to the conviction before the magistrate in the terms which had been stated by Mr. Harper, and that charge and the confession made under the advice of the solicitor to the magistrate he did not intend to go behind. It was no part of Dr. Girvan's case now to shield himself, so far as his omission of any reference to the possible cause of the peritonitis or his omission of the word "micarriage" or any other word which might have indicated to what cause the peritonitis was due, or to justify from a professional standpoint his action in relation to that matter. All he desired was that the Council should look at all the surrounding circumstances of the case, and ask themselves whether, under those circumstances, it was a case which called for the infliction of the extreme penalty provided by the statute. In omitting the words from the certificate Dr. Girvan was now conscious that he had been guilty of an indiscretion, and he would not dream of so acting again in any future case. Dr. Girvan was undoubtedly moved by his promise to shield from the knowledge of the girl's family the facts relating to her condition, with a view of protecting her honour and reputation. How far he was justified after her death in omitting from the certificate the word which ought to have been added, he could only leave to the merciful consideration of the Council. He hoped it would not rush hurriedly to the conclusion that Dr. Girvan was actuated by improper motives. He was a man with no antecedent circumstances of impropriety pointing to suspicious professional conduct, and this one incident, standing alone, might well call for the lenity of the Council.

Strangers and the parties were directed to withdraw; on readmission, the PRESIDENT announced the decision of the Council as follows:

Mr. Alexander Girvan, I have to inform you that the Council has found your conviction for the misdemeanour alleged against you in the notice to have been proved; that the Council takes the gravest view of the offence of which you have been convicted, but that, having regard to the punishment which you have already received, the Council has suspended its judgement until the November session, when you will be required to attend and to produce evidence from medical men and others that in the interval your professional conduct has been without reproach.

Conviction for making False Death Certificates.

The Council considered on May 29th the case of Michael Joseph Ryan, of 106, Newport Street, Bolton, L.R.C.S.Ivel., who had been summoned to answer the following charge:

That being a registered medical practitioner you were at the assizes held at Manchester, and commencing on November 17th, 1913, convicted of unlawfully making false certificates purporting to be made under the Births and Deaths Registration Act, 1874, knowing same to be false, and sentenced to six months' imprisonment in the second division.

Mr. HARPER, solicitor to the Council, said that Mr. Ryan had furnished an insurance agent with seven certificates of death of different persons, none of whom he had attended, none of whom was ill, and all of whom attended at the trial as witnesses for the prosecution. The practitioner received fees for the seven certificates. In every instance in which a certificate was given, the particulars were so grossly untrue that the penalty could only be considered an extremely light one.

Mr. RYAN pointed out that the certificates were not given as purporting to be under the Act of 1874. In answer to the PRESIDENT he said that he knew the certificates were all untrue at the time he gave them.

Strangers and parties were directed to withdraw. On readmission the PRESIDENT announced the Council's judgement as follows:

Mr. Ryan, I have to inform you that you have been proved to have been convicted of the misdemeanour alleged against you in the notice of inquiry, and that the Registrar has been directed to erase your name from the *Medical Register*.

Convictions for Drunkenness: Decision Postponed.

The Council considered on June 1st the case of Caspar Denis Downing, registered as of 47, Mount Pleasant Square, Ranelagh, Dublin, L.A.H.Dubl. 1912, who had been summoned to appear before the Council on the charge that, being a registered medical practitioner, he had been convicted on three charges of drunkenness although not while practising. Mr. Downing did not appear, and was not represented.

Strangers were directed to withdraw; on readmission,

The PRESIDENT announced the decision of the Council as follows:

I have to state the Council have found that the convictions alleged against Caspar Denis Downing in the notice of inquiry have been proved to their satisfaction; but the Council have postponed pronouncing judgement on these convictions until November next, when Caspar Denis Downing will be required to attend in person, and to produce satisfactory evidence of his conduct in the interval.

DENTAL DISCIPLINARY CASES.

Reports on the following cases were presented by the Dental Committee:

1. In the case of Valleck Cartwright Mallan, registered as in practice before July 22nd, 1878, and residing at 106, Edgware Road, London, W., the allegation was that he had advertised his practice by card and pamphlet and in other ways. At the conclusion of the inquiry before the Dental Committee, Mr. Mallan offered to give an undertaking that in future he would not advertise in any form of which the Council disapproved.

Mr. R. W. TURNER, who appeared for the British Dental Association, said that having regard to the offer of an undertaking he would leave the matter in the hands of the Council.

Mr. Mallan expressed his regret for what had taken place. He had been established in business in Edgware Road for forty years, where he had much to contend with in regard to unregistered practitioners, by whom he was surrounded. The law was to blame and not himself for what he had done, as he had to support himself and family, and the only way he could do it was by keeping his name before the public. In conclusion he repeated his willingness to undertake not to advertise any more.

Strangers and parties withdrew; on readmission,

The President announced the decision of the Council as follows:

Mr. Mallan, the Council has considered the report of the Dental Committee in regard to the facts proved against you, and it has considered the undertaking which you have given that in future you will not advertise in any form of which the Council disapproves. The Council has deferred the further consideration of your case till the November session, when you will be required to be present and to produce satisfactory evidence as to your conduct in the interval, with particular reference to the manner in which you have carried out the undertaking regarding advertising which you have given to the Council.

2. In the case of John Winter, registered as in practice before July 22nd, 1878, and residing at 26, West Parade, Lincoln, the Committee found that the evidence established that Mr. John Winter resided at Mablethorpe, but practised at the address mentioned in Lincoln, where his son, J. G. Winter, resided and practised dentistry but was not on the *Dentists Register*, and that John Winter covered the practice of his son. The case was submitted by the British Dental Association. Mr. Winter was not represented and did not appear.

Strangers and parties were directed to withdraw; on readmission,

The President announced the judgement of the Council as follows:

Mr. Turner, I have to announce to you that, on the facts found in the report of the Dental Committee, it has been proved that John Winter has been guilty of infamous or disgraceful conduct in a professional respect, and that the Registrar has been directed to erase from the *Dentists Register* the name of John Winter.

3. In the case of John William Whitehead, registered as in practice before July 22nd, 1878, and residing at 10, Bellevue Street, Burnley, the Committee found that he had been convicted in 1904 under the provisions of the Gasworks Clauses Act, 1847, of an offence which in non-technical language consisted in tapping the gas mains of the local authority and stealing the gas; that in 1906 he had been convicted at Blackburn of stealing books, and again in 1906 at Accrington of stealing other books. His name had been erased from the *Dentists Register* in 1904 under Section 12 of the Dentists Act. He applied for restoration, and the Executive Committee was advised that the request should be complied with, but directed the Registrar to inform him that in the event of registration an inquiry would be held in regard to the convictions. Notwithstanding this he renewed his application and his name was restored, but the Committee found that he had, in response to an application from the Registrar, failed to furnish any satisfactory explanation of his convictions, and did not offer evidence of his conduct since 1906. The Committee found that the misdemeanour and felonies, in respect of which he was convicted, could be considered by the Council as sufficient to entitle it to erase his name from the *Register*.

Mr. Whitehead did not appear, and was unrepresented.

Strangers and the parties were directed to withdraw; on readmission,

The President announced the judgement of the Council as follows:

Mr. Harper, I have to tell you that John William Whitehead, having been proved to have been guilty of the two felonies and the misdemeanour set forth in the report of the Dental Committee, the Registrar has been directed to erase from the *Dentists Register* the name of John William Whitehead.

Warning Notice as to Certificates.

Mr. Verrall asked the President on May 28th when the Warning Notice of the Council would be issued to practitioners on the *Register* from M to Z. He had been asked to put the question on behalf of the Insurance Act Committee of the British Medical Association, with a view, if possible, to getting the remaining notices issued to practitioners before the expiration of the insurance year.

The President replied that an amended form of the notice would be submitted to the Council at a later date, and on June 1st the Public Health Committee submitted the notice in a revised form, containing certain alterations and extensions recommended by the Solicitor. The notice as revised will be published in a subsequent issue.

The Inspection of Examinations.

The Chairman of the Education Committee, Dr. Mackay, presented a report by the Education and Examination Committees, acting conjointly, advising the Council to commence in the year 1915 a cycle of inspection (under Section 3 of the Medical Act, 1886) of the qualifying examination held by the several licensing bodies in the United Kingdom, and recommending that members of the Council should be appointed to act as visitors.

Dr. Mackay said that inspection was a statutory duty imposed upon the Council. It was ten years since the last cycle was undertaken, and in the interval several new bodies had come into existence which had not been inspected; it was really the duty of the Council to undertake the work largely on that ground. The Committee felt that a case might arise in which the body inspected dissented from the inspectors' opinion, and that therefore it would be well that the Council should be represented, and have an independent opinion if any case of dispute arose. The visitors proposed would, as members of the Council, be qualified to give it their advice.

The report was received, entered on the minutes, and adopted, and it was resolved:

That it be delegated to the Executive Committee to make all necessary arrangements for the inspection and visitation of qualifying examinations directed to begin in 1915, and to nominate to the Council at the November sessions suitable persons for the appointment of inspectors.

Recognition of Certain Preliminary Examinations.

A report of the Education Committee upon the recognition of certain preliminary examinations was entered on the minutes.

Dr. Mackay said that with regard to these examinations generally there was little to report to the Council, because it was usually found that the bodies concerned were willing to adopt any suggestions made by the Education Committee, which always very carefully considered any representations put forward. The part of the report dealing with the Indian universities was, he said, the more important. The report really meant that the Council were ready to recognize studies in chemistry, physics, and biology after matriculation, but before the absolute completion of the student's work.

The report on the subject is as follows:

Matriculation Examinations of the Indian Universities.

The Universities of Allahabad, Bombay, Madras, and the Punjab require of their own students that after passing the Matriculation Examination they shall engage in further study in subjects of general knowledge for a period of one or two years before entering for the first professional examination in chemistry, physics, and biology. This additional general study is usually carried on simultaneously with the study in the preliminary sciences. On the other hand, the University of Calcutta does not demand from its candidates for degrees in medicine any further test or proof of further study in general knowledge than that implied in the passing of the Matriculation Examination.

In consequence the four first-named universities do not accept the Calcutta Matriculation Examination by itself as sufficient test of preliminary education, but require it to be supplemented by the Intermediate Examination or the Preliminary Scientific Examination of the university.

It is the usual practice of the General Medical Council to recognize only those examinations conducted by universities which the universities themselves accept as sufficient for their own degrees; and the Committee would therefore recommend that no Indian examination should be recognized as sufficient by the licensing bodies in this country which is not accepted as such by all the Indian universities.

The Committee propose to modify the regulations regarding the registration of Indian students as set forth on page 10 of the regulations for registration as follows, namely:

* University of Allahabad:
- Matriculation Examination.
- Intermediate Examination.

* University of Bombay:
- Matriculation Examination.
- Preliminary Scientific Examination or Previous Examination.

* University of Calcutta:
- Matriculation Examination.
- Preliminary Scientific Examination or Intermediate Examination.

* University of Madras:
- Matriculation Examination.
- Intermediate Examination.

* The Punjab University:
- Matriculation Examination.
- Intermediate Examination in Arts or Science.

*United Provinces (India) Education Department: The School Leaving Certificate may replace the Matriculation Examination of any of the Indian Universities.

The Committee would further recommend that in the case of students in the Indian universities, study in chemistry, physics, and biology carried out within the colleges of these universities subsequent to the passing of the Matriculation Examination, although prior to the completion of the additional examination required by the Council, be recognized as part of the medical curriculum. They propose, therefore, to insert the following note upon page 10 of the Regulations for Registration of Students.

Proposed Note to Page 10 of Regulations for Registration.—The Matriculation Examinations of these universities and the School Leaving Certificate of the United Provinces (India) Education Department, when certified as embracing the subjects prescribed by the General Medical Council, are accepted as entitling the student to undertake as part of the recognized medical curriculum, the study of chemistry, physics, and biology within any of the colleges affiliated to these universities, but they will not be accepted as entitling to admission to the *Students Register* in the United Kingdom, unless accompanied by evidence in each case of a pass in one or other of the additional examinations specified in the detailed list.

The report was adopted.

MILITARY ASSISTANT SURGEONS IN INDIA: INDIAN CERTIFICATES.

A report on military assistant surgeons in India and Indian certificates was presented by the Chairman of the Examination Committee, Sir CHARLES BALL.

In 1912 the Council specified certain conditions under which students coming from various medical colleges in India would receive recognition in this country of studies taken in India. The report contained a statement of the courses of study and examinations undergone by military assistant surgeons, a record of recommendations made by the Council to the licensing bodies, and certain certificate forms prepared by the India Office and the Council acting together, to be used by candidates seeking recognition in this country for work done in India. The report was forwarded to the India Office, and from a communication recently received it appeared that the certificates as originally drafted were not entirely acceptable to the Government of India. That Government made certain suggestions with regard to certificates affording proof of character and identity with which the Committee was in entire agreement. The other certificates had reference to (1) preliminary examination of general knowledge; (2) course of study; (3) the professional examinations passed by the candidate. The report continued as follows:

The actual recommendations of the Indian Government are as follows: With reference to Form I (the Preliminary Examination Certificate), that the heading "for use in the Indian Universities" be deleted, and that words should be added below showing that the Certificate may be signed either by a Registrar of a University, or by a Divisional Inspector of Schools, a Commissioner for Government Examinations, or by the Director-General, Indian Medical Service (in the case of Military Assistant Surgeons). In this connexion the India Office has asked the Council whether an examination in General Knowledge, such as that for which a Divisional Inspector of Schools, or a Commissioner for Government Examinations, would be responsible, and whether the Preliminary Examination for Military Assistant Surgeons would be accepted as satisfactory by the Council for purposes of registration in this country.

With regard to Form II. which deals with the curriculum, it is recommended that this form should not be filled up in the case of Graduates, and of Military Assistant Surgeons who have entered upon service, and therefore have *ex hypothesi* completed their medical education. It is further suggested that when used for Students the form should be signed by the Principal or Superintendent of the Medical College or School at which the curriculum was undertaken. The Indian Government has also proposed the addition of words to this form to the effect that the course must have been taken at a College or School which is recognized by the Government.

As regards Form III—the Examination Certificate—it is recommended that the form should be altered so as to include the attestation of the examination for Military Assistant Surgeons, as well as that for the University degree or diploma, and that the Director-General should be the signatory in respect of the examinations conducted under his control.

There is also a general recommendation that the three educational certificates, together with a single certificate of identity and character, should be printed on one form.

With reference to the Preliminary Examinations, and to Form No. I of the Certificates, the Committee would point out that the principle upon which recognition is extended to candidates from India and the Colonies, for the purpose of enabling them to obtain qualifications which confer the privilege of Registration in this country, is based upon the equality of the work done by them with that which is accepted by Licensing Bodies in the United Kingdom. They are of opinion that to recognize the examinations mentioned other than those of the Indian Universities specified in the list published in the "Regulations of the General Medical Council in regard to the Registration of Medical and Dental Students" would probably have the effect of lowering the standard which has been attained within this country, and would certainly hinder educational progress at home and throughout the Empire. The aims of the Council are constantly directed towards the elevation of the standard of general education in the profession, and the Committee feel sure that the Indian Government, once they have been made cognizant of them, will appreciate and support them. The Committee are therefore of opinion that the alterations proposed upon this Form (No. I) cannot be given effect to with advantage.

The Military Assistant Surgeons form a class which has undergone a modified medical training for a period of four years in one of the Indian Colleges. The Council have permitted the recognition of this course under certain conditions as equivalent to three years of study in this country, but they have not sanctioned the acceptance of the preliminary and professional examinations connected with it. In the circumstances the Forms Nos. I and II are not called for in the case of applicants belonging to this class, and Form No. III as amended in conformity with the recommendations of the Indian Government and signed by the Director-General is all that is necessary.

In the case of Graduates of the Indian Universities, Form III as amended and signed by the Registrar of the University concerned, would also be sufficient. The courses of study undertaken by this class among the applicants is fully detailed in the Calendars of these Universities.

In the case of Students Form II would be required when credit is claimed for the course of study, and Form III, in addition, when exemption from one or more of the professional examinations is sought for. These two forms cannot therefore be treated as in all cases alternative; both would be necessary in a number of instances.

The recommendation that a form of words should be added to Form II to indicate that the courses of study for which recognition is asked "must have been taken in a College or School which is recognized by the Government" would, in the opinion of the Committee, if carried into effect, introduce an important and valuable safeguard; but, in view of the probability that Government recognition is widely spread over all classes and grades of schools, it seems necessary to provide specially that only those of University Standard should be chosen. In the opinion of the Committee this could be effected by an addition to the restrictive clause quoted above, stating that the College or School is accepted for purposes of Medical Study by one of the Indian Universities. This proposal, if adopted, would bring about an arrangement similar to that which prevails in this country.

The proposal that the several educational certificates should be printed on one sheet along with a single character and identity certificate is one which recommends itself to the Committee.

The report, which had been prepared by the Examination Committee, with the co-operation of the Chairmen of the Education and Students' Registration Committees, was adopted, and directed to be transmitted to the India Office.

"BRITISH PHARMACOPOEIA" (1914).

The PRESIDENT placed on the table, on behalf of the Pharmacopoeia Committee, a revised proof of the text and appendices of the *British Pharmacopoeia* (1914). It represented, he said, many years of work, with the assistance of the able editors who had been secured, and it was believed the book would be quite worthy to take its place as the official medicine book of the empire. The proof was submitted subject to the typographical and other editorial corrections which might be necessary, and to the addition of an index.

The Council delegated to the Executive Committee to receive from the Pharmacopoeia Committee the completed draft of the new pharmacopoeia, to adopt it on behalf of the Council as the *British Pharmacopoeia* (1914), to carry out the statutory procedure as to the fixing of the price at which copies are to be sold, and as to giving official notice in the *Gazettes*, and making all necessary arrangements preparatory to the issue and publication of the work.

STUDENTS' REGISTRATION COMMITTEE.

On the Report on Exceptional Cases, Sir JOHN MOORE took exception to the exclusion or proposed exclusion of Latin. Exemption from Latin had been granted in two cases, and it looked very much like the thin end of the wedge.

Sir WILLIAM WHITLA strongly supported the Committee. It was perfectly competent to judge whether a preliminary examination fitted a man for entering upon medical studies. Preliminary education was meant to fit a man mentally

and otherwise for beginning the study of medicine with profit and success. The Committee had had before it the special circumstances of each case.

After some further discussion, the Chairman of the Committee, Dr. Norman Moore, said the Committee would not think of doing anything other than support the existing decisions of the Council. The duty of the Committee was to consider "exceptional" cases.

The report was approved.

Midwives (Scotland) Bill.

The Council then went into camera to consider a report of the Executive Committee on the suggested amendment of the Standing Order relating to the erasure of qualifications which have been withdrawn, on an amended form of "Warning Notices," and on the Midwives (Scotland) Bill.

Strangers and the press were directed to withdraw; on readmission,

The President announced that the Council had considered the Midwives (Scotland) Bill now before the House of Commons, and he had been directed to communicate to the Lord President of the Privy Council the following resolution:

> That the General Medical Council expresses its approval of the Bill, and trusts that it will be passed into law in the course of the current session.

Examinations for the Services.

A report on the returns relating to examinations for the medical services was entered on the minutes. It showed that there was still a serious shortage in the number of candidates for the Royal Navy, and that whereas at the examinations for the Indian Medical Service and for the Royal Army Medical Corps all candidates qualified, at the examinations for the navy a certain number were rejected.

Election of Committees.

On the motion of Dr. Norman Moore, seconded by Sir Henry Morris, the following nominations were made:

Education Committee.—Dr. Norman Moore, Sir G. Philipson, Sir F. Champneys (from English Branch Council); Dr. Mackay, Mr. Hodsdon, Dr. Knox (from Scottish Branch Council); Sir William Whitla, Sir Christopher Nixon, Dr. Little (from Irish Branch Council).

Examination Committee.—Dr. Taylor, Dr. Saundby, Dr. Caton (from English Branch Council); Sir T. Fraser, Dr. Russell, Dr. Norman Walker (from Scottish Branch Council); Sir John Moore, Sir Charles Ball, Dr. Kidd (from Irish Branch Council).

Public Health Committee.—Mr. Verrall, Dr. Newsholme, Dr. Latimer (from English Branch Council); Dr. Norman Walker, Dr. Cash, Dr. McVail (from Scottish Branch Council); Sir John Moore, Dr. Adye-Curran, Dr. Kidd (from Irish Branch Council).

Public Health Committee.

Sir John Moore, Chairman of the Public Health Committee, in presenting its report, drew attention to the recommendation that all examinations conducted for the purpose of conferring the registrable degrees, diplomas, or certificates in Sanitary Science, Public Health, or State Medicine, should shortly be inspected. Nearly twenty years, he said, had elapsed since these examinations were inspected in 1895. Since then many institutions had established a diploma of Public Health; the examination for these diplomas had never been inspected, and it seemed essential to the Committee that a careful inspection should be made.

On the suggestion of the President, the recommendation was adopted in the following form:

> That it is desirable that all examinations conducted for the purpose of conferring the several registrable degrees, diplomas, or certificates in Sanitary Science, Public Health, or State Medicine specified in Table G at p. lxxv of the *Medical Register* should be inspected, and that it be remitted to the Executive Committee to consider and report on the necessary arrangements.

Registrar.

Mr. Norman King was reappointed Registrar of the Council.

Vote of Thanks.

On the motion of Dr. Norman Moore, seconded by Dr. Little, the best thanks of the Council were accorded to the President for his able services in the chair during the session.

The President having expressed his thanks, the proceedings terminated.

Meetings of Branches and Divisions.

CAMBRIDGE AND HUNTINGDON BRANCH: Isle of Ely Division.

A meeting of the Isle of Ely Division was held at March on May 21st, when Dr. C. H. Gunson, Chairman, presided, and seven others were present.

Annual Report of Council.—The Chairman, in calling special attention to the annual report of Council contained in the Supplement of May 2nd, said that no one could go through that report without seeing what an immense amount of work the Association was doing for the profession as a whole. He then dealt in particular with the part on the treatment of school children found defective on school inspection. There was a regrettable tendency among those responsible for advising parents to recommend that children found defective should be sent to the local hospitals instead of to their own medical attendants. The following resolution was unanimously adopted:

> That children found suffering from disease or defective conditions calling for treatment should be referred to their own medical attendant.

It was decided to call the attention of the education authority thereto, to send to it a copy of the Association's memorandum on treatment of school children found defective on medical inspection, and to draw its attention to the handbook issued by the Norfolk County Council Education Committee respecting fees paid for treatment.

Insurance Act.—The documents received from the Council on medical referees, the conference with the Pharmaceutical Society, and model schemes for Panel Committees and the expenses of those committees were read and were dealt with afterwards at the meeting of the Local Medical Committee and Panel Committee for the Isle of Ely (see page 424).

DORSET AND WEST HANTS BRANCH.

The annual meeting of the Dorset and West Hants Branch was held at the Dorset County Hospital, Dorchester, on May 20th, when the President, Dr. H. G. Lys, was in the chair, and forty-two other members were present.

Report of Branch Council.—The Honorary Secretary read the report of the Branch Council for the year ending December 31st, 1913. It stated that the meetings of the Branch during the past year had been better attended, and the Branch Council expressed its thanks to those members who had shown the hospitality which the Branch had enjoyed at each meeting. The accounts showed a balance in hand of £47 8s. 2d., and outstanding unpaid accounts £13 2s. 11d. It was hoped that the balance might be employed to the benefit of members of the Branch.

Reports of Divisions.—The report of the Bournemouth Division was read by Dr. Eleanor Bond, Honorary Secretary, and Dr. J. Miller read the report of the West Dorset Division.

Officers of Branch.—On the motion of the Honorary Secretary, seconded by Dr. Macdonald, it was unanimously resolved:

> That Rule 4 (paragraph 1) be altered to read as follows: "The officers of the Branch shall be a President, Past-President, President-elect, two Vice-Presidents, and two Secretaries, one of whom shall act as Treasurer."

Joint Secretary.—On the motion of the Honorary Secretary, seconded by Dr. W. Johnson Smyth, Mr. Percy A. Ross was elected Joint Secretary, subject to confirmation of the alteration of Rule 4 by the Council of the Association.

Induction of President.—The President introduced the President-elect (Mr. H. H. Du Boulay), who then took the chair, and expressed the thanks of the Branch to Dr. Lys for his services during the past year. The President then gave an address on eye cases in general practice. Dr. Lys thanked the President for his very useful and practical paper.

Clinical Cases.—Dr. Macdonald and Dr. Perdrau showed a series of interesting and rare pathological specimens and microscopical slides. Dr. Burrough Cosens read notes on gall stone cases. The President, Mr. Unwin, Mr. Ramsay, Mr. Belben, and Dr. Lys spoke,

and Dr. COSENS replied. Mr. BELBEN showed a uterus and right appendages with a perforated ovarian cyst and subperitoneal fibroids. The Honorary Staff showed cases of interest in the hospital.

Summer Meeting.—It was decided that the summer meeting should be held at Bridport on July 8th.

Luncheon.—The practitioners of Dorchester and the district very kindly entertained the members to luncheon at the Antelope Hotel, and on the motion of the PRESIDENT a hearty vote of thanks was passed for their hospitality.

Vote of Thanks.—A vote of thanks was passed to the Governors of the Dorset County Hospital for kindly allowing the Branch the use of the hospital for the meeting.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER CENTRAL DIVISION.

THE annual meeting of the Division was held on May 28th. Dr. T. ARTHUR HELME in the chair.

Annual Report of Division.—The annual report was received and adopted.

Annual Report of Council.—The report of Council and the agenda of the Representative Meeting were considered, and it was resolved that the Representative be authorized to use his own discretion in the exercise of his vote.

Election of Officers.—The officers for the ensuing year were elected as follows:

Chairman: Dr. Helme.
Vice-Chairman: Dr. Bury.
Honorary Secretary and Treasurer: Dr. Tylecote.
Representative in Representative Meeting: Dr. Helme.
Deputy Representative.—Dr. Tylecote.
Representatives on Branch Council.—Drs. Helme and Tylecote.
Other Members of Executive Committee: Drs. Annacker, J. Ferguson, Shaw, Douglas, and Ollerenshaw.
Members of Manchester and Salford Joint Committee.—Drs. Helme, Tylecote, Melland, Cryer, and Annacker.

An ordinary meeting was subsequently held. The CHAIRMAN and HONORARY SECRETARY reported that they had, on behalf of the Division, nominated Dr. Goodfellow for the Central Council, and their action was approved. A letter with enclosure was read from the Honorary Secretary of the Burnley Division.

Amalgamation of Divisions.—It was decided that, if the other Manchester Divisions were in favour of amalgamation, the Manchester Central Division approved of the proposed amalgamation of the local Divisions.

OLDHAM DIVISION.

THE annual meeting of the Oldham Division was held at the Oldham Royal Infirmary on May 29th, there being only a moderate attendance.

Annual Representative Meeting.—The Representative (Dr. POCHIN) gave an account of the proceedings of the last Representative Meeting with a view to its bearing on the business of the Annual Representative Meeting in July next; and general satisfaction was expressed with the attitude of the Council towards trade unionism, as the Division had long been unanimous that a fund for defensive purposes could only be safely administered by a registered trade union.

Election of Officers.—The following office-bearers were appointed:

Chairman: Dr. Frank Radcliffe.
Vice-Chairman: Dr. Godson.
Members of Branch Council: Drs. Fort and Pochin.
Executive Committee: Drs. Martland, Ed. Kershaw, Lendrum, and Doble.
Honorary Secretary: Dr. Malcolm Hutton.

WARRINGTON DIVISION.

THE annual meeting of the Warrington Division was held at the Infirmary, Warrington, on May 28th, when Dr. LANGDALE was in the chair, and twelve other members were present.

Election of Officers.—The following officers were elected:

Chairman: Dr. Bennett.
Vice-Chairman: Dr. Edwards.
Representative on Branch Council: Dr. Bowden.
Honorary Secretary and Treasurer: T. A. Murray.
Executive Committee: The Representative (Dr. Bassett), the above officers, and Drs. Langdale, Binns, and Naden.

Vote of Thanks.—A vote of thanks was accorded to the retiring Chairman, Dr. Langdale.

Annual Report of Central Council.—The report of Council and agenda for the Representative Meeting were discussed. The opinions of the meeting are to be put before a joint meeting with St. Helens.

Alteration of the Division's Boundary.—The resolution of the Division that no alteration was desirable in the boundary of the Division passed at the meeting on November 25th last was reaffirmed.

Organization.—The new rules of organization were adopted.

METROPOLITAN COUNTIES BRANCH:

CAMBERWELL DIVISION.

THE annual meeting of the Camberwell Division was held at 2, Underhill Road on Wednesday, May 20th, at 4 p.m. Dr. BATTEN was in the chair, and fourteen members and one visitor were present.

Annual Report of Division.—The annual report was presented by the HONORARY SECRETARY and adopted. It stated that during the past session meetings had been held at Guy's Hospital, Peckham House Private Asylum, Southwark Infirmary, and Camberwell Infirmary at which scientific papers had been read and discussed and the ordinary business of the Division transacted; a largely attended meeting was also held at the South Metropolitan Gas Works, where a paper was read by Dr. Rideal and the members shown over the laboratories of the company. A special meeting was held at the Surrey Masonic Hall to instruct the Representative how to vote at the Special Representative Meeting in December, 1913, where, among other things, the Division decided to support the proposal to increase the annual subscription to £2 2s.; the Division decided not to support the formation of a special fund at present. Dr. Cox, the Medical Secretary, was present, and addressed the meeting. The school clinic inaugurated by the Division had had an uneventful and successful year with the exception of some trouble with the landlord about the tenancy of the premises. A branch clinic had also been started in Addington Square, and was managed originally by a lay committee of members of local School Care Committees. Owing to the activity displayed by the Executive Committee, especially Dr. Capes, this lay committee had co-opted four medical men nominated by the Executive Committee, and had placed the management of the medical staff in the hands of the local School Clinics Committee until such time as the local profession could be conveniently consulted. The year ended with a balance in hand of £6 17s. 1d. The number of members had decreased during the past session to 82 from 109.

Election of Officers.—The following officers were elected:

Chairman: Dr. W. T. Partridge.
Vice-Chairman: Dr. H. G. Clitherow.
Representative at Representative Meetings: Dr. F. C. Langford.
Representative on Branch Council: Dr. J. T. Clark.
Secretary and Treasurer: Dr. A. F. Heald.
Executive Committee: Drs. G. B. Batten, J. H. Clatworthy, C. Couper Cripps, H. Isaac, W. Cooper Keates, R. P. Marshall, and W. G. Stone.

A hearty vote of thanks to the retiring Chairman was unanimously adopted and suitably acknowledged.

It was resolved to send a letter to Dr. Capes expressing regret that he was unable to serve on the executive in view of the fact that for so many years he had taken such a leading part in the business of the Association, and expressing a hope that next year he would be able to take his place on the executive. A vote of thanks was also passed to Dr. Esler, who, for the first time in twenty years, was unable, owing to other duties, to be an office-bearer in the Association.

Bermondsey Guardians.—The question of the Bermondsey guardians' proposal to substitute for the services of district Poor Law medical officers that of whole-time medical officers was considered. Dr. R. P. MARSHALL, one of the officers concerned, stated that the local profession viewed the proposed change with apathy, but he recognized that should such changes take place over the country it would seriously affect the welfare of the patients and the interests of general medical practitioners. Dr. ISAAC also stated that the local profession did not concern themselves much in the proposed change. After considerable discussion the following resolution was, on the motion of Dr. BATTEN, carried unanimously:

> That even if the new scheme for providing whole-time Poor Law medical officers for Bermondsey may not appear detrimental to or against the interests of the profession in

Bermondsey, that nevertheless this Division is of opinion that such schemes are against the interests of the pauper patients in Bermondsey and Great Britain, and detrimental to the interests of medical practitioners, and that this Division opposes this and all such schemes.

Annual Representative Meeting. — The preliminary agenda for the Annual Representative Meeting in Aberdeen (Supplement, May 9th) was considered. It was decided to support certain resolutions of the School Medical Service Group of the Society of Medical Officers of Health. It was resolved that Motion 72, regarding free choice of doctor, should be supported only on the condition that it was clearly shown at the Representative Meeting that such action would not tend to wholesale contracting out of insured persons into medical aid associations and such like bodies. It was decided to leave it to the discretion of the Representative as to how to vote on the other items on the agenda.

Medical Aid Institutes.—The question of medical aid institutes was considered, and it was resolved to send letters to the staff of local hospitals to ask them how far they would be prepared to support the line of action proposed by the Association in its recent memorandum (Supplement, April 4th).

Vote of Thanks.—The meeting concluded with a hearty vote of thanks to Dr. and Mrs. Batten for their kind hospitality in entertaining the Division.

City Division.

The twelfth annual general meeting of the Division was held at Balfour Hall, Kingsland, on May 26th. Dr. T. Hobbs Crampton, Chairman of the Division, presided, and thirty members were present.

Annual Report of Division.

The annual report of the Executive Committee was received and approved. The Treasurer's report for the past year and on the present financial position of the Division was also approved. The report of the Executive Committee stated that during the past year general interest in the work of the Division has been well maintained on both the scientific and medico-political sides. Six clinical meetings had been held, with an average attendance of 17½, and seven business meetings with an average of 29. Meetings had been held conjointly with the Finsbury Medical and Aesculapian Societies, and the South-West Essex Division. The Division was indebted to Dr. J. H. Sequeira, Dr. Jas. MacMunn (a member of the Division), Dr. H. MacNaughton Jones, and Mr. Bishop Harman for addresses and demonstrations given, and to the consulting staffs and house committees of the London and Metropolitan Hospitals, and to Drs. Hadfield and Gerald Johnston for meetings and hospitality. The Committee expressed its indebtedness to Mr. Courtney Buchanan for placing the board room of the Metropolitan Hospital at the disposal of the Committee for its meetings. The scientific and clinical opportunities afforded to members by the Hunterian, Aesculapian, Abernethian, and North-East London Clinical Societies, which meet within or closely adjoining the area of the Division, and also the clinical demonstrations given by the staffs at the Metropolitan, Queen's, City Road Chest, Victoria Park Chest, and Prince of Wales's Hospitals rendered any further extension of such meetings by request of, or suggestion by, the Division, in the opinion of the Committee, unnecessary and undesirable. The membership of the Division was 174, with two associate members. The reduction from the number a year ago—207—appeared mainly due to the increase in the subscription to the Association. The loss —about 16½ per cent.—though heavy and regrettable, was, however, less than was anticipated.

The following subjects of interest had been under discussion during the session: (1) Friendly society control of medical benefit; (2) school children's medical treatment centre; (3) infants' consultations; (4) midwives' cases and fees for assistance.

The Executive Committee has held four meetings, with an average attendance of fourteen.

The report also contained a record of attendances.

The Treasurer's report showed that the expenses of the Division during the period May 30th, 1913, to date (May 14th) had been:

	£	s.	d.
Printing	16	9	2½
Hire of rooms	3	0	0
Postage...	2	2	1½
Gratuities	2	2	6
	23	13	10
Deficit, May, 1913	14	19	0½
Total	38	12	10½

From the Branch Council £29 19s. 4d. has been received, and the share of the appeal produced £4 10s.; total, £34 9s. 4d.

The present deficit is therefore reduced to £4 3s. 6½d. No payment has yet been made by the Branch on account of the grant due this year, and the cost of the annual meeting on the 26th was not provided for in this statement. It was greatly to be desired that a reorganization of the financial arrangements of the Association would provide for a sufficient payment early in the year towards the expenses of Divisions, and avoid the constant deficit which was met by advances from the Treasurers of the Divisions.

With regard to the Hospitality Fund, no subscriptions had been received during the past session. Donations from Drs. Christopher Powell and A. W. Miller amounting to 10s. were acknowledged. The sum of 18s. 6d. was expended at the Manchester Hotel at the meeting with the Finsbury Medical Society on December 12th, 1913. The amount of the fund in hand was £6 3s. 6d.

In order to allow the opportunity for all members of the Division to contribute, it had been decided to receive the annual subscriptions (1s.) at the annual meetings on this and future occasions.

The Representatives' Expenses Fund showed an unexpended balance of 10s. in hand to the credit of this fund, received from Drs. Bird and Thomas too late for distribution last year.

Election of Officers.—The following were elected:

Chairman: C. F. Hadfield (Upper Clapton).
Vice-Chairman: Leslie Durno (Stamford Hill).
Honorary Secretary and Treasurer: A. G. Southcombe (Homerton).
Representatives in Representative Meetings of the Association: A. G. Southcombe (Homerton), Major Greenwood (Shoreditch); *Deputies*, J. I. Jaffé and A. T. Swan.
Representatives on Branch Council: C. F. Hadfield (Upper Clapton), J. I. Jaffé (Stoke Newington), T. F. Keenan (Upper Clapton).
Executive Committee: The former members—H. Cuthbert Dixon (South Hackney), 1913, C. E. Evans (Lower Clapton), 1910, E. W. Goodall (Homerton), 1912, J. W. Hunt (Upper Clapton), 1912, A. W. Miller (Upper Clapton), 1913, Vaughan Pryce (Stoke Newington), 1912, W. F. Roe (Finsbury), 1911, David Ross (Kingsland), 1913, A. Tynan Swan (Victoria Park), 1910, W. Whitelaw (Stoke Newington), 1913, W. E. Amsden Worley (Kingsland), 1912; the retiring officers—T. Hobbs Crampton (Finsbury), 1914, Evan Jones (Finsbury), 1914, J. H. Porter (Dalston), 1914; and to fill the vacancies—J. J. McNaboe (Kingsland), 1914, T. Rushbrooke, M.A., J.P., (Stamford Hill), 1914, David Petty (Stamford Hill), 1914. (The date denotes year of accession to office.)
Ethical Committee: Leslie Durno, Major Greenwood, E. W. Goodall, J. W. Hunt, David Ross, T. Hobbs Crampton, T. F. Keenan.
The Chairman and Secretary of the Division are *ex-officio* members of the Ethical Committee.
Officers of the Branch Council: The following were nominated: President, F. J. Smith; President-elect, Major Greenwood; Vice-President, Evan Jones; Treasurer, Atwood Thorne; Honorary Secretaries, R. E. Crosse, N. Bishop Harman.
Central Council: Major Greenwood.
The Executive Committee trusts that all members of the Division will record their votes for the candidates nominated on behalf of the Division.
Auditors: J. W. Hunt, T. F. Keenan.
Committees of the Branch: (1) National Insurance Committee: T. F. Keenan, J. H. Porter. (2) Medical Charities Committee: T. Hobbs Crampton.

Expenses of Representatives.—On the motion of the Chairman, it was unanimously resolved:

That members of the Division be invited to contribute 3s. 6d. each towards the fund for meeting the expenses of Representatives at Representative Meetings.

A collection was made in the room, and the Treasurer announced later that £5 8s. 6d. had been subscribed for the Representatives' Expenses Fund and £1 10s. to the Hospitality Fund.

Arrangements with Unqualified Practitioners.—On the motion of Dr. MAJOR GREENWOOD, it was resolved:

> That the employment by the Worcester Insurance Committee of herbalists in the place of registered medical practitioners is a serious infringement of the Medical Acts, and that the Council be instructed to take legal opinion with the view of testing the matter in the law courts.

This was directed to be an instruction to the Representatives.

Annual Report of Central Council.—The meeting then considered the annual report of Council and the provisional agenda of Representative Meeting, and instructed the Representatives on several points.

Vote of Thanks.—On the motion of Dr. GOODALL, a very hearty vote of thanks was acclaimed to the Chairman, Dr. Hobbs Crampton, for the able and impartial manner in which the duties of the chair had been discharged during his year of office.

MARYLEBONE DIVISION.

THE annual general meeting of the Marylebone Division was held at the house of the Medical Society of London on May 15th, when Mr. BISHOP HARMAN was in the chair and twelve members were present.

Annual Report of Division.—The HONORARY SECRETARY read the annual report, which stated five general meetings had been held (one annual, three ordinary, and one special) during the year. The Division continued to express its strong opposition to the Insurance Act, and the Representatives were instructed to vote against any resolution at the Annual Representative Meeting approving of the Act. The Division also decided to oppose the increase in the subscription to the Association, the formation of a Special Fund, and the conversion of the Association into a trade union. A postal vote taken on the first question showed a considerable majority in disapproval. The special meeting was concerned with the Mount Vernon Hospital dispute, but no business could be transacted owing to legal proceedings having been commenced. The average attendance at the general meetings was twenty, and the highest thirty-one. The number of members belonging to the Division was 581, a decrease of 91, due to resignations on the increase in the subscription. Nine meetings of the Executive Committee were held for the consideration of the ordinary business of the Division and the ethical questions that were brought before them. The financial position of the Division had improved, although the Division was still in debt to its Honorary Treasurer. On the motion of the CHAIRMAN the report was adopted.

Election of Officers.—The list of officers elected were published in the SUPPLEMENT of May 30th, p. 404, with the exception of the six nominations made under Rule 4 for the office of President: Dr. H. Fleming Browne, Mr. V. Warren Low, Mr. E. C. Montgomery-Smith, Mr. Charles Ryall, Dr. F. J. Smith, Mr. Atwood Thorne.

Votes of Thanks.—On the motion of Dr. SPURGIN, seconded by Dr. HOLMES, very hearty votes of thanks were accorded to the Chairman and Secretary for their services during the past year. Dr. GOODBODY replied for Mr. Ryall and himself.

Nominations for Central Council.—On the motion of the CHAIRMAN, Drs. M. G. Biggs, Charles Buttar, E. C. Montgomery-Smith, and F. J. Smith were nominated for the Central Council of the Association.

Nominations for Branch Council.—On the motion of the CHAIRMAN, the following were nominated for the Branch Council:

President-elect: Dr. M. G. Biggs.
Vice-President: Dr. T. Dyke Acland.
Honorary Treasurer: Mr. Atwood Thorne.
Honorary Secretaries: Dr. E. C. Crosse, Mr. N. Bishop Harman.

Finances.—On the motion of Dr. METCALFE, seconded by Dr. GOODBODY, it was resolved:

> That, in the opinion of this Division, the financial grant allocated to it by the Branch Council is inadequate, and suggests that the minimum grant in the future should be two shillings per member.

State Medical Service.—Dr. GRIFFITH proposed, seconded by Dr. METCALFE:

> That facilities for a discussion on a State Medical Service be given during the year.

WANDSWORTH DIVISION.

A MEETING of the Wandsworth Division was held on May 28th, when Dr. NOBBS presided.

Election of Officers.—The following elections were declared:

Chairman: Dr. Nobbs.
Vice-Chairman: Dr. Steedman.
Chairman-elect (1915–16): Dr. Allan Swallow.
Honorary Treasurer: Dr. Allan Swallow.
Honorary Secretary: Dr. Pollock.
Assistant Honorary Secretaries: Drs. Scott, Twigg, and A. Wilson.
Representatives on Branch Council: Dr. M. G. Biggs and Dr. L. Williams.
Executive Committee: Drs. S. C. H. Bent, Ferguson, Gay, A. Howell, Hutcheson, Milne, and Wallace.
Representatives for Representative Meeting: Dr. M. G. Biggs and Dr. A. Wilson.

It was agreed that the officers elected should assume duties at once.

The annual meeting of the Division was arranged for Thursday, July 9th, at 3.30 p.m., at Stanley's Restaurant.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

THE annual meeting of the Boston and Spalding Division was held at Boston on May 22nd, when Dr. WHITE, Chairman, presided, and nine other members were present.

Model Rules of Organization.—The Model Rules of Organization were adopted, and the desire was expressed that the Division be known as the "Holland Division," instead of the Boston and Spalding Division, as heretofore.

Medical Aid Institutes.—The report on medical institutes (SUPPLEMENT, April 4th) was read and adopted.

Election of Officers.—The following officers were elected:

Chairman: Dr. C. W. Pilcher.
Vice-Chairman: Dr. White.
Secretary: Dr. Tuxford (re-elected).
Committee: Drs. Braithwaite, Biggs, Husband, Monro, W. H. Smith, South, Walker, and Witham.
Representative to the Council: Dr. Tuxford.
Representative to the Branch Council: Dr. Smith.

Vote of Thanks.—Dr. BRAITHWAITE proposed a hearty vote of thanks to the retiring chairman for the services he had rendered to the Division during the time he had held office. He mentioned the punctuality with which he had attended all meetings (committee and other), and his unfailing courtesy and tact in maintaining the dignity of the chair during the trying times previous to the passing of the Insurance Act. The motion was seconded by Dr. MASON, and carried. Dr. WHITE briefly returned thanks.

Annual Report of Council.—With regard to Section B and D of the report it was decided on the motion of Dr. TUXFORD, seconded by Dr. MASON, that the attention of the Council be drawn to the salaries of the editor and sub-editors. It appeared from the balance sheet that all these officials were in the receipt of salaries, but also drew considerable emoluments from contributions to the JOURNAL, these additions to their salaries aggregating £768 6s. 3d. It was suggested that these amounts should be shown either as fixed salaries and that the next item (general) and reporting be made more explicit, or that some explanation be appended to the financial statement showing why these officials could draw so much in addition to their salaries.

Medical Aid Patients and General Hospitals.—On the motion of Dr. SOUTH, seconded by Dr. LOCK, the Secretary was instructed to write to the Lincoln Secretary asking for information regarding the treatment of medical aid patients from Boston at the Lincoln Hospital.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

CARDIFF DIVISION.

THE annual meeting of the Division was held at King Edward VII Hospital, Cardiff, on May 22nd.

Election of Officers.—The following officers were elected for the year 1914–15:

Chairman: Dr. E. E. Brierley.
Vice-Chairman: Dr. K. C. Mackenzie.
Representatives at Representative Meetings: Dr. W. B. C. Treasure, Dr. D. A. Fitzgerald.
Secretary: Dr. A. L. Thornley.
Junior Secretary: Dr. D. C. Evans.
Representatives on Branch Council: Drs. E. E. Brierley, R. J. Smith, P. J. O'Donnell, W. W. Leigh, T. Wallace, D. A. Fitzgerald, J. Powell, W. B. C. Treasure.

Executive Committee: Robert Walker, H. G. G. Cook, F. W. S. Davies, W. M. Stevens.
Representatives on the Branch Contract Practice Committee: Drs. W. W. Leigh, K. C. Mackenzie, Charles Reidy.

Annual Report.—The Secretary's annual report showed that there was a slight decrease of membership. This was accounted for to some extent, by the increase of the subscription to £2 2s., and partly also as a result of the reaction of the Insurance Act campaign. A large amount of time has been devoted during the year to the prevention of the spread of medical aid institutes. These at one time threatened to become very prevalent in South Wales and Monmouthshire, but now happily, through the efforts of this and adjoining Divisions, their extension has been to some extent arrested. The financial statement for the year ending December 31st, 1913, showed a deficit of £14 13s. 4d. This was due to the fact that the grants made to the Division during the year had been quite inadequate for its successful working. The report was approved.

Votes of Thanks.—A vote of thanks was accorded to the retiring chairman, Dr. R. J. Smith, and also to Mr. William Martin, who has retired from the position of Representative at the Representative Meetings.

Representatives at Representative Meetings. — The following resolution was unanimously adopted:

> That an allowance of £2 2s. per day be paid to Representatives attending Representative Meetings, and that 4s. per head be called upon from each member of the Division for this purpose.

Annual Report of Council.—The annual report of Council was considered and approved.

Agenda of Representative Meeting.—The Provisional Agenda of the Annual Representative Meeting was considered, and certain recommendations made to the Representative.

Dr. Mitchell Stevens.—The Division congratulated Dr. W. Mitchell Stevens on his election as Fellow of the Royal College of Physicians.

STIRLING BRANCH.

The annual meeting of the Stirling, Kinross, and Clackmannan Branch was held at Stirling on May 19th. Dr. Dyer, President of the Branch, presided, and twenty-two members were present.

Annual Report of Central Council.—The annual report and financial statement of the Council was read and approved.

Election of Office-bearers.—The following officers were elected:

President: Dr. D. Mitchell (Camelon).
Vice-President: Dr. John Young (Bonnybridge).
Secretary: Dr. E. E. Dyer (Alloa).
Representative: Dr. Dyer (Alloa).
Council: Dr. Joss (Denny), Dr. Stewart (Falkirk), Dr. Park (Kilsyth), and Dr. Vost (Stirling).

Resignation of Secretary.—The President made appropriate reference to the retirement of Dr. J. E. Moorhouse, who had resigned the secretaryship after having filled the office with ability for fifteen years.

Special Fund.—It was agreed to obtain the opinion of the members of the Branch on the question of raising a special fund for the defence of the profession by a post-card vote, the Representative to vote according to the result of the majority of cards.

Insurance Act.—Dr. Joss read an interesting paper on the Insurance Act and the medical profession, which gave rise to an interesting and useful discussion, and for which the author was heartily thanked.

SUSSEX BRANCH:
Eastbourne Division.

The annual meeting of the Eastbourne Division was held on May 25th, when Dr. A. Harper, Chairman, presided, and eight other members were present.

Annual Report.—The report of the Executive Committee for the year 1913 was received and unanimously adopted. It stated that the number of members of the Division on January 1st, 1913, was 67. During the year there were added five by election and seven by removing into the area, but against this addition there had been ten removals out of the area and two resignations of membership, leaving the membership the same on December 31st. Seven meetings of the Division and two meetings of the Executive Committee had been held, with an average attendance of 16 and 6 respectively. The financial statement showed a debit balance of £2 14s. 7d. due to the Honorary Treasurer.

Election of Officers.—The following officers and members of the Executive Committee were unanimously elected:

Chairman: Dr. J. H. Ewart.
Vice-Chairman: Dr. T. MacQueen.
Honorary Secretary and Treasurer: Dr. William Muir Smith.
Representative on Branch Council: Dr. William Muir Smith.
Representative for Representative Meeting: Dr. J. H. Ewart.
Executive Committee: Dr. C. O'Brien Harding, R. Howie, A. A. Martin, W. J. C. Merry, M. Milner Moore.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

Any further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (Supplement, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (Supplement, May 9th), will be published in the Supplement of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the Supplement of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in Supplement of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,
Alfred Cox,
Medical Secretary.

May 13th, 1914.

QUARTERLY MEETING OF COUNCIL.

The Quarterly Meeting of Council will be held on Wednesday, June 24th, in the Council Room, 429, Strand, London, W.C.

By order,
Guy Elliston,
Financial Secretary and Business Manager.

June 4th, 1914.

CHANGES OF TITLE.

The following changes of title have been approved on behalf of the Council of the Association, and take effect as from the date of publication of this notice:

(1) Altrincham.

Altrincham Division to be henceforth named Mid-Cheshire Division, pursuant to an application to that effect received from the Division and approved on behalf of the Lancashire and Cheshire Branch Council.

[*Note.*—The necessary verbal alteration will consequently be made in the Cheshire Reorganization Scheme already published in Supplement of May 23rd.]

(2) Boston and Spalding.

Boston and Spalding Division to be named henceforth Holland Division, pursuant to an application to that effect received from the Division and approved on behalf of the Midland Branch Council.

(3) Scottish Division.

Scottish Division to be named henceforth Dumfries and Galloway Division, pursuant to an application to that effect received from the Division and approved on behalf of the Border Counties Branch Council.

SUGGESTED CHANGES OF BOUNDARIES.

NOTICE OF PROPOSAL FOR AMALGAMATION OF MANCHESTER DIVISIONS.

NOTICE is hereby given under By-law 73 to all concerned of a proposal made by the Manchester (North) Division that the four existing Divisions of the Association in Manchester shall be amalgamated.

Formal written notice of the proposal has been given, pursuant to Article 13, to the other existing Divisions concerned, as well as to the Branch Council, and the matter will be determined in due course by or on behalf of the Council of the Association.

Any member affected by the proposed change, and objecting thereto, is requested to notify the fact and his reason therefor to the Medical Secretary, 429, Strand, London, W.C., not later than July 6th.

BRANCH AND DIVISION MEETINGS TO BE HELD

BIRMINGHAM BRANCH.—Mr. Seymour Barling, Honorary Secretary (52, Newhall Street, Birmingham), gives notice that the annual meeting of the Branch will be held at the Medical Institute, Edmund Street, Birmingham, at 3.30 p.m. on Thursday, June 18th.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Dr. Ernest C. Hadley, Honorary Secretary (Burbury Street, Lozells, Birmingham), gives notice that members of the Central Division, Birmingham Branch, are requested to nominate officers for the posts of Chairman, Vice-Chairman, and two Honorary Secretaries for this Division to one of the honorary secretaries, Dr. Ernest C. Hadley, Burbury Street, Lozells, Birmingham, or Mr. Bernard J. Ward, 141A, Great Charles Street, Birmingham, in writing as early as possible. The annual meeting will be called at a late date in June, of which every member will have due notice.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—Dr. Duncan Davidson, Honorary Secretary (15, Priory Row, Coventry), gives notice that the annual meeting of the Coventry Division will be held at the Coventry Hospital on Thursday, June 11th, at 8.15 p.m. (1) To receive the recommendations of the Executive Committee. (2) To receive the annual report. (3) To elect officers for the ensuing year. (4) To receive correspondence. (5) To hear a special speaker on the subject of a medical trade union.

EAST YORK AND NORTH LINCOLN BRANCH.—Dr. H. L. Evans, Honorary Secretary, gives notice that the annual meeting of this Branch will be held in Hull on Friday, July 10th. Accounts, election of officers, etc.

KENT BRANCH.—Dr. E. A. Starling, Honorary Secretary (Chillingworth House, Tunbridge Wells), gives notice that the first annual meeting of the Branch will be held on Friday, June 12th, at 2.30 p.m., at the Town Hall, Maidstone (by kind permission of His Worship the Mayor). The council will meet before lunch, and due notice, together with the agenda, will be sent to members of the council. Dr. William Douglas, President, kindly invites members to lunch at the Star Hotel, at 1.30 p.m. Agenda: In addition to the business of an ordinary meeting: (1) To receive the report of the election of officers for 1914–15, who shall thereupon take office. (2) To receive the annual report and financial statement. (3) To appoint two auditors. (4) Any other business decided on by the council, or any other competent business. The following excursions have been arranged, starting at 3.30 p.m.: (*a*) To visit Allington Castle, where Sir Martin and Lady Conway kindly invite members to tea (number limited to twenty). (*b*) To visit Leeds Castle, by kind permission of Mr. and Mrs. C. P. Wykeham Martin. Tea will be provided at the Park Gate Inn, Leeds. The annual dinner will be held at the Star Hotel, at 6.30 p.m.; charge, 6s. each. Wine will be provided by the local members. Members intending to be present at the lunch or dinner are requested to signify their intention, and also to state which of the excursions they select, not later than Saturday, June 6th, to Mr. Geo. Potts, Maidstone.

LANCASHIRE AND CHESHIRE BRANCH.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester. Members desiring to make scientific, clinical, or other communications are requested to notify the Branch Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL DIVISION.—Dr. Francis W. Bailey, Honorary Secretary (51A, Rodney Street, Liverpool), gives notice that a meeting of the Division will be held at the Medical Institution, Mount Pleasant, Liverpool, on Friday, June 12th, at 4 p.m. Business: Report of Council and agenda of Annual Representative Meeting.

METROPOLITAN COUNTIES BRANCH.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers; Annual Reports of Council and of Representatives of the Branch on the Central Council, and the President's Address, "Some Observations on Modern Vascular Problems."

METROPOLITAN COUNTIES BRANCH: EAST HERTFORDSHIRE DIVISION.—Dr. H. D. Ledward, Honorary Secretary (123, Norton Way, Letchworth), gives notice that the second annual meeting of the Division will be held at 3 p.m., on Thursday, June 18th, at the North Hertfordshire and South Bedfordshire Hospital, Hitchin. Agenda: To receive correspondence; to receive the Honorary Secretary's annual report; to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; to elect the Representative and Deputy Representative of the Division in Representative Meetings; to consider the business of the Annual Representative Meeting.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.), gives notice that a general meeting of the Division will be held at the Stepney Central Hall on Monday, June 8th, at 4 p.m., to consider the annual report of Council and instruct Representative for forthcoming Annual Representative Meeting. The SUPPLEMENTS of May 2nd and May 9th should be brought to the meeting.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that the annual meeting of the Division will be held at the Royal Infirmary, Leicester, on Wednesday, June 17th, at 4 p.m. Agenda: (1) Nomination of a Vice-President of the Branch for 1914–15. (2) Election of Representatives of the Division upon the Branch Council, and of officers and members of the Executive Committee of the Division. (3) Annual report of the Executive Committee. (4) Discussion of matters referred to the Divisions (see SUPPLEMENTS of the JOURNAL).

MUNSTER BRANCH.—Dr. Philip G. Lee, Honorary Secretary, gives notice that the annual meeting of the Branch will be held at 74, South Mall, Cork, on Saturday, June 20th, at 4.30 p.m. Business: Election of (1) officers and Council for 1914–15, (2) Ethical Committee of the Branch, (3) Representative and Deputy Representative for Representative Meeting, and (4) Representative to Irish Committee.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—Dr. J. Livingston, Honorary Secretary (2, Hartington Street, Barrow-in-Furness), gives notice that the annual meeting of the Branch will be held in the Friends' Hall, Lancaster, on Wednesday, June 24th, at 3.45 p.m. Agenda: (1) Report of Council. (2) Statement of accounts. (3) Election of office-bearers. (4) Introduction of new President, Mr. A. S. Barling. (5) Vote of thanks to retiring President, Dr. F. E. Daniel. (6) President's address. Subject: "Operations for the Cure of Hernia." To be followed by a discussion. Messrs. Down Bros. will exhibit a large selection of surgical instruments, and Messrs. Baillière, Tindall, and Cox a number of new books. In order to make the meeting as instructive as possible, members are requested to bring cases and specimens of interest. The President hopes that all members and their friends will take tea with him, and Dr. Livingston asks those intending to accept this hospitality to be good enough to give him a few days' notice so that suitable arrangements may be made.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Mr. W. J. Greer (19, Gold Tops, Newport) and Dr. J. E. P. Davies (Fairfield, Llanelly), Honorary Secretaries, give notice that the annual meeting of the South Wales and Monmouthshire Branch will be held in Llanelly, on Thursday, June 11th. Accounts, election of officers, etc.

SOUTH-WESTERN BRANCH.—Mr. Russell Coombe, Honorary Secretary, gives notice that the seventy-fifth annual meeting will be held on Tuesday, June 23rd, at the Royal Hotel, Plymouth, at 12.30 p.m., when Mr. Eales will resign the chair to Mr. Woollcombe. The report of the Branch Council for the year 1913–14 and the annual financial statement for the year 1913 will be presented to the meeting, and the officers of the Branch will be elected for the year 1914–15. Luncheon, by the kind invitation of the President-elect and members of the Plymouth Division, will take place from 1.30 p.m. to 2.30 p.m. at the Royal Hotel. The annual dinner of the Branch will be held at the Royal Hotel at 7 o'clock for 7.30 prompt. Tickets, 6s. 6d. each (exclusive of wine), can be had from Dr. Pinker, 10, Braidwood Terrace, Mutley, Plymouth. Early applications for dinner tickets will greatly facilitate arrangements, and in any case they should be made not later than the first post on Monday, June 22nd. The President is especially desirous of making the dinner a leading feature. To facilitate this he has intimated his desire to entertain those ladies accompanying members coming from outlying Divisions as his guests at the annual dinner of the Branch. Excursions (at 2.30 p.m.)—(1) Visit to H.M. Dockyard and inspection of modern battleship; (2) excursion to Bantham (Dr. E. L. Fox will entertain

visitors at tea); (3) golf on Mt. Batten links. Members wishing to be accommodated with bed and breakfast are requested to send their names to Mr. E. J. Donbavand, Plymstock, South Devon, who will endeavour to arrange for them.

SURREY BRANCH.—Dr. Cecil P. Lankester, Honorary Secretary (1, Rectory Place, Guildford), gives notice that the first annual meeting of the Surrey Branch will be held (by the kind invitation of the Reigate Division) on Wednesday, June 17th, at 2.30 p.m., at the White Hart Hotel, Reigate. The Reigate Division kindly invites members to lunch at the hotel at 1.15. There will be an excursion in the afternoon to Gatton Hall, where the members will be the guests of Sir Jeremiah Colman, Bart. The annual dinner will be held at the White Hart Hotel at 6.30 o'clock. Charge 6s. Wines will be provided by the Division. In order to facilitate arrangements, members are requested to notify Dr. Lankester of their intention to be present before June 14th. A meeting of the Branch Council will be held before lunch. Notice with agenda will be sent to members of Council in due course.

YORKSHIRE BRANCH.—Dr. Adolph Bronner, Honorary Secretary (33, Manor Row, Bradford), gives notice that the annual meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, June 17th, at 4.15 p.m., for the election of Vice-President, Secretary and Treasurer, etc. Members intending to read papers, make any communications, propose new members, or show cases or specimens, are requested to notify him at once. The annual dinner will take place at the Midland Hotel at 6.30 p.m.

LOCAL MEDICAL AND PANEL COMMITTEES.

ESSEX.

LOCAL MEDICAL AND PANEL COMMITTEES.

THE third meeting of the Panel Committee was held on April 9th, when, in consequence of a letter from the Commissioners postponing the schemes for permanent Panel Committees till April 30th, in which also model schemes were promised, most of the work of the agenda was rendered useless.

Certificates.—It was resolved:

That regulations for medical benefit are incompatible with rules sent by Insurance Commissioners, and that it is desirable to have a little more elasticity as to the matter of dating certificates on account of inconvenience to insured persons who live some miles from the doctor.

Medical Cards.—The Secretary was instructed to call the attention of the Insurance Committee to the fact that a great deal of trouble was caused by the absence of medical cards among a large number of persons, many of whom required treatment during the weeks they were awaiting the receipt of the cards, and to inquire how doctors were to ascertain which of those persons applying for treatment were entitled to medical benefit, since they might either be upon another doctor's list or be otherwise disqualified.

Co-ordination of Local Medical and Panel Committees.—A letter from Mr. D. F. Todd was read asking for subscriptions had to be answered in the negative until such time as some arrangement was made for obtaining the grant allowed by the Act, 1913 (which provides 1d. per head of all insured persons upon panel lists, for use of Panel and Pharmaceutical Committees). The hitch occurred through the Commissioners refusing railway fares, and deciding that no member of the Committee could be a paid secretary.

Cases Treated by Panel Doctors in Hospitals.—It appeared that no provision was made for any one to be paid for these cases.

Operation Cases.—It was decided that accidents, hernia, amputations treated in private were outside medical benefit.

Checking Prescriptions.—The Committee was asked by the Insurance Committee to pay 25 per cent. of the total cost (which is £400 per annum), the Pharmaceutical Committee agreeing to pay a like proportion. The Committee declined at present to do this, as they did not understand how they were in any way responsible.

Panel Committee Expenses Fund.—It was decided to ask for the ½d. per head on persons on panel lists, and use it as far as the restrictions of the Commissioners allowed.

The fourth meeting of the Panel Committee was held on May 21st, the usual date having had to be postponed through lack of information from the Insurance Committee and Commissioners.

Inadequate Accommodation in Rural Surgeries.—A letter of complaint was read, but as no specific instance was quoted the matter was allowed to stand over.

Antitoxin.—It was resolved:

That the Insurance Committee be requested to repay (as for emergency drugs) the cost of antitoxin supplied by any practitioner on the panel.

Fixed Dates for Certificates.—The Secretary was directed to lay before the Commissioners a case in which sickness benefit was refused because a doctor, unable to sign a certificate stating he had "this day seen and examined" a patient who sent a certificate, three and a half miles' journey, signed it on the following day, it being practically impossible to make a special journey that day on purpose to comply with the wording of the certificate.

Panel Committee Expenses.—In addition to the above request for ½d. per head, and to make certain that a portion of it could be used for expenses not administrative—for example, to meet the rail fares, and to allow of the paid secretary still remaining a member of the Committee, and also to defray any additional expenses such as subscription to the Co-ordinated Local Medical and Panel Committees—it was decided to circularize all panel practitioners asking them to sign a paper requesting the Insurance Committee to pay over any money out of the ½d. per capita not used for administrative purposes (as restricted by the Commissioners) to the Panel Committee for use for the above needs.

Model Scheme for the Treatment of Tuberculosis.—The model scheme for the treatment of tuberculosis issued by the British Medical Association (SUPPLEMENT, April 4th) was discussed and approved.

Constitution of Committees.—The model schemes for the constitution of Local Medical and Panel Committees were considered, and it was decided to adopt, with certain alterations, Forms D and B respectively, upon the understanding that if the Commissioners insisted upon twenty-one returning officers they should appoint and pay for them, and that the Local Medical Committee should be elected before the Panel Committee but at the same meeting in order to secure identical personnel.

Medical Service Subcommittee.—Drs. E. Brunton and Pottinger Eldred were re-elected as representatives upon the Medical Service Subcommittee as the representatives of the Panel Committee, and subsequently Dr. Ross Steen was re-elected to serve as the representative of the Local Medical Committee.

The Chairman at the close of the meeting mentioned that the Secretary of the two Committees, Dr. Harding H. Tomkins, had been nominated as a candidate for the Central Council of the British Medical Association, and read a letter from the Executive Committee of the South-West Essex Division, asking the other Divisions of the Metropolitan Counties Branch to vote for him and interest their friends on his behalf as no member of the present Council lived in Essex. It was decided to endorse this letter with a like request from the Local Medical and Panel Committees.

ISLE OF ELY.

PANEL COMMITTEE.

A MEETING of the Panel Committee for the Isle of Ely was held on May 21st at March. Dr. C. E. STEPHENS, Chairman, presided, and seven others were present, together with the Clerk of the Isle of Ely Insurance Committee.

Model Schemes for Election of Panel Committee.—The model schemes for the election of Panel Committee in July were discussed, and it was resolved to adopt Scheme A.

Medical Service Subcommittee.—Dr. C. E. Stephens and Dr. A. C. S. Waters were unanimously elected the two representatives on the Medical Service Subcommittee.

Conference of Local Medical and Panel Committees.—The representatives gave an account of their visit to the meeting in London. It was unanimously resolved to contribute the £1 required from the Isle of Ely area, and to give the new organization every support.

Expenses of Panel Committee.—It was resolved to rescind a former resolution passed on March 10th to the effect that 1s. per 100 insured persons should be deducted from amounts payable to practitioners under medical benefit regulations, and to recommend that a voluntary

levy of 1s. for 100 insured persons be asked of all panel practitioners, the Panel Committee thus securing absolute control of its own funds.

Mileage Grant.—It was resolved:

That all insured persons residing over 50 yards from a high road be paid for out of the mileage grant according to a unit system of payment.

That the Clerk of the Insurance Committee be requested to write to the Commissioners with a view to settlement of the grant.

Allocation.—It was resolved that allocation be carried out on the Edinburgh scheme and according to panel districts.

Drug Tariff.—In reply to a letter from the Isle of Ely Association of Pharmacists, it was resolved to regard sanatogen, vitafer, and saccharine as foods and not drugs, and that they should not, therefore, become chargeable under the drug tariff.

Local Medical Committee.

A meeting was held on May 21st, at the Griffin Hotel, March. Dr. C. E. Stephens was in the chair, and seven others were present.

Medical Service Subcommittee.— Dr. R. E. Nix was unanimously appointed representative to the Medical Service Subcommittee.

Model Scheme for the Election of Local Medical Committee.—It was decided to adopt Scheme B.

WEST SUFFOLK.

Local Medical Committee.

The West Suffolk Local Medical Committee met on May 19th, 1914.

Permanent Constitution.—Model schemes for permanent constitution were considered with Memorandum 194/I.C. It was decided to adopt Scheme A, which provides for the personnel of the Committee being identical with that of the Panel Committee.

Green Vouchers.—The Secretary was instructed to request the Clerk to the Insurance Committee to submit the green vouchers for 1913 to the Local Medical Committee for checking.

Panel Committee.

A meeting of the Panel Committee was held on May 19th, when various matters of local interest were discussed.

Allocation of Unallotted Persons.—The Committee approved for submission to the County Insurance Committee the following scheme for (1) allocation of insured persons refused by doctors in accordance with Regulation 21 (4); and (2) the distribution of funds in respect of unallotted persons in accordance with Regulation 35 (1).

1. A panel practitioner who refuses to accept an insured person on his list shall, at the time of refusal, inform him that, failing acceptance by some other practitioner, he must make application to the Clerk to the Insurance Committee to be placed on a doctor's list.

2. The clerk shall be authorized to allot such persons in the following manner:

(*a*) In towns, to the practitioners on the panel in alphabetical order—it being agreed that any practitioner may be liable, if it is his turn, to have assigned to him a patient whom he has rejected.

(*b*) In the country, to the panel practitioner nearest to the insured person's residence.

3. Panel practitioners shall undertake to give immediate treatment in urgent cases pending allocation in accordance with the scheme.

4. Capitation fees in respect of unallotted persons and persons who have made no choice of doctor shall be allotted each quarter to practitioners on the panel in proportion to the number of insured persons on each practitioner's list at the commencement of the quarter, and should include a proper proportion of the medical benefit, sanatorium, drug, and drug suspense funds.

Cost of Prescriptions.—The subcommittee appointed to check chemists' accounts considered the cost of prescriptions for the past five quarters; the average over the whole period was 8½ pence. The Committee decided to ask the clerk to the Insurance Committee for the following figures with a view of checking any extravagance: (1) Approximate number of persons in receipt of medical benefit during each of the past five quarters; (2) approximate number of persons on each practitioner's list for quarter ending April 11th, 1914; (3) total number of prescriptions issued by each practitioner during quarter ending April 11th; (4) average cost per prescription in the case of each practitioner.

COUNTY OF GLAMORGAN:

Panel Committee.

A meeting of the County of Glamorgan Panel Committee was held in the Glamorgan County Hall, Cardiff, on May 28th, Dr. W. E. Thomas in the chair, there being sixteen other members present.

Organization of Local Medical and Panel Committees.—On the motion of Dr. Bickerton Edwards, seconded by Dr. A. Lloyd Jones, it was unanimously agreed that the Glamorgan Panel Committee joins the new organization of Local Medical and Panel Committees, and the Chairman was authorized to send the subscription of £12 10s.

Domiciliary Treatment of Tuberculosis.—Representatives of the Welsh National Memorial Association were received, and a long discussion took place on domiciliary treatment. Eventually the Chairman (Dr. W. E. Thomas), the Honorary Secretary (Dr. J. Shaw Lyttle), and Dr. W. Bickerton Edwards were appointed to meet the tuberculosis physicians of the Welsh National Memorial Association to discuss matters and arrange a suitable form to be filled up on a patient leaving a sanatorium.

BURGH OF EDINBURGH.

Panel Committee.

A meeting of the Burgh of Edinburgh Panel Committee was held on May 22nd, when Dr. Dewar occupied the chair, and ten members were present.

Circular to Insurance Practitioners.—The following circular was directed to be sent to the Insurance practitioners in Edinburgh:

Circular to Edinburgh Insurance Practitioners, May, 1914.

1. *Caution in Prescribing.*—The Committee would draw the attention of Insurance practitioners to the practice of excessive prescribing on the part of not a few, and would urge upon them the need of being careful as regards quantities and the use of expensive drugs in cases where less expensive drugs could be utilized with equally beneficial results. It is also strongly recommended that practitioners should, wherever possible, discourage unnecessary drugging.

The Committee feel it to be their duty to make these recommendations, because during the last few months the number of prescriptions dispensed has increased by 3,000 to 4,000 forms per month, a number which is greater than what could be properly attributed to an excessive sickness rate, and their value by nearly 3d. per form, as compared with the previous months. There is also a great discrepancy in the average cost of prescriptions in the various districts of Edinburgh, varying from 7d. to 1s. 8½d., and even to 2s. 2d. in one particular district during January of this year. This excessive cost was no doubt largely due to the too free prescribing of malt and cod-liver oil preparations by way of food, which may even be consumed by others than the insured person.

In the view of the Committee, these substances should be restricted to their medicinal uses, and carefully ordered so as to avoid the prescribing of excessive quantities. As each insured person in this area was credited with over 1⅛ prescriptions during 1913, it means that in the district where 2s. 2d. was the average cost per form during January, the drug fund of 1⅛d. for that month was exceeded by almost 100 per cent., and if the suspense 6d. was included, by 70 per cent. The cost is markedly high in the Gorgie and Haymarket districts. It is hoped that practitioners will, in their own interests, carefully consider the above statement, and act accordingly.

2. *Repeat Forms.*—The chemists have received instructions not to dispense "Repeat Forms" in the future for cogent reasons. Each repeat prescription must be written in full, just as in the case of first prescriptions.

3. *Secret Formulae.*—It has been reported to the Committee that use is being made of secret formulae, and as this practice abolishes the free choice of chemist by insured persons, it is contrary to the provisions of the Act. The Committee would therefore appeal to Insurance practitioners to avoid this offence.

4. *Excessive Certification.*—Practitioners are reminded that certification for sick benefit is a serious obligation imposed upon them by their agreement with the Insurance Committee. Some practitioners have not yet realized the importance of this duty. The Committee would point out that a too ready granting of certificates, often at the request of insured persons, who on many occasions are not entitled to them, is doing an injury directly to both the societies and the profession. Practitioners, therefore, are strongly urged to be firm and careful in this matter, and only to grant certificates when they are perfectly satisfied that the insured person is, owing to a specific ailment, unable to work. The Medical Service Subcommittee deals with complaints of this kind, and practitioners would be wise to take this matter into their serious consideration, and thus avoid the risk of bearing the penalties attached thereto.

5. *Emergency Drugs and Appliances.*—At present, insurance practitioners are allowed to supply themselves, monthly if necessary, with the articles mentioned in the list communicated to them by the Insurance Committee on February 21st, 1914, which list contains the maximum quantity for use

during one calendar month. Steps, however, are being taken by the Panel Committee for the purpose of obtaining permission to vary the individual items according to the special requirement of each practitioner, without in any way exceeding the maximum monthly quantity.

6. *Response to Levy.*—Twenty-nine practitioners residing in the Edinburgh area have up to this date subscribed, and the Committee would respectfully request those who have not yet forwarded their subscription to the Honorary Treasurer, Dr. Morrison M'Intosh, 4, East Claremont Street, to do so at once so as to save the expense of collection.

John Craig,
Honorary Secretary.

Drug Tariff.—The following recommendations of the Subcommittee appointed to consider this matter and to report were unanimously approved of:

	Dispensing Fee.
1. All liquid preparations of any kind or size ...	3d.
2. Pills, capsules, tablets, etc.: Proposed tariff agreed to.	
3. Bulk powders in any size	2d.
Rest of powder tariff to remain as proposed for 1914-15.	
4. Tariff ointments, pastes, and confections ...	2d.
Ointments, pastes, and confections, other than on tariff list	4d.
5. Suppositories, pessaries, and bougies: Proposed tariff agreed to.	
6. Plasters (except mustard leaves, which are to be supplied at 1½d. each).	4d.
Vaccines and serums: It was agreed that nasal catarrh vaccine be added to the list already drawn up.	

Unallotted Funds.—It was agreed to approve of the balance remaining in the Panel Fund being distributed amongst the practitioners on the panel on the basis of the Insurance Committee's scheme for a personal allocation.

INSURANCE COMMITTEES.

LONDON.

Distribution of Unallotted Funds.

As briefly noted in our last issue (Supplement, May 30th, p. 399), the London Insurance Committee had before it on May 28th the scheme prepared by its Special Subcommittee for the distribution amongst doctors on the panel of the moneys accumulated during 1913 in respect of insured persons who had not chosen a doctor. It was proposed to distribute this sum—amounting, according to corrected figures, to £91,000—in proportion to the numbers on each doctor's list.

Mr. Kingsley Wood moved that the recommendation be referred back to the Subcommittee. He said it was an astounding proposal that this sum, amounting to £490,000 in London and to about a million throughout the country (this statement was corrected later on) should be divided amongst the doctors in accordance with the numbers on their lists. Many doctors with small panel lists objected to this method of distribution, which accentuated the injustice of the whole position; doctors with small lists should receive more favourable consideration than those with large ones. He considered the method adopted by the Essex Committee to be a fair one; by that scheme doctors with over a certain number on their lists were excluded from sharing in the distribution, and as regards the remainder the money was distributed rateably between them. The method proposed for London stultified the resolution in which the Committee expressed the opinion that no doctor should have more than 2,000 names on his list. He believed that most of the complaints against practitioners in London were in respect of those who had large lists. The Committee should be properly advised as to its legal rights and duties in the matter, but in view of the Committee's decision last month to disregard the late Mr. Danckwerts's opinion, he hesitated to propose that.

The amendment having been seconded, Mr. F. Briant, the Chairman of the Medical Benefit Subcommittee, stated, in reply to a question, that the recommendation was based on information that the Commissioners had definitely advised that the matter was governed by Article No. 40 (3) of the Regulations, 1912.

Mr. P. Rockliff declared that that advice was absolutely wrong, and quoted various circulars and communications from the Commissioners to show that alternative methods of distribution were contemplated—for example, Circular 10/I.C., which mentioned alternative methods; Circular 29/I.C., which used the expression, "distribution subject to local variation"; and a letter from Mr. Vivian, Secretary to the Commission, who spoke of distribution "on some agreed principle." Alternative methods were approved by the Advisory Committee.

Mr. Briant corrected Mr. Wood as to the amount of the unalloted funds. The £490,000 was the total amount of the medical benefit fund for 1913. He admitted that there were any number of schemes for distribution, but the difficulty in allocating in any other way than that proposed was overwhelming. The large list difficulty was becoming less acute, because, as doctors gained experience of the amount of work required of them, they were obtaining partners, and a large proportion of the unallotted funds would not therefore necessarily accrue to individual practitioners. It was not the case that most of the complaints arose in respect of doctors with large lists. In order to obtain a dispassionate view of the present difficulty it was necessary to consider what doctor would have been selected by those who, because they were young and healthy, had not hitherto selected a doctor. Under normal circumstances the doctors with large lists would receive a considerable proportion of these people as additions to their lists.

Mr. O. E. Warburg said that the reasons of the accumulation of funds were (1) people delayed choice of doctor until they were ill, and (2) there was a class of persons who did not desire to avail themselves of a doctor on the panel; they preferred to go to another practitioner, even if they had to pay him out of their own pockets. As to the first class, practitioners contended that the average of sickness was high amongst persons who had come on their lists. The moneys accumulated under these two heads were in different categories, and he contended that only the money in respect of the first class should go to practitioners on the panel. The only equitable way of disposing of the remainder would be, if possible, to make allowances in respect of the doctors' bills of insured persons who obtained treatment privately; or, as that would be difficult, to use this part of the money for some scheme for the general benefit of insured persons, such as the provision of skilled nursing. As to the argument that the difficulty would not have arisen if allocation had been proceeded with, Mr. Warburg urged that if allocation had been carried out, it would not have been made *pro rata* but would have filled up small lists. For that reason he protested that the proposed method of distribution was inequitable.

Mr. W. Long thought that a specially severe burden was cast by the Act upon doctors with large lists, and that the sickness rate amongst their patients was unduly high. To differentiate as between large and small lists would be to penalize successful doctors.

Miss Lawrence objected that the Subcommittee, having understood from the Commissioners that no other basis of allocation was possible, did not discuss any other scheme. Therefore the matter should be referred back for further consideration, and perhaps in the meantime a written opinion would be obtained from the Commissioners.

The amendment was then carried by 33 votes to 21, and the scheme was accordingly referred back.

Joint Arrangement with Middlesex for Checking Prescriptions.

The Committee approved an arrangement whereby the Drugs and Appliances Subcommittee would include in its work the checking of prescriptions for the Middlesex Insurance Committee, with a view to convenience and economy of administration. At the same time notification was received from the London Panel Committee of its approval of the proposal to appoint the Subcommittee, and the Panel Committee asked that the work might include an examination as to character and nature of the drugs ordered for insured persons with a view to information being supplied to the Panel Committee as to the prescribing by practitioners of unnecessarily expensive ingredients, and as to grossly extravagant prescribing. The Middlesex Insurance Committee also asked for an analysis and statistics of doctors' prescriptions, a report on any important matter connected with prescribing, and that each prescription might be checked twice—once for errors in

price and once for the detection of extravagance or excess in prescribing. It was agreed that the work should proceed on lines that would meet both requests.

Seasonal Variations in Tuberculosis Applications.

The Sanatorium Benefit Subcommittee submitted the following particulars as to insured persons receiving sanatorium benefit: Hospital treatment: Men, 146; women, 42. Sanatorium treatment: Men, 356; women, 194. Domiciliary treatment (including 413 discharged from institutions): Men, 1,100; women, 312. Dispensary treatment (including 118 discharged from institutions): Men, 332; women, 159. Hospital out-patient treatment: Men, 90; women, 29. Total for all forms of treatment: Men, 2,024; women, 736.

Mr. J. A. DAWES, M.P., the Chairman, remarked that the curious discovery had been made by the Committee that tuberculosis was a kind of seasonal disease. Just before and during the winter difficulty was experienced in filling all the beds at the disposal of the Committee, but latterly there had been floods of applications, and cases had to be kept waiting. The only explanation appeared to be that people rather liked the idea of going away to sanatoriums during the warm weather, but were not so anxious during the winter. The drawback from the Insurance Committee's point of view was that it would not make for economical working if beds had to be provided which were empty during part of the year.

Mr. O. E. WARBURG, who is Chairman of the Committee responsible for the London County Council scheme for the treatment of uninsured tuberculous persons, of which an account was given in the last issue of the JOURNAL (p. 1206), suggested that possibly the difficulty could be overcome to some extent by the County Council and the Insurance Committee working in close co-operation in the matter of tuberculosis treatment.

Complaints against Practitioners.

The Medical Service Subcommittee reported on the means which should be taken to acquaint insured persons on a particular doctor's list with the fact that the Committee had decided, in the case of that doctor (on account of some serious breach), to transfer to another list, without inquiry, any insured person who applied.[1] The Subcommittee mentioned the decision of the Committee not to publish names in cases of complaints, and added that it considered that the regulations in this particular were intended to apply only to insured persons who made application for transfer, and did not authorize the Committee to advise the insured persons concerned generally. It would be undesirable for the Committee to consent to information respecting a particular case being conveyed either directly or indirectly to the insured persons on the list of the practitioner concerned. The Committee approved this recommendation.

The Subcommittee reported a finding that a doctor wrongfully made a charge for services rendered, and that he refused to issue a death certificate until payment of 3 guineas was forthcoming. The latter allegation was denied by the doctor. Extenuating circumstances appeared to be that the patient had been attended by another practitioner as a private patient, and on moving into another district came under the care of the doctor against whom complaint was made. The patient was in a very grave condition, and a conflict of evidence arose as to whether he was accepted as a private or an insured patient. On the documentary evidence available the Subcommittee decided against the doctor on this point.

Mr. WARBURG, Chairman of Subcommittee, mentioned that in this case a new form of procedure had been recommended—namely, of sending the papers to the Insurance Commissioners with a request that they might be brought to the notice of the General Medical Council. The grave breach of which the Subcommittee had found the practitioner guilty was not one concerning the efficiency of the medical service, the treatment having been quite satisfactory. A grave breach of professional practice was alleged, and the matter should come before the professional tribunal which could deal with it adequately.

The Committee approved this course.

In another case in which a doctor was censured for a breach explained by illness and who had since died, Dr. EVAN JONES moved the reference back with a view to the case being expunged from the records, but by a majority the Committee rejected the motion.

The Committee required a practitioner to pay 3s. 6d. in a case in which a second doctor was called in at the suggestion of the practitioner's wife, she being unable to state when her husband would return from his round of visits. The Committee thought the insured person should have returned to the panel practitioner after the immediate necessity had been dealt with, and as he had not done so no allowance was made in respect of money expended for treatment elsewhere after the first occasion.

It was held that a practitioner should have provided treatment in a case in which an insured person on his list presented a medical card for the previous year. The defence was that the doctor thought he had not accepted the insured person.

Complaints were received against three practitioners who gave post-dated certificates declaring patients to be capable of work as from a prospective date. It was held that the difficulty had arisen because the practitioners did not amend the standard form of certificate, and the Committee expressed the opinion that the date of the practitioner's signature on a certificate should be the date on which he had affixed his signature after satisfying himself as to the patient's condition.

A complaint of failure to provide adequate treatment, and two complaints against a single doctor of having prescribed without making an examination, were found not to have been substantiated.

In the case of a practitioner now deceased who during his last illness made no arrangements for a deputy, a sum incurred by an insured person in obtaining treatment elsewhere was ordered to be refunded out of moneys due to the deceased practitioner's estate.

In regard to a complaint of a charge having been made for treatment, the defence was that the practitioner had no recollection of having accepted the patient, and believed he had not done so. The Committee found that the doctor was under contract to provide treatment, but that a further complaint that he had been abusive to the patient was not substantiated.

ABERDEENSHIRE.

THE Insurance Committee for the county of Aberdeen met on May 29th, Provost LEASK (Peterhead) presiding.

Recognition of Local Medical Committee.—A communication was read from the Commissioners intimating recognition of the Local Medical Committee under Section 62 of the Act, as from May 16th.

The Budget Proposals.—A communication from Newcastle-on-Tyne Insurance Committee, inviting the Committee to express the opinion that any scheme in connexion with nursing, medical referees, establishment of clinics, pathological laboratories, etc., as outlined by the Chancellor of the Exchequer in his Budget statement, should be administered by Insurance Committees, was ordered to lie on the table.

Proposed Amendment of the Act.—The Rev. CHARLES MACKIE (a local Socialist) moved the following suggested amendment to the Act:

> That the Act should be made not contributory on the part of wage-earners, and that the sole local authority for its administration should be the parish council.

In the course of his speech he attacked the administration of the friendly societies and described the Act as a hotch-potch of mismanagement, waste, confusion, discontentment, and strife. Mr. CLARK seconded. Mr. HARVEY, a friendly society representative, moved a direct negative, seconded by Mr. DICKIE, who said Mr. Mackie's resolution aimed at taking away the very principle the independent working man delighted in—namely, paying his contributions—and would make the country a nation of paupers. The motion was lost by 33 votes to 5. Subsequently it was unanimously agreed to support the Executive Committee of the Scottish Association of Insurance Committees in seeking to give the Commissioners power to dispense with the necessity of forming district committees in counties.

Proposed State Medical Service.—Mr. MACKIE also moved:

> That the Committee recommend that a State Medical and Pharmaceutical Service be substituted for the present method of agreements with private doctors and chemists, to administer the medical benefit part of the Act.

He invited the Committee to follow the lead of Sir John Collie, an Aberdonian, and sweep away the present intolerable medical nuisance. Mr. SIMPSON seconded.

Dr. RORIE moved the rejection of the motion, saying that the only argument in favour of the motion would have been proof that the present system had failed, whereas as yet there had been no time to test it. There was no

[1] BRITISH MEDICAL JOURNAL, May 2nd, p. 992.

reason why they should not have an efficient medical service if they treated the medical men fairly, but they would not get it by refusing payment of the money due them. Should a State medical service ever come it could only come by a movement within the profession, at the desire of the profession, and on the initiative of the profession, and not merely by pressure from without. Dr. Beddie, in seconding, said a State medical service would remove free choice of doctor. As regards the work now being done, he showed by statistics from his own practice that medical men were doing their best for the Act, and that to blame the doctors for everything that went wrong was a fatuous policy. The motion was lost by 31 votes to 5.

Sanatorium Benefit Subcommittee's Report.—The adoption of this report, which showed the excellent work done by Dr. Macrae, the tuberculosis officer for the county, was carried by a large majority, against a motion by Mr. Mackie that the Insurance Committee should not contribute to the salary of the tuberculosis officer, on the ground that the whole cost should be borne by the County Council.

Medical Benefit Subcommittee's Report.—This report, which dealt with an agreement come to (after a conference with the Panel and Pharmaceutical Committees) empowering all the medical men who had been dispensing before the Act came into force to continue doing so at capitation rates, was unanimously approved, although it was mentioned that the chemists, in spite of their previous consent, had appealed to the Commissioners against the Subcommittee's decision.

Payments to Doctors and Chemists.—When the report of the Finance Subcommittee (which intimated the deduction of 20 per cent. off the sums due to the doctors and chemists) was brought forward by Mr. Irvine of Drum, formal protests were intimated from the Panel and Pharmaceutical Committees, and it was only adopted after considerable discussion and with an addition, moved by Major Reiach and seconded by Dr. Beddie, to the effect that the Insurance Commissioners be requested to provide the Insurance Committee immediately with funds to pay the doctors and chemists 95 per cent. of the sums due.

INSURANCE NOTES.

IRELAND.

Certification under the Insurance Act.

So far no change has been made in the method of arranging for medical certificates under the Insurance Act. When the Insurance Commissioners decided to continue the existing arrangements from April 1st to June 30th, the Irish Medical Committee wrote to the Commissioners expressing regret that the Commissioners had not made a scheme for certification on the basis of the discussions which took place between the Commissioners and a deputation of the Irish Medical Committee last December; the Committee repeated the offer then made, that the members of the profession were willing to carry out the duties of certification gratuitously for a limited period, say, up to June 30th if necessary, in the hope that a satisfactory settlement would be reached: this offer was, of course, conditional on the present system of certification by medical advisers being abolished. This letter was written on March 25th, and received merely a formal acknowledgement. The Irish Medical Committee wrote to the Commissioners again on May 18th, asking for further information with regard to what arrangements were being made with a view to the meeting of the profession to be held early in June to consider the matter. The Commissioners merely stated in their reply that "proposals for placing certification arrangements in Ireland on a permanent basis are still engaging the attention of the Commissioners." The question would appear, therefore, to be very much where it was six months ago. In the meantime the system of certification by "medical advisers" persists; it is a thoroughly vicious system, even more unfair to the insured persons than to the general body of the medical profession. Its prime purpose would not seem to be to ensure that insured persons get the utmost possible benefit from their enforced contributions, but rather to secure that the Act is an administrative success. It is notorious that insured persons find the present system of certification anything but satisfactory; complaints are numerous and bitter that it is very difficult to secure a certificate of sickness at all, that certificates are refused on trivial grounds, and that the period of incapacity is cut down to the barest minimum. Only last week the Athlone Board of Guardians were engaged in considering complaints of irregularities and hardships in the administration of the Insurance Act. They had previously forwarded to the Local Government Board particulars of several cases in which sickness benefit had been denied to insured people, who in consequence had to receive considerable sums in outdoor relief chargeable to the local rates. The Relieving Officer reported that he had to give outdoor relief to a sick man who was insured, but had not got any benefit, though he had a medical certificate of illness. He also stated that he had on his books the case of a man who had been sick since last October; his child was sick also, but he was getting no benefit. There was also the case of a woman with five children, whose husband was in Peamount Sanatorium, yet she was getting nothing. The clerk was directed to make out a complete list of all the cases and complaints, and forward them to the Insurance Commissioners, with a strong protest against the administration of the Act. The Secretary of the Irish Medical Committee has collected particulars of a very large number of cases, which are little short of a public scandal; in one case it is alleged that a girl after receiving benefit for two months, was told by the referee of her society that she was fit for work. Within a fortnight she was admitted to a sanatorium with "advanced tuberculosis of the lungs." In another man who was attended by the dispensary doctor for cancer of the stomach was, it is alleged, told by a "medical adviser" that he was fit for work, and his benefit was stopped; he had to go to a workhouse hospital, where he died ten days after the visit from the "medical adviser."

It is alleged also that in some cases sick persons are refused benefit on the advice of a "medical adviser" who has never even seen the patient. In Ireland the members of approved societies suffer not merely from delays and annoyances in obtaining their benefit, but when the benefit is refused they are to all intents without redress. They have, it is true, the right to appeal to a "committee of disputes"; the procedure is cumbrous, however, and the appeal is heard in Dublin, which is not very useful to a patient who is lying ill perhaps far away in the country. One large society has in its rules a condition that an appeal to a committee of disputes must be accompanied by a deposit of £1, and it is asked how such a rule obtained the approval of the Insurance Commissioners. The evil of the present system affects "sanatorium benefit" also, as in order to substantiate his claim, the tuberculous patient may be sent several miles to visit the "medical adviser"; the natural consequence is that many prefer to leave the benefit unclaimed. Any system which relies on the evidence of outside parties—to the exclusion of that of the medical attendant—must not only prove unsatisfactory to the medical profession, but lead to gross injustice to the insured person.

By the time this is in print a mass meeting of the profession will have been held in Dublin to protest against the establishment of any system of certification of insured persons other than by the medical attendant. The profession has done and is doing its best to safeguard the interests of insured patients, and it now rests with the Commissioners to make an honest attempt to meet the profession and devise a satisfactory scheme.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER, 1914.

[Specially Reported for the "British Medical Journal."]

In the accompanying table will be found summarized the vital statistics of ninety-seven of the largest English towns based upon the Registrar-General's weekly returns for the first quarter of the year. The 113,577 births registered in these towns during the quarter were equal to an annual rate of 25.1 per 1,000 of the population, estimated at 18,120,059 persons in the middle of the year. In London the birth-rate was equal to the mean rate for all the large towns, among which the lowest rates were 12.4 in Bournemouth, 13.1 in Southport, 14.1 in Blackpool, 14.2 in Eastbourne, 14.5 in Hastings, 15.0 in Ealing, 15.7 in Bath, 16.3 in Cambridge, and 16.4 in Ilford; while the highest rates were 32.4 in Barnsley and in Stockton-on-Tees, 33.0 in Sunderland, 33.1 in West Bromwich, 33.6 in Middlesbrough, 34.2 in St. Helens, and 35.4 in Rhondda.

Analysis of the Vital Statistics of Ninety-seven of the Largest English Towns during the First Quarter of 1914.

Towns.	Estimated Population middle of 1914.	Births.	Deaths.	Annual rate per 1,000 Living.		Deaths from							Deaths of Children under 1 year of age to 1,000 Births.	Rate per cent. of Ascertained Deaths.
				Births.	Deaths.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping-cough.	Diphtheria.	Diarrhœa and Enteritis (under 2 years of age).		
97 Towns	18,120,059	113,577	74,256	25.1	16.4	228	—	1,254	462	1,538	848	966	116	0.8
London	4,516,612	28,235	18,112	25.1	16.1	47	—	148	66	281	161	265	96	0.1
Croydon	181,956	977	563	21.5	12.4	2	—	1	1	3	11	8	87	—
Wimbledon	59,598	266	168	17.9	11.3	—	—	1	—	1	1	1	38	—
Ealing	71,030	265	197	15.0	11.1	—	—	1	1	—	—	3	91	0.5
Acton	64,369	365	210	22.7	13.1	1	—	—	—	1	2	—	99	—
Willesden	167,922	969	460	23.1	11.0	2	—	—	—	1	5	3	70	—
Hornsey	88,953	378	219	17.0	9.9	—	—	—	1	—	1	5	66	—
Tottenham	149,495	921	487	24.7	13.1	2	—	2	1	16	10	7	117	—
Edmonton	71,024	505	183	28.5	10.3	1	—	—	1	7	8	2	57	—
Enfield	61,069	314	167	20.6	11.0	—	—	—	1	2	6	3	86	—
West Ham	296,570	2,342	1,275	31.7	17.2	4	—	51	5	63	15	17	113	0.1
East Ham	146,526	891	406	24.4	11.1	1	—	6	3	9	11	5	75	—
Leyton	133,719	668	374	20.0	11.2	1	—	1	—	8	7	2	84	—
Walthamstow	134,825	785	365	23.4	10.9	1	—	—	3	4	5	6	83	—
Ilford	91,041	373	190	16.4	8.4	—	—	—	—	4	2	—	56	—
Gillingham	55,559	335	230	24.2	16.6	2	—	5	—	7	4	—	128	1.7
Hastings	59,620	215	249	14.5	16.8	1	—	—	—	2	—	—	116	—
Eastbourne	55,662	197	116	14.2	8.4	—	—	—	—	—	5	—	51	0.9
Brighton	133,936	588	536	17.6	16.1	—	—	8	5	—	—	2	71	—
Portsmouth	245,827	1,453	937	23.7	15.3	2	—	20	2	13	32	7	96	1.0
Bournemouth	85,254	264	275	12.4	12.9	—	—	1	—	—	2	1	102	—
Southampton	123,948	696	467	22.5	15.1	2	—	6	3	5	12	2	80	—
Exeter	60,738	289	263	19.1	17.4	—	—	—	—	7	1	2	131	—
Reading	90,085	467	355	20.8	15.8	2	—	1	—	—	—	3	135	1.7
Oxford	54,339	228	184	16.8	13.6	—	—	4	—	2	—	3	75	—
Northampton	91,123	500	374	22.0	16.5	—	—	2	—	1	16	4	110	1.6
Cambridge	57,676	234	205	16.3	14.3	—	—	—	—	—	12	—	111	—
Southend-on-Sea	83,908	365	225	17.4	10.8	1	—	—	1	1	1	—	71	3.6
Ipswich	76,472	460	327	24.1	17.2	—	—	14	5	—	1	4	126	—
Great Yarmouth	57,502	309	294	21.6	20.5	1	—	4	—	12	6	2	142	—
Norwich	124,107	576	543	18.6	17.5	—	—	9	2	—	11	6	175	0.4
Swindon	52,750	299	193	22.7	14.7	—	—	—	—	—	1	2	104	—
Plymouth	113,559	650	588	23.0	20.8	2	—	—	2	12	10	2	140	—
Devonport	85,589	493	276	23.1	12.9	4	—	—	2	7	11	3	91	—
Bath	70,292	276	308	15.7	17.6	—	—	—	1	—	3	2	72	0.3
Bristol	363,312	1,901	1,461	21.0	16.1	3	—	54	7	11	6	11	137	—
Gloucester	50,759	312	224	24.7	17.7	—	—	—	2	—	5	1	109	3.6
Stoke-on-Trent	241,430	1,827	1,150	30.4	19.1	6	—	26	—	23	17	30	142	1.0
Wolverhampton	95,725	641	452	26.9	18.9	—	—	2	3	4	4	6	136	—
Walsall	94,093	683	339	29.1	14.5	—	—	—	—	6	7	5	86	—
West Bromwich	69,430	573	337	33.1	19.5	1	—	20	4	6	9	8	119	1.8
Dudley	51,895	386	257	29.8	19.9	1	—	20	—	14	—	5	168	2.7
Birmingham	868,430	5,813	3,692	26.8	17.1	3	—	20	59	171	82	54	121	3.4
Smethwick	76,314	497	319	26.1	16.8	—	—	—	3	9	3	6	117	0.3
Coventry	119,003	804	434	27.1	14.6	1	—	7	1	5	4	5	106	1.6
Leicester	232,664	1,271	1,026	21.9	17.7	1	—	58	3	39	5	10	158	0.4
Lincoln	60,243	319	226	21.2	15.0	—	—	3	—	—	4	1	110	0.4
Grimsby	78,667	505	298	25.7	15.2	—	—	—	—	4	1	3	127	1.0
Nottingham	266,918	1,480	1,151	22.2	17.3	2	—	74	3	13	12	9	155	0.2
Derby	126,389	730	497	23.2	15.8	1	—	1	—	8	3	7	110	—
Stockport	126,040	708	532	22.5	16.9	3	—	14	2	2	6	11	153	0.8
Birkenhead	137,710	961	520	28.0	15.1	2	—	1	2	16	3	8	120	0.6
Wallasey	87,175	457	282	21.0	13.0	—	—	1	1	7	1	4	61	—
Liverpool	767,992	5,838	3,676	30.5	19.2	11	—	29	27	70	24	55	114	2.3
Bootle	73,230	582	272	31.9	14.9	—	—	2	—	—	1	3	103	2.9
St. Helens	100,775	859	463	34.2	18.4	—	—	—	2	9	1	4	133	3.0
Southport	71,747	234	271	13.1	15.1	1	—	8	—	—	—	—	94	1.8
Wigan	91,491	715	398	31.3	17.4	5	—	—	—	5	2	7	120	—
Warrington	74,923	550	312	29.4	16.7	3	—	7	2	—	4	3	138	3.8
Bolton	185,247	997	711	21.6	15.4	4	—	—	2	23	12	11	109	0.3
Bury	59,213	301	300	20.4	20.3	1	—	1	5	8	3	3	156	2.0
Manchester	738,538	4,890	3,387	26.6	18.4	15	—	38	28	95	42	70	129	0.1
Salford	234,975	1,558	1,064	26.6	18.2	6	—	27	32	18	9	16	125	0.2
Oldham	151,044	912	724	24.2	19.2	1	—	6	13	17	15	10	127	—
Rochdale	94,320	494	478	21.0	20.3	1	—	11	2	21	6	3	160	3.6
Burnley	110,040	669	638	24.4	23.3	2	—	98	4	12	6	13	245	1.3
Blackburn	134,387	706	590	21.1	17.6	3	—	7	6	—	2	3	105	0.8
Preston	118,514	685	501	23.2	17.0	3	—	—	13	1	9	8	136	3.0
Blackpool	62,206	218	234	14.1	15.1	—	—	2	—	—	1	2	124	3.4
Barrow-in-Furness	65,921	518	272	31.5	16.6	1	—	1	3	6	5	2	112	1.5
Huddersfield	112,265	504	440	18.0	15.7	2	—	1	—	4	—	—	107	0.5
Halifax	100,373	443	436	17.7	17.4	5	—	2	1	14	2	2	140	0.2
Bradford	291,482	1,388	1,258	19.1	17.3	4	—	63	—	29	12	8	125	—
Leeds	459,260	2,707	1,785	23.6	15.6	6	—	3	11	44	19	21	118	—
Dewsbury	54,083	345	216	25.6	16.0	3	—	4	—	—	1	1	87	—
Wakefield	52,643	287	199	21.9	15.2	—	—	—	2	—	6	1	105	—
Barnsley	53,929	435	284	32.4	21.1	—	—	39	2	8	—	1	156	—
Sheffield	476,971	3,294	2,187	27.7	18.4	20	—	87	28	114	25	21	143	0.5
Rotherham	65,313	500	272	30.7	16.7	2	—	—	2	8	1	3	102	2.2
York	83,802	484	300	23.2	14.4	—	—	—	—	7	5	2	124	—
Hull	291,118	2,034	1,126	28.0	15.5	7	—	17	—	16	8	13	109	0.3
Middlesbrough	126,452	1,058	647	33.6	20.5	2	—	33	14	25	7	21	153	0.6
Darlington	59,500	423	235	28.5	15.8	—	—	—	3	11	8	2	128	3.4
Stockton-on-Tees	59,311	479	261	32.4	17.7	—	—	6	6	3	4	6	113	0.4
West Hartlepool	64,374	512	277	31.9	17.3	2	—	—	5	12	1	1	117	0.7
Sunderland	152,927	1,260	681	33.0	17.9	2	—	3	5	15	5	10	140	1.6
South Shields	111,357	880	577	31.7	20.8	1	—	14	12	17	4	2	167	4.5
Gateshead	119,362	928	540	31.2	18.1	—	—	1	3	15	3	10	151	5.0
Newcastle-on-Tyne	273,415	2,000	1,196	29.3	17.5	6	—	—	9	8	5	14	143	0.5
Tynemouth	61,408	449	255	29.3	16.7	1	—	4	4	1	6	1	138	2.7
Carlisle	52,813	304	234	23.1	17.8	—	—	—	—	—	1	1	145	5.4
Newport (Mon.)	89,404	620	353	27.8	15.8	1	—	2	6	19	1	4	134	—
Cardiff	188,495	1,188	796	25.3	16.8	2	—	53	5	21	5	8	125	—
Rhondda	166,365	1,468	688	35.4	16.6	2	—	39	4	6	13	19	145	0.4
Merthyr Tydfil	85,082	635	353	29.9	16.6	—	—	—	3	1	7	5	139	0.3
Aberdare	53,427	379	200	28.5	15.0	—	—	—	—	1	6	4	129	1.0
Swansea	121,665	851	657	27.4	21.7	—	—	60	2	47	4	16	205	—

The 74,256 deaths in these towns during the quarter were equal to an annual rate of 16.4 per 1,000; in London the rate was 16.1 per 1,000; while among the ninety-six other large towns it ranged from 8.4 in Ilford and in Eastbourne, 9.9 in Hornsey, 10.3 in Edmonton, 10.8 in Southend-on-Sea, and 10.9 in Walthamstow to 20.3 in Bury and in Rochdale, 20.5 in Great Yarmouth and in Middlesbrough, 20.8 in Plymouth and in South Shields, 21.1 in Barnsley, 21.7 in Swansea, and 23.3 in Burnley.

The deaths included 228 which were referred to enteric fever, 1,254 to measles, 462 to scarlet fever, 1,538 to whooping-cough, 848 to diphtheria, and 966, among children under 2 years of age, to diarrhœa and enteritis. The 228 deaths from enteric fever were equal to an annual rate of 0.05 per 1,000; in London the death-rate from this disease was 0.04, while among the other towns it ranged upwards to 0.12 in Rotherham and West Hartlepool, 0.13 in Gillingham, 0.16 in Warrington, 0.17 in Sheffield, 0.19 in Devonport, 0.20 in Halifax, and 0.22 in Wigan and in Dewsbury. The 1,254 fatal cases of measles were equal to a rate of 0.28 per 1,000, in London the rate was only 0.13 per 1,000, but in the other towns it ranged upwards to 1.00 in Leicester, 1.05 in Middlesbrough, 1.11 in Nottingham, 1.13 in Cardiff, 1.16 in West Bromwich, 1.55 in Dudley, 1.98 in Swansea, 2.90 in Barnsley, and 3.57 in Burnley. The 462 deaths from scarlet fever corresponded to a rate of 0.10 per 1,000; in London the rate was 0.06 per 1,000, while among the other towns the highest rates were 0.31 in West Hartlepool, 0.34 in Bury, 0.35 in Oldham, 0.41 in Stockton-on-Tees, 0.43 in South Shields, 0.44 in Preston and in Middlesbrough, and 0.55 in Salford. The 1,538 fatal cases of whooping-cough were equal to a rate of 0.34 per 1,000; in London this disease caused a death-rate of 0.25 per 1,000, while in the other towns the rates ranged upwards to 0.79 in Bury and in Middlesbrough, 0.84 in Great Yarmouth, 0.85 in West Ham and in Newport (Mon.), 0.89 in Rochdale, 0.96 in Sheffield, 1.08 in Dudley, and 1.55 in Swansea. The 848 deaths from diphtheria corresponded to a rate of 0.19 per 1,000; in London the rate was 0.14, while among the other towns the highest rates were 0.45 in Edmonton and in Aberdare, 0.46 in Wakefield, 0.52 in Portsmouth, in Devonport, and in West Bromwich, 0.54 in Darlington, 0.70 in Northampton, and 0.85 in Cambridge. The 966 deaths from diarrhœa and enteritis among children under 2 years of age were in the proportion of 3.51 to 1,000 births registered during the quarter. In London the proportion was 2.39, while among the other large towns the highest proportions were 14.31 in Manchester, 15.54 in Stockport, 16.42 in Stoke-on-Trent, 19.25 in Swansea, 19.43 in Burnley, and 19.85 in Middlesbrough.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 116 per 1,000; in London the rate of infant mortality was 96 per 1,000, while among the other large towns it ranged from 38 in Wimbledon, 51 in Eastbourne, 56 in Ilford, 57 in Edmonton, 61 in Walthamstow, and 66 in Hornsey to 155 in Bury and in Barnsley, 158 in Leicester, 160 in Rochdale, 167 in South Shields, 168 in Dudley, 175 in Norwich, 203 in Swansea, and 245 in Burnley.

The causes of 559, or 0.8 per cent., of the deaths registered in the ninety-seven towns last quarter were not certified either by a registered medical practitioner or by a coroner. In 40 of the towns the causes of all the deaths were duly certified; among the other towns the highest proportions of uncertified deaths were 3.4 per cent. in Birmingham, in Blackpool, in Darlington, and in Carlisle, 3.6 in Southend-on-Sea, Gloucester, and Rochdale, 3.8 in Warrington, 4.5 in South Shields, and 5.0 in Gateshead.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest towns, 9,304 births and 6,636 deaths were registered during the week ended Saturday, May 30th. The annual rate of mortality in these towns, which had been 14.1, 14.1, and 13.9 per 1,000 in the three preceding weeks, further fell to 13.3 per 1,000 in the week under notice. In London the death-rate did not exceed 11.8, against 13.8, 13.4, and 12.7 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 5.1 in Edmonton, 5.2 in Bath, 6.7 in Acton and in Willesden, 6.8 in Enfield, 7.5 in Gillingham, and 7.9 in Wimbledon and in Carlisle to 18.8 in Rochdale, 18.9 in Salford, 19.9 in Wigan, 20.1 in Sunderland, 21.0 in Middlesbrough, and 21.7 in Oldham. Measles caused a death-rate of 1.0 in Liverpool and in Leeds, 1.1 in Manchester and in Sheffield, 1.7 in Wigan and in Rochdale, and 2.8 in Warrington and in Barnsley; scarlet fever of 1.2 in Middlesbrough; and whooping-cough of 1.5 in Gateshead and in Swansea, and 2.5 in South Shields. The mortality from diphtheria and enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 33, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest: of this number 8 were recorded in Birmingham, 5 in Liverpool, and 2 each in St. Helens, Rochdale, Barrow-in-Furness, and Darlington. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,901, 2,862, and 2,909 at the end of the three preceding weeks, were 2,910 on Saturday, May 30th; 377 new cases were admitted during the week, against 398, 349, and 415 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,228 births and 686 deaths were registered during the week ended Saturday, May 30th. The annual rate of mortality in these towns, which had been 16.2, 15.3, and 61.1 per 1,000 in the three preceding weeks, fell to 15.6 in the week under notice, but was 2.3 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 5.9 in Clydebank, 8.5 in Leith, and 11.3 in Motherwell to 20.6 in Paisley, 21.6 in Hamilton, and 21.4 in Kirkcaldy. The mortality from the principal infective diseases averaged 1.3 per 1,000, and was highest in Paisley and Hamilton. The 311 deaths from all causes in Glasgow included 19 from whooping-cough, 7 from measles, 4 from infantile diarrhœa, 2 from scarlet fever, and 2 from diphtheria. Three deaths from measles were recorded in Dundee, 3 in Paisley, 2 in Edinburgh, and 2 in Hamilton; and from whooping-cough 2 deaths in Paisley and 2 in Coatbridge.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 30th, 747 births and 512 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 630 births and 438 deaths in the preceding period. These deaths represent a mortality of 17.8 per 1,000 of the aggregate population in the districts in question, as against 18.9 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.5 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 32.3 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 22.0 (as against an average of 20.6 for the previous four weeks), in Dublin City 21.8 (as against 21.7), in Belfast 15.0 (as against 16.4), in Cork 18.4 (as against 19.7), in Londonderry 7.6 (as against 12.4), in Limerick 17.6 (as against 18.9), and in Waterford 17.1 (as against 20.4). The zymotic death-rate was 2.1, as against 2.2 in the previous week.

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

Surgeon-General Sir William L. Gubbins, K.C.B., M.V.O., is placed on retired pay, June 1st.

Surgeon-General Sir Arthur T. Sloggett, C.B., C.M.G., to be Director-General and to rank as Lieutenant-General, vice Surgeon-General Sir William Gubbins, retired, June 1st.

Colonel Richard W. Ford, D.S.O., to be Surgeon-General, vice Sir William Gubbins, retired, June 1st.

Colonel Tom P. Woodhouse, from the half-pay list to be Colonel, vice R. W. Ford, D.S.O., promoted, June 1st.

Royal Army Medical Corps.

Major Robert B. Black, M.B., retired on retired pay, May 27th.

Captain G. A. D. Harvey, from the Royal Army Medical College, has been appointed to the Egyptian Army for duty.

The following Captains to be Majors, June 1st: Percival Davidson, D.S.O., M.B., John Mackenzie, M.B., Norman D. Walker, M.B., Arthur H. Hayes, Henry J. Crossley, Reginald Storrs, Raymond L. V. Foster, M.B., Frederick A. H. Clarke, George A. K. H. Reed, John M. H. Conway, Sydney M. W. Meadows, William W. Browne, William D. C. Kelly, M.B., and Norman E. J. Harding, M.B.

INDIAN MEDICAL SERVICE.

Captain R. L. Flowerdew is appointed to be Superintendent of the Cellular and Female Gaols and Civil Surgeon, Port Blair, with effect from March 19th.

Lieutenant-Colonel J. M. Macleod, C.I.E., is granted privilege leave for three months combined with furlough for four months and study leave for three months, with effect from February 5th.

Captain A. R. S. Alexander held charge of the current duties of the office of Civil Surgeon, Quetta, in addition to his own duties for the period from February 5th.

Major W. M. Anderson is posted as Civil Surgeon, Quetta, with effect from March 8th.

TERRITORIAL FORCE.

Royal Army Medical Corps.

For Attachment to Units other than Medical Units.—Stanley Southam to be Lieutenant, January 3rd.

Attached to Units other than Medical Units.—Major William F. O'Grady is retired under the provisions of paragraph 116 of the Territorial Forces Regulations, and is granted permission to retain his rank and to wear the prescribed uniform, May 27th.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ABERDEEN UNIVERSITY.—Lectureship in Public Health. Salary, £400 per annum.

ASHTON-UNDER-LYNE UNION WORKHOUSE.—(1) Resident Medical Officer; (2) Resident Assistant Medical Officer. Salary for (1) £350, rising to £400 per annum, and for (2) £150 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £150 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House-Surgeon (male). Salary, £120 per annum.

BIRMINGHAM CITY.—(1) Assistant Medical Officer for the Yardley Road Sanatorium; (2) Non-resident Assistant Medical Officer for Central Tuberculosis Dispensary; (3) Resident Medical Officer at the Salterley Grange Sanatorium for Consumption, near Cheltenham. Salary, £250, £350, and £300 per annum respectively.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £240 per annum.

BIRMINGHAM UNION.—Resident Assistant Medical Officer (male) at the Dudley Road Infirmary. Salary, £150 per annum.

BOOTLE: BOROUGH HOSPITAL.—Senior and Junior House-Surgeons. Salary, £100 and £80 per annum respectively.

BOURNEMOUTH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

BOURNEMOUTH: ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House-Surgeon (male). Salary, £80 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—Two House-Surgeons. Salary, £135 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £150 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Locumtenent Medical Officer. Salary, 7 guineas weekly.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £80 per annum respectively.

CARDIFF: KING EDWARD VII HOSPITAL.—(1) House-Surgeon for the Ophthalmic and Ear, Nose, and Throat Departments; (2) Two House-Surgeons. Salary for (1) £120 per annum, and for (2) £80 per annum each.

CARDIFF: KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—Resident Medical Officer for the Glan Ely Tuberculosis Hospital. Salary, £200 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Registrar.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House-Physician. Salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E. House-Physician (male). Salary at the rate of £75 per annum.

CUMBERLAND COUNTY COUNCIL.—Three Assistant County Medical Officers. Salary, £300 per annum, rising to £450.

DERBYSHIRE ROYAL INFIRMARY.—(1) House-Physician; (2) Assistant House-Surgeon. Salaries, £120 and £80 per annum respectively.

DEVONPORT: ROYAL ALBERT HOSPITAL. House-Surgeon. Salary at the rate of £120 per annum.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

ESSEX EDUCATION COMMITTEE, Chelmsford.—Medical Inspector of School Children. Salary, £300 per annum, rising to £400.

GALWAY: UNIVERSITY COLLEGE.—(1) Assistant in Anatomy; (2) Assistant in Physiology. Salary, £175 per annum each.

GLASGOW SCHOOL BOARD. Lady Assistant Medical Officer. Salary, £250 per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Anaesthetist. Honorarium, 10 guineas per annum.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer (male). Salary, £250 per annum.

HARROGATE: THE INFIRMARY.—Resident House Surgeon. Salary, £75 per annum, rising to £100.

HARTLEPOOL UNION.—Assistant Medical Officer (non-resident). Salary at the rate of £250 per annum.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £75 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 for six months and £2 10s. washing allowance.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £150 per annum.

LAHORE MUNICIPAL COMMITTEE.—Health Officer. Salary, Rs. 750 a month (£630 a year).

LIVERPOOL: STANLEY HOSPITAL.—(1) Two House-Physicians; (2) House-Surgeon. Salary, £75 per annum each.

LONDON COUNTY COUNCIL.—Assistant Organizers of Children's Care Work. Salary, £100 per annum, rising to £150.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital, Harrow Road. Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum.

MANCHESTER: HULME DISPENSARY.—House-Surgeon. Salary, £180 per annum, increasing to £200.

MANCHESTER CORPORATION.—Fourth Medical Assistant at the Monsall Fever Hospital. Salary, £150 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum.

MANCHESTER ROYAL INFIRMARY.—(1) Medical Officer for Out-patients and Accidents at the Central Branch; (2) Assistant Director in the Clinical Laboratory; (3) Surgical Registrar; (4) Junior Administrator of Anaesthetics. Salary at the rate of for (1) £100, for (2) and (3) £75, and (4) £60 per annum.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Clinical Assistant in the Out-patient Department; (2) Anaesthetist.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Demonstrator of Anatomy. Salary, £200 per annum.

NORWICH: JENNY LIND HOSPITAL FOR SICK CHILDREN.—Lady Resident Medical Officer. Salary at the rate of £50 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

OUGHTERARD UNION.—Medical Officer for the Lettermore Dispensary District. Salary, £200 per annum, rising to £250, and fees, and £20 a year as Medical Officer of Health.

PEMBROKESHIRE EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary, £300 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary at the rate of £90 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—(1) Junior Assistant Medical Officer; (2) Assistant Medical Officer to act as Pathologist. Salary, £250 per annum, rising to £300.

PRESTON COUNTY BOROUGH.—School Medical Officer. Salary, £300 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—(1) House-Physician. (2) House-Surgeon. Salary at the rate of £80 per annum each.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £200 and £100 per annum respectively.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Resident Medical Officer; salary, £120 per annum. (2) Additional Medical Officer for X-Ray Department; honorarium, 25 guineas per annum.

SALFORD ROYAL HOSPITAL.—(1) Honorary Physician; (2) Honorary Assistant Surgeon; (3) Junior House-Surgeon; (4) Casualty House-Surgeon. Salary for (3) and (4), £80 per annum each.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £90 per annum.

SALVATION ARMY: MOTHERS' HOSPITAL, Clapton.—Lady Resident Doctor.

SHEFFIELD: EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £180 per annum.

SHOREDITCH: PARISH OF ST. LEONARD.—Junior Assistant Medical Officer for the Infirmary. Salary, £150 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum, rising to £250.

SOUTHWARK UNION.—Second and Third Assistant Medical Officer. Salary, £170 and £160 per annum, rising to £180 and £170 respectively.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—(1) House-Physician; (2) Casualty and Out-patient Officer (Males). Salary at the rate of £120 per annum each.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £120 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Clinical Assistants.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Two Assistant Anaesthetists.

WEST RIDING ASYLUM, Scalebor Park.—Assistant Medical Officer. Salary, £250 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon. (2) Junior House-Surgeon. Salary, £170 and £150 per annum respectively.

WOKINGHAM: PINEWOOD SANATORIUM.—Assistant Medical Officer. Salary, £150 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £120 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary at the rate of £125 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £160 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments, namely: Blackburn, South (Lancs.), Pontymister (Mon.), Westerham (Kent).

To ensure notice in this column—which is compiled from our Advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BURKE, D. E. J., M.B., B.Ch., N.U.I., Certifying Factory Surgeon for the Sleevereagh District, co. Cork.

BURT, W., M.R.C.S., L.R.C.P., House-Physician to the Royal Free Hospital, Gray's Inn Road.

CARLILL, Hildred B., M.A., M.D.Cantab., M.R.C.P.Lond., appointed Assistant Physician to the West End Hospital for Diseases of the Nervous System, Welbeck Street, W.

CLATWORTHY, C. H., M.B.Syd., Assistant Health Officer, Department of Public Health, Queensland.

DART, George H., M.B., Ch.B.Edin., Tuberculosis Officer to the Greenwich Borough Council.

HEDERMAN, W., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Croom District, co. Limerick.

LOFTWIDGE, W. C., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Langport District, co. Somerset.

PITTS, Arthur T., M.R.C.S., L.R.C.P., L.D.S., Dental Surgeon to the Hospital for Diseases of the Throat, Golden Square.

RIGGALL, Robert M., L.R.C.P. and S.Edin., L.F.P.S.Glasg., Surgeon R.N., Assistant Medical Officer to the Queen Alexandra Sanatorium, Davos Platz, Switzerland.

TARBET, P. R., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Llanwrtyd District, co. Brecknock.

THOMPSON, R. B., M.B., Ch.B.Vict., Certifying Factory Surgeon for the Brixham District, co. Devon.

KING'S COLLEGE HOSPITAL.—The following appointments have recently been made:

Assistant Anaesthetist.—Mr. Cecil Hughes, M.B., M.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond.

Senior House-Physician.—Mr. V. E. Negus, M.R.C.S., L.R.C.P.

Junior House-Physician.—Mr. A. S. Wakely, M.R.C.S., L.R.C.P.

House-Accoucheur and Assistant Casualty Officer.—Mr. N. P. Pritchard, M.A.Cantab., M.R.C.S., L.R.C.P.

Assistant House-Accoucheur and Assistant Casualty Officer.—Mr. C. V. Lyne, M.R.C.S., L.R.C.P.

House-Surgeon for Diseases of Children.—Mr. Sidney Smith, M.R.C.S., L.R.C.P.

House-Surgeon for Professor Sir Watson Cheyne.—Mr. W. H. W. Cheyne, B.A.Cantab., M.R.C.S., L.R.C.P.

House-Surgeon for the Professor Carlill.—Mr. [illegible], B.A., M.B., Ch.B.Oxon., M.R.C.S., L.R.C.P.

House-Surgeon for Mr. F. F. Burghard.—Mr. H. H. P. Morton, M.R.C.S., L.R.C.P.

GRAVESEND HOSPITAL.—The following appointments have been made:

Honorary Surgeons.—C. J. Pinching, B.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.Lond. J. D. Hartley, F.R.C.S.Eng., L.R.C.P. Lond.

Honorary Assistant Surgeon.—S. M. Lawrence, M.D., B.S.Lond., L.R.C.P.Lond., M.R.C.S.Eng.

Honorary Junior Assistant Surgeon.—C. Dismorr, M.R.C.S.Eng., L.R.C.P.Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

MARRIAGES.

MARSHALL—STÜLPMAGEL.—On May 21st, at the Cathedral Church of St. Paul, Valletta, Fleet Surgeon William E. Marshall, R.N., H.M.S. *Duke of Edinburgh*, to Amy Mara, second daughter of the late Charles John Stülpmagel, Educational Department, Punjaub, India.

MARTIN—LEIGH.—On May 27th, 1914, at All Saints', Oystermouth, by the Rev. Canon Jones, M.A., Rector of Gellygaer, and the Rev. J. F. W. Leigh, M.A., Rector of Rockhampton, Glos. (brother of the bride), assisted by the Rev. Harold S. Williams, Vicar of Oystermouth, Edward Graeme Martin, B.A.Cantab., M.R.C.S., L.R.C.P., son of Henry W. Martin, J.P., of Sherwood, Cardiff, to Mabel Harriett Louisa, only daughter of Dr. W. W. Leigh, J.P., and Mrs. Leigh, of Glyn Bargoed, Treharris, S. Wales.

NEVILLE CROWE—WOODHAMS.—At Holy Trinity Church, Hastings, by the Rev. T. W. Cook, M.A., Henry Neville Crowe, M.D. (Honorary Secretary of Worcester Division, British Medical Association), second son of Geo. Wyndham Crowe, M.D., to Margaret Winifred Woodhams, youngest daughter of the late Mr. James Woodhams and Mrs. Woodhams, of Aldwick, Hastings.

DEATHS.

DAVIES.—On May 20th, at Singapore, Frederick Henry Davies, M.B.Edin., C.M.Paris, second son of the late John Davies, M.D., J.P., of Ebbw Vale, Monmouthshire, in his 59th year.

ISTANCE.—On May 22nd, at The Laurels, Pontymister (Mon.), Richard Istance, M.R.C.S., L.S.A., in his 77th year.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF SURGERY.—Meeting at Liverpool.

WEDNESDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OPHTHALMOLOGY, 8 p.m.—(1) Annual Meeting and Election of Officers. (2) Cases and Specimens. 8.30 p.m., Papers:—Mr. Charles Wray: Operative Treatment of Keratoconus. Mr. E. Erskine Henderson: Rupture of Optic Nerve at Lamina Cribrosa.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNAECOLOGY, 8 p.m.—(1) Epidiascope and other Demonstrations. (2) Papers:—Dr. Archibald Donald (Manchester): Case of so-called Chronic Metritis in a Nullipara. Dr. W. Fletcher Shaw (Manchester): The Subdivisions of Chronic Metritis.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.

LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	JUNE.
5 Fri.	London: Medico-Political Committee, 10.30 a.m. London: Central Ethical Committee, 2 p.m. London: Joint Medico-Political and Hospitals Committee, 3 p.m.
6 Sat.	Date of issue of Voting Papers for Council Election from Head Office. London: Organization of Medical Students Subcommittee, 12.15 p.m. Inverness-shire Division, Annual Meeting, Inverness, 3.30 p.m.
8 Mon.	Tower Hamlets Division, Stepney Central Hall, 4 p.m.
9 Tues.	London: Regulations and Standing Orders Subcommittee, 12.15 p.m. London: Organization Committee, 2 p.m. London: Non-Panel Committee, 2.30 p.m. London: Metropolitan Counties Branch Council, 4 p.m.
10 Wed.	London: Medico-Political Crime and Punishment Subcommittee, 12 noon.
11 Thur.	Deputation from the Association and the Society of Medical Officers of Health to be received by Cabinet Ministers at the House of Commons, 4 p.m.; Preliminary Conference, 3.15 p.m. Coventry Division, Annual Meeting, Coventry Hospital, 8.15 p.m. South Wales and Monmouthshire Branch, Annual Meeting, Llanelly.
12 Fri.	Kent Branch, Maidstone, Lunch, 1.30 p.m.; Dinner, 6.30 p.m. Liverpool Division, Liverpool, 4 p.m.
13 Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
17 Wed.	London: Finance Committee, 2.30 p.m. Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, noon to 1 p.m.; Meeting, 1 to 3 p.m.; Excursions, 3 to 6 p.m.; Dinner, 7.30 p.m.

Date.	Meetings to be Held.
	JUNE (*continued*).
17 Wed.	Surrey Branch, Annual Meeting, Reigate, 2.30 p.m.; Lunch, 1.15 p.m.; Dinner, 6.30 p.m. Leicester and Rutland Division, Annual Meeting, Leicester, 4 p.m. Yorkshire Branch, Annual Meeting, Bradford, 4.15 p.m.; Annual Dinner, 6.30 p.m.
18 Thur.	East Hertfordshire Division, Annual Meeting, Hitchin, 3 p.m. Birmingham Branch, Annual Meeting, Birmingham, 3.30 p.m.
20 Sat.	Munster Branch, Annual Meeting, Cork, 4.30 p.m.
23 Tues.	South-Western Branch, Annual Meeting, Plymouth, 12.30 p.m.; Luncheon, 1.30 to 2.30 p.m; Dinner, 7 for 7.30 p.m.
24 Wed.	London: Council Meeting. North Lancashire and South Westmoriand Branch, Annual Meeting, Lancaster, 3.45 p.m.
26 Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
27 Sat.	Announcement of result of Election of Members to Council.
	JULY.
10 Fri.	East York and North Lincoln Branch, Annual Meeting, Hull.
11 Sat.	London: Science Committee, 10.30 a.m.

ANNUAL MEETING, ABERDEEN, 1914.

Annual Representative Meeting, July 24th, and following days.

Presidential Address, Tuesday, July 28th.

Sections—Wednesday, July 29th; Thursday, July 30th; and Friday, July 31st.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 13TH, 1914.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

REPORT TO THE DIVISIONS, WITH QUESTIONS, ON THE 1914-15 BUDGET PROPOSALS WITH REGARD TO DEVELOPMENTS IN THE MEDICAL SERVICE OF THE INSURANCE ACTS.

1. As the Government has announced its intention of providing money for certain important extensions of the medical service under the Insurance Acts, and as it is important that the opinion of the Divisions on certain questions should be elicited without delay, the Council has authorised the Future Developments of the Insurance Acts Committee to issue this Report with a view to obtaining the opinion of the profession on certain questions arising therein.

2. The Committee recognises that the Government may find itself faced by a strong demand by the Approved Societies for some re-adjustment of the conditions of medical service. Two circumstances may combine to precipitate this demand, viz.:

(a) The approaching termination of the period of three years during which the Government undertook to provide a Treasury Grant of 2s. 6d. a head towards the cost of medical benefit (January, 1916). The grants for the calendar years 1913 and 1914 have already been paid out and the grant for 1915 is contained in the Budget for this year and will be voted in the Finance Act to be passed in the present session of Parliament. Therefore, when the Budget which will be introduced next April is under consideration of the Government towards the end of this year (1914) the question of continuing, increasing or reducing the grant will come under the consideration of the Treasury.

(b) The complaints which have been made as to the excessive claims for sickness benefit, and the consequent fears which have been expressed as to the stability of the Approved Societies.

3. The second mentioned circumstance has been used with increasing frequency of late, even by some members of the profession itself, as a ground for advocating a whole time medical service. It is urged that if doctors were the servants of the State there would be no suspicion of unnecessary certification for the purpose of gaining favour with patients. The administrative ease with which it is believed a whole time medical service could be administered is advanced as another argument for its introduction.

4. It is also suggested that the different branches and specialties of medicine could be dealt with by whole time specialists and senior members of the Service, and that in this connection the State should take over the hospitals.

5. If a whole-time service were established, it is hardly conceivable that it should be limited to the insured alone. The dependants would undoubtedly be included in its field of work, which would consequently correspond to the whole of the population, excluding the well-to-do, who, though they might theoretically have the same right to make use of it, would usually elect to make private arrangements.

6. Remote and undesirable as any such developments may appear to the majority of the profession, it is to be noted that the volume of advocacy of such changes has been increasing of late, and that some influential names are associated with the movement.

7. The Committee by no means apprehends that any serious attempt is likely to be made to substitute any such system for the panel system in the near future. But it is concerned to note that many of the minor developments of the Insurance Act and alterations in the conditions of medical work which are following in its train are coloured by a tendency which would find its fullest development in a complete whole-time service. This tendency is exemplified by (a) the appointment of whole-time tuberculosis officers—the first instalment of whole-time

specialists; (b) tuberculosis dispensaries; (c) the appointment of whole-time medical referees, a development which is advocated by the Association and the medical profession generally.

8. The Committee therefore thinks that the time has come when the profession should adopt clear views of the direction in which it desires the service which it offers to the public to develop, in order that each step may be taken, not as mere opportunist considerations dictate, but in a direction which tends consistently towards the end to which the profession has decided to press forward.

9. In saying this, the contentment of a large section of the profession with the present financial returns of the panel system, together with what remains of private practice on the old lines is not ignored. The Committee knows that large numbers of individuals in the profession only ask to be left alone. But the Committee must point out that the indications are strong that a policy of *laissez faire* will be imprudent, that to adopt it is to court defeat and the delivery of the future of medical life into the hands of the bureaucracy, and that, whilst the conditions at present are satisfactory to a large number of individual doctors, they have resulted in substantial injustice to another considerable section.

10. To assist the profession to decide on the direction in which it desires development to take place the Committee would point out that there seem to be three main methods by which medical benefit could be administered :—

I. The present Panel System, *i.e.*, a capitation contract arrangement.

II. A State Medical Service, briefly referred to above.

III. A third system which would retain some of the features of private practice. No complete concrete example of this can be pointed to; but the following considerations and questions, which the Committee trusts the Divisions will discuss and answer, may serve to assist the Committee to formulate the principles on which such a system might be based.

11. The Insurance Act is not likely to be repealed, and therefore advance towards a system of National Health Insurance really worthy of the name must be made on the basis of the present Acts—by way of amendment of the Acts and Regulations.

12. The first step is therefore to schedule the defects of the present Act. They fall into two groups, one concerning the incomplete provision made by the Act for the higher and special branches of medical work, and the other concerning the excessive claims for sickness benefit and medical attendance.

I.—Incomplete Provision of the Act for the Higher and Special Branches of Medical Work.

13. The Committee recognises :—

(a) That the failure of the present Insurance Act regulations to provide for the higher and special branches of medical work is a matter calling urgently for remedy.

(b) That the remedy will necessarily involve the organisation of special out-patient departments, treatment centres (clinics) or other appropriate arrangements in association with the hospitals on the one hand and with insurance practice on the other.

(c) That insured persons should have a right to proper institutional medical treatment for which, however, no provision is made under the present Insurance Acts. It has been suggested that arrangements might be made between Insurance Committees and the voluntary hospitals existing in their areas, for the treatment in the latter of insured persons at an agreed rate per head for all patients received, the Insurance Committee giving to the hospital authorities an undertaking as to the minimum annual sum it will be prepared to guarantee. Such an arrangement would justify hospital authorities in providing more beds where necessary, and the suggestion has been made, as to which the Committee desires the opinion of the Divisions, (Question I. (b)), that the necessary capital expenditure might be met under an arrangement by which the Government lent the money for the buildings and equipment at a low rate of interest, this interest and a sinking fund for repayment of capital being met by the payments from the Insurance Committees and any other public authorities which sent subsidized patients into the hospitals. This method has been suggested as a means whereby the shortage of hospital accommodation which undoubtedly exists in some districts might be met, while at the same time the voluntary character of the hospitals might be preserved. The Boards of Management of voluntary hospitals have always feared that if they accepted money from the Government or from local authorities in return for stated services, these authorities would demand to exercise a large measure of control through representatives appointed to the Boards. With regard to the State it is submitted that the power of inspection before a grant was made and afterwards, analogous to that exercised by the Board of Education in respect of grants to Universities and Colleges would be sufficient; and with regard to local authorities, that the interests of all of them would be safeguarded by the fact that it would be the duty of a local authority, namely the Insurance Committee, or the proposed new Joint Committee, to make the arrangements in respect of insured persons, and that that Committee would only make arrangements with well-conducted hospitals which satisfied all requirements.

(d) If a local authority, or the State by direct payment, made provision for the treatment of certain classes of patients in voluntary hospitals, such patients could not be considered charitable cases, and the services of the medical staffs of the hospitals should therefore receive pecuniary recognition.

II.—Excessive Claims for Sickness Benefit and for Medical Attendance.

14. It has been freely alleged that there is a considerable abuse of sickness benefit and an unnecessary demand for medical benefit by insured persons. On the other hand, it is maintained, and the Committee believes with truth, that the increased demand for both medical and sickness benefits, beyond that anticipated by the actuarial estimates, is due to the fact that before the Insurance Act came into force there was a large amount of sickness which was inadequately treated, or went altogether untreated. There may be other causes, not yet elucidated, for the increase. The question for the profession is whether it believes that the present system tends to encourage the insured person to consult the doctor for unnecessarily trivial complaints and so to foster valetudinarianism. If so, then it would obviously be the duty of the Association to press for the adoption of some system which would give the patient a direct interest in restricting his recourse to the doctor to occasions when this was really necessary. On the other hand it may be held that the best plan in the long run is to allow the patient free recourse to the doctor without any barrier whatever, on the ground that it is better that the doctor should see the patient early even in trivial ailments, and that in any case the patient is not a competent judge as to whether his complaint is trivial or not.

Proposed Early New Developments in the Medical Treatment given under the Insurance Acts.

15. The following table summarises the proposals in the Budget for Grants in Aid and the manner of their expenditure :—

	Totals.	
	1915-16.	This Year.
I. *Public Health Grant in Relief of Rates*.. For Housing. ,, Small holdings. ,, Tuberculosis. ,, Hospitals.	£4,000,000 (England and Wales, £3,200,000)	£1,300,000
II. *Special Grants in Aid* .. .. .. For Tuberculosis (arrangements for dependants and others). ,, Clinical (pathological) laboratories ,, Nursing	£750,000 (£250,000)	£250,000 (£50,000)
III. *Insurance* .. .. For Medical Referee-Consultants. ,, Clinics. ,, Health lectures. ,, Society deficiencies (women especially). ,, Deposit contributors.	£1,250,000	£1,000,000

(I.) *Public Health Grant in Relief of Rates* is based upon paying twenty-five per cent. of the net expenditure in connection with housing, sanitation, and other public health duties the grant will presumably be paid to Councils of Counties or County Boroughs or to Public Health Authorities. In regard to hospital provision no definite scheme appears to have been framed.

(II.) *Special Grants in Aid.*—The grants under this head apply to the whole population and not to insured persons only.

(III.) *Insurance* applies to insured persons only.

16. It is probable that a proposal will be made to hand over II. (Special Grants in Aid) to the Councils of Counties and County Boroughs, and that the allocation shall be determined by the Local Government Board. The Councils of Counties and County Boroughs will probably be disposed to administer the new services as part of their public health work, either directly or through local public health authorities. This policy is likely to be favoured partly on the grounds of alleged greater convenience, and partly because certain arrangements, *e.g.*, for tuberculosis and clinical laboratories, are at present being administered in some areas by these authorities. It will probably be proposed that III. (Insurance Grants) should be administered by the Insurance Commissioners, either directly or through the County Insurance Committees.

17. The Committee is of opinion that to place arrangements which are mainly clinical under the care of an authority whose work is mainly concerned with sanitation and whose medical adviser, the Medical Officer of Health, tends by the steady imposition on him of more and more administrative duties to be forced out of actual personal participation in clinical work, would be a mistake. Such a course would tend to overburden an officer already fully occupied and would in the opinion of the Committee not be likely to give the new clinical proposals a proper opportunity of developing on satisfactory lines.

18. The Committee would therefore suggest to the Divisions that the new circumstances require the institution of a new authority to deal with the work which is mainly clinical, leaving to existing public health authorities the work of sanitary administration. This new authority it is proposed should be a Joint Committee composed of representatives elected by the following bodies:—

(a) The Insurance Committee.

(b) The County Council (representatives preferably elected from its Education and Public Health Committees, which are those specially concerned in clinical work).

(c) The local hospitals (representatives of both the Boards of Management and the honorary medical staffs).

(d) The Local Medical Committee.

This Joint Committee would, it is suggested, fully represent all the different interests concerned, and its composition would prevent overlapping of the work of the various public authorities represented.

The New Developments.

Tuberculosis.

19. The new grant under this head in I. (Public Health Grants) is apparently intended to supplement the Hobhouse grant in connection with schemes drawn up to provide treatment for all tuberculous persons in the different areas. The extra money is no doubt intended to help in speeding up the provision of dispensaries, homes for advanced cases and sanatoriums. As the Tuberculosis Scheme of the Association is already before the Divisions (*see* SUPPLEMENT, April 4th, page 204) the Committee does not propose to deal further with this question otherwise than to express the opinion that the Government should be urged to provide suitable isolation accommodation for advanced cases of pulmonary tuberculosis—a class of cases for which no attempt has yet been made to make any even approximately adequate provision.

Clinical (Pathological) Laboratories.

20. The Committee would suggest that the proposed laboratories, which it will be observed are not to be limited to the service of insured persons, should provide for the following examinations:

(1) Microscopical, *e.g.* of tumours.
(2) Bacteriological, *e.g.* of surgical infections.
(3) Protozoological, *e.g.* for the spirochete of syphilis.
(4) Parasitological, *e.g.* of skin lesions.
(5) Chemical, *e.g.* of urine, faeces, discharges.
(6) Blood, *e.g.* for Wassermann reaction, and cytological.

21. The list does not include any investigations which a medical man practising among the moneyed classes might not consider necessary, and would not be prepared to have carried out. He would not undertake them himself, the nature of his avocations rendering it impossible that he should have the time, the technical knowledge and skill, or the appliances.

22. In the opinion of the Committee, special care will have to be taken as regards the selection and methods of employment of the laboratory worker. He may be educated up to the point of doing routine work well, but it becomes monotonous, and unless he is given his chance of enlarging his horizon, he will not go on doing even routine work well. It follows therefore, first, that routine laboratory work should not be divorced from research, and secondly, from this that the ideal arrangement would be that the laboratory should be an institution of University rank (or closely connected with such an institution), its functions being extended to include work for insurance and private patients, and where found expedient, for public health authorities also (as at the bacteriological laboratory of the University of Manchester).

23. The multiplication of Universities renders the realisation of such schemes immediately possible in the most populous parts of England, Wales and Scotland, namely:—

Northumberland and Durham.—Medical School of the University of Durham (Newcastle).
Lancashire and Cheshire.—Universities of Liverpool and Manchester.
East and South Yorkshire.—Universities of Leeds and Sheffield.
Eastern Counties.—University of Cambridge.
Midlands.—University of Birmingham.
South Midlands.—University of Oxford.
Middle West.—University of Bristol.
South Wales.—Medical School of the University of Wales, Cardiff.
Home Counties.—London.
West Scotland.—University of Glasgow.
East Scotland.—University of Edinburgh, Dundee (St. Andrew's).
North East Scotland.—University of Aberdeen.

24. In many instances it would be feasible to link the County laboratory with the nearest University, for example, Norwich and Suffolk with Cambridge, Derby and Nottingham with Sheffield, and so to organise a system of interchange of workers while keeping them continuously under the influence of the Directors of the University laboratories, and in the current of University thought.

25. It does not seem necessary at this stage to interfere with the arrangements of those public health authorities which do bacteriological diagnosis. If the County and County Borough clinical and bacteriological laboratories are successfully organised the public health authorities would probably eventually find that it would be cheaper to subsidise the County laboratories than to maintain a separate laboratory for a part of the work.

26. The Committee has briefly stated the grounds on which it considers the divorce of routine pathological and bacteriological work in clinical laboratories from research work to be inexpedient, and it only remains to add that it believes that any scheme such as is understood to be contemplated by the Medical Research Committee constituted under Section 16 (2) of the Insurance Act, 1911, for concentrating research work in pathology in a central institution in or near London would be a retrograde step. Wisely distributed the money would greatly assist the University authorities of Great Britain in encouraging the growth of a class of experts whose services would be invaluable to the community. It would also help to retain in that class many whose natural bent is towards research and laboratory work but who find that there is little material encouragement for them under present circumstances.

Nursing.

27. The proposed nursing service, it will be observed, is not to be limited to insured persons, but is to be utilised for the whole population, although it is of course not expected that the well-to-do classes will take advantage of it. All practitioners will agree that efficient nursing is an essential part of the treatment of all cases of serious illness. In many districts there exist organisations, for the most part voluntary, which make some provision for the nursing of persons of the industrial classes, but an extension of this essential part of effective treatment would, the Committee believes, be welcomed by the medical profession. The Committee suggests that any nursing system established with the assistance of the State should be under the control of the proposed new Joint Committee, and that this body should utilise to the full the voluntary organisations already in existence, supplementing them where necessary by grants or by the establishment of a nursing service under their direct control. The Committee,

however, recognises that it will be necessary to proceed gradually, inasmuch as the number of competent nurses at present available is not adequate to the needs of a complete nursing service for the whole country.

Referee—Consultants.

28. Without further information it is difficult to understand exactly what kind of an officer the Chancellor of the Exchequer had in mind when he proposed to find money for this purpose. The Committee understands that it is suggested that the Referee should be prepared, at the request of the practitioner in charge of the case, not only to express an opinion as to whether the patient is or is not capable of work, but also in some cases in which the opinion of an experienced general practitioner would be welcomed, should be willing to express an opinion on the diagnosis or treatment of the case. It is assumed that he will have the power of calling in a specialist when he considers it necessary.

29. The Committee makes the following suggestions as regards these officers for the consideration of the Divisions:—

(a) That as already agreed by the Special Representative Meeting, December, 1913 (Minute 70) they should be appointed by the Commissioners and only removable by them: that they should be whole time officers and practitioners of not less than ten years standing: that the commencing salary should not be less than £750 per annum: and that the appointment should be pensionable.

(b) That they should be advisers on medical questions to the proposed Joint Committee or failing it to the Insurance Committees.

(c) That in ordinary circumstances the specialist, or consultant, should be called in by the referee after consultation with the practitioner in attendance, but that arrangements should be made whereby in cases of emergency the practitioner should be entitled to call in a consultant and afterwards to report to the referee.

(d) That consultants should not be whole-time officers.

(e) That with a view to preventing excessive use being made of the services of the referee, practitioners should be required to furnish a report of the case to the referee whenever that officer is called in on the practitioner's initiative, and should also be required to attend the consultation.

(f) That Approved Societies desiring the services of the referee should be required to make a full report as to their reasons therefor. Possibly the Societies might be expected to make a small payment for each case referred as a further check on undue use of the referee's services.

Treatment Centres—Clinics.

30. The Committee prefers the name Treatment Centre to that of Clinic, as the former term seems more correctly to define the object of the proposed institution. The Committee would suggest that these Centres should be provided for that class of cases the treatment of which cannot properly be carried out at the surgery of the practitioner, either because the practitioner is unable himself to undertake the treatment or because he has not the requisite facilities at his surgery.

31. The Committee would further suggest that these Centres should be under the control of the proposed Joint Committee and should be used as consultation centres at which the referee could examine cases sent to him, and at which also consultants could examine and treat suitable cases.

QUESTIONS FOR DIVISIONS.

32. A schedule of questions is appended which Divisions are urged to consider and answer at their earliest convenience. If the Committee is to consider the replies in time to make a report which can be discussed at the Annual Representative Meeting it will be necessary that replies should be returned to the Medical Secretary not later than July 1st. The Committee trusts that as many Divisions as possible will give these important matters their early and careful consideration so that the Association may know the mind of the profession and be able to speak in the name of the profession when the proposed extensions of the medical service under the Insurance Acts and otherwise are under discussion by the Government.

SCHEDULE OF QUESTIONS *re* FUTURE DEVELOPMENTS OF INSURANCE ACTS.

QUESTIONS FOR DIVISIONS.

I.—Provision of Institutional Treatment (paragraph 13 (e)).

(a) Is there sufficient hospital accommodation at present in the area of the Division to meet the requirements of the population?

(b) Is the Division in favour of the suggestion as to the provision of capital by the Government to enable more hospital accommodation to be provided?

(c) If not in favour of the suggestion, does the Division make any alternative suggestion?

(d) Does the Division agree with the principle enumerated in **paragraph 13 (d)** that patients whose treatment is subsidised by the State or other public authority could not be regarded by the profession as proper subjects for charitable treatment, and that those giving the treatment should be paid for their services?

II.—Excessive Claims for Sickness Benefit and Medical Attendance (paragraph 14).

(a) Does the Division agree with the suggestion that the demand for medical attendance and sickness benefit beyond what was anticipated by actuarial estimate is due mainly to the existence among the insured of a large amount of sickness previously untreated or inadequately treated?

(b) Is there any other cause which can be suggested for the increase?

(c) Does the present system tend to encourage patients to consult the doctor unnecessarily? Should any check be put on the patient's right to consult the doctor whenever he chooses? or does the Division think that on the whole it is better that the patient should be encouraged to see the doctor early even in cases which may (or may not) prove to be trivial?

(d) If the Division considers that there should be a check of the kind above alluded to the Committee would be glad to have any suggestions as to the nature of the check.

III.—Proposed New Services.

1. Control (paragraph 17).

(a) Does the Division agree that it would be unwise to place clinical arrangements under the control of the Public Health Authority and consequently in all probability under the control of the Medical Officer of Health?

(b) If the answer to the above is in the affirmative, does the Division agree with the proposal to set up a new Joint Committee or other new clinical authority? (paragraph 18.)

(c) If the Division disagrees with the proposal the Committee would be glad to have alternative suggestions either as to principle, or as to the details of the proposed Joint Committee.

2. Details as to Services (Laboratories).

(a) Has the Division any suggestion to make as to the detailed work of the proposed clinical laboratories? (paragraph 20.)

(b) Does the Division approve of the suggestion that the new laboratories should be linked up as far as possible with the Universities and other similar institutions? (paragraphs 22-25.)

Nursing (paragraph 27).

(a) Is the Division in favour of the provision of a nursing service to be utilised for the whole working-class population?

(b) Does the Division agree with the proposals made in paragraph 27 for the institution of such a service? and has it any additional suggestions to make on the subject?

Referee—Consultants (paragraph 29).

Does the Division agree with the suggestions regarding these officers as laid down in this paragraph?

Treatment Centres (paragraphs 30-31).

Does the Division agree with the suggestions made in this paragraph? Has it any further suggestions to make on the subject?

Note.—The Committee will be glad to have any remarks or suggestions on the subjects dealt with in the Report, that may appear to the Division to be useful.

British Medical Association.

EIGHTY-SECOND ANNUAL MEETING, ABERDEEN, JULY, 1914.

PROGRAMME OF BUSINESS.

President: WILLIAM AINSLIE HOLLIS, M.A., M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Brighton.

President-elect: Sir ALEXANDER OGSTON, K.C.V.O., M.D., LL.D., Consulting Surgeon, Aberdeen Royal Infirmary; Surgeon in Ordinary to H.M. the King in Scotland.

Chairman of Representative Meetings: THOMAS JENNER VERRALL, M.R.C.S., L.R.C.P., Consulting Surgeon, Sussex County Hospital, Brighton.

Chairman of Council: JAMES ALEXANDER MACDONALD, M.D., M.Ch.R.U.I., LL.D., Honorary Physician, Taunton and Somerset Hospital, Taunton.

Treasurer: EDWIN RAYNER, B.A., M.D.Lond., F.R.C.S. Eng., Consulting Surgeon, Stockport Infirmary, Stockport.

The Eighty-second Annual Meeting of the British Medical Association will be held in Aberdeen in July, 1914. The President's Address will be delivered on Tuesday, July 28th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 24th, at 10 a.m.

The Address in Medicine will be delivered by ARCHIBALD EDWARD GARROD, M.D., F.R.C.P., F.R.S., Physician, St. Bartholomew's Hospital, London.

The Address in Surgery will be delivered by Sir JOHN BLAND-SUTTON, Surgeon to the Middlesex Hospital, London, W.

The Popular Lecture will be delivered by Professor J. ARTHUR THOMSON, M.A., LL.D., Natural History Department, Marischal College, Aberdeen.

THE SECTIONS.

The scientific business of the meeting will be conducted in sixteen Sections, which will meet on Wednesday, July 29th, Thursday, July 30th, and Friday, July 31st.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL *without special permission.*

The following sixteen Sections have been authorized by the Council:

ANATOMY AND PHYSIOLOGY.

President: Professor ROBERT W. REID, M.D., F.R.C.S., Aberdeen. *Vice-Presidents:* DENIS P. FITZGERALD, M.B., B.Ch., Cork; J. STRICKLAND GOODALL, M.B., F.R.C.S., London, S.E.; Professor J. KAY JAMIESON, M.B., C.M., Leeds; Professor J. A. MACWILLIAM, M.D., C.M., Aberdeen. *Honorary Secretaries:* NORMAN J. CALDER, M.B., Ch.B., Anatomy Department, Marischal College, Aberdeen; E. PROVEN CATHCART, M.D., D.Sc., Department of Physiology, University of Glasgow; R. J. GLADSTONE, M.D., F.R.C.S., University of London, King's College, Strand, W.C.; HUGH MACLEAN, M.D., Chemical Pathology Department, St. Thomas's Hospital, London, S.E.

The programme of this Section will be published in a later issue.

DERMATOLOGY AND SYPHILOLOGY.

President: ALFRED EDDOWES, M.D., M.R.C.P., London. *Vice-Presidents:* R. CRANSTON LOW, M.B., F.R.C.P.E., Edinburgh; J. M. HENDRIE MACLEOD, M.D., M.R.C.P., London, W.; J. A. NIXON, M.B., F.R.C.P., Clifton, Bristol; J. C. OGILVIE WILL, M.D., C.M., Aberdeen. *Honorary Secretaries:* J. FARQUHAR CHRISTIE, M.B., C.M., 7, Alford Place, Aberdeen; J. D. PRYDE MCLATCHIE, M.B., C.M., 34, Welbeck Street, London, W.

The following programme has been arranged:

July 29th.—Discussion on the Need for more Method in the Conflict with Lupus and Ringworm. To be opened by Dr. NORMAN WALKER.

July 30th.—Discussion on the Modern Treatment of Syphilis. To be opened by Mr. J. E. R. MCDONAGH.

July 31st.—Independent papers.

DAVIS, Haldin. Infantile Eczema.
MCDONAGH, J. E. R. The Rationale of the Wassermann Reaction.
TOMKINSON, J. Goodwin. Three Cases of Lahore Sore.
WALTER, J. C. M. On the Use of Antimony in Syphilis.
WILLIAMS, A. Winkelried. Keratodermia Blenorrhagica.

Arrangements will also be made for the demonstration of cases. Contributions of drawings, photographs, microscope and other specimens relating to dermatology and syphilis are invited, and should be sent as early as possible—not to London, but to Aberdeen.

DISEASES OF CHILDREN, INCLUDING ORTHOPAEDICS.

President: JOHN THOMSON, M.D., F.R.C.P.E., Edinburgh. *Vice-Presidents:* ANDREW FULLERTON, M.Ch., F.R.C.S.I., Belfast; H. M. W. GRAY, M.B., F.R.C.S.E., Aberdeen; E. MUIRHEAD LITTLE, F.R.C.S., London; J. HUGH THURSFIELD, M.D., F.R.C.P., London. *Honorary Secretaries:* A. S. BLUNDELL BANKART, M.C., F.R.C.S., 14, Harley Street, London, W.; D. WATSON GEDDIE, M.B., C.M., 13, Golden Square, Aberdeen; H. TYRRELL GRAY, M.C., F.R.C.S., 60, Harley Street, London, W.

The following programme has been arranged:

July 29th.—(1) Discussion on Congenital Dislocation of the Hip. To be opened by Mr. T. H. OPENSHAW.

July 30th.—(2) Discussion on the Thymus Gland in its Clinical Aspects. To be opened by Dr. ARCHIBALD E. GARROD.

July 31st.—(3) Joint discussion on the Diagnosis of Chronic Pulmonary Tuberculosis in Infancy and Childhood (See Section of Medicine).

The following papers have been accepted:

FINDLAY, Leonard, and ROBERTSON, Madge (Glasgow). The Treatment of Congenital Syphilis.
FRASER, William (Edinburgh). The Influence of the Thymus and Certain other Ductless Glands on the Epiphyses.
MACLENNAN, Alexander (Glasgow). The Technique of Thymectomy.
MCNEIL, Charles (Edinburgh). The Association of Abnormal Types of Pneumonia and of Tuberculosis in Children with Thymo-lymphatic Hyperplasia.
MCWALTER, J. C. (Dublin). Lime Salts in Children's Diseases.
ROTH, Paul B. (1) The Treatment of Torticollis; and (2) The Practical Treatment of Lateral Curvature of the Spine.
WILKIE, D. P. D. (Edinburgh). Appendicitis and the Status Lymphaticus.

ELECTRO-THERAPEUTICS AND RADIOLOGY.

President: SAMUEL SLOAN, M.D., F.R.F.P.S., Glasgow. *Vice-Presidents:* W. J. S. BLYTHELL, M.D., Kersal, Manchester; DAVID LAWSON, M.D., Nordrach-on-Dee, N.B.; J. R. LEVACK, M.B., C.M., Aberdeen. *Honorary Secretaries:* M. R. J. HAYES, F.R.C.S.I., 35, Upper Fitzwilliam Street, Dublin; W. L. LOCKE, M.B., Ch.B., 31, Queen Anne Street, London, W.; F. PHILIP, M.B., 183, Great Western Road, Aberdeen.

The following programme has been arranged:

July 29th.—(1) An Introductory Address by Professor LEDUC on Cerebral Galvanization. (2) Discussion on the Therapeutic Value of High-Frequency Currents; to be opened by the PRESIDENT.

July 30th.—Discussion on (1) The Comparative Value of X-Rays and Radium in the Treatment of Malignant Growths; to be opened by Dr. HERNAMAN-JOHNSON and Dr. JOHN MACINTYRE. (2) Electro-Therapy in Neurasthenia;

to be opened by Dr. Agnes Savill and Dr. W. F. Somerville. (3) Demonstration on Muscle Testing by means of Condensers.

July 31st.—(1) Joint Discussion on the Diagnosis of Chronic Pulmonary Tuberculosis; to be opened by Dr. Ironside Bruce (see Section of Medicine). (2) Discussion on X-Ray Diagnosis in Gastro-Intestinal Conditions, with Special Reference to Appendicitis; to be opened by Dr. Hertz.

Members wishing to read papers before the Section should communicate with one of the Honorary Secretaries.

GYNAECOLOGY AND OBSTETRICS.

President: F. W. Nicol Haultain, M.D., F.R.C.P.E., Edinburgh. *Vice-Presidents:* Professor J. Alexander Kynoch, F.R.C.P., F.R.C.S., Dundee; Professor R. G. McKerron, M.D., C.M., Aberdeen; T. G. Stevens, M.D., F.R.C.S., London; W. C. Swayne, M.D., Clifton, Bristol. *Honorary Secretaries:* H. S. Davidson, M.B., F.R.C.S., 6, Atholl Place, Edinburgh; S. G. Luker, M.D., F.R.C.S., 1, Harley Street, London, W.; Alexander Mitchell, M.B., 2A, Albyn Place, Aberdeen.

Full details of the programme arranged will be published in a future issue.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

President: H. Lambert Lack, M.D., F.R.C.S., London. *Vice-Presidents:* J. M. Booth, M.D., C.M., Aberdeen; J. S. Fraser, M.B., F.R.C.S.E., Edinburgh; A. A. Gray, M.D., F.F.P.S., Glasgow; T. H. Livingstone, M.D., F.R.C.S.E., Newcastle-on-Tyne. *Honorary Secretaries:* C. St. J. Gogarty, M.D., 15, Ely Place, Dublin; J. F. O'Malley, F.R.C.S., 16, Weymouth Street, London, W.; H. Peterkin, M.B., 17, Bon Accord Crescent, Aberdeen.

The following programme has been arranged provisionally:

July 29th.—Discussion on the Treatment of Inoperable Growths of the Nose and Throat. To be opened by Mr. W. D. Harmer (Diathermy), Dr. William Hill (Radium), and Dr. John Macintyre (X Rays).

July 30th.—Discussion on Oto-sclerosis. To be opened by Dr. A. A. Gray (Etiology and Pathology), Mr. J. S. Fraser (Clinical Aspects), Mr. G. J. Jenkins (Various Methods of Treatment), and Mr. F. F. Muecke (Auditory Re-education).

July 31st.—Mr. J. S. Fraser (Edinburgh): Demonstration—The Pathology of Labyrinthitis. Mr. Watson Williams (Bristol): Demonstration—Intranasal Operations for Frontal Sinus Disease. Dr. Brown Kelly (Glasgow): Paper—The Difficulties and Dangers of Exploratory Puncture of the Antrum of Highmore.

Members wishing to read papers before the Section should communicate with Mr. O'Malley at the address given. Contributions for the division of the Museum set apart for preparations, specimens, drawings, and instruments relating to the work of the Section should be sent to Dr. Henry Peterkin, 17, Bon Accord Crescent, Aberdeen.

MEDICAL SOCIOLOGY.

President: John Gordon, M.D., Aberdeen. *Vice-Presidents:* J. Munro Moir, M.D., Inverness; David Nicolson, C.B., M.D., Camberley, Surrey; George Williamson, M.B., Aberdeen. *Honorary Secretaries:* David Rorie, M.D., 1, St. Devenick Terrace, Cults, Aberdeen; Dr. Anne Watson, 22, Waverley Place, Aberdeen.

Full details of the programme arranged will be published in a future issue.

MEDICINE.

President: F. J. Smith, M.D., F.R.C.P., London. *Vice-Presidents:* J. R. Charles, M.D., F.R.C.P., Clifton, Bristol; G. Maitland Edmond, M.D., C.M., Aberdeen; Herbert French, M.D., F.R.C.P., London; Professor A. W. Mackintosh, M.D., Aberdeen; Professor T. K. Monro, M.D., F.F.P.S., Glasgow; Professor A. M. Stalker, M.D., C.M., Dundee. *Honorary Secretaries:* D. Barty King, M.D., M.R.C.P., 6, Devonshire Street, Portland Place, London, W.; W. Rattray Pirie, M.B., C.M., 20, Bon Accord Square, Aberdeen.

Full details of the programme arranged will be published in a future issue.

NAVAL AND MILITARY MEDICINE AND SURGERY.

President: Deputy Surgeon-General W. Maxwell Craig, C.B., R.N., Haslar. *Vice-Presidents:* Surgeon-General P. H. Benson, I.M.S., Upper Walmer; Brigade-Surgeon-Lieutenant-Colonel R. Gray, I.M.S., Aberdeen; Major G. R. Livingston, M.D., R.A.M.C.(T.F.); Lieutenant-Colonel George Scott, R.A.M.C. (ret.), Aberdeen. *Honorary Secretaries:* Captain Cecil Johnson, R.A.M.C. (T.F.), Cricklewood, East Sheen, London, S.W.; Lieutenant-Colonel Francis Kelly, M.D., R.A.M.C.(T.F.), West Craibstone Street, Aberdeen.

The following programme has been arranged:

July 29th.—Discussion on (1) the Treatment of Wounded in Naval Warfare; to be opened by Fleet Surgeon D. Walker Hewitt, R.N. (2) Gangrene in War; to be opened by Captain C. Max Page, R.A.M.C.(S.R.).

July 30th.—Discussion on (1) the Treatment of Syphilis; to be opened by Lieutenant-Colonel T. W. Gibbard, R.A.M.C., and Major L. W. Harrison, R.A.M.C. (2) On Common Ailments in Camp: their Prevention and Treatment; to be opened by Captain C. Johnson, M.B., R.A.M.C.(T.F.).

July 31st.—A lecture, with limelight illustrations, on Experiences of the Northern Party of Captain Scott's Expedition, by Staff Surgeon G. Murray Levick, R.N.

NEUROLOGY AND PSYCHOLOGICAL MEDICINE.

President: F. W. Mott, M.D., F.R.C.P., F.R.S., London. *Vice-Presidents:* Donald J. Armour, F.R.C.S., London; James Neil, M.D., Oxford; William Reid, M.D., Aberdeen; H. Campbell Thomson, M.D., F.R.C.P., London. *Honorary Secretaries:* H. de Maine Alexander, M.D., Aberdeen District Asylum, Kingseat, Newmachar; M. D. Eder, M.R.C.S., L.R.C.P., 7, Welbeck Street, London, W.; A. W. Falconer, M.D., M.R.C.P., 18, Bon Accord Square, Aberdeen.

The following programme has been arranged:

July 29th.—Discussion on the Diagnosis and Treatment of Parenchymatous Syphilis. To be opened by Dr. F. W. Mott, followed by Dr. Plaut (Munich) and others.

July 30th.—Discussion on the Significance of the Unconscious in Psycho-Pathology. To be opened by Dr. Ernest Jones (London) and Dr. C. G. Jung (Zurich).

July 31st.—Independent papers:

Bruce, L. Campbell. Demonstration—The Pathology of Disseminated Spinal Sclerosis.
Hyslop, J. B. Anger in its Medico-Psychological Aspects.
Mackenzie, Dr. (Inverness). Some Considerations regarding Insanity in the Highlands.
Miller, Crichton. The Psychic Factor in Insomnia.
Wilson, A. S. Kinnier. The Temporo-Sphenoidal Form of Epilepsy.

Those desirous of reading papers before the Section are requested to communicate with the Secretaries as soon as possible. Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, and in regard to these to communicate directly with the Committee of the Pathological Museum.

OPHTHALMOLOGY.

President: C. H. Usher, M.B., F.R.C.S.Edin., Aberdeen. *Vice-Presidents:* A. R. Galloway, M.B., C.M., Aberdeen; Karl A. Grossmann, M.D., F.R.C.S., Liverpool; N. Bishop Harman, M.B., F.R.C.S., London; A. H. H. Sinclair, M.D., F.R.C.S.Edin., Edinburgh. *Honorary Secretaries:* F. R. Hill, M.B., C.M., 62, Warwick Road, Carlisle; Miss Euphan M. Maxwell, M.B., 19, Lower Baggot Street, Dublin; W. Clark Souter, M.D., 2, Bon Accord Square, Aberdeen.

The following programme has been arranged provisionally:

1. Discussion on the Choice of a Cataract Operation. To be opened by Mr. E. E. Maddox.

2. Discussion on the Hygiene of Reading and Near Vision. To be opened by Mr. J. Herbert Parsons.

3. Discussion on the Teaching of Ophthalmology to Medical Students. To be opened by Dr. Maitland Ramsay.

The Secretaries will be glad to hear from those wishing

to read papers or to give demonstrations before the Section as early as possible.

PATHOLOGY AND BACTERIOLOGY.

President: W. S. LAZARUS-BARLOW, M.D., F.R.C.P., London. *Vice-Presidents:* C. H. BENHAM, M.D., M.R.C.P., Hove; CHARLES BOLTON, M.D., F.R.C.P., London; J. C. G. LEDINGHAM, M.B., Ch.B., London; J. H. TEACHER, M.B., F.F.P.S., Glasgow. *Honorary Secretaries:* G. MELLIS DUNCAN, M.B., C.M., 12, Bayview Road, Aberdeen; J. F. GASKELL, M.D., M.R.C.P., 23, Gadbroke Grove, London, W.; J. W. TREVAN, M.D., B.S., St. Bartholomew's Hospital, London, E.C.

The following programme has been arranged:

July 29th.—Discussions on (1) the Action of Radiations on Cells and Fluids; to be opened by the PRESIDENT. (2) The Biochemistry of Immunity Reactions; to be opened by Dr. CARL BROWNING.

July 30th.—Discussion (in conjunction with the Section of Pharmacology) on the Pathology of Heart Function. To be opened by Dr. THOMAS LEWIS.

July 31st.—Discussion on the Importance of Variability among Bacteria and its Bearings on Diagnosis. To be opened by Dr. W. J. PENFOLD.

Papers.

MORGAN, J. M., and TEACHER, J. H. Aneurysm of the Aorta due to Bacterial Infection.
HORT, E. C. Recognition of Haemic Infections of the Urine and its Diagnostic Value.

PHARMACOLOGY, THERAPEUTICS, AND DIETETICS.

President: Professor J. THEODORE CASH, M.D., LL.D., F.R.S., Aberdeen. *Vice-Presidents:* F. J. CHARTERIS, M.D., Glasgow; O. F. F. GRÜNBAUM, M.D., F.R.C.P., London; J. C. MCWALTER, M.D., Dublin. *Honorary Secretaries:* W. J. DILLING, M.B., Ch.B., Materia Medica Department, Marischal College, Aberdeen; J. M. FORTESCUE-BRICKDALE, M.D., 52, Pembroke Road, Clifton; J. DAVENPORT WINDLE, M.D., Cippenham Lodge, Southall.

The following programme has been arranged:

July 29th.—Discussion on Recent Advances in the Relationship between Chemical Constitution and Pharmacological Activity. To be opened by Dr. FORTESCUE-BRICKDALE.

July 30th.—Joint Discussion on the Pathology of Heart Function, including the Experimental Pharmacology and Therapeutics of Pathological Conditions of the Heart (see Section of Pathology).

July 31st.—Discussion on the Pharmacology and Therapeutics of the Animal Extracts, exclusive of Thyroid Extract. To be opened by Professor NOEL PATON (Physiology) and Dr. O. F. F. GRÜNBAUM (Therapeutics).

Papers:

GUNN, J. A. The Pharmacology of the Isolated Human Uterus and Fallopian Tubes.
MCWALTER, J. C. Notes on Cerii Oxalas.
MUTHU, J. C. Clinical Observations on Diet in the Treatment of Pulmonary Tuberculosis.

STATE MEDICINE AND MEDICAL JURISPRUDENCE.

President: Professor MATTHEW HAY, M.D., LL.D., F.R.C.P.I., Aberdeen. *Vice-Presidents:* E. LEE COLLIS, M.B., B.Ch., London; Professor F. W. EURICH, M.D., Bradford; W. HARGOOD, M.D., Sutton; W. LESLIE MACKENZIE, M.D., F.R.C.P., LL.D., Edinburgh. *Honorary Secretaries:* R. BALFOUR GRAHAM, F.R.C.S.E., Leven, Fife; W. ALEXANDER MACNAUGHTON, M.D., County Buildings, Stonehaven, Kincardineshire; FRANK E. ROCK, M.D., Town Hall, Edmonton, N.

The programme will be published in a future issue.

SURGERY.

President: J. SCOTT RIDDELL, M.V.O., M.B., C.M., Aberdeen. *Vice-Presidents:* J. GRANT ANDREW, C.M., F.R.F.P.S., Glasgow; ARTHUR CONNELL, F.R.C.S.E., Sheffield; W. MCADAM ECCLES, M.S., F.R.C.S., London; T. EAGLESON GORDON, F.R.C.S.I., Dublin; Professor JOHN MARNOCH, M.B., C.M., Aberdeen; ALEXANDER MILES, F.R.C.S., Edinburgh. *Honorary Secretaries:* G. H. COLT, F.R.C.S., 12, Bon Accord Square, Aberdeen; RUPERT FARRANT, F.R.C.S., 59, Queen Anne Street, London, W.; J. M. GRAHAM, F.R.C.S.E., 5, Castle Terrace, Edinburgh; S. THOMSON IRWIN, M.Ch., F.R.C.S.Edin., 29, University Square, Belfast.

The following programme has been arranged:

Wednesday, July 29th.—Discussion on the Etiology and Treatment of Carcinoma of the Tongue. To be opened by Mr. W. G. SPENCER, followed by Professor H. MORESTIN (Paris).

Thursday, July 30th.—Discussion on the Surgical Treatment of Arthritic Deformities. To be opened by Mr. ROBERT JONES.

Friday, July 31st.—Discussion on Anoci-association, or the Evolution of the Shockless Operation. To be opened by Mr. H. M. W. GRAY.

Papers.—The following papers have been accepted:

BOYD, Sidney A.: The Newer Indications for Removal of the Spleen.
DON, A. Pott's Disease in Cervical Region, with Methods of Bony Splinting.
GORDON, T. E. Duodenal Haemorrhage.
GUNN, J. A. The Action of Certain Drugs on the Isolated Human Vermiform Appendix (with a demonstration).
JAMIESON, Professor J. K., and DOBSON, J. F. The Lymphatics of the Tongue (with a demonstration of specimens prepared by Gerota's method).
MILLIGAN, William. Some Practical Considerations in the Diagnosis and Treatment of Abscess of the Cerebellum, with a record of cases subjected to operation.
PAGE, C. Max. The Treatment of certain cases of Appendix Abscess.
WHEELER, W. I. DE C. A further report on Three Cases of Abdominal Aneurysm treated by Operation.
WILKIE, D. P. D. Acute Appendicitis and Acute Appendicular Obstruction.

TROPICAL MEDICINE.

President: Professor W. J. R. SIMPSON, C.M.G., M.D., London. *Vice-Presidents:* DANIEL E. ANDERSON, M.D. Lond. and Paris, B.Sc., F.R.S.E., London, W.; J. MITFORD ATKINSON, M.B., London; HENRY FRASER, M.D., Kuala Lumpur, Federated Malay States. *Honorary Secretary:* G. A. WILLIAMSON, M.D., 15, Forest Road, Aberdeen.

The following programme has been arranged:

Wednesday, July 29th.—Discussion on Kala-azar and Allied Conditions. To be opened by Fleet Surgeon P. W. BASSETT-SMITH.

Thursday, July 30th.—Discussion on the Education and Position of the Sanitarian in the Tropics. To be opened by Colonel KING, I.M.S., C.I.E.

Friday, July 31st.—Discussion on the Surgical Treatment of Colitis and Post-Dysenteric Conditions. To be opened by Mr. JAMES CANTLIE.

Papers:

BAHR, P. H. Recent Researches in Sprue.
BIRT, Colonel C., A.M.S. Sand-Fly Fever.
FRASER, H., and STANTON, A. T. The Rice Theory and Recent Conclusions.
MACCALLAN, A. F. The Ankylostomiasis Campaign in Egypt.
MARETT, Captain P. J., R.A.M.C. The Bionomics of Maltese Phlebotomi.

A Special Subsection of the Museum is being reserved for exhibits in Tropical Medicine, and the Pathological Museum Committee, Marischal College, will be glad to receive instruction as soon as possible from intending exhibitors, and will later forward information as to packing, insurance of exhibits, etc., the expense of which will be borne by the Association.

PATHOLOGICAL MUSEUM.

THE Committee of the Pathological Museum, to be organized in connexion with the Annual Meeting of the British Medical Association next July, proposes to arrange the material under the following heads:

1. Exhibits bearing on discussions and papers in the various sections.

2. Specimens and illustrations relating to any recent research work.

3. Instruments relating to clinical diagnosis and pathological investigation.

4. Individual specimens of special interest or a series illustrating some special subject.

It is also proposed to make an effort to gather together series of exhibits relating to the pathology of the circulatory system and the ductless glands; the effect of radium on malignant growths; pyelo-radiography and *x*-ray photographs of brain, skull, and gall stones, and of ancient and historical surgical instruments.

While making these suggestions the committee, of which Dr. G. M. Duncan is chairman, will welcome specimens illustrating other subjects. The museum will occupy a central position in the same building as that in which the sectional work is to be carried on.

Communications may be addressed to the honorary secretaries, Dr. A. W. Falconer and Mr. William Anderson, F.R.C.S., Pathological Department, Marischal College, Aberdeen.

Honorary Local Treasurer—
George Williamson, M.B.,
256, Union Street, Aberdeen.

Honorary Local Secretaries—
Thomas Fraser, M.B.,
16, Albyn Place, Aberdeen.
Fred. K. Smith, M.B.,
7, East Craibstone Street, Aberdeen.

PROVISIONAL PROGRAMME.

The following is the provisional time-table for the Aberdeen Meeting:

Friday, July 24th.

10 a.m.—Annual Representative Meeting.

Saturday, July 25th.

9.30 a.m.—Representative Meeting.

Monday, July 27th.

9.30 a.m.—Council Meeting.
10 a.m.—Representative Meeting.

Tuesday, July 28th.

9 a.m.—Exhibition of Surgical Instruments, Drugs, etc. The Exhibition will remain open until 6 p.m. on this and the three following days.
9.30 a.m.—Representative Meeting.
2 p.m.—Annual General Meeting.
8.30 p.m.—Adjourned General Meeting, President's Address.

Wednesday, July 29th.

9 a.m.—Council Meeting.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Medicine.
2.30 p.m.—Secretaries' Conference and Dinner.
3 p.m.—Religious Services.

Thursday, July 30th.

8 a.m.—National Temperance League Breakfast.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Surgery.
7.30 p.m.—Annual Dinner.

Friday, July 31st.

9 a.m.—Council Meeting.
10 a.m. to 1 p.m.—Sectional Meetings.
6 p.m.—Annual Exhibition closes.

Saturday, August 1st.

Excursions.

ANNUAL EXHIBITION.

The annual exhibition of surgical instruments, drugs, foods, etc., held during the annual meetings of the British Medical Association, will be arranged this year in the Marischal College, where also the Sections will meet, where the General and Representative Meetings of the Association will take place, and where the Addresses in Medicine and Surgery will be delivered. The exhibition on this occasion will, therefore, occupy a central and convenient position, and members will have an excellent opportunity of inspecting the exhibits.

LODGINGS AND HOTELS.

A list of hotels and lodgings available in Aberdeen during the Annual Meeting was published in the advertisement pages (10 and 11) of our last issue. Members desiring further information on this subject are asked to communicate with Dr. F. Philip, Honorary Secretary of the Hotels and Lodgings Committee, 29, King Street, Aberdeen

EXCURSIONS.

It is the hospitable custom of members residing in or near the town in which the annual meeting of the British Medical Association is held to arrange that opportunities should be afforded to visiting members to see the town and its immediate neighbourhood, and also to plan excursions to more distant places within easy reach.

Aberdeen and the North of Scotland will not be backward in following this example, and those who are making such arrangements have, indeed, probably suffered from an embarrassment of choice, inasmuch as within reach of Aberdeen there is much beautiful river, mountain, and loch scenery. We give below some particulars of the provisional arrangements so far made, but this information must be prefaced by the general observation that the meeting falls at a season when the beauty spots of Northern Scotland are beginning to be crowded, and that it is therefore essential that members should as far as possible make up their minds early in regard to the excursion or excursions they wish to take, and notify their intention to the Secretary, Mr. G. H. Colt, F.R.C.S., 12, Bon Accord Square, Aberdeen, not later than June 30th.

The Committee will have to make arrangements for travelling facilities, catering, etc., with the railway companies and hotels, and all these arrangements must be made in advance. In the case of certain excursions the number must be limited and places will be assigned in order of application. A special office will be open in the reception rooms in Aberdeen and will be provided with time-tables, programmes, and guide-books, containing full information as to the many places of interest which may be visited from Aberdeen. The railway companies will make special concessions, but members of the Association should note that they must produce their tickets of membership when booking in Aberdeen for any excursion.

The following provisional arrangements have been made. Any additions or alterations will be duly notified in subsequent issues:

For Representatives.

The Annual Representative Meeting begins on Friday, July 24th, and will no doubt be continued on Saturday, July 25th. Arrangements have been made by members in Aberdeen for running a special train to Cruden Bay on Sunday, July 26th, leaving Aberdeen in the morning and returning the same evening. Slain's Castle, Bullers o' Buchan, and Whinnifold, the scene of Bram Stoker's *Mystery of the Sea*, are all within walking distance. Luncheon will be given at the hotel at Cruden Bay, and Representatives who wish to make this excursion are particularly requested to send their names to Mr. Colt as early as possible, and in any case not later than June 30th.

Short Excursions.

Deeside and Donside may both be seen on one day by a circular tour through Alford to Strathdon and Ballater, and so back to Aberdeen. The excursion will occupy the whole day, starting at 8.5 or 9.30 a.m., and arriving back in Aberdeen at or about 7 p.m. The journey from Alford to Ballater will be made by motor car, and it is therefore essential that adequate notice should be given. The fares for the round are: First class, 12s.; third class, 9s.

The following half-day excursions may be taken on either Wednesday, July 29th, or Saturday, August 1st:

To Speyside, returning from Garten.—The train will leave at 1 p.m., and luncheon will be served on it for a limited number. The party will reach Aberdeen on the return journey at 10.32 p.m. Fare 2s. 6d.

To Ballater at 1.15 p.m., including coach drive to Balmoral. Aberdeen will be reached at 10 p.m. Fare 2s. 6d.

To Aboyne, to visit Fungle, Aboyne Castle, and Glentanar. The party will leave at 1.15 p.m. and reach Aberdeen again at 10 p.m. Fare 2s. There will be opportunity for golf on these two excursions.

To Elgin, where the cathedral can be visited. The train leaves Aberdeen at 12.30 p.m., and the party will arrive there on the return journey at 9.35 p.m. Fare 3s.

To Banff, Cullen, and Buckie, leaving at 12.30 p.m., and reaching Aberdeen again at 9.35 p.m. Fare 2s. 6d.

To Alford and Oyne, to visit the prehistoric fort on Nether Tap of Bennachie and Maiden Stone. The train

leaves Aberdeen at 1.37 p.m., and reaches it again at 8.52 p.m. Fare 1s. 6d.

Cruden Bay.—The train leaves Aberdeen at 1.30 p.m., and the return train is due at 8.38 p.m. Fare 2s. 6d., including use of golf course.

Stonehaven and Muchalls.—Visits may also be made on Wednesday or Saturday to Stonehaven to see Dunottar Castle, Raedykes Camp, the Ogham Stone, the Druidical Circles, old Fetteresso Church, Cowie Churchyard, and to Muchalls for the coast scenery and rocks. Both at Stonehaven and Muchalls golf may be played, and at Stonehaven tennis and golf also.

Longer Excursions.

Three Rivers Tour.

On Saturday, August 1st, a tour will be made by a party not exceeding forty to the valleys of the Dee, Spey, and Don. The same tour can also be taken on Wednesday, July 29th. The party will go from Aberdeen by train as far as Dinnet, and will motor to Strathdon, where luncheon will be taken. It will then go by coach from Cockbridge to Tomintoul, the highest village in Scotland, where tea will be taken. The return will be by Ballindalloch, Speyside, and Donside, to Aberdeen. The fare for the round will be—first class, 20s.; third class, 15s. This tour will occupy the whole day, from 8 a.m. to 10.30 p.m.

Glen of Drumtochty.

A party of 200 will be able to make an excursion to the Glen of Drumtochty on July 29th, and a similar party will be arranged on August 1st. This is a most charming round trip, passing many places of historical and archaeological interest, among them being Edzell, with its golf course and castle, Auchinblae, Drumtochty, Clatterin Brigs, and Fettercairn. This is a half-day excursion, leaving shortly after 1 p.m. and getting back to Aberdeen on Wednesday a little before 9 p.m. and on Saturday soon after 7 p.m. If desired it could be arranged for a half of each party to coach from Fordoun and the other half from Edzell. The fare for the round is from 5s. to 6s.

Grantown and Speyside.

This trip has also been arranged for a party of 200 on Wednesday, July 29th, and Saturday, August 1st. At Grantown, which is one of the chief health resorts of Strathspey, the valley of the Spey opens out into a large wide plain—the Cairngorm mountains to the left and the Monadh Liath range to the right. The party will start on each day at 2 p.m., and reach Aberdeen on the return journey at 11.15 p.m. Cold luncheon can be arranged on the train for a limited number. The fare will be 2s. 6d. third class.

Ballater, Balmoral, and Braemar.

Arrangements have been made for a party of 500 to visit Royal Deeside on Saturday, August 1st. The party will travel to Ballater by a train leaving Aberdeen at 8.45 a.m., and by coach from Ballater to Balmoral. Lunch will be taken in a marquee in Balmoral grounds. From Balmoral after luncheon the party will proceed by coach to Ballater, and return to Aberdeen by a train arriving there at 6.15. Members wishing to travel to Edinburgh, Glasgow, etc., from Aberdeen by the trains at 5.30 and 5.35 p.m. can return from Balmoral by the railway company's motor via Crathie to Ballater, and proceed thence by the train due to arrive in Aberdeen at 5.15. It will be possible for a few members to obtain private motors at Ballater by previous arrangement, and to drive to Braemar and Linn of Dee, lunching at Braemar and joining the party at Ballater on the return journey. The return fare to Ballater is 2s. 6d., and from Ballater to Balmoral 2s. 6d., luncheon extra.

Aviemore (Further Speyside).

This is an alternative to the last excursion, and will afford to those who may have been unable to avail themselves of the Three Rivers tour an opportunity of seeing the lovely country of Further Speyside. The party will leave Aberdeen on Saturday morning, August 1st, and will reach Aberdeen in the evening. Members who may wish to return south via Perth on Saturday evening should make their own arrangements with the stationmaster at Aviemore, where luncheon will be taken. The return fares are: First class, 20s. 8d.; third, 11s. 1d.



Outline map showing railways in the east of Scotland. The system of the Highland Railway and its connexions is shown by the darker line.

Archaeology.

It is proposed to arrange excursions for members specially interested in Scottish history, archaeology, geology, and mountain and marine scenery. Among the places to be visited will be druidical circles on Kingcausie and at Aquhorties, the underground houses at Kildrummy, the prehistoric fort on the Mither Tap of Bennachie and the Maiden Way at its foot, the vitrified forts at Tap of Noth and at Finavon, near Forfar, the sculptured stones at Aberlemno, and many other places of particular interest to archaeologists.

Inverness, Elgin, Nairn, and the Highlands.

The members of the Northern Counties of Scotland Branch of the Association have organized a series of excursions for those members who propose to visit Inverness and neighbourhood. It is anticipated that many who attend the annual meeting will complete their holiday by visiting the North of Scotland. In order to facilitate arrangements, the medical men in Inverness, Elgin, Nairn, and Strathpeffer Spa are anxious to get the names of those members who propose visiting these places as soon as possible so as to have some indication as to probable numbers. The tourist season is very heavy during July and August, and as hotel accommodation is somewhat limited, private hospitality will be extended to a certain number.

The excursions in Inverness district include a trip up the Caledonian Canal, motor runs to Culloden Moor, Cawdor Castle, Speyside, and to Glenurquhart, Strathglass, Loch Maree, Loch Duich. All these are delightful excursions typical of Highland scenery. Nairn, with its fine golf course, will be an attraction to many, while Elgin, with Lossiemouth as a golfing centre, will charm others. To men who are not golfers, drives to Grantown on Spey and Craigellachie have been arranged. It is suggested that members coming from London and neighbourhood should take tourist tickets to Inverness (£3 3s. third class from London). These tickets permit a break of journey northward at Aberdeen, and are available to return via the Highland Railway by Inverness, Aviemore, and Dunkeld, going on to Edinburgh or Glasgow. The journey may be broken at any of these places on the way

south. Tourist tickets may also be obtained from any of the larger towns in England and Wales. Full particulars can be gathered from the *Guide to the Highlands*, which may be obtained from the secretary of the Highland Railway Co., Inverness. As already indicated, it would facilitate arrangements if the names of intending visitors were sent in to one of the undermentioned not later than July 10th:

Dr. J. Munro Moir, Inverness,
Dr. Stephen, Elgin,
Dr. E. Wilson, Nairn,

who will be pleased to give any information as to hotel accommodation, private hospitality, etc.

The provisional arrangements for those visiting Nairn are as follows: The party will arrive during the forenoon of Saturday, August 1st; there will be a reception by the Provost, followed by luncheon. In the afternoon there will be a motor run by Culloden Moor, visiting the battlefield, and on the homeward run Kilravoch and Cawdor Castles. In the evening there will be a concert, which will probably be held in the open air. On Sunday there will be a motor run to the upper reaches of the Findhorn (Glenferness and Dulsie). On Monday the baths and the golf course will be open to the visitors.

Weekly First Class Season Tickets.

Members staying at Banchory or Cruden Bay can obtain season tickets enabling them to travel to and from Aberdeen daily during the week of the annual meeting at the following rates: Cruden Bay 10s., Banchory 8s. 8d. The season tickets will be issued from intermediate stations at proportional rates.

On the Caledonian Railway to Stonehaven and intermediate stations, during the Congress, return tickets will be issued at Aberdeen to places where members wish to reside. These tickets will be available for day of issue or following day, or from Saturday to Monday, at a single fare and a third for the double journey, minimum 1s. Season tickets are also available for more than one journey, at a charge of not less than the accumulated fares per day as above, the minimum being 1s. per day.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

EAST AFRICA AND UGANDA BRANCH.

The first annual general meeting of the East Africa and Uganda Branch was held at the Church Missionary Society's Hospital, Namirembe, on December 23rd, 1913. Twelve members were present.

Election of New Members.—Eight new members were elected.

Finance.—A report was submitted and approved showing a credit balance in favour of the Branch in addition to undrawn allowances.

Organization Rules.—Draft organization rules of the Branch were adopted, and directed to be forwarded for the approval of the Council of the Association.

Ethical Rules.—It was decided to postpone the question of the adoption of ethical rules.

Election of Officers.—The following office-bearers were elected for 1914:

President: Dr. A. R. Cook.
President-elect: Dr. A. D. P. Hodges, C.M.G.
Secretary: Dr. G. C. Strathairn.
Members of Branch Council: Drs. J. H. Cook, C. J. Baker, and C. A. Wiggins. Dr. Wiggins was further elected to represent the Branch at any of the Association meetings held in Britain in 1914 at which it would be competent for him to do so.

Presidential Address.—The Presidential address (on obstetric practice in Uganda) was delivered by Dr. A. R. Cook, and an interesting discussion took place.

Clinical Cases.—An exhibition of clinical cases was given in the hospital.

Fees.—A discussion on fees took place, and the Secretary was instructed to circularize the members of the Divisions on the subject.

LANCASHIRE AND CHESHIRE BRANCH:

Blackburn Division.

The annual meeting of the Blackburn Division was held at the Old Bull Hotel, Blackburn, on May 28th, when Dr. Prebble was in the chair.

Election of Officers.—The following officers were elected for next year:

President: Dr. Tough.
Vice-President: Dr. Greeves.
Honorary Secretary and Treasurer: Dr. Shearer.
Representatives on Branch Council: Dr. J. Craig, Dr. Greeves.
Representative at Representative Meeting: Dr. J. Craig.
Executive Committee: Dr. Prebble, Dr. Barr, Dr. Lees, Dr. Beaton.

Blackpool Division.

The annual meeting of the Blackpool Division was held on May 29th at the Clifton Hotel, Blackpool, when Dr. Penman (the retiring Chairman) and Dr. Thomas Cave (the Chairman-elect) and fourteen other members were present. The meeting was preceded by the annual dinner.

Annual Report of Division.—The annual report of the Division was read and adopted. The report stated that the membership of the Division had decreased during the past year from 69 to 58. Three new members had joined during the year, 5 had removed into and 4 out of the area, and 12 members had resigned. The reasons given for the resignations had in some cases been disapproval of the policy of the British Medical Association in connexion with the Insurance Act, in others the increase in the annual subscription to the Association. Two members died during the year (Drs. Jones and Robinson). There were still 67 practitioners who were not members of the British Medical Association out of a total of 125 practitioners resident in the Division. Five meetings of the Division were held, at which the average attendance was seventeen. The financial report showed that the deficit of £7 17s. 7d. from last year had increased to £10 17s. 9d. A grant of £3 3s. had been received from the Branch Secretary during the year.

Election of Officers.—The officers for the coming year were elected as follows:

Chairman: Dr. Carr.
Vice-Chairman: Dr. Court.
Honorary Secretary: Dr. Baird.
Representative for Representative Meeting: Dr. Barton.
Representatives on Branch Council: Dr. Barton and Dr. Brown.
Executive Committee: Drs. Smith, Penman, Buckley, Penistan, Godley, English, and E. Hilliard.

Votes of Thanks.—Votes of thanks were passed to the retiring officers.

METROPOLITAN COUNTIES BRANCH:

Lambeth Division.

The annual meeting of the Division was held at Bethlem Royal Hospital on May 27th, when the following were elected:

Chairman: Dr. R. J. Farman.
Vice-Chairman: Dr. H. Harvey Norton.
Representative on the Branch Council: Dr. Herbert Taylor.
Representative at Representative Meetings: Dr. J. V. C. Denning.
Honorary Secretary and Treasurer: Dr. T. H. Parkes Peers.
Members of Committee: Drs. G. B. Scott, G. R. Elwin, S. S. Brook, J. G. Glasgow, A. R. French, A. J. McNickle, A. R. Moore, F. O. Stoker, P. D. Pywell, E. W. Herrington, W. R. Cazenove, A. G. Everard.

Vote of Thanks.—A most hearty vote of thanks was accorded to the retiring chairman after some suitable remarks by the incoming chairman.

Annual Report of Council.—The Representative was instructed to vote in favour of the report of council.

Model Scheme for the Treatment of Tuberculosis.—The model scheme for treatment of tuberculosis was considered and approved.

Demonstration.—A most interesting demonstration was given by the retiring Chairman on dementia praecox, after which votes of thanks were given to the Chairman and the Governors for the use of the room.

North Middlesex Division.

The twelfth annual meeting of the North Middlesex Division was held on May 29th, at the Prince of Wales General Hospital, Tottenham. Dr. Leonard Grant was in the chair, and twenty-three members were present.

Annual Report of Division.—The report of 1913 and 1914 was submitted and adopted.

Election of Officers.—The following officers were elected:

Chairman: Dr. Reginald Fuller.
Vice-Chairman: Dr. Leonard Grant.
Honorary Secretary and Treasurer: Dr. Stewart Smith.
Direct Representative at Representative Meetings: Dr. Percival Barnes.
Representative on Branch Council: Dr. Brackenbury.
Executive Committee: The above officers, together with the following six members, made up the Executive—Messrs. Burton, Distin, Fawssett, Marjoribanks, R. T. Vivian, and F. C. Wood.

Division Rules.—The following addition to the Division rules were passed. To Rule 4 add the words:

Together with such members (if any) of any Local Medical Committee formed under the National Insurance Act, 1911, and such medical members (if any) of any Insurance Committee constituted under that Act, being (in either case) ordinary members of the Association resident within the area of the Division.

To Rule 11 add this paragraph:

That the Executive Committee be summoned at least three times a year.

STRATFORD DIVISION.

THE annual meeting of the Stratford Division was held on Thursday, June 4th, at West Ham Hospital, when Dr. PERCY ROSE presided, and nineteen members were present.

Annual Report of Council.—The annual report of the Council was discussed.

Election of Officers.—The officer-bearers for the ensuing year were elected as follows:

Chairman and Representative at Annual Representative Meeting: Dr. Harold S. Beadles.
Vice-Chairman and Honorary Secretary: Dr. Percy Rose.
Treasurer and Representative on Branch Council: Dr. P. J. S. Nicoll.
Executive: Mr. Couzens, Drs. Dayus, Frederick, Grogono, Hay, Kennedy, MacMurtry, Randall, Ross Steen, and Taylor.

Vote of Thanks.—The following resolution was unanimously adopted:

That this annual meeting of the Stratford Division of the Metropolitan Counties Branch of the British Medical Association expresses its great regret that Dr. Nicoll feels himself unable to continue as honorary secretary, and heartily thanks him for his service in that capacity, and further desires that this record should be entered on the minutes.

NEW SOUTH WALES BRANCH.

(From our Special Correspondent in Sydney.)

THE report of the Council for the year ended March 27th states that the number of members now stands at 920 as against 894 at the end of the last year. Additions by election and transfer from other Branches numbered 95, losses by transfer to other Branches 31, by default 17, by resignation, 12, and by death 9.

Friendly Societies and the Medical Profession.

The year has marked an epoch in connexion with the relations of medical practitioners and friendly societies. Action was taken by the Branch, on behalf of its members engaged in lodge practice, with a view to introducing the common form of agreement between medical officer and friendly society lodge approved (except as to certain details which were left undetermined) at the conference of September, 1912, between the friendly societies' representatives and the representatives of the Branch, for use throughout the State. The procedure necessary to give effect to the wishes of the members was elaborated with much care and thought. The introduction of new terms in friendly society lodge practice has opened up the question of the advisability of making adjustments in the coal-mining and possibly other industrial districts, where a large proportion of the people are accustomed to receive their medical attendance under contract practice conditions independently of the friendly societies. Two new affiliated local associations of members have been formed during the year—the Eastern District Medical Association, with its centre at Taree, and the South-Eastern Medical Association, with its centre at Wollongong. The rules of the local associations have been modified in several instances, so as to make their areas correspond to shires and municipalities, as being more suitable for organization.

"The Medical Journal of Australia."

The past year has still further emphasized the importance and value of the *Australasian Medical Gazette* as the organ of the Branch. The year has been a strenuous one by reason of the many questions of vital interest to the profession which have occupied the minds of the members, and the *Gazette* has done good service through its leading articles and otherwise, not only in affording information, but also in guiding professional opinion and in giving expression to it on these important matters. The time, however, is fast approaching when the Branch will be relieved, by the recently formed Australasian Medical Publishing Company, of the immediate responsibility of newspaper proprietorship. The formation of this company is a corollary of the federation of the Branches under the Federal Committee, and has for its primary object the conducting of a journal on behalf of all the Branches in Australia in common. In the new publication, which is to be called the *Medical Journal of Australia*, both the *Australasian Medical Gazette* and the *Australian Medical Journal* (the journal of the Victorian Branch) will be incorporated. The directors of the company have decided that the new journal shall be printed and published in Sydney, and have selected Dr. H. W. Armit of London to be the editor. Dr. Armit is expected to arrive in Sydney early in June, and the first issue of the new journal is to appear on July 4th.

The Visit of Dr. Macdonald.

Reference is made to the visit of Dr. J. A. Macdonald, the Chairman of the Council of the British Medical Association, to the meeting of the Australasian Medical Congress held in Auckland, New Zealand, in March last. As he was passing through Sydney at the time of a meeting of the Federal Committee and of a board meeting of the Australasian Medical Publishing Company an opportunity was afforded him of meeting many members of the New South Wales and other Branches in Sydney at that time. He attended as a visitor the meeting of the Federal Committee, and guided its deliberations on the most important subject of National Insurance.

Dr. Crago.

Leave of absence from meetings of the Council was granted to Dr. W. H. Crago on the occasion of his taking a well-earned holiday and a rest from the many onerous duties which he performs on behalf of his colleagues in the profession. For twenty-five years continuously Dr. Crago has been a member of the Council and an officer of the Branch. Except during his term of office as Vice-President in 1893 and President in 1894 and Acting Honorary Secretary, he has been the Honorary Treasurer. In addition to this, it is very largely due to his enthusiasm and foresight that the Branch possesses its own premises—the British Medical Association building. He organized the financial arrangements necessary in connexion with the acquisition of land and the erection of the building; he superintended its construction, and ever since its completion he has been the attorney of the Branch for its management. So numerous and exacting are the tasks and duties he has been performing, that it has not been easy for the Council, even by distributing them, to find members able and willing to act in his place. On the occasion of his departure, Dr. Crago was presented with a purse of sovereigns in recognition of his valuable services.

Election of Officers.

Dr. David Thomas has been elected President of the Branch for this year; Dr. George Armstrong has been elected Vice-President; Dr. R. H. Todd, Honorary Secretary; and Dr. W. H. Crago, Honorary Treasurer.

NORTHERN COUNTIES OF SCOTLAND BRANCH:

ROSS AND CROMARTY DIVISION.

THE annual meeting of the Ross and Cromarty Division was held at Dingwall on May 28th, when Dr. KAYE presided, and five other members were present.

The late Dr. Adam.—The Chairman and Secretary were instructed to prepare a special minute as to the loss the profession and the Division had sustained in the death of Dr. Adam (Dingwall); a copy of the minute was directed to be sent to Mrs. Adam.

Election of Officers.—The following officers were elected:

Chairman: Dr. Ross (Tain).
Vice-Chairman: Dr. Kaye (Strathpeffer).
Secretary and Treasurer: Dr. McKenzie (Tain).
Representatives on Branch Council: Dr. Pender Smith, Dr. Brodie.
Executive Committee: Dr. McLean, Dr. Knox, Dr. Somerville, Dr. Cameron, Dr. Pender Smith, and Dr. Johnstone.

The meeting unanimously agreed to nominate Dr. Moir (Inverness) as its Representative.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH:

FURNESS DIVISION.

THE annual meeting of the Furness Division was held in the Masonic Hall, on May 29th, when Dr. CROSS was in the chair, and nine other members were present.

Annual Report of Division.—Dr. THOMPSON, in presenting the annual report, gave an outline of what had been done during the year. There had been six Divisional and seven committee and special meetings. The number of members in December, 1913, was 53. Since then 4 had resigned and 2 had removed out of the district, leaving 47. Two had promised to join the Association. During the year the Division sustained a loss by the death of Dr. Fawcitt, of Broughton-in-Furness, an ex-President of the Branch and an ex-Chairman of the Division. In the early part of the year the Division was approached by medical practitioners in Millom to help them in their dispute with the friendly societies and ironworks club, with the result that an outside medical man was prevented from coming in. The Division was engaged during the greater part of the year in an endeavour to improve the condition of juvenile contract practice in Barrow. After prolonged negotiations an agreement was drawn up between representatives of the juvenile societies and representatives of the Furness Division, as a result of which the fees would now be increased by amounts varying from 100 to 150 per cent. Dr. CROSS (the Chairman) congratulated the Division on the report. Dr. DANIEL pointed out that the satisfactory result of the juvenile club question showed that the British Medical Association was not so useless as some would have it believed.

Vote of Thanks.—On the motion of Dr. CROSS, a vote of thanks was unanimously passed to Dr. Cockill for acting as Representative during the past year.

Election of Officers.—The following officers were appointed for 1914–15:

Chairman: Dr. Allen.
Vice-Chairman: Dr. Parsons.
Honorary Secretaries: Drs. Alexander and Thompson.
Representative at Representative Meetings: Dr. Callaghan.
Deputy Representative at Representative Meetings.—Dr. Riddell.
Representatives on Branch Council.—Drs. J. A. Reed and Johnston.
Members of Executive Committee: Drs. Livingston, Daniel, and Harper.

Dr. CALLAGHAN proposed that the Secretary of the Panel and Local Medical Committee (Dr. Wilson) be co-opted, and this was agreed to.

Public Health Work.—Dr. HARPER, in proposing that the Furness Division should take a more active part in public health work, made the following suggestion: (1) That there should be a municipal milk supply for infants (he gave statistics showing the good results of these institutions in various parts of the country); (2) that more should be done to assist those returned from the sanatorium; (3) as to the starting of municipal laboratories (the Chancellor in his Budget speech referred to this question); (4) the improvement of insanitary properties; and (5) provision of maternity beds at the hospital. Drs. SETTLE and CALLAGHAN supported Dr. Harper, and the Executive Committee was instructed to draw up a memorandum on the subject and present it to the Town Council through the medical officer of health.

School Medical Officers.—Letters were read from the School Medical Service Group of the Society of Medical Officers of Health, and Dr. Callaghan, the Representative, was instructed to support them at the Annual Representative Meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

MONMOUTHSHIRE DIVISION.

THE annual meeting of the Monmouthshire Division was held in the Board Room of the Royal Gwent Hospital, Newport, on May 29th, when Sir GARROD THOMAS was in the chair, and twenty-one members were present.

Presentation to Mr. R. J. Coulter.—Before proceeding to the agenda a presentation was made to Mr. R. J. Coulter. In handing him a cheque for £25 10s., the CHAIRMAN referred to his recent marriage, which had given the Division the opportunity of showing their appreciation of his services while honorary secretary.

Election of Officers.—The following officers were then elected:

Chairman: Mr. R. J. Coulter.
Vice-Chairman: Dr. J. L. Sullivan.
Representatives on Branch Council: Sir Garrod Thomas, J. W. Mulligan, E. M. Griffiths, R. J. S. Verity, T. E. Lloyd.
Executive Committee: W. F. Nelis, G. R. Strong, W. D. Steel, T. Morrell Thomas, and S. Hamilton and E. Ryan as Secretaries of the Local Borough and County Medical Committees respectively.
Representation on the Branch Contract Practice Committee.—H. S. Elworthy, E. M. Griffiths, W. D. Steel.
Representative on Committee of Newport Maternity Home: O. E. B. Marsh.
Representative on Committee of Welsh National Memorial Association: S. Hamilton.
Honorary Secretaries: Dr. Acomb resigned the senior honorary secretaryship and Dr. P. C. P. Ingram was elected, Dr. Acomb consenting to remain on as junior honorary secretary.

Annual Report.—The report of the Executive Committee was received and adopted; it included a recommendation that the representative be given power to act according to his judgement at the Annual Representative Meeting. A proposition that the Representative be instructed to support the formation of the proposed defence fund was not carried.

Local Schemes.—A discussion took place on certain local schemes, and it was decided to consider them at a forthcoming special meeting of the Division.

Votes of Condolence.—Votes of condolence were passed with the relatives of the late Drs. Istance and Sheehy.

Vote of Thanks.—The meeting terminated with a vote of thanks to the Directors of the Hospital for the use of the Board Room.

SURREY BRANCH:

GUILDFORD DIVISION.

THE annual general meeting of the Guildford Division was held at the Royal Surrey County Hospital, Guildford, on May 29th, when ten members were present.

Annual Report of Division.—The annual report and financial statement of the Division were adopted.

Annual Representative Meeting.—Instructions were given to the Representative as to Annual Representative Meeting at Aberdeen in July. The Representative was also instructed to support resolutions mentioned in a letter from the School Medical Service Group of Society of Medical Officers of Health.

Annual Meeting Luncheon.—On the motion of Dr. LYNDON, seconded by Dr. MITCHELL, the following resolution was unanimously carried:

> That, in the opinion of the Guildford Division, the custom of the President of the Branch defraying the cost of the luncheon to the members at the annual meeting of the Branch should be discontinued, and that in future the cost should be defrayed from the funds of the Division in which the meeting is held.

Election of Officers.—The following were elected officers for the ensuing year:

Chairman: Dr. Lyndon.
Vice-Chairman: Dr. Lankester.
Honorary Treasurer and Secretary: Dr. Graham-Jones.
Representative for Representative Meeting: Dr. Lankester.
Representative on Branch Council: Dr. Caldicott.

The Executive Committee were re-elected with the addition of the name of Dr. Gardner (Weybridge) in the place of Dr. Bird (Godalming).

ULSTER BRANCH:

BELFAST DIVISION.

THE annual meeting of the Belfast Division was held on May 21st, Dr. GARDNER ROBB in the chair.

Election of Officers.—The office-bearers for 1914–15 were elected as follows:

Chairman: Dr. George St. George (Lisburn).
Secretary and Treasurer: Dr. W. L. Storey (Rosetta, Belfast).

Executive Committee: Drs. W. M. Burnside, *M. F. Cahill, T. C. D. Cathcart, *T. A. Davidson, J. R. Davison, *D. Gray, *Hugh Irvine, S. T. Irwin, R. W. Leslie, J. MacDonald, W. McLorinan, J. O'Doherty, *Gardner Robb, J. Rusk, F. C. Smyth, D. H. Tweedie, R. Watt (Belfast), *H. J. Boyd (Hillsborough), J. A. Clarke (Carrickfergus), W. R. Davison (Ballymena), W. D. Donnan (Holywood), A. E. Knight (Donaghadee), *R. Reid (Whiteabbey), *J. L. Rentoul (Lisburn).

Representative: Dr. W. L. Storey (Rosetta, Belfast).

(The members whose names are distinguished by an asterisk were appointed as Representatives on the Branch Council.)

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

THE Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

ANY further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (SUPPLEMENT, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (SUPPLEMENT, May 9th), will be published in the SUPPLEMENT of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the SUPPLEMENT of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in SUPPLEMENT of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,
ALFRED COX,
Medical Secretary.

May 13th, 1914.

QUARTERLY MEETING OF COUNCIL.

THE Quarterly Meeting of Council will be held on Wednesday, June 24th, at 10 a.m., in the Council Room, 429, Strand, London, W.C.

By order,
GUY ELLISTON,
Financial Secretary and Business Manager.

June 4th, 1914.

SUGGESTED CHANGES OF BOUNDARIES.

NOTICE OF PROPOSAL FOR FORMATION OF A SEVENOAKS DIVISION.

NOTICE is hereby given under By-law 73 to all concerned of a proposal made by the Tunbridge Wells Division for formation of a Sevenoaks Division of the Association to form part of the Kent Branch, with area as follows:

> The urban districts of Sevenoaks and Wrotham, the rural district of Sevenoaks, and the civil parishes of Stanstead, Shipbourne, and Ightham.

Formal written notice of the proposal has been given pursuant to Article 13 to the Maidstone Division and Kent Branch, and the matter will be determined in due course by or on behalf of the Council of the Association.

Any member affected by the proposed change and objecting thereto, is requested to notify the fact and his reason therefor to the Medical Secretary, 429, Strand, London, W.C., not later than July 13th.

BRANCH AND DIVISION MEETINGS TO BE HELD

BIRMINGHAM BRANCH.—Mr. Seymour Barling, Honorary Secretary (52, Newhall Street, Birmingham), gives notice that the annual meeting of the Branch will be held at the Medical Institute, Edmund Street, Birmingham, at 3.30 p.m. on Thursday, June 18th.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—Dr. Ernest C. Hadley, Honorary Secretary (Burbury Street, Lozells, Birmingham), gives notice that members of the Central Division, Birmingham Branch, are requested to nominate officers for the posts of Chairman, Vice-Chairman, and two Honorary Secretaries for this Division to one of the honorary secretaries, Dr. Ernest C. Hadley, Burbury Street, Lozells, Birmingham, or Mr. Bernard J. Ward, 141A, Great Charles Street, Birmingham, in writing as early as possible. The annual meeting will be called at a late date in June, of which every member will have due notice.

BORDER COUNTIES BRANCH.—Dr. George R. Livingston, Honorary Secretary (47, Castle Street, Dumfries), gives notice that a general meeting of the Border Counties Branch will be held, by invitation of the President, at the Crichton Royal Institution, on Friday, June 19th, at 3 p.m. Members will meet at Crichton Hall (first house), for discussion of business and afternoon tea, and will then proceed to the Crichton Laboratory, where Dr. John Cruickshank will demonstrate some of the recent laboratory methods employed in medicine and psychiatry, and discuss their clinical bearings. Conveyances from Crichton Hall will leave Dumfries station on the arrival of the Carlisle train at 2.26 p.m., and return to the station in time for the 5.5 p.m. train to Carlisle.

CAMBRIDGE AND HUNTINGDON.—Dr. G. S. Haynes, Honorary Secretary (King's Lane, Cambridge), gives notice that the seventieth annual general meeting will be held at the Corn Exchange, St. Ives, Hunts, on Thursday, July 2nd. 12.20 p.m., business meeting, election of officers, etc.; 1.15 p.m., luncheon to members and their wives by the kind invitation of the President-elect, Dr. W. R. Grove; 3 p.m., presidential address.

DORSET AND WEST HANTS BRANCH.—Dr. Frank Fowler, Honorary Secretary (29, Poole Road, Bournemouth), gives notice that the summer meeting of the Dorset and West Hants Branch will be held at the Town Hall, Bridport, on Wednesday, July 8th, at 3.30 p.m. Mr. C. Edwards, Vice-President, will read a paper, "Dr. Roberts, a Bridport Worthy." Dr. H. C. Manning will open a discussion on "The Theory and Practice of Tuberculin Treatment." The Bridport practitioners very kindly invite members to luncheon at the Greyhound Hotel (1.30 to 2.30), and Mr. and Mrs. Edwards, Granville House, have kindly offered to give tea. By kind permission of the Mayor, the Municipal Archives will be on view at the Town Hall from 2.30 to 3.30. The West Dorset Golf Club kindly offer members the free use of the club at West Bay. Plans of the proposed new Bridport Hospital will be on view.

EAST YORK AND NORTH LINCOLN BRANCH.—Dr. H. L. Evans, Honorary Secretary, gives notice that the annual meeting of this Branch will be held in Hull on Friday, July 10th. Accounts, election of officers, etc.

EDINBURGH BRANCH.—Drs. John Stevens and John Eason, Honorary Secretaries, give notice that the annual meeting of the Edinburgh Branch will be held in the hall of the Royal College of Surgeons, Nicolson Street, on Friday, June 26th, at 4 p.m. Tea will be served from 3.30 to 4 o'clock. Business:—Report of Branch Council. Treasurer's financial statement. Election of office-bearers. Report of election of Dr. J. R. Hamilton as member of Council for the Edinburgh and Fife Branches for 1914–15. Scottish Committee: (1) Report of proceedings—contract practice, midwives' bills, etc.; (2) proposal for appointment of whole-time Medical Secretary for Scotland. (Motion: "That the whole-time Medical Secretary for Scotland and his entire staff should be located in Edinburgh." (Unanimous recommendation of Branch Council.)) Election to vacancy on the board of management of the Queen Mary Nursing Home; Branch Council nominate Dr. W. R. Martine, Haddington. Local Guarantee Fund: (1) Report of Branch Council's action—(*a*) Levy called up; (*b*) Decision to return the balance left, after paying expenses, to those who subscribed. (2) Recommendation by Branch Council that this fund should now be abrogated. National Insurance—prospective legislative changes: (1) For provision of laboratories and nurses; (2) proposal *re* medical referees. Rules of the Edinburgh Branch: Recommendation of Branch Council—(1) That the Branch give instructions for their revision and submission to a future meeting; (2) proposed new rule—"That one Honorary Secretary of each Division be *ex officio* a member of the Branch Council."

KENT BRANCH.—Dr. Hugh M. Raven, Honorary Secretary (Barfield House, Broadstairs), gives notice that a clinical meeting will be held at the Kent and Canterbury Hospital, at 3.15 p.m., on Thursday, June 18th, 1914, Dr. Sidney Wacher in the chair. All medical practitioners, whether members of the British Medical Association or not, are cordially invited to these meetings, which it is hoped will meet a want expressed by many practitioners in East Kent, and that they will make an effort to attend. Agenda: Difficulties in the diagnosis of pulmonary tuberculosis in children, by Dr. Reginald Miller (Great Ormond Street and St. Mary's Hospitals). The staff of the hospital will demonstrate cases of interest. Notes on a case of lymphatic leukaemia by Mr. E. L. Gowlland. Some experiences of cases treated with stock vaccines, by Mr. Hugh M. Raven.

LANCASHIRE AND CHESHIRE BRANCH.—Mr. F. Charles Larkin, Honorary Secretary, gives notice that the provisional arrangements for the annual meeting at Knutsford on Wednesday, June 17th, are as follows: 12 to 1, Lunch given by the Altrincham

Division. 1 to 3, Business meeting, President's address, scientific papers. 3 to 6, Excursions. 7.30, Dinner at the Queen's Hotel, Manchester. Members desiring to make scientific, clinical, or other communications are requested to notify the Branch Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON AND ST. HELENS DIVISIONS.—Drs. F. J. Knowles and T. A. Murray, Honorary Secretaries, give notice that a joint meeting of the above Divisions will be held at the Earlestown Town Hall, on Tuesday, June 16th, at 4 p.m. Agenda: Election of Representative for Representative Meeting, 1914; election of deputy; discussion of agenda for Representative Meeting, 1914; report of Council.

METROPOLITAN COUNTIES BRANCH.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers; Annual Reports of Council and of Representatives of the Branch on the Central Council, and the President's Address, "Some Observations on Modern Vascular Problems."

METROPOLITAN COUNTIES BRANCH: EAST HERTFORDSHIRE DIVISION.—Dr. H. D. Ledward, Honorary Secretary (123, Norton Way, Letchworth), gives notice that the second annual meeting of the Division will be held at 3 p.m., on Thursday, June 18th, at the North Hertfordshire and South Bedfordshire Hospital, Hitchin. Agenda: To receive correspondence; to receive the Honorary Secretary's annual report; to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; to elect the Representative and Deputy Representative of the Division in Representative Meetings; to consider the business of the Annual Representative Meeting.

METROPOLITAN COUNTIES BRANCH: GREENWICH AND DEPTFORD DIVISION.—Dr. W. H. Payne, Honorary Secretary (8, Vesta Road, Brockley, S.E.), gives notice that the annual meeting of the Greenwich and Deptford Division will take place at the St. John's Church Room, Lewisham High Road, on Wednesday, June 24th. Business: (1) To receive the annual report; (2) to elect the officers, Representatives, and Executive Committee for the ensuing year; (3) to instruct the Representative; (4) any other business.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—Dr. W. A. Milligan, Honorary Secretary (11, Upper Brook Street, W.), gives notice that the next meeting of this Division will be held on Tuesday, June 16th, at the Criterion Restaurant, W., when the President, Mr. J. Howell Evans, F.R.C.S., will be in the chair. At 7.30 p.m. the members will dine together, but if members are unable to attend the dinner it is hoped they will come to the meeting at 8.45 p.m. Agenda: Election of officers (1914–15); instructions to Representatives to Annual Representative Meeting.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that the annual meeting of the Division will be held at the Royal Infirmary, Leicester, on Wednesday, June 17th, at 4 p.m. Agenda: (1) Nomination of a Vice-President of the Branch for 1914–15. (2) Election of Representatives of the Division upon the Branch Council, and of officers and members of the Executive Committee of the Division. (3) Annual report of the Executive Committee. (4) Discussion of matters referred to the Divisions (see SUPPLEMENTS of the JOURNAL).

MUNSTER BRANCH.—Dr. Philip G. Lee, Honorary Secretary, gives notice that the annual meeting of the Branch will be held at 74, South Mall, Cork, on Saturday, June 20th, at 4.30 p.m. Business: Election of (1) officers and Council for 1914–15, (2) Ethical Committee of the Branch, (3) Representative and Deputy Representative for Representative Meeting, and (4) Representative to Irish Committee.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—Dr. J. Livingston, Honorary Secretary (2, Hartington Street, Barrow-in-Furness), gives notice that the annual meeting of the Branch will be held in the Friends' Hall, Lancaster, on Wednesday, June 24th, at 3.45 p.m. Agenda: (1) Report of Council. (2) Statement of accounts. (3) Election of office-bearers. (4) Introduction of new President, Mr. A. S. Barling. (5) Vote of thanks to retiring President, Dr. F. E. Daniel. (6) President's address. Subject: "Operations for the Cure of Hernia." To be followed by a discussion. Messrs. Down Bros. will exhibit a large selection of surgical instruments, and Messrs. Baillière, Tindall, and Cox a number of new books. In order to make the meeting as instructive as possible, members are requested to bring cases and specimens of interest. The President hopes that all members and their friends will take tea with him, and Dr. Livingston asks those intending to accept this hospitality to be good enough to give him a few days' notice so that suitable arrangements may be made.

SOUTH-WESTERN BRANCH.—Mr. Russell Coombe, Honorary Secretary, gives notice that the seventy-fifth annual meeting will be held on Tuesday, June 23rd, at the Royal Hotel, Plymouth, at 12.30 p.m., when Mr. Eales will resign the chair to Mr. Woollcombe. The report of the Branch Council for the year 1913–14 and the annual financial statement for the year 1913 will be presented to the meeting, and the officers of the Branch will be elected for the year 1914–15. Luncheon, by the kind invitation of the President-elect and members of the Plymouth Division, will take place from 1.30 p.m. to 2.30 p.m. at the Royal Hotel. The annual dinner of the Branch will be held at the Royal Hotel at 7 o'clock for 7.30 prompt. Tickets, 6s. 6d. each (exclusive of wine), can be had from Dr. Pinker, 10, Braidwood Terrace, Mutley, Plymouth. Early applications for dinner tickets will greatly facilitate arrangements, and in any case they should be made not later than the first post on Monday, June 22nd. The President is especially desirous of making the dinner a leading feature. To facilitate this he has intimated his desire to entertain those ladies accompanying members coming from outlying Divisions as his guests at the annual dinner of the Branch. Excursions (at 2.30 p.m.)—(1) Visit to H.M. Dockyard and inspection of modern battleship; (2) excursion to Bantham (Dr. E. L. Fox will entertain visitors at tea); (3) golf on Mt. Batten links. Members wishing to be accommodated with bed and breakfast are requested to send their names to Mr. E. J. Donbavand, Plymstock, South Devon, who will endeavour to arrange for them.

STAFFORDSHIRE BRANCH.—Dr. Harold Hartley, Honorary General Secretary (Basford, Stoke-on-Trent), gives notice that the forty-first annual meeting of the Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, June 25th, at 4.30 p.m., when an address will be delivered by the President-elect, Dr. J. Russell. Agenda: Introduction of the new President; Correspondence; report of the Council; the financial statement; election of officers for the ensuing year—President-elect, Secretary, and Treasurer; to decide the place of holding the next annual meeting; address by the President. Members have the privilege of introducing friends. Dinner at 6.45 p.m. Charge 5s.

SURREY BRANCH.—Dr. Cecil P. Lankester, Honorary Secretary (1, Rectory Place, Guildford), gives notice that the first annual meeting of the Surrey Branch will be held (by the kind invitation of the Reigate Division) on Wednesday, June 17th, at 2.30 p.m., at the White Hart Hotel, Reigate. The Reigate Division kindly invites members to lunch at the hotel at 1.15. There will be an excursion in the afternoon to Gatton Hall, where the members will be the guests of Sir Jeremiah Colman, Bart. The annual dinner will be held at the White Hart Hotel at 6.30 o'clock. Charge 6s. Wines will be provided by the Division. In order to facillitate arrangements, members are requested to notify Dr. Lankester of their intention to be present before June 14th. A meeting of the Branch Council will be held before lunch. Notice with agenda will be sent to members of Council in due course.

SUSSEX BRANCH.—Dr. A. S. Morton Palmer, Honorary Secretary, *pro tem.* (103, Marine Parade, Worthing), gives notice that the first annual meeting of the Sussex Branch will be held in Worthing, on Friday, June 26th, at 2.30 p.m., preceded by a meeting of the Council of the Branch at 12 noon, and luncheon by kind invitation of Dr. Gostling, Chairman of the Branch. After the transaction of ordinary business and a short presidential address, cinematograph films of medical interest will be shown. At 5 p.m. members are kindly invited by Dr. and Mrs. Gostling to a garden party at Barningham. Members are requested to notify Dr. Palmer at their earliest convenience whether they will be present at the lunch or no.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—Mr. S. Colin Legge, Honorary Secretary (24, Foregate Street, Worcester), gives notice that the annual meeting of the Worcestershire and Herefordshire Branch will be held at the Worcester General Infirmary, at 3.30 p.m., on Wednesday, June 24th. Agenda: (1) Report of Council; (2) election of office-bearers; (3) the retiring President, Mr. J. Lionel Stretton, will deliver an address and introduce his successor, Mr. Herbert Jones.

YORKSHIRE BRANCH.—Dr. Adolph Bronner, Honorary Secretary (33, Manor Road, Bradford), gives notice that the annual meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, June 17th, at 4.15 p.m., for the election of Vice-President, Secretary, and Treasurer, etc. Members intending to read papers, make any communications, propose new members, or show cases or specimens, are requested to notify him at once. The annual dinner will take place at the Midland Hotel at 6.30 p.m.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

British Medical Association.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

THE Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.

SHIP SURGEONS SUBCOMMITTEE.

A MEETING of the Standing Ship Surgeons Subcommittee of the Medico-Political Committee was held on March 18th, when there were present: Mr. J. T. MACNAMARA (in the chair), Dr. A. Grosvenor Hincks, Dr. W. P. Norris, Dr. T. H. Parkes Peers, and Dr. J. H. Taylor.

"Casual" Ship Surgeons.

The recommendation of the last meeting of the Subcommittee with regard to this question having been referred back to it for further consideration, a final decision was postponed.

Advertisements for Ship Surgeons.

The recommendation of the last meeting of the Subcommittee with regard to advertisements for ship surgeons tendered for insertion in the JOURNAL, which did not afford to intending applicants facilities for obtaining all essential information as to such appointments, was also reconsidered, and a modified recommendation was made.

Royal Naval Reserve, Surgeons' Branch.

The Subcommittee considered the question of (1) the organization of a medical department in connexion with the Royal Naval Reserve, to be recruited from ship surgeons; and (2) representations to the Admiralty upon such questions. It also had before it a memorandum upon the subject by Dr. Elder; in his absence it was decided to postpone consideration of the matter until the next meeting, and to ask him to prepare a memorandum upon the constitution of the Royal Naval Reserve and the Royal Naval Volunteer Reserve.

Shore Pay: Annual Leave on Full Pay.

The Subcommittee had before it a report of action taken in the matter of obtaining the views of the "correspondents" of the Subcommittee and ship surgeons in general upon the questions of (1) shore pay, and (2) annual leave on full pay. In view of the small number of replies received the Subcommittee decided to make a further appeal to ship surgeons for information.

"Correspondents" of Subcommittee.

The Subcommittee had before it a report of action taken in the matter of enlisting the assistance of the Honorary Secretaries of the Australian Branches in obtaining "correspondents" in the various Australian ports.

It was decided to appoint Dr. C. J. Cooke as "correspondent" of the Subcommittee for Plymouth, and, at the same time, to withdraw Dr. Edgar Du Cane's name from the list of London "correspondents," in accordance with his desire.

Conditions of Service in Shipping Companies.

The Subcommittee had before it a table of particulars of conditions of service under various shipping companies.

Payment of Ship Surgeons for Attendance upon First and Second Class Passengers.

The Subcommittee decided upon a draft scale of fees for attendance upon first and second class passengers suitable for suggestion to shipping companies, and recommended its adoption by the Medico-Political Committee.

Minimum Salary and Status of Ship Surgeons.

The Subcommittee will consider at its next meeting the question of the status of ship surgeons, and the desirability of raising the minimum remuneration approved by the Association.

THE following practitioners have consented to act as "Correspondents" of the Ship Surgeons Subcommittee, and are prepared to discuss with any ship surgeon in their area any matter of interest either to that surgeon or to ship surgeons in general, and to forward representations to the Subcommittee in regard to any question in connexion with which central action seems desirable:

Correspondent.	*Port.*
Dr. J. Godding, 56, Leadenhall Street, London, E.C.	London.
Dr. A. G. Hinks, 40, St. Vincent Row, Southend-on Sea	London.
Dr. H. T. Bates, Church Road, Wavertree, Liverpool	Liverpool.
Dr. C. Carlyle, 13, Menlove Avenue, Mossley Hill, Liverpool	Liverpool.
Dr. C. J. Cooke, 1, Sussex Terrace, Plymouth	Plymouth.
Dr. J. C. H. Beaumont, Chinsura, Khartoum Hill Road, Southampton	Southampton.
Dr. O. V. Currie, Union Castle Buildings, 58, Adderley Street, Capetown	Capetown.

Ship surgeons visiting these ports and desiring to discuss matters of interest to the service are invited to place themselves in communication with the correspondent for the port.

The Medical Secretary, 429, Strand, London, W.C., will be glad to hear from practitioners in passenger ports not mentioned above who are willing to act as correspondents to the Subcommittee.

Ship surgeons are also asked to forward for the guidance of the Subcommittee, either to one of the above correspondents or to the Medical Secretary, British Medical Association, 429, Strand, London, W.C., their views upon the following questions:

(1) Whether ship surgeons should receive full sea pay while in port *plus* a subsistence allowance at the same rate granted to the chief officer, with a possible liability to have to report every day at the office of the company, or whether they would prefer to receive full sea pay only in port without such liability; subsistence pay, however, to be paid upon those days in port when any duty connected with the ship is performed.

(2) Their views generally on the question of annual leave being granted with full pay to permanent ship surgeons.

LOCAL MEDICAL AND PANEL COMMITTEES.

LONDON.

Panel Committee.

A special meeting of the London Panel Committee was held on June 9th to deal with adjourned business.

Scheme of Allocation.

The Panel Committee having determined to concur in the resolution adopted by the Insurance Committee in respect to the crediting of additional capitation fees (moneys accumulated in respect of persons who have not chosen a doctor) to practitioners for the year 1914 (Supplement, March 7th, p. 137), the meeting considered a scheme, prepared at the request of the Commissioners, setting out the arrangements to be made for the assignment of persons who experience difficulty in obtaining acceptance, and for the crediting of additional capitation fees. Under the scheme the Panel Committee undertook that the services of a practitioner should be available to any insured person needing them, and to circulate to practitioners a list of doctors prepared to give immediate treatment. A practitioner who refused a person was required to furnish him with an introduction to the doctor on the special list whose surgery was nearest to the insured person's residence. In regard to additional capitation fees, a practitioner who declined to have persons assigned to him would not be entitled to share; this would not apply to a woman practitioner who did not wish to accept male patients. Additional capitation fees would not be credited in respect of persons on a doctor's list in excess of 2,000, but no notice would be taken of persons on a doctor's list in another county.

Dr. Major Greenwood moved the deletion of the last clause on the ground that it would give practitioners on the borders of the county a special advantage.

Dr. B. A. Richmond (Secretary of the Committee) said the difficulty was that the Panel Committee had no power to obtain information on this point from other Insurance Committees.

Dr. J. F. Keenan, who seconded the amendment, condemned the 2,000 limit. Doctors could not be prevented from accepting more than that number, and they ought not be penalized.

Dr. Richmond said that the Panel Committee agreed in the first instance that there should be no limit; but when the scheme came before the Medical Benefit Subcommittee of the Insurance Committee objection was taken to the absence of the limit. He had urged on the Insurance Committee that the difficulties in the industrial areas would not be solved by penalizing the doctors with large lists. The medical representatives were out-voted, and the alternative of a 1,500 limit was proposed. This was defeated, but the Committee decided upon the 2,000 limit. However, if accurate figures were obtained for the whole metropolis, he believed it would be found now that in large list areas—the industrial districts—there were very few people who had not chosen a doctor. The Panel Committee had already accepted the 2,000 limit as a compromise; members must realize that it was no use reiterating their original demand for no limit. If the Insurance Committee had not acted in the matter the Commissioners would have done so.

It was agreed by 17 votes to 16 that the clause should stand part of the scheme, and the scheme was then approved as a whole.

Alleged Extravagant Prescribing.—The Pharmacy Subcommittee asked for instructions to inquire into alleged cases of extravagant prescribing. Some members demurred to this proposal, but it was pointed out that the Regulations provided that the Panel Committee must undertake such inquiries at the request of the Pharmaceutical Committee; and Dr. C. W. Hogarth, the Chairman of the Subcommittee, mentioned that the cases were quite extraordinary; musk had been ordered at a cost of 10s. a dose, also cylinders of oxygen.

The Budget Proposals.—The Panel Service Subcommittee reported further with reference to the suggestions formulated at the last meeting[1] as to the best ways, from the professional view, in which the money provided by the Budget in aid of public health and insurance services could be expended. In regard to the proposal to establish centres for the co-operation of practitioners on the panel the Subcommittee noted that the character of the centres was not defined; it would seem that their nature and scope had not yet been finally determined. It was most desirable, therefore, that the Panel Committee should place before the Insurance Commissioners its views as to the character of the assistance in this matter which would be most beneficial to the practitioner on the panel. It had been suggested to the Subcommittee that the centres might take one of the three following forms:

1. A place to which a practitioner on the panel might take a difficult case for consultation with a specialist.
2. A place to which a practitioner on the panel might take a difficult case for discussion with other practitioners on the panel.
3. A place where a practitioner on the panel, if he so desired, might perform his ordinary surgery work.

Although of opinion that much good might result both to the practitioner and to the insured person from a consultation such as that referred to in (2), the Subcommittee did not think that the money available would be utilized to the greatest advantage in aiding centres of this description, for although there was no doubt that the practitioners on the panel in some areas would make considerable use of such centres, the evidence before the Subcommittee suggested that in other areas the practitioners' interest in and use of the centres would not be sustained. The conditions of medical practice in the various areas differed so considerably that it was difficult to formulate a scheme which would be satisfactory in all parts of the county, but as an experiment the money available might well be utilized in connexion with the establishment of centres where a number of practitioners on the panel would be able to see their industrial patients. Properly planned and adequately equipped centres were apparently particularly desirable in those areas in which it was difficult for practitioners individually to secure satisfactory surgery and waiting room accommodation, and the use of such centres in common by a number of practitioners on the panel would secure to them advantages which they could only collectively obtain. Thus it would no doubt be possible to engage a clerk who would relieve practitioners of purely clerical duties, and to arrange for an *x*-ray operator, consultants, and possibly the medical referee to be appointed by the Commissioners to attend at the centre at regular intervals. It might even be possible to secure that one or more trained nurses should be attached to the centre.

The Subcommittee accordingly recommended:

Centres for the Co-operation of Practitioners.

1. That in London the proposed centres for the co-operation of practitioners on the panel should be sufficiently numerous, and should be so situated that each practitioner on the panel might have an opportunity, if he so desires, of seeing his industrial patients at such a centre.
2. That the centre should provide consulting rooms for a number of practitioners and accommodation for a trained nurse, an *x*-ray operator, a clerk, and, if possible, a chemist on the list of persons supplying drugs and appliances.
3. That arrangements should be made for the occasional attendance at the centre of consultants.
4. That the centres should be under the joint control of the Insurance and Panel Committees.

The report was not reached until after the Committee had been sitting for a considerable time. Dr. H. J. Cardale was pointing out the desirability of centralized arrangements in readiness for the time dependants of insured persons came under the Act and the work of panel practitioners would be greatly increased, when the Chairman declared there was not a quorum present, and the meeting adjourned.

BOURNEMOUTH.

Local Medical and Panel Committees.

Medical Referees.

In Bournemouth, as in other places, certain of the approved societies are offering a fee of 5s. a case for referee work, and unfortunately in some cases have been successful in getting the work done for this inadequate fee. The Local Medical and Panel Committees have adopted the fee suggested by the British Medical Association—

[1] Supplement, May 30th, p. 396.

namely, 10s. 6d. The matter has also been before the local Division, and the Honorary Secretary of the Division has instructions to send out a circular to ask all practitioners practising in the area not on any account to accept a lower fee than half a guinea.

The approved societies in question are instructing their managers and agents that if they cannot get a local doctor to accept the fee of 5s., they are to collect cases and then the society will send a referee from elsewhere to see a batch of patients on one day and thus make it worth his while. It is sincerely to be hoped that they will not get practitioners to act in the way they anticipate. The fee of half a guinea is really a very moderate fee indeed for the work entailed, which includes (1) communicating with the approved society, (2) communicating with and possibly a consultation with the doctor in charge of the case, (3) communicating with the patient to make an appointment, (4) examining the patient, and (5) reporting to the approved society.

WARWICKSHIRE.

PANEL COMMITTEE.

A MEETING of the Warwickshire Panel Committee was was held at Coventry on May 26th.

Treatment of Unallotted Persons.—The SECRETARY reported that the scheme for treatment of unallotted insured persons by doctors had been accepted by the Commissioners, and that in future, therefore, advance payments would be made to all doctors who had signified their willingness to give treatment to the unallotted insured persons up to 90 per cent. of the total panel fund.

Advance Payment.—The SECRETARY reported that at the recent meeting of the Executive Committee and representatives of the Insurance Committee, it was agreed that advance payments should be made to all doctors at the following rate, per quarter:

	s.	d.
Professional services	1	6
Domiciliary treatment	0	1
Drugs	0	5
Total	2	0

Capitation Rate for Emergency Drugs.—It was arranged, also, to pay to doctors who do not dispense a capitation rate of 6d. per hundred accepted patients per half year for emergency drugs or dressings, etc. Any number over fifty to count as one hundred patients, fifty or under being ignored.

Model Schemes for Election of Panel Committees and Local Medical Committees.—Model scheme B, for the election of future Panel Committees, was finally approved with the necessary modications applicable to this area; and model scheme A, for the formation of future Local Medical Committees, was also approved—that is, that the personnel of Local Medical Committee should be the same as that of the Panel Committee for the area.

Expenses of Committee.—The SECRETARY also reported the receipt of further communications sanctioning the voluntary levy, there being now only about twenty doctors who had not yet consented, out of a total of about 200.

DUMBARTONSHIRE.

A MEETING of the Dumbarton County Panel Committee was held in Glasgow on May 20th, when there was a large attendance of members.

Dispensing by Doctors.—In conference with the County Pharmaceutical Committee it was agreed that £10 from the balance of the Drug Fund for the first medical year should be set aside for distribution among those doctors who were permitted to dispense throughout the year.

Repeat Prescriptions.—The question of repeat prescriptions was also considered jointly, and it was agreed that each committee should obtain further information with a view to arriving at a satisfactory arrangement at a later conference. Meanwhile, the Insurance Committee was to be requested to continue unaltered the arrangements existing last year,

Checking of Prescriptions.—It was unanimously resolved to make a joint representation to the Insurance Committee strongly recommending it to arrange for the independent checking of prescriptions in the interests of all concerned.

Drug Tariff.—After the Pharmaceutical Committee had withdrawn, the Commissioners' recent circular and post-card (SUPPLEMENT, May 23rd, p. 378) as to the proposal to increase chemists' dispensing fees and alter certain prices in the Drug Tariff were considered. Twenty-four replies to the post-card had been received:

I.	Approving increased dispensing fees ...	5
	Disapproving increased dispensing fees ...	19
II.	Approving adjustment of prices	22
	Disapproving adjustment of prices... ...	2

It was unanimously decided to inform the Commissioners that the Panel Committee did not approve of the payment out of the Drug Fund and Drug Suspense Fund of the increased dispensing fees desired by the chemists, but did approve of the adjustment of prices.

FIFE.

A MEETING of the Panel Committee for Fife County was held in Kirkcaldy on May 22nd, when Dr. DOUGLAS was in the chair, and eight other members were present.

Drug Tariff.—The HONORARY SECRETARY stated that he had received seventeen post-card replies in connexion with the Drug Tariff (SUPPLEMENT, May 23rd, p. 378), and that all the doctors had answered the second question in the negative, and that ten had answered the first in the affirmative, and seven in the negative. It was unanimously decided to instruct the Honorary Secretary to write the Commissioners expressing (1) disapproval of payment out of the Drug Suspense Fund of the increased dispensing fees desired by the chemists, owing to the unsatisfactory credit by the Medical Benefit Fund to the county for the year 1913; and (2) adjustment of prices in connexion with the drug tariff.

Panel Fund.—The HONORARY SECRETARY then explained the attitude adopted by the Fife County Insurance Committee in connexion with the dissatisfaction of insurance service practitioners with reference to the Panel Fund credited to the county area for 1913. He stated that the matter had been referred to a subcommittee after favourably considering the matter. It was decided to await further developments. The Committee thereafter met Mr. Jackson, of the County Insurance Committee, who willingly answered many questions in connexion with medical benefit. A vote of thanks to Mr. Jackson terminated the proceedings.

PERTH.

LOCAL MEDICAL AND PANEL COMMITTEES.

A MEETING of the Local Medical and Panel Committees of Perth and Perthshire was held at Perth on May 19th, when Dr. MACKAY, in the absence of Dr. Stirling, occupied the chair, and six other members were present. A deputation of chemists subsequently attended.

Drug Tariff.

Dr. LYELL explained that the meeting was held by desire of the Commissioners in order to discuss the proposals of the chemists of Scotland for a revision of the Drug Tariff and the post-card replies of practitioners to the questions of the Commissioners (SUPPLEMENT, May 23rd, p. 378).

The SECRETARIES reported that they had so far only received twenty-four post-cards, excluding those sent in duplicates.

Question No. 2 was first discussed (eighteen answers in the affirmative and six in the negative). The general feeling of the meeting was that the adjustment of prices referred to in this question was reasonable.

Question 1 gave rise to much discussion, during which the deputation of chemists gave free expression to their views regarding the necessity for increased dispensing fees. The point was raised as to how far the so-called Drug Suspense Fund had anything to do with the chemists' tariff, and it was pointed out that the secretary of the Pharmaceutical Standing Committee stated that the question as to where the money for adequate payment of the chemists' demands was to come from was entirely distinct from the so-called "floating sixpence."

The SECRETARIES stated that there were thirteen affirmative and eleven negative answers to this question.

To bring matters to a conclusion it was resolved, on the motion of Dr. HUME, seconded by Dr. TROTTER,

> That having fully considered the proposed tariff for 1914, and heard the arguments advanced by the deputation of chemists in regard to the justice of the charges, this meeting quite approves of the said tariff.

Dr. Trotter read a circular by the Perthshire Pharmacists Association, in which various instructions were laid down in connexion with the prescribing and dispensing of medicines. This gave rise to considerable discussion, it being pointed out that some of the instructions would give occasions for difficulty, and more especially that No. 5, namely, that repeat prescriptions should be written out in full, was quite impracticable. A small committee of three doctors (Menzies, J. Hume, and Trotter) and three chemists (afterwards to be named), was appointed to consider and report on the various matters contained in the circular, more especially Nos. 2 and 4, and also to review the list of proprietary medicines appended to the said circular.

Administration Expenses.

On the motion of Dr. Hume, seconded by Dr. Bissett, it was resolved;

That the secretaries be empowered to approach the Local Insurance Committees to obtain permission to make the levy on panel practitioners of a sum not exceeding 1d. per insured person for the administrative purposes of the Local Medical and Panel Committees of the City and County, in accordance with Section 35 (2) of the Amending Act, 1913.

INSURANCE ACT COMMITTEE.

The sixteenth meeting of the Insurance Act Committee was held at the office of the Association on Thursday, June 4th. Mr. T. Jenner Verrall was in the chair, and the other members present were:—*England and Wales:* Dr. R. M. Beaton (London), Dr. Mina L. Dobbie (London), Dr. E. R. Fothergill (Hove), Dr. Major Greenwood (London), Miss M. F. Ivens, M.S. (Liverpool), Dr. C. H. Hilburn (Hull), Dr. G. K. Smiley (Derby), Mr. D. F. Todd (Sunderland), Dr. W. B. Crawford Treasure (Cardiff), Mr. E. B. Turner (London). *Scotland:* Dr. John Adams (Glasgow), Dr. R. McKenzie Johnston (Edinburgh). *Ireland:* Dr. J. S. Darling (Lurgan).

Fees for Consultation in Connexion with an Insured Person.

It was reported that in accordance with instructions given by the Committee at its previous meeting the opinion of the solicitor to the Association had been obtained upon the following question:

Where a mistress wishes a consultation in respect of her servant who is an insured person, is the panel practitioner concerned entitled to charge the mistress a fee for his attendance at such consultation?

The opinion was in the following terms:

3rd June, 1914.

Dear Dr. Cox,

With reference to the question submitted to me for my opinion by your letter dated the 30th May ultimo, as I read the facts I gather them to be as follows, namely, that a mistress has in her employment a maid who is the patient of and is under the care and treatment of a medical man who is upon the panel and towards whom such practitioner stands in the capacity of a panel doctor.

The mistress, of her own volition, informs the doctor in question that for her own satisfaction, peace of mind, or comfort she would like a consultation to take place with another medical man, and she suggests and asks him to meet such other medical man in consultation.

The panel practitioner has, in my view and opinion, in such circumstances the right either to decline or to acquiesce in the request which is made of him, and if he acquiesces in the arrangement proposed he does so, in my opinion, at the direct instance and request of the mistress, thereby rendering a personal service to her which does not fall within his contractual duties with the Insurance Committee towards the patient.

It would, in my opinion, be an act of prudence on the part of the panel practitioner to make the position perfectly clear to the mistress at the time that the arrangement is made with him, and I should certainly advise the propriety of his informing her that it is at her request that he meets in consultation the medical man whom she desires, and that he consequently will have to look to her for payment of the usual professional fee for doing so.—I am, yours faithfully,

(Signed) W. E. Hempson.

Dr. Cox, Medical Secretary,
British Medical Association, 429, Strand, W.C.

Expenses of Election of Panel Committee.

It was decided to send a letter to the Insurance Commissioners protesting against the proposition that the expenses of carrying out the election of Panel Committees as outlined in the model schemes issued by the Commissioners, should be borne by the practitioners concerned.

The British Medical Association and Conference of Local Medical and Panel Committees.

Proposals from the Provisional Committee of the Local Medical and Panel Committees on the relationship of the proposed federation with the British Medical Association were considered, and Mr. D. F. Todd, the Chairman of the Provisional Committee of the Conference, undertook to report to it at an early date the views of the Insurance Act Committee. At a meeting of the Committee, held on Tuesday, June 9th, specially to consider the reply of the Provisional Committee, a report on the matter was drawn up for presentation to the Council on June 24th.

Budget Proposals.

Dr. Fothergill suggested that the Committee should consider various proposals referring to insurance matters made in the Budget speech of the Chancellor of the Exchequer on May 4th, 1914. Mr. D. F. Todd, Chairman of the Future Developments of the Insurance Acts Committee, reported that the points in the speech in question had already been considered by that Committee, and that a report on the subject had been prepared for publication and issue to the Divisions. The Insurance Act Committee accordingly decided to postpone further consideration of the matter pending the publication of the report, which will be found at p. 433.

Islington Tuberculosis Scheme.

Dr. Beaton drew attention as a matter of urgency to the proposals of the Islington Borough Council as regards the treatment of tuberculosis, and the relation of such proposals to the existing tuberculosis dispensary in the borough at present staffed by local general practitioners. The Committee resolved to address a communication to the Town Clerk of Islington, (1) drawing attention to the fact that the practitioners' tuberculosis dispensary had been in successful operation for nearly two years, (2) pointing out the absence in the Borough Council's proposals of any recognition of it, and (3) urging that the interests of the public health demanded that the interest of the general practitioner in the prevention and treatment of tuberculosis should be encouraged.

Compensation Case.

An application from a practitioner for compensation from the Central Insurance Fund was considered, but the Committee found itself unable to make a grant.

INSURANCE NOTES.

Election of Medical Members of Insurance Committees.

The Insurance Commission, England, has issued regulations providing for the election of two representatives to each Insurance Committee by the registered medical practitioners resident in each area on June 1st, 1914. The Commissioners give notice by advertisement in our columns that any practitioner who does not by June 16th receive notice from the Commissioners that his name has been included in the list for his area, may make application to the Secretary of the Insurance Commission, 29, Queen Anne's Gate, London, S.W., before Saturday, June 20th, to have his name included in the list for the area in which he resides. The regulations do not apply to Carlisle and Southend-on-Sea.

Deposit Contributors: Maternity Benefit.

The Scottish Insurance Commissioners have issued amended model rules for deposit contributors in accordance with the National Insurance Act, 1913. The chief amendment refers to maternity benefit, with regard to which new rules are issued. The benefit will be administered in the interests of the mother and child in cash or otherwise at the discretion of the Committee, or any part

thereof may be paid direct to the doctor or midwife attending the confinement. Notice of confinement must be given within seven days, and if required must be accompanied by a certificate signed by the doctor or midwife, or by some other sufficient evidence of the confinement. Confinement means labour resulting in the issue of a living child or labour after twenty-eight weeks of pregnancy resulting in the issue of a child whether alive or dead.

IRISH DOCTORS AND INSURANCE.

A MASS meeting of the members of the Irish medical profession was held on Tuesday evening, June 2nd, in the Mansion House, Dublin, to consider the position of the profession in regard to the administration of the Insurance Act. Mr. R. D. PUREFOY, President of the Royal College of Surgeons, Ireland, presided, and there was a large attendance.

The CHAIRMAN said there were, he thought, two great difficulties to be overcome before the objects of the resolutions to be submitted to the meeting could be secured. One difficulty was the want of unity amongst themselves; he hoped that they would succeed better in the future than in the past in that respect. Another difficulty was that a considerable number of their fellow countrymen and women thought that they were just as well qualified to sign certificates as were any members of the profession. The meeting was called not for the purpose of opposing the law, but of carrying it out, and assisting the working of the Act to the best interests of those concerned—the insured persons and the members of the medical profession.

The SECRETARY of the Irish Medical Committee read a statement in which was traced at length the history of the negotiations of the Irish Medical Committee with the National Insurance Commissioners with reference to a scheme by which the increased grant of 2s. 6d. per insured person for certification, as promised by the Chancellor of the Exchequer, might be secured. The negotiations began on August 19th, 1913, and had not yet been productive of any result. The statement concluded as follows: "In the interests of peace, as well as for the sake of the sick insured persons, their patients, the Irish medical profession is sincerely anxious to co-operate in bringing about an amicable settlement of this dispute which will be satisfactory to all parties concerned and which will be conducive to the smooth working of the Insurance Act in this country. The offers contained in the schemes submitted to the Commission on December 23rd still stand, and the profession believes that these schemes contain the basis of an amicable settlement. The profession also believes that the conference arranged for in the month of March, under the presidency of the Chancellor of the Exchequer, and to which all the parties concerned had agreed to attend, would result in an amicable settlement, and they sincerely regret that this conference has not taken place. They are convinced that the successful working of the Insurance Act, and more especially the sanatorium benefit clauses of that Act, cannot be accomplished without that co-operation and support, which, according to the interim report of the Departmental Committee on Tuberculosis, is such an essential. In considering the position of the general medical practitioner, paragraph 28 of that report states:

"The Committee are of opinion that it is of primary importance to the lasting success of any scheme for dealing with tuberculosis that it should enlist the hearty co-operation and stimulate the interest of the general medical practitioners of the country. Their intimate personal relations with patients, and their influence in the homes of the people, are forces which should be actively enlisted in the campaign against the disease as aids to securing its early recognition and methodical treatment, as well as in promoting the effective after-care of cases of tuberculosis, and in encouraging these healthy habits of life which are so essential to building up the powers of resistance to the disease.

"In accomplishing this desirable end the Irish doctors are anxious and willing to take their part, and they still hope that they shall not be precluded from exercising their useful and necessary functions in safeguarding the health of the insured section of their fellow-countrymen."

The Right Hon. M. F. COX, M.D., proposed the following resolution:

That in the opinion of this mass meeting of the medical profession, the medical attendant of the insured is in the best position to form a just opinion of his fitness or unfitness to work.

This resolution was seconded by Sir ARTHUR CHANCE and Dr. J. B. STORY, President of the Irish Medical Association, and Dr. DARLING (Lurgan) spoke in its support. It was unanimously adopted.

Dr. J. S. MCARDLE, F.R.C.S.I., moved the following resolution:

That any system of obtaining evidence of fitness or unfitness to work which ignores the opinion of the medical attendant will result in injustice to the sick insured, and will prevent their obtaining the benefits to which they are legally entitled.

He read a letter sent by an approved society to one of its members who claimed benefit, directing the applicant to attend on a certain date for examination, "whether you have recovered from your illness or not." This patient had to drive sixteen miles for examination. During efforts towards a peaceful settlement, Dr. McArdle continued, he had had hundreds of cases of hardships to insured persons related to him, and were it not that the people were so good to each other, he felt that the Insurance Act would be the greatest curse to the poor since the famine scourge.

The following resolution was also adopted:

That it is essential for the successful working of the sanatorium benefit of the National Insurance Act that the services of the general practitioner should be employed, both for the reporting of cases of tuberculosis and for carrying out domiciliary treatment.

CORRESPONDENCE.

LONDON SCHOOL TREATMENT CENTRES AND THE REPORT OF THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

DR. B. G. MORISON (Honorary Secretary to the London School Treatment Centres Committee) writes: Early in June of last year steps were taken at a conference of representatives of the London School Treatment Centres, for the formation of a joint committee with a view to promoting their intercourse and their common interests. A meeting of this Committee was held on Friday last (June 5th). Among the subjects discussed was Appendix V to the Report of Council (SUPPLEMENT, May 2nd). It was the unanimous opinion of those present that certain proposals contained in that Appendix are incompatible with existing methods of working which have been carefully selected by the London centres, and with arrangements entered into by them with the London County Council which have proved generally satisfactory. The suggested disturbance of the present system of election and service in rotation among local practitioners is particularly objected to. The Committee consequently finds itself opposed to the introduction in the metropolitan area of the alternative arrangements mentioned in the Appendix, and I am requested to forward this statement of its views for insertion in the BRITISH MEDICAL JOURNAL. As there appears to be some uncertainty as to whether the proposals referred to are really intended to apply to London, I am further requested to state that a definite assurance to the contrary on the part of the Council would be welcomed by my Committee.

*** There was no intention of disturbing any arrangements at present working to the satisfaction of the profession in London. If it is thought that the memorandum of the Council suggests such a disturbance, the question should be raised at the Annual Representative Meeting.

LOCAL MEDICAL AND PANEL COMMITTEES.

Dr. H. B. PALMER (Honorary Secretary, Panel Committee, Plymouth) writes: In the early days of the Insurance Act movement fears were expressed that we might gradually lose our freedom of action, and many were opposed to accepting service by reason of vague and undefined forebodings. Conciliatory letters have passed to our multiple organizations from the Commission until we have been lulled into a sense of false security. I have been an out-and-out supporter of the Insurance Act, but never have I let my mind be so obsessed as not to see that there were dangers and shoals ahead, but which if carefully surmounted as they arose need never become serious. Early communications from the Commission were couched

in the permissive "may," but are now, and appear to be more likely to be controlled in the future by the imperative "shall," and it is time we asserted our rights wherever assailed. Objection should at once be raised to the quiet assumption of control over the Local Medical and Panel Committees. The regulations are perfectly equitable, and might reasonably be respected were the Commissioners the paymasters; but we are absolute fools to run these bodies and pay the expenses solely in the interest of the Insurance Committees. Far better would it be to run them in our own interests and seek nothing of the Commissioners. The Local Medical and Panel Committees should seek nothing of the Commission, should pay their own expenses, and hold a watching brief on the part of the profession. The Council of the Association should rise to the occasion, forbid the participation in the proposed election of Local Medical Committees and Panel Committees, and arrange for the establishment of non-statutory Local Medical Committees with subcommittees of panel men. Will the Council rise to the occasion? To do so would give the Association the power to bind the present fragmentary organizations into a homogeneous whole and make for unity and strength.

INSURANCE ACT IN PARLIAMENT.

Sanatorium Benefit.

Mr. Godfrey Locker-Lampson asked the President of the Local Government Board whether, in a circular of April, 1913, certain figures were given to county councils on the subject of grants to be made by the Board to councils for the purpose of erecting sanatoriums; whether certain councils based their calculations on that circular; whether the Board had recently written stating that it must not be held as committing itself to a grant, on the ground that it would be impossible to make grants at the rates referred to in the circular; and whether he proposed to take any action in the matter.—Mr. Herbert Samuel, in reply, said that no circular was issued on this subject in April, 1913. The Local Government Board explained the basis on which grants were proposed to be made towards the cost of new sanatoriums in a circular issued on May 14th, 1912, and in a further circular of February 25th, 1913, they indicated that other considerations besides the population of the area would have to be taken into account in distributing the capital grant. He understood that some misconception had arisen in certain counties as to the amount of capital grant which was available in aid of the provision of hospital beds for the treatment of tuberculosis, but the maintenance grant of one-half the net cost of all schemes of treatment approved by the Board would make the total grants towards the cost of providing both sanatoriums and hospitals for treating tuberculosis considerably larger than was contemplated in the circular of May 14th, 1912.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following notifications are announced by the Admiralty: Fleet Surgeon Percy H. Boyden, M.D., to the *Collingwood*, additional, July 1st. Fleet Surgeon Henry W. Finlayson, to the *Marlborough*, and for general staff duties, June 23rd. Fleet Surgeon Percy E. Maitland to the *King Edward VII*, and for general staff duties, vice Finlayson, June 23rd. Fleet Surgeon Walter J. Bearblock, to the Portsmouth Dockyard, vice Maitland, June 23rd. Fleet Surgeon William B. Macleod, to the *Bellerophon*, vice Bearblock, June 23rd. Fleet Surgeon Jonathan Shand, to the *Victory*, additional for Portland Hospital, vice Thorpe, July 1st. Fleet Surgeon Edward C. Ward, to the *Cornwallis* on becoming parent ship, June 1st. Fleet Surgeons Henry F. Iliewicz, M.B., and George R. MacMahon, M.B., have been placed on the retired list at their own request, June 1st and May 25th respectively. Fleet Surgeon Hugh Clift, to the *Hercules*, June 4th. Staff Surgeon Edgar S. Wilkinson, to the *Marlborough*, June 23rd. Staff Surgeon James A. Thompson, M.B., to the *Wildfire*, additional, June 6th. Staff Surgeon Richard Willan, to the *Vivid*, additional, June 21st. Staff Surgeon Charles T. Baxter, to the *Attentive*, temporary, June 4th. Surgeon John S. Elliott, M.B., to the *King Edward VII*, vice Wilkinson, June 23rd. Surgeon William Miller, M.B., to the *Victory*, additional for disposal, June 5th. Surgeon Alexander Simpson, M.B., to the *Victory*, additional for disposal, June 6th. Surgeon Adrian C. Paterson, to the *Fisgard*, vice Simpson, June 6th. Surgeon David H. C. Given, M.B., to the *Vivid*, additional, to be lent to Plymouth Hospital to learn duties as Instructor of Sick Berth Staff, June 7th, and as Instructor to Sick Berth Staff, vice Willan, June 23rd. Surgeon Frederick W. Quirk, to the *Vivid*, additional for disposal, June 14th. Surgeon Harry M. Langdale, to the *President*, additional, June 15th, and to the *Victory*, additional, July 20th, and for Haslar Hospital as Anaesthetist and Radiographer, vice Smith-Shand, August 10th. Surgeon William Bradbury, M.B., to the *Pembroke*, additional for disposal, on expiration of foreign service leave. Surgeons George M. Levick, Arthur T. Rivers, and Hugh F. Briggs, to the *Victory*, additional for disposal, July 1st. Surgeon Michael P. Fitzgerald, to the *Vivid*, additional for disposal, July 1st. Surgeon Algernon E. P. Cheesman, to the Royal Marine Division, Chatham, vice Edgar, June 5th. Surgeon Frank L. Smith, to Pembroke Dockyard, vice Thompson, June 6th. Surgeon Matthew F. Caldwell, M.B., to the *Indus*, vice Given, June 6th. Surgeon Ernest C. Holton, to the *Excellent*, vice Tonkinson, June 14th. Surgeon Albert J. Tonkinson, to the *Victory*, additional for disposal, June 14th. Surgeon James S. Orwin, M.B., to the *Vivid*, additional for disposal, July 1st. Surgeon William H. Edgar, M.D., to the *Pembroke*, additional, June 5th, and to the *Superb*, vice Chilcott, July 5th. Chilcott William W. D. Chilcott, to the *Cormorant*, additional for Gibraltar Hospital and Yard, vice Davidson, July 5th.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Cadet William McM. Chesney, from the Belfast Contingent, Officers' Training Corps, to be Lieutenant on probation, April 30th.

The following have been appointed Lieutenants on probation: Cadet Lance-Corporal James Melvin, Cadet William Walker, Cadet David Murdoch Marr, Cadet Lance-Corporal Foster H. B. Norrie, Cadet Robert S. Cumming, Cadet John G. M. Firth, Cadet Robert B. Myles, Cadet Sergeant John F. W. Sandison, and Cadet Robert D. Lawrence, from the Aberdeen University Contingent, Officers' Training Corps. Cadet Corporal John McC. Orme, from the Edinburgh University Contingent, Officers' Training Corps. John A. O'Driscoll, late Cadet Lance-Corporal, Royal College of Surgeons in Ireland Contingent, Officers' Training Corps. Ivan M. Pirrie, M.B., late Cadet Colour-Sergeant, Durham University Contingent, Officers' Training Corps. Cadet Edgar S. Rowbotham, from the London University Contingent, Officers' Training Corps.

Army Medical Reserve.

The date of the removal of Lieutenant A. S. Millard is February 1st, 1914, and not as stated in the *Gazette* of May 5th.

ARMY MEDICAL SERVICE.

Royal Army Medical Corps.

Captain J. A. Turnbull is appointed to the medical charge of the Gun-Carriage Factory, Jubbulpore.

Captain D. P. Watson has been posted to the Military Hospital, Curragh, as Specialist in Bacteriology.

INDIAN MEDICAL SERVICE.

Major H. Crossle, on return from leave, is posted as Civil Surgeon, Hazara, with effect from April 13th.

Captain F. E. Wilson, on return from leave, is posted as Civil Surgeon, Sibi, with effect from April 20th.

Lieutenant-Colonel H. W. Pilgrim, M.B., F.R.C.S., has been permitted to retire from the service, with effect from May 11th.

Captain F. C. Rogers is appointed to officiate as Civil Surgeon, Coorg, during the absence on leave of Lieutenant-Colonel J. L. Macrae, M.B.

Lieutenant-Colonel J. L. Macrae, M.B., Civil Surgeon, Coorg, is granted privilege leave for three months, with furlough for one year in continuation, with effect from July 7th.

Lieutenant-Colonel T. W. Irvine is appointed to officiate as an Agency Surgeon of the First Class and Chief Medical Officer, North-West Frontier Province, with effect from May 1st.

Captain H. B. Drake, Deputy Assay Master, Bombay, is granted privilege leave for three months, and in continuation furlough for fifteen months and six days, with effect from May 1st.

Captain F. A. F. Barnardo, M.D., F.R.C.S.E., has been promoted to be Major, with effect from January 26th.

Captain R. B. Sewell, Surgeon Naturalist, Marine Survey of India, is granted six months' special leave on urgent private affairs, with effect from May 9th.

Captain Chuckerbutty has been transferred from Burma to civil employment in Assam.

TERRITORIAL FORCE.

Royal Army Medical Corps.

North Midland Mounted Brigade Field Ambulance.—Captain Arthur C. Goodwin, M.B., F.R.C.S., to be Major, June 3rd.

Third South Midland Field Ambulance.—John P. I. Harty, M.B., to be Lieutenant, April 1st.

Attached to Units other than Medical Units.—Captain William M. Mackay, M.B., to be Major, March 26th. Lieutenant Geoffrey S. Hett resigns his commission, June 3rd. Jesse Robert Garrood, M.D., to be Lieutenant, February 27th.

Third East Anglian Field Ambulance.—Lieutenant Walter R. S. Roberts to be Captain, May 1st.

Third North Midland Field Ambulance.—Guy F. Haycraft to be Lieutenant (supernumerary), May 1st.

First Northumberland Field Ambulance.—Supernumerary Lieutenant Joseph W. Craven, M.B., is absorbed into the establishment, April 1st; Ronald G. Badenock, M.B., late Cadet, Durham University Contingent, Senior Division, Officers' Training Corps, to be Lieutenant, April 28th.

First London (City of London) General Hospital.—Lieutenant-Colonel Samuel West, M.D., and Major J. A. Ormerod, M.D., have resigned their commission, June 6th.

Fourth Northern General Hospital.—Joseph J. Rainforth, M.B., F.R.C.S., to be Captain, May 1st; Major George Shipman resigns his commission, June 6th; Captain Edward C. Clements to be Major, June 6th.

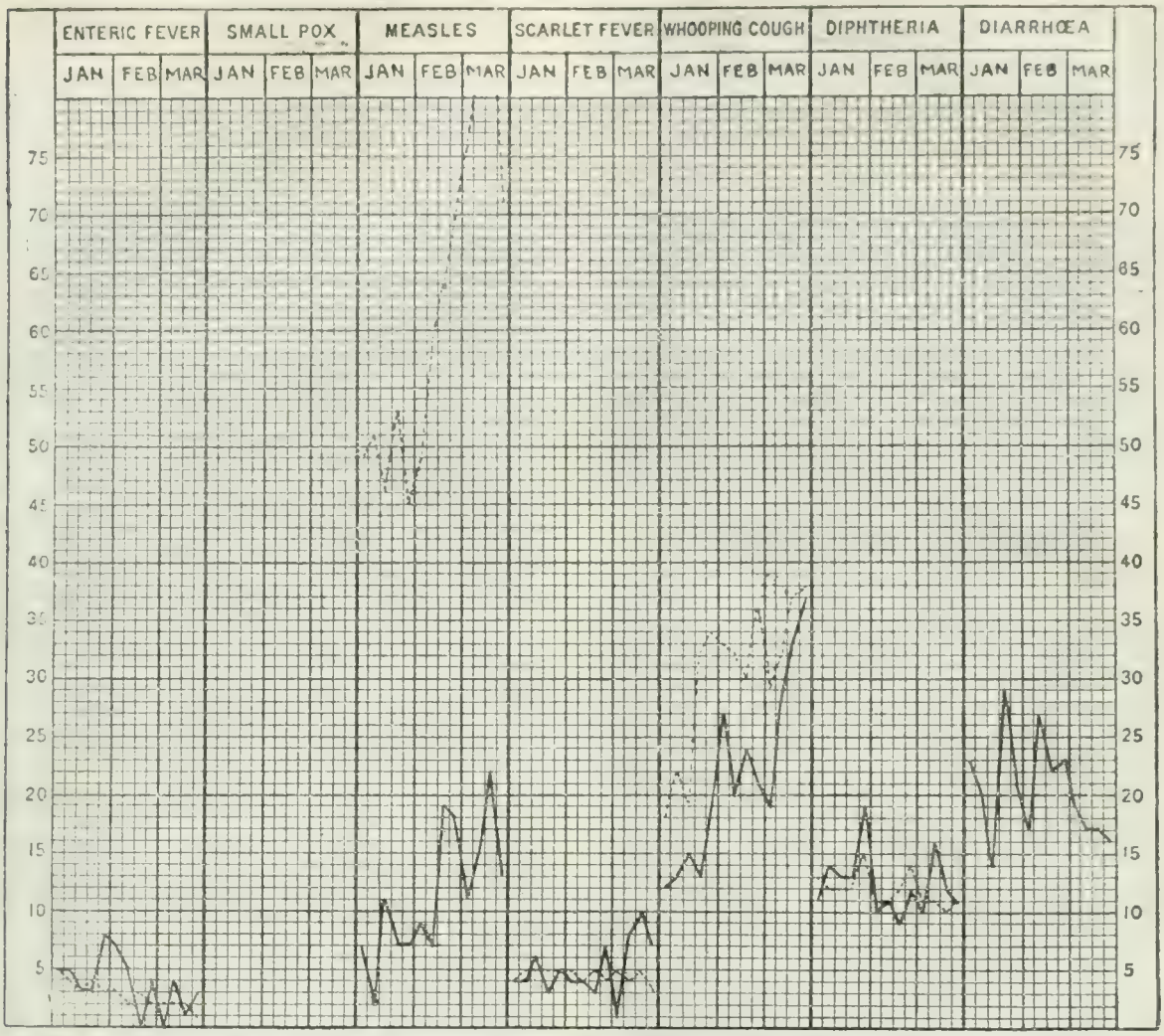
East Lancashire Clearing Hospital.—Thomas B. Wolstenholme, M.B., to be Lieutenant, April 8th.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal epidemic diseases during the first quarter of the year. The fluctuations of each disease and its relative fatality, compared with the average in the corresponding periods of recent years can thus be readily seen, except in the case of diarrhoea and enteritis among children under 2 years of age, for which the average mortality is not available.

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FIRST QUARTER OF 1914.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the five preceding years, 1909–13. Under the heading "Diarrhoea" are given the deaths from diarrhoea and enteritis among children under 2 years of age; the corrected average number of these deaths is not available.

Enteric Fever.—The fatal cases of enteric fever, which had been 26, 28, and 37 in the three preceding quarters, further rose last quarter to 47, and were 9 in excess of the corrected average number in the corresponding period of the five preceding years. This disease showed the highest proportional mortality last quarter in Fulham, Hampstead, Islington, Holborn, Finsbury, and Lewisham. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 35, 56, and 51 at the end of the three preceding quarters, had risen again to 66 at the end of last quarter; 147 new cases were admitted during the quarter, against 68, 113, and 148 in the three preceding quarters.

Small-pox.—No death from small-pox was registered last quarter, and no case of this disease was under treatment in the Metropolitan Asylums Hospitals at the end of the quarter.

Measles.—The deaths from measles, which had been 549, 124, and 52 in the three preceding quarters, rose again last quarter to 148, but was 557 below the average for the corresponding quarter in the five preceding years. This disease was proportionally most fatal last quarter in Holborn, Finsbury, Stepney, Bermondsey, Camberwell, Deptford, and Greenwich.

Scarlet Fever.—The fatal cases of scarlet fever, which had been 41, 46, and 49 in the three preceding quarters, further rose to 65 last quarter, and were 7 in excess of the corrected average number. Among the several metropolitan boroughs this disease was proportionally most fatal in Kensington, St. Pancras, Islington, Poplar, Southwark, Bermondsey, and Camberwell. The Metropolitan Asylums Hospitals contained 3,138 scarlet fever patients at the end of last quarter, against 1,579, 2,552, and 3,810 at the end of the three preceding quarters; 4,800 new cases were admitted during the quarter, against 2,573, 4,203, and 7,113 in the three preceding quarters.

Whooping-cough.—The deaths from whooping-cough, which had been 264, 120, and 116 in the three preceding quarters, rose again last quarter to 281, but were 111 below the corrected average number. The highest death-rates from this disease last quarter were recorded in Hampstead, St. Pancras, Hackney, Shoreditch, Bethnal Green, Poplar, and Southwark.

Diphtheria.—The fatal cases of diphtheria, which had been 107, 73, and 138 in the three preceding quarters, further rose last quarter to 161, and were 6 above the corrected average number. This disease was proportionally most fatal last quarter in Chelsea, Stoke Newington, Finsbury, Shoreditch, Bethnal Green, Southwark, and Woolwich. The number of diphtheria patients in the Metropolitan Asylums Hospitals, which had been 811, 909, and 1,099 at the end of the three preceding quarters, had further risen to 1,306 at the end of last quarter; the number of new cases admitted during the quarter was 2,068, against 1,341, 1,624, and 2,261 in the three preceding quarters.

Diarrhoea.—The 265 deaths under this heading are those attributed to diarrhoea and enteritis among children under 2 years of age; measured in proportion to the births registered during the quarter, the mortality from this cause was greatest in Kensington, Chelsea, St. Marylebone, Shoreditch, Bethnal Green, Poplar, and Wandsworth.

In conclusion, it may be stated that the aggregate mortality last quarter from these epidemic diseases, excluding diarrhoea, was 51.4 per cent. below the average.

HEALTH OF ENGLISH TOWNS.

IN ninety-seven of the largest English towns 7,430 births and 4,586 deaths were registered during the week ended Saturday, June 6th. The annual rate of mortality in these towns, which had been 14.1, 13.9, and 13.3 per 1,000 in the three preceding weeks, further fell to 13.2 per 1,000 in the week under notice. In London the death-rate was equal to 12.7, against 13.4, 12.7, and 11.8 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 3.7 in Eastbourne, 5.2 in Ilford, 5.9 in Hornsey, 6.8 in Enfield, 7.1 in East Ham, and 7.3 in Edmonton to 18.2 in Rochdale, 18.8 in Liverpool, 19.2 in Stoke-on-Trent, 19.7 in Carlisle, 19.9 in Lincoln, and 21.1 in Oldham. Measles caused a death-rate of 1.2 in Middlesbrough, 1.9 in Burnley and in Barnsley, 2.1 in Bootle, and 3.3 in Rochdale; scarlet fever of 1.0 in Oldham; and whooping-cough of 1.3 in Gateshead, 1.4 in Oldham and in South Shields, 1.7 in Exeter, and 1.9 in Barnsley. The mortality from diphtheria and enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 32, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number 8 were recorded in Liverpool, 3 in Birmingham, 3 in Blackburn, 2 in Reading, and 2 in Sunderland. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,862, 2,906, and 2,910 at the end of the three preceding weeks, had risen to 2,970 on Saturday, June 6th; 339 new cases were admitted during the week, against 349, 415, and 377 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

IN the sixteen largest Scottish towns 1,293 births and 702 deaths were registered during the week ended Saturday, June 6th. The annual rate of mortality in these towns, which had been 15.3, 16.1, and 15.6 per 1,000 in the three preceding weeks, rose to 16.0 in the week under

notice, and was 2.8 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 9.4 in Falkirk, 10.1 in Motherwell, and 10.3 in Kilmarnock to 17.6 in Glasgow and in Clydebank, 19.0 in Leith, and 20.0 in Paisley. The mortality from the principal infective diseases averaged 1.4 per 1000, and was highest in Dundee and Clydebank. The 354 deaths from all causes in Glasgow included 11 from measles, 11 from whooping-cough, 8 from infantile diarrhoea, 2 from scarlet fever, and 1 from enteric fever. Six deaths from measles were recorded in Dundee; 3 deaths from diphtheria and 3 from infantile diarrhoea in Aberdeen; and 2 deaths from whooping-cough in Paisley and 2 in Clydebank.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, June 6th, 562 births and 385 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 747 births and 412 deaths in the preceding period. These deaths represent a mortality of 16.7 per 1,000 of the aggregate population in the districts in question, as against 17.8 per 1,000 in the previous period. The mortality in these Irish areas was therefore 3.5 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 24.3 per 1,000 of population. As for mortality of individual localities, that in the Dublin registration area was 19.9 (as against an average of 20.2 for the previous four weeks), in Dublin city 21.5 (as against 21.8), in Belfast 16.6 (as against 16.8), in Cork 15.0 (as against 18.5), in Londonderry 14.0 (as against 12.7), in Limerick 17.6 (or the same as in the previous week), and in Waterford 19.0 (as against 18.5). The zymotic death-rate was 1.6, as against 2.1 in the previous week.

Hospitals and Asylums.

CIRCULAR WARDS.

A RECENT issue of the *Burnley Express* contains a long letter from Dr. John Brown, formerly of Burnley, but now resident in Cape Colony, relative to the proposed extension of the Victoria Hospital, Burnley. He had a great deal to do with the foundation of this hospital in the early eighties, and with the plans adopted in its construction, and is anxious that the further accommodation now required should be provided by adding stories to the circular wards of which the hospital at present consists. In the course of his letter he enters very fully into the advantages that such wards present, and illustrates them by reference to the Burnley wards. Bed for bed circular wards are cheaper to build than wards of ordinary shape; they are brighter in appearance, and it is relatively easy to keep the air in them sweet and pure. There is economy in building costs, because a circular form encloses a larger space than any other form, and the whole of the wall space can be utilized for the placing of bed heads. The Burnley wards, for instance, are approximately 60 ft. in diameter and 200 ft. in circumference, and contain 20 beds, each 10 ft. distant at the head from its neighbour. If the same length of wall were disposed in the form of a ward measuring 25 ft. in breadth and 75 ft. in width, such ward would accommodate only 14 beds, each with a wall space of 10 ft., and the proportion of the floor space to beds would be smaller than in the case of the circular ward. The wards are brighter, because so long as the sun is shining its rays will enter the wards through one or other of its windows. It is easier to keep the wards sweet, because whatever the position of the wind it will sweep along two sides instead of one. A further advantage is that there are no corners in circular wards, and it is easier to keep the walls free from recesses and traps for dust. Dr. Brown also appears to claim that it is easier to arrange for effective steam heating and artificial ventilation in a circular ward than in a straight-sided ward, but he does not enter into the question of how far preservation of all the advantages of circular ward building is consistent with the provision of the necessary annexes of a ward, or with the modern idea of ward units. Nor does he deal with the effect of shape on nursing labour. The Burnley wards were built in 1886.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

THE annual report of the City of London Hospital for Diseases of the Chest, Victoria Park, submitted to a meeting of the subscribers on March 5th stated that 163 of the institution's 175 beds had been daily occupied throughout the year, and that out-patient attendances to the number of 31,391 had been recorded. The attempts made to utilize the grounds of the hospital—which extend to four acres—for the treatment of patients in various ways were believed to have given valuable results. So far as was compatible with the retention of its special and voluntary characteristics, the hospital would associate itself with the proposed centralized measures for the treatment and prevention of tuberculosis. As to the immediate future, it was thought that the institution could best fulfil its functions by an extension of special departments, and with this object the committee had already taken in hand the erection of buildings suitable for special chest surgery and for modern methods of dealing with diseases of the heart. The new department would include improved arrangements for *x*-ray work. An extension of balcony accommodation and the provision of two new sanitary blocks were also in view. The expenditure anticipated was about £15,000, a sum which still remained to be collected.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ASHTON-UNDER-LYNE UNION WORKHOUSE.—(1) Resident Medical Officer; (2) Resident Assistant Medical Officer. Salary for (1) £350, rising to £400 per annum, and for (2) £150 per annum.

BARNET: CLARE HALL SANATORIUM, South Mimms.—Assistant Resident Medical Officer. Salary, £120 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £150 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—House-Surgeon (male). Salary at the rate of £75 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House-Surgeon (male). Salary, £120 per annum.

BIRMINGHAM CITY.—Resident Medical Officer at the Salterley Grange Sanatorium for Consumptives, near Cheltenham. Salary, £300 per annum.

BIRMINGHAM: CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £200 per annum.

BIRMINGHAM CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £200 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £240 per annum

BIRMINGHAM GENERAL HOSPITAL.—(1) Assistant Physician; (2) House-Physician; (3) Resident Pathologist; (4) Obstetric House-Surgeon; (5) House-Surgeon; (6) Resident Medical and Surgical Officer at the Jaffray Branch. Salary for (1—4) at the rate of £50 per annum, for (5) £40 rising to £50, and for (6) £150 per annum.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £100 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—(1) Clinical Assistant. (2) Clinical Assistant to Electrical Department. Honorarium, 52 guineas per annum each.

BIRMINGHAM UNION.—Second and Fourth Assistant Medical Officers at the Dudley Road Infirmary.—Salary, £160 and £140 per annum respectively.

BOLTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £110 per annum.

BOOTLE: BOROUGH HOSPITAL.—Senior and Junior House-Surgeons. Salary, £120 and £100 per annum respectively.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £100 per annum.

BRISTOL EDUCATION COMMITTEE.—School Medical Officer. Salary, £500 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—House-Surgeon. Salary, £135 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £150 per annum.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £80 per annum respectively. (3) Honorary Surgeon.

CARDIFF: KING EDWARD VII HOSPITAL.—(1) House-Surgeon for the Ophthalmic and Ear, Nose, and Throat Departments; (2) Two House-Surgeons. Salary for (1) £100 per annum, and for (2) £60 per annum each.

CHELSEA HOSPITAL FOR WOMEN.—Anaesthetist. Honorarium, £21 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) House-Physician (male); salary, £75 per annum. (2) Clinical Assistant.

CLAPHAM MATERNITY HOSPITAL.—Assistant Medical Women. Salary, £50 per annum.

CUMBERLAND COUNTY COUNCIL.—Three Assistant County Medical Officers. Salary, £350 per annum, rising to £400.

DERBYSHIRE ROYAL INFIRMARY.—(1) House-Physician; (2) Assistant House-Surgeon. Salary, £120 and £80 per annum respectively.

DEVONPORT: ROYAL ALBERT HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

DUMFRIES SECONDARY EDUCATION COMMITTEE.—Dentist. Salary, £250 per annum, rising to £300.

DUNDEE ROYAL INFIRMARY.—(1) House-Surgeon; (2) Outdoor Maternity Assistant. Salary at the rate of £40 per annum each.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—(1) Surgeon to Out-patients; (2) House-Physician. Salary at the rate of £75 per annum. (3) Clinical Assistants.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—(1) Surgeon (out-patient). (2) Anaesthetist. Honorarium, 10 guineas per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons (males). Salary, £120 and £100 per annum, respectively.

HAMMERSMITH BOROUGH COUNCIL.—Medical Officer of Health. Salary, £600 per annum, rising to £750.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Physician to Out-patients.

HERTFORD COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

HOLBORN UNION.—(1) Second Assistant Medical Officer at the Infirmary, Archway Road, N.; (2) Temporary Assistant Medical Officer at the Infirmary, Cleveland Street, W. Salary at the rate of £150 and £180 per annum respectively.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician; (2) House-Surgeon. Salary, £50 each for six months and £2 10s. washing allowance.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary at the rate of £80 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Second Assistant Medical Officer. Salary, £150 per annum, rising to £200.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £150 per annum.

LAHORE MUNICIPAL COMMITTEE.—Health Officer. Salary, Rs. 750 a month (£600 a year).

LEEDS GENERAL INFIRMARY.—Resident Ophthalmic Officer. Salary, £100 per annum.

LEICESTER ROYAL INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

LONDON COUNTY EPILEPTIC COLONY, Epsom.—Assistant Medical Officer. Salary, £290 per annum, rising to £330.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £150 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum.

MANCHESTER: HULME DISPENSARY.—House-Surgeon. Salary, £180 per annum, increasing to £200.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon.

MANCHESTER ROYAL INFIRMARY.—(1) Medical Officer for Out-patients and Accidents; (2) Assistant Director in the Clinical Laboratory; (3) Surgical Registrar. Salary for (1) and (2) £100 per annum, and for (3) £75 per annum.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—House-Surgeon. Honorarium at the rate of £50 per annum.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Obstetric Assistant; (2) Resident Medical Officer at House of Recovery, New Barnet; (3) two Clinical Assistants to Out-patient Department; (4) Anæsthetist (females).

NEWCASTLE-UPON-TYNE: UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Demonstrator of Anatomy. Salary, £200 per annum.

NORTHAMPTON COUNTY COUNCIL EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £275 per annum, rising to £350.

NORTHAMPTON GENERAL HOSPITAL.—(1) Senior Resident Medical Officer; (2) two House-Surgeons. Salary for (1) £140, and for (2) £120 per annum.

NORWICH CITY.—Assistant School Medical Officer and Assistant Medical Officer of Health. Salary, £300 per annum, rising to £350.

NOTTINGHAM CITY GUARDIANS.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House-Surgeon. Salary at the rate of £80 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary at the rate of £90 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—(1) Junior Assistant Medical Officer; (2) Assistant Medical Officer to act as Pathologist. Salary, £250 per annum, rising to £300.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary, £100 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £80 per annum each.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £200 and £100 per annum respectively.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House-Surgeon. Salary at the rate of £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Salary, £120 per annum.

ROYAL INSTITUTE OF PUBLIC HEALTH, Russell Square, W.C.—(1) Director of the Laboratories of State Medicine; (2) Demonstrator in the Bacteriological Laboratories. Salary, £400 and £200 per annum respectively.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Physician.

ST. MARY'S HOSPITAL, Paddington, W.—Obstetric Surgeon in charge of out-patients.

SALFORD UNION INFIRMARY.—(1) Male Senior Assistant Medical Officer; (2) Male Resident Assistant Medical Officer. Salary, £200 and £150 per annum respectively.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £110 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Assistant Surgeon at the Dreadnought Hospital.

SHEFFIELD: ROYAL INFIRMARY.—(1) House-Surgeon; (2) Ophthalmic House-Surgeon (males). Salary, £100 per annum each.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £180 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £200 per annum, rising to £230.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—(1) House-Physician; (2) Casualty and Out-patient Officer (males). Salary at the rate of £120 per annum each.

SUNDERLAND: ROYAL INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—House-Surgeon. Salary, at the rate of £150 per annum.

WAKEFIELD: WEST RIDING ASYLUM.—(1) Assistant Medical Officer; (2) Locumtonent Assistant Medical Officer (males). Salary for (1) £200 per annum, rising to £230, and upon promotion to £340.

WALSALL AND DISTRICT HOSPITAL.—Assistant House-Surgeon. Salary, £110 per annum.

WANDSWORTH UNION INFIRMARY, S.W.—Male Senior Assistant Medical Officer. Salary at the rate of £150 per annum.

WESTMINSTER HOSPITAL, S.W.—(1) Assistant House-Physician; (2) Assistant House-Surgeon.

WESTMINSTER UNION INFIRMARY.—Third Assistant Medical Officer. Salary, £140 per annum, rising to £160.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anæsthetist. Salary, £100 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician; (2) Resident Casualty Officer.

WEST RIDING ASYLUM, Scalebor Park.—Assistant Medical Officer. Salary, £250 per annum.

WEST SUSSEX COUNTY COUNCIL, Horsham.—Temporary Assistant Medical Officer under Mental Deficiency Act. Salary, £6 6s. a week.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £170 per annum.

WIMBLEDON BOROUGH.—Lady Assistant Medical Officer of Health. Salary, £300 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £120 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £160 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces the following vacant appointments: Cambuslang (Lanark); Langholm (Dumfries); Osmotherley (Yorks); Whalley (Lancs.).

MEDICAL REFEREE.—The Home Secretary has notified a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for the Kirkcaldy District of the Sheriffdom of Fife and Kinross. Applications to the Private Secretary, Scottish Office.

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BLACKMORE, F. J. C., M.R.C.S.Eng., L.R.C.P.Lond., Chief Medical Officer to the Tuberculosis Dispensary, Woolwich.

BRAMWELL, Hugh Ransom, M.B.Edin., M.R.C.S., Chief Clinical Assistant in the X-ray Department, West London Hospital.

COX, Wm. J., M.B., Ch.B.Vict., D.P.H.Manch., Medical Superintendent at the National Sanatorium, Benenden, Kent.

DOUGAL, Daniel, M.D., Pathologist to St. Mary's Hospital, Manchester.

EVATT, J. M., M.R.C.S., L.R.C.P., House-Surgeon to University College Hospital, London.

GILHESPY, F. B., M.R.C.S., L.R.C.P., House-Physician to University College Hospital, London.

HADLEY, Ernest C., M.D., B.S.Lond., F.R.C.S.E., Medical Superintendent to the North Evington Poor Law Infirmary and Medical Officer to the Workhouse and Children's Receiving Home, Leicester.

HERBERT, John F., M.B., B.Ch.I., Assistant House-Surgeon to the North Ormesby Hospital, Middlesbrough.

HUGHES, H. O., L.R.C.P., L.R.C.S.Edin., Medical Officer of Health for Abergele and Pensarn, Denbighshire.

LEIGH, J. Dickinson, M.D., F.R.C.S.E., D.P.H., Assistant Tuberculosis Officer for the County of Durham.

ORAM, Walter Charles, M.D., B.Ch., B.A.O., D.S.M., B.A., Honorary Radiographer to the Southport Infirmary, Southport.

PRENTICE, H. Ridley, M.B., B.S.Lond., M.R.C.P.Lond., Physician to Out-patients at the West End Hospital for Diseases of the Nervous System.

STACEY, W. Wrigley, M.B., Ch.B.Vict., D.P.H.Manch., Assistant Medical Officer at the National Sanatorium, Benenden, Kent.

MANCHESTER ROYAL INFIRMARY.—The following appointments have been made:

House-Physicians.—W. R. Blore, M.B., Ch.B.; G. W. Wood, M.B., Ch.B.; G. B. Jameson, M.R.C.S., L.R.C.P.

Senior House-Surgeons.—C. H. Crawshaw, B.A., M.B., Ch.B., M.R.C.S., L.R.C.P.; H. F. Hutchinson, M.B., Ch.B., M.R.C.S., L.R.C.P.

Junior House-Surgeon.—F. A. Bearn, M.B., Ch.B.

House-Surgeon to Special Departments.—F. C. Bentz, M.B. Ch.B.

Medical Registrar.—T. H. Oliver, M.A., B.C., M.B., Ch.B.

DIARY FOR THE WEEK.

MONDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor Road, S.W., 4 p.m.—Annual General Meeting.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL, 5 p.m.—Sydney Ringer Memorial Lecture, by Dr. T. R. Elliott, F.R.S.: The Adrenal Glands.

TUESDAY.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester Square, W.C., 4.30 p.m.—(1) Annual business meeting. (2) Cases and Specimens. Cases will be shown by Drs. Dockrell, Bunch, Sibley, Griffith, Phibbs, and Gooding. (3) Paper:—Mr. C. H. Mills: Some Points in the Treatment of Syphilis.

THURSDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Dr. Sandwith: The Third Lettsomian Lecture on Dysentery.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall Last, S.W., 5 p.m.—First Croonian Lecture, by Dr. E. Goodall: Modern Aspects of Certain Problems in the Pathology of Mental Disorders.

ROYAL SOCIETY OF MEDICINE:
SECTION OF DERMATOLOGY, 4.30 p.m.—Demonstration of Cases and Specimens.

FRIDAY.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Paper: Major S. P. James, I.M.S.: Mosquito Work in Ceylon.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, Town Hall, Kensington, W., 8.15 p.m.—Cavendish Lecture, by Dr. F. W. Mott, F.R.S.: The Causes of Insanity.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

DUBLIN: ROTUNDA HOSPITAL.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.
LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.
LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.
LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.
MANCHESTER HOSPITALS: Post-Graduate Clinics.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.
NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.
WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

DEATH.

NOBLE.—On June 4th at Holywood Hall, Wolsingham, co. Durham, Joseph William Noble, M.D.Cantab., L.R.C.P., Medical Superintendent of the Durham County Sanatorium, Wolsingham, and late of Queen Alexandra Sanatorium, Davos, aged 46 years.

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JUNE.
13	Sat.	Last day for receipt of Voting Papers at Head Office *re* Council Election.
16	Tues.	Warrington and St. Helens Divisions, Joint Meeting, Earlestown Town Hall, 4 p.m. Westminster Division. Criterion Restaurant; Dinner, 7.30 p.m.; Meeting, 8.45 p.m.
17	Wed.	London: Finance Committee, 2.30 p.m. London: Medico-Political Crime and Punishment Subcommittee, 4.15 p.m. Lancashire and Cheshire Branch, Annual Meeting, Knutsford; Lunch, noon to 1 p.m.; Meeting, 1 to 3 p.m.; Excursions, 3 to 6 p.m.; Dinner, 7.30 p.m. Surrey Branch, Annual Meeting, Reigate, 2.30 p.m.; Lunch, 1.15 p.m.; Dinner, 6.30 p.m. Leicester and Rutland Division, Annual Meeting, Leicester, 4 p.m. Yorkshire Branch, Annual Meeting, Bradford, 4.15 p.m.; Annual Dinner, 6.30 p.m.
18	Thur.	East Hertfordshire Division, Annual Meeting, Hitchin, 3 p.m. Kent Branch, Clinical Meeting, Kent and Canterbury Hospital, 3.15 p.m. Birmingham Branch, Annual Meeting, Birmingham, 3.30 p.m.
19	Fri.	Border Counties Branch, Crichton Royal Institution, 3 p.m.
20	Sat.	Munster Branch, Annual Meeting, Cork, 4.30 p.m.
23	Tues.	South-Western Branch, Annual Meeting, Plymouth, 12.30 p.m.; Luncheon, 1.30 to 2.30 p.m.; Dinner, 7 for 7.30 p.m.
24	Wed.	London: Council Meeting, 10 a.m. Worcestershire and Herefordshire Branch, Annual Meeting, Worcester General Infirmary, 3.30 p.m.
		JUNE (*continued*).
24	Wed.	North Lancashire and South Westmorland Branch, Annual Meeting, Lancaster, 3.45 p.m. Greenwich and Deptford Division, Annual Meeting, St. John's Church Room, Lewisham High Road, 4 p.m.
25	Thur.	Staffordshire Branch, Annual Meeting, Stoke-on-Trent, 4.30 p.m.; Dinner, 6.45 p.m.
26	Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m. Sussex Branch, Annual Meeting, Worthing, 2.30 p.m.; Council, 12 noon. Edinburgh Branch, Annual Meeting, Royal College of Surgeons, 4 p.m.
		JULY.
2	Thur.	London: Insurance Act Committee (*provisional*). Cambridge and Huntingdon Branch, Annual Meeting, St. Ives, 12.30 p.m.; Luncheon, 1.15 p.m.
8	Wed.	Dorset and West Hants Branch, Bridport, 3.30 p.m.; Luncheon, 1.30 to 2.30 p.m.
10	Fri.	East York and North Lincoln Branch, Annual Meeting, Hull.
11	Sat.	London: Science Committee, 10.30 a.m.
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.

ANNUAL MEETING, ABERDEEN, 1914.

Annual Representative Meeting, Friday, July 24th, and following days.

Presidential Address, Tuesday, July 28th.

Sections — Wednesday, July 29th; Thursday, July 30th; and Friday, July 31st.

Annual Exhibition, July 28th–31st.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 20TH, 1914.

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MEDICAL OFFICERS OF HEALTH AND SECURITY OF TENURE.

DEPUTATION TO MEMBERS OF THE GOVERNMENT.

An important and representative deputation waited upon the Chancellor of the Exchequer, the President of the Local Government Board, and the President of the Board of Education, at the House of Commons on June 11th to urge the claims of medical officers of health to security of tenure in their offices, superannuation on retirement, and in respect of a minority suffering under a further disability, discontinuance of an arrangement whereby the medical officer meets the cost of travelling expenses out of salary. Representatives of sanitary inspectors were received at the same time; they asked for similar reforms for members of that department of the public health service.

When the representatives of the various interested bodies assembled "upstairs" for a private preliminary meeting in Committee Room No. 10, it was found that the assembly was far too numerous to be accommodated in the Chancellor's private room, and the ministers accordingly came to the committee room and received the deputation there. The Chancellor was accompanied by Mr. E. S. Montagu, M.P., Financial Secretary to the Treasury, and amongst the permanent officials present were Sir Horace Monro, C.B., Chief Secretary; Dr. Arthur Newsholme, C.B., Chief Medical Officer; Mr. F. J. Willis, C.B., Assistant Secretary to the Local Government Board, and Sir George Newman, Chief Medical Officer to the Board of Education.

The deputation on behalf of the medical officers of health was introduced by Sir PHILIP MAGNUS, the member for the University of London, and by Dr. CHRISTOPHER ADDISON, M.P. The representatives of the sanitary inspectors were introduced by Mr. JAMES PARKER, M.P. The following were the societies represented, with the names of their representatives:

Representatives of British Medical Association.—Dr. E. J. Domville (Chairman, Public Health Committee), Dr. J. Mitford Atkinson (London), Dr. L. J. Blandford (Stockton-on-Tees), Dr. Major Greenwood (London), Dr. T. B. Heggs (Sittingbourne), Dr. J. Livingston Loudon (Hamilton), Dr. Alfred Cox (Medical Secretary), Dr. James Neal (Deputy Medical Secretary).

Representatives of the Society of Medical Officers of Health.—Dr. Bostock Hill (Warwickshire), Dr. T. Ridley Bailey (Bilston), Dr. H. H. J. Hitchon (Heywood, Manchester), Mr. F. E. Fremantle (Hertford), Dr. H. C. Pattin (Norwich), Dr. A. M. Fraser (Portsmouth), Dr. W. Stainthorpe (Saltburn); Dr. Herbert Jones (President-elect, Hereford), and Dr. Joseph Priestley (Lambeth), Honorary Secretaries.

National Housing and Town-Planning Council.—Councillor F. M. Elgood (Northwood), Mr. T. C. Horsfall (Manchester), Alderman W. G. Wilkins (ex-Mayor of Derby), Mr. H. Tuer Shawcross (Berkshire County Council), Mr. A. E. Cave (London), and Mr. Henry R. Aldridge (Secretary).

Mansion House Council.—Mr. C. E. Allan (Honorary Secretary), Mr. Henry Johnson (Wimbledon), and Miss Portlock.

Rural Housing and Sanitation Association.—Miss A. Churton (Secretary), Dr. Dudley Buxton, Professor Simpson, C.M.G., Halsey Ricardo, Esq., F.R.I.B.A., Miss Stuart (School of Economics), Miss Constance Cochrane (St. Neots), and Mr. A. H. H. Matthews (Central Chamber of Agriculture).

Royal Institute of Public Health.—Dr. E. G. Annis (Greenwich).

The Sanitary Inspectors' Association.—Sir James Crichton-Browne and Mr. H. H. Spears (West Bromwich).

Private Individuals.—The Dean of Worcester (Dr. Moore Ede, formerly Chairman Housing Committee, Durham County Council), Mr. Charles Bathurst, M.P., Lord Henry Cavendish-Bentinck, M.P., Sir Henry Craik, M.P., Mr. David Davies, M.P., Colonel T. E. Hickman, M.P., Mr. W. S. Glyn-Jones, M.P.

Editors of Medical Journals.—The BRITISH MEDICAL JOURNAL, Dr. Dawson Williams; *The Lancet*, Dr. S. Squire Sprigge; *The Medical Officer*, Mr. G. S. Elliston; *The Medical World*, Dr. W. Malden; *The Medical Press and Circular*, Dr. David Walsh.

It was stated that the following had expressed sympathy with the objects of the deputation:

The Archbishop of Canterbury, the Earl of Harrowby, the Bishop of Hereford, the Bishop of Birmingham, Mr. Henry W. Forster, M.P., Sir Henry Norman, M.P., Mr. Godfrey Locker-Lampson, M.P., Mr. G. N. Barnes, M.P., Mr. Aneurin Williams, M.P.

INTRODUCTION OF THE DEPUTATION.

Sir PHILIP MAGNUS said he had the honour to introduce a very representative deputation of the medical officers of health, and ministers would recognize that the large assembly was also representative of various associations and included many members of Parliament on both sides of the House who sympathized very much with the objects about which the deputation wished to speak.

The position of medical officers of health had been, as ministers doubtless knew, somewhat unsatisfactory during a great many years, and last year he introduced a bill in the House of Commons which had for its object the remedying of the acknowledged grievances of these officers. That bill did not pass its second reading, and the then President of the Local Government Board gave him to understand that it contained clauses with which he was not altogether in agreement. The President gave him very little hope of succeeding in getting that bill passed into law. Subsequent to that, a very important meeting of some of the representatives now present was held at the offices of the British Medical Association, and it was felt that it might be desirable that a departmental committee should be appointed to inquire into the whole matter. Before arriving at such a decision it was suggested that those interested should endeavour to come before the President of the Local Government Board, the Chancellor of the Exchequer, and the President of the Board of Education, with a view to ascertaining what was the best course to pursue in order to remedy the grievances to which he had referred. As the objects which the deputation desired might involve the expenditure of some little money from the Treasury it was thought very desirable that the deputation should have the full sympathy of the Chancellor of the Exchequer, and further, as some medical officers of health were doing work under the Board of Education very similar to that of medical officers, it was thought desirable that the President should be present in order that co-ordination should be ensured. The main grievance from which medical officers of health had so long suffered was their want of security of tenure in the offices they held. This militated very much against the performance of the arduous duties confided to them, and it was a Gilbertian state of things that medical officers of health should practically be under the direction of persons whose defects they very often had to point out, and were therefore prevented to a very great extent, unless they were almost more conscientious than human beings were generally found to be, from representing to local authorities the conditions of the slums as thoroughly as they would wish. There was another grievance—that a large number of medical officers of health had not the advantage of any scheme of superannuation. He was glad to admit that more and more it had been the endeavour of the present Government to secure for public officers pensions after service. It was very important that men placed in the responsible position of officers of health should not be troubled by having to consider what would happen to them in their old age, but that some pension should be provided for them. There was another grievance for which he hoped some remedy might be found; it was this: It generally happened that the more work a man had to do the better he was paid, but from what he understood, the more work some medical officers of health did, the less they were paid. That was not a right thing, but it occurred because at present travelling and other expenses had to be paid out of salary, and the consequence was that the more duties medical officers had to discharge the greater were their expenses and the less was their salary. It was very desirable that the expenses should be defrayed by the local authorities. Year by year larger and more responsible duties were thrown on these officers, and he ventured to hope that the case they would place before the ministers would receive their very sympathetic consideration.

Dr. Christopher Addison, M.P., said he was very glad to be associated with the member for the University of London in introducing the deputation. It was not necessary to say more than that he heartily associated himself with everything Sir Philip Magnus had said. The Government's own publications in connexion with various inquiries, land and other, bore sufficient testimony to the desirability of obtaining security of tenure for competent officers who had important duties to discharge. He hoped the Government would take the representations of the deputation into serious consideration and give medical officers of health that security of tenure necessary not only in their own but in the public interest.

The British Medical Association.

Mr. E. J. Domville, Chairman of the Public Health Committee of the British Medical Association, was the first speaker on behalf of the deputation. He said the advance of scientific discovery tended more and more to make medicine an exact science, and the aim of its professors the prevention rather than the cure of disease. Hence the duties of the medical officer of health became increasingly important and his equipment and training as a specialist essential. The British Medical Association had formulated the opinion of its members in Representative Meeting as follows:

> That in the general interests of public health and the medical profession it is desirable (i) that medical officers of health should as a rule (and without prejudice to those at present holding part-time appointments) be required to devote their whole time to official duties; (ii) that medical officers of health should be adequately paid, districts being grouped where necessary to make this practicable; (iii) that all medical officers of health should participate in a Government superannuation scheme; and (iv) that all medical officers of health should be protected in the proper discharge of their duties against capricious dismissal or reduction of salaries.

The Local Government Board, through its inspectors, had consistently urged this course upon local authorities. It was clear that special study and training in hygiene, including chemistry and bacteriology, did not tend to improve the medical man's opportunities for the general practice of medicine, and when once a man devoted his time to this branch of work as a speciality he lessened his chances of success in general work, and he ought to be freed from the necessity of attempting to earn his living in that direction. It had been constantly found that the efficiency of the medical officer of health had been impaired, and his independence of action restrained, by the consciousness that his future depended upon the extent to which his action commended itself to his immediate employers, whose individual interests were often involved. It was clear that any officer whose excess of zeal had rendered him unacceptable to one local authority would have no chance of being appointed by any similar body. At the same time provision should be made for the removal of officers whose inefficiency had been proved to the Local Government Board, and the benefits of a scheme of superannuation should be provided for those who had reached an age limit. That this was the opinion not only of the British Medical Association, but of an increasing number of persons engaged and interested in public sanitary matters, other members of the deputation would testify, but he would read a short extract from the report of a committee of the Exeter Diocesan Conference through which an inquiry was made into the housing question over a large part of the county of Devon:

> The Committee suggest that a change might be made in the method of election, and, by consequence, in the status of sanitary inspectors and medical officers of health. These officers are the servants of the councils by whom they are appointed. In some cases the appointments are for life; in other cases they are only subject to three months' written notice, such notice to take effect at the same period of the year as that on which the original term of office expired. It is suggested that wherever possible the officers should be whole-time officers with fixity of tenure. This would obviate any objection which might be felt on their part to report defects or to recommend improvements.

Mr. Domville added that in connexion with the inquiry it was found that a large number of bad houses were the property of small owners on whose cases no report had been made. The British Medical Association felt that the present conditions of appointment should be altered in the interests of the public and not only of the profession. This suggestion was not intended to reflect upon the honour of medical officers of health, but from time to time the Association had received confessions from medical officers of health admitting a consciousness of ineffectiveness on account of the intolerable position due to the terms on which they held their appointments.

The Society of Medical Officers of Health.

Dr. Herbert Jones, President-elect of the Society of Medical Officers of Health, said the object of the deputation was to put before the Government three disabilities under which medical officers of health were—the lack of security of tenure; the lack of superannuation; and, thirdly (this only referred to a certain number of medical officers), in having to pay out of salaries uncertain sums for travelling expenses and office and clerical expenses. Medical officers of health did not mean by security of tenure that whatever they did, and however badly they carried on their

work, they should remain in their posts. What they did suggest was that they should have such security of tenure as would enable them to carry out their work without any chance of those to whom they might give offence turning them out of office.

Mr. LLOYD GEORGE: Now you are on that very important point, is it your suggestion that there should be an appeal to the Local Government Board whenever there is a notice to dismiss an officer?

Dr. HERBERT JONES: Quite so; we have always held that. The next point I want to raise is that what medical officers of health feel is that they do not know exactly how far they may go without giving offence to their authorities.

Mr. LLOYD GEORGE (who had been conferring with the permanent officials behind him) said this was a very important point. He wanted to know what exactly was the position now. It had not been stated up to the present.

Dr. HERBERT JONES: The position is that a medical officer of health is elected now and can be dismissed by the authority that elected him, after three months' notice, and without any appeal.

Mr. LLOYD GEORGE: Without any appeal to the Local Government Board under any conditions? I understood there are a few who have a right of appeal.

Dr. HERBERT JONES: Those are county medical officers of health, also the metropolitan, Scottish, and Irish medical officers of health. They all have the right, and we ask for the same treatment for the others.

Mr. LLOYD GEORGE: There are only about 100 of these?

Dr. HERBERT JONES replied that there were more with the metropolitan officers. Other medical officers wanted similar treatment. At present, before they sent out their annual and other reports, many officers found it necessary to go through them and blue-pencil anything which they thought might endanger their position. It was a terrible confession to make from the point of view of the interests of public health. Medical officers wanted to know exactly how far they might go. At present they were very much in the position of a shepherd driving a flock of sheep near the unprotected edge of a precipice. A fog suddenly came down and the shepherd did not know how near he might go to the edge without endangering himself. When the fog lifted the tragic thing was that half the sheep had fallen over the cliff and were killed. Medical officers of health asked that a fence might be put at the edge of this cliff.

Mr. LLOYD GEORGE: Just to give you confidence.

Dr. HERBERT JONES (pursuing the metaphor, which was evidently much to the Chancellor's taste) added that medical officers wanted the fence to be a secure one and not a wobbly one, so that they might depend on it. Proceeding, he said that with regard to superannuation, which was closely bound up with this subject, ministers would no doubt be aware that the Royal Sanitary Commission, which first recommended the appointment of medical officers of health, made a definite representation that they should have superannuation and have the same position as any other civil servant. One reason the Society he represented was pressing for superannuation was that there were some urban and rural medical officers of health who had been very seriously hit by additional legislation put forward and additional Orders of the Local Government Board. A certain number of them, who received a fixed salary and had to pay travelling expenses, found they were no longer able to put by what they used to do for retirement because of the extra expenses charged against their salaries. More work meant for them higher travelling expenses and office charges, and a lower net income. Having accepted office on this basis these men made no complaint so long as the conditions remained the same, but that was not the case. Not only had extra work been put upon them, but public health was an advancing science, and to carry out their work as it should be done medical officers had to add to their expenses. He had obtained information from some of his colleagues which showed that two or three days in a week were occupied in clerical work which could be done better and cheaper by a clerk at 30s. or £2 a week, instead of men in receipt of from £600 to £800 a year being engaged upon it. Office expenses were also a charge upon the salary of a medical officer of health serving under these conditions, and a third expense was travelling about the district. The area he (Dr. Jones) served was 500 square miles in extent, and if—as he could not, though he would like to do—he were to carry out the latest Tuberculosis Order, he would have to travel from 3,000 to 5,000 miles in a year and bear the cost out of his salary. Medical officers said that was a most unfair state of affairs. His remarks under this head did not apply to every medical officer of health, but only to those in rural and small districts.

A CLERICAL SUPPORTER.

THE DEAN OF WORCESTER said he had been asked to say a word both in his clerical capacity and also from his experience in connexion with housing reform. In his clerical capacity he would like to emphasize the fact that every clergyman and minister familiar with the condition of the homes of people in town and country was painfully aware that bad conditions had an evil effect morally, spiritually, and physically upon the people, and every one must desire to see a great reformation. When one came to the practical politics of the question one always found that a great deal hinged on the medical officer of health, and it was necessary that that official should be a man of experience, efficiency, and independence. Very often, especially in country districts, one found neither efficiency nor experience, and certainly not independence. For many years he was an active member of a housing committee in one of the most populous counties, namely, the county of Durham, and he had personal experience of the effect of the medical officer being independent. Being a county medical officer, his position was unassailable, and one realized what strength that gave him in dealing with the committee, and in making reports upon property sometimes owned by members of the committee. The medical officer in those circumstances never had any reason to fear that any back-handed influence would be brought to bear upon his position, and consequently he could deal with property without fear or favour. He had lived in other parts of the country, where a different condition of affairs prevailed, where medical officers not only went through their reports to consider how far they might go without offending the authority; he had actually known of a medical officer of health being required to rewrite a portion of his report.

Mr. LLOYD GEORGE: By whom?

The DEAN OF WORCESTER: By the Council itself. The medical officer had to do it; he would have had to go otherwise. He would not have been dismissed for that particular thing, but he would have disappeared. (Laughter.) Continuing, the Dean said it was in the smaller councils that the chief difficulty arose, because members of the Council were generally owners of property. He had known a case in which a medical officer reported several times, and his report was always set aside. The officer asked if there was any good in going on making reports, and the reply was, "None." The medical officer had no force behind him; he was absolutely the servant of the Council, and he could bring no pressure to bear by appealing to the Local Government Board. The difficulty was he had no fixity of tenure. Therefore it was of the gravest importance, if a better state of things in regard to housing in town and country was to be brought about, that the medical officers of health should be men of experience and efficiency, and should not be liable to dismissal without the consent of the Local Government Board. That would secure that they should not be dismissed unless there was some sound reason. It would involve expenditure, because it meant whole-time officers in a larger number of places than at present, and he presumed it would also involve a certain increase of Treasury grant for the purpose of enabling officers to have an adequate retiring pension.

THE NATIONAL HOUSING AND TOWN PLANNING COUNCIL.

Mr. T. C. HORSFALL (Manchester), on behalf of the National Housing and Town Planning Council, said he would speak from the point of view created for him by membership of the Council, by forty years' membership of the Manchester and Salford Housing Association, and by long connexion with a University Settlement in a very poor part of Manchester. The powers possessed by urban authorities were now very great. They had control of education; and under the powers given them by the Housing and Town Planning Act, especially by their power of limiting the number of houses to the acre, they had

greater powers than were possessed by local authorities anywhere else. But there was a very marked want in most of our large towns—the want of an influence powerful enough to create a strong party of reform upon town councils and amongst citizens themselves. Unless the zealous members of a town council had the support of a large number of the citizens, they could do very little. The best instrument for creating parties of reform would assuredly be a perfectly fearless medical man. One could say that with confidence, because medical officers of health were already so extremely useful. He remembered the work of three medical officers in Manchester, and he had watched the results achieved by a medical officer in a much smaller town, near which he lived, and he said with confidence that the condition of the towns would be infinitely worse than it was if it had not been for the influence of medical officers. Although local authorities had great powers, in no town were they fully used. Far more ought to be done in providing playgrounds under proper supervision, and far more attention given to housing and the condition of the air. How were perfectly fearless medical men to be obtained? At present the medical officer of health could not be as fearless in the interests of public health as he considers he ought to be, because in many places he knew that if he took up a very active policy a party hostile to him would be formed on the town council, and his tenure would be extremely brief. It would always be desirable that a medical officer of health should be prudent and tactful, but at present the tendency was for him to be much too prudent.

Mr. W. G. WILKINS, who also spoke on behalf of the Housing and Town Planning Council, mentioned that the Council had made periodical inquiries in various parts of the country, and had had conferences with those interested in the housing of the poorest. Continually this question of the activity, or the non-activity, of medical officers of health had been one of the subjects requiring discussion. The council would be told by local people. "The medical officer is with us as much as he dare show, but he dare not act or speak strongly because of his position with the council." It was always felt that in the medical officer housing reform had a strong friend, but that the circumstances of his appointment in many cases prevented him from putting his sympathy into action.

THE RURAL HOUSING AND SANITATION ASSOCIATION.

Miss COCHRANE (St. Neots) supported the objects of the deputation on behalf of the Rural Housing and Sanitation Association. She said that during the eleven years the association had been at work the hindrance to rural housing reform arising from the unsatisfactory position of medical officers of health and sanitary inspectors had been again and again before the association. Officers had lost their appointments or had their salaries reduced, or become demoralized, owing to their lack of independence. Although the Rural Housing Association supported the object of the deputation, as possibly a step in the right direction, it was, however, undoubtedly the fact that other causes beside fear of losing appointments operated in bringing about the present unsatisfactory condition, and the council was of opinion that no permanent improvement would be brought about until the whole question was dealt with on a much wider scale and medical officers of health and inspectors of nuisances were made responsible to authorities independent of narrow local interests and possessing the confidence of the community.

THE SANITARY INSPECTORS' ASSOCIATION.

Mr. JAMES PARKER, M.P., introduced the representatives of the Sanitary Inspectors' Association, and said sanitary inspectors found themselves in this matter in practically the same position as medical officers of health. They came into quite as close touch with members of the councils, and needed also security of tenure.

Sir JAMES CRICHTON-BROWNE said the deputation for which he spoke represented the Sanitary Inspectors' Association, which had 1,600 members, who were carrying on the work of sanitation in every part of the country. Their case for security of tenure was an even stronger one than that put so forcibly before the ministers by the bodies representing the medical profession. The medical officer of health had a certain scientific prestige and social status, and he had the support of a powerful and determined profession that would resent any injustice. But the sanitary inspector had no union behind him, and he was liable to be very summarily dealt with if he gave offence. The medical officer was the advising authority, but the sanitary inspector was the hand that stirred up slumdom, and was most likely to become obnoxious to owners and to tenants who preferred to go on wallowing in the mire. He was bringing no sweeping indictment against local authorities; some were showing an increasing sense of responsibility, some were enlightened and others were not, some were public-spirited and others absorbed in self-interest; and in the existing state of affairs cases of hardship, persecution and injustice occurred, and must continue to do so. Notes of many such cases would be handed in by the deputation. Sir James mentioned one or two instances of zealous officers being dismissed on a flimsy pretext, and urged that these injustices constituted a public danger, because sanitary inspectors, hampered by fear of consequences, might refrain from reporting on property which was a menace to health. The great fall in the death and sickness rates in the last sixty years had been due to the work of sanitary inspectors acting under medical guidance, but there was still much to be done, and it was most desirable that sanitary inspectors should have security of tenure, that only men should be appointed who were properly educated and certificated, and that they should have adequate salaries and some modest provision for old age. Sir James Crichton-Browne mentioned that the present occasion was the fourth time of asking as far as sanitary inspectors were concerned, and he caused some amusement by quoting the expressions of sympathy used by members of the various Governments on whom deputations waited. Mr. Gerald Balfour in 1905 even assured a deputation that he was looking into the matter at that very moment. The speaker was present on the last occasion, and so cogent were the arguments and so sympathetic the response that he did not expect to be present again on the same errand. He hoped this time they were addressing not merely the sympathetic ear, but the willing mind, and that something would be done.

Mr. H. H. SPEARS (West Bromwich) also spoke on behalf of the Sanitary Inspectors' Association. He thought it would be an exaggeration to suggest that the majority of members of local authorities throughout the country were opposed to public health progress, but there were members whose financial interests made them slack. Mr. Spears quoted from reports of medical officers to the Local Government Board and other documents to show that undue pressure and in some cases injustice and persecution were brought to bear upon sanitary inspectors who gave annoyance because of their zeal in the performance of their duties. In regard to superannuation, the claims of sanitary inspectors were very strong. It was impossible for an officer receiving for whole-time work a salary of from £50 to £90 a year to save anything. As to payment of travelling expenses out of salary, 500 rural inspectors were affected. A return would be handed in showing deductions from a salary of £60 a year of £15 for travelling expenses, from a salary of £110 of £55 for expenses, and similar instances. Recent legislation had greatly increased the work of inspectors, but there had been no corresponding rise in the scale of their emoluments.

REPLIES OF MINISTERS.

The Chancellor of the Exchequer.

Mr. LLOYD GEORGE said he had first of all to apologize for his inability to receive the deputation when he first arranged to do so. It was entirely due to his illness; otherwise, he would certainly have felt it a great pleasure to have been present to receive them earlier this year. He was at a loss at first to know why the Chancellor of the Exchequer was invited to be present to hear representations which seemed to concern primarily the departments of his colleagues, the President of the Local Government Board and the President of the Board of Education, but before he had listened to the speeches more than five or ten minutes an explanation was forthcoming—he saw that part of the demands involved a request for money from the Exchequer, and he had been lured there rather on that account. He was not quite sure what answer he could give. After what Sir James Crichton-Browne had said he dare not give a sympathetic answer (laughter), and he could give no other. So he was rather at a loss.

He had never heard a case which was more irresistible, and never, if he might say so, one which was better presented. All the speeches to which it had been his privilege to listen presented very cogently a case that had only to be stated to carry conviction to every fair and impartial mind. His attention had been called to this grievance very largely through investigations he had conducted, more especially in the last two or three years, and he had come to feel that these officers were the pivot upon which the whole health administration turned. He agreed with what fell from Mr. Horsfall, who had had very considerable experience in this matter, that the powers entrusted to local authorities, even at the present moment, were enormous. He would like to see some of them strengthened, but until greater independence was secured to officers who administered these powers it was idle for Parliament to waste any more time carrying new Acts. That was why he felt that some form of security of tenure, that would give independence not merely to the medical officer of health but to the inspector, must be an essential part, if not an essential preliminary, to any further legislation dealing with the housing question. Members of the deputation had each given experiences, and he could give some of his own. He remembered in his own district a fight which the inspectors there had to wage against local interests in clearing away slums. There was a great pigsty fight in that district and a fight against middens and all sorts of disease traps, a fight against owners large and small, and, he was sorry to say, against occupiers whose interest was primarily involved in clearing away these incitements to disease and pestilence. Luckily, the reformers were supported by a very enlightened local press, and they owed a very deep debt of gratitude to a journalist—a very able man—who took up the cause in his paper. Without the help of that journalist he was perfectly certain it would have been impossible to put the thing through. Therefore he agreed—in fact, he did not see what there was to be said against the demand—that it was essential for good local administration that the executive officers should be in a position in which they would feel that they could report without fear or favour upon actual conditions in those areas. It was put very well by Dr. Herbert Jones in a metaphor that he appreciated very much as he came from a mountainous area. The medical officer of health must be given confidence; he did not know how to tread. Very startling cases had been given by the Dean of Worcester of men who had actually been asked to rewrite their reports, and he (Mr. Lloyd George) had had communications from medical officers of health telling him that he must not look at Local Government reports, because they dare not give the facts, and that the reports that went to the Local Government Board did not represent one-tenth of the conditions in the particular areas. These letters were always accompanied by an entreaty not to give names. He was not criticizing the medical officers of health. What were the poor fellows to do under these conditions? He would go so far as to say it was one of the first duties of a Government which intended to deal with housing problems to see that these officers got a proper footing. Parliament could not deal with local problems; they must be dealt with locally. Parliament could legislate, but the work must be done in the locality. If the foothold of the local officers was a slippery one, they could not do their work; it was impossible when a man was liable to be dismissed at three months' notice. As Dr. Domville had said, it was not easy for a medical officer of health to begin a new career, because his training and experience incapacitated him for a class of work to which he might otherwise have devoted himself—namely, the building up of a private practice. Therefore, when the community invited men to do work which was the most important they could undertake, it was the duty of the community to stand at their backs and protect them. He was whole-heartedly in sympathy with the demand put forward. So important did the Government consider the position of local medical officers of health that when the Budget was being framed and it was a question of distribution of grants, it was felt that there ought to be specific grants for the payment of a substantial part of salaries of local officers. That put the central authority in a position to demand better terms from local authorities, and it was an important feature of the grant. The grants came to £350,000 for various officers connected with the work of health, and therefore the Government felt in a position to require from local authorities reforms such as giving officers greater security. He was sure the great majority of local authorities would welcome the change, although there might be interests which would be opposed. He was sorry to say that in some areas people got elected purely to protect certain interests. Public officers ought to be protected against such influences; those men should be defended on whom the public must rely if there was to be efficient health administration in the country. With regard to the financial side of the question—on which alone he was entitled to speak—he understood the President of the Local Government Board was considering the question of superannuation, but that he was not satisfied with the scheme put forward as far as medical officers of health were concerned. The President would explain his reasons. Meanwhile (Mr. Lloyd George concluded) he agreed in principle that it was very important medical officers of health should have a superannuation scheme, because, for one reason, it was the only way of getting rid, without hardship, of men who were past their work. That was important for the community; but from the medical officers' point of view the existence of a superannuation scheme added to their sense of security and independence, and enabled them to do their work the better. He understood the President of the Local Government Board—he was sorry to use the phrase in the presence of Sir James Crichton-Browne—was really "looking into the matter." He was glad to see members of Parliament present; Mr. Bathurst, he noticed, had gone, but members who represented both sides of the House were present. A good deal depended on that. No Government was all-powerful in a Parliament. In order to carry through measures of this kind which were non-contentious, which did not arouse partisan zeal, and so did not get behind them that sort of hydraulic pressure which ensured their passing—in respect of such measures it was necessary to obtain a considerable amount of support from both sides of the House, and he would invite members on both sides to "negotiate" that kind of support for a measure which would deal with this problem. There was no reason why it should be a partisan measure. Time was a thing of which the House of Commons was stinted, and if a measure was much criticized it had little chance of passing. Members who were interested could do useful work in the direction he had indicated, and he hoped something of the sort would be done. If men like Sir Philip Magnus, Dr. Christopher Addison, and Mr. Bathurst would take the matter in hand, and secure the necessary measure of support, the promoters of this movement might be able to get their bill through in a very short time, and no further deputations would be necessary.

Mr. Lloyd George then left to meet a deputation elsewhere.

The President of the Local Government Board.

Mr. HERBERT SAMUEL said that he was very glad that so early in his tenure of office as President of the Local Government Board he should have the opportunity of meeting so large and authoritative a deputation representing those who were engaged in the health work of the country, because so large a portion of the work of the Local Government Board was connected with those services. The claims of the deputation really divided themselves into two parts: First, those relating to the tenure of their offices, and, secondly, those relating to the superannuation of medical officers of health and sanitary inspectors. With respect to the question of security of tenure, he had held the view for many years, and had expressed it on more than one occasion, that the country could not expect really efficient administration of the health laws unless officers concerned were protected from the injustice which might now penalize them as the result of conscientious work. So far as the general principle was concerned, he was entirely at one with the Chancellor of the Exchequer, that such measures as were practicable should be taken to secure in all proper cases security of tenure. It was not right that medical officers of health and sanitary inspectors should go about their work day by day in the spirit of a soldier going into action, never knowing but that at any moment they might be involved—and their families with them—in disaster, through action they regarded it as their duty to take. "We shall straightway take this question in hand," said Mr. Samuel. He

proposed to consider how much could be done under the clauses of the Finance Bill to secure this security of tenure without legislation, because he believed it might be possible to effect a great deal without waiting for the slow processes of Parliament and the chances of a bill. One of the difficulties placed in the path of medical officers of health (he was not now referring to sanitary inspectors) was the fact that so many of them were engaged in private practice; nearly four-fifths were men in that position. If their work was liable to be affected by the fear that private interests of members of local bodies might be crossed, so also, in the case of a large majority of these officers, their work might be affected by the private interests of patients. Therefore it had long been the tendency of the Local Government Board to urge that whenever possible whole-time appointments should be created. The exhortation had not always fallen on willing ears. Local authorities, sometimes because they liked to keep entire control over the appointments they made, were unwilling to combine with their neighbours. Also the larger the area the more time and money were spent on travelling, so that in districts beyond a certain size combination became a doubtful economy. Whenever possible medical functions were combined, and the Local Government Board and the Board of Education had made it a practice to encourage the combination of education medical officerships, and public health appointments, and that policy would continue. But when the question of security of tenure was being considered it had to be taken into account that while the principle was wholly right for whole-time men, where part-time men were concerned it might be advisable not to make their positions permanent, but to pave the way for their supersession by whole-time officers. Therefore, the deputation had rightly directed its remarks mainly to whole-time officers, for while the work was, as a rule, well performed, there were many cases where the standard they would all desire was not attained, and medical officers, being paid very small salaries, gave little time to their work. Security of tenure for them would be a public disaster. The position should be rendered so insecure in their case as to lead to their removal almost immediately. In general he agreed that there should be security of tenure also for sanitary inspectors. Their condition was even more precarious than that of the doctors. The sanitary inspector was a poorer man, his standing was not so firm, and if any one needed protection he did. With respect to superannuation, there could not fail to arise from the existing situation many hardships. It was difficult for all men to turn to other occupations when they were advanced in years, but for a medical man who had not built up a private practice it was almost impossible to find any other career. Secondly, it was found that in many cases medical officers of health retained their posts until they reached very advanced years; they could not afford to give up the posts, and the local authorities would not inflict the hardship of calling upon them to retire. There were medical officers of health of 75, 80, or even more years of age, continuing their functions as well as their advanced years might allow. Though there was no general provision for superannuation, there were some local cases. The whole position was in a state of some confusion; there were general Acts referring to certain classes of officers, for example, the Poor Law officers. Teachers had some measure of superannuation, so had asylum attendants, and the police had a pension scheme. In the case of other local officers there were no general Acts; town clerks, surveyors, engineers, medical officers of health, and sanitary officers were not dealt with, except here and there, by local Acts which dealt with all the officers in certain places. But in the majority of places there was no proper provision. He was advised that the Superannuation Bill introduced by Sir Philip Magnus last year was not actuarially sound, that the benefits proposed could not be provided by the contributions which the bill suggested, and therefore the Government could not advise Parliament to assent to it. Furthermore, he found it difficult to distinguish the case of the medical officers of health and sanitary inspectors in regard to superannuation from that of other local authority officers. As to security of tenure there was a difference, because of the fact that other officers were not exposed to the same difficulties as medical officers of health and sanitary inspectors. But in regard to superannuation, all that had been said by the deputation might be said with equal truth by representatives of other classes of officials of local authorities, and he was receiving this month a deputation from the National Association of Local Government Officers, who would come to urge the very arguments that the medical officers of health and sanitary inspectors had urged. He thought it would be wise for him to reserve any remarks he had to make on this subject until he had heard that deputation. It needed close consideration, for it was a difficult question, and must be examined with actuarial assistance. But for his part he could not see why it should be right for Parliament to provide pensions—or rather, to make legislative provision to secure that pensions should be received by some classes of public officials and by the imperial civil service—and pay no attention whatever to the claims of other officers of the local civil service. Therefore the matter would receive his very careful consideration, but he would prefer not to make any specific observations until he had heard the views of other officers employed by local governing bodies. While he was at the Local Government Board he hoped he might succeed in doing something in this matter, but no one had less security of tenure than a Cabinet Minister, and he did not know how long he might have the honour of holding his present position. Mr. Samuel concluded by thanking the deputation for their very interesting speeches on the important subject they had come to discuss.

Dr. HERBERT JONES mentioned that the claims of the deputation were put forward on behalf of all medical officers of health. He also reminded Mr. Samuel that he had not referred to the subject of travelling expenses.

Mr. SAMUEL: That seems to be a matter for you to discuss with local authorities when making agreements with them. Do you suggest that the Local Government Board, by legislation or by some other means, should make it obligatory on the part of local authorities to pay expenses? What means do you suggest?

Dr. HERBERT JONES said the payment of travelling expenses by local authorities should be obligatory.

The President of the Board of Education.

Mr. J. A. PEASE, President of the Board of Education, also addressed the deputation. He remarked that, although little reference had been made in the speeches to the connexion of his department with this subject, if there was one branch of the Government service which was keenly concerned about health it was the Board of Education. The problem of education was primarily physical, and it was absurd to examine children medically in the schools, and to have them treated, if they returned from healthy schools into slums and unhealthy surroundings. Mr. Samuel and he would work wholeheartedly to secure that in respect of children of all ages authorities and Care Committees were united to obtain the best attention in the interests of the child. In regard to travelling expenses of officers, although there were a large number of medical officers and school medical officers under the Board of Education, he believed that question had never arisen, as in these cases travelling expenses were already provided by the local authorities. As to superannuation, he had done what he could to assist professors at universities to secure some form of superannuation and to help the teachers in the same direction. He had as much sympathy with the medical profession as with teachers and professors of universities, and he would like to see a system established for its members. He would do all he could to unite with his colleagues in that matter. The Board of Education was trying to secure additional money to provide meals for school children and to help local authorities to take a keener interest in health problems. The moment it gave money for that purpose the central authority would have the power of placing pressure upon local bodies.

Dr. CHRISTOPHER ADDISON, M.P., then thanked the Ministers for receiving the deputation, and said he believed he could say, on behalf of fellow members of Parliament who were interested in this question, that they would take the Chancellor's hint and act upon it.

The proceedings then terminated.

ELECTION OF COUNCIL, SESSION 1914-15.

BRANCHES IN THE UNITED KINGDOM.

BRANCHES INCLUDED IN GROUP.	NAME.	UNOPPOSED OR CONTEST.
North of England, and North Lancashire and South Westmorland Branches	Mr. D. F. TODD	Unopposed.
Yorkshire Branch	Dr. H. J. CAMPBELL	Unopposed.
Lancashire and Cheshire Branch	Dr. T. A. GOODFELLOW	Unopposed.
	Mr. F. C. LARKIN	Unopposed.
East York and North Lincoln, and Midland Branches	Dr. ADAM FULTON	Unopposed.
Cambridge and Huntingdon, East Anglian, and South Midland Branches	Dr. O. R. M. WOOD	Unopposed.
Birmingham and Staffordshire Branches	Mr. ALBERT LUCAS	Unopposed.
North Wales, Shropshire and Mid-Wales, and South Wales and Monmouthshire Branches	Mr. W. F. BROOK	Unopposed.
Metropolitan Counties Branch	Dr. F. J. SMITH	Elected.
	Mr. H. B. BRACKENBURY	Elected
	Dr. JAMES GALLOWAY	Elected.
	Dr. CHARLES BUTTAR	Elected.
	Dr. M. G. Biggs	—
	Dr. H. J. Cardale	—
	Dr. Major Greenwood	—
	Mr. E. C. Montgomery-Smith	—
	Dr. J. T. Richards	—
	Mr. H. H. Tomkins	—
Bath and Bristol, Gloucestershire, West Somerset, and Worcestershire and Herefordshire Branches	Dr. GEORGE PARKER	Unopposed.
Dorset and West Hants, and South-Western Branches	Dr. WM. JOHNSON SMYTH	Unopposed.
Oxford and Reading, and Southern Branches	Mr. JAMES GREEN	Unopposed.
Kent, Surrey, and Sussex Branches	Dr. A. TENNYSON SMITH	Unopposed.
SCOTLAND.		
Aberdeen, Northern Counties, Dundee, and Perth Branches	Dr. JOHN GORDON	Unopposed.
Edinburgh and Fife Branches	Dr. J. R. HAMILTON	Unopposed.
Glasgow and West of Scotland Branch (4 City Divisions)	Dr. JOHN ADAMS	Unopposed.
Glasgow and West of Scotland (5 County Divisions), Border Counties, and Stirling Branches	Dr. J. LIVINGSTONE LOUDON	Unopposed.
IRELAND.		
Connaught and South-Eastern of Ireland Branches	Mr. DENIS WALSHE	Unopposed.
Leinster Branch	Professor ARTHUR HAMILTON WHITE	Unopposed.
Munster Branch	Professor H. CORBY, M.D.	Unopposed.
Ulster Branch	Mr. R. J. JOHNSTONE	Unopposed.
COLONIAL RETURNS.		
New South Wales and Queensland Branches	Dr. C. J. MARTIN, F.R.S.	
New Zealand Branch	Dr. DAVID EWART.	
Assam, Baluchistan, Bombay, Burma, Punjab, South Indian, and Madras Branches	Captain S. H. LEE ABBOTT, I.M.S.	
Ceylon, Hong Kong and China, and Malaya Branches	Mr. CHARLES T. GRIFFIN.	
South Australian, Tasmanian, Victorian, and Western Australian Branches	Dr. W. T. HAYWARD.	

CENTRAL COUNCIL ELECTIONS, 1914-15.

Metropolitan Counties Branch.

There was only one contest this year in the election of the Central Council. This took place in the Metropolitan Counties Branch. Ten candidates were nominated; last year the number was six. The election was conducted under the proportional system, the transferable vote being again employed.

The Transferable Vote.

This method of voting is becoming more familiar, but nevertheless it may be of value to state once more its essential features. Each elector has one vote, which he records by placing the figure "1" against the name of the candidate he most prefers. The vote is credited to the candidate so marked. In order, however, to ensure an equitable result the vote is made transferable. The elector, by marking the figures "2," "3," "4," etc., against the names of other candidates in the order of his choice, can indicate to whom he desires his vote to be transferred in the event (1) of his favourite obtaining more votes than the number required for election, or (2) obtaining so few as to be at the bottom of the poll, even after the transfer of the surplus votes of elected candidates. The number of votes required for election is called the "quota," and is a specified proportion of the total number of votes polled. When only one member is to be elected the quota is one more than one-half of the total; when two members are to be elected the quota is one more than one-third; when three members are to be elected the quota is one more than one-fourth; and when, as in this election, four representatives are to be chosen, the quota is one more than one-fifth.

As in previous elections, a few electors ignored the instructions given to them and placed a cross instead of the figures "1," "2," "3," etc., against the names of candidates. A few others contented themselves with marking their first preference. The papers of the latter were valid, but in the absence of any indication of further preferences were non-transferable. With this system no advantage can accrue to a candidate from plumping. The vote is only transferred when the candidate to whom it has been given in the first place can no longer make effective use of it.

First Count: Election of Dr. Smith.

The ballot papers were first sorted according to the names marked "1" for the purpose of ascertaining the number of votes obtained by each candidate. The result of the sorting was as follows:

	Votes.
Dr. F. J. Smith	205
Mr. H. B. Brackenbury	173
Dr. Charles Buttar	159
Dr. James Galloway	141
Dr. Greenwood	81
Dr. M. G. Biggs	77
Mr. J. T. Richards	48
Mr. H. H. Tomkins	41
Mr. E. C. Montgomery-Smith	39
Mr. H. J. Cardale	36
Total	991

As there were four vacancies, the quota necessary for election was 199. This was found by dividing the total number of votes, 991, by 5 (one more than the number of seats), and adding one to the result.

Transfer of Surplus Votes.

Dr. Smith was the only candidate who obtained more than the quota of votes, and he was therefore the first to be declared elected. His ballot papers were re-sorted according to the second preferences marked upon them, and his excess votes (six) were distributed in proportion among the candidates so marked, Dr. Buttar receiving two and Drs. Biggs, Galloway, Greenwood, and Mr. Montgomery-Smith one each. These small additions made no change in the relative position of candidates.

Exclusion of Lowest Candidate.

As no candidate now had more votes than a quota, the candidate with the fewest votes—Mr. Cardale—was then excluded from the contest, and his votes were transferred to the second preferences named by his supporters, Mr. Richards receiving 12, Mr. Brackenbury 10, Dr. Galloway 9, and Dr. Major Greenwood 5 votes. These were added to the previous totals of these candidates, after which the state of the poll was:

	Votes.
Dr. F. J. Smith	199 (*elected*)
Mr. Brackenbury	183
Dr. Buttar	152
Dr. Galloway	151
Dr. Greenwood	87
Dr. Biggs	73
Mr. Richards	60
Mr. Tomkins	41
Mr. Montgomery-Smith	40
Total	991

Further Exclusions.

The next candidate to be excluded was Mr. Montgomery-Smith. One of his papers was found to be non-transferable, but the remaining 39 showed next preferences as follows: Dr. Biggs 17, Dr. Buttar 15, Dr. Greenwood 5, Dr. Galloway 3, and Mr. Brackenbury one.

Mr. Tomkins was next excluded. Six of his papers were non-transferable; of the others Dr. Greenwood received 16, Dr. Biggs 6, Dr. Galloway 6, Mr. Brackenbury 5, Dr. Buttar 1, and Mr. Richards 1.

Mr. Richards was then at the bottom of the poll with 61 votes, and his papers were transferred, Dr. Galloway receiving 30, Mr. Brackenbury 28, Dr. Greenwood 2, and Dr. Biggs 1. The poll then stood as follows:

	Votes.
Dr. F. J. Smith	199 (*elected*)
Mr. Brackenbury	217
Dr. Galloway	190
Dr. Buttar	158
Dr. Greenwood	103
Dr. Biggs	102
Non-transferable	7
Total	991

Election of Mr. Brackenbury and Dr. Galloway.

Mr. Brackenbury's total now exceeded the quota, and he was the second candidate to be declared elected. His surplus votes, 18, which had originally been given to Mr. Richards or Mr. Cardale, fell nearly all to Dr. Galloway. Indeed, nearly all of these papers showed no preferences save for the four candidates named. The result of the transfer was to bring Dr. Galloway's total to the quota, and he was the third candidate to be declared elected. The position of the poll was then as follows:

	Votes.
Dr. F. J. Smith	199 (*elected*)
Mr. Brackenbury	199 (*elected*)
Dr. Galloway	199 (*elected*)
Dr. Buttar	158
Dr. Greenwood	109
Dr. Biggs	103
Non-transferable	14
Total	991

Election of Dr. Buttar.

At this stage three candidates had been elected, and only one seat remained to be filled. The candidate lowest on the poll—Dr. Biggs—was excluded, and of his 103 votes 76 showed a next preference for Dr. Buttar, and 15 for Dr. Greenwood, whilst 12 papers were not transferable. Dr. Buttar was thereby elected as fourth representative, the final state of the poll being as follows:

	Votes.
Dr. F. J. Smith	199 (*elected*)
Mr. H. B. Brackenbury	199 (*elected*)
Dr. James Galloway	199 (*elected*)
Dr. Charles Buttar	244 (*elected*)
Dr. Greenwood	124
Non-transferable papers	26
Total	991

A list of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian, at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 2 p.m.).

British Medical Association.

EIGHTY-SECOND ANNUAL MEETING, ABERDEEN, JULY, 1914.

The Eighty-second Annual Meeting of the British Medical Association will be held in Aberdeen in July, 1914. The President's Address will be delivered on Tuesday, July 28th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 24th, at 10 A.M.

PROVISIONAL PROGRAMME.

The following is the provisional time-table for the Aberdeen Meeting:

FRIDAY, JULY 24TH.

10 A.M.—Annual Representative Meeting.

SATURDAY, JULY 25TH.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 27TH.

9.30 A.M.—Council Meeting.
10 A.M.—Representative Meeting.

TUESDAY, JULY 28TH.

9 A.M.—Exhibition of Surgical Instruments, Drugs, etc. The Exhibition will remain open until 6 p.m. on this and the three following days.
9.30 A.M.—Representative Meeting.
2 P.M.—Annual General Meeting.
8.30 P.M.—Adjourned General Meeting, President's Address.

WEDNESDAY, JULY 29TH.

9 A.M.—Religious Services.
9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Medicine.
2.30 P.M.—Secretaries' Conference followed by Dinner.
3.30 P.M.—Garden Party in Duthie Park.
8.30 P.M.—Reception by University in Marischal College.

THURSDAY, JULY 30TH.

8 A.M.—National Temperance League Breakfast.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Address in Surgery.
7.30 P.M.—Annual Dinner.

FRIDAY, JULY 31ST.

9 A.M.—Council Meeting.
10 A.M. to 1 P.M.—Sectional Meetings.
12.30 P.M.—Graduation Ceremony in Marischal College.
6 P.M.—Annual Exhibition closes.
8.30 P.M.—Reception by Branch (Music Hall).

SATURDAY, AUGUST 1ST.

Excursions.

RECEPTION ROOM.

THE reception room will be open during the annual meeting in the Advocates' Hall, Broad Street, Aberdeen, and members are advised to call there as soon as possible after their arrival in Aberdeen. They will there find full information at their disposal and will be able to obtain a copy of the daily journal.

RELIGIOUS SERVICES.

THE annual service for the Association will be held in the West Parish Church of St. Nicholas at 9 a.m. on Wednesday, July 29th. At the same hour a Roman Catholic service will be held in St. Mary's Cathedral, and a service of the Episcopal Church in Scotland in the Cathedral Church of St. Andrew's.

ANNUAL EXHIBITION.

THE annual exhibition of surgical instruments, drugs, foods, etc., held during the annual meetings of the British Medical Association, will be arranged this year in the Marischal College, where also the Sections will meet, where the General and Representative Meetings of the Association will take place, and where the Addresses in Medicine and Surgery will be delivered. The exhibition on this occasion will, therefore, occupy a central and convenient position, and members will have an excellent opportunity of inspecting the exhibits.

THE JOURNEY TO ABERDEEN.

RAILWAY facilities similar to those offered in previous years will be available this year—that is to say, return tickets, valid from July 22nd to August 3rd, will be issued at a single fare and a third on the presentation of a voucher, which will be supplied, to members who intend to go to Aberdeen, by the Financial Secretary and Business Manager, British Medical Association, 429, Strand, London, W.C., on receipt of the notification form. A separate voucher is required for each passenger. Members travelling from the south may like to be reminded that they can make the journey from London by sea. The boats of the Aberdeen Steam Navigation Company, which are lighted by electricity and in every way well appointed, sail from Aberdeen Wharf, Limehouse, E., every Wednesday and Saturday (see advertisement, page 12). The return fares, available for six months, are first cabin 45s., second cabin 25s.; private cabins can be obtained for an extra fee. A boat will leave on Wednesday, July 22nd, at 11 a.m., and on Saturday, July 25th, at 1 p.m. Further particulars will be published or can be obtained on application to the company at Aberdeen Wharf, Limehouse, or the City Passenger Agency, 25, Cannon Street, E.C.

RAILWAY FACILITIES FOR MEMBERS STAYING IN THE NEIGHBOURHOOD OF ABERDEEN.

DURING the meeting reduced fares, with a minimum of 1s., will be granted to places within a radius of fifty miles from Aberdeen. Members who propose travelling to and from Aberdeen daily should use the first half of the ticket on the first journey and the return half on the last journey; the reduced fares for the intermediate journeys will be granted on production at the time of booking of the card of membership.

Weekly Season Tickets.

Members staying at Banchory or Cruden Bay can obtain season tickets enabling them to travel to and from Aberdeen daily during the week of the annual meeting at the following rates: Cruden Bay, 10s.; Banchory, 8s. 8d. The season tickets will be issued from intermediate stations at proportional rates.

On the Caledonian Railway to Stonehaven and intermediate stations, during the Meeting, return tickets will be issued at Aberdeen to places where members wish to reside. These tickets will be available for the day of issue or following day, or from Saturday to Monday, at a single fare and a third for the double journey, minimum 1s. Season tickets are also available for more than one journey, at a charge of not less than the accumulated fares per day as above, the minimum being 1s. a day.

ACCOMMODATION IN ABERDEEN.

A LIST of hotels and lodgings available in Aberdeen during the Annual Meeting is published in the advertisement pages (8 and 9) of this issue. Members desiring further information on this subject are asked to communicate with Dr. F. Philip, Honorary Secretary of the Hotels and Lodgings Committee, 29, King Street, Aberdeen.

At a recent meeting of the General Committee, consisting of influential citizens, the intention to give a hearty welcome to members of the Association was made evident, and a very large amount of private hospitality is likely to be offered. The Local Executive Committee hopes that members will not be led by the answers they may get from some of the hotels to suppose that the accommodation available in Aberdeen is filled up; any member who finds difficulty in finding accommodation should not hesitate to communicate either with Dr. F. Philip, as above, or with Dr. Thomas Fraser, one of the honorary local secretaries, at the same address.

EXCURSIONS.

ARRANGEMENTS are being made to afford to members attending the annual meeting opportunities of visiting many places of beauty and interest in the north-east of Scotland and the Highlands. Some preliminary particulars were published in the SUPPLEMENT to the JOURNAL of last week, and further articles giving the latest particulars with regard to such arrangements will be

published at an early date. It is desirable that members should make up their minds as to the excursion or excursions they wish to take as early as possible, and that they should communicate their preference to Mr. G. H. Colt, F.R.C.S., 12, Bon Accord Square, Aberdeen.

Members of the Representative Body should note that arrangements have been made by members in Aberdeen for a special train to Cruden Bay on Sunday, July 26th, leaving Aberdeen in the morning and returning the same evening. Representatives who wish to take part in this excursion should send their names to Mr. Colt as early as possible, and in any case not later than June 30th.

As was noted last week, it will be possible during the meeting to make afternoon excursions to many places of interest within easy reach of Aberdeen, and longer tours have been arranged for Saturday, including one to Inverness, Elgin, Nairn, and the Highlands. There will also be some tours of intermediate length on Wednesday, starting early in the afternoon and returning to Aberdeen in the evening.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1914.

DATE OF MEETING.

The Annual Representative Meeting of the Association, 1914, will be held at Aberdeen on Friday, July 24th, 1914, and following days as may be required.

AMENDMENTS BY DIVISIONS AND BRANCHES FOR AGENDA.

Any further notices of amendment by Divisions or Branches to paragraphs of the Annual Report of Council (Supplement, May 2nd), or in connexion with the Provisional Agenda for the Annual Representative Meeting (Supplement, May 9th), will be published in the Supplement of June 27th, 1914, if received by me by first post on Monday, June 22nd, at latest.

All such notices published in the Supplement of June 27th will be included in the final printed Agenda issued to members of the Annual Representative Meeting. That Agenda will also include, in addition to the Provisional Agenda already published and to items arising out of the Supplementary Report of Council (to be published in Supplement of June 27th), all notices of motion or amendment by Divisions or Branches received by me up to and including the first delivery on Monday, July 13th, 1914, and found by the Chairman of Representative Meetings to be in order.

By Order,
Alfred Cox,
Medical Secretary.

May 13th, 1914.

QUARTERLY MEETING OF COUNCIL.

The Quarterly Meeting of Council will be held on Wednesday, June 24th, at 10 a.m., in the Council Room, 429, Strand, London, W.C.

By order,
Guy Elliston,
Financial Secretary and Business Manager.

June 4th, 1914.

CHANGES OF BOUNDARIES.

Southampton and Winchester Divisions.

The following changes have been made in accordance with the Articles and By-laws of the Association, and take effect as from the date of publication of this notice:

That the area of the Southampton Division be coterminous with that of Southampton county borough, and that the remainder of the present area of the Division be transferred to the Winchester Division.

Representation in Representative Body.—The representation of these Divisions in the Representative Body 1914–15 has already been decided by the Council on the basis of the 1914 Annual List of Members, each to be an independent constituency. The representation of the Divisions in the Representative Body 1915–16 will be such as may at a later date be determined by the Council.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Birmingham Branch: Central Division.—Drs. Ernest C. Hadley (Burbury Street, Lozells) and Bernard J. Ward (141A, Great Charles Street), Honorary Secretaries, give notice that the annual meeting of the Division will be held at the Medical Institute, Edmund Street, on Wednesday, July 1st, at 3.30 p.m. Business: Election of officers, six Representatives upon the Branch Council and seven members of the Executive Committee. To receive Representatives' report of Special Representative Meeting. To receive annual report of Executive Committee, and, if approved, adopt. To instruct Representatives for Annual Representative Meeting. (Members are particularly requested to bring with them British Medical Journal Supplements of May 2nd, May 9th, June 13th, and June 27th.) An ethical case.

Border Counties Branch.—Dr. George R. Livingston, Honorary Secretary (47, Castle Street, Dumfries), gives notice that the forty-seventh annual general meeting of the Border Counties Branch will be held in the Station Hotel, Carlisle, on Friday, July 3rd, at 3.45 p.m., when the President-elect (Dr. Fisher, of Whitehaven) will deliver his presidential address on national health insurance.

Cambridge and Huntingdon.—Dr. G. S. Haynes, Honorary Secretary (King's Lane, Cambridge), gives notice that the seventieth annual general meeting will be held at the Corn Exchange, St. Ives, Hunts, on Thursday, July 2nd.—12.20 p.m., business meeting, election of officers, etc.; 1.15 p.m., luncheon to members and their wives by the kind invitation of the President-elect, Dr. W. R. Grove; 3 p.m., presidential address.

Dorset and West Hants Branch.—Dr. Frank Fowler, Honorary Secretary (29, Poole Road, Bournemouth), gives notice that the summer meeting of the Dorset and West Hants Branch will be held at the Town Hall, Bridport, on Wednesday, July 8th, at 3.30 p.m. Mr. C. Edwards, Vice-President, will read a paper, "Dr. Roberts, a Bridport Worthy." Dr. H. C. Manning will open a discussion on "The Theory and Practice of Tuberculin Treatment." The Bridport practitioners very kindly invite members to luncheon at the Greyhound Hotel (1.30 to 2.30), and Mr. and Mrs. Edwards, Granville House, have kindly offered to give tea. By kind permission of the Mayor, the Municipal Archives will be on view at the Town Hall from 2.30 to 3.30. The West Dorset Golf Club kindly offer members the free use of the club at West Bay. Plans of the proposed new Bridport Hospital will be on view.

East York and North Lincoln Branch.—Dr. H. L. Evans, Honorary Secretary, gives notice that the annual meeting of this Branch will be held in Hull on Friday, July 10th. Accounts, election of officers, etc.

Edinburgh Branch.—Drs. John Stevens and John Eason, Honorary Secretaries, give notice that the annual meeting of the Edinburgh Branch will be held in the hall of the Royal College of Surgeons, Nicolson Street, on Friday, June 26th, at 4 p.m. Tea will be served from 3.30 to 4 o'clock. Business:—Report of Branch Council. Treasurer's financial statement. Election of office-bearers. Report of election of Dr. J. R. Hamilton as member of Council for the Edinburgh and Fife Branches for 1914–15. Scottish Committee: (1) Report of proceedings—contract practice, midwives' bills, etc.; (2) proposal for appointment of whole-time Medical Secretary for Scotland. (Motion: "That the whole-time Medical Secretary for Scotland and his entire staff should be located in Edinburgh." (Unanimous recommendation of Branch Council.)) Election to vacancy on the board of management of the Queen Mary Nursing Home; Branch Council nominate Dr. W. R. Martine, Haddington. Local Guarantee Fund: (1) Report of Branch Council's action—(*a*) Levy called up; (*b*) Decision to return the balance left, after paying expenses, to those who subscribed. (2) Recommendation by Branch Council that this fund should now be abrogated. National Insurance—prospective legislative changes: (1) For provision of laboratories and nurses; (2) proposal *re* medical referees. Rules of the Edinburgh Branch: Recommendation of Branch Council—(1) That the Branch give instructions for their revision and submission to a future meeting; (2) proposed new rule—"That one Honorary Secretary of each Division be *ex officio* a member of the Branch Council."

Metropolitan Counties Branch.—Dr. R. E. Crosse and Mr. N. Bishop Harman, Honorary Secretaries, give notice that the annual general meeting of the Branch will be held at 429, Strand, W.C., on Friday, June 26th, at 4 p.m. The business will be: Report of Scrutineers as to the election of new officers; Annual Reports of Council and of Representatives of the Branch on the Central Council, and the President's Address, "Some Observations on Modern Vascular Problems."

Metropolitan Counties Branch: Greenwich and Deptford Division.—Dr. W. H. Payne, Honorary Secretary (8, Vesta Road, Brockley, S.E.), gives notice that the annual meeting of the Greenwich and Deptford Division will take place at the St. John's Church Room, Lewisham High Road, on Wednesday, June 24th. Business: (1) To receive the annual report; (2) to elect the officers, Representatives, and Executive Committee for the ensuing year; (3) to instruct the Representative; (4) any other business.

MIDLAND BRANCH: HOLLAND DIVISION.—Dr. R. Taxford, Honorary Secretary (12, Wide Bargate, Boston), gives notice that a meeting of the Holland Division will be held at the White Hart Hotel, Boston, on Friday, June 26th, at 3.45 p.m., to consider matters referred to Divisions (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, June 13th). Tea will be provided at the hotel.

NORTH OF ENGLAND BRANCH.—Dr. James Don, Honorary Secretary (1, Grove Street, Newcastle-on-Tyne), gives notice that a meeting of the Branch Council will be held at the Royal Victoria Infirmary, Newcastle-on-Tyne, on Tuesday, June 23rd, at 4 p.m., at which all surgeons on the acting staffs of the various general and cottage hospitals within the area of the Branch are invited to be present, with a view to conferring with the Branch Council and fixing a suitable flat rate for the operative treatment of tuberculous cases in hospitals.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—Dr. J. Livingston, Honorary Secretary (2, Hartington Street, Barrow-in-Furness), gives notice that the annual meeting of the Branch will be held in the Friends' Hall, Lancaster, on Wednesday, June 24th, at 3.45 p.m. Agenda: (1) Report of Council. (2) Statement of accounts. (3) Election of office-bearers. (4) Introduction of new President, Mr. A. S. Barling. (5) Vote of thanks to retiring President, Dr. F. E. Daniel. (6) President's address. Subject: "Operations for the Cure of Hernia." To be followed by a discussion. Messrs. Down Bros. will exhibit a large selection of surgical instruments, and Messrs. Baillière, Tindall, and Cox a number of new books. In order to make the meeting as instructive as possible, members are requested to bring cases and specimens of interest. The President hopes that all members and their friends will take tea with him, and Dr. Livingston asks those intending to accept this hospitality to be good enough to give him a few days' notice so that suitable arrangements may be made.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—Dr. P. S. Hichens, Honorary Secretary (47, Sheep Street, Northampton), gives notice that the annual meeting of the Northamptonshire Division will be held on Thursday, July 2nd, in the board room of the Northampton General Hospital, at 2.30 p.m. The meeting will be preceded by a meeting at Franklin's Restaurant, at 1.30 p.m. Those wishing to be present should notify the Secretary two days beforehand. Agenda: Election of officers for the ensuing year. Consideration of agenda for Annual Representative Meeting.

SOUTHERN BRANCH.—Dr. James Green, Honorary Secretary (Brandon House, Mile End, Landport, Portsmouth), gives notice that the forty-first annual meeting of the Southern Branch will be held at the South-Western Hotel, Southampton, on Thursday, July 9th, at 1 o'clock. Agenda: Correspondence. Election of officers for 1914–15 (scrutineers' report). Annual report of Council. Balance sheet. Council's recommendation *re* travelling expenses of secretaries of Divisions. Adoption of new rules of organization. Alterations of rules of golf competition. General business. At the conclusion of the business the President for the coming year (Mr. G. H. Cowen) will take the chair and deliver an address. Mr. Cowen invites the members to luncheon at the hotel, at 1.45, and to afternoon tea, to which ladies are invited, at 4 o'clock. The golf competition will be played off at the Stoneham Golf Club directly after luncheon. Excursions will also be arranged. Members intending to accept the President's hospitality will oblige by sending word to that effect to Dr. W. A. Simpson, 3, Waterloo Road, Southampton, as early as possible, but not later than July 6th.

SOUTH-WESTERN BRANCH.—Mr. Russell Coombe, Honorary Secretary, gives notice that the seventy-fifth annual meeting will be held on Tuesday, June 23rd, at the Royal Hotel, Plymouth, at 12.30 p.m., when Mr. Eales will resign the chair to Mr. Woollcombe. The report of the Branch Council for the year 1913-14 and the annual financial statement for the year 1913 will be presented to the meeting, and the officers of the Branch will be elected for the year 1914-15. Luncheon, by the kind invitation of the President-elect and members of the Plymouth Division, will take place from 1.30 p.m. to 2.30 p.m. at the Royal Hotel. The annual dinner of the Branch will be held at the Royal Hotel at 7 o'clock for 7.30 prompt. Tickets, 6s. 6d. each (exclusive of wine), can be had from Dr. Pinker, 10, Braidwood Terrace, Mutley, Plymouth. Early applications for dinner tickets will greatly facilitate arrangements, and in any case they should be made not later than the first post on Monday, June 22nd. The President is especially desirous of making the dinner a leading feature. To facilitate this he has intimated his desire to entertain those ladies accompanying members coming from outlying Divisions as his guests at the annual dinner of the Branch. Excursions (at 2.30 p.m.)—(1) Visit to H.M. Dockyard and inspection of modern battleships; (2) excursion to Bantham (Dr. E. L. Fox will entertain visitors at tea); (3) golf on Mt. Batten links. Members wishing to be accommodated with bed and breakfast are requested to send their names to Mr. E. J. Donbavand, Plymstock, South Devon, who will endeavour to arrange for them.

STAFFORDSHIRE BRANCH.—Dr. Harold Hartley, Honorary General Secretary (Basford, Stoke-on-Trent), gives notice that the forty-first annual meeting of the Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, June 25th, at 4.30 p.m., when an address will be delivered by the President-elect, Dr. J. Russell. Agenda: Introduction of the new President; Correspondence; report of the Council; the financial statement; election of officers for the ensuing year—President-elect, Secretary, and Treasurer; to decide the place of holding the next annual meeting; address by the President. Members have the privilege of introducing friends. Dinner at 6.45 p.m. Charge 5s.

SUSSEX BRANCH.—Dr. A. S. Morton Palmer, Honorary Secretary, *pro tem.* (103, Marine Parade, Worthing), gives notice that the first annual meeting of the Sussex Branch will be held in Worthing, on Friday, June 26th, at 2.30 p.m., preceded by a meeting of the Council of the Branch at 12 noon, and luncheon by kind invitation of Dr. Gostling, Chairman of the Branch. After the transaction of ordinary business and a short presidential address, cinematograph films of medical interest will be shown. At 5 p.m. members are kindly invited by Dr. and Mrs. Gostling to a garden party at Barningham. Members are requested to notify Dr. Palmer at their earliest convenience whether they will be present at the lunch or no.

WEST SOMERSET BRANCH.—Dr. Charles Farrant, Honorary Secretary (Shrapnels, Taunton), gives notice that the seventy-second annual meeting will be held at the Clarence Hotel, Bridgwater, on Friday, June 26th, at 12.30 p.m., when the new President (Dr. W. C. G. Collins, M.D.) will take the chair. Agenda: Annual report. Balance-sheet for 1913. Election of President-elect. Election of officers. Appointment of Ethical Committee. Dr. J. A. Macdonald, M.D., LL.D., Chairman of the Council, has kindly consented to relate his recent experiences in Australasia. Luncheon will be provided at 2 p.m., for which the charge will be 3s., exclusive of wine. After lunch the members are invited to Cannington, where the golf links will be open for play. Dr. Collins has also arranged for an exhibition of boxing by the boys of the Cannington Industrial School, and kindly invites the members to tea and play tennis. Members proposing to be present at the luncheon are requested to notify Dr. Farrant as soon as possible, so that adequate arrangements may be made.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—Mr. S. Colin Legge, Honorary Secretary (24, Foregate Street, Worcester), gives notice that the annual meeting of the Worcestershire and Herefordshire Branch will be held at the Worcester General Infirmary, at 3.30 p.m., on Wednesday, June 24th. Agenda: (1) Report of Council; (2) election of office-bearers; (3) the retiring President, Mr. J. Lionel Stretton, will deliver an address and introduce his successor, Mr. Herbert Jones.

Meetings of Branches and Divisions.

BATH AND BRISTOL BRANCH:

TROWBRIDGE DIVISION.

A MEETING of the Trowbridge Division was held at the Town Hall, Trowbridge, on May 27th, when Dr. FERGUSON was in the chair, and twelve other members were present.

Annual Report of Division.—The SECRETARY presented the annual report and financial statement, which was approved.

Election of Officers.—The following officers were elected:

Chairman: Dr. Rumboll.
Vice-Chairman: Dr. Flemming.
Honorary Secretary: Dr. Bond.
Representatives on Branch Council: Drs. Rattray, Adye, and F. E. Tayler.
Executive Committee: Drs. Locket, Ferguson, and Adye.
Representative: Dr. Flemming.
Deputy Representative: Dr. Tubb-Thomas.

Annual Report of Council.—The annual report of Council and the provisional agenda of the Representative Meeting were considered and approved, with the following modifications:

Par. 94. Recommendation F (Dental Clinics). Stress should rather be laid on the fact that clinics are calculated to diminish the amount of sickness.

Par. 113. (Telephones). Medical men should be charged as private individuals, and not as traders, as they tend to induce other people to subscribe.

Par. 152. Recommendation D (Free Choice). The meeting disapproved of the recommendation.

Prosposed special fund. The meeting considered that the proposal should be deferred, pending the report of the committee appointed at the meeting of Representatives of Local Medical and Panel Committees.

Appendix IX. Memorandum on the reasons why medical men will not accept service under the National Insurance Acts. The meeting strongly disapproved of the memorandum.

Vote of Thanks.—On the motion of Dr. Tubb-Thomas, seconded by Dr. Adye, it was resolved:

That the thanks of the meeting be given to Dr. Ferguson for his services as Chairman during the past year.

KENT BRANCH.

The first annual meeting of the Kent Branch was held on June 12th at Maidstone, and the attendance of members augurs well for the success of the new Branch.

Meeting of Council.—The Council met in the morning, and twelve members were present. A cordial invitation from the Tunbridge Wells Division to the Branch to visit that town in 1915 was accepted. Dr. Raven, Secretary of the East Kent Science Committee, reported the arrangements made for scientific work in that area, and said that he had promise of support from a large number of practitioners, and looked forward to a successful session. A grant was made towards necessary expenses. Dr. Will was appointed Secretary for the West and South Kent area, and a Secretary was nominated for North and Mid-Kent area to organize scientific work on similar lines. Non-members will be invited to these meetings during the first year at least. Two candidates were elected members of the Association. The financial reports of the Divisions were considered and grants made. The request of the Sevenoaks members, supported by the Tunbridge Wells and the Maidstone Divisions, to constitute Sevenoaks a separate Division was approved and forwarded to the Council of the Association. The Secretary was instructed to communicate with the Divisions and suggest that each Division should arrange for a uniform "contract practice" rate throughout its area.

The Branch met at the Town Hall. Dr. Douglas, President, was in the chair, and forty-eight members were present.

Luncheon.—Prior to the meeting Dr. Douglas, the President, entertained about fifty members to lunch at the Royal Star Hotel.

Election of Officers.—The following officers were declared duly elected for 1914–15:

President: Dr. Wm. Douglas (Goudhurst).
President-elect: Dr. Claude Wilson (Tunbridge Wells).
Vice-Presidents: Dr. John Scott (Eden Bridge), Mr. A. H. B. Hallowes (Maidstone).
Honorary Secretary and Treasurer: Dr. E. A. Starling (Tunbridge Wells).

Annual Report.—The report stated the Branch was organized and recognized on November 15th, 1913, with a membership of 520. The balance stood at £34 5s. 6d. on December 31st, 1913.

Vote of Thanks.—Drs. D. Davies and C. Elliott were thanked for past services and re-elected auditors, and Dr. C. C. Lord was thanked for his services on the Council of the Association.

Medical Treatment of School Children.—Dr. A. Tennyson Smith referred to the medical treatment of school children and proposed a resolution, which was seconded by Dr. Hugh Smith and carried, urging members to remember that the policy of the Branch is to act collectively and not individually in this matter; and also to refer all overtures made to them to the committee appointed by the Branch to deal with that subject.

Presidential Address.—The President delivered an address dealing with the history of Maidstone, and referred specially to Allington Castle and Leeds Castle, which the members afterwards visited by the invitation of Sir Martin and Lady Conway (who entertained their visitors), and Mr. and Mrs. C. P. Wykeham Martin respectively.

Annual Dinner.—The dinner was held at the Royal Star Hotel, where twenty-eight members and friends dined under the presidency of Dr. Wm. Douglas.

PERTH BRANCH.

The summer meeting of the Perth Branch was held at Perth on June 12th, when Dr. Taylor, President, was in the chair, and twelve other members were present.

Branch Boundaries.—The meeting confirmed the recommendation of the Branch Council that the Branch boundaries should be coterminous with the national insurance area—that is, those of the county of Perth.

Election of Officers.—The following were appointed:

President: Dr. Burnet, vice Dr. Taylor, retiring.
President-elect (Vice-President): Dr. Parker Stewart.
Secretary: Dr. Lyell (reappointed).
Treasurer: Dr. Hume (reappointed).
Representative to Annual Meeting: Dr. Haig (reappointed).
Branch Council: Drs. Haig, Bisset, Gunn, Menzies, and Major Williams. Dr. Trotter co-opted as Secretary of Local Medical and Panel Committees.

Conference with Pharmaceutical Society.—The meeting approved of a conference being held between representatives of the Association and the Pharmaceutical Society with regard to the drug tariff for the succeeding year.

Model Scheme for Treatment of Tuberculosis.—The meeting approved of the scheme (Supplement, April 4th), and authorized the Representative to express this view at the annual meeting.

Midwives (Scotland) Bills.—The Secretary stated that there were two bills before Parliament, one by the Lords and one by the Commons, and read the recommendation of the Scottish Committee that local members of Parliament should be approached by Branches with a view to supporting the House of Lords bill, as being the better of the two. The Secretary was asked to write to the members for the city and county to this effect.

Perth Water and Drainage.—The Secretary was asked to write to the M. O. H. to inquire if anything was being done to remedy the present unsatisfactory state of matters, and to report the answer received.

SOUTHERN BRANCH:
Salisbury Division.

The annual general meeting of the Salisbury Division was held at the infirmary on May 27th, when Dr. J. E. Gordon was in the chair.

Annual Report of Division.—The annual report was read, and the Secretary produced the balance sheet for December 31st, 1913, the balance in hand being £5 14s. 3d. The report and balance sheet were passed. It was again decided to give the sum of £2 2s. to the Salisbury Infirmary as a recognition of kindness in allowing the Divisional meetings to be held at the infirmary.

Annual Representative Meeting.—The meeting considered the annual report of the Council, and decided to instruct the Representative to support the recommendations of the Council as published in the Supplement of May 22nd.

Election of Officers.—The following officers were elected:

Chairman: Dr. J. E. Gordon.
Vice-Chairman: Dr. G. C. B. Kempe.
Secretary and Treasurer: Dr. J. Armitage.
Representative of Division: Dr. J. E. Gordon.
Representatives on Branch Council: Drs. W. W. Ord and T. B. Henderson.
Executive Committee: Drs. L. D. Saunders, E. T. Fison, H. U. Gould, and L. S. Luckham.

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH.

SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for Research Scholarships, as follows:

1. An Ernest Hart Memorial Scholarship, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. Three Research Scholarships, each of the value of £150 per annum, for research into some subject relating to the causation, prevention, or treatment of disease.

Each Scholarship is tenable for one year, commencing on October 1st, 1914. A Scholar may be reappointed for not more than two additional terms.

The Conditions of the award of Scholarships are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

GRANTS.

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of Research into the Causation, Treatment, or Prevention of Disease. Preference will be given, other things being equal, to members of the medical profession, and to applicants who propose as subjects of investigation problems directly related to practical medicine.

The Conditions of the award of Grants are stated in the Regulations, a copy of which will be supplied on application to the Medical Secretary of the Association, 429, Strand, London, W.C.

Applications for Scholarships and Grants for the year 1914–15 must be made not later than Saturday, June 20th, 1914, in the prescribed form, a copy of which will be supplied by the Medical Secretary on application.

Each application should be accompanied by testimonials, including a recommendation from the head of the laboratory, if any, in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

ALFRED COX, *Medical Secretary.*

429, Strand, London, W.C.

INSURANCE NOTES.

SCOTLAND.

PRESENTATION TO DR. JAMES A. STEPHEN.

At a meeting of the medical practitioners held in Elgin on June 6th, Dr. James A. Stephen, Secretary of the Medical Practitioners' Association of Elgin and Nairn and of the Local Medical and Panel Committees, was made the recipient of a handsome gold watch, and a salad bowl for Mrs. Stephen, in recognition of their services during the past three years. Dr. Taylor, Chairman of the Panel Committee, made the presentation in a happy speech, and Dr. Stephen suitably replied.

THE DRUG FUND IN GLASGOW.

A meeting of Glasgow panel chemists was held on June 10th to hear a statement by the Burgh Pharmaceutical Committee regarding the present condition of the drug fund, the apparent probability of discounting accounts before the end of the year, and the general position in regard to insurance dispensing. It was resolved:

> That this meeting of Glasgow panel chemists, having heard the reasons given by the Scottish Commissioners for refusing the revision of the drug tariff at this date, promised by Mr. Leishman at the mass meeting in Edinburgh in October, 1913, expresses its deep disappointment that the Commissioners find themselves unable to keep faith with Scottish chemists.

A motion that the meeting recommend Glasgow chemists to send in notices of withdrawal at once was strongly supported, but was not carried, and the meeting pledged itself to support the General Council in taking the strongest possible measures to obtain satisfactory conditions before entering on a new agreement for 1915.

IRELAND.

MEDICAL CERTIFICATION.

A deputation of the Irish Medical Committee, consisting of Dr. R. A. Johnstone (Belfast), Dr. Maurice Hayes (Dublin), Dr. Rowlette (Dublin), and Dr. Thomas Hennessy, secretary of the Irish Committee of the British Medical Association, had an interview with Mr. Masterman, chairman of the Joint Committee of Insurance Commissioners, on June 16th. The deputation was on the subject of certification for sick benefit of insured persons in Ireland. The deputation stated its objections to a whole-time or a part-time service for this purpose, and urged that the ordinary medical attendant on the insured should be the certifier. Mr. Masterman reserved his reply, but stated that he would give the facts brought to his notice his most careful consideration.

IRISH TRADE CONGRESS AND STATE MEDICAL SERVICE.

At the meeting of the Irish Trade Congress held in Dublin last week a Belfast delegate moved:

> That, in the opinion of the congress, the present panel system of obtaining medical certificates by insured persons in Ireland under the Insurance Act has proved a complete failure, both in regard to the interest of the insured person and the approved society; and they call upon the Chancellor of the Exchequer and the Irish Insurance Commission to institute a State medical service for all insured persons; and, failing that, that a State medical scheme be initiated for the purpose of issuing medical certificates to insured persons when ill.

Another delegate said that more attention should be paid to sanatorium benefits, which at the present time were inadequate; he knew of a village in the north where two families had been wiped out by tuberculous disease in one house, and no person afterwards would take the house, which was allowed to stand in the centre of the town until the roof fell in. A resolution was moved that the congress should affirm its belief that medical benefits under the Insurance Act should be at once extended to the whole of Ireland, as without such extension the Act was practically worthless to the country. Another proposal before the congress was that the dispensing system was totally unsuited to meet the requirements of insured persons, and, if the Act was to be made anything but a costly farce, immediate action should be taken to apply medical benefits to Ireland without waiting for any alteration in the Poor Law or the abolition of dispensaries. Amendments were proposed, and the resolution, altered so as to embrace these amendments, was adopted as follows:

> (1) That in the opinion of this congress a State medical service under the National Health Insurance Act should at once be set up in Ireland for all insured persons. (2) That the Act should be so amended as to make it non-contributory for all insured persons earning less than 30s. per week.

CORRESPONDENCE.

MEDICAL CERTIFICATION IN LONDON.

DR. A. GEORGE BATEMAN (General Secretary, Medical Defence Union) writes: It will be advisable for medical practitioners in the County of London to read carefully the terms of the agreement into which they have entered this year with their Insurance Committee in respect of their attendance upon insured persons. I would venture to call their attention to Clause 7 (ii) of their agreement, which has, I must confess, previously escaped my notice. In this clause it is enacted, "All certificates furnished by the practitioner under this agreement shall be written in ink and shall be signed by the practitioner in his own handwriting." If this be read as it is written, certificates cannot be signed by rubber stamp signature facsimile, and the body of the certificate cannot be in printed form such as is usually adopted. This is a reversal of the decision given last year, in which the court held that facsimile signatures were binding and valid, and in addition would make printed forms ineligible, thereby increasing once again the clerical work of the unfortunate panel practitioner.

As the matter of the duplicate prescription, also included in the agreement, is now under the consideration of His Majesty's judges I will not raise it here, but await their judgement.

UNALLOTTED FUNDS.

Dr. G. C. CRICHTON (London, S.W.) writes: The latest decision of the London Insurance Committee is undoubtedly a disappointment to every sensible person, whether pecuniarily interested or not. The subject is thrown back to the Subcommittee without clear expression of the mode in which the Committee thinks this comparatively simple matter may be settled. The one thing recognized is that the surplus belongs to the panel doctors for 1913, but it has taken twelve months to arrive even so far.

The statement made is that about £91,000 belonging to the doctors on the London panel remains to be paid to them. It is stated that this is money "accumulated in respect of persons who have not chosen a doctor." This is not quite correct. For every person accepted in March of last year (call him A.) the doctor has received 7s. But for every one accepted in August (call him B.) he has received only 2s. 7½d., or three-eighths of 7s. B. equally with A. has contributed 7s. to the accumulated funds by his direct payments and indirect taxation. (For every one who earns his living pays taxes.)

To whom, then, does this balance of 4s. 4½d. belong but to the doctor who has accepted him some time or other during the year? I confess I was rather puzzled that my later cheques were not much larger, and absolutely surprised when I was coolly informed that this plan was in force.

As to distributing the surplus now in the hands of the Insurance Committee, others besides myself have pointed

out that the first step should be to make up to the full amount the payments received on account of every insured person to the doctor who at any time during the past year had accepted him or her. This payment will not absorb the whole of the funds. Some considerable amount will be left for general distribution. It seems generally agreed that every one should share proportionately, with the proviso that those with a list over 2,000 should be counted up to 2,000 and no more. This appears the most reasonable course, although it may be argued for and against. I have wondered it had not been suggested to pay the surplus according to the number of persons attended, which could easily be found.

INSURANCE ACT IN PARLIAMENT.

District Insurance Committees (London).

Mr. Cassel asked whether any, and, if so, what powers had been assigned to the District Insurance Committees in the metropolitan boroughs, which were specially required to be set up by Section 59 of the National Insurance Act, 1911.—Mr. W. Benn replied that powers which might be delegated and assigned to District Committees were specified in the schemes framed by the Insurance Committees for the constitution of the District Committees. The London scheme set out the conditions for the delegation of certain powers in connexion with medical and sanatorium benefit to District Committees.

Sanatorium Benefit.

Mr. G. Locker-Lampson asked the President of the Local Government Board whether his attention had been called to statements made at a recent meeting of the Carmarthenshire Insurance Committee to the effect that of the thirty-eight persons recommended for sanatorium treatment three months previously only two had been admitted to a sanatorium, and to the reported admission by the Clerk to that Committee that there was a delay of quite two months in many cases, three months in some, and even four months in others; and whether he could do anything to secure for these consumptive persons the treatment they had been recommended and for which they had paid.—Mr. W. Benn replied that he was making inquiry into the circumstances.

Chemists' Accounts.

In reply to Mr. G. Locker-Lampson, Mr. Benn said that the chemists under contract with the West Hartlepool Insurance Committee had been paid only 70 per cent. of the total of their accounts in respect of insured persons for the quarter ending April, 1914. The quarterly payments to chemists could not be regarded as in settlement of the quarters' accounts, but were in the nature of advances on account of the sums due to them under their agreements after the close of the year. Information as to the position of other Insurance Committees in this respect could only be obtained by means of a special return from each.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In ninety-seven of the largest English towns 9,511 births and 4,687 deaths were registered during the week ended Saturday, June 13th. The annual rate of mortality in these towns, which had been 15.9, 15.3, and 15.2 per 1,000 in the three preceding weeks rose to 15.5 per 1,000 in the week under notice. In London the death-rate did not exceed 12.8, against 12.7, 11.8, and 12.7 per 1,000 in the three preceding weeks. Among the ninety-six other large towns the death-rate ranged from 6.1 in Wimbledon, 6.7 in Dewsbury, 6.8 in Enfield, 6.9 in Ilford, 7.2 in Cambridge, and 7.5 in Ipswich to 18.8 in Walsall, in West Bromwich, and in Sheffield, 19.3 in Barnsley, 20.3 in Liverpool, 21.2 in Grimsby, 21.4 in Middlesbrough, and 22.7 in Carlisle. Measles caused a death-rate of 1.2 in Liverpool and in Sheffield, 1.4 in Smethwick, in Oldham, and in Burnley, and 2.1 in Warrington; whooping-cough of 1.4 in Burnley and in South Shields, 1.5 in West Bromwich, and 1.8 in Darlington and in Stockton-on-Tees; and diphtheria of 1.0 in Sunderland, 1.1 in Walsall, and 1.2 in York. The mortality from enteric fever and scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The causes of 32, or 0.7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; of this number, 8 were recorded in Liverpool, 6 in Birmingham, 3 in Gateshead, and 2 each in Preston, Sheffield, and Sunderland. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,909, 2,910, and 2,970 at the end of the three preceding weeks, had further risen to 2,293 on Saturday, June 13th; 591 new cases were admitted during the week, against 415, 577, and 539 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the sixteen largest Scottish towns 1,204 births and 631 deaths were registered during the week ended Saturday, June 13th. The annual rate of mortality in these towns, which had been 16.1, 15.6, and 16.0 per 1,000 in the three preceding weeks, fell to 14.4 in the week under notice, but was 0.9 per 1,000 above the rate in the ninety-seven large English towns. Among the several towns the death-rate ranged from 8.1 in Hamilton, 8.8 in Kilmarnock, and 11.8 in Leith to 17.3 in Ayr, 17.6 in Motherwell and in Clydebank, and 18.2 in Coatbridge. The mortality from the principal infective diseases averaged 1.1 per 1,000, and was highest in Hamilton and Falkirk. The 300 deaths from all causes in Glasgow included 12 from whooping-cough, 6 from measles, 3 from infantile diarrhœa, 2 from diphtheria, 1 from scarlet fever, and 1 from enteric fever. Three deaths from scarlet fever were registered in Edinburgh; 2 deaths from measles in Dundee and 2 in Hamilton; and 2 deaths from whooping-cough in Falkirk.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, June 13th, 636 births and 413 deaths were registered in the twenty-seven principal urban districts of Ireland, as against 562 births and 385 deaths in the preceding period. These deaths represent a mortality of 17.9 per 1,000 of the aggregate population in the districts in question, as against 16.7 per 1,000 in the previous period. The mortality in these Irish areas was therefore 4.4 per 1,000 higher than the corresponding rate in the ninety-seven English towns during the week ending on the same date. The birth-rate, on the other hand, was equal to 27.5 per 1,000 of the population. As for mortality of individual localities, that in the Dublin registration area was 18.5 (as against an average of 19.9 for the previous four weeks), in Dublin city 19.8 (as against 21.3), in Belfast 16.9 (as against 16.6), in Londonderry 10.1 (as against 12.1), in Limerick 23.0 (as against 20.6), and in Waterford 13.3 (as against 17.1). The zymotic death-rate was 1.8, as against 1.6 in the previous week.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ABERDEEN UNIVERSITY.—Additional Examiners.

ABERDEENSHIRE: PARISH COUNCIL OF TYRIE.—Medical Officer. Salary, £30 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £150 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BETHLEM ROYAL HOSPITAL, S.E.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £300.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House-Surgeon (male). Salary, £120 per annum.

BIRMINGHAM: CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £200 per annum.

BIRMINGHAM CITY HOSPITAL.—Assistant Resident Medical Officer. Salary, £200 per annum.

BIRMINGHAM EDUCATION COMMITTEE.—Temporary Ophthalmic Surgeon or Surgeons. Salary, £100 per annum.

BIRMINGHAM: ROYAL ORTHOPAEDIC AND SPINAL HOSPITAL. Clinical Assistant. Honorarium, £25.

BIRMINGHAM UNION.—Second and Fourth Assistant Medical Officers at the Dudley Road Infirmary. Salary, £160 and £140 per annum respectively.

BOARD OF CONTROL (MENTAL DEFICIENCY ACT).—Medical Superintendent of a State Institution for Defectives to be opened near Liverpool. Salary, £800 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £110 per annum.

BOOTLE: BOROUGH HOSPITAL.—Senior and Junior House-Surgeons. Salary, £120 and £100 per annum respectively.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £100 per annum.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House-Surgeon. Salary at the rate of £100 per annum.

BURNLEY: VICTORIA HOSPITAL.—House-Surgeon. Salary, £135 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £150 per annum.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer. Salary, £120 per annum

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Infirmary and Children's Homes. Salary, £180 per annum, rising to £200.

CANCER HOSPITAL, Fulham Road, S.W.—Surgical Registrar. Honorarium, £100 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Honorary Surgeon.

CARDIFF: KING EDWARD VII HOSPITAL.—Two House-Surgeons. Salary, £60 per annum.

CHELSEA HOSPITAL FOR WOMEN.—Anaesthetist. Honorarium, £21 per annum.

CHESTER: CHESHIRE COUNTY COUNCIL.—Four District Tuberculosis Officers. Salary, £350 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL.—House-Surgeon Salary, £100 per annum.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon Salary, £200 per annum.

DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Salary, £80 per annum.

DERBYSHIRE ROYAL INFIRMARY.—(1) House-Physician; (2) Assistant House-Surgeon. Salary, £125 and £80 per annum respectively.

DEVONPORT: ROYAL ALBERT HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

DEWSBURY UNION.—Resident Assistant Medical Officer. Salary, £100 per annum.

DURHAM COUNTY COUNCIL.—Temporary Assistant Tuberculosis Medical Officer. Salary, £7 7s. per week.

DURHAM COUNTY SANATORIUM.—Medical Superintendent. Salary, £400 per annum, rising to £500.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—Senior and Junior Resident Medical Officers. Honorarium, £25 and £18 per annum respectively.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon (male). Salary, £104 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—(1) House-Physician; (2) House-Surgeon; salary, £75 per annum each. (3) Surgeon to Out-patients.

GIBRALTAR.—Second Assistant Colonial Surgeon. Salary, £350 per annum.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons (males). Salary, £120 and £100 per annum respectively.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Physician to Out-patients.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician; (2) House-Surgeon. Salary, £30 each for six months and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho Square, W.—Clinical Assistants in Out-patient Department.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary at the rate of £80 per annum.

KENSINGTON UNION.—Second Assistant Male Resident Medical Officer for the Workhouse and Infirmary. Salary, £110 per annum, rising to £120.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Second Assistant Medical Officer. Salary, £150 per annum, rising to £200.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £150 per annum.

LAHORE MUNICIPAL COMMITTEE.—Health Officer. Salary, Rs. 750 a month (£600 a year).

LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary, £250 per annum, rising to £300.

LANCASHIRE EDUCATION COMMITTEE, Preston.—School Medical Inspector. Salary, £350 per annum, rising to £450.

LEEDS HOSPITALS FOR INFECTIOUS DISEASES AND TUBERCULOSIS.—Assistant Medical Officer. Salary, £130 per annum.

LEICESTER ROYAL INFIRMARY.—House-Physician. Salary at the rate of £120 per annum.

LIVERPOOL STANLEY HOSPITAL.—(1) Two House-Physicians; (2) House-Surgeon. Salary, £75 per annum each.

MACCLESFIELD GENERAL INFIRMARY.—House-Surgeon. Salary, £150 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

MANCHESTER: CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

MANCHESTER CORPORATION.—Fourth Medical Assistant at the Monsall Fever Hospital. Salary, £150 per annum.

MANCHESTER: HULME DISPENSARY.—House-Surgeon. Salary, £180 per annum, rising to £200.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum.

MANCHESTER: ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

MANCHESTER ROYAL INFIRMARY.—(1) Medical Officer for Out-patients and Accidents; (2) Assistant Director in the Clinical Laboratory; (3) Surgical Registrar; (4) Junior Administrator of Anaesthetics. Salary, for (1) £100 per annum, for (2 and (3) £75, and for (4) £60.

METROPOLITAN ASYLUMS BOARD.—Temporary Assistant Medical Officer at the Park Hospital for Children, Hither Green.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Obstetric Assistant; (2) Resident Medical Officer at House of Recovery, New Barnet; salary, £60 a year. (3) Two Clinical Assistants to Out-patient Department; (4) Anaesthetist (females).

NORTHAMPTON COUNTY COUNCIL EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £275 per annum, rising to £350.

NORTHAMPTON GENERAL HOSPITAL.—(1) Senior Resident Medical Officer; (2) two House-Surgeons. Salary for (1) £140, and for (2) £120 per annum.

NORWICH CITY.—Assistant School Medical Officer and Assistant Medical Officer of Health. Salary, £300 per annum, rising to £350.

NORWICH: JENNY LIND HOSPITAL FOR SICK CHILDREN.—Lady Resident Medical Officer. Salary, £50 per annum.

NOTTINGHAM CITY GUARDIANS.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary at the rate of £100 per annum.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

OUGHTERARD UNION.—Medical Officer for the Lettermore Dispensary District. Salary, £200 per annum, rising to £250. May also be appointed M.O.H. for the district. Salary, £20 per annum.

PADDINGTON INFIRMARY, W.—Locumtenent Assistant Medical Officer. Salary, £5 5s. per week.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary, £90 per annum.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary, £100 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—(1) District Resident Medical Officer; salary at the rate of £60 per annum. (2) Assistant Resident Medical Officer; salary at the rate of £50 per annum, rising to £60 on appointment as senior.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary at the rate of £80 per annum.

READING: BERKSHIRE EDUCATION COMMITTEE.—Assistant School Medical Inspector. Salary, £300 per annum.

RETFORD: STATE CRIMINAL LUNATIC ASYLUM.—Assistant Medical Officer (male). Salary, £225, increasing to £350.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House Surgeons. Salary, £200 and £100 per annum respectively.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Resident Medical Officer; salary, £120 per annum. (2) Clinical Assistants in the Ear, Nose, and Throat Department; (3) Clinical Assistant in the In-patient Department.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Physician.

ST. ANDREWS UNIVERSITY.—Bute Chair of Anatomy in the United College.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Chief Assistant in Electrical Department.

ST. PANCRAS DISPENSARY, N.W.—Resident Medical Officer. Salary, £105 and other fees.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion Square, W.C.—Clinical Assistant in Out-patient Department.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary, £100 per annum each.

SALFORD UNION INFIRMARY.—Male Resident Assistant Medical Officer. Salary, £150 per annum.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £110 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Assistant Surgeon at the Dreadnought Hospital.

SHEFFIELD: EAST END BRANCH OF CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

SHEFFIELD EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—Senior and Junior Lady House-Surgeons. Salary, £100 and £80 per annum respectively.

SHEFFIELD: ROYAL INFIRMARY.—(1) House Surgeon; (2) Ophthalmic House-Surgeon (males). Salary, £100 per annum each.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £230 per annum, rising to £250.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £225 per annum, rising to £250.

SUNDERLAND: ROYAL INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon (male). Salary, £100 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

WAKEFIELD: WEST RIDING ASYLUM.—(1) Assistant Medical Officer; (2) Locumtenent Assistant Medical Officer (males). Salary for (1) £200 per annum, rising to £230, and upon promotion to £340.

WALSALL AND DISTRICT HOSPITAL.—Assistant House-Surgeon. Salary, £110 per annum.

WEST AFRICAN MEDICAL STAFF.—Appointments to the Service. Salary, £400 per annum, rising to £500, and thence to £600, with prospect of promotion to higher posts.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £100 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £150 per annum.

WEST RIDING ASYLUM, Scalebor Park.—Assistant Medical Officer. Salary, £250 per annum.

WEST SUSSEX COUNTY COUNCIL, Horsham.—Temporary Assistant Medical Officer under Mental Deficiency Act. Salary £6 6s. a week.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £120 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £160 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces the following vacant appointment: Crosshills (Yorks).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

Acheson, D. R., M.B., B.Ch., Q.U.Belf., Assistant Medical Officer of the Dudley Road Infirmary of the Birmingham Union.

Barnett, H. Norman, F.R.C.S., Surgeon to the Bath Ear, Nose, and Throat Hospital.

Bennett, C. J. E., M.R.C.S., L.R.C.P.Lond., Medical Officer of the Workhouse of the Trowbridge and Melksham Union.

Beevor, Sir Hugh Reeve, Bart., M.D.Lond., F.R.C.P., Consulting Physician to King's College Hospital.

Bond, F. F., M.R.C.S., L.R.C.P., District Medical Officer of the Trowbridge and Melksham Union.

Brownlie, William Barrie, F.R.C.S.Edin., M.B., Ch.B.Glasg., Honorary Assistant Ophthalmic Surgeon to the Blackburn and East Lancashire Royal Infirmary.

Campbell, R. F., M.B., C.M.Aberd., District Medical Officer of the Bellingham Union.

Clowes, William F. A., M.R.C.S.Eng., L.R.C.P.Lond., Honorary Surgeon to the Essex County Hospital.

Davidson, Miss E., L.M. and S.Ceylon Med. Coll., Assistant Medical Officer to the Halifax Union Poor Law Hospital.

Day, Leigh, B.A., M.D., B.Ch.Oxon., M.R.C.S., L.R.C.P., Honorary Surgeon to the Essex County Hospital.

Hallinan, W. E., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Kingston Union Infirmary and Workhouse.

Horrocks, O., L.R.C.P. and S.Edin., District Medical Officer of Williton Union.

Johnston, R., M.B., C.M.Aberd., Medical Officer and Public Vaccinator, Bradfield District of the Dunmow Union.

Marshall, G. G., M.B., Ch.B.Edin., Assistant Medical Officer of the Sheffield Union Hospital.

Morton, Hugh, M.D., Professor of Physiology at the Anderson College of Medicine, Glasgow, vice A. J. Ballantyne, M.B.Glasg., resigned.

Renshaw, Arnold, M.B., B.S.Lond., Bacteriologist to the Manchester Royal Eye Hospital.

Sedgwick, C. H., M.B., B.C.Cantab., District Medical Officer of the Daventry Union.

Stewart, George, M.B., Ch.B.Edin., Assistant School Medical Officer for the Cupar and St. Andrew's District of Fife.

DIARY FOR THE WEEK.

TUESDAY.

Royal College of Physicians of London, Pall Mall East, S.W., 5 p.m.—Second Croonian Lecture by Dr. E. Goodall: Modern Aspects of Certain Problems in the Pathology of Mental Disorders.

THURSDAY.

Royal College of Physicians of London, Pall Mall East, S.W., 5 p.m.—Third Croonian Lecture by Dr. E. Goodall: Modern Aspects of Certain Problems in the Pathology of Mental Disorders.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

Central London Throat and Ear Hospital, Gray's Inn Road, W.C.

Dublin: Rotunda Hospital.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.

Hospital for Sick Children, Great Ormond Street, W.C.

London Hospital Medical College, Turner Street, E.

London School of Clinical Medicine, Dreadnought Hospital, Greenwich, S.E.

London School of Tropical Medicine, Royal Albert Dock.

Manchester Hospitals: Post-Graduate Clinics.

Medical Graduates' College and Polyclinic, Chenies Street, London, W.C.

National Hospital for the Paralysed and Epileptic, Queen Square, London, W.C.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.

Royal Hospital for Diseases of the Chest, City Road, E.C.

West End Hospital for Diseases of the Nervous System, Welbeck Street, W.

West London Post-Graduate College, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s., which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.

MARRIAGES.

Harries—Brazel.—At St. Martin's Church, Gospel Oak, on the 11th inst., by the Rev. T. H. Russell, B.D., Vicar, Eric Henry Rhys, M.D.Lond., eldest son of Arthur John Harries, M.D., of 30, St. James's Square, Pall Mall, London, to Edith Irene, eldest daughter of William Brazel, of Swansea.

Pridham—Haworth.—On June 4th, at Manchester, Frederick Charles Pridham, M.R.C.S.Eng., L.R.C.P.Lond., F.R.C.S.Edin., younger son of James Frederick Pridham, of Darlington, to Ida, fourth daughter of the late William Haworth, of Blackburn.

Steel—Allen.—June 10th, at St. Luke's Church, Loughgall, by Rev. Alfred Daniel, Rector of the parish, Captain Richard Francis Steel, I.M.S., Castlerock, co. Derry, to Kathleen Maude, only child of the late Joseph and Kathleen Allen, of Clonallen, Armagh.

DEATH.

Neil.—On June 13th, in London, after an operation, James Neil, M.D., Medical Superintendent of the Warneford Asylum, Oxford, aged 66. Funeral at Ballater, Aberdeenshire.

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JUNE.
20	Sat.	Munster Branch, Cork, 4.30 p.m.
23	Tues.	South-Western Branch, Annual Meeting, Plymouth, 12.30 p.m.; Luncheon, 1.30 to 2.30 p.m.; Dinner, 7 for 7.30 p.m.
		North of England Branch, Newcastle-on-Tyne, 4 p.m.
24	Wed.	London: Council Meeting, 10 a.m.
		Worcestershire and Herefordshire Branch, Annual Meeting, Worcester General Infirmary, 3.30 p.m.
		North Lancashire and South Westmorland Branch, Annual Meeting, Lancaster, 3.45 p.m.
		Greenwich and Deptford Division, Annual Meeting, St. John's Church Room, Lewisham High Road, 4 p.m.
25	Thur.	Staffordshire Branch, Annual Meeting, Stoke-on-Trent, 4.30 p.m.; Dinner, 6.45 p.m.
26	Fri.	London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
		West Somerset Branch, Annual Meeting, Bridgwater, 12.30 p.m.; Luncheon, 2 p.m.
		Sussex Branch, Annual Meeting, Worthing, 2.30 p.m.; Council, 12 noon.
		Edinburgh Branch, Annual Meeting, Royal College of Surgeons, 4 p.m.
		JULY.
1	Wed.	London: Therapeutic Subcommittee (*provisional*).
2	Thur.	London: Insurance Act Committee (*provisional*).

Date.		Meetings to be Held.
		JULY (*continued*).
2	Thur.	Cambridge and Huntingdon Branch, Annual Meeting, St. Ives, 12.30 p.m.; Luncheon, 1.15 p.m.
		Northamptonshire Division, Annual Meeting, Northampton General Hospital, 2.30 p.m.
3	Fri.	Border Counties Branch, Annual Meeting, Carlisle, 3.45 p.m.
7	Tues.	London: Standing Ethical Subcommittee, 2.30 p.m. (*provisional*).
8	Wed.	Dorset and West Hants Branch, Bridport, 3.30 p.m.; Luncheon, 1.30 to 2.30 p.m.
9	Thur.	Southern Branch, Annual Meeting, Southampton, 1 p.m.; Luncheon, 1.45 p.m.
10	Fri.	London: Medico-Political, Medical Inspection and Treatment of School Children Sub-Committee, 7 p.m.
		East York and North Lincoln Branch, Annual Meeting, Hull.
11	Sat.	London: Science Committee, 10.30 a.m.
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.

ANNUAL MEETING, ABERDEEN, 1914.

Annual Representative Meeting, Friday, July 24th, and following days.

Presidential Address, Tuesday, July 28th.

Sections — Wednesday, July 29th; Thursday, July 30th; and Friday, July 31st.

Annual Exhibition, July 28th-31st.

Excursions, August 1st.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 27TH, 1914.

MATTERS REFERRED TO DIVISIONS.

SUPPLEMENTARY REPORT OF COUNCIL, 1913-14.

NOTE.—The sections numbered (A), (C), etc., of the Supplementary Report of Council are the continuations, respectively, of the similarly lettered sections of the Annual Report of Council, published in the Supplement of May 2nd, 1914. The paragraphs of the Supplementary Report are numbered consecutively to those of the Annual Report.

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(A) Preliminary.

Election of Vice-Presidents.

200. The Council recommends:

Recommendation C.—That Dr. W. Ainslie Hollis, President of the Association for 1913-14, be elected a Vice-President of the Association.

Recommendation D.—That Mr. W. T. Hayward, M.R.C.S., Chairman of the Australian Federal Committee, be elected a Vice-President of the Association.

Matters referred to Council by A.R.M. July, and S.R.M. December, 1913.

201. The Council appends (*see* Appendix XI., page 481) a list of the matters referred to the Council by the Representative Body, July and December, 1913.

(C) Organisation.

Election of Members of Council, 1913-14 and 1914-15 by grouped Representatives under By-Law 43 (c).

(a) 1914-15.

202. The A.R.M., 1913, having left it to the Council to settle the grouping of the U.K. constituencies for the election of 12 Members of Council, 1914-15 in the light of the figures contained in the 1914 Annual List, the Council found that no change in the grouping was necessary. The U.K. constituencies for election of 12 Members of Council for 1914-15 have therefore been grouped in the same manner as for 1913-14, the constituencies of the new Kent, Surrey and Sussex Branches taking the place of those of the late South-Eastern Branch.

(b) 1915-16.

203. The Council recommends:—

Recommendation DD.—That the grouping of constituencies for election of 12 Members of Council, 1915-16, be similar to that for 1914-15, discretion being, however, left to the Council to make any modifications in the grouping rendered necessary or desirable owing to numerical changes or formation of new Divisions or constituencies or modification of those bodies as at present existing.

Grouping of Branches outside U.K. for 1915-16 under By-law 43 (b).

(Continuation of paragraph 40 of Annual Report, p. 277).

204. The Council has carefully considered the question of the grouping of overseas Branches for the election of seven Members of Council, 1915-16. In this connection the Hong Kong and China Branch (which with the Malaya Branch formed for 1913-14 an independent group for election of a member of Council, but which at the instance of the Bombay Branch the A.R.M., 1913, grouped for 1914-15 with the Malaya and Ceylon Branches), proposes (item 47 of A.R.M. Provisional Agenda, Supplement May 9th, p. 377) that the 1915-16 grouping shall revert to the 1913-14 basis, *i.e.*, that Hong Kong and China and Malaya shall form one group and Ceylon be reassigned to the Indian group. The Council agrees with this proposal.

205. The Council recommends:—

Recommendation EE.—That the Branches outside the United Kingdom be grouped for the election of 7 members of Council for the year 1915-16, in the same way as for the year 1914-15, except that Ceylon be grouped with the Indian Branches instead of with Hong Kong and China and Malaya, and that the new Orange Free State, Natal Coastal, Natal Inland, Pretoria and Witwatersrand Branches be incorporated in the group containing the other African Branches.

206. A list of the overseas Branches showing the 1914 memberships and the 1914-15 grouping will be found in Appendix XII. (page 481).

Returns of Attendances of Members of Representative Body, Council, Committees and Sub-Committees.

(*Continuation of paragraph 38 of Annual Report, p. 277.*)

207. With a view to saving labour and expense the Council is so far as possible bringing the returns of attendances required for the respective purposes of the Representative Body and Council into line, changing where necessary its standing orders to correspond with those of the Representative Body. In this connection, as indicated in paragraph 38 of the Annual Report of Council, adjustment of S.O. 39 of the Representative Body will be required, and the Council accordingly submits (see below) a draft amended form. It is proposed that not only shall the attendances of members of Council, Committees and Sub-Committees be shown in the return published yearly, but also the attendances of Representatives, as it will be of assistance to members generally in electing Representatives and members of Council, as well as to Representatives and members of Council in electing Committees, to know how Representatives have attended. On the other hand the Council proposes to simplify the return of attendances to be required under the S.O.s. of both the Representative Body and the Council by omitting the provision at present contained in S.O. 39 of the Representative Body that the years of service shall be shown, as the Council finds this provision to be of little utility and one which has never been carried out, on account of the labour involved and the space required.

208. The Council recommends:—

Recommendation FF.—That S.O. 39 of the Representative Body, which at present reads as follows:—

39. The Committee shall prepare a return showing for each Committee, members of which are elected by the meeting: (1) the members of such Committee for the past year (those not appointed by the Representative Meeting being specially indicated); (2) the years of service of the Committee; (3) their possible and actual attendances at (i) meetings of the full Committee, and (ii) meetings of its Sub-Committees, held up to three weeks before the commencement of the Annual Meeting. The return shall be issued to each Representative with the Agenda of the Meeting.

be amended to read as follows:—

39. In connection with each Annual Meeting there shall be prepared by the Financial Secretary and Business Manager, in the form appended to this S.O., a return of attendances shewing:—

(a) For the Representative Body,
(b) For the Council,
(c) For each Committee,

(1) The members for the past year, members of Committees appointed by the Representative Body, Council or other body, being respectively indicated:

(2) Their possible and actual attendances up to three weeks before the commencement of the Annual Meeting, including, in the case of Committees, Meetings of Sub-Committees.

The return shall be issued to all members of the Representative Body with the Agenda of the A.R.M. In the case of Members of Council not elected before the issue of the A.R.M. Agenda the return shall be issued to them by the Financial Secretary and Business Manager as soon as their election is known.

Form of Return.

Representative Body and Council Meetings.

Name.	Attendances.					
	Daily Sessions of Rep. Body.		Council Meetings.		Total.	
	Actual.	Possible.	Actual.	Possible.	Actual.	Possible.

.....Committee.

Name.	Attendances.					
	Committee Meetings.		Sub-Committee Meetings.		Total.	
	Actual.	Possible.	Actual.	Possible.	Actual.	Possible.

ORGANISATION OF MEDICAL STUDENTS.

(Continuation of paragraph 47 of Annual Report, p. 277.)

209. The Council has considered the following Minute 197 of the A.R.M., 1909, consideration of which was held over in consequence of the pre-occupation of the Association with matters in connection with the National Insurance Act:—

> *Minute* 197.—Resolved: That the Council be instructed to investigate and report as to the feasibility of forming a British Medical Students' Union, or a similar body, under the auspices of the Association, with Branches in all towns having Medical Schools, which shall act as a nursery for future Members of the Association,

and reports to the Representative Body that in the opinion of the Council the formation of a Students' Union on the lines suggested is, for the present at least, impracticable.

210. The Council has under consideration various proposals for getting into touch with medical students and interesting them in the aims and work of the Association.

SCOTTISH COMMITTEE.

(Continuation of paragraph 57 of Report as to Articles and By-laws, Supplement, May 2nd, p. 301.)

211. The work of the Scottish Committee is growing, and it is found increasingly difficult for the Chairman to be able to attend all the Committee Meetings in Scotland, and Council and Committees in London as well. The Committee consequently desires to be able to elect a Deputy-Chairman as well as Chairman. By-law 67 provides that each Standing Committee shall appoint from its own number a member of Council as Chairman, in order that the Council may be able to keep in touch with each Committee. The Scottish Committee wishes to be an exception to this By-law and to be able to have a Chairman not necessarily a member of Council, but that effective co-ordination shall be maintained by insisting that one of its three officers—Chairman, Deputy-Chairman, or Honorary Secretary, shall be on the Council. As the Scottish members desire the change as early as possible, the Council has arranged that a special session of the Representative Body shall be held at Aberdeen on Monday, July 27th, 1914, at 12 noon, for the purpose (only one month's notice of such an alteration of by-laws being required in the case of a Special Representative Meeting).

212. The Council recommends:—

> **Recommendation GG.**—That the Special Representative Meeting, Aberdeen, amend existing By-law 67 of the Association, which reads as follows:—
>
> 67. Each Standing Committee shall appoint from its own number a Member of Council as Chairman,

to read as follows:—

> 67. Each Standing Committee except the Scottish Committee shall appoint from its own number a Member of Council as Chairman. The Scottish Committee shall appoint from its own number a Deputy-Chairman, as well as a Chairman, and either the Chairman or the Deputy-Chairman or the Honorary Secretary of that Committee shall be appointed from amongst members of Council.

ANNUAL REPORTS OF DIVISIONS AND BRANCHES.

(a) *Reports of Divisions in United Kingdom for* 1913.

(Continuation of paragraphs 48-50 of Annual Report, p. 278).

213. While satisfactory reports for 1913 have been received from most of the Divisions, the following, in addition to certain unorganised Divisions, which are being otherwise dealt with by the Council, have still failed to report, although the reports in question should have been made last January:—

> Aberdeen, Birkenhead, Bishop Auckland, Blyth, Bradford, Bristol, Croydon, Derry, East Herts, Hendon and Finchley, Kilkenny, Lothians, Manchester (West), Mid Connaught, Mid Essex, Mid Leinster, Monaghan and Cavan, North Glamorgan and Brecknock, North-West Leinster, Orkney, Portadown and West Down, Richmond, Rotherham, South Connaught, St. Pancras and Islington, South Carnarvon and Merioneth, Waterford.

(b) *Reports of Branches in United Kingdom for* 1913.

(Continuation of paragraph 51 of Annual Report, p. 278.)

214. Reports for 1913, due by at latest March 15th, have been received from all the Branches except Bath and Bristol, and Connaught.

RECRUITING NEWLY-QUALIFIED PRACTITIONERS.

215. The Council has instructed the Organisation Committee to arrange a procedure whereby all newly-qualified medical practitioners shall immediately upon registration be circularised as to the advantages of joining the Association. As far as possible a personal element will be introduced into the procedure by eliciting the aid of the advisers whom the Council is seeking to obtain in the medical schools in connection with the work of the organisation of medical students. In the case of Scotland and Ireland the procedure to be adopted will be settled between the Organisation Committee and Scottish and Irish Committees respectively.

CONSTITUENCIES IN UNITED KINGDOM FOR REPRESENTATIVE BODY, 1914-15.

(Continuation of paragraphs 63-4 of Annual Report, pp. 278-9.)

216. Pursuant to paragraph 63 of its Annual Report the Council submits (*see* Appendix XIII, p. 482) a list of the constituencies in the United Kingdom for representation in the Representative Body, 1914-15. In addition to the cases mentioned in paragraph 63 of its Annual Report, the Council has deviated from the 1913-14 grouping in the following respects, consequent upon changes of memberships in the Annual List for 1914 as compared with 1913:—Forfarshire has been grouped with Dundee, Dartford with Rochester, Chatham and Gillingham, and Islands with Caithness, Inverness and Ross.

217. As the Representative Body has decided that it is too large and that it is desirable its membership should be reduced, the Council has felt itself unable, except under very exceptional circumstances, to grant independent representation to Divisions of less than fifty members, and unless the Representative Body modifies that view the Council feels it will be its duty to continue this process still more drastically next year.

SUB-COMMITTEES.

218. The Council has arranged for the continuance in office of the various Sub-Committees appointed by standing Committees and whose references have not been discharged, until the first meeting next session of the Committees which appointed them respectively.

UNDER CONSIDERATION.

219. (a) Compilation of pronouncements of Association.

(b) Preparation of Secretaries' Handbook.

(c) Date of publication of Annual List of Members.

(d) Question of co-ordination of work of Local Medical Committees with that of Association.

(e) Question of re-organisation of certain Branch areas.

(f) Question of co-ordination of work of Organisation, Central Ethical and Dominions Committees.

(g) Question of formation of a Hyderabad Branch.

(E) Science.

QUESTION OF MIDDLEMORE PRIZE.

(Continuation of paragraph 77 of Annual Report of Council, page 279.)

220. The Council reports that four Essays on the subject of The Physiology of Vision and Fusion (excluding the question of Colour Vision) were received in competition for the Middlemore Prize, but upon consideration of the adjudicators' report, which was to the effect that the essays did not attain the standard which might reasonably be expected in this prize essay, the Council has decided not to award the prize this year and to issue invitations for a fresh competition to be held in 1915.

(F) Medical Ethics.

Expulsion.

(Continuation of paragraph 79 of Annual Report, page 280.)

221. The Council regrets to report that since the issue of the Annual Report for 1913-14, it has been necessary to remove from membership of the Association a member who continued to hold appointments for attendance upon uninsured persons at lower rates than those approved by the Division to which he belonged.

Ethical Rules of Divisions and Branches.

(Continuation of paragraph 80 of Annual Report of Council page 280.)

222. Since the issue of the Annual Report the Council has approved the adoption of the New Model Ethical Rules by the following Divisions :—

Dumbartonshire, Kensington, and St. Pancras and Islington.

223. There remain 49 Divisions and 11 Branches that have not yet reported that they have adopted the New Rules.

"The Family Encyclopædia of Medicine."

(Continuation of paragraph 83 of Annual Report, page 280.)

224. The Council received 25 replies from the 26 members communicated with in respect of the appearance of their names in the public advertisements of the "Family Encyclopædia of Medicine." The Council is informed that none of these members anticipated any such procedure and that as soon as they became aware of it they took prompt steps to disavow their connection with it and to have such advertisements withdrawn, and obtained assurances that no repetition should take place. In these circumstances the Council did not see that it was able to take any further steps but expressed its deep regret that such wholesale advertising should have taken place.

Position of Medical Practitioners in connection with Publications to the Public on Medical Subjects.

225. Arising out of the publication of "The Family Encyclopædia of Medicine" the Council has considered the whole question of the position of medical practitioners who contribute to or in any way assist in the preparation of any publication on medical subjects intended for the use of the public.

226. The Council recommends :—

Recommendation A : That every medical practitioner who contributes to or in any way assists in the preparation of any publication on medical subjects intended for the use of the public, must hold himself responsible for any undue or improper advertising that may take place in connection with such publication, and also for the scope and distribution of the work.

Warning Notices.

227. The Council has had under consideration the whole question of the Warning Notices published in the British Medical Journal and the Regulations relating thereto, and has consulted Counsel as to the legal responsibility incurred by the Association in connection with such publication. In view of the difficult and technical nature of questions arising in this connection the Council is of opinion that the whole procedure in connection with the publication of these Notices should be entrusted to the Council and carried out in close co-operation with the Solicitor of the Association.

228. The Council recommends :—

Recommendation B: That the Representative Body rescinds all its previous decisions relating to the Warning Notice, and empowers the Council to approve Regulations which in the opinion of the Council are appropriate relative to the insertion in the British Medical Journal of Notices regarding Appointments, and that the control of these Notices be in future left entirely in the hands of the Council.

Mount Vernon Hospital.

229. The Council reports that in December, 1913, an action was brought by the Committee of Management of the Mount Vernon Hospital against the British Medical Association, the Honorary Secretary of the Marylebone Division and certain other medical practitioners in respect of the publication in the British Medical Journal of a Warning Notice relating to appointments at the Mount Vernon Hospital. The Council is glad to report a stay of proceedings, and that the differences between the Mount Vernon Hospital and the Association have been composed.

Cases submitted to General Medical Council.

230. Four cases were presented on behalf of the Association to the May, 1914, Sessions of the General Medical Council. These cases affected three practitioners resident within the area of the North of England Branch, and one resident within the area of the East Yorks Division. In one case, where the practitioner was charged with canvassing, the Council suspended judgment until the November Sessions, when the practitioner will be required to produce evidence as to his professional conduct in the interval. In another similar case, in view of the fact that the practitioner had severed his connection with the local Workmen's Medical Association and had promised not to renew it, the Council allowed the Association to withdraw the charge. In a third case of canvassing the Council found that the facts alleged had not been proved to the satisfaction of the Council and the complaint was accordingly dismissed. In the remaining case a practitioner was charged with having sought to attract to himself patients by canvassing in person and by an agent, and by sending out to persons who were not his patients a printed circular letter signed by him offering his services in connection with a private medical club, and intimating that his secretary would call on the recipient. The practitioner tendered an apology to the Council for his action and although the Council found that the facts alleged had been proved to its satisfaction, it accepted the apology and did not direct the Registrar to erase his name from the Medical Register.

(G) Medico-Political.

Fees for Medical Examinations for Life Insurance.

231. The Council has had under consideration the question of the remuneration of practitioners in respect of medical examinations for life insurance, but a difficulty has arisen in the preparation of a report on the subject as there is considerable difference of opinion as to the principle upon which the amount of that remuneration should be based, and until that question is settled it appears to the Council that the submission of a detailed report is inadvisable.

232. The Council recommends :—

Recommendation H.—That the Representative Body decide whether (a) fees for life insurance examinations should be based on the amount of evidence required in confirmation of the examiner's professional opinion of the life, or (b) there should be a fixed minimum fee for that opinion irrespective of the number of questions to be answered.

Ship Surgeons.

(a) Payment of Ship Surgeons for attendance on First and Second Class Passengers.

(Continuation of paragraph 97 of Annual Report, page 282.)

233. The Council is of opinion that the time is now ripe for action in furtherance of the principle contained in paragraph 97 of the Annual Report of Council, namely, that shipping companies should adopt a fixed scale of fees for medical attendance on first and second class passengers.

234. The Council recommends :—

Recommendation I.—(i.) That fees for medical and surgical attendance should be payable by first and second class passengers in all cases of illness and injury except those due to the voyage.

(ii.) That in those cases where the ship surgeon is at liberty to charge a fee, the minimum fee shall be 5s. and 2s. 6d. per attendance in the case of first and second class passengers respectively.

(iii.) That accounts for any such fees should not be subject to any preliminary scrutiny by the commander, but it is clearly understood that any passenger questioning the legitimacy of any charge may make representations accordingly to the commander.

(b) Insertion in Journal of Certain Advertisements concerning Ship Surgeons.

235. In view of cases in which hardship has arisen out of advertisements as to vacancies for ship surgeons published in the JOURNAL, the Council has further considered the question, and has decided (1) that advertisements of the kind, tendered by any firm or agent known to require the payment of a fee before giving intending applicants all essential information as to such appointments, be not accepted, and (2) that in the case of persons proffering advertisements for ship surgeons and stating that they are agents of shipping companies, it shall be ascertained whether or not they are bonâ fide appointed agents of the companies in question.

(c) Conditions of Service in Shipping Companies.

(Continuation of paragraph 98 *of Annual Report, page* 282.*)*

236. It has been arranged to publish in the JOURNAL particulars as to the terms and conditions of service offered to ship surgeons by various shipping companies.

MENTAL DEFICIENCY ACTS.

Fees for Medical Certificates.

237. The question of the fees to be paid for certificates given under the Mental Deficiency Acts by the "usual medical attendant" has been considered. The examination required appears to the Council to be on the same footing, as regards work and responsibility involved, as that required for the filling up of an ordinary lunacy certificate, for which the recognised fee is £1. 1s.

238. The Council recommends :—

Recommendation J.—That the fee for medical certificates under the Medical Deficiency Acts signed by the "usual medical attendant" should not be less than £1 1s.

TELEPHONE SERVICE RATES.

(Continuation of paragraph 113 *of Annual Report, page* 283.*)*

239. The Postmaster-General has replied to the representations made to him pursuant to paragraph 113 of the Annual Report of Council in favour of a flat rate of payment for telephone subscribers. As a Division has given notice to raise this question at the A.R.M., the Council submits the terms of his reply, which was to the following effect :—

(i.) That the question whether a flat rate subscription for telephone service is a proper one had engaged the attention of telephone administrations throughout the world for some time past, and the unanimous opinion was that the only proper method of payment was one which varied with the volume of traffic.

(ii.) That so long ago as 1905 a Committee of the Merchants' Association of New York included the following statement, in which the Postmaster-General concurs, in its report on this question :—

"It is the opinion of this Committee, therefore, that in large cities the flat rate with unlimited service is based upon a fallacy, that it is extremely unjust to small users, favours large users unduly, impedes expansion of the telephone business, tends to inefficient service, and that as a financial proposition it is unsound," and

(iii.) That it is assumed that the Association did not suggest that the medical profession should be treated differently from other professions in this respect, as, of course, the Postmaster-General is precluded by Statute from according favour or preference to any individual or association of individuals.

ADVERTISEMENTS OF PRACTICES.

240. In view of the fact that difficulties and disputes have sometimes arisen in cases in which practitioners signed agreements in respect of transfers or purchases of practices advertised in the JOURNAL, the Council has approved a procedure whereby a notice shall be inserted weekly in the advertisement pages of the JOURNAL drawing attention to the great care which practitioners should exercise in the matter of signing agreements which necessitate deposits being made in the transfer or purchase of a practice.

INTERDEPARTMENTAL COMMITTEE *re* INTERNATIONAL OPIUM CONFERENCE.

241. The Under Secretary for Foreign Affairs (Mr. F. D. Acland, M.P.) has asked on behalf of the Interdepartmental Committee sitting to consider the question of the legislation necessary to give effect to the provisions of the International Opium Convention signed at the Hague in 1912, (a) whether in order to comply with the provisions of that convention it would be desirable and practicable to limit the sale to a private consumer of the substances mentioned in Article 14 (opium, its derivatives and cocaine) to persons in receipt of a doctor's prescription (b) whether, if so, it would be desirable and practicable to lay down that a doctor should state in his prescription the number of times for which it might be used and that the compounder should, under penalty, be bound to comply with the limitation, and (c), in the event of any such limitation being in the opinion of the Association possible and practicable, to be informed of its views as to the best method of enforcing it.

242. Mr. Acland has been informed that the Association has long recognised the dangers arising from the ease with which persons in this country can obtain powerful drugs by means of a doctor's prescription, and that it is of opinion that legislation should be introduced to provide (1) that medical practitioners should state in their prescriptions the number of times for which these should be used (2) that the compounder should, under penalty, be bound to comply with the limitation.

CASE OF UNQUALIFIED PRACTICE.

243. As a result of inquiries made in connection with what appeared to be a glaring case of unqualified practice the Council found that while there was no possibility of action being taken successfully under the Medical Acts there appeared to be ample grounds for prosecution for fraud. The facts of the case were therefore reported by the Association to the Public Prosecutor, with the result that a prosecution was instituted, and one of the two persons interested in the firm of unqualified practitioners in question has been punished, and some strong remarks on frauds of this kind were made by the judge.

CENTRAL EMERGENCY FUND.

(Continuation of paragraph 114 *of Annual Report, page* 283.*)*

244. From January 1st to May 30th, 1914, £83. 1s. 6d. has been received in subscriptions to this Trust Fund, which is under the control of the Medico-Political Committee. There was a total sum of £800. 8s. 4d. standing to the credit of the Fund as at the latter date. A grant of £23 has lately been made for the assistance of a medical practitioner who in the interests of the profession resigned his appointment as medical officer of a medical aid institute.

245. The Council has under consideration the question of the desirability of special efforts being made to place the Fund on a better financial footing.

UNDER CONSIDERATION.

246. (a) Question of applicability of Shop Acts to practitioners employing dispensers.

(b) Question of deputation to Treasury concerning salaries paid by Government to medical men and medical women.

(c) Question of duties and appointment of medical officers of reformatory and industrial schools.

(H) National Insurance.

Returned Medical Cards.

247. Careful consideration has been given to complaints which have been received from various parts of the country with respect to the recent issue of Medical Cards to insured persons. When the new system is in full working order medical practitioners, on being applied to for treatment by an insured person on their list, will be entitled to require the production of the card in question as evidence of identification.

248. Insurance Committees all over the country have had a considerable proportion of these cards returned to them by the postal authorities marked "No trace," notwithstanding the fact that many of the insured persons concerned were at the time under the treatment of the practitioners on whose lists their names appear. In consequence of this return of large numbers of cards the Scottish Insurance Commissioners instructed Insurance Committees to withdraw from the list of medical practitioners the name of any insured person whose medical card was so returned. It is obvious that this action may result in a considerable reduction of the moneys which medical practitioners expected to receive, and is manifestly unfair to those practitioners who have actually given treatment to some and have been liable to attend many of those persons whose cards have been returned.

249. The Council recommends :

Recommendation E.—That it is no part of the duty of a panel practitioner to correct and keep up-to-date the list of addresses of insured persons.

Recommendation F.—That a medical practitioner should be entitled to charge private fees to those insured persons demanding treatment of him but who fail to produce their medical cards, in view of the instruction of the various Insurance Commissioners to Insurance Committees than when the medical card system is in full operation a practitioner would be entitled, on giving treatment, to require insured persons on his list to present their medical cards should such a course appear necessary.

Relation of British Medical Association to the Proposed Federation of Local Medical and Panel Committees.

(Continuation of paragraph 134 of Annual Report, page 286.)

250. The Council at its Meeting on April 22nd, 1914, received a report by the Insurance Act Committee as to the outcome of the Conference, authorised by the Council, of representatives of Local Medical and Panel Committees, which was held in London, on the initiative of the Council, on March 13th, 1914. It will be remembered that the Conference passed a vote of thanks to the Council for calling the conference, and in laying down the provisional lines of a new organisation of Local Medical and Panel Committees expressed a strong desire to work in close relationship with the British Medical Association.

251. At the Meeting of the Insurance Act Committee on May 21st, Messrs. D. F. Todd, Apthorpe Webb, and G. W. Eustace attended as a deputation from the Provisional Committee of the Conference and laid before the Committee certain suggestions as to the relationship of the Association to the proposed Federation of Local Medical and Panel Committees. A full discussion took place between the Committee and members of the deputation upon the proposals.

252. The Insurance Act Committee at its Meeting on June 4th gave very careful consideration to the proposals, and, while cordially agreeing that the relationship of the Association to the Federation, if established, should be one of friendly co-operation, did not see its way to accept the proposals placed before it by the Provisional Committee. The Insurance Act Committee put forward a series of alternative proposals which were forwarded for the consideration of the Provisional Committee, and which are now in a slightly modified form submitted by the Council for the consideration of the Representative Body.

253. The Insurance Act Committee has been instructed to consider the draft constitution, objects, powers, etc., of the proposed Federation as soon as they are available and to report direct thereon to the Representative Body.

254. *The Council specially desires it to be understood that the recommendations are purely tentative, and are conditional on the establishment of the proposed Federation and upon the Representative Body being satisfied with its constitution, powers, objects, etc.*

255. The Council recommends :

Recommendation H.—That in the event of the proposed Federation of Local Medical and Panel Committees being formed, it be granted adequate representation on the Insurance Act Committee of the British Medical Association, and that the decision as to the exact amount of such representation be deferred until the policy of the Federation has been confirmed by the Local Medical and Panel Committees concerned.

Recommendation I.—That steps be taken to secure that the necessary amendments be made in the Regulations of the Association to allow of two direct representatives being nominated by the proposed Federation of Local Medical and Panel Committees for election by the Representative Body on the Council of the British Medical Association, such representatives to be members of the Association.

Recommendation J.—That provided other arrangements for co-operation are satisfactory the work of the proposed Federation and Association be carried out by the same staff on the premises of the Association ; and that, subject to payment by the Federation on an agreed tariff, the Association place the following facilities at the disposal of the proposed Federation :

(i.) Office accommodation.
(ii.) Clerical assistance.
(iii.) Printing, etc.
(iv.) Space in the Supplement of the British Medical Journal for reporting the proceedings of the Federation and its Branches.

Recommendation K.—That there should be co-operation between the Scottish, Irish and Welsh Executive Committees of the proposed Federation and any separate Committees set up by the Association in those countries.

Recommendation L.—That it be understood that if the above proposals are accepted by both the Association and the proposed Federation, the Federation shall not take action independent of the Association in any negotiations with lay bodies.

Recommendation M.—That the whole of the foregoing decisions be provisional only, dependent upon whether the Representative Body is satisfied with the constitution, powers, objects, etc., of the proposed Federation.

Appointment of and Reference to Insurance Act Committee.

(Continuation of paragraph 45 of Report as to Articles and By-laws, Supplement, May 2nd, page 300.)

256. In the Annual Report of Council, it was recommended that for the present no steps be taken to constitute the Insurance Act Committee as a Standing Committee *(Par. 45 of Appendix I. of Annual Report)*. There is therefore no proposition at present before the Representative Body as to the appointment of an Insurance Act Committee for the forthcoming Session, and it is probable that some alteration in the present constitution of the Committee may be desired as a result of the Representative Body's consideration of the question of the relationship between the Association and the proposed Federation of Local Medical and Panel Committees.

257. The Council recommends :

Recommendation N.—That the Representative Body appoint an Insurance Act Committee for the forthcoming session, 1914-15.

258. The Insurance Act Committee has been empowered to report direct to the Representative Body on this matter after it has had an opportunity of considering the constitution and powers of the proposed Federation.

Consideration by Insurance Committees of Reports of Medical Service Sub-Committees.

259. Advice has been sought by various Local Medical Committees concerning the question of procedure in Insurance Committees on consideration of reports of Medical Service Sub-Committees. The Council by publication in the Journal and by circular letter to Local Medical and Panel Committees has expressed the opinion that Insurance Committees should be urged to adopt, on the reconsideration of their Standing

Orders in July next, a suitable Standing Order which would embody the spirit of the Medical Benefit Regulations, namely, that no mention be made in public discussion previous to the decision of the Insurance Committee of the names of the parties concerned in any case of complaint. A form of Standing Order to carry the principle into effect has been suggested.

Lay Representatives of Approved Societies and Inspection of Wounds, etc.

260. Acting on representations made from widely-separated parts of the country a communication has been addressed to the Insurance Commissioners to the following effect :—

> That cases have arisen where lay officials of Approved Societies under cloak of the Rules adopted by the Society under its powers of Section 14 (2) of the 1911 Act for the purpose of deciding whether or not Sick Benefit be paid to an insured person, have actively interfered with the treatment of the medical practitioner concerned ; and that the Association desires the Commissioners to exercise their jurisdiction so as to secure that rules submitted for their approval by Approved Societies under Section 14 (2) for the purpose of providing proof of disease or disablement, shall make it quite clear that all investigation for the purpose of questioning the validity of a practitioner's certificate should be made by a medical practitioner and not by a layman.

No reply has, as yet, been received from the Commissioners.

Frivolous Complaints by Approved Societies.

(Continuation of paragraph 146 of Annual Report, p. 287.)

261. Paragraph 146 of the Annual Report contained a report of action taken in communicating with the Insurance Commissioners as to approved societies being made subject to fines with respect to frivolous complaints against doctors. The Council has now to report that the Commissioners have expressed the opinion that in view of the terms of Section 14 of the 1911 Act it would not appear to be open to them to amend the Regulations in the manner desired by the Council.

Drug Tariff.

(Continuation of paragraph 133 of Annual Report, p. 286.)

262. The Pharmaceutical Society has accepted the invitation of the Association for a Conference on the Drug Tariff, which it is hoped will take place at an early date.

Consultants Employed for Purposes of Insurance Act.

263. The Council has considered the probability of the appointment of specialists or consultants in connection with the proposed early developments of the medical service under the Insurance Acts, and is of opinion that the Representative Body should express an opinion on the following principle:—

264. The Council recommends :—

Recommendation O.—That the policy of the Association should be opposed (with some possible special exceptions) to whole time consultative appointments in connection with the Insurance Acts, and that it should be in support of the performance of such duties being open, under conditions of free choice and adequate remuneration, to all registered medical practitioners qualified to perform them.

Future Developments of Insurance Acts.

(Continuation of paragraphs 153-5 of Annual Report, p. 288.)

265. The Report mentioned in paragraph 155 of the Annual Report as likely to be issued to Divisions was published in the Supplement to the Journal of June 13th, 1914. The Divisions have been asked to send their opinions on the suggestions contained in the Report by July 1st, and it is hoped that it will be possible to issue a further report on the subject direct to the Representative Body.

266. In the preparation of the Report careful consideration was paid to those portions of the Budget Speech of the Chancellor of the Exchequer of May 4th, which referred to extensions of various parts of the Insurance Acts affecting the medical profession.

Expenses of Election of Panel Committees.

267. Communications have been addressed to the Association by various Panel Committees throughout the country protesting against the elaborate procedure which is required to be observed in connection with the election of Panel Committees, and particularly against the Panel Committees having to pay the expenses of their own election. The Council has pointed out that as regards the procedure, the schemes for the election of the Committees are largely based on suggestions made by the Association. As regards the expenses the Council agreed with the protest and has written to the Insurance Commissioners objecting to their ruling that the expenses of election of Panel Committees should be borne by practitioners concerned, inasmuch as these Committees were set up by Parliament at the instigation of the Commissioners, and not at the request of the profession. Comment was also made on the inequity of expecting the panel practitioners not only to furnish an important item of the local machinery of the Act, and to work it with efficiency, but also to pay for it themselves.

(J) Public Health and Poor Law.

Public Health Officers (Security of Tenure) and Medical Officers of Health (Superannuation) Bills of Association.

(Continuation of paragraphs 158-9 of Annual Report, p. 289).

268. The joint deputation to the Chancellor of the Exchequer, the President of the Local Government Board, and the President of the Board of Education, postponed from March 31st, was received by those Ministers on June 11th, 1914. The Deputation was a large and representative one and included Members of Parliament, representatives from the principal Housing and Town Planning Societies and the Royal Institute of Public Health, members of the British Medical Association and of the Society of Medical Officers of Health, the editors of the weekly Journals, and the Dean of Worcester. The Ministers received the deputation most sympathetically and gave promises as regards security of tenure which the deputation considered most satisfactory. A full report appeared in the British Medical Journal of June 20th, 1914. Sir Philip Magnus and Dr. Addison, who were instrumental in securing the reception of the Deputation and introduced it to Ministers, have been thanked by the Council for their valuable services.

Model Scheme for Treatment of Tuberculosis.

269. The Council has further considered the Model Scheme for the treatment of Tuberculosis referred to in Recommendation A (p. 286) of the Annual Report of Council and published in the Supplement of April 4th (page 204), and May 2nd (page 316), and suggests certain verbal adjustments thereof.

270. The Council recommends :—

Recommendation A.—That the Model Scheme for the treatment of Tuberculosis be amended in the following respects :—

Clause 5, *line* 3.—Insert "any" before "benefit."

Clause 10 (b).—Substitute "consulting" for "chief."

Clause 15, *line* 6.—Substitute "dealt with" for "distributed."

Clause 16, *heading.*—Substitute "disposal" for "distribution."

Advertisements for Tuberculosis Officers.

271. In a considerable number of cases advertisements for Tuberculosis Officers have been received for publication in the Journal which were at variance with the requirements of the policy of the Association. It appears to the Council that much correspondence and possible friction and annoyance could be avoided if all Authorities employing, or who might employ Tuberculosis Officers, were aware of the policy of the Association in respect of such appointments.

272. The Council recommends :—

Recommendation B.—That the Model Scheme for the Treatment of Tuberculosis, as approved by the Representative Body, be circulated to Municipal Councils, Insurance Committees and other bodies whom it may concern, with a view to obtaining their co-operation.

POOR LAW INSTITUTIONS ORDER, 1913, AND POOR LAW INSTITUTIONS (NURSING) ORDER, 1913.

(*Continuation of paragraph* 165 *of Annual Report, p.* 289.)

273. In reply to the communication to the Local Government Board, referred to in the above mentioned paragraph of the Annual Report the Board has intimated that it does not appear to it to be necessary to suggest any increase of the salaries of Poor Law Medical Officers on the ground of additional duties imposed by these Orders, and that if in particular cases it should be found in the light of experience that any substantial increase of work has resulted, the Board does not doubt that the Boards of Guardians concerned would be ready to consider applications for increase of remuneration. As regards the question of general administrative control, the reply of the Board points out that the Orders in question do not apply to institutions provided wholly for the sick, and that it would not as a rule be practicable in an institution to which the Orders apply to sever the administration of the sick wards from the administration of the rest of the institution.

274. While not considering this reply satisfactory, the Council has decided not to take any further action for the present, other than advising the Medical Officers concerned to make suitable representations to their respective Boards of Guardians.

PUBLIC HEALTH AND POOR LAW APPOINTMENTS AS TO WHICH ACTION TAKEN.

(*Continuation of paragraph* 169 *of Annual Report, p.* 290.)

275. In addition to those referred to in the Annual Report of Council action has been taken by the Association in respect of the following appointments:—

Derby (Assistant Medical Officer of Health), Clutton Union (District Medical Officer), Bournemouth (Tuberculosis Officer), Chichester (District Medical Officer), Huntingdon (Assistant M.O.H. and S.M.O. (Woman)), Stockport (Tuberculosis Officer), Hampshire (Tuberculosis Officer).

POOR LAW APPOINTMENTS.

276. A scheme formulated by a Board of Guardians for the institution of a whole-time medical service for the paupers of the Union, directly controlled by the Medical Superintendent of the Infirmary, has been considered in co-operation with the local Division. The Guardians give as a reason for establishing such a service that the present system of part-time officers is unsatisfactory, and that the obtaining of such officers is becoming increasingly difficult owing to the effects of the Insurance Act. Representations are being made to the Local Government Board, expressing the hope that the proposals for a whole-time service will not receive the approval of the Board and suggesting that appointments in the Poor Law Medical Service should be made more attractive by offering more adequate salaries.

(K) Hospitals.

MEDICAL AID INSTITUTIONS AND MEMBERS OF MEDICAL STAFFS OF HOSPITALS.

(*Continuation of paragraph* 170 *of Annual Report, page* 290.)

277. The replies of Divisions to the joint report and questions of the Medico-Political and Hospitals Committees as to Medical Aid Institutions and members of medical staffs of hospitals do not in the opinion of the Council justify the Association in instituting at present the campaign against these institutions which was outlined in Minute 82 of the S.R.M. of December, 1913. (For Minute 82 *see* paragraph 170.)

278. In these circumstances the Council has decided that the support of the Association shall be given to any action tending to prevent the extension of medical aid institutions which may be taken by any Branch or Division with the consent of the Council.

(L) Naval and Military.

PRESENT POSITION AND FUTURE PROSPECTS OF THE INDIAN MEDICAL SERVICE.

(*Continuation of paragraph* 172 *of Annual Report, page* 290.)

279. Lt.-Col. R. H. Elliot, I.M.S., as mentioned in the Annual Report of Council, was appointed as representative of the Association to give evidence before the Royal Commission on the Public Services in India. He appeared before the Commission on May 8th, 1914, and on behalf of the Association has been thanked for his services. Subsequent to the publication of the Annual Report of Council a request was made by the Commission for a representative of the Association to give evidence before it regarding the feeling in the English Medical Schools as to the Indian Medical Service, and Sir Clifford Allbutt was invited and consented to appear before the Commission for this purpose.

SHORTAGE OF MEDICAL OFFICERS IN THE ROYAL NAVY.

280. Many representations have been made to the Association by Medical Officers, R.N., both on the active list and retired, with reference to the conditions in the Royal Navy Medical Service, which they consider are causing the present shortage of Medical Officers in that Service, and to which reference was made by the Medical Director-General, R.N. in his recent speech to the students of Edinburgh University. The Council has fully considered the question, and has drawn up a report setting out what appear to be the chief reasons for the shortage of such Officers, and suggesting alterations in the conditions of the Service which it is believed would, if carried into effect, make it more popular with the medical profession, and consequently more efficient. A copy of the Report has been forwarded to the Admiralty and will be published in the BRITISH MEDICAL JOURNAL. Copies will be printed in pamphlet form for issue to the Deans of Medical Schools with a request that they place them in the reading rooms and libraries and hand them to newly qualified practitioners who may be contemplating entering the Service.

NOMINATIONS FOR ELECTION AS REPRESENTATIVES OF SERVICES.

(*Continuation of paragraph* 175 *of Annual Report, page* 290.)

281. The Council has received with regret the resignation through illness of Col. H. J. Waller Barrow, A.M.S. (Retd.), who represented the Army Medical Service on the Council, and was recommended in the Annual Report of Council for election to serve upon the Council for a further period of three years.

282. The Council recommends:—

Recommendation C.—That Col. R. I. D. Hackett, A.M.S. (Retd.), be appointed to represent the Army Medical Service on the Council for the period 1914-17, in place of Col. H. J. Waller Barrow, A.M.S. (Retd.), unable to serve.

(M) Scotland.

WHOLE-TIME MEDICAL SECRETARY FOR SCOTLAND.

283. The A.R.M., 1913, instructed the Council to consider, in connection with the proposed raising of the Association subscription to two guineas, the question of better provision being made for the organisation of the Association and profession, including the appointment of an organising Secretary for Scotland with an office in that country. Having conferred on the subject with the Scottish Committee the Council proposes to appoint at its Meeting in Aberdeen a whole-time Medical Secretary for Scotland subject to similar conditions of service as those which apply to the rest of the medical staff of the Association, and on terms practically identical with those already described in connection with Ireland (paragraphs 183-189 of Annual Report, page 291). It is intended that the Scottish Medical Secretary shall enter into office at the beginning of 1915.

MIDWIVES BILLS.

284. The Council considered the provisions of the two Scottish Midwives Bills introduced in the House of Commons and House of Lords respectively, and approved the action taken by the Scottish Committee in recommending the Scottish Divisions to approach their Members of Parliament, urging them to support the Lords' Bill, which Bill gives to the Scottish Committee the appointment of representatives of the profession upon the Central Midwives Board proposed to be set up in Scotland.

(O) Branches outside United Kingdom.

MEDICAL REGISTRATION IN NORTH BORNEO.

285. The Council has made representations to the British North Borneo Company in reference to certain provisions in a Draft Medical Ordinance which it was proposed to bring into force in that State pointing out the desirability (1) of providing for adequate medical supervision of unqualified assistants in the Government and Estate Hospitals, and (2) of the personnel of the Medical Council being less under Government control.

J. A. MACDONALD,
Chairman of Council.

June 24th, 1914.

APPENDIX XI.

LIST OF MATTERS REFERRED TO COUNCIL BY A.R.M., JULY, AND S.R.M., DECEMBER, 1913, RESPECTIVELY.

(A) By A.R.M., JULY, 1913.

Min. of A.R.M. 1913.	*Subject.*	*Paragraph of Report of Council.*
31	Power to borrow money	41
44	Scientific and social work of Divisions	73
68	Question of shorter notice of S.R.M.'s	37; also paras. 52-4 of Special Report, Supp., May 2nd, page 300.
87	Treatment by maternity and Voluntary Hospitals of patients in receipt of maternity benefit	136
161	Central Insurance Defence Fund	119-24
171	Minimum salaries of Tuberculosis Medical Officers	272-3
202-3	Proposed special fund for organisation of profession	156-7
205	Future Developments of National Health Insurance Act	153-5
208	Medical certificates	100
223	Mode of Election of Council ...	37; also para. 55 of Special Report, Supp., May 2nd, page 301.
224	Welsh Committee	37; also para. 46 of Special Report, Supp., May 2nd, page 300
225	Questions of alterations of Articles or By-laws	37; also Special Report, Supp., May 2nd, pages 293-308
237-41	Referendum and postal vote ...	37; also paras. 12-35 of Special Report, Supp., May 2nd, pages 294-8
249	Representatives and deputy representatives	37; also para. 43 of Special Report, Supp., May 2nd., page 299.
251-6	Question of possible Insurance members of Branch Councils and of Division Executive Committees	37; also paras. 4-9 of Special Report, Supp., May 2nd, pages 293-4
260	Question of a separate National Insurance Department.	42-4.
271	Welsh Committee for 1913-14 ...	—
283	Medical inspection and treatment of school children	91-2
298	Scottish Committee	37, 176, 211-2, 284; also paras. 56-7 of Special Report, Supp. May 2nd, page 301
306	Eligibility for membership ...	37; also paras. 48-9 of Special Report, Supp. May 2nd, page 300
308	Composition of Branch Councils	37; also para. 39 of Special Report, Supp. May 2nd, page 298
317	Annual meeting, 1914	1

(B) By S.R.M., DECEMBER, 1913.

23	Expenditure	42-6, 183, 243
31-2	Question of membership subscription payable by newly-qualified practitioners	Para. 38 of Special Report, Supp., May 2nd, page 298
35	Proposal that Channel Islands be exempted from the 2-guinea subscription	Paras. 50-1 of Special Report, Supp., May 2nd, page 300
58-60	Proposed special fund for organisation of profession	156-7
61	Central Insurance Defence Fund	119-24
69	Medical referees	130-1
82-3	Workmen's medical aid associations and members of medical staffs of voluntary hospitals	170, 278-9
93	Free choice of doctors	132, 141-5

APPENDIX XII.

GROUPING OF BRANCHES NOT IN UNITED KINGDOM FOR ELECTION OF 7 MEMBERS OF COUNCIL, 1914-15.

(Branches bracketed are grouped.)

Branch.	Membership (*Annual List, 1914*).	Member of Council.
South Australian	224	
Tasmania	74	
Victoria	787	1
Western Australian	152	
New South Wales	915	
Queensland	253	1
New Zealand	510	1
Barbadoes	22	
Bermuda	10	
British Guiana	43	
Halifax, Nova Scotia	45	
Jamaica	46	
Leeward Islands	18	1
Montreal	51	
St. John, New Brunswick ...	24	
Saskatchewan	34	
Toronto	254	
Trinidad and Tobago	21	
Assam	10	
Baluchistan	8	
Bombay	235	
Burmah	66	1
Punjab	67	
South Indian and Madras ...	144	
Ceylon	183	
Hong Kong and China	147	1
Malaya	115	
Border, South Africa	106	
Cape of Good Hope (Eastern) ...	39	
Cape of Good Hope (Western) ...	129	
East Africa and Uganda ...	31	
Egyptian	34	
Gibraltar	17	
Griqualand West	26	
Malta and Mediterranean ...	27	1
Natal Coastal	70	
Natal Inland	58	
Orange Free State	76	
Pretoria	47	
Rhodesian	67	
Witwatersrand	125	

APPENDIX XIII.

CONSTITUENCIES IN UNITED KINGDOM FOR ELECTION OF REPRESENTATIVE BODY FOR YEAR 1914–15.

(Divisions bracketed together form one Constituency.)

	Membership. Annual List, 1914.
Aberdeen—	
Aberdeen	173
Orkney	11
Shetland	10
Bath and Bristol—	
Bath	112
Bristol	243
Trowbridge	39
Birmingham—	
Bromsgrove	18
Dudley	45
Central	362
Coventry	49
Nuneaton and Tamworth	22
Walsall	20
West Bromwich	40
Warwick and Leamington	53
Border Counties—	
Dumfries and Galloway	77
English	59
Cambridge and Huntingdon—	
Cambridge and Huntingdon	102
Isle of Ely	23
Connaught—	
Mid Connaught	10
North Connaught	6
South Connaught	23
Dorset and West Hants—	
Bournemouth	132
West Dorset	82
Dundee—	
Dundee	71
Forfarshire	33
East Anglian—	
East Norfolk	70
Great Yarmouth	18
North Suffolk	32
Mid Essex	36
North-West Essex	13
North-East Essex	61
Norwich	47
South Essex	65
South Suffolk	71
West Norfolk	39
West Suffolk	40
East York and North Lincoln—	
East York	137
North Lincoln	53
Edinburgh—	
Edinburgh and Leith	246
South-Eastern Counties	59
The Lothians	87
Fife	96
Glasgow and West of Scotland—	
Argyllshire	31
Ayrshire	71
Dumbartonshire	52
Glasgow Central	129
Glasgow Eastern	93
Glasgow North-Western	112
Glasgow Southern	85
Lanarkshire	115
Renfrewshire	98
Gloucestershire	136

	Membership. Annual List, 1914.
Kent—	
Ashford	20
Dover	23
Folkestone	16
Bromley	68
Canterbury and Faversham	51
Dartford	30
Rochester, Chatham and Gillingham	52
Isle of Thanet	35
Maidstone	47
Tunbridge Wells	75
Lancashire and Cheshire—	
Ashton-under-Lyne	50
Glossop	8
Birkenhead	83
Blackburn	98
Blackpool	58
Isle of Man	9
Bolton	77
Burnley	85
Bury	55
Chester and Crewe	71
Leigh	27
Wigan	34
Liverpool	331
Manchester (Central)	85
Manchester (North)	77
Manchester (South)	77
Manchester (West)	63
Mid-Cheshire	74
Oldham	76
Preston	78
Rochdale	44
St. Helens	38
Warrington	37
Salford	69
Southport	70
Stockport, Macclesfield & East Cheshire	97
Leinster—	
Dublin	112
East Leinster	59
Mid Leinster	7
North Leinster	7
North-West Leinster	6
South-East Leinster	8
Metropolitan Counties—	
Camberwell	86
Chelsea	90
City	174
Ealing	74
East Hertfordshire	52
Finchley and Hendon	54
Greenwich and Deptford	60
Hampstead	86
Harrow	54
Kensington	285
Lambeth	122
Lewisham	60
Woolwich	31
Marylebone	584
North Middlesex	140
South Middlesex	52
South-West Essex	79
St. Pancras and Islington	152
Stratford	112
Tower Hamlets	66
Wandsworth	166
West Hertfordshire	75
Westminster	224
Willesden	63

	Membership. Annual List, 1914.
MIDLAND—	
Chesterfield	60
Derby	131
Holland	26
Kesteven	34
Leicester and Rutland	175
Lincoln	64
Nottingham	158
MUNSTER—	
North Munster	23
South Munster	57
West Munster	5
NORTHERN COUNTIES OF SCOTLAND—	
Banff, Elgin and Nairn	56
Caithness and Sutherland	22
Inverness	29
Islands	21
Ross and Cromarty	18
NORTH LANCASHIRE AND SOUTH WESTMORLAND—	
Furness	47
Kendal	28
Lancaster	50
NORTH OF ENGLAND—	
Bishop Auckland	35
Durham	22
Blyth	20
Morpeth	22
North Northumberland	25
Cleveland	67
Consett	15
Gateshead	58
Darlington	55
Hartlepools	29
Stockton	34
Hexham	22
Newcastle-on-Tyne	187
South Shields	35
Tyneside	44
Sunderland	117
NORTH WALES—	
Denbigh and Flint	69
North Carnarvon and Anglesea	79
South Carnarvon and Merioneth	46
OXFORD AND READING—	
Oxford	125
Reading	114
PERTH	52
SHROPSHIRE AND MID WALES	131
SOUTH-EASTERN OF IRELAND—	
Carlow	5
Kilkenny	20
Waterford	27
SOUTHERN—	
Guernsey and Alderney	23
Jersey	14
Isle of Wight	50
Portsmouth	126
Salisbury	46
Southampton	78
Winchester	70

	Membership. Annual List, 1914.
SOUTH MIDLAND—	
Bedford	64
Buckinghamshire	66
Northamptonshire	116
SOUTH WALES AND MONMOUTHSHIRE—	
Cardiff	192
Monmouthshire	135
North Glamorgan and Brecknock	114
South-West Wales	95
Swansea	95
SOUTH-WESTERN—	
Barnstaple	53
East Cornwall	48
Exeter	133
Plymouth	104
Torquay	79
West Cornwall	71
STAFFORDSHIRE—	
Mid-Staffordshire	76
North Staffordshire	120
South Staffordshire	79
STIRLING	83
SURREY—	
Croydon	145
Guildford	80
Kingston-on-Thames	63
Reigate	86
Richmond	39
Wimbledon	30
SUSSEX—	
Brighton	136
Chichester and Worthing	63
Horsham	25
Eastbourne	60
Hastings	53
Lewes and East Grinstead	59
ULSTER—	
Ballymoney, North Antrim, and South Derry	19
Derry	37
Belfast	203
Enniskillen	10
Omagh	12
Monaghan and Cavan	16
Portadown and West Down	66
WEST SOMERSET	77
WORCESTERSHIRE AND HEREFORDSHIRE—	
Hereford	60
Worcester	77
YORKSHIRE—	
Barnsley	40
Bradford	164
Halifax	60
Harrogate	64
Huddersfield	53
Leeds	189
Rotherham	20
Sheffield	210
Scarborough	45
Wakefield, Pontefract, and Castleford	70
York	61

British Medical Association.

Annual Representative Meeting, Aberdeen, 1914.

NOTICES OF MOTION FORWARDED BY DIVISIONS

Since Publication of Provisional Agenda.*

(B) Finance.

British Medical Journal.

1. **Amendment**, by West Herts, to Motion contained in Item 9 of Provisional Agenda, as to approval of Annual Report of Council under heading "(B) Finance":

That this Meeting is of the opinion that the British Medical Journal does not satisfactorily fulfil the requirements of modern medical journalism, and requests the Journal Committee to revise the scheme of publication and its expenditure.

Amounts Paid to Contributors to the Journal.

2. **Amendment**, by Dr. R. Tuxford, Representative of Holland and Kesteven, to Motion contained in Item 9 of Provisional Agenda:

That a more detailed account be given in the accounts of the Journal showing the actual amounts paid to contributors and their number other than the Editor and Sub-Editors.

Finance.

3. **Rider**, by Sunderland, to Motion contained in Item 9 of Provisional Agenda:

That all matters of finance shall be dealt with by a Finance Committee of the Council.

Payment of Annual Subscription.

4. **Rider**, by City, to Motion contained in Item 9 of Provisional Agenda:

That the heretofore custom of notifying members individually at the end of December as to renewal of the annual subscription be discontinued, and that a notice be prominently inserted in the Journal during December and January drawing attention to the renewal of subscriptions and the desirability of prompt payment, and attaching two perforated slips, one for remitting with payment direct and the other a banker's order for annual renewal of payment, with a recommendation in preference of the latter.

Salaries of Staff of Association.

5. **Rider**, by Brighton, to Motion contained in Item 9 of Provisional Agenda:

That in the opinion of this Meeting the whole-time staff of the Association should receive an inclusive salary, which should include all contributions to the Journal.

(C) Organization.

Possible Insurance Members of Branch Councils and Division Executive Committees.

6. **Amendment**, by City, to Motion contained in Item 11 of Provisional Agenda, as to approval of Recommendation A of Council for amendment of By-laws 16 and 18 (for report see Supplement, May 2nd, p. 293):

That the report be referred back for further consideration and information as to the numerical proportion of such members of Committees under the National Insurance Act to the members of the Executive Committee of Divisions.

Referendum and Postal Vote.

7. **Amendment**, by Brighton, to Motion contained in Item 12 of Provisional Agenda, as to proposed draft new and amended Articles and By-laws as to Referendum and Postal Vote:

That Article 32 (*f*) be as follows:

If the said meeting of the Council shall not be held within the said period of three months, or if the requisition prescribed by paragraph (*c*) of this Article shall not have been issued within the said period of eight weeks, then the resolution shall come into operation immediately upon the expiration of the said period of three months or of the said period of eight weeks (as the case may be). Save as aforesaid, no resolution to which this Article relates shall have any operation unless and until it shall have been duly approved either on a Referendum (in cases in which a Referendum has been duly required) or by the Council (in other cases). Any resolution so approved shall (unless the same shall be finally disallowed by the Council in pursuance of the last preceding paragraph of this Article) have effect according to the tenor thereof as a valid and effectual decision of the Association.

Representatives and Deputy-Representatives.

8. **Amendment**, by Brighton, to Motion contained in Item 21 of Provisional Agenda, as to proposed amendment of By-law 33:

That there be added to paragraph (3) of the proposed amended By-law 33 the following clause:

In the event of a Representative failing to resign within seven days when requested in accordance with foregoing subsection, the Executive Committee of the Division shall declare the office of Representative vacant, and proceed to the election of a Representative.

Question of Making Insurance Act Committee a Standing Committee.

9. **Amendment**, by Brighton, to Motion contained in Item 24 of Provisional Agenda, in special connexion with paragraph 45 of Special Report of Council as to Articles and By-laws (Supplement, May 2nd, p. 300):

(i) That steps be taken for the constitution of an Insurance Acts Committee as a Standing Committee of the Association, and that it be so named.

(ii) That the Insurance Act Committee consist of the *ex officio* members, the Chairman of the Hospitals, Medico-Political, Organization, and Public Health Standing Committees, together with twelve members to be elected by the Panel Committees of the United Kingdom on a similar territorial basis as adopted under By-law 43 (*c*) for the election of twelve Members of Council.

(iii) That the reference to the Insurance Acts Committee in the Schedule to the By-laws be as follows:

To deal with all matters arising under the National Insurance Acts; to watch the interests of the medical profession in relation to these Acts; and to report to the Council.

(iv) That it be an instruction to the Council to carry out an election of an Insurance Act Committee by November next in accordance with the proposal in Resolution (ii) above, which shall hold office until the Annual Representative Meeting next year, and act under the reference in Resolution (iii) above.

(v) That until the Insurance Act Committee referred to in Resolution (iv) above be constituted the present Insurance Act Committee continue in office.

Assistant Medical Secretary.

10. **Amendment**, by Tunbridge Wells, to Motion contained in Item 46 of Provisional Agenda, as to approval of remainder of Annual Report under heading "(C) Organization," in connexion with paragraph 44 of the Report (Supplement, May 2nd, p. 277):

That this Representative Meeting regret the delay of the Council in appointing an Assistant Medical Secretary.

* The Provisional Agenda was published in Supplement of May 9th, pages 329 to 344.

Annual Conference of Secretaries.

11. **Rider,** by CITY, to Motion contained in Item 46 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(C) Organization," in connexion with paragraph 60 of the Report as to Annual Conference of Secretaries, 1914:

That the Conference be empowered to appoint a Sub-committee to consider matters of interest to Honorary Secretaries during the ensuing twelve months, and to report to the next Conference.

Expenses Attending Central Meetings.

12. **Rider,** by SUNDERLAND, to Motion contained in Item 46 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(C) Organization":

That members attending Executive Meetings in London shall be paid one guinea per day for expenses in addition to railway fare.

Composition of Representative Body.

13. **Rider,** by SUNDERLAND, to Motion contained in Item 46 of Provisional Agenda:

That no Division shall have more than one Representative at Representative Meetings.

Assistance to Non-Members in Medico-Political Matters.

14. **Rider,** by BRIGHTON, to Motion contained in Item 46 of Provisional Agenda:

That it be referred to the Council to consider and report on what terms and conditions, if any, the assistance if asked for of the British Medical Association in medico-political subjects shall be placed at the disposal of any registered medical practitioner who has resigned his membership or has never become a member.

Resignations.

15. **Rider,** by CITY, to Motion contained in Item 46 of Provisional Agenda:

That the JOURNAL be discontinued to those resigning membership of the Association at the expiration of the current subscription.

Question of Entrance Fee for Practitioners Rejoining Association.

16. **Rider,** by BRIGHTON, to Motion contained in Item 46 of Provisional Agenda:

That it be an instruction to the Council to consider and report, with any consequent amendments of the By-laws thought desirable, on the proposal that should any registered medical practitioner who has resigned his membership desire to become once more a member he be required to pay an entrance fee in addition to the annual subscription.

(E) Science.

Prevention of Malarial Fever.

17. **Rider,** by KENSINGTON, to Motion contained in Item 49 of Provisional Agenda, as to Annual Report of Council under heading "(E) Science":

That in the opinion of the Representatives of the British Medical Association the petition of Sir Ronald Ross, K.C.B., F.R.S., to the House of Commons for remuneration for his services to the empire in having discovered how malarial fever can be prevented, should be granted.

(F) Medical Ethics.

"The Family Encyclopaedia of Medicine."

18. **Rider,** by BUCKINGHAMSHIRE, to Motion contained in Item 50 of Provisional Agenda, as to approval of Annual Report of Council under heading "(F) Medical Ethics," with special reference to paragraph 83 (page 280):

That all those who have allowed their names to appear in connexion with "The Family Encyclopaedia of Medicine" should be called upon to withdraw, and that their conduct be severely condemned.

Avoidance of Risk of Financial Loss in Respect of Possible Libel Actions.

19. **Rider,** by BRIGHTON, to Motion contained in Item 50 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(F) Medical Ethics," with special reference to paragraph 85 (page 280):

That the Council shall take such steps as may be possible and necessary to avoid incurring any financial loss for any libel action which may be brought against the Association owing to the conduct of any member, Division, or Branch acting in opposition to the advice and instructions of the Council.

(G) Medico-Political.

State Registration of Nurses.

20. **Rider,** by BRIGHTON, to Motion contained in Item 51 of Provisional Agenda:—

That it be an instruction to Council to take afresh such steps as it considers desirable in order to obtain:

1. Unanimity amongst the various interests concerned as to the essentials of a Nurses' Registration Bill.

2. Satisfactory evidence that there is a large body of professional opinion in support of these essentials.

3. The support of the Government for legislation next session on the lines of these essentials.

Draft Memorandum on Policy of Association as to Medical Inspection and Treatment of School Children.

21. **Amendment,** by TOWER HAMLETS, to Motion contained in Item 55 of Provisional Agenda:

That the Memorandum submitted by the Council be referred back for further consideration.

Remuneration of Whole-time Assistant School Medical Officers.

22. **Amendment,** by PLYMOUTH, to Motion contained in Item 55 of Provisional Agenda, in connexion with paragraph 6 of Memorandum on policy of Association with regard to medical inspection and treatment of school children (SUPPLEMENT, May 2nd, p. 313):

That assistant whole-time medical officers whose duties include school medical work shall commence at a salary of not less than £350 per annum, rising by annual increments of £25 to a maximum of not less than £500.

Treatment by Private Practitioners.

23. **Amendment,** by BRIGHTON, to paragraph 11 of the draft Memorandum:

That for the words "it is their duty to" in the line 3 there be substituted the words "they should through the Division."

24. **Amendment,** by BRIGHTON, to paragraph 15 of the draft Memorandum:

That all the words after the word "obtained" in line 6 be deleted and the following substituted:

"Should the school medical officer not be satisfied with the result of treatment said to have been given, he should offer the private practitioner, if any, an opportunity of consultation on the case."

Treatment by Medical Charities.

25. **Amendment,** by BRIGHTON, to Motion contained in Item 55 of Provisional Agenda, with special reference to paragraph 17 of draft Memorandum on Policy of Association (SUPPLEMENT, May 2nd, p. 313):

(i) That no case in the first instance should be referred to a voluntary (charitable) institution for treatment.

(ii) That the Education Authority shall be required to pay for all children of their schools receiving treatment at a voluntary hospital such sum as shall be arranged with Governing Body.

(iii) That from such sum an amount agreed upon by the Governing Body and the Medical Board shall be placed to a special fund which shall be distributed as the Medical Board shall decide.

26. **Amendment**, by Brighton, to paragraph 17 of the draft Memorandum:

That in line 2 there be inserted after the word "not" the words "in the first instance."

27. **Amendment**, by Brighton, to paragraph 18 of draft Memorandum:

That there be inserted in line 2 after the word "reference" the words "in the first instance."

28. **Amendment**, by Brighton, to paragraph 22 of draft Memorandum (page 314):

That in the first line "should" be substituted for "may."

Remuneration of Whole-time Health and School Officers.

29. **Rider**, by Hereford, to Motion contained in Item 55 of Provisional Agenda:

That in the opinion of the Representative Body no whole-time medical officer of health nor school medical officer shall accept any wholly new appointment involving fresh duties unless adequate remuneration is added to that previously received by him.

30. **Rider**, by Plymouth, to Motion contained in Item 55 of Provisional Agenda:

That whole-time medical officers whose duties include school work be included in the provisions of the bill to secure superannuation and security of tenure of office.

31. **Rider**, by Hereford, to Motion contained in Item 55 of Provisional Agenda:

That whole-time medical officers whose duties include school work should be entitled to secure superannuation, security of tenure, etc.

Draft Memorandum on Treatment at Voluntary Hospitals of School Children found Defective on Medical Inspection.

32. **Amendment**, by Brighton, to Motion contained in Item 56 of Provisional Agenda:

That in Paragraph 5 (2), line 1, of the Memorandum (Supplement, May 2nd, p. 281) there be inserted after the word "referred" the words "in the first instance."

33. **Rider**, by Buckinghamshire, to Motion contained in Item 56 of Provisional Agenda:

That clinics should be started to treat defective school children in place of sending them to the voluntary hospitals.

Practice of Dentistry by Unqualified Persons.

34. **Rider**, by Hereford, to Motion contained in Item 57 of Provisional Agenda, as to question of establishment of Dental Clinics:

That this Representative Meeting, being alarmed at the continued rapid increase in unqualified persons practising "Dentistry," to the very great damage of the public health, and considering that from the standpoint of the general health the profession should endeavour to safeguard the nation from these dangers, instructs the Council to take all possible steps to influence the Government, members of Parliament, and others to obtain legislation to prevent further unqualified persons from starting the practice of dentistry, and to so define the titles of those qualified to practise that the uninstructed public may easily distinguish dentists from those who have established a statutory right to practise though unqualified.

Salaries of Medical Women.

35. **Rider**, by Plymouth, to Motion contained in Item 59 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(G) Medico-Political," in connexion with paragraphs 102–3 (pages 282–3), as to salaries of women medical inspectors of reformatory and industrial schools and under Board of Control:

That the salaries paid to medical women be the same as those paid to men.

Fees for Medical Examinations and Reports for Life Insurance.

36. **Rider**, by Worcester, to Motion contained in Item 59 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(G) Medico-Political":

That the question of fees for medical examinations and reports for life insurance be considered by the Annual Representative Meeting, 1914, with a view to the Council approaching the insurance companies in order to obtain the adoption of a universal rate all over the country.

Scope of Policy of Association.

37. **Amendment**, by Plymouth, to Motion by that Division contained in Item 60 of Provisional Agenda:

That it is desirable for the future that the British Medical Association should primarily confine its policy to promoting the scientific and social welfare of the medical profession, leaving all medico-political work to be done by a body formed for such purpose, and registered as a "trade union."

(H) National Insurance.

Model Scheme for Treatment of Tuberculosis.

38. **Amendment**, by Tower Hamlets, to Motion contained in Item 61 of Provisional Agenda:

That in paragraph 11 B (ii) of the Scheme the word "estimated" be deleted. (See Supplement, May 2nd, p. 316.)

39. **Motion**, by Tower Hamlets, to Motion contained in Item 61 of Provisional Agenda:

That in paragraph 13 (ii) of the Scheme the word "estimated" be deleted, and that after the word "cost" there be inserted the words "so far as can be ascertained." (See Supplement, May 2nd, p. 317.)

40. **Amendment**, by Worcester, to Motion in Item 61 of Provisional Agenda:

That in paragraph 16 of the Scheme (page 317) subsections (ii) to (vi), inclusive, be deleted.

Appointment of Intermediaries between Non-Panel Committee and Non-Panel Practitioners.

41. **Amendment**, by Brighton, to Motion contained in Item 73 of Provisional Agenda, with reference to paragraph 150 of Report of Council (page 288):

That the only intermediaries by whom the views of any section of the medical profession should be obtained are the officials of the Branch or Division concerned.

Medical Practitioners and Service under the Insurance Act.

42. **Amendment**, by Buckinghamshire, to Motion contained in Item 73 of Provisional Agenda, in connexion with paragraph 151 of Annual Report of Council:

That Appendix IX to the Annual Report of Council, page 318 (Memorandum on the reasons why medical practitioners will not accept service under the National Health Insurance Acts) be deleted.

Central Insurance Defence Fund.

43. **Rider,** by SUNDERLAND, to Motion contained in Item 73 of Provisional Agenda, as to approval of remainder of Annual Report of Council under heading "(H) National Insurance," in connexion with paragraphs 119 to 124 of Report:

That the Central Defence Fund be now closed.

Medical Referees.

44. **Rider,** by WEST HERTS, to Motion contained in Item 73 of Provisional Agenda in connexion with paragraphs 130–1 of Annual Report of Council as to medical referees (SUPPLEMENT, May 2nd, p. 285):

That whole-time medical referees should be appointed as soon as possible.

Fees of Medical Referees under Insurance Act.

45. **Rider,** by WORCESTER, to Motion contained in Item 73 of Provisional Agenda, in connexion with paragraphs 130–1 of Report (page 285):

That half a guinea be the minimum fee for examination and report as referee under the National Insurance Act, and that mileage be charged extra at the rate of not less than one shilling a mile beyond one mile.

Insured Persons making their own arrangements with Unqualified Persons.

46. **Rider,** by CITY, to Motion contained in Item 73 of Provisional Agenda, in connexion with paragraphs 141–3 of Annual Report of Council:

That the employment by the Worcester Insurance Committee of herbalists in the place of registered medical practitioners is a serious infringement of the Medical Acts, and that the Council be instructed to take legal opinion with the view of testing the matter in the law courts.

Proposed Special Fund.

47. **Amendment,** by EDINBURGH AND LEITH, to Motion contained in Item 78 of Provisional Agenda, as to the inauguration of a Special Fund:

That the subject of an Emergency Fund be remitted to the Council for further reconsideration.

48. **Amendment,** by BRIGHTON, to Motion contained in Item 78 of Provisional Agenda:

That before the word "Fund" there be inserted the word "Central."

49. **Amendment,** by BRIGHTON, to Motion contained in Item 81 of Provisional Agenda:

(i) That local funds be inaugurated in areas consisting of one or more Divisions if the medical practitioners resident in such area so desire.

(ii) That the collection and administration of such local fund be placed in the hands of a trade union or trust as the local medical profession may decide.

(iii) That contributions be required to be made to the Central Fund from each such local fund, and also by practitioners who have not subscribed locally.

50. **Motion,** by TOWER HAMLETS, preliminary to consideration by Annual Representative Meeting of Item 83 of Provisional Agenda, as to collection and administration of the Proposed Special Fund being placed in the hands of a trade union:

That a three-fourths majority of those present and voting be necessary to make Motion No. 83 of the Provisional Agenda (SUPPLEMENT, May 9th, p. 339) effective.

Formation of Association into or Connexion of Association with a Medical Trade Union.

51. **Amendment,** by EDINBURGH AND LEITH, to Motion contained in Item 83 of Provisional Agenda, as to collection and administration of a Special Fund being placed in the hands of a trade union:

That this meeting disapproves of the Association being formed into or being in any way associated with a medical trade union.

52. **Amendment,** by BRIGHTON, to Motion contained in Item 83 of Provisional Agenda:

That the collection and administration of the Central Fund shall be placed in the hands of a Trust.

53. **Rider,** by BRIGHTON, to the foregoing Amendment by that Division (see paragraph 10 of Report of Council concerning the proposed Special Fund, SUPPLEMENT, May 2nd, p. 319):

That this Representative Meeting do elect six of its number not members of the Council who, together with six members of the Council elected by the Council, shall form the Provisional Committee of Management of the Trust Fund, and shall hold office either until the Fund is completely inaugurated or until the next Annual Representative Meeting, whichever shall occur first.

(K) Hospitals.

Medical Aid Institutions and Medical Members of Staffs of Hospitals.

54. **Amendment,** by WORCESTER, to Motion contained in Item 90 of Provisional Agenda, as to approval of Annual Report of Council under heading "(K) Hospitals," in connexion with paragraph 170 of the Report (page 290):

That Minute 83, Special Representative Meeting, December, 1913, be amended by changing the words "has retained his post with the consent of the Council of the Association" so as to read "has retained his post with the consent of the local profession."

55. **Riders,** by WORCESTER, to Motion contained in Item 90 of Provisional Agenda:

(*a*) That in future the consent of the Association be asked before a medical officer of these institutions be allowed to retain his post.

(*b*) That previous exemption should justify an exemption by the Council.

(*c*) That exemption should be granted if the institution should come to be carried on in accordance with the wishes of the Council of the Association.

Medical Aid Institutions.

56. **Rider,** by BRIGHTON, to Motion contained in Item 90 of Provisional Agenda:

That it be an instruction to the Council to take or to support any action such as will tend to insure that medical institutes shall:

(*a*) Pay their medical officers at a rate not less than that provided under the National Insurance Act.

(*b*) Provide adequate medical attendance for all their members.

(M) Scotland.

Scottish Office.

57. **Rider,** by EDINBURGH AND LEITH, to Item 94 of Provisional Agenda:

That the Scottish Office and whole staff should be located in Edinburgh.

58. **Amendment,** by DUNDEE BRANCH, to foregoing:

That freedom be given the Scottish Committee to determine the locus of the office in Scotland.

(O) Branches outside United Kingdom.

South African Medical Congress.

59. **Rider,** by BORDER (SOUTH AFRICA) BRANCH, to Motion contained in Item 96 of Provisional Agenda, in connexion with paragraph 197 of Annual Report of Council, as to the South African Medical Congress:

That the Council of the Association send a representative to attend a South African Medical Congress.

ALFRED COX,
Medical Secretary.

June 24th, 1914.

Special Representative Meeting, Aberdeen.

On the requisition of the Council, notice is hereby given under Article 31 and By-laws 36 and 73, that a Special Representative Meeting of the Association will be held on Monday, July 27th, 1914, at 12 noon, at the Marischal College, Aberdeen, for the purpose of considering the following Report and Recommendation of Council (paragraphs 211 and 212 of Supplementary Report of Council, 1913–14), and, if considered advisable, amending By-law 67 accordingly:

Scottish Committee.

211. The work of the Scottish Committee is growing, and it is found increasingly difficult for the Chairman to be able to attend all the Committee meetings in Scotland, and Council and Committees in London as well. The Committee consequently desires to be able to elect a Deputy Chairman as well as Chairman. By-law 67 provides that each Standing Committee shall appoint from its own number a member of Council as Chairman, in order that the Council may be able to keep in touch with each Committee. The Scottish Committee wishes to be an exception to this By-law and to be able to have a Chairman not necessarily a member of Council, but that effective co-ordination shall be maintained by insisting that one of its three officers—Chairman, Deputy Chairman, or Honorary Secretary—shall be on the Council. As the Scottish members desire the change as early as possible, the Council has arranged that a special session of the Representative Body shall be held at Aberdeen on Monday, July 27th, 1914, at 12 noon, for the purpose (only one month's notice of such an alteration of By-laws being required in the case of a Special Representative Meeting).

212. The Council recommends:

Recommendation GG.—That the Special Representative Meeting, Aberdeen, amend existing By-law 67 of the Association, which reads as follows:

67. Each Standing Committee shall appoint from its own number a Member of Council as Chairman,

to read as follows:

67. Each Standing Committee except the Scottish Committee shall appoint from its own number a Member of Council as Chairman. The Scottish Committee shall appoint from its own number a Deputy Chairman, as well as a Chairman, and either the Chairman or the Deputy Chairman or the Honorary Secretary of that Committee shall be appointed from amongst members of Council.

T. Jenner Verrall,
Chairman of Representative Meetings.

June 24th, 1914.

Association Notices.

ELECTION OF MEMBERS OF COUNCIL BY GROUPED REPRESENTATIVES.

Notice is hereby given that Nominations for Candidates for election of Members of Council by grouped Representatives for the year 1914–15 will be received by the Medical Secretary up to the end of the first hour of the proceedings of the Annual Representative Meeting on Friday, July 24th, 1914. Each Nomination must be on the prescribed form, copies of which will be forwarded by the Medical Secretary on application.

Separate forms have been prepared: (I) For Nomination by a Division (through its Representative), and (II) for Nomination by a Representative of a Constituency included in the Group, and those applying are requested to state for which purpose the form is desired.

The voting papers will be issued at the Representative Meeting to each Representative or Deputy Representative of a Constituency in the United Kingdom in attendance at the Meeting.

By order of the Council,
Alfred Cox,
Medical Secretary.

June 24th, 1914.

SUGGESTED CHANGES OF BOUNDARIES.

(1) Notice of Proposal for Adjustment of Perth Branch Area.

Notice is hereby given under By-law 73 to all concerned of a proposal made by the Perth Branch for adjustment of its boundary as follows:

That the boundary of the Perth Branch be adjusted so as to be throughout identical with the Perth County boundary, and that the areas of the Perth, Dundee, and Stirling Branches and Forfarshire Division be modified accordingly.

Formal written notice of the proposal has been given, pursuant to Article 13, to the Dundee and Stirling Branches and Forfarshire Division, and the matter will be determined in due course by or on behalf of the Council of the Association.

Any member affected by the proposed change and objecting thereto is requested to notify the fact and his reason therefor to the Medical Secretary, 429, Strand, London, W.C., not later than July 27th, 1914.

(2) Notice of Proposal for Alteration of Areas of Birmingham and South Midland Branches, and Northants and Warwick and Leamington Divisions.

Notice is hereby given under By-law 73 to all concerned of a proposal made by the Northants Division that Rugby and district shall be transferred from the area of that Division to the Warwick and Leamington Division.

Formal written notice of the proposal has been given, under Article 13, to the Birmingham and South Midland Branches and the Warwick and Leamington Division, and the matter will be determined in due course by or on behalf of the Council.

Any member affected by the proposed change and objecting thereto is requested to notify the fact and his reason therefor to the Medical Secretary, 429, Strand, London, W.C., not later than July 27th, 1914.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Birmingham Branch: Central Division.—Drs. Ernest C. Hadley (Bunbury Street, Lozells) and Bernard J. Ward (141A, Great Charles Street), Honorary Secretaries, give notice that the annual meeting of the Division will be held at the Medical Institute, Edmund Street, on Wednesday, July 1st, at 3.30 p.m. Business: Election of officers, four Representatives upon the Branch Council and seven members of the Executive Committee. To receive Representatives' report of Special Representative Meeting. To receive annual report of Executive Committee, and, if approved, adopt. To instruct Representatives for Annual Representative Meeting. (Members are particularly requested to bring with them British Medical Journal Supplements of May 2nd, May 9th, June 13th, and June 27th.) An ethical case.

Border Counties Branch.—Dr. George R. Livingston, Honorary Secretary (47, Castle Street, Dumfries), gives notice that the forty-seventh annual general meeting of the Border Counties Branch will be held in the Station Hotel, Carlisle, on Friday, July 3rd, at 3.45 p.m., when the President-elect (Dr. Fisher, of Whitehaven) will deliver his presidential address on national health insurance.

Cambridge and Huntingdon.—Dr. G. S. Haynes, Honorary Secretary (King's Lane, Cambridge), gives notice that the seventieth annual general meeting will be held at the Corn Exchange, St. Ives, Hunts, on Thursday, July 2nd.—12.20 p.m., business meeting, election of officers, etc.; 1.15 p.m., luncheon to members and their wives by the kind invitation of the President-elect, Dr. W. R. Grove; 3 p.m., presidential address.

Dorset and West Hants Branch.—Dr. Frank Fowler, Honorary Secretary (29, Poole Road, Bournemouth), gives notice that the summer meeting of the Dorset and West Hants Branch will be held at the Town Hall, Bridport, on Wednesday, July 8th, at 3.30 p.m. Mr. C. Edwards, Vice-President, will read a paper, "Dr. Roberts, a Bridport Worthy." Dr. H. C. Manning will open a discussion on "The Theory and Practice of Tuberculin Treatment." The Bridport practitioners very kindly invite members to luncheon at the Greyhound Hotel (1.30 to 2.30), and Mr. and Mrs. Edwards, Granville House, have kindly offered to give tea. By kind permission of the Mayor, the Municipal Archives will be on view at the Town Hall from 2.30 to 3.30. The West Dorset Golf Club kindly offer members the free use of the club at West Bay. Plans of the proposed new Bridport Hospital will be on view.

EAST ANGLIAN BRANCH.—Dr. B. H. Nicholson, Mr. Hamilton A. Ballance, and Dr. J. Gutch, Honorary Secretaries, give notice that the annual meeting of the East Anglian Branch will be held at the Assembly Rooms, Albert Square, Great Yarmouth, on Wednesday, July 1st, at 12.45 p.m., when the report of Council and financial report will be presented and officers elected. The President-elect, Dr. James Ryley, and Dr. Cleveland (Norwich) will exhibit some radiographs, and Dr. Ryley will show 3 cases of simple glaucoma treated by Colonel Elliot's operation. The President-elect invites members to luncheon at the Assembly Rooms at 1.15 p.m. The general meeting will be resumed at 2 p.m., when the President-elect will be inducted and the final memorandum upon the proposed subdivision of the Branch will be considered. Dr. D. G. Thomson (Norwich) will move that the Branch be divided into three—for Norfolk, Suffolk, and Essex respectively; that the arrangement of details be left to the Branch Council, and that after the dissolution of the East Anglian Branch it will be advantageous to hold from time to time combined meetings for social and scientific purposes of two or more of the newly formed Branches. Dr. and Mrs. Ryley invite members to tea at their house at Gorleston at 4.30 p.m. There will be a trip by steamer (weather permitting) round the St. Nicholas lightship, leaving the South Quay, Yarmouth, at 3 p.m., and landing passengers at Gorleston. Those who prefer may pay a visit to Burgh Castle and church and the Roman encampment, and to Fritton Lake, reaching Gorleston for tea.

EAST YORK AND NORTH LINCOLN BRANCH.—Dr. H. L. Evans, Honorary Secretary, gives notice that the annual meeting of this Branch will be held in Hull on Friday, July 10th. Accounts, election of officers, etc.

LANCASHIRE AND CHESHIRE BRANCH: CHESTER AND CREWE DIVISION.—Drs. C. Jephcott and E. Gray, Honorary Secretaries (12, Upper Northgate Street, Chester), give notice that a meeting of the Division will be held in the Board Room of the Chester Royal Infirmary on Monday, June 29th, at 8.30 p.m. Business: To consider report in SUPPLEMENT of June 13th, and reply to the questions concerning development in the medical service of the Insurance Act; to consider report of Council (see SUPPLEMENT, May 2nd, special paragraph 64).

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—Dr. A. G. Southcombe, Honorary Secretary (83, Sidney Road, Homerton, N.E.), gives notice that a special general meeting of the Division will be held in Balfour Hall, Kingsland Road, on Tuesday, July 7th, at 9.30 p.m., to consider the adoption of the model rules of organization for the Division.—Following the special meeting an ordinary general meeting will be held for the usual business, and especially to consider the Supplementary Agenda for the Representative Meeting (SUPPLEMENT, June 27th).

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—Dr. W. H. F. Oxley, Honorary Secretary (119, East India Road, E.), gives notice that a meeting of the Division will be held on Monday, June 29th, at the Stepney Central Hall, at 4 p.m. Business: To consider report by Future Developments of Insurance Act Committee (SUPPLEMENT, June 13th). As this report raises questions of the utmost importance to the whole profession, it is earnestly hoped that members will find it possible to attend.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—Dr. P. S. Hichens, Honorary Secretary (47, Sheep Street, Northampton), gives notice that the annual meeting of the Northamptonshire Division will be held on Thursday, July 2nd, in the Board Room of the Northampton General Hospital, at 2.30 p.m. The meeting will be preceded by a meeting at Franklin's Restaurant, at 1.30 p.m. Those wishing to be present should notify the Secretary two days beforehand. Agenda: Election of officers for the ensuing year. Consideration of agenda for Annual Representative Meeting.

SOUTHERN BRANCH.—Dr. James Green, Honorary Secretary (Brandon House, Mile End, Landport, Portsmouth), gives notice that the forty-first annual meeting of the Southern Branch will be held at the South-Western Hotel, Southampton, on Thursday, July 9th, at 1 o'clock. Agenda: Correspondence. Election of officers for 1914–15 (scrutineers' report). Annual Report of Council. Balance sheet. Council's recommendation *re* travelling expenses of secretaries of Divisions. Adoption of new rules of organization. Alterations of rules of golf competition. General business. At the conclusion of the business the President for the coming year (Mr. G. H. Cowen) will take the chair and deliver an address. Mr. Cowen invites the members to luncheon at the hotel, at 1.45, and to afternoon tea, to which ladies are invited, at 4 o'clock. The golf competition will be played off at the Stoneham Golf Club directly after luncheon. Excursions will also be arranged. Members intending to accept the President's hospitality will oblige by sending word to that effect to Dr. W. A. Simpson, 3, Waterloo Road, Southampton, as early as possible, but not later than July 6th.

Meetings of Branches and Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

BORDER COUNTIES BRANCH.

A MEETING of the Border Counties Branch was held by the invitation of the President, Dr. EASTERBROOK, at the Crichton Royal Institution, Dumfries, on June 19th. The members were received by Dr. Easterbrook at Crichton Hall, where tea was served.

Laboratory Demonstrations.—After the transaction of some formal business the members present proceeded to the Crichton laboratories, where Dr. EASTERBROOK explained the arrangement of the various departments. Dr. JOHN CRUICKSHANKS then gave a demonstration on recent laboratory methods in medicine and psychiatry, more particularly upon laboratory methods of practical clinical value in aiding the general practitioner in diagnosis.

Vote of Thanks.—On the motion of Dr. BARNES (Carlisle) a very hearty vote of thanks was accorded Dr. Easterbrook for his kindness in having the meeting at the Crichton Royal Institution, and to Dr. John Cruickshanks for his very helpful demonstration.

FIFE BRANCH.

THE twelfth annual meeting of the Fife Branch was held at Cupar on June 12th, when Dr. DOUGLAS, President of the Branch, was in the chair. There was a small attendance.

Election of Office-bearers.—The following officers were elected:

President: Dr. R. B. Graham (Leven).
President-elect: Dr. Macdonald (Cupar).
Honorary Secretary and Treasurer: Dr. G. C. Anderson (Denbeath).
Past Presidents: Dr. C. E. Douglas (Cupar), Dr. J. Orr (Tayport).
Representative: Dr. Sneddon (Cupar).
Deputy Representative: Dr. Macdonald (Cupar).
Branch Council: Dr. M. Crawford (Kirkcaldy), Dr. William Eggeling (Largo), Dr. F. T. Heron (Markinch), Dr. J. Keay (Kelty), Dr. M. MacNicol (Leven), Dr. J. Jack (Falkland), Dr. J. Dalgleish (Dunfermline).

Annual Report.—The annual report of the Branch Council was approved. The report showed that the Branch had a balance in hand at December 31st, 1913, of £3 5s. 10d., against a debit of £5 5s. 11d. the previous year, and that the membership stood at 103, as against 105 for 1912. Three meetings had been held during the year, while the Branch Council had met on four occasions. A special question of local interest which had engaged the attention of the members had occurred in connexion with the Colliery Surgeons Subcommittee. The matter for discussion during the past year in this connexion had been the contract rate for medical attendance upon the wives and families of insured persons. The matter was not yet definitely settled and the subcommittee was still negotiating with the miners' representatives. The Branch had been ably represented at the Representative Meetings by Dr. Sneddon (Cupar), and the Branch Council expressed its thanks to him for his services in this connexion.

Colliery Surgeons Subcommittee.—Dr. DICKSON, convener of the Colliery Surgeons Subcommittee, submitted the annual report of this Committee, which stated that during the year 1913 the Committee had been extremely busy. There had been seven meetings of the full committee (which consisted of forty-five members) and nine meetings of deputies from that Committee. The questions at issue between the Colliery Surgeons Committee and the Miners' Union officials had been the arrangements for the medical attendance on dependants of insured persons and the supply of medicines to those dependants by the doctors in certain areas. The Colliery Surgeons Committee agreed to the appointing of workmen's committees in the various areas to check the medical deductions and payments at the colliery offices, but it had objected to the provision of medicine for dependants, and had intimated to the miners that it was prepared to stop the whole scheme for dependants on that one point alone. Negotia-

tions might be resumed at an early date, but meanwhile there was a deadlock. The reports were unanimously adopted.

Annual Report of Central Council.—It was unanimously agreed to instruct the Representative to oppose the formation of any special fund, and to oppose the motion recommending the lowering of the subscription to 25s. for members of not less than five years' standing.

Midwives Bill.—It was unanimously agreed to support the House of Lords' Bill.

GLASGOW AND WEST OF SCOTLAND BRANCH:

Glasgow Eastern Division.

The annual meeting of the Division was held in the Bellgrove U. F. Church Hall, Glasgow, on Wednesday, June 17th, under the chairmanship of Dr. Alex. Johnston.

Election of Officers.—The following officers were elected:

Chairman: Dr. Alex. Johnston.
Vice-Chairman: Dr. J. Wishart Kerr.
Secretary and Treasurer: Dr. Hugh A. McLean.
Representative: Dr. J. Wishart Kerr.
Deputy Representative: Dr. Alex. Johnston.
Representatives on Branch Council: The Chairman, Representative, and Secretary.
Executive Council: Drs. James Battersby, William Bryce, P. S. Buchanan, Wm. Campbell, Robert Davidson, A. P. Granger, W. L. Muir, J. G. McCutcheon, and Miller Semple.

Annual Report.—The Secretary reported that at the close of the year December 31st, 1913, the membership was 118, a decrease of 5 from the corresponding date in 1912. Four meetings of the Division and four meetings of the Executive Council were held during the year, all of which were well attended.

Annual Representative Meeting.—Instructions were given to the Representative to the Annual Representative Meeting to support Motion 83:

> That the collection and administration of a special fund shall be placed in the hands of a trade union.

Midwives (Scotland) Bills.—A communication from the Clerk to the Scottish Committee of the British Medical Association relative to the Midwives (Scotland) Bills was considered, and it was unanimously agreed to support the Lords' Bill, and to approach the local Members of Parliament in order to secure their assistance and support likewise.

Model Rules.—The Division model rules of organization were completed and adopted.

Lanarkshire Division.

The annual meeting of the Lanarkshire Division was held at Glasgow on June 10th, when the Chairman, Dr. W. G. Macpherson, presided, and twelve other members were present.

Correspondence.—Letters were read chiefly dealing with (*a*) matters referred to Divisions, (*b*) extension and alterations of Division area boundaries, and (*c*) medical aid institutes.

Annual Report of Division.—The Secretary read the annual report for the year 1913, which showed that the membership had fallen from 109 at December 31st, 1912, to 103 at December 31st, 1913. He explained, however, that at the date of meeting the membership was 115. Their accounts showed that the expenditure of the Division was £15 13s. 11d., leaving a debit balance of £5 9s. 5d. During the year five meetings were held, the average attendance being twenty.

Election of Office-bearers.—The following office-bearers were elected:

Chairman: Dr. W. G. Macpherson (Bothwell).
Vice-Chairman: Dr. W. Grant (Blantyre).
Secretary: Dr. Livingstone Loudon (Hamilton).
Treasurer: Dr. Murray Young (Hamilton).
Representative in Representative Meetings: Dr. Robert P. Jack (Birkenshaw, Motherwell).
Representatives to Branch Council: Dr. Macpherson (Bothwell) and Dr. T. D. Laird (Cambuslang), along with Dr. John Goff, Dr. Loudon, and Dr. Jack *ex officio*.
Executive Committee: Dr. Mackenzie (Douglas), Dr. M'Nay (Larkhall), Dr. Macphail (Whifflet), Dr. Steele (Hamilton), Dr. Fotheringham (Motherwell).

Midwives (Scotland) Bill.—The Division instructed the Secretary to write to the local Members of Parliament pointing out that it preferred the bill introduced by Lord Balfour of Burleigh to that of Mr. Barnes.

Annual Representative Meeting.—The agenda of the Annual Representative Meeting was discussed, and the Representative instructed thereanent.

Insurance Act.—The Secretary was instructed to write to Members of Parliament and point out that the Division was of opinion that the moneys which the Chancellor of the Exchequer proposed to devote to nursing, clinics, etc., should be administered by Insurance Committees and not by local authorities.

Committees.—The Secretary was instructed to make arrangements for the formation of three committees of the Division, namely: (1) A State Insurance Committee; (2) a Public Works and Collieries Committee; (3) a Public Health Committee, keeping in mind always the advisability of utilizing as far as possible the members of committees already dealing with these subjects.

LANCASHIRE AND CHESHIRE BRANCH:

Bury Division.

A general meeting of the Bury Division was held on June 17th, when Dr. Vine was in the chair and twenty members were present.

Annual Report of Division.

The Secretary read the annual report, which showed that five meetings of the Division had been held during the year, the average attendance being fourteen. The Committee regretted that it had been unable so far to arrange any scientific meetings owing to the pressure of insurance work and other considerations. The Executive and Ethical Committee had met three times and considered several important matters. In particular:

1. An effort has been made to increase the size of the Division so as to make it coterminous with the three insurance areas, namely, Bury, and areas 16 and 24 of the county of Lancashire, but owing to lack of interest in the medical men concerned, not much headway had been made.

2. A communication from the local branch of the Tramway and Vehicle Workers' Union, in reference to the non-acceptance by the Bury Tramways manager of medical certificates, had been considered, and the Committee was pleased to report that a satisfactory arrangement had been made with the manager whereby in such a case in the future the doctor issuing the certificate should be consulted, and in the event of further disagreement the case should be referred to an independent medical man.

3. The appointment of clinical tuberculosis officer for the district had engaged the attention of the Committee. In spite of representation to the health authorities, the appointment was offered at a salary of £400 per annum; a Warning Notice was inserted in the Journal. A gentleman was appointed, however, but when his attention was called to the fact that he was acting contrary to the decision of the Division and the policy of the British Medical Association he immediately withdrew, and intimated his intention of supporting the policy of the Association. In consequence of this the appointment was reconstituted, the borough of Bury deciding to appoint a tuberculosis officer, for their own area only, with duties as school medical officer, at a salary of £500. These conditions were approved, and the Division had received the congratulations of the Medical Secretary on the marked success of its action. The membership of the Division had fallen slightly from fifty-nine to fifty-six, owing mainly to arrears of subscriptions, though it was not thought that the increased subscription had had any bearing on this.

Financial Statement.—The ordinary account, made up to the end of the year 1913, showed expenditure of £11 13s. 5d. and receipts (grant from Branch Council) £10 15s., leaving a deficit of 18s. 5d. The extraordinary account was as follows:

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Balance from December 31st, 1912	7	0	8	Representative's expenses	11	3	6
Levy of 5s.: 49 members paid ...	12	5	0	Deficit on annual dinner	5	3	6
Deficit	0	1	4				
	£19	7	0		£19	7	0

Vote of Thanks.—Votes of thanks were accorded to Dr. Turnbull for his report and to the retiring officers.

Election of Officers.—The following were elected for the ensuing year:

President: Dr. R. Crompton.
Vice-President: Dr. B. Holmes.
Representative to Representative Meetings and Branch Council: Dr. J. W. Johnson.
Deputy Representative: Dr. Smith.
Joint Honorary Secretaries: Dr. P. F. Braithwaite (123, Tottington Road, Bury), Dr. J. C. Turnbull (Walmersley Road, Bury).
Executive: Drs. Vine, Nuttall, Baird, and Hitchen.
Local Honorary Secretaries: Dr. Smith (Radcliffe), Dr. H. Lawrie (Ramsbottom), Dr. J. A. Harrison (Haslingden), Dr. W. M. MacIlraith (Rawtenstall).

Annual Representative Meeting.—The Representative was instructed to vote in favour of the reduced subscription for newly qualified practitioners. Recommendation A (alteration of by-laws), the rider by Brighton, Recommendations B (midwives), C, D, and E (necessitous school children) were all approved. There was a unanimous vote against the rider by Plymouth (regarding scope of policy of Association). It was, on the motion of Dr. JOHNSON, unanimously resolved:

That this Division pledges itself to support a special fund provided it be protected by a trade union.

Dr. NUTTALL moved and Dr. YOUNG seconded the adoption of the Altrincham rider (National Medical Guild), which, after some discussion, was carried by 7 votes to 6. Regarding the amendment by St. Pancras and Islington (National Insurance Act), it was agreed that the Representative should not vote either way. Arising out of the amendment by North Middlesex, it was agreed that the Executive Committee should consider at an early date the question of the "future developments of the Insurance Act."

LIVERPOOL DIVISION.

A MEETING of the Liverpool Division was held at the Medical Institution, Liverpool, on June 12th, when Dr. J. C. M. GIVEN, the Chairman of the Division, presided. A communication was received from the Burnley Division, and it was agreed that the Divisional Secretary (Dr. Francis W. Bailey) should write the Medical Secretary in reference to the matter.

Organization Rules.—It was reported that the Organization Rules, which had been passed by the Division at the annual meeting on January 30th, had been approved by the Council, and they thus became the rules of the Division.

Nomination for Central Council.—Mr. F. Charles Larkin, the Branch Secretary, was nominated as a candidate for the Central Council by the Division.

Report of Council.—The report of Council, 1913–14, and the agenda of the Annual Representative Meeting (SUPPLEMENTS, May 2nd and May 9th) were next considered, and adopted as follows as the recommendations of the Division to the Representatives:

(B) *Finance.*—That item 9, motion (page 330) be approved.
(C) *Organization.*—That items 11 to 42, motions (pages 330 to 336 inclusive) be approved. That item 43, Rider by Brighton (page 336), and item 47, Rider by Hong Kong (page 337), both be left to the Representatives.
(D) *Journal.*—That item 48, motion (page 337), be approved.
(E) *Science.*—That item 49, motion (page 337), be approved.
(F) *Medical Ethics.*—That item 50, motion (page 337), be approved.
(G) *Medico-Political.*—That item 51, motion (page 337), be approved. That item 52, rider by Trowbridge (page 337), be left to Representatives. That items 53 to 59, motions (pages 337 to 338), be approved. That item 60, rider by Plymouth (page 338), be opposed.
(H) *National Insurance.*—That item 61, motion (page 338) be approved, except with regard to Clause 13, Subsection iii, and Clause 15, the proportion of fees paid to the medical staff should be one-third of the money paid by the health insurance authorities. That item 62, amendment by Trowbridge (page 338) be opposed. That items 63 and 64, riders be left to Representatives, except Subsection 6, rider 64 (page 338), which should be opposed. That items 65 to 71, motions (page 338) be approved. That item 72, motion (page 338) be opposed. That item 74, amendment by Stratford (page 339) be left to Representatives. That item 75, amendment by St. Pancras and Islington (page 339) be opposed. That item 76, amendment by North Middlesex (page 339) be approved.
(I) *Proposed Special Fund.*—That items 77 to 87, motions (page 339) be left to the Representatives. That item 88, rider by Altrincham (page 339) be opposed.

It was further agreed that the voting on the remainder of the agenda of the Annual Representative Meeting, and anything not contained in the above, should be left to the Representatives. It was also agreed that in the event of any of the Representatives being unable or unwilling to attend the Annual Representative Meeting deputy Representatives should be appointed by the Chairman and Secretary.

Trade Union.—Some discussion took place as to the question of supporting the principle of trade unionism in the Association, but pending a debate at the Representative Meeting, no opinion favourable to this principle was expressed.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

THE annual meeting of the Hampstead Division was held on June 12th at the Central Library, Finchley Road, when Dr. PICARD was in the chair.

The late Dr. Jessop.—It was agreed to send a letter of condolence to the widow of the late Dr. E. Jessop.

New Rule.—The following new rule was carried unanimously:

In cases of emergency, the Chairman shall have power to appoint a deputy to represent the Division at Representative Meetings.

Annual Report of Council.—The annual report of the Council was considered, and the views of the Executive Committee on the various recommendations brought before the meeting.

Election of Officers.—The following were elected:

Chairman: Dr. Coode Adams.
Vice-Chairman: Dr. Collingwood Andrews.
Honorary Secretary: Dr. Sidney Boyd.
Representatives on the Branch Council (2): Dr. C. W. Cunnington, Dr. H. Pinto-Leite.
Executive Committee: Dr. G. E. Shuttleworth, Dr. Hugh Thompson, Dr. T. B. Haggard, Dr. H. Meggitt, Dr. E. J. Peck, Dr. L. Barnett, Dr. King Patrick, Dr. J. Cohn, Dr. G. D. Fildcock, Dr. J. Dewar, Dr. D. H. de Souza.

SOUTH MIDDLESEX DIVISION.

THE annual meeting of the South Middlesex Division was held at Twickenham on June 17th, when Dr. M. F. COCK was in the chair and eight other members were present.

Annual Report.—The HONORARY SECRETARY presented his annual report, which stated that the Division had been able to spend more time on scientific and less on medico-political subjects than in the previous year. Seven ordinary meetings had been held at which papers were read, and thanks were due to Messrs. CARLESS, NORTON, FRANKAU, DODD, Sir JOHN COLLIE, and Dr. HASLETT for reading papers and opening discussions. Two other meetings had been held—one a well attended and successful dinner at the Mitre, Hampton Court, in October, and a meeting of the whole profession in May to consider the question of school clinics in parts of the Division. At the last annual general meeting it was decided to alter the place of meeting as an experiment. At a meeting held at Hounslow only one practitioner from that district attended, and at Staines only six members were present. The meetings held at Twickenham had been better attended, though there also there was room for improvement. Financially the Division was paying its way on the amount granted by the Branch. During the year Drs. Camps, Christian, Scott, and the Honorary Secretary were elected on the Middlesex Panel Committee.

Election of Officers for 1914–15.—The following officers were elected:

Chairman: W. H. Haslett, Esq. (Sunbury).
Vice-Chairman: M. F. Cock, Esq. (Ashford).
Honorary Secretary and Treasurer: Dr. H. M. Cooper (Hampton).
Representative: Dr. R. Langdon Down (Hampton Wick).
Representative on Branch Council: Dr. P. W. L. Camps (Teddington).

Election of Executive Committee.—The Executive Committee was re-elected, with the addition of Dr. Stevenson of Ashford.

Annual Dinner.—It was decided that the annual dinner should be held at the Mitre, Hampton Court, on October 21st.

School Clinics.—Letters from Dr. Brackenbury *re* the suggested school clinics having been read and discussed, the Honorary Secretary was directed to reply that the fees payable in some of the smaller parts of the Division should be those decided by the Association as a reasonable scale of fees.

Budget Proposals.—A long discussion ensued on the answers to be returned to the questions sent to the Divisions by the Future Developments of the Insurance Acts Committee of the Association, and the Honorary Secretary was directed to forward the decisions arrived at to the Medical Secretary.

Congratulations.—A vote of congratulation was passed to Drs. Percival Langdon Down and W. H. Haslett on being appointed Chairmen respectively of the Teddington and Sunbury District Councils, and on being sworn in as justices of the peace for the county of Middlesex.

Woolwich Division.

The annual general meeting of the Woolwich Division was held on May 26th, when Dr. Thomson was in the chair.

Annual Report of Division.—The annual report was received and adopted.

Election of Officers.—The following officers were elected:

Chairman: Dr. J. Clarke.
Vice-Chairman: Dr. Faris.
Honorary Secretary: Dr. B. Lacey.
Assistant Honorary Secretary: Dr. Lindow.
Representative at Representative Meeting: Dr. Macnamara.
Representatives on Branch Council: Dr. J. Clarke.
Executive Committee: Drs. A. E. Thomson, St. John, Faris, Cowie, Wise, Webley, Moore Smith, Holmes, and Lindow.
Committee for L.C.C. School Clinic: Drs. J. Clarke, Cowie, Faris, Lindow, and Lacey.

Instructions to Representative.—It was decided that Dr. Macnamara should be given a free hand at the Representative Meeting.

Medical Aid Societies.—The following resolution was passed unanimously:

> That it is the opinion of this Division that medical aid societies are derogatory to the profession, and should be strenuously opposed by the Association.

Vote of Thanks.—A vote of thanks was accorded to the past officers for their services.

Panel Committee of Members.—It was unanimously decided that a special panel committee of members of the Woolwich Division of the British Medical Association should be formed for the purpose of considering all panel questions and their relations to the profession in general, and a committee of nine was chosen with power to add to their numbers, but such must be members of the British Medical Association.

MIDLAND BRANCH:

Leicester and Rutland Division.

The annual meeting of the Division was held at the Royal Infirmary, Leicester, on June 17th.

Election of Officers for 1914-15.—The following were elected officers of the Division:

Chairman: Dr. McAllister-Hewlings.
Vice-Chairman: Dr. Pike.
Honorary Secretary: Dr. R. Wallace Henry.
Assistant Honorary Secretary: Dr. Clare.
Representatives to the Branch Council: Drs. McAllister-Hewlings, Clare, Waite, Parsons, Fagge, and Pike.
Executive Committee: Drs. Barrett, Couper, Holyoak, Johnston, Harris, Logan, Pearson, R. Young, and Holmes.

Annual Report.—The annual report of the Executive was approved.

Annual Representative Meeting.—The business of the Annual Representative Meeting was discussed, and the decision of how to vote thereon was left to the Representatives, as they knew the views of the Division on the various matters arising.

National Insurance Act.—The questions dealing with further developments of the National Insurance Act were referred to the Local Medical Committees of the Borough and County of Leicester, and the County of Rutland, for consideration and report to the Council, through the Honorary Secretary.

Vote of Thanks.—A vote of thanks was passed to the Board of the Royal Infirmary for their kindness in permitting the Division to have the use of the Board Room for its meetings.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

The annual meeting of the Branch was held at Invergordon on June 3rd, when Dr. J. B. Simpson (Golspie) was in the chair, and twenty members were present.

Election of Officers.—The following were elected:

President-elect: Dr. William Fergusson (Banff).
Vice-Presidents: Drs. Simpson (Golspie), Pender-Smith (Dingwall).
Members of Council.—Drs. Ross (Tain), Knox (Gairloch), Johns (Nairn), J. W. Mackenzie (Inverness), Douglas (Strathpeffer), Mowatt (Lairg).
Representatives in Representative Meeting: Dr. J. Munro Moir (Inverness), and Dr. Alexander (Elgin).
Representatives on Central Council: Dr. Gordon (Aberdeen), Dr. J. Munro Moir (Inverness).
Honorary Secretary and Treasurer: Dr. J. Munro Moir.

Annual Report.—The annual report, which was read and approved, stated that only one meeting of the Branch had been held since the last annual meeting at Strathpeffer. This was partly due to the difficulties inherent to so large an area as that covered by the Northern Counties of Scotland Branch, and to the fact that many members found it impossible to attend without sacrificing more than one day. It was with the hope that members might have an opportunity of meeting their fellow-members that meetings were held in different parts of the Branch. The inability to attend Branch meetings had been compensated by the formation of Divisions in various counties within the Branch, namely, Ross and Cromarty, Elgin and Nairn, Caithness and Sutherland, and the Inverness-shire Divisions. During the past year the Islands Division, embracing members resident in the western borders of Ross and Inverness-shires and the islands adjoining had been formed. This Division would be of much benefit to many members who, owing to the long distance of their residences from meeting places, never had an opportunity of attending any meeting. It had already held two meetings, one at Kyleakin and another at Portree, and arrangements had been made for a third meeting at Stornoway. The Islands Division had a membership of 21. The membership of the Branch at the end of 1913 was 146, an increase of six on the previous year. Twelve new members were added to the Branch during the year while nine resigned; these resignations were partly due to the raising of the subscription to £2 2s.; three of the resignations were those of members who were not in practice. When it was considered how much the Association had done for its members during the past few years, the addition of 17s. did not appear to be excessive. The report contained an expression of sincere regret at the death, since the last annual meeting, of a former president of the Branch, Dr. Adam (Dingwall). Dr. Adam was for many years a member of the Branch, and always took a keen interest in its work, seldom missing a meeting, and by his sound judgement and genial manner gained the esteem of his fellow members. During the year the Insurance Act and its ramification had not been so much before either Branch or Division meetings, owing to the constitution of Panel and Local Medical Committees, but the fact should not be lost sight of that, sooner or later, its benefits would be extended to the dependants of the insured persons, and the profession would have to keep a united front against the designs of approved societies and others. In order to promote the better organization of the profession in Scotland, the Association—through the Scottish Committee—were about to appoint a whole-time medical secretary, with an office in Edinburgh. In the meantime it behoved every member of the Association to do his utmost to induce all non-members to join. The annual report of the Council, which was published in the Supplement of May 2nd, gave an indication of the amount of work done by the Association, through the Central Council and the Representative Meeting, for its members and the profession generally. Special attention was directed to the paragraphs dealing with the finances of the Association; it would there be seen that an association such as the British Medical could not be carried on efficiently without the expenditure of a large amount of money.

Next Annual Meeting.—It was resolved to hold the next annual meeting at Kyleakin.

Representative Meeting.—It was unanimously agreed that the Representatives should be given a free hand in dealing with matters at the Representative Meeting, at the same time endeavouring as far as possible to ascertain the views of members of the Divisions which they represent on any point of special interest.

Midwives Bill (Scotland).—A petition was drawn up and signed by all the members present in favour of Lord Balfour of Burleigh's bill.

BANFF, ELGIN, AND NAIRN DIVISION.

THE annual meeting of the Division was held at Gray's Hospital, Elgin, on June 6th, when Dr. BRODIE CRUICKSHANK (Nairn) was in the chair.

Annual Report of Division.—The annual report and financial statement of the Executive Committee were adopted.

Election of Officers.—The following were elected officers for the ensuing year:

Chairman: Dr. Sellar (Abertour).
Vice-Chairman: Dr. Rennie.
Honorary Secretary and Treasurer: Dr. J. A. Stephen.
Representative in Representative Meeting: Dr. Alexander.
Substitute Representative: Dr. Brodie Cruickshank.
Representatives on Branch Council: Drs. Johns and Rennie.
Executive Committee: Drs. Adam (Forres), Alexander, Campbell, Fergusson, sen., Taylor (Keith), and George Wilson.
Ethical Committee: Drs. Fergusson, sen., Alexander, Campbell, Brander, and Taylor (Elgin).

Correspondence. — Communications from the Medical Secretary and the Secretary of the Scottish Committee on various matters were submitted.

Annual Report of Council and Agenda for Annual Meeting.—These were then considered by the meeting, and the Honorary Secretary was instructed to call another meeting for further consideration of these early in July.

NORTH WALES BRANCH:

DENBIGH AND FLINT DIVISION.

A MEETING of the Denbigh and Flint Division was held at the William and John Jones Convalescent Home, Rhyl, on June 3rd, when Dr. J. H. DAVIES (Wrexham) was in the chair.

Election of Officers.—The following officers were elected for the coming year:

Chairman: Dr. B. J. Wright (Overton).
Vice-Chairman: Dr. E. D. Evans (Wrexham).
Honorary Secretary and Treasurer: Dr. C. E. Morris (Holywell).
Representative: Dr. F. S. Rowland (Wrexham).
Branch Council: Drs. H. Drinkwater, E. D. Evans, David Lloyd, and E. Moss (re-elected).
Executive Committee: Drs. W. Goodwin (Rhyl), W. R. Walton (Shotton), J. O. Jones (Holywell), W. Thomas (Rhyl), and the members of the Branch Council and officers of the Division.

Model Scheme for the Treatment of Tuberculosis.—The chair being occupied by the newly-elected chairman, a discussion took place regarding the model scheme for the treatment of tuberculosis (SUPPLEMENT, April 4th), in which Drs. J. C. DAVIES, GOODWIN, J. H. DAVIES, H. DRINKWATER, and MIDDLETON took part. It was resolved:

> That the Representative confer with Dr. Middleton (tuberculosis physician) regarding the proposed scheme, and the former be given an open vote in the matter.

Heredity.—With the permission of the meeting, a paper by Dr. H. DRINKWATER, on the history of syphilis, was deferred to a future occasion, and instead he made an interesting communication with regard to heredity. Dr. Drinkwater described how he had been studying a family in England which presented the congenital deformity of brachydactyly, and illustrated the laws of Mendel, which had previously been the subject of a monograph by him. He also referred to a similar occurrence in a family in America described by Farabee. Dr. Drinkwater read a letter received from Dr. Farabee which proved conclusively that these two families were related to each other, thus confirming the opinion held by Dr. Drinkwater; the combined genealogies (illustrated by means of charts) showed that the abnormality appeared almost in the precise ratio required by the Mendelian law.

Votes of Thanks.—On the motion of Dr. J. H. DAVIES, a vote of thanks was accorded to the trustees of the Convalescent Home for the use of the room and invitation to tea. The meeting terminated with a vote of thanks to the Chairman, and after tea the members inspected the building.

SOUTH-EASTERN OF IRELAND BRANCH.

AN ordinary meeting of the Branch and meetings of the Branch Council and local Division were held in the Council Chamber, Town Hall, Clonmel, on June 10th. Dr. O'CONNELL occupied the chair.

Votes of Congratulation.—On the motion of Dr. JELLETT, seconded by Dr. O'CONNELL, a vote of congratulation was unanimously passed to Dr. T. Hennessy on his recent appointment as Irish Medical Secretary of the British Medical Association. Dr. HENNESSY returned thanks and addressed the meeting. Dr. Stephenson (Dunmore East, co. Waterford), whose resignation as a member of the Branch was regretted, was also congratulated on his appointment as inspector under the Local Government Board.

Annual Report of Central Council.—On the motion of Dr. QUIRKE, seconded by Dr. HENNESSY, it was resolved that the annual report of Central Council be adopted.

Reorganization of Divisions.—A meeting of the Branch Council was subsequently held, with Dr. O'CONNELL in the chair, to consider and report to the Organization Committee whether Carlow Division should remain as at present or be merged into another Division. It was proposed by Dr. O'CONNELL, seconded by Dr. POWER, that Dr. Hennessy, Medical Secretary for Ireland, be asked to visit the Carlow district with view of reorganizing its Division.

New Members.—Drs. R. R. O'Brien, P. I. O'Brien, and John Stokes were elected members of the Branch.

Adjournment.—The meeting then adjourned and the members dined together.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

THE annual general meeting of the Portsmouth Division was held in the Medical Library on June 17th. Mr. C. P. CHILDE, F.R.C.S., was in the chair, and thirteen other members were present.

Correspondence. — Communications from the Medical Secretary were read on the new Budget proposals and the finances of Divisions and Branches; consideration of the former was deferred.

Annual Report.—The HONORARY SECRETARY and TREASURER presented the annual report, which showed that there had been seven meetings of the Executive Committee with an average attendance of nine; five business meetings of the Division with an average attendance of thirteen; and two clinical meetings with an average attendance of seventeen. All matters referred by the Central Council had been carefully considered, some ethical questions had been dealt with, and much routine business transacted. A most important event was the transference of the Portsmouth Medical Library to the Division, the members thereof having handed over the books and all assets free of charge. The thanks of the Division for the generous gift have been recorded in the minutes, and it was hoped that the library might be extended in usefulness and attractiveness. The Clinical Secretary had experienced considerable difficulty in getting together a sufficient quantity of material, but notwithstanding, both meetings were full of interest and the discussions quite up to the average. The balance sheet showed a deficit of £8 14s. 3d. The report and balance sheet were adopted.

Election of Officers.—The following gentlemen were unanimously elected to serve during the ensuing year:

Chairman: Dr. L. Cole-Baker.
Vice-Chairman: Dr. J. T. Leon.
Secretary and Treasurer: Mr. L. K. H. Hackman.
Clinical Secretary: Mr. C. A. Scott Ridout, F.R.C.S.
Representative at Representative Meeting: Dr. D. A. Sheahan.
Representatives on Branch Council: Drs. Cole-Baker, McEldowney, and A. B. Wright.
Executive Committee: Drs. Blackman, Blackwood, Colt, Jeans, A. V. Maybury, sen., George McGregor, Salmond, H. S. Thomas, C. Lamplough, H. B. Bird, with the following *ex officio*:—*Librarian:* Dr. W. Carling. *Central Council:* Mr. James Green. *Local Medical Committee:* Mr. L. K. H. Hackman.

Vote of Thanks.—A hearty vote of thanks was accorded to Mr. C. P. Childe for his admirable conduct in the chair during the past year.

Annual Representative Meeting.—The provisional agenda (SUPPLEMENT, BRITISH MEDICAL JOURNAL, May 9th) was considered, and it was unanimously resolved that the

recommendations of the Central Council be approved, and the Representative be instructed to vote accordingly.

New Rules.—The Model Rules of Organization were considered, approved, and adopted, with certain alterations and additions to suit the local conditions, and ordered to be sent to the Central Council for approval.

New Budget Proposals.—The Budget proposals and the memorandum thereon of the Future Developments of Insurance Acts Committee were considered, and gave rise to much discussion; the questions submitted were answered and ordered to be sent to the Committee. The meeting was entirely in favour of a voluntary contribution system for the maintenance and extension of hospital accommodation. Voluntary hospitals should not accept grants from the State or municipalities whereby control might be claimed by those bodies: only the necessitous poor, whether insured or not, should be treated gratuitously in voluntary hospitals, and special arrangements should be made for those patients who do not come under that heading. It was also decided that the medical profession should be strongly represented on the committees of nursing institutions; that the nurses should be under regulations not to act independently of the practitioner in charge; and that the same rule should apply to sick visitors of approved societies under the Insurance Acts.

Southampton Division.

The annual general meeting of the Southampton Division was held at the Royal South Hants and Southampton Hospital on June 19th, when Mr. Purvis, F.R.C.S., was in the chair.

Annual Report.—The Secretary read the annual report of the Division. The financial statement showed a balance in hand on December 31st, 1913, of £28 19s. The meeting considered the annual report of the Council, and instructed the Representative.

Election of Officers.—The following officers were elected:

Chairman: Dr. A. A. MacKeith.
Vice-Chairman: Dr. J. T. McDougall.
Honorary Secretary and Treasurer: Dr. W. A. Simpson.
Representative of Division: Dr. E. Alderson.
Representatives on Branch Council: Drs. Aldridge, Le Quesne, and Robson.
Executive Committee: Drs. Cowen, May, Purvis, and Fox.
Representatives on Southampton Public Medical Service: Drs. Bathe, MacKeith, and Simpson.

YORKSHIRE BRANCH:

Leeds Division.

The annual meeting of the Leeds Division was held on June 4th, when Dr. Rowden was in the chair.

Annual Report of Division.—The annual report of the Executive Committee was received and adopted.

Election of Officers.—The following officers were elected:

Chairman: Dr. Markby.
Vice-Chairman: Dr. A. S. Grünbaum.
Honorary Secretaries: Dr. Allan and Dr. Bell.
Representatives for Representative Meetings: Dr. J. J. Anning and Dr. Bell.
Representatives on Branch Council: Drs. Allan, Markby, Sharp, and Rowden.
Other Members of the Executive Committee: Drs. Crawford, Johnson, Hawkyard, Moore, Roper, Stewart, Vining, and Whitehead.

Annual Report of Council.—The report of the Council and the agenda of the Representative Meeting were considered and instructions given to the Representatives.

LOCAL MEDICAL AND PANEL COMMITTEES.

GLASGOW.

Local Medical and Panel Committees.

The following, among other matters, have been dealt with at recent meetings:

Range of Services.—The Local Medical Committee and the Insurance Committee are in agreement that removal of chalazion and cauterization of turbinals should not be included within the services which a practitioner is under contract to give. The Commissioners acquiesce, "having in mind the special facilities offered in Glasgow" for expert treatment at public hospitals. The decision is not to be held in any way as of general application. In view of these facilities, it appears to the Commission that an insurance service practitioner who is of opinion that such an operation is required by one of his insurance patients, and who does not desire to carry it out as a part of medical benefit, should in general prefer to direct the patient to a suitable institution or to an exclusive specialist, rather than to perform the operation himself at a special charge.

Proposed Alteration in the Dispensing Charges.—In view of the adverse vote of practitioners in the area on this question (153 to 51), the Panel Committee refused to agree to the proposed alterations, but indicated its willingness to agree to certain specified increases, on condition that the Tariff List be enlarged by the inclusion of a number of commonly used preparations, and that the list price be so adjusted as to include a reasonable dispensing fee.

Medical Accounts for 1913.—The provisional credit permits of payment being made at the rate of 7s. 3d. for every form of acceptance sent in, whether "identified" or not. The Committees have recommended that this be accepted, and practitioners have been asked to sign a letter of concurrence. Any further sums that may be credited to the Insurance Committee in respect of medical benefit for 1913 will be distributed equally among practitioners on the panel.

Drug Fund.—The drug accounts for the first quarter of this year show a very large increase over the corresponding quarter of last year, and the following letter has been circulated calling the attention of practitioners to the matter.

Extravagant Prescribing.

Lincluden, Cathcart, Glasgow,
Dear Sir or Madam, 10th June, 1914.

I am instructed by the Local Medical and Panel Committees to direct the attention of medical practitioners to the serious position which has arisen in this area in connexion with the drug fund.

Appended is a statement which shows details of the charges against the fund during the period January, 1913, till March, 1914. From this it will be observed that, while the totals, both in respect of the number of prescriptions and the amount of the charge, showed a seasonal variation during last year, there was a marked increase in the cost per prescription in the later months of the year.

The Committees view with alarm this increase in the average price per prescription, which in the present medical year has risen to 10.37d., as compared with an average 9.1d. for last year, while at the same time there is a great increase in the number of prescriptions dispensed and in the consequent charges upon the Fund. The figures are not finally adjusted for the months of April and May, but the Committees understand that the total charges are much in excess of the amount available for the period.

The Committees have no evidence that these increases are to be accounted for by any excessive sickness, nor have they evidence that there has been any increase in the efficiency of the service corresponding to the increase in cost. An investigation is proceeding into the incidence of prescriptions, as well as into the quantities and nature of the drugs, medicines, or appliances ordered, and the Panel Committee wishes to intimate clearly that it may be necessary to exercise the powers conferred on it by the Medical Benefit Regulations of reporting to the Insurance Committee such cases as may appear to them to have been the cause of an excessive demand upon the drug fund. *The Committees are further of opinion that abuse of insurance funds in this direction may form a sufficient ground for recommending the removal of any practitioner concerned from the panel.*

The present condition of the drug fund is not only serious but alarming, and the Committees earnestly ask that practitioners will exercise a wise discretion, consistently with the interests of their patients, in so prescribing that economy may be effected.

Yours faithfully,
Jas. R. Drever,
Secretary, Local Medical and Panel Committees.

Appended to the letter is a statement showing charges against the drug fund within the area for the medical year 1913–14, and for the period from January 12th till March 31st, 1914.

PERTH.

Local Medical and Panel Committees.

A meeting of the Local Medical and Panel Committees of the county and burgh of Perth was held at Perth on June 12th, when Dr. Stirling was in the chair, and seven other members were present.

Expenses of Committees.—It was agreed to follow the precedent of last year, and to make a voluntary levy of ½d. per insured person. It was decided to ask the clerks of the Insurance Committees to intimate to panel practitioners by circular that such a levy would be deducted

from their capitation grants unless they made a formal objection.

Chemists' Accounts.—The question of overcharging having arisen, certain chemists' accounts which had been requisitioned under Regulation 39 (3) were considered and remitted to a subcommittee consisting of Drs. Menzies, Haig, Trotter, and Edwards for examination, with a request to report to the next meeting.

Over-prescribing by Practitioners.—A letter was read from the clerk of the Perth Insurance Committee on the subject of over-prescribing, and Dr. Trotter was instructed to communicate with the Pharmaceutical Committee and the doctors concerned, and to bring the matter before the next meeting of the Panel Committee.

ESSEX.

Local Medical and Panel Committees.

The fifth meeting of the Panel Committee was held on June 11th, the Local Medical Committee considering matters referable to that Committee.

Vote of Condolence.—A letter was received from Dr. Ross Steen conveying the sad news of his father's sudden death. The Secretary was asked to send a letter of condolence.

Conference on Certification.—The Commissioners having invited the officers to a conference on certification, Dr. Wells and Dr. Tomkins (Vice-Chairman and Secretary) were appointed to attend.

Medical Benefit Cards.—A letter was read from a District Committee asking that a request should be sent to the Commissioners that Form 50 should be altered so that the insured person may write the name of the doctor he desires, and the doctor sign his name as accepting or refusing. After discussion it was decided to make this request.

Drugs and Appliances.—Letters from the Clerk to the Insurance Committee and the Secretary of the Pharmaceutical Committee were read. An answer was directed to be sent to the former to the effect that a flat rate for drugs and appliances (Clause 12 (1), Form Med. 29) be accepted provided that it be adequate. The latter, referring to payment for checking prescriptions, was, after discussion, postponed to the next meeting.

Expenses of Panel Committee.—The Insurance Committee, authorized by the Commissioners, sent a first instalment towards the Panel Committee expenses, with a promise of further instalments from time to time. With regard to a voluntary levy for expenses of Panel Committee not included in the administrative expenses (provided for by the Act, 1913, to be deducted by Insurance Committee), it was reported that a very fair response to the circular asking panel practitioners to allow a proportion of these expenses to be deducted by the clerk had been made; it was hoped that all panel practitioners would accede to the request, as in that case the amount would be very trifling, only a few shillings at the present rate of expenditure, since nearly all requirements were met under the arrangements for administrative expenses already agreed to by the Commissioners.

Treasurer Committee.—The chairman, vice-chairman, and secretary for the time being were appointed, the signatures of any two of these officers to be valid.

Constitution of Committees.—Schemes "B" and "D" for constitution of committees were again considered. Many amendments tending to simplify the procedure as suggested by the secretary were passed by the Panel and Local Medical Committees at the last meeting. These were agreed to by the Commissioners, who suggested that the secretary of the Panel Committee should be the chief returning officer for Essex; the Committees accepted the schemes provided that the secretary were duly appointed. One of the amendments was that for the Local Medical Committee election a practitioner not on the panel could act as deputy returning officer, so that (not being an elector for Panel Committee) he could act in the same capacity for Panel Committee election, thus securing a medical man as returning officer in all areas if, as it was hoped, they would act. It was resolved:

> That the Panel Committee (Essex) accept the amendment made by the Commissioners, Rule 10 (marked 2) on condition that the Commissioners do in writing appoint the Panel Committee secretary to be the "returning officer" for Essex; at the same time the Panel Committee strongly protests against the principle of the payment of the returning officers' expenses by the members of the medical profession, and agrees to the amendment to Rule 10, for this election only, without prejudice to its right to reconsider, and revise, or omit this amendment at any future occasion if it so desire.

TYNEMOUTH.

Panel Committee.

At a meeting of the Tynemouth Panel Committee on June 12th the following resolution was passed:

> We, the County Borough of Tynemouth Panel Committee, do hereby protest in the most emphatic manner against the reduction in the moneys due to us from the Commissioners. We have loyally fulfilled the contracts signed by us, and we call upon the Commissioners to fulfil their part of the contract and pay over to us the full sums to which we are justly and legally entitled.

INSURANCE COMMITTEES.

LONDON.

Distribution of the Unallotted Funds.

A month ago the London Insurance Committee referred back for further consideration a scheme submitted by the Medical Benefit Subcommittee for the distribution of moneys accumulated during 1913 in respect of insured persons who failed to select a doctor. The Committee's view was that the Subcommittee should have brought forward alternative schemes for distributing the money (Supplement, May 30th, p. 399, and June 6th, p. 426). On June 25th the Subcommittee reported that the Insurance Commissioners had advised that the distribution was governed solely by Article 40 (3) of the Regulations for 1912, and that those Regulations precluded the exercise of any discretion on the part of an Insurance Committee to vary the method of distribution. The total funds must be distributed in ratio to the amount of the doctor's credits, each doctor being entitled to a sum bearing the same proportion to the total sum available as his total credit for the year bore to the aggregate of the total credits for the year of all the doctors on the panel. As to the legality of payments to practitioners in respect of persons who had not chosen doctors, the Commissioners said they were advised that, on a proper interpretation of the regulations and agreements, the practitioners on the panel were collectively entitled to the whole sum available for medical treatment.

The Subcommittee invited the Committee to decide either to distribute according to the Commissioners' advice or to express the opinion that the Commissioners should make the distribution. The Committee decided, however, that it could not distribute on a *pro rata* basis without further legal or parliamentary authority.

Additions to the London Panel.

It was reported at the same meeting that there had been recent accessions to the panel list. The number of practitioners on the list on June 13th was 1,545, as compared with 1,502 on March 31st and 1,486 on January 31st. Ten practitioners had withdrawn.

BRISTOL.

The monthly meeting of the Insurance Committee was held on June 8th.

Sanatorium Provision.—Dr. Saise, who was in the chair, reminded the committee that six months ago he called attention to the laggard way in which sufferers from consumption were coming forward for treatment, both insured and uninsured persons. This he had ascribed to want of knowledge that the treatment was free, and the request that he made at the time that the attention of the citizens should be drawn to the opportunities offered had had an immediate effect. At present there had been treated 762 persons—a matter for congratulation. The city owned 77 beds, and 47 had been put unreservedly at the use of the committee. There were 96 persons in sanatoriums, and when the scheme was in full working there would be 110. The maximum had nearly been reached, and something would have to be done to increase the number of beds. With regard to the position of seamen, he stated that he had had a letter from Sir Robert Morant, who said that a claim could be made on behalf of men away at sea, and the sums credited to the

funds of their society. Regulations would be shortly issued.

Mr. Dyer moved the adoption of the sanatorium report, which showed that the number of applicants since July 1st, 1913, was 302. It also referred to the case of an inmate who had been sentenced to one month's hard labour for assaulting the medical officer, and to the suspension in this case of sanatorium benefits for six months. Dr. Carter expressed a hope that the committee would hesitate before they withheld benefits for this period, and with this several members agreed. It was decided to withhold the paragraph relating to this case till the next meeting.

Cases Referred to Medical Adviser.—The Chairman of the Medical Service Subcommittee reported that the medical adviser had seen 101 cases with the following results: 45 fit for work, 23 did not attend, 32 unfit to work, and one workman's compensation case; 73 came from societies and 28 from doctors.

Unallotted Capitation Fees.—Mr. Morris, in moving the adoption of the report of the Medical Benefit Subcommittee, included the following recommendation:

Your Subcommittee beg to report that they have provisionally agreed with the Panel Committee that the unallotted capitation fees in the Panel Fund for 1913 be distributed (subject to certain exceptions), as to one-half equally among the panel practitioners, and the other half to be divided pro rata to the number of each doctor's list. Your Subcommittee beg to report that the Panel Committee have stated that they recognize that every insured person is entitled to obtain medical benefit without difficulty, and they are prepared to consider arrangements for ensuring this.

This was seconded by Mr. Saunders, who stated that it had been definitely decided that the doctors were to have the money. Mr. Brown moved to refer the matter back to the Subcommittee, and this was seconded by Mr. Jarman, and on being put to the vote was lost. The report was adopted.

Payments to Members of Committee.—The General Purposes Committee reported that it had received an intimation from the Insurance Commissioners that they could not approve of the recommendations concerning subsistence and compensation for loss of time, and had made the following model scheme: 2s. 6d. subsistence allowance if the member was absent from home for more than four hours, and lived more than two miles from the place of meeting; 3s. 6d. compensation allowance for every complete half-day on account of which a loss of salary or wages is incurred.

A resolution was proposed by Mr. Sanders emphatically protesting against the scheme put forward by the Commissioners, stigmatizing it as "most humiliating and degrading to the intelligence of this committee and unworthy of consideration." Several members spoke in warm terms of condemnation, one suggesting that the Labour party, "or some other party," should be got to fight their grievance on the floor of the House of Commons. He advocated a strike on behalf of the members—(laughter)—as the working of the Act was, instead of being democratic as was promised by the Chancellor, becoming more autocratic every day. The resolution was carried unanimously.

INSURANCE NOTES.

National Association of Insurance Committees.

Meetings of the Executive Committee of the National Association of Insurance Committees, held at Caxton Hall, Westminster, on June 18th and 19th, were attended by representatives of the associations of county councils, municipal corporations, and urban and rural councils.

Tuberculosis: Local Administration.

A discussion on local administration in connexion with the prevention and treatment of tuberculosis was opened by Mr. W. Astor, M.P., who observed that the Local Government Board, the Insurance Commission, and the Board of Education, all had some responsibility in this matter. Each of the departments concerned would probably oppose concentration, but the unification of local administration was highly desirable not only with regard to tuberculosis, but other national health matters. He concluded by moving the following resolution:

The great expansion of public efforts, both official and voluntary, directed to the improvement of national health and the removal of contagious and other forms of sickness and the introduction of many ameliorative agencies through the recent Health Insurance Acts, have rendered it increasingly necessary that the present and prospective wastage and overlapping of labour and expenditure should as far as possible be diminished by some suitable process of co-ordination that would not impair the spirit of philanthropy and generous sympathy which has hitherto been a national and indispensable characteristic of such work.

Any effective co-ordination of existing organizations, whether in regard to nursing generally or to that in connexion with institutional or domiciliary treatment of tuberculosis would seem in the first instance to point to the necessity of a central authoritative body such as a distinct Government Health Department.

Such a Department might also be the focus for health work at present scattered over various Government Departments, and subdivided into branches—for example, Poor Law hospitals and medical officers of health, Central Midwives Board, medical inspection of school children, school nurses, medical statistics, factory medical staff, inebriates, etc.

Whilst such a movement might not extend to hospitals, endowed charities, and similar agencies, a wide field for needed activity is offered, and the meeting desires to submit its convictions to His Majesty's Government for their consideration.

The resolution was seconded by Mr. Glyn Jones, M.P., and in the course of the discussion that followed several members expressed the view that when the chairmanship of the three local authorities concerned—the county council, the Insurance Committee, and the Education Committee—were held by the same individual, overlapping was to a considerable extent obviated. After a reply by Mr. Astor, the resolution was put to the meeting and carried unanimously.

Sanatorium Treatment and After.

The following resolution was carried *nemine contradicente*:

This Conference, after full consideration of the subject of sanatoriums in its relation to the suppression of tuberculosis in the light of present experience, is deeply impressed by the urgent necessity of further provision, in order to make effective and more complete the partial recovery of patients when discharged from sanatoriums.

In so far as the provision of any institutional treatment in certain small areas is concerned, the inadequate funds available in many such areas, including county boroughs, hinder or prevent the authorities from making any adequate provision until further financial aid is provided.

Where more adequate provision is made, as contemplated by the Insurance Act for sanatorium treatment, and after taking fully into account the exceptional pressure for beds in the early stages of the movement, this Conference is deeply convinced that in a multitude of cases the patient, while improved in health and on the way to recovery, is on discharge from the sanatorium, owing either to enfeebled condition, to crowded or insanitary domestic conditions, or to lack of employment suited to the patient's condition, steadily relapses and soon becomes a victim and a further source of infection.

Whilst some partial remedy may be attainable through the voluntary work of After-Care Committees in finding employment, and by land cultivation where land is possessed as part of the sanatorium, or by the free and fuller use of shelters where the conditions are favourable, or by open-air schools in the case of children, the Conference is convinced that these efforts are wholly inadequate, and that unless further provision is made, supplementary to sanatoriums, so as to carry forward the convalescent to a much further stage of recovery, the large national expenditure on sanatoriums is comparatively lost and the efforts aimed at by the Insurance Act largely frustrated.

This Conference therefore respectfully urges upon the Government the necessity—by a special committee or otherwise—to consider fully the case and the means by which the necessities of the case may be met.

The meeting further decided to recommend the amendment of Section 63 (Excessive Sickness) of the Insurance Act, 1911, so that Insurance Committees should be enabled to recover from persons, or local authorities, the cost of treatment of tuberculosis among insured persons, when it could be shown to the satisfaction of the Local Government Board that the disease had been contracted or disseminated by conditions of occupation or dwelling.

Hospitals.

The Council also expressed opinions to the effect that an amending regulation should be made to secure provision by Insurance Committees of such treatment in hospitals as appeared to be needed by insured persons recommended for such treatment by their doctor; that further facilities for modern means of exact diagnosis should be provided, and that trained nurses should be available when their

services were recommended by the doctor in charge of the case.

Medical Referees.

The opinion was expressed that any scheme for medical referees should be administered in conjunction with Insurance Committees.

SCOTLAND.

BUDGET PROPOSALS.

THE following letter has been addressed to the Chancellor of the Exchequer on behalf of the Dundee Panel Committee by its secretary, Dr. George F. Whyte; copies of the letter have been forwarded also to Mr. Winston Churchill, M.P., Mr. Wilkie, M.P. (representatives for Dundee), and Sir Robert Finlay and Sir Henry Craik, Scottish universities' representatives:

Dundee Panel Committee.

To the Right Honourable David Lloyd George, M.P.,
Chancellor of the Exchequer, The Treasury.

Dear Sir,—On behalf of the Dundee Panel Committee I venture to write you concerning the new Budget proposals in connexion with National Health Insurance—namely: (1) Medical referees, (2) clinics, (3) laboratories, (4) nursing, (5) health lectures, (6) tuberculosis. The question of their effective administration is one of supreme importance to Panel Committees, and so my Committee desires me to put before you the following considerations:

As regards medical referees, my Committee is of the opinion that the appointments and administration should be under the control of the Commissioners rather than locally or through societies.

As regards tuberculosis, with which we would class other communicable diseases, my Committee, while cognisant of the stimulating influence of Insurance Committees and their zeal in the administration of sanatorium benefit, is of opinion that the present dual control is not satisfactory, and the time must soon come for the administration to be solely vested in the Public Health Authorities.

As regards clinics, laboratories, nursing and health lectures, my Committee is strongly of the opinion that these being essentially extensions of the medical benefit can only be effectively administered by the Local Insurance Committees. These Committees, I need scarcely point out, are much more widely representative in character than health authorities as at present constituted can be, especially with regard to the inclusion of women and medical practitioners among their members.

A further drawback to the administration of these benefits by Public Health Authorities is their multiplicity as compared with the much smaller number of Insurance Committees.

To sum up, my Committee adopted the following resolutions:

1. *Medical Referees.* Appointment and administration to be by the Commissioners.
2. *Clinics.* To be administered by Insurance Committees.
3. *Laboratories.* To be administered by Insurance Committees in conjunction with existing laboratories, hospitals, and medical schools.
4. *Nursing.* To be administered by Insurance Committees. Use to be made of present nursing arrangements, such as the Jubilee Nursing Society by co-ordination and extension.
5. *Health Lectures.* To be administered and arranged by Insurance Committees by extension of present powers in National Insurance Act.
6. *Tuberculosis* and other communicable diseases. To be administered by Public Health Authorities.

My Committee begs to ask for your kind consideration of these proposals.—I have the honour to be, Sir, your obedient servant,

GEO. F. WHYTE,
June 22nd, 1914. Secretary, Dundee Panel Committee.

INSURANCE ACT IN PARLIAMENT.

EXCESSIVE PRESCRIBING.

MR. GODFREY LOCKER-LAMPSON asked whether attention had been called to a recent meeting of the Salford Insurance Committee, at which it was stated that insured persons were not getting the best treatment, as was seen by special reports which had been issued; that the drug fund was not sufficient; that those doctors who had been charged with excessive prescribing had since dropped their prescriptions to an enormous extent; and that there was thus a danger of insured patients not getting the best treatment; and whether the Commissioners had decided to conduct an investigation on the spot, as requested by the Committee. Mr. W. Benn was not aware that any statement was made in the course of the meeting in question to the effect that insured persons were not getting the best treatment. Attention was drawn, according to the newspaper report of the discussion, to the necessity for safeguarding the rights of insured persons in the matter of proper and sufficient medicines, but there was no reason for apprehending that action taken by the Insurance Committee to check extravagant prescribing would hinder the performance of the duty to protect these rights. The Commissioners had not decided to conduct an investigation on the spot. An investigation was being held in the whole of Lancashire into the question of druggists' accounts.

COST OF ADMINISTRATION.

In reply to Mr. Cassel, Mr Wedgwood Benn said that the amount estimated to be expended by approved societies and Insurance Committees for cost of administration during the year 1914–15 was £2,579,400. The amount included in the estimates for the financial year 1914–15 for central administration was £876,140.

CORRESPONDENCE.

LONDON INSURANCE COMMITTEE ELECTION, 1914.

THE following letter has been received:

To the London Profession.

Ladies and Gentlemen,

We, the undersigned candidates, for the direct representation of the profession upon the London Insurance Committee, desire to put the following points before you:

1. As the livelihood of a large number of London practitioners is now bound up in the Insurance Act, we are opposed to any drastic change being made in its administration until such time as the effect of the Act on the profession shall become more thoroughly known through its practical working. We shall oppose to the utmost of our power both friendly society control and attempts to organize a State medical service.

2. We are in favour of the funds due in respect of persons who have not chosen a doctor being distributed in proportion to the responsibility of each doctor concerned.

3. In order to mitigate the injustice from which non-panel men, chiefly in industrial areas, have suffered through the setting up of the Act, we are in favour of allowing all patients of non-panel doctors to make their own arrangements, believing that in that way only can the present friction be terminated, and a means found of uniting the profession.

4. In conclusion, we hope that, by considering every question from the point of view of the profession as a whole, we shall best serve the interests of both panel and non-panel men.—We are, yours faithfully,

MAJOR GREENWOOD.
W. H. F. OXLEY.

MATERNITY BENEFIT AND THE TEACHING OF MIDWIFERY.

REPORT BY THE GLASGOW OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

A COMMITTEE appointed by the Glasgow Obstetrical and Gynaecological Society to inquire into the effect of the maternity benefit of the National Insurance Act on the practice and teaching of midwifery in Glasgow has presented the following report:

Method of Inquiry.

The committee having decided upon certain questions that should be asked, had these sent to 450 medical men engaged in general practice, with a request that they might be good enough to answer. Of these, 222 made returns; but 56 of these, having no midwifery practice or for other reasons, could give no information. There remained 166 whose replies were available for the inquiry.

Certain other questions, varying according to the nature of the work carried on by them, were addressed to institutions and public bodies likely to be able to afford information; and the committee is indebted for assistance to the Maternity Hospital, Merryflats Hospital, Govan; Duke Street Hospital, Oakbank Hospital, Stobhill Hospital, Dundas Street Training School for Midwives, Scotia Street Training School for Midwives, Moncur Street Medical Mission, Grove Street Institute,

Charity Organization Society, St. Elizabeth's District Nursing Home, and the Medical Officer of Health, Glasgow.

The Position of Practice in Glasgow before the Advent of the Act.

Before the coming into force of the Act and among people having incomes of not more than £160 per annum, only a portion of the maternity work was in the hands of the medical profession. The amount varied from nearly 100 per cent. in some districts, and among those near the upper limit of income to less than 10 per cent. in other districts and among the very poor. From figures supplied to us it appears that in the thrifty class who made up the membership of the old friendly societies, and who occupy a middle position in the insured population, from 30 per cent. to 50 per cent. of the births were attended by medical men. Outside this, which came within the private practice of members of the profession, maternity work was done by women wholly untrained, by those of various degrees of training, and by public institutions such as the maternity and Poor Law hospitals. The share falling to any one of these was in no case so small as to be negligible. Within the distribution of cases there was ample room for a shifting of practice from point to point on a scale sufficiently large for the movement to be readily observable, and a question fundamental to the inquiry is whether there has been such a shifting of maternity practice as a consequence of the operation of the National Insurance Act; and if so, whether the change has been in the direction of greater security to child-bearing women and their infants.

Maternity Benefit is not Exclusively Devoted to Lying-in Expenses.

It need not be pointed out that the effect of the Act in this part of its working must be largely determined by whether or no the money set apart for the care of women in childbed is wholly used for that purpose. Information derived from various sources, including some of the agencies engaged in social work, makes it appear that those who formerly made good provision for an expected confinement still do so. There is for them, however, only a change in the method. The maternity benefit is a substitute; there is no evidence of a disposition to regard it as an additional provision, and sometimes even in this class the expenses of the confinement are not dealt with as having the first claim on the money. Among others of the insured the money is not wholly applied to the purpose for which it has been named; and the desire to set free a portion for other uses, good or bad, is likely to influence the kind of attendance sought for. Moreover, the payment of the whole amount after the event to people who have no means and little credit also tends to divert it to other ends.

The Medical Profession as a Whole has not Obtained an Increased Amount of Maternity Work in Consequence of the Insurance Act.

Asked whether women now engage a doctor for their confinement who formerly did not do so, 92 practitioners answer in the negative, and 39 in the affirmative; while 35 return "no knowledge," or leave the question unanswered. Asked whether they themselves are doing more midwifery since the maternity benefit was introduced, 137 practitioners reply in the negative, of whom 7 say they are doing less; 25 state that they are doing more, of whom 14 say the increase is small. Four make no return on this point.

The two questions above dealt with are much alike, but are not identical. Of the practitioners answering them 70 per cent. express the opinion that women do not now more than formerly engage a doctor for their confinement; while 30 per cent. believe that they do. These opinions being brought to the test of personal experience, 81 per cent. report that they are not doing more maternity work among the insured; while 19 per cent. report that they are doing more. Taking together the answers to the two questions, it is evident that, of the midwifery practice in Glasgow which formerly they did not possess, very little, if any, has been transferred to the medical profession in consequence of the Insurance Act.

Medical Men in General Practice are not Greatly Desirous of an Increase of their Maternity Work among the Insured.

Questioned on this point, 112 practitioners reply that they are unwilling to increase their practice in this direction; while 50 are willing so to extend it. Four make no return.

More Work is being Done by Midwives.

Since the outdoor cases of the Maternity Hospital in the first year of insurance are less by 967 than in the previous year, and since all but one of the Poor Law hospitals report a similar falling off in the number of their cases, there must have been a transference of work to other hands. The transference has not been to the private practice of medical men, or there would have been a notable increase in this. It must have been mainly to midwives practising independently. In Glasgow, as in Scotland generally, there is no commonly recognized standard of training for maternity nurses, and no State regulation of their practice. Many who act as midwives are wholly untrained, some are inadequately trained, and only a small proportion could satisfy the requirements for registration in England. All the grades of nurses mentioned were employed before the passing of the Act, and are still employed. Yet it may be that among these different grades, women are seeking what they believe to be better service, being now enabled to pay for it. Inquiry, therefore, was made upon this point. Answers, however, were affected by the fact that at the beginning of the year the belief prevailed that only certificated nurses or doctors could sign the claim for benefit. When this was found to be an error, the improvement in practice which resulted from it was not maintained. Reckoning among affirmative answers the replies of those who note the initial improvement, but who deny its continuance, 57 practitioners say that women now seek better attendance; while 64 say that they do not. Forty-five return "no knowledge." Even if it be accepted that the trained nurse is more frequently employed, still—

The Untrained Midwife Continues in Favour.

A fact to be taken into account as likely to have a deciding influence in the choice is that when the wife-and-mother is laid aside there is need for a housekeeper as well as a nurse. Now that there is money available it is probable that housekeeping services, which before were rendered freely by friends or neighbours have now to be paid for; and that the "handy-woman," who will care for the house as well as the patient, is preferred on that account to the midwife who carries on "a practice," or to the well-trained nurse whose whole time could not be engaged by the poor, even if she were willing to undertake the housekeeping. It is probably in this that the explanation is to be found for the falling-off in the outdoor cases of the Maternity Hospital. The possibility of obtaining nursing and other services for the same fee as for nursing alone is, it may be presumed, sufficient to bring about this result. On this account, then, any movement that there may be among a section of the insured towards a better kind of attendance in childbed is likely to be counterbalanced by a movement in the opposite direction among those of another section.

Asked whether a larger proportion of the midwifery practice in their districts was being carried on by untrained women since the maternity benefit came into operation, 32 practitioners replied in the affirmative and 62 in the negative, while 72 returned "no knowledge" or no answer. The weight of opinion, as here stated, is against the view that there has been an increase of unskilled service. But the fact remains that the "handy-woman" has not been eliminated by the operation of the Act. Nor is she likely to be without a change in the administration of the benefit.

Effect on Midwifery Teaching.

The outdoor practice of the Maternity Hospital is the only means in the city by which practical instruction can be given to medical students in the conduct of normal labour; and the practice is also used for the training of nurses. Formerly the number of cases was not in excess of the requirements for these purposes; and the reduction in that number during the first year of insurance—a reduction which amounts to 30 per cent. of the whole—is seriously hampering practical teaching. While it may be possible by adjustment so to utilize these restricted resources that the minimum requirements of the examining boards shall be met an enforced limitation to the minimum is to be deplored, and it is not to be expected that the present minimum will continue indefinitely. The situation which has arisen calls for serious consideration on the part of those concerned in the teaching of midwifery.

General Effect of the Maternity Benefit.

To the general question whether the maternity benefit had favoured the comfort and safety of the mother and child, 57 practitioners replied in the affirmative, 36 in the negative, 16 had observed no change, 3 were of opinion that the Act had been prejudicial in this direction, 24 that the effect was doubtful or partly beneficial and partly prejudicial, while 30 could express no opinion. Such a want of decisiveness in the general result of the replies to this question in itself indicates that the maternity benefit has not promoted in Glasgow the comfort and security of mothers and infants to the extent that might have been hoped for.

Vacancies and Appointments.

WARNING NOTICE.—Attention is called to a Notice (see Index to Advertisements—Warning Notice) appearing in our advertisement columns, giving particulars of vacancies as to which inquiries should be made before application.

VACANCIES.

ABERDEENSHIRE: PARISH COUNCIL OF TYRIE.—Medical Officer. Salary, £30 per annum.

BARROW-IN-FURNESS: NORTH LONSDALE HOSPITAL.—Male House-Surgeon. Salary, £150 per annum.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House-Surgeon (male).—Salary, £120 per annum.

BIRKENHEAD UNION.—Senior Male Resident Assistant Medical Officer. Salary, £175 per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer. Salary, £240 per annum.

BOARD OF CONTROL (MENTAL DEFICIENCY ACT).—Medical Superintendent of a State Institution for Defectives to be opened near Liverpool. Salary, £800 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Third House-Surgeon. Salary, £110 per annum.

BRADFORD ROYAL INFIRMARY.—Male House-Surgeon. Salary, £100 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £100 per annum.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer. Salary, £200 per annum, rising to £250.

BRISTOL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.

BRITISH MEDICAL ASSOCIATION.—Scottish Medical Secretary. Salary, £600 per annum.

BROMLEY EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum, rising to £300.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Physician. Salary, £100 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Infirmary and Children's Homes. Salary, £180 per annum, increasing to £200.

CANCER HOSPITAL, Fulham Road, S.W.—Surgical Registrar. Honorarium, £100 per annum.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum.

CARDIFF: KING EDWARD VII HOSPITAL.—Two House-Surgeons. Salary, £60 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £90 per annum

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon (male). Salary, £100 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL.—House-Physician (male). Salary, £100 per annum.

COLONIAL OFFICE.—Two Assistant Medical Officers for Ankylostomiasis Campaign in Trinidad and Grenada. Salary, £400 per annum without quarters or £350 with free quarters.

CROYDON BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Assistant Resident Medical Officer. Salary, £150 per annum.

DERBY MENTAL HOSPITAL.—Senior and Junior Assistant Medical Officers. Salary, £250 and £200 per annum respectively.

DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Salary, £80 per annum.

DERBYSHIRE ROYAL INFIRMARY.—(1) House-Physician; (2) Assistant House-Surgeon. Salary, £125 and £80 per annum respectively.

DEVONPORT: ROYAL ALBERT HOSPITAL.—House-Surgeon. Salary at the rate of £150 per annum.

DEWSBURY UNION.—Resident Assistant Medical Officer. Salary, £100 per annum.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary, £150 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) House-Physician; (2) Medical Officer to Casualty Department (males). Salary at the rate of £75 and £100 per annum respectively.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon (male). Salary, £104 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House-Surgeon. Salary at the rate of £75 per annum.

GIBRALTAR.—Second Assistant Colonial Surgeon. Salary, £350 per annum.

GLOUCESTERSHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary, £250 per annum, rising to £300.

HALIFAX: ROYAL HALIFAX INFIRMARY.—Second and Third House-Surgeons. Salary, £120 and £100 per annum respectively.

HERTFORD COUNTY HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

HOLBORN UNION.—Second Assistant Medical Officer at the Infirmary, Archway Road, N. Salary, £150 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Assistant Physician; (2) Assistant Resident Medical Officer; salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician; (2) House-Surgeon. Salary, £30 each for six months and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho Square, W.—Resident Medical Officer. Salary at the rate of £80 per annum.

HULL: ROYAL INFIRMARY.—(1) Honorary Assistant Ophthalmic Surgeon; (2) Casualty House-Surgeon; (3) Assistant House-Surgeon. Salary for (2) and (3) £80 and £100 per annum respectively.

INVERNESS DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £200 per annum.

INVERNESS: NORTHERN INFIRMARY.—House-Surgeon. Salary, £100 per annum.

KENT COUNTY ASYLUM, Maidstone.—Fourth Assistant Medical Officer (male). Salary, £250 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

KING EDWARD VII SANATORIUM, Midhurst.—Second Assistant Medical Officer. Salary, £150 per annum, rising to £200.

KING'S LYNN: WEST NORFOLK AND KING'S LYNN HOSPITAL.—House-Surgeon. Salary, £150 per annum.

LAHORE MUNICIPAL COMMITTEE.—Health Officer. Salary, Rs. 750 a month (£600 a year).

LANCASHIRE EDUCATION COMMITTEE, Preston.—School Medical Inspector. Salary, £350 per annum, rising to £450.

LEEDS CITY HOSPITALS FOR INFECTIOUS DISEASES AND TUBERCULOSIS.—Assistant Medical Officer. Salary, £150 per annum.

LEEDS: GENERAL INFIRMARY.—Two House-Physicians.

LEEDS TUBERCULOSIS ASSOCIATION.—Resident Medical Officer at Sanatorium, Gateforth. Salary at the rate of £100 per annum.

LEICESTER EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £300 per annum.

LIVERPOOL STANLEY HOSPITAL.—(1) Two House-Physicians; (2) House-Surgeon. Salary, £75 per annum each.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital, Harrow Road, W. Salary, £100 per annum.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—(1) House-Surgeon; salary, £100 per annum, and 50s. per annum laundry allowance. (2) Locumtenent; salary, 4 guineas per week.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum.

MANCHESTER CORPORATION.—Fourth Medical Assistant at the Monsall Fever Hospital. Salary, £150 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum.

MANCHESTER ROYAL INFIRMARY.—(1) Surgical Registrar; (2) Medical Officer for Out-Patients and Accidents; (3) Assistant Director in the Clinical Laboratory; (4) Junior Administrator of Anaesthetics. Salary for (1) and (3), £75 per annum; for (2), £100; and for (4), £60 per annum.

MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Honorarium, £25 for six months.

MANCHESTER: TOWNSHIP OF SOUTH MANCHESTER.—Junior Resident Medical Officer for the Hospitals, West Didsbury. Salary, £150 per annum.

MANCHESTER: VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Honorary Assistant Anaesthetist.

NOTTINGHAM CITY GUARDIANS.—Resident Assistant Medical Officer at the Bagthorpe Institution and Infirmary. Salary at the rate of £165 per annum, rising to £180.

ORKNEY: PARISH OF SHAPANSEY.—Medical Officer and Public Vaccinator. Salary, £90 per annum.

OXFORD: WARNEFORD LUNATIC ASYLUM.—Medical Superintendent and Secretary. Salary, £755 per annum, rising to £800.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Physician. Salary, £90 per annum.

PRESTON: COUNTY ASYLUM, Whittingham.—(1) Junior Assistant Medical Officer; (2) Assistant Medical Officer to act also as Pathologist. Salary, £250 per annum, rising to £300.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—(1) Junior House-Physician; (2) Junior House-Surgeon. Salary, £75 per annum each.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary, £100 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—(1) District Resident Medical Officer; salary at the rate of £60 per annum. (2) Assistant Resident Medical Officer; salary at the rate of £50 per annum, rising to £60 on appointment as senior.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary, £80 per annum.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House-Surgeon (male). Salary, £110 per annum.

ROTHERHAM HOSPITAL.—Senior and Junior House-Surgeons. Salary, £200 and £100 per annum respectively.

ROYAL DENTAL HOSPITAL AND SCHOOL OF DENTAL SURGERY, Leicester Square.—(1) Lecturer on Dental Anatomy and Physiology. (2) Assistant Anaesthetist.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant Anaesthetist. Salary, £75 per annum.

SALFORD ROYAL HOSPITAL.—(1) Junior House-Surgeon; (2) Casualty House-Surgeon. Salary, £100 per annum each.

SALFORD UNION INFIRMARY.—Male Resident Assistant Medical Officer. Salary, £150 per annum.

SALISBURY GENERAL INFIRMARY.—House Surgeon. Salary, £100 per annum.

SALOP INFIRMARY.—House-Physician. Salary at the rate of £110 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Resident House-Surgeon. Salary, £80 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £100 per annum.

SEAMEN'S HOSPITAL SOCIETY.—Assistant Surgeon at the Dreadnought Hospital.

SHEFFIELD CITY.—Second Assistant Medical Officer to the Tuberculosis Dispensary. Salary, £300 per annum.

SHEFFIELD: EAST END BRANCH OF CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £120 per annum.

SHEFFIELD EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £300 per annum.

SHEFFIELD: ROYAL INFIRMARY.—(1) House-Surgeon; (2) Ophthalmic House-Surgeon (males). Salary, £100 per annum each.

SHOREDITCH: PARISH OF ST. LEONARD.—Junior Assistant Medical Officer for the Infirmary. Salary, £150 per annum.

SHREWSBURY: COUNTY ASYLUM.—Second Assistant Medical Officer (male). Salary, £230 per annum, rising to £250.

SHREWSBURY: COUNTY ASYLUM.—Locumtenent. Salary, 5 guineas a week.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

STOCKPORT INFIRMARY.—Junior House-Surgeon (male). Salary, £100 per annum.

SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £225 per annum, rising to £250.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House-Surgeons. Salary, £125 per annum.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon (male). Salary, £160 per annum.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.—Junior Surgical Registrar. Salary, £80 to £100 per annum.

WALSALL AND DISTRICT HOSPITAL.—Assistant House-Surgeon. Salary, £110 per annum.

WANDSWORTH UNION INFIRMARY.—Male First Assistant Medical Officer. Salary, £150 per annum.

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS.—Tuberculosis Officer. Salary, £500 per annum.

WEST AFRICAN MEDICAL STAFF.—Appointments to the Service. Salary, £400 per annum, rising to £500, and thence to £600, with prospect of promotion to higher posts.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House-Surgeon and Anaesthetist. Salary, £100 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Clinical Assistants.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—(1) Junior House-Physician. (2) Junior House-Surgeon. Salary at the rate of £75 per annum.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £150 per annum.

WESTMINSTER UNION INFIRMARY.—Third Assistant Medical Officer. Salary, £140 per annum, rising to £160.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £120 per annum.

WEST SUSSEX COUNTY COUNCIL, Horsham.—Temporary Assistant Medical Officer under Mental Deficiency Act. Salary, £6 6s. a week.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £120 per annum.

WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL. House-Physician (male). Salary, £80 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £160 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces the following vacant appointment: Greenwich (London).

To ensure notice in this column—which is compiled from our advertisement columns, where full particulars will be found—it is necessary that advertisements should be received not later than the first post on Wednesday morning. Persons interested should refer also to the Index to Advertisements which follows the Table of Contents in the JOURNAL.

APPOINTMENTS.

BROWN, Ralph, M.D.Lond., Senior Assistant Physician to the Bethlem Royal Hospital.

PHILLIPS, J. G. Porter, M.D.Lond., M.R.C.P., Resident Physician to Bethlem Royal Hospital.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Fourth Croonian Lecture by Dr. E. Goodall: Modern Aspects of Certain Problems in the Pathology of Mental Disorders.

WEDNESDAY.

BRITISH OTO-LARYNGOLOGICAL SOCIETY, 11, Chandos Street, Cavendish Square, W., 4 p.m.—Cases and Specimens.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNAECOLOGY, 8 p.m.—(1) Cases and Specimens. (2) President's Annual Address.

POST-GRADUATE COURSES AND LECTURES.

Post-Graduate Courses and Lectures are to be given next week at the following schools, colleges, and hospitals:

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.
DUBLIN: ROTUNDA HOSPITAL.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.
LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, E.
LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich, S.E.
LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock.
MANCHESTER HOSPITALS: Post-Graduate Clinics.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chenies Street, London, W.C.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, London, W.C.
NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.
WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.

[Further particulars can be obtained on application to the Deans of the several institutions, or in some instances from our advertisement columns.]

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is **5s.**, *which sum should be forwarded in Post Office Orders or Stamps with the notice not later than first post Wednesday morning in order to ensure insertion in the current issue.*

BIRTHS.

CATES.—On June 22nd, at Laurel Mount, St. Helens, the wife of Joseph Cates, M.D., D.P.H., of a son.

TATE.—On June 24th, at 3, Stanley Park Road, Wallington, to the wife of Captain G. Tate, I.M.S., a daughter.

MARRIAGES.

BENSON—NODDER.—On June 10th, at Ashover, Joseph Mitchell Benson, M.B., Ch.B.Edin., West African Medical Staff, youngest son of the late John Benson, M.R.C.S., of Sheffield, to Olive Marguerite, younger daughter of the Rev. J. B. Nodder, The Rectory, Ashover, Derbyshire.

CLAYTON—EASTWOOD.—On June 9th, at St. Hildebrugh's Church, Hoylake, Frank Clayton, M.D., M.R.C.P., of Leamington Spa, to Emily Eastwood, of The Royd, Hoylake.

FITZMAURICE-KELLY—GARRETT.—On June 10th, at St. Barnabas, Pimlico, by the Rev. F. Bealby, Maurice Fitzmaurice-Kelly, M.B., B.S., F.R.C.S., youngest son of the late Colonel T. J. Kelly, Bey, of Boulak, Cairo, Egypt, and Elsie Marguerite, younger daughter of Walter Garrett, Esq., and Mrs. Garrett, of Lee.

WILSON—WILKINSON.—On Wednesday, June 24th, at St. John's, Ranmoor, Sheffield, by the Rev. J. R. Lee Nicholls, M.A., Vicar of the parish, and the Rev. A. F. Mitchell, M.A., Vicar of St. Augustine's, Alexander Garrick Wilson, M.C., F.R.C.S., son of J. Mitchell Wilson, M.D., of Beverley, to Vera, only daughter of Mrs. J. B. Wilkinson, of Tapton Grange, Sheffield.

DIARY OF THE ASSOCIATION.

Date.		Meetings to be Held.
		JUNE.
26	Fri.	London: Insurance Act, Defence Subcommittee, 11 a.m.
		London: Metropolitan Counties Branch, Annual Meeting, 4 p.m.
29	Mon.	Tower Hamlets Division, Stepney Central Hall, 4 p.m.
		Chester and Crewe Division, Chester Royal Infirmary, 8.30 p.m.
30	Tues.	London: Medico-Political Subcommittee *re* Medical Women's Salaries.
		JULY.
1	Wed.	East Anglian Branch, Annual Meeting, Great Yarmouth, 12.45 p.m.; Luncheon, 1.15 p.m.
2	Thur.	London: Insurance Act Committee (*provisional*).
		Cambridge and Huntingdon Branch, Annual Meeting, St. Ives, 12.30 p.m.; Luncheon, 1.15 p.m.
		Northamptonshire Division, Annual Meeting, Northampton General Hospital, 2.30 p.m.
3	Fri.	Border Counties Branch, Annual Meeting, Carlisle, 3.45 p.m.
7	Tues.	London: Standing Ethical Subcommittee, 2.30 p.m.
7	Tues.	City Division, Balfour Hall, Kingsland Road, 9.30 p.m.
8	Wed.	Dorset and West Hants Branch, Bridport, 3.30 p.m.; Luncheon, 1.30 to 2.30 p.m.
9	Thur.	Southern Branch, Annual Meeting, Southampton, 1 p.m.; Luncheon, 1.45 p.m.
10	Fri.	London: Medico-Political, Medical Inspection and Treatment of School Children Sub-Committee, 7 p.m.
		East York and North Lincoln Branch, Annual Meeting, Hull.
11	Sat.	London: Science Committee, 10.30 a.m.
14	Tues.	London: Metropolitan Counties Branch Council, 4 p.m.

ANNUAL MEETING, ABERDEEN, 1914.

Annual Representative Meeting, Friday, July 24th, and following days.
Special Representative Meeting, July 27th.
Presidential Address, Tuesday, July 28th.
Sections—July 29th, July 30th, and July 31st.
Annual Exhibition, July 28th–31st.
Excursions, August 1st.

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AN EPITOME OF CURRENT MEDICAL LITERATURE

MEDICINE.

1. Adiposis Dolorosa.

BABONNEIX AND SPANOWSKY (*Bull. et mém. Soc. Méd. des Hôp. de Paris*, November 6th, 1913) record 2 cases of adiposis dolorosa which illustrate well the nodular and the circumscribed forms respectively; the former case showed enormous size of the fatty masses, the latter a relatively large number of smaller masses. The first patient was a woman of 55, in whom the painful adiposis began at 43 slowly; in 1907 she had nocturnal gastric pains and vomiting which persisted. She had always menstruated regularly from the age of 17 up to the menopause. For the last two years severe biting pains, chiefly in the legs, occurred. On admission she showed pain on pressure over muscles and nerves, and she confessed to alcoholism; syphilis was suspected, but Wassermann was negative. The fatty deposits are symmetrical, and occupy the region below the external malleoli, both patellar borders, popliteal space, axillae, and upper part of buttocks; all, except the gluteal ones, are well defined; they are not adherent, are soft, rounded, elastic, semi-fluctuating, tender on pressure, and show also spontaneous pains; the skin over them shows varicosities; no objective sensory changes were found, and the asthenia was but little marked, a very unusual feature of the disease. The psychical changes were also slight; this is not at all unusual, however. Her memory was slightly defective, and slight emotionalism was present, but these were, perhaps, more connected with her alcoholism than with the adiposis; she showed good intelligence and judgement. The organs generally were normal. The only symptoms pointing to any internal secretory disturbances were gradual stoutness coming on after the menopause, and congestive eruptions, especially on the face. Radiography of skull revealed a possible very slight enlargement of the sella turcica; apart from slight sternal pigmentation there was no evidence of adrenal changes. The second patient was a woman of 71, in whom menorrhagia lasted for four months at 36 years of age; then the menses disappeared and never returned. Some months later the legs began to increase in size, and became painful, the pains radiating to loins and vertebral column, and being sometimes deep and sometimes superficial: the former seemed to be seated in the muscles, and gave a sensation of twitching or shooting; the latter were evoked by the slightest pressure. She had also articular pains at times in hip, ankle, and vertebral joints, aggravated by various movements. The adiposis was diffuse and segmentary, involving chiefly lower limbs (figured), also abdomen, loins, and upper limbs; and it was exactly symmetrical. The painful adiposity began gradually, and was as marked at the age of 39 as it is now at 71. In the lower limbs the diffuse fatty infiltration is elastic, and painful on pressure and even on light touch; but the abdominal fat, though very thick, is not painful on palpation. She has superficial, deep, and articular pains, cramps—especially in calves—a sensation of deadness of fingers, and hyperaesthesia to cold stimuli; she had migraines for the first five or six years, but they then disappeared. The only objective change which can now be found is slight hyperalgesia to pinprick. Of late she has felt disinclined for the least exertion, but she says that until the last few years she had no asthenia. Psychically, there is progressive memory defect, and change of character; she has grown emotional, choleric, and easily depressed. She has early glaucoma and slight horizontal nystagmus. There is slight evidence of latent uraemia, arterial hypertension, and nocturnal polyuria. Radiogram of skull negative; thyroid not palpable; no clear evidence of any internal secretory affection. The writers say that the only glands that could be at all blamed are the ovaries; in both cases, especially the first, there was clear evidence of ovarian insufficiency. They refer to the fact that adiposis dolorosa sometimes supervenes in young women after double ovariotomy.

2. Trichinosis.

LEEN (*Boston Med. and Surg. Journal*, April 24th, 1913) traces the history of the recognition of this disease—referring more especially to the classical case of Zenker, reported in *Virchow's Archiv*—and gives an account of the pathology and symptomatology of the condition. The development cycle consists of three stages: (1) That of sexual maturity; (2) the emigration and growth of the young embryos in the muscles; (3) the resting stage, or muscle trichinae. The author describes these in detail, and then passes to the symptom-complex of the disease which corresponds to these stages. Amongst the early symptoms constitutional and gastro-enteric disturbances are the rule. The patient experiences a sense of anxiety, suffers from dull and heavy headaches, giddiness, nausea and vomiting, and diarrhoea with violent colicky pains. Sometimes there is quite early a marked incapacity of the flexor muscles of the neck and lumbar region. Kratz considers this the most constant of the early symptoms. This muscle lameness appears before the embryo begins to wander, and cannot be explained by muscle invasion. Some authorities hold that it is due to reflex action from the intestines. Friedrichs, on the other hand, ascribes it to an intoxication from dead trichinellae. The most important pathognomonic symptom which is constant is the oedema of the eyelids and of the face. This first appears on the seventh day. Somewhat later oedema of the extremities, more especially of the legs and sometimes of the scrotum, occurs. The sensorium is generally undisturbed, though delirium has been noted in a few fatal cases. Severe epigastric pain occurs in the second week, and has been attributed to the migration of the young brood to the diaphragm. A characteristic symptom is profuse sweating, which appears early and lasts throughout. The skin reflexes show no change, but the patellar reflexes are frequently diminished or lost. The temperature often shows a typical typhoid curve. The spleen is not as a rule enlarged. The muscle lameness already referred to gradually merges into muscle stiffness, motion causing intense pain. The urine shows the diazo reaction, which is more marked than in typhoid fever or tuberculosis. The blood picture is interesting and characteristic. In the first stage there is a polycythaemia and polychromhaemia and marked eosinophilia, the latter being of great diagnostic value. The differential diagnosis, except from typhoid fever and poliomyocitis, presents no especial difficulties. In the latter case an examination of the muscle for trichinellae may be necessary. With regard to treatment, if only a short time has elapsed since eating the infected food, copious stomach washing and thorough catharsis may be tried. For direct action on the worm glycerine, benzol, and the picronitrate of potass or soda may be tried. The author suggests the use of neosalvarsan in order to kill the embryos in the blood. Colloidal silver, 4 to 6 c.cm. of a 2 per cent. solution intravenously, has been tried for the same object.

3. Painful Spasm of Pylorus.

AN observation relating to spasm of the pylorus in which *x* rays proved of some diagnostic service is communicated by DOMINGUEZ to the Société de Radiologie Médicale de Paris (*Bull. et mém.*, October, 1913). The clinical picture was one of pyloric stenosis. The patient was a woman, aged 52 years, who had suffered for the previous eleven or twelve years from recurring gastric crises of hyperchlorhydria. During the two years immediately preceding *x*-ray examination hepatic colic and gastric pain had caused her sufferings to be almost continuous, and she had had recourse to morphine. She was in a state of great exhaustion, owing to morphinism and insufficient nourishment. On examining with the bismuth meal it was evident that there was neither dilatation nor ptosis of the stomach. The lesser curvature had a V-shaped appearance, the pylorus approaching the cardia. Subsequent radiographs showed little that was abnormal, the evacuation of the stomach appearing to be rather rapid. A radiograph made six hours after the meal, however, showed the bismuth residue at a contracted pylorus, a portion of the bismuth being in the duodenum. Evidently spasmodic contraction of the pyloric sphincter occurred towards the end of digestion, and this coincided with the painful gastric crises of which the patient had complained previously, crises which took place some hours after a meal, and seemed to disappear on the ingestion of an aliment, either solid or liquid. The radiograph suggested that the case was not one of ordinary stenosis, since the stomach was not dilated, and at the commencement of digestion the evacuation was rapid. Subsequently the patient visited New York, and was examined in the clinic of Max Einhorn, who systematic-

ally practised catheterization through the natural passage for several days, and this manœuvre proved sufficient to bring about a cessation of symptoms. At the end of a month the patient left the clinic quite re-established. The radiographic signs of such a condition are easily missed, but nevertheless, the appearance indicated above, when found at the end of the radiological examination of the stomach, may be taken as an indication of pyloric spasm, and may conduce to the diagnosis of ulcer of the pyloric or surrounding regions.

SURGERY.

4. Tonsillectomy.

RIEDEL (*Munch. med. Woch.*, October 14th, 1913) is convinced that while it is permissible and at times even advisable to remove parts of tonsils with the guillotine, the majority of practitioners do not appear to appreciate the conditions when a total extirpation is required. He considers that slight hypertrophy of the tonsils, provided that they are not materially affected otherwise, does not require any operative treatment. When the child breathes with an open mouth a partial removal is essential, in order to enable the child to develop properly. When the child snores during sleep, and especially if there is any cyanosis, he believes that the hypertrophied tonsils are always in a state of chronic inflammation, with plugs in the lacunæ. Such tonsils should be removed wholly. A partial removal cannot do any good, and the condition is sure to recur. But, he points out, the radical operation is a very difficult and severe one. He has tried a number of methods, and now carries out the operation as follows: He uses a very strong, solid pair of forceps, of at least 22 cm. in length, by means of which the tonsil can be seized and securely pulled forward. The blades must be 13 mm. wide above and 5 mm. below, and should be provided with three sharp hooks. A good head light is necessary, and the operator should have two assistants who are well trained to help. The child must be fully chloroformed. One assistant opens the mouth with a Roser's gag, with the convexity inwards. The other assistant then applies a "lip dilator" at the corner of the mouth and pulls the upper and under lip outwards. Then the first assistant presses the tongue forward by means of a spatula, which is bent to an angle of 50 degrees. This having been achieved, the operator seizes the tonsil with the forceps and cuts them out from below upwards, making sawing cuts. He gives a number of further technical details respecting the operation under varying conditions, and does not fail to warn the practitioner that if he is not specially skilled in such operations he should not attempt to carry this one out. The child should be kept in the hospital or clinic for a couple of days after the operation, and should be watched for the event of secondary haemorrhage. He has not had experience of local anæsthetics for this operation in children, but Görke is said to have met with excellent results. Riedel, however, prefers to have little patients asleep during the operation. Lastly, he reports that he has attempted to remove tonsils during the stage of acute inflammation, but without success. The tissue is always so friable that it is impossible to seize the tonsil satisfactorily.

5. Primary Intranasal Syphilis.

NEIL MACLAY (*Journ. of Laryngol., Rhinol., and Otol.*, November, 1913) records an instance of this easily overlooked mode of syphilitic infection. The patient was a clean, careful man of 25, of good social position, who in the course of his work was closely associated with a man now known to be suffering from early secondary syphilis; but though the infection was probably conveyed by the fingers, the patient would not admit the habit of nose-picking. The trouble began with soreness in the left nostril, as of an ordinary cold, some nine days before Maclay saw the patient. After a day or two of coryza, with stuffiness, something painful and tender made itself evident. Examination showed slight swelling of the left ala nasi, extending to the junction of the cartilage and the nasal bone, and on to the cheek; some hard submaxillary lymph-nodes on left side, pain here on swallowing; the faucial, buccal, and pharyngeal mucous membrane showed nothing wrong, and the right nostril was normal. The left nostril was almost completely blocked; cocaine and adrenalin, and rather forcible use of the speculum were needed, and then an intensely inflamed, circular patch, of the size of a threepenny piece, was seen at the anterior end of the inferior turbinal, covered by a yellowish white membranous formation: on manipulation there was free oozing of blood. A swab from the nostril showed streptococci and pneumococci in great numbers. An alkaline lotion and a colloidal silver preparation were used. Five weeks after the onset of symptoms the membrane had gone and inflammation seemed lessened; but there was greater glandular swelling and greater infiltration of the ala. Palpation of the sore was impossible owing to its situation: its centre was red, and had a soft, pulpy appearance, and its margin was slightly raised. There was lassitude, pains in legs, no headache, but slight pyrexia all the time, with a pulse disproportionately accelerated. A typical secondary rash appeared about the end of the sixth week; a Wassermann test was not carried out. The case had been diagnosed at the outset as one of primary syphilitic infection.

6. Bilateral Dislocation of the Clavicles.

V. KAMPTZ (*Med. Klin.*, June 22nd, 1913) records a case of presternal dislocation of both clavicles in a farmer who was driving timber down a steep road. He stumbled and fell, and before he could roll out of the way the back wheel of the cart had passed over his chest. He got up at once, but felt dyspnœa and violent pain in his chest, which prevented his moving his arms. When admitted to hospital he was suffering from shock, and there was an ecchymosis over his second and third left ribs, and over the upper portion of the sternum, which appeared to be displaced backwards. The two inner thirds of both clavicles, on the other hand, projected forwards, and the overlying skin was cyanosed. Though this area was very tender it was easy to feel both clavicles projecting in front of the sternum. There was considerable subcutaneous emphysema but the lungs seemed normal. The patient was discharged a month later with the dislocations unreduced. He could move his arms freely, though raising them above the level of the shoulders caused slight pain in the shoulders and sternum. Two months later he looked well, and his lungs were normal. The clavicles had become firmly adherent to the sternum, which retained its position behind them. There was no pain or tenderness in these bones, but the arms had become weak, and the patient could not raise them above his shoulders. The range of passive movements was also much restricted, and pain was caused by raising the arms above the level of the shoulders. The arms could not be actively or passively moved backwards, and the relation of the clavicles to the sternum was not altered by any movement of the arms. Pain on movement was now limited to the shoulder. At first the patient's state of collapse and the absence of pressure by the sternum on the trachea led to the adoption of expectant treatment. Later, when adhesions had formed between the clavicles and sternum a bloodless reduction had become impossible, and the slight discomfort experienced by the patient on his discharge did not warrant operative interference. The author admits, however, that if the symptoms complained of two months later persist an operation must be performed. Discussing the mechanism of bilateral, presternal dislocation of the clavicles, the author thinks that when the wheel passed over the chest at the level of the second and third ribs, the thorax was compressed in the sagittal plane, and the clavicles were too rigid to follow the backward movement of the sternum. It is also possible that the first rib on both sides prevented the backward movement of the clavicles.

OBSTETRICS.

7. Pedunculated Thrombus of Vagina in Pregnancy.

POTOCKI AND SAUVAGE (*Ann. de gynéc. et d'obstét.*, October, 1913) have closely scrutinized two instances of this complication of the later stages of pregnancy. A woman aged 29 was admitted into hospital for haemorrhage associated with a tumour in the lower part of the vagina. She was in the ninth month of pregnancy, and was clearly not a primipara. Liquid blood, without any clots, had been coming away for about twenty-four hours. There was a trifling amount of varicosity of the veins of the lower extremity. The presentation was vertex, head not engaged. The cervix was deeply split and both vaginal walls were prolapsed. When the patient coughed, a brown or almost black tumour, of the size of a hen's egg, appeared in the vulvar cleft. It was connected with the posterior vaginal wall by a pedicle, so thin and broad as to simulate a peritoneal mesentery, and it allowed free mobility to the thrombus. The tumour lay immediately above the level of the levator ani, which gripped it when it

was drawn down outside the vulva. Sphacelation was beginning. Two days after examination the thrombus burst during defaecation, and a certain amount of blood escaped: on the next day Potocki excised its remains. Free general oozing followed, and was stopped by catgut sutures. On the following day labour set in, and in two hours a live child over 6½ lb., was delivered spontaneously. The placenta came away without any trouble, and the sutured vaginal wound was not damaged, so that cicatrization was complete within twelve days. The second instance of pedunculated vaginal thrombus was observed in a woman, aged 30, in the eighth month of her third pregnancy, who began to bleed and complained of a swelling occasionally protruding from the vagina. There were very large varicose veins on the legs and vulva. Above the vulvar varices lay a deep-violet tumour 1¼ in. long and 1 in. broad. As in the first case, the pedicle was broad, but it was also thick. The thrombus was ulcerating. The lower border lay about half an inch above the vulvar cleft when it was not forced down; but it was easily inspected, because the varicosities and an old laceration of the posterior thrombus made the vulva highly patulous. Sauvage excised the tumour. There was much oozing and two arterioles required ligature, but the venous oozing was easily stopped by catgut ligatures. Five weeks later the patient was delivered of a child weighing about eight pounds, and the cicatrix was sound. At the end of the puerperium the vulvar varices were found to have disappeared. Twenty-one cases of pedunculated thrombus have been described, 13 in primiparae. It is always situated on the lower part of the posterior vaginal column, about one inch above the commissure, and has never been known to cause dystocia. Varices of the vulva usually coexist, but in three instances they were quite absent. The prognosis is never, according to the experience of the 21 cases, serious. The thrombus disappears or bursts. Yet as sphacelation was noted in one subject and ulceration in the other, Potocki and Sauvage considered that removal of the thrombus was advisable lest it should produce infection.

GYNAECOLOGY.

8. Hernia of the Uterus and Both Adnexa.

FARRAR contributes an exhaustive article upon this subject to *Surgery, Gynaecology, and Obstetrics*, November, 1913. He observes that although hernia of the ovary was observed at the close of the first century, it was not until the nineteenth century that such cases were collected and studied. Hernia of the genital organs may be divided into three stages. The first stage includes hernia of the ovary alone, the second stage hernia of the uterus and one appendage, and the third stage hernia of the uterus and both adnexa. Several theories have been put forward as to the cause of hernia of the uterus. Thus, Kuestner and Eisenhart consider that the intestine or omentum is the essential factor by drawing an adherent ovary into the inguinal canal, the uterus then following the latter. Schultze, on the other hand, thinks that hernia of the ovary is the first stage, and that the broad ligament forms a reduplicature and draws the uterus in by a method analogous to the gliding hernia of the large intestine. Winckel is of opinion that the round ligament acts on the ovary as Hunter's ligament on the testicle, causing the ovary to make a similar descent into the canal. Farrar, on the other hand, considers that the causes are probably not single, but several associated. In the majority occurring in infancy or childhood, probably intra-abdominal pressure is the immediate cause of the hernia. In adults multiple pregnancy, subinvolution of the uterus, or a previous inguinal hernia of the intestine, are secondary causes which favour its production. Adhesive peritonitis in intrauterine life may produce displacements of the genital organs which render them more liable to hernia. It is important to note that inguinal hernia of the uterus is practically always congenital. The acquired form is very infrequent, if indeed it occurs at all. Two varieties are known, namely, inguinal and femoral. The inguinal type is by far the most common. As usually seen, it is associated with malformation of the genitalia such as hermaphroditism. The diagnosis must be made on symptoms which are connected with pelvic organs. A sound is sometimes of considerable use in ascertaining the nature of doubtful tumours of this kind in the inguinal region. The treatment is always operative, either on the pregnant uterus for the relief of the immediate condition, or on the non-pregnant organ to avoid the dangers of pregnancy or to prevent degenerative changes in the organs involved.

9. Wertheim's Operation for Cancer of the Uterus.

DURING the past fifteen years WERTHEIM (*Wien. med. Woch.*, October 4th, 1913) has performed his extended abdominal operation for cancer of the uterus in 714 cases. After giving details of his technique, he reviews the results and compares them with an earlier series of 500 cases published three years ago. His latest statistics, which include the 500 earlier cases, show that he examined 1,501 cases of cancer of the cervix. In 75 cases an operation was refused. Of the remaining 1,426 cases 712, or 50 per cent. were considered inoperable. In 99 cases the disease was found inoperable only after an exploratory laparotomy, or an attempt to carry out the radical operation. The percentage of operable cases had risen by 7.5 since the previous publication three years ago. This was due to the material investigated at the University Obstetrical Hospital being somewhat better than that of the Bettina Hospital, whence Wertheim's earlier cases were in part derived. Of 450 cases in which the radical operation was performed five years or more earlier, 186, or 42.5 per cent., showed no relapse. If from these 450 cases the 89 which terminated fatally during the operation and the 12 which subsequently terminated fatally owing to intercurrent maladies be subtracted, the percentage of permanent recoveries is raised to 53.3. If, however, the inoperable cases are included with the others, the percentage of recoveries for the total is only 20. In 14 cases showing no relapse after five years the local lymphatic glands were found already involved at the operation. Cancer of the body of the uterus was found only in 5 per cent., and the author was for a long time unconvinced as to the desirability of the extended abdominal operation in these cases. Compared with cancer of the cervix, cancer of the body of the uterus is more suitable for an operation not so radical as the extended abdominal operation. In fact, 97 per cent. of the author's material proved operable. Ultimately he decided to apply the extended abdominal operation also to cancer of the body of the uterus, for his own material and that of others showed that relapses after the less radical operation are relatively frequent. He admits that the statistics of operations for cancer of the body of the uterus are at present unsatisfactory, and that it is impossible to form a definite opinion of the value of an operation for this form of cancer. But it is certain that laparotomy is preferable to the vaginal route in cancer of the body of the uterus, for the former enables the operator to modify his procedure according to the extent of the disease.

THERAPEUTICS.

10. Serum Treatment of Cerebro-spinal Meningitis.

AFTER reviewing the results hitherto obtained by various authorities in the treatment of cerebro-spinal meningitis with specific serums, P. AASER (*Tidsskrift for den Norske Laegeforening*, October 15th, 1913) confirms the favourable reports already published. He considers the advantage of this treatment is practically as great as that derived from serum treatment of diphtheria. The serum must be fresh, and, whenever possible, should be tested by complement fixation or the opsonic index, and compared with the strain of meningococcus cultivated from the patient. The agglutination test is also useful, and, when negative, probably indicates that the serum is inert. The injections should invariably be intraspinal, and the dose should be 15 to 25 c.cm. for children, and 25 to 60 c.cm. for adults. The injections should be given daily or every other day until definite improvement occurs. After the symptoms have disappeared lumbar puncture should be made, and, if meningococci are still demonstrable, the serum should again be given. The author found the German commercial serums unsatisfactory, either because they were stale or because the strain of meningococcus obtained in Germany was not identical with that responsible for the disease in Norway. A specific serum was, therefore, prepared by the intravenous and subcutaneous injections of over twenty different strains of meningococci recently cultivated in Norway. The horse from which the serum was obtained was treated for six months beforehand. Discussing the technique of the injections, the author insists on the necessity of first withdrawing as much cerebro-spinal fluid as will flow through the cannula without aspiration. As much as 60 c.cm. or more may thus be allowed to escape. Sometimes it may also be advisable to aspirate

when the cannula contains only a little pus. The serum should be slowly injected at the body temperature. Since January, 1912, the author has observed 187 cases. Of these, 57 were not treated with serum, and the mortality was 61.4 per cent. Of the 42 cases in which Norwegian serum was used, 16 ended fatally, the mortality being 38 per cent. As a rule, the patients before they were treated with serum were more ill than the others, some of whom were admitted to hospital already almost convalescent. The epidemic was severe, diffuse subcutaneous haemorrhages were common, and, when present, indicated an unfavourable prognosis even after serum treatment. This was also fruitless when focal cerebral symptoms were observed. The author gives a clinical history of certain cases illustrating the rapidly beneficent action of the serum.

11. The Treatment of Actinomycosis.

PINOY (*Ann. of Derm. and Syph.*, No. 10, October, 1913).—Ever since Thomassen discovered its remarkable therapeutic action potassium iodide has been used in the treatment of actinomycosis, and in the majority of cases with great success. From time to time, however, refractory cases are met with, and the author considers that probably the sluggish nature of the circulation in the neighbourhood of the often oedematous lesions is a potent factor in preventing the access of the salt to the diseased areas. In this article he reports the case of a young girl (15) who had such lesions in the neighbourhood of the left inferior maxilla. They had been present about five months, and consisted of a dusky red indurated plaque, in which were interspersed soft nodules, and sinuses from which were discharged pus and serous fluid which were proved to contain the typical yellow grains of a ray fungus. The cultures on potato remained negative, those grown anaërobically on Veillon's gelatine medium were positive in five days, and the characters of the colonies corresponded with those of the variety called "the streptothrix Israeli." The patient was immediately placed on potassium iodide 100 grains daily, but in spite of it the lesions advanced from day to day and became more oedematous, so that she was soon unable to open the left eye, whilst the upper cervical chain of glands became enlarged and very tender, and an evening temperature developed. The patient was then put on a salt-free diet (March 27th), and the plaque was stimulated with fifteen galvano-caustic punctures, and dressed with lint soaked in Gram's fluid. The potassium iodide was continued. On April 1st there was a very marked improvement. The oedema had decreased, the patient was able to open her eye, and there was no more pain. The complaint that saltless food was most unappetizing was met with the suggestion that she should savour her dishes with the iodide, and she followed it with complete success. Syrup of the iodide of iron was given additionally. On June 6th further punctures with the galvano-cautery were made, and the patient was discharged cured in August. An opportunity to treat a similar case has since arisen, and the method was found equally successful. The point to note is that actinomycosis tends to obstruct the venous return and thus gives rise to oedema which still further obstructs the circulation. The local condition is attacked with the galvano-cautery, and the general measures, so often used with success for the oedema of renal and cardiac disease, namely, complete omission of salt in the diet, is a very useful adjunct in the treatment. The substitution of potassium iodide for the sodium chloride is an ingenious adaptation.

12. Cerebro-spinal Fluid in Acute Poliomyelitis.

FRASER (*Journ. of Exper. Med.*, September, 1913) records the results of the examination of the cerebro-spinal fluid in 57 cases of acute epidemic poliomyelitis in conjunction with the findings of Draper and Peabody in 69 similar cases previously reported, with a view to ascertaining whether examination of the cerebro-spinal fluid may assist in early diagnosis, and whether the abnormalities present have any relation to the severity of the disease, the localization of paralysis, and the prognosis. In the total 126 cases, 362 examinations were made, the macroscopic appearance of the fluid, the number and type of cells present, the presence of globulin, and the power of reducing Fehling's solution being especially noted. Lumbar puncture was always performed as soon as possible after the admission of the patient and at varying intervals afterwards, the period covered extending from the preparalytic stage to the twelfth week after onset, and the fluid was always examined immediately after withdrawal. As far as could be judged, an especially high pressure was not generally present, and the macroscopic appearance of the fluids was constant, nearly all being clear and colourless, a few only showing slight opalescence or containing small white flakes. Fehling's solution was reduced by all the fluids examined, but no quantitative examination was made. The number of the cells was estimated by mixing the fluid in a haematocytometer with 50 per cent. acetic acid drawn up to the "1" mark, and the globulin was estimated by the butyric acid method of Noguchi. While the number of cells was found to be highest early in the disease and gradually diminished later, the globulin reaction was at its maximum in the third week, persisted into the fourth week, and then gradually diminished, though it might be present for a considerable time. The increase in the number of cells was due in nearly every case to mononuclear cells of various types, the lymphocyte type being the most common, and a high polymorphonuclear count was noted in the very early stages. No accurate relation between the severity of the attack and the changes in the spinal fluid could be determined, and its examination, while of possible value in diagnosis in the preparalytic stages and in abortive cases, is of no value as to prognosis either of life or of ultimate recovery.

13. Melubrin.

BENNO HAHN (*Munch. med. Woch.*, October 7th, 1913) thinks that melubrin, a new derivative of antipyrin, has an assured place among the medicaments employed in the treatment of rheumatism. In acute rheumatism the fever, swelling, and pain are promptly relieved when 8 to 12 grams are given daily, while the residue clears up if the drug is given in doses of from 3 to 4 grams daily for a further week. The result is said to be less favourable in subacute and chronic rheumatism, but 0.5 to 1 gram given three times a day is supposed to relieve pain and reduce the temperature in the event of exacerbations. Hahn states that daily doses of from 3 to 6 grams have reduced swelling and improved the motility of the joints in these chronic cases. In regard to the question of toxicity, he has, unlike the majority of other authors, seen some digestive disturbances which have suggested to him that the preparation might be given intravenously with advantage. This idea was carried into effect, in the hope that the action of the drug would attack the causal agent of the disease more readily and directly in this way. Melubrin undergoes discolorization after heating, exposure to daylight and sunlight, and storage in oxygen. But he has satisfied himself that this discolorization does not indicate any decomposition, nor does it give rise to toxic symptoms in experiment animals. Save in the case of one patient, in whom an idiosyncrasy against the preparation appeared to exist, all the patients who received melubrin intravenously tolerated this medication well. He gives 1 c.cm. of a 50 per cent. solution, and increases the dose up to 5 or 6 c.cm. three times daily. The therapeutic effect of this was excellent; in the opinion of the author the advantages over oral medication are well marked.

PATHOLOGY.

14. Passage of Internal Secretion of Pancreas from Fetus to Mother.

G. LAFON (*Compt. rend. Soc. de Biologie*, October 24th, 1913) refers to the experimental finding of Carlson and Drennan (1911) that after removal of the pancreas of a pregnant dog towards the end of gestation glycosuria did not appear, but that after the subsequent extraction of the fetus by Caesarean section the diabetes made its appearance. Hédon (1913) failed to confirm this observation in a dog. The writer extirpated the pancreas of a pregnant dog, weighing 20 kilos., almost at term, on June 20th, 1913; the animal recovered well from the operation, and the abdominal wound healed by first intention; the dog refused food for the first three days, however. No sugar appeared in the urine. On June 24th and 25th, several puppies were born, and the mother then took her milk-soup. Glycosuria began to appear on June 25th, and rapidly became intense on an exclusively meat diet. The dog was sacrificed on July 11th. The glycosuria thus appeared when all the puppies had been whelped. It is probable, therefore, that the product of the internal secretion of the fetal pancreas diffuses itself in the mother's blood, and supplies to her the function of her removed pancreas. But the writer asks whether the absence of glycosuria may not be attributed to the special action of the placenta or to the consumption of sugar by the fetal tissues.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

15. Antibodies in Acute Lobar Pneumonia.

CLOUGH (*Johns Hopkins Hosp. Bull.*, October, 1913) studied the serums in a selected series of twelve cases recovering from acute lobar pneumonia in order to determine the constancy with which antibodies appear at the crisis, and if possible to determine their nature. Since previous investigations probably failed on account of a difference between the strain of the organism used in the tests and that with which the patient was infected, in all except one of this series the homologous virulent strain was employed. The activity of the patient's serum after crisis (or lysis) was compared with that of normal serum, and in the last two cases with that of the patient before the crisis, both as to its power passively to protect mice and its power to promote phagocytosis in the test tube. The phagocytosis tests were carried out in every case with the virulent strain isolated during the acute stage from the sputum (or blood) of the patient whose serum was tested. Of the twelve cases in which satisfactory protection tests were carried out with the serums of patients after crisis (or lysis), using the homologous strain of pneumococcus, nine had serums which showed definite protective power for mice as compared with normal serum, while three gave negative results, but in these only one specimen of serum was tested. In two of the cases whose serum showed protective power after the crisis specimens of serum obtained during the acute stage showed no such power, and in two other cases (one fatal) in which the serum was examined only during the acute stage no protection was manifested. Three serums which protected mice from the homologous strain were also tested with a heterologous strain towards which they showed no protective power. Occasionally protective power cannot be demonstrated unless the serum is tested at frequent intervals during convalescence. In all except two the strains isolated were not phagocytable in fresh, normal human serum, and were presumably virulent for man, and of the exceptions, which were highly virulent for mice, one cultivated from the blood of a patient a few days before death may also be regarded as virulent for man, in spite of its phagocytability in normal human serum, thus suggesting the necessity for caution in assuming that the virulence of an organism for man is always parallel with its resistance to phagocytosis in the test tube. Of eleven tests *in vitro* six showed definite phagocytic activity, and some of the remainder would probably have given positive results if suitable variations in technique had been employed. This activity, with one exception limited to the homologous strain derived from the patient whose serum was being tested, is qualitatively comparable with that of potent, immune serum, in that it brings about active phagocytosis of a virulent pneumococcus not phagocytable in normal human serum. The active substances are bacteriotropines. In 2 cases tested phagocytosis in the peritoneum of the mouse closely paralleled that in the test tube, intracellular digestion of the cocci being marked. Since the phagocytic activity of the serum closely paralleled its protective power for mice both in incidence, time of appearance, and strict specificity as to the strain of pneumococcus affected, it seems justifiable to conclude that its protective action depends upon, and is directly due to, its power of promoting phagocytosis. Although a larger number of cases must be studied before finally concluding as to the rôle it plays in man, it is probable that this phagocytic activity, which can be shown to develop at the crisis in a large proportion of cases, and which is directed against, and largely limited to, the one virulent strain infecting the patient, plays an important part in bringing about recovery in man.

16. The Ultimate Fate of the Syphilitic.

IN succession to two previous publications based on the same material, E. MATTAUSCHEK and A. PILCZ (*Med. Klin.*, September 21st, 1913) gave a further analysis of 4,134 cases of syphilis among officers infected during the period 1880–1900. By January, 1912, after the exclusion of the subjects of progressive paralysis, tabes, cerebro-spinal syphilis, and various psychoses, there were 546 deaths, the causes of which were ascertained in 508 cases. Tuberculosis was responsible for 147, suicide for 83, heart disease following acute polyarticular arthritis for 37, and myocarditis for 35 deaths. Next in order of frequency come apoplexy, cancer, syphilitic marasmus, aneurysm of the aorta, typhoid fever, chronic nephritis, and pneumonia. Some of the causes of death, such as organic heart disease following arthritis, trauma, and sepsis, are relatively frequent, irrespective of syphilis, in this class of patient. The 83 suicides do not include suicides in cases of tabes and insanity. The high mortality due to tuberculosis is all the more striking as all the men had been accepted for military service. Syphilis must, therefore, be regarded as a factor disposing to fatal tuberculosis. Whereas the death-rate from tuberculosis is highest during the first ten years after infection with syphilis, the death-rate from diseases of the circulatory system, including apoplexy, is highest from eleven to twenty years after infection. This applies also to chronic nephritis, but acute nephritis is most common earlier. The greatest frequency of arterio-sclerosis is synchronous with the greatest frequency of the so-called metasyphilitic diseases of the central nervous system. The morbidity among the survivors shows features similar to those of the death-rate. Tuberculosis is responsible for 15, arterio-sclerosis for 15, "constitutional" syphilis for 20, organic heart disease for 15, and cirrhosis of the liver for 8 cases of invalidism. Here, again, tuberculosis is an early and arterio-sclerosis a late sequel to infection with syphilis. Of the 4,134 subjects of syphilis, 198 had developed progressive paralysis, 113 tabes, 132 cerebro-spinal syphilis, and 89 various psychoses. The classification of every case of progressive paralysis, tabes, cerebro-spinal syphilis, syphilis maligna praecox et inveterata, and aneurysm of the aorta in one group shows that 12 per cent. of the subjects of syphilis become seriously ill or die of this disease. If arterio-sclerosis be considered as a result of syphilis, 2.64 per cent. may be added. The total of 14.64 per cent. does not yet represent the whole truth, for such factors as the influence of syphilis on tuberculosis are not included in this estimate.

17. Von Pirquet's Reaction in Pertussis.

IN view of the fact that in measles—a disease not seldom followed by tuberculosis—a von Pirquet reaction which had been previously obtained is found to disappear during the attack, COZZOLINO (*Rif. Med.*, November 1st, 1913) has carried out a series of observations in 227 cases of whooping-cough to see what happens to the von Pirquet reaction in this disease. Pertussis, like whooping-cough, is likely to be followed by tuberculosis. Koch's old undiluted tuberculin was used, and in many cases more than one inoculation was made. Of the 227 cases, 67 gave a positive reaction and 160 were negative. In his fairly large number of cases naturally the disease was seen at all stages, but no marked difference was observed, except that probably more positive results were obtained in old standing cases, but the fallacy of age may have affected this a little. Taking the results of a von Pirquet test in 400 children not suffering from pertussis, but attending the hospital for various complaints, the figures are 36.75 per cent. positive and 63.25 per cent. negative, which differ very little from the figures for whooping-cough—namely, 29.5 per cent. and 70.5 per cent. No relation seemed to exist between the degree of leucocytosis and the result *qua* cuti-reaction. The state of the skin as regards irritation seemed to have some influence on the reaction, chiefly in an inverse sense. These researches in pertussis do not bring any support to von Pirquet's suggestion as to the reason why the reaction disappears in such a disease as measles and reappears when this infection has run its course.

18. Galvano-tonic Contraction in the Reaction of Degeneration.

DELHERM (*Arch. d'électr. méd.*, November 10th, 1913) states that the galvano-tonic contraction is far from being a rare occurrence in the course of the reaction of degeneration; and while Erb and other authors have noticed it as taking place near the beginning of reaction of degeneration when there is galvanic hyper-excitability of the muscle, the present author has discovered it in hypo-excitability also. He reports four observations. In a typical one the patient, aged 52, had paralysis of the muscles served by the median and cubital nerves. These muscles proved to be in complete

reaction of degeneration. On exploring the muscles of the thenar eminence there was found to be complete faradic inexcitability, and on monopolar galvanic excitation, with a current of from 15 to 20 milliampères, or even with one of 8 milliampères, a complete tetanizing contraction was observed. This persisted during the whole of the time that the circuit was closed, and fell gradually after the circuit was reopened. The patient was submitted to electrical treatment, and subsequently the muscles of the thenar eminence, though still in reaction of degeneration, acquired a certain voluntary contractility. Afterwards this tetanizing reaction was sought for on various occasions, and proved to be less clear than at the first examination, and the tetanus, instead of being complete as before, had become incomplete, in the sense that while fully established at the first closing of the circuit, it slackened somewhat during the passage of the current, and gave way immediately after the current was stopped. On the basis of this and of three other cases, the author thinks it curious that the galvano-tonic reaction is not more frequently mentioned in the literature of medical electricity, as it occurs often, and, according to some of his observations, comes into evidence at the period of hypo- as well as of hyper-excitability, and may be either complete or incomplete.

SURGERY.

19. Treatment of Fractured Forearm by Pegging.

G. SCHÖNE (*Muench. med. Woch.*, October 21st, 1913) describes the method he has applied in the treatment of fractures of the ulna and radius by means of silver pegs introduced into the medullary cavity. In the first place, he points out that a satisfactory fixation of the fragments in a good position is not always easy if the peg is inserted at the fractured end of the bone, especially since the peg should be of a considerable length. He therefore prefers, under most circumstances, to trephine the broken bone at some distance from the point of fracture, and to introduce the peg through the trephine hole. The trephine should be applied on the dorsal aspect of the ulna at any point proximally situated, but he has no objection to trephining at a point distal to the fracture. Distal trephining is advisable when the radius is being treated, and the immediate neighbourhood of the radial nerve should be avoided. The trephine hole must be oblique and sufficiently long to admit of a slightly flexible metal rod being introduced into the medulla. The peg or rod should be between 2.8 and 4 mm. in thickness and made of hardened silver. The end is rounded. At times the pegs are more serviceable when square in section instead of being round. The peg is seized by a special pegholder and is pressed or lightly hammered into the medulla until the end has entered the other fragment. The handle or holder is then detached and the peg shortened by a suitable wire cutter, so that its length will lie completely buried in the medullary cavity. A special instrument is then used to push the peg right into the medulla. This is also done by light hammering on the instrument. Care must be taken that the end is not driven too far into the bone, since in this case the peg will bend up. He has employed this method in 6 cases, four times with fracture of either radius or ulna and twice with fracture of both bones. In 5 of these cases the union was obtained rapidly, and in the sixth it was obtained after a short interval. In all cases the position was good. He has not yet attempted this method for fractures of other bones.

20. Traumatic Nerve Paralysis.

IN a paper read before the New York Surgical Society, April 23rd, 1913, and published in *Annals of Surgery*, November, 1913, TAYLOR and CASAMAJOR observe that traumatic nerve paralysis in the adult is by no means rare. The cause is almost always a sudden wide separation of the head and neck from the corresponding shoulder. The tissues which are lacerated include cervical fascia, nerve sheaths and fibres, and vessels. The cicatrix resulting from the combined lesion interferes with nerve regeneration in practically all cases. The greatest amount of injury is situated in the upper roots of the brachial plexus. The roots may be torn from the cord, although as a rule this is not common. The symptoms naturally depend upon the situation of the cicatrices and the number of roots involved. The muscles which are paralysed correspond with the roots from which they derive their innervation. As a rule the motor are much more definite than the sensory symptoms, which usually disappear much sooner. The prognosis, apart from operation, is distinctly bad. Even with prompt repair of the lesion, a really perfect result cannot be obtained in many cases, although the outlook is much improved. The authors are of opinion that the only rational treatment consists in prompt exploration, with such repair of nerve structures as may be indicated in the individual case. Even if no macroscopic injury is found, practically nothing but a skin wound has been made, and after-treatment may be instituted with the exact knowledge of the condition present. At the same time, if gross injury exists, it can be repaired at once, and so gives the least loss of time to the patient, as well as affording the most favourable opportunity to the nerves for complete repair. The damaged areas should be resected, followed by end-to-end suture of the nerve roots and trunks. Should the damage be extreme and the necessary resection very extensive, resection of the middle of the clavicle greatly facilitates approximation of the nerve ends. Taylor and Casamajor observe that an extremity that will move with a clavicle, absent or distorted, is much to be preferred to one that is paralysed but with a clavicle intact. The after-treatment consists in the wearing of a fixation apparatus for six to twelve weeks, in order to keep the neck and shoulder in close approximation, thus favouring the firm anatomical and physiological union of the nerves.

21. Peritomy of the Conjunctiva.

M. SALZMANN (*Wien. med. Woch.*, July 19th, 1913) pleads for the old operation of peritomy which, though very helpful in certain cases, has fallen into disuse. Indeed, one textbook on diseases of the eye devotes only four lines of small print to this operation. It is simple and safe. General anaesthesia is necessary only for children. Adults require local anaesthesia with cocaine and adrenalin, the combination of which renders the operation painless. A small scalpel is used to divide the conjunctiva as close to the cornea as possible. Scissors are now used to undermine the peripheral margins of the wound, and thus facilitate the retraction of the conjunctiva. An alternative to this procedure is to make a second incision, concentric with, and 3 mm. external to, the first incision; the strip of conjunctiva thus isolated being removed. The wound is left open, and presents in a few days a grey, fibrinous deposit, which is gradually replaced by granulation tissue. Ultimately a fine white scar is left which is scarcely visible on the white sclera. In spite of local anaemia caused by the adrenalin, the conjunctiva bleeds freely during the operation, and the depletion of the blood vessels is doubtless beneficial. The division of newly-formed blood vessels passing from the conjunctiva to the cornea reduces the pathological vascularity of this part, but does not totally abolish it, for it is not possible to divide the more deeply seated vessels lying close to the junction of the cornea with the conjunctiva. The beneficial action of the operation is immediate, and, if improvement begins several days later, it must depend on other factors. As the normal condition of the eye is restored in a few days, and the improvement obtained persists, it is probable that the operation merely interrupts a vicious circle, enabling Nature to do the rest. The conditions for which the operation is indicated include progressive ulceration of the cornea with the development of new vascular tissue, irrespective of the etiology of the ulceration. Ulcers of the cornea associated with irritation and pain, and resistant to the usual methods of treatment, improve under the operation which banishes the subjective disturbances, while the ulceration rapidly disappears. The author records 6 cases, in all but one of which marked improvement was effected. In this case the patient was a woman, aged 22, who had suffered from severe conjunctivitis and eczematous keratitis for two and a half months. She was manifestly scrofulous, and suffered much from pain and photophobia. The operation gave only slight and transitory relief. Of the successful cases, one was that of a woman, aged 40, who had lost one eye from chronic tuberculous iridocyclitis. For two weeks she had suffered from inflammation of the cornea of the remaining eye; and severe pain necessitated the frequent use of cocaine. There were signs of a previous attack of iridocyclitis, and a coloboma was observed. A network of blood vessels passed from the periphery to an ulcer in the lower part of the cornea. Surrounding this ulcer was a dull area in which the cornea was muddy and spotted. After six days' treatment with atropine and hot compresses, the patient could still not dispense with cocaine, the ulcer had grown and assumed a horseshoe shape, and the network of blood vessels had further invaded the cornea. The operation at once relieved the pain, and in two days improvement was objectively demonstrable. Four days later the lesion had practically healed.

OBSTETRICS.

22. Brachial Birth Palsy.

TAYLOR (*Amer. Journ. Med. Sci.*, December, 1913) discusses the etiology and treatment of brachial birth palsy, the essential etiological factor being the forcible separation of the head and neck from the shoulder on the side of the lesion, whether occurring from too forcible instrumental traction when the shoulders are impeded, or from the head and neck being used to prise out the shoulder from under the pubis, or in a breech from too great traction being put upon the shoulders to deliver the after-coming head. Both extra- and intraspinal lesions may occur, in the former the deep cervical fascia, nerve sheaths, nerves, and accompanying vessels being torn, the resulting blood clot and torn structures forming a dense cicatrix preventing nerve regeneration. The roots are generally involved in order from above downwards, the condition varying from a slight injury of the upper root to a complete rupture of the entire plexus, while intraspinally the roots may be torn from the cord itself, secondary pathologic changes recurring in the muscles, ligaments, and joint ends of the bones. The paralysed muscles fall into groups according to the roots injured, the characteristic attitude being one of marked inward rotation of the whole extremity accentuated by the pronation of the forearm and hand. Some posterior displacement of the upper end of the humerus as compared with the normal side is always present, and in a few cases there is complete posterior dislocation of the shoulder. Sensory disturbances are slight and generally soon disappear, but there is always interference with growth which is most marked about the shoulder girdle, deformity increasing with age. A cicatrix can usually be felt in the region of the damaged nerves, and even after many years tenderness at the site may be present. The prognosis is bad, some degree of deformity and paralysis nearly always persisting, and complete spontaneous recovery is extremely rare, and only occurs in mild cases when it is generally complete at the end of three months and never later than six. In the few cases in which complete spontaneous recovery will occur improvement commences early and continues rapidly, thereby contraindicating operation, but in all other cases operation, as early as the general condition of the patient permits, gives the best prospect for a useful arm. This will usually be between three and twelve weeks, and should rarely be postponed beyond three months. In debatable cases the procedure merely amounts to an exploration for the repair of such damage as may be found, but in all others resection and suture of the damaged nerves is necessary. In cases where the roots have been torn from the cord they must be laterally implanted into neighbouring roots, and if these latter have been themselves sufficiently damaged to require resection, all of the distal nerve trunks may be sutured in a bunch to the proximal roots still attached to the cord. Following operation, the head and shoulder must be held in approximation for several weeks by a steel brace fitted prior to operation. After-treatment is important, at first consisting of massage and passive motion to the fingers, hand, wrist, forearm, elbow, and arm muscles, while for from four to six months after operation manipulation of the neck and shoulder must not put any strain upon the sutured roots, and any movement tending to pull the shoulder downward or away from the neck must be carefully avoided. While results can never be perfect, operation gives a chance of much greater improvement than can be obtained by any other method.

GYNAECOLOGY.

23. Benign and Malignant Ovarian Cysts.

MACCARTY AND SISTRUNK publish a report (*Surgery, Gynaecology, and Obstetrics*, July, 1913) upon 1,000 specimens of ovarian neoplasm examined in the Laboratory of Surgical Pathology at the Mayo Clinic, Rochester, between 1905 and 1912. The tumours included 214 haemorrhagic (or lutein) cysts, 451 non-haemorrhagic cysts, 163 papillary and carcinomatous cysts, 98 dermoids, and 74 parovarian cysts. The authors observe that the principal distinguishing feature in ovarian cysts is the lining epithelium. Three different linings are noted—namely, (1) round or oval, many-layered epithelium; (2) columnar epithelium, high or low; (3) lutein cells. It is unknown whether or not the columnar epithelium and the many-layered ditto may develop from each other. Both types may, however, be present in the same cyst. The simplest cyst is derived from a Graafian follicle. Its inner surface is smooth and composed of from two to six layers of small oval or round epithelial cells. Such a cyst may attain the size of the human head. Cystadenomata include all those cysts which are lined by columnar or cuboidal epithelium and which contain an albuminous, pseudo-mucinous, or gelatinous material. The epithelium lining may be hypoplastic and form papillomata. These may be intracystic or extracystic, the latter being due to destruction of the wall of the cyst and growth into the abdominal cavity. With regard to haemorrhagic cysts of the ovary, the majority of these are derived from the corpus luteum. At the same time the line of demarcation between a normal corpus luteum and so-called luteum cyst is as indefinite as that between the Graafian follicle and a simple cyst. The diagnosis can only be made by the microscope. Concerning the question of malignancy, in the authors' experience all carcinomatous and papillomatous cysts have apparently originated from cystadenomata. These tumours bear a certain resemblance to cystadenomata in the breast, particularly in regard to the hyperplasia of the lining epithelium. MacCarty and Sistrunk note that, as regards treatment, it is impossible to say at present whether artificial rupture of a small ovarian cyst tumour will prevent further development. As regards the larger growths, however, these certainly continue to develop after rupture. They consider that it is advisable therefore, whenever possible, to ascertain the nature of a small cyst by immediate microscopic examination of a small portion of the wall during the operation. By so doing a simple cyst can be ruptured without destruction of the ovary, whilst cystadenomata will not be left in an attempt to preserve ovarian tissue. In the earliest stages the microscope alone can give the required information.

THERAPEUTICS.

24. The Autolysate Treatment of Cancer.

LUNCKENBEIN is of opinion that the only way to ascertain the true value of the so-called autolysate treatment of malignant disease is to subject this treatment to as wide a control as possible (*Muench. med. Woch.*, September 2nd, 1913). His own opinion is that the injection of autolysate is capable of producing such a marked improvement in primary tumours and in metastases that this is obvious both from subjective and objective standpoints. Various observers have obtained results in the treatment of carcinoma and sarcoma which are said to have been practically cures. The author states that the advantage of the method is that any practitioner who can take the patient into a nursing home or hospital for a few days is able to carry out the treatment without any great expenditure of time, trouble, or money. The treatment is not only a means of doing something with a reasonable degree of hope in inoperable cases, but it can be applied as a prophylactic measure. He also points out that it can be combined with radium or other form of radio-active treatment. The treatment is carried out as follows: A portion of the growth is extirpated and finely divided in sterile saline solution. If no operation can be undertaken for the removal of the whole growth, a small piece may be removed, or a metastatic lymphatic gland may be employed. After the piece has been divided, or cut up into small pieces, it is shaken up in an automatic shaker, and then kept for three days on ice. Finally the suspension is filtered. After the filtrate has been warmed to 56 C. for one hour it is ready for injection. Lunckenbein points out that the tumour must be a "closed" tumour, that is, the surface must be intact and it must be free from contaminating infection. In regard to the concentration of the suspension and the dosage, he states that he has empirically determined that a suspension having a specific gravity of 1009 to 1010 answers well. He filters the suspension through five or six layers of a paper filter, but admits that it may be advisable to employ a porcelain filter. He gives the injections subcutaneously, as intramuscular injections have proved painful. The dose which he employs is 5 c.cm., which he increases to 10 c.cm. after a week or ten days; 20 c.cm. can be given without harm. The injections are repeated every three or four days. Naturally the tumour employed must be from the same patient, although the author states that the injection of autolysates from the tumours of other patients has not led to the appearance of fresh inoculation tumours. In conclusion, he is of opinion that the method should be more widely used, until all the theoretical questions connected with it have been settled.

25. Injections of Blood and Serum in Diseases of the Skin.

L. ZUMBUSCH (*Wien. med. Woch.*, September 13th, 1913) gives an account of one case of impetigo herpetiformis, six cases of pemphigus, and one of mycosis fungoides treated with injections of blood, serum, or Ringer's solution. The case of impetigo herpetiformis was complicated by pregnancy in the ninth month. The patient, aged 20, had previously been well when the rash broke out. It covered the forearms, trunk and lower limbs, and only the palms of the hands, the soles of the feet, the scalp and external mucous membranes escaped. The temperature oscillated between 99.1 and 101° F.: the patient was exhausted, and fresh irruptions appeared after she was admitted to hospital. Eight c.cm. of blood, withdrawn from a vein in the arm of a healthy woman, also in the ninth month of pregnancy, were immediately injected under the skin of the patient's abdomen before coagulation could occur. Next day the rash was paler, and there were no fresh irruptions. Three days later, 20 c.cm. of blood, taken from a woman in the seventh month of pregnancy, were injected as before. No reaction occurred except slight tenderness, lasting a few days, at the site of injection. Two days after this injection the rash had almost disappeared, only a few crusts and pigmentation of the skin remained, and the temperature was normal. A normal confinement and puerperium followed. The author considers it immaterial whether serum or freshly-drawn blood be used. The former necessitates the withdrawal of much blood, as a certain amount of fluid is lost in the preparation of serum. On the other hand, as his case shows, freshly-drawn blood need cause no violent reaction. In 4 cases of pemphigus, rectal injections of Ringer's solution were given daily for three or four weeks, the dose being 1 litre for adults and ½ litre for infants. No satisfactory result was recorded. In 1 case of pemphigus, two injections, each of 20 c.cm. of serum, were ineffective; but in another case of pemphigus great improvement was obtained, each injection of 20 c.cm. of serum, given on three occasions at intervals of a week, causing a febrile reaction, followed by improvement in the general health and cessation of fresh irruptions. The subcutaneous injection of freshly-drawn normal blood was followed by improvement in 1 case and negative results in 2 cases. The case of mycosis fungoides showed no permanent improvement. The author considers the injections of serum valuable in cutaneous diseases complicating pregnancy, and normal serum or blood may benefit certain cases of pemphigus. Others are not improved. Rectal injections of Ringer's solution are valueless.

26. The Treatment of Acute Empyema.

B. HAHN (*Deut. med. Woch.*, September 18th, 1913) admits that chronic empyema should be treated by the surgeon only, but he considers acute empyema is more satisfactorily treated by puncture and aspiration than by resection of ribs or any other operation. During the past year he has adopted the following procedure in 25 cases of acute empyema in children and adults. A wide intercostal space is selected, and the skin disinfected with iodine tincture. Local anaesthesia, extending to the pleura, is induced by an injection of novocain. An incision is now made, through which a trocar and cannula are introduced with a rotatory movement. The rush of pus, which follows the withdrawal of the trocar, is checked by the introduction into the cannula of a Nélaton's catheter. Both are secured by plaster to the skin, and the catheter is connected with a Potain's bottle, pus being slowly aspirated at suitable intervals. Plugging of the catheter by pus or fibrin can usually be remedied by increased suction, and it is seldom necessary to remove the catheter to clean it. In order that aspiration may be as continuous as possible, Potain's bottle is attached to the person of a patient well enough to leave his bed. The small fistula left, when the cannula is removed, requires only a few days to close. Of the 25 patients, 20 were cured, 3 were not cured, and 2 died. The treatment was therefore successful in 80 per cent. Lawrow, with a series of 197 cases, for which resection followed by aspiration was prescribed, effected a cure in only 45 per cent. The average duration of treatment in 14 of his cases was eighty-nine days, as compared with the author's twenty-five days. He therefore concludes that puncture and aspiration drainage should first be prescribed in every case of acute empyema, particularly when this follows such an acute disease as pneumonia. When the treatment is followed by signs of retention suggestive of a multilocular empyema, or when the discharge is still profuse six weeks after the puncture, operative interference is advisable. Bilateral empyema should be suspected in children when puncture and aspiration fail to reduce the fever. If both sides are affected, puncture and aspiration should be adopted and resection of ribs is clearly contraindicated. Bilateral empyema is rare in adults but common in children. It has lately been shown that, when a solution of colouring matter is injected into a dog's pleural cavity, the pleurae of the other side quickly become stained. The pleurae of both sides are, therefore, evidently united by lymphatics, which are responsible for the conversion of a unilateral to a bilateral empyema.

PATHOLOGY.

27. The Causal Micro-organism of Typhus.

M. RABINOWITSCH publishes further details in regard to the organism which he has isolated and which he regards as the causal organism of typhus (*Muench. med. Woch.*, November 4th, 1913). He calls the organism the *Diplobacillus exanthematicus*. In fresh cultures it always has the characters of a bacillus; but in older cultures various degeneration forms appear, which no longer possess the tinctorial peculiarities of the diplobacillus. It is Gram-positive, and does not alter Drigalsky's or Bersikow's media, nor yet litmus milk, nor does it ferment sugar. It does not coagulate milk. Pure cultures can be obtained by adding to ascitic fluid bouillon, containing 4 per cent. glycerine, 3 or 4 per cent. of the patient's blood. The virulence can be tested by injecting either the blood or the pure culture into guinea-pigs intraperitoneally. This varies greatly in different strains. The incubation period also varies according to the virulence, and may be as short as five or as long as thirty-seven days. The bacilli can be regained from the heart's blood during the height of the paroxysm, and either cultured artificially or inoculated into other animals. With antigens gained after passage the complement deviation test was fairly well marked, with 80 per cent. of typhus patients' serum. The agglutination tests at times were positive in dilutions ranging from 1 in 60 to 1 in 640, but at times it was negative. Guinea-pigs which were successfully inoculated with pure cultures or with patients' blood proved to be completely resistant to repeated inoculations. The author further mentions that the bacilli are killed by heating to 60° C. for thirty minutes. Young pigs (sucking pigs) proved to be susceptible to the bacilli, and developed a scarlatinal rash.

28. The Herman-Perutz Reaction in Syphilis.

J. KALLOS (*Deut. med. Woch.*, September 25th, 1913) has tested the Herman-Perutz reaction in 195 persons, 63 of whom were not supposed to have syphilis, and were, therefore, used as controls. Of these, 60 gave a negative reaction. Of the 3 that gave a positive reaction, 1 also gave a positive Wassermann reaction. As both reactions became negative after a course of mercury, and as the patient was in the employ of the venereal department of a hospital, it is probable that he had become infected there and was suffering from latent syphilis. In another case there had been a soft sore of the urethra, the lumbar glands were enlarged and painful, but Wassermann's reaction was negative. That the Herman-Perutz reaction was positive may possibly be due to the lipaemic condition of the blood. Two months later both reactions were negative. In the third case there was no history of a chancre, and the patient's two children were healthy. The patient, who died of laryngeal tuberculosis, gave a negative Wassermann and a positive Herman-Perutz reaction. Of the 132 cases, including clinically demonstrable syphilis, symptom-free and latent syphilis, tabes and paralysis, 88 gave a positive, and 44 a negative Herman-Perutz reaction. In the same series 86 gave a positive and 46 a negative Wassermann reaction. The former reaction was, therefore, positive in 66.6 per cent. and the latter in 65.1 per cent. In other words, the Herman-Perutz reaction is more often positive than the Wassermann reaction by 1.5 per cent. In 19 cases the reactions failed to coincide. In 8 of these one or other of the reactions was positive and in 8 negative. In 3 borderland cases the Herman-Perutz reaction was twice positive and once negative, while the Wassermann reaction was twice negative and once positive. It was found that the Herman-Perutz reaction was positive sooner after infection than the Wassermann reaction. The author concludes that the Herman-Perutz reaction is specific for syphilis, and that, when positive, syphilis must be present. It cannot, however, replace the Wassermann reaction, because the Herman-Perutz reaction is less often positive in secondary syphilis. Yet it is to be recommended to control the evidence of a Wassermann reaction.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

29. Violent Abdominal Pain in Scarlatina.

E. MEY (*Petersburger Med. Zeit.*, October 30th, 1913) records two cases of scarlatina in adults who developed severe abdominal pain late in the disease. One patient was a factory girl, aged 20, who was seized with headache, pain in the neck, high fever, and vomiting. The rash was typical of scarlatina, but the glands behind the jaw were not swollen. The abdomen was somewhat distended and tender. On the tenth day the general condition was much better, the rash was paler, and the temperature had fallen from 105.5° to 100.8°. On the sixteenth day the patient complained of dysphagia, and there was a painful swelling behind the angle of the jaw on the left side. The pharynx was congested and yielded pus on incision. A few days later the right side of the neck became painful and swollen, an abscess in the tonsillar region bursting spontaneously. On the twenty-seventh day the patient complained of violent pain in the left abdomen. There was no vomiting, diarrhoea, haematuria, or jaundice. The pulse was 86 and the temperature 103.3°. The abdomen was not distended, and tenderness was limited to the outer portion of the left lumbar region. During the attack of abdominal pain, which lasted about a week, the urine contained a little albumin. Both pain and albuminuria disappeared spontaneously, and the patient was discharged quite well. The second patient was a cab-driver, aged 26, who had suffered from typhoid fever four years earlier. The scarlatina began with headache, pain in the neck, and high fever. The rash was universal, the throat sore, and the glands behind the angle of the jaw were slightly swollen and tender. On the twelfth day desquamation began, and the temperature fell from 100.8° to normal. The sore throat and glandular swelling had practically disappeared. On the twenty-eighth day the pharynx again became red and swollen, the glands behind the jaw became tender and enlarged, and acute abdominal pain was felt. The abdomen was slightly distended, but was scarcely tender. The action of the bowels was normal, the temperature was 99.7°, and there was no vomiting. There was no resistance or tumour, and no sign of peritonitis. The pain was uniformly distributed over the abdomen. The administration of castor-oil yielded fluid motions containing neither mucus nor blood. There was no tenesmus or albuminuria. After the pain had lasted for about a week it disappeared spontaneously, and the patient recovered. In both these cases the onset of the abdominal pain was preceded by pain in the neck, and the author attributes the pain in both positions to inflammation of the lymphatic glands. Almost invariably when scarlatina has ended fatally the necropsy has shown enlargement of the abdominal lymphatic glands. Usually this enlargement is painless, probably because the inflammation has not spread beyond the surface of the glands. In both the author's cases the pain began suddenly, increased during the first two or three days, was continuous for a week, and was unaffected by morphine. Fever began and ended with the pain, which varied little in intensity, and was never like that of colic.

30. Post-herpetic Chronic Rheumatismal Periarthritis.

G. GUILLAIN AND D. ROUTIER (*Bull. et mém. Soc. Méd. des Hôpitaux de Paris*, November 6th, 1913) record a case of chronic periarthritis following herpes, and localized strictly in the area of eruption. They point out that post-herpetic osseous, articular, or periarticular affections are rarer than the neuralgic pains, objective sensory changes, muscular atrophies, cyanosis, and oedemas, and they mention a few of the recorded cases of post-herpetic chronic arthritis. Their own patient was a diabetic woman of 70, who in the year 1911 had an acute attack of herpes of the back of the left hand, extending later on to the forearm; the vesicles covered the back of the hand, and extended on the forearm as far as the elbow; they appeared on the interdigital folds, but did not pass beyond the first phalanges; there were no other vesicles anywhere. She had pains in the area of eruption, and she states that at the onset she complained of stiffness of the finger-joints, that she could not close her hand, and that efforts to bend the wrist gave pain; the eruption lasted for fifteen to eighteen days, she says, and massage was very painful, and the oedema of the hand persisted long after the eruption had gone. When the pains had ceased, the stiffness of the joints of the hand persisted, so that she could not help herself. Even now, after two years, there is still some periarthritis present, entirely limited to the left hand. Examination shows imperfect flexion of the left fingers, the metacarpo-phalangeal articulations being more affected than the interphalangeal, and passive flexion of the fingers causes pain. No sensory changes were found, except possibly a very slight diminution of bone sensibility in the left hand (the question whether this was causally related to the diabetes is not mentioned). Both ankle-jerks are absent; the knee, wrist, and triceps jerks very feeble, owing to the diabetes. On the left thenar eminence there is a partial polar electrical inversion, but without any slowness of response. Radiography showed the presence of periarticular changes in the left hand, but no bony changes. In previous recorded cases bony lesions were present. The writers conclude that the periarticular changes in their patient are due to the nerve lesions, which in their turn were due to the attack of herpes.

31. Cutaneous Manifestations of Septicaemia.

CHURCHMAN (*Amer. Journ. of Med. Sciences*, December, 1913) records a case of streptococcic septicaemia presenting unusual lesions. A man, aged 59, received in the right frontal region near the hair line a ragged scalp laceration, which was sutured by a doctor. After a week's "drunk" without professional attendance the edges of the wound were found to be separated by necrotic tissue, and the skull could be easily explored, but there was no sign of fracture. The temperature was 102.5°, and there was impaired resonance throughout the right back of the chest, and the day following consolidation of the whole right lung was evident, the patient dying from a streptococcic septicaemia and double pneumonia seventy-two hours after admission to hospital. *Streptococcus pyogenes* was isolated in pure culture from the blood, and also from the fluid aspirated from a vesicle on the right little finger, the most striking feature of the case being the rapid development of the cutaneous lesions on the hands and feet. On the fingers these amounted to blebs, containing clear fluid, resting on a hyperaemic base, but the contents of one of these on the right little finger rapidly became blood-stained, and, finally, in a few hours, resulted in a bulla filled with deep blue fluid lying between the epidermis and dermis, and presenting the appearance of a thin finger-stall distended with the fluid, which could be seen shimmering through. This lesion was found on the morning round, though there had been no sign of it the night before, thus showing the striking rapidity of development, which was a feature of the case. The lesion occupied the region of the two terminal phalanges, and ended abruptly, with perfectly normal skin beyond. It was entirely intracutaneous, and there was no gangrene of the soft parts.

32. The Differentiation between Vincent's Angina and Chancre of the Tonsil.

To illustrate the difficulty of distinguishing between angina necrotica and a primary syphilitic sore of the tonsil, G. SCHERBER (*Wien. med. Woch.*, September 13th, 1913) records the case of a medical student who, during a stay in the country about four weeks earlier, had suddenly developed a painful sore throat on the right side. The cervical lymphatic glands on this side became swollen. Gargling with a solution of potassium chloride gave temporary relief, but a week later a relapse occurred. The patient and a medical attendant examined a stained specimen of the discharge from the tonsil, and thought they recognized the *Spirochaeta pallida* in great numbers. A course of salvarsan was therefore recommended. The author found the whole of the right tonsil enlarged. On its surface was a shallow ulcer, of the circumference of a bean, covered with a greyish-yellow, necrotic membrane, and surrounded by a hyperaemic zone. The moderate degree of local inflammation, the limited tenderness, and, above all, the great swelling of the submaxillary and the anterior, cervical, lymphatic glands, which formed one large, firm, and slightly tender swelling, suggested syphilis. On the other hand, the ulcer itself was not like a chancre, and the inflammatory zone showed a reaction

too violent to be syphilitic. Under the microscope a stained specimen showed a spirochaete, which differed from the *Spirochaeta pallida* in being shorter and somewhat thicker. Giemsa staining distinguished this spirochaete from that of syphilis by staining the former a deep violet colour. It was also distinguished from the *Spirochaeta pallida* by staining with borax-methylene-blue, and with a cold, dilute, alcoholic solution of fuchsin. Wassermann's reaction was negative. Under local treatment with hydrogen peroxide the inflammation of the tonsil and lymphatic glands disappeared completely in eight days, during which the patient gave up smoking cigarettes. During the following year Wassermann's reaction was tested seven times, and was invariably negative. This case illustrates the importance of a careful bacteriological examination. Without it salvarsan may be prescribed, and the patient labelled syphilitic for the rest of his life. Salvarsan, it is true, cures local infections with spirochaetes other than those of syphilis, but recovery can also be effected by local treatment with hydrogen peroxide, the potency of which is due to the anaërobic character of the micro-organism.

SURGERY.

33. Chronic Otitis Media.

IN dealing with the subject of chronic otorrhoea from a practical point of view, SCHWABACH (*Berl. klin. Woch.*, October 27th, 1913) states that when the otitis depends on some constitutional cause, such as scrofula, tuberculosis, syphilis, and the like, the discharge may last for many years. The same chronicity is observed in scarlatinal otorrhoea. This chronicity appears to be due to a secondary infection, and is certainly favoured by the existence of adenoid vegetations. The degree of deafness which accompanies even severe forms of otitis media varies from an almost negligible one to practical stone deafness. Tinnitus and pain are not common symptoms of an uncomplicated otorrhoea. Headache is met with only when the discharge is retained, while trigeminal pain may be complained of when the petrous bone is affected. The discharge itself is seldom pure pus, but is usually marked by an admixture of mucus and pus. Blood may lend to it a reddish or brownish colour. Caseous inspissated pus of a stinking nature and glistening cholesterin masses are quite common. Speaking of the perforation of tympanic membrane, he states that there is always one perforated, and not infrequently two. More than two perforations are rare. The usual site is in the lower segment, but it may be found in the middle or in the upper segment, in Shrapnell's membrane, just over the short process of the malleus. After describing the appearance of the perforations, he goes on to state that while they may usually be recognized by inspection without difficulty, the presence of swelling, granulations and polypi may obscure them. Pulsation synchronous with the heart's beat does not always indicate a perforation, although in the majority of cases in which this is seen a perforation exists. In difficult cases the perforation should be sought for by means of Politzer's method of passing air through the Eustachian tube. The author describes the occurrence of polypi and the advent of inflammatory changes which spread from the soft parts, cutis and mucosa to the periosteum, thence invading the petrous portion of the temporal bone. The diagnosis of caries of the bone is at times very difficult. In doubtful cases it is advisable to examine the pus after syringing for sand-like particles of necrosed bone. When the probe is used the greatest care must be exercised, and this may only be done under the control of the eye. He traces the spread of the inflammation of the bone to abscess of the brain and to the less frequent meningitis. At times the inflammation involves the bony canal of the carotid and the floor of the tympanic cavity in the neighbourhood of the jugular vein. In both cases severe and fatal haemorrhages may take place. Even when the first attack is successfully treated by compression of the common carotid, or by tamponage, a recurrence is likely to follow, and death takes place sooner or later from this cause. The next complication treated is pyaemia. In regard to prognosis, the author expresses himself with the utmost caution. In a large number of cases skilled treatment is able to stop even a very long-standing otorrhoea, and even to cause the perforated tympanic membrane to heal, but even then deafness of marked degree is commonly left behind. More frequently the perforation is not healed, and in these cases recurrences are very common. The prognosis is worst when the neighbouring parts are affected, and the author finds that it is wise to recognize that whenever the middle ear is affected it is impossible to say to what the affection may lead. The treatment of the otorrhoea consists in the careful removal of the discharge. This is best done by syringing with boiled lukewarm water and a Lucae's syringe. Boric acid perhydrol, formalin, and the like may be added to the water when the discharge is offensive. When the perforation is small it may be wise to use a thin catheter in syringing. If the pus is inspissated, equal parts of alcohol and glycerine should be dropped in the ear previous to the syringing. After syringing the auditory passages should be well dried with wool or gauze. Bezold's method is specially mentioned as being valuable at times. This consists in (1) cleaning the tympanic cavity well with a 4 per cent. boric acid solution; (2) after the passages have been dried and the air douche applied, finely powdered boric acid is insufflated into the ear, and the cavity filled with the powder; (3) the external ear is then closed with a plug of salicylic or carbolic wool or borolint. This treatment is said to do away with the necessity of the employment of astringents. When the upper part of the tympanic cavity is affected, curettage may be employed, or the extraction of the carious malleus or incus, after the excision of the remains of the membrane, may lead to satisfactory results in some cases. In the event of caries of the petrous bone being present, the healing cannot be expected until the sequestra have been removed, which may take months. Naturally, when the pharyngeal tonsil is hypertrophied, this must be removed, and granulations should be treated either with alcohol or with silver nitrate. Chromic acid may also be used. He also gives directions as to the use of silver nitrate solutions for the treatment of hyperplasia of the tympanic mucous membrane. To treat the perforation, after the otorrhoea has been stopped, various methods may be adopted. It is advisable first to try the air douche. Delstan's massage may be found of value. If the hearing is bad, an artificial drum made of wool soaked in paraffin may be of service. In some cases it is possible to stimulate the perforation to close by applying trichlor-acetic acid after cocainizing to the edges.

34. Rotation Treatment of Scoliosis.

FORBES (*Amer. Journ. of Orthopaedic Surgery*, July, 1913) urges the treatment of scoliosis by rotation, the theory of such treatment being based upon knowledge of the mechanics of the movements possible in the normal, especially as regards the interrelation between the movements of the vertebrae and those of the rib walls on the thorax. In organic scoliosis the two sides of the thoracic wall are deformed, so that there is a bulging on one side posteriorly and on the other side anteriorly, a horizontal thoracic section presenting converse deformities, which it is the aim of the treatment to reverse by placing the thoracic parietes in a position so far removed from their present deformity as possible, and maintaining them there until this new position becomes their normal. This can be done by posture which aims at changing the form or shape of the two sides of the thorax, the one for the other, and, since the deformity of pathological scoliosis has its counterpart in physiological scoliosis, this can be done by producing physiological scoliosis of a type the reverse of the pathological scoliosis. Past treatment by side-bending has not been very successful, because the treatment of the curvature has been unaccompanied by treatment for the rotation of the individual vertebrae, which are each rotated towards the convexity of the spinal curve. The greatest deformity is usually in the dorsal region, and, although physiological scoliosis may be obtained by side-bending, it would be preferable to use rotation for this purpose, as rotation in this region is the freest of all movements, and is more easily borne by the patient, who may unconsciously compensate for the attitude produced thereby. The rotation treatment of scoliosis therefore aims at correcting the deformity by producing its counterpart, a physiological scoliosis of an opposite character to the existing pathological scoliosis being obtained by rotating the patient's thorax on a fixed pelvis toward the side of the convexity of the curve. By this means not only is the curve of the spinal column changed, but the deformity of the thoracic walls is altered, the side which bulged becoming flattened, and the flattened side filled out. Each step undertaken in the treatment can be thought out and a reason assigned for every move, and correction can be produced without apparatus and maintained by plaster-of-Paris. Although the author uses a somewhat complicated and continually evolving apparatus in order to secure the greatest possible rotation, no special apparatus is really needed, and good results can be obtained

from rotating by means of the arms and fixing, and rotation in flexion is the position allowing the greatest rotation. Windows must be cut out in the plaster-of-Paris jacket over the contracted thoracic walls to allow for expansion and pressure provided over bulging walls. Breathing exercises calculated to expand contracted parts are useful, and the jacket maintaining the rotation must be worn until Wolff's law confirms the correction by definite changes in the internal architecture and external formation of the bones.

OBSTETRICS.

35. The Fate of Spermatozoa in the Female Organism.

E. WALDSTEIN AND R. EKLER (*Wien. klin. Woch.*, October 16th, 1913) point out that a single coitus leaves millions of spermatozoa in the female organism, and that the fate of those not required for fertilization is at present unknown. Macroscopic and microscopic examinations of the female mammalian reproductive organs have thrown but little light on this problem, which the authors have investigated with the help of Abderhalden's reaction. This is based on the observation that, when foreign substances enter the system, it develops ferments bearing a specific relation to the foreign substances. Under certain conditions these ferments can be demonstrated and identified with the substances which have called them into existence. If the female organism absorb semen, it should evolve ferments non-existent before coitus, and having a specific action on the semen or the testicle from which it came. The authors' experiments were carried out on rabbits, the regulation of the animals and the withdrawal of blood being undertaken by the one, while the examination of the blood was conducted by the other, who, to prevent bias, was kept in ignorance of the source of blood in each case. The method by dialysis was adopted, and Abderhalden's technique was carried out in every detail. To learn whether the blood of virgin or male rabbits already contains ferments having a specific action on the testicle, 21 rabbits were examined. Of the 5 males, all gave a negative reaction. Of the 16 virgin females, 13 gave a negative reaction, 2 gave a weak positive reaction, and 1 a markedly positive reaction. In other words, 88 per cent. gave a negative reaction. The reaction was now investigated from twelve to forty-eight hours after coitus in 15 female rabbits, all of whom gave a positive reaction. Of these, 10 had been tested before coitus, and, with one exception, probably due to an error of technique, the reaction was negative. To decide whether the ferments developed after coitus are specific only for testicular substance, the authors replaced the testicle with placenta in 3 cases, muscle in 4 cases, and kidney in 1 case. The results were invariably negative. The objection may be raised that the ferments demonstrated are due to fertilization of the ovum and not to absorption of semen. This, however, is unlikely, for the fertilized ovum can scarcely be capable of inducing a biological reaction in the mother, as it is not in any biological relation with her a few hours after coitus. Again, the reaction was often positive after coitus, although fertilization of the ovum had not occurred. Ten pregnant rabbits were examined, and all gave a positive reaction except one. But though the reaction was thus positive for both recently covered and for subsequently pregnant rabbits, it was much more marked in the first class. In one case in which coitus was not followed by pregnancy the reaction ceased to be positive after fourteen days. If these observations can be applied to man, then the many changes observed in recently married women, and hitherto traced to psychic influences, may now be traced to the formation of ferments in the blood due to the absorption of semen. In other words, the changes in woman are chemical instead of psychic. The reaction may be of medico-legal importance.

GYNAECOLOGY.

36. Ovarian Dermoids Rupturing into Intestine.

TÉDENAT (*Ann. de gynéc. et d'obstét.*, November, 1913) reports a collection of cases in his experience where ovarian tumours of different types have ruptured under various conditions, such as traumatism and pregnancy. The most important are three instances where dermoid cysts had formed communications with the large intestine. The clinical histories are worth recording: A woman, aged 30, married nine years but childless, was seized with abdominal pains and nausea, which subsided within twelve hours. Four days later pultaceous material with hairs, and fifteen days later a tuft of black hair, came away at stool. Ovariotomy was performed; the pedicle was twisted. There was an orifice in the lower part of the sigmoid flexure, the borders of which were vivified and united by suture. The tumour contained three teeth on a plate of bone and numerous hairs. The second patient was also a sterile married woman; her age was 28. Tédenat detected a tumour behind the uterus, the cavity of which measured 3½ in. Two months later the patient had an attack of abdominal pains ascribed to inflamed appendix. A week later pultaceous matter and hair were passed from the bowel. The tumour was removed; its pedicle was twisted. It communicated with the middle portion of the sigmoid colon. Tédenat cut away the cyst wall a few millimetres above the opening, made raw the inner surface of the adherent portion, and sutured it over the opening. The last patient was a virgin aged 19. A severe attack of peritonitis occurred, and, as in the last case, was diagnosed as appendicitis, but a tumour was detected on the right of the uterus; within a fortnight the patient suddenly felt acute colicky pains and passed two pints of liquid dermoid products, and hairs came away during the next two days. Tédenat operated. The tumour had a very long pedicle, twisted two turns. It was connected with the middle part of the sigmoid colon. The communication was closed, as in the second case. These cases all recovered from the operation. Hence communication with intestine is, from a surgical point of view, much less grave a complication than rupture into the peritoneal cavity when the ovarian tumour is dermoid, though in subjects where the cyst is of the simple adenomatous type the reverse is the case. There was, after all, no great difficulty encountered in the separation of the cyst and the closure of the opening in the colon. Axial rotation had occurred in all three cases, and appendicitis was diagnosed in two.

THERAPEUTICS.

37. Aethylhydrocuprein in Pneumonia.

MORGENROTH AND LEVY, stimulated by the work of Ehrlich and the suggestion that pneumococci are especially easy to act upon, found that of the derivatives of quinine, aethylhydrocuprein was characterized by a specific action against pneumococcal infections in mice. Engwer was able to confirm this at a later date for guinea-pigs. It was therefore regarded as a very hopeful sign that this substance proved itself so efficacious in animals both as a prophylactic and as a curative agent. Attempts to employ it in human beings were made by Fränkel, A. E. Wright and Parkinson, and others, but the published results proved very disappointing. Lenné inquires into the cause of the varying results obtained in clinical medicine, and of the failures observed chiefly by Wright, Parkinson, and Fränkel. The first point which struck him was the difficulty in dosage, since the toxicity of aethylhydrocuprein renders small doses essential (*Berl. klin. Woch.*, October 27th, 1913). Wright considered that human pneumonia differed essentially from mouse pneumococcal infections, which partake of the nature of septicaemias. He further pointed out that in man the process is local, and that the coagulation of the inflammatory fluids renders a local action on the cocci impossible. Morgenroth and Kaulmann suggested further that some pneumococci might prove to be resistant to this drug; but this proved, according to Gutmann, to be doubtful. Lenné has made some interesting clinical observations. He treated a series of severe cases (17 in all) by aethylhydrocuprein given by mouth. Arranging the cases according to age and to the extent of the local process, he shows that the action of the drug on the fatality of the disease was marked. It had no effect on the length of the fever nor on its height, nor on the physical signs in the lungs. The mortality of this series was 11.8 per cent. Treating a second series with antipneumococcic serum and aethylhydrocuprein (18 cases), the mortality was 16.5 per cent. No improvement was observed in regard to the local processes or to the fever. A short series of cases treated by serum alone gave a mortality of 33 per cent. Lastly, he found that a series of 40 cases, treated by non-specific means, yielded a mortality of 30 per cent. It will thus be seen that even if the pneumococcic serum cases were included among those treated by specific means, the mortality of the specifically treated cases was 16.8 per cent., as against

30 per cent. of the others. He admits that the number of his cases is too small to justify far-reaching deductions, but suggests that they should awaken an interest in the acthylhydrocuprein treatment of pneumonia.

38. The Benzol Treatment of Carcinoma.

G. KIRÁLYFI has found that a certain similarity exists between the therapeutic effect of x rays and of benzol. In leukaemia and also pseudoleukaemia this similarity is striking (*Berl. klin. Woch.*, October 27th, 1913). After having studied the action of benzol on animals, he came to the conclusion that it might be worth while trying the drug in some inoperable cases of carcinoma. He has done so in two cases. The first was a labourer, aged 53 years, who had been operated on four years before for a breast tumour. In the scar two recurrences were seen. The one was of the size of a walnut, and the second, in the axilla, as large as a hen's egg. The benzol was injected into the tumours. The first injections of 0.1 c.cm. was so painful that no increase of dose was made at first. Later the pain became less, and the doses were then increased to 0.2, 0.3, and eventually 0.5 c.cm. After the fifth injection the centres of the tumours showed a greyish discoloration, which led to a central necrosis. This spread slowly, and after about two months the smaller tumour disappeared altogether. After a considerable time the line of demarcation in the larger growth appeared, and the necrosed central mass fell out. The cavity was then treated with silver nitrate. It soon healed. During the whole time the patient felt quite well, and put on 10 kilograms body weight. Unfortunately a metastasis appeared subsequently in the infraclavicular fossa. The second patient was a woman, aged 60 years. The left mamma had been extirpated some two years previously for a tumour. Five months before admission a nodule of the size of a pea was noted. The growth increased rapidly in size and began to ulcerate and bleed freely. The general condition soon became markedly affected. In this case, the effect of the benzol treatment was not so favourable as in the first case. The greater part of the growth necrosed, but the progress was very slow and incomplete. Fever was more or less constant, and the anaemia became still more marked than on admission. She died six weeks after the beginning of the treatment. *Post mortem* it could be shown that while a fair quantity of carcinomatous tissue was still recognizable, much of the tumour had undergone complete necrosis and disintegration. The author points out that the fact is established by these two cases that benzol has an undoubted action on carcinoma cells. But he believes that this is merely a local action, so that there is no question of any curative effect of the treatment. In his opinion benzol shares with x rays, radium, and thorium the action of materially attacking the cancer cells locally, without effecting a real or general cure in any case.

39. Treatment of Snake-Poisoning.

F. WALL (*Indian Medical Gazette*, November, 1913) writes a good paper on this subject. On seeing a case of reputed snake-bite one must first find out if it be merely one of a punctured or lacerated wound or one of ophitotoxaemia. A snake-poisoned wound shows: (1) Burning or stinging pain, immediate or almost immediate in onset, and usually persistent; (2) swelling, also immediate or nearly so, increasing progressively hour by hour; (3) discharge of blood or bloody serum, thin, persisting for many hours, up to twenty-four or longer, even although the wound may be a trifling one. These three signs are usually associated, but the presence of any one of them is enough for the diagnosis; absence of all three proves that the wound is not poisoned by the snake's bite. One of the most dangerous complications of snake-bite is syncope; many deaths occur every year in India from fright even after bites of non-poisonous snakes. Wall advises us to keep under observation any patient who has been, or thinks he has been, bitten by a snake. Such a patient must be carefully treated, and his wound be attended to, for, should he die, his death may otherwise be attributed to ophitotoxaemia. Of preventive treatment Wall suggests a trial of potassium permanganate, either by free excision or by closely set parallel incisions through the swollen tissues; but this advice does not apply in the cases of cobra or daboia poisoning, for antivenene is a specific for them. In the former group of cases excision may be tried, but he points out that in experimental ophitotoxaemia ligature, excision, and amputation failed to save the lives of fowls and dogs. Antidotal treatment: Antivenene loses from 5 to 10 per cent. of its virtue in the first year, and probably more subsequently; the sooner it is used in cobra or daboia poisoning the better; intravenous injection is the best method: 100 c.cm. for the first dose, to be repeated every fifteen minutes as long as symptoms increase. Symptomatic treatment: Ammonia is useless, strychnine worse than useless, alcohol also (Fayrer); indeed "Vincent Richard, who also experimented with it, expressed the opinion that 'every person who resorts to it should be punishable for malpractice.'" Adrenalin powerfully invigorates the heart muscle enfeebled by snake venom, and tends to control the small haemorrhages; Wall advises hypodermic injection of 10 minims of a 1 to 1,000 solution. Pituitrin should be given in 1 c.cm. doses (17 minims). The combination of calcium with either adrenalin or pituitrin appears to offer great possibilities if pushed judiciously subcutaneously. "In every case of snake poisoning syncope is to be expected. It should be looked for and promptly treated, otherwise even antivenene will not save the subject bitten by cobras and daboias, and the other measures recommended for other toxaemias will prove unsuccessful." Finally, the wounds, however trivial, should always receive attention; they should be laid open, and whether or not excision or multiple incisions with $KMnO_4$ are employed, should be antiseptically dressed.

40. Graves's Disease treated with Antithyroidin (Moebius) and Carbonic Acid Baths.

STEIN (*Gazz. degli Osped.*, Oct. 12th, 1913) has analysed most of the records of cases treated with antithyroidin since 1906 and gives details of a few cases of his own. He says the dose should only be gradually increased, beginning with a small dose of 10 drops twice a day and going up 30 or more drops on the day, according to the effect produced. In addition he is strongly in favour of the administration of baths impregnated with CO_2. As a rule, no bad effects are seen from the use of antithyroidin, and it has been given with success at such different ages as 62 and 4 years. The author says nothing about the surgical treatment of Graves's disease.

PATHOLOGY.

41. Excretion of Urotropin through the Mucous Surfaces.

A. LEIBECKE (*Berl. klin. Woch.*, September 15th, 1913) has investigated the excretion of urotropin through the nasal and other mucous surfaces, and also through the serous membranes. He selected cases of otorrhoea, and tested the purulent discharge for urotropin after varying intervals, after taking of the drug had elapsed. He also turned his attention to the excretion through the peritoneum in cases of peritonitis, and the results of these observations and a consideration of the work done by others have impelled him to the following conclusions. Urotropin is excreted by the urine one quarter of an hour after it has been taken; it appears in the cerebro-spinal fluid 45 minutes after taking, in the milk 1 hour, in pus from the ear and from the bronchi 2 hours, and in the peritoneal fluid 4 hours after having been taken. It disappears from the oral pus 15 hours, from the bronchial pus 30 hours, from the milk 21 hours, from the cerebro-spinal fluid between 53 and 77 hours afterwards. These data may, however, only be taken as approximate. The highest concentration in the cerebro-spinal fluid and in milk is observed as soon as the drug can be detected, while it is 4 to 6 hours later in the case of pus from the ear. The highest concentration observed was in milk; it was 1 in 10,000 in pus from the ear and from the peritoneum after doses of from 0.25 to 1 gram were taken: 1 in 12,000 to 15,000 in cerebro-spinal fluid, and 1 in 20,000 in the bronchial secretion. The concentration of urotropin in the cerebro-spinal fluid and in the ural pus does not stand in any relation to the dose, nor is there any direct or indirect proportion between it and the body weight. Cumulation does not take place in any of the fluids, and it is, therefore, advisable to give urotropin for therapeutic purposes in six to seven-hourly intervals. It is conceivable that the concentration of 1 in 10,000 to 1 in 6,000 of urotropin in the pus of otorrhoea may exercise an inhibitory action, but this has not been definitely proved. It is not excluded that urotropin might exercise a damaging action on the kidneys in haemorrhagic nephritis, but this may in all probability be prevented by a free supply of fluid.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

42. Sources of Error in the Use of the Stomach Tube for Diagnosis.

HARMER AND DODD (*Archives of Internal Med.*, November 15th, 1913) report their investigations into the possible sources of error in the use of the stomach tube for diagnosis, from their experience that the unaided stomach tube occasionally fails to detect gastric stasis which is demonstrable with the bismuth meal and Roentgen-ray. In order to determine the cause of this inefficiency the course taken by the tube was watched with the fluoroscope, and it was noticed that in several cases the end of the tube did not pass directly to the most dependent portion of the stomach, but the tip first touched a portion of the stomach wall well above the most dependent portion. As more tube was passed the end slid along for a varying distance and then became impinged against the stomach wall so that, on still further passage of the tube, the end remained fixed, and a downward bowing of the tube into the lower portion of the stomach occurred. This dependent loop increased in size as more tube was passed, the tip sooner or later slipping from its fixed position and passing upward toward the cardia, thus becoming further removed from any residuum which may have been present in the stomach. On passing still more tube the end may follow about the wall of the stomach and eventually reach its most dependent portion, or the tip may skim the surface of the residuum and only drain a portion of it. Thus the degree of stasis may be underestimated, or a considerable amount of residuum may entirely escape detection by the tube. In order to ascertain why the tip of the tube may become deflected on emerging from the oesophagus instead of passing directly to the most dependent portion of the stomach, stomach tubes were passed through glass tubing about the length and diameter of the oesophagus, and it was frequently noted that the tip of the stomach tube on emerging from the lower opening deflected from the long axis of the glass. This is accounted for by the fact that stomach tubes are usually kept coiled up, so that they acquire a tendency to curve, which is responsible for their deviation from the straight course on emerging from the lower end of the oesophagus, and the success or otherwise of passing a stomach tube depends in part upon the tightness with which it has been kept coiled, and on its flexibility. If the curve of the tube accommodates itself to the curve of the stomach wall, and if the tip does not become impinged, it will reach the most dependent portion, and deductions will be correct, but the reverse will happen if such accommodation does not take place and the tip become impinged. Attempts to allow for the curving tendency by starting the tube in such a position that when it emerged from the lower end of the glass tube its tip should point in the right direction were unsuccessful, since it was found that, in passing, it became revolved in a way which could not be prevented with certainty. The proportion of successes and failures is also dependent upon the posture of the patient and upon the position which the stomach occupies in the abdominal cavity, as in cases of gastroptosis, where the degree may be underestimated or an insufficient length of tube passed. Their observations make it obvious that failure to recover gastric residuum with the unaided stomach tube from a fasting stomach, or after the ingestion of a test meal, cannot be accepted as conclusive evidence of the absence of gastric stasis.

43. Raynaud's Disease due to Inherited Syphilis.

A. BOSÁNYI (*Jahrb. f. Kinderheilk.*, Berlin, 1913, lxxviii, 177) remarks that hitherto nb cases of Raynaud's disease demonstrably due to syphilis have been put on record. The condition has been variously ascribed to primary changes in the blood-vessels (Beck, 1910), central vasomotor disturbances (Raymond), changes in the lateral and posterior columns of the cord (Oppenheim), a peripheral neurosis (Pitres), and a vasomotor reflex neurosis (Cassireri). Bosányi brings forward two instances in which it was clearly due to hereditary syphilis. The first patient, a girl of 18 months, had had attacks of blueness of the hands and feet lasting an hour four or five times a day since she was two weeks old. When taken into hospital there were small superficial patches of cutaneous gangrene on the tips of the two last fingers of the right hand and the dorsum of the left foot. The right hand to the wrist and both feet to the ankles were dark-bluish red, cold as ice, moist, very tender to the touch, and there was no pulse at the left wrist. The discoloration became livid blue; after two and a half hours it went away, the extremities returning to the normal colour. These attacks of cyanosis were preceded by a brief pallor, which gave way to redness and then lividity, beginning at the finger tips; complete cyanosis came on in thirty to forty-five minutes. Hot applications lessened the duration and severity of the attacks; immersion of the four extremities in cold water brought them on in ten to fifteen minutes. Wassermann's reaction was very strongly positive; neutral emulsion of salvarsan was given by injection deep into the buttock, 1 cg. to the kilogram (in this case 8 cg.). For the next six months the attacks of cyanosis were few and far between. Then they began to return more frequently, Wassermann's reaction was again found to be strongly positive, 11 cg. salvarsan were injected, and cure followed. A month later Wassermann's reaction was negative -November, 1911; since then there has been little cyanosis, according to the parents. The second patient, a rickety girl of 2, under treatment for congenital syphilis, with an anal condyloma and an ulcer of the hard palate, gave a strongly positive Wassermann reaction on May 23rd; next day 9 cg. salvarsan were injected. Two days later cyanosis and coldness of the hands and feet were noted for the first time; the extremities were very tender and almost pulseless. Later the parents said that such attacks of cyanosis had occurred for a month. The attacks recurred, milder and less frequently, for the next month; then they disappeared, and in August Wassermann's reaction was negative; the ulcer and condyloma were cured. The author holds that the rapid improvement of the Raynaud's disease proves that the underlying lesion here could not have been a sclerotic change in the arteries. A coloured plate with a good picture of the feet and right hand of the first case during an attack is given.

44. Adrenal Insufficiency in Dengue Fever.

ALFRED-KHOURY (*Bull. et mém. Soc. Méd. des Hôpitaux de Paris*, No. 32, 1913) points out that although we know, thanks to the work of Sergent especially, that adrenal insufficiency is common in acute infective diseases, yet it appears to be even commoner in dengue fever, and to form in the majority of cases the outstanding feature in its symptomatology, in the shape of profound asthenia—sometimes sudden, but almost constant, whatever may be its mode of onset—spontaneous lumbo-abdominal pain, increased by pressure, gastric cramps, and vomiting. But there is the further fact that one of the chief features of this disease of short evolution is that convalescence is often slow, lasting for two or three weeks, and is marked by a muscular feebleness, prostration, mental depression, and incapacity for work. At the close of the epidemic of the year 1912 Alfred-Khoury saw 7 patients who showed evidence of hypoadrenalism in dengue fever; 3 of these were very rapidly improved by 30 drops of 1 in 1,000 solution of adrenalin by the mouth, with disappearance of the white-line phenomenon. He concludes that the hypoadrenalism syndrome is, if not constant, yet of very great frequency in dengue fever; that it causes some of its chief symptoms, and especially the asthenia; that in no acute infection is it so common; and that adrenalin therapy is called for to combat the asthenia of its convalescence, which is more harmful than the severe pains of its short febrile period; and that the (fortunately rare) graver forms of dengue fever, formerly unknown in Syria and observed there for the first time in the latest epidemic, will in future find us less helpless owing to the possession of this adrenalin therapy.

45. A New Specific Objective Symptom in Neuropathics.

PANCRAZIO (*Gazz. degli Osped.*, November 27th, 1913) draws attention to a symptom first noted by d'Ancona, and especially common in, if not peculiar to, neuropathics. The symptom consists in the marked degree in which they protrude the tongue when asked to show it, so that one can see right into the back of the mouth much farther than is usually the case. It is this good view of the back of the mouth which is characteristic. The author is

convinced that it is a useful diagnostic point, and explains its occurrence on the supposition that neuropathics are just the sort of people who are always examining their tongues and having them examined by sympathetic relations. He says it is commoner in men than women, and this is not surprising if we contrast the occasions where a dirty tongue is likely to arise in the two sexes. If the symptom is once acquired it does not disappear even when the neuropathic condition is cured, for the glosso-epiglottic folds get permanently modified.

SURGERY.

46. Artificial Pneumothorax in Laryngeal Tuberculosis.

SOME observers have expressed the opinion that when pulmonary tuberculosis is complicated by a laryngeal affection treatment by the production of an artificial pneumothorax should not be undertaken. ZINK, on the other hand, wishes to set up the thesis that practically every pulmonary and laryngeal tuberculosis can be treated with marked advantage by this method (*Muench. med. Woch.*, September 2nd, 1913). In going through the cases in which he has treated tuberculosis with artificial pneumothorax, he has found that 12 out of the 75 which were materially benefited by the treatment were suffering from a laryngeal complication. All the milder cases were cured. He gives details of 5 severe cases, from which it transpires that, save in 1 case, no further treatment than the pneumothorax and the application of a powder or menthol solution locally, together with complete rest of the voice, was used. In 1 case an intestinal tuberculosis rendered the case more refractive to treatment than the others, but in all the rest the laryngeal signs and symptoms healed promptly and satisfactorily. In a number of his cases he is inclined to regard the cure as permanent. He ascribes the good results to the stopping of the fever, the arrest of the progress of the pulmonary disease, checking of the severe and frequent attacks of coughing, and the limitation or suppression of the sputum. The fact that the artificial pneumothorax rapidly affects a disappearance of the bacilli from the sputum is, in his opinion, also a powerful factor in the healing of the laryngeal affection. He proposes to publish the result of his general experience of this method of treatment of pulmonary tuberculosis. In the present communication he states that he would only refrain from applying the artificial pneumothorax in cases with laryngeal complication when there is a non-localized perichondral process, especially of the epiglottis, and when the tuberculosis of the epiglottis is productive of severe dysphagia and is characterized by ulcerative processes extending over the whole of the inlet of the larynx and accompanied by oedematous swelling. These cases always end fatally, and not even an artificial pneumothorax is capable of altering this fact.

47. Removal of Adenoids and Mouth Breathing.

MCCLANAHAN (*Arch. of Pediatrics*, October, 1913), having observed that the degree of relief from mouth breathing following adenoidectomy varied greatly in different cases, in some being very slight and in others prompt and decided, studied the effect of this operation in 52 children previously operated upon by himself and others. The facial expression, the ability to breathe through the nose with the mouth closed, the appearance of the mouth and throat, and the condition and coaptation of the teeth were the points noted. An obstruction in one nasal fossa induced mouth breathing equally as well as when both fossae were obstructed. Coaptation of the teeth afforded the most information, in the normal mouth the lower teeth being half the width of the bicuspid in advance of the upper, and the upper incisors overlapping the lower, the cusps of all the teeth (except the incisors) being in apposition and proper alignment, in which condition the bony structure of the nasal fossae is normal in size, affording room for the free flow of air unless some growth or inflammatory condition is present. Of the 52 children, ranging from 6 to 12 years of age, 28 were girls and 24 boys; and since failure to relieve mouth breathing is almost invariably attributed by the parents to want of skill in the operator, it is pointed out that the cases included those in the practice of eight physicians, mostly specialists in naso-pharyngeal work. In 28 of the cases the relief from mouth breathing was either complete or greatly improved, and in all these the coaptation of the teeth was fairly normal. In 24 the operation was a failure as far as nasal inspiration was concerned, and three of these had been operated upon twice and one three times, in each case by different surgeons. In 20 of these 24 cases the failure was not due to faulty technique on the part of the operator, or to recurrence, but to anatomic conditions in the superior maxilla. In all the 24 cases there was bad coaptation of the teeth, as well as maldevelopment of the superior maxilla, vomer, palatine, and turbinal bones, the hard palate being deep and either circular or angular, with retraction of the mandible due to its being drawn downward and backward, and consequent apparent lengthening and actual narrowing of the superior maxilla, while the upper lip appeared short and could only be brought into coaptation with the lower lip by a strong muscular effort, the whole producing the so-called adenoid face due to defective development of the upper jaw. The clinical evidence of such anatomic condition is the appearance of the hard palate and the imperfect coaptation of the teeth. It therefore becomes possible to determine beforehand in any given case whether or not an adenoidectomy will afford relief to mouth breathing, and where there is deformity in the superior maxilla a frank statement of the fact to the parents prior to operation will relieve the operator from unjust criticism afterwards, and will give an opportunity to have corrective treatment instituted by the orthodontist.

48. Enlarged Thymus.

VISCONTINI (*Gazz. degli Osped.*, September 16th, 1913) relates the case of a child aged 2 years, admitted with marked symptoms of laryngeal obstruction (dyspnoea, cyanosis, retracted thorax, etc.), thought to be due to laryngeal growths. Since birth the child had had occasional difficulty in breathing and attacks of suffocation. During inspiration the abdominal viscera were not drawn in, and the sternum was seen to project forward; in expiration a soft dull mass was seen to project into the jugular fossa. Enlargement of the thymus was diagnosed, and under chloroform this gland was found and removed. After the removal of the thymus no great improvement in the breathing was noted, and on examining the trachea it was found to be very soft, and not kept patent by the cartilaginous rings; tracheotomy was therefore performed, and a tube inserted. Four days later the child appeared to be doing well when it was seized with a sudden suffocative attack and died. At the *post-mortem* examination there was no sign of membrane growths or ulceration in the trachea, but the cartilaginous rings were so soft and flabby that the trachea was as limp as a glove finger. The thymus measured 6 cm. long, 3 cm. wide, ½ cm. thick, and weighed 23 grams. After discussing the etiology, symptoms, and literature of enlarged thymus the author comes to the treatment. If the dyspnoea is only slight and intermittent, and not associated with bad paroxysms, the author advises a trial with *x* rays, which may completely reduce the gland to a non-dangerous size. Drugs like iodides, arsenic, and adrenalin are useful. But if the symptoms are more severe, the gland should be excised early—the longer the delay the greater danger of absorption and weakening of the tracheal rings, such as occurred in the author's case. The whole gland should be removed, and the statistics of complete extirpation are good on the whole—for example, Vesas gives 16 cured, 2 improved, 3 stationary; Olivier, 27 cured, 15 dead (7 of these not due to the operation, and the other 8 due to faulty technique or secondary infection).

49. Hair Ball in the Stomach.

RAMSBOTTOM AND BARCLAY (*Arch. Röntgen Ray*, October, 1913) relate a case in which the presence of hair-ball in the stomach was diagnosed by *x*-ray screen examination. Clinically the case appeared to be an obscure abdominal tumour. On practising radioscopy the tumour could not be seen, although it could be felt. The examination was conducted with the patient in the erect posture, and bismuth food was given in order to establish the relationship of the stomach and other parts of the alimentary canal to the tumour. The bismuth flowed into the stomach, and then began to canalize down the greater curvature, thereby showing that the tumour was not the spleen. As more food was given the shadow extended down the lesser curvature, apparently around the mass, which was evidently therefore either inside the stomach, in front of, or behind it. A little manipulation and rotation of the patient quickly demonstrated that the mass displacing the bismuth (showing as a lighter area in the midst of the dark bismuth shadow) was actually within the stomach, and by means of palpation it was easy to demonstrate that it was freely movable. The mass was enucleated

through an incision in the long axis of the stomach along the greater curvature. The size of the hair-ball was 9½ in. in length and 3 in. in width, its shape corresponding almost exactly to that which radiologists consider to be the normal stomach, and there was no suggestion in its markings that the normal stomach was other than one undivided cavity. The authors insist upon the value of palpation and manipulation in association with screen examination.

OBSTETRICS.

50. Rupture of Symphysis in Labour.

TULEY (*Amer. Journ. Obstet.*, November, 1913) reports an instance of this complication following an occipito posterior forceps labour. A woman, aged 23, had been delivered of her first child by forceps. Two years later she was in labour for ten hours, the second stage occupying two hours. The forceps was applied for an hour, and forcible traction made intermittently under chloroform. Tuley then examined the parts, and defined a large head with the occiput directly posterior. The vagina was very oedematous. Without difficulty the head was at once turned to the left occipito-anterior position. The forceps was then applied and the head delivered with quite moderate traction. The child was asphyxiated, but was saved. Much haemorrhage followed its extraction, which continued after expression of the placenta. The parts being carefully searched, the bleeding was traced to a rent anterior to the vagina near the urethra, and in packing it the finger passed between the pubic bones at the symphysis, the gap being 2⅛ in. in width. Plaster was at first applied, and afterwards a suitable binder with straps and buckles, and although there was phlegmasia of the left leg, union was complete at the end of six weeks. Tuley adds a good bibliography of puerperal rupture of the symphysis.

51. Uncontrollable Umbilical Haemorrhage in Newborn.

AUDEBERT (*Bull. de la Soc. d'Obstét. et de Gynéc. de Paris*, May, 1913) reports a case of dyscrasic haemorrhage in a haemophilic newborn child. The bleeding set in on the sixth day and proved fatal five days later. Ganjon, discussing the case, mentioned another in his experience. The infant was born at the end of the fifth month, and its placenta was very heavy. The mother was single and syphilis was suspected, but Wassermann's reaction was not tried and there was no *post-mortem* examination. The stump of the funis came away on the sixth day; two days later haemorrhages set in, and a large haematoma developed. The bleeding umbilical tissues were covered in by a whip-stitch suture, but the integuments thus brought together sloughed, and after injections of antidiphtheritic and physiological serums had been given the punctures bled continuously. The child died on the seventeenth day. Secheyron, in noting an instance of fatal haematemesis developing on the fourth day, considered that it was due to haemophilia and homologous to Audebert's case; but it was not certain that there was no intestinal lesion. Uncontrollable umbilical haemorrhage seemed usually ascribable to syphilis, nor was it clear whether there was true haemophilia in non-syphilitic infants.

GYNAECOLOGY.

52. Mesenteric Cysts.

CHILD, STRONG, AND SCHWARTZ (*Amer. Journ. of Obstet.*, September, 1913) report two instances of this pathological condition. The first patient was a married woman aged 32, who left the West Indies, her native country, for the first time two months before she came under observation. There was a family history of epilepsy, but she had never ailed in any way, and her three children were delivered spontaneously. She was admitted into the Woman's Hospital, New York, with symptoms of acute obstruction of hardly a day's duration. The distension was marked and there was extreme rigidity. Bile-stained fluid was vomited. The uterus was small, retroflexed, and held firm by a large cystic tumour, which filled the pelvis and rose into the abdomen. It was but slightly movable and palpation gave pain. Axial rotation of an ovarian cyst was diagnosed. Child operated and discovered an inflamed and adherent cystic tumour with two cavities lying on either side of a segment of small intestine intercommunicating through the mesentery, from which the growth probably sprang. Both cavities were so tense as to compress and completely flatten out the section of small intestine between them at the point which was the seat of obstruction. On freeing adhesions on the proximal or distended side and separating the two cystic lobes, gas passed freely downwards. The involved intestine was resected with the cystic tumour, and anastomosis accomplished by means of a Murphy button. The patient recovered, but the button was *in situ* when she was last examined. The second patient was admitted into hospital complaining of pressure symptoms in the pelvis and lower abdomen. Two years previously her uterus, with the left appendages and the right tube, was removed for fibroid disease. There was a large fluctuating movable tumour, evidently cystic, filling the lower part of the abdomen. Riddle Goffe operated. The cyst being intimately adherent to the parietes, was laid open by the operator when the parietal incision was made. It was intimately bound up with the adjacent viscera and was not removed, but a portion of the cyst wall was resected and examined under the microscope. The cystic cavity was drained for seven weeks; then the sinus closed. There was no sign of refilling a year later. Strong and Schwartz, who examined the walls of both cysts, found them similar. The authors add numerous references, with the opinions and experiences of earlier observers.

THERAPEUTICS.

53. The Action of Drugs.

CLOËTTA (*Corr. Bl. f. schweizer Aerzte*, November 29th, 1913) states that in the majority of our most useful drugs, although, after absorption, they are carried to every part, the effect is due, not to an indefinite action on the whole body, but to a specific action on one or, at most, certain definite cells or organs. This depends on two factors: (1) The cell, and (2) the drug. (1) If a drug is given in therapeutic doses, it influences the function of a definite organ in a definite way; that is, the action of a drug on an organ depends on the physiological function of its cells. This is well illustrated by the alkaloids. Atropine inhibits the function of all true glands, of all organs with non-striped musculature which are innervated by the vagus, and also paralyses the oculo-motor nerve. The glands affected belong to one system, have the same physiological purpose (secretion), and are innervated by the same system. Such drugs are, therefore, sometimes called "systemic poisons." The physiological function of a cell doubtless depends on the structure of its protoplasm. In many instances these structural differences are microscopically obvious, or can at least be demonstrated by special staining reactions. But sometimes the morphological differences of cells are so slight as to be indistinguishable, although their functions, as shown by the selective action of certain drugs, are entirely different. This especially applies to the physiology of the nervous system, which has been greatly advanced by the observation of the action of drugs. (2) Drugs may be divided into those with a general and those with a special action. The former have such an affinity for protoplasm that they react with every cell with which they come in contact. If given in small quantities they are rapidly exhausted. These drugs with an affinity for every kind of protoplasm possess no selective action on special organs. They are usually of simple constitution, and comprise chlorine, bromine, and iodine, and their salts; certain bodies of the alcohol series, and some simple aromatic substances of the phenol and salicylic acid groups, which are protoplasmic poisons and consequently disinfectants. Drugs with a specific action on definite cells or cell systems must possess properties which prevent them from reacting with protoplasm in general, and enable them to establish relations with the cells for which they have an affinity. These relations depend, as the case may be, on (*a*) chemical or (*b*) physical properties. (*a*) It may be assumed that chemical groups situated on the periphery of the molecule of protoplasm have the power of reacting with certain groups in the molecule of the drug. That peripheral groups are mainly affected is shown by a whole series of observations. For instance, cocaine loses its power if repeatedly sterilized—a process which causes a peripheral methyl group to be readily split off. But it is exactly this group which enables the anaesthetic complex in cocaine to be fixed or anchored to the protoplasm. The cocaine then resembles a bomb without a fuse. It still contains an anaesthetic complex unimpaired,

but lacks the means of exerting its activity. Morphine is another example. Its action mainly depends on the presence of two OH radicals on the periphery of the molecule. If these radicals are closed by bodies which are with difficulty split off from the molecule, such as alkyl or benzoyl derivatives, substances result such as codeine, dionin, and peronin, which have the action of morphine, but in an attenuated degree. On the other hand, if the OH radicals are closed by only lightly attached substances, such as acetyl-derivatives, as is the case in heroin, a compound results which has an intense morphine action. The acetyl-radicals are split off in the body and active morphine remains. Thus we are justified in speaking of chemical reactions between the protoplasm and the drug. The function of the cell is always influenced either in the sense of paralysis or stimulation; no drug exists which will enable a cell to perform functions for which it is not normally intended. The duration of the effect of a drug on a cell is practically always limited. A fatal issue occurs only if the drug is one which paralyses the respiration and circulation so that they are unable to assist the cell in destroying or eliminating the poison. This is well illustrated by the difference in toxicity between atropine and scopolamine (hyoscine). The former is seldom fatal, because, although intensely poisonous, it stimulates rather than depresses respiration and circulation. The latter is a powerful respiratory and circulatory depressant, and although no more toxic to the nervous system than atropine, is much more dangerous to life. Exceptions to the rule of recovery are cells which have been subjected to general protoplasmic poisons. The protoplasmic changes are usually not simply those connected with the finer physiological functions, but are of the irreversible type. Recovery from alkaloid poisoning may be explained by the destruction of the drug either by oxidation or the action of ferments. But this cannot be applied universally, as in many cases the drug is excreted unchanged. Possibly the connexion in these cases between the drug and the protoplasm is slight and approaches the nature of a simple solution. (*b*) The physical element in the relations between a drug and a cell is the cell membrane, the function of which is to keep the composition of the protoplasm constant comformably with the functions it has to perform—that is, to preserve the specificity of the protoplasm. The drug, which is carried by the circulation everywhere, finds in certain cell membranes especially favourable conditions of solution, more favourable than those in the blood. Hence the drug is excreted from the blood and taken up by the cell membrane, in which it alters the powers of elective filtration. It is not necessary to assume that the drug invariably penetrates the membrane and enters the protoplasm. Thus, one theory of narcosis and anaesthesia is that the anaesthetic or narcotic is taken up by the membranes of the brain cells and prevents the passage of oxygen into the cells, which consequently become asphyxiated. Recovery is due to the blood becoming completely free from the poison and being able slowly to extract it from the cell membranes. So far it has been assumed that the drug exerts its action so long as it is chemically combined with the protoplasm or dissolved in the cell membrane. Practically this is not always the case. It seems that the presence of the poison is not the only factor, and that the act of penetration of the drug, as in repeated small doses, has a marked influence on the cellular function. Thus the cell may become tolerant and resume its function. This is well shown by the action of muscarin on the heart of aplysia (a marine gastropod), which is arrested in diastole. After a time the heart beats again. This is due neither to destruction of the alkaloid by the protoplasm nor to its being washed out of the cell membranes, because it can be recovered from the cells and is capable of poisoning the heart of another animal. If a second dose of muscarin is given to the first animal the heart is again arrested in diastole, and after an interval regains its normal rhythm.

54. Vaccine Treatment of Ozaena.

G. Hofer and K. Kofler (*Wien. klin. Woch.*, October 16th, 1913) have treated with vaccines ten cases of ozaena. They regard the *Cocco-bacillus foetidus ozaenae*, isolated by Perez in 1899, as the cause of characteristic ozaena, for this micro-organism can be found in most cases of ozaena. It produces a similar disease in rabbits, it yields a typical smell on culture media, and in some cases it is agglutinated by the serum of the subjects of ozaena. The vaccine was made from a suspension of seven different strains of the cocco-bacillus in saline solution. This polyvalent vaccine was injected subcutaneously at intervals of a week in doses of 10 to 500 million germs. All the patients presented typical signs of ozaena, with atrophy of the turbinates, fetor, and the formation of greenish-yellow offensive crusts. Care was taken to exclude cases of syphilis and of suppuration of the nasal cavities. After giving a detailed account of every case, the authors point out that the treatment invariably provoked a more or less severe local reaction, consisting of pain and tenderness, redness and infiltration at the site of the injection. These reactions were limited to the first three injections, except in two patients, who showed a slight reaction to the later injections. In seven cases the injections caused acute snuffling, and in three cases epistaxis. In some cases sneezing was provoked, and in others there was a temporary exacerbation of the fetor and other symptoms. This reaction is analogous to the reaction produced in a tuberculous patient by tuberculin. Other reactions observed in certain cases included a sense of congestion and heat in the head (3 cases), headache (2 cases), pain in the frontal processes (3 cases), toothache, conjunctivitis, and slight pain in the neck (each in 1 case). Tinnitus was observed in 2 cases, and a relapse of a chronic, suppurative otitis media, which had healed two years earlier, in 1 case. The treatment provoked fever in 5 cases, vomiting in 1, and emaciation in another. The injections, which were continued for two months, liquified the discharge from the nose and pharynx in 8 cases. In 9 cases the fetor was reduced or banished, and in 9 the discharge and formation of crusts were reduced or cured. In 1 case chronic eczema of the introitus was cured. The dry pharyngitis, from which all the patients suffered much, was improved in 2 cases and cured in 4. The authors consider their results encouraging.

PATHOLOGY.

55. Coli Infection of the Urinary Tract.

Marsh (*Pediatrics*, October, 1913) discusses *coli* infection of the urinary tract in infancy and childhood. Although many other organisms may occasionally be the exciting cause of an infection, the *Bacillus coli* is by far the most frequent. Since 90 to 95 per cent. of the cases occur in girls, direct ascending infection is probably the route in most cases, though the organisms may pass directly from the bowel to the kidney or from inflamed pelvic organs to the bladder and ureters, or be carried by the blood stream to the kidney, with a consequent descending infection. Shivering is an important sign in the onset of pyelitis, as it is very rarely met with in infancy except in this condition. The general distress may be considerable and may simulate other infections, though local symptoms may be slight; and mysterious febrile attacks, especially in females, should not be attributed to dentition and gastro-intestinal disturbances until a careful examination of the urine for pus cells and organisms has been made. The urine is opalescent or turbid, acid in reaction, of unpleasant odour, and deposits pus and epithelial cells on standing. The turbidity is unaffected by acids or boiling, and microscopically the deposit contains quantities of motile bacilli. General oedema is sometimes marked, and in older children there may be puffiness about the eyelids. Diagnosis depends entirely upon microscopical and bacteriological examination of the urine, and when the symptoms are wholly constitutional the true nature of the condition may be easily overlooked, so that in all cases the examination of the centrifugalized urine should never be omitted. Duration is variable and ultimate prognosis favourable, but before a cure is pronounced the urine should not only show an absence of organisms and pus cells, but should also be culturally free from the colon bacillus. Apparently no permanent damage occurs to the kidneys in those cases that are cured. The main indications for treatment are to secure a copious excretion of urine by free administration of fluids, and to render the urine alkaline and keep it so for some weeks. Citrate of potash in from 5 to 20-grain doses every three or four hours will generally produce alkalinity with accompanying improvement in symptoms in from one to three days, and should this drug disturb digestion alkalinity may be maintained by 5 to 10-grain doses of sodium bicarbonate or potassium bicarbonate every two or three hours. Urinary antiseptics are not satisfactory, probably because the efficacy of urotropine depends upon the urine being acid; and autogenous vaccines are of no special value, but these should be given a trial where the alkaline treatment fails.

AN EPITOME OF CURRENT MEDICAL LITERATURE

MEDICINE.

56. Extensive Thrombosis in Heart Disease.

F. GLASER (*Med. Klin.*, October 19th, 1913) records a case of thrombosis following heart disease in which the left arm, the left side of the chest, head, and neck were involved. The patient was a servant girl, aged 24, who developed articular rheumatism seven years earlier. She was admitted to hospital for dyspnœa and general weakness. She was very anæmic, and the hæmoglobin was 60 per cent. The apex beat was in the anterior axillary line, and the cardiac dullness extended one finger-breadth beyond the right sternal margin. A soft diastolic murmur was audible over the aorta, and the second pulmonary sound was slapping. A systolic and a presystolic murmur were audible over the apex of the heart. After the patient had been in hospital for three months without much improvement a tender swelling of the size of a walnut appeared under the right sterno-mastoid muscle. There were signs of pulmonary infarct, and the patient became very restless. Nine days later the right side of the face became swollen, and the hard and tender parotids made the ears protrude. The right upper arm was 9 cm., and the right forearm was 7½ cm. wider in circumference than the corresponding measurements on the left side. The sclera were jaundiced, and the right side of the chest was boggy. When this condition had lasted about three weeks, during which there were recurrent attacks of pulmonary infarct, the patient died. The necropsy showed stenosis and incompetence of the mitral valve, incompetence of the aortic and tricuspid valves, endocarditis verrucosa recurrens, hydropericardium, hydrothorax, ascites, anasarca, jaundice, multiple pulmonary infarct, and thrombosis of the superior vena cava, and of the subclavian and jugular veins on both sides. The author can find records of only four cases in which such extensive thrombosis, involving the large veins of the chest, and following heart disease, occurred. In one of these, reported by Cheadle, Lees, and Poynton, bilateral parotitis was observed. Thrombosis of the branches of the superior vena cava in chronic heart disease is more common, and in 1900 Gallavardin collected 25 cases, 23 of which were observed in women, usually under the age of 30. Probably chlorosis favours thrombosis, for the factors disposing to thrombosis, such as a sluggish circulation, changes in the quality of the blood, and faulty nutrition of the blood vessels, are present in chlorosis.

57. Mild Manifestations of Syringomyelia.

C. BURNS CRAIG (*Medical Record*, October 25th, 1913) points out that there is a group of cases, which may be called mild or incipient, whose real status passes unrecognized until they drift into the neurologist's clinic. The history of such cases arouses suspicion of their true nature; thus, a stiffness, numbness, and loss of dexterity in the fingers, gradually increasing in severity, usually without pain, associated at one time or another with an accidental painless burn; a slowly healing and painless traumatic sore on the hand; an injury to the hand, seen by the patient rather than felt, makes it possible to hazard the diagnosis. The suspicion is readily confirmed on physical examination. He records three cases in point. In the first one a young man showed as his earliest symptom a difficulty in using his left hand in playing his violin; he could not hold a cigar easily and had difficulty in putting his fingers into a baseball glove. In the second case the first symptoms were of rapid onset. A young man, who was an expert swimmer, went for a swim in the ocean and found he could not make his usual powerful arm strokes. The same evening he woke from a light sleep with severe precordial pains; he rose off the bed, but fell, owing to weakness of his left leg, and then found he could not use his left arm. It is suggested that he probably had a hæmorrhage into the syringomyelic cavity. The third patient, a man of 39, had ten years previously felt numbness in his right little finger; two years later it affected the whole of the right arm, the right trunk, and right lower extremity; five years ago the right little finger began to curl in, and he could not straighten it. The later changes in these three cases are not dealt with in this abstract. In summing up these cases, the writer comments on the mild degree of the muscular atrophy, trophic changes, and motor weakness, as indicating the remarkable manner in which the depredation of the spinal gliosis is confined, in the early stages at least, to the sensory tracts conducting thermal and painful sensibility, tactile and postural sense being unimpaired. He urges the great importance of making tests for the various forms of objective sensibility even in the very early stage of the paræsthesia.

58. The Cuti Reaction in Syphilis.

GAVINI (*Rif. Med.*, September 27th, 1913) discusses the various attempts made to diagnose syphilis by the help of a cuti-reaction, and showed how discordant are the results. He then gives his experience with Noguchi's luetin as the agent for producing a cuti-reaction. Of the 117 syphilitic cases 35 gave an intense vesico-pustular reaction, 35 a papular reaction with erythematous halo, 13 a papular erythema lasting more than seven days, and 69 were negative. Of the 55 non-luetic cases 1 gave an intense vesiculo-pustular rash, 7 a papular erythema, and 47 were negative. The single case which gave a well-marked reaction was a child admitted for lupus of the nose and elbow, who subsequently was found to give a positive Wassermann result, and was probably a syphilitic case. Amongst the syphilitic cases the cuti-reaction was least marked in the early stages of syphilis—for example, a positive result was obtained in 38 per cent. of the cases of secondary syphilis, whilst in tertiary syphilis the percentage rose to 51 per cent. In two cases of parasyphilis a doubtful reaction was obtained in one. Looking at the cases as a whole the author is clear that a specific and diagnostic reaction can be obtained after vaccination with Noguchi's luetin. The characteristic reaction consists of papules surrounded by an erythematous halo and lasting more than seven days: in cases where the reaction is intense this papular rash becomes vesicular in places. The cases where the result is weak and doubtful do not invalidate these conclusions. As will be seen from the statistics the cuti-reaction is not so certain or so constant as the Wassermann test, but may be looked upon as an efficient complementary test. Like the Wassermann, it is influenced by antispecific treatment, changing from positive to negative.

59. The Cerebro-spinal Fluid and Tremor in Children.

LO RE (*Rif. Med.*, November 29th, 1913) reports three cases of tremor in young children, with details as to state of the cerebro-spinal fluid in each case. (1) A child, 26 months; well up to 12 months; since then it suffered from chronic dyspepsia, and at the time of admission showed rhythmical movements of the right upper extremity, with very slight rigidity. Kernig and Babinski signs both absent. The tremor became general after a few days, and resembled a chronic shiver. Lumbar puncture gave a fluid with normal pressure, containing ⅓ gram albumin, 99 per cent. lymphocytes, and 1 per cent. large mononuclears. Bacterioscopic examination negative. The child recovered in a few days. (2) Child, aged 17 months; dyspeptic and rickety. On admission there was generalized tremor. Kernig and Babinski negative. Lumbar puncture, normal pressure, albumin ⅓ gram per cent., lymphocytes 91.5 per cent., large mononuclears 7.5 per cent., and polynuclear 1 per cent.; no bacteria. This was on March 9th. The tremor varied, sometimes better, sometimes worse. On April 13th the child was re-admitted, and then showed definite rigidity, and lumbar puncture showed ⅓ gram albumin, 82.30 per cent. lymphocytes, 11.5 per cent. large mononuclears, and 6.19 per cent. polynuclears. The child died of bronchopneumonia on April 23rd, and a chronic fibrous cerebro-spinal pachymeningitis was discovered, also an acute cerebral lepto-meningitis. (3) A child, aged 14 months, also suffering from chronic dyspepsia and generalized tremor. Lumbar puncture gave ⅓ gram albumin, 97.22 per cent. lymphocytes, 1.85 per cent. large mononuclears, and 0.9 per cent. polynuclears. This child recovered. The author points out that all three cases suffered from chronic dyspepsia, and that probably there was a chronic poisoning from intestinal toxins. In reply to the objection that hundreds of babies suffer from chronic indigestion and yet do not display symptoms of meningism, he assumes that the cases that do are predisposed to neurosis by inheritance or otherwise.

SURGERY.

60. The Surgical Treatment of the Lung.

IN a post-graduate lecture SAUERBRUCH gives a general survey of the development and present position of the surgery of the lung (*Munch. med. Woch.*, August 26th and September 2nd, 1913). He traces the beginning of modern surgical treatment of affections of the lung to the introduction of *x* rays, the ingenious proposals of methods and the employment of one of the two methods of operating with increased or diminished atmospheric pressure. In order to understand the technique and advantages of the latter, he gives a careful description of the various effects of so-called operative pneumothorax. At first, the method of diminished pressure was employed, in which the patient, operator, and assistant were placed in a chamber, while the head of the patient passing through an opening in the chamber and the anaesthetist remained outside. The neck was surrounded by a collar of rubber, which fitted exactly, and thus prevented the diminished pressure in the chamber from being raised from without. When the chest was opened the negative pressure (equal to about 7 mm. of mercury) sufficed to keep the lung expanded, since the pressure of the inspired air was high enough to distend it. The second method of raised pressure was effected by an oxygen apparatus which was attached to the anaesthetic mask, and raised the pressure in the respiratory passages sufficiently to allow the lungs to remain distended, even when air was freely admitted into the pleural cavities. The author gave verbal and pictorial descriptions of the forms of apparatus used by him in the Zürich clinics. Having dealt with a number of points in technique, he passed on to consider the conditions for which operative interference had been applied. Starting with injuries, he showed how lung surgery had completely altered the treatment of the more severe forms. Rupture of the lung should be treated by thoracotomy, and the prospects of recovery are good, as he showed from cases of his own. He then turned his attention to the development of haemothorax and pneumothorax in connexion with penetrating wounds of the lung. "Tension" pneumothorax, in which the air passes into the pleural cavity, but is prevented from passing out again by a valve-like opening either of the chest wall or of the lung, is always a direct indication for operation. On the whole, he found that considerable care must be exercised in the selection of cases for operation, since the majority of wounds of the lung heal without operation. He also dealt with injuries to the abdomen and chest, for which the operative treatment is best undertaken as a primary thoracotomy. Primary and secondary tumours of the lung have been treated successfully by removal of the tumour or of the lobe. The author has carried this out in one case for a primary carcinoma, but these cases are extremely rare. Abscess of the lung is another class of cases in which the surgical treatment may save life. He regards every case of chronic suppuration with fetid pus as an indication for operation. Pneumotomy should be performed in two sittings if the condition of the patient allows of this, unless adhesions have bound the lung to the chest wall. The abscess should be opened by cautery. The next class of case dealt with is bronchiectasis. One of the primary difficulties in these cases is the rigidity of the dilated bronchus, which renders it useless in the majority of cases to employ resection of ribs and similar operations. Phrenicotomy combined with thoracotomy at times suffices to produce a shrinkage of the lung and partial cure of a bronchiectasis. Another method which is at times crowned with success and which is well tolerated is ligature of the pulmonary artery. If this fails, the amputation of the affected lobe may have to be resorted to: but it should always be remembered that this operation is a dangerous one, which requires considerable care. Finally, the subject of the treatment of pulmonary tuberculosis is dealt with. Passing over the operation of the division of the first rib planned by Freund, he considered the various operations devised to collapse the lung. The operation he prefers is thoracoplasty of Brauer and Friedrich. After discussing at some length the *rationale* of this and similar operations, including artificial pneumothorax, he described some of his own cases. Of 113 patients treated by thoracoplasty, 77 were suffering from pulmonary tuberculosis, 2 died of the operation, 11 died later of tuberculosis, 17 were definitely cured, 19 markedly improved, and may include some cases of complete cure, 4 remained unaltered, and in 3 instances the condition became worse after operation. The next operation which he has applied for this affection is phrenicotomy. He has employed it in 23 cases, but has come to the conclusion that alone it rarely, if ever, leads to complete cure. It may, however, be of immeasurable benefit when combined with one of the other operations. Lastly, he spoke of the introduction of a hard paraffin plug into tuberculous cavities, according to Bär. The technique appears to be very difficult, and the selection needs to be made with great care, but the author has convinced himself that under certain circumstances this method should be recommended. A large number of details are given, but space forbids these from being dealt with in this place.

61. The Noguchi Luetin Reaction in Syphilis.

FOSTER (*Amer. Journ. of Med. Sci.*, November, 1913) considers that the Noguchi luetin test in certain cases of syphilis affords a means of diagnosis which is specific, reasonably delicate, easy of application, and harmless to the patient. The test was applied after the method recommended by Noguchi to 75 persons, 70 of whom were, or had been, infected with syphilis, while the remaining 5 were used as normal controls, 0.07 c.cm. of the luetin emulsion being injected intradermically into the left arm and the control emulsion into the right, the inoculations being very superficial, so as just to raise the epidermis. Both the luetin and control emulsions produced a circumscribed, elevated, blanched swelling about 4 mm. in diameter, which entirely disappeared in about half an hour. After twenty-four hours in positive cases more or less inflammatory reaction, as manifested by a distinct, circumscribed, indurated, bright red papule, surrounded by a hyperaemic areola, occurred at the luetin site, and in some cases a similar but less indurated reaction at the control site, but this latter gradually fades and disappears within three days. From the end of forty-eight hours up to the seventh day a marked inflammatory reaction occurs in the luetin papule, which becomes larger, more indurated and surrounded by an inflammatory areola with radiating lines of telangiectasis. Generally there is no accompanying systemic reaction, though a few cases may complain of soreness and itching. At the end of a week the reaction begins to fade with some desquamation over the inflamed area, the induration remaining for several days, to be followed by a bluish discoloration, lasting two or three weeks. The test was applied in 13 cases of secondary treated syphilis, in 5 exhibiting striking tertiary lesions, in 52 in the stage of latency or cure, and in 5 presumably free from disease. Positive reactions occurred in 77 per cent. of the cases of secondary treated syphilis, in 80 per cent. of the tertiary cases, in 88 per cent. of the latent cases; while of the 5 apparently normal controls, 1 gave a positive reaction, this being a healthy young soldier, who denied absolutely the possibility of infection, and in whom the Wassermann test was negative, but whose maternal grandmother suffered from tabes, thus raising the question as to whether a state of allergy transmitted from a luetic maternal grandmother might explain the positive reaction, since it has been shown experimentally that the state of allergy or anaphylaxis (upon which the luetin reaction depends) may be transmitted through the female from a sensitized guinea-pig to her offspring. The facts that a positive Wassermann test is indicative of metabolic substances in the serum due to a present or recent activity of the spirochaetes on the tissues, and that a positive luetin reaction indicates a state of hypersensitiveness to the specific proteins of the spirochaetes induced by a period of cessation of the introduction of these proteins prior to the injection of the luetin are borne out by the practical results in this series of cases, those reacting most intensely to the one test being negative to the other. While these cases show the value of the test in diagnosis in the tertiary and latent stages of syphilis, its greatest value appears to be as a means of prognosis, and a provocative injection of salvarsan, followed by the application of both Wassermann and luetin tests, is suggested as a rational means of determining whether treatment has been sufficiently intensive to effect a cure.

62. Cystic Breast: Tubercle and Cancer.

MADAME GOSSET AND P. MASSON (*Revue de gynéc. et de chir. abdom.*, October, 1913) publish, with drawings of sections, an elaborate report of 75 tumours of the breast, the clinical notes being given as well as the histological descriptions. All sections have been prepared after the newest approved methods. Especial care has been taken to make out the signification of coincident cystic and solid tumours. To this end 38 epitheliomas (glandular infection in 28) were examined, 10 being uncomplicated, 25 associated with cystic disease, and 3 with tubercle: also 3 specimens of pure cystic disease and 4 of cystic disease and adeno-fibroma. Gosset and Masson analyse several cases which tend to show that an infective agent, tubercle

or simple irritation from trauma, is capable of setting up those hyperplastic lesions characteristic of cystic disease. All chronic inflammations of the mammary parenchyma not due to malignant disease may end in the development of cysts. Contrary to the opinion of Reclus, cystic disease is very often followed by cancer. Gosset and Masson suspect it will invariably become malignant if not removed, and they have seldom found cancerous tumours in a breast free from cystic disease or distant hyperplastic lesions. They hold that the American method of diagnosis by frozen sections made during the operation is inconclusive and unsatisfactory.

OBSTETRICS.

63. Rupture of Uterus in Fifth Month of Pregnancy.

E. BOVIN (*Hygiea*, October, 1913) records the case of an unmarried woman, aged 24, who declared herself a primipara, but who subsequently was found to be a multipara. She stated that she menstruated last in the middle of September, 1912, that abdominal pain began on January 21st, 1913, and that it had continued at short intervals till she was admitted to hospital on the 22nd, when a slight haemorrhage was found to have stopped. On account of a temperature of 101.6° no internal examination was made, and it was thought that, as the labour pains were active, the abortion would be completed spontaneously. At first the pulse was 112, and the uterus did not quite extend upwards to the level of the umbilicus. Two hours later the uterus reached this level, and diffuse tenderness of the lower abdomen was most noticeable in the middle line. The abdomen was, however, flaccid. A few hours later an internal examination was made. The external os was far back in the pelvis and admitted only one finger. No abnormality was discovered. An hour later the patient suddenly became pale and pulseless, and died in a few minutes. The necropsy showed much fluid blood in the abdominal cavity. A large haematoma in front of the left side of the uterus had stripped up the serous lining, which had given way at one point, whence the blood had escaped into the abdominal cavity. The haematoma communicated with the interior of the uterus by a longitudinal tear extending from a point just above the external os to the upper portion of the body of the uterus. The cervix showed no other lesion, and the vaginal fornices were uninjured. A 15 cm. long unmacerated fetus had escaped from the uterus completely, and lay in the cavity formed by the haematoma. The placenta was still attached to the right upper portion of the uterus, which had not been involved in the rupture. Although the position of the tear in the uterus coincided with that usually found after spontaneous rupture at term, the author is sceptical as to its spontaneity, for there were no signs of erosions or scars to account for it. It is more probable that the cervix had been wounded and infected during an attempt to induce abortion, and that when labour pains began the wound instead of the os had been gradually enlarged till it transmitted the fetus into the haematoma. The circumstantial evidence in support of this hypothesis was full and convincing.

GYNAECOLOGY.

64. Non-Ovarian Pelvic Dermoids.

VAUTRIN (*Ann. de gynéc. et d'obstét.*, November, 1913) dwells on the dangerous complications which are frequent when dermoids, independent of the ovary, develop in the female pelvis. They are found in the folds of the broad ligaments, in Douglas's pouch, in the parasacral regions, and in the subperitoneal space above the levator ani. But there remains the most important variety, which is that type of dermoid found in the vesico-uterine space in the median line. They push down the uterus, press on the bladder, and rise till the peritoneum lies behind, and the abdominal parietes in front of their outer limits. They contain the same dermoid elements found in their homologues in the ovary, and though they do not open up the layers of the broad ligaments, their contents often grow through their walls and diffuse themselves over neighbouring tissues. These non-ovarian dermoids develop in women between 20 and 50 years of age. When the bladder is not involved these tumours may be enucleated with little difficulty, as in 2 cases related by Vautrin in full. But troublesome and dangerous complications necessarily follow the invasion of the bladder by dermoid elements. In one instance Vautrin removed a retrovesical dermoid after hairs had been passed during micturition. The tumour was removed, yet dysuria continued, and Vautrin made a vesico-vaginal incision, and extracted a dermoid structure, fig-shaped, 2 inches in long diameter, loose, and loaded with phosphates: convalescence was rapid. The patient had recently, before the operation, recovered from typhoid fever, and these dermoids, Vautrin notes in speaking of the case, are very susceptible to general infection. He operated in one instance where sepsis had followed abortion. The tumour suppurated and opened into the bladder, but its removal was effected and the vesical wound successfully sutured. Neglected cases, where dermoid elements fill the bladder, involve not only continual torment but also ultimate infection of the upper part of the urinary tract. Fortunately, thanks to bolder operating, these advanced cases are now seldom met with.

THERAPEUTICS.

65. The Sedative Action of Lumbar Puncture.

E. SZEDLAK (*Pester Med.-Chir. Presse*, November 2nd, 1913) has performed lumbar puncture in about 250 cases for diagnostic purposes, and has noticed that in most of these restlessness and excitement diminished or even disappeared. This led him to practise lumbar puncture as a purely therapeutic measure among the most restless inmates of a hospital for nervous diseases. Lumbar puncture is known to relieve the headache, somnolence, vomiting, and other disturbances following epidemic cerebro-spinal meningitis, tuberculous meningitis, and hydrocephalus, in which the intraspinal pressure is raised. It may be that in some cases this pressure is also raised in certain forms of insanity, and that the stimulus to which the cortex is subjected by this pressure can be removed by the withdrawal of some cerebro-spinal fluid. Again, if the mental symptoms be due to an accumulation of toxins in the cerebro-spinal fluid, a reduction of its volume should be beneficial. The author does not include in his report those cases in which a general anaesthetic was given during lumbar puncture, as the resulting beneficial effects may partly be traced to the anaesthetic. In most cases he dispensed with anaesthetics, and when the patients were very restless he secured the pelvis with a cloth drawn downwards and backwards by two attendants, while a third attendant held the patient's head in his armpit so that the body of the sitting patient was carried forward as far as possible. Thus secured, even the most restless patient is not likely to break the needle. The intraspinal pressure was as high as 300 to 500 mm. or more in the most violent patients, and the liquor squirted forcibly out of the needle when it was opened. Not more than 10 to 15 c.cm. were withdrawn at one puncture, lest the sudden reduction of pressure should be harmful. In some cases the immediate result was striking, the restlessness disappearing completely. Sometimes this effect lasted only a few days, and a repetition of the procedure became necessary. No good effect was observed in a case of encephalopathic psychosis or one of alcoholic psychosis. In the first case the patient died after six days' continuous and severe psycho-motor disturbance. The necropsy showed a large haemorrhagic infarct of the right parietal lobe. No improvement was effected in a case of paranoia, but in most cases of restlessness in dementia praecox, psychosis epileptica and maniaco-depressiva, dementia paralytica progressiva and melancholia excellent results were obtained. The author gives details of 7 cases in which lumbar-puncture was very beneficial.

66. Prophylactic Typhoid Vaccination.

LAMB (*Archives of Internal Med.*, November 15th, 1913) records the results of experiences with prophylactic typhoid vaccination, and its effects upon menstruation. All observers agree that, in spite of precautions, nurses, doctors, and hospital attendants run a greater risk of contracting the disease than the ordinary citizen, the source of infection being either the patient or articles which have come in contact with typhoid cases. Vaccine should not be used after it is three months old, and the usual dosage recommended is that adopted in the United States Army, of three inoculations at ten-day intervals, the first of 500 million, and the second and third of one billion each, such method conferring immunity for at least three years. As some nurses under observation reacted rather markedly, one class received four doses of 100, 200, 400, and 600 million at five-day intervals; but as this involves a lengthened time, and (among women) delays caused by

menstrual periods, the more recent routine adopted was three doses at from seven to ten-day intervals, the first of 300 million, the second of 700 million, and the third of one billion. Women are more apt to have reactions than men. For those in whom an abnormal reaction might be predicted from such causes as lowered resistance, chronic disease, etc., four doses at seven-day intervals commencing with 200 million are advised, but in all others the three graduated doses are preferable. Patients who have had an attack of typhoid should not be inoculated, as the disease confers life immunity, and inoculation is apt to be followed by bad reactions. Of 203 persons inoculated among doctors, students, nurses, and attendants, there were no cases of typhoid and no untoward effects from the vaccine. Of 100 records in which the effects of vaccination upon menstruation were studied fourteen showed very distinct changes, probably due to the effect of the vaccine itself; 53 per cent. showed some type of menstrual disturbance, while 47 per cent. were unaffected. From the fourteen definite instances cited a very striking relationship is seen to exist between the vaccine and menstrual disturbances, which is of interest, in view of the similar disturbances seen in typhoid fever. These changes are of only temporary significance, and have no lasting effects, as in none was there any disturbance after six months had elapsed. During pregnancy vaccination should be avoided unless there was some special indication for its performance. In order to reduce menstrual disturbances from vaccination to a minimum the first inoculation should come within a few days after a period, and then there will be sufficient time for the second and third injections at seven-day intervals before the succeeding period. Since instances of aggravation of existing chronic conditions are recorded in association with prophylactic typhoid vaccination the relation of the vaccine to the development of various diseases was noted. In thirteen of the patients affections of the respiratory tract followed, and, although many were probably coincidences, the impression remains that in some cases resistance is sufficiently lowered to favour the chances of such infections. Appendicitis was noted in five instances, though in only one could the vaccine be suspected as an accessory cause. In one patient with extensive scabies the condition almost completely disappeared during the course of inoculations, to reappear after their cessation. With regard to three patients who later developed tuberculosis, in none was the relation between the vaccine and the disease sufficiently close to be suggestive.

67. Noviform, a Substitute for Iodoform.

OF all the substituted products for iodoform, those which are built up on a bismuth basis have proved themselves most satisfactory. The requirements of an antiseptic to be used in the place of iodoform should be relative non-toxicity, the absence of the unpleasant penetrating odour, and a non-irritating action; it should possess a bactericidal action, should be deodorizing, and have the power of stimulating granulations, and of drying up weeping surfaces without the formation of scabs. Lastly, it should be stable to light and readily sterilized. M. KASBOURER (*Muench. med. Woch.*, November 4th, 1913) considers that these qualities are combined in the case of noviform, which is the tetra-bromide of benzo-catechin bismuth. He has used this substance in the form of powder, suppositories, 10 per cent. gauze, and 10 per cent. olive oil suspension. These preparations acted well in aseptic and infected wounds. In carbuncles, abscesses, phlegmons, fistulae, etc., plugging with noviform gauze led to surprisingly rapid healing. Sloughing wounds soon cleaned up under the use of noviform, and healthy granulation tissue formed, while the discharge was quickly reduced in amount. He experienced very good results in ulcers of the leg. After a hot bath, the ulcer was covered with a few layers of noviform gauze, and then covered by Unna's zinc "glue." At first this dressing was changed as soon as the secretion soaked through. Later it was changed once every six or eight days. The pain and itching soon disappeared, and the healing progressed so rapidly that after from six to twelve changes of the dressings, the ulcer was completely healed. He further remarks that noviform acted well in burns. He has not observed any toxic effects of the compound.

68. Palladium Hydrate (Leptynol) in Obesity.

W. GORN has tried the effect of a preparation of colloidal palladium hydrate called leptynol for the reduction of excessive fat deposit in cases of euphoria, and is pleased with the results obtained (*Muench. med. Woch.*, September 2nd, 1913). He states that in no case were any local or general untoward symptoms noted, which could be referred to the preparation. The substance must be injected 2 or 3 cm. deep into the fatty tissue, since it always produces infiltrative foci when injected subcutaneously. He has come to the conclusion that local irritation is always the result of faulty technique in the injection. During the course of injections a special diet must be strictly followed. This consists in giving 2 litres of milk in five portions daily. The patients do not, he states, complain of hunger as long as they receive the injections, and thirst can readily be combated by giving ice to suck. He has succeeded in reducing the weight of various patients by 8, 7.6, and 7.4 lb. per week after injecting 80 or 100 mg. of leptynol. Other patients were reduced to a smaller extent. The temperature is rarely and only to a slight extent raised. Of importance is the beneficial action on the heart as a result of the reduction of fat. While the author is not yet in a position to state what effect this treatment has on the general mental processes in akinetic conditions in psychasthenia and similar mental affections, he is inclined to ascribe the improvement noted to a regulation of the oxidation processes which appear to be disturbed in these affections. At all events, it seems to him that the psychiatric physician is able to obtain marked improvement in a certain class of case which he is able from experience to select without difficulty.

PATHOLOGY.

69. Spirochaetes in the Brains of General Paralytics.

NOGUCHI reported a short time ago that spirochaetes could be shown to be present in the cortex of persons suffering from general paralysis of the insane. Hoffmann appears to have been one of the first to attempt to confirm this by injecting the material into the testes of rabbits, while a number of other observers confirmed Noguchi's statement that the organisms could be demonstrated by the dark field illumination microscope. HANS BERGER considered it of such high importance to clinical medicine that he has attempted to control the find in connexion with his own patients (*Muench. med. Woch.*, September 2nd, 1913). He selected 20 cases and obtained small cylinders of brain, gained from the frontal lobe by means of Pfeiffer's trocar and cannula. The material was immediately placed in warm sterile saline solution, cut up into very small pieces with fine, sterile scissors, ground up in a mortar, and the suspension injected into the testis of a healthy rabbit. The puncture did not appear to have done the patients any harm, save in one case, in which a severe haemorrhage took place and led to death after five days. It was discovered at a later date that the patient was known to be a haemophilic, and since he was a very advanced case, rapidly nearing the end. Berger comforts himself that this unfortunate accident was not so very deplorable. In one case the puncture disclosed an internal hydrocephalus, and effected an undoubted, albeit temporary, improvement. In the rest of the cases no influence of the puncture was noticed. In regard to the results of the implantation of the cerebral material into the rabbit's testis, no pathological changes were produced in 17 cases, nor could any spirochaetes be found in the organ after four months, which is stated to be the usual incubation period for rabbits for experimental syphilis. The cases were advanced and typical ones of general paralysis. In 4 of them death has since taken place and the diagnosis was confirmed. A positive result was obtained in the remaining 3 cases. In the first, no spirochaetes were found in the testis, but an infiltration formed in the epididymis, and in this infiltration spirochaetes were discovered. The case was typical. In the second, two whitish nodules were found in the epididymis. Microscopically an area of small cell infiltration was seen around the nodules and some areas of necrosis. Typical spirochaetes were found in the latter by means of Levaditi's staining. The third case showed sparse spirochaetes in some nodules situated under the tunica vaginalis. While the author was unable to discern any essential clinical differences between the 17 cases in which no spirochaetes were found and the 3 in which they were found, he throws up the question whether the finding of spirochaetes should not be regarded as an indication for energetic antisyphilitic treatment. This treatment, he considers, should be to a large extent local, and in view of the absolute hopelessness of the cases, should be driven to the utmost limit, even within the danger zone.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

70. The Etiology of Rheumatism.

A. MENZER, basing his observations on the effect of tuberculin and streptococcic vaccine treatment in cases of acute arthritic rheumatism, and also on theoretical grounds, comes to the following conclusions (*Berl. klin. Woch.*, December 1st, 1913): (1) The actual cause of acute, subacute, and chronic arthritic rheumatism is an infection of the upper air passages. (2) These infections are at times an acute primary streptococcic tonsillitis, but not infrequently they are exacerbations of a long-standing latent infection. (3) Such infections may be localized in the nose and nasal cavities, in the auditory organs, in the tonsils, in the bronchial glands, and elsewhere. They lead to a weakening of the organism, manifested by anaemia, headaches, tendency to sweating, palpitation of the heart, recurrent attacks of sore throat, and catarrhs of the upper air passages. (4) The usual micro-organisms associated with catarrhal affections — streptococci, pneumococci, etc.—are found in these foci, but not infrequently tubercle bacilli are also present. (5) In association with some deleterious influences, a general infection may be started from these latent foci, leading to metastatic involvement of joints, heart, serous cavities, etc. (6) In strong resistant persons, whose organisms respond with a powerful reaction, a sharp acute rheumatism develops, but in weakly subjects with anaemic tendencies, a subacute attack is more likely to follow, which tends to merge into a chronic condition. (7) It is especially in these last named cases that the ordinary tonsillitis bacteria are associated with tubercle bacilli, and in such cases there is a chronic inflammatory joint affection. Latent tuberculosis appears also to play a part in a considerable number of cases of acute rheumatism. (8) Every treatment of the various forms of joint rheumatism must be based on the assumption that the joint and other symptoms are largely only the manifestations of a centrally placed latent infection, and that it is not sufficient to remove the peripheral joint symptoms—the adequate treatment of the chronic latent infection is absolutely necessary. (9) For these reasons, treatment with salicylates and similar preparations should be avoided. Menzer concludes by recommending treatment which he considers will assist the natural immunization processes—such as baths, warm applications, vaccines, tuberculin, and the like, and claims that in this manner permanent cures will be obtained, even if this process is a somewhat slow one.

71. Dorsal Percussion in Tracheo-bronchial Glands.

DA COSTA (*Amer. Journ. of Med. Sci.*, November, 1913) studied the practical diagnostic value of vertebral percussion in enlargements of the tracheo-bronchial glands frequently following pertussis, measles, tonsillitis, and tuberculosis, and the differences between the percussion findings in simple adenopathies and the more extensive neoplastic tumours of the mediastinum. In the healthy adult gentle finger percussion of the thoracic vertebral processes yields an upper zone of impaired resonance with appreciable tactile resistance over the first two or three spines, below which there is uniform osteal resonance over the remainder. Of lesions of the mediastinum, lungs, and pleura accounting for vertebral physical signs, tracheo-bronchial adenopathies are by far the most frequent and important, frequently having a direct causal relationship with apparently parodoxical findings, since in order to afford any tangible signs the mass must either encroach backward upon the vertebral column or act as an intervening conducting medium, two pathologic conditions producing diametrically opposite objective symptoms. The histologic structure of such a mass must be taken into account, since a dense compact structure under moderate tension proves a better conductor than one composed of boggy relaxed tissue, a fibroma being more likely to transmit tracheal hyper-resonance backward than to cause merely dulling of the vertebrae, while a vascular sarcoma will impair rather than exaggerate the osteal percussion resonance. Enlarged glands, though structurally ideal as sound conductors, only exceptionally form the necessary bridge from air passage to spine, and consequently they more often dull than resonate the bone. The report is based upon 18 case-histories selected from a series of 38 mediastinal cases affording definite vertebral percussion findings, from which it is concluded that percussion of the thoracic vertebrae, especially above the level of the inferior scapular angles, affords tonal changes of real clinical value in simple enlargement of the tracheo-bronchial lymphatic glands, but they require careful interpretation, since hypo-resonance with maximum tactile resistance and hyper-resonance with minimum tactile resistance may have precisely the same significance in uncomplicated adenopathies, according to their size and nature. In glandular enlargements associated with pleuro-pulmonary lesions, emphysema and pleural adhesions, as additional factors of hyper-resonance and hypo-resonance respectively, have to be taken into account. Ordinary mediate finger percussion is preferable to instrumental, since the latter gives no better tonal results and precludes any judgement of tactile resistance.

72. Fatal Leucopenia following X-Ray Treatment.

CUMBERBATCH (*Arch. Röntgen Ray*, No. 159, 1913) describes a case of fatal leucopenia which followed *x*-ray treatment for spleno-medullary leukaemia. When the patient was admitted to hospital the blood contained 691,000 leucocytes per c.mm. The rays were directed on the spleen and on the red bone-marrow, no portion of the latter receiving a dose higher than that represented by the Sabouraud tint B. each month. Unfiltered rays were used for the bones but filtered rays for the spleen. *X*-ray treatment was continued over a period of 111 days. At the end of that time the total number of leucocytes had fallen to 4,000 per c.mm. The spleen had retracted considerably, and could just be felt under the left costal margin. The improvement continued after the suspension of *x*-ray treatment, but forty-nine days later, as the spleen had considerably enlarged, though the patient had retained her good health, another pastille dose of *x* rays was given to the spleen, and three weeks afterwards the patient returned, obviously very ill, and with inflamed tonsils and pharynx. An examination of the blood showed a profound anaemia of the pernicious type, while the number of leucocytes had fallen to 850 per c.mm. (238 of these were myelocytes). Eleven days later the patient died. The number to which the leucocytes fell before treatment was suspended, and also the rate of their disappearance, were virtually paralleled in successful cases. It is noted, however, that in the fatal case the polymorphonuclear cells, as compared with the myelocytes, disappeared more rapidly than in a case otherwise similar. This may have been due to the heavier dosage in the fatal case—namely, 1 pastille dose each 4.73 days, as compared with 1 pastille dose in 9.5 days in the other. The author suggests that the terminal leucopenia was possibly the result of the heavier dosage causing the disappearance of the normal leucocytes more rapidly than the myelocytes.

73. Oedema of Left Arm from Pericarditis.

ZANNINI (*Gazz. degli Osped.*, January 4th, 1914) reports the case of a young girl, aged 16, admitted with pericardial effusion due to scarlet fever. There was no albuminuria. The evidence of pericardial effusion was clear; the cardiac dullness was characteristically increased, and there was well-marked friction sounds at the base. In spite of the increase in the amount of pericardial effusion as judged by the precordial bulging, the area of dullness, and the obliteration of the apex beat, the friction sound did not disappear, but if anything became louder and more superficial. About the end of the first week the oedema, which is more or less constant over the precordial area in pericarditis, spread upwards towards and above the clavicle, and presently affected the left arm, which became partially cyanosed and swelled to double its size. Warm fomentations and raising the arm reduced the oedema in a few days, and the girl got quite well ultimately. The persistence of the pericardial frictions all through the illness, in spite of the effusions, is explained by attributing it to a pleuro-pericardial—that is, exocardial—origin. The unusual oedema was probably due to the drag by the anterior superior ligament of the pericardium (due to the increased weight of the pericardial sac) in the deeper fascia of the neck, which in its turn compressed the left brachio-cephalic vein, and caused some obstructive flexion of the subclavian.

SURGERY.

74. Operations on the Oesophagus.

SINCE the introduction of methods of opening the thorax under negative pressure, or with positive pressure acting through the respiratory passages, what was before practically impossible has become accomplished. In animals used for experiment various operations on the oesophagus have been performed by Sauerbruch, Riegel, Lapeyre, and others with more or less complete success. In man the plan of operation appears to depend on the situation of the lesion. E. UNGER (*Berl. klin. Woch.*, November 10th, 1913) divides tumours into those situated between the diaphragmatic portion of the oesophagus and the cardiac orifice, those situated above the diaphragm, and those situated in the upper half of the thorax. The sound, Roentgen rays, and oesophagoscopy may give adequate information regarding the situation of the upper limit of the growth, but often fail to indicate the lower limits or to give information regarding the implication of lymphatic glands or the presence of adhesions. In regard to the first division, Sauerbruch has succeeded in removing a carcinoma through the thorax and in suturing up the stomach and oesophagus by means of a button; the patient, however, died of pneumonia. Good union had been obtained. Zaaijer resected the sixth to twelfth ribs in the first operation; four weeks later he opened the abdomen and exposed the diaphragm and pleura by a large curved incision, separated the stomach from the tumour, freed the oesophagus upwards for a considerable distance, and removed the tumour. The free end of the oesophagus was brought to the surface through the pleura, and from this situation was connected with a fistula in the stomach. The patient was able to take semi-fluid food three weeks after the operation. Ach also succeeded in removing a carcinomatous tumour from this situation by freeing the oesophagus digitally through the abdomen and drawing its upper end, after the tumour had been removed, through a wound in the neck. The patient died sixteen days after the operation as a result of the failure of the fistula of the stomach to work. Unger states that it appears to him advisable, in cases of tumour situated immediately above the diaphragm, to connect the stomach and oesophagus through the diaphragm, provided the suture can be carried out without excessive tension. Turning to the second division, he relates a case of his own. The anaesthetic was administered by Meltzer-Auer's insufflation method. The chest was opened by a considerable resection of the eighth rib. The tumour was found immediately in front of the aorta, behind the left bronchus, and extended for some 5 cm. upwards. Two small glands were found to be involved. After applying a 5 per cent. solution of cocaine, both vagi were divided, without any change in the heart's beat. A clamp was applied below the tumour, and after the oesophagus was sutured close to the clamp it was divided, a closed stump of the lower end being left. The stump was suitably treated and passed through the opening in the diaphragm. After the tumour had been removed an attempt was made to draw the oesophagus up by means of a sound passed through the mouth. This failed, and it was therefore sought in the neck and drawn through the wound. The opening of the oesophagus in the neck and the fistula in the stomach were then connected by means of a tube, through which food was swallowed. Death took place on the fifth day from haemorrhage into the left pleura. There was no infection. The third division was illustrated by a case under the care of Torek, who anaesthetized his patient by means of insufflation. After resection of several ribs, the oesophagus was exposed through the pleura and the upper end together with the tumour, which was situated behind the arch of the aorta, was drawn upwards through a neck wound. The patient recovered. This case is held to prove that it is possible to remove a tumour from the most inaccessible site in the thorax—namely, behind the trachea and aorta. In discussing the subject, the author states that he does not consider it possible to operate without opening the pleural cavity, save in cases of tumours of the lower end of the oesophagus, which can be reached through the diaphragm. This is, however, of small importance provided that some form of apparatus for altering the pressure be employed. He prefers the insufflation method, which A. LAUTENSCLÄGER (*Berl. klin. Woch.*, November 10th, 1913) describes as follows: The patient is examined laryngoscopically. The glottis is touched with a small quantity of a 20 per cent. solution of cocaine. Deep anaesthesia is then obtained. The head is then allowed to hang down and the glottis is brought into sight by means of a tubular spatula with a good illumination. The spatula is held firmly in one hand and the insufflation tube, which must be properly selected according to the size of the glottis, is guided by the other hand deep into the trachea. As soon as a resistance is felt the tube is withdrawn for about 1 cm. If the resistance is not felt it will suffice to see on the scale that the point is between 25 and 27 cm. from the level of the upper teeth in males and between 23 and 25 cm. in females. The spatula is then withdrawn and the anaesthetic apparatus attached to the tube. The positive pressure employed varies between 10 and 20 mm. of mercury. The lungs remain still during the anaesthesia and gradually expand; it is therefore necessary to interrupt the flow of air every minute once or twice and to allow the patient to empty the lungs once or twice spontaneously. In regard to the division of the vagus nerves, Unger states that if the division be carried out low in the chest, and especially if they be cocainized, no ill effects follow.

75. The Significance of Anaemia as an Operative Risk.

IN a paper read before the American Gynaecological Society at Washington, in May, 1913, and published in *Surgery, Gynaecology, and Obstetrics*, September, 1913, BYFORD discusses the significance of anaemia with reference to the risk of operation. For this purpose he divides anaemia into two types—namely, anaemia with compensation and anaemia without compensation. In the former the patient's functions have so far compensated for the anaemia that she may be treated up to a certain point as a normal individual, in spite of the fact that the condition is not always relieved by the exhibition of tonics and dieting. In other words, in these cases, the anaemic habit has been acquired. Furthermore, it takes time for a general readjustment of function that will be compatible with the different quality of blood. The development of this type of anaemia is gradual. The patient is seldom emaciated, and the blood pressure is usually about normal or slightly raised. The red cell count is seldom much below 4 million. Analysis of the urine as a rule shows a slightly diminished excretion of urea, together with a moderate amount of indican or oxalate crystals. In the second group of cases—namely, anaemia without compensation—the adjustment of the bodily functions has not taken place sufficiently to enable the patient to perform the ordinary duties of an active life. It occurs in association with chronic sepsis, faulty metabolism, drug habits, excessive childbearing, and mental distress. The patients are usually emaciated, with a rapid pulse, low blood pressure, and subnormal temperature. The urine is frequently concentrated, and contains an excess of phosphates of oxalates, whilst the excretion of urea may be less than the normal average. Byford observes that these patients are using up energy faster than they create it, and therefore they require more or less extended preparatory treatment to render them good operative risks. On the other hand, those patients who have been anaemic long enough to acquire an anaemic habit and who are leading a physically active life without great discomfort, and are not markedly emaciated, make much better operative risks than the degree of anaemia would seem to indicate. The author concludes that surgical interference should not be undertaken except in an emergency upon an anaemic patient until a careful investigation has been completed into the case-history, symptoms, and functions of the various organs. Time occupied in conducting such an investigation, whether it takes an hour, a week, or a month, is time well spent, and will help to reduce the mortality associated with cases of anaemia when operation is undertaken without previous forethought.

76. Suppuration of Urachus.

R. V. SMITH (*Journ. Oklahoma State Med. Assoc.*, November, 1911; *Monatsschr. f. Geb. u. Gyn.*, March, 1913) found a patulous urachus in 3 patients on whom he operated. Two of the patients were girls suffering from acute appendicitis. The third was a man, aged 34, subject from childhood to pains around the umbilicus, at the site of which R. V. Smith found a tumour like a strawberry. An area of induration spread outwards from the tumour for about 2 in. on either side, involving the recti, and downwards to the pubes. On pressure, a great quantity of fetid pus escaped from the umbilicus. Smith excised the diseased parts very freely, with a great part of both recti and the adjacent parietal peritoneum. A collection of greasy matter, of the size of a pigeon's egg, lay 2 in. below the umbilicus. The induration extended down the pedicle of the lower growth, which consisted of an hypertrophied urachus, 1 in. broad and $\frac{3}{8}$ in. thick. The lower

tumour, which contained grease, was made up of fibrous tissue, probably the sheath of the urachus, whilst, though there had been free suppuration, the strawberry-like growth appeared to be, not a mass of granulations, but a malignant papilloma.

OBSTETRICS.

77. Serum Diagnosis of Pregnancy.

C. FRAENKEL considers that the method of diagnosing pregnancy by a serological reaction first worked out by Rosenthal yields just as trustworthy results as those obtained by Abderhalden's optic and dialyzing methods (*Berl. klin. Woch.*, December 8th, 1913). The Rosenthal reaction is based on the inhibition of tryptic digestion by the serum of certain persons. Brieger and Trebing attempted to diagnose cancer by measuring the inhibitory power of the serum of cancerous patients on tryptic digestion some five years ago. Later it was shown that the serum of persons suffering from diabetes, tuberculosis, and other diseases also inhibited this action. The cancer serum yielded in the hands of Brieger and Trebing close on 92 per cent. of reactions, while the serum of normal persons gave a reaction in about 24 per cent. Rosenthal came to the conclusion that the essence of the inhibition depended on the concentration of dissociation products of albumin. An increase of this concentration would be capable of arresting the progress of proteolytic action, in accordance to the law of reversibility of a reaction. He refused to recognize any evidence of the presence of an antiferment in the inhibition. In the condition of starvation the titre sinks markedly in rabbits, while it rises even more so in overfeeding. The rise in the titre in cancer, Graves's disease, and nephritis was in his opinion to be explained by the assumption of an increase of the destructive process of proteins in the organism. Since the dissociation of proteins has been shown to exist from the early stages of pregnancy, he concluded that this method might be of value in the diagnosis of that condition. A negative reaction would exclude on theoretical grounds the existence of pregnancy. A positive reaction, on the other hand, would justify its diagnosis, provided that such wasting diseases as cancer, nephritis, and exophthalmic goitre could be excluded. Fraenkel has taken the trouble to master the technique of the reaction under the personal direction of Rosenthal, and has applied it to a considerable series of persons. These he divides into three groups. First there are those in whom a pregnancy was ascertainable. Complete digestion of 2 c.cm. of the 0.2 per cent. casein solution is effected by 0.4 c.cm. of a 0.1 per cent. solution of trypsin. The addition of a standard quantity of the test serum 0.01 c.cm. diluted with 0.49 c.cm. of a saline fluid, in the case of the serum of the pregnant woman, rendered it necessary for 1.2 c.cm. of the trypsin solution to be added to obtain complete digestion. In a few cases 1.0 and 1.1 c.cm. sufficed. The second group included cases in which pregnancy could not be diagnosed with certainty. In these cases, the author tabulates those serums which necessitated the addition of 0.9 c.cm. or more of the trypsin solution as positive inhibition, while 0.8 c.cm. or less indicated a negative reaction. In 6 cases a negative reaction led to a diagnosis of climacteric or amenorrhoea, and this proved subsequently to be correct. In 4 cases a positive reaction led to a diagnosis of pregnancy, which was found to be correct in three and mistaken in the fourth case. In the third group the cases are given in which pregnancy could be excluded by other diagnostic means. Out of 21 cases, a positive reaction was met with five times; in one of these there was a carcinoma, while three others were convalescing after appendicectomy. The author, therefore, agrees with Rosenthal that the reaction can be relied upon when a negative result is obtained, and also when a positive result is obtained, provided that carcinoma and other wasting diseases can be excluded.

GYNAECOLOGY.

78. Cyclical X-Ray Applications in the Treatment of Uterine Fibromyoma.

RECENTLY Bordier of Lyons established a system of treating interstitial uterine fibromyomata accompanied by haemorrhage by means of *x*-ray applications given in cycles. Well-filtered doses of hard *x* rays are applied in three sittings to the uterus itself, in three more to the appendages on the right, and in a further three to the appendages on the left. These nine sittings, which are given on consecutive days if possible, constitute one cycle, and an interval of three weeks elapses before a second cycle is undertaken. This method has been adopted in some cases at the Royal Devon and Exeter Hospital, and DELPRATT HARRIS (*Arch. Röntgen Ray*, January, 1914) states that all the patients felt much better, and the appearances bore out the subjective feelings. In one case the improvement was so marked that the patient was scarcely recognizable as the person who had come up for treatment at first. He employs for the first cycle a single filter of 0.5 mm. thickness of aluminium, and for the succeeding cycles two such filters (in future he will use three). The Sabouraud distance from the skin is taken, and the dose is 1½ Sabouraud B. Four cases are recorded, none of the patients being under 39 years of age. Each case was of great severity as regards blanching and exsanguination. In two of them, each after five cycles, a large fibromyoma was diminished to a greater or smaller extent, though not dispersed, and the haemorrhage controlled; in the third and fourth cases, which came up for menorrhagia, the menopause appeared to be established at the end of about three cycles. The author utters a warning against the use of the cycle method as a means of diagnosis to see whether the haemorrhage will cease, and adds that this form of treatment produces, at all events temporarily, sterilization of the ovaries.

THERAPEUTICS.

79. Beneficial Action of Erysipelas on Nephritis.

GLASER (*Berl. klin. Woch.*, December 1st, 1913) records the case of a lad, aged 12, who had contracted measles and varicella at the age of 2 and scarlatina at the age of 6. At the age of 10, when there was no albuminuria, he was operated on for a perityphlitic abscess. Two years later he suffered from headache and pallor, and his face, legs, and arms became swollen. After vomiting had set in he was admitted to hospital in February, 1911. Here his temperature was 98.6°, his pulse 112, and his respirations 20. The patellar and pupil reflexes were present, and the patient was conscious. The liver extended a little beyond the costal margin, and was somewhat tender. The urine contained 1 per cent. albumin, numerous granular casts, red cells, and a few leucocytes. After the patient had been treated in hospital fifty-eight days the condition was much worse, ascites and hydrothorax had developed, the oedema had increased, and the albumin in the urine had risen to 30 per cent. At this stage erysipelas appeared on the scrotum and spread to the thighs and trunk. In spite of high fever the albumin in the urine fell after six days to 1 per cent., and after twelve more days the albuminuria had completely disappeared. Although the fever continued seventeen days more, the urine remained free from albumin and sediment. The oedema, ascites, and hydrothorax disappeared, the patient losing 33 lb. in a short time. During the following two years repeated examinations showed that the recovery was maintained. This case is not unique, for Langballe has recorded the case of a woman, aged 22, who suffered from chronic nephritis. After an attack of erysipelas, involving the trunk and thighs, the urine was found free from albumin and casts. Nyrop has recorded the case of a sergeant, aged 25, whose chronic nephritis was accompanied by great oedema of the legs. Erysipelas of the thighs was followed by a reduction of the albuminuria from 48 to 6 per cent. The nephritis in this case must be regarded as improved, not cured. Eichhorst has observed two cases of chronic inflammation of the kidneys in which, from a clinical standpoint, complete recovery followed an attack of scarlatina. He has therefore suggested that antistreptococcal serum should be prescribed in nephritis, as both erysipelas and scarlatina are probably streptococcal infections of the skin. While admitting that this view is plausible, the author considers that the beneficial action of erysipelas on nephritis may also possibly be due to alteration in the circulation of the kidneys caused by hyperaemia of the skin.

80. Scarlatina Treated with the Serum of Convalescents.

IN 1912 Reiss and Jungmann published their observations on the treatment of scarlatina with the serum of convalescents. Their conclusions were unconvincing and elicited much criticism. C. ROWE (*Med. Klin.*, November 30th, 1913) has repeated their experiments, using the serum of patients convalescent from scarlatina, between the twenty-first and the twenty-eighth day of the disease.

Only otherwise healthy persons, in whom Wassermann's reaction was negative, were thus utilized. From 100 to 200 c.cm. of blood were withdrawn and stored in tall glass cylinders for twenty-four hours at room temperature, for the serum to separate out. This was now treated with a 5 per cent. solution of carbolic acid, one drop of which was added to every 10 c.cm. of serum. This was kept on ice until wanted, but was never more than three weeks old before use. The technique of the injections was sometimes that adopted for salvarsan, small quantities of saline solution being injected before and after the serum; sometimes the serum was injected from a "Record" syringe in quantities of 20 c.cm. The author gives records and temperature charts of 5 cases thus treated. In every case the temperature was over 103° F. From 20 to 90 c.cm. of serum were injected. The temperature charts invariably showed a fall by crisis within a few hours of the injection. To compare the action of the serum of convalescents with that of healthy persons who had never contracted scarlatina, 5 cases of scarlatina in which the temperature was 103° F. or more were treated with normal serum. The results were similar to those of the first series of cases. In both the fever and the general symptoms showed rapid improvement, the temperature usually falling practically to normal after a few hours. The rate of the pulse fell with the temperature, and in a few hours the patient would fall fast asleep. In twenty-four hours the rash would be less, and two days after the injection it would usually have disappeared. The sore throat and the condition of the tongue usually persisted for some days after an injection. Desquamation either failed to occur or was less marked than usual. It was found that doses of 40 to 65 c.cm. of serum were sufficient, and that, if necessary, a second dose of 20 to 40 c.cm. could be given next day. Doses of 70 to 100 c.cm. are apt to cause rigors. The treatment is not suitable when high fever has lasted for over five days and when scarlatinal sepsis is present. It is also contraindicated when severe inflammation of the throat is accompanied by necrosis, extensive glandular swelling in the neck, and purulent rhinitis.

81. Abortive Treatment of Syphilis with Salvarsan and Mercury.

MÜLLERN-ASPEGREN (*Dermat. Zeitschr.*, November, 1913) says that syphilis can be aborted by early treatment with salvarsan and mercury. The minimum time period over which no relapse either to the blood test or clinically was observed was fixed by the author as twelve months. The author's method was to give two intravenous salvarsan injections and then ten intramuscular mercurial, of which the first five were in the form of mercury salicylate and the others as mercurial oil suspensions. Thirty-four of his cases only which attended regularly for observation purposes are reported on: 7 of these 34 cases relapsed at the fourth, fifth, sixth, seventh, eighth, tenth, and eighteenth months, and 2 more contracted fresh infections. There were consequently 25 downright cures at the time of writing, which are respectively tabulated as having shown no clinical or blood relapses as follows: 1 case for twenty-nine months, 2 for twenty-six, 2 for twenty-five, 1 for twenty-three, 2 for twenty-one, 5 for twenty, 3 for eighteen, 3 for seventeen, 1 for sixteen, 1 for fifteen, 2 for thirteen, and 2 for twelve months after the commencement of treatment. Of the 7 cases which relapsed only 2 showed clinical signs, the rest were serum-test recurrences. It is noteworthy that of the 7 relapsing cases 1 had received only salvarsan injections, another one of an insufficient course of mercurial injections, and a third was a reinfection case about twenty years after his first infection. Of the remaining 4, 2 being reinfections should not have been tabulated as relapses.

82. Electrolytic Treatment of Rhinophyma.

BORDIER (*Arch. d'électr. méd.*, December 10th, 1913) states that an electrolytic treatment of rhinophyma, the disfiguring acne rosacea of the nose, has many advantages over surgery, not least in the aesthetic character of the result. He uses the bipolar method, introducing into the masses forming the hypertrophied nares, under a local anaesthetic if necessary, three irido-platinum needles in parallel fashion, penetrating to within 2 mm. of the plane of the future cicatricial surface. The middle needle is connected to the positive pole, the other two to the negative. The current is turned on, gradually of course, until a strength of 40 milliampères is reached if possible. The destruction is judged to be sufficient when the tissues take a greyish tinge between the needles. The time necessary to obtain this result varies with the thickness of the tissues to be destroyed, the distance of the needles, and the quantity of the current. The current is afterwards brought gradually to zero, and the needles retracted, the two negatives being pulled away easily, while the positive is somewhat resistant. The froth which tissues during electrolysis (bubbles of hydrogen at the site of the two negative needles, oxygen around the positive) is removed carefully by means of a plug of cotton-wool which is impregnated with oxygenated water or with a 1 in 2,000 solution of mercuric oxycyanide. The same night or the next day the treated masses take a blackish colour, becoming necrosed in the days which follow, and being detached about fifteen days after the sitting. The patient should be instructed to bathe the eschar twice a day in an antiseptic solution. In some cases only two sittings are necessary in order to get rid of the whole of the hypertrophied mass. If, after the electrolytic destruction, any small hillocks or roughnesses remain, interfering with the perfection of the aesthetic result, these may be removed by diathermy. A slender metallic electrode is employed, and the destruction of the irregularities takes place very rapidly (two or three seconds in each case) owing to the coagulation of the albuminoid matter by which they are constituted. Once these roughnesses are removed, the surface of the nose becomes almost smooth, the cicatricial tissue is supple, and the colouration normal.

PATHOLOGY.

83. Demonstration of the Eggs of Trichocephalus Dispar.

ACCORDING to K. SHROEDER and C. JÖRGENSEN (*Hospitalstidende*, October 1st and 8th, 1913) the frequency with which *Trichocephalus dispar* occurs in man is underrated, because it is seldom present in large numbers and rarely leaves its host spontaneously. The patient, therefore, notices nothing amiss with the faeces, and recognition of the condition depends on a careful search for eggs in the faeces. The microscopic examination of faeces, dissolved in a little water, often fails to demonstrate the eggs; and Telemann's and Yaoitas's methods, which both include centrifugalization, are also faulty. The authors recommend the following double method: Samples, of the size of a pea, are taken from the faeces at five to six different points, and are rubbed together with half a teaspoonful of potassium bicarbonate and 5 c.cm. of ether. From 15 to 25 c.cm. of lukewarm, dilute hydrochloric acid are added, its reaction with the bicarbonate helping to break up the faecal conglomerations. The solution is filtered through a single layer of gauze, and is forcibly shaken up with a third of its volume of ether. Centrifugalization is now continued for five minutes, 1 c.cm. of concentrated alcohol being added to the upper layer of the solution to prevent the deposit of firm masses on the sides of the vessel. The eggs can now be withdrawn from the bottom of the solution and placed under the microscope. The second stage of the examination is necessary only when the deposit is more than $\frac{1}{2}$ cm. thick, or when it contains large particles. The deposit is added to an 80 per cent. aqueous solution of glycerine, and is centrifugalized for one minute. An equal quantity of dilute hydrochloric acid is added, and the mixture is shaken up with 2 c.cm. of ether, after which centrifugalization is again continued for two minutes. The authors' investigation originated in the discovery of the eggs of *Trichocephalus dispar* in the faeces of an anaemic patient. Altogether they examined the faeces of 81 patients, whose ages ranged from 21 months to 77 years, and who were admitted to hospital for various conditions. The eggs were found in 60 per cent., being most common among children. Dwellers in the country were more often affected than town dwellers, but there was no difference between the sexes. No certain connexion between the parasite and the patient's various diseases could be satisfactorily established, although out of twelve patients suffering from anaemia ten showed eggs. The four patients who showed most eggs were not anaemic, and of the anaemic patients there was none whose anaemia could not be traced to some other cause, such as cancer. In 6 cases vermifuge treatment was prescribed, but the results were unsatisfactory. In some cases the trichocephalus was expelled, and the eggs were then not found in the faeces, but they contained eggs again after a short time, and no permanent improvement of the symptoms was effected. As the treatment is unpleasant, and the various symptoms could not be traced to the parasites, the authors ceased to prescribe it. Yet their verdict on the trichocephalus in connexion with diseases of man is rather "Not proven" than "Not guilty."

AN EPITOME OF CURRENT MEDICAL LITERATURE

MEDICINE.

84 Organic Heart Disease following Pneumonia

O. KELLER (*Deut. med. Woch.*, November 6th, 1913) describes a case of pneumonia immediately followed by organic heart disease in a workman, aged 36. On November 10th, 1912, he felt sudden pain in the left chest. In hospital next day the limits and sounds of the heart were normal. There was loud bronchial breathing over the middle of the left lung behind. The expectoration was rusty, the pulse 112, and the temperature 100.8 F. There was no glycosuria or albuminuria. On November 14th there was dullness over the left lung behind, but the heart still seemed normal. The pneumonia ran a typical course, and on the ninth day the temperature fell almost to normal. On the twelfth day the temperature again rose to 102.2 F. A soft rub could be heard over the right lung behind, but there was no dullness. On the seventeenth day the patient was again afebrile, and remained so until his discharge. When he first attempted to get up on December 7th, he suffered from severe dyspnoea. The lungs now seemed normal, but though the limits of the heart were unchanged, a sharp systolic murmur was audible over all the valves. The pulse was small and rapid. An icebag was applied to the heart, and digitalis was prescribed. Although the temperature remained normal, the dyspnoea persisted until the end of January, 1913. The limits of the heart were still normal, and while the systolic murmur had become loud over the aorta it was fairly soft over the other valves. No albuminuria could be detected. When the patient was discharged, early in February, the dyspnoea had ceased, but he was pale, and the pulse ranged from 90 to 100. The author thinks that a pneumococcal endocarditis may be excluded, as the onset of the cardiac disease was unaccompanied by fever. The Roentgen rays showed that the size and position of the heart and the aorta were normal. A negative Wassermann reaction discredited the hypothesis that the pneumonia might have stirred up latent syphilitic aortitis. It was considered possible that the cardiac disease might be due to anaemia, but the accentuation of the murmur over the aortic valve did not harmonize with this view, which may be dismissed, as an examination seven months after the patient's discharge showed persistence of the murmur, although the anaemia had disappeared. It was now found that the maximum blood pressure was 110 and the minimum 95. There was a capillary pulse, the temporal arteries were very prominent, and the pulsation of the vessels of the neck was visible. The pulse was still 95 to 100. It is most probable that latent arterio-sclerosis flared up during the pneumonia and settled in the aortic valve, which proved to be a *locus minoris resistentiae*.

85. Acute Pulmonary Oedema.

LECLERC (*Journ. des praticiens*, October, 1913) dismisses insufficiency of the left ventricle as a cause of this condition. He classifies the etiology under three headings: (*a*) Mechanical, (*b*) infectious, (*c*) toxic. In the first group may be included as causes the rapid evacuation of the pleural cavity, in thoracocentesis, tabes, ascending myelitis, and mitral stenosis. In the second group he classes influenza, pleuropneumonia, and other infective maladies of the same type; and in the third acute alcoholism, injection of various serums, pilocarpin, and, above all, renal sclerosis accompanied by uraemic poisoning. In these cases it has been demonstrated that the myocardium *a priori* is not always at fault. Among the phenomena to be noted in the condition are acute pneumoplegia, paralytic inhibition of the vagus, and a state of acute asystole of the right side of the heart. The lung is deprived of its two essential functions—that is, haematosis and the elimination of waste matter from the economy. This does not only consist of water and CO_2, but other toxic substances, which make their exit by means of the lungs. In the mechanical group of cases thoracocentesis produces immobilization of the lung with consequent loss of elasticity. Tabes and ascending myelitis bring about pneumogastric inhibition. In all these cases haematosis is affected. In the infectious group of cases, on the other hand, it is the function of elimination which is attacked, and, as may be readily understood, an accumulation of toxins results. But it is in uraemia that pulmonary insufficiency becomes more acute. Here the lung itself is more or less sclerosed and a state of emphysema exists. In conclusion, the author emphasizes the fact that the condition is essentially and primarily pulmonary, affecting the two essential attributes of the lungs haematemesis and elimination.

86. Exophthalmic Goitre.

BLACKFORD AND SANFORD (*Amer. Journ. of Med. Sciences*, December, 1913) studied the cardio-vascular effects on dogs of intravenous injections of sterile non-haemolytic blood serum from nervous individuals and from patients affected with exophthalmic goitre. All injections were made into the right femoral vein and the effect on blood pressure in the left carotid artery recorded. From 2½ to 4 c.cm. of serum per kilo of body weight was the average dose injected, the serum from twenty-eight patients having exophthalmic goitre being used. Serum from normal individuals, from patients with goitre without apparent intoxication, and from those presenting a long-standing intoxication due to thyroid adenomata were also examined, but only in those with active symptoms of exophthalmic goitre and with markedly hyperplastic glands were any definite symptoms of cardio-vascular depression noted in the dogs injected. The experiments indicate that patients with exophthalmic goitre who are suffering from a marked degree of intoxication at or near the height of the clinical curve of the disease possess serum having a powerful depressor action, whereas such action is not demonstrable in normal serums nor in serums from patients without marked hyperplasia, and that serums from patients in whom the disease is not at or near its height are less potent in this respect and may be negative. Although only a small number of patients with severe intoxications were bled, it was noticed that in most of them bleeding was followed by considerable relief from their subjective symptoms. Experiments with intravenous injections of saline extracts of forty-eight exophthalmic thyroids show that the markedly hyperplastic goitres possess a more powerful action than that of the extract of any normal organ examined, including muscle, liver, spleen, pancreas, breast, testicle, thyroid, etc., the fall in blood pressure averaging 60 mm. of Hg. as against less than 25 mm. for that from other tissues. Extracts of thyroid adenomata, simple colloids, and normal thyroids have a depressor action, which is, however, much less than that produced by exophthalmic thyroids. The first injection of any extract of fresh goitre confers a marked tolerance to subsequent injections of the same material during the same experiment, and after an active depressor dose of the serum from a case of exophthalmic goitre the depressor action of the extract of an exophthalmic goitre is weakened or abolished, the converse also being true.

87. Is Syphilis a Factor in Blackwater Fever?

A. H. NAPIER (*Indian Med. Gaz.*, October, 1913) mentions the uncertainty which prevails as to the etiology of blackwater fever. Theories mentioned by him are: (1) The malarial; (2) the quinine theory: (3) malaria *plus* another cause; (4) due to an unknown cause (the organism described recently by Coles in the BRITISH MEDICAL JOURNAL); (5) syphilis, which theory he accepts. He offers this theory, that the disease is found in cases giving a positive Wassermann reaction, the onset being brought on by chill, over-exertion, quinine, or an attack of malaria. Blackwater fever is symptomatically indistinguishable from paroxysmal haemoglobinuria. He quotes Manson's opinion that "the two diseases are the same, or, at least, the symptoms are produced in the same way." Browning and Mackenzie write thus: "Three cases of paroxysmal haemoglobinuria, which we recently examined, all showed positively reacting serums." After some further theoretical considerations Napier suggests that in blackwater fever a Wassermann should always be done, and if it be positive salvarsan should be given.

88. Infantile Alcoholism.

OSTALI (*Gazz. degli Osped.*, November 30th, 1913) says this may be hereditary or acquired. Children begotten by parents in a state of intoxication are likely to present physical or bodily anomalies, and experimentally it has been shown that aqueous solutions of alcohol arrest or

alter the development of the embryo; and just as chronic alcoholism induces changes in the tissues, so it may cause degenerative changes in the genital system and in the spermatic fluids. The effects on the offspring are seen especially in the nervous system—for example, epilepsy, hysteria, neurasthenia, vertigo, tremors, mental deficiency, dipsomania, etc. In acquired alcoholism the alcohol may be introduced via the mother's milk or by direct ingestion. In the suckling infant alcoholism shows itself in the development of convulsions (without fever or gastric disturbance) or in the more chronic varieties by disturbed sleep, loss of weight, abnormal faeces, and gastric dyspepsia. In older children acute alcoholism gives rise first to excitement, then physical and intellectual ataxia, and finally coma.

SURGERY.

89. A Rare Form of Mastoiditis.

KIRMISSON (*Progrès méd.*, January 24th, 1914), in a clinical lecture at the Hôpital des Enfant Malades, showed a case of mastoid suppuration which presented features which are uncommon and of infrequent occurrence; failure to recognize the condition when it does occur may have serious consequences. The patient was a little girl of 10 years of age, usually well, but having had whooping-cough and measles, the latter not followed by any complications. She suffered, however, from time to time from attacks of pain in the left ear, and there were symptoms pointing to the presence of adenoid vegetations in the pharynx. Her present illness commenced three weeks ago with an attack of tonsillitis, lasting about eight days, and followed by a purulent discharge from the left ear. Kirmisson emphasizes the causative connexion between inflammation of the tonsils, adenoid vegetations, middle-ear disease, and mastoiditis. After a few days this discharge suddenly ceased and all the symptoms became aggravated, vomiting appeared, and after three days the child was brought to the hospital by the mother and admitted. There was a distinct left tortícollis, a temperature of 38.8° C., but a complete absence of local signs pointing to mastoid disease. Instead there was diffuse tumefaction, commencing below the level of the mastoid and spreading downwards into the neck, both in front and behind the sterno-mastoid. As the condition of the child became worse and the temperature higher a diagnosis of mastoid suppuration was made, despite the absence of local signs, and the usual operation performed at once. Aided by the "protector" of Stacke, the middle ear was freely opened. On the following day there was some improvement, but not of long duration: vomiting recommenced. Kernig's sign was present; there was photophobia, etc. Lumbar puncture revealed increased tension of the cerebro-spinal fluid and increase in the number of polynuclear cells. There were no micro-organisms. Three intravenous injections of 10 c.cm. of electrargol at intervals of a few days were followed by considerable amelioration in the symptoms, and it is hoped that recovery may ensue. This case is an example of the form of mastoiditis first described by Bezold of Munich in 1881. This surgeon noticed a number of cases in which diffuse suppuration along the sterno-mastoid muscle and fistulae in the neck were associated with a discharge from the ear. Careful exploration with flexible probes showed that these fistulae led to the mastoid process. Bezold also recognized a relationship between the frequency of this kind of mastoiditis and the age of the patient and the associated structure of the mastoid process. It is rare in very young infants, in whom the cellular part of the process is little developed, and occurs more usually in elder children. The tendinous expansion of the attachments to the bone of the sterno-mastoid, the splenius, and complexus minor form an obstacle to the exit of the pus in the usual direction. It emerges under the tendons and burrows along the intramuscular planes down the neck: the cases are often mistaken for ordinary adenitis. Abscess of the cerebellum, lateral sinus inflammation, and a serous meningitis in which microbes do not occur in the cerebro-spinal fluid are complications particularly liable to happen in this form of mastoid diseases.

90. Radiological Diagnosis of Chronic Appendicitis.

THE diagnosis of chronic appendicitis may be so difficult that until the abdomen is opened the surgeon cannot be quite sure that the appendix is really diseased. G. SINGER and G. HOLZKNECHT have made a suggestion by which they claim that the diagnostic difficulties may be somewhat reduced (*Mucnch. med. Woch.*, December 2nd, 1913). They base their diagnosis on the localization of the pain complained of by the patient, the palpation of this site, and the examination by *x* rays of the organs situated there. For the better carrying out of the *x*-ray examination in such cases they utilize a special apparatus, which they describe briefly. They then proceed to give the details of cases of chronic appendicitis in which a radiographic examination six hours after bismuth or barium had been given. In all these cases the site of the pain was identified as the caecum, and the diagnosis was confirmed in all cases in which an operation was performed. In one case inversion of the abdominal organs was divulged by the examination. Next, a correct diagnosis was arrived at in a case which proved to be spastic constipation, on the ground that the painful site was distant from the caecum. In all, 25 cases were examined in this manner. They emphasize the fact that the *x*-ray examination does not show up the appendix, but its approximate position is indicated by the position of the caecum. The method is obviously useless in the interval between two attacks of appendicitis, when no pain is present, but it is applicable in the latent stage, when tenderness or localized pain is still felt. Bearing in mind the limitations of the procedure, the method should prove of considerable use in forming an exact diagnosis of chronic appendicitis.

91. Fractures of Tuberosity complicating Dislocation of Shoulder.

JAPIOT (*Arch. d'électr. méd.*, January 10th, 1914) has had occasion recently to radiograph several cases of dislocation of the shoulder in which a complication was suspected, and in four of these the radiograph afforded evidence of a fracture of the tuberosity. It is difficult to appreciate the extent and exact site of such osseous lesions from the *x*-ray picture: even on the best negatives it is not always possible to say which is the tuberosity concerned. The author maintains, nevertheless, that this disadvantage scarcely detracts from the value of radiography as compared with other methods in the diagnosis of this condition. Radiography is of all the greater importance in these cases because the symptoms are unreliable. A linear ecchymosis coinciding with a pain on pressure at the centre of the fracture has been signalized, and occasionally it has been possible to perceive under the acromion a projecting osseous fragment. But these signs cannot be counted upon, and the diagnosis can only be established with certainty by radiographic proof. If the reduction of the dislocated shoulder appears to be simple, the fracture may pass altogether unnoticed, although the patient goes on to suffer from atrophy of the muscles and limitation of movement, especially in abduction, and the general picture is that described as scapulo-humeral periarthritis. Such symptoms, however, may be the result of other lesions, such as fracture of the head of the humerus and nerve injuries, and even the simple contusion should not be disregarded. These conditions, therefore, must be eliminated, and here also it is only the radiograph which establishes the diagnosis. The author concludes that in cases in which dislocation has taken place a considerable time previously, it will often be found difficult to clear up the origin of a scapulo-humeral periarthritis without radiographic assistance, and that even when the dislocation is recent, however simple the injury may appear, the making of a radiograph is always a useful precaution.

OBSTETRICS.

92. Intrauterine Fracture.

RICHARD R. SMITH (*Surgery, Gynaecology, and Obstetrics*, September, 1913) records a case of intrauterine fracture, and discusses the literature upon this subject. He divides cases of intrauterine fracture into two groups: (1) Those which take place during delivery, and (2) those which have as a predisposing cause certain diseases of the bone. In the first class, the head is the most common point of injury, although fractures of the femur, humerus, and clavicle are also met with. The majority of such fractures occur during artificial delivery. In the second group, constitutional anomalies, such as chondrodystrophia and osteogenesis imperfecta, form the basis of the same. In the former, the head is large in contrast with the deficient length of the fetus as a whole. All the extremities are short and deformed. The epiphyses are more or less enlarged, and the ribs produce the so-called rachitic rosary. The lips, eyelids, and tongue are thickened, whilst the skin and subdermal tissues generally are hyper-

trophied. There is well-marked prognathus, together with marked retraction of the nose. Osteogenesis imperfecta, on the other hand, is a systematic bone disease attacking the very young fetus, without causing well marked abnormalities. The difficulty lies in an abnormal calcification of the osteoid tissue in the shafts of the bones. The extremities are not shortened, but are often bent and deformed, and are always extremely brittle, so that the slightest violence results in fracture. The intrauterine fractures present at birth may be recent or firmly united, and only shown by the excessive amount of callus present. The majority of such infants die during intrauterine life. Nathan, to whom the author refers, has cited two cases that survived birth, and believes that the condition of fragilitas ossium of later life is identical with it. Another cause of intrauterine fracture is syphilis, which produces changes in the osseous system leading to separation of the epiphyses. Further evidence of the disease are, however, usually present at birth. Difficulty sometimes exists in the diagnosis of intrauterine fracture by the resemblance of certain bony deficiencies to the deformity produced by fracture; thus absence or deficiency of the fibula, or the tarsal, or metatarsal bones of the foot, sometimes is the cause of a wrong diagnosis. Smith has collected 43 examples of the lesion. In 22 of these instances, the fracture was caused by falls, in 10 by blows, and in 1 by pressure. The injury occurred during the later months of pregnancy, except in one instance, where the trauma took place at the end of the fourth month. The injury seldom interrupted the pregnancy: thus 29 went on to term, 8 terminated prematurely, and in 7 the result is not given. In 32 cases the fractures were single, and in 5 they were multiple. In 11 instances the lesion appeared in the lower extremity, 8 in the upper extremity, and 11 in the skull. In conclusion the author observes that true intrauterine fracture, though rare, may occur without serious injury to the mother, and therefore has an important medico-legal bearing.

GYNAECOLOGY.

93. Haematometra simulating Cancer of the Cervix Uteri.

THE difficulty sometimes experienced in distinguishing between dilatation of the cervix with blood, and cancer is emphasized by E. BOVIN (*Hygeia*, October, 1913) who records a case in which the diagnosis was not established before the uterus was removed. The patient was an unmarried nullipara, aged 47, whose menstruation had been normal till about a year ago when she began occasionally to lose blood in the intervals of menstruation. At the end of March, 1912, menstruation, lasting less than one day, was followed in a few days by violent abdominal pain and retention of urine. Both were relieved by catheterization. In the middle of April menstruation, lasting less than half-a-day, was followed by violent abdominal pain, the disappearance of which, after less than a day's duration, coincided with a violent haemorrhage. The blood was fluid and odourless. During the following few days there was a moderate flow of blood of the menstrual type. A week later abdominal pain, retention of urine and fever were followed after about one day by a profuse discharge of stinking fluid blood, the pain and fever disappearing forthwith. At the end of April the patient was admitted to hospital, where the profuse and continuous haemorrhage was arrested in a few days by tampons. An examination under general anaesthesia now showed the enlarged cervix just within the orifice of the hymen. The external os was undilated, and the cervix was as large as a goose's egg, firm and movable. The uterus was not much enlarged and was retroflexed and movable. When one finger was pressed through the os, a large cavity lined with irregular, friable, and readily bleeding tissues, and containing liquid blood, could be felt. The thickening of the cervix was practically uniform, and it did not suggest the infiltration and ulceration of cancer. The patient was not cachectic, and a microscopic examination of tissues removed from the interior of the cervix showed only inflammatory changes. The patient's age, the profuse and offensive haemorrhage, and the readiness with which the cervix bled pointed to cancer. But this seemed improbable in view of the digital and microscopic examinations. An operation was, however, indicated, whatever the cause, for the anaemia was progressive. Laparotomy was performed, and the uterus removed. The patient recovered after a prolonged convalescence. A sagittal section of the uterus showed an irregular oval cavity, 1.5 cm. of which occupied the body of the uterus, while the lower 8.5 cm. of the cavity was bounded by the cervix. The upper portion of the uterus measured 4.5 cm., and was not dilated. The microscope showed no malignant growth. The constriction of the external os evidently began in a cervical metritis, which became chronic. As the inflammatory tissue contracted, the external os must have become smaller, till blood could no longer escape from the uterus except under high pressure. The microscopic structure of the cervix showed hyperplasia of the connective tissue which was more or less hyaline and deficient in cellular elements, resembling an advanced stage of a fibromyoma.

THERAPEUTICS.

94. Dehydration Treatment of Chronic Bronchitis and Bronchiectasis.

H. HOCHHAUS (*Med. Klin.*, December 7th, 1913) has adopted the treatment lately advocated by Singer, who has cured bronchiectasis by reducing the fluid constituents of the patient's diet. The amount of solid food is unrestricted, while fluid in the form of soup, water, milk, or wine is limited to 400 or 500 c.cm. a day. Every fourth day the patient is allowed as much as two litres. Singer, who considers tuberculosis and nephritis as absolute contra-indications, has achieved brilliant results even in bronchitis and bronchiectasis of old standing. The author has adopted the treatment in 14 cases which had proved refractory to other treatment. In 8 cases great improvement, or even recovery, was effected; in the remainder the treatment had to be abandoned without improvement being effected. One patient was a woman, aged 48, who had suffered from cough, backache, and expectoration for many years. She was admitted to hospital suffering from extensive bronchopneumonia of the right lung. The pulse was 130, and the temperature ranged from 38.9° to 39.2°. The muco-purulent sputum measured over 100 c.cm. every day, and contained the pneumococcus. The fever disappeared after about eighteen days, but the expectoration and the physical signs over the lung persisted, in spite of expectorant drugs and Quincke's postural treatment. After the thirst treatment had been carried out for a few days the amount of sputum fell from 130 to 50 c.cm.; it rose again on the days of grace when more fluid was imbibed. After a few weeks the sputum had dwindled to 5 c.cm., the general condition was satisfactory, and the lungs showed only slight bronchitis. During the first two days of the treatment the patient felt unwell, the thirst was severe, the appetite poor, and she complained of a dry throat. On the third day she felt better, and the appetite had returned. The author gives detailed accounts of four other cases, one of which was complicated by albuminuria. This improved, and it is possible that Singer's exclusion of cases of nephritis may not always be necessary. How far the improvement is permanent remains to be seen, for none of the author's cases was observed for more than ten months. Among the failures under this treatment were two cases of phthisis, one case of bronchopneumonia due to a foreign body, and one case of bronchitis and bronchiectasis complicated by heart disease. Probably several factors underlie the treatment's success, and one of the most important is no doubt the improved action of the heart, which was often unsatisfactory before the treatment was begun.

95. Salvarsan and Neo-salvarsan.

CH. SABATIÉ (*Progrès méd.*, January 24th, 1914) sums up the most recent views of authorities on the value and use of these remedies, and the accidents which may follow their use and the precautions necessary to avoid them. Neo-salvarsan, he considers, has no advantage over salvarsan so far as toxicity is concerned. The fact, however, that it can be dissolved in a much smaller volume of distilled water, without any addition of salt or soda, makes the technique of the injection much simpler. Also it is a point of importance that the accidental chemical or organic impurities in distilled water, cannot in practice be with certainty eliminated. As regards dose, 40 cg. of salvarsan equals 60 cg. of neo-salvarsan. Most authors recommend that the first injection should be a small one of about 0.45 gram, repeated at intervals of a few days, and increased progressively up to 0.75 gram. In the case of adults the authors consider that the injection may be safely given at the residence of the doctor, provided that the patient can in a short time regain his own dwelling and keep his room until the next day. During this time the temperature is watched. During the week that should intervene between the repetition of the injection any symptoms of indisposition—in particular headache—are carefully noted. The untoward results which may follow

an injection of salvarsan occur either within a few hours or days or are delayed for two or three months. In the former case the usual symptoms suggest a grave meningeal congestion, ending most often in coma and death. A latent meningeal affection, due to syphilis and awakened into activity by the arsenical preparation (idiosyncrasy may also exist), is the explanation usually given. The later accidents are also primarily syphilitic in nature and occurred before salvarsan was introduced, but not nearly so frequently. The most common form suggests a diffuse meningeal inflammation (chronic), often eventuating in paralysis of some cranial nerve, generally the auditory. Recovery is the rule. One possible explanation is that a few spirochaetes linger in the white fibrous tissue of the meninges and in the sheaths of the nerves, and that as immunity wears off these renew their activity, and thus cause the symptoms. As regards treatment, the advice of Dr. Sabatié is to commence with mercury and proceed later to small doses of salvarsan cautiously increased. In this way is avoided any sudden extensive destruction of spirochaetes and the possible liberation of large quantities of toxins. Thoroughness in the treatment, persistence for a time after every symptom has disappeared, seems to be the best guarantee against the later manifestations of syphilis or of syphilis *plus* salvarsan.

96. The Vaccine-therapy of Gonorrhoea.

J. GERSCHUN AND J. FINKELSTEIN, writing from Moscow, state that they have employed a polyvalent heterovaccine in the treatment of their gonorrhoea patients, and give the details of the results obtained (*Berl. klin. Woch.*, September 15th, 1913). The cultures derived from a considerable number of different sources were grown on blood agar or ascitic agar, and cultures one or two days old were suspended in physiological saline fluid, and heated for one hour at 60° C. No antiseptic or other inhibitory substance was added. The emulsions used contained 1, 5 and 10 million per c.cm. The authors stated that they aimed at giving doses according to Wright's method—that is, sufficiently small to avoid local or general reactions. Starting with a half of a million cocci, they increased the dose by doubling it at each subsequent injection. They raised it as far as 50 million. The injections were given every six or seven days, after the temperature had returned to normal and all effects of the injections had passed off. They found that in small or moderate doses gonococcal vaccines are harmless. As a general rule pain disappears after the first dose in gonorrhoeal arthritis and epididymitis; the inflammatory infiltrations begin to be absorbed almost as rapidly. In acute and chronic gonorrhoea, and also in cases complicated with arthritis and epididymitis, the gonococci disappear from the discharge in a large percentage of cases. The authors are convinced that this disappearance is the direct result of the vaccine. They state that it is necessary to treat gonorrhoeal affections on a large scale with vaccines in order that a more exact estimate of its value can be arrived at.

97. Hexamethylenamin.

HAZLIK AND COLLINS (*Arch. of Internal Med.*, November 15th, 1913) studied the applicability of various tests for the formaldehyde and free hexamethylenamin; the various conditions under which the liberation of formaldehyde takes place; the antiseptic efficiency of hexamethylenamin under different chemical and biological conditions, and as to whether it is in itself bactericidal or not, as far as possible endeavouring to correlate the chemical data obtained with experiments *in vitro* and on lower animals with observations on patients. The phloroglucin test was found to be the most delicate and most useful test for free formaldehyde, being more sensitive and simpler in application than the phenylhydrazin test. Solutions of hexamethylenamin in water and in various body fluids do not liberate formaldehyde immediately, but they do so on boiling, or on standing for one hour at 37.5° C., or at once if acid is added, and except in a few doubtful instances alkalis prevent the liberation. Experiments with several species of bacteria in hexamethylenamin media, in which the liberation of formaldehyde was prevented, proved that hexamethylenamin itself is not bactericidal, but that its efficiency in that respect depends upon the liberated formaldehyde, and that such liberation depends on the hydrogen ion concentration of the solution, and could occur with degrees of acidity lower than those appreciated by litmus and closely approximating to that of certain body fluids. It was found that practically all hexamethylenamin urines exhibiting true acidity showed the presence of formaldehyde; white urines exhibiting true alkalinity showed no trace of formaldehyde. From experiments conducted to determine whether hexamethylenamin exists as such or as free formaldehyde in various body fluids and in freshly-formed urine it was found that, following its administration, hexamethylenamin could be detected in all the body fluids, and that it does not liberate free formaldehyde therein, except when truly acid, as urine and gastric juice, free formaldehyde never appearing in any body fluids which are neutral or alkaline—for example, blood; cerebro-spinal, pleural, pericardial, and synovial fluids; aqueous and vitreous humours, saliva, bile, and some urines. Urines which are truly acid and contain hexamethylenamin practically always contain formaldehyde, and since urine is the only body fluid except gastric juice exhibiting true acidity, it is here only that liberation of formaldehyde takes place. By the administration of monosodium phosphate it is possible to increase the acidity of a urine, and the intensity of the formaldehyde reaction appears to be directly proportional to the acidity, but the administration of sodium bicarbonate and potassium citrate alters the reaction of acid urine to true alkalinity, and the liberation of formaldehyde from such urines containing hexamethylenamin is inhibited, so that since the beneficial therapeutic effects of hexamethylenamin depend upon the liberated formaldehyde it is irrational to prescribe alkalis together with hexamethylenamin.

PATHOLOGY.

98. The Flora of the Normal Prostate.

H. UNTERBERG (*Pester Med.-Chir. Presse*, October 5th, 1913) was struck by the frequency with which, in the absence of a history of gonorrhoea, acute prostatitis occurred in his practice. The symptoms were sometimes limited to a burning sensation in the anal region, and a slight rise of temperature. In other cases there was a more or less profuse discharge from the urethra. In other cases, again, pain about the anal region was severe, and complete retention of urine, lasting for some time, was accompanied by high fever. Even in the slight forms the prostate was swollen and tender, and in the severe forms the enlargement of the prostate was considerable. The patients' ages ranged from early adolescence to middle age. Patients over 60 were not included in this category, as the prostatitis may be complicated by hypertrophy of the gland. The bacteriological examination of the prostatic secretion in these cases showed the *Staphylococcus aureus* and *albus*, and the *Bacillus coli*. These observations led the author to investigate the prostatic secretion of twenty-five persons, whose ages ranged from 13 to 60 years, and whose genito-urinary tract seemed normal. The urethral orifice and its surroundings were carefully cleaned and disinfected, and a sterile rod was passed 5 to 10 cm. up the urethra and was then applied to various culture media. The urethra was now washed out with a 1 in 5,000 solution of sublimate, which was removed by micturition. The glans penis was again disinfected, and a metal catheter introduced so that its opening occupied the prostatic portion of the urethra. The prostate was now massaged per rectum to expel secretion into the catheter, which was withdrawn after its external opening had been closed. The secretion thus obtained was placed on various culture media. Of the 25 cases there were 20 in which the urethra contained micro-organisms and 5 in which it was sterile. The prostate contained micro-organisms in 12 cases, and was sterile in 13. In 10 cases both urethra and prostate contained micro-organisms, and in 10 the prostate was sterile, while the urethra contained micro-organisms. In two cases the prostate contained micro-organisms while the urethra was sterile, and in 3 cases both were sterile. The *Staphylococcus aureus* was found in the urethra in 17 cases, and in the prostate in 10. The *Staphylococcus albus* was found in the urethra in 5 cases and in the prostate in 3. A streptococcus was found in the urethra in 3 cases and in the prostate in 2. The *Bacillus coli* was found only once in the urethra and once in the prostate. Fränkel's diplococcus was found once in the urethra. Six examinations were made for anaërobic micro-organisms, but they were never found. The frequency of infection of the urethra and prostate increased with the host's age. Between the ages 13 and 30 the urethra was infected in 73.3 per cent. and the prostate in 33.3 per cent. Between the ages 30 and 60 the urethra was infected in 90 per cent., and the prostate in 70 per cent. The author concludes that the prostate of persons without a history of genito-urinary disease in 48 per cent. of all cases contains various micro-organisms.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

99 Acute Painful Congestion of the Liver.

N. ORTNER (*Med. Klin.*, September 21st, 1913) was consulted by a man, aged 52, whose capacity for bodily exertion had recently diminished. He often suffered from a sense of slight pressure about the heart. The ascent of a high mountain provoked no discomfort, but during the last half hour of the descent he noticed a sense of pressure, which began over the stomach and extended upwards under the sternum. He had hardly reached his home when this sensation changed to intense pain, respiration became laboured, and he was forced to sit up in bed. Only slight relief was obtained by evacuation of the bowels. All the symptoms disappeared after four days' complete rest in bed. The author was now consulted, but could find nothing abnormal except a moderate degree of cardiac dilatation, suggestive of chronic myocarditis, and slight arterio-sclerosis of the aorta and peripheral vessels. The urine was normal. The most plausible diagnosis seemed diaphragmatic angina pectoris, although the pain began almost at the end of the exercise, and did not radiate outwards. The absence of a sense of anxiety, and the gradual disappearance of the pain during a few days' rest in bed, also invalidated the diagnosis of angina. A few weeks later, a second patient complained of severe epigastric and retrosternal pain, which began when he was descending a mountain. Again no clue to the pain was demonstrable. The patient was instructed to repeat the climb and to return at once to the author. Directly after this experiment, which provoked the previous attack of pain, the liver was found enormously dilated, its dullness extending from the fifth intercostal space to the level of the umbilicus, where it was palpable. It was very tender, and when pushed upwards it increased the pain. There was no perihepatic rub; but the concentrated urine contained much urobilin. The patient was put to bed, no drugs were given, and after four days he felt well, the liver and urine were normal, and the right heart was less dilated. The first patient was now persuaded to try the same experiment. Directly afterwards his liver extended to three finger-breadths below the right costal margin. There was no sign of perihepatitis. The author attributes the pain in both these cases to sudden dilatation of the capsule of the liver. Some time later he saw a third similar case. The sense of pressure provoked in the epigastrium and under the sternum by congestion of the liver is probably due to imperfect drainage of blood from the left lobe of the liver, which in this respect is worse off than the right lobe. All three patients could live fairly active lives in comfort, probably because of, rather than in spite of, the condition of the liver. The author regards the liver in such cases as a reservoir which expands to accommodate the blood embarrassing the heart. In other words, the liver by its expansion has the same beneficial action as venesection on the dilated heart. The author points out that, while the more chronic forms of hepatic congestion are well recognized, the superacute form has scarcely been noticed.

100. The Value of the "Coin Sound" in Children.

S. OSTROWSKI (*Jahrb. f. Kinderheilk.*, Berlin, 1913, lxxviii) goes through the literature of the "coin sound" or *signe du sou* described by Professor Pitres, of Bordeaux, in 1898, and adds his own experience of its value in children. The sign is said to be of service in distinguishing pleural effusion from pneumonia. It is looked for in the following way. While an assistant holds a coin against that part of the chest in which a pleural effusion is suspected and taps it with another coin, the observer listens with his ear held directly against the opposite aspect of the same side of the chest at a symmetrically placed spot; the other ear is stopped with the finger. Four varieties of the sound coming through the chest are to be recognized: (1) If alveolar tissue intervenes, a dull sound without any metallic clang is heard. (2) If a cavity filled with gas intervenes, the sound is louder and has a strongly metallic character. (3) When the intervening substance is homogeneous—whether solid or fluid—the sound is definitely metallic. (4) When the intervening substance is not homogeneous—alveolar and fluid, for example—the coin sound is dull and not metallic. The sign of the coin sound is positive when the sound heard is metallic, negative when it is dull. Pitres finds it is always metallic in pleural effusion, dull in health, still duller in pneumonia and not metallic. Brudzinski (1902) found the *signe du sou* so trustworthy as to replace exploratory thoracocentesis; in 1905 he again wrote well of it. Jastrzebski (1907) got a positive result in 24 out of 28 cases confirmed by tapping the chest; the nature of the effusion he found to be indifferent, and even small effusions gave a positive result in children. Zlatowierchownikoff (1911) obtained a positive result in 28 cases of pleural effusion, a negative result in 10 cases of lobar and 1 of lobular pneumonia: he concluded it was a most valuable sign, and also of great value in determining the limits of a pleural effusion. Various other authors are quoted who have found the sign of value in the diagnosis of pleural effusions in children. Ostrowski himself finds it most valuable; but in infants with pleural effusion and consolidation of the lung as well it is not conclusive diagnostically: it was always negative when the lungs were healthy. In 5 cases of confluent lobular pneumonia with small pleural effusions (30 c.cm. or less) the *signe du sou* was absent.

101. The Blood Count in Measles.

MENSI (*Gazz. degli Osped.*, November 16th, 1913) has examined the blood in 17 cases of measles at various periods of the disease. The age of the patients varied from 16 months to 3¾ years. During the eruption there was almost constantly a leucopenia and an eosinopenia. Before the eruption appeared (two to eight days previously) the usual condition was one of leucopenia; sometimes the leucocyte count was normal, and exceptionally above the normal. The cosinophiles were rather rare. After the eruption was over, in 3 cases a moderate leucopenia persisted, and in two the cosinophiles were absent. In the only case where leucopenia was absent during the eruptive stage the child suffered from a streptococcal pseudo-membranous stomatitis, and in two cases where the leucopenia was only slightly marked a bronchopneumonia was coexistent. One child who was suffering from pertussis (where hyperleucocytosis usually is present) showed well-marked leucopenia during the attack of measles. In opposition to Hecker, the author found that in the eruptive stage there was some diminution of lymphocytes, and just before the eruption a diminution in the number of neutrophiles. Further observations are necessary before one can test the value of the blood count in the early diagnosis of measles, and, in any case, such a method would only be practically useful where a laboratory was within easy reach.

102. Tuberculous Meningitis Masked by Worms.

J. PRZEDBORSKI (*Berl. klin. Woch.*, October 27th, 1913) records the case of a boy, aged 2¼ years, whose mother stated that he had just vomited a round worm. She had seen another disappear down the œsophagus. The child had always been ailing, and had suffered from phlyctenular keratitis and a tuberculous rash. He had recently been very flabby and pale, and had complained of pain in the legs. There was no history of abdominal pain, and the parents had never seen worms in the faeces. The skull was hydrocephalic, the temperature was 100.4°, and there was slight dullness behind the apex of the left lung. A few cyanosed, eczematous patches, of the size of a small coin, were scattered over the wrists and ankles, and were evidently tuberculous. Five minims of oil of chenopodium were given every hour for three hours, after which castor oil was administered. Next day the faeces contained about a hundred unusually small ascarides. The largest were about 190 mm. long and 3 mm. wide, and the smallest were only 35 mm. long and 1 mm. wide. The patient seemed better, although the vomiting had not altogether ceased. During the following two days twenty-three more worms appeared in the faeces, after which the vomiting and anorexia ceased, and the child became lively and interested in his surroundings. But the anaemia (haemoglobin 65 per cent., erythrocytes 3,800,000, leucocytes 12,000), a positive cutaneous reaction to tuberculin, and the persistent fever suggested an active tuberculous lesion. Two days later the patient became almost unconscious, violent vomiting began again, there were deviation of the eyes, rigidity of the neck, and positive Kernig's

and Brudzinski's signs. The screaming patient was admitted to hospital, where lumbar puncture revealed tubercle bacilli. Death occurred six days later. The necropsy showed tuberculous meningitis, caseous tracheo-bronchial lymphatic glands, and acute disseminated miliary tuberculosis of the lungs, kidneys, spleen, and liver. The intestines contained no worms and showed no inflammation. The vomiting in the first instance was probably due to the meningitis, but this was not recognized owing to the absence of other meningeal symptoms and to the presence of the worms. Their appearance for the first time at this stage was probably due to the illness of their host, for it has often been observed that acute diseases of the host are interpreted by round worms as a notice to quit. The author praises the action of oil of chenopodium, 15 minims of which expelled every worm without distressing the patient.

SURGERY.

103. Transplantation of Vessels for Aneurysm.

E. UNGER (*Berl. klin. Woch.*, November 24th, 1913) gives the details of three cases of aneurysm in which a portion of a vein was substituted for the diseased part of the artery. The first patient was an ostler, aged 39 years, who was kicked in the posterior surface of the knee. A popliteal aneurysm developed. Unger undertook the operative treatment, and after exposing the aneurysmal sac proceeded to dissect it out. The gap between the femoral artery and the anterior tibial was about 15 cm. in length, and as the foot was cold, bluish in colour, and obviously not in a condition to live if left in this state, a portion of the saphena vein measuring 15 cm. was resected and implanted with the distal end to the proximal stump of the artery, so that the valves would not impede the blood stream. The vascular suture was carried out with exactness, and on releasing the clamps blood flowed through the vein into the foot freely. The wound was then closed. During the last stage of the operation the circulation suddenly stopped, but this was overcome by the removal of a thrombus through the femoral artery. The rest of the convalescence was undisturbed, and the circulation remained good. Five months later he was able to convince himself that blood was flowing through the implanted saphena vein. The second case was that of a man who developed an aneurysm of the femoral artery as a result of a revolver wound. In this case the defect measured some 10 cm., and a corresponding piece of saphena vein was implanted. The femoral vein had to be sutured, on account of a wound inflicted in it, and much difficulty was experienced with a matted mass of veins lying superficial to the aneurysm. The limb regained its full functions, and evidence was adduced to prove that the implanted vein was permeable. The third case was less favourable. The patient had suffered from syphilis. An aneurysm of the popliteal artery was found. A sudden attack of pain took place one night, and in the morning the leg and foot was very blue. At the operation the sac was extirpated, leaving a defect of about 12 cm. The vessel wall was friable, and not suitable for suture. On removal of a suitable portion of the saphena vein, it was found that its lumen was only 3 mm. All attempts to adapt it to the artery failed, and it was found necessary to amputate the limb.

104. Resection of the enlarged Thymus after Childhood.

V. HABERER (*Wien. med. Woch.*, October 25th, 1913) has found the thymus enlarged in 9 out of 295 cases in which thyroidectomy was performed. The patients' ages ranged from 13 to 44 years, and in every case hyperplasia of the thymus was suspected before the operation, although there were never any symptoms of compression by the thymus. In 5 cases the symptoms could not be accounted for by the goitre also present, and in 4 cases the hyperplasia of the thymus was accompanied by marked exophthalmic goitre. All but one of the patients were females, and in every case but one the operative reduction of the thymus was accompanied by removal of part of the thyroid. In the first 5 cases the Roentgen rays showed no stenosis or displacement of the trachea, but the physical development was abnormal. Two of the patients, aged 13 and 14 years, were unusually big for their age, while a third, aged 16 years, was unusually small and appeared like a cretin. In all these 5 cases there was dullness on percussion over the manubrium sterni, and the Roentgen rays twice showed a shadow in this position. In 2 cases the tonsils and lingual follicles were enlarged. In 2 cases the heart was dilated and the pulse small and rapid. In 3 cases the coagulability of the blood was diminished before and was increased after operation. In 2 cases blood counts before operation showed leucopenia, diminution of the polynuclear leucocytes, and an increase of the small lymphocytes. After operation the polynuclear leucocytes showed an increase, and the lymphocytes a decrease, while the leucopenia was unaltered. Of the 4 cases in which exophthalmic goitre was also present, 1 was that of a man whose thyroid had twice been operated on before without effect elsewhere. Indeed, the cardiac symptoms had increased, the pulse could not be counted, the congested liver reached to the level of the umbilicus, and the cardiac dullness extended into the axilla. He was almost moribund when the slightly enlarged thymus was removed by an operation at which the thyroid was not interfered with. The immediate results were excellent, and ten months later the patient could climb mountains and swim. His pulse fell to 80, and the dilatation of the heart diminished considerably. Of the 3 other cases of exophthalmic goitre all improved after reduction of the thymus. In 1 case the pulse fell from 130 to 80 within twenty-four hours of the operation. In 1 case the buphthalmia diminished within a few days of the operation. As the results were satisfactory in all 9 cases, the author considers that whenever there are symptoms suggestive of hyperplasia of the thymus in cases of goitre, the operation for this should be extended to the thymus. The removal of the thymus is easy, and may save the surgeon many of the disappointments now associated with simple thyroidectomy for exophthalmic goitre.

105. Chronic Ascites.

IN *Surg., Gyn., and Obstet.*, November, 1913, appears a paper by MCDILL upon the treatment of chronic ascites by lymphangioplasty by the trocar wound under anaesthesia. The author considers that patients with chronic ascites pay too dearly for relief from distension by tapping if the transudate, which is rich in proteins and salts, can be turned back into the blood stream from which it came. At the same time, such patients have deficient powers of repair, and do not stand well extensive operations under a general anaesthesia. Since 1896, when Talma, Drummond, and Morison devised the operation of epiplopexy, several surgical procedures have been practised for the relief of free fluid within the peritoneal cavity. The death-rate of these operations is high, being as much as 20 per cent. After referring to the methods of Schiassi, Mayo, Narath, and others, McDill considers at length the method of silk lymphangioplasty devised by Sampson Handley. The few reported cases of silk drainage for ascites makes the probability rather strong that the long loops of silk, partly in and partly out of the parietal peritoneum, are promptly buried, and that they do not contribute anything to the desired drainage by capillarity, and that the actual point of escape of the fluid is situated at the angle formed by silk and peritoneum where it reaches through to the healthy lymph spaces and then along the sides of the silk. The author undertook experiments upon rabbits to investigate these points. These experiments show that the ends of three strands of No. 20 silk sewed together and slightly protruding into the lower levels of the peritoneal cavity become a permanent silk connective tissue peg. Furthermore, the breach it makes in the abdominal wall allows the escape of fluid whilst the hernia liability is *nil*. The operation devised by McDill for the treatment of chronic ascites has the following technique: After infiltration of the abdominal wall at the site of puncture, with 1 per cent. of quinine and urea hydrochloride or 1 per cent. novocain, an incision, ½ in. in length, is made just above the pubes and about 2 in. to one side of the median line. Paracentesis is then performed, and, after a little of the ascitic fluid has escaped, three pieces of No. 20 silk, 7 in. long, are passed into the abdomen by means of a special carrier to a distance of 2 or 3 in. beyond the intra-abdominal end of the cannula. The silks are cut so that about 4 in. lie subcutaneously. Each end of the silk is then threaded through the eye of a bodkin, and passed from the trocar wound into the tissues along one of the anaesthetized area until it unthreads itself. The author observes that the procedure need not confine the patient to bed for more than one day. Furthermore, it is not more formidable than an ordinary paracentesis abdominis, and can be repeated if necessary at any subsequent tapping until sufficient drainage is produced.

106. Osteitis Deformans.

HURWITZ (*Johns Hopkins Hosp. Bull.*, September, 1913) reports six cases of osteitis deformans (Paget's disease),

three from the records of over 30,000 medical admissions to the Johns Hopkins Hospital, and three from among a larger number in the dispensary of that hospital. Commencing in middle age or later, slow in progress, and often causing no other troubles than those due to deformity, the disease most frequently affects the long bones of the lower extremities, and the skull, and though usually symmetrical is not necessarily so. The skull is most frequently affected, and then, in order of frequency the tibiae, femora, pelvis, spine, clavicles, ribs, and radii. Of 86 reported cases, 46 were in men and 40 in women, pointing to the fact that the sexes are about equally divided. The rheumatic pains usually present may be so slight as to be scarcely noticeable, and the osseous changes consist of a resorption of bone, associated with an excessive production of poorly calcified bone designated as fibro-osteoid tissue. Of unknown etiology, Paget definitely stated that it was not syphilitic, and the osteitis deformans of congenital syphilis may be differentiated from true Paget's disease by the youth of the patients in the former, the relative absence of pain, the favourable results following specific treatment, the tibiae being most severely and frequently affected, the affected bones presenting irregular bosses on the surface, the absence of tendency to become malignant, together with other obvious signs of congenital syphilis. The most recent view regards osteitis deformans as probably the result of a faulty metabolism due to a perversion of the internal secretions, and since the metabolic processes accompanying it are but little understood, accurate studies on these lines may help to solve the problem of its causation.

OBSTETRICS.

107. Puerperal Haemorrhage into Ovarian Cysts.

DARNALL (*Amer. Journ. Obstet.*, November, 1913) and W. C. JONES (*Surgery, Gynaecology, and Obstetrics*, January, 1913) both report a condition which should be taken into consideration by the obstetrician. Darnall's patient, a woman aged 24, was delivered at term of her third child, and had not been conscious of any pelvic symptoms before or during her pregnancy. On the fourth day, when all seemed well, she was seized with violent pain in the left inguinal region, followed by syncope and other symptoms of internal haemorrhage. A mass of the size of a large cocoa-nut could be defined on the left of the uterus, tender on pressure, and harder than an ordinary ovarian cyst. Symptoms of intestinal obstruction developed within a few hours, and abdominal section was at once performed. The left ovary had attained the size of a man's head; it was very dark, and pressed firmly on the sigmoid colon. Its pedicle was not twisted, but it was filled with thick dark blood. The right ovary contained a cyst about the size of a walnut; it was removed with the tumour. Recovery was uncomplicated. In W. C. Jones's case, symptoms of enlargement of the abdomen began within twenty minutes of the end of the second stage, and a twin child was suspected, but the uterine cavity was empty. Otherwise delivery was normal. There were no symptoms of haemorrhage, but the swelling increased slowly without pain, yet the patient grew distinctly weaker. At the end of a month there was a tumour twice the size of a normal uterus, chiefly on the left side. Ovariotomy was performed, and the cyst contained about six quarts of a chocolate-coloured fluid, evidently of haemorrhagic origin. It was multilocular, whilst the cyst in Darnell's case was unilocular. Le Conte reported an instance, like Jones's, of enlargement of the uterus developing at delivery; six weeks later a multilocular ovarian cyst containing nearly four gallons of characteristic dark-brown fluid was removed. Darnall observes the absence of very acute symptoms in Jones's and Le Conte's patients contrasted with what was seen in his own, where pulmonary embolism was first suspected.

GYNAECOLOGY.

108. Spontaneous Rupture of the Uterus.

E. ZALEWSKI (*Muench. med. Woch.*, November 4th, 1913) states that as far as he has been able to ascertain from the literature of the subject no one has yet actually observed the spontaneous rupture of the uterus. He describes his experience. The patient was 30 years of age, and had been pregnant six times before. In each case the child had to be sacrificed, save when it was born before the completion of the pregnancy, in which instances it was dead. The patient had been rachitic, and the true conjugate was only 9 cm. She was admitted into hospital at the beginning of labour, as she was most desirous of obtaining a living child. The head was in the first position, high above the brim, the os uteri was of the size of about a crown piece, and the membranes were intact. The pains were strong. She was anaesthetized with chloroform, and the abdomen was opened by a supra-symphysial incision, the fascia being divided transversely. After the urinary bladder had been separated on the left side he noticed that the uterine wall showed on its anterior surface suggillation over an area of about 8 cm. in diameter. In the middle of this area he observed the gradual giving way of the tissue and the appearance of the glistening fetal membranes. On examination he found that the rupture had started from a thin, very tense cicatrix extending for some 3 or 4 c.cm., and running in the axis of the organ. He immediately opened the uterus through the ruptured area, and delivered a living child with forceps. The placenta was then removed, the scar with the site of the rupture excised, and the wound sutured with catgut. The operation was completed in thirty-two minutes, and the mother and child both made a good recovery. He is inclined to the opinion that the scar resulted from a wound inflicted during one of the previous perforations of the fetal cranium. It was mere chance that the mother was saved, since, had the operation been commenced later, it is doubtful whether this result would have been achieved.

THERAPEUTICS.

109. Treatment of Pneumonia with Ethylhydrocuprein and Serum.

LENNÉ (*Berl. Klin. Woch.*, October 27th, 1913) reports favourably on ethylhydrocuprein in pneumonia. His material consists of 81 cases, of which 17 were treated with ethylhydrocuprein, 18 with this drug and pneumococcal serum, 6 with serum alone, and 40 were treated symptomatically only. The epidemic of pneumonia to which this series belongs was unusually severe. In practically all the cases treated with ethylhydrocuprein the *Pneumococcus lanceolatus* was demonstrated. In a table illustrating these cases the patient's age, the number of lobes involved, the duration of the illness at the date of admission to hospital, the duration of the fever, and the dosage and total amount of the drug given are recorded. The ages of the two patients who died in the first series were 11 and 60 years. The mortality was 11.8 per cent. The drug was given by the mouth as a powder in doses varying from 0.1 to 0.5 gram, the maximum dose in one day being 2 grams, and the total amount given to one patient being 11 grams. In one case transitory amaurosis was observed, and dilatation of the pupils was common. Slight auditory disturbances in one case disappeared in a few days. As Engwer and Boehnke have shown by experiments on animals that a specific serum is a valuable supplement to ethylhydrocuprein, the author adopted this combined treatment in 18 non-selected cases, in the hope that, while the ethylhydrocuprein killed the micro-organisms, the serum would destroy the toxins. Of the 18 patients 3 died, the mortality being 16.5 per cent. The dosage of ethylhydrocuprein, which in one case was given intravenously, was less in this series than in the former. Of 6 patients treated with serum alone, 2 died. These figures are far too small on which to base an estimate of the value of Neufeld's and Handel's polyvalent serum. Besides, it was sometimes given late in the disease, and thus the principal factor in its successful application was absent. Of the 40 patients included in the fourth table, and treated symptomatically only, 12 died, the mortality, therefore, being 30 per cent. If the cases in the first three series be analysed together, the mortality is still only 16.8 per cent., as compared with the mortality of 30 per cent. in the fourth table. While admitting that his material is not large enough for a final judgement, the author considers that his observations are decidedly favourable to the treatment of pneumonia with serum and with ethylhydrocuprein, which he now administers intravenously without ill effects.

110. Treatment of Oedema and Varix of the Lower Limbs.

D'ORIA (*Rif. Med.*, December 6th, 1913) describes a new method of treating the troublesome oedema and varicosity sometimes left after thrombosis of the veins. For the common varicose varices the usual operation of removing large portions of the saphenous vein is satisfactory enough, but where there has been septic thrombosis, his

operation is sometimes followed by disastrous results in the way of acute septicaemia. To avoid this, Professor Bonti suggested excising a small part of the superficial femoral artery (and not the vein) in Scarpa's triangle. By this operation the supply of blood to the congested part is altered, and, the vein being untouched, the dangers of disturbing a latent sepsis are avoided. Two cases of extensive oedema and varicosity producing a condition of chronic elephantiasis are reported where this operation of excising part of the superficial femoral was performed. The results in both these cases were excellent. In the first case the operation was done in 1910, and in 1913 the leg was completely cured, and had given the patient no trouble since the operation. Three weeks after excision of the artery the leg had resumed its natural size, and a month later the patient could use the limb freely. A similarly good result was obtained in the second case. It should be understood that this new operation is only suggested as a good treatment in the septic veins of thrombotic venous oedema.

111. Diogenal.

F. MÖRCHEN considers that the best hypnotic which we possess at present is veronal (*Muench. med. Woch.*, December 2nd, 1913). It appears to him, however, highly desirable to obtain the sedative as contrasted with the hypnotic effect of this drug in such a form that the latter can be avoided at will. Hitherto the only derivatives of veronal possessing markedly sedative action are bromural and adalin. A new derivative, bearing the name of "diogenal," has been prepared by E. Merck of Darmstadt. Diogenal contains 41.7 per cent. of bromine, which has been shown to be readily split off in the animal body. Having satisfied himself that diogenal possessed a suitable pharmacological action, he proceeded to test it in his asylum practice, and while in a few cases he gave it in doses of 2 grams as a hypnotic with fair results, save when the sleeplessness was very obstinate, he used it chiefly as a sedative in doses of from 0.5 to 2 grams. The drug was given for three to fourteen days several times a day, and never produced any toxic signs. In chronic excitement it acted well, and he noted that three doses of 1 gram given for three days produced an effect which lasted for a week. In milder cases he obtained good results with 0.5 gram given three times a day. No cumulative effect was observed, and his experience justifies him in recommending it as a pure sedative.

112. Artificial Pneumothorax in Haemoptysis.

P. MASENTI, M. BORGOGNO, AND R. VERGANO (*Giorn. di R. Accad. di Med. di Torino*, 1913, lxxvi) describe 5 cases in which patients with severe haemoptysis were treated by the induction of artificial pneumothorax by the method of Forlanini. The amounts of blood spat up varied from 500 to 1,500 c.cm. in from four to eight days. The haemoptysis ceased promptly in 4 of the cases after the first introduction of N_2: in the fifth three injections were found to be necessary, of 300, 400, and 400 c.cm. respectively. In the other 4 cases, from 250 to 400 c.cm. of N_2 were employed; in no instance was anything like a complete pneumothorax produced, nor was a positive intrapleural pressure reached in any of the patients, so that the cessation of the haemoptysis cannot have been due to immobilization of the lung or to a high intrapleural pressure. The authors ascribe the success of this line of treatment to some change in the pulmonary circulatory conditions, without further specification. It is of interest to note that W. Cayley of the Middlesex Hospital successfully treated a severe haemoptysis by inducing pneumothorax while the patient was under the influence of a general anaesthetic as early as 1885.

113. Passive Ergotherapy.

BERGONIÉ (*Arch. d'élect. méd.*, November 10th, 1913) has a lengthy communication on what he calls passive ergotherapy, or muscular exercise electrically provoked, in the treatment of such diseases as obesity, rheumatism, and diabetes, but especially the first. In favour of the electrical method of augmenting the output of muscular energy, he urges that it is entirely passive, and quite independent of the concurrence of the nervous system, thus avoiding fatigue and nervous exhaustion. The whole muscular system of the body is stimulated by appropriate electrical excitation, which produces painless and rhythmic contractions of all the muscular masses. The technique differs only in slight modifications from that which was expounded by the same author five years ago. He uses for the purpose the faradic current obtained from the secondary circuit of the Ruhmkorff coil, allied to which is a good interrupter, the first necessity of this latter being that it should emit a pure musical note without variations of intermittency, and that the number of interruptions should be about 50 per second. The coil he favours is a fixed one, more powerful than the ordinary medical apparatus, and gives a current of 500 milliampères or more in the secondary circuit at from 10 to 20 volts. The faradic current has then to be passed through a metronome, or rhythmic reverser, as without reversal the current would only induce muscular fatigue and exhaustion. The metronome is so regulated as to give one double beat per second, and the excitations of the muscle are of unequal intensity, having a sequence, within the second, of (1) repose, (2) strong contraction, (3) repose, (4) feeble contraction. The current is turned on gradually, and the electrodes used are in considerable number, and present as large a surface as possible. Some of them are formed by the metallic seat and back of a reclining chair, and others are movable plates of metal, suitably padded, and placed on various parts of the body, some of them with the aid of sandbags, until "*c'est d'une véritable armure que l'on revêtira le patient.*" With a man of ordinary muscular development, weighing 10 st., and having a height of about 5 ft. 4 in., and without fat or oedema, it is found that strong generalized muscular contractions are produced by a current of from 25 to 30 milliampères. The sittings may be more frequent and of longer duration as time goes on, reaching two sittings per day, each lasting one hour. Arterial tension is said to be profoundly modified by a course of passive ergotherapy. The skin also is excited, and there is a general quickening of the processes of metabolism.

PATHOLOGY.

114. Pathological Changes in the Function of the Spleen.

H. EPPINGER says the attempts to study the haemolytic function of the spleen by chemical methods have led to negative results (*Berl. klin. Woch.*, December 29th, 1913). In considering the undoubted benefit derived in cases of pernicious anaemia from splenectomy, he has come to the conclusion that this is due to the removal of the increased haemolytic function of the diseased organ. He has, therefore, given special attention to the histological characters of spleens removed from persons suffering from pernicious anaemia, and by comparing these with those of the normal spleen, he believes that he is justified in drawing certain conclusions. His attention has been attracted especially to the vascular arrangement of the organ. Under normal conditions the artery divides up into small and smaller branches, without losing its peculiar arterial coats. The branches found in the trabeculae are exceedingly small, and only when they pass out into the follicles are capillary vessels given off. These capillaries appear to lose themselves in the parenchyma of the organ. The main trunk of the arteriole passes on and enters the sinus by way of quite short lengths of capillary, which are known as the Schwaiger-Seidel capillaries. On tracing the vein from the trabeculae it is found that after very little branching the smallest vessels enter the sinuses and from sinus to sinus there is a capillary connexion, until at last the arterial capillary is met with. The significance of the capillaries which lose themselves in the follicles is that foreign and even native red cells and foreign bodies find their way into the follicles when the blood pressure in the arterioles is higher than the outflow through the sinuses can deal with. It has been shown experimentally that it is impossible to inject particles into the parenchyma from the veins, but quite easy to do so from the arteries. Now it can be shown that when red cells come into contact with connective tissue or follicle cells they are put out of action and disintegrate. The degree of haemolysis would thus depend on the resistance to the circulation through the sinuses. In pernicious anaemia, the author shows that there is a primary pathological change in the vessels and the result of this is the increased escape of red cells into the splenic pulp. These red cells are destroyed and their haemoglobin liberated. Spleens removed from patients suffering from pernicious anaemia are found to contain a very much larger number of red blood corpuscles than the spleens of persons who have died of this disease. The author attributes this to the fact that death from pernicious anaemia is largely due to a giving out of the function of the bone marrow. In conclusion Eppinger points out that haemolymph glands possess similar functions and their existence accounts for some failures to improve the condition by splenectomy.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

115. Rupture of an Aneurysm into the Superior Vena Cava.

A. KLEIN (*Deut. med. Woch.*, October 9th, 1913) records the case of a cabdriver, aged 42, who for a long time had suffered from palpitation of the heart and dyspnoea. Two days before admission to hospital he suddenly felt ill and breathless, and the arms and upper part of the body became oedematous and cyanosed. He was a smoker and took alcohol, but he denied infection with venereal disease, and had never suffered from disease of the joints. In hospital his head and neck, as well as the external mucous membranes, were dark purple, and his eyes protruded a little. The cyanosis and oedema extended downwards to the level of the xiphoid process, where they ceased abruptly. The veins above this level were much dilated, and some of the more superficial showed marked pulsation. Respiration was laboured, and the respiratory sounds were harsh. The circumscribed heaving apex beat was palpable in the sixth intercostal space in the nipple line. The cardiac dulness extended from the fourth rib to the sixth intercostal space, and its right border extended two fingerbreadths to the right of the sternum. A systolic murmur, audible over the whole of the heart, was loudest over the aorta, where a diastolic murmur was also audible. The pulse was 120, small, soft, rhythmic, and equal and synchronous on both sides. There was marked pulsation of the right external jugular vein, but the liver and spleen seemed normal. The reflexes were also normal. The urine was acid, 1021, and contained leucocytes, hyaline casts, and a trace of albumin. The temperature was subnormal. The Roentgen rays showed a pulsating shadow, as large as a child's head, in the position of the ascending aorta. The patient suddenly died soon after admission to hospital. The necropsy showed a sacciform aneurysm of the ascending aorta and of the arch of the aorta. It was filled with lightly coagulated blood and clots of fibrin, which were easily removed, and left a cavity in which a fist could be inserted. In the upper part of the aneurysm was an oval opening, of the size of a lentil, and with smooth margins, communicating with the superior vena cava, which was completely flattened out by the aneurysm. Advanced chronic endarteritis of the thoracic aorta was observed. The author has collected records of 17 similar cases. The three important diagnostic features are—a perforation murmur, venous pulsation, and sudden onset of oedema and cyanosis limited to the area drained by the superior vena cava. But all these features are not invariably present. The condition does not necessarily terminate fatally at once, and in one case the patient lived eight months after the arterio-venous anastomosis had developed.

116. Polypus of the Stomach simulating Cancer.

ACCORDING to G. LEDDERHOSE (*Deut. med. Woch.*, November 27th, 1913) polypi of the stomach are commonly regarded as harmless, as causing no symptoms, and remaining undiscovered throughout life. They are, therefore, hardly mentioned in textbooks, but cases are occasionally reported in which severe symptoms have even necessitated an operation. The author records such a case. A woman, aged 64, contracted typhoid fever in 1870. Ten years later she began to suffer from diarrhoea with colic, and the occasional passage of blood per rectum. Chronic catarrh of the large intestine was diagnosed. This condition persisted with remissions. After 1900 she suffered from nausea, anorexia, and a sensation as if the stomach were being twisted. This sensation began as soon as food was taken on an empty stomach, and lasted scarcely a minute. It was accompanied by salivation, running at the nose, and often by vomiting. She was much wasted, her skin was pale yellow, and her face expressed much suffering. A tender swelling was palpable over the stomach, while the lower part of the abdomen was somewhat distended. A test meal showed traces of lactic acid, but no free hydrochloric acid. There were many short bacilli in the stomach, but no signs of fermentation. Altered blood was frequently found in the stools. Two Roentgen-ray examinations with bismuth paste showed imperfect filling of the pyloric portion of the stomach, the jagged outline of which was not altered when the patient lay on her right side. After a meal the stomach first began to empty very quickly, then peristalsis diminished appreciably, so that after four hours, one-third of the meal remained in the stomach, and after ten hours, one-sixth of the meal. The Roentgen rays suggested a tumour of the pylorus or cicatrization of the pars pylorica. A laparotomy performed in 1913 showed no adhesions about the stomach. There was no obstruction of the pylorus, above which a round movable body could be felt through the walls of the stomach. When this was opened a polypus, of the size of a cherry, was found attached by a slender pedicle to the anterior wall of the stomach near its greater curvature, three fingerbreadths above the pylorus. The polypus and its pedicle were removed with that portion of the stomach to which they were attached. The microscopic examination of the mulberry-like polypus, the surface of which was partially ulcerated, showed an adenomatous structure. Eight months later the patient could eat any food, and no longer suffered from symptoms referred to the stomach. The colitis, however, showed only partial improvement.

117. The Pathogenesis of Gastric Ulcer.

PALMULLI (*Rif. Med.*, November 15th, 1913) critically examines some of the more recent hypotheses with regard to the pathogenesis of gastric ulcer. Thrombosis, embolism, venous stasis, or, indeed, any circulatory disturbance, are not of themselves sufficient to explain gastric ulcer, partly for reasons which concern the intimate circulation of the stomach itself, and partly because, working experimentally on these lines, the most one can produce, and then with difficulty, is haemorrhagic erosion. Hyperchlorhydria is not altogether satisfactory, for it is not a constant symptom in gastric ulcer. The author looks most favourably on a trophic theory. Changes in the trophic centres of the stomach are induced by toxins, exogenous or endogenous. In nearly all the subjects of gastric ulcer there is evidence of a previous toxaemia (chronic gastric catarrh, chlorosis, arthritism, etc.), which may affect the nervous elements of the stomach. Unless you admit some special predisposition—namely, a pathological change in the cellular chemistry of the trophic centres of the stomach—it is difficult to explain why the same poisons do not produce gastric ulcer in every case. As a corollary it has to be assumed that these chemical changes in the cells are not limited to the trophic centres of the stomach, but may affect other nervous areas and produce other types of neurosis.

118. Orthostatic Albuminuria and Tuberculosis.

N. v. JAGIC (*Wien. klin. Woch.*, September 25th, 1913) points out that orthostatic albuminuria has lately been described as an early sign of tuberculosis, and that in 72 per cent. of cases of pulmonary tuberculosis in every stage albuminuria has existed after walking or standing, and has disappeared after rest in bed. In other cases orthostatic albuminuria has been provoked by an injection of Old Tuberculin large enough to cause fever. The author, who regards lordosis as an immediate, not a primary, cause of orthostatic albuminuria, was consulted by a man, aged 20, for pain over the apex of the right lung. His slender proportions, "cor juvenum," and long narrow chest suggested orthostatic albuminuria. At first the urine contained no albumin, but after lordosis had been maintained in the erect position for three minutes the urine contained 4 to 5 per cent. albumin. A walk lasting three hours also provoked albuminuria. In another case, the patient, a girl aged 11, was sent to hospital with the diagnosis of nephritis. She suffered from headache, pallor, and marked albuminuria. But after lying in bed for six hours she lost her albuminuria, which returned when lordosis was induced. The urine contained no blood or pus. Death occurred eleven days later, and the necropsy showed tuberculosis of the meninges and left lung. Macroscopically the kidneys seemed normal, but the microscope showed a few miliary tubercles surrounded by fibrous tissue in both kidneys. Evidently the tuberculosis had a primary toxic effect on the parenchyma of the kidneys, which, when subjected to the action of lordosis, excreted albumin. In five cases of orthostatic albuminuria showing no sign of tuberculosis the author injected the urine into guinea-pigs without inducing tuberculosis.

SURGERY.

119. Embolism and Thrombosis of the Superior Mesenteric Artery.

NOLAND AND WATSON (*Ann. of Surg.*, October, 1913, vol. lviii, No. 4) record a case of this rare condition occurring in a negro aged 58. The patient had had a right inguinal hernia for two years, and at times had had considerable difficulty in reducing it. Two days before admission to hospital a large mass descended into the right side of the scrotum. Reduction was impossible, but the pain was not acute until two days later, when it was accompanied by nausea and vomiting. At operation no strangulation was present at either ring, and yet on opening the sac a coil of gangrenous gut was revealed. The gangrene involved 8 feet of the ileum supplied by that portion of the superior mesenteric artery distal to the ileocolic branch. A well-defined line of demarcation existed above and below. The mesentery was thickened and oedematous, and the peritoneal cavity contained about 2,000 c.cm. of very offensive blood-stained fluid. The affected portion of gut was dissected with its mesentery, and an intestinal anastomosis performed with the aid of Murphy button and Lembert sutures. The patient's condition remained good until the fourth day, when abdominal distension and rigidity appeared, and death took place. Investigation of the specimen showed that the mesentery was thickened and its layers were filled with extravasated blood. The lumen of the arteries was filled with firmly organized clot. It was impossible to determine whether the condition was a primary thrombosis of the superior mesenteric artery or an embolism with a secondary thrombosis. At the autopsy, general peritonitis was found, there being no attempt at union at the site of the anastomosis. The arch of the aorta was thickened by numerous atheromatous plaques. The spleen exhibited two small red infarcts. In the right frontal lobe of the brain an area of softening, the size of a walnut, was present. In discussing the symptomatology of the condition, the authors observe that the diagnosis is rarely made before operation, but that the indications for exploration are so imperative as to render this refinement almost unnecessary. The lesion is simulated by intestinal obstruction, perforation of gastric and duodenal ulcers, acute cholecystitis, appendicitis, pancreatitis, and intussusception. As a rule, the abdomen is much distended, tender, and rigid. There is sudden agonizing abdominal pain, which is usually generalized and paroxysmal. The pain is quickly followed by nausea and vomiting, and constipation is absolute. As regards prognosis, the great majority of cases terminate fatally. In a series reported by Jackson, Porter, and Quimby the mortality was 92 per cent. Occasionally a collateral circulation is established, when spontaneous cure takes place.

120. Lupus of Penis cured by Removal of Tuberculous Kidney.

A. BRANDWEINER (*Wien. med. Woch.*, September 13th, 1913) was consulted by a hairdresser, aged 23, for inflammation of the penis, which had begun several months earlier with slight pain on micturition. Later, a discharge from the urethra appeared and gonorrhoea was diagnosed. Appropriate treatment was, however, useless, and the diagnosis was altered to that of syphilis. Wassermann's reaction was negative. Lichen planus could be excluded, as there was much infiltration of the glans. Methylene blue staining of the discharge showed epithelial cells and polynuclear leucocytes, but no gonococci. Many tubercle bacilli were found in the sediment of the urine. This suggested the diagnosis of lupus, which was confirmed by the microscopic examination of a small piece of tissue. The circumference of the external urethral orifice was cyanosed, and the distal end of the urethra was densely infiltrated. The glans was covered by a cyanosed eruption consisting of numerous confluent nodules, varying from the size of a pin's head to that of a lentil. At the outer border of the eruption the nodules were less closely packed, and were soft on palpation. Their colour became rusty when anaemia was induced by pressure. A few nodules were also scattered over the foreskin and on the dorsum of the penis. About 1 cm. behind the coronary sulcus there was a tumour as large as the kernel of a hazel nut, covered by cyanosed skin. It fluctuated and yielded pus on incision. A considerable amount of purulent secretion escaped from the urethra when compressed. Palpation of the epididymides and vesiculae seminales showed no abnormality. The lungs also seemed normal. The urine was cloudy and contained many leucocytes and a trace of albumin. The urethroscope showed nodules in both the middle of the pars pendula and in the fossa navicularis, where they occurred separately and in clusters. They were of the size of pin's head, greyish-white, and surrounded by a red zone. Pressure on the prostate forced pus out of a small opening between the colliculus and the sphincter internus. The cystoscope showed the opening of the right ureter to be red and rigid, while the opening of the left ureter was normal. Catheterization of the right ureter yielded tubercle bacilli, and showed a stricture 8 cm. above the bladder. Urine drawn from the left ureter contained no tubercle bacilli. In March, 1912, the right kidney was excised. It was much enlarged, and the upper pole contained numerous tubercles, a few of which were scattered throughout the lower pole. There was a small cavity in the position of one of the upper calyces. After the operation the patient gained 12 kilos. By July, 1913, the lupus of the glans had disappeared completely, leaving a soft scar. The urine was now clear, and an examination of the urethra and bladder showed that here also recovery was complete. It is thus evident that the disease began in the right kidney, whence it extended to the ureter, the prostate and urethra, and finally involved the glans and foreskin. Treatment was confined to removal of the right kidney, and neither tuberculin nor local applications were prescribed. Evidently, therefore, the removal of the right kidney enabled the tissues successfully to combat the remaining disease. Lupus vulgaris of the glans of the penis is exceedingly rare, and when tuberculosis of an internal organ extends to the junction of mucous membrane with skin the result is usually miliary ulceration, not lupus.

121. Vulvo-vaginitis in Young Children.

BARNETT (*Archives of Pediatrics*, September, 1913) gives the results of over a year's experience in charge of a special clinic in the Mount Sinai Dispensary, New York, in the control and successful treatment of vulvo-vaginitis in young children. Every case was carefully examined, studied, and treated, attendance at the clinic being required three times a week, nurses visiting the homes to urge regularity in attendance and to improve the home conditions, especially in getting the children to sleep alone, since many of the cases occurred in families where two or more children slept together and with their parents. The disease varied in duration from one week to several years, the average being eight and a half months. With the patient on the back on a bedpan, and the labia widely separated, a platinum loop was introduced into the vagina for about 1½ to 2 in., keeping well to the posterior wall, and by gently scraping the floor and walls of the vagina the secretion was obtained for diagnosis. Although even in a pronounced gonorrhoeal process the external appearance of the hymen may be normal, in the majority of cases a small amount of secretion is found on the labia, and pus is seen coming from the vaginal orifice, or may be found just behind it, the vagina being a dull pink, with pus and occasionally haemorrhagic spots on its walls. The cervix in all cases was deeply congested with pus issuing from the cervical canal, and superficial ulcerations were occasionally present. Treatment consisted in vaginal douches of 1 in 10,000 permanganate solution given daily by the mother at home, with small daily doses of urotropine internally. At the clinic the treatment by the electric endoscope was carried out three times a week, and after removal of secretion iodine (Lugol's solution) was applied directly to the cervix and vaginal walls as the endoscope was being slowly withdrawn. Fourteen cases treated with vaccines showed no improvement in the discharge. Although with all local methods of treatment discharge soon ceases, this does not always indicate a cure, as smears may remain positive for months after all visible discharge has ceased, though a cure may be assumed after three negative consecutive weekly smears, provided that the case is observed at monthly intervals for some time after. Among general conclusions deduced from observation upon 26 cases, the infection of the cervix and difficulty of reaching the nidus of infection by ordinary methods must be borne in mind, vaginal irrigation being insufficient, and direct applications to the deep point of infection are essential, cures being obtained in a short period of time, while strong solutions can be painlessly applied to the cervix and vaginal walls. For prophylaxis children should sleep alone, should have marked linen not to be used by others even after washing, and should wear a vulvar pad frequently changed. Separate toilets should be provided in schools, and the children should be instructed to spread paper on the seat, and keep their hands away from the genitals, while teachers and parents should recognize that a vaginal gonorrhoeal discharge may be acquired quite innocently.

OBSTETRICS.

122. The Calcium Content of the Blood during Pregnancy, Labour, and the Puerperium.

MORLEY publishes in *Surg., Gyn., and Obstet.*, September 1913, the results of his investigations into the calcium content of the blood during pregnancy and the puerperium. The method employed was that devised by Blair Bell, and the observations were conducted in 63 cases of pregnancy at months varying from the fifth to the ninth, in 2 cases of normal labour, and 47 cases during the puerperium. Morley's results show that there is a lessened amount of calcium in the blood during all these periods. The calcium index in the cases investigated varied from 1.2 to 0.06 crystals per square. Apparently calcium is withdrawn from the maternal blood, but whether it is taken up by the fetus during pregnancy, by the uterus during labour, or by the breasts during lactation, further investigation must show. The author refers to the work of Drennan, published several years ago without the determination of the calcium content of the blood. In these articles various theories are put forward as to conditions possibly dependent upon the abstraction of calcium salts from the mother by the fetus: osteomalacia, large "white kidney," and puerperal eclampsia were all suggested as having a relation to the calcium metabolism. Now that an accurate method of determination of the calcium content of the blood has been devised, Morley suggests that these theories be investigated from a scientific standpoint, and asks whether it is too much to hope or to prophesy that some day the unsettled etiology of the toxaemias of pregnancy may be explained by some disordered calcium economy on the part of the patient.

123. Triplet Tubal Pregnancy.

DIAMANT (*Zentralbl. f. Gynäk.*, No. 3, 1914) operated on a woman aged 34 for pelvic tumour, of the size of a fist, on the right side of the uterus. It had been associated with symptoms of haemorrhage. The operator found much clot and fluid blood in the pelvis and lower part of the abdominal cavity. The right Fallopian tube ran into the coagulum. Tubal abortion had occurred, and three fetuses, each an inch long, had escaped into Douglas's pouch. The right appendages were amputated, a wedge-shaped piece of the right cornu being excised as well. The patient recovered. Diamant recalls three earlier cases. Sänger operated on a case of interstitial gestation. There were twins in the tubo-uterine sac, and a third fetus was discovered in the capillary portion of the tube. Krusen, operating on a case of tubal abortion similar to Diamant's, found three recently dead fetuses in the coagulum. Launay and Seguinot, removing both tubes, found a gestation sac in both, with a single fetus in one and twins in the other.

GYNAECOLOGY.

124. Tuberculosis of Cervix.

PETIT-DUTAILLIS (*La gynéc.*, No. 2, 1913) reports two instances of interstitial tuberculosis of the vaginal portion of the cervix, where tubercle is deposited in the fibro-muscular tissue, the mucosa being at first intact, though it soon ulcerates. The first case was clear. The patient was 41 years old and had never seen the periods, but at 29 metrorrhagia set in and lasted three days. Ulceration was discovered and the galvano-cautery applied, but fresh bleeding occurred. Glycerine plugs were tried for six months, but at the end of that time the ulceration was worse and inoperable cancer was diagnosed. The cautery was twice applied at a month's interval. Then the metrorrhagia ceased and cicatrization began and soon was complete. It was now noted that the patient's husband was syphilitic, and the lesion was suspected to be specific. For six years the patient remained well, but then profuse leucorrhoea developed. Petit-Dutaillis detected an irregular, hard, tuberous, ulcerated mass, which did not tend to bleed on touch, completely surrounding the os externum. A portion excised showed all the histological elements of tubercle. The cervix was amputated, but recurrence occurred within six months: the patient refused to permit hysterectomy. The second patient was subject to tuberculous disease of the bones and had undergone several operations. Leucorrhoea set in and ectropion of the os externum was detected with soft turgid masses projecting from the surface. They bled readily on touch, unlike the first case. High amputation of the cervix was performed. The author considers that hysterectomy is the more advisable operation for tubercle of the cervix.

125. Radiotherapy in Uterine Myoma.

VON SEUFFERT (*Arch. d'électr. méd.*, October 25th, 1913) gives an account of the radio-therapeutic technique for uterine myoma as it is followed in the clinic of Professor Döderlein of Munich. The rays employed have a hardness of 9 to 10 on the Wehnelt scale (or 7 to 8 Benoist). The area to be irradiated is generally divided into fields each of 25 sq. cm., and on each of these fields a dose of 10 to 15 Kienböck X units—10 X being equal to 5 Holzknecht, or the dose represented by the Sabouraud B tint—is applied. This dose is obtained, according to the state of the tube, in from five to fifteen minutes. The skin-focus distance with ordinary tubes is 18½ cm. As filter a 3 mm. sheet of aluminium is employed, and to this is added, in order to avoid any secondary radiation excited by the aluminium, a soft filter consisting of some thicknesses of photographic paper enclosed in cloth. Between the soft filter and the aluminium a loofah sponge is interposed, its purpose being to secure better fixation for the filters, which are mounted on the localizer. The vaginal irradiation is practised with a speculum of lead-glass, and lasts from twenty to thirty minutes. In this manner twenty fields or more are irradiated at one series, given generally in a single day in two sittings, one in the morning and the other in the afternoon, the patient having an interval of some hours' rest between them. The total dose thus given may be 200 or 300 X. An interval of at least three weeks elapses before a second series of irradiations is undertaken. The amenorrhoea, or, according to the case, the oligomenorrhoea, is usually obtained in from six to eight weeks.

THERAPEUTICS.

123. Early Diagnosis and Treatment of the Nervous System in Syphilis.

P. RAVAUT (*Ann. de méd.*, Paris, 1914, I. 49) points out the importance of diagnosing syphilis of the nervous system at the earliest possible moment—the preclinical period, as he calls it. This is the period before any localizing physical signs make their appearance, during which, however, meningeal and vascular syphilitic lesions may be in full swing. He points out, again, that a negative Wassermann reaction given by the blood affords no evidence as to whether there is or is not active syphilitic infection of the central system. The cerebro-spinal fluid may give a positive reaction when that given by the blood is negative. He attaches great importance to the method of cytodiagnosis, rendered practicable by himself and Widal in 1900 and 1901; the cerebro-spinal fluid, as soon as it has been collected, is centrifugalized, and the sediment is spread on slides, while the supernatant fluid is reserved—half for a Wassermann reaction and half for an albumin determination by the method of Mestrezat. Very various results are obtained when the cerebro-spinal fluid is examined at different stages of syphilitic infection. In mild degrees, when the contents of the spinal theca are but little involved, there is a small increase in the amount of albumin and a small excess of lymphocytes. When the infection is severe, Wassermann's reaction is positive, the quantity of the fluid itself is much increased, it contains much albumin and many cellular elements (lymphocytes, polymorphonuclears, large mononuclear cells, plasma cells, sometimes cosinophiles). If a case is followed up for years the gradual changes that take place in the cerebro-spinal fluid may be striking; if improvement takes place plasma cells may be seen to give way to lymphocytes, and the lymphocytes to become smaller in size and fewer in number. In cases getting worse the increase in the number and variety of the cells can be noted; the amount of albumin increases, and Wassermann's reaction becomes positive when it reaches a certain proportion. Ravaut lays stress on the importance of lumbar puncture in the early diagnosis of syphilis of the central nervous system, which is affected in no less than 65 per cent. of cases with secondary symptoms without there being any clinical sign of such infection. The disease at this stage is, in fact, latent; yet it calls for immediate treatment once it has been diagnosed by examination of the cerebro-spinal fluid. Ravaut goes on to quote from the literature cases in which arsenical drugs such as atoxyl, salvarsan, and neo-salvarsan have been introduced for curative purposes into the spinal theca, by injection after lumbar puncture and the withdrawal of more or less of the cerebro-spinal fluid. His own method is to inject

from 3 to 12 mg. of neo-salvaran dissolved in a sterile 6 per cent. solution; he has found that such hypertonic solutions are better borne by the meninges than distilled water or isotonic solutions. The solution is made up just before use; from 1 to 4 drops of it, and no more, are injected. A special needle is employed, the terminal ½ in. being only half the diameter of the rest of it, so that the hole made in the dura mater may be as small as possible. The needle is made of platinum and osmium. After the injection has been made the patient is put head downwards in the Trendelenburg position, so that the neo-salvarsan may gravitate towards the head. This method of treating syphilis of the nervous system is, of course, still on its trial; Ravaut recommends it strongly, for it ameliorates the pathological condition of the cerebro-spinal fluid, estimated as has been described above, more rapidly than any other method of administering anti-syphilitic remedies. He gives details of 9 cases in which sixty-three injections were thus given, at intervals of a week in each case, from 3 to 6 mg. being the usual dose. Intravenous injections of 30, 45, 60, or 90 cg. of the drug, as the case may be, may be given at the same time, or alternately with the intraspinal injections.

127. Pituitary Gland Extract.

R. VON DEN VELDEN records some observations and experiments made with the view of ascertaining the effect of pituitary gland on the renal function (*Berl. klin. Woch.*, November 10th, 1913). Although these substances are in free use in obstetric practice, our knowledge of the pharmacology of the active principles is not extensive. It has been stated that the extract effects a rise in diuresis in animals which is associated with an increase in volume of the kidney. Some authors describe a temporary vaso-constriction followed by a vaso-dilatation of the renal vessels. The author found that in normal persons the subcutaneous injection of 2 c.cm. of hypophysin or 1 c.cm. of pituitrin decreases the secretion of urine, and at the same time the actual amount of sodium chloride. The total nitrogen excretion and the phosphoric acid remain undisturbed. After the injection of pituitrin or hypophysin, and to a less extent after the ingestion of the former by the mouth, the kidneys of patients suffering from diabetes insipidus excrete a urine which is two or three times as concentrated as before. This may be expressed as a diminution of the excretion of water. The patient thus treated improved subjectively as the quantity of urine became less; the thirst became less, the feeling of dryness of the mucous surfaces disappeared, the appetite improved, and water was less frequently passed in the night. As soon as the treatment was interrupted the old symptoms reappeared in their original severity. The change in the urine affected the chlorides, the phosphates, and the total nitrogen in their percentage values but not in their absolute quantities. It therefore appears from these observations that extracts of the pituitary gland produce a diminution of quantity of urine in man, which is in fact limited to the water. The author is, however, disinclined to formulate theories as to the significance of the facts, either from a therapeutic or from a pharmacological point of view.

128. Pilocarpin in Parapsoriasis.

K. HERXHEIMER AND H. KÖSTER (*Berl. klin. Woch.*, December 1st, 1913) gave pilocarpin in a case of psoriasis to see whether the increased perspiration induced would relieve the troublesome itching. They found that the rash itself improved so much under this treatment that they regard it as curative as well as palliative. One patient was a servant, aged 39, whose skin had become scaly and had itched somewhat, particularly in warm weather, twelve years earlier. She had been treated in hospital ten years earlier, but the condition soon relapsed. Subsequently she had been repeatedly under medical treatment, without any permanent result. The organs of respiration, circulation, and digestion were healthy, and the urine contained neither albumin nor sugar. The rash, which affected the whole body with the exception of the face, the palms of the hands, and the soles of the feet, consisted of small papules, ranging from the size of a millet seed to that of a lentil. They were rust-coloured, raised, more or less infiltrated, and almost invariably covered by scales, the removal of which caused no capillary haemorrhage. The distribution of the papules was irregular, and the skin between them looked somewhat dry. Dermographia was marked. Parapsoriasis *en gouttes* was diagnosed. Arsenic was given internally, and quartz light, chrysarobin, and liquor carbonis detergens were applied in different places. The quartz light provoked a dermatitis, followed by complete desquamation and formation of new skin, from which the parapsoriasis was absent. The chrysarobin and the liquor carbonis did not cure the rash. An intramuscular injection of 0.01 gram of pilocarpin hydrochloricum was followed in five minutes by violent perspiration and a flow of saliva. The injections were repeated at intervals of two to three days without general disturbances. After the sixth injection the rash had almost completely disappeared and the treatment was discontinued, as the patient could no longer stay in hospital. In another case a servant girl, aged 19, had recently developed parapsoriasis involving the whole body. Treatment was limited to eighteen injections of 0.01 gram each. After six weeks of this treatment there was scarcely a trace of the rash. How far these results are permanent remains to be seen. The authors are not certain as to the mode of action of pilocarpin in parapsoriasis. Their patients tolerated the drug well, but it is contraindicated in heart disease, congestion of the lungs, and pregnancy.

129. Melubrin.

MELUBRIN is the sodium salt of a combination of amidomethane sulphonic acid with antipyrin, and possesses chemical properties which suggest better therapeutic results than those obtained from other antipyrin combinations or substitutes. Several authors record their favourable experience of this drug in rheumatism, sciatica, various infective processes including tuberculosis, and in reducing the lightning pains of tabes dorsalis. Hahn further found that a distinct advantage over other salicylate preparations was that melubrin could be given intravenously, without any untoward symptoms being produced. K. RIEDEL (*Muench. med. Woch.*, November 4th, 1913) has given this substance by the mouth, and by various methods of injection, and has only once seen the slightest toxic symptoms; these, however, were of short duration. In one case of acute rheumatism, the pains and swelling disappeared after a single intravenous injection of 0.75 gram. But as a rule, much larger and repeated doses are required to attain this effect. He has made the observation that the therapeutic effect is just as good after subcutaneous or intramuscular injections, and now strongly recommends this method as being simpler and less tedious than the intravenous method. He gives from 2 to 3 grams twice or three times daily. He finds it useful also as an antipyretic and antineuralgic. In conclusion, he points out that powder and not tablets must be used for preparing solutions for injection, as the latter contain some starch.

PATHOLOGY.

130. Infection Carriers of Poliomyelitis.

J. BRUNO has had experience of two cases of epidemic poliomyelitis in which the children affected had not come into contact with other children, but had obviously been exposed to the infection present in some ducks (*Muench. med. Woch.*, September 9th, 1913). The association with an infection of domestic animals has already been mentioned by a few authors, including Behrmann-Kungsör, Caverley, Krause, Wilke, and Sturm. In the present instance Bruno records that the father of the little patients had recently received a number of ducks from Elsen. One morning a white duck was found dead; a week later another white duck was found to be paralysed, although it still ate well. This duck was put into the house for three days and then killed and eaten. A week later still two brown ducks sickened with the same symptoms, and at a later date a third one followed suit. The three ducks recovered. Another duck was also noticed to limp a little. In order better to investigate this source of infection, the three ducks which recovered were sent to the Heidelberg Pathological Institute for laboratory investigation. The author is able to record two further cases of epidemic poliomyelitis which were associated with paralytic affections of domestic animals—one in a cow, which died with marked paralysis, and the other in a goat, which also died paralysed. In these cases also the epidemic infections in children were isolated cases. Bruno is convinced that in his own cases the infection took place from the ducks, and in view of this experience he publishes the facts in order that others who are called upon to treat isolated instances of this disease may be induced to inquire whether any domestic animals in the vicinity of the patients had suffered from paralytic diseases shortly before the manifestation of the human infection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

131. Bradycardia in Intestinal Affections.

ALTHOUGH bradycardia is less common than tachycardia or arrhythmia in digestive conditions, MAURICE LOEPER (*Presse Médicale Belge*, November 9th, 1913, p. 163) has seen it in many cases of gastric neuroses and ulcers, especially of the lesser curvature. But the bradycardias are commoner in intestinal affections. There are, first, those which are consecutive to simple mechanical disturbances or to discrete irritations of the intestine, enteritis, or lithiasis; a personal case is detailed, cured by a severe regimen of intestinal disinfection, hydrotherapy, and valerian and belladonna in combination; similar cases were recorded by Babcock in 1895 and by Taylor in 1908. Such bradycardias depend on the sole influence of an exaggeration of intestinal disturbances long felt by the patients; sometimes an artificial irritation, such as that of an ill-timed and too violent purgation, is the determining factor of the onset of bradycardia. Such a case was that of David Singer's patient who, after three days' constipation, took a strong purge, and felt pain in the head and syncope of forty minutes' duration, with arrest of pulse and heart, which beat no faster than four times in a minute! Recovery followed after a series of convulsive attacks. Loeper describes a personal case of bradycardia in intestinal cancer, and another occurring in appendicitis. A case of Vaquez is quoted—one of persistent bradycardia of forty beats a minute, with slight syncopal attacks in a nervous patient in the course of appendicitis; atropine brought it up to eighty beats a minute, and everything cleared up. Loeper points out that the bradycardia of intestinal affections is a true bradycardia, and not merely a bradysphygmia: it is one accompanied by malaise, vertigo, lipothymic tendencies, and even syncope: but it is intermittent, coming on in attacks, always transitory, never persistent, and disappears with the cessation of the attacks or the recovery of the intestinal or appendicular lesion. We have two varieties of bradycardia: (1) the muscular, due to lesion of the bundle of His, and (2) the nervous, due to a lesion or irritation of the vagus nerve. The majority of the intestinal bradycardias are of the nervous variety, as shown by the tracings, the intermittent nature of their cardiac slowing, their cessation under atropine, the exaggerated degree of cardiac slowing which is seen in them on compression of the eyeballs, and sometimes by the rapid improvement produced by 20-drop doses of tincture of belladonna, as in two of Loeper's cases. Occasionally, however, appendicular bradycardias appear to be due to a momentary transitory superficial irritation of the cardiac muscle, and, in consequence, of the bundle of His. The vagus nerve is involved in abdominal affections, sometimes by compression, or by inflammation, toxic impregnation, toxi-infection, or invasion of lymph-nodes: and it is easy to see how adherent cholecystites, colites, appendicites, etc., involve the vagus filaments, and so slow the pulse, especially when the lesions extend to the upper part of the abdomen. Roger found that extracts of the intestinal contents, experimentally injected, act energetically on the pulse just as injection of intestinal poisons does, and that the resulting phenomena are analogous to those of section of the vagus; we can hardly doubt, then, that the same poisons of the intestinal contents and mucosa can affect the vagus in man also. Loeper thinks it is possible that bulbar lesions, compressions of the vagus in neck or mediastinum, or primary neuritis of the vagus may provoke simultaneously both bradycardia and intestinal reactions, but he admits that this is not yet certain; so that, apart from the bradycardias secondary to intestinal affections, there may be primary ones in which the digestive and the vascular lesions represent two parallel effects of the same irritation or lesion of the bulb or the vagus nerve. He insists on the need for careful abdominal examination in all obscure cases of nervous bradycardia. Prognosis is good when the intestinal bradycardia is transitory and is a purely vascular symptom without syncopes or vertigos; but it is bad when the bradycardia is persistent, or occurs too frequently, or gives rise to lipothymic states (depression), or affects the nervous system of impressionable patients. If it be purely reflex (a difficult thing to prove), it is good; if due to toxic or infective impregnation, or to a neighbouring compression or lesion, it is bad; it is good when clearly neurogenic, bad when myogenic. But, as bradycardia is most often nervous, it is not usually of itself a grave condition. The treatment of intestinal bradycardia is that of the nervous form—valerian and belladonna combined, in doses of 5 cg. of the former and 2 cg. of the latter, three or four times in the twenty-four hours, with complete rest in bed. In severe cases atropine may be given: 1 or 2 mg. by mouth, or better, by hypodermic injection; locally, hot compresses or spirit compresses. The treatment of the digestive condition, on which the bradycardia depends, will vary according to its nature, whether it be ulcer, cancer, local or generalized infection of the digestive tract; in constipation we must forbid all violent treatment, such as too early evacuation, which may evoke bradycardia and its accidents. Loeper advises a careful examination of the vascular system, auscultation of the heart, examination of the urine, and the taking of the arterial pressure; for it often happens that hypertension or renal insufficiency gives to a bradycardia its true character and prognosis. He gives details of several excellent cases, both personal and from the literature.

132. The Respiratory Sounds.

BUERI (*Rif. Med.*, December 20th, 1913), discussing the various sounds heard during respiration, physiological and pathological, says that the vesicular murmur is due to the impact of columns of air. The more central strata in the column of moving air impinging on the peripheral layers of air which are more or less motionless, and where the bronchi divagate either by flexure or by bifurcation, reflex waves are set up, and it is this combination of the central moving column of air and the reflex waves which causes the so-called vesicular murmur. Many other theories have been suggested, but, in the author's view, this is the most rational. The laryngo-tracheal murmur originates in the larynx, and differs more in quality than in intensity, the inspiratory sound being the more intense in accordance with the physical laws governing the intensity of a sound and the amplitude of the wave. The bronchial murmur (physiological as well as pathological) gains its greater intensity as compared with the laryngeal from the resonance of the pharyngeal cavity. The greater intensity of the expiratory murmur in pathological bronchial breathing probably depends on the closer association of the hepatized lung tissue with the thoracic walls during expiration, which renders the conduction of sound more easy. Where the lung is compressed and atelectacic, associated with a pleural effusion or with adhesions, the bronchial breathing may be louder during inspiration. In his case the fluid and compressed lung make one single conducting body.

133. Sporotrichosis of the Hand.

PETGES (*Journ. de méd. de Bordeaux*, October 13th, 1913) discusses the question of the relation of sporotrichosis to cases frequently diagnosed as verrucous tuberculosis. He relates the case of a man aged 62 whose family history was excellent, and who up to the age of 57 had enjoyed good health. About that time he had been treated for diabetes. He complained of the progressive invasion of the back of both his hands by round or oval plaques with raised borders. These were reddish in colour and papillomatous, giving a finely granular appearance to the surface. There was a number of greyish crusts loosely adherent to the borders of the plaques, of which there were two on the right hand, one of them being the size of a florin. On the left hand there was one only, covering the whole of the ulnar side of the dorsum. The treatment consisted in the application of an iodized pomade, 1 per cent., and the administration of potassium iodide 4 gram per diem. The improvement was rapid and decided. Cultures made upon Sabouraud's malted gelatine medium did not, however, in this case present the usual character of sporotrichosis. The author suggests that a few years ago this would have been diagnosed as tuberculosis, but although in this particular case the bacteriological finding was negative, the author refers to other cases in which laboratory methods and the treatment already described cleared up the diagnosis.

SURGERY.

134. Sciatica with Kyphosis.

According to J. Hnátek (*Deut. med. Woch.*, October 9th, 1913), sciatica is almost invariably followed by scoliosis, with the concavity of the spine facing either towards or away from the affected side. In either case the scoliosis affects the lumbo-dorsal portion of the spine, and a compensatory scoliosis in the upper portion of the spine enables the patient to maintain the upright position. The cause of this scoliosis is not fully understood. Kyphosis may be present in cases of bilateral sciatica, but these are exceedingly rare. The author can find only 3 published cases of kyphosis as a sequel to unilateral sciatica, and in these scoliosis was also present. In one the sciatica was due to pressure by a cavernous lymphangioma, in another the sciatica was probably a true neuritis, and in the third hysteria cannot be excluded. Little is therefore known of the causes of kyphosis in sciatica. The author was consulted by a confectioner, aged 38, whose father and three brothers and sisters had died of tuberculosis. He was a moderate drinker, and denied infection with venereal disease. In December, 1906, he began to feel tiredness, most marked in the legs. He was overworked, and one morning he noticed pain in the hips. This disappeared on walking. Shortly before Christmas he felt stabbing pain in the right hip, extending down the back of the thigh to the knee. Early in January he could no longer walk, and was unable to stand upright on account of the pain. This disturbed his sleep, and he could only obtain relief by adopting the "a la vache" position. On examination the trunk of his body was carried forward, and formed an angle of 120 degrees with the thighs. The upper portion of the anal furrow deviated slightly to the left. The gluteal folds were but slightly asymmetrical, and the spine was nowhere tender. The right sciatic nerve was tender from its exit to the back of the knee, the maximum tenderness being between the great trochanter and the tuber ischii, and below the tuberosity of the fibula. Sitting down was painful, and he rested on the left ischial tuberosity. When he walked he took longer steps with the left than with the right leg, which was kept flexed at the knee-joint. When he stood still, he steadied himself by holding the right knee with the right hand. The patellar reflexes were much increased. Extension of the body could only be maintained on account of the pain for a short time, during which the thoracic vertebrae showed lordosis, while the lumbar vertebrae showed kyphosis. The galvanic current was prescribed twice a week, and the internal administration of sodium salicylate was supplemented by hot baths and compresses. After four weeks he could keep his body erect, the pain in the sciatic nerve had diminished, and it was tender only in the middle of the thigh and at a level of the tuber ischii. After walking for 10 minutes without pain it would return, and force him into the former kyphotic position. A complete recovery was effected after four more weeks. Hysteria can certainly be excluded. As the kyphotic position invariably relieved the pain, it is probable that a sensory branch of the sciatic nerve in contact with the sacro-lumbar muscles was diseased, and that contraction of these muscles compressed this branch.

135. Chronic Exudative Otitis Media.

Reik (*Johns Hopkins Hosp. Bull.*, September, 1913) discusses the value of naso-pharyngeal surgery in the treatment of chronic exudative otitis media, and the effect upon the ear which can logically be expected to result from such treatment when the chronic exudative otitis media has had its origin in, or is still excited by, abnormal naso-pharyngeal conditions. From observations upon 34 cases occurring in private practice, and strictly limited to those in which a simple chronic exudative (catarrhal) otitis media was dependent solely upon some abnormality of the nose or throat, he concludes very emphatically that in such cases the disease can be arrested in its progress, the progressive deafness stopped, further loss of hearing prevented, and in some instances material improvement gained, but that success depends upon a proper performance of naso-pharyngeal operations to insure complete and thorough eradication of the abnormality without any injury to neighbouring normal structures, and he quotes instances bearing out his conviction that the explanation of failures and disappointments lies in incomplete or imperfectly performed surgical procedures involving injury to the faucial pillars, etc. Since the important facts to be ascertained are whether or not the hearing improves, remains stationary, or becomes worse immediately after operation, and what relative condition of hearing is obtained at a later period, it is necessary to have a uniform test, and for that purpose a self-controlled tuning fork of the middle register (C^2 = 512 v.s.) was employed. This fork is set in action by drawing the prongs between the thumb and forefinger, so that the tips of the prongs are brought together by this pressure and spring apart as they escape therefrom, and by this means any control on the part of the examiner is avoided, since whatever pressure is exerted the prongs can only be brought into contact, and no matter how quickly released they can but spring apart. Such a fork can be heard by the normal ear for exactly twenty seconds at 1 in. from the meatus, and is a reliable practical test of scientific value in estimating the direction of the progress of aural disease. In all of the 34 cases there had been increasing deafness, and following operation upon the naso-pharynx there was immediate improvement in 32, and in none was there immediate loss of hearing, while later observations showed that 26 remained improved, 4 showed additional improvement, and in only 2 did the first improvement lapse back to the original state of hearing. The naso-pharyngeal abnormalities corrected included hypertrophied turbinates, deflected septa, hypertrophied or submerged diseased tonsils and adenoids, and the above figures show that in otherwise uncomplicated cases of chronic exudative otitis media such operations will check the advance of the aural disease, arrest the progress of deafness, and in some instances result in improvement of hearing.

136. Liberation and Preservation of Great Omentum in Colectomy.

Lardennois and Okinczyc (*Bull. et mém. de la Soc. Anat. de Paris*, October, 1913) show the importance of setting free the posterior layer of the great omentum so as to save it when the transverse colon is removed partially or otherwise. They point out how the anterior two folds of the omentum pass from the lower border of the stomach, bearing the branches of the gastro-epiploic vessels which nourish them. The folds turn up till they reach the transverse colon, and then pass over the transverse mesocolon to the posterior parietes. This is the portion of the omentum Lardennois and Okinczyc lay stress upon. It adheres to the upper layer of the mesocolon, but its vascular supply is from the gastro-epiploic vessels whilst the mesocolon is supplied by the colica media artery, and the few vessels in the connective tissue uniting these folds hardly require ligature. Hence, when stripped off the mesocolon, the posterior portion of the omentum is not deprived of its vascular supply. It is a mistake to suppose that even in the adult this portion is blended intimately with the mesocolon in the way that all the omental folds are blended in the pendulous portion of the omentum below the transverse colon. On the contrary, it is not very difficult to strip it off the mesocolon if the operator begins at the hepatic and splenic flexures, and then separates the middle portion of the adherent folds. The most likely accident, especially when the operator begins in the middle, is the laceration of the omental folds so that the omental cavity behind the stomach is opened up, but there is little fear of the transverse mesocolon being torn. The authors declare that, even where local inflammatory changes existed, they have succeeded in isolating the great omentum with its epiploic vessels intact, and saving it entire. After the separation the transverse mesocolon can be clearly inspected, and its vessels stand out in relief, and can be ligatured separately. The advantages of saving the omentum, where malignant or tuberculous disease is absent, are evident.

137. Osteitis Fibrosa of the Cranium.

Ali Krogius (*Finska Laekaresaellskapets Handlingar*, September, 1913) published in 1902 a case which was diagnosed as one of spindle-celled sarcoma of the frontal bone. The macroscopic and microscopic appearance of the excised growth differed considerably from that of a typical sarcoma of bone; and the growth had increased but slowly. It was, therefore, considered relatively benign. Subsequently a disease has been described as "osteitis fibrosa." It is characterized by decalcification and lacunar resorption of bone, accompanied by the formation of new osteoid tissue and the conversion of bone marrow into fibrous connective tissue. Under the microscope this looks like a spindle-celled sarcoma. The progress of the disease is slow, and is often accompanied by the formation of cysts. Early in 1913 the author again saw his patient, who wished to have the disfigurement, caused by the operation eleven years earlier, removed. As he was in perfect health, it was evident that the original diagnosis of sarcoma required revision. The microscopic sections of the growth made in 1902 were again scrutinized,

when it became evident that the structure of the tumour coincided with the description given of osteitis fibrosa. In 1902 a large cavity in the right frontal bone was opened and found to extend into the neighbouring bones. It contained a soft substance, which extended to the dura mater, and which was removed as far as possible. The anterior and the lower walls of the cavity, which had displaced the right eye considerably, were also removed. Eleven years later the Roentgen rays showed the absence of the right frontal sinus. A shelf of bone, projecting from the upper and inner angle of the right orbit, was disfiguring, and was therefore removed. Its substance was spongy, and consisted partly of the same substance as had been removed at the first operation. Its microscopic structure was also the same. The bones adjoining this shelf were, however, normal. The author has collected records of 7 similar cases, from which he concludes that the disease usually arises in infancy, and has lasted several years before an operation is performed. Five of these patients were male and 2 female. The disease was limited to the left side of the head in 5 and to the right side in 2 cases.

OBSTETRICS.

138. New Ecbolic Preparations.

G. BARGER AND H. H. DALE isolated a highly active basic substance from ergot of rye, which they identified as imidazolaethylamine. The physiological action of this substance has been shown by Popielski to consist in depressing blood pressure and in causing a powerful contraction of the uterine muscle, both in a pregnant and in a non-pregnant state. Dale further recorded the discovery of another amine—namely, p-hydroxyphenylaethylamine—which he and Barger had isolated from ergot. This substance bears considerable resemblance to adrenalin. Ackermann showed that it could be prepared from tyrosin by splitting off a carbonic acid group. Barger and Dale further described a weakly alkaline alkaloid, ergotoxin, which was extracted from ergot. Ergotoxin acts generally on unstriped muscle, producing a marked constriction of vessels, and the appearance of ergot gangrene is ascribed to it. Ergot, further, contains a substance called cholin, which depresses blood pressure, but which has no ascertainable action on the uterine muscle. Of these substances, β-imidazolylaethylamine and p-oxyphenylaethylamine are the most important ecbolics. Bayer and Co. have combined these two substances in proportions of 0.0005 gram of the former and 0.02 gram of the latter in 1 c.cm. of water, and speak of the combination as tenosin. Since the poisonous element of ergot is excluded, it was to be expected that this combination would yield the powerful ecbolic action of ergot without its disadvantages. R. ZIMMERMANN reports on its clinical uses (*Muench. med. Woch.*, December 2nd, 1913). After intramuscular injection powerful contractions of the uterus take place usually in from two to five minutes. In some cases, however, the action only lasts for from twenty to forty minutes, and a second injection is rendered necessary. In 2 cases he observed a complete failure of the preparation to effect the contractions. The dose injected was 1 c.cm. No local signs of irritation or general toxicity occurred. At times the drug was given by mouth in doses of from 15 to 30 drops three times a day. The author does not consider that the action is either more powerful or more rapid than that of the ordinary extract of ergot. The advantage of this preparation, however, lies in the fact that its constitution is constant, and that it is therefore possible to control the dosage with exactness. On the other hand, it is dearer than the extract. W. RÜBSAMEN (*Muench. med. Woch.*, December 9th, 1913) states that when tested by the graphic method neither tenosin nor uteramin produce any effect on the uterine muscle. He further points out that β-imidazolylaethylamine has led to dangerously toxic effects in the hands of some observers. From a practical point of view the combination of pituitrin, which acts promptly but very transiently, and secacornin, which acts slowly but for a long period, does not appear to satisfy all the requirements of a good ecbolic. Hoffmann La Roche have made various combinations for him of β-imidazolylaethylamine (or histamin), p-oxyphenylaethylamine (or tyramin), phenylaethylamine and isoamylamine. He has experimented with these various combinations, and records that one of them, which he prefers to call E VII for the present, without giving its composition, has proved itself suitable for clinical employment. From his curves of the uterine contractions, he deduces that during the third stage of labour 1 c.cm. of the solution given by intramuscular injection produces a tetanic contraction of the uterine muscle within one or two minutes, which gradually gives place to regular periodic contractions with good tone of the muscle. The effect lasts for about half an hour. Repetition of the injection produces renewed action. In this respect E VII is very similar in its action to pituitrin. During the actual labour E VII acts more promptly and more effectively on the uterus than pituitrin. Having satisfied himself that the action of this combination of the four substances named above was satisfactory in his experiments, he applied it in suitable cases, and was especially pleased with the result during labour. More recently he has added to the combination 1 c.cm. of a secacornin preparation, with excellent results. W. LINDEMANN and B. ASCHNER (*Muench. med. Woch.*, December 16th, 1913) have applied a special method of determining the action on unstriped muscle and publish the curves obtained thereby with a number of substances. They found that histamin produced the most powerful vaso-contracting action, but demonstrated that a secondary insusceptibility to the drug takes place. Pituglandol proved itself the most powerful drug in producing contractions of unstriped muscle generally, but this also produced a secondary insusceptibility. Of enteroglandol, pancreoglandol, thyreoglandol, epiglandol (pineal body extract), etc., thyreoglandol and pancreoglandol appeared to be the most active. Enteroglandol was tested clinically, and proved to possess a marked ecbolic action when given during the expulsion period. The effect, however, in some cases was unsatisfactory, and in summing up the results of their observations they conclude that pituglandol is the most reliable ecbolic preparation of the series. They discuss the possibility of the action of these organ extracts being due to the presence of some proteinogenic amines, such as histamin.

GYNAECOLOGY.

139. Atropine in Dysmenorrhoea.

WHILE investigating the causes of bradycardia and arrhythmia in the puerperium, J. NOVAK (*Wien. klin. Woch.*, December 11th, 1913) found that the subjects of this condition, which he traced to increased excitability of the vagus, were frequently also the subjects of dysmenorrhoea. It was therefore natural to suppose that this was due to excessive irritability of the involuntary nervous system and that atropine would accordingly be beneficial. It has lately been shown that this drug in small doses stimulates and in large doses paralyses the movements of the uterus. This application of atropine is not altogether new, and Drenkhahn has lately injected a watery solution of atropine into the cervix, or has inserted tampons soaked in a solution of atropine into the posterior vaginal fornix. The results were most encouraging. The author prefers to give atropine by the mouth or rectum, for, though the direct application of atropine to the uterus ensures a more intensive action with a relatively small dose, yet the disadvantages of this method, particularly in unmarried women, are obvious. Out of 38 cases of dysmenorrhoea the pain was continuous during menstruation in 2 cases, and in 1 case the character of the pain was not defined by the patient. In the remaining 35 cases the pain was spasmodic, suggesting colic or labour pains. In 30 cases the atropine reduced the pain to a negligible quantity or cured it completely. Backache and a sense of tension in the lower abdomen were scarcely affected by the drug. In 7 cases it was ineffective. Among these were the two cases in which the pain was continuous, not intermittent. Possibly some of the failures may have been due to an unsuitable dosage, for in small doses atropine has a stimulating effect on the involuntary nervous system. It is not surprising that the drug should fail in a certain percentage of cases of dysmenorrhoea, for this name probably covers various conditions due to many different causes, such as neurasthenia, infantilism, mechanical stenosis, and other anatomical changes in the uterus, hyperaemia, spastic contraction and inflammatory changes of the uterus. It is not clear how atropine relieves the pain of menstruation. It may reduce the spasmodic contractions of the uterus, and it may also check spasm of the uterine vessels, to which some authorities attribute the pain in certain forms of dysmenorrhoea. A useful supplement to the atropine is uzara, which has been experimentally shown to stimulate the inhibitory fibres of the splanchnic system. As atropine paralyses the excitor fibres, the successful combination of these drugs is rational.

THERAPEUTICS.

140. Protective Inoculations against Varicella.

Although chicken-pox is usually a very mild disease, C. A. Kling (*Berl. klin. Woch.*, November 10th, 1913) points out that severe cases appear from time to time, and there may be serious complications and sequelae. For this reason every effort should be made to check the spread of the disease. In August, 1913, an epidemic of chicken-pox broke out in the General Hospital for Children in Stockholm; there were 44 cases. Regarding this as a good opportunity of testing the efficacy of preventive vaccination, he therefore vaccinated a number of healthy infants; of these 58 responded well, while only a few proved resistant. The lymph was obtained from a varicella vesicle with perfectly clear contents, and the vaccination was performed in the same manner as for small-pox. No reaction was seen until the eighth day, when one or more small red papules appeared. The next day a typical varicella vesicle was observed on the papule. The red zone or areola increased in size during the following few days, when it began to dry up; a small, brown scab formed, which separated in about two and a half weeks. Kling succeeded in vaccinating from arm to arm through several generations. The last series of inoculations presented exactly the same appearances as the first. Moreover, the majority of the infants vaccinated in this manner were successfully vaccinated against small-pox within a few weeks. In a few cases the local reaction was accompanied by a very mild generalization of the rash, without serious disturbance of the health. Kling is inclined to regard this as a modified attack of true varicella rather than a generalized form of vaccinia. It was observed in 6 of the 58 infants. He expresses the opinion that these infants were rendered refractory toward infection of varicella: 31 of 95 infants in the two wards in which the epidemic broke out were vaccinated. Of these 31 infants, only 1 was subsequently attacked with varicella, and the attack in this case was very mild indeed, the rash being fairly profuse, but no general disturbance or fever being noted. On the other hand, 44 of the 64 not vaccinated infants were attacked, several of whom had a sharp attack with high fever.

141. Vaccine Treatment of Gonorrhoea.

O. Sachs (*Wien. med. Woch.*, November 15th, 1913) has treated 58 cases of gonorrhoeal urethritis, epididymitis, funiculitis, prostatitis, and arthritis with intramuscular injections of a vaccine. In 50 cases Höchst's gonargin was used, in 4 cases Bruch's arthigon was prescribed alone, and in 4 other cases these stock vaccines were combined. The first injection of gonargin contained 5 million germs, the second injection given two days later was twice as strong, and by the time that eight injections had been given the dosage had risen to 50 million germs. In 8 cases, including 7 cases of epididymitis, the patients did not continue the treatment, the efficacy of which must, therefore, be judged by the remaining 50 cases. Five patients, or 10 per cent. of the total, did not completely lose their urethritis, but the epididymitis (3 cases) and arthritis (2 cases) disappeared. Twenty-nine patients, or 58 per cent. of the total, showed improvement. These included 1 case of urethritis, 2 cases of prostatitis, 2 of arthritis, and 24 of epididymitis. This usually showed diminution of pain and tension after a few injections; but even after their completion the epididymis was more or less infiltrated. Sixteen patients, or 32 per cent. of the total, were not cured. In this category 2 cases of epididymitis showed no improvement, while in 12 cases the disease spread from one epididymis to the other during or immediately after the treatment with gonargin. The author concludes that this treatment is better than any other for arthritis. Most cases of epididymitis improve, but only a few recover under this treatment, which is no improvement on older methods as far as urethritis and prostatitis are concerned. The treatment may be ambulatory, for the reaction is not severe, and, in the author's experience, was limited to a rise of temperature, except in 1 case, which showed transitory general malaise. The long time required for this treatment as compared with older methods, reduces its value for insured patients. The author's conclusions coincide with those of Volk and Oppenheim. Before the treatment is introduced to general practice, the conflicting claims for stock and autogenous vaccines must be settled.

142. The Action of Penetrating Rays on the Blood-forming Organs.

H. Heineke (*Muench. med. Woch.*, December 2nd, 1913) expresses some alarm at the tendency of clinicians to use enormous doses of Roentgen and radio-active rays in the treatment of disease, and raises the question whether a damaging effect may not be produced in the blood-forming organs in this manner. He has experimented on small animals, and has obtained some astounding results. Using 20 mg. of radium, he found that when the capsule was brought into actual contact with the spleen or intestine through a small opening in the abdominal wall, the rate of change in the spleen or lymphatic follicles of the intestines could be determined by killing the animals at varying intervals. Guinea-pigs and rabbits were used. Marked destruction of the nuclei was seen after the radium had acted for only five seconds. Exposure for such short periods does not effect any change on the skin of the animal. Destructive changes in the lymphocytic foci were observed after one hour's exposure through the abdominal wall. Further he discovered that filtration through 3 mm. sheets of lead does not materially diminish the destructive action. While the author is not prepared to draw very definite conclusions in regard to the action of the rays on man from these experiments, he considers that the lesson which should be learnt from his results is that a control of the condition of the blood should be kept while radio-active substances are being used in the treatment of disease. It is quite possible that these changes are merely temporary and readily repaired, but in view of the conditions under which radium treatment is undertaken, he is not inclined to regard changes of such a character as of small importance. He recalls the frequency with which leukaemia has occurred in radiologists (6 cases being recorded), and while the danger of the irritative action of the rays leading to a hyperfunction of the leucocyte-forming activity may only be present when the action is prolonged for several years, he points out that up to the present what is known about the action of penetrating rays is so little that caution should be exercised lest harm result intead of good from our therapeutic endeavours.

PATHOLOGY.

143. Lepra Bacillus and Bed-bugs.

Smith, Lynch, and Rivas (*Amer. Journ. of Med. Sciences*, November, 1913), being impressed with the possibilities of insect transmission of the lepra bacillus, investigated its transmissibility by the bed-bug (*Cimex lectularius*, L.). As a preliminary observation it was proved that ordinary house-flies may convey the bacilli on the exterior of their bodies and convey infection to fresh media, but there was no evidence that the bacilli were taken into the alimentary canal of the fly. The bed-bug was chosen for investigation because of its ubiquity, close relation with man, and its unexplained preference for some individuals and avoidance of others in the same group. From observations upon over 100 infected bugs it appears certain that for a time the bacilli increase in size and numbers within the bed-bugs, elongating into typical bacillary form, and being found between the third and tenth days after feeding upon infected blood, not only in the alimentary canal, but also in the various fluids of the head, thorax, and abdomen, and disappearing after two or three weeks. From direct feeding upon two lepers the usual human types of lepra bacilli were found in a number of the bed-bugs so fed, and the writers are convinced that a true lepra bacillaemia exists, the bacilli having been obtained both by culture and staining from venous blood without contact with the skin lesions. From the facts that the bacilli were not found in every bed-bug so fed, and that they disappear after two or three weeks, it is not to be expected, quite apart from individual immunity, that leprosy should invariably follow the bite of a bed-bug previously fed upon a leper. E. C. Long, of Basutoland, cites the case of a native who came from a village free from leprosy, and who had no family history of leprosy, but who, after spending a night at a hut fifty miles distant from which the solitary leper of the district had recently been expelled, and being severely bitten during the night by bed-bugs, within a year developed the disease. Bed-bugs infected in the laboratory, and presumably more heavily so than those infected from human beings, may transmit the bacilli through the sucking apparatus to the animal bitten; but whether in nature the organisms are unchanged and of sufficient virulence to induce leprosy remains to be proved. If, however, bed-bugs do transmit the disease as suggested, they are probably only one of a number of possible carriers, other types of biting and sucking insects (particularly those which regurgitate in biting) being open to suspicion.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

144. Instantaneous Radiography in Pericardial Effusion and Pneumothorax.

THE literature of radiology contains few references to the *x*-ray diagnosis of pericardial affections, yet there seems to be little doubt that screen examination and instantaneous radiography (exposures of less than $\frac{1}{50}$ sec.) can indicate very clearly the form, limits, and movements of the cardio-pericardial shadow. In bringing forward a remarkable case of hydropericardium with pneumothorax following upon a traumatism, SPEDER (*Arch. d'électr. méd.*, January 10th, 1914) describes how its various phases were followed radiologically. The patient had been struck on the left and posterior part of the chest by the buffer of a railway wagon, and this accident brought about a condition which was radiologically diagnosed as (1) total pneumothorax, (2) light serous exudate in the pleura, and (3) pericardial effusion. There was no trace of a fracture of the rib, which at first had been taken for granted. The author gives a detailed description of the picture presented when the patient was brought up for screen examination four days after the injury. One of the more noteworthy appearances was the great relative clearness of the left pulmonary field, which had no trace of the normal pulmonary and ganglionary shadows. The shadow ordinarily corresponding to the heart presented a greatly enlarged surface, which by its form and movements appeared attributable only to a pericardium distended by fluid. Its left border, from the diaphragm to the pulmonary aortic notch, was the scene of continuous, irregular, unco-ordinated undulations, compared by the author to the waving of a flag, the staff of which was being agitated by small jerky movements. Behind the cardio-pericardial shadow appeared an intensely opaque triangular patch, which seemed to correspond with retracted lung. Fluid was seen in the lower part of the angle formed by the left border of the cardio-pericardial shadow and left costal line, and from its very mobile character this fluid appeared to be neither blood nor pus but serosity. An instantaneous radiograph ($\frac{1}{200}$th of a second) from a distance of 1 metre was made by means of the "one-flash" apparatus ("Blitz-Apparat") of Dessauer ten days after the accident, and in spite of the patient's dyspnoea and pulse frequency (140), the contours were given as definitely as crayon pencillings. Not only was the pericardial shadow recognizable, but also the projection of the heart within this shadow. The pleural effusion in the left costo-diaphragmatic sinus was indicated, as were also the pneumothorax and the retracted lung. The radioscopic examination and the instantaneous radiography were repeated several times, and marked the gradual return to a normal picture, which corresponded with the clinical improvement. The author points out the rarity of hydrops of the pericardium developing at the same time as a spontaneous or artificial pneumothorax, and also lays particular stress upon the fact that instantaneous radiography made the silhouette of the heart visible within the pericardial shadow. The visibility of the heart in certain cases of pericardial effusion has been contested, but the author states that on several occasions with instantaneous exposures he has been able to demonstrate the visibility of the heart when the shadow of the pericardium has been distended by reason of fluid (hydropericardium).

145. Purpura Abdominalis in an Adult.

G. ROSENOW (*Med. Klin.*, October 12th, 1913) records the case of a man, aged 36, who, with the exception of syphilis contracted six years earlier, and treated with mercury, had previously been well. Ten weeks before admission to hospital he became febrile, and developed a cough and profuse expectoration. He continued to work for some weeks, till he suddenly developed typical urticaria of the whole body. After three days' treatment with thymol the rash disappeared, and was immediately succeeded by a new eruption on the legs. The patient felt very ill and giddy, and anorexia was accompanied by irregular action of the bowels. The whole abdomen became suddenly painful, and severe vomiting and diarrhoea set in. There was no pain on defaecation. Examination in hospital showed numerous spots, larger than a lentil, of a dull copper colour, with irregular margins, scattered over the inner aspect of both thighs. The spots did not disappear on pressure, and showed a small red central zone. Similar spots and small pigmented areas were irregularly distributed over the legs below the knees; and the dorsal aspect of the feet showed a few vesicles, the contents of which were blue. The rest of the body showed no rash, the lymphatic glands were not enlarged, and there was no oedema. The gums were loose and red, but showed no haemorrhage. A couple of minute haemorrhages were seen in the soft palate. The respiratory and cardio-vascular systems were normal. The abdominal wall was everywhere rigid and very tender. The percussion note was tympanitic from the costal margins to the umbilicus, below which there was dullness, which did not shift with changes of position. The scanty urine was rich in urates, but was otherwise normal. A blood count showed 3,420,000 red cells, 18,600 leucocytes, of which 88 per cent. were polynuclear, 9 per cent. were lymphocytes, and 3 per cent. mononuclear. Haemoglobin was 67 per cent. In spite of the temperature being only 99.3°, and the action of the heart being satisfactory, septicaemia with peritonitis was diagnosed on account of the violent abdominal pain and rigidity, the marked neutrophile leucocytosis, and the subcutaneous haemorrhages of the lower limbs. During the following days the vomit contained blood clots. Exploratory puncture of the right abdomen yielded much haemorrhagic fluid containing only red cells and a few leucocytes. Enemata were returned much blood-stained, and a recto-scopic examination showed the lining of the intestine to be somewhat dilated; no haemorrhages or ulcers were visible. Blood cultures yielded no growths, and the serum failed to agglutinate Gaertner's enteritis bacillus, *Bacillus typhosus* or *paratyphosus* A and B. Five days after admission to hospital the patient ceased vomiting, and a complete recovery rapidly followed. The temperature was usually normal, and only once rose to 100.8°. This case resembles the two cases described by Henoch in 1868 as purpura. The involvement of the joints and the rheumatic pains associated with Henoch's purpura were not observed in the author's case, which showed haemorrhagic ascites—a complication hitherto not described. Probably it is frequently overlooked. These discrepancies do not discredit the diagnosis, and Henoch considers that the signs of true purpura may vary considerably in different cases.

146. Psoriasis evoked by Tuberculin.

WARNECKE (*Deut. med. Woch.*, January 1st, 1914) records the case of a well-fed, powerfully built man, aged 32, who had developed pulmonary tuberculosis with haemoptysis more than a year earlier. On admission to hospital he showed slight disease of the apex of the right lung, and the sputum contained tubercle bacilli. The skin seemed perfectly healthy. Koch's old tuberculin was prescribed, the initial dose being 0.001 mg. After about five weeks the dose had been raised to 0.09 mg. A day after this injection had been given patches of the size of a mark piece appeared on the back. Next day their appearance was typical of psoriasis annularis. There was no other sign of a reaction to tuberculin. An injection of 0.1 mg. was given four days after the last injection. The rash became very red, desquamation was marked, and the area involved was enlarged, the original eruption spreading outwards, and new eruptions appearing on both sides of the chest in the anterior axillary line. The rash slowly faded although no treatment was prescribed. To see whether tuberculin was its cause, 0.1 mg. was injected four days after the last injection. Again the rash flared up at the original sites, and new eruptions appeared. These gradually increased and there was considerable desquamation. As there seemed no tendency towards spontaneous recovery, chrysarobin and tumenol-zinc paste were prescribed, with the result that in ten days the rash was cured and only brown pigmentation remained. No relapse occurred during the following weeks' stay in hospital. The author dismisses as improbable the view that this rash was a tuberculin rash; for though tuberculin may cause an erythematous eruption which may be symmetrical and may go on to desquamation, such a rash disappears spontaneously when tuberculin is withheld. It is probable that the tuberculin was the direct cause of the psoriasis; but the author does not consider that psoriasis is therefore an expression of tuberculosis.

Menzer regards psoriasis as the result of latent tuberculosis, the tubercle bacilli being practically limited to the glands where streptococci and staphylococci are also present. He bases this view on the exacerbations of psoriasis which injections of tuberculin may induce; but authorities such as Hübner and Schönfeld consider his hypothesis is not proven.

SURGERY.

147. An Early Sign of Perforation of the Stomach.

A. BRENNER (*Wien. klin. Woch.*, November 27th, 1913) finds that in five cases out of six a metallic rub can be heard behind and below the diaphragm within a few hours of perforation of the stomach. With the exception of the case recorded by Buchanan and Bickersteth, who have described a soft rub audible below the diaphragm after perforation, there does not seem to have been any recognition of this sign, which is due to air and fluid from the stomach being churned between the diaphragm and the dilated stomach. Probably the sign has been overlooked, as its investigation entails the patient sitting up in bed when he is suffering acute abdominal pain. It is only during the first few hours after perforation that the sign indicates nothing but effusion from the stomach into the abdominal cavity. At a later stage a similar rub may be due to a fibrinous purulent deposit on the organs underlying the diaphragm. The sign is present even when the anterior wall of the stomach or the duodenum is perforated, for the violent pain keeps the patient on his back, and the fluid which escapes gravitates to the back of the diaphragm. One patient was a man, aged 43, who was examined an hour and a half after the onset of acute abdominal pain. The abdomen was rigid and the pulse small and rapid. A loud metallic rub was audible behind and below the diaphragm on the left side, and was easily distinguishable from the vesicular respiration heard above the diaphragm. A metallic rub could also be heard in front over the stomach. An operation showed a small perforation in the anterior wall of the stomach near the pylorus, and grey, soup-like fluid containing bubbles of air between the stomach and the diaphragm. A second patient was a man, aged 29, who was examined sixteen hours after perforation. A metallic rub was heard behind and below the diaphragm on both sides. The operation showed a perforation on the smaller curvature near the pylorus, and the gastric contents lying between the stomach and the liver. Another patient, aged 36, was examined forty-eight hours after perforation. The abdomen was rigid, but the diaphragmatic rub was not audible. The operation showed a small perforation in the anterior wall of the duodenum. There was no air and only a trace of bile-stained fluid in the abdominal cavity close to the duodenum. Another patient was a lad, aged 15, who was wounded by a bullet in the abdomen. A metallic rub could easily be heard below the twelfth rib, close to the vertebral column on the left side. Four and a half hours after the accident an operation showed that the bullet had passed through the left lobe of the liver and had perforated the stomach close to the smaller curvature. A little bile-stained fluid mixed with air was found behind the stomach. Another patient was a married woman, aged 57, who was admitted to hospital unconscious and moribund. The abdomen was distended and rigid, and the skin jaundiced. These features and the recent history of the case suggested a perforation somewhere in the biliary system. A loud rub heard on both sides behind suggested perforation of the stomach. The necropsy showed purulent cholangitis and perforation of the gall bladder. A villous, green deposit on the liver and spleen was responsible for the rub.

148. Schlatter's Disease.

BASSETTA (*Archiv. di Ortopedia*, An. 30, f. 2) contributes a careful study of the literature of this condition and also details of two cases. Schlatter first described the condition in 1903. It consists in a chronic inflammatory condition of the tuberosity of the tibia, and in Schlatter's view this usually started as a fracture of the tuberosity due to forcible muscular exertion. Bassetta disputes this view and considers that when and if fracture occurs, as it may do on rare occasions, the signs and symptoms are different, but that the usual state of things is due to a chronic kind of periostitis. The disease usually occurs in young athletic males, is seldom due to any definite known trauma, and if such occurs it is not usually sufficient to prevent the patient going on with his game, as the tenderness over the tuberosity is not very manifest unless the part is touched. Operative interference hardly ever gives any evidence of fracture. Radiographic evidence is very uncertain and depends so much on the point of view. A study of the development and centres of ossification of the tuberosity reveals great variety in individual cases. Moreover, the lesion in question is often bilateral. The prolonged duration of the cases, lasting sometimes for years, is against the common history of a fracture. Fracture of course may occur, and one of the author's cases is a case of fracture, but this is rare. The probable pathology of these cases is a repeated local irritation due to frequently repeated violent muscular action on a limited bony point, interfering with its regular ossification. A series of skiagrams are given and a copious bibliography appended.

149. Operations for Tumours of the Optic Thalamus and Corpora Quadrigemina.

H. OPPENHEIM AND F. KRAUSE give full details of two important cases of tumour of the brain, involving in the one case the optic thalamus and in the other the corpora quadrigemina and pineal body (*Berl. klin. Woch.*, December 15th, 1913). In the former case the patient was a woman aged 24, who gave a history of six years' amenorrhoea and five years' left-sided oculomotor paralysis. She had also complained of weakness of the right side of the body, and more recently of severe headache and attacks of unconsciousness with passing of urine. The examination revealed beginning optic neuritis, partial left-sided oculomotor paralysis, and complete hemianopsia on the right side. There was tenderness over the left temporal region, and slight amnesic aphasia; the patient was apathetic. The pulse-rate was 56; a hemiparesis affecting the right facial nerve was observed, and there was some static ataxia of the right hand. The tendon reflexes on the right side were exaggerated; *x*-ray examination showed an extension of the sella turcica with a zone of clearer tissue. A provisional diagnosis of tumour of the brain affecting the optic thalamus and the pituitary gland was made. The woman was watched for a time, and the subsequent signs confirmed the diagnosis. The operation was conducted in two stages. At first a large skin and bone flap was made, with the base of about 10 cm. in length at the level of the upper attachment of the left external ear, and extending for some 11 cm. upwards. Ten days later the flap was turned downwards and the dura mater incised above, in order that a prolapse of the brain might be prevented should the tumour prove inoperable. The convolutions were almost completely flattened. At first no tumour could be found by palpation and puncture. On puncturing the upper temporal convolution, in the direction of the site where the tumour was supposed to be, soft brain tissue was penetrated, and then some dark blood was aspirated. An incision was made in this region, and after the cortex was retracted with suitable instruments, the finger was passed into the substance of the grey matter. It was only when it had penetrated some 5 cm. that a hard tumour was felt. It was smooth on the surface and sharply circumscribed. The tumour was then freed from the surrounding structures with the finger, care being taken to injure them as little as possible. At one stage it was necessary to insert both index fingers into the brain. Eventually, after the finger had reached a depth of 8 cm. from the surface, the tumour was shelled out completely. Krause ascertained that it was completely surrounded by brain, and did not involve either the base of the brain or the pituitary gland. The tumour measured 8 by 6 by 5½ cm. The patient made a good recovery, and although serious disturbance of brain function was noted at first, she eventually gained a fair degree of understanding of spoken words, spontaneous and repeated speech became less defective than it had been, and some power was regained in the paralysed right arm and hand. She was able to walk with assistance, and was free from all signs of active disturbance of the brain. The second case was more remarkable. The tumour was located in the region of the corpora quadrigemina. The operative removal of the tumour was extremely difficult, and only succeeded after the cerebellum was allowed to prolapse out of the wound. It was situated 5.4 cm. from the surface of the dura mater, and after removal the depth of the tumour bed from the cerebellar dura mater was 7.3 cm. It was therefore situated in one of the most inaccessible parts of the brain, and involved the pineal gland. In spite of the difficulty of removal, the child made a complete recovery, the symptoms referable to cerebral compression having disappeared. The paralysis of the abducens muscles became much less marked, and the only apparently persistent sign of destruction was the fixation of the pupil. The tumours in both cases were sarcomata. The authors point out that the result of the surgical

interference in both was extremely unusual, and taking the situation and other peculiarities of the cases into consideration, they claim that they were unique.

OBSTETRICS.

150. Ovarian Cyst delivered per Anum in Labour.

MICHAELIS (*Zentralbl. f. Gynäk.*, No. 4, 1914) reports an instance where labour, in a healthy young woman aged 23, lingered, and her doctor, believing that the head was not engaged in the pelvis, applied the forceps without success. He then attempted perforation, but failed to reach the fetal head, and sent the patient into a hospital. Michaelis found that pains were regular, the head not engaged in the brim presented in the second position, and the heart sounds were audible. The os externum was fully dilated, the vulva patulous and the posterior vaginal wall bulged downwards. The forceps was applied, and as strong traction was being made the anus opened and a small ovarian cyst appeared; when it was completely delivered the child was extracted directly afterwards without difficulty, and it lived. A laceration of the rectum was detected. Abdominal section was performed; the pedicle, which lay on the left of the uterus, was ligatured and divided, the cyst then slipping away out of the anus. There were some particles of solid faeces in the peritoneal cavity. The rent in the rectum was 3 in. long, the edges were not bruised and were easily closed by deep and seroserous sutures. The lower end of the abdominal wound was left open and a rubber tube passed into Douglas's pouch. On the sixth day obstruction occurred and enterostomy was performed, but the patient died two days later. Suppuration was discovered around the uterus. The laceration in the bowel had healed perfectly. The tumour was a unilocular cyst, bearing the left Fallopian tube on its surface. Only three instances of this complication of labour have, it appears, been previously published.

151. Spontaneous Rupture of Uterus at Eighth Month.

ARMYTAGE (*Journ. of Obstet. and Gynaec. of Brit. Emp.*, September, 1913) admitted into hospital a Bengali primipara, aged 22, who was in a dying condition. She had felt something give way when straining at stool two hours before admission, and great pain followed. A soft, doughy tumour filled the abdomen; fetal parts were distinguishable; no portion of the child was near the brim, and the cervix was "not in the least taken up." No bloody discharge issued from the uterine cavity. The patient died within half an hour. On opening the abdomen a complete fetal sac with the fetus *in situ*, and the placenta entire on its outer surface, was found floating in free blood. The uterus had retracted to its normal *post-partum* size, there was a rent 4 in. by 1½ in. running almost straight across the fundus. The tissues involved in the wound were examined under the microscope; there were patches of hyaline degeneration and some small-celled infiltration, organizing at certain points into fibrous tissue, deep in the muscular structure. There was no history of injury, syphilis, or any other disease except occasional fever.

GYNAECOLOGY.

152. Tuberculous Salpingitis discharging into the Bladder.

J. ISRAEL (*Deut. med. Woch.*, November 20th, 1913) records the case of an unmarried woman, aged 22, who had been pale, easily tired, and occasionally febrile during the past five years. At the age of 21 frequency of micturition and marked cloudiness of the urine were followed in a few months by dysuria, night sweats, and fever. Tubercle bacilli were sometimes found in the urine, and at other times were absent for weeks. Cystoscopy showed marked redness of the bladder and a tuberculous ulcer on the right side. Catheterization of the ureters yielded urine the inoculation of which into guinea-pigs induced tuberculosis. A repetition of this procedure led to the same result. Bilateral tuberculosis of the kidneys was therefore diagnosed, and, the case being considered inoperable, the patient was sent to a sanatorium in the south, where she gained 38 lb. in eleven months. Subsequently she developed polyuria, dysuria, and intermittent fever. The author now examined the healthy-looking woman. Cystoscopy showed redness and bullous cystitis of the base of the bladder, but no ulceration. Palpation of the kidneys showed no abnormality, but under general anaesthesia a tumour was palpable just above the symphysis, its lower aspect being detected by a vaginal examination to the right of and behind the uterus. The tumour was fluctuating, and the examination was followed by a febrile reaction lasting several days. The diagnosis of bilateral renal tuberculosis was now questioned, because of the flourishing appearance and gain of weight. Appearances may be deceptive in unilateral renal tuberculosis: but the author has never seen a patient with well-established bilateral renal tuberculosis who was not pale and flabby. The intermittent character of the bacilluria and pyuria was also suspicious, although tuberculous pyonephrosis may sometimes cause intermittent symptoms. Yet this condition could scarcely be present in the absence of symptoms of retention, such as renal enlargement and tenderness. It seemed, therefore, more probable that the bladder communicated with a bag of pus the passage between which and the bladder was sometimes obstructed. Tuberculosis of a Fallopian tube was accordingly diagnosed. The ureters were again catheterized at a period when the urine was most clear. The bladder was first irrigated thoroughly under general anaesthesia, and a current of fluid was maintained through the catheter on its way to the ureters. The urine withdrawn under these precautions failed to induce tuberculosis in guinea-pigs. Much difficulty was experienced at the operation owing to numerous adhesions around the tumour, from the base of which a band as thick as a pencil extended to the bladder. This band, when divided, showed a small canal. The tumour was removed, a tampon was inserted into the wound in the pelvis, and a catheter was kept in the bladder. The urine gradually became less cloudy, and the tubercle bacilli disappeared after six months. The cystoscope now showed a perfectly normal bladder. The pelvic wound developed tuberculous granulations which persisted for seven months. The patient ultimately recovered. Of the 19 cases of pyosalpinx rupturing into the bladder collected by Helle none was tuberculous. Recently Violet and Charlier have recorded three cases of tuberculous pyosalpinx communicating with the bladder, but in none of these were bacilli found in the urine, nor was the bladder cystoscoped. In one case the condition was diagnosed on account of the pyuria being increased by pressure on the tumour; in the other two cases the condition was not diagnosed before operation.

THERAPEUTICS.

153. Local Application of Ether in General Peritonitis.

JEANNERET (*Rev. méd. de la Suisse rom.*, December 20th, 1913) states that the local application of ether in septic peritonitis appears to have none of the disadvantages of iodoform, camphor, or thymol dissolved in oil or glycerine. The technique is as follows: After removal of the cause—for example, the appendix—the more accessible coils of intestine are washed with ether, then from 50 to 100 c.cm. of ether are poured into the peritoneal cavity, and the laparotomy wound is closed with or without drainage. Morestin employs the method in all abdominal operations in which the peritoneum has become soiled. The ether rapidly evaporates, and, if the wound has been closed without drainage, produces slight meteorism of a few minutes' duration. The pulse is unusually regular and of good volume, but the patient is longer than usual in regaining consciousness. Morestin has reported a number of cases in which, though the prognosis appeared desperate, recovery occurred. He assumes that volatilized ether penetrates everywhere and exerts an antiseptic action. It has also an excellent tonic action on the patient. Several surgeons have confirmed these claims. Auvray, in a case of general peritonitis, poured as much as a litre of pure ether into the abdominal cavity, and is convinced that this lavage saved the patient's life. In the following desperate case recovery followed the use of ether. A previously healthy boy, aged 7, was, on July 20th, attacked with abdominal pain and vomiting. On July 21st the mother gave an aperient, which was followed by repeated vomiting. Jeanneret saw the boy in the evening. The tongue was coated but moist. There were severe epigastric pain and tenderness with abdominal rigidity as marked on the left as on the right side. The pulse was 82 and full. The temperature was 103.8° F. There was no tenderness over the appendix. In spite of the abnormal localization of the signs acute appendicitis was diagnosed. It was decided not to operate, as the patient was in an

hotel without any conveniences and the favourable time for early operation (twenty-four hours) had passed. At 4 p.m. on July 22nd, while vomiting, the boy cried out and suddenly lost consciousness. He soon rallied, but the facies became abdominal. The abdominal wall was rigid. The pulse rose to 160, the temperature was 102.8° F., and the respirations 33. Perforation of the appendix was diagnosed. On July 23rd the child was comatose and collapsed, with cold extremities. There was tympanites, and no flatus was passed. At 5 p.m. the temperature was subnormal. The writer and two surgeons considered the case to be hopeless, but at the parents' wish performed laparotomy. Thin ichorous pus with a faecal odour covered the intestines, filling the true pelvis. The appendix, which was retrocaecal, was gangrenous and perforated near the base. It was removed. The peritoneal cavity was mopped dry, and a glass drain, 4 in. in length, was placed in the pelvis. After the abdominal wound had been closed, 50 c.cm. of sulphuric ether were poured through the drainage tube. The pulse rapidly improved. Consciousness was regained slowly, and the patient had a good night without vomiting. On July 24th flatus was passed. Several injections of saline solution were given. On July 26th faeces were passed spontaneously. The tongue cleared, and all went well until the seventh day, when, two hours after changing the drainage tube, the temperature rose. On July 27th the facies again became abdominal, the tongue became coated, the pulse rose to 130, and the temperature was 102° F. The abdominal wall was rigid, and a recrudescence of peritonitis was feared. The writer then injected 50 c.cm. of ether through the drain. The child complained of intense but evanescent pain, and soon became drowsy. On the next day the temperature was 98.2 F., and the pulse was 80. All the peritoneal symptoms had disappeared. Recovery thereafter was uninterrupted, and six weeks after the onset of the illness the boy was at play. Thus the operation was performed in an emergency with inadequate surgical appliances, and at a late stage in which statistics show a mortality of from 80 to 100 per cent. The fact of recovery supports Morestin's claim that the local application of ether greatly improves the prognosis of septic peritonitis.

154. Heliotherapy in Intestinal Tuberculosis.

MEYER (*Schweizerische Rundschau*, January 24th, 1914) describes a case of phthisis in which diarrhoea and abdominal pain were prominent symptoms and caused great distress and rapid emaciation. The patient was about 30 years of age, and for the last three years had had symptoms of lung mischief. Of these haemoptysis was the chief. Haemorrhages were frequent and serious. As the patient steadily grew worse in spite of all (including sanatorium) treatment, it was decided to try heliotherapy. Cachexia was then marked; there were frequent liquid evacuations, a fibro-caseous condition of both lungs, and numerous enlarged glands in the neck. Heliotherapy was initiated prudently and progressively until the appearance of the characteristic pigmentation. He was then subjected to intensive baths, being exposed to the sun during many hours each day. The improvement under this treatment was surprising. The stools became little by little less frequent and more consistent. The temperature gradually fell to normal. The general condition improved correspondingly, and after some months of treatment digestion became normal. His appearance was now that of flourishing health, the glands in the neck could not now be felt, and his weight had augmented by "numerous" kilos. Nevertheless the local signs in the lungs still existed and the sputum contained bacilli. The author asks how it is that such good results are rarely obtained in tuberculosis of the lungs, while in surgical forms of tubercle the treatment and technique are well established. He is inclined to ascribe the difference to the greater attention so far given to the latter, notably by Dr. Rollier. It is emphasized that in the case reported haemoptysis seemed to be favourably influenced by the sun baths. Such haemorrhages as occurred coincided with a period when, owing to the weather, the treatment was suspended, never with a *séance d'héliothérapie*.

155. Injury to the Testicle by Mesothorium.

M. SIMMONDS (*Deut. med. Woch.*, November 20th, 1913) has tested the action of mesothorium on the testicles of four rabbits. The capsules containing mesothorium were strapped to the shaved abdomen just above the symphysis. The rabbits were killed a month later, this interval being necessary for the development of the reaction to the drug, and the testicles were microscoped. The first rabbit was exposed for five hours to 10 mg. of mesothorium. The testicles weighed 3.5 grams, and only a few tubules showed any disintegration of the seminal cells, most of which exhibited spermatogenesis. The interstitial tissues seemed normal. The second rabbit was exposed to double the first dose. The testicles were much shrunk and weighed only 1.8 grams. In many of the seminal tubules the epithelium was disintegrated: in other tubules the epithelium was uninjured. The interstitial tissues showed hardly any change. The third rabbit was exposed for twenty hours to 20 mg. of mesothorium. The testicles weighed 2 grams and the interstitial tissue showed marked hypertrophy. Only in a few seminal tubules could any spermatogenesis be detected: in most of the tubules the cells of Sertoli remained intact, but the rest of the tubule contained amorphous débris. The fourth rabbit was exposed for twenty hours to 50 mg. of mesothorium. The testicles weighed 1.3 grams, and not a single tubule had escaped injury. The seminal cells were entirely replaced by amorphous particles, but the cells of Sertoli remained uninjured. The interstitial tissue, which is scarcely found in the normal testicle, was abundant. It is therefore evident that mesothorium resembles the Roentgen rays in their action on germinal cells; small doses injure and large doses destroy their reproductive functions. The two substances have the same selective action on the germinal cells, the interstitial cells being relatively immune. They even appear to flourish at the expense of the germinal cells. The author concludes that, however carefully capsules containing mesothorium be packed, they should not be carelessly carried in the pockets, lest the sterility of the Roentgen-ray worker be contracted.

PATHOLOGY.

156. The Pathogeny of Congenital Jaundice.

A. CHAUFFARD (*Ann. de méd.*, January, 1914) relates certain features of cases of congenital jaundice (*ictère hémolytique congénital*) and the conclusion to which he was led as to its pathogeny. The elements in the clinical examination and history (which in every case was complete, although all the details are not set out in the article) on which he lays stress were the relative fragility of the blood corpuscles, the isolysin reaction of the blood, the Wassermann test for syphilis, and the intradermic test for tuberculosis. In two of his cases the disease showed itself first at the ages respectively of 11 and 15 years, without any premonitory anaemia. These cases, the author remarks, were thus not strictly congenital, but were nevertheless of the congenital type. The first three cases referred to furnished a striking instance of the hereditary element in the affection. They were a father and his two daughters, twins, 17 years of age. The age of the father was 50 years, and there was also a third daughter aged 8 years unaffected by the malady. These three cases were all typical congenital icterics, jaundiced from birth, and had suffered from time to time from attacks of pain in the region of the spleen, accompanied by a temporary increase in the jaundice. There was no acquired syphilis, and except the disease under consideration, and in each case a positive Wassermann reaction, scarcely any trace of syphilis at all. The corpuscular fragility was high. Isolysin and tuberculin reactions negative. Two further cases are mentioned in which also the reactions were similar, but the jaundice was not strictly congenital. In each of these four cases an injection of neo-salvarsan was followed by the symptom generally described as the "reaction of Herxheimer," also by pain and tenderness in the splenic region and an increase of the jaundice and of the area of splenic dullness. At the same time an index of the corpuscular fragility was increased, and in some cases the isolysin reaction was obtained. With subsequent injections of neo-salvarsan these sequelae lessened in intensity, and ultimately disappeared. Chauffard interprets this as a focal reaction, analogous to that which occurs in local tuberculosis when tuberculin is injected, and accepts it as evidence of the syphilitic genesis of the disease in these cases. In a second group of three cases the chief features were similar in character, except that here the Wassermann reaction was negative, and intradermic reaction for tuberculosis was positive. This last test was in each case followed by a modified "reaction of Herxheimer" and increase in the size of the spleen—in one case to an extraordinary extent, its volume was more than doubled—tenderness in the splenic region, the isolysin reaction, increased corpuscular fragility, etc. Chauffard interprets these facts to mean that in these three cases the origin of the jaundice was to be found in tuberculosis.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

157. Meningitis due to Follicular Tonsillitis.

E. SIEMERLING (*Deut. med. Woch.*, November 20th, 1913) points out that certain conditions hitherto unassociated with meningitis have lately been recognized as primary causes of this disease. Thus, scarlet fever, mumps, and diphtheria have in a few cases led to meningitis; and, as the following case shows, follicular tonsillitis may be added to this list: A lad, aged 15, developed a sore throat on June 8th. Next day his tongue was coated, and the tonsils were red and swollen, showing many yellow spots. The pharynx was red and covered with mucus. A somewhat tender glandular swelling of the size of a hazel nut was felt under the right angle of the jaw. The temperature was 38.2°. During the following week the sore throat abated somewhat, but there remained slight dysphagia. On June 16th the temperature was subnormal and the patient complained of headache and giddiness. Next day he fainted, and during the following night he was very restless, frequently wetting his bed and screaming. The abdominal reflexes were lost, the Achilles reflexes were retained, and the patellar reflexes were exaggerated. There was ankle clonus on the left side, and Babinski's reflex was marked on both sides. The neck was slightly rigid, and tapping the head provoked screams. The patient lay in bed groaning, with his legs somewhat drawn up and his eyes tightly closed. The pulse was 84 and the temperature 37.5°. Lumbar puncture yielded 12 to 15 c.cm. of blood-stained liquor under very high pressure. It contained numerous leucocytes but no tubercle bacilli or cocci. The excitement and unconsciousness soon passed off, but for several weeks there were intermittent attacks of vomiting, giddiness, and pain in the head and neck, the temperature being either normal or as high as 37.4°. Lumbar puncture was often prescribed, and had a strikingly beneficial effect. Inunction with 3 grams unguentum cinereum daily also hastened convalescence. Discussing the diagnosis, the author excludes tuberculous meningitis, for the insidious onset of this disease was not observed, and tubercle bacilli were nowhere demonstrable. Besides, the patient's complete recovery also negatives such a diagnosis. Acute anterior poliomyelitis with early cerebral symptoms may, in view of the subsequent course of the disease, also be excluded. The so-called pseudomeningitis or meningismus may also be ruled out, as the symptoms were too severe and definite for such a diagnosis.

158. Paroxysmal Haemoglobinuria.

A. REISS (*Jahrb. f. Kinderheilk.*, Berlin, 1913, lxxviii, 723) remarks that hereditary syphilis was found in 30 per cent. of his 77 cases of paroxysmal haemoglobinuria by Stempel, and by Donath in 60 per cent. of his cases. How is the occurrence of the haemolysis causing the haemoglobinuria to be explained? According to Donath and Landsteiner, by autolysis; the blood of the patient contains both complement and immune body, and when the patient is chilled the immune body is able to fix itself to the red cells and so bring about haemolysis. Reiss's two cases were boys of 7 and 5½, each giving a positive Wassermann's and a negative von Pirquet's reaction. To each a cold foot-bath was given for ten or fifteen minutes; within an hour each felt ill, was feverish, had pains in the abdomen, one was sick, and both passed reddened urine. The attack was over after fourteen hours in one case. Reiss examined the blood before, during, and after the attack, and concluded that the haemoglobinuria was due to the presence of an autohaemolysin in the blood. He concludes that a luetic immune body is essential to this autolysis, but that no haemolysis takes place unless the resisting power of the red cells is impaired by the chill. Many methods of treating paroxysmal haemoglobinuria have been suggested; Pringsheim in 1912 advocated cholesterin, on the ground that it is a substance antagonistic to haemolysis by such toxic bodies as saponin, cobra venom, digitonin. Reiss injected half a cubic centimetre of 10 per cent. cholesterin solution in olive oil into each patient; six injections were administered, each at intervals of two days. The treatment was temporarily successful in one case, but the protection it afforded against the haemoglobinura ceased as soon as the cholesterin was excreted; it failed in the other case altogether. Accordingly mercurial inunctions were given, with satisfactory results maintained six months later.

159. Agraphia.

FERNANDEZ SANS (*Revista de Medicina y Cirugia Practicas*, January 21st, 1914), in presenting to the Academia Medico-Quirurgica Española a case of agraphia, says that while some authors consider that there is reason to believe in a separate centre to control the mechanism involved in writing, others think that it is combined with the speech centre and that agraphia is necessarily associated with aphasia. The existence of cases, like that shown by F. Sans, in which agraphia alone persisted after a more extensive attack of aphasia, leads the latter to the conclusion that there is a separate centre for writing. The case shown was one of cerebral haemorrhage, in which after loss of consciousness for twenty-four hours, and left hemiplegia, there was the typical motor aphasia of Broca. The patient gradually recovered from the paralysis, and recovered the power of speech, beginning with the understanding of what was said to him and later being able to express himself in speech. Finally, agraphia alone persisted. The order in which the functions were recovered is that in which they were acquired in childhood; the centre for writing, being the latest evolved, is the most vulnerable and the slowest to return.

160. Localization of Gastric Ulcers.

TH. V. OPENCHOWSKI (*Muench. med. Woch.*, November 25th, 1913), on reviewing his experience of gastric ulcers, believes that certain distribution of tenderness of the spine is capable of indicating the localization of the ulcer. His experience appears to have extended over a large number of years. He states that when marked tenderness exists in the region of the bodies or spinous processes of the fourth, fifth, sixth, or seventh dorsal vertebrae, the ulcer will be found in the majority of cases between the pyloric and the cardiac orifices on the lesser curvature. The pain is only present when the ulcer is of a certain size and depth, and it disappears during the process of healing. With an ulcer situated in the body of the organ, the tenderness is found over the spinous processes of the eighth to the tenth dorsal vertebrae, or on either side of the same. Should the tenderness be located around the tenth to twelfth dorsal vertebrae, he accepts an ulcer situated on the greater curvature. Lastly, he states that the intensity of the pain and the extent to which it radiates toward one or other side of the thorax depends on the size and depth of the ulcer and on the number of nerves involved in the ulceration. He published two schemata illustrating the mechanism of this reference of pain to the indicated sites.

161. Gumma of Head of the Pancreas.

LEURET AND SECOUSSE (Soc. de Méd. et de Chirurg. de Bordeaux, January 16th, 1914) showed specimens from a woman of 41 who had had tertiary syphilis of the nasal bones. In November, 1913, she showed all the signs of hepatic cirrhosis, which appears to have come on ten months previously with jaundice. The Wassermann reaction was positive on the two occasions on which it was taken. The diagnosis made was sclero-gummatous hepatitis: and intensive mercurial treatment was adopted, but without any benefit. Right haemorrhagic pleurisy came on on November 28th, and the patient died on December 18th. The specimens show, apart from a slight hepatitis, a large gumma of the head of the pancreas, surrounding and compressing the portal vein and the bile ducts. The writers draw attention to the rarity of these cases, of which they have found only a few records since the year 1817, the most interesting one being that of Schlagenhaufer.

SURGERY.

162. Isolated Primary Actinomycosis of the Salivary Glands.

G. SÖDERLUND (*Deut. med. Woch.*, August 21st, 1913) has investigated 6 cases in which actinomycosis was limited to the salivary glands. The first patient was a farmer's

wife, aged 65, who noticed a small painless swelling below and to the right of the tongue. After two months' observation in hospital it had grown to the size of a walnut, and was thought to be malignant. It consisted of the right sublingual gland, which was completely removed. When dissected, it showed a grain of oats, 5 mm. long, lying in a duct of the gland, and in direct contact with a small abscess as large as a pin's head. The fungi were found in the grain and the abscess. The rest of the gland showed chronic inflammation with round-celled infiltration and proliferation of the connective tissue. The second patient was a married woman, aged 38, who had noticed a nodule under the tongue for a week. The right sublingual gland, which was as large as a bean, was completely removed. The microscope showed chronic inflammation with round-celled infiltration and fibrosis. After almost the whole gland had been explored by serial sections, a small focus of granulation tissue, of the size of a pin's head, was found containing a cluster of fungi in which a fragment of corn was imbedded. The third patient was a farmer, aged 46, who for three weeks had noticed a swelling under his right lower jaw. The right submaxillary gland was swollen to the dimensions of a hen's egg and was covered by slightly reddened skin. Tuberculosis was suspected, and the gland, which was not adherent to the surrounding tissues, was completely removed. A fluctuating swelling on its anterior aspect, a little larger than a pea, yielded pus on incision. Serial sections of the gland revealed a grain of barley in contact with the abscess cavity, where the fungi were numerous; elsewhere they were not demonstrable, although the whole gland was inflamed. The fourth patient was a farmer, aged 53, who had developed several painful nodules in the neck. A firm swelling, of the size of half an egg, was found in the position of the left submaxillary gland. The overlying skin was neither reddened nor adherent, and there was no fluctuation. The gland was removed with some enlarged lymphatic glands. After about seventy microscopic sections had been cut without the discovery of any pathological condition, except chronic inflammation, a piece of barley was found surrounded by pus and granulation tissue, in which the fungi were demonstrable. There was no macroscopic sign of suppuration. The fifth patient was a lad aged 10, the swelling of whose left submaxillary gland was at first considered tuberculous. The excised gland showed on section a few yellow foci in the hilus. The microscope showed round-celled infiltration in most of the gland, but here and there fungi were demonstrable. The sixth patient was a woman aged 50, whose left submaxillary gland was as large as a walnut, firm and nodular. Tuberculosis was suspected. The surface of the excised gland was perfectly smooth and free from fibrous bands. An abscess, of the size of a pea, was situated within the gland, close to one of its main ducts. No fungi were at first discovered, but a subsequent laborious examination of serial sections of the gland ultimately revealed four clusters of fungi. Discussing these cases, the author points out that actinomycosis of the sublingual and submaxillary glands is clinically and pathologically limited to these structures for some time after infection, and that the symptoms are definite and localized. Considering the difficulty he often experienced in finding the fungi, he thinks that in many cases they must have been overlooked, and the diagnosis have been limited to a "chronic inflammation of unknown origin." In such cases actinomycosis cannot be excluded till microscopic sections of the whole gland have been scrutinized.

163. Tumours of the Carotid Body.

CALLISON AND MACKENTY (*Annals of Surgery*, December, 1913) record a personal case of tumour of the carotid body. After an account of the anatomy, embryology, and physiology of the carotid body they give a summary of thirty-one instances which have been recorded since the paper by Keen and Funke appeared in 1906. There are now, therefore, sixty cases of tumour of the carotid body on record. The writers' patient, a man of 41, consulted Mackenty for a tumour of the neck. There was aphonia, difficult breathing, pain in throat, and difficulty in swallowing. He was a big robust man who had lost much flesh during the last four months; a hard tumour was found on the right side, extending from the angle of the jaw to the right clavicle, and from the thyroid body internally well into the posterior triangle; it was hard on palpation, without pulsation, and was not movable, although the skin was freely movable over it. Auscultation over the tumour gave no increase in the carotid bruit. There was paralysis of the right vocal cord and the larynx was displaced to the left. Chest *nil;* pupils and facial nerve normal; Wassermann and Noguchi reactions negative. A fragment of the tumour was removed for histological study. Many varying opinions were given as to its nature, but lymphosarcoma seemed the most likely; a description is given of its structure. Operation for removal of the tumour was performed, but the patient died three weeks later. The final opinion of the nature of the tumour held by Callison was endothelioma, but he "was never quite satisfied." Two photomicrographs are given. Out of the 60 recorded cases of carotid body tumours, 54 have come to operation, 4 were found at necropsy, and 2 were examined *post mortem*, although their existence was known before death occurred from another cause. A list of the numerous accidents connected with these tumours or with operations for their removal is given. These tumours usually grow slowly over a long period; they may be benign in that stage, are encapsulated, do not invade other parts, do not return if completely removed, and give no symptoms beyond the deformity. Later, they may grow rapidly, and be mildly malignant, with recurrences and metastases, but without cachexia and anaemia. As to symptoms, in the early stage deformity is the chief complaint; but later involvement of cranial nerves and the sympathetic may occur; the resulting symptoms depend on the direction of growth of the tumour; thus, there may be aphonia, dysphagia, annoying cough, deafness, conjunctivitis, or pain from compression of nerve trunks by the tumour; but subjective symptoms are, on the whole, very few. Objective symptoms are more constant and numerous; in the early stage the tumour varies in size from that of a robin's egg to a just palpable tumour which is underneath the sterno-mastoid, or at its anterior margin, on a level with the upper border of the thyroid cartilage; it is egg-shaped, single, discrete, firm, elastic, and movable laterally but not vertically. Pulsation is transmitted, but not expansile; a bruit is usually heard. With the increasing growth of the tumour the recurrent laryngeal nerve is often involved; there is dysphonia, dysphagia, and laryngeal congestion or catarrh; the pupils may be irregular on the affected side, and may fail to react to light. Displacement of larynx, or bulging of the tumour into the pharynx may occur. Carotid body tumours are seldom diagnosed, as their true nature is not suspected; thus, only seven cases have been recognized before operation. They have to be diagnosed from cervical adenitis, early metastatic carcinoma of the lymph nodes, sarcoma (particularly lymphosarcoma and sarcoma of lymph nodes), lipoma, fibroma, aneurysm, branchial cyst, gumma, Hodgkin's disease, aberrant thyroid, and Bezold's perforation of the mastoid. It is only when these conditions occur in the superior carotid triangle that a differentiation must be made. All these points are discussed by the writers; they say that, hard as the differential diagnosis is on paper, it is yet more difficult in practice. On the question of surgical treatment they point out that in the early stage, in which the true condition is but rarely diagnosed, operation is attempted under some mistaken diagnosis, and the true nature of the tumour is then discovered; at this stage it is benign: "If now it be not closely adherent to the arteries, except through the 'ligament of Mayer,' it seems safe to dissect it away from the bifurcation. Keen advises against this, but the authors see no objection if a close watch be kept for recurrence, and then such other operative procedures taken as the case may demand. On the other hand, if the tumour surrounds the arteries, is closely adherent to the wall, and other structures are included in the surface of the growth, then an attempt to dissect away the mass must be condemned." The wound may now be closed up and the tumour left *in situ*, or the tumour and arteries may be removed together, as is usually done; this involves ligature of the common, external, and internal carotid arteries, and probably also the internal jugular vein, and risk of injury to the vagus, hypoglossal, and other nerves. The paper has a good bibliography; references to the cases recorded up to 1906 will be found in the paper by Keen and Funke (*Journ. Amer. Med. Assoc.*, xlvii, pp. 469, 566).

164. Sterilization of the Hands by Thymol.

MONZARDO (*Gazz. degli Osped.*, November 13th, 1913) points out some of the disadvantages of the iodine treatment of the skin (staining, skin irritation, and hardening), and then describes a treatment he has used for the last year. This consists in the use of an alcoholic solution (5 per cent.) of thymol, used pretty much in the same way as iodine. The hands and forearm of the surgeon are first washed in spirit, and then the thymol solution applied. The author has performed 100 hernia operations, 53 laparotomies, and

many other surgical operations, as well as obstetric work, under his method of disinfection, and is well satisfied with the results. The solution, he says, is non-toxic, non-irritating to the skin, does not affect instruments, and is at least as powerful as iodine as a disinfectant.

OBSTETRICS.

165. Abderhalden's Protective Ferments.

E. ABDERHALDEN (*Muench. med. Woch.*, December 16th, 1913) states that 600 reactions for pregnancy have been carried out in the physiological institute of the University of Halle by means of the dialysis test, and that in all save two instances the diagnosis made has been proved to have been correct. In about 1 per cent. of the tests the first reactions yielded wrong results, but on repetition the mistake was rectified. The mistakes were due to faulty technique, and occurred when novices were employing the test. In inquiring whether the reaction is truly specific, the author states that as far as he has been able to ascertain, examples of unspecific results are always due to faulty technique. It is, however, conceivable that the presence of a large number of different protective ferments might yield unspecific results. He has not met with such a condition, but has experienced an apparent unspecific result, which was due to the inclusion of blood in the organ under examination. In order to test the importance of the presence of blood, he has carried out two series of experiments, the first with horse serum and the second with ox serum. In each series the serum was tested against muscle, liver, lungs, and kidneys. The organs were rendered as free of blood as possible by washing. A portion of the organ was then transferred directly to boiling water, and constituted the sample containing traces of blood. The rest was then pounded, washed, and manipulated in various ways until no trace of blood could be squeezed out. The microscopical examination of this portion revealed a complete absence of red blood corpuscles. This portion was utilized as the bloodless sample. Fifty tests with each sample of the organs were put up. The bloodless organs gave a negative result, save in one case with muscle, in which the animal had suffered from a severe contusion, and in a few cases with lungs, which corresponded to marked tuberculosis of this organ, and lastly in five cases with livers containing liver parasites. On the other hand, the large majority of the tests with blood-containing organs gave positive results. The explanation for this is that the serum must have contained protective ferments, which act directly on the constituents of hydrolysed blood. The experiments demonstrate the necessity of a complete removal of blood for the organs employed in setting up the Abderhalden test.

166. The Cholesterinaemia of Pregnancy.

IT is well known that cholesterin is formed very largely in the adrenal cortex, and has antitoxic and antihaemolytic properties. Normally the blood serum of man contains an amount of cholesterin which varies between 1.5 and 1.8 gram per litre, according to the extensive studies of Chauffard and his pupils, Grigaut, Troisier, and Laroche. The cholesterin content of the serum of pregnant women has been studied by P. MAURIAC and MARIE STRYMBAU (Réunion biologique de Bordeaux, January 6th, 1914). They find that as a general rule it is above the normal throughout the whole period of pregnancy. Hypercholesterinaemia is present from the earliest months; it increases up to the third month, to fall at the fourth, and then reascends up to the ninth: on nearing term, however, the cholesterin ratio falls rather often to normal or below normal. But this rule applies only to normal pregnancies of healthy women. Such infections as tuberculosis and syphilis tend to lower the cholesterinaemia to a subnormal level.

GYNAECOLOGY.

167. Metastatic Cancer of the Ovaries.

F. SCHAUTA (*Wien. med. Woch.*, December 6th, 1913) points out that cancer of the abdominal viscera, such as the pylorus or pancreas, not infrequently causes secondary disease of the ovaries. Why these should be particularly vulnerable is a matter of dispute. Kraus considers that carcinomatous cells may pass from the pylorus through the peritoneal cavity to the ovaries which are exposed to infection owing to the periodic rupture of Graafian follicles. When the stomach and the ovaries are both carcinomatous, the disease of the ovary is almost invariably secondary to that of the stomach. The gynaecologist who operates for ovarian cancer should invariably examine the stomach, although when both ovaries are involved as a sequel to cancer of the stomach, the discovery of the latter during operation will merely demonstrate its inoperability. Far more important is it for the surgeon operating on cancer of the stomach in women to examine the ovaries. If only one ovary is suspected, both should be removed. To illustrate this point the author records the following case: A 3-para, aged 39, developed in 1908 gastric symptoms, including pain and dyspepsia. Early in 1910 an operation showed cancer in the stomach starting from an ulcer. The growth was removed, and a gastro-entero-anastomosis was effected. She felt very well after her discharge from hospital. In October, 1913, she complained of having lost weight during the past two months, while the abdomen had increased in size. She complained of pain in the abdomen and loins, and was cachectic. The temperature, defaecation, and micturition were normal. In the left hypogastrium a slightly tender and movable tumour could be felt. Another tumour could be felt on the right side of the abdomen, and changes in the dulness in the flanks when the position of the body was altered showed the presence of ascites. A vaginal examination showed a few immovable nodules in the pouch of Douglas, and the uterus lodged between two hard, uneven, and scarcely movable tumours. A laparotomy showed bilateral inoperable ovarian cancer. Had the ovaries been removed in February, 1910, when the cancer of the stomach was excised, the patient's life could have been saved. Very likely one or other of the ovaries was already involved in 1910, for it is now known that secondary deposits of cancer may remain latent for a long time.

THERAPEUTICS.

168. Faulty Assimilation of Iron and Arsenic Pills.

WHILE treating a case of anaemia with iron and arsenic KNUD SCHROEDER (*Hospitals Tidende*, December 17th and 24th, 1913) noticed that a steady increase of haemoglobin ceased as soon as these drugs were given in pills after having been at first given in fluid form. This raised the suspicion that the pills were not being assimilated. Their fate was therefore systematically investigated in 22 cases of slight anaemia. Six pills were given daily for two to four days after which none was given for three to four days, so that the fate of the first lot of pills might be learnt by a careful examination of the faeces. The iron pill was a Blaud's pill, made with exsiccated ferrous sulphate, potassium carbonate, and magnesium oxide: the arsenic pill consisted of Blaud's pill with the addition of 1 mg. of acidum arsenicosum. Of the 324 iron and arsenic pills given to thirteen patients, 235, or 73 per cent., were found again in the faeces. Pills which had been recently made were more often absorbed than old pills, 65 per cent. of the former and 78 per cent. of the latter being recovered from the faeces. Not one patient retained every pill, and some patients passed nearly every pill. No relation could, however, be found between the disease from which the patient was suffering and the proportion of pills remaining unabsorbed. Most of the pills recovered were scarcely changed, but the surface of some was eroded. Some even showed the marks of the patient's teeth. The fate of Blaud's pill without arsenic was still less satisfactory, 85 per cent. being recovered. Scarcely better results were obtained by substituting lactas ferrosus for the exsiccated ferrous sulphate in the Blaud's pill containing arsenic. When, however, the potassium carbonate and magnesium oxide were withheld, and the pills were made: (1) with arsenic, ferrous sulphate, manna electa and extractum gentianae; (2) with glycyrrhiza added to the above constituents; or (3) with arsenic, ferrous sulphate, glycerrhiza, and tragacanth; no pill was recovered from the faeces of the fifteen patients who were treated with this modified form of Blaud's pill. An analysis of the constituents of the recovered pills showed that 93 per cent. of the iron, and over 80 per cent. of the arsenic had not been absorbed. It may be argued that the minute quantities of iron and arsenic absorbed may be effective, but this state of affairs is very unsatisfactory. The author recommends the administration of pills of iron and arsenic as modified above; and he prefers them to the usual fluid preparations of iron and arsenic which are more expensive, and often contain an undesirable quantity of alcohol.

169. The Treatment of Obesity.

OTTO SIMMONDS (*Med. Klin.*, January 18th, 1914) gives his experience in the treatment of obesity by means of the electrical apparatus devised by Bergonié of Bordeaux. Obesity offers a good example of a pathological "vicious circle." The increase of adipose tissue is the result of insufficient muscular exercise. Yet the more the fat increases the less is the inclination and the greater the effort required to take the necessary exercise. The idea of causing the muscles to contract by means of an electrical current instead of by will power is not new, but the apparatus of Bergonié is the first approach to success in its practical application. The apparatus consists of a sort of chair or couch fitted in appropriate parts with a special electrode. Through these a rhythmically interrupted faradic current of low tension can be passed and measured with exactness. Nearly the whole of the muscles of the trunk and limbs can thus be thrown into strong, regular, and painless contractions. The work done can be varied separately in the various regions of the body according to the strength of the current, the number of contractions per minute, and also by weighting the part—trunk or limbs—with bags of sand. The increased metabolism is shown by quickening of the pulse and respiration rate, the skin becomes red, and perspiration may appear. Generally the rate of the current interruptions and consequent muscular contractions was 120 per minute, and the first four or five sittings last from twenty-five to forty minutes, and the strength of the current 30 to 40 milliampères. Soon sittings lasting an hour, a current of 70 milliampères, and a weight of sandbags of 75 kg. can be reached. Naturally the treatment must be so adapted to each case that no pain nor "faradic sensation" be caused. The blood pressure remains unaffected; only in one case has Dr. Simmonds found the treatment inapplicable because of the pain it caused. The result of a single application of the treatment is usually a slight loss of weight—400 to 700 grams—occasionally there is a gain of 50 to 100 grams. This is due to the absorption by the skin of water from the electrodes. In the treatment of obesity by this method, Dr. Simmonds has found a limitation of the diet, so far as fats and carbohydrates are concerned, to be essential. This, however, need be nothing like so stringent as it would have to be if the treatment was by dieting alone. The loss of weight averages 1.200 to 1.500 grams weekly. The circumference of the abdomen often diminishes much more rapidly than the loss of weight would seem to indicate. This is due to simultaneous increase in the weight of muscular tissue. After the individual application of the treatment there is no feeling of fatigue worth mentioning, the patients progressively improve in condition, and depression of spirits vanishes. The treatment can be applied locally to any part of the body. If the increase of fat is chiefly in the abdomen, the trunk and abdominal muscles receive most attention. After childbirth and laparotomy the apparatus may be very useful, and it has also proved a valuable addition to other treatment in chronic constipation, neurasthenia, and bronchial asthma.

170. Benzol as a Leucotoxin.

L. SELLING'S (*Johns Hopkins Hospital Reports and Monographs*, New Series, No. ii) researches on benzol as a leucotoxin have already been utilized as the basis for the benzol treatment of leukaemia. The starting point of the author's research was the clinical material furnished by three cases (two fatal) of chronic benzol poisoning occurring in young girls, at work in a tin can factory, where rubber was used in place of solder. From the marked changes in solution in the blood and haematopoietic organs seen in these cases the author was led to carry out a series of experiments on animals. Rabbits were selected, and an oily emulsion of benzol injected subcutaneously into their bodies. The results obtained corresponded very closely with those seen in the human subjects. In brief, they showed that benzol was a powerful leucotoxin, especially affecting the polynuclear leucocytes and the myeloid rather than the lymphadenoid tissue. The changes occurring in the process of regeneration are very fully detailed, and there are a good number of microphotographs, some beautifully coloured sections, and a bibliography of over fifty items.

171. Treatment of Gonorrhoea.

SCHLASBERG (*Dermat. Zeitschr.*, November, 1913) reports results in 95 cases of urethral, cervical, and uterine gonorrhoea, acute and chronic, by the following treatment. He injects the parts locally with a thick 2 per cent. emulsion of cusylol (a soluble combination of copper citrate and sodium borocitrate) in tragacanth from an ordinary blunt-pointed ointment syringe. The tragacanth is prepared according to Almqvist's formula—R Tragacanth 8 grams, water 286 grams—and has a rather thick glutinous consistency, owing to which any medicament added has a better chance of remaining in prolonged contact with the affected mucous membranes. Cusylol is non-irritating and non-toxic in far higher concentrations than the one suggested by the author: 4 c.cm. injections once daily at first, and later twice a day, were used for urethral infections, and for uterine after carefully cleansing the external os. Thick discharges rapidly became more serous, and even in the uterine cases which were treated in bed no other means of disinfection had yielded the same results. The author concludes that gonorrhoea in prostitutes can be lastingly cured in most cases, and that in cusylol we have a most efficient and harmless means to that end.

PATHOLOGY.

172. The Pathology of Huntington's Chorea.

PIERRE MARIE AND J. LHERMITTE (*Ann. de méd.*, January, 1914) have investigated the morbid anatomy of four cases of chronic progressive chorea, or Huntington's chorea. They consider that the morbid changes found in these cases, viewed in the light of morbid anatomy, which other workers have recorded, enable them to formulate a consistent and definite pathology of the disease. The general characteristics of the malady are recorded: choreic movements, which may affect any or all the muscles of the trunk or limbs, except the muscles of the eye, lasting usually many years, eventually leading to a progressive mental deterioration, at first affectional (hypochondriasis, melancholia, irrascibility, etc.) but later ending in deterioration of the memory and intelligence. The disease is one of very slow evolution and does not in itself threaten the life of the patient: some intercurrent malady generally ends the case. Beyond a slight diminution of muscular power, nervous symptoms, or signs either as to reflexes, trophic, or sensory changes, are absent. Hitherto the changes found in the nervous centres after death have been most various and inconclusive, so much so that Sainton in his report to the Congress of Alienists and Neurologists at Nantes in 1909 decided that the disease had no definite pathological anatomy, but that it was a "syndrome physiologico-pathologique" which might be caused by various lesions. Strümpell asks whether, in view of the diversity of anatomical findings, the disease should not be regarded as a functional disorder of the psychomotor centres rather than a result of very gross changes in the brain. The authors of this article, however, as a result of their investigations have substantiated the presence of certain changes constant in their character and location. As regards location, the disease selects with curious constancy the cortex of the brain, in the anterior-fronto-parietal regions more especially. Also the caudate nucleus and the lenticular nucleus are atrophied, the nerve fibres and cells, the most highly differentiated and delicate elements, being diminished. To this slow and progressive degeneration is added a proliferation of the connective tissue framework, the neuroglia, and there are also constantly more or less important vascular alterations. These degenerative changes in the higher centres are accompanied by secondary descending degeneration to only a very small extent. It is to be noted that the proliferation of the neuroglia, which is usually very marked, especially in the central ganglia, and the vascular changes, are neither of them in any relation to the duration of the disease. How, ask MM. Marie and Lhermitte, are the various and even contradictory opinions of other authors to be reconciled? Some, for instance, consider that a fault of development, as shown by malformations of the encephalon, is the essential factor; others, struck by the great proliferation of the neuroglia, see in this the *primum movens* of the process; yet others see in the state of the meninges and the vascular system evidence of an inflammatory process. The authors explain these divergencies by a failure to take into consideration the *order* of their appearance—the *time* element in their evolution. Regarding the change found in the fronto-Rolandic area of the cortex and the symmetrical atrophic degeneration of the corpus striatum as the essential seats of the disease, the question of the nature of the process arises. MM. Marie and Lhermitte lean to the view that this is in its essence inflammatory, not, of course, infectious or septic, but caused by some unknown toxic agent, which may be liberated or elaborated through the defective metabolism of some congenitally defective tissue or gland. It is in this direction that further researches are most likely to bear fruit.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

173. Syphilis of the Pancreas.

WALTER-SALLIS (*Ann. de derm. et de syph.*, vol. iv, No. 12, December, 1913) says the pancreas is not uncommonly the seat of syphilitic changes, which may or may not manifest themselves by clinical symptoms in the patient's lifetime. He says that in 100 cases of abdominal lues no less than 45 had lesions of the pancreatic gland, which can be grouped pathologically under three headings: (1) An inflammatory, sclerosing, indurative type; (2) a gummatous variety; and (3) a sclero-gummatous variety. Without going too much into detail it would appear that the first type closely imitates a toxic pancreatitis, and ends with dilatation of the ducts, atrophy of the gland substance, and very extensive fibrous proliferation. The gumma of the pancreas resembles that granuloma elsewhere, and only involves the gland substance in its immediate proximity. The sclero-gummatous type combines the histological characters of the other two, is hard and fibrous in texture, and may be studded with gummata and scars of various dimensions and numbers. The importance of diagnosis from the patient's point of view can scarcely be overestimated, as the symptoms yielded rapidly, in 11 out of the 15 cases described by the author, to energetic administration of mercury and iodides (salvarsan does not appear to have been administered to any case of the series). The other four patients died either as a result of the operation undertaken for relief of the supposed biliary obstruction, or in consequence of acetonaemia. In his summary the author emphasizes the following points: The disease is common to both sexes, and occurs both in hereditary and acquired syphilis, in combination with, or apart from, syphilitic hepatitis. Its usual onset may be any time from six to thirty years after infection. The symptoms are those of pancreatic disease, and may include digestive disturbances, glycosuria, steatorrhoea, jaundice, emaciation, epigastric pains, and a tumour of the pancreas. The importance of glycosuria in the diagnosis is manifest when it is stated that it occurred eight times in the 15 cases. It is very rare in ordinary chronic pancreatitis caused by duct infection. This is not difficult to explain when one remembers that syphilis is a disease of the blood, in which the islets of Langerhans would be liable to suffer equally with the enzyme secreting acini of the pancreatic lobule. On the same lines can be explained the usually delayed onset of steatorrhoea, which is caused by the failure of pancreatic digestion, and is an early symptom of a pancreatitis caused, for example, by biliary infection. Jaundice in these cases is very frequent, and is produced not by obstruction of the bile ducts (for this was patent in such cases as were examined), but by the hepatitis which usually accompanies the pancreatic condition, and is probably the cause of the fever when it occurs. A pancreatic tumour was defined in eight of the 15 cases described, and when present is a great help in the diagnosis. When evidence of syphilis can be obtained in the presence of cutaneous gummata or scars, or a positive history or Wassermann reaction, and is coincident with obscure abdominal pains, glycosuria, and the other or some of the other symptoms above mentioned, the possibility of localized syphilis of the pancreas should always be borne in mind, and antispecific measures adopted before a laparatomy is undertaken.

174. The Diagnosis of Gastric Ulcer.

J. R. VERBRYCKE, JUN. (*Amer. Journ. of the Med. Sciences*, November, 1913), finds that out of 3,000 hospital cases of gastric ulcer, only 36 per cent. were diagnosed correctly; he thinks that at least 90 per cent. are diagnosable by modern methods. In addition to the acute and chronic ulcers, he recognizes the chronic non-indurated ulcer which may last unrecognized for years, and possibly may be a forerunner of the indurated ulcer. He points out that gall stones often coexist with gastric ulcer, and that we should not hastily conclude that a gastric ulcer is necessarily the only lesion present in a given case. History is untrustworthy; pain may be absent; when present it is not characteristic of ulcer, and the front to back pain is rare. When pain occurs it comes at a fixed time after meals, which is variable for the many but constant for the individual; it is relieved by the taking of more food or alkalis or by vomiting. Pyrosis and regurgitation are common but not pathognomonic; haematemesis occurs in probably less than 10 per cent. of cases; nausea and vomiting do not occur in about half the cases; and, even when they are present, their diagnostic value is *nil* unless the pain is relieved by the vomiting. Alternating periods of euphoria and misery are common; the greater the pain the more severe are the other symptoms, and *vice versâ*. Physical examination gives slightly more reliable information than the history and symptomatology: there is usually a tender point in the epigastrium, or at the eighth dorsal vertebra behind, or in both regions; the tenderness is slight, and is sometimes absent; to be of any diagnostic value, it should be always at the same place, and there should be only the one spot. Muscle spasm and rigidity, when present, are but further evidence of tenderness. Of the various special tests and laboratory aids, Verbrycke attaches more importance to the test for occult blood than to any of the others; such bleeding occurs in the large majority, regardless of duration or variety; it is characteristically intermittent, so that several examinations under varying conditions are needed. The benzidine test is the best and most delicate; the test tubes must be absolutely clean. If the first test be positive, put the patient on a meat-free diet for several days and make the test again; if it be still positive, exclude all bleeding points, such as the gums or bleeding piles. Gastric hyperacidity is common, but is of far less value than hypersecretion, although the latter is not pathognomonic. Meunier's gastric rinsing with 1 per cent. acetic acid and testing of the rinse water for blood has on several occasions helped Verbrycke in diagnosis. The *x* rays are of value, but their interpretation needs the help of an expert gastric radiographer. Einhorn's thread-impregnation test is wellnigh perfect as a test for localization of ulcer, but is still more or less *sub judice*: certain positive threads are almost infallible, but a stained thread does not always denote ulcer, even in the absence of cirrhosis and cancer. The thread test is carried out thus: A silk thread is swallowed at night by the patient and retained all night; it rubs the ulcer and causes oozing of blood; the resulting stain is plainly visible when the thread is removed next morning. Verbrycke has found that those threads with a plain mark or two marks denoting the rim of an ulcer, with an unstained portion between, are never misleading, and a stain on two or more threads at exactly the same spot is a sure indication of ulcer, but he cannot believe that the many instances of diffuse stained thread are all caused by ulceration; a stained thread, however, always denotes a morbid mucous membrane, either ulcerated or soft and spongy. Cases which defy diagnosis must be treated as if due to ulcer and the results of treatment be noted: by means of this therapeutic test Verbrycke has in some doubtful cases been rewarded by success. He concludes that there are several combinations which practically assure a diagnosis: (1) A tender point with occult blood; (2) gastric hypersecretion with a tender point; (3) gastric hypersecretion with occult blood; (4) a tender point with repeated positive thread tests; (5) a tender point with haematemesis; (6) haematemesis with gastric hypersecretion; (7) hypersecretion with positive thread tests.

175. Cardioptosis.

DE RENZI (*Rif. Med.*, January 3rd, 1914), in a clinical lecture on this condition, first showed the case of a man, aged 51, who exhibited the signs and symptoms of the disease, and then proceeded to explain the pathology of similar cases. He refers to essential cardioptosis, not a mere ptosis secondary to some primary lesion, for example, cardiac disease. Cardioptosis in his sense is usually congenital, and commoner in men, and although it is congenital it may remain latent for many years, as in the case of his patient, and only show itself suddenly (as far as the patient is concerned) after some unusual exertion. The main cause is assumed to be a loss in the elasticity of the supports of the heart, namely, the pericardium and its continuation into the cervical fascia and the large vessels of the neck. Cardioptosis and enteroptosis are not related causally, and may exist independently; in each case there is an underlying loss of elasticity in the supports. A secondary hypertrophy of the heart may develop as the result of the greater work thrown on the displaced heart—for example, the pressure against the diaphragm. Some degree of hepatoptosis is not

uncommon as a secondary result of the pressure on the diaphragm. Since it is the loss of elasticity of the upper supports of the heart which is the chief cause, it does not follow that the loss of support from the diaphragm which follows enteroptosis will cause cardioptosis. In estimating the position of the heart the author prefers the deep to the superficial area of cardiac dullness, using light percussion. The smaller percentage of women affected may be due to their use of corsets, and the author treats some of his cases by applying a kind of truss which gives support to the base of the thorax.

SURGERY.

176. The Prophylaxis and Treatment of Peritoneal Adhesions.

E. PAYR has been experimenting with the object of ascertaining the position of various segments of the gastro-intestinal canal, the presence of peritoneal adhesions, and the possibility of dealing with them (*Munch. med. Woch.*, November 25th, 1913). The leading idea was to fill the part of the canal to be examined with some form of magnetic iron, and then by applying a powerful magnet to the outside of the abdomen, to determine the extent of the iron-containing contents of the organ and the limitations of the movability of the organ. After trying a number of compounds, Payr came to the conclusion that finely divided ferrous oxide is best adapted for the purpose. For the stomach, when this substance is mixed with a suspension of starch or with some colloidal solution such as agar-agar, the magnetic action can be readily made use of, and no risks of intoxication are present. In his experiments he filled portions of the intestine either by giving enemas, or by opening the abdomen and bowel and introducing the suspension directly. He describes the apparatus which he has employed for the laboratory experiments, and states that experiments are now being made by physicians to construct a really suitable magnet for application to human beings. His observations lead him to believe that the method when properly adapted will enable the physician to recognize adhesions, to break down adhesions in the fibrinous stage, to stretch and even even break down by gradual means adhesions binding the intestines together or with the abdominal wall, to correct gross misplacements of the abdominal organs, to examine the sensitiveness of the abdominal organs, to study the effect of artificially induced intestinal movements, to study artificially accelerated or retarded propulsion of the intestinal contents, to improve the radiological diagnosis of diverticula, niches, and other forms of small cavities which are difficult to fill with the ordinary bismuth suspensions (including the appendix), and to study the production of volvulus and invagination and their reduction. He points out that the application of the magnetic iron particles can be localized to any chosen segment of the gastro-intestinal canal, that the movements can be carried out in any direction desired, and that the observations can be controlled by Roentgen rays.

177. Scoliosis and Hypothyroidism.

J. GOURDON AND H. DIJONNEAU (*Rev. d'Orthop.*, January, 1914) draw attention to the importance of a careful study of the general health in cases of scoliosis; it is of course generally recognized that tonic treatment is needed in the early stage, but it is still true that in later stages the surgeon may fall into the error of devoting all his energies to the attempt to straighten the spine, and to correct paravertebral deformities. The writers have examined 48 cases of hypothyroidism, the patients ranging in age from 8 to 20 years; out of these 20 showed a virtually normal skeletal development; out of the remainder 12 showed arrest of growth and subsidence of the trunk; 11 were scoliotic, 4 kypho-scoliotic, and 1 showed thoracic contraction. All these patients showed most of the signs of hypothyroidism described by Lévy and Rothschild—as a rule the limbs were well developed, but the growth of the trunk was defective, with osseous denutrition and muscular atrophy. Some showed generalized adiposity, but the majority showed local adiposities, especially of the upper and outer part of the arm or thigh, the abdomen, or the buttocks; in these regions the tissues were lardaceous and the skin cold and purple, while the neighbouring parts retained their suppleness and normal temperature: the hair was dry and brittle, the eyebrows thin and sometimes absent at their outer extremity. All the patients were apathetic, complained of constant fatigue, and had pains in the back and lower limbs; in girls amenorrhoea was the rule. The scoliosis was always preceded and accompanied by a settling of the spine. Full particulars are given of 5 cases treated by fresh thyroid juice; all were cured in a few weeks' time after the previous failure of exclusively mechanical treatment. The writers refer at some length to many points in the physiology of the thyroid body which have been brought out by experiments. The thyroid has both trophic and antitoxic functions; it has also an important influence on calcium equilibrium; thus, thyroidectomized animals can be kept alive by calcium salts. Hypothyroidism can lead to a diminution of the resistance of the vertebral column, partly by causing defective functioning of calcium exchanges, and partly by the suppression of a normal barrier to infection (the internal secretion of the thyroid body). Gourdon has shown previously that faulty attitudes adopted during childhood and adolescence have no influence on the bones of the trunk unless their resistance be defective, as in predisposed subjects; when hypothyroidism is present during childhood this resistance is diminished, and the spine becomes softened. Carnot recorded a case of a fractured bone in a rickety patient which showed no trace of consolidation after sixty days; thyroid treatment was then begun, and fifteen days later consolidation was perfect; and yet only 3 grams of fresh thyroid were given in all. The writers found that the stature of their scoliotic patients began to increase from the time when thyroid treatment was adopted; their best results were obtained by the use of a glycerinated thyroid juice in the fresh state, combined with the usual orthopaedic measures. The beneficial changes wrought in the appearance, health, mental state, and growth of their patients under this régime are well brought out in the case-histories given.

178. The Running Suture and the Bloodless Operation.

STARR (*Canadian Med. Assoc. Journ.*, October, 1913) has endeavoured for many years to eliminate the ligature and its knots from wounds after the method first described by Pilcher. Bleeding points are caught in Ochsner's forceps and later controlled by a running suture of No. 1 plain iodized catgut. By this means he has found that ligatures are unnecessary for operations such as abdominal incisions, hernia, ruptured spleen, resection of the bowel, and hysterectomy. He has not ligatured the uterine artery for seven to eight years; in thyroidectomy he ligatures the superior thyroid artery. By the avoidance of ligatures he claims that primary union is obtained with greater regularity.

179. Induratio Penis.

OWING to the extreme rarity of the condition, CINQUEMANI (*Gazz. degli Osped.*, November 2nd, 1913) reports the following case. A medical man, aged 53, married, and of good health except for some slight attacks of rheumatism, noticed in October, 1909, a small nodule on the dorsum of the penis, hard and painless; as this nodule increased in size it gave rise to disturbances in erection, the penis becoming curved with the concavity above. Coitus was possible and painless. The induration extended from about 1 cm. from the suspensory ligament to 2 cm. from the coronal sulcus. The skin was not adherent. On March 6th, 1911, an incision 6 cm. long was made over the dorsum of the penis, and the sclerotic albuginea removed. The haemorrhage, which was troublesome, was controlled by swabs. The wound healed per primam, and the ultimate result (two years and four months later) was quite good. There is no incurvation on erection, and coitus is possible. The sclerosed albuginea when removed measured 4½ cm. in width and 6 cm. long, and 4 to 6 mm. in thickness. In some parts it was as hard as bone, and, indeed, presented on section many of the characters of bone (medullary canal, bony walls, and osseous lamellae). The author discusses the literature of the subject, and adds a short bibliography.

OBSTETRICS.

180. The Vomiting of Pregnancy.

A. DE UDACTA (*Revista de Med. y Cir. Pract.*, February 7th, 14th, and 21st, 1914) reviews recent investigations into the cause, nature, and treatment—especially the opotherapy—of the vomiting of pregnancy. He insists on the probably very various and complex causation of the symptom. From his own experience he cites cases where there could be no doubt about the fact, whatever the mechanism underlying may be, that vomiting in pregnancy may

result from reflex nervous action, as in cases of uterine retroversion and other causes of local irritation. Other cases, again, are connected with errors of diet or affections of the gastro-intestinal system. Nevertheless, there is a residuum of a very typical, and generally very severe cases, in which all such explanations fail, as does all treatment founded upon them. The researches of Fieux and Mauriac on the deviation of the complement in women from one to four months pregnant, using as an antigen an extract made from chorial villi, seem to leave no room for doubt, taking into consideration the results of treating severe cases of vomiting in pregnancy with the serum of a normal pregnant woman, that toxins are elaborated from the chorial villi, and that the blood of pregnant women contains specific antibodies. The serum of the normal horse seems also to possess similar properties, since it has been established for the human serum and given good results. This hardly accords with theory, as for various reasons it is difficult to explain how 20 c.cm. of normal horse serum could contain antibodies sufficient to neutralize the maternal blood saturated with toxins as it was in the cases of Fieux and Freund, and those reported by the author. It may be that the horse serum does not act directly, but excites and brings into play those glands and organs which naturally produce antibodies. Summing up the present state of our knowledge in regard to treatment, the author considers that after a thorough investigation has failed to reveal any other cause for the vomiting, and the conviction reached that the case is one of toxaemia gravidum, that the serum of a healthy woman, pregnant from two to four months, should be given. Alternatively, the serum of a normal horse, which is easier to obtain and manipulate, may be used.

181. Triplet Pregnancies.

GALL of Trieste (*Zentralbl. f. Gynäk.*, January 17th, 1914) successfully delivered a woman, aged 30, of triplets. He lays stress on the age of the subject. One fetus was a male, two being females, and all were reared. There were two placentas; the cords lay very close, being marginal. One had a third cord inserted into it. The woman was healthy. Ten years before coming under observation she had borne a child to term; five years after the first labour she gave birth to twins, a boy and a girl; and there had been two twin pregnancies in her husband's family. This experience is in accordance with the records of other observers. According to Mirabeau, the average age for triplet births is 30, being much less before 30 and after 34. Amongst eighty-two mothers of triplets Colorini found that twenty-one were primiparae, sixty-one multiparae. Out of the sixty-one, ten were 2-parae, seventeen 3-parae, seven 4-parae, and twenty-seven had all been four or more times pregnant; 5-parae, as in Diamant's case, were most frequently subject to triplet pregnancy. Strassmann noted that, again as in Diamant's case, twin pregnancy was often found to have preceded a triplet pregnancy.

GYNAECOLOGY.

182. Perforation of Uterus and Avulsion of Appendix.

BRAUDE, working under Strassmann of Berlin, has recently published (*Zentralbl. f. Gynäk.*, December 27th, 1913) a case of perforation of the uterus, avulsion of the vermiform appendix, and perforating wounds in several parts of the intestines, where he performed hysterectomy, sutured the wounds in the bowel, and saved the patient. She was a widow, nearly 40 years old, who had been five times previously pregnant. The periods had ceased for four months; then feverish attacks set in with haemorrhages. The patient, according to her own account, fell down stairs, and, the bleeding being severe, sent for a doctor, who at once undertook to empty the uterus. The os being undilated, he thrust into the uterine cavity a dressing forceps to draw down the fetus. He succeeded in pulling out what he at once recognized as the vermiform appendix. He applied the curette and then took the patient to a hospital. Dr. Braude operated, as above stated. There were numerous perforations in the intestine, and a portion of the vertebrae of the fetus was found in Douglas's pouch. A considerable amount of the contents of the injured intestine had escaped into the peritoneal cavity, yet there were but few signs of peritonitis and no local or general infection followed. The rent in the fundus was ragged and bruised, readily admitting the passage of a finger. The mesentery bore numerous ecchymoses, and two bleeding vessels required ligature. On the tenth day an attack of dyspnoea set in and a distinct embolic infarct could be defined in the right lung, but the patient was kept at rest and ultimately recovered. The perils of using a dressing forceps for emptying a gravid uterus were well shown in this case. It is extraordinary how these grave injuries inflicted on viscera by malpraxis often fail to prove mortal when skilful surgical aid is at hand.

183. Surgery of Suppurative Diseases of Tube and Ovary.

CHILD, JUN. (*Journ. of Obstet. and Gyn. of Brit. Emp.*, December, 1913) lays down rules as to the surgery of suppurative salpingitis and oöphoritis. (1) When operating by the abdominal route the pus should always be removed by aspiration before any extensive separation of adhesions is attempted, this avoids soiling of the peritoneal cavity, and, by decreasing the bulk of the tumour, adds greatly to the subsequent ease of the operation, especially the separation of adhesions. (2) Drainage is to be avoided save in the mixed infections, and when there is a great deal of oozing from raw surfaces, and then, always, vaginal drainage is called for. (3) The transverse incision must be made, as it exposes the field of operation as much, and the intestines as little, as possible. (4) Non-absorbable and non-infectable suture material must be used for the sutures applied to the abdominal incision. (5) The operator must never fail to inspect the condition of the vermiform appendix, or at least to make sure that it is not in the pelvis.

THERAPEUTICS.

184. High Altitudes in the Treatment of Pulmonary Phthisis.

TUCON communicated to the ninth International Congress of Climatology, Hydrology, and Geology, held at Madrid in October, 1913, a paper on this subject, which is published in the *Schweizerische Rundschau*, January 24th, 1914. He lays stress on the individual peculiarities which not infrequently occur, and which seem to defy all general guiding rules, quoting the celebrated aphorism, "Il n'y a pas de maladies, il y a des malades." Nevertheless, he says, it is possible to give certain contraindications and indications of incontestable value in the treatment of tuberculous disease of the lungs by high-altitude climates. The contraindications are: (1) Tachycardia, a pulse of about 110 per minute in the morning, during repose, and persisting many days, with a tendency to dyspnoea. (2) Uncompensated cardiac affections, especially if there is an enfeebled myocardium, with lowered blood pressure. When either of the above is associated with a much diminished area of sound lung tissue, available for breathing purposes, a diminished "respiratory field," the contraindication is absolute. (3) Grave adynamic or cachectic states, anaemia to a pronounced degree, general granular tuberculosis, tubercle localized in the meninges, the brain, or in the intestine. (4) Certain rare nervous states. (5) The author believes that certain ethnographic considerations are of importance. Consumptives of the negro race or of mixed blood (mulattoes, etc.) accommodate themselves with considerable difficulty to a mountain climate. The yellow races (Siamese, Chinese, Japanese) seem to bear very well the high altitude cure. Among cases likely to be favourably influenced by a residence at a high altitude, are first noted those in a quite early stage. Laryngeal tuberculosis, asthma, pregnancy in consumption generally do well at high altitudes. A distinct indication for the treatment is haemoptysis and febrile states connected with acute attacks. In all cases, however, in which there are indications or contraindications for treatment by a climate of high altitude, the final judgement may be made after a short trial of the particular climate in view; this can generally be made without danger.

185. Intravenous Injections of Arthigonin.

J. LEWINSKI (*Muench. med. Woch.*, December 16th, 1913) has investigated the question of the value of intravenous injections of arthigonin both in the treatment of gonorrhoeal affections and also in the diagnosis. In gonorrhoeal epididymitis intravenous injections of from 0.3 to 0.5 c.cm. produced a rise of temperature and a rapid diminution of the pain and swelling of the organ. The gonococci did not disappear from the urethral discharge. In one case, in which the treatment was associated with the application of heat, an acute prostatitis developed. In one of his cases the injections produced dyspnoea and acceleration of the heart beat, in another marked nausea and palpitation, and in a third heart symptoms of some severity. Further, he records that in one case the treatment succeeded in

diminishing the signs of inflammation, but immediately on this an acute epididymitis developed on the other side. In four cases the treatment was given for gonorrhoeal prostatitis. Here, again, the signs of inflammation rapidly diminished, but the gonococci did not disappear from the secretion. A definite cure of the complication was not observed. The results in gonorrhoeal arthritis were more favourable. His experience, however, teaches him that intravenous injections of arthigonin should not be given to persons suffering from disturbances of the circulatory or respiratory organs or to weakly, wasted individuals. In regard to the diagnostic value of the injections, Bruck and Sommer found that a rise of temperature of 1.5° C. may be accepted as a specific sign of gonorrhoea. In controlling these results the author found that a rise of 0.9° C. followed an injection of 0.1 c.cm. in a person who had never had gonorrhoea. A person who had just recovered from a subacute gonorrhoea gave a rise of 1.4° C., while another gave a rise of 1.5° C. The cure in these two cases was, in the opinion of the author, quite definite. Next he tested the effect on persons suffering from gonorrhoea. The rise of temperature varied between 1° and 1.6° C. after 0.025 c.cm. Various doses were given, and from the results observed he deduces that 0.05 c.cm. is the best dose for diagnostic purposes. Cured patients give a rise of temperature of under 1° C., and no gonococci appear in the urethral discharge. In this manner the diagnosis of a still existing infection can be decided. Persons who have never had gonorrhoea give a rise of temperature of a small extent in response to an injection of 0.1 c.cm., but rises of 1.5° C. in response to this dose may be accepted as evidence of the gonorrhoeal nature of the affection.

186. Tincture of Iodine in Gastro-intestinal Haemorrhage.

NOTTEBAUM (*Deut. med. Woch.*, December 4th, 1913) finds tincture of iodine a valuable haemostatic for haemorrhage from a gastric or intestinal ulcer. In one severe case of typhoid fever, an intestinal haemorrhage persisted in spite of the application of an icebag, and the administration of gelatine, plumbum aceticum, opium, ergotin, and stypticin. As the hourly evacuation of loose, haemorrhagic stools persisted, and the condition was critical, the author as a last resort prescribed tincture of iodine in the following mixture:

R	Tr. iodi			25.0 m
	Sod. iodi			0.1 gram
	Aq. menth. pip.	}	āā	20.0 grams
	Syrup. simp.			
	Aq.		ad	200.0 ,,

A dessertspoonful was given at first every half-hour, and later at intervals of one to two hours. The diarrhoea and haemorrhage soon ceased, and the patient recovered after taking the mixture for twelve days without a sign of iodism. Five similar cases treated in the same way showed equally satisfactory results. The profuse diarrhoea of typhoid fever was rapidly checked in most cases by tincture of iodine. When it failed, the diarrhoea was very likely due to a mixed infection. In one case of intestinal haemorrhage of unknown origin, the patient was a man aged 53. Apart from a small gouty tophus of the left ear, and a history of rheumatism in the back, he seemed healthy. He was afebrile, and the haemorrhage, which was promptly arrested by tincture of iodine, could not be traced with certainty to any cause, but it was probably gouty. In four cases of haemorrhage from a gastric ulcer, the author found the action of tincture of iodine was prompt. It also relieves the abdominal tenderness of this condition, and it probably helps to clean and cicatrize the ulcer.

187. Treatment of Lupus Erythematosus.

HASLUND (*Ann. de derm. et de syph.*, vol. iv, December, 1913) says the Finsen Institute at Copenhagen, of which he is a director, has made a two years' trial of the carbon-dioxide snow method for the cure of lupus erythematosus, and the results obtained have satisfied the authorities that it is the method of choice, and far superior to all ointment or phototherapeutic agents. Dr. Haslund details several cases in support of his contention, and among the most striking is one of a woman, aged 43, who had been under treatment at the institute since 1897 for an extensive involvement of the nose. The treatment then given included the Finsen lamp, of which there were 149 applications in the first year, 300 in the second, and a diminishing number in subsequent years, with improvement of the condition. This treatment was combined with galvano-caustic punctures, and towards the end of her treatment (in 1909) with quinine internally, under which she was apparently cured, with residual supple and soft scarring of the regions affected. In 1912 she had a recurrence, not only over the scars, but exceeding their dimensions considerably. These were rapidly cured with seven applications of the snow at two weeks' interval. Each application, under moderate pressure, lasted ten to twelve seconds only. It is important to note that apparently, *ceteris paribus*, seven applications of snow had the same therapeutic effect as 750 Finsen exposures *plus* the galvano-caustic punctures. The author's method is of the greatest simplicity. He uses no apparatus beyond the ordinary chamois-leather collector and vulcanite moulds of various sizes. He regards every case of lupus erythematosus, even the hyperaemic irritable types in which all authorities are agreed as to the danger of violent remedies, as an indication for the use of the snow.

188. Pilocarpin in Parapsoriasis en Gouttes.

IN attempting to ascertain whether the sudorific effect of pilocarpin would lessen itching in skin diseases, K. HERXHEIMER and H. KÖSTER noted an extraordinary action in *parapsoriasis en gouttes*, and therefore watched its effect more closely (*Berl. klin. Woch.*, December 1st, 1913). In the first case other medication was employed, including arsenic internally, and externally the quartz lamp, chrysarobin, and tar. The quartz lamp treatment set up dermatitis, and in this situation the disease cleared up, while the rest of the body appeared to be uninfluenced by treatment. After pilocarpin hydrochlorate had been given complete recovery followed. In the second case the only treatment employed was by pilocarpin, which was injected intramuscularly in doses of 0.01 gram. In the course of about five and a half weeks the patient (a woman) was given eighteen pilocarpin injections. The rash was distributed all over the body, and was especially profuse over the lumbar region. No capillary haemorrhages were seen, but the papules, pigmentation, and scaly plaques were typical of a severe affection. The itching was fairly acute at night. The result of the treatment was that the rash cleared up, save on the thighs and knees, leaving brown stains. On the thighs and knees a few isolated papules still were present. The patient stood the treatment well and left the hospital in good general health, but at first she lost a fair amount of weight. The authors are of opinion that, save when a serious cardiac or pulmonary affection or pregnancy is present, pilocarpin can be given continuously with safety, provided that the patients can be watched, and even if signs of intoxication followed doses like 0.01 gram, the antidote—atropine—can always be relied upon to remove serious symptoms.

PATHOLOGY.

189. Regeneration of Elastic Fibres after Injury to Arteries.

CAFORIO (*Rif. Med.*, January 17th, 1914) has carried out a series of experiments on dogs, in relation to the processes of repair that go on in arteries after injury, especially in reference to the elastic coat. With especial care to avoid haemorrhage, a longitudinal incision about 1 cm. was made in the femoral artery, which was then sutured with silk or catgut, and the after-effects noted up to five months. Contrary to the observations of some other experimenters, the author found that it made no difference in the ultimate result whether silk or catgut was used as the material of suture. On the other hand, great differences were observed as to whether a thrombus was or was not formed. The chief factor in regeneration *quâ* the elastic fibres was the perviousness of the vessel and its consequent functional capacity, as long as, and partly because of this, the artery functioned well; repair, with the formation of new elastic fibres, practically always took place. On the other hand, if thrombosis occurred, elastic regeneration was very scanty and reduced to mere tentative efforts. In pervious vessels elastic regeneration began after the fourth week from injury and ended in complete recovery in about four or five months. The author was not convinced that the new elastic fibres proceeded directly—that is, in continuity from the old; the new fibres seemed to proceed from special elastogenic cells scattered through the thickness of the cicatrix. The relation between preservation of function and tissue growth is well shown in the great difference between the results of those experiments in arteries which retain their lumen unimpaired as compared with those where thrombosis occurs, and is only a special illustration of a general biological law. Photomicrographs and a lengthy bibliography add value to the article.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

190. Uraemic Endocarditis.

FIESSENGER AND ROUDOWSKA (*Journ. des praticiens*, October 13th, 1913), although quoting several authorities who have noted cases of this kind, point out that the condition has not been sufficiently studied. They give in detail particulars of the case of a woman, aged 41, who was admitted to hospital in a state of coma, which was soon succeeded by an epileptiform convulsion affecting the face and limbs. On examination, a soft diastolic murmur was heard, transmitted along the left border of the sternum, and a diagnosis of aortic insufficiency was made. An examination of the urine showed the presence of albumin in large quantities. When the patient had sufficiently recovered she stated that she had suffered from continual headaches for some months, and that the epileptiform attack referred to was the third she had had. The patient soon after had another similar attack, and died in a state of coma. On autopsy the kidneys were found to be small, red, and congested, and there was evidence of a chronic nephritis with a superadded acute attack. The heart showed an acute vegetative endocarditis, the vegetation being soft and easily destroyed by pressure. The pneumococcus was found to be the invading organism. The uraemic intoxication alone would not account for the endocarditis present. This was to be explained by the superadded pneumococcic infection which developed the more easily on account of the lowered resistance of the tissues. The authors remark as a notable feature of the case that throughout there was no pyrexia and no myocardial symptoms. It is impossible to say whether this was due to the feeble virulence of the pneumococcus present or to an inhibition of the thermic centres by the uraemic intoxication.

191. Syphilis simulating Tuberculosis.

IN the course of one year H. KRAUS (*Wien. klin. Woch.*, December 4th, 1913) has observed four cases of syphilis which were admitted to the Wienerwald Sanatorium for tuberculosis. In one case the chance discovery of a gumma led to the right diagnosis, while in the other three cases there was no such sign of syphilis. The first patient was a married woman, aged 28, who had suffered in infancy from tuberculosis of the left knee. Shortly before admission to the sanatorium she became thin and weak, and developed intermittent fever and a slight cough. There was no expectoration, and there were no definite physical signs over the lungs. The temperature would be normal for a few days, and would then range from 99.5° to 101.4° in the evening for a few successive days. She also suffered from abdominal pain and vomiting, which were independent of the febrile attacks. There were no signs of disease of the nervous system, but the liver and spleen were slightly enlarged. After several weeks' observation a small gumma was found breaking down in the left pharynx. A positive Wassermann reaction and a history of an aborted and macerated fetus led to the prescription of mercury in the form of enesol. After a few injections the temperature fell to normal, where it remained. The patient was discharged perfectly well. The second patient was a married woman, aged 25, who during the past year had developed a periodic cough and slight expectoration. No tubercle bacilli were demonstrable, but she was repeatedly febrile, and her appetite was poor. A few dry râles were audible over both upper lobes of the lungs, but the Roentgen rays showed nothing abnormal with the exception of slight shadows over the hilus on both sides. After six months' treatment with febrifuge drugs, rest in bed, followed by slight exercise, the râles had disappeared, and the patient had gained 10 kilos and looked very well. But she was still occasionally febrile. The author's experience with the first case suggested the employment of Wassermann's reaction, which was found to be positive. Injections of enesol were prescribed, and in a few days the temperature fell to normal, where it remained. The third patient was a painter, aged 39, who had suffered from intermittent fever during the past four months. While the fever lasted he felt miserable, but he could continue his work when the temperature was normal. A few râles were audible over the upper lobe of the right lung, but there was no expectoration, and the Roentgen rays showed no disease. In the sanatorium febrifuge drugs, including pyramidon, had no influence on the temperature, which would range from 99.5° to 101.6° in the evening. Sometimes the temperature would be normal for a whole day. There were occasional attacks of abdominal pain, nausea, vomiting, and anorexia. After this condition had lasted for some time the patient confessed that he had contracted syphilis six years earlier, when a rash had appeared. He had received intermittent treatment for three years, since when there had been no symptom. Wassermann's reaction was positive. A few injections of enesol brought the temperature down to normal, where it remained. The fourth patient was a business man, aged 40, who had suffered from intermittent fever for a couple of months. He was emaciated and suffered from slight jaundice, anorexia, and occasional night sweats. There was no cough or expectoration, but all the physicians he consulted found the condition of the lungs suspicious. The examination of the lungs at the sanatorium was negative. Here the patient was afebrile at first, but on the evening of the sixth day the temperature rose to 100.6°, and during the following days it rose still higher. Syphilis was now suspected, a history of a chancre sixteen years earlier was elicited, and Wassermann's reaction was found to be positive. After eight injections of enesol the temperature fell to normal, where it remained. With the exception of the gumma in the first case, the only sign of syphilis, apart from Wassermann's reaction, was the intermittent fever. As this is not specific for syphilis, its recognition in such obscure cases is dependent on Wassermann's reaction, which should be employed when so-called cases of latent tuberculosis run an atypical course.

192. The Cerebral Form of Subacute Hypo-adrenalism following Typhoid Fever.

IT was shown by Sergent in the year 1902 that acute adrenal insufficiency is a fairly common sequel of many acute infections, and that it does not always prove fatal, but may become subacute or chronic. A case of the cerebral form occurring after typhoid fever is recorded by DONIUS (*Arch. de méd. et de pharm. militaires*, 1913, lxi); according to him, the commonest forms of adrenal encephalopathy are the psychopathic and the depressed melancholic. His patient was a soldier, aged 22, who was in hospital for two months with severe typhoid. Two months after his discharge he returned in a profoundly wasted, pale, and asthenic condition: he answered questions reluctantly, and complained of lumbo-abdominal pains. There was also severe persistent cephalalgia, with clouding of intellect, refusal of food, nocturnal delirium, inequality of pupils, great tearfulness, hopelessness, mental sluggishness, and indifference: he complained of sciatic pains and inability to warm himself in bed; his extremities were cold to the touch, and slightly bluish, and he had obstinate vomitings and constipation. There was hypothermia, and a very feeble low-tension pulse, but Sergent's white-line phenomenon was absent. He was treated by adrenalin, and improved steadily on it; at first he took 30 drops daily of 1 in 1,000 adrenalin solution; after a few days 40 drops was given; and this treatment was periodically stopped for a few days, and then resumed; he recovered in three months, and returned to military service. The slowness of development of the symptoms is attributed to adrenal sclerotic changes.

193. Estimation of the Renal Function.

AT a meeting of the Holländische Gesellschaft für Chirurgie a new method of estimating the renal function was published by VAN HOOGENHUIJZE (*Zentralbl. für Chir.*, February 28th, 1914). It consists in the estimation of the creatinin content of separated urine. The advantages claimed for this method are—(1) that 5 c.cm. of urine suffice for the test; (2) that contamination of the urine with blood does not interfere with the reaction; and (3) that the figure obtained has an absolute as well as a relative value. The daily output of creatinin for any man on a protein-free diet is fairly constant, and, roughly, proportional to the body weight. It depends upon the katabolism of body protein, the creatin so formed being converted into creatinin by the liver. On a mixed diet the creatinin excretion is raised, but the difference is so small that it may be neglected. Under ordinary circumstances a healthy kidney separates about 8 mg. of kreatinin per 10 c.cm. of urine. The actual estimation is simple. The

author has devised a colorimeter, using a half-normal solution of potassium bichromate as a standard for comparison. Five c.cm. of urine are added to 15 c.cm. of a saturated solution of picric acid and 5 c.cm. of NaOH; the mixture is allowed to stand for five minutes, and then made up to 250 c.cm. with water. It is now compared with the colorimeter scale. Sixty cases have been investigated by this method, and the results controlled in 30 cases by operation. There was no instance of renal insufficiency after nephrectomy in this series. A disadvantage which the method shares with many others lies in the fact that polyuria is frequently occasioned by the passage of the ureteric catheters. Testing several portions of urine passed at short intervals will, however, enable a sufficiently accurate estimate to be made. The results have been found so reliable that in the Utrecht clinic the method has superseded all others.

SURGERY.

191. Operation for Embolism of the Femoral and Profunda Femoris Arteries.

H. MATTI (*Corr. Bl. f. schweizer Aerzte*, December 13th, 1913) states that though the removal of emboli from peripheral arteries has been performed in a number of cases since the operation was first performed by Ssabanjeff in 1896, a successful result was obtained in only two. The writer reports a third. A man, aged 70, had uncompensated heart disease. At 3 a.m., on July 6th, there was violent pain in the right foot and leg. About noon on the following day the skin of the foot and lower half of the leg was cold, white, and of wax-like appearance. Sensibility was entirely abolished up to a handbreath below the knee. The toes could not be moved. The pulse was absent in the posterior tibial and popliteal arteries. In the femoral artery, also, it was imperceptible except immediately below Poupart's ligament, where there was vigorous pulsation. Embolism of the femoral artery was diagnosed. As at 4 p.m. the coldness of the skin had extended above the knee, the profunda femoris was evidently also involved. Under local anaesthesia an incision 4 in. in length, and beginning at Poupart's ligament, was made over the femoral artery. As isolation of the artery in Scarpa's triangle proved painful, ether was administered. Just before the bifurcation of the common femoral into the superficial and deep femoral arteries an elastic body could be felt within the vessel. It extended nearly an inch into the profunda femoris. The femoral artery was freed upwards as far as Poupart's ligament, and a stout thread ligature was placed round the pulsating portion, but not tied. The artery was then provisionally closed by a Doyen's clamp protected with rubber. Below an aneurysm needle was introduced beneath both the femoral and profunda vessels, so that they could be rapidly ligatured if the necessity arose. An incision ¾ in. long was made in the femoral artery above its bifurcation. The lumen was completely occluded with a tough greyish-red embolus, ½ in. of which was cautiously expressed. A smaller plug was detached from the bifurcation, and another was extracted from the profunda. Haemorrhage then occurred from the profunda, but was arrested by putting tension on the artery by the aneurysm needle. Two portions of the embolus were next removed from the femoral below the incision, but as no reflex of blood occurred the thumb was inserted by the side of the artery as far as the adductor opening. The fingers at the same time pressed on the skin over the artery. In this way a long recent thrombus, at least 6 in. long, was extracted. Haemorrhage then occurred from the peripheral end of the femoral artery, and was temporarily arrested with the aneurysm needle. The arterial wound was closed, first with a continuous suture of finest silk through all the coats, and, secondly, with interrupted sutures of the adventitia and media. The fascia was so joined with catgut. To guard against secondary haemorrhage, the ends of the loose ligature round the common femoral artery were conducted through the upper angle of the wound, so that they could be immediately tightened without reopening. On July 7th the patient had passed a good night and was in less pain. The toes were still white and the nails blue, and a few bluish patches remained below the knee. Pulsation could be felt in the popliteal artery. On July 14th the great toe and the tips of the second, third, and fourth toes had become gangrenous. Sensibility was absent in all the toes and the foot below the middle. There was a patch of cutaneous necrosis on the heel. On July 21st there was satisfactory pulsation in the femoral and popliteal arteries, but on August 15th the femoral pulse could not be felt. The dry gangrene of the toes did not spread, but the general condition deteriorated, oedema of both legs appeared, and death resulted with progressive dyspnoea on September 3rd. The heart was dilated; the aortic valves were incompetent, and the mitral and tricuspid orifices admitted three fingers. There was arterio-sclerosis of the aorta and coronary arteries. The right external iliac, common femoral, and profunda arteries were patent, but the superficial femoral from its origin was completely occluded by a thrombus, which extended as far as the popliteal artery and was partially organized. The incision in the artery was externally no longer recognizable, but internally was covered as to its lower half with organized thrombus. There was chronic bronchitis. The author claims that the operation saved the leg and obviated amputation of the limb high in the thigh, the prognosis of which would have been desperate. Though secondary thrombosis of the superficial femoral artery occurred—probably about the end of the third week after the operation—the occurrence of gangrene in the foot was probably due to the damage which resulted from the embolism, and not to the secondary thrombosis. If the operation had been performed immediately, instead of thirteen hours after the embolism occurred, gangrene might have been prevented. The surgeon must not overlook the possible presence of extensive thrombosis below the embolus. Death was due entirely to the condition of the heart and bronchi and in no way to the embolism.

195. Tracheotomy.

BAGGERD (*Med. Klin.*, January 18th, 1914) summarizes the history, and discusses the indications for the operation, and describes the different methods followed, and their advantages and drawbacks. In diphtheria there is much difference of opinion as to when the operation is indicated. Feer, Strümpell, and Romberg wait until the distinct signs of a dangerously impeded "windway" are present. Feer regards the action of the sterno-cleido-mastoid, and other auxiliary muscles of respiration, as the danger signal. On the other hand, Leser advises that the operation be performed as early as possible, that is, at the very first sign of commencing narrowing of the lumen of the laryngeal orifice. He considers the danger of tracheotomy so slight that he would rather do it once unnecessarily than once omit it where it might possibly be indicated. In regard to the relative advantages and disadvantages of the high or low operation, Baggerd on the whole prefers the former. Its only inferiority he considers to lie in the occasional abnormality of the isthmus of the thyroid gland. In every other way the high operation is the better of the two; it is easier, the trachea is more superficial, there is less bleeding, and there is no risk of air entering the mediastinum. Also the introduction and retention of the tube is a simpler matter. When the isthmus and trachea are exposed, Bose and Müller's cross incision through the thyro-laryngeal ligament, along the lower border of the isthmus, will free the gland sufficiently to allow of its being drawn out of the way with a blunt hook. Contrary to the usual advice, Baggerd counsels the delaying the opening into the trachea until all bleeding has been stopped. In practice he does not find that the relief of cyanosis is followed by cessation of haemorrhage, which is apt to continue to cause much trouble. In tracheotomy for diphtheria the author has almost never found it necessary to leave the tube in its place longer than six days.

196. Sulphuric Ether Lavage.

G. DE TARNOWSKY (*Journal American Medical Association*, January 24th, 1914) reports 30 cases treated by the Souligoux-Morestin method of sulphuric ether lavage of the peritoneal cavity. His attention was drawn to the method during a recent visit to the Paris clinics, where it is used in five hospitals as a routine measure in all laparotomies. Eight years' experience with ether as a local disinfectant had convinced him already that it was harmless as regards cell degeneration, and he quotes the French authorities to the same effect. He began using it in his abdominal operations in the latter part of August, 1913, in both private and charity cases, with uniformly gratifying results. The technique is described by him as follows: "After removal of pathologic tissue, free pus is carefully wiped out; then ether is freely poured into the abdomen and is allowed to come in contact with all of the viscera in a case of general peritonitis. The viscera are literally washed in ether, hence the term 'lavage' adopted by the French. As much as a quart of ether has been thus used. After having remained in contact with the abdominal organs for from two to five minutes, it is mopped out by means of gauze sponges and the abdomen is closed with

one small drain. In circumscribed peritonitis the pus cavity, having been wiped out, is filled with ether and the abdomen is closed without drainage. In pelvic peritonitis, ether-soaked sponges are applied to all involved surfaces, and then 2 oz. of ether are poured into Douglas's pouch and the abdomen is closed without drainage. The immediate effect of ether thus applied is to cause a momentary capillary contraction followed by hyperaemia of the viscera. There is a moderate formation of carbon dioxide in the abdomen, evinced by a bubbling sound and the escape of bubbles from the surface of the ether. Ether is slowly absorbed by the serosa: this is proved by the fact that no change in the anaesthesia of the patient has been reported to date." De Tarnowsky's 30 cases included 3 cases of gangrenous appendicitis with general peritonitis, 4 cases of localized abdominal peritonitis, 2 of pelvic peritonitis, and one of acute cholecystitis with adhesions in which the bactericidal action was very apparent. The remaining cases were not acutely septic. In 75 per cent. the post-operative pain and restlessness were lessened, and were not increased in the remaining 25 per cent. He is convinced that there is less pain than there is ordinarily encountered, and there was no mortality in this series. Experimental study on animals is being carried on by Dr. Bissel in the Cook County Hospital, and will be reported later.

OBSTETRICS.

197. Fertilization of an Ovum in a Tuberculo Fallopian Tube.

C. MANNHEIMER AND E. BOVIN (*Hygica*, December, 1913) have observed two cases of extranterine pregnancy combined with tuberculosis of the Fallopian tube. One patient was a nullipara, aged 30, who had been married a year and a half ago, and who had recovered from pulmonary tuberculosis several years earlier. Menstruation had been regular but scanty till early in February, when it was succeeded by slight continuous haemorrhage, backache, and abdominal pain. A fortnight later an examination of the uterus proved it to be anteflexed, movable, and not enlarged. The uterine appendages seemed normal. As the examination provoked pain and vertigo, the patient was admitted to hospital, where rest in bed arrested the haemorrhage. Her temperature was slightly raised, and a tender swelling behind and to the right of the uterus slowly grew from the size of a plum to that of a hen's egg. After an attack of violent abdominal pain in the middle of February, the pouch of Douglas was found to be distended, the patient was very anaemic, and the pulse was weak and rapid. Laparotomy was at once performed, when much fluid blood was found in the abdominal cavity. A large, partially organized blood clot was found adherent to a coil of small intestine in the pouch of Douglas. The right ovary was normal, but the right Fallopian tube was as thick as a thumb. The left tube was also distended, yielding fluid blood and collapsing when a probe was introduced through its fimbriated end. The left ovary, which was normal, as well as the left tube and right ovary, was left *in situ*. The right tube was removed, and the patient made a satisfactory recovery. The tuberculous character of the condition was not ascertained till a microscopic examination of serial sections of the right tube showed acute miliary tuberculosis, practically limited to its mucous lining. No fetus could be found, and the only sign of fertilization of an ovum were a few chorionic villi found in the blood clot. Probably the left Fallopian tube was also tuberculous, and, had the tuberculosis of the right tube been recognized at the operation, the left tube would also have been removed. Possibly the fluid blood found in the left tube had been absorbed from the abdominal cavity. The authors consider that a fertilized ovum may develop in the left tube, and that the patient ought therefore to be kept under close observation. In another case, a nullipara, aged 34, who had been married nine years, and who had suffered from spinal caries in childhood, began to suffer from attacks of abdominal pain and vomiting. After they had lasted a month the uterus was found to be somewhat enlarged and displaced forwards and to the left by a large tumour lying behind and to the right of the uterus. A laparotomy showed the tumour to consist of the much distended right Fallopian tube, which was covered by several clots of blood. A 4 cm. long fetus and a profuse growth of granulation tissue containing numerous tubercles were found within the tube. It is probable that tuberculosis of the tubes is a more common cause of tubal pregnancy than has hitherto been realized, although the combination of the two conditions was described long ago.

GYNAECOLOGY.

198. The Post-Operative Results of Trachelorrhaphy.

LEONARD (*Surgery, Gynaecology, and Obstetrics*, January, 1914), in discussing the post-operative results of trachelorrhaphy in the Gynaecological Clinic of the Johns Hopkins Hospital during the past twenty years, concludes that the presence of a marked endocervicitis should be considered a contraindication to the performance of this operation for laceration of the cervix. Contrasting trachelorrhaphy with amputation of the cervix, it is important to note that although the former may render a mild endocervicitis more amenable to treatment, it cannot be considered, like the latter, a curative measure for this condition. Nevertheless, in properly selected cases, the influence of the operation in improving the general condition of the patient is quite as marked as that of amputation of the cervix. Fertility is much more likely to follow trachelorrhaphy than amputation of the cervix. This is partly due to the fact that after amputation of the cervix the incidence of abortion and premature delivery is greatly increased, whilst trachelorrhaphy has no effect upon the course of subsequent pregnancy. Should labour occur after amputation of the cervix it is usually difficult. This is not so when trachelorrhaphy has been performed. The former operation should therefore be avoided in women in the child-bearing period until all other therapeutic means have been exhausted. Leonard finds that laceration of the cervix is a frequent cause of dysmenorrhoea in multiparae, and when it is removed, either by amputation of the cervix or trachelorrhaphy, the menstrual pain disappears or is ameliorated in over 60 per cent. of cases. A further reason for selecting trachelorrhaphy as the operation of choice is the fact that serious post-operative haemorrhage is not infrequent after amputation of the cervix, whilst this accident is very uncommon after the former operation.

THERAPEUTICS.

199. The Treatment of Haemoptysis.

MORICHAU-BEAUCHANT (*Arch. méd. et chir. de province*, October, 1913: *Journ. des praticiens*, January 24th, 1914) discusses three recent methods of treating haemoptysis: (1) Flandin and Joltrain have recently employed emerine. They were induced to try this alkaloid by the good effects obtained in certain forms of haemoptysis with ipecacuanha, and its antihaemorrhagic action on abscess of the liver. In doses of 0.04 to 0.12 gram hypodermically in the twenty-four hours emetine seems to be perfectly well borne; no undesirable by-effects are recorded. Six severe cases were recently treated by Albert Robin by two daily injections of the smaller of the above doses. In four cases the haemorrhage ceased; in two the method was unsuccesstul. They were cases of late phthisis with fever and much general debility. Emetine seems most suitable in early "congestive" haemoptysis without fever. (2) Rist has experimented with an extract of the posterior lobe of the pituitary gland — pituitrin (Parke, Davis and Co.) A demicentimetre cube, representing a decigram of the fresh gland, was injected into a vein of the arm. Twelve cases were treated. In six of these the injection was followed by immediate and complete cessarion of the bleeding. In other cases the haemorrhage was stopped for a time, but recommenced once or twice in the following days. Generally a further injection was again efficacious, but in one case succeeding injections failed to act. Several times faintness and vertigo and a very alarming sensation of distress and anxiety followed the injections, but soon passed off. Morichau-Beauchant recommends the employment of a solution of the medicament diluted in several cubic centimetres of normal serum. (3) Haemato-serotherapy: The increase in the coagulating power of the blood after the injection of fresh serum is well known. Fresh serum, for a few hours only, contains a certain quantity of thrombine. It is thus able to cause the coagulation of liquids rich in fibrinogen, but without ferments, and by itself incoagulable. Serum some days old, or treated without thrombine, has nevertheless a favouring action upon coagulation. These facts have been applied clinically with success. To avoid the undesirable effects (anaphylaxis) which may follow the use of animal serums, it is recommended that human serum from a healthy subject should be employed: 30 or 40 c.cm. defibrinated may be administered intramuscularly or subcutaneously. Larger quantities even may be used of

serum from blood freshly drawn which has been allowed to coagulate spontaneously. This method of treatment is simple, and according to the experience of Morichau-Beauchant efficacious, and has a great future before it.

200. Hydriodic Acid in Certain Surgical Lesions.

RAFFAELE (*Rif. Med.*, February 14th, 1914) speaks favourably of dilute solutions of hydriodic acid (from 0.1 to 0.5 per cent.) in the treatment of certain surgical lesions. His first group of cases are wounds (contused, lacerated, dog bites, gunshot injuries). After a preliminary disinfection with soap and alcohol he bathes the wound in 2 per cent. solution of hydriodic acid, and then dresses with sterile gauze soaked in 0.3 per cent. hydriodic acid solution. The second group comprised acute infective lesions. If much tension was present, he scarified the tissue and then injected at several points weak solutions of hydriodic acid; if there was reason to suppose much pain would be caused, a preliminary injection of 2 per cent. stovaine was given. The third group included suppurative infiltrations and was treated in a similar manner. A fourth group consisted of acute abscesses. Here the pus was first aspirated off and the abscess cavity washed out, and then from 1 to 5 c.cm. of 0.5 per cent. hydriodic acid injected into the cavity. Cold tuberculous abscesses and tuberculous ulcers were treated similarly. As the result of the author's experience in the above class of cases, he speaks very favourably of the results which he obtained thereby. More than one injection is necessary.

201. Neo-salvarsan in the Treatment of Malaria.

THE first attempts to treat malaria with salvarsan dates back some four years, and was based on the experience met with in connexion with recurrent fever, framboesia, etc. It was found that this drug was able to cure cases dependent on tertian parasites, which were "quinine-fast." Since then it has been shown that salvarsan is incapable of effecting a complete cure in cases of quartan or tropical fever. P. BAETGE has been able to treat four cases of tertian fever in Düsseldorf with neo-salvarsan, and records his results (*Muench. med. Woch.*, December 16th, 1913). The neo-salvarsan was given intravenously in doses of 0.9 gram. In one case a second injection was given twenty-seven days after the first. After the injections blood smears were made every hour, and in three out of the four cases the parasites disappeared after about eight hours. Later the blood examination was carried out less frequently, and the control was continued for fourteen, seventeen, and twenty-eight days respectively in the first three cases. In all, the search for tertian parasites which had been present before treatment remained negative. In the fourth patient ring forms were found during the first fifteen hours after the first injection. After that time they disappeared, but appeared again in the blood, together with a reappearance of the fever after twenty-six days. The second injection was successful in causing them to disappear from the blood within eight hours. They did not reappear during the following thirty days. In regard to the fever, the neo-salvarsan injection was equally successful. Prior to treatment there was a typical quotidian (double tertian) fever in the first case and a typical tertian fever in the other three. The temperature became normal after each injection, and remained so, save in the fourth, in which a relapse took place, as already stated. The author does not consider that neo-salvarsan should be given in place of quinine in malaria, but when quinine proves useless, or when observation enables the physician to select the right moment for attacking the parasites, much good may be effected by a single injection of neo-salvarsan.

202. Elarson.

ELARSON is a new arsenic compound; it is the strontium salt of chlorine-arseno-behenic acid. According to G. Klemperer the strontium salt is converted into an alkaline salt in the intestine, which is in all probability absorbed as such; 75 per cent. of the arsenic is absorbed, and only 5 per cent. excreted in the faeces. TUSZEWSKI (*Muench. med. Woch.*, December 30th, 1913) considers that elarson differs from the other known preparations of arsenic in that it can be taken by mouth without disturbing digestion or producing toxic symptoms. He has given as much as twenty tablets, each containing ½ mgr. of arsenic, without irritating the stomach or intestine. In one case, however, an attack of diarrhoea was produced by two tablets; the patient was suffering from Graves's disease, and had already had severe diarrhoea. In some cases he was able to give elarson to persons who could not tolerate Fowler's solution or other forms of arsenic. Children were given one to three tablets, adult women up to sixteen, and men up to twenty tablets a day. He found that elarson was especially useful in combination with iron in secondary anaemia and chlorosis, and acted well also as a general tonic.

203. Treatment of Anal Fissure by Tincture of Iodine.

MASCHAT (*Prov. méd.*, December 20th, 1913) deprecates the use of the knife in treating this simple malady. He is satisfied that the use of tincture of iodine as a means of cauterization is both simpler and surer. He has for some years now treated all degrees of fissure in this manner, and with uniformly good results. The cauterization is done on three or four occasions, with two or three days' interval. After the first application there is, in twenty-four hours, considerable diminution of the pain, and the fissure is generally cured by the fourth application. The pain following the first cauterization is rather severe, but does not last more than a few minutes, and there is usually no necessity for local anaesthesia. In no case was there a return of the trouble, and the author reports further that he has cured in this simple fashion several cases which had been treated by forcible stretching of the anus, but in which the malady had recurred in spite of this.

PATHOLOGY.

204. The Causal Organism of Granuloma Venereum.

MARTINI describes a capsulated diplococcus which he has isolated from the ulcerating edges of a venereal sore (granuloma) in a sailor (*Muench. med. Woch.*, October 29th, 1912). The chief cultural characteristics of this micro-organism were that on blood agar it grew within twenty-four to forty-eight hours and penetrated the depths of the medium, turning it a pale greyish red. From the depths of the growth offshoots grew toward the glass wall of the tube, and appear as isolated greyish colonies. On blood broth the chief growth was seen immediately over the mass of corpuscles at the bottom of the tube. These became dissolved, and the clear red fluid below was covered by a layer of turbid fluid. The growth remained undiminished after four or five subcultures on various media. Martini gives the following reasons for regarding these cocci as the causal organisms of the granuloma. They were found both in sections of the surface of the ulcers and also deep below the base. In pure culture they revealed constant characteristics, including a negative behaviour toward Gram-staining, capsulation both of single cocci and of chains, etc. They also showed the propensity of growing into the depths in living tissue as they did in the artificial culture media. Siebert, Fülleborn, and Mayer have described similar structures in venereal granulomata, as did Flu.

205. Hypophysectomy and Experimental Polyuria.

CAMUS AND ROUSSY (*Compt. rend. de la Soc. de Biol.*, December 5th and 26th, 1913) performed many hypophysectomies, both partial and supposedly total, in both newly born and adult dogs and cats. In dogs polyuria without glycosuria is seen within twenty-four hours of the time of operation; as much as ten times the normal daily amount of urine may be passed. The polyuria lasts for a variable time, usually for a few days, but it may persist for as long as three weeks, and the accompanying polydipsia may be very large. These experimental findings agree with those of Cushing and Dean Lewis, and also with clinical experience; polyuria, with or without glycosuria, being rather often seen in pituitary syndromes, as well as in affections of the base of the brain. But in both clinical and experimental work polyuria is inconstant, and it is not yet finally settled whether it depends on the pathological lesion of or the removal of the pituitary, or on a parapituitary basal lesion involving the tuber cinereum or infundibulum. In the second of these papers Camus and Roussy studied the experimental production of polyuria by operations on the base of the brain near the pituitary body in dogs; their conclusion was that so-called pituitary polyuria seems rather to be due—and possibly solely due—to a lesion of the interpeduncular region of the brain, for lesions of this region give a greater and more durable polyuria than that which follows hypophysectomy.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

206. Serum Disease.

FROM 1905 to 1912 Moser's antiscarlatinal serum was used in treating 1,200 cases of scarlet fever at the St. Petersburg Children's Hospital; 683, or 57 per cent., of the patients developed one form or another of serum disease as a consequence. They are considered very thoroughly by L. AXENOW (*Jahrb. f. Kinderhlk.*, Berlin, 1913, lxxviii, 565), who remarks that, as 168 of the patients died within a week of the injection of serum, the percentage of cases developing the serum disease should really be 66. The dose of serum used is large, about 45 per cent. of the children receiving under 200 c.cm., the remainder over 200 c.cm.; up to 350 c.cm. were injected into patients over 15 years old. Serum disease showed itself in 75 per cent. of the children under 5, but only because the doses of antiserum injected were relatively larger in them than in the older patients. It was noted that different samples of serum showed different tendencies to produce serum disease, and, further, a given sample might produce a given type of it (for example, erythema gyratum) in a series of patients. In addition the individuality or idiosyncrasy of the patient is very important here. The incubation period varied from three to seventeen days; it was seven to ten days in 78 per cent. of the cases, seven to eight days in 51 per cent. It should be noted that it may be hard to say when serum disease does begin; von Pirquet and Schick describe enlargement of the glands and rise of temperature as the earliest symptoms, but these can hardly be employed as criteria in scarlet fever. Axenow recommends the serum exanthem for use here. The duration of serum disease varied from a few hours to four weeks and a half; his tabulation shows two maxima: 44 per cent. lasted for from one to five days, 43 per cent. from fourteen to seventeen days. In 23 cases the disease lasted only a few hours, in 2 it lasted thirty-two days with interruptions. In 29 per cent. of the patients it ran its course in two periods with a remission of from one to twelve days in between; in 78 per cent. of these cases the remission lasted for seven to eleven days, and the second period was always the more serious of the two. The treatment is not without its dangers. It was directly responsible for death in 21 out of the 683 cases, and partly responsible in 37 more in which there was some complication of scarlet fever that was running a favourable course until the symptoms of anaphylaxis made their appearance. One family was hypersensitive to serum, and lost three of its members "to the horror of the parents and the physician." One sample of serum caused 7 deaths. In 11 cases more death resulted from faulty technique on injection. Altogether, the serum treatment was wholly or partly responsible for 69 deaths in the 1,200 cases; its use should be confined to the most serious cases of scarlet fever. As for the general condition of the patient, this is but little affected in the first period of serum disease, and the disease was over in one period in 59 per cent. of the cases. In the remaining 41 per cent. there were two, three, or four periods, and the general health of the patient was usually much impaired during these periods, while any complications present were much aggravated. The occurrence of serum disease did not make any complications more frequent. As for the phenomena of serum disease itself, fever (usually below 102° F.) was seen in 253 patients; the first symptom was erythema in 410, urticaria in 230, arthralgia in 158, oedema in 87, albuminuria in 65, and these phenomena rarely lasted for more than six days, usually two to four days. The urticaria was no worse than annoying to the patients. The erythema was of various forms, macular in 231 cases; in 40 it was haemorrhagic in the second period, with 33 deaths; the temperature rose very high, often over 104° F., in the 43 cases of erythema gyratum. Arthralgia was commoner in the older children, and 158 cases (15 per cent.) were seen; it lasted up to three or four days, affected the lower limbs chiefly, and was usually multiple and symmetrical. Arthralgia is seen in only from 1 to 3 per cent. of the cases of scarlet fever at St. Petersburg that are not treated with serum. In 61 of the 158 cases arthritis was seen as well as arthralgia, always in the second period of the serum disease, and death followed in 58 of the 61. Oedema occurred in 87 cases, 57 times in the face, 21 in the legs; albuminuria was seen in 65; oedema and albuminuria occurred together in only 17 instances. Nephritis was noted in 8 patients, of whom 6 died. Axenow found that neither Netter's prophylaxis by giving calcium chloride, nor Besredka's method of injecting 1 c.cm. of the serum six hours before the rest of the dose, was of the least use in preventing the occurrence of serum disease.

207. Rapid Radiography of Tracheo-bronchial Adenopathies.

ALBERT-WEIL AND AUCLAIR, in a communication to the Société de Radiologie Médicale de France (*Bull. et mém.*, December, 1913), urge that *x*-ray screen examination for diagnosing adenopathies or glandular enlargements in the mediastinum and hilum should be complemented by rapid (almost instantaneous) radiography. In the rapid radiograph of the normal thorax there appears on each side of the median cardio-vascular image a large clear zone with branching striae. These striae, mainly bronchioles, are directed fan-like towards the periphery of the thorax. When glandular nodules, due probably to fibrous or calcifying processes, are found along these striae they may appear on the *x*-ray screen as opacities in the hilus shadow, but should the lesions be very small they give no trace on the screen, and though the pulmonary fields bordering the median cardio-vascular shadow may be rather more greyish than normal, the difference is almost indistinguishable even to the experienced eye. On the other hand, a radiograph taken in the frontal position in less than one-fifth of a second shows adenopathies the traces of which on the plate are only the size of large pin's heads. The authors reproduce a plate showing a number of opaque disseminated nodules on the bronchial ramifications, although the screen in this instance gave no positive result. The mediastinal adenopathies are best studied by the frontal or right anterior oblique examination. In the frontal position, when the mediastinal adenopathies are closely coupled to the tracheal axis, their contour may be masked in a "posed" radiograph or a screen examination, whereas the all but instantaneous radiograph will frequently demonstrate polycyclic or ovoid shadows bordering on the vertebral image. The very rapid radiograph shows its superiority more particularly in the oblique position. In the right anterior oblique the subject faces the screen in such a manner that the right shoulder is in contact with the screen, and the biscapular axis makes an an angle with the screen of 45 degrees or rather less. In this position, during the inspiratory phase, one may see, between the shadow of the heart and that of the vertebral column, a clear, or relatively clear, space lightly obscured in the centre by a shadow due to the tracheal bifurcation. When there are considerable mediastinal lesions dark markings are found to obscure the clear space to a greater or smaller extent, but with very small lesions only the slightest shading is distinguishable on the screen, and this makes definite conclusions out of the question. The very rapid radiograph, on the other hand, enables the lesions to be perfectly localized and enumerated, and should be taken even when the screen examination appears to show the integrity of the pulmonary field.

208. Criminal Tendencies and Mental Defects in Childhood.

RAECKE (*Med. Klin.*, January 18th, 1914) has pointed out that amongst the children in reformatories and similar institutions mental defects and abnormalities are much more frequent than among children in other institutions. In Frankfort during the last two years Dr. Raecke has carefully and systematically investigated 371 children and youths of this class; of these, 292 (up to 16 years of age) had already shown criminal tendencies, 175 (or about three-fifths) had been guilty of offences against property. This corresponds with the usual experience that stealing is the most frequent crime amongst children. The next largest section were those who exhibited sexual deviations from the normal. No less than 52 or nearly one-fifth) were in this class. Amongst the offences against property were 23 cases of burglary and 26 instances in which boys had formed societies or bands for burglarious purposes. Some of these were highly organized and had names evidently borrowed from the lurid fiction so plentifully and cheaply provided for this class of youth; they were led by a "captain" elected by themselves, and sometimes took an initiatory oath written in their own blood. In this class

the cause is frequently to be found in desire for adventure fostered by undesirable reading, picture theatres, etc., rather than in any real dishonesty. The mental conditions found are very interesting. In only one-fourth of the cases were these normal and the crime the result of circumstances and upbringing. In nearly half the cases there was an intellectual defect of higher or lower degree. Actual imbecility occurred in 82 cases. In this matter the method of Binet-Simon proved very useful. There were 22 cases of epilepsy, distinct hysteria in 16 cases, and various psychopathic symptoms in 58 cases. Amongst the last mentioned were included only those without accompanying intellectual defect. When that was present the case was classed amongst the imbeciles. Actual insanity was rare. It was suspected in 8 cases; in only 4 could the diagnosis be definitely made. The author points out the harmful influence which the sexual cases frequently exercise over their playmates and the undesirability of allowing them to mix freely with other children.

SURGERY.

209. Jaundice following Appendicitis.

LENZMANN (*Zentralbl. für. Chir.*, February 14th, 1914) bases his conclusions on the study of four cases which have recently been under his observation. The older conception of jaundice as being usually due to inflammatory swelling of the mucous membrane of the bile duct is not held to suffice for the majority of cases. Obstructive jaundice is usually due to gall stones or to pressure upon the biliary ducts from without. The type of jaundice here considered is not obstructive, but belongs to that group of cases dependent upon pathological changes in the functioning of the liver cells. The surgeon occasionally sees jaundice supervening upon suppurative abdominal lesions, and such cases, in the author's experience, are almost invariably fatal. The symptoms in all his four cases were similar; they varied only in the rapidity with which they led to death. Two cases were acute, death taking place after two days; the other two lasted for one and two weeks respectively. In each case the onset of jaundice was ushered in by a rigor, followed by high fever. The rigors were repeated at intervals of twenty-four to seventy-two hours. After a short period of delirium stupor set in, accompanied by rapid, irregular action of the heart; stupor led to coma, and this to death. In two cases stupor followed rapidly after the first rigor. The operations performed (for appendicitis or for purulent or sero-purulent peritonitis) had no influence on the progress of the condition when once a rigor had occurred. In one of the cases there was merely a small quantity of stinking pus under tension in the appendix: the peritoneum was not involved, even the serous coat of the appendix being smooth and shiny. In this case a rigor was an early symptom, and one hour later the appendix was removed; yet the jaundice appeared in twenty-four hours, followed two days later by coma and death. In none of the cases could micro-organisms be recovered from the blood; the condition is therefore one of pure toxaemia. In only one of the cases was the author able to observe the *post-mortem* appearances. This was a case of sero-purulent perityphlitis. The illness had lasted a fortnight, during which six rigors occurred. The liver was small, and its surface wrinkled; the cut surface was bile-stained; the liver cells showed cloudy degeneration, with disintegration of the nuclei. The heart was flabby, the spleen enlarged, and the kidneys showed acute nephritis. In a few of the portal tributaries, which had been covered by the peritoneal effusion, there were soft purulent thrombi. The jaundice observed in these cases is obviously merely the most striking symptom of a condition of general intoxication. A virulent toxin is being absorbed, which is carried in the first instance to the liver by the portal vein. The next organ to be affected is the kidney, the organ of toxin-excretion. In all the author's cases there was severe anuria, with albumin, blood, and casts in the urine. Thirdly, the poison has a marked effect on the red corpuscles in the blood. The nature of the poison cannot be stated, but in the author's opinion it probably belongs to the same group as putrescin and cadaverin. The effect of such a toxin, when carried to the liver by the portal vein, is to poison the liver parenchyma. The liver cells are no longer able to produce bile in a physiological manner. The amount produced is scanty, viscous, and abnormally rich in bile-pigments, and is all the more on this account less likely to be extruded by the normal channels. To these damaged liver cells an excessive number of damaged red blood corpuscles are carried, themselves poisoned by the circulating toxin; with these the liver is unable to deal. The occurrence of jaundice may therefore be explained on these two grounds. Of the associated phenomena which lead to death, the rapid onset of anuria is the most important. The combination of symptoms seen in these cases might be considered as due to chloroform poisoning; but two of the cases did not have chloroform. The other two cases had a little to induce anaesthesia, which was continued by ether; but in both cases a chloroform idiosyncrasy could be excluded, as they had each previously undergone operations under chloroform without suffering any ill effects. Indeed, the same train of symptoms may supervene without any operation or anaesthetic; the author adduces the instance of a case which was brought into hospital moribund, with severe jaundice and nephritis, and died without operation. At the autopsy a circumscribed pericaecal abscess was found. In fact, the condition is on all fours with the occurrence of jaundice sometimes seen in the course of "asthenic pneumonia"; and probably has the same pathology as acute yellow atrophy of the liver.

210. Pericolic Membranes and Lane's Kink.

BLAND WILLIAMS (*Ann. of Surg.*, January, 1914) discusses the etiology, symptoms, and treatment of colonic membranous films described as the "parietocolic" or "bloodless" folds. The author points out that new light has been shed upon the subject by the researches of Lane and Jackson, and describes the anatomy of Jackson's membrane and Lane's kink. The former consists of a broad band of peritoneal membrane arising from the postero-lateral wall of the abdominal cavity on the right side emerging from beneath the liver and extending downwards to the outer side of the ascending colon as far as the caecum. The membrane passes over the first part of the transverse colon and ascending colon, blending with the peritoneum of these structures near the attachment of the mesentery. Lane's kink is produced by a narrow band extending from the peritoneum of the right iliac region to a point on the ileum a few inches from the ileo-caecal valve. The appendix is often adherent to the under-surface of the mesentery, and from its point of attachment thread like bands extend to the wall of the ileum. The appendix itself is free from any sign of acute or chronic inflammation. The theories that have been advanced to account for these membranes are three: (1) That they are evolutionary and due to the assumption of the erect position (Lane). (2) That they are congenital or developmental, due to abnormalities in the rotation and descent of the caecum (Mayo, Cheever). (3) That they are inflammatory and the result of irritation caused by mild inflammation arising from within the intestine (Pilcher, Gerster). The symptoms produced by the condition are those due to obstruction and intestinal stasis. Pain is frequently present and almost always referred to the right side of the abdomen. It may be acute, with or without vomiting, but is never referred to the epigastrium or diffused over the abdomen, as in appendicitis. Occasionally it is referred to the region of the hepatic flexure. Tenderness is very commonly marked over the appendix, and in many cases there is a feeling of distension. There is no pyrexia and no leucocytosis, thus differentiating the condition from acute inflammation. Constipation is practically always present, and may be the chief complaint. It is usually associated with symptoms of autointoxication, such as backache, headache, lassitude, etc. Radiographs are often of great assistance, especially in angulation at the hepatic flexure. Treatment is essentially surgical, although by diet, massage, and purgatives the symptoms may be held in abeyance. Restricting bands should be divided and all raw surfaces covered. If the caecum is dilated and very movable, plication of its walls may be performed.

211. Suture of the Pulmonary Artery.

AN operation involving suture of the pulmonary artery is reported by MARTIN (*Würt. med. Korresp.*, 1913, No. 22). A man of 27 years shot himself with a revolver while intoxicated. He at once fell down unconscious. When brought into hospital he presented the characteristic signs associated with pericardial effusion, causing embarrassment of the heart. Operation was performed four hours after the injury. A longitudinal incised wound of the pulmonary artery was found and sutured, and a drain placed in the pericardium. The pleural cavity contained about 16 oz. of blood. When this had been evacuated a small round hole from which venous blood was oozing was found in the lung near the hilum. It was sutured. The collapsed lung was fixed to the parietal pleura by a few sutures, and the pleura drained. Death occurred fifteen

hours after the operation. On *post-mortem* examination it was ascertained that there had been no reactionary haemorrhage from the wound in the lung.

212. Urethral Cysts.

A. J. UNDERHILL (*Journ. Amer. Med. Assoc.*, January 24th, 1914) reports two cases of cystic degeneration of the posterior urethra. They both followed previous gonorrhoeal inflammations, and the conditions were discovered only by endoscopic examination. Solitary cysts of the prostatic urethra are not uncommon, but differ from the multiple variety in the cases described, where they were sessile and looked like pearls embedded in the mucous membrane. The local symptoms are not distinctive, and the subjective symptoms are those characteristic of the neurasthenia accompanying many of the chronic diseases of the posterior urethra. Underhill believes the condition will be found much more frequently with the more general use of the endoscope. The treatment is dilatation followed by incision of the cysts under control of the eye.

OBSTETRICS.

213. Ovarian Pregnancy in the Graafian Follicle.

MALL AND CULLEN report (*Surgery, Gynaecology, and Obstetrics*, December, 1913) a case of true ovarian pregnancy situated in the Graafian follicle occurring in a patient, aged 24, admitted to the Johns Hopkins Hospital complaining of acute paroxysmal abdominal pain. The ovary measured 5 by 4 by 3½ cm. On section a cyst 3 cm. in diameter was found, containing blood clot adherent to the walls of the same. Chorionic villi were present in the clot and attached to the inner surface of the cyst. There was no evidence of any decidual formation. Of the fetal envelopes, the amnion was quite characteristic, and in close apposition to the chorion. The embryo was not evident. The wall of the cavity containing the blood clot and villi was lined almost throughout with a layer of lutein cells. Between the latter strands of blood vessels were present. The relation of the lutein tissue to the gestation proved quite conclusively that the ovum had developed within the cavity of the Graafian follicle, to which it belonged. A second corpus luteum, situated near the proximal pole of the ovary, was considerably more advanced in development than the one containing the ovum, and therefore, in the opinion of the authors, belonged to a previous ovulation. The older corpus luteum was encircled by a well-marked corpus fibrosum. The specimen confirms Teacher and Bryce's observation that in ovarian pregnancy no decidua is formed. It also probably represents an earlier stage than that recorded by these authors, inasmuch as the gestation had not burst through the layer of lutein cells in such a way as to destroy the anatomical relationship of the gestation to the Graafian follicle. At the same time the possibility of a secondary attachment of the ovum to the ovary through the direct wandering from a Graafian vesicle into the adjacent tissue cannot be denied, until it is shown that the ovum is invariably lodged in a follicle surrounded by a layer of lutein cells of the same age as that of the ovum.

GYNAECOLOGY.

214. Alexander-Adams Operation for Displacements of the Uterus.

DISCUSSING the Alexander-Adams operation, KARL HERZ (*Wien. klin. Rundschau*, January 25th, 1914) points out that it has now been practised for a quarter of a century, but that its value is still questioned. When it was first introduced, it was argued that the round ligaments would be difficult to find; that they would be too weak to hold the uterus in place; that they would be further weakened by the operation; that they would fail to correct displacement of the uterus; and that, even if their shortening moved the uterus, it would merely be displaced in another direction. Of recent years other objections have been raised. The uterus may press on the bladder, causing disturbances of micturition; a fatal haemorrhage, or injury to the small intestine, leading to sepsis, may occur during the operation; an inguinal hernia may be provoked; the displacement of the uterus may recur, and haematomata and painful scars may develop at the site of operation. It has also been suggested that, when pregnancy supervenes, the operation tends to precipitate an abortion. Kleinwächter has analysed 112 cases in which the operation was followed by pregnancy. Among these were 9.82 per cent. abortions. As, however, the ratio of abortions to confinements at term under normal conditions is at least one to ten, Kleinwächter's observations prove nothing. The author has analysed the results of the operation performed in 176 cases at the gynaecological hospital attached to the University of Heidelberg between April 1st, 1908, and April 1st, 1910. Thus, in every case at least a year had elapsed after the operation before its effects were estimated. In no case did the operator fail to find the round ligaments, but in 24 cases they were difficult to find, or were poorly developed and readily torn. Several minor accidents occurred during the operation, but they were almost invariably due to want of technical skill on the part of the assistants by whom the operation was performed. The operation was undertaken when conservative treatment had failed, and the patient's capacity for work was much reduced. As it was often found that although the uterus was restored to an apparently satisfactory position, the patient's symptoms did not disappear, the operation was confined to those cases in which there was considerable displacement to account for the symptoms. Of the 14 patients who had been confined at term after the completion of the operation, 10 showed no relapse of the displacement, and 4 suffered from slight discomfort, which could not, however, be regarded as a relapse. Towards the end of pregnancy these patients experienced tension and pain in the operation scars. After excluding 20 patients who were lost sight of, and 5 who had died in the interval, the author finds that the results were subjectively and objectively satisfactory in 74.8 per cent. In 3 cases, or 1.9 per cent., post-operative hernia appeared. In 3 other cases there was complete relapse of the displacement. Relatively unsatisfactory results were obtained in 17 cases. The author concludes that in uncomplicated cases of displacement, the Alexander-Adams operation may be expected to give satisfactory results in 98.1 per cent. of all cases; that when displacement also includes prolapse of the uterus, the operation, with or without the help of plastic operations, may be expected to give satisfactory results in 92.1 per cent. of all cases. With care the frequency with which post-operative hernia and total relapse occur should be further reduced. The operation is not dangerous, and it deserves a first place among the many operations for displacement of the uterus.

THERAPEUTICS.

215. Agar-agar, Linseed and Psyllium in Chronic Constipation.

SURMONT AND ASSOIGNION (*Echo méd. du Nord*, January 25th, 1914) record experiments and observations on the comparative value and mode of action of these mucilaginous substances in the treatment of constipation. The older view—that the dryness and hardness of the faeces in chronic constipation is due to a too prolonged retention in the colon, and consequent absorption of water by the bowel—has of late years been more or less inverted, owing to the teaching of Adolph Schmidt, Strassburger, and their pupils. According to these authorities, the dryness of the faeces is due to an abnormal absorbing power of the large bowel, *la voracité du colon*, to which the delay of the faeces in passing through the colon is secondary. The researches of Goiffon, and especially those of Arthur F. Hertz, tend rather to re-establish the older view. However that may be, the influence of Schmidt has led to a very extensive use of agar-agar in the treatment of constipation, and often with good results. In France for many years linseed and psyllium have been used for the same purpose, and as seemed to the authors with results quite equal to those obtained from agar-agar. In order to decide the matter these experiments were undertaken. The first series of experiments were *in vitro*. A definite quantity of volume of each of the three substances was allowed to absorb water for a certain time, and the increase in volume and the amount of water absorbed measured both at the ordinary room temperature, and also in an incubator at 37° C. The results showed very little difference between the three substances. Agar-agar and psyllium were about equal and had a slight advantage over linseed in grain or in flour. The volume of each was a little more than doubled. Another series of experiments was made on dogs. The faeces were weighed during a period of strictly measured diet, and weighed again during periods in which each of the three medicaments was added to the diet. The results were surprising. The weight of the stools was

increased to an extent which was quite beyond anything which could be accounted for by the absorption of water and increase in bulk of the agar-agar, etc. The increase in weight of the faeces was in the case of agar-agar 48.5 per cent., in the case of linseed 88.57 per cent., and in the case of psyllium 97.14 per cent. The coefficient of humidity was very little altered—from 69 to 74 per cent.—an increase of 5 per cent., and was the same in each case; whether the increase in the weight and volume of the faeces was to be accounted for by increased intestinal secretion or desquamation, or by lessened absorption of the matter ingested, or by multiplication of micro-organisms, or by some unknown factor, must be left to further investigations to decide. Two series of experiments on the same lines were undertaken in a human subject, a young man of 22 years of age, living on a slightly constipating diet. The results were practically the same as in the case of the dogs; both linseed and psyllium showed a marked superiority over agar-agar. The greater concentration of a mucilaginous content of linseed is a point not to be lost sight of by practical therapeutists—for instance, 30.9 grams of agar-agar correspond to 56 teaspoonfuls; 62 grams of linseed can be contained in 20 teaspoonfuls.

216. Bleeding in Typhoid Fever.

RUDOLF (*Amer. Journ. Med. Sci.*, January, 1914) records the epitomies of the histories, with pulse and temperature charts, of 12 cases selected as typical examples of 127 cases of typhoid with bleeding occurring at the Toronto General Hospital. With one exception, in which the bleeding was through venesection, the haemorrhage was intestinal, and the cases show how the bleeding was followed by a more or less marked fall in the temperature and pulse-rate, which, while often transient, in some cases lasted for days, or even ushered in convalescence. How the good effects are produced is difficult of explanation though bleeding undoubtedly produces a profound effect upon the whole body economy, increasing the flow of urine and the intake of oxygen, with proportionate raising of tissue oxidation. Furthermore, the coagulation time is hastened and the specific antibodies are increased, the agglutinating power of the blood being enormously raised by the bleeding. By the timely use of venesection in those cases which are not doing well because of the severity of the infection and toxaemia, the good effects of haemorrhage may be obtained with avoidance of the bad effects associated with intestinal haemorrhage, and, theoretically, a moderate venesection of from 6 to 14 oz. can do no harm, and may possibly be productive of great good.

217. Mesothorium and Thorium X in Dermatology.

AFTER describing in detail their technique, O. E. NAGELI and M. JESSNER (*Therap. Monats.*, November, 1913) record the results obtained with mesothorium and thorium X in various diseases of the skin. Mesothorium was prescribed alone or in combination with ointments, Finsen or Roentgen treatment in 71 cases of lupus vulgaris. The same area was, however, never treated both with mesothorium and other bodies. On the whole, the results were good, a cure being effected after two to five exposures in some cases. In other cases the disease was refractory. It is easier to apply mesothorium than Finsen light when the disease affects such areas as the ear and nasal orifice. The former treatment, in fact, is the better for small, isolated foci, and for beginning relapses in a lupus scar. Finsen light, on the other hand, is superior when lupus is widespread. An excellent result was obtained with mesothorium in a case of ulcerating lupus of the hard palate. The action of mesothorium in 23 cases of lupus erythematosus was strikingly beneficial, although great caution was necessary owing to the sensitiveness of the skin. On this account short exposures had to be given, and it was found that severe and troublesome reactions sometimes followed an exposure of ten to fifteen minutes, although a silver filter had been interposed. When the disease was of old standing and the skin was less sensitive, exposures lasting for an hour were well tolerated. The cosmetic effects were excellent apart from an intense, transitory pigmentation. The bluish-white scars described by other authors were never seen. Mesothorium was prescribed in spinal-celled epithelioma only as a post-operative measure. In 19 cases of basal-celled epithelioma mesothorium alone effected cures the permanency of which remains *sub judice*. After two to four exposures a cure was invariably effected, even in cases which had been refractory to Roentgen treatment. A striking result of treatment with mesothorium is the absence of scars. The 17 cases of angioma treated required considerable patience, and the more vascular the angioma was the greater was its sensitiveness to mesothorium. It was therefore necessary to use silver filters, and to limit the exposures at first to ten or fifteen minutes, and they never exceeded thirty minutes. In one case an exposure of ten minutes with a silver filter cured an angioma 0.75 by 0.5 cm. and 2 mm. high. The tumour was represented by a spot scarcely distinguishable from the surrounding skin eleven months later. Flat naevi tolerated longer exposures, and when they were large the treatment was continued for several months at intervals of one month. No refractory case was observed. Mesothorium was found unsuitable for pigmented and hairy moles, for an effective exposure also induced telangiectatic, pigmented scars which were as disfiguring as the original mole. Mesothorium was also found unsuitable for clavus, verruca dura, verruca plana, and tuberculosis verrucosa cutis. Four cases of sycosis barbae of the upper lip reacted very satisfactorily to mesothorium, a cure being effected after one to three exposures lasting fifteen to thirty minutes. This result is all the more surprising as the disease is often refractory to the Roentgen rays. Psoriasis also showed marked improvement, small foci disappearing after a single filtered exposure lasting four minutes. But such a speedy result was not permanent, and it was found that the exposure best fitted to avoid a relapse on the one hand and a pigmented scar on the other was an exposure of ten to fifteen minutes with a silver filter. A case of lupus pernio and another of granuloma annulare showed complete recovery after a couple of exposures each. Thorium X was supplied to the authors in liquid and powder form from a factory twice a week as it is very unstabile. The liquid was painted on the skin and left to dry, or it was applied under cover of a wet compress to prevent evaporation. It was also incorporated in an ointment to prevent evaporation. Its action in psoriasis was excellent, being more certain and rapid than that of the Roentgen rays. It can also be used by the general practitioner without technical experience.

PATHOLOGY.

218. Hypophysectomy and Experimental Glycosuria.

CAMUS AND ROUSSY find that glycosuria is seldom seen after operations for removal of the pituitary, either partial or total, in dogs (*Compt. rend. Soc. de Biol.*, February 27th, 1914). It was seen after only 6 out of 45 such operations; in cats it is oftener seen, namely, in 4 out of 9 partial operations on the two pituitary lobes. Anaesthesia was by chloralose or ether. Glycosuria, when it does occur, is a transitory phenomenon, and it appears within the first few hours after the operation. The writers think it would be found more often probably if the urine were drawn off, for some dogs do not micturate for the first twenty-four or thirty-six hours after operation. Glycosuria and polyuria are not necessarily associated; the latter is far the commoner after these operations. The appearance of glycosuria does not seem to be influenced by the kind of food taken before operation, nor by age, sex, or gestation. The authors hold that their researches show that glycosuria is not related to partial or total hypophysectomy; we must attribute it to damage done to basal nerve centres situated near the pituitary, for out of 6 of their animals in which a lesion or temporary irritation of the base of the brain was present glycosuria occurred in 4. They cannot answer the question as to the site of these centres, whether in the tuber cinereum or infundibulum, nor whether the glycosuria depends on their stimulation or inhibition.

219. Glycolytic Action of the Tonsils.

FARMACHIDIS AND VATTUONE (*Rif. Med.*, September 6th, 1913), having observed a temporary glycosuria in 4 cases of tonsillitis, carried out some experiments with reference to the tonsils in relation to glycosuria. In the first series they mechanically irritated the tonsils of dogs and rabbits and found that, as a result, they induced definite hyperglycaemia and glycosuria. In a second series of experiments they injected into the jugular vein of a dog suffering from slight glycosuria 10 c.cm. of tonsillar extract, and found that, instead of increasing the glycosuria, it helped to make it disappear. In depancreatized dogs suffering from marked glycosuria injections of tonsillar extract considerably reduced the amount of sugar. A similar glycolytic action was noticed when the tonsillar extract was added to glycosuric urine and left *in vitro*.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

220. Sudden Death during Bathing.

After discussing the numerous explanations of the cause of sudden death during bathing, Güttich (*Med. Klin.*, November 16th, 1913) considers none of them entirely convincing. On the basis of physiological experiments on the vestibule, he argues that caloric stimulation of the middle ear is often the cause of a fatal reflex. Persons with large perforations of the tympanum are subject to giddiness, vomiting, nystagmus, and general collapse when a small quantity of cold water is poured into the ear. Even when the tympanum is intact the same reaction occurs if the water is less than 10° C. As many persons have a more or less large perforation of the tympanum, and many others suffer from calcification of the tympanum and other pathological conditions which facilitate a rupture of the tympanum, the chances of a bather getting water into the middle ear are considerable. While he is suffering from giddiness, vomiting, and collapse he may be drowned. The obvious precaution is the insertion of cotton-wool into the ears before bathing, particularly if the water is cold. O. Muck (Ibid., December 21st, 1913) discusses the same hypothesis. He records the case of a young healthy person who was bathing in a swimming-bath close to the rope dividing the section for non-swimmers from that for swimmers. After performing a somersault in the water he was seized with such violent giddiness that he had to seize the rope in order not to fall. Next day he consulted the author for severe tinnitus. Complete absence of the tympanum was now found, and the lining of the tympanic cavity was seen to be thin and pale. The author points out that Danziger reported a similar case in 1899. Not only may a perforation of the tympanum prove fatal during bathing, but a quiescent suppuration of the middle ear may flare up again when water enters the middle ear. When the cause of a death during bathing is being investigated the necropsy should include an examination of the tympanum, if possible, by an aural surgeon. It is unnecessary to remove the petrous portion of the temporal bone; indeed, its excision might rupture the tympanum and thus vitiate the investigation. As the epidermis becomes detached and the cavities of the body lose their normal appearance after the body has been in the water for some time, the investigation of the ear should be confined to those cases in which the body has not been long in the water.

221. Myasthenia Gravis with Psychical and Sensori-Sensorial Symptoms.

Souques and Mignot (Soc. de Neurol. de Paris, December 4th, 1913) showed a case of myasthenia gravis in a man of 35, who presented the unusual feature of psychical and sensori-sensorial symptoms. The patient admitted that he drank freely for two years six years ago. His cerebral symptoms began five years ago, and his myasthenia four years ago. His earliest symptoms five years ago were constant "headache," worst on waking in the mornings, consisting of a sense of oppression and of emptiness in the forehead and vertex. He had also attacks of vertigo, which occurred eight to ten times daily. Sometimes his gait was titubating, as if he were drunk: he had also difficulty in collecting his thoughts, and in following a conversation; his memory, too, was appreciably weakened. These cerebral symptoms lasted for a period of two years, that is, till one year after the onset of myasthenia. The myasthenia began in the lower extremities, but later it became widespread, and affected the masticator muscles severely. He had the common remissions and exacerbations of the disease; on the two occasions on which the myasthenic electrical reaction was tested for it was absent. The patient stated that during the myasthenic attacks his taste and smell were a little affected, and his food tasted insipid; his hearing, too, was for several months diminished, but without any tinnitus. Examination revealed slight muscular atrophy, especially in the extensors of the limbs. A fragment of the deltoid muscle, removed for histological examination, showed in places a slight infiltration with lymphocytes in the interfascicular tissue, but no appreciable changes in the muscle fibres, which were quite normally striated. Adrenal opotherapy was tried for two periods; slight benefit followed the first administration, but none the second; but as he had periods of amelioration of his symptoms quite apart from any treatment, the writers do not put down the benefit to the adrenal therapy. In the discussion on the paper Dufour mentioned the case of a woman of 54, which he reported in 1899, in whom progressive myasthenia disappeared under treatment by adrenal therapy; she still remains well at the age of 68. Sicard also quoted a case of his own, reported in 1905, cured by adrenal opotherapy; he saw the patient a few months ago, and found that she remains well without having undergone any other treatment.

222. Post-partum Phlebitis: A New Method of Treatment.

Parachi (*Revista de Medicina y Cirugia Practicas*, January 21st, 1914) recounted to the Academia Medico-Quirurgica Española three striking cases in which he treated post-partum phlebitis by a new method. In two of the cases the disease was already established, and was quickly cured. In the third case premonitory symptoms were present, and the disease was undoubtedly commencing. Under the new treatment all the symptoms disappeared the disease "aborted." The method consists in the administration of peptones in order to stimulate the anti-coagulating function of the liver. After washing out the colon two enemata are given, each of 10 grams of pure peptone, combined with which is the emulsified pulp of 100 grams of fresh liver. The dry extract of liver of commerce may be used instead of the fresh liver.

223. Tuberculosis Verrucosa Cutis after Measles.

Bourgeois (*Dermat. Zeitschr.*, vol. xxi, No. 6) says the ordinary lupus verrucosus, or *post-mortem* wart, so common at one time in those whose employment necessitated the handling of the cadaver, is still fairly often seen. This variety is always due to an external infection, and it is with the object of proving that the condition may also be blood borne that the author has described in detail two cases of his own, and quoted fifteen similar cases from the literature. The disease occurs for the most part in children with or without tuberculous antecedents or concomitants, and is almost always post-exanthematic (measles especially). There are several relapses as a rule, and it is not uncommon for a verrucose form to occur simultaneously with a papulo-necrotic type, lichen scrofulosorum, or lupus vulgaris disseminatus. The individual lesions are indistinguishable, both clinically and histologically, from the ordinary exogenous verrucose lupus. There is the same massive hypertrophy of the corneous layer associated with acanthosis and parakeratosis in both; and, in addition, in the rete Malpighii and subpapillary layers, cellular infiltrations containing both epithelioid and giant cells. The clinical appearance of the haematogenous infection is that of a papillary hyperkeratosis, without the slightest indication of lupus nodules. These lesions make their appearance mostly on the extremities, whilst they are relatively common on the nates, the trunk, the face, and the genitalia. In both Bourgeois's cases the inoculation of excised portions into guinea-pigs resulted in the production of tuberculous lesions, thus indicating that the lesions are actually produced by the bacilli themselves by way of the blood stream.

SURGERY.

224. Dilatation of the Ejaculatory Ducts.

Luys (*Compt. rend. de l'Assoc. Franc. d'Urol.*, 17e Sess., 1913) advocates dilatation of the common ejaculatory ducts as a therapeutic measure in selected cases of chronic gonorrhoea. The classical accounts of the anatomy of the floor of the posterior urethra describe the verumontanum as having a median longitudinal opening—that of the utriculus masculinus. The openings of the ejaculatory ducts are described as being placed laterally, one on each of the external walls of the verumontanum. In examining eleven bodies, this arrangement was found three times. In seven of the eleven the ducts opened just on the margins of the lips of the orifice of the utriculus masculinus; this is, therefore, their commonest disposition. In one instance the openings of the ducts were placed on the floor of the utriculus, and were not visible from the

urethra until the verumontanum had been slit up. When passing bougies into the ducts in the cadaver through a urethroscope, it is found that they pass into the vesicula seminalis, and not into the vas deferens. Dilatation of the ducts is recommended in the treatment of chronic inflammation of the vesiculae seminales. Chronic vesiculitis is common as a complication of, or as the cause of, the persistence of chronic gonorrhoea. It should be sought for in all cases of chronic posterior urethritis, whether there be any other obvious cause for the chronicity or not. There are no distinctive subjective symptoms from which inflammation of the vesiculae may be inferred, and the diagnosis is made by rectal palpation. This is not easy, especially in the case of stout subjects. The lower ends of the vesiculae meet the examining finger as soon as the latter has passed above the upper border of the prostate, placed slightly laterally one on each side of the middle line. Inflammation of the vesiculae is recognized by the four following signs: Tenderness on palpation; thickening of the walls; the expression by massage of large convoluted "moulds" of the vesicula formed of muco-pus, and pain evoked by the passage of the head of an olivary bougie over the verumontanum. There are in addition a number of symptoms, which, while not themselves diagnostic, should direct attention to the condition of the vesiculae. Such are: The occurrence of long filaments in the first glass of urine, when noting the "four-glass" test; pain or frequency of micturition; vague pains in the region of the perineum, testicles, kidneys, or thighs; painful ejaculation; the ejaculation of yellowish or blood-stained seminal fluid; repeated attacks of subacute epididymitis: a condition of neurasthenia, with various subjective symptoms referable to the urinary and genital functions. As the treatment of vesiculitis, the author recommends massage of the vesiculae combined with topical applications to the verumontanum and dilatations of the ejaculatory ducts. Before dilatation is undertaken, the urethra should be cleansed by a course of urethro-vesical irrigations; and the condition of the verumontanum rendered as healthy as possible by the application of caustics under visual control through a urethroscope. Massage of the vesiculae should be gentle; it should be performed regularly and frequently. The vesicle should be massaged from above downwards, and the highest part, which is most difficult to reach, should not be neglected. It often happens, however, that even after thorough massage of a vesicle obviously containing pus, there is no discharge of the contents into the urethra. This is because the muco-purulent contents are bulky, and the duct is stenosed. Stricture of the ejaculatory duct takes place in the same fashion as stricture of the urethra, and owing to the occurrence of the same pathological processes. A rational treatment of the condition therefore includes dilatation of the ducts. The ducts should only be explored in the absence of any acute condition associated with the urethra. The author's technique for sounding the ducts is: First, the urethra is cleansed by one or two urethro-vesical irrigations; a long straight urethroscope of as large a diameter as possible is passed, and the verumontanum located. A straight metal stylet, of fine calibre, is passed along the urethroscope as far as the verumontanum, and the slightly bulbous extremity is insinuated into the mouth of the duct on the affected side. Gentle pressure in a straight line will cause the stylet to pass along the duct; it usually passes for a distance of 1 or 2, or even as much as 6 cm. The bougie is not passed further than it will go easily, without the operator experiencing any sensation of resistance to its passage. The manœuvre may usually be executed without causing any pain, and there should be no or very little bleeding. If the opening of the stenosed duct is not seen on the verumontanum, it is most probably to be found upon the floor of the utriculus. In this case the stylet should be passed into the utriculus, and the hand of the operator then inclined towards his own right side, if it is desired to enter the patient's right duct; or to his own left side to approach the left duct of the patient. A little gentle tentative manœuvring will then usually cause the probe to enter. The duct is then gradually dilated by the passage of larger probes, which are graduated in sizes similarly to ureteric catheters. The same precautions are used as when dilating strictures of the urethra; no force is used, and dilatation is proceeded with by easy stages. After the passage of several bougies, the bladder is filled with a solution of mercury oxycyanide. The vesicula is then massaged, and the patient forthwith empties his bladder. Lavage of the vesiculae by means of the injection of lotions through a small catheter passed into the ejaculatory duct has been performed, but is not recommended; the effect has usually been to produce epididymitis. The author has treated 60 cases by this method of dilatation of the ducts, and is satisfied from the results he has obtained that it is a correct and useful line of treatment. Using the precautions he recommends, he has only seen one case in which any ill result directly attributable to the sounding of the duct has occurred.

225. Splenectomy in Pernicious Anaemia.

Huber (*Berl. klin. Woch.*, November 24th, 1913) points out that extirpation of the spleen in health can usually be effected without risk, but that the operation is contra-indicated in leukaemia. Splenectomy stimulates the production of certain elements of the blood, and it has therefore been concluded that the spleen inhibits the action of the bone marrow. Splenectomy has frequently improved or cured haemolytic jaundice and splenic anaemia, and this encouraged the author to extirpate the spleen in the following case. A married woman, aged 34, had contracted syphilis four years earlier, and had been treated with mercury and salvarsan. She was admitted to hospital moribund. The haemoglobin was 15 to 20 per cent., and the red cells numbered only one million. Oedema, retinal haemorrhages, slight jaundice, urobilinuria, dyspnoea, and partial loss of consciousness were observed. The blood was characteristic of pernicious anaemia. As the patient was too weak for an operation she was first treated with small intragluteal injections of defibrinated blood. This effected temporary improvement, which was followed in a few weeks by high fever and petechiae in the neck and chest. As a last resort the spleen was extirpated by an operation lasting twenty minutes. The spleen was three times the normal size, largely owing to engorgement with blood, 150 c.cm. of which escaped when the ligatures on the spleen were removed. The arteries of the spleen ought therefore to be ligatured early in the operation. The microscope showed marked myeloid changes, numerous myelocytes, eosinophile leucocytes, and nucleated erythrocytes in the spleen. The blood, on the other hand, showed no eosinophilia. She stood the operation well, and improved rapidly. After five weeks the haemoglobin had risen to 50 per cent. and the erythrocytes to 2.5 million. The oedema, jaundice, urobilinuria, and retinal haemorrhages had disappeared, and the temperature had fallen almost to normal. In spite of the disappearance of the oedema the weight had risen from 54 to 56.7 kilos. Ten days later a slow relapse was checked by injections of defibrinated blood. More than three months after the operation the patient could walk without difficulty, but the author is guarded in his prognosis. Even better results have been obtained by Eppinger and others who have treated pernicious anaemia by extirpation of the spleen. It is evidently injurious in pernicious anaemia because of its haemolytic activity and its inhibitory action on the production by the bone marrow of mature erythrocytes.

226. Open Treatment of Fractures.

Van Duyn (*Amer. Journ. of Surg.*, January, 1914) holds that the open treatment of fractures is more scientific and gives more satisfactory results than the older method in cases where complete reduction cannot be immediately accomplished and maintained. The dangers of the operation lie in faulty technique alone. Foreign material, apart from sutures, should not be introduced, except in those cases where it is necessary to replace lost tissue. When such material is necessary, the best to employ is bone from the same patient. All cases should be examined at regular intervals, with the aid of radiography, to determine the amount and extent of callus formation. When there is a failure of such formation, in spite of early manipulation and massage, measures should be employed to induce local hyperaemia. Van Duyn has found thyroid extract of use in stimulating the formation of callus. The injection of iodine at the seat of fracture is also recommended. Bere has obtained good results in cases of non-union by the injection of the patient's blood between the bone ends.

OBSTETRICS.

227. Pregnancy complicated by Ovarian Cyst and Phthisis.

F. Schauta (*Wien. med. Woch.*, January 24th, 1914) records the case of a one-para whose pregnancy had been complicated by pulmonary tuberculosis. In November, 1913, she was again pregnant, the last menstruation having occurred two months earlier. For the past nine weeks the pulmonary tuberculosis had been actively progressive, and haemoptysis had occurred. An abdominal tumour to the left of the uterus seemed to be of the size of two fists.

The progressive pulmonary disease pointed to the immediate termination of the pregnancy: the abdominal tumour pointed to a laparotomy. It seemed desirable that these two undertakings should be carried out simultaneously; and, as the removal of the fetus from the uterus by the abdominal route is a difficult operation, the removal of the fetus and tumour through the vagina was decided on. The cervix was drawn forward, and its anterior wall was divided up to and beyond its union with the anterior vaginal wall. This was also incised, care being taken not to injure the bladder. This was pushed upwards and separated from the cervix, the incision in which was then prolonged upwards to the internal os. A Schultze spoon-forceps was introduced into the uterus, the fetus was removed, and the inner surface of the uterus was curetted. The peritoneum between the bladder and cervix was now opened, the left side of the uterus was seized and drawn forward, and then the cyst was secured and tapped. The collapsed walls of the cyst were now drawn through the opening in the peritoneum, the pedicle was divided, and its stump was sutured and covered with peritoneum. To prevent further pregnancies, the tubes were ligatured and partially resected. The openings in the peritoneum and vagina were closed, and the operation was satisfactorily completed.

GYNAECOLOGY.

228. Radium in Urethro-Vaginal Cancer.

UNDER the title of "Cure of an Inoperable Urethro-vaginal Cancer by Radiumtherapy," LEGUEU (*Bull. et. mém. Soc. de Chir. de Paris*, February 17th, 1914) gives in detail the history of a case which remained apparently cured for two and a half years after treatment. The case was referred to him fifteen months after the first appearance of symptoms: the patient, aged 26, then presented a carcinoma involving the urethra from the meatus to the neck of the bladder, the anterior wall of the vagina, and the anterior halves of the labia minora. The whole mass appeared to be intimately adherent to the symphysis pubis. There was no obvious enlargement of lymphatic glands. A portion of the growth removed for examination showed typical squamous-celled carcinoma, with rudimentary cell nests. It was considered that an attempt at a radical cure by operation would entail severe mutilation, and afford little hope of a cure. Treatment by radium was instituted in collaboration with Chéron, and continued at intervals for six months. Full details are given as to the method of application. At the end of the course of treatment the posterior wall of the urethra and the corresponding portion of the anterior wall of the vagina had disappeared; the neck of the bladder opened direct into the vagina, and there was therefore complete incontinence. The mucous membrane of the remains of the urethra, of the vagina, and of the vulva appeared everywhere smooth and free from recurrence. The patient before the institution of treatment had been thin, feeble, and in constant pain: she was now in apparently flourishing health. Two and a half years later she presented herself again, under the following circumstances: She remained perfectly well to all appearance, both generally and locally. She wished to get married, and insisted upon an operation being performed, whatever the risks, in order to relieve the distressing incontinence. Legueu advised against operation, but finally consented to perform implantation of the ureters into the intestine, which he considered was the only feasible operation. The patient died of peritonitis. The parts which had been involved in the growth, together with the inguinal and lymphatic glands, were exhaustively examined by Verliac, and no trace of carcinoma was found anywhere. In the course of the discussion which followed the communication SAVARIAUD and FAURE (Ibid., February 24th, 1914) each reported the result of radium treatment of a case of carcinoma of the cervix. The latter's patient was deemed inoperable in March, 1910, and treated by radium. Three and a half years later she was seen, and declared herself as feeling perfectly well. She was 18 lb. heavier; in the interval there had been no discharge of blood or pus. The cervix was transformed into a cicatricial mass. Savariaud's patient appeared to be near death in August, 1912, when she was given radium treatment, after curettage of a soft mass of growth from the cervix. One and a half years later she appears to be in good health, and has gained 30 lb. in weight. The cicatrized remains of the cervix can be seen beyond a mass of scar tissue at the upper end of the vagina. There is nothing to indicate recurrence of the growth. Delbet counselled caution in estimating the value of radium treatment in cases of cancer of the cervix. He points out that those with most experience are the most diffident in giving a prognosis in any case of cancer. The rate of growth of any tumour is most irregular, and varies in a manner which we are at present unable to explain; and this variation in the rate of progress of a growth may occur whatever the treatment adopted, or even in the absence of any treatment. A graphic tracing showing the evolution of a malignant tumour would hardly ever be a straight line or a regular curve. In former days, before the attention of surgeons was so exclusively directed as it is now to attempting surgical cure of cancer, surprising results were sometimes achieved in advanced cases of carcinoma of the cervix by energetic curettage and cauterization. The penetrating power of a tube of radium containing 5 cg. is not more than 1 in. It is therefore difficult to see how radium can effect a cure in the case of cancers which have penetrated to any depth. Growths which have not penetrated deeply, although they may be very exuberant, may, however, be very materially benefited, or perhaps cured, by radium. The number of cases of the cervix which conform to these conditions must unfortunately be rare. As a matter of experience, of the cases of cancer occurring in his clinic which had been treated by radium, all those which he had been able to follow up for an adequate period had terminated in death.

THERAPEUTICS.

229. Magnesium Sulphate Treatment of Tetanus.

IT has been shown that tetanus antoxin is incapable of combining with and neutralizing tetanus toxin when the latter is anchored to the nerve cell. For this reason antitoxin does not appear to exert any curative action in severe cases—at all events, after the symptoms are well marked. Recent researches have brought to light two other methods of treating severe tetanus—the magnesium sulphate treatment of Meltzer and Auer, and the carbolic acid treatment of Baccelli. H. STADLER discusses the former in considerable detail; and while he refers to the latter *en passant*, he refers his reader to a subsequent communication for fuller information (*Berl. klin. Woch.*, January 5th and 19th, 1914). The magnesium treatment depends on the anaesthetic effect of magnesium in the animal body. When applied intramuscularly or intravenously, the sensory nerves are first paralysed, then voluntary movement is arrested, next the respiratory centre is paralysed, and lastly, if the animal be kept alive by artificial respiration, the muscles of deglutition and the vasomotor centres are paralysed. After subcutaneous injection, the anaesthesia which follows is flaccid and respiratory paralysis sets in later, while when applied directly to a nerve trunk it acts like cocaine in cutting off the nerve path. It has further been shown that the symptoms and signs of magnesium anaesthesia can be completely checked and removed by injections of calcium salts. The author, in explaining the pharmacological action of magnesium cations, refers to the theory that calcium ions act antagonistically to magnesium ions, the former exciting the nerve cell and the end-plate, and paralysing the muscle cell, the latter paralysing the nerve cell and end-plate and exciting the muscle cell. It appears from the pharmacological experiments that the circulation is but little affected in magnesium poisoning. Respiratory failure can be arrested by the application of physostigmin or by insufflation of oxygen. Further, it has been shown that in anaesthesia produced by lumbar injections of magnesium salts washing out the lumbar sac suffices to remove dangerous symptoms of respiratory failure. The depressant effect in tetanus was first studied in animals and was then applied to man, 25 per cent. solutions of magnesium sulphate being injected in doses of 1.2 c.cm. per 10 kg. body weight. At first the lumbar method was applied. After from ten to twenty minutes the patient sinks into a quiet sleep, notwithstanding the severity of the spasms existing. All the limbs become flaccid, the respiration becomes free, and cyanosis and sweating ceases. After from two to five hours the patient awakens, usually drinks, and is quite unconscious of what has passed. There may be a paraplegia of the lower extremities, associated with anaesthesia. The patella reflexes, etc., are absent, and the muscles of the legs and trunk are but little tense, while the muscles of the neck and upper part of the back are usually

still rigid. After from twelve to twenty-four hours the action passes off and all the symptoms return, unless a fresh injection be given. In the magnesium sulphate treatment the chief danger is asphyxia. Kocher found that tracheal insufflation of oxygen was required to remove this danger and he suggests a prophylactic tracheotomy, but Stadler is not inclined to adopt this suggestion, chiefly because after tracheotomy the predisposition to bronchopneumonia is increased. He records 2 fresh cases treated by magnesium, in both of which repeated injections were required. Recovery took place in one, while death occurred in the other after a long illness, and after all the tetanic symptoms had passed off. Recent experience has shown that the subcutaneous method promises to yield better results than the lumbar, but the disadvantage lies in the painfulness of the injections. The author admits that it is extremely difficult to determine exactly what the value of a method of treatment is in tetanus, since the prognosis varies so widely in different cases. On the assumption that the severity of the disease runs parallel to the length of the incubation, he has attempted to compare the results obtained by various methods. This is, however, not a reliable assumption, since many mild cases occur with very short incubation periods and many severe ones with long incubation periods. Without any modern form of treatment the mortality of cases with an incubation period of under ten days averages 86 per cent. (taking various authors into account), while in cases of long incubation it was 59 per cent. The mortality of cases treated with antitoxin was 67 per cent. and 36 per cent. in the two groups respectively. Cases treated with magnesium sulphate injection into the lumbar sac was 42 per cent. for the cases with incubation periods of under ten days and 9 per cent. for those with the incubation period of more than ten days. With some reserve he appends the mortality tables of the cases treated with carbolic acid, because it is not clear whether the division of the cases was corresponding to the two groups, and the number of cases is not large. It was 28 and 6.4 per cent. respectively. Lastly, in a series of 7 cases treated with subcutaneous injection of magnesium sulphate, 3 of which were cases with long and 4 of which were cases of short incubation periods, no death took place at all. Whether lumbar or subcutaneous injections of magnesium sulphate or carbolic acid treatment be the best form of treatment of tetanus must be proved by a minute study of cases and a proper development of the various methods, including dosage.

230. A Simple Mechanical Enterokinetic Method.

COYON (*Concours médical*, 1914, No. 1) describes a curious method of evoking intestinal contraction which was discovered by a patient of his who suffered from constipation—namely, by percussion over the region of the left sciatic notch. Coyon explains the resulting enterokinesis by invoking the connexions of the sciatic nerve or its branches with the sacral plexus and the sympathetic; he thinks the percussion acts by vibration or propagation to the sacral plexus and the sympathetic. He adopts the following plan, which can easily be carried out by the patient himself: The patient must lie on his right side with his lower limbs slightly drawn up; percussion may be made behind the left trochanter by the fingers, or an instrument such as a hammer, or the palm, at first slowly, and then rapidly. Coyon has obtained the maximum enterokinetic effect in the shortest time by percussing with his flexed palm by means of oscillatory movements, striking once with the carpus, once with the fingers, and making thus a hundred oscillatory movements in a minute, and then two hundred taps in a minute, a feeble one with the tips of the fingers, and a stronger one with the carpus. By this means a good enterokinesis is obtained in two minutes, sometimes even sooner; the time varies in various subjects. He finds that percussion of the right side has no such result, and recumbency is essential. The method will not, he says, replace purges and enemata, but it is of real value in some cases of intestinal paresis.

231. Isapogen.

ISAPOGEN is a fluid preparation containing 6 per cent. of iodine and 6 per cent. of camphor dissolved in a soap. VOERNER (*Muench. med. Woch.*, February 24th, 1914) states that the fluid is slightly alkaline, brownish in colour, not quite limpid, and possesses a not unpleasant odour. He points out that the action of both iodine and camphor is increased by the method of solution, as compared with the ordinary solutions in spirit. It is suitable for inunction in infiltrating and hyperplastic affections, such as adenitis of various kinds, goitre, etc., and may also be recommended as an external medicament for joint and nerve conditions. In the treatment of rheumatic affections, including sciatica, chronic arthritis, and some forms of neuralgia, he advises the addition of salicylic acid. This mixture, containing 10 per cent. of the last named, is prepared by the manufacturers (Peltzer of Cologne) ready for use. The author has found it of use in various tuberculous processes and also in tertiary syphilis. For these affections it can be applied both locally and as a general inunction. For syphilis, he rubs in a half to one teaspoonful into the skin at one time. The substance is rubbed on to the skin until the latter becomes quite dry. The procedure is clean, and there is no objection to washing off the last traces with water after the inunction, since the ingredients penetrate the skin very rapidly. Lastly he speaks favourably of its action in those skin diseases in which the action of iodine is desired, namely burns, chilblains, alopecia areata, etc. Another preparation of isapogen, namely, a powder, has also proved itself of use to the author. He has used the powder as a dusting powder in the place of iodoform and the other powders in common use. In ulcers of the leg it has been of great value, as soon as the excessive tenderness permits of its application. The ulcer is first washed carefully with boric acid solution, dried with swabs, and then covered with the powder. This may be done by means of an insufflator. A dry bandage is then applied, and on top of this a starch bandage moistened with boro-glycerine. After the starch bandage has dried, an elastic bandage is firmly applied. The results obtained from this procedure are said to be very good. Isapogen powder contains 20 per cent. of isapogen.

PATHOLOGY.

232. Immunizing Bodies and Roentgen Rays.

SOME investigations with almost entirely negative results have been carried out by FIORINI and ZIRONI (*Arch. d'électr. méd.*, February 10th, 1914), with the object of discovering: (1) any possible action of *x* rays on the production of agglutinins, on substances able to deviate complement, on haemolysins; (2) any such action on the immunizing bodies *in vivo* and *in vitro;* (3) any such action on the adaptations of the micro-organisms to the agglutinins. The experiments on agglutinins were carried out on rabbits after peritoneal inoculation with cultures of typhus in bouillon, killed by heating to 60° C. for about half an hour. Some of the rabbits served as controls, and others were irradiated with large *x*-ray doses of 8 Holzknecht units under a filter of 1 mm. aluminium. The irradiation was made upon the base of the thorax, with a tube of medium hardness, 15 to 20 cm. away. The results, so far as concerns the agglutinating power of the blood serum, were practically the same for the rabbits irradiated as for those not irradiated, and in each group there were instances of high and of low agglutinating power. It was noted, however, that in the animals which were irradiated only after a third inoculation of antigens, instead of after a first, as in the other cases, the agglutinating power was more marked by contrast with the controls. With the serum of these same animals research was proceeded with upon the deviation of the complement, using as antigen 1 c.cm. of a suspension in saline of the typhus bacillus, killed by heating to 60°. Here again there was in every case complete deviation without any perceptible difference between the animals of the two groups. It was also demonstrated that there were no marked differences in the haemolytic power of the serum of the animals irradiated and of those non-irradiated. In order to discover any possible action upon the immunizing bodies *in vitro* various serums were used, including fresh serum of the guinea-pig, agglutinating serums for typhus, and serums certainly luetic. These were placed in tubes and irradiated with doses of 3 to 5 Holzknecht. Quantitative researches upon the complementary, haemolytic, and agglutinating power were made immediately after the irradiations, and the reaction of Wassermann on the syphilitic serums determined. Even in these experiments no evidence of certain difference between the irradiated specimens and the controls could be found, save a slight diminution in the complementary power of the serums submitted to *x*-ray action. A further research took place upon the adaptation of the micro-organisms to the agglutinins under *x* rays, the typhus bacillus being taken for the purpose of the experiment, and here also no difference was observed in the degree of adaptation to the agglutinins, as between the cultures which had been irradiated and those which had not.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

233. The Dysphagia of Laryngeal Tubercle.

A. SANPIQUET (*Arch. gén. de méd.*, January, 1914) recently communicated to the French Oto-Rhino-Laryngological Society a new procedure for the treatment of the often very painful dysphagia which is sometimes a feature in laryngeal tuberculosis. The picture drawn of such a case is distressing: "The miserable wretches, wan, emaciated, their faces lined with anxiety, exhausted by suffering, for many days able to swallow (and at what cost of agony!) a few drops of fluid, suffer that worst of tortures, hunger, in dread of the intolerable pain caused by the contact of the least particle of food with their laryngeal lesions." The methods of treatment hitherto available are passed in review: (1) Arytenoidectomy as proposed and practised by Gouguenheim. This is a desperate remedy, scarcely applicable in any but exceptional cases. (2) Local anaesthetic sprays and insufflations. These are in practice unsatisfactory, although they may be useful adjuvants to other treatment. (3) The galvano-cautery is followed by a very severe and painful reaction, which may last for some days and during which the dysphagia is increased. (4) Local anaesthesia by the injection of novocain and alcohol 85 per cent. heated to 45° C. into or near the trunk of the superior laryngeal nerve, as introduced recently by Frey and Hoffman, and popularized in France by Boulay. This procedure has had many successes, but is not without danger. There have been two or three cases of sudden death at the moment when the needle penetrated the nerve. Sanpiquet proposes the piecemeal removal of not the whole arytenoid but only of the swollen mucous membrane with its exposed and hypersensitive nervous tissue, which is the cause of the dysphagia. This he endeavours to do so gently (*doucement*) and so little at any one sitting that practically no reaction is produced. The instrument employed is the laryngeal polypus forceps of Moritz-Schmidt, and the minute precision and the gentleness of the manipulation to be seen in the clinic of M. Lubet-Barbon, and described at the 1897 Congress of the French Oto-Rhino-Laryngological Society by M. le Marc-Hadour, has been the ideal arrived at. After cocainization of the larynx, two, three, or four small pieces of the mucous membrane and perichondrium are nipped off from one side. An application of carbolic glycerine and an insufflation of orthoform concludes the operation. This is repeated on the other side in two days' time. Thus, first on one side and then on the other, the operation proceeds until all or most of the diseased tissue is removed. There is no haemorrhage or pain, and the procedure entails so little inconvenience that the patient willingly submits to the frequent interventions necessary. The results obtained by the author are surprising. Several cases are given in detail. Patients reduced to the verge of inanition by pain and starvation in a few days are able to swallow and enjoy almost any kind of food, weight increases rapidly, and the general condition improves *pari passu*. The tuberculous condition of other organs may of course progress, but so far as the dysphagia is concerned the relief seems to be permanent in most cases and in others the operation may have to be repeated, but this is the exception.

234. Perforation of the Aorta by Foreign Bodies.

H. CHIARI (*Berl. klin. Woch.*, January 5th, 1914) finds that death due to perforation of the oesophagus and aorta by a foreign body is not very rare. Adelmann has recorded 14 such cases, Poulet 17, and Krause 21. Poulet distinguished between primary and secondary cases. He regarded the former as rare, and was able to find records of only 2 cases. In the majority of instances the foreign body (fish bones, coins, false teeth, needle, etc.) wounds the oesophagus, and leads indirectly to a perforation of the aorta. Poulet regarded the pathology of the perforation as an ulcerative process due to pressure, but the author is more inclined to ascribe it to a sloughing, purulent infection in the majority of cases. He records two interesting cases. The first patient was an inmate of Wollenberg's psychiatric clinic. She was attacked with profuse haemorrhage, which recurred twice during the day, and death ensued in the evening. The *post-mortem* examination revealed one perforating wound in the oesophagus and one wound of the mucosa. These wounds were much inflamed. The perioesophageal tissue was greatly infiltrated, and communicated directly with an opening in the aorta. The foreign bodies found were a broken safety pin in the ileum and a bent hair-pin in the rectum. While no history could be obtained of the swallowing of these foreign bodies, it appears to him to be certain from the condition of the tissues that the perforation of the aorta was indirect. The second case was that of a man who swallowed a bone on September 11th, 1913. He complained of increasing difficulty in swallowing. On the evening of the 16th, after a bougie had been passed, a considerable amount of blood was vomited. The haemorrhage recurred, and after admission into hospital a very cautious passage of the sound led to a fatal haemorrhage. *Post mortem* a large gaping wound with dirty grey ulcerating edges was found in the oesophagus. A second perforation was also present. The tissue surrounding the oesophagus at the level of the large opening was infiltrated, and a passage was found through an inflamed opening into the lumen of the aorta. The bone was not found in the gastro-intestinal canal or elsewhere. Chiari is satisfied that the phlegmonous inflammation and not actual trauma led to the aortic perforation in both cases.

235. Hair-dye (Paraphenylendiamin) Dermatitis.

A. BLASCHKO (*Deut. med. Woch.*, December 4th, 1913) has recently seen several cases of dermatitis due to proprietary hair dyes, all of which on analysis were found to contain paraphenylendiamin. $C_6H_4(NH_2)_2$. This substance is gradually oxidized by the air and is rapidly oxidized by hydrogen peroxide, the resulting dark colour being due to the formation of Bandrowski's base. A by-product of the oxidation is chinondichlordiimin, which is responsible for the inflammatory action of the hair dye. The patients were usually middle-aged married women. The dermatitis began without any preliminary warnings, or it was preceded for some time by severe itching. The whole face would become suddenly red and burning, the eyelids often swelling so as to close the eyes. At some points the epidermis would be broken and a weeping surface would appear. The inflammation sometimes extended to the neck and chest, and even to the whole body. In many cases the dermatitis followed the first application of the dye; in other cases it had been used for some time, and its action must have been cumulative. Sometimes the inflammation was due to the dye not having been properly washed off after application. The avoidance of this condition is difficult if this particular dye is to be used. Its oxidation product, chinondiimin, is chiefly responsible for the dermatitis, but if pure paraphenylendiamin is used and absorbed by the skin in considerable quantities toxic effects occur. These include vomiting, diarrhoea, tinnitus, giddiness, clonic and tonic contractions, and even severe disturbances of vision. In Germany the sale of this substance has been forbidden by law since 1906, but it is constantly introduced into the country from abroad. It is claimed for a preparation called "Koorpa" that it contains meta-, ortho-, and paraphenylendiamin, the toxicity of which has been removed by the formation of sulphates. The author tested this preparation on himself and on others, and observed no inflammatory reaction. He was, therefore, incautious enough to say so to the vendor, who broke his promise not to publish the statement. Some time later the author observed a case in which the preparation evoked a violent dermatitis. Many experiments have been made to rob this drug of its toxic qualities, but it is very difficult to separate them from the qualities of staining. Even when the toxicity of a dye has apparently been reduced to a minimum, cases of idiosyncrasy are almost inevitable. The author has found that "Primal" prepared in an anilin factory is usually non-irritant. In this preparation paraphenylendiamin is replaced by toluylendiamin, and it contains sodium sulphite. The formation of chinondiimin is thus avoided or reduced to a minimum; the formation of Bandrowski's base occurs quickly, and poisonous by-products are rapidly decomposed. The author has used this dye with success, even in cases reacting unsatisfactorily to other dyes. Yet even this dye caused an acute eczema of the face and scalp in one case. The treatment of dermatitis due to hair dyes consists of removing all traces of the irritant with lukewarm water. When the inflammation is severe boracic compresses should be prescribed, and crusts should be softened with vaseline or oil. When the inflammation is less severe a

zinc liniment may be applied. Patients are usually sensible enough not to court a second attack, but when they insist on the use of a hair dye, a relatively harmless dye, such as "Primal," may be prescribed. The hair should be thoroughly washed directly after the dye has been applied, the skin of the face and scalp having been previously protected by some fatty substance.

SURGERY.

236. A New Operation for Chronic Ascites.

Rosenstein (*Zentralbl. für Chir.*, February 28th, 1914) describes a device which he employed for the relief of a case of chronic ascites. The patient, a female, aged 62 years, had suffered from ascites secondary to cirrhosis of the liver for two years. Rosenstein had already operated upon her twice; two years ago he made an anastomosis between the portal vein and the inferior vena cava. The amelioration of symptoms which resulted was but temporary. A year later he operated to produce adhesions between the parietal peritoneum and the spleen, liver, and great omentum, again without permanent benefit to the patient. An operation was then devised, and carried out a year later, with the object of providing a permanent drain from the peritoneal cavity into the urinary bladder. A valve had to be formed in such a fashion that the ascitic fluid could drain into the bladder, but that the bladder contents were prevented from regurgitating into the peritoneal cavity when the viscus contracted. Free access to the pelvis was obtained through a sufficiently large incision in the abdomen, and that portion of the bladder which is covered by peritoneum was drawn up. A silver ring of 3 cm. in diameter was then placed on the summit of the bladder. The circular portion of bladder wall enclosed by the ring was then incised, and turned inside out over the ring so as to cover the latter all round. The circumference of this portion was stitched to the bladder wall immediately below the ring by silk sutures, serous coat to serous coat. A circular strip, 4 cm. wide, and running round the bladder immediately below this suture, was then excised. The strip removed included peritoneal and muscular coats, but left the mucous membrane intact. The upper and lower edges of this broad wound were then stitched together, muscle being stitched to muscle and peritoneum to peritoneum. Through the drawing together of the outer coats, the mucous membrane corresponding to the excised strip was compelled to infold itself, and to protrude within the bladder in the form of a diaphragm with a central aperture, placed just below the channel of communication between the peritoneal cavity and the bladder. When now the viscus contracts, the reduplicated ring of mucous membrane will close in, and act as a valve preventing the back flow of fluid into the abdomen. The immediate result of the operation has been good. Paracentesis was not required for several months after the operation, and since being performed eight weeks ago has not yet required repeating. The urine contains albumin, leucocytes and fatty granular cells, such as are contained in the ascitic fluid. Cystoscopy shows that the bladder fills up from below; an air bubble which happened to rest against the mucous valve did not pass through, suggesting that the valve is functional. An instantaneous photograph obtained cystoscopically showed the folded mucous membrane coming in contact with the opening. The operation is not likely to be extensively employed, but may be useful in similar intractable cases of chronic ascites. Suitably modified, the procedure might be used to prevent incontinence in obstinate cases of vesico-vaginal fistula. If the operation when employed for ascites is to be a success, adhesions on the part of intestine or omentum must not be allowed to form in the neighbourhood of the opening. It is, therefore, necessary that not all the ascitic fluid should escape into the bladder, but that a certain amount should remain within the abdominal cavity, so as to float the other viscera up away from the communication. A point in technique which is recommended is to fix the bladder rather high up on the abdominal wall, so that the organ may not be compressed by the ascitic fluid, but maintained in such a position that it is always ready to be filled with fluid.

237. Traumatic Rupture of the Spleen.

L. Norrlin (*Upsala Lakareforenings Forhandlingar*, vol. xviii, No. 4, 1913) has collected from four Swedish hospitals 13 cases of traumatic rupture of the spleen hitherto not published. Of 33,000 patients admitted to hospital in the period 1891–1912, 8,700 were suffering from accidents and 36 presented injury to the abdominal viscera. Of the 13 cases of rupture of the spleen, all but 1 were observed within the last six years. Eleven patients were male and 2 female; 3 died directly after the accident, and 10 were operated on. Of these, 1, whose liver and stomach were also ruptured, died. The rest recovered after periods of convalescence ranging from fourteen to sixty-eight days—an average of thirty-two days. In two cases tamponment was practised: in two cases, in which two-fifths of the spleen were completely torn off, partial resection was effected. In the five cases in which the spleen was completely removed no permanent discomfort followed. In one case the spleen was somewhat enlarged and abnormally soft; in another there was acute hyperplasia of the spleen, probably due to enteritis, the immediate cause of the rupture being a fall during an epileptic seizure. In a third case the spleen was enormously enlarged, and though the liver was not also enlarged, the case was probably one of early Banti's disease. In a fourth case moderate enlargement of the spleen was accompanied by typical Laënnec's cirrhosis of the liver. In 1 case rupture of the spleen was complicated by rupture of the small and large intestine, in 1 by fracture of ribs and rupture of a lung, in 4 by fracture of ribs, in 1 by rupture of the diaphragm, and in 1 by rupture of the splenic vein. In 4 cases the injuries were limited to the spleen. The sign described by Pitts and Ballance was found in the only case in which it was sought. It consists of dullness in the left hypochondrium unaffected by movements of the body and dullness in the right flank, disappearing when the patient shifts from his right to his left side, the two phenomena being due to the presence of coagulated blood about the spleen and fluid blood free in the peritoneal cavity. Pain in the region of the scapula was not observed. Summarizing his own and others' observations, the author concludes that the number of cases admitted to hospital early enough to be successfully operated on has increased much of late. Although definite signs are sometimes absent, it is often possible to collect evidence of rupture of the spleen before operation. The incision should be in the middle line, whence a transverse incision is carried through the left rectus muscle. As much of the spleen as possible should be left in the body.

238. Circumscribed Median Glossitis.

Brocq and L. Pautrier (*Ann. de derm. et syph.*, No. 1, January, 1914) have here described a lozenge-shaped longitudinal lesion of the tongue, situated consistently on the dorsum, immediately anterior to the angle formed by the circumvallate papillae. The clinical importance of their paper, which is based on an examination of 17 cases is self-evident when the question of differential diagnosis is discussed, for these lesions are apparently neither syphilitic nor tuberculous, and their etiology is quite obscure. In only one of the cases in which any subjective symptoms complained of, and these consisted of moderate burning or pricking sensations in an otherwise neurotic individual. Most of the cases were accidentally discovered or in the course of a systematic examination. The lozenge-shaped area was denuded of papillae, smooth, sharply defined, and occasionally the site of two or three mamilliform elevations of the normal tongue colour, or paler. The course of the lesion as far as could be ascertained—owing to absence of all symptoms—had been consistently chronic, and all treatment by drugs, local or general, and by electrolysis entirely failed to check its slow advance or alter any item of its clinical appearance. In the differential diagnosis from syphilitic leukoplakia, tuberculosis, lichen planus, and traumatic ulceration, the authors have laid particular emphasis on its invariably median position, its lozenge shape with the long axis antero-posterior, and on its chronicity and obstinacy to treatment. The histology of excised portions throws no light of any value on the etiology.

239. Separation of Tibio-fibular Epiphysis without Fracture of Malleoli.

Pellissier (*Echo méd. du Nord*, January 4th, 1914), in reporting this very rare accident, points out the extreme difficulty its diagnosis may present, even with the aid of the *x* rays. It is probably often undiagnosed, and the symptom attributed to a "severe sprain." In this case, a digital examination of the ankle-joint led to a diagnosis of both malleoli by over-adduction. Two radiographs were then taken—one anterior-posterior, dorsal aspect; the other external, lateral. These, however, showed no fracture or other obvious lesion. A screen examination was then made, and at a certain angle, about 30 degrees

with the vertical, a clear space could be seen between the tibia and the fibula, a space which widened when the foot was forcibly adducted, could be obliterated by pressing the bones together between the two hands. The nature of the injury could then be perceived a separation of lower tibio-fibular epiphysis of the fibula without any fracture either of the malleoli or of the fibula higher up.

OBSTETRICS.

240. Treatment of Post-partum Haemorrhage.

E. GRAF states that about the middle of last century a Würtemberg doctor named Ulsamer recommended the compression of the aorta for the treatment of uterine haemorrhage during labour (*Muench. med. Woch.*, December 30th, 1913). This simple method does not appear to have attracted much attention and was certainly not widely employed. The author, however, finds it of the greatest value and recommends it to all who have the care of a large number of obstetric cases. He applies it by passing three fingers between the space of the two abdominal rectus muscles until the protrusion of the spine is felt. The powerful pulse of the aorta can then be found and the vessel can be kept from slipping to either side by the two external fingers. Compression should be maintained for from ten to twenty minutes. He gives as illustrations of the efficacy of this method the details of some cases of *post-partum* haemorrhage. In these cases no injections or tamponage was resorted to. After rubbing the fundus uteri failed to arrest the haemorrhage, the aorta was compressed and the bleeding stopped within the time mentioned. The striking part of the treatment is that an immediate stopping of the bleeding is effected, and that after from ten to twenty minutes, the compression has effected sufficient clotting of blood in the open vessels to guarantee freedom from recurrence.

GYNAECOLOGY.

241. Gangrene of Cervix from Caustic Injections.

HERRGOTT (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, etc., December, 1913) reports that in his maternity department at Nancy the mortality from infections after admission was 0.13 per cent., and from other causes associated with labour 0.5 per cent., whilst no less than 10 out of 386 cases of abortion proved fatal, a mortality of 2.59 per cent. Criminal cases were specially dangerous, more particularly when the patient herself undertook abortifacient measures. A woman, aged 30, mother of seven children, thrust a knitting needle as deep as possible into her uterus early in her eighth pregnancy, and then dissolved a 25 cg. tabloid of sublimate in a teaspoon and a half of water and injected it into the vagina by means of a wooden tube fitted on to a rubber ball-syringe. The injection was repeated twice at two days' interval. Then strong uterine pains set in, with flooding. The patient was admitted into hospital. The cervix was found to be sloughing, and it came away in a few days. Only when very ill did the patient admit that she had used the injections. Three days after the separation of the cervix symptoms of embolism developed, and within a week the patient died with pyaemic symptoms traced to thrombosed and suppurating veins in the parametrium.

242. Results of Radium Treatment in Uterine and Vaginal Cancer.

THE results of radium treatment in more than 150 cases of uterine and vaginal cancer are tabulated by CHÉRON and RUBENS-DUVAL (*Arch. d'électr. méd.*, January 25th, 1914). The authors have relied upon massive dosage and the use of penetrating rays and heavy filters. Applications made with apparatus containing 1 or 2 cg. of radium salt may give appreciable results in favourable cases, but most frequently doses as small as this are unavailing. The failure should be attributed, not to radium-therapy, but to the tentative and insufficient methods employed. In only two cases have the authors met with entirely negative results, and these were patients whose exhausted organism was incapable of taking advantage of the therapeutic agent in its defence. One of them, for example, was a woman, alone in a foreign city, ignorant of the language, evidently suffering from privations, and believing herself incurable owing to a large cancer of the neck of the uterus. Her nervous vitality, therefore, was low, and there was no spontaneous defensive power available for the radium to assist. On the other hand, turning to their successful cases, the authors assert that massive doses have brought about the cure clinically of an inoperable cancer of the neck of the uterus after only two applications, and in one such case they have been able to verify the cure anatomically. The patient had a large tumour of the right half of the uterine neck, infiltrating the base of the large right ligament, and adhering to the bladder. Two applications of radium were given, with a two months' interval between them, and the growth disappeared completely. The patient, however, had an affection of the nerve centres, from which she died fifteen months after the radium treatment had been stopped, and at the autopsy, which included a histological examination of the organs previously affected, no trace of cancer was found. The following is the authors' summary of results in their 158 cases of inoperable uterine and vaginal cancer and relapses after hysterectomy:

Cure verified anatomically		1
Complete clinical disappearance maintained—		
For more than one year (in some cases four years)	22	
For about one year	15	
For varying periods, but patients lost to view.	9	46
Purely local or temporary regression with return or extension—		
In situ	16	
In neighbouring organs (bladder or rectum) ...	9	
Metastases	6	—31
Improvement under radium rendering operation possible		12
Improvement, but treatment interrupted from—		
Extra-medical circumstances	2	
Intercurrent disease	2	— 4
Palliation (arrest or diminution of haemorrhage or pain, improvement in general state) ...		62
No appreciable clinical result		2

THERAPEUTICS.

243. Inhalation of Tincture of Strophanthus in Heart Disease.

J. MOCZULSKI (*Wien. med. Woch.*, January 8th, 1914) finds tincture of strophanthus more potent in heart disease when inhaled than when given in any other way. Theodor Heryng by his recent work on inhalation apparatus has appreciably advanced treatment by inhalation, and his thermo-regulator has made possible the inhalation of drugs at different temperatures, and his thermo-accumulator has facilitated the inhalation of gases. The author has worked with Heryng's apparatus and has strictly followed his instructions, the patient sitting with his tongue held out and his mouth four finger-breadths off the inhalation tube. The usual amount of strophanthus given in one day was 10 minims of the tincture dissolved in 30 c.cm. of distilled water. This treatment increased diuresis, diminished oedema and cyanosis, and raised the blood pressure appreciably. Often one inhalation benefited the action of the heart strikingly, and strophanthus appears to act even more rapidly when inhaled than when injected intravenously. The technique is simple and the desired effects may be obtained with exceedingly small quantities of the drug. The author gives details of five cases. One patient was a man, aged 50, suffering from emphysema, chronic bronchitis, arterio-sclerosis, and faulty action of the heart. For two years he had suffered from dyspnoea, cough, headache, and insomnia. Respiration was 36, the pulse 100. The feet were dropsical, and the lips, cheeks, and fingers were cyanosed. Dry râles were audible all over the lungs, the respiratory sounds of which were feeble. The daily excretion of urine was about 300 c.cm. For ten days a milk diet was combined with digitalis and strophanthus given by the mouth. The excretion of urine rose to 700 c.cm., but otherwise little improvement was effected. When, however, strophanthus was inhaled, the dyspnoea and cyanosis diminished appreciably, the respiration fell to 26, and the pulse to 94, while the excretion of urine rose to 1,500 c.cm. After daily inhalations of strophanthus had been given for five days, the urine rose to 2,500 c.cm., and as soon as the inhalations were omitted, it fell to 500 c.cm., to rise again to 2,000 c.cm. as soon as the inhalations were resumed. In another case a patient, aged 63, was so alarmed by the violent diuresis following one inhalation that he absolutely refused to continue the treatment.

244. The Autolysate Treatment of Cancer.

LUNCKENBEIN (*Muench. med. Woch.*, January 6th, 1914) has obtained better results with the autolysate treatment of malignant tumours since he has injected his extracts intravenously. He prepares the extract in the following

manner: The tumour selected is removed and minced in a mechanical apparatus, which admits of ready sterilization. It is then shaken with sterile saline solution for from one to two hours, kept on ice for three days, and finally filtered. The filtrate is heated for one hour to 56° C. and preserved in sealed glass capsules containing from 5 to 20 c.cm. The author does not hesitate to use the extract (which is kept in the interval on ice) for four or five weeks. Erhardt has injected autolysate intravenously in mice and obtained 60 per cent. of permanent cures. As far as he knows, no one has yet used this method in human patients. He injects 20 to 25 c.cm. of the extract. After about twenty-four hours the effect begins to manifest itself in inoperable cases. This effect is well marked in two or three days, and consists in an inflammatory infiltration in the neighbourhood of the growth. The implicated lymphatic glands soon become impalpable—at first the regional glands and later those more distantly situated. The tumour soon becomes movable and sharply demarcated, and in the course of a few days smaller and softer. In all he has treated 15 cases of quite hopeless inoperable carcinoma. Of these he gives the clinical details of a few to demonstrate the extraordinary effect achieved. He does not state the result in all his cases, but contents himself in summarizing his experience. He states that the advantages of the treatment are the extreme rigidity with which the effect is obtained, the certainty with which it relieves even severe pain which has resisted morphine, the fact that the treatment attacks not only the primary tumour, but also all metastases, no matter where situated, and, lastly, the absolute specificity of the process. A carcinoma extract does not effect the slightest change in sarcoma. On the other hand, he admits certain disadvantages. These are evidenced by toxic symptoms, fever, diarrhoea, rigors, and prostration. He is hopeful that these undesired effects may be reducible or even removed altogether, and in the meantime he thinks that the treatment should be cautiously applied to a large number of patients, in order that its true value may be measured.

245. Action of Radium upon Enlarged Spleen.

H. SCHÜLLER (*Berl. klin. Woch.*, February 16th, 1914) details some cases of leukaemia and similar diseases, characterized by changes in the blood and enlargement of the spleen, in which the application of radium seemed to exercise a strikingly curative effect. In some of these Roentgen rays had been previously tried, and had either failed altogether or ceased to act after a time. The radium was applied either as such, or mesothorium or rademanit were used. The latter are most suitable, as they can be spread over a wider area. In each case the applicators were adjusted in the manner taught by Kietman and Mayer, and α and β rays, as well as the secondary rays, were shut out. Thus any burning of the skin or harmful effect upon the peritoneum was avoided. The applicators (usually four in number) were applied from five to twelve hours every two to four weeks, according to the skin reaction in each case. The dose was equivalent to from 150 to 500 mg. of radium bromide: 150 to 200 was the quantity mostly used. Altogether nine cases were treated, and of these sufficient time had elapsed to be sure of the result in four cases. The improvement, both as regards blood count, disappearance of oedema and ascites, and diminution in the size of the spleen followed so swiftly upon the adoption of the treatment as to leave no doubt as to its effect. Owing to the careful filtering out of harmful rays, undesirable effects upon the skin or peritoneum were not observed, and where the removal of the spleen was afterwards undertaken, the operation was not in any way impeded by peritoneal adhesions. On the contrary, the operation might be facilitated, or rendered possible, where it would otherwise not be so, by the preliminary use of radium to diminish the size of the organ. Even after the employment of large doses (1,500 mg.) the author did not observe any bad general effects. There was no vomiting or dizziness or feeling of illness, such as has been known to occur after Roentgen therapy. Rather, the patients declared themselves to experience a remarkable feeling of general well-being.

246. Uses of Pituitary Extract.

FREY AND KUMPIESS (*Zeitschr. f. d. Ges. exper.*, M. 2, 1914) state that the intramuscular injection of pituitary extract in man is followed by a marked inhibition of the secretion of urine. After a few hours there is reactionary polyuria. This secondarily increased secretion of urine is not a simple diuresis; there is in addition a relative increase in the output of sodium chloride. The effect of extract of the hypophysis cerebri is therefore to be compared with that of other excitants of NaCl excretion; it is in contrast to the diminution in the output of salt which occurs during anaesthesia. EBELE (*Zeitschr. f. gyn. Urol.*, 4, 1913) has found pituitrin invaluable for the treatment of retention of urine in women during the puerperium or after operations. He finds that its action in promoting micturition is only exhibited if the bladder is full; he therefore waits on an average sixteen to thirty-six hours after the last micturition before giving an intramuscular injection. When once the bladder has emptied itself retention is not again experienced. This action of pituitrin on smooth muscle is taken advantage of by VOGT also (*Dres. m. Woch.*, 1913). He gives it therapeutically in *post-partum* haemorrhage, and also as a prophylactic whenever for any reason flooding may be anticipated as a possibility. In these cases it not only controls or prevents bleeding from the uterus, but stimulates the normal separation of the placenta. Manual separation of the placenta is a proceeding fraught with danger. It should only be resorted to after the injection of pituitrin and Credé's method of expulsion under anaesthesia have equally failed. Pituitrin has also given good results in cases of retained placenta after miscarriage. The dose is up to 6 c.cm., and may be injected either intramuscularly or into a vein. In the latter case the injection should be made very slowly. It should be noted that ill effects upon the mother have been observed to follow the injection of doses even within the limit stated above.

PATHOLOGY.

247. Experimental Cirrhosis of the Liver.

THE pathology of cirrhosis of the liver is by no means so clear that dogmatic utterances are permissible. Even the rôle played by alcohol in the production of cirrhosis has been challenged by capable pathologists, and, on the other hand, typical hob-nail livers have been observed in the etiology of which alcohol could be definitely excluded. MAX LISSAUER (*Berl. klin. Woch.*, January 19th and 26th, 1914) gives an excellent summary of the experimental work in this direction. He finds that cirrhosis of the liver can be produced by the ligation of the common bile duct or its branches. The changes produced in this manner are, in Lissauer's opinion, identical to those found in human cirrhosis. On the other hand, the experimental data prove that the changes following the ligature of the duct is largely influenced by infective processes. All the attempts to produce this condition by interference with the portal or hepatic circulation have failed. Cirrhosis has been produced by the introduction of toxic substances into the organism. Phosphorus, and at times lead, are mentioned in the first place. Of the organic compounds alcohol takes the first place, and it is shown that the changes occur after introduction of alcohol into the intestine, into the lungs, or into the blood. It is still quite uncertain how the poison acts. It may be that it acts directly on the liver or indirectly by damaging the gastro-intestinal canal. Next to alcohol, a number of organic substances, including pulegon, antipyrin, glycerine, pyrogallic acid, and toluylendiamin, have led to the production of cirrhosis under certain conditions. In a number of instances cirrhosis has been effected as a result of bacterial action. In these cases the intermediate stage appears to be an increased dissociation of the contents of the gastro-intestinal canal. This would confirm the clinical assumption that cirrhosis may be due to infections or enterogenous autoinfections. But the whole experience shows clearly that the tendency of the liver to cirrhotic changes is but slight both in animals and in man, and in order to explain the development of the disease it will be necessary to discover these predisposing causes, which are as yet unknown. Lissauer is satisfied to accept isolated positive results of experiments as clinching evidence, and to disregard the negative results, on account of this slight tendency toward the affection on the part of the organ.

248. Patient's Serum as a Solvent for Neo-salvarsan.

IN a preliminary note, E. VON SCHUBERT (*Muench. med. Woch.*, 1913) states that neo-salvarsan is easily soluble in serum. For an injection 0.45 gram should be dissolved in 10 c.cm. of serum. Patients treated by this method do not experience the unpleasant sequelae which frequently occur after the use of watery or saline solutions. No carefully distilled water is required, and the operator has a perfectly sterile medium at his disposal.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

249. Bradycardia.

CARLES AND CANUYT (*Journ. de méd. de Bordeaux*, December 28th, 1913) discuss the symptomatology of bradycardia, referring more especially to the syncopal, apoplectiform, and epileptiform attacks which accompany it. They point out that bradycardia is now recognized as the result of a lesion of the bundle of His resulting in auriculo-ventricular dissociation. They go on to relate the case of a patient, aged 68, who suffered from a permanent form of bradycardia. The family history was good, and there was no indication whatever of syphilis. Up to the age of 66 the patient had been perfectly healthy, but about that time began to suffer from attacks of giddiness, slight apoplectiform attacks and indications of renal sclerosis. He then developed a monoplegia of the right arm and entered hospital. For a fortnight his pulse-rate was on an average 24 per minute, and a week later he had an epileptic crisis, the bradycardia falling to 12 or 13 per minute. The carotid arteries were visible, as were also the subclavian and brachial arteries. The apex of the heart was perceptible in the sixth intercostal space—a handbreadth outside the mammillary line. On auscultation there was a loud bruit, which seemingly corresponded with the ventricular systole, and lasted about five seconds. In the intervals between the beats three or four abortive systoles were to be heard, corresponding to what Huchard called *systoles en écho*. It was to be expected that there would be some alteration in the myocardium, and the injection of atropin—of which the result was negative so far as any increase in the number of pulsations was concerned—together with the radial and jugular tracings, went to prove this. It was noted that the patient's intelligence was enfeebled, that he responded slowly to questions put to him, was forgetful and inexact in his replies. He lay in bed as if afraid to make the slightest movement, in order to avoid precipitating a syncopal or epileptiform crisis. A Wassermann test was done with negative result, but in spite of this specific treatment was instituted, and, after a prolonged period, with considerable benefit, the pulse-rate rising gradually until it reached a rate of 70 to the minute. The patient's intelligence, too, became brighter, and he became able to move about. The disappearance of the cerebral ischaemia with its grave effects, which were much the same as would follow ligature of the carotid arteries, was a remarkable feature of the result obtained. This result was the more remarkable as even apart from the negative Wassermann reaction the patient showed none of the stigmata of syphilis in any form whatever.

250. Poliomyelitis.

MONRAD (*Ugeskrift for Laeger*, January 8th, 1914) considers that the old conception of poliomyelitis requires drastic revision. The teaching that a child goes to bed well in the evening and awakes paralysed next morning is true in very few cases. It is a mistake to regard rigors and fits as characteristic of the early stage of poliomyelitis; they are, in fact, very rare. The disease almost invariably begins with fever, which conforms to no special type, and usually ranges from 38° to 39.5°. Temperatures of 40° and over are exceptional. The temperature is no guide to prognosis, for cases in which the temperature never exceeds 38.5° may end fatally, while others may terminate in complete recovery, in spite of high fever. The fever of the early stage of the disease seldom lasts more than a week, but occasionally persists for six weeks, long after paralysis have developed. The pulse and respiration are often rapid in comparison with the temperature. Vomiting is an almost constant symptom, which is usually limited to the first day of the disease. General malaise, headache, anorexia, a furred tongue, and drowsiness are commonly present early in the disease, the patient often being somnolent by day and very restless by night. Loss of consciousness is exceedingly rare. The textbooks usually ignore or minimize the importance of certain sensory disturbances which are, however, almost invariably present. Of these, the most important is pain, which may be spontaneous or evoked by passive movements. It is frequently limited to the limbs, and is mistaken for rheumatism. The pain may also be limited to the back and neck, causing rigidity of the latter, and suggesting meningitis, with which poliomyelitis is often confused. Another important early symptom, particularly valuable in young children, is hyperaesthesia, which is sometimes limited to those areas which subsequently become paralysed. At other times it is general and so marked that the child screams at the prospect of being touched. When the disease has been ushered in by fever and vomiting, and the hyperaesthesia has been limited to the abdomen, appendicitis has been diagnosed. Dislocation of the humerus, coxitis, and fractures have also been diagnosed on the strength of hyperaesthesia. A third and more rare sensory disturbance is intense tenderness of certain nerves and muscles which has misled the physician's suspicions to polyneuritis. Excessive perspiration has often been described as an early symptom, but neither the author nor Wernstedt, who observed 6,000 cases in the Swedish epidemic of 1911 and 1912, considers this symptom characteristic. It has probably been provoked in a few cases by parents who have dosed the child with aspirin or antifebrin before summoning a doctor. Leukopaenia has also been regarded as indicating poliomyelitis and distinguishing it from typhoid fever, measles, and tuberculosis. The author considers this view mistaken, and cites Wernstedt, who even argues that leukopaenia, when present, invalidates the diagnosis of poliomyelitis. Coryza, sore throat, bronchitis, and diarrhoea have from time to time been regarded as early symptoms of poliomyelitis; but they are too inconstant to be of any diagnostic importance. Treatment should be conservative. The patient who in the early stages is dosed with urotropin, aspirin, choral; has his nose and mouth sprayed, is plunged into hot baths, and is stirred up with electricity, is left little peace and has but a slender chance of recovery. Complete rest in bed, where pressure by the bedclothes is avoided, should be supplemented by a fluid diet and the regulation of the bowels, with enemata if necessary. Aspirin, antipyrin, and phenacetin may be given to relieve pain and to secure sleep. Serum treatment is still *sub judice*. Urotropin has been prescribed, as a few minutes after its administration formalin can be demonstrated in the cerebro spinal fluid. But the results of this treatment are not very satisfactory. Besides, it not infrequently induces albuminuria and haematuria in children.

251. Umbilical Colic.

E. MORO recently described a condition in children under the term of recurrent umbilical colic, which he maintained was not to be confused with appendicitis, and which he ascribed to neuropathic causes, chronic constipation, and other not ascertainable conditions. HERMANN KÜTTNER (*Berl. klin. Woch.*, January 26th, 1914) holds a different view, and, on the basis of his own experience of a long series of cases which correspond to the description of Moro's cases in every particular, argues strongly in favour of these cases being due to changes in the appendix. He gives an account of a number of typical cases. In one of these the child complained of pain in the neighbourhood of the umbilicus. The pain occurred in paroxysms, usually in connexion with bodily exertion. His family practitioner localized the tenderness during the attack to McBurney's point. The objective examination proved completely negative. In spite of this, an operation was performed, the appendix was found to be free from pathological changes, but was abnormally inserted into the caecal wall, and was sharply kinked. No further attacks of pain took place after the operation. In other cases, the recurrent pain localized around the umbilicus passed off each time within a few hours, but subsequently merged into a typical attack of acute appendicitis, for which an immediate operation was required. Summing up his own experience, Küttner states that recurrent umbilical pain, periodic vomiting, and transitory disturbance of micturition in children should be regarded as symptoms which are very likely to be associated with an affection of the appendix.

252. Recovery in Pneumonia.

L. HEKTOEN (*Journ. Amer. Med. Assoc.*, January 24th, 1914), from a study of the mechanism of recovery in pneumonia made with special reference to the crisis, reaches the following conclusions: The cure of pneumonia results from the destruction of the pneumococci in the lungs and in the

blood. This is accomplished mainly by phagocytosis, probably to some extent also by extracellular processes. The predominating general defensive reactions in pneumonia are leucocytosis and the production of antibodies for pneumococci, especially opsonins, and these appear to be specific for the group to which the infecting pneumococcus belongs. In rapidly fatal cases the defensive reactions are inadequate to destroy the pneumococci, which persist and multiply in the lungs and in the blood, and free antibodies have not been demonstrated in the blood. In favourable cases the pneumococci are destroyed more or less rapidly when the antipneumococcal reactions reach a certain height. We may assume that lysis results when the destruction takes place more gradually. Crisis is the effect of prompt destruction. In both cases, but demonstrated more clearly in crisis, there is an excess of free antibodies in the blood.

SURGERY.

252. Citrate Solutions in the Prevention of Peritoneal Adhesions.

SAXTON POPE (*Ann. of Surg.*, January, 1914) publishes the results of an experimental study in the prevention of peritoneal adhesions. The work is based upon the hypothesis that fibrous exudates depend upon a similar machinery to that involved in the formation of fibrin in blood clot. The production of a fibrous exudate is dependent upon the liberation of thrombokinase, its activation on prothrombin in the presence of calcium, and the production of thrombin, which converts fibrinogen into fibrin. Pope's sixty experiments, carried out upon rabbits, were performed with a view to finding some method of inhibiting the process of ferment activity, either by inactivation of the thrombokinase or binding the calcium present in the serous exudate. The author observed that when blood was allowed to collect in the peritoneum, where neither air entered nor any trauma had been inflicted, clotting was delayed for fifteen minutes. At the site of bleeding, however, clotting occurred in five minutes. When the peritoneum suffered trauma with a gauze sponge, clotting occurred in three minutes. Pope concludes that there is an active thrombin element in the normal untraumatized peritoneal cavity. When the endothelium is injured, even by exposure to the air, an active thrombin ferment is liberated. In the author's experiments extensive post-operative adhesions were produced by scarification of the colon throughout its whole length, with multiple scratches about an inch long sufficiently deep to cause oozing of blood. Various solutions were introduced into the peritoneal cavity after trauma had been inflicted. The materials employed consisted of camphorated oil, olive oil, petrolatum, butter, sugar (50 per cent. solution), egg albumen, milk, citrated sugar, citrate egg albumen, milk, peptonized milk, Ringer's solution, normal saline, ammonia oxalate (1 per cent.) in salt solution, citrate of soda (1 per cent.) in salt solution, citrate of sodium (2 per cent.) in solution of sodium chloride (4 per cent.), and citrate of soda (2 per cent.) in salt solution (3 per cent.). In these experiments, citrate of soda in salt solution gave the best results. Pope found that after the scarification, which under normal circumstances produces extensive adhesions, with the addition of citrate solutions, the peritoneal cavity at the end of a week was practically free from exudate. The endothelium presented no adhesions and no sign of trauma, apart from a hazy opacity and thickening. The best results were obtained when citrate of soda (2 per cent.) in hypertonic salt solution (3 per cent.) was used. The reason for this was found to be that hypertonic solutions remain longer in the peritoneum than normal saline. The author suggests that to prevent the formation of adhesions the peritoneum should receive the application of small quantities of solution of normal saline containing 1 or 2 per cent. of citrate of soda. It is not suggested that large quantities of solution be left in the abdominal cavity, although in the absence of pus it is probably not detrimental. It is of interest to note that in Pope's series of experiments camphorated oil produced the most extensive formation of adhesions. A thick, creamy deposit occurred, with masses of fibrous lymph and dense resistent adhesions throughout the entire abdomen.

254. Direct Transfusion of Blood.

GUILLOT AND DEHELLY of Le Havre (*Arch. Provinciales de Chir.*, September, 1913) narrate their experience of 19 cases of direct transfusion of blood. The technique of vascular anastomosis is by means of Elsberg's cannula. The results are classified according to the nature of the cases. In haemorrhagic states without infection the haemostatic action is perfect and constant. In cases of uterine fibroma with persistent recurring haemorrhages producing marked anaemia the metrorrhagia was arrested by transfusion for several months, four months being the average. In one case hysterectomy could not be carried out because of the extreme anaemia, but was quite successful several days after transfusion. In another case of puerperal infection with abundant uterine and buccal haemorrhages the bleeding ceased after transfusion, though the patient died from the infection. In acute haemorrhages the state of shock is of more importance than the actual loss of blood, and these authors believe that direct transfusion is in many cases of more value than intravenous transfusion of saline solution. The indication for the latter is to relieve vascular hypotension. In one of these cases haemorrhages had taken place several times, and then suddenly the patient's life was in danger on account of a fresh haemorrhage. Transfusion responded to two indications—to elevate the vascular tension and administer blood cells to the patient. In acute haemorrhages, after having controlled the source of the bleeding, intravenous injection of saline solution could be then given, and then some hours afterwards a direct transfusion of blood whose haematopoietic action is undeniable. Two cases of extreme anaemia—one due to pulmonary haemorrhage and the other due to haemolytic jaundice were not affected at all by direct transfusion. The stationary condition of the phthisical patient after transfusion confirms the belief that the inoculation of serum in a healthy individual is without effect on the course of a tuberculous lesion. This is probably true of all chronic affections. Two cases of enteric fever were treated, and the authors, while admitting the very small number, are satisfied on two points—the absence of any danger of intoxication by bacteriolysis and the slight improvement which followed each of the transfusions. One case of cancer of uterus was treated sixteen days after operation, with satisfactory results. The patient left the hospital well, and it was proposed to transfuse again. The authors admit to some imperfection in detail in their observations, but they are satisfied that their results show some definite conclusions—the efficacy of transfusion as a haemostatic in non-infectious cases, safety of massive serotherapy by transfusion, the absence of risk of toxaemia due to bacteriolysis.

255. Rectal Gonorrhoea in the Female.

SCHMIDT (*Dermat. Zeitschr.*, December, 1913, xx, 12) says the result of an investigation among a total of 746 cases of gonorrhoea has resulted in the discovery that 151 of them were suffering also from a rectal involvement. The author divides his total of 746 into two periods, during the first of which he was satisfied with the clinical appearance of external and proctoscopic examination only, and during the second of which he actually demonstrated the gonococcus microscopically. Under the first category he includes 479 cases, in which 87, or 18.3 per cent., exhibited the congestion, hyperaemia, and erosions of the mucous membrane, which are clinical evidence of rectal involvement. He is careful to point out that the subjective symptoms of the condition are minimal—in fact, only 4 of the 151 cases had complained of discharge or rectal tenesmus. The importance of this fact is very obvious, and should lead in the future to the examination of the anus in every case of gonorrhoea in the female, whether a discharge be present in this situation or not, for the author insists that a rectal discharge is a rarity. The mode of infection is by direct backwards flow of the vulval pus in the supine position, and a reinfection from rectum to vulva after the latter has been cured by treatment probably never takes place. In his second series of cases, in which swabs were taken from the rectum, the percentage of positive results is even higher. Out of 267 cases thus examined 74, that is, 27.7 per cent., were found to have gonococci in the rectal mucous membrane. A most interesting fact is stated by Schmidt. In the whole course of his investigation, which extended over more than a year, not one single case of rectal stricture was observed, although there were many long-standing and recurrent cases in his material. In his opinion gonorrhoea of the rectum does not cause rectal stricture, and the etiology of this troublesome condition badly needs revision. The treatment of rectal gonorrhoea, which should go hand in hand with that of the vulvo-vaginitis, is not a very difficult or arduous matter. In addition to precautions which aim at preventing the back flow of pus from the genital tract, Schmidt recommends the daily injection of a 1 per cent. albargin solution in mucilage of

tragacanth, and mentions that he is in the habit of using Almkvist's formula:

Albargin ...	...	...	...	3 grams
Mucilag. tragacanth.	...	...		8 ,,
Aq. destill.	...	..	..	286 ,,

This should be injected as high as possible, although rectal gonorrhoea never extends more than 8 cm. from the anus, with a soft catheter, and retained by the patient as long as possible. Where albargin is not tolerated, 1 in 2,000 to 1 in 1,000 irrigations with potassium permanganate solution should be administered. The rapid results (two to three weeks) obtained in the majority of his cases by Dr. Schmidt depend, in his opinion, on the mucilaginous quality of his injections, which are more easily retained than the watery irrigations administered by other authors.

OBSTETRICS.

255. Extra-membranous Gestation simulating Placenta Praevia.

GONNET (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, January, 1914) observes that since Glaize described definite cases where the amnion and chorion have ruptured long before term and the fetus has continued to live and to be delivered normally, some 40 cases have been collected. He attended himself last year a woman in her third labour. Her last periods ended on January 22nd, and term was calculated for October 28th. In the second month a little blood came away; later on this symptom continued; ultimately blood-stained liquor amnii trickled from the cervix from time to time. On August 11th there was flooding, so that placenta praevia was diagnosed and the patient was hurried off to a lying-in hospital, but the cervix was not in the least dilated. The fetal breech presented. From August 12th to 22nd there was hydrorrhoea, often blood-stained, without any real intermission. Labour set in on August 22nd; at the end of seven hours the child was spontaneously delivered, breech first. It weighed over 3 lb. and was asphyxiated: it was restored to animation, but died three hours later. The placenta was expelled with the maternal surface forward and weighed about 12 oz. There was no *post-partum* haemorrhage and the puerperium was normal. It was found that the placenta was well developed, the funis without anomaly, and the maternal surface and deep tissues free from any morbid appearance. The margination of the fetal surface was marked. The membranous sac was small, out of all proportion to the size of the fetus. Its free edge was thick, cicatricial in fact, all round, with no sign of a recent laceration. Rupture must have occurred many weeks before labour. The hydrorrhoea with frequent blood-staining of the liquor amnii simulating placenta, and also, Gonnet notes, breech presentation, are the rule in extra-membranous pregnancy.

GYNAECOLOGY.

257. Vulvo-vaginitis.

SINCLAIR (*Arch. of Pediatrics*, January, 1914) gives the results of his investigations in vulvo-vaginitis in infants by means of the female urethroscope, 85 infants under 3 years of age being examined. On arrival at the hospital a vulvar smear was made in every case, and the bacteriological findings noted, only the negative cases being admitted to the general wards, all positive and suspicious cases being isolated for further study, and within twenty-four hours an examination with the electric-lighted female urethroscope was carried out, and a vaginal smear examined for bacteriological diagnosis. In taking smears the platinum loop gave better results than either moist or dry swabs. Of 10 cases in which the complement fixation test was employed, 50 per cent. showed a positive reaction, and these are believed to be the first series of such tests made on infants, which are accompanied by notes of endoscopic examinations of the cervix and vaginal mucosa. Of the 83 cases examined, 16 (19 per cent.) were found to be infected with the gonococcus at the time of admission, or to be highly suspicious of such infection. Seven cases, negative on admission, subsequently developed a specific vaginitis, and 9 cases admirably illustrated the tendency to latency in this disease, pointing to the necessity for early recognition of the infectious agent in regard to proper prophylaxis; 21.74 per cent. of the total 83 cases would have escaped detection without the use of the electric-lighted female urethroscope. Ophthalmia, an eczematous condition about the vulva, buttocks, and thighs, and proctitis were the complications observed. Treatment consisted of irrigations of potassium permanganate $\frac{1}{8000}$, with local applications of 20 per cent. argyrol solution, and when the discharge became scanty a $\frac{1}{4000}$ solution of hydrochloric acid was substituted for the potassium permanganate solution. Prophylaxis to be effective must begin with a campaign of education in the homes and institutions where infants are born and reared, with the exercise of adequate medical supervision and isolation of infected cases until free from the specific organism, and systematic periodic examinations of all the inmates of institutions for young children should be made in order to detect latent cases, and procure their isolation before they become fresh centres of infection.

THERAPEUTICS.

258. Intralumbar and Intraventricular Injections of Ethylhydrocuprein in Pneumococcal Meningitis.

SIEGFRIED WOLFF AND WALTER LEHMANN (*Deut. med. Woch.*, December 18th, 1913) record the case of a child, 8 months old, who suddenly developed high fever and convulsions. The patient was admitted to hospital on the second day of the disease, when the temperature was 39°, and the cough was troublesome. Many rales were audible over both lungs, and in the course of the following day pneumonia of the upper lobes of the right lung was diagnosed. Slight rigidity of the neck was interpreted as meningismus. The pneumonia ran a typical course, and the physical signs over the lung disappeared, but the fever persisted and the meningeal symptoms gradually increased. Lumbar puncture showed pneumococci. Frequent lumbar puncture, intralumbar injections of pneumococcal serum, and large doses of urotropin proved futile. As aethylhydrocuprein, sold as "optochin," is specific for pneumococci, it was injected by lumbar puncture so as to act as directly as possible on the pneumococcus. Unfortunately only two such injections could be given as the many punctures had evidently led to adhesion of the membranes in the lumbar region. The drug was subsequently given subcutaneously, for it could not be given by the mouth, as the child vomited frequently, and intravenous injections were not feasible as the veins were too small. This treatment lasted fourteen days, during which some improvement was effected, the temperature being almost normal for several days, and the child being lively. But the temperature again rose, vomiting became severe, and the persistence of the other meningeal symptoms necessitated ventricular puncture. The liquor thus obtained contained much fewer cells than that obtained by lumbar puncture, and pneumococci were no longer demonstrable. Though the condition was, therefore, more satisfactory, an intraventricular injection of ethylhydrocuprein was given. Twenty-four hours later the temperature was normal and there were no longer any meningeal symptoms. Eighteen days later the child developed influenza. Ventricular puncture yielded normal liquor, containing no pneumococci. The meningitis may, therefore, be considered as cured, and as the prognosis of pneumococcal meningitis is very bad, it is not unlikely that the recovery was due to the ethylhydrocuprein, 1.25 grams of which were given in fourteen injections, the amount given by intraventricular injections being 0.07, that by lumbar puncture being 0.06, and that by subcutaneous injections 1.12 grams. There were no ocular symptoms, and no signs of quinine poisoning.

259. A Substitute for Carbon Dioxide Snow.

E. SOMMER (*Schweizerische Rundschau für Medizin*, January 10th, 1914) advocates the use of acidum trichloracceticum as a substitute for carbon dioxide snow in dermatology. The latter has many disadvantages. It does not last long, and cannot, therefore, be dispatched afar. The hire of cylinders is expensive, and their manipulation intricate. The author has found that trichloracetic acid is in many respects more satisfactory. It forms colourless crystals which easily volatilize. Its melting point is 56° C., and its boiling point is between 192° and 195°. It is soluble in water, spirits of wine, and ether. It is kept in a brown, glass-stoppered bottle, and can be used in the form of crystals or a concentrated solution. It is so stabile when kept carefully corked in a dry place that it lasts for years. The solution, which is more easily managed than the crystals, should be poured out

into a watch-glass, care being taken not to contaminate the fingers. A drop is taken on a glass rod and placed on the skin, where it is lightly rubbed or pressed with the rod. This pressure is necessary to insure complete contact of the drug with the skin. The size and shape of the glass rod varies with the character of the area to be treated. When it is small, a small rod, with or without a bulbous end, should be used; when it is large, a thick rod with a bulbous or flat, shelving end should be used. The penetration of the drug being directly proportional to the pressure applied, this is increased when the disease is deep-seated. To protect the skin in the neighbourhood of the area to be treated a coating of collodium or mastisol should be applied. The latter is preferable, as it can be used as a dressing after the drug has been applied. This is allowed to dry, and, though a dressing is subsequently not essential, it is useful. The area treated rapidly turns white, but it does not show the vesicles which may follow the application of carbon dioxide snow. The discolorization of the skin is followed by the formation of crusts, which fall off in one to two weeks. The treatment should not be repeated before the reaction has completely passed off. Often one application is sufficient. The conditions suitable for the treatment are new growths of the skin, warts, keloids, pigmentations, naevi, freckles, tattoo marks, etc. The advantages of the treatment are its cheapness and simplicity. Neither great technical skill nor an elaborate apparatus is required. The drug is always ready for use, and is not easily decomposed. The strength of the reaction can be graduated by the strength of the solution and by the pressure applied. The drug does not, however, have such a penetrative action as carbon dioxide snow. The acid causes but little pain, but occasionally during or after its application a slight burning sensation is felt. The cosmetic results are good, and the author has seen no undesirable effects.

260. Urotropin in Skin Diseases.

Sachs (*Wien. klin. Woch.*, 1913) has employed hexamethylenetetramin in 154 cases of skin disease. He gives 15 grains three or four times a day in half a glass of plain water immediately after meals; soda water should not be used. This mode of administration reduces the chance of the drug having any ill effects on the digestion to a minimum. His observations refer to the following diseases:—(1) Herpes zoster: Eighty-two cases were treated of which 75 were cured. The author observed subsidence of inflammation in the lymphatic glands, alleviation of the burning pain felt in the affected portion of skin, and relief of the associated neuralgia. He considers urotropin a specific remedy for this affection. The length of treatment in these cases varied from five to fourteen days. (2) Erythema exsudativum multiforme et bullosum: Of 29 cases, 23 were cured, 6 improved. He considers the number of cases too small to admit of drawing conclusions as to the influence of the treatment on the incidence of relapses or complications: nevertheless, the results are encouraging. (3) Impetigo contagiosa, eczema impetiginosum: A cure was observed in 33 of 41 cases treated; 4 were improved. The advantage of this method of therapy in these cases is that no local application is used; the hair was not clipped, and the duration of treatment, even in cases of extensive involvement, did not exceed ten to fourteen days. (4) Varicella: Only 2 cases were treated, so that no conclusion can be drawn. The author considers the drug worthy of trial in pemphigus neonatorum and pemphigus vulgaris, dermatitis herpetiformis, impetigo herpetiformis and variola.

261. Embarin in Ocular Affections.

P. Possek (*Berl. klin. Woch.*, February 16th, 1914) has tried this mercurial preparation in 49 cases of various diseases of the eye, chiefly, of course, syphilitic. Embarin is a solution of mercuri-salicy-sulphonate of sodium, containing 3 per cent. of mercury, with ½ per cent. acoin added as an anaesthetic. It can be administered by intramuscular injection in doses of 1.2 c.cm. The claim made on its behalf, that it fulfils the four essential requirements of an ideal mercurial preparation, seems to the author to be justified. These four desiderata are (1) energetic action, (2) absence of undesirable by-effects, (3) painless and easy administration, (4) not necessitating any interruption or modification of the daily routine of life or business. Possek found the injection of embarin painless, and provided that it was properly injected, with antiseptic precautions, into the gluteal muscle, and not into the connective tissue (and in stout persons with small gluteal muscles this requires some care), free from any local reaction, such as swelling or lump formation. Of the 49 cases in which the author tried embarin, 9 were non-syphilitic eye diseases: the remainder either certainly or probably syphilitic. Among the former was a case of sympathetic ophthalmia, and a case of traumatic irido-cyclitis, in both of which syphilis could be excluded. In some of the syphilitic cases salvarsan was also employed, and in every case, of course, the appropriate local treatment also. The results, although under the conditions necessarily inconclusive, yet impressed Possek as very favourable, and he feels justified in recommending embarin as a convenient and reliable preparation of mercury, especially in ophthalmic practice.

PATHOLOGY.

262 The Etiology of Typhus Fever.

Eugen Fraenkel is not inclined to accept, at present at all events, the evidence adduced by von Prowazek in regard to the bodies which he found in the leucocytes of typhus patients, which he claims to be the causal parasites of the disease, and which he classified among the strongyloplasmata (*Muench. med. Woch.*, January 13th, 1914). He is still less inclined to believe in the organisms which M. Rabinowitsch and P. Th. Müller have described. Under these circumstances, he regarded it advisable to study the etiology of typhus more closely, and he therefore seized the opportunity offered him by the occurrence of a few isolated cases in Hamburg. The method he adopted was to excise small pieces of skin including the roseola, placing them in grape sugar broth for eighteen hours in the incubator, and then preparing them for microscopic examination. Choosing Pappenheim's panoptic method, he was able to demonstrate several important changes. The chief characteristic of the skin changes lies in a peculiar process of the small arteries. This process consists of nodular expansions of the whole circumference of the arterial wall. The wall between the expanded parts varies in structure. In the immediate neighbourhood all differential structure appears to be lost, while in other situations the wall and endothelium is more like the wall of the expanded portions. The latter was found to be a thickening consisting of mononuclear cells, many of which have dark, pyknotic nuclei and narrow eosinophile protoplasm, while others, larger cells, have a wider protoplasmic zone and largish nucleus. The author gives a full histological description of the changes met with and publishes some very clear photomicrographs. He admits that he has never come across similar changes in the cutaneous arteries before, and that he is at a loss to explain the changes. He is convinced that the changes are specific for typhus, and goes as far as to point out that diagnostically the condition can be readily identified by histological examination of the rash. The appearance differs markedly from that of the rash of enteric fever. In conclusion, he suggests that further investigation is required of the arterial system of persons dead of typhus, and anticipates an analogous type of change in other small arteries.

263. The Pallidin Reaction.

E. Klausner and O. Fischer have worked out a cutaneous reaction with an organ extract for syphilis, which they term the "pallidin reaction." The former gives the details of the technique (*Muench. med. Woch.*, January 13th, 1914). The extract is made from lungs affected with white pneumonia. The method of preparing this extract is not stated in the present communication. The skin is scored with a lancet with cross lines. The lancet is dipped into the pallidin, which must be well shaken before use. The scores must be made to bleed. The blood is not wiped off, but is allowed to dry, and the small wounds are not covered by any dressing. After about twenty-four hours a distinct infiltration begins to show itself, which reaches its maximum of intensity after forty-eight hours. A positive reaction is evidenced by the appearance of a slightly raised inflammatory papule surrounded by a zone of erythema. The papule should cover the whole of the scored area. In untreated cases of hereditary or tertiary syphilis the papule becomes pustular, and goes on to necrosis. The reaction has, according to the author, been applied to upwards of 1,500 cases, and to more than 1,200 control persons. It is said to be a certain diagnostic sign of hereditary or tertiary syphilis, but it is negative in tabes, general paralysis, and syphilitic affections of the arteries.

AN EPITOME OF CURRENT MEDICAL LITERATURE

MEDICINE.

264. Hay Fever.

H. L. ULRICH (*Journ. Amer. Med. Assoc.*, April 18th, 1914) says that hay fever does not receive the attention it deserves from the medical practitioner, and there is a growing conviction that hay fever is not only a local manifestation, but also involves reactions that bring it into the domain of constitutional disease. He notices the work of Dunbar, who establishes the fact that it is a pollen toxicosis, though his pollantin is losing favour as a cure. The active immunity induced by Noon and Freeman is mentioned, as well as the demonstration by Clowes of the immune bodies of the hay fever of America. The clinical picture of the disease is reviewed as described by Bostock, whose description seems, according to Ulrich, to be rather mild in comparison to American autumnal catarrh. Ulrich quotes it, however, to call attention to the irregularity of the symptoms as compared with other infectious diseases, which suggest to him more the hypersensibility of nerve and tissue groups to an irregular protein intoxication, the portal of entry of which is the nose. For two years he has been observing ragweed, because he finds that it is the only flowering plant which has a wind-borne pollen during the period between July 1st and September 15th. The ragweed pollen is distributed when the sun warms the air held in its oily envelope, and its production is most prodigious. Ulrich is convinced that it is constantly in the air of the country and the city, and estimates that 1 gram contains 172,800,000 pollen grains. He has made extracts according to Dunbar's method, and treated twelve cases with considerable success in giving relief from the symptoms. He is convinced from the manner of its production and its short duration that he was producing a refractory or inhibitory phase of hypersensibility. Ulrich differs from Dunbar, Clowes, and others in believing it to be a protein toxin instead of a microbe. Two clinical studies suggest themselves from his point of view: (1) If it can be shown that the muscle reactions in hay-fever patients are modified just as they are in spasmophiliacs we shall have added another link to the chain of evidence. (2) Recent reports of eosinophilia in animals sensitized to foreign proteins have led observers to think that an increase in oxyphiles in the blood is an indication of this condition. If this can be shown to occur in hay fever, another clinical test can be added to our list. As a matter of fact George D. Head has verbally communicated to Ulrich that eosinophilia is a common occurrence in cases in which asthmatic symptoms are present. In one of Ulrich's cases under complete control he had the blood studied before and during the season. At no time did eosinophiles go above 4.5 per cent. In conclusion, Ulrich says there are three ways of meeting autumnal hay fever: (1) The eradication of ragweed. (2) The removal of the patient from the ragweed environment. (3) The production of antihypersensibility. The first of these is more practical than is commonly realized. Ragweed can be exterminated. The second method is available only to the favoured few, while in the third he sees a glimmer of hope for the many thus afflicted.

265. Status Lymphaticus in Adults.

EMERSON (*Arch. of Intern. Med.*, January 15th, 1914), having noted the high percentage of mortality among those cases of meningitis, enteric, and septic infections which presented physical marks of status lymphaticus and whose pathological findings were confirmatory, tested the reliability of the various criteria whereby a classical case of status lymphaticus may be recognized. Of 1,000 men attending the alcoholic wards of the Bellevue Hospital in New York, 780 were without any stigmata or abnormal physical characteristics, while the remaining 220 (22 per cent.) presented physical attributes sufficient to identify them as cases of status lymphaticus. The main points of variation from the usual masculine physical habit justifying a diagnosis of the condition are: Scantiness of hair on lip, chin, and in sternal and axillary regions, with the feminine type of distribution, with or without scantiness of pubic hair; a tendency to narrowness and length in the thorax; a noticeable roundness and arching of the thighs and roundness of the upper arms; small penis, with smallness and pointed shape of the glans; and smallness of the testicles. A velvety or fine and delicate texture of the skin is also noticeable, the skin being seen and felt to be almost wholly free from the usual short hairs as commonly found, for instance, on the thigh. Other points commonly noted for example, coarse and straight hair, increased lymph tissue and enlarged lymph nodes, and enlargement of the spleen were found to be of no diagnostic value in the cases examined, though confirmatory when the other symptoms were also present. Of 3,600 autopsies, 288 (8 per cent.) were cases of status lymphaticus, and of these 242 were associated with infectious diseases, so that it must be concluded that such individuals are more susceptible to the dangers of infectious disease than are normal persons, and that precautions should be taken, especially by artificial immunization, to prevent their occurrence. Further, these cases are among those who cannot tolerate as well as normal men extreme fatigues, shocks, losses of blood, abuse of narcotic drugs, or surgical procedures. Among the ordinary pauper class in the general wards of the Bellevue Hospital the incidence of this condition of status lymphaticus is less than a quarter of that found among the alcoholics from which the above statistics were derived.

266. A Rare Form of Lichen Ruber Planus.

THE ordinary typical eruption of lichen planus and the situations commonly affected are well known to the profession, but in the two cases reported by POLLAND (*Dermat. Zeitschr.*, September, 1913) the typical lesions were associated with pemphigoid bullae, which although previously described are by no means common, and might have given rise to considerable diagnostic difficulty in a less well-informed mind. The bullous lesions in the first case, a woman of 27, were scattered, but the majority of them were grouped on the legs, especially round the ankles. The itching was very troublesome at times, although it responded fairly well to arsenic internally—the almost specific treatment for lichen planus—and an ointment of a drachm each of camphor, menthol, and chloral hydrate to 3 oz. of lanoline and vaseline āā. The author states that where Fowler's solution completely fails to alleviate, there is every justification, theoretically and in the literature, for the cautious intravenous infusion of salvarsan.

267. The Syphilitic Index.

B. P. SORMANI (*Muench. med. Woch.*, January 13th, 1914) describes what he terms the luetic or syphilitic index. For this he claims that the determination is independent of the reagents used and also of the time factor; the so-called paradox serum does not exist in reality, but is due to faulty employment of complement. His method is the best means of ascertaining the effect of antisyphilitic treatment; parasyphilitic affections of the brain and spinal cord are always diagnosable by its means: the highest index is met with in dementia paralytica, while locomotor ataxy give the lowest; syphilis of the cerebral vessels differs from cerebro-spinal parasyphilis in that it gives an index of 0. Briefly stated, the determination is carried out as follows: The serum must be used within twenty-four hours of the bleeding and is inactivized for half an hour at 56° C. The extract is an alcoholic solution of syphilitic liver from an infant. Sheep's blood is used for red corpuscles: the haemolytic amboceptor is preserved with ½ per cent. carbolic acid in the ice-chest, and must be active in a dilution of 1 in 2,000. All the instruments used must be carefully cleaned before sterilization. The preliminary test consists in setting up two rows of test tubes containing dilutions of the extract, diminishing dilutions of complement, and saline made up to a definite volume. In the second row there are diminishing dilutions of complement and saline. Apart from this a mixture is prepared of well washed blood corpuscles and the haemolytic amboceptor (8 to 10 litre units being mixed with 10 c.cm. of the suspensions). After these constituents have been in contact in the incubator for two hours the cells are centrifuged and washed several times. The ultimate suspension is free from all traces of amboceptor, save what has become attached to the cells. The sensitized cells are then added to each of the tubes in the two rows. A comparison of the rows will show the difference

made by the extract in inhibiting complete haemolysis. This is measured in terms of the difference of the complement content of the tubes just giving complete haemolysis. The actual test is now carried out. In the first row of tubes normal serum, the smallest quantity of complement required for complete haemolysis, and diminishing quantities of extract are placed. The total volume in all cases must be equal. The second row of tubes contains the same, with the exception of the serum, which must be that of a certain case of syphilis; the third row contains the serum of the patient and the other ingredients as before, while a fourth row stands as control; it contains no serum, but saline in its place. The tubes of the first row must all show complete haemolysis, and the same applies to the control tubes. The index is determined in the second and third rows by the position of the tube showing distinct inhibition of haemolysis. Special precautions are taken to exclude the action of spontaneous inhibition. The author maintains that while the manipulations may be somewhat complicated, as soon as the technique is mastered it will be found that fifty tests can be carried out between eleven in the morning and five in the afternoon.

SURGERY.

268. Retrograde Incarceration: Hernia "en W."

THE name "retrograde incarceration" or "Strangulation en W" is not a satisfactory one, and does not adequately describe many of the cases included under this heading. The condition referred to is one in which, in cases of hernia, there occurs partial or complete strangulation of a loop of gut not lying within the hernial sac. WENDEL (*Ergeb. der Chir. und Orthopäd.*, Bd. vi) has collected 78 cases from the literature, nearly all of which have been reported within the last ten years. The condition usually occurs in elderly people with large herniae; it is more common on the right side. The hernial sac may contain one or two separate loops of intestine; or it may be that there is in the sac merely a portion of mesentery, which becomes nipped. The intestinal loops contained in the sac are sometimes strangulated or incarcerated, but sometimes not. When two such loops are strangulated it occasionally happens that a connecting loop lying outside the sac is not affected; more usually, however, the connecting loop is more severely strangulated than the gut within the sac, and sometimes becomes gangrenous with extreme rapidity. The mesentery of this connecting loop may be strangulated within the hernial sac, though not in every case; but even when not definitely strangulated, the circulation in its vessels is markedly affected. Other causes, besides compression of its mesentery by strangulation in a hernial sac, may lead to gangrene of the connecting loop. Thus, it may be subjected to pressure from bands or adhesions, or kinked by its own hyperdistension with gas or faeces. Faecal impaction, volvulus, and similar complications may affect it, and lead to gangrene. As regards diagnosis, it is notable that while the earlier cases reported were not diagnosed, a provisional diagnosis was frequently hazarded in the later cases of the series. The importance of diagnosis lies in the fact that a provisional diagnosis of strangulation of this type leads the surgeon to the correct treatment—that is, to open the abdomen first, and deal with the actual hernia secondarily. The affected loop of gut may be replaced within the abdomen if its condition appears to justify this, or it may be resected. Resection should be free; it is better to resect too much than too little. In some cases the gut has been stitched up into the wound and opened; the results of this procedure have not been good. The prognosis is grave, and chiefly because of the difficulty of diagnosis. The mortality among the reported cases was 42 per cent. A similar strangulation sometimes affects organs like the appendix or Fallopian tube, when a loop of the organ is contained within a hernial sac, while its free extremity projects into the abdominal cavity. Strangulation of the free end may occur, either with or without strangulation of the rest of the tube. The prognosis in these cases is better owing to the absence of intestinal obstruction.

269. Blood Pressure in Relation to Surgical Shock.

BLOODGOOD (*Ann. of Surg.*, December, 1913) publishes the results of studies in blood pressure before, during, and after operations, with reference to the early recognition and prevention of shock. He observes that the evidence now available is sufficient to indicate that great advance has been made in the early recognition and prevention of shock due to operative interference. The two factors in the production of shock over which there is the greatest control are: (1) The toxic factor due to anaesthesia and (2) the traumatic factor due to operative manipulation. Much attention has been given within recent years to both, and the work of Crile has resulted in the development of a definite technique to eliminate as far as possible both these factors. Bloodgood observes that this technique makes the operation time longer, puts more labour on the surgeon, and requires infinite patience. For these reasons he is confident that it will not become popular until it is clearly demonstrated that shock and operative mortality are reduced thereby. For three years he has employed the method in every operation, and in the majority of cases a complete record has been taken of the pulse and blood pressure during, before, and after operation. From the graphic records thus obtained he is convinced that operations performed under Crile's method of anaesthesia, if properly carried out, result in less shock, with diminished mortality and post-operative discomforts and complications. When infiltration anaesthesia is employed, it is most important to reduce the sensory impulses from the wound to a minimum, and the excellent effect of the substitution of nitrous oxide and oxygen combined with local anaesthesia is demonstrated most clearly when a chart is kept of the blood pressure throughout the progress of the operation. To obtain the best results the surgeon must attempt to improve not only his general and local anaesthesia but also his own technique. If, then, graphic records are taken throughout the course of each operation of the pulse-rate and blood pressure, a true estimation will be obtained of the factors in shock due to the degree of anaesthesia and to traumatism respectively. Bloodgood publishes in detail six anaesthetic charts indicating variations in blood pressure during colectomy, laryngectomy, excision of a carcinoma of the mucous membrane of the cheek, and excision of a fibromyxoma beneath the psoas muscle. Operations were conducted under either gas and oxygen with local infiltration of 1 in 400 novocain or under the latter alone, and the anaesthetic charts demonstrate in a conclusive manner the advantages to be gained by Crile's method controlled by blood pressure tracings.

270. Removal of Needles Buried in the Tissues.

CHARLES VIANNAY (*Prov. méd.*, February 7th, 1914) insists on the necessity in every case of the aid of two *x*-ray photographs before attempting the removal of a needle accidentally buried in the tissues. He does not except even cases in which the foreign body can be grasped through the skin by its two extremities between the surgeon's finger and thumb; nor does he mention the often useful manœuvre of thrusting the sharper of the two ends through the skin so that it can be grasped by a pair of pincers and withdrawn. The author prefers in all cases to locate, as precisely as possible, the needle by means of at least two *x*-ray photographs taken in planes at right angles to each other. He recommends Fayard's method in all cases where any difficulty is experienced in finding the needle. This method consists in getting the ends of the jaws of a pair of forceps as near the supposed location of the foreign body as possible, fixing the instrument there by ripping up a morsel of tissue, and making a further *x*-ray examination or photograph with the forceps in that position. As a rule, of course, the patient remembers the circumstances of the accident and knows that a needle has entered his tissues; but it is extraordinary how completely such an incident may be forgotten, or even unnoticed at the time. A clean needle may remain in or near one spot; it is quite the exception for needles to "travel" to any great extent, even when they are in the neighbourhood of joints. In such a case the movements of the joints may drive them an inch or two in this or that direction; but in the majority of instances they become encysted and fixed in one place. Viannay recalls, and says that his experience has often confirmed, the teaching of his old master, Professor Tixier of Lyons—for example, that a needle scarcely ever enters the skin by its *point;* the point is already fixed in the plank or stuff, etc., and it is the extremity corresponding to the eye which pierces the skin. Another "point" is that a needle as a foreign body is nearly always a fragment. The same violence which drives it into the tissues causes it to break. The former of the above two facts explains why it is generally futile to withdraw a threaded needle by pulling on the thread. Where the needle has entered deeply into or between muscles its discovery and removal is often a very difficult and delicate operation. Viannay prefers in all cases a general anaesthetic. He performs the preliminary stages of the operation with gloves, but the actual finding and

withdrawal of the needle he prefers to do without, as the sense of touch is so important a factor. It is not to be forgotten that in most cases a needle is a harmless foreign body, and may, and generally does, become encysted and lodge in the tissue for years without causing symptoms and without danger.

OBSTETRICS.

271. Sugar as an Oxytoxic.

D. A. FRIAS Y ROIG (*Revista de Medicina y Cirugia Practicas*, February 28th, 1914) gives these properties as those which most characterize the ideal oxytoxic and by the approach to which we must judge any agent proposed as an oxytoxic: (1) It must not be very toxic; (2) it must respect the normal rhythm of the uterine contractions and not produce a state of tonic spasm; (3) it must not interfere with the normal expulsion of the placenta; (4) it must not harm the child either by tonic spasm of the uterus, by separating prematurely the placenta and causing haemorrhage, or by any direct toxic action exercised through the blood; (5) it must act promptly—the quicker its action the better the effect; (6) its action must cease with the birth of the child, and its elimination must be rapid, and no toxic derivatives must appear in the mother's milk; (7) it must act most strongly during the first stage of labour. The author considers the action of sugar as an oxytoxic comes nearer to this ideal than many of the more frequently used drugs. It was first used by C. Keim, of Paris, in 1898. Its action seems to be essentially physiological. Sugar is a muscle food—the source of muscular energy. There is in the system of the pregnant woman at term an unusually large quantity of sugar. Some of it is required by the mammary glands. The state of the liver, the hypertrophy of the suprarenal capsule and the hypophysis all contribute to the excess of sugar in the system. At the beginning of labour the uterine muscle and blood is saturated with sugar, which suffices in a labour of normal duration. In delayed labour, however, the supply may be insufficient; under various circumstances the amount of sugar produced may be diminished, and may have as a result abnormal weakness of the uterine muscle. In his first communication Dr. Keim advocated the administration of sugar in the form in which it is secreted by the mammary glands. Afterwards, however, he found that ordinary cane sugar acted as well or even better, as it was more quickly absorbed, and was much more easily obtained at any time and in any place. It should be given in small doses, frequently repeated, and in concentrated solution, between meals; 25 grams of sugar, dissolved in half a glass of water, may be repeated several times at intervals of half an hour. Sugar as an oxytoxic has its most suitable application towards the end of labour, when there is no mechanical obstacle to the expulsion of the fetus and where the delay is due simply to uterine inertia.

GYNAECOLOGY.

272. Pseudarrhenia.

C. BENDA (*Berl. klin. Woch.*, January 12th, 1914) describes a specimen of external feminine pseudo-hermaphroditism or pseudarrhenia of an unusual type. The subject was a child of 2 months. It was called by a male name and the external genitals did not suggest any abnormality. The penis was about 4 cm. in length, and was quite usual in appearance. The scrotum was also quite normal. The internal pelvic organs, however, were those of a female. No prostate was found, but in the situation where this organ should have been a vagina measuring about 2 cm. in length was placed. The upper part of the vagina passed in a sac-like manner on to the cervix, the latter scarcely protruding into the former. The uterus was well formed, measuring 3.2 cm. in length. The ovaries and broad ligaments were also well developed. Apart from the genital deformity, a congenital cardiac defect was found, consisting of a dilated ductus Botalli, and there was an enormous hyperplasia of the suprarenals. In discussing the theoretical significance of this form of defect Benda points out that the fetus up to the length of about 29 mm. possesses more of the female than the male type. The differentiation of the sexual and other organs to a male type is more complex than that leading to the development of the female. In the development of pseudarrhenia the author suggests that a specific abnormal influence must be present in the sexual glands. If this were so, he would expect to find a trace of masculinism in the ovaries—or, in other words, a sign of an attempt to true hermaphroditism. His theory depends on the assumption that the development of the external genital organs depends on an influence exercised by the sexual glands, and is of a secondary character. Steinach demonstrated at the last meeting of German Scientists and Physicians that if ovaries are transplanted into male rats or guinea-pigs or if testes are transplanted into the female animal the sexual characteristics of the animal are reversed. He even succeeded in making a male animal suckle young after ovaries had been transplanted. The intermediary cells no doubt effected the necessary changes, as the sexual cells probably degenerate after implantation.

THERAPEUTICS.

273. Treatment of the Pneumonias.

R. N. WILLSON (*Journ. Amer. Med. Assoc.*, January 24th, 1914) says the distinction between the two conditions known as pneumonia is made by few clinicians, and he points to the need of determining early just which form of involvement of the lungs the physician has in hand. In the first place, by fibrous or lobar pneumonia Willson thinks we all mean the clinical picture that opens suddenly, often in a vigorous healthy person, with a chill, vomiting, aching back, and high temperature. The pathologic changes are usually congestion, red hepatization, grey hepatization, and finally resolution or some catastrophe. The clinical picture is a high constant temperature, fairly slow high-pressure pulse, and overworking but strong heart, and the physical signs showing progression through the above stages, rusty sputum, and a febrile course of from seven to nine days, ending by crisis and recovery in about 75 per cent. of cases. Against this picture is that of broncho-catarrhal pneumonia, usually in asthenic persons, with usually a definite causative bronchitis. Willson's belief is that more colds and broncho-catarrhal pneumonias are due to gastro-intestinal toxaemia, possibly from the colon bacillus, than to any one other cause. The pathologic picture is that of bronchitis with extension to the lung, and the clinical course is one of irregular temperature, weak, rapid pulse, respiratory rate not far above normal, often bloody sputum, a course lasting from two days to many weeks, termination by crisis in a few cases, more often in the customary long-drawn out recovery. It has its frequent sites of predilection in the lung, such as the middle right lobe, the areas beneath the inner angle of the scapula, and less frequently the apex. In the lobar type we are dealing usually with a vigorous patient, in the other with an asthenic toxic state in which the conservation of the vital forces is of the utmost importance. In many, if not most, respects the treatment of the two conditions is the same but in many essential points directly opposite, and it is to this that Willson especially calls attention. In the first place he speaks of fresh air, and in fibrous pneumonia the patient should be placed bodily outdoors if possible, provided the diagnosis is absolutely certain. It is by the unlimited supply of fresh air the oxygen he needs is best supplied. Of course, he should be kept warm in extreme weather, and only the nose and mouth need be exposed to the cold fresh air. The patient with broncho-catarrhal pneumonia, on the other hand, while just as much in need of fresh air and oxygen, has a poverty of heat and vital energy that would make cold air dangerous, and exposure to it as in the other case incurs the risk of an unnecessary death. Still more important is the regulation of the food supply, and in the robust lobar pneumonia case, well nourished at the start, almost total abstinence from food might be practised for the seven or nine days, but few would have the courage to carry this out. As little as possible of the most easily digested and most nourishing food should be given unless a more liberal but regulated diet is necessary to satisfy the patient. In broncho-catarrhal pneumonia the patient requires from the first a nourishing diet, and Willson has found it helpful to prescribe about 2 quarts of milk in the twenty-four hours in addition to three light meals of soft boiled eggs, potatoes or chopped meat, custards, etc. In both classes of cases the full supply of drinking-water is important. Cleaning out the gastro-intestinal tract by an initial intestinal sweeping with castor oil, repeating this every second day through the disease, is one of the best measures for securing a favourable prognosis in either type of pneumonia. Any other purgatives may be used, but it is well to avoid any that irritate the kidneys. Perhaps magnesium citrate is the second best. Occasionally tympanites may be encountered, especially in deeply toxic cases. In such

cases the high rectal tube may be utilized. Peritonitis frequently occurs, and is a serious complication. Far more frequently there may be symptoms of appendicitis, and Willson thinks one should be very cautious in the use of surgical measures. Among the non-medical measures, care of the skin is important; as far as possible it should be left free to perform its function, but it should be kept clean. In high fever cool sponging may be grateful to the patient and lowering to the bodily temperature, but the hot sponge is more restful and stimulating to the heart. In broncho-catarrhal pneumonia there is no need of sponging to reduce temperature. Briefly applied stupes (fifteen minutes) are important for counter-irritation, and dry cupping is effective, but is not pleasant to the patient, and therefore should not be overdone. Bleeding is of questionable value, except in cyanotic patients with a labouring dilated heart and congestion of all the organs. Used promptly at such a time it may be life-saving, but should be done under careful observation by the physician, and ceased as soon as cardiac and respiratory relief is obtained. To bleed a patient with bronchopneumonia cannot relieve, and may kill. Hot mustard foot-baths are often of value to relieve circulation. Hypodermoclysis is mentioned only to be condemned, and the value of the ice-bag is rather questioned. Serous pleural effusions should be evacuated as soon as certainly recognized, and the same is true of the rarer pericardial effusion. Loculated or free empyemas call for surgical attention and drainage. The use of drugs should be limited to actual necessity after the intestines are kept in order. Willson has found atropine the most useful one of a very few available drugs as a cardiac tonic and a respiratory stimulant. Morphine hypodermically in small doses may relieve restlessness, quiet cough, and further sleep, besides acting as a cardiac sedative and tonic. Aconite should never be used in broncho-catarrhal pneumonia. Veratrum viride serves the same purpose and is safer. Antitoxins and vaccines have not yet been found. Quinine, highly recommended by some, has not been effective in other hands. Expectorants and pulmonary antiseptics are not advised, and alcohol is absolutely condemned. In the crisis warmth, rest, and cardiac stimulants are required, and the convalescent needs careful management. Pulmonary embolus has been known to cause death with the first active movements, and the patient should be brought back to his former activities gradually. Measures for delayed resolution are mentioned, and the purging, diet, and bathing of the ancients with warm or cold fresh air outline the most successful modern treatment of pneumonia.

274. Grotan.

Aumann and Storp (*Berl. klin. Woch.*, March 2nd. 1914) have chemically, bacteriologically, and clinically investigated grotan, a new disinfectant placed on the market by Messrs. Schülke and Mayr of Hamburg. According to Schottelius it is a loose combination of two complex molecules:

$$2C_6H_3\begin{cases}ONal\\CH_3\\Cl4\end{cases} \quad \begin{matrix}OHl\\C_6H_5\\Cl4\end{matrix} \quad \begin{matrix}\\CH_3\\3\end{matrix}$$

The following are their chief conclusions: Weak watery solutions of grotan, such as in use as disinfectants, are practically colourless, and of alkaline reaction. Concentrated solutions, on standing, deposit an oily substance, from which in cold weather needle-like crystals separate. This oily substance dissolves in water, the reaction of which is then acid. It is probably chlorkresol. Grotan is not a definite chemical compound as represented in the formula given by Schottelius, but is a mixture having the approximate composition: Chlorine, 19.2 per cent.; sodium, 7.8 per cent.; and water, 14 per cent. The water content of grotan seems to be definite as estimated by Marcusson's xylol distillation method. Rubbed into the skin in powder forms, or applied in strong solutions, grotan is free from any caustic or irritant action. It is equally harmless to instruments of any metal, and seems, therefore, particularly suitable for the disinfection of surgical instruments. Grotan is only very slightly poisonous, much less so than carbolic acid. It has a faint odour, however, which reminds one of carbolic acid, and the presence of a trace of eosine gives to a strong solution a characteristic colour. The usual bacteria and cocci were found to be killed with certainty by a 0.33 per cent. solution of grotan, which acted even in albuminous material. Practically four tablets of grotan in a litre of water (4 in 1,000) makes a perfectly efficient disinfectant. The one practical drawback of grotan seems to be its rather high price.

275. Oleum Sinapis as an Anaesthetic.

In a preliminary communication Adolf Schwarz (*Muench. med. Woch.*, February 24th, 1914) states that he has accidentally come across a remarkable action of oleum sinapis aethereum (of the Austrian Pharmacopoeia) on the sensory nerve endings of the trigeminal nerve. If a person suffering from toothache takes a small quantity of mustard oil in a bottle, and, after closing one nostril, inhales once the fumes of the oil, the first effect is a reddening of the face, flow of tears, and difficulty of respiration. Within a very short time all pain in connexion with the tooth has disappeared. If he has inhaled too much vapour, respiratory reaction and the reaction to sneezing and to coughing are abolished, and the patient suffers some distress for the time. Provided that only one short inhalation is taken, the relief of pain is almost instantaneous and lasts for some hours. He has found that the pain of middle-ear disease can also be relieved by the same means, and is complete enough to render the operation of paracentesis painless without any narcosis. The patient remains fully awake, and in no case is any unpleasant after-effect produced. He has carried it out in about 60 cases, including delicate women and decrepit old people. Unfortunately it proved quite inactive in facial neuralgia, but the author suggested that it should be of value in painful conditions of the nose, nasal cavities, and tonsils.

PATHOLOGY.

276. Staphylococcal Sepsis.

L. Jacob (*Muench. med. Woch.*, February 24th, 1914) is of opinion that a bacteriological examination of the blood and urine is essential in the diagnosis of obscure febrile conditions. He has studied a number of cases of obscure fever, and has been able to trace the cause to an infection with virulent staphylococci. In his first case the portal of entry for the organisms was the tonsil, while in the second it was the intestinal wall. In both cases the symptoms pointed to appendicitis, and the patients were sent to the surgical clinics for operation. They were, however, transferred to the medical wards as soon as the mistake in the diagnosis was clear. His third case was unusual, in so far as he showed that the *Staphylococcus aureus* obtained entrance into the organism through a bronchiectatic focus in the right lung. The fourth case was due to a haemolytic staphylococcus, but the author could not elicit the point of entrance. His next three cases were forms of severe staphylococcal sepsis. In one case the portal of entrance remained obscure, but this is by no means uncommon in cases of osteomyelitis. In this case numerous colonies of *Staphylococcus aureus* were grown both from the blood and from the urine. In the other two cases the micro-organisms gained an entrance through a wound in the finger. Recovery took place in the first after an abscess containing a pure culture of *Staphylococcus albus* had been opened. The blood contained the same coccus. The other case ran a very virulent course, and ended fatally. *Post mortem* abscesses were found in the kidneys, liver, intestine, and elsewhere, while the endocardium, myocardium, and pericardium were involved in the pyaemic process. The author discusses the cases in some details, and draws certain conclusions in regard to the significance of the bacteriological find. His main conclusion is that, in the milder forms especially, the bacteriological examination would serve to indicate the nature of the infection and give valuable indications as to treatment.

277. Sedobrol.

As a convenient and agreeable device for treating epilepsy by the method recommended by Toulouse and Richet, Demole recently related his experience of sedobrol to the Société Médicale de Genève (*Progrès médical*, January 31st, 1914). Sedobrol is a mixture of sodium bromide with various savoury vegetable extracts, in the form of little cubes, each containing 1 gram of sodium bromide. They are dissolved in boiling water, or in hot soup or broth. Soup or broth usually contains much sodium chloride—say, 1 per cent.—and is therefore forbidden, is a treatment of which dechlorination forms a part. Soup to which sedobrol has been added is quite palatable, neither the absence of salt nor the presence of the bromide being noticeable. Excellent results were obtained in 4 cases in which the preparation was tried. The fits diminished in the proportion of 35 in 100, and the general psychical state was much improved. It is estimated that one can in this way easily diminish by 10 to 15 grams the amount of sodium chloride absorbed daily.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

278. The Diagnosis of Yellow Fever.

W. PAREJA (*Revista de Med. y Cir. Pract.*, February 7th, 1914, says that for the diagnosis of yellow fever a clinical examination alone is almost always insufficient, as there is probably only one positive sign—namely, fever. If the possibility of protection by a previous attack of the disease can be excluded, susceptibility may be inferred. This, and fever, are all the data present on the first day of the disease, and justify immediate isolation. The temperature is no indication as to the probable course of the disease. In many cases the temperature may not exceed 38 C., and yet the patient may succumb to profuse haemorrhage. High temperatures are not the rule in yellow fever, and the hyperpyrexia which is frequent in malaria and plague is exceptional here. In favourable cases the temperature comes down gradually by lysis, with slight evening remissions. The author has not found the usually described remission on the fifth day to be a common event; in more than a thousand cases which he has observed it occurred rarely. On the third day, there are generally signs which enable the diagnosis to be made with an approach to certainty. These are: (1) Fever, with the symptoms usually accompanying a raised temperature; (2) relative bradycardia; (3) oliguria; (4) albuminuria. When these four signs are present in a case without previous indication of renal or cardiac trouble, the diagnosis is fairly certain, and signs of intoxication—haemorrhages and jaundice—will not be long delayed. The relative bradycardia (a pulse slower than the temperature would lead one to expect) occurs in other affections; in yellow fever it is constant and appears early, often on the second or third day. The pulse-rate may be 90 or 100 per minute, with a temperature of 39 or 40 C. This disproportion between the pulse-rate and the temperature is gradually accentuated, until a normal temperature is accompanied by a pulse of 50 or 60 per minute. The reverse takes place as regards the oliguria. Generally the patient will pass only 400 to 600 cubic centimetres of urine daily the first two or three days; by the sixth or the seventh day he is passing daily 1,000 cubic centimetres. Albuminuria increased during the febrile stage, and persists after the temperature has become normal. These four signs together are of more value in the diagnosis than all the pains and discolorations which have been from time to time described. The one additional diagnostic procedure of importance is the examination of the blood. It has been established that as early as the second day a diminution in the number of the leucocytes in proportion to the erythrocytes is present as a relative leucopenia. If this and the four signs above mentioned are present, we may be sure the case is one of yellow fever.

279. Purpura.

HUTINEL (*Journ. des praticiens*, December 27th, 1913) discusses this condition. From the dermatological point of view there is an infiltration of the skin with blood, displaying various shades of colour according to the degree to which the haemoglobin has been altered. In some cases these ecchymoses lead to actual necrosis of tissue; histologically there may be rupture of the vessel walls or simple diapedesis. The eruption may be secondary to any condition, such as oedema, which modifies the vitality of the skin, or to lesions of the liver and a great many of the infections. The so-called primary forms of purpura do not differ materially but the cause is not always so apparent. Two classes of purpura have been distinguished—(*a*) the rheumatoid, (*b*) those of infectious origin. This classification, however, is not, in the author's opinion, justifiable. The first group generally affects children from the ages of 5 to 15 years, the infection generally arising in the digestive apparatus. The child, as a rule, has suffered from loss of appetite, fetid breath, furred tongue, vomiting, diarrhoea, or constipation, with glairy and foul-smelling stools. The abdomen is sometimes distended and at other times retracted. The articular pains in these cases are never very severe, and affect most frequently the knees, elbows, and wrists, and it is in the neighbourhood of the painful joints that the eruption is most in evidence. Generally the eruption is ushered in by malaise, gastric catarrh, and diarrhoea. The petechiae last for about ten days but may occur in successive crops lasting longer than this. These cases are not for the most part very grave, although at times the gastro-intestinal condition may be so severe as to resemble peritonitis. As a rule there is no haematuria in these cases. In some there is an indefinite type of fever, and tuberculosis has been found to be responsible. It is often difficult to draw a definite line of demarcation between these simple purpura and the more serious haemorrhagic variety. The author indeed quotes a case in which a child suffering from the milder variety of purpura succumbed very early to a meningeal haemorrhage. In some cases the petechiae become gangrenous and slough, leaving an ulcerating surface. Hepatic insufficiency accounts for a great many cases, the condition being indicated by the presence of alimentary glycosuria. Lenoble of Brest differentiates the purpuras according to the blood picture. In the graver forms there are always myelocytes and nucleated red cells indicating changes in the haematopoietic organs. The general treatment consists in the administration of chloride of calcium. Adrenalin has given surprisingly good results in small doses in the treatment of the haemorrhagic condition, but the intestinal state must also be dealt with. The dietary ought not to include meat, eggs, milk, and other substances likely to cause intestinal fermentation, and should consist mainly of fresh vegetables, fruit, and acidulated beverages.

280. Late Effects of Acute Anterior Poliomyelitis

SCHEUERMANN (*Hospitalstidende*, January 28th, 1914) gives an account of his and Dr. Reinhard's investigations into the late effects of poliomyelitis in Denmark. They were sent by the central sanitary authority to the forty towns where the disease had been most prevalent, and they examined between 800 and 900 patients. Copenhagen was not included in this investigation. Of the 847 patients whose histories were learnt, 209 had completely recovered or showed only trifling effects. This is roughly one recovery in every 4 cases—a result which coincides with Wood's investigation in 1911 of 234 patients who had developed poliomyelitis in Massachusetts in 1907. The author found 171 patients still under treatment, either by special institutions or independent specialists. In 405 cases there was some degree of invalidity, but in most of these cases there was a prospect of improvement under suitable treatment. In 20 cases there was no such prospect, the patients chiefly being young children with complete paralysis of one arm. In 46 cases the disease had a cerebral localization of a spastic type. In 260 cases it was considered advisable to prescribe orthopaedic or operative treatment, the patients usually having been drafted out of hospitals back to their homes where skilled treatment was seldom available, and where further medical advice was seldom sought till contractions and deformities had developed. The proportion of boys to girls was as 5 to 4. The incidence of the disease rose rapidly from June, becoming greatest in September, after which it rapidly fell till December. In most cases the disease had begun in 1910-11, and 1912, but in several cases it had developed ten to fifteen years earlier. The age incidence of the disease rose rapidly from birth till the second year, after which it steadily fell till the twelfth year. After this age it became rare, and was not observed after the age of 38. No relation could be found between the age of the patient and the severity and extent of the paralyses. Even after the age of 30 the patient's liability to paralysis was not diminished, and several patients of this age developed complete paralysis of both lower limbs. The lower segments of the cord were most often involved, and the paralyses were apparently not much more frequent on one side than on the other. The feet were much more often paralysed than the hands, but the shoulders were more often paralysed than the hips. The cranial nerve most often involved was the facial. This was paralysed in 5 cases on the right side and in 9 on the left. There were 3 cases of severe lagophthalmos. Three members of the same family—father, mother, and a 10-year old son—developed poliomyelitis at successive intervals of a few months, and in all facial paralysis appeared. The author in the course of his

journeys observed about 50 cases of disseminated sclerosis, progressive muscular dystrophy, chronic articular rheumatism, hemiplegia, and hysteria, which required weeding out from the cases of true poliomyelitis. The importance of a tour of inspection by specialists is further illustrated by the case of a man, aged 31, both of whose legs had become paralysed several years earlier. He had been energetically treated in hospital with antisyphilitic drugs in spite of his denial of syphilitic infection. No improvement followed this treatment. Subsequently he married, had several children, and was able to walk a little. The verdict that this was a case of infantile paralysis was naturally consoling to the patient.

SURGERY.

281. Thymectomy in Exophthalmic Goitre.

C. LENORMANT has an admirable review on this subject (*Presse médicale*, February 14th, 1914): He points out that it has been known for many years that the thymus is often persistent and hypertrophied in the subjects of exophthalmic goitre; but many observers have regarded this as accidental and of no importance. But Capelle (1908) found a large thymus in 43 out of 60 autopsies (70 per cent). Matti (1912) found a hypertrophied thymus in 75 per cent. of 133 necropsies. This thymic hypertrophy in exophthalmic goitre is often missed by clinical examination, both by palpation and percussion, whereas radioscopy of twenty cases by Schultze showed the presence of a thymic shadow in eighteen instances. But this method of examination is not often adopted. Moreover, Lenormant reminds us that thymic hypertrophy is sometimes latent in this disease, and gives no symptoms; in such cases, therefore, the condition is not examined for. Thymic hypertrophy, however, is not constant; even in severe and advanced cases it may be absent; indeed, Melchior says it is absent just in these cases. The first surgical removal of the hypertrophied thymus in exophthalmic goitre seems to have been done by Garré in 1911; in a more recent case he performed, along with the thymectomy, a unilateral thyroidectomy at the same sitting, with a favourable result. He had also a strikingly successful case of thymectomy in a woman of 27 who showed acute exophthalmic goitre after a gynaecological operation. Capelle reported in 1913 great benefit from thymectomy in a very severe case of the disease. Some other cases are cited by Lenormant. Up to the present time only one case of thymectomy has proved fatal; necropsy showed that the removal of the thymus was only partial. The total number operated on up to the present time appears to be fourteen; Haberer has had no less than six cases. The operation is usually easy, and has generally been well borne; most of the thymectomies have been combined with operations on the thyroid. But out of the five pure thymectomies one case died; there was, however, in the four others a constant and more or less rapid and complete amelioration, especially of the nervous symptoms—tachycardia, diarrhoea, and general nutritional disturbances. But Lenormant, in discussing the question of the durable nature of the amelioration, says he does not know of any case at present in which thymectomy alone, without any other therapeutic means, has cured a case of exophthalmic goitre, or even given one of those considerable and prolonged ameliorations which amount practically to recovery. Yet he claims that thymectomy does really save the patient's life in very grave cases, as in one of Haberer's. Finally, Lenormant offers these provisional conclusions: (1) If in the course of a thyroidectomy (partial) or other operation in a case of exophthalmic goitre we find an overlooked persistent thymus, we should perform subcapsular thymectomy simultaneously with the removal of the thyroid lobe; the operation is not sensibly aggravated thereby, and it may prevent acute post-operative complications of the thyroid operation. (2) On discovering clinical evidence of an enlarged thymus in a case of exophthalmic goitre we should first try the elective and energetic effects of *x* rays on the thymus before we resort to surgery. If this should fail to give sufficient amelioration, we should then perform the combined operation of partial thyroidectomy and total thymectomy at one sitting. (3) In cases in which thyroidectomy has failed we should search carefully for signs of thymic hypertrophy; if we find them we should apply thymic radiography, to be followed, if need be, by thymectomy.

282. Fractures of the Skull.

ELSBURG (*Amer. Journ. of Surg.*, January, 1914) classifies patients with fractures of the skull into the following classes: (1) Patients with evidence of fracture of the vertex, showing few or no brain symptoms, and in whom loss of consciousness, paralysis, or convulsions, are absent. (2) Patients with partial or complete loss of consciousness, and in whom there is weakness of one side of the face, paresis or paralysis of the upper or lower limb on the same side or both limbs. (3) Patients in whom few symptoms are present at first, but who develop after a few days signs of increased intracranial pressure, for example, drowsiness, slow pulse, and respiratory disturbances. (4) Patients with signs of fracture of the base. Fractures grouped under the first heading do not require operative treatment. The patients should be carefully watched, since in a certain proportion signs of cerebral compression due to slow venous bleeding or oedema of the brain set in after an interval. If such symptoms show a tendency to progress and are well localized, an exploratory puncture of the skull may be performed. If no blood is shown, the dura is punctured and aspiration again carried out. In this way it is possible to determine with certainty whether a collection of blood is present inside or outside the dural sac. Group 2 includes those patients who have either a marked depression of bone or a large extradural or intradural collection of blood. Operation is frequently called for to remove depressed fragments of bone or extradural extravasation of blood with or without ligature of the middle meningeal artery and removal of a subdural effusion. In the case of patients grouped under the third heading, careful notes should be taken with a view to localizing the seat of brain compression. Exploratory trephining should then be performed. If the seat of pressure cannot be located, subtemporal decompression is indicated. If patients suffering from fracture of the base of the skull exhibit any symptoms of intracranial pressure, the author also recommends subtemporal decompression. Should brain symptoms develop several months after the cranial injury, cerebral abscess should be suspected.

233. Accumulation of Gas in the Peritoneal Cavity.

FALKENBURG (*Deut. Ztschr. für Chir.*, Bd. cxxiv) operated for appendicitis on a man aged 53. A collection of pus was found round the caecum and extending towards the umbilicus. There was also a pelvic abscess. The abscesses were drained and lightly packed. The appendix was gangrenous and was removed. At first the case appeared to be progressing satisfactorily, but a fortnight after the operation a rigor occurred, followed by a rise in the temperature. The abdomen commenced to distend, in spite of the fact that the bowels were open, and by the end of the third week there was barrel-like distension. Peritonitis with meteorism was diagnosed; a laparotomy was undertaken with the object of performing enterostomy. When the abdomen was opened a large quantity of inodorous gas escaped; it appeared to have been generally distributed throughout the peritoneal cavity. The swelling of the abdomen forthwith subsided, and the intestines were found collapsed and apparently normal. There was no peritoneal exudate, and the peritoneum was everywhere smooth and shining. The abdomen was closed. The patient recovered. The author suggests that the gas was formed by the action of bacteria, probably *B. coli*. Rüder of Hamburg has reported a somewhat similar case, in which free gas in the peritoneal cavity was found thirteen days after Caesarean section. In his case also recovery followed after laparotomy.

284. Acute Non-gonorrhoeal Orchitis and Epididymitis.

H. STROINK (*Deut. med. Woch.*, August 7th, 1913) has investigated 4 cases of acute orchitis, epididymitis, and funiculitis, by a bacteriological examination of the fluid obtained by exploratory puncture. In every case he obtained pure cultures on various media, and in 2 cases, when the punctures were repeated, the same organisms were again found. The punctures were made after the acute inflammation had subsided, and the scrotum had been sterilized by washing, and the application of absolute alcohol and ether. The first patient was a lad, aged 16, whose scrotum became red and oedematous, and whose right testicle, epididymis, and cord became swollen and very tender a day after he had bruised his testicle while climbing through a window. There was no urethral discharge, the prostate was normal, and the urine clear. When centrifugalized it showed only a few leucocytes. Under the alternate application of ice and hot compresses the temperature fell slowly from 101.3 to 98.6, and the pain and swelling almost ceased. Though the urine was sterile, an exploratory puncture yielded the *Bacillus fluorescens non liquefaciens*. A year later the testicle was much atrophied. The author gives an account of agglutination tests with this bacillus, from which he concludes that it

was the cause of the inflammation, but he is not certain as to the portal by which it reached the testicle. The second patient was a lad, aged 14, who had passed a match into his urethra. His left testicle, epididymis, and cord became swollen and tender five days later. The prostate was normal, the urine was clear and sterile, and there was no urethral discharge. Under the alternate application of ice and hot compresses the temperature fell from 102.2 to normal, and the pain and swelling diminished. On the eighth day puncture of the testicle yielded a pure culture of the *Staphylococcus pyogenes aureus*. The third patient was a man, aged 22, who developed an acute, painful swelling of the left testicle twelve days after both parotids had become inflamed. There was no urethral discharge; the epididymis, cord, and prostate were normal, and the urine was clear. Puncture of the testicle yielded a pure culture of the *Staphylococcus pyogenes albus*. A rapid recovery was effected with the alternate application of ice and hot compresses. The fourth patient was a lad, aged 18, who had previously suffered from attacks of pain in the testicles with fever. He denied having contracted gonorrhoea, or having had a urethral discharge. His prostate and left testicle were swollen and tender, and a slight urethral discharge contained rods and cocci, but no gonococci. Puncture of the testicle yielded pure pus which contained coliform bacilli. These had probably reached the testicle from the bladder or rectum.

OBSTETRICS.

285. Treatment of Retained Fetal Membranes at Term.

P. GUILDAL (*Ugeskrift for Laeger*, March 12th, 1914) has investigated the material in the maternity wing of the Rigshospital in Copenhagen for the ten-year period 1903 to 1912, with a view to ascertaining the significance of retention of the membranes at term. He points out that, while retention of part or the whole of the placenta is unanimously regarded as an indication for interference, there are conflicting views as to the treatment of retained membranes. Even the frequency with which this accident occurs is estimated at widely divergent values, ranging from 1 to 20 per cent. of all confinements. This divergence is mainly due to the different conceptions of what constitutes retention of membranes, and the author, therefore, finds it necessary to define this point. At the Rigshospital uniformity of record is ensured by the notes being almost exclusively made by the same person—the senior physician. Every abnormality, such as laceration of the membranes, is noted; and the author has included in his statistics only those cases in which partial or complete retention of the membranes was definitely recorded. Of 14,078 cases, 346, or 2.5 per cent., showed partial or complete retention of the membranes. The routine adopted at the hospital after the birth of a child consists of close observation of the uterus, its distension with blood and haemorrhage per vaginam being guarded against. If neither occurs, the contraction of the uterus and its expulsion of the placenta into the lower uterine segment are awaited, and are assisted by the abdominal contractions of the patient, and by light pressure on the fundus. If, however, haemorrhage occurs, or the placenta is not detached within half an hour to an hour of birth, Credé's method is practised. If this fails, and there is haemorrhage or risk of sepsis from delay, Credé's method is aided by general anaesthesia, and if this also fails, manual removal of the placenta is resorted to. When the placenta is detached, but the membranes are adherent, the placenta is rotated so as to twist the membranes into a cord. If light traction on this failed to bring away less than half of the membranes, it was the practice till 1911 to introduce a couple of fingers into the uterus and pull on the rest of the membranes. This manœuvre was abandoned, as it seldom effected the removal of more than a few shreds of membrane. The puerperal morbidity among the patients with retention of membranes treated in this manner was 35.8 per cent. During 1911 and 1912, when the treatment was expectant, the puerperal morbidity was 34 per cent. There is, therefore, in this respect no evidence to support the removal of retained membranes; and as the manual removal in the first series of cases was undertaken in a hospital where antiseptic precautions were scrupulously carried out, it is evident that the results in general practice must be even less satisfactory. Credé's method has often been held responsible for retention of membranes, and it was practised in 5 cases out of the author's 346 cases. This is equivalent to an incidence of 1.4 per cent., as compared with an incidence of 0.7 per cent. for the total of births. The influence of abnormalities of the placenta on the retention of membranes is considerable: it occurred in 42 per cent. of the cases of retained membranes, whereas it occurred only in 20 per cent. of all births. The author is not convinced that retention of membranes disposes to haemorrhage, which he observed in 23 cases, or 7 per cent. Only in one of these cases was the haemorrhage violent. The incidence of haemorrhage is, therefore, scarcely greater than when the membranes are completely removed. Retention of membranes, whether actively treated or not, certainly increases the puerperal morbidity, and in 119 cases, or 34.4 per cent., the rectal temperature was 100.4° F. or more in the puerperium. Judged by the same standard, the puerperal morbidity among all the births during the same period was 20.2 per cent. In 69 cases, or 20 per cent. of all the cases of retention of membranes, the spontaneous discharge of fragments of membrane was observed, the period at which this occurred being most often between the fourth and eighth days of the puerperium. The question whether retention of the membranes disposes to metritis or endometritis has often been raised, but the author has observed only one case of such a coincidence. He does not, therefore, attempt to answer this question.

GYNAECOLOGY.

286. Treatment of Uterine Carcinoma with Cancerous Ascitic Fluid.

GREEN AND KONRAD (*Boston Med. and Surg. Journ.*, March 5th, 1914) have had the opportunity of observing several cases of inoperable uterine carcinoma in the wards of a hospital. An abundance of cancerous ascitic fluid was obtained from one of the cases in their series for autogenous inoculation in that case and for heterogenous inoculation in five others. The treatment was continued in some instances for over four months. The final report was made at the end of two years. All 6 cases showed a slight and irregular elevation of temperature, which, however, bore no apparent relation in its oscillations to the injections of cancerous ascitic fluid, but seemed rather to be due to septic absorption from the ulcerating surface of the cancer. Three gave no apparent reaction, 2 were relieved of pain and improved in general physical condition: the remaining one showed temporary relief of pain and a big slough came away, presumably as the result of the treatment. Four patients died of the disease, apparently without retardation; 2 were discharged and lost to observation. Whether the good effect certainly noted in 2 cases was due simply to a serum isotonic with the blood and acting as a stimulant, or whether the reaction was specific, remains to be proven. The injection of a highly nutritive fluid, saline and isotonic with the blood, must have a stimulating effect on these cachectic cases and aid in the improvement of the general condition and in resistance to the inroads of the cancer. The reaction, however, is slight, quite temporary, and with little evidence (if any) of specificity. (The autogenous inoculation was practised in the first case, which proved to be one of the three where there was no evidence of reaction, and the patient died within a month of the first injection into the abdominal wall of fluid from the peritoneal cavity.)

THERAPEUTICS.

287. Bulav's Method in Purulent Pleurisies.

BRAU-TAPIE (*Prov. méd.*, November 22nd, 1913) lays stress upon the generally unsatisfactory results obtained in this condition by the ordinary methods of repeated puncture, simple incision followed by drainage, or resection of portion of a rib. These proceedings, in the author's view, rarely result in a rapid and complete cure. The patient very often becomes more or less cachectic, and complications are apt to occur. He refers at some length to the case of a child of 9 years of age, suffering from purulent pleurisy and treated by means of Bülav's method, the result being a complete cure in a little over a month. The method aims at continuous drainage of the pleura and the apparatus used is quite simple. It consists briefly of a flask or bottle which holds about a litre and a half, closed by a rubber cork perforated by two orifices through which pass two tubes. One of these passes to the bottom of the bottle and lies in an antiseptic liquid which occupies the bottom of the bottle. Attached to this tube is the drain which is inserted into the pleural cavity. The shorter tube is in communication with the outer

air. An exploratory puncture is first made at one of the usual sites of selection, and if pus is found the area is painted over with tincture of iodine, and local anaesthesia is produced by novocain. A transverse incision is then made in the skin, and a trocar of from 8 mm. to 9 mm. in diameter is passed into the pleural cavity. When the greater portion of the pus has been evacuated the drain is introduced, and secured outside to the skin by means of Reverdin's needles. For greater security sticking plaster is also used. The drain is then joined up with the longer of the tubes passing into the bottle as already described. The bottle is bandaged to the side of the patient's thigh. The discharge usually becomes less and less, and it is seldom necessary to change the drain. The tubes in Bülav's apparatus are straight, but, according to the author, it is an improvement if the longer one attached to the drain is slightly bent. This results in better accommodation to the movements of the body. He further considers that a longer drain is desirable. He questions also whether in children it is necessary to have a clip to compress the tube and so regulate the flow of pus. A good deal will depend upon the quantity of pus to be evacuated after the first day or so. The bottle is attached to the side of the thigh, according to Bülav, by a rather complicated system of bandages. The author places it in a sloping position comparatively near the pleural opening, fixing it by means of a single bandage looped round the bottle, round the waist, and over the opposite shoulder. The indications for the method are all recent pleurisies whatever the general state. It is unsuitable, however, in tuberculous pleurisies and encysted empyemata. The author considers the method an excellent one, rational and simple to carry out, and deserving of further notice.

288. Urotropin in the Cerebro-spinal Fluid.

ZIMMERMANN (*Zeits. für Ohrenheilk. und für d. Krankh. d. Luftwege*, Bd. 69) considers that urotropin has been proved to have antiseptic powers. He also regards it as established that the disinfectant action of hexamethylenetetramin is due to its power of releasing formaldehyde under certain conditions. He has administered urotropin to patients and, after an interval, withdrawn cerebro-spinal fluid by lumbar puncture. In no case has he been able to find free formaldehyde present. From other experiments he finds that urotropin, even when concentrated, does not inhibit bacterial growth when dissolved in normal body fluids. In inflammatory fluids containing products of protein disintegration, such as lactic acid and cholin, formaldehyde is split off from urotropin. The nascent formaldehyde easily combines with other substances present in such fluids: it may, therefore, not be found on testing for it, even though it has been present. The author considers that this liability to form combinations with other organic substances present in fluids diminishes the bactericidal action of formaldehyde and, as a consequence, of hexamethylenetetramin also.

289. Argatoxyl in Septic Affections.

ARGATOXYL is a combination of atoxyl and silver, and may be described chemically as the monosilver salt of (p) amidophenyl arsenic acid. The arsenic content of the compound is 23.1 per cent., and the silver content 33.3 per cent. It is extraordinarily little toxic, 0.5 gram being well tolerated when injected in a 10 per cent. suspension in olive oil intramuscularly. It is insoluble in water, but is soluble in a solution of piperazin. P. ROSENSTEIN (*Deut. med. Woch.*, October 10th, 1912) has used the salt chiefly in oily suspension, but also in a few cases in solution with piperazin in the treatment of septic processes. In regard to the technical precautions required, he points out that the syringe must be boiled in distilled water, as the least trace of chlorine is capable of converting the silver into a highly toxic compound. Blumenthal has found the preparation useful in gonorrhoeal processes, and Eisenberg and Josef Hirsch have had good results in puerperal sepsis. The author tried it in a case of severe general puerperal sepsis, and, having obtained good results, gave it in a number of other cases. These include 2 of carbuncle, 3 of phlegmonous inflammations of the extremities, 1 of scarlatina, 1 of peritonitis, 5 of puerperal fever, 1 of mastitis, 1 of necrosis of the pancreas, 1 of otitis media, 1 of rheumatic arthritis, 1 of syphilitic obliterative arteritis, and 3 of sepsis arising from any unknown cause. Of the 20 cases, 16 recovered, 1 was still under treatment, and 3 patients died. The author gives details of 3 cases in which he considers that the action of the remedy was particularly striking. One of the patients who died was suffering from phlegmonous inflammation of the lower extremity with high fever. Death took place as a result of thrombosis of the inferior vena cava. The second case was one of puerperal sepsis with purulent peritonitis, and the patient was *in extremis* when admitted into hospital. The third case was one of necrosis of the pancreas, peritonitis, pleurisy, and dilatation of the heart. Having satisfied himself that argatoxyl exercised a curative influence on the various septic processes for which he employed it, he inquires into its mode of action and comes to the conclusion that it owes its beneficial effect to a bactericidal action and to the capability of inducing a marked leucocytosis. He adduces evidence in support of these contentions. He recommends the drug in doses of from 0.3 to 0.5 gram in olive oil, but prefers to reserve his opinion as to the value of the dissolved salt until his experience is larger.

290. Treatment of Tabes.

IAWORSKI (*Journ. des praticiens*, April 19th) says the fundamental idea of the treatment rests upon the fact that whereas tabetics suffer from an irremediable medullary lesion the symptoms vary from day to day, and may even disappear for a time. This peculiarity is to be explained by the existence of peripheral lesions, and to their influence the variety in the symptomatology of tabes must be attributed. In some the gait is more especially affected, others suffer from the "lightning" pains, and others again from gastric crises. But in nearly every case there are rectal and vesical crises. These, it has been found, can be provoked voluntarily, and even aggravated. Treatment of these lesions by dilatation of the urethra or rectum—called by the author "reflexo-therapy"—improves the general condition. The effects produced are often remarkable, as after the first few *séances* the sensation of cold in the lower extremities diminishes and the crises alter in character: the ataxic condition is less marked, the painful crises are lessened, and Romberg's sign disappears. In long-standing cases the author supplements this treatment by vertebral reflexo-therapy, and in this way obtains all the effects of re-education after a very short time. This has happened in some cases when the ordinary methods of re-education had completely failed. Contrary to the general rule, he has found that the more severe the case the better was the result obtained. The author has had no other ill effects than the temporary results of hyperdilatation. The first *séances* of vertebral reflexo-therapy are a little painful, but the skin quickly gets accustomed to it and the *séances* are, of course, given at suitable intervals.

PATHOLOGY.

291. A Strepto-diplococcus in Small-pox.

MARCUS RABINOWITSCH (*Berl. klin. Woch.*, February 16th), in 1908 described a micrococcus which he had found in the organs of two cases which had died of typhus fever. These two cases were the only ones out of 30 examined in which the organism was found, and these two only had been inoculated with small-pox lymph some days before death. This micrococcus he also found in cases of uncomplicated small-pox. The coccus, which is much smaller than the other known cocci, forms pairs and chains of pairs; hence the author named it "strepto-diplococcus." He succeeded in cultivating it in pure culture from the lymph, organs, and blood of small-pox and also from the lymph of cow-pox. The organism had definite staining properties and quite peculiar pathogenic properties. For rabbits and adult rats the subcutaneous injection of even 2 c.cm. of the bouillon culture is quite without virulence, and it is only slightly virulent in mice. These animals, however, are very susceptible to infection by rubbing the virus into abrasions on the shaved skin, and typical pustules develop. In the spleen, and especially in the bone marrow of inoculated animals, appear large numbers of the strepto-diplococcus which possess quite distinctive morphological and colour properties and which cause degenerative changes different to those caused by any other known coccus. The same degenerative appearances also occur in man at a certain period in the development of the pustule, and are found *post mortem* in the spleen and bone marrow. These phenomena occur in inoculated animals whether they are inoculated with the contents of a pustule, with vaccination lymph, or with a culture from the organs of animals which have died from the disease. Rabinowitsch contends that these facts, which he has also set forth at length in a monograph entitled "On the Question of the Cause of Small-pox and Cow-pox," prove that the organism he has described as the strepto-diplococcus is the cause of these diseases.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

292. Post-pleuritic Tuberculosis of the Base of the Lungs.

PALLASSE AND CH. ROUBIER (*Province médicale*, February 7th, 1914) refer the first important clinical study of tuberculosis of the base of the lung to Jaccoud, who wrote in 1883. Jaccoud looked upon this as quite a special form of phthisis, secondary to a pleuritic attack. The primary pleurisy he called *pleurésie phthisiogène*. In this affection he regarded the usual pleural effusion as being replaced by a focus of tuberculous inflammation in which cavities quickly formed. The author divides cavities at the base of the lung into four classes, differing in pathogeny and the mechanism of their production: (*a*) Cavities the result of acute caseous phthisis; (*b*) cavities consecutive to a tuberculous spleno-pneumonia, and to the necrosing pneumonia of Sabourin; (*c*) cavities occurring in the course of ordinary fibro-caseous phthisis; (*d*) and the cavities in post-pleuritic tuberculosis. The pleurisy which has tuberculosis as its sequel is distinguished by certain peculiarities. Jaccoud supposed it to occur almost exclusively on the left side. The experience of the author does not bear this out. The effusion is small in quantity and quickly absorbed. Hence probably the prevalent impression that a large quantity of fluid is a favourable prognostic sign. Adhesions form, and the patient is apparently well, but after some weeks or months, it may be even years, the second stage of Jaccoud is initiated, and at the level of the adhesions a pneumonic focus forms. The progress of the disease may be insidious, but as a rule excavation occurs early. The third stage of Jaccoud is characterized in that author's words "by an explosion of generalized granulations," extending even to the apices of the lungs. Extension of the lesions to the apex of the lung is always a bad prognostic sign. Jaccoud saw in pleural adhesions and the resulting limitation of lung movement the cause of the localization of the tuberculosis at the base of the lung. To this it is objected that adhesions at the base of the lung are very common, while tuberculosis there is very uncommon. The same objection applies to the supposition that the tubercle bacillus, admitted to be the causal agent in most sero-fibrinous pleurisies, migrates directly into the lung tissue beneath. The most probable hypothesis seems to be that basal tuberculosis is post-pleuritic only in appearance. The pleurisy is symptomatic of a subjacent tuberculosis already in existence. There still remains the question why the disease has attacked the base. To this no complete answer can be given. In some cases it may be that the disease is a revivification of some tuberculous focus which has lingered in a dormant state from infancy, at which time of life the base is the part of the lung usually affected.

293. Severe Aberrant Forms of Malaria.

W. ETTINGER (*Wien. klin. Woch.*, January 15th, 1914) records three cases of malaria, occurring in Poland, and presenting such severe and unusual symptoms that the nature of the disease was not at first recognized. One patient was a man, aged 22, who suddenly developed rigors, fever, vomiting, diarrhœa, dyspnœa, and violent pain in the head, back, and limbs. He rapidly lost consciousness, the temperature rose to 39.5°, and the pulse to 120. All over the body a rash appeared, consisting of spots and papules, some of which contained serous fluid. The spleen was enlarged, and the right hypochondrium was very painful. An otorrhœa, which had begun in childhood, flared up again, the left mastoid process becoming painful. The rash disappeared in a few hours, and the temperature rapidly fell to normal. It was at first thought that the exacerbation of the otorrhœa was responsible for all these symptoms. On the third day the temperature was 39°, and on the fourth day it oscillated between 38.8° and 39.4°. A post-systolic murmur was audible over the heart. The rash, which resembled that of measles, broke out again. On the fifth day the patient felt well, the temperature being subnormal and the pulse 96. Some vesicles had become pustular, and the rash, which had faded considerably, still caused much itching. On the evening of the same day a rigor was accompanied by a rise of temperature to 39.7°. This fever, which lasted till the middle of the following day, was marked by an exacerbation of the rash. On the evening of the sixth day violent perspiration and a fall of the temperature to normal were observed. On the seventh day, when the temperature was again raised, the parasite of malaria was found in the blood. Methylene blue was prescribed, and the patient recovered. The second patient was a man who suddenly developed a rash like that of measles. The temperature was raised, and the eyes, nose, and pharynx were involved. The rash and fever disappeared on the second day. On the third day an urticarial rash appeared over the whole body, and the temperature rose to 40°. The patient was admitted to hospital in a state of collapse. The spleen was not at first enlarged, but on the ninth day it was much enlarged. Ultimately the parasite of malaria was found in the blood, and treatment with quinine banished the fever and rash. The third patient was a man, aged 26, who complained of a severe headache, which had lasted for five days, and had been followed by vomiting and rigors. He could not bend his head forwards or be tapped on the head without pain. The retinal vessels were dilated. A few dry râles were audible over both lungs, and the tongue was much coated. The liver and spleen were not palpable, and the temperature was only 37.4°. Meningitis or some other intracranial disease was suspected on account of headache, rigors, vomiting, apathy, cervical rigidity, the dilatation of the retinal vessels, and the slow pulse which, in contrast to the other alarming symptoms, was only 66. The absence of Kernig's sign and of other nervous phenomena seemed, however, incompatible with such a diagnosis. The cerebro-spinal fluid obtained by lumbar puncture was not inflammatory. Examinations of the blood for typhoid fever, sepsis, malaria, and syphilis were at first negative. When jaundice appeared on the third day of the illness it was realized that some generalized infection must exist. On the fifth day the parasite of malaria was found in the blood. Quinine was prescribed, and the patient rapidly recovered.

294. Ulcer of the Stomach in Early Life.

MATHIEU (*Gazz. degli Osped.*, April 5th, 1914) says that ulcer of the stomach and ulcerations of the stomach (gastric erosion) occur more frequently in early life—that is, from 1 to 20 years—than is generally believed. In women, if the history is traced back, it will often be found that the first symptoms began about puberty. Similarly it is well to think backwards in cases of gastrectasia and pyloric stenosis, and bear in mind the possibility of a cicatrized ulcer. Not a few cases have been operated on for supposed appendicitis when the real trouble is gastric ulcer. This is the reverse of what has been so often taught of late years. Some cases of arrested development and infantilism are probably due to old-standing chronic gastric ulcer, interfering with nourishment and digestion. It is true that the diagnosis in many of these cases has only been made at an autopsy or on the operating table, but the point that the author is most anxious to impress upon his readers is the fact (illustrated by a few cases) that gastric ulcer or ulcers may occur in early life, and in fact does occur more commonly than is generally admitted. The anatomical situation of the ulcer seems to correspond in its relative position, in various parts of the stomach and duodenum, to what one sees in the adult.

295. Albuminuria of Fatigue.

RATHERG (*Journ. des praticiens*, March 28th, 1914) points out that this is a term given by Leube to denote an intermittent form of albuminuria, following exclusively upon fatigue. That the condition is a clinical entity was proved by the examination of a number of soldiers on the march, due precaution being taken to eliminate any other causal factor which might account for the albuminuria. The condition must be distinguished from mucinuria, which also follows fatiguing exercises, especially after horse exercise and bicycling. It occurs generally in young subjects, and there has been also noted in these cases a marked lowering of the blood pressure. Ordinarily two forms of albuminuria may occur, serum and globulin albumin. The condition is to be distinguished from orthostatic albuminuria. To explain the albuminuria of fatigue Ranke suggests that there is an afflux of blood to the muscles, resulting in a fall of the general blood pressure and a slowing of the renal circulation. The author, on the other hand, considers that the albuminuria is provoked

by the liberation in the circulation of a large number of toxins, as the result of muscle fatigue. A certain degree of renal impairment is always present. The differentiation from ordinary albuminuria is important from the point of view of prognosis and treatment, as the hope of remedying the renal lesion in these cases of "fatigue" albuminuria by proper regimen and diet is considerable.

SURGERY.

295. Excision of Secondary Carcinoma of Liver.

BAUDET (*Bull. et mém. de la Soc. de Chir.*, March 24th, 1914) reports the case of a lady, aged 67, who had suffered for two years from abdominal symptoms and loss of flesh. For the last twelve months constipation had gradually increased, and there was occasional melaena. She had also noticed a small lump in the right hypochondrium which during the last three months had increased in size and become painful. When she came under observation the tumour was the size of two fists, hard, irregular, dull on percussion, and freely movable both in the vertical and transverse directions. A diagnosis was made of carcinoma of the hepatic flexure of the colon. Laparotomy was performed with a view to excision, having regard to the mobility of the tumour. The tumour was found to be in the liver, involving the gall bladder and with the great omentum adherent to it. A rapid search failed to reveal any primary growth in stomach or intestines. The operator considered the possibility of the growth being primary and solitary, and decided to remove it. The great omentum having been resected, two curved clamps were placed on the liver, and the tumour excised by a single sweep of the knife. Much difficulty was experienced in dealing with the large bleeding surface thus exposed. There was still some oozing after passing many catgut sutures in U-fashion through the liver some distance from the edges of the wound. A manœuvre was adopted which succeeded in effecting haemostasis and at the same time covered over the raw surface. The ends of the above-mentioned long catgut sutures were passed through the peritoneum of the anterior abdominal wall, some on either side of the vertical abdominal incision, and at a distance of about 2 in. from its edges. The peritoneal margins were lightly tacked to the raw surface of liver by a few points of sutures. By drawing the long catgut sutures tight, and closing the abdomen, the exposed area of liver was drawn up in contact with the peritoneum lining the anterior abdominal wall. The author considers that it would have been better to have resected the tumour by a wedge-shaped incision, as haemostasis and coaptation would have been more easily effected. The patient recovered from the operation and was temporarily relieved. Three months later she was reported to be much worse, thinner and weaker. Microscopically the tumour was a columnar-celled carcinoma; it was therefore not primary, but almost certainly secondary to some small focus in the stomach or intestine. The author does not recommend the operation, but considers that it was justifiable in this particular case. He points out that his device for dealing with the liver proved successful, and might possibly be of use under similar circumstances again.

297. Surgery of the Spleen.

MICHELSSON (*Ergeb. der Chir. und Orthopäd.*, Bd. vi), reviewing the results of modern surgery of the spleen, states that the organ may be removed without any ill effects ensuing. Leucocytosis follows extirpation, and lasts a long time. Other disorders which have been described as following splenectomy are not specific, and are transitory. Injury is the chief indication for operative interference. The spleen is more easily ruptured when it is enlarged or soft. Subcutaneous rupture is immediately followed by symptoms of shock; a latent period succeeds, usually of short duration, but it has been known to last as long as twenty-four hours; this stage is followed by the appearance of symptoms of internal haemorrhage. Spontaneous arrest of haemorrhage is due to thrombosis aided by the low blood pressure of shock. Sometimes the omentum has been observed to act as a species of plug. A precise diagnosis is usually not possible. The operation of election is splenectomy; if the spleen is too large for this to be safe, packing. If suture of the rent is attempted, it is easy to overlook small tears which may continue to bleed. Perforating wounds are usually bullet wounds; other important organs besides the spleen are often involved. If exploratory thoracotomy is performed for wounds in the left lower thoracic region, injuries of the spleen are easily missed. Suture is good treatment for perforating incised wounds. Abscesses of the spleen are either multiple, when they are due to pyaemic emboli; or single, these usually being due to haematogenetic infection of a traumatic haematoma. Symptoms referable to the spleen do not occur until the capsule is involved. An exploring syringe clinches the diagnosis; its use is by no means without danger, and it should only be employed on the operating table. Incision is the best treatment for abscess; splenectomy has also been done, with good results. Of cysts of the spleen, blood cysts, the sequelae of encapsuled haematomata, are the most important surgically. Their capsules are not lined by epithelium, which distinguishes them from serous cysts. Only large cysts produce symptoms. A diagnosis can rarely be made. If operated upon they may be either incised and drained, or excised. Tapping is to be avoided. Hydatid cysts are best treated by packing off the peritoneal cavity, stitching the spleen up into the wound, and then removing the endocyst. Malignant new growths of the spleen are rare; they are almost always sarcomata. Clinically, new growth causes a tumour of the spleen, rapidly increasing in size, and presenting an irregular bossy surface; the blood count and temperature remain normal; fluctuation cannot be obtained. The treatment is splenectomy; two cases have been reported as remaining well for six and a half and four years respectively after operation. Malarial enlargement of the spleen is usually diagnosed without difficulty. Operation is indicated only when the enlarged paludic spleen causes abdominal symptoms, and its upper pole lies below or only slightly above the costal margin. Primary tuberculosis of the spleen occurs, but is very rare; it has been treated by splenectomy, with an operation mortality of 25 per cent. Enlargement of the spleen due to amyloid disease, venous congestion, and other similar general conditions is not amenable to surgical treatment; such cases hitherto operated upon have all ended fatally. Splenectomy is justifiable in leukaemia when the spleen is so large as to cause distressing abdominal symptoms and the disease is clearly of a chronic type. The removal of the spleen does not affect the progress of the disease. A movable spleen has almost always undergone some previous pathological change; it is found in stout people with loose abdominal walls, and usually in women. Diagnosis is easy, except when the displaced organ has acquired adhesions. The treatment is medical and dietetic, especially in malarial cases. If recourse is had to surgery, the spleen should be removed. Splenopexy is indicated only when the viscus is small and approximately normal in texture; the retroperitoneal route is to be preferred.

298. The Diagnostic Value of Gonococcus Vaccine.

As a result of his considerable experience, C. BRUHNS has analysed the value of arthigonin and other gonococcus vaccine injections in the diagnosis of gonorrhoea (*Berl. klin. Woch.*, January 12th, 1914). He comes to the conclusion that intravenous injections of arthigonin may cause a rise in temperature more frequently in gonorrhoeal patients than in normal persons, but in view of the fact that such a rise takes place in normal persons, it cannot be regarded as specific. In some cases a provocative injection of vaccine causes latent gonococci to reappear in the urethral discharge. The author is of opinion that this, together with other more usual provocative measures, should be more freely employed in doubtful cases, especially when the doctor is asked whether a person may marry. Lastly, he points out that the complement deviation with arthigon as antigen has proved to be positive only on rare occasions. He admits the value of the test when it is positive, but considers it of doubtful value in view of the infrequency with which this takes place.

299. Pericolic Membranous Bands.

IN *Annals of Surgery*, January, 1914, PILCHER publishes a further contribution to the study of pericolic membranous films and bands, based upon the clinical histories of 27 cases. Since the author formulated the conclusion that these adhesions are a distinct pathological entity deserving recognition as a definite surgical condition, papers have been written by Mayo, Connell, Eastman, Flint, and others. Flint has concluded that the bands represent a more marked attachment of the large intestine to the posterior abdominal wall, and are of embryonic rather than inflammatory origin. Furthermore, he is of the opinion that the condition is more frequent than has been suspected. In many cases no inconvenience is produced, and it is only after the supervention of such concomitants as ptosis or inflammatory conditions that they give rise to discomfort.

Eastman, in an investigation involving twenty-eight newborn children, found in five that a peritoneal fold, arising from the inner aspect of the ascending colon passing over the anterior surface of the ascending colon, was attached to the parietal peritoneum on the outer or right surface. These folds, according to Eastman, exist before birth, and are readily demonstrable in about 20 per cent. of fetuses after the sixth month. Pilcher, from an analysis of his cases, concludes that it is easy to accept the theory that pericolic bands are persistent remnants of embryonic conditions which become contributors to disease, either by the mechanical irritation of prolapsing organs, or by an infection transmitted from within the bowel. As a result of the mild proliferating inflammation, the constricting fibres become dense and strong, thus interfering with peristalsis and aggravating faecal stasis. The author thinks that sufficient clinical observation has accumulated to confirm the teaching that such bands are of frequent occurrence, and form a well-defined surgical condition which is always a menace to the future, and often a cause of ill-health.

OBSTETRICS.

300. The Value of Abderhalden's Reaction.

A REFERENDUM has lately been taken by the *Medizinische Klinik* of Vienna, which has addressed a series of questions to numerous authorities whether Abderhalden's reaction is reliable. The answers, published in its issue of March 15th, show an almost unanimous belief in the importance of this reaction in the hands of experts. Zweifel (Leipzig) has found the diagnosis of pregnancy by this reaction very reliable, and during the last six months he has tested it in 90 cases, in many of which it was the only sign of pregnancy. He also found a negative reaction of great value in the exclusion of pregnancy in doubtful cases. Veit (Halle) has found the reaction give uniform results in the hands of experts. It was invariably positive in 45 cases of advanced pregnancy, and in 15 cases of pregnancy in the first month it was only once negative. He calculates that the reaction is misleading only in 5 per cent. of all cases. In 60 cases of cancer the reaction was only twice negative, all the others giving a positive reaction to carcinomatous tissue. The report from Professor's Bumm's hospital in Berlin states that the reaction is reliable in uncomplicated cases, and that the optical method is the most accurate. During the past six months 120 cases were investigated. Of these 69 cases of pregnancy gave a positive reaction, and in 20 cases in which pregnancy did not exist the reaction was negative. It was doubtful in 3 cases, and in 28 cases it was misleading. The reaction was considered non-specific, and was therefore unreliable in the differential diagnosis of pregnancy and tumours. In 48 per cent. of cases of tumour the reaction to placental tissue was positive, although pregnancy could be excluded. Opitz (Giessen), who has employed the dialysis method only, has almost invariably found the reaction agree with clinical evidence. It was, however, observed that the reaction is not invariably uniform when repeated on the same serum, and a single test in each case may, therefore, occasionally be misleading. Though the practical value of the reaction is great, its general utility is much limited by difficulties of technique. Stoeckel (Kiel) considers the dialysis method unreliable, but he admits that his unsatisfactory results may be traced to faulty technique, although the greatest care was taken. The report from Professor Herff's hospital in Basel is most laudatory. During the last six months, from 80 to 100 cases have been investigated, and in clinically doubtful cases of pregnancy a diagnosis based on the reaction invariably proved correct. Only in one case was it misleading, and this was due to a fault in the dialyser. The report from Professor Hofmeier's hospital in Würzburg states that the results were first misleading, but when the technique was revised they became almost invariably reliable. Particularly in the diagnosis of extrauterine pregnancy was the reaction found useful. Kroemer (Greifswald) has employed the dialysis method only, and finds the reaction misleading only in 2 per cent. of all cases. He has investigated over 100 cases during the last six months, and once observed a positive reaction in a case of myoma of the uterus and once a negative reaction in an old case of placental polypus. Küstner (Breslau) considers the reaction reliable on the whole, but faulty results still occur occasionally, in spite of improvements in technique. He considers it so complicated that it should be confined at present to experts. Winter (Königsberg) considers the reaction specific, and has worked with the dialysis method only. During the last six months he has investigated 42 cases, in 7 of which the differential diagnosis between early or extrauterine pregnancy and inflammation of the uterine appendages could not be made clinically. In these cases the reaction was invariably correct. In his opinion, also, the technique of the reaction is too complicated for general use. Zangemeister (Marburg) regards the dialysis method as thoroughly reliable in expert hands. It was negative in one case, in which the differential diagnosis between extrauterine pregnancy and disease of the uterine appendages could not be clinically established. An operation showed a tumour of the uterine appendages. Sellheim (Tübingen) has worked with the dialysis method only, and finds it very satisfactory. In 94 cases of pregnancy the reaction was negative only in 4 cases, and in 3 of these the pregnancy was complicated by severe anaemia or vomiting. Menge (Heidelberg) finds the reaction misleading in 7 per cent. of all cases. He regards a negative reaction as strong evidence against pregnancy, the existence of which can not, however, be irrefutably established by a positive reaction.

GYNAECOLOGY.

301. Corpus Luteum Organotherapy.

DANNREUTHER (*Journ. Amer. Med. Assoc.*, January 31st, 1914) believes that the internal secretion of the ovary probably depends on the corpus luteum, and finds that ovarian extracts are much less active therapeutically than luteal extracts. Animal corpus luteum, when taken by mouth in average doses, is non-toxic. He makes out a good case for his insistence that luteal extract must be prepared from pregnant animals. He insists also on the importance of watching carefully the patient's blood pressure during luteal therapy; the pressure must not be allowed to fall more than 15 mm. below the patient's normal pressure, and never below 90 mm. It is important to select with great care the cases in which to use this therapy: its use should be limited to the following conditions: (1) Functional amenorrhoea or scanty menstruation; (2) dysmenorrhoea of ovarian origin; (3) symptoms of physiological or artificial menopause, such as flushes and psycho-neuroses, etc.; (4) "neurasthenic" symptoms occurring during menstrual life; (5) sterility not due to pyogenic infections or mechanical obstruction; (6) when one ovary is functionally impaired or when one has been removed and the other fails in its compensatory activity; (7) repeated abortions not due to disease or mechanical factors; (8) hyperemesis in the early months of pregnancy. Slight gastric disturbance and vertigo may occur at the beginning of luteal therapy, but they soon disappear and tolerance is established. Dannreuther has used a luteal extract, prepared from pregnant cows, 5 grains of which represents 30 grains of the the fresh corpus luteum: this extract is given in capsules, and usually 5-grain doses thrice daily are quite sufficient; only rarely has a 10-grain dose been necessary. The extract must be comparatively fresh, at any rate not older than three months. Some interesting cases thus treated are given: In two cases of pruritus vulvae, associated with menopausal symptoms, luteal extract rapidly relieved the itching. A remarkable result was obtained in a case of bilateral salpingo-oöphorectomy—namely, re-establishment of menstruation. Examination seems to have shown that all ovarian tissue had really been removed, and yet menstruation has recurred regularly for a year under luteal therapy given latterly about ten days before the date of the expected flow. Dannreuther has used luteal therapy in about eighty carefully selected results, and usually with conspicuously good results. The only objection to its use appears to be its expense.

THERAPEUTICS.

302. Pharmacology of Digitalis.

GOTTLIEB (*Archives des maladies du coeur, des vaisseux, et du sang*, January, 1914) recently communicated to the XVII Congrès International des Science Médicales a paper on recent advances in treatment by digitalis and its derivatives. He insists on the inapplicability of results obtained by experiments on normal animals to morbid states. He instances camphor as an example. In health this drug has little or no effect upon the circulation or upon the heart. In vasomotor paralyses, on the contrary, the irritability of the vasomotor centre is markedly augmented,

and the heart, which has almost ceased to beat from any cause, starts off again after a dose of camphor. The present task of pharmacology in relation to digitalis is to experiment in diseased conditions with minimal doses, which scarcely affect the normal circulation. The slowing of the heart-beat, so much insisted upon by Cushny and his collaborators, occurs only in that form of arrhythmia connected with auricular fibrillation. It is not in this way that the classical effect of digitalis in conditions of venous stasis, where there is neither arrhythmia or abnormal rapidity of the pulse, can be explained. The author divides the digitalis group of substances into two classes—those which are easily absorbed by the heart muscles and as easily disengaged, and those which are more slowly absorbed and act over a longer period. In the former class is strophanthin; in the latter digitoxin; others are intermediate. It has been shown that there are differences in the effect of the gastric and intestinal contents under different circumstances. Strophanthin is easily altered in the stomach and intestines. Digitoxin is much more stable, but is absorbed with difficulty. Ogawa has shown that digipuratum is fairly well absorbed, except where there is portal stasis, when absorption may be almost *nil*. The drawbacks incidental to the administration of digitalis by the mouth are avoided by giving strophanthin or digipuratum intravenously. In therapeutic doses intravenously neither nausea nor vomiting occur. For this and other reasons it would seem that gastric disturbance apt to be caused by digitalis is due to a local irritating action on the mucous membrane and not to an excitation of the centre of vomiting. Digipuratum is recommended as the best form in which to give digitalis by the mouth. It is soluble in slightly alkaline media, is thus easily absorbed in the intestine, but passes through the stomach; it is fairly stable. The pure glucosides isolated from digitalis do not seem to have all the therapeutic properties of the leaves. Digipuratum is a mixture of the totality of the active principles, but in view of the inconstancy and variability of these, and our want of definite knowledge regarding them, it is best that the dose for each case should be ascertained by careful trial. The physiological method of standardizing digitalis preparations is to be preferred, but presents practical difficulties. By injecting different quantities of a preparation, the quality of which is known, into the lymphatic sac of the frog (after the method of Houghton) its strength can be estimated, but the quality of different specimens of digitalis leaves or preparations varies so much that experiments on warm blooded animals are also required, in order to obtain a complete estimation of the value of any particular specimen.

303. Milk of a Thyroidectomized Woman in Graves's Disease.

Pychlau (*Deut. med. Woch.*, 1913, No. 47) recounts the case of a female patient, aged 37, severely affected with Graves's disease. The patient's sister, some years previously, had undergone an operation on the thyroid, and the gland had been removed; she was now lying in, and her milk became useless, owing to the death of her child when 4 days old. Her milk was drawn off four times daily, about 200 c.cm. being afforded each time, and was administered to the patient by mouth. The treatment was continued for four months, with very great improvement in the patient's condition. The goitre became one inch less in circumference, exophthalmos disappeared almost entirely, the pulse-rate and the heart's action became normal, and the nervous symptoms were very considerably improved. The effect of the milk was all the more noticeable as many different methods of treatment had been tried previously, without influencing the condition of the patient in the least.

304. Endolaryngeal Heliotherapy in Laryngeal Tuberculosis.

Émile Sari (*Rev. hebd. de laryngol., d'otol., et de rhinol.*, January 10th, 1914) has been applying this mode of treatment for many years in Corsica and on the Côte d'Azur with decidedly beneficial results; other writers have found it useful at high altitudes, especially Davos. Sari adopts the following plan: The patient wears a wide-brimmed hat, and his eyes are covered with a black bandage, while he sits in the sunshine undergoing treatment. Sari prefers to project the solar rays on to the vocal cords by means of a plane or concave laryngeal mirror; this is a more reliable plan than that of allowing the patient to practise autolaryngeal heliotherapy. Sari usually has two sittings daily—in the morning and evening—each lasting for twenty or thirty minutes. The site chosen is preferably one removed from the town, and as free from wind and dust as possible. He records cases treated during the first stage of congestion, during the second period of infiltration, ulceration, and vegetations, and in the final stage of cachexia. He concludes that endolaryngeal heliotherapy benefits the general health; and he has seen cases of recovery of congestive bacillary laryngitis and amelioration of laryngeal ulceration. In nearly all his cases he has obtained relief of their pain, and often its complete disappearance. He sums up its benefits as analgesic, decongestive, bactericidal, and sclerogenous. The method seems feasible in the sunniest British resorts in winter and anywhere in summer.

305. Treatment of Muco-membranous Colitis by Galvanism.

Fraikin (*Journ. des praticiens*, March 21st, 1914) points out that this form of treatment is of great service even in hopeless cases, and that it can be utilized by every practitioner. The author describes fully the methods of Dourner and Zimmern, and recommends the latter on the whole as being less severe while at the same time giving excellent results. The mode of action of the galvanic current in these cases is somewhat complex. The current in the first place acts upon the relaxed abdominal muscles causing contraction. It has a sedative effect upon intestinal spasm, and, indeed, upon the whole abdominal nervous system. Further, it regularizes nutrition and relieves abdominal congestion. If intestinal atony exists and little or no pain, Dourner's method may be used. A current of 20 to 30 ampères is used, interrupting the current every thirty seconds but not reversing it. If there is spasm and contraction of the abdominal wall, Zimmern's method should be employed, using a large abdominal electrode, to a strength of 25 ampères, and without reversing the current. Electrotherapy will not give relief in those cases of muco-membranous colitis which are due to infection, but gives excellent results and often definite cure in that due to constipation. The stools become of soft consistence without being diarrhoeic in type in about fifteen séances. In the purely nervous forms—enteroneurosis—the results are variable and relapses not uncommon. Even in those cases, however, galvanization ought to be perseveringly tried.

PATHOLOGY.

306. Bacteriology of Leucorrhoea.

In *Surgery, Gynaecology, and Obstetrics*, March, 1914, Curtis publishes the results of an investigation he has undertaken into the etiology and bacteriology of leucorrhoeal discharges based upon the study of 75 cases. He observes that amongst those conditions which predispose to vaginal discharge the most important are lacerations and displacements, infections complicating pregnancy, and gonorrhoea. In the case of fresh preparations from clinically normal cases, the vaginal discharges show almost exclusively Döderlein's Gram-positive bacilli. When leucorrhoea is profuse anaërobic organisms preponderate. These include various types of bacilli and Gram-positive diplococci. When cultures are made from the vulvar region aërobes are more frequent, particularly *B. coli*, staphylococci, and pseudo-diphtheria bacilli. In patients who are subjected to frequent douching, similar germs are found in the higher vaginal tract. In order to observe the virulence of leucorrhoeal organisms, Curtis had resort to animal experiments, and found distinct evidences of toxicity. Streptococci, both anaërobic and aërobic, are practically never found in fresh preparations, but develop from diplococci on artificial media. The author observes that the anaërobic flora of the vagina, particularly its bacilli, is of paramount importance in the etiology of leucorrhoea. On the other hand, the number of aërobes is roughly proportional to the amount of contamination through douches, etc. It is doubtful whether bacilli of the colon group takes a very active part in the production of vaginal discharges. Gonorrhoeal infection, on the other hand, appears to be the exciting cause of leucorrhoea in the great majority of women who have never been pregnant. It creates conditions favourable for the development of other organisms, and then in a very large percentage of cases disappears so completely that it is not demonstrable by any laboratory method. An important factor in determining the rôle of bacteria in leucorrhoea is shown by the results of treatment with vaccines. Cases with constant chronic discharge have in many instances been markedly affected by this mode of therapy.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

307. Febris Uveo-parotidea Subchronica.

UNDER this heading a symptom-complex, including uveitis, parotitis, and fever, has lately been described by Heerfordt. A case presenting all the characteristic features of this condition is recorded by S. SCHOU (*Hospitalstidende*, January 14th, 1914). The patient was a lad aged 13, who had felt tired for several months, and whose eyesight had been failing for the past two months. The left eye was congested and there were numerous deposits on the lower aspect of Descemet's membrane. The discoloured iris showed newly-formed blood vessels and two yellow swellings, about 2 mm. in diameter, on its surface. A similar swelling, looking like a 0.5 mm. high hyphaema, could be seen in the lower portion of the eye. The presence of synechiae was demonstrated by the irregular dilatation of the pupil under atropine. The anterior capsule of the lens was splashed with pigmented areas. The fundus of the eye was not visible, and the patient could just count fingers at a distance of 1 metre. The tension of the eye, measured by Schiötz's tonometer, was 44 mm. The right eye was not congested, and there was only a single deposit on Descemet's membrane. A single brownish-yellow swelling was seen in the position of the yellow swellings in the left eye, but it was somewhat smaller. The iris was not discoloured, it reacted satisfactorily to light and accommodation, but its dilatation under atropine was slightly irregular. The vision of this eye was normal, and its tension was 26 mm. The temperature was 100.8°, the urine contained neither albumin nor sugar, and the thoracic organs seemed normal. After the patient had been under observation in hospital for about one month, symmetrical indolent swellings of the parotids developed. The testicles meanwhile were not affected. A month later both lacrymal glands became swollen and appeared as marked prominences under the eyebrows. At the end of the third month in hospital the patient developed symmetrical, tense, fluctuating swellings, measuring 2 by 4 cm., on the dorsal aspect of the wrists. They closely resembled ganglia, were freely movable, irreducible, and apparently not connected with the joints. The temperature oscillated about 100.4°, whether the patient were in bed or up. The condition of the left eye slowly improved, the swellings in the iris disappearing, leaving pigmented areas. The patient could count fingers at a distance of 5 metres with this eye. The right eye, on the other hand, became somewhat congested, and the swelling in the iris increased. The vitreous humour showed a few opacities, and a couple of white patches were visible in the lower peripheral aspect of the choroid. The condition of the parotids, the lacrymal glands, and the swellings on the wrists varied but slightly from time to time. No other symptoms could be detected and the nervous system seemed normal. At first it was thought that the irido-cyclitis was syphilitic or tuberculous, but Wassermann's reaction was negative, as was also the cutaneous reaction to a 50 per cent. solution of tuberculin. Other tuberculin tests also were negative in spite of large doses. Examinations for parasites in the blood were also negative. No other cases of epidemic parotitis were observed among the patient's surroundings, and though he was in intimate touch with many adults and children during his stay in hospital, he did not apparently pass the infection on to any one. Although the disease presents clearly defined features, its etiology is obscure.

308. Tuberculosis and Obesity.

SABOURIN (*Journ. des praticiens*, February 14th, 1914) points out how necessary it is, in a certain number of cases of tuberculosis, rather to reduce the weight of the patient than to increase it. He distributes these cases into three categories. In the first group are those patients who are to all appearances cured, but who through fear of relapse continue excessive feeding, and at the same time deprive themselves of sufficient exercise. They are obsessed by the idea that becoming fat is a necessary part of the cure of phthisis, and they continue to get fat until they have resurrected the very disease they had hoped to get rid of. The author quotes the case of a young man of 25 years of age in which this happened. There had been apparent arrest of the disease, which involved the left upper lobe. His general health was excellent, and all local signs had disappeared. Quite suddenly, without obvious cause, he developed a general increase of adiposity, muco-purulent expectoration reappeared with evening temperature, and the old lesion became active again. In a case of this kind it is necessary to restore a proper equilibrium between food and exercise: muscle must be developed at the expense of adipose tissue, and the quality as well as the quantity of food must be regulated. The patient's weight ought not to exceed a certain average. In the second category the author places those patients who, owing to badly directed regimen, have all along indulged in an excessive amount of food and various tonic medicines, while at the same time leading absolutely inactive lives. In the third group are those cases who are more or less obese for a variety of reasons—it may be they are hereditarily so—and in whom the tubercle bacillus has subsequently found a nidus. Many of these patients suffer from glycosuria or glyco-albuminuria. In this category should be placed also the obesities of tuberculous origin which have recently been the subject of discussion.

309. Non-tuberculous Affections of the Apex.

LITZNER (*Gazz. degli Osped.*, February 17th, 1914) first draws attention to the fact that in perfectly healthy people you may hear sub-bronchial breathing and prolonged expiration at the right apex owing to the anatomical position of the right bronchus. This fallacy is, perhaps, more marked in mouth-breathers. Resonance may be less at the right apex owing to increased muscular development on that side or to slight scoliosis. Certain occupation pneumonoconioses—for example, anthracosis—are more apt to affect the right apex. Influenza may give rise to a chronic apical catarrh which is not tuberculous, and the author quotes an illustrative case, treated at first as tuberculous. The pneumococci may also give rise to a deceptive apical catarrh. In these non-tuberculous affections the whole complex of symptoms must be considered, and in a few cases the exact nature of the lesion is determined by the discovery of some specific organism in the sputa. Atelectasis may occur at the apex, but is uncommon. Other possible non-tuberculous affections discussed are infarction, tumour, ecchinococcal cyst, and thickened pleura. The differential diagnosis rests largely on a proper estimation of all the evidence; the leading factors are mentioned in each case.

310. Pyrexia in Vaccinia.

VON JAKSCH (*Zentralbl. f. inn. Med.*, January 3rd, 1914) as long ago as 1888 described the typical temperature chart of vaccination for small-pox, but the most recent text-books give details of the pyrexia which are either inadequate or incorrect. The degree of pyrexia is independent of the size of the areolae. Immediately after vaccination the axillary temperature is usually subnormal, and remains so until the forty-fifth hour, when the temperature rises. The rise is by stages, as in enteric fever, but is more abrupt, and usually reaches its acme within twenty-four hours. The temperature in different cases ranges between 100.4° F. and 105° F. Pyrexia usually persists for four or six days, but exceptionally may continue only twenty-four hours, or as long as eleven days. It is of a remittent type. Defervescence is by lysis, and within twenty-four to seventy-two hours the temperature becomes subnormal. Thus the acme of fever does not coincide with the maturation of the pustules, and is independent of the severity of the local affection. The writer's researches have convinced him that vaccination may be performed without danger to the child immediately before, in the course of, and immediately after such illnesses as pneumonia and tuberculosis. This knowledge is useful in the event of a small-pox epidemic.

SURGERY.

311. Intestinal Stasis in the Ascending Colon.

PIERRE DUVAL AND J. ROUX (*Bull. et mém. de la Soc. de Chir.*, March 10th, 1914) contribute a number of considerations to the study of intestinal stasis. Their conclusions are the result of practical experience, and based on pathology. The present article deals with abnormal

conditions of the caecum and ascending colon only. Stasis of the ascending colon (including the caecum) may be due to several causes. The fundamental conditions causing stasis may be differentiated by combining clinical examination with radiography and the information afforded by chemical analysis of the faeces. Four essentially different pathological entities are described. In the first of these, the so-called "membranous pericolitis," deformity of the right colon is caused by the presence of peritoneal folds resulting from abnormal congenital fusion of peritoneal surfaces. It is distinguished by two systems of peritoneal folds—(*a*) peri-caeco-colic and (*b*) subhepatic. These are found associated. The subhepatic bands sling up the hepatic flexure. As a consequence of the kink formed at this point, the ascending and transverse colons come to lie parallel to each other, constituting the "double-barrelled colon"; the gut is functionally constricted at the point of kinking. The second condition is the primarily mobile caecum. Here the hepatic flexure is not depressed, which distinguishes primary mobility of the caecum from mobile caecum secondary to pressure from above. Thirdly comes acquired atonic dilatation of the caecum, to be distinguished from caecal dilatation occurring merely as a part of Hirschsprung's disease. Fourthly, chronic caeco-typhlitis. These four conditions have certain features in common. Thus, they are all characterized clinically by constipation alternating with diarrhoea. All are associated with uncomfortable sensations in the right iliac fossa, and with a general condition of ill health, indicated by sallow complexion, furred tongue, loss of flesh, and nervousness or neurasthenia. This condition of general debility is in marked contrast to the good general health frequently noticed in the subjects of left colon constipation, in which the retained faeces are constituted by hard scybalous masses not liable to putrefaction. As regards the chemistry of the stools, there is nothing characteristic in those passed during the period of retention. The periodical attacks of diarrhoea are due to caecal irritation, and the stools then evacuated are somewhat characteristic. Two types may be differentiated, according to whether there is typhlocolitis or not. When the mucous membrane is not much affected, the evacuations are pasty in consistence, yellow-orange, and faintly acid in reaction; they are often frothy; they have a sour butyric odour, and fermentation occurs rapidly owing to the presence in excess of starch and yeasts. The picture is very different when colitis is present: protein putrefaction predominates and not carbohydrate fermentation; the stools are dark in colour, alkaline in reaction, and have a putrid smell; during acute attacks shreds of mucus stained yellow by bilirubin are present. Considering the conditions separately, in membranous pericolitis the caecum is not movable by palpation, and not much distended; discomfort is constant, and is felt diffusely over the right colon; the point of maximum intensity is at the hepatic flexure. Occasional attacks of subacute intestinal obstruction occur, due to the kink of the "double-barrel." By *x*-ray examination after bismuth meal, stagnation of bismuth in the caecum is observed, and dilatation of the caecum. Bismuth enemas afford more information; the bismuth is arrested for a time at the hepatic flexure; when it has passed into the ascending colon the shadows are seen to be broken up by bands, which can be recognized as different in appearance to contraction bands; this segmentation is more marked in the upright posture. The double-barrelled condition is shown by a permanent alignment of the ascending and transverse colons. The caecum does not shift with change of posture. In mobile caecum there is colic due to caecal distension; it may be caused by excessive fermentation, or excited by change of posture. Caecal mobility may be demonstrated by palpation, best in the left lateral position. *X*-ray examination shows displacement of the caecum in the recumbent, left lateral, and upright positions. Atonic dilatation of the caecum is difficult to diagnose clinically, but the radiographic picture is definite; after a bismuth enema the caecum is seen to fill like a sack; the shadow has immovable contours; no contraction is seen, and the mass is evacuated inordinately slowly. Chronic caeco-typhlitis is characterized by typically putrefactive caecal diarrhoea; there is intermittent pyrexia, and marked constitutional debility. Henri Béclère has twice observed a fragmented "fluffy" appearance of bismuth in the caecum, which he thinks is associated with a pathological condition of the mucous membrane; if this is so, it may be the radiographic sign of typhlo-colitis. A detailed account is given by Duval of his operative experience in such cases. The operations which he has performed include freeing of adhesions, caecoplicature and caecopexy, various methods of anastomosis and colonic resections. Many of the results have been unsatisfactory; there has frequently been an improvement in symptoms for a few weeks, followed by relapse to the former state. The author has repeatedly modified his technique, and his experience forces him to the following conclusions: First, constipation is not a surgical disease in most instances. It should be treated by medical measures in the first instance always, and operation should be considered only in inveterate cases of grave constipation. For mobility of the caecum without typhlo-colitis all are agreed that caecoplicature and caecopexy are sufficient. Duval believes that the caecum should be fixed to the psoas; he has devised a method founded on that employed for pelvic colopexy in cases of prolapsus recti; peritoneal fixation is entirely inadequate. Discussing the general question of intestinal anastomosis, he points out that no method of anastomosis throws the affected portion of gut out of action. Reflux and antiperistalsis of the colon always occur; the dilated gut is not excluded, and if it is not drained the anastomosis does no good. Drainage, therefore, and not exclusion, is the object at which to aim in devising anastomoses. In his opinion, the only logical method of anastomosis for right colon stasis is caecosigmoidostomy; even this is followed by reflux, but by *x*-ray examination this is seen to be less than by other methods, and the affected portion of intestine is drained by the shortest and most dependent route. Caecosigmoidostomy is indicated for atonic caecal dilatation and for the less severe cases of caeco-typhlitis. For chronic caeco-typhlitis with induration of the intestinal walls and glandular enlargement nothing less than resection of the caecum and ascending colon is sufficient; perfect cure may be obtained by resection. For membranous pericolitis with bands many operations have been tried. In spite of Jackson's published results, Duval agrees with Isaacs that section of the bands is almost inevitably followed by relapse. Fresh adhesions form in spite of vaselining the raw surfaces, or employing various devices for peritonizing them. Anastomosis does not sufficiently relieve the strangled portion of intestine. For well-marked cases, resection of the caecum and the large intestine as far as the middle of the transverse colon is correct treatment, and is followed by good results.

312. Disappearance of Sugar in Diabetics after Operations.

E. H. Eising (*Journ. Amer. Med. Assoc.*, April 18th, 1914) discusses the disappearance of sugar in diabetics after certain pelvic operations. He reproduces the reports of four published cases—all he has been able to find in the literature—and reports two of advanced prostatic disease with pronounced and severe diabetes in which all traces of sugar had disappeared from the urine soon after operation. In both cases the absence of sugar was permanent. Eising says that in the present state of knowledge it is useless to attempt any explanation. Spontaneous cure in diabetes has been known, according to Naunyn, but very rarely and only after traumatic or syphilitic diabetes of short duration. The wide distribution of the organs that may cause glycosuria in their pathologic condition might suggest that certain pathological conditions of internal secretions of organs in the pelvis might disturb the glycogenetic function. One inference is possible, namely, that diabetes must no longer be viewed as an absolute surgical barrier, at least for hysterectomy and prostatectomy, and that in some cases a possible cure may occur.

313. Perineal Enucleation of the Prostate.

F. Berndt (*Muench. med. Woch.*, January 6th, 1914) finds that Freyer's enucleation of the prostate fulfils the two conditions demanded in an almost ideal manner—namely, that the hypertrophic portion of the gland should be removed in order to get rid of the obstruction to micturition; and, secondly, that the capsule of the prostate should be preserved in order that subsequent continence of urine should be safeguarded, and that the rectum does not suffer injury during the operation. Nevertheless, he finds that there are two objections to the operation under certain conditions. In the first place, it is a severe one, which may prove fatal in weak or feeble patients. In the second place, he has experienced secondary haemorrhage from the prostate bed. The old perineal operations cannot compete with Freyer's operation for many reasons. Wilms introduced an improved method by making his incision laterally between the perineal raphé and the left tuber ischii, opening the capsule and shelling out the prostate by means of the finger. Berndt has devised a further modification, the first operation having been performed for total obstruction of urine. The operation is carried out as

follows: A director is passed into the urethra, and an incision of some 5 to 6 cm. in length is made medially in the raphé as close to the bladder as possible. A blunt-pointed bistoury is then passed along the director, and the urethra slit up into the bladder. A finger passed into the bladder can then rapidly control the size and shape of the prostate, and the blunt bistoury is then passed along the finger to the left lobe, which is incised. In the case of very large prostates, it may be advisable to make a second incision into the right lobe. The capsule having been incised, the finger rapidly enucleates the prostate. It may be shelled out in one piece, or if too large for this in several smaller portions. He then introduces three narrow, long specula, washes the bladder out with saline fluid, and introduces a drainage tube well wrapped round with vioform gauze. After the specula have been removed, he injects a little fluid through the drainage tube to assure himself that it is capable of draining the bladder. In the after-treatment the bladder is washed out once a day or more frequently with a weak solution of oxycyanate of mercury. The tube is removed on the eighth or tenth day, and the wound is washed out through a soft tube. As a rule perfect control over the bladder is regained within a fortnight. If necessary a catheter may be passed from time to time to prevent the formation of a stricture, but this is, in his opinion, rare. He has carried the operation out fourteen times. One patient died of sudden heart failure five days later. Three patients are still under treatment, and the rest all did well, in spite of the fact that many were feeble, old and decrepit men.

OBSTETRICS.

314. Injection of Blood of Normal Pregnant Women in Vomiting of Pregnancy.

ARTHUR H. CURTIS (*Journ. Amer. Med. Assoc.*, February 28th, 1914) applied this treatment with a good result in one case, and pleads for a further trial of this method in suitable cases. The patient, aged 36, was seen for the first time during the sixth month of her fourth pregnancy; her previous pregnancies had not revealed any evidences of intoxication or renal disturbance, and she had only a moderate amount of nausea, almost unaccompanied by vomiting, during the earlier months of those pregnancies. For the first three months of her fourth pregnancy the course was regular; then began general malaise with irregular fever of one to three degrees. With the onset of fetal movements tenderness, dragging, and aching pain in the right lower quadrant became a constant feature. Nausea developed, and was followed by vomiting, which became intractable. Examination failed to reveal anything else amiss, and various therapeutic efforts proved useless. Incessant vomiting went on for five weeks, and the patient lost weight and strength; fasting for twenty-four hours increased this, so that it seemed clear that she retained some food. By means of a petrolatum-coated syringe 15 c.cm. of blood were withdrawn from a pregnant woman in whom the Wassermann reaction was negative, and were at once injected into the back muscles of the patient. Her symptoms improved within eighteen hours; emesis continued, but a large proportion of her food was retained. Five days later a considerable amount of blood was withdrawn from another pregnant woman, whose Wassermann reaction was negative, and was immediately defibrinated; 10 c.cm. were injected into the patient, and the result was that her vomiting stopped entirely within eighteen hours. Two subsequent injections of defibrinated blood were given within the next two days, after which time all treatment was discontinued. Pregnancy continued an undisturbed course, and was followed by normal labour and the birth of a healthy child.

GYNAECOLOGY.

315. The Surgical Principles of Hysteropexy.

ROUHIER (*Revue de gynéc. et de chir. abdom.*, February, 1914) reviews the various methods of fixing the uterus, and concludes that Doléris's method of drawing the round ligaments through the parietes has proved the safest and most satisfactory. Dragging up the fundus and mooring it to the parietes caused chronic congestion of the uterus, often manifested by haemorrhages, and even when the round ligaments only are fixed, a narrow-necked pit lies between the fundus and the parietes, which may cause internal strangulation. This fossa, or pit, must be as wide as possible, to minimize the risks of hernia. Rouhier directs that the loop of broad ligament should be caught up by a blunt-ended forceps pushed between the two heads of the recti, about one inch above the pubes, and not lower. The parts are to be exposed by a curved integumental incision, the convexity touching the pubes and the points lying at the level of the outer border of the recti. Then a flap of integument is turned up and the peritoneal cavity opened vertically between the recti. The uterus is then drawn up after exploration of its appendages. The operator slips his fore and middle finger behind the parietes to guide the blunt-pointed forceps when it is pushed between the heads of the recti. The loop of round ligament being drawn out and held by forceps, the opposite round ligament is drawn through the parietes in the same way and held outside by forceps. The vertical incision between the recti is closed by suture, and the two loops of round ligament are united in the middle line in front of the recti by a glover's suture. Another suture is passed between each round ligament and the tissues around the channel through which it has been drawn through the parietes. The curved incision through the integuments is then sutured. Such, Rouhier holds, are the details of the operation, which would seem to ensure all the advantages of hysteropexy, avoiding all the dangers of earlier devised methods.

THERAPEUTICS.

316. Lumbar Puncture and Injection of Neo-salvarsan in Early Syphilis of the Nervous System.

PAUL RAVAUT (*Ann. de méd.*, January, 1914) reports nine cases of syphilis of the central nervous system treated by the injection of neo-salvarsan into the lumbar cerebro-spinal fluid. The author insists that syphilis of the central nervous system has already existed and caused pathological changes before any clinical signs or symptoms can be detected. This was notably so before the researches of Babinski into the reflexes placed at our service a more refined method of clinical investigation than had hitherto been available, and Ravaut has shown that changes in the cerebro-spinal fluid can be demonstrated before any other signs so far known to us. Nageotte has shown what an early and prominent part in cerebro-spinal syphilis is played by meningeal and vascular changes. It is in this "preclinical stage" that it is so important to detect and to treat the disease. Widal and Ravaut published their first researches into the changes in the cerebro-spinal fluid in syphilis in 1901, and called their method "cyto-diagnosis." They showed that the blood and cerebro-spinal fluid were to a great extent independent—changes in the one were not necessarily reflected in the other. Since 1901 Ravaut and others have demonstrated the susceptibility of the central nervous system to the attacks of the *Spirochaeta pallida*. In 65 per cent. of cases of secondary syphilis, even in the absence of any clinical symptoms, an examination of the cerebro-spinal fluid will show pathological changes due to the organism. Ravaut also established the frequent association of cutaneous and nervous lesions in the secondary period of syphilis, and their independence in the tertiary period. In 1903 Widal and Sicard, with the author, at the same time as MM. Guillian and Parant, showed the importance of the study of the albumins in the cerebro-spinal fluid, and the parallelism between a high albumin content and the reaction of Wassermann. So constant is this that Ravaut substitutes an estimation of the albumins in the fluid for the much more troublesome and complex Wassermann reaction. The demonstration of the presence of the spirillium of syphilis in the brain and spinal cord and their meninges by Ravaut, Pouselic, Ranke, Sezary, etc., in cases of syphilitic, cerebro-spinal meningitis, acquired and hereditary, tabes dorsalis, and general paralysis of the insane, has naturally suggested the attempt to attack the micro-organisms locally by the intrathecal injection of mercurial and arsenical compounds. Injections into the spinal canal of atoxyl have been carried out by Kopke and Mendy. Salvarsan could not be used in this way. The soda, which must be added in order to dissolve it, rendered the solution too irritant, and caused also a precipitate in the cerebro-spinal fluid. Aqueous solution of neo-salvarsan and the cerebro-spinal fluid, however, remain perfectly limpid when mixed. It is of practical importance that the solution injected should have a density equal to or greater than that of the cerebro-spinal fluid itself. Solutions of less density are badly tolerated, and may cause a non-septic meningitis of slight degree, with symptoms—headache, pains in the limbs, vomiting, difficulty of

micturition, etc. Ravaut employs a 6 per cent. solution of neo-salvarsan. Each drop of this solution, which is itself hypertonic, contains 3 mg. of the salt. The quantity injected is from 3 to 12 mg. In the nine cases reported, the results were not very decisive; intravenous or intramuscular injections were also given, and other treatment adopted. Ravaut thinks the results better than would have been obtained without the intrathecal injections, and these were not followed by any serious after-effects. Further experience is necessary before any definite judgement on the value of the method can be formed.

317. A Vaccine for Tuberculosis.

AFTER ten years' careful trial with different vaccines and serums BRUSCHETTINI (*Rif. med.*, February 21st, 1914) considers that he has found one so efficacious that he recommends it without hesitation. In principle it depends on the action between tubercle bacilli and living leucocytes within the organism, and it is prepared as follows: An emulsion of living active bacilli, so made as to insure uniform suspension of the bacillus in physiological solution, is injected into the pleural cavity of rabbits which have been treated with injections inducing an abundant collection of leucocytes, and after a certain time the rabbits are killed and the exudation used as the material for vaccine. This exudation consists of an enormous number of leucocytes filled with jelly-stained bacilli and a few free bacilli well stained. It is pounded in a mortar with sterilized quartz and emulsionized with dilute oxygenated water and 0.8 per cent. salt. The emulsion is shaken up for twenty to twenty-four hours with the addition of a few drops of chloroform and filtered through a thick layer of cotton wool. With his vaccine the author says he has got surprisingly good results, and quotes some extreme cases which recovered under his treatment. As to the number of injections required, no general rule can be laid down; each case must be treated on its merits. Probably at the outset one injection every five or six days will be sufficient, but more may be necessary if prompt relief does not occur. No bad results were recorded, and the treatment does not seem to give rise to any alarming reaction.

318. The Danger of Anaesthesia with Many Drugs.

ACCORDING to H. HINTERSTOISSER (*Wien. klin. Woch.*, December 11th, 1913), the practice of inducing anaesthesia with a variety of drugs, including scopolamin and omnopon, has increased the danger of general anaesthesia, for some of these drugs apparently increase the toxicity of each other. The danger of giving morphine in combination with scopolamin has led to the former's displacement by its allied bodies, omnopon and narcophin, which have been praised as harmless. The former has, however, been credited with several deaths. The latter, which was introduced by Straub in 1912, is a combination of narcotin, morphine, and meconic acid. It is claimed for narcophin that its action on the respiratory centre is much weaker than that of morphine. For the past nine months the author has used narcophin in combination with scopolamin half an hour to one hour before giving ether or a mixture of chloroform, ether, and oxygen from a Roth-Dräger apparatus. The patients usually slept for several hours after the operation, but when they awoke it was the practice in many cases to give an injection of 0.02 gram of morphine to relieve pain. That this procedure is dangerous is shown by the following case. A married woman aged 41 had suffered from several attacks of appendicitis, the last of which occurred three weeks earlier. The temperature was normal, and the heart and lungs were healthy. On May 28th 0.0005 gram of scopolamin and 0.03 gram of narcophin were injected. The Roth-Dräger apparatus was employed; the narcosis lasted thirty-five minutes, and 60 c.cm. of ether and 5 c.cm. of chloroform were used. After the completion of the operation, during which the appendix was removed, the patient slept quietly. On the evening of the same day 0.02 gram of morphine was injected. An hour and a half later the patient was cyanosed, the limbs were cold, the respiration was only six or seven to the minute, and the pulse was slow, but fairly strong. The pupils were contracted, and failed to react. The corneal reflex was lost, and the patient did not react to speech or cutaneous stimuli. Atropine, digalen, and oil of camphor were at once injected, the stomach was washed out with potassium permanganate, the skin was flicked with wet cloths, the patient was plied with oxygen, and artificial respiration was practised; but no improvement followed, and the respiration fell to one or two to the minute. Four and a half hours after the injection of morphine, 300 c.cm. of blood were withdrawn, and a litre of Ringer's solution was injected into a vein. Improvement rapidly followed. In a few hours the respiration had risen to 16. Next day the temperature was 39.2°, the pulse 108, and the respiration was regular. But the patient was still unconscious. During May 30th and 31st the temperature was subfebrile, the patient was comatose, and there was incontinence of the urine and faeces. On the fourth day consciousness slowly returned, and the patient ultimately recovered. No morphine could be found in the blood withdrawn at the venesection. As the amount of morphine given after the operation was insufficient to cause these alarming symptoms, they must be traced to the combination of narcophin, scopolamin, and morphine. Venesection and the injection of Ringer's solution effected a recovery when the condition seemed hopeless. This procedure is not apparently always successful, and it was ineffective in a case lately reported by Brauer. His patient was a woman, aged 40, who had been given morphine and scopolamin. Her life was saved, after the usual methods had failed, by tracheotomy and by spraying with oxygen the bifurcation of the trachea and the large bronchi for several hours on end. Brauer considers that in such a case morphine does not paralyse the respiratory centre, but merely reduces its excitability a little. This is sufficient to retard the respiration, and thus induce an accumulation of carbonic acid in the tissues. This accumulation accentuates the action of the morphine and a vicious circle is started, the patient dying of carbonic acid rather than of morphine poisoning. The author interdicts the use of morphine within twenty-four hours of anaesthesia induced by a combination of drugs.

PATHOLOGY.

319. The Bacteriology of Ozaena.

F. PEREZ (*Berl. klin. Woch.*, December 29th, 1913) regards ozaena as an infectious disease. It is often transmitted from mother to child, and in 93 cases, infection from one member of a family to another, and in 35 cases, infection from one person to another, not of the same family, were investigated by the author. He found the disease was transmitted from mother to child in 47 cases, by one child to another of the same family in 27 cases, and from father to child in 9 cases. His investigations showed that when one or two children of the same family presented typical ozaena, other children of that family would suffer from aberrant forms, such as chronic coryza without atrophy, or a benign form of diphtheritic sore throat. In early childhood the disease may cause general disturbances, simulating syphilis. The author's bacteriological investigations were first directed to the Loewenberg-Abel cocco-bacillus which he found difficult to distinguish from the pneumobacillus of Friedländer. Subsequently he isolated from the nose a cocco-bacillus which possesses several distinctive features. After describing the cultural features of this *Cocco-bacillus foetidus ozaenae*, the author describes inoculation experiments on rabbits. When a bouillon culture is injected into a vein of the ear, the rabbit usually dies after twenty four hours or later. The inoculation makes it restless or depressed, and loss of appetite is accompanied by fever. There is a purulent haemorrhagic discharge from the nose, and apart from the occasional hyperaemia of the spleen, the pathological changes are practically limited to the nose. The mucous membrane of the turbinates, particularly the anterior turbinate, is much inflamed, showing haemorrhages as well as hyperaemia. The germ can be recovered. Similar but slighter changes have been induced by Hofer after injecting the toxins of this germ into rabbits. When a rabbit survives the infection the disease becomes chronic, and the persistent discharge contains the cocco-bacillus. When the rabbit is killed some months later atrophy of the anterior turbinate is found, and is proportional to the severity and duration of the disease. The pathological changes in man and the rabbit are the same, with this exception, that in the former the lower turbinate, while in the latter the anterior turbinate, is involved. The relation of the *Cocco-bacillus foetidus* to ozaena has been further established by agglutination tests on the subjects of ozaena. The author has found the cocco-bacillus in the noses of dogs, from which, he believes, the infection can be conveyed to man. In no other domestic animal has the cocco-bacillus yet been found. Other writers have also traced infection from dog to man, and the author is convinced that this source of infection is relatively common.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

320. Adrenal Haemorrhage in a Child.

PAPPENHEIMER (Studies from Department of Pathology, Columbia University, New York, 1913) records a case of adrenal haemorrhage in a previously perfectly healthy, well-nourished 3 year old boy, who was taken suddenly ill in the night with vomiting, irritability, and delirium, and a temperature of 103°. Convulsions followed, and, after a mustard bath, the child lay in an apathic, semiconscious state till death nine and a half hours after the onset of the attack, during which he was slightly cyanosed, with slow and gasping respirations, and a rapid pulse, which was fairly strong until shortly before death, when it failed to respond to injection of ether and camphor. Autopsy revealed excessive lymphoid hyperplasia throughout the body, and the periadrenal cellular tissue was oedematous, the glands themselves being normal in size and shape, and of a dark red colour, but on section showing diffuse haemorrhagic infiltration. There had been no extravasation into the surrounding cellular tissue, and the demarcation between the cortex and medulla was still obvious in places. Microscopically, it was seen that the diffuse haemorrhage had completely destroyed the medullae of both glands, to which it was limited, there being only one small rupture through the capsule into the adjacent tissue, and several extra-cortical adenomata present in the sections examined were entirely free from haemorrhage. The centres of the lymphoid follicles in the spleen, intestines, and certain lymph glands were composed of large phagocyte cells filled with chromatin fragments, while the liver capillaries contained numerous dark-staining bodies, which were undoubtedly free nuclear structures in various stages of degeneration, and obviously not derived from liver elements, since these showed no degenerative changes. Possibly they arose from the fragmented and pycnotic nuclei found in the lymphoid follicles of the intestine and mesenteric glands which had been carried to the liver. Cultures from the spleen were sterile, and the cause of this and of similar cases is obscure, but the fact that diphtheria toxin and other bacterial toxins may produce similar lesions in animals suggests the possibility that, in spite of their clinical and pathological similarity, these cases are not necessarily due to the same toxic or infectious agent. The clinical history of initial delirium, vomiting, and convulsions lend support to the suggestion that they are due to an acute adrenalin intoxication rather than to an acute insufficiency, since the subcutaneous injection of toxic doses of adrenalin produces similar symptoms in animals, and the preservation of a strong pulse until just prior to death also suggests the presence of a pressor substance in the blood. The uniformity in the clinical and pathological findings in these cases probably points to a specific disease of unknown origin, which further clinical and bacteriological study may disclose.

321. Cholera in Bulgaria.

FRANZ ROSENTHAL (*Berl. klin. Woch.*, February 23rd. 1914) relates his impressions and experiences at Sofia while in charge of the special hospital for cholera during the late war. A series of 283 cases of undoubted Asiatic cholera were treated, with a mortality of 25.7 per cent. In diagnosis most reliance was placed on the results of an examination of the blood. In cases of true cholera the changes were characteristic and constant. Quite early in the disease—from the first day, indeed—both red cells and leucocytes were augmented in number, the latter to an extent much greater than the concentration of the blood from its loss of water would account for. A table is given of the blood count in 29 cases. The observation of Von Biernacki, in isolated cases, that there is a leucocytosis in cholera and an absence from the blood of eosinophile cells, is shown to be the rule in the first few days of the disease. After the third or fourth day the leucocytes gradually diminish in number and the eosinophiles reappear. A leucocytosis of 40,000 to 50,000 per c.mm. is not, however, as Von Biernacki supposed, necessarily fatal; several such cases of the author's recovered. In about three-fourths of the cases cyanosis was marked. In the worst of these cases he observed cyanosis of the penis, and regards it as a very unfavourable prognostic sign. In 2 such cases, after death, the mucous membrane of both the small and large intestine as far as the rectum was found to be blue-black with cyanosis and inflamed and swollen. The faeces, even in the worst cases, were not always of the rice-water variety; often they more resembled meal-soup, often contained a little blood, or were slightly yellow tinted. Pain and cramp were sometimes so severe and prolonged that the patient shrieked in agony; even large doses of morphine seemed useless: pantopon (omnopon) scopolamin, however, was effectual. In a few cases, chiefly those in which during the acute stage there had been profuse diarrhoea, the patients succumbed, not as in the ordinary fatal cases, on the first or second day, during the stage of collapse, but later, even after some days or weeks of so-called cholera-coma. The symptoms are characteristic. A patient, apparently convalescing, becomes again cyanotic, with cold extremities and slurred speech. There is no temperature, and the urine is abundant but albuminuric. Respiration is slow and deep; the odour of acetone cannot be detected in the breath. Sleep is continuous, but at first patient can be roused momentarily; later actual coma comes on. Certain resemblances between this coma of cholera and diabetic coma, particularly as regards the character of the respiration, suggest that in the former, as in the latter, a condition of acid intoxication may be present. In 1892, in Kiel, Quinke and Hoppe-Seyler found in two cases a pronounced diminution of alkalinity of the blood and an intensely acid urine. Nevertheless, large doses of sodium citrate seemed useless. The author, after ineffectually trying alkaline by the mouth, tried subcutaneous and intravenous infusion of a 5 per cent. (later of a 3 per cent.) solution of sodium bicarbonate. About half the cases so treated recovered, death otherwise being almost invariable. The author remarks upon the importance of adding the powdered sodium salt to the sterile physiological salt solution without being previously sterilized by heat in the dry state. If this is done the solution is apt to be irritating and pain provoking. Magnus Levy has shown that the heating of sodium bicarbonate results in part being transformed into soda. The author remarks that the coma, despite the free secretion of urine, may be of uraemic origin. He quotes Lewis, who has described cases of uraemia in which the alkalinity of the blood was diminished, and treatment by alkalis was beneficial.

SURGERY.

322. Moszkowicz's Sign in Vascular Gangrenes.

BELLET (*Archives de méd. et pharm. navales*, December, 1913) draws attention to the difficulty a surgeon sometimes has in deciding at what site to operate in a case of spontaneous gangrene. In order to operate under good conditions the incision must be made through tissues whose vitality is sufficiently good. Now, in these cases we do not get sufficiently exact information on this point by the situation of the gangrene, the presence or absence of arterial pulsation, or the examination of the sensibility and temperature of the affected limb. The sign of comparative hyperaemia described by Moszkowicz in 1907 has been found by Bellet to be a most excellent diagnostic means of fixing the site of the incision. On making a circular compression of the root of the limbs by elastic bands and then, some minutes later, releasing the pressure, one sees on the integuments rendered anaemic by the ligature a redness appear; this is due to an abrupt hyperaemia, which descends from the root to the extremities of the limb. If the two limbs be healthy, the redness appears with the same intensity and rapidity on each side. But on a gangrenous limb there is generally a slower and less extensive hyperaemia than on its healthy fellow. *Technique:* One must expel the venous blood of the two limbs to be examined; elevate both lower limbs vertically, the patient being in dorsal decubitus; this simple elevation is usually sufficient. A slight massage or compression by an elastic bandage from the toes up to the root of the limb may sometimes be needed. Then one applies to the root of each limb, as high as possible, a haemostatic band of Houzé; this is kept on for five or six minutes, long enough to render the limb anaemic. This compression is rather painful. Then the bands are removed, the limbs are lowered to the horizontal position,

and, by the help of a good light, one can see the march of the redness as it succeeds the pallor of the tissues. One must note the quickness of its descent to the extremities of the limbs, the degree of coloration of the tissues, and the extent of the hyperaemic zones on all the aspects of the limbs. On the affected side one sees either an abrupt cessation of hyperaemia at a point more or less distant from the root, or a slower and less marked redness than on the sound limb; the line of arrest of congestion corresponds with the limit of arterial permeability, or of the collateral circulation. The hyperaemia is occasioned by the sudden liberation of the dammed-back blood; if it fail to occur in a part of a limb, there is an arterial obliteration in that zone. Numerous surgeons have testified to the great value of Moszkowicz's test. Coiquaud (*Thèse de Bordeaux*, 1912) says that any amputation performed below the hyperaemic zone is followed by a return of the gangrene; above this limit one is sure to obtain a good stump. Moszkowicz held that one may amputate anywhere in the hyperaemic zone as it corresponds with a viable condition of the deep parts. But Bellet advises that, as a general rule, to avoid gangrene of the stump, it is important that amputation should not be practised exactly at the lower limit of the hyperaemic zone, but appreciably above it; by observing this rule the incision is carried through tissues which are sufficiently vascular.

323. The Surgery of Goitre.

In a short article contributed to *Surgery, Gynaecology, and Obstetrics*, March, 1914, Mayo sums up the present-day views concerning thyroid enlargement. He notes that the various types of goitre should be treated both medically and surgically. Simple colloid goitre, which has resisted treatment and encapsulated adenomata, are generally best treated by removal of the diseased portion of the gland with preservation of the healthy part. If the diseased area is not removed, at a later period it exposes the individual to a serious menace; thus, during middle life degeneration occurs especially following the ill-advised use of iodine, and this may permanently damage the heart, kidneys, and liver. Exophthalmic goitre is amenable to surgical treatment by the removal of a large amount of the gland. At the same time the operation should not be undertaken in an emergency. Extreme conditions, especially dilatation of the heart, require medical preparation before operative interference. If such cases do not respond to medical treatment, injections of boiling water into the gland may be given as advocated by Porter. If ligation is previously employed, and a severe reaction follows the application of a ligature to one upper pole of the gland, the other pole should be ligated a week later. Thyroidectomy should not be performed until four months later, when the majority of patients show great general improvement. If, on the other hand, the reaction following the single ligation is not severe, Mayo advises a partial thyroidectomy at the second operation a week later. The gland is best exposed through a curved transverse incision between the anterior jugular veins with a midline vertical division of the muscles. As a rule, tubular drainage for twenty-four hours is employed, although in some cases the wound may be closed without a drain, the cavity being filled with salt solution. The anaesthetic of choice is ether. On the other hand, in complicated cases, the operation is best performed under a local anaesthesia obtained by a solution of 0.5 per cent. novocain with the addition of adrenalin.

321. Angio-lipoma of Hand after Plastic Operations.

Tourneux (*Arch. Prov. de Chir.*, August, 1913) points out that lipoma may develop in autoplastic flaps, especially if subcutaneous fat has not been removed, so that this manœuvre is systematically adopted by some operators, but vascular changes in such flaps are extremely rare. Tourneux saw a young girl of 15 who at 10 years had had an autoplastic operation performed on the hand. Three years after operation elevation of the flap was observed, and at the same time modifications in colour appeared passing through various stages to reach a violet red, so that a veritable tumour (angio-lipoma) developed. An elliptical piece was removed and the fatty tissue of the rest of the mass was ablated; haemorrhage was abundant, but was controlled by pressure. Microscopically examined, the segment of tumour showed diminution in thickness of the various layers of the epidermis, but no structural changes; in the true skin, which was of normal dimensions, there were numerous blood vessels of greater than ordinary development; the fat was of marked rose-red colour, due to the presence of many capillaries ramifying in the perilobular partitions of connective tissue.

325. Tonsillitis and Appendicitis.

L. Verdelet records two cases of acute appendicitis following rapidly an acute tonsillitis (*Gazz. hebd. des sci. méd. de Bordeaux*, April 19th, 1914). Case 1 was that of a woman of 36 who had previously been free from intestinal troubles; bilateral acute tonsillitis came on with a temperature of 38° C.; the case progressed normally until the evening of the next day, when she felt an acute abdominal pain whose greatest intensity was at McBurney's point; there was also vomiting, some tympanites, constipation, and a temperature of 39° C. Appendicitis was diagnosed, and under suitable medical treatment recovery took place uneventfully in about a week, and she remained quite well. The second patient, a woman of 25, had acute sore throat and double tonsillitis, which progressed normally till six days later, when she was attacked by violent abdominal pain accompanied by signs of appendicitis. Under medical treatment she recovered in a few days; but two years later a fresh attack of appendicitis occurred without appreciable cause, and she then had her appendix resected in the quiescent stage. Many similar cases have been recorded during the last twenty years; some which came on quietly and insidiously showed early suppuration needing immediate surgical treatment. Hutinel has drawn attention to the connexion between pharyngeal and intestinal affections, and Busebke has described the important part played by tonsillar infections in the evolution of various intestinal diseases.

OBSTETRICS.

326. Fetus Retained Four Months after Term.

Gomma (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, etc., February, 1914) attended a labour on April 20th, 1913, pains having commenced very sluggishly within twenty-four hours and ceased entirely, though the cervix was effaced. The waters, very abundant, had come away spontaneously. The souffle was plain, the fetal heart inaudible, the vertex presented but was not engaged in the inlet. The patient had borne three children, all delivered spontaneously. The periods had ceased on this occasion on July 15th, 1912, and shortly before term the patient ceased to feel the movements of the child. Three months after the incomplete labour the fetal outline could be clearly defined. At the end of the fourth month—on August 17th, 1913—after two days of dull irregular local pain and about one hour of feeble uterine contractions, a macerated fetus, 17½ in. long, was expelled spontaneously. The placenta followed; it was nearly normal, very pale, and rather small. Very little liquor amnii came away. There was no elevation of temperature or any complication after delivery. The periods began seven weeks later and continued free, appearing twice a month, till the case was reported in February, 1914.

327. Corpora Lutea.

F. Fenger (*Journ. Amer. Med. Assoc.*, April 18th, 1914) makes a preliminary report on his investigations as to the differences in size and chemical composition of the corpus luteum of ovulation and the true corpus luteum of pregnancy. The active principle of the gland has not been isolated, hence it is difficult to standardize the drug for medical purposes. He has examined a total number of 310 of corpora lutea from non-pregnant animals and 692 from pregnant cows. The colour and shape of the two are identical, so that external appearances go for nothing. The tabulated results which are given show that the corpus luteum of pregnancy is larger and more variable in size. There are also given in the same table the analysis of the desiccated fat-free glands—determination of the moisture, ash, and total nitrogen, and total phosphoric acid, and it is noted that the nitrogen, and consequently the protein as well as the phosphoric acid ratio is slightly higher in the non-pregnant gland, but the slight difference is of hardly any significance as regards their therapeutic powers. The active principle is undoubtedly present in the glands in organic combination, and closely associated with the protein complex. Fenger also reports some observations made in examining the uteri of pregnant cattle which, he says, demonstrate clearly when the fetus dies during gestation the uterus is itself capable of disposing of it by a sort of digestive process, and by other means than by simple abortion.

GYNAECOLOGY.

328. Dysmenorrhoea.

C. D. MOSHER (*Journ. Amer. Med. Assoc.*, April 25th, 1914) says that menstruation when normal should cause no pain or disability. The functional dysmenorrhoea observed is, she says, congestive in type and produced by (1) the upright position, (2) alteration of the normal type of respiration by disuse of the diaphragm and of the abdominal muscles, (3) the lack of general muscular development, (4) inactivity during the menstrual period, (5) psychic influences. Each of these causes is discussed. She shows how the upright position with the valveless vena cava causes uterine congestion which tends to become exaggerated when the abdominal muscles are lax, when costal breathing is employed and by clothing, etc., which interferes with the action of the respiratory muscles. She has corrected these conditions in many cases by the following method: "All tight clothing having been removed, the woman is placed on her back, on a level surface, in the horizontal position. The knees are flexed and the arms placed at the sides to secure relaxation of the abdominal muscles. One hand is allowed to rest on the abdominal wall without exerting any pressure to serve as an indicator of the amount of movement. The woman is then directed to see how high she can raise the hand by lifting the abdominal wall; then to see how far the hand will be lowered by the voluntary contraction of the abdominal muscles, the importance of this contraction being especially emphasized. This exercise is repeated ten times, night and morning, in a well-ventilated room, preferably while she is still in bed in her night-clothing. She is cautioned to avoid jerky movements and to strive for a smooth, rhythmical raising and lowering of the abdominal wall." The results have been that the pain has been lessened in many cases and wholly removed in a large number. The desirability of more activity is noticed in one of the cases reported; but she warns against excess, especially in the athletics of college training. A hopeful mental condition is important, and it is unfortunate that pain or disability is so commonly expected. The definition of menstruation should be restated more accurately as Nature's effort to relieve the undue congestion of the uterus by the causes above mentioned. The author's opinion does not represent a supplemental wave of nutrition, but rather a waste of potential energy in the form of blood which might be used in productive work when not required for the development of the embryo. Under normal conditions there should be no more women suffering from disorders of the generative organs than from disturbances of digestion, respiration, or of the heart. At present, she says, all the evidence points to the menstrual haemorrhage as a secondary matter more or less fixed by the upright position, and it is unnecessary that it should be of long duration or large in amount.

329. Treatment of Gonorrhoea in Women with Cusylol.

A FAVOURABLE report is given by H. I. SCHLASBERG (*Hygiea*, vol. lxxvi, No. 3, 1914) on cusylol, which is a combination of cuprum citricum and sodium borocitricum, sold by Arlt in Vienna. It is a blue powder, easily soluble in water, possessing high bactericidal properties without being caustic even in concentrated solutions. It has also been used with success in diseases of the eye, notably in trachoma. The author has used it in a 2 per cent. solution, suspended in an emulsion of tragacanth, 8 grams of which are added to 285 grams of water. After the patient has passed her water 4 c.cm. of the emulsion are injected into the urethra, subsequent micturition being deferred as long as possible. When the uterus is infected 4 c.cm. of the emulsion are slowly injected into the cervix and body of the uterus, after the external os has been carefully cleaned. A plug of cotton wool is left over the external os till the next injection. This is repeated every day for a fortnight, after which two injections are given every day for some time. This treatment was adopted by the author in 95 cases of gonorrhoea in prostitutes who had been drafted into the Eira Hospital in Stockholm. In over 25 per cent. of the women in this hospital the rectum was infected with gonorrhoea, but the author does not state whether cusylol was injected into the rectum or not. He does not, as a rule, keep women in hospital for gonorrhoea limited to the rectum. No other treatment was combined with the injections, which caused no discomfort. Under their influence the thick, purulent discharge from the cervix became more watery and less profuse. The injections into the uterus were never followed by inflammation of its appendages, and the only drawback to the treatment was the blue staining of the patient's linen. With care this can be avoided. The efficacy of the treatment was tested by microscopic examinations of the discharge. When gonococci were found on admission the discharge was examined at intervals of two days as long as gonococci were present. When they were not present on four consecutive examinations the injections were discontinued. When both the uterus and urethra were diseased the treatment was continued till the discharge from both sources was found not to contain gonococci on four consecutive examinations. After the injections had been discontinued three more examinations were made, and only when all were negative was the patient discharged. Thus seven consecutive negative examinations were required before the patient was regarded as cured. Of the 95 patients, 27 suffered from gonorrhoea of the urethra alone, 21 from gonorrhoea of the uterus alone, and 47 from gonorrhoea of both parts. In estimating the permanency of the results the author refers to the difficulties experienced in following up patients after their discharge from hospital. Even in the case of the minority who subsequently report themselves for examination, it is difficult to decide, supposing gonococci are found, whether a relapse or a reinfection has occurred. Yet the author is convinced that in more than half his cases the treatment made the patients no longer infectious. The gonococci may, indeed, be lurking in the uterine appendages, but their inflammatory reaction cuts the gonococci off, preventing infection, and they soon die. The efficacy of the injections largely depends on the detection and eradication of gonococcal foci in and near the external genitals. The author claims that his results are all the more encouraging, as many authorities have hitherto regarded gonorrhoea in prostitutes as incurable.

330. Calcified Fibromyoma Impacted in Pelvis.

BINET (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, etc., December, 1913) writes of a woman, aged 67, a 7-para, who when suffering from abdominal pains, at the age of 48, was found to be subject to fibromyoma of the uterus. She refused operative treatment. After the age of 65 violent attacks of epigastric pain set in, without vomiting, haematemesis, or melaena, but there was nausea with constipation and emaciation, the face growing sallow. She was treated for some time as a case of malignant disease of the stomach. At length a femoral hernia developed after severe vomiting, and the pelvis was explored. The uterus was found to be hard and bulky, converted into a bony mass as big as a fist, filling the pelvis. It did not rise into the hypogastrium. Binet, of Nancy, operated, performing subtotal hysterectomy. The periphery of the tumour, a fibromyoma developed in the anterior wall of the uterus, was converted into a shell of calcified tissue over ¼ in. thick. The vermiform, and also an epiploic appendix, was found adherent to the sac of the femoral hernia, and both were removed. There were no more attacks of gastric pain after convalescence.

THERAPEUTICS.

331. Nicolle's Antigonococcic Vaccine.

SEVERAL clinicians have had excellent results from the improved non-toxic antigonococcic vaccine of Nicolle. Five cases have just been reported by TROISFONTAINES to the Medico-Chirurgical Society of Liége (*Presse Médicale Belge*, January 11th, 1914). Three of his cases were instances of acute gonorrhoeal epididymitis of several weeks' duration. Injection of Nicolle's vaccine relieved the pain and tenderness very quickly, and reduced the swelling of the organ a good deal. The three first injections were given at an interval of twenty-four hours, the fourth forty-eight hours after the third. In a few days the patients could walk comfortably, and their sleep was natural. No urethral lavage was used, but merely suitable diet and slightly diuretic drinks. The other two cases were young girls infected with gonorrhoea of urethra and cervix uteri, who consulted the writer for acute arthritis of the wrist; one girl had recently had other arthritic troubles, which disappeared under ordinary antirheumatic treatment; her present arthritis of the wrist and metacarpo-carpal region showed great swelling; ten injections of Nicolle's vaccine were given in the course of eighteen days; the pain and swelling became appreciably less; she had, however, the limb splinted and massaged, and local hot baths and a naphthalin poultice were used in association with the vaccine. But the case of the second girl was brilliantly successful; she had contracted gonorrhoea five weeks before she arrived

at the clinic, and had had no treatment; she refused local treatment, but gonococci were found in the urethral pus. Two days before her admission she had a very severe arthritis of one wrist, which abolished all sleep; her wrist arthritis was more acute than that of the first girl, showing great swelling, violet-coloured oedema, and extremely bad spontaneous pain with abolition of all movement of fingers and hand; next day she was splinted, and on the third day a cubic centimetre of the vaccine was injected; by the same evening the pain and fever had lessened, and she slept that night. By the fifth day the local condition was greatly improved and her temperature was normal: a similar injection was given. After the third injection two days later she was cured. The writer finds, as Nicolle and Blaizot and others have found, that this vaccine gives no bad effects whatever, and is far superior to any other treatment. Although Nicolle advises that the injections should be intramuscular, Troisfontaines used subcutaneous injections into the abdominal walls or buttocks in more than half of his cases, and in no case was there any pain at the site of injection. He characterized the way in which the local pain in the cases of epididymitis, and in his second case of arthritis, yielded in the course of a few hours as extraordinary, and he strongly commended the use of Nicolle's vaccine to the members of the society.

332. Antigonococcic Vaccino-therapy.

J. LIVON FILS (*Réunion Biologique de Marseille*, January 20th, 1914) records his experiences since July, 1913, with the atoxic vaccine of Nicolle and Blaizot, sent by them from Tunis in sealed ampoules; ½ c.cm. of this vaccine, diluted with 1½ c.cm. of sterilized physiological solution, was used for each dose. The hypodermic injections were made into the gluteal region every other day, or every day, until recovery was complete. He finds that the vaccine acts specially quickly on the pain. Thus, in orchitis, it may disappear after the first injection. He has also got excellent results from its use in ophthalmia neonatorum, and in women infected with gonorrhoeal metritis and salpingitis. A case of obstinate gleet, of three years' duration, was completely cured by him after eight injections of the vaccine. In a case of gonorrhoea, of seventeen days' duration, the pain on micturition was greatly diminished after the second injection and disappeared entirely after the third, and the discharge stopped after the fourth. This vaccine keeps its properties unimpaired for a period of about three months. In none of Livon's cases did it produce any lassitude, fever, or general reaction; indeed, there was virtually no reaction at all.

333. The Treatment of Lupus Vulgaris.

CHAPERON (*Arch. d'électr. méd.*, April 10th, 1914) reports upon the rôle of electro-therapy in the treatment of lupus vulgaris. In lupus, characterized by a few isolated tuberculous foci, his preference is for surgical excision, if this is possible; otherwise negative electrolysis (3 to 5 milliampères), the action being sufficiently prolonged to disintegrate the tissues, will bring about a cure without a disfiguring cicatrix. Against the ulcerated forms of lupus, whether covered or not by crusts and scales, the spark of high frequency may be employed concurrently with other methods in order to aid cicatrization. In the vegetative forms he prefers the curette to any electrical procedure. The site of the lupus is of some importance in determining the treatment to be employed. In lupus of the nasal fossae, curettage is almost always indicated, and a certain number of sittings of high frequency may follow advantageously. Of all the electro-therapeutic methods available for the treatment of lupus, the only one which meets with the author's full approval is negative electrolysis. In the same journal of the same date, Belot and Nahan report upon radio-therapy and radium therapy in lupus vulgaris. Without claiming for radio-therapy that it is the heroic treatment in tuberculous lupus, they regard it as an effective one in many instances. The violent method, however, by which ulcerating reactions are brought about is completely to be rejected; the doses of radiation should be moderate, and the sittings well spaced out. When thus employed, radio-therapy brings about an indisputable amelioration, although it is only in exceptional cases that it destroys the lupus nodule. In order to obtain the complete cure, it is necessary to combine *x* rays with other therapeutic measures according to the case. In flat, non-ulcerated lupus radio-therapy is not indicated, but in the ulcerated form it assists the cure when combined with Finsen light, scarification, or negative electrolysis. Non-suppurating lupus serpiginosus is considerably ameliorated. Radio-therapy is indicated in lupus affecting the orifices, and, combined with scarification, it gives excellent aesthetic results. It is indicated also in secondary lupus developing on the foci of osteitis or of tuberculous adenitis. Radium therapy may have analogous indications, but the authors think it preferable to reserve radium for lupus of small extent, and for lesions localized in the mucous membranes, where radium has the advantage over *x* rays in respect of ease of application. Finally the authors urge strongly that *x* rays are not the cause of the development of epithelioma as a complication of lupus. This degeneration is met with frequently in cases of lupus which have never had any radio-therapeutic application.

PATHOLOGY.

334. Abderhalden's Defensive Ferments of the Blood.

ANDRÉ PHILIBERT (*Progrès médical*, January 31st, 1914) describes the theoretical basis and practical application of Abderhalden's researches into the *Abwehr-fermenten* of the blood. Under normal conditions, out of the complex contents of the intestine, only certain simple and constant products are absorbed into the blood. The amino-acids, alone among the substances resulting from the digestion of albumins, are directly absorbed. Of the sugars, glucose only enters directly into the blood stream. These substances which the blood is capable of directly utilizing are the *Bausteines* of Abderhalden. Should more complicated compounds enter the blood, there are formed in that fluid certain ferments which can split them up into the simpler compounds. These ferments, the *Abwehr-fermenten*, do not exist in the blood under ordinary circumstances. For example, if saccharose is mixed *in vitro* with the serum of a dog's blood, it remains unaltered; if, however, the dog had previously been given injections of saccharose, the serum then acts upon the saccharose so that glucose and levulose are formed. These ferments are absolutely specific, that is, they are adapted to the particular variety of sugar or albumin with which they have to deal. In pathology it is the albumins which have most practical importance. They may be divided into three classes: (1) The albumins of bacteria or parasites, which gain access to the blood as a result of infection; (2) the cells of tumours (cancer, etc.) or of the placenta; (3) the cells of this or that organ of the body which in the course of degenerative changes may set free albumins in the blood. Appropriate ferments may be formed which are able to change each of these "foreign albumins" into amino-acids. To detect them the procedure is briefly as follows: An extract is prepared by boiling in distilled water the bacteria, or the tissue of the cancer, the placenta, or the particular organ implicated. This is brought into contact with the serum of the blood in a dialyzer. After remaining sixteen hours in an incubator at 37° C., the fluid outside the dialyzer is tested for the presence of amino-acids by means of ninhydrin (hydrate of tricetohydrindene) being boiled with this reagent for exactly one minute. A violet tint proclaims the presence of amino-acids. Abderhalden claims that the serum of pregnant women is able thus to digest extract of placenta, and some, but not all, other observers corroborate his observations. Thus in France Mdlle. Berthe Sabin in 72 cases found the reaction to fail only 13 times. In 43 pregnant women it was positive, and in 16 women who were amenorrhoeic from other causes than pregnancy it was negative. The reaction has also been applied to the diagnosis of tumours by Epstein, Abderhalden, Bauer, and von Gambaroff. The last named has even thus been able to distinguish between carcinoma and sarcoma. Employing an extract of cerebral tissue, Fauser, Fischer, Wegener, and others have attempted to apply the reaction to the diagnosis of mental affections, and Max Theobald, using an extract from the cerebellum of a general paralytic, has found the reaction to be positive in the majority of cases of general paralysis. The whole subject must be regarded as being *sub judice*, and that we have still much to learn is shown by a paradoxical result reported by F. Jesson. He tried the reaction of a patient's serum with an extract of tubercle bacilli, and again with an extract caseous matter, and then with an extract of healthy lung, hoping for guidance as to the tuberculous nature of the malady, and, further, whether it was fibrous or caseous—that is, whether or not there was destruction of living tissue. With the two former extracts (in one case amongst others of a cavity which had cicatrized so far as clinical signs went) the reaction was negative, while it was positive with the extract of healthy lung.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

335. Glycosuria.

J. J. R. MACLEOD (*Journ. Amer. Med. Assoc.*, April 18th, 1914) reviews some recent researches on pathological glycosuria. One of the most important results of the laboratory investigations, he says, has been at least to show that some of the symptoms of diabetes in man can be induced in experimental animals by a multitude of causes. They show that etiologically, inheritance, nervous strain and over-indulgence in carbohydrate foods all predispose to the disease, while undoubted benefit can be obtained in different cases by the control of carbohydrates and protein ingestion respectively. A strict analogy between laboratory diabetes and the clinical forms is hardly possible even in the case of pancreas removal in animals, but light is thrown on many of the problems which the clinical observer has to face. He discusses the question whether glycosuria, which has been chosen as the most characteristic symptom, is properly such, and holds that the symptom of hyperglycaemia is better for adoption as a criterion. The analogy of the kidney to the overflow tube of a cistern is not strictly correct, and some change in the excretory function of the kidney must be considered as one of the results of the diabetic state. Certain forms of experimental glycosuria seem to be due to no other lesion than one affecting the kidney alone, and it is possible that this may be paralleled in the clinical cases, though this Macleod doubts. More recent researches indicate that to keep the sugar content of the blood as low as possible both sugar and carbohydrate in the diet must be regulated, and the rate of absorption is the only difference in their action. The decrease of glycosuria due to opium may be due to the delay it causes in emptying the stomach, and this fact may also be used in a way to explain the good effect of the oatmeal diet in many diabetics. In employing hyperglycaemia as the most reliable index of disturbed carbohydrate metabolism, care must be taken to bear in mind the effects of frights, anaesthesia, body temperature, etc. It is impossible, says Macleod, to settle the question as to the free or combined condition of the sugar in the blood by chemical examination. The evidence in this line is in favour of its being uncombined. The views of Pavy and Allen in this regard are criticized by him. The pathology of pancreatic diabetes and the influence of the nervous system on the sugar content of the blood and the hormone control of the hepatic sugar output are discussed at length. Macleod sums up that "we may conclude that the nerve impulse that brings about an increased discharge of dextrose from the liver does so either by producing in the liver cells some chemical change which facilitates the action of the glycogenase on the glycogen, or by causing the glycogen masses to become dissociated from the protoplasm, so that they become susceptible to the intracellular enzymes, or become extruded from the cell, so that they are attacked by the glycogenase which exists in the neighbouring lymph and blood vessels." How the pancreas lesions act in producing diabetes cannot be settled at present, nor can the effect of an internal secretion of the pancreas be considered proved. The general conclusion also which can be drawn is that there is no evidence, as far as experiment shows, that the blood of a normal animal, even from the pancreatic vein, contains an internal secretion that can restore to a diabetic animal any lost power to utilize carbohydrates.

336. Blood Pressure in the Diagnosis of Aortic Regurgitation.

ACCORDING to P. BAJ DI G. (*Med. Klin.*, February 15th, 1914) it is common knowledge that the difference between the maximum and minimum arterial blood pressure is greater in aortic regurgitation than under normal conditions; but opinions differ as to the cause of this phenomenon. It may be due to an abnormally high maximum pressure, to an abnormally low minimum pressure, or to a combination of both. For the past two years the author has investigated the maximum and minimum blood pressure in over 1,000 persons in the Ospedale Maggiore in Milan. He adopted Korotkow's acoustic method on account of its simplicity and accuracy. Riva-Rocci's sphygmomanometer was used, its cuff being attached to the arm, and a phonendoscope being fixed over the brachial artery just below the cuff. The changes in the sounds conducted from the brachial artery through the phonendoscope were observed and noted as the pressure exerted by the cuff was increased or diminished. This acoustic method gives higher readings by 10 to 12 mm. of mercury than the palpation method, which is less accurate. The author found the limits of the normal maximum pressure to be between 135 and 150 mm. of mercury, and the limits of the minimum pressure to be between 90 and 110. The minimum pressure in cases of arterio-sclerosis, unaccompanied by increased resistance to the peripheral circulation, was never below 80 mm. The only cases in which the minimum pressure fell below this figure were those of aortic regurgitation. Of the 25 cases of this disease, 12 showed a minimum pressure of less than 60 mm., 6 showed a minimum pressure of 0, and 7 showed a minimum pressure oscillating between 60 and 70 mm. In the 18 cases in which the minimum pressure was less than 60 mm. or down to 0, the aortic regurgitation was due to rheumatism (Corrigan's disease). Of the 7 cases in which the minimum pressure oscillated between 60 and 70 mm., 6 were due to syphilis or arterio-sclerosis (Hodgson's disease). The author, therefore, concludes that the minimum pressure in aortic regurgitation is invariably below 70 mm.; that in Corrigan's disease it ranges from 60 to 0, and is never over 60; that in Hodgson's disease it ranges from 60 to 70 mm. In other words, the acoustic method may be used to distinguish between Corrigan's and Hodgson's diseases. The author claims that any person whose minimum pressure is below 75 mm. must be suffering from aortic regurgitation, and that when the pressure is under 60 mm. the aortic regurgitation is probably due to rheumatism. From among over 1,000 persons whose blood pressure was measured, only 25 showed a minimum pressure of less than 75 mm., and all these 25 suffered from aortic regurgitation. It is also very probable that the minimum pressure in every case of aortic regurgitation is less than 75 mm. of mercury.

337. Relative Value of the Microscopic and Inoculation Diagnosis of Tuberculosis.

RAUTENBERG (*Berl. klin. Woch.*, February 23rd, 1914) remarks upon the absence of any unanimity among investigators as to whether the bacilli of tubercle can be found in the blood either of tuberculous or of non-tuberculous persons, and offers his own experience and opinion on the point. He finds the recognition of tubercle bacilli in the blood by means of the microscope a very uncertain difficult matter, and their presence or absence of very indefinite import. On the other hand, experimental inoculation into guinea-pigs is, he has convinced himself, a quite reliable indication as to whether the blood contains bacilli in a living or virulent state. As the result of the inoculation of the blood of fifty-eight patients with advanced tuberculosis into 150 guinea-pigs and 5 monkeys, the conclusion is reached that the presence of living tubercle bacilli in the blood of tuberculous persons is altogether rare and exceptional. Control experiments, in which tubercle bacilli were injected into the blood stream in monkeys, resulted in each case in a bacilluria and the appearance of miliary tuberculosis.

SURGERY.

338. Suture of Wounds of the Auricle.

CHIFOLIAN AND MARCHAK (*Progrès méd.*, January 31st and February 7th, 1914) report the second case in France in which a wounded auricle has been sutured. So far in medical literature 24 cases have been recorded, and these are tabulated and analysed by the authors. Their patient was wounded by a revolver bullet (calibre 6 mm.), which had entered the chest in the third right intercostal space, just beneath the third cartilage. He was seen half an hour after receiving the wound, and there were then no very alarming symptoms. The patient was pale and his pulse-rate was 140, and there was rapid and difficult breathing, but he was conscious and collected. There was dullness on percussion at the base of both lungs but no precordial dullness. An hour later the symptoms were much aggravated. There were signs of great internal haemorrhage. An operation was immediately performed. The incision was the usual quadrilateral one, forming three sides of a

rectangle. The vertical incision was along the right border of the sternum, and the two horizontal incisions were at the level of the second and third intercostal spaces respectively. The costo-musculo-cutaneous flap was turned outwards, and a strip of the sternum was removed by means of gouge pincers. The border of the right lung had been wounded and the pleural cavity was full of blood. On opening the pericardium, which was also wounded, although the cavity was not distended, a wound of the auricle was found and closed by means of two catgut sutures. The pericardium was not sutured and the flap was replaced and sutured without drainage. After the operation the patient was very much collapsed, and for several days intravenous injections of electrargol and serum, and stimulants, camphorated oil and champagne, were given at frequent intervals. Six weeks later there were signs of a pulmonary embolism, which delayed convalescence, but in another month he was fairly well. Several radiographs failed to show any trace of the projectile. He reported himself after eight months as being quite recovered. The other French case of suture of a wound, also of the right auricle, was operated on by Grégoire. The patient recovered from the operation, but died five weeks later of purulent pleurisy. As a result of the study of these and the 22 other cases recorded, the authors formulate the following conclusions: (1) In every case of a wound of the chest in or near the cardiac region a methodical exploration of the wound should be made, even though the general state of the patient seems to be good. (2) Under local anaesthesia the wound should be enlarged sufficiently to ascertain whether it is penetrating and whether the heart is wounded; in the latter case a general anaesthetic should be given. (3) In opening the thorax in order to expose the auricles, Delorme's three-sided incision with an external hinge seems the best. Most often it is on the left side, but sometimes on the right. (4) The pericardium must be freely incised, so that the whole heart may be inspected in front and behind. (5) The wound in the auricle and the pericardium is sutured without drainage. (6) It is better also at the outset not to drain the pleural cavity. If necessary this can be done afterwards. (7) Surgical intervention in wounds of the auricle shows a recovery-rate of 50 per cent.

339. Pneumococcic Arthritis.

BULKLEY (*Ann. of Surg.*, January, 1914) records a case of infection of the shoulder-joint by the pneumococcus in a child aged 11 months, supervening upon a left lower lobe pneumonia. The joint was aspirated, and 130 c.cm. of greenish-white pus evacuated. Cultures showed a pure growth of the pneumococcus. Arthrotomy, with drainage, under cocaine anaesthesia, was performed, and the child made an uneventful convalescence. Pneumococcic arthritis is rare, and but few cases have been recorded. The author has only been able to collect 172 records, although the condition was first described twenty-five years ago. Its frequency in relation to pneumonia is about 1 in 800. In Bulkley's series, 53 cases, or 34 per cent., occurred during the first hemidecade; 65 per cent. of the patients were males, and 35 per cent. females. This disproportion has usually been ascribed to the influence of trauma. As regards predisposing factors, the work of Bezancon and Griffon has shown that pneumococcic arthritis is more apt to appear with an attenuated culture of the germ, or from an enormous dose of the same into an organism rendered relatively immune by previous vaccination. Trauma and previous joint disease also play an important part. Cole found that the injection of virulent cultures of the pneumococcus into the joint of a susceptible animal was almost invariably followed by acute suppurative arthritis. He also found that if a septic inflammation of the joint was induced, subcutaneous injections of the pneumococcus gave some positive and some negative results, whilst intravenous injections were more apt to give a positive result. In the author's cases, 73 directly followed a pneumonia, 5 preceded the same, and 38 were associated with this condition, although the direct relation is not stated. In 48 cases pneumonia was absent. Of the latter, 59 per cent. occurred in children under 10 years of age. Although one or more joints may be involved, the infection is usually limited to one only. In Bulkley's series, 75 per cent. were monarticular and 25 per cent. polyarticular. Of the single joints affected, the knee is usually the site of election, whilst practically all the monarticular cases have been either sterno-clavicular or one of the large joints. The inflammation set up by the pneumococcus usually terminates in suppuration, and the conditions found within the joints are identical with those of other varieties of septic arthritis. The symptoms also are those of any acute septic arthritis. Pain on movement is usually acute. It is associated with loss of function and swelling, the latter depending on the amount of fluid within the joint. Hyperaemia and oedema are also present with periarticular involvement. Since most cases succeed a pneumonia, diagnosis should be easy, but owing to the rarity of pneumococcic arthritis, it is sometimes overlooked. The author considers that localized articular pain occurring during or after a pneumonia should be an indication for immediate exploratory aspiration and bacteriological examination of the fluid. Diagnosis has to be made from acute suppurative arthritis due to the staphylococcus or streptococcus, tuberculous arthritis, and gonorrhoeal or syphilitic arthritis. Acute rheumatic arthritis is usually multiple and in children often accompanied by endocarditis. Prognosis is grave, but depends upon the number of joints involved and the presence of complications. It is better in the younger than in the older patients. If recovery from the general infection takes place, it does not follow that ankylosis of the affected joint invariably ensues. Treatment to be effective must be radical and undertaken immediately the diagnosis is made. Aspiration, arthrotomy, resection, or amputation may be performed. The first should be primarily diagnostic, and if pus is obtained arthrotomy must be performed immediately. Bulkley considers that it is a question whether resection and amputation are often advisable, since the arthritis is only one manifestation of a general bacteriaemia. Active and passive immunity will also probably be of use in this condition. In two cases where autogenous vaccines were employed both patients recovered.

340. Cervical Ribs in Hereditary Syphilis.

E. GAUCHER AND O. CROUZON (*Arch. gén. de méd.*, January, 1914), in a communication to the Société Médicale des Hôpitaux, reports the case of a woman aged 29 years who was under treatment for headaches, peri-orbital neuralgia, and pains in the legs, of undoubtedly syphilitic origin, and in whom examination revealed the presence of a supernumerary rib on each side. On the right side the cervical rib was long, and descended obliquely into the thorax. It was of the "costal thoracic" type. On the left the rib was much shorter, partly fused with the transverse process, and was of the "cuneiform" type. This patient suffered from the age of 25 years from deafness, now almost complete; at 12 years of age she had an attack of interstitial keratitis, and a second attack at 27 years of age. An examination of the eyes showed a corneal opacity due to old keratitis, posterior synechiae due to old iritis, and in the left eye secondary glaucoma, due to former irido-choroiditis. The reaction of Wassermann was positive. The authors consider, in view of the well-known tendency of syphilis to cause malformation of the skeleton during fetal development, that in this case the cervical ribs, equally with the ear and eye affections, were to be ascribed to inherited syphilis. It is true that all infectious maladies which affect the fetus during its development may lead to dystrophies of various kinds; but by far the most frequent of these maladies is syphilis. It is recommended that in every case of cervical ribs the question of congenital syphilis should be investigated.

341. Constrictions of the Duodenum.

M. L. HARRIS (*Journ. Amer. Med. Assoc.*, April 18th, 1914) calls attention to what he calls a hitherto undescribed condition giving rise to characteristic symptoms. Constrictions of the duodenum due to cicatrices, inflammatory adhesions, etc., are of course well known, and in the first case here described the condition was thought to be of inflammatory origin. Subsequent study of the other cases in which Harris operated led him to the belief that the condition is due to the abnormal remains of a normal embryonic structure. Five patients have been operated on by him all showing similar symptoms and giving similar findings at the operation. In all there was disturbance of digestion, shown in distress in the epigastric region coming on several hours after taking food, and relieved by eating. Nausea was mentioned, but vomiting seldom occurred. In all cases there was some degree of tenderness in the epigastric region. The condition was a chronic one, dating in some from early life, and while intermittent in its early history, became practically continuous later. Hyperchlorhydria was found whenever sought, and very marked in one case. No occult blood occurred in the stools. The symptoms strongly suggest duodenal ulcer, but no gastric or duodenal ulcer was discovered, and in two cases gall stone was suggested. Whether it will be possible to differentiate these duodenal constrictions by the clinical history will have to be settled

by further experience, but an analysis seems to Harris to show that there is an absence of the marked intermissions and the bad relapses characteristic of ulcer. The use of the Roentgen ray with the bismuth meal is a valuable aid to diagnosis. Operations in all cases showed that the constricting fold was of peritoneum and not of the wall of the duodenum, and Harris looks to embryology for an explanation of its origin. It is due, he thinks, to the persistence of the caudal edge of the mesogastrium as a distinct fold extending across the ventral surface of the duodenum at the hepatic flexure, which has been already described by others as the hepatico-colic ligament. The paper concludes with an account of a sixth operation, performed since the account of the others was written, which showed a remarkable constriction of the duodenum, but is too recent to form the basis of statements as regards relief.

OBSTETRICS.

342. Prolonged Retention of Dead Fetus.

GAUJON (*Bull. de la Soc. d'Obstét. et de Gyn. de Paris*, etc., April, 1914) had under observation last year a woman, aged 34, in her fourth pregnancy, all previous gestations being normal. The last periods occurred early in November, 1912, and all the cardinal symptoms of pregnancy developed, until signs of threatened abortion were noted on March 15th, 1913. Pregnancy at the fourth month was then detected in a maternity hospital. The patient refused to enter the hospital, and she became anaemic, the abdominal swelling diminishing. A small amount of bloody discharge came away from time to time. By June 13th, when the patient once more was examined, the uterus was no larger than normally in the third month. It grew steadily smaller so that error of diagnosis was suspected. On July 10th fetid discharge came away, and on July 18th the patient was delivered of a mummified fetus 4 in. long, but little over half an ounce in weight. The funis was like a thin string. The patient was very ill next day; the curette brought away placental tissue, quite putrid, showing that necrobiotic changes must have been in progress long before the expulsion of the retained fetus. After an alarming attack of acute dilatation of the stomach, simulating peritonitis, the patient slowly recovered. By the end of March, 1914, she was free from all local and general morbid conditions.

343. Typhoid Fever and Pregnancy: Fetal Immunity.

BERKOWITZ (*Amer. Journ. Obstet.*, May, 1914) reports in full an instance of pregnancy complicated by typhoid fever with haemorrhage and relapse. The patient was 31 years of age and in her third pregnancy. The fever developed in the fifth month; it was rather severe, and complicated by intestinal haemorrhage and intercurrent relapse. The child passed unscathed through the grave dangers of toxaemia, and was normally delivered at term. There were two coils of the cord round its neck; the placenta came away a few minutes later. The Widal reaction was positive on the seventh day of the disease. On readmission to hospital at the time of labour the Widal reaction was negative in the mother as well as in the child immediately after delivery. On several further occasions, when the blood of mother and child was examined, the Widal reaction remained negative, and was also negative when the mother's milk was tested. No typhoid bacilli were detected in the urine and faeces of the mother and child; cultures from the blood of the cord and placenta and from sections of their tissues were negative. The fetus was a full-sized male, and the perineum was not lacerated.

GYNAECOLOGY.

344. Radio-therapy in Gynaecology.

AT the present time, M. HENKEL says, *x* rays may be preferred for the treatment of myomata of the uterus and for metropathies, while radium or mesothorium are more largely employed for carcinoma and other malignant tumours (*Muench. med. Woch.*, January 20th, 1914). He recalls the experiments with *x* rays on plant seeds, which demonstrate that small doses stimulate growth while large ones inhibit it. The same applies to medicine. If the doses of *x* rays be too small, a stimulation takes place, tumours grow more rapidly, haemorrhages increase, and the patient is much more harmed than helped. On the other hand, experience shows that, if the doses be too large, important functions of the body may be damaged. He points out that the old leather filter has now given place to a filter made of 1 to 3 mm. aluminium sheets; but even aluminium does not protect the person from all damaging effect under all conditions. In the treatment of myomata the chief object is functional castration, but the action of the rays on young muscle fibres, connective tissue, and mucosa must always be borne in mind. In acting on the ovaries, the rays attack the epithelial cells more energetically than the connective tissue cells. Some observers hold that the latter are responsible for the greater part of the function spoken of as internal secretion, and deduce that radiation may not directly attack the specific functions. Experience, however, does not bear out this view. The author is of opinion that very little is known about this question, but he feels justified in stating that in comparing operative with the radiological treatment of myomata the latter only influences the symptom haemorrhage, and does not, as is the case in the former, materially influence the size of the tumour or the other symptoms. He adds that we do not know whether radiological treatment effects a lasting cure and removes the possibility of malignant degeneration of the myoma taking place. In reply to the contention that death has not been observed after *x*-ray treatment of myoma, he first points out that diagnostic errors are by no means rare. In many of these cases ovarian tumours, pyosalpinx, tumours of the Fallopian tubes, adenomyomata, and the like are mistaken for myomata, and the author has had operative experience of the disastrous results of these mistakes. He has experienced the delay of operation for malignant tumour until it was too late. In the next place, it must be remembered that putrefactive changes or complications with pyosalpinx cannot be treated by radiation, and deaths which occur as a result either of malignant disease or these last-named complications alter the prognostic value of *x* rays for the diagnosed myoma. He therefore objects strongly to the assumption that the result of radiation for myoma is 100 per cent. cures. On the other hand, he recognizes a number of striking advantages of the *x*-ray treatment. In the first place the treatment can be undertaken without necessarily admitting the patient into a hospital or clinic; secondly, many women will agree to radiation but not to operation, especially when the manifest symptom is haemorrhage. If a gynaecologist has the reputation of operating on all his patients, he does not get his patients anything like as early as a gynaecologist who uses *x* rays in many cases. *X* rays suffice to obtain satisfactory results in the majority of myoma cases, but it is necessary to distinguish between cases which may and those which may not be treated in this manner. The following are unsuitable for *x*-ray treatment: Cases with sudden haemorrhages which threaten life; cases of large myomata producing signs of compression, submucous myomata causing severe bleeding; malignant and other forms of degeneration; cases of myoma in young persons in which an operation is likely to prove successful with preservation of the menstrual function; and lastly, all cases in which the diagnosis is not certain. Great caution should be exercised if *x* rays are used for myoma in proper dosage and this is followed by disturbances of the intestines, increase of haemorrhage, fever, and other signs of general illness. He therefore comes to the conclusion that the chief indication for *x* rays in the treatment of myoma is to be found in cases of climacteric and definitely benign haemorrhages in elderly women.

THERAPEUTICS.

345. External Application of Hypertonic Saline Solution in Peripheral Oedema.

PALHAULT (*Journ. des praticiens*, March 21st, 1914) speaks highly of the treatment of peripheral oedema by external applications of hypertonic saline solution. The suggestion first arose from the good effects that followed the use of sea water locally in tuberculous adenitis. A solution of saline in the strength of 25 to 50 grams to the litre is used, the applications being made in the form of a compress directly to the oedematous parts. This is kept in position by a covering of wool surrounded by a loose bandage, and the application is left on all night. The following day a considerable quantity of fluid will be found to have soaked into the wool; the bed-clothes, indeed, and even the mattress, being wet in some cases. The results are excellent and rapid, and the oedema as a rule subsides in a few days. The author quotes a case of some standing with involvement of the lungs, in which digitalis and other remedies had failed to produce any effect. He stopped all

internal treatment, gave a "dry" diet for two days and applied the solution to the extremities. The condition improved rapidly—the pulmonary oedema greatly diminished, and sleep returned. The method applied in cardiac and in renal oedema has again and again brought about this result. The interesting question arises as to whether the action is that of osmosis. It would be of further interest to know also the amount of chlorides present in the fluid which has thus filtered through the skin, and the author proposes to make a further study of this point. Similar applications made with ordinary water produced no result whatever. By this proceeding the tissues are relieved of their burden, and can perform their normal functions; and this applies to the heart also. The way is thus prepared for internal medication, for, as Widal suggests, it is unsafe to prescribe diuretics, particularly theobromine, before relieving the peripheral engorgement. The author suggests that possibly similar proceedings may become applicable in the case of hydrothorax and cardiac ascites also.

346. The Treatment of Sunburn.

G. SCHERBER (*Med. Klin.*, January 18th, 1914), in a comprehensive article on the etiology, pathology, and treatment of sunburn, reminds us that the invisible ultra-violet rays of the spectrum, which are the chief cause of the lesion, are almost totally reflected from the surface of snow and ice. Hence the frequency of the affection amongst mountain climbers and travellers in arctic and antarctic regions. Of the protective measures which may be adopted by those who are exposed to the sun's rays, he gives the first place to the application, in the form of an ointment, of one or other of those chemical substances which have an especial absorbing power for the ultra-violet rays of the spectrum. To Hammer belongs the credit of first recommending sulphate of quinine for this purpose. Scherber employs the bisulphate as more soluble. A great advance in this direction was the discovery of aesculin, a crystalline substance, easily soluble in water, obtained from the rind of the *Aesculus hippocastanum*. Freund demonstrated that in 4 per cent. solution this substance will prevent the occurrence of light erythema. Unna has already with good results employed the monoxide of aesculin and aesculin dimethylamine under the names respectively of zeozon and ultrazeozon (in a 3 per cent. and 7 per cent. respectively ointment) with good results. Scherber remarks that in practice the usual applications—vaseline, lanoline, etc.—are far from being useless, and he especially recommends as an agreeable and convenient application a soap of stearin of high melting point, combined with ammonia or sodium carbonate. The latter also forms a convenient vehicle for aesculin and its derivatives. The stearin preparation, formed into a kind of cream, can be obtained in the shops under various denominations.

347. Cycloform.

CYCLOFORM was introduced in 1910 as a medium for prolonging local anaesthesia in the case of operations likely to be followed by much pain. It is an almost insoluble powder; the solubility is 1 in 4,500 of water. It is non-poisonous, the absorption of even large quantities of such a solution producing no toxic effects. Its formula is given as p-amido-benzoic-acid-isobutyl-ester. O. KLAUBER (*Zent. für Chir.*, March 7th, 1914) has used it since its introduction, and finds it efficacious. He finds it especially serviceable in such operations as those for ingrowing toenail, onychia, fissura ani, and haemorrhoids. When the effect of the anaesthetic, whether local or general, has worn off, such operations are followed by pain often so unbearable as hardly yields to the influence of morphine or similar drugs. Klauber sprinkles cycloform freely over the raw surfaces of such wounds at the end of the operation, using enough to produce a layer as thick as the back of a knife-blade. He states that as a rule the onset of pain is delayed for many hours after the operation; that discomfort returns gradually; and that by the time the wounded area has recovered full sensibility the period when the most acute pain would have been felt has passed. The drug does not irritate wounds or interfere with their healing. It is supplied by the makers in sterile form: it has the disadvantage of not being readily re-sterilized by ordinary methods, as the powder fuses at 65° C. For this reason the author has not used it for sutured wounds; but, indeed, these operation wounds are attended by but little after-discomfort, and the use of a local anodyne to prolong the duration of analgesia is not necessary. Cycloform may be employed fearlessly either with local or general anaesthesia. Used in conjunction with novocain it has no cumulative action. In a careful analysis the same author discusses the general question of preventing operative and post-operative pain, with special reference to local anaesthesia. He considers local anaesthesia preferable, where possible, for the reason, amongst others, that pain in the operation area sets in more gradually than when a general anaesthetic has been used. Such discomfort is more easily borne than pain returning in its acutest form and suddenly rousing the patient from his post-anaesthetic stupor. Whatever form of anaesthetic is used, certain procedures cause post-operative pain, while others are comparatively painless. Thus the opening up of layers of previously healthy fasciae by a foreign body, for instance, is followed by pain. Wounds treated by primary suture are not painful, while those which have been packed are very tender; they cease to be tender as soon as the tissues are protected by a layer of coagulated lymph; but if this be removed they are at once painful again. Granulations shield raw surfaces even more than lymph. Any swelling in the neighbourhood of an operation wound is painful; the discomfort is most marked when the infiltration is inflammatory in origin, but may be caused also by the formation of a haematoma. The influence of blood infiltration in causing discomfort is well illustrated by hernia operations; if haematoma of the cord and scrotum be prevented by suitable bandaging, the only pain following the operation is an insignificant and temporary smart in the skin wound. Under local anaesthesia traction on the peritoneum causes severe pain, nausea, and collapse; the symptoms pass off when the cause ceases to operate. Muscle wounds are not painful unless haematomata form among the muscular fibres. The most potent cause of pain following perineal operations is swelling due to the often unavoidable infection. Circumcisions and similar operations on the penis are painful while inflammatory exudate is forming in the spongy and cellular tissues; when this has reached its height, if the penis be supported, pain ceases. Infiltration anaesthesia of dense tissues, such as the palm of the hand, or of regions rendered tense by inflammatory exudate, is to be avoided; the injection of the anaesthetic fluid is itself painful. Thus, in the case of a foreign body under the finger-nail, for early removal, nerve blocking by injecting the digital nerves is suitable; later, if onychia has occurred, a general anaesthetic, gas or ether, is preferable; for a chronic onychia with necrosis of the nail, either method may be used indifferently. Local infiltration anaesthesia is excellent for cicatrized tissues, but requires to be carefully conducted as the fluid runs poorly. Klauber concludes by remarking that fear of the pain and discomfort attendant upon or following operations often prevents a patient acting upon good advice; careful attention to such details as tend to diminish or remove this fear, by making operations less painful, will act in the best interests of all concerned.

PATHOLOGY.

348. Syphilitic Meningo-encephalitis.

VANZETTI (*Archiv. per le Scienze Med.*, vol. xxxviii, No. 1) publishes a lengthy account of an experimental investigation carried out by him with reference to syphilitic meningo-encephalitis. Taking rabbits as the subject of his experiment, he introduced subdurally fragments of syphilomata containing active spirochaetes, and watched the results. It was possible in this way to produce pathological results which corresponded to what we recognize as meningo-encephalitis in the human subject—results which did not follow when non-syphilomatous tissue was introduced. The lesions were not always, or indeed often, continuous *qua* extension, intervals of quite healthy tissue could be seen between different foci, indeed the lesion was sometimes in the opposite hemisphere to that in which the introduction took place. The spirochaetes were not found in the induced lesions, but this need not exclude their being truly syphilitic, as it is extremely difficult to find them, and possibly the lesions may be due to syphilitic toxins rather than to the actual presence of spirochaetes. The biological proof that the lesions were truly syphilitic owing to many technical difficulties was not attempted. There was no constant relation between the degree or intensity of the meningitic lesion and that of the encephalic foci, one might be slight and the other marked, or vice versa. The longer the spirochaetes persisted in the introduced syphilomatous fragment, the more likely was the meningo-encephalic lesion to reach a considerable degree of severity. The author gives a bibliography of over a hundred references, and several photomicrographs of the lesions observed.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

349. Pancreatic Insufficiency in Tuberculosis.

TONNEL AND MOLLE. PERONNET (*Echo méd. du Nord*, January 11th, 1914) have made the first attempt to apply to practical diagnosis the experimental work of Wohlzemuth and his pupil Noguchi on the diastasic ferments in the urine in relation to disease or injury of the pancreas. Hitherto the estimation of the diastasic power of the urine or blood serum has been a laborious and complicated process, requiring the resources of a special laboratory and technical training. The work of the authors would scarcely have been possible had not Noguchi devised an easy, rapid, and elegant method, which promises to be rich in results, and to take its place as one of the usual tests of the practical clinician. The test depends upon the transformation of starch, under the influence of diastasic ferments, and the different colour reactions given by starch and its derivatives with iodine. A series of numbers, obtained by doubling each preceding number (1, 2, 4, 8, 16, 32, 64, etc.), which represent the varying diastasic power of the urine. In normal individuals this is about 16 to 32, with a minimum of 8 and a maximum of 64. The examination of the urine of 25 cases of tuberculosis of the lung (tubercle bacillus in the sputa) gave the following results: In 40 per cent. of the cases the diastasic power of the urine was about normal, but in most of this 40 per cent. it was at the maximum normal. Of the remaining 60 per cent., 36 per cent. had a very high diastasic power (up to 2,048), which left no doubt as to the existence of some affection of the pancreas, more or less latent; 24 per cent. had a moderately-raised figure (128), which might be regarded as indecisive. In one of these latter cases a *post-mortem* examination revealed the presence of definite pancreatic changes. The authors conclude that any diastasic power which is represented by a figure higher than 64 should direct the attention of the physician to the pancreas. The authors have found the test of value in prognosis. A very high coefficient of diastasic power in the urine indicates that death is not far off (less than two months in the cases observed by the authors). They have not noted any exception to this rule, and believe it to be more constant than the reaction of Weicz-Moriz, recently introduced.

350. Rupture of Spleen in Typhoid Fever.

CONNER AND DOWNES (*Amer. Journ. Med. Sci.*, March, 1914) report a case of spontaneous rupture of the spleen in typhoid fever, which was cured by splenectomy. A physician, aged 36, with good past history, and no history of malaria or of any other disease likely to cause enlargement of the spleen, was admitted to hospital suffering from typhoid fever of one week's duration, the spleen being enlarged and tender on palpation. The following morning he complained of a sudden, sharp, stabbing pain in the left hypochondrium, with aching in the left shoulder, radiating down the arm, and requiring an injection of morphine. He appeared to be seriously ill, with sunken eyes, anxious expression, shallow hurried respirations, and distinct tenderness and slight rigidity in the left hypochondrium, with increased splenic dullness. During the next three days he improved considerably, but on the morning of the fourth day, after an attack of coughing, he again complained of a return of the severe pain in the left hypochondrium and shoulder, accompanied by profuse sweating, and a rapid change for the worse in his appearance and general condition. Upon a diagnosis of splenic rupture, based mainly upon the location of the pain, tenderness, and rigidity, together with the history of the spleen having been unusually large and tense for an early typhoid, exploratory operation was decided upon, when, on passing the hand behind the spleen, a three-inch rent in the capsule was found running along the posterior border, and the organ was removed. With the exception of some indications of thrombo-phlebitis in the calves and of pulmonary infarction, convalescence was uninterrupted, and the patient was discharged from hospital five weeks later, and had regained his usual health and weight after a further month. Prior to operation, and within three hours of the onset of the pain, when the symptoms pointed to a severe internal haemorrhage, a blood examination was made in the hope of obtaining confirmatory evidence, but the red cells were 5,280,000, haemoglobin 85 per cent., and leucocytes 35,000, this apparent inconsistency being interpreted as meaning that the haemorrhage had occurred so rapidly that the blood in circulation, though reduced in volume, was as yet unchanged in consistence. After the operation the haemoglobin had fallen to 62 per cent., and the leucocytes numbered 68,000, and the following day the findings were: Red cells 2,810,000, haemoglobin 58 per cent., leucocytes 36,400. This increase in the leucocytes, occurring much earlier than the fall in the red cells and percentage of haemoglobin, was an interesting feature in the case. At the operation a layer of old laminated clot was found lying directly over the dorsum of the spleen, which made it certain that the acute symptoms of the first attack indicated the first rupture of the capsule, and that, after these symptoms had entirely subsided, the second attack of pain immediately following an attack of coughing either increased the rupture or displaced the old clot, with subsequent uncontrollable bleeding from the original tear. A summary is given of the twelve authentic cases of spontaneous rupture of the spleen previously reported, all of which were fatal. But in this case the fact that the first rupture occurred four days before the symptoms leading to operation, at which a laminated clot was found, suggests the possibility that in rare instances spontaneous recovery may result, though in general the only chance of recovery lies in prompt recognition and immediate operation.

351. Poisoning by Pyramidon.

DANDRIEU (*Pror. méd.*, November 28th, 1913) comments upon the ease of access which the public have to these preparations, and relates a case of poisoning by pyramidon. The patient was a woman of 24 years of age, of robust constitution, and habitual good health, who had taken in rapid succession ten cachets each containing 0.50 gram of pyramidon. She complained of violent pain over the precordium and a sensation of choking. Her skin was covered by a clammy sweat, and the pulse was small and arrhythmic, ranging up to 160 per minute. She had violent shivering fits affecting the whole body, followed by clonic contraction. Fearing fatal syncope, the author gave an injection of morphine followed by one of caffeine, and as quickly as was possible the patient was also given ipecacuanha in warm water, this being followed by abundant vomiting. The pulse then became more regular, and dropped to 120 per minute. Potassium bromide with digitalis was then ordered, and hot bottles were kept applied to the extremities. The following day respiration was normal, and the pulse had dropped to 90 per minute. A curious feature of the case, which the author especially comments on, was the onset of severe metrorrhagia. His conclusions are that pyramidon in large doses has an injurious action on the heart by excitation of the central nervous system and the sympathetic. It also appears to provoke, in the female, utero-ovarian congestion, probably on account of its paretic effect on the vasomotor system.

352. Gastric Ulcer in the Aged.

MATHIEU (*Journ. des praticiens*, February 7th, 1914) states that not uncommonly this condition begins long after middle life and gives details of several such cases, the patients ranging in age from 60 to 75 years, in whom the typical symptoms of gastric ulcer appeared at that period of life. In nearly every case, although the appetite otherwise was good, the patients exhibited a marked distaste for meat in any form, and according to the author, this is a peculiarity of gastric ulcer in old people. In every case there was marked dilatation of the stomach and evidence of pyloric stenosis. Many of these patients presented symptoms that might well lead to a diagnosis of cancer, including marked cachexia. But in those patients in whom operation was performed nothing was found other than simple gastric ulcer. In many cases there is a condition of perigastritis which is suggestive of tumour. This is a purely inflammatory condition, however, and in some cases has been found to disappear after an exploratory operation. The diagnosis before operation, however, in these cases presenting cachexia and local chronic perigastritis, is rendered correspondingly difficult. The type of lesions found have been simply erosions—which appear to have been recent—callous ulcer, and in some instances a perforative condition involving the liver or pancreas. Gastro-enterostomy is indicated in any case in which the general condition of the patient allows of it.

SURGERY.

353. Operative Treatment of Ulcer of the Lesser Curvature.

THE lines of treatment indicated for pyloric and duodenal ulcers are now well established, but there is not as yet a consensus of opinion as to the best operation for ulcers of the lesser curvature. Gastro-enterostomy only cures 50 per cent. of the cases; excision is not an entirely safe procedure, especially when applied to perforating ulcers. BAUM (*Zentr. für Chir.*, February 14th, 1914) has treated five cases by short-circuiting the part of the stomach in which the ulcer is situated. He has adapted to the stomach a technique originally applied to the pylorus by Wilms: a strip of fascia is drawn tightly round the stomach on the cardiac side of the ulcer, and buried by suturing the serous coat together over it. The operation is completed by gastro-enterostomy. The patients were all middle-aged men; in four cases the ulcer was movable; in one perforating case it was intimately adherent to the pancreas. The isolated portion of the stomach varied in size from a quarter to two-thirds, according to the position of the ulcer. The immediate result of the operation was, on the whole, good; one patient, however, died fourteen days after operation from acute pulmonary gangrene. The four other patients have increased in weight, have no pain or discomfort, and are generally improved. The first question raised is whether by this method of buried fascia a complete occlusion of the lumen of the stomach can be obtained, such as has been shown to occur in the case of the pylorus. On this point light was shed by radiography and by an autopsy of the fatal case. In the latter the two parts of the stomach were found to be in communication through a channel which would admit a lead pencil. In two of the other cases radiography showed that the whole of a bismuth meal passed through the gastro-enterostomy opening; in the other two cases there was a small trickle into the distal portion of the stomach. It next remains to be considered whether an incomplete occlusion of the distal portion of the stomach has a beneficial action on an ulcer contained therein. Nasetti has shown by experimental constriction of the antrum pylori in animals that the mucous membrane at the site of the ligature atrophies, so that the lumen of the canal is to some extent re-established. The author considers that even if a similar process occurs in the stomach when treated by his method, yet the partial and temporary short-circuiting may nevertheless enable the ulcer to heal. It is relieved from the continual mechanical irritation caused by the passage of food over it, and placed under conditions which conduce to its cicatrization. A condition of merely partial occlusion may even be advantageous, since the simultaneous performance of gastro-enterostomy assists to neutralize the gastric juice in the distal portion of the stomach. So far as his small experience is an indication, the author considers that the operation presents undoubted advantages when compared with methods previously employed.

354. A Celluloid Skull-graft Twenty Years Old.

LEOPOLD RUPPERT (*Wien. klin. Woch.*, January 8th, 1914) records the case of a man, aged 35, who was kicked on the forehead by a horse in October, 1893, when he was 15 years old. He was admitted unconscious to hospital, where an operation showed a comminuted fracture of the frontal bones, the nasal bones, and the ethmoid bone. The fragments of bone were removed, and over the left orbit the dura mater showed a tear through which brain substance protruded. The longitudinal sinus was also torn, and a triangular piece of bone had to be removed from the frontal bones before haemorrhage from this source could be arrested. Clots of blood and damaged tissues were removed, the dura was sutured, a gauze drain was inserted, and the scalp wound was partially closed. Two days later consciousness returned without paralysis or impairment of intelligence. Early in January, 1894, a flap of skin and muscle was cut over the forehead and turned downwards. The margins of the hole in the skull were trimmed, and a celluloid plate, carefully modelled to fit the hole, was inserted. It measured 10 cm. by 4 cm. at its widest, though it was merely laid flush with the skull, not fitted into a groove between the tables of the skull, and, though its lower aspect was unsupported by any bony structure, it remained exactly as it was placed, and the wound healed by first intention. Nine days after the operation a clear, serous fluid was withdrawn by puncture from the site of the operation. As this fluid contained much albumin, it was evidently not cerebro-spinal fluid, but the product of stasis caused by the operation. This fluid again collected, but disappeared spontaneously in a few days. The patient was discharged early in March of the same year. During the following six years he was perfectly well. At the age of 21 epileptic attacks, recurring at intervals of three weeks to several months, appeared without obvious reason. They were of moderate severity, and occurring at night, lasted only a short time. There was no preliminary aura nor pain in the scar to indicate the approach of an attack. The patient would suddenly cry out, and spasmodic contractions beginning in the left leg would become general. After these contractions had lasted a minute or two the patient would again become quiet, and consciousness would rapidly return. An examination of the skull about twenty years after the plastic operation showed an almost ideal result. The scar was scarcely visible, and the shape of the forehead was almost normal. The skin was freely movable over the celluloid plate, between which and the bone no gap could be detected. Indeed, the edges of the plate could not be felt except along its lower border, which took the place of the supraorbital margin of the left frontal bone. The plate had nowhere been encroached on by growth of bony tissue, for the Roentgen rays, which penetrate celluloid without throwing a shadow, proved that the hole in the skull presented practically the same size and shape as before. The author concludes by emphasizing the superiority of heteroplastic to autoplastic operations on the skull, and he prefers celluloid to metal or ivory.

355. Acute Osteomyelitis.

F. G. DYAS (*Journ. Amer. Med. Assoc.*, April 18th) criticizes the usual method of treating osteomyelitis of the long bones by means of the mallet and chisel. They cause unnecessary traumatism, and the attainment of sterilization is often impracticable even by the most skilled. The methods of the dentist in the treatment of jaw troubles are much better as regards the sterilization, and the attainment of absolute asepsis in badly decayed and infected teeth is a matter of every-day occurrence to the dentist. With this idea in mind he has treated a series of cases of osteomyelitis by exposing the diseased tissue, painting with a solution of one part glycerine and two parts iodine before making the incisions, and then using a large burr driven by a dental engine until it has removed every suspicion of decayed bone and left a smooth surface instead of the ragged edges left by the chisel and mallet. The operator readily acquires the ability to tell when the burr is working in diseased or normal bone by the greater resistance offered by the latter. With the burr he can safely operate where with the chisel and mallet it would be dangerous, and the chance of the heat and friction generated by the burr destroying the microbes is to be considered. It has been shown by cultures made from the inner surface of machinery belts that mechanical influence may produce an effective bactericidal action. One case is reported showing the success of this method.

356. Testes in Inguinal Herniae in a "Female" aged 13.

PHÉLIP (*Bull. et mém. de la Soc. Anat. de Paris*, December, 1913) operated last November on a "girl" aged 13, in whom a double inguinal hernia had developed three weeks previously. A body of the size of a nut lay in each inguinal canal, and a cord ran into it from above. It could be pushed up to the internal ring, and was very tender. Impulse was noted. Ovarian hernia was diagnosed. The child was quite feminine; the labia majora and minora were normal, and there was no trace of a hypospadias. The meatus of the urethra showed no malformation. The child had never menstruated. The right hernial sac contained a perfect testicle of the size of an almond with the spermatic cord, and also a gubernaculum which connected it with the labium majus. It was reduced into the abdominal cavity and the internal ring closed. The left sac also contained a testis as big as its fellow; it was excised and the sac closed. The resected left testicle showed all the characters of normal and healthy testicular tissue.

357. Bladder Resection.

G. KOLISCHER (*Journ. Amer. Med. Assoc.*, January 24th, 1914) reports a case of excision of a malignant growth in the vertex of the bladder performed by denuding the whole anterior aspect of the viscus of its peritoneal covering and clamping the top of the bladder far enough down to ensure the resection of the vertex and the tumour in healthy tissue, the clamp being applied under the control of the cystoscope introduced before the operation, which, however, in practice was found to be superfluous, as the incision could have been guided by palpation. The operation is described in detail, and the healing was

complete in three weeks. Three months later the interior of the bladder was apparently normal, according to cystoscopic examination, except for a slight distortion upward at the seat of the excision, evidently due to an adhesion at the top of the bladder. While it is still too early to predict a permanent cure, the operation is described as a technical success.

OBSTETRICS.

358. Atrophy of the Pituitary Body following Puerperal Fever.

DISCUSSING cases in which the cause of death is difficult to find, even by a careful necropsy, M. SIMMONDS (*Deut. med. Woch.*, February 12th, 1914) records the case of a married woman, aged 46, who was admitted to hospital unconscious. The urine was normal, as was also the constitution and pressure of the cerebro-spinal fluid examined by lumbar puncture. The pupils were contracted, but reacted satisfactorily to light. Wassermann's reaction was negative, the reflexes were normal, and the temperature was subnormal. The pulse was very small and thready, but not rapid. The thoracic organs seemed healthy, but the patient was much emaciated and pale, and she looked much older than her years. She died next day, without a return of consciousness. The necropsy showed at first nothing to account for the coma and death. The heart was small and flabby, and the smallness of the liver, spleen and ovaries was striking in such a relatively young woman. The cause of death would have remained obscure had not the pituitary body been examined. It was very small and flabby, and weighed only 0.3 gram. The microscopic examination showed no definite relics of the neuro-hypophysis, and the pars intermedia was represented only by a few small colloid cysts partly lined with ciliated epithelium. Only a few fragments of cells were found in the anterior lobe. The connective tissue was permeated by small capillaries, and was deficient in elastic and cellular elements. It was now learnt that the patient, at the age of 36, had been confined to bed for several weeks by severe puerperal fever following her fifth and last confinement. Subsequently, menstruation did not return; the patient spent half the day in bed, felt weak and faint, could no longer work, frequently lost consciousness, lost weight, and aged rapidly. After this condition had lasted nine years she was kept in hospital for five weeks, without any definite diagnosis being made. The haemoglobin was then only 50 per cent., and her hair was very grey. She was discharged from hospital with the ambiguous diagnosis "senium praecox." In the course of many examinations of the pituitary body the author has frequently found evidence of sepsis, such as bacterial emboli and necrotic areas. He has also found half of the anterior lobe necrosed in a fatal case of puerperal fever, the necrosis, which was sharply defined, evidently being due to septic embolism. He therefore concludes that the necrosis of the pituitary body in his first case was also due to septic embolism eleven years earlier. This view accounts for the early menopause, muscular weakness, giddiness, frequent loss of consciousness, anaemia, rapid aging, and finally coma, ending fatally. This view is also in harmony with numerous experiments on animals which have died comatose sooner or later after removal of the pituitary body.

GYNAECOLOGY.

359. Thyroid Insufficiency and Nervous Symptoms in Women.

IN the course of his observations of women suffering from haemorrhagic metropathic affections in which an insufficient function of the thyroid gland could be demonstrated, E. SEHRT noted that the nervous symptoms were markedly improved when iodothyrin was given (*Muench. med. Woch.*, February 24th, 1914). He found on careful consideration that this effect was not due to a suggestive action of the preparation. The presence of hypothyreosis is best determined by Kocher's method of blood examination. This is manifested by acceleration of coagulation, a relative decrease of neutrophile cells, and a relative increase of lymphocytes. The author relates the histories of a few of his cases to illustrate the relation between nervous symptoms to haemorrhagic metropathia and to hypothyreosis. In these cases the common symptoms apart from the severe menorrhagia were loss of appetite, sleeplessness, falling out of hair, giddiness, and chronic constipation. The effect of the iodothyrin was the rapid removal of these symptoms. In a second series of cases in which nervous symptoms were associated with infantile uterus, the menstrual loss was quite small, but goitre, myxoedematous skin, and headache were found to be associated with the nervous symptoms mentioned above. Here, too, the iodothyrin acted promptly and fully. He maintains that hypothyriasis in subjects with infantile uterus does not lead to menorrhagia but is manifested in other ways. His cases show definitely that thyroid medication acts on the nervous symptoms of women who are suffering from hypothyreosis and effects a marked somatic improvement—for example, gain in weight. He discusses the pathology of the two series of cases and comes to the conclusion that the symptoms must be regarded as a hypersensibility of the sensory cells of the central nervous system, which is caused by a gradual autointoxication. The latter may be either caused by, or at least furthered by, the insufficiency of thyroid tissue.

THERAPEUTICS.

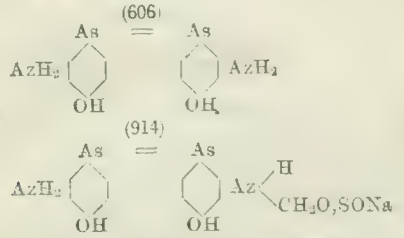
360. The Treatment of Inoperable Tumours.

H. SIMON (*Berl. klin. Woch.*, January 12th, 1914) describes the various methods which have been suggested and tried for the cure of inoperable malignant tumours. Under the collective name of bacteriotherapy he describes the attempts which have been made to treat cancer by giving an attack of erysipelas or other bacterial disease. Fehleisen is said to have suggested that streptococci possess a power of inhibiting the growth of tumour cells. At present the idea of utilizing bacterial means in the treatment of malignant disease is limited to the toxins of the bacteria or a corresponding form of antitoxin. Coley's fluid proved itself to be of less use than was at first supposed and much more dangerous, while the antitoxic method of Emmerich and School proved an absolute failure. He concludes that the idea of imitating the occasional curative effect of an intercurrent infection in the treatment of malignant disease must be limited to very exceptional conditions. Next he deals with immunization. He crystallizes the whole subject by stating that benefit from immunization can only be expected if the disease depends on a virus. The opponents of the parasitic theory of cancer must deny the possibility of good being done by attempts to immunize. Richet and Héricourt injected suspensions of tumours gained by operation into animals, and utilized the serum of the animals for treatment purposes. The results did not lead to satisfactory results. Schmidt and Doyen, among others, claimed to have found the causal parasites, and from these they prepared their curative substances. In no case, however, have these or similar methods yielded curative results. More recently the method of so-called autovaccination has been introduced. But the author regards it essential before such a method could be largely employed for proof to be forthcoming that the injection of a suspension of tumour cells cannot produce the disease afresh. Passing on to the consideration of chemotherapy, he naturally first discusses arsenic. In 1893 Lassar demonstrated three cases of skin carcinoma which he had cured with arsenic, applied internally and subcutaneously. The patients were free from recurrence after eight years. Zellar has quite recently combined an arsenic paste with internal medication with sodium and potassium silicate. A circular inquiry addressed to the directors of all the German surgical university clinics elicited a doubtful reply as to the value of this treatment. Wassermann found that in mice the intravenous application of a combination of eosin and selenium cured cancerous tumours almost with certainty. Unfortunately the attempts to apply this treatment to man have proved disappointing. Werner and Exner have introduced a treatment with lecithin which has been subjected to the action of radium. It was found that the dissociation product of the lecithin thus obtained was cholin. He expresses himself very cautiously as to the therapeutic value of this preparation, but throws a doubt as to the correctness of the theoretic basis of the treatment. After dealing with *x*-ray treatment of cancer in a brief manner, he mentions that it is significant that men like Krönig, Bumm, and Döderlein are now prepared to accept the responsibility of subjecting operable patients directly to an intense radiological course. The next physical method of treatment mentioned is fulguration, which he accepts as a valuable supplementary treatment. It is true that the hopes expressed with regard to fulguration have not been fulfilled, especially in France, but there can be no doubt as to the power of cleaning up sloughing

wounds by this measure. Diathermic treatment has advanced considerably within recent times, and one of the most important advantages attached to the employment of Forest's needle and similar instruments is that a knife which might conceivably infect a distant healthy part is avoided.

361. Salvarsan and Neo-salvarsan.

MILIAN (*Bull. de la Soc. Franç. de Derm. et Syph.*, December, 1912) states that the toxicity of the new preparation very closely resembles that of the old, and renders the doses advised by Schreiber, who was the first to experiment clinically with 914, absolutely unjustifiable. He (S.) was in the habit of giving 0.9 gram on the first day, 1.2 gram on the third, 1.35 gram on the fifth, and 1.5 gram on the seventh, without attempting to ascertain what proportion of the previously injected dose had been eliminated. Inasmuch as the formulae and chemical constitution of the two preparations are almost identical—that is,



representing merely a substitution of methyl sodium sulphite for one hydrogen atom, and as rabbits are killed by doses very closely approximate in the two cases, and as finally the same toxic phenomena—for example, erythemata and jaundice, convulsions, coma, and death are observed after administrations of either, the author is in the habit of rigidly adhering to a fixed scale of injections, at intervals of six days, and he only increases his dose if the previous one was well borne:

0.45 gram neo-salvarsan			corresponds to	0.3 gram	606
0.6	,,	,,	,,	0.4 ,,	606
0.75	,,	,,	,,	0.5 ,,	606
0.9	,,	,,	,,	0.6 ,,	606

362. Diathermy in the Treatment of Digestive Disorder.

PETIT (*Arch. d'électr. méd.*, February 25th, 1914) describes a case of severe and long-standing digestive trouble, accompanied by cervical adenopathy, which cleared up under diathermy and radio-therapy. The patient was a young woman whose history showed a delicate temperament and a long succession of illnesses. For eighteen months she had suffered from grave digestive disorder, with much pain and acid vomiting. Alimentation was affected to such an extent that her weight fell from 8 st. to 6 st. A cervical adenopathy developed concurrently with the digestive trouble. Diathermy was instituted to the exclusion of all other treatment, the current being passed daily for twenty minutes over a period of seven months. The appetite gradually returned, pain and vomiting after a meal entirely disappeared, and the patient was able to eat any kind of food save raw. The weight rose by some 16 lb., and remained constant after treatment had ceased, and constipation was the only symptom which persisted. As soon as the general state became fairly satisfactory α rays were applied to the glands in the neck, and these after a few sittings almost entirely cleared up.

363. Blood Transfusion.

SATTERLEE AND HOOKER (*Arch. of Int. Med.*, January 15th, 1914) record experiments to develop a more widely useful method of blood transfusion than those generally employed, and they describe an apparatus by which the blood from the donor is drawn directly into a paraffin receptacle, carried to the recipient, and injected into his circulation. There is no point of contact with any moistenable surface, and the exposure of broken tissue surface to the blood stream is reduced to a minimum, while, with the exception of the air contact of its upper surface while in the receptacle, the blood does not touch anything but paraffin during its passage. The receptacle consists of a thin film of hard paraffin lining a tubulated glass cylinder, the lower end of which is closed by an asbestos stopper, through which passes a specially constructed cannula, while the upper end passes directly into an aspirating tube containing an air filter. The point of the cannula is conical in shape, its distal opening being placed laterally with a shoulder just behind the opening which serves as a stop and prevents leaking. By means of the asbestos stopper the cannula and receptacle form a rigid one-piece apparatus. Two internal coatings of paraffin are applied under sterile precautions, the first at 68° to 71° C. by rotating the half-immersed cylinder in the paraffin mixture, and after this has hardened the aspirating tube and asbestos stopper and cannula are attached. The second coating is applied by aspirating " paraffin mixture at 60° to 61° C. through the cannula " the cylinder, and when this has reached the level of a 1 cm. above the neck it is immediately expelled, cannula being then lifted from beneath the surface and its lumen cleared by gently blowing through the aspirating tube. The method of performing the operation is described, and a receptacle of about 225 c.cm. capacity the most useful, as it is inadvisable to take more tha 200 c.cm. of blood at one time. By the use of speci stylets for puncturing the exposed vein wall an entrance of the cannula at the first trial is ensured, and only a small skin incision is needed. The apparatus should be prepared at least an hour before use, in order to allow the paraffin to harden thoroughly, and care must be taken to avoid any lapse of the coating which might initiate the formation of thromboplastin. The operation can be easily performed single-handed without skilled assistance by any one capable of performing an ordinary intravenous saline infusion, and the apparatus is compact and can be manipulated with one hand.

364. Benzol in the Treatment of Splenic Leukaemia.

DUPOT AND HALLEZ (*Echo méd. du Nord*, February 1st, 1914), after reviewing the literature of the treatment by benzol of "leucémie myélogène," and relating in detail a case in which any good effect was very doubtful, concl nevertheless that the drug must retain a place with ot methods in the treatment of the disease. Marked ameli tion of the symptoms sometimes follow the exhibitio the drug, and it seems occasionally to prolong and impr the effect of arsenic, of thorium, or of radio- and radi therapy. A reduction in the size of the spleen seems undoubted result in many instances. The treatment benzol has the advantage of being simple, applicable t cases, and without serious dangers or by-effects, if we except the indigestion and gastric intolerance which occasionally occur. It is best administered in small doses frequently repeated, and never on an empty stomach. Keratin-coated capsules are perhaps the best form in which to give benzol.

PATHOLOGY.

365. Quantitative Wassermann Reaction.

F. LESSER (*Muench. med. Woch.*, January 13th, 1914) points out that the Wassermann reaction is usually carried out by mixing the patient's serum, diluted to ten times its volume, with the antigen and a haemolytic system, and determining whether the resultant mixture remains absolutely unchanged (in which case the reaction is held to be strongly positive), or whether the red cells dissolve completely (in which case the reaction is held to be negative). If some haemolysis takes place, leaving some of the cells undissolved, the reaction is stated to be moderately or weakly positive, according to the degree of solution. Now if the serum is diluted to, say, 1 in 1,000 before treatment is begun, and this dilution inhibits haemolysis completely, and after-treatment has been carried out, the maximum dilution which gives a complete inhibition gradually diminishes to 1 in 50 or even lower, some measure of the effect of the treatment is produced, and a far more satisfactory guide is obtained as to the progress towards cure. He pleads for this form of quantitative reaction, in which the maximum dilution is determined which is capable of effecting a complete inhibition of the solution of the red blood corpuscles by the haemolytic system. The quantitative test could also be carried out by utilizing diminishing quantities of extract (antigen), but he shows that this method did not prove itself satisfactory in practice. Another way is to use increasing quantities of complement. This proved quite satisfactory, but for obvious reasons he prefers to employ constant quantities of extract and complement and diminishing quantities of the patient's serum. In those cases in which a complete inhibition is not obtained by 0.1 c.cm. of serum (that is, 1 c.cm. of a 1 in 10 dilution of serum, as is used for the qualitative test) he notes the degree of inhibition and determines the minimum amount which will yield the same degree of inhibition. The results are expressed in terms of the degree of inhibition obtained with 0.1 c.cm., such as $\frac{1}{10}$ O.U. (original unit) = +++.

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